



Appendix B

E-UTRA Band 41



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1 Effective (Isotropic) Radiated Power Output Data

Effective Isotropic Radiated Power of Transmitter (EIRP) for LTE BAND 41

Test Band(LTE)	Test Mode	Test Bandwidth	Test channel	Test RB	Measured (dBm)	EIRP (dBm)	limit (dBm)	Verdict
BAND41	LTE/TM1	5M	LCH	RB1#0	22.28	22.51	33.00	PASS
				RB1#13	21.74	21.97	33.00	PASS
				RB1#24	21.76	21.99	33.00	PASS
				RB12#0	21.04	21.27	33.00	PASS
				RB12#6	20.88	21.11	33.00	PASS
				RB12#13	20.90	21.13	33.00	PASS
				RB25#0	21.22	21.45	33.00	PASS
			MCH	RB1#0	21.99	22.22	33.00	PASS
				RB1#13	21.73	21.96	33.00	PASS
				RB1#24	21.97	22.20	33.00	PASS
				RB12#0	21.04	21.27	33.00	PASS
				RB12#6	20.85	21.08	33.00	PASS
				RB12#13	20.96	21.19	33.00	PASS
				RB25#0	20.99	21.22	33.00	PASS
			HCH	RB1#0	21.91	22.14	33.00	PASS
				RB1#13	21.87	22.10	33.00	PASS
				RB1#24	21.91	22.14	33.00	PASS
				RB12#0	21.04	21.27	33.00	PASS
				RB12#6	20.95	21.18	33.00	PASS
				RB12#13	21.03	21.26	33.00	PASS
				RB25#0	21.05	21.28	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
BAND41	LTE/TM2	5M	LCH	RB1#0	20.97	21.20	33.00	PASS
				RB1#13	20.66	20.89	33.00	PASS
				RB1#24	20.97	21.20	33.00	PASS
				RB12#0	19.86	20.09	33.00	PASS
				RB12#6	19.73	19.96	33.00	PASS
				RB12#13	19.78	20.01	33.00	PASS
				RB25#0	19.94	20.17	33.00	PASS
			MCH	RB1#0	21.14	21.37	33.00	PASS
				RB1#13	20.82	21.05	33.00	PASS
				RB1#24	21.13	21.36	33.00	PASS
				RB12#0	20.03	20.26	33.00	PASS
				RB12#6	19.85	20.08	33.00	PASS
				RB12#13	19.96	20.19	33.00	PASS
				RB25#0	20.04	20.27	33.00	PASS
			HCH	RB1#0	21.06	21.29	33.00	PASS
				RB1#13	21.05	21.28	33.00	PASS
				RB1#24	21.10	21.33	33.00	PASS
				RB12#0	20.13	20.36	33.00	PASS
				RB12#6	19.94	20.17	33.00	PASS
				RB12#13	19.94	20.17	33.00	PASS
				RB25#0	20.12	20.35	33.00	PASS



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BAND41	LTE/TM1	10M	LCH	RB1#0	22.02	22.25	33.00	PASS
				RB1#25	21.89	22.12	33.00	PASS
				RB1#49	22.00	22.23	33.00	PASS
				RB25#0	20.88	21.11	33.00	PASS
				RB25#13	20.77	21.00	33.00	PASS
				RB25#25	20.94	21.17	33.00	PASS
				RB50#0	20.87	21.10	33.00	PASS
			MCH	RB1#0	22.07	22.30	33.00	PASS
				RB1#25	21.81	22.04	33.00	PASS
				RB1#49	22.01	22.24	33.00	PASS
				RB25#0	20.99	21.22	33.00	PASS
				RB25#13	20.85	21.08	33.00	PASS
				RB25#25	20.86	21.09	33.00	PASS
				RB50#0	20.94	21.17	33.00	PASS
			HCH	RB1#0	22.10	22.33	33.00	PASS
				RB1#25	22.04	22.27	33.00	PASS
				RB1#49	22.03	22.26	33.00	PASS
				RB25#0	20.99	21.22	33.00	PASS
				RB25#13	20.94	21.17	33.00	PASS
				RB25#25	20.93	21.16	33.00	PASS
				RB50#0	21.02	21.25	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
BAND41	LTE/TM2	10M	LCH	RB1#0	21.09	21.32	33.00	PASS
				RB1#25	21.12	21.35	33.00	PASS
				RB1#49	21.20	21.43	33.00	PASS
				RB25#0	19.94	20.17	33.00	PASS
				RB25#13	19.83	20.06	33.00	PASS
				RB25#25	20.01	20.24	33.00	PASS
				RB50#0	19.93	20.16	33.00	PASS
			MCH	RB1#0	21.19	21.42	33.00	PASS
				RB1#25	21.21	21.44	33.00	PASS
				RB1#49	21.09	21.32	33.00	PASS
				RB25#0	20.04	20.27	33.00	PASS
				RB25#13	19.91	20.14	33.00	PASS
				RB25#25	19.91	20.14	33.00	PASS
				RB50#0	19.99	20.22	33.00	PASS
			HCH	RB1#0	21.21	21.44	33.00	PASS
				RB1#25	20.97	21.20	33.00	PASS
				RB1#49	21.09	21.32	33.00	PASS
				RB25#0	20.30	20.53	33.00	PASS
				RB25#13	20.24	20.47	33.00	PASS
				RB25#25	20.07	20.30	33.00	PASS
				RB50#0	20.07	20.30	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
BAND41	LTE/TM1	15M	LCH	RB1#0	21.87	22.10	33.00	PASS
				RB1#38	21.67	21.90	33.00	PASS
				RB1#74	21.91	22.14	33.00	PASS
				RB36#0	20.76	20.99	33.00	PASS
				RB36#18	20.72	20.95	33.00	PASS
				RB36#39	20.74	20.97	33.00	PASS
				RB75#0	20.81	21.04	33.00	PASS
			MCH	RB1#0	22.13	22.36	33.00	PASS
				RB1#38	21.90	22.13	33.00	PASS
				RB1#74	22.43	22.66	33.00	PASS
				RB36#0	21.45	21.68	33.00	PASS
				RB36#18	21.35	21.58	33.00	PASS
				RB36#39	21.34	21.57	33.00	PASS
				RB75#0	21.43	21.66	33.00	PASS
			HCH	RB1#0	22.69	22.92	33.00	PASS
				RB1#38	22.03	22.26	33.00	PASS
				RB1#74	22.04	22.27	33.00	PASS
				RB36#0	21.09	21.32	33.00	PASS
				RB36#18	20.88	21.11	33.00	PASS
				RB36#39	21.00	21.23	33.00	PASS
				RB75#0	21.17	21.40	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
BAND41	LTE/TM2	15M	LCH	RB1#0	21.13	21.36	33.00	PASS
				RB1#38	20.91	21.14	33.00	PASS
				RB1#74	20.98	21.21	33.00	PASS
				RB36#0	19.84	20.07	33.00	PASS
				RB36#18	19.73	19.96	33.00	PASS
				RB36#39	19.72	19.95	33.00	PASS
				RB75#0	19.94	20.17	33.00	PASS
			MCH	RB1#0	21.31	21.54	33.00	PASS
				RB1#38	20.89	21.12	33.00	PASS
				RB1#74	21.15	21.38	33.00	PASS
				RB36#0	19.95	20.18	33.00	PASS
				RB36#18	19.77	20.00	33.00	PASS
				RB36#39	19.85	20.08	33.00	PASS
				RB75#0	20.01	20.24	33.00	PASS
			HCH	RB1#0	21.44	21.67	33.00	PASS
				RB1#38	21.03	21.26	33.00	PASS
				RB1#74	20.87	21.10	33.00	PASS
				RB36#0	20.27	20.50	33.00	PASS
				RB36#18	20.04	20.27	33.00	PASS
				RB36#39	20.15	20.38	33.00	PASS
				RB75#0	20.18	20.41	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
BAND41	LTE/TM1	20M	LCH	RB1#0	21.99	22.22	33.00	PASS
				RB1#50	21.77	22.00	33.00	PASS
				RB1#99	21.89	22.12	33.00	PASS
				RB50#0	20.76	20.99	33.00	PASS
				RB50#25	20.77	21.00	33.00	PASS
				RB50#50	20.83	21.06	33.00	PASS
				RB100#0	20.86	21.09	33.00	PASS
			MCH	RB1#0	22.21	22.44	33.00	PASS
				RB1#50	22.13	22.36	33.00	PASS
				RB1#99	21.97	22.20	33.00	PASS
				RB50#0	21.10	21.33	33.00	PASS
				RB50#25	20.9	21.13	33.00	PASS
				RB50#50	21.00	21.23	33.00	PASS
				RB100#0	20.97	21.20	33.00	PASS
			HCH	RB1#0	22.55	22.78	33.00	PASS
				RB1#50	22.31	22.54	33.00	PASS
				RB1#99	22.28	22.51	33.00	PASS
				RB50#0	21.69	21.92	33.00	PASS
				RB50#25	21.63	21.86	33.00	PASS
				RB50#50	21.57	21.80	33.00	PASS
				RB100#0	21.67	21.90	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
BAND41	LTE/TM2	20M	LCH	RB1#0	21.09	21.32	33.00	PASS
				RB1#50	21.11	21.34	33.00	PASS
				RB1#99	20.96	21.19	33.00	PASS
				RB50#0	19.82	20.05	33.00	PASS
				RB50#25	19.81	20.04	33.00	PASS
				RB50#50	19.73	19.96	33.00	PASS
				RB100#0	19.90	20.13	33.00	PASS
			MCH	RB1#0	21.40	21.63	33.00	PASS
				RB1#50	21.23	21.46	33.00	PASS
				RB1#99	21.16	21.39	33.00	PASS
				RB50#0	20.14	20.37	33.00	PASS
				RB50#25	20.04	20.27	33.00	PASS
				RB50#50	20.08	20.31	33.00	PASS
				RB100#0	20.12	20.35	33.00	PASS
			HCH	RB1#0	21.54	21.77	33.00	PASS
				RB1#50	21.44	21.67	33.00	PASS
				RB1#99	21.32	21.55	33.00	PASS
				RB50#0	20.64	20.87	33.00	PASS
				RB50#25	20.18	20.41	33.00	PASS
				RB50#50	20.20	20.43	33.00	PASS
				RB100#0	20.27	20.50	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

c: RBW > emission bandwidth, VBW > 3 x RBW.

Detector: RMS



2 Peak-to-Average Ratio

Part I - Test Results

Test Band	Test Mode	Test Channel	Measured[dB]	Limit [dB]	Verdict
Band 41	TM1/20M	LCH	5.07	13	PASS
		MCH	5.22	13	PASS
		HCH	5.39	13	PASS
	TM2/20M	LCH	6.12	13	PASS
		MCH	6.81	13	PASS
		HCH	6.41	13	PASS



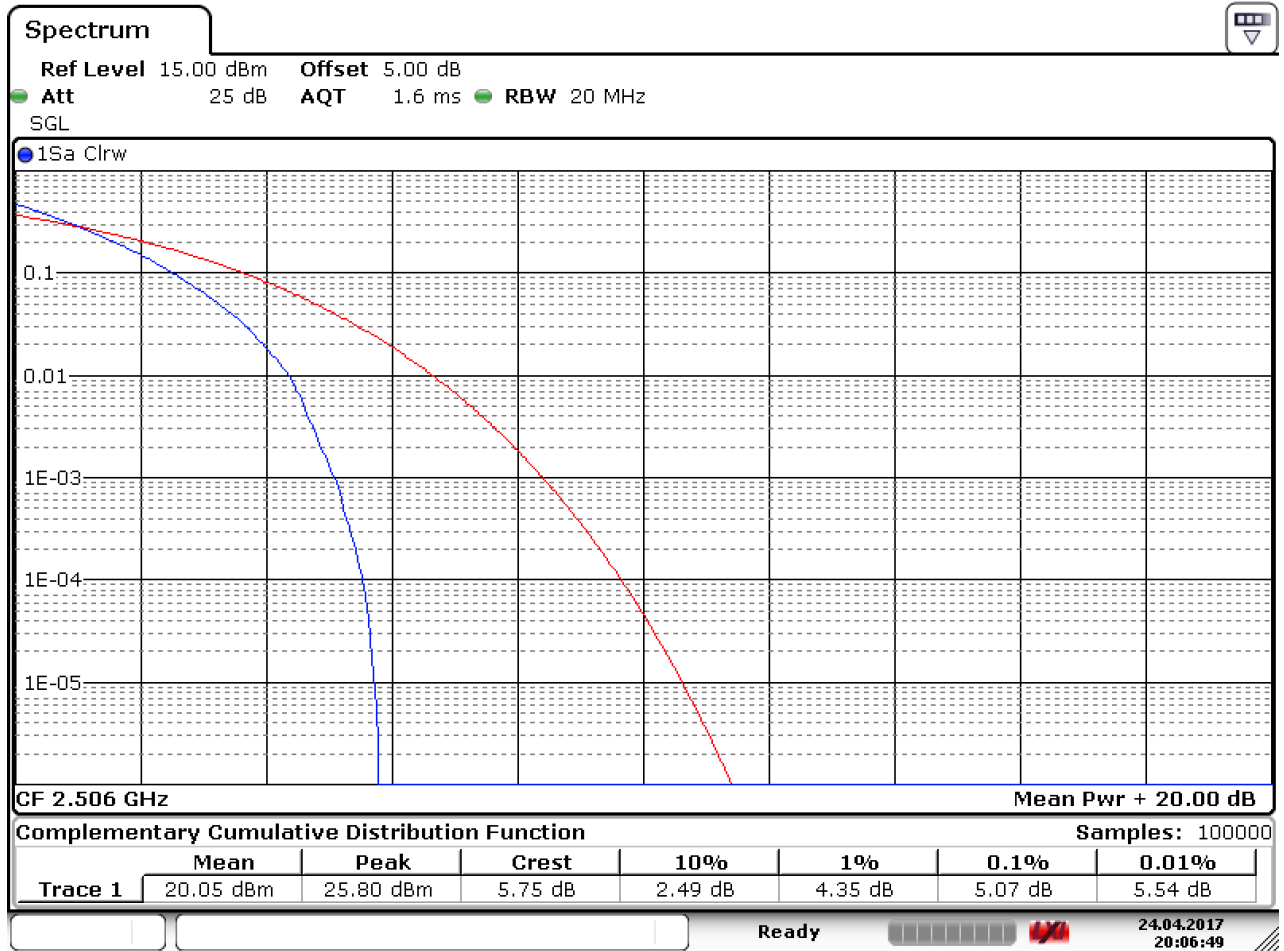
Part II - Test Plots

2.1 For LTE

2.1.1 Test Band = LTE band41

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

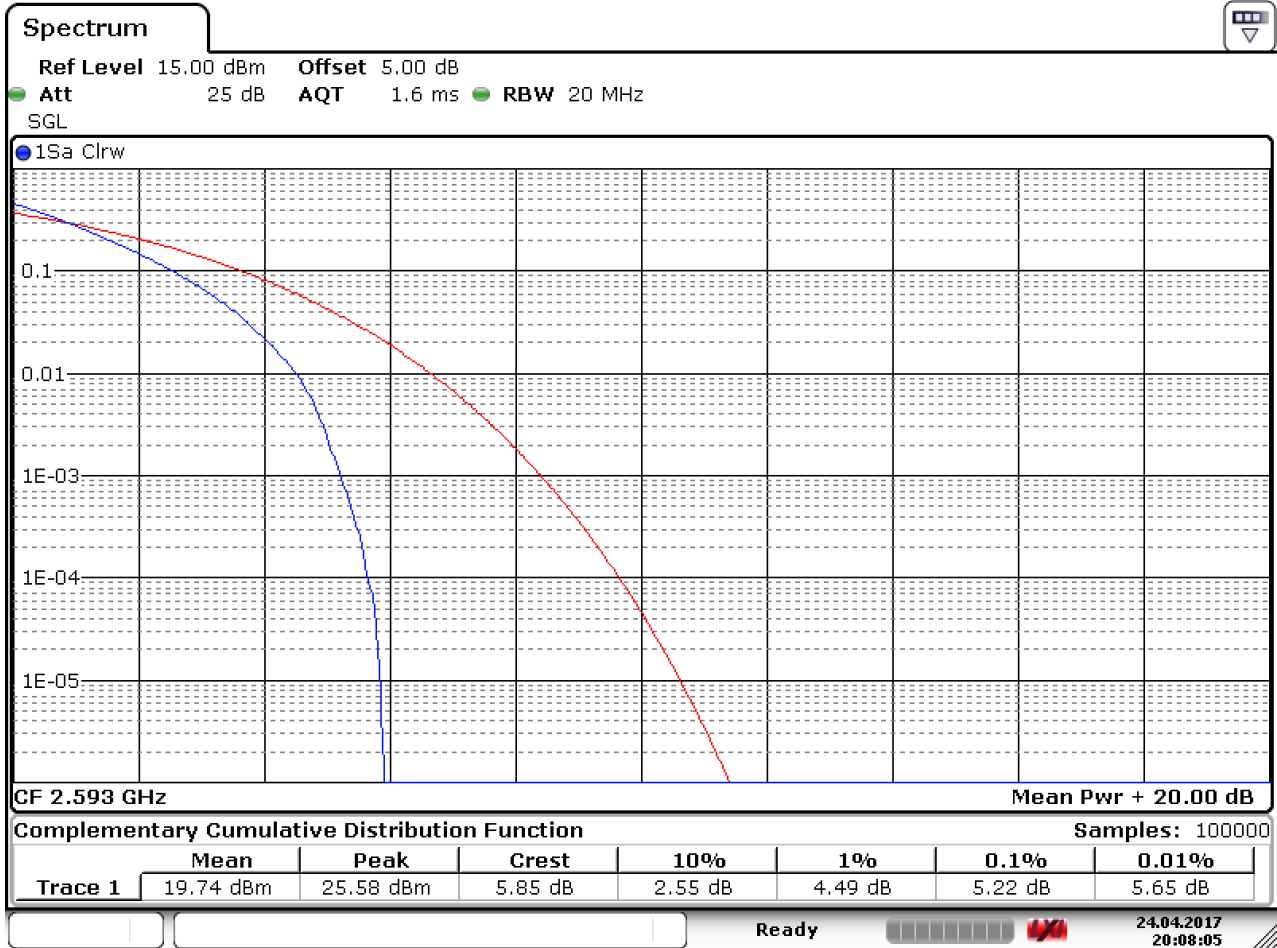
2.1.1.1.1 Test Channel = LCH



Date: 24.APR.2017 20:06:50



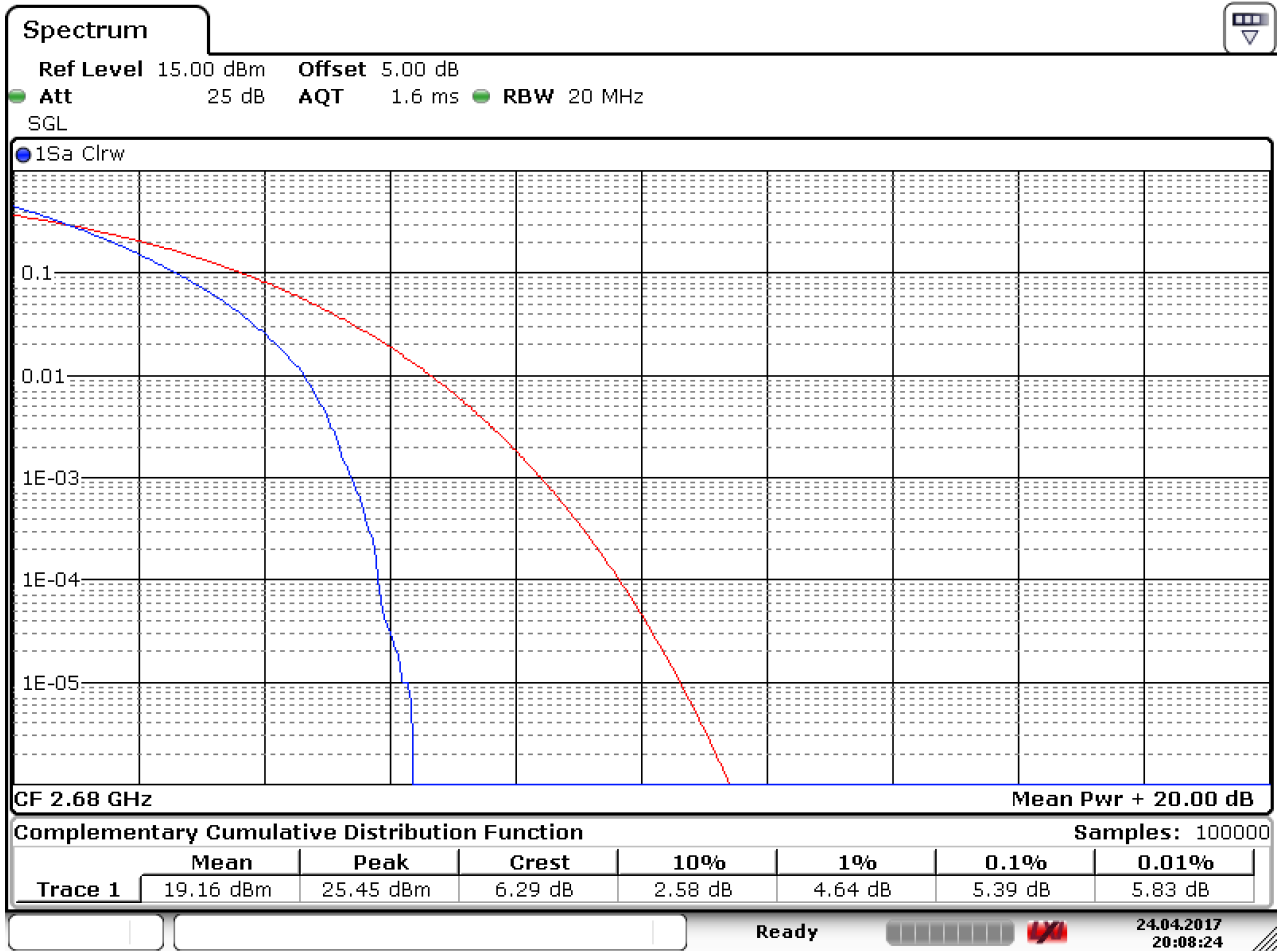
2.1.1.1.2 Test Channel = MCH



Date: 24.APR.2017 20:08:05



2.1.1.1.3 Test Channel = HCH

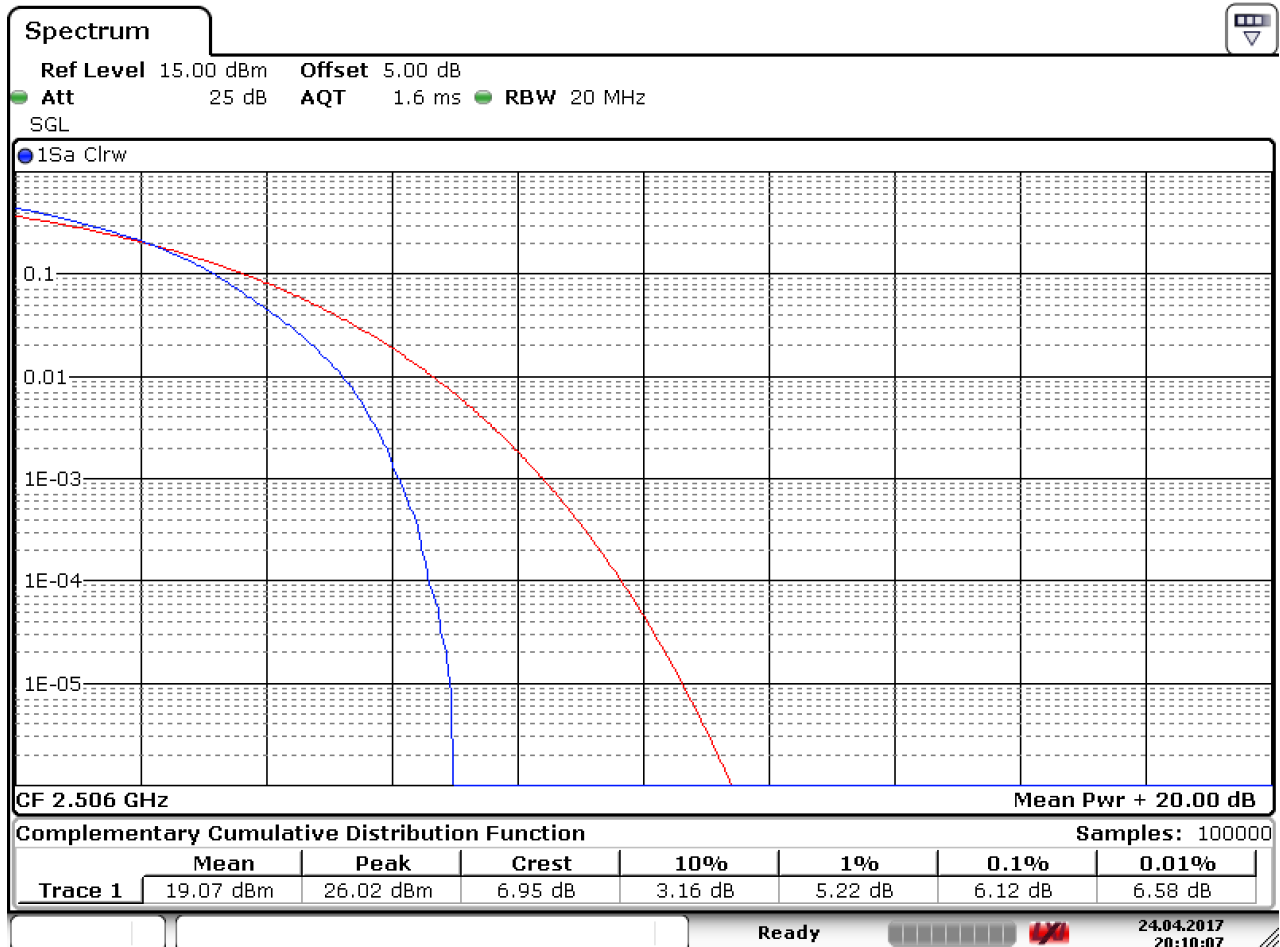


Date: 24.APR.2017 20:08:24



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

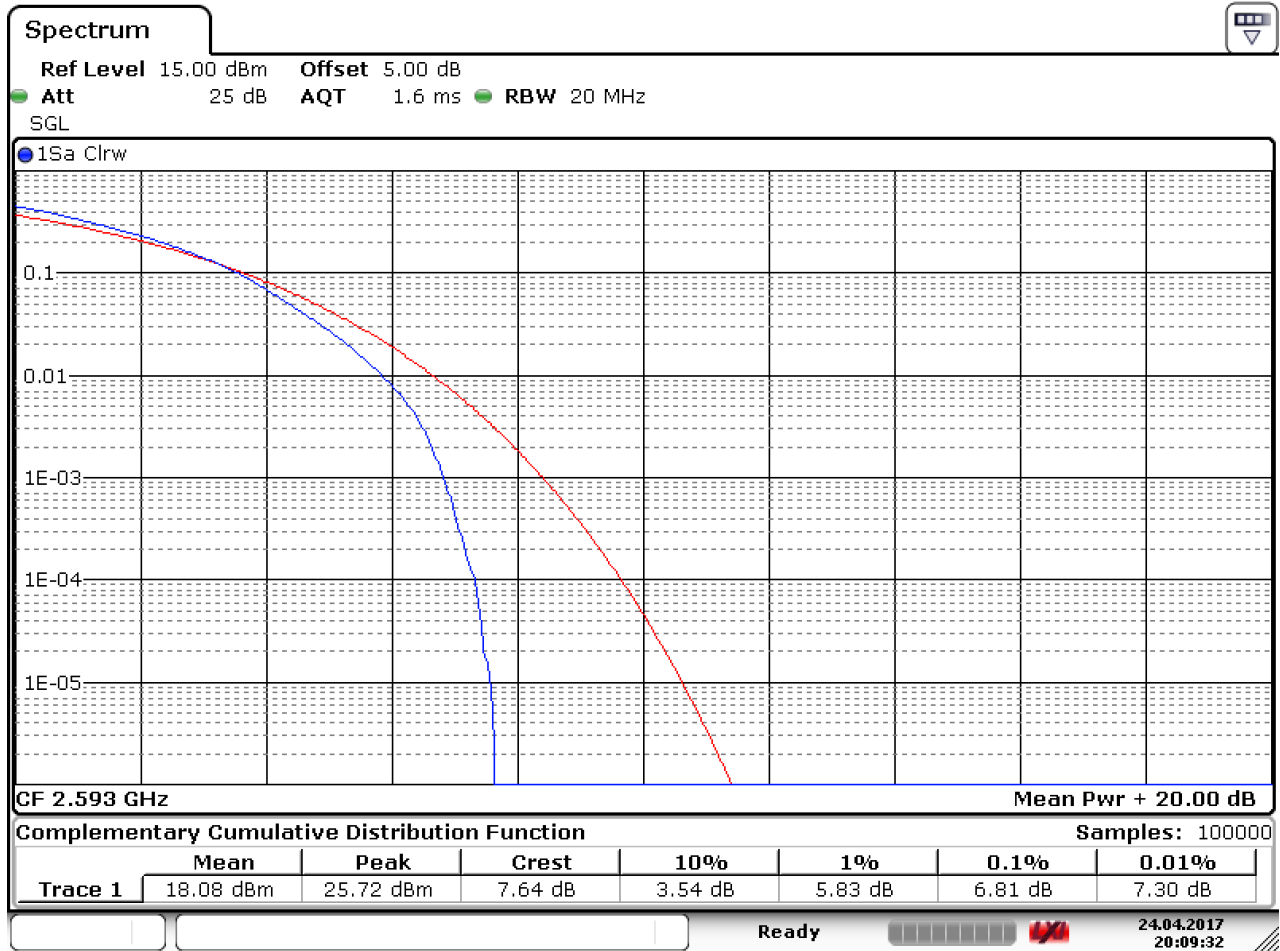
2.1.1.2.1 Test Channel = LCH



Date: 24.APR.2017 20:10:08



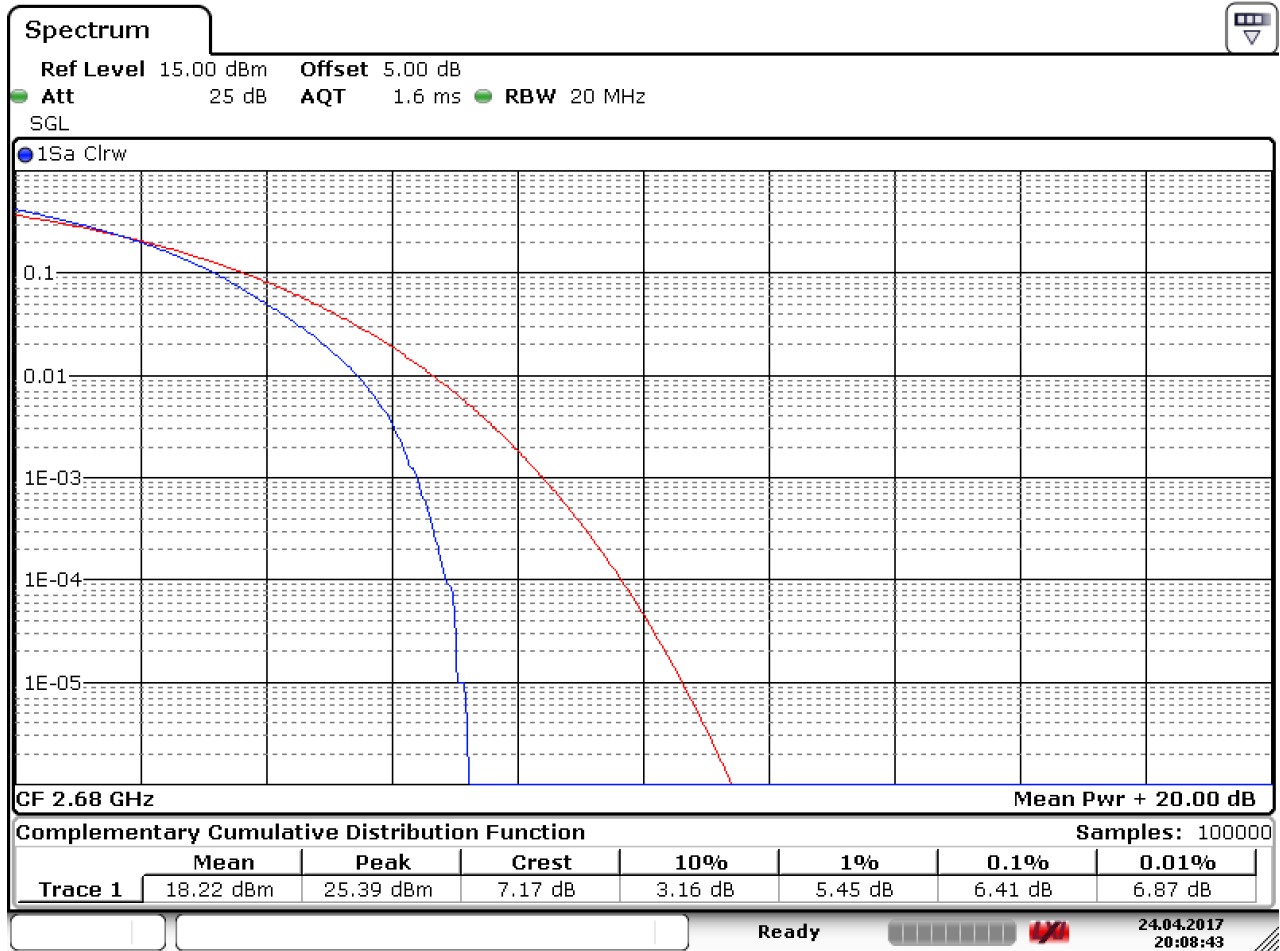
2.1.1.2.2 Test Channel = MCH



Date: 24.APR.2017 20:09:32



2.1.1.2.3 Test Channel = HCH



Date: 24.APR.2017 20:08:43

3 Modulation Characteristics

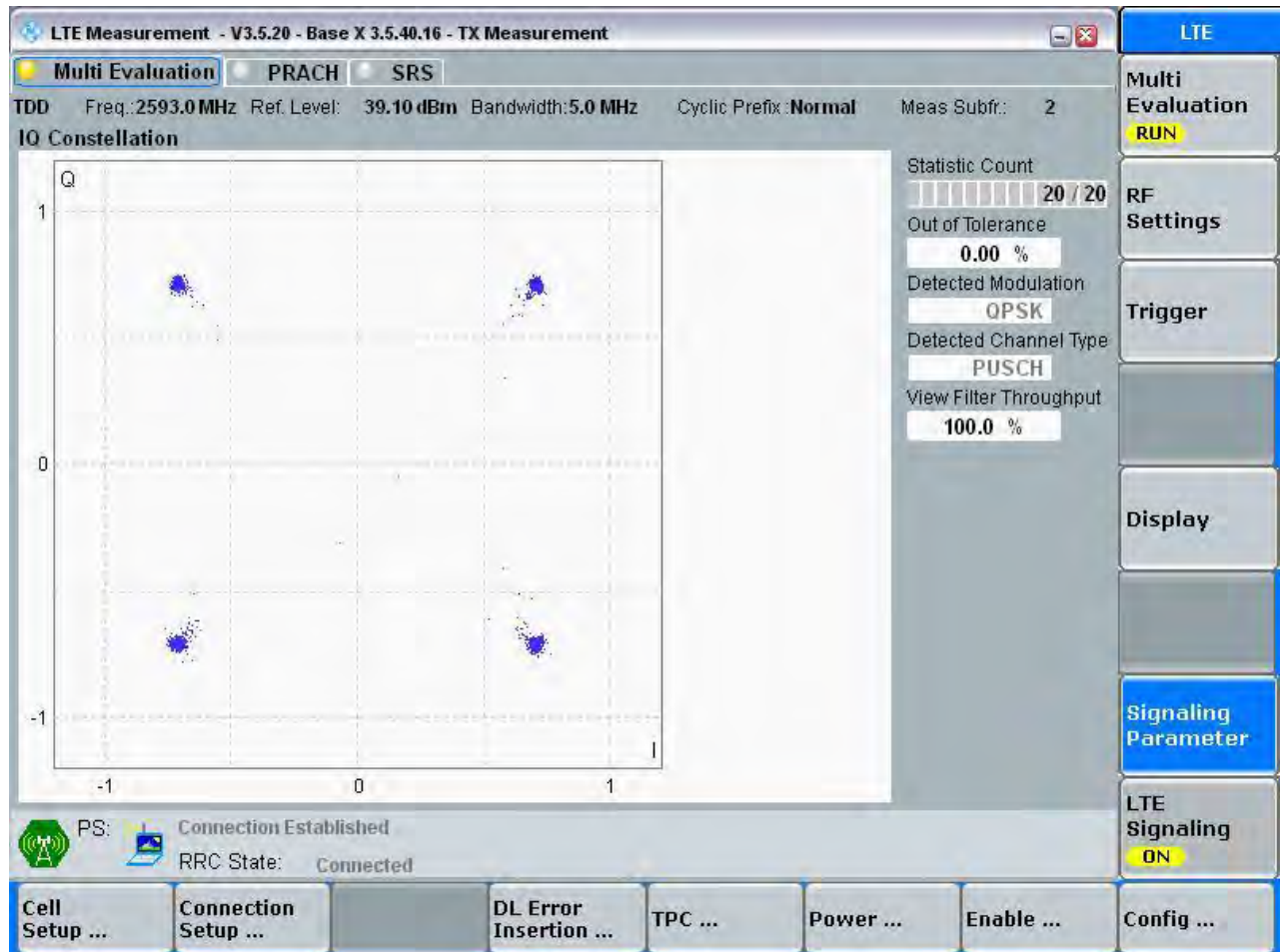
Part I - Test Plots

3.1 For LTE

3.1.1 Test Band = LTE band41

3.1.1.1 Test Mode = LTE /TM1 5MHz

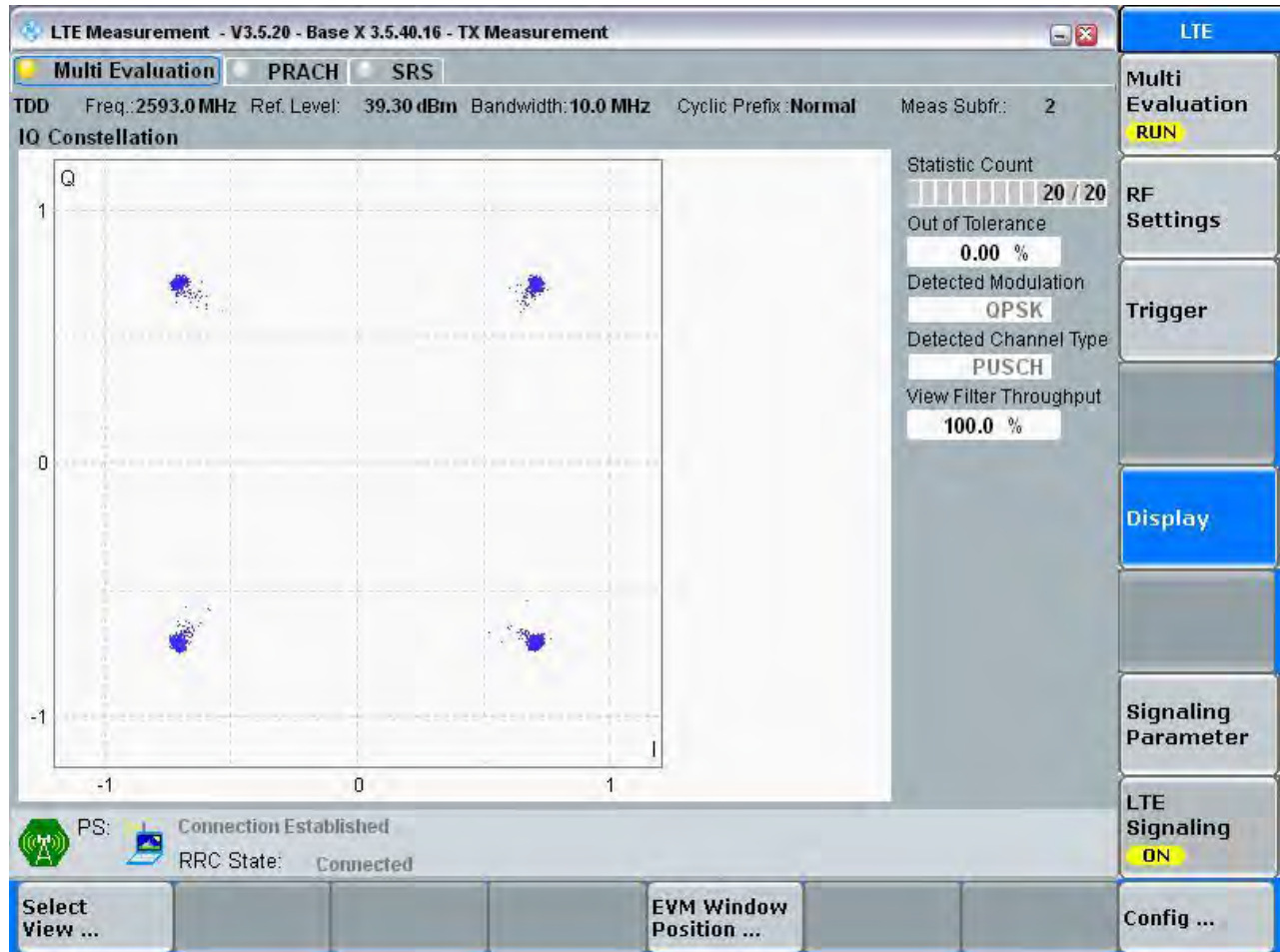
3.1.1.1.1 Test Channel = MCH





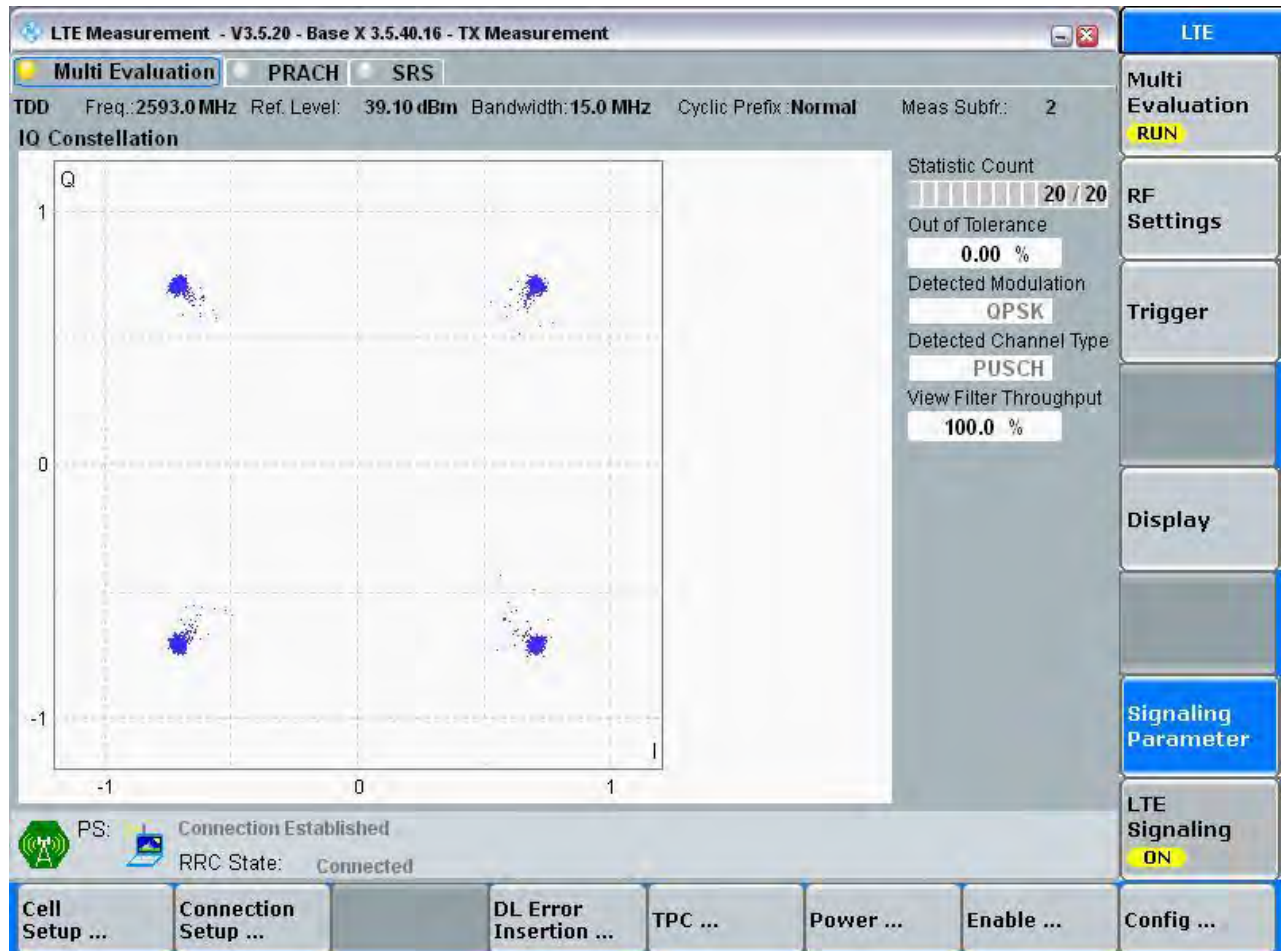
3.1.1.2 Test Mode = LTE /TM1 10MHz

3.1.1.2.1 Test Channel = MCH



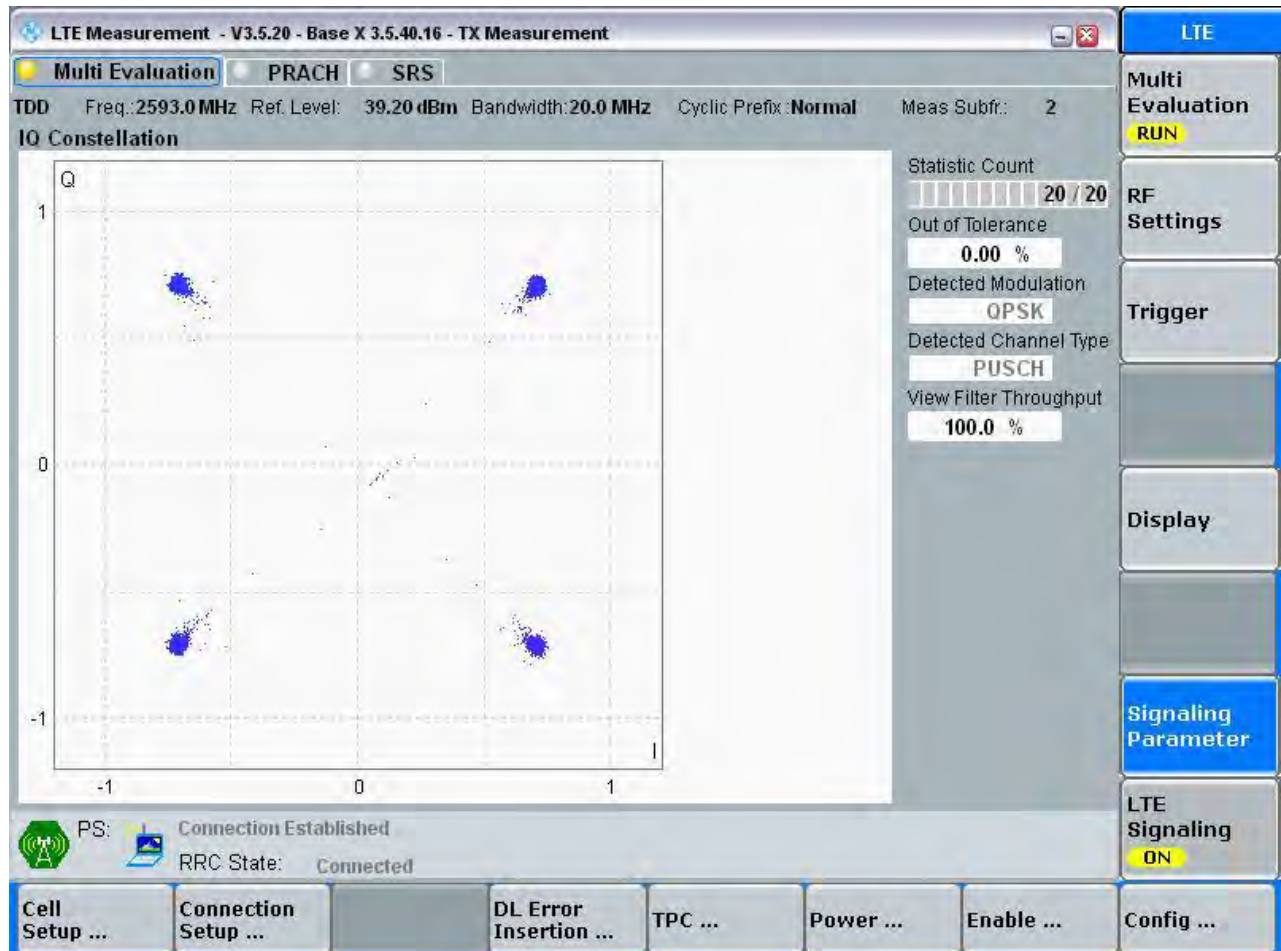
3.1.1.3 Test Mode = LTE /TM1 15MHz

3.1.1.3.1 Test Channel = MCH



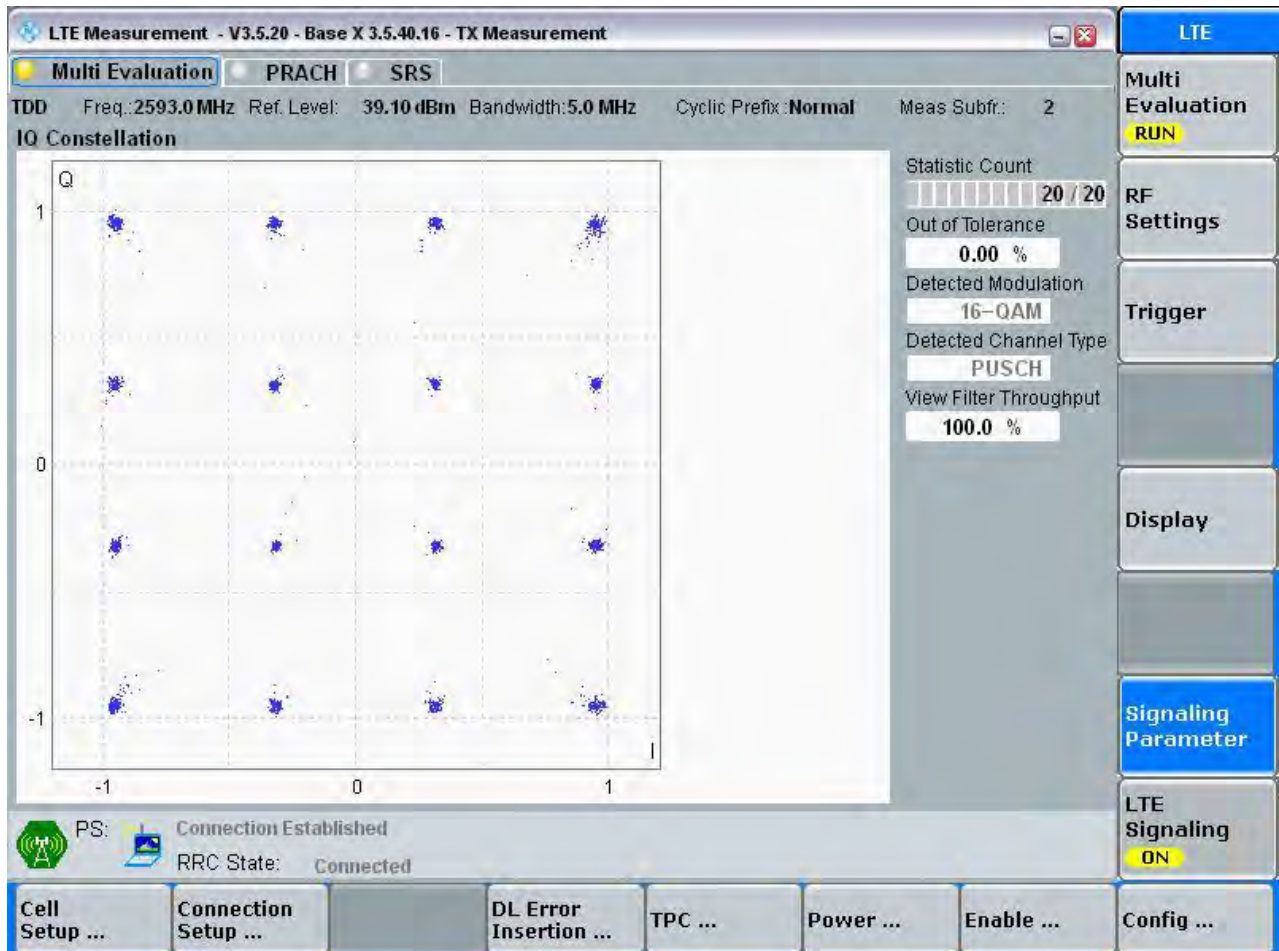
3.1.1.4 Test Mode = LTE /TM1 20MHz

3.1.1.4.1 Test Channel = MCH



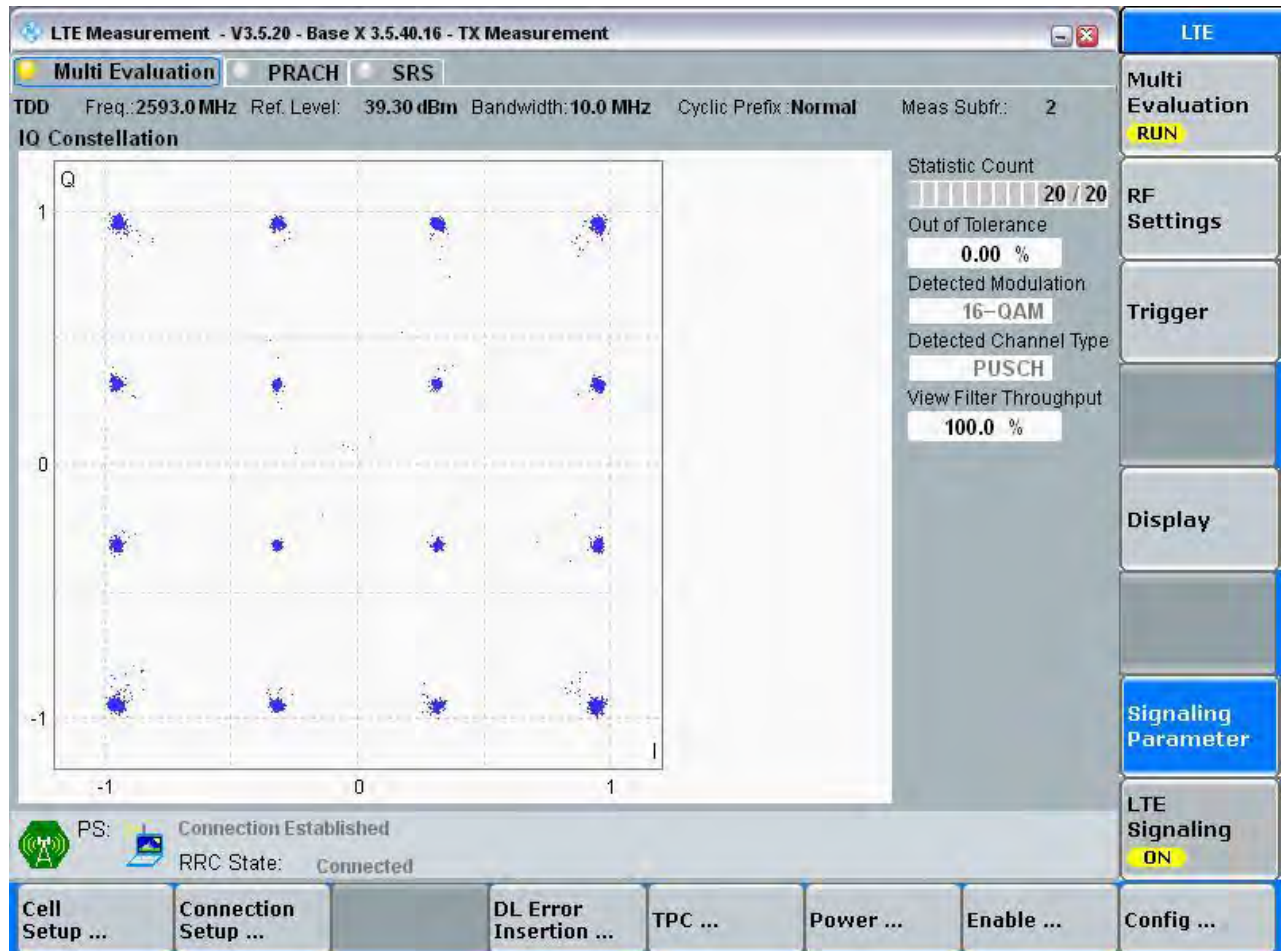
3.1.1.5 Test Mode = LTE /TM2 5MHz

3.1.1.5.1 Test Channel = MCH



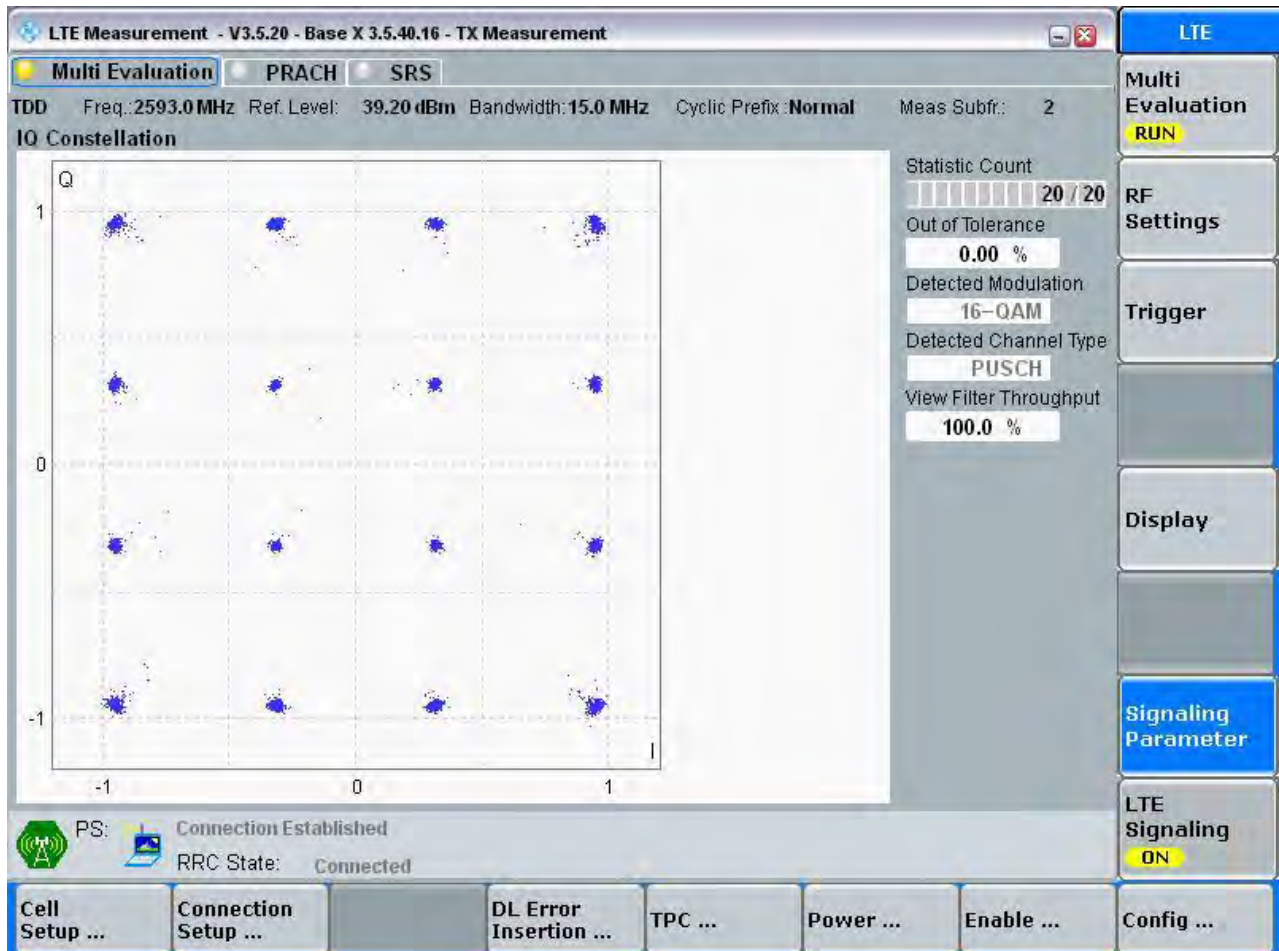
3.1.1.6 Test Mode = LTE /TM2 10MHz

3.1.1.6.1 Test Channel = MCH



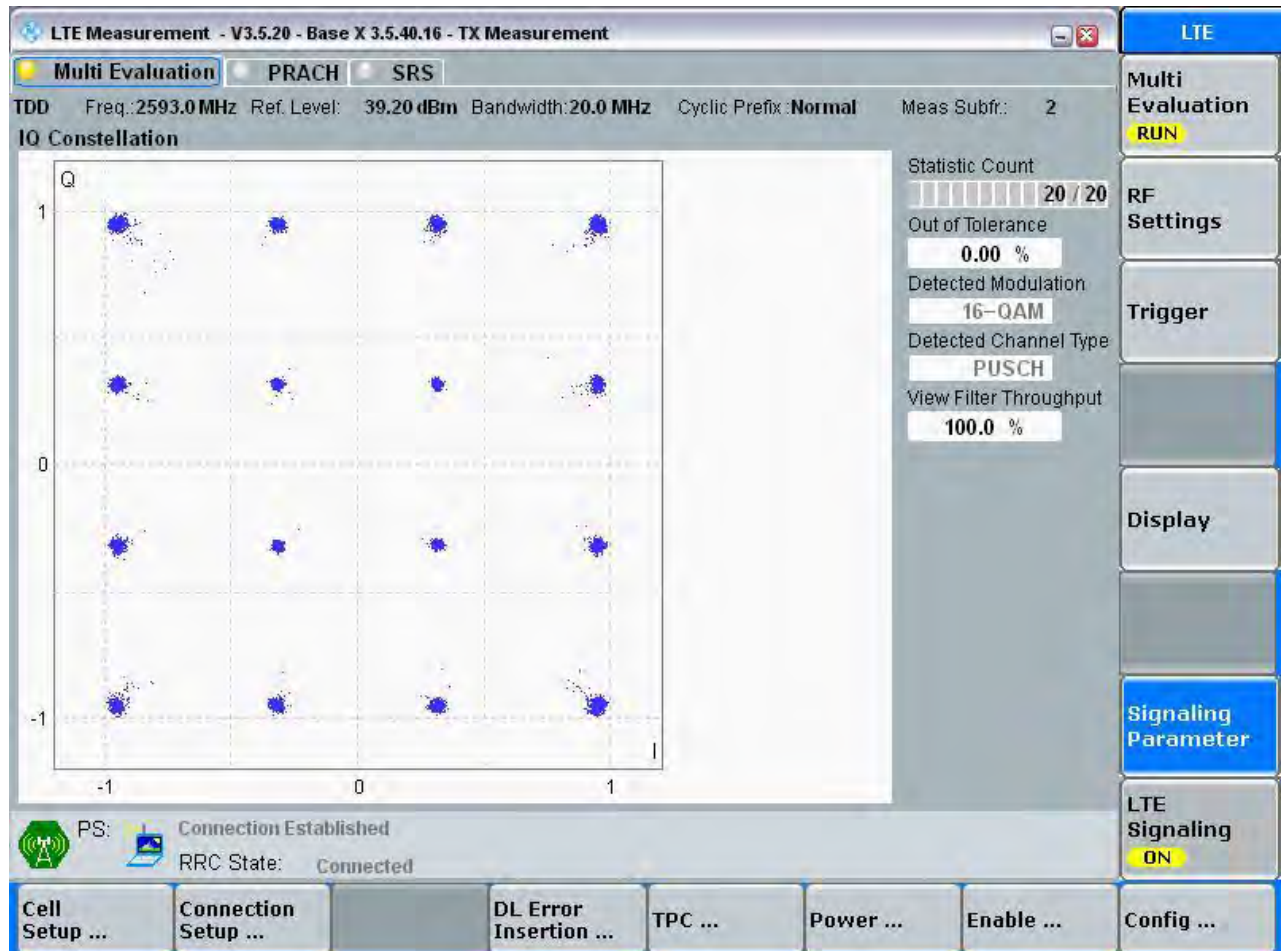
3.1.1.7 Test Mode = LTE /TM2 15MHz

3.1.1.7.1 Test Channel = MCH



3.1.1.8 Test Mode = LTE /TM2 20MHz

3.1.1.8.1 Test Channel = MCH





4 Bandwidth

Part I - Test Results

Test Band	Test Mode	Test Channel	Occupied Bandwidth [MHz]	Emission Bandwidth [MHz]	Verdict
Band 41	TM1/ 5MHz	LCH	4.50	4.85	PASS
		MCH	4.48	4.95	PASS
		HCH	4.48	5.02	PASS
	TM2/ 5MHz	LCH	4.48	4.92	PASS
		MCH	4.47	4.91	PASS
		HCH	4.50	4.94	PASS
	TM1/10MHz	LCH	8.93	9.81	PASS
		MCH	8.95	9.83	PASS
		HCH	8.93	9.73	PASS
	TM2/ 10MHz	LCH	8.91	9.61	PASS
		MCH	8.95	9.65	PASS
		HCH	8.93	9.79	PASS
	TM1/ 15MHz	LCH	13.46	14.87	PASS
		MCH	13.55	15.88	PASS
		HCH	13.52	16.09	PASS
	TM2/ 15MHz	LCH	13.55	15.35	PASS
		MCH	13.52	15.67	PASS
		HCH	13.55	15.44	PASS
	TM1/ 20MHz	LCH	17.90	19.94	PASS
		MCH	17.94	19.58	PASS
		HCH	17.90	19.98	19.62
	TM2/ 20MHz	LCH	17.94	20.78	PASS
		MCH	17.90	19.86	PASS
		HCH	17.90	19.62	PASS

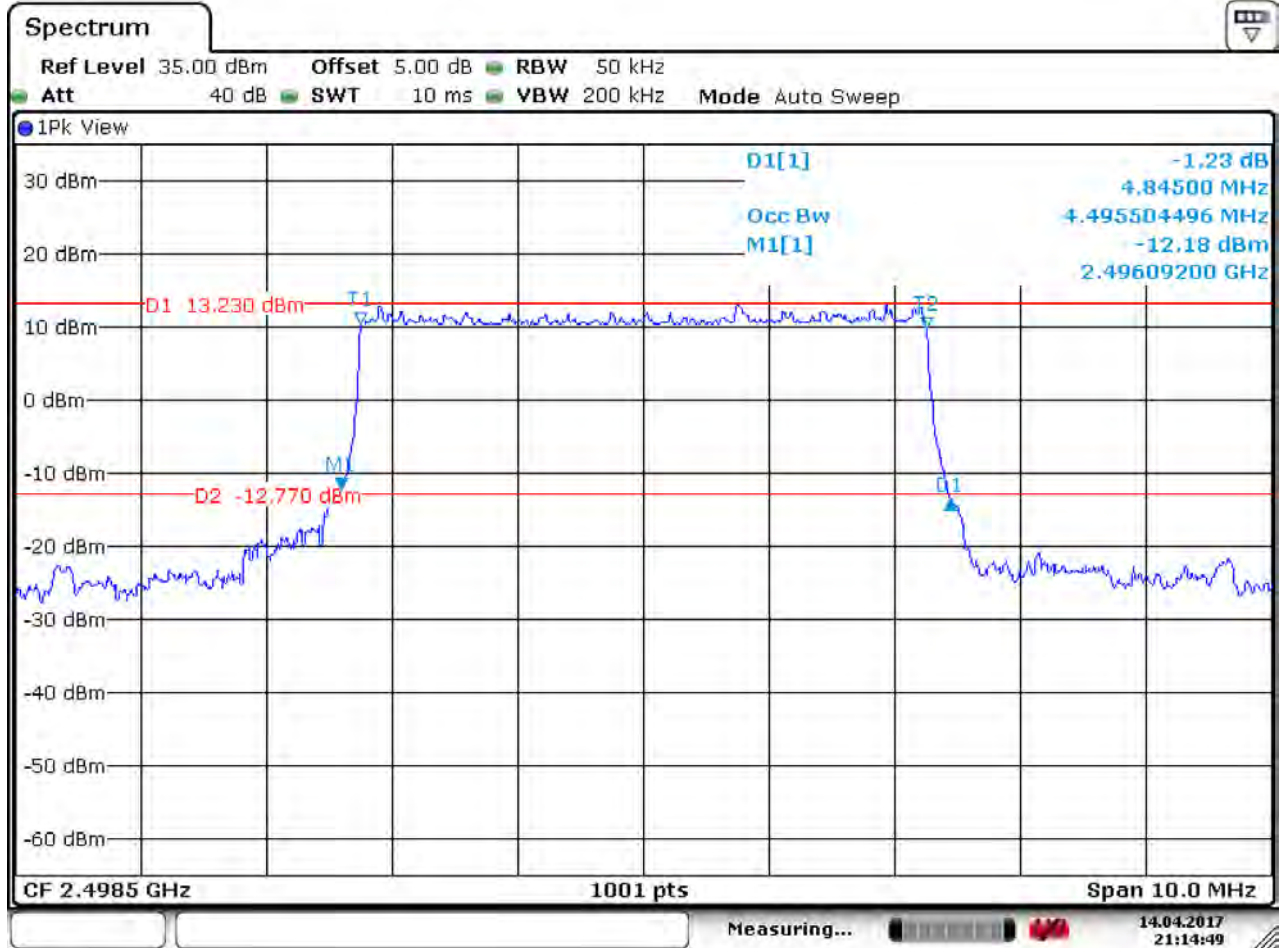


4.1 For LTE

4.1.1 Test Band = LTE band41

4.1.1.1 Test Mode = LTE/TM1 5MHz

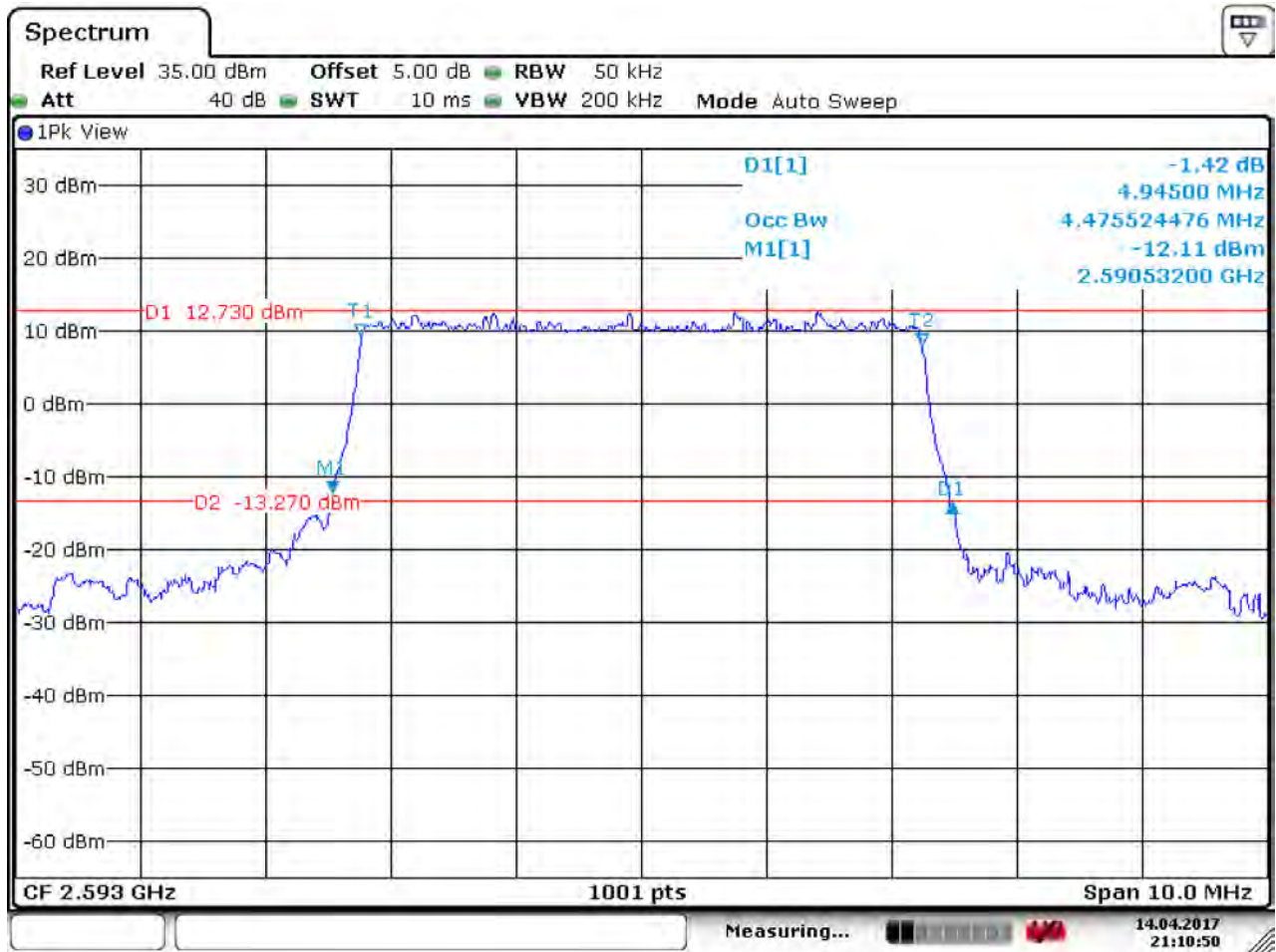
4.1.1.1.1 Test Channel = LCH



Date: 14.APR.2017 21:14:50



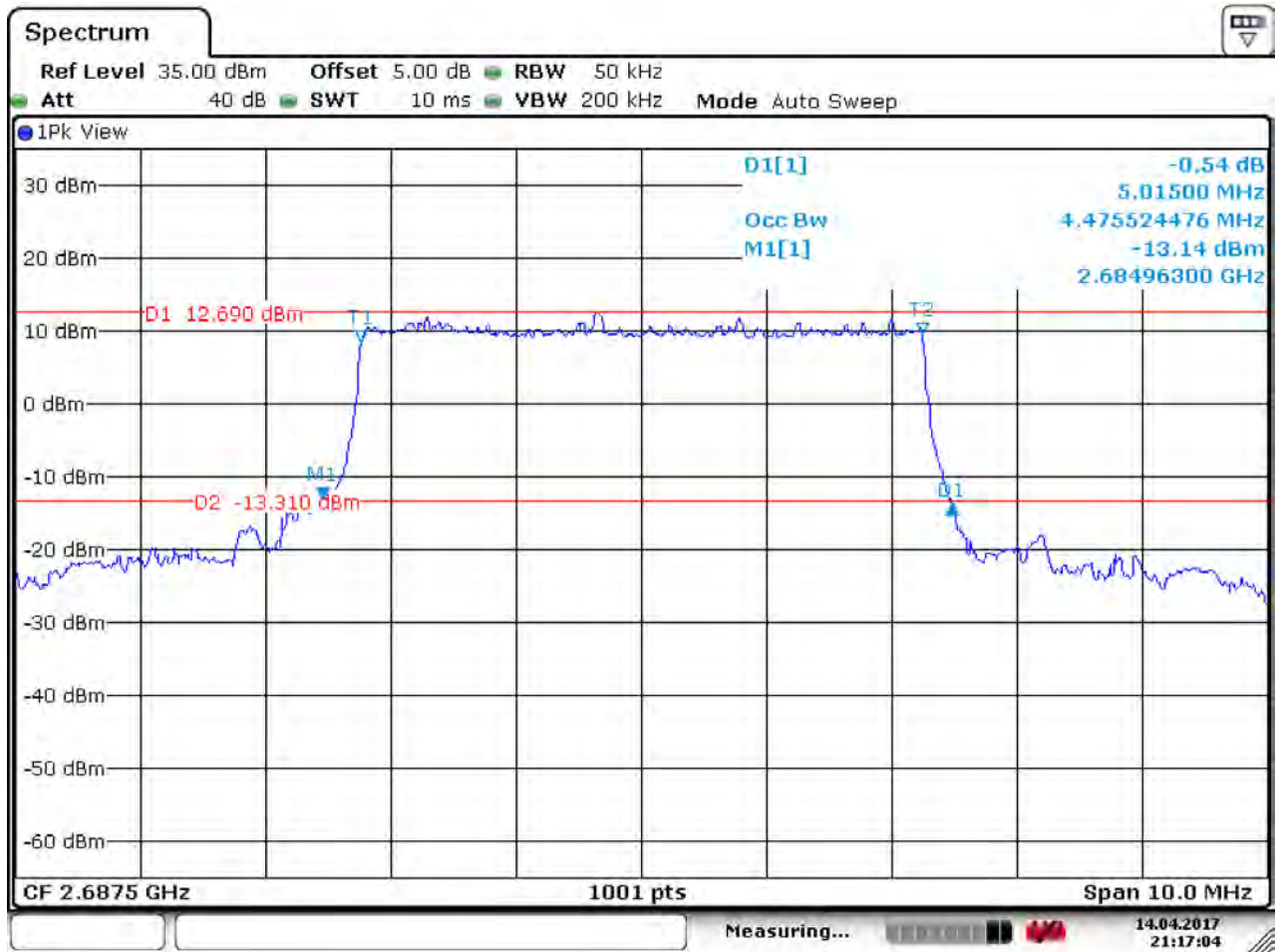
4.1.1.1.2 Test Channel = MCH



Date: 14.APR.2017 21:10:50



4.1.1.1.3 Test Channel = HCH

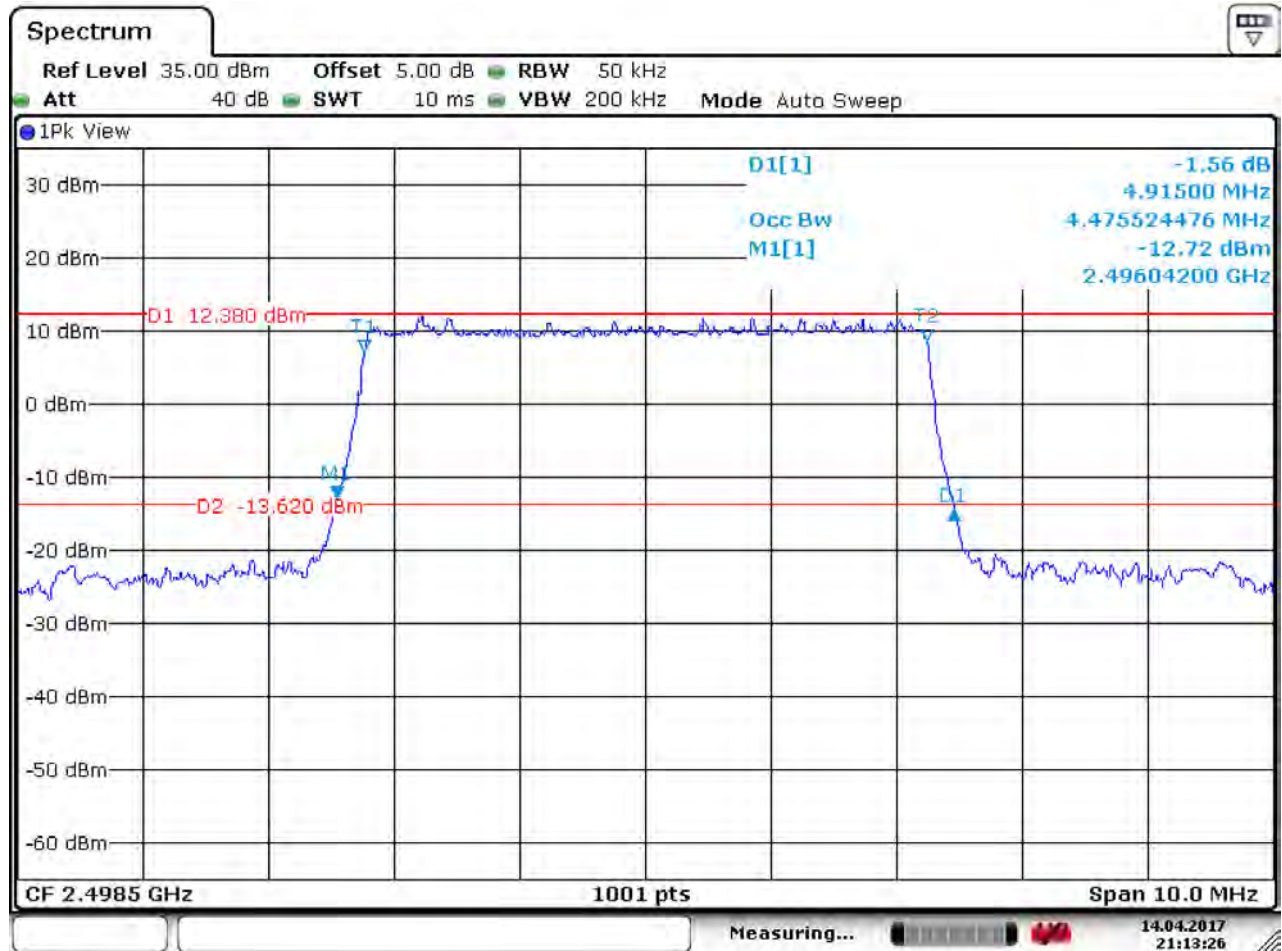


Date: 14.APR.2017 21:17:05



4.1.1.2 Test Mode = LTE/TM2 5MHz

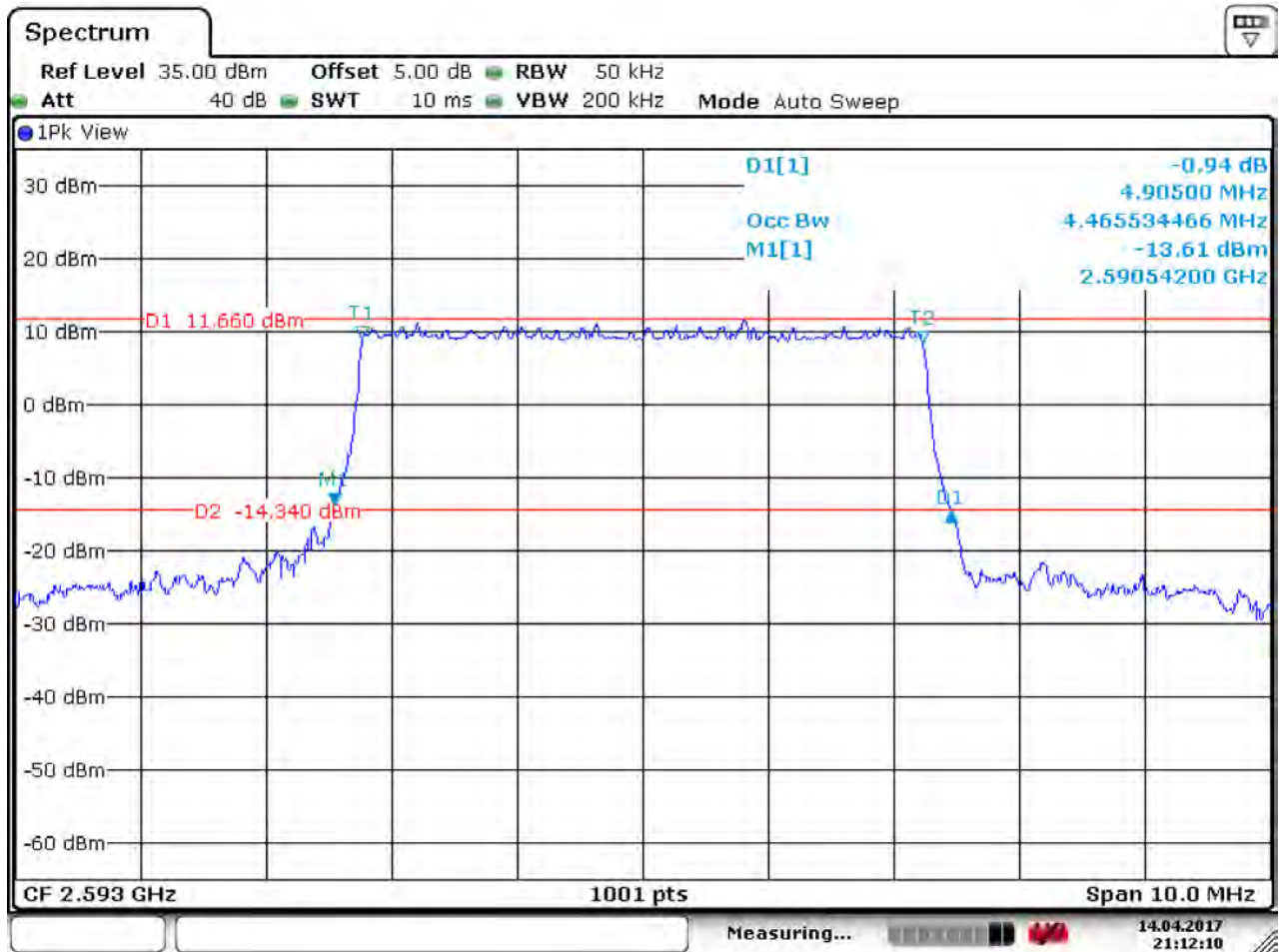
4.1.1.2.1 Test Channel = LCH



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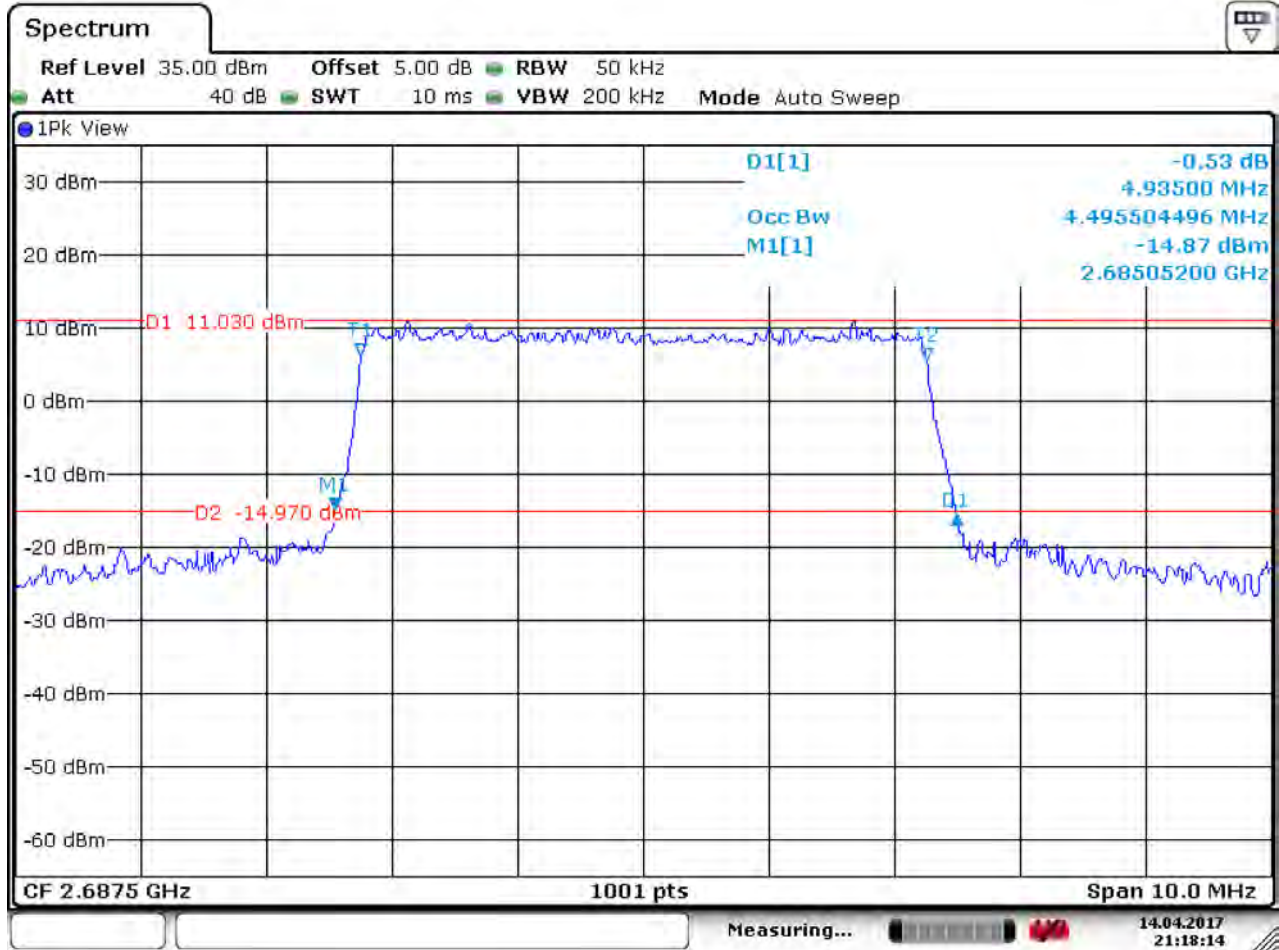


4.1.1.2.2 Test Channel = MCH



Date: 14.APR.2017 21:12:11

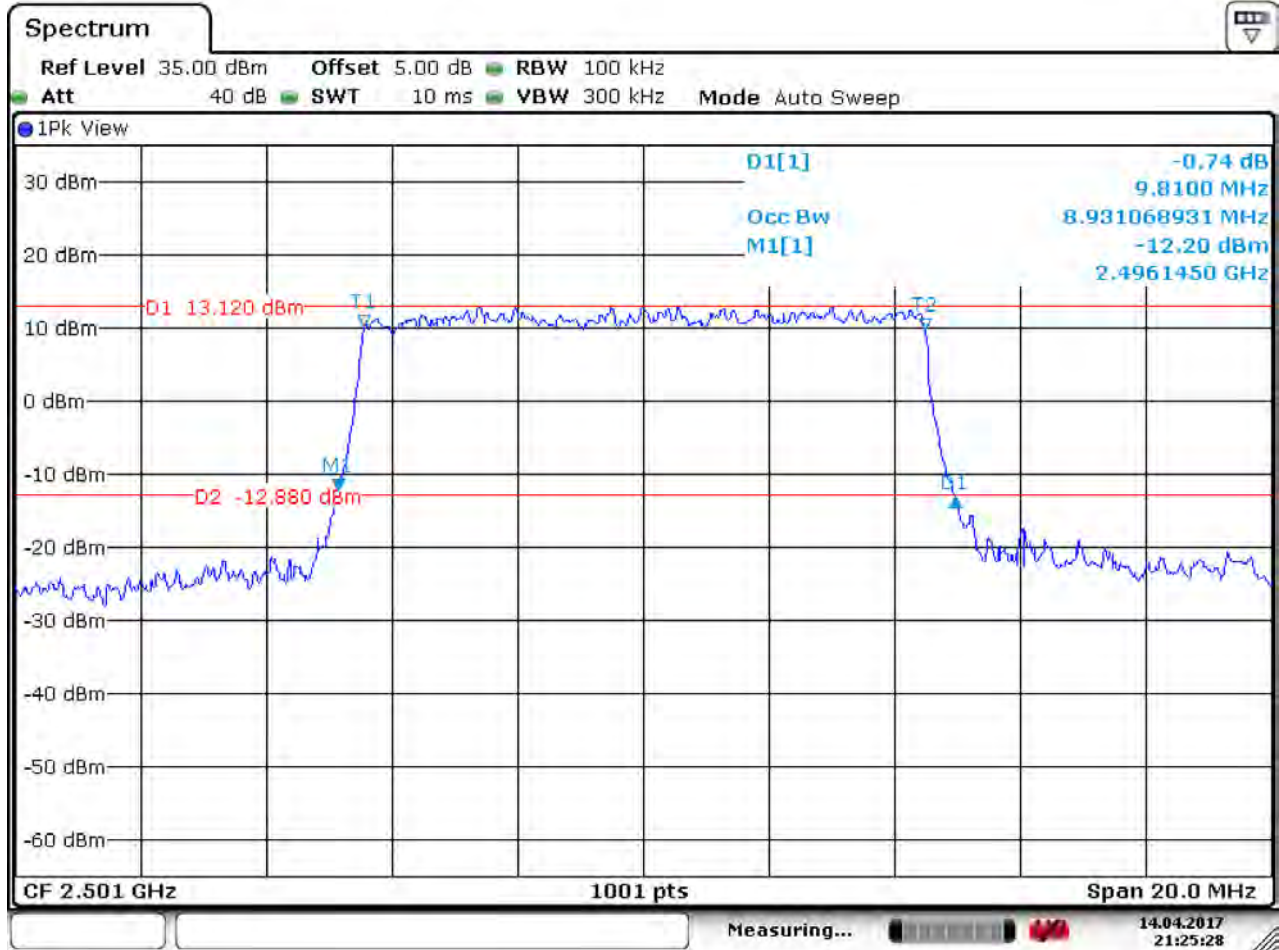
4.1.1.2.3 Test Channel = HCH



Date: 14.APR 2017 21:18:15

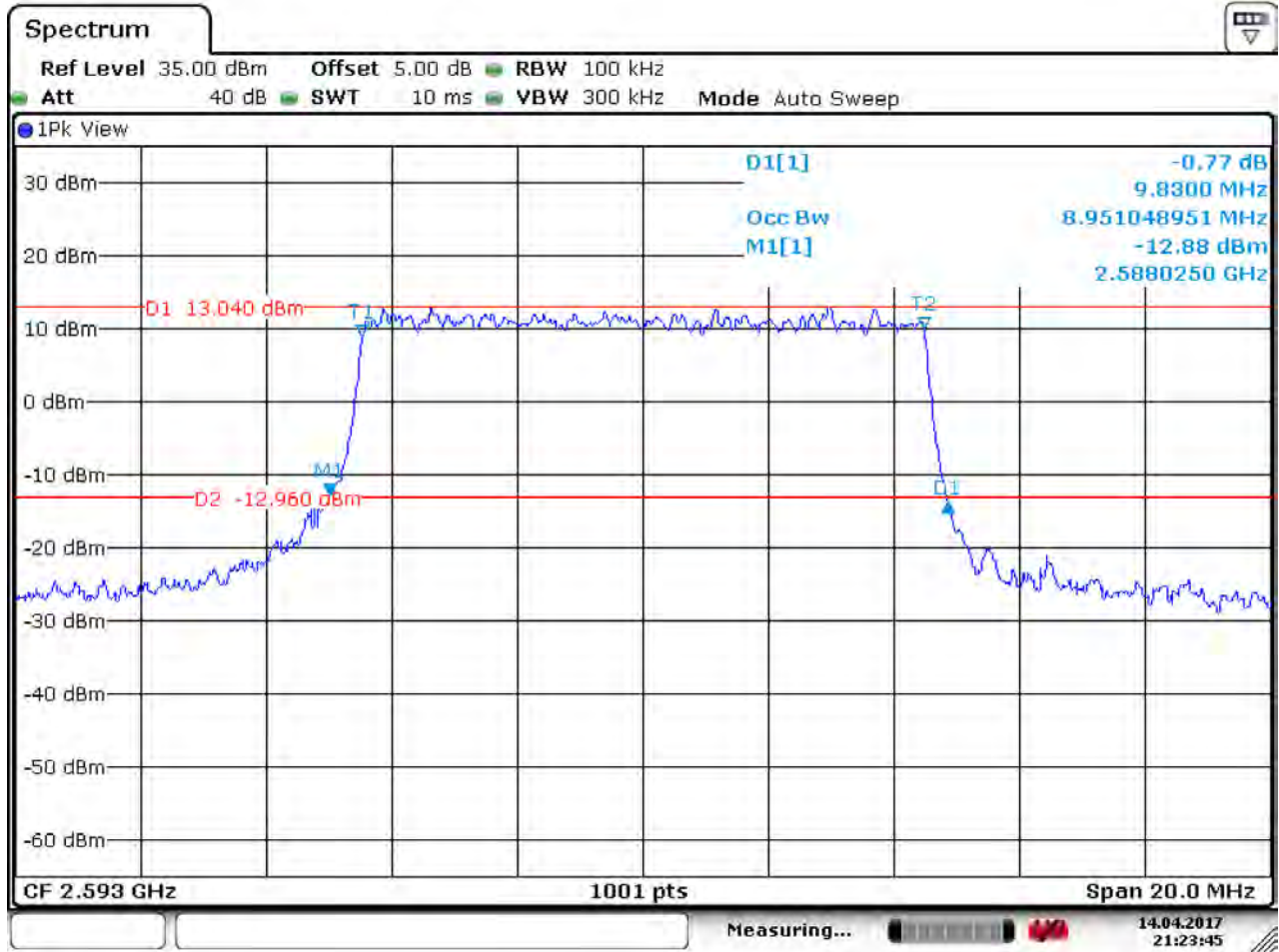
4.1.1.3 Test Mode = LTE/TM1 10MHz

4.1.1.3.1 Test Channel = LCH



Date: 14.APR.2017 21:25:29

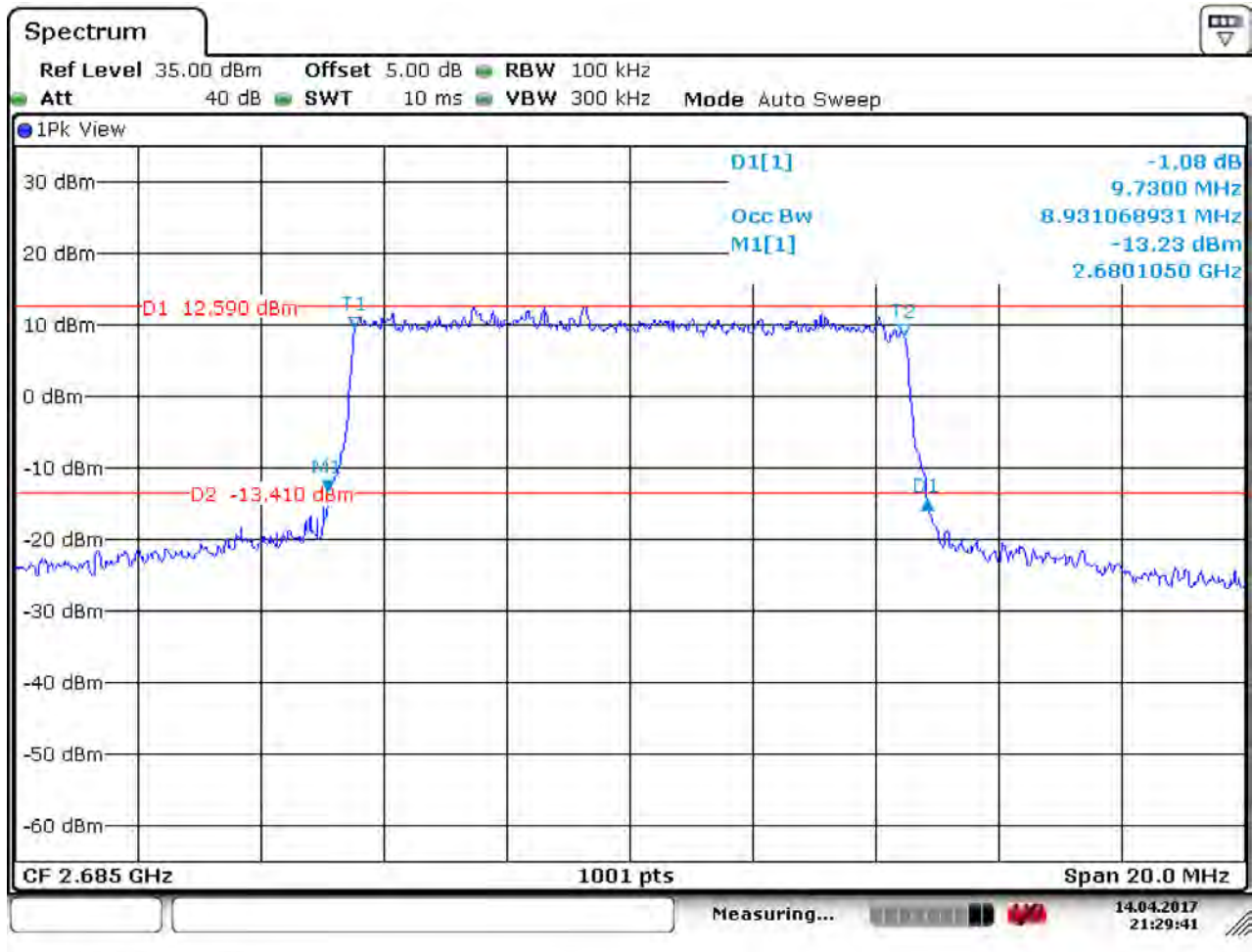
4.1.1.3.2 Test Channel = MCH



Date: 14.APR.2017 21:23:45



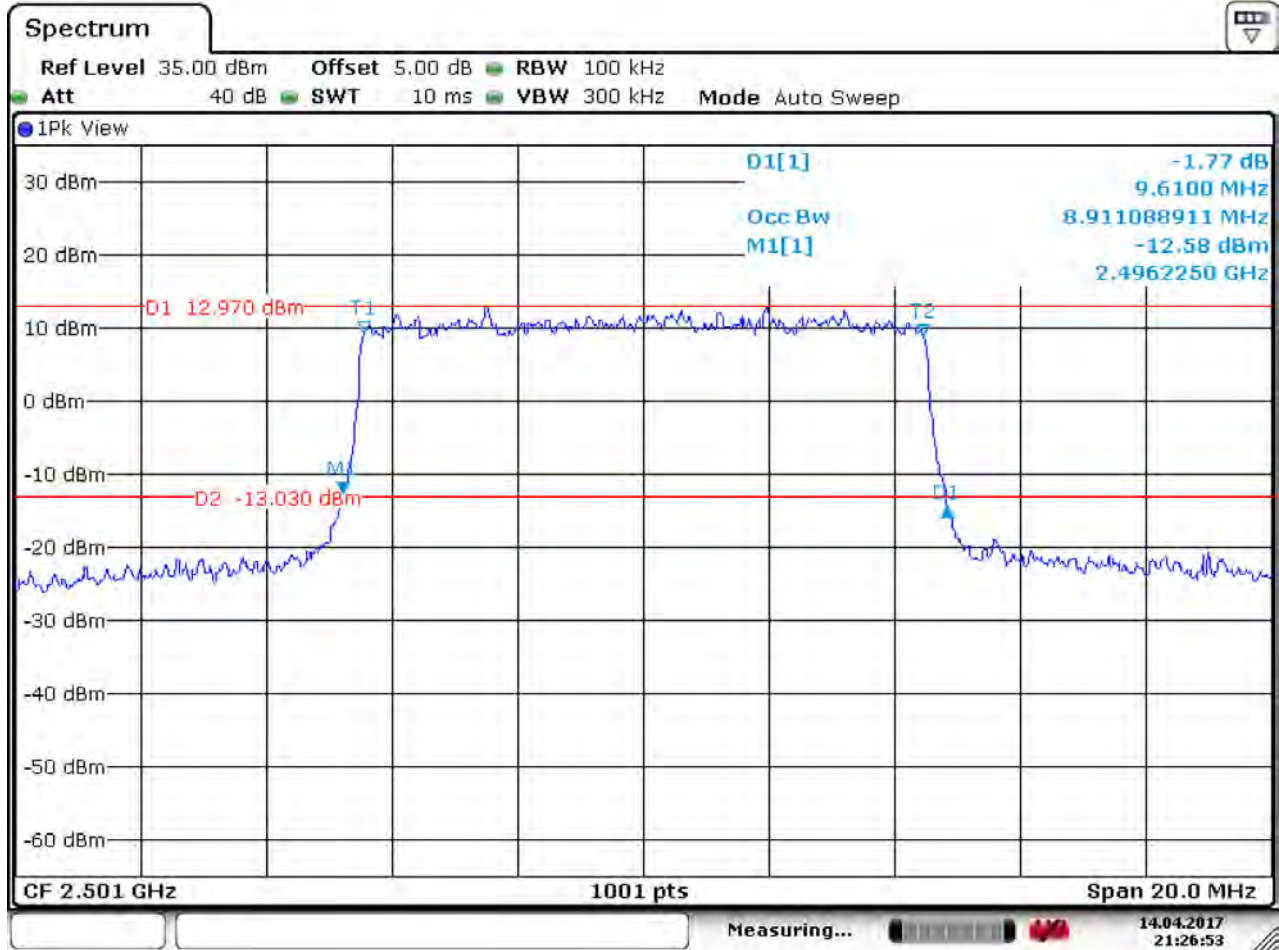
4.1.1.3.3 Test Channel = HCH



Date: 14.APR.2017 21:29:41

4.1.1.4 Test Mode = LTE/TM2 10MHz

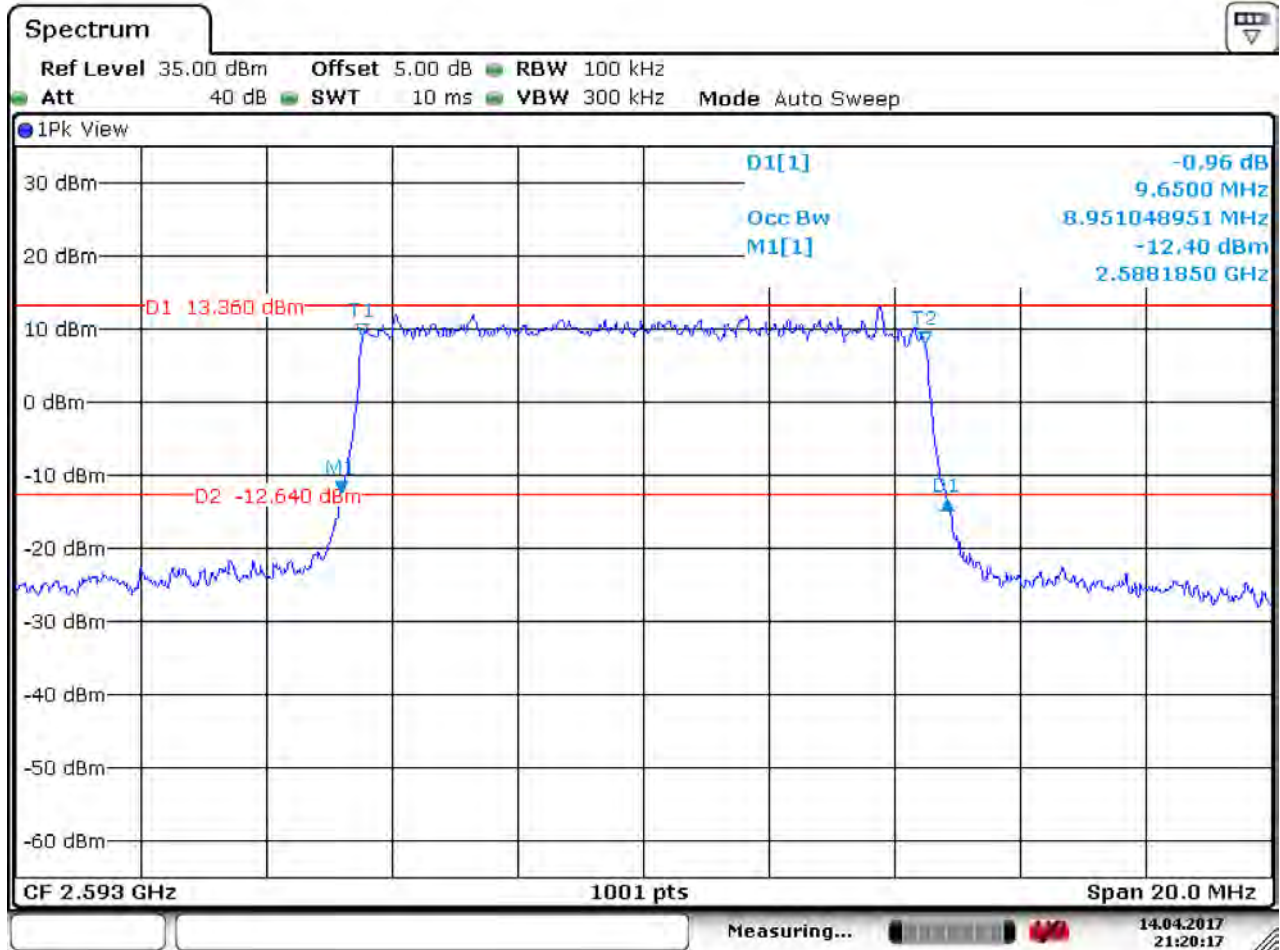
4.1.1.4.1 Test Channel = LCH



Date: 14.APR.2017 21:26:54



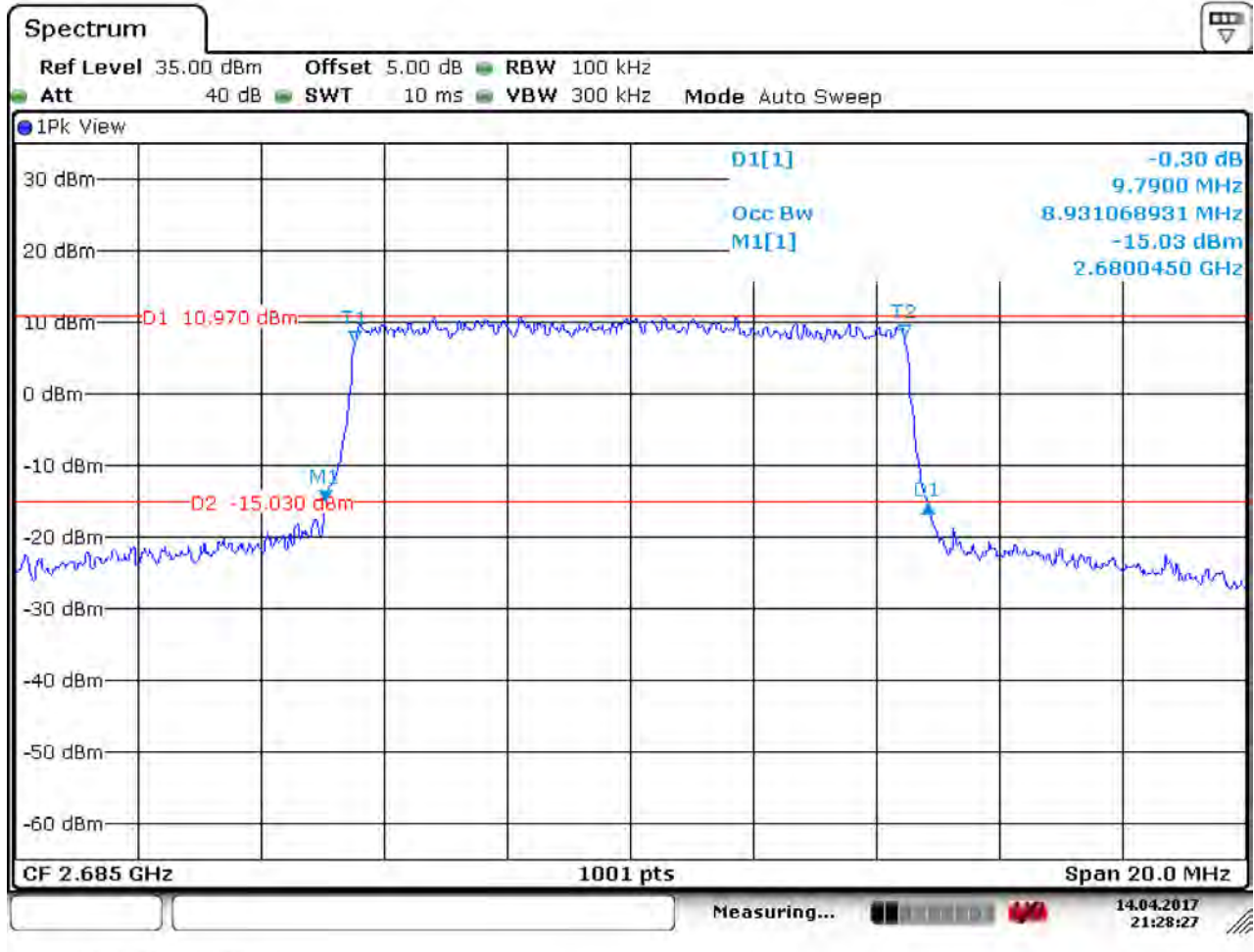
4.1.1.4.2 Test Channel = MCH



Date: 14.APR.2017 21:20:17



4.1.1.4.3 Test Channel = HCH

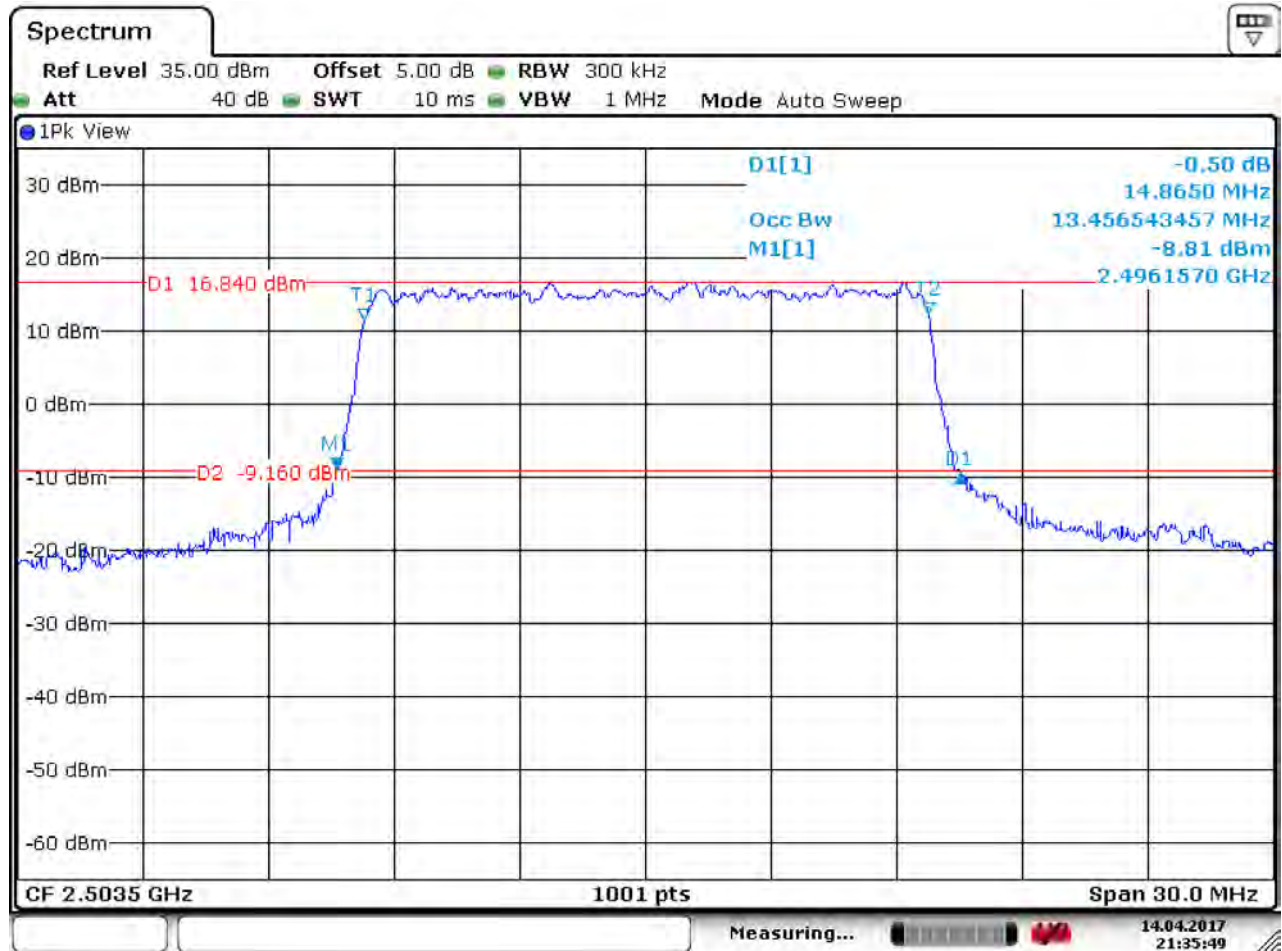


Date: 14.APR.2017 21:28:27



4.1.1.5 Test Mode = LTE/TM1 15MHz

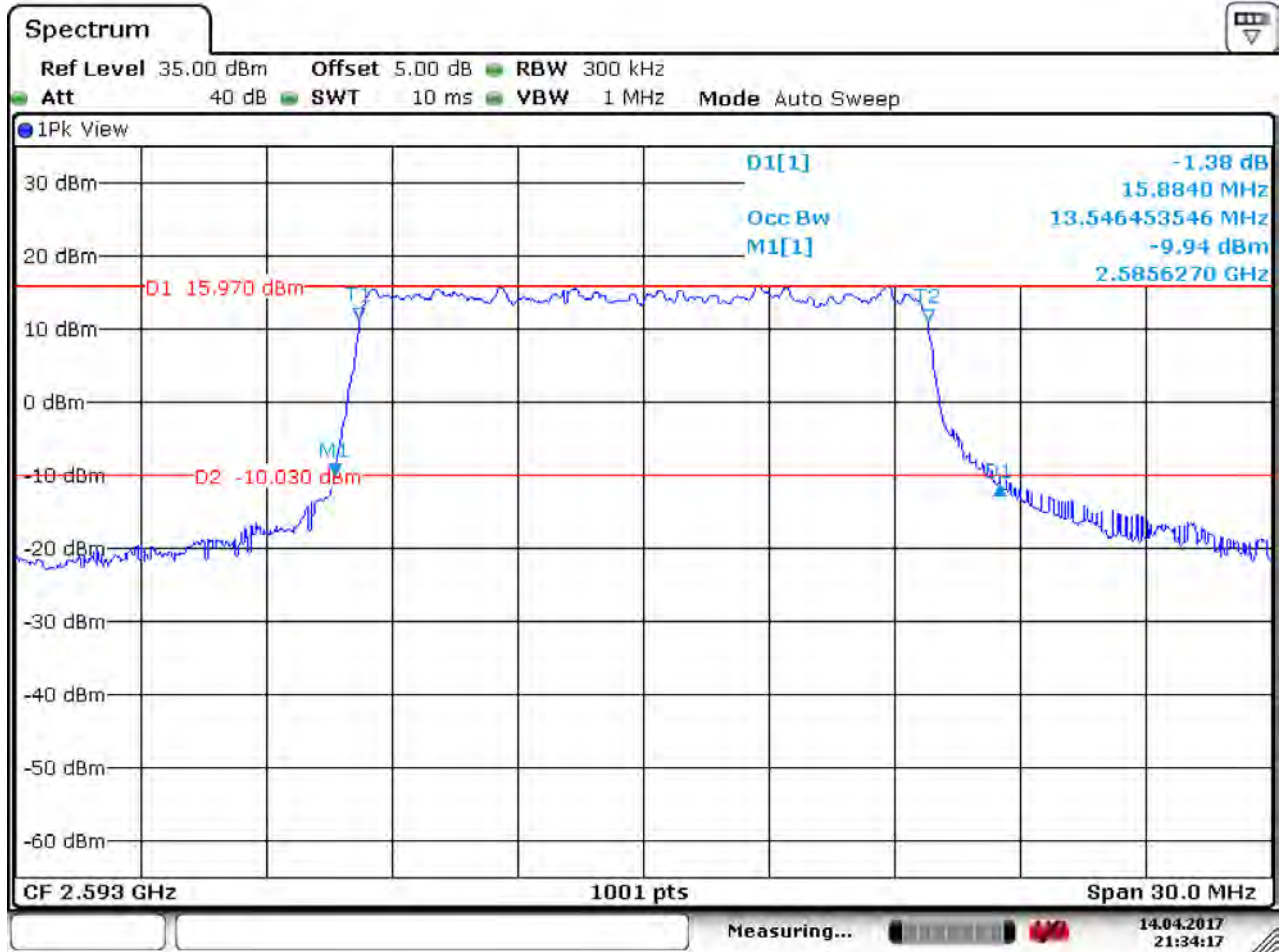
4.1.1.5.1 Test Channel = LCH



Date: 14.APR.2017 21:35:49



4.1.1.5.2 Test Channel = MCH



Date: 14.APR.2017 21:34:17



4.1.1.5.3 Test Channel = HCH

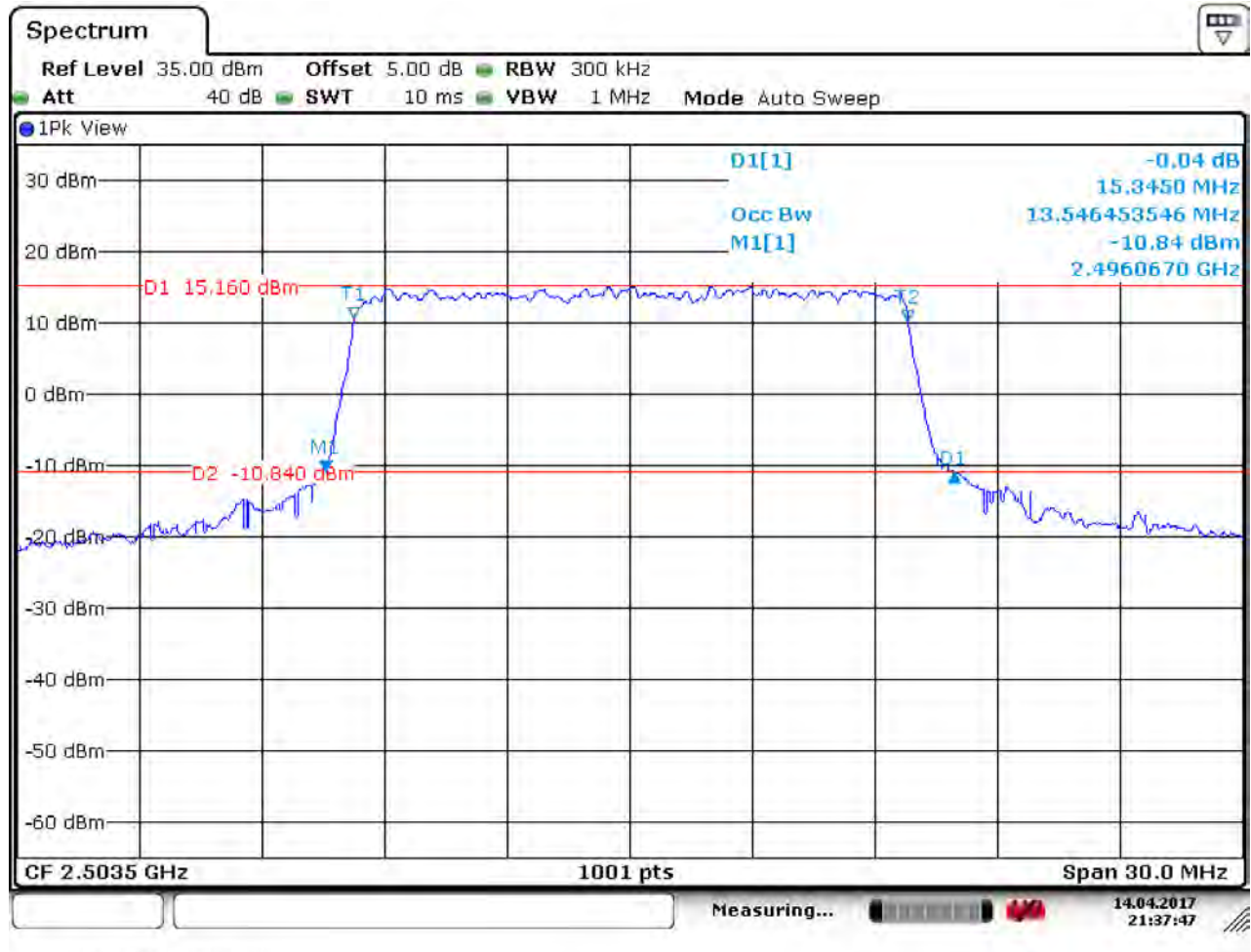


Date: 14.APR.2017 21:41:39



4.1.1.6 Test Mode = LTE/TM2 15MHz

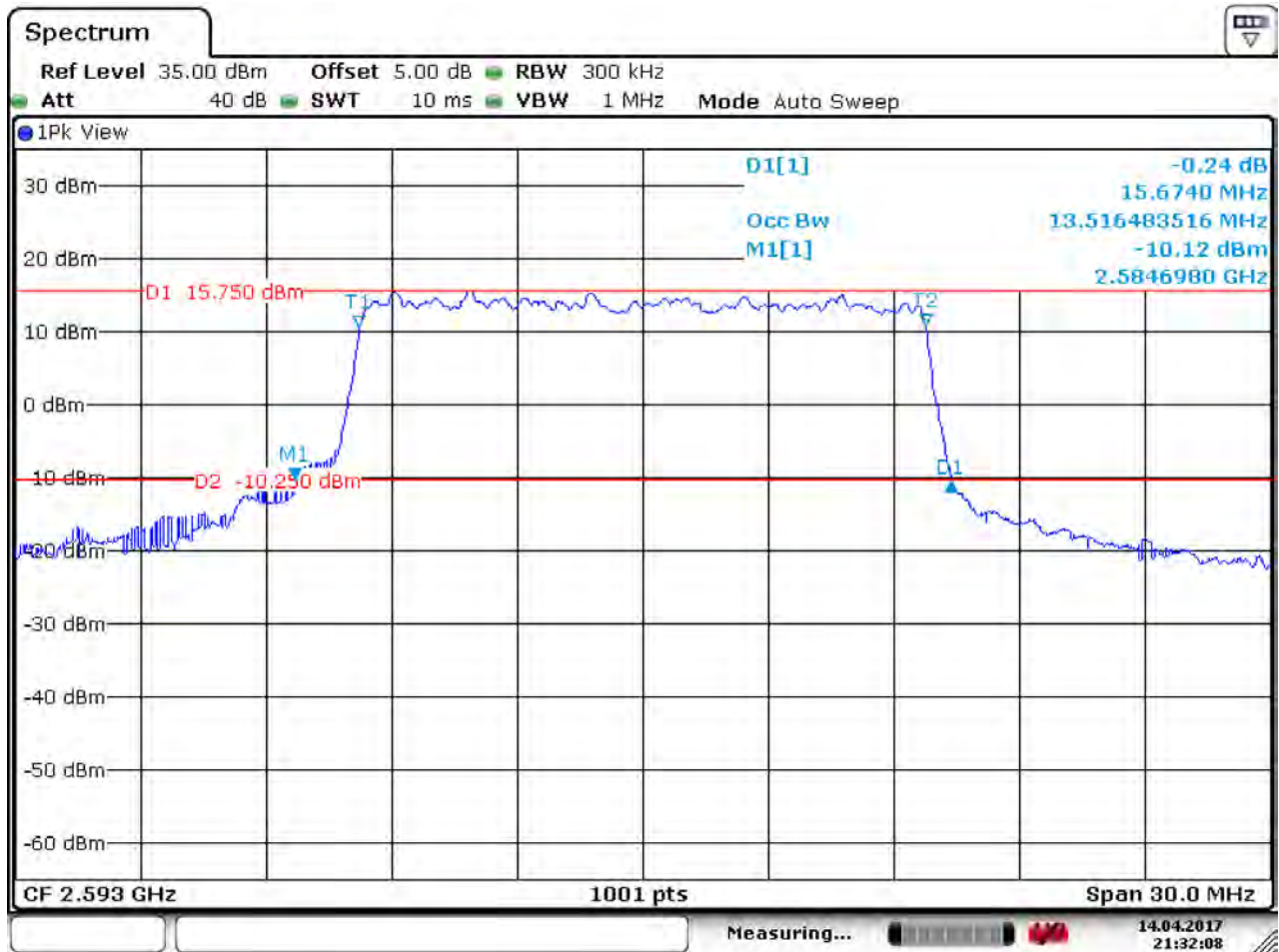
4.1.1.6.1 Test Channel = LCH



Date: 14.APR.2017 21:37:48

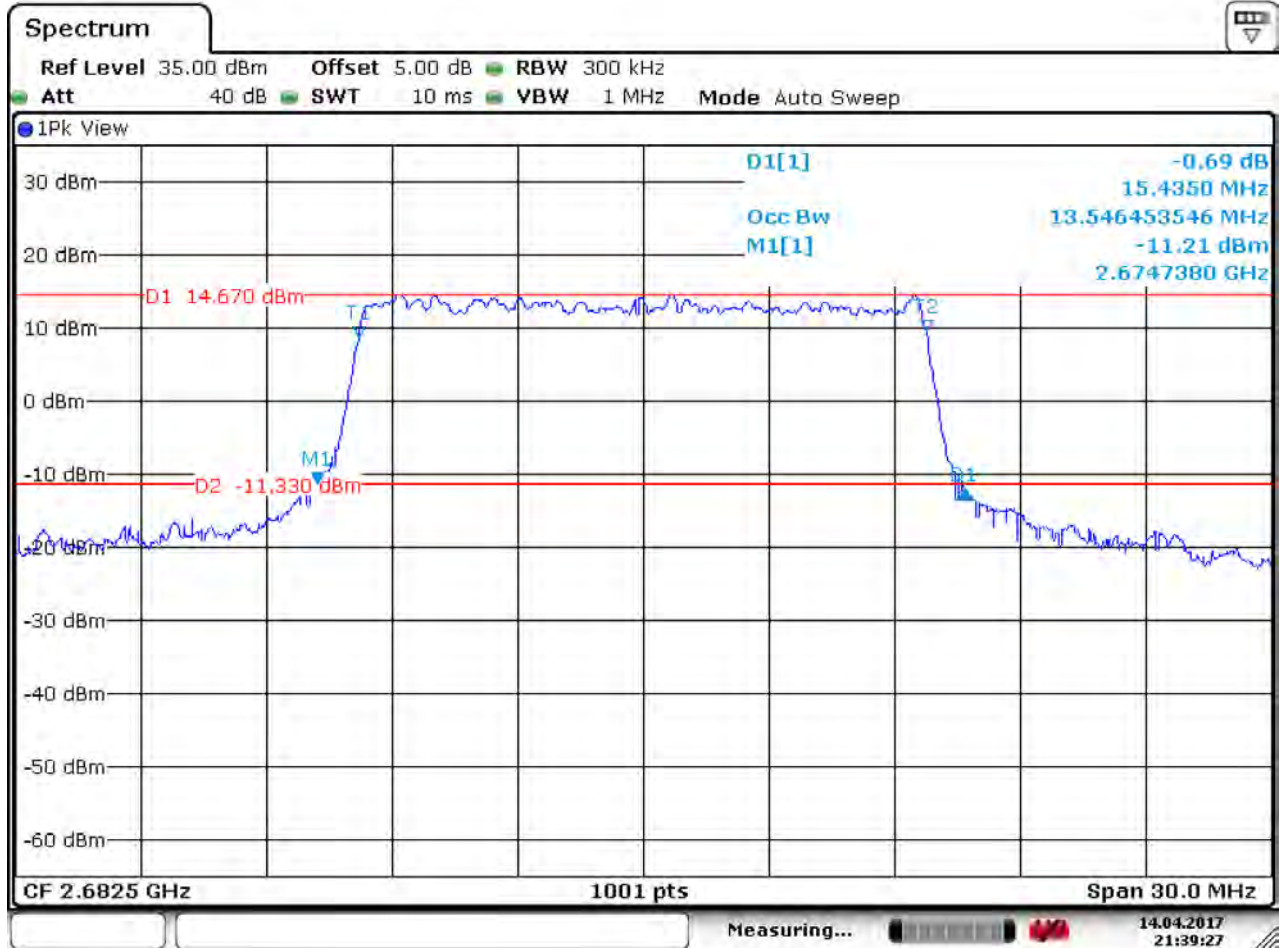


4.1.1.6.2 Test Channel = MCH



Date: 14.APR.2017 21:32:08

4.1.1.6.3 Test Channel = HCH

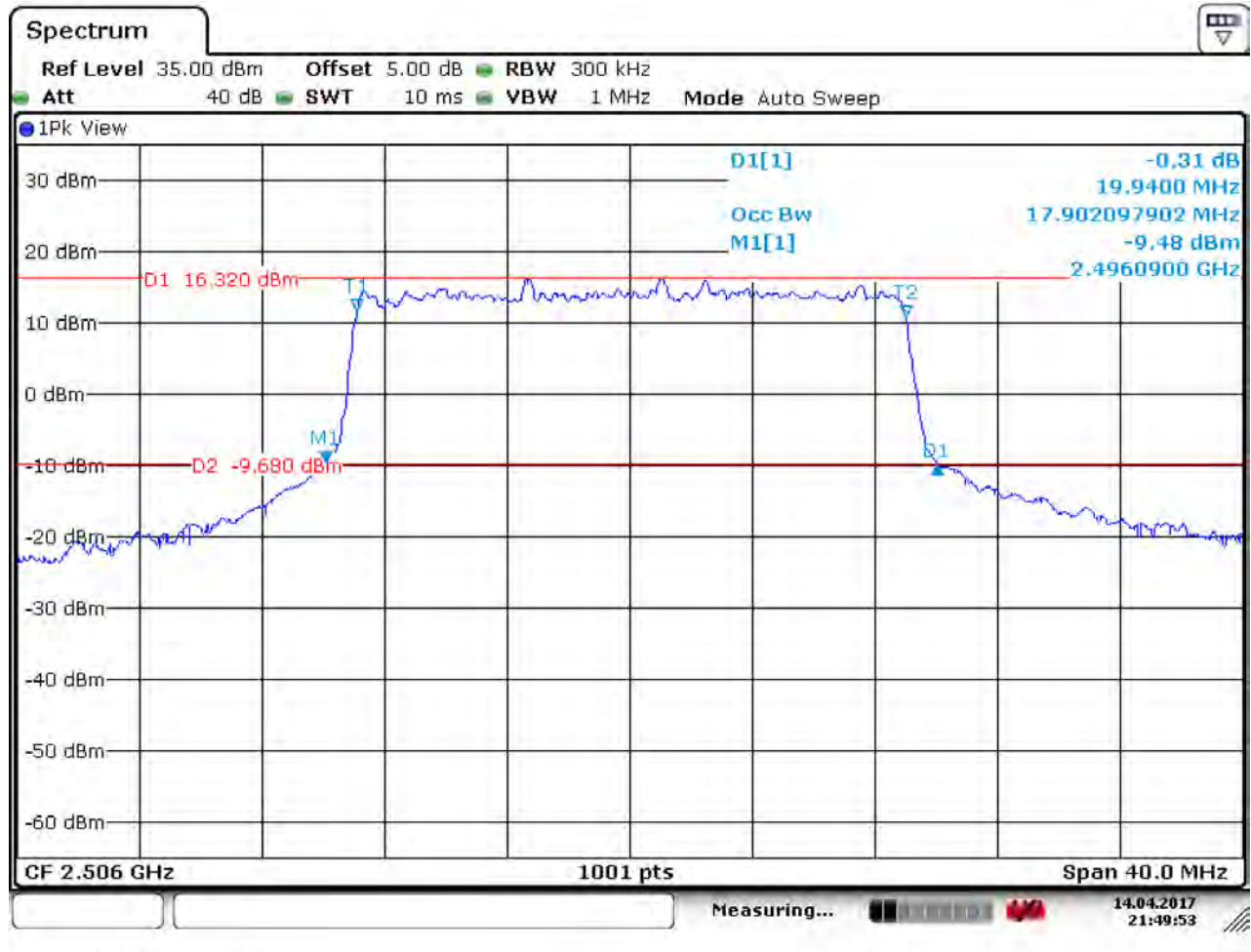


Date: 14.APR.2017 21:39:28



4.1.1.7 Test Mode = LTE/TM1 20MHz

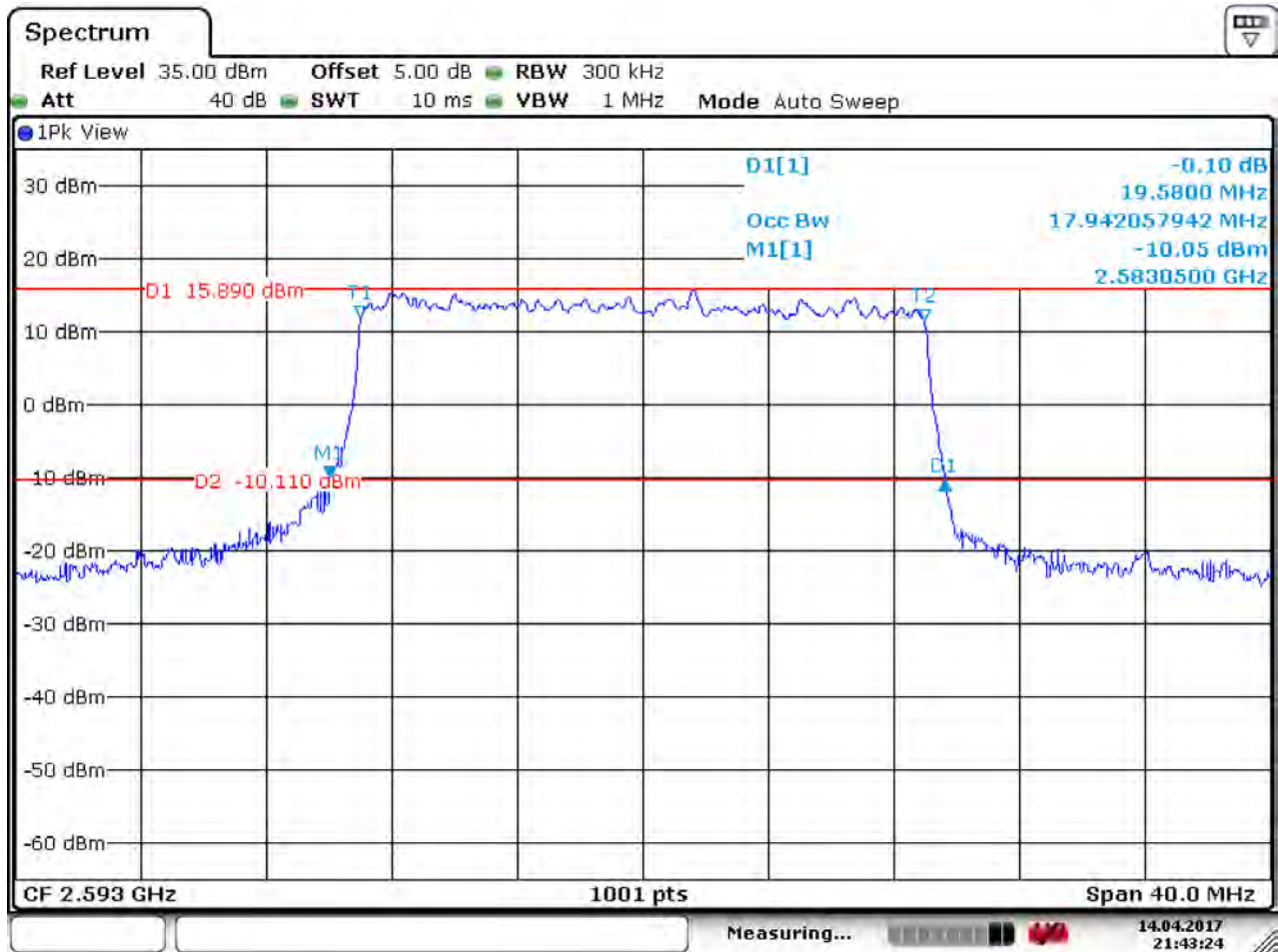
4.1.1.7.1 Test Channel = LCH



Date: 14.APR.2017 21:49:54



4.1.1.7.2 Test Channel = MCH



Date: 14.APR.2017 21:43:24

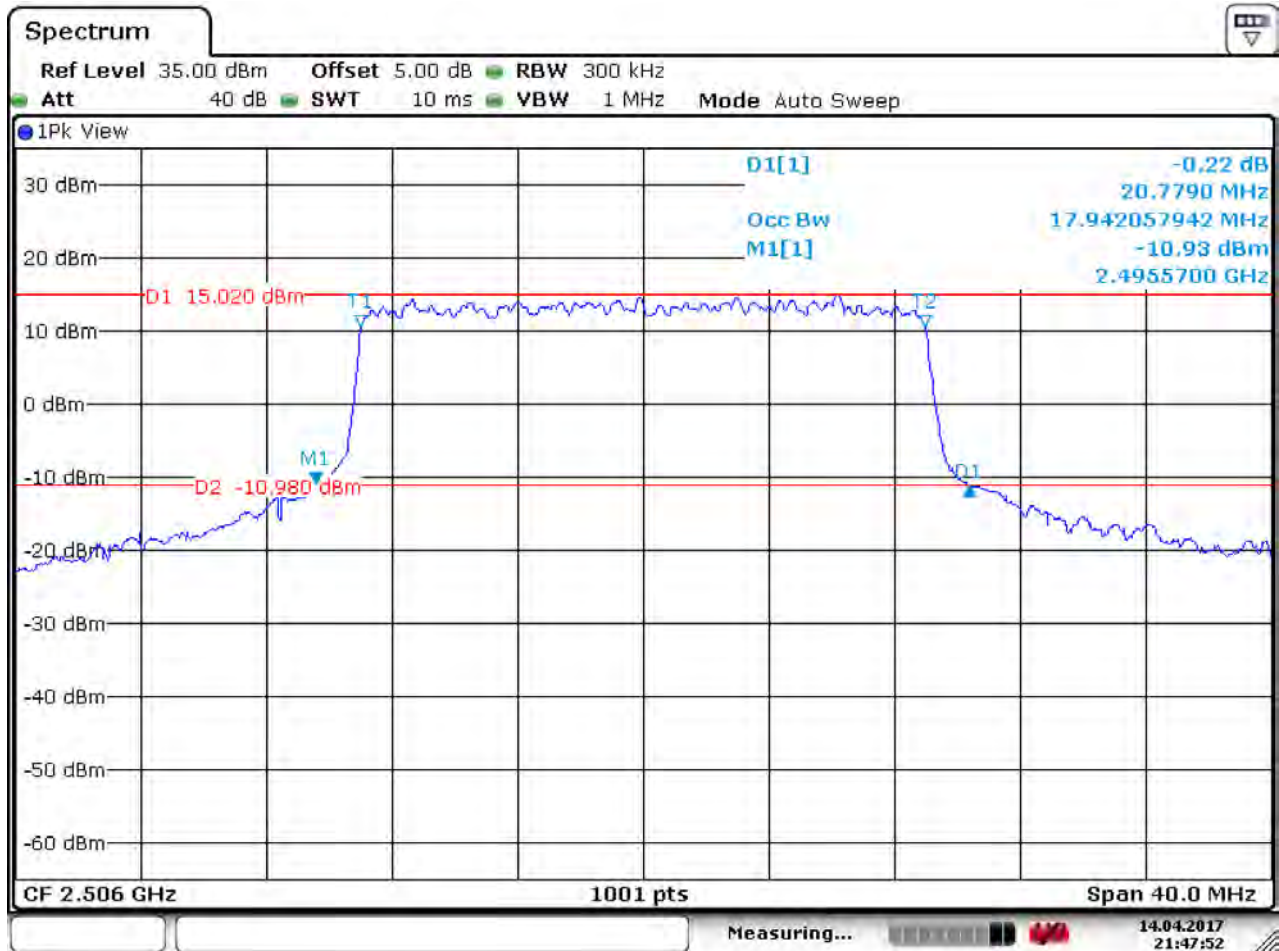


4.1.1.7.3 Test Channel = HCH



Date: 14.APR.2017 21:51:44

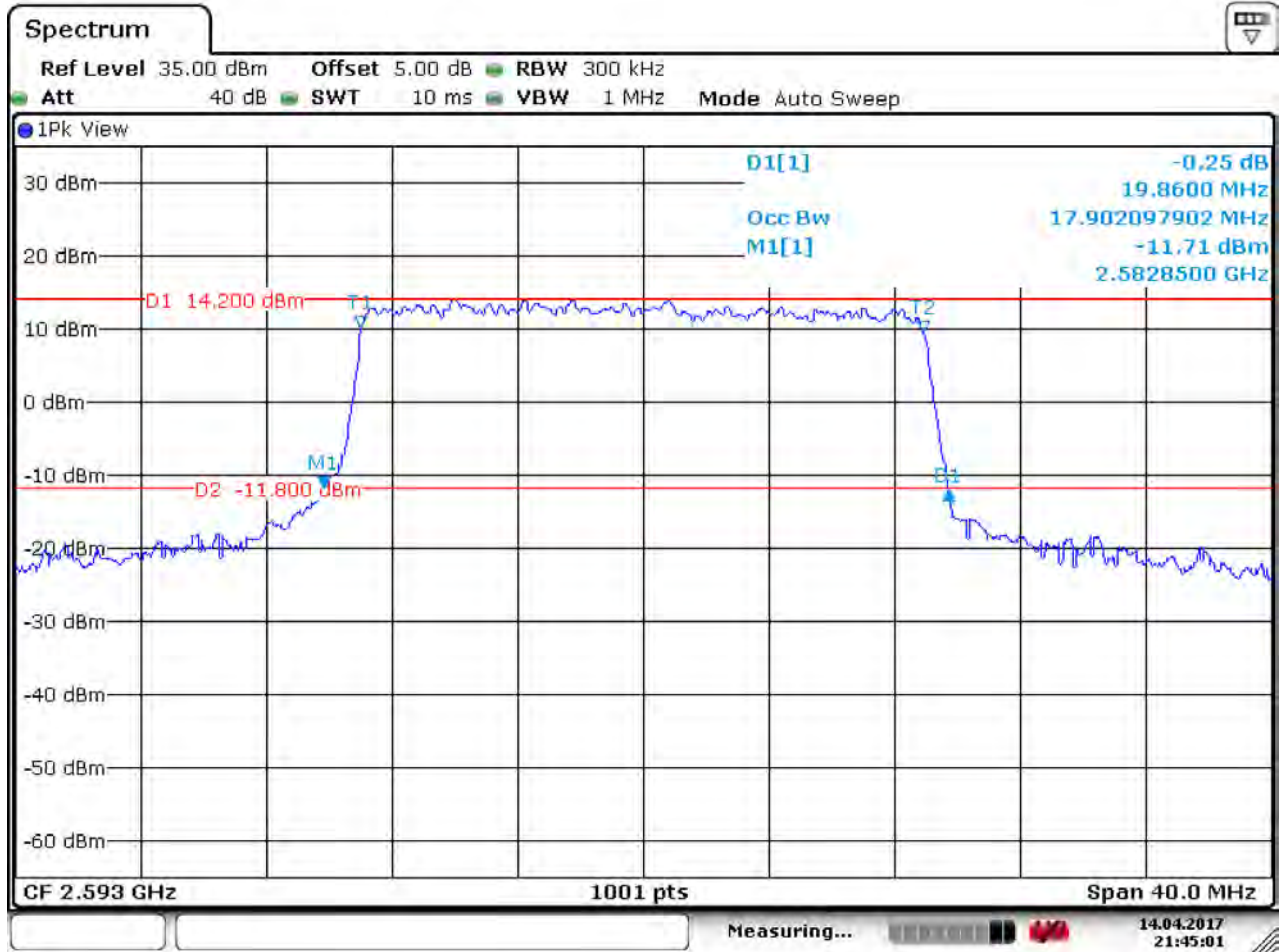
4.1.1.8 Test Mode = LTE/TM2 20MHz
4.1.1.8.1 Test Channel = LCH



Date: 14.APR.2017 21:47:52



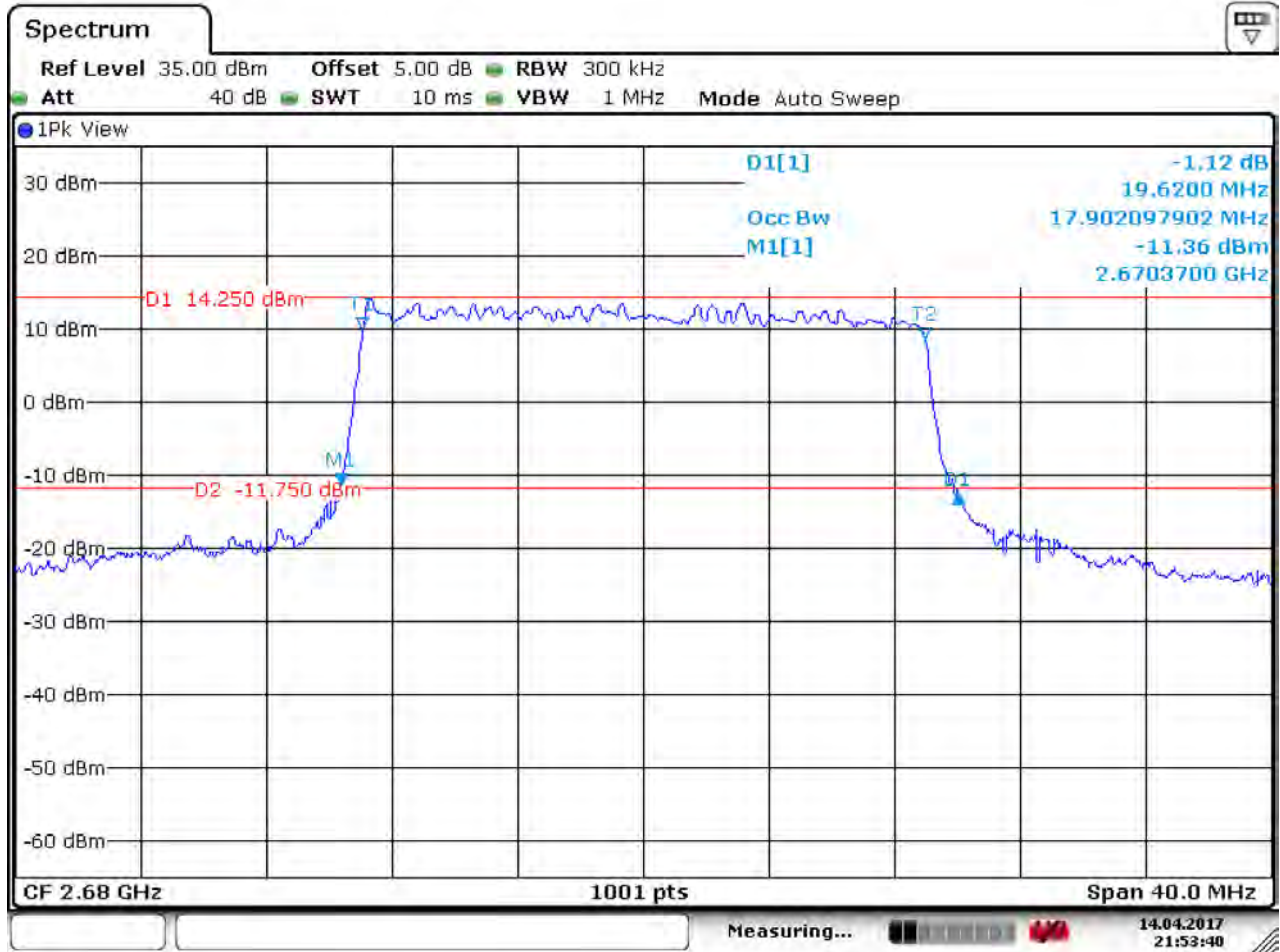
4.1.1.8.2 Test Channel = MCH



Date: 14.APR.2017 21:45:02



4.1.1.8.3 Test Channel = HCH



Date: 14.APR.2017 21:53:40

5 Band Edges Compliance

Part I –

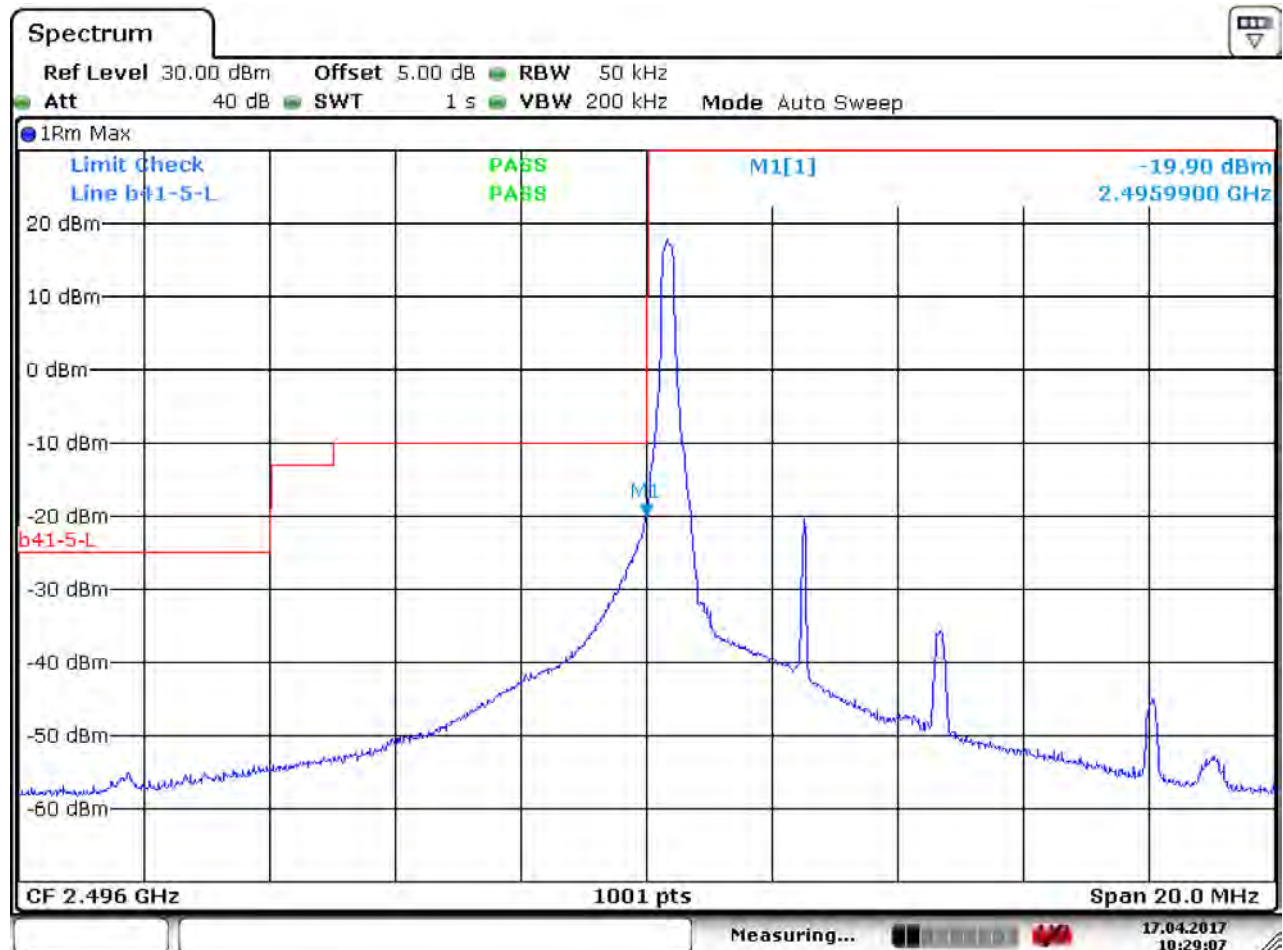
5.1 For LTE

5.1.1 Test Band = LTE band41

5.1.1.1 Test Mode = LTE/TM1 5MHz

5.1.1.1.1 Test Channel = LCH

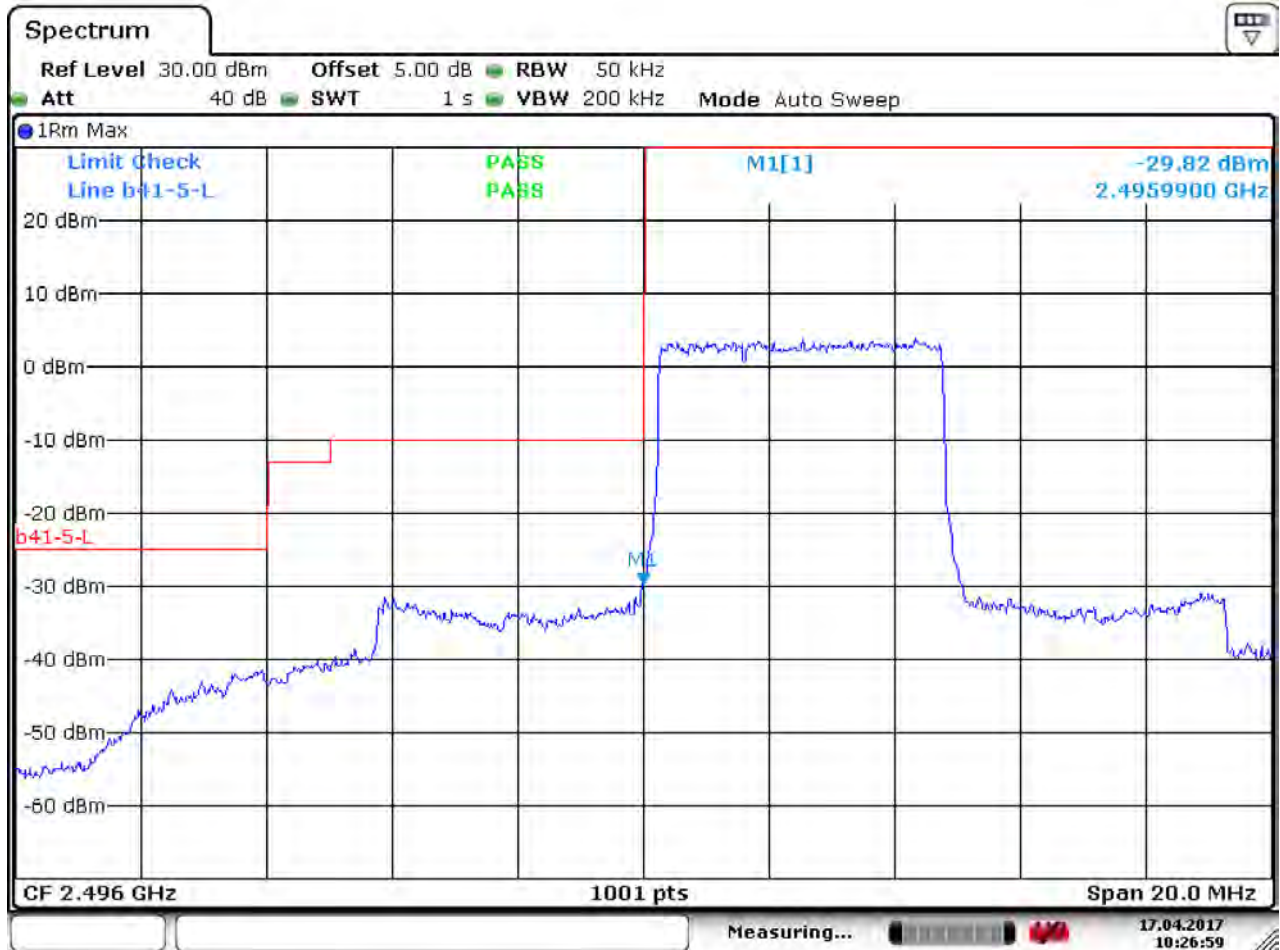
5.1.1.1.1.1 Test RB=1RB



Date: 17.APR.2017 10:29:07



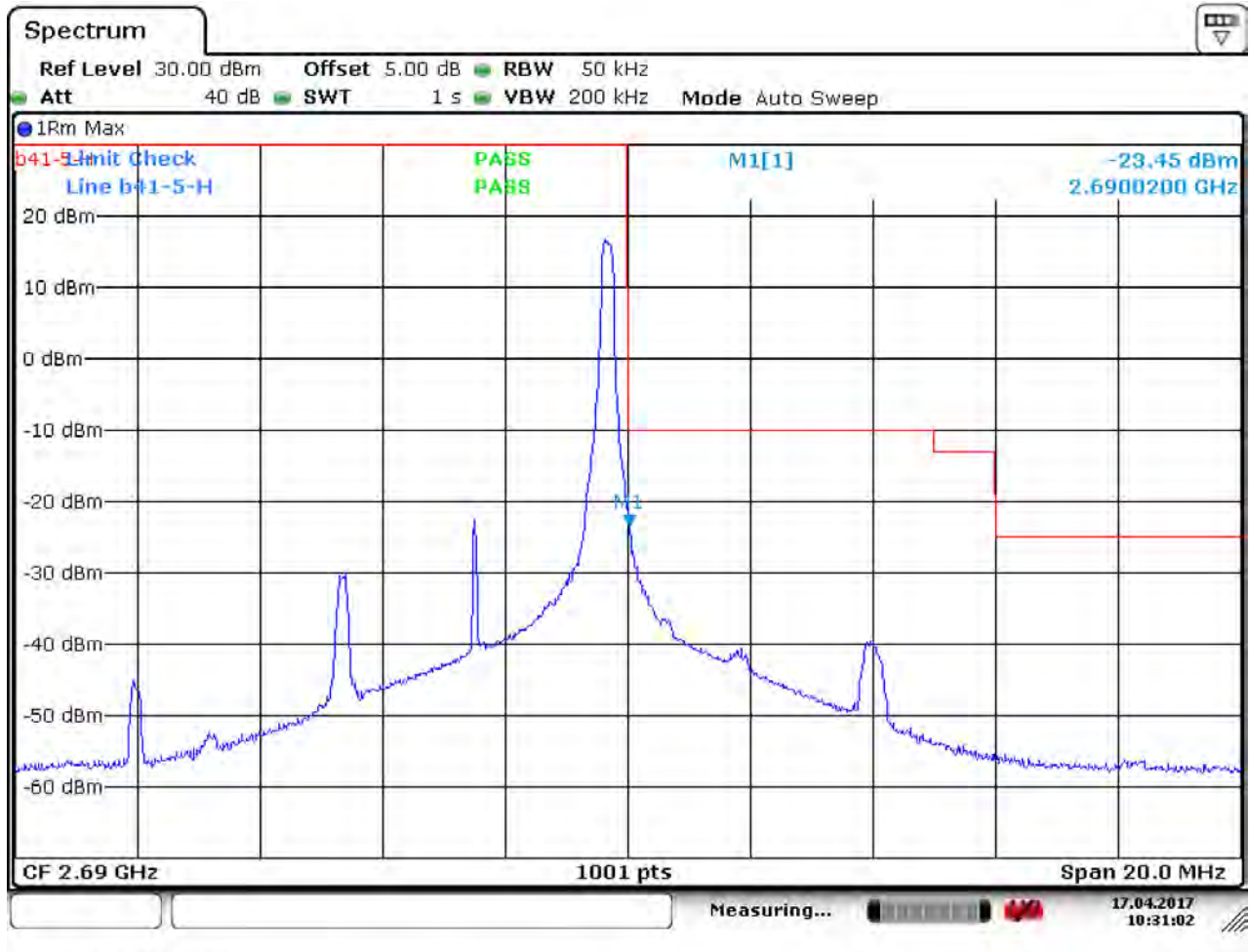
5.1.1.1.2 Test RB=25RB



Date: 17. APR 2017 10:26:59

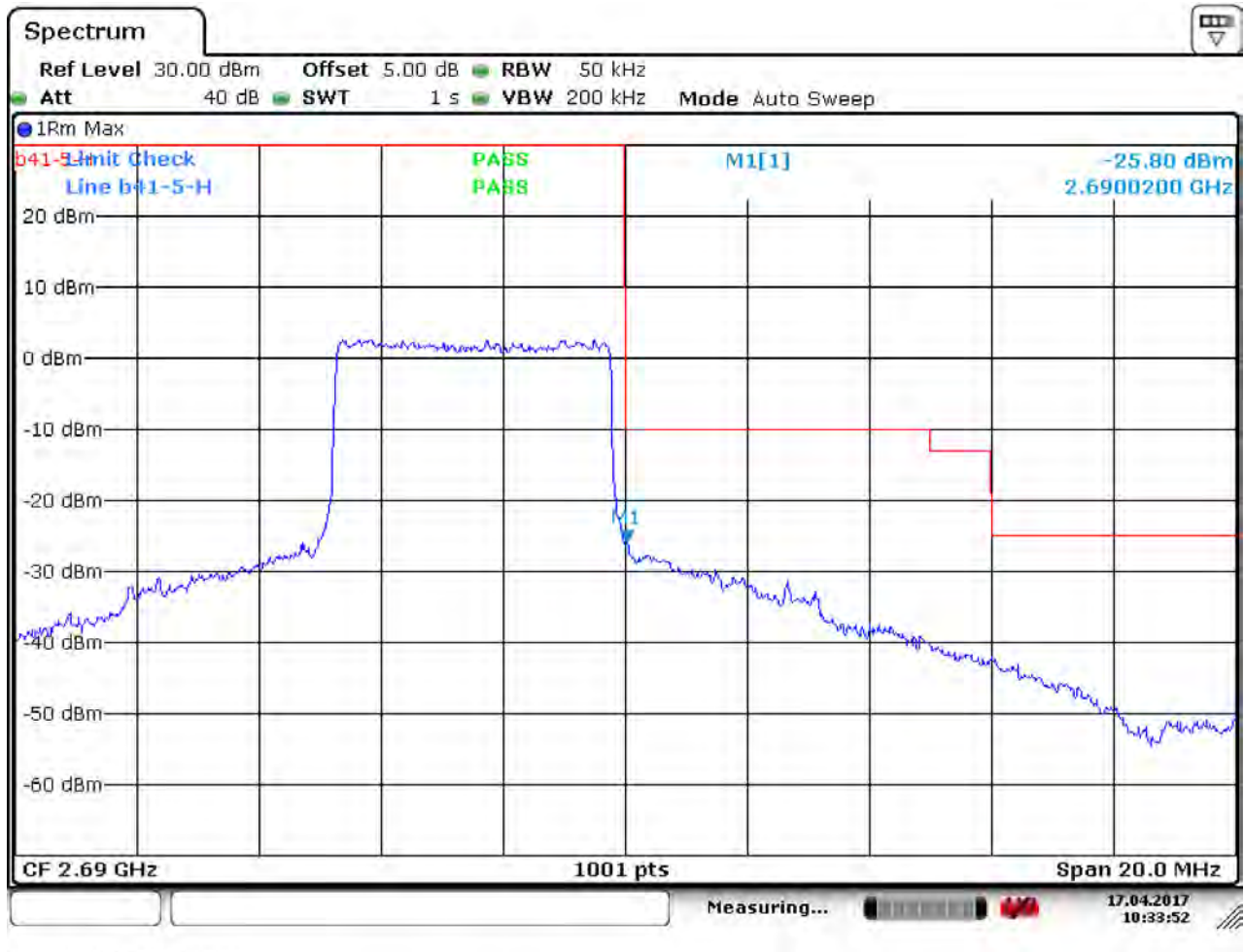
5.1.1.1.2 Test Channel = HCH

5.1.1.1.2.1 Test RB=1RB



Date: 17. APR 2017 10:31:03

5.1.1.1.2.2 Test RB=25RB



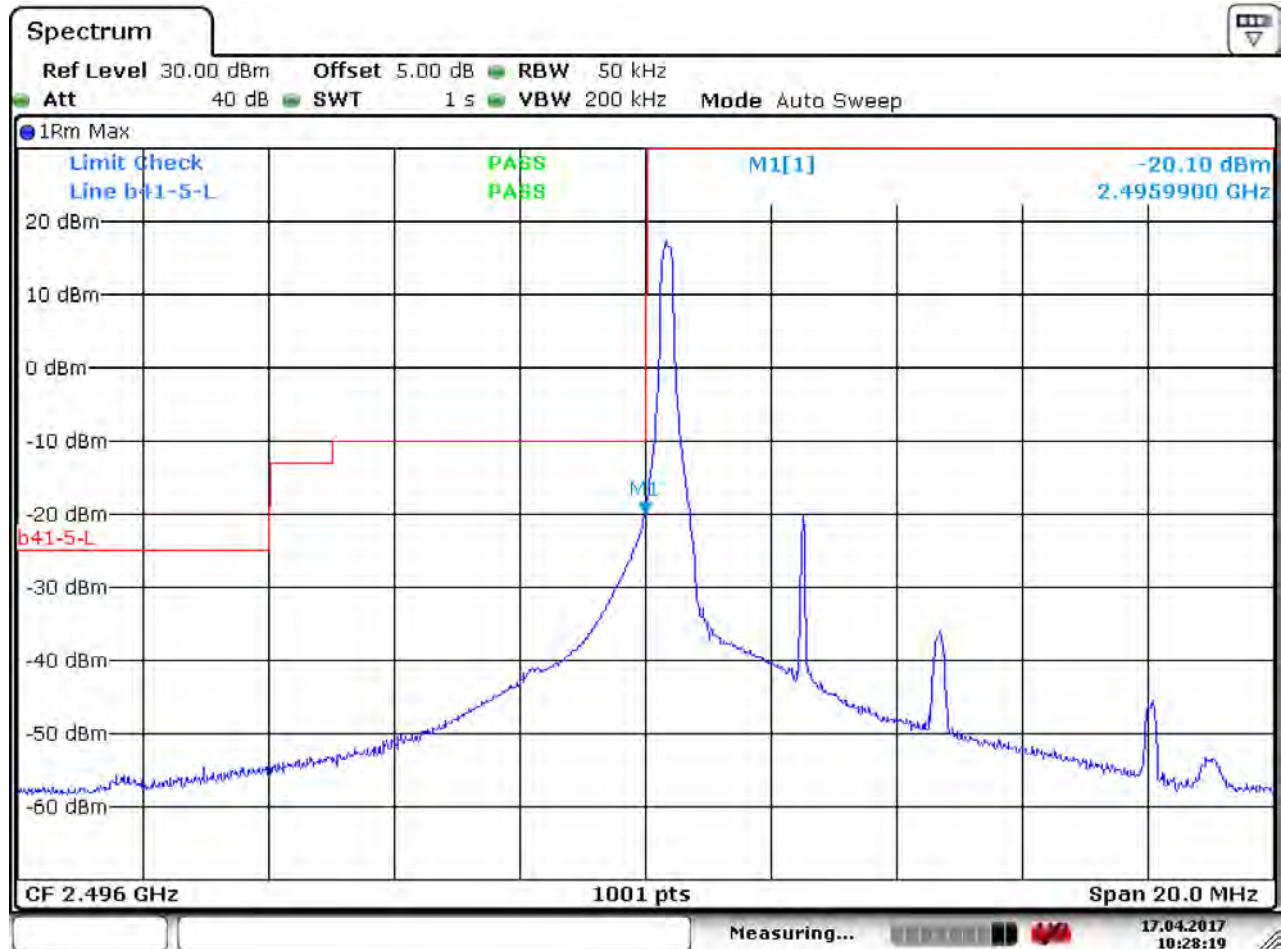
Date: 17.APR 2017 10:33:52



5.1.1.2 Test Mode = LTE/TM2 5MHz

5.1.1.2.1 Test Channel = LCH

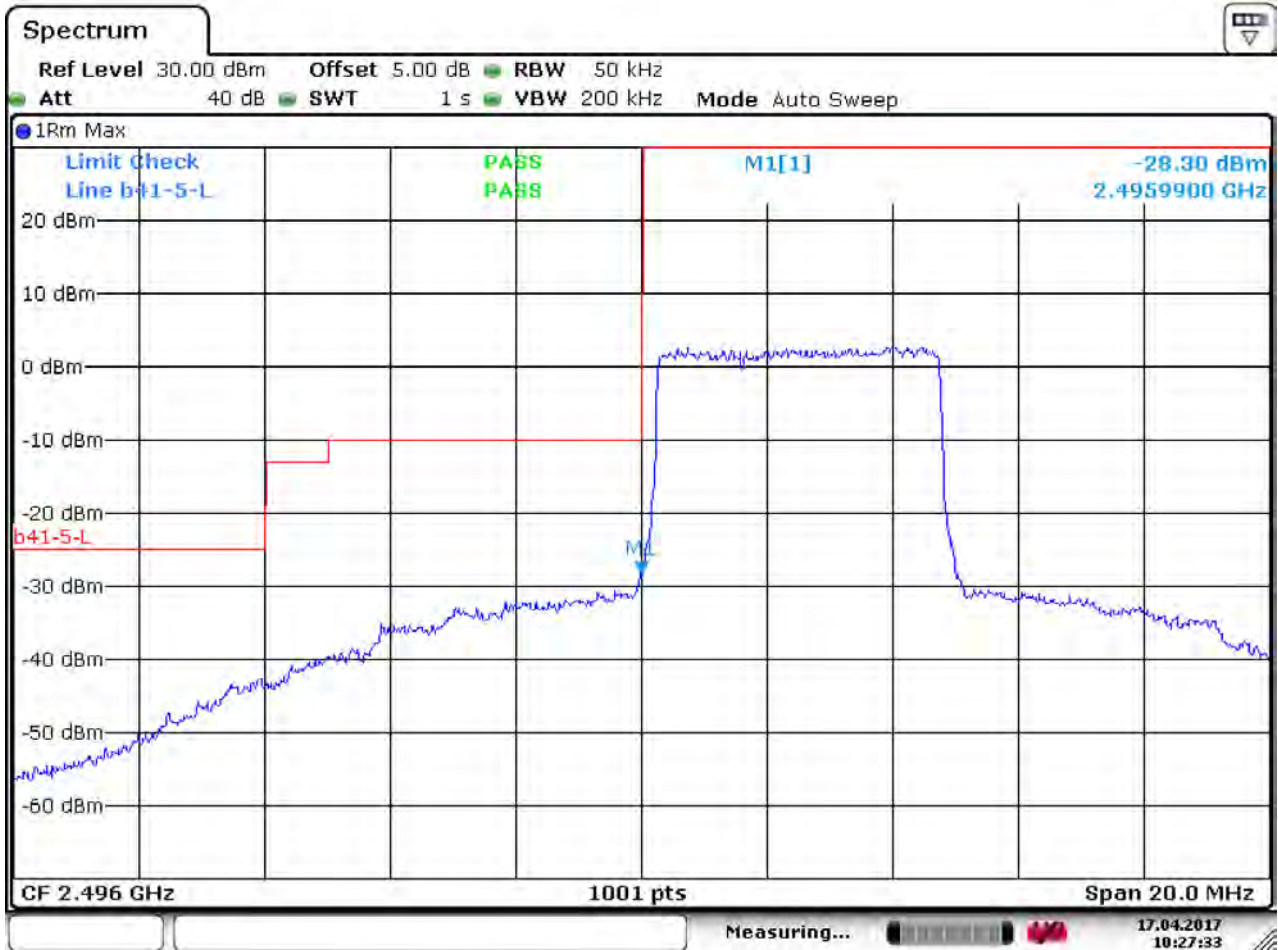
5.1.1.2.1.1 Test RB=1RB



Date: 17.APR 2017 10:28:20



5.1.1.2.1.2 Test RB=25RB

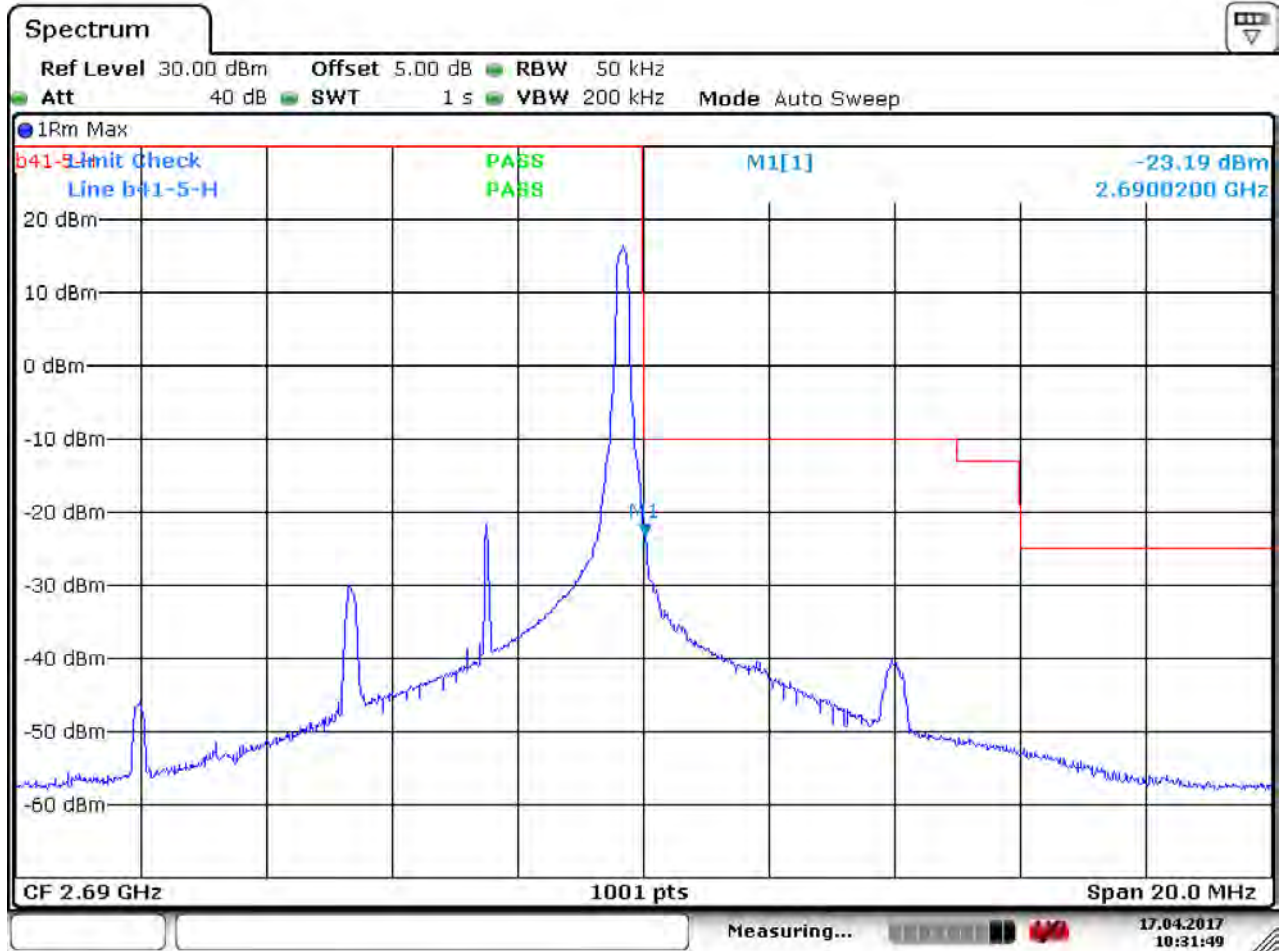


Date: 17. APR 2017 10:27:34



5.1.1.2.2 Test Channel = HCH

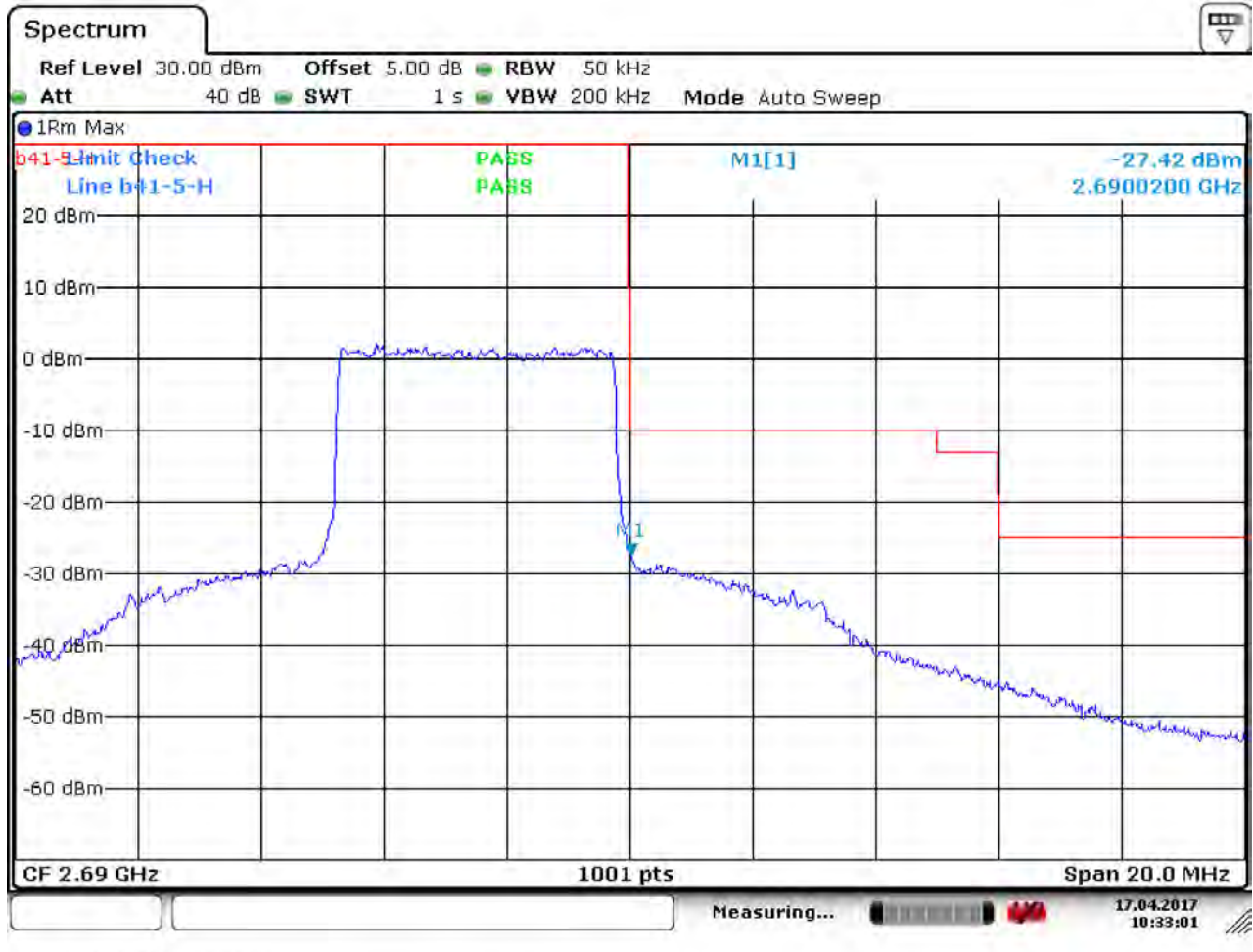
5.1.1.2.2.1 Test RB=1RB



Date: 17. APR 2017 10:31:50



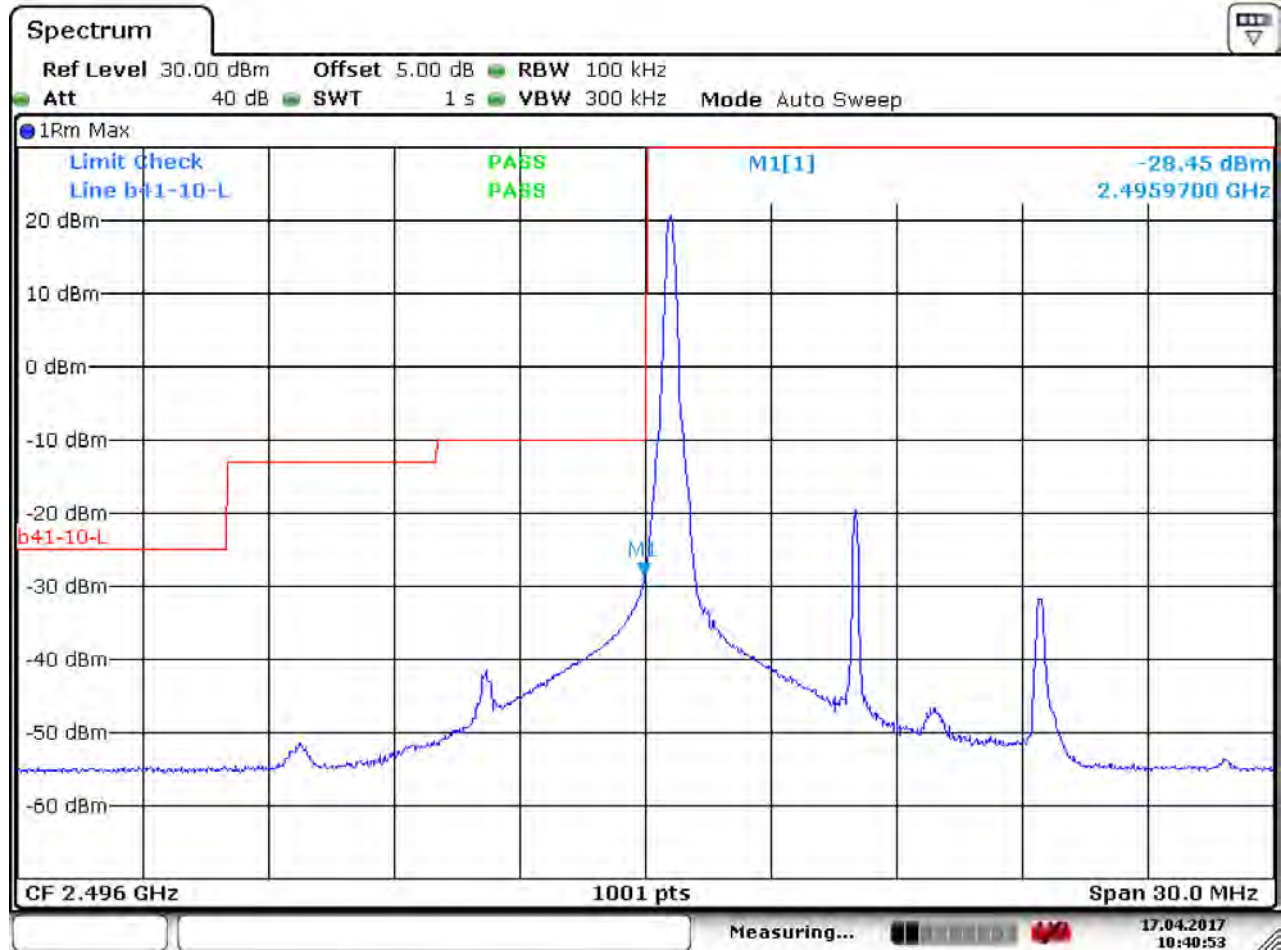
5.1.1.2.2.2 Test RB=25RB



Date: 17. APR 2017 10:33:01



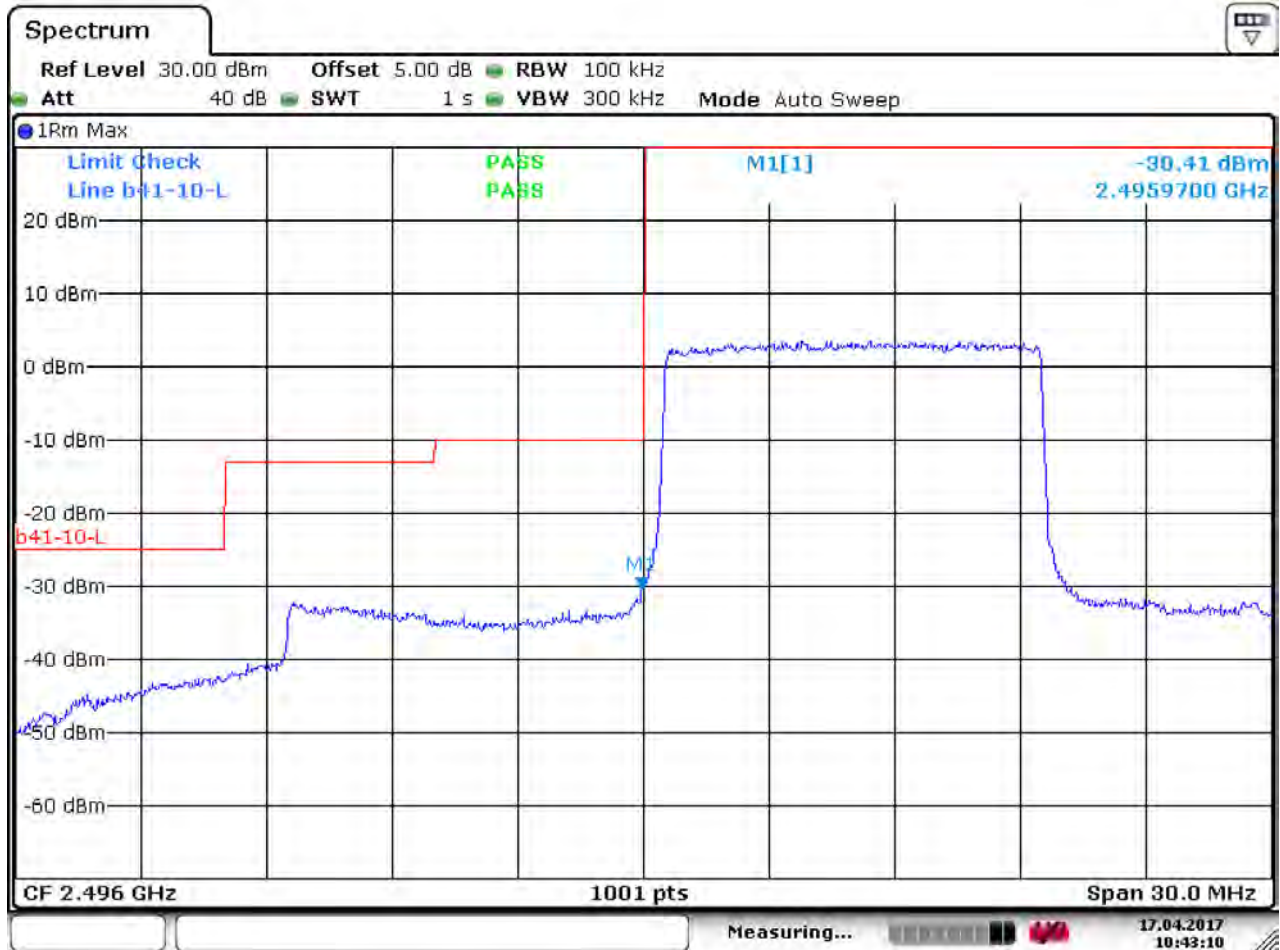
5.1.1.3 Test Mode = LTE/TM1 10MHz
5.1.1.3.1 Test Channel = LCH
5.1.1.3.1.1 Test RB=1RB



Date: 17.APR.2017 10:40:54



5.1.1.3.1.2 Test RB=50RB

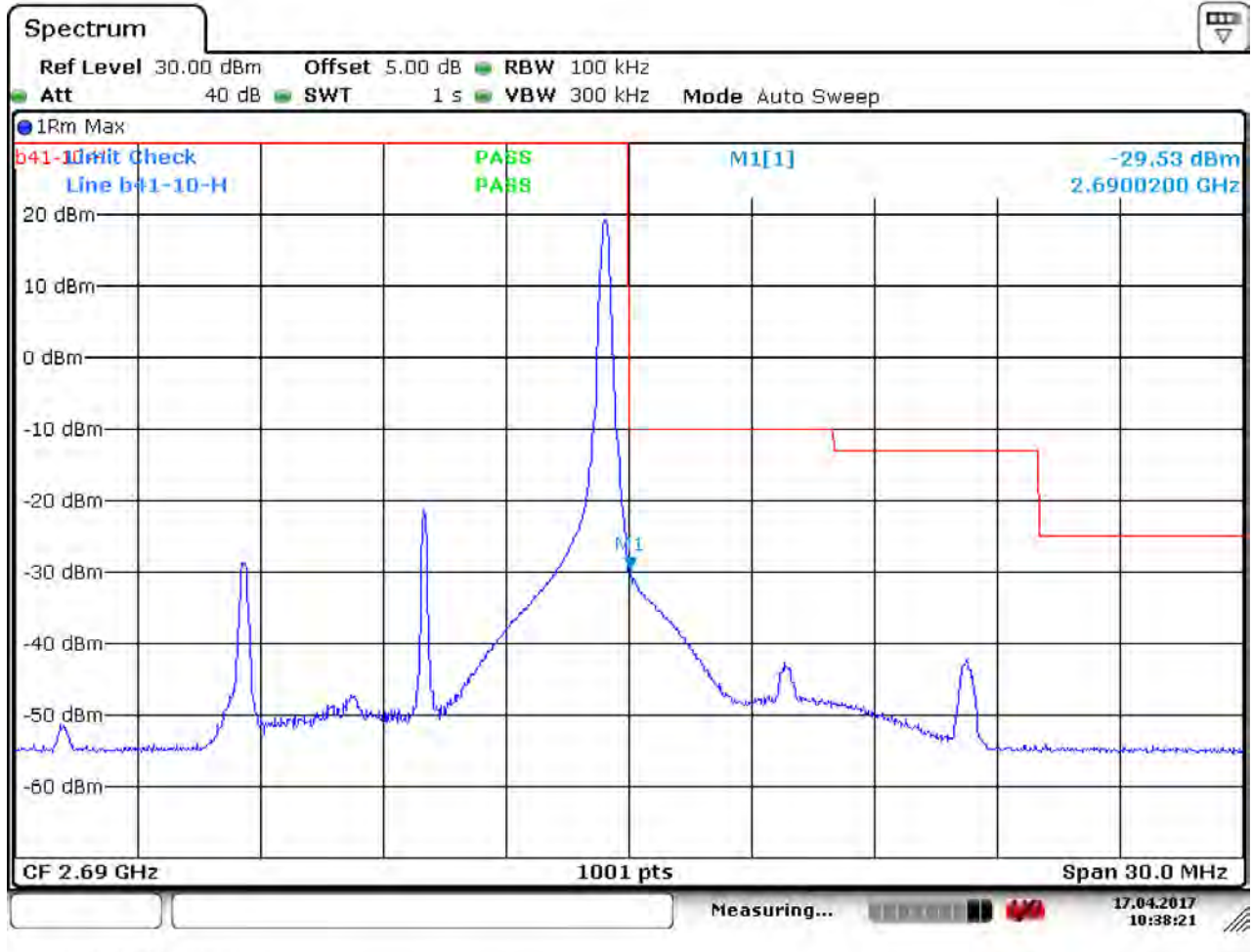


Date: 17. APR. 2017 10:43:11



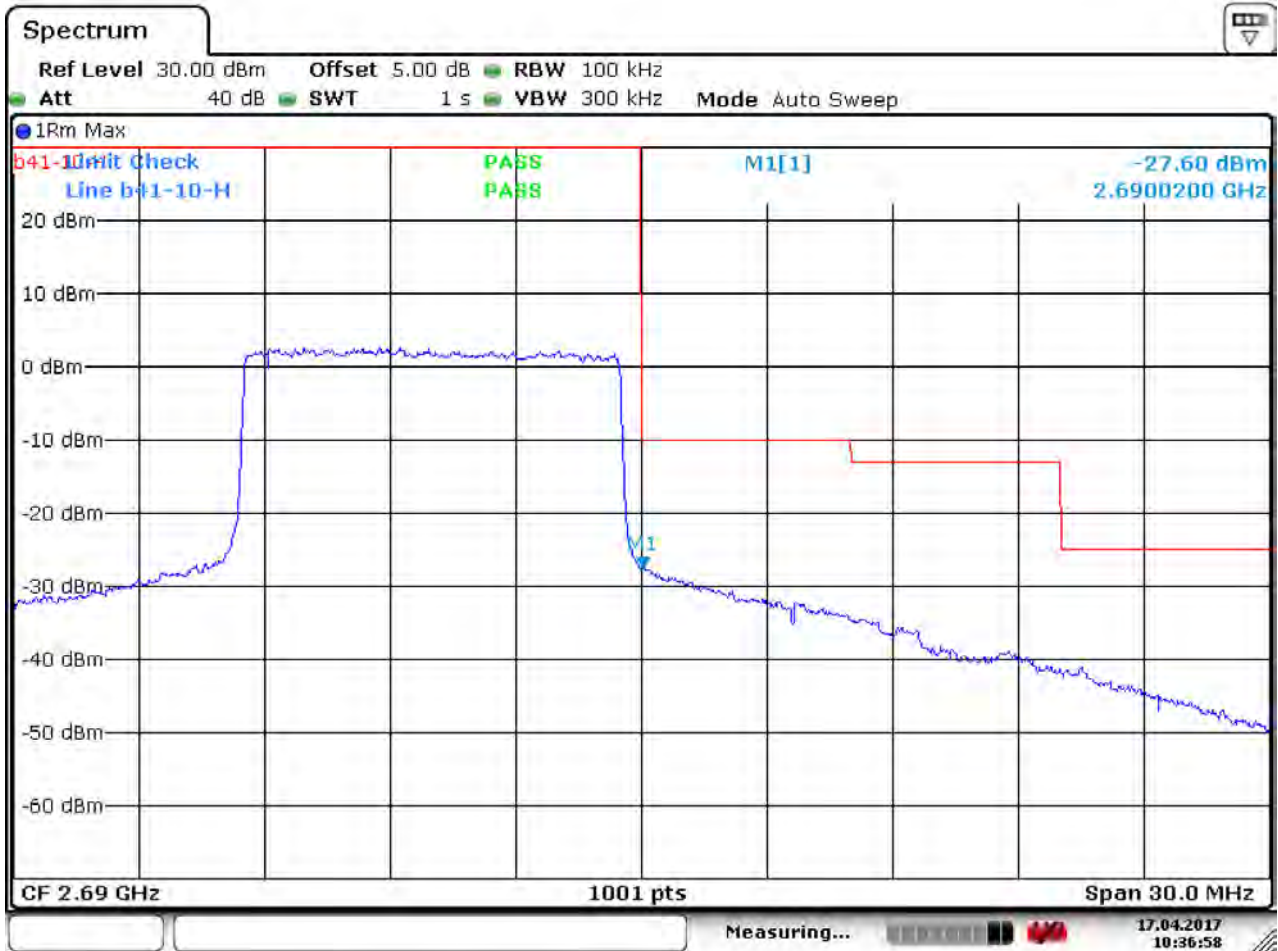
5.1.1.3.2 Test Channel = HCH

5.1.1.3.2.1 Test RB=1RB



Date: 17. APR 2017 10:38:22

5.1.1.3.2.2 Test RB=50RB



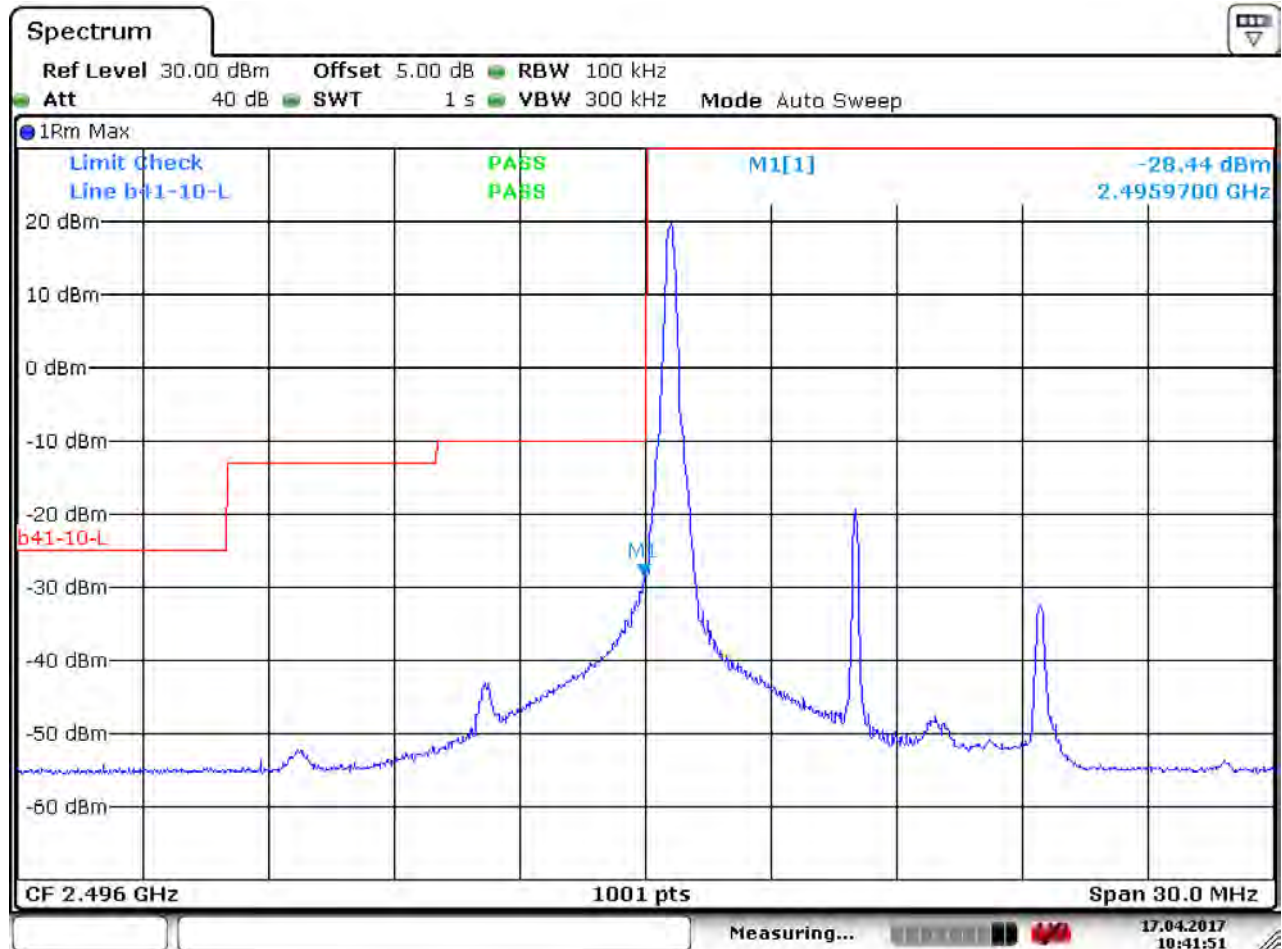
Date: 17.APR.2017 10:36:59



5.1.1.4 Test Mode = LTE/TM2 10MHz

5.1.1.4.1 Test Channel = LCH

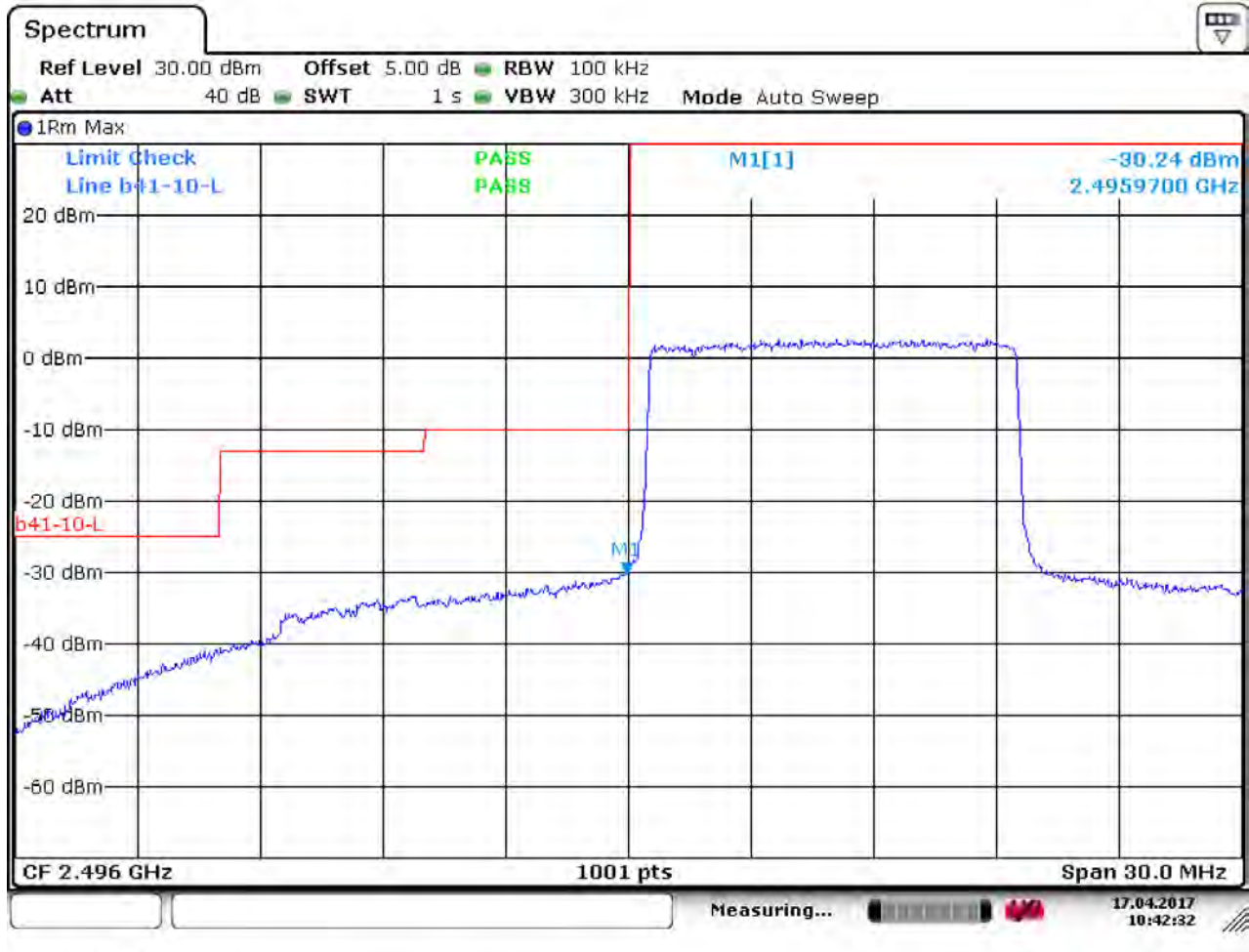
5.1.1.4.1.1 Test RB=1RB



Date: 17.APR.2017 10:41:52



5.1.1.4.1.2 Test RB=50RB

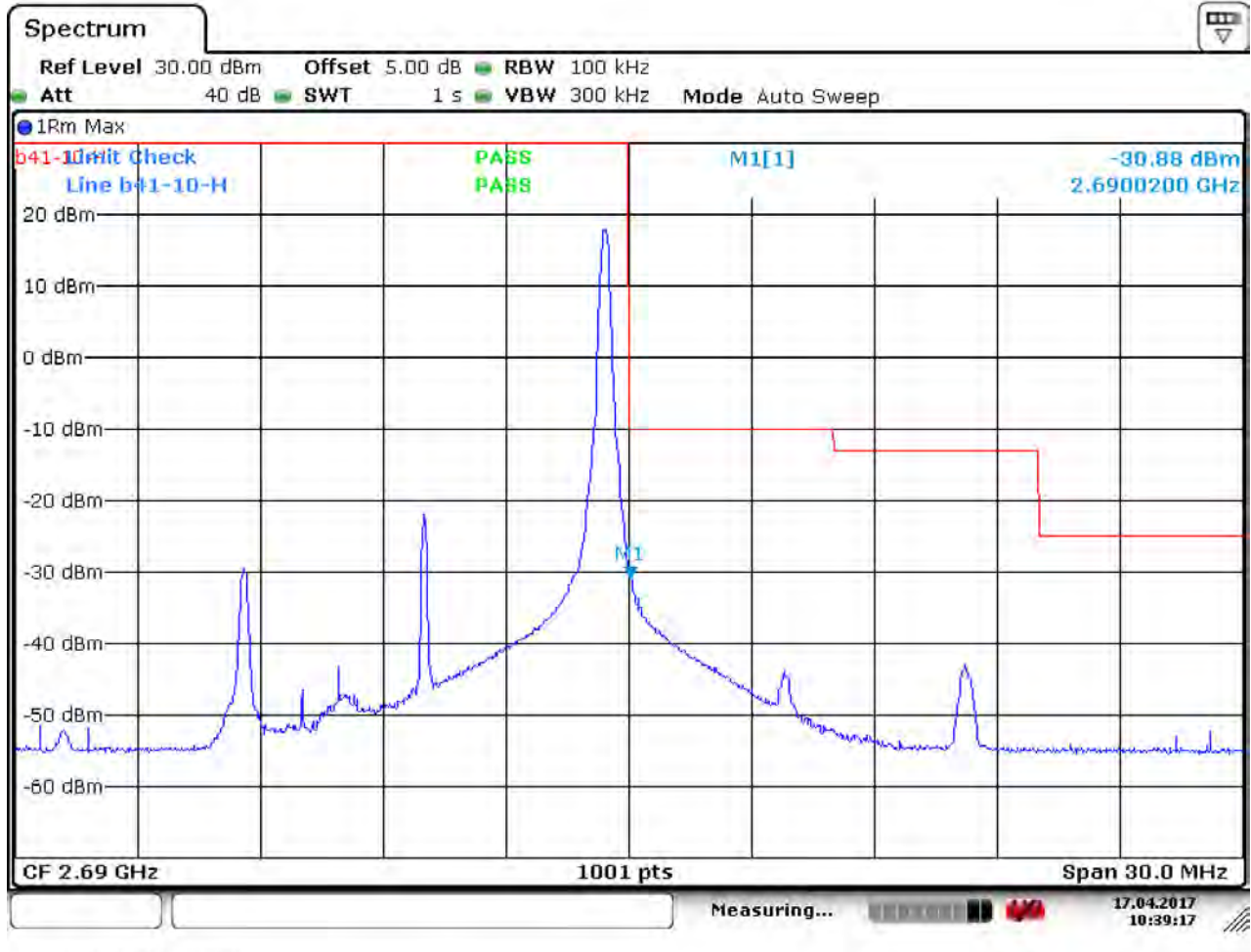


Date: 17. APR 2017 10:42:32



5.1.1.4.2 Test Channel = HCH

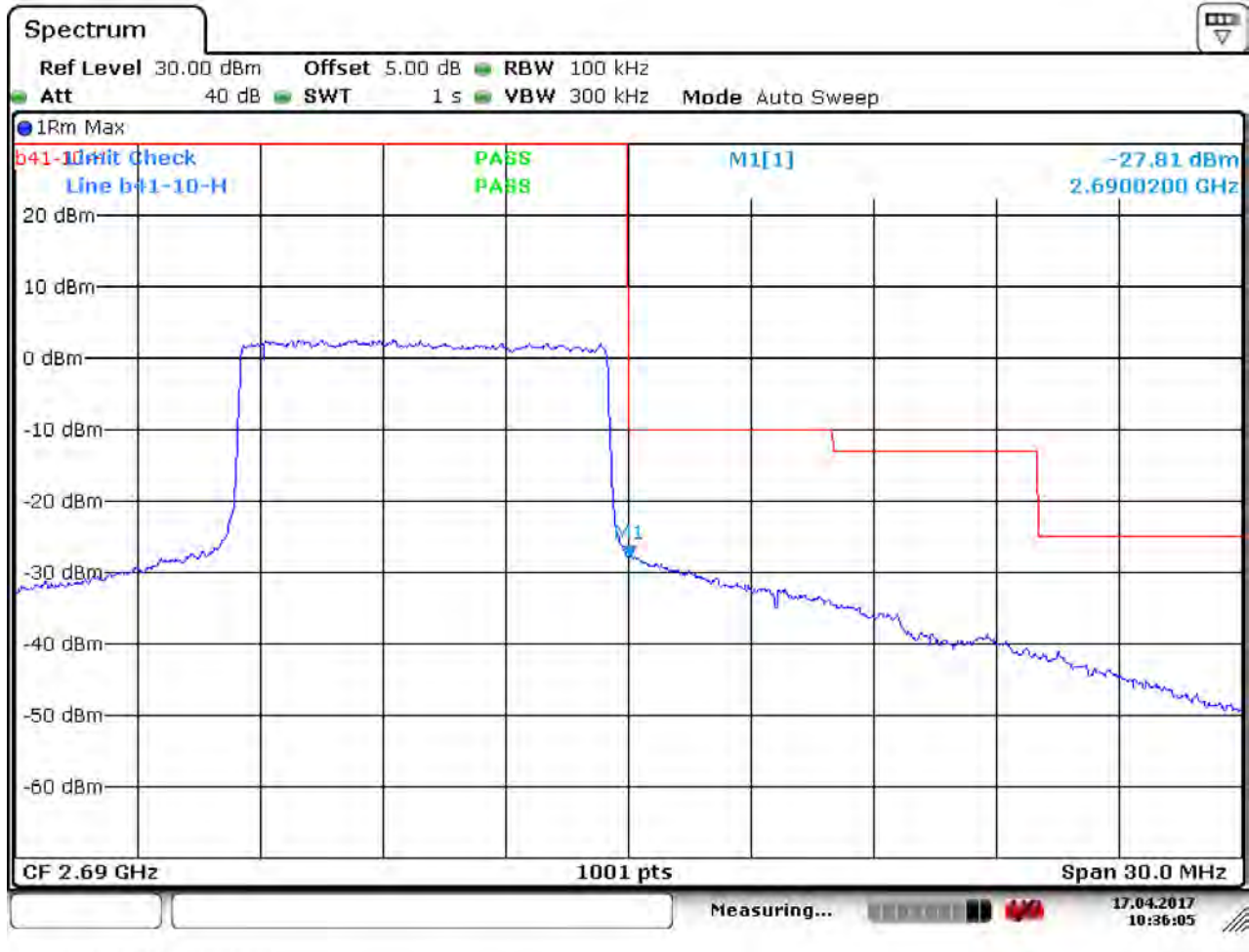
5.1.1.4.2.1 Test RB=1RB



Date: 17. APR 2017 10:39:18



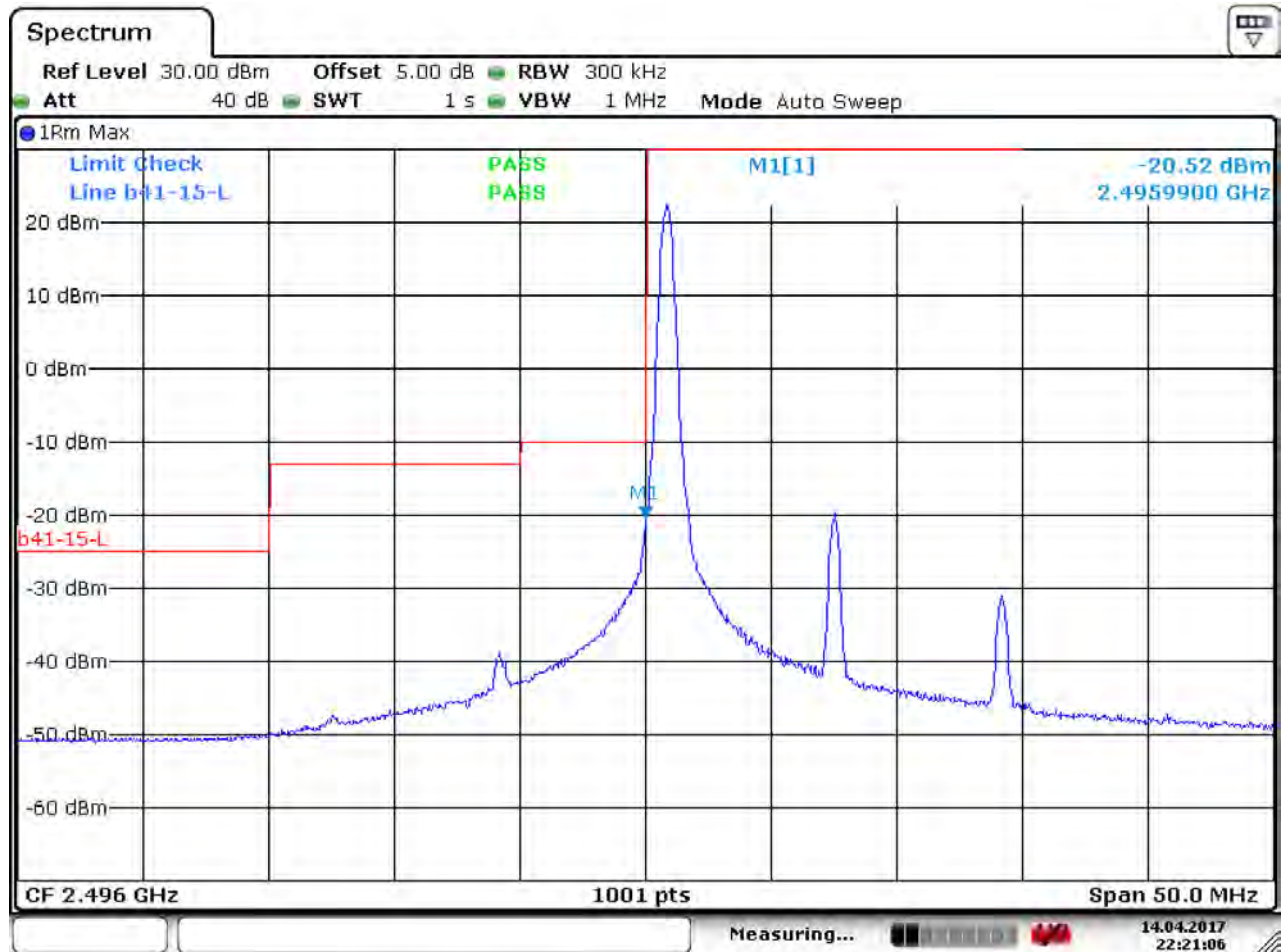
5.1.1.4.2.2 Test RB=50RB



Date: 17. APR 2017 10:36:06



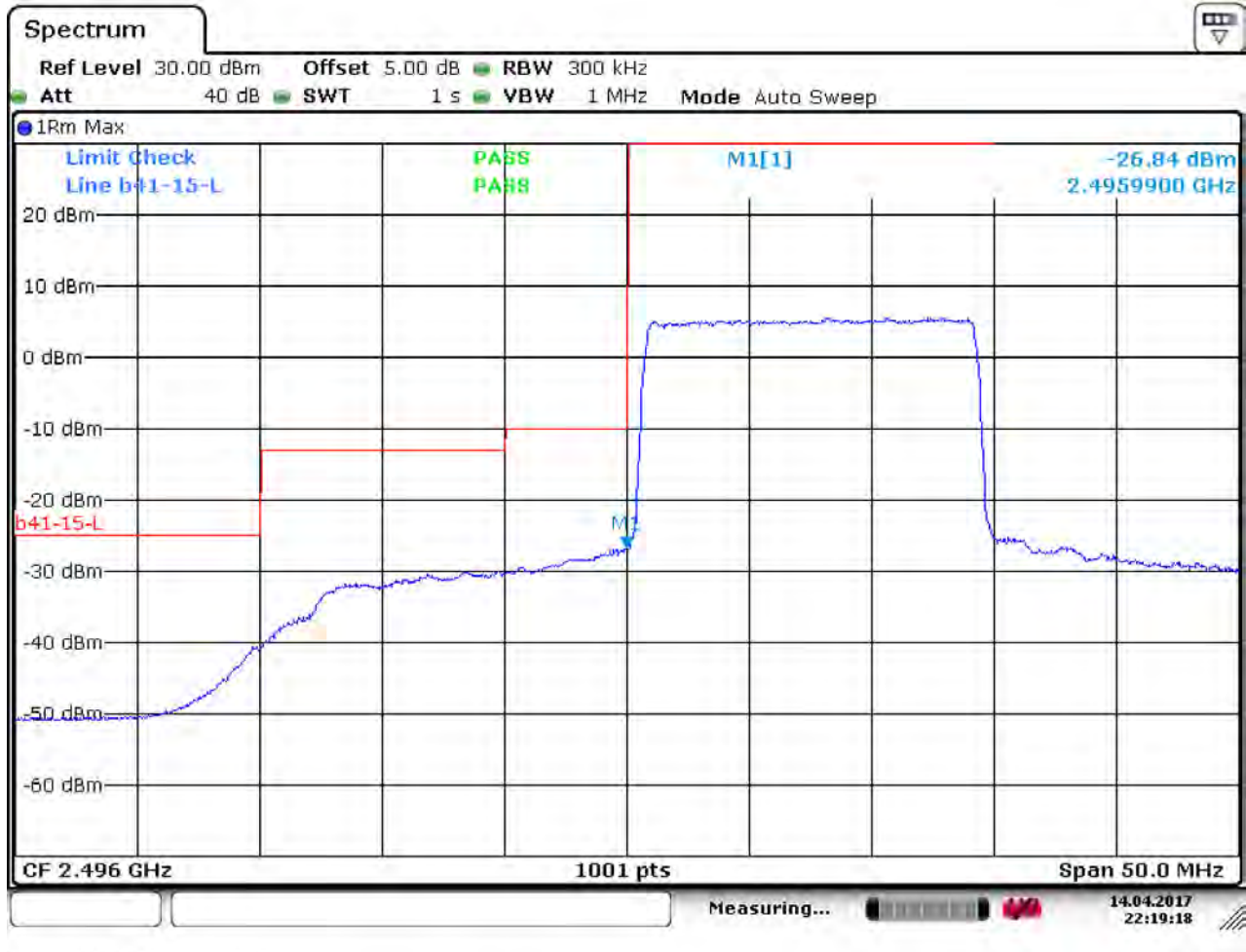
5.1.1.5 Test Mode = LTE/TM1 15MHz
5.1.1.5.1 Test Channel = LCH
5.1.1.5.1.1 Test RB=1RB



Date: 14.APR.2017 22:21:07



5.1.1.5.1.2 Test RB=75RB

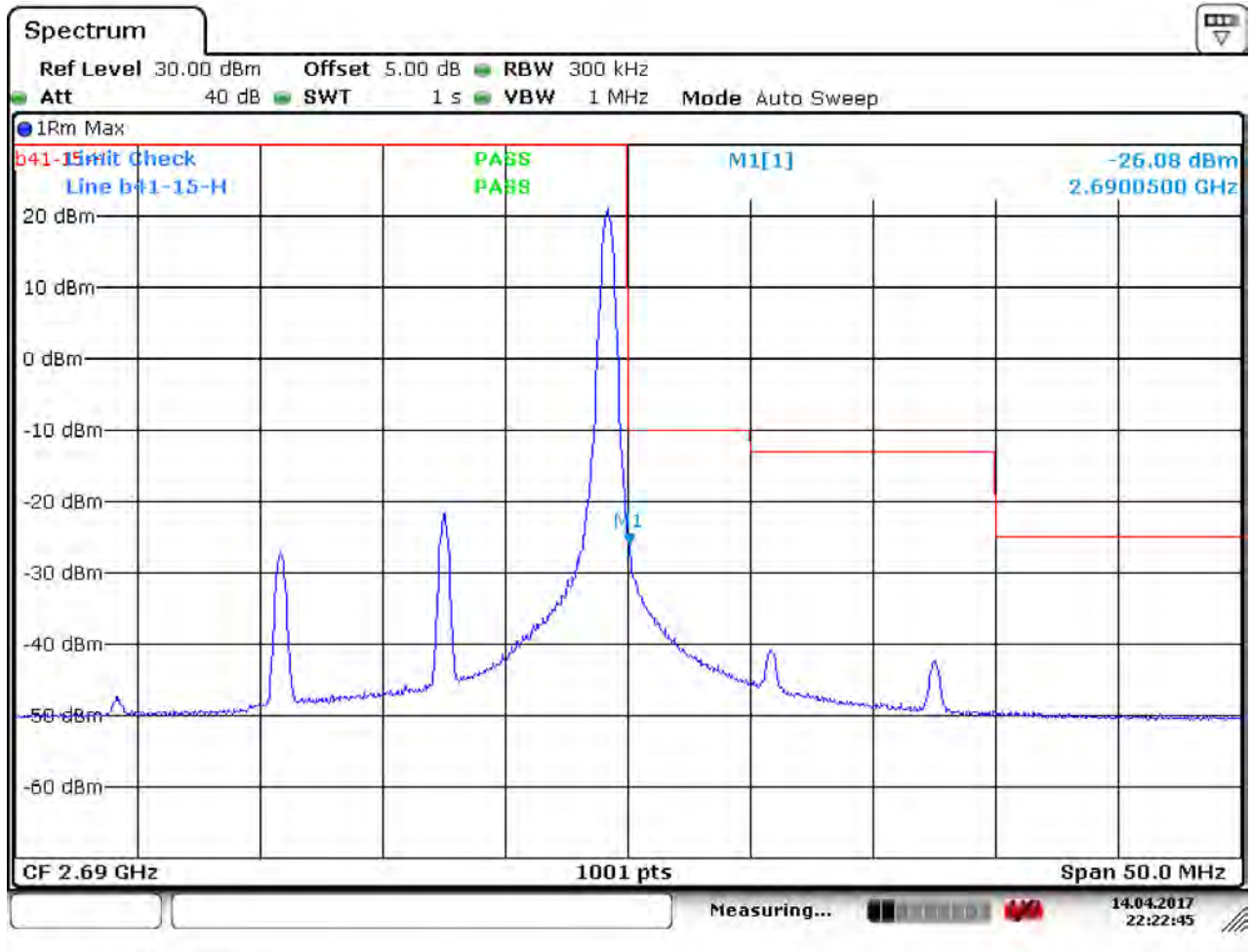


Date: 14. APR 2017 22:19:19



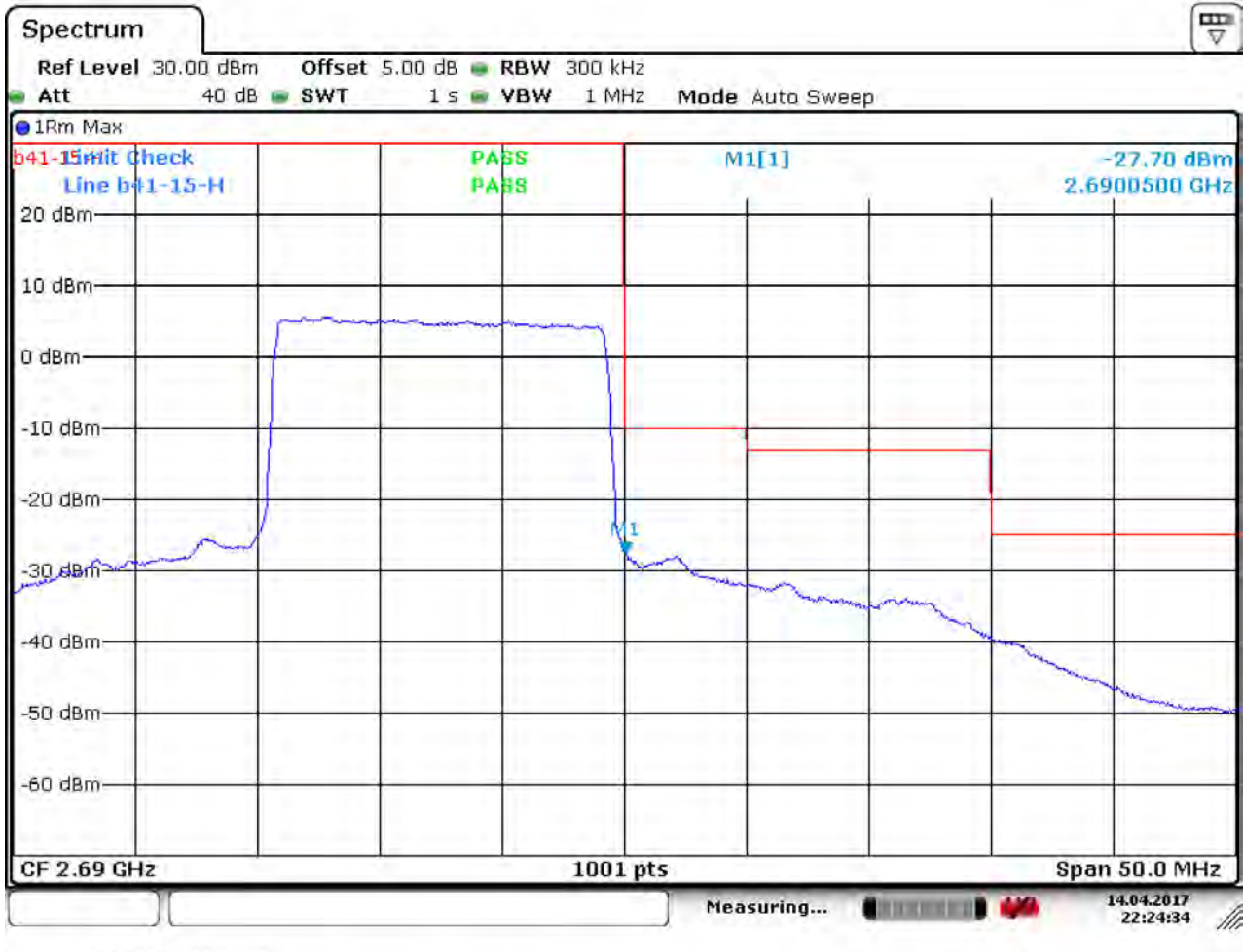
5.1.1.5.2 Test Channel = HCH

5.1.1.5.2.1 Test RB=1RB



Date: 14. APR 2017 22:22:45

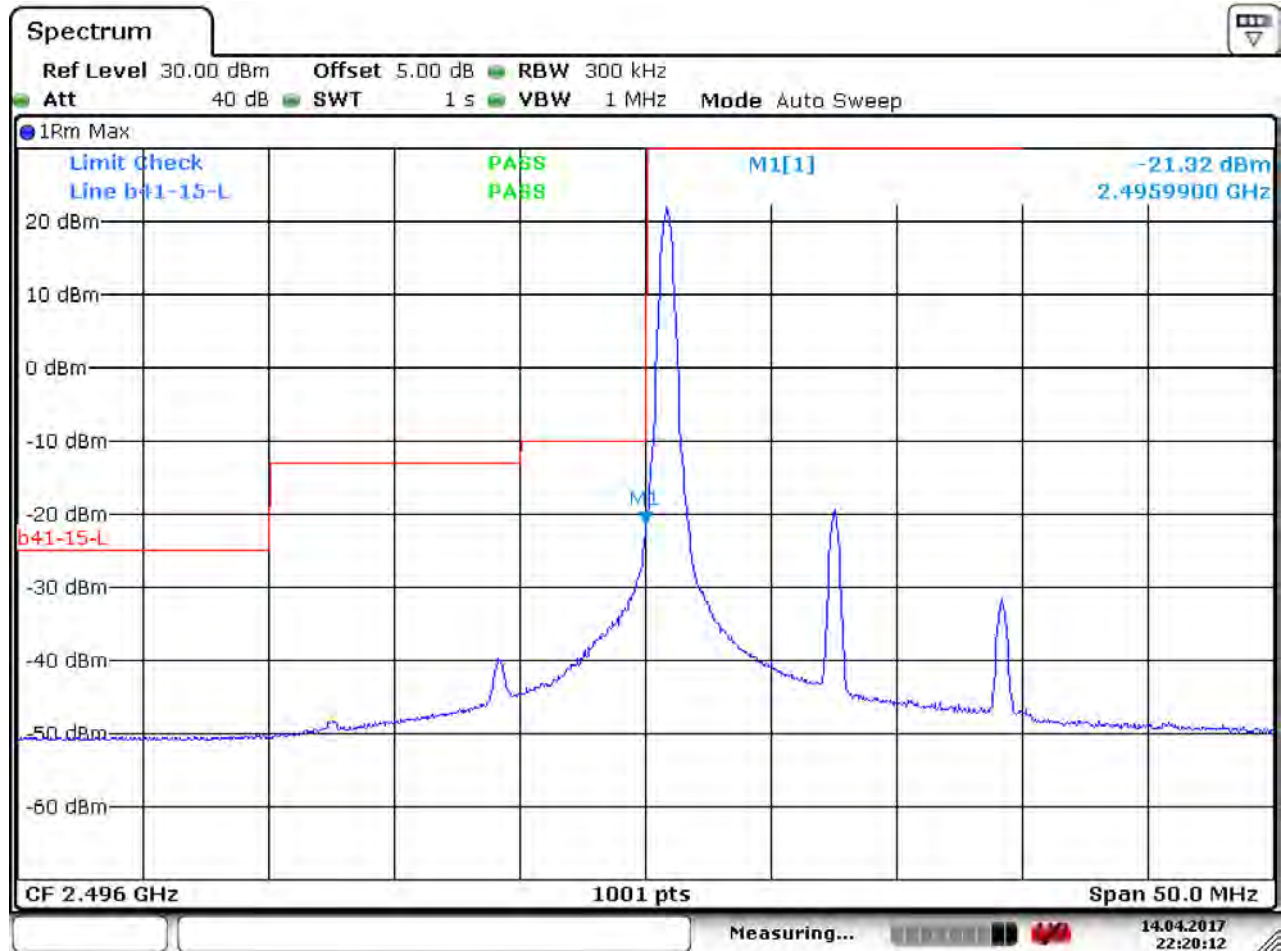
5.1.1.5.2.2 Test RB=75RB



Date: 14.APR.2017 22:24:35



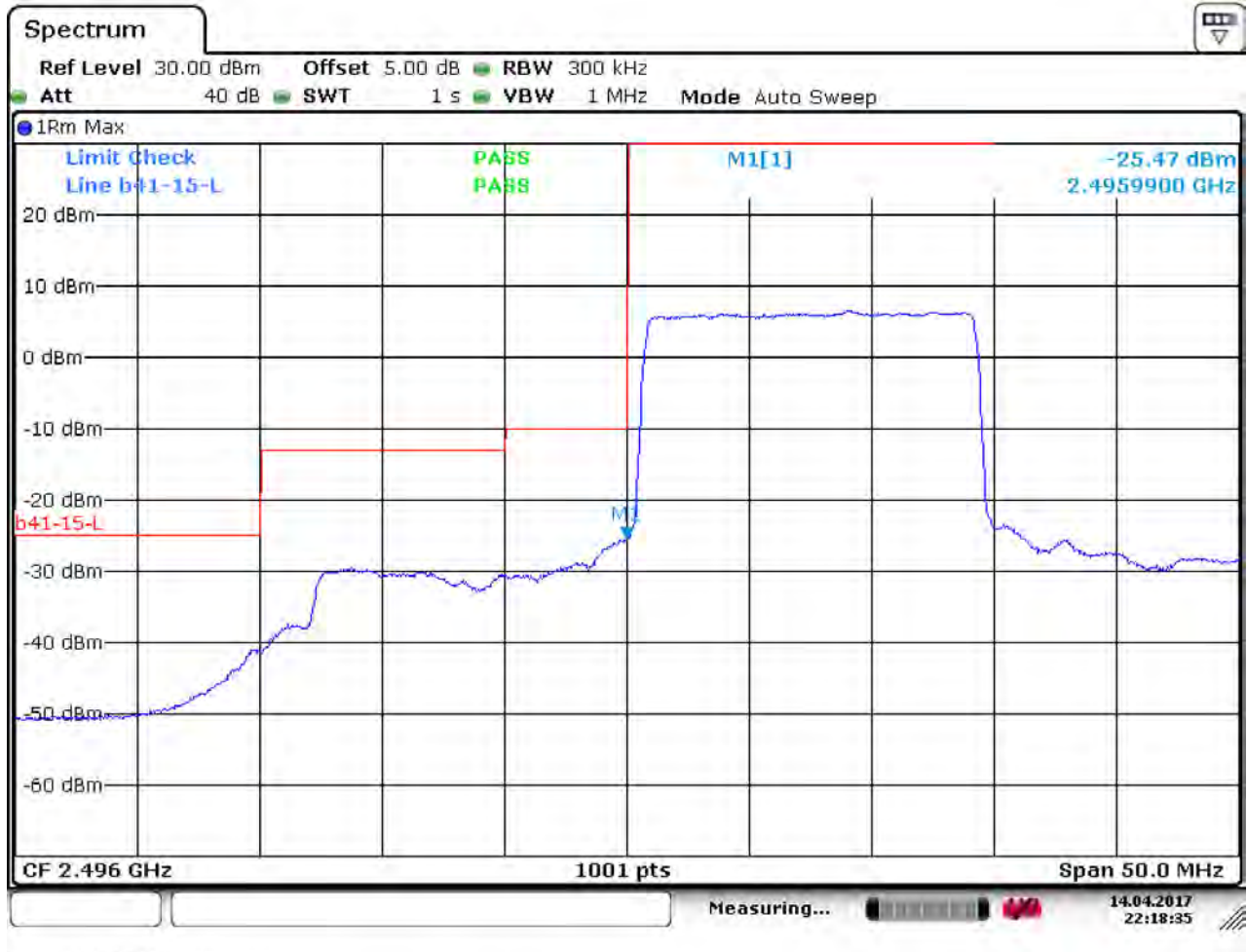
5.1.1.6 Test Mode = LTE/TM2 15MHz
5.1.1.6.1 Test Channel = LCH
5.1.1.6.1.1 Test RB=1RB



Date: 14.APR.2017 22:20:12



5.1.1.6.1.2 Test RB=75RB

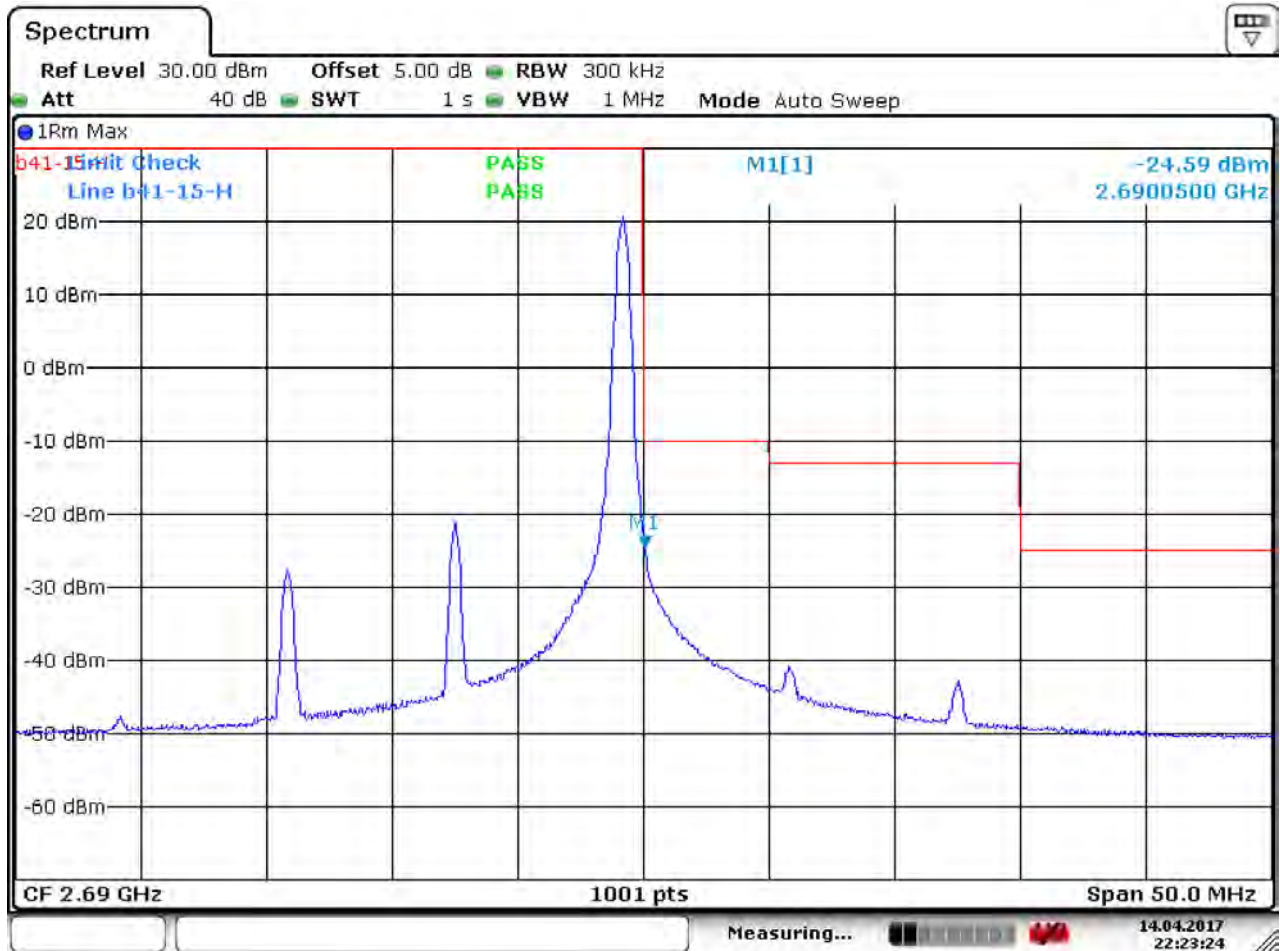


Date: 14. APR 2017 22:18:36



5.1.1.6.2 Test Channel = HCH

5.1.1.6.2.1 Test RB=1RB



Date: 14. APR 2017 22:23:25



5.1.1.6.2.2 Test RB=75RB



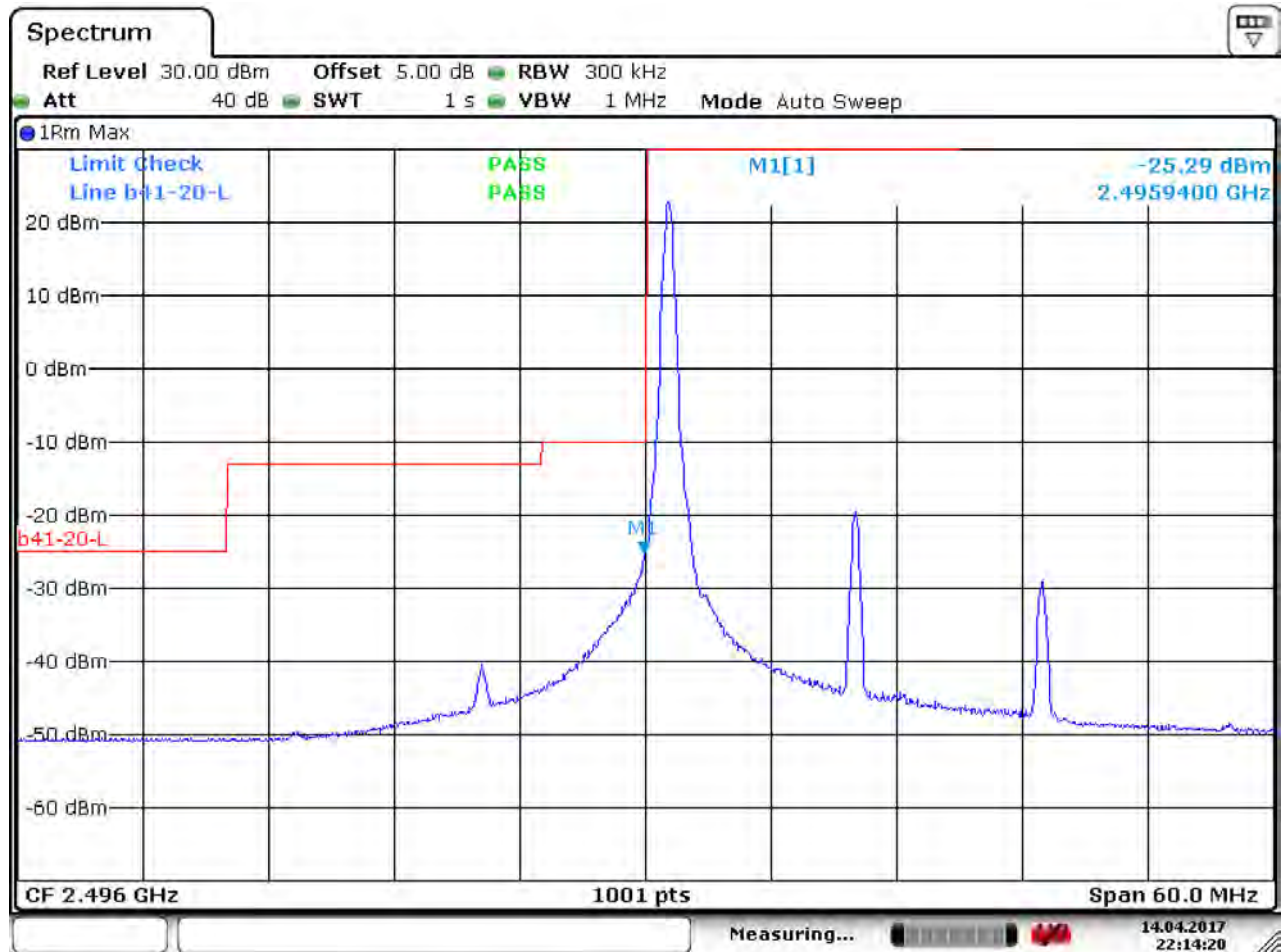
Date: 14. APR 2017 22:23:56



5.1.1.7 Test Mode = LTE/TM1 20MHz

5.1.1.7.1 Test Channel = LCH

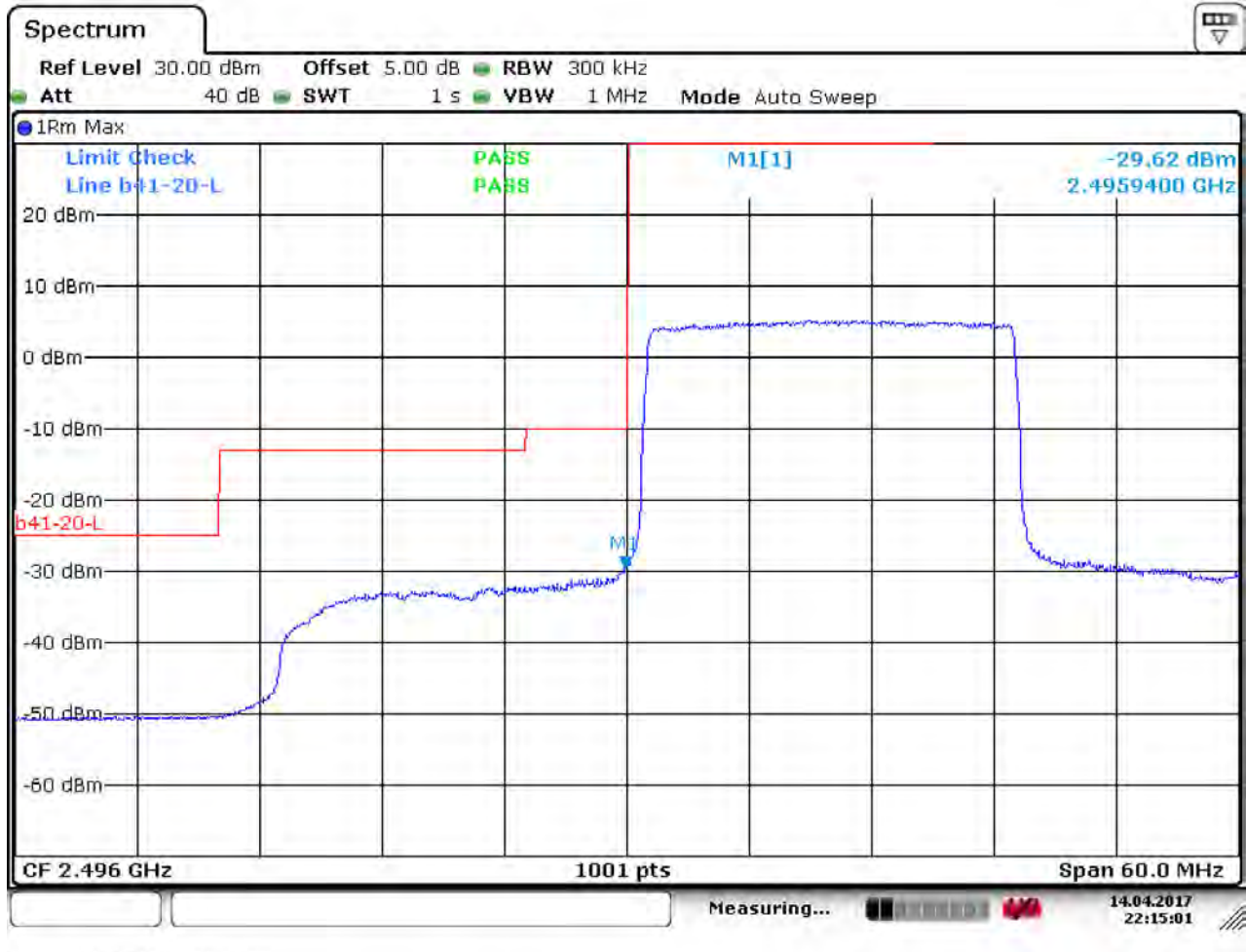
5.1.1.7.1.1 Test RB=1RB



Date: 14.APR.2017 22:14:20



5.1.1.7.1.2 Test RB=100RB

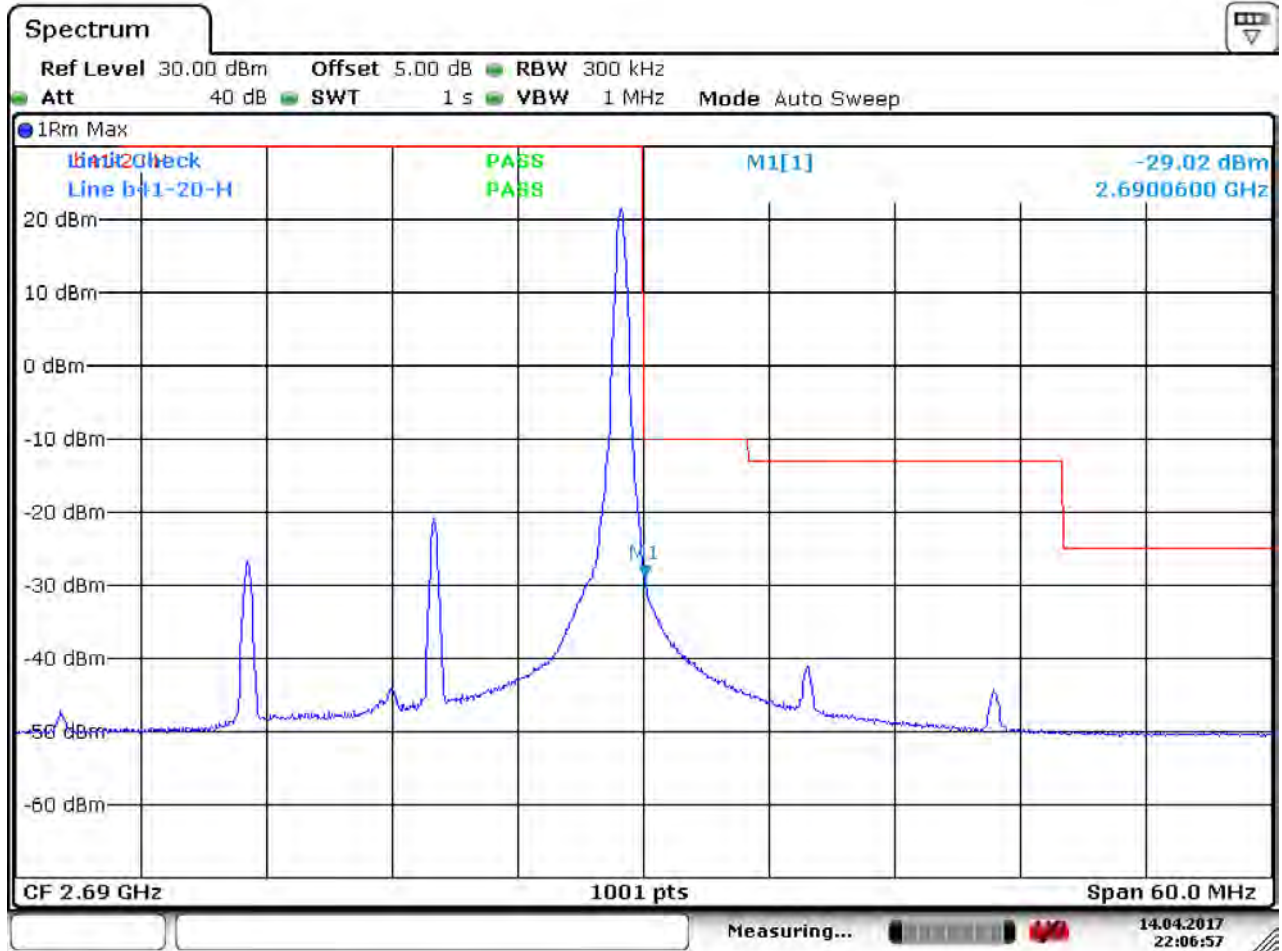


Date: 14. APR 2017 22:15:02



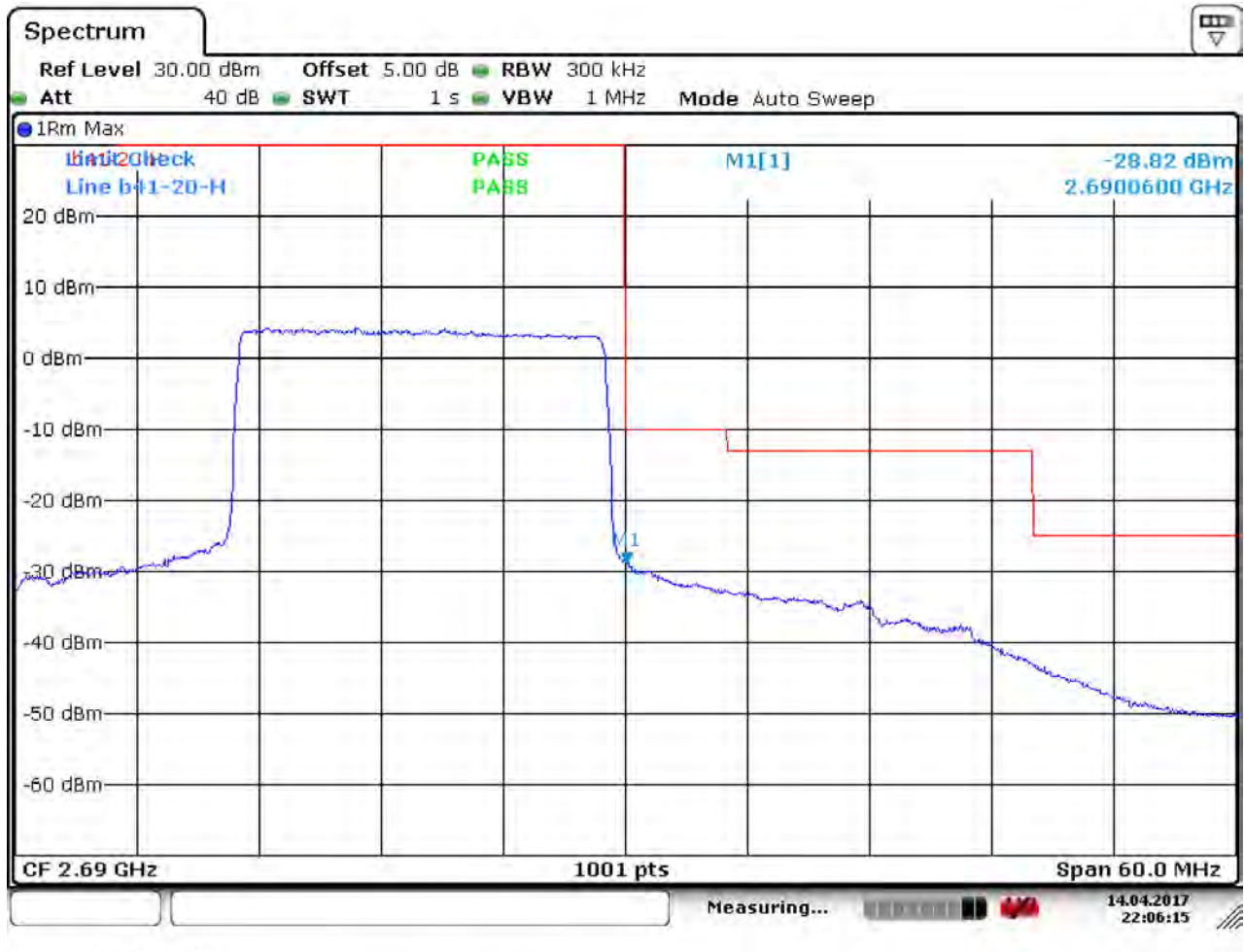
5.1.1.7.2 Test Channel = HCH

5.1.1.7.2.1 Test RB=1RB



Date: 14. APR 2017 22:06:57

5.1.1.7.2.2 Test RB=100RB



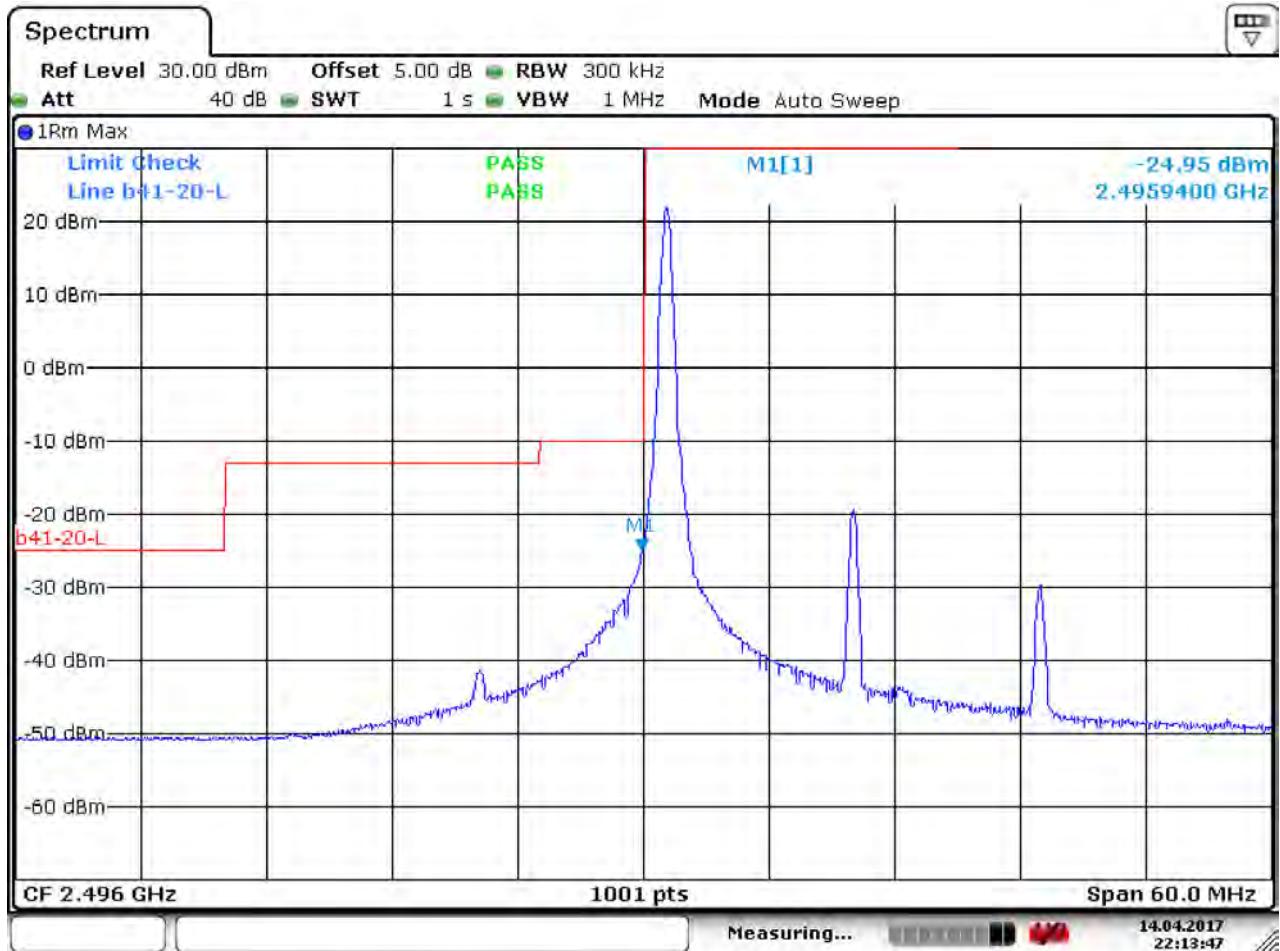
Date: 14.APR.2017 22:06:16



5.1.1.8 Test Mode = LTE/TM2 20MHz

5.1.1.8.1 Test Channel = LCH

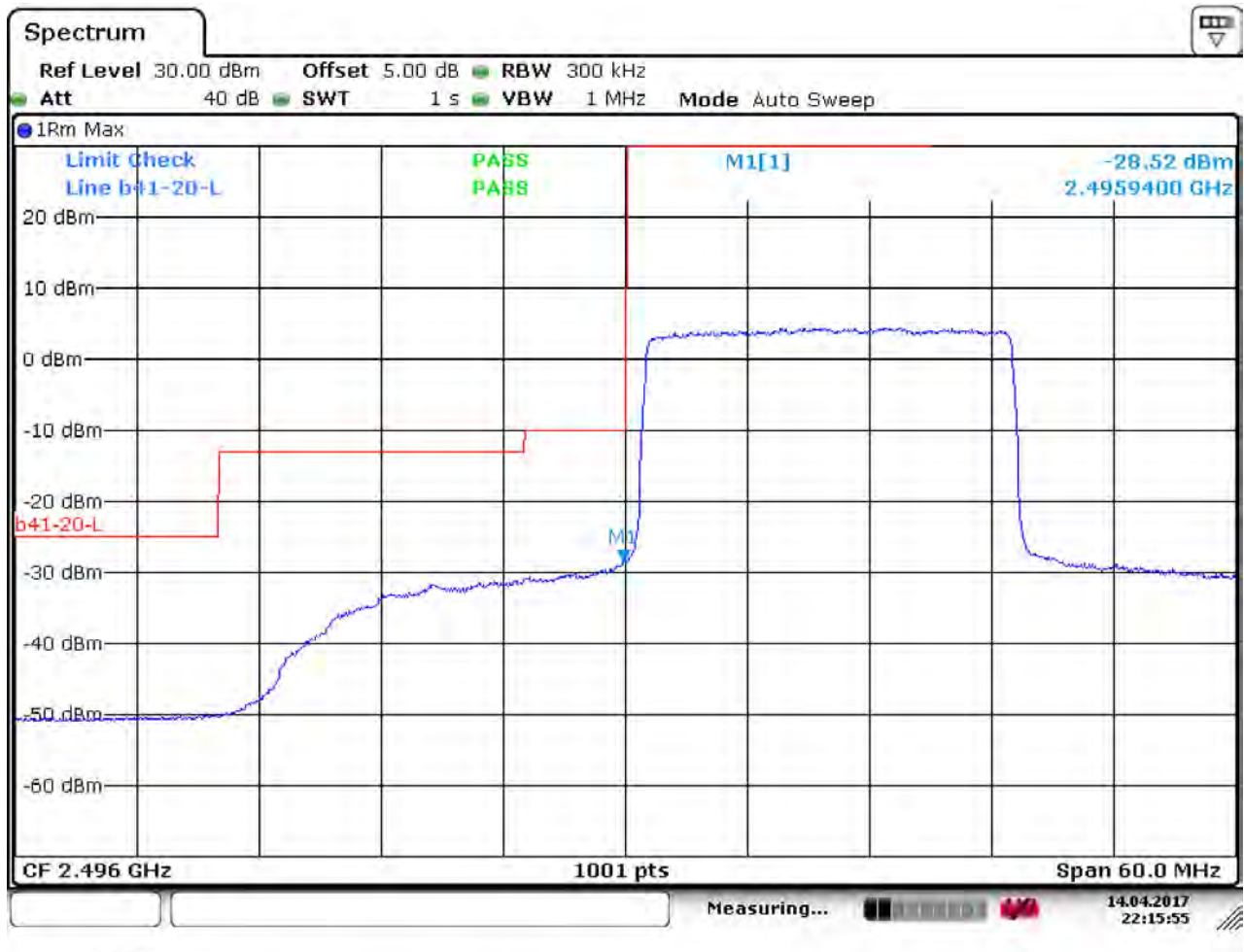
5.1.1.8.1.1 Test RB=1RB



Date: 14.APR.2017 22:13:47



5.1.1.8.1.2 Test RB=100RB

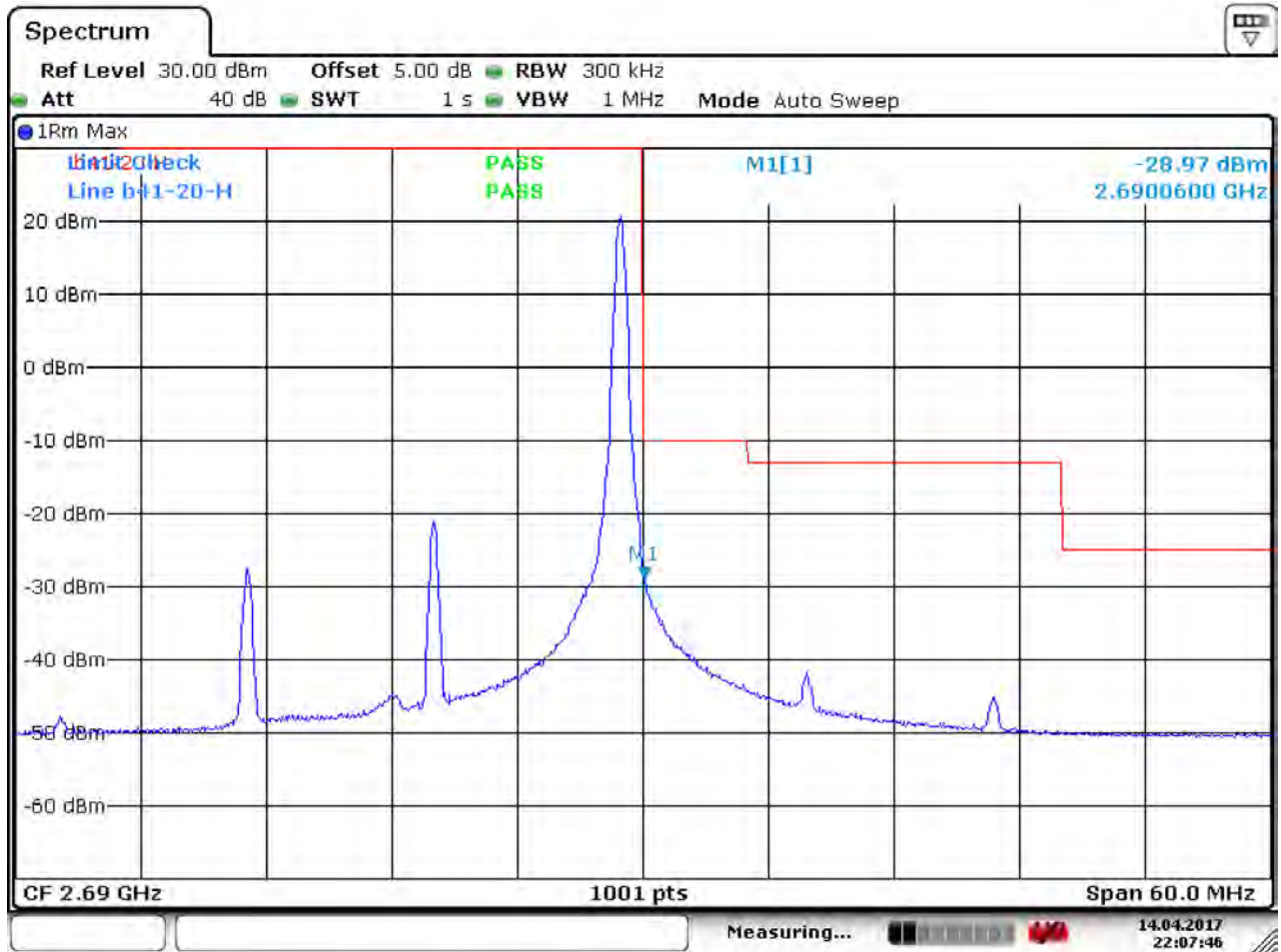


Date: 14. APR 2017 22:15:55



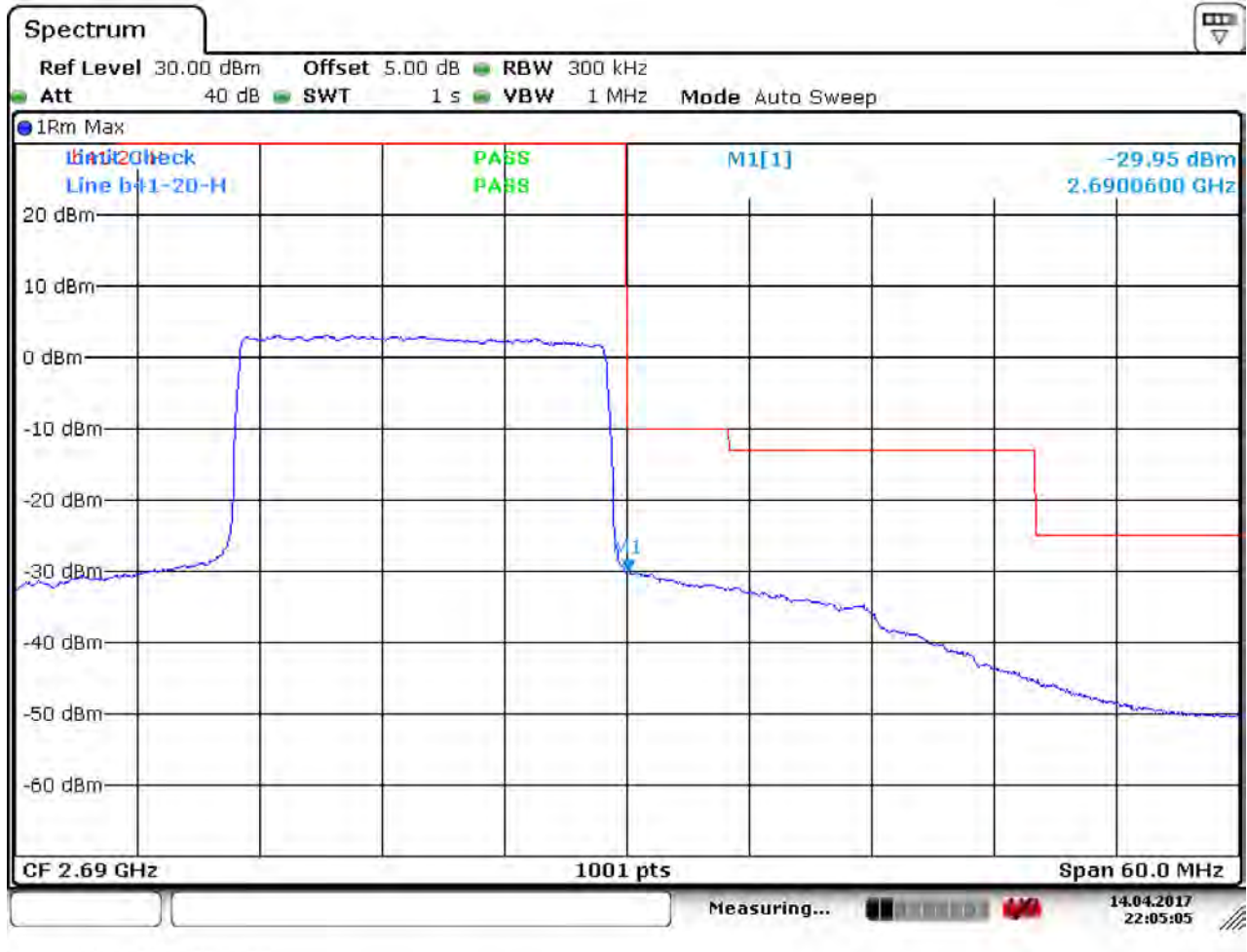
5.1.1.8.2 Test Channel = HCH

5.1.1.8.2.1 Test RB=1RB



Date: 14.APR.2017 22:07:47

5.1.1.8.2.2 Test RB=100RB



Date: 14. APR 2017 22:05:06

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.

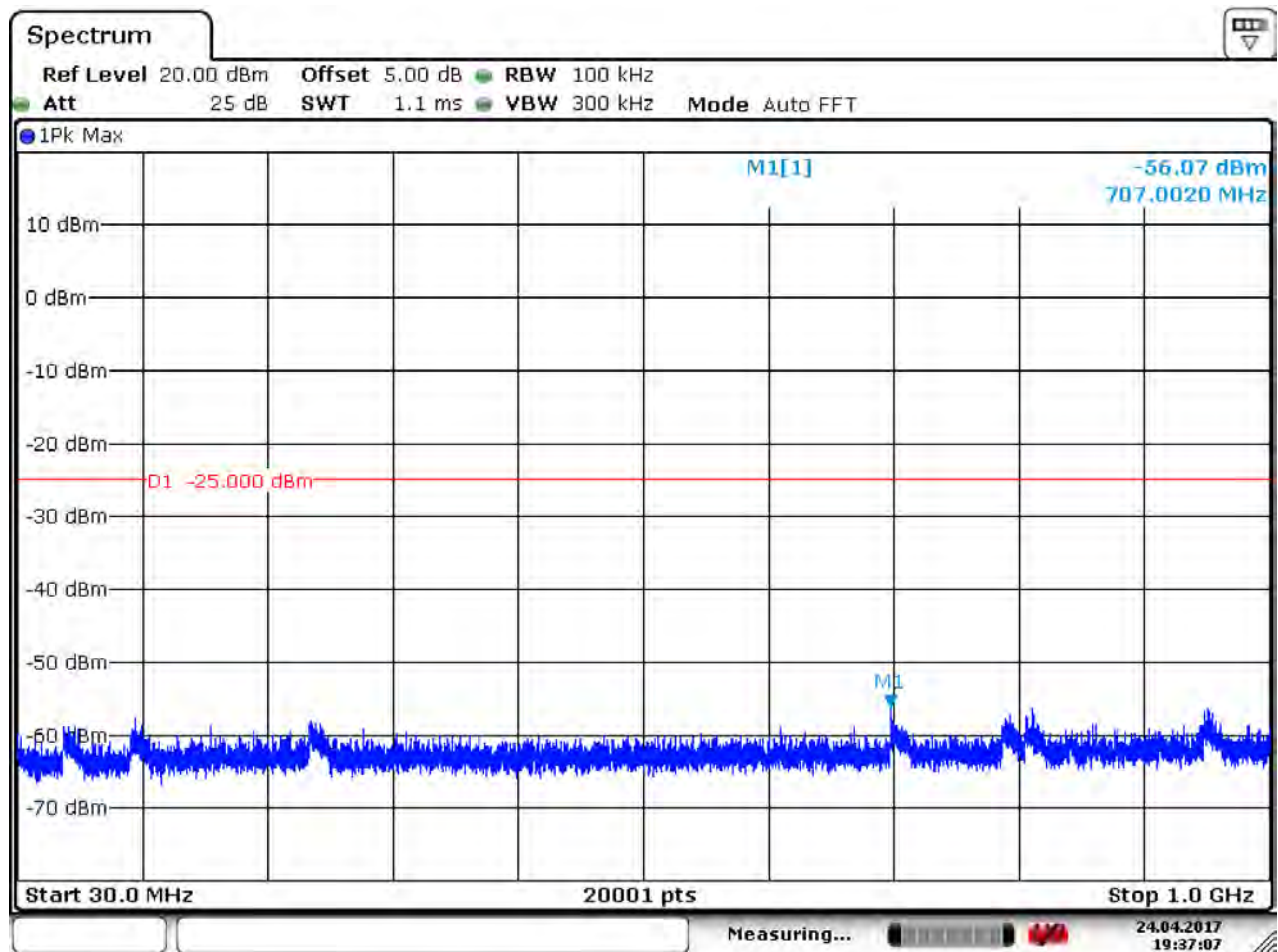
Part I - Test Plots

6.1 For LTE

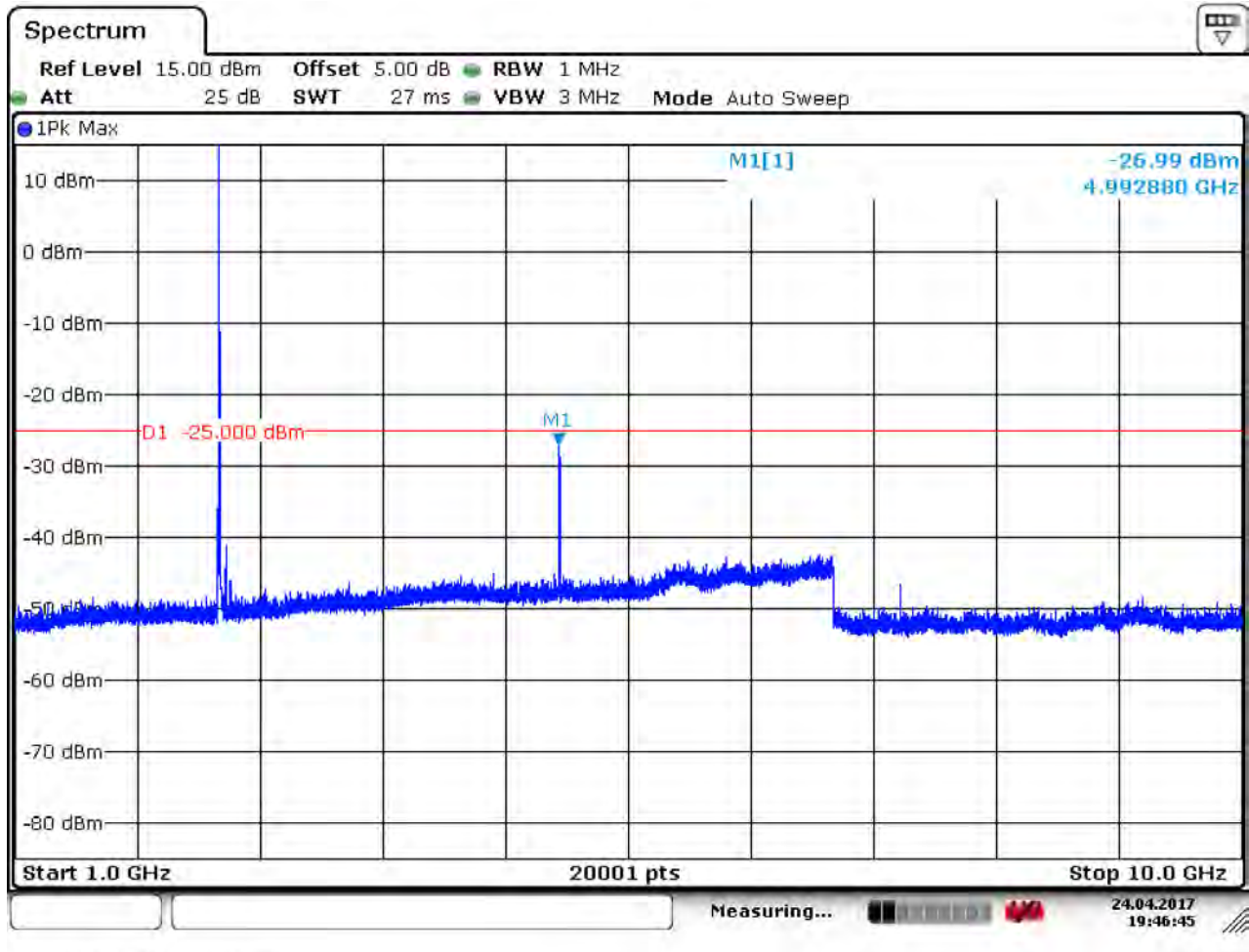
6.1.1 Test Band = LTE band41

6.1.1.1 Test Mode = LTE / TM1 5MHz RB1#0

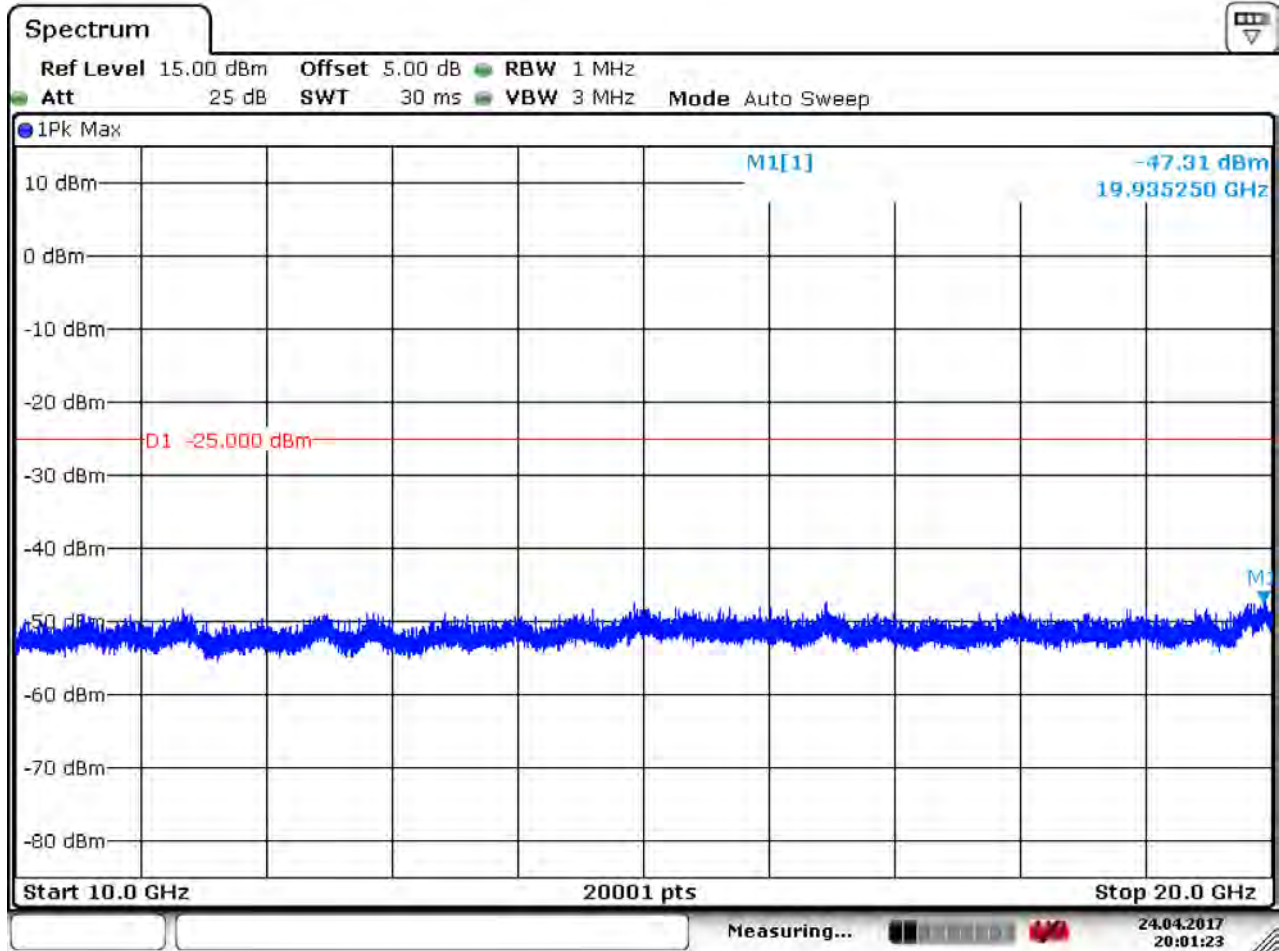
6.1.1.1.1 Test Channel = LCH



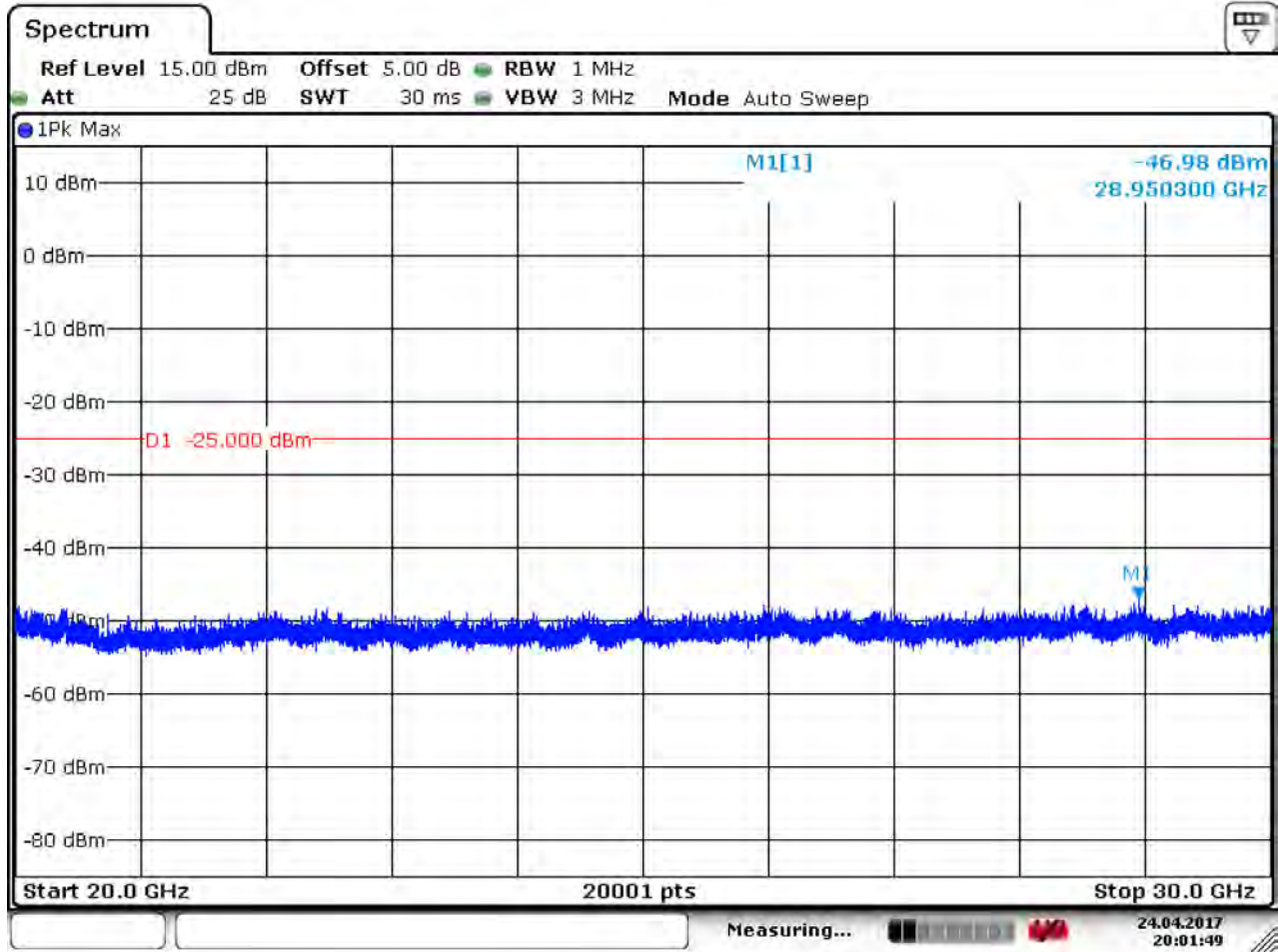
Date: 24. APR. 2017 19:37:07



Date: 24.APR.2017 19:46:45



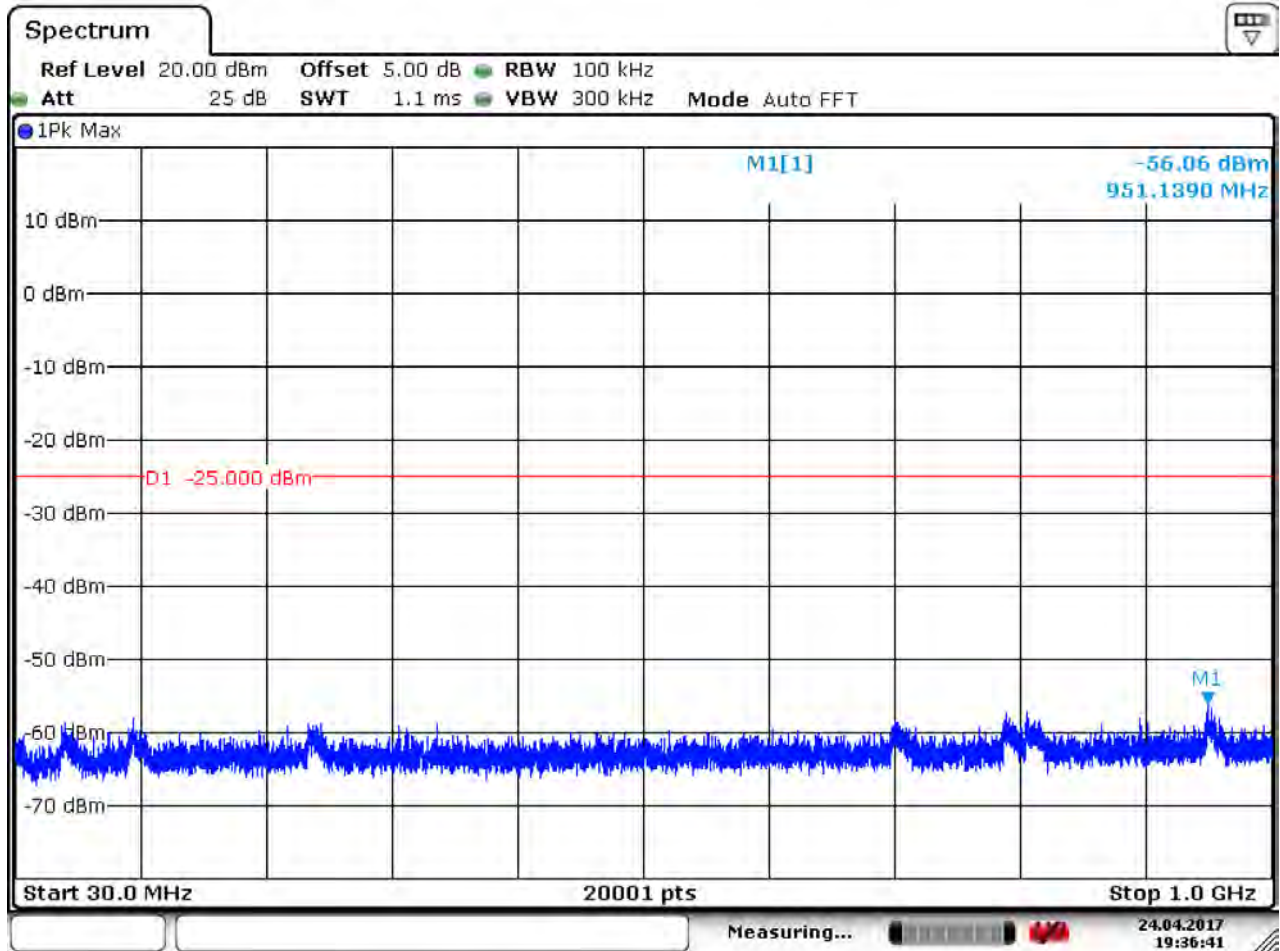
Date: 24.APR.2017 20:01:23



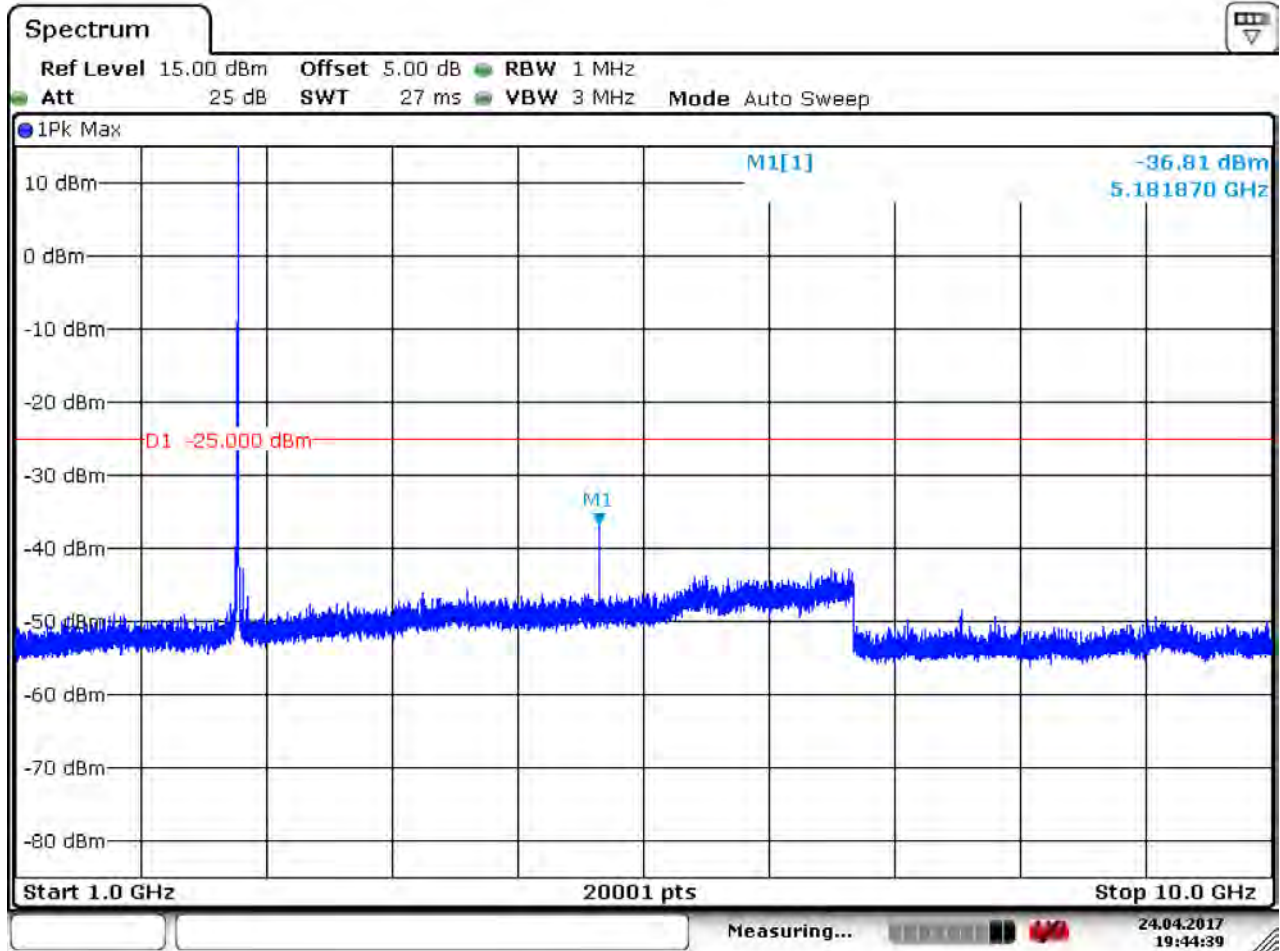
Date: 24.APR.2017 20:01:50



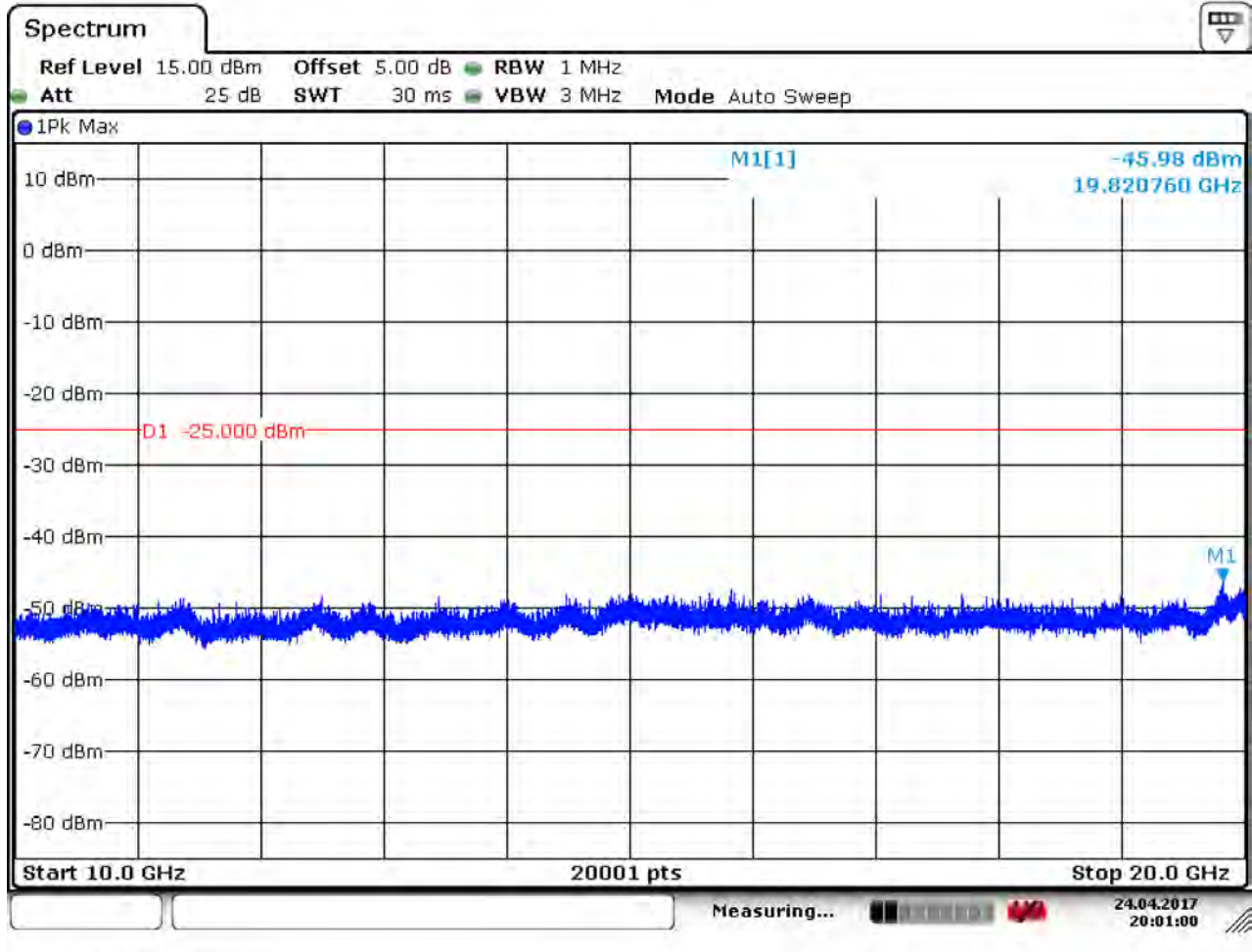
6.1.1.1.2 Test Channel = MCH



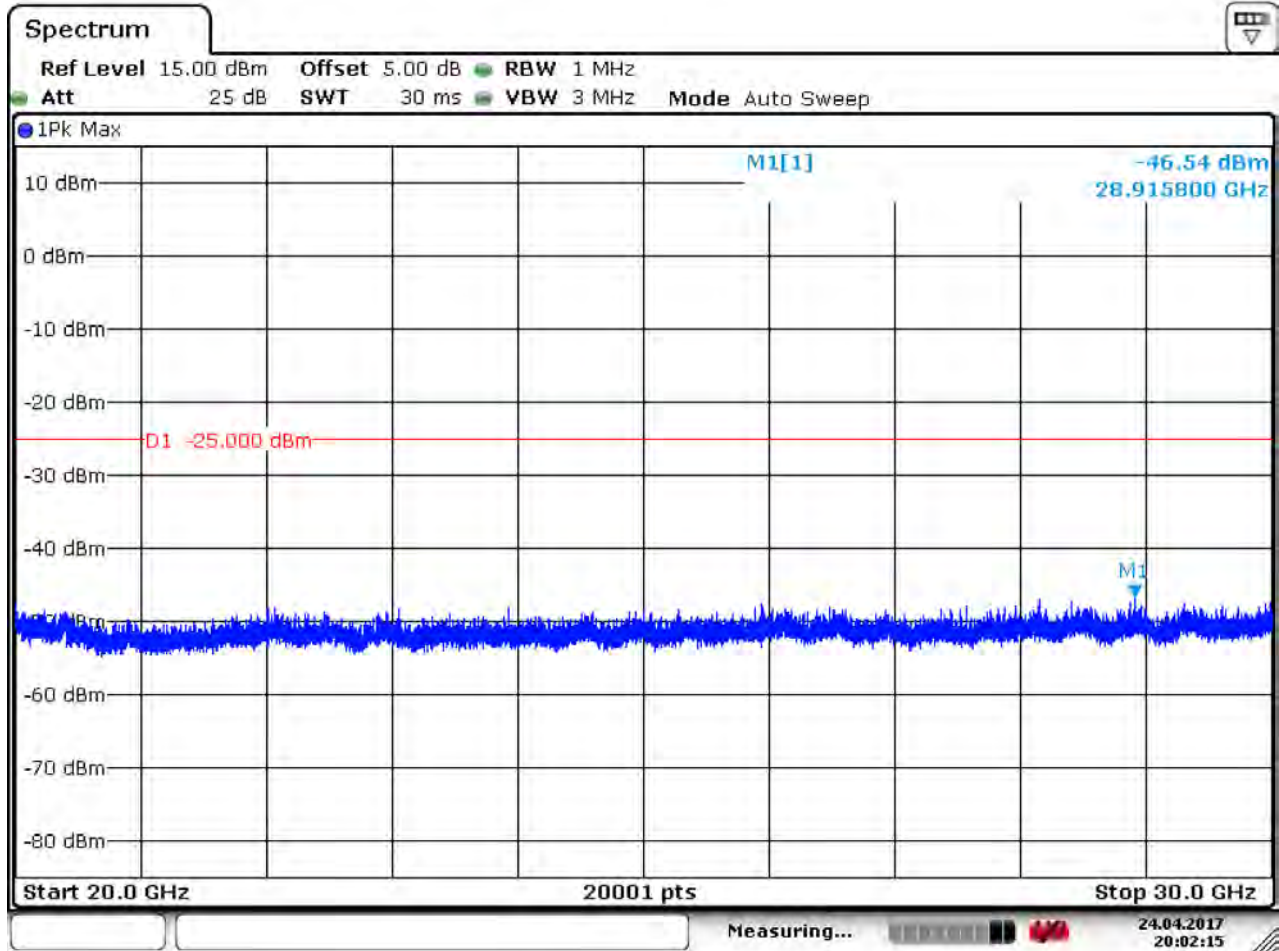
Date: 24. APR 2017 19:36:42



Date: 24.APR.2017 19:44:39



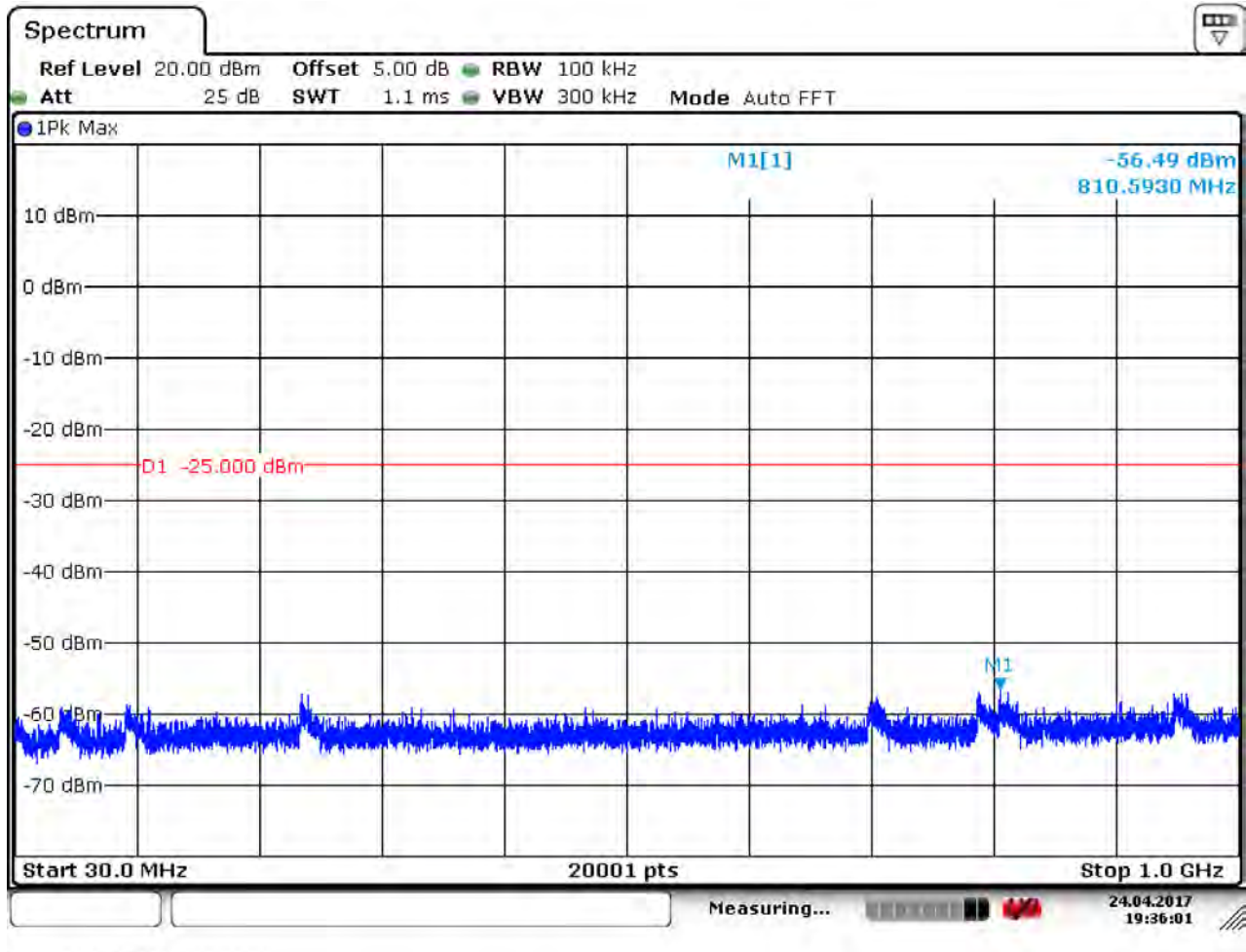
Date: 24.APR.2017 20:01:00



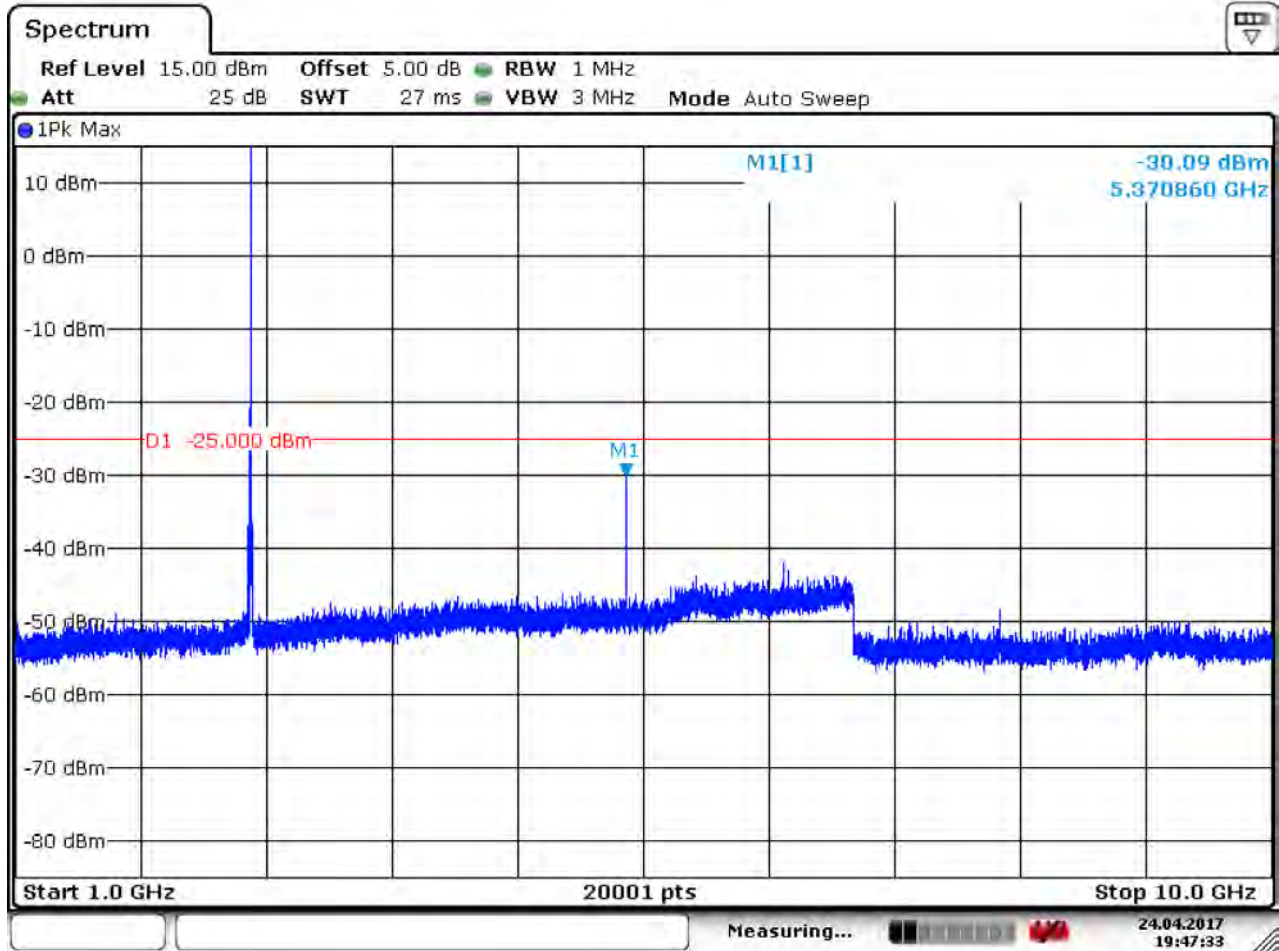
Date: 24.APR.2017 20:02:14



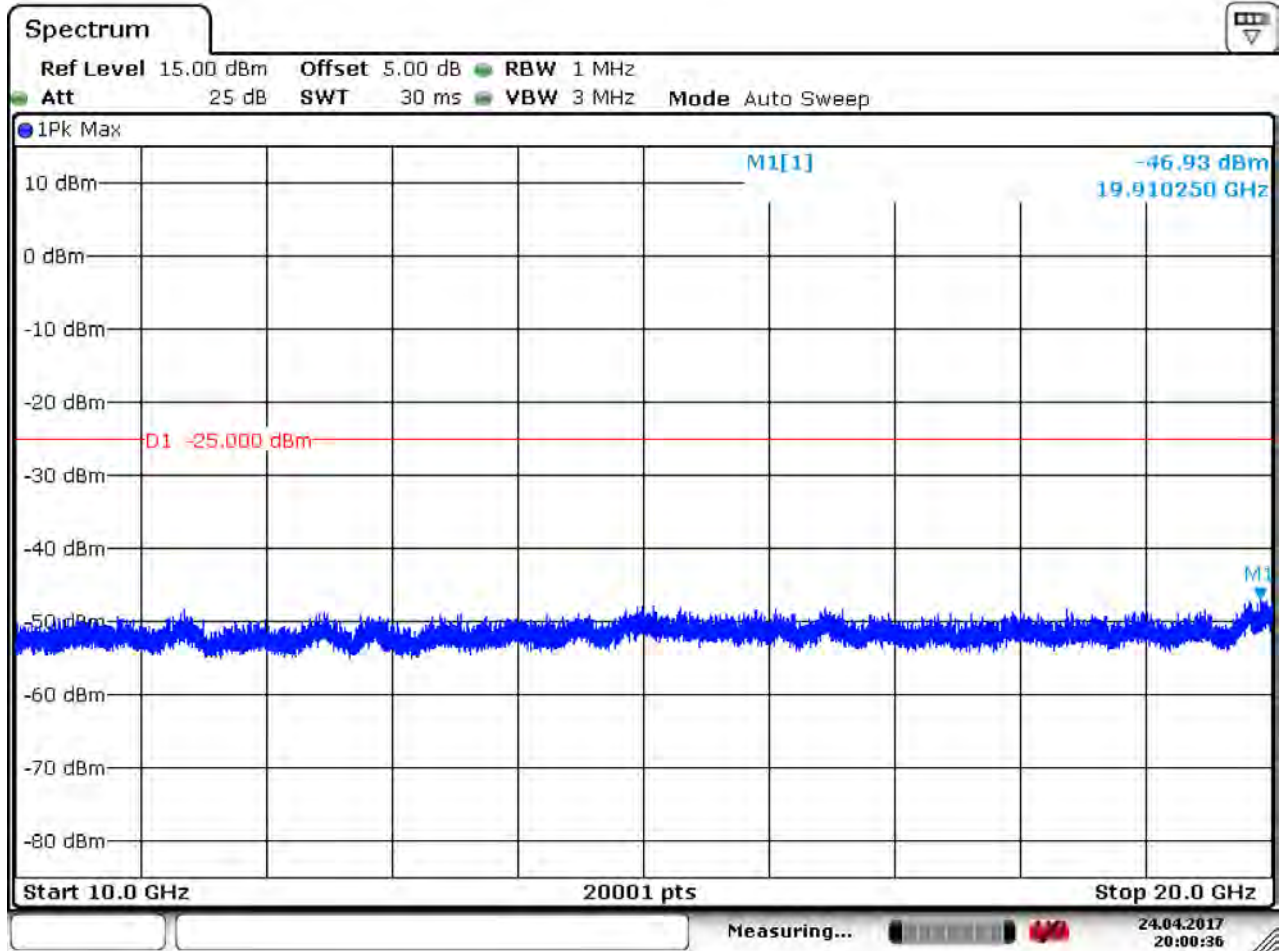
6.1.1.1.3 Test Channel = HCH



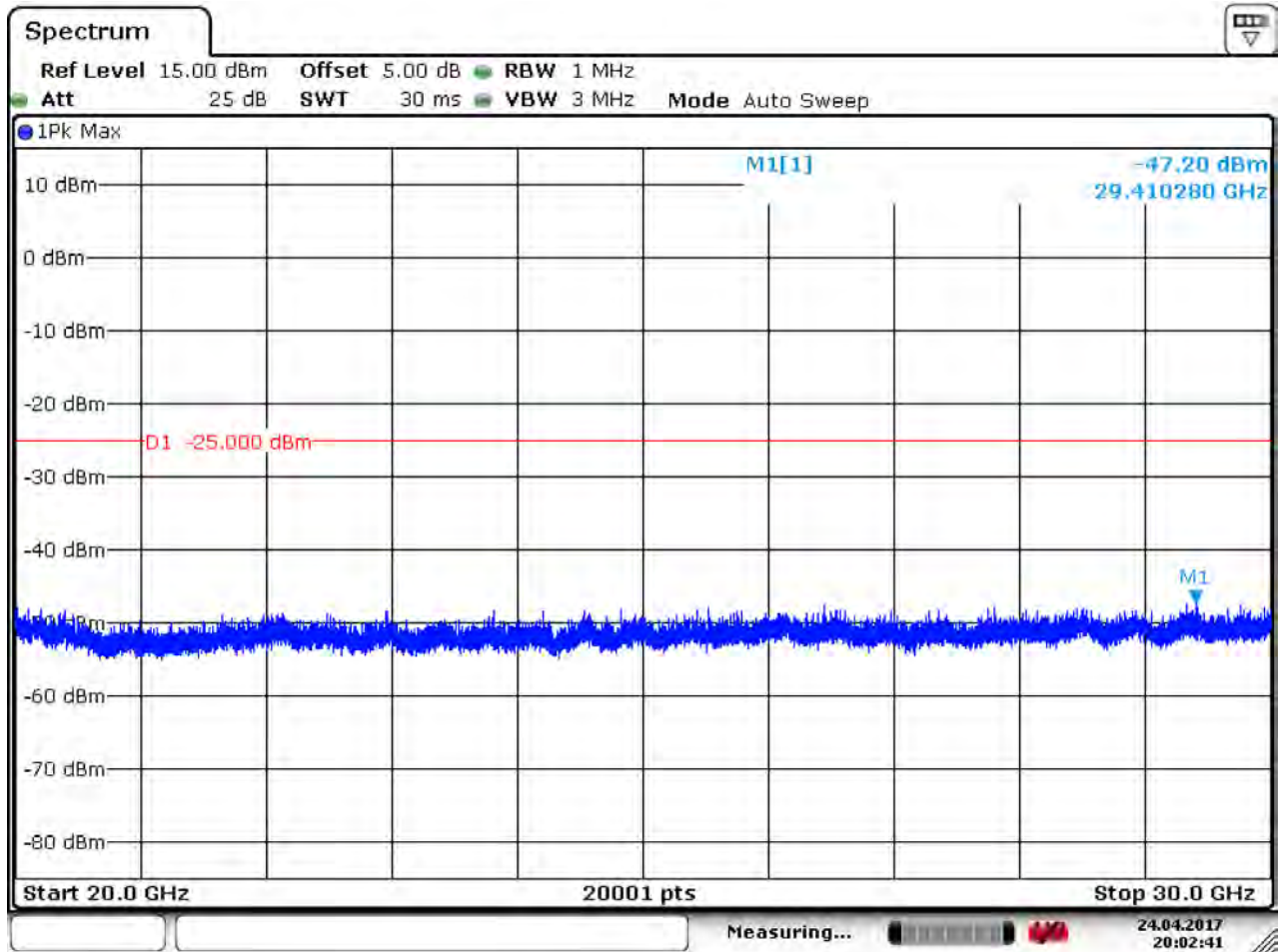
Date: 24. APR. 2017 19:36:01



Date: 24.APR.2017 19:47:34



Date: 24.APR.2017 20:00:37

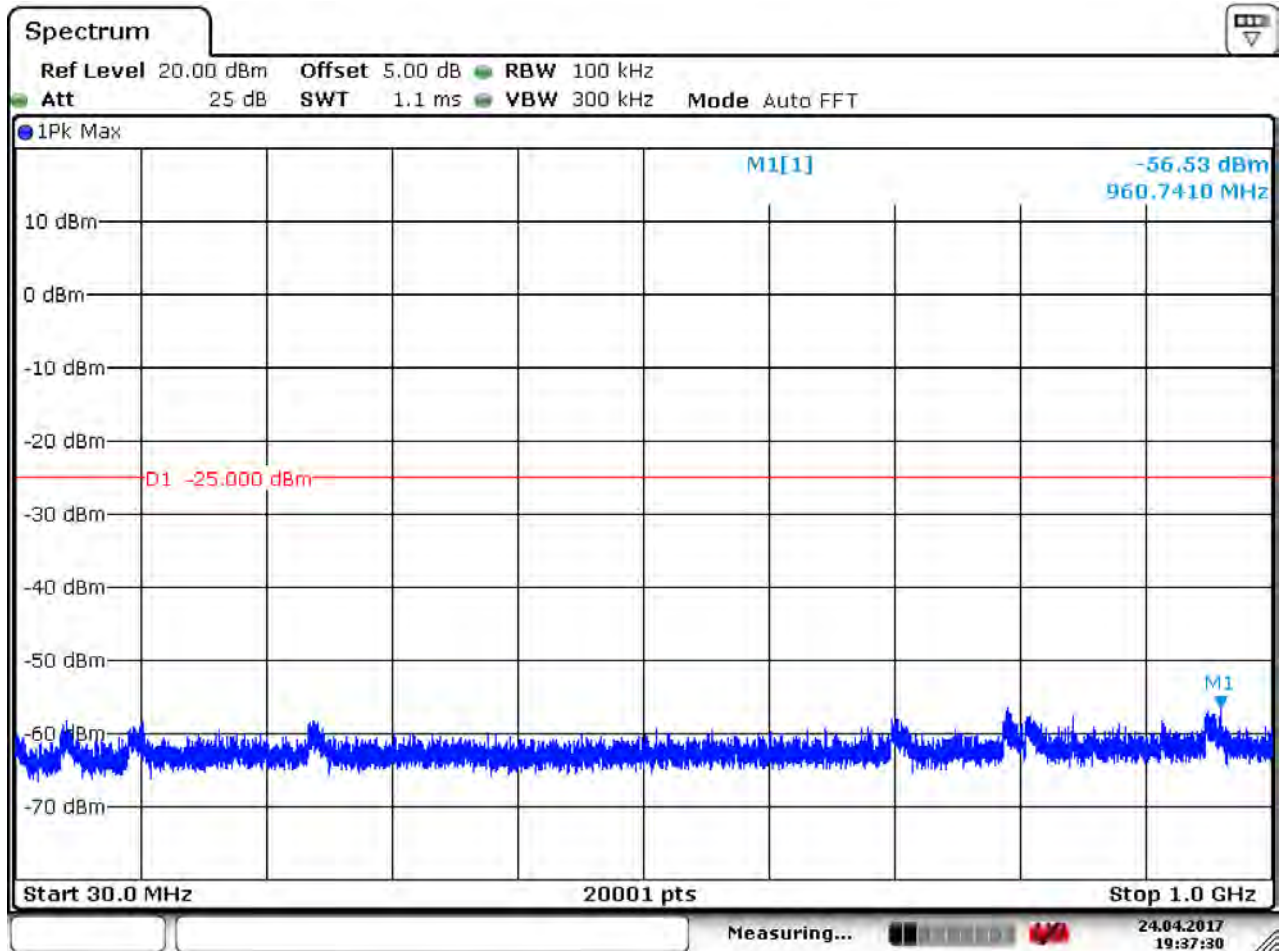


Date: 24.APR.2017 20:02:41

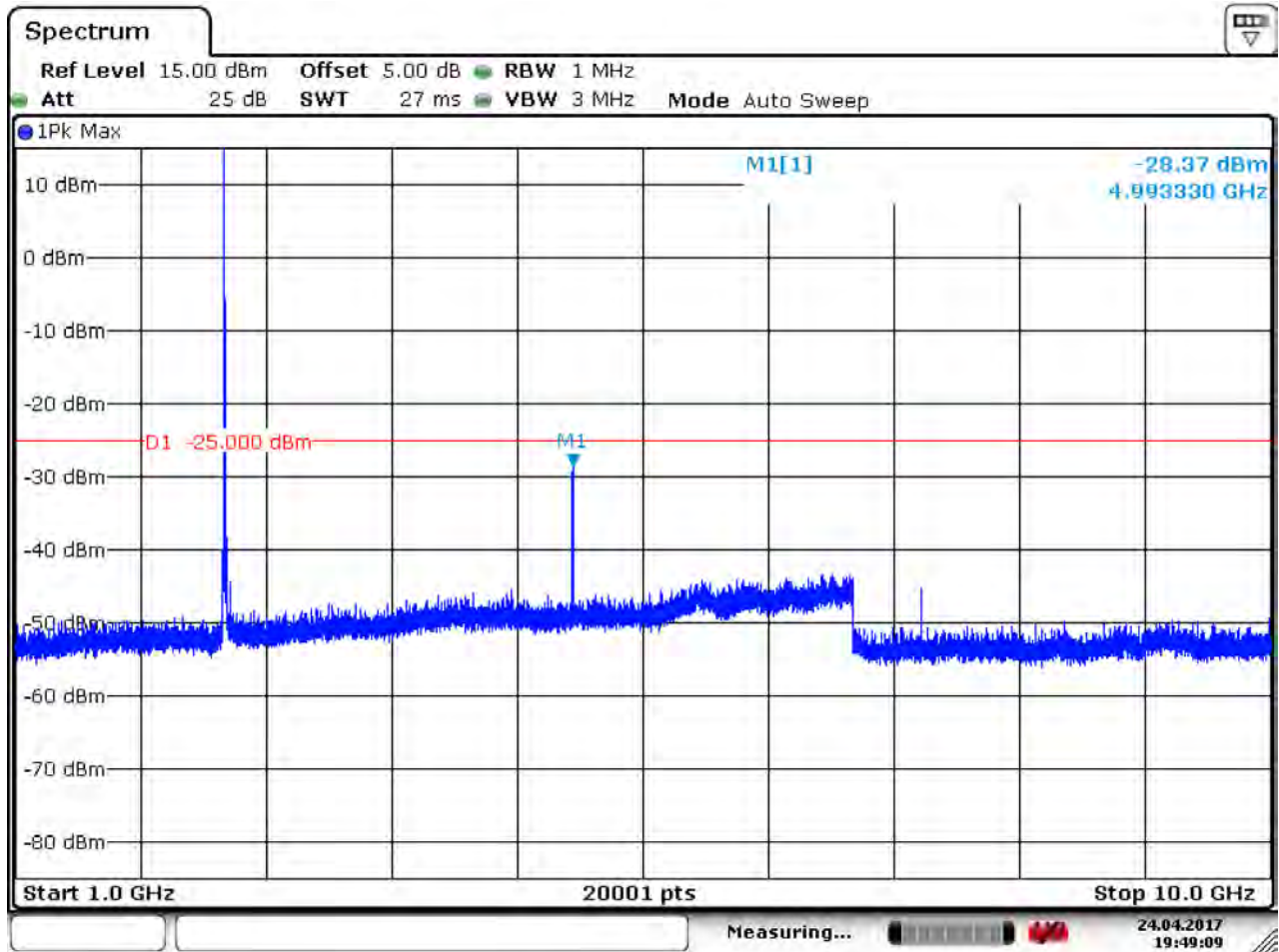


6.1.1.2 Test Mode = LTE / TM1 10MHz RB1#0

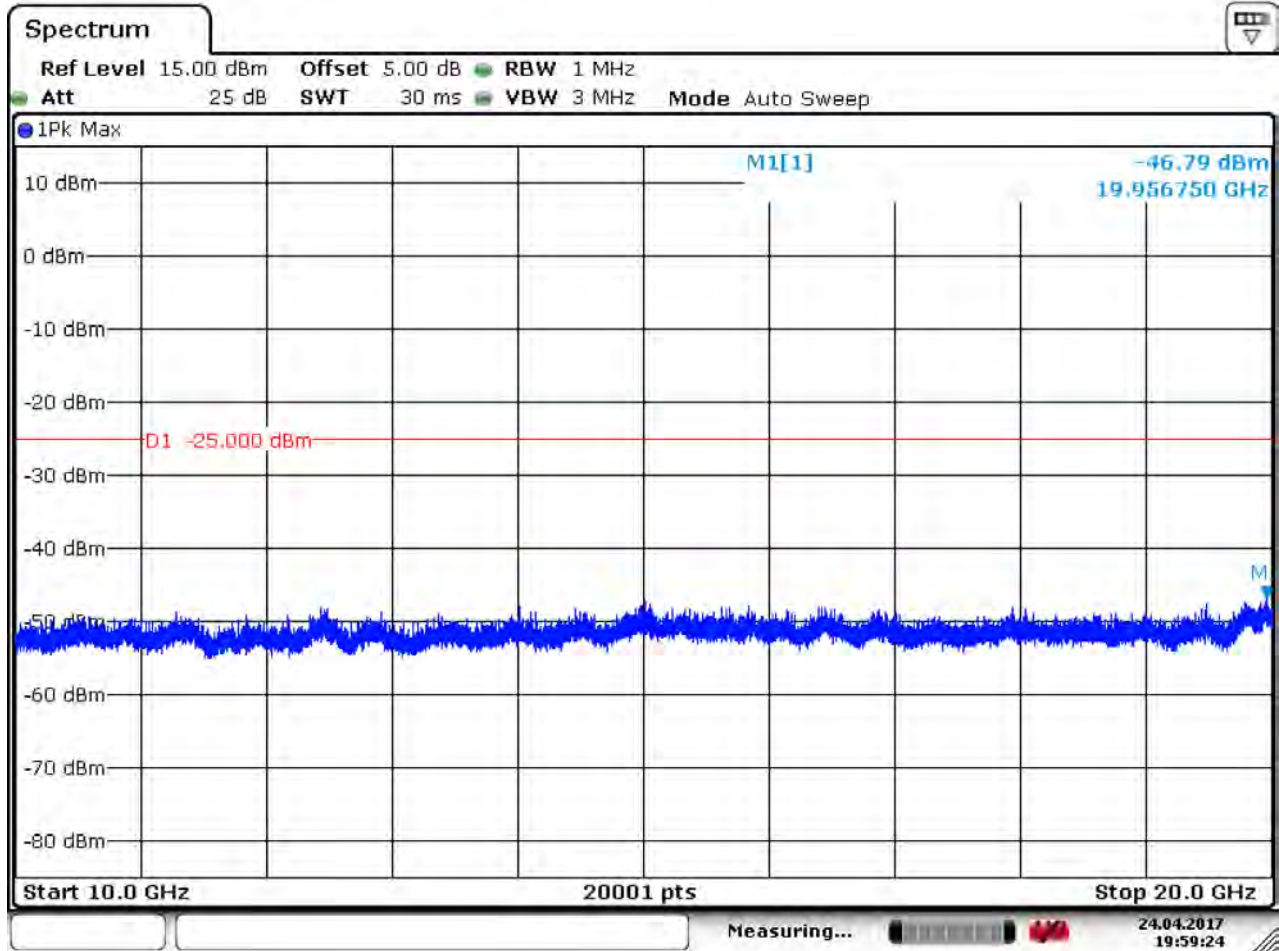
6.1.1.2.1 Test Channel = LCH



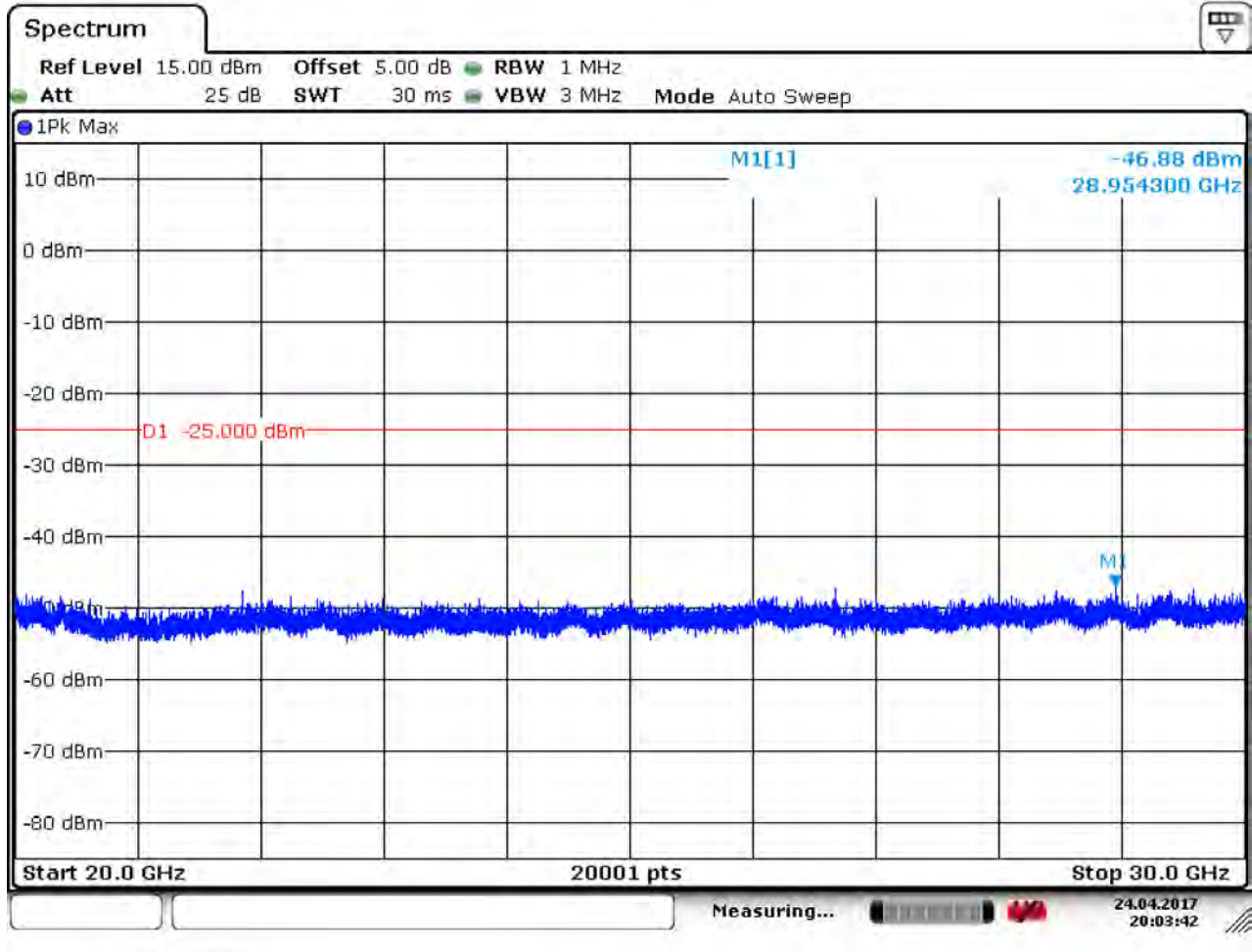
Date: 24.APR.2017 19:37:30



Date: 24.APR.2017 19:49:09



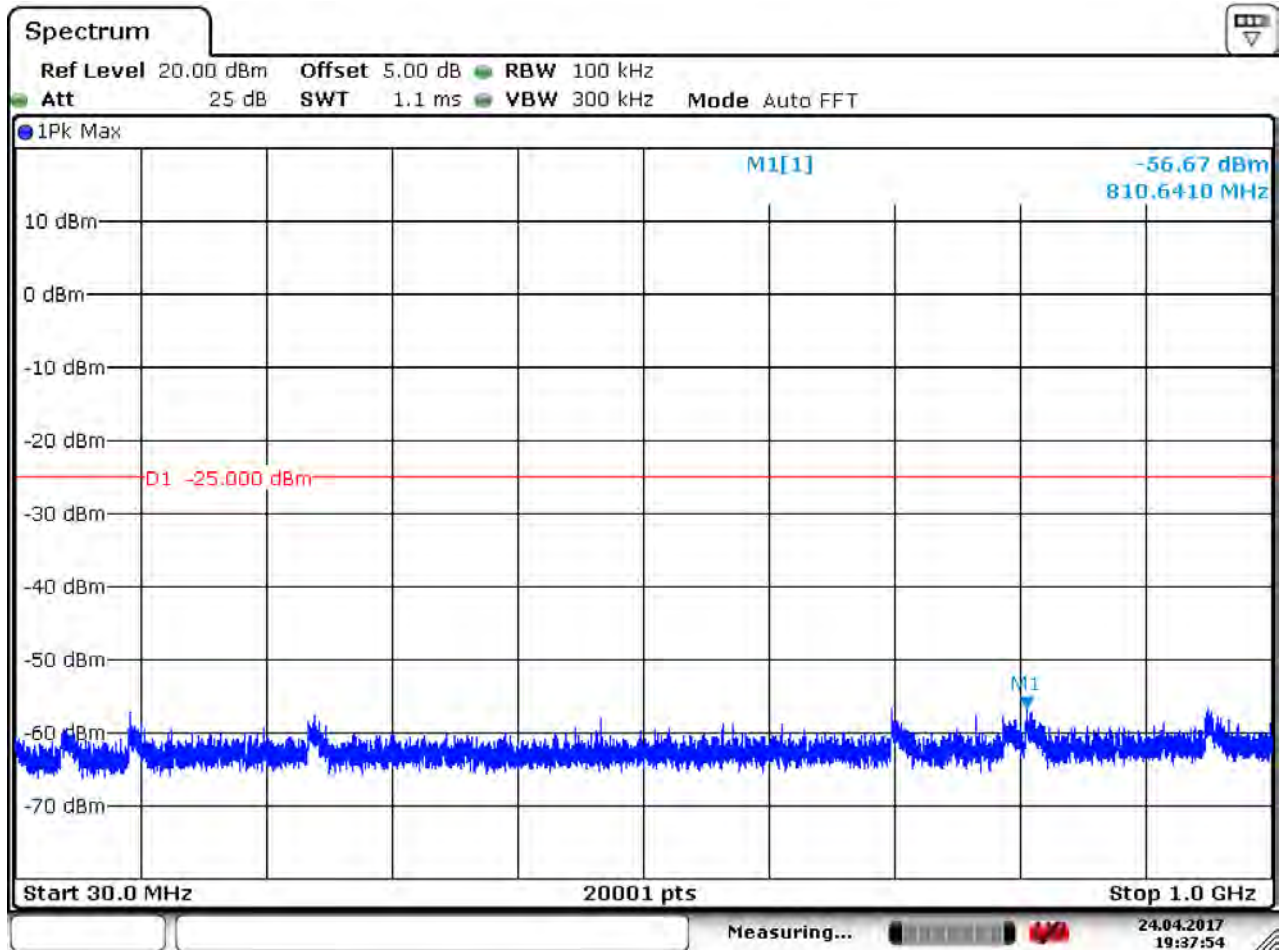
Date: 24.APR.2017 19:59:24



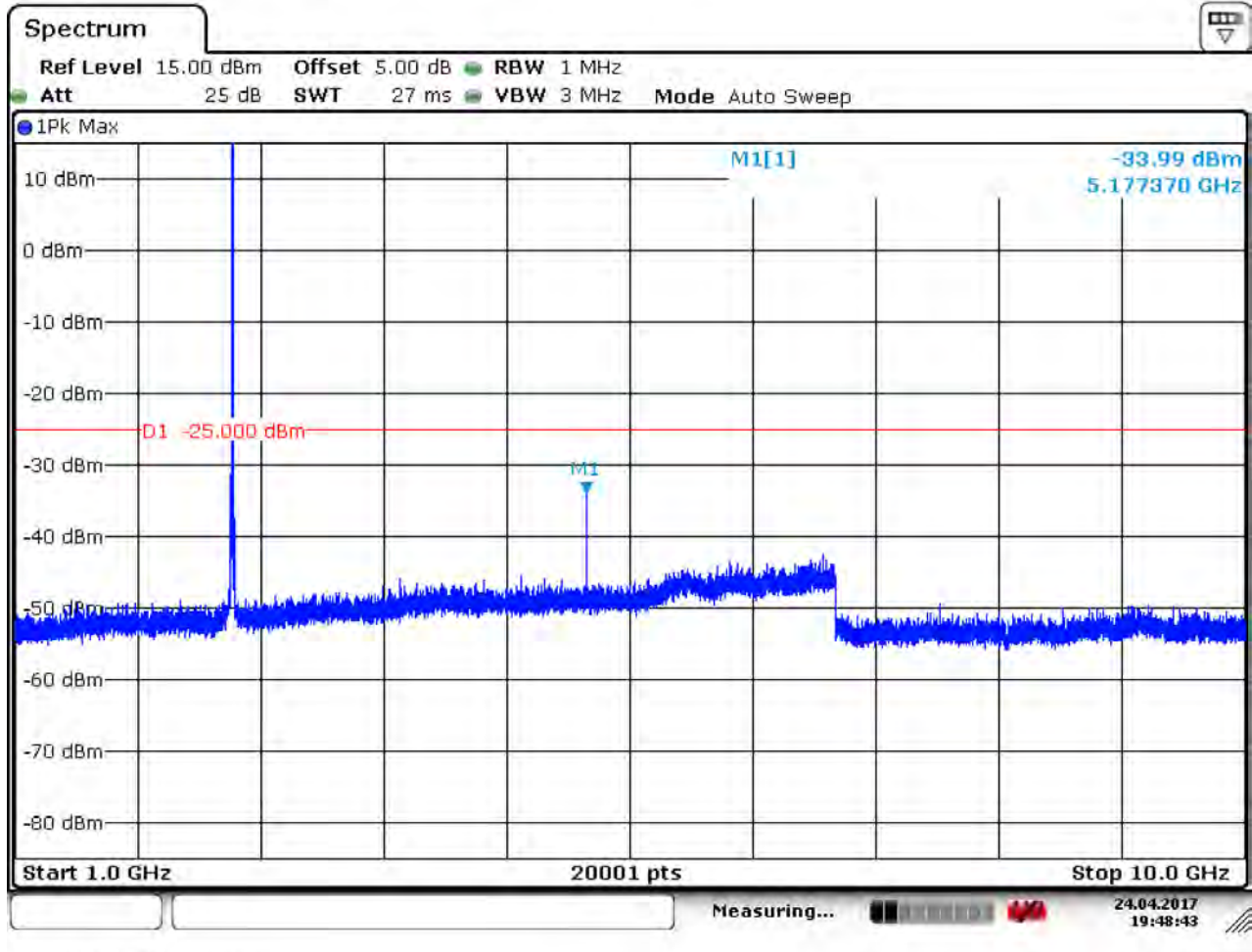
Date: 24.APR.2017 20:03:42



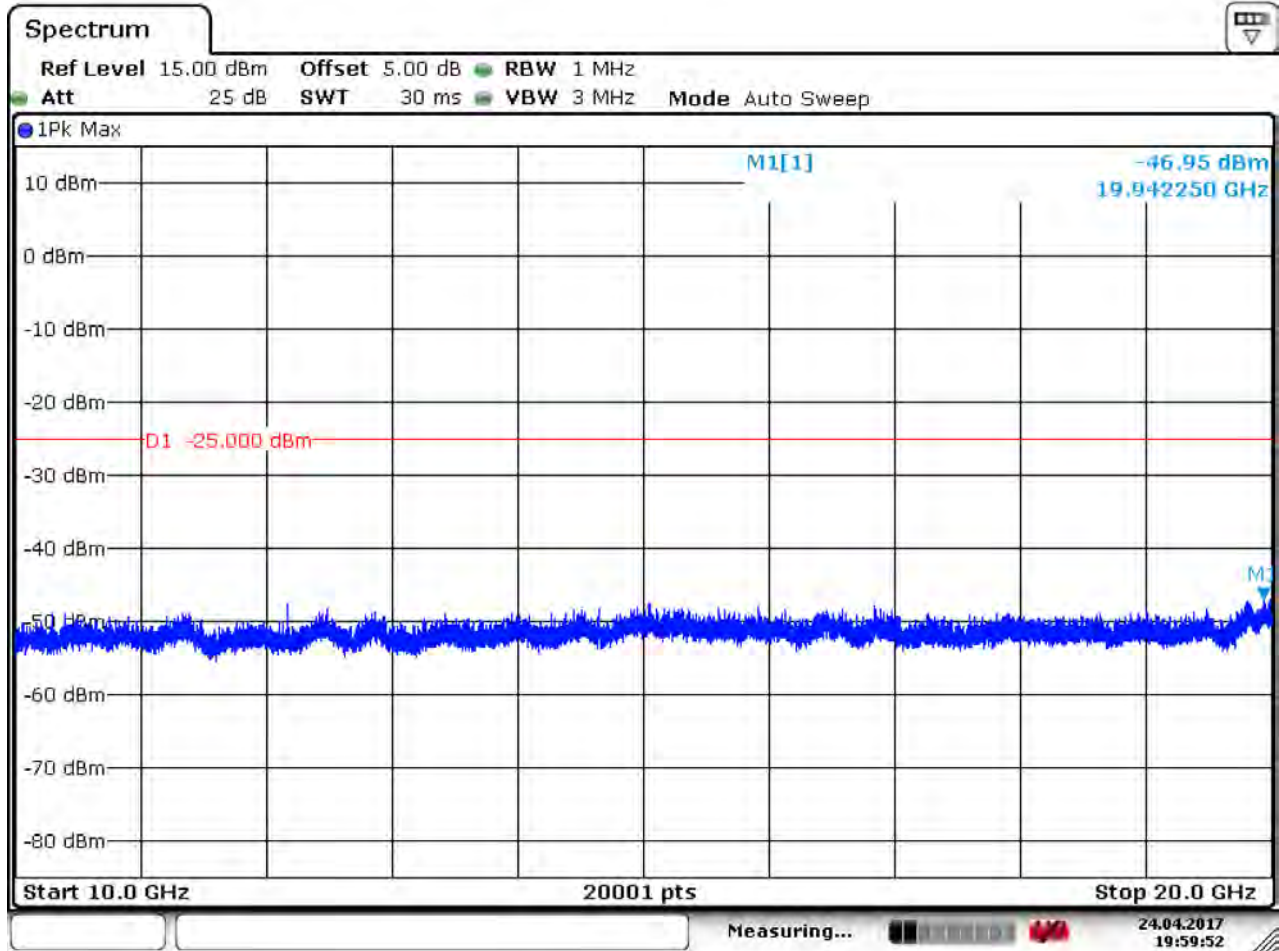
6.1.1.2.2 Test Channel = MCH



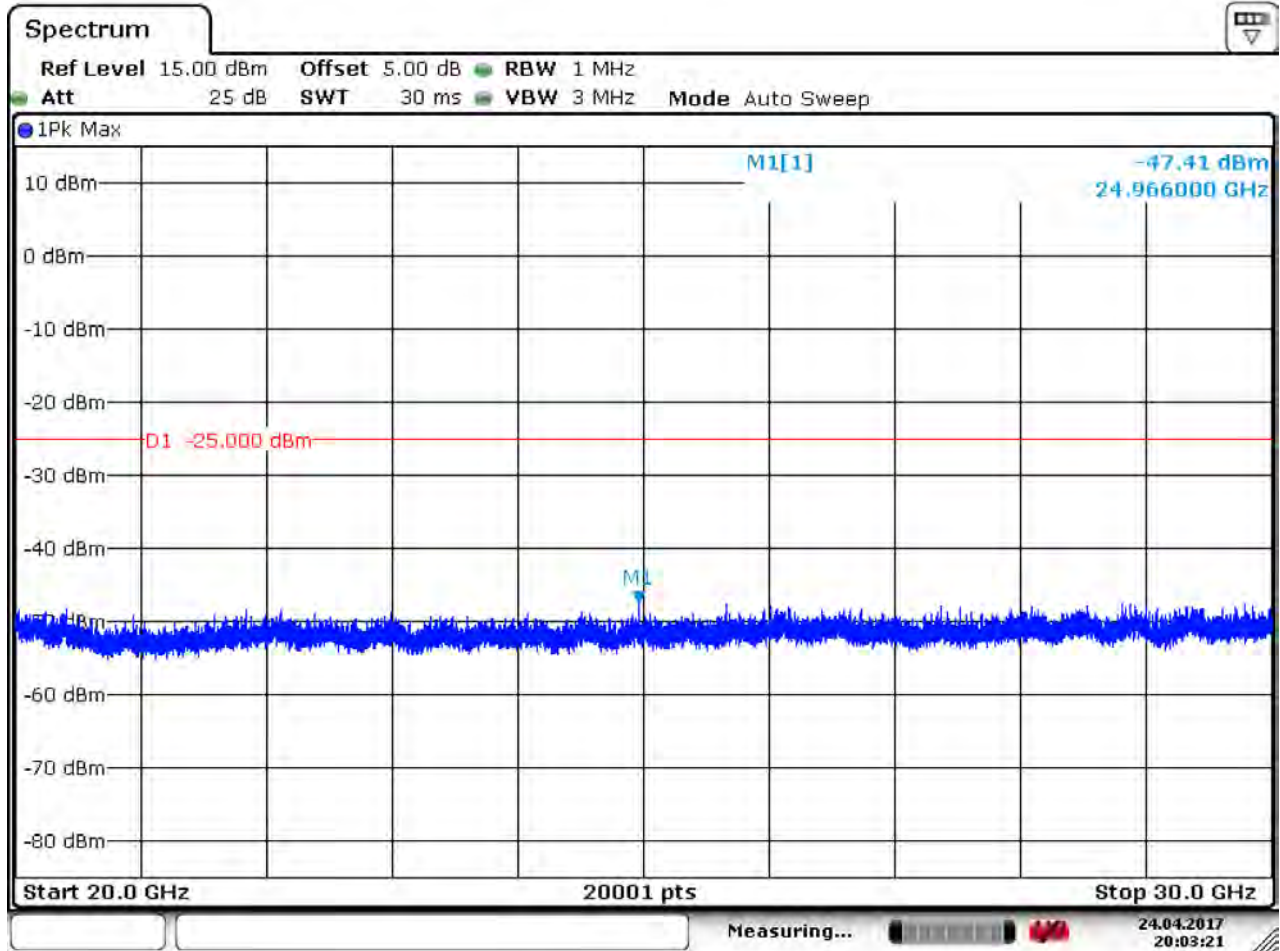
Date: 24. APR. 2017 19:37:55



Date: 24.APR.2017 19:48:43



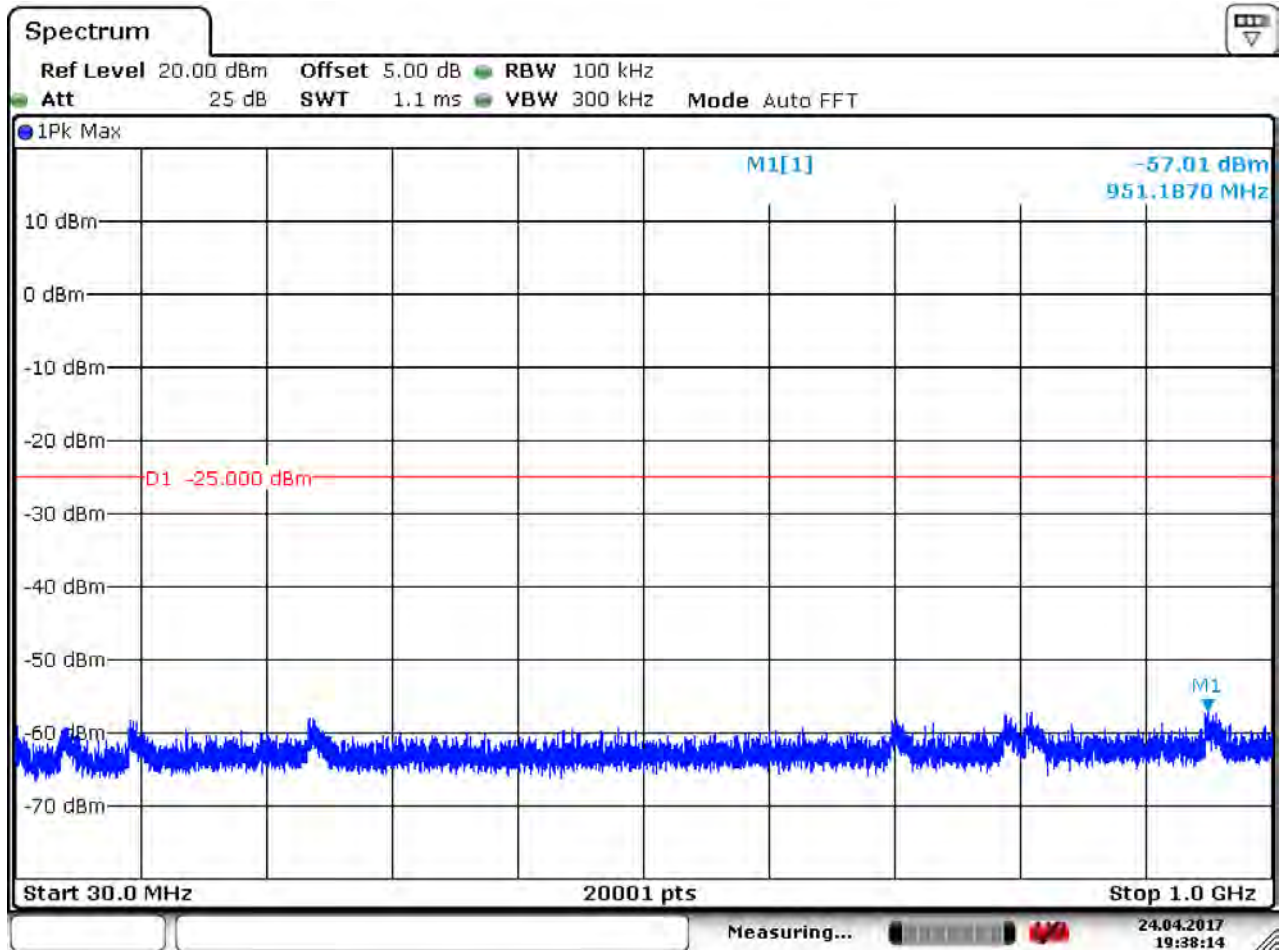
Date: 24.APR.2017 19:59:52



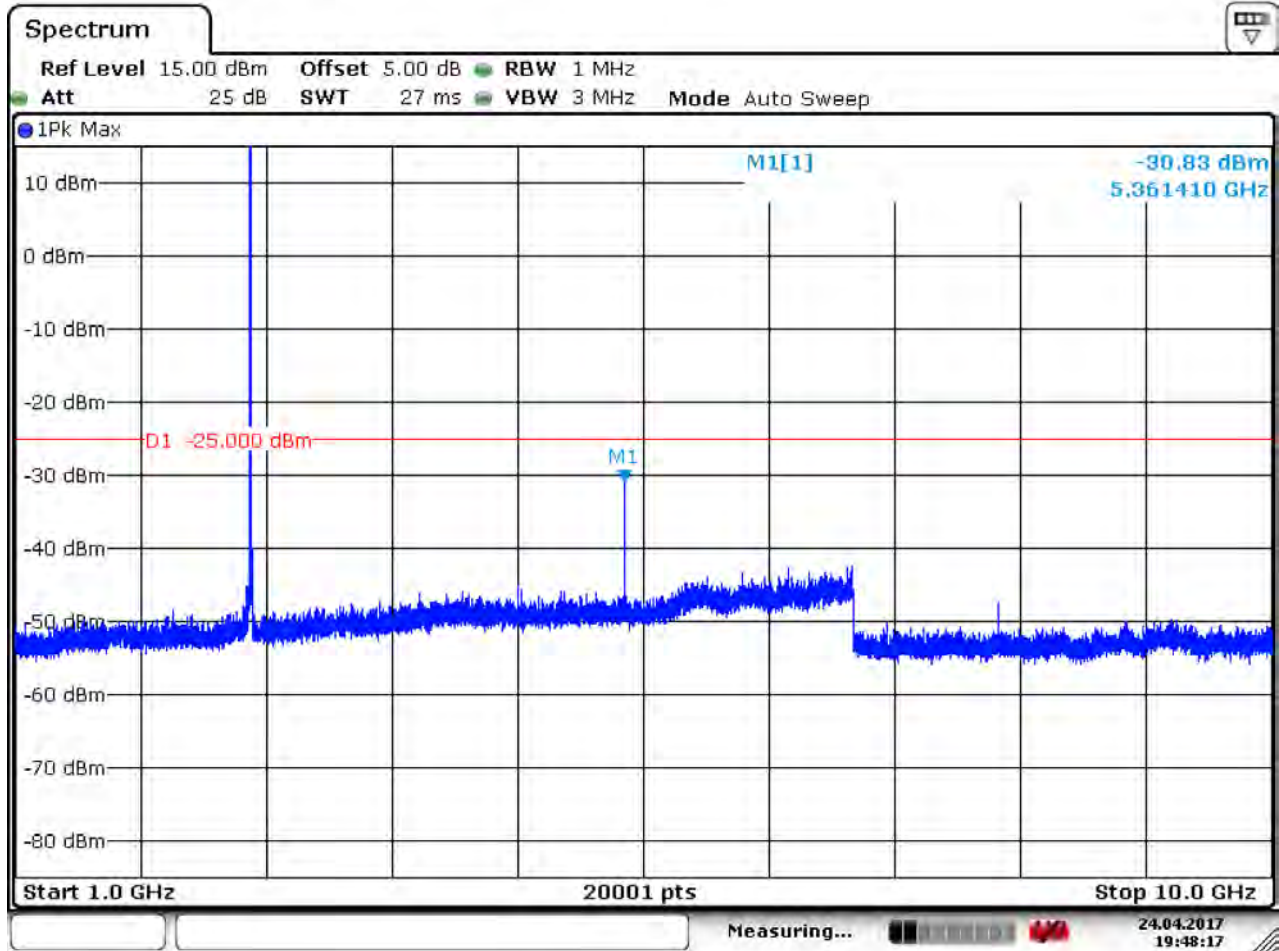
Date: 24.APR.2017 20:03:21



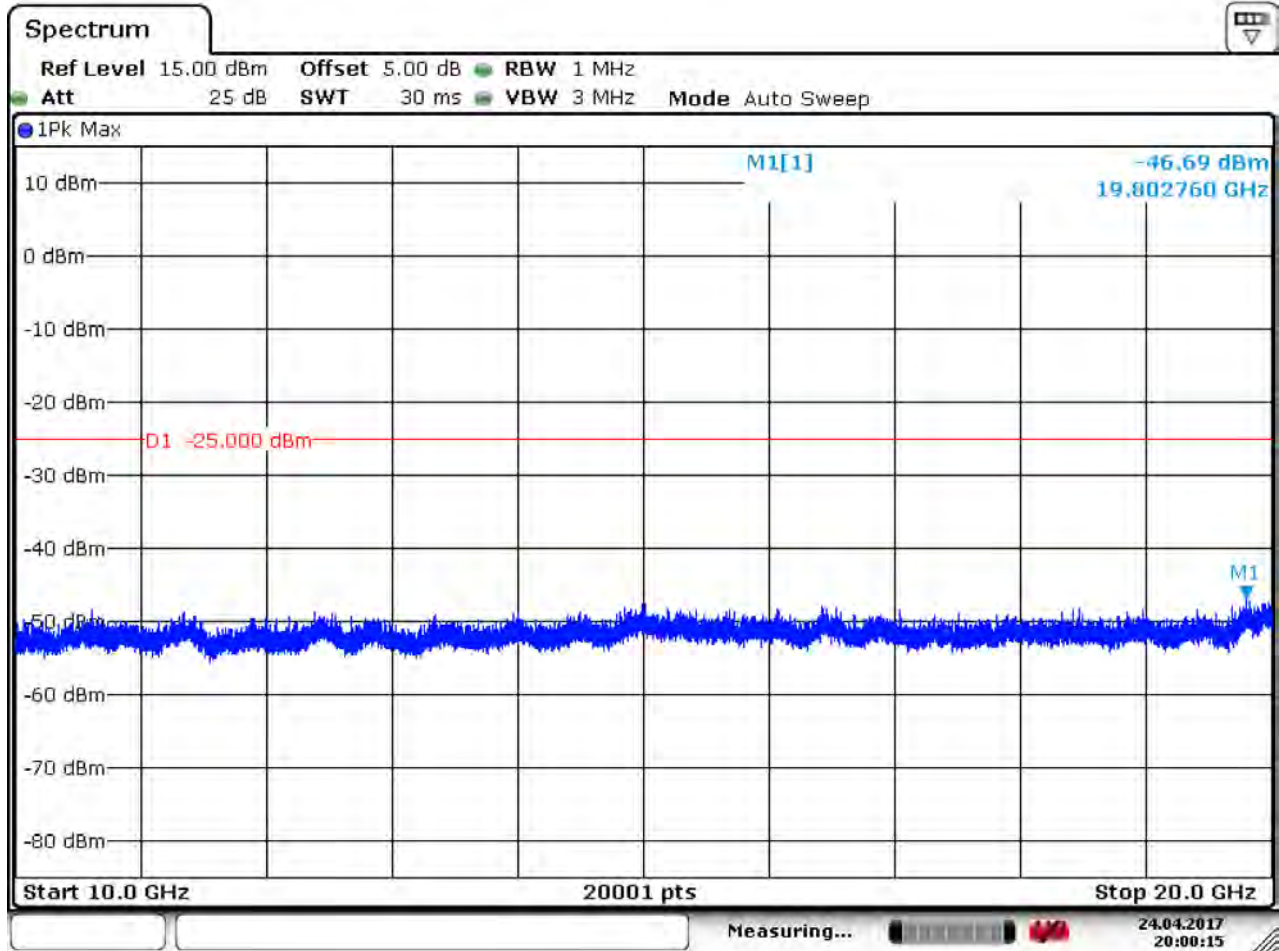
6.1.1.2.3 Test Channel = HCH



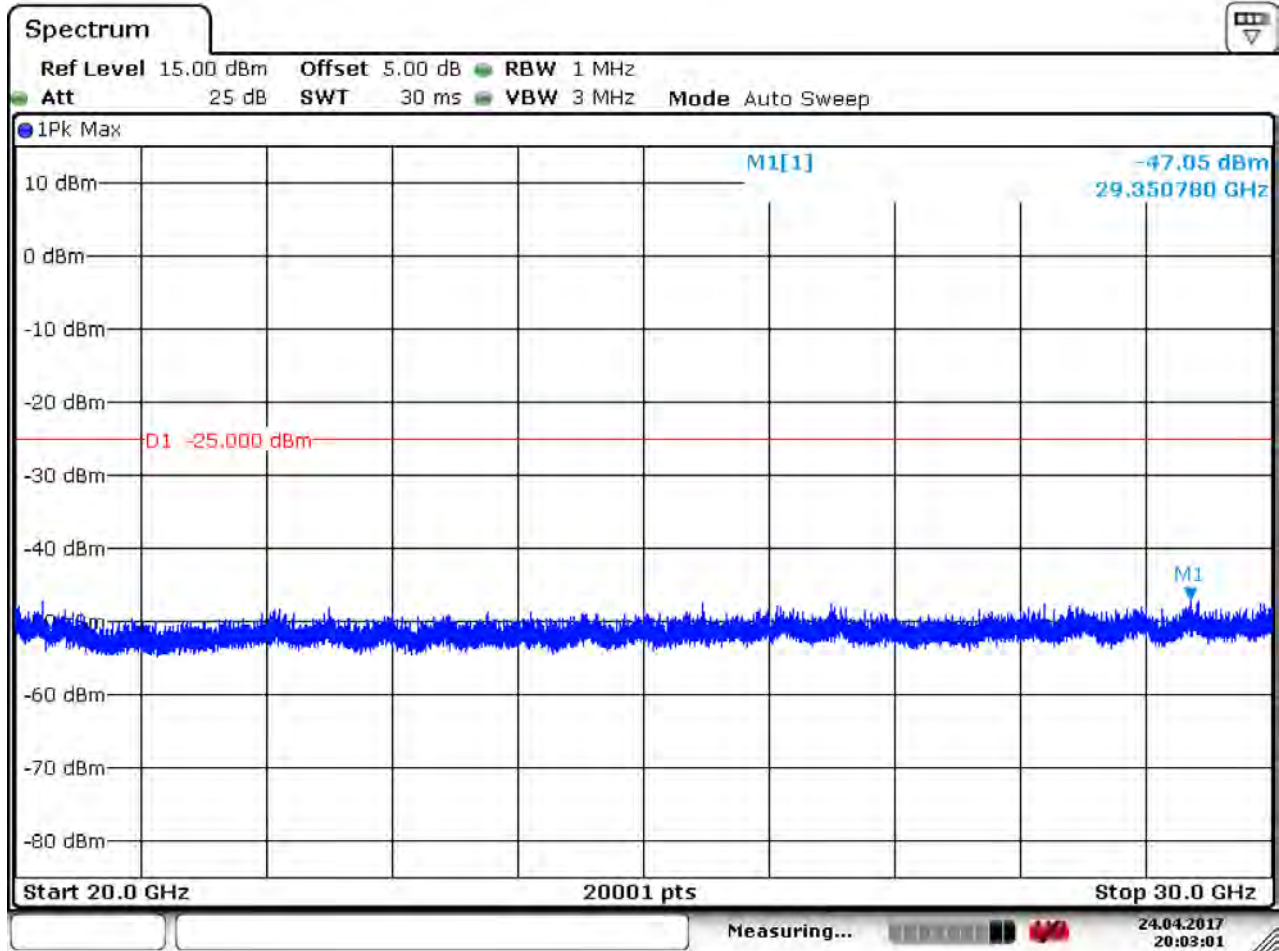
Date: 24. APR. 2017 19:38:14



Date: 24.APR.2017 19:48:17



Date: 24.APR.2017 20:00:15

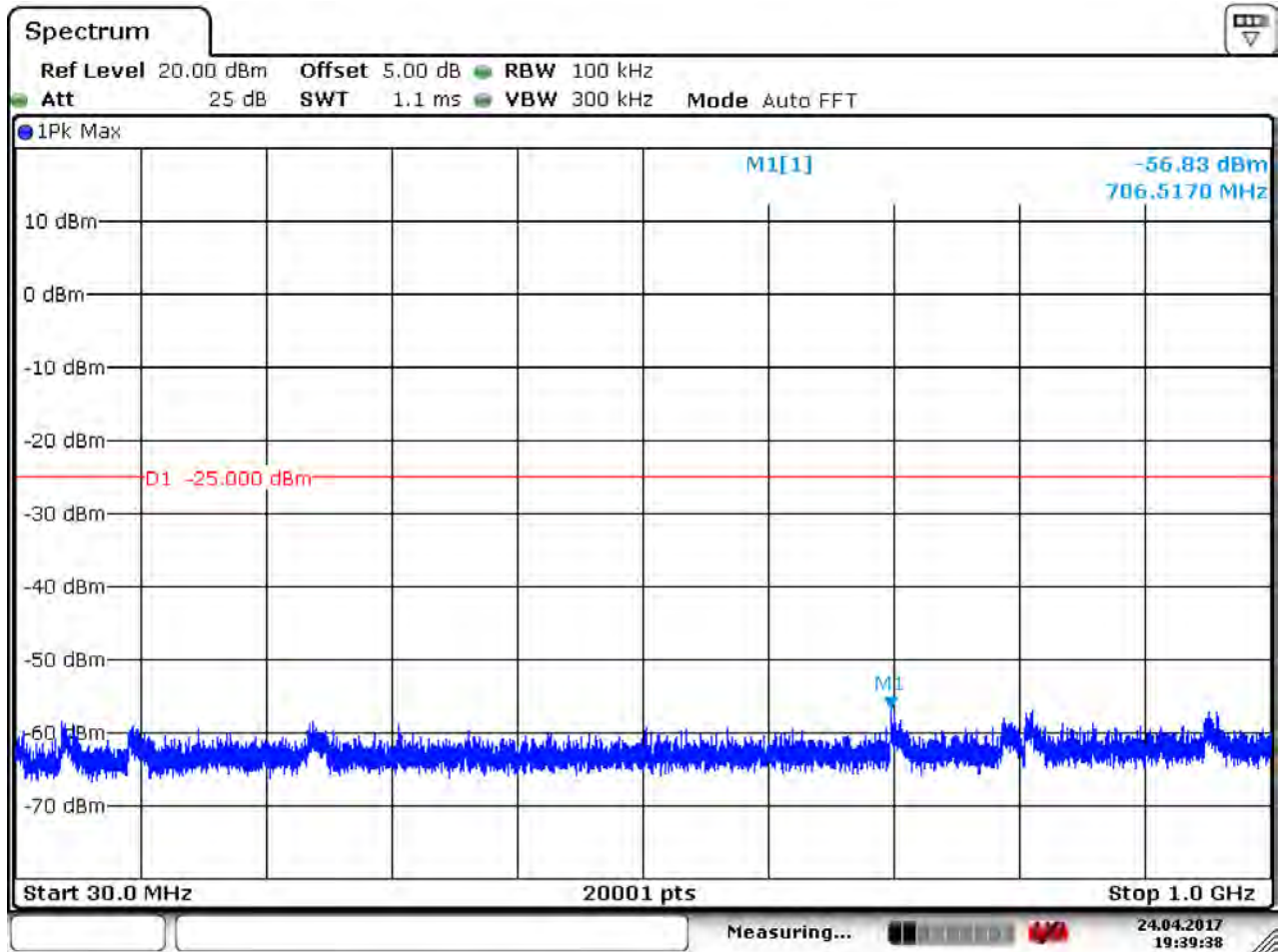


Date: 24.APR.2017 20:03:02

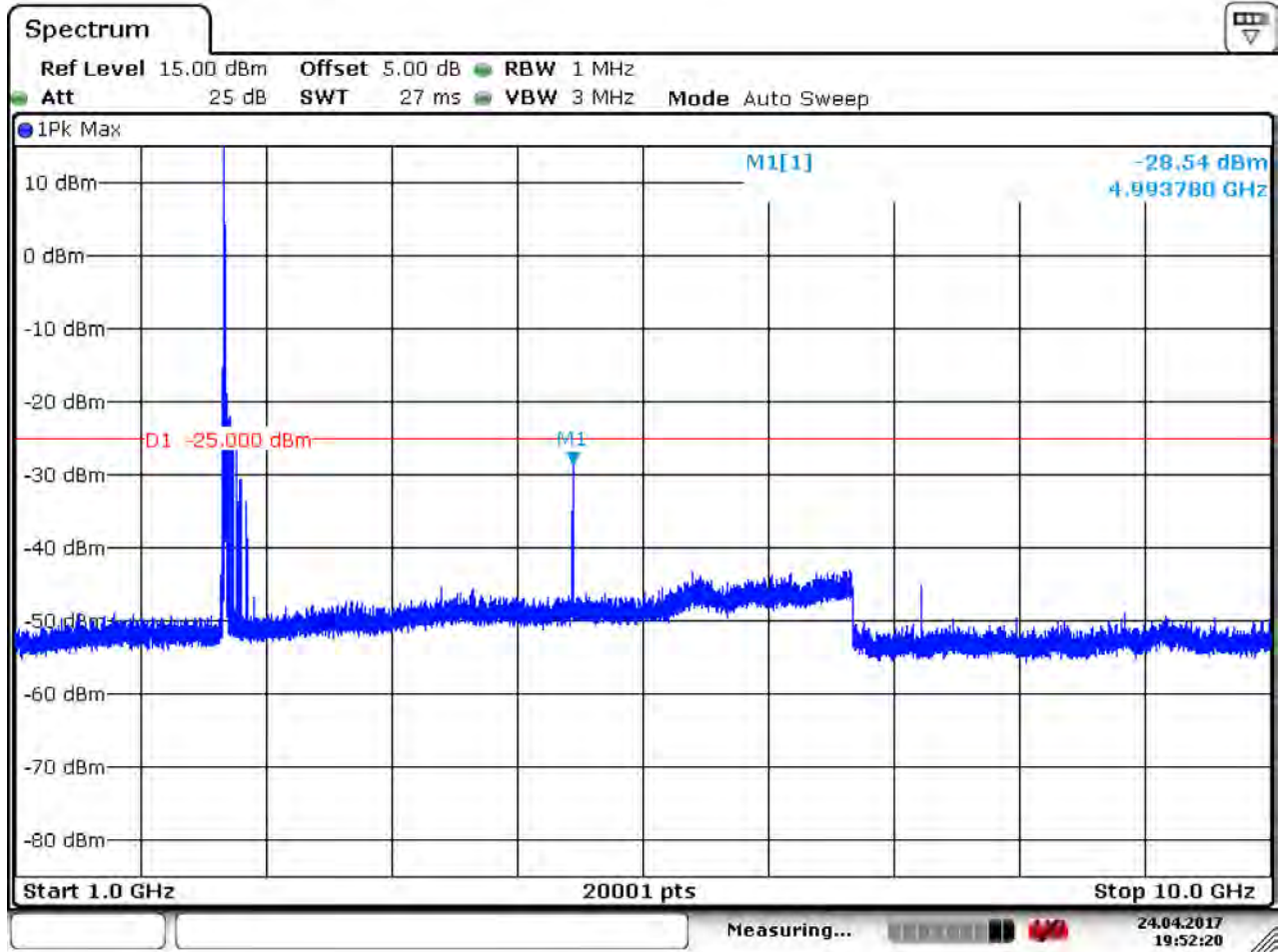


6.1.1.3 Test Mode = LTE / TM1 15MHz RB1#0

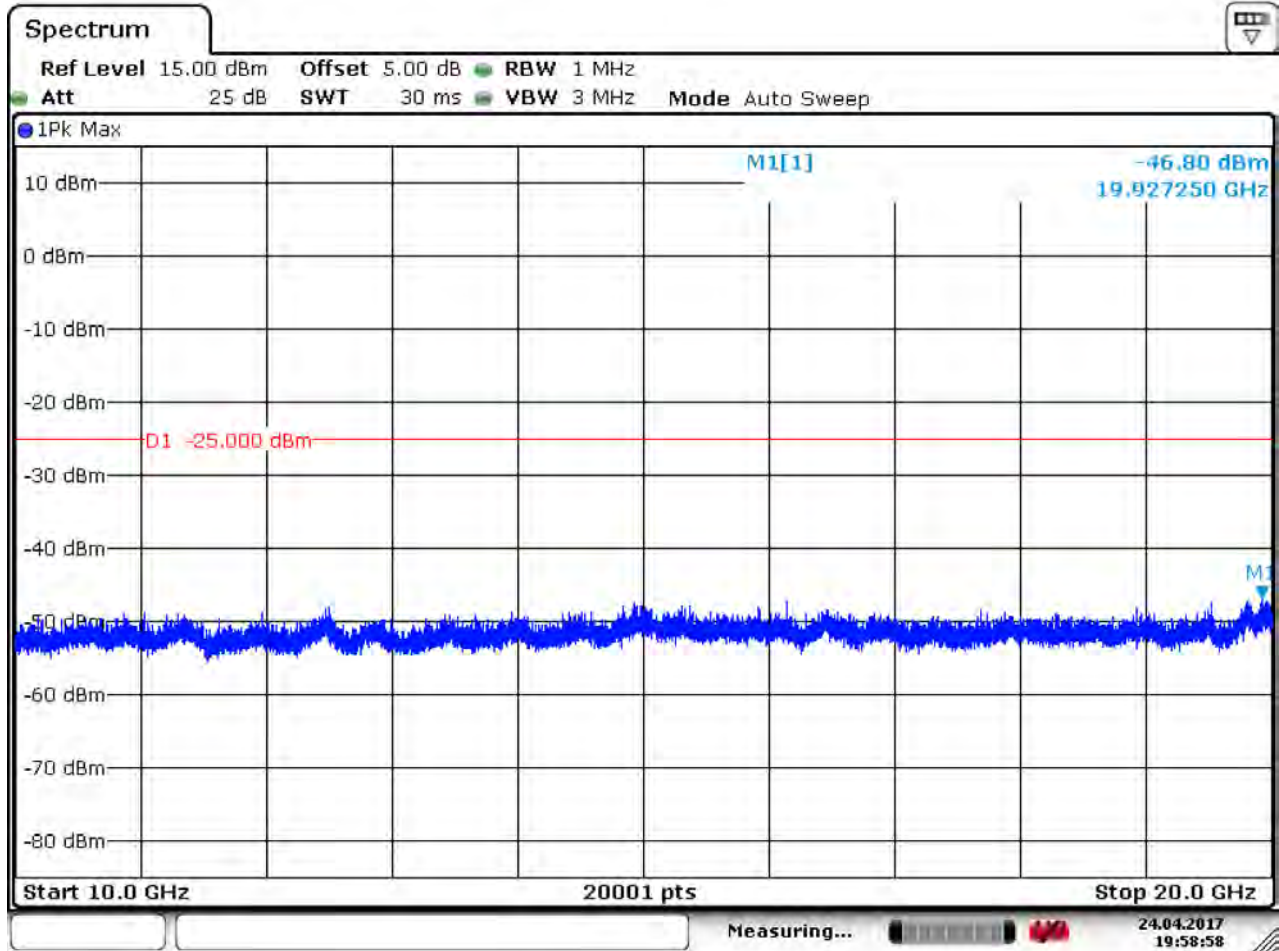
6.1.1.3.1 Test Channel = LCH



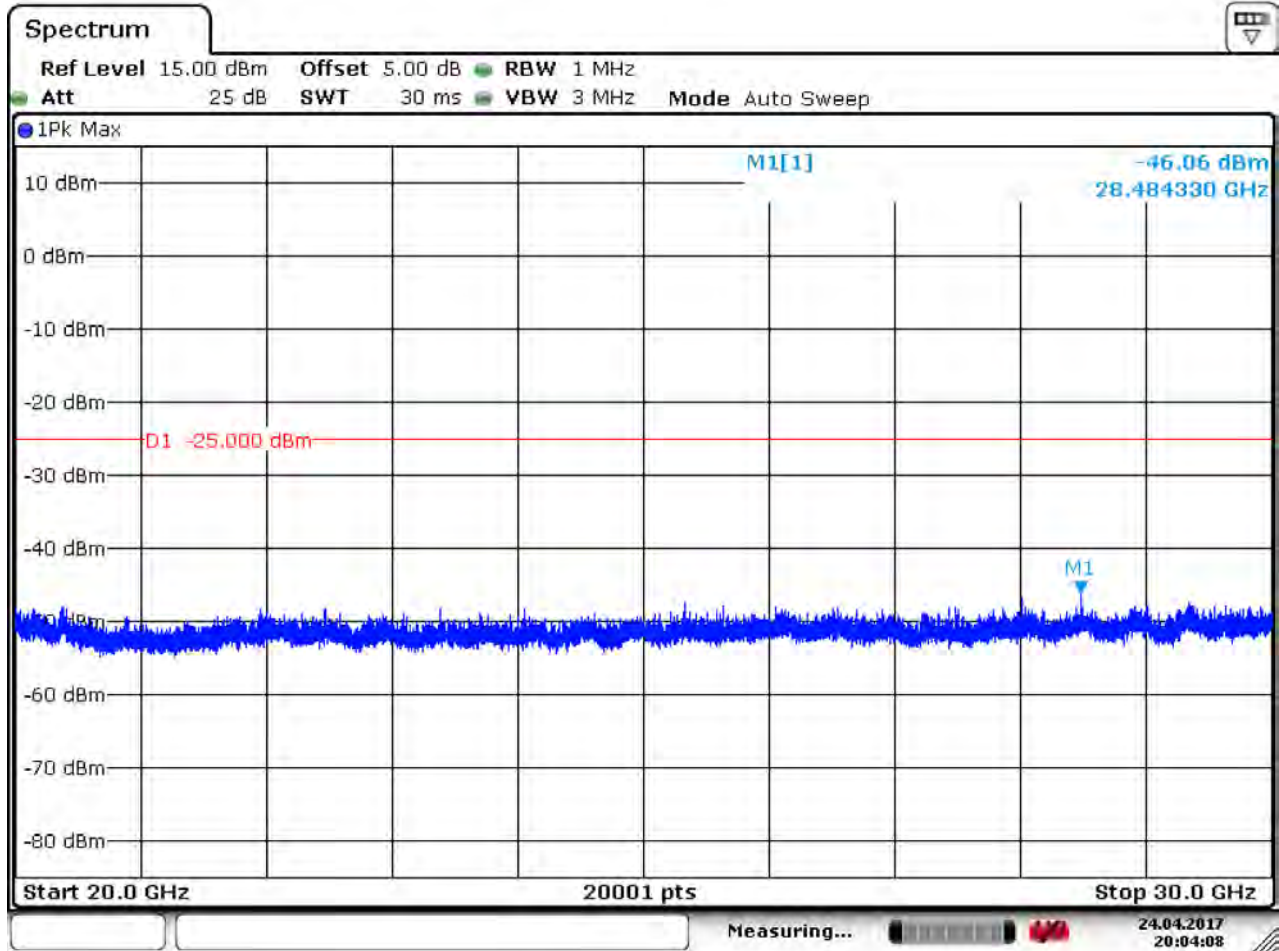
Date: 24. APR 2017 19:39:39



Date: 24.APR.2017 19:52:21



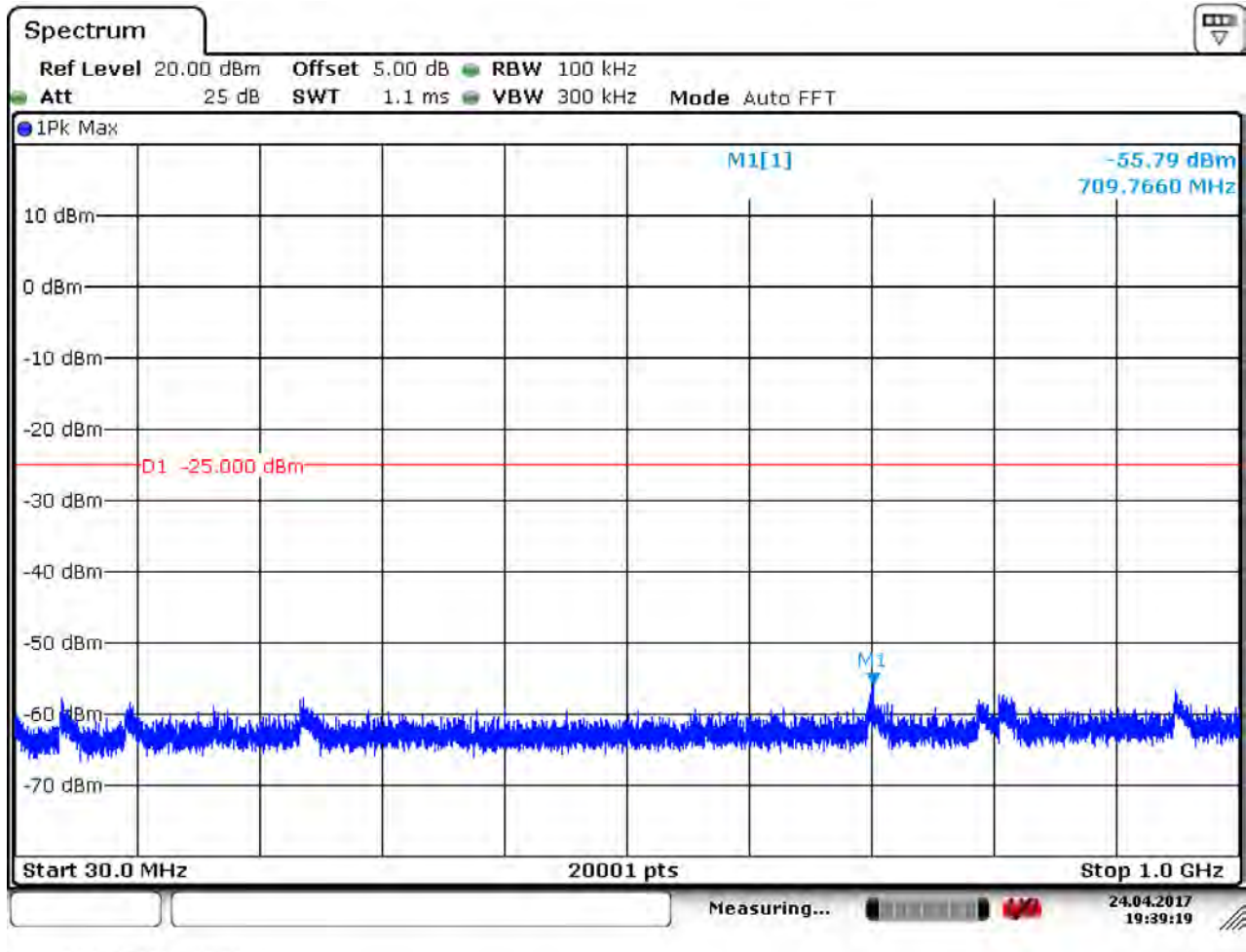
Date: 24.APR.2017 19:58:59



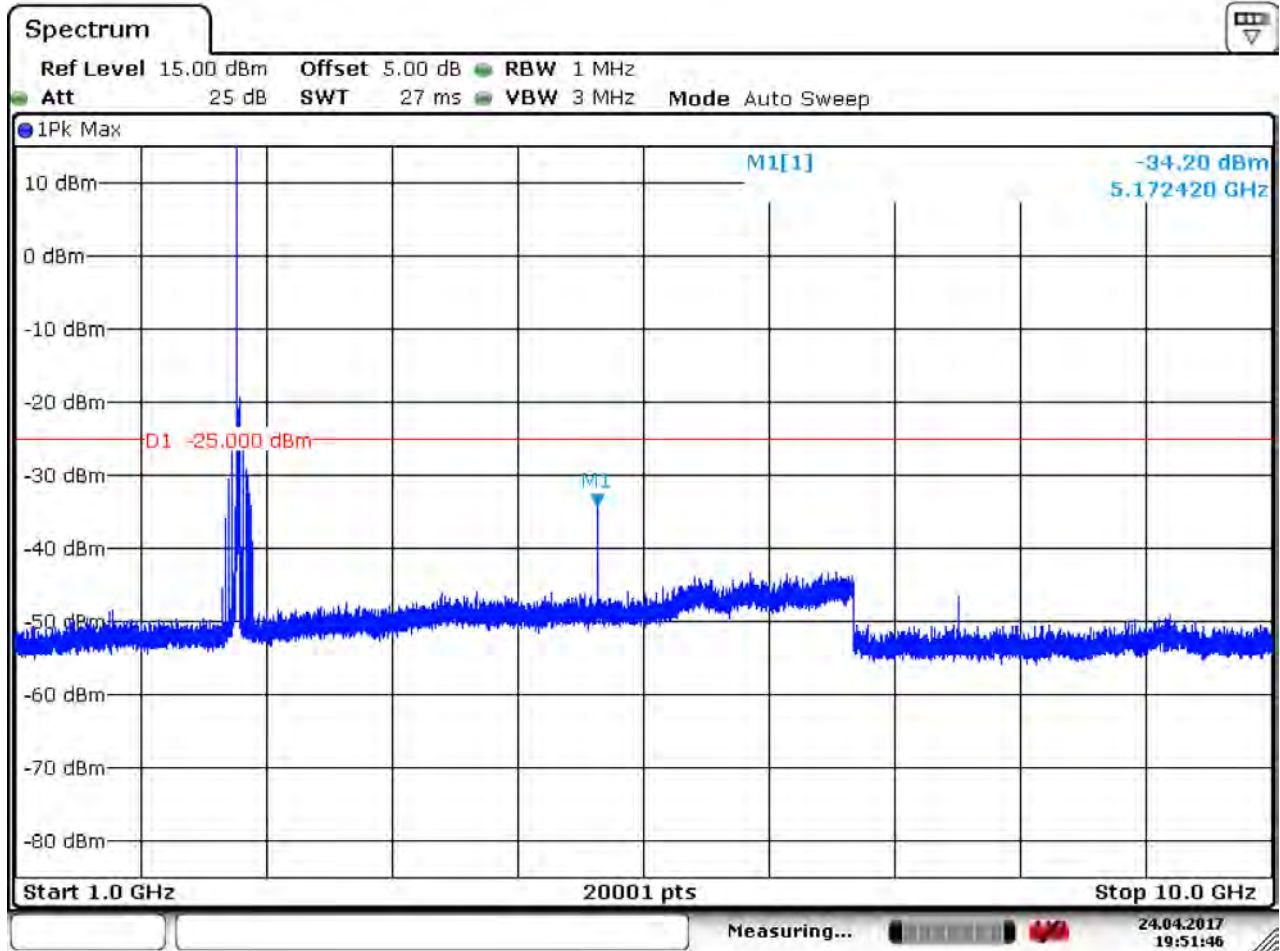
Date: 24.APR.2017 20:04:08



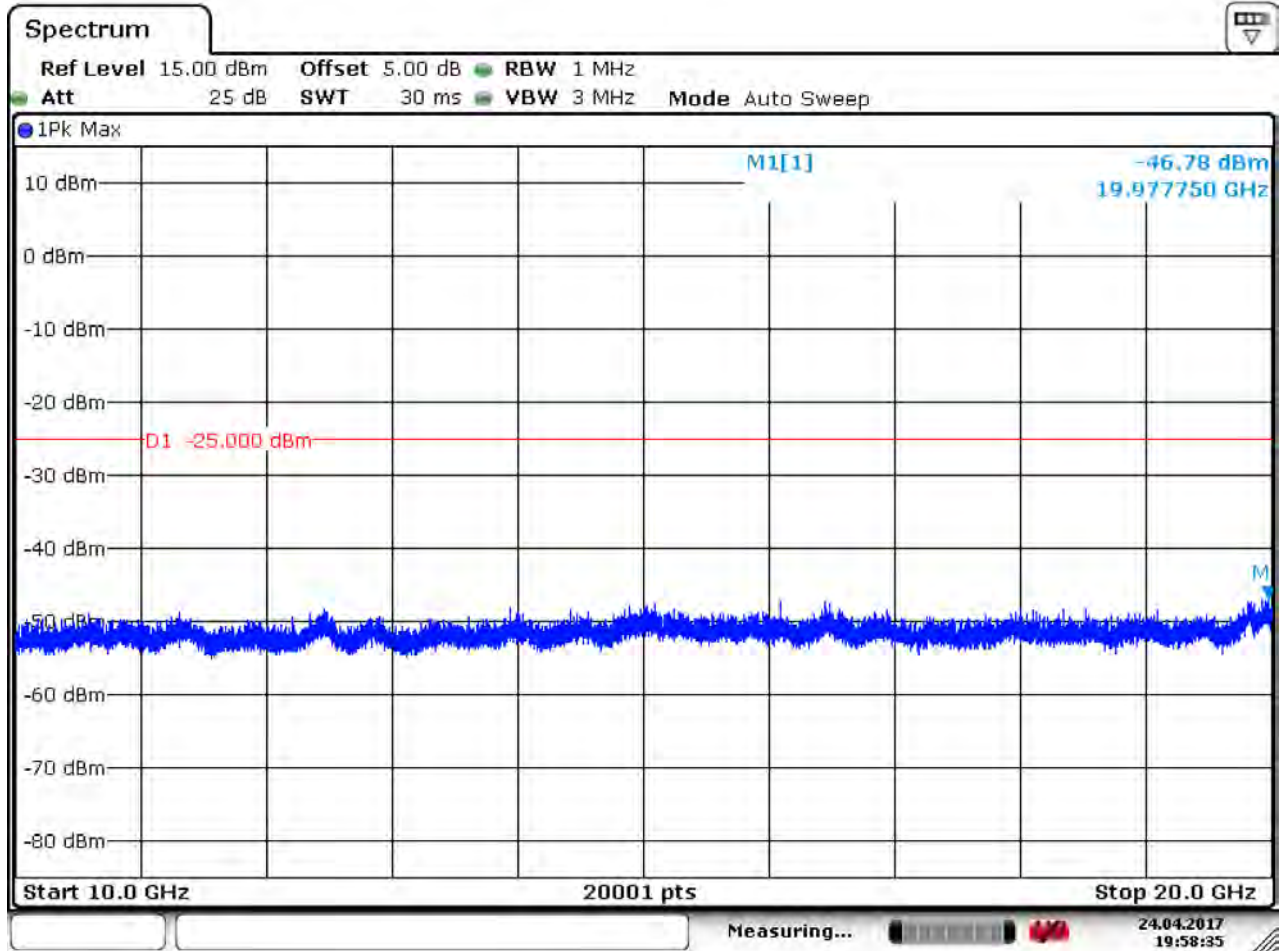
6.1.1.3.2 Test Channel = MCH



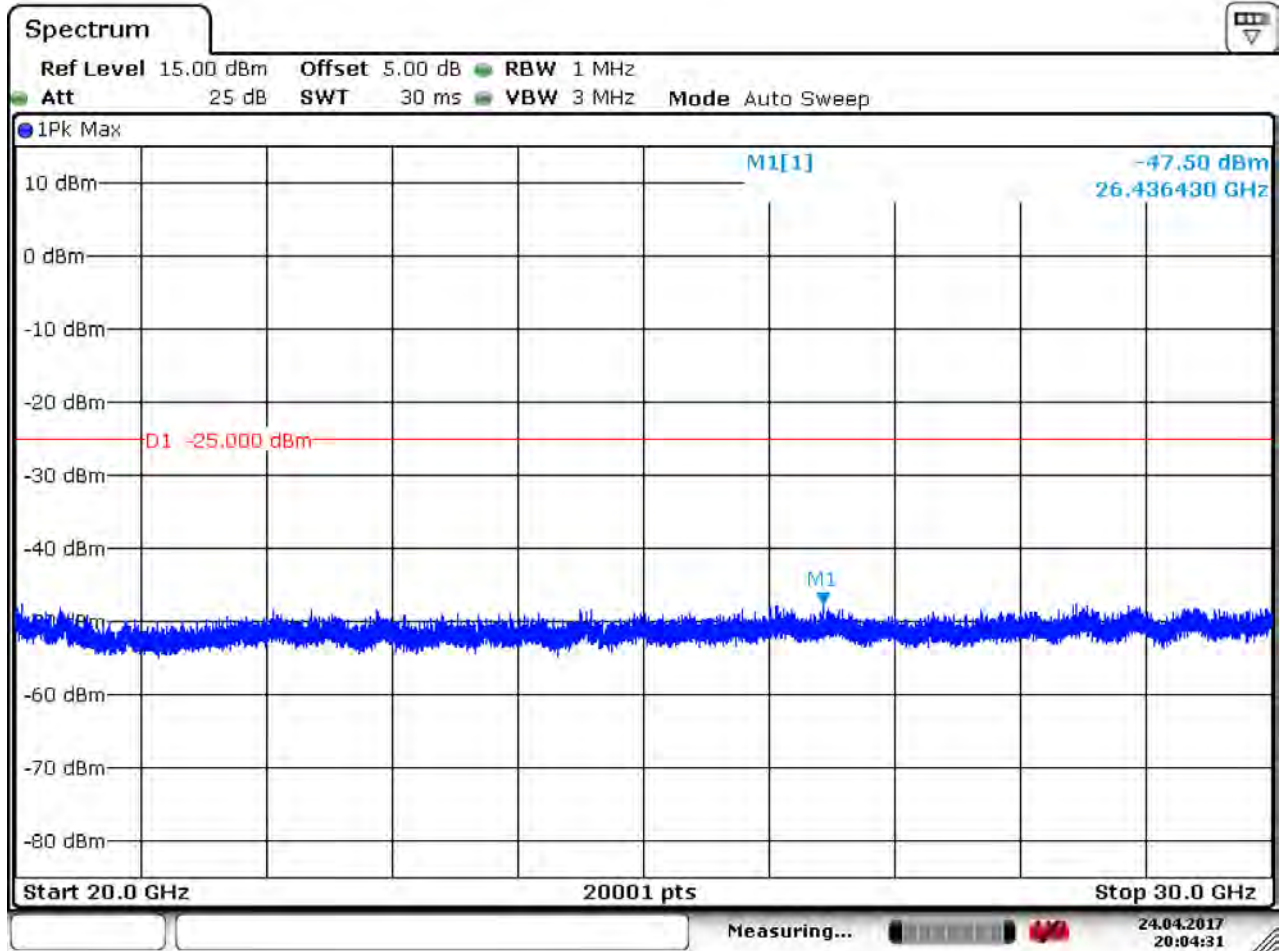
Date: 24. APR. 2017 19:39:19



Date: 24.APR.2017 19:51:46



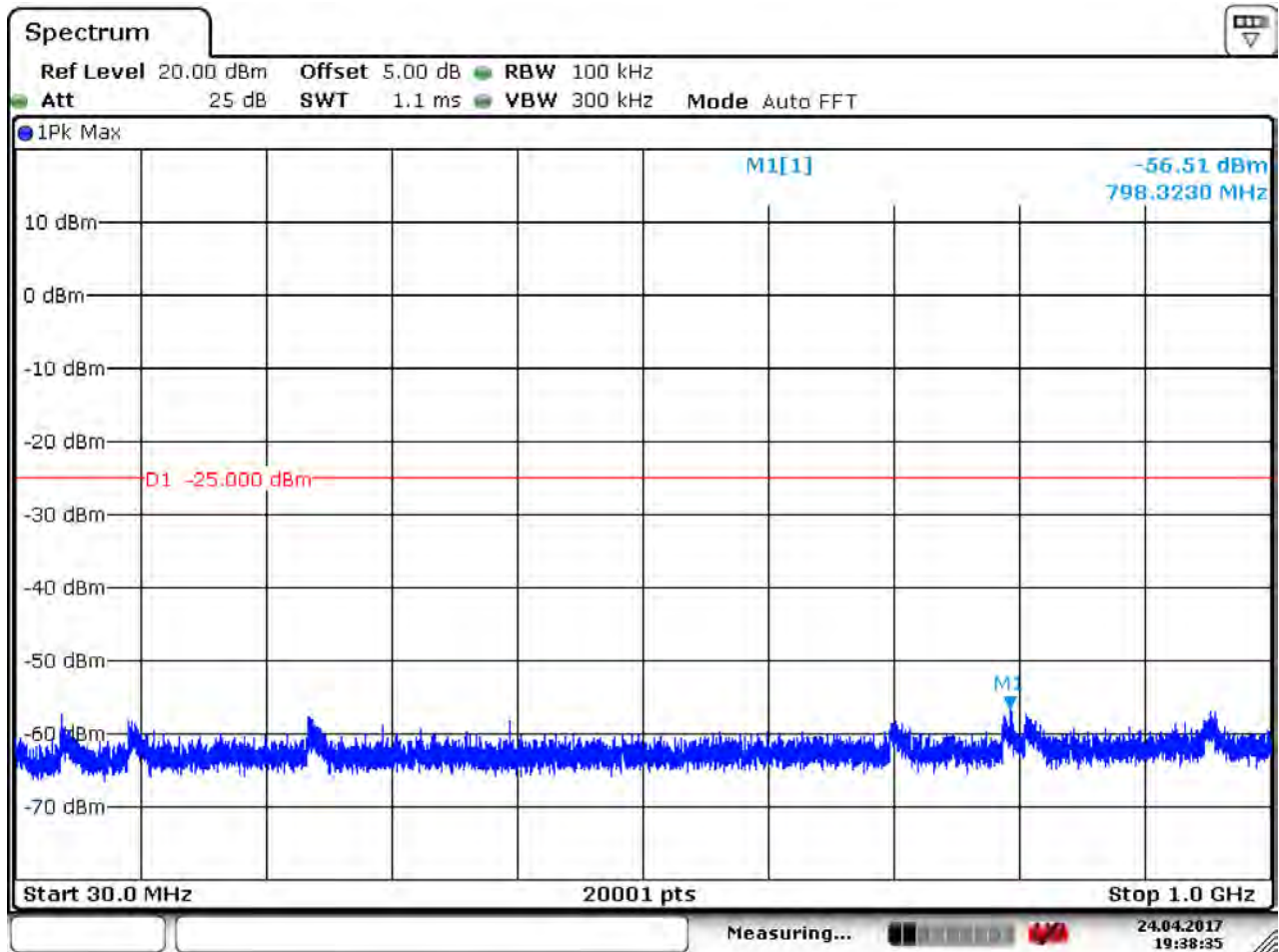
Date: 24.APR.2017 19:58:35



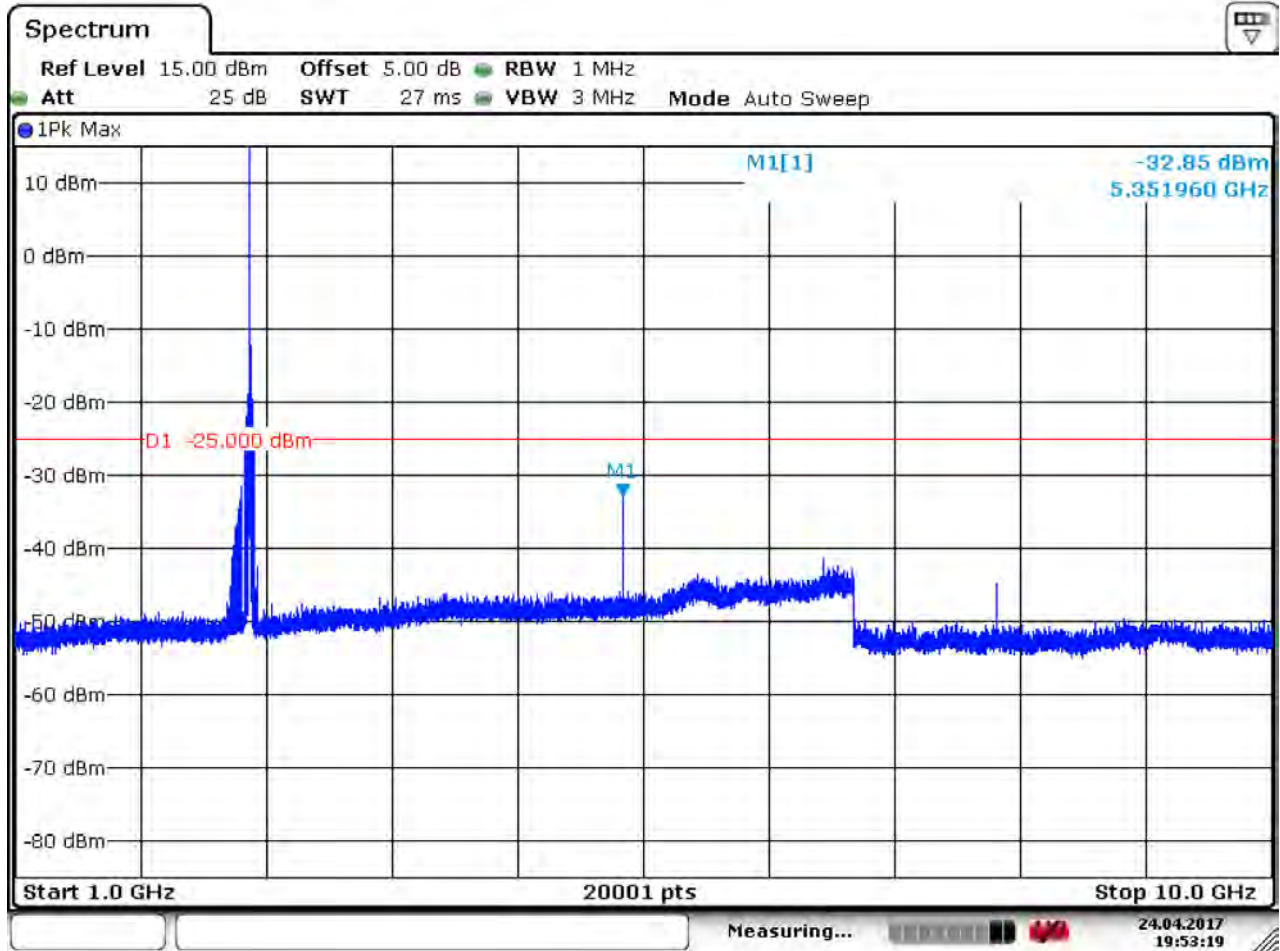
Date: 24.APR.2017 20:04:32



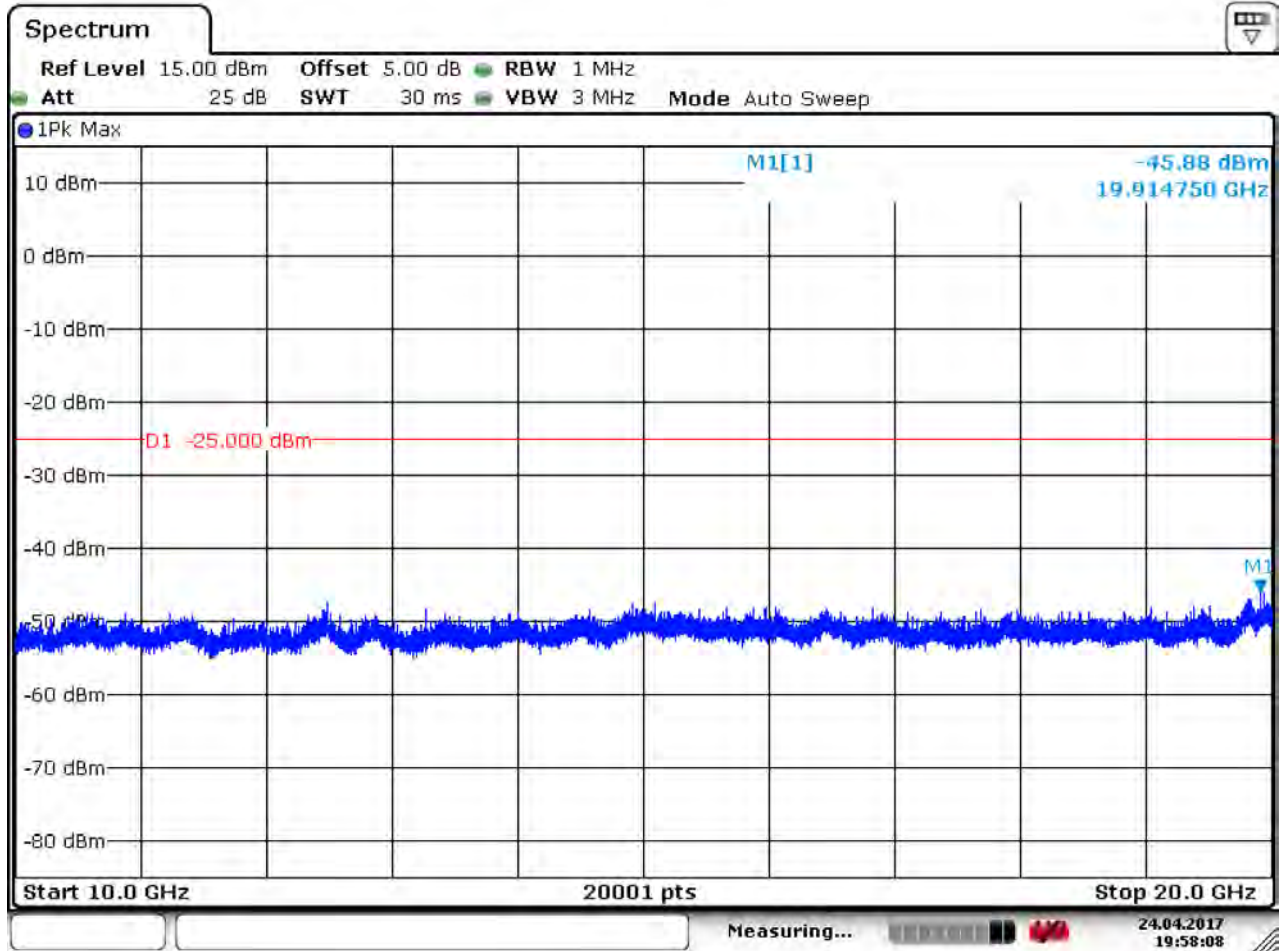
6.1.1.3.3 Test Channel = HCH



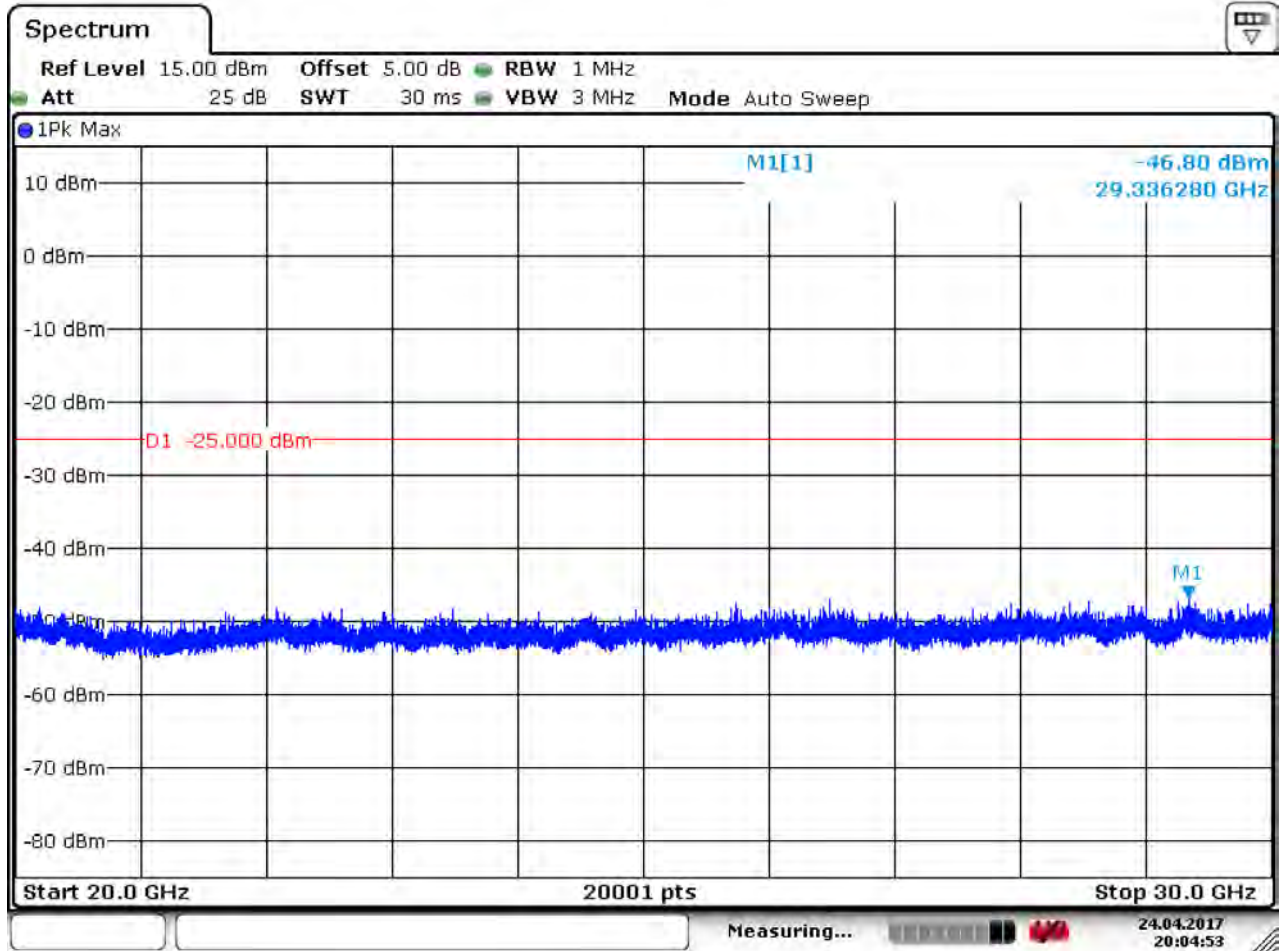
Date: 24. APR. 2017 19:38:35



Date: 24.APR.2017 19:53:20



Date: 24.APR.2017 19:58:09

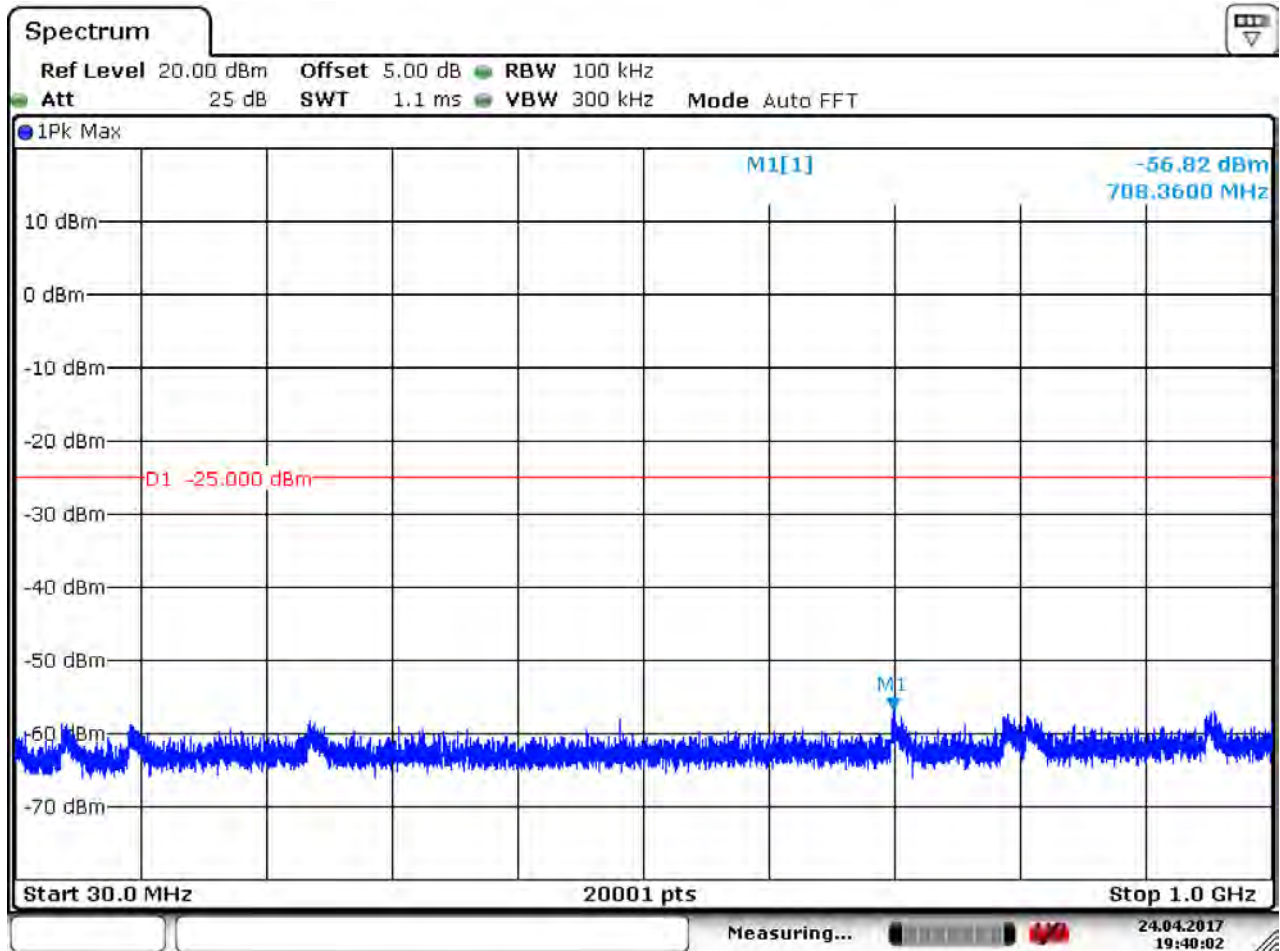


Date: 24.APR.2017 20:04:53

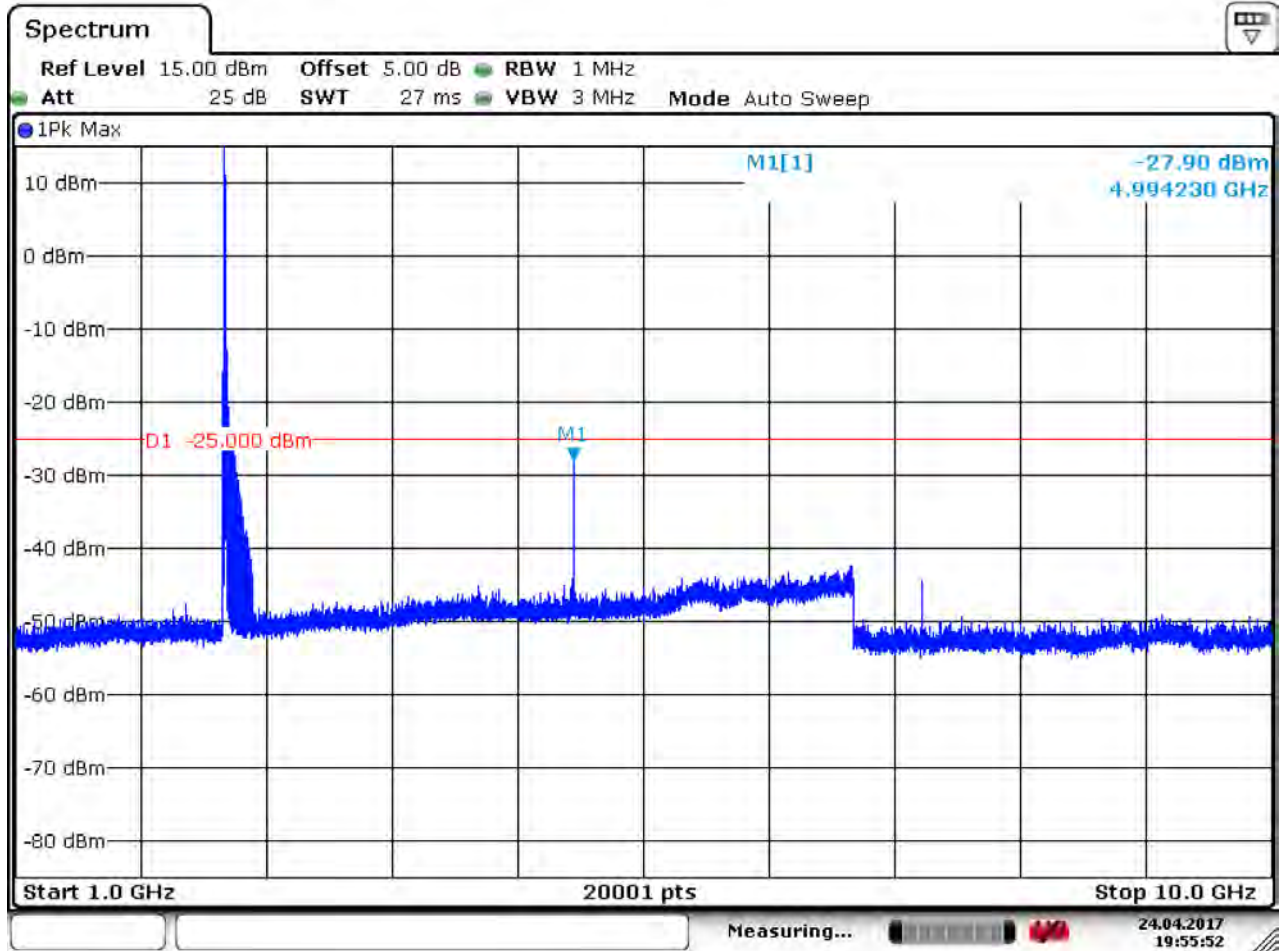


6.1.1.4 Test Mode = LTE / TM1 20MHz RB1#0

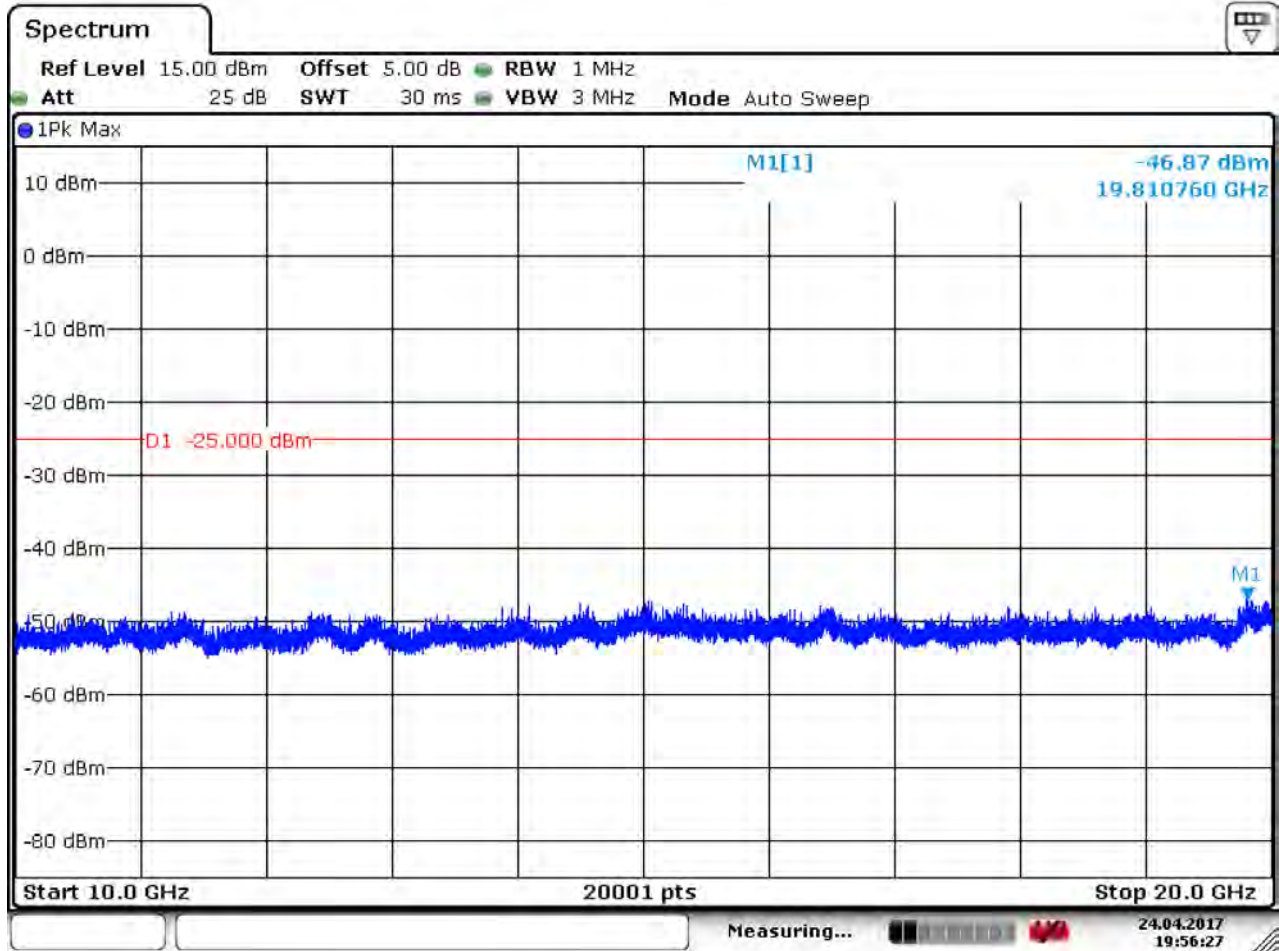
6.1.1.4.1 Test Channel = LCH



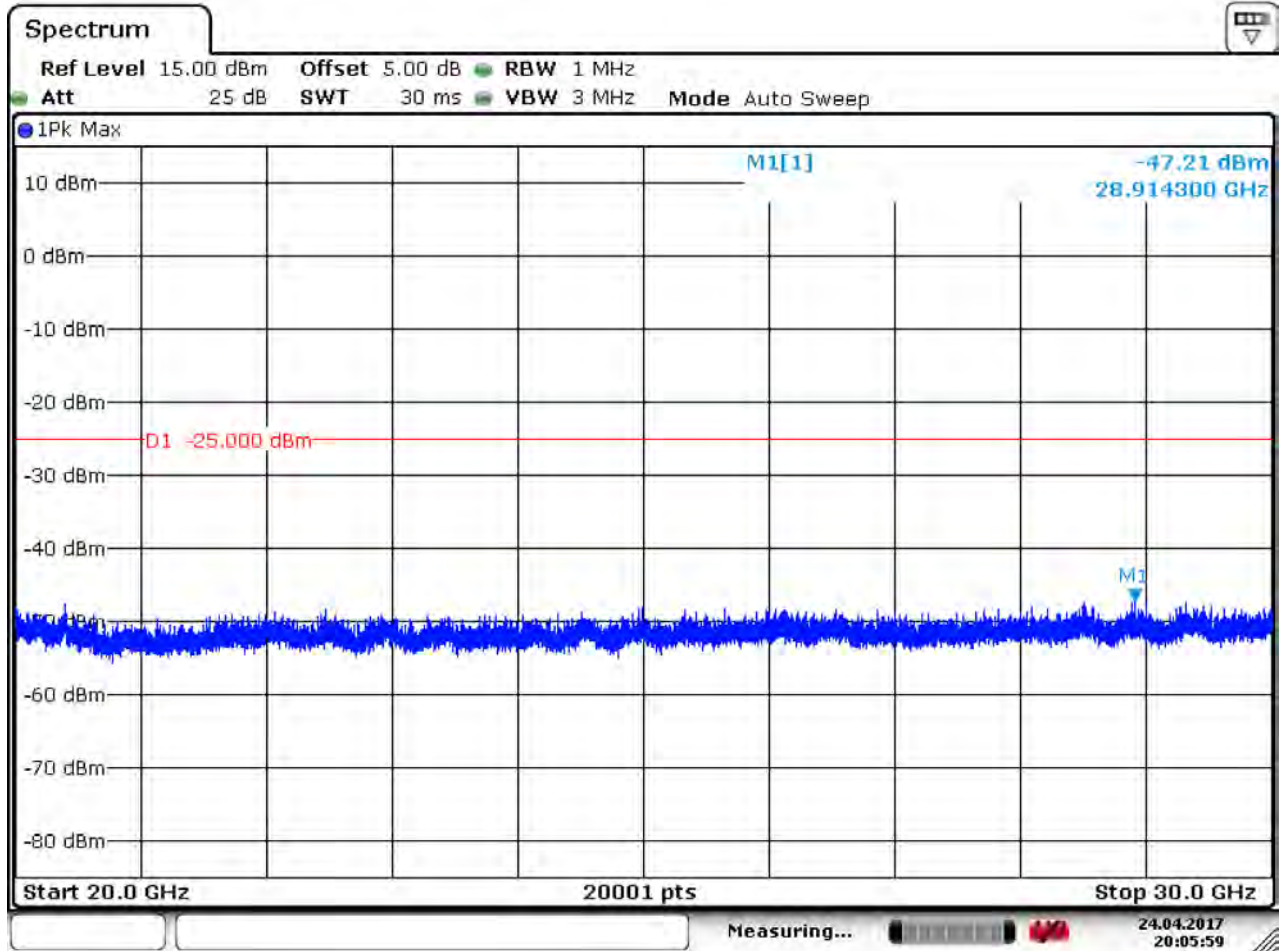
Date: 24. APR 2017 19:40:03



Date: 24.APR.2017 19:55:53



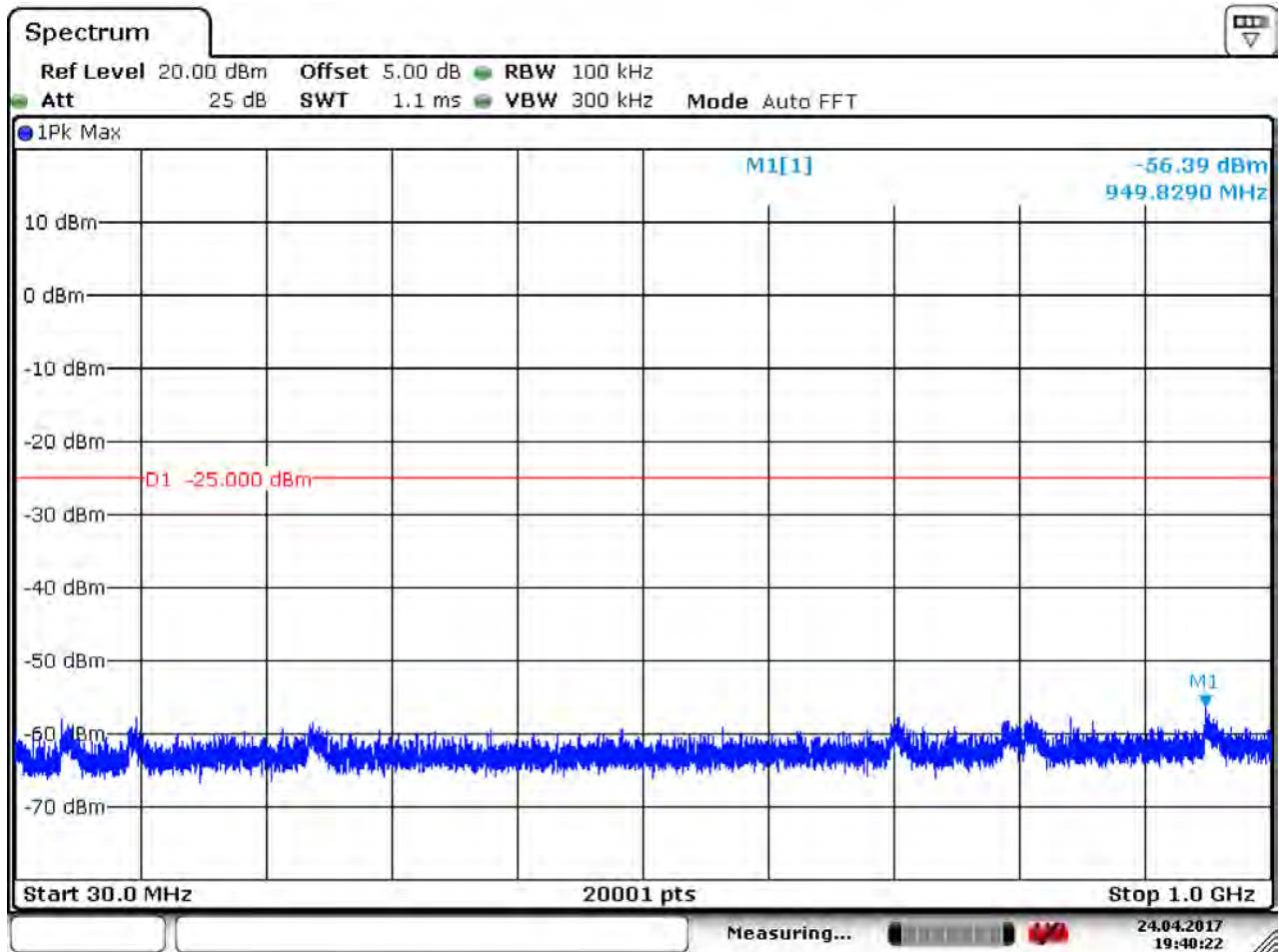
Date: 24.APR.2017 19:56:27



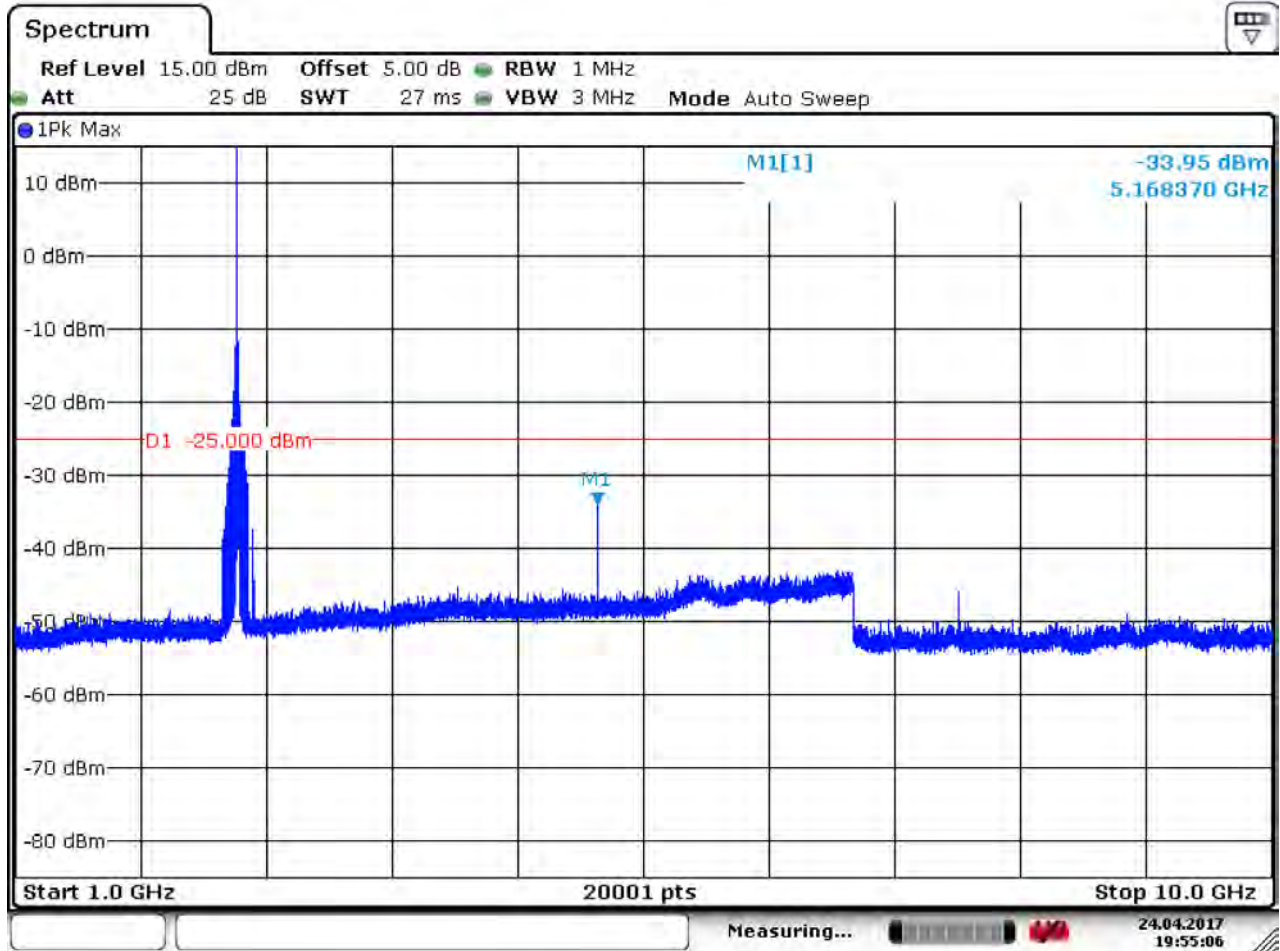
Date: 24.APR.2017 20:05:59



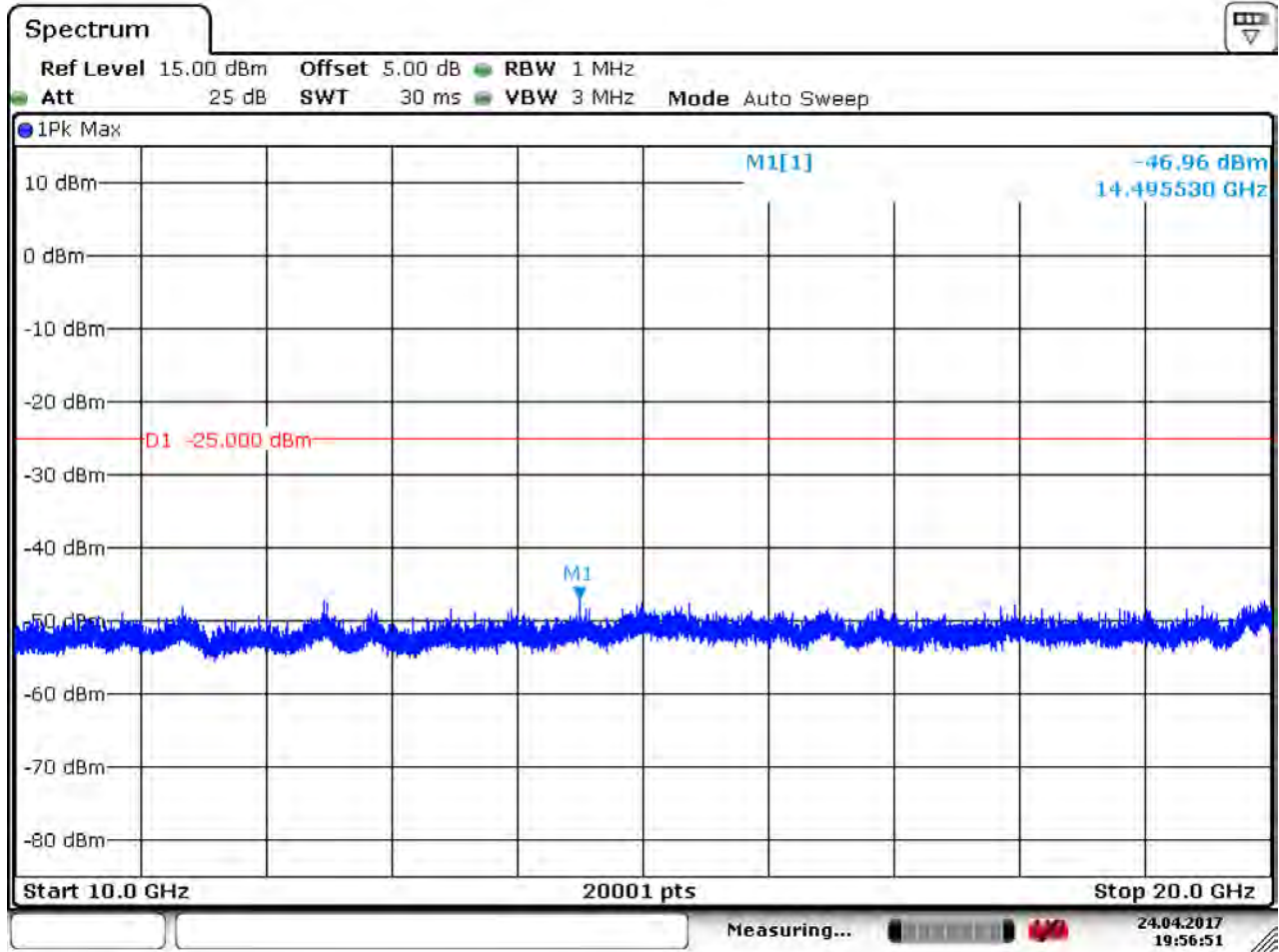
6.1.1.4.2 Test Channel = MCH



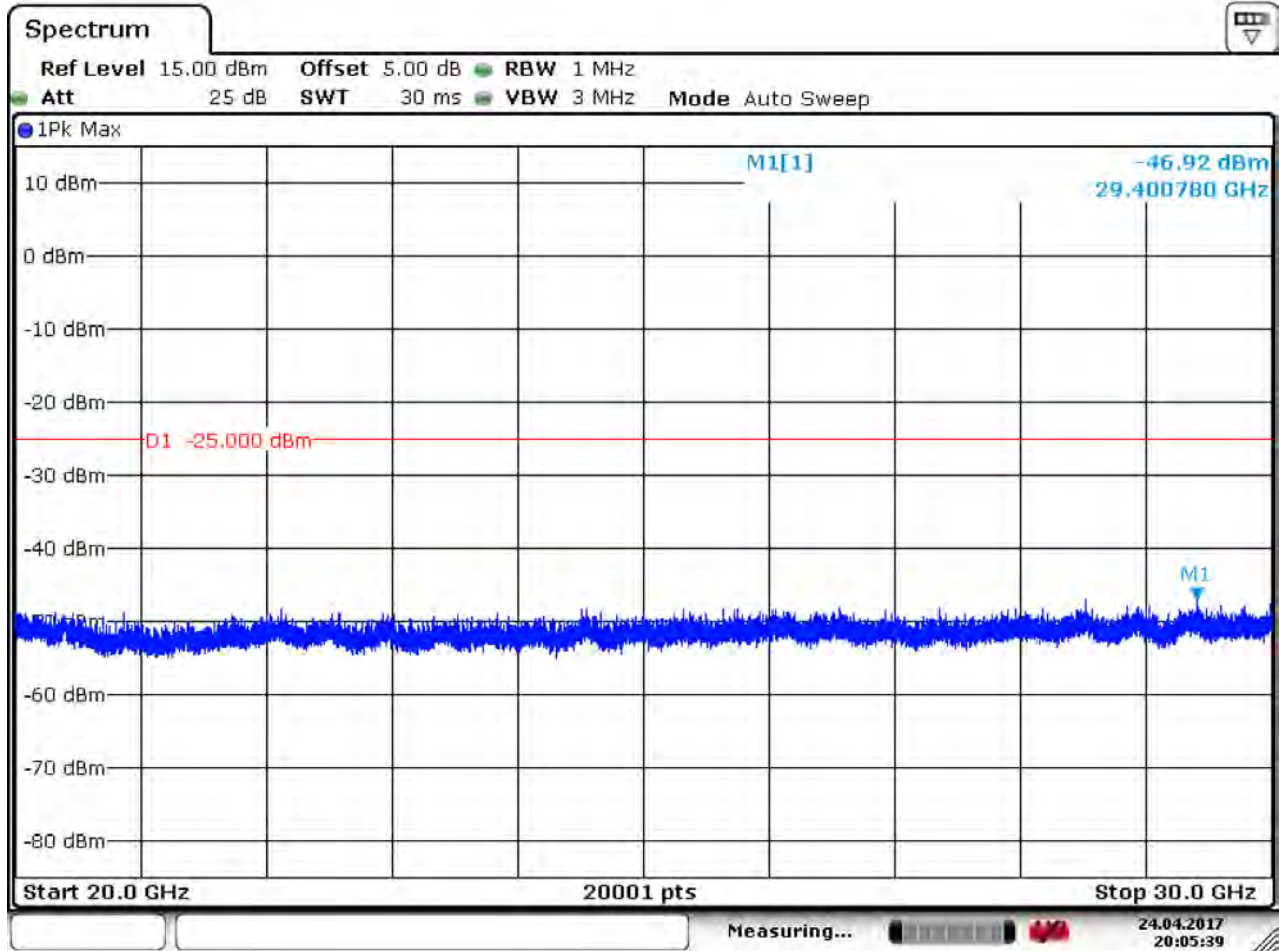
Date: 24. APR 2017 19:40:23



Date: 24.APR.2017 19:55:06



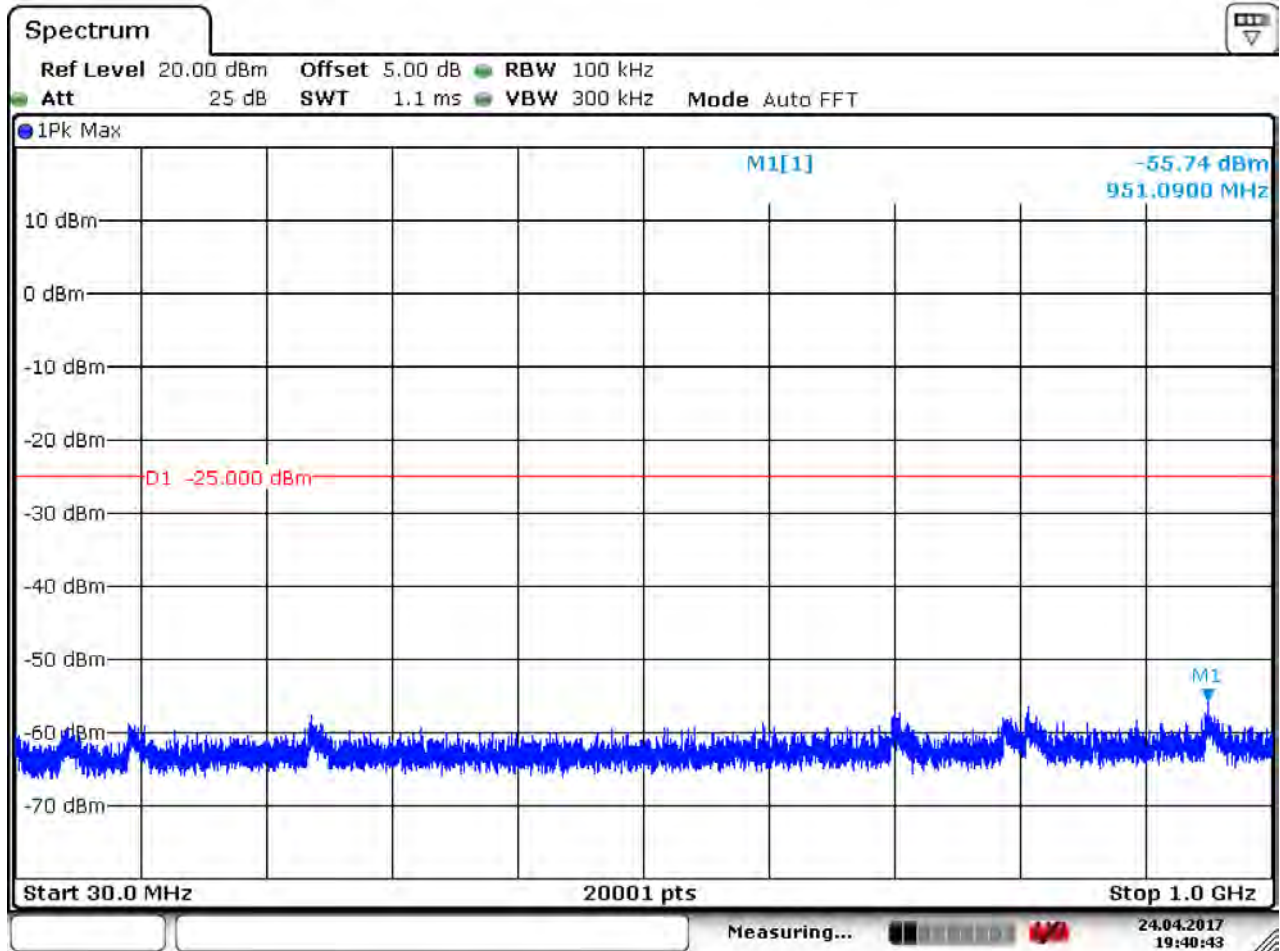
Date: 24.APR.2017 19:56:52



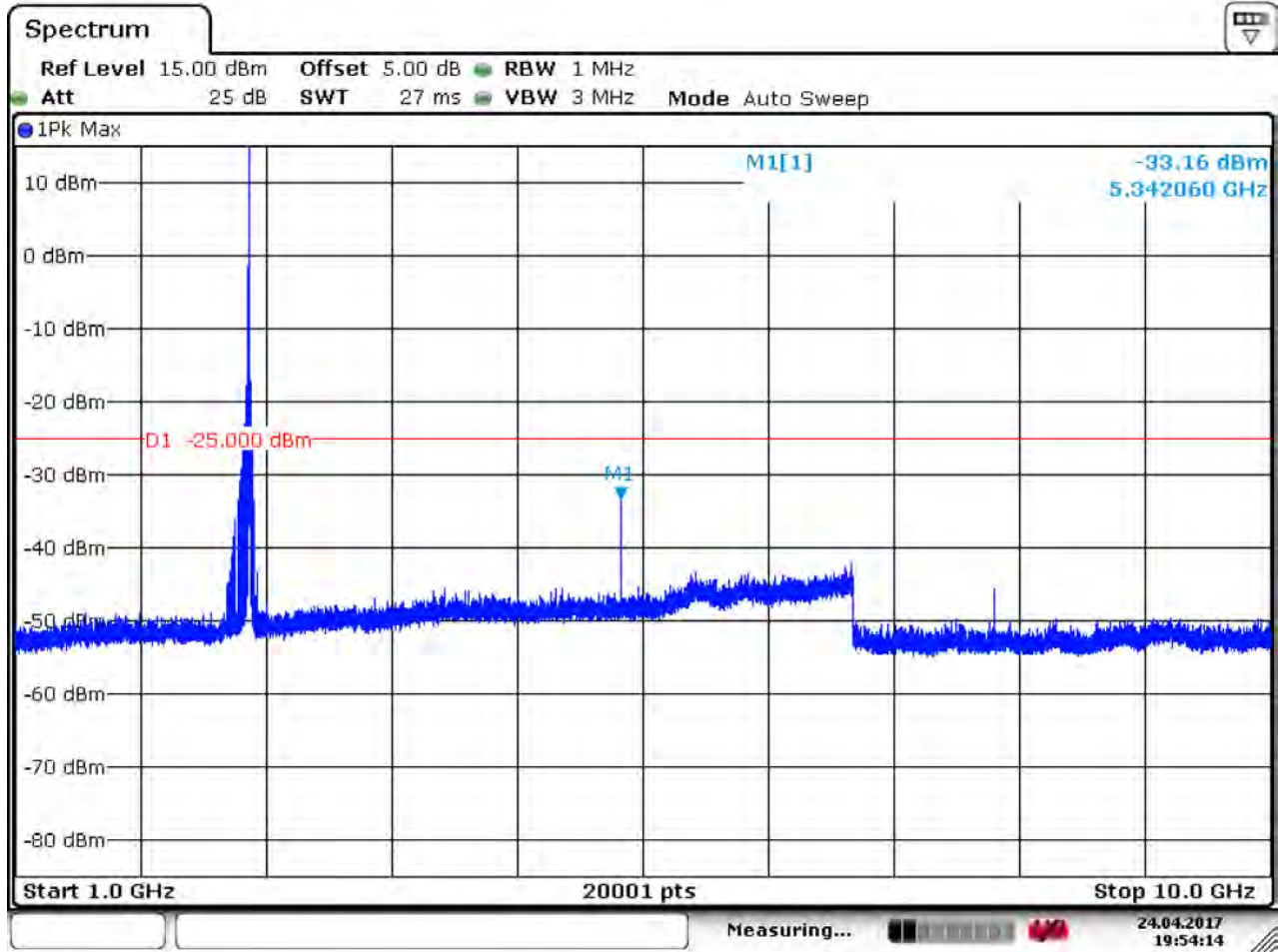
Date: 24.APR.2017 20:05:40



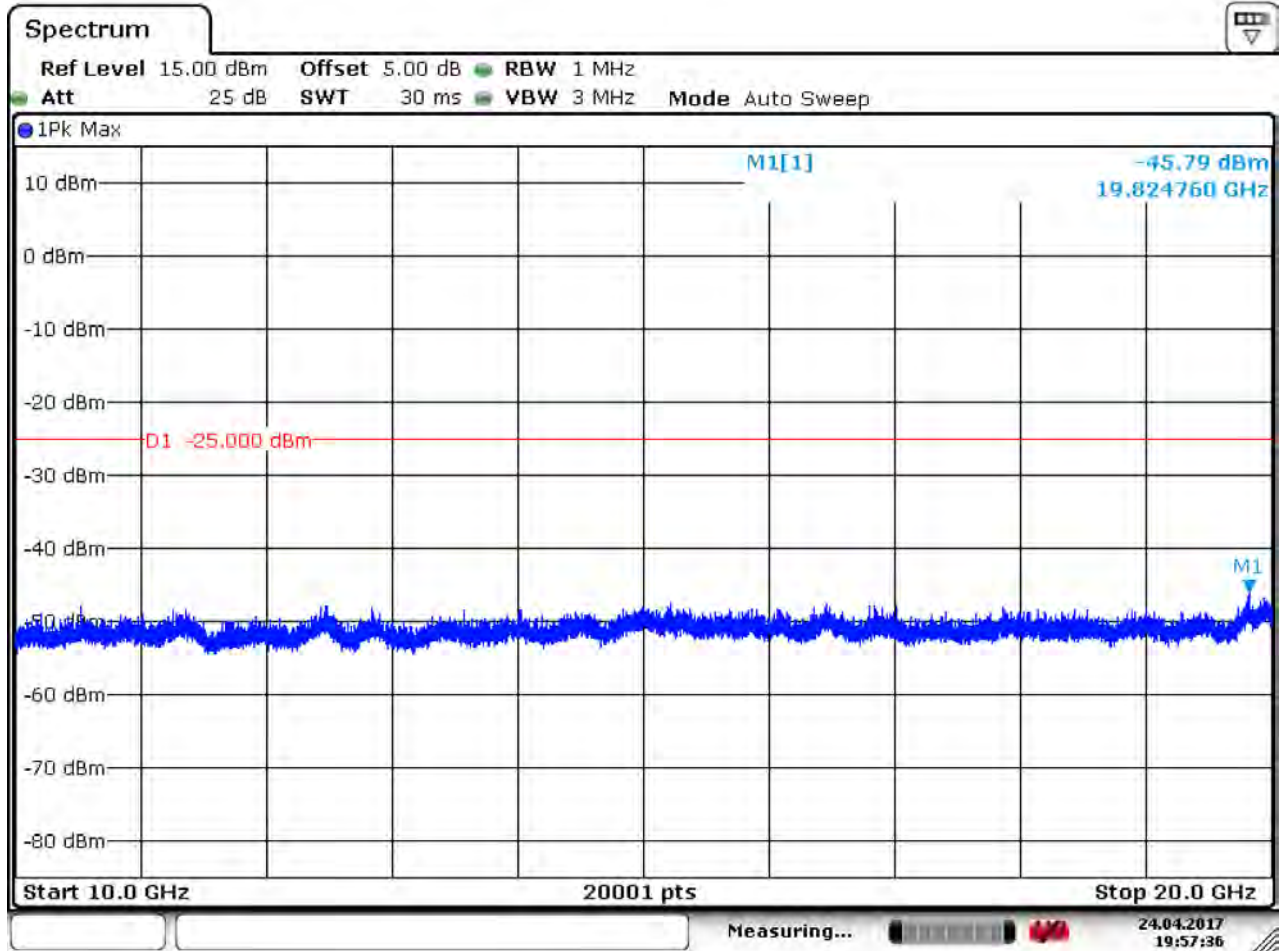
6.1.1.4.3 Test Channel = HCH



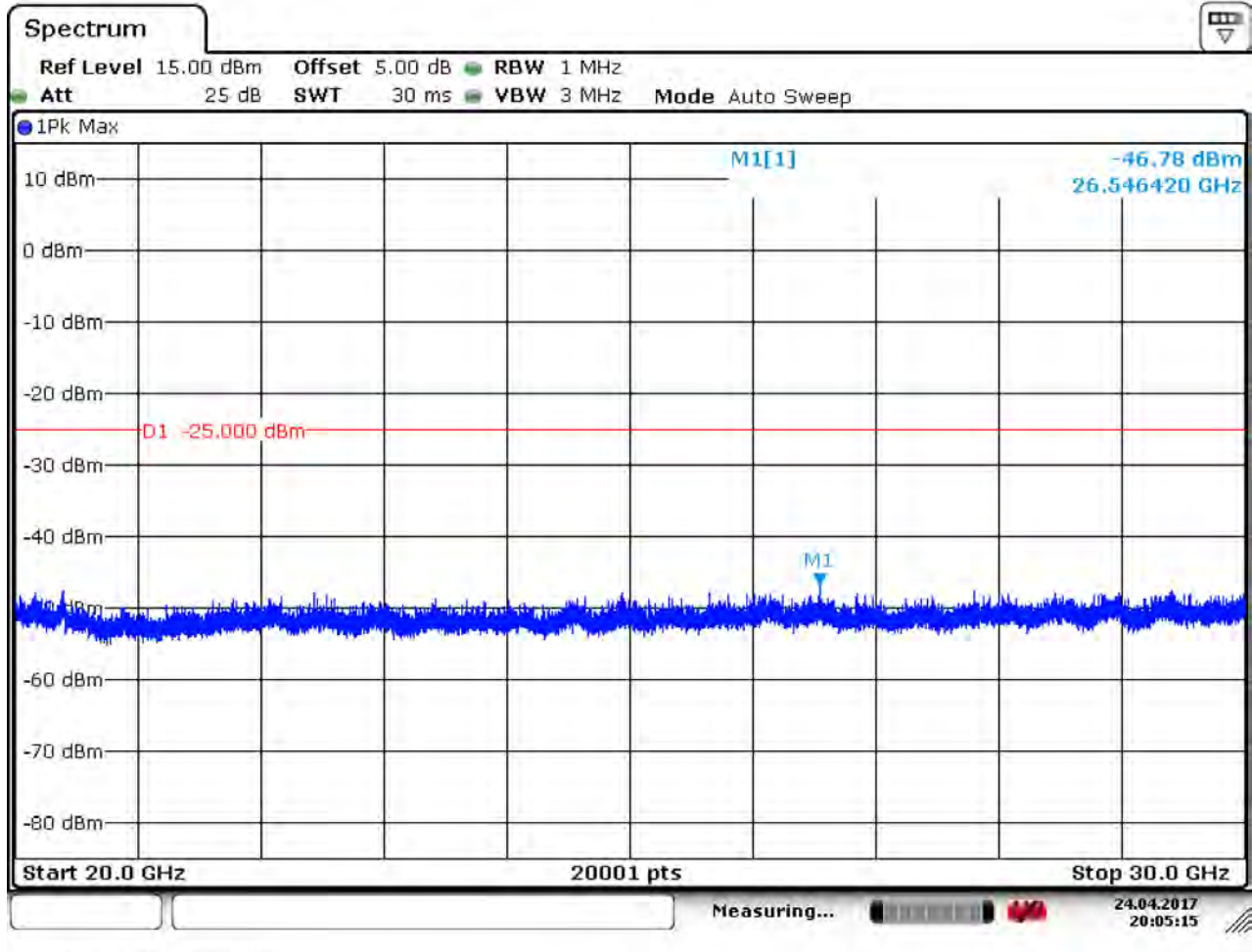
Date: 24. APR 2017 19:40:43



Date: 24.APR.2017 19:54:14



Date: 24.APR.2017 19:57:36



Date: 24.APR.2017 20:05:15



7 Field Strength of Spurious Radiation

7.1 For LTE

7.1.1 Test Band = LTE band41

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
1265.000	-66.38	-25.00	-41.38	Vertical
2608.000	-58.07	-25.00	-33.07	Vertical
6412.500	-66.82	-25.00	-41.82	Vertical
1199.000	-67.08	-25.00	-32.08	Horizontal
3487.500	-69.85	-25.00	-44.85	Horizontal
4267.500	-67.67	-25.00	-42.67	Horizontal

7.1.1.1.2 Test Channel = MCH

Frequency (MHz)	Level (dBm)	Limit Line (dBm)	Over Limit (dB)	Polarization
1617.000	-65.70	-25.00	-40.70	Vertical
1991.000	-61.61	-25.00	-36.61	Vertical
6120.000	-66.25	-25.00	-41.25	Vertical
1463.000	-66.26	-25.00	-41.26	Horizontal
1782.000	-63.77	-25.00	-38.77	Horizontal
2384.000	-59.04	-25.00	-34.04	Horizontal

7.1.1.1.3 Test Channel = HCH

Frequency (MHz)	Level (dBm)	Limit Line (dBm)	Over Limit (dB)	Polarization
1694.000	-64.53	-25.00	-39.53	Vertical
6900.000	-65.80	-25.00	-40.80	Vertical
9045.000	-64.79	-25.00	-39.79	Vertical
1529.000	-66.13	-25.00	-41.13	Horizontal
3292.500	-69.70	-25.00	-44.70	Horizontal
4170.000	-67.98	-25.00	-42.98	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.



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
LTEband41	LTE/TM1 20MHz	LCH	TN	VL	-3.03	-0.00121	PASS
				VN	2.46	0.00098	PASS
				VH	-5.73	-0.00229	PASS
		MCH	TN	VL	1.44	0.00056	PASS
				VN	-2.94	-0.00113	PASS
				VH	2.33	0.00090	PASS
		HCH	TN	VL	-6.26	-0.00234	PASS
				VN	-5.13	-0.00191	PASS
				VH	-2.74	-0.00102	PASS
	LTE/TM2 20MHz	LCH	TN	VL	-7.08	-0.00283	PASS
				VN	-2.35	-0.00094	PASS
				VH	-5.12	-0.00204	PASS
		MCH	TN	VL	2.53	0.00098	PASS
				VN	-2.82	-0.00109	PASS
				VH	1.39	0.00054	PASS
		HCH	TN	VL	-3.04	-0.00113	PASS
				VN	-6.32	-0.00236	PASS
				VH	3.34	0.00125	PASS



8.2 Frequency Error VS. Temperature

Test Band	Test Mode	Test Channel	Test Volt.	Test Temp.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict
LTEband41	LTE/TM1 20MHz	LCH	VN	-30	-3.13	-0.00125	PASS
				-20	2.47	0.00099	PASS
				-10	1.66	0.00066	PASS
				0	-4.27	-0.00170	PASS
				10	2.23	0.00089	PASS
				20	4.95	0.00198	PASS
				30	-0.72	-0.00029	PASS
				40	-4.16	-0.00166	PASS
				50	-5.90	-0.00235	PASS
		MCH	VN	-30	3.70	0.00143	PASS
				-20	1.69	0.00065	PASS
				-10	-4.31	-0.00166	PASS
				0	-3.15	-0.00121	PASS
				10	0.63	0.00024	PASS
				20	6.31	0.00243	PASS
				30	-5.85	-0.00226	PASS
				40	-4.42	-0.00170	PASS
				50	-5.16	-0.00199	PASS
		HCH	VN	-30	2.28	0.00085	PASS
				-20	-4.21	-0.00157	PASS
				-10	-3.62	-0.00135	PASS
				0	1.87	0.00070	PASS
				10	3.37	0.00126	PASS
				20	2.22	0.00083	PASS
				30	3.91	0.00146	PASS
				40	-1.75	-0.00065	PASS
				50	-5.19	-0.00194	PASS



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Test Band	Test Mode	Test Channel	Test Volt.	Test Temp.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict
LTEband41	LTE/TM2 20MHz	LCH	VN	-30	-7.71	-0.00308	PASS
				-20	-3.85	-0.00154	PASS
				-10	-7.50	-0.00299	PASS
				0	-5.58	-0.00223	PASS
				10	-4.09	-0.00163	PASS
				20	-489	-0.19513	PASS
				30	-5.70	-0.00227	PASS
				40	-4.69	-0.00187	PASS
		MCH	VN	-30	-2.39	-0.00092	PASS
				-20	1.73	0.00067	PASS
				-10	2.64	0.00102	PASS
				0	3.08	0.00119	PASS
				10	-0.35	-0.00013	PASS
				20	-0.14	-0.00005	PASS
				30	-4.65	-0.00179	PASS
				40	-6.60	-0.00255	PASS
		HCH	VN	-30	1.51	0.00056	PASS
				-20	-4.45	-0.00166	PASS
				-10	-7.87	-0.00294	PASS
				0	0.21	0.00008	PASS
				10	-6.61	-0.00247	PASS
				20	-2.27	-0.00085	PASS
				30	-8.13	-0.00303	PASS
				40	-3.07	-0.00115	PASS
				50	-6.42	-0.00240	PASS

The End