Appendix for GSM 850

Model: VNE-N41

BTL-FCCP-6-2204C233

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1 Appendix_A: Effective (Isotropic) Radiated Power of Transmitter

1.1 Test Results

Test Band	Test Mode	Test Channel	Conducted Power [dBm]	Gain [dBi]	ER(I)P [dBm]	Limit [dBm]	Verdict
GSM850	TM1	LCH	32.89	0.2	30.94	38.45	PASS
		MCH	32.96	0.2	31.01	38.45	PASS
		HCH	32.72	0.2	30.77	38.45	PASS
	TM2	LCH	32.97	0.2	31.02	38.45	PASS
		MCH	33.03	0.2	31.08	38.45	PASS
		HCH	32.79	0.2	30.84	38.45	PASS
	TM3	LCH	26.60	0.2	24.65	38.45	PASS
		MCH	26.82	0.2	24.87	38.45	PASS
		HCH	26.39	0.2	24.44	38.45	PASS

2 Appendix_B: Peak-to-Average Ratio

2.1 Test Results

Test Band	Test Mode	Test Channel	Measured[dB]	Limit [dB]	Verdict
GSM850	TM1	LCH	-7.29	13	PASS
		MCH	-7.39	13	PASS
		HCH	-7.42	13	PASS
	TM2	LCH	-7.27	13	PASS
		MCH	-7.32	13	PASS
		HCH	-7.32	13	PASS
	TM3	LCH	-4.5	13	PASS
		MCH	-4.69	13	PASS
		HCH	-4.46	13	PASS
PCS1900	TM1	LCH	-7.09	13	PASS
		MCH	-7.17	13	PASS
		HCH	-7.44	13	PASS
	TM2	LCH	-6.96	13	PASS
		MCH	-7.33	13	PASS
		HCH	-6.88	13	PASS
	TM3	LCH	-4.17	13	PASS
		MCH	-3.94	13	PASS
		HCH	-3.67	13	PASS

3 Appendix_C: Modulation Characteristics

3.1 Test Plots

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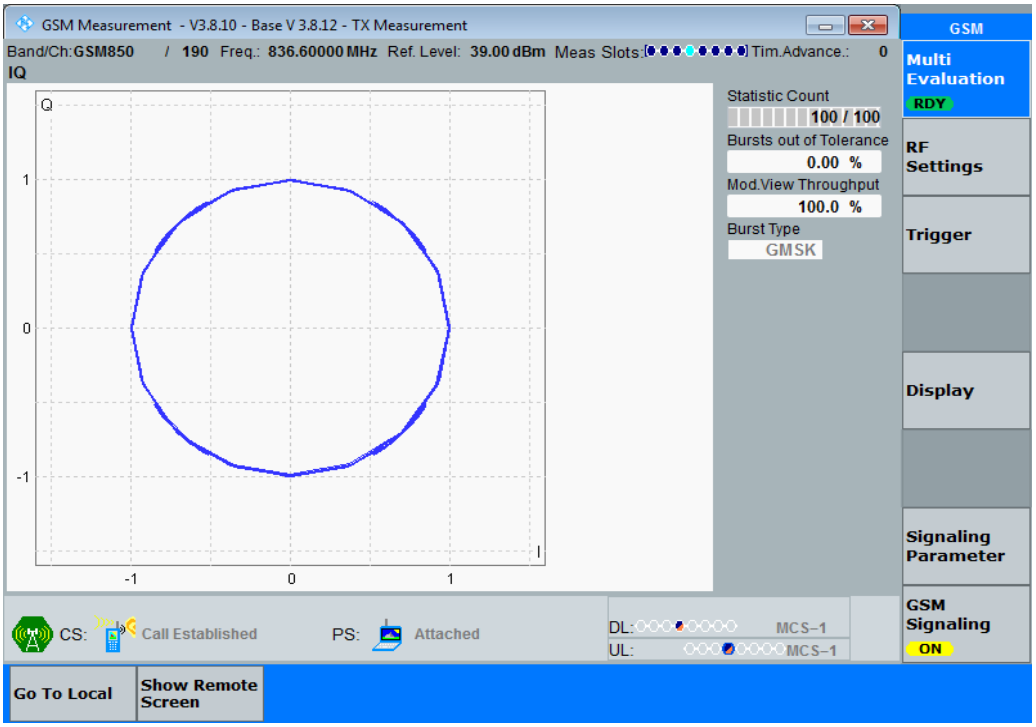
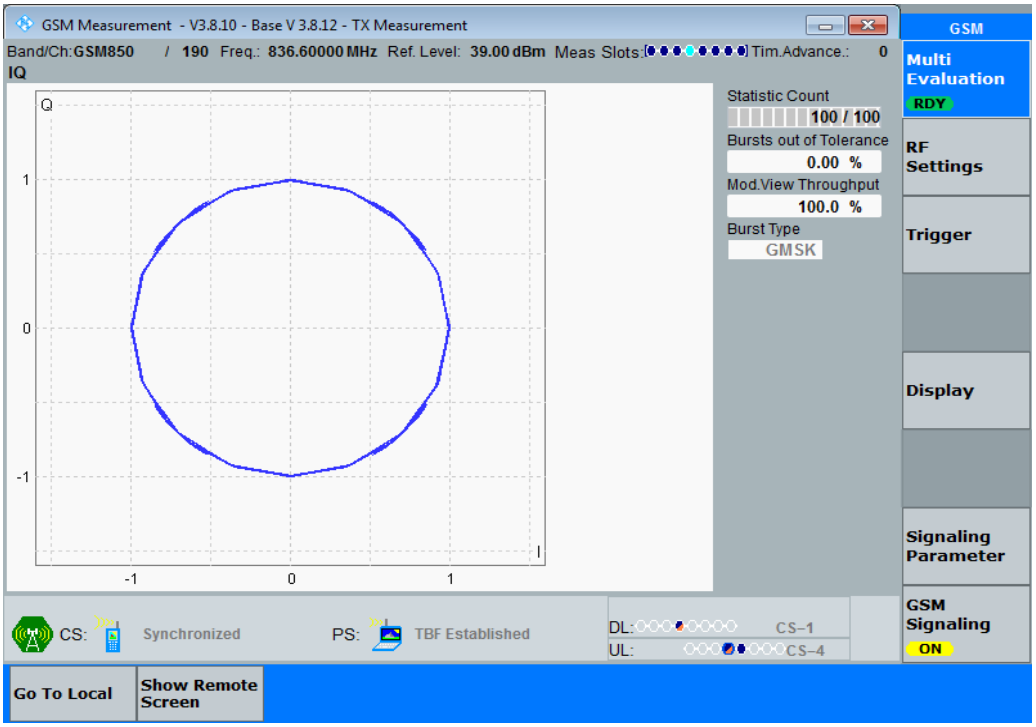


GSM850_TM2_MCH



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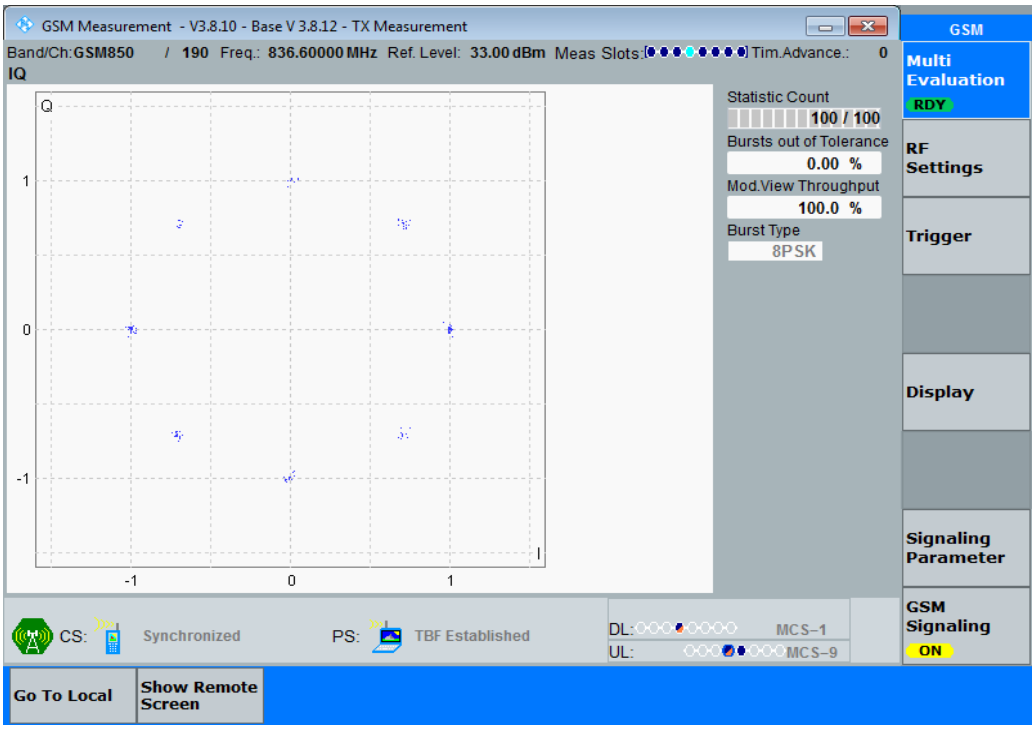


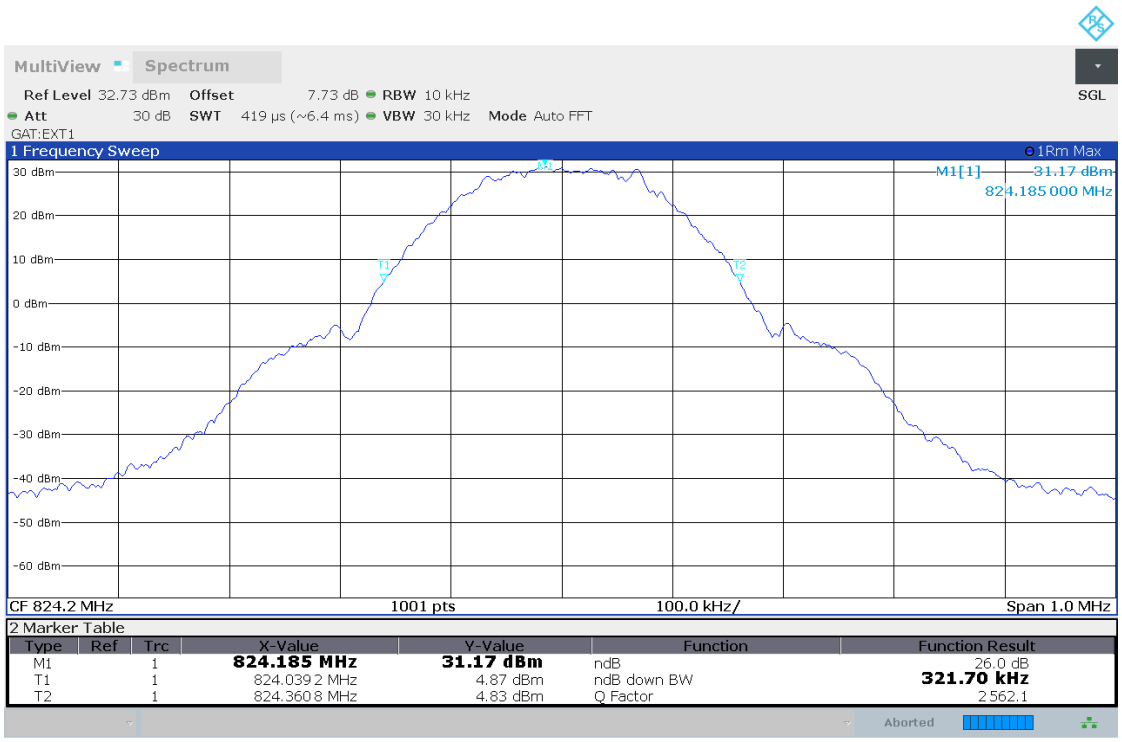
4 Appendix_D: Occupied Bandwidth

4.1 Test Results

Test Band	Test Mode	Test Channel	Occupied Bandwidth [kHz]	Emission Bandwidth [KHz]	Verdict
GSM850	TM1	LCH	242.08	321.70	PASS
		MCH	242.36	320.70	PASS
		HCH	243.39	318.70	PASS
	TM2	LCH	242.28	319.70	PASS
		MCH	241.51	317.70	PASS
		HCH	242.04	316.70	PASS
	TM3	LCH	251.50	320.70	PASS
		MCH	253.72	323.70	PASS
		HCH	250.89	320.70	PASS

4.2 Test Plots

GSM850_TM1_LCH



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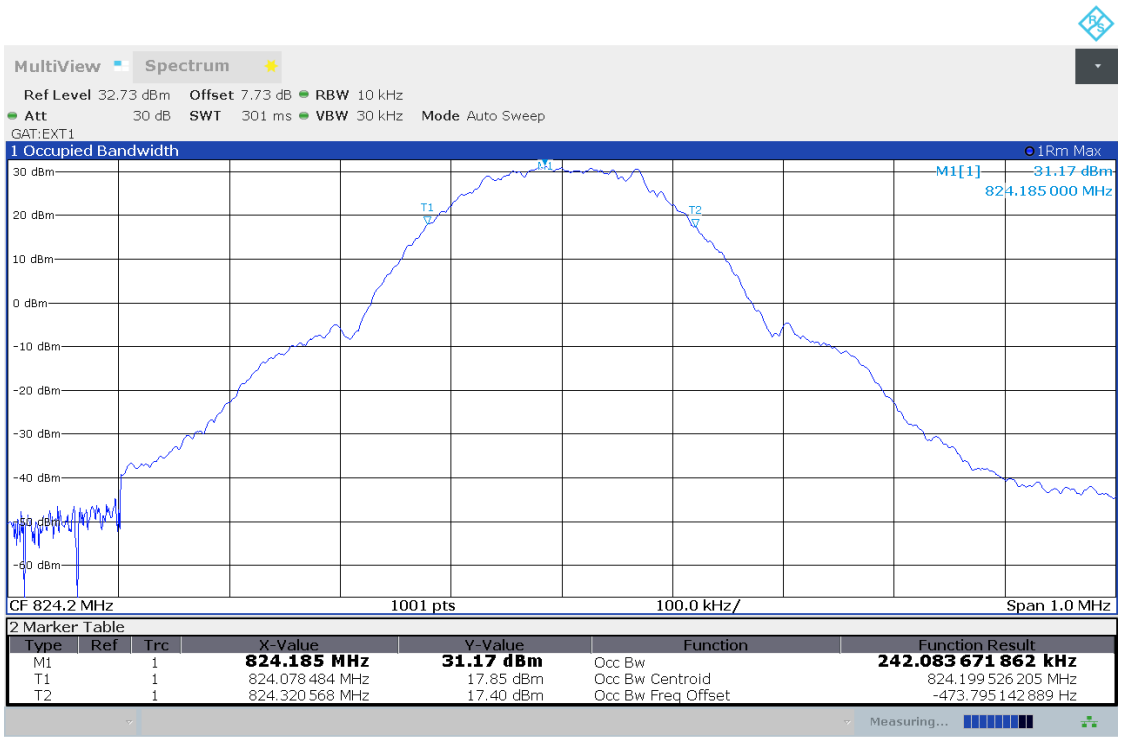

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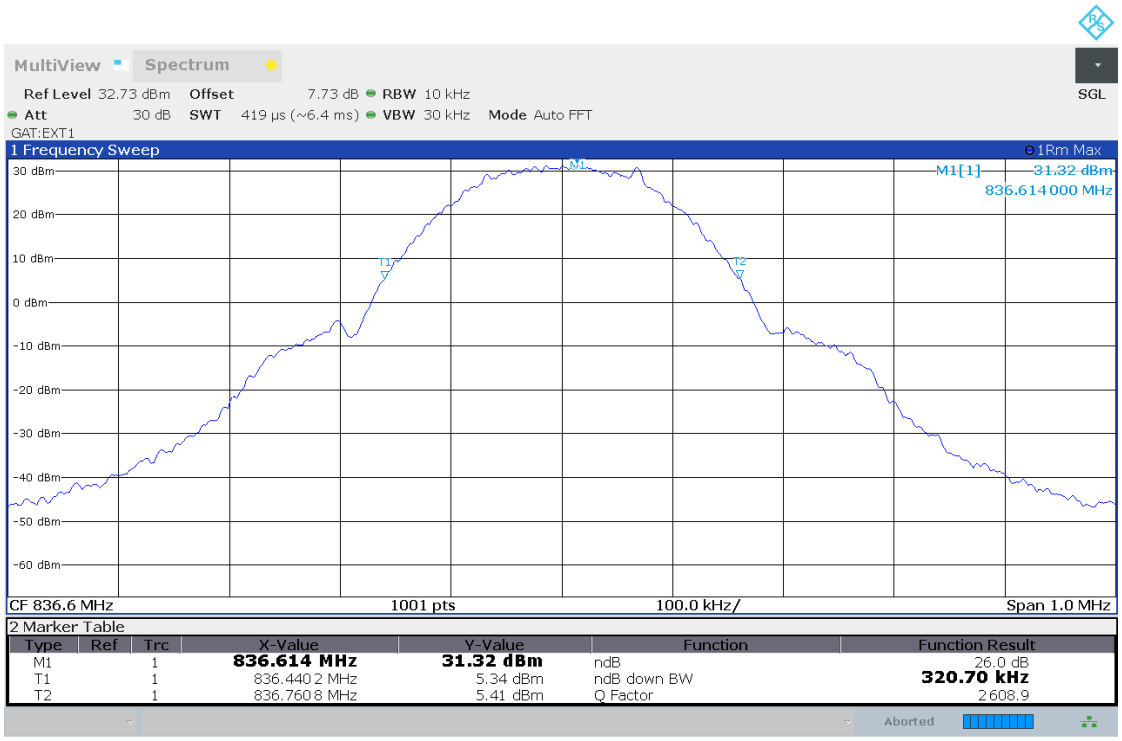

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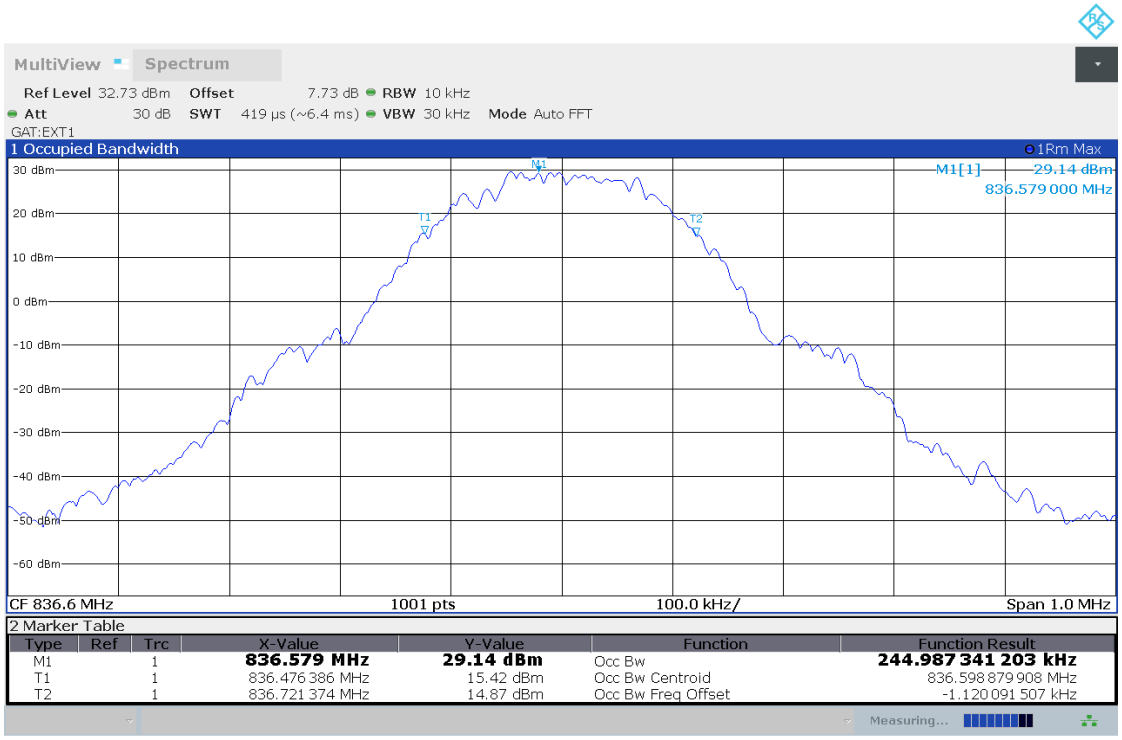

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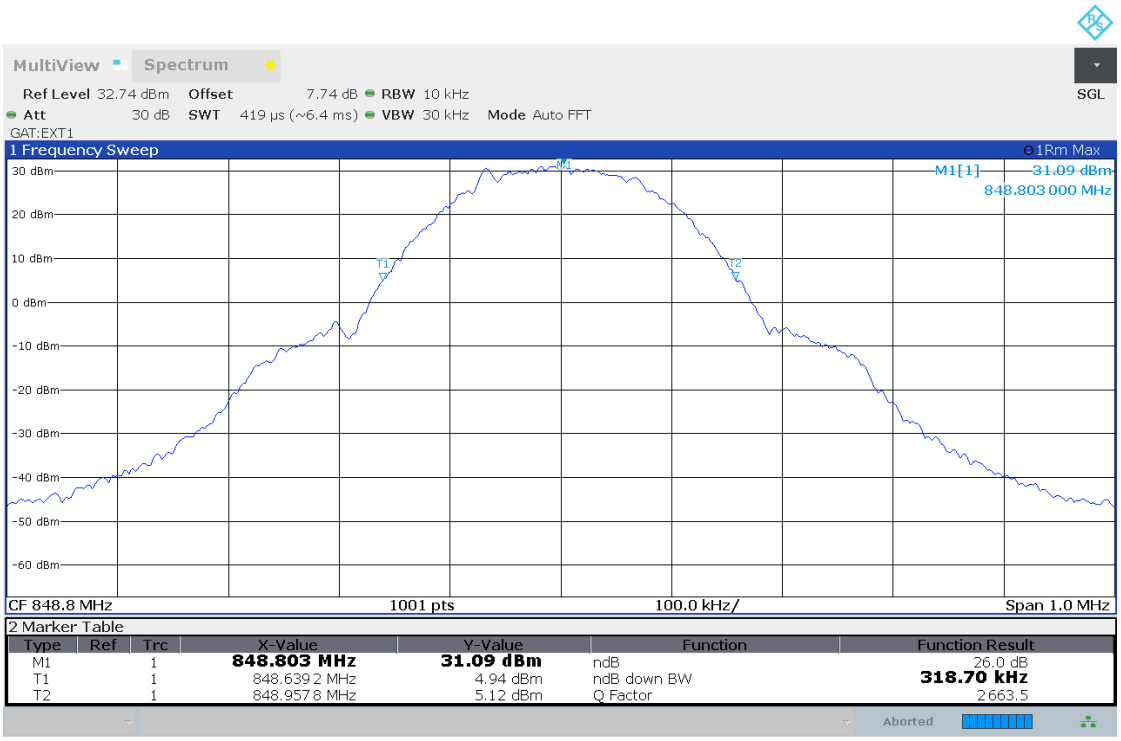
GSM850_TM1_HCH



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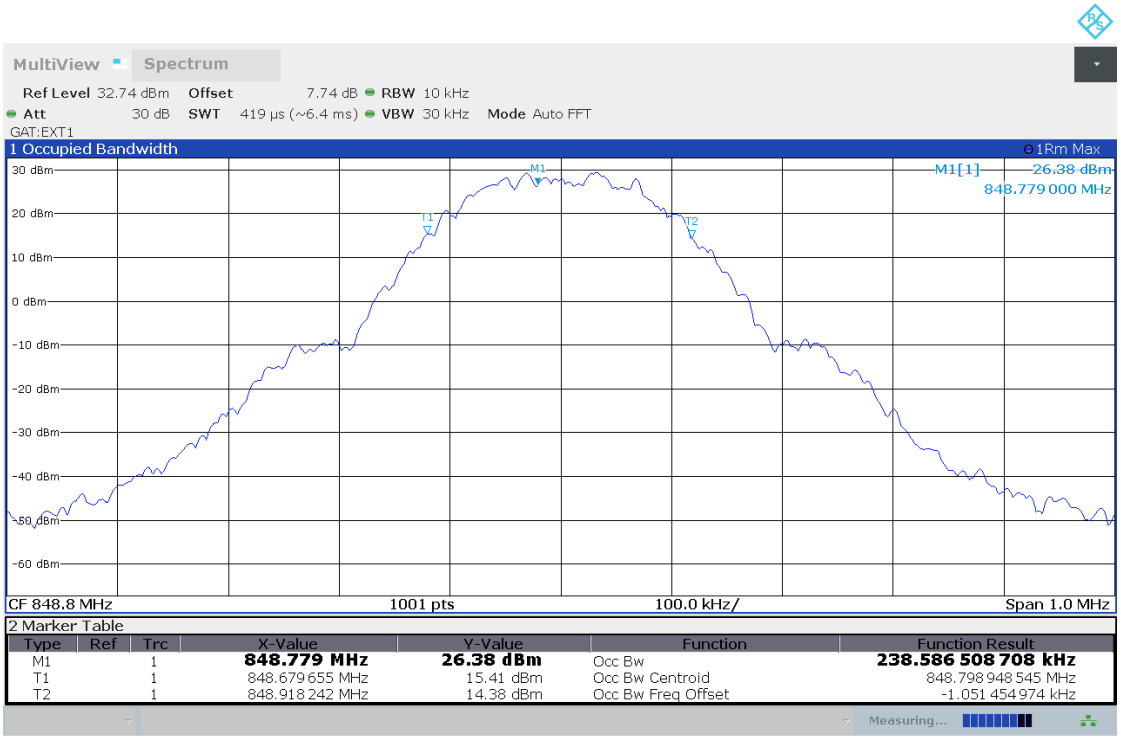

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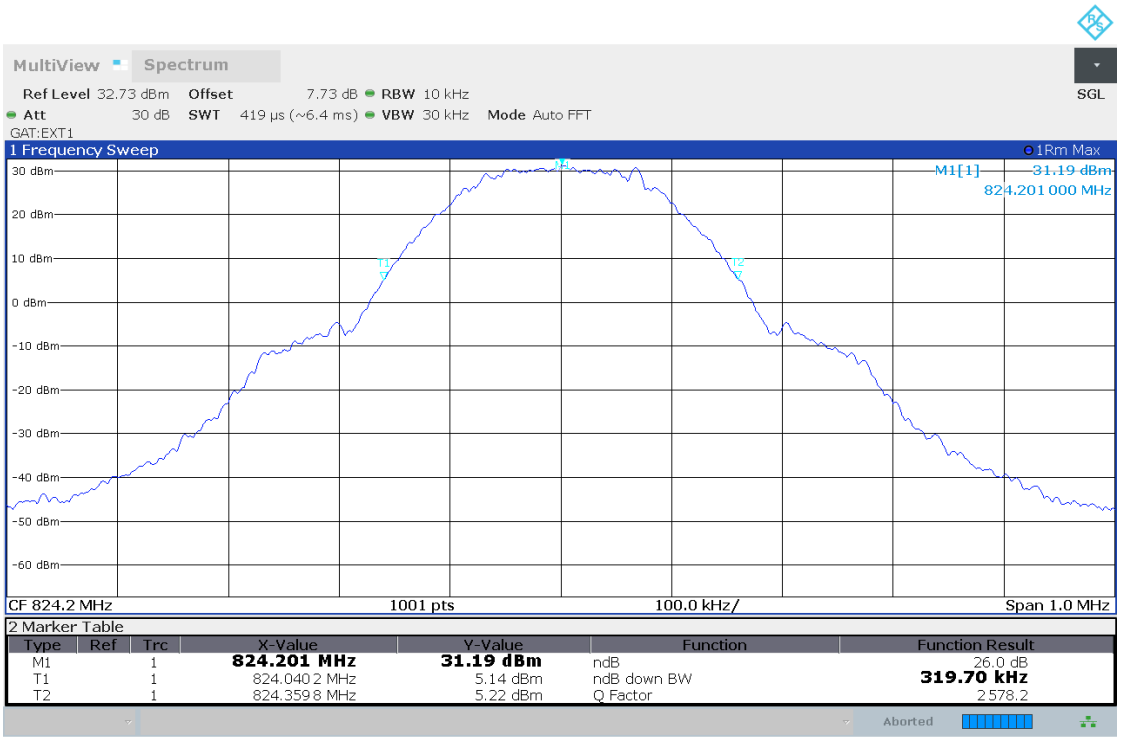

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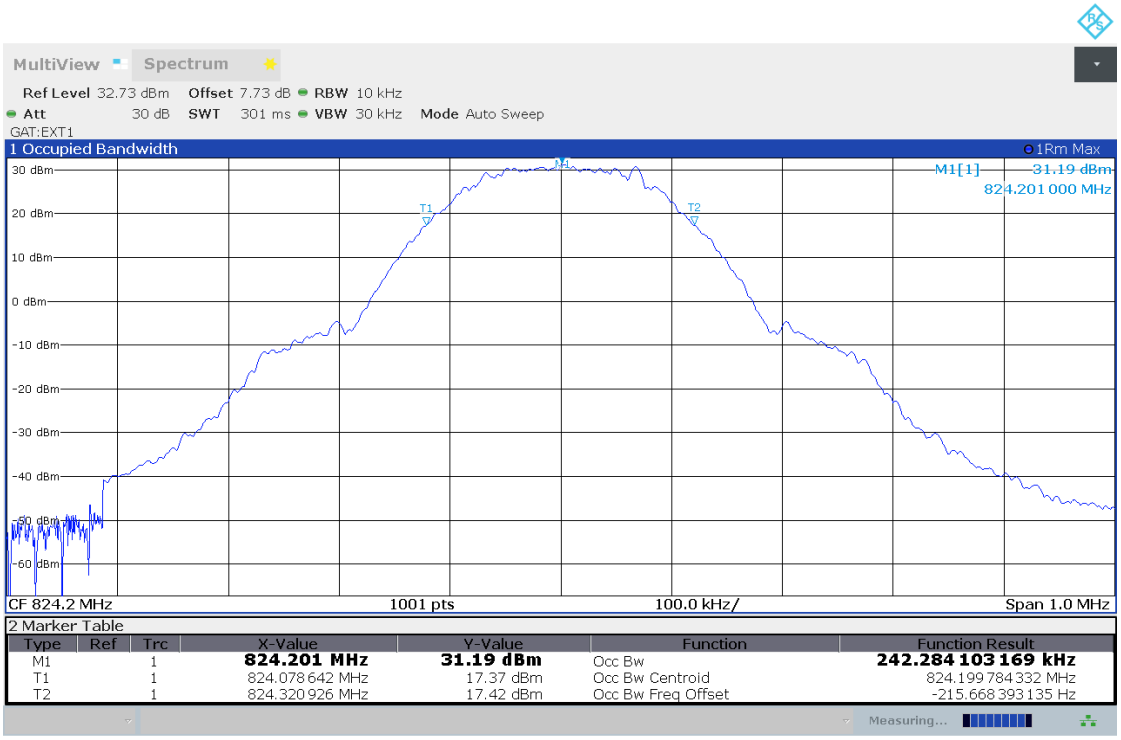

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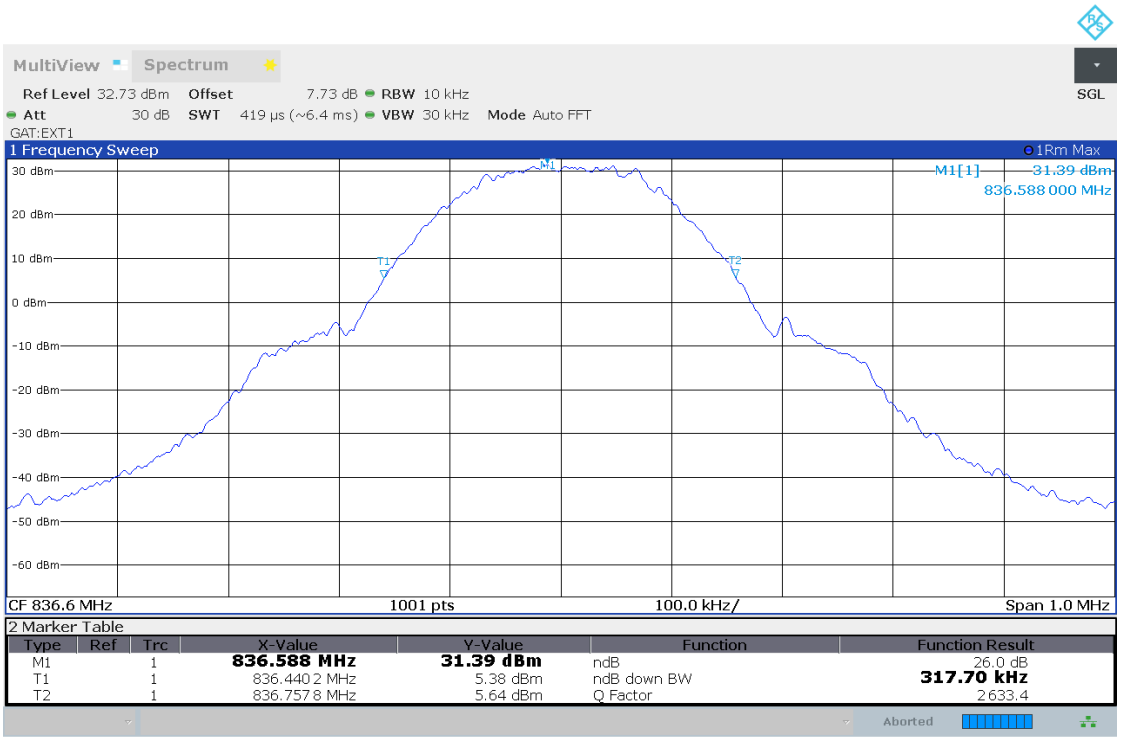

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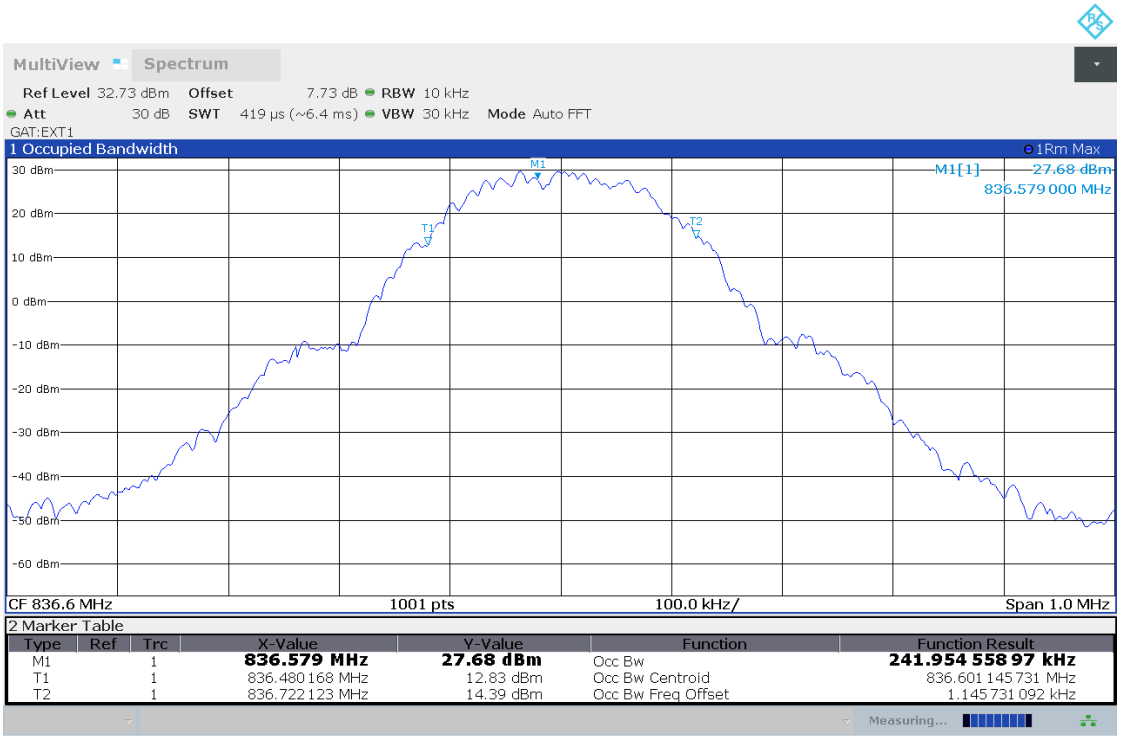

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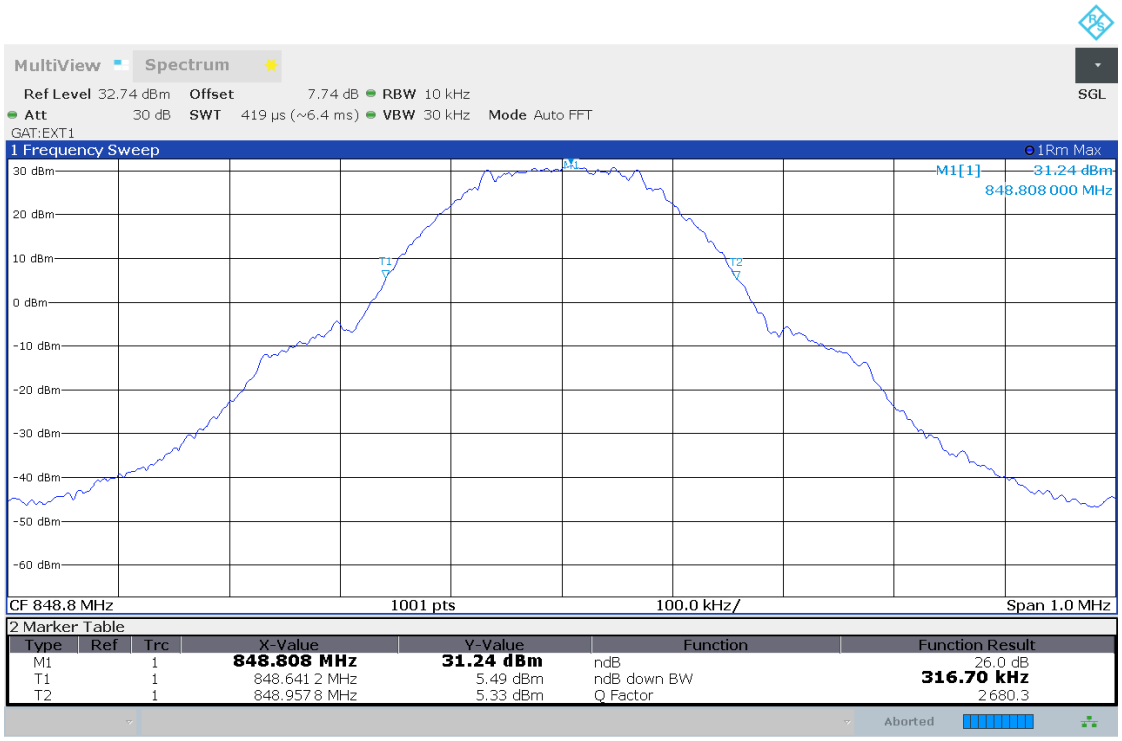

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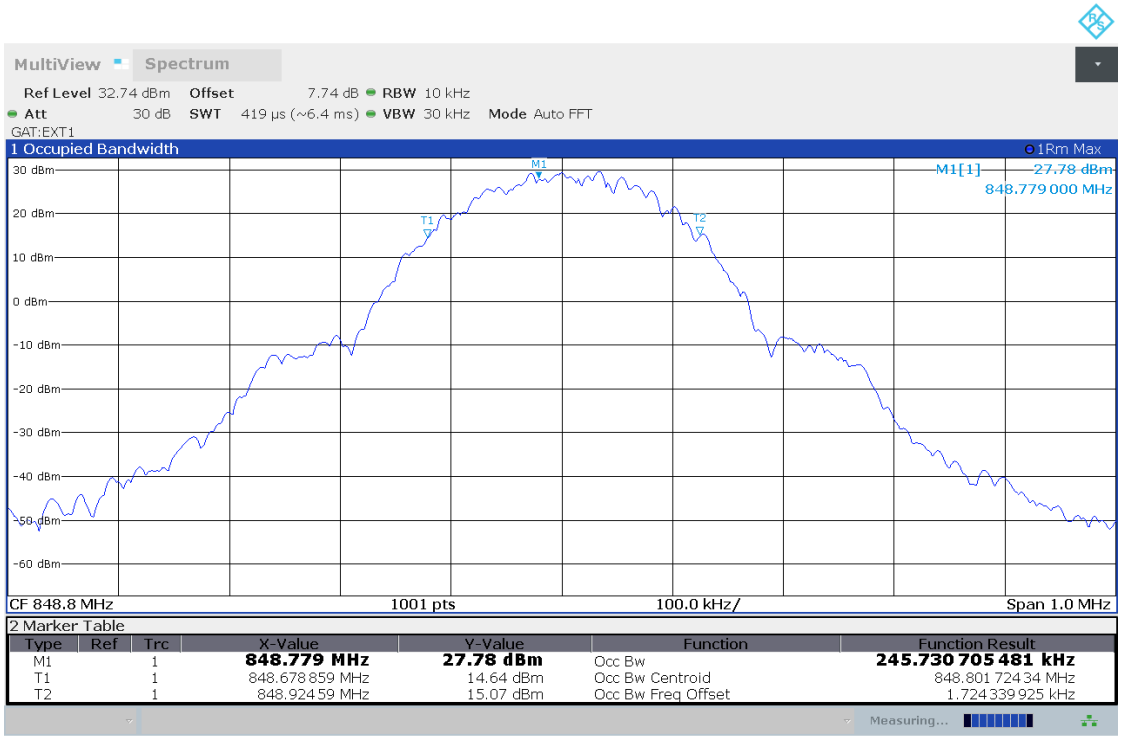

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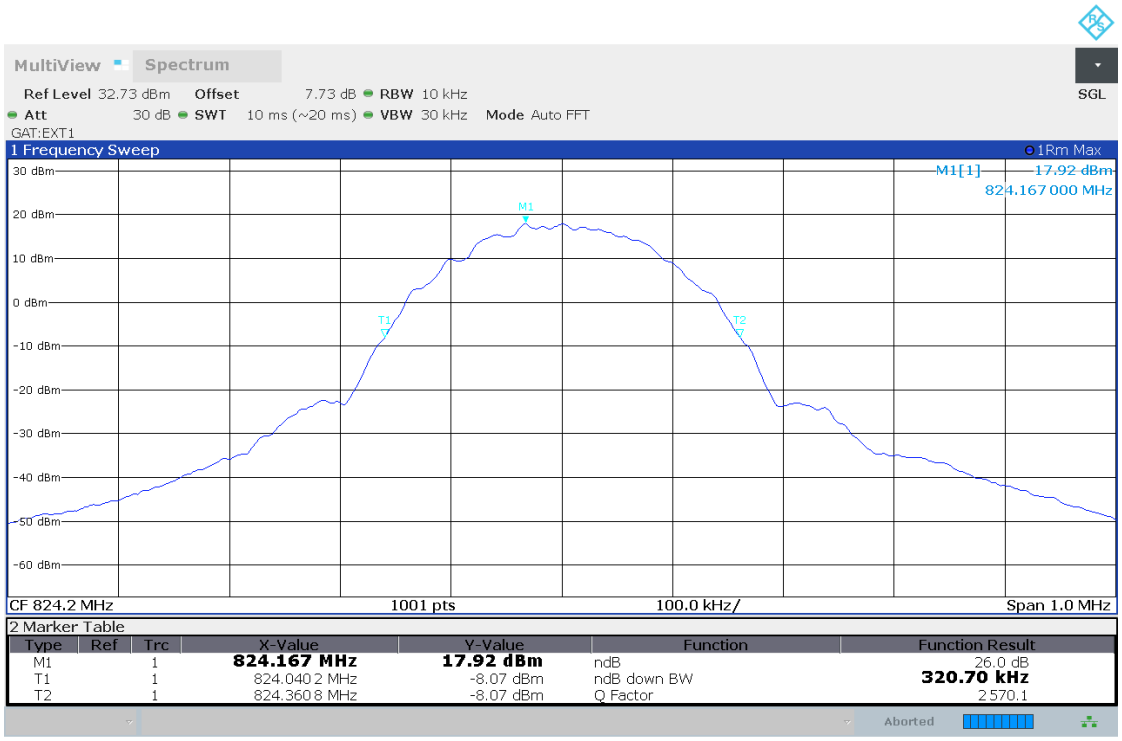

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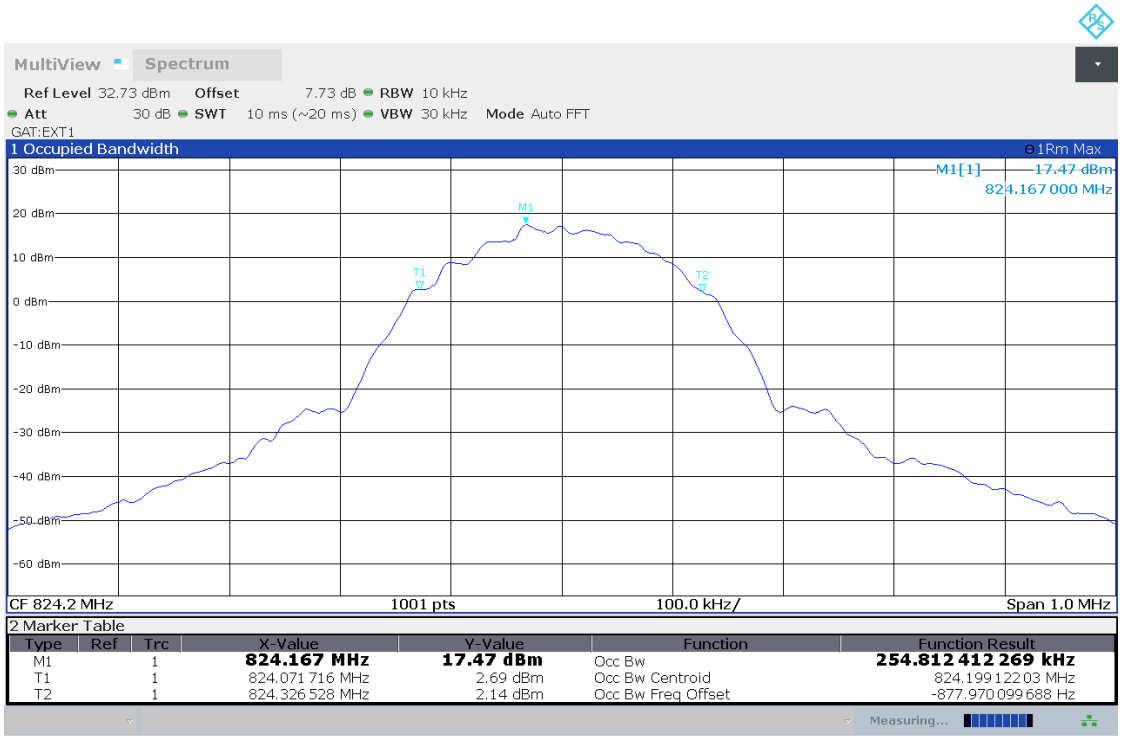

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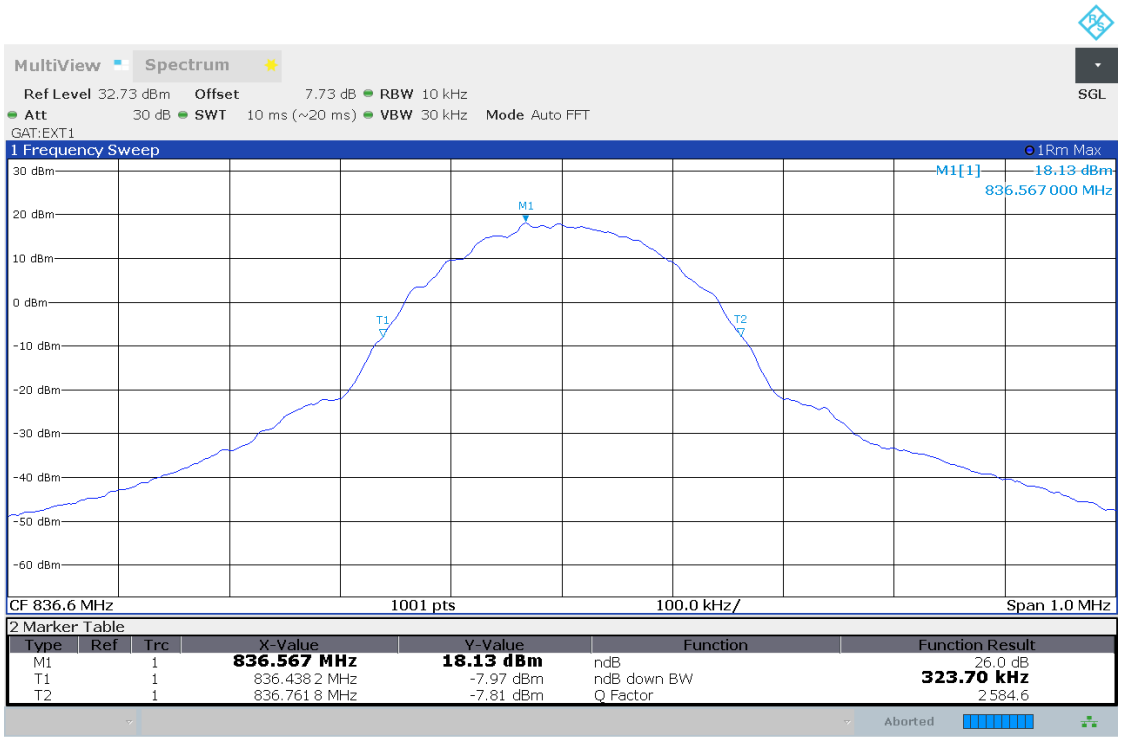

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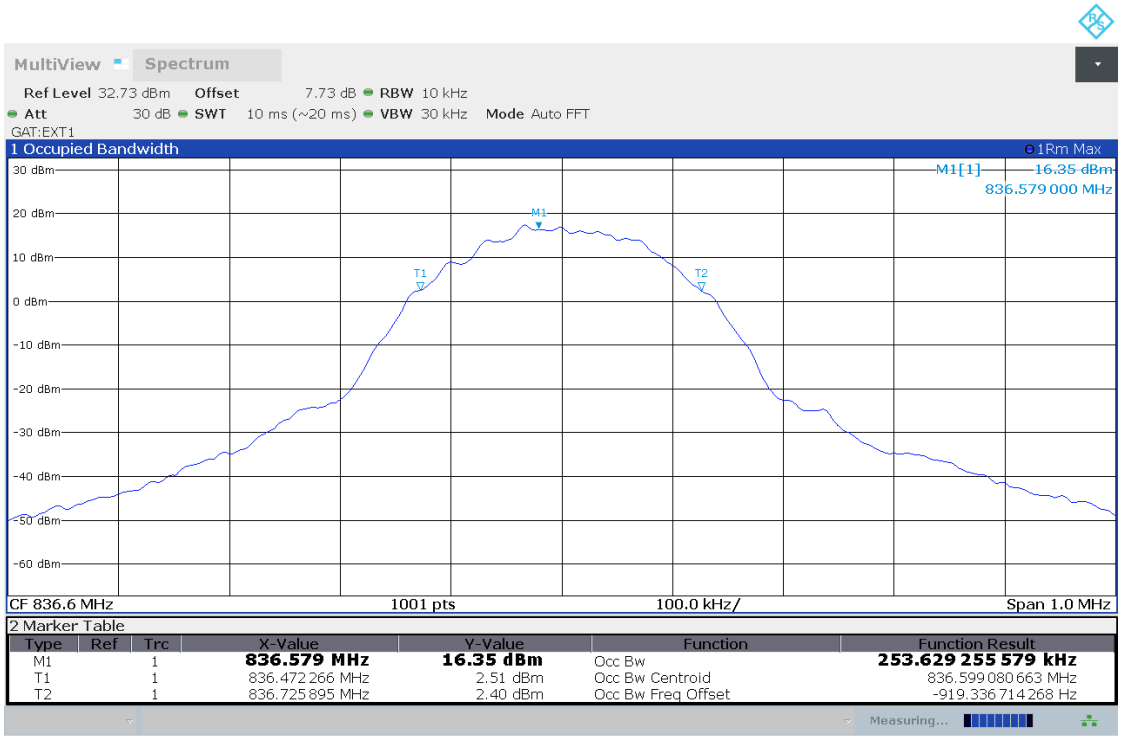

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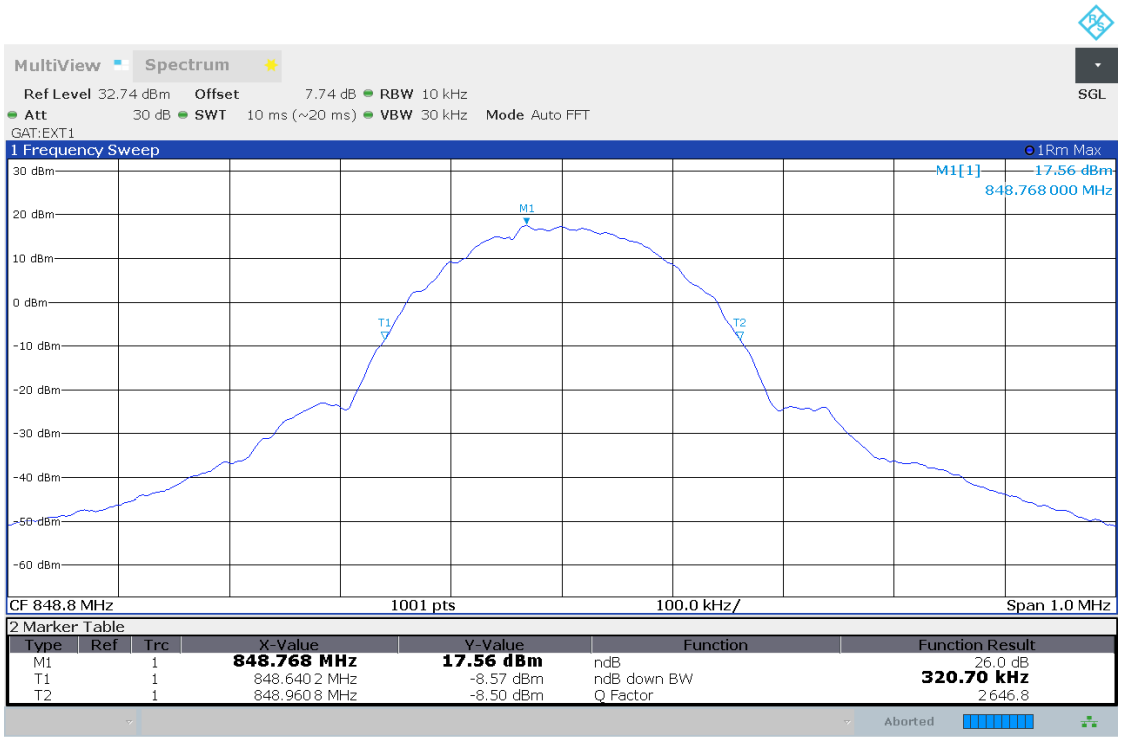
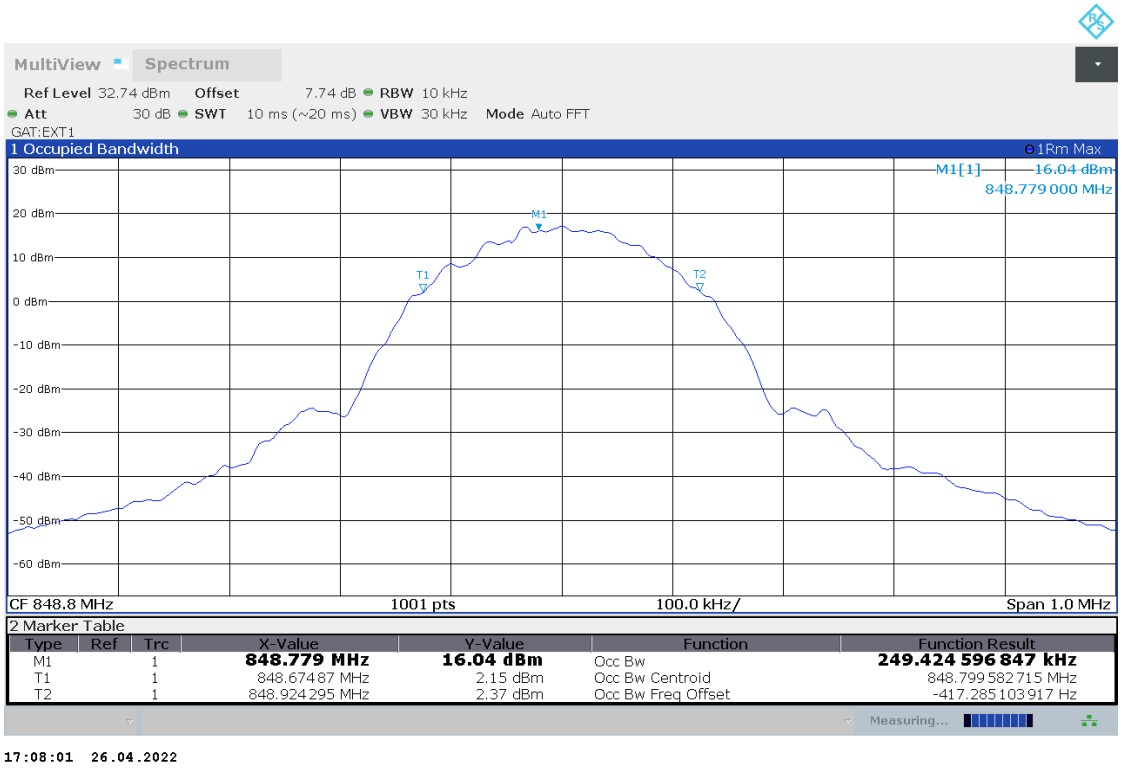




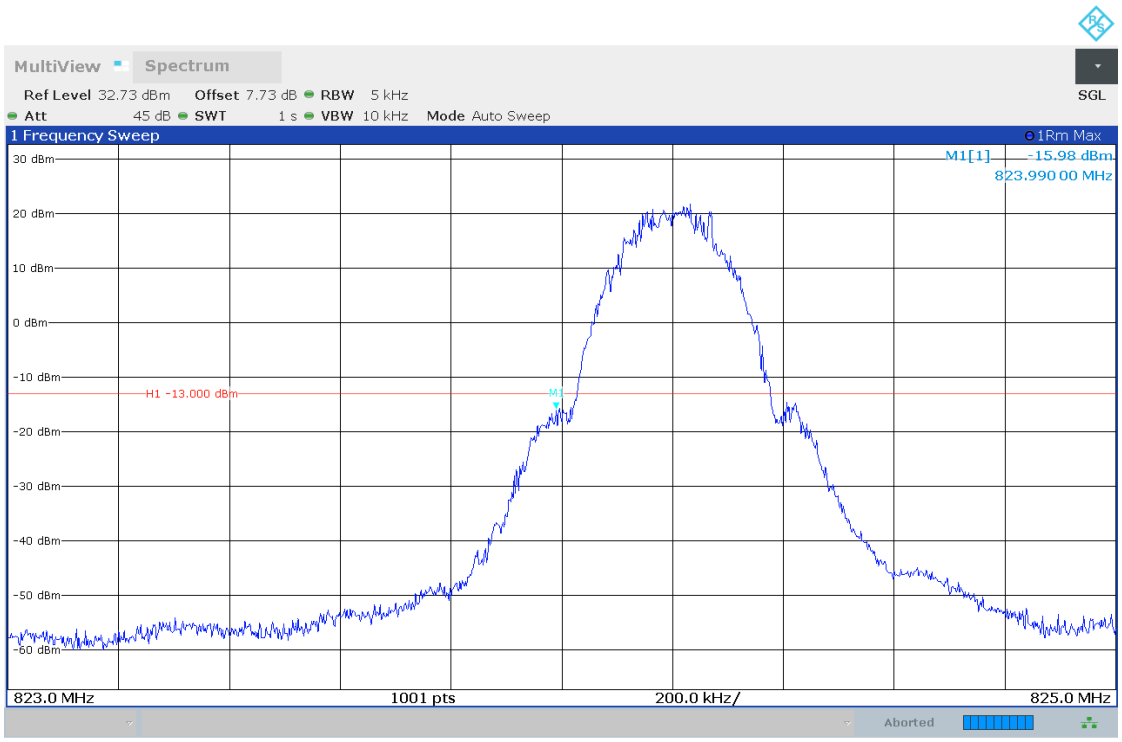
5 Appendix_E: Band Edges Compliance

5.1 Test Results

Test Band	Test Mode	Test Channel	Measured Emissions Conformed to the Relevant Limits?	Verdict
GSM850	TM1	LCH	Yes	PASS
		HCH	Yes	PASS
	TM2	LCH	Yes	PASS
		HCH	Yes	PASS
	TM3	LCH	Yes	PASS
		HCH	Yes	PASS

5.2 Test Plots

GSM850_TM1_LCH



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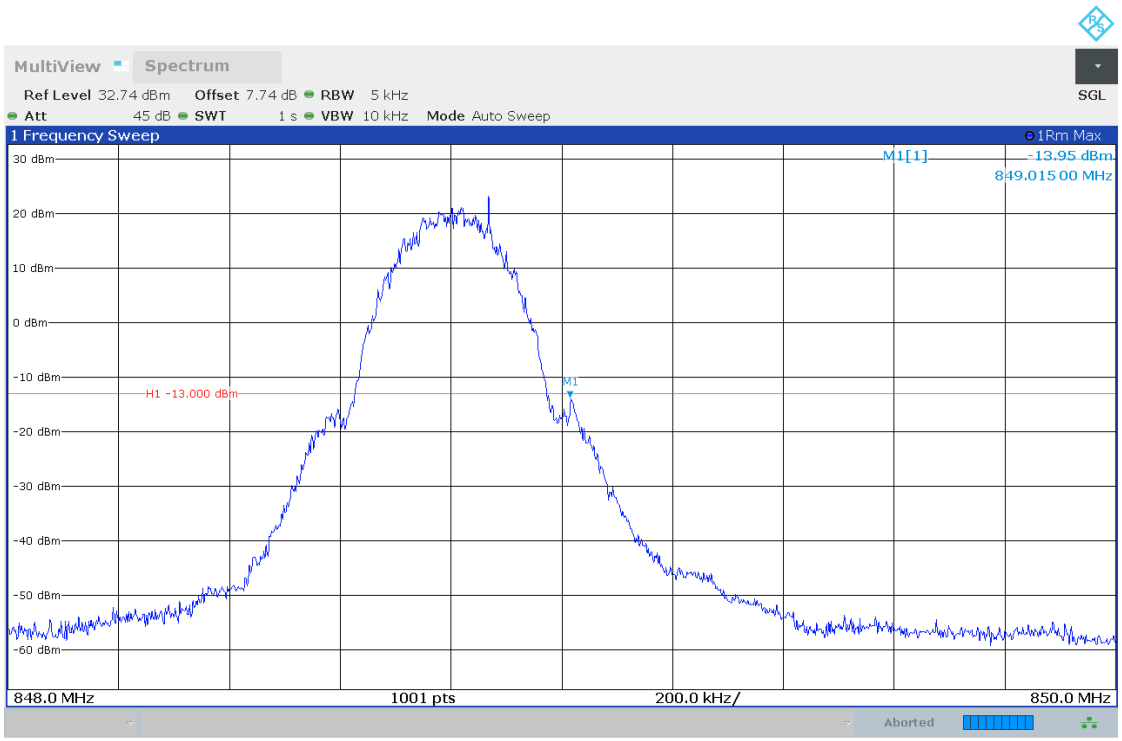

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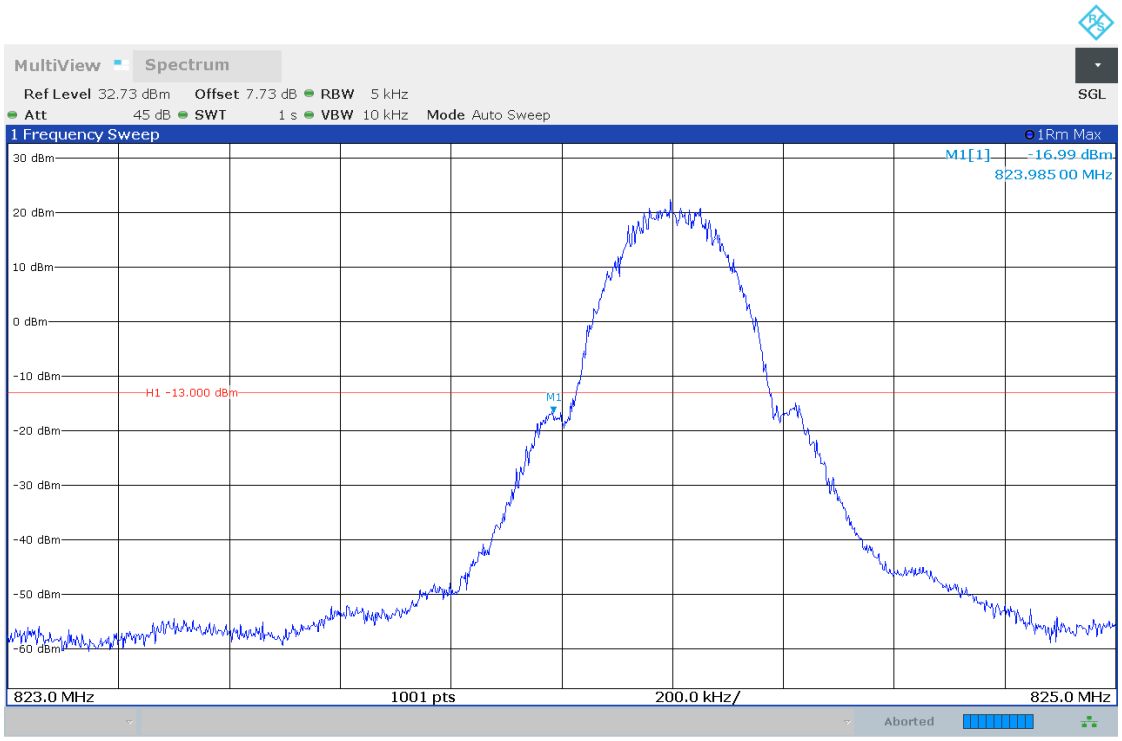
GSM850_TM2_LCH



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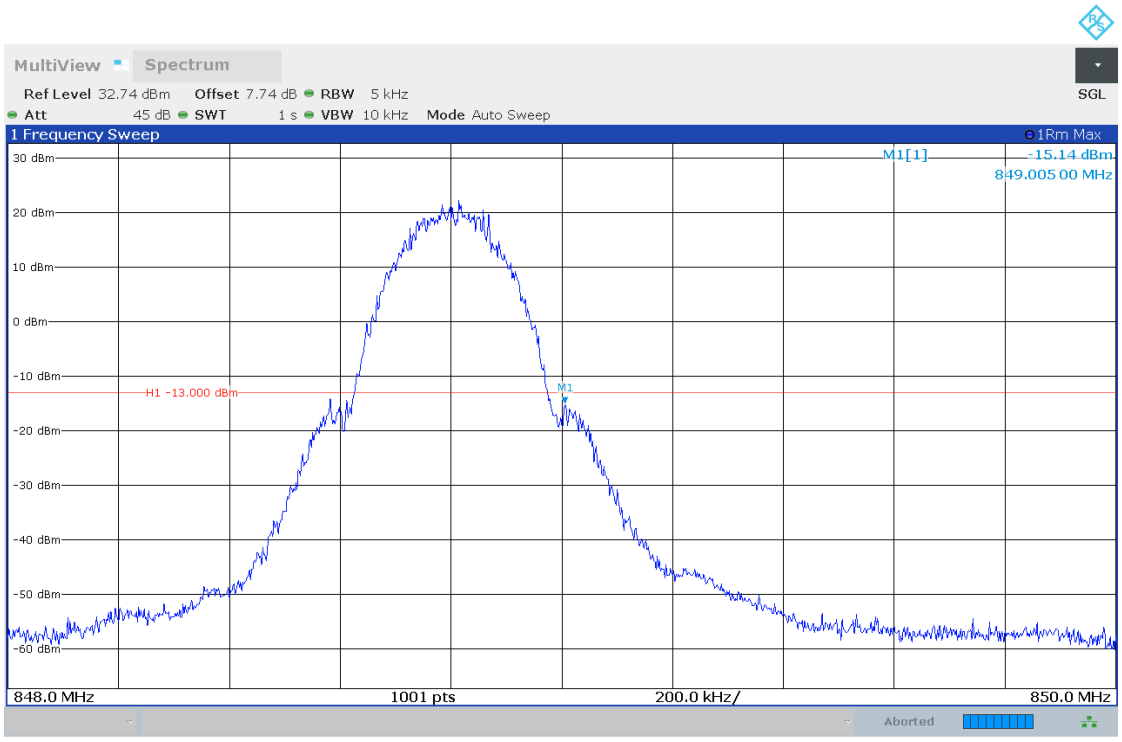

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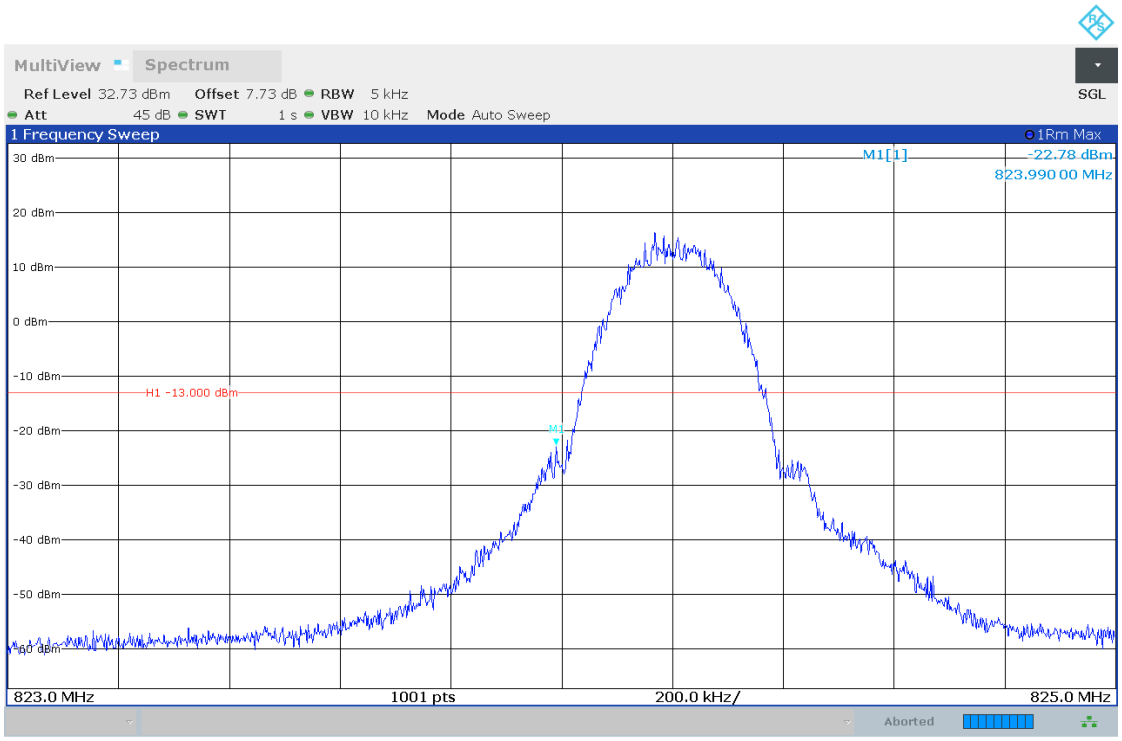

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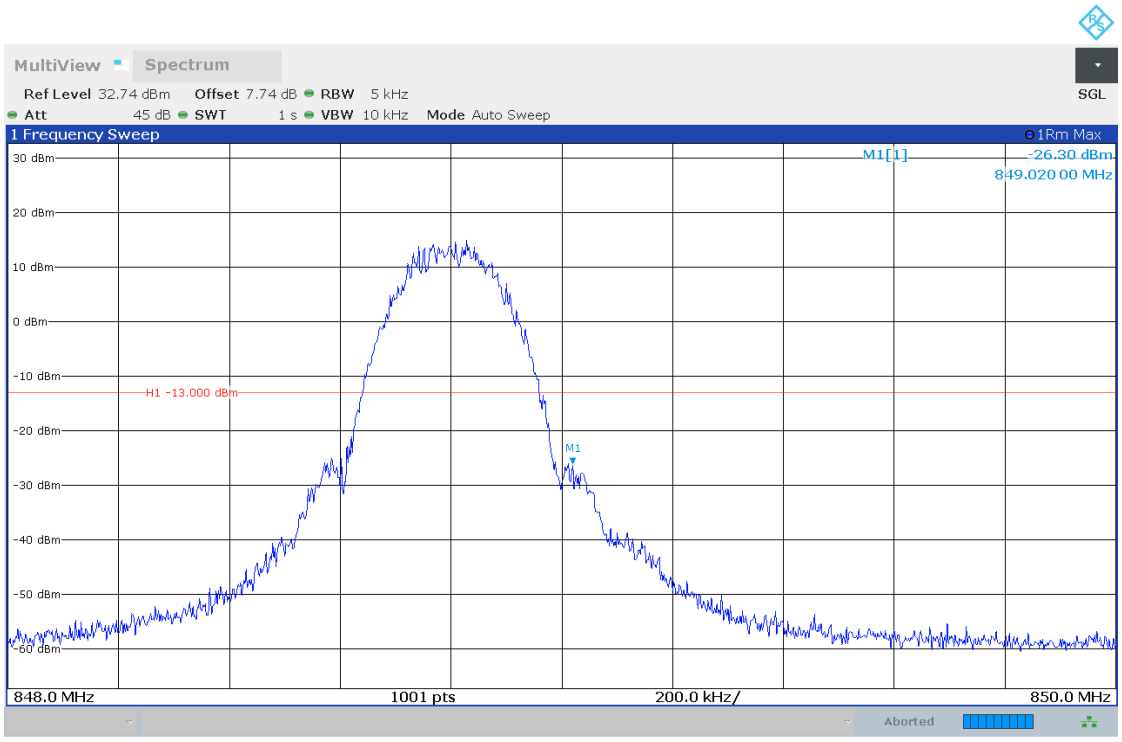

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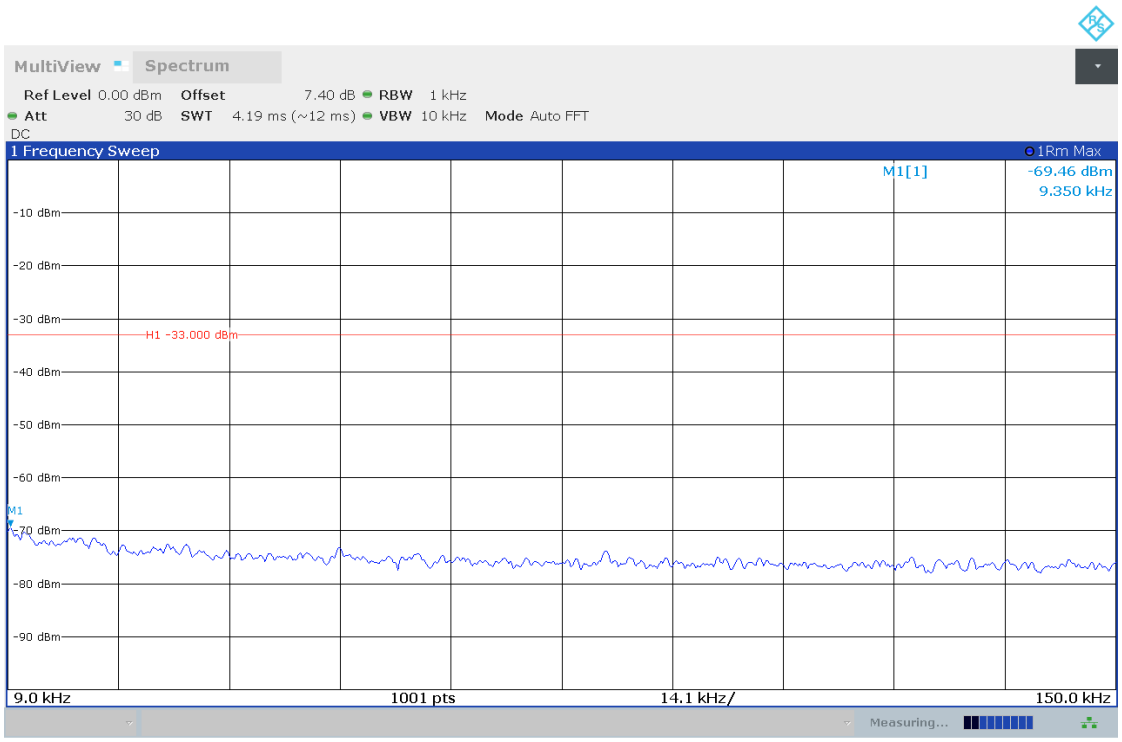
6 Appendix_F: Spurious Emission at Antenna Terminal

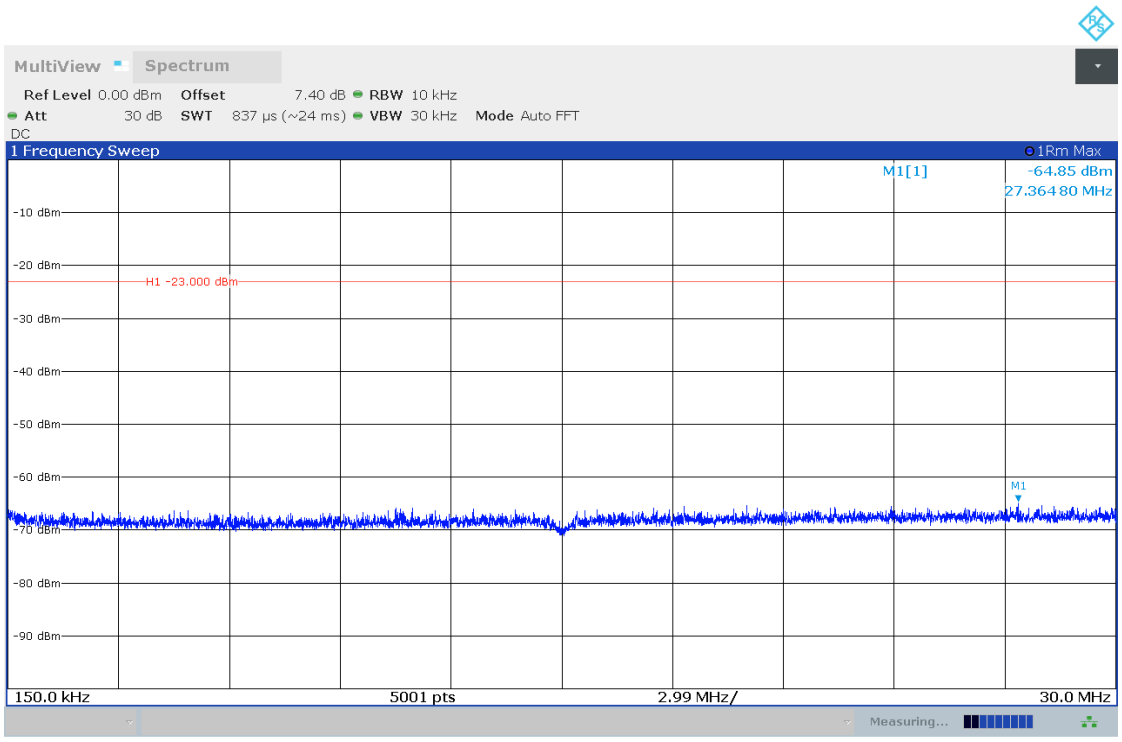
6.1 Test Results

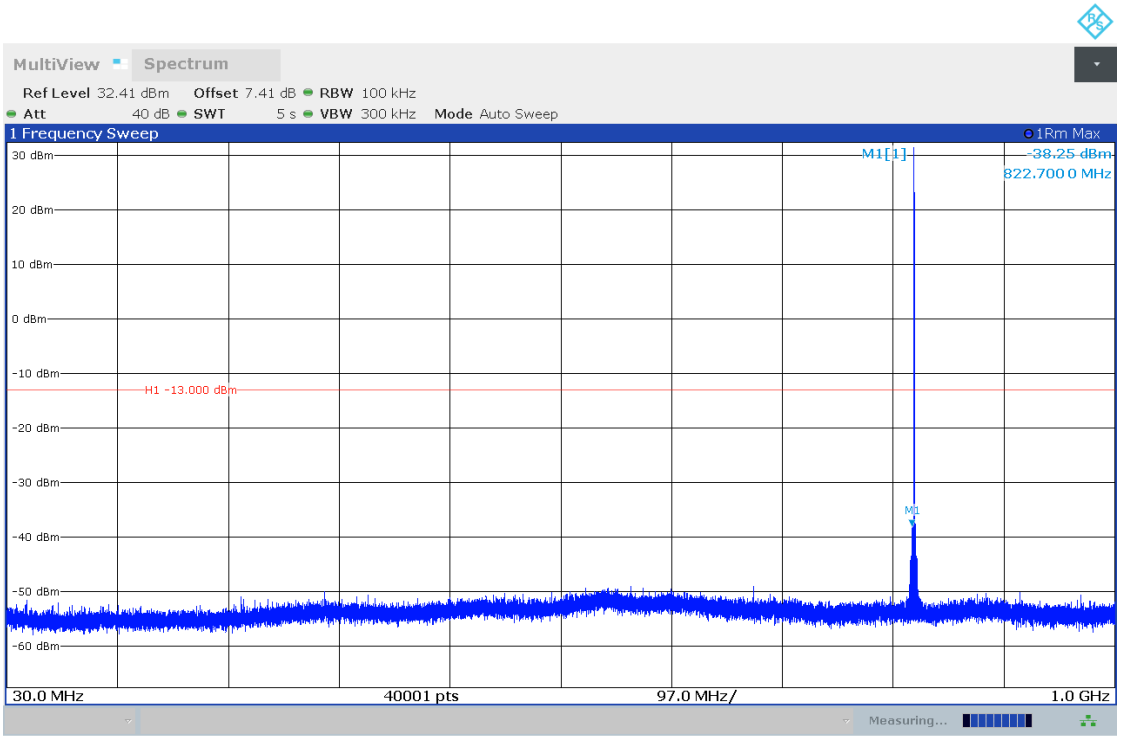
Test Band	Test Mode	Test Channel	Measured Emissions Conformed to the Relevant Limits?	Verdict
GSM850	TM1	LCH	Yes	PASS
		MCH	Yes	PASS
		HCH	Yes	PASS
	TM2	LCH	Yes	PASS
		MCH	Yes	PASS
		HCH	Yes	PASS
	TM3	LCH	Yes	PASS
		MCH	Yes	PASS
		HCH	Yes	PASS

6.2 Test Plots

GSM850_TM1_LCH







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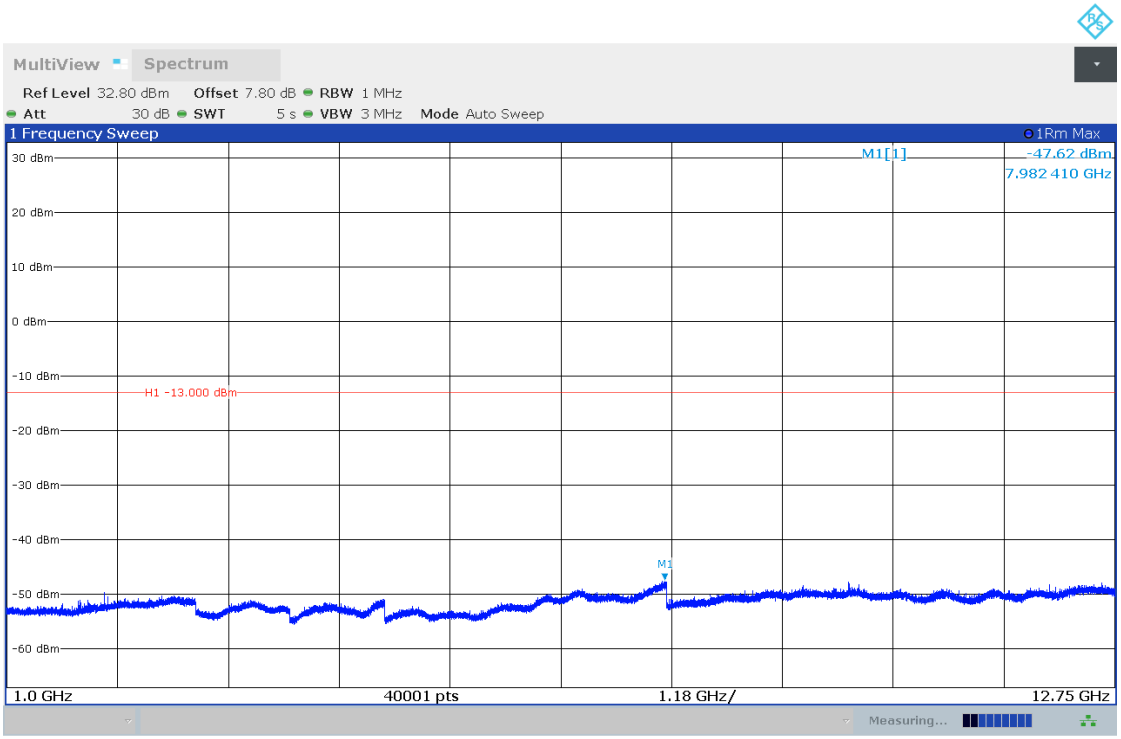

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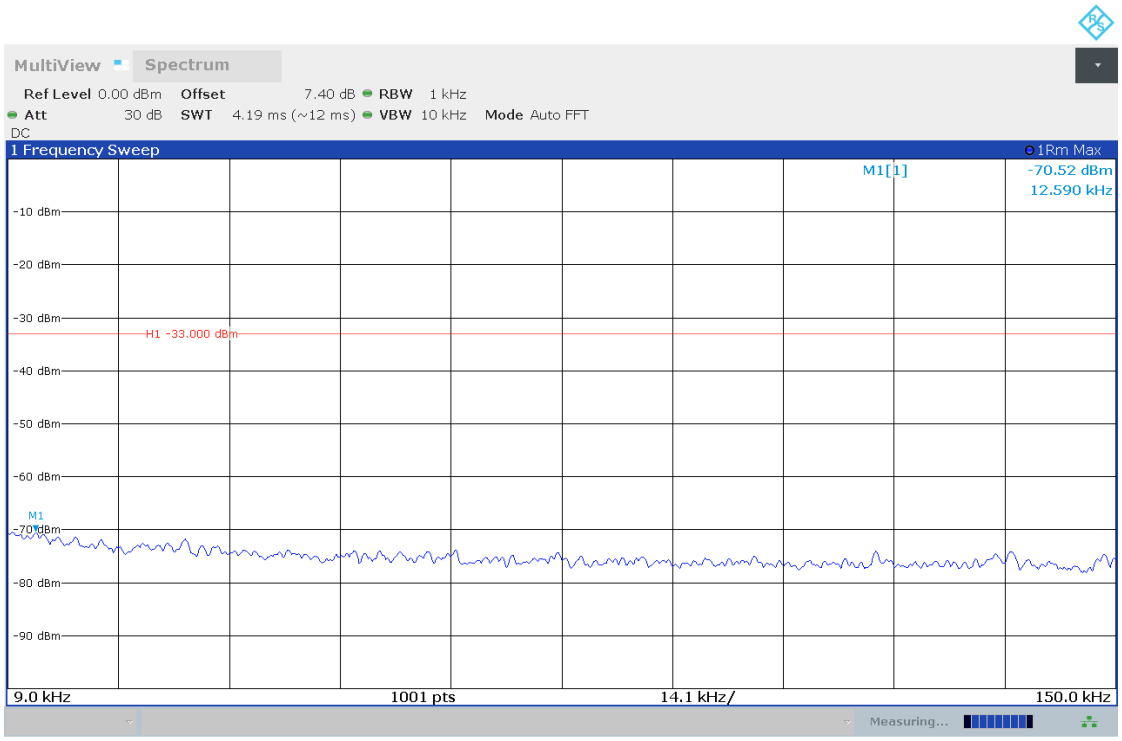
GSM850_TM1_MCH



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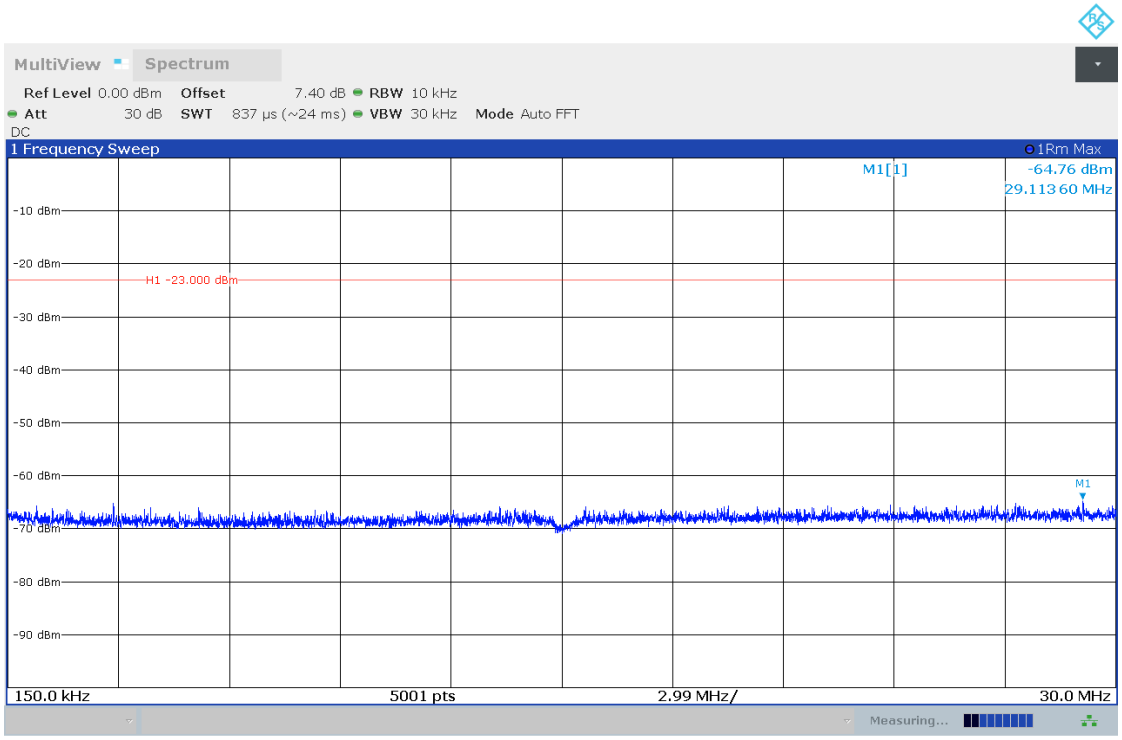

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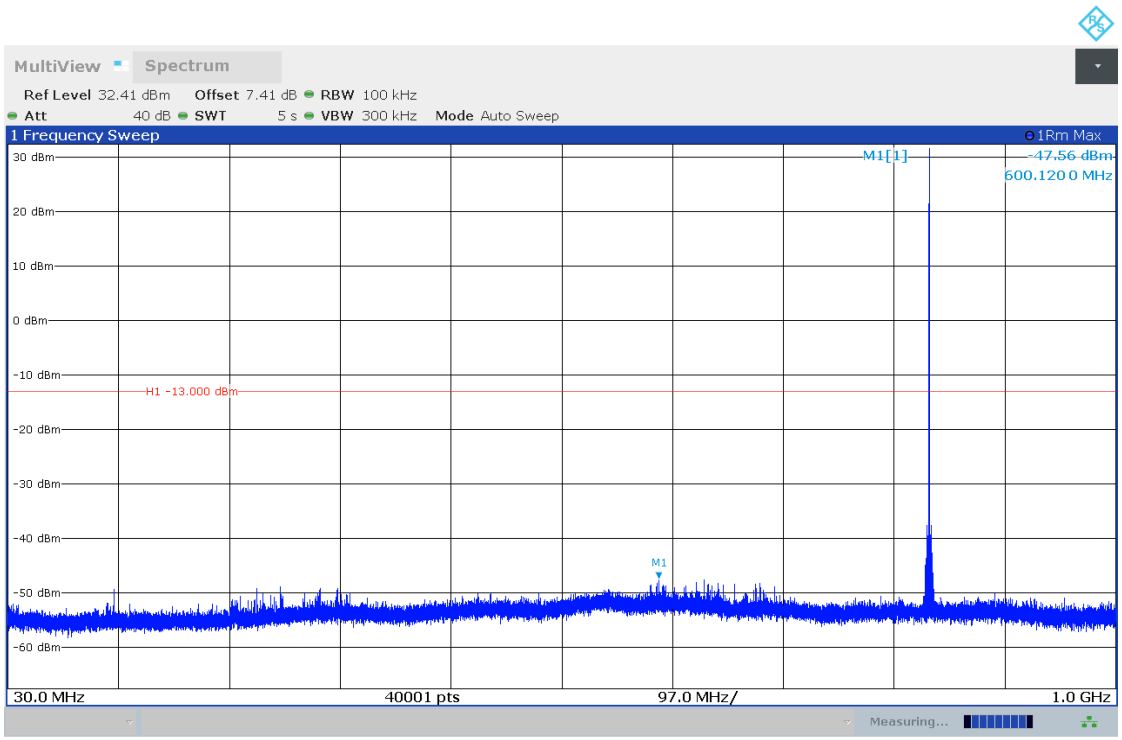

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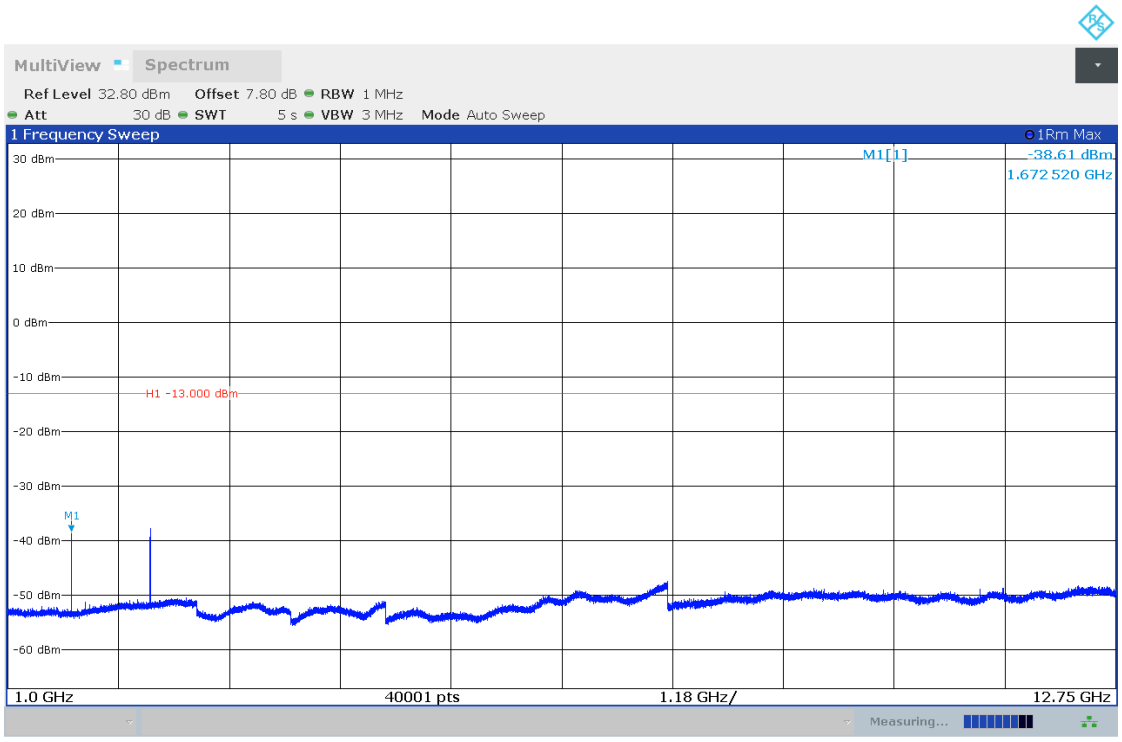

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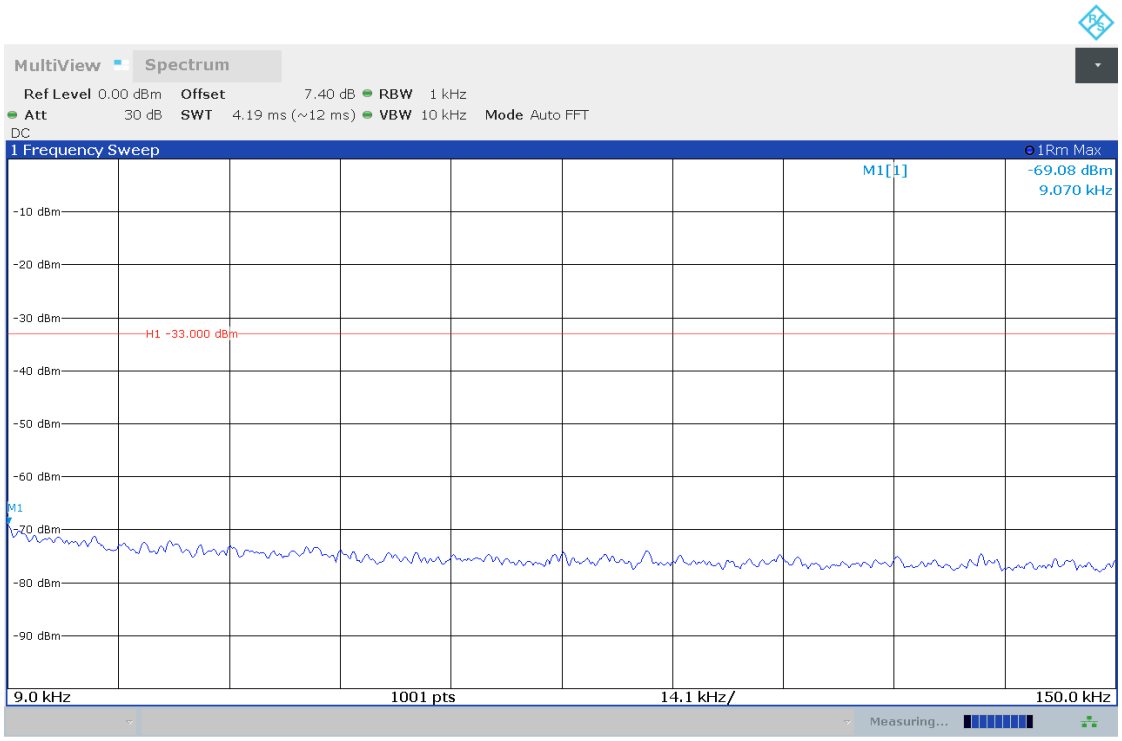
GSM850_TM1_HCH



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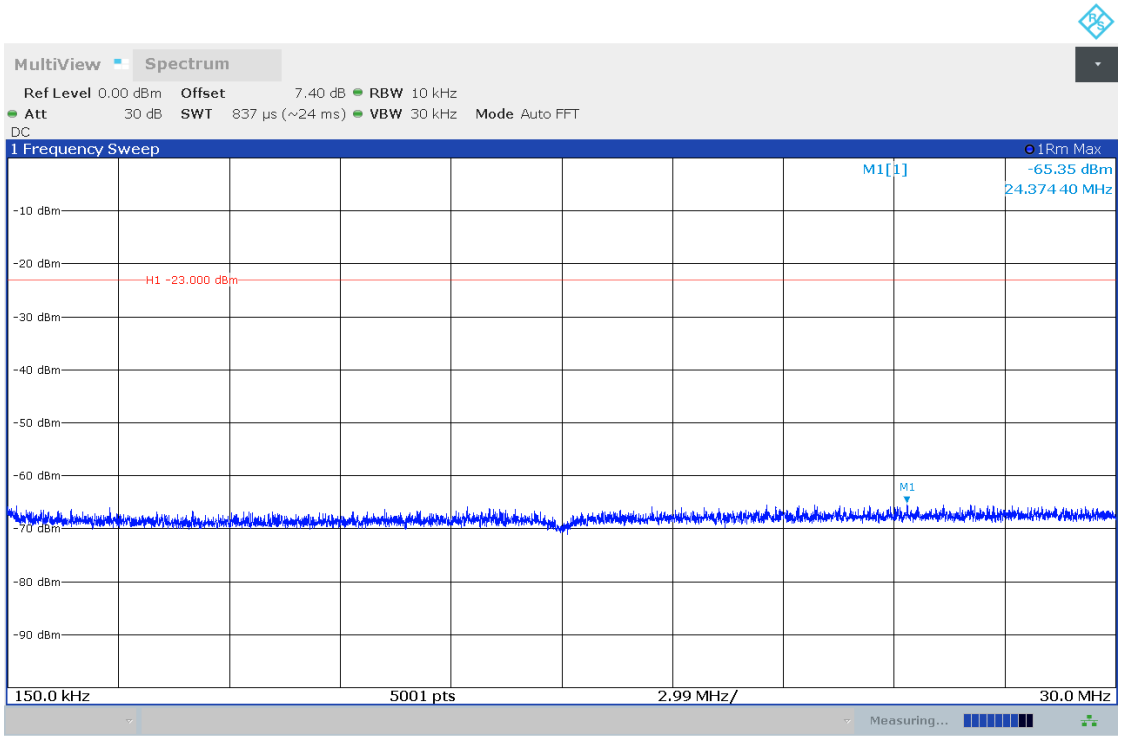

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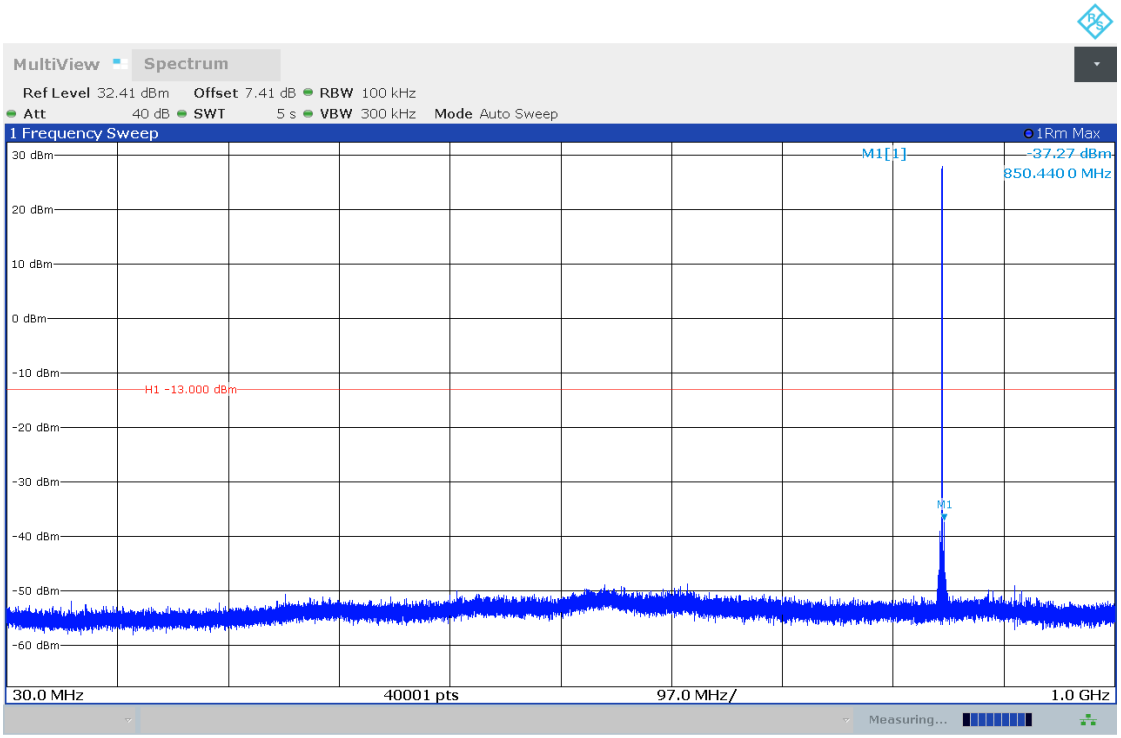

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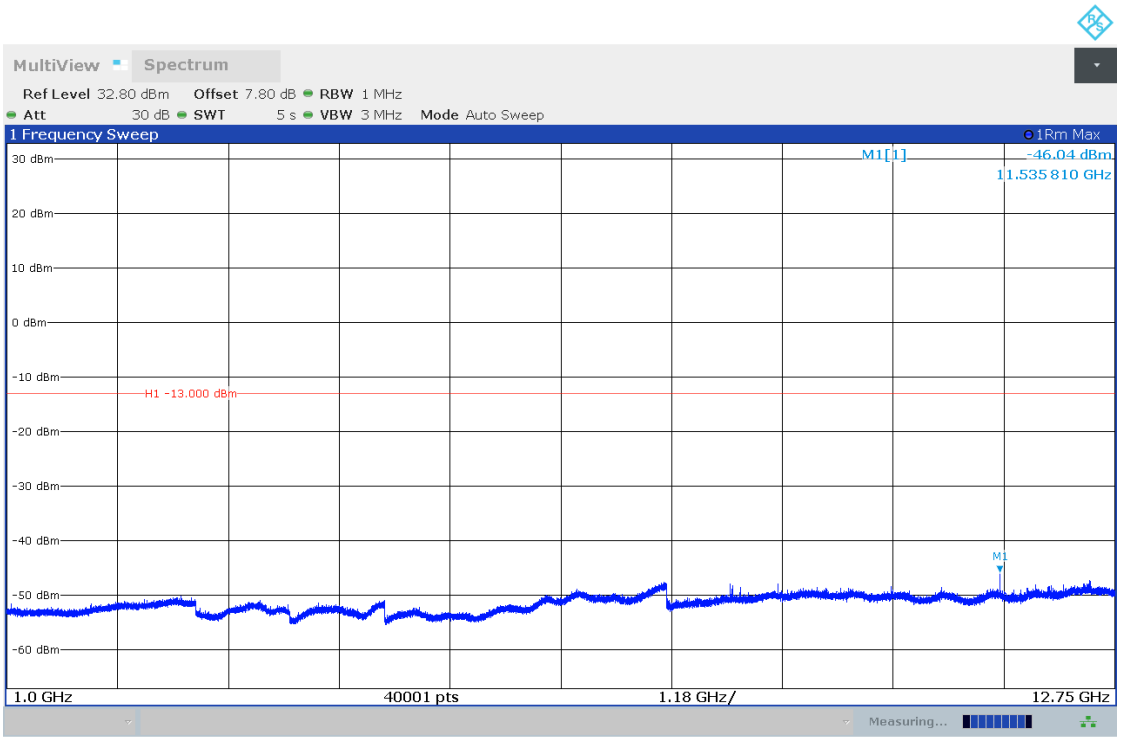

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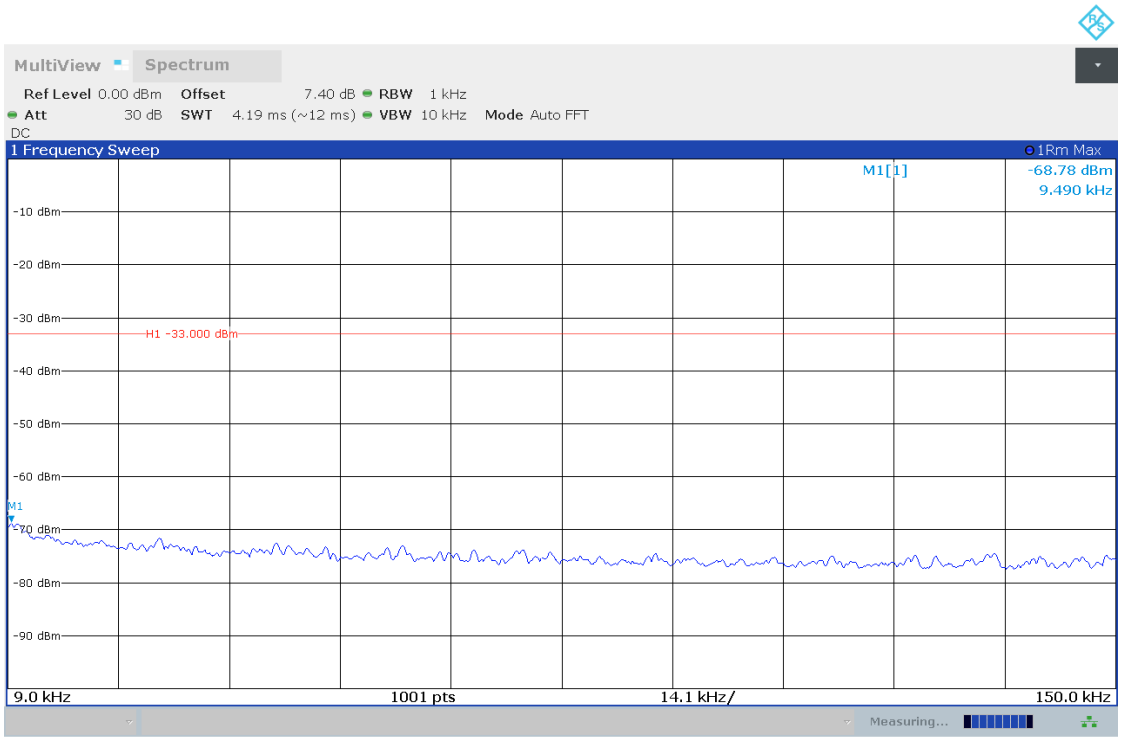

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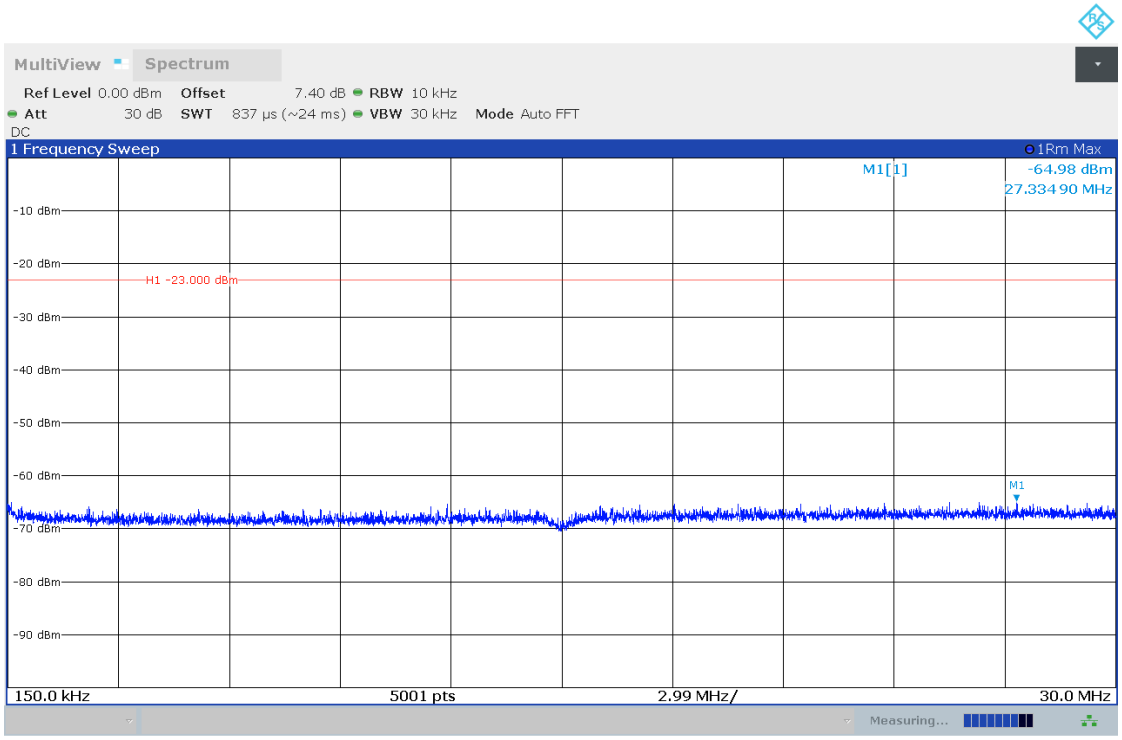

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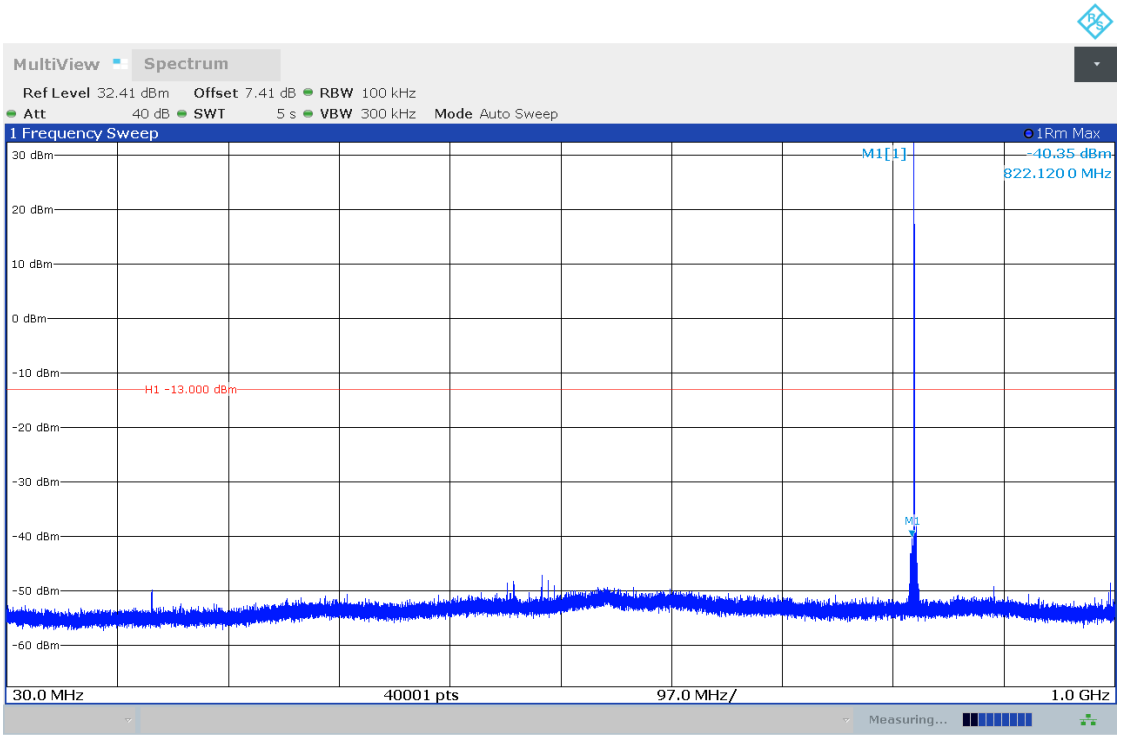

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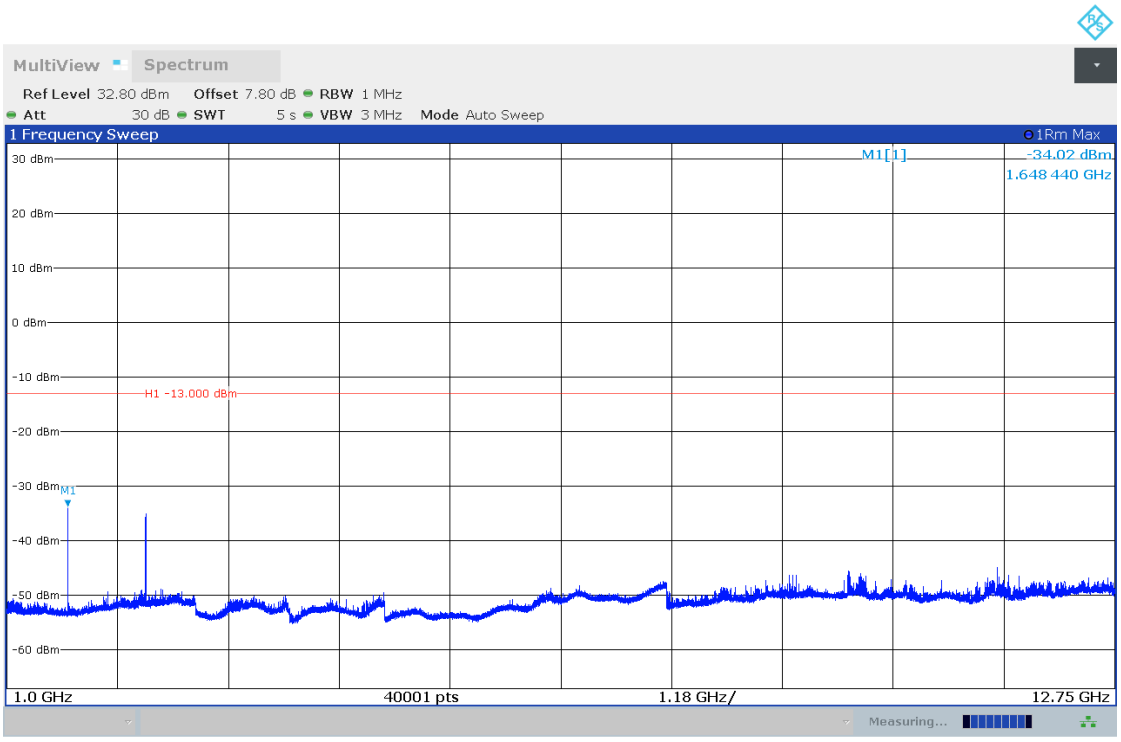

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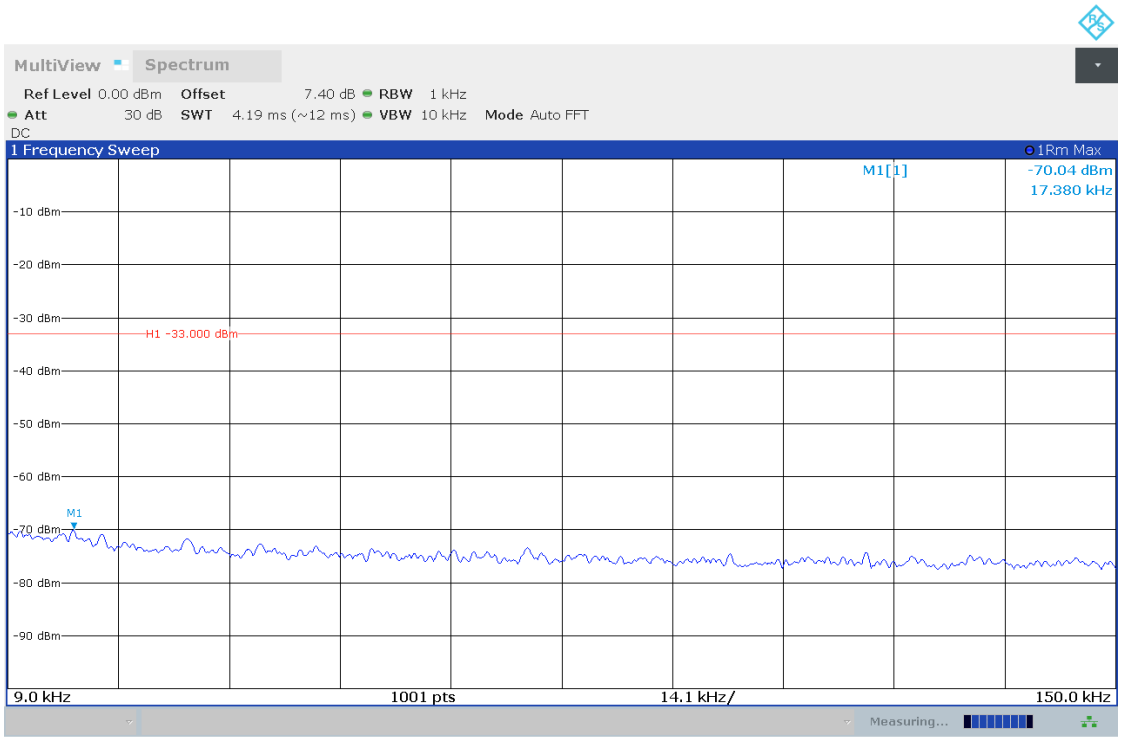
GSM850_TM2_MCH



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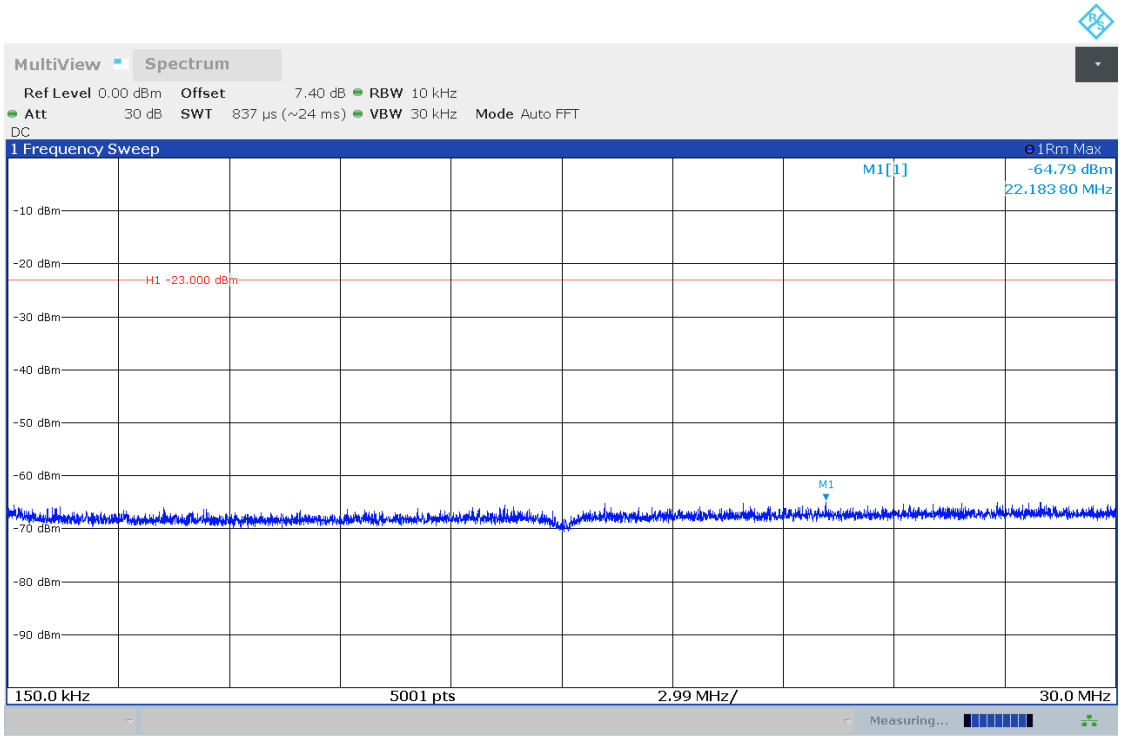

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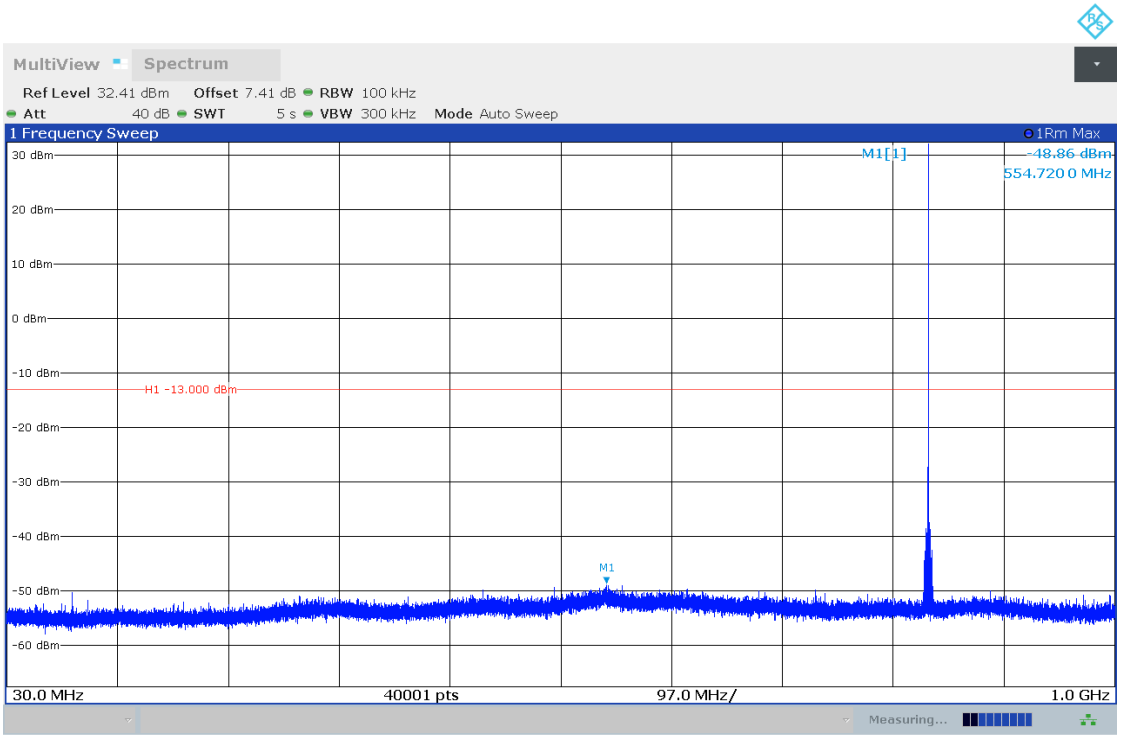

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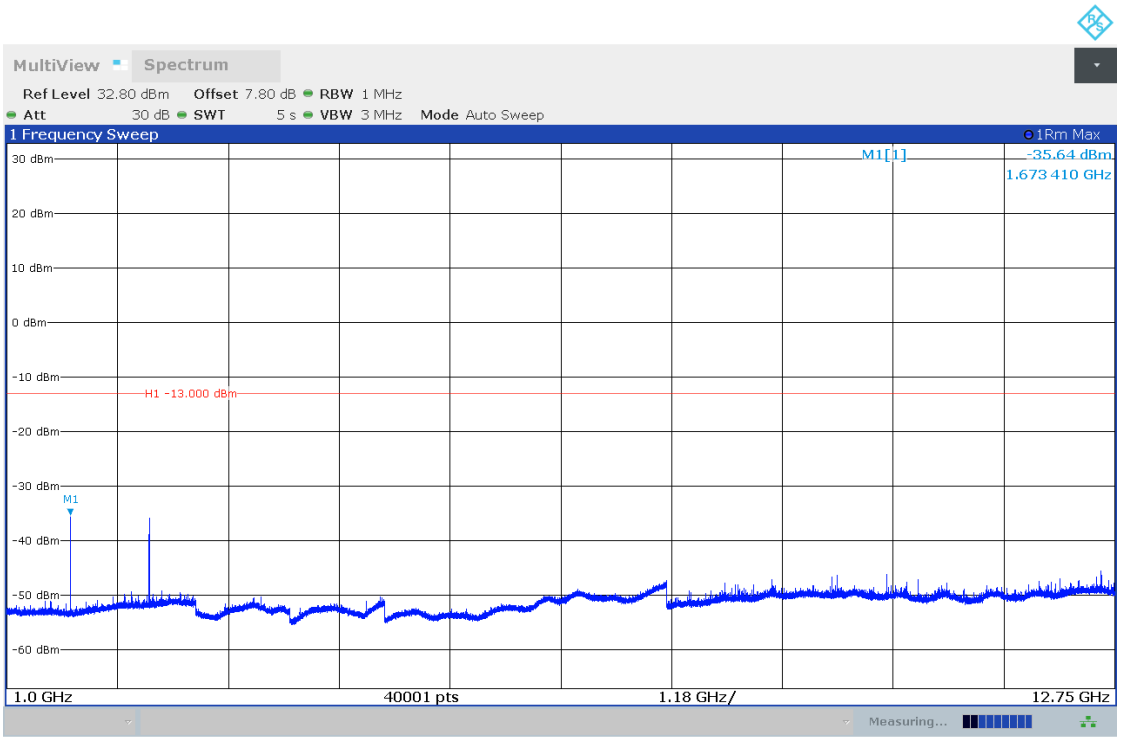

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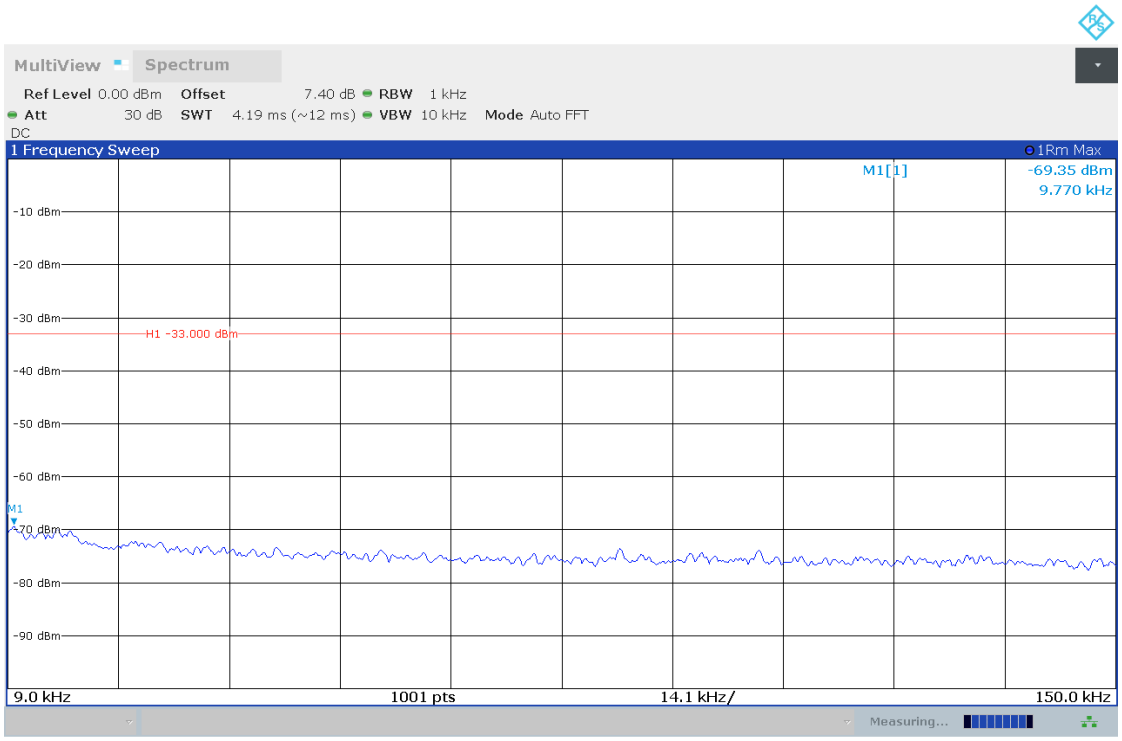

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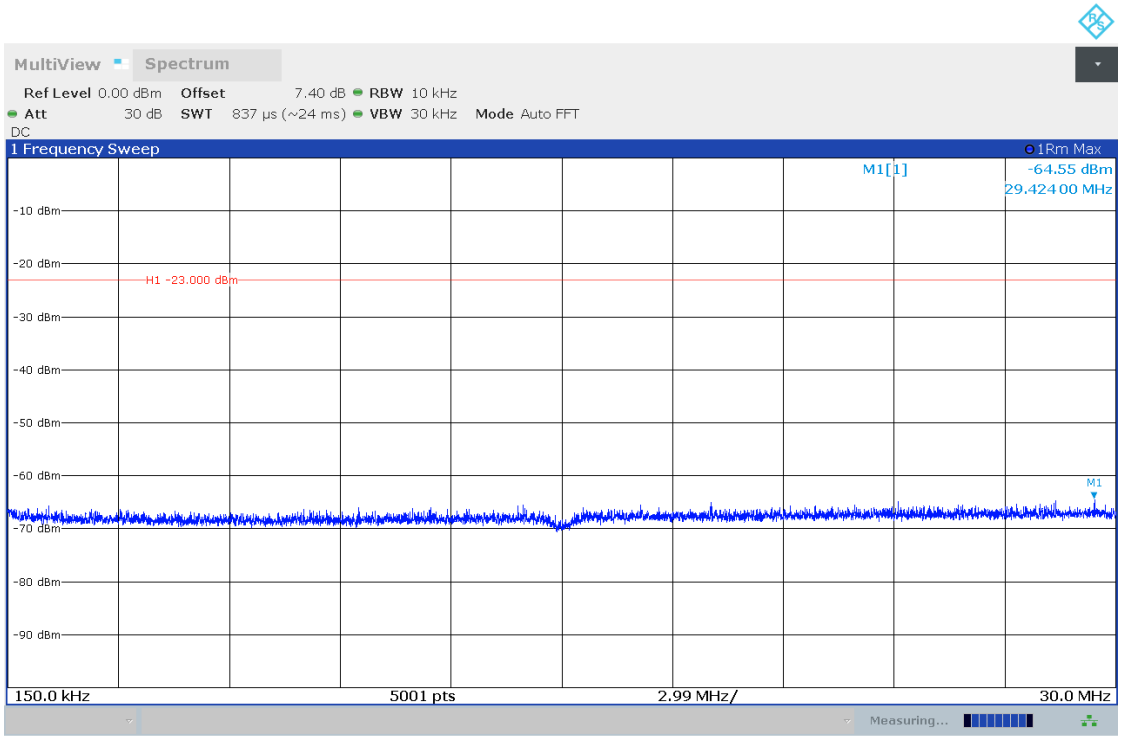

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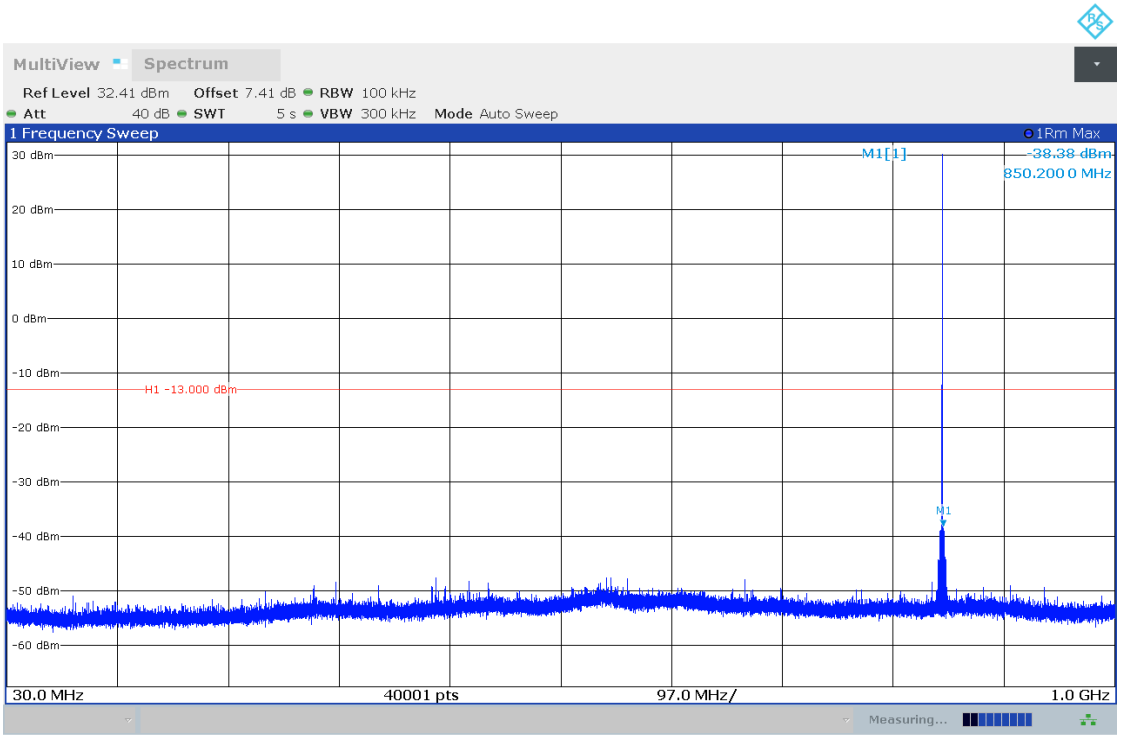

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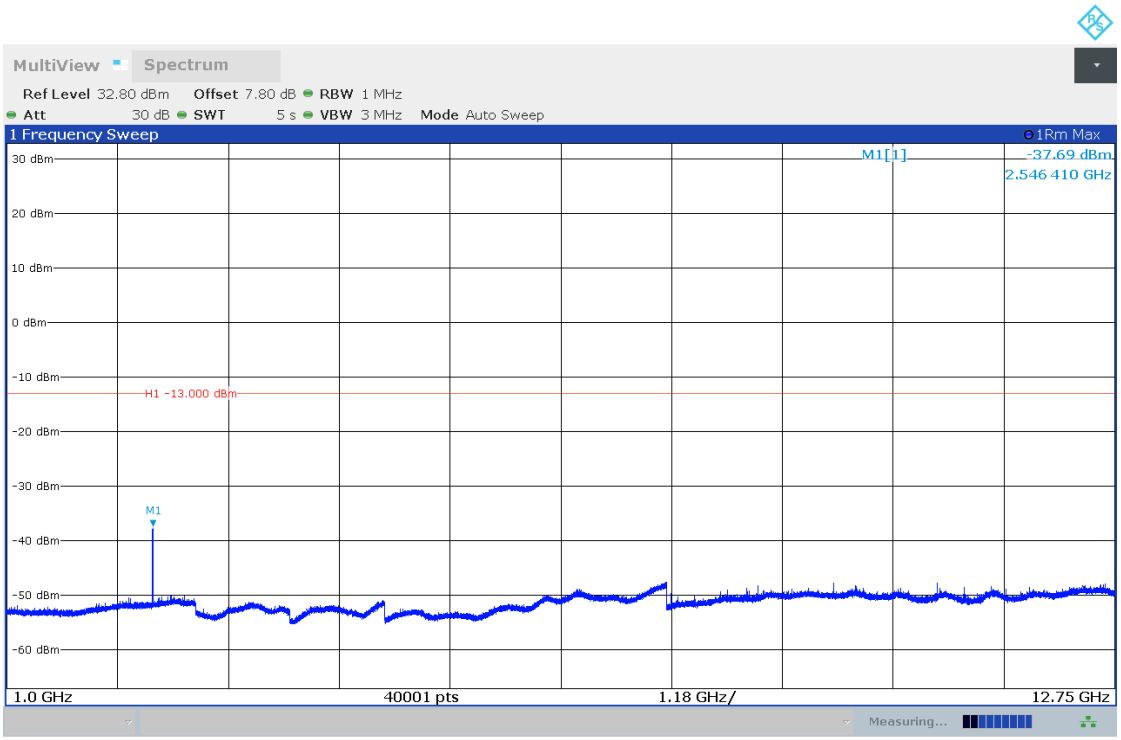

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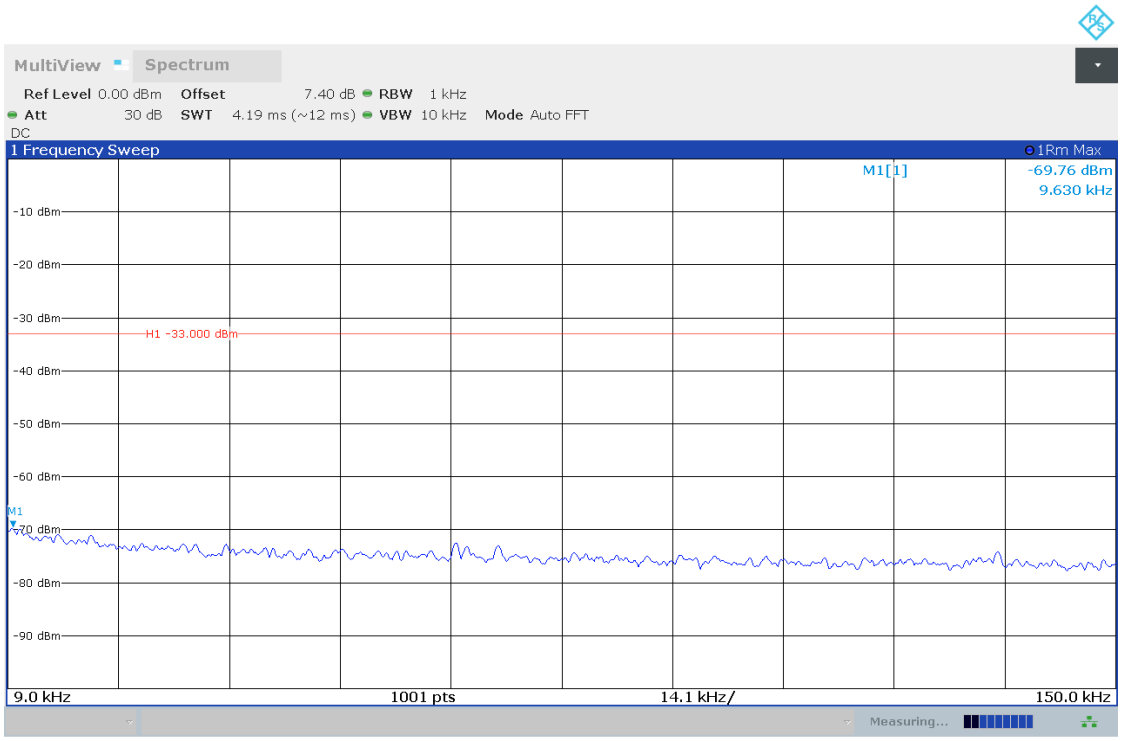
GSM850_TM3_LCH



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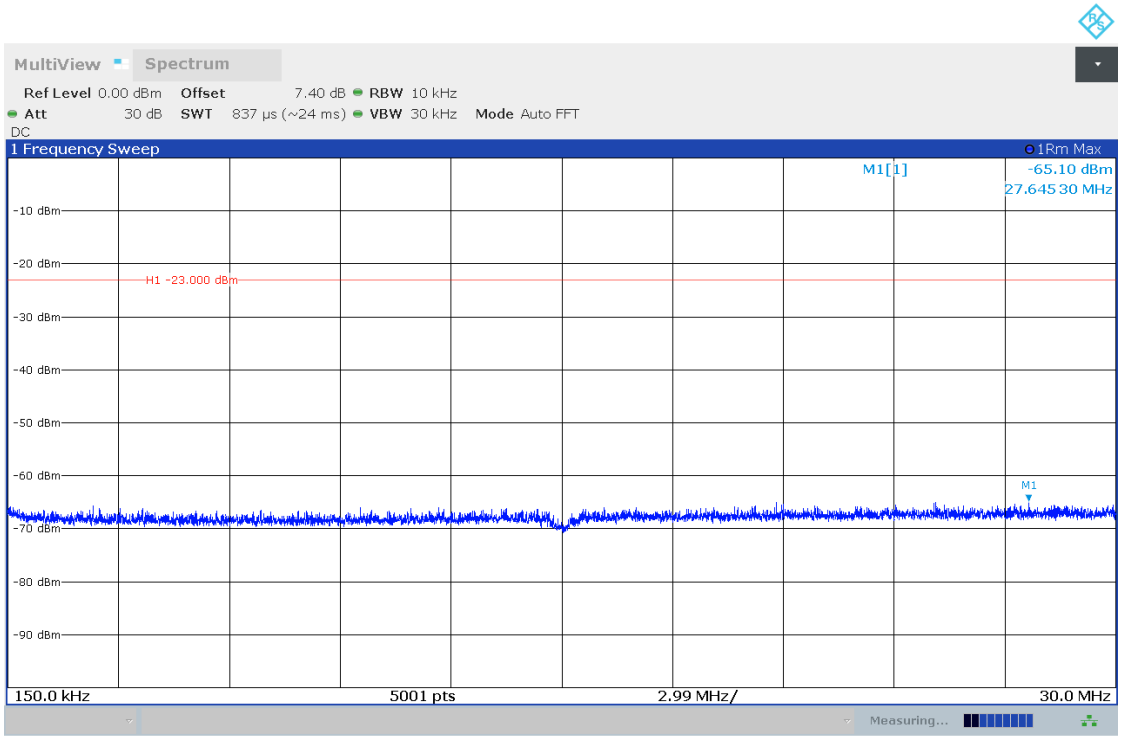

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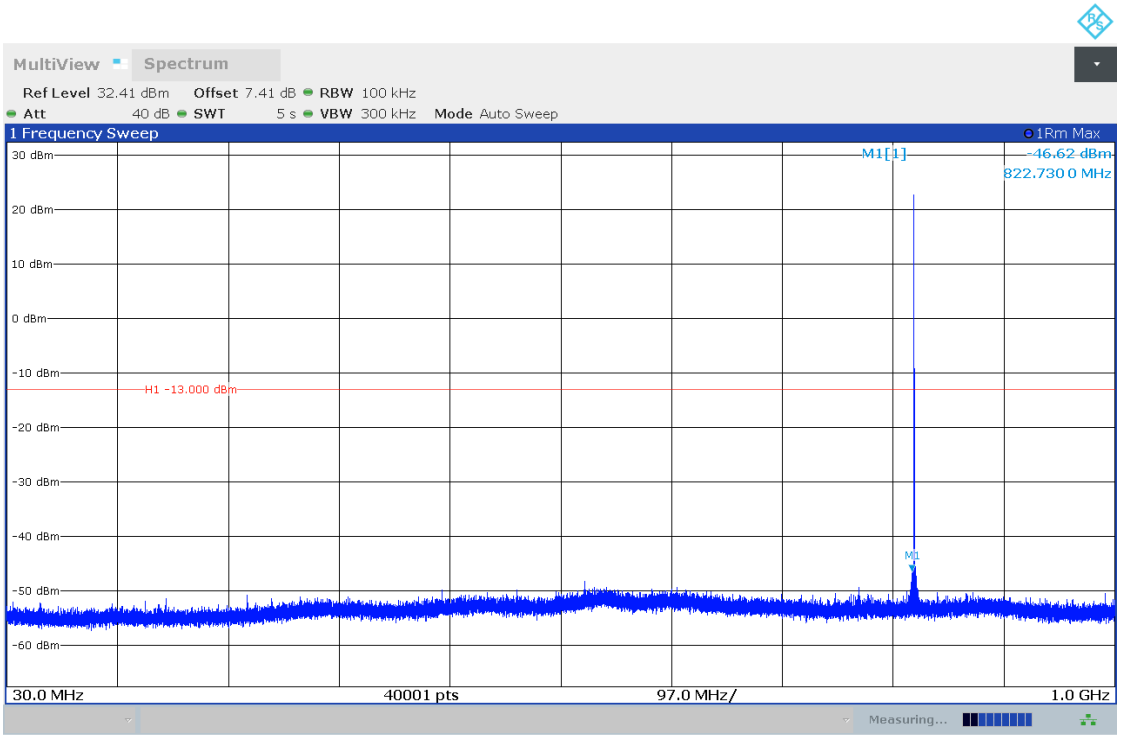

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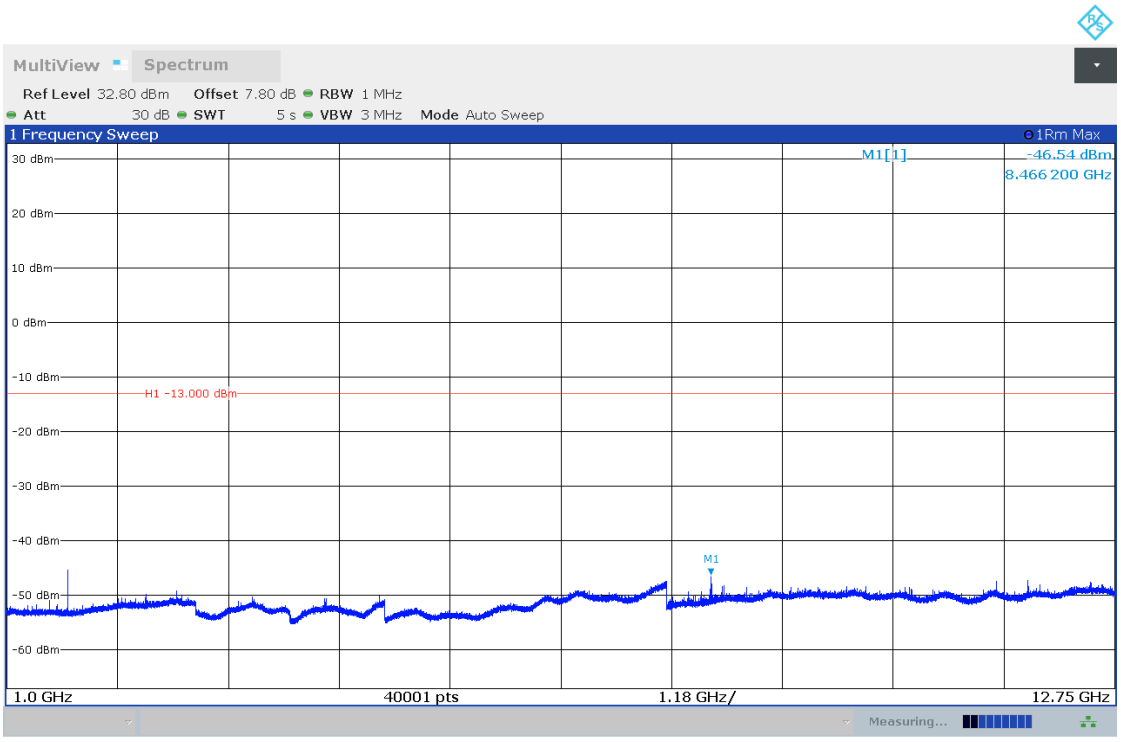

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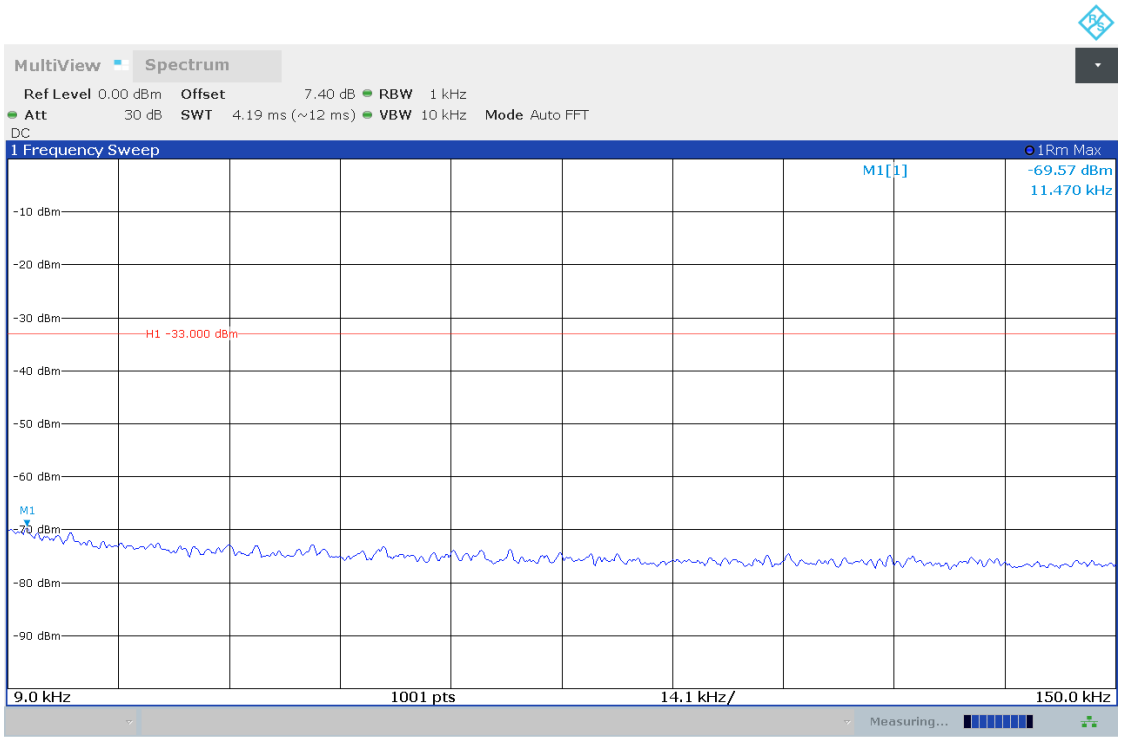
GSM850_TM3_MCH



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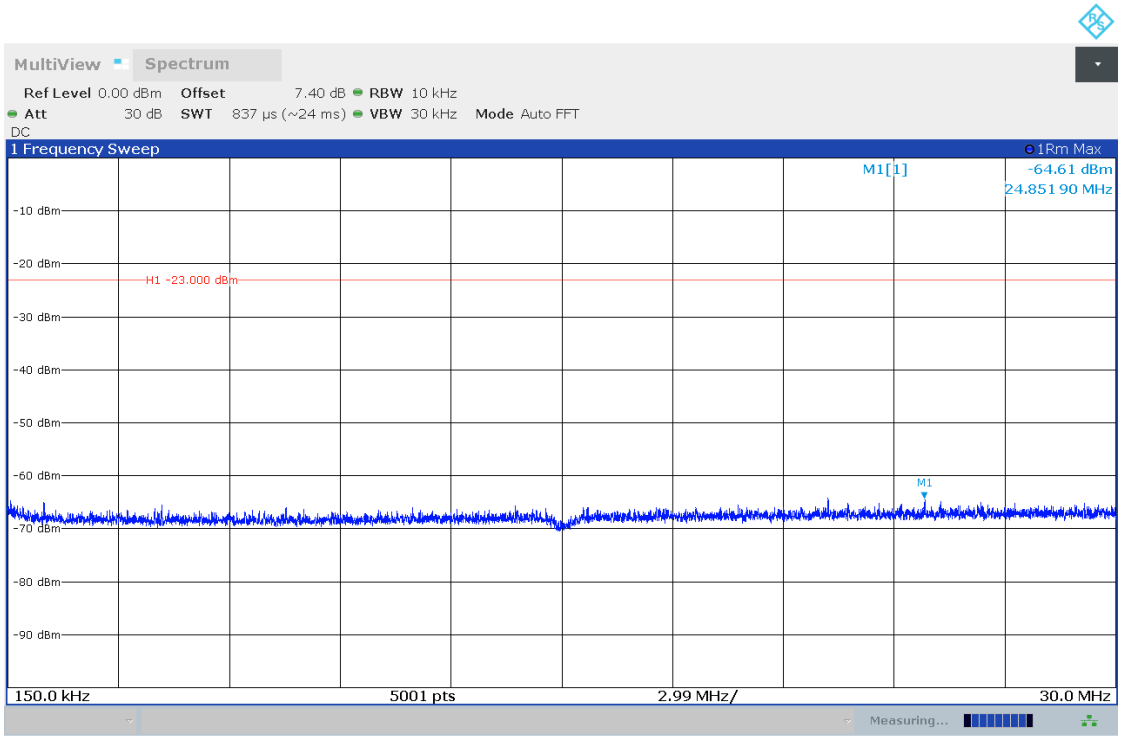

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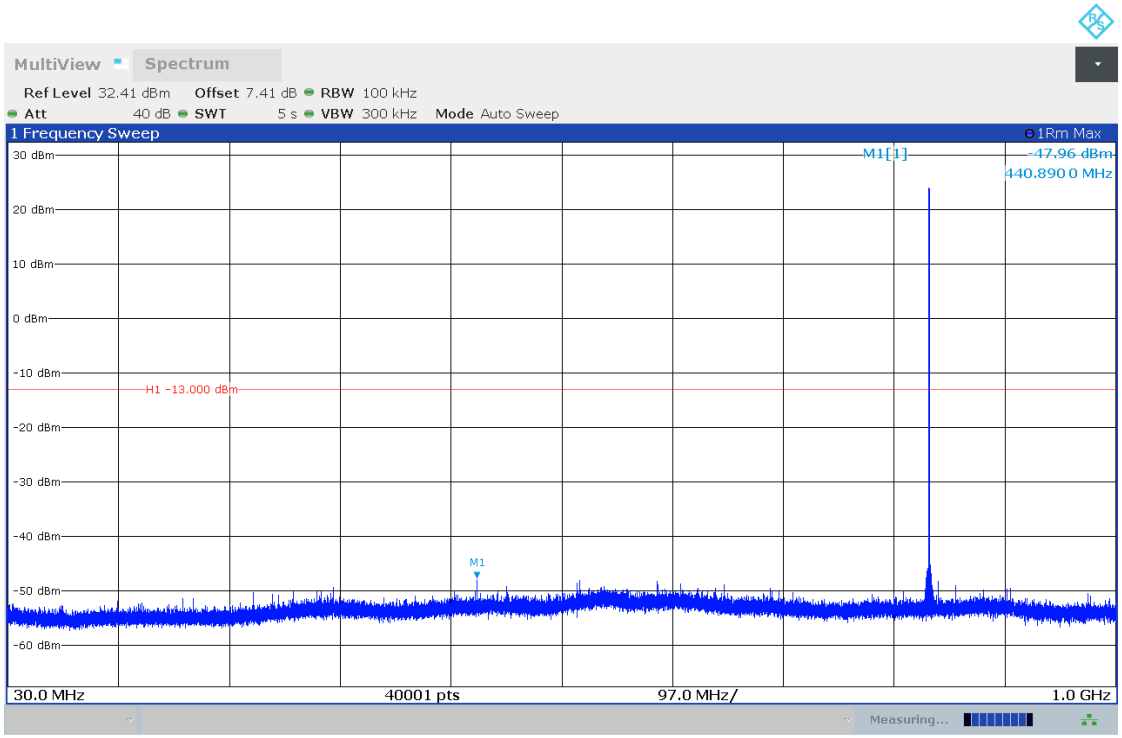

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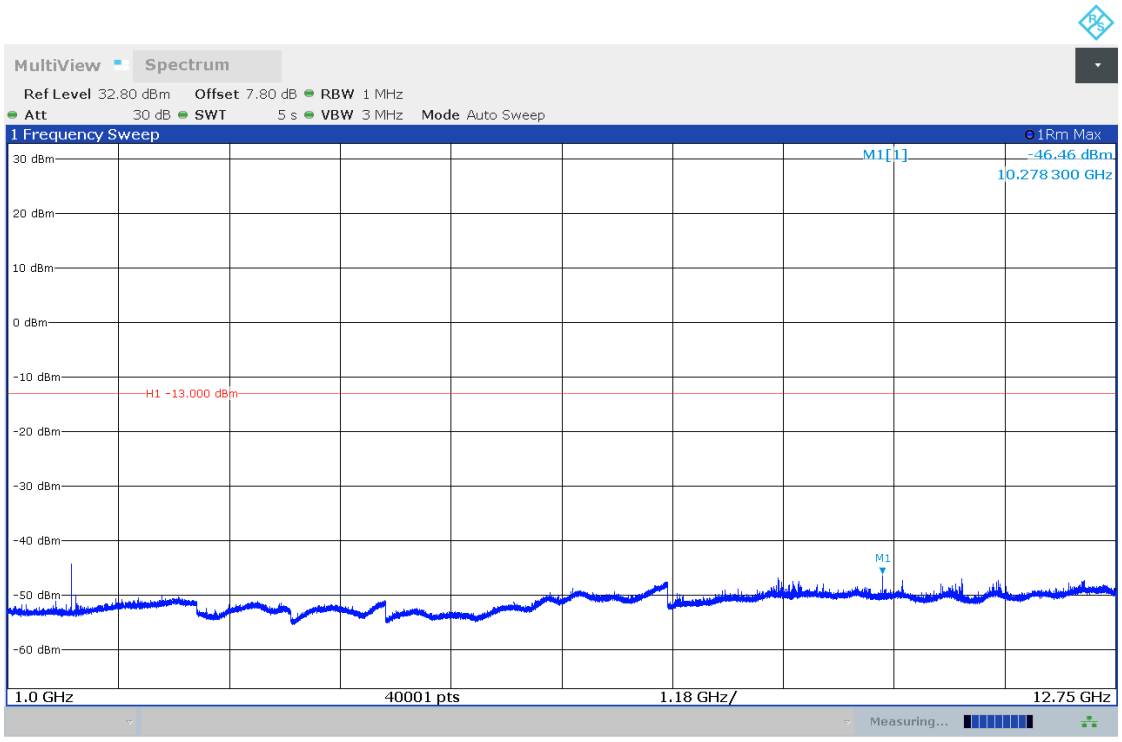

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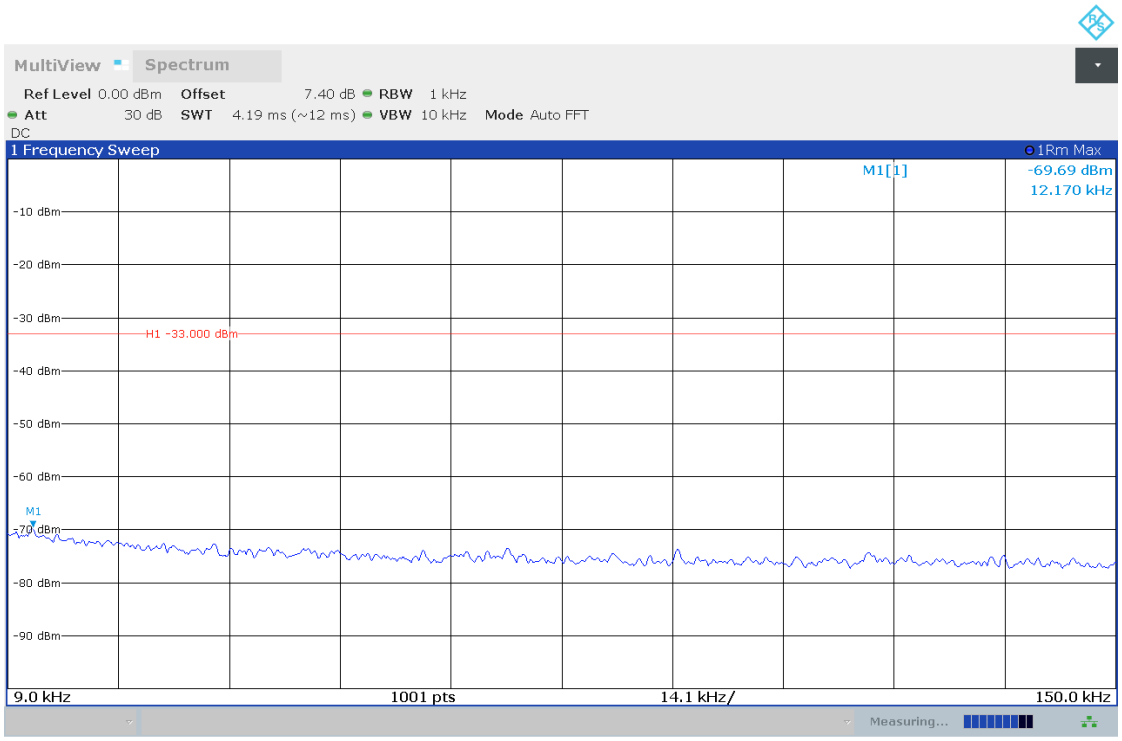
GSM850_TM3_HCH



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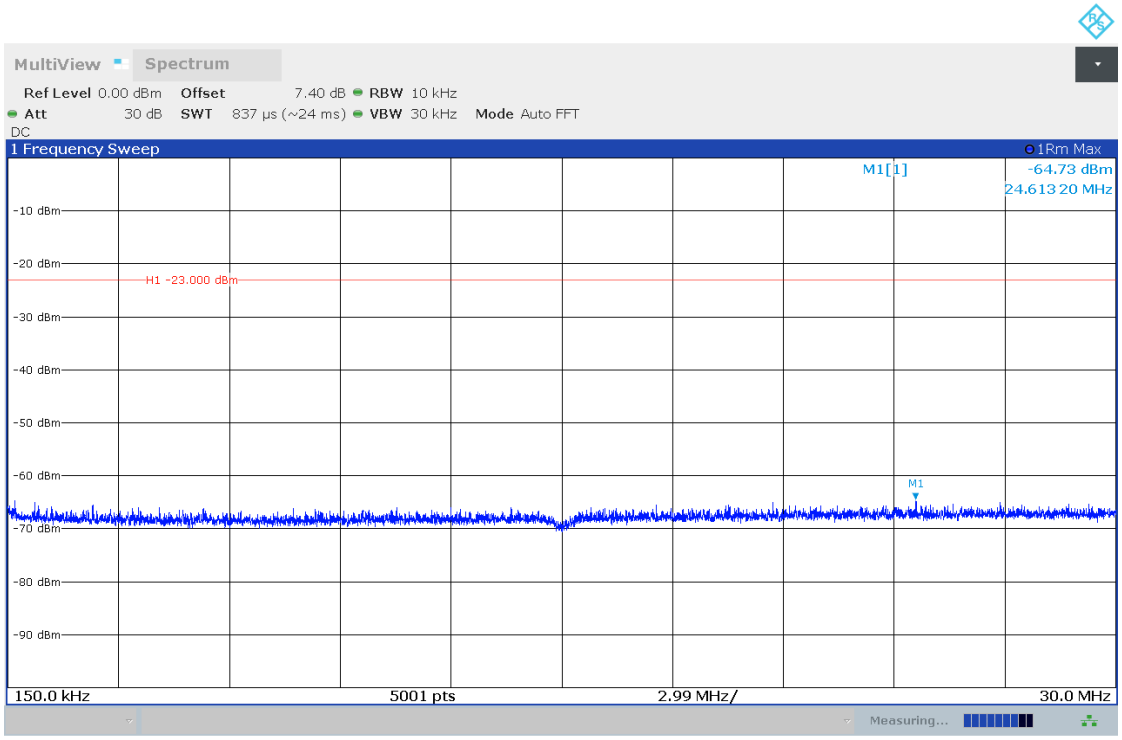

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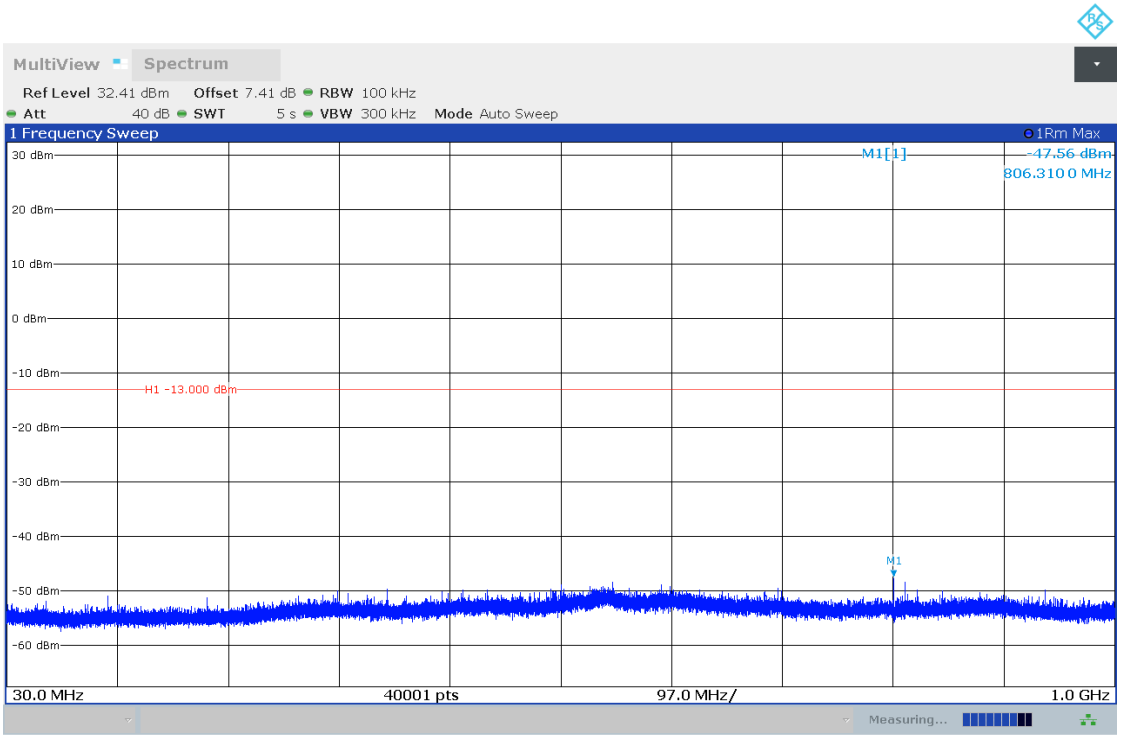

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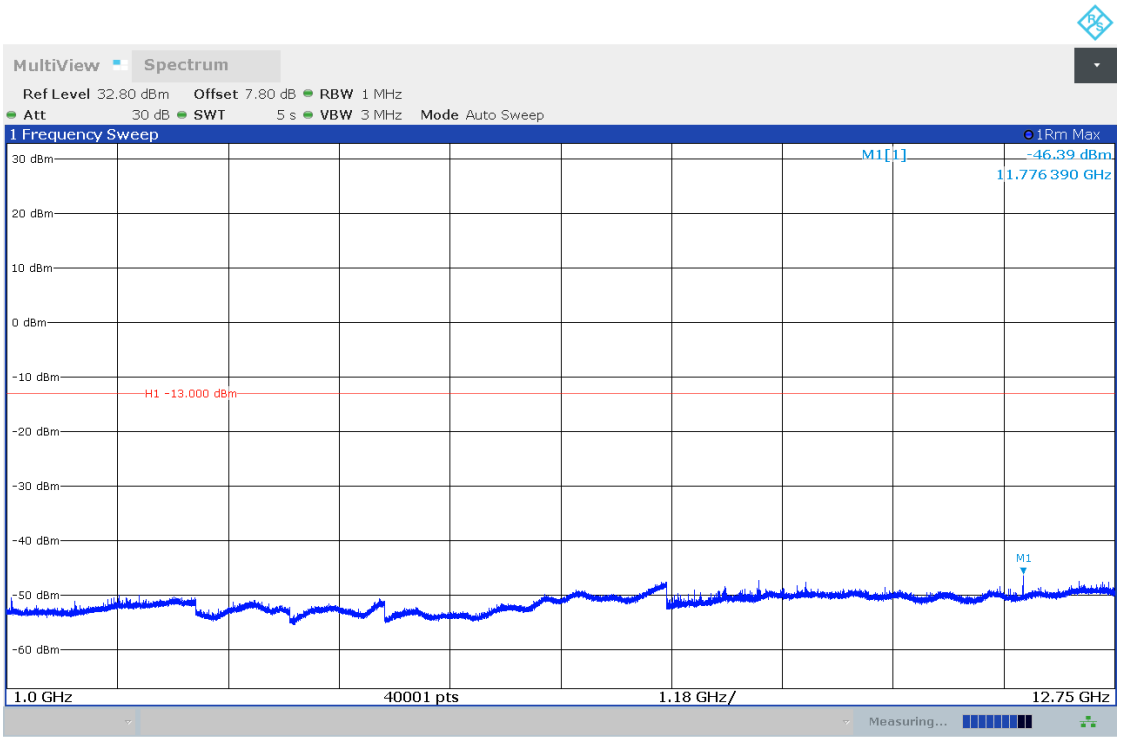

16:59:57 26.04.2022

7 Appendix_G: Frequency Stability

7.1 Test Results

Frequency Error vs. Voltage

Test Band	Test Mode	Test Channel	Test Temp.	Test Volt.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict
GSM850	TM1	LCH	TN	VH	21.98	0.03	PASS
			TN	VN	20.40	0.02	PASS
			TN	VL	20.39	0.02	PASS
		MCH	TN	VH	21.95	0.03	PASS
			TN	VN	19.95	0.02	PASS
			TN	VL	19.73	0.02	PASS
		HCH	TN	VH	22.23	0.03	PASS
			TN	VN	19.35	0.02	PASS
			TN	VL	20.36	0.02	PASS
	TM2	LCH	TN	VH	28.53	0.03	PASS
			TN	VN	28.81	0.03	PASS
			TN	VL	28.24	0.03	PASS
		MCH	TN	VH	29.56	0.04	PASS
			TN	VN	28.87	0.03	PASS
			TN	VL	29.09	0.03	PASS
		HCH	TN	VH	28.22	0.03	PASS
			TN	VN	29.03	0.03	PASS
			TN	VL	28.89	0.03	PASS
	TM3	LCH	TN	VH	22.86	0.03	PASS
			TN	VN	22.08	0.03	PASS
			TN	VL	22.34	0.03	PASS
		MCH	TN	VH	22.37	0.03	PASS
			TN	VN	21.52	0.03	PASS
			TN	VL	22.18	0.03	PASS
		HCH	TN	VH	21.70	0.03	PASS
			TN	VN	21.46	0.03	PASS
			TN	VL	21.04	0.02	PASS

Frequency Error vs. Temperature

Test Band	Test Mode	Test Channel	Test Temp.	Test Volt.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict
GSM850	TM1	LCH	VN	-30	20.99	0.03	PASS
			VN	-20	21.08	0.03	PASS
			VN	-10	19.72	0.02	PASS
			VN	0	18.36	0.02	PASS
			VN	10	19.98	0.02	PASS
			VN	20	20.72	0.03	PASS
			VN	30	20.20	0.02	PASS
			VN	40	21.82	0.03	PASS
			VN	50	20.57	0.02	PASS
		MCH	VN	-30	21.70	0.03	PASS
			VN	-20	18.82	0.02	PASS
			VN	-10	19.34	0.02	PASS
			VN	0	18.84	0.02	PASS
			VN	10	20.21	0.02	PASS
			VN	20	18.54	0.02	PASS
			VN	30	20.41	0.02	PASS
			VN	40	17.47	0.02	PASS
			VN	50	20.28	0.02	PASS
		HCH	VN	-30	21.29	0.03	PASS
			VN	-20	20.18	0.02	PASS
			VN	-10	20.68	0.02	PASS
			VN	0	20.37	0.02	PASS
			VN	10	20.25	0.02	PASS
			VN	20	20.65	0.02	PASS
			VN	30	21.16	0.02	PASS
			VN	40	20.60	0.02	PASS
			VN	50	19.10	0.02	PASS

Test Band	Test Mode	Test Channel	Test Temp.	Test Volt.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict
GSM850	TM2	LCH	VN	-30	29.08	0.04	PASS
			VN	-20	30.10	0.04	PASS
			VN	-10	29.24	0.04	PASS
			VN	0	29.12	0.04	PASS
			VN	10	28.62	0.03	PASS
			VN	20	28.77	0.03	PASS
			VN	30	28.11	0.03	PASS
			VN	40	28.46	0.03	PASS
			VN	50	28.00	0.03	PASS
		MCH	VN	-30	29.65	0.04	PASS
			VN	-20	29.43	0.04	PASS
			VN	-10	29.15	0.03	PASS
			VN	0	29.03	0.03	PASS
			VN	10	29.43	0.04	PASS
			VN	20	29.42	0.04	PASS
			VN	30	29.51	0.04	PASS
			VN	40	29.43	0.04	PASS
			VN	50	29.86	0.04	PASS
		HCH	VN	-30	28.98	0.03	PASS
			VN	-20	29.49	0.03	PASS
			VN	-10	28.71	0.03	PASS
			VN	0	29.32	0.03	PASS
			VN	10	29.19	0.03	PASS
			VN	20	28.87	0.03	PASS
			VN	30	28.19	0.03	PASS
			VN	40	29.60	0.03	PASS
			VN	50	28.35	0.03	PASS

Test Band	Test Mode	Test Channel	Test Temp.	Test Volt.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict
GSM850	TM3	LCH	VN	-30	20.64	0.03	PASS
			VN	-20	19.78	0.02	PASS
			VN	-10	20.89	0.03	PASS
			VN	0	19.85	0.02	PASS
			VN	10	19.60	0.02	PASS
			VN	20	19.79	0.02	PASS
			VN	30	20.30	0.02	PASS
			VN	40	20.01	0.02	PASS
			VN	50	19.59	0.02	PASS
		MCH	VN	-30	19.31	0.02	PASS
			VN	-20	20.68	0.02	PASS
			VN	-10	20.40	0.02	PASS
			VN	0	20.26	0.02	PASS
			VN	10	21.18	0.03	PASS
			VN	20	20.49	0.02	PASS
			VN	30	20.43	0.02	PASS
			VN	40	20.91	0.02	PASS
			VN	50	20.60	0.02	PASS
		HCH	VN	-30	20.20	0.02	PASS
			VN	-20	20.42	0.02	PASS
			VN	-10	20.94	0.02	PASS
			VN	0	20.28	0.02	PASS
			VN	10	20.43	0.02	PASS
			VN	20	20.47	0.02	PASS
			VN	30	20.74	0.02	PASS
			VN	40	20.02	0.02	PASS
			VN	50	20.38	0.02	PASS

End of Test Report