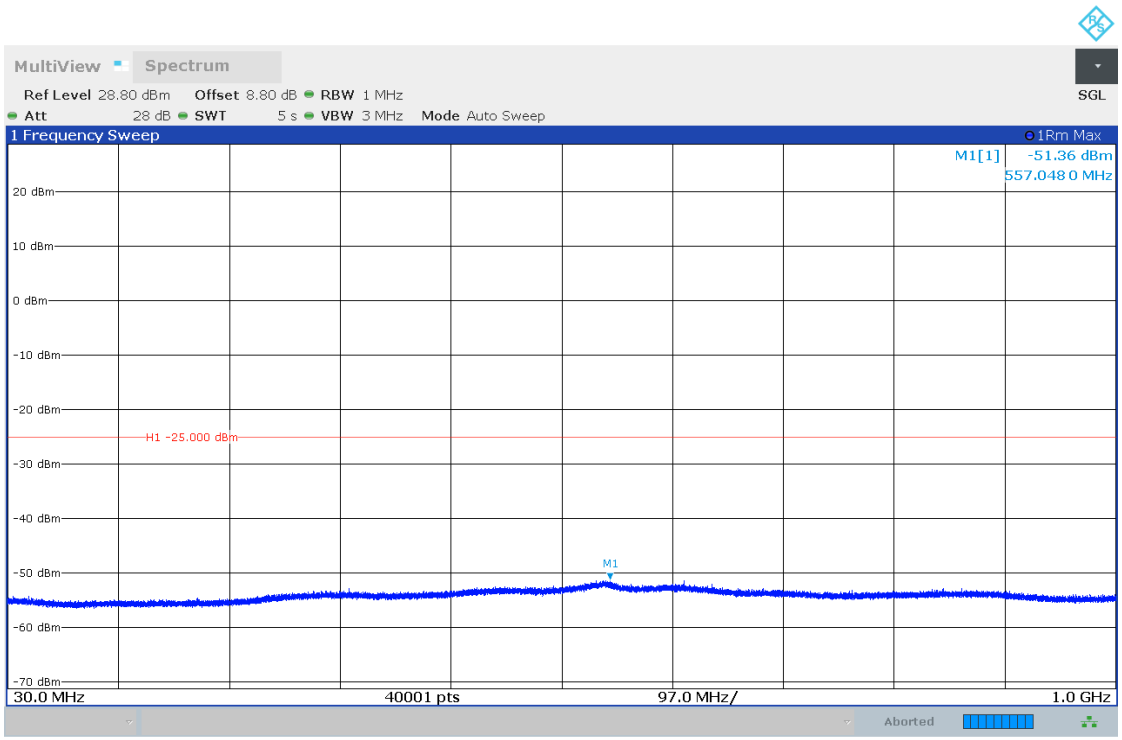
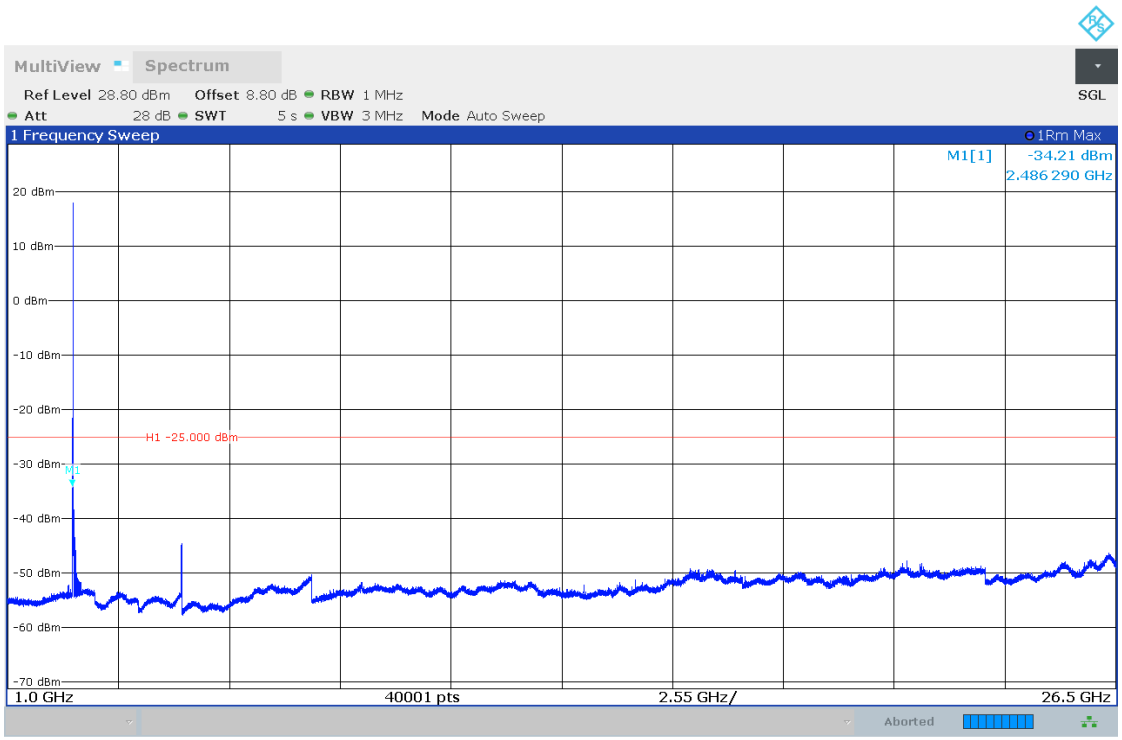


14:55:17 25.04.2022



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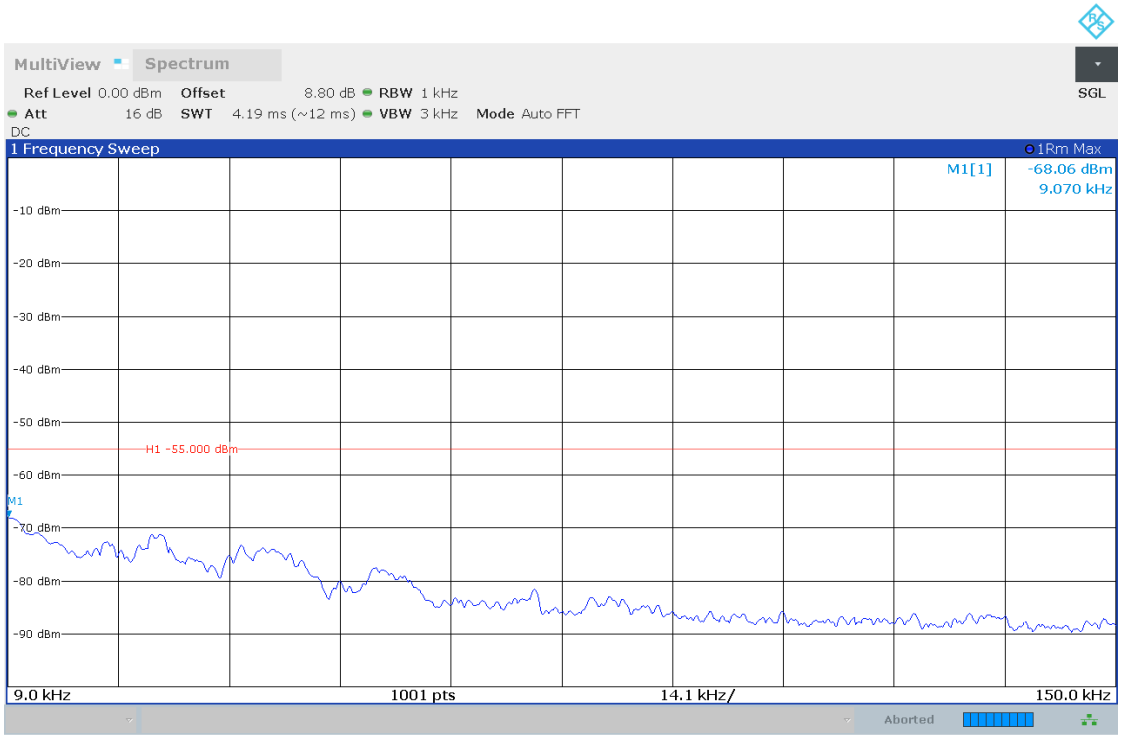
TM1_5MHz_LCH_RB1#0



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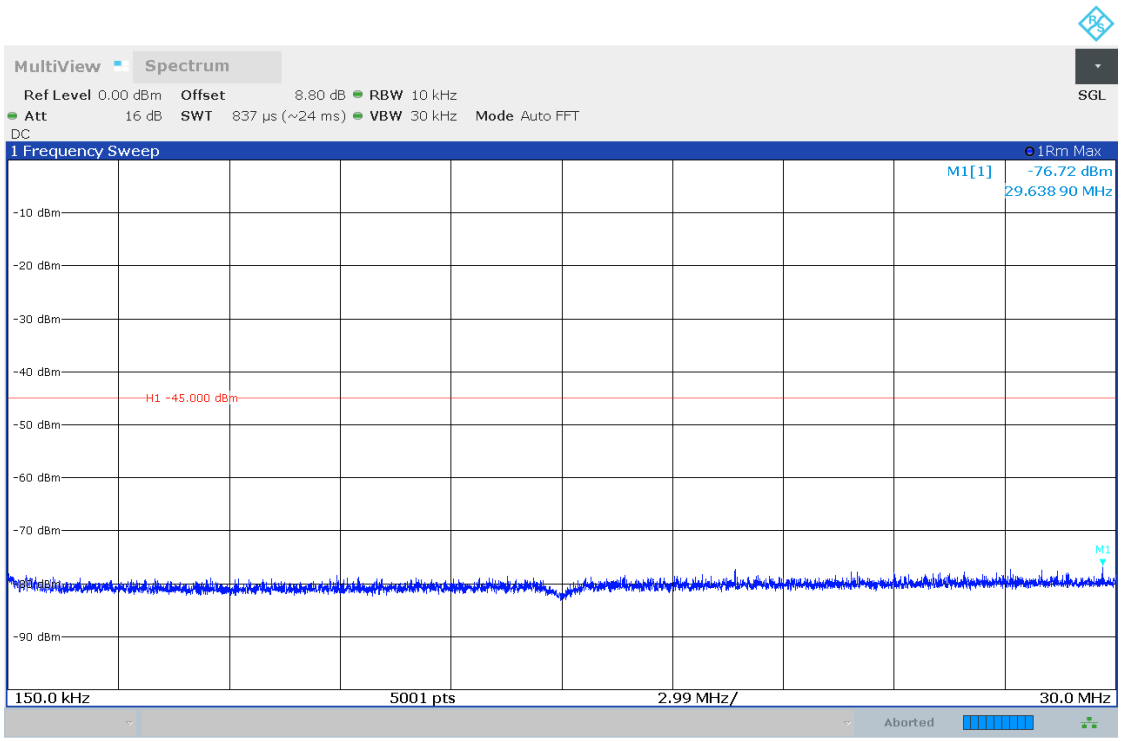

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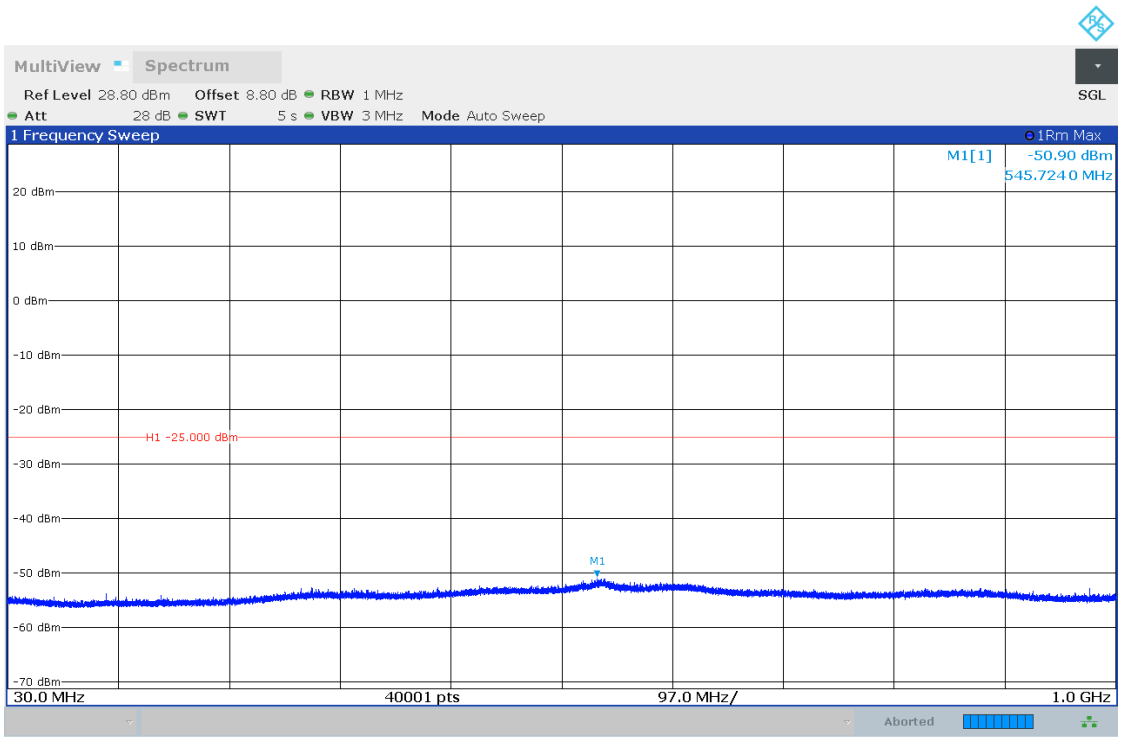

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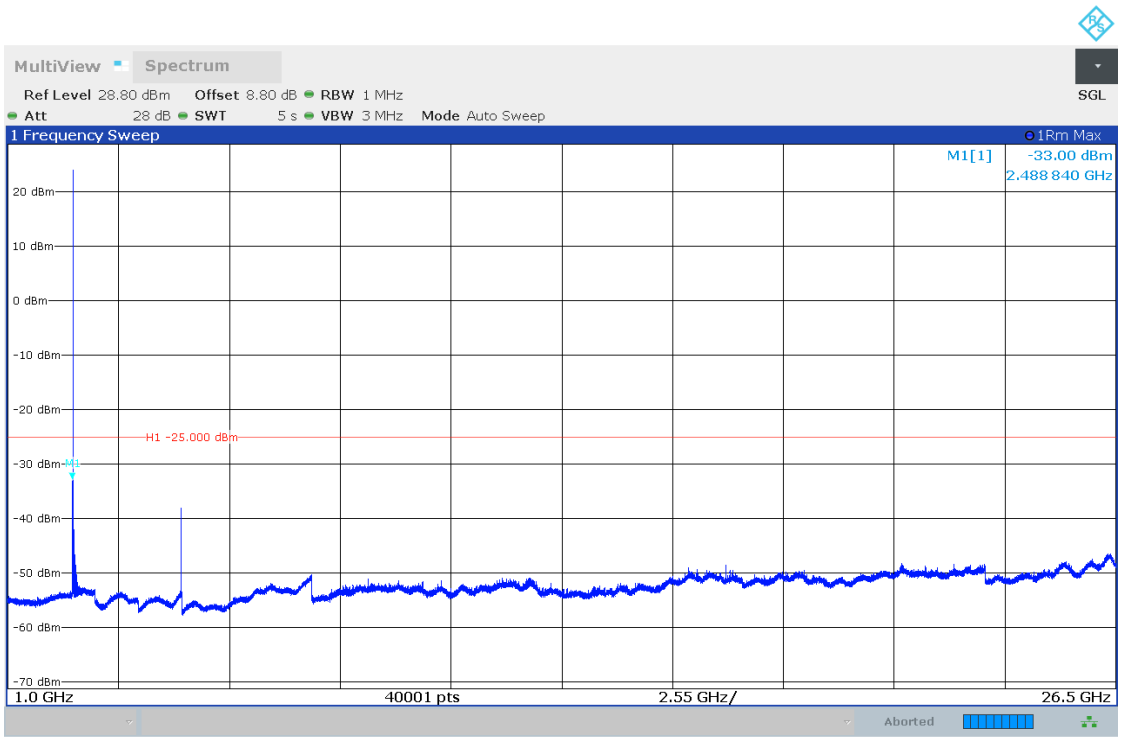

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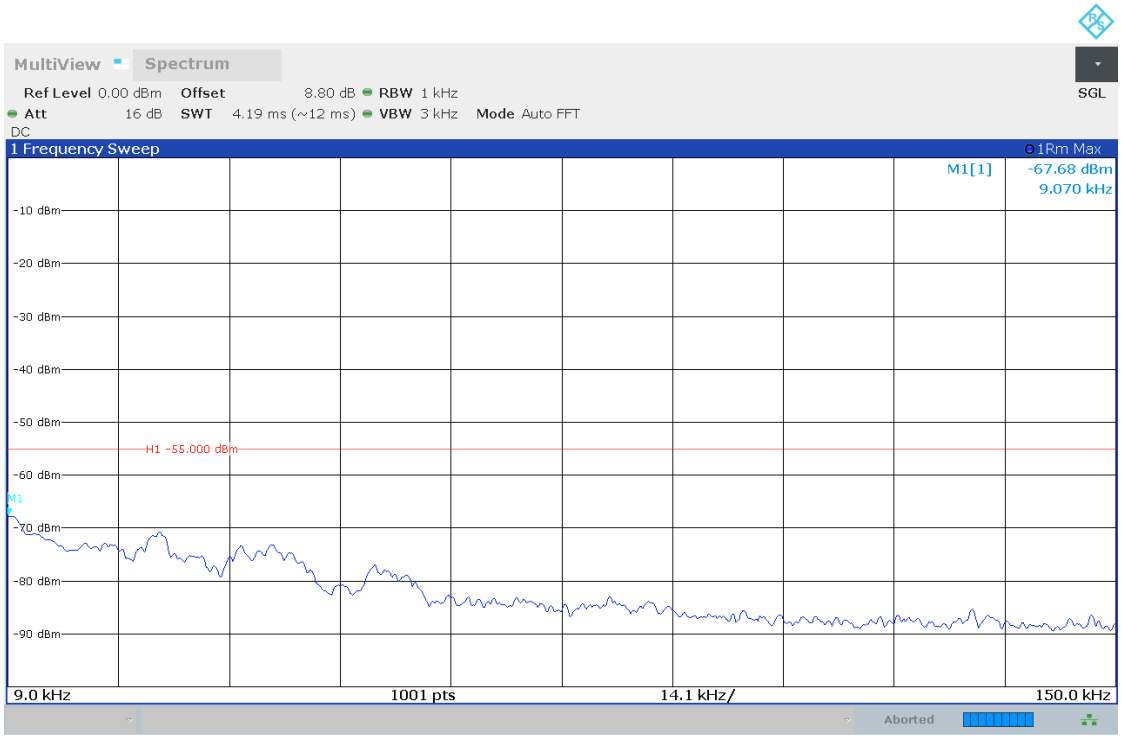
TM1_5MHz_LCH_RB1#24



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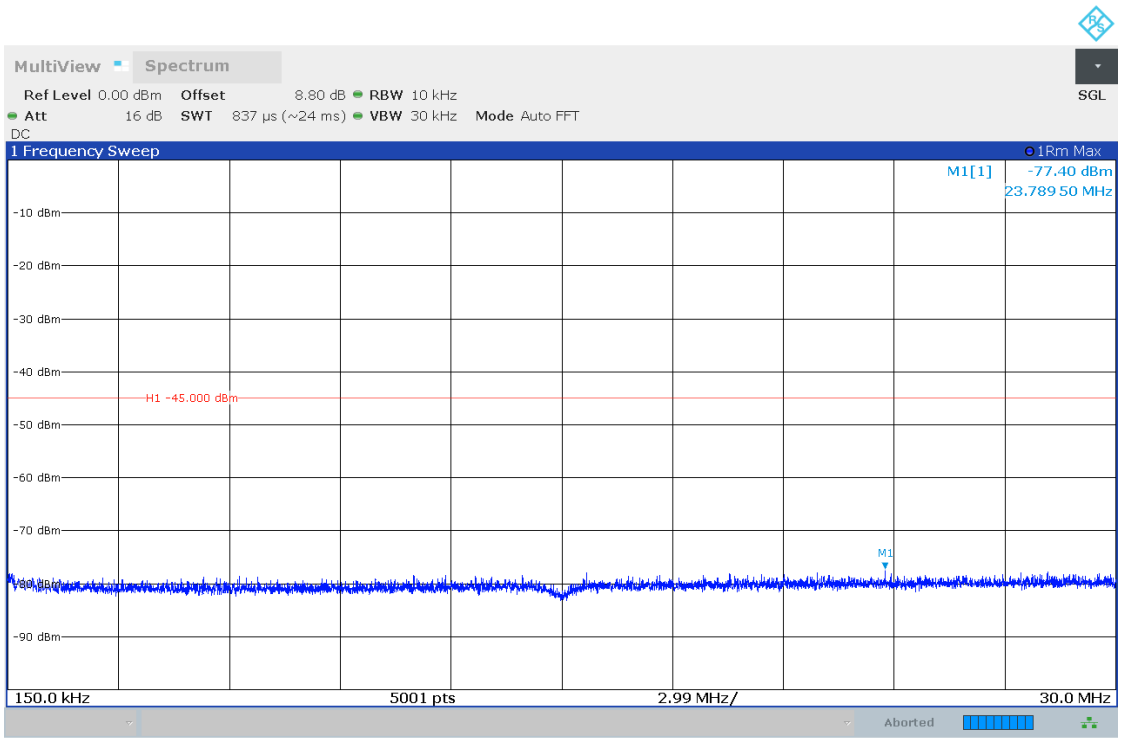

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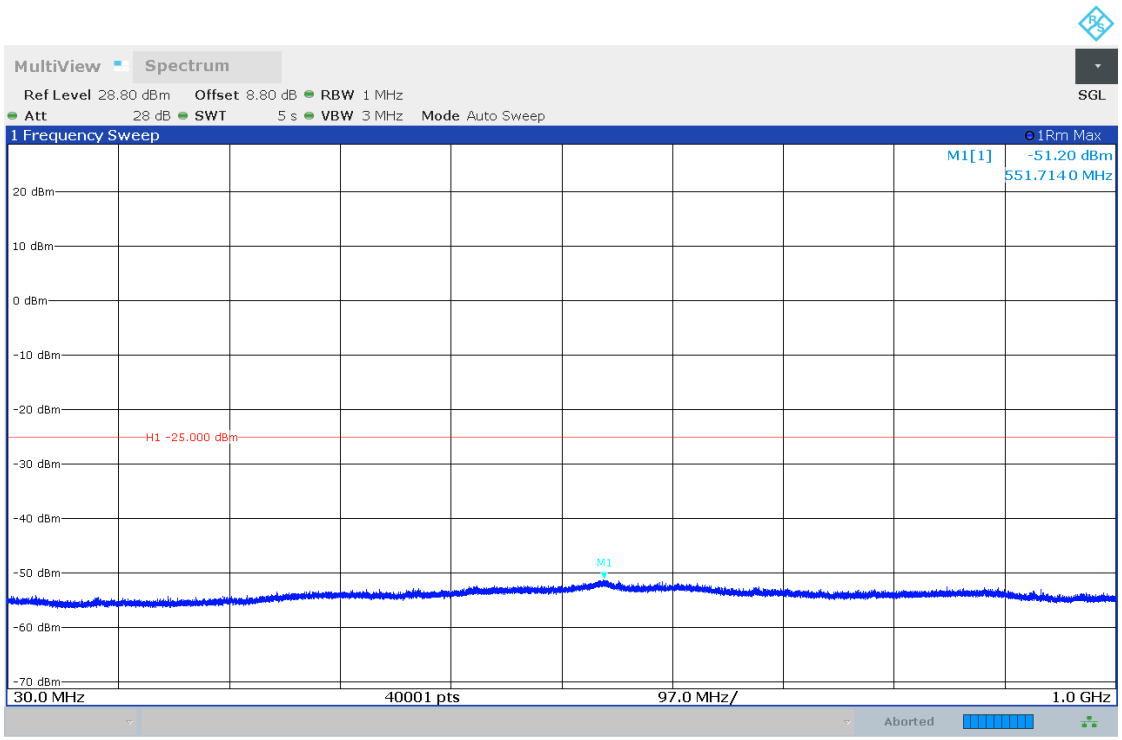

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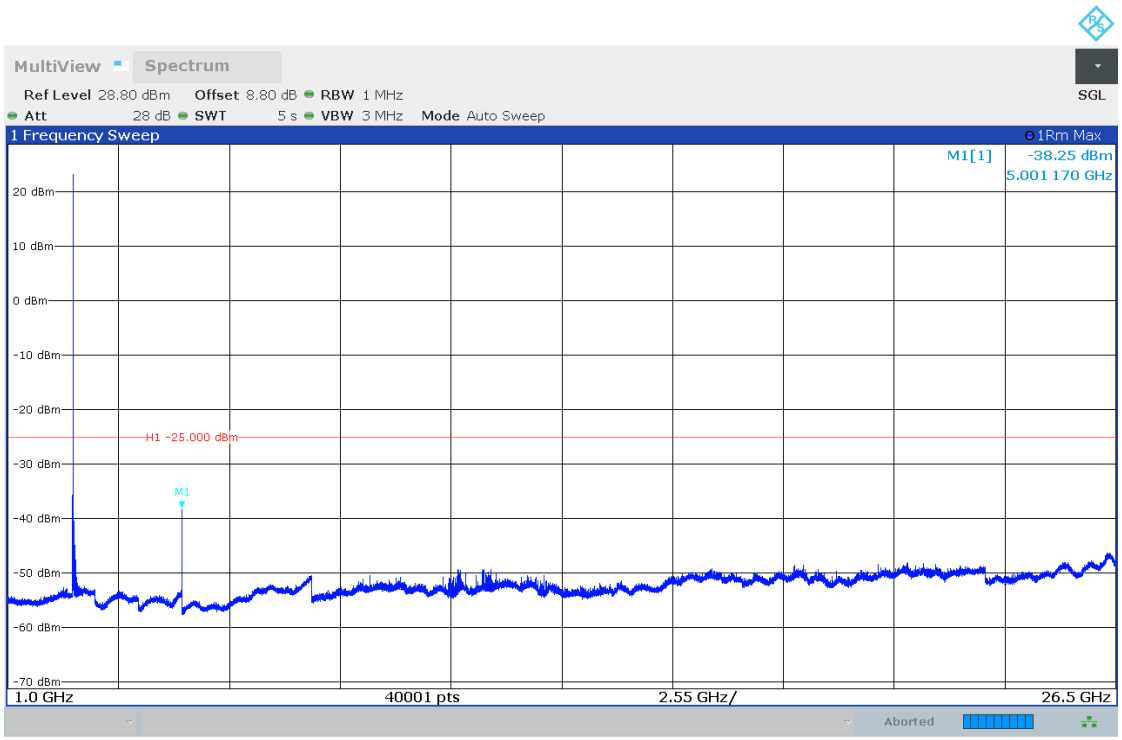

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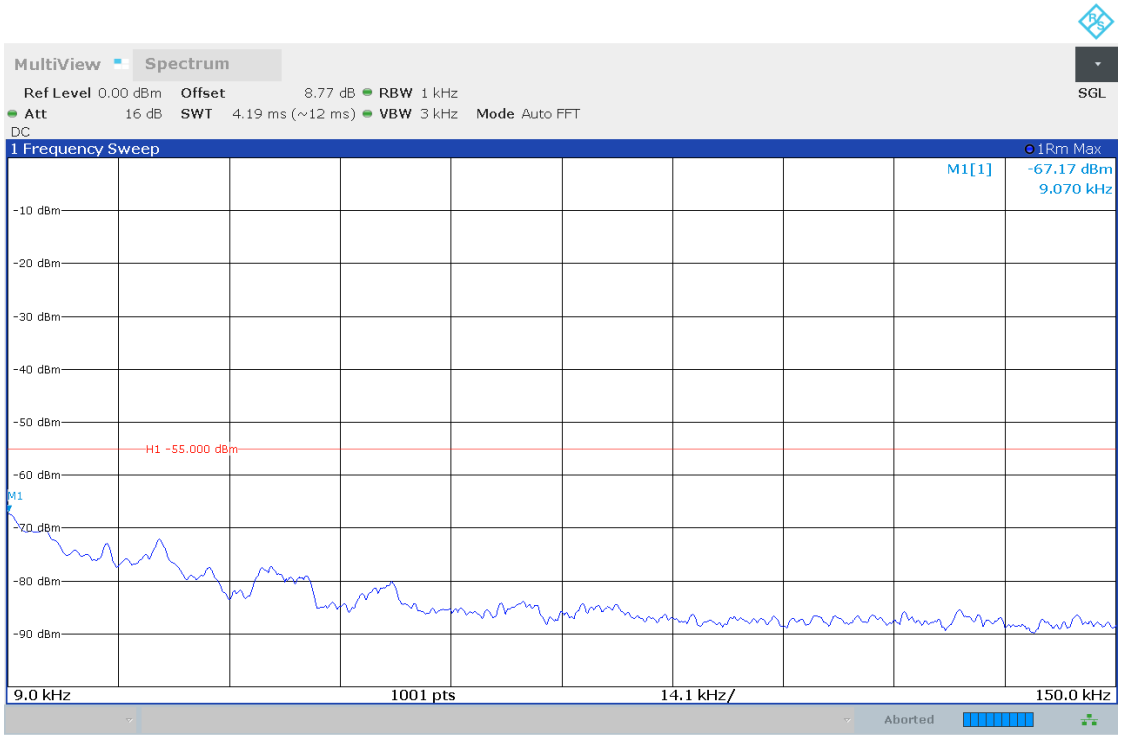
TM1_5MHz_MCH_RB25#0



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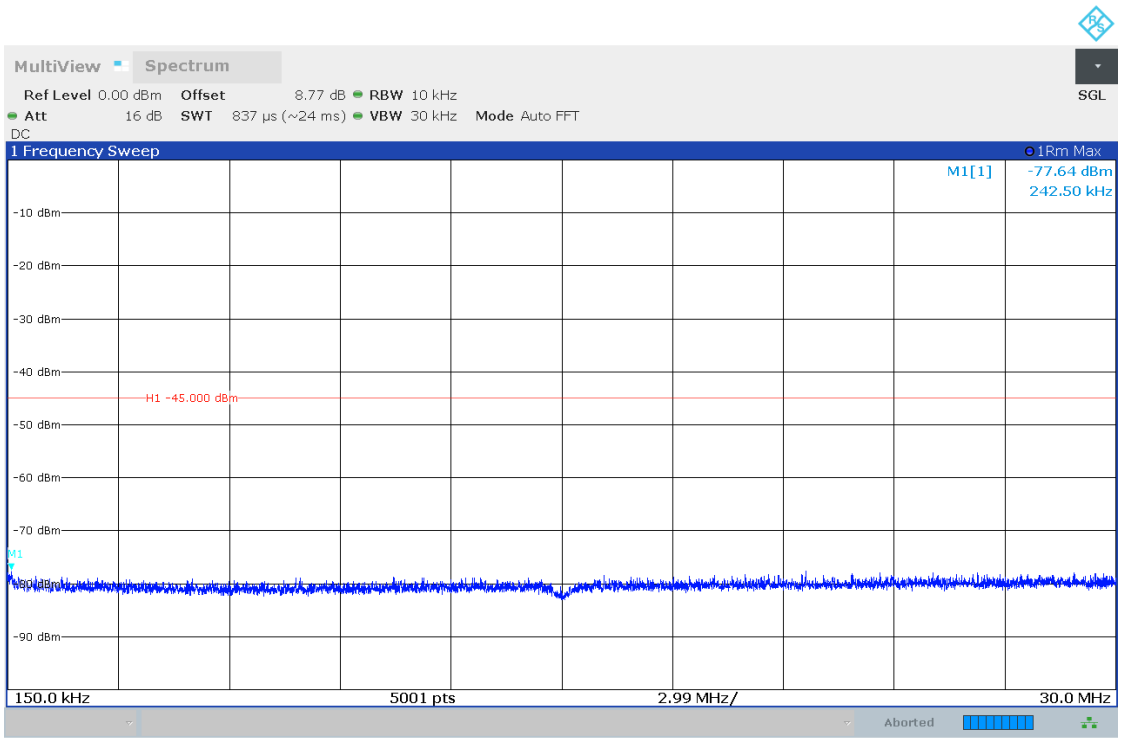

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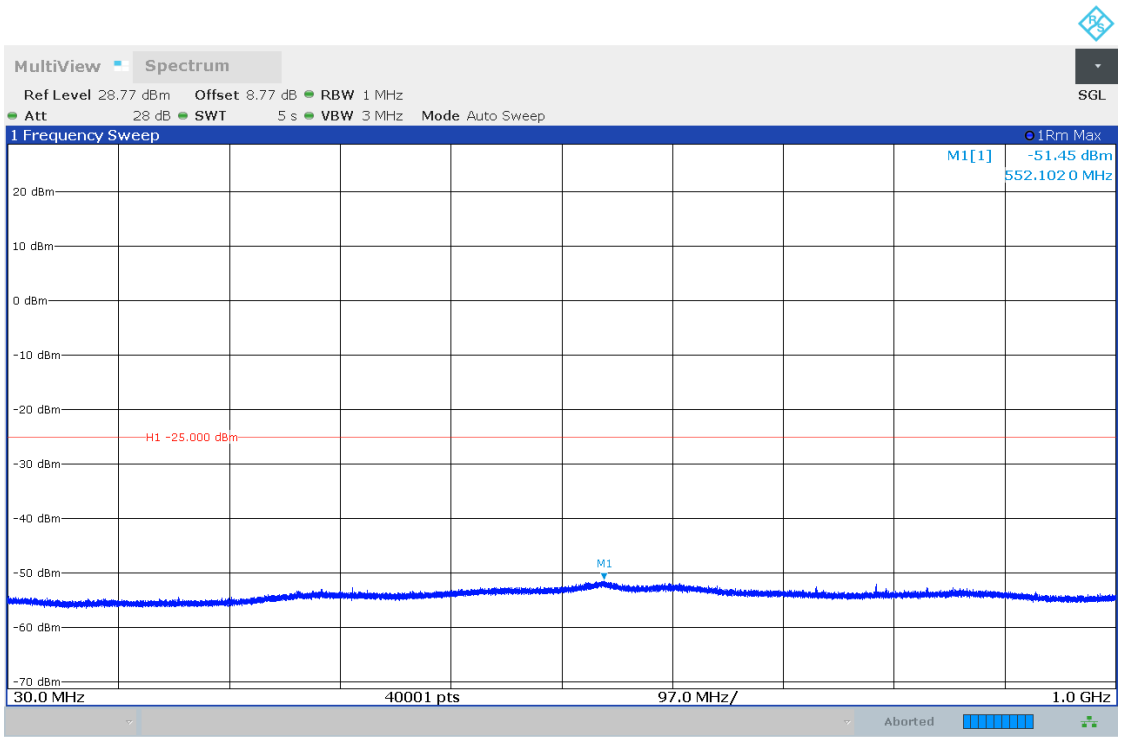

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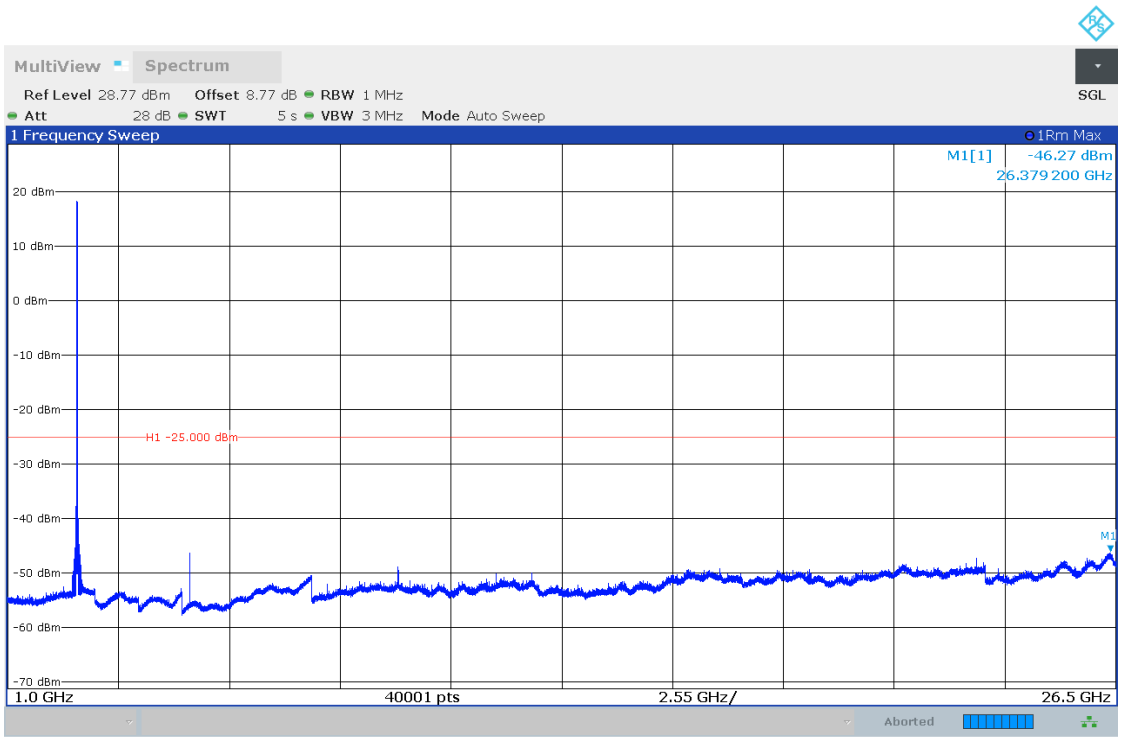

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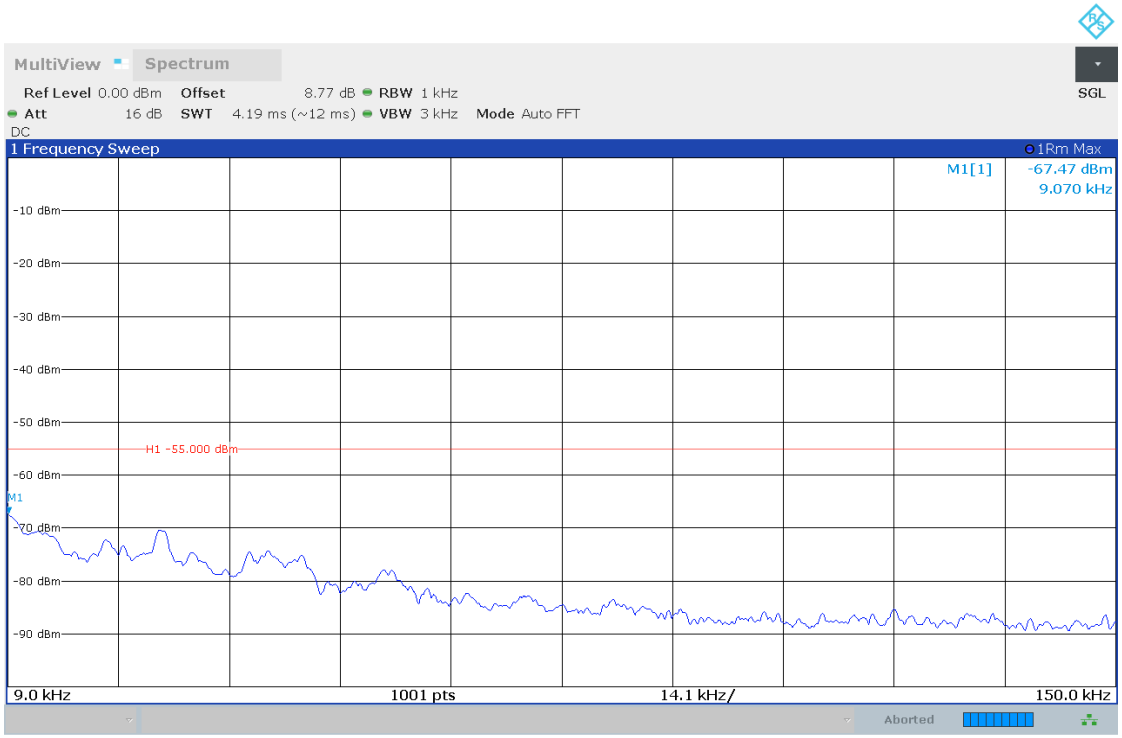
TM1_5MHz_MCH_RB1#0



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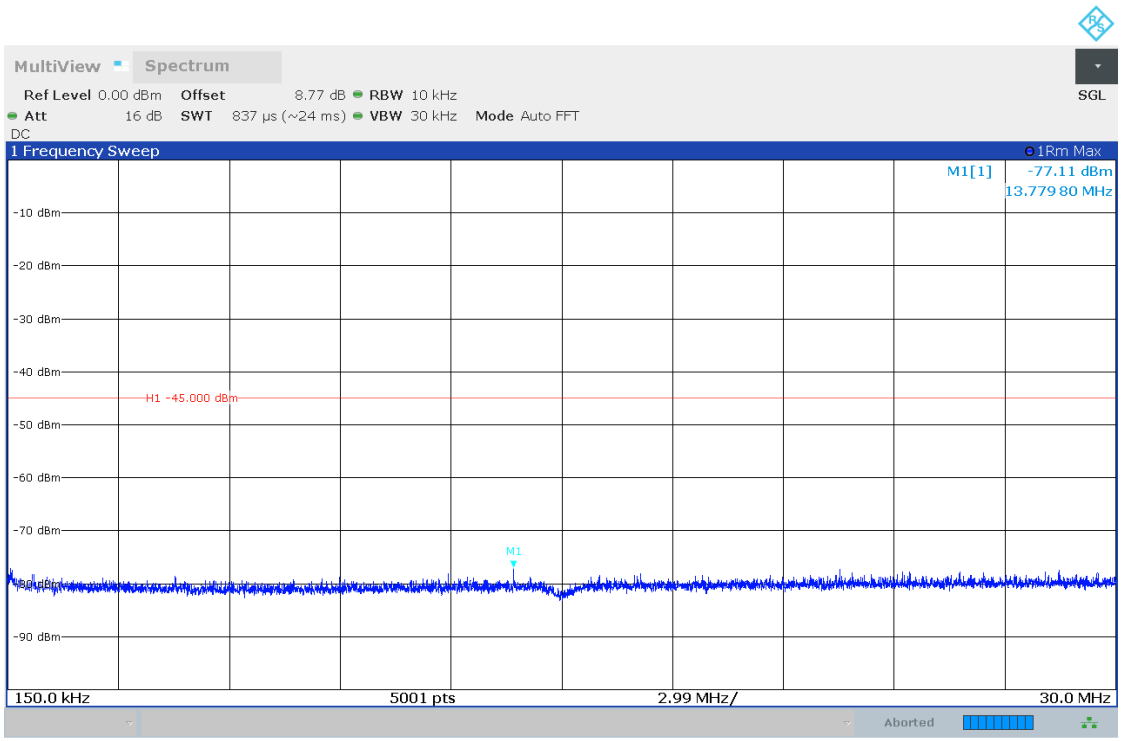

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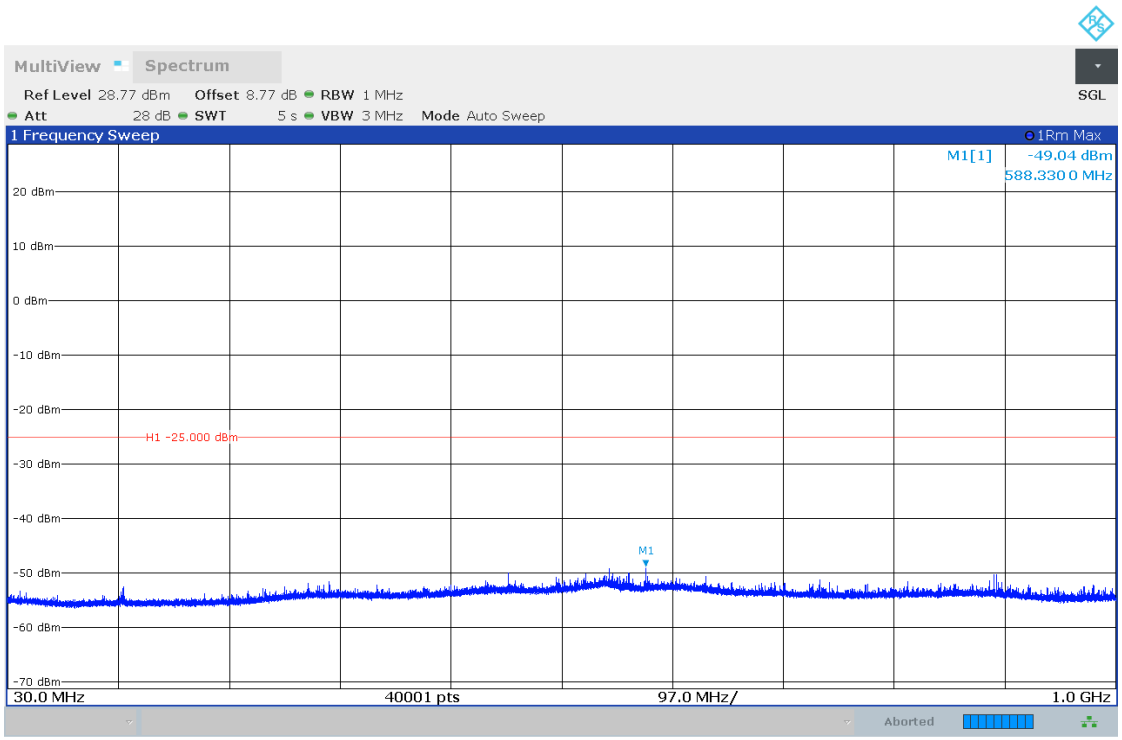

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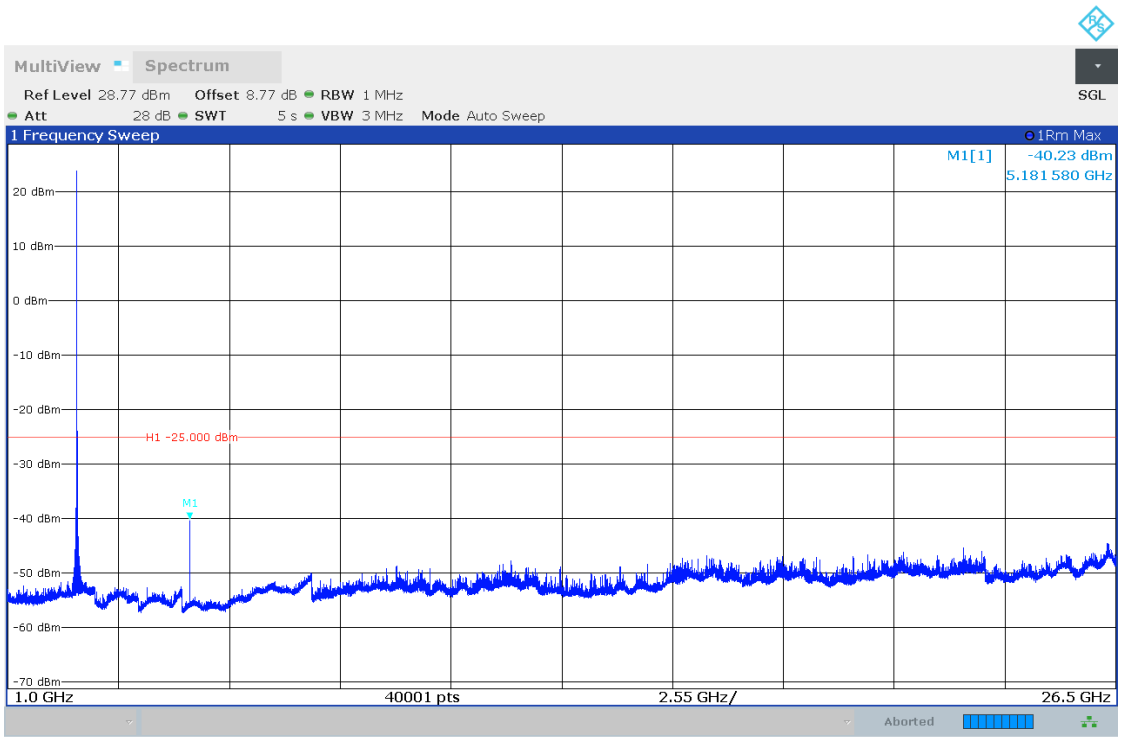

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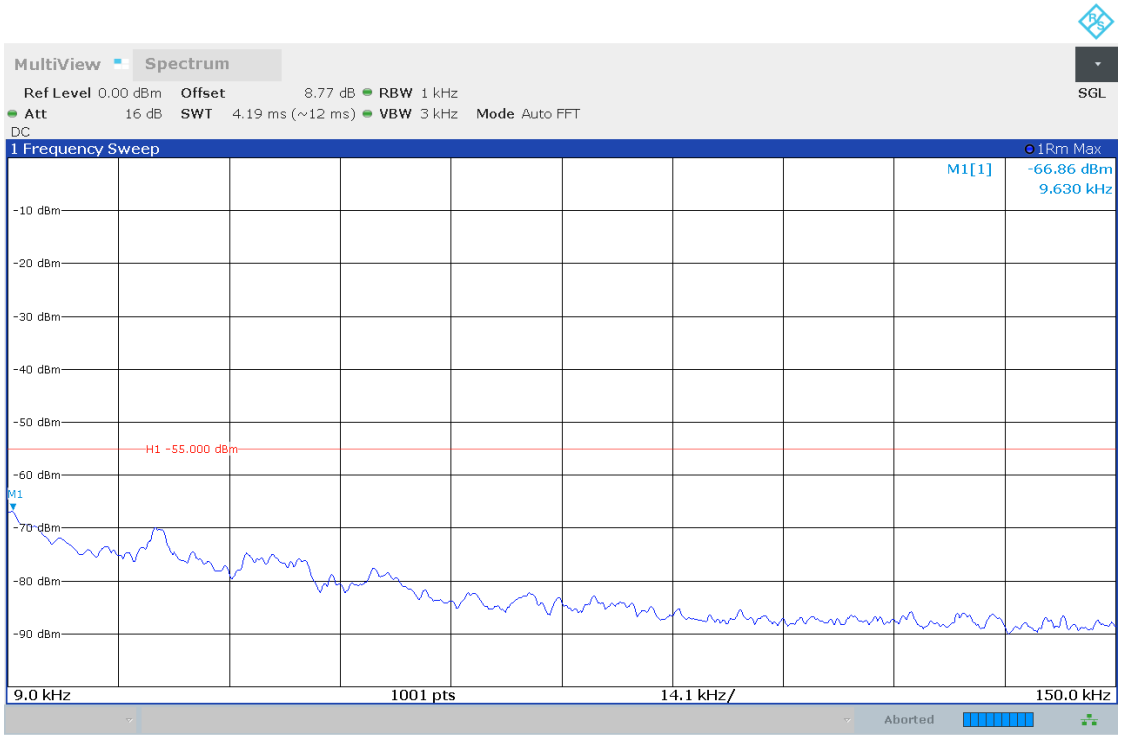
TM1_5MHz_MCH_RB1#24



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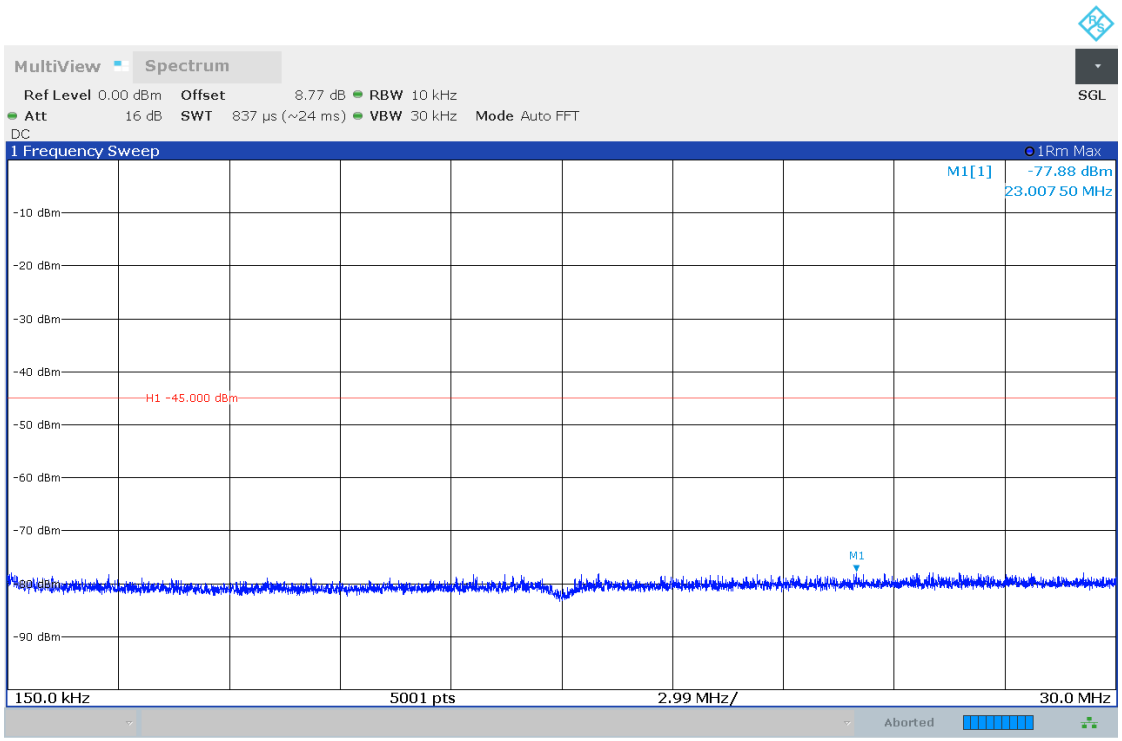

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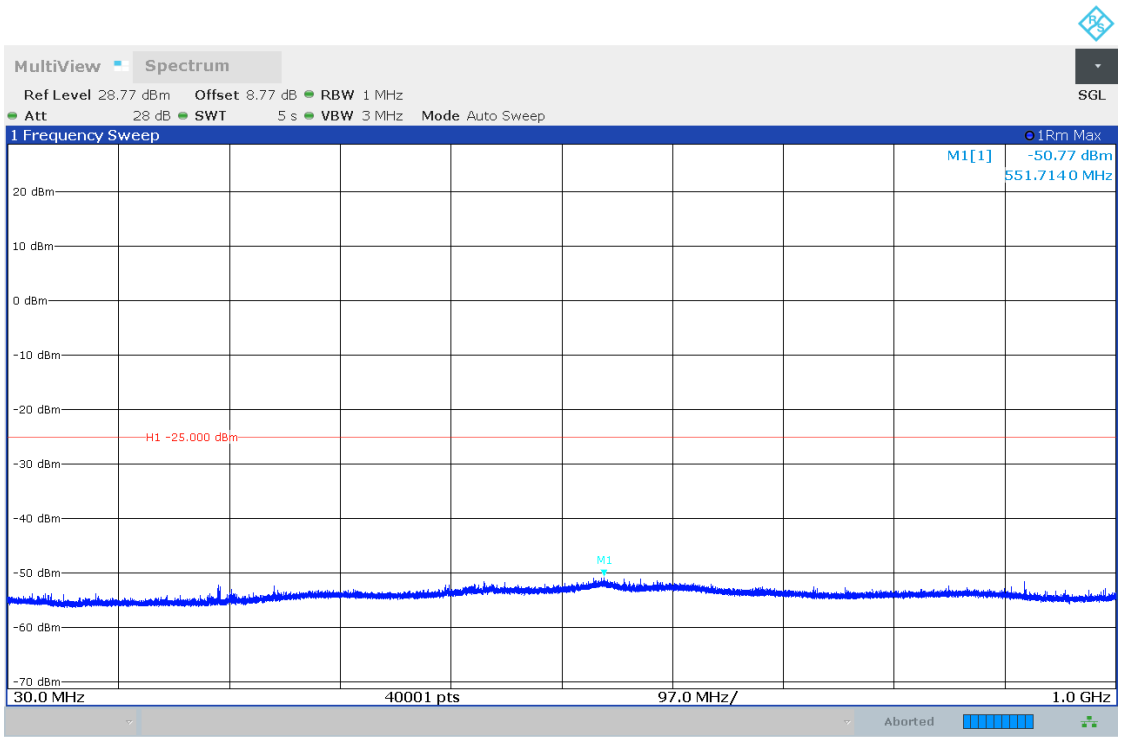

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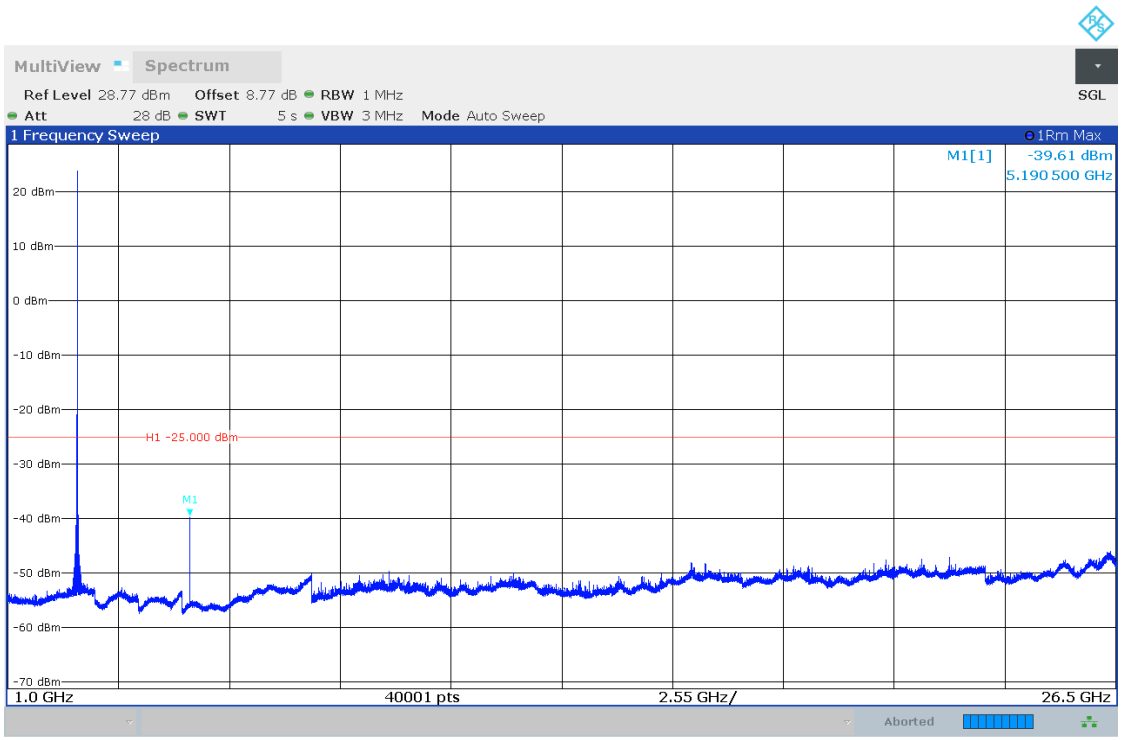

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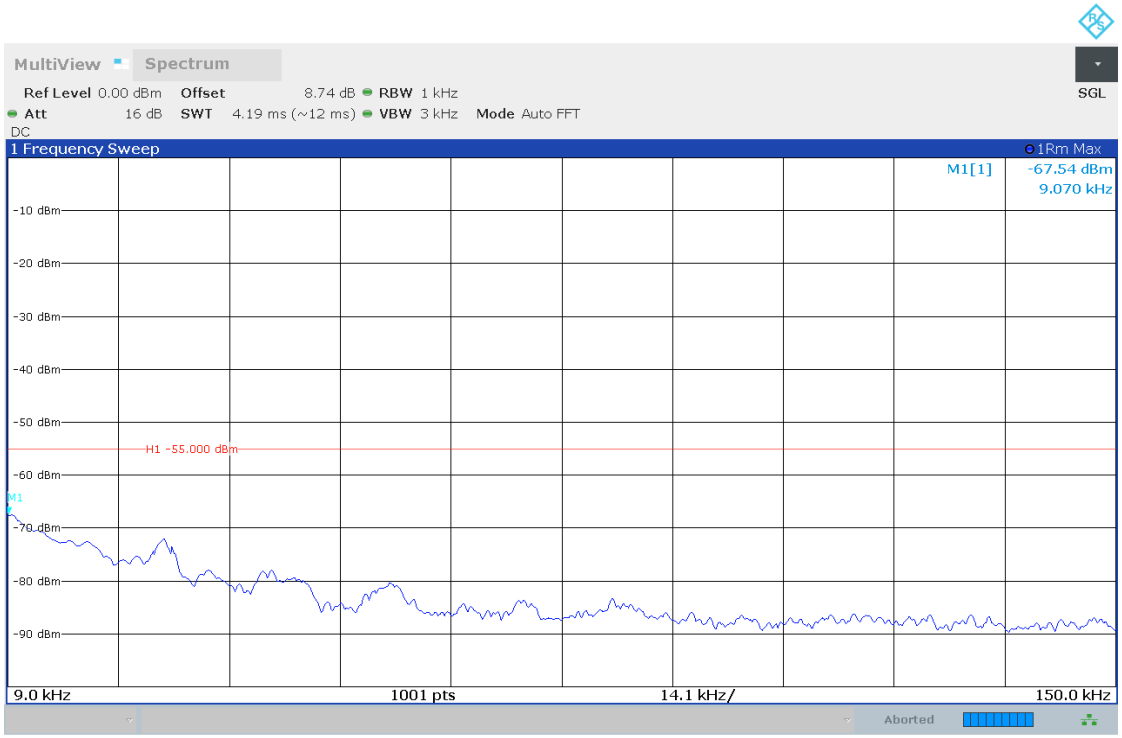
TM1_5MHz_HCH_RB25#0



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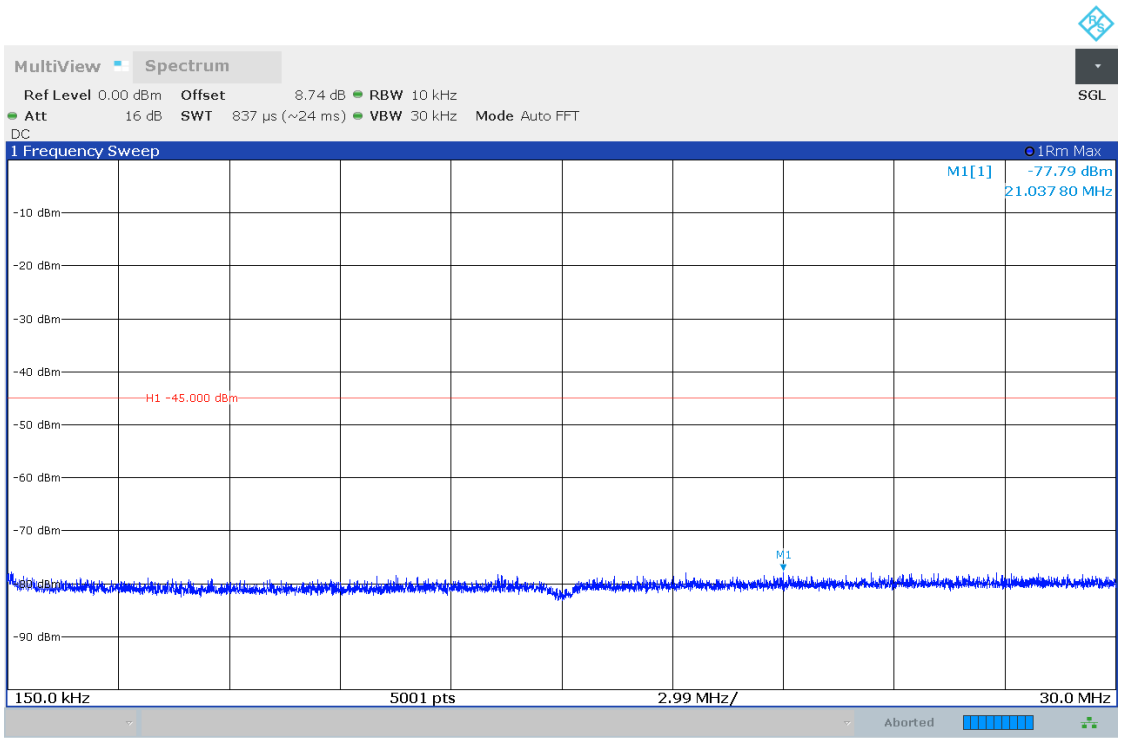

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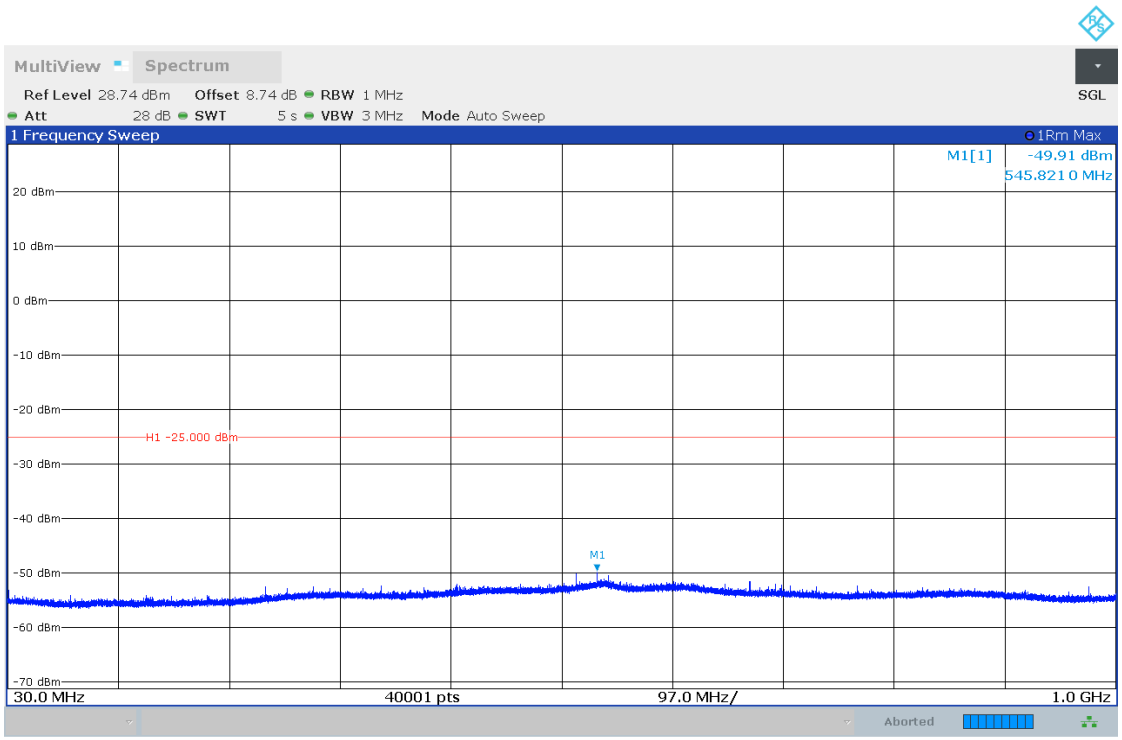

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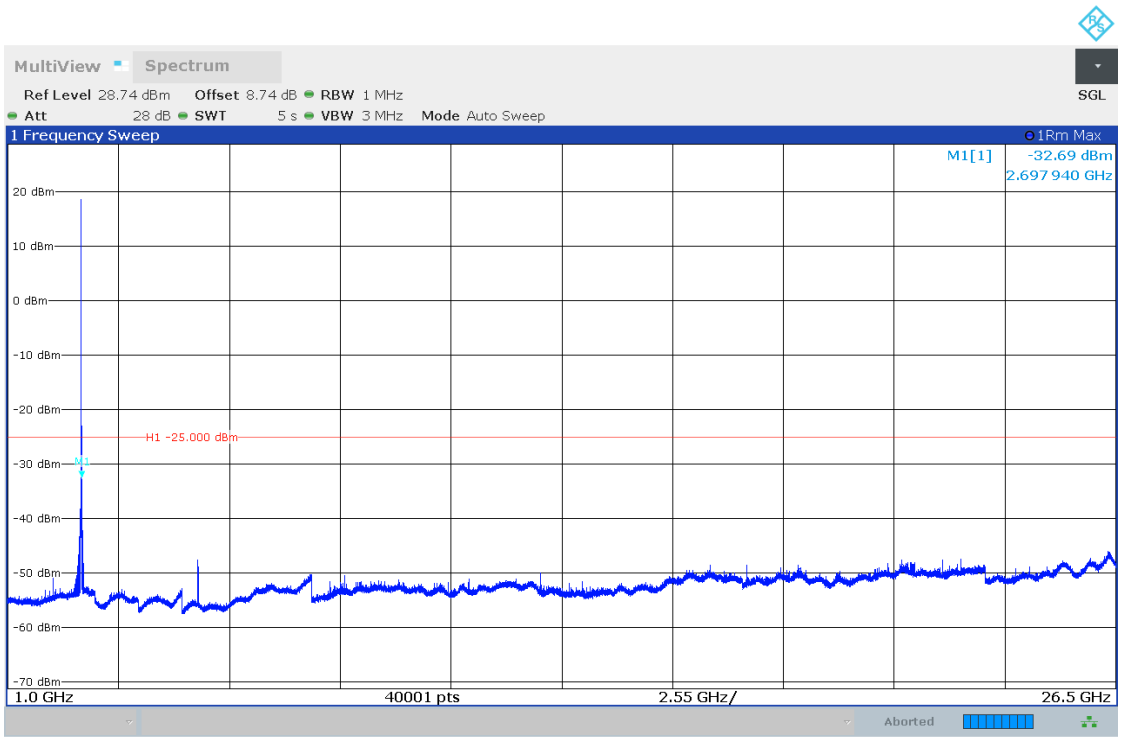

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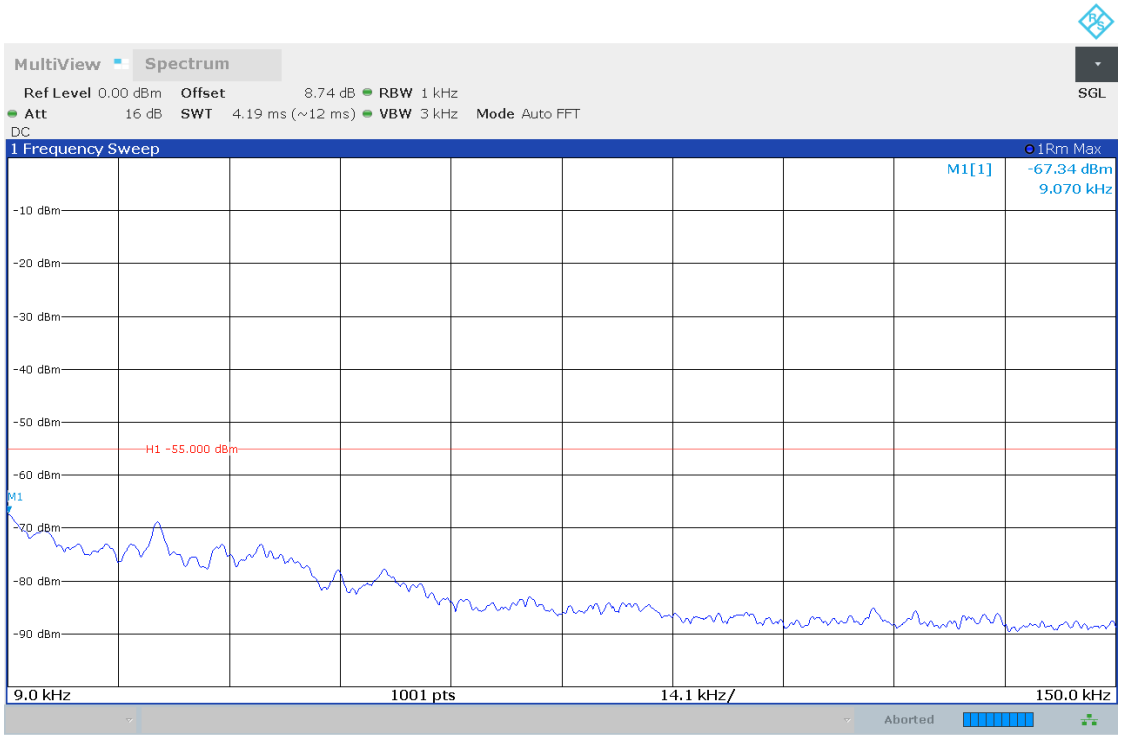
TM1_5MHz_HCH_RB1#0



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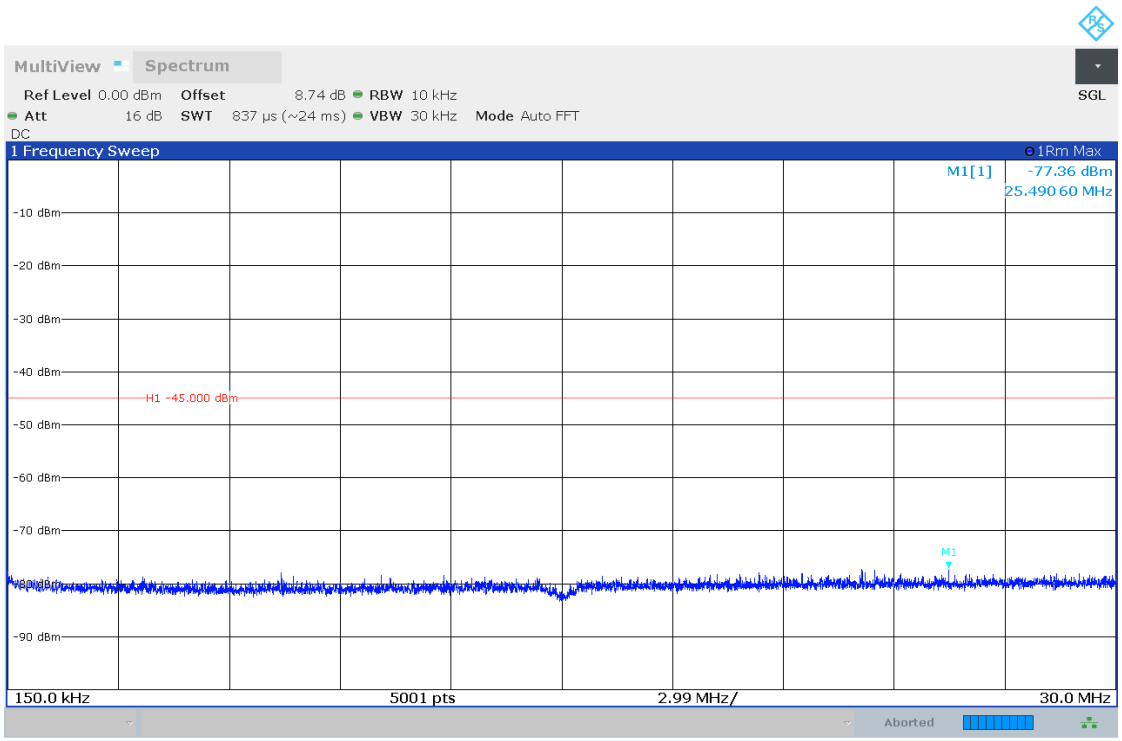

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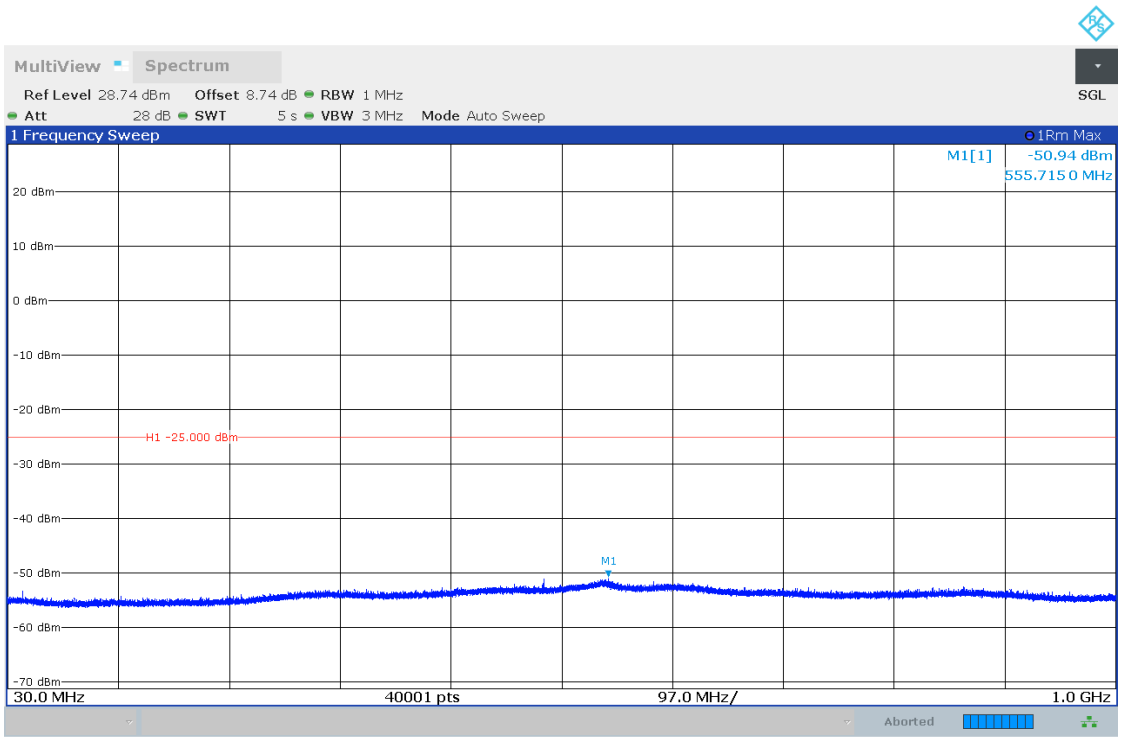

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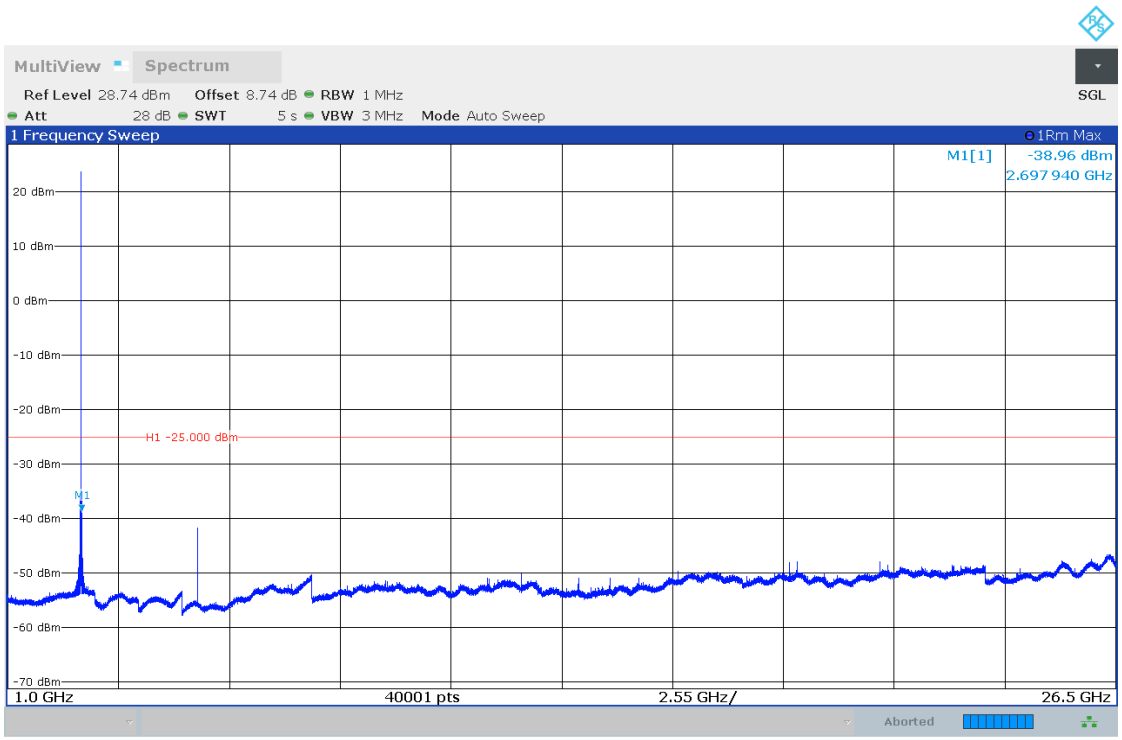

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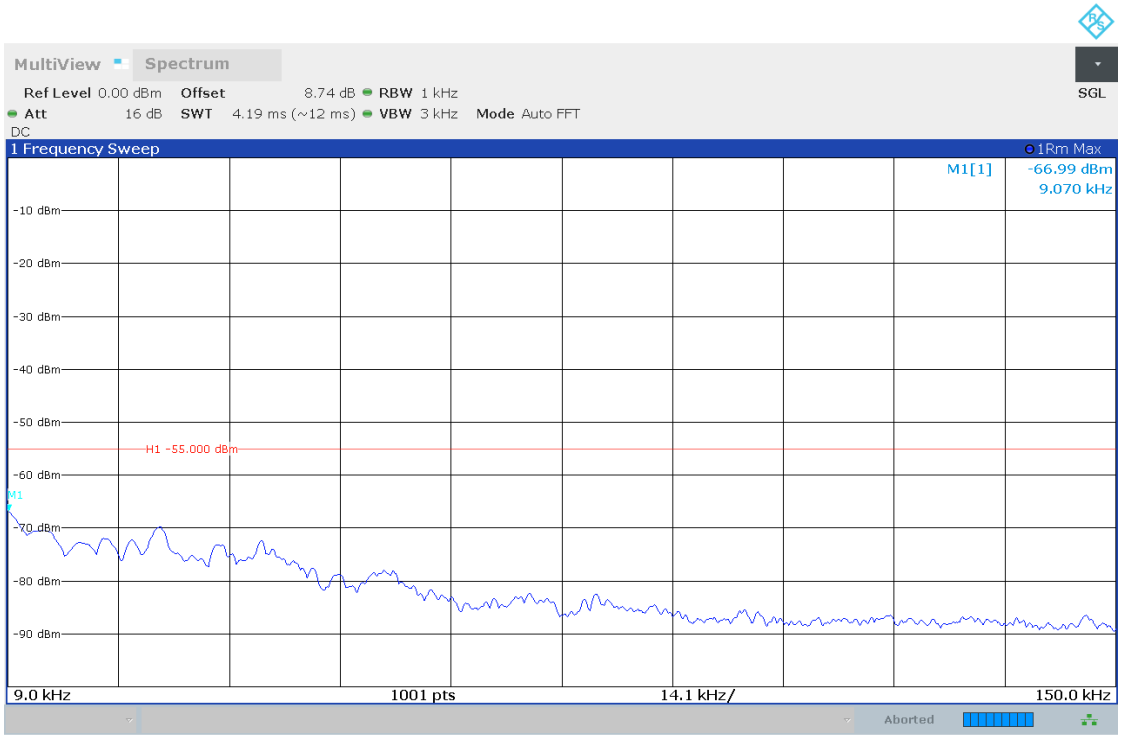
TM1_5MHz_HCH_RB1#24



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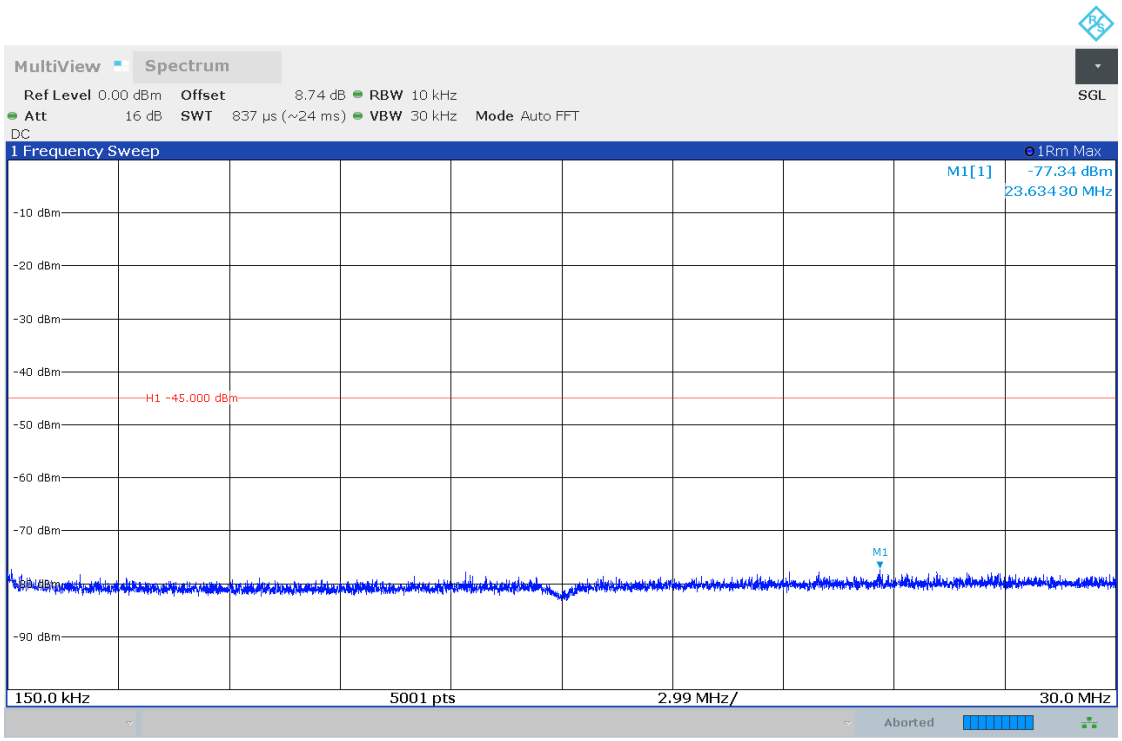

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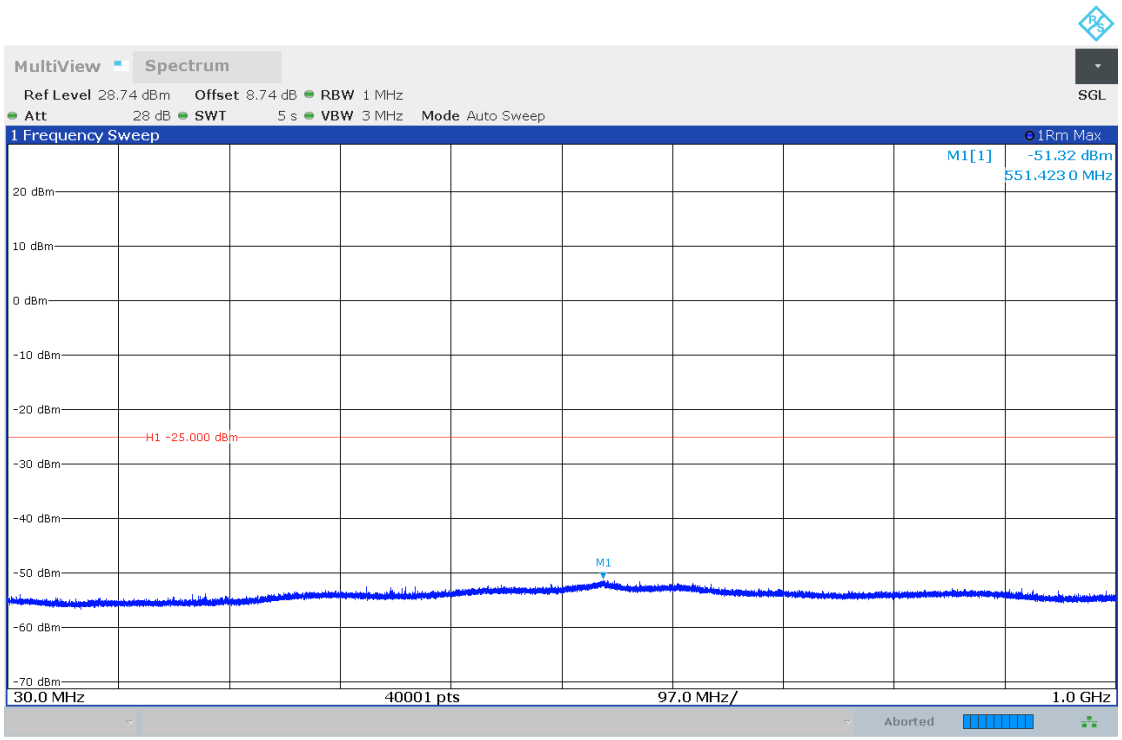

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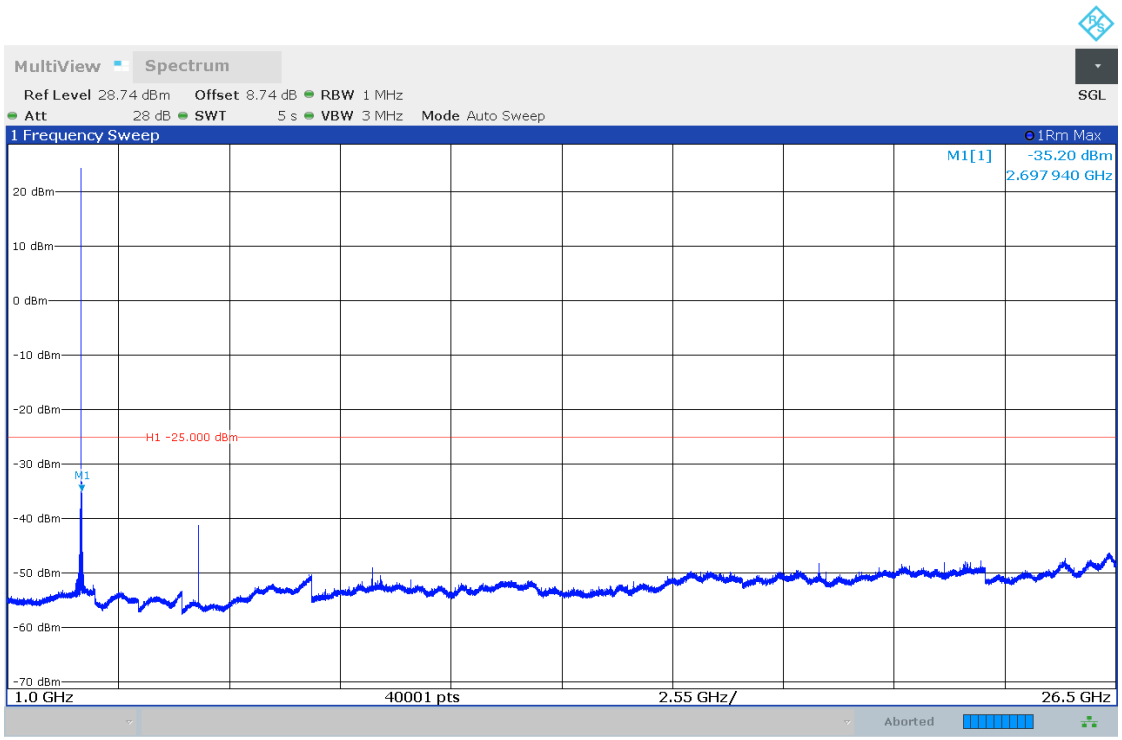

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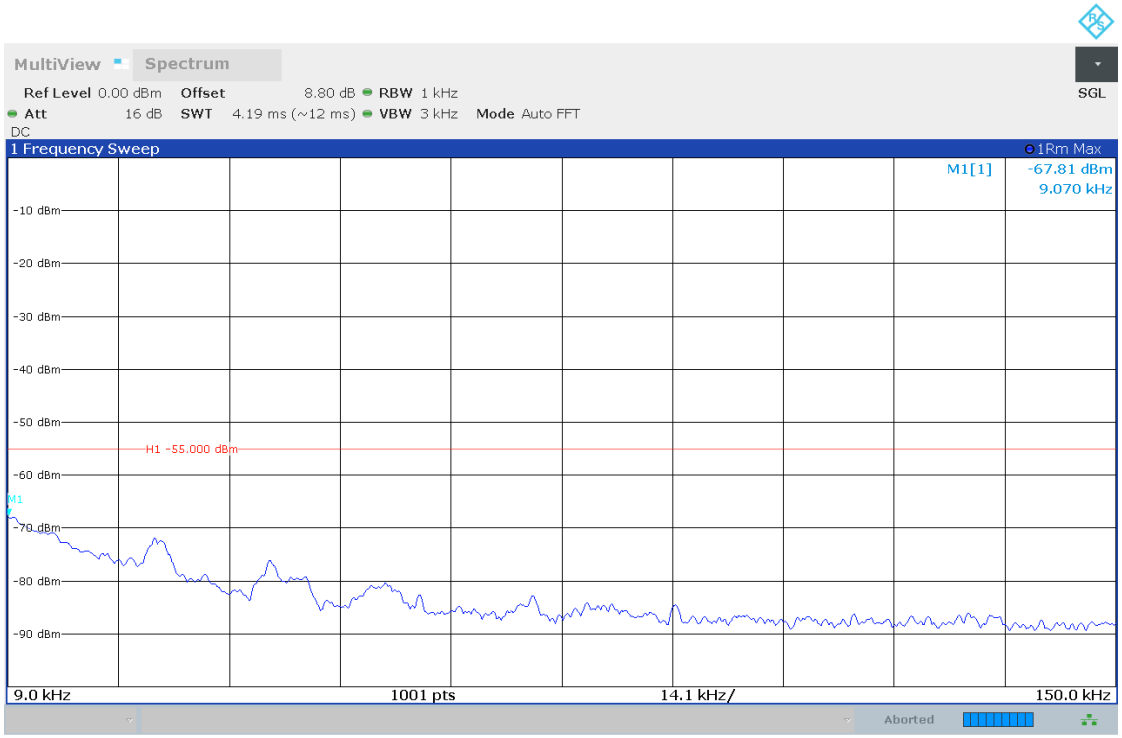
TM1_20MHz_LCH_RB100#0



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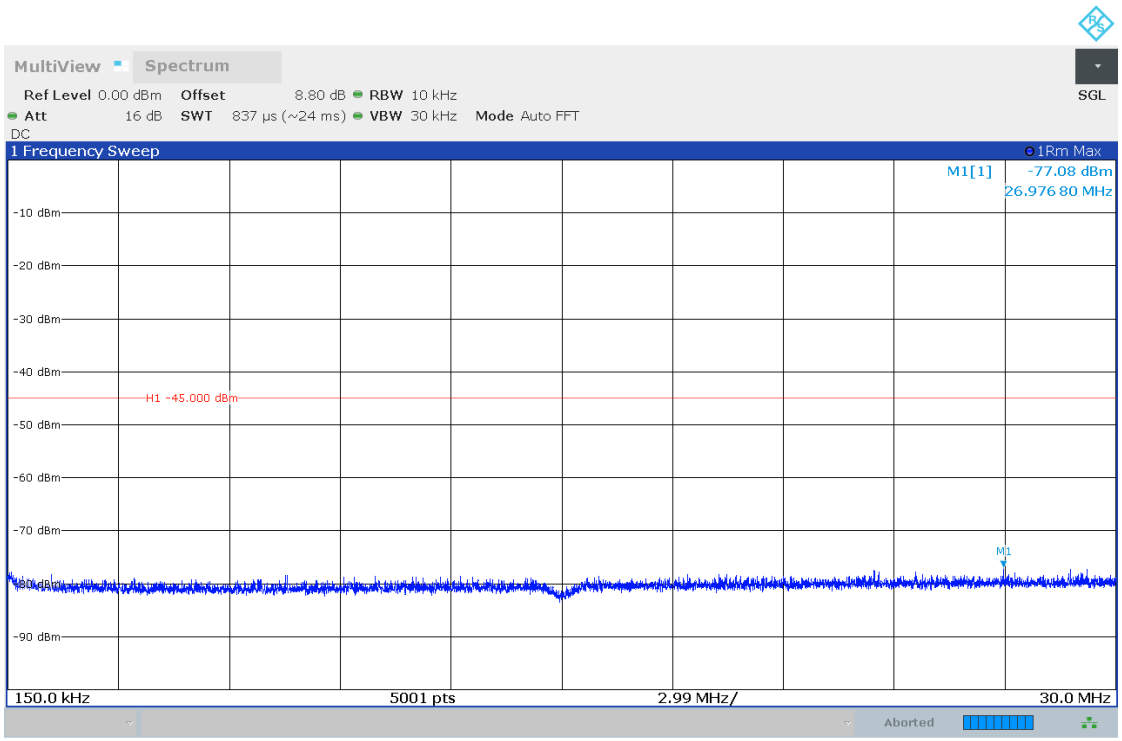

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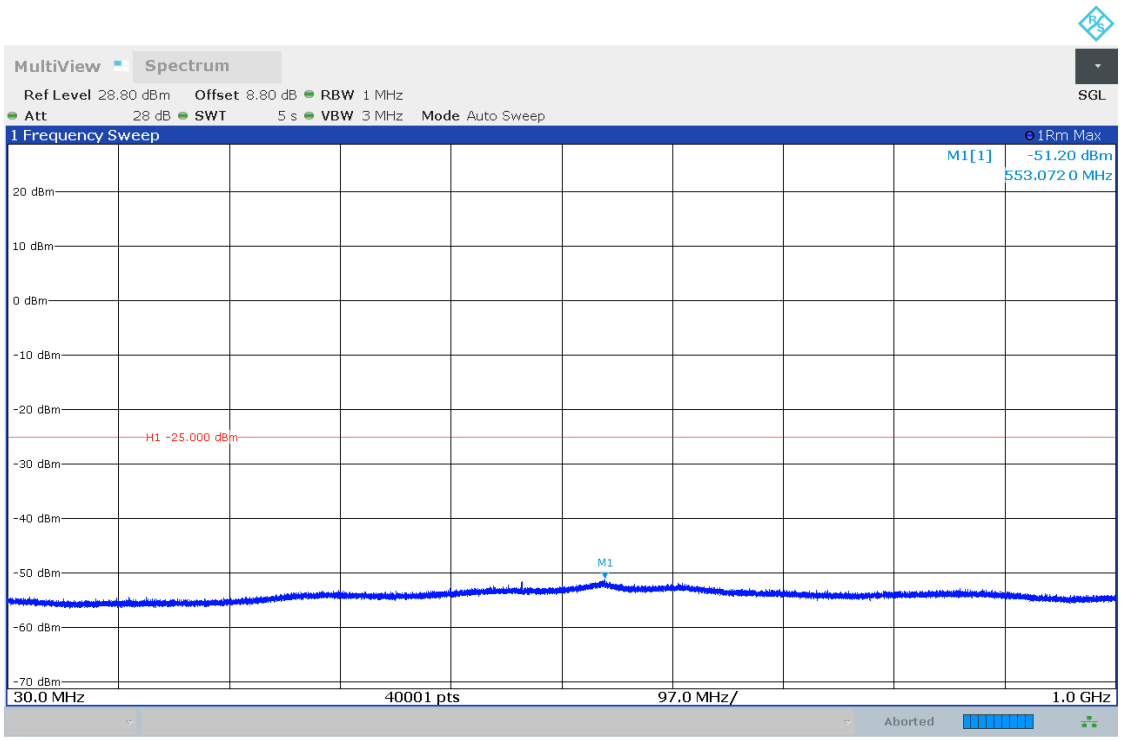

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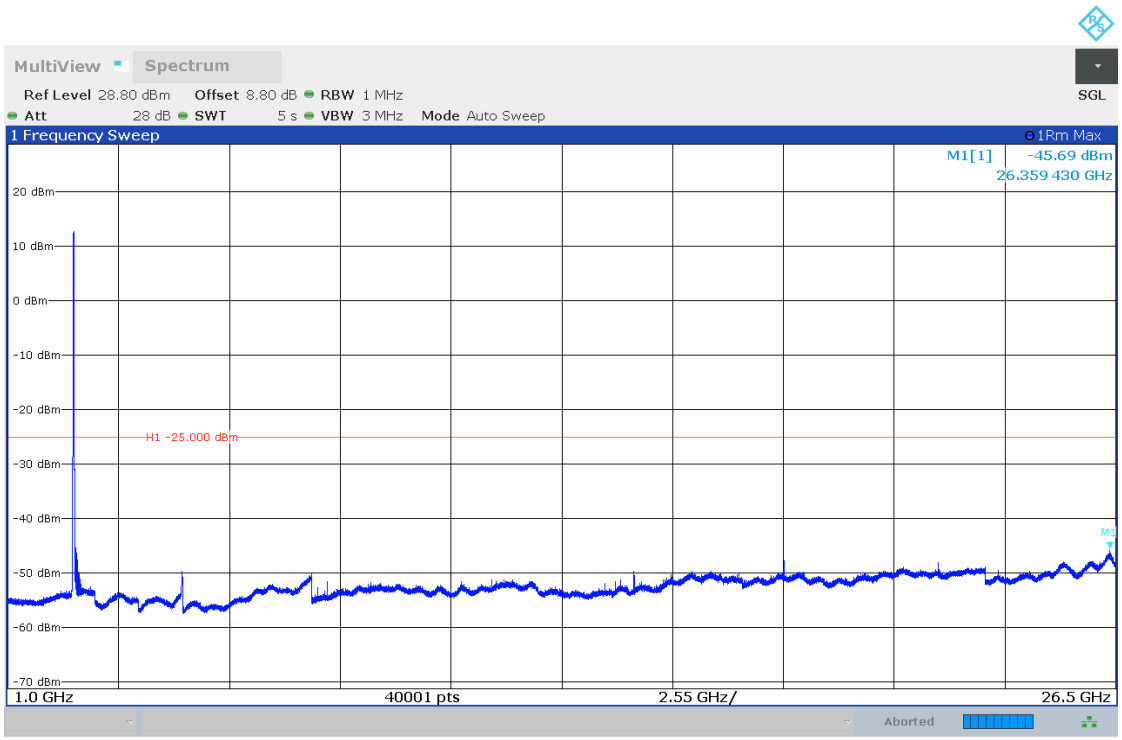

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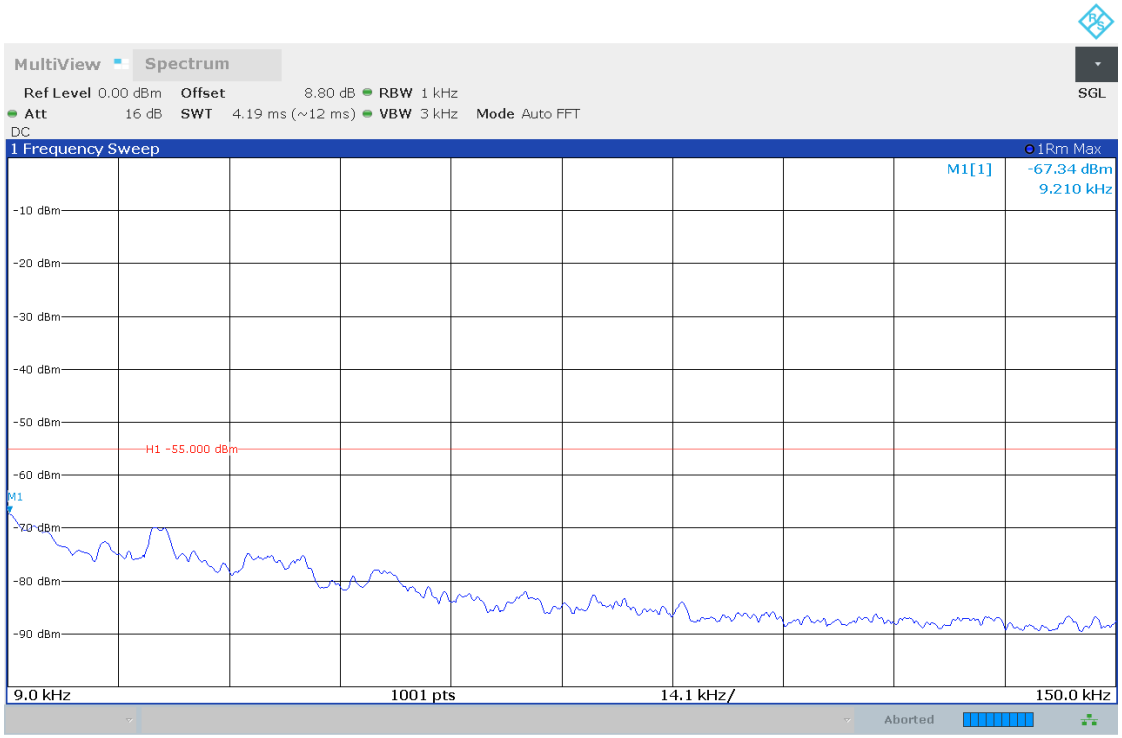
TM1_20MHz_LCH_RB1#0



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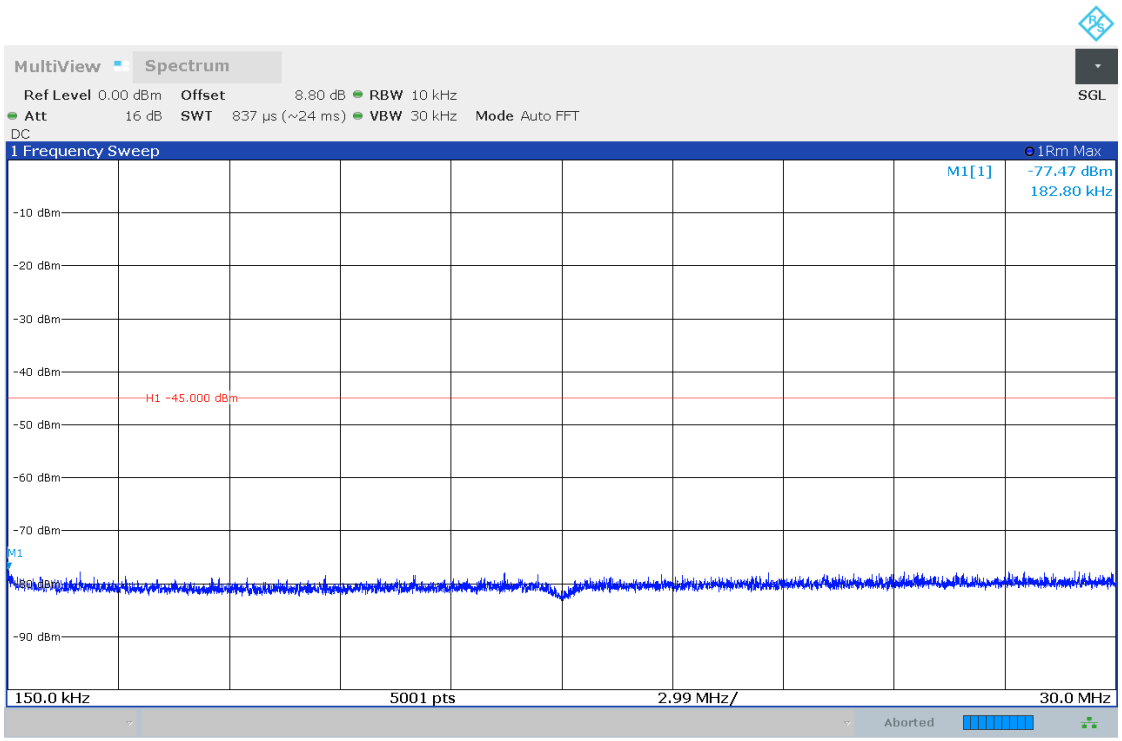

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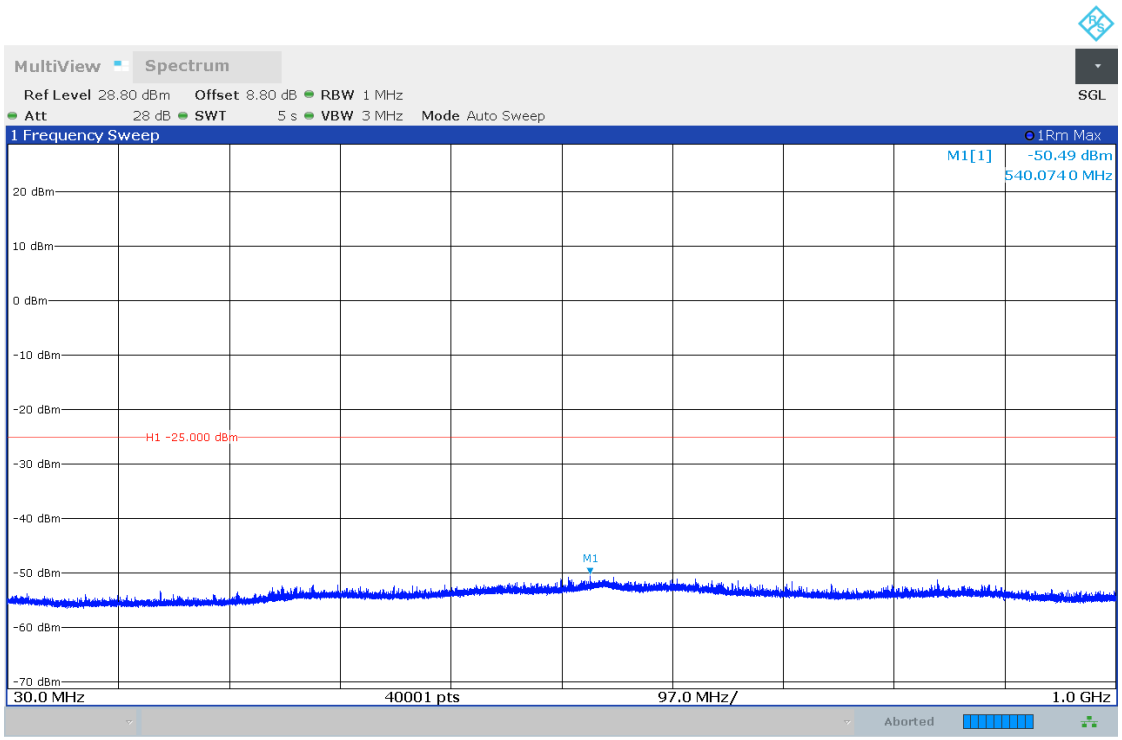

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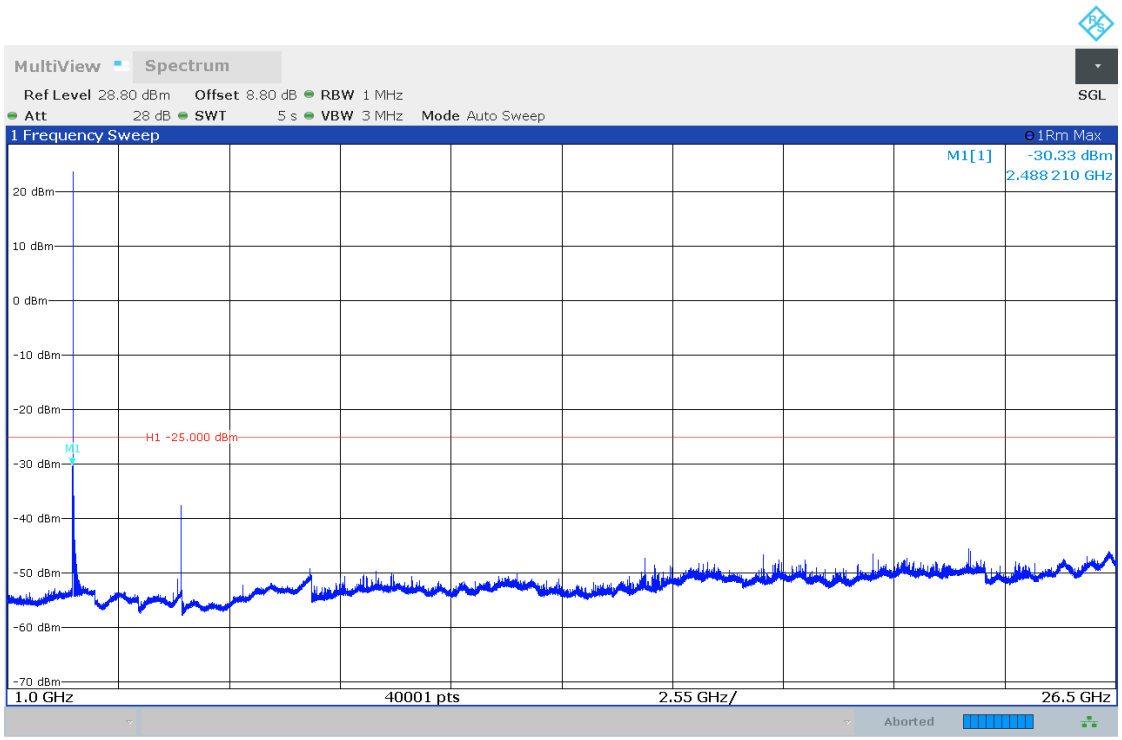

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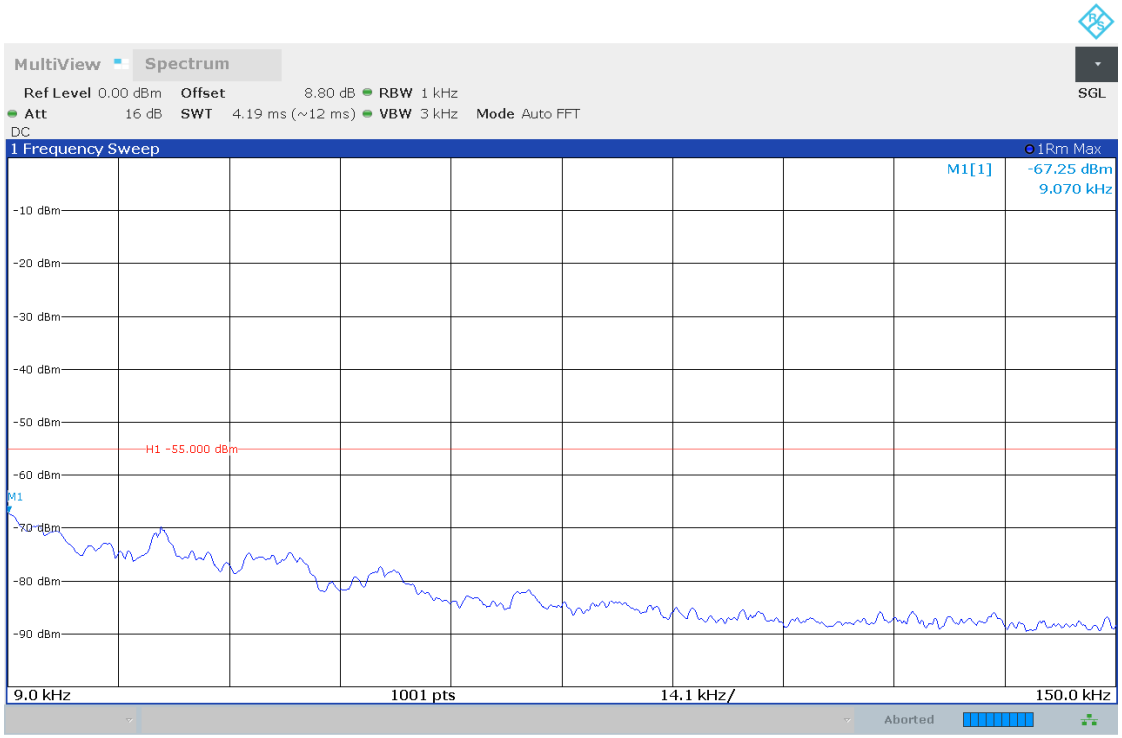
TM1_20MHz_LCH_RB1#99



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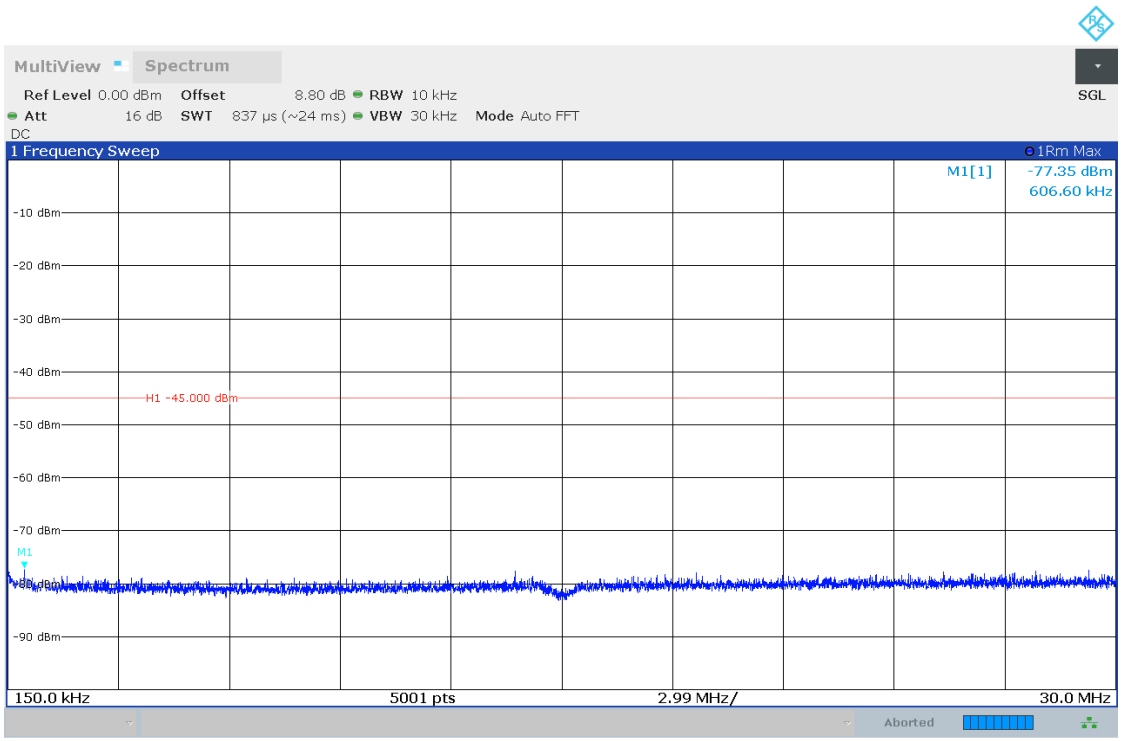

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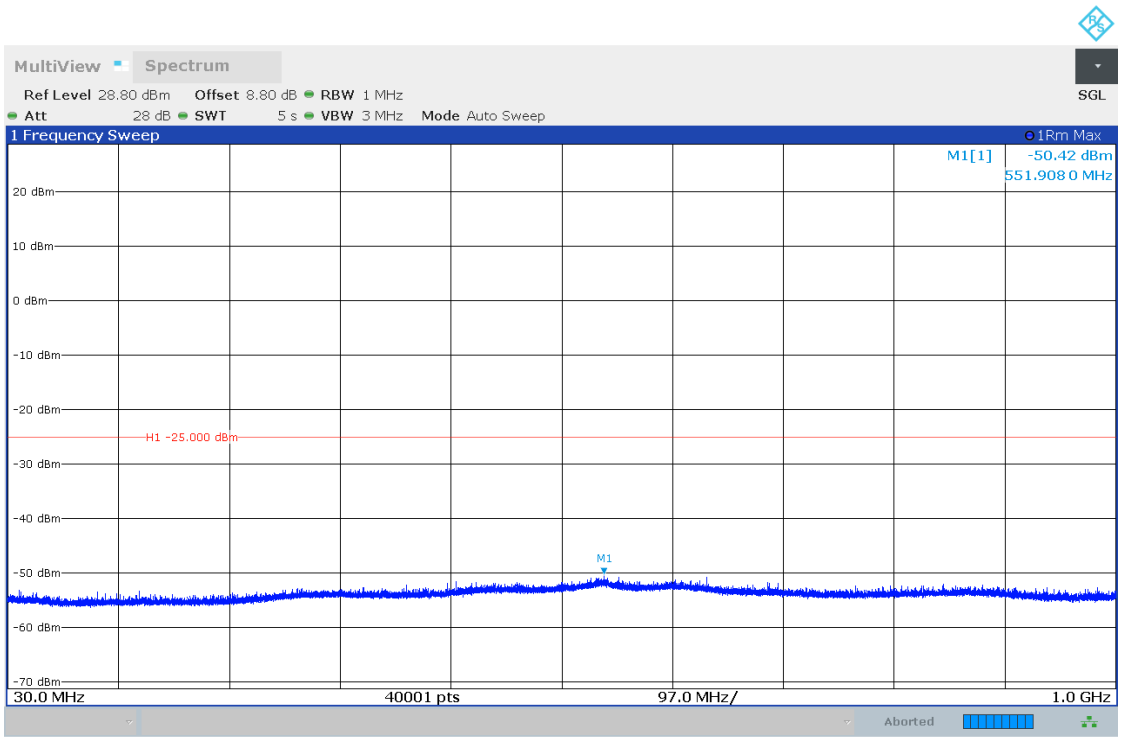

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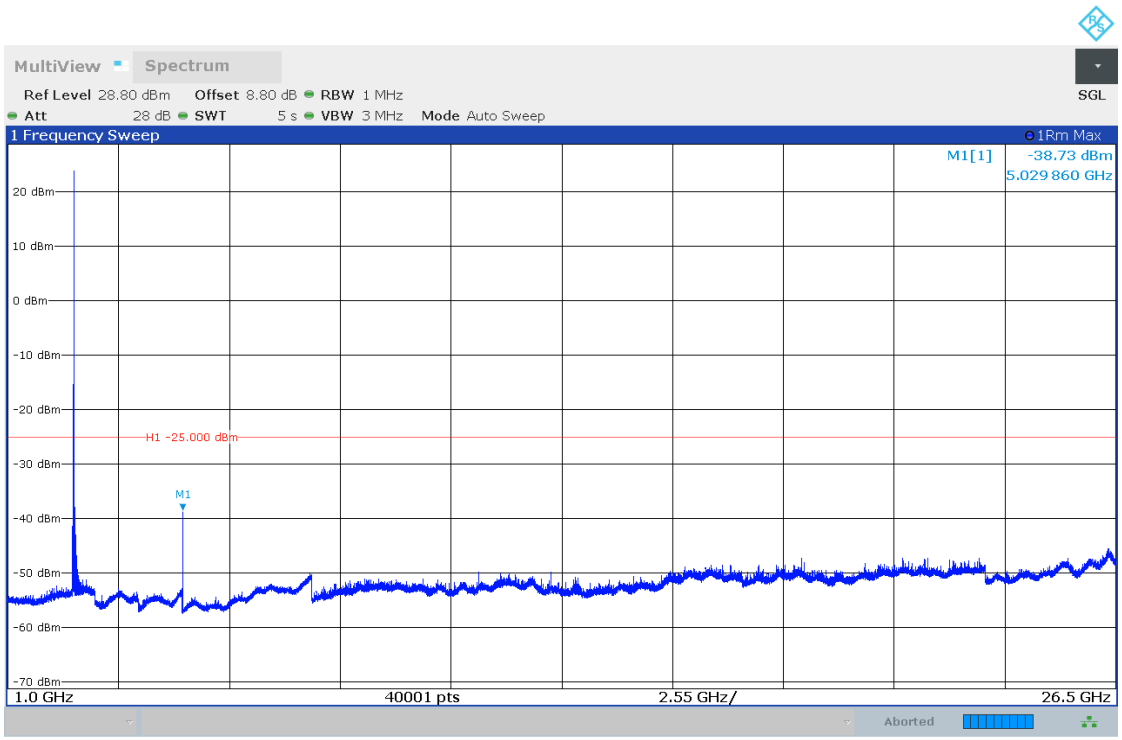

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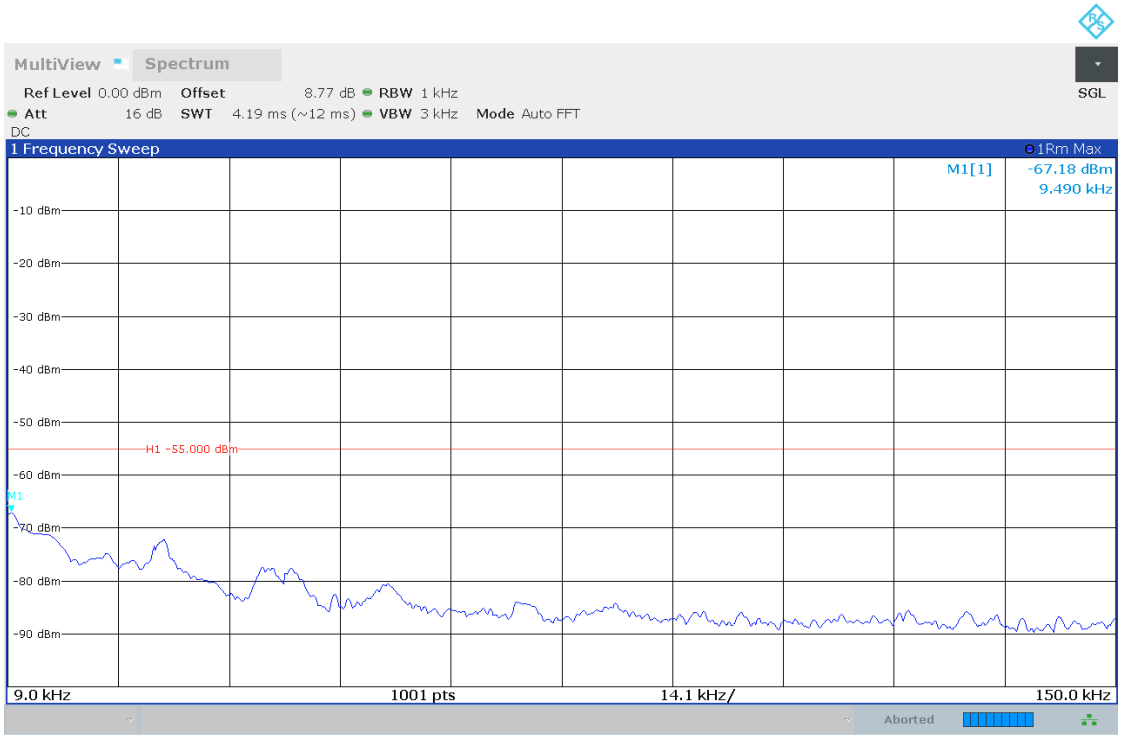
TM1_20MHz_MCH_RB100#0



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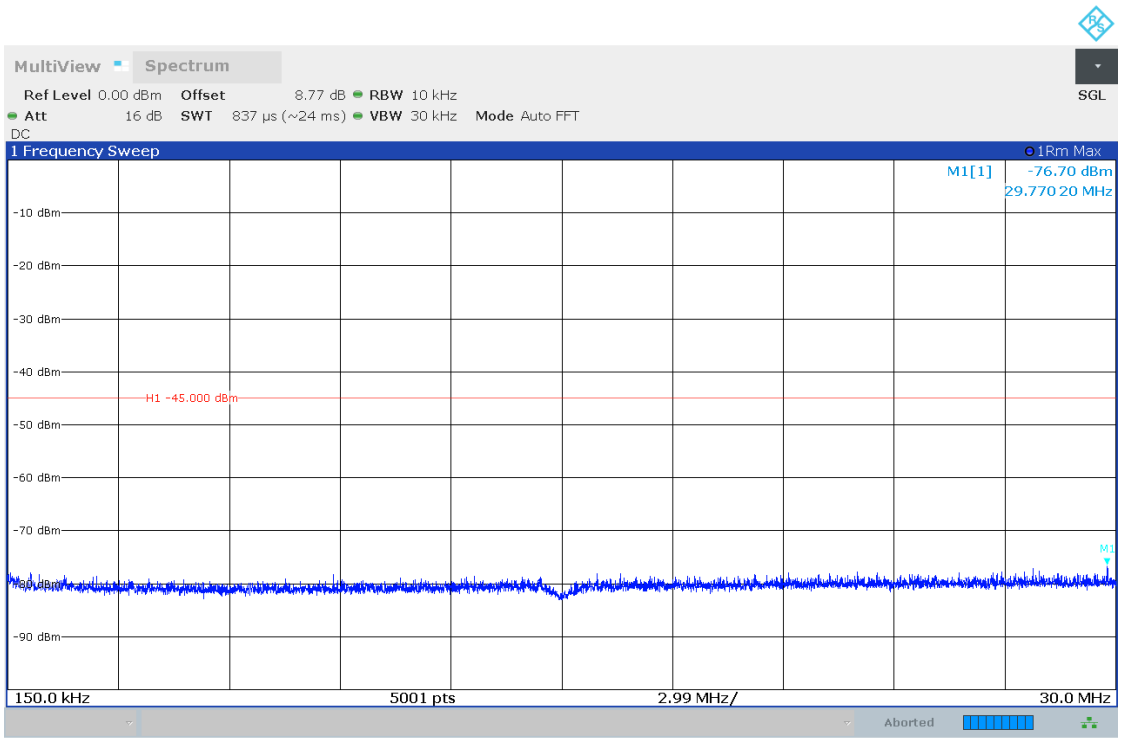

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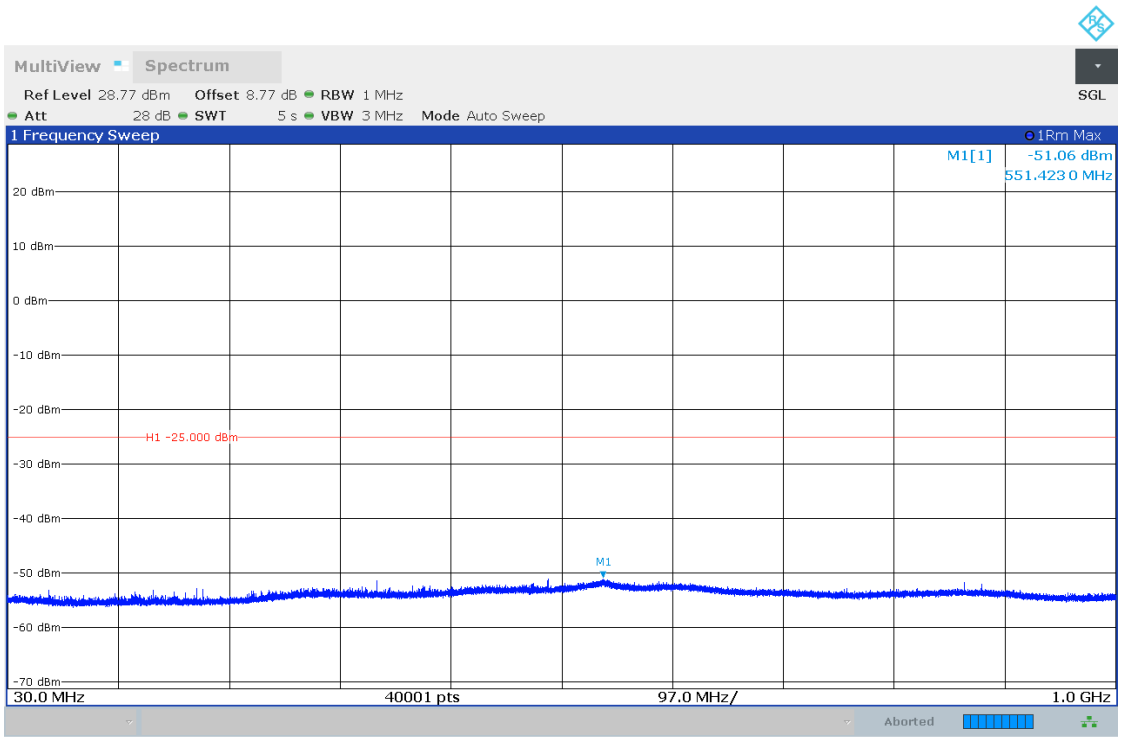

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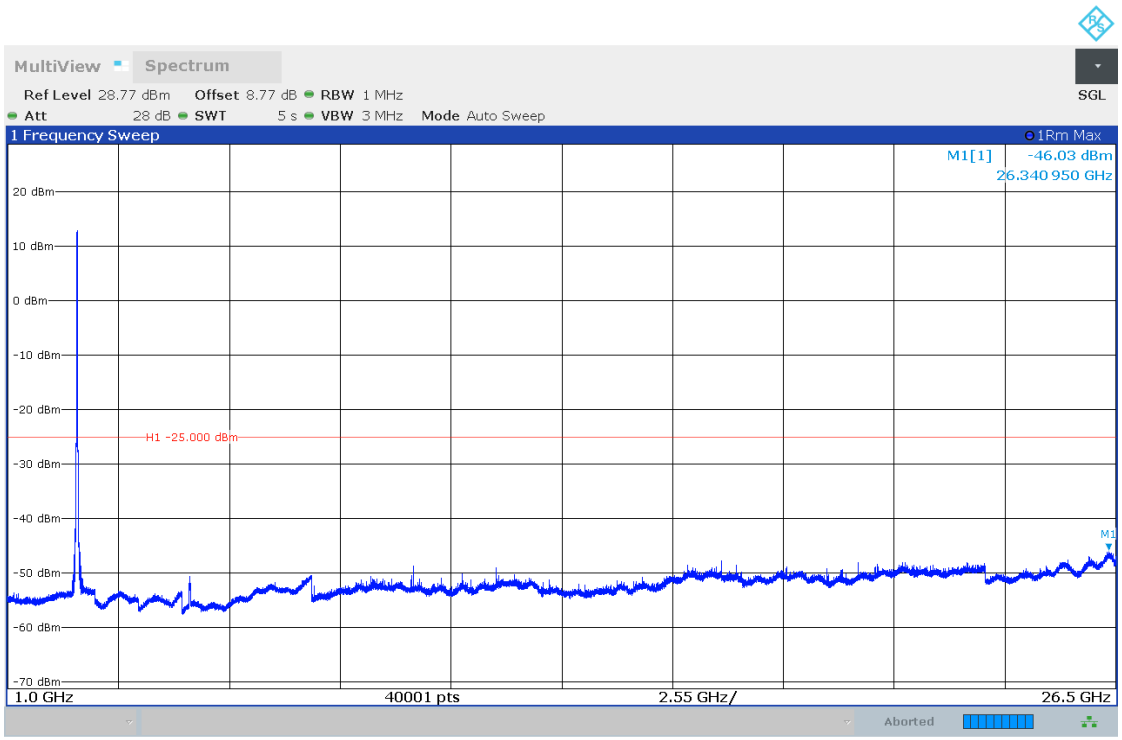

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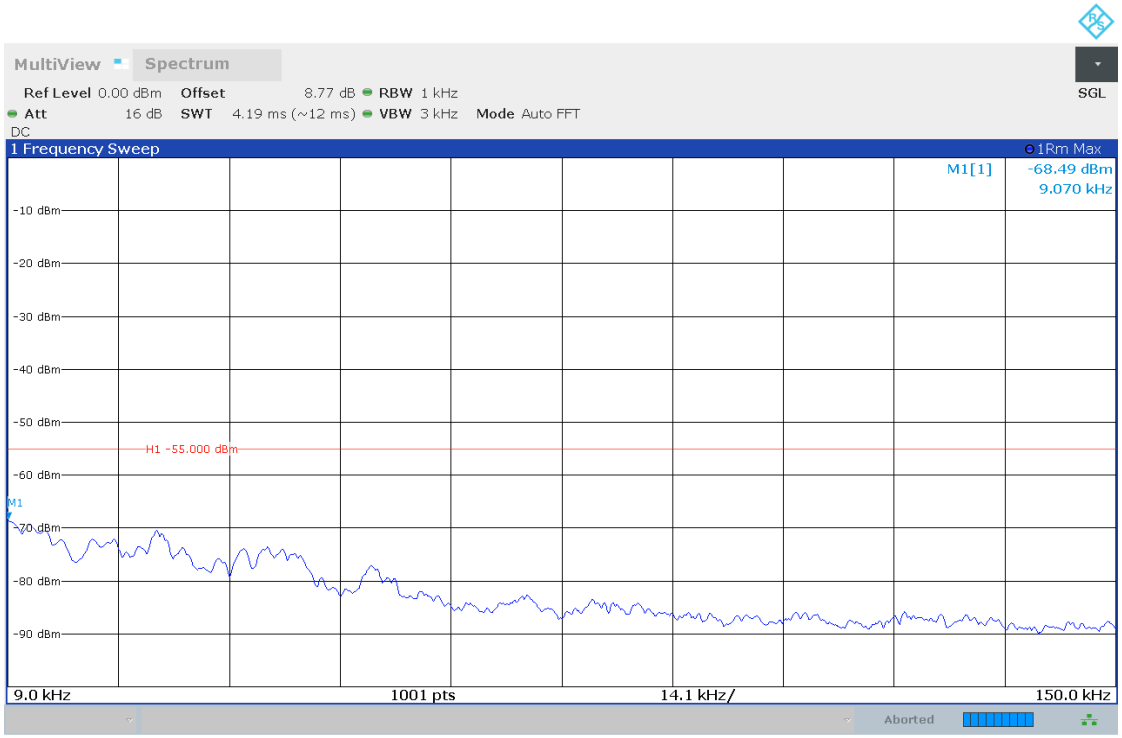
TM1_20MHz_MCH_RB1#0



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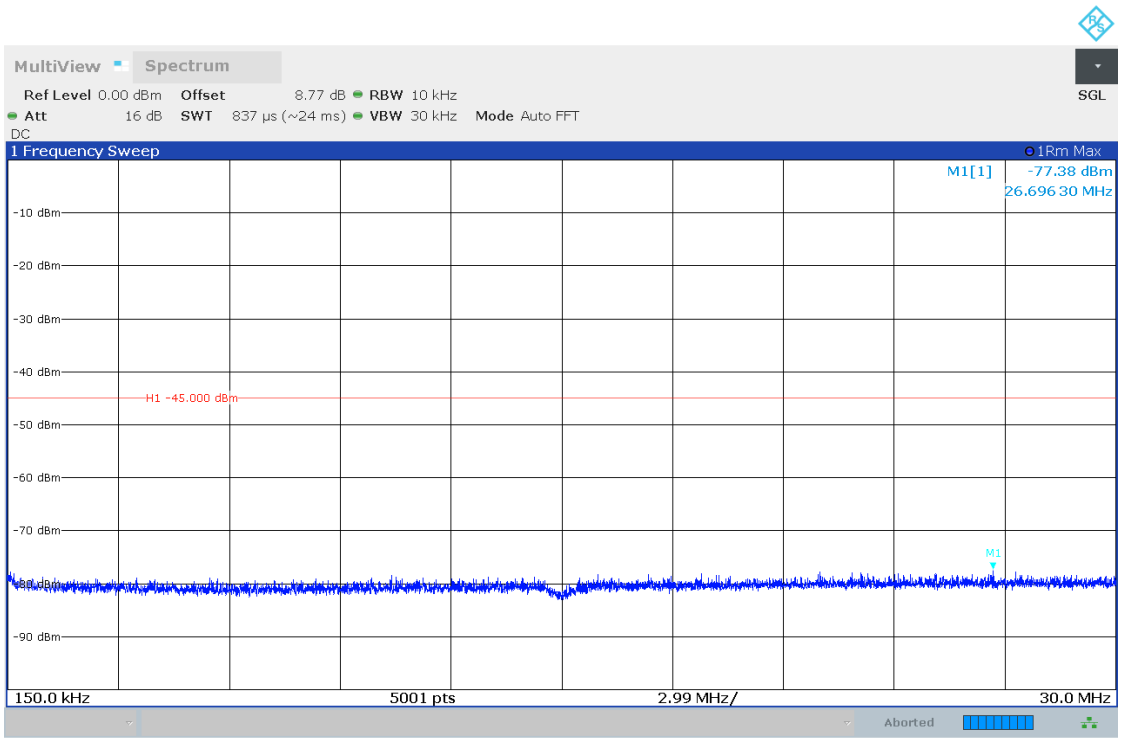

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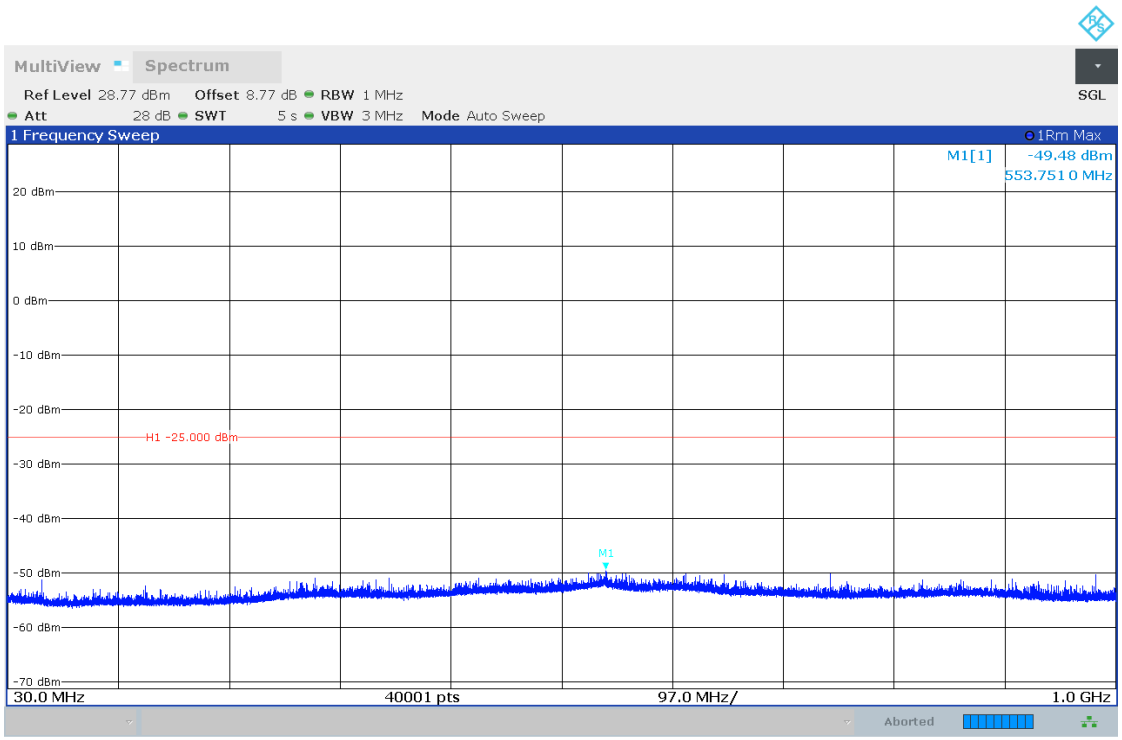

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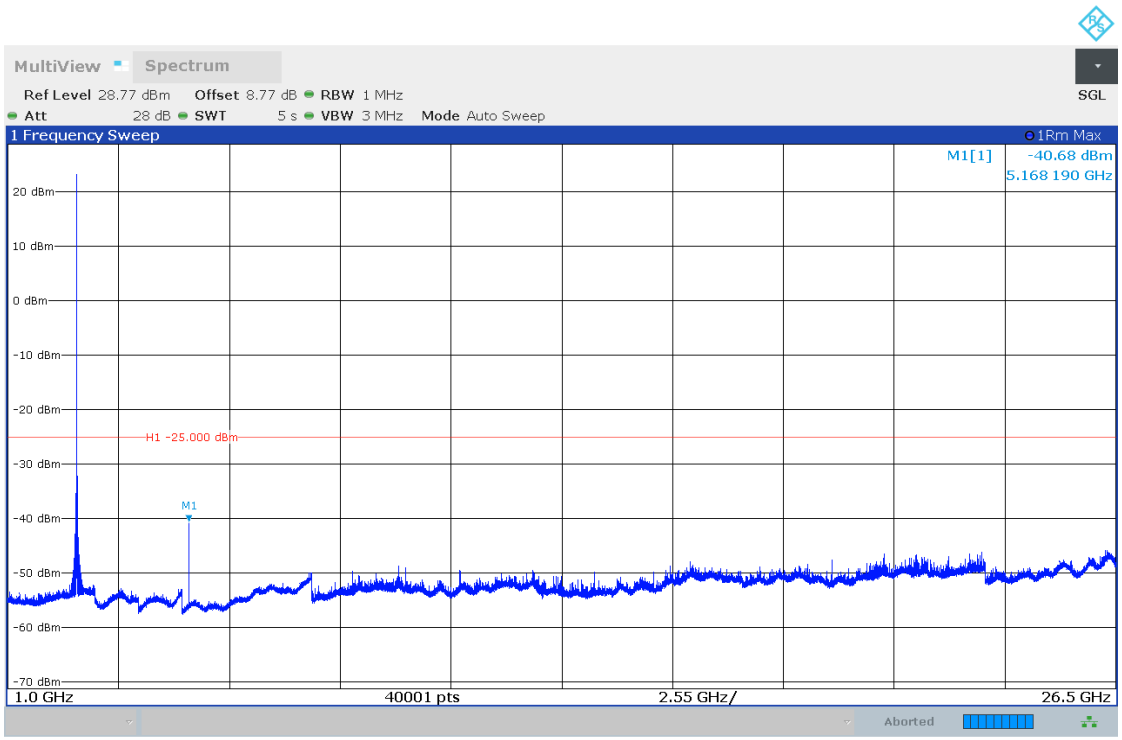

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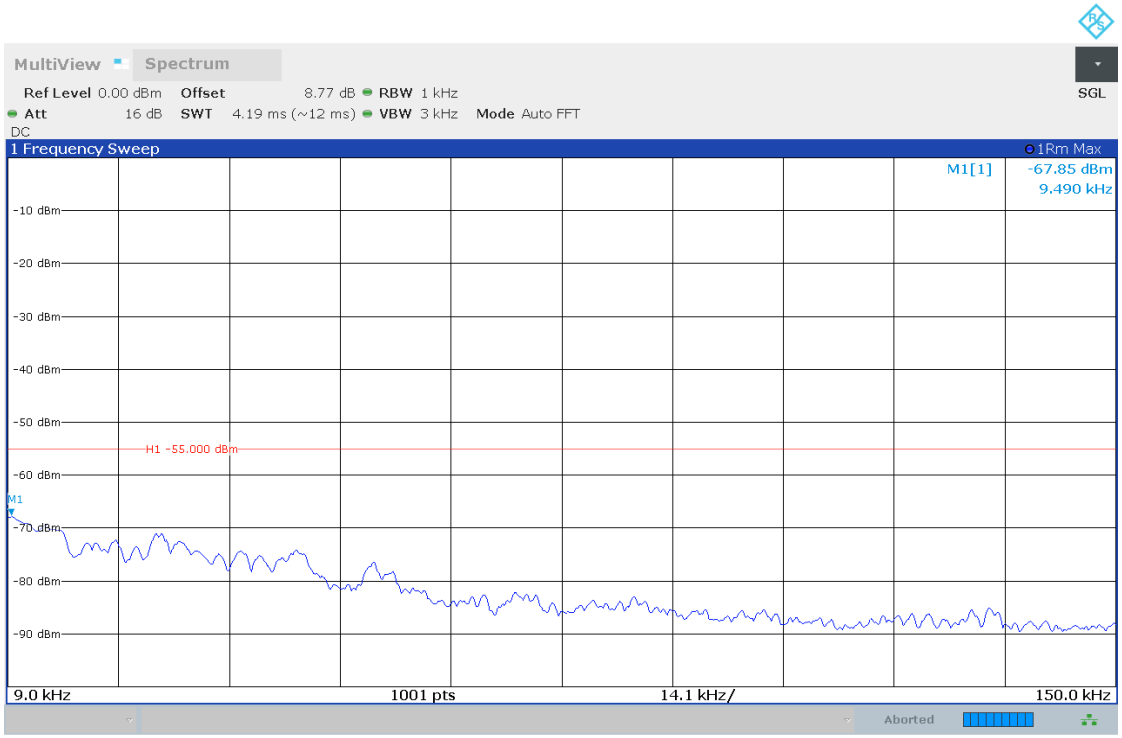
TM1_20MHz_MCH_RB1#99



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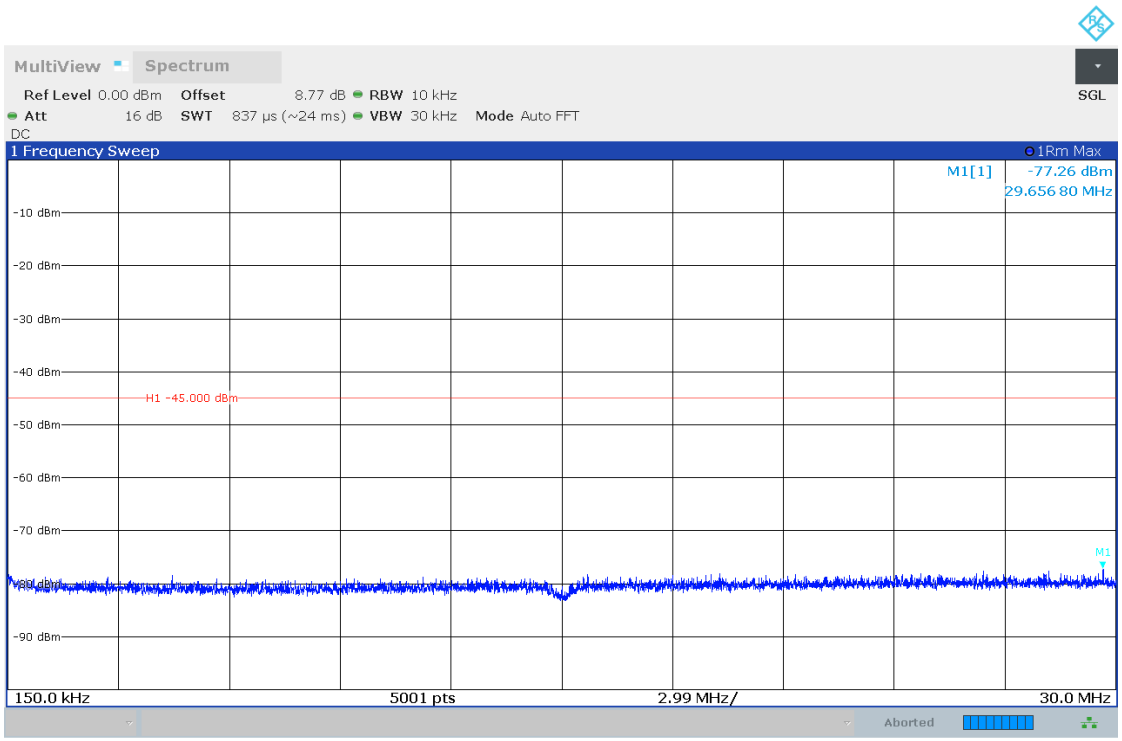

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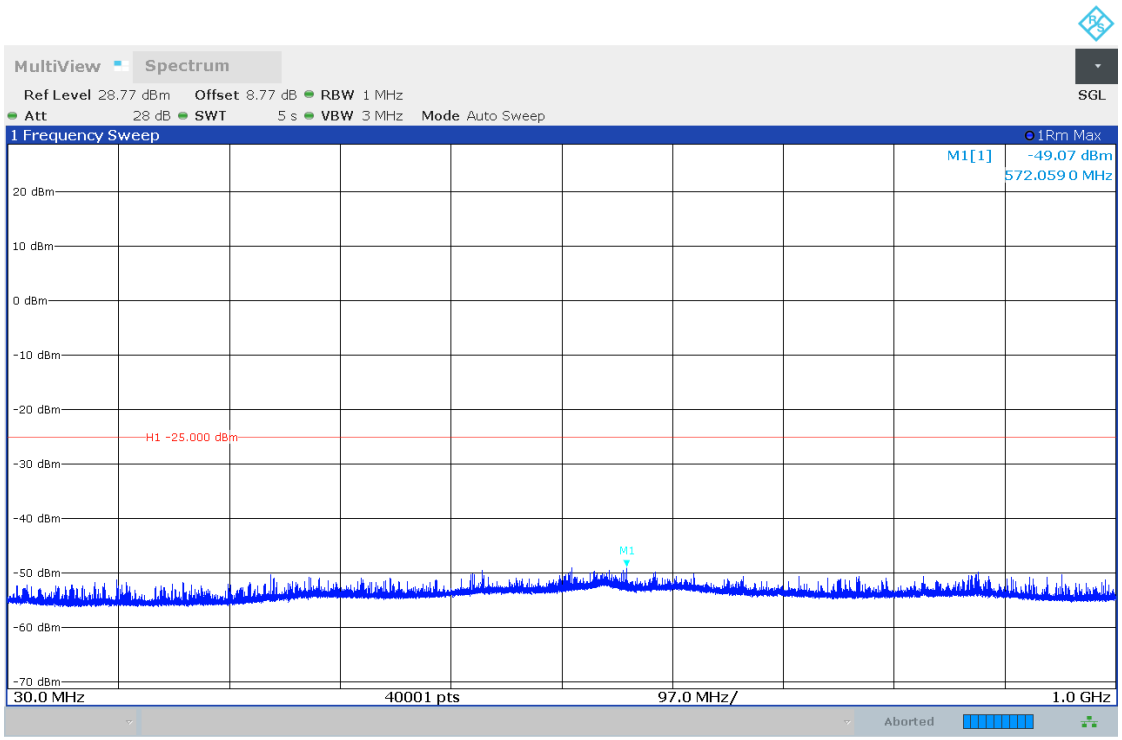

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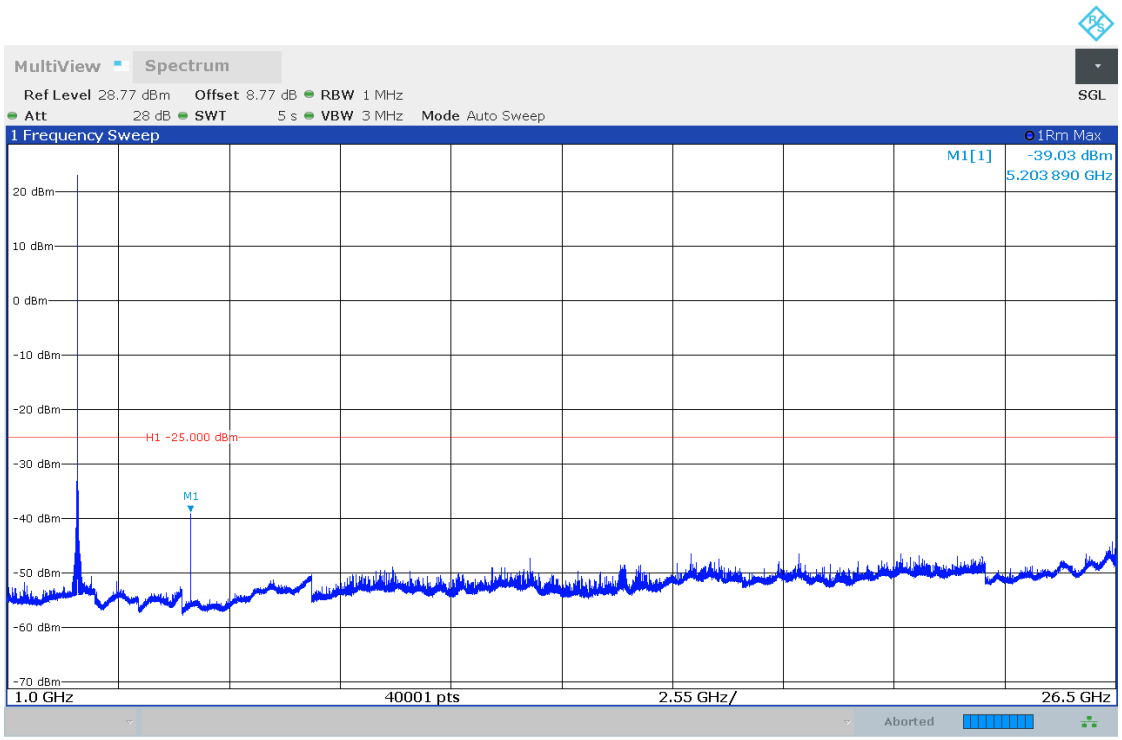

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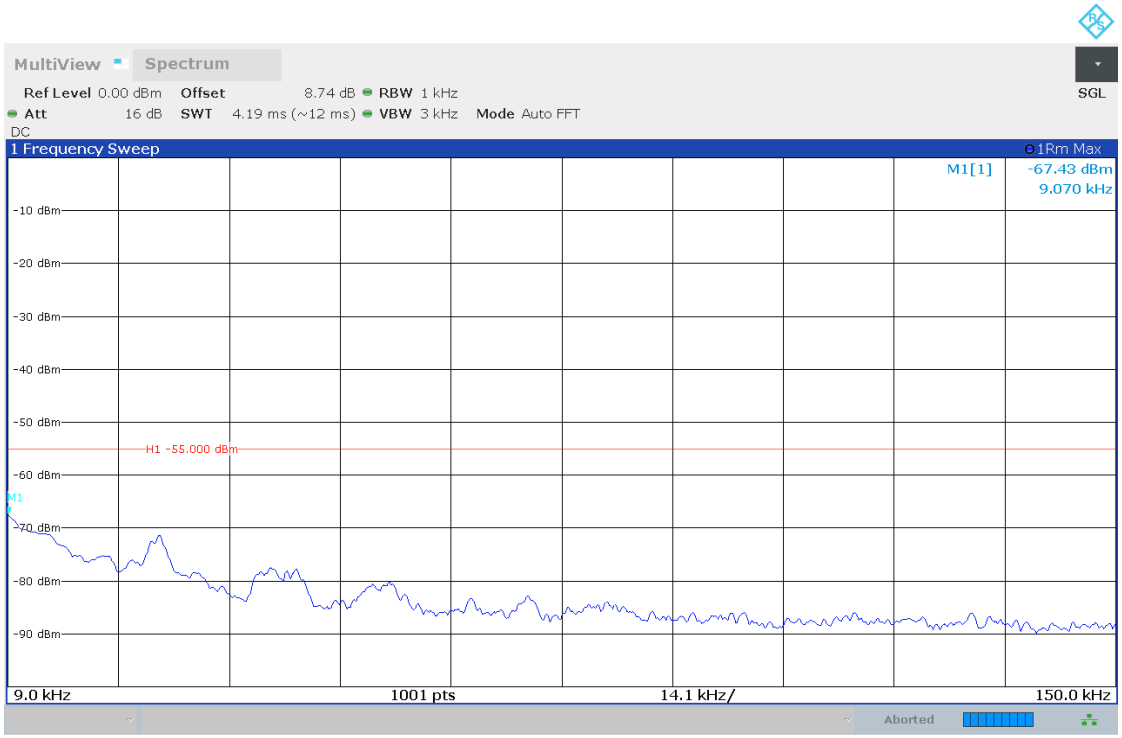
TM1_20MHz_HCH_RB100#0



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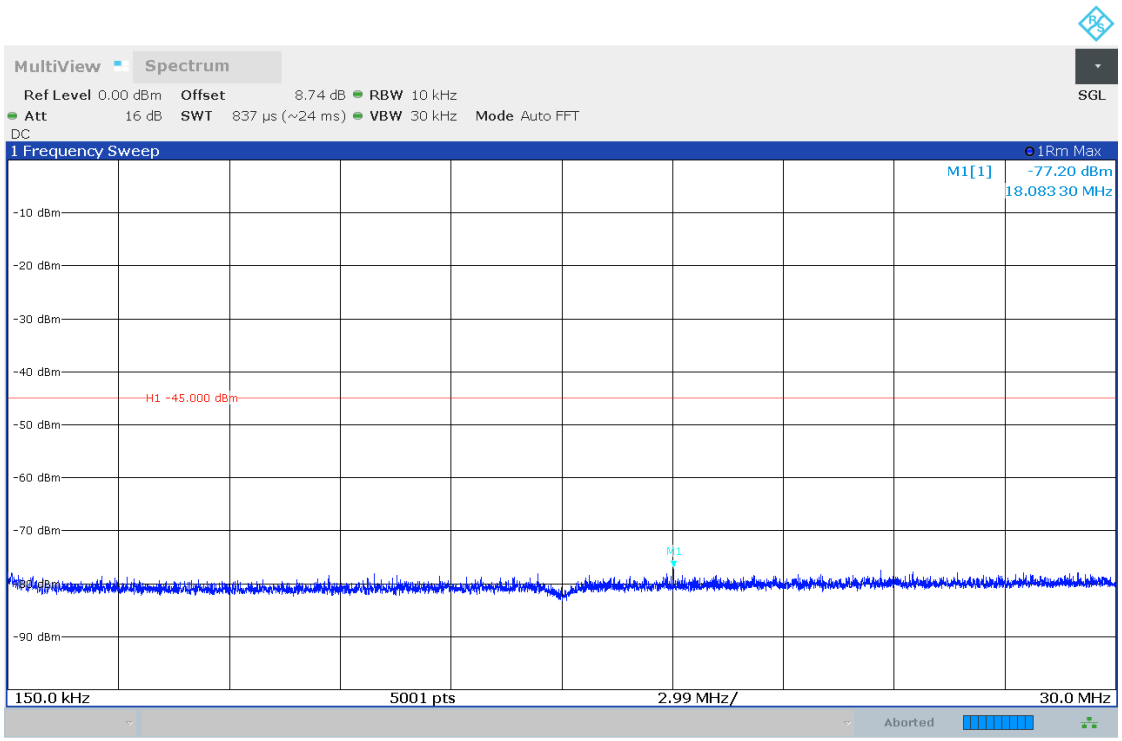

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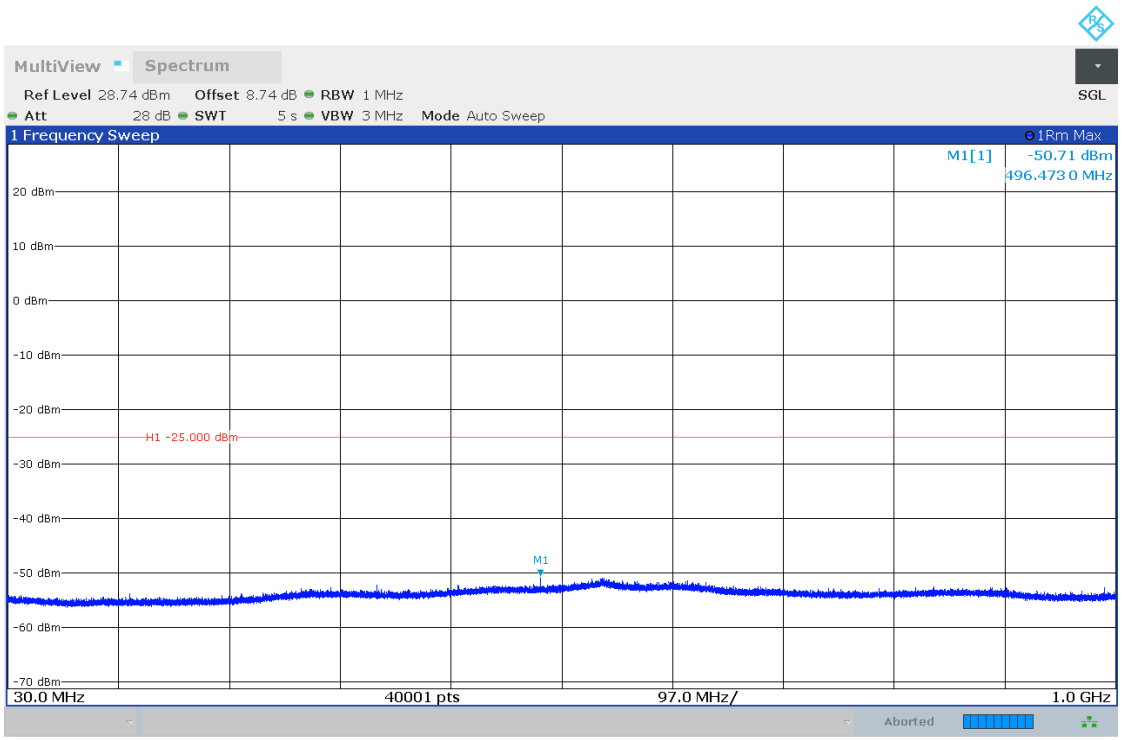

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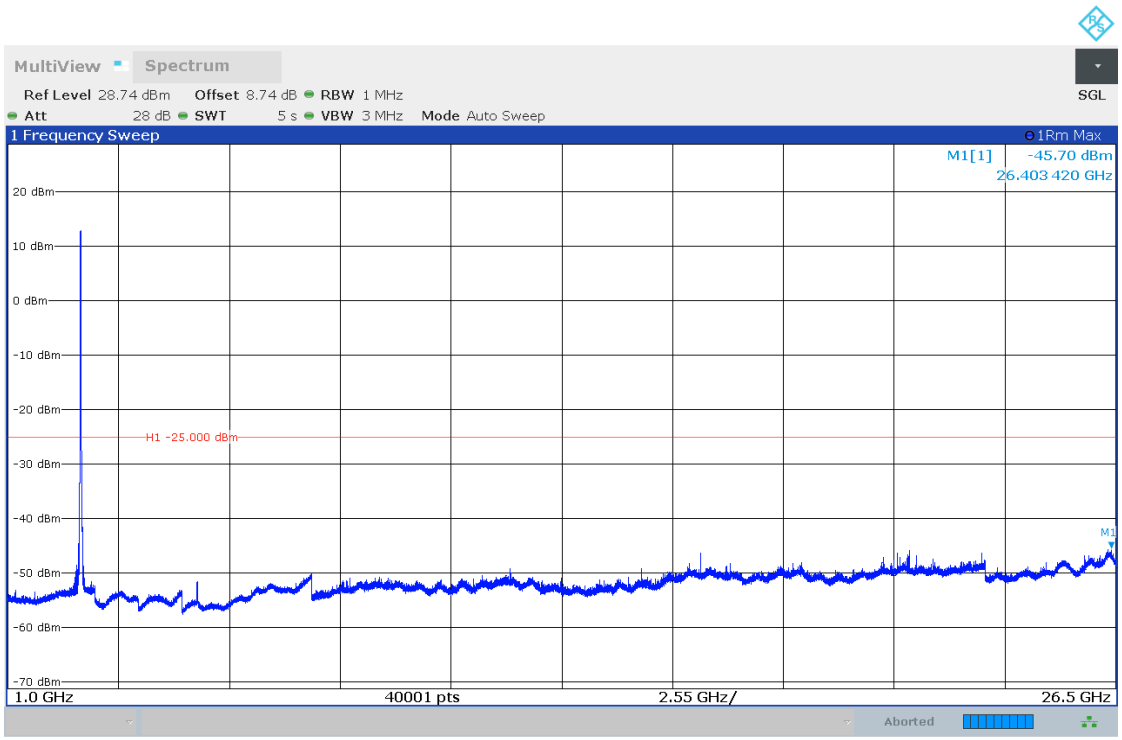

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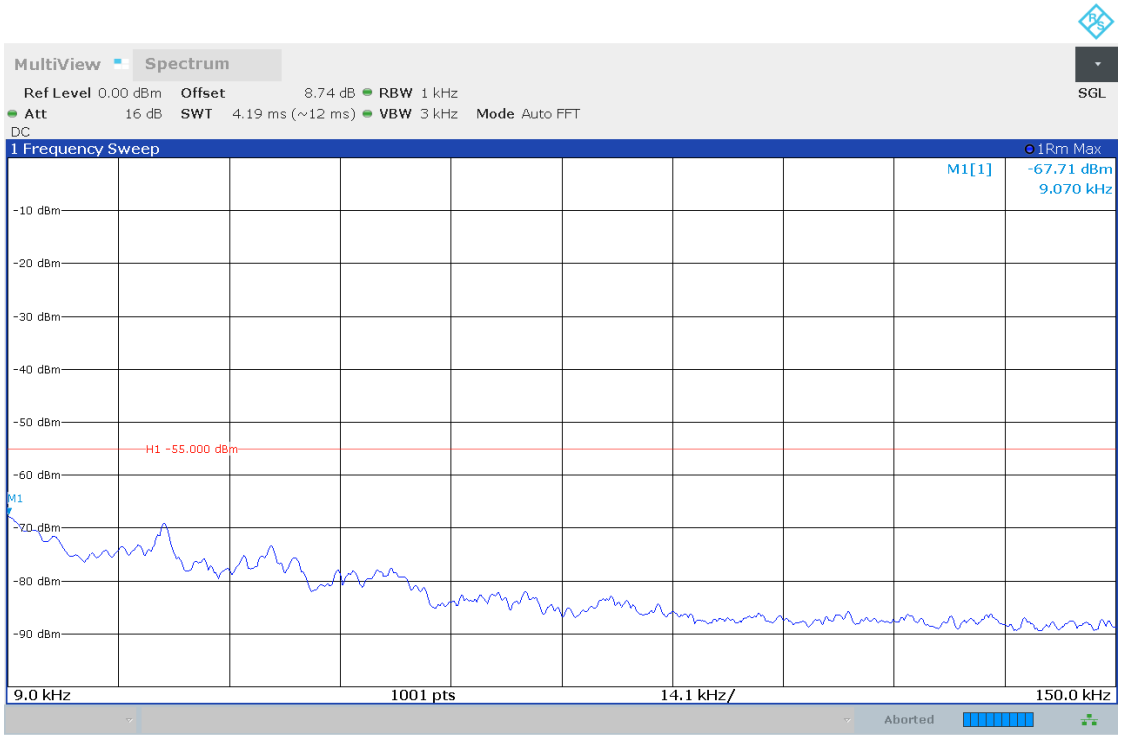
TM1_20MHz_HCH_RB1#0



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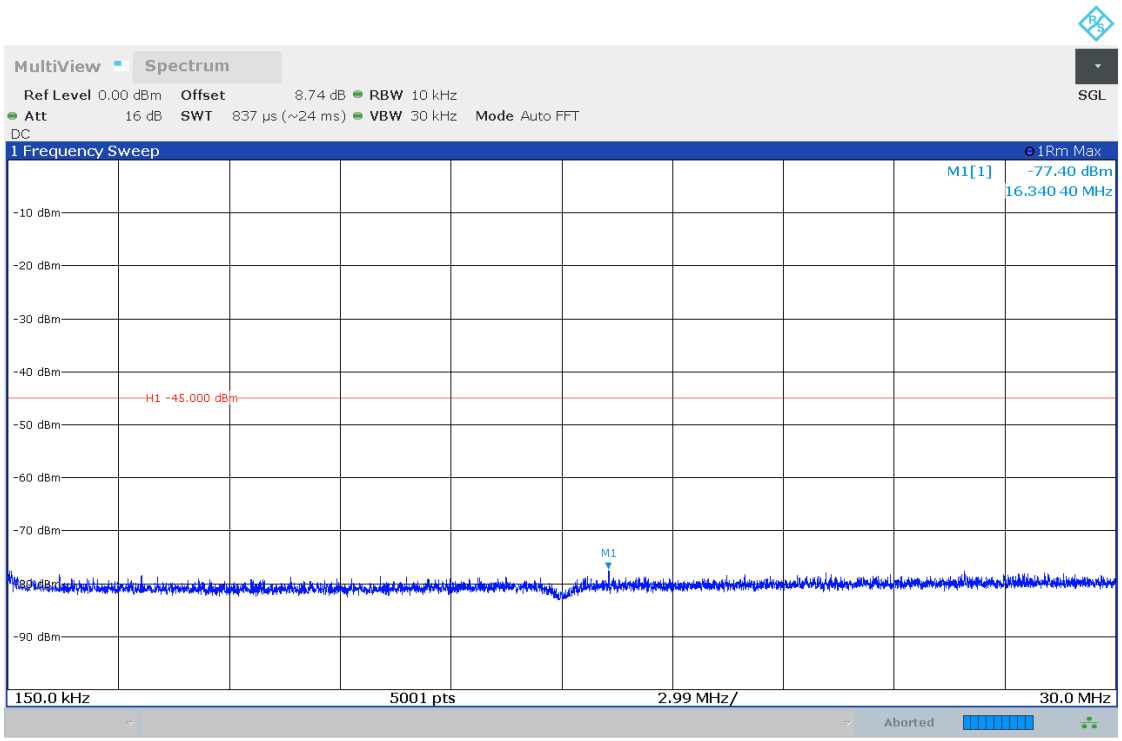

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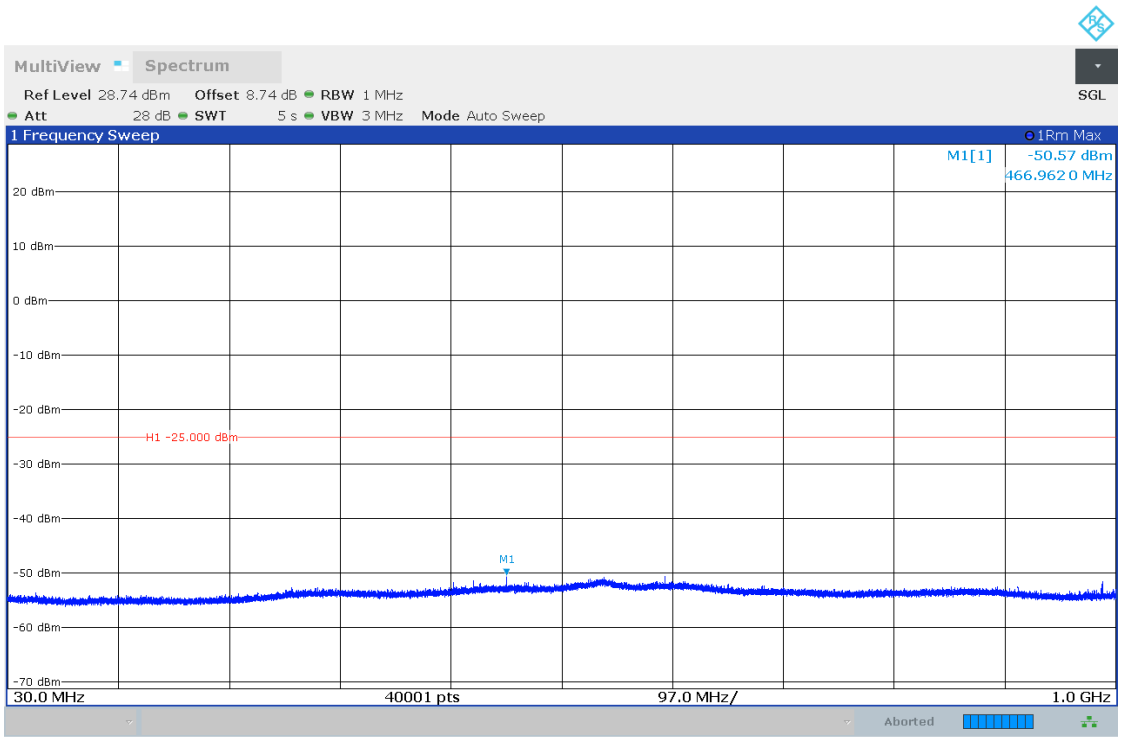

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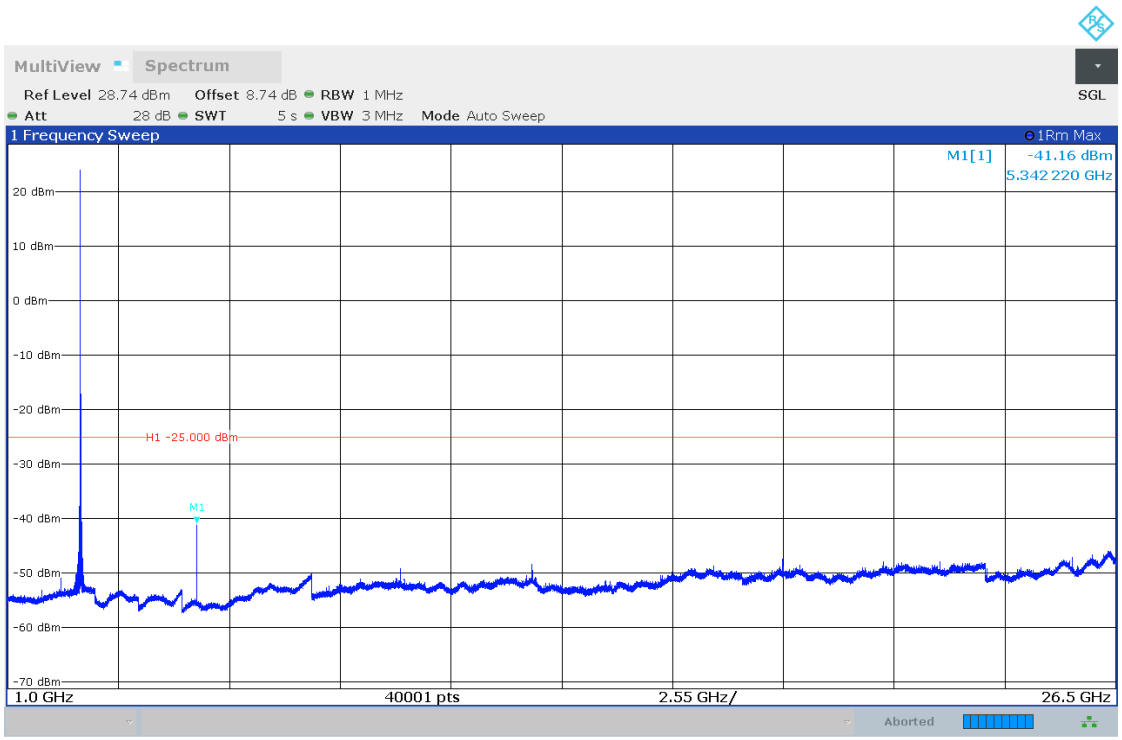

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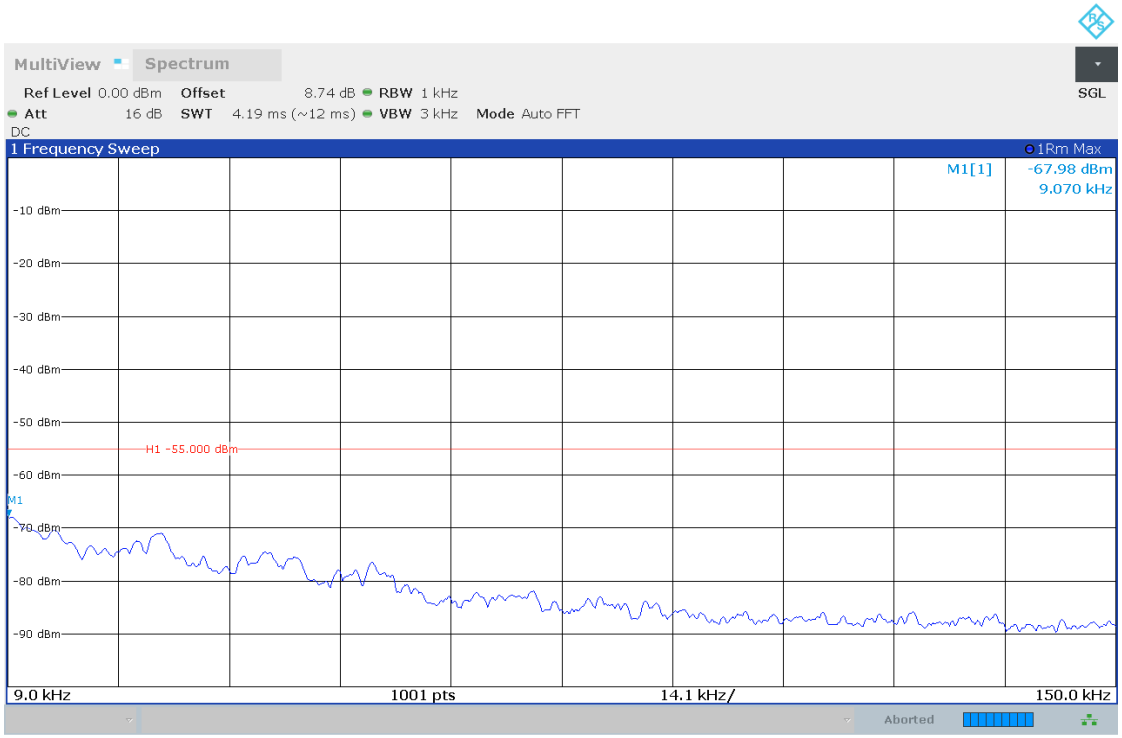
TM1_20MHz_HCH_RB1#99



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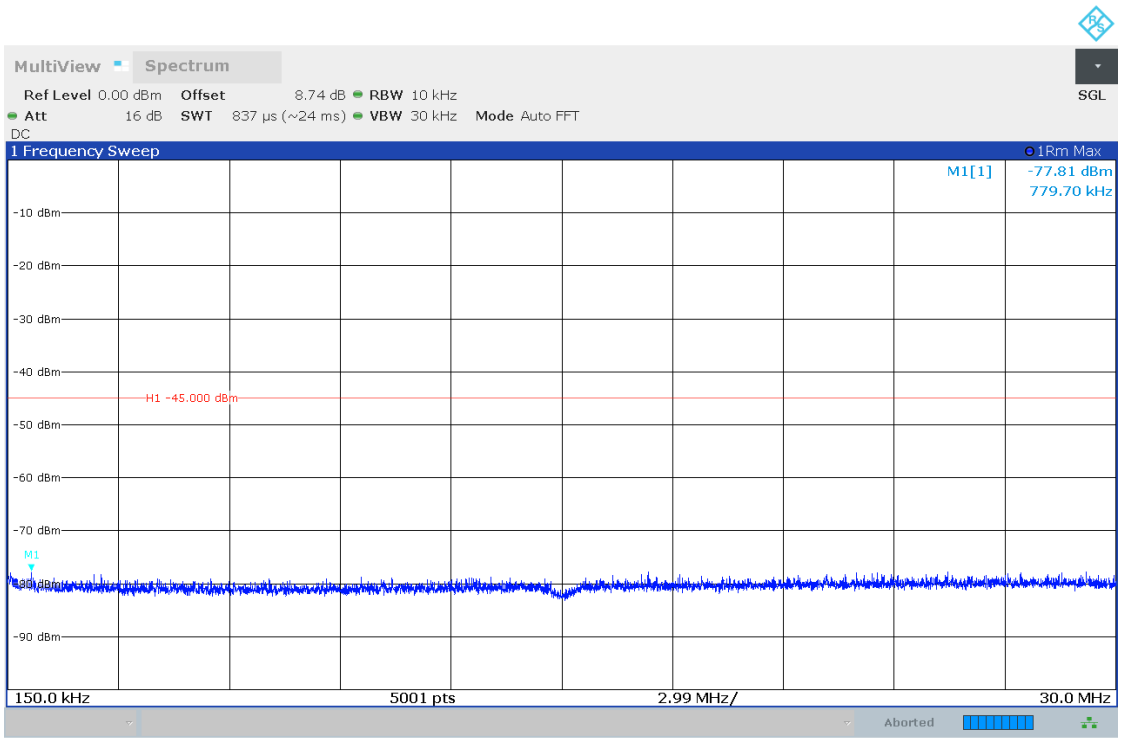

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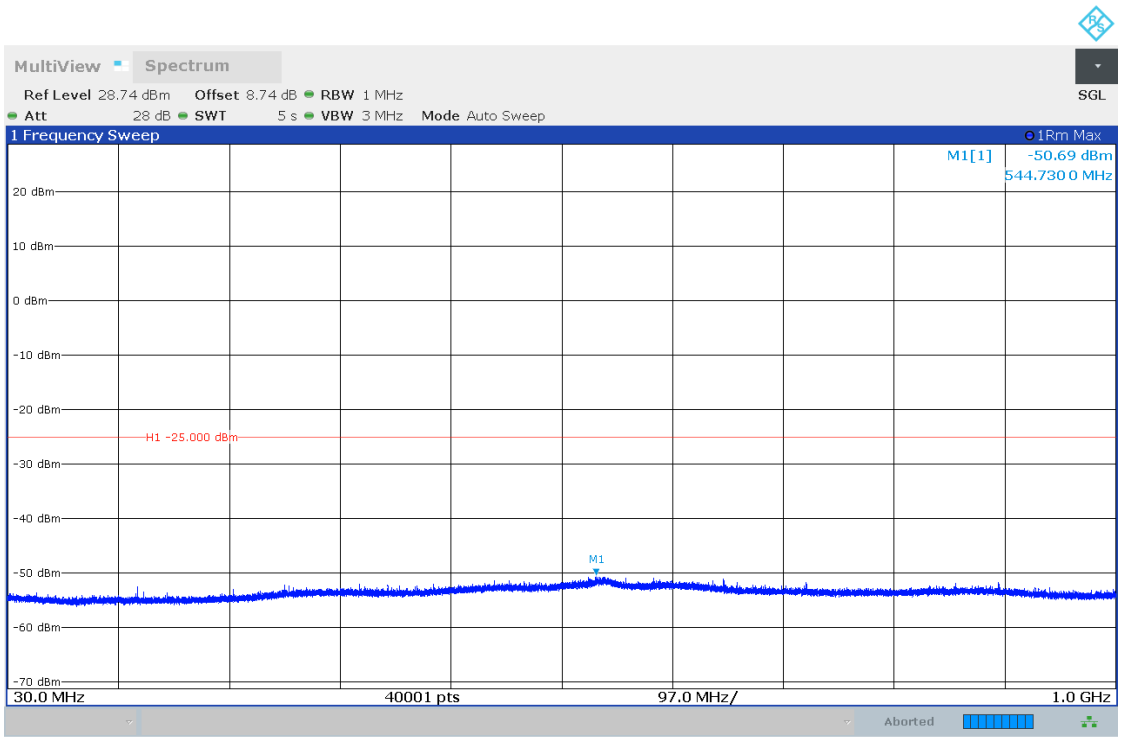

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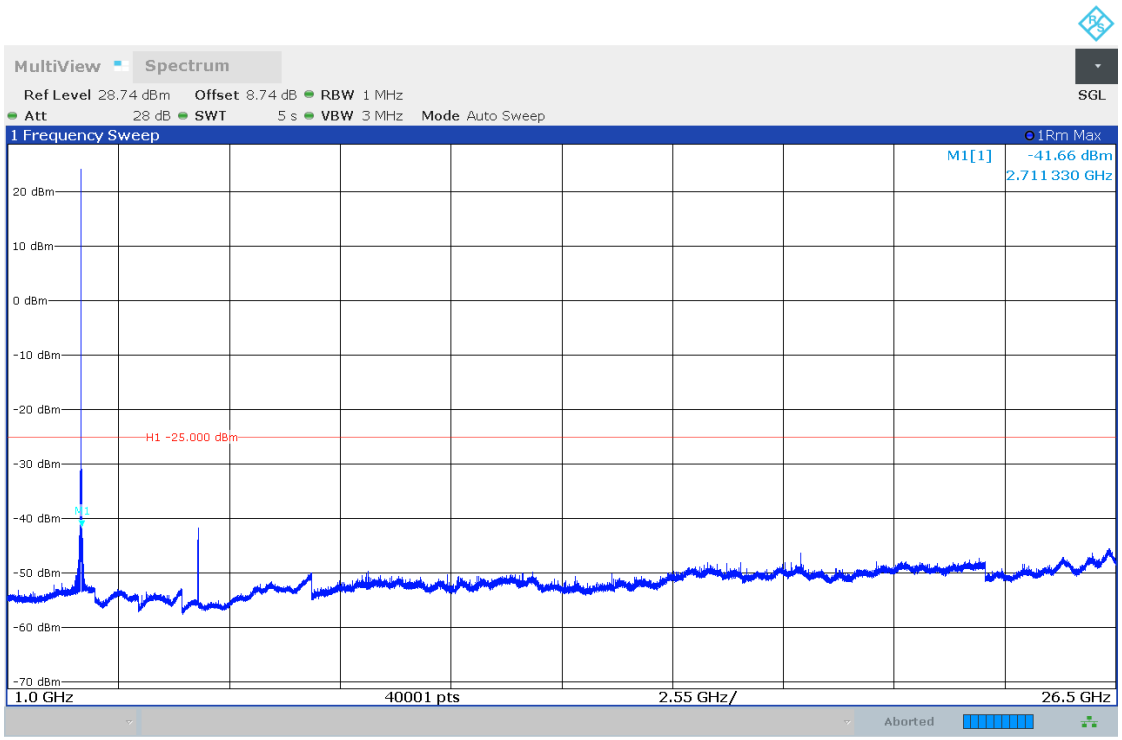

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TM2_5MHz_LCH_RB25#0

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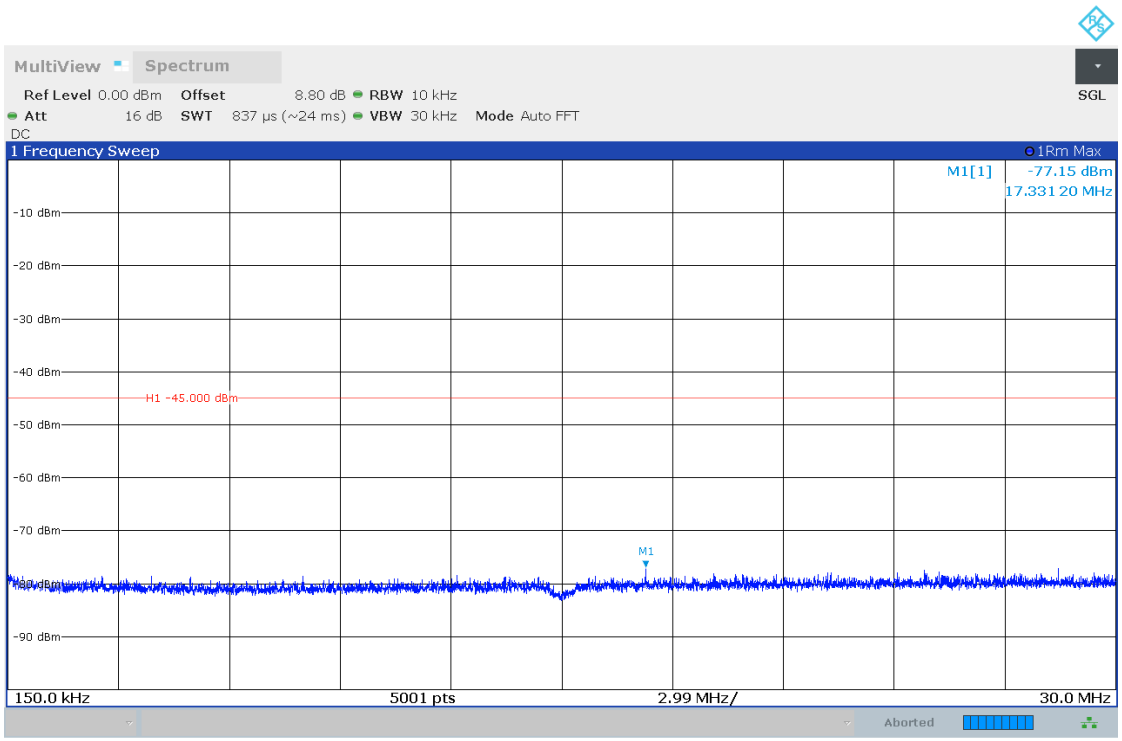

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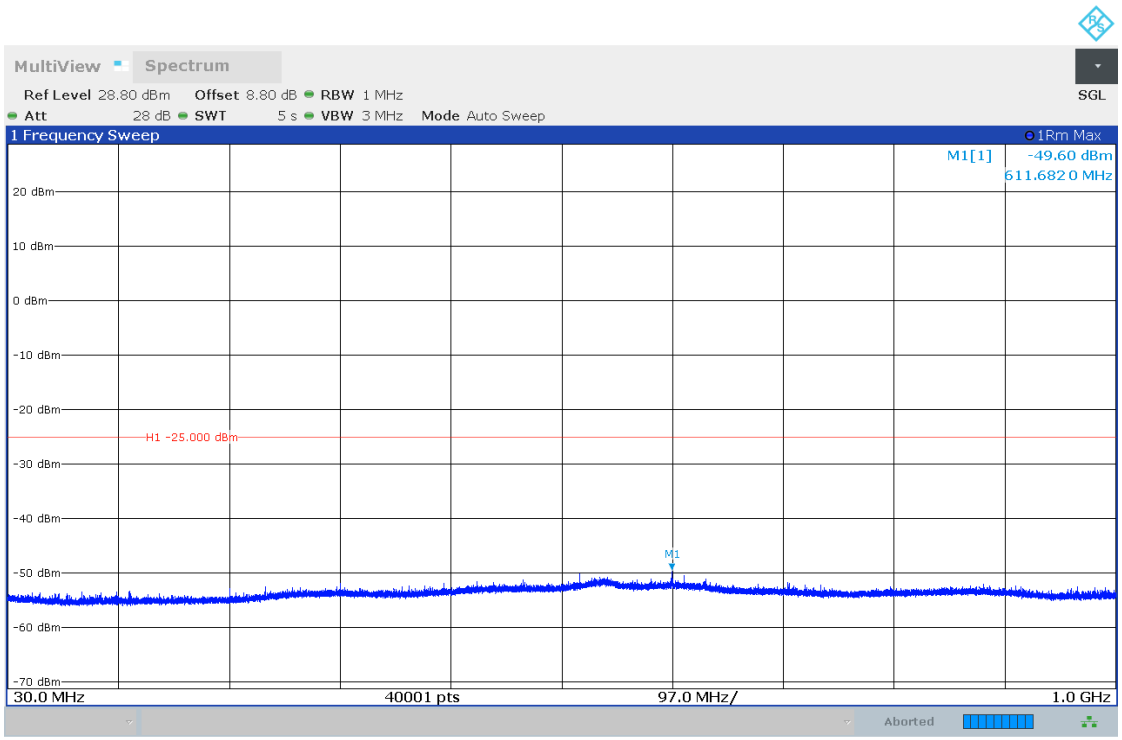

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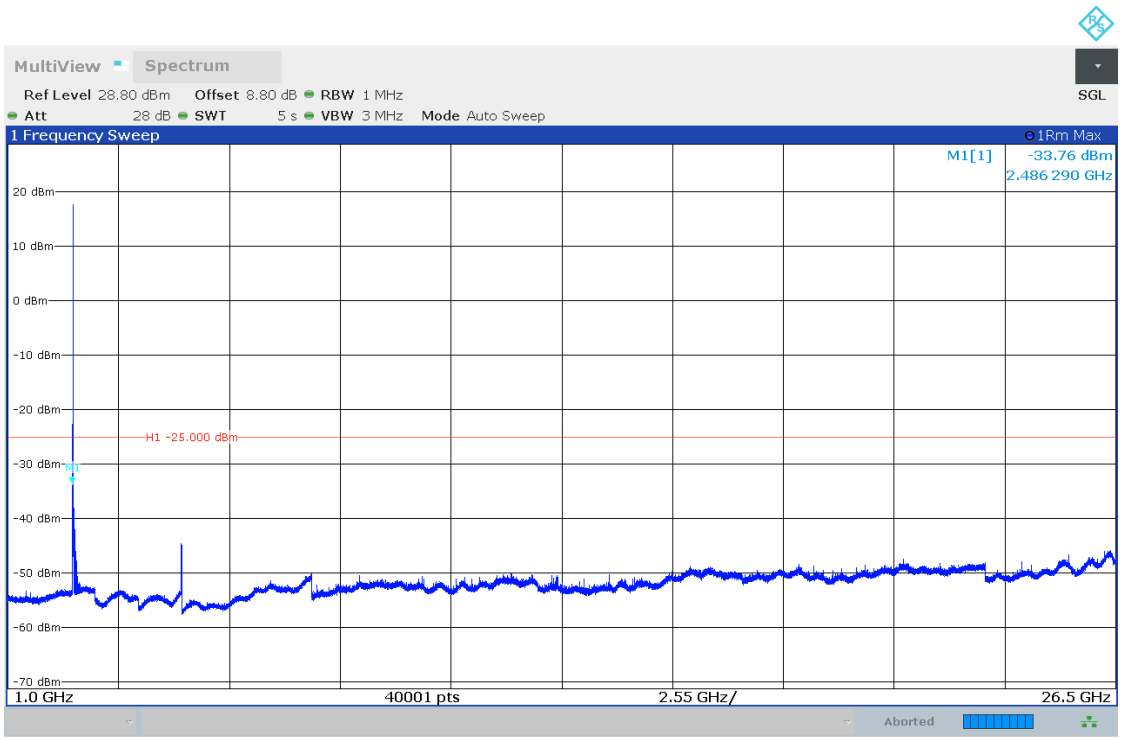

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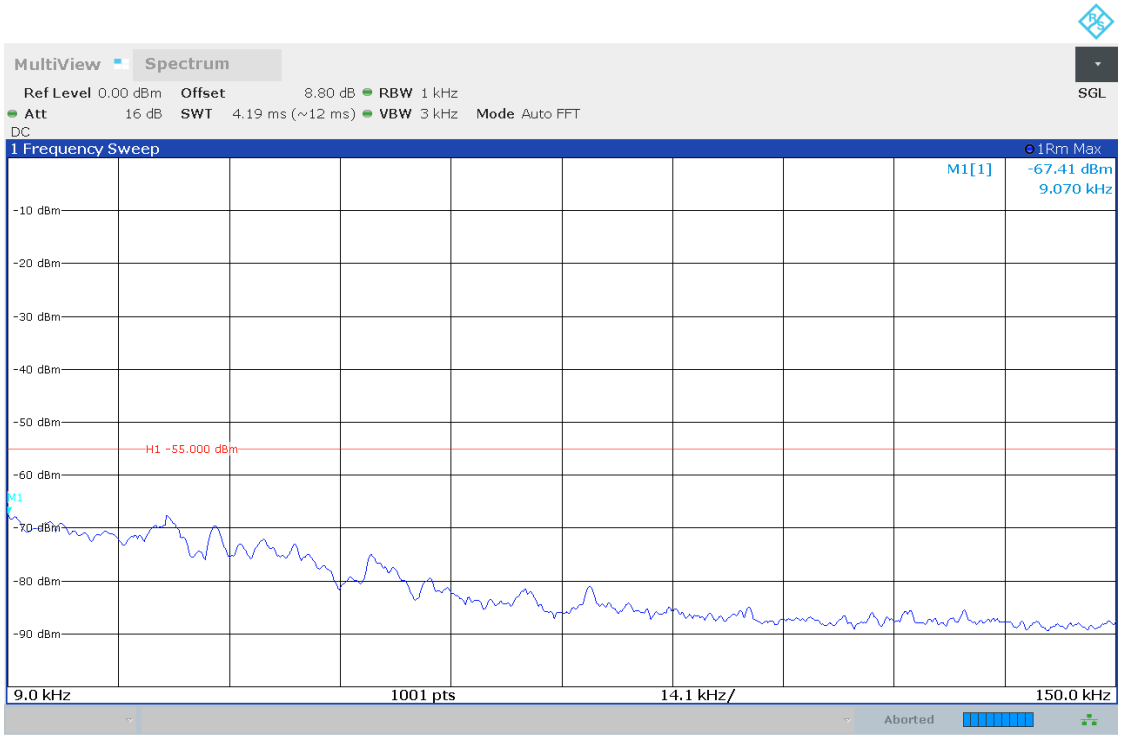
TM2_5MHz_LCH_RB1#0



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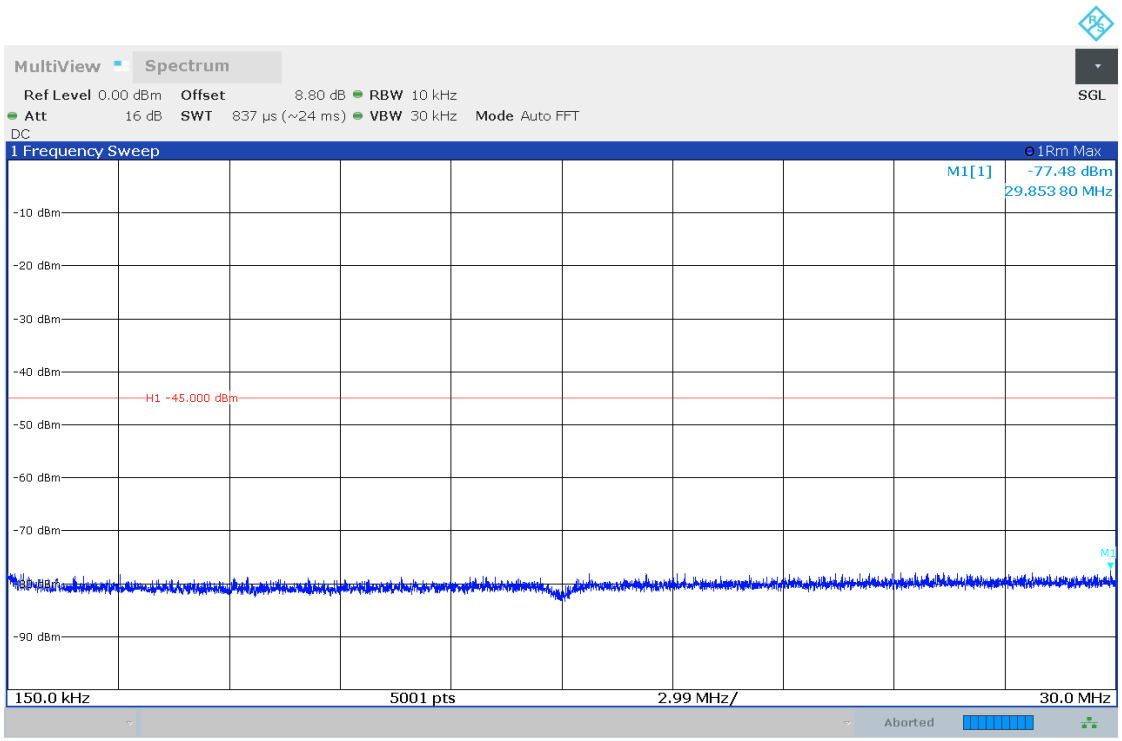

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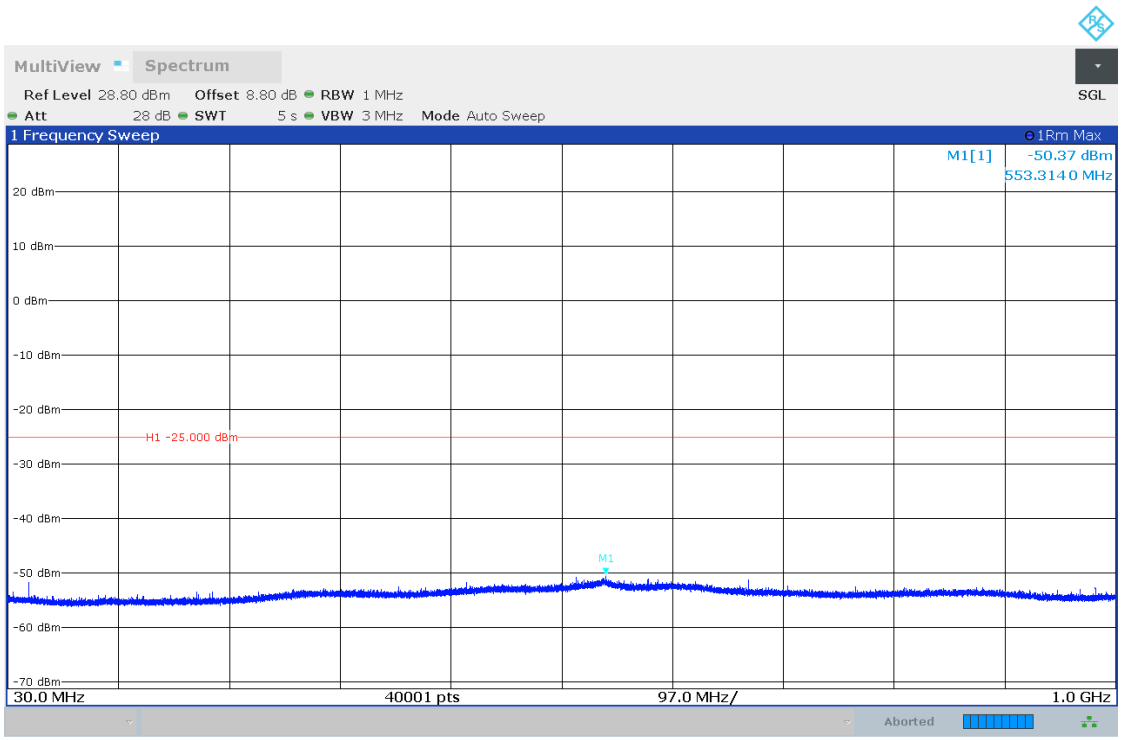

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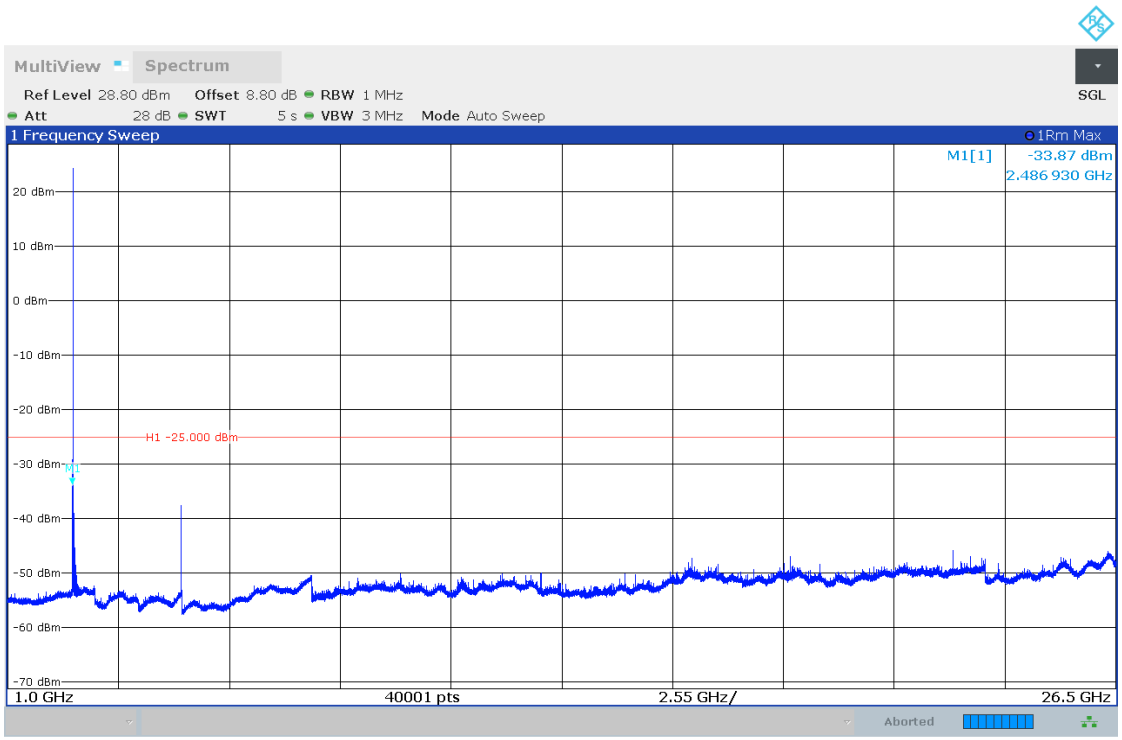

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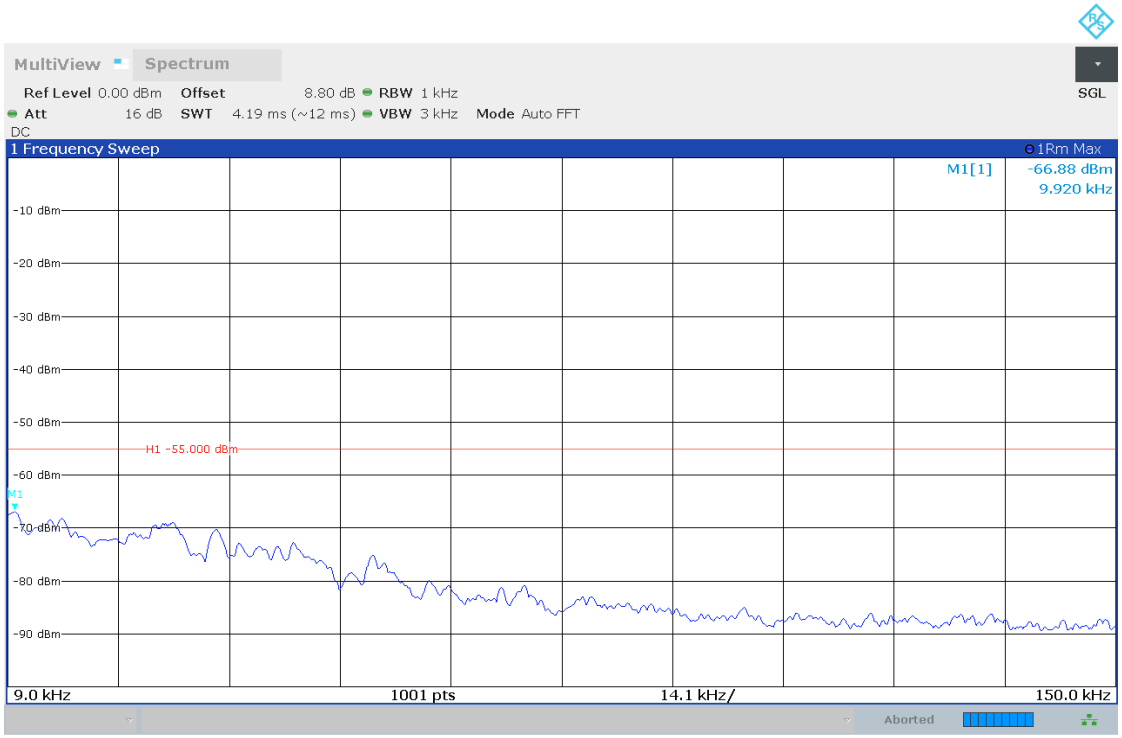
TM2_5MHz_LCH_RB1#24



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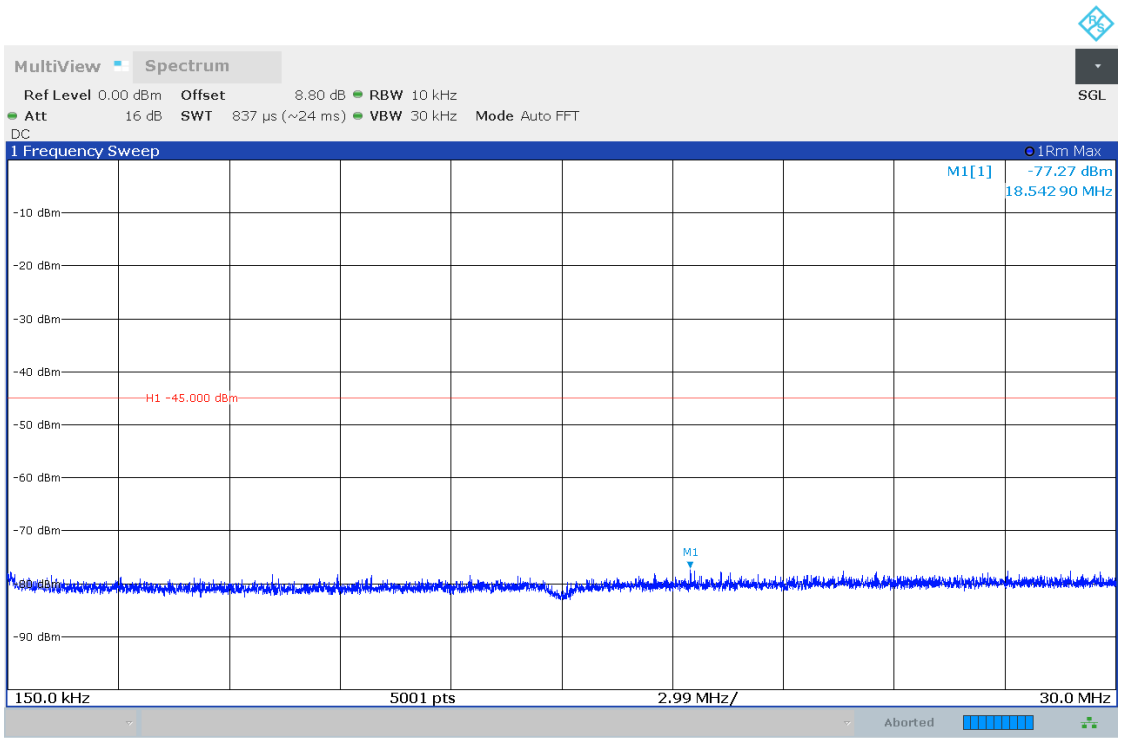

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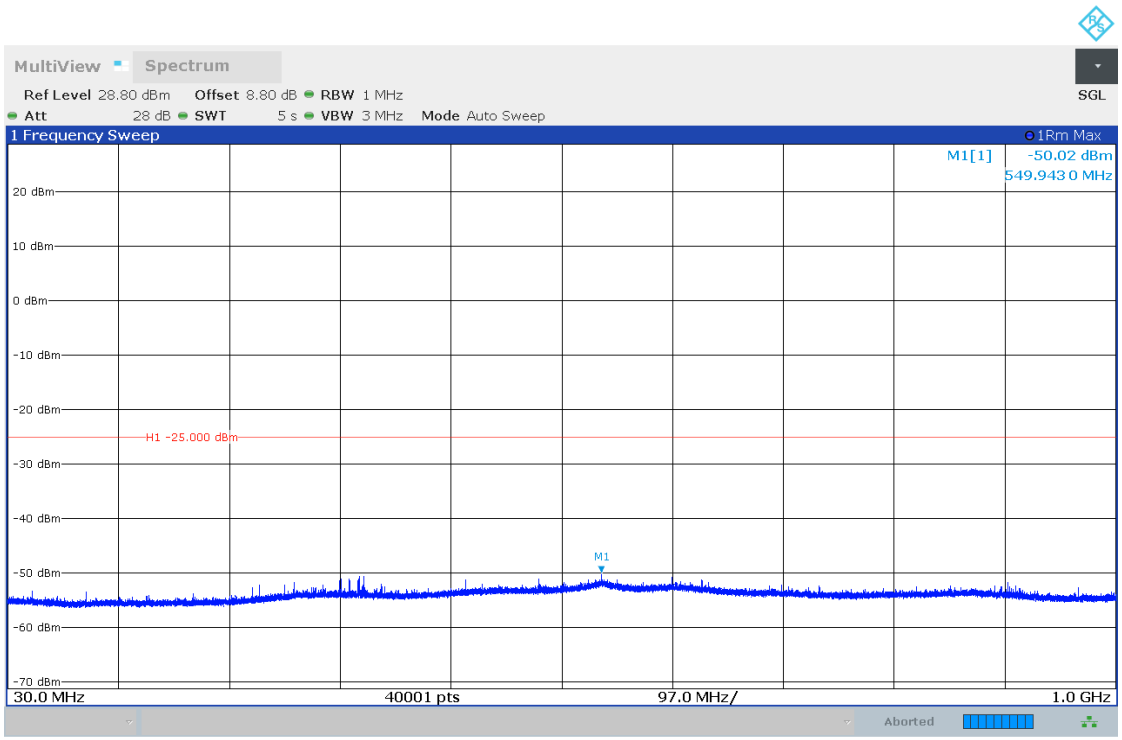

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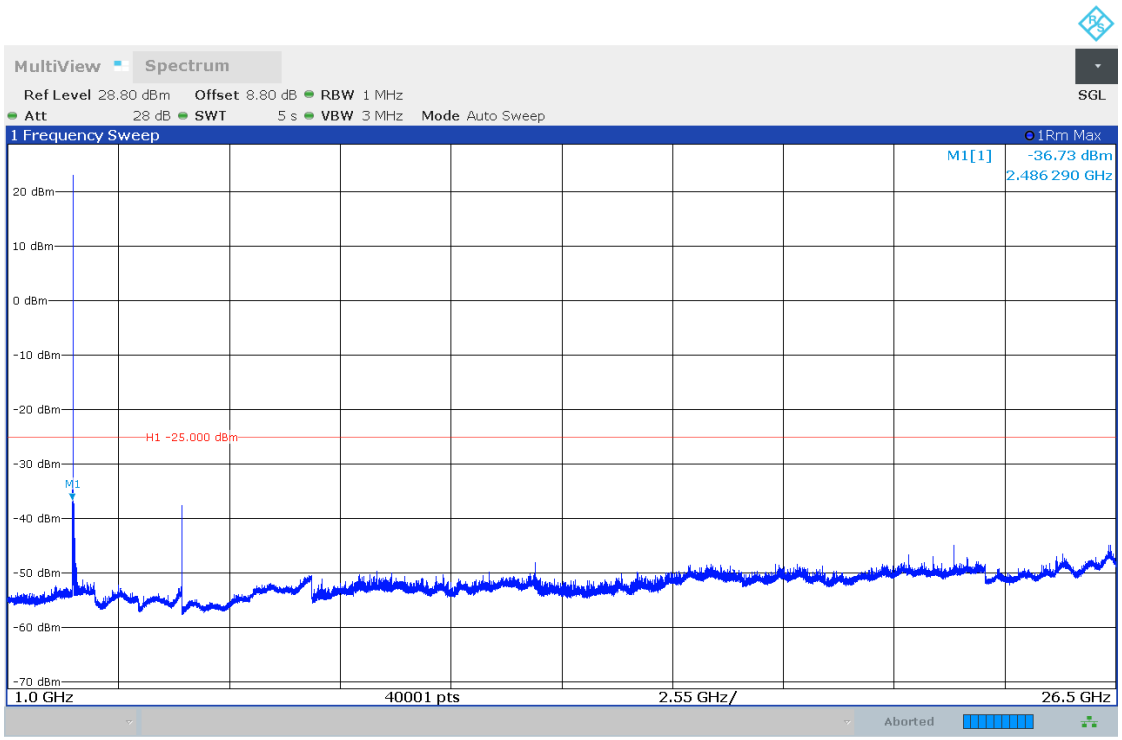

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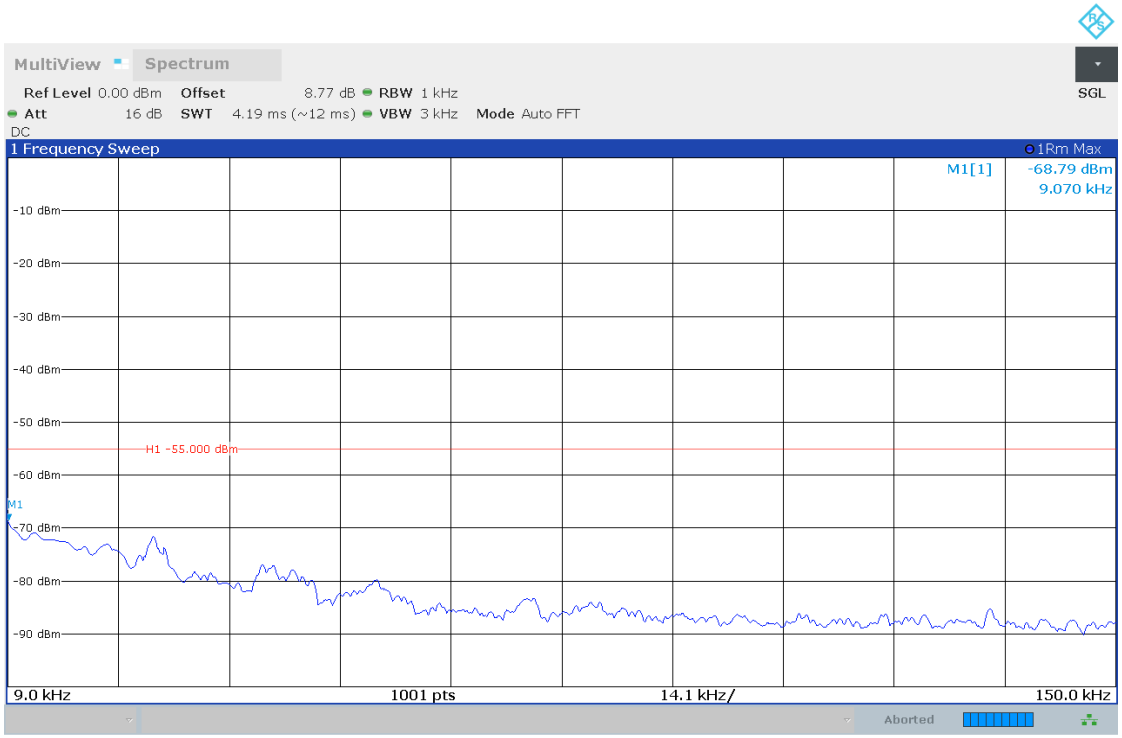
TM2_5MHz_MCH_RB25#0



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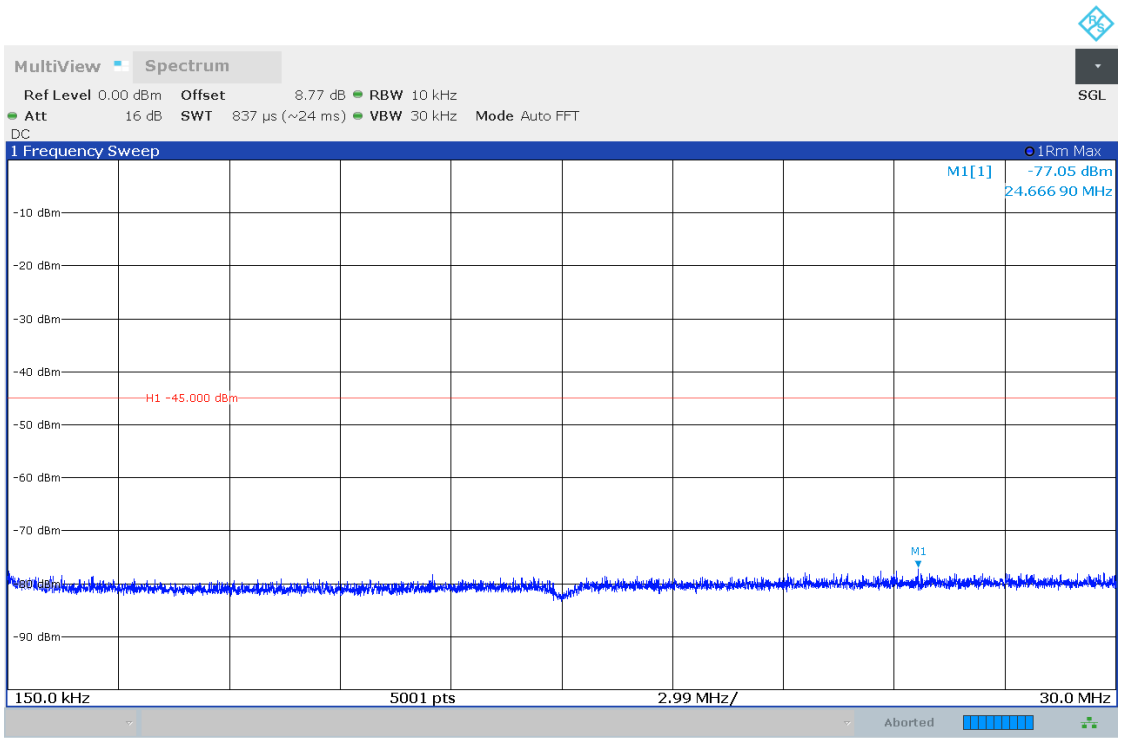

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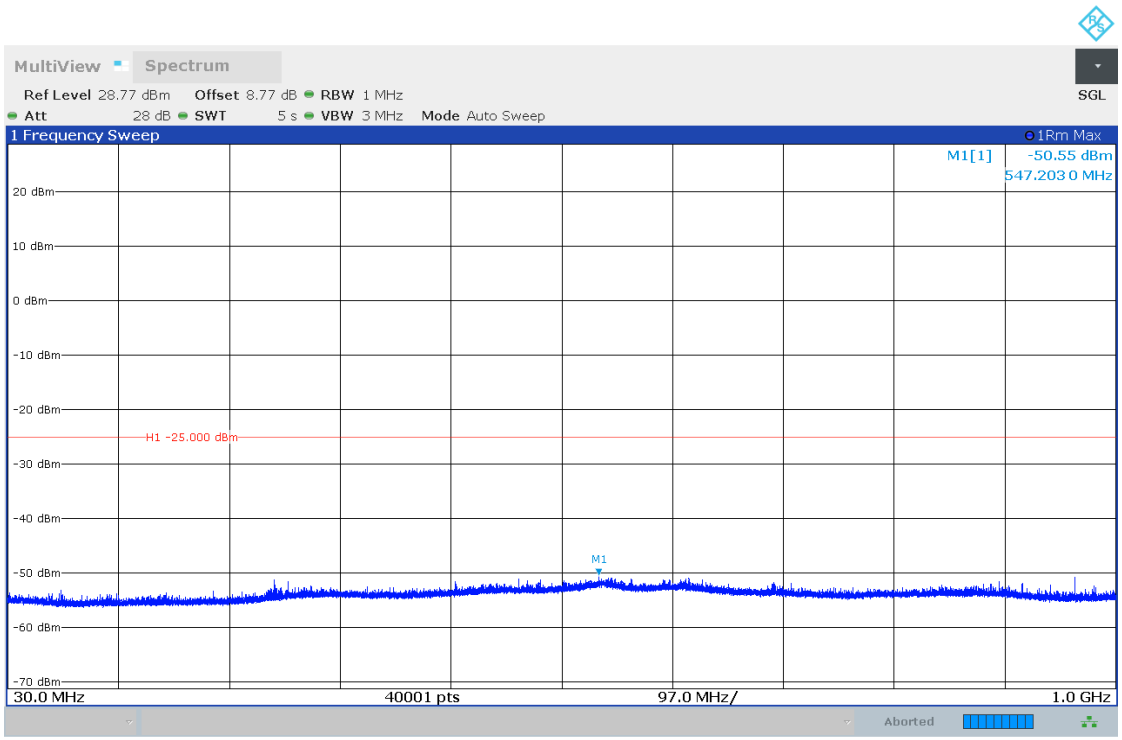

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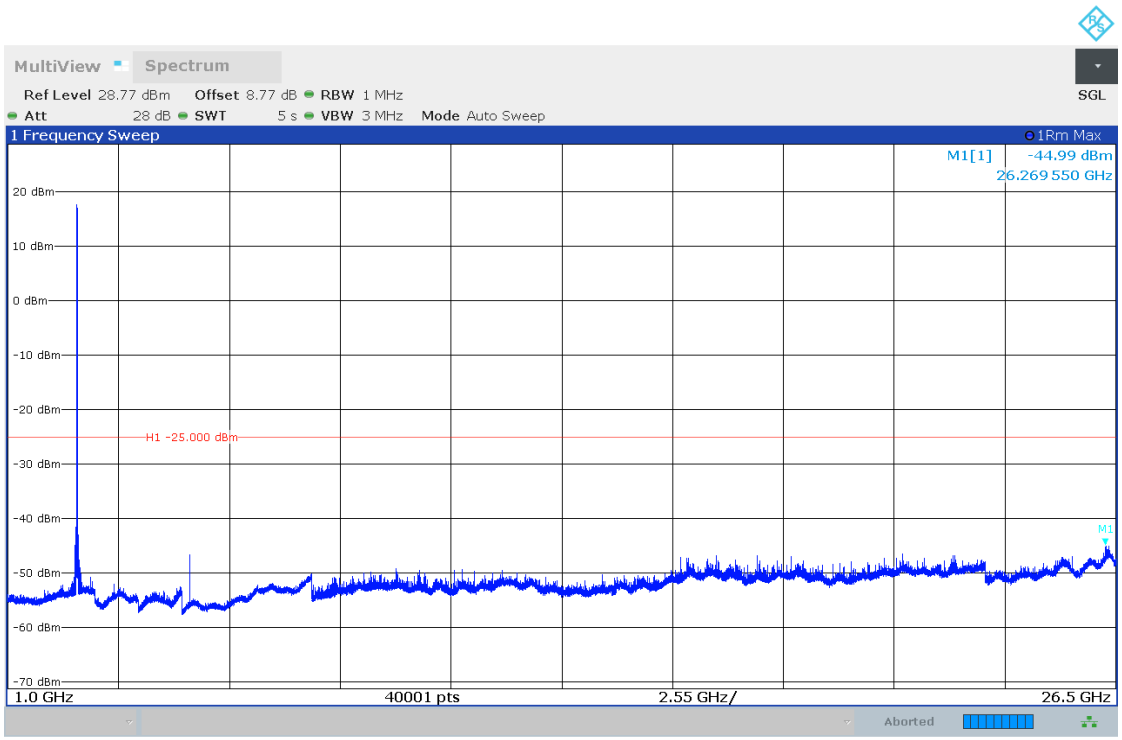

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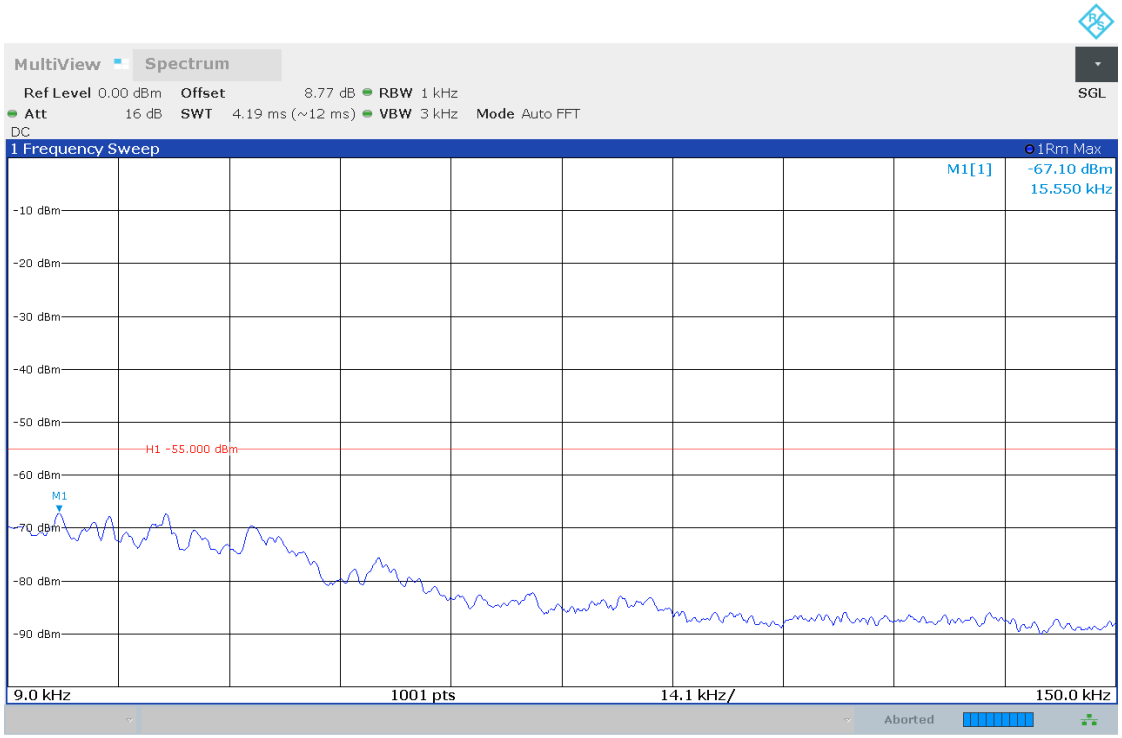
TM2_5MHz_MCH_RB1#0



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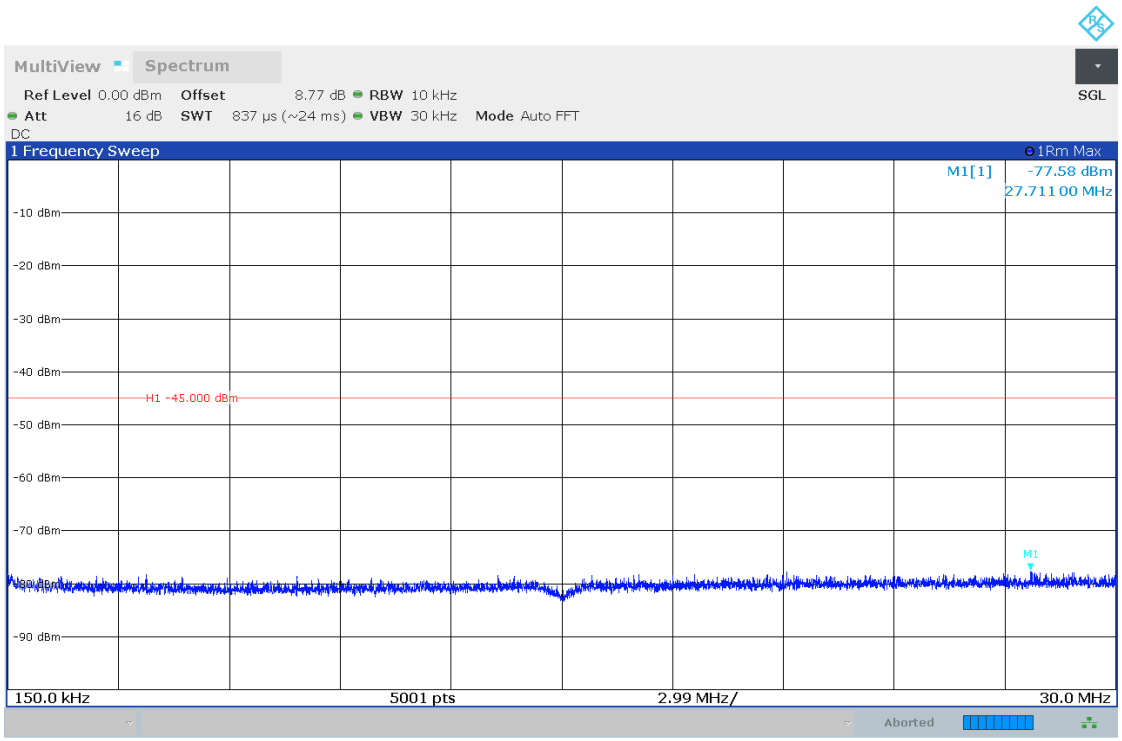

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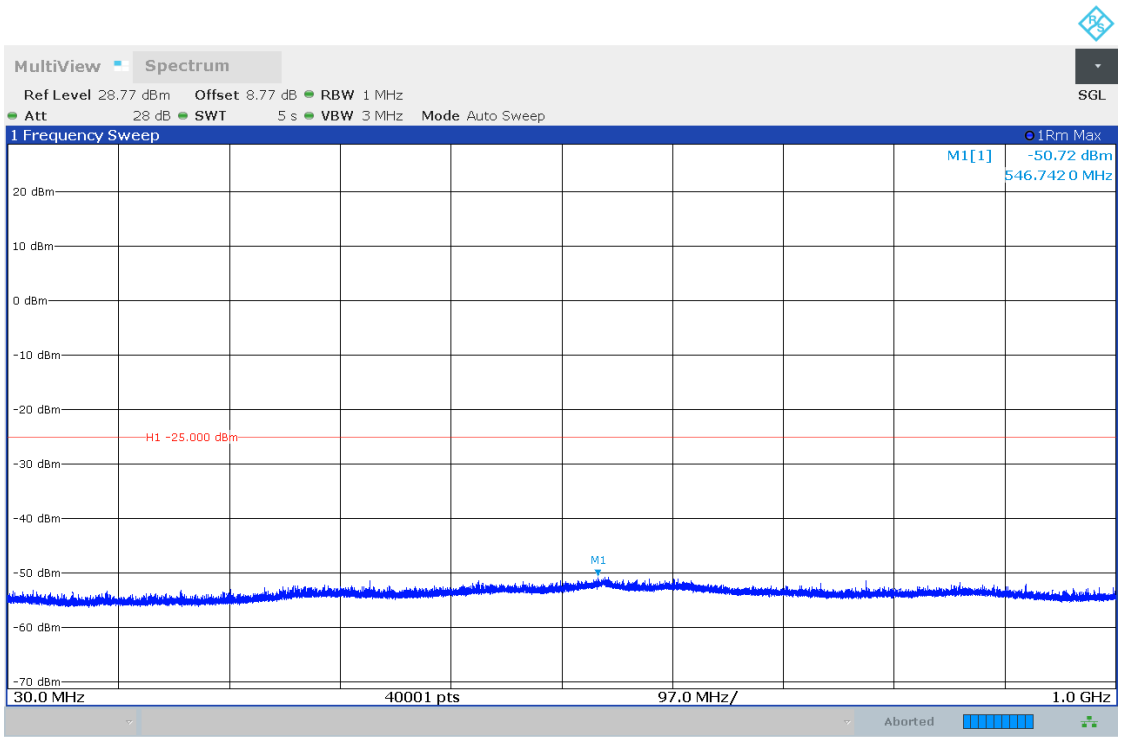

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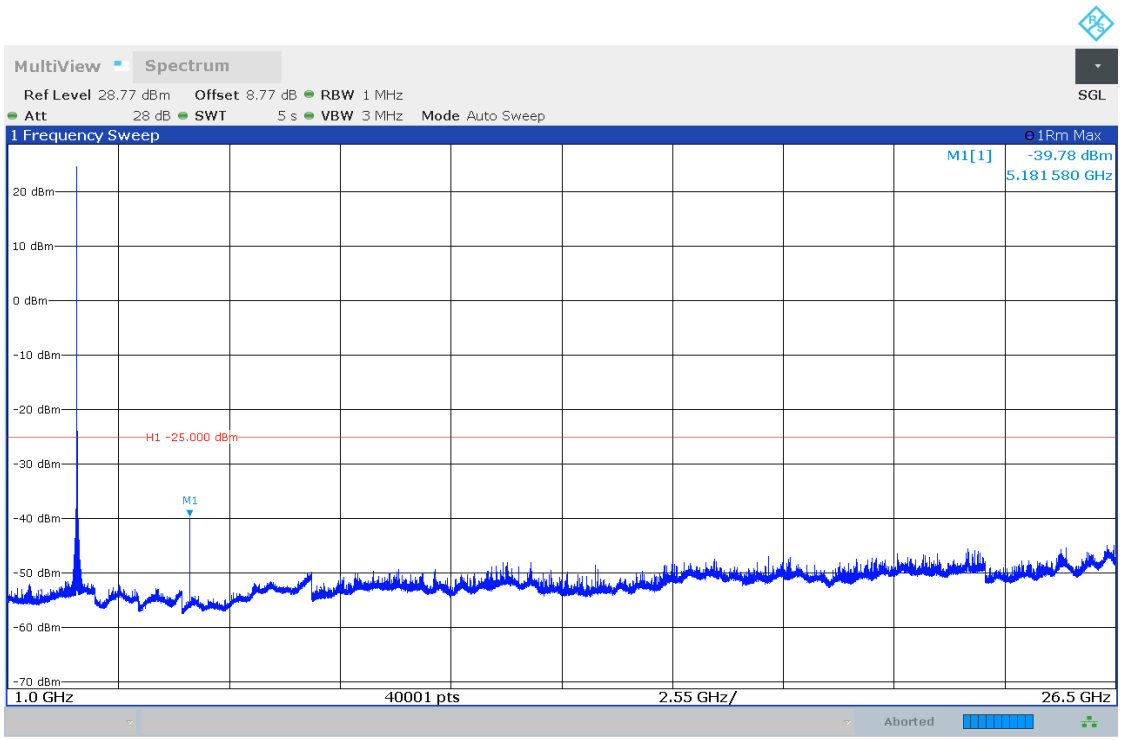

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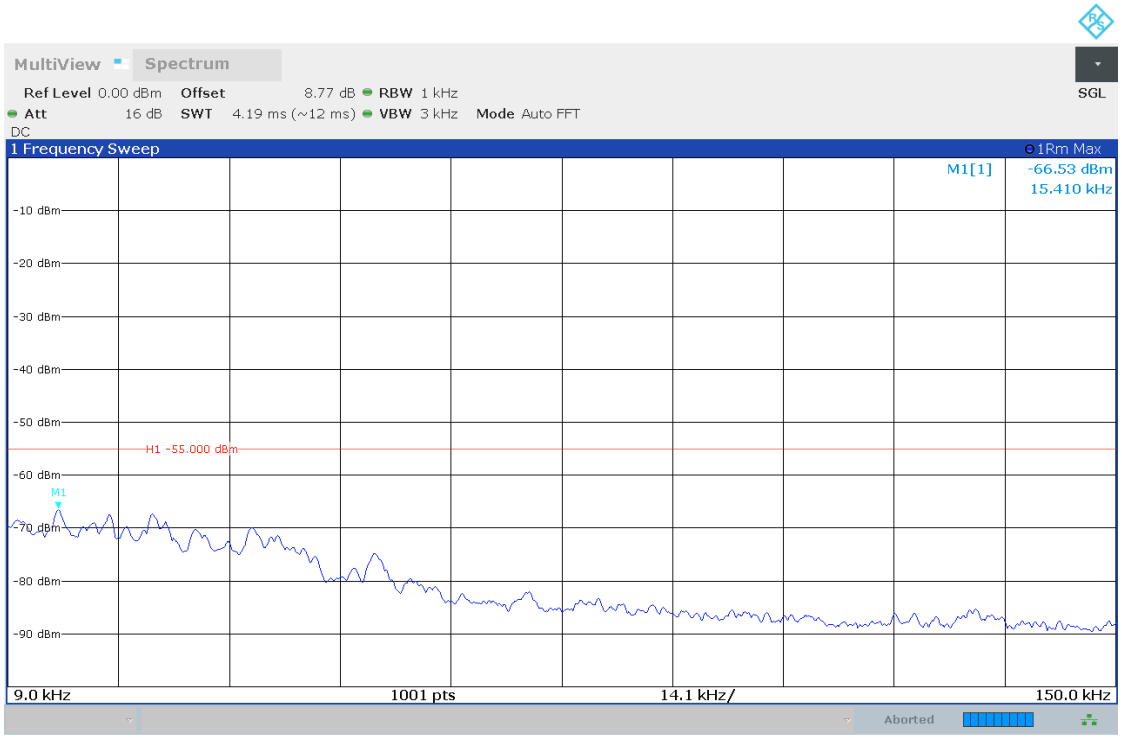
TM2_5MHz_MCH_RB1#24



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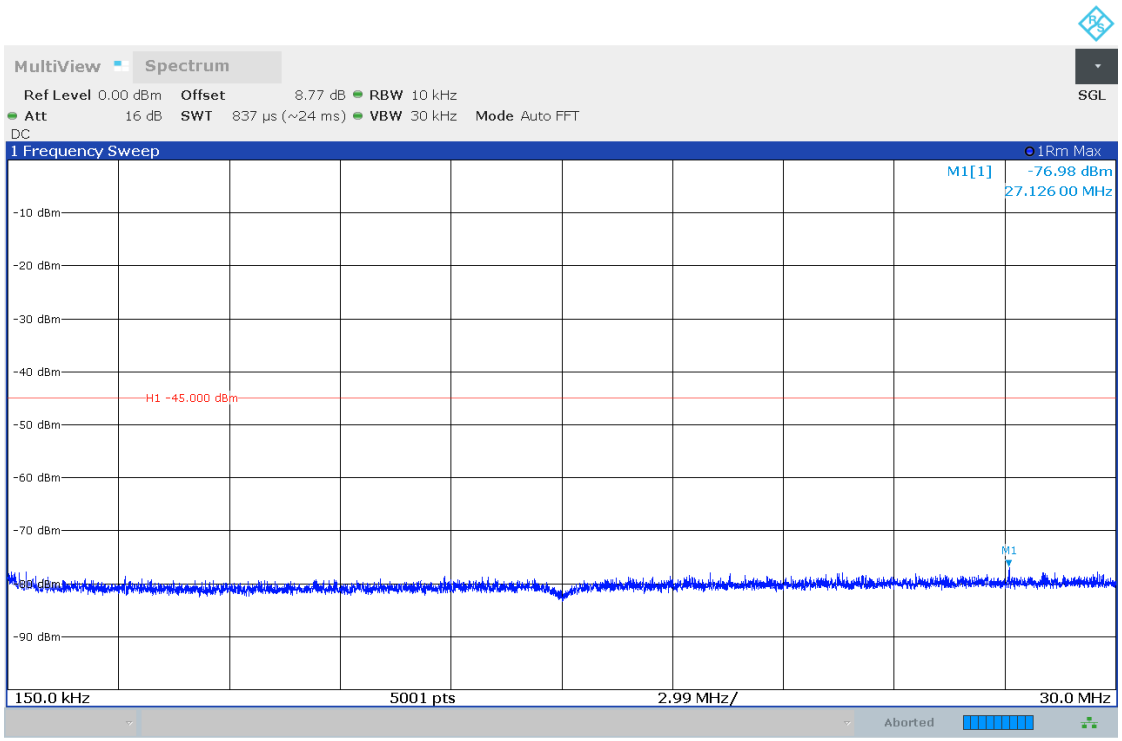

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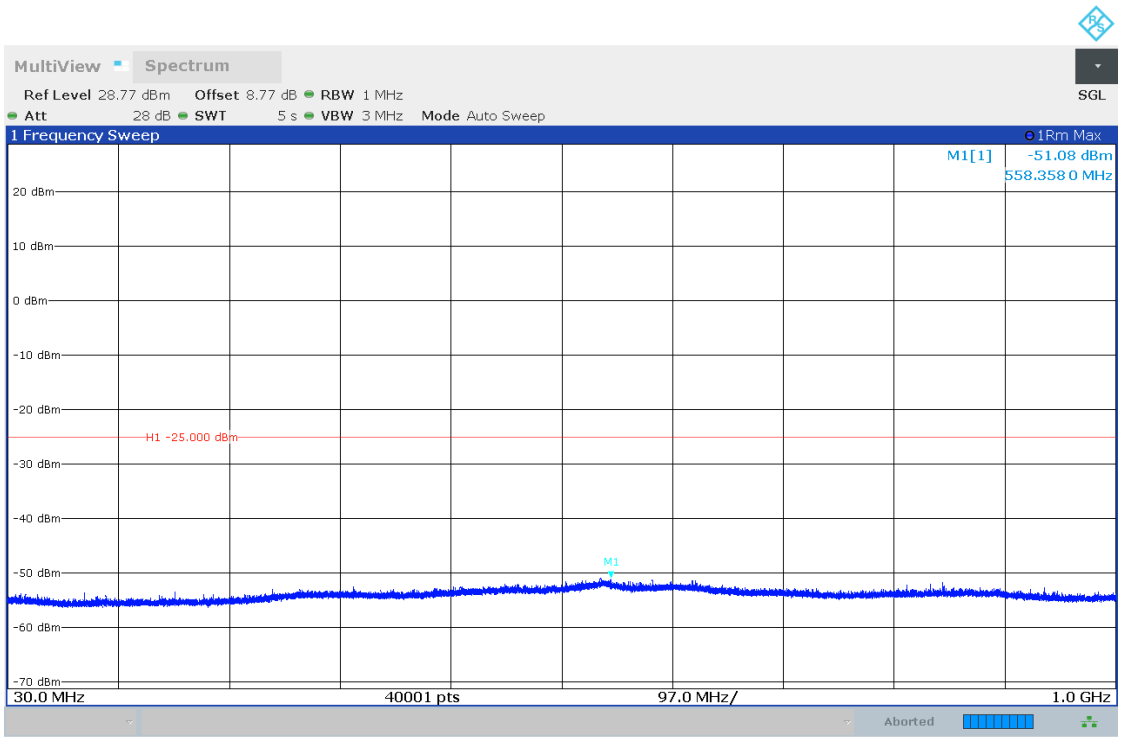

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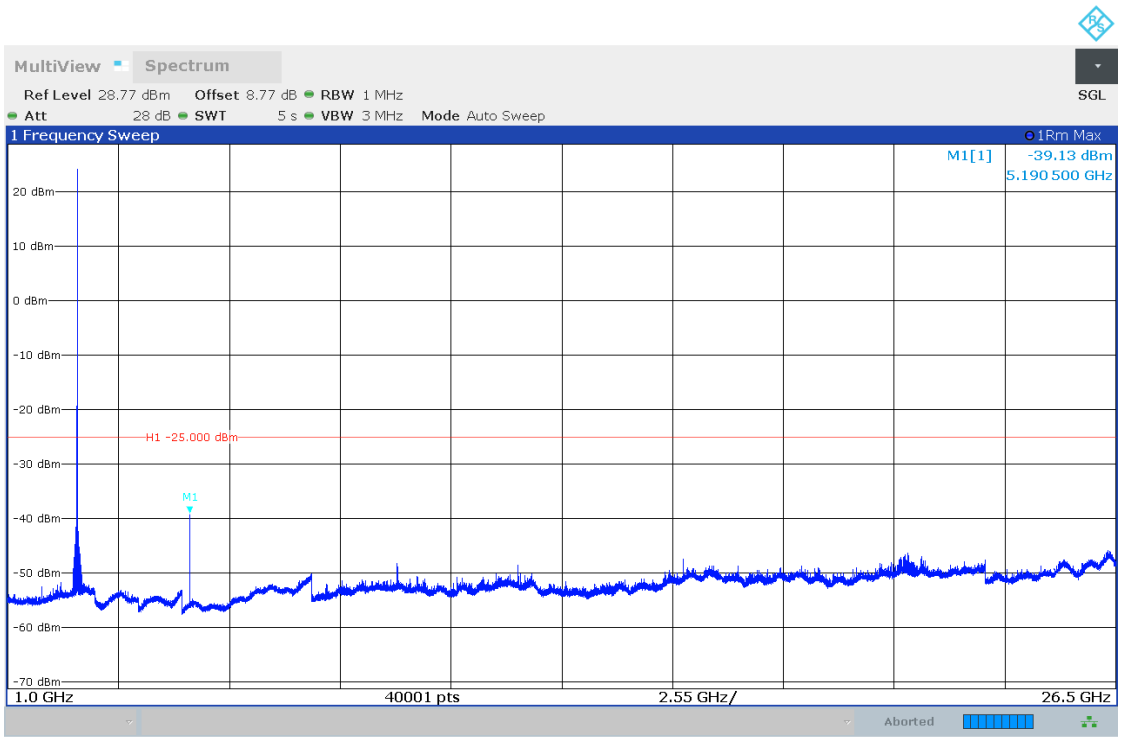

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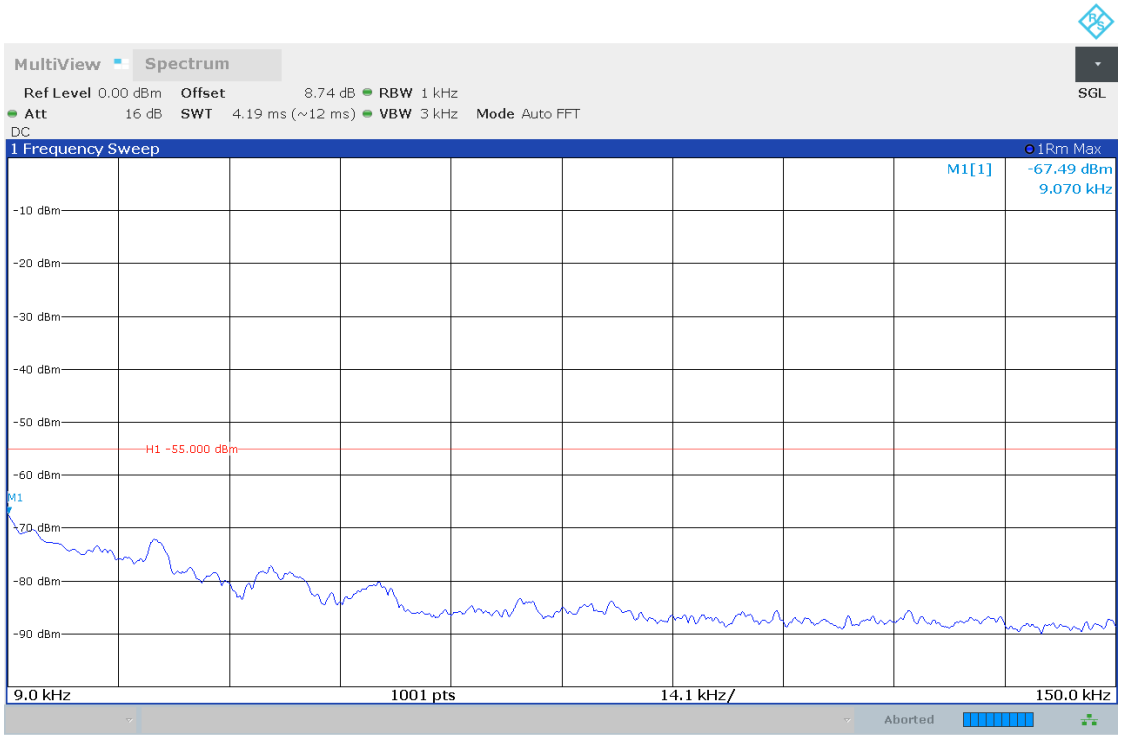
TM2_5MHz_HCH_RB25#0



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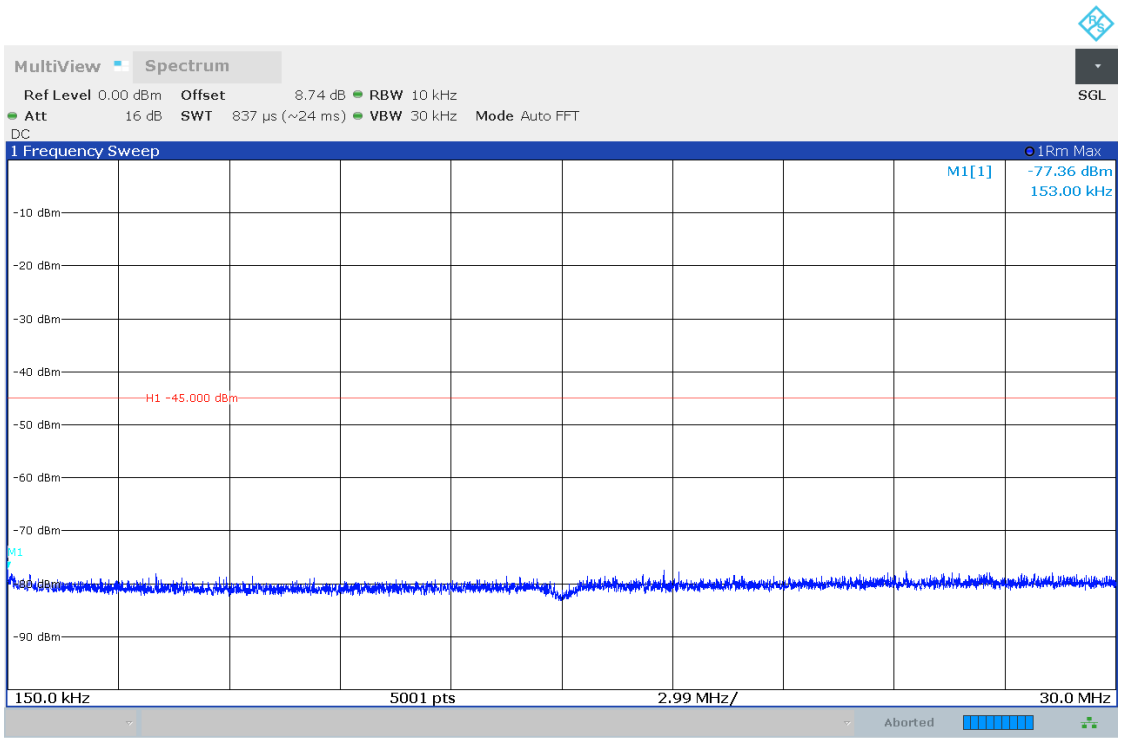

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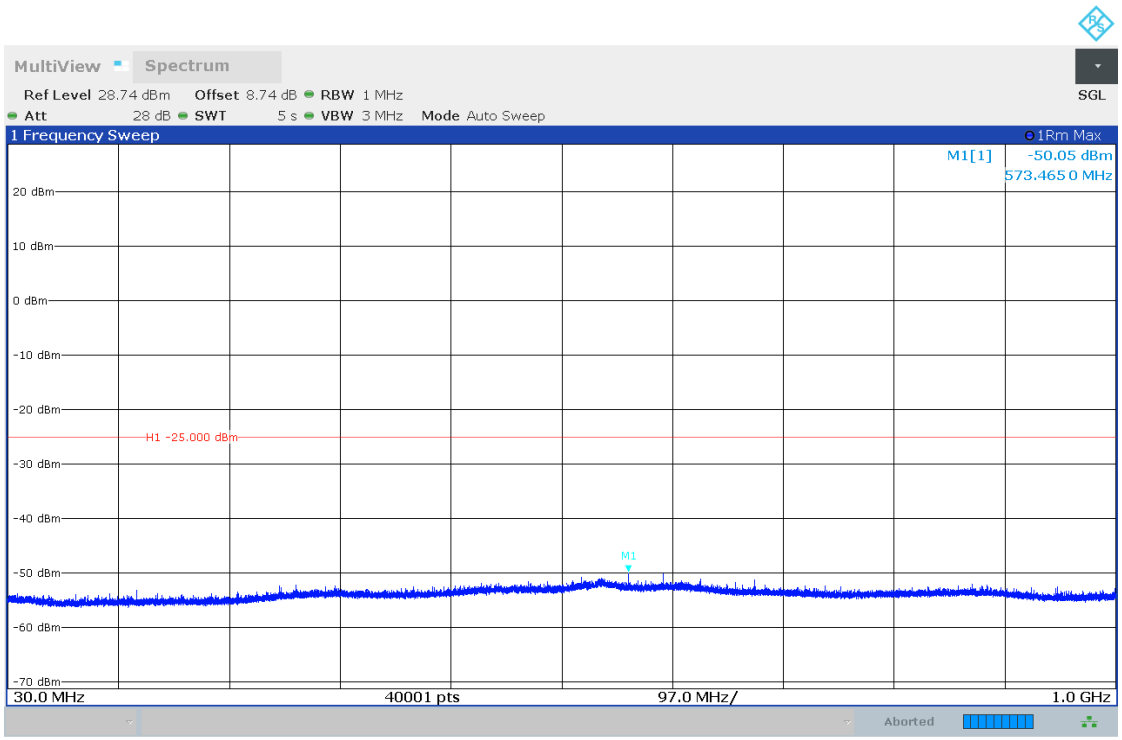

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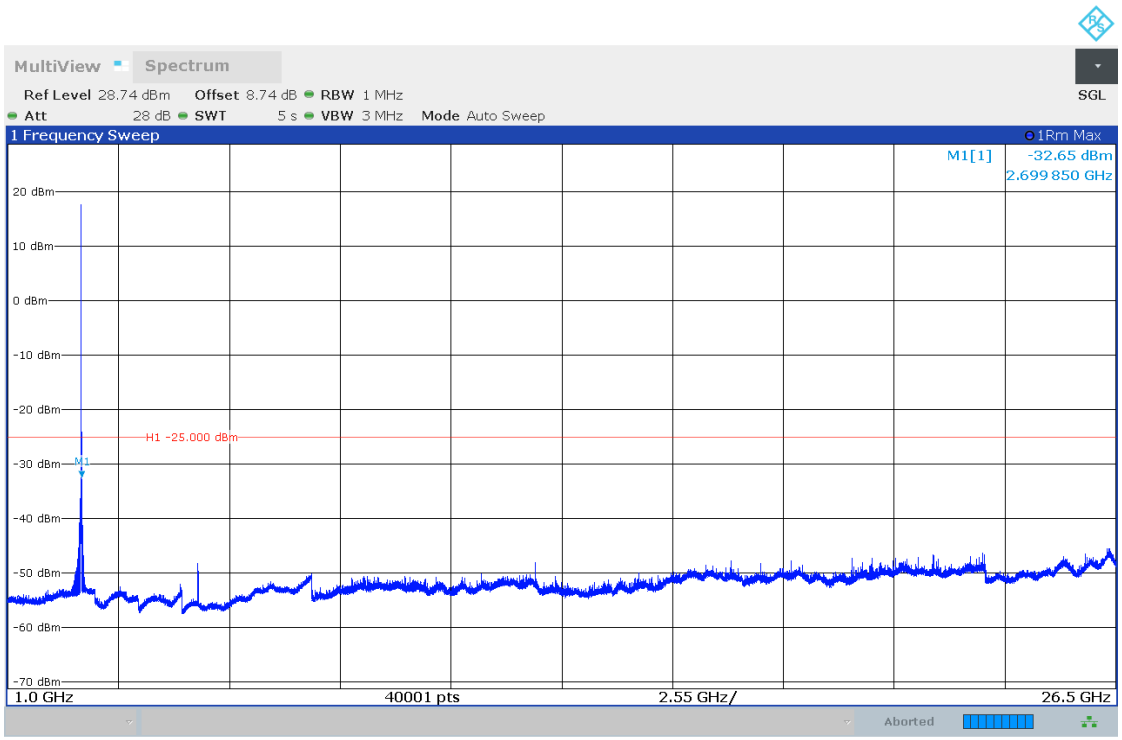

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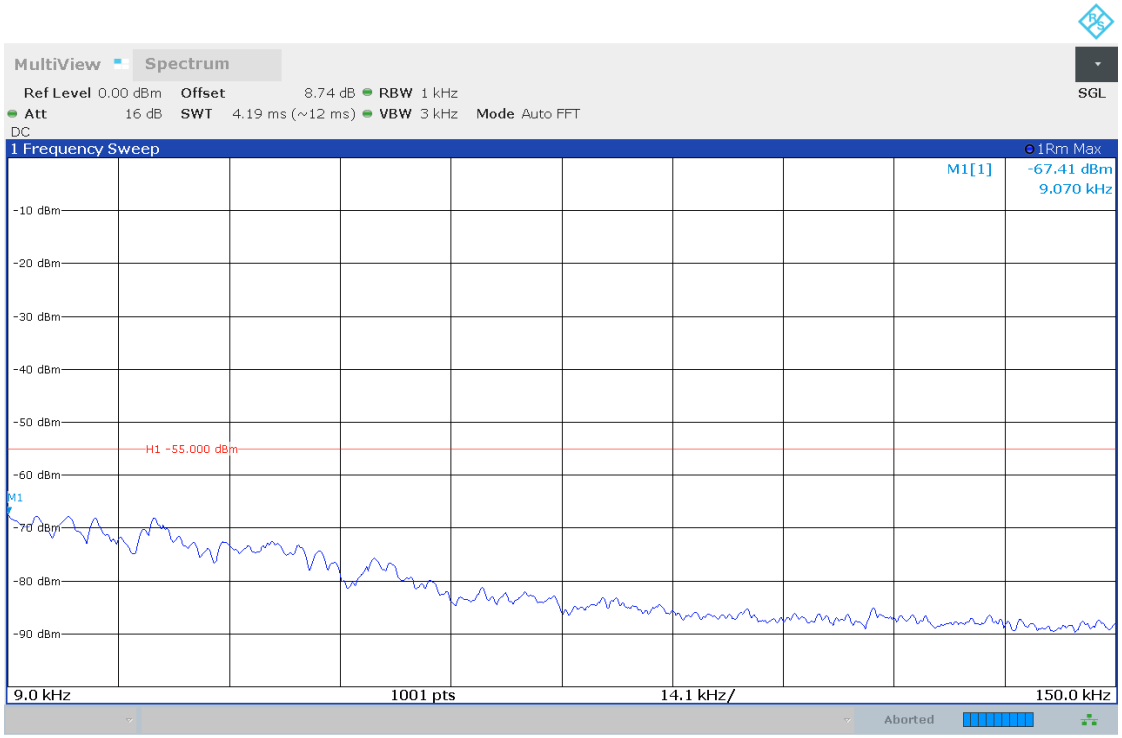
TM2_5MHz_HCH_RB1#0



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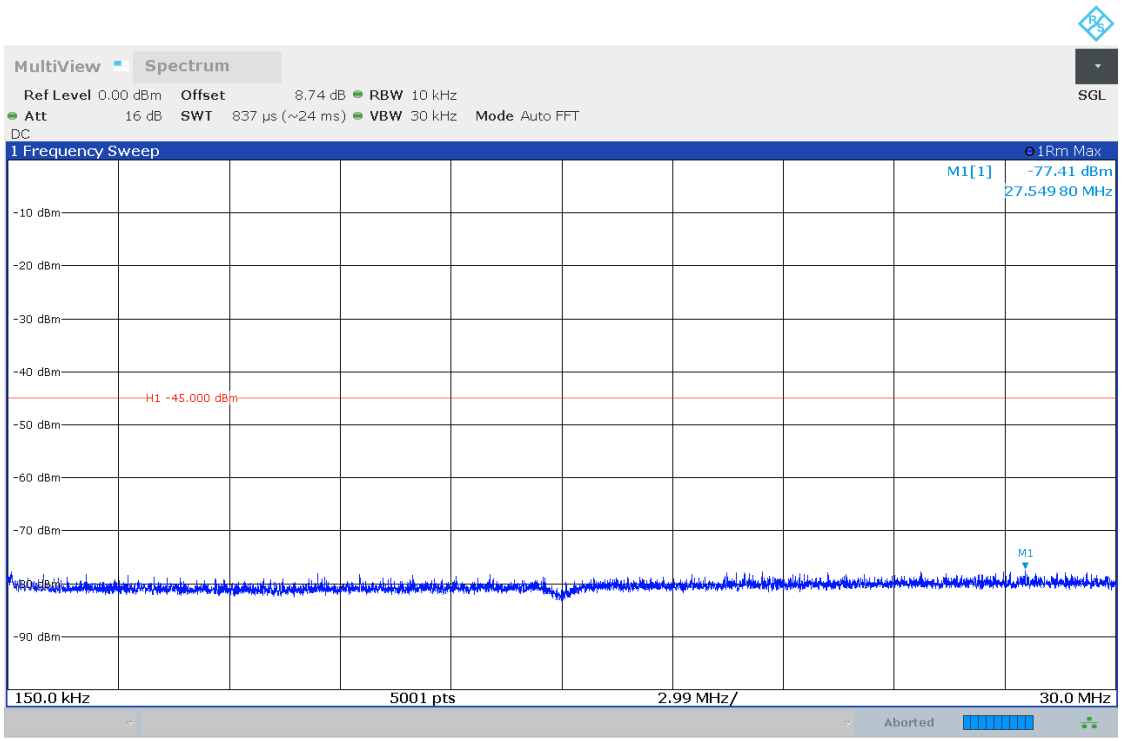

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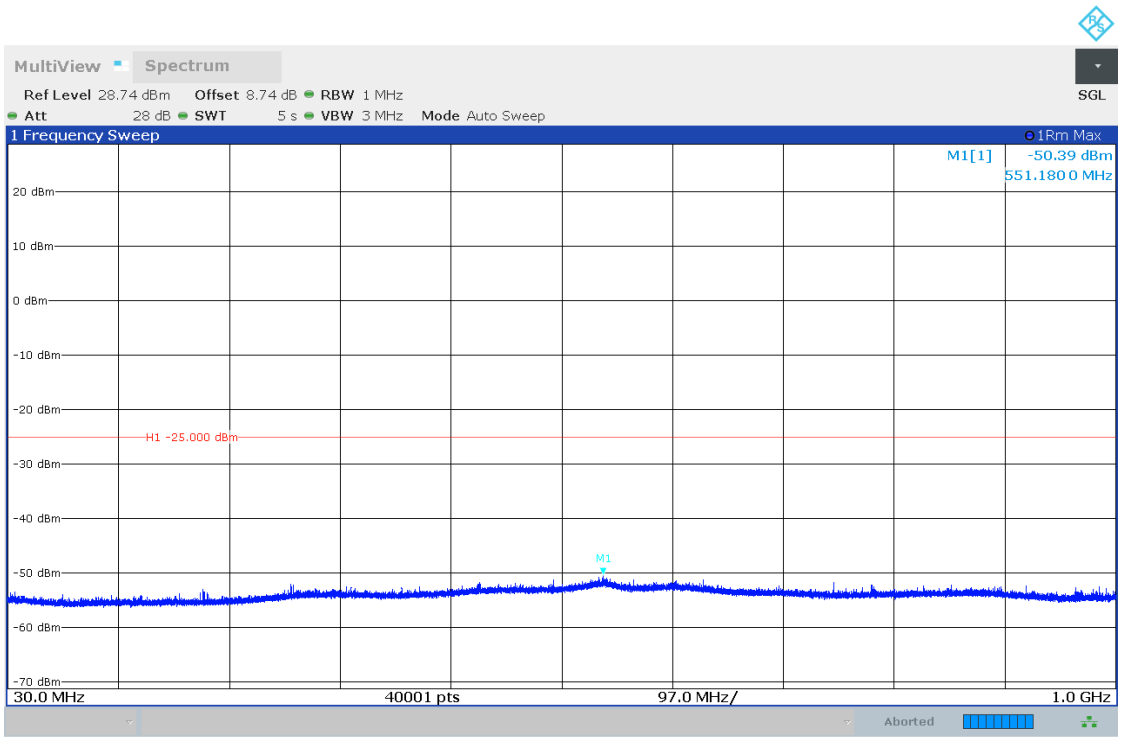

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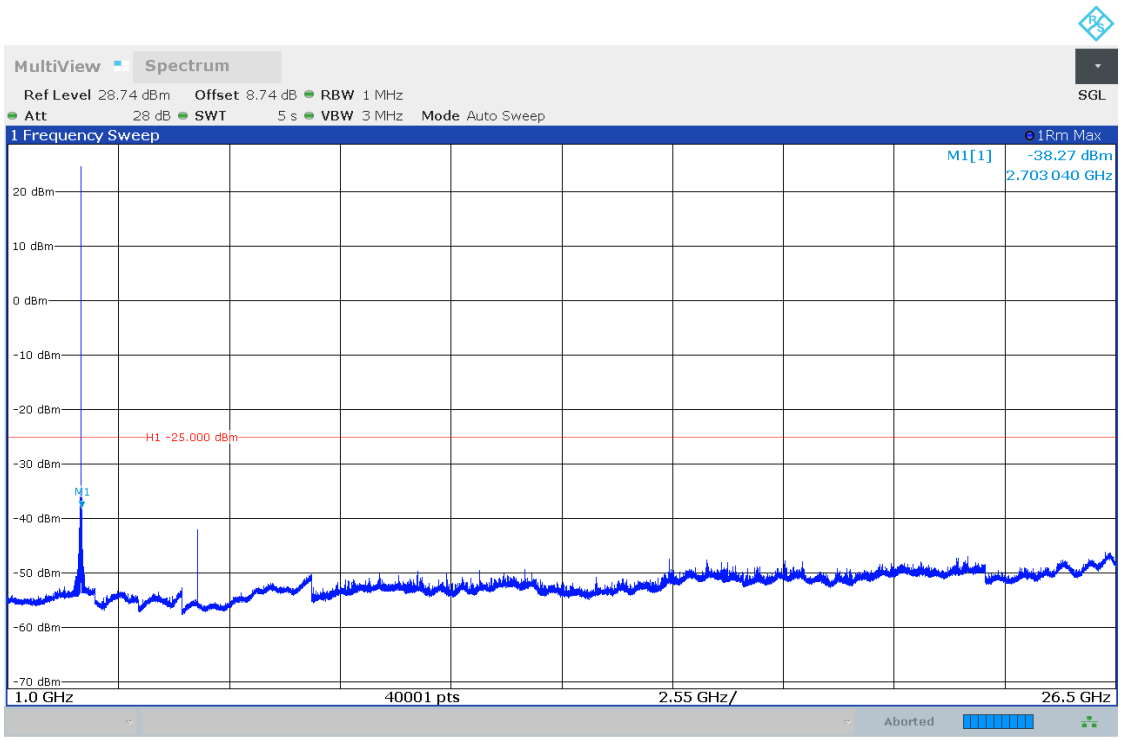

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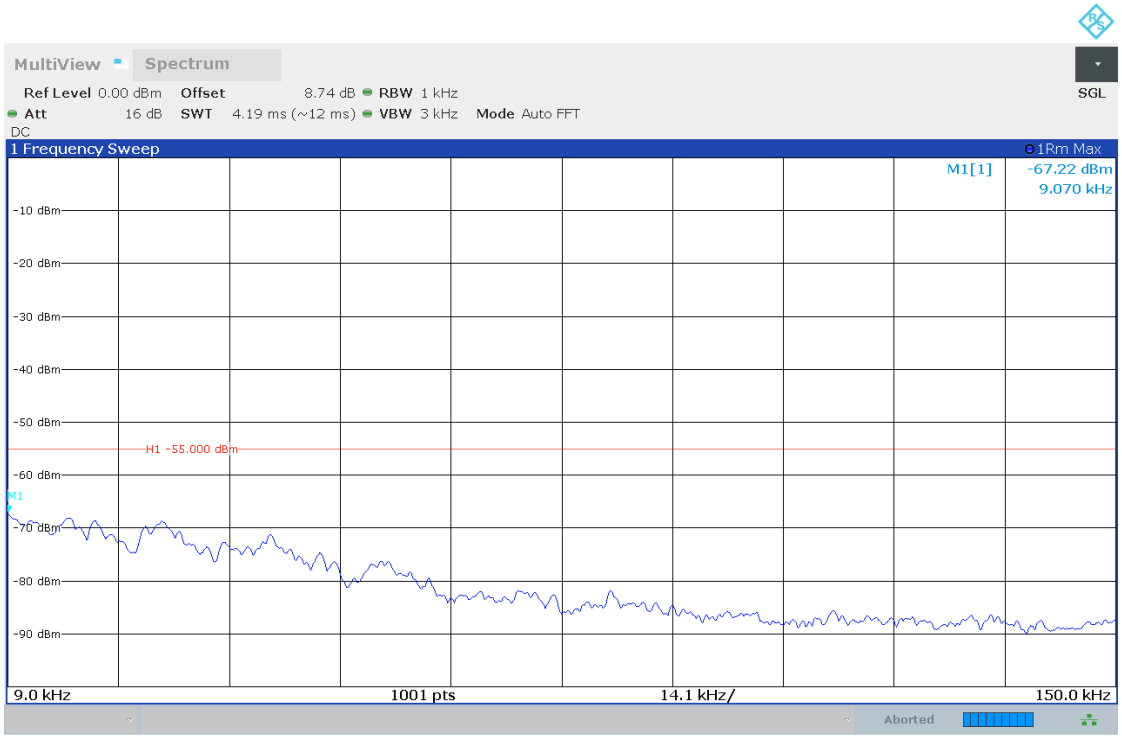
TM2_5MHz_HCH_RB1#24



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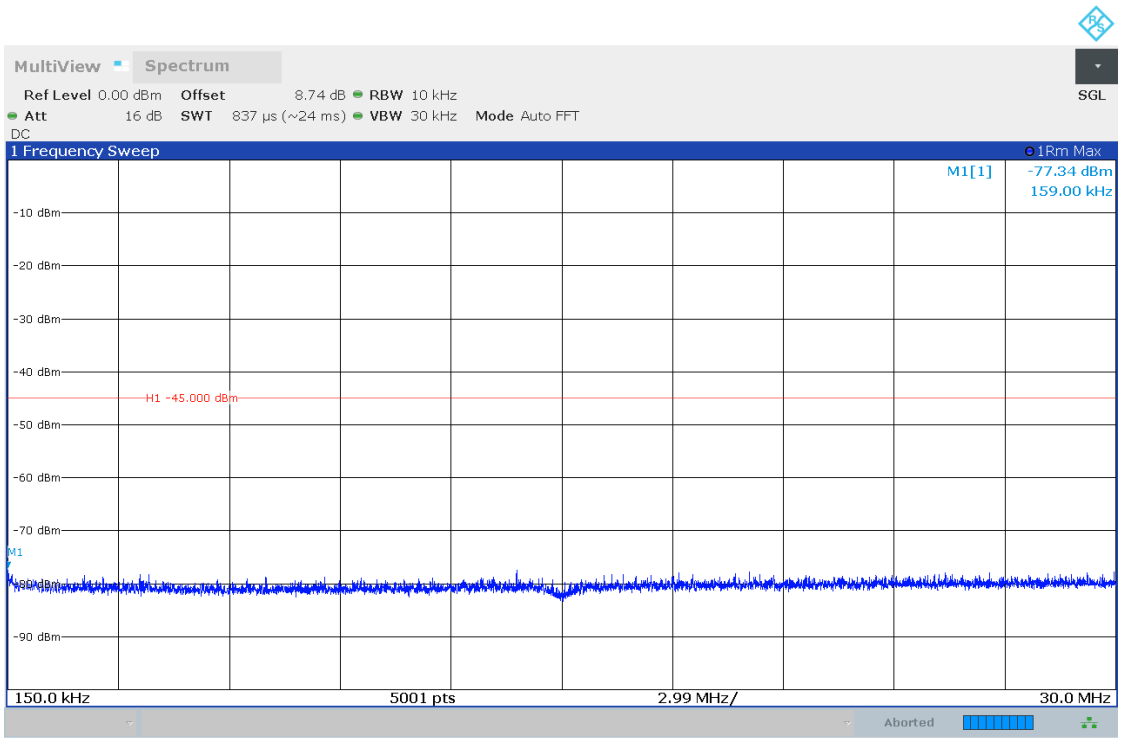

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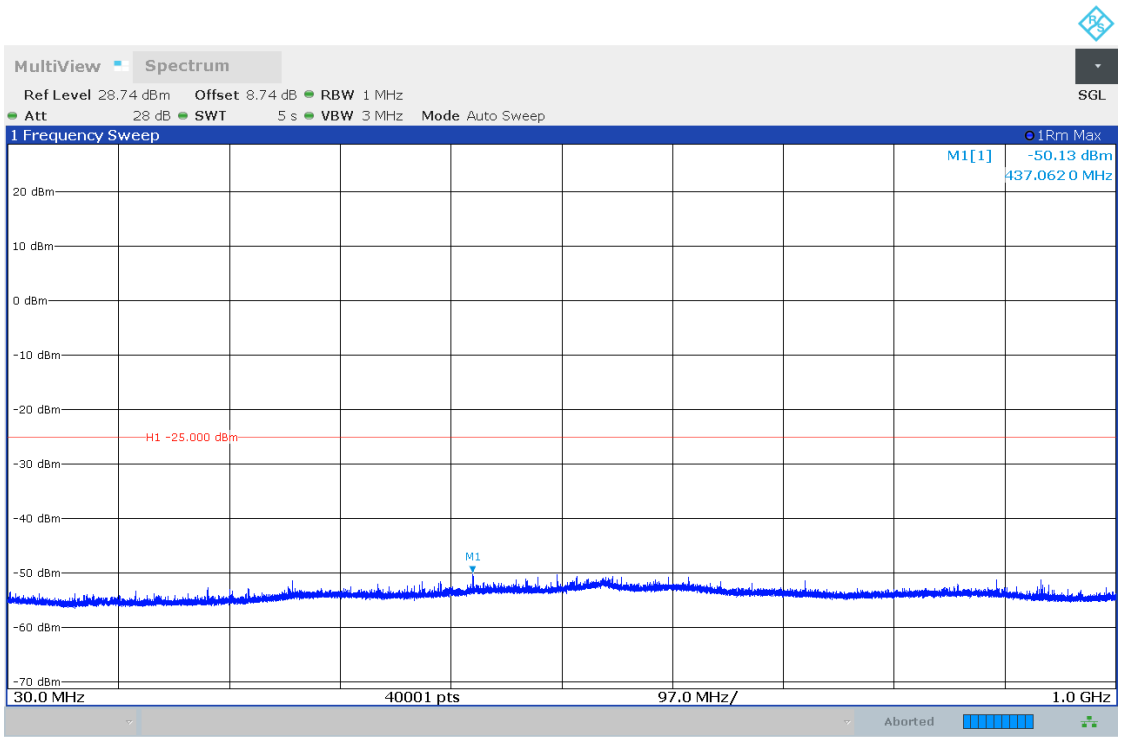

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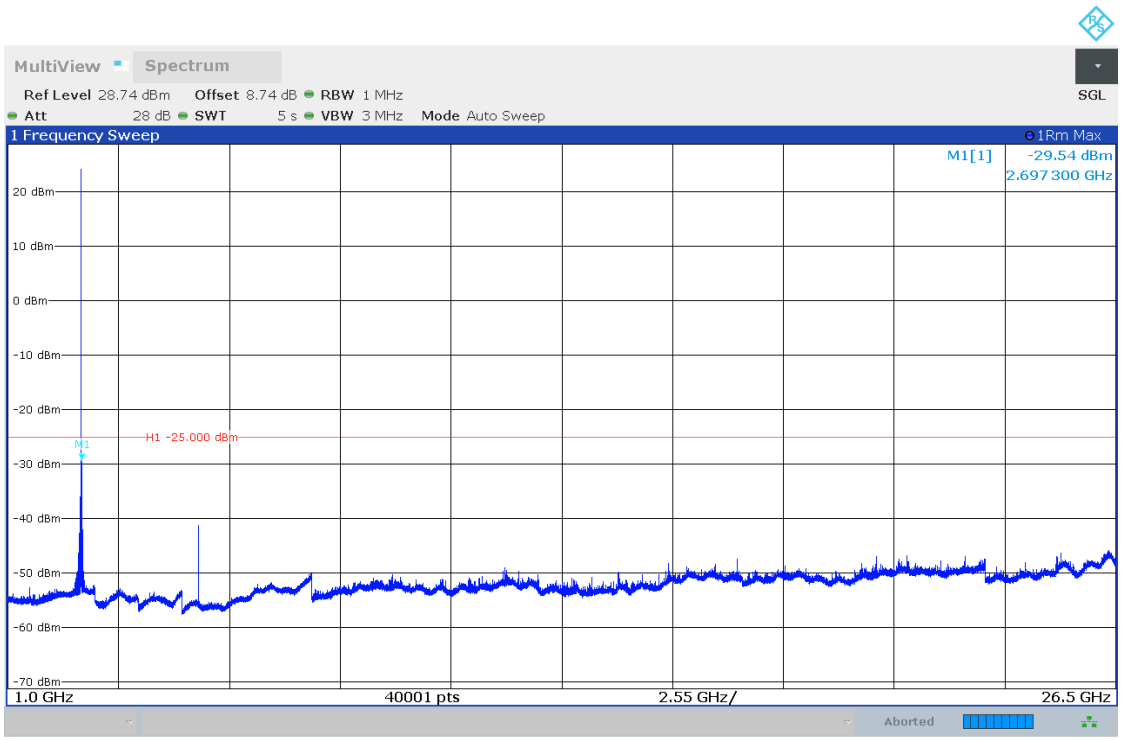

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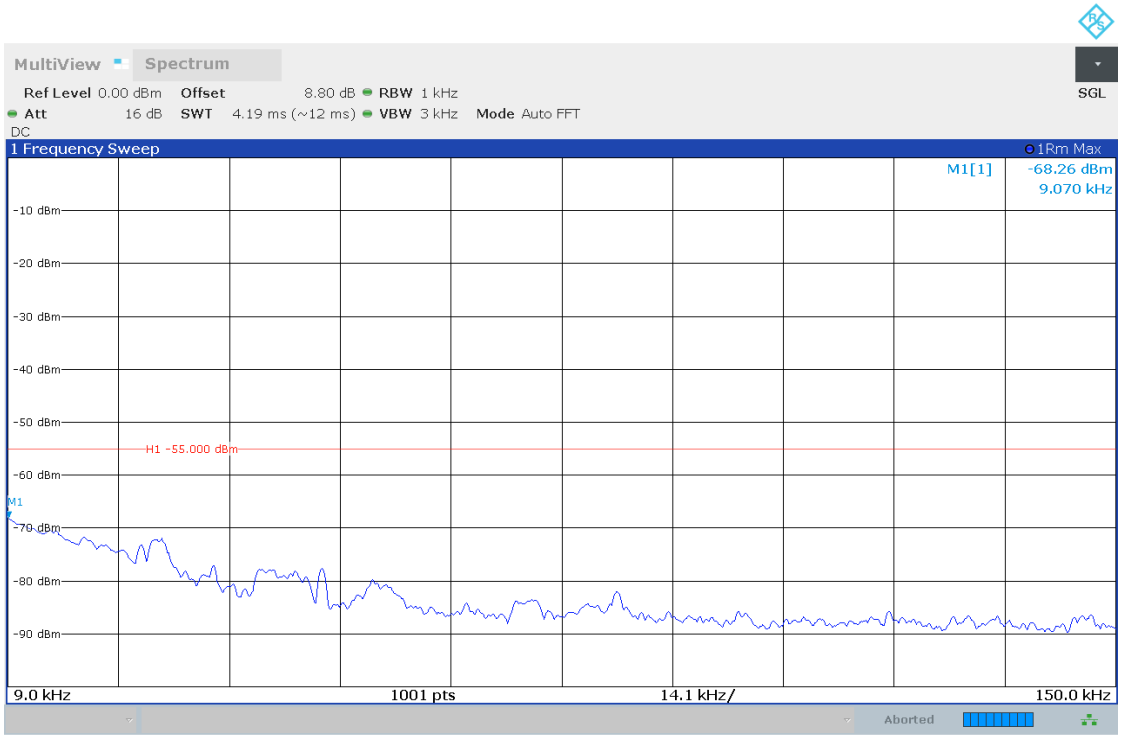
TM2_20MHz_LCH_RB100#0



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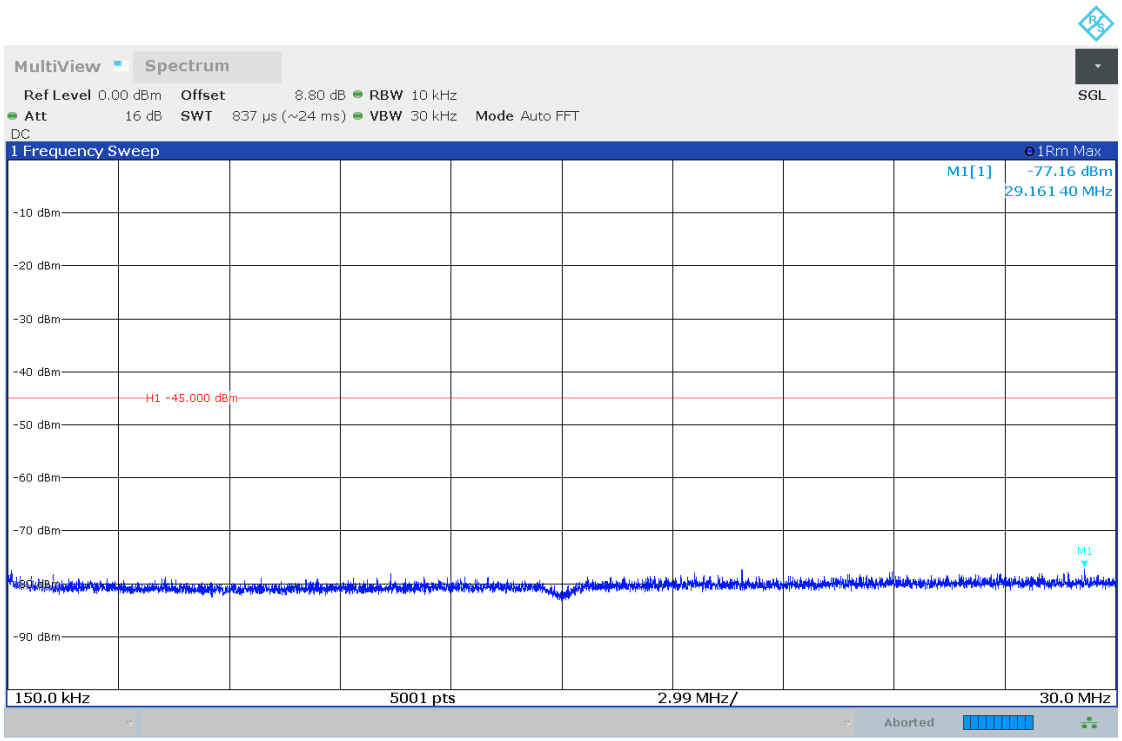

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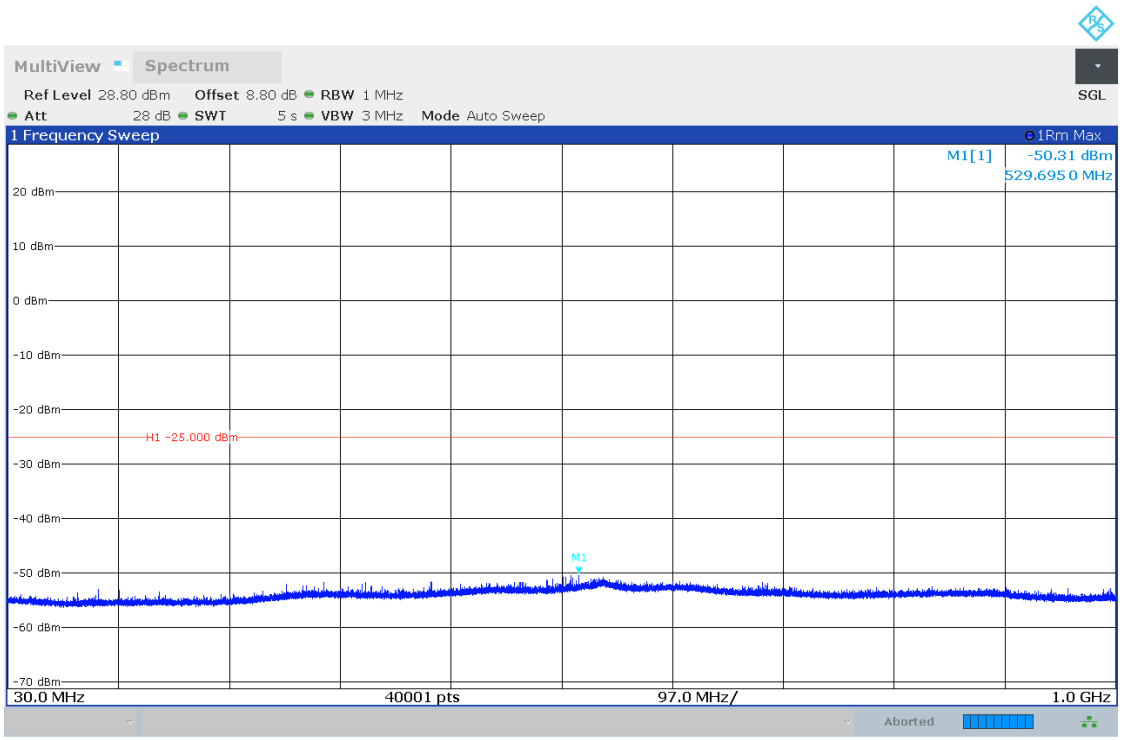

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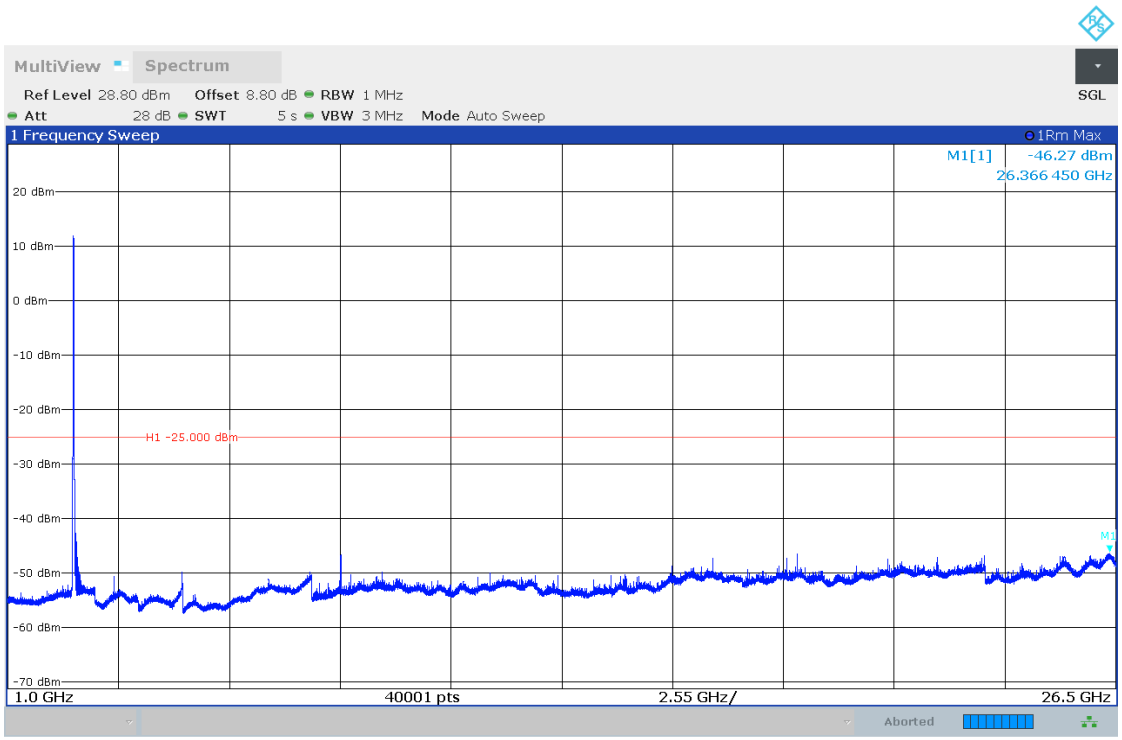

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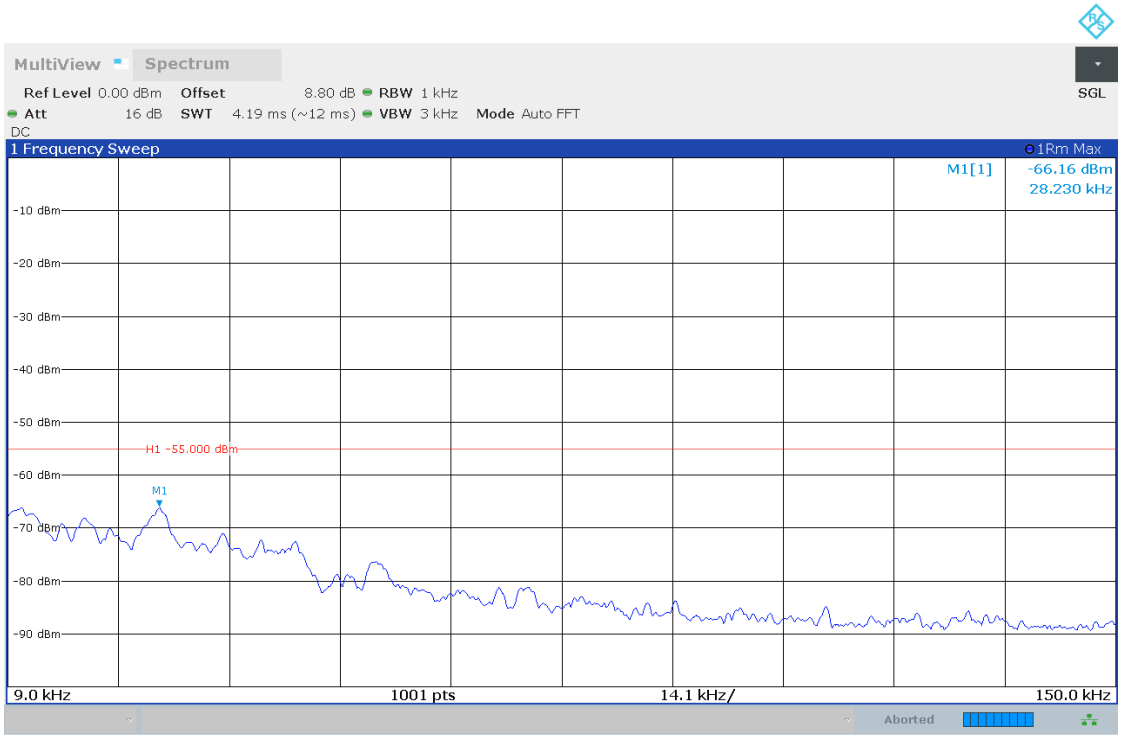
TM2_20MHz_LCH_RB1#0



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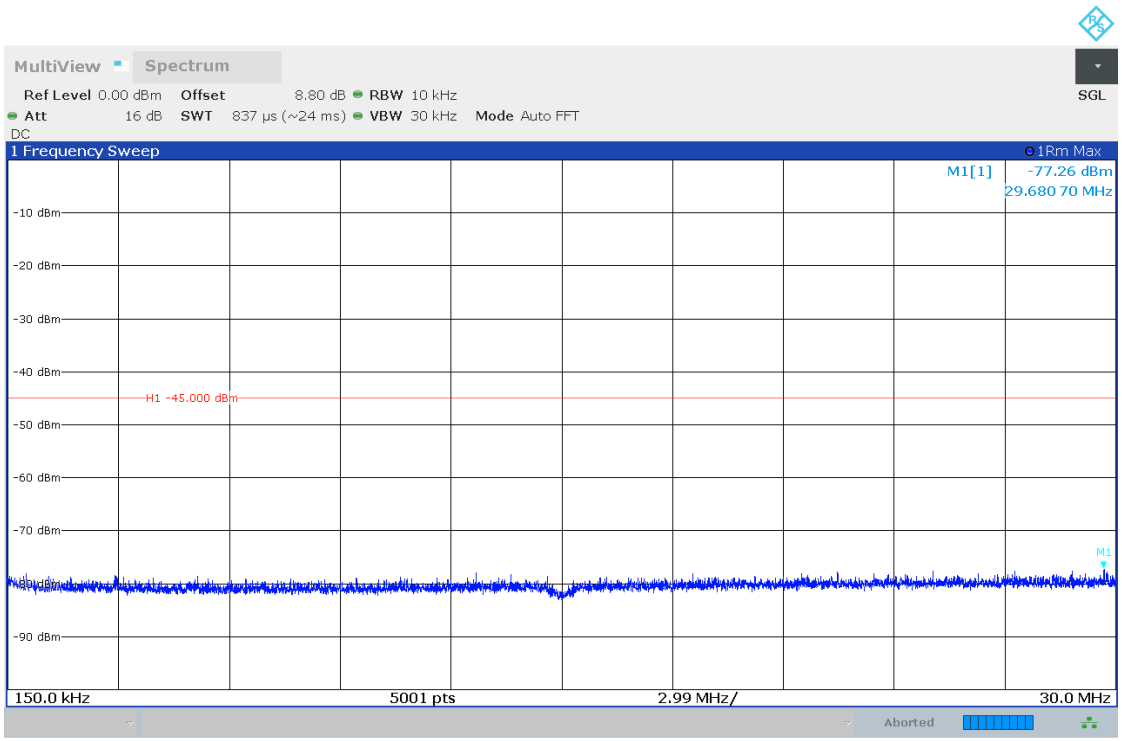

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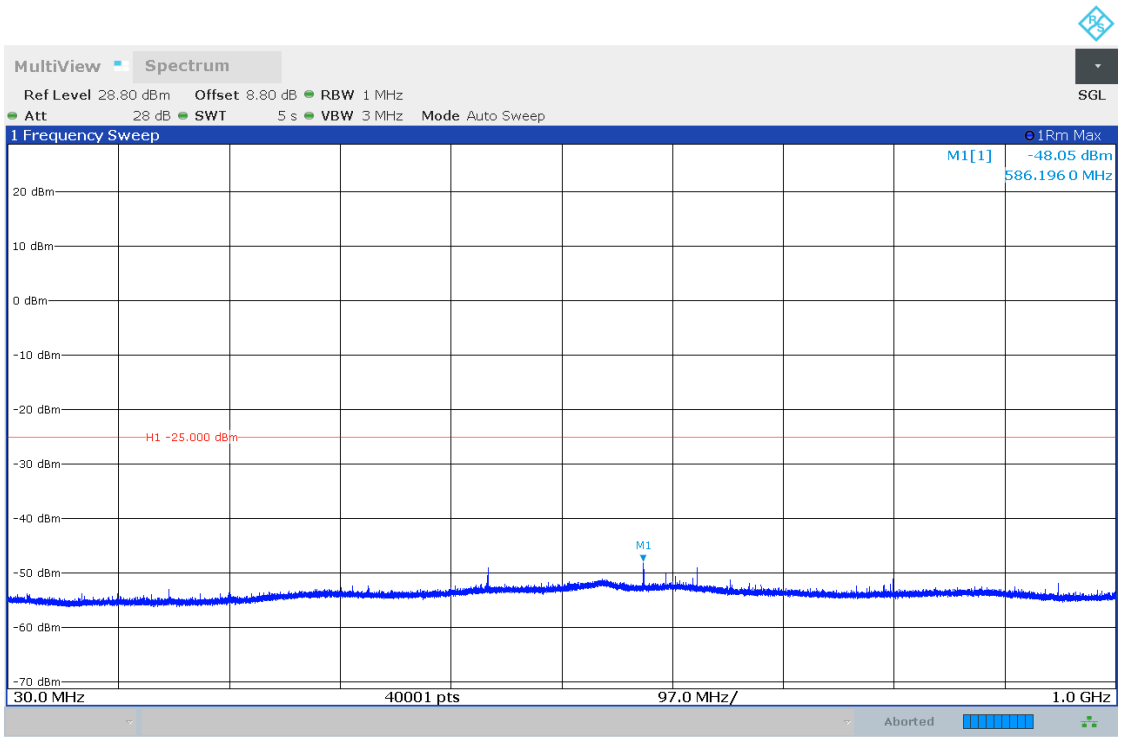

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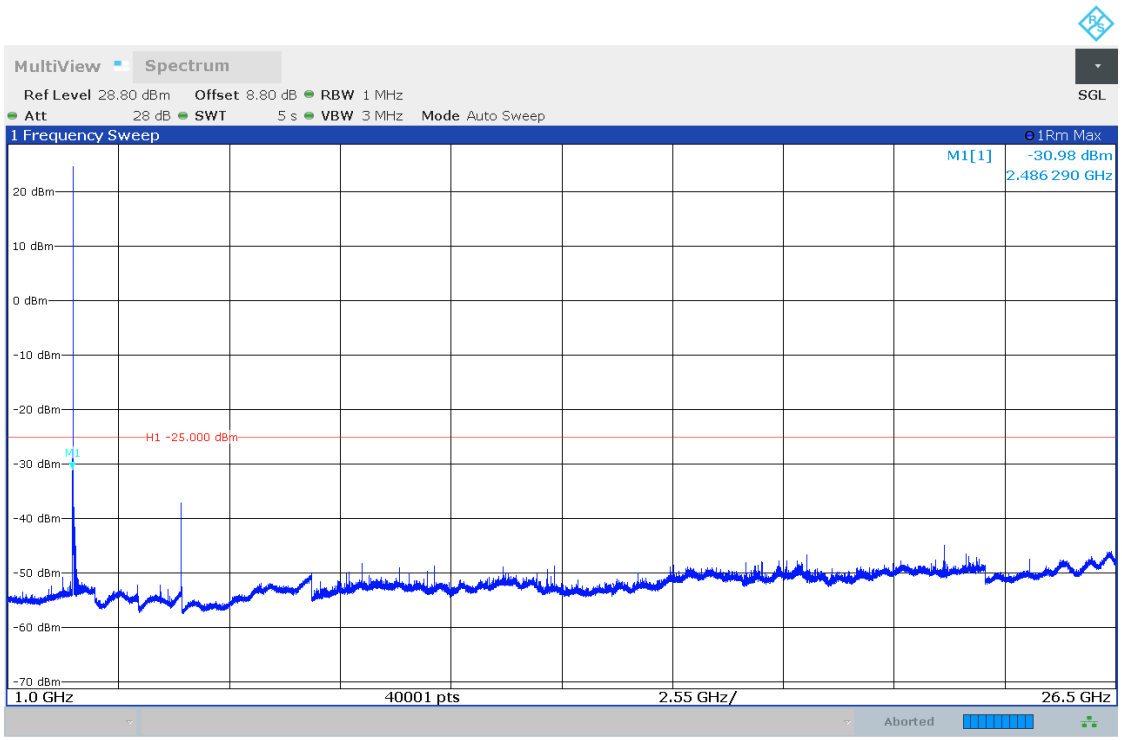

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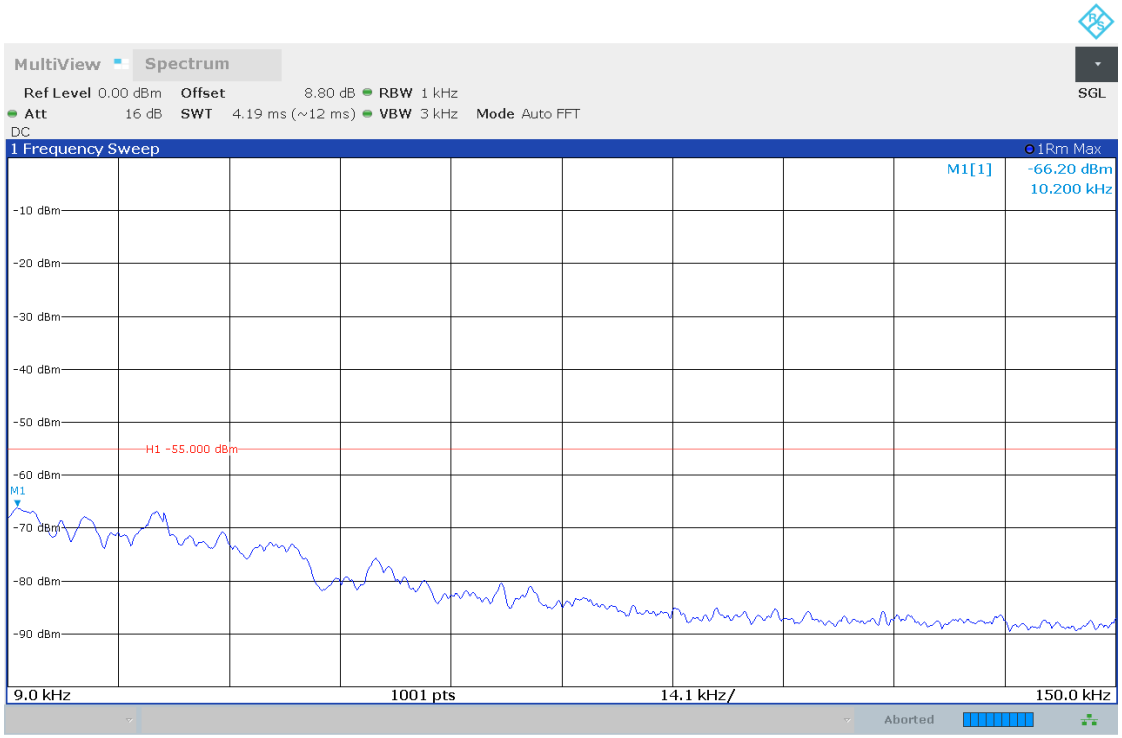
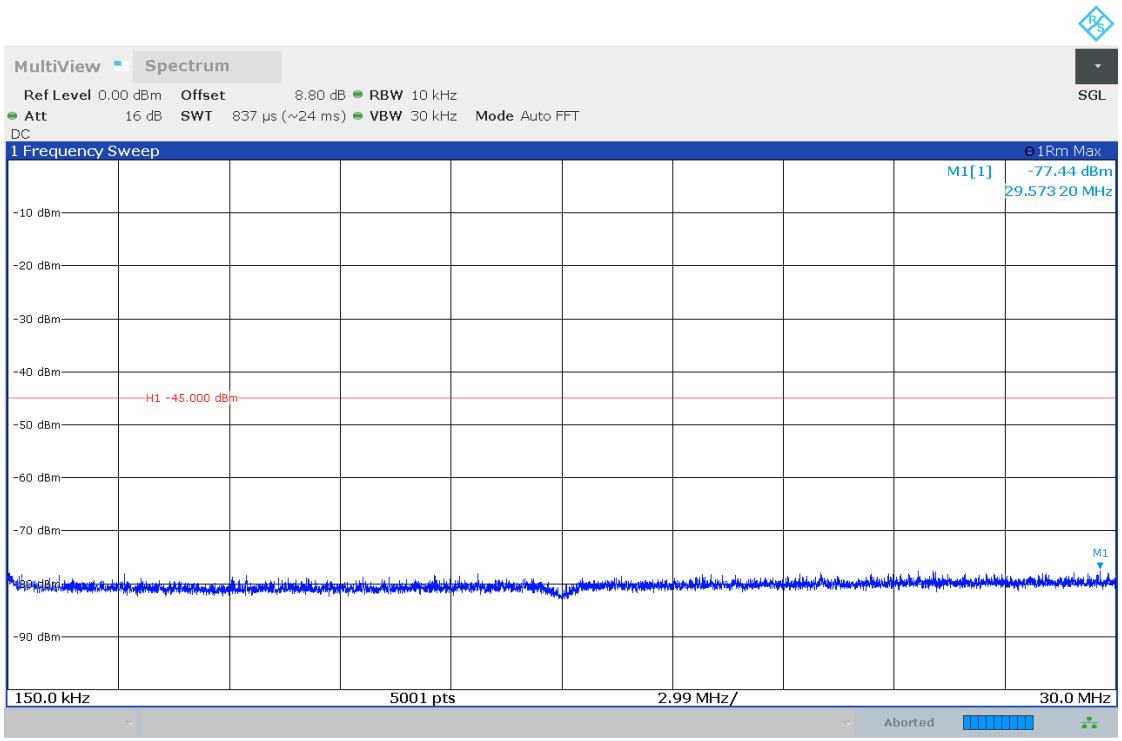
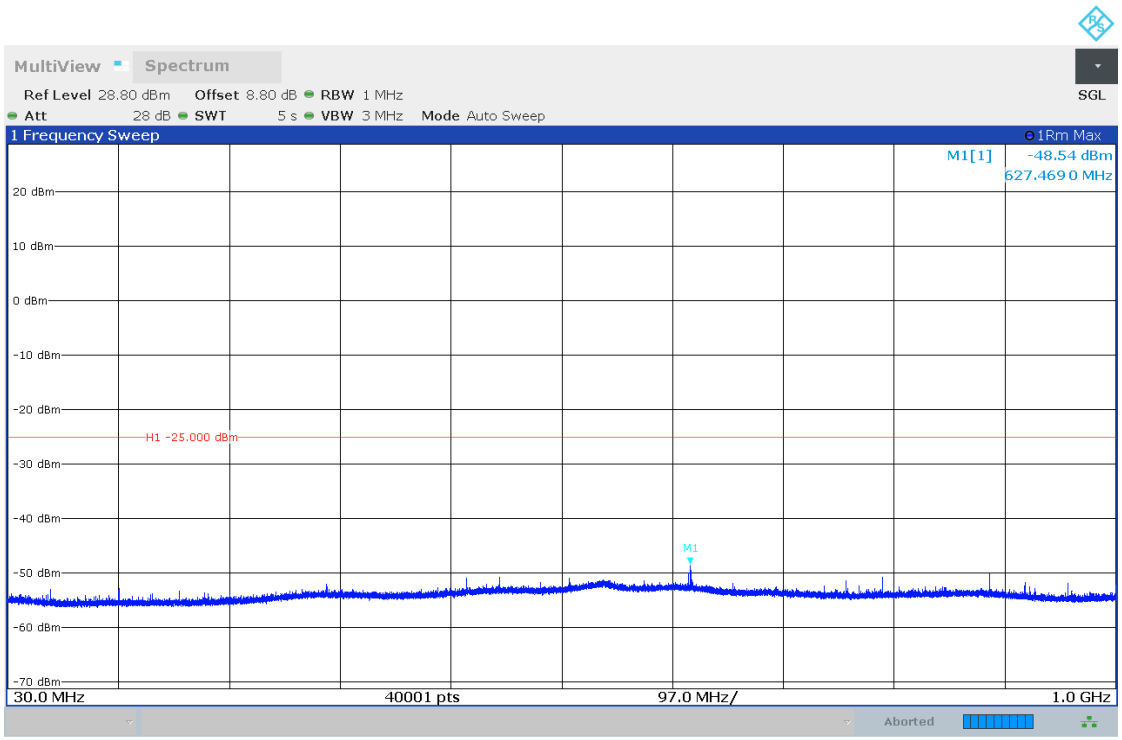
TM2_20MHz_LCH_RB1#99



15:55:54 25.04.2022



15:56:23 25.04.2022



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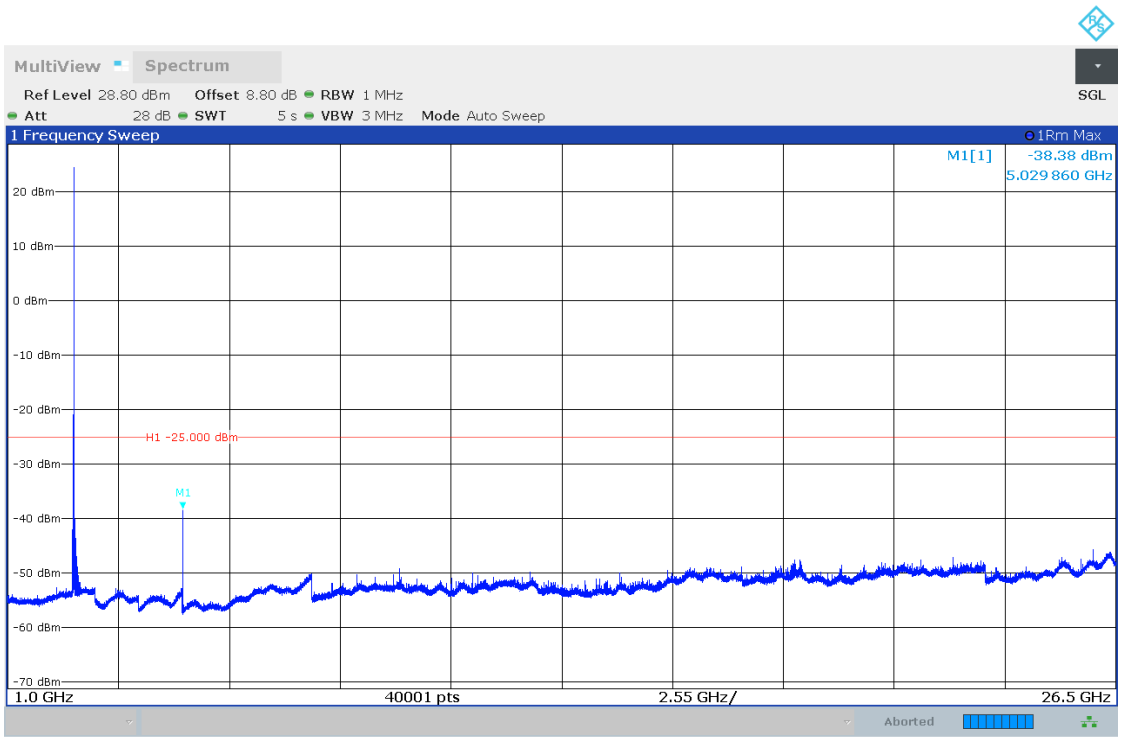

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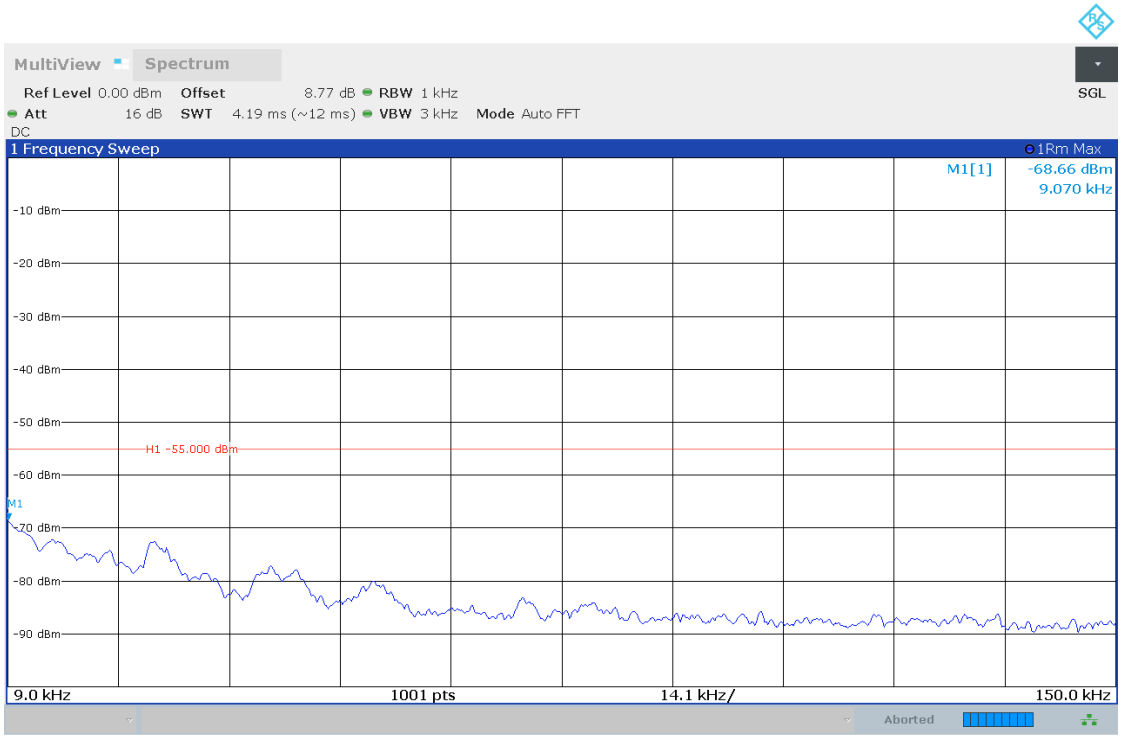
TM2_20MHz_MCH_RB100#0



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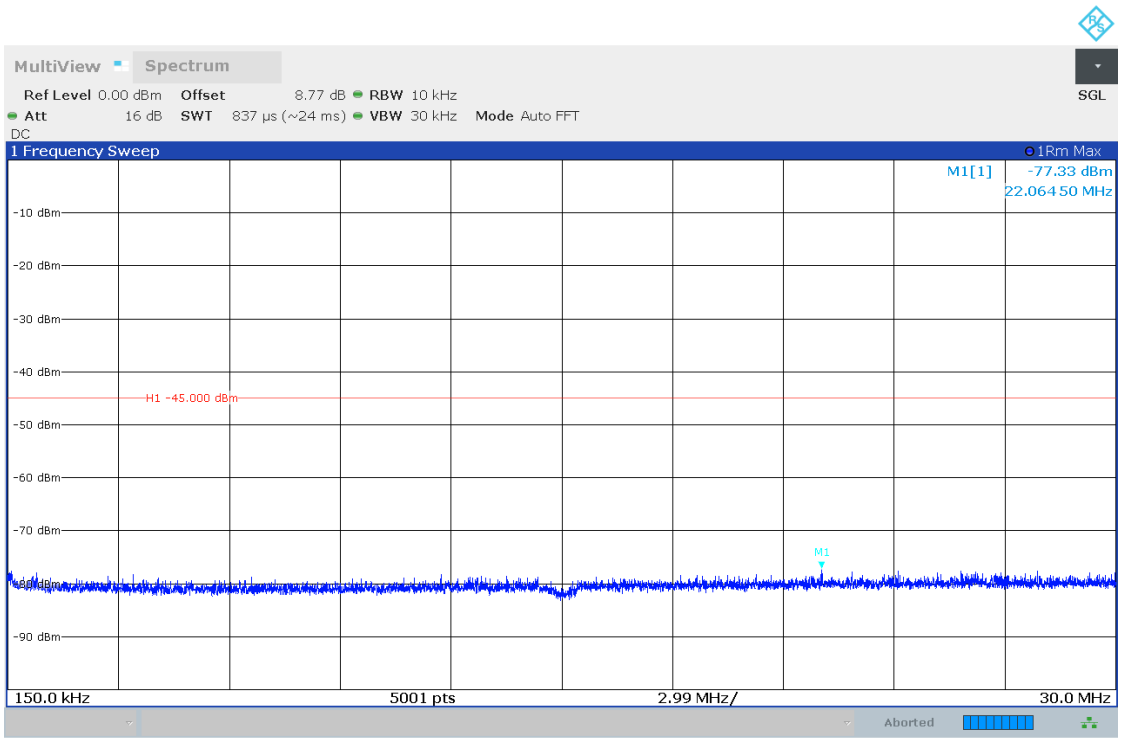

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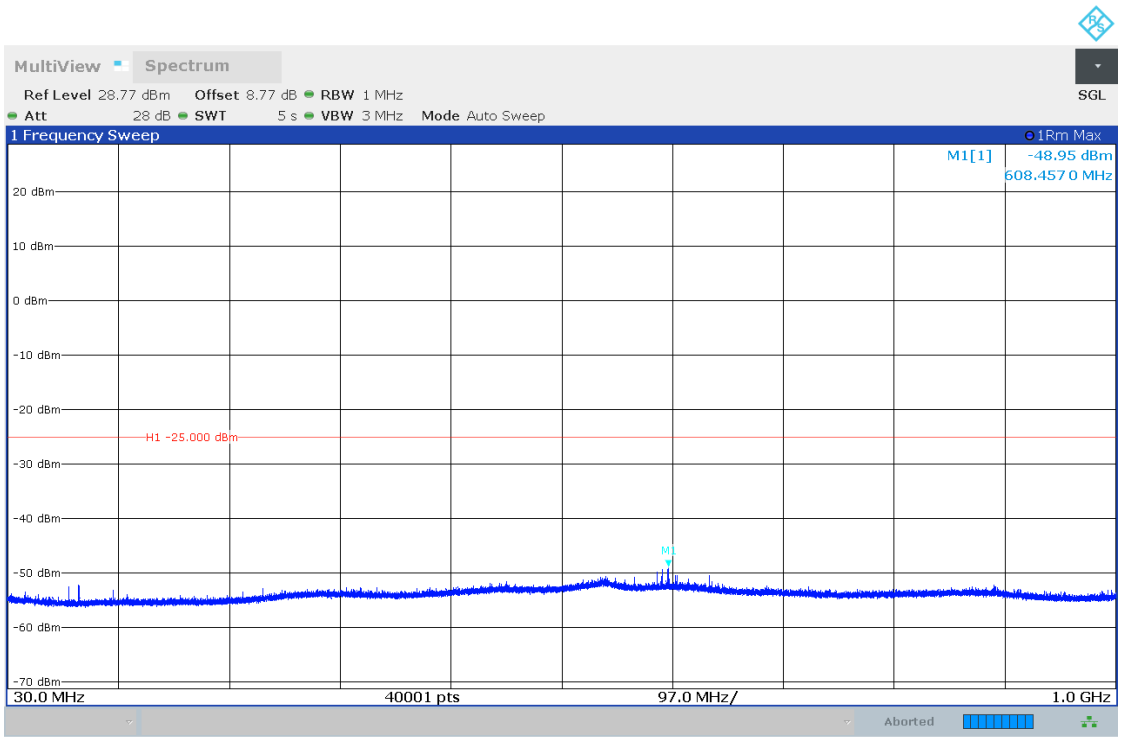
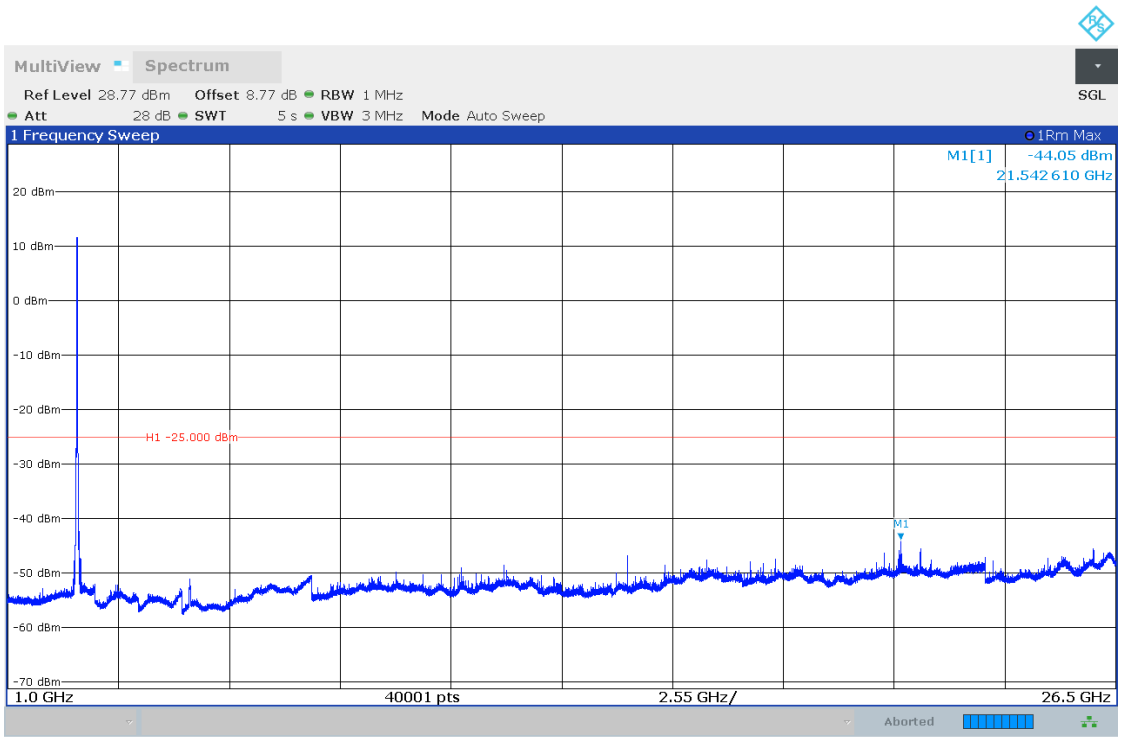


15:58:59 25.04.2022



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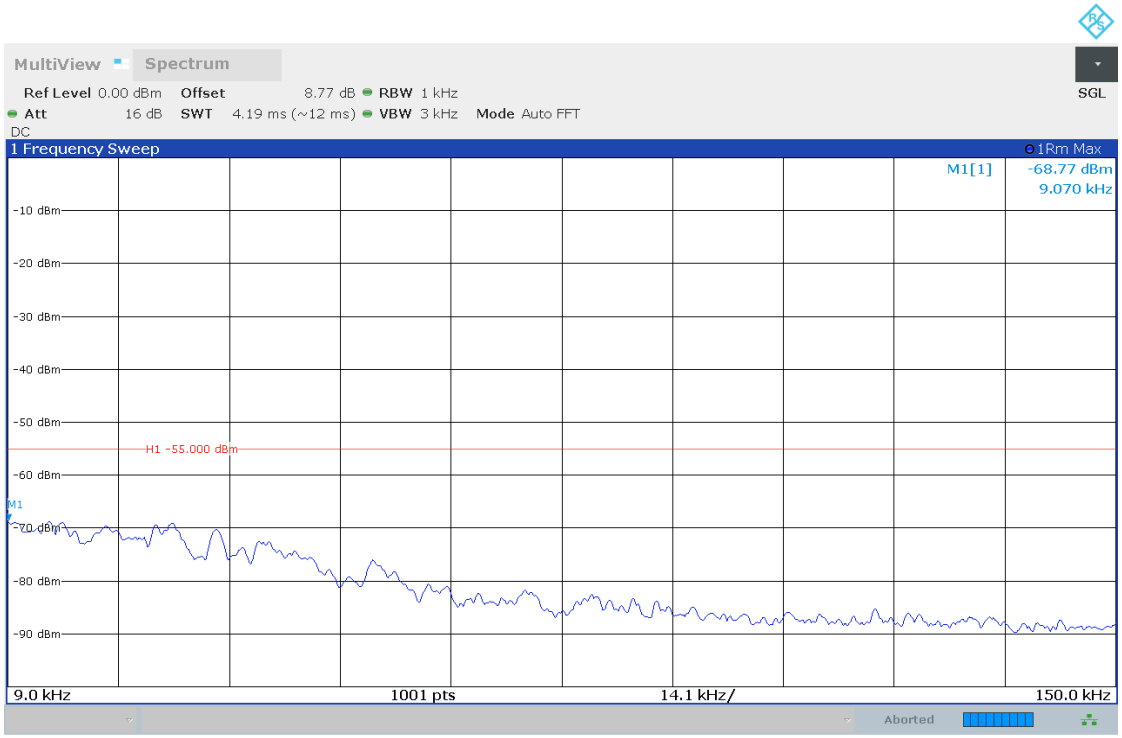
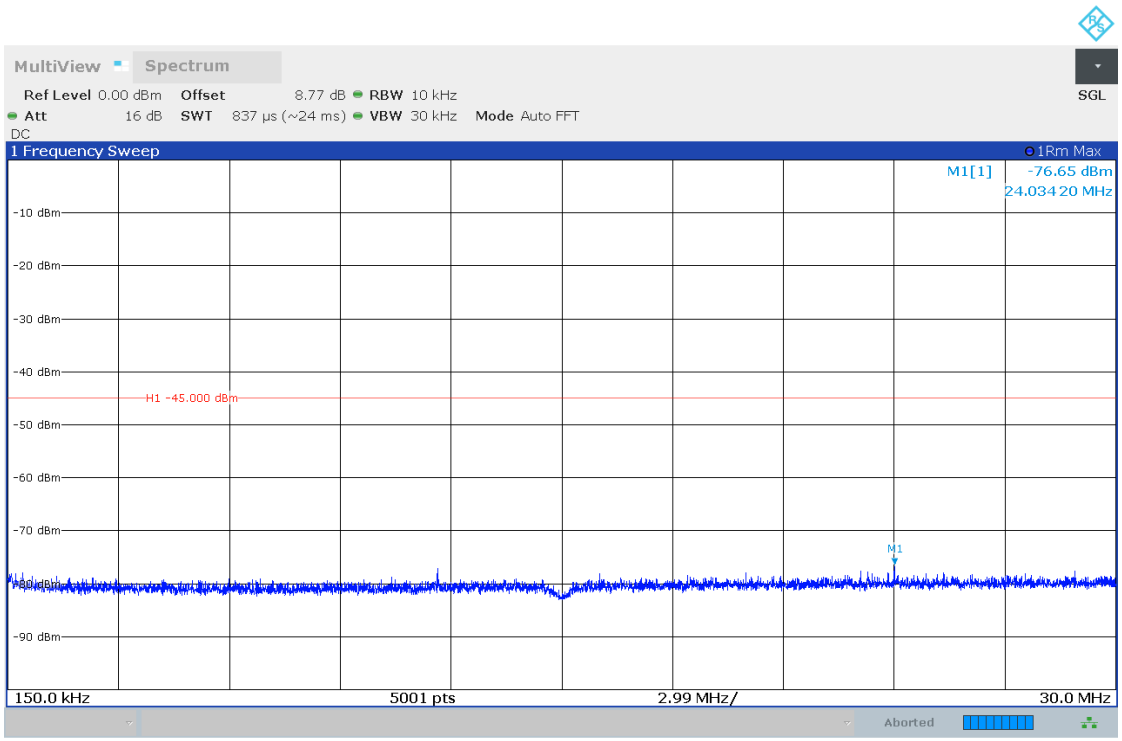
TM2_20MHz_MCH_RB1#0



16:00:05 25.04.2022



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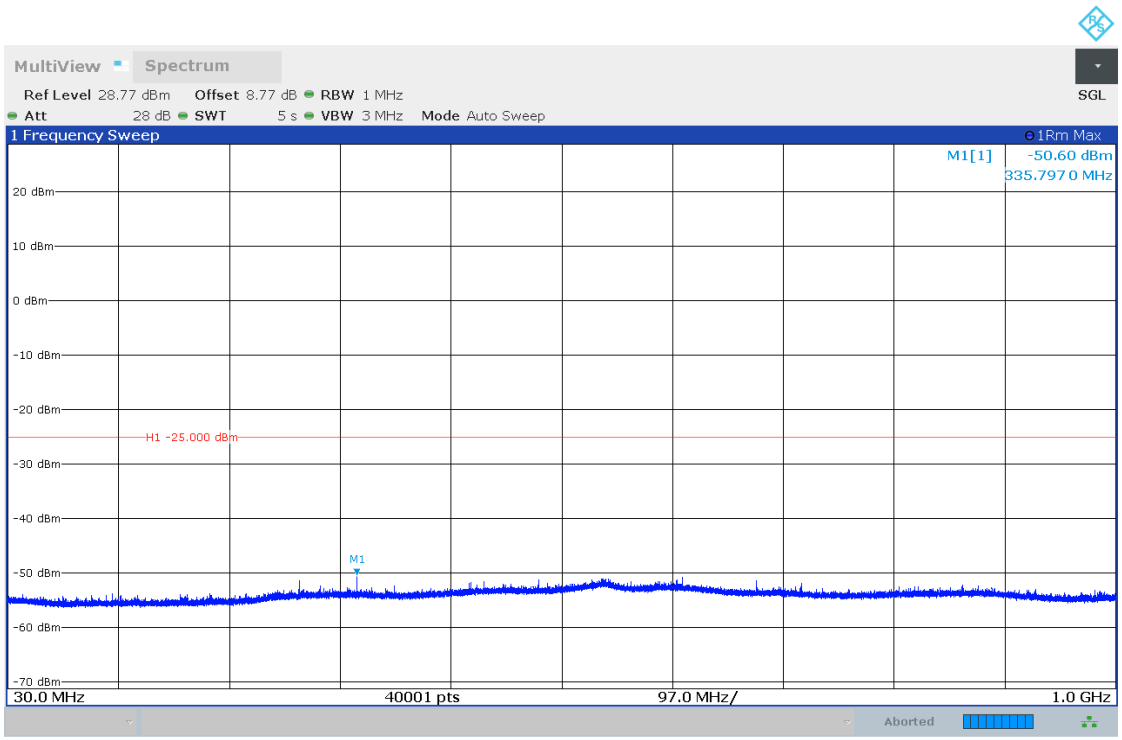

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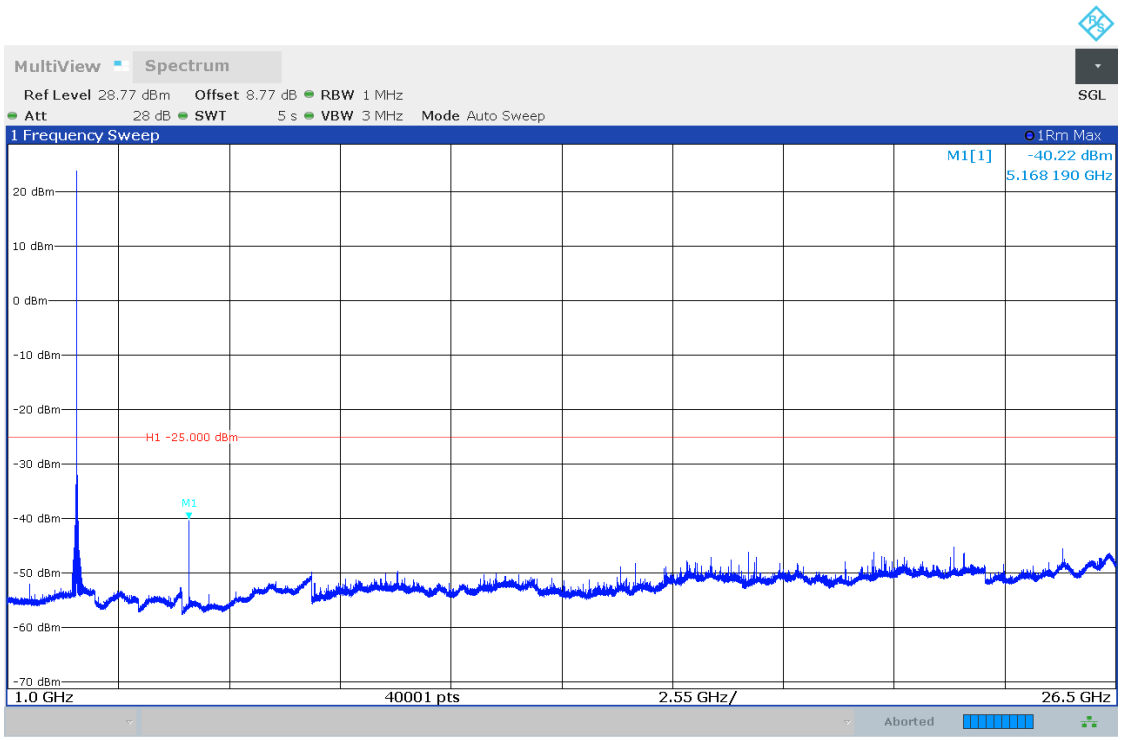
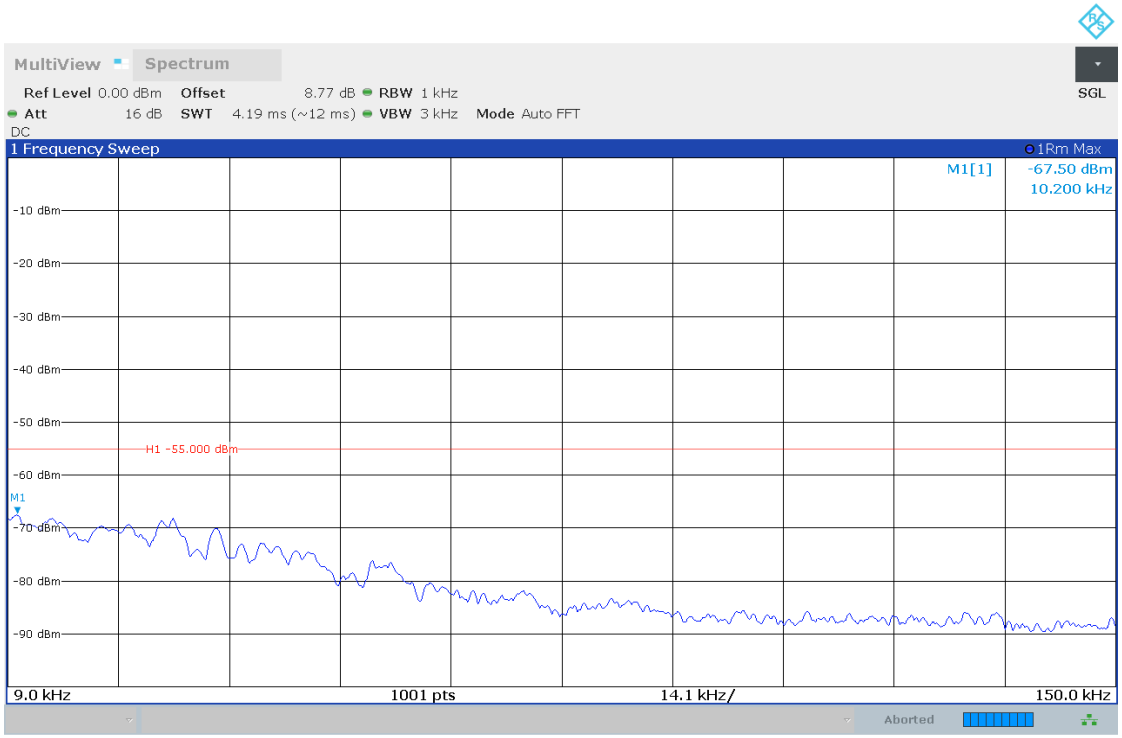


16:01:38 25.04.2022

TM2_20MHz_MCH_RB1#99



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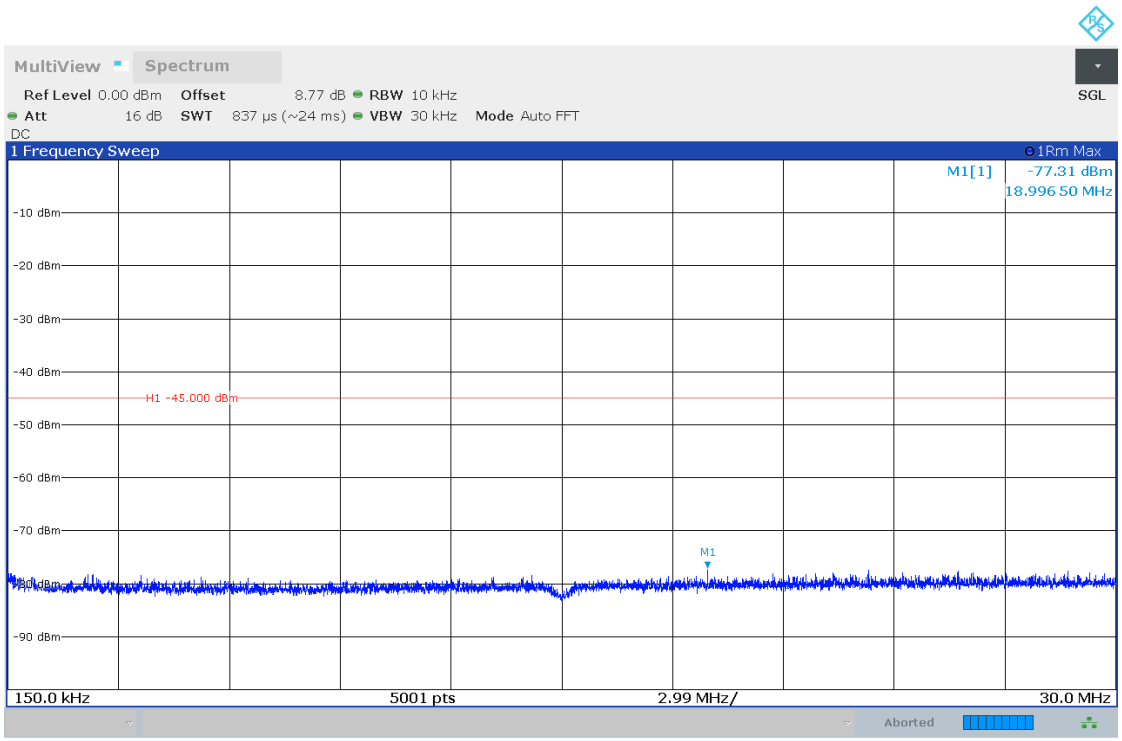

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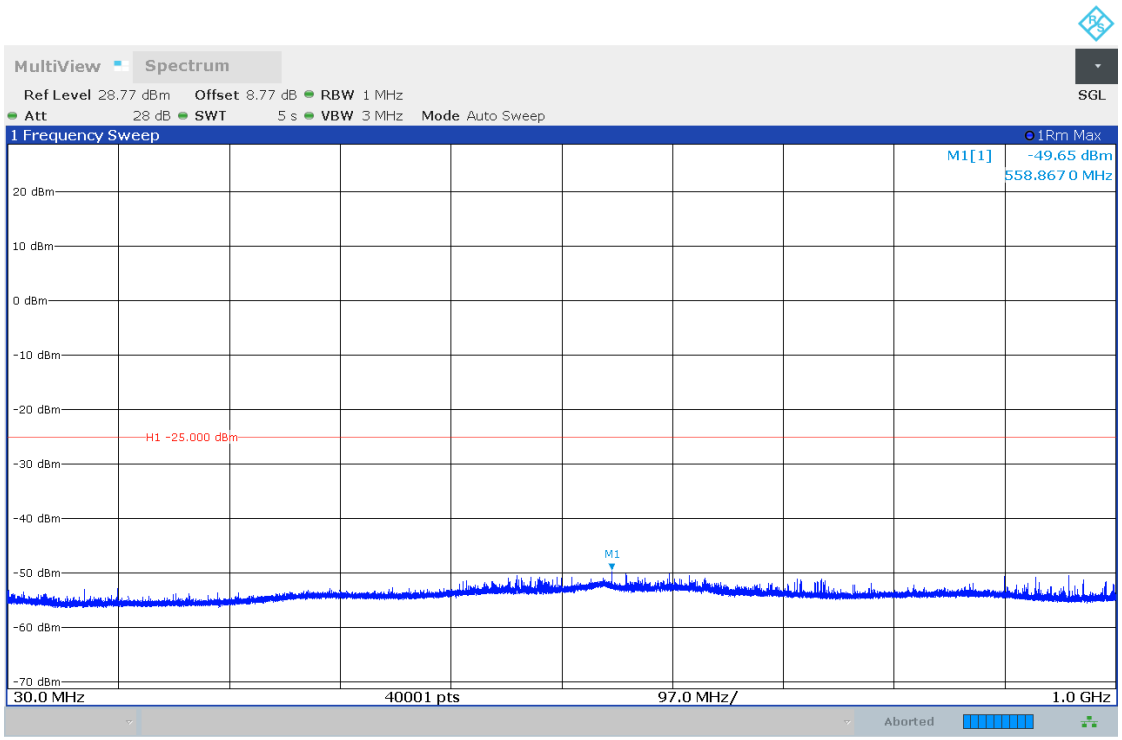
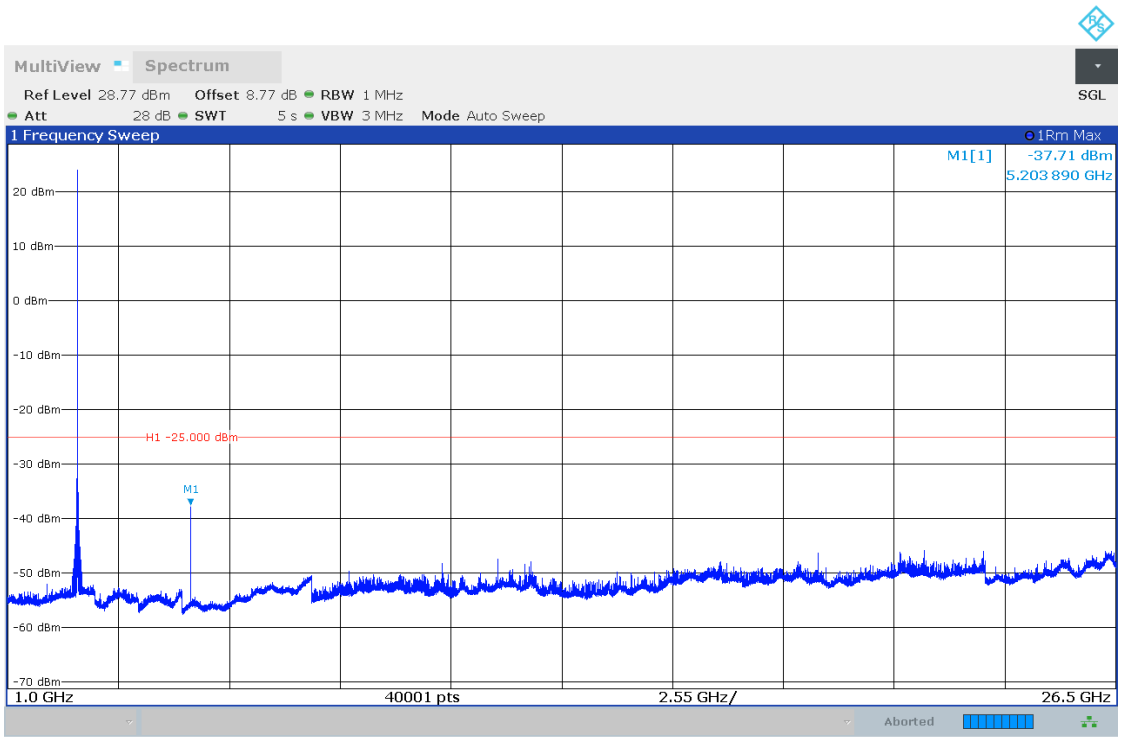
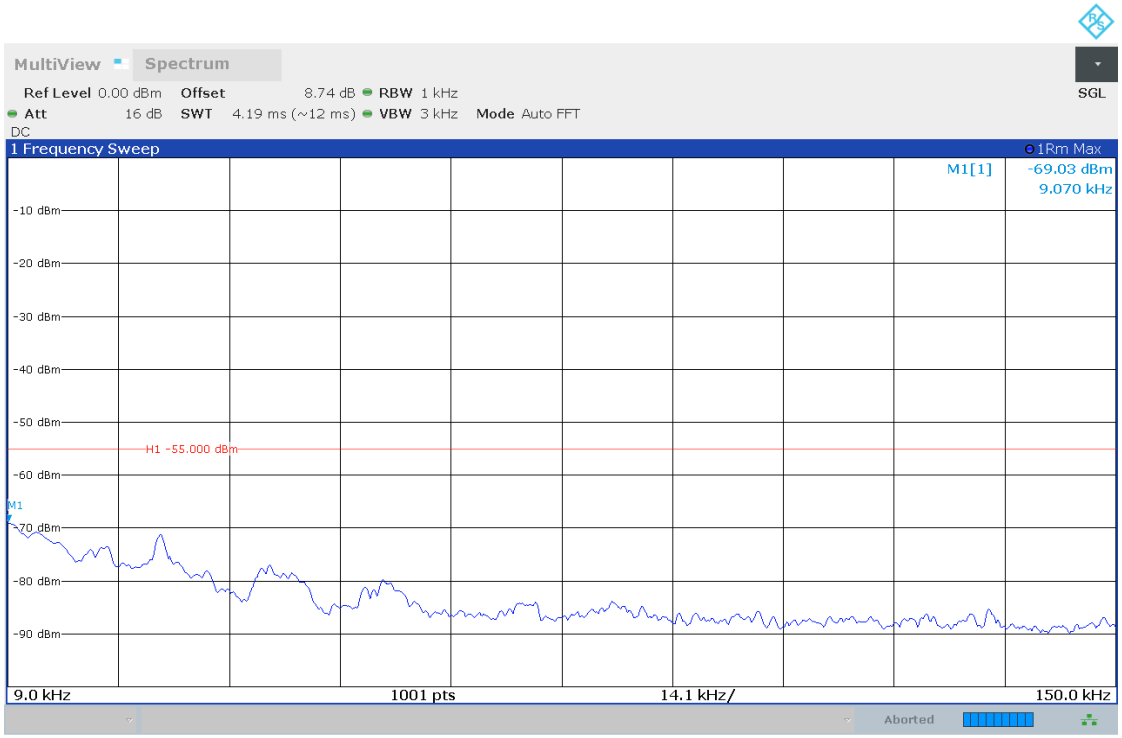


16:03:08 25.04.2022

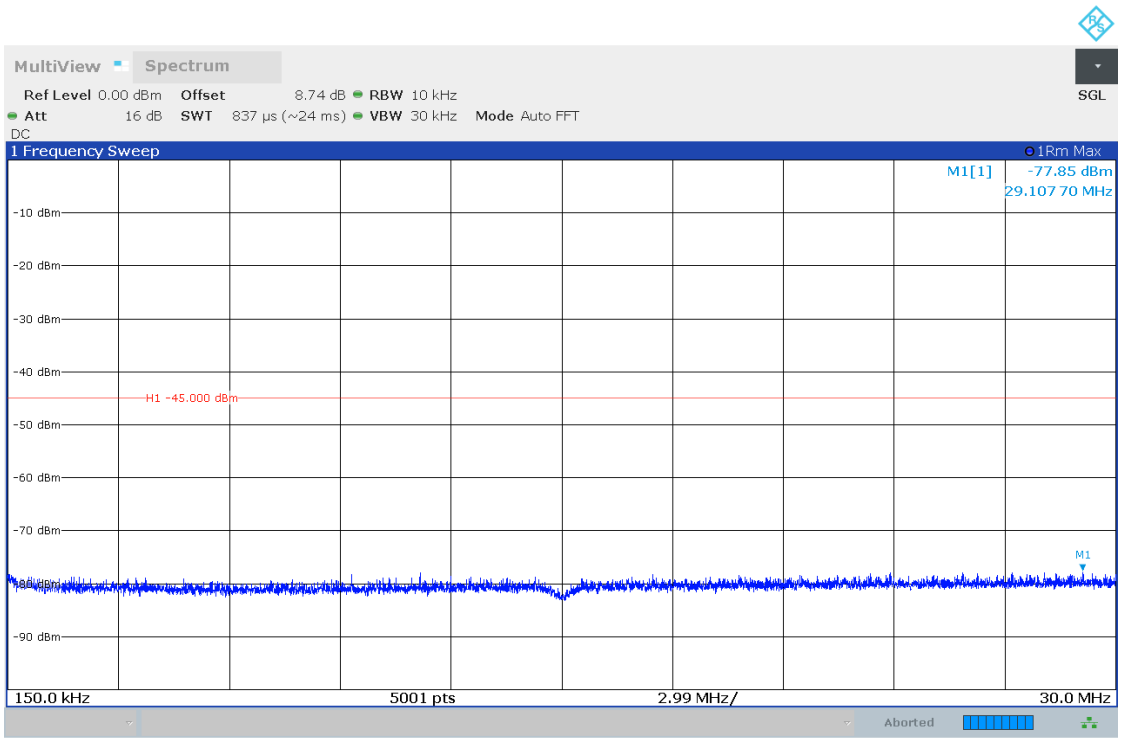


16:03:43 25.04.2022

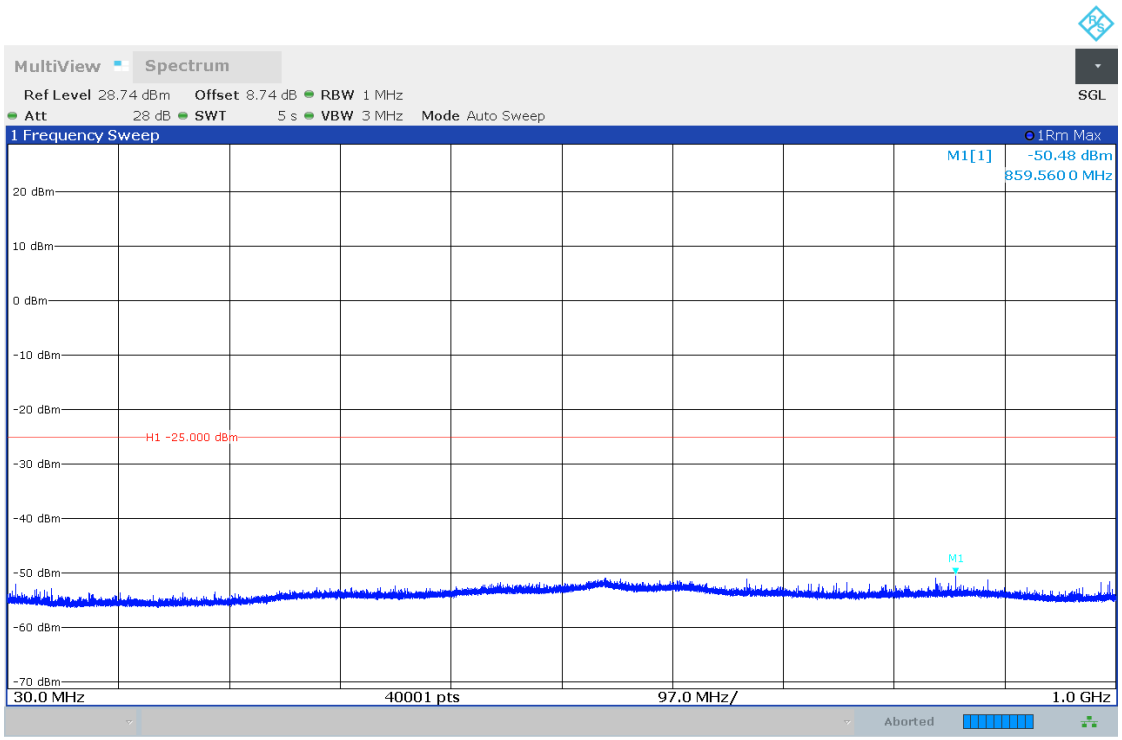
TM2_20MHz_HCH_RB100#0



16:04:16 25.04.2022



16:04:45 25.04.2022



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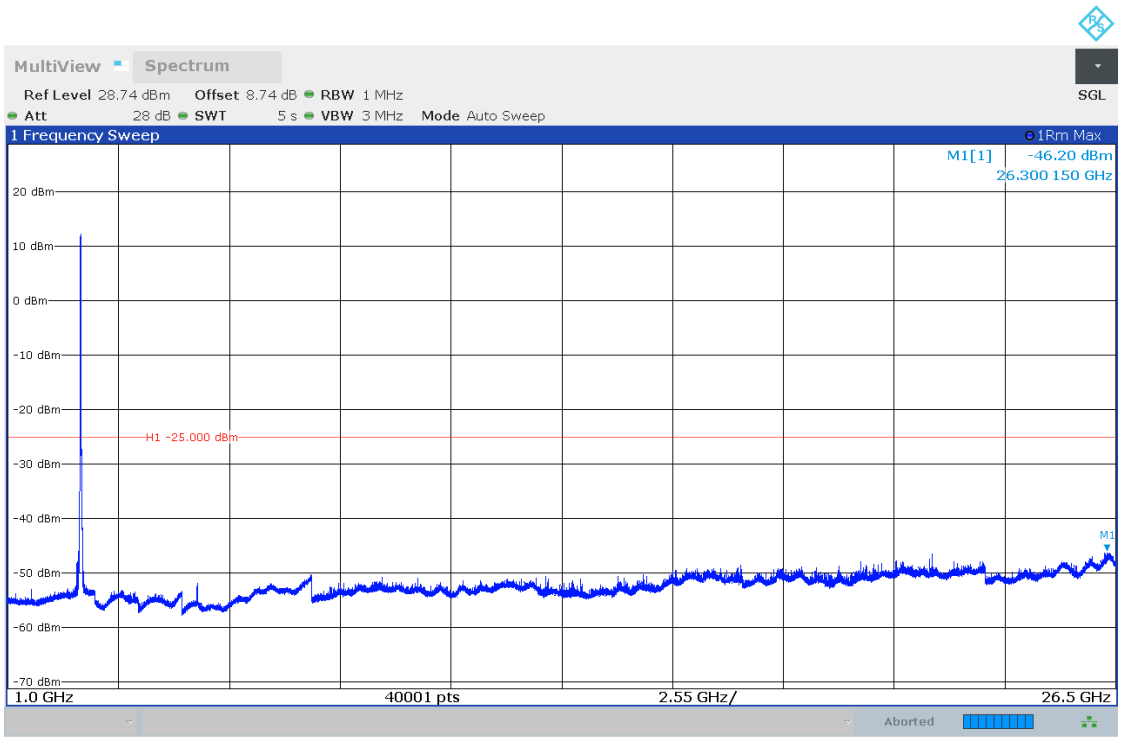
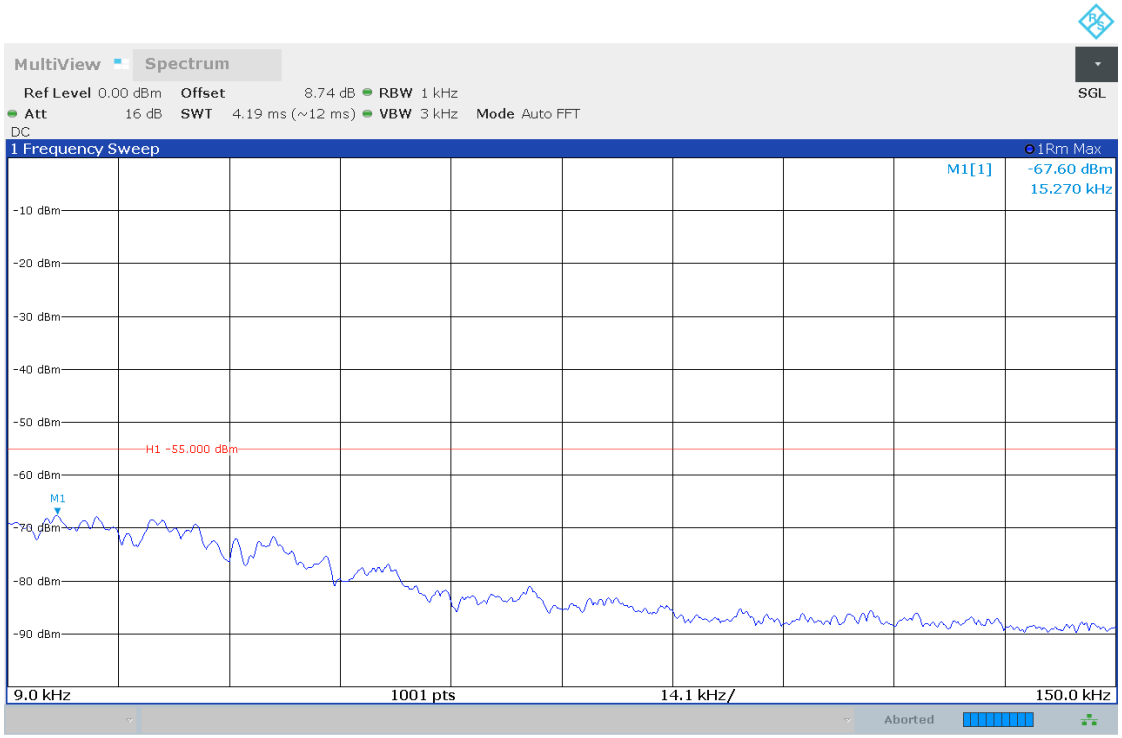


16:05:49 25.04.2022

TM2_20MHz_HCH_RB1#0



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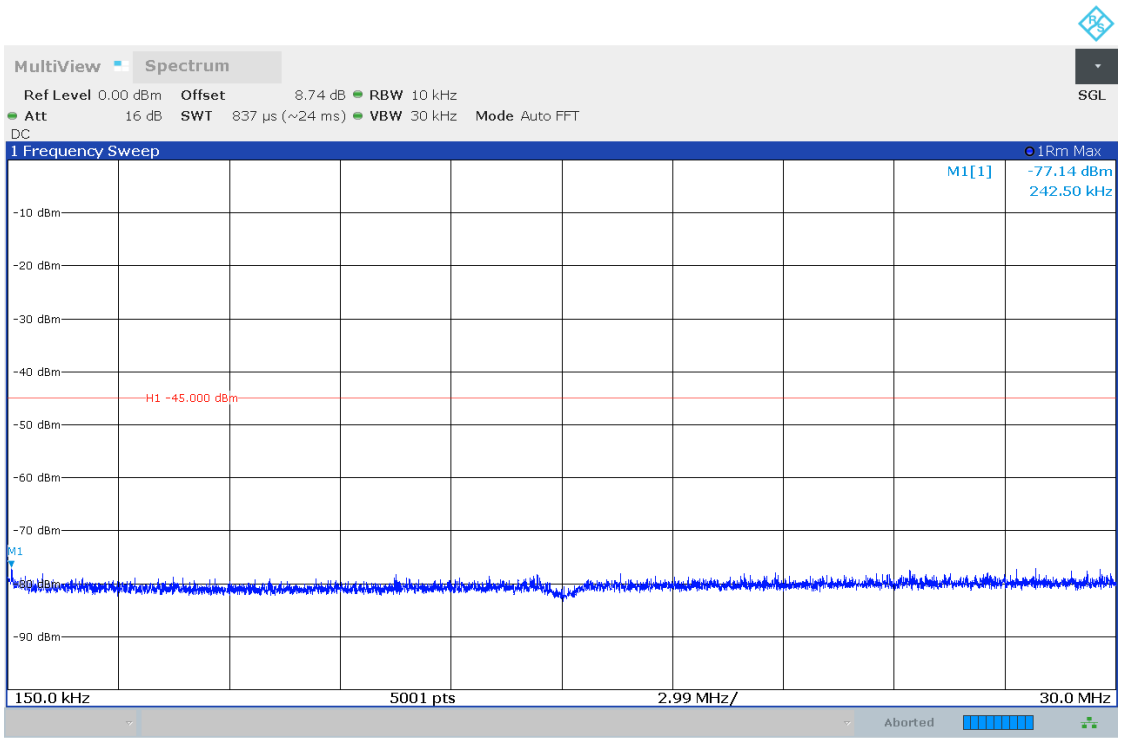

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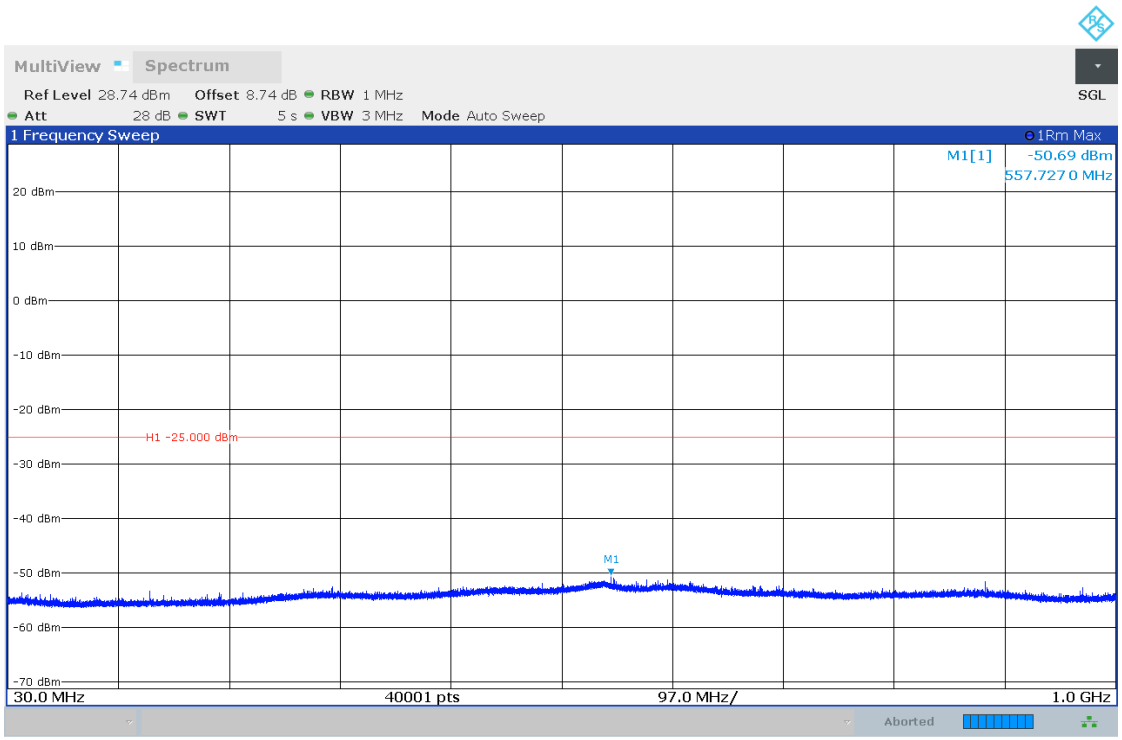
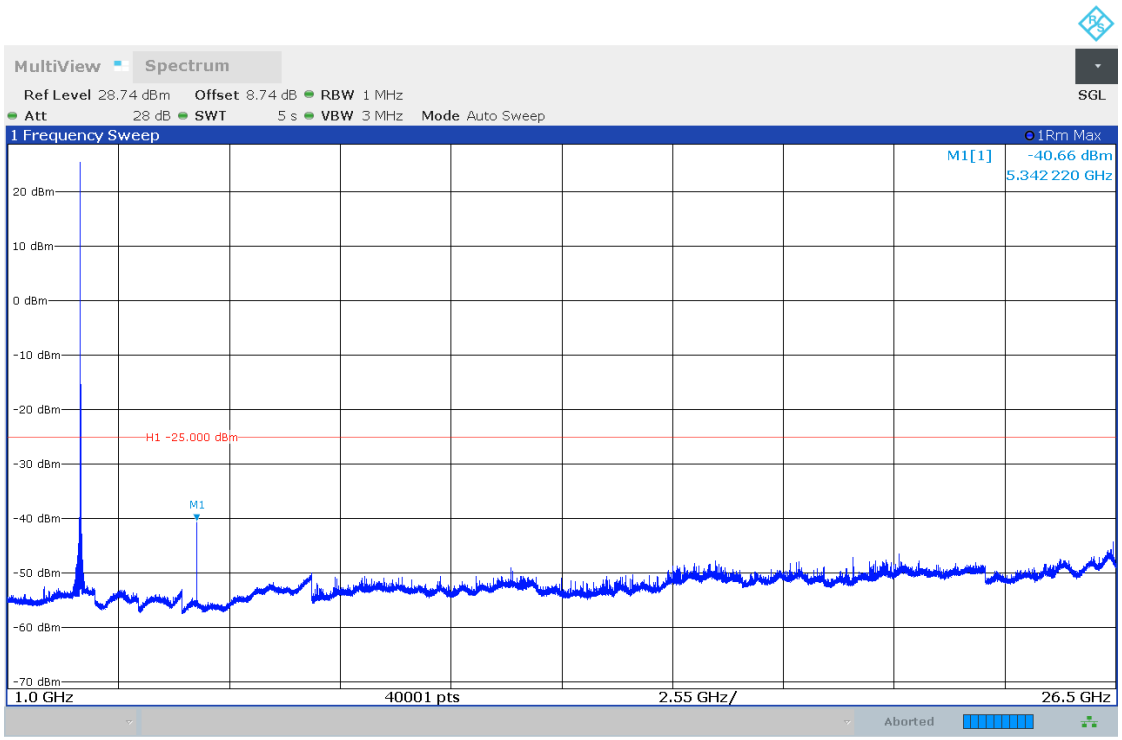
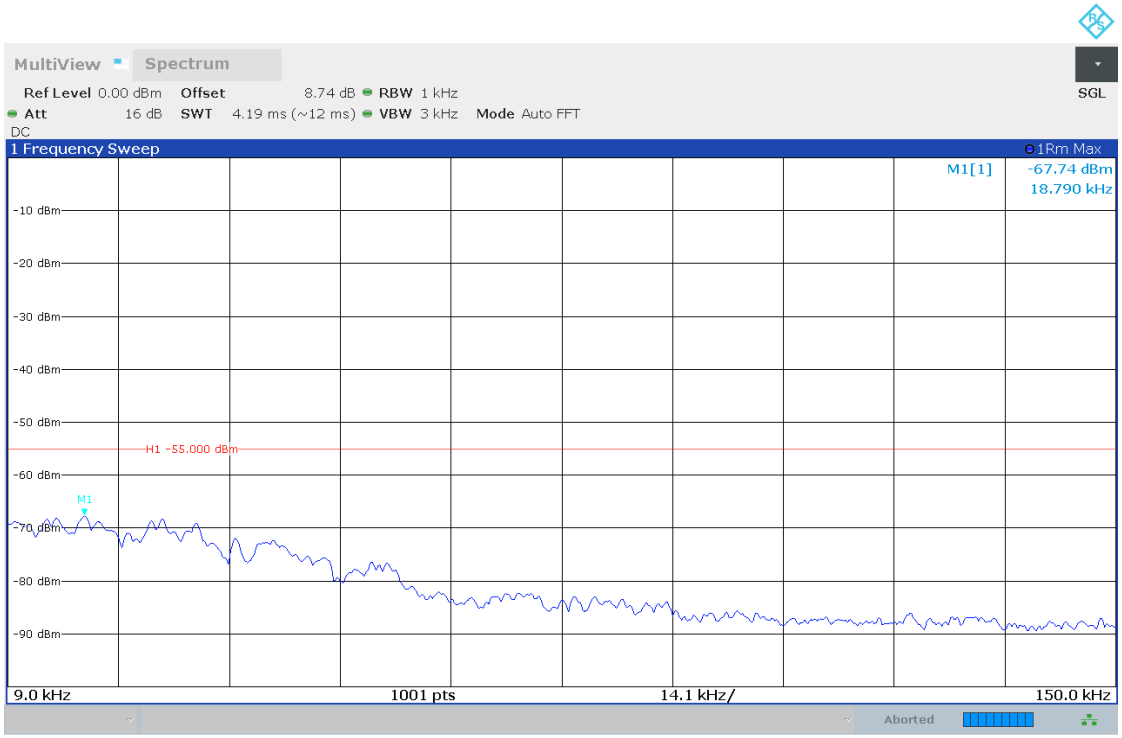


16:07:19 25.04.2022

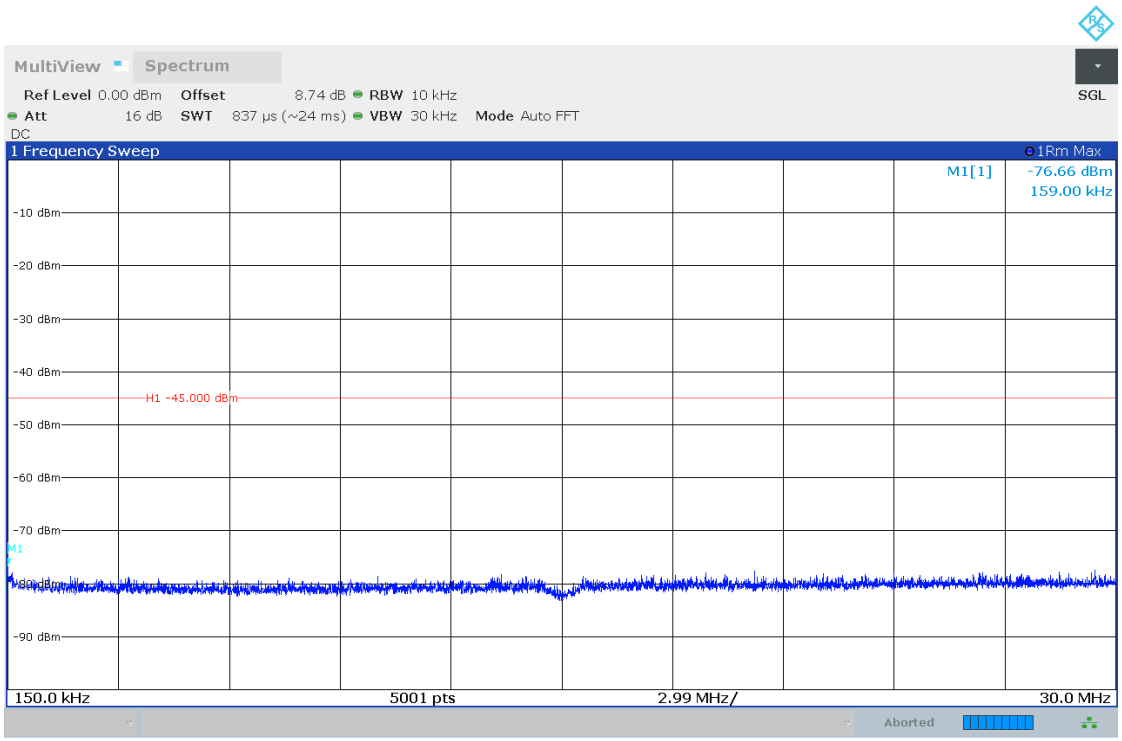


16:07:53 25.04.2022

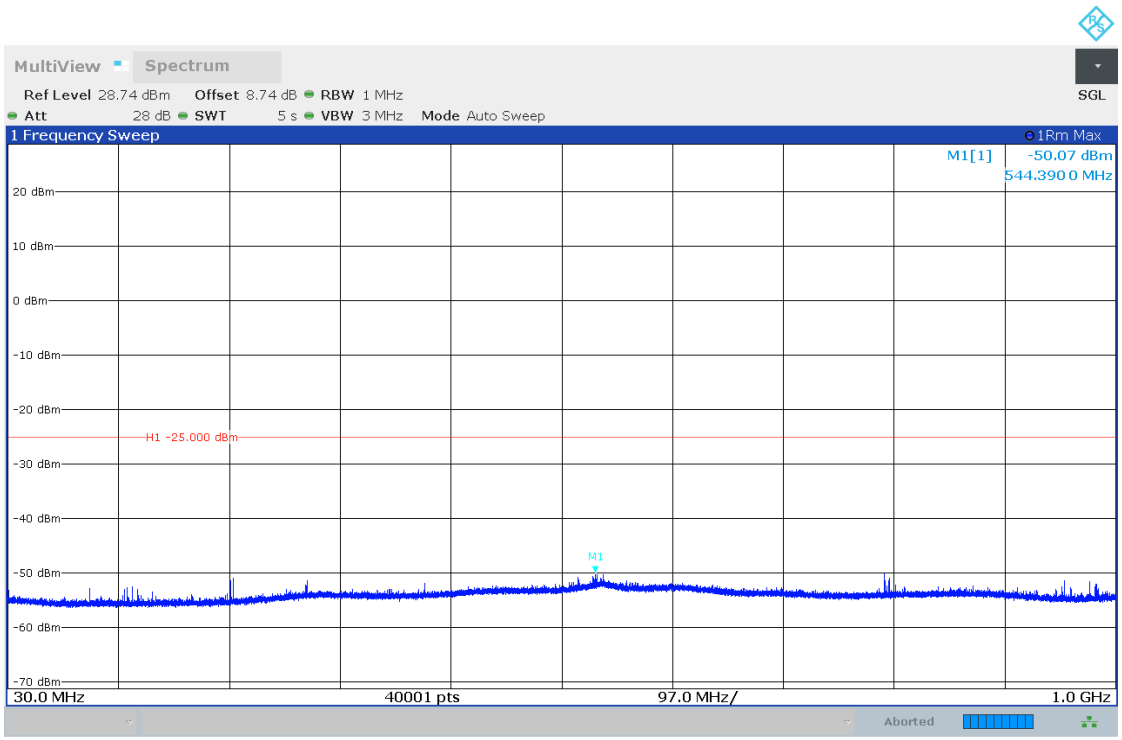
TM2_20MHz_HCH_RB1#99



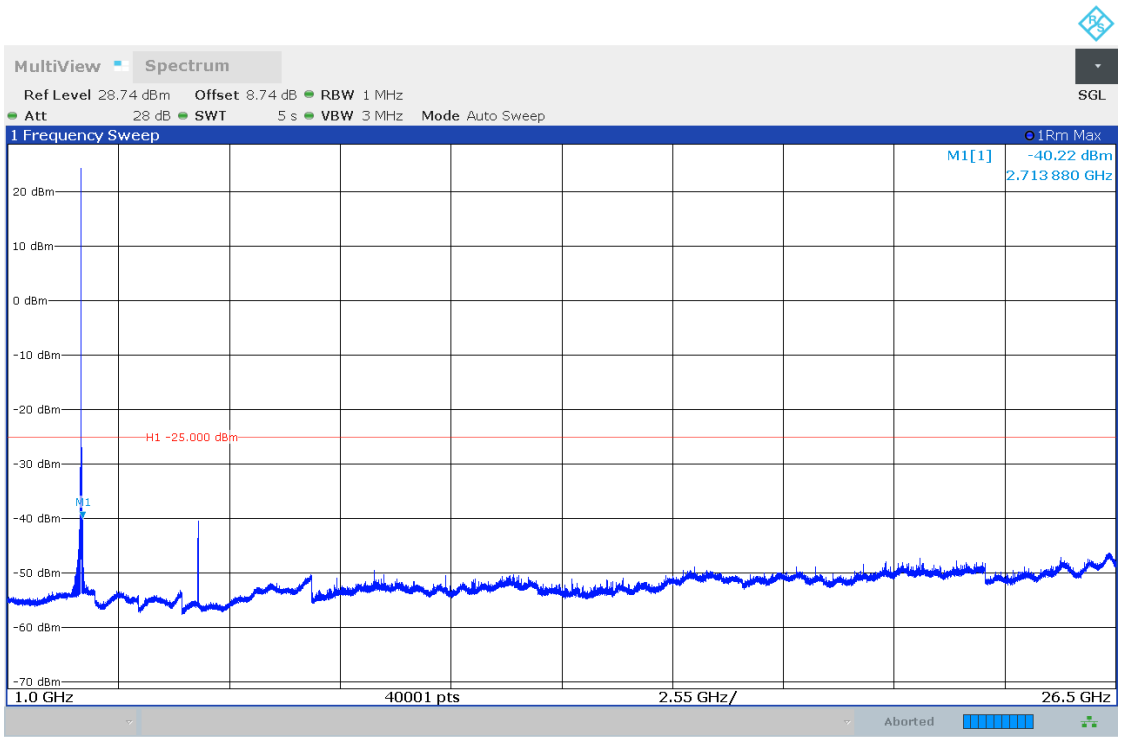
16:08:24 25.04.2022



16:08:54 25.04.2022



16:09:23 25.04.2022



16:09:58 25.04.2022

7 Appendix_G: Frequency Stability

7.1 Test Results

Frequency Error vs. Voltage

Test Mode	Test Bandwidth [MHz]	Test Channel	Modulation	Test Temp.	Test Volt.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict
TM1	5	LCH	QPSK	TN	VH	-118.49	-0.05	PASS
			QPSK	TN	VN	7.56	0.0	PASS
			QPSK	TN	VL	12.89	0.01	PASS
		MCH	QPSK	TN	VH	38.88	0.01	PASS
			QPSK	TN	VN	-7.44	-0.0	PASS
			QPSK	TN	VL	5.50	0.0	PASS
		HCH	QPSK	TN	VH	5.48	0.0	PASS
			QPSK	TN	VN	80.34	0.03	PASS
			QPSK	TN	VL	-12.17	-0.0	PASS
	20	LCH	QPSK	TN	VH	-10.73	-0.0	PASS
			QPSK	TN	VN	-3.48	-0.0	PASS
			QPSK	TN	VL	6.40	0.0	PASS
		MCH	QPSK	TN	VH	-5.19	-0.0	PASS
			QPSK	TN	VN	-11.19	-0.0	PASS
			QPSK	TN	VL	-4.32	-0.0	PASS
		HCH	QPSK	TN	VH	-18.92	-0.01	PASS
			QPSK	TN	VN	-7.33	-0.0	PASS
			QPSK	TN	VL	-10.83	-0.0	PASS

Test Mode	Test Bandwidth [MHz]	Test Channel	Modulation	Test Temp.	Test Volt.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict
TM2	5	LCH	16QAM	TN	VH	-7.55	-0.0	PASS
			16QAM	TN	VN	13.41	0.01	PASS
			16QAM	TN	VL	47.81	0.02	PASS
		MCH	16QAM	TN	VH	21.41	0.01	PASS
			16QAM	TN	VN	-3.02	-0.0	PASS
			16QAM	TN	VL	-55.83	-0.02	PASS
		HCH	16QAM	TN	VH	35.16	0.01	PASS
			16QAM	TN	VN	-0.53	-0.0	PASS
			16QAM	TN	VL	50.41	0.02	PASS
	20	LCH	16QAM	TN	VH	-3.90	-0.0	PASS
			16QAM	TN	VN	9.23	0.0	PASS
			16QAM	TN	VL	-11.81	-0.0	PASS
		MCH	16QAM	TN	VH	-0.30	-0.0	PASS
			16QAM	TN	VN	-9.43	-0.0	PASS
			16QAM	TN	VL	4.34	0.0	PASS
		HCH	16QAM	TN	VH	3.84	0.0	PASS
			16QAM	TN	VN	-4.57	-0.0	PASS
			16QAM	TN	VL	14.49	0.01	PASS

Frequency Error vs. Temperature

Test Mode	Test Bandwidth [MHz]	Test Channel	Modulation	Test Volt.	Test Temp.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict
TM1	5	LCH	QPSK	VN	-30	6.68	0.0	PASS
			QPSK	VN	-20	6.87	0.0	PASS
			QPSK	VN	-10	-1.92	-0.0	PASS
			QPSK	VN	0	-63.88	-0.03	PASS
			QPSK	VN	10	-18.11	-0.01	PASS
			QPSK	VN	20	2.45	0.0	PASS
			QPSK	VN	30	-34.47	-0.01	PASS
			QPSK	VN	40	-26.56	-0.01	PASS
			QPSK	VN	50	32.67	0.01	PASS
		MCH	QPSK	VN	-30	-40.74	-0.02	PASS
			QPSK	VN	-20	8.53	0.0	PASS
			QPSK	VN	-10	-40.64	-0.02	PASS
			QPSK	VN	0	18.06	0.01	PASS
			QPSK	VN	10	0.92	0.0	PASS
			QPSK	VN	20	-22.48	-0.01	PASS
			QPSK	VN	30	-11.37	-0.0	PASS
			QPSK	VN	40	-24.53	-0.01	PASS
			QPSK	VN	50	-29.04	-0.01	PASS
		HCH	QPSK	VN	-30	13.81	0.01	PASS
			QPSK	VN	-20	150.32	0.06	PASS
			QPSK	VN	-10	-14.17	-0.01	PASS
			QPSK	VN	0	11.00	0.0	PASS
			QPSK	VN	10	37.01	0.01	PASS
			QPSK	VN	20	26.23	0.01	PASS
			QPSK	VN	30	16.09	0.01	PASS
			QPSK	VN	40	58.87	0.02	PASS
			QPSK	VN	50	63.38	0.02	PASS

Test Mode	Test Bandwidth [MHz]	Test Channel	Modulation	Test Volt.	Test Temp.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict
TM1	10	LCH	QPSK	VN	-30	-11.29	-0.0	PASS
			QPSK	VN	-20	27.8	0.01	PASS
			QPSK	VN	-10	2.61	0.0	PASS
			QPSK	VN	0	17.03	0.01	PASS
			QPSK	VN	10	-42.72	-0.02	PASS
			QPSK	VN	20	1.77	0.0	PASS
			QPSK	VN	30	-2.29	-0.0	PASS
			QPSK	VN	40	-10.43	-0.0	PASS
			QPSK	VN	50	48.21	0.02	PASS
		MCH	QPSK	VN	-30	-30.00	-0.01	PASS
			QPSK	VN	-20	-16.54	-0.01	PASS
			QPSK	VN	-10	-28.35	-0.01	PASS
			QPSK	VN	0	-17.11	-0.01	PASS
			QPSK	VN	10	-18.12	-0.01	PASS
			QPSK	VN	20	15.19	0.01	PASS
			QPSK	VN	30	-64.29	-0.02	PASS
			QPSK	VN	40	11.30	0.0	PASS
			QPSK	VN	50	-3.74	-0.0	PASS
		HCH	QPSK	VN	-30	8.81	0.0	PASS
			QPSK	VN	-20	-65.93	-0.02	PASS
			QPSK	VN	-10	-25.42	-0.01	PASS
			QPSK	VN	0	43.88	0.02	PASS
			QPSK	VN	10	-7.75	-0.0	PASS
			QPSK	VN	20	1.46	0.0	PASS
			QPSK	VN	30	22.89	0.01	PASS
			QPSK	VN	40	5.68	0.0	PASS
			QPSK	VN	50	42.22	0.02	PASS

Test Mode	Test Bandwidth [MHz]	Test Channel	Modulation	Test Volt.	Test Temp.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict
TM1	15	LCH	QPSK	VN	-30	-5.24	-0.0	PASS
			QPSK	VN	-20	9.32	0.0	PASS
			QPSK	VN	-10	-8.32	-0.0	PASS
			QPSK	VN	0	3.34	0.0	PASS
			QPSK	VN	10	-3.50	-0.0	PASS
			QPSK	VN	20	65.51	0.03	PASS
			QPSK	VN	30	-1.61	-0.0	PASS
			QPSK	VN	40	-2.32	-0.0	PASS
			QPSK	VN	50	-0.57	-0.0	PASS
		MCH	QPSK	VN	-30	9.88	0.0	PASS
			QPSK	VN	-20	-5.84	-0.0	PASS
			QPSK	VN	-10	9.44	0.0	PASS
			QPSK	VN	0	15.66	0.01	PASS
			QPSK	VN	10	-1.68	-0.0	PASS
			QPSK	VN	20	11.58	0.0	PASS
			QPSK	VN	30	-10.47	-0.0	PASS
			QPSK	VN	40	7.95	0.0	PASS
			QPSK	VN	50	-10.34	-0.0	PASS
		HCH	QPSK	VN	-30	-13.59	-0.01	PASS
			QPSK	VN	-20	-14.38	-0.01	PASS
			QPSK	VN	-10	94.88	0.04	PASS
			QPSK	VN	0	-9.36	-0.0	PASS
			QPSK	VN	10	199.78	0.07	PASS
			QPSK	VN	20	5.04	0.0	PASS
			QPSK	VN	30	-1.95	-0.0	PASS
			QPSK	VN	40	27.92	0.01	PASS
			QPSK	VN	50	117.70	0.04	PASS

Test Mode	Test Bandwidth [MHz]	Test Channel	Modulation	Test Volt.	Test Temp.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict
TM1	20	LCH	QPSK	VN	-30	2.62	0.0	PASS
			QPSK	VN	-20	2.68	0.0	PASS
			QPSK	VN	-10	8.52	0.0	PASS
			QPSK	VN	0	-12.01	-0.0	PASS
			QPSK	VN	10	-11.05	-0.0	PASS
			QPSK	VN	20	-9.62	-0.0	PASS
			QPSK	VN	30	11.99	0.0	PASS
			QPSK	VN	40	-10.70	-0.0	PASS
			QPSK	VN	50	13.42	0.01	PASS
		MCH	QPSK	VN	-30	-3.43	-0.0	PASS
			QPSK	VN	-20	-5.84	-0.0	PASS
			QPSK	VN	-10	-4.37	-0.0	PASS
			QPSK	VN	0	1.22	0.0	PASS
			QPSK	VN	10	-3.74	-0.0	PASS
			QPSK	VN	20	-77.68	-0.03	PASS
			QPSK	VN	30	2.36	0.0	PASS
			QPSK	VN	40	-10.64	-0.0	PASS
			QPSK	VN	50	-5.29	-0.0	PASS
		HCH	QPSK	VN	-30	-6.56	-0.0	PASS
			QPSK	VN	-20	-0.20	-0.0	PASS
			QPSK	VN	-10	-3.12	-0.0	PASS
			QPSK	VN	0	6.08	0.0	PASS
			QPSK	VN	10	-4.24	-0.0	PASS
			QPSK	VN	20	-8.25	-0.0	PASS
			QPSK	VN	30	0.25	0.0	PASS
			QPSK	VN	40	-6.30	-0.0	PASS
			QPSK	VN	50	0.05	0.0	PASS

Test Mode	Test Bandwidth [MHz]	Test Channel	Modulation	Test Volt.	Test Temp.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict
TM2	5	LCH	16QAM	VN	-30	28.10	0.01	PASS
			16QAM	VN	-20	-27.96	-0.01	PASS
			16QAM	VN	-10	26.80	0.01	PASS
			16QAM	VN	0	-1.80	-0.0	PASS
			16QAM	VN	10	6.26	0.0	PASS
			16QAM	VN	20	-2.27	-0.0	PASS
			16QAM	VN	30	2.29	0.0	PASS
			16QAM	VN	40	34.59	0.01	PASS
			16QAM	VN	50	-9.62	-0.0	PASS
		MCH	16QAM	VN	-30	3.11	0.0	PASS
			16QAM	VN	-20	-10.65	-0.0	PASS
			16QAM	VN	-10	23.89	0.01	PASS
			16QAM	VN	0	-23.78	-0.01	PASS
			16QAM	VN	10	25.65	0.01	PASS
			16QAM	VN	20	41.06	0.02	PASS
			16QAM	VN	30	0.28	0.0	PASS
			16QAM	VN	40	41.47	0.02	PASS
			16QAM	VN	50	9.69	0.0	PASS
		HCH	16QAM	VN	-30	0.08	0.0	PASS
			16QAM	VN	-20	29.23	0.01	PASS
			16QAM	VN	-10	-17.76	-0.01	PASS
			16QAM	VN	0	-2.52	-0.0	PASS
			16QAM	VN	10	2.25	0.0	PASS
			16QAM	VN	20	-34.06	-0.01	PASS
			16QAM	VN	30	-12.06	-0.0	PASS
			16QAM	VN	40	16.05	0.01	PASS
			16QAM	VN	50	1.31	0.0	PASS

Test Mode	Test Bandwidth [MHz]	Test Channel	Modulation	Test Volt.	Test Temp.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict
TM2	10	LCH	16QAM	VN	-30	-0.62	-0.0	PASS
			16QAM	VN	-20	-9.43	-0.0	PASS
			16QAM	VN	-10	9.94	0.0	PASS
			16QAM	VN	0	6.85	0.0	PASS
			16QAM	VN	10	23.07	0.01	PASS
			16QAM	VN	20	-0.72	-0.0	PASS
			16QAM	VN	30	-4.25	-0.0	PASS
			16QAM	VN	40	6.05	0.0	PASS
			16QAM	VN	50	-17.11	-0.01	PASS
		MCH	16QAM	VN	-30	-47.41	-0.02	PASS
			16QAM	VN	-20	-6.93	-0.0	PASS
			16QAM	VN	-10	10.18	0.0	PASS
			16QAM	VN	0	-1.58	-0.0	PASS
			16QAM	VN	10	-8.96	-0.0	PASS
			16QAM	VN	20	-63.26	-0.02	PASS
			16QAM	VN	30	-2.74	-0.0	PASS
			16QAM	VN	40	-14.44	-0.01	PASS
			16QAM	VN	50	-16.87	-0.01	PASS
		HCH	16QAM	VN	-30	14.59	0.01	PASS
			16QAM	VN	-20	11.03	0.0	PASS
			16QAM	VN	-10	-88.42	-0.03	PASS
			16QAM	VN	0	-33.31	-0.01	PASS
			16QAM	VN	10	-173.1	-0.06	PASS
			16QAM	VN	20	31.21	0.01	PASS
			16QAM	VN	30	-6.79	-0.0	PASS
			16QAM	VN	40	-12.49	-0.0	PASS
			16QAM	VN	50	-8.28	-0.0	PASS

Test Mode	Test Bandwidth [MHz]	Test Channel	Modulation	Test Volt.	Test Temp.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict
TM2	15	LCH	16QAM	VN	-30	13.23	0.01	PASS
			16QAM	VN	-20	12.2	0.0	PASS
			16QAM	VN	-10	-3.69	-0.0	PASS
			16QAM	VN	0	0.13	0.0	PASS
			16QAM	VN	10	1.04	0.0	PASS
			16QAM	VN	20	-14.62	-0.01	PASS
			16QAM	VN	30	1.21	0.0	PASS
			16QAM	VN	40	-4.29	-0.0	PASS
			16QAM	VN	50	4.21	0.0	PASS
		MCH	16QAM	VN	-30	5.61	0.0	PASS
			16QAM	VN	-20	-14.22	-0.01	PASS
			16QAM	VN	-10	-3.25	-0.0	PASS
			16QAM	VN	0	-3.74	-0.0	PASS
			16QAM	VN	10	-2.23	-0.0	PASS
			16QAM	VN	20	-2.00	-0.0	PASS
			16QAM	VN	30	6.97	0.0	PASS
			16QAM	VN	40	-7.30	-0.0	PASS
			16QAM	VN	50	7.73	0.0	PASS
		HCH	16QAM	VN	-30	12.83	0.0	PASS
			16QAM	VN	-20	-40.77	-0.02	PASS
			16QAM	VN	-10	-16.84	-0.01	PASS
			16QAM	VN	0	18.45	0.01	PASS
			16QAM	VN	10	-7.88	-0.0	PASS
			16QAM	VN	20	17.33	0.01	PASS
			16QAM	VN	30	14.12	0.01	PASS
			16QAM	VN	40	-11.3	-0.0	PASS
			16QAM	VN	50	2.13	0.0	PASS

Test Mode	Test Bandwidth [MHz]	Test Channel	Modulation	Test Volt.	Test Temp.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict
TM2	20	LCH	16QAM	VN	-30	-4.47	-0.0	PASS
			16QAM	VN	-20	-3.49	-0.0	PASS
			16QAM	VN	-10	4.22	0.0	PASS
			16QAM	VN	0	16.78	0.01	PASS
			16QAM	VN	10	2.18	0.0	PASS
			16QAM	VN	20	-3.06	-0.0	PASS
			16QAM	VN	30	-14.32	-0.01	PASS
			16QAM	VN	40	2.01	0.0	PASS
			16QAM	VN	50	7.89	0.0	PASS
		MCH	16QAM	VN	-30	-11.81	-0.0	PASS
			16QAM	VN	-20	-5.87	-0.0	PASS
			16QAM	VN	-10	-9.58	-0.0	PASS
			16QAM	VN	0	-4.28	-0.0	PASS
			16QAM	VN	10	3.97	0.0	PASS
			16QAM	VN	20	-1.22	-0.0	PASS
			16QAM	VN	30	-4.55	-0.0	PASS
			16QAM	VN	40	3.51	0.0	PASS
			16QAM	VN	50	5.37	0.0	PASS
		HCH	16QAM	VN	-30	-3.36	-0.0	PASS
			16QAM	VN	-20	-2.79	-0.0	PASS
			16QAM	VN	-10	-7.83	-0.0	PASS
			16QAM	VN	0	-2.38	-0.0	PASS
			16QAM	VN	10	3.07	0.0	PASS
			16QAM	VN	20	-2.26	-0.0	PASS
			16QAM	VN	30	0.17	0.0	PASS
			16QAM	VN	40	-9.50	-0.0	PASS
			16QAM	VN	50	0.31	0.0	PASS

End of Test Report