



Appendix B

E-UTRA Band 2



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1 Effective (Isotropic) Radiated Power Output Data

Effective Isotropic Radiated Power of Transmitter (EIRP) for LTE BAND 2

Test Band(LTE)	Test Mode	Test Bandwidth	Test channel	Test RB	Measured (dBm)	EIRP (dBm)	limit (dBm)	Verdict
BAND2	LTE/TM1	1.4M	LCH	RB1#0	22.99	20.19	33.00	PASS
				RB1#2	23.14	20.34	33.00	PASS
				RB1#5	22.93	20.13	33.00	PASS
				RB3#0	23.08	20.28	33.00	PASS
				RB3#2	22.99	20.19	33.00	PASS
				RB3#3	23.05	20.25	33.00	PASS
				RB6#0	22.03	19.23	33.00	PASS
			MCH	RB1#0	22.94	20.14	33.00	PASS
				RB1#2	23.1	20.3	33.00	PASS
				RB1#5	23.08	20.28	33.00	PASS
				RB3#0	23.08	20.28	33.00	PASS
				RB3#2	23.04	20.24	33.00	PASS
				RB3#3	23.11	20.31	33.00	PASS
				RB6#0	22.07	19.27	33.00	PASS
			HCH	RB1#0	23.06	20.26	33.00	PASS
				RB1#2	23.33	20.53	33.00	PASS
				RB1#5	23.07	20.27	33.00	PASS
				RB3#0	23.08	20.28	33.00	PASS
				RB3#2	23.22	20.42	33.00	PASS
				RB3#3	23.17	20.37	33.00	PASS
				RB6#0	22.29	19.49	33.00	PASS

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Test Band(LTE)	Test Mode	Test Bandwidth	Test channel	Test RB	Measured (dBm)	EIRP (dBm)	limit (dBm)	Verdict
BAND2	LTE/TM2	1.4M	LCH	RB1#0	22.24	19.44	33.00	PASS
				RB1#2	22.48	19.68	33.00	PASS
				RB1#5	22.01	19.21	33.00	PASS
				RB3#0	21.82	19.02	33.00	PASS
				RB3#2	22.31	19.51	33.00	PASS
				RB3#3	21.89	19.09	33.00	PASS
				RB6#0	21.37	18.57	33.00	PASS
			MCH	RB1#0	22.13	19.33	33.00	PASS
				RB1#2	22.23	19.43	33.00	PASS
				RB1#5	22.11	19.31	33.00	PASS
				RB3#0	22.05	19.25	33.00	PASS
				RB3#2	22.1	19.3	33.00	PASS
				RB3#3	21.99	19.19	33.00	PASS
				RB6#0	21.05	18.25	33.00	PASS
			HCH	RB1#0	22.1	19.3	33.00	PASS
				RB1#2	22.58	19.78	33.00	PASS
				RB1#5	22.1	19.3	33.00	PASS
				RB3#0	22.12	19.32	33.00	PASS
				RB3#2	22.1	19.3	33.00	PASS
				RB3#3	22.06	19.26	33.00	PASS
				RB6#0	21.13	18.33	33.00	PASS

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BAND2	LTE/TM1	3M	LCH	RB1#0	23.02	20.22	33.00	PASS
				RB1#7	23.2	20.4	33.00	PASS
				RB1#14	23.09	20.29	33.00	PASS
				RB8#0	22	19.2	33.00	PASS
				RB8#4	22.12	19.32	33.00	PASS
				RB8#7	22.1	19.3	33.00	PASS
				RB15#0	22.03	19.23	33.00	PASS
			MCH	RB1#0	22.99	20.19	33.00	PASS
				RB1#7	23.26	20.46	33.00	PASS
				RB1#14	22.99	20.19	33.00	PASS
				RB8#0	22.1	19.3	33.00	PASS
				RB8#4	22.03	19.23	33.00	PASS
				RB8#7	22.04	19.24	33.00	PASS
				RB15#0	22.12	19.32	33.00	PASS
			HCH	RB1#0	23.2	20.4	33.00	PASS
				RB1#7	23.33	20.53	33.00	PASS
				RB1#14	23.19	20.39	33.00	PASS
				RB8#0	22.07	19.27	33.00	PASS
				RB8#4	22.29	19.49	33.00	PASS
				RB8#7	22.07	19.27	33.00	PASS
				RB15#0	22.2	19.4	33.00	PASS

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BAND2	LTE/TM2	3M	LCH	RB1#0	22.52	19.72	33.00	PASS
				RB1#7	22.45	19.65	33.00	PASS
				RB1#14	22.2	19.4	33.00	PASS
				RB8#0	21.24	18.44	33.00	PASS
				RB8#4	21.21	18.41	33.00	PASS
				RB8#7	21.11	18.31	33.00	PASS
				RB15#0	21.05	18.25	33.00	PASS
			MCH	RB1#0	22.59	19.79	33.00	PASS
				RB1#7	22.24	19.44	33.00	PASS
				RB1#14	22.5	19.7	33.00	PASS
				RB8#0	21.2	18.4	33.00	PASS
				RB8#4	21.22	18.42	33.00	PASS
				RB8#7	21.14	18.34	33.00	PASS
				RB15#0	21.23	18.43	33.00	PASS
			HCH	RB1#0	22.28	19.48	33.00	PASS
				RB1#7	22.37	19.57	33.00	PASS
				RB1#14	21.99	19.19	33.00	PASS
				RB8#0	21.23	18.43	33.00	PASS
				RB8#4	21.27	18.47	33.00	PASS
				RB8#7	21.19	18.39	33.00	PASS
				RB15#0	21.17	18.37	33.00	PASS

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BAND2	LTE/TM1	5M	LCH	RB1#0	22.98	20.18	33.00	PASS
				RB1#13	23.01	20.21	33.00	PASS
				RB1#24	22.98	20.18	33.00	PASS
				RB12#0	22.1	19.3	33.00	PASS
				RB12#6	22.16	19.36	33.00	PASS
				RB12#13	22.14	19.34	33.00	PASS
				RB25#0	22.1	19.3	33.00	PASS
			MCH	RB1#0	22.95	20.15	33.00	PASS
				RB1#13	23.03	20.23	33.00	PASS
				RB1#24	22.92	20.12	33.00	PASS
				RB12#0	22.07	19.27	33.00	PASS
				RB12#6	22.16	19.36	33.00	PASS
				RB12#13	22.11	19.31	33.00	PASS
				RB25#0	22.08	19.28	33.00	PASS
			HCH	RB1#0	23	20.2	33.00	PASS
				RB1#13	23.15	20.35	33.00	PASS
				RB1#24	22.97	20.17	33.00	PASS
				RB12#0	22.13	19.33	33.00	PASS
				RB12#6	22.24	19.44	33.00	PASS
				RB12#13	22.19	19.39	33.00	PASS
				RB25#0	22.17	19.37	33.00	PASS

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BAND2	LTE/TM2	5M	LCH	RB1#0	22.09	19.29	33.00	PASS
				RB1#13	21.92	19.12	33.00	PASS
				RB1#24	22.34	19.54	33.00	PASS
				RB12#0	21.16	18.36	33.00	PASS
				RB12#6	21.06	18.26	33.00	PASS
				RB12#13	21.12	18.32	33.00	PASS
				RB25#0	21.22	18.42	33.00	PASS
			MCH	RB1#0	21.88	19.08	33.00	PASS
				RB1#13	22.6	19.8	33.00	PASS
				RB1#24	22.12	19.32	33.00	PASS
				RB12#0	21.11	18.31	33.00	PASS
				RB12#6	21.13	18.33	33.00	PASS
				RB12#13	21.19	18.39	33.00	PASS
				RB25#0	21.13	18.33	33.00	PASS
			HCH	RB1#0	22.46	19.66	33.00	PASS
				RB1#13	22.42	19.62	33.00	PASS
				RB1#24	21.8	19	33.00	PASS
				RB12#0	21.15	18.35	33.00	PASS
				RB12#6	21.11	18.31	33.00	PASS
				RB12#13	21.24	18.44	33.00	PASS
				RB25#0	21.05	18.25	33.00	PASS

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BAND2	LTE/TM1	10M	LCH	RB1#0	23.08	20.28	33.00	PASS
				RB1#25	23.3	20.5	33.00	PASS
				RB1#49	22.97	20.17	33.00	PASS
				RB25#0	22.12	19.32	33.00	PASS
				RB25#13	22.09	19.29	33.00	PASS
				RB25#25	22.04	19.24	33.00	PASS
				RB50#0	22.18	19.38	33.00	PASS
			MCH	RB1#0	23.03	20.23	33.00	PASS
				RB1#25	23.38	20.58	33.00	PASS
				RB1#49	23.13	20.33	33.00	PASS
				RB25#0	22.05	19.25	33.00	PASS
				RB25#13	22.18	19.38	33.00	PASS
				RB25#25	22.29	19.49	33.00	PASS
				RB50#0	22.17	19.37	33.00	PASS
			HCH	RB1#0	23.25	20.45	33.00	PASS
				RB1#25	23.2	20.4	33.00	PASS
				RB1#49	23.09	20.29	33.00	PASS
				RB25#0	22.19	19.39	33.00	PASS
				RB25#13	22.33	19.53	33.00	PASS
				RB25#25	22.41	19.61	33.00	PASS
				RB50#0	22.22	19.42	33.00	PASS

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BAND2	LTE/TM2	10M	LCH	RB1#0	22.38	19.58	33.00	PASS
				RB1#25	22.33	19.53	33.00	PASS
				RB1#49	22.56	19.76	33.00	PASS
				RB25#0	21.12	18.32	33.00	PASS
				RB25#13	21.05	18.25	33.00	PASS
				RB25#25	21.2	18.4	33.00	PASS
				RB50#0	21.17	18.37	33.00	PASS
			MCH	RB1#0	22.28	19.48	33.00	PASS
				RB1#25	22.66	19.86	33.00	PASS
				RB1#49	22.24	19.44	33.00	PASS
				RB25#0	21.13	18.33	33.00	PASS
				RB25#13	21.23	18.43	33.00	PASS
				RB25#25	21.31	18.51	33.00	PASS
				RB50#0	21.27	18.47	33.00	PASS
			HCH	RB1#0	22.63	19.83	33.00	PASS
				RB1#25	22.4	19.6	33.00	PASS
				RB1#49	22.1	19.3	33.00	PASS
				RB25#0	21.2	18.4	33.00	PASS
				RB25#13	21.38	18.58	33.00	PASS
				RB25#25	21.34	18.54	33.00	PASS
				RB50#0	21.24	18.44	33.00	PASS

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BAND2	LTE/TM1	15M	LCH	RB1#0	22.93	20.13	33.00	PASS
				RB1#38	23.09	20.29	33.00	PASS
				RB1#74	23.09	20.29	33.00	PASS
				RB36#0	22.17	19.37	33.00	PASS
				RB36#18	22.07	19.27	33.00	PASS
				RB36#39	21.94	19.14	33.00	PASS
				RB75#0	22	19.2	33.00	PASS
			MCH	RB1#0	23.02	20.22	33.00	PASS
				RB1#38	23.12	20.32	33.00	PASS
				RB1#74	23.01	20.21	33.00	PASS
				RB36#0	22.14	19.34	33.00	PASS
				RB36#18	22.19	19.39	33.00	PASS
				RB36#39	22.1	19.3	33.00	PASS
				RB75#0	22.25	19.45	33.00	PASS
			HCH	RB1#0	23.1	20.3	33.00	PASS
				RB1#38	23.21	20.41	33.00	PASS
				RB1#74	23.07	20.27	33.00	PASS
				RB36#0	22.23	19.43	33.00	PASS
				RB36#18	22.2	19.4	33.00	PASS
				RB36#39	22.31	19.51	33.00	PASS
				RB75#0	22.31	19.51	33.00	PASS

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BAND2	LTE/TM2	15M	LCH	RB1#0	22.27	19.47	33.00	PASS
				RB1#38	22.2	19.4	33.00	PASS
				RB1#74	22.22	19.42	33.00	PASS
				RB36#0	21.2	18.4	33.00	PASS
				RB36#18	21.17	18.37	33.00	PASS
				RB36#39	21.17	18.37	33.00	PASS
				RB75#0	21.2	18.4	33.00	PASS
			MCH	RB1#0	22.58	19.78	33.00	PASS
				RB1#38	22.57	19.77	33.00	PASS
				RB1#74	22.42	19.62	33.00	PASS
				RB36#0	21.13	18.33	33.00	PASS
				RB36#18	21.2	18.4	33.00	PASS
				RB36#39	21.14	18.34	33.00	PASS
				RB75#0	21.31	18.51	33.00	PASS
			HCH	RB1#0	22.23	19.43	33.00	PASS
				RB1#38	22.17	19.37	33.00	PASS
				RB1#74	22.02	19.22	33.00	PASS
				RB36#0	21.26	18.46	33.00	PASS
				RB36#18	21.32	18.52	33.00	PASS
				RB36#39	21.28	18.48	33.00	PASS
				RB75#0	21.23	18.43	33.00	PASS

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**SGS-CSTC Standards Technical Services Co., Ltd.
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Test Band(LTE)	Test Mode	Test Bandwidth	Test channel	Test RB	Measured (dBm)	EIRP (dBm)	limit (dBm)	Verdict
BAND2	LTE/TM1	20M	LCH	RB1#0	22.95	20.15	33.00	PASS
				RB1#50	23.18	20.38	33.00	PASS
				RB1#99	22.8	20	33.00	PASS
				RB50#0	22.27	19.47	33.00	PASS
				RB50#25	22.24	19.44	33.00	PASS
				RB50#50	22.1	19.3	33.00	PASS
				RB100#0	22.22	19.42	33.00	PASS
			MCH	RB1#0	22.85	20.05	33.00	PASS
				RB1#50	23.12	20.32	33.00	PASS
				RB1#99	22.96	20.16	33.00	PASS
				RB50#0	22.16	19.36	33.00	PASS
				RB50#25	22.16	19.36	33.00	PASS
				RB50#50	22.31	19.51	33.00	PASS
				RB100#0	22.23	19.43	33.00	PASS
			HCH	RB1#0	22.96	20.16	33.00	PASS
				RB1#50	23.3	20.5	33.00	PASS
				RB1#99	22.91	20.11	33.00	PASS
				RB50#0	22.34	19.54	33.00	PASS
				RB50#25	22.38	19.58	33.00	PASS
				RB50#50	22.44	19.64	33.00	PASS
				RB100#0	22.34	19.54	33.00	PASS

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Test Band(LTE)	Test Mode	Test Bandwidth	Test channel	Test RB	Measured (dBm)	EIRP (dBm)	limit (dBm)	Verdict
BAND2	LTE/TM2	20M	LCH	RB1#0	22.08	19.28	33.00	PASS
				RB1#50	22.58	19.78	33.00	PASS
				RB1#99	22.44	19.64	33.00	PASS
				RB50#0	21.2	18.4	33.00	PASS
				RB50#25	21.15	18.35	33.00	PASS
				RB50#50	21.15	18.35	33.00	PASS
				RB100#0	21.11	18.31	33.00	PASS
			MCH	RB1#0	22.18	19.38	33.00	PASS
				RB1#50	22.68	19.88	33.00	PASS
				RB1#99	22.42	19.62	33.00	PASS
				RB50#0	21.24	18.44	33.00	PASS
				RB50#25	21.31	18.51	33.00	PASS
				RB50#50	21.41	18.61	33.00	PASS
				RB100#0	21.13	18.33	33.00	PASS
			HCH	RB1#0	22.08	19.28	33.00	PASS
				RB1#50	22.57	19.77	33.00	PASS
				RB1#99	22.34	19.54	33.00	PASS
				RB50#0	21.39	18.59	33.00	PASS
				RB50#25	21.31	18.51	33.00	PASS
				RB50#50	21.45	18.65	33.00	PASS
				RB100#0	21.51	18.71	33.00	PASS

Note:

a: For getting the EIRP (Efficient Isotropic Radiated Power) in substitution method, the following formula should be taken to calculate it,

$$\text{EIRP [dBm]} = \text{SGP [dBm]} - \text{Cable Loss [dB]} + \text{Gain [dBi]}$$

b: SGP=Signal Generator Level

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2 Peak-to-Average Ratio

Part I - Test Results

Test Band	Test Mode	Test Channel	Measured[dB]	Limit [dB]	Verdict
Band 2	TM1/20M	LCH	5.04	13	PASS
		MCH	5.07	13	PASS
		HCH	4.96	13	PASS
	TM2/20M	LCH	6.00	13	PASS
		MCH	5.91	13	PASS
		HCH	5.80	13	PASS

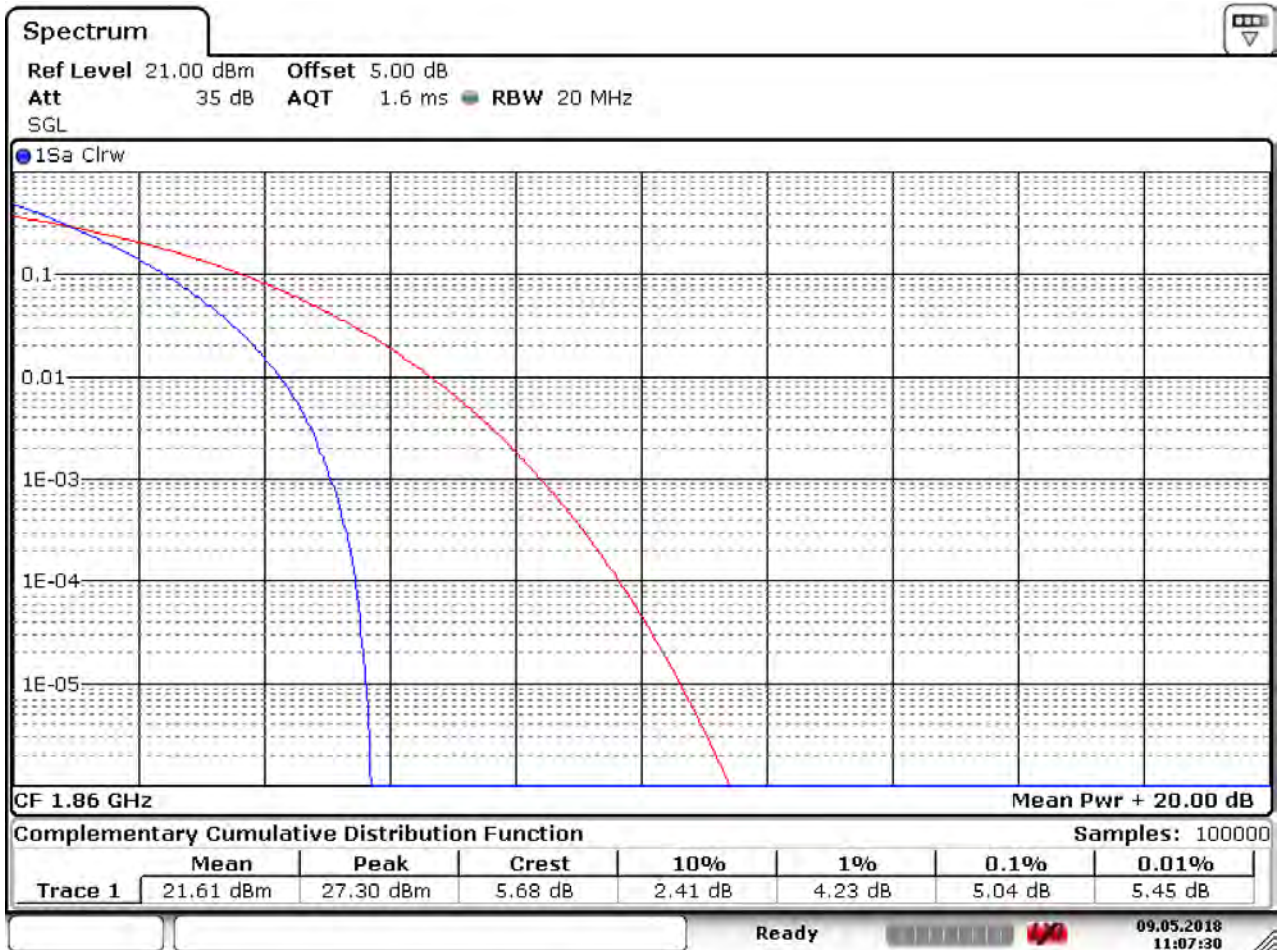
Part II - Test Plots

2.1 For LTE

2.1.1 Test Band = LTE band2

2.1.1.1 Test Mode = LTE/TM1.Bandwidth=20MHz

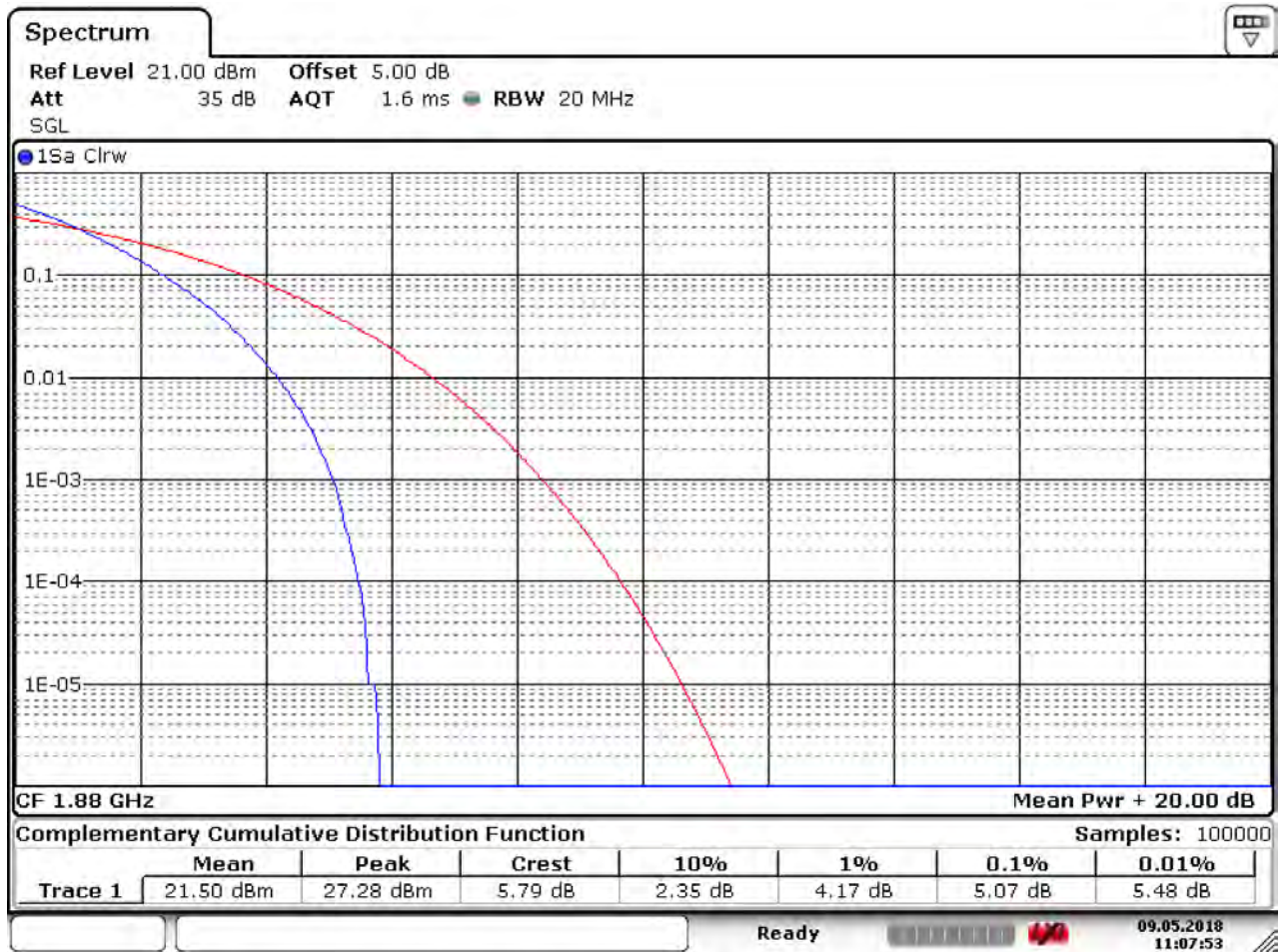
2.1.1.1.1 Test Channel = LCH



Date: 9.MAY.2018 11:07:31



2.1.1.1.2 Test Channel = MCH

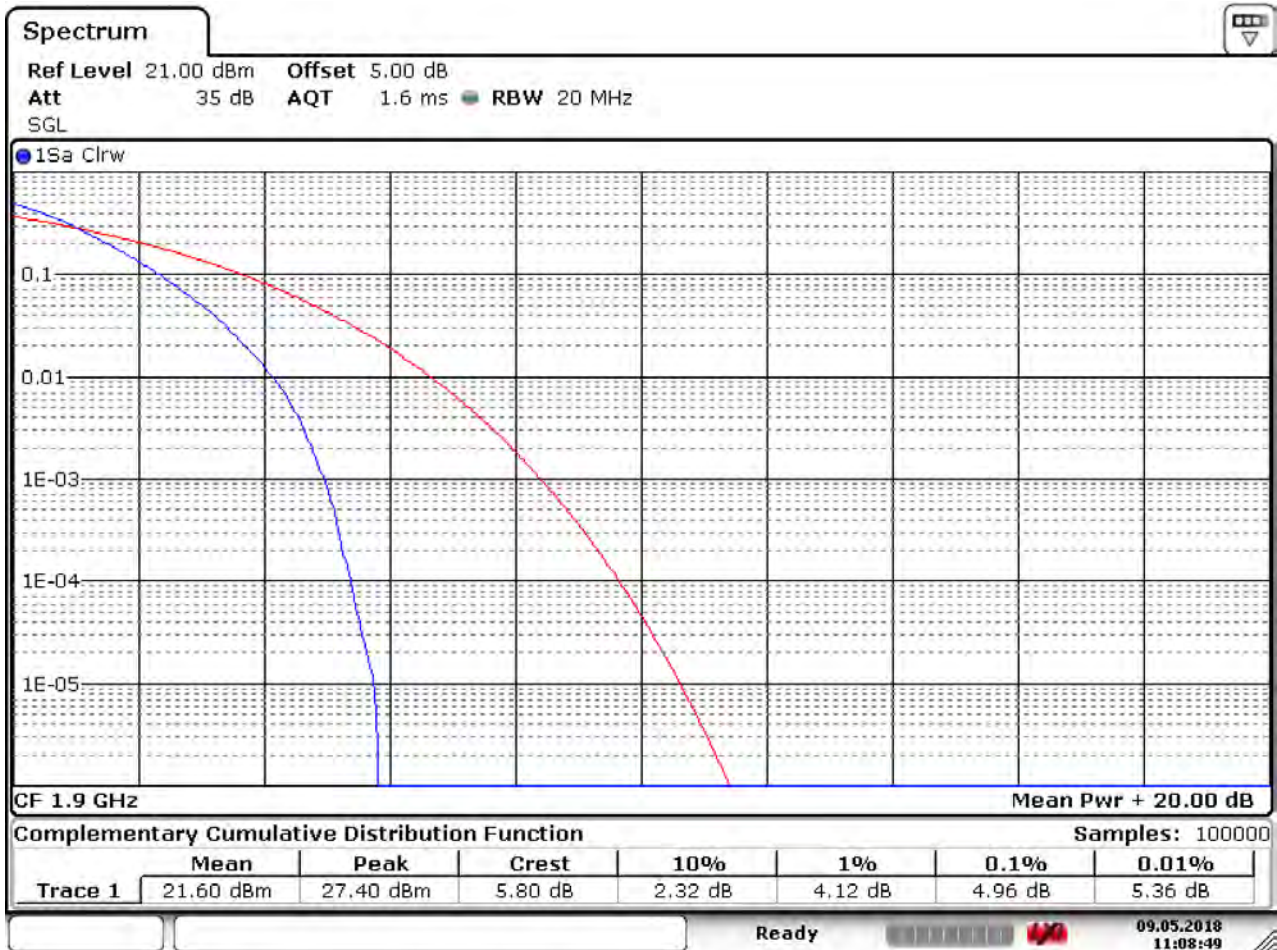


Date: 9.MAY.2018 11:07:53

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2.1.1.1.3 Test Channel = HCH

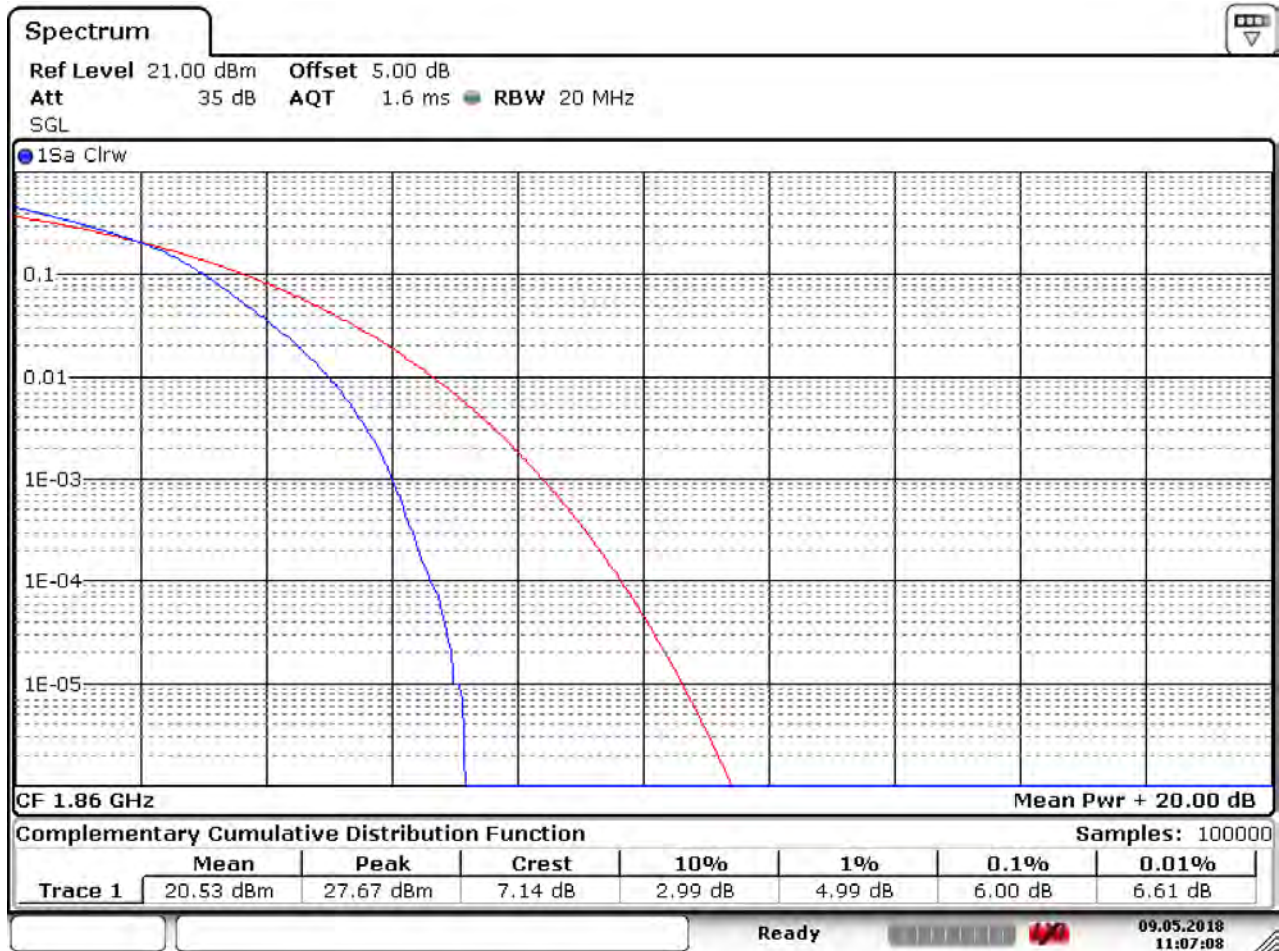


Date: 9.MAY.2018 11:08:49



2.1.1.2 Test Mode = LTE/TM2.Bandwidth=20MHz

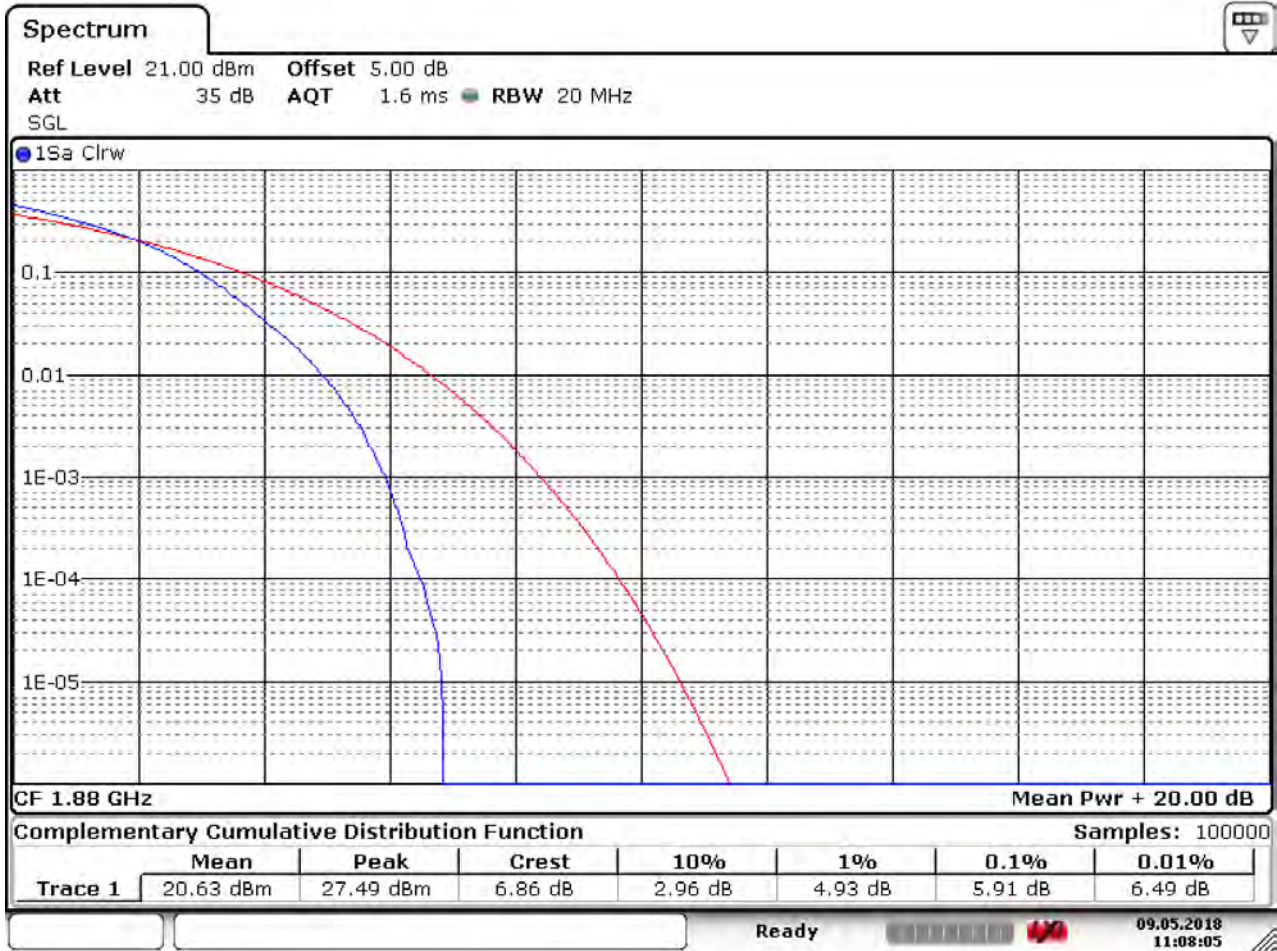
2.1.1.2.1 Test Channel = LCH



Date: 9.MAY.2018 11:07:09



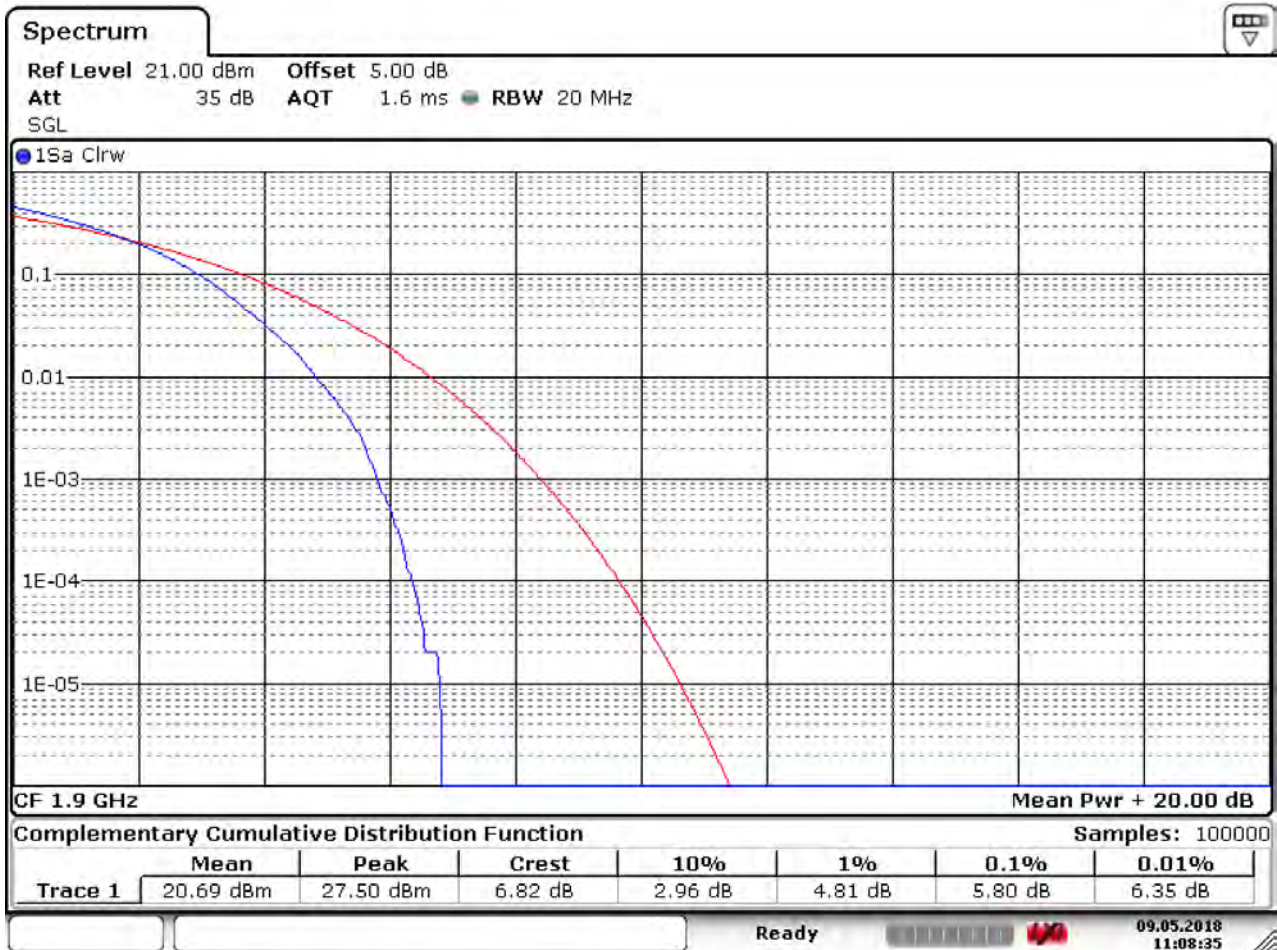
2.1.1.2.2 Test Channel = MCH



Date: 9.MAY.2018 11:08:05



2.1.1.2.3 Test Channel = HCH



Date: 9.MAY.2018 11:08:35



3 Modulation Characteristics

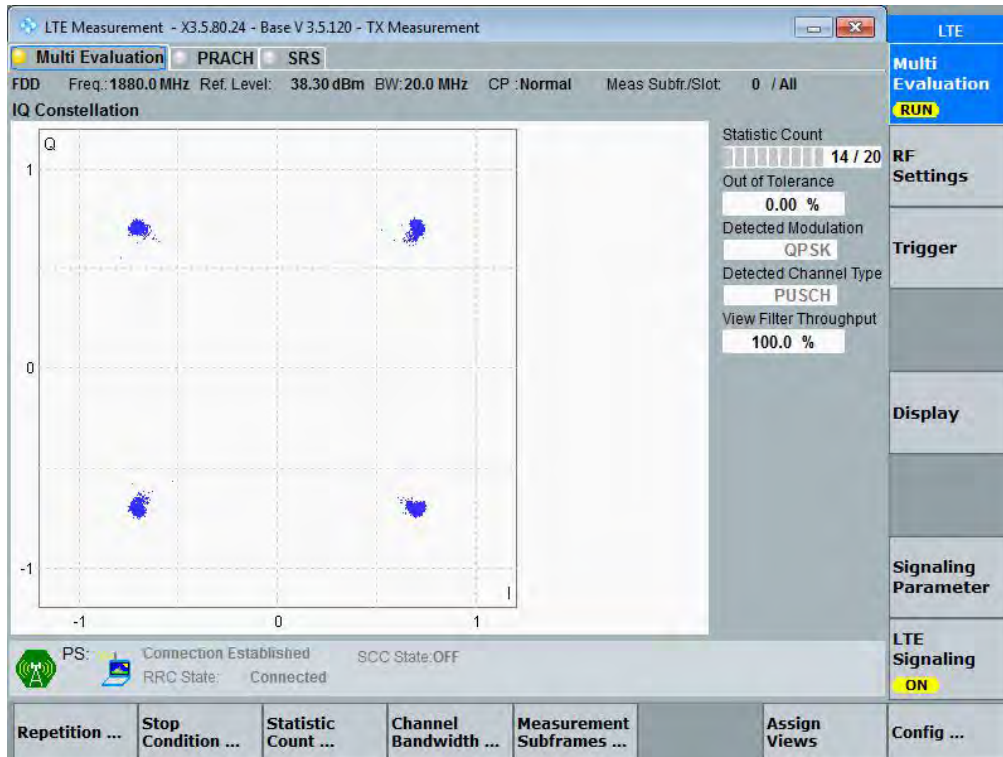
Part I - Test Plots

3.1 For LTE

3.1.1 Test Band = LTE band2

3.1.1.1 Test Mode = LTE /TM1 20MHz

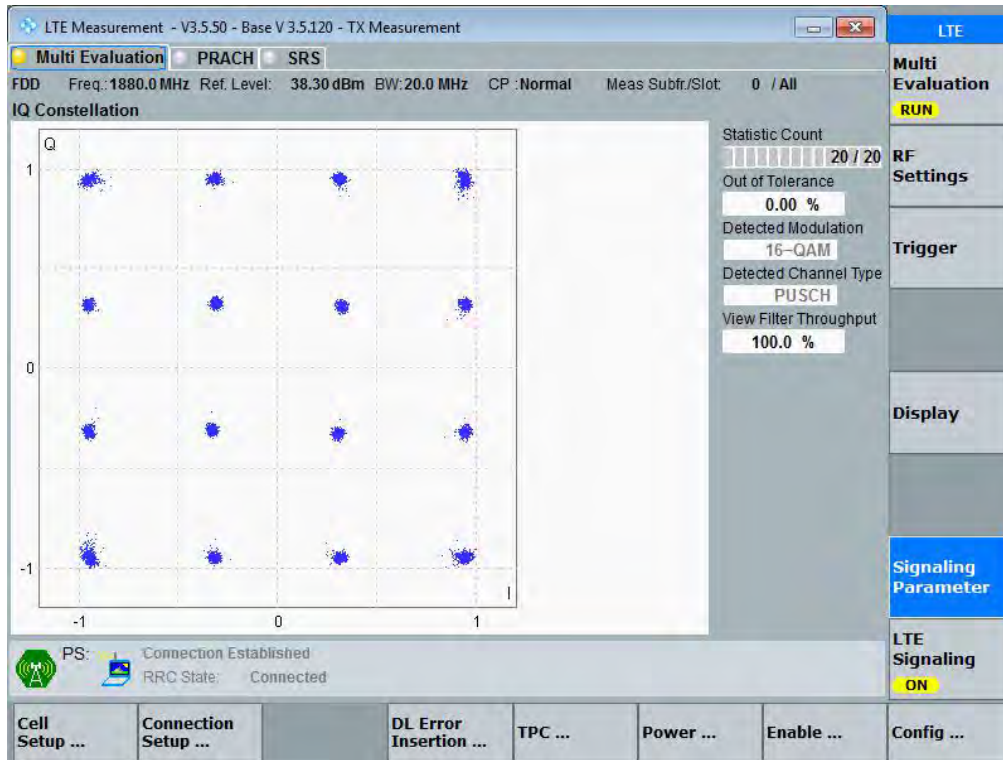
3.1.1.1.1 Test Channel = MCH





3.1.1.2 Test Mode = LTE /TM2 20MHz

3.1.1.2.1 Test Channel = MCH





4 Bandwidth

Part I - Test Results

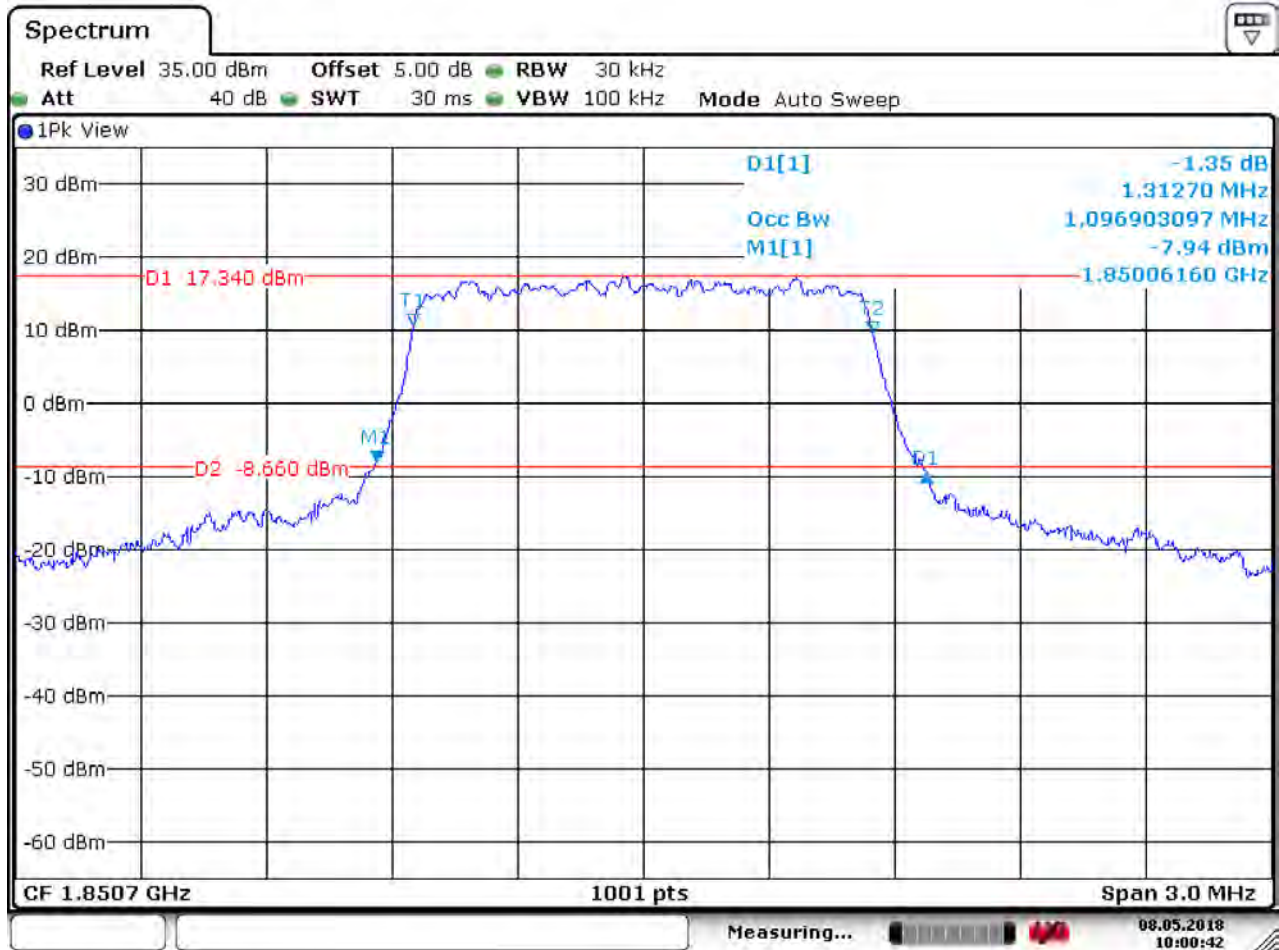
Test Band	Test Mode	Test Channel	Occupied Bandwidth [MHz]	Emission Bandwidth [MHz]	Verdict
Band 2	TM1/1.4MHz	LCH	1.10	1.31	PASS
		MCH	1.10	1.28	PASS
		HCH	1.10	1.31	PASS
	TM2/1.4MHz	LCH	1.10	1.31	PASS
		MCH	1.10	1.29	PASS
		HCH	1.10	1.31	PASS
	TM1/ 3MHz	LCH	2.68	2.87	PASS
		MCH	2.68	2.85	PASS
		HCH	2.68	2.87	PASS
	TM2/3MHz	LCH	2.67	2.85	PASS
		MCH	2.67	2.87	PASS
		HCH	2.67	2.87	PASS
	TM1/ 5MHz	LCH	4.48	5.08	PASS
		MCH	4.49	5.04	PASS
		HCH	4.48	5.03	PASS
	TM2/ 5MHz	LCH	4.49	5.08	PASS
		MCH	4.48	4.97	PASS
		HCH	4.50	5.05	PASS
	TM1/10MHz	LCH	8.95	9.85	PASS
		MCH	8.93	9.79	PASS
		HCH	8.97	9.91	PASS
	TM2/ 10MHz	LCH	8.93	9.91	PASS
		MCH	8.97	9.85	PASS
		HCH	8.95	9.73	PASS
TM1/ 15MHz	LCH	13.52	15.26	PASS	
	MCH	13.46	15.11	PASS	
	HCH	13.49	15.05	PASS	
TM2/ 15MHz	LCH	13.52	15.08	PASS	
	MCH	13.52	15.02	PASS	
	HCH	13.52	15.05	PASS	
TM1/ 20MHz	LCH	17.98	19.94	PASS	
	MCH	17.90	19.54	PASS	
	HCH	17.90	19.50	PASS	
TM2/ 20MHz	LCH	17.94	19.70	PASS	
	MCH	17.90	19.66	PASS	
	HCH	17.94	19.78	PASS	

4.1 For LTE

4.1.1 Test Band = LTE band2

4.1.1.1 Test Mode = LTE/TM1 1.4MHz

4.1.1.1.1 Test Channel = LCH



Date: 8.MAY.2018 10:00:42



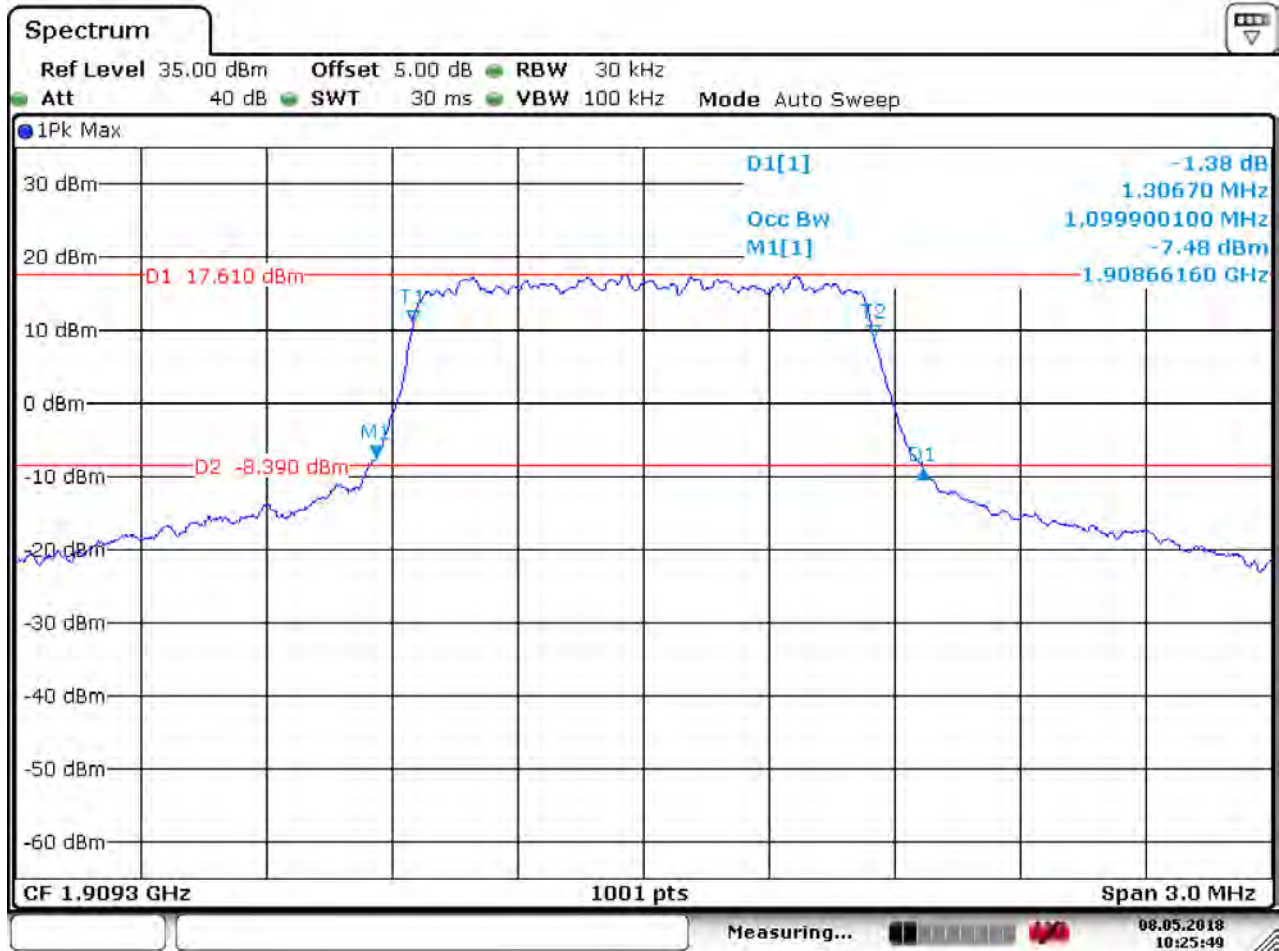
4.1.1.1.2 Test Channel = MCH



Date: 8.MAY.2018 10:15:30

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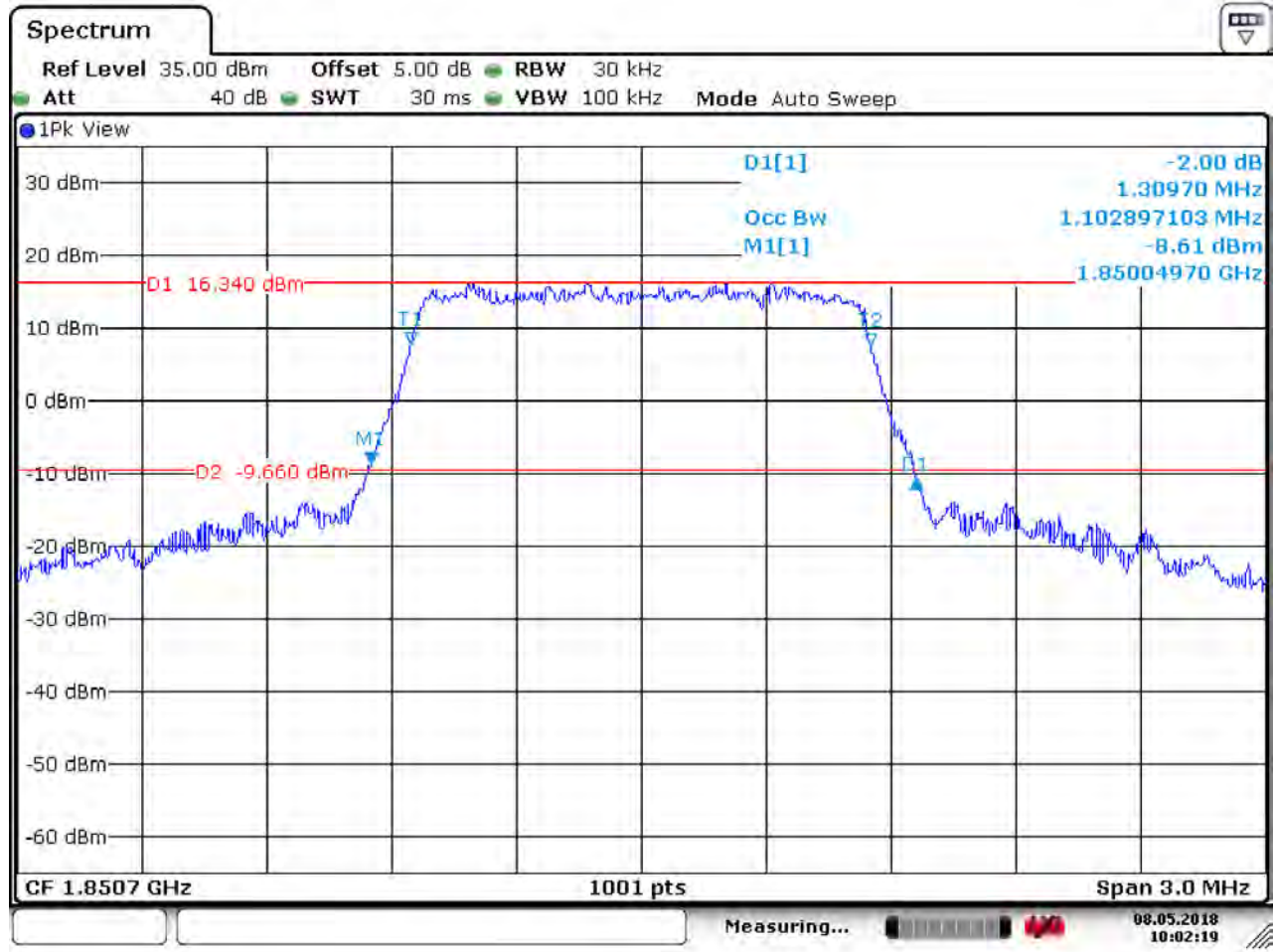
4.1.1.1.3 Test Channel = HCH



Date: 8.MAY.2018 10:25:49

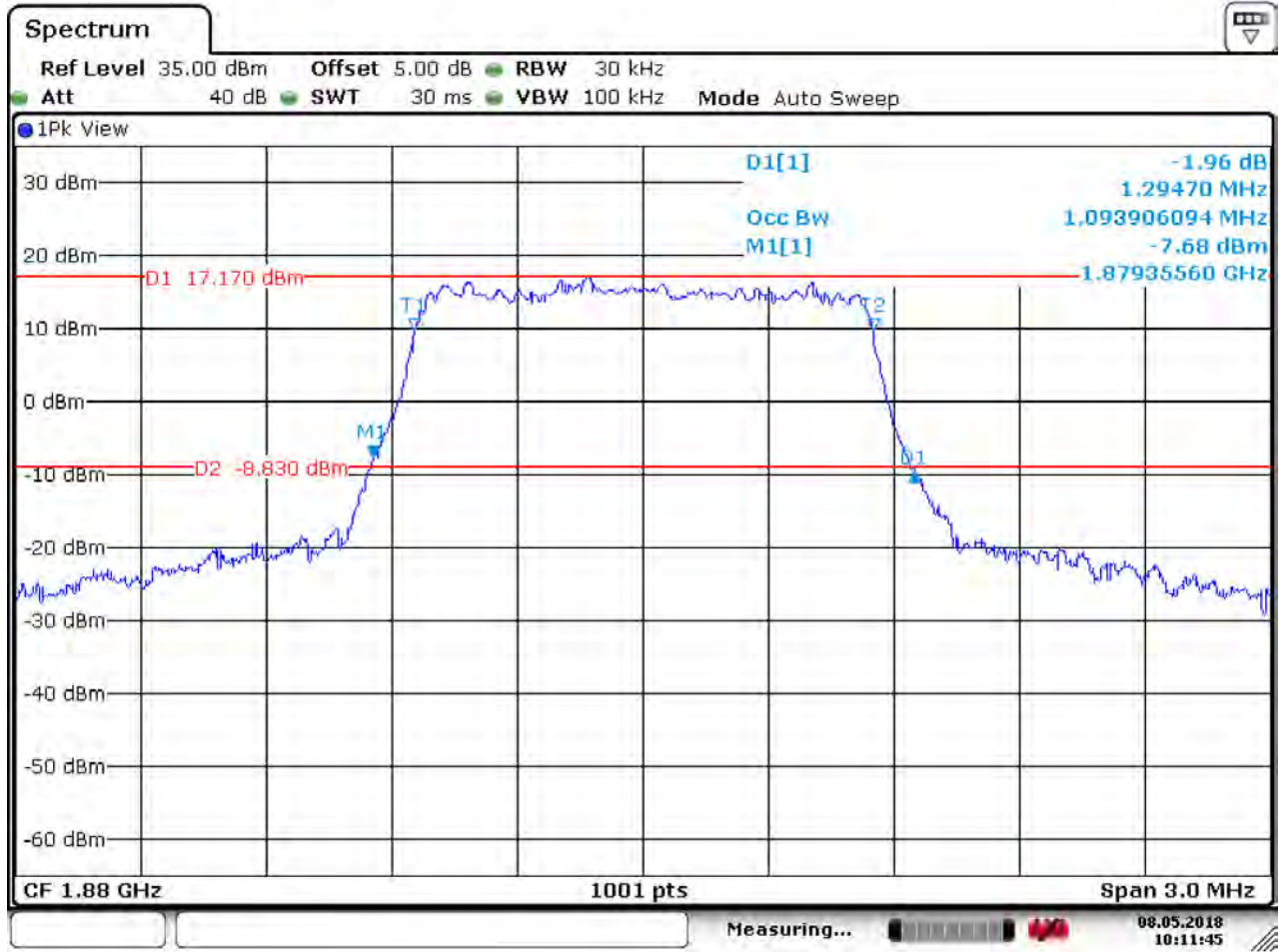
4.1.1.2 Test Mode = LTE/TM2 1.4MHz

4.1.1.2.1 Test Channel = LCH



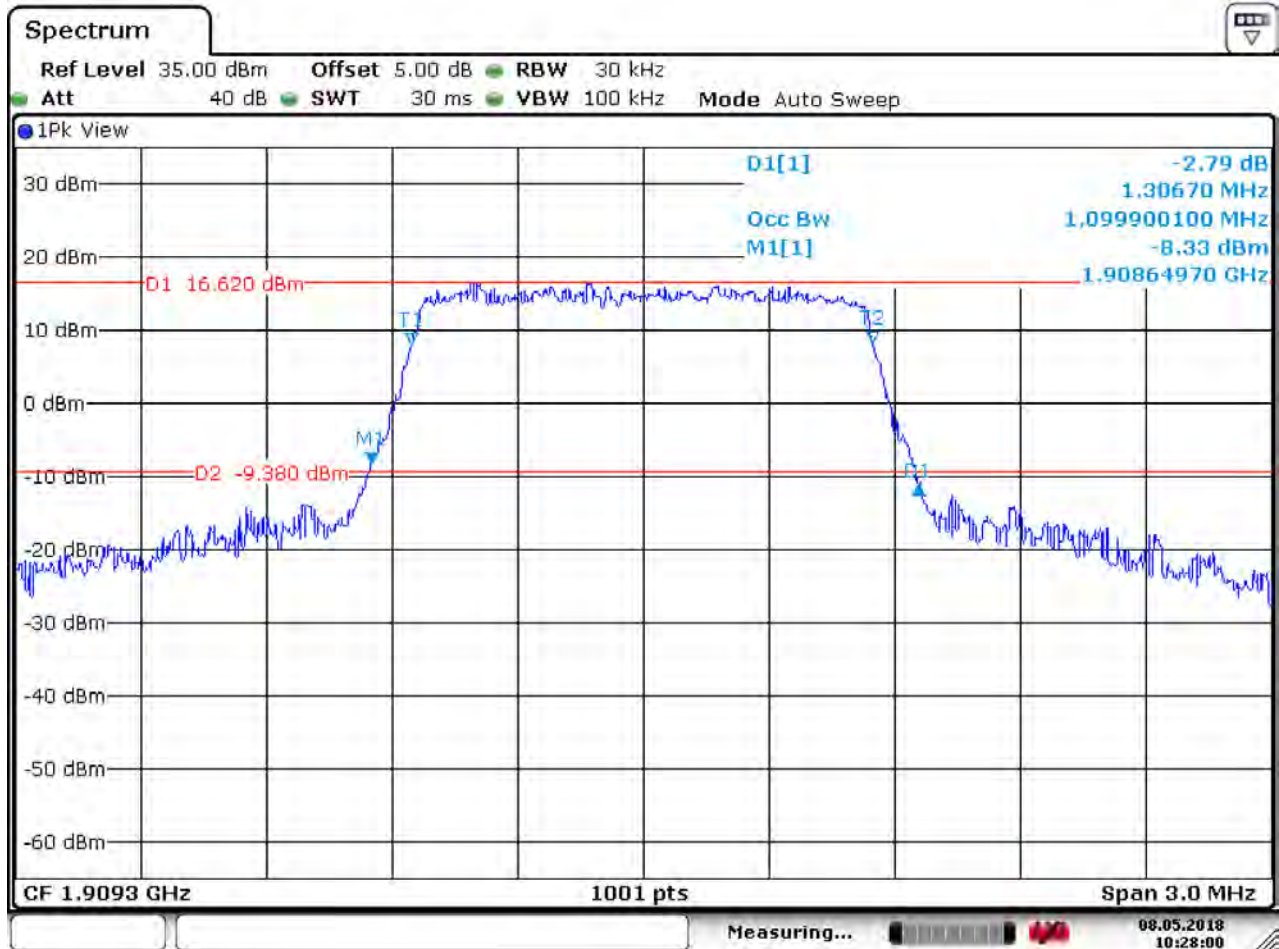
Date: 8.MAY.2018 10:02:20

4.1.1.2.2 Test Channel = MCH



Date: 8.MAY.2018 10:11:46

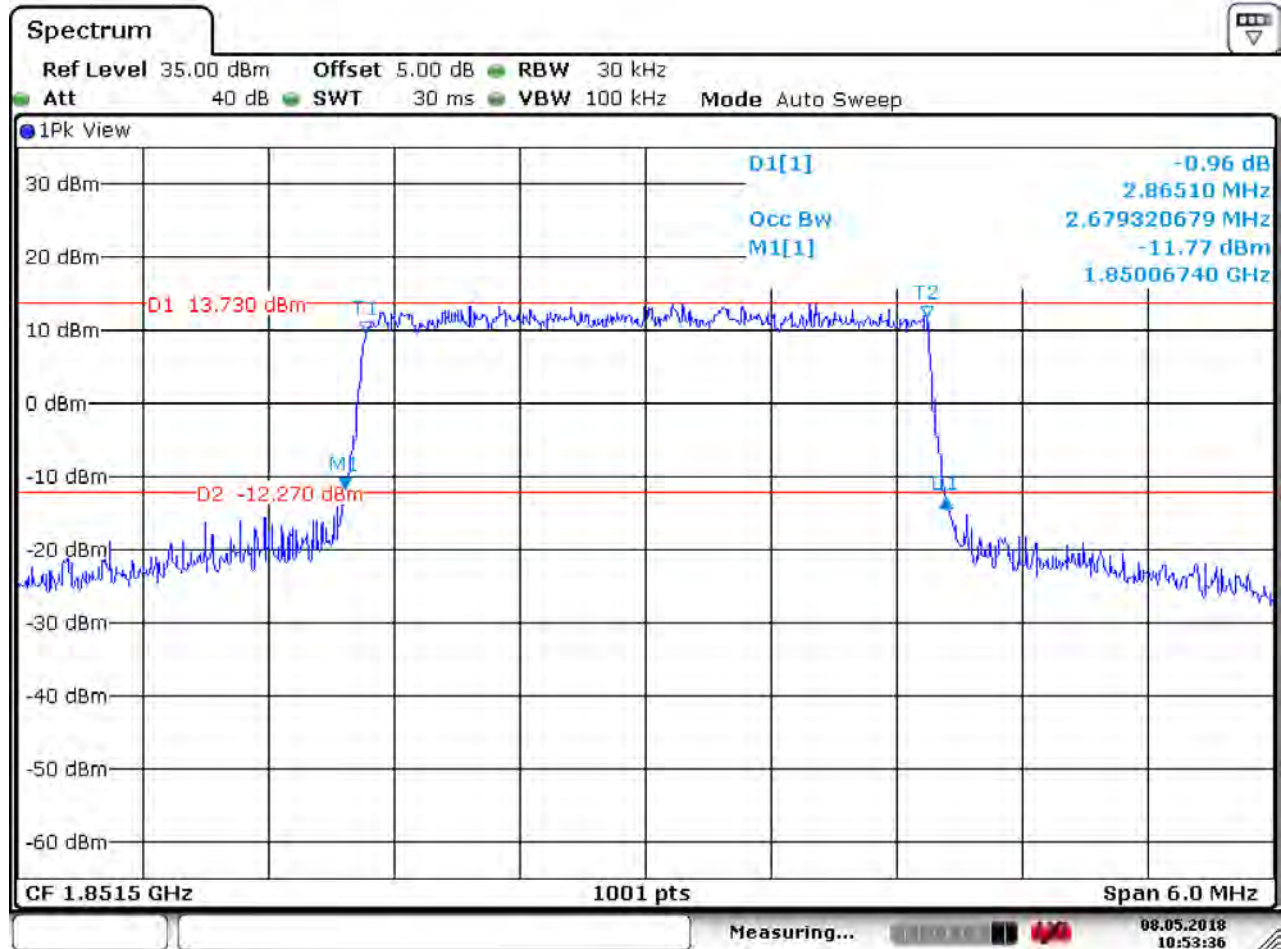
4.1.1.2.3 Test Channel = HCH



Date: 8.MAY.2018 10:28:01

4.1.1.3 Test Mode = LTE/TM1 3MHz

4.1.1.3.1 Test Channel = LCH

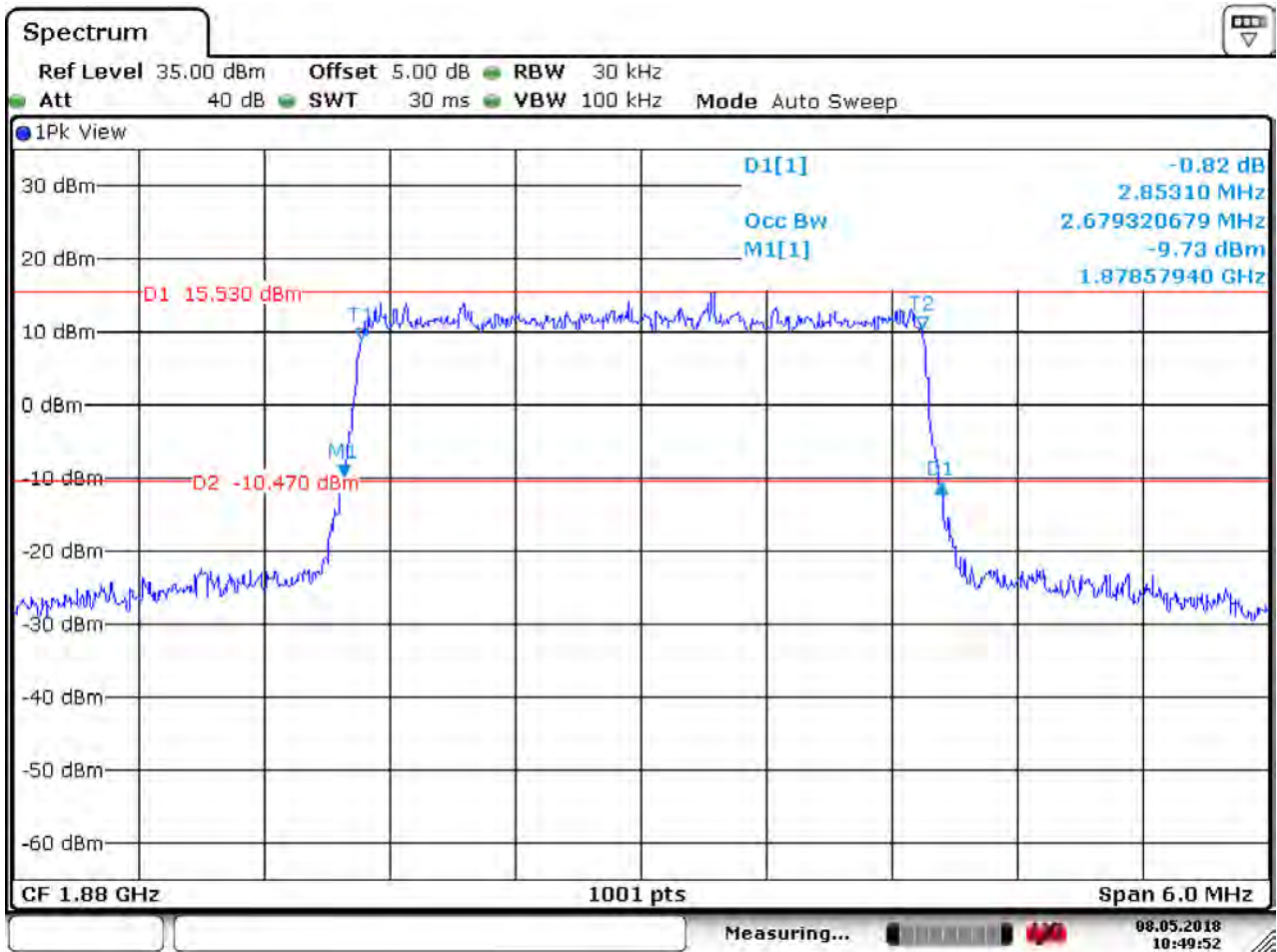


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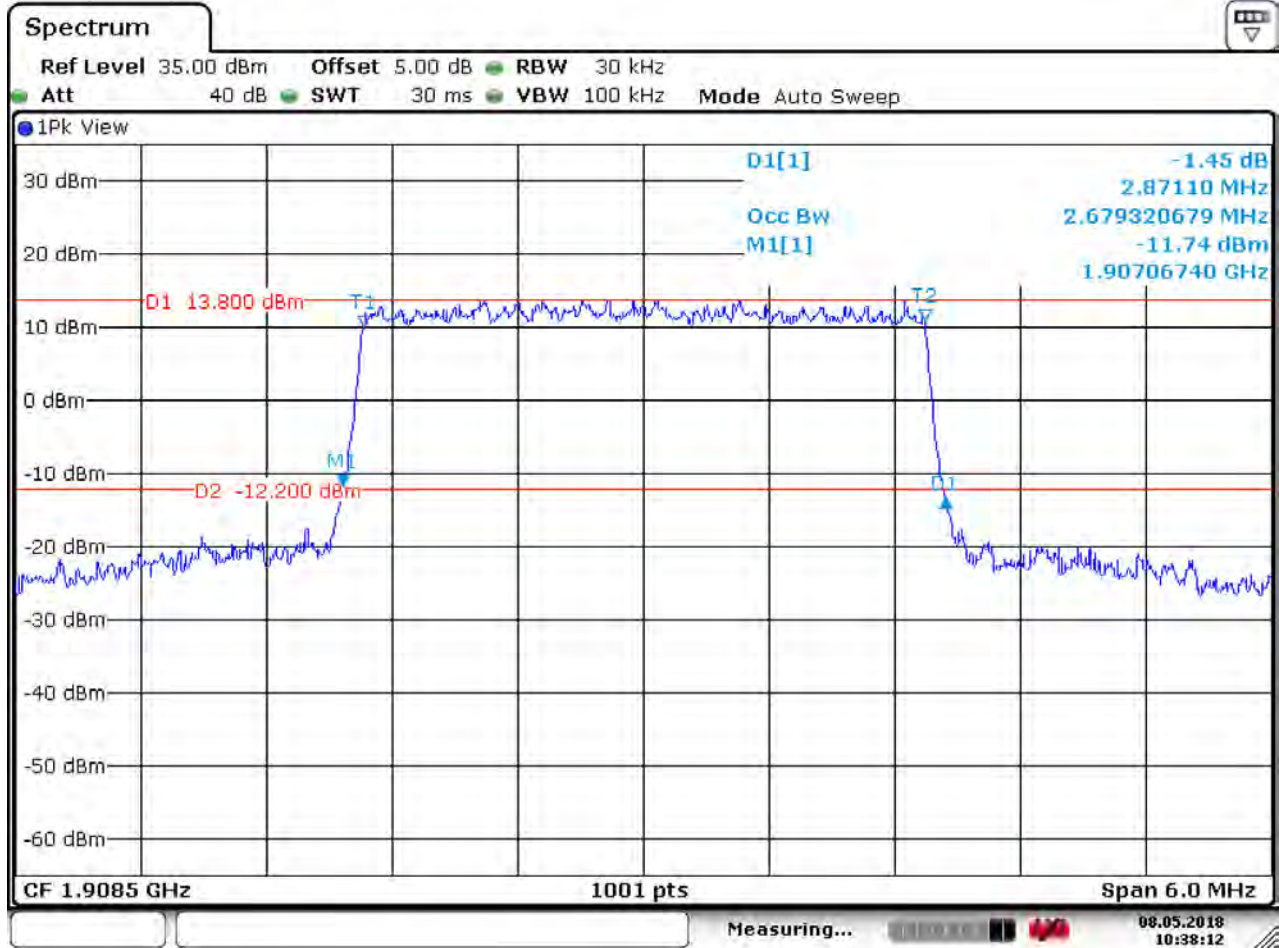


4.1.1.3.2 Test Channel = MCH



Date: 8.MAY.2018 10:49:52

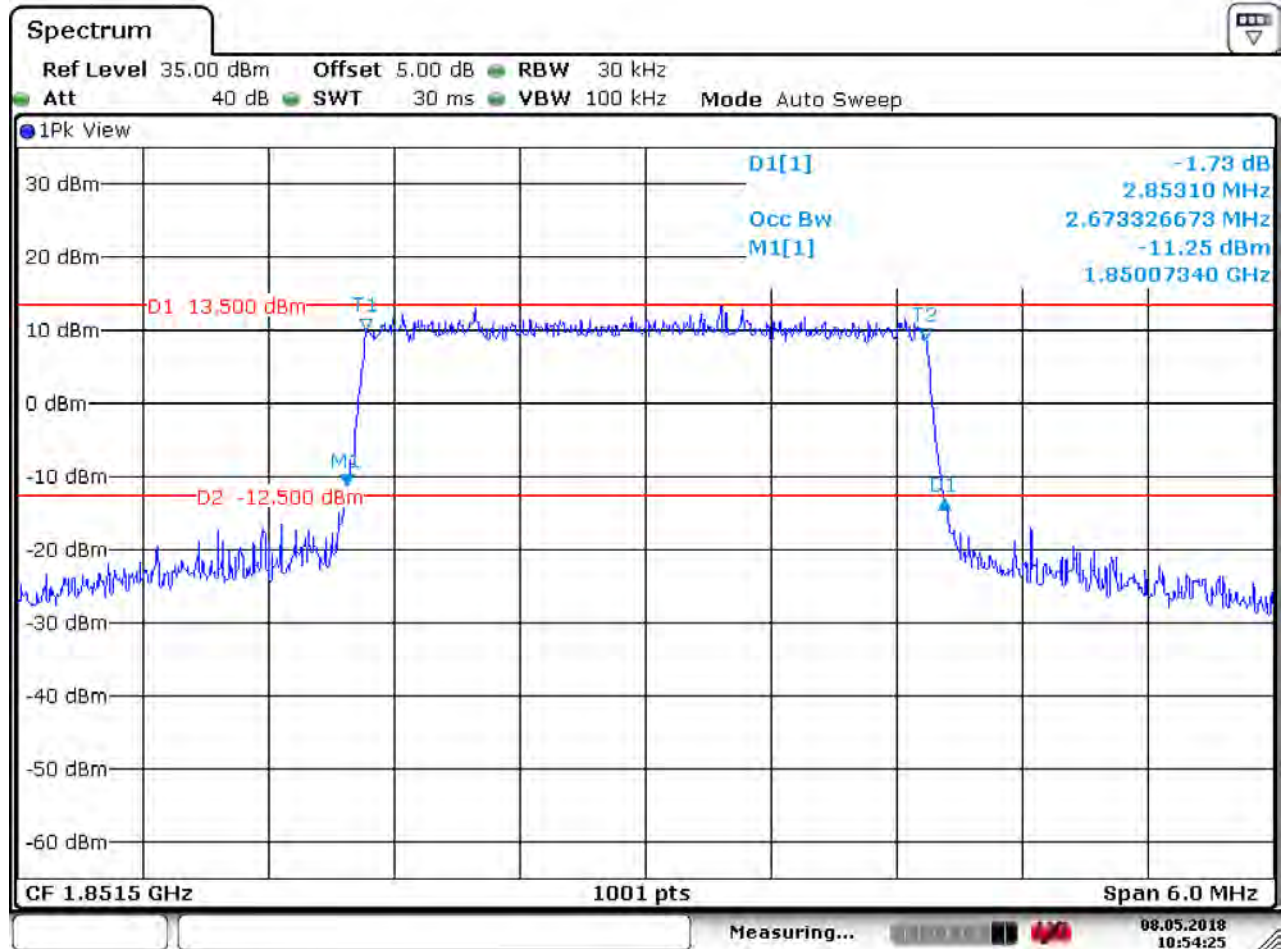
4.1.1.3.3 Test Channel = HCH



Date: 8.MAY.2018 10:38:12

4.1.1.4 Test Mode = LTE/TM2 3MHz

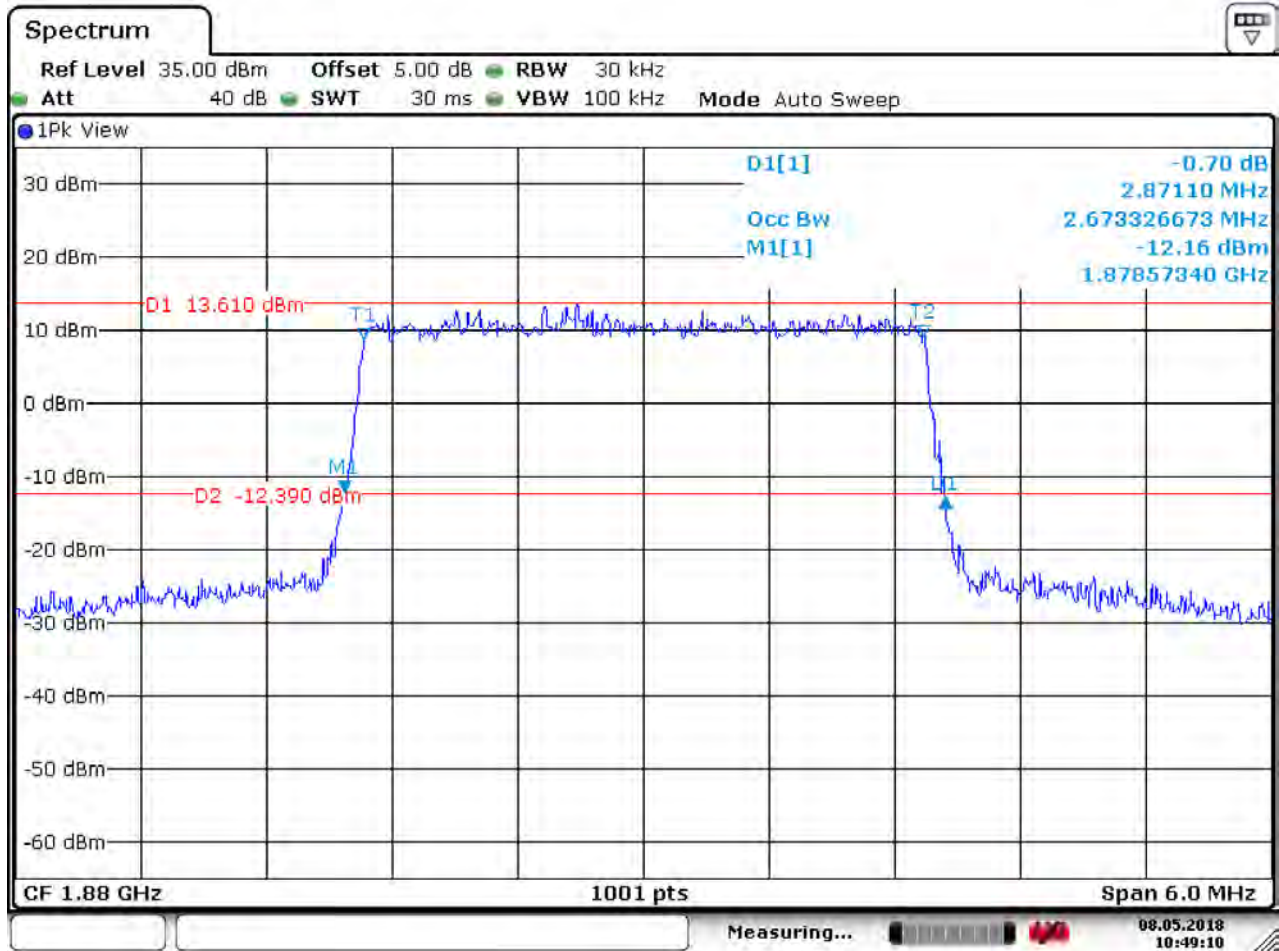
4.1.1.4.1 Test Channel = LCH



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4.1.1.4.2 Test Channel = MCH

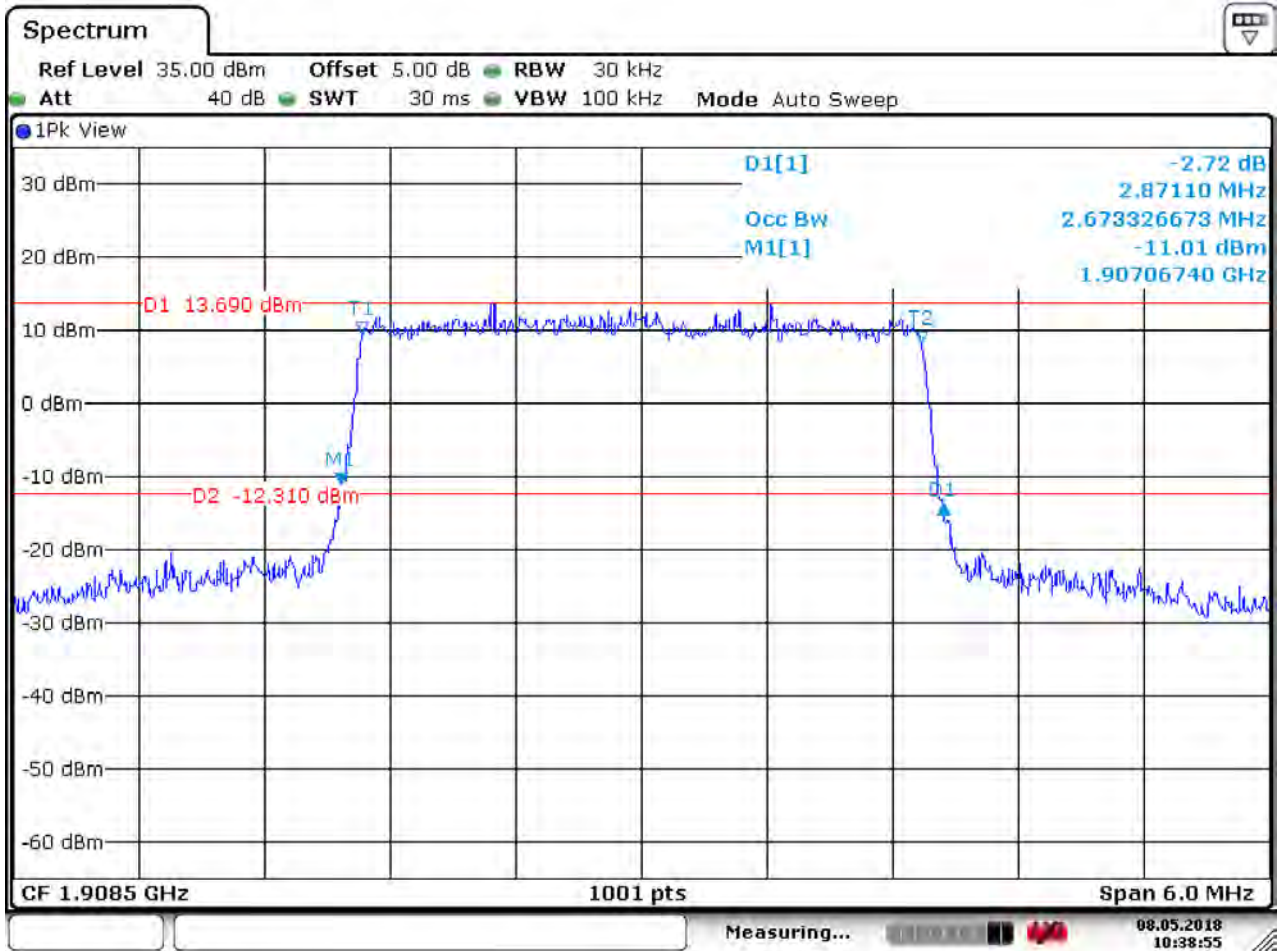


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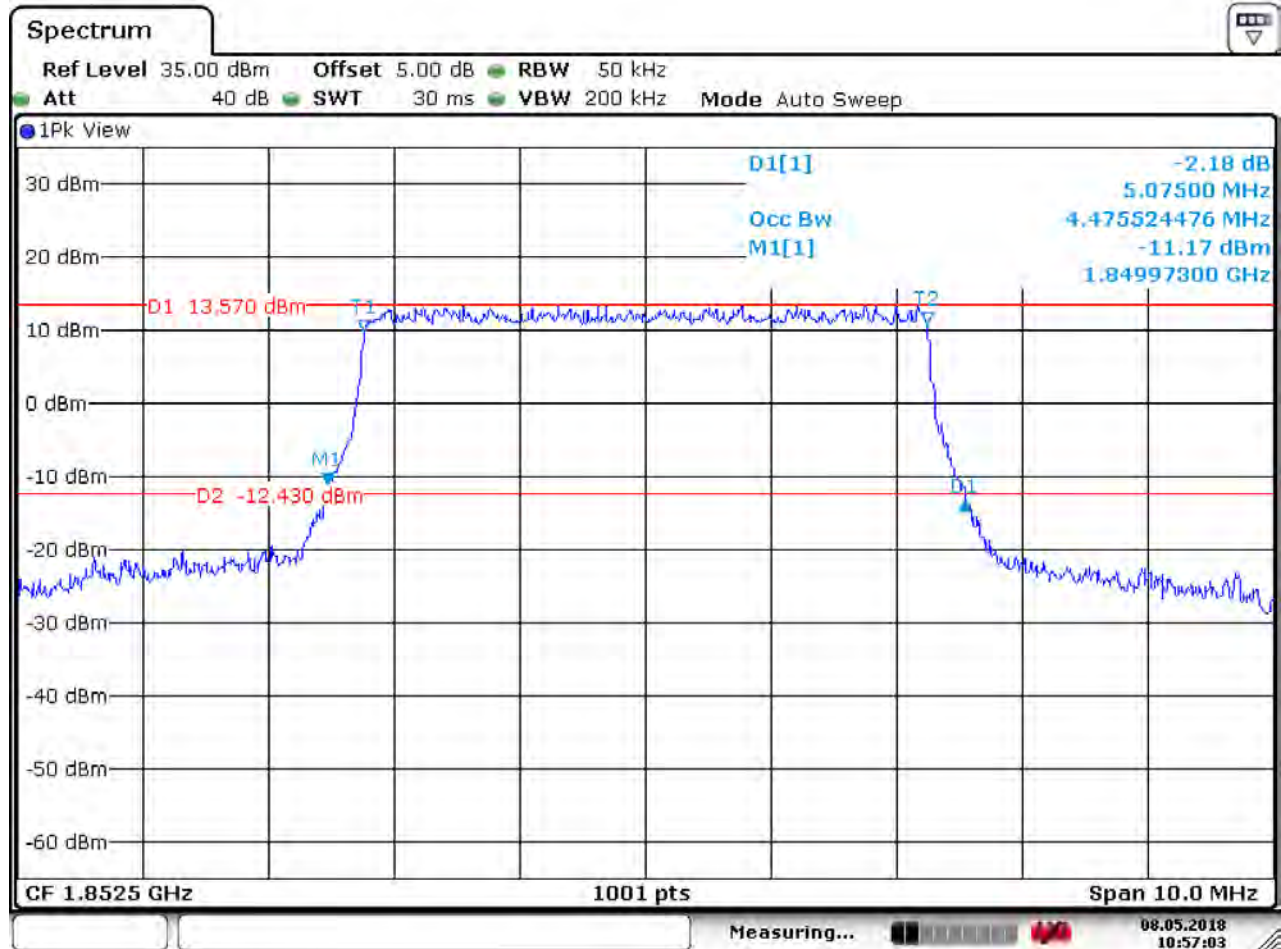
4.1.1.4.3 Test Channel = HCH



Date: 8.MAY.2018 10:38:55

4.1.1.5 Test Mode = LTE/TM1 5MHz

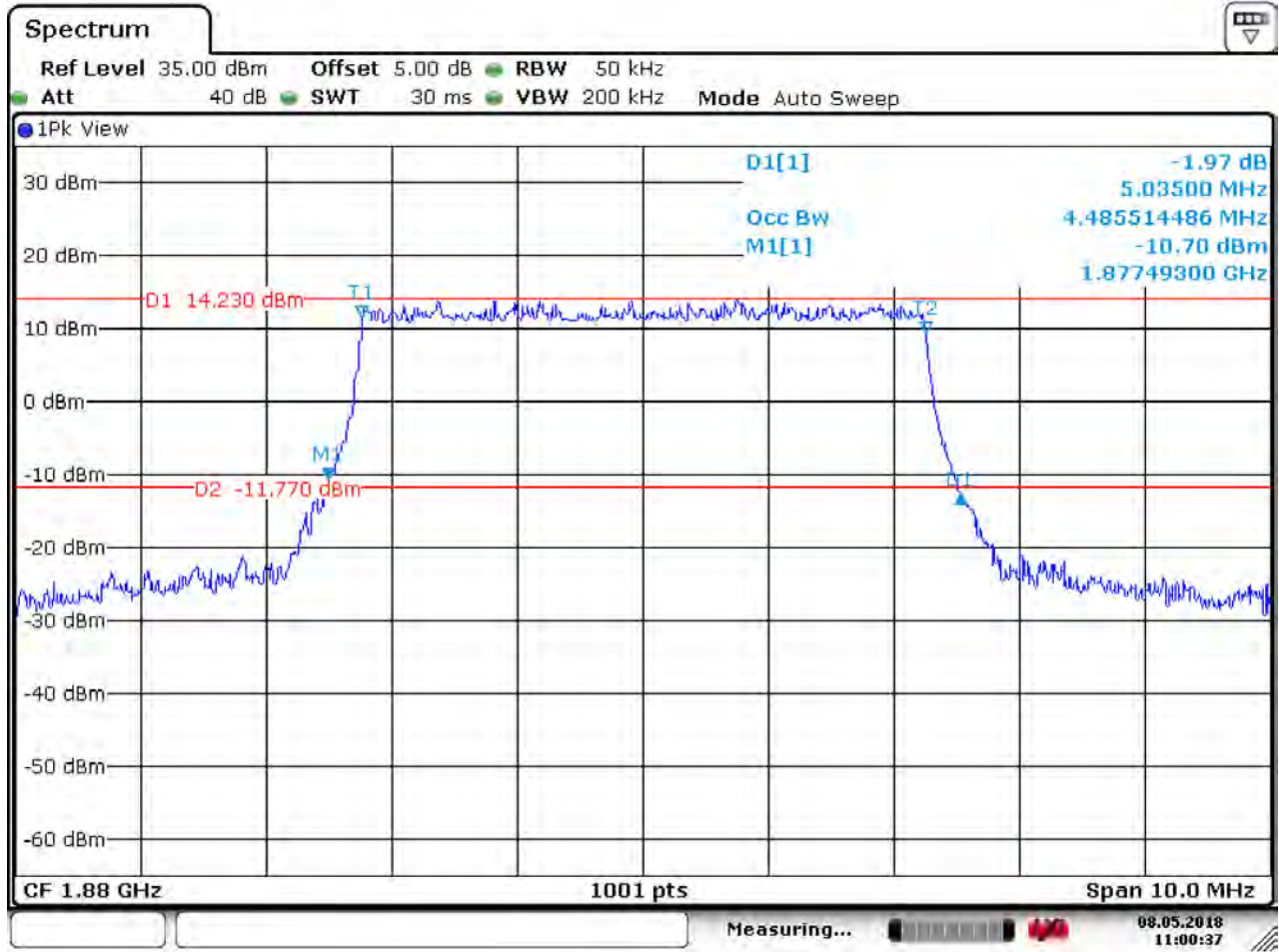
4.1.1.5.1 Test Channel = LCH



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4.1.1.5.2 Test Channel = MCH

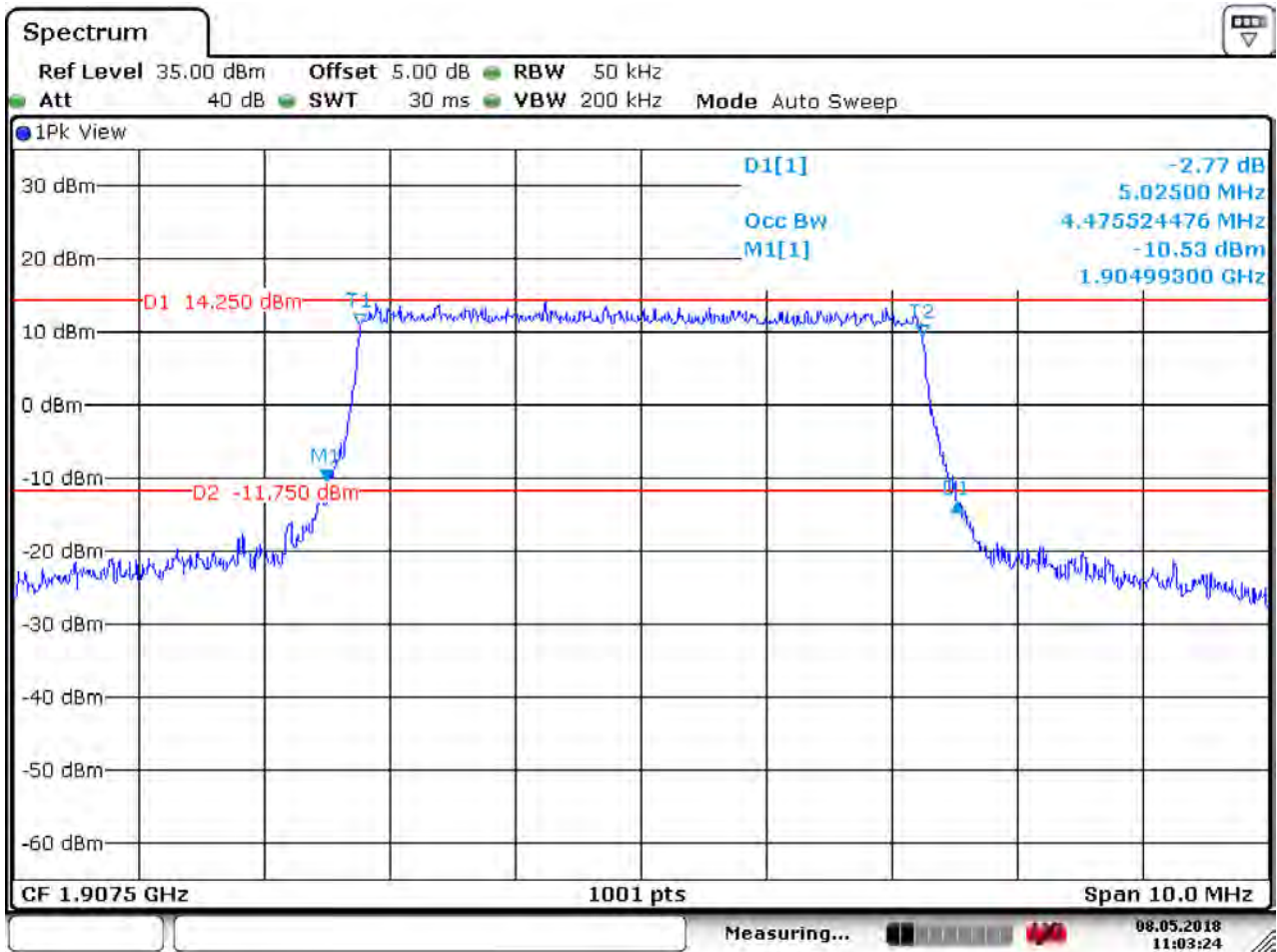


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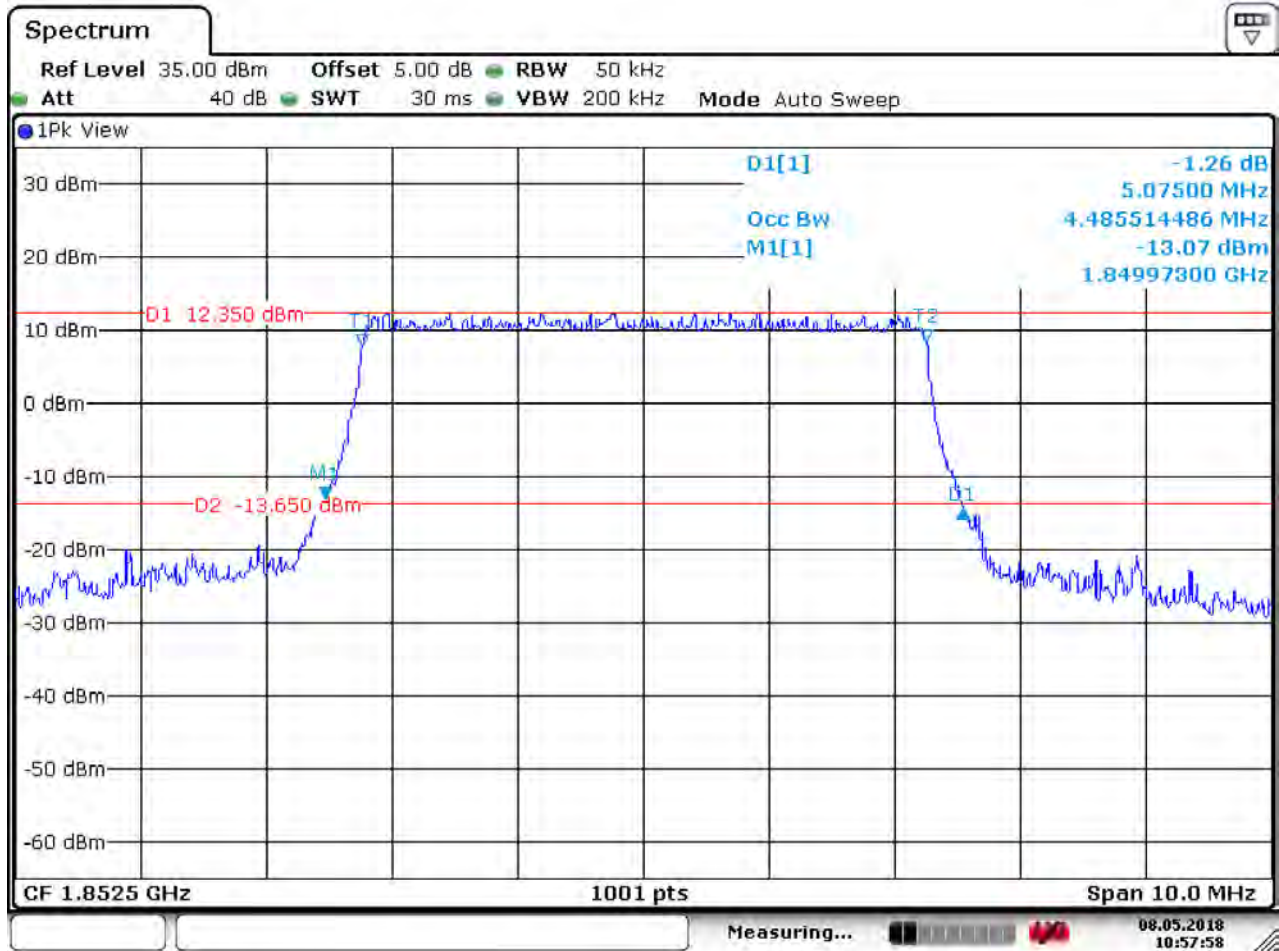
4.1.1.5.3 Test Channel = HCH



Date: 8.MAY.2018 11:03:24

4.1.1.6 Test Mode = LTE/TM2 5MHz

4.1.1.6.1 Test Channel = LCH

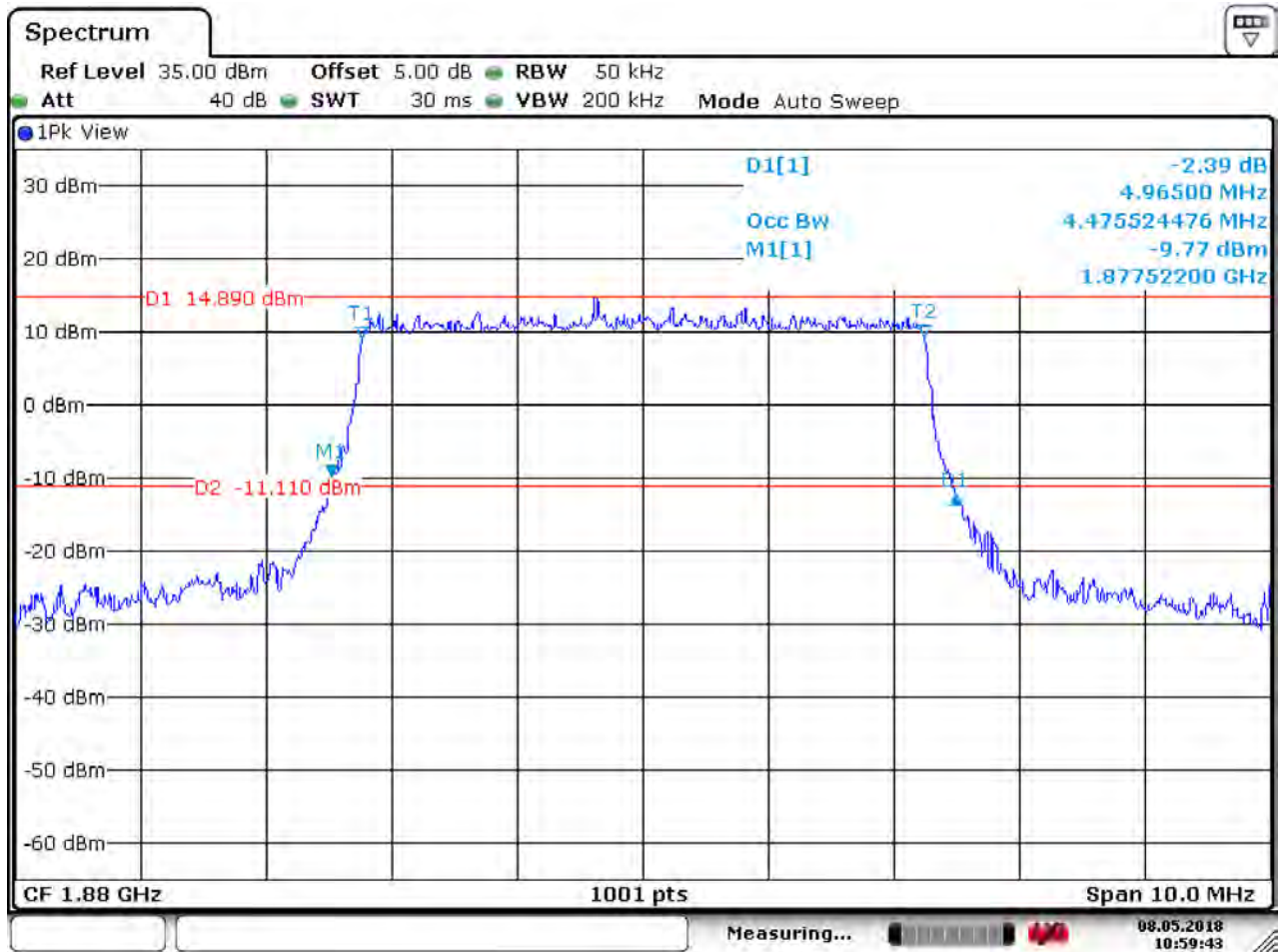


Date: 8.MAY.2018 10:57:59

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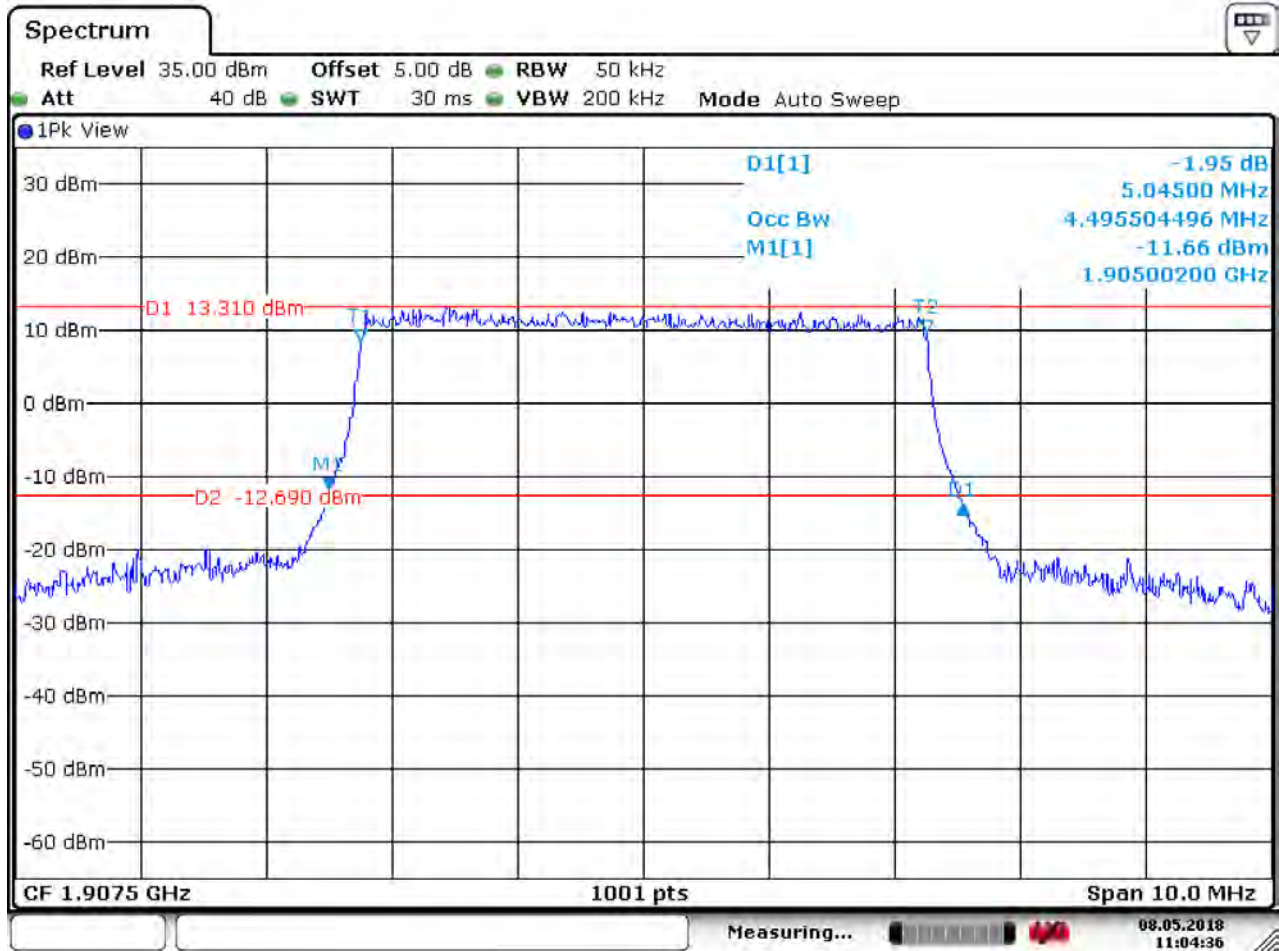


4.1.1.6.2 Test Channel = MCH



Date: 8.MAY.2018 10:59:43

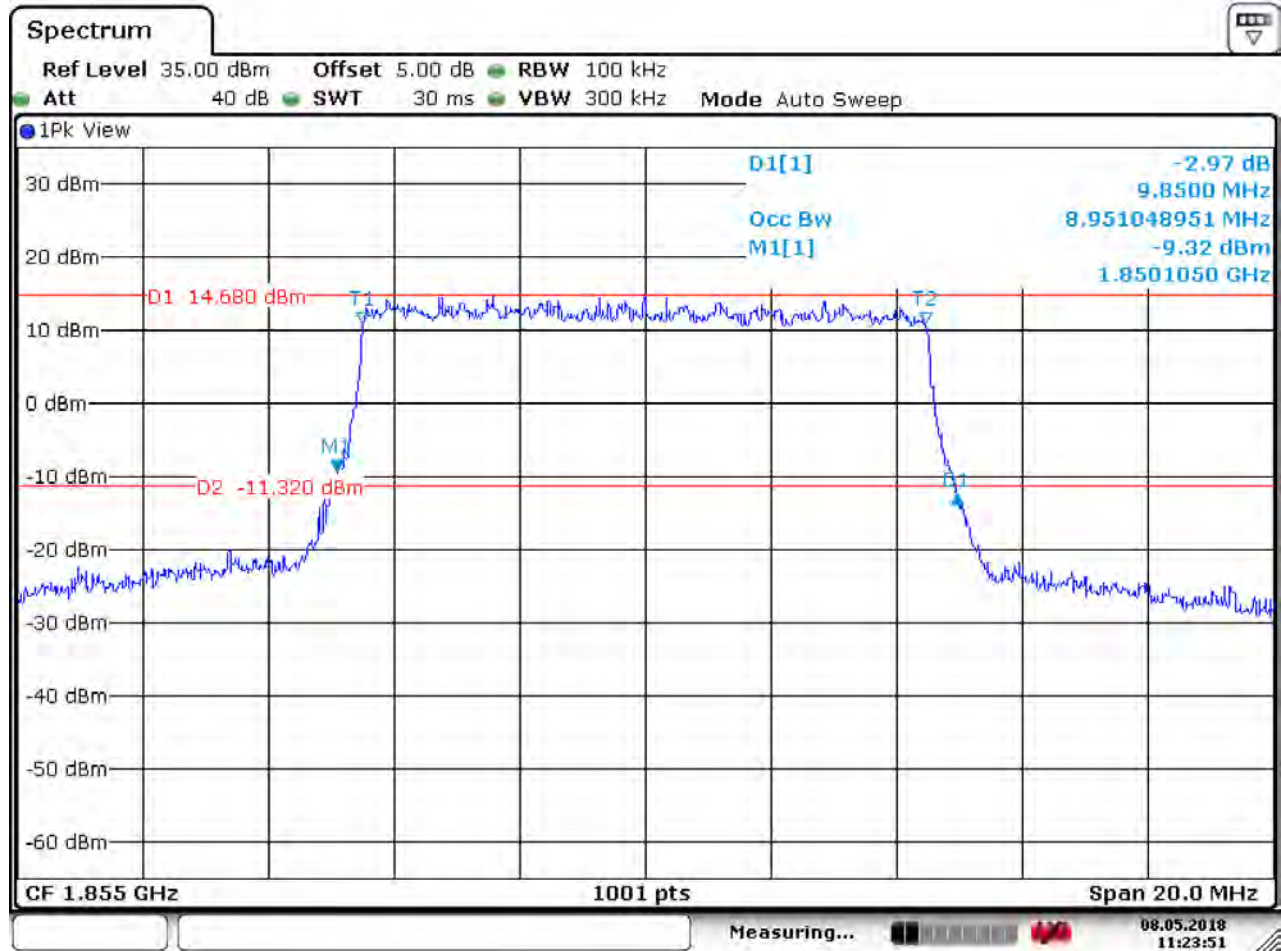
4.1.1.6.3 Test Channel = HCH



Date: 8.MAY.2018 11:04:37

4.1.1.7 Test Mode = LTE/TM1 10MHz

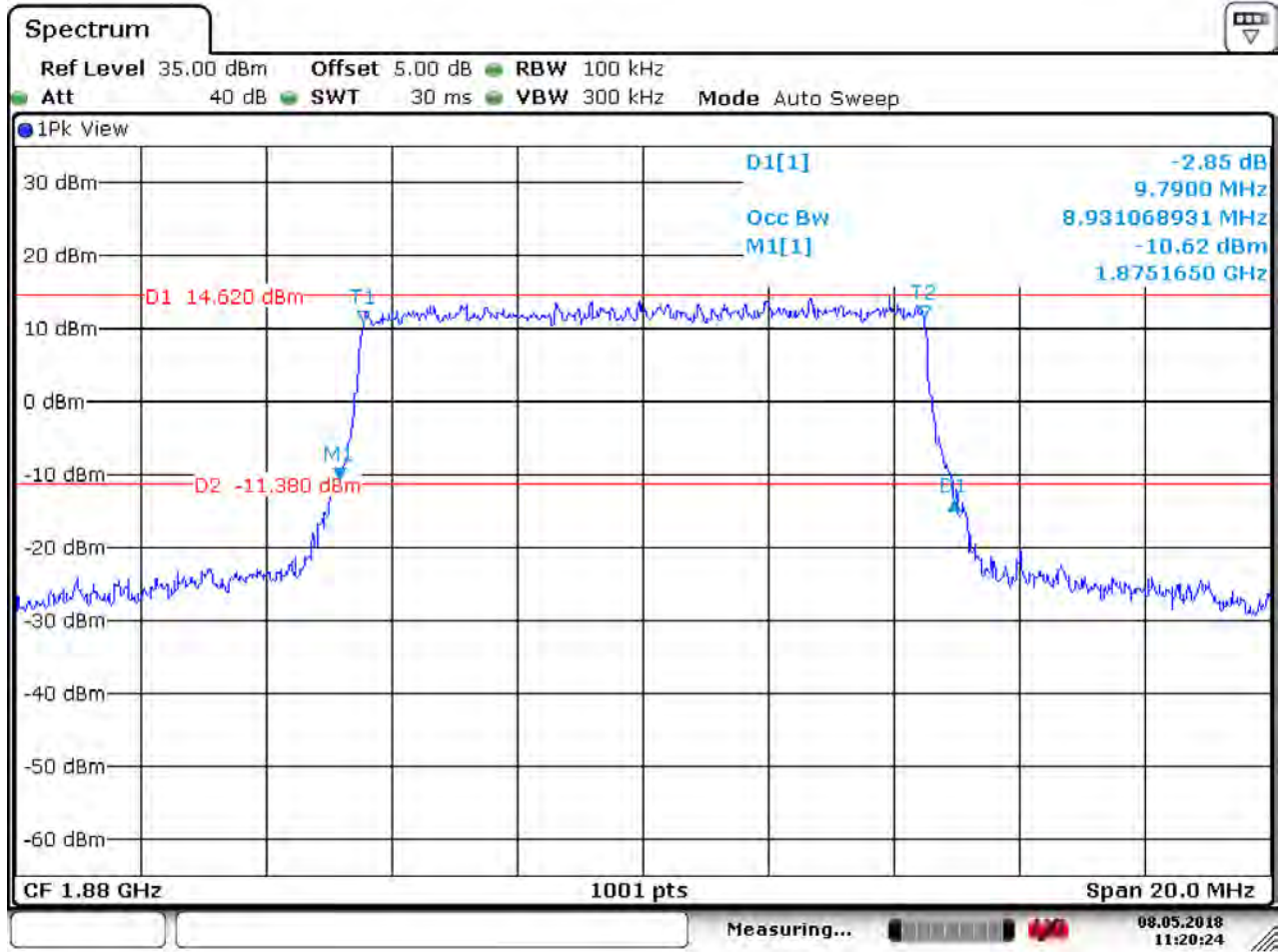
4.1.1.7.1 Test Channel = LCH



Date: 8.MAY.2018 11:23:51

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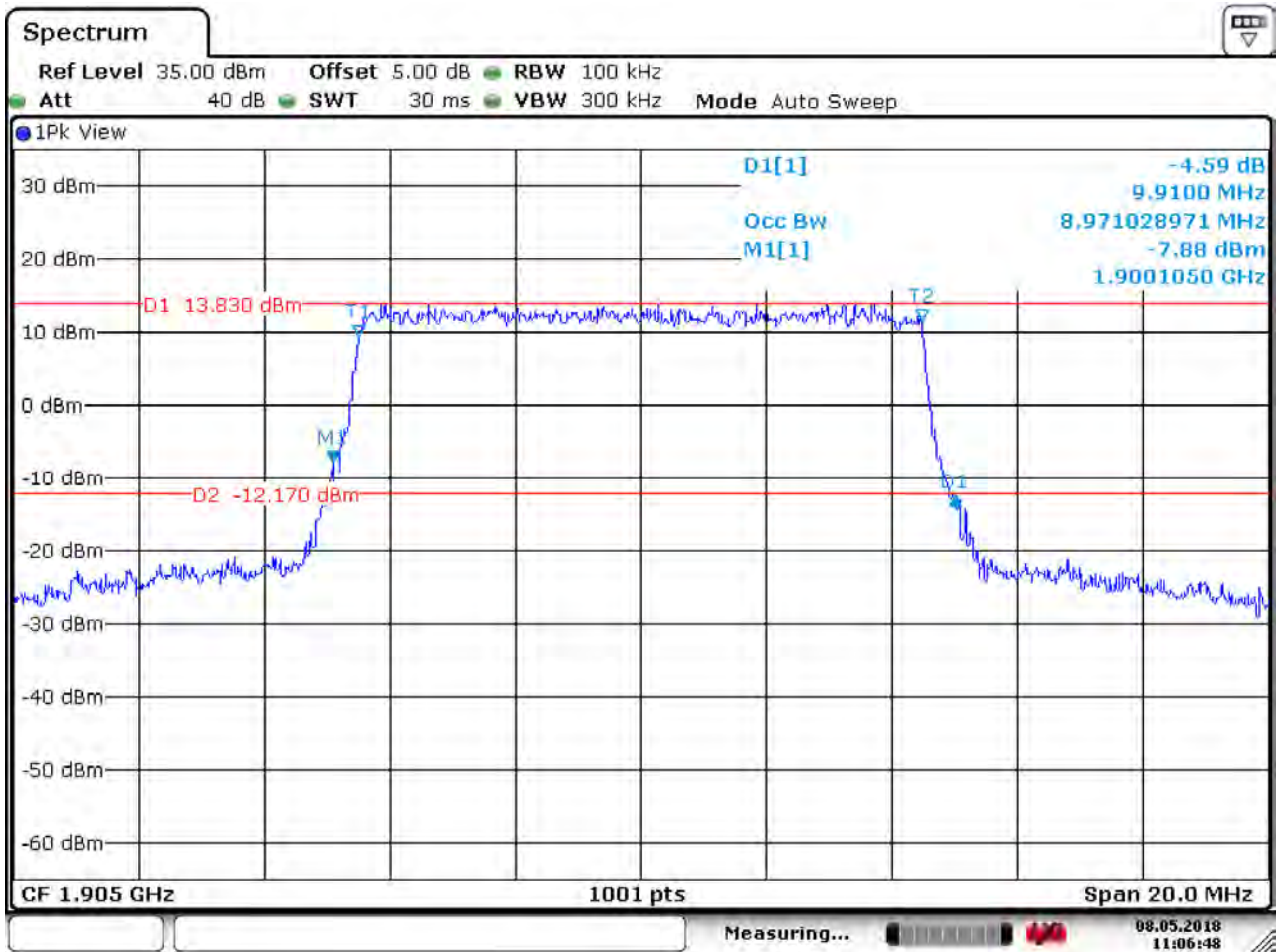
4.1.1.7.2 Test Channel = MCH



Date: 8.MAY.2018 11:20:24



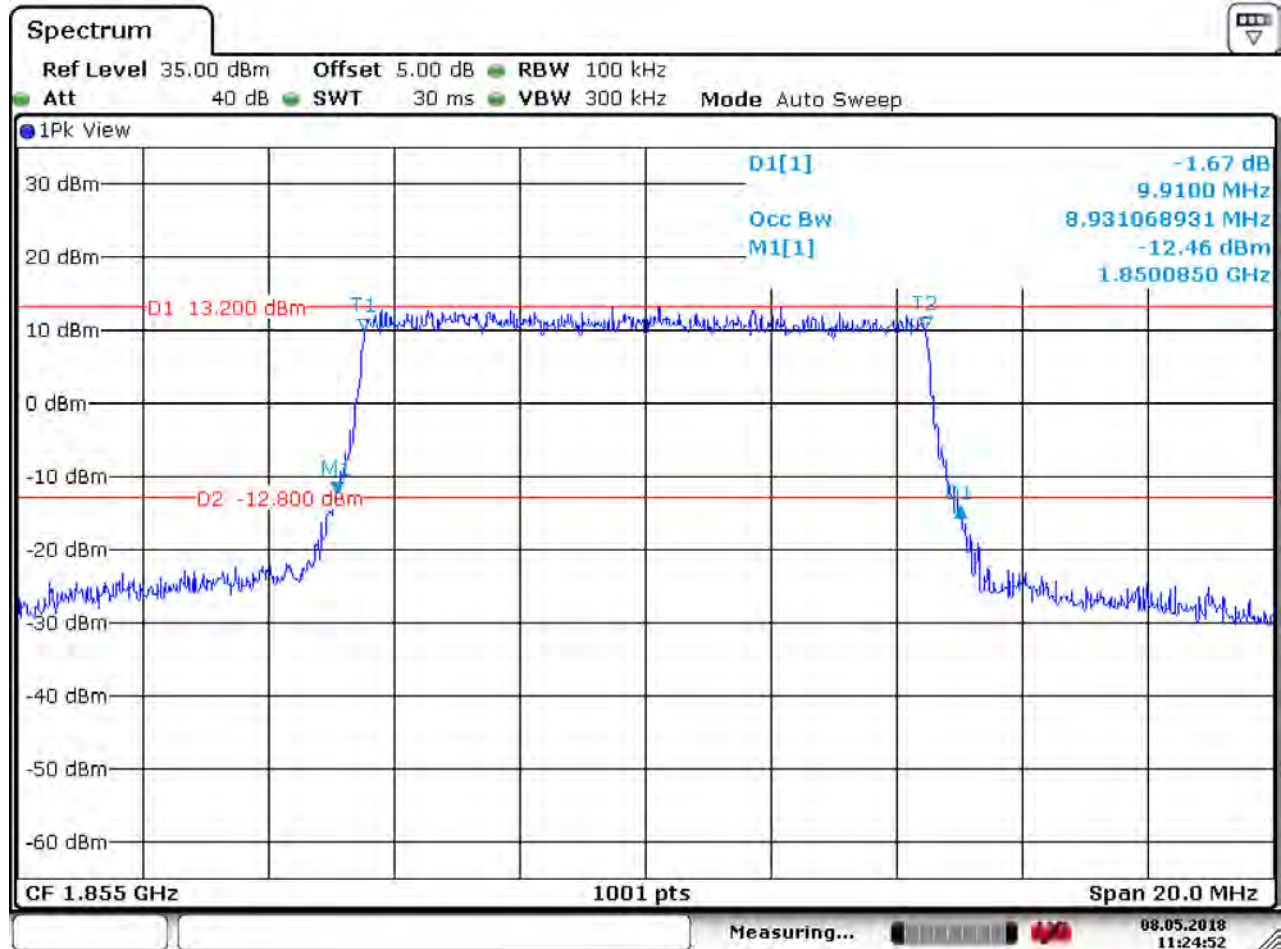
4.1.1.7.3 Test Channel = HCH



Date: 8.MAY.2018 11:06:48

4.1.1.8 Test Mode = LTE/TM2 10MHz

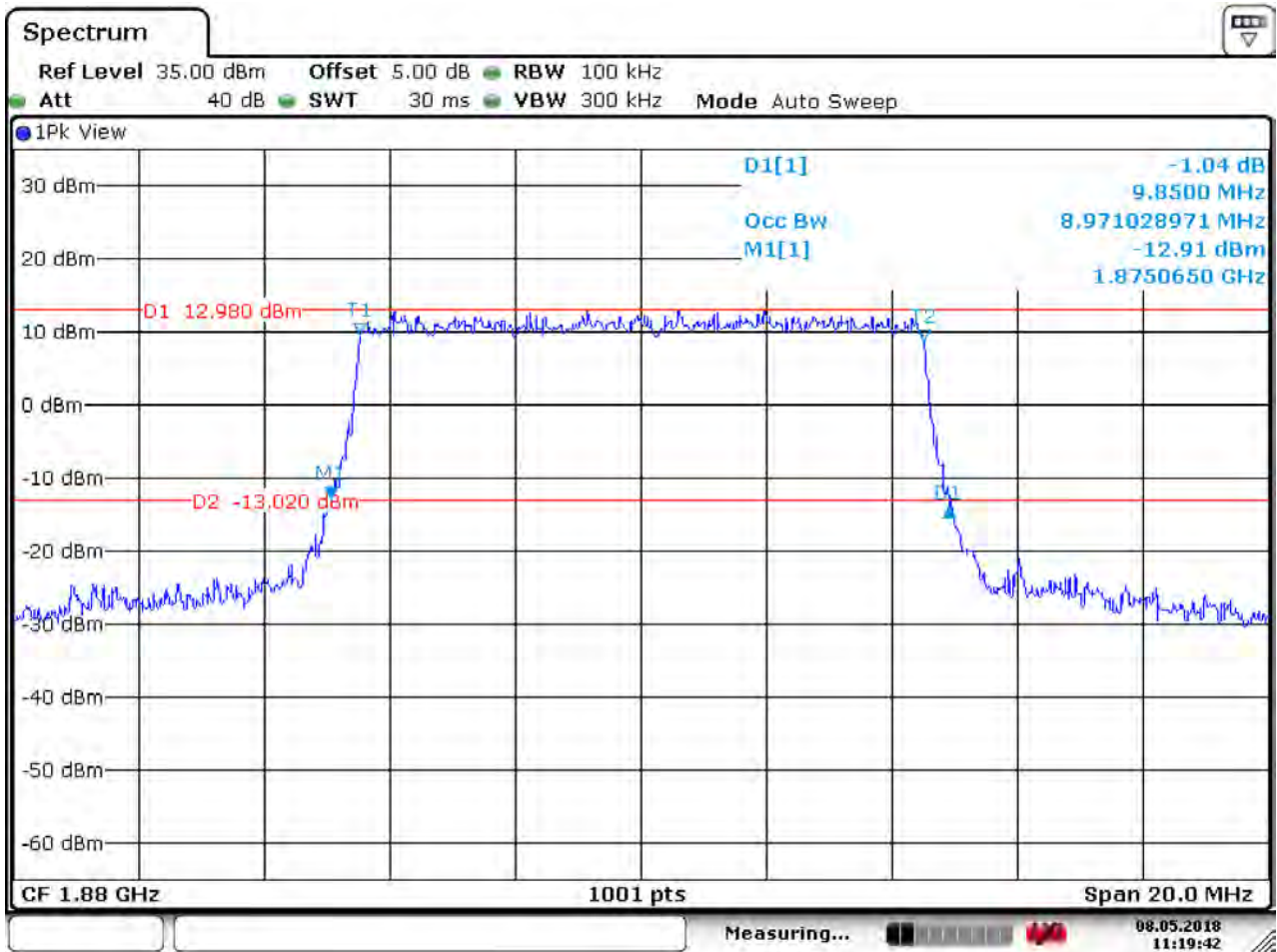
4.1.1.8.1 Test Channel = LCH



Date: 8.MAY.2018 11:24:52

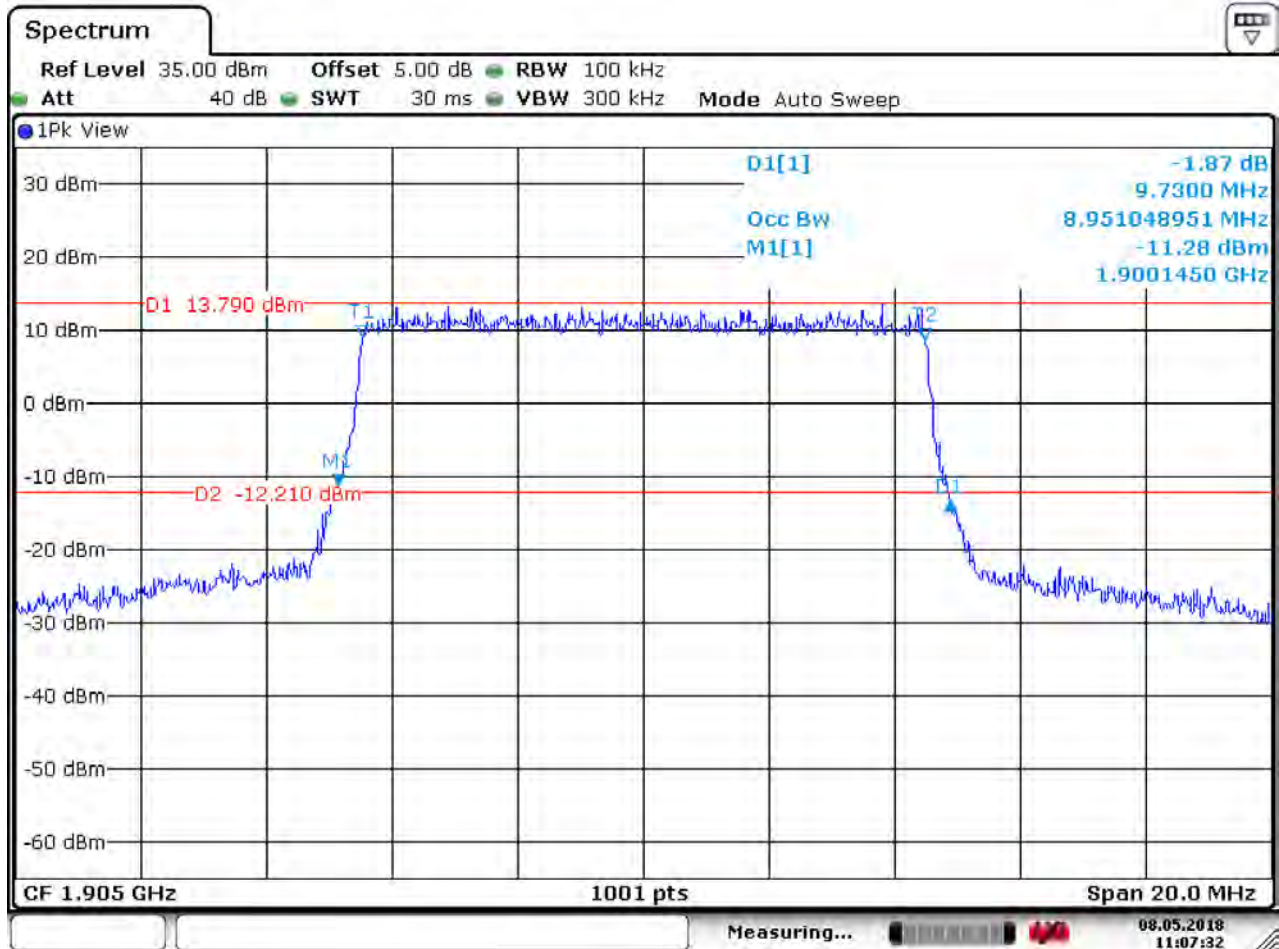


4.1.1.8.2 Test Channel = MCH



Date: 8.MAY.2018 11:19:42

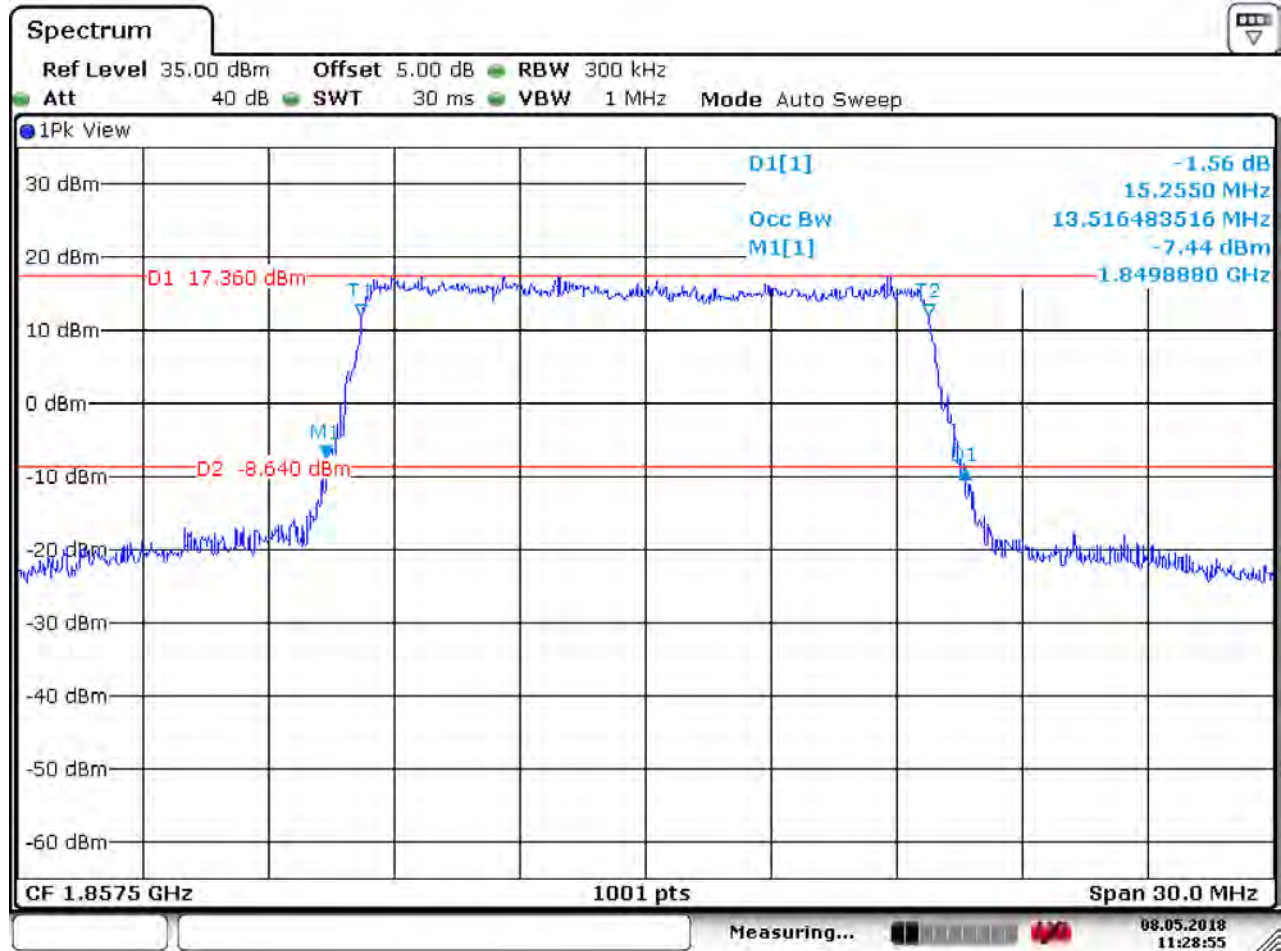
4.1.1.8.3 Test Channel = HCH



Date: 8.MAY.2018 11:07:33

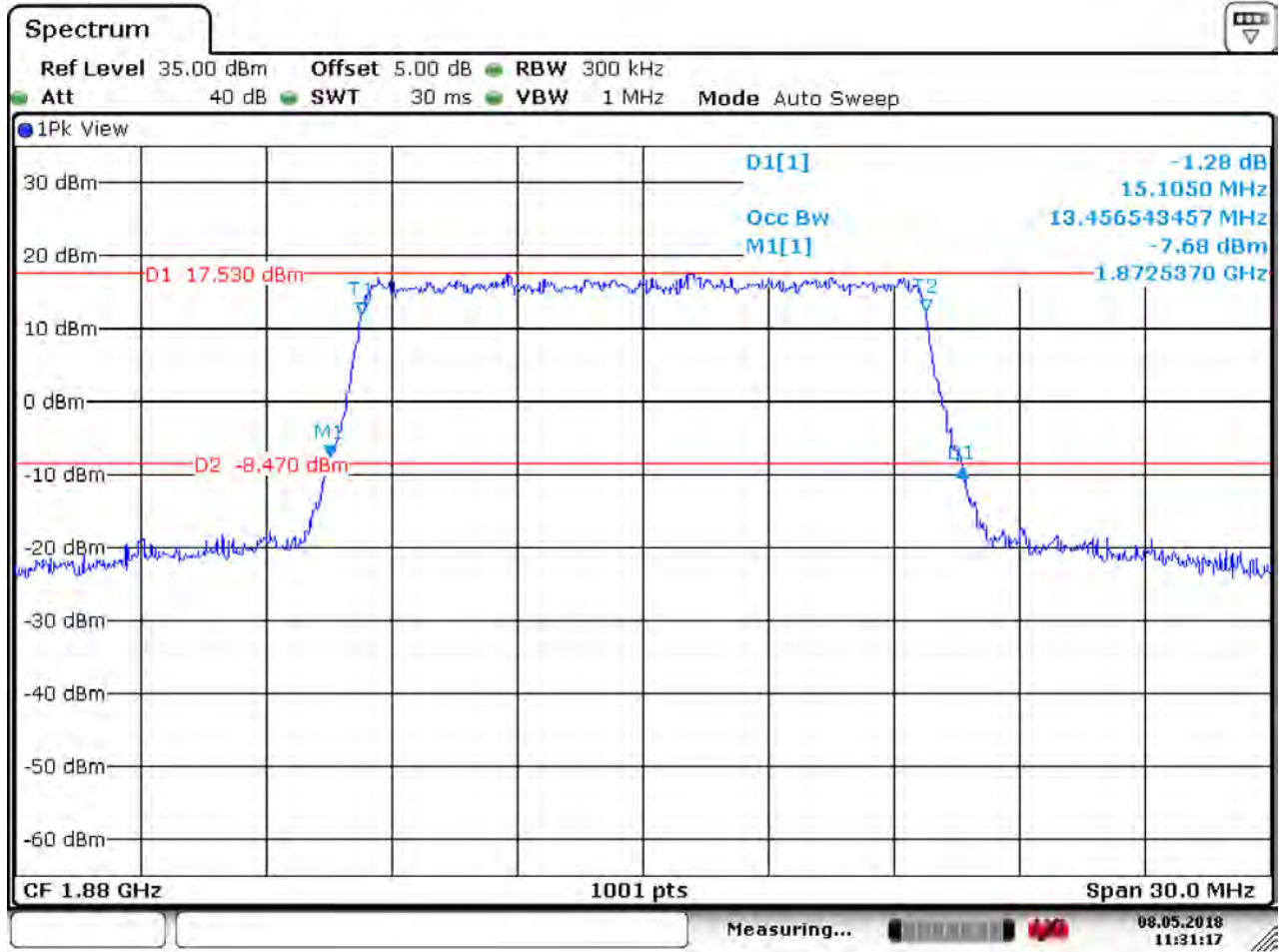
4.1.1.9 Test Mode = LTE/TM1 15MHz

4.1.1.9.1 Test Channel = LCH



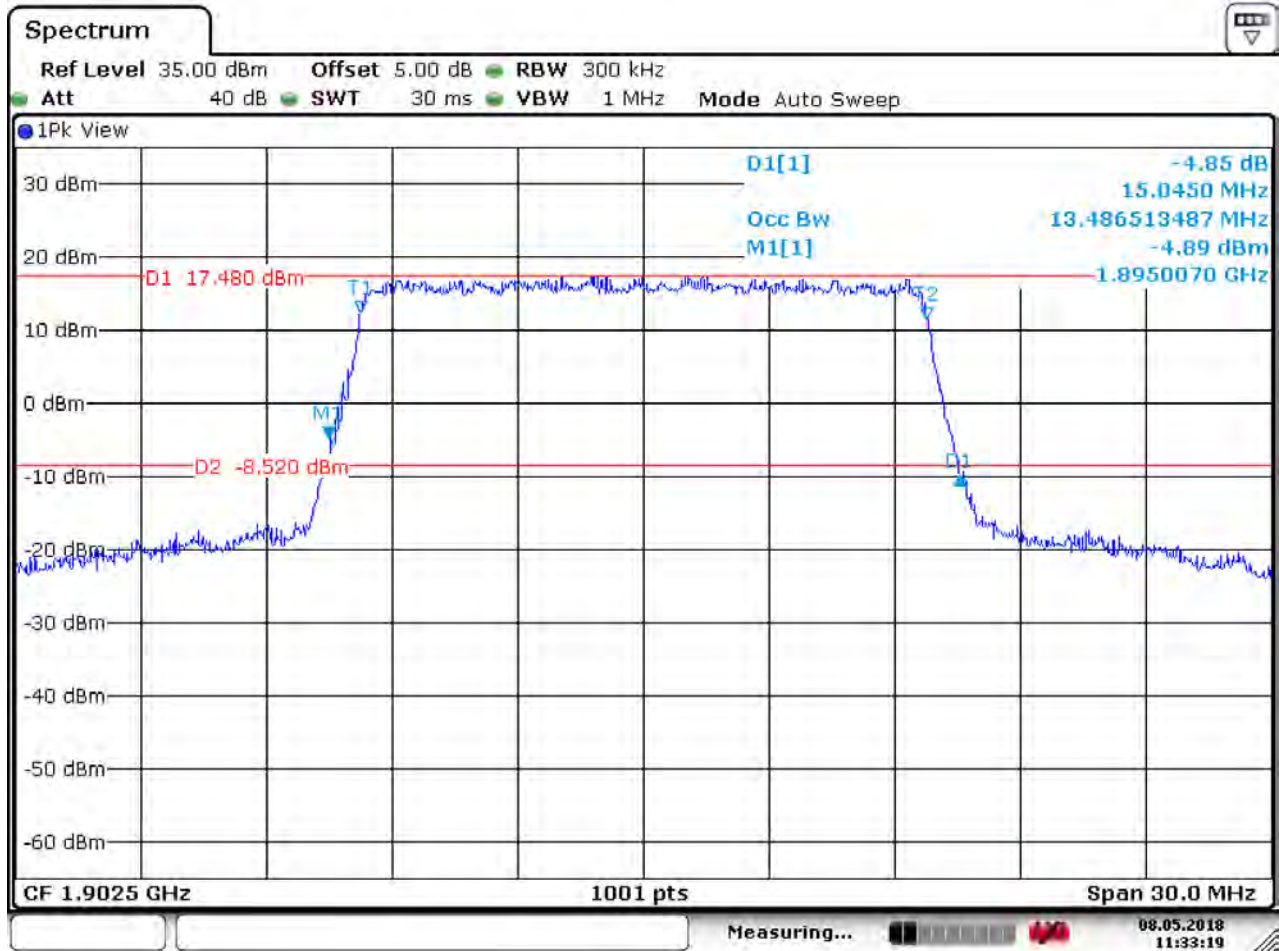
Date: 8.MAY.2018 11:28:55

4.1.1.9.2 Test Channel = MCH



Date: 8.MAY.2018 11:31:18

4.1.1.9.3 Test Channel = HCH

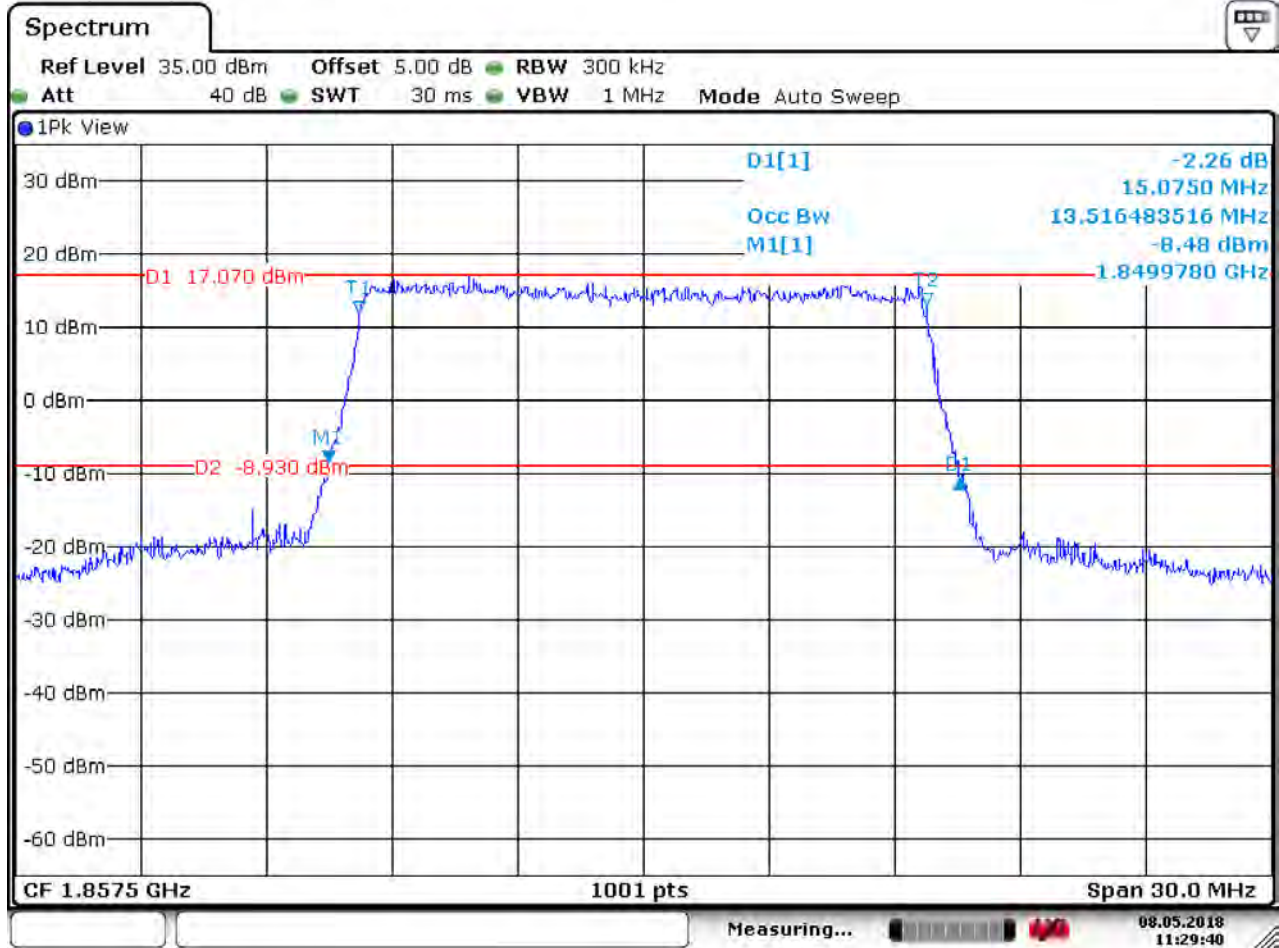


Date: 8.MAY.2018 11:33:19

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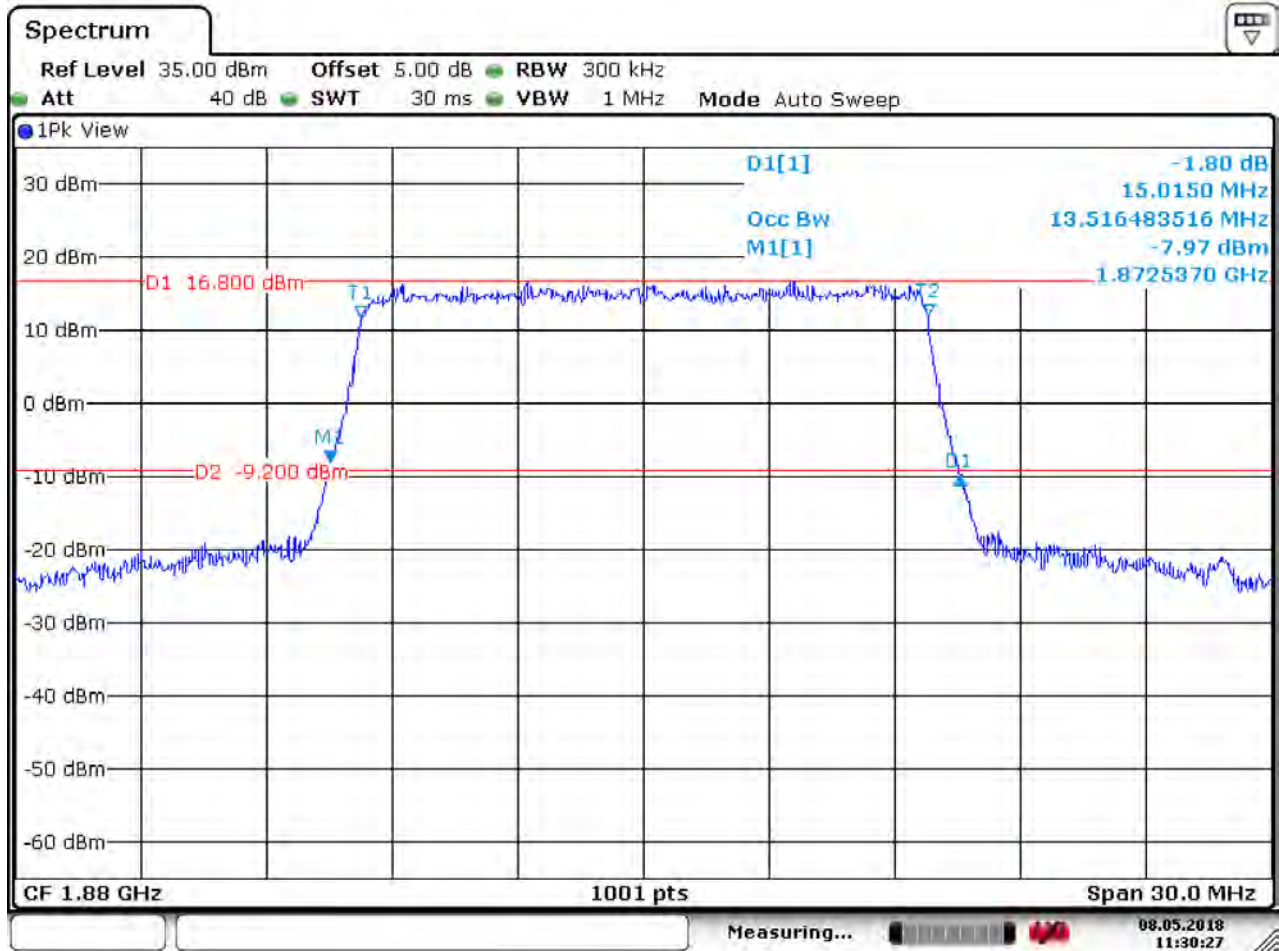
4.1.1.10 Test Mode = LTE/TM2 15MHz

4.1.1.10.1 Test Channel = LCH



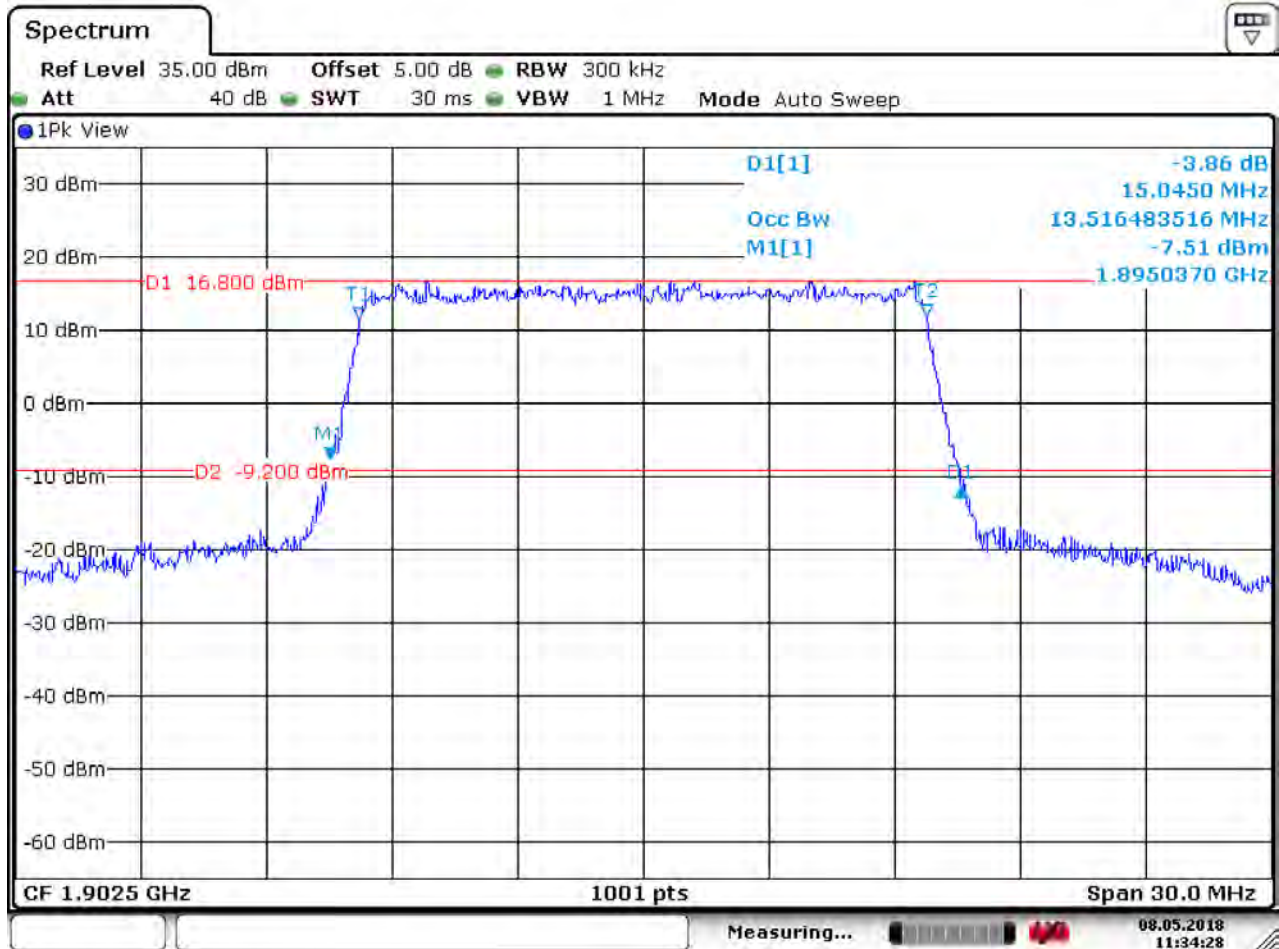
Date: 8.MAY.2018 11:29:40

4.1.1.10.2 Test Channel = MCH



Date: 8.MAY.2018 11:30:28

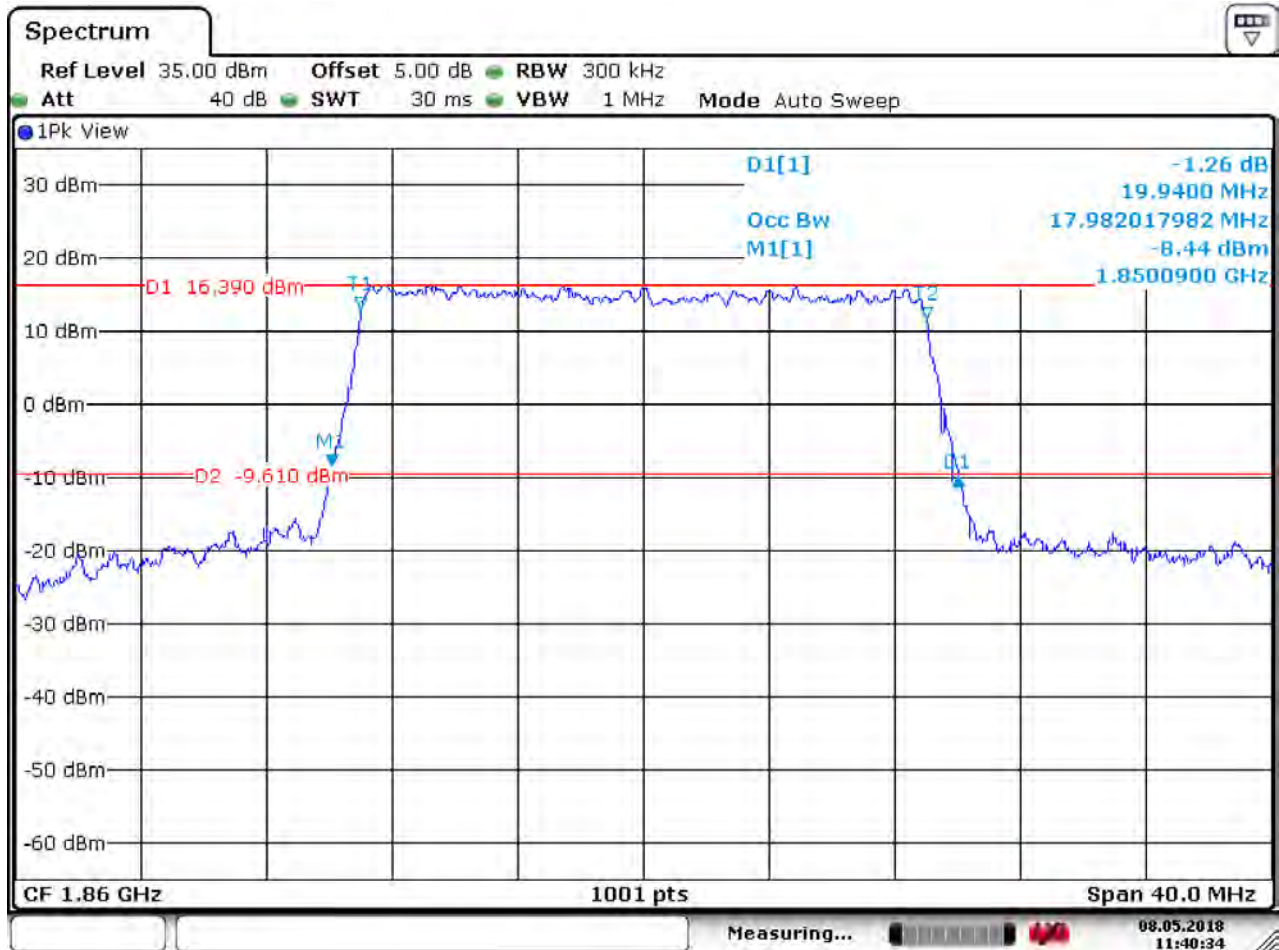
4.1.1.10.3 Test Channel = HCH



Date: 8.MAY.2018 11:34:28

4.1.1.11 Test Mode = LTE/TM1 20MHz

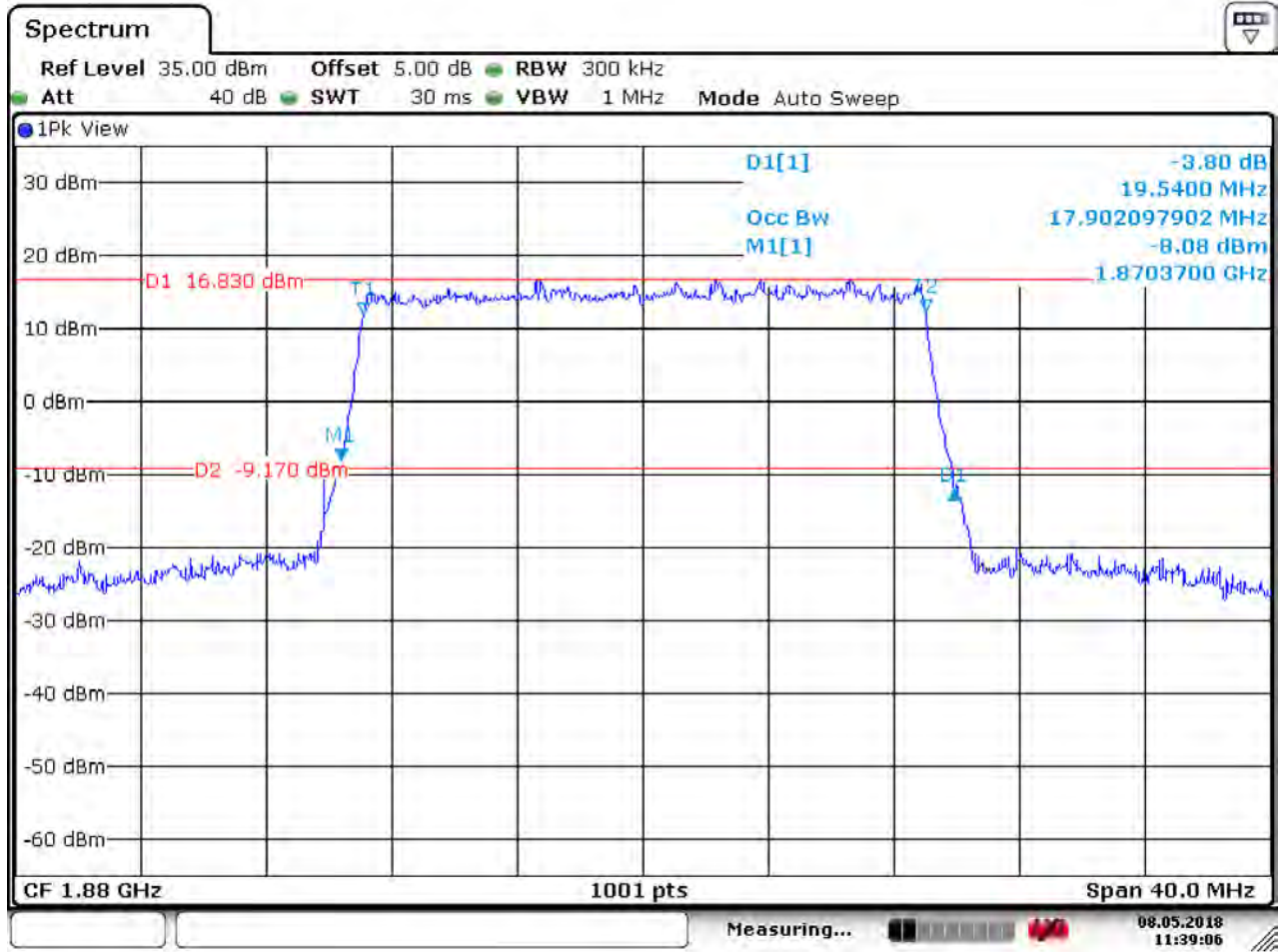
4.1.1.11.1 Test Channel = LCH



Date: 8.MAY.2018 11:40:34

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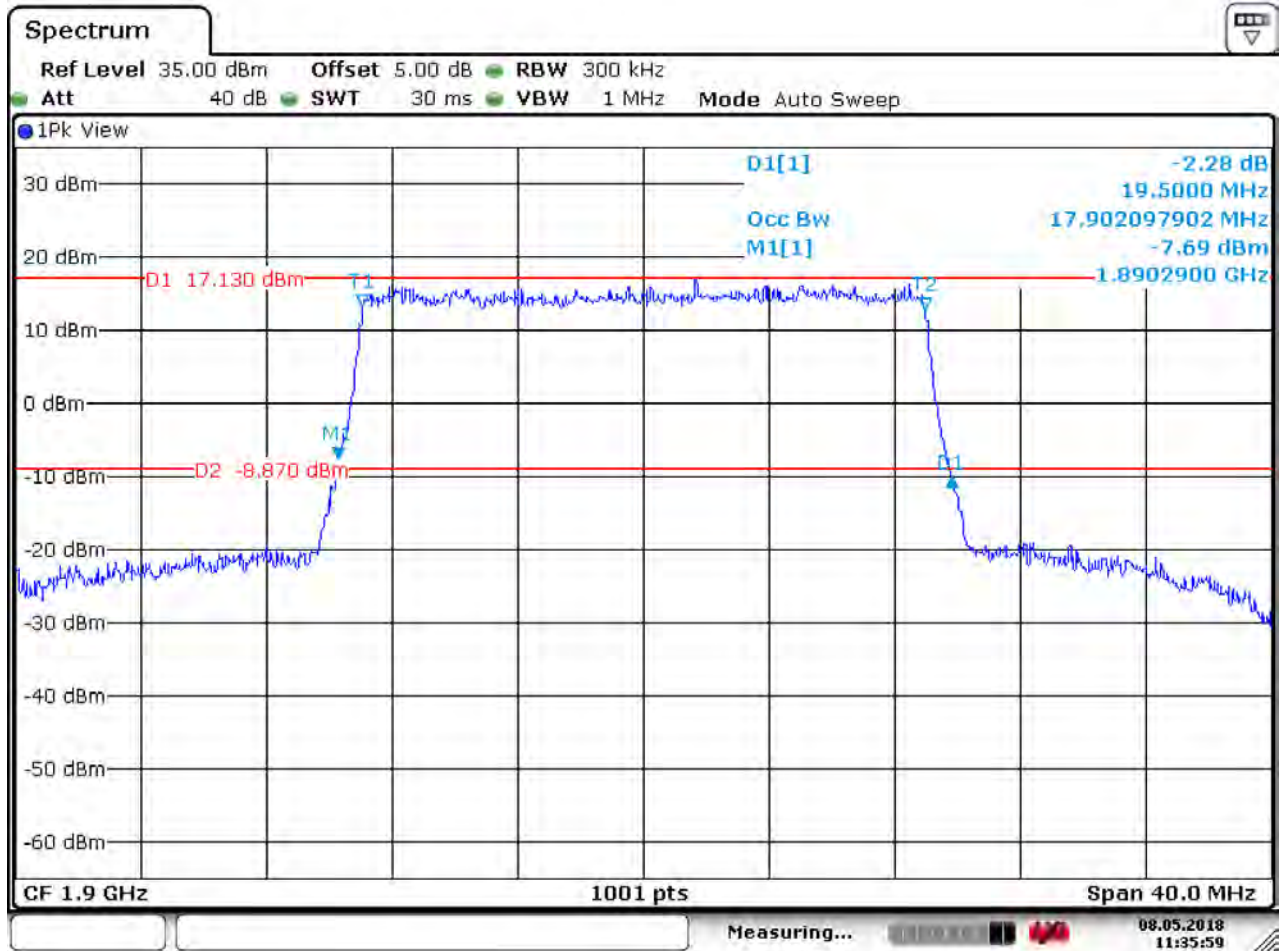
4.1.1.11.2 Test Channel = MCH



Date: 8.MAY.2018 11:39:06

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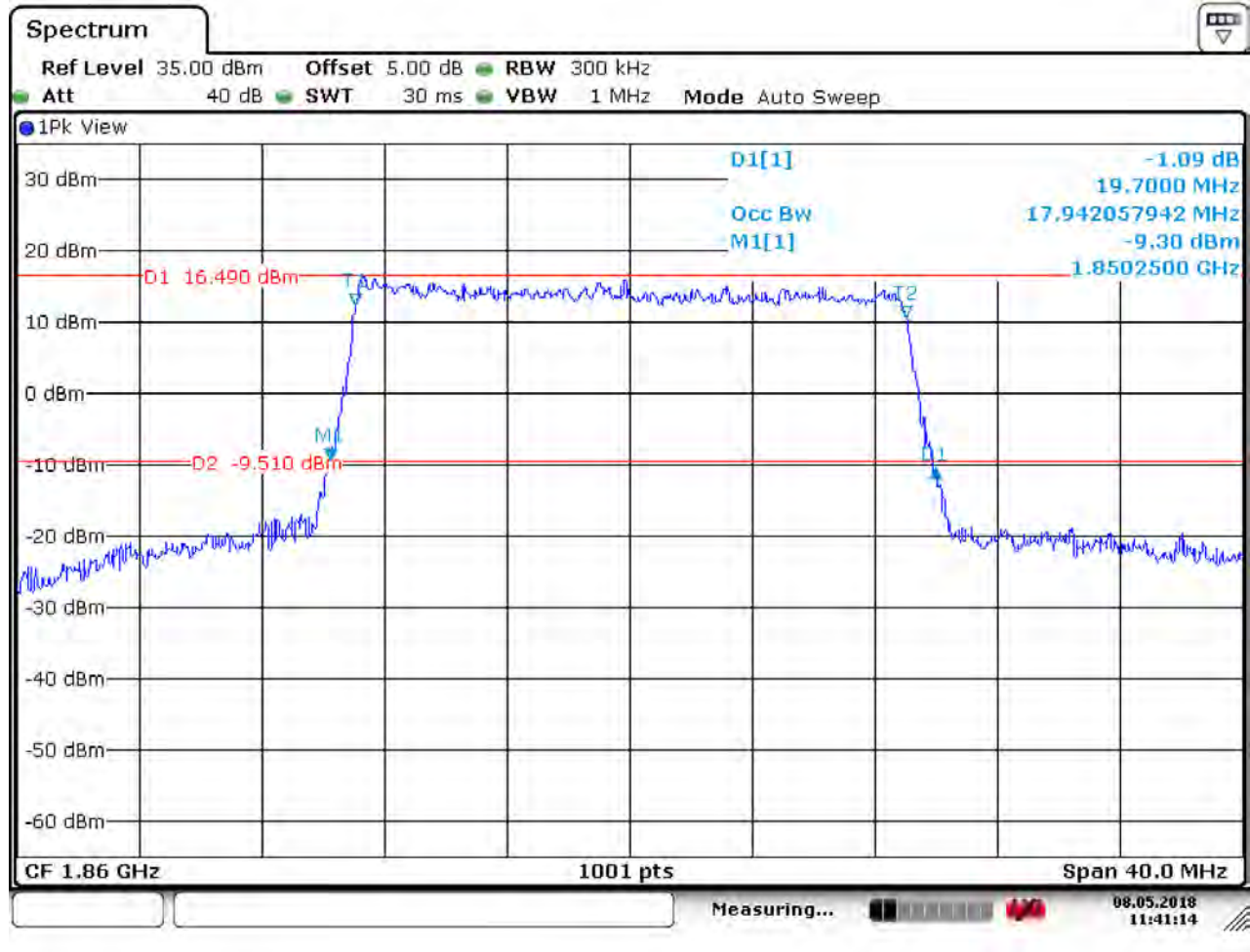
4.1.1.11.3 Test Channel = HCH



Date: 8.MAY.2018 11:35:59

4.1.1.12 Test Mode = LTE/TM2 20MHz

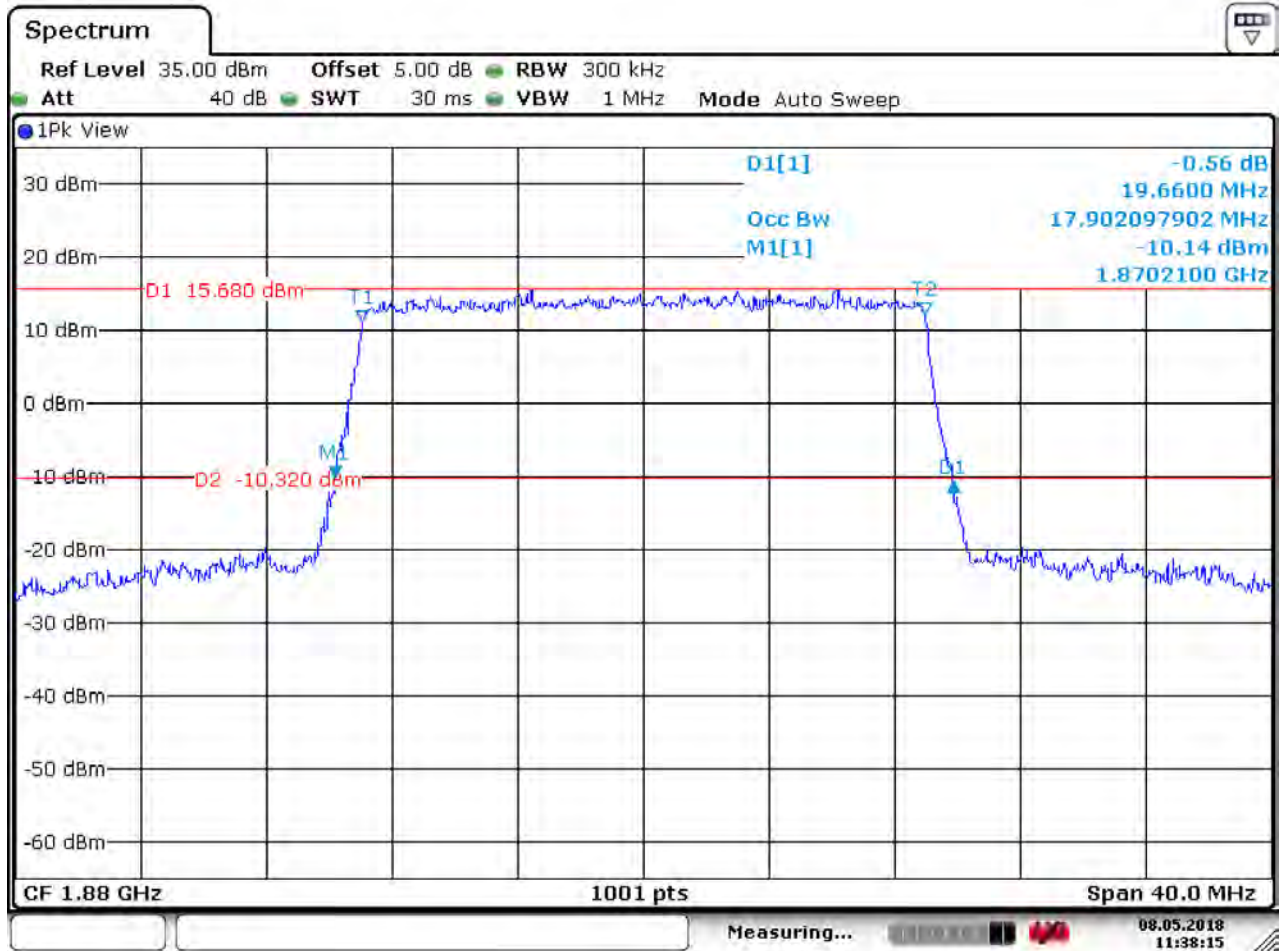
4.1.1.12.1 Test Channel = LCH



Date: 8.MAY.2018 11:41:15

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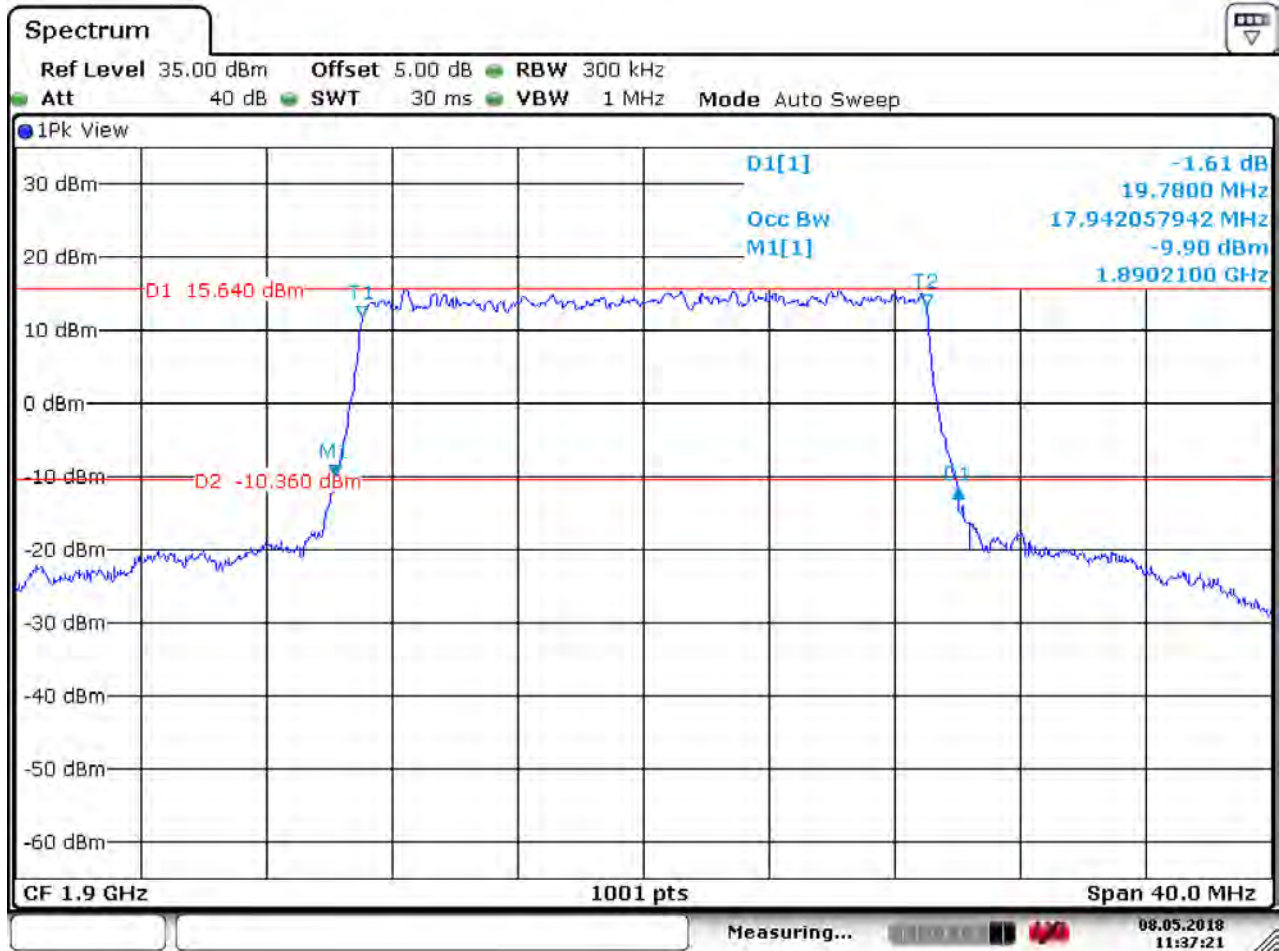
4.1.1.12.2 Test Channel = MCH



Date: 8.MAY.2018 11:38:15

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4.1.1.12.3 Test Channel = HCH



Date: 8.MAY.2018 11:37:22

5 Band Edges Compliance

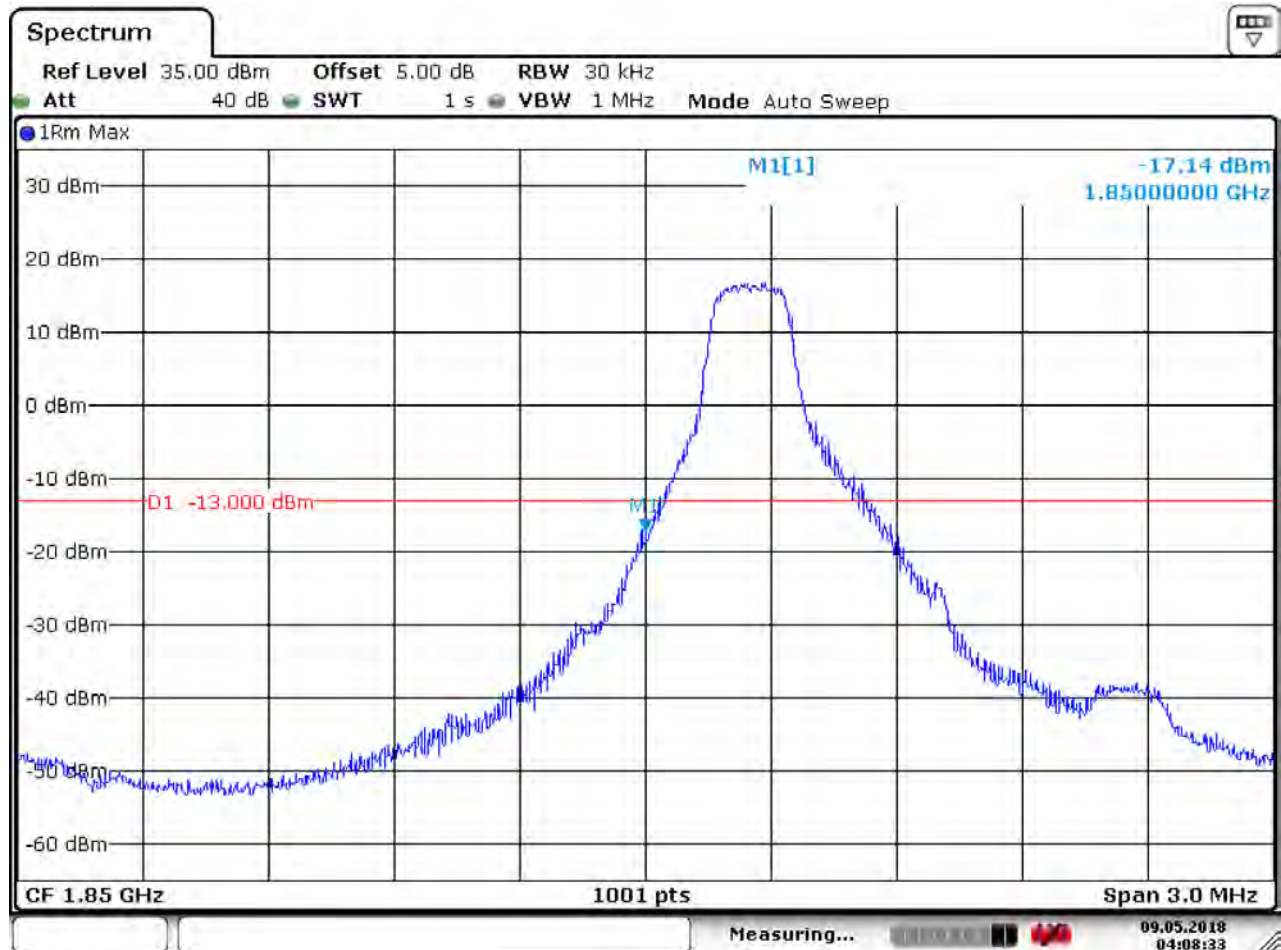
5.1 For LTE

5.1.1 Test Band = LTE band2

5.1.1.1 Test Mode = LTE/TM1 1.4MHz

5.1.1.1.1 Test Channel = LCH

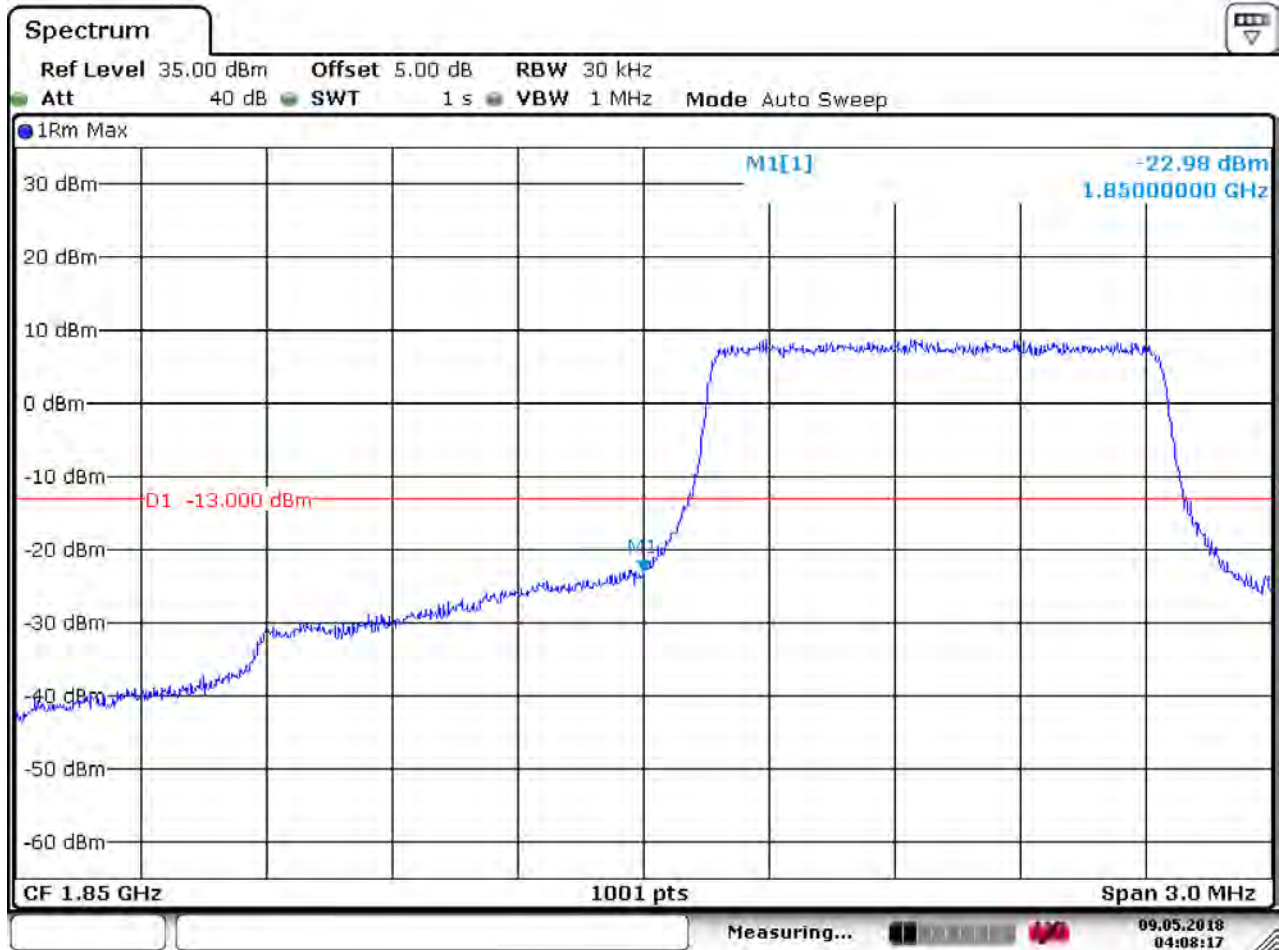
5.1.1.1.1.1 Test RB=1RB



Date: 9.MAY.2018 04:08:33



5.1.1.1.2 Test RB=6RB

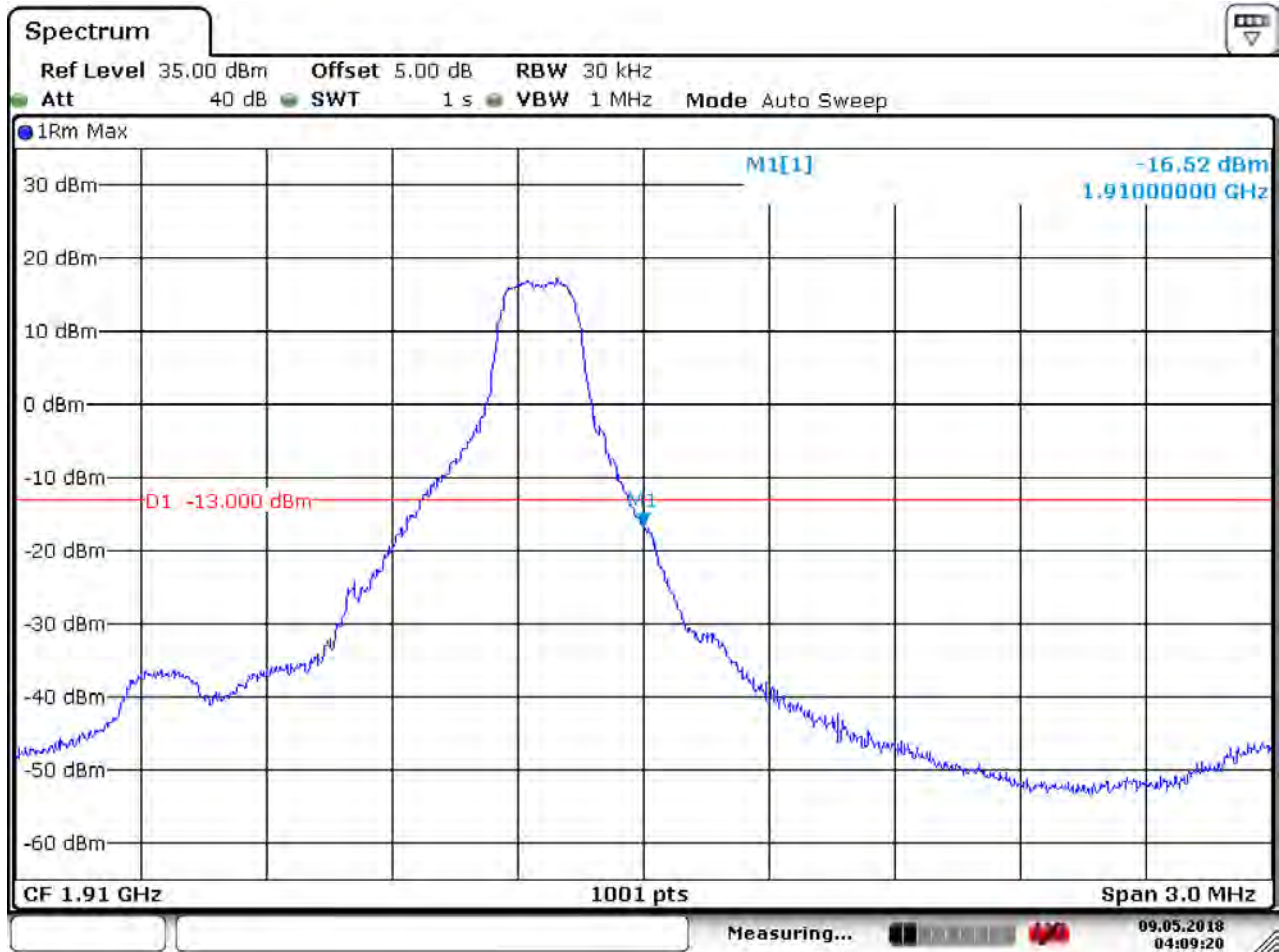


Date: 9.MAY.2018 04:08:18

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5.1.1.1.2 Test Channel = HCH

5.1.1.1.2.1 Test RB=1RB



Date: 9.MAY.2018 04:09:21



5.1.1.1.2.2 Test RB=6RB



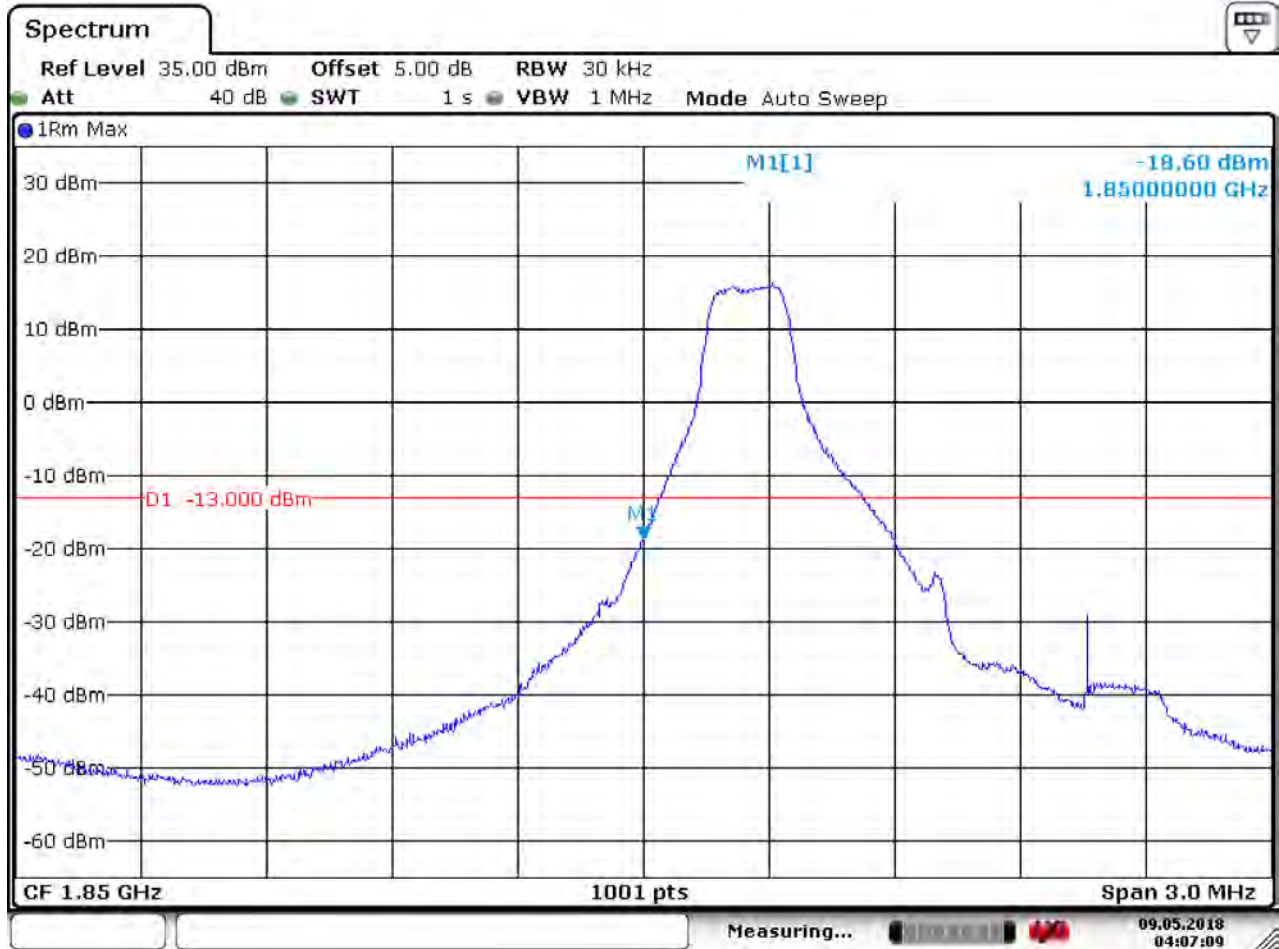
Date: 9.MAY.2018 04:10:08

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5.1.1.2 Test Mode = LTE/TM2 1.4MHz

5.1.1.2.1 Test Channel = LCH

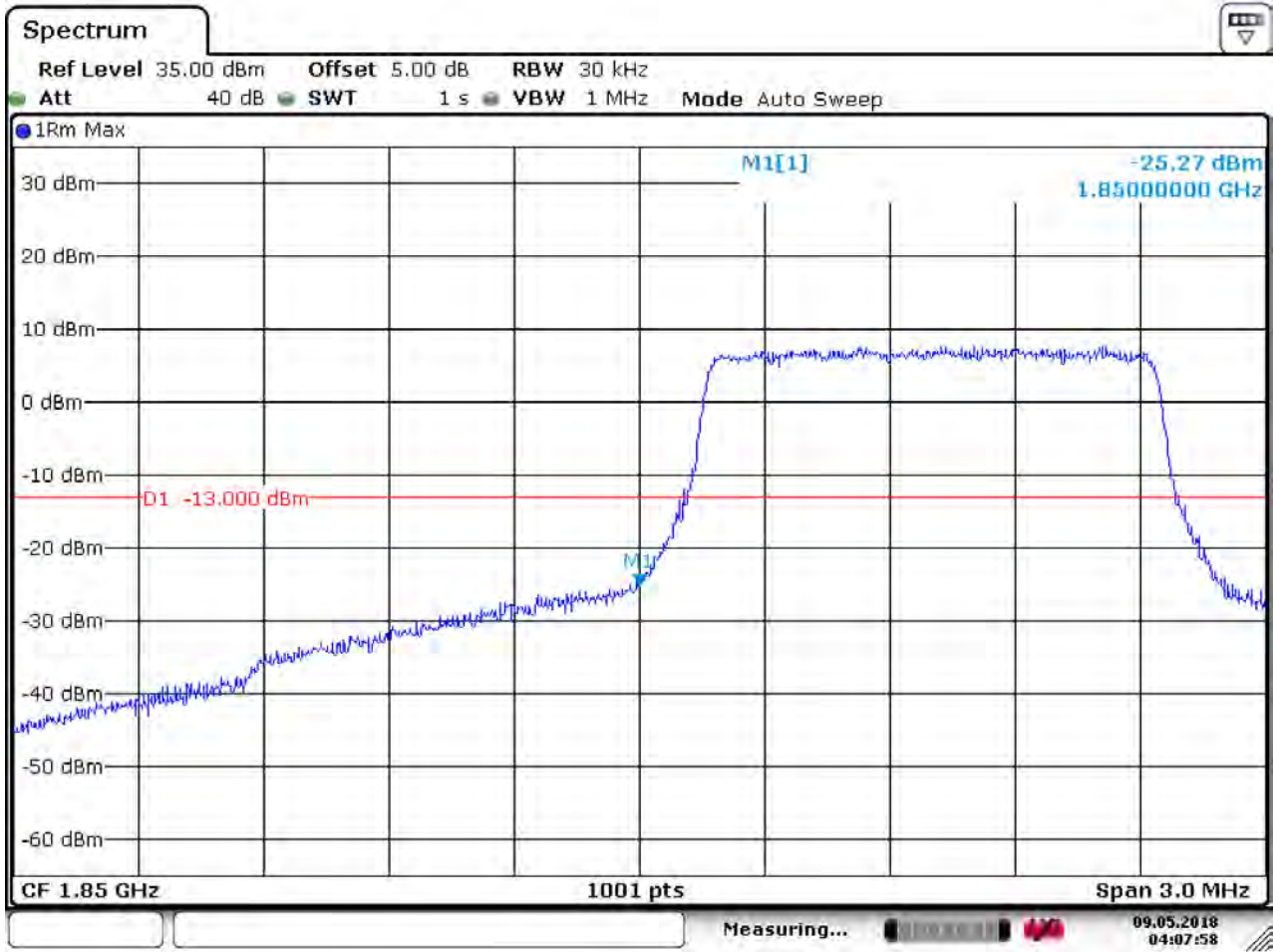
5.1.1.2.1.1 Test RB=1RB



Date: 9.MAY.2018 04:07:09

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5.1.1.2.1.2 Test RB=6RB

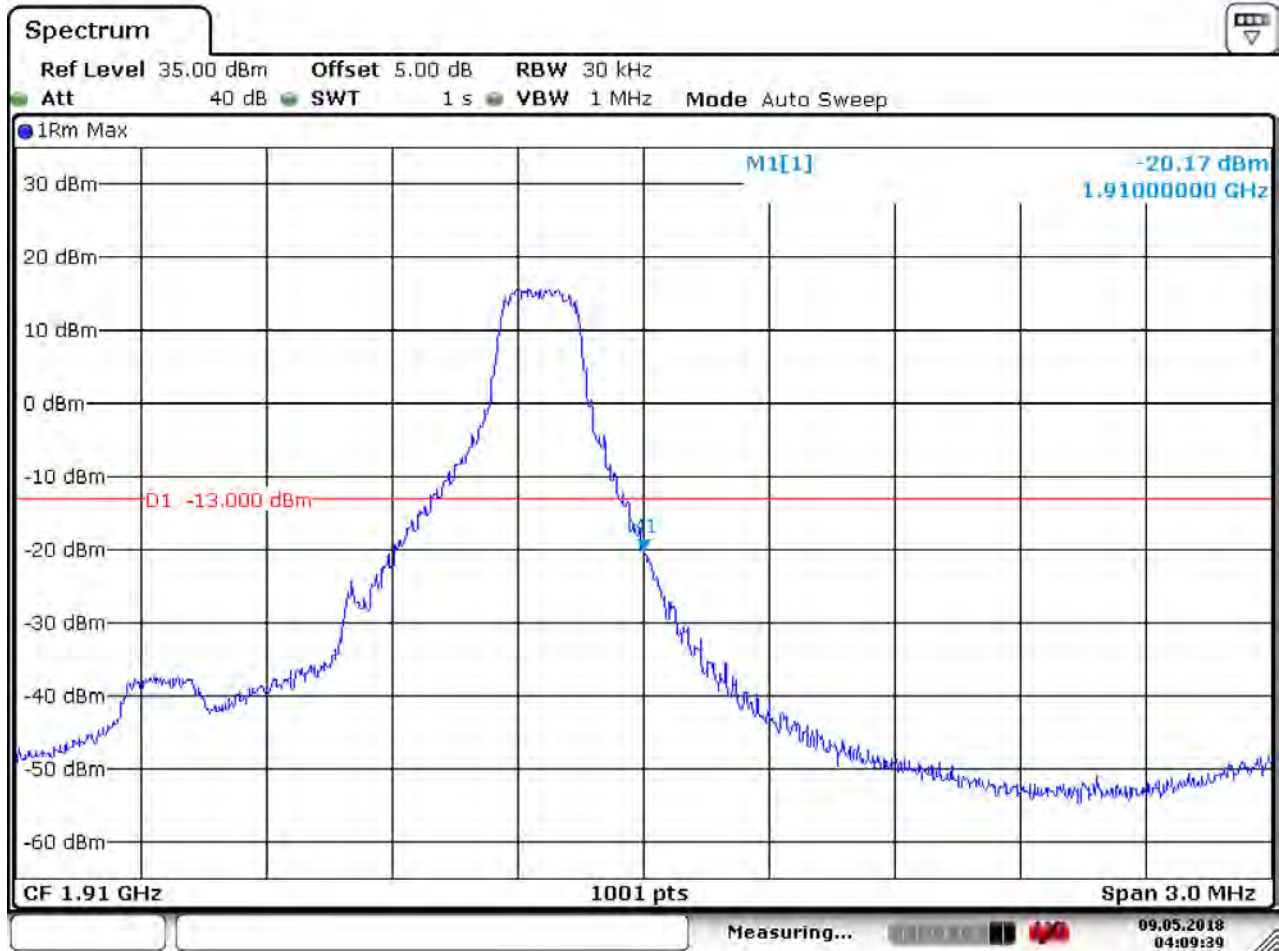


Date: 9.MAY.2018 04:07:59

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5.1.1.2.2 Test Channel = HCH

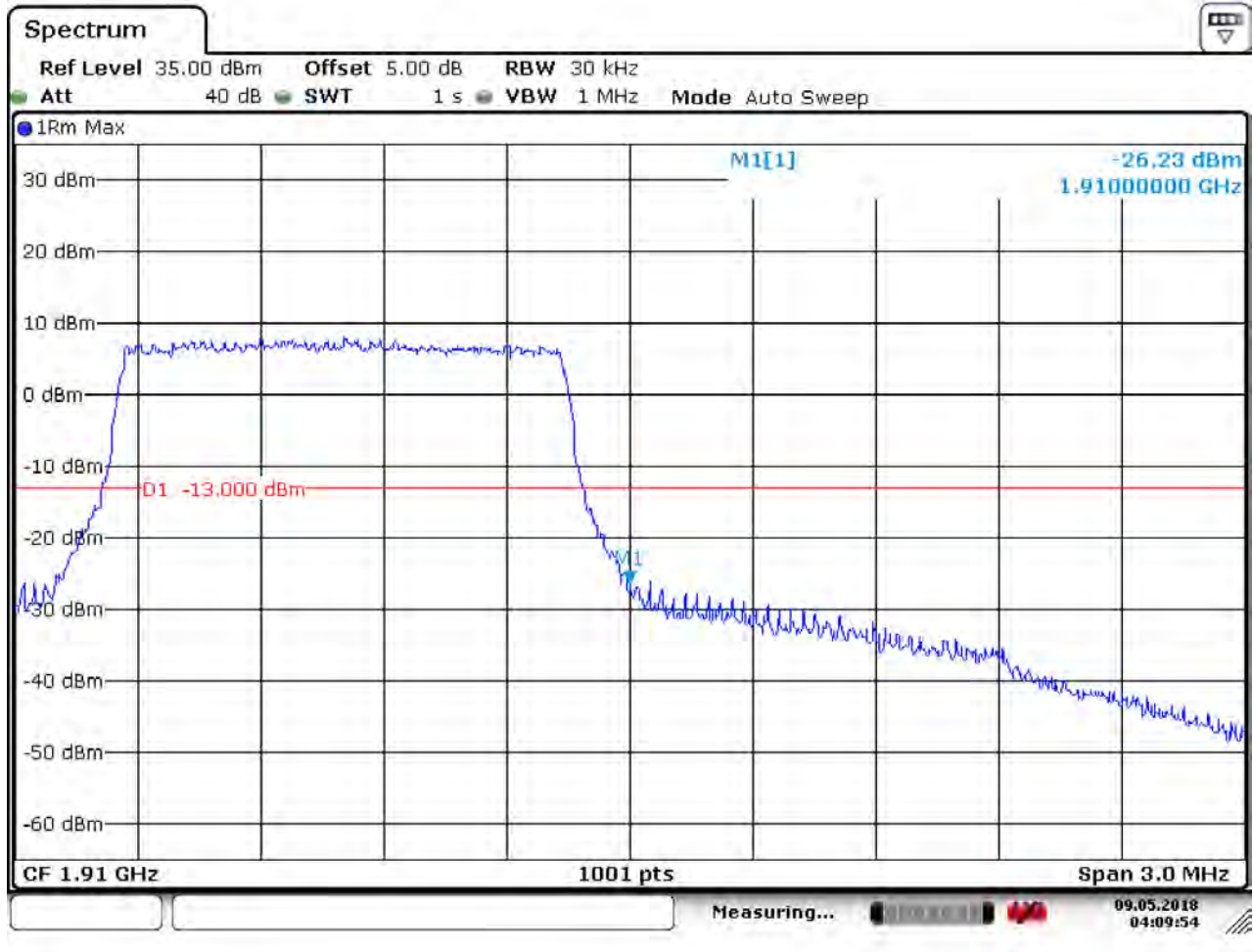
5.1.1.2.2.1 Test RB=1RB



Date: 9.MAY.2018 04:09:40



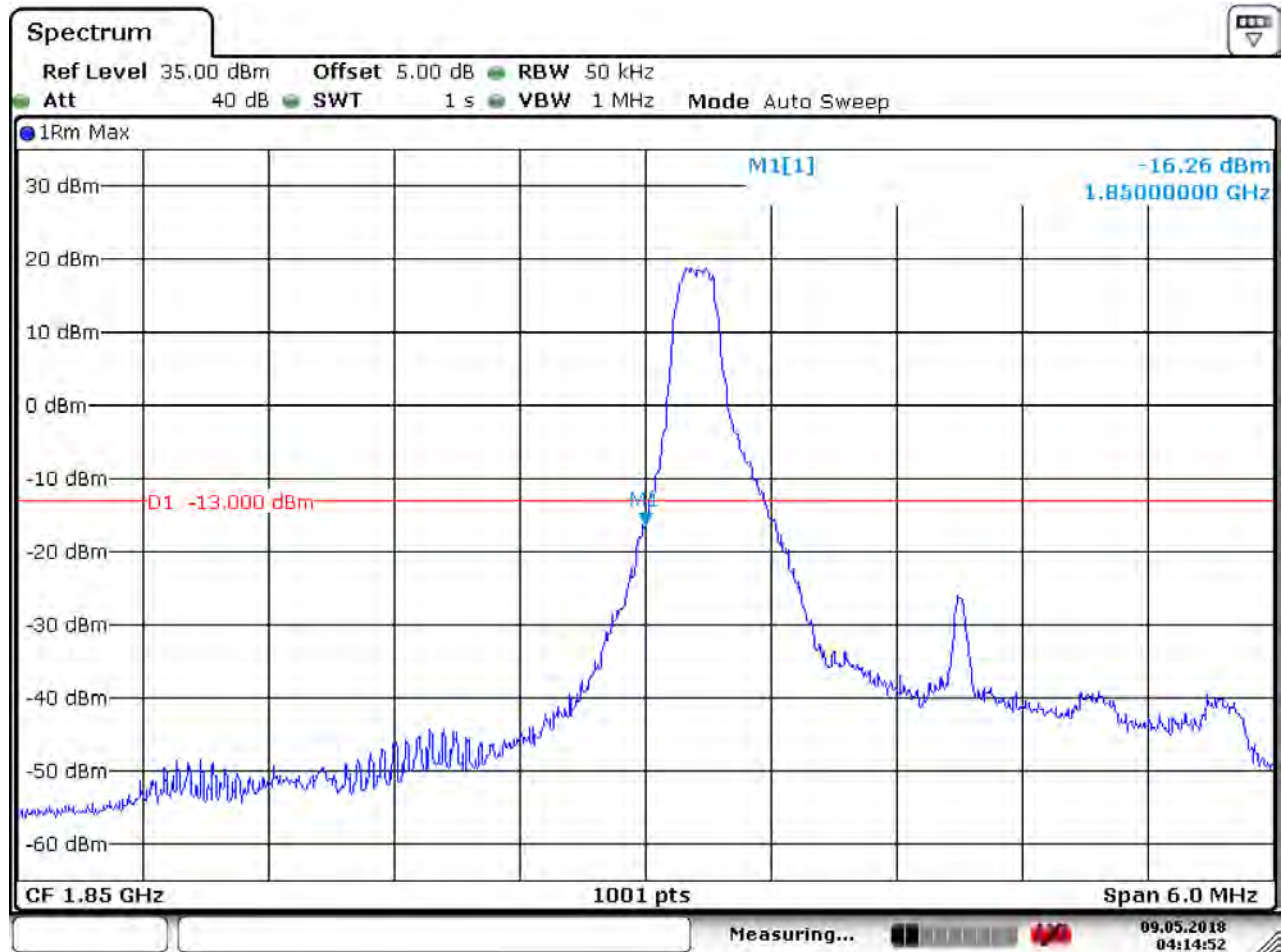
5.1.1.2.2.2 Test RB=6RB



5.1.1.3 Test Mode = LTE/TM1 3MHz

5.1.1.3.1 Test Channel = LCH

5.1.1.3.1.1 Test RB=1RB

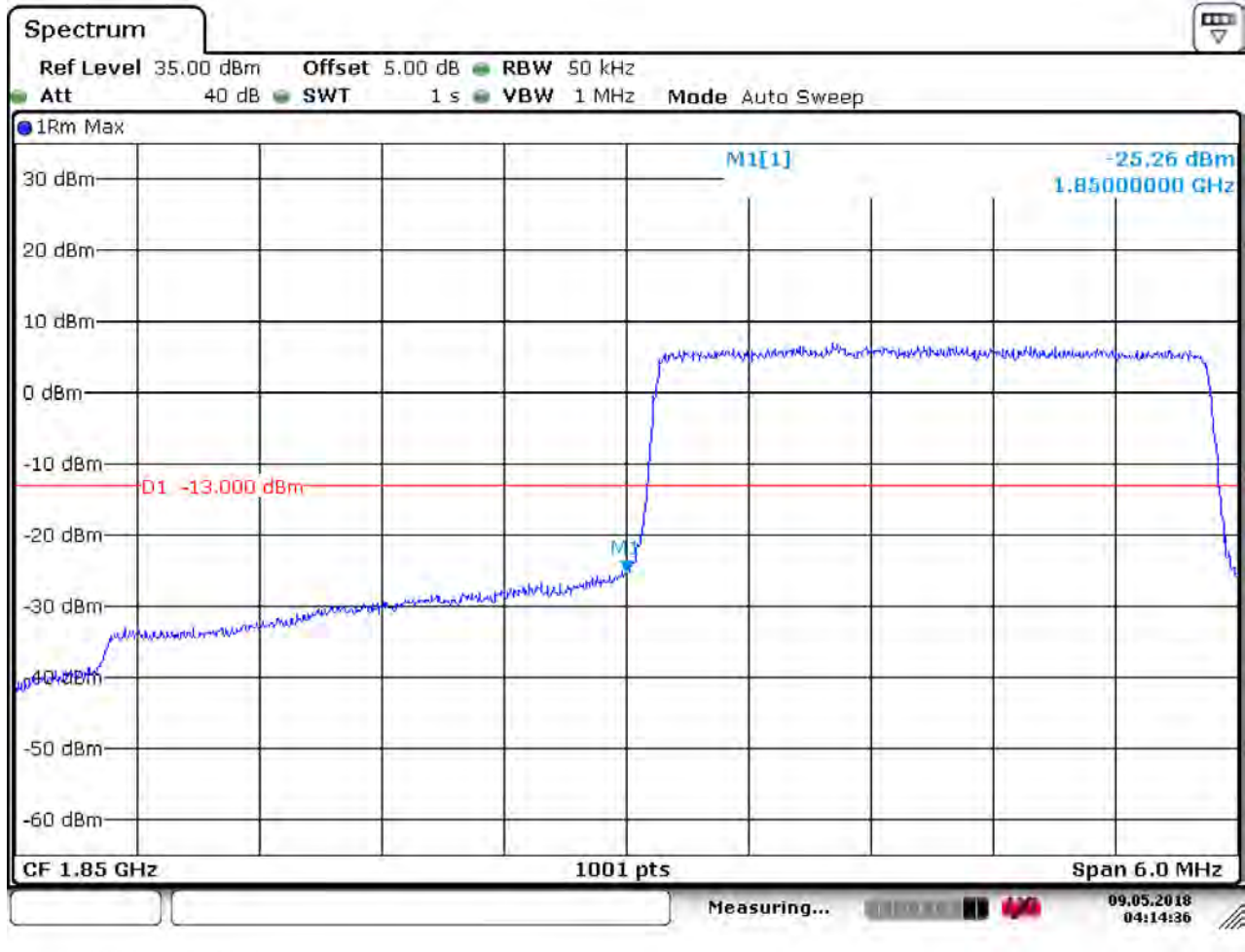


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5.1.1.3.1.2 Test RB=15RB

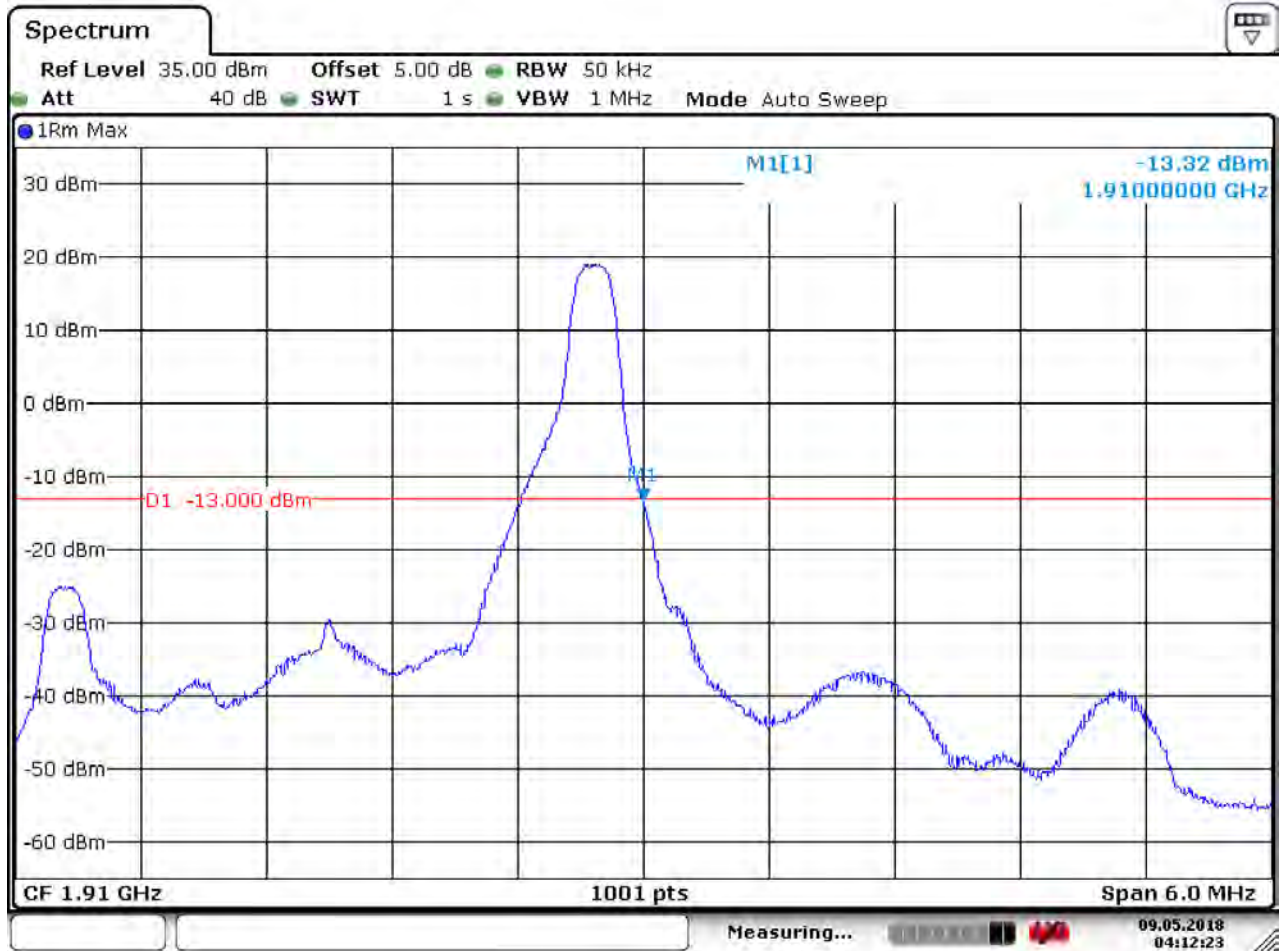


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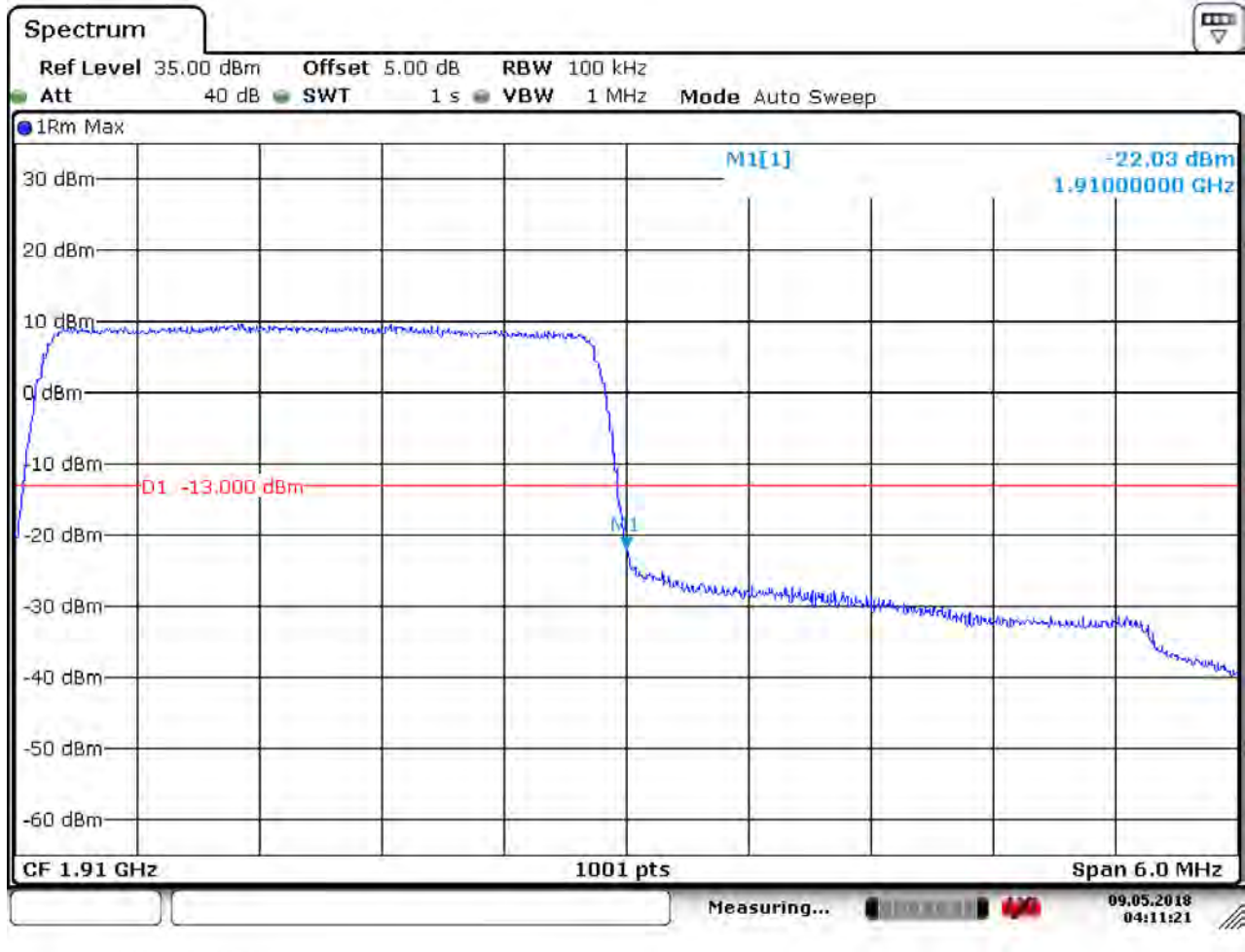
5.1.1.3.2 Test Channel = HCH

5.1.1.3.2.1 Test RB=1RB



Date: 9.MAY.2018 04:12:23

5.1.1.3.2.2 Test RB=15RB



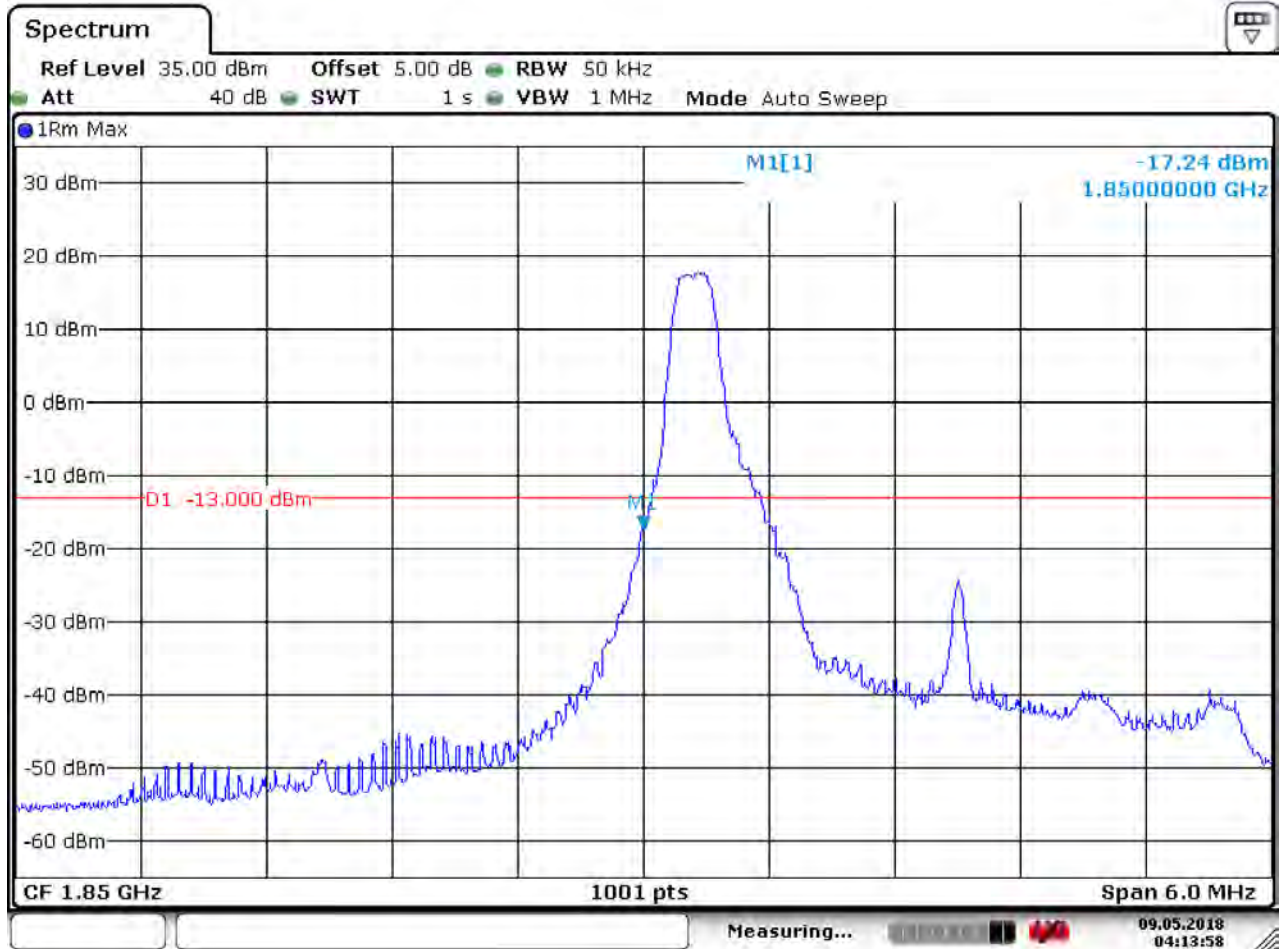
Date: 9.MAY.2018 04:11:21

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5.1.1.4 Test Mode = LTE/TM2 3MHz

5.1.1.4.1 Test Channel = LCH

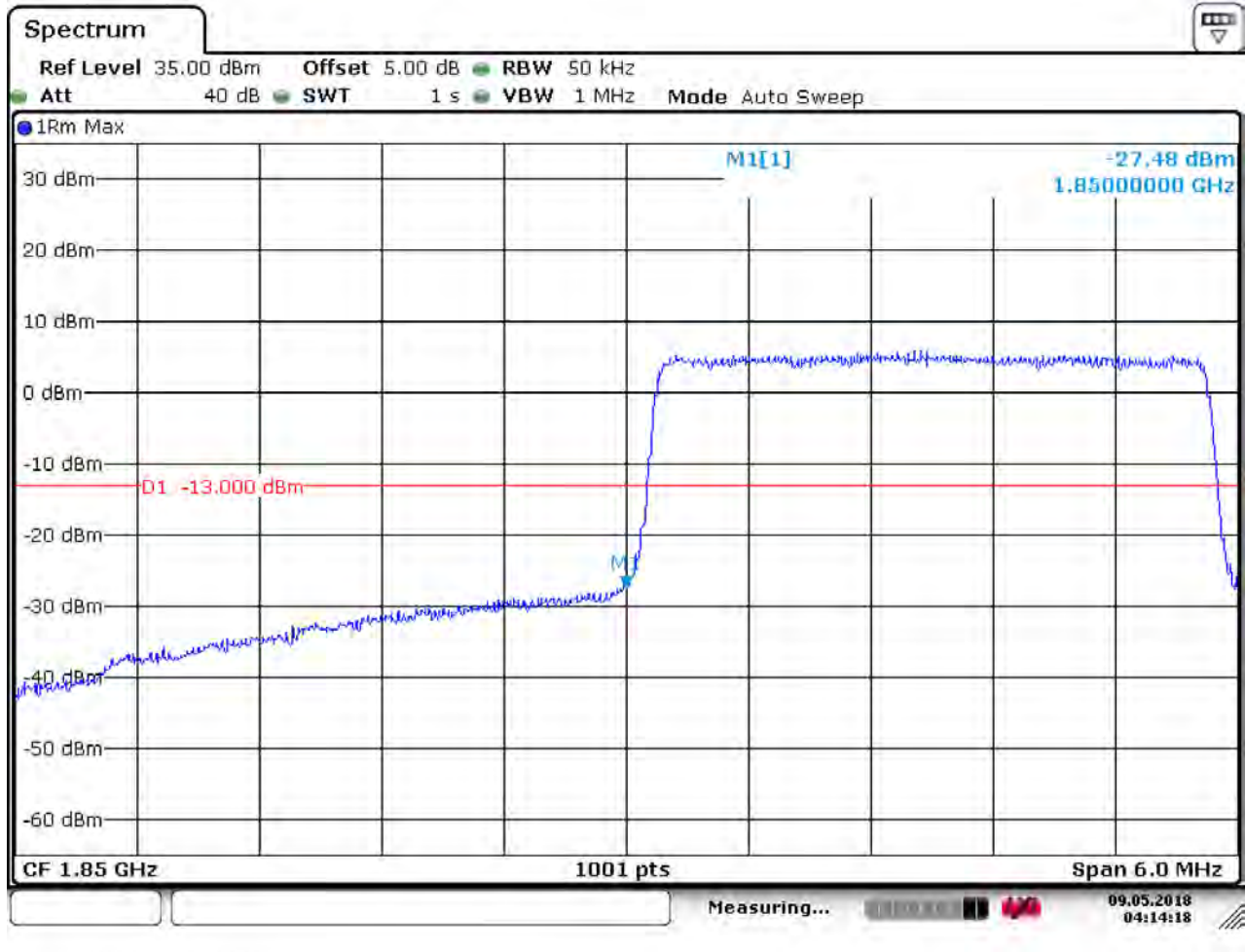
5.1.1.4.1.1 Test RB=1RB



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5.1.1.4.1.2 Test RB=15RB

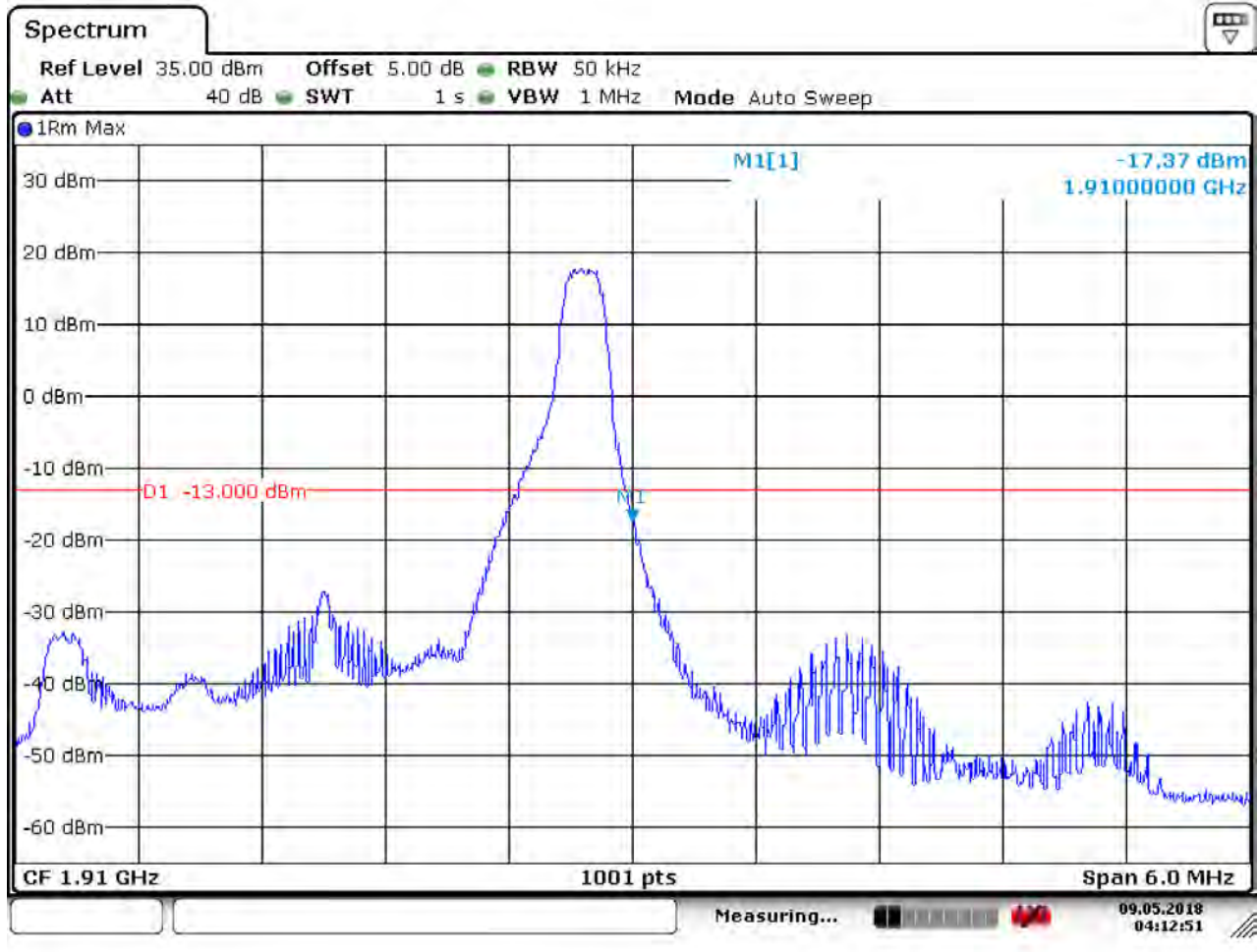


Date: 9.MAY.2018 04:14:19

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5.1.1.4.2 Test Channel = HCH

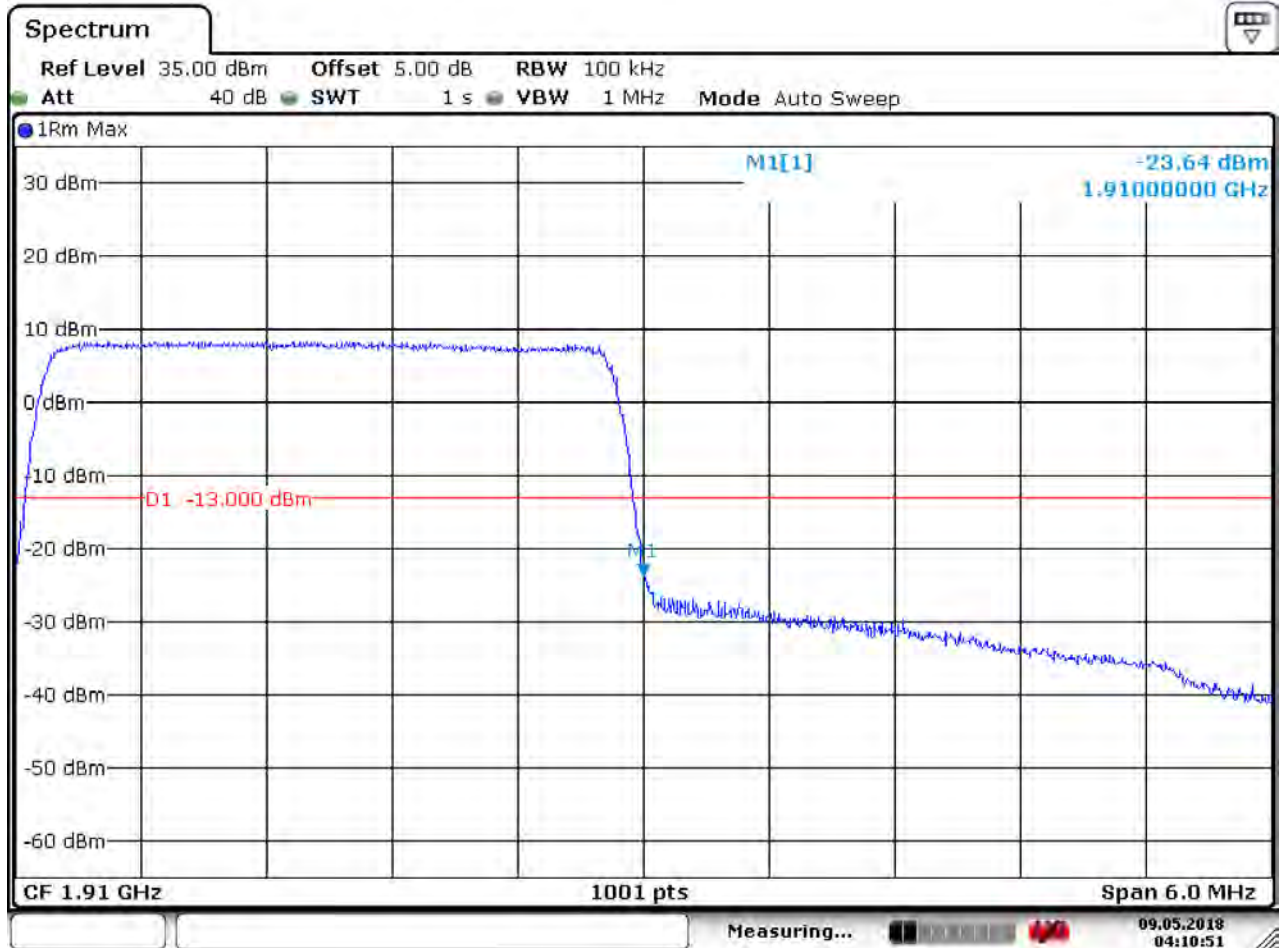
5.1.1.4.2.1 Test RB=1RB



Date: 9.MAY.2018 04:12:51



5.1.1.4.3 Test RB=15RB



Date: 9.MAY.2018 04:10:52

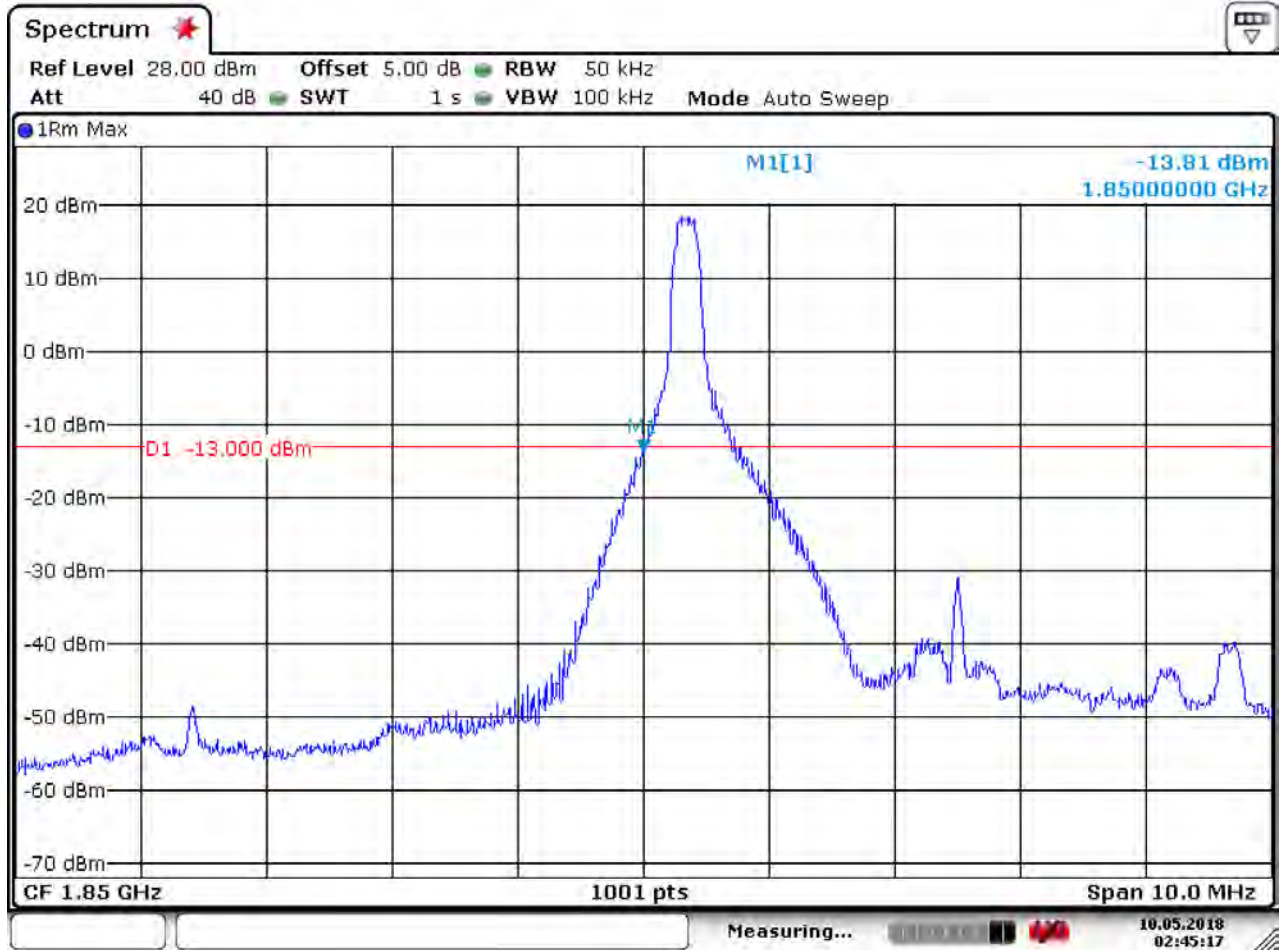
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5.1.1.5 Test Mode = LTE/TM1 5MHz

5.1.1.5.1 Test Channel = LCH

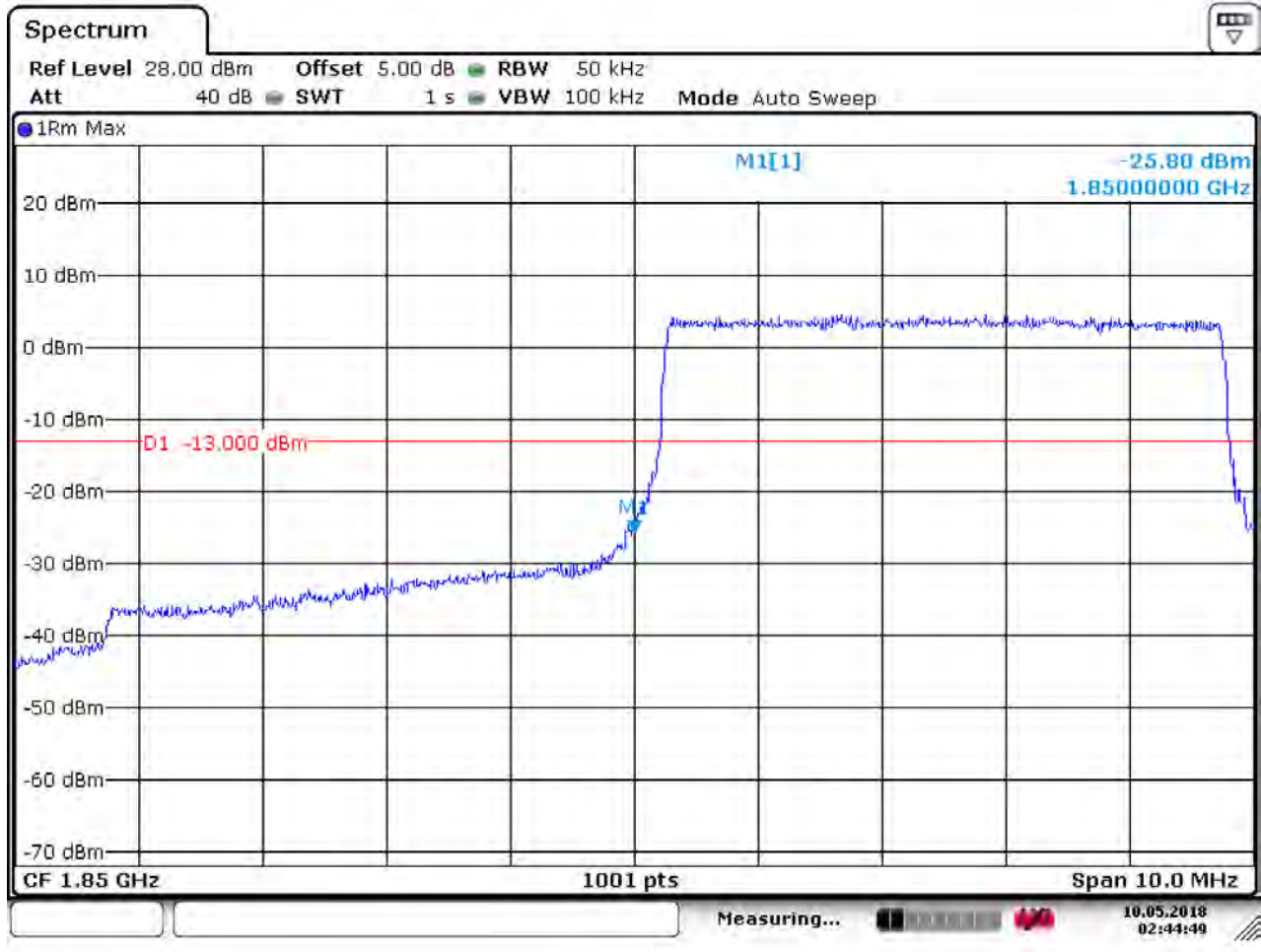
5.1.1.5.1.1 Test RB=1RB



Date: 10.MAY.2018 02:45:18



5.1.1.5.1.2 Test RB=25RB

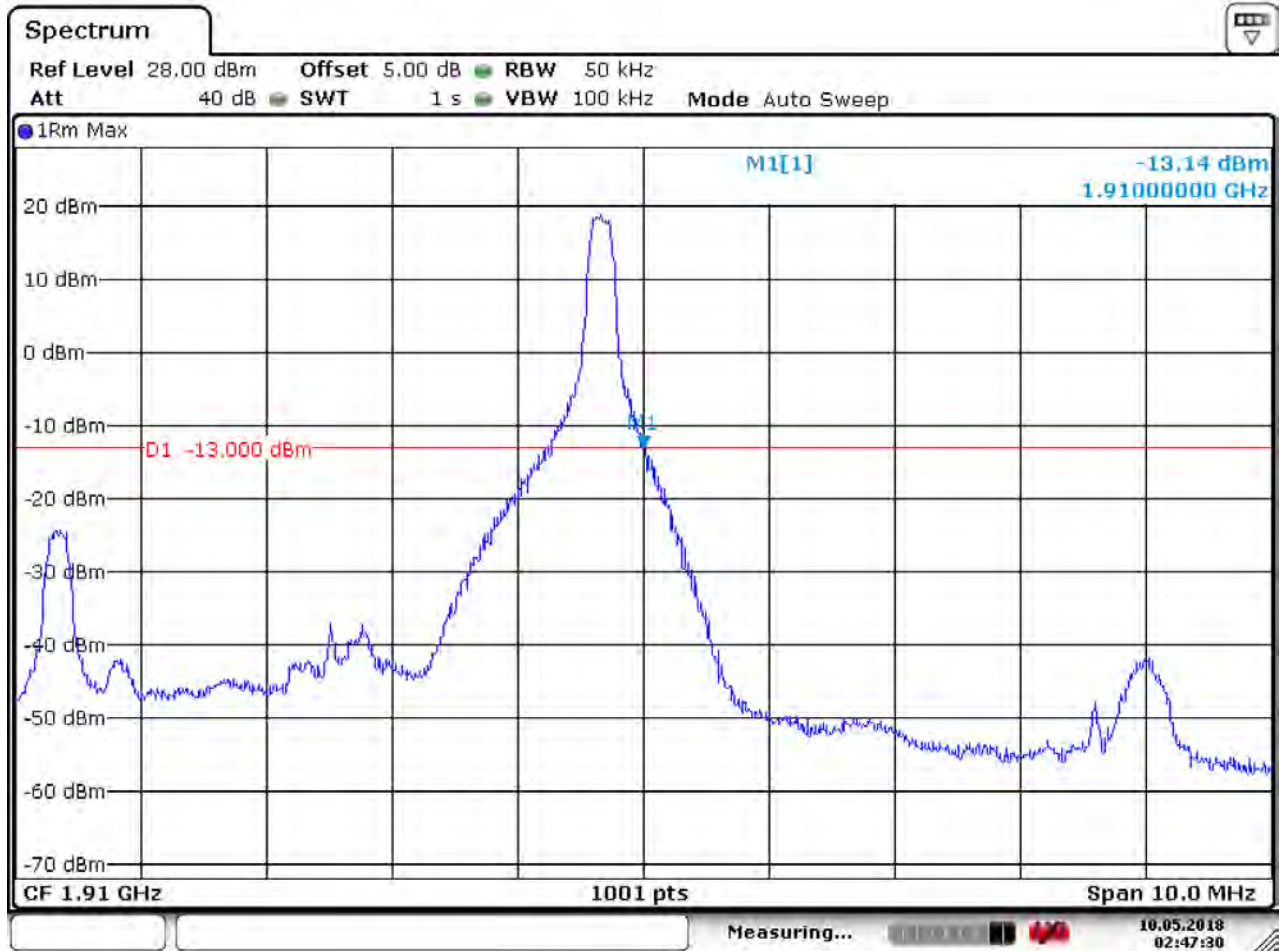


Date: 10.MAY.2018 02:44:49

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5.1.1.5.2 Test Channel = HCH

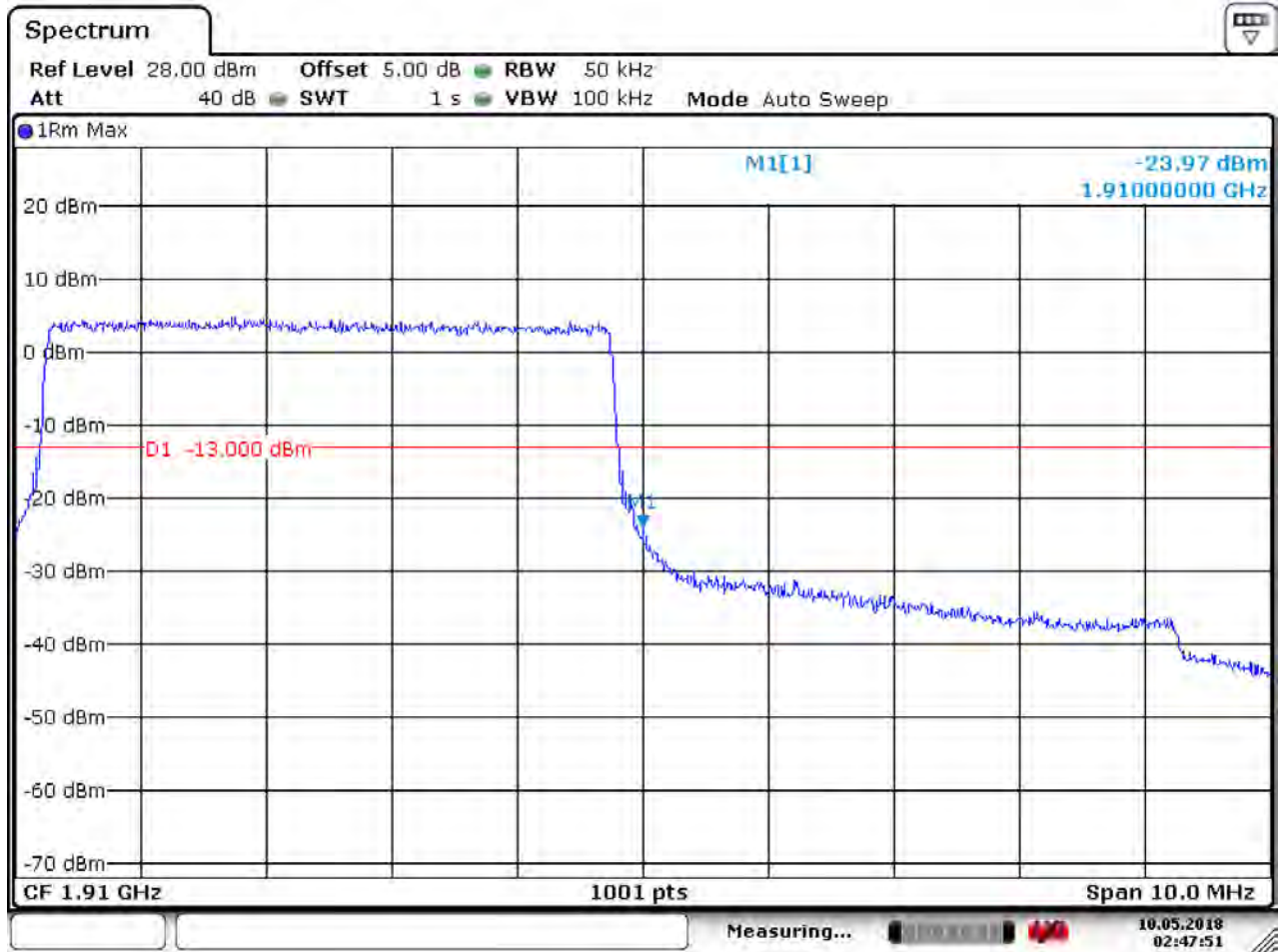
5.1.1.5.2.1 Test RB=1RB



Date: 10.MAY.2018 02:47:30



5.1.1.5.2.2 Test RB=25RB



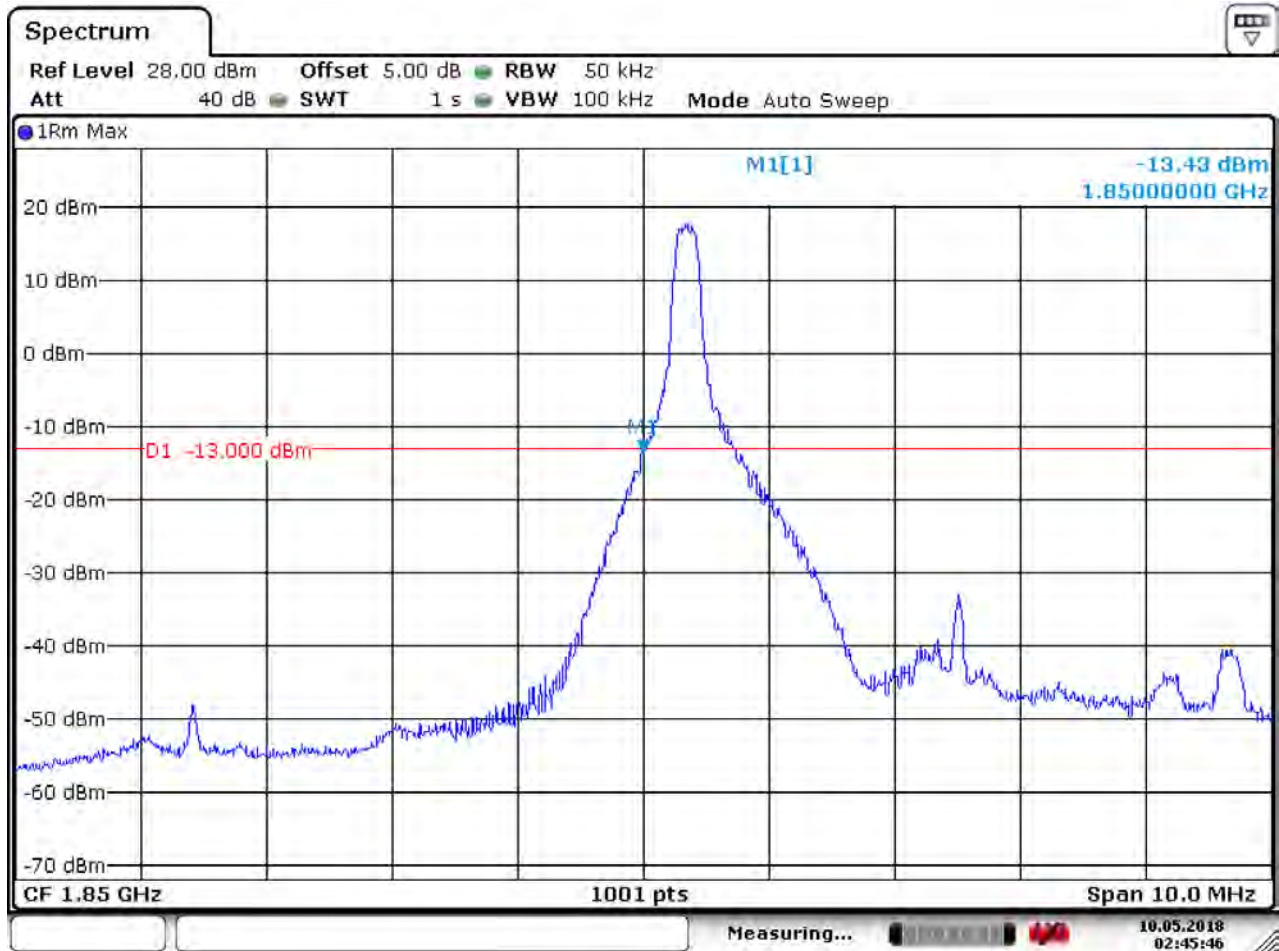
Date: 10.MAY.2018 02:47:52



5.1.1.6 Test Mode = LTE/TM2 5MHz

5.1.1.6.1 Test Channel = LCH

5.1.1.6.1.1 Test RB=1RB

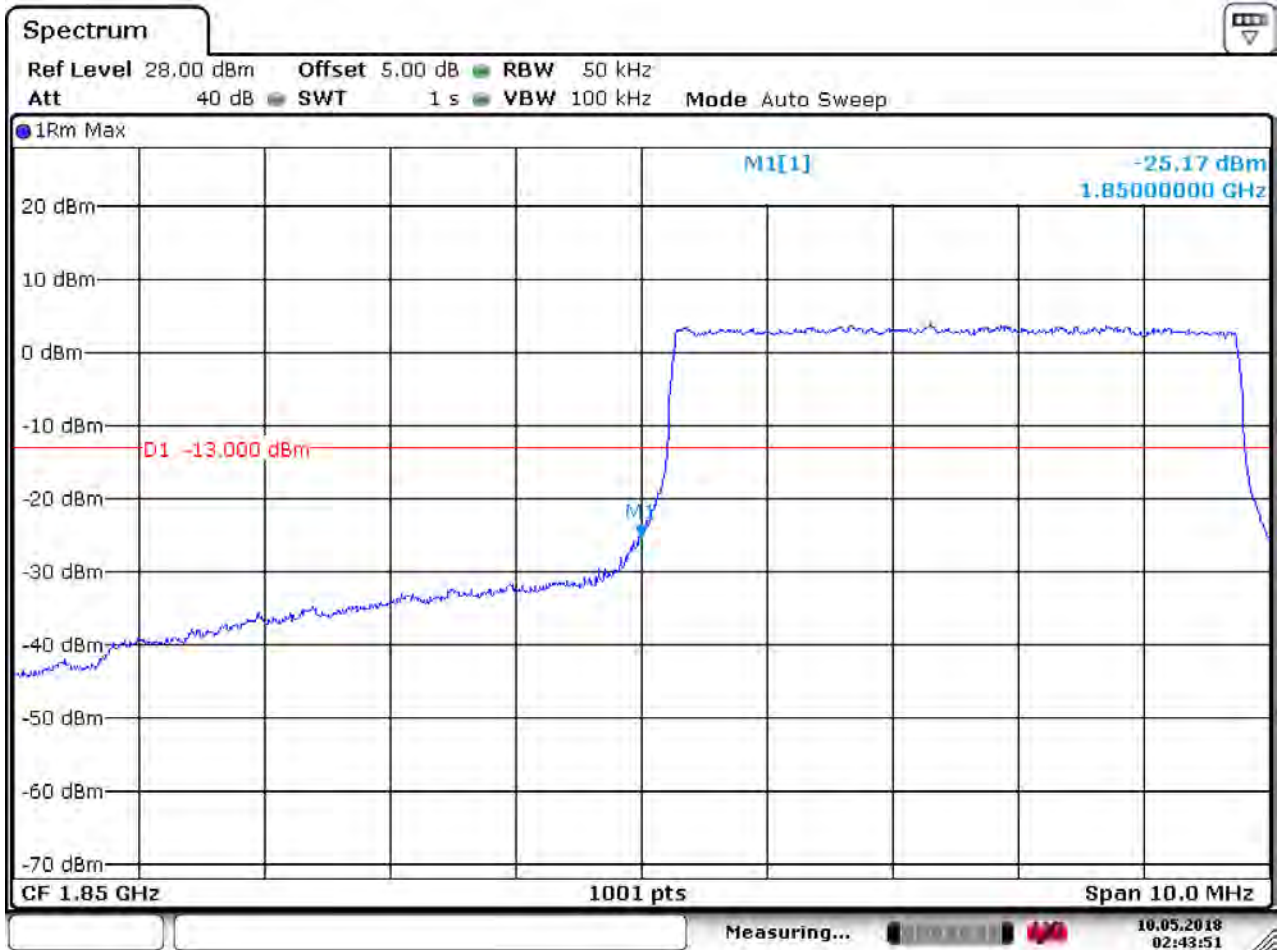


Date: 10.MAY.2018 02:45:47

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5.1.1.6.1.2 Test RB=25RB

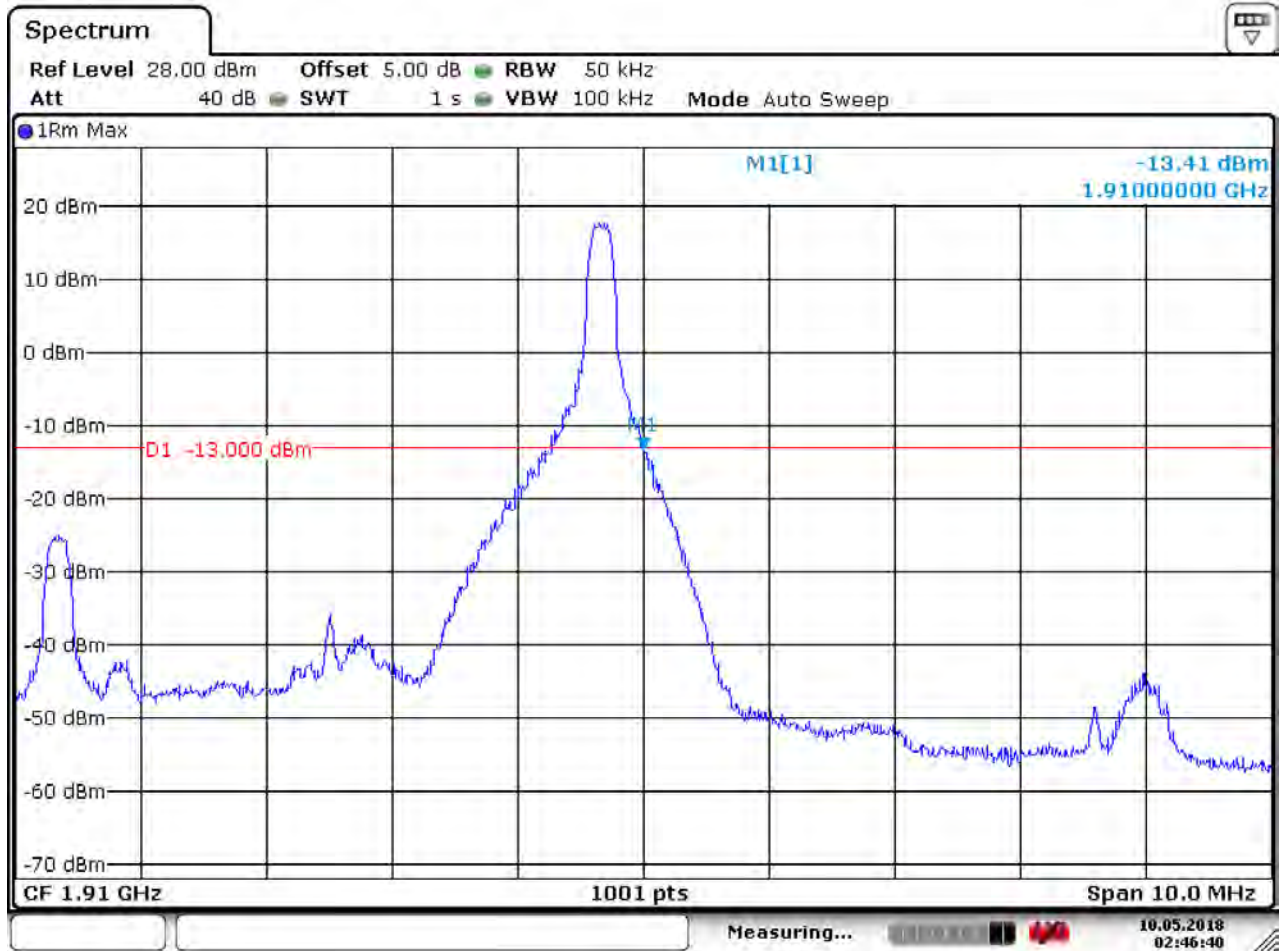


Date: 10.MAY.2018 02:43:51

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5.1.1.6.2 Test Channel = HCH

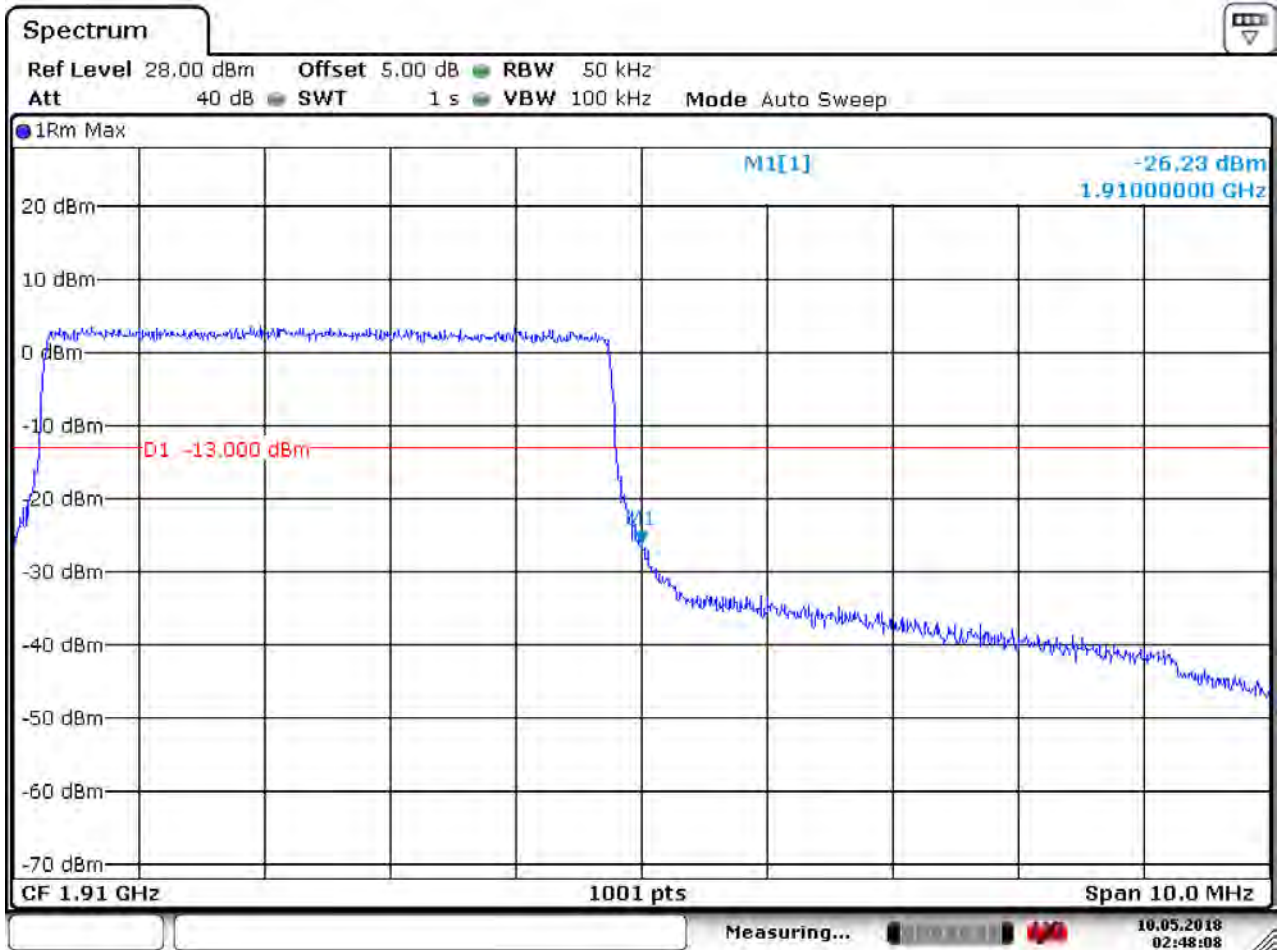
5.1.1.6.2.1 Test RB=1RB



Date: 10.MAY.2018 02:46:40



5.1.1.6.2.2 Test RB=25RB

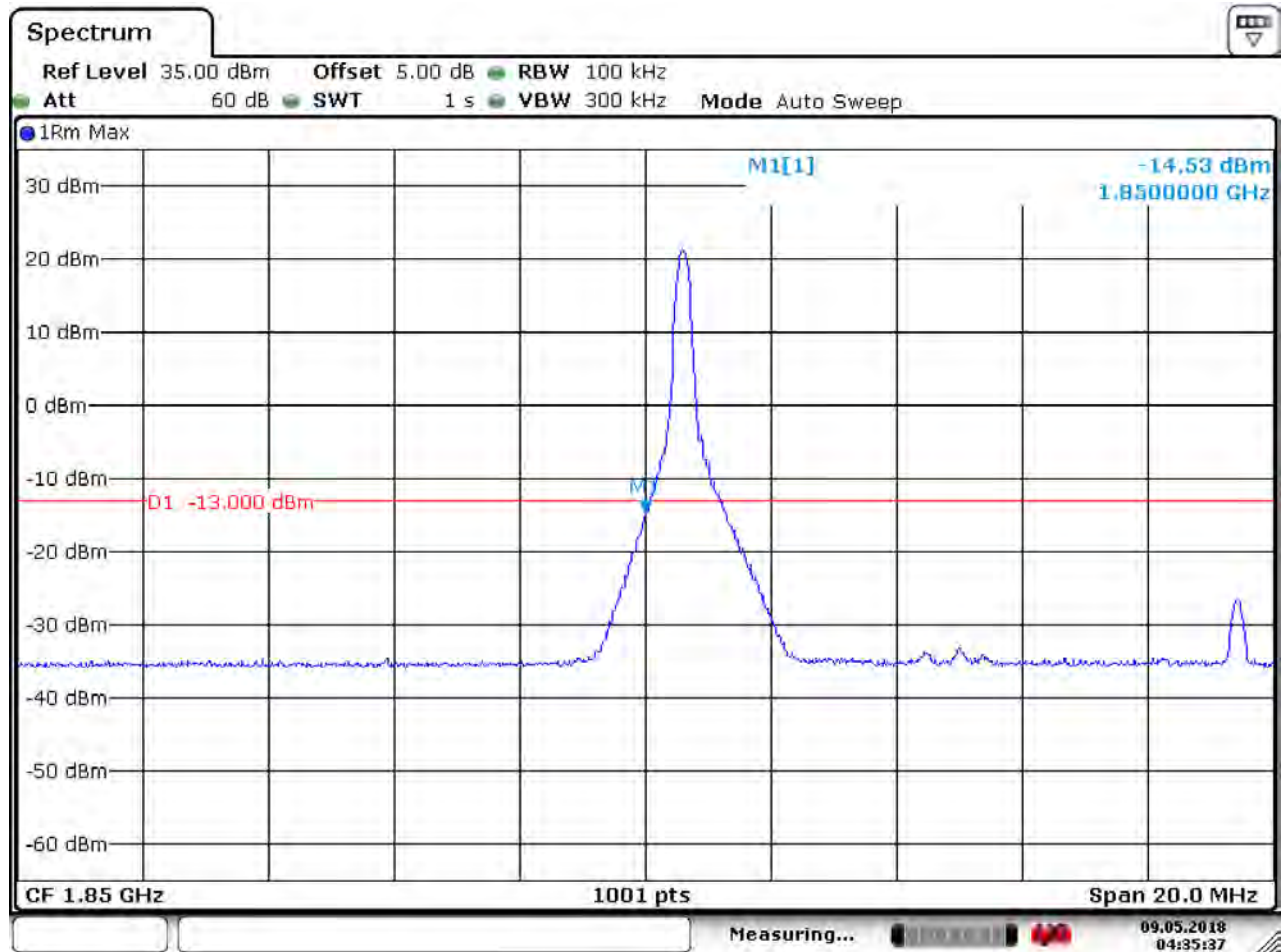


Date: 10.MAY.2018 02:48:08

5.1.1.7 Test Mode = LTE/TM1 10MHz

5.1.1.7.1 Test Channel = LCH

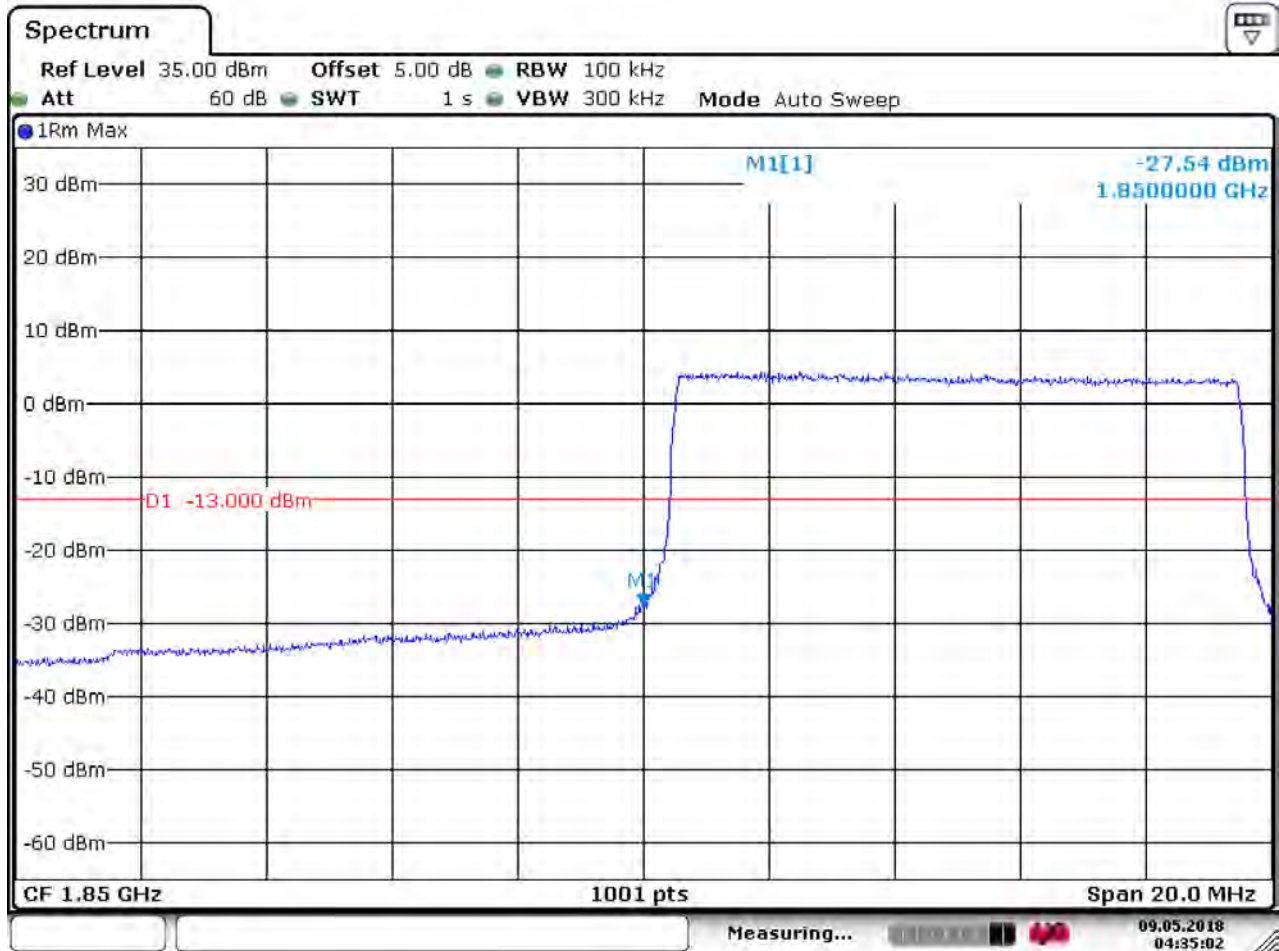
5.1.1.7.1.1 Test RB=1RB



Date: 9.MAY.2018 04:35:37



5.1.1.7.1.2 Test RB=50RB

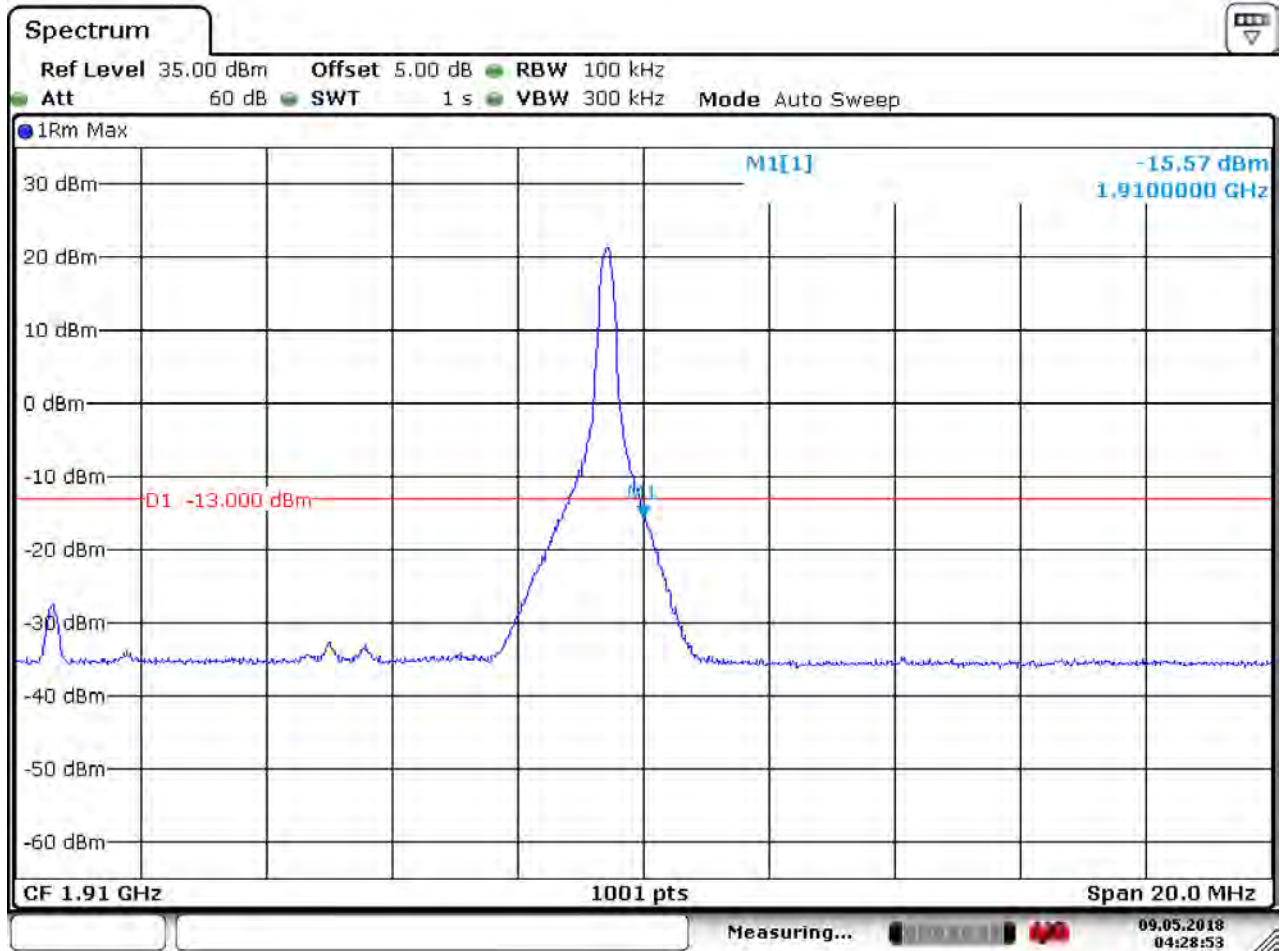


Date: 9.MAY.2018 04:35:02

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5.1.1.7.2 Test Channel = HCH

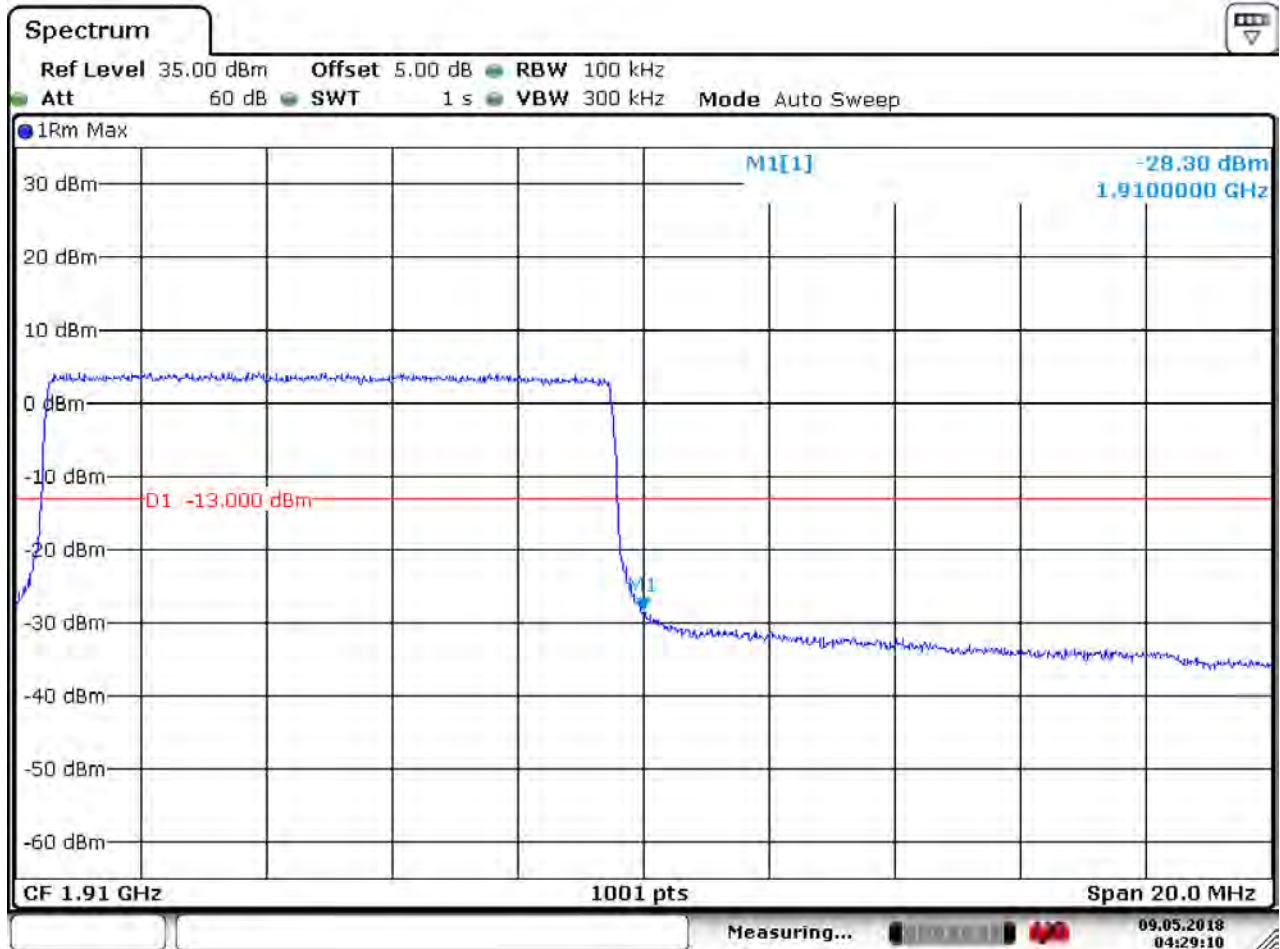
5.1.1.7.2.1 Test RB=1RB



Date: 9.MAY.2018 04:28:54



5.1.1.7.2.2 Test RB=50RB



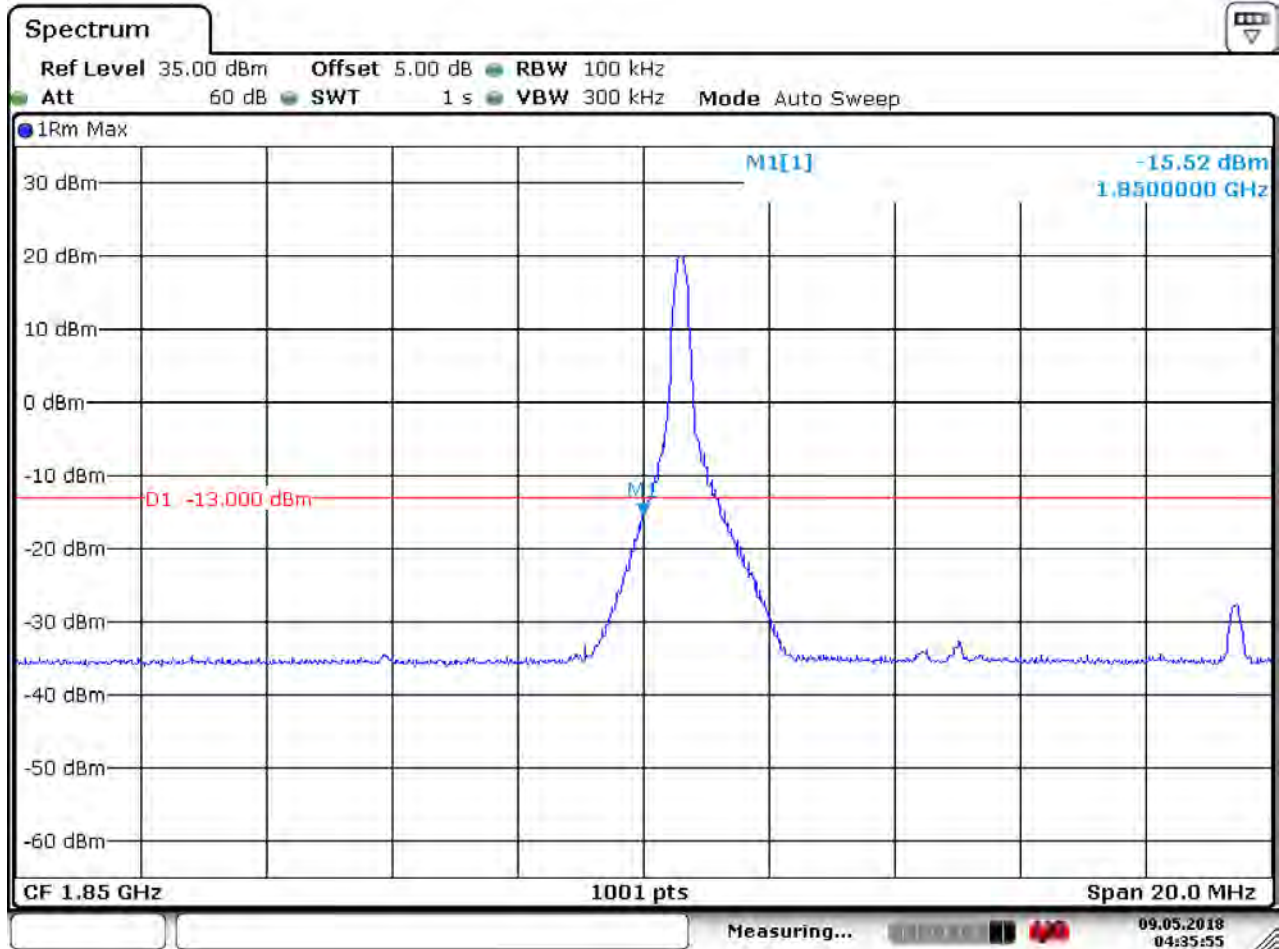
Date: 9.MAY.2018 04:29:11

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5.1.1.8 Test Mode = LTE/TM2 10MHz

5.1.1.8.1 Test Channel = LCH

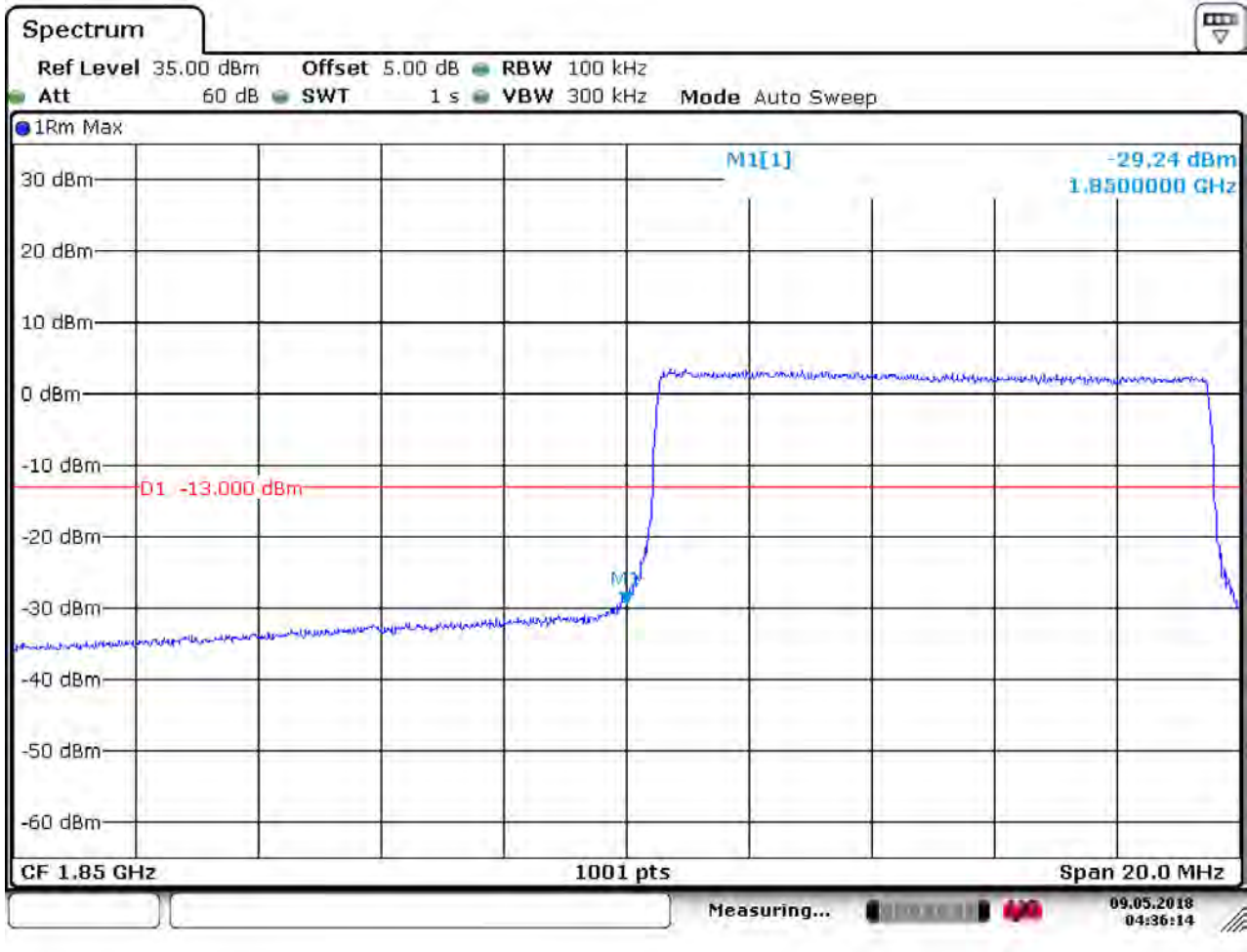
5.1.1.8.1.1 Test RB=1RB



Date: 9.MAY.2018 04:35:56



5.1.1.8.1.2 Test RB=50RB

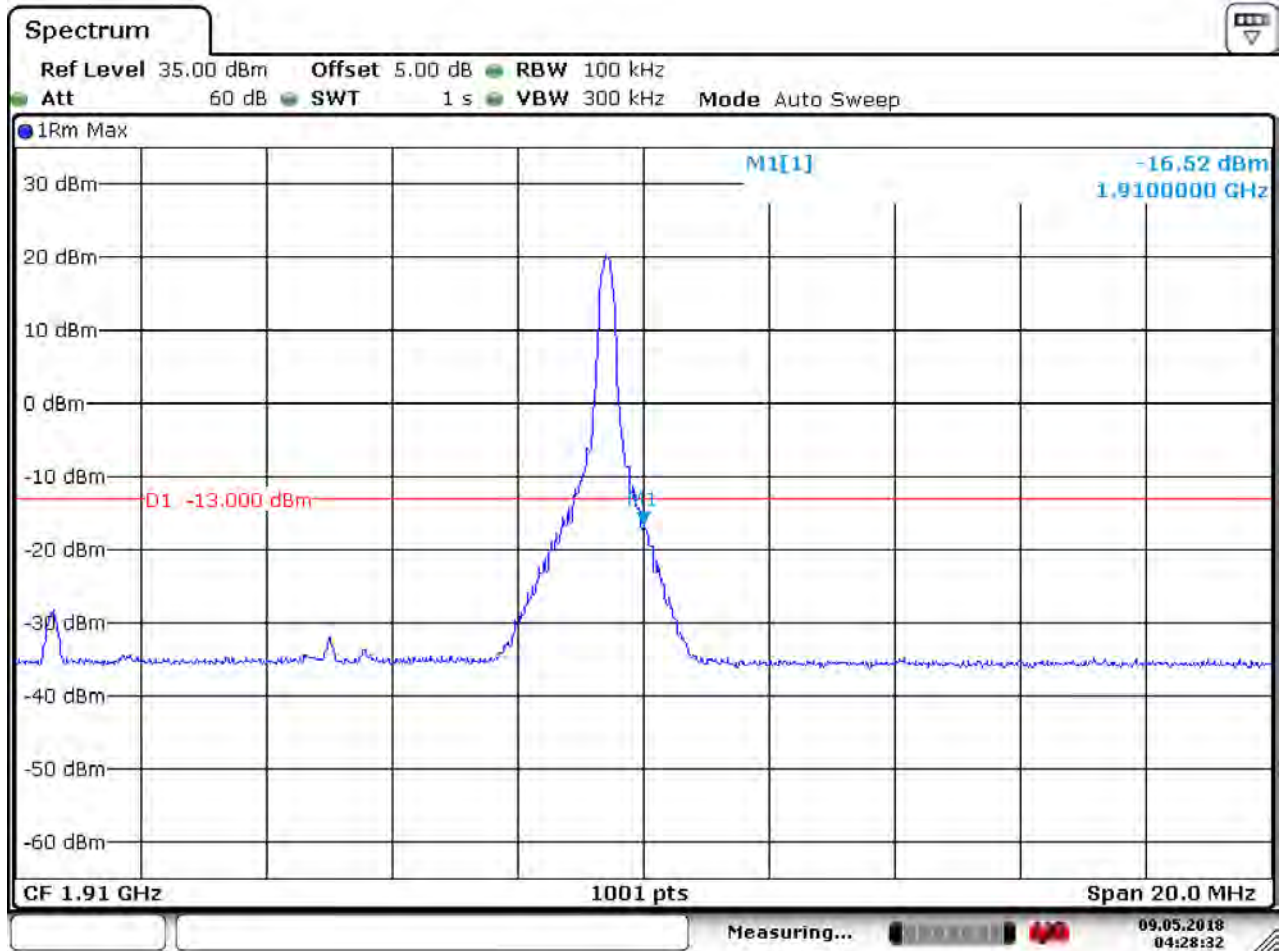


Date: 9.MAY.2018 04:36:15



5.1.1.8.2 Test Channel = HCH

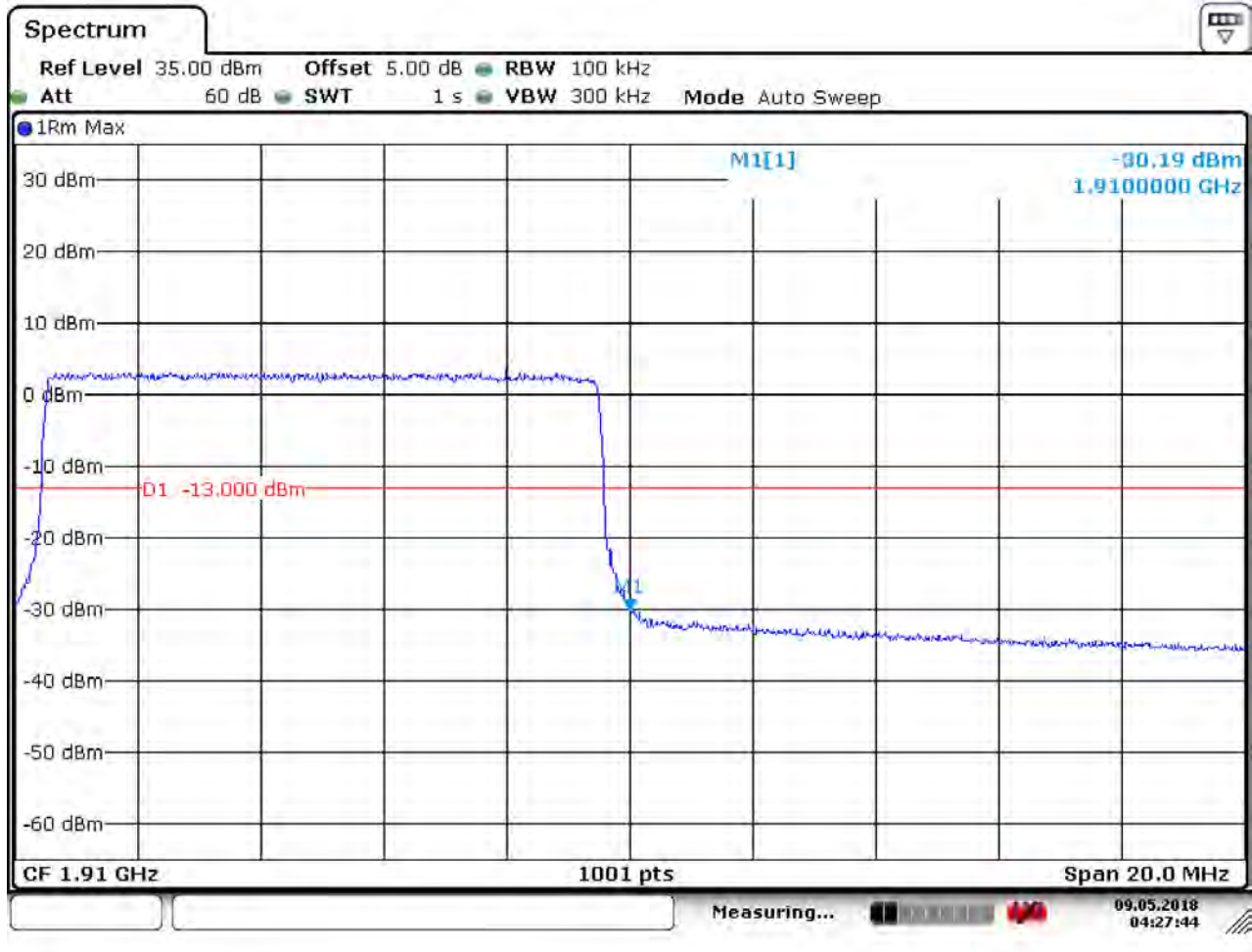
5.1.1.8.2.1 Test RB=1RB



Date: 9.MAY.2018 04:28:32



5.1.1.8.2.2 Test RB=50RB



Date: 9.MAY.2018 04:27:44

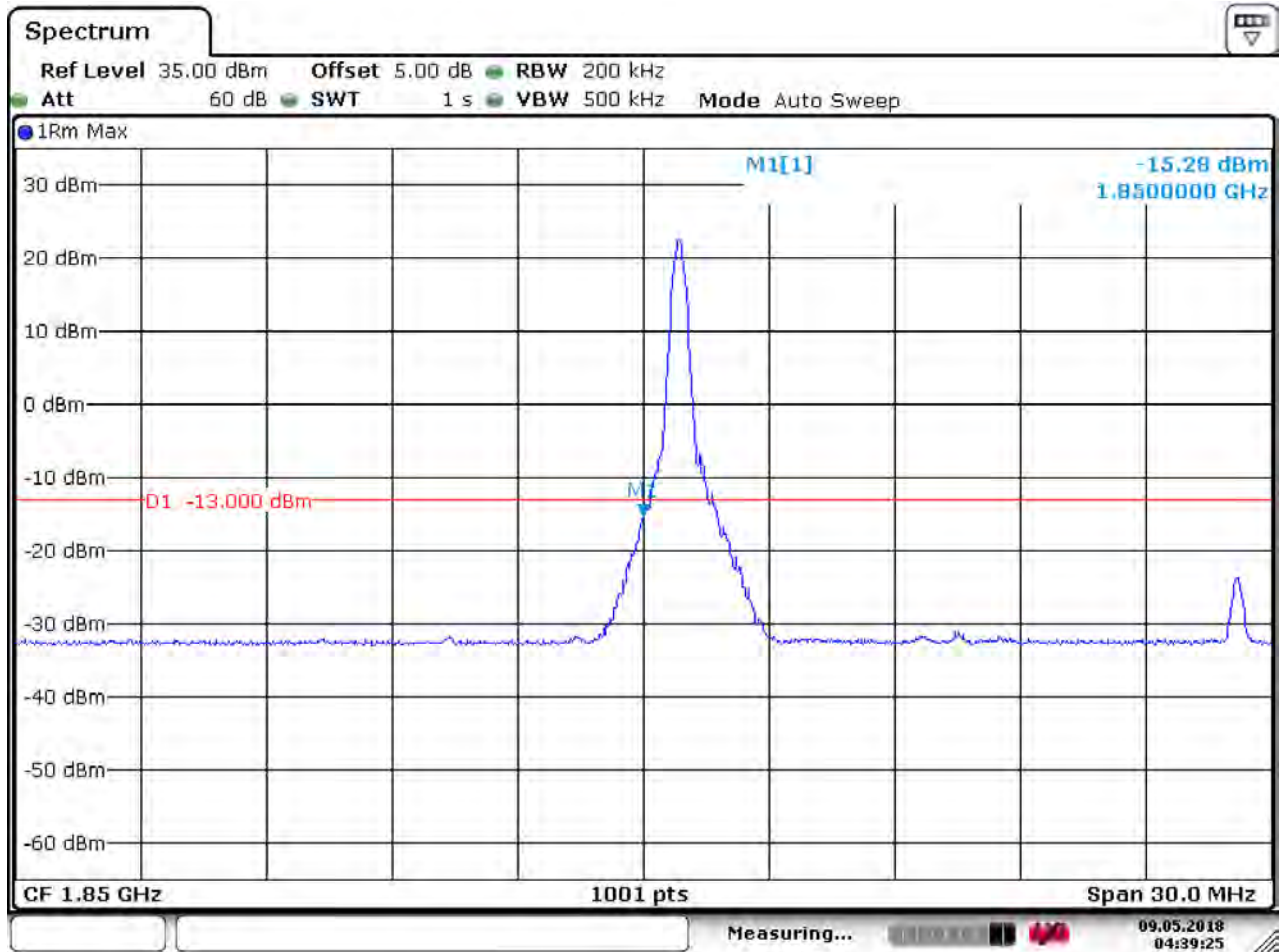
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5.1.1.9 Test Mode = LTE/TM1 15MHz

5.1.1.9.1 Test Channel = LCH

5.1.1.9.1.1 Test RB=1RB

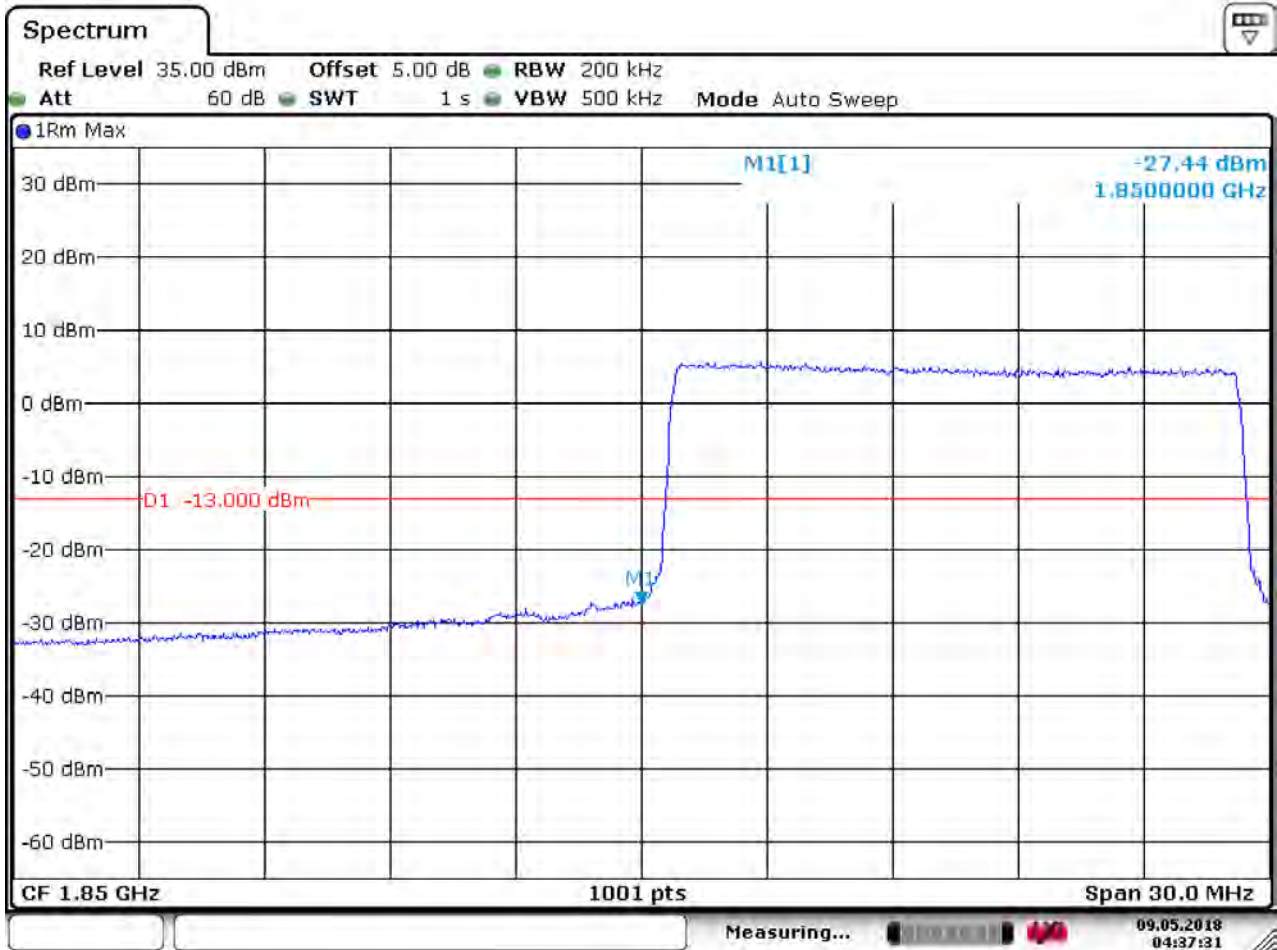


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5.1.1.9.1.2 Test RB=75RB

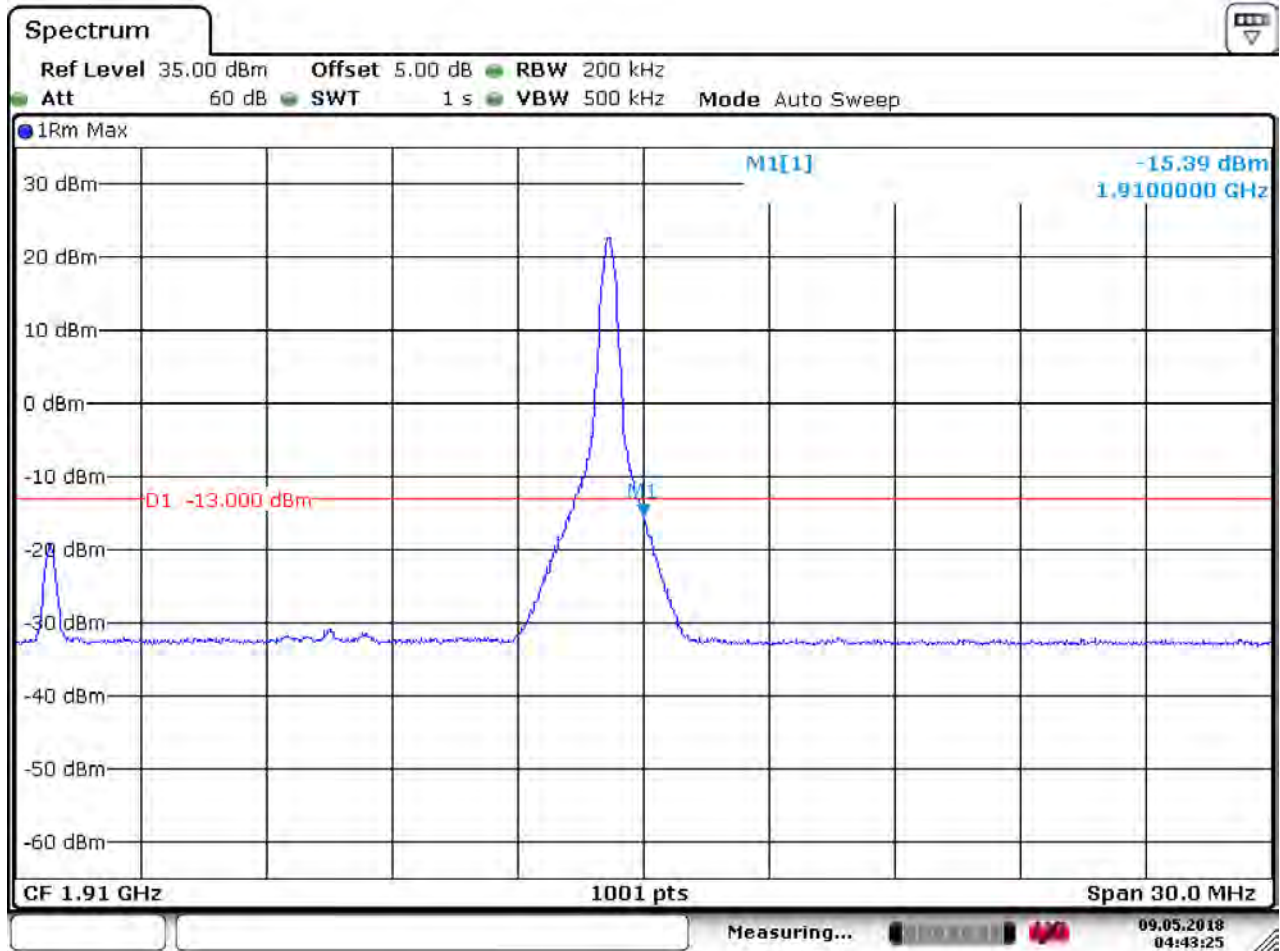


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5.1.1.9.2 Test Channel = HCH

5.1.1.9.2.1 Test RB=1RB



Date: 9.MAY.2018 04:43:25



5.1.1.9.2.2 Test RB=75RB



Date: 9.MAY.2018 04:44:26

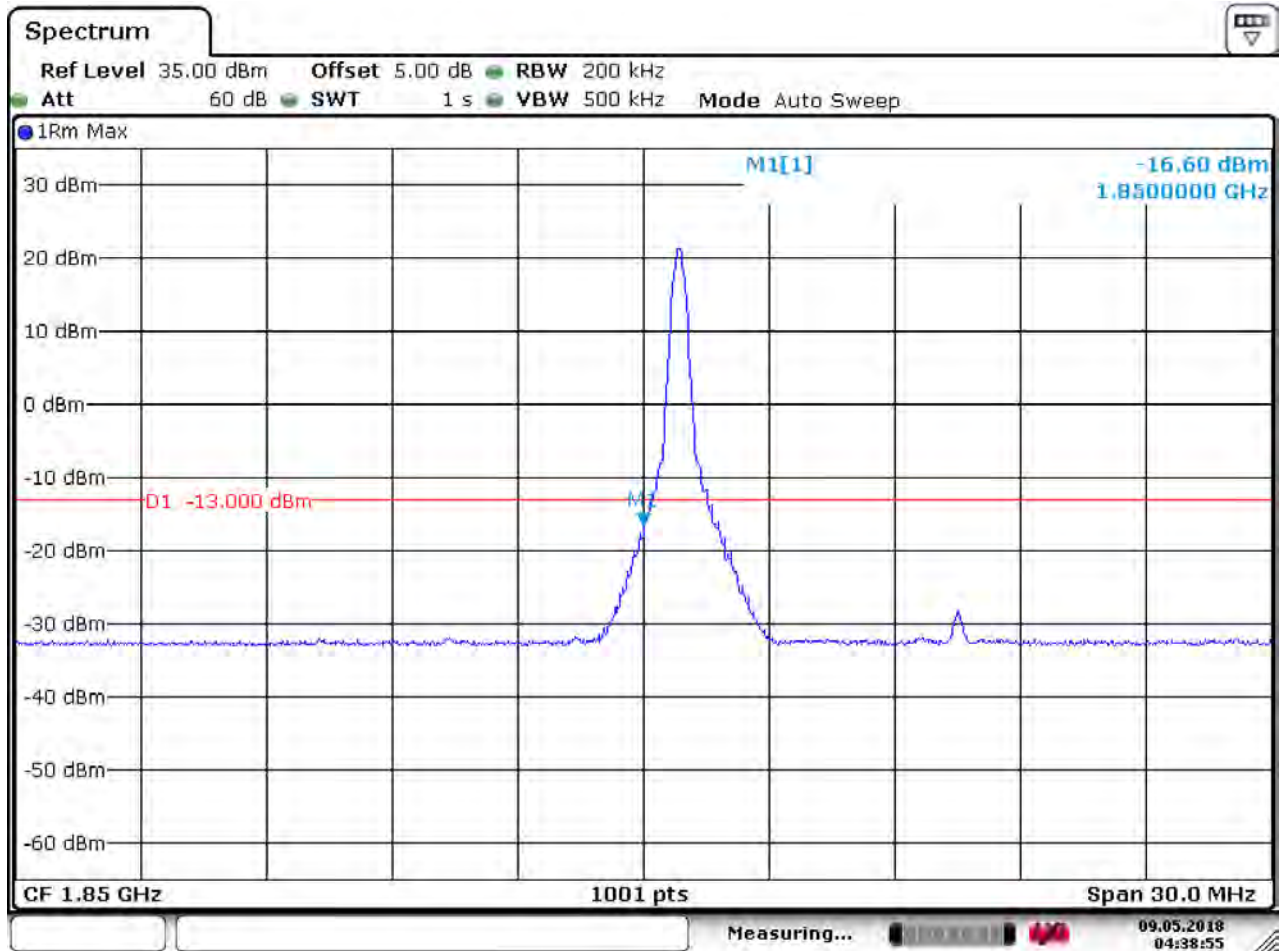
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5.1.1.10 Test Mode = LTE/TM2 15MHz

5.1.1.10.1 Test Channel = LCH

5.1.1.10.1.1 Test RB=1RB

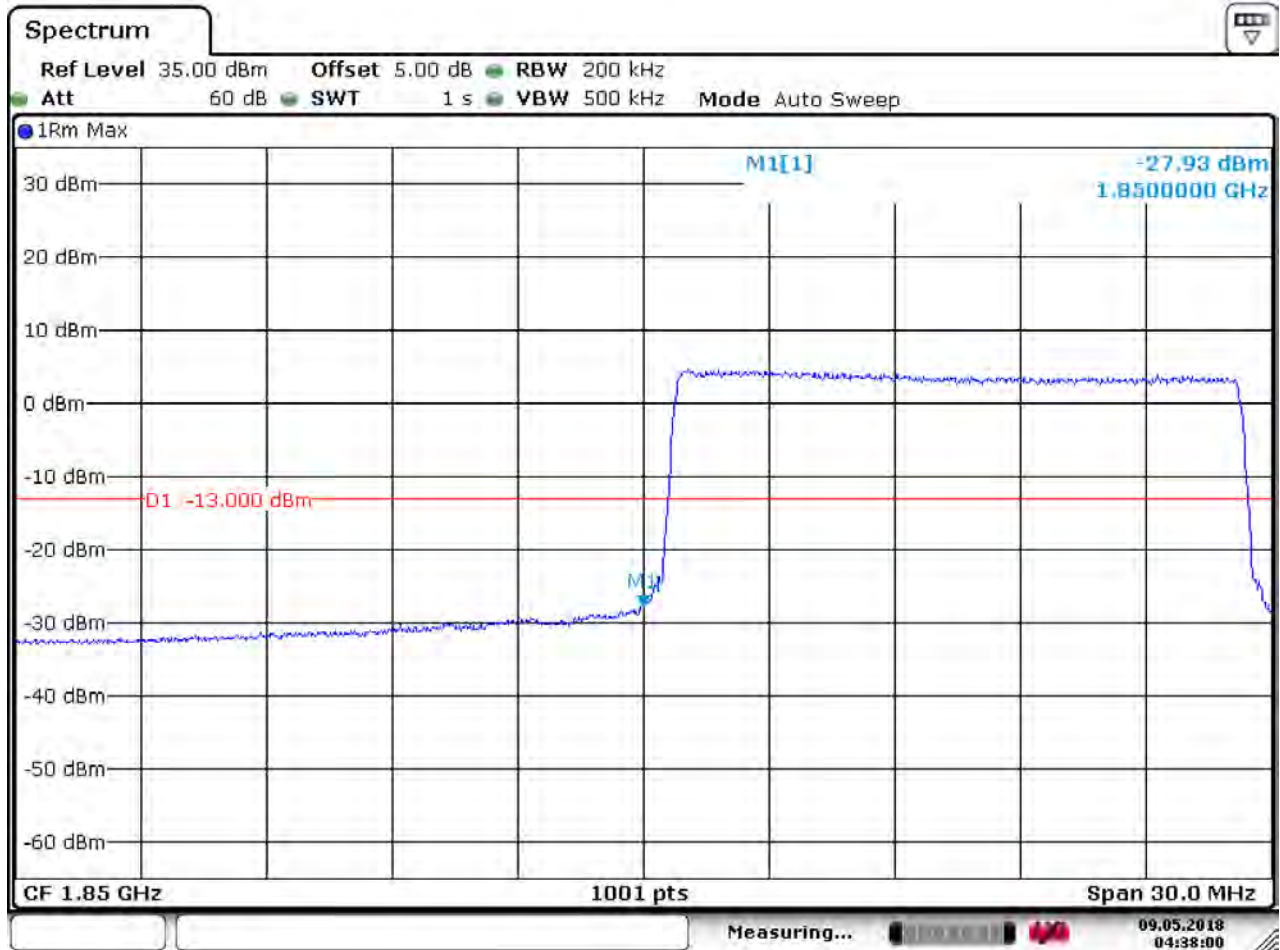


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5.1.1.10.1.2 Test RB=75RB

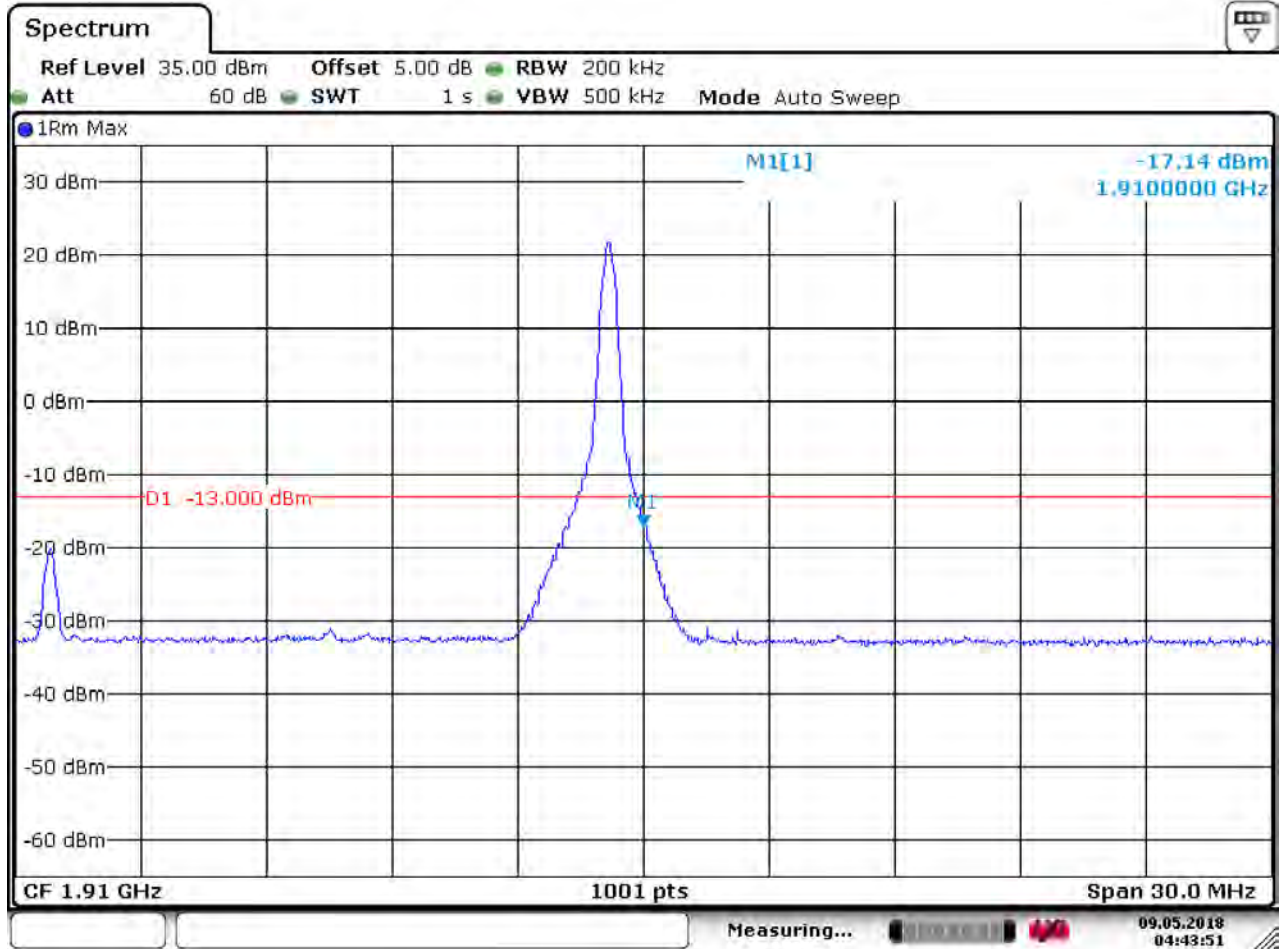


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5.1.1.10.2 Test Channel = HCH

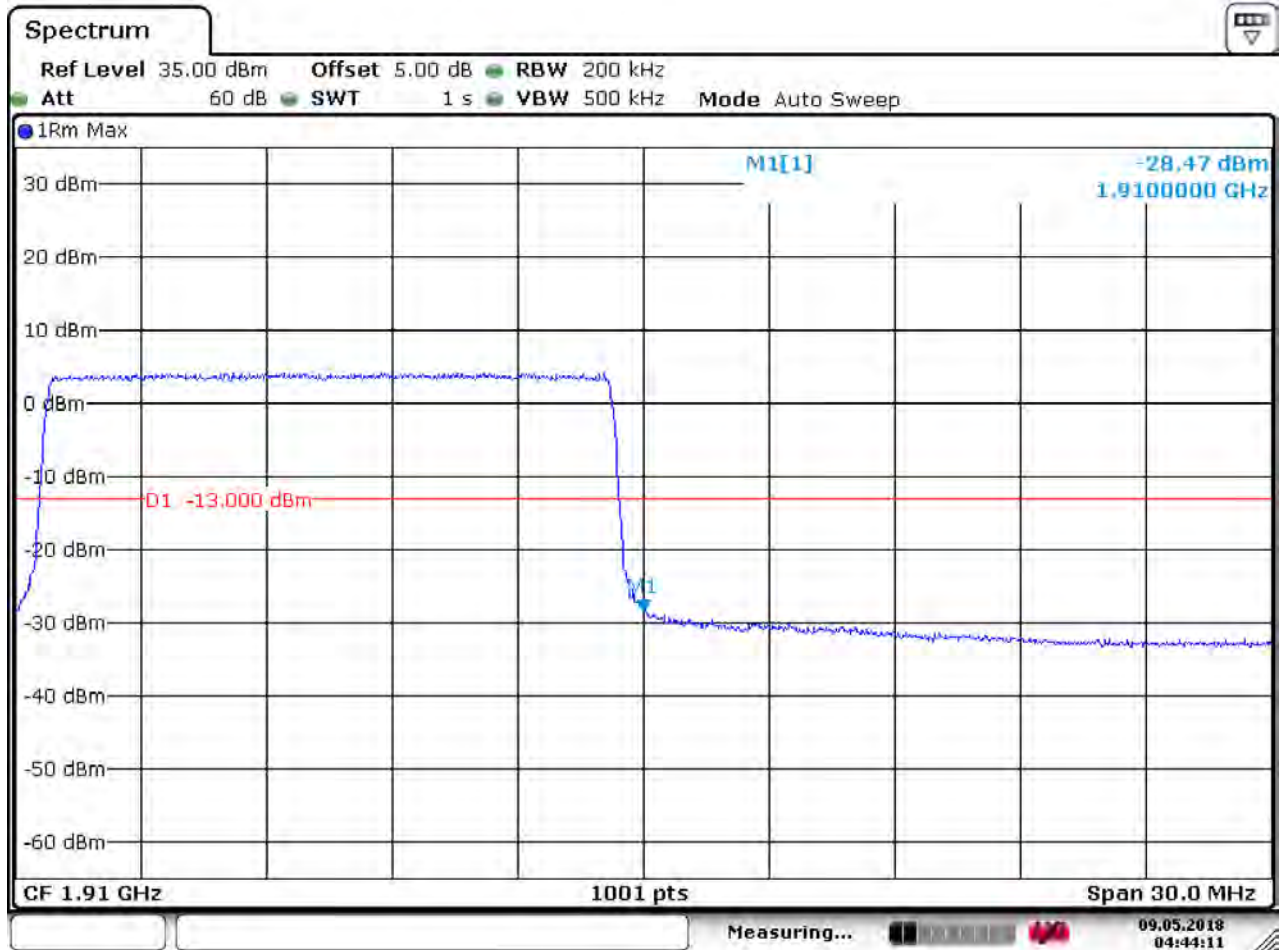
5.1.1.10.2.1 Test RB=1RB



Date: 9.MAY.2018 04:43:52



5.1.1.10.2.2 Test RB=75RB



Date: 9.MAY.2018 04:44:11

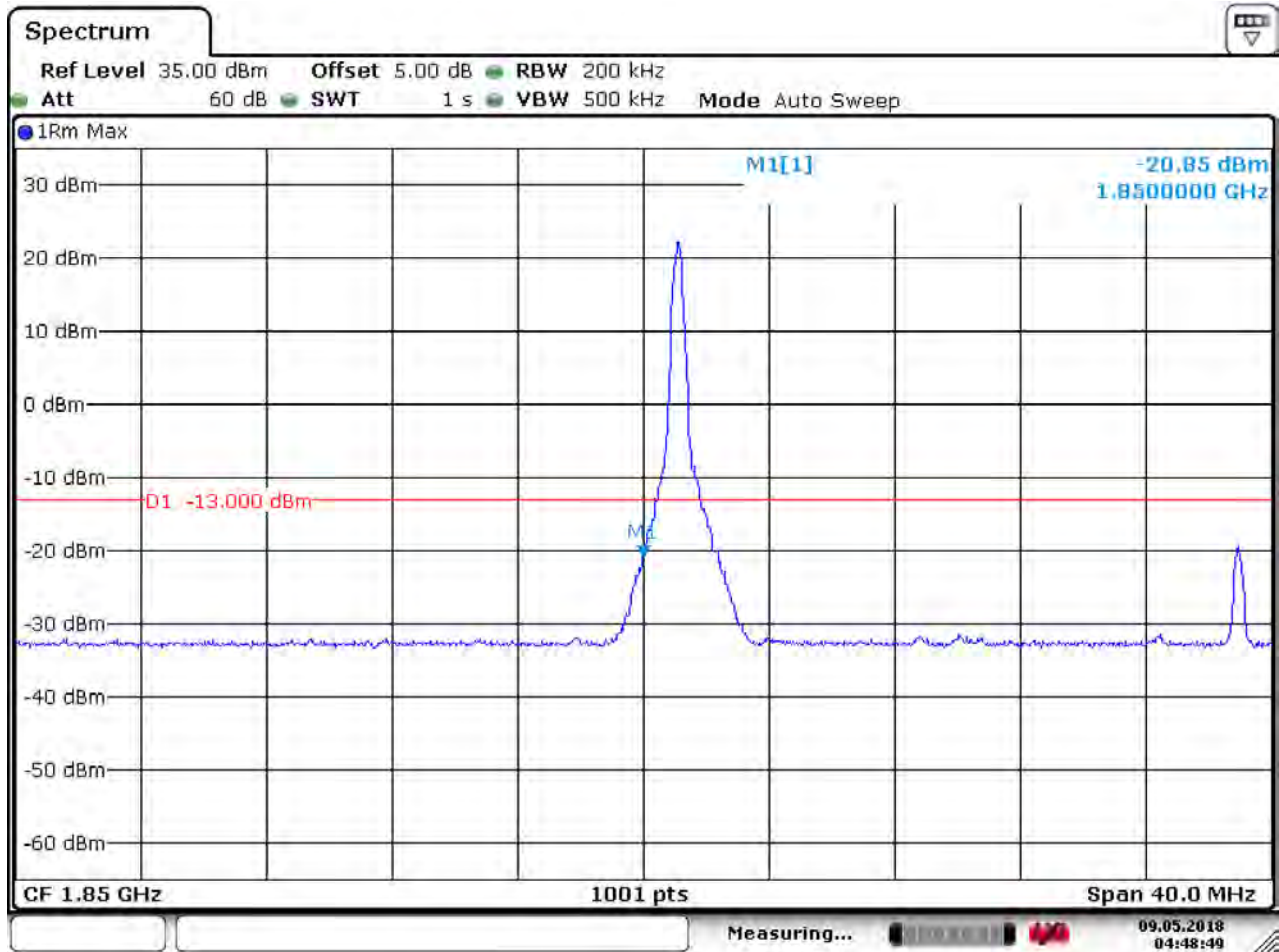
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5.1.1.11 Test Mode = LTE/TM1 20MHz

5.1.1.11.1 Test Channel = LCH

5.1.1.11.1.1 Test RB=1RB

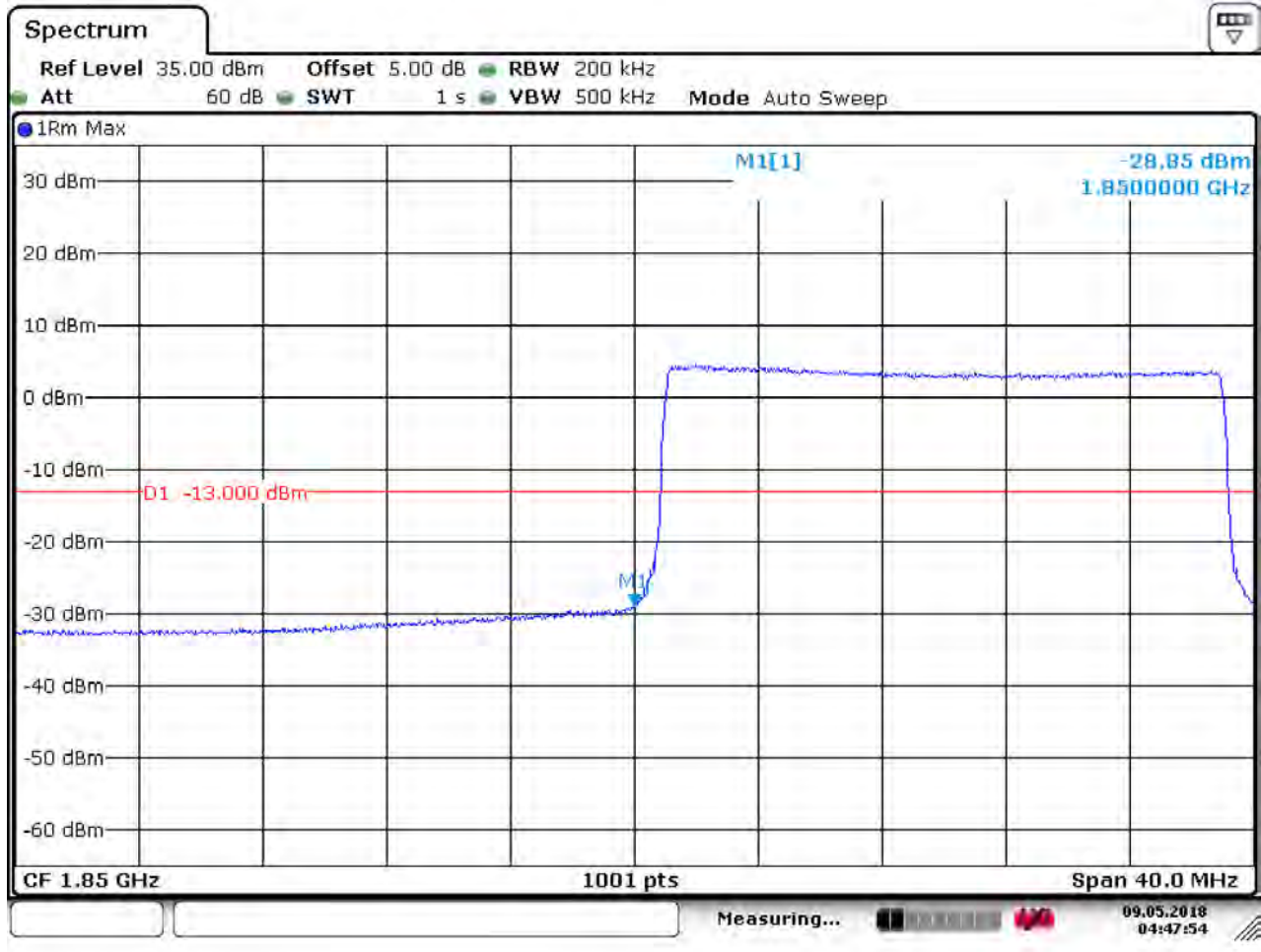


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5.1.1.11.1.2 Test RB=100RB



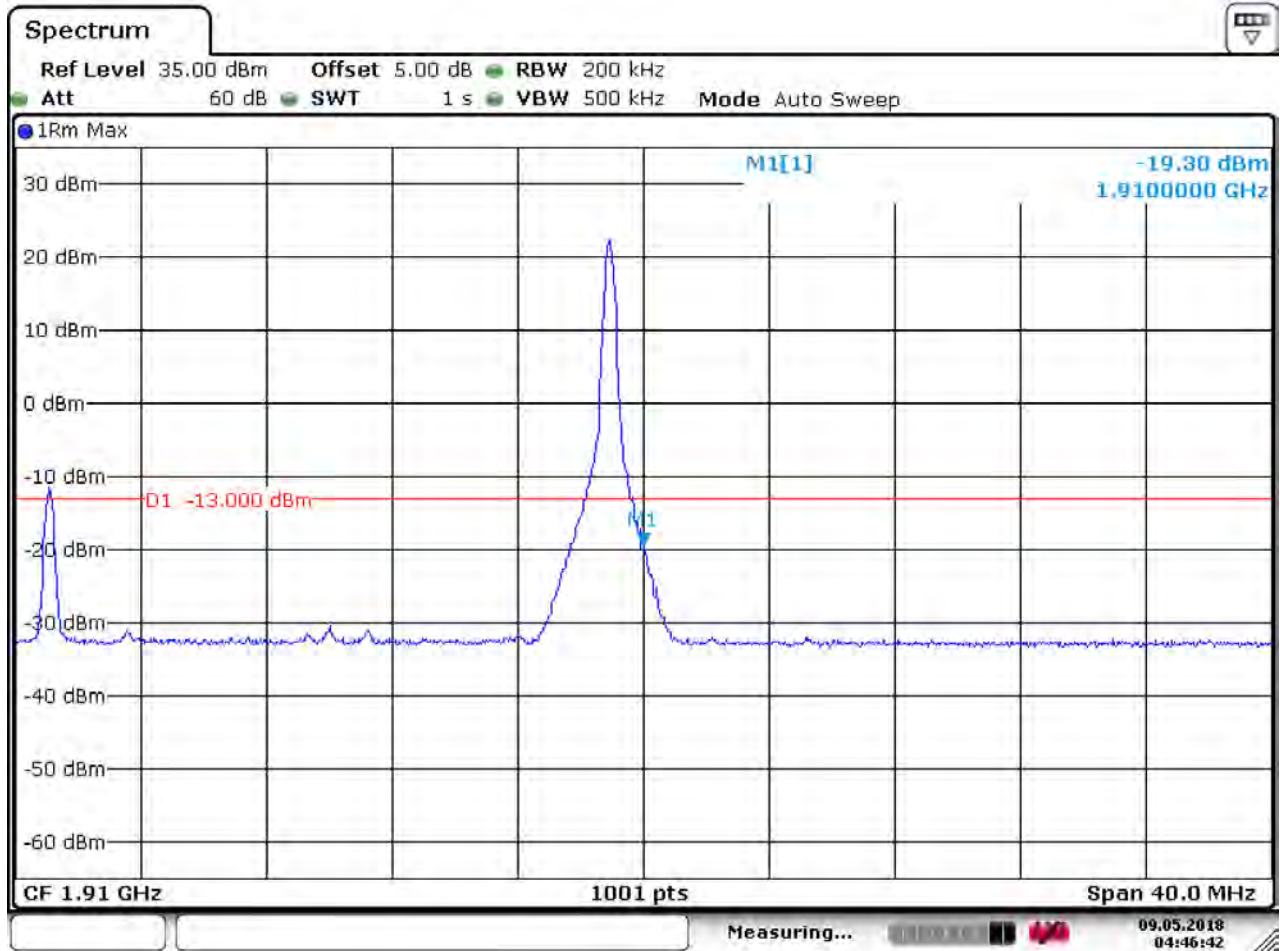
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5.1.1.11.2 Test Channel = HCH

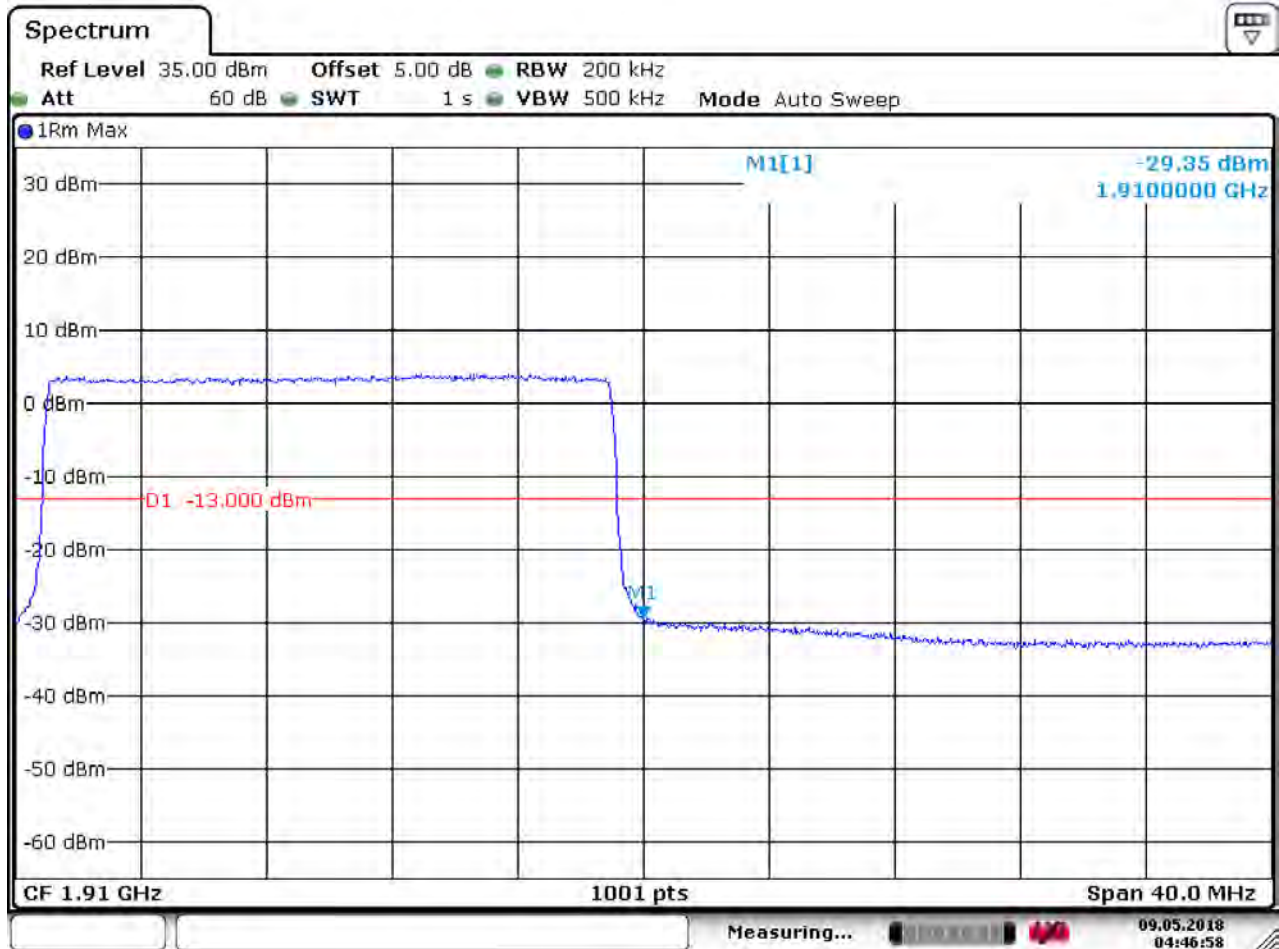
5.1.1.11.2.1 Test RB=1RB



Date: 9.MAY.2018 04:46:42



5.1.1.11.2.2 Test RB=100RB



Date: 9.MAY.2018 04:46:58

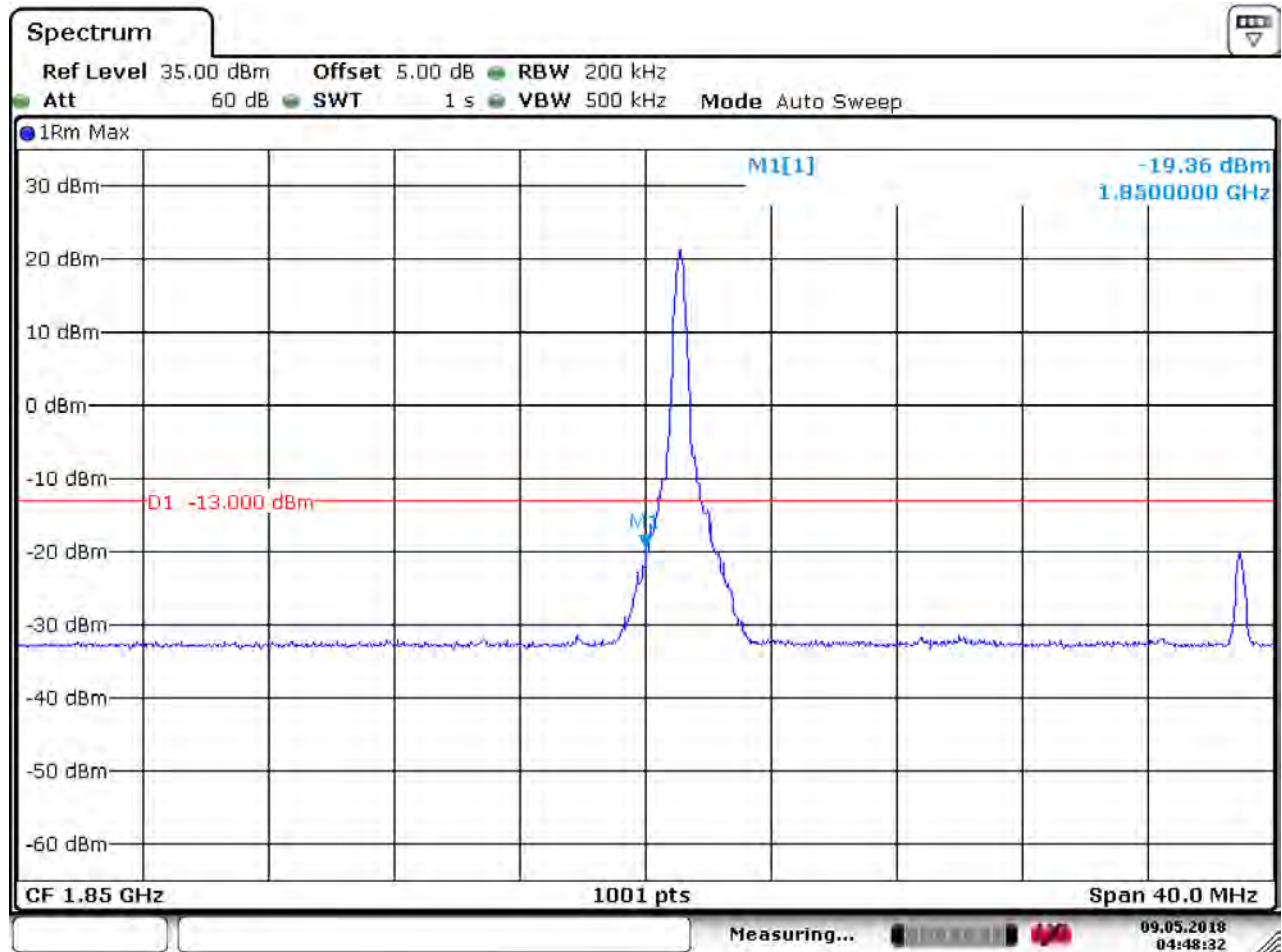
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5.1.1.12 Test Mode = LTE/TM2 20MHz

5.1.1.12.1 Test Channel = LCH

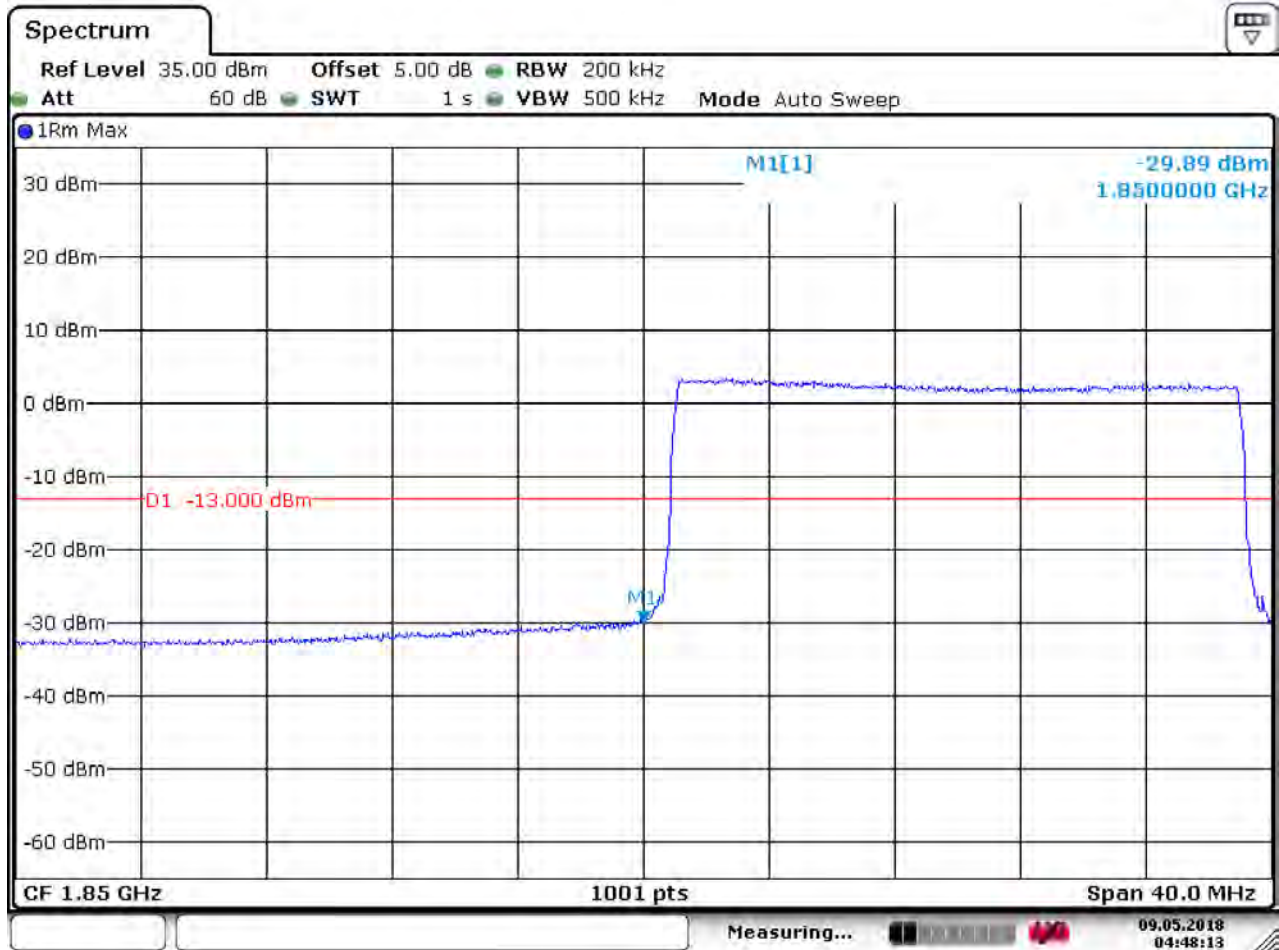
5.1.1.12.1.1 Test RB=1RB



Date: 9.MAY.2018 04:48:33



5.1.1.12.1.2 Test RB=100RB

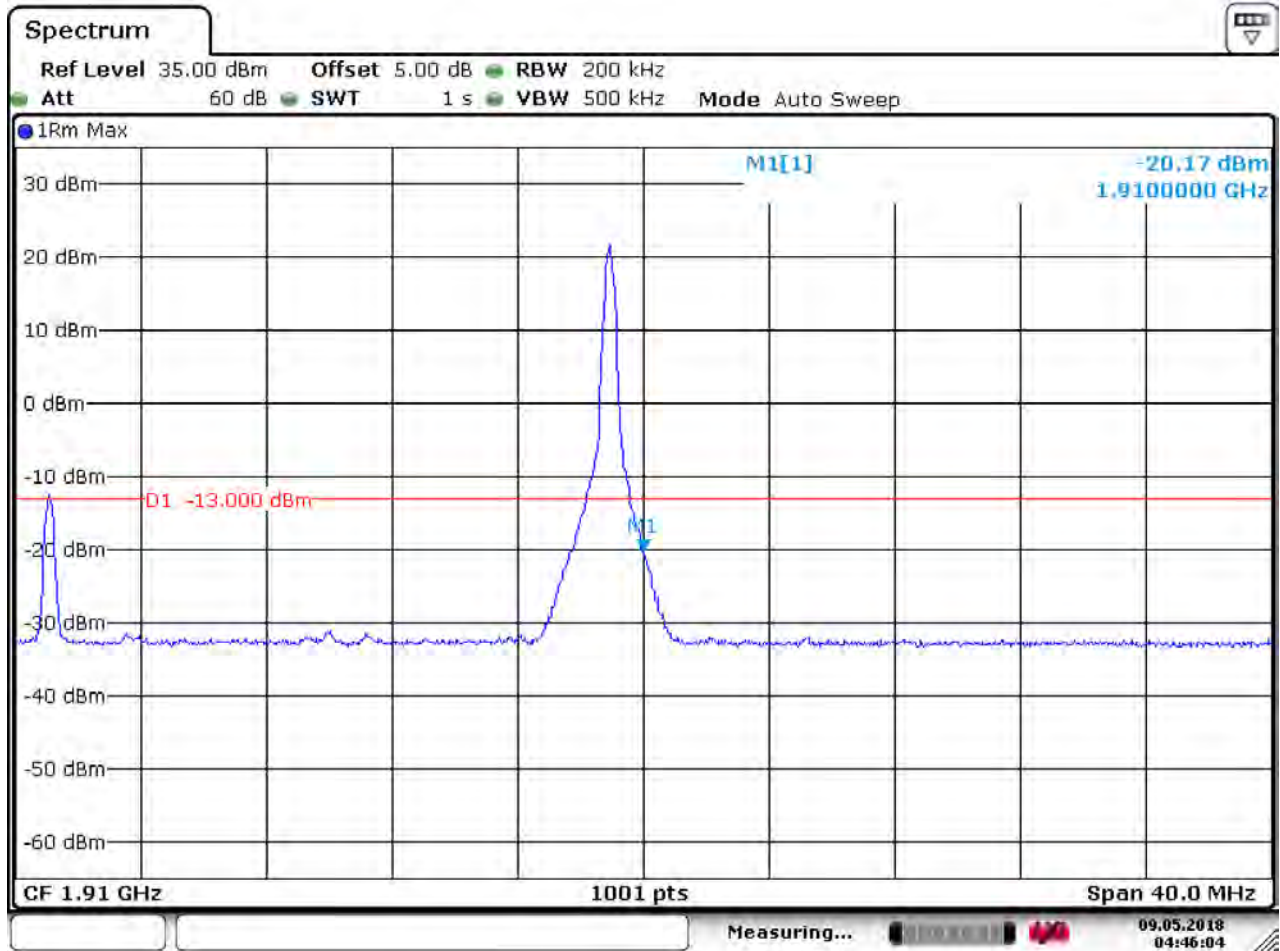


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5.1.1.12.2 Test Channel = HCH

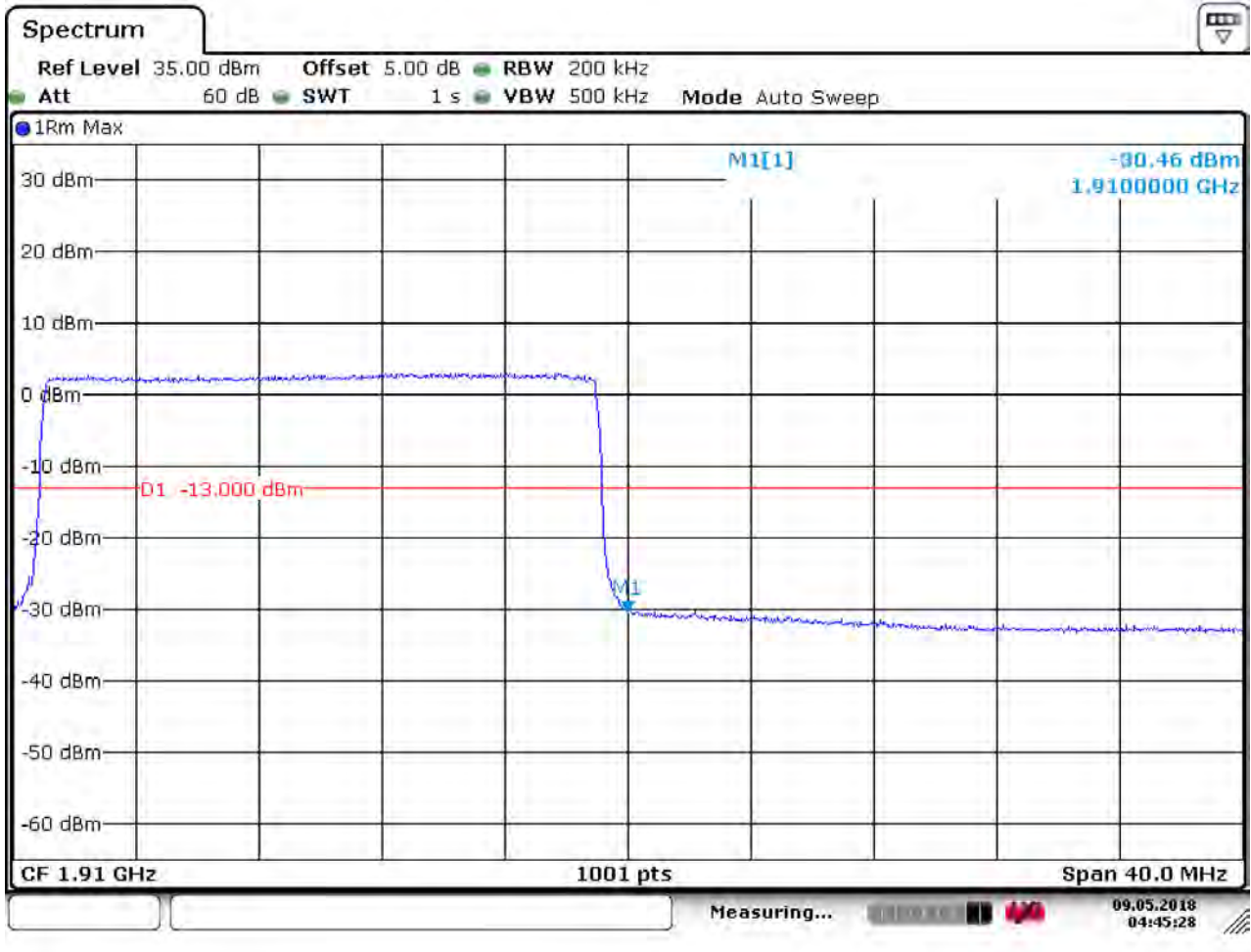
5.1.1.12.2.1 Test RB=1RB



Date: 9.MAY.2018 04:46:04



5.1.1.12.2.2 Test RB=100RB



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6 Spurious Emission at Antenna Terminal

NOTE: For the averaged unwanted emissions measurements, the measurement points in each sweep is greater than twice the Span/RBW in order to ensure bin-to-bin spacing of $< RBW/2$ so that narrowband signals are not lost between frequency bins. As to the present test item, the "Measurement Points = $k * (Span / RBW)$ " with k between 4 and 5, which results in an acceptable level error of less than 0.5 dB.

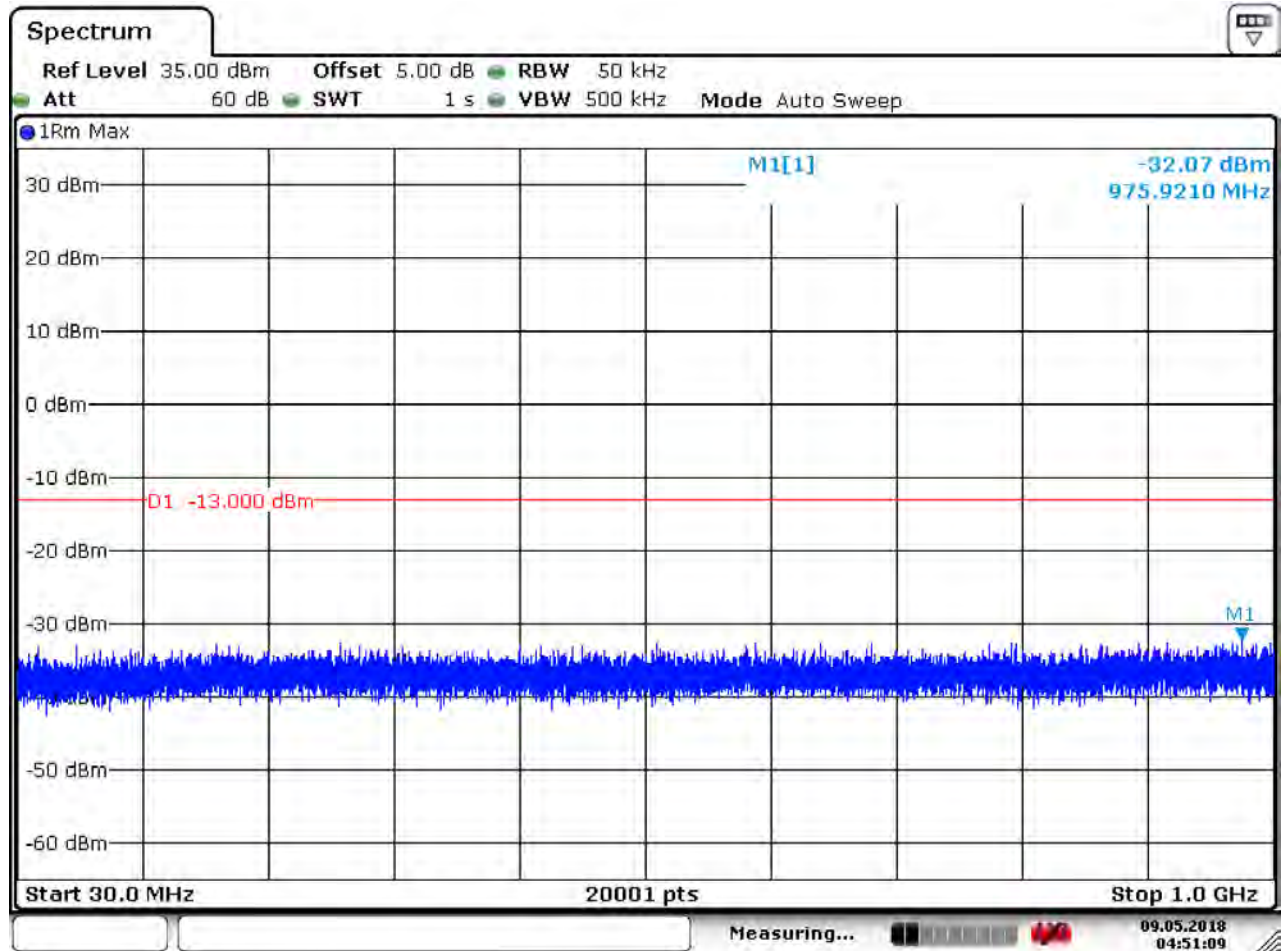
Part I - Test Plots

6.1 For LTE

6.1.1 Test Band = LTE band2

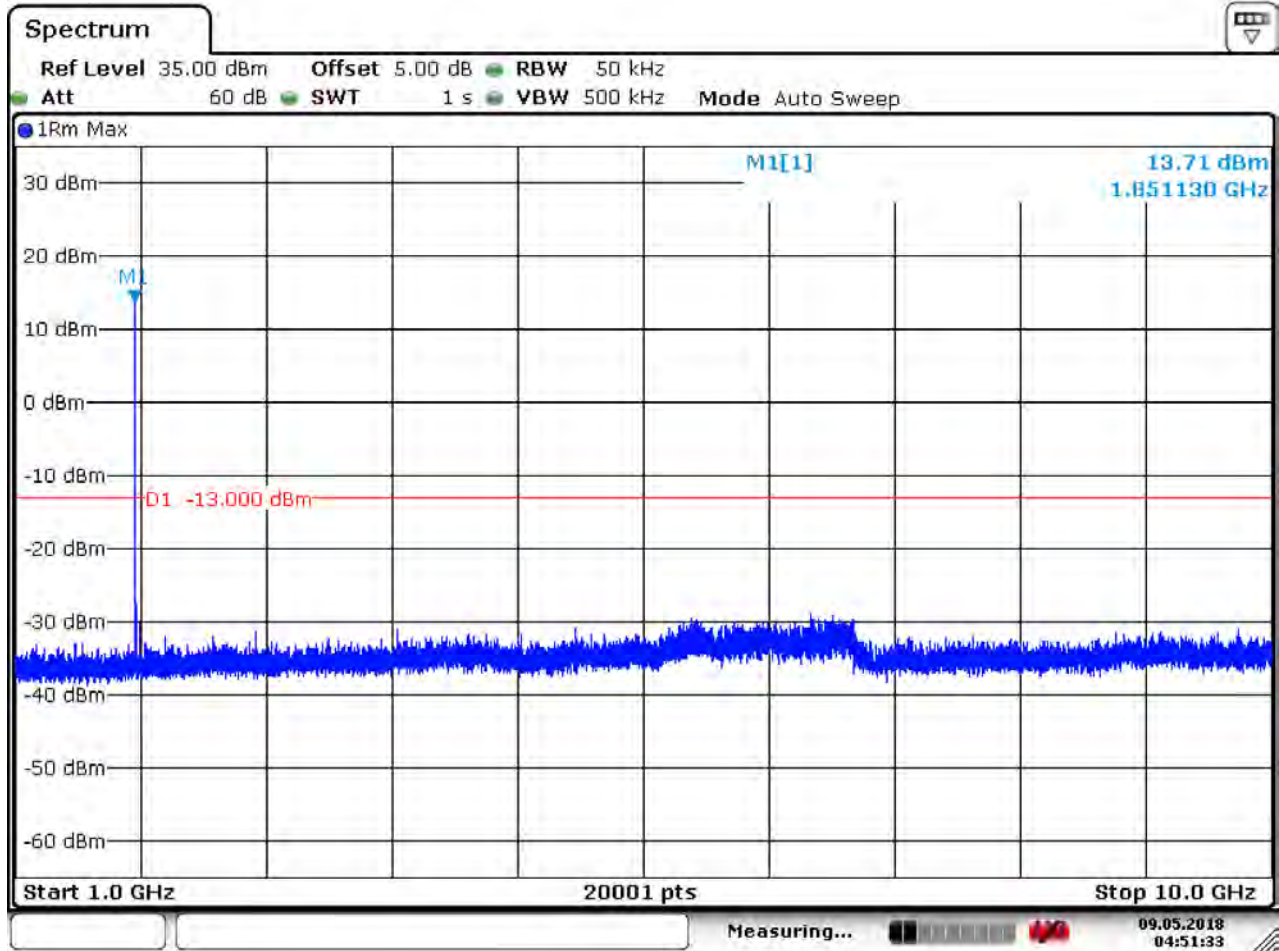
6.1.1.1 Test Mode = LTE / TM1 20MHz RB1#0

6.1.1.1.1 Test Channel = LCH



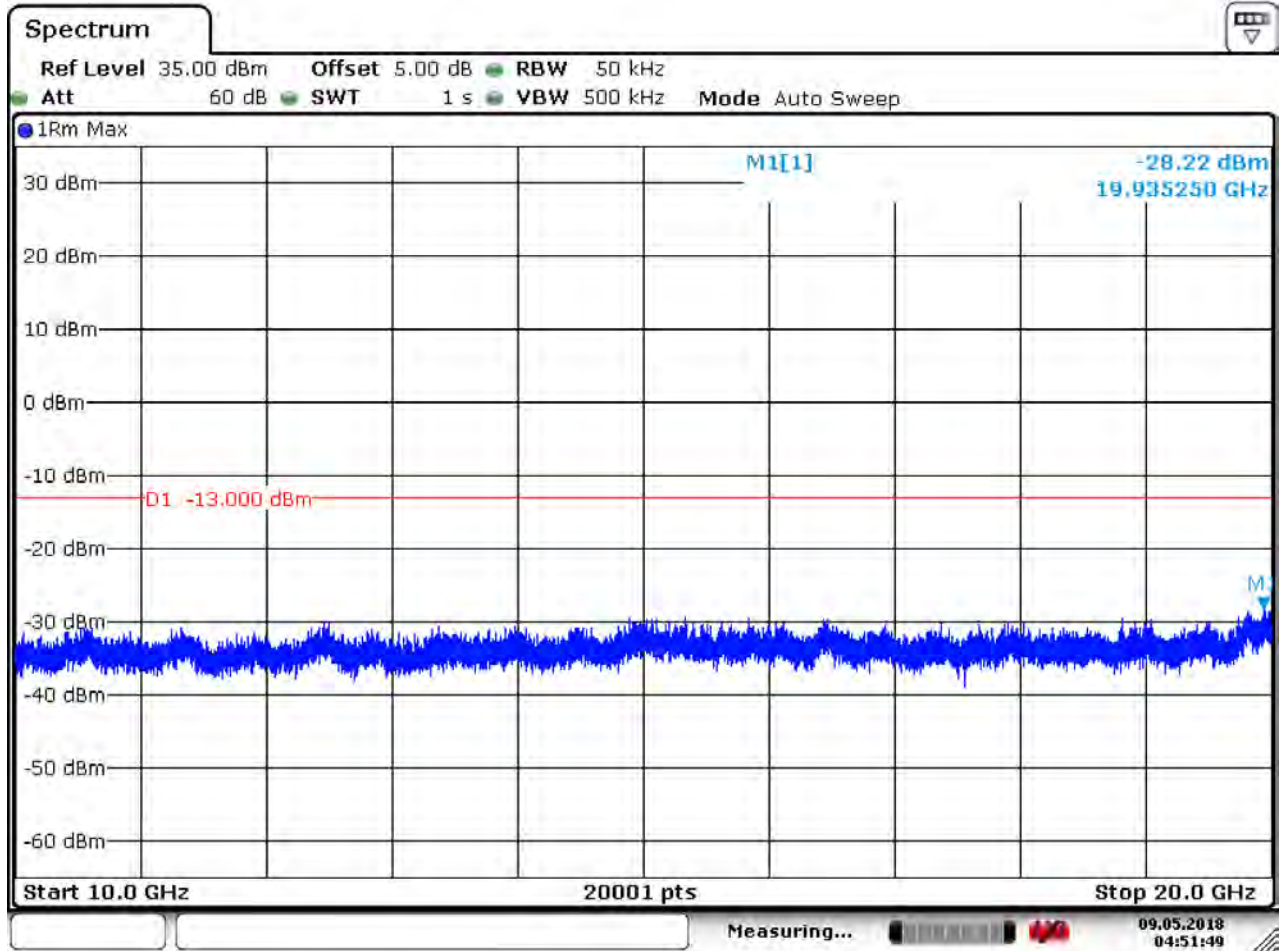
Date: 9.MAY.2018 04:51:10

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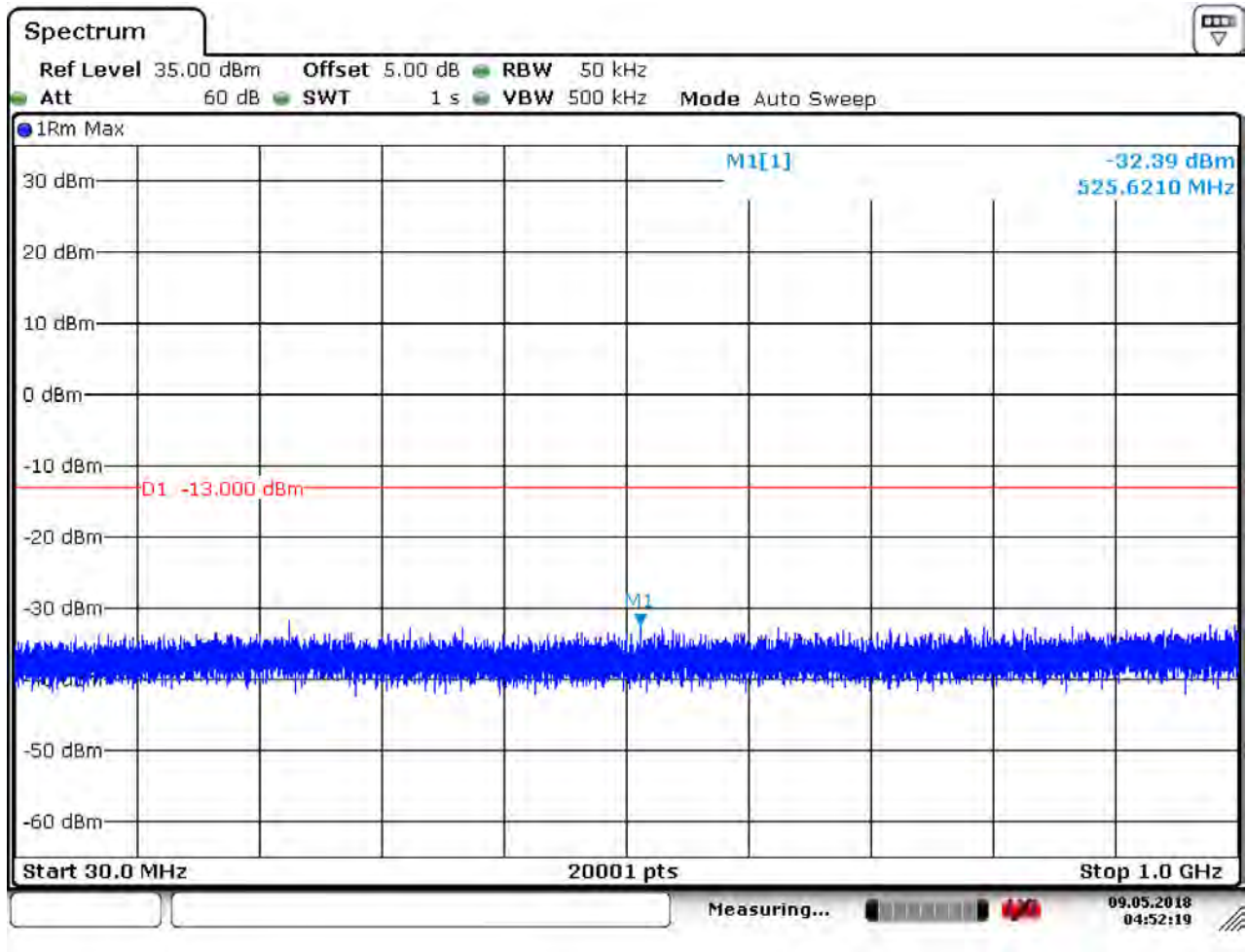


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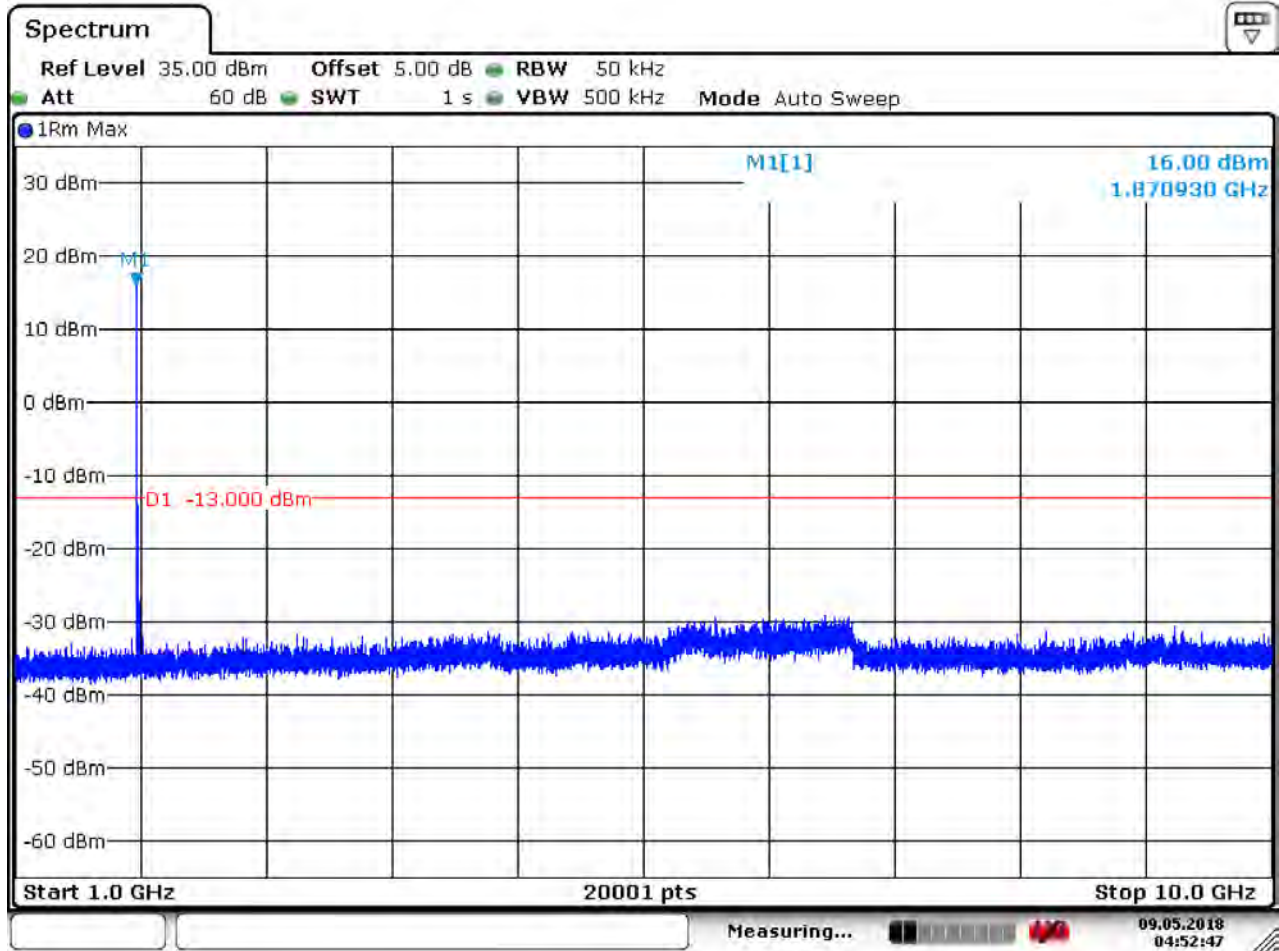


6.1.1.1.2 Test Channel = MCH



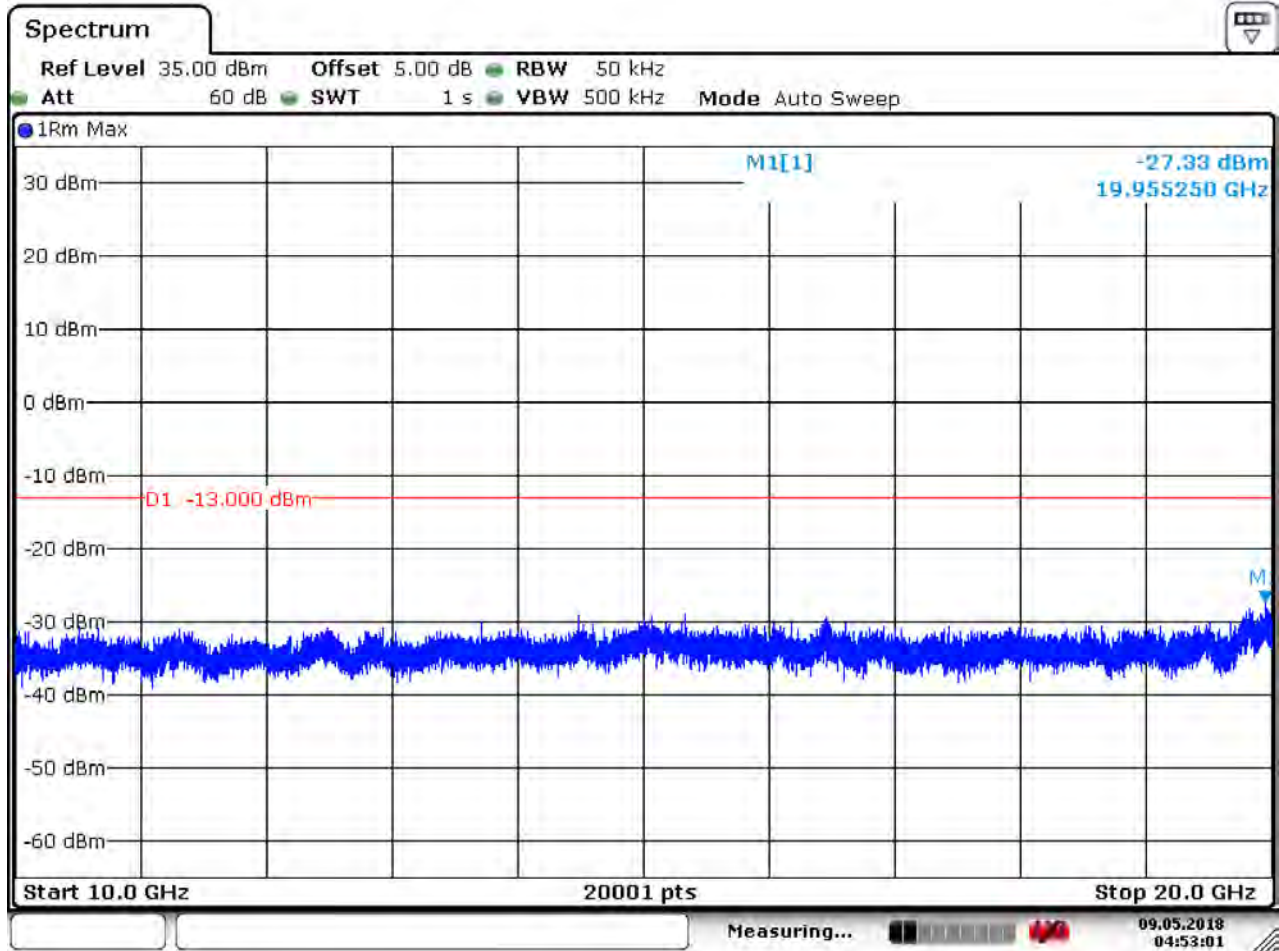
Date: 9.MAY.2018 04:52:19

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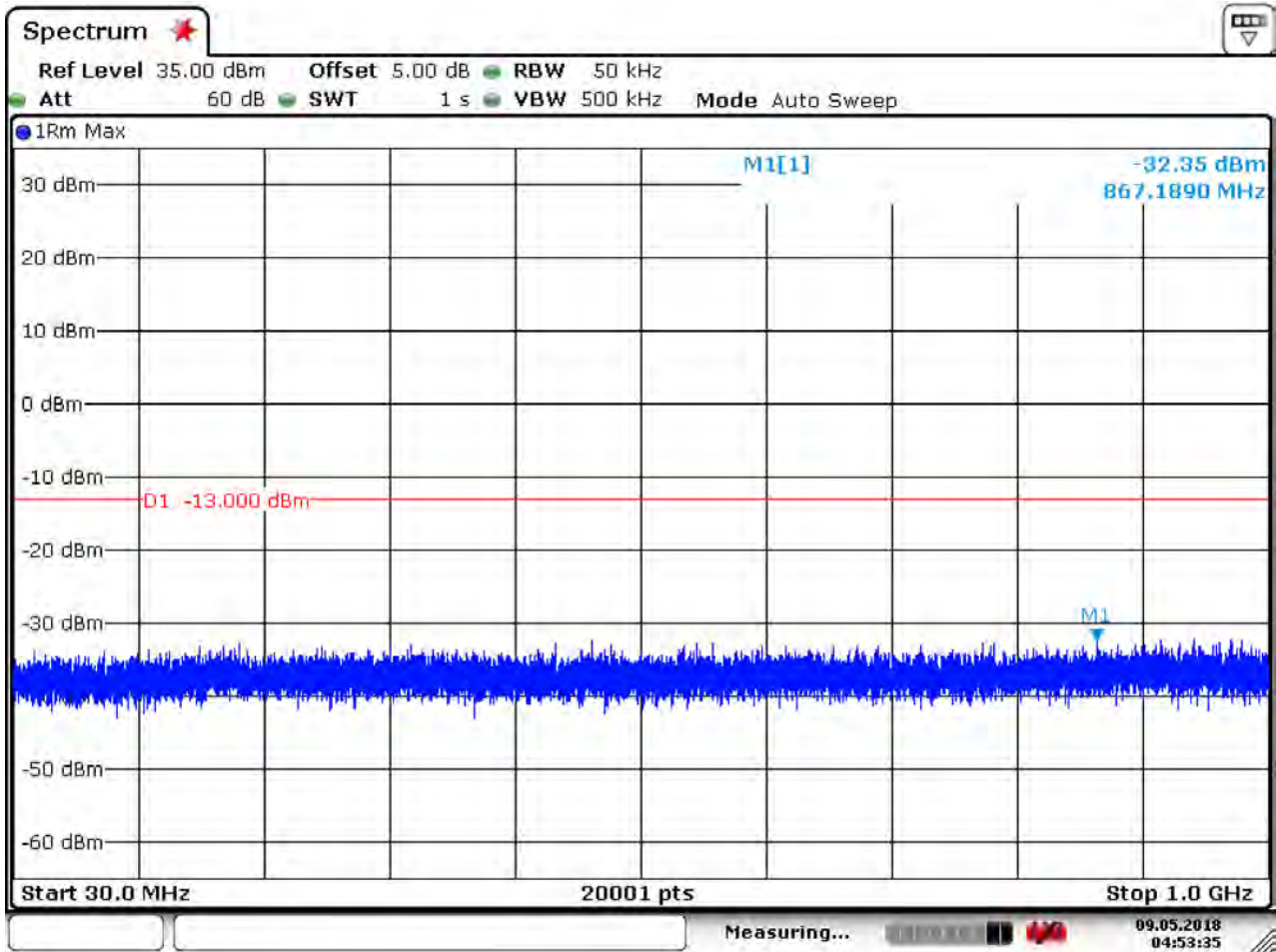


Date: 9.MAY.2018 04:53:01

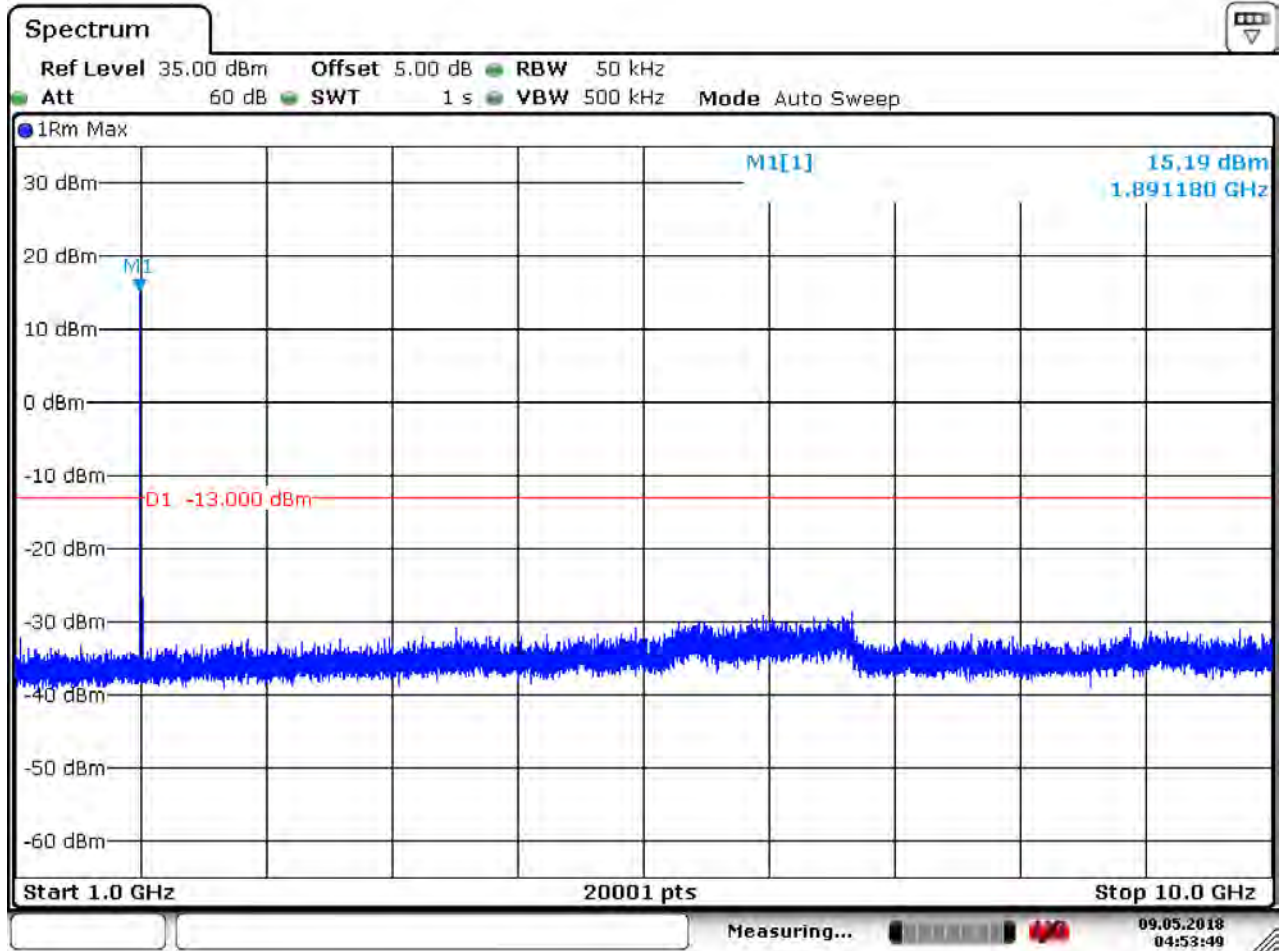
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6.1.1.1.3 Test Channel = HCH



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7 Field Strength of Spurious Radiation

7.1 For LTE

7.1.1 Test Band = LTE band2

7.1.1.1 Test Mode =LTE/TM1 20MHz RB1#0

7.1.1.1.1 Test Channel = LCH

Frequency (MHz)	Level (dBm)	Limit Line (dBm)	Over Limit (dB)	Polarization
64.400000	-80.76	-13.00	67.76	Vertical
109.700000	-80.48	-13.00	67.48	Vertical
3702.000000	-64.25	-13.00	51.25	Vertical
5553.200000	-64.88	-13.00	51.88	Vertical
7404.400000	-64.79	-13.00	51.79	Vertical
9255.275000	-60.35	-13.00	47.35	Vertical
56.200000	-78.21	-13.00	65.21	Horizontal
182.150000	-82.40	-13.00	69.40	Horizontal
3702.000000	-57.90	-13.00	44.90	Horizontal
5553.200000	-66.33	-13.00	53.33	Horizontal
7404.400000	-65.04	-13.00	52.04	Horizontal
9255.600000	-55.84	-13.00	42.84	Horizontal

7.1.1.1.2 Test Channel = MCH

Frequency (MHz)	Level (dBm)	Limit Line (dBm)	Over Limit (dB)	Polarization
65.100000	-81.14	-13.00	68.14	Vertical
109.350000	-80.25	-13.00	67.25	Vertical
266.450000	-84.79	-13.00	71.79	Vertical
3741.975000	-66.89	-13.00	53.89	Vertical
5613.325000	-66.32	-13.00	53.32	Vertical
7484.025000	-65.09	-13.00	52.09	Vertical
56.300000	-77.77	-13.00	64.77	Horizontal
110.950000	-83.73	-13.00	70.73	Horizontal
184.550000	-79.25	-13.00	66.25	Horizontal
3741.975000	-60.92	-13.00	47.92	Horizontal
6061.175000	-65.56	-13.00	52.56	Horizontal
9355.375000	-63.06	-13.00	50.06	Horizontal



7.1.1.1.3 Test Channel = HCH

Frequency (MHz)	Level (dBm)	Limit Line (dBm)	Over Limit (dB)	Polarization
64.000000	-81.51	-13.00	68.51	Vertical
110.200000	-80.07	-13.00	67.07	Vertical
352.100000	-86.04	-13.00	73.04	Vertical
3781.950000	-67.68	-13.00	54.68	Vertical
5673.125000	-63.82	-13.00	50.82	Vertical
9455.475000	-63.68	-13.00	50.68	Vertical
62.850000	-77.87	-13.00	64.87	Horizontal
182.050000	-82.76	-13.00	69.76	Horizontal
3781.950000	-64.63	-13.00	51.63	Horizontal
5673.125000	-65.34	-13.00	52.34	Horizontal
7564.625000	-65.58	-13.00	52.58	Horizontal
9455.475000	-59.31	-13.00	46.31	Horizontal

NOTE:

- 1) The disturbance above 13GHz and below 30MHz was very low, and the above harmonics were the highest point could be found when testing, so only the above harmonics had been displayed.
- 2) We have tested all modulation and all Bandwidth, but only the worst case data presented in this report.



8 Frequency Stability

8.1 Frequency Error VS. Voltage

Test Band	Test Mode	Test Channel	Test Temp.	Test Volt.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict	
LTEband 2	LTE/TM1 20MHz	LCH	TN	VL	-8.65	-0.00465	PASS	
				VN	-1.29	-0.00069	PASS	
				VH	9.03	0.00486	PASS	
		MCH	TN	VL	-6.64	-0.00353	PASS	
				VN	9.68	0.00515	PASS	
				VH	-2.75	-0.00146	PASS	
		HCH	TN	VL	9.39	0.00494	PASS	
				VN	3.13	0.00165	PASS	
				VH	-2.18	-0.00115	PASS	
		LTE/TM2 20MHz	LCH	TN	VL	-7.77	-0.00418	PASS
					VN	-1.67	-0.00090	PASS
					VH	-2.82	-0.00151	PASS
	MCH		TN	VL	-5.11	-0.00272	PASS	
				VN	-5.02	-0.00267	PASS	
				VH	8.99	0.00478	PASS	
	HCH		TN	VL	9.87	0.00520	PASS	
				VN	9.05	0.00476	PASS	
				VH	9.81	0.00517	PASS	

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8.2 Frequency Error VS. Temperature

Test Band	Test Mode	Test Channel	Test Volt.	Test Temp.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict
LTEband 2	LTE/TM1 20MHz	LCH	VN	-30	0.60	0.00032	PASS
				-20	5.01	0.00269	PASS
				-10	-6.58	-0.00354	PASS
				0	9.71	0.00522	PASS
				10	-1.04	-0.00056	PASS
				20	-2.26	-0.00121	PASS
				30	1.70	0.00092	PASS
				40	-2.87	-0.00154	PASS
				50	-4.20	-0.00226	PASS
		MCH	VN	-30	-2.47	-0.00132	PASS
				-20	5.72	0.00304	PASS
				-10	9.49	0.00505	PASS
				0	3.72	0.00198	PASS
				10	9.13	0.00486	PASS
				20	1.02	0.00054	PASS
				30	8.30	0.00442	PASS
				40	1.36	0.00073	PASS
				50	-8.61	-0.00458	PASS
		HCH	VN	-30	-1.87	-0.00098	PASS
				-20	-7.48	-0.00394	PASS
				-10	-4.79	-0.00252	PASS
				0	-0.26	-0.00013	PASS
				10	-9.99	-0.00526	PASS
				20	9.65	0.00508	PASS
				30	7.55	0.00397	PASS
				40	3.44	0.00181	PASS
				50	-8.06	-0.00424	PASS

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**SGS-CSTC Standards Technical Services Co., Ltd.
Shenzhen Branch**

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Test Band	Test Mode	Test Channel	Test Volt.	Test Temp.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict
LTEband 2	LTE/TM2 20MHz	LCH	VN	-30	-1.20	-0.00065	PASS
				-20	-2.50	-0.00134	PASS
				-10	8.02	0.00431	PASS
				0	1.16	0.00062	PASS
				10	-7.01	-0.00377	PASS
				20	-6.09	-0.00327	PASS
				30	-4.32	-0.00232	PASS
				40	9.45	0.00508	PASS
		MCH	VN	50	-4.23	-0.00228	PASS
				-30	8.75	0.00465	PASS
				-20	-6.02	-0.00320	PASS
				-10	-7.32	-0.00390	PASS
				0	-1.14	-0.00061	PASS
				10	7.98	0.00424	PASS
				20	-9.57	-0.00509	PASS
				30	4.07	0.00216	PASS
		HCH	VN	40	6.21	0.00331	PASS
				50	6.75	0.00359	PASS
				-30	-4.01	-0.00211	PASS
				-20	-7.05	-0.00371	PASS
				-10	-3.20	-0.00169	PASS
				0	-5.00	-0.00263	PASS
				10	-3.40	-0.00179	PASS
				20	7.68	0.00404	PASS
30	1.18	0.00062	PASS				
40	-1.95	-0.00102	PASS				
50	7.36	0.00387	PASS				

The End

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