

Appendix - 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	31.71	-1.74	27.82	<=38.45	Pass
			836.6	31.70	-1.74	27.81	<=38.45	Pass
			848.8	31.65	-1.74	27.76	<=38.45	Pass
	GPRS	1 TX Slot	824.2	31.70	-1.74	27.81	<=38.45	Pass
		2 TX Slots	824.2	31.10	-1.74	27.21	<=38.45	Pass
		3 TX Slots	824.2	29.61	-1.74	25.72	<=38.45	Pass
		4 TX Slots	824.2	28.62	-1.74	24.73	<=38.45	Pass
		1 TX Slot	836.6	31.69	-1.74	27.80	<=38.45	Pass
		2 TX Slots	836.6	31.09	-1.74	27.20	<=38.45	Pass
		3 TX Slots	836.6	29.61	-1.74	25.72	<=38.45	Pass
		4 TX Slots	836.6	28.63	-1.74	24.74	<=38.45	Pass
		1 TX Slot	848.8	31.65	-1.74	27.76	<=38.45	Pass
		2 TX Slots	848.8	31.04	-1.74	27.15	<=38.45	Pass
		3 TX Slots	848.8	29.57	-1.74	25.68	<=38.45	Pass
		4 TX Slots	848.8	28.57	-1.74	24.68	<=38.45	Pass
	EGPRS	1 TX Slot	824.2	25.64	-1.74	21.75	<=38.45	Pass
		2 TX Slots	824.2	24.55	-1.74	20.66	<=38.45	Pass
		3 TX Slots	824.2	22.24	-1.74	18.35	<=38.45	Pass
		4 TX Slots	824.2	21.22	-1.74	17.33	<=38.45	Pass
		1 TX Slot	836.6	27.53	-1.74	23.64	<=38.45	Pass
		2 TX Slots	836.6	24.49	-1.74	20.60	<=38.45	Pass
		3 TX Slots	836.6	22.24	-1.74	18.35	<=38.45	Pass
		4 TX Slots	836.6	21.04	-1.74	17.15	<=38.45	Pass
		1 TX Slot	848.8	25.43	-1.74	21.54	<=38.45	Pass
		2 TX Slots	848.8	26.78	-1.74	22.89	<=38.45	Pass
		3 TX Slots	848.8	22.28	-1.74	18.39	<=38.45	Pass
		4 TX Slots	848.8	21.18	-1.74	17.29	<=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	-4.972	-0.0060	-2.5 to 2.5	Pass
			3.85	0.226	0.0003	-2.5 to 2.5	Pass
			4.43	-1.098	-0.0013	-2.5 to 2.5	Pass
		-30	3.85	0.581	0.0007	-2.5 to 2.5	Pass
		-20	3.85	1.776	0.0022	-2.5 to 2.5	Pass
		-10	3.85	-1.065	-0.0013	-2.5 to 2.5	Pass

		0	3.85	-5.779	-0.0070	-2.5 to 2.5	Pass	
		10	3.85	-7.490	-0.0091	-2.5 to 2.5	Pass	
		30	3.85	-7.878	-0.0096	-2.5 to 2.5	Pass	
		40	3.85	-2.518	-0.0031	-2.5 to 2.5	Pass	
		50	3.85	-4.455	-0.0054	-2.5 to 2.5	Pass	
	836.6	20	3.27	-0.936	-0.0011	-2.5 to 2.5	Pass	
			3.85	-2.906	-0.0035	-2.5 to 2.5	Pass	
			4.43	-1.227	-0.0015	-2.5 to 2.5	Pass	
		-30	3.85	-2.163	-0.0026	-2.5 to 2.5	Pass	
		-20	3.85	-4.326	-0.0052	-2.5 to 2.5	Pass	
		-10	3.85	0.097	0.0001	-2.5 to 2.5	Pass	
		0	3.85	-3.584	-0.0043	-2.5 to 2.5	Pass	
		10	3.85	-5.682	-0.0068	-2.5 to 2.5	Pass	
		30	3.85	-5.941	-0.0071	-2.5 to 2.5	Pass	
		40	3.85	-5.682	-0.0068	-2.5 to 2.5	Pass	
		50	3.85	-2.712	-0.0032	-2.5 to 2.5	Pass	
	848.8	20	3.27	-2.841	-0.0033	-2.5 to 2.5	Pass	
			3.85	-0.936	-0.0011	-2.5 to 2.5	Pass	
			4.43	1.679	0.0020	-2.5 to 2.5	Pass	
		-30	3.85	-2.970	-0.0035	-2.5 to 2.5	Pass	
		-20	3.85	-1.130	-0.0013	-2.5 to 2.5	Pass	
		-10	3.85	0.936	0.0011	-2.5 to 2.5	Pass	
		0	3.85	-3.325	-0.0039	-2.5 to 2.5	Pass	
		10	3.85	-1.937	-0.0023	-2.5 to 2.5	Pass	
		30	3.85	-4.875	-0.0057	-2.5 to 2.5	Pass	
		40	3.85	-6.037	-0.0071	-2.5 to 2.5	Pass	
	GPRS	824.2	20	3.27	-5.682	-0.0069	-2.5 to 2.5	Pass
				3.85	-4.262	-0.0052	-2.5 to 2.5	Pass
				4.43	-4.229	-0.0051	-2.5 to 2.5	Pass
			-30	3.85	2.195	0.0027	-2.5 to 2.5	Pass
			-20	3.85	-5.908	-0.0072	-2.5 to 2.5	Pass
			-10	3.85	-6.134	-0.0074	-2.5 to 2.5	Pass
			0	3.85	2.970	0.0036	-2.5 to 2.5	Pass
			10	3.85	4.391	0.0053	-2.5 to 2.5	Pass
			30	3.85	3.229	0.0039	-2.5 to 2.5	Pass
			40	3.85	-0.032	0.0000	-2.5 to 2.5	Pass
50			3.85	-1.227	-0.0015	-2.5 to 2.5	Pass	
836.6		20	3.27	-4.811	-0.0058	-2.5 to 2.5	Pass	
			3.85	-1.550	-0.0019	-2.5 to 2.5	Pass	
			4.43	-4.552	-0.0054	-2.5 to 2.5	Pass	
		-30	3.85	-3.422	-0.0041	-2.5 to 2.5	Pass	
		-20	3.85	-4.197	-0.0050	-2.5 to 2.5	Pass	
		-10	3.85	-6.070	-0.0073	-2.5 to 2.5	Pass	
		0	3.85	-0.613	-0.0007	-2.5 to 2.5	Pass	
		10	3.85	-2.389	-0.0029	-2.5 to 2.5	Pass	
		30	3.85	1.388	0.0017	-2.5 to 2.5	Pass	
		40	3.85	-0.226	-0.0003	-2.5 to 2.5	Pass	
50		3.85	-0.678	-0.0008	-2.5 to 2.5	Pass		
848.8		20	3.27	-3.842	-0.0045	-2.5 to 2.5	Pass	
			3.85	-5.166	-0.0061	-2.5 to 2.5	Pass	
			4.43	-0.678	-0.0008	-2.5 to 2.5	Pass	
		-30	3.85	0.194	0.0002	-2.5 to 2.5	Pass	
		-20	3.85	-1.517	-0.0018	-2.5 to 2.5	Pass	
		-10	3.85	-3.196	-0.0038	-2.5 to 2.5	Pass	
		0	3.85	-3.261	-0.0038	-2.5 to 2.5	Pass	
		10	3.85	-0.710	-0.0008	-2.5 to 2.5	Pass	
		30	3.85	-2.970	-0.0035	-2.5 to 2.5	Pass	
40		3.85	-1.614	-0.0019	-2.5 to 2.5	Pass		

EGPRS	824.2	50	3.85	-2.873	-0.0034	-2.5 to 2.5	Pass
		20	3.27	2.712	0.0033	-2.5 to 2.5	Pass
			3.85	11.526	0.0140	-2.5 to 2.5	Pass
			4.43	2.357	0.0029	-2.5 to 2.5	Pass
		-30	3.85	-4.165	-0.0051	-2.5 to 2.5	Pass
		-20	3.85	-4.746	-0.0058	-2.5 to 2.5	Pass
		-10	3.85	-3.132	-0.0038	-2.5 to 2.5	Pass
		0	3.85	0.032	0.0000	-2.5 to 2.5	Pass
		10	3.85	-2.228	-0.0027	-2.5 to 2.5	Pass
		30	3.85	-0.420	-0.0005	-2.5 to 2.5	Pass
		40	3.85	-1.195	-0.0014	-2.5 to 2.5	Pass
		50	3.85	-1.614	-0.0020	-2.5 to 2.5	Pass
	836.6	20	3.27	-1.227	-0.0015	-2.5 to 2.5	Pass
			3.85	-0.839	-0.0010	-2.5 to 2.5	Pass
			4.43	-1.873	-0.0022	-2.5 to 2.5	Pass
		-30	3.85	-0.839	-0.0010	-2.5 to 2.5	Pass
		-20	3.85	-1.840	-0.0022	-2.5 to 2.5	Pass
		-10	3.85	-1.356	-0.0016	-2.5 to 2.5	Pass
		0	3.85	-0.226	-0.0003	-2.5 to 2.5	Pass
		10	3.85	-1.582	-0.0019	-2.5 to 2.5	Pass
		30	3.85	-2.357	-0.0028	-2.5 to 2.5	Pass
		40	3.85	1.356	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	-5.004	-0.0059	-2.5 to 2.5	Pass
			3.85	1.647	0.0019	-2.5 to 2.5	Pass
			4.43	-3.325	-0.0039	-2.5 to 2.5	Pass
		-30	3.85	-4.649	-0.0055	-2.5 to 2.5	Pass
		-20	3.85	-1.195	-0.0014	-2.5 to 2.5	Pass
		-10	3.85	0.613	0.0007	-2.5 to 2.5	Pass
		0	3.85	-1.969	-0.0023	-2.5 to 2.5	Pass
		10	3.85	-2.712	-0.0032	-2.5 to 2.5	Pass
		30	3.85	0.065	0.0001	-2.5 to 2.5	Pass
		40	3.85	0.613	0.0007	-2.5 to 2.5	Pass
		50	3.85	0.484	0.0006	-2.5 to 2.5	Pass

3. Modulation Characteristics

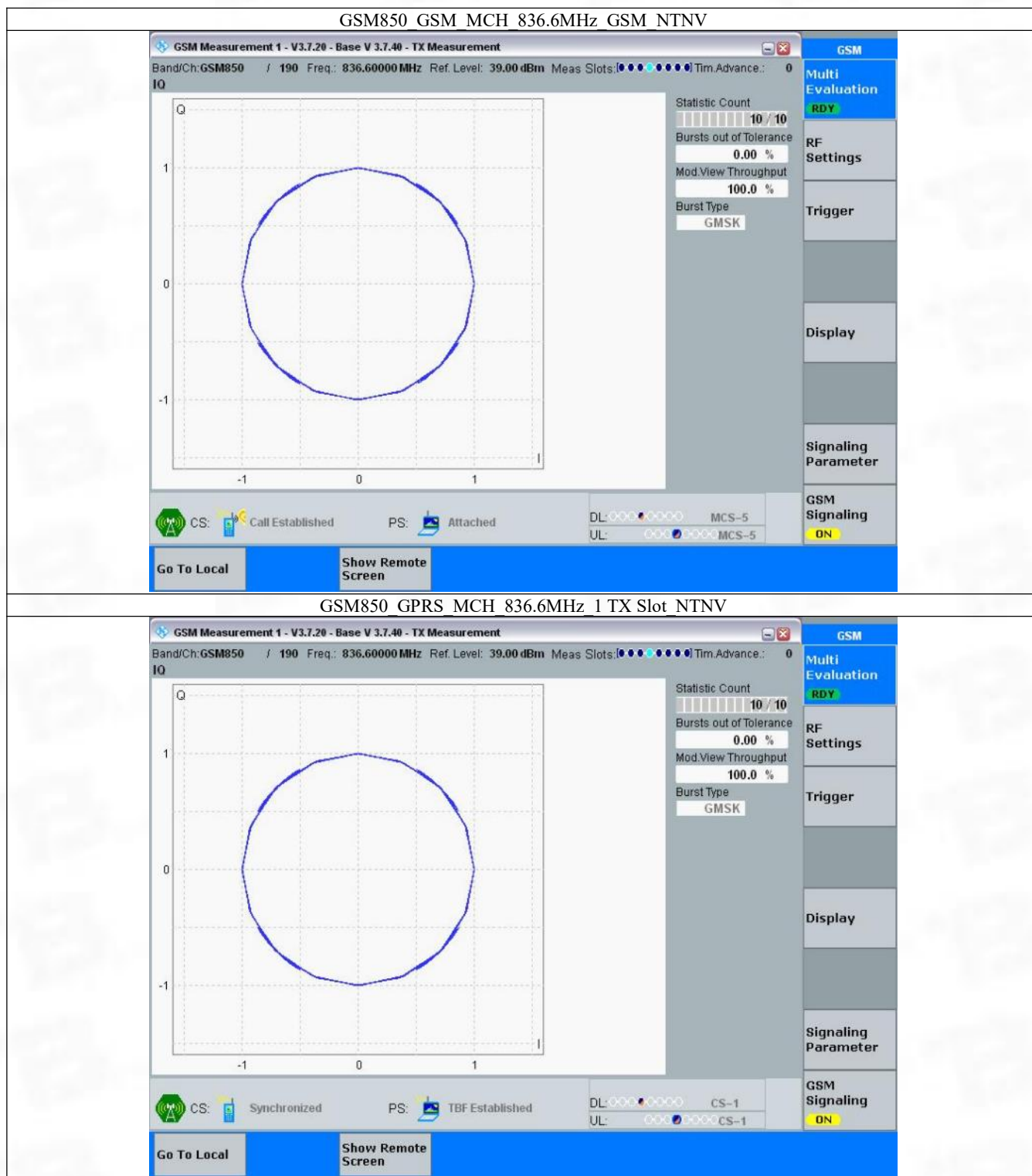
3.1 Test Result

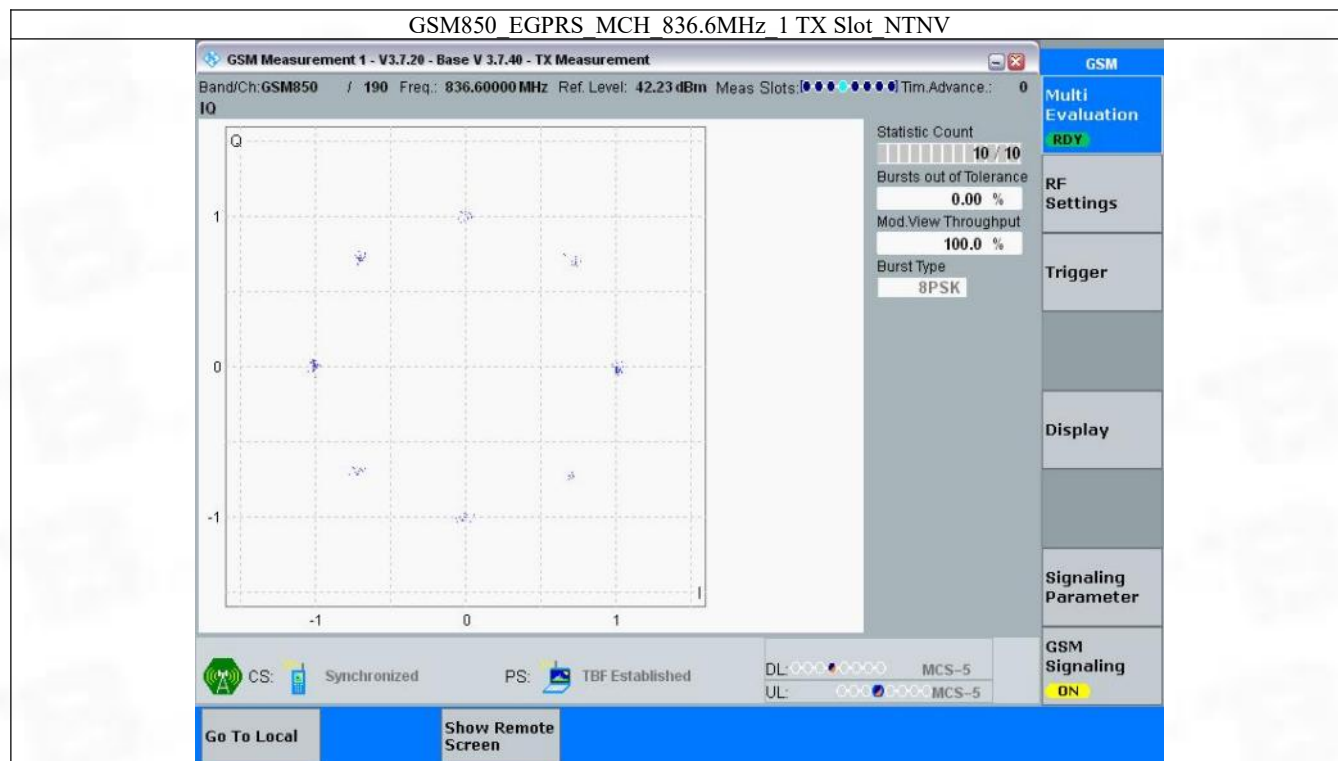
3.1.1 GSM850

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





4. 99% & 26dB Bandwidth

4.1 Test Result

4.1.1 GSM850_OBW

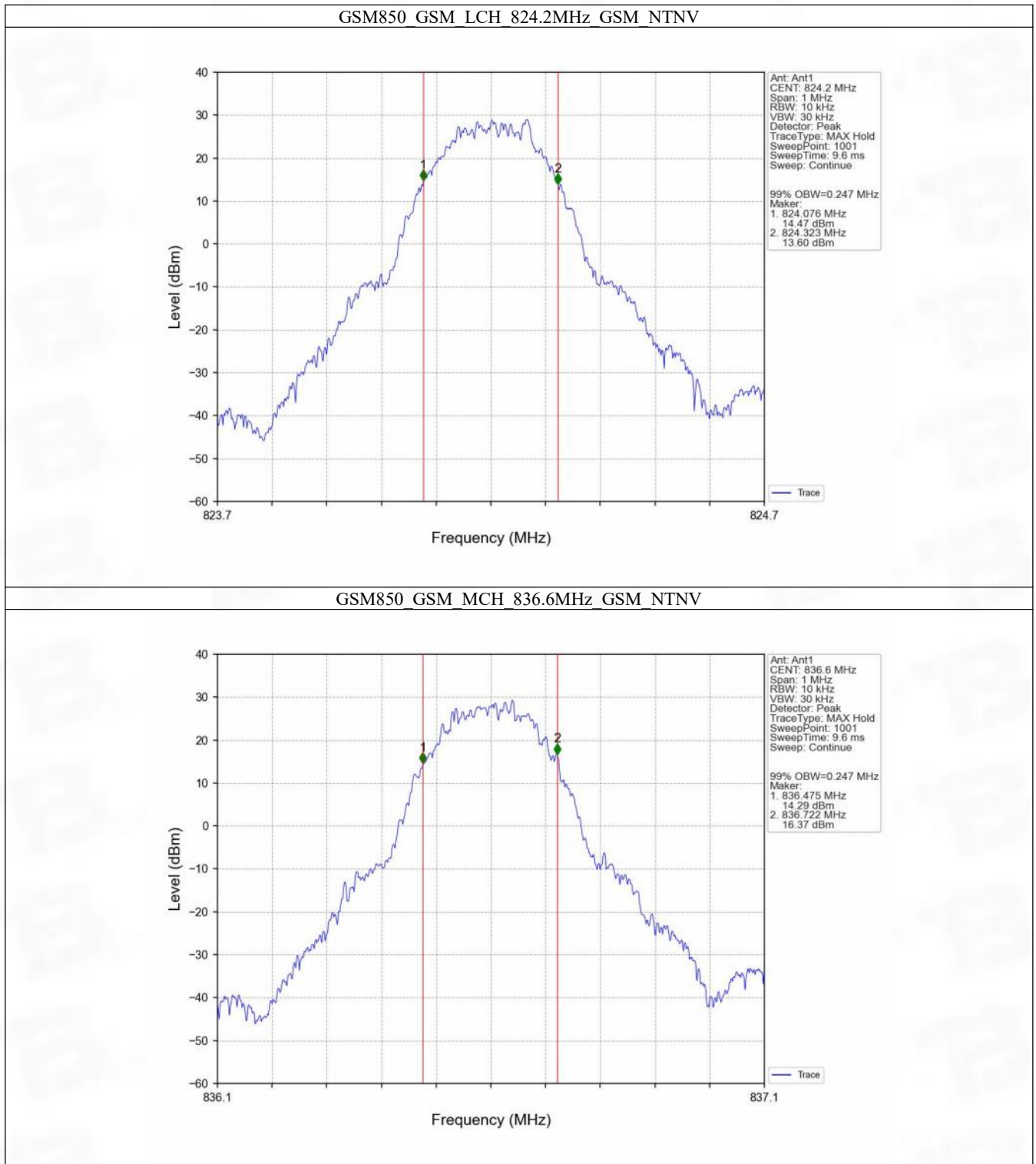
Band: GSM850						
ENV	Mode		Frequency (MHz)	99% Occupied Bandwidth (MHz)		Verdict
	Network	Subset		Result	Limit	
NTNV	GSM	GSM	824.2	0.247	/	Pass
			836.6	0.247	/	Pass
			848.8	0.247	/	Pass
	GPRS	1 TX Slot	824.2	0.244	/	Pass
			836.6	0.241	/	Pass
			848.8	0.243	/	Pass
	EGPRS	1 TX Slot	824.2	0.235	/	Pass
			836.6	0.230	/	Pass
			848.8	0.247	/	Pass

4.1.2 GSM850_XDB

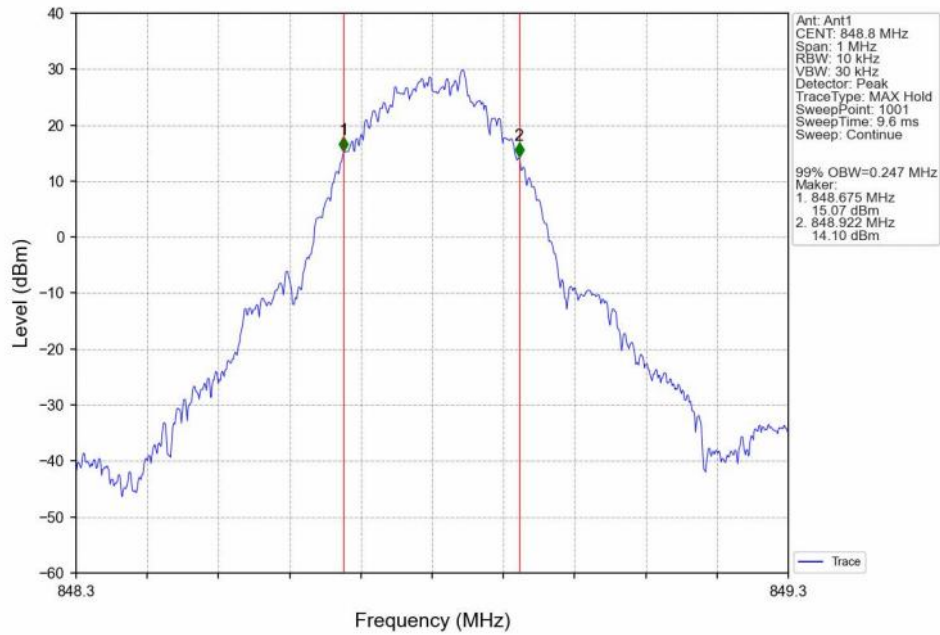
Band: GSM850						
ENV	Mode		Frequency (MHz)	26dB Bandwidth (MHz)		Verdict
	Network	Subset		Result	Limit	
NTNV	GSM	GSM	824.2	0.319	/	Pass
			836.6	0.314	/	Pass
			848.8	0.309	/	Pass
	GPRS	1 TX Slot	824.2	0.307	/	Pass
			836.6	0.310	/	Pass
			848.8	0.315	/	Pass
	EGPRS	1 TX Slot	824.2	0.293	/	Pass
			836.6	0.295	/	Pass
			848.8	0.304	/	Pass

4.2 Test Graph

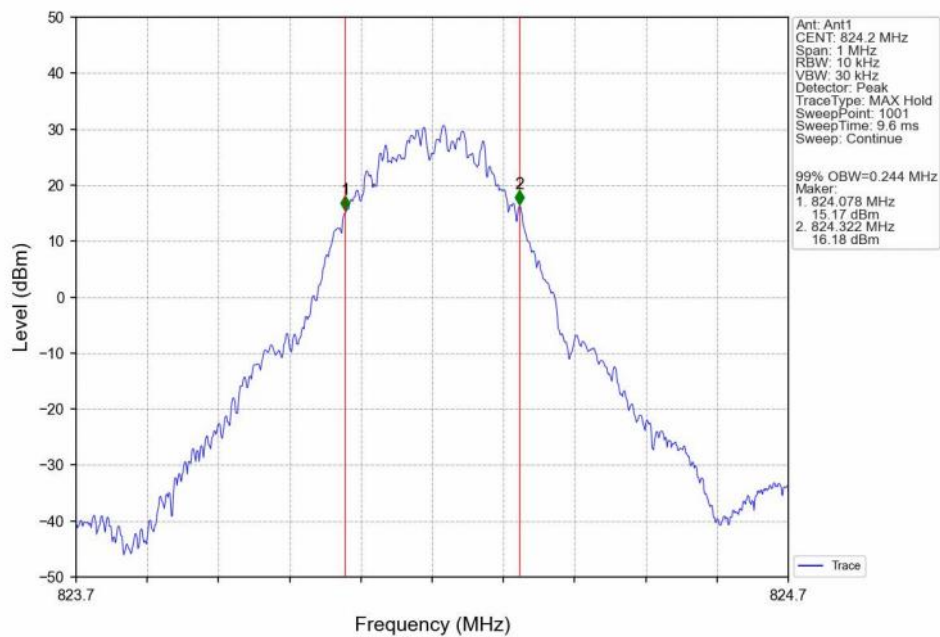
4.2.1 GSM850_OBW



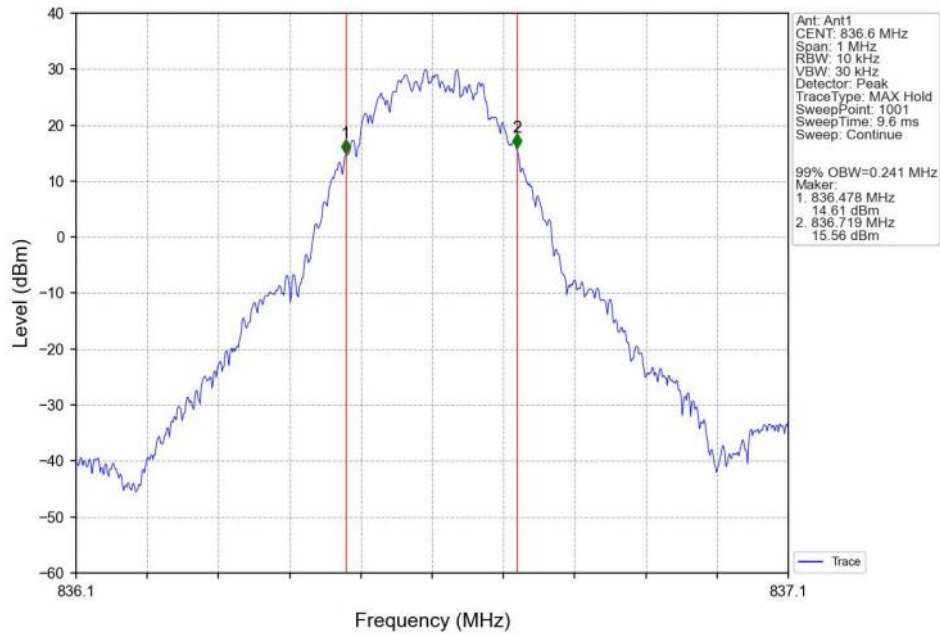
GSM850 GSM HCH 848.8MHz GSM NTNV



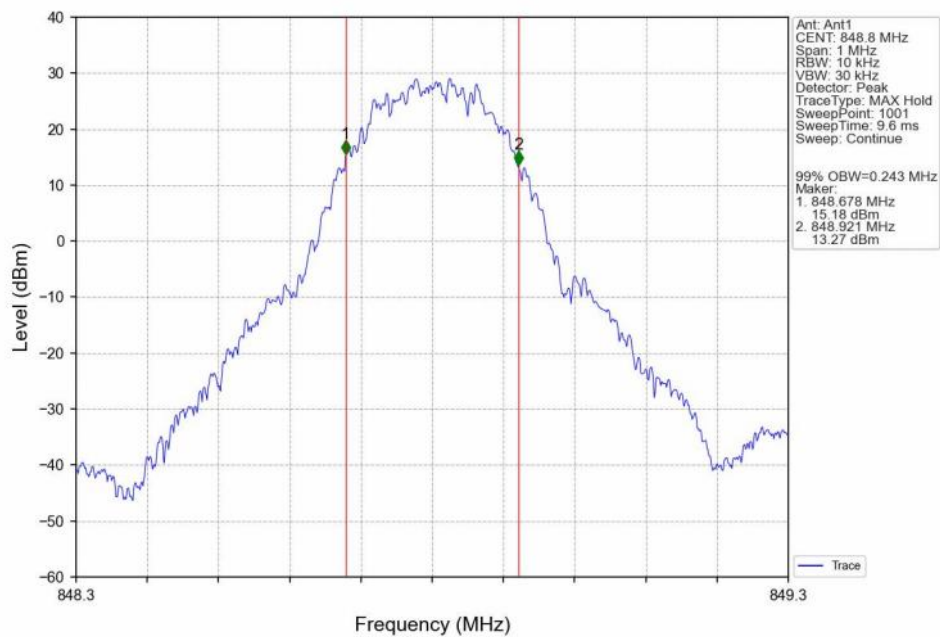
GSM850_GPRS_LCH_824.2MHz_1 TX Slot_NTNV



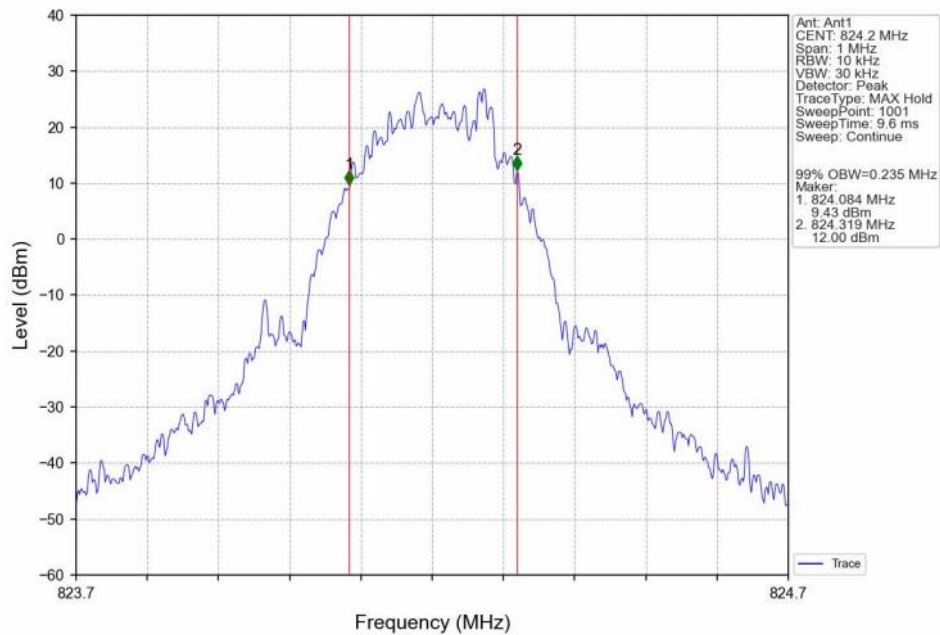
GSM850 GPRS MCH 836.6MHz 1 TX Slot_NTNV



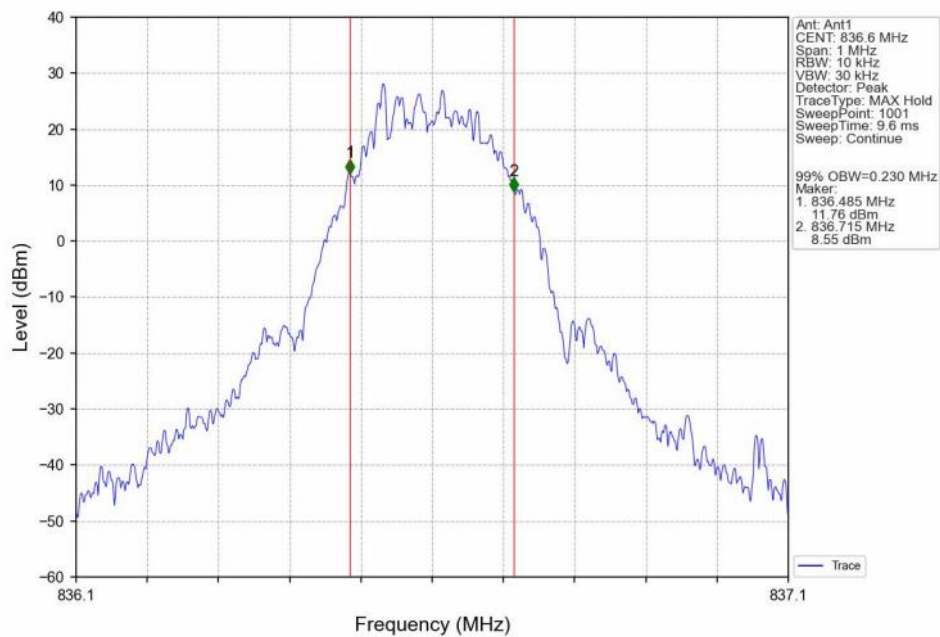
GSM850 GPRS HCH 848.8MHz 1 TX Slot_NTNV



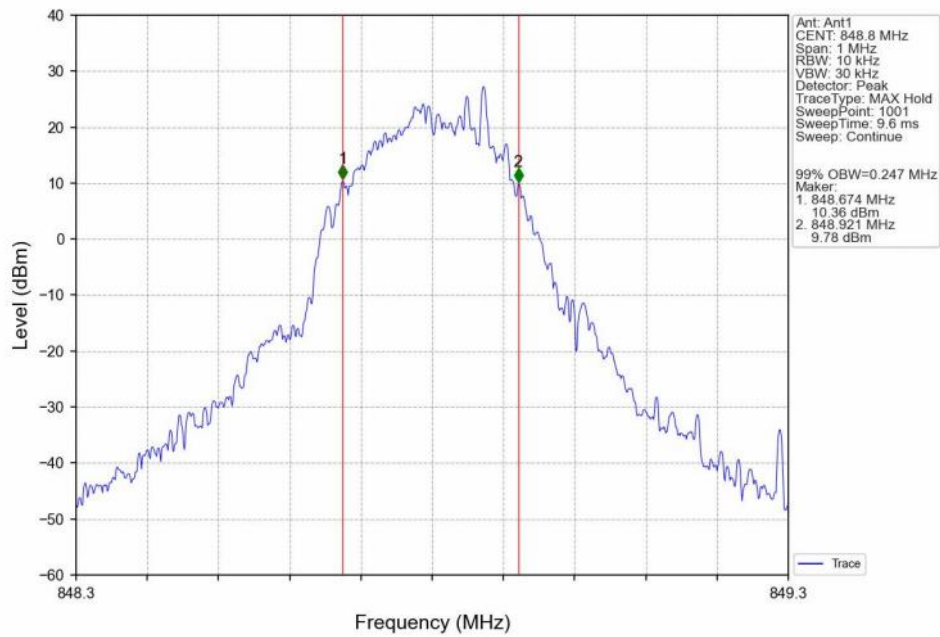
GSM850 EGPRS LCH 824.2MHz 1 TX Slot NTN



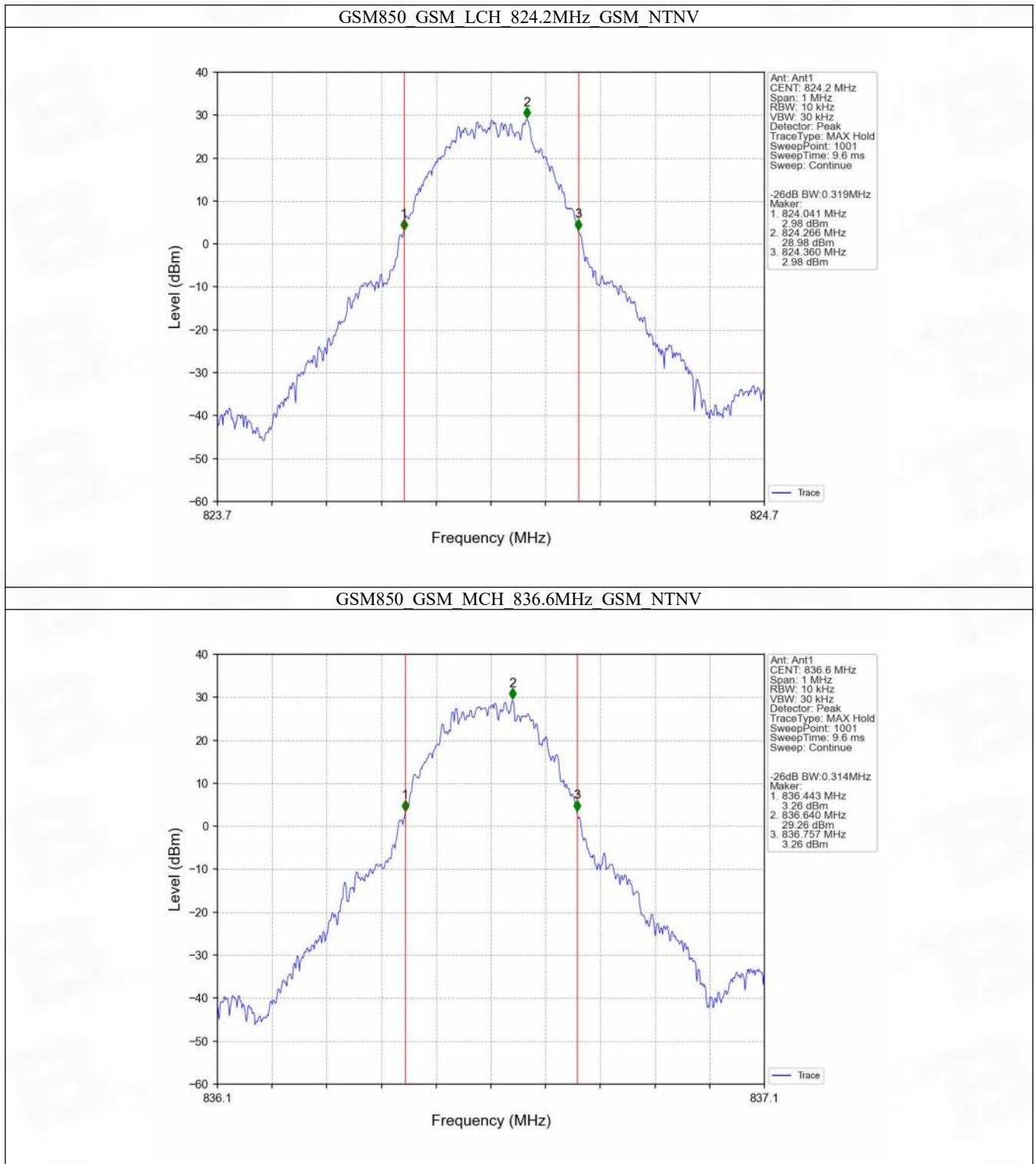
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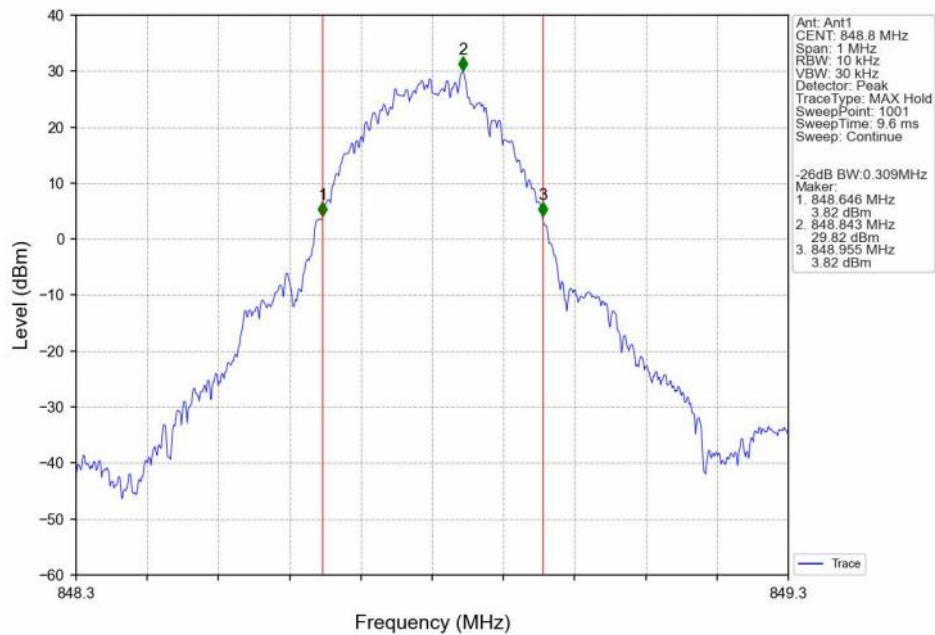
GSM850 EGPRS HCH 848.8MHz 1 TX Slot NTV



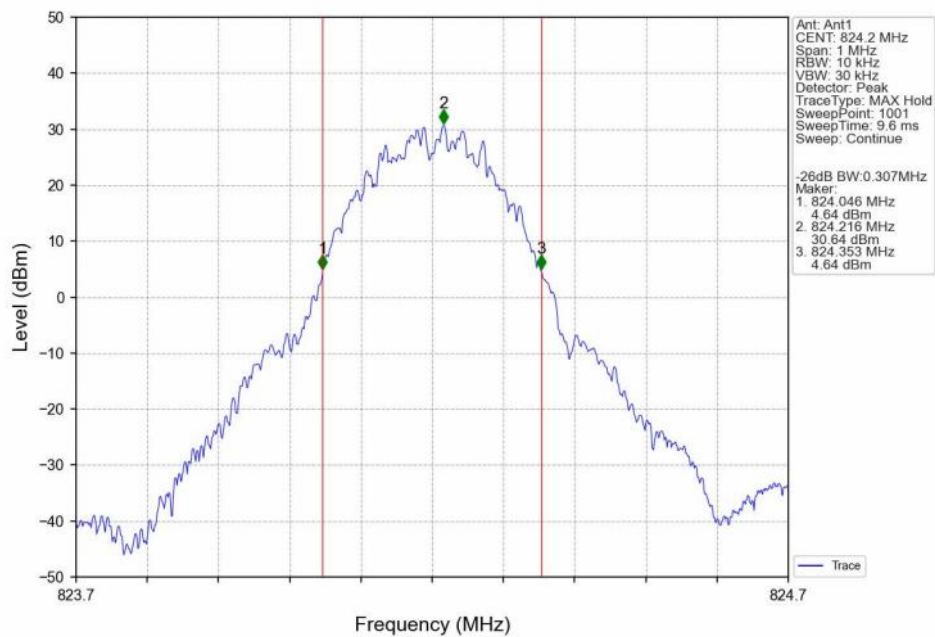
4.2.2 GSM850_XDB



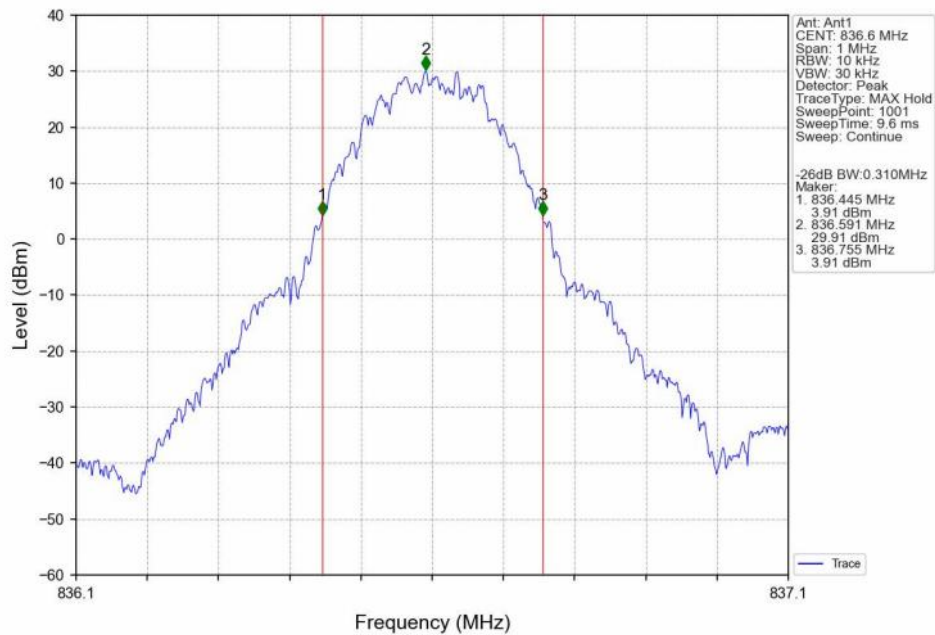
GSM850 GSM HCH 848.8MHz GSM NTNV



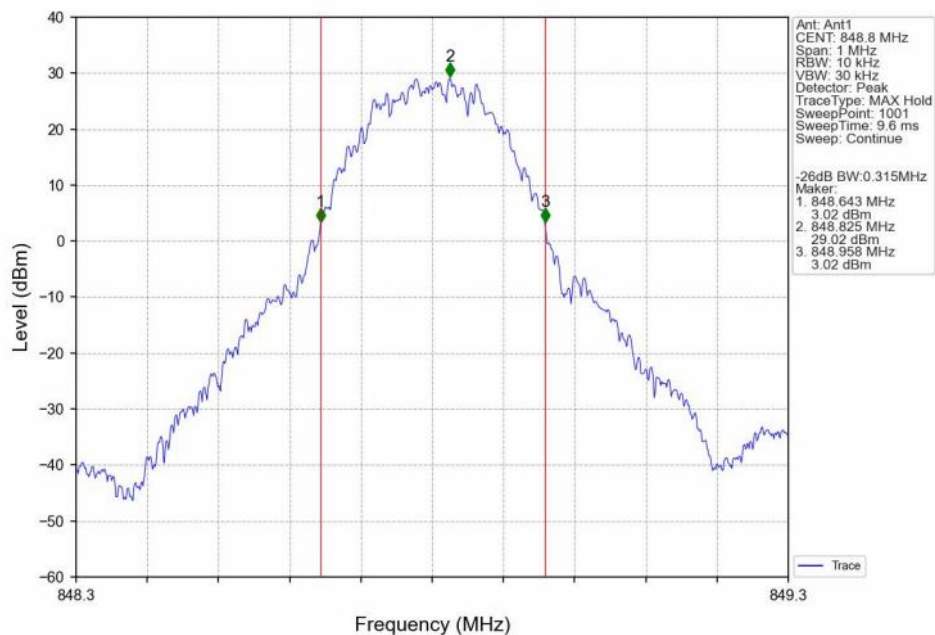
GSM850_GPRS_LCH_824.2MHz_1 TX Slot_NTNV



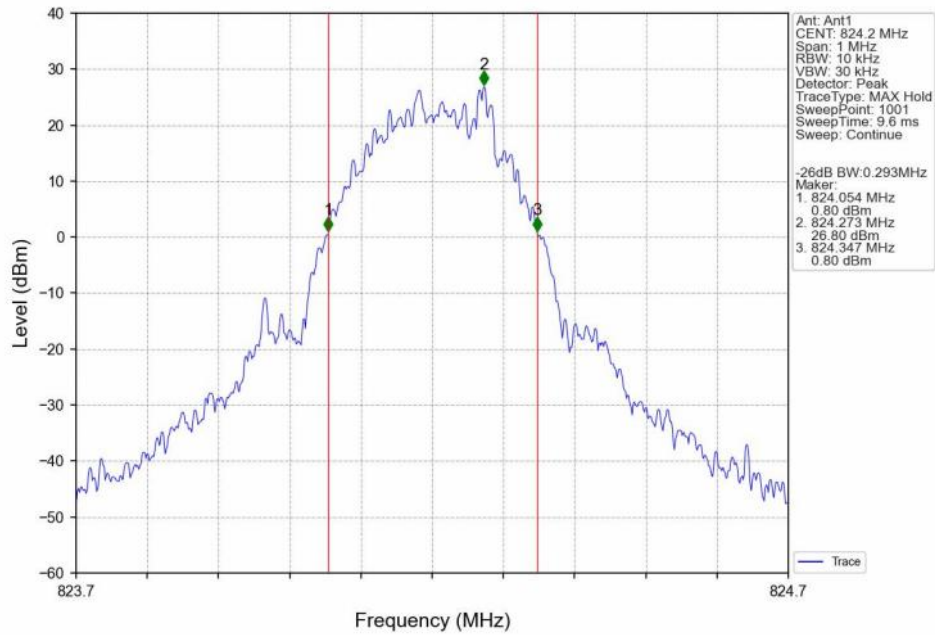
GSM850 GPRS MCH 836.6MHz 1 TX Slot_NTNV



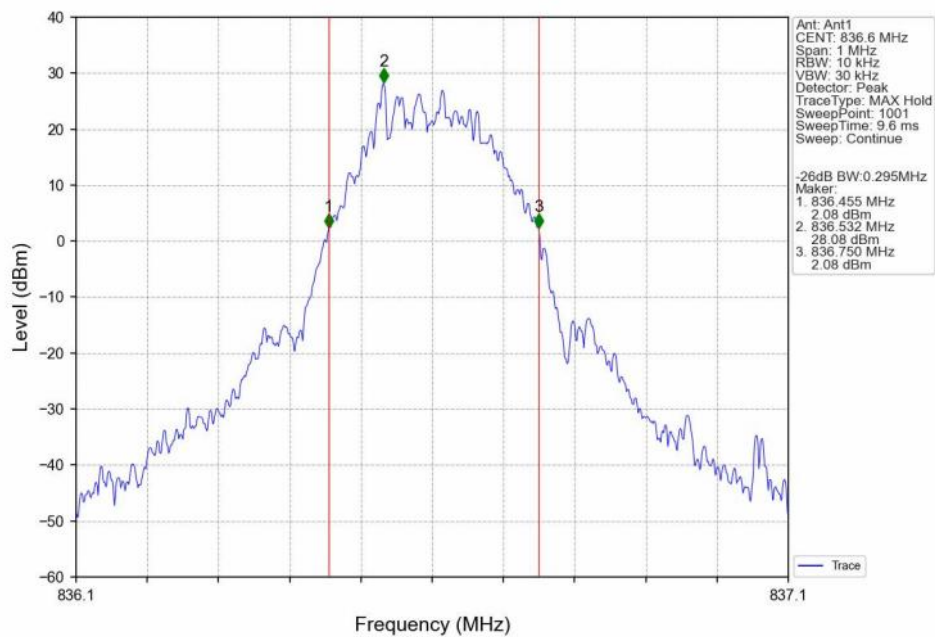
GSM850 GPRS HCH 848.8MHz 1 TX Slot_NTNV



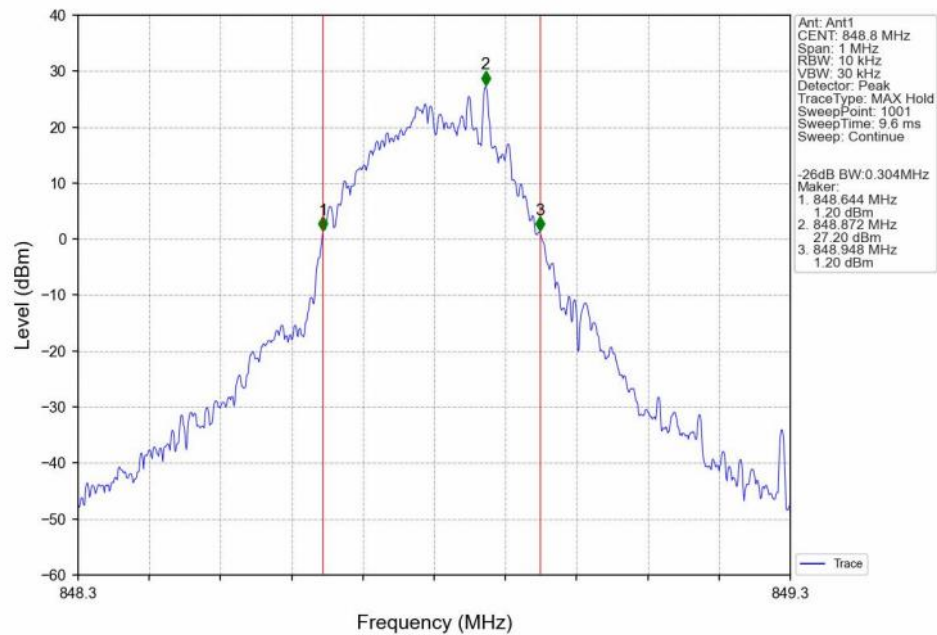
GSM850 EGPRS LCH 824.2MHz 1 TX Slot NTN



GSM850 EGPRS MCH 836.6MHz 1 TX Slot NTN



GSM850 EGPRS HCH 848.8MHz 1 TX Slot NTN



5. Peak-Average Ratio

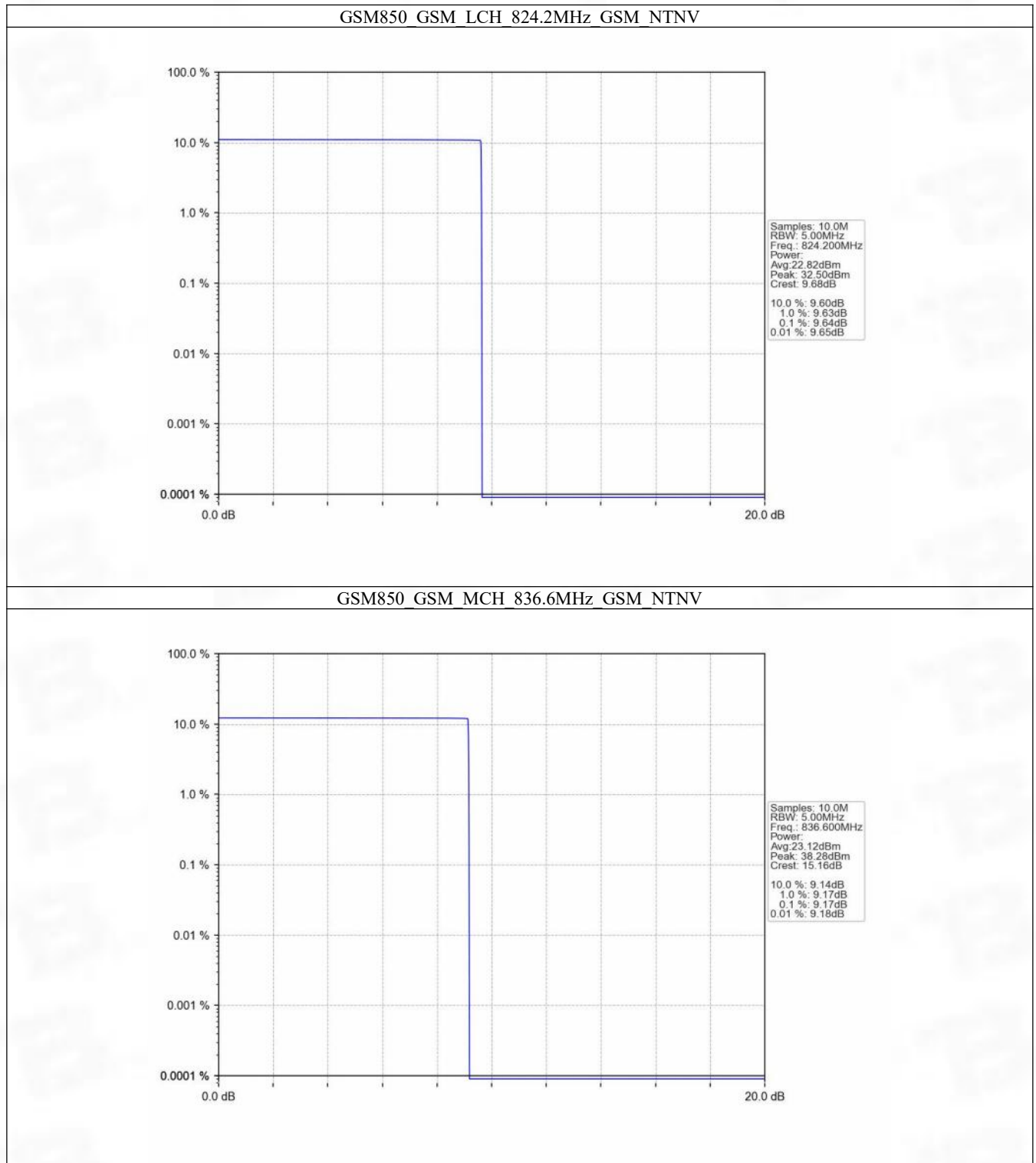
5.1 Test Result

5.1.1 GSM850

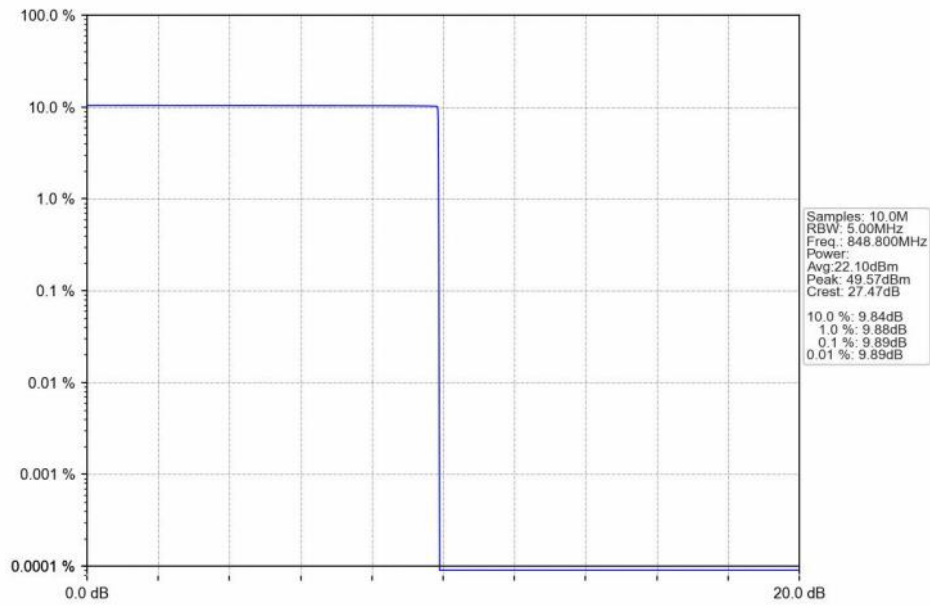
Band: GSM850						
ENV	Mode		Frequency (MHz)	Peak-Average Ratio (dB)		Verdict
	Network	Subset		Result	Limit	
NTNV	GSM	GSM	824.2	9.64	≤ 13	Pass
			836.6	9.17	≤ 13	Pass
			848.8	9.89	≤ 13	Pass
	GPRS	4 TX Slots	824.2	3.57	≤ 13	Pass
			836.6	3.52	≤ 13	Pass
			848.8	3.59	≤ 13	Pass
	EGPRS	4 TX Slots	824.2	10.99	≤ 13	Pass
			836.6	6.57	≤ 13	Pass
			848.8	11.13	≤ 13	Pass

5.2 Test Graph

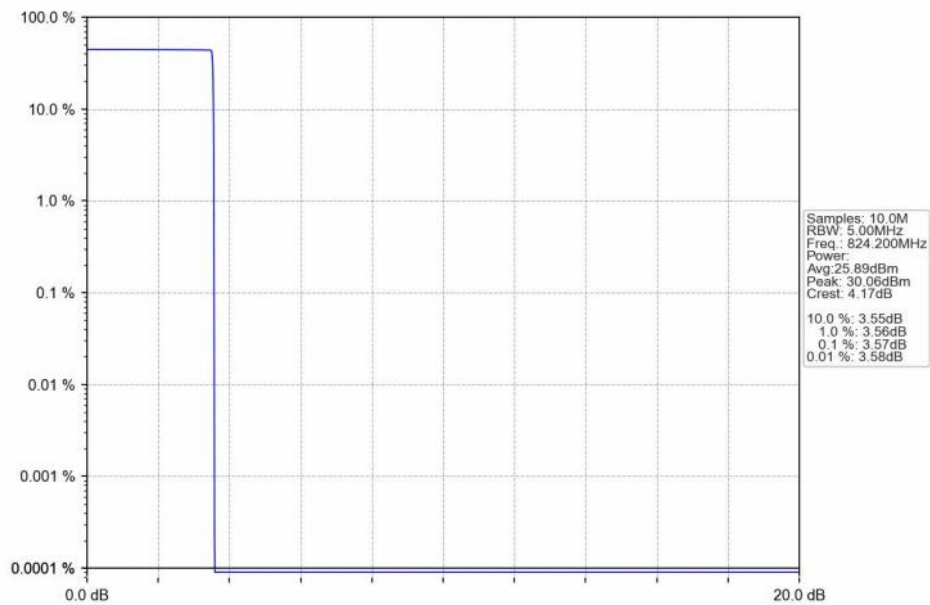
5.2.1 GSM850



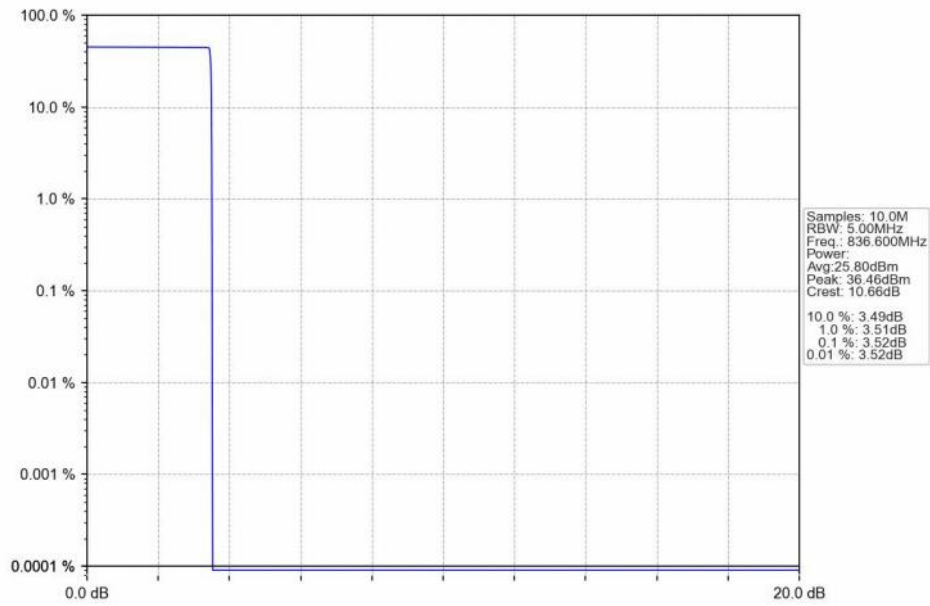
GSM850 GSM HCH 848.8MHz GSM NTNV



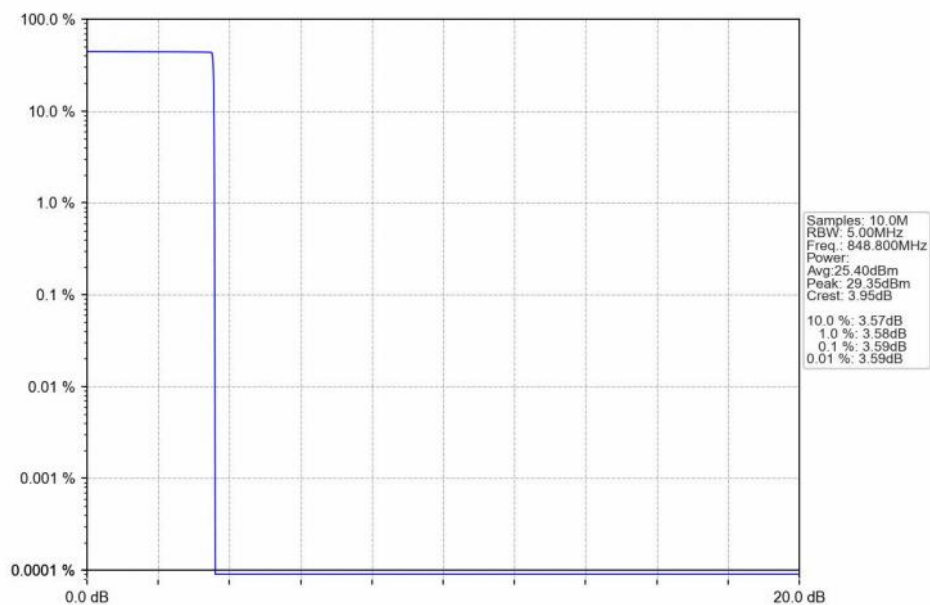
GSM850 GPRS LCH 824.2MHz 4 TX Slots NTNV



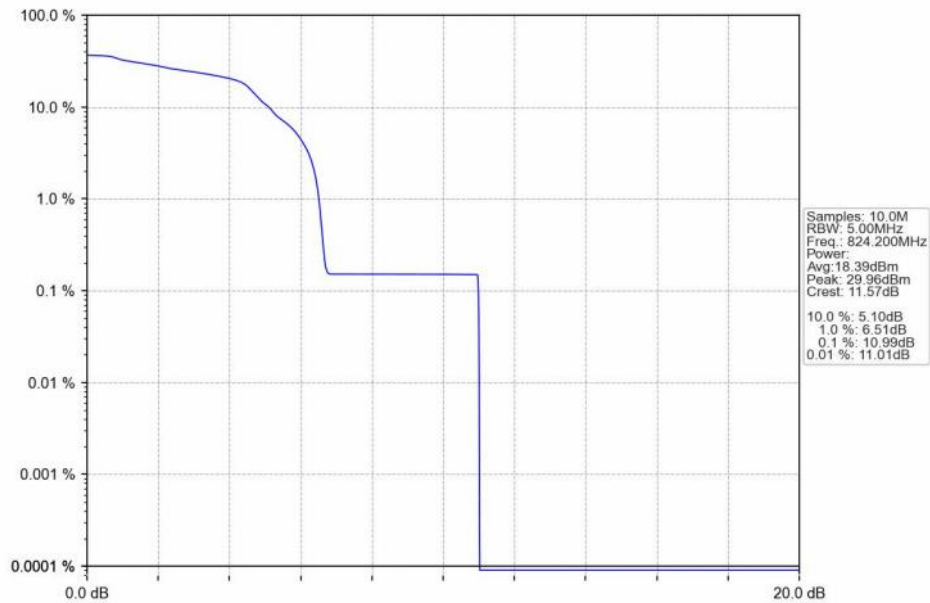
GSM850 GPRS MCH 836.6MHz 4 TX Slots NTV



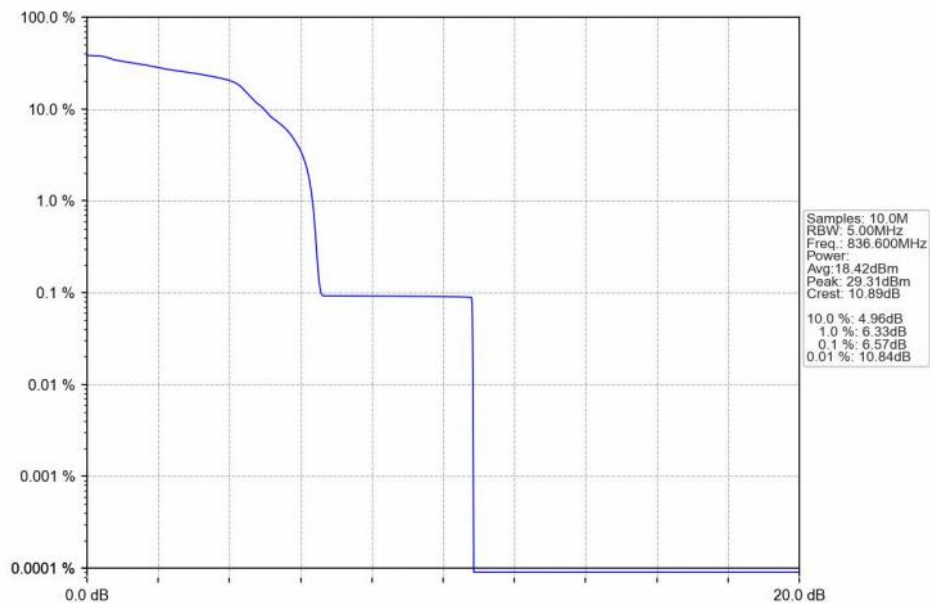
GSM850 GPRS HCH 848.8MHz 4 TX Slots NTV



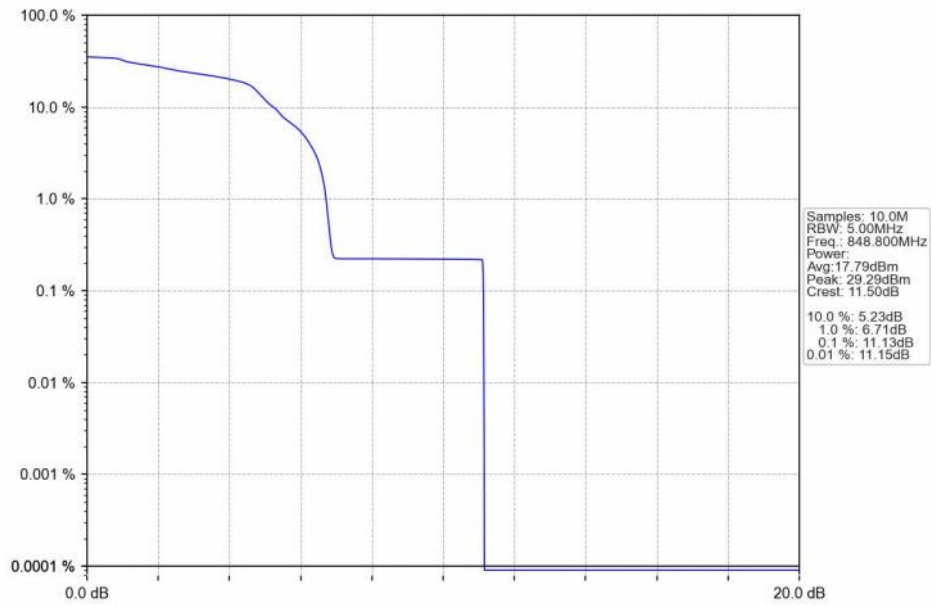
GSM850_EGPRS_LCH_824.2MHz_4 TX Slots_NTNV



GSM850_EGPRS_MCH_836.6MHz_4 TX Slots_NTNV



GSM850 EGPRS HCH 848.8MHz 4 TX Slots_NTNV



6. Spurious Emission

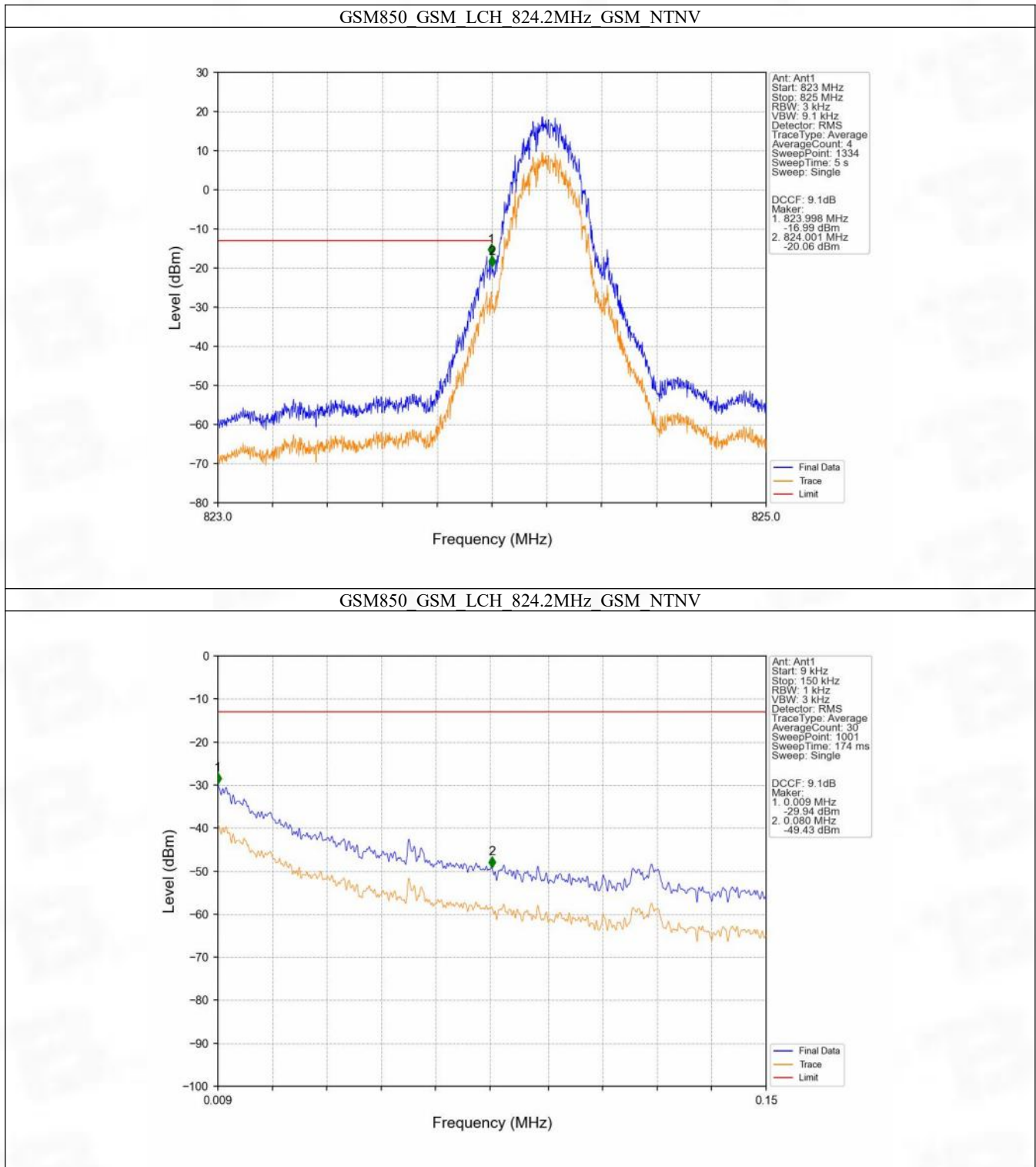
6.1 Test Result

6.1.1 GSM850

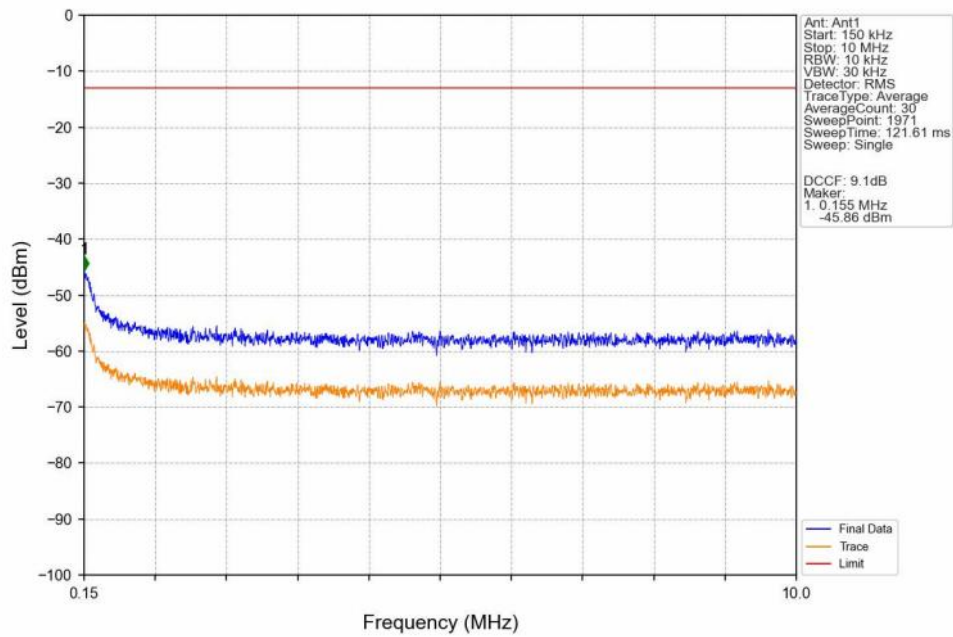
Band: GSM850						
ENV	Mode		Frequency (MHz)	Spurious Emission		Verdict
	Network	Subset		Result	Limit	
NTNV	GSM	GSM	824.2	Refer To Test Graph	Pass	
			836.6	Refer To Test Graph	Pass	
			848.8	Refer To Test Graph	Pass	
	GPRS	1 TX Slot	824.2	Refer To Test Graph	Pass	
			836.6	Refer To Test Graph	Pass	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

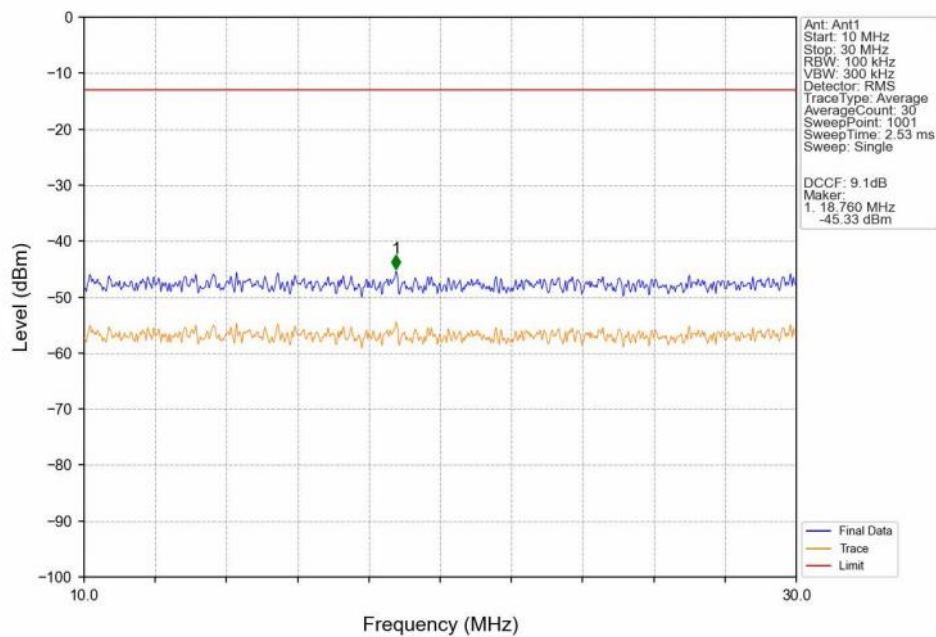
6.2.1 GSM850



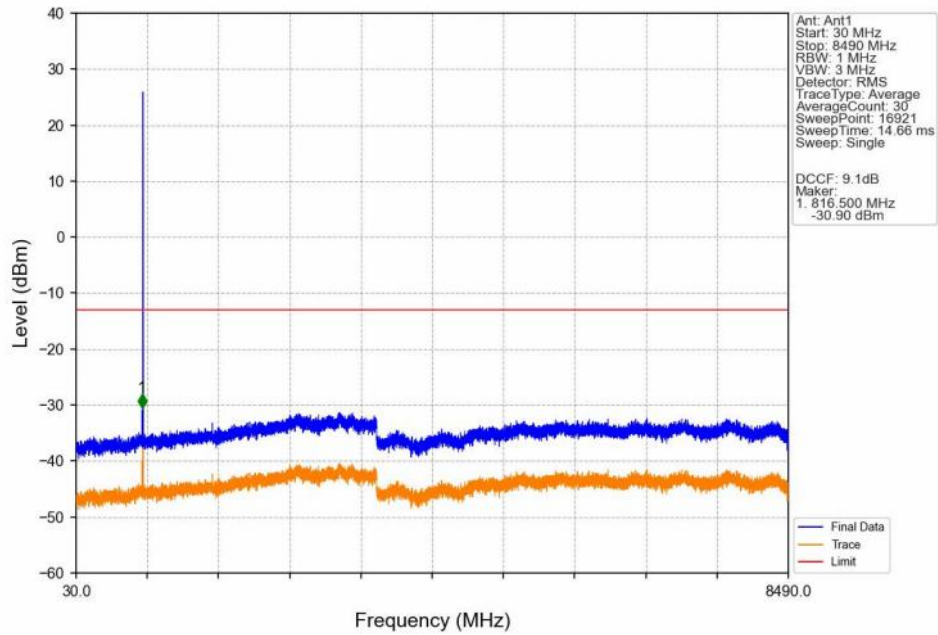
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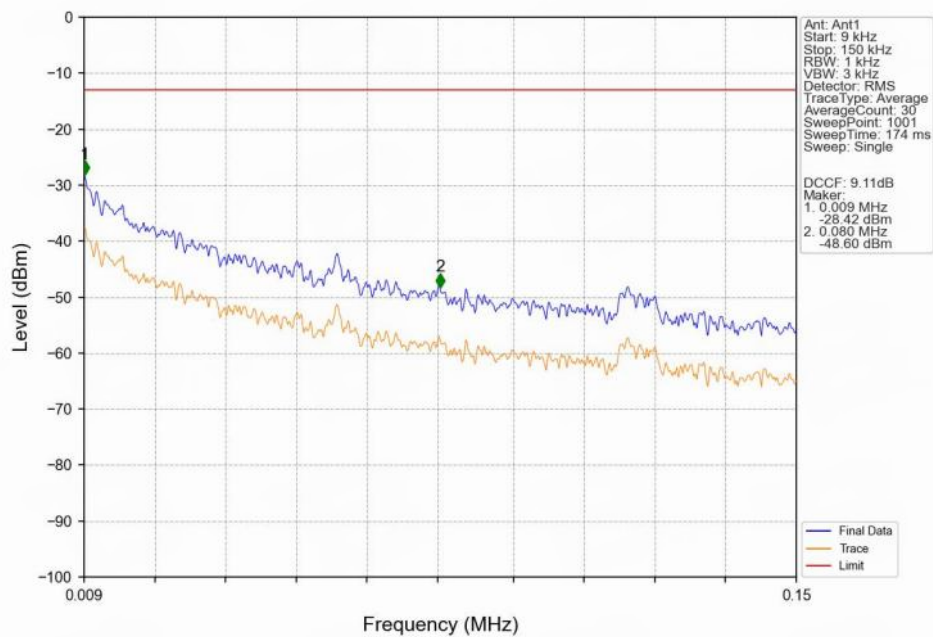
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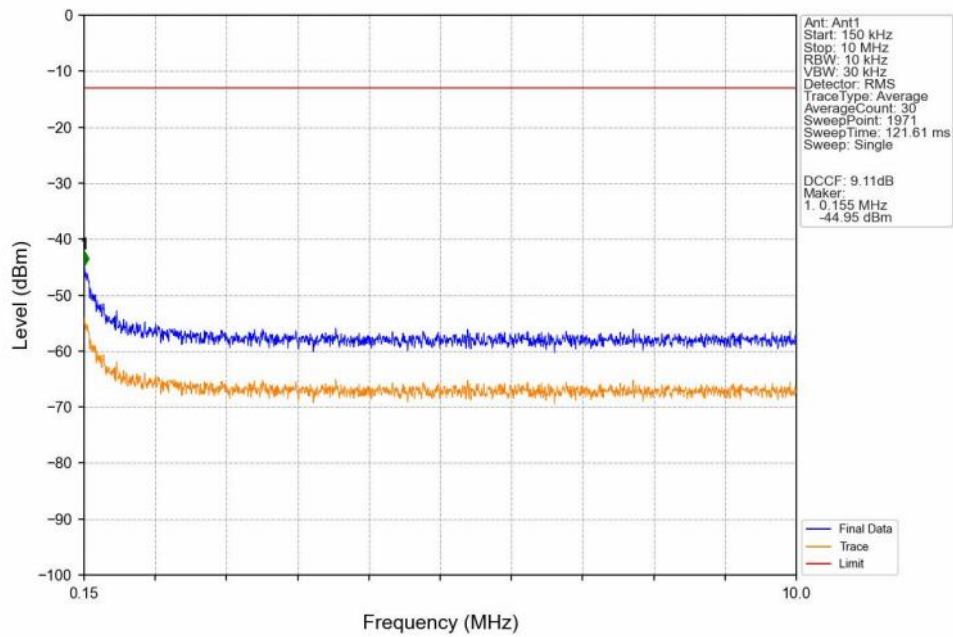
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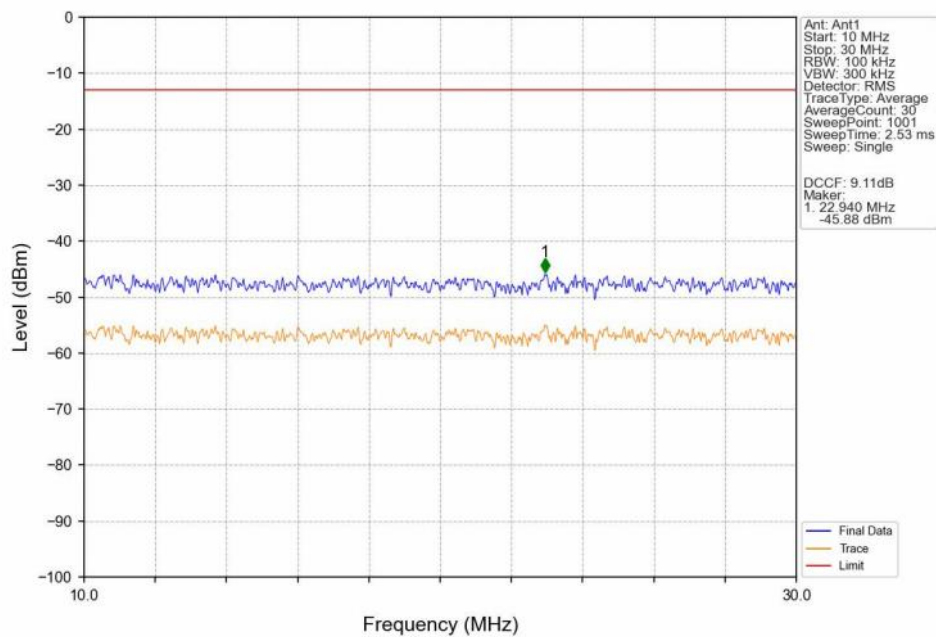
GSM850 GSM MCH 836.6MHz GSM NTNV



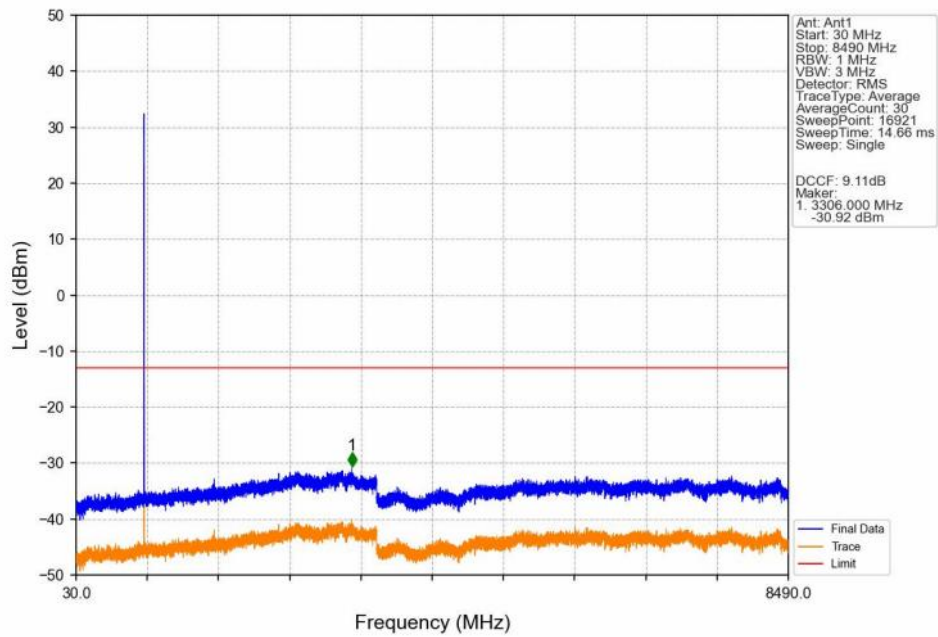
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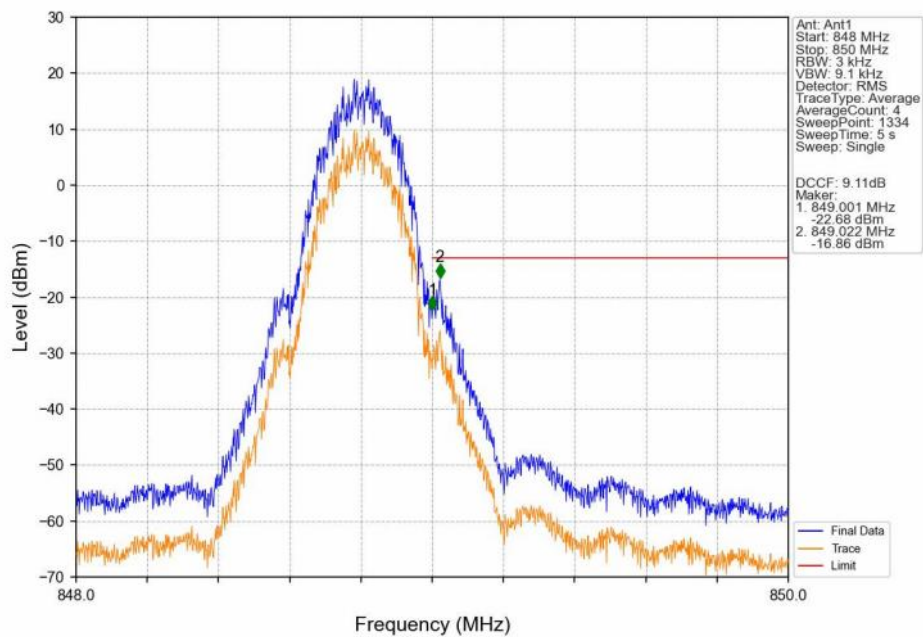
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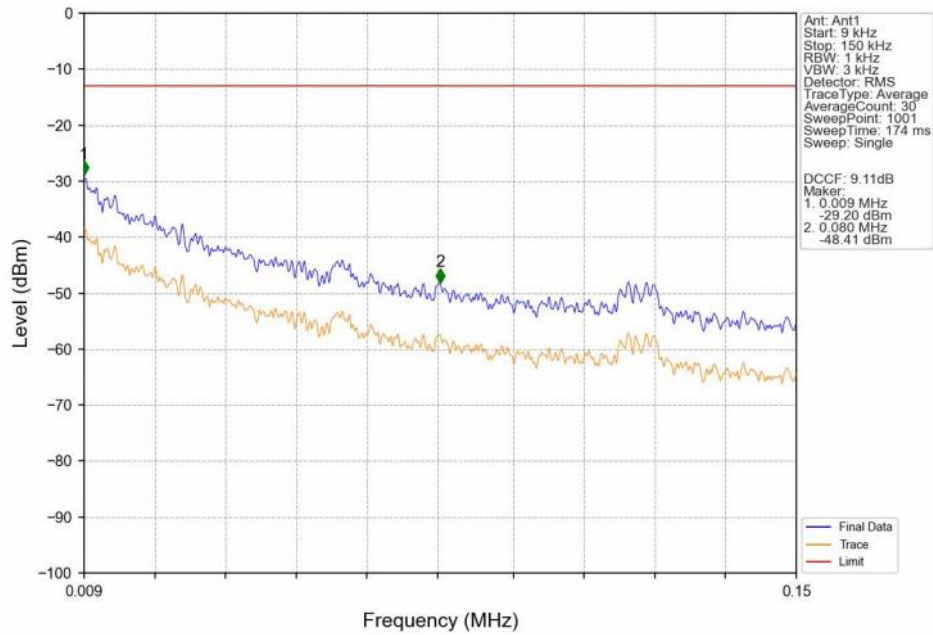
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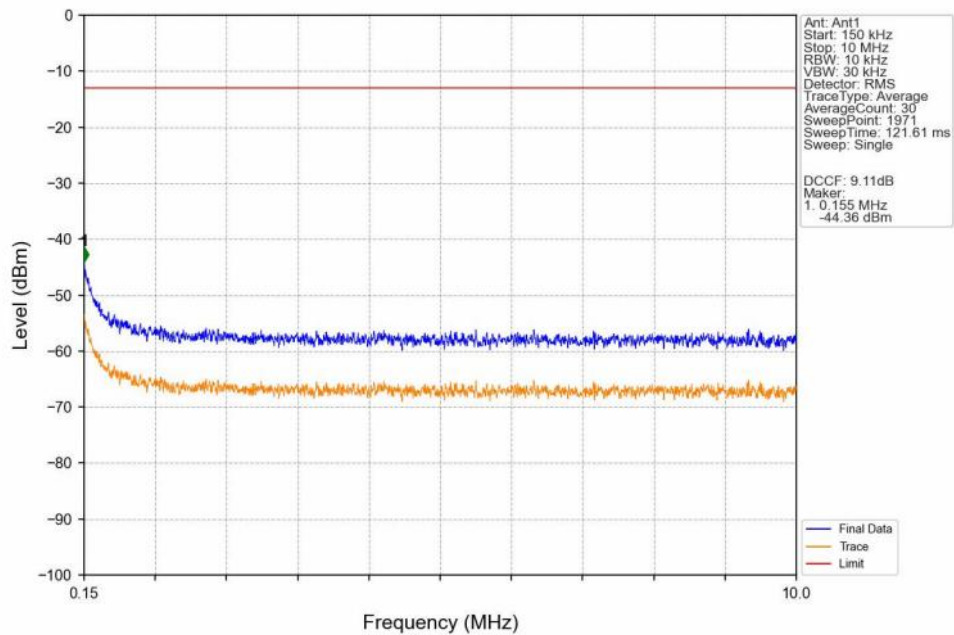
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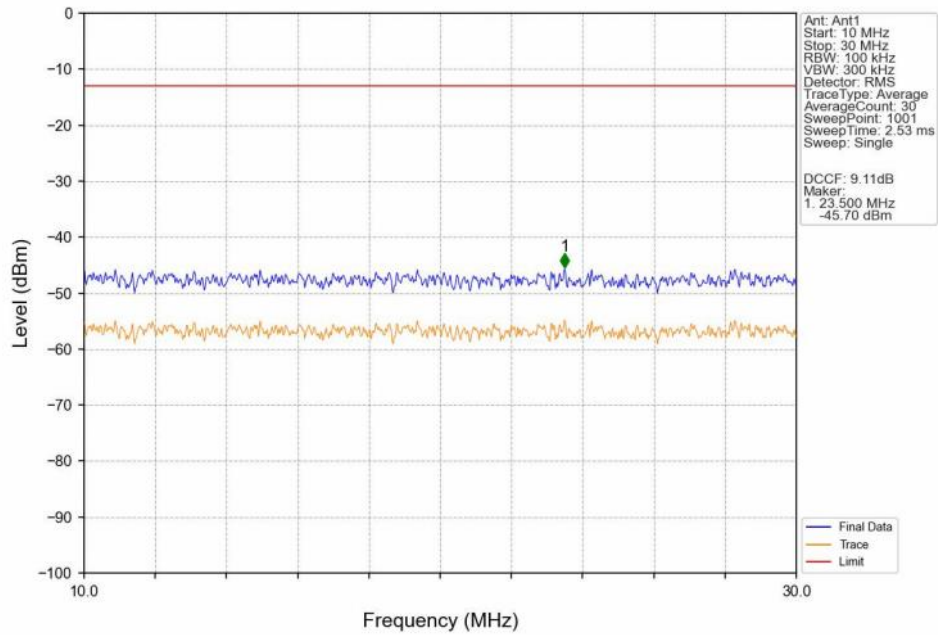
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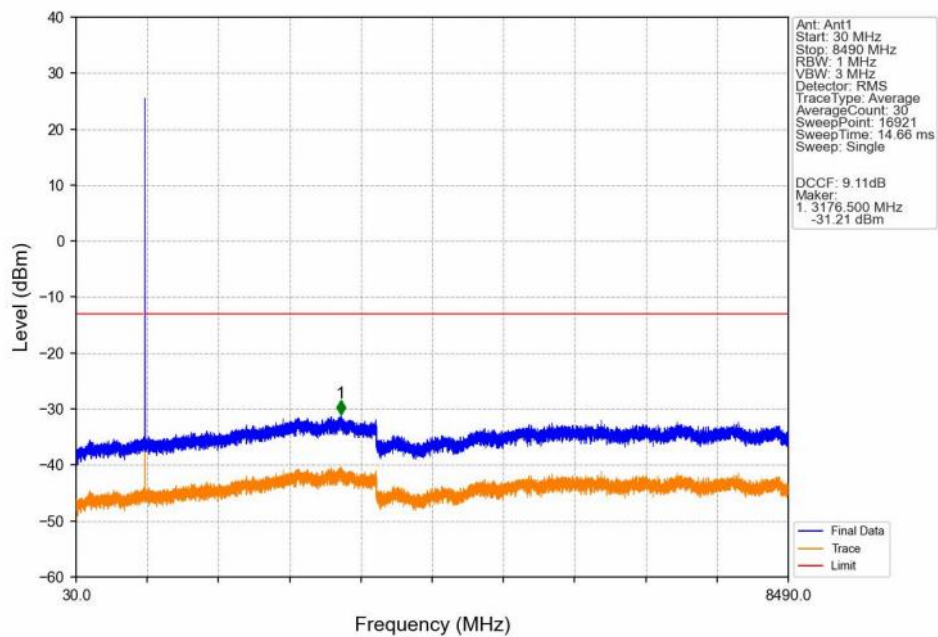
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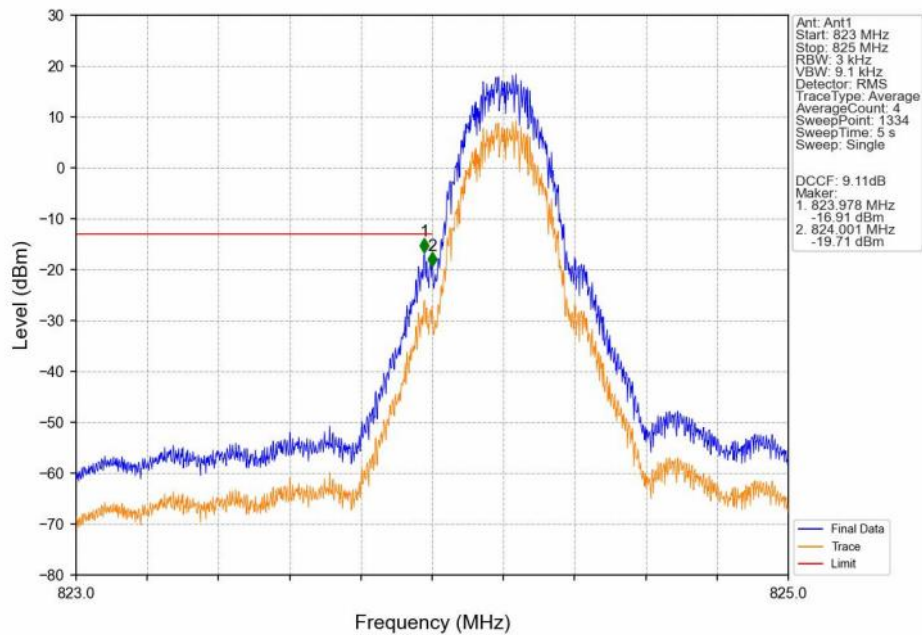
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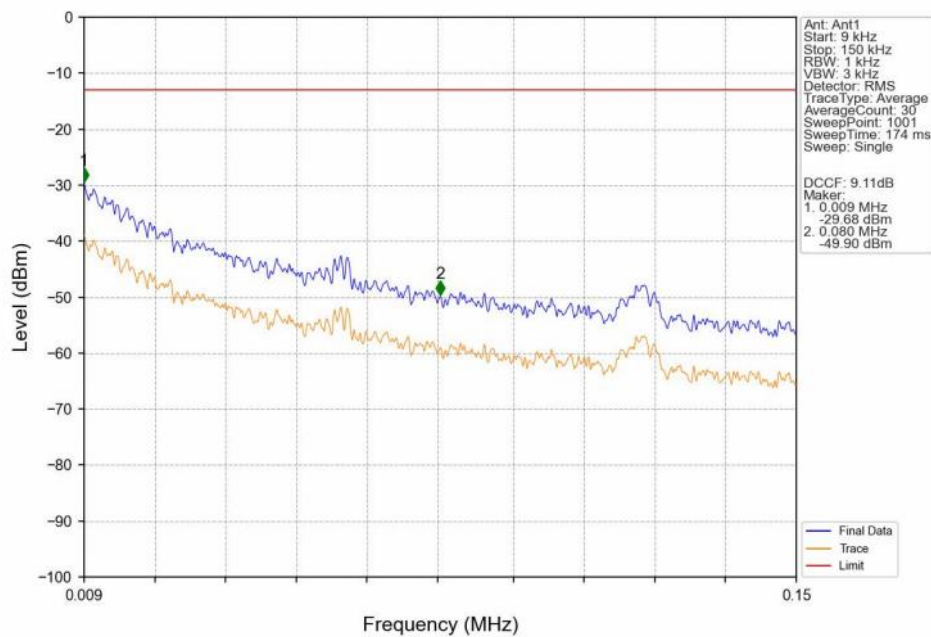
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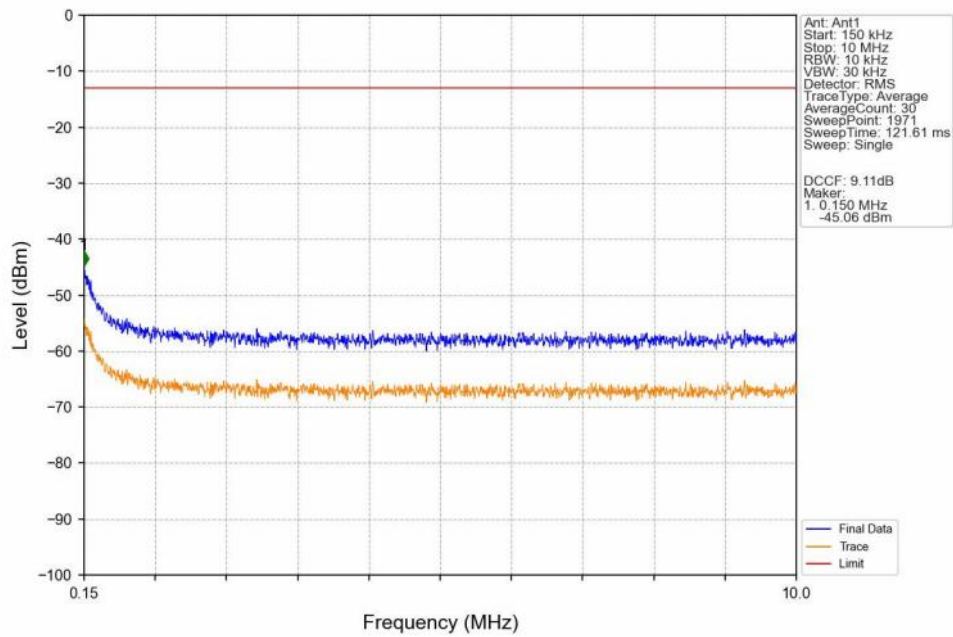
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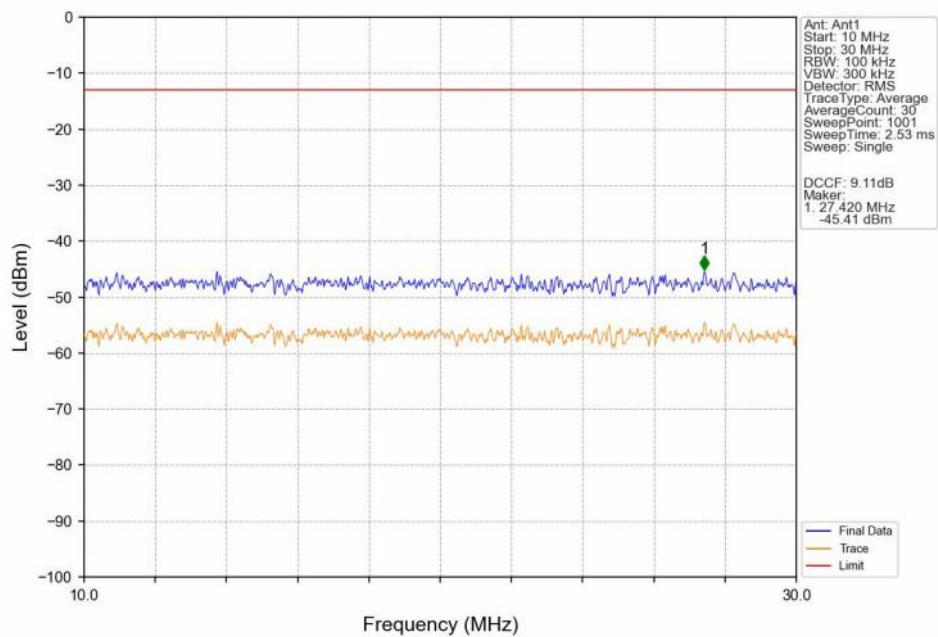
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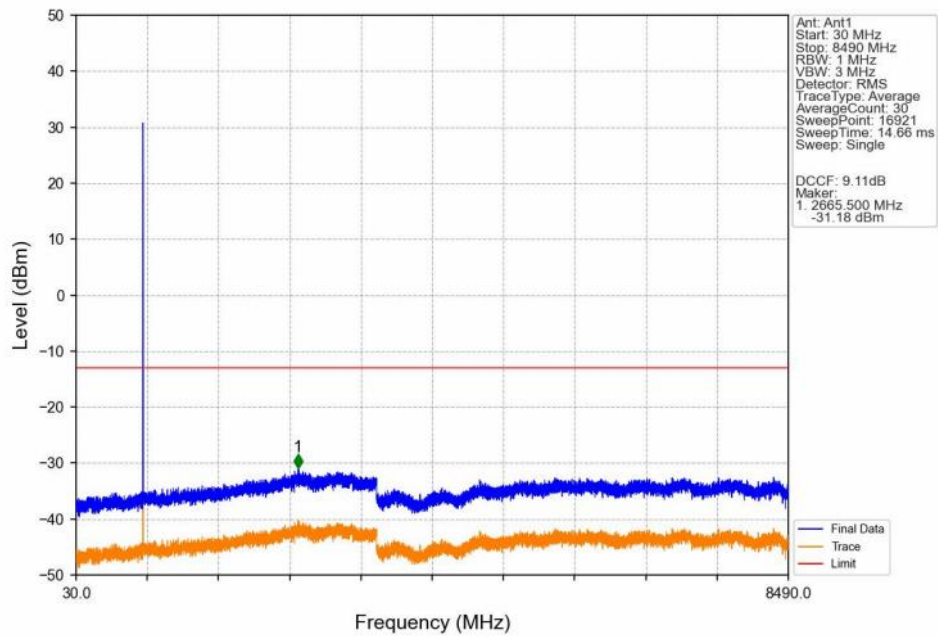
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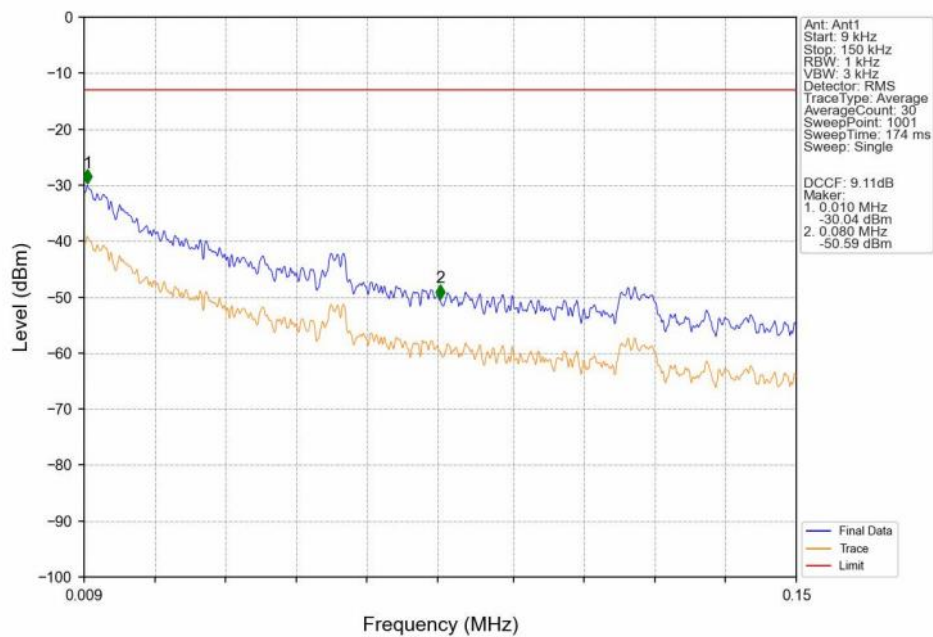
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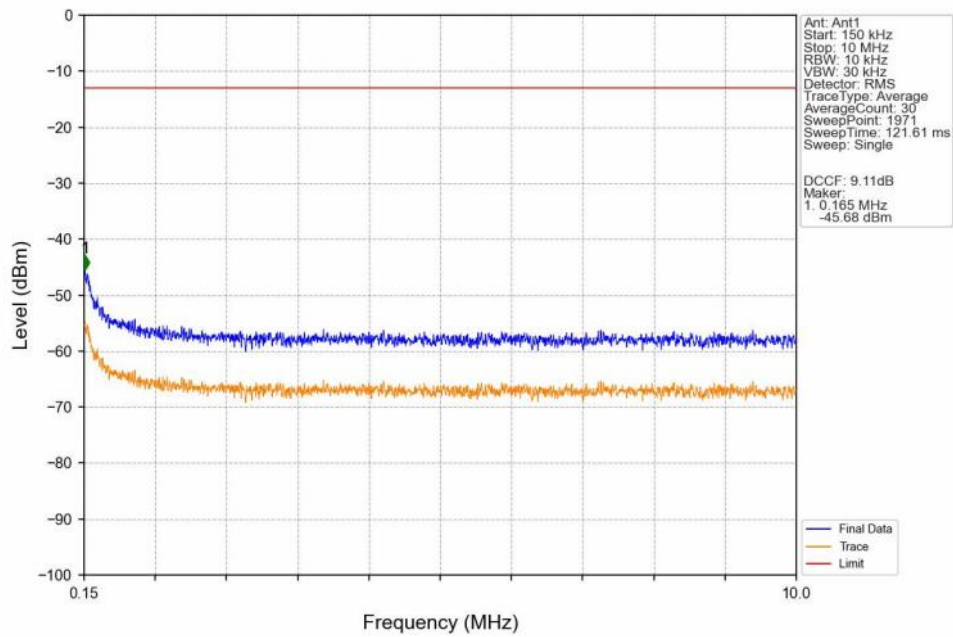
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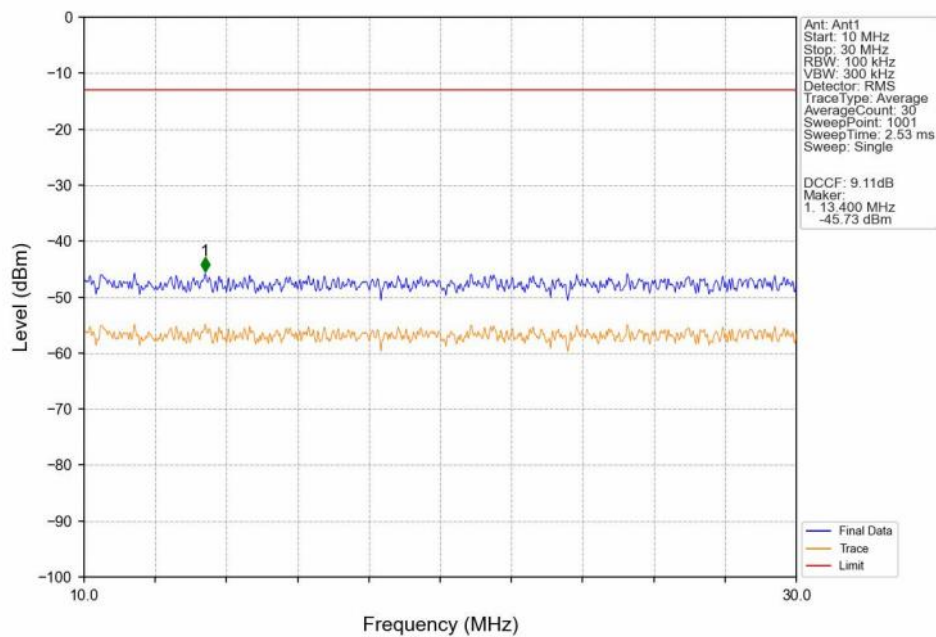
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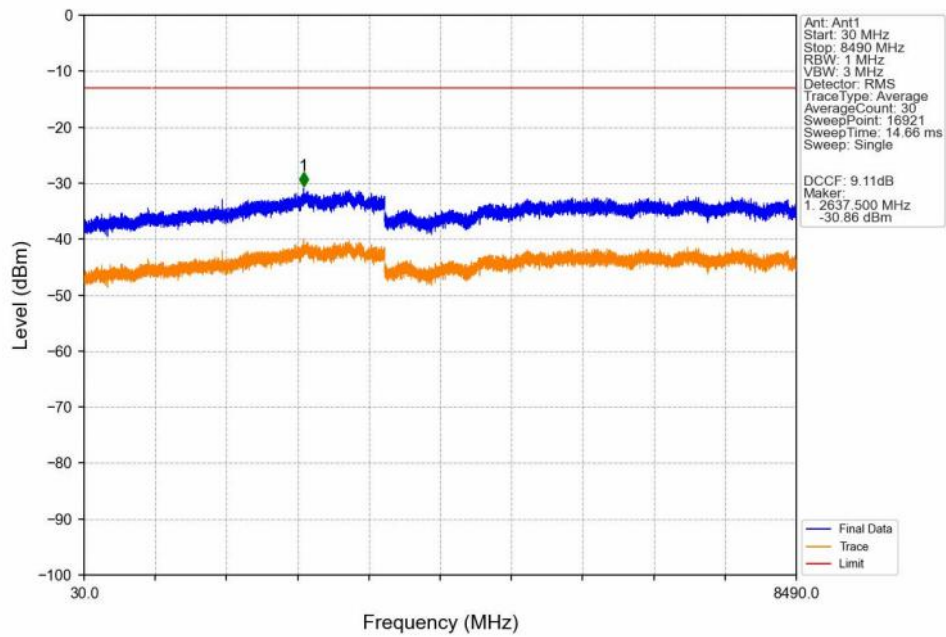
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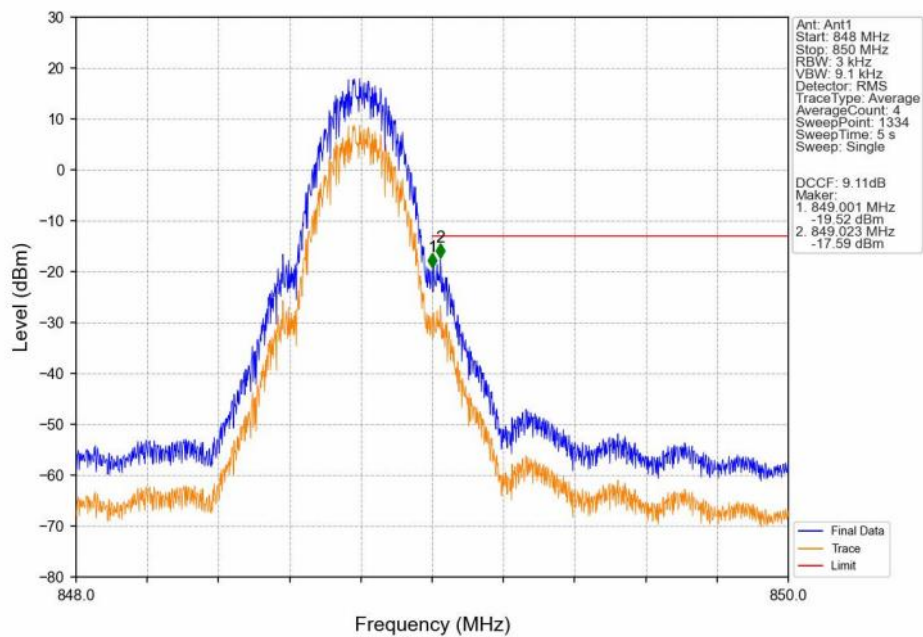
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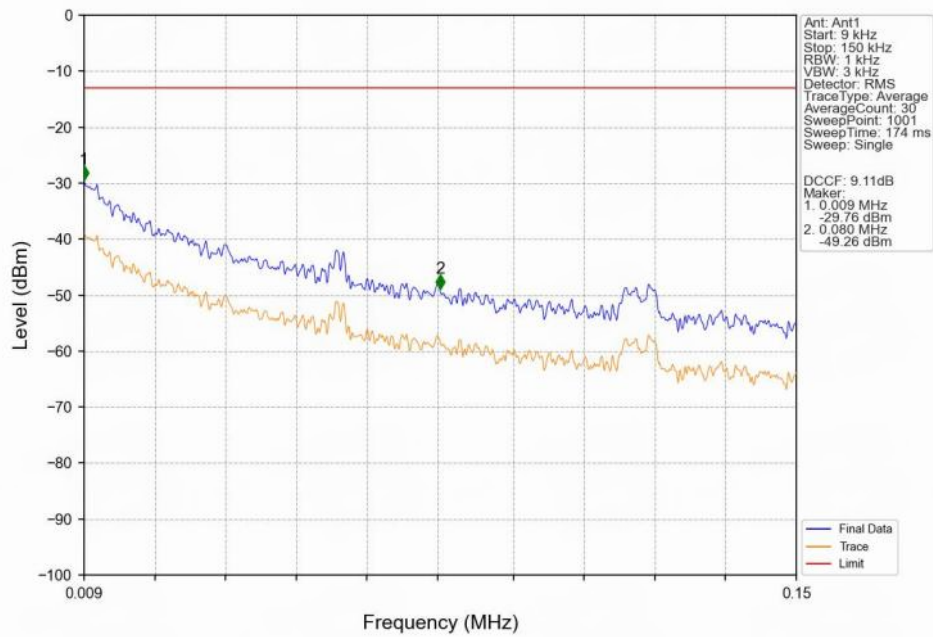
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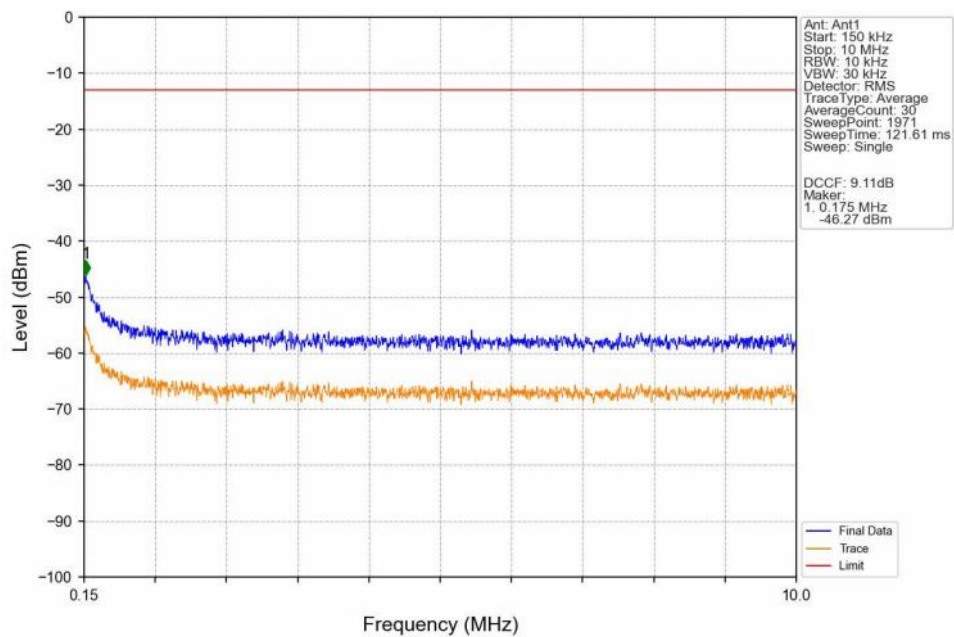
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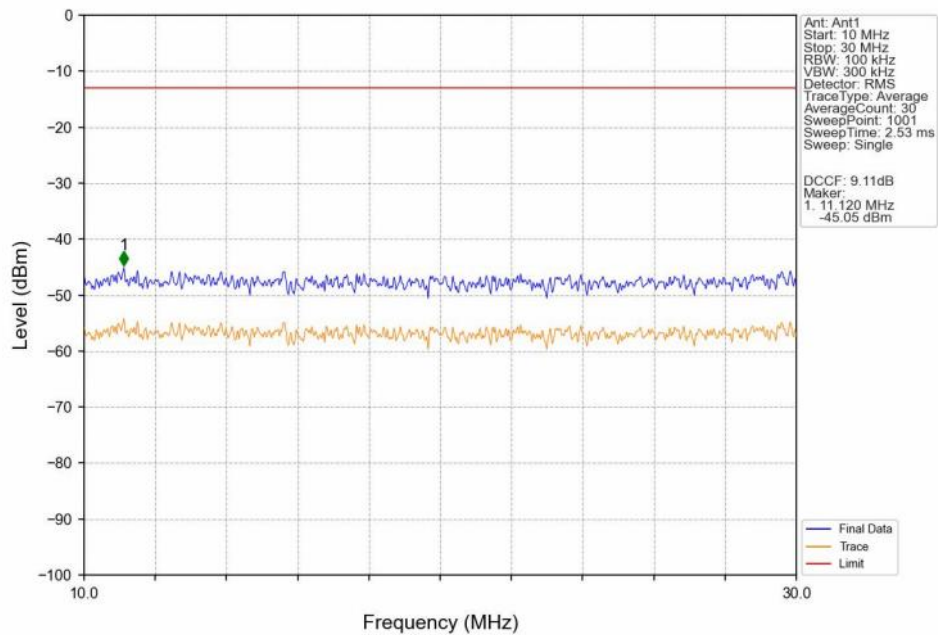
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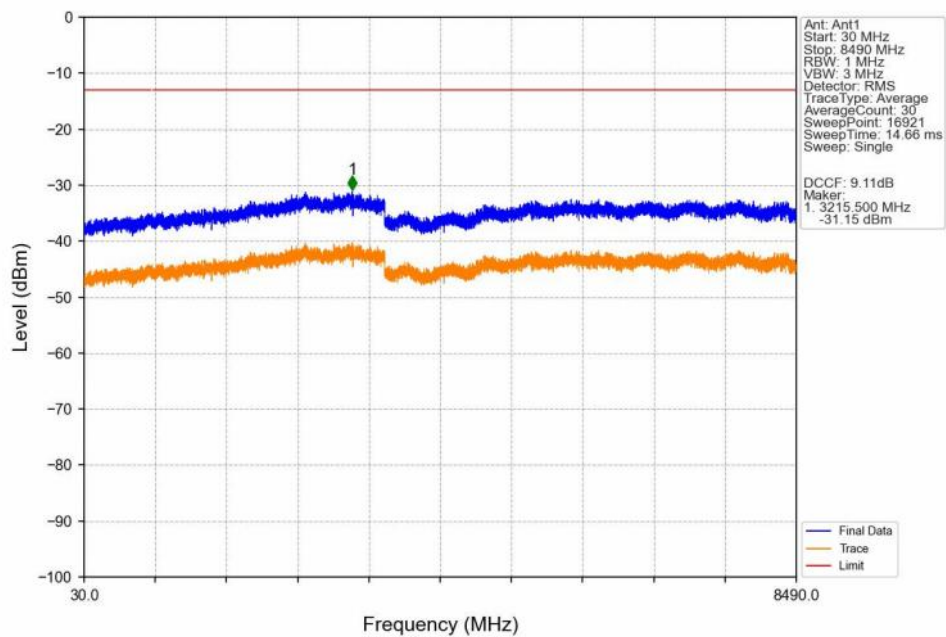
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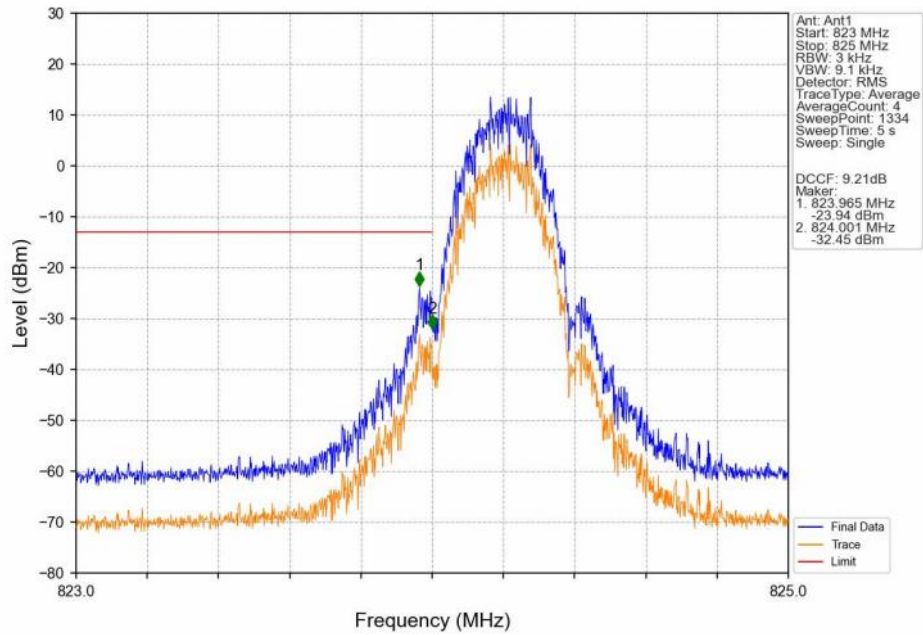
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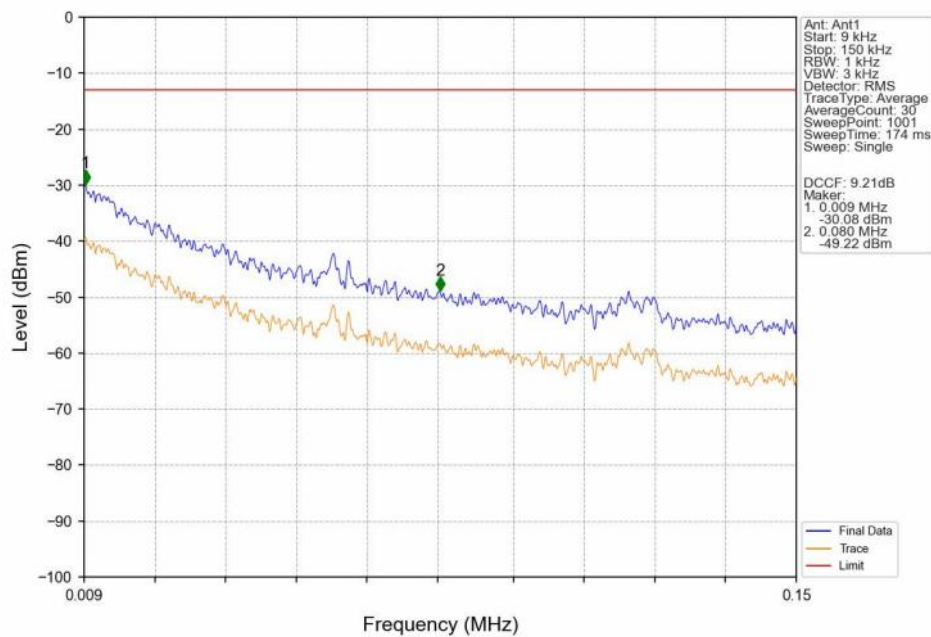
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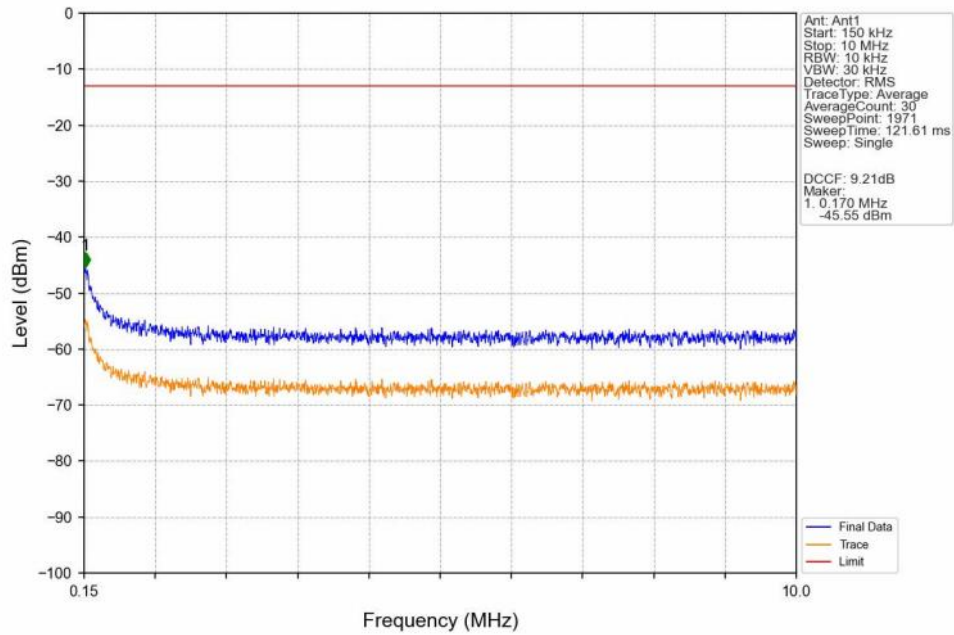
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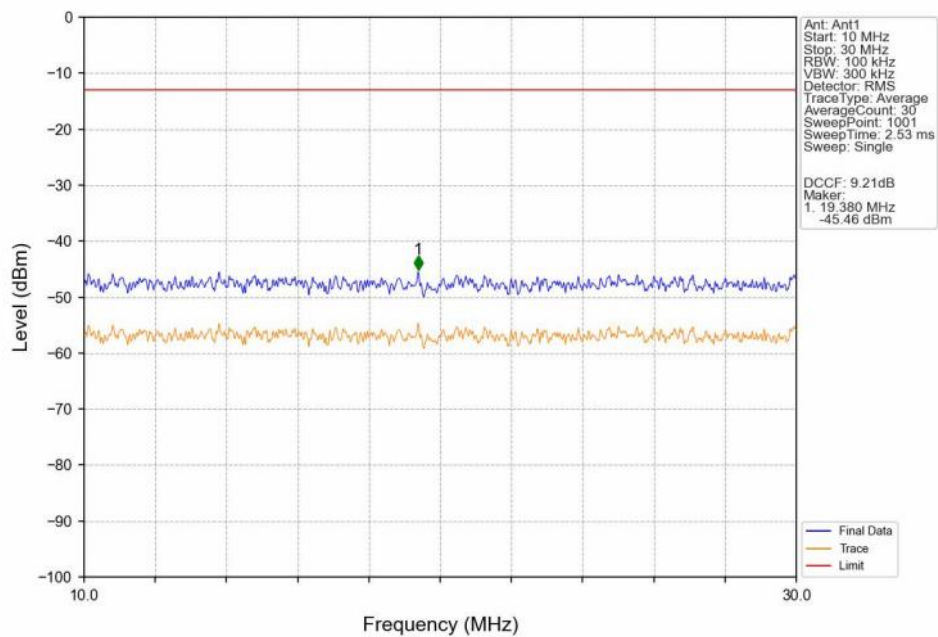
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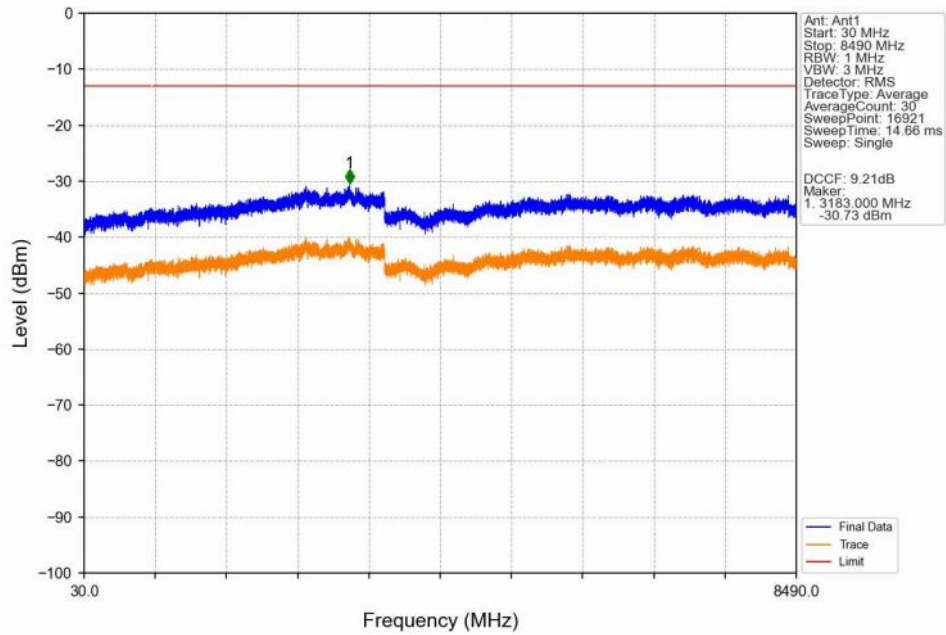
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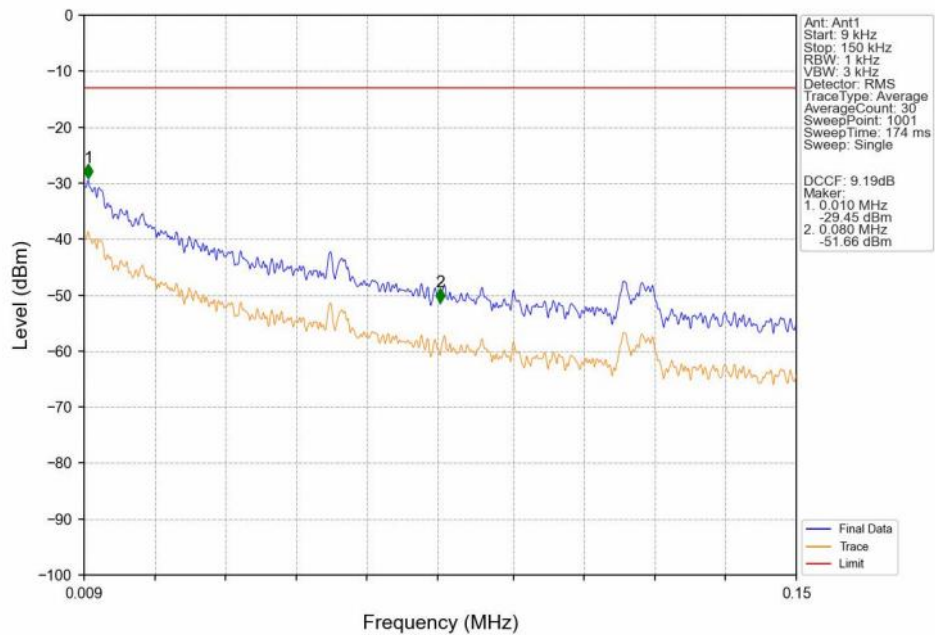
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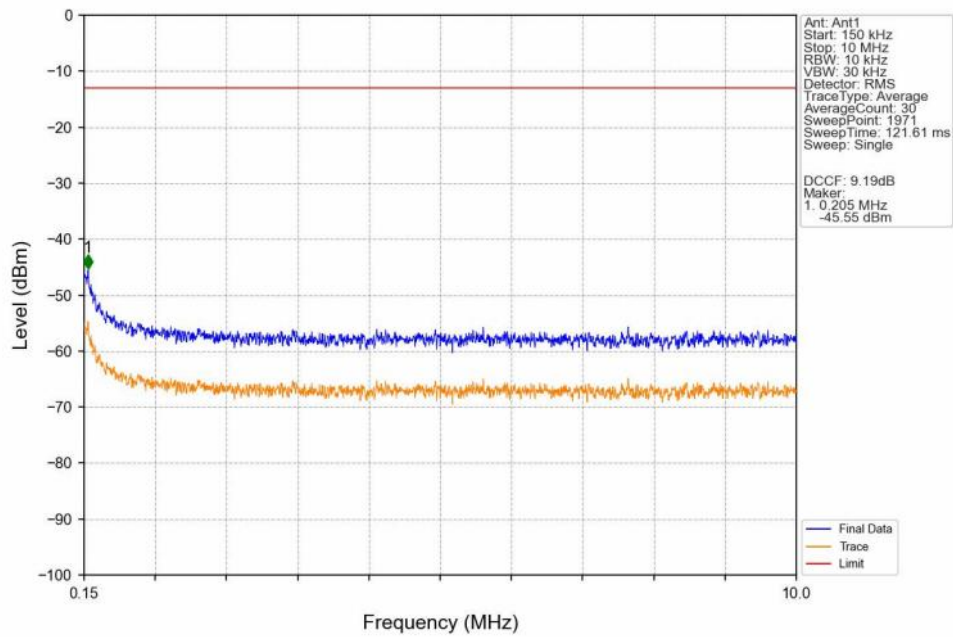
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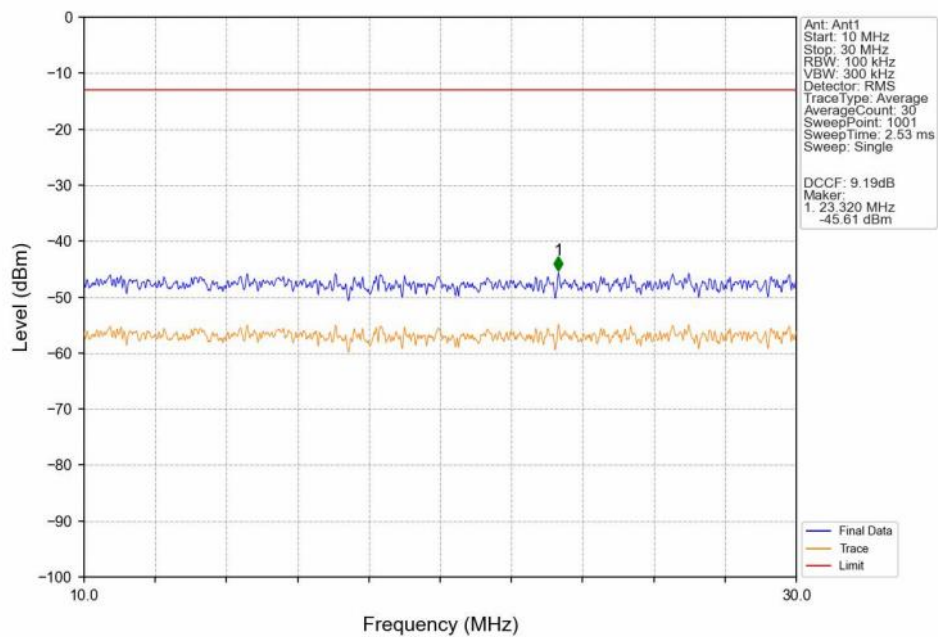
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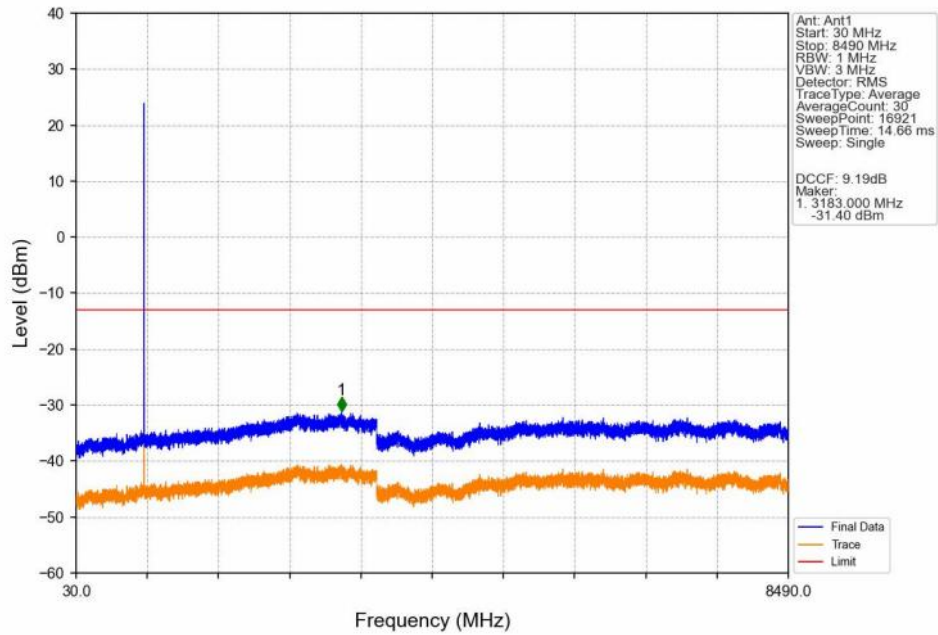
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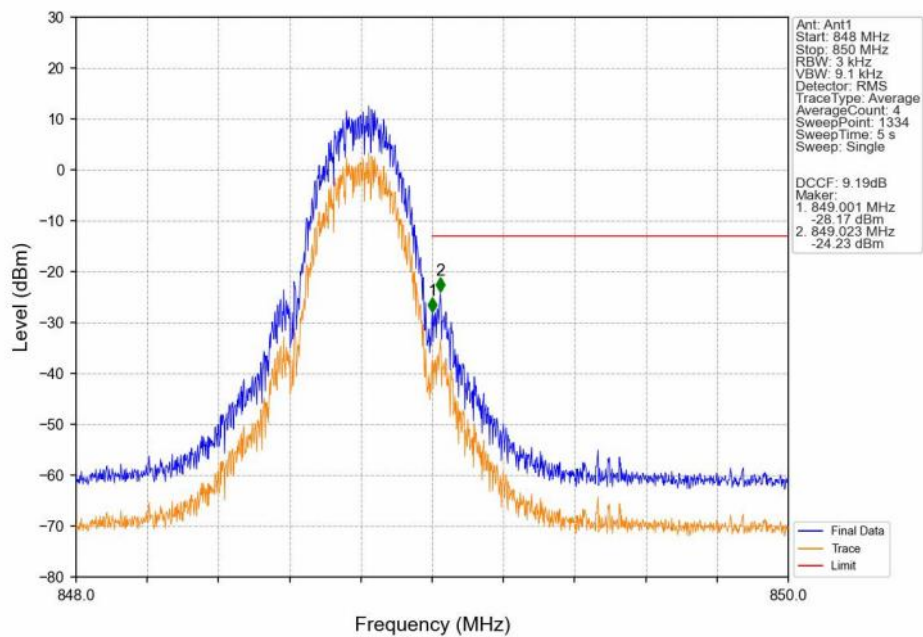
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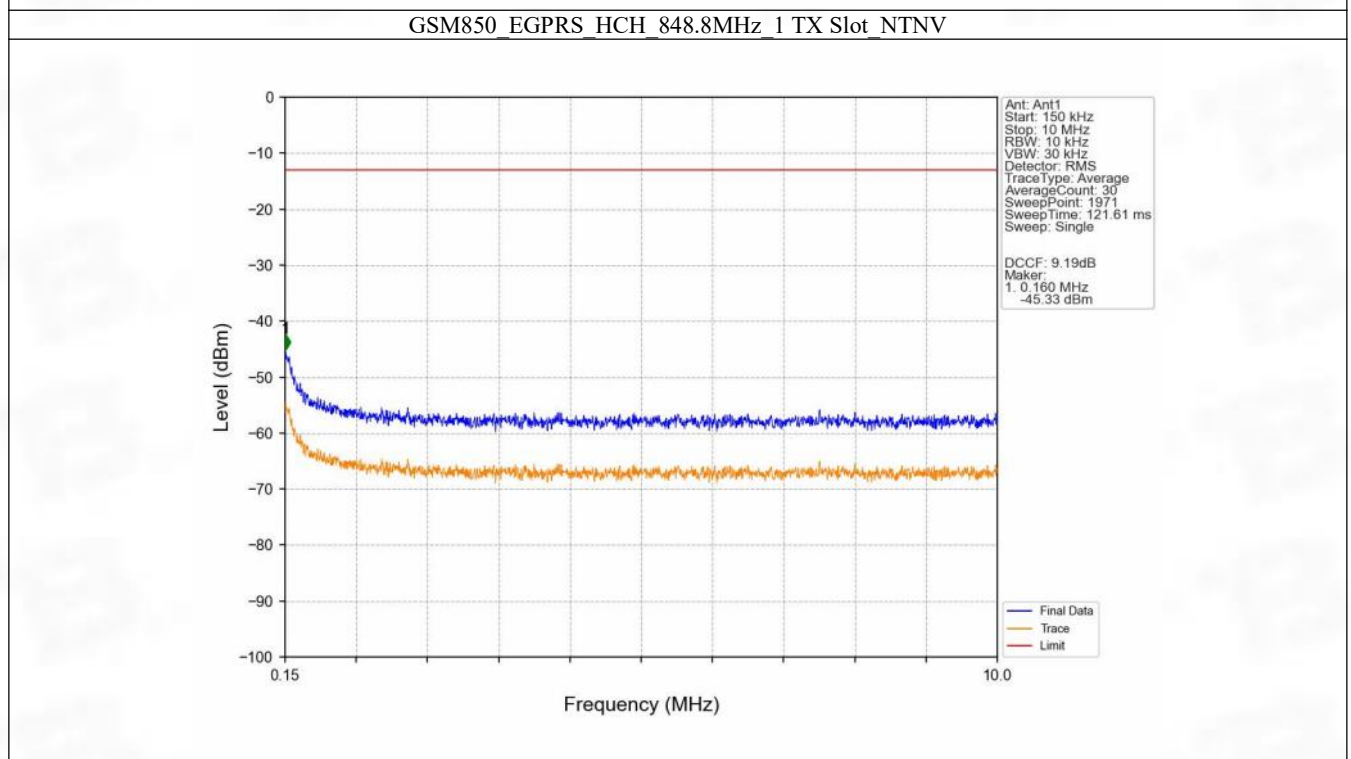
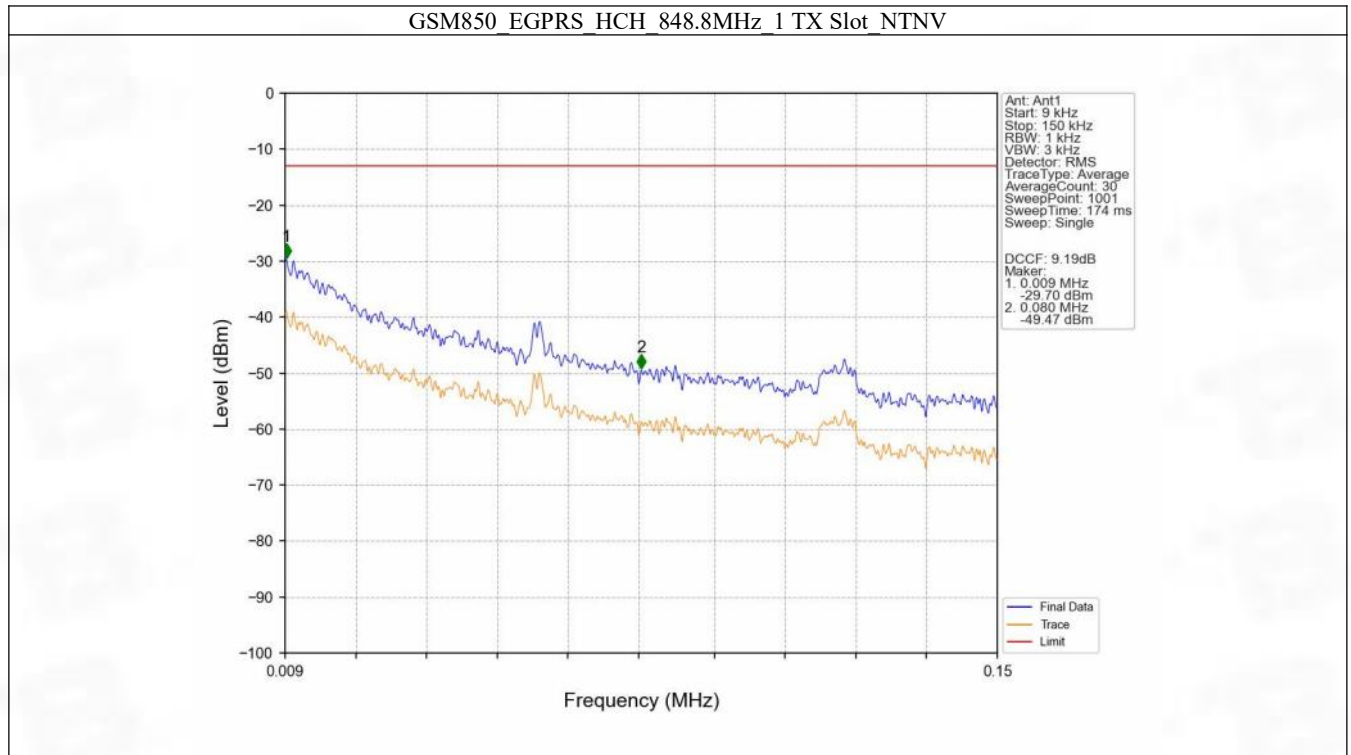


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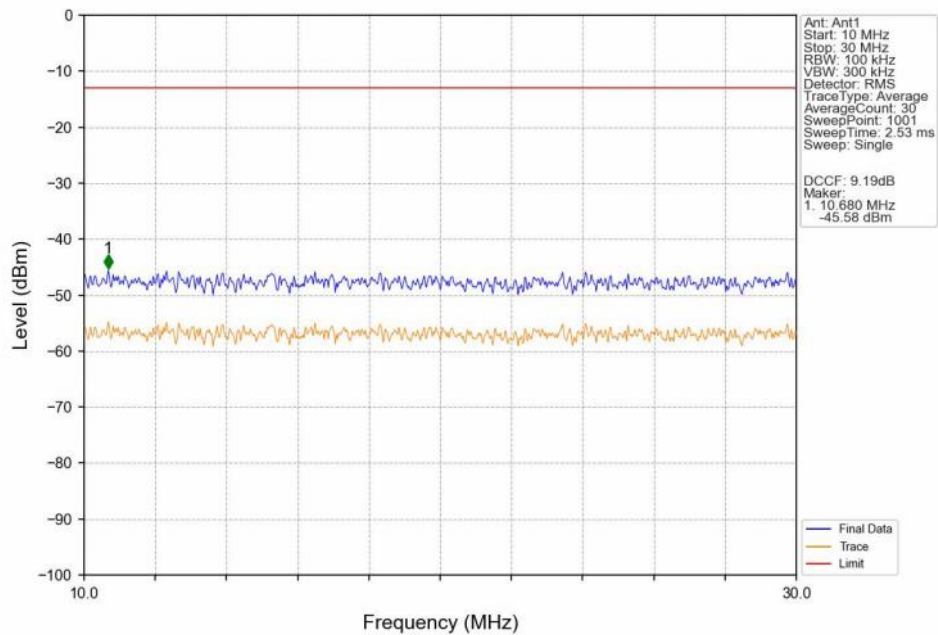


GSM850 EGPRS HCH 848.8MHz 1 TX Slot NTN

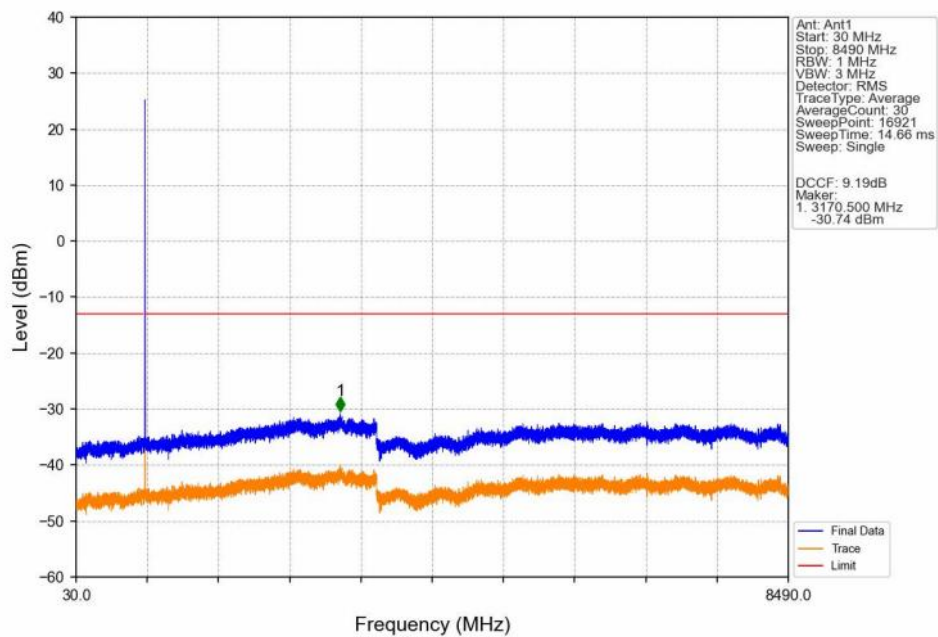




GSM850 EGPRS HCH 848.8MHz 1 TX Slot NTNV



GSM850 EGPRS HCH 848.8MHz 1 TX Slot NTNV



7. Form731

7.1 Test Result

7.1.1 Form731_Power

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	1.4825	0.0096	ppm	247KGXW	22H	31.71
GSM850	0.2	824.2	848.8	0.5662	0.0140	ppm	247KG7W	22H	27.53

7.1.2 Form731_ERP

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	0.6053	0.0096	ppm	247KGXW	22H	27.82
GSM850	0.2	824.2	848.8	0.2312	0.0140	ppm	247KG7W	22H	23.64