



# Appendix B

## E-UTRA Band4



## CONTENT

	Page
<b>1 EFFECTIVE (ISOTROPIC) RADIATED POWER OUTPUT DATA.....</b>	<b>3</b>
<b>2 PEAK-TO-AVERAGE RATIO .....</b>	<b>15</b>
2.1 FOR LTE .....	15
2.1.1 <i>Test Band = LTE Band4</i> .....	15
<b>3 MODULATION CHARACTERISTICS .....</b>	<b>21</b>
3.1 FOR LTE .....	21
3.1.1 <i>Test Band = LTE Band4</i> .....	21
<b>4 BANDWIDTH .....</b>	<b>23</b>
4.1 FOR LTE .....	24
4.1.1 <i>Test Band = LTE band4</i> .....	24
<b>5 BAND EDGES COMPLIANCE .....</b>	<b>61</b>
5.1 FOR LTE .....	61
5.1.1 <i>Test Band = LTE Band4</i> .....	61
<b>6 SPURIOUS EMISSION AT ANTENNA TERMINAL.....</b>	<b>109</b>
6.1 FOR LTE .....	109
6.1.1 <i>Test Band = LTE band4</i> .....	109
<b>7 FIELD STRENGTH OF SPURIOUS RADIATION .....</b>	<b>118</b>
7.1 FOR LTE .....	118
7.1.1 <i>Test Band = LTE Band4</i> .....	118
<b>8 FREQUENCY STABILITY .....</b>	<b>120</b>
8.1 FREQUENCY ERROR VS. VOLTAGE .....	120
8.2 FREQUENCY ERROR VS. TEMPERATURE .....	121



## 1 Effective (Isotropic) Radiated Power Output Data

### Part I - Test Results

Test Band(LTE)	Test Mode	Test Bandwidth	Test channel	Test RB	Measured (dBm)	SG Power(With Cable_Loss)	EIRP (dBm)	limit (dBm)	Verdict
BAND4	LTE/TM1	1.4M	LCH	RB1#0	22.37	20.15	23.27	30.00	PASS
				RB1#2	22.27	20.04	23.16	30.00	PASS
				RB1#5	22.25	19.17	22.29	30.00	PASS
				RB3#0	22.43	19.03	22.15	30.00	PASS
				RB3#2	22.51	19.74	22.86	30.00	PASS
				RB3#3	22.33	19.89	23.01	30.00	PASS
				RB6#0	21.55	17.65	20.77	30.00	PASS
			MCH	RB1#0	22.58	18.83	21.95	30.00	PASS
				RB1#2	22.77	19.33	22.45	30.00	PASS
				RB1#5	22.51	19.77	22.89	30.00	PASS
				RB3#0	22.64	20.48	23.6	30.00	PASS
				RB3#2	22.57	20.30	23.42	30.00	PASS
				RB3#3	22.44	19.81	22.93	30.00	PASS
				RB6#0	21.56	17.79	20.91	30.00	PASS
			HCH	RB1#0	22.64	18.72	21.84	30.00	PASS
				RB1#2	22.45	19.91	23.03	30.00	PASS
				RB1#5	22.57	18.88	22	30.00	PASS
				RB3#0	22.43	19.83	22.95	30.00	PASS
				RB3#2	22.43	19.78	22.9	30.00	PASS
				RB3#3	22.37	18.78	21.9	30.00	PASS
				RB6#0	21.54	18.24	21.36	30.00	PASS



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

Report No.: SZEM180100100001

Page: 4 of 122

Test Band(LTE)	Test Mode	Test Bandwidth	Test channel	Test RB	Measured (dBm)	SG Power( With Cable Loss)	EIRP (dBm )	limit (dBm )	Verdict
BAND4	LTE/TM2	1.4M	LCH	RB1#0	21.30	17.65	20.77	30.00	PASS
				RB1#2	21.47	17.56	20.68	30.00	PASS
				RB1#5	21.39	18.57	21.69	30.00	PASS
				RB3#0	21.56	18.94	22.06	30.00	PASS
				RB3#2	21.48	18.89	22.01	30.00	PASS
				RB3#3	21.42	18.84	21.96	30.00	PASS
				RB6#0	20.51	16.72	19.84	30.00	PASS
			MCH	RB1#0	21.76	19.66	22.78	30.00	PASS
				RB1#2	21.97	19.25	22.37	30.00	PASS
				RB1#5	21.54	19.03	22.15	30.00	PASS
				RB3#0	21.46	18.68	21.8	30.00	PASS
				RB3#2	21.47	19.44	22.56	30.00	PASS
				RB3#3	21.40	18.98	22.1	30.00	PASS
				RB6#0	20.52	18.14	21.26	30.00	PASS
			HCH	RB1#0	21.82	19.26	22.38	30.00	PASS
				RB1#2	22.04	19.76	22.88	30.00	PASS
				RB1#5	21.73	18.38	21.5	30.00	PASS
				RB3#0	21.37	18.50	21.62	30.00	PASS
				RB3#2	21.36	18.23	21.35	30.00	PASS
				RB3#3	21.41	19.13	22.25	30.00	PASS
				RB6#0	20.64	18.16	21.28	30.00	PASS



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

Report No.: SZEM180100100001

Page: 5 of 122

Test Band(LTE)	Test Mode	Test Bandwidth	Test channel	Test RB	Measured (dBm)	SG Power( With Cable Loss)	EIRP (dBm )	limit (dBm )	Verdict
BAND4	LTE/TM 1	3M	LCH	RB1#0	22.61	20.60	23.72	30.00	PASS
				RB1#7	22.33	18.70	21.82	30.00	PASS
				RB1#14	22.73	20.47	23.59	30.00	PASS
				RB8#0	21.58	17.89	21.01	30.00	PASS
				RB8#4	21.58	19.39	22.51	30.00	PASS
				RB8#7	21.62	17.90	21.02	30.00	PASS
				RB15#0	21.54	18.61	21.73	30.00	PASS
			MCH	RB1#0	22.65	19.11	22.23	30.00	PASS
				RB1#7	22.40	19.96	23.08	30.00	PASS
				RB1#14	22.92	19.86	22.98	30.00	PASS
				RB8#0	21.59	18.73	21.85	30.00	PASS
				RB8#4	21.60	18.52	21.64	30.00	PASS
				RB8#7	21.63	19.39	22.51	30.00	PASS
				RB15#0	21.54	18.04	21.16	30.00	PASS
			HCH	RB1#0	22.54	19.32	22.44	30.00	PASS
				RB1#7	22.27	18.67	21.79	30.00	PASS
				RB1#14	22.42	20.12	23.24	30.00	PASS
				RB8#0	21.48	18.60	21.72	30.00	PASS
				RB8#4	21.49	17.77	20.89	30.00	PASS
				RB8#7	21.52	18.84	21.96	30.00	PASS
				RB15#0	21.46	17.55	20.67	30.00	PASS

<sup>4</sup>This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.



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

Report No.: SZEM180100100001  
Page: 6 of 122

Test Band(LTE)	Test Mode	Test Bandwidth	Test channel	Test RB	Measured (dBm)	SG Power( With Cable Loss)	EIRP (dBm )	limit (dBm )	Verdict
BAND4	LTE/TM2	3M	LCH	RB1#0	21.83	18.00	21.12	30.00	PASS
				RB1#7	21.57	18.83	21.95	30.00	PASS
				RB1#14	21.73	19.53	22.65	30.00	PASS
				RB8#0	20.53	17.55	20.67	30.00	PASS
				RB8#4	20.60	17.89	21.01	30.00	PASS
				RB8#7	20.60	18.59	21.71	30.00	PASS
				RB15#0	20.58	18.23	21.35	30.00	PASS
			MCH	RB1#0	21.76	18.02	21.14	30.00	PASS
				RB1#7	21.54	19.00	22.12	30.00	PASS
				RB1#14	21.62	18.64	21.76	30.00	PASS
				RB8#0	20.53	16.67	19.79	30.00	PASS
				RB8#4	20.72	18.59	21.71	30.00	PASS
				RB8#7	20.56	17.11	20.23	30.00	PASS
				RB15#0	20.51	16.63	19.75	30.00	PASS
			HCH	RB1#0	21.38	18.54	21.66	30.00	PASS
				RB1#7	21.40	18.40	21.52	30.00	PASS
				RB1#14	21.26	18.14	21.26	30.00	PASS
				RB8#0	20.66	18.46	21.58	30.00	PASS
				RB8#4	20.59	17.54	20.66	30.00	PASS
				RB8#7	20.71	17.33	20.45	30.00	PASS
				RB15#0	20.59	18.45	21.57	30.00	PASS

<sup>4</sup>This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.



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

Report No.: SZEM180100100001

Page: 7 of 122

Test Band(LTE)	Test Mode	Test Bandwidth	Test channel	Test RB	Measured (dBm)	SG Power( With Cable Loss)	EIRP (dBm )	limit (dBm )	Verdict
BAND4	LTE/TM1	5M	LCH	RB1#0	22.56	19.61	22.73	30.00	PASS
				RB1#13	22.42	20.23	23.35	30.00	PASS
				RB1#24	22.47	20.24	23.36	30.00	PASS
				RB12#0	21.39	19.05	22.17	30.00	PASS
				RB12#6	21.40	18.37	21.49	30.00	PASS
				RB12#13	21.53	17.63	20.75	30.00	PASS
				RB25#0	21.42	19.42	22.54	30.00	PASS
			MCH	RB1#0	22.43	19.19	22.31	30.00	PASS
				RB1#13	22.43	19.44	22.56	30.00	PASS
				RB1#24	22.45	19.65	22.77	30.00	PASS
				RB12#0	21.57	18.12	21.24	30.00	PASS
				RB12#6	21.49	17.85	20.97	30.00	PASS
				RB12#13	21.48	19.12	22.24	30.00	PASS
				RB25#0	21.54	18.37	21.49	30.00	PASS
			HCH	RB1#0	22.57	19.28	22.4	30.00	PASS
				RB1#13	22.54	19.65	22.77	30.00	PASS
				RB1#24	22.40	19.97	23.09	30.00	PASS
				RB12#0	21.62	19.12	22.24	30.00	PASS
				RB12#6	21.63	18.29	21.41	30.00	PASS
				RB12#13	21.74	18.90	22.02	30.00	PASS
				RB25#0	21.65	18.29	21.41	30.00	PASS



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

Report No.: SZEM180100100001  
Page: 8 of 122

Test Band(LTE)	Test Mode	Test Bandwidth	Test channel	Test RB	Measured (dBm)	SG Power( With Cable Loss)	EIRP (dBm )	limit (dBm )	Verdict
BAND4	LTE/TM2	5M	LCH	RB1#0	21.41	18.38	21.5	30.00	PASS
				RB1#13	21.62	18.59	21.71	30.00	PASS
				RB1#24	21.61	19.15	22.27	30.00	PASS
				RB12#0	20.37	16.87	19.99	30.00	PASS
				RB12#6	20.55	16.87	19.99	30.00	PASS
				RB12#13	20.50	16.99	20.11	30.00	PASS
				RB25#0	20.41	17.75	20.87	30.00	PASS
			MCH	RB1#0	21.40	18.03	21.15	30.00	PASS
				RB1#13	21.47	17.84	20.96	30.00	PASS
				RB1#24	21.48	18.02	21.14	30.00	PASS
				RB12#0	20.43	16.81	19.93	30.00	PASS
				RB12#6	20.43	17.51	20.63	30.00	PASS
				RB12#13	20.54	17.93	21.05	30.00	PASS
				RB25#0	20.61	16.95	20.07	30.00	PASS
			HCH	RB1#0	21.28	17.95	21.07	30.00	PASS
				RB1#13	21.39	18.93	22.05	30.00	PASS
				RB1#24	21.46	18.54	21.66	30.00	PASS
				RB12#0	20.64	17.22	20.34	30.00	PASS
				RB12#6	20.72	18.04	21.16	30.00	PASS
				RB12#13	20.66	17.52	20.64	30.00	PASS
				RB25#0	20.81	17.56	20.68	30.00	PASS

<sup>4</sup>This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Documents.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.





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

Report No.: SZEM180100100001

Page: 9 of 122

Test Band(LTE)	Test Mode	Test Bandwidth	Test channel	Test RB	Measured (dBm)	SG Power( With Cable Loss)	EIRP (dBm )	limit (dBm )	Verdict
BAND4	LTE/TM 1	10M	LCH	RB1#0	22.41	18.47	21.59	30.00	PASS
				RB1#25	22.45	19.49	22.61	30.00	PASS
				RB1#49	22.37	18.70	21.82	30.00	PASS
				RB25#0	21.54	18.98	22.1	30.00	PASS
				RB25#13	21.64	19.17	22.29	30.00	PASS
				RB25#25	21.60	19.33	22.45	30.00	PASS
				RB50#0	21.51	18.83	21.95	30.00	PASS
			MCH	RB1#0	22.55	20.02	23.14	30.00	PASS
				RB1#25	22.56	18.76	21.88	30.00	PASS
				RB1#49	22.58	19.27	22.39	30.00	PASS
				RB25#0	21.53	18.32	21.44	30.00	PASS
				RB25#13	21.54	18.74	21.86	30.00	PASS
				RB25#25	21.57	18.41	21.53	30.00	PASS
				RB50#0	21.65	17.81	20.93	30.00	PASS
			HCH	RB1#0	22.49	19.34	22.46	30.00	PASS
				RB1#25	22.37	19.63	22.75	30.00	PASS
				RB1#49	22.55	19.76	22.88	30.00	PASS
				RB25#0	21.56	19.05	22.17	30.00	PASS
				RB25#13	21.57	18.82	21.94	30.00	PASS
				RB25#25	21.65	19.43	22.55	30.00	PASS
				RB50#0	21.57	17.70	20.82	30.00	PASS



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

Report No.: SZEM180100100001  
Page: 10 of 122

Test Band(LTE)	Test Mode	Test Bandwidth	Test channel	Test RB	Measured (dBm)	SG Power( With Cable Loss)	EIRP (dBm )	limit (dBm )	Verdict
BAND4	LTE/TM2	10M	LCH	RB1#0	21.70	18.58	21.7	30.00	PASS
				RB1#25	21.64	18.83	21.95	30.00	PASS
				RB1#49	21.35	18.46	21.58	30.00	PASS
				RB25#0	20.68	18.44	21.56	30.00	PASS
				RB25#13	20.67	17.16	20.28	30.00	PASS
				RB25#25	20.64	16.81	19.93	30.00	PASS
				RB50#0	20.54	17.35	20.47	30.00	PASS
			MCH	RB1#0	21.86	18.31	21.43	30.00	PASS
				RB1#25	21.72	17.74	20.86	30.00	PASS
				RB1#49	21.78	18.31	21.43	30.00	PASS
				RB25#0	20.57	17.94	21.06	30.00	PASS
				RB25#13	20.58	16.58	19.7	30.00	PASS
				RB25#25	20.62	18.22	21.34	30.00	PASS
				RB50#0	20.67	17.38	20.5	30.00	PASS
			HCH	RB1#0	21.55	18.70	21.82	30.00	PASS
				RB1#25	21.68	18.58	21.7	30.00	PASS
				RB1#49	21.66	18.21	21.33	30.00	PASS
				RB25#0	20.57	16.87	19.99	30.00	PASS
				RB25#13	20.57	17.75	20.87	30.00	PASS
				RB25#25	20.65	16.89	20.01	30.00	PASS
				RB50#0	20.56	16.81	19.93	30.00	PASS

<sup>4</sup>This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.



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

Report No.: SZEM180100100001

Page: 11 of 122

Test Band(LTE)	Test Mode	Test Bandwidth	Test channel	Test RB	Measured (dBm)	SG Power (With Cable Loss)	EIRP (dBm)	limit (dBm)	Verdict
BAND4	LTE/TM1	15M	LCH	RB1#0	22.36	18.63	21.75	30.00	PASS
				RB1#38	22.34	19.19	22.31	30.00	PASS
				RB1#74	22.22	19.31	22.43	30.00	PASS
				RB36#0	21.24	17.99	21.11	30.00	PASS
				RB36#18	21.38	18.15	21.27	30.00	PASS
				RB36#39	21.15	18.13	21.25	30.00	PASS
				RB75#0	21.41	19.13	22.25	30.00	PASS
			MCH	RB1#0	22.23	19.10	22.22	30.00	PASS
				RB1#38	22.22	18.74	21.86	30.00	PASS
				RB1#74	22.10	19.15	22.27	30.00	PASS
				RB36#0	21.33	17.98	21.1	30.00	PASS
				RB36#18	21.20	18.59	21.71	30.00	PASS
				RB36#39	21.18	18.06	21.18	30.00	PASS
				RB75#0	21.52	17.80	20.92	30.00	PASS
			HCH	RB1#0	22.66	20.32	23.44	30.00	PASS
				RB1#38	22.53	18.93	22.05	30.00	PASS
				RB1#74	22.63	19.58	22.7	30.00	PASS
				RB36#0	21.54	18.33	21.45	30.00	PASS
				RB36#18	21.90	19.55	22.67	30.00	PASS
				RB36#39	21.62	18.70	21.82	30.00	PASS
				RB75#0	21.54	18.55	21.67	30.00	PASS



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

Report No.: SZEM180100100001

Page: 12 of 122

Test Band(LTE)	Test Mode	Test Bandwidth	Test channel	Test RB	Measured (dBm)	SG Power (With Cable Loss)	EIRP (dBm)	limit (dBm)	Verdict
BAND4	LTE/TM2	15M	LCH	RB1#0	21.57	18.42	21.54	30.00	PASS
				RB1#38	21.35	17.80	20.92	30.00	PASS
				RB1#74	21.45	18.27	21.39	30.00	PASS
				RB36#0	21.22	18.72	21.84	30.00	PASS
				RB36#18	21.29	19.00	22.12	30.00	PASS
				RB36#39	21.18	17.26	20.38	30.00	PASS
				RB75#0	20.48	18.31	21.43	30.00	PASS
			MCH	RB1#0	21.29	19.25	22.37	30.00	PASS
				RB1#38	21.47	18.47	21.59	30.00	PASS
				RB1#74	21.32	19.18	22.3	30.00	PASS
				RB36#0	21.31	17.84	20.96	30.00	PASS
				RB36#18	21.31	18.32	21.44	30.00	PASS
				RB36#39	21.07	19.03	22.15	30.00	PASS
				RB75#0	20.54	17.63	20.75	30.00	PASS
			HCH	RB1#0	21.85	18.29	21.41	30.00	PASS
				RB1#38	21.77	18.37	21.49	30.00	PASS
				RB1#74	21.66	19.45	22.57	30.00	PASS
				RB36#0	21.84	19.72	22.84	30.00	PASS
				RB36#18	21.70	19.61	22.73	30.00	PASS
				RB36#39	21.62	19.20	22.32	30.00	PASS
				RB75#0	20.57	16.86	19.98	30.00	PASS

<sup>4</sup>This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.



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

Report No.: SZEM180100100001

Page: 13 of 122

Test Band(LTE)	Test Mode	Test Bandwidth	Test channel	Test RB	Measured (dBm)	SG Power( With Cable Loss)	EIRP (dBm )	limit (dBm )	Verdict
BAND4	LTE/TM 1	20M	LCH	RB1#0	22.37	18.47	21.59	30.00	PASS
				RB1#50	22.81	20.16	23.28	30.00	PASS
				RB1#99	22.36	19.29	22.41	30.00	PASS
				RB50#0	21.58	18.53	21.65	30.00	PASS
				RB50#25	21.73	19.08	22.2	30.00	PASS
				RB50#50	21.68	19.66	22.78	30.00	PASS
				RB100#0	21.61	18.18	21.3	30.00	PASS
			MCH	RB1#0	22.67	20.11	23.23	30.00	PASS
				RB1#50	22.50	19.90	23.02	30.00	PASS
				RB1#99	22.70	19.47	22.59	30.00	PASS
				RB50#0	21.65	19.43	22.55	30.00	PASS
				RB50#25	21.66	19.20	22.32	30.00	PASS
				RB50#50	21.54	18.92	22.04	30.00	PASS
				RB100#0	21.63	18.91	22.03	30.00	PASS
			HCH	RB1#0	22.39	19.33	22.45	30.00	PASS
				RB1#50	22.61	20.16	23.28	30.00	PASS
				RB1#99	22.45	19.35	22.47	30.00	PASS
				RB50#0	21.55	17.75	20.87	30.00	PASS
				RB50#25	21.59	18.79	21.91	30.00	PASS
				RB50#50	21.69	19.36	22.48	30.00	PASS
				RB100#0	21.65	18.17	21.29	30.00	PASS

<sup>4</sup>This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.



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

Report No.: SZEM180100100001

Page: 14 of 122

Test Band(LTE)	Test Mode	Test Band width	Test channel	Test RB	Measured (dBm)	SG Power(With Cable Loss)	EIRP (dBm)	limit (dBm)	Verdict
BAND4	LTE/TM2	20M	LCH	RB1#0	21.63	18.98	22.1	30.00	PASS
				RB1#50	21.77	19.74	22.86	30.00	PASS
				RB1#99	21.82	17.93	21.05	30.00	PASS
				RB50#0	20.65	18.41	21.53	30.00	PASS
				RB50#25	20.72	18.58	21.7	30.00	PASS
				RB50#50	20.65	17.60	20.72	30.00	PASS
				RB100#0	20.59	17.00	20.12	30.00	PASS
			MCH	RB1#0	21.97	18.72	21.84	30.00	PASS
				RB1#50	21.97	19.80	22.92	30.00	PASS
				RB1#99	21.89	19.39	22.51	30.00	PASS
				RB50#0	20.68	17.08	20.2	30.00	PASS
				RB50#25	20.69	18.42	21.54	30.00	PASS
				RB50#50	20.53	17.71	20.83	30.00	PASS
				RB100#0	20.54	17.10	20.22	30.00	PASS
			HCH	RB1#0	21.73	19.07	22.19	30.00	PASS
				RB1#50	21.46	18.55	21.67	30.00	PASS
				RB1#99	21.57	19.08	22.2	30.00	PASS
				RB50#0	20.64	16.96	20.08	30.00	PASS
				RB50#25	20.74	18.59	21.71	30.00	PASS
				RB50#50	20.67	18.08	21.2	30.00	PASS
				RB100#0	20.47	17.68	20.8	30.00	PASS

Note:

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

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

<sup>4</sup>This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.



b: SGP=Signal Generator Level

## 2 Peak-to-Average Ratio

### Part I - Test Results

Test Band	Test Mode	Test Channel	Measured[dB]	Limit [dB]	Verdict
Band4	TM1/20M	LCH	5.57	13	PASS
		MCH	4.67	13	PASS
		HCH	4.64	13	PASS
	TM2/20M	LCH	6.49	13	PASS
		MCH	5.65	13	PASS
		HCH	5.62	13	PASS

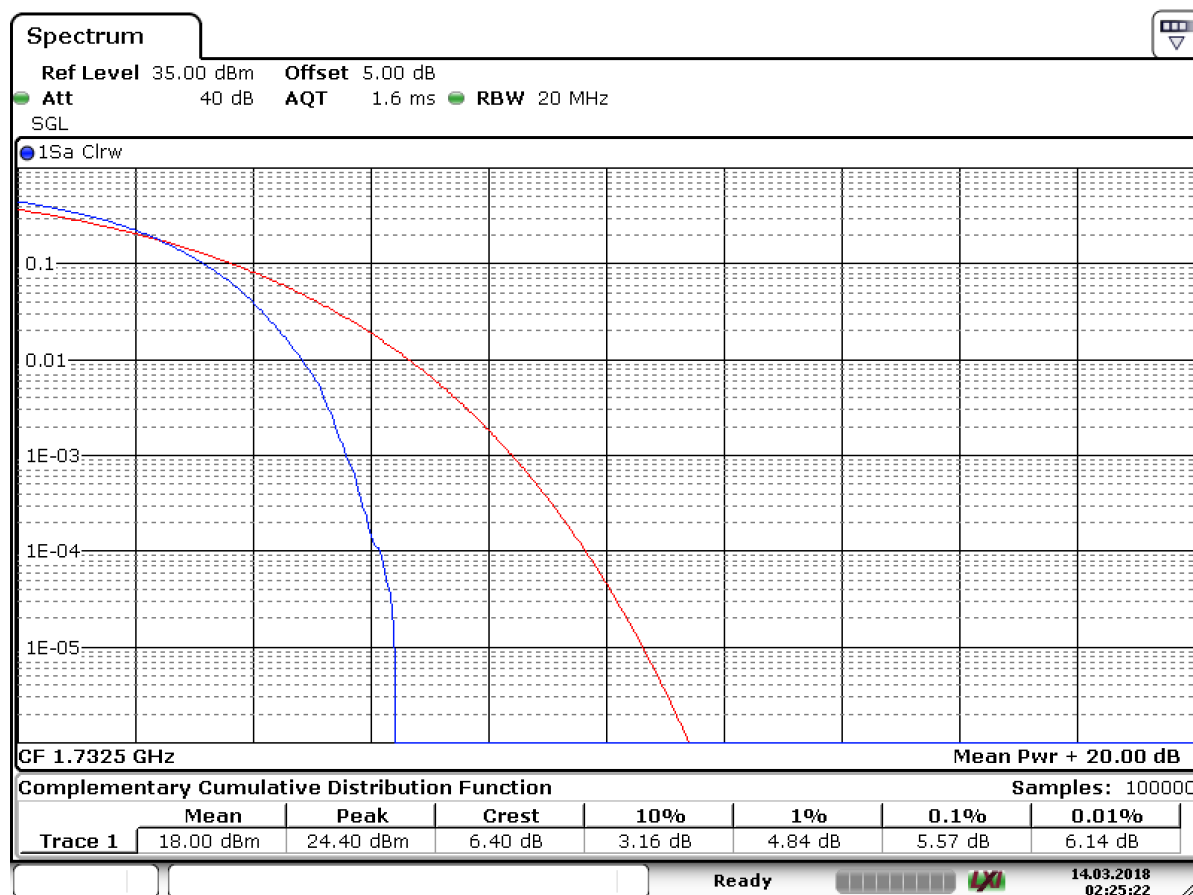
### Part II - Test Plots

## 2.1 For LTE

### 2.1.1 Test Band = LTE Band4

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

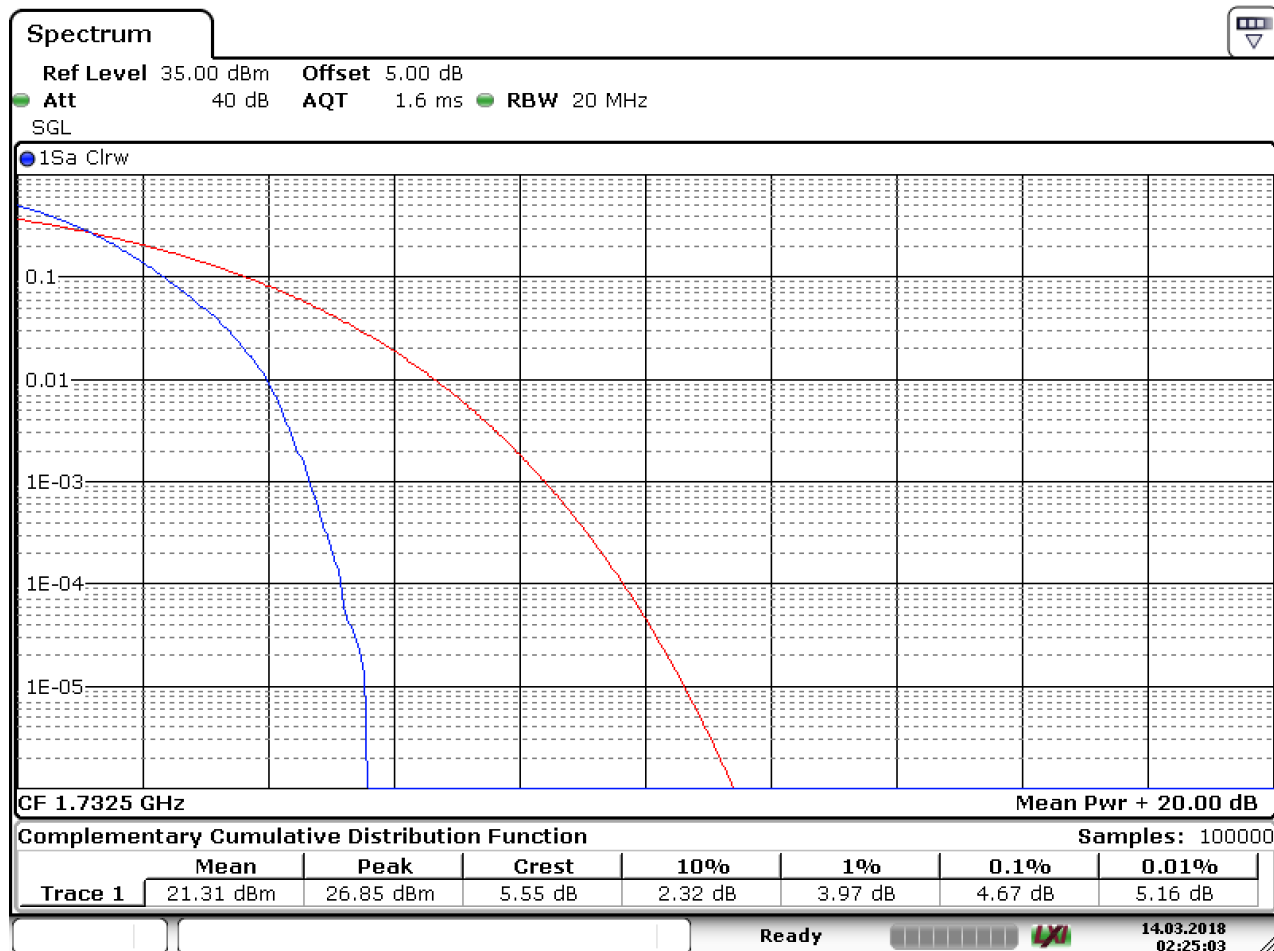
##### 2.1.1.1.1 Test Channel = LCH



Date: 14.MAR.2018 02:25:22



2.1.1.1.2 Test Channel = MCH

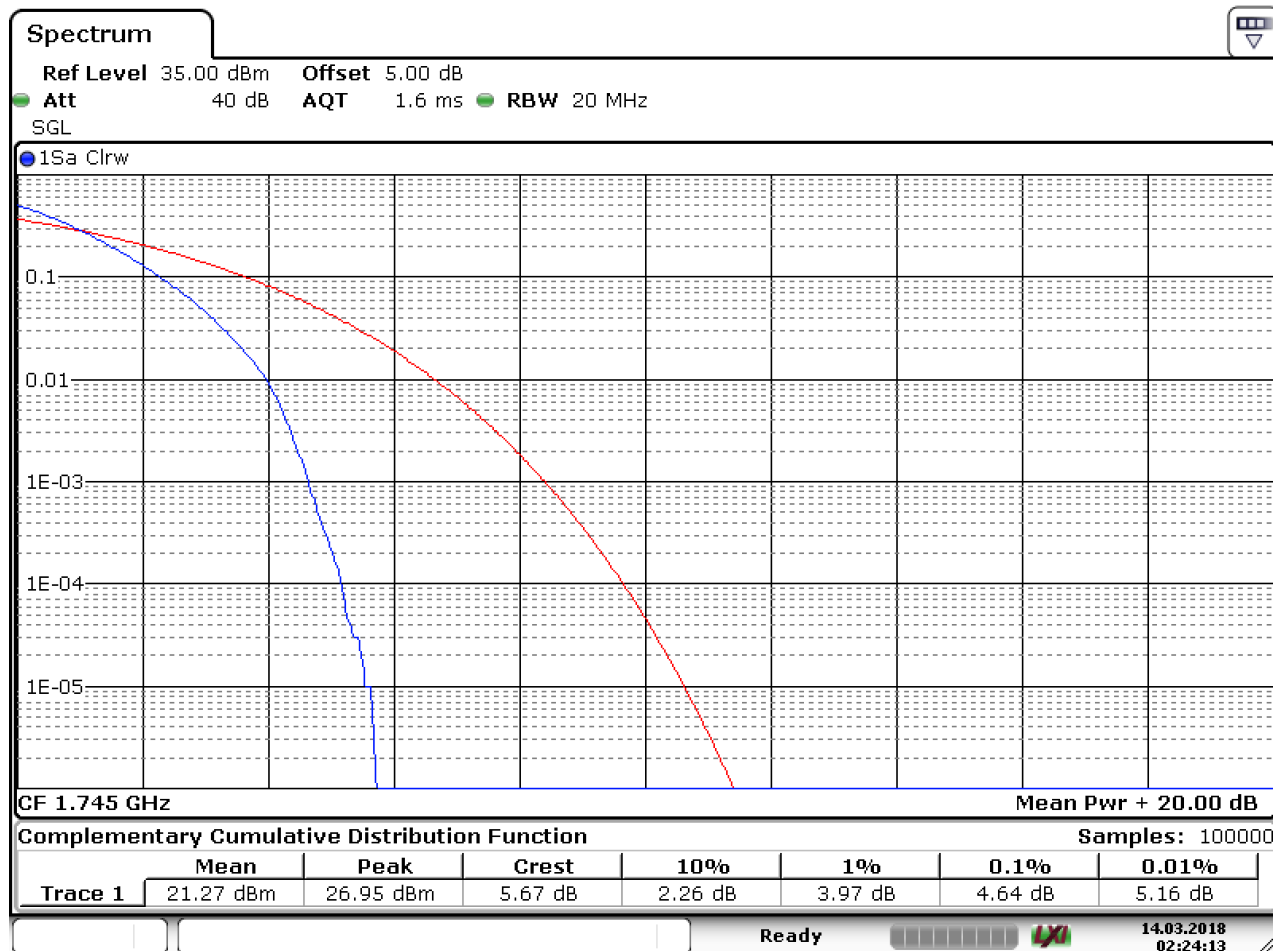


Date: 14.MAR.2018 02:25:02





2.1.1.1.3 Test Channel = HCH

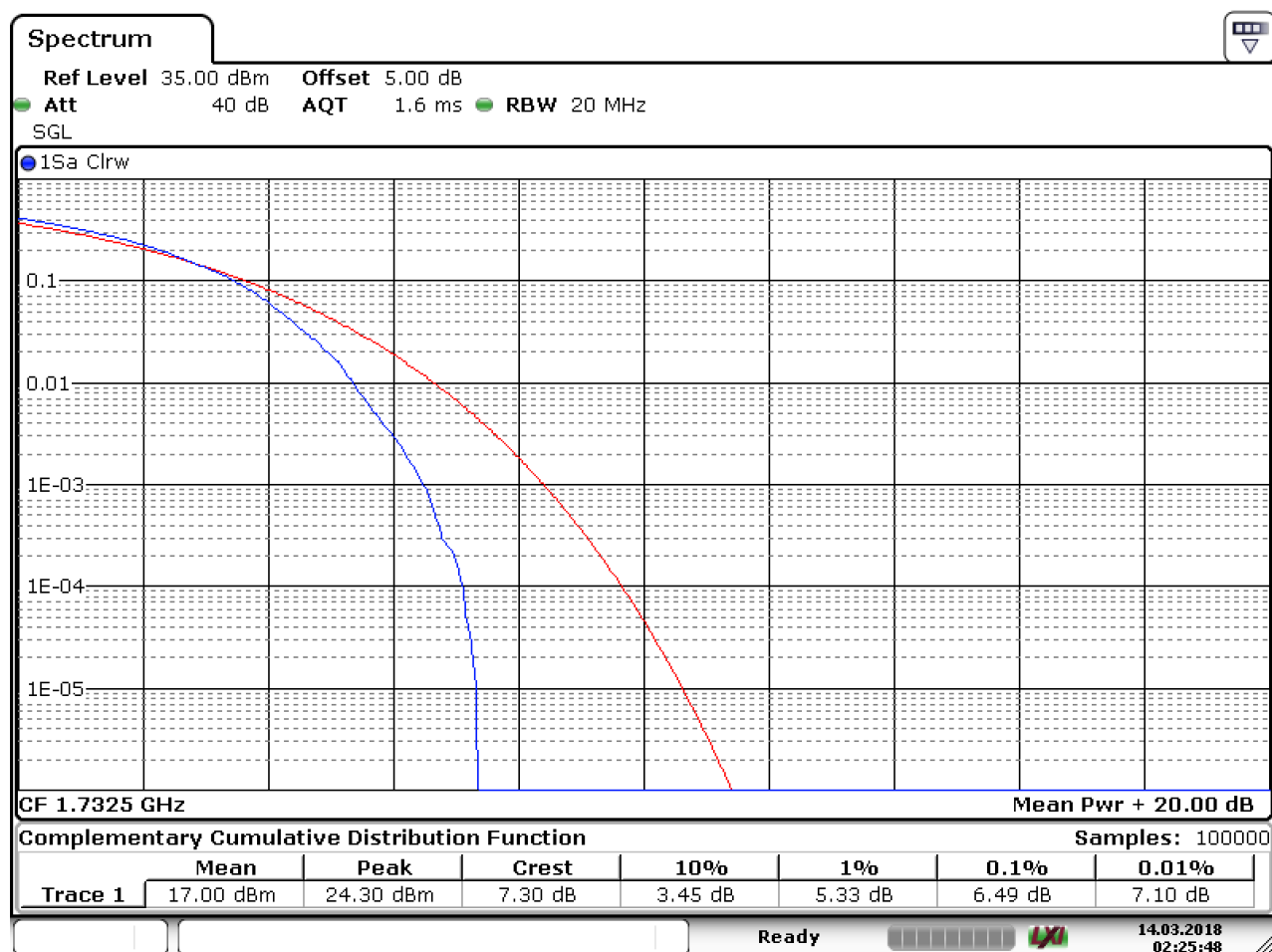


Date: 14.MAR.2018 02:24:13



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

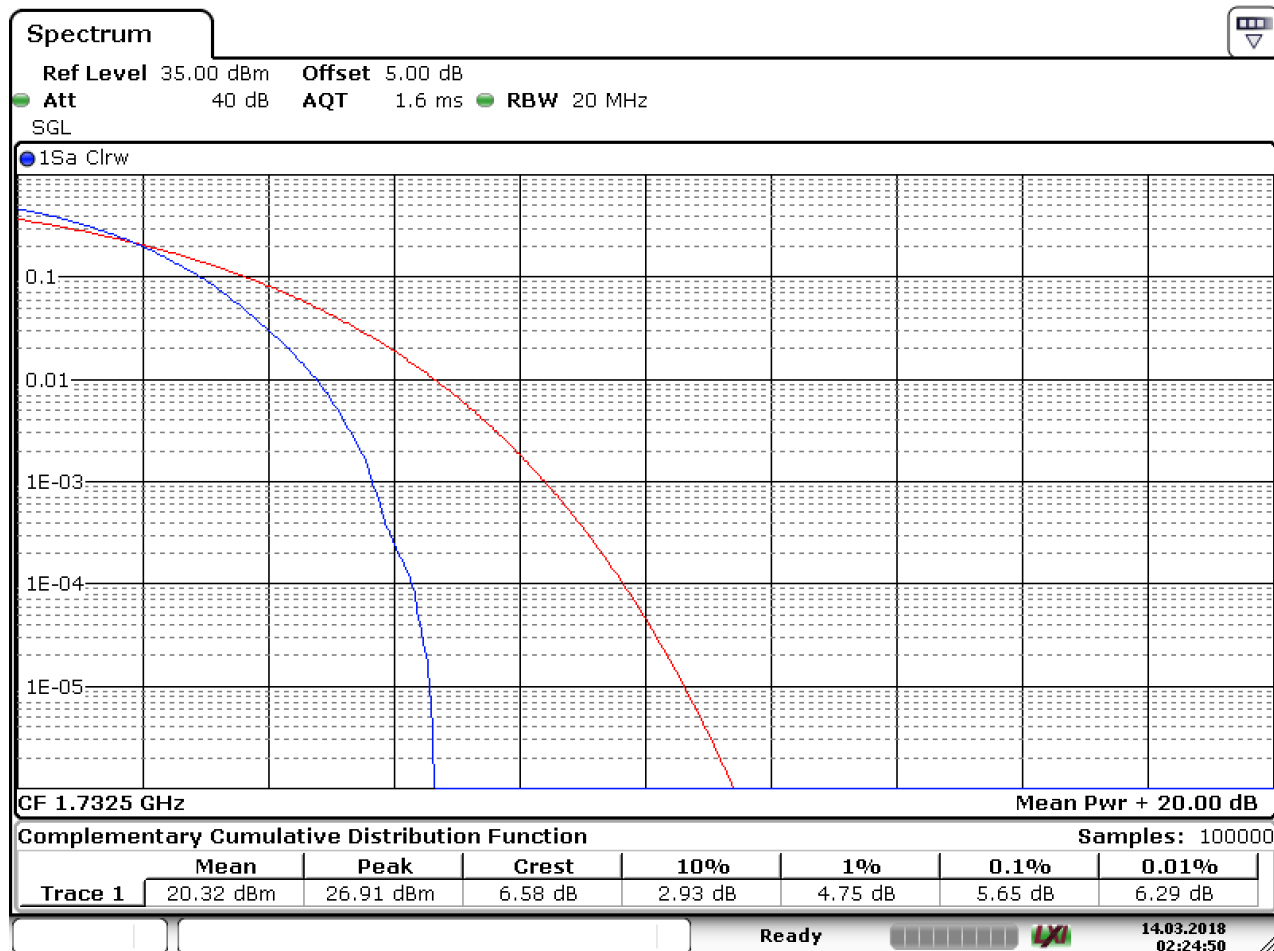
2.1.1.2.1 Test Channel = LCH



Date: 14.MAR.2018 02:25:48



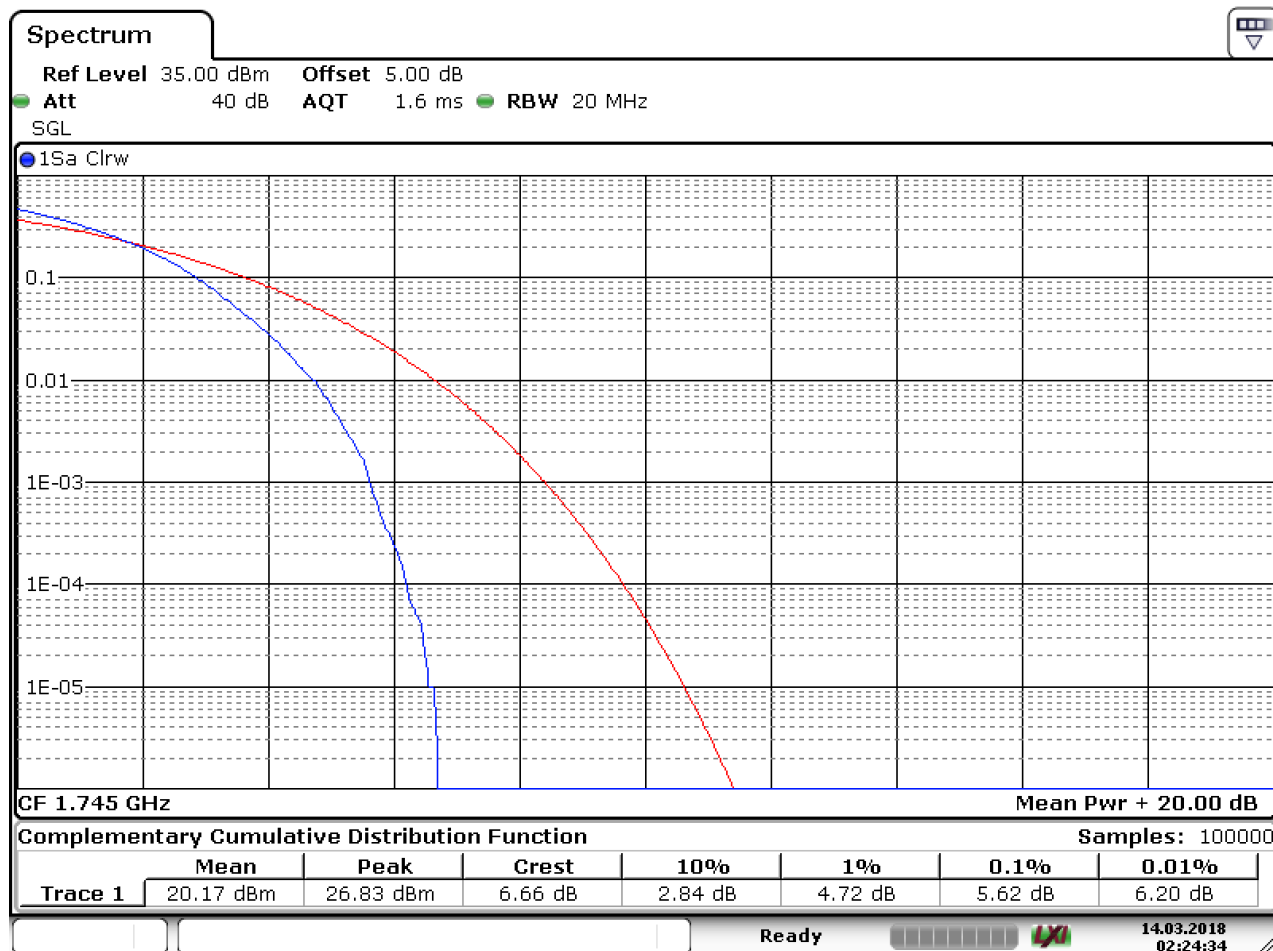
2.1.1.2.2 Test Channel = MCH



Date: 14.MAR.2018 02:24:51



2.1.1.2.3 Test Channel = HCH



Date: 14.MAR.2018 02:24:35



### 3 Modulation Characteristics

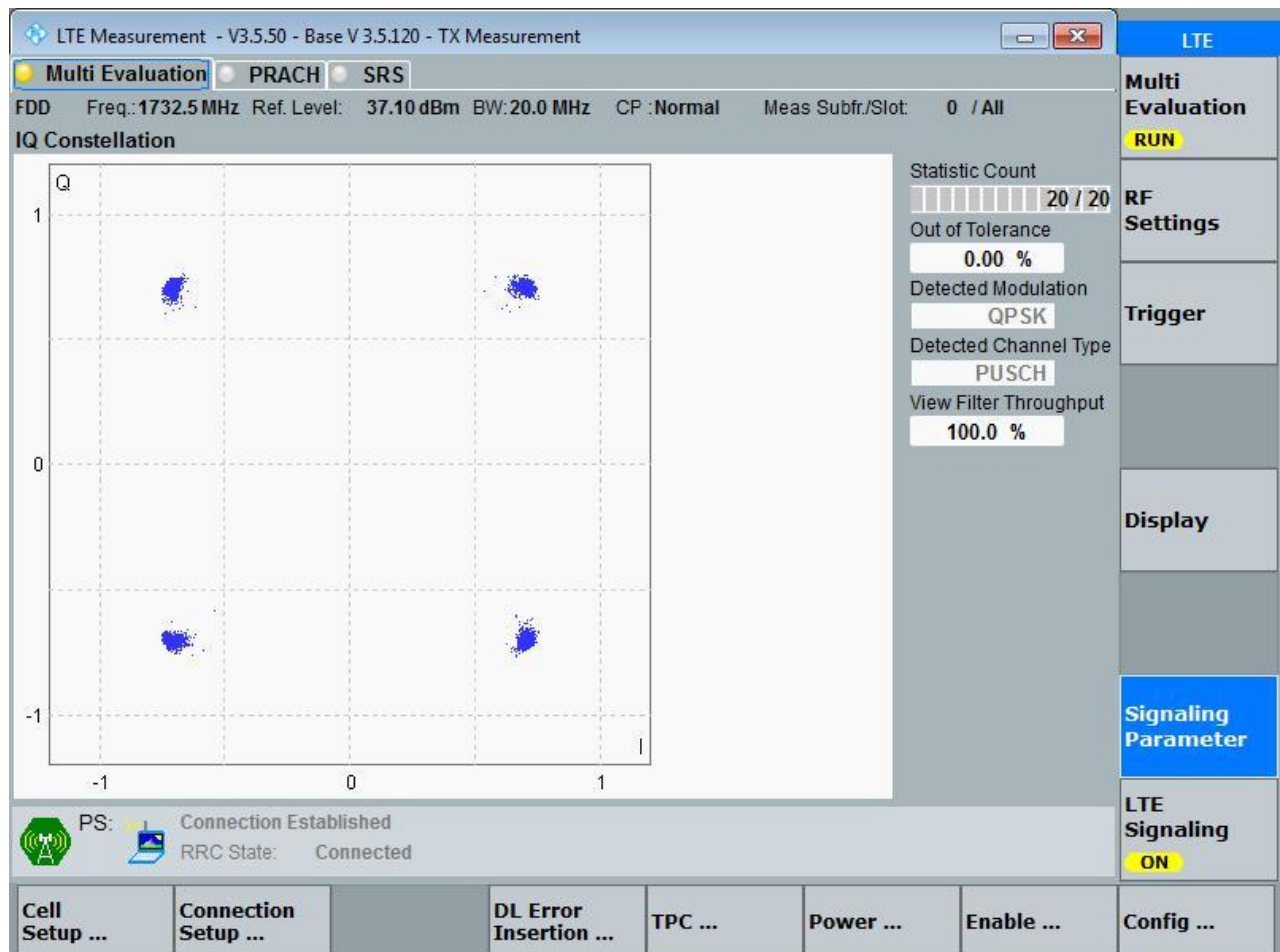
#### Part I - Test Plots

#### 3.1 For LTE

##### 3.1.1 Test Band = LTE Band4

##### 3.1.1.1 Test Mode = LTE /TM1 20MHz

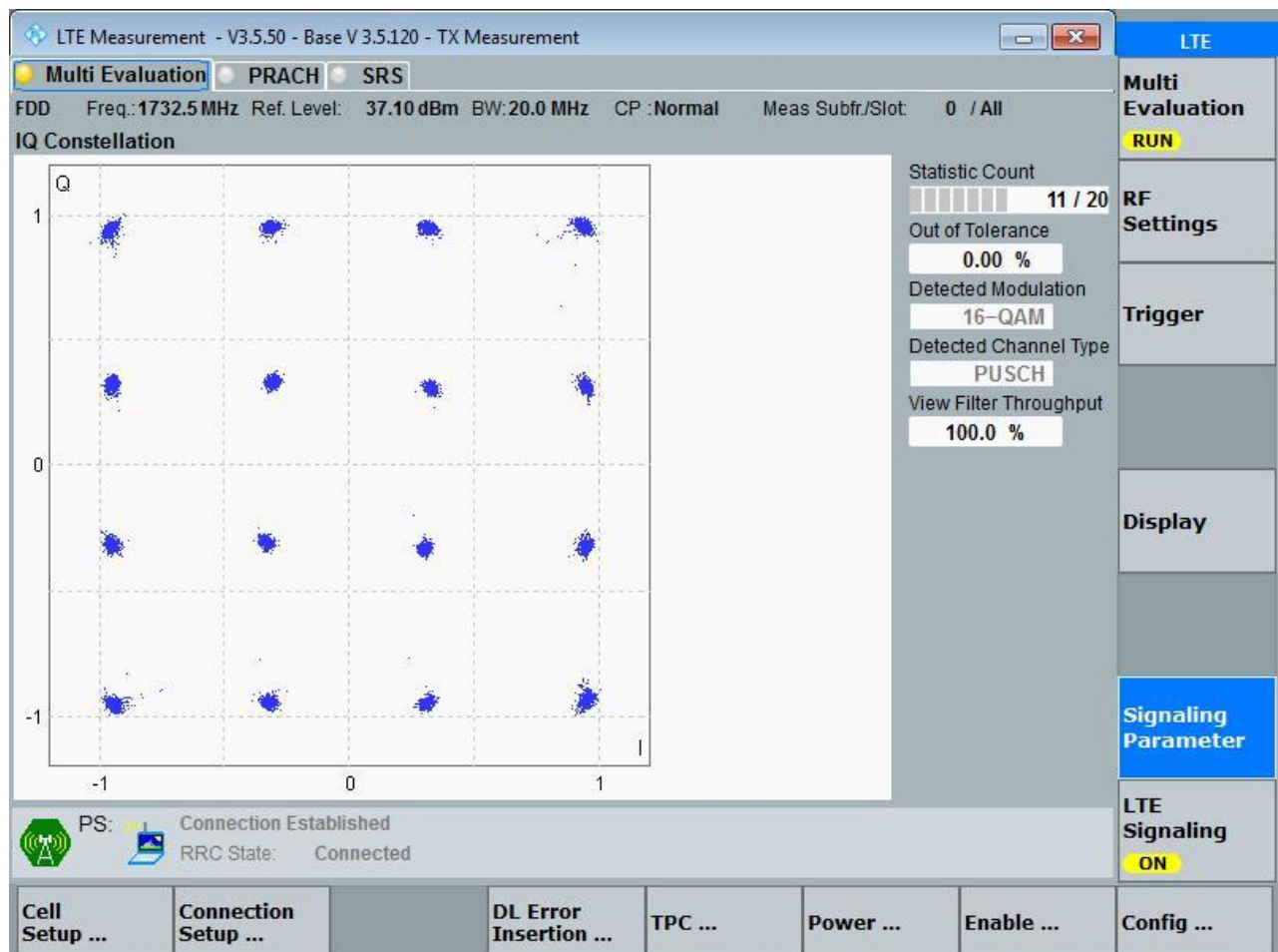
##### 3.1.1.1.1 Test Channel = MCH





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
Band4	TM1/1.4MHz	LCH	1.10	1.32	PASS
		MCH	1.10	1.30	PASS
		HCH	1.10	1.32	PASS
	TM2/1.4MHz	LCH	1.10	1.29	PASS
		MCH	1.10	1.31	PASS
		HCH	1.10	1.32	PASS
	TM1/ 3MHz	LCH	2.69	2.95	PASS
		MCH	2.69	2.94	PASS
		HCH	2.69	2.93	PASS
	TM2/3MHz	LCH	2.69	2.94	PASS
		MCH	2.68	2.94	PASS
		HCH	2.69	2.97	PASS
	TM1/ 5MHz	LCH	4.49	4.95	PASS
		MCH	4.47	4.91	PASS
		HCH	4.48	4.94	PASS
	TM2/ 5MHz	LCH	4.48	4.93	PASS
		MCH	4.48	4.95	PASS
		HCH	4.48	4.93	PASS
	TM1/10MHz	LCH	8.93	9.73	PASS
		MCH	8.93	9.71	PASS
		HCH	8.95	9.89	PASS
	TM2/ 10MHz	LCH	8.93	9.73	PASS
		MCH	8.93	9.65	PASS
		HCH	8.93	9.71	PASS
	TM1/ 15MHz	LCH	13.43	14.77	PASS
		MCH	13.43	14.80	PASS
		HCH	13.43	14.70	PASS
	TM2/ 15MHz	LCH	13.43	14.78	PASS
		MCH	13.43	14.69	PASS
		HCH	13.46	14.81	PASS
	TM1/ 20MHz	LCH	17.86	19.18	PASS
		MCH	17.86	19.14	PASS
		HCH	17.86	19.22	PASS
	TM2/ 20MHz	LCH	17.86	19.38	PASS
		MCH	17.86	19.22	PASS



Test Band	Test Mode	Test Channel	Occupied Bandwidth [MHz]	Emission Bandwidth [MHz]	Verdict
		HCH	17.90	19.34	PASS

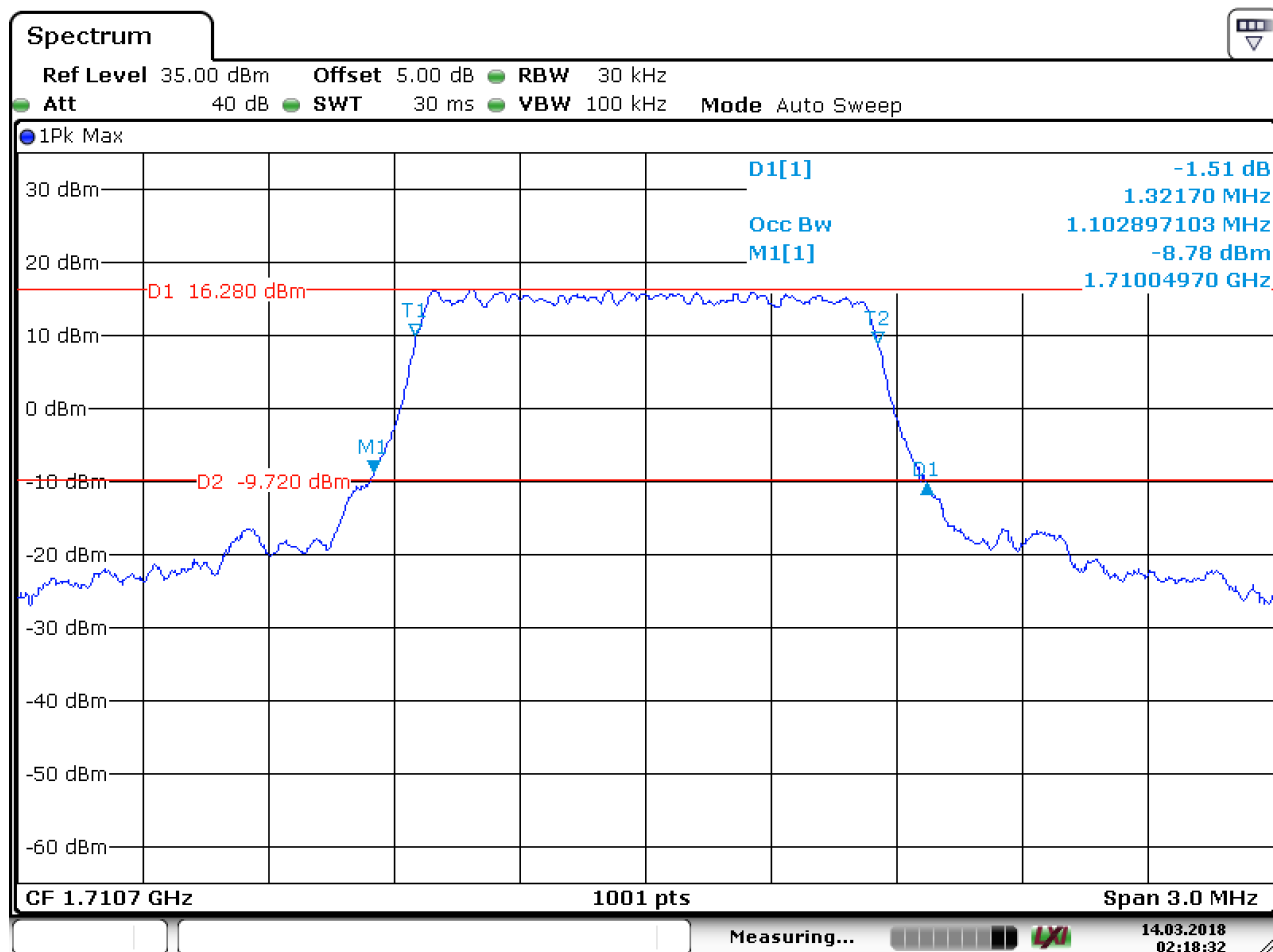
## Part II - Test Plots

### 4.1 For LTE

#### 4.1.1 Test Band = LTE band4

##### 4.1.1.1 Test Mode = LTE/TM1 1.4MHz

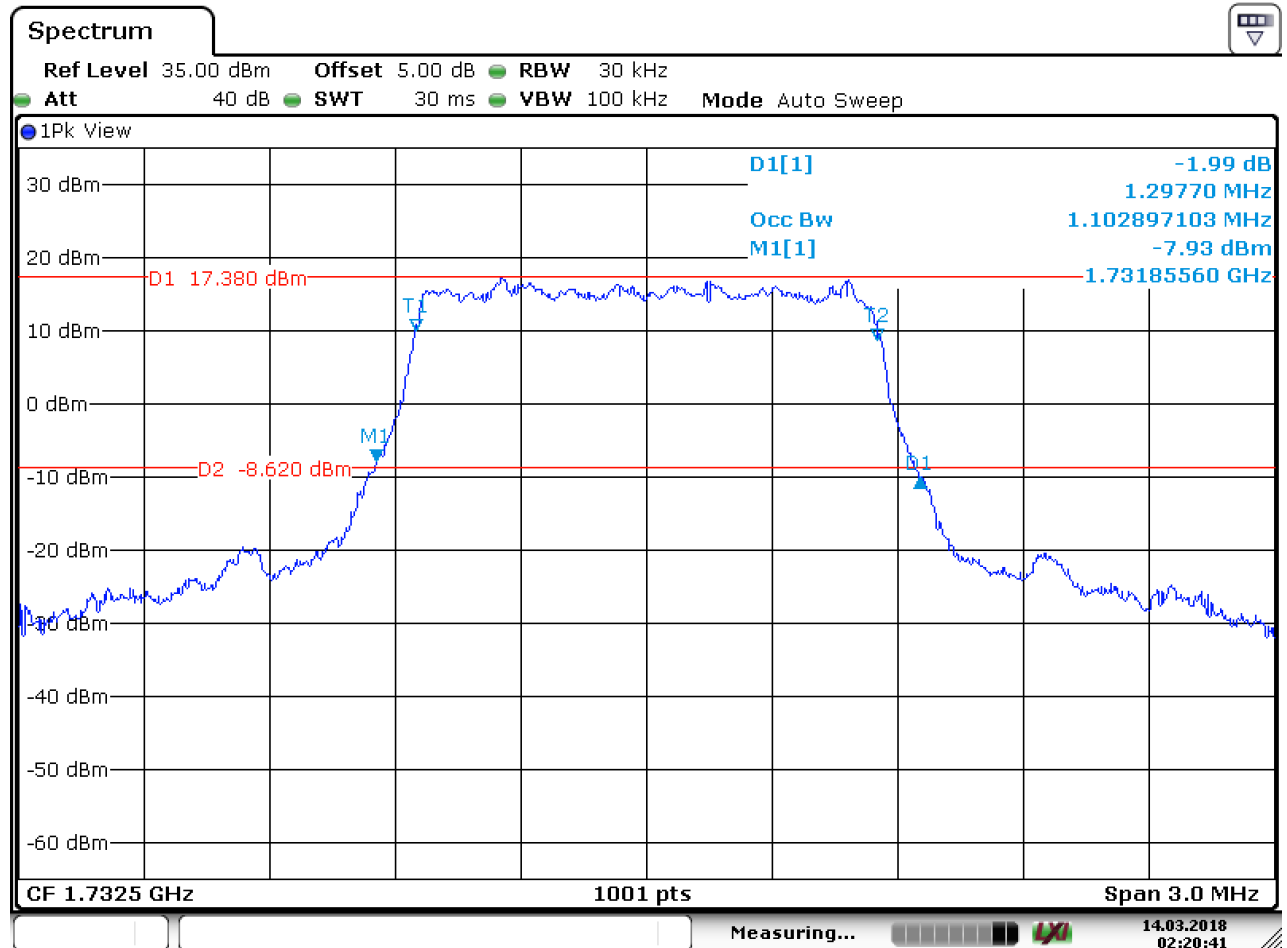
##### 4.1.1.1.1 Test Channel = LCH



Date: 14.MAR.2018 02:18:33



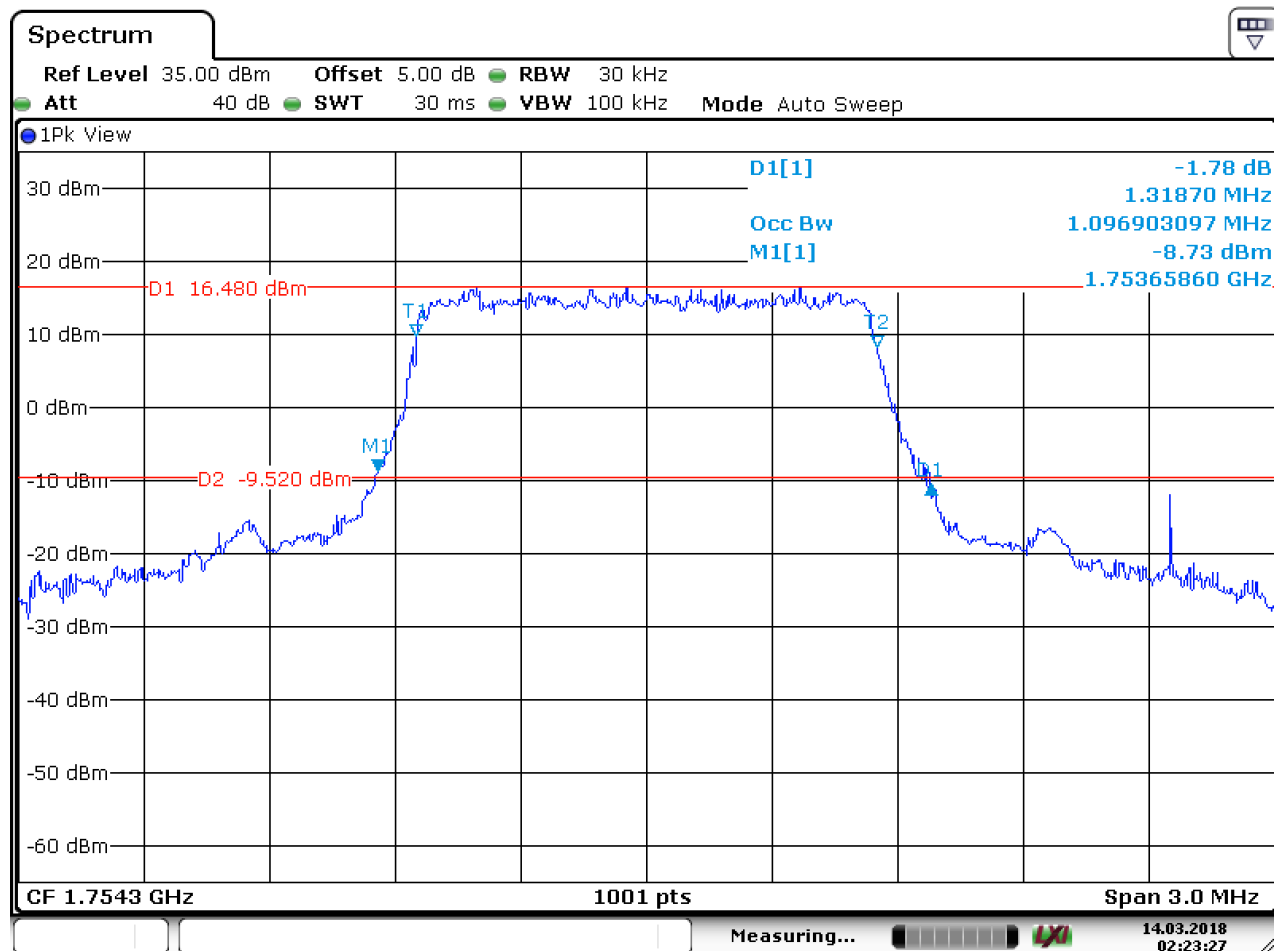
#### 4.1.1.1.2 Test Channel = MCH



Date: 14.MAR.2018 02:20:41



4.1.1.1.3 Test Channel = HCH

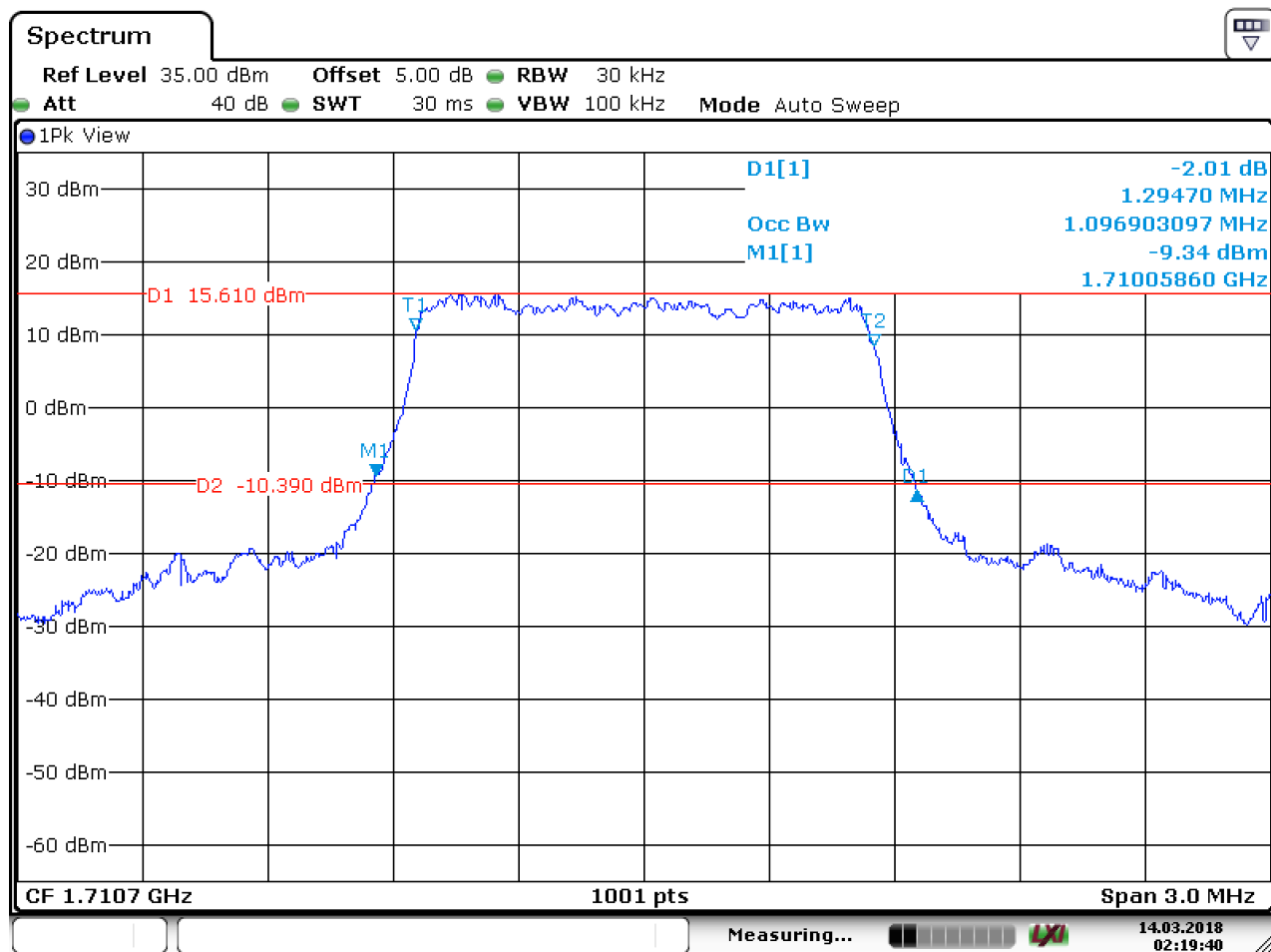


Date: 14.MAR.2018 02:23:28



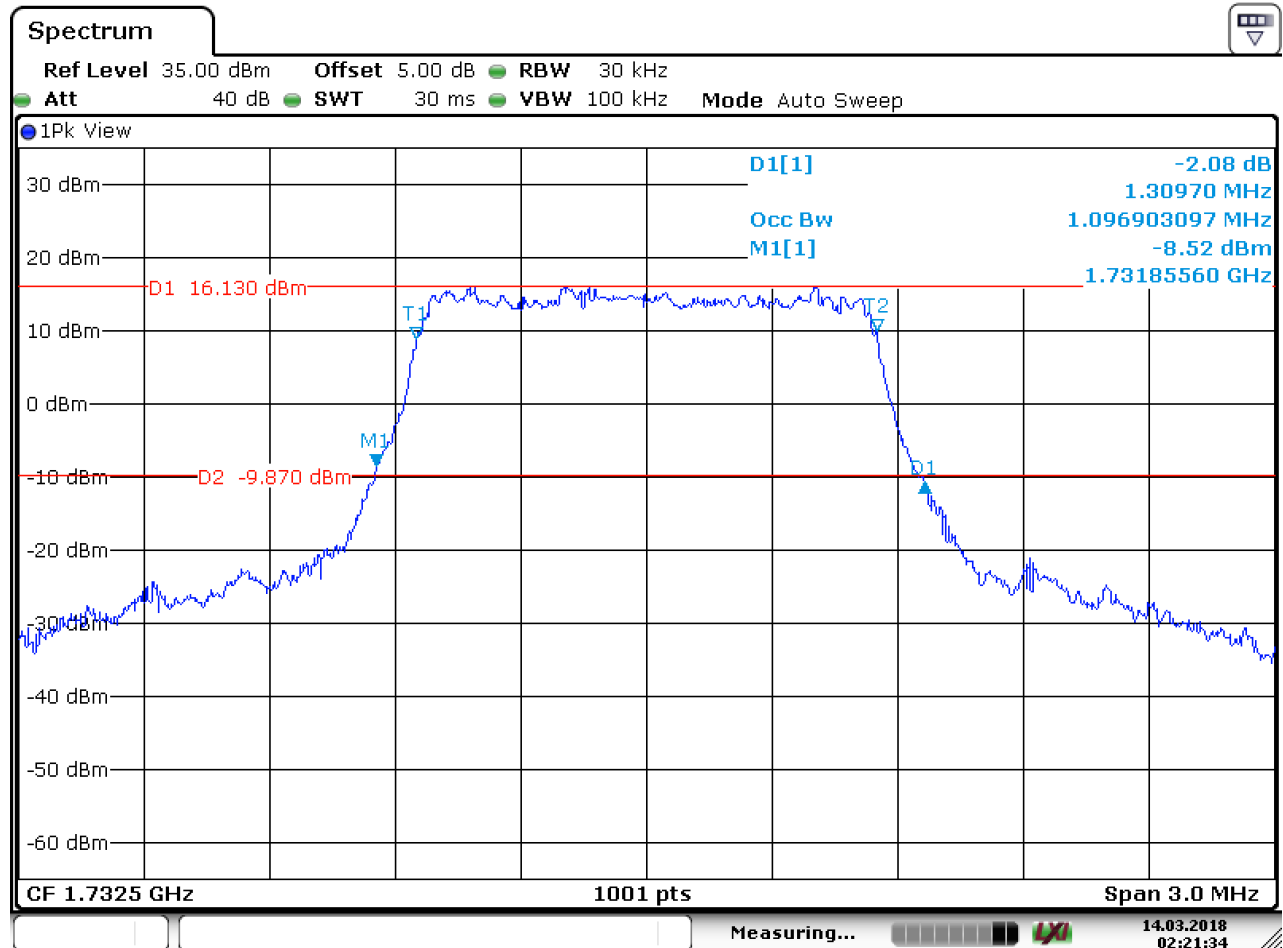
4.1.1.2 Test Mode = LTE/TM2 1.4MHz

4.1.1.2.1 Test Channel = LCH



Date: 14.MAR.2018 02:19:40

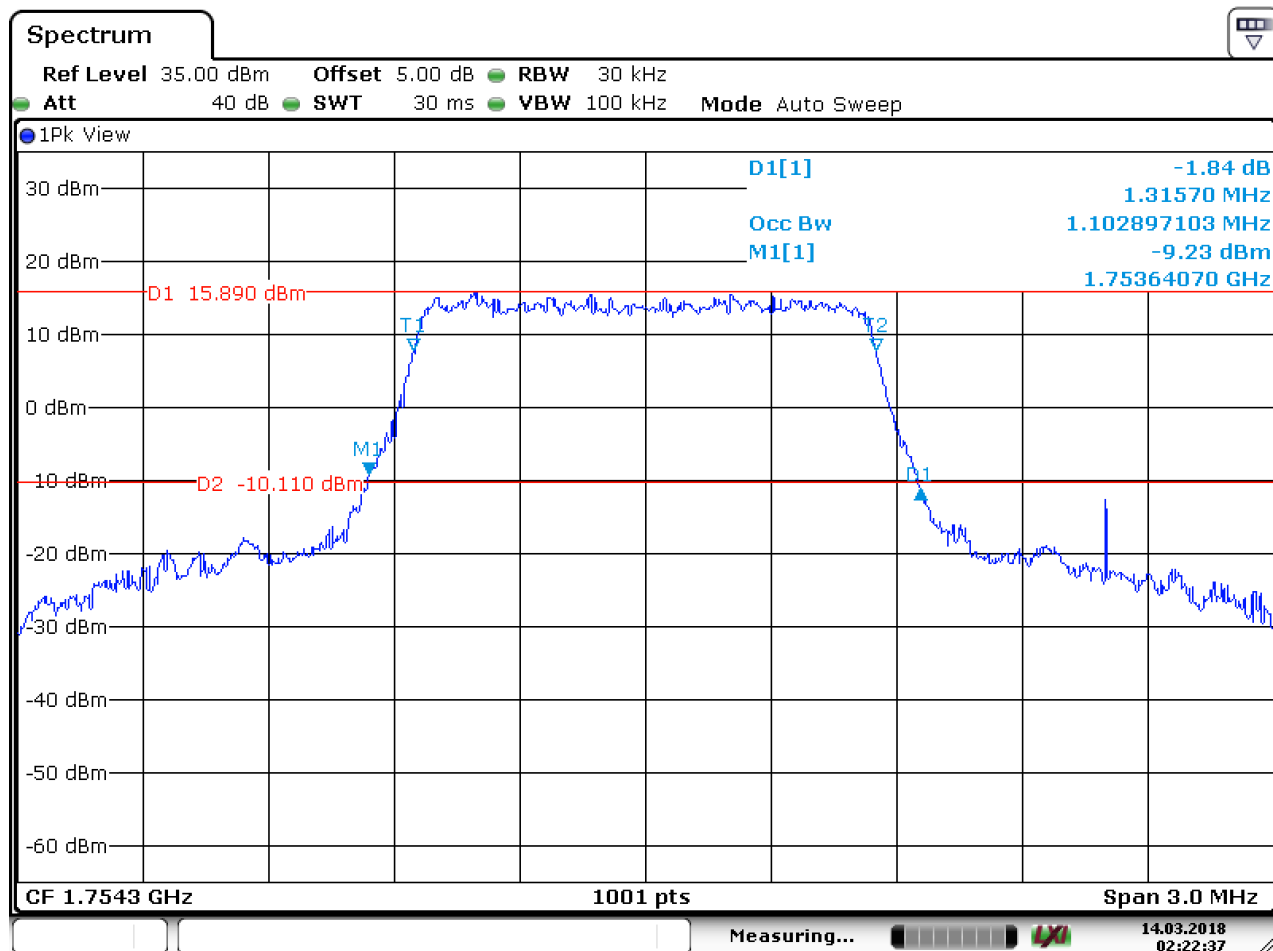
#### 4.1.1.2.2 Test Channel = MCH



Date: 14.MAR.2018 02:21:34



4.1.1.2.3 Test Channel = HCH



Date: 14.MAR.2018 02:22:37



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

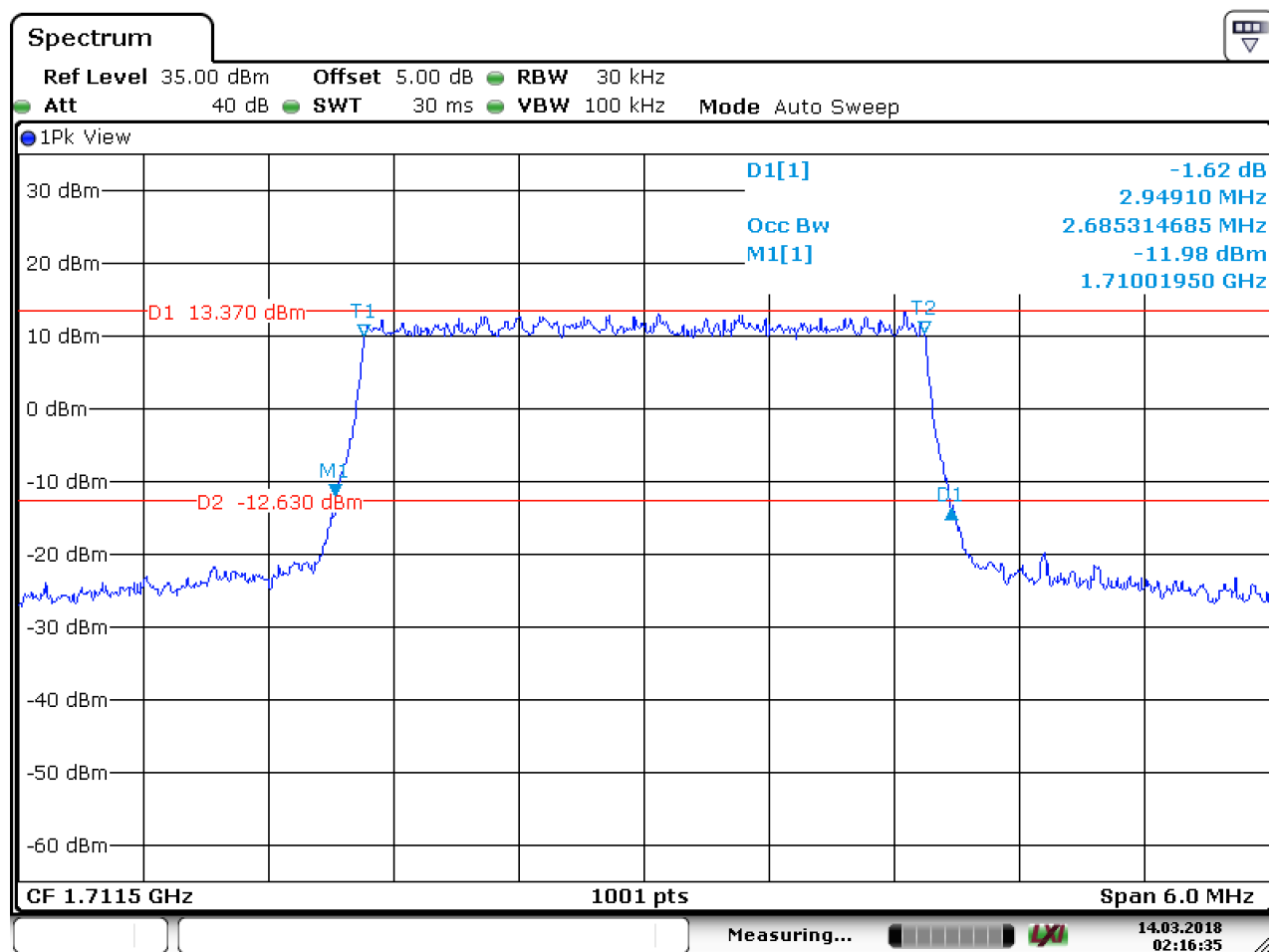
Report No.: SZEM180100100001

Page: 30 of 122



4.1.1.3 Test Mode = LTE/TM1 3MHz

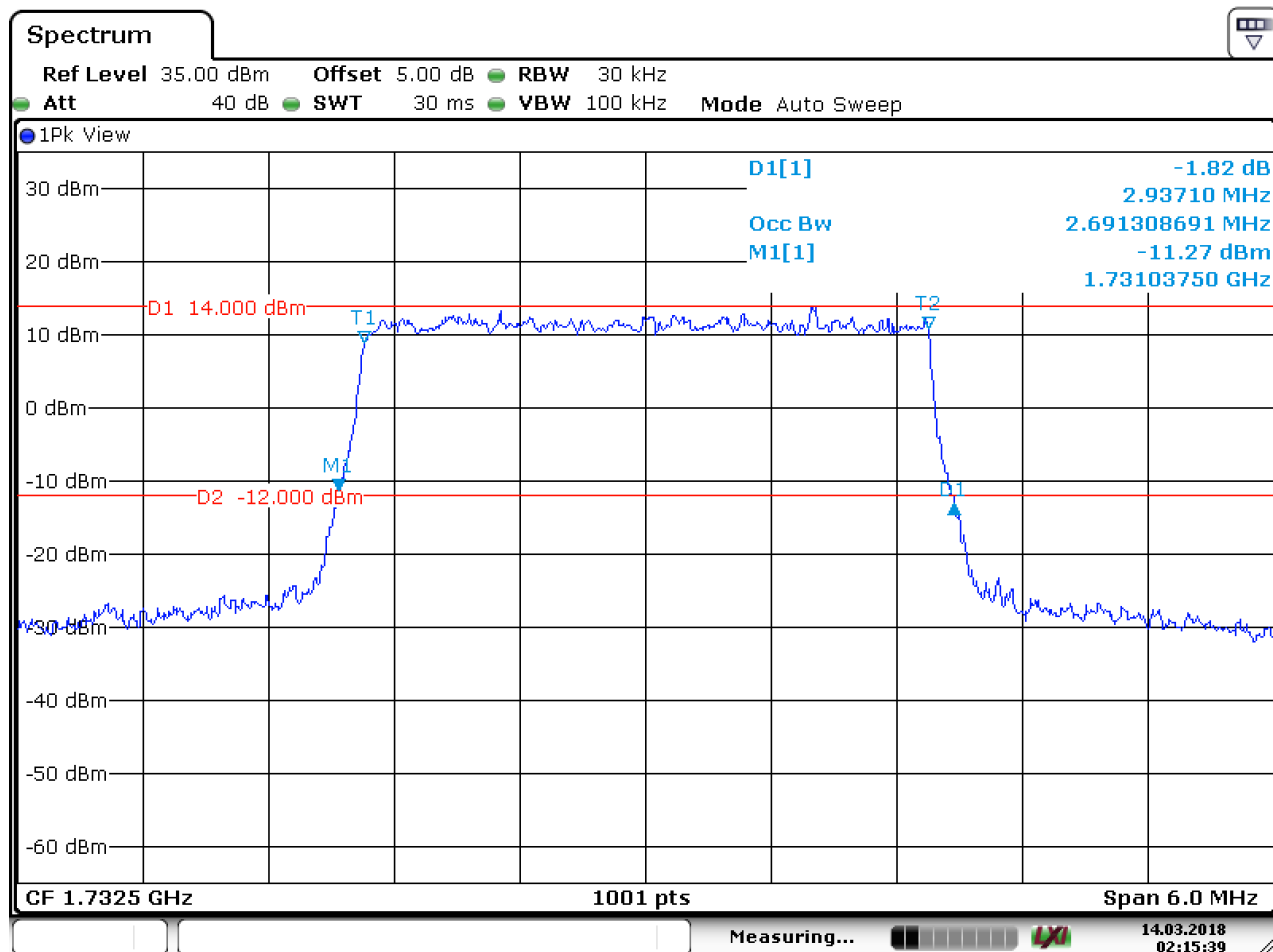
4.1.1.3.1 Test Channel = LCH



Date: 14.MAR.2018 02:16:35



4.1.1.3.2 Test Channel = MCH

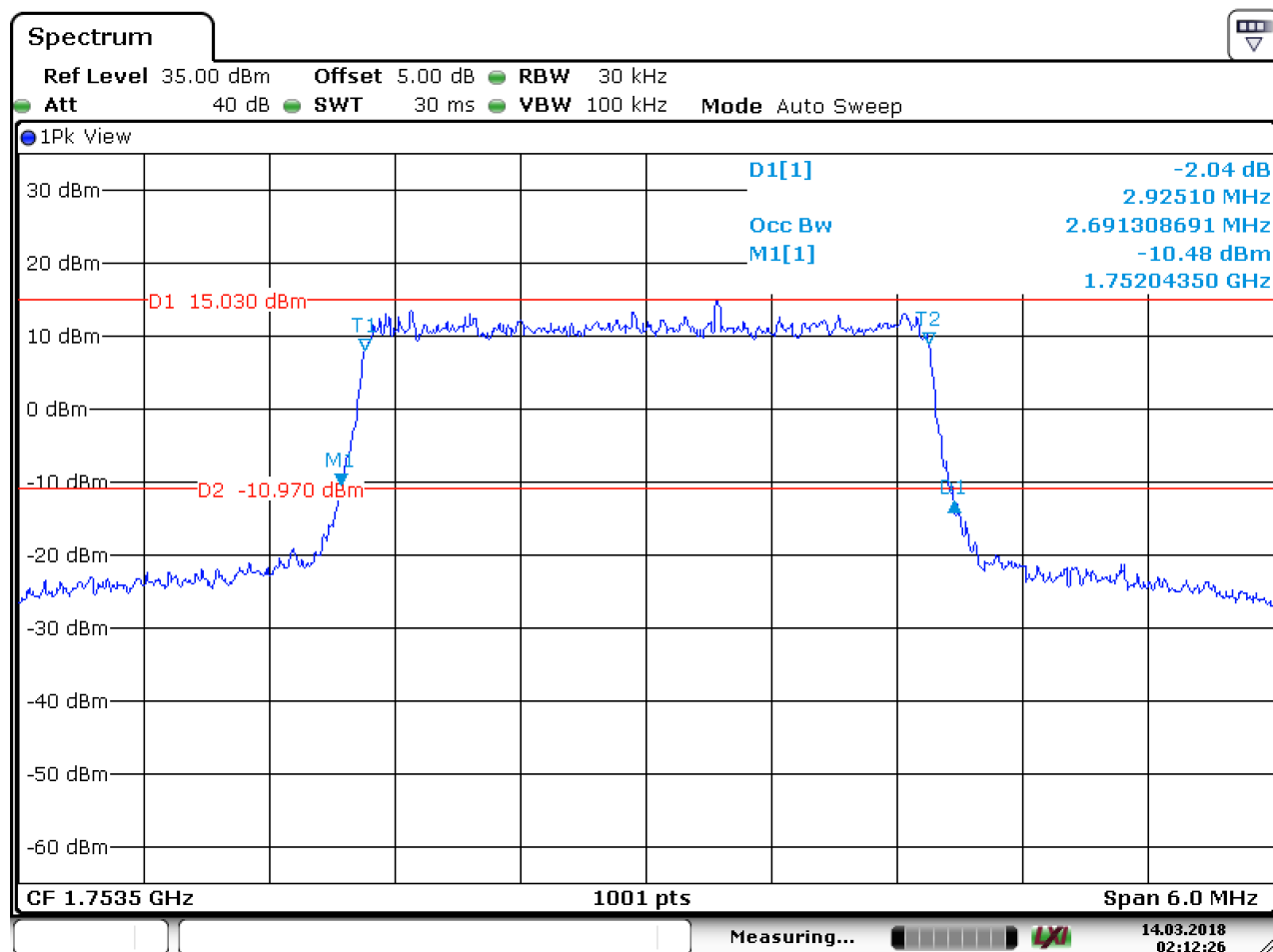


Date: 14.MAR.2018 02:15:39





4.1.1.3.3 Test Channel = HCH

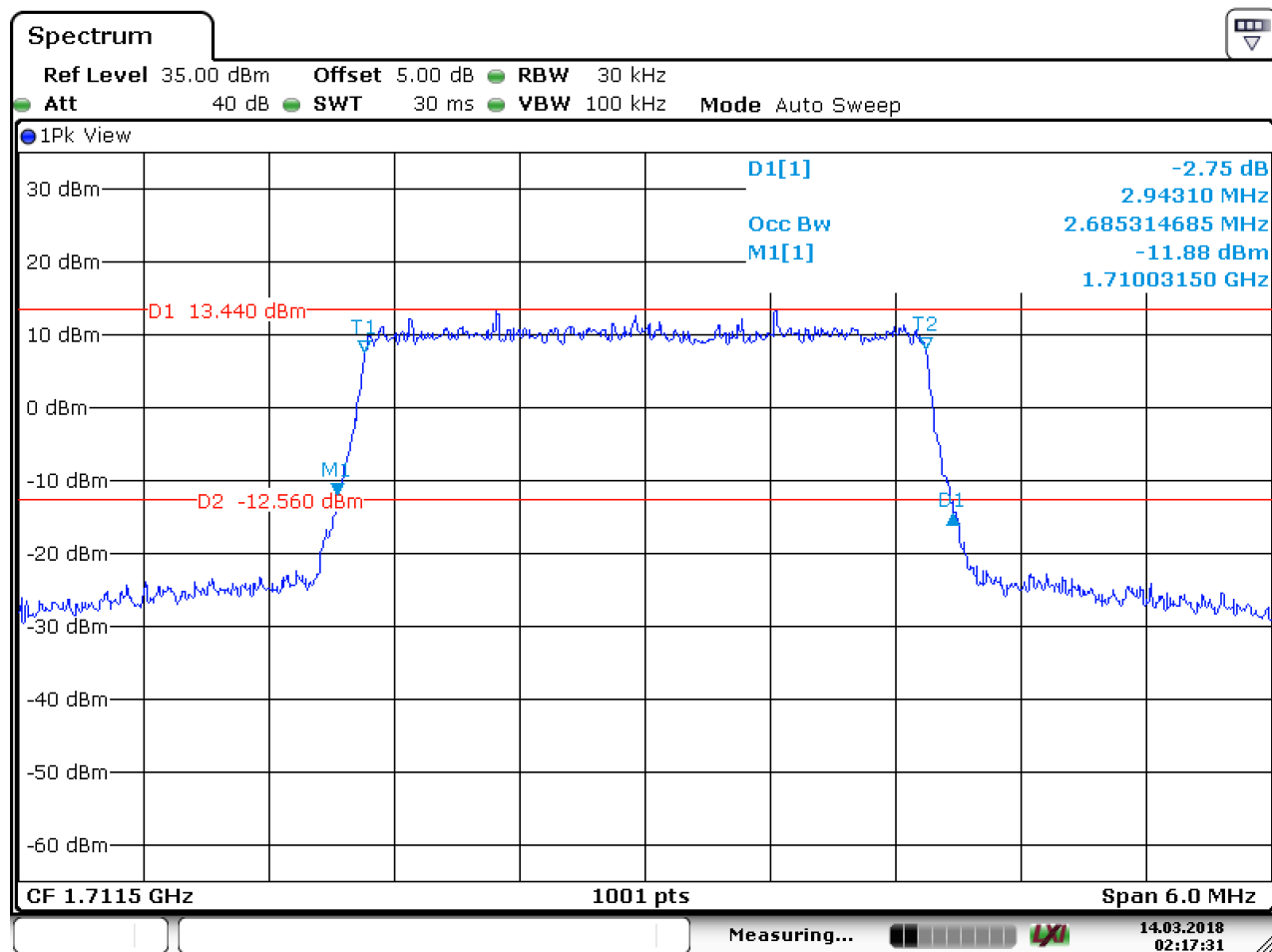


Date: 14.MAR.2018 02:12:26



4.1.1.4 Test Mode = LTE/TM2 3MHz

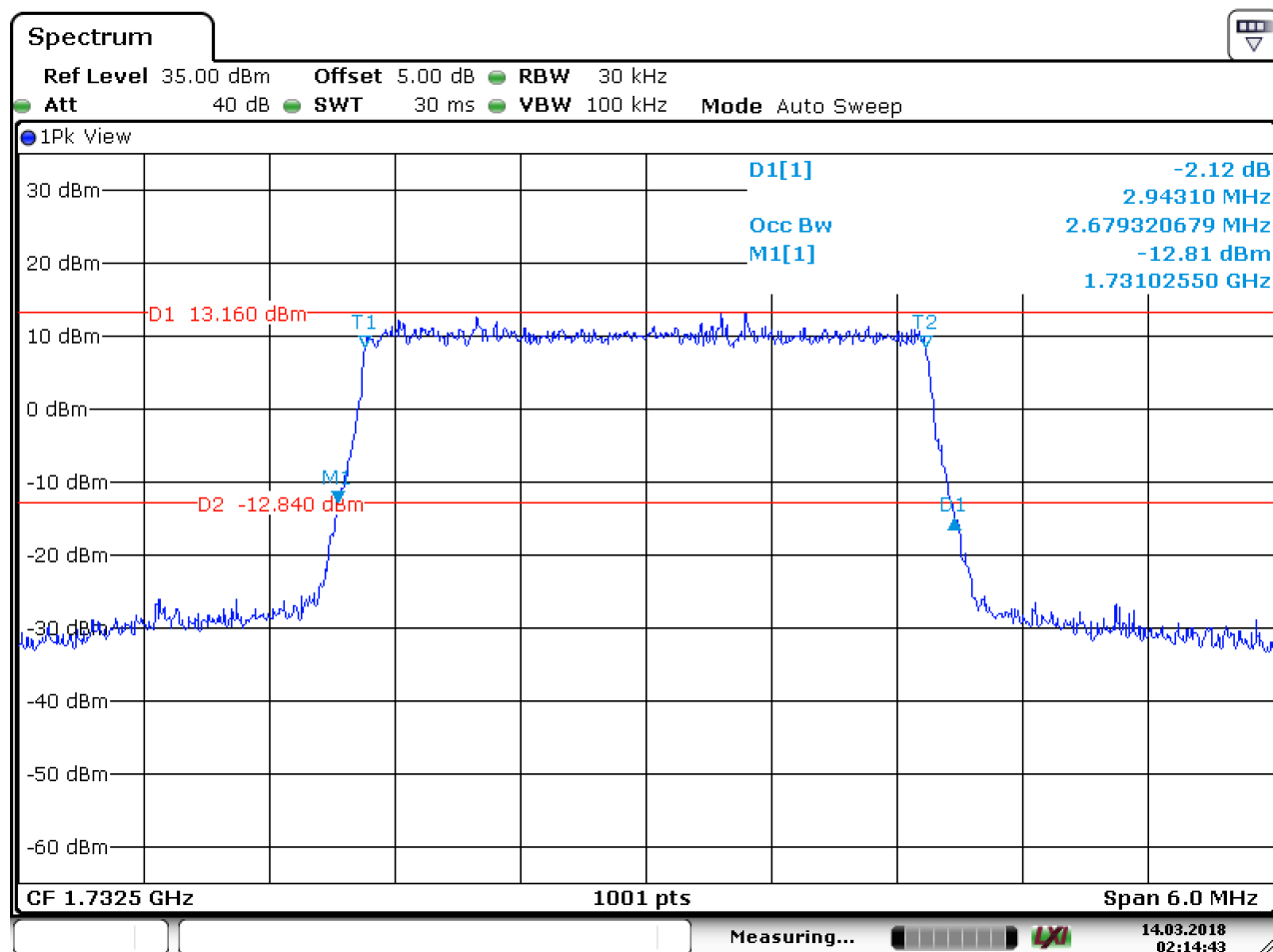
4.1.1.4.1 Test Channel = LCH



Date: 14.MAR.2018 02:17:32



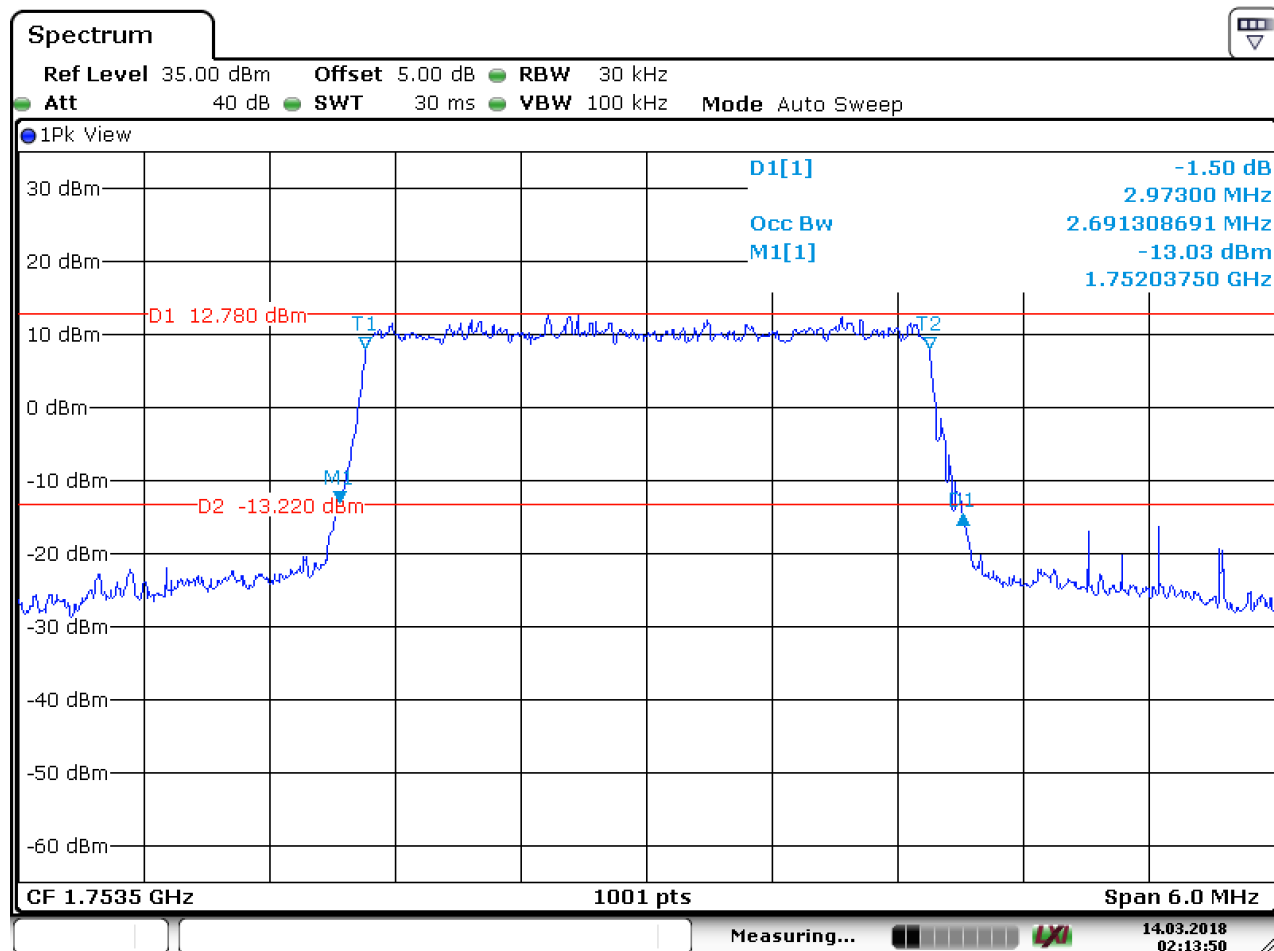
4.1.1.4.2 Test Channel = MCH



Date: 14.MAR.2018 02:14:43



4.1.1.4.3 Test Channel = HCH

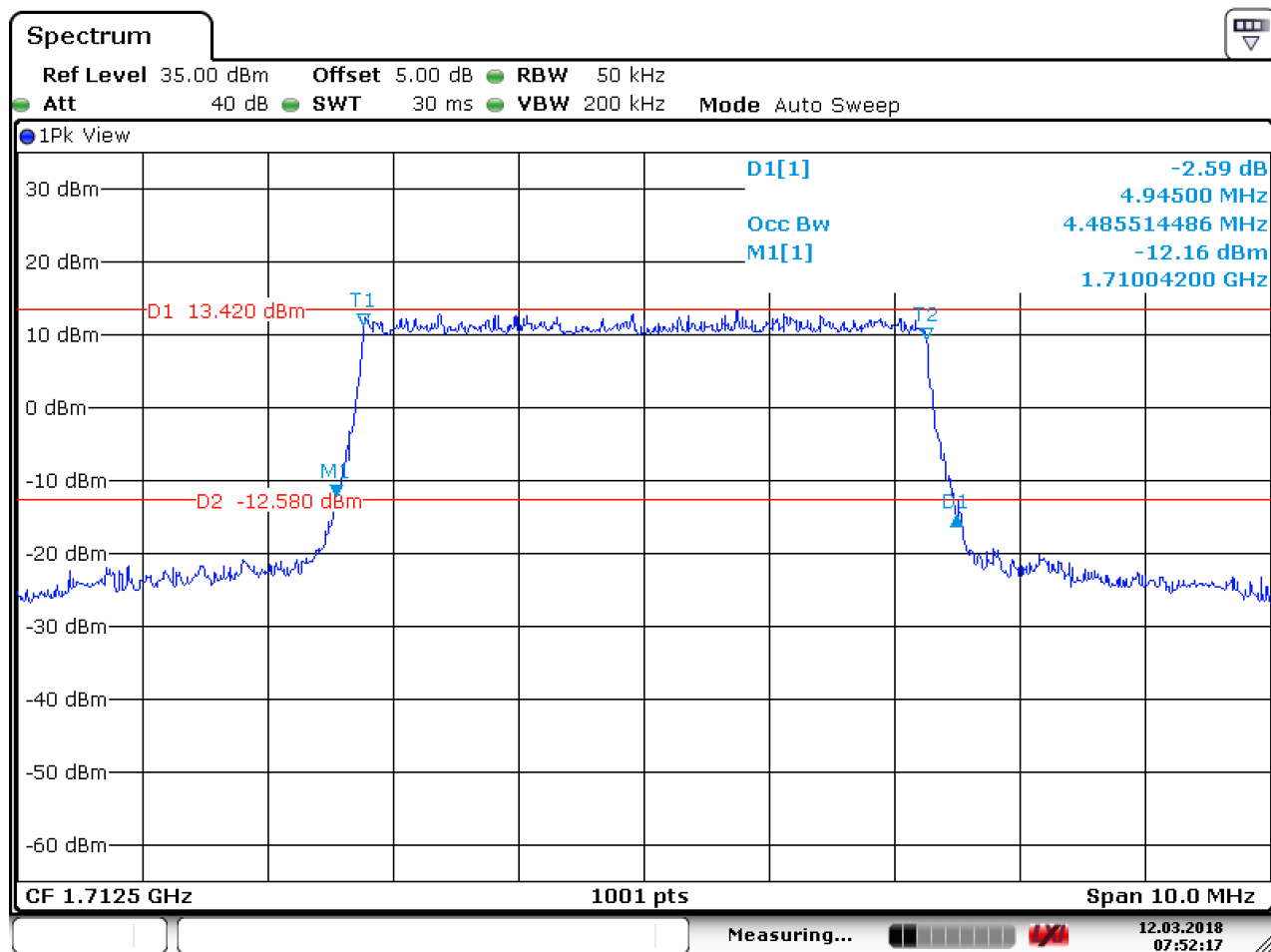


Date: 14.MAR.2018 02:13:51



4.1.1.5 Test Mode = LTE/TM1 5MHz

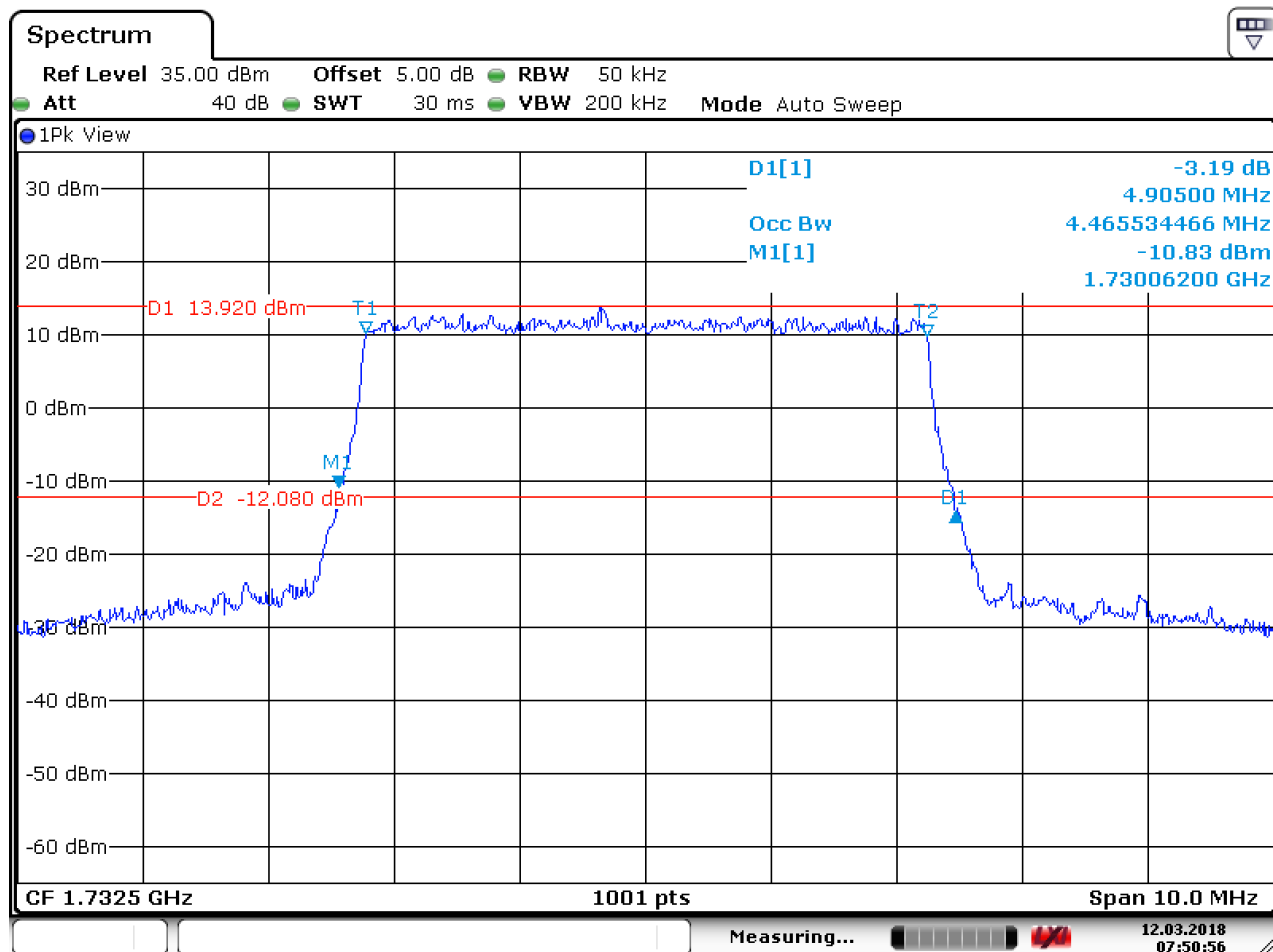
4.1.1.5.1 Test Channel = LCH



Date: 12.MAR.2018 07:52:18



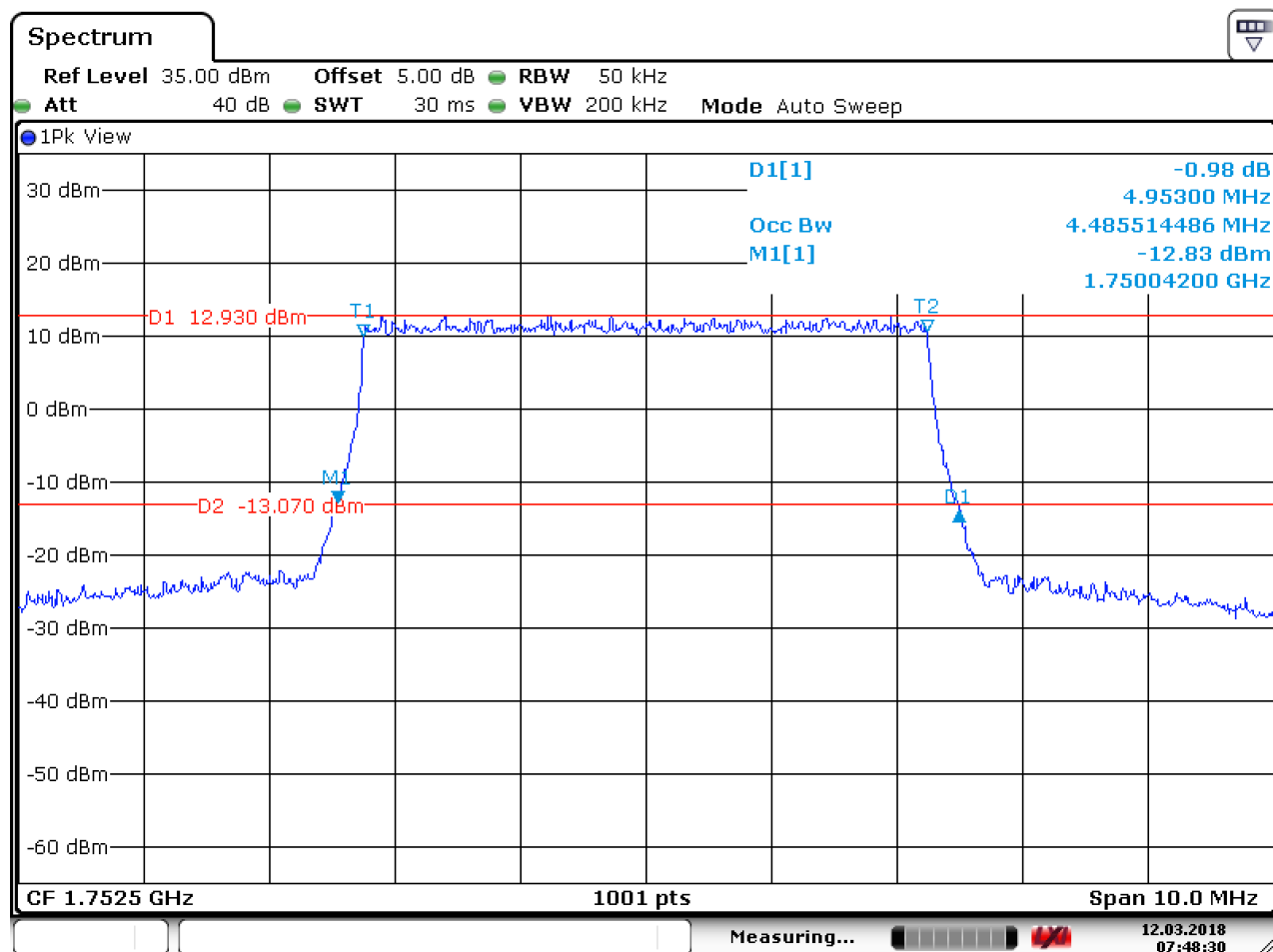
4.1.1.5.2 Test Channel = MCH



Date: 12.MAR.2018 07:50:56



4.1.1.5.3 Test Channel = HCH

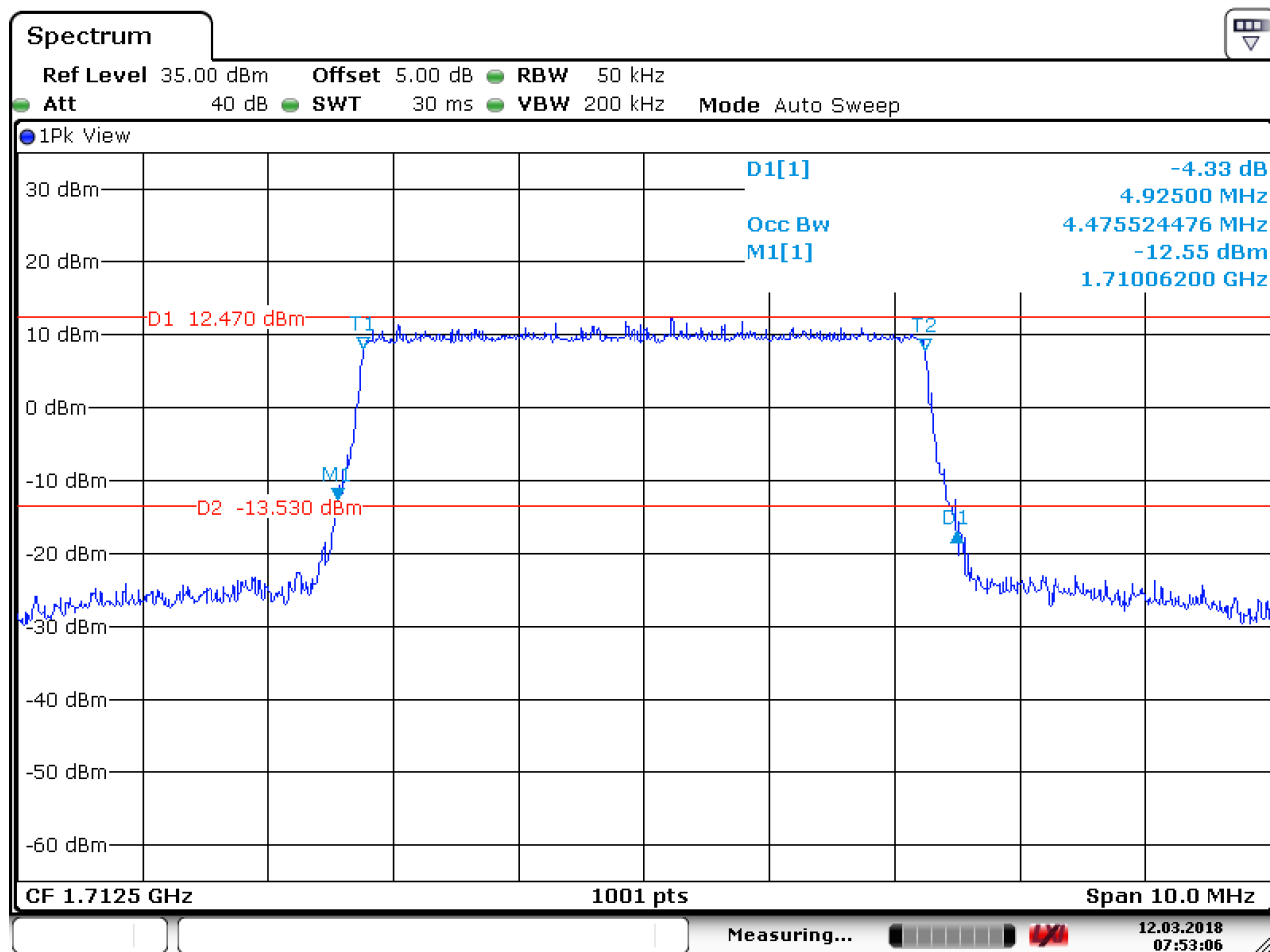


Date: 12.MAR.2018 07:48:31



4.1.1.6 Test Mode = LTE/TM2 5MHz

4.1.1.6.1 Test Channel = LCH

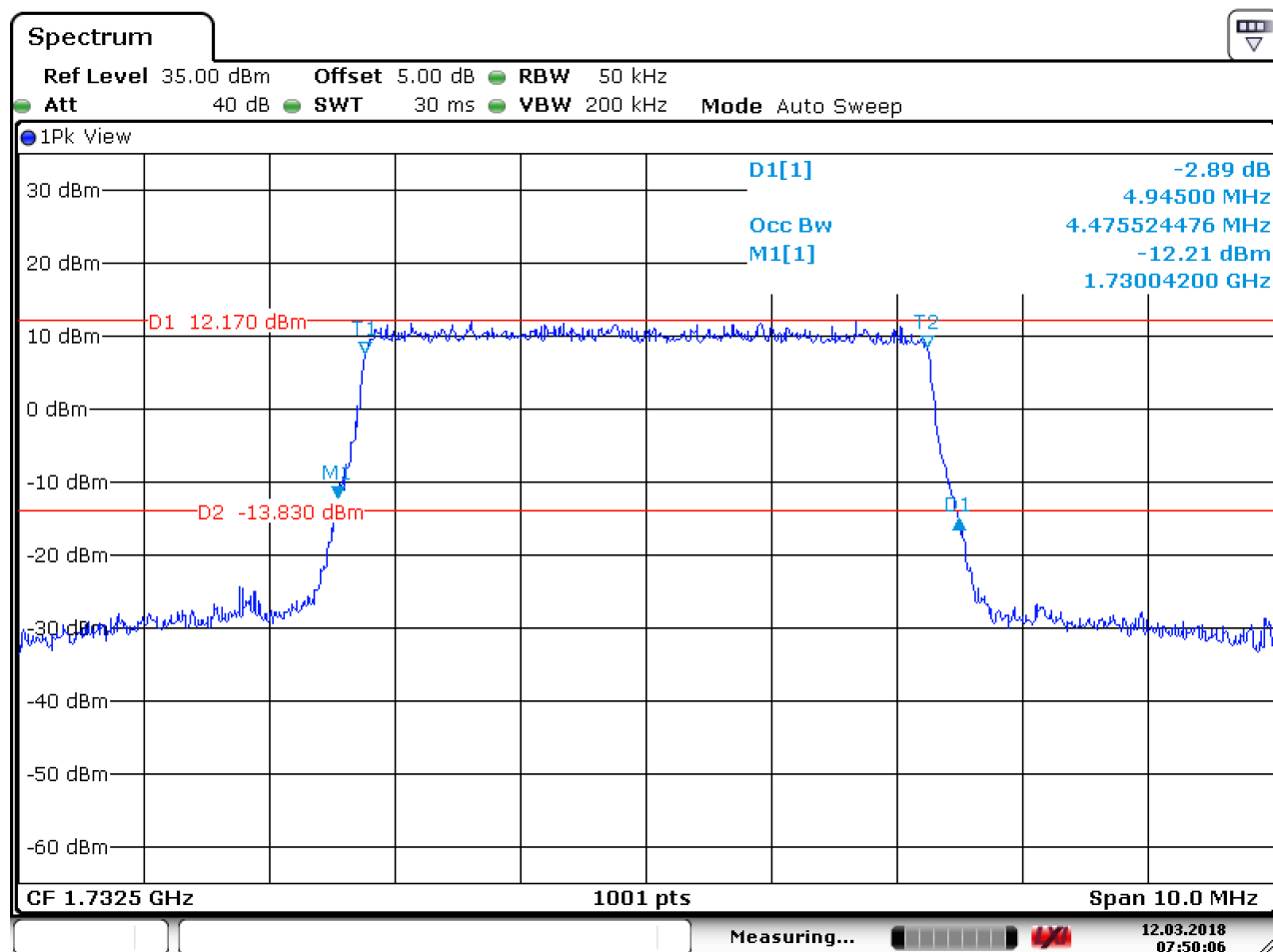


Date: 12.MAR.2018 07:53:06





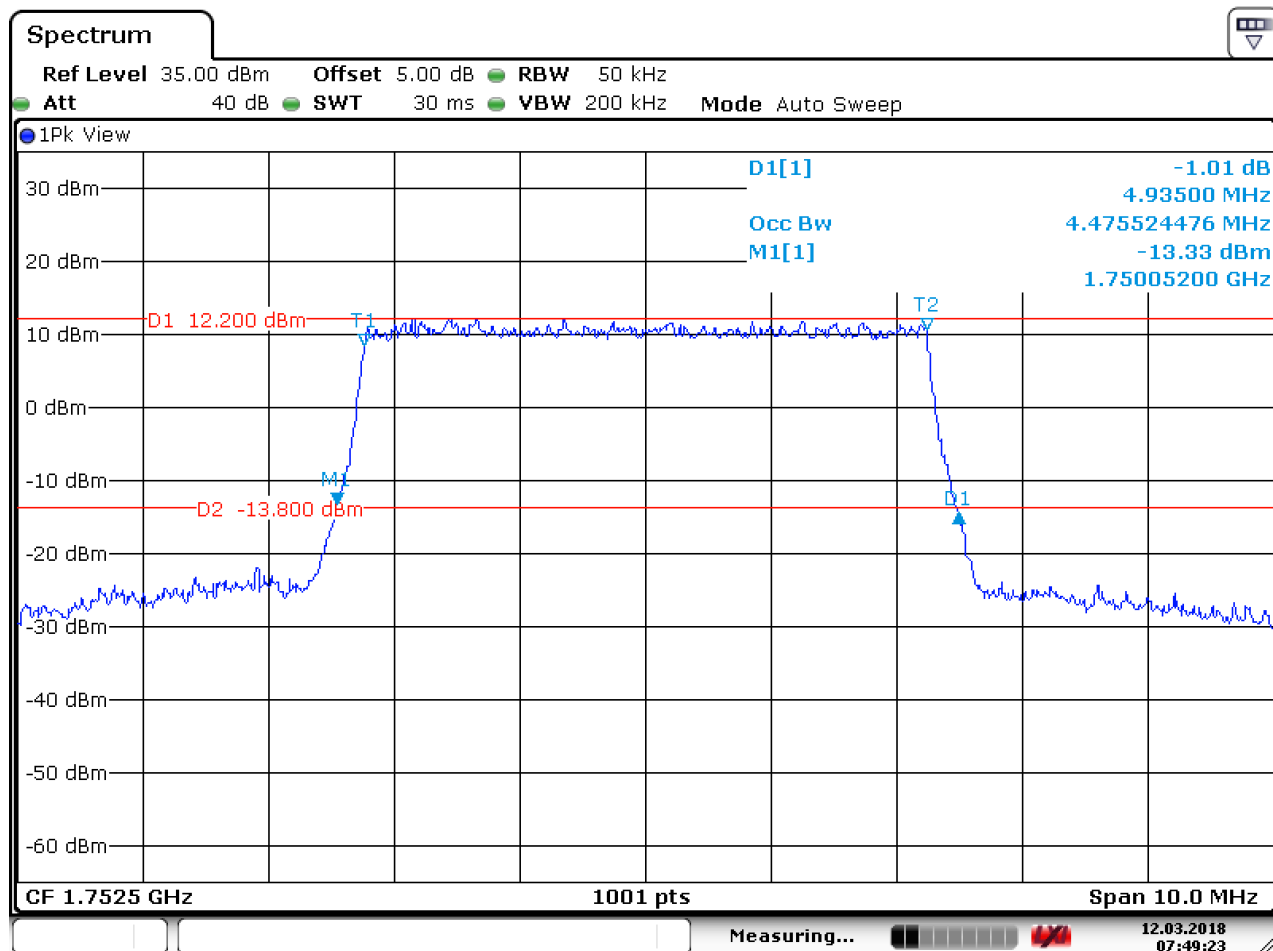
4.1.1.6.2 Test Channel = MCH



Date: 12.MAR.2018 07:50:07



4.1.1.6.3 Test Channel = HCH

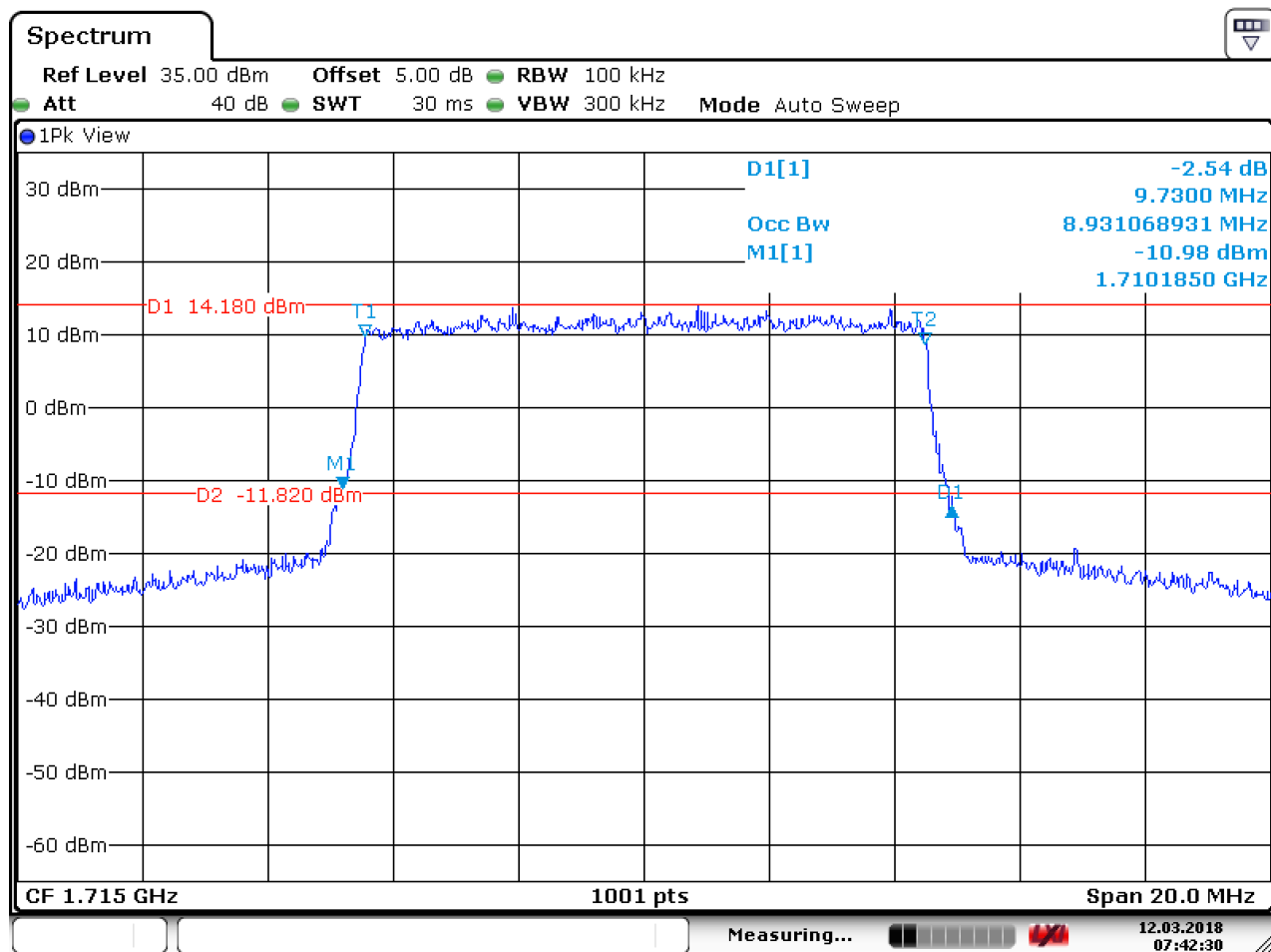


Date: 12.MAR.2018 07:49:23



4.1.1.7 Test Mode = LTE/TM1 10MHz

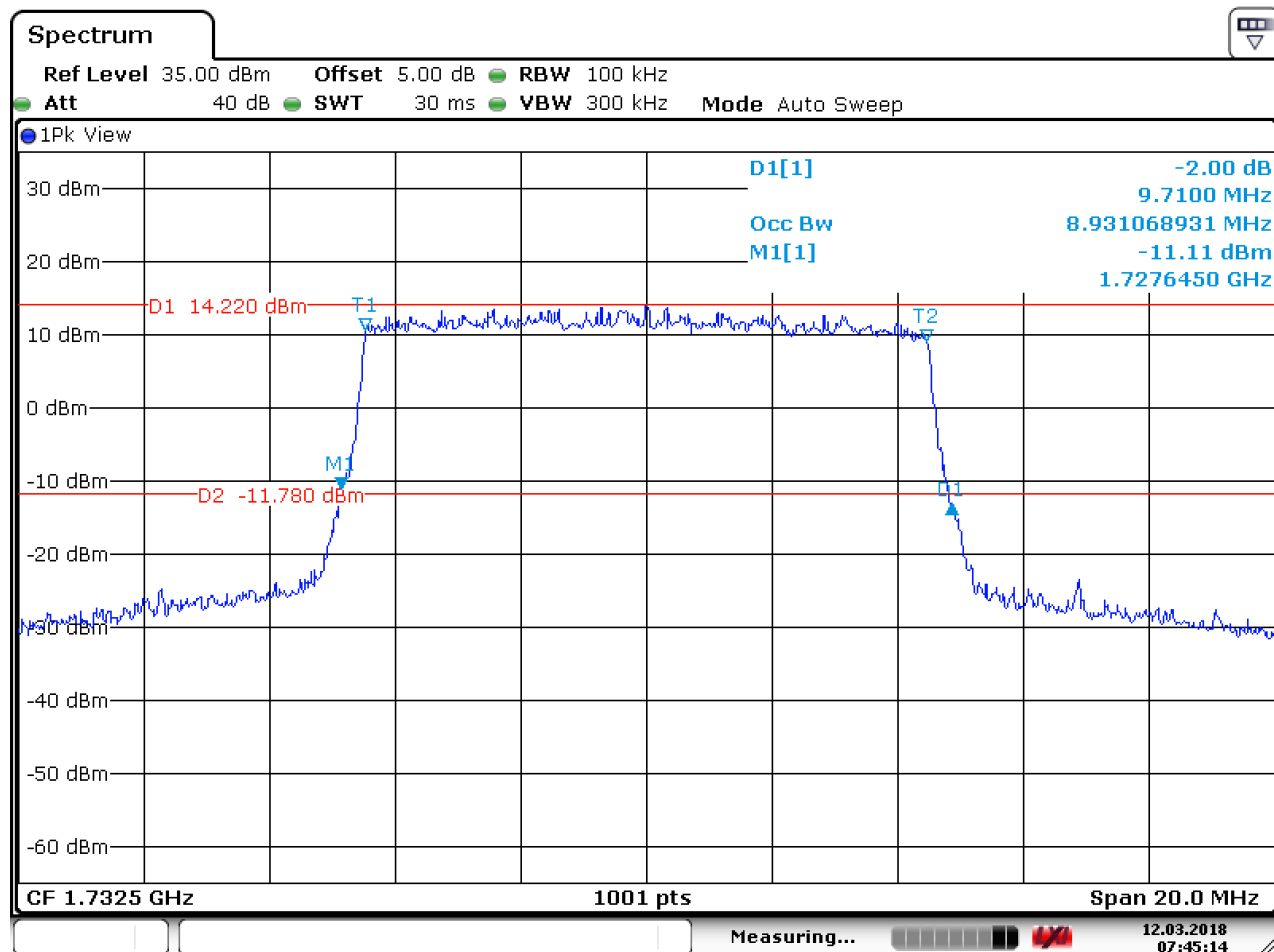
4.1.1.7.1 Test Channel = LCH



Date: 12.MAR.2018 07:42:30



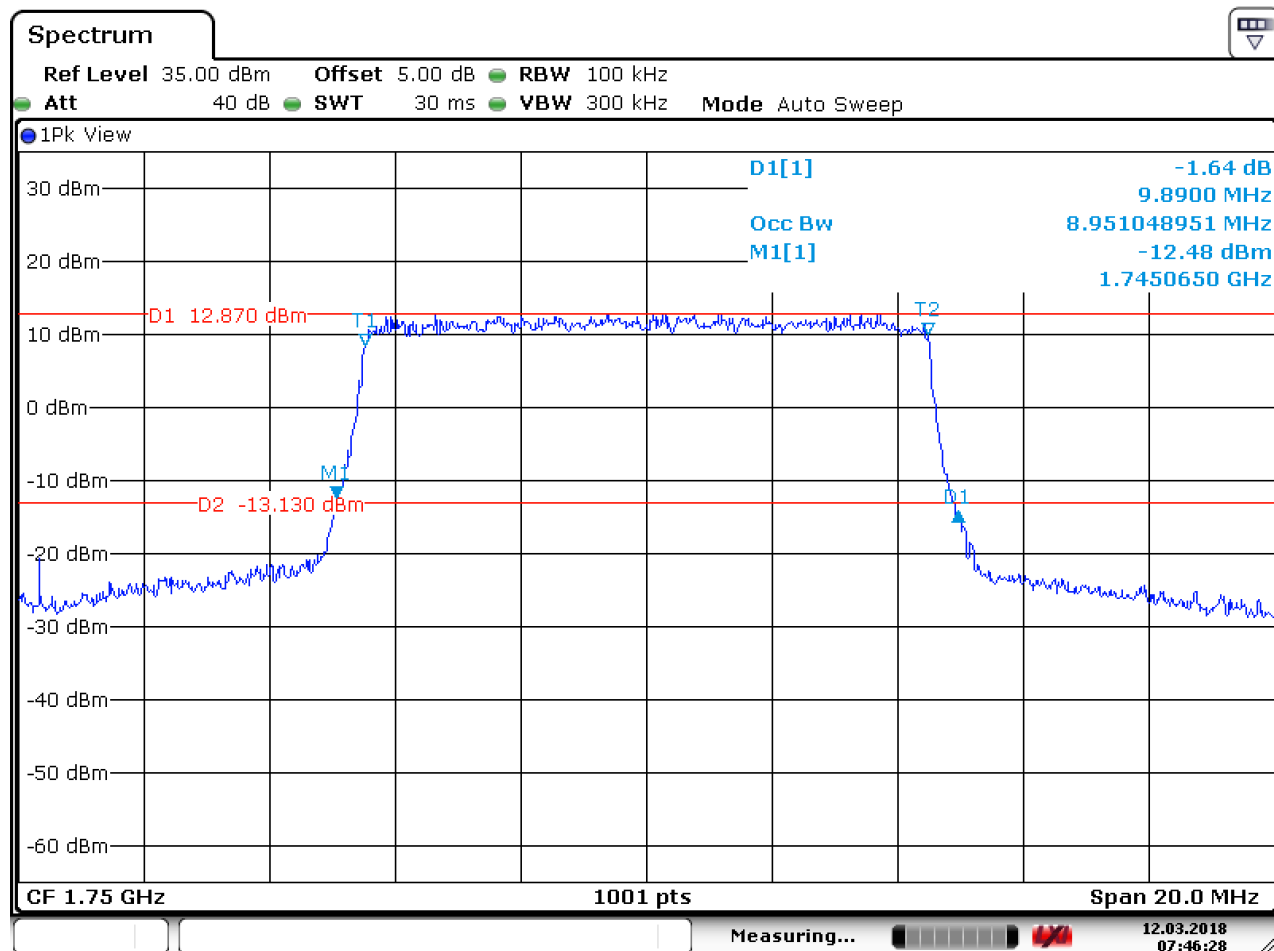
4.1.1.7.2 Test Channel = MCH



Date: 12.MAR.2018 07:45:14



4.1.1.7.3 Test Channel = HCH

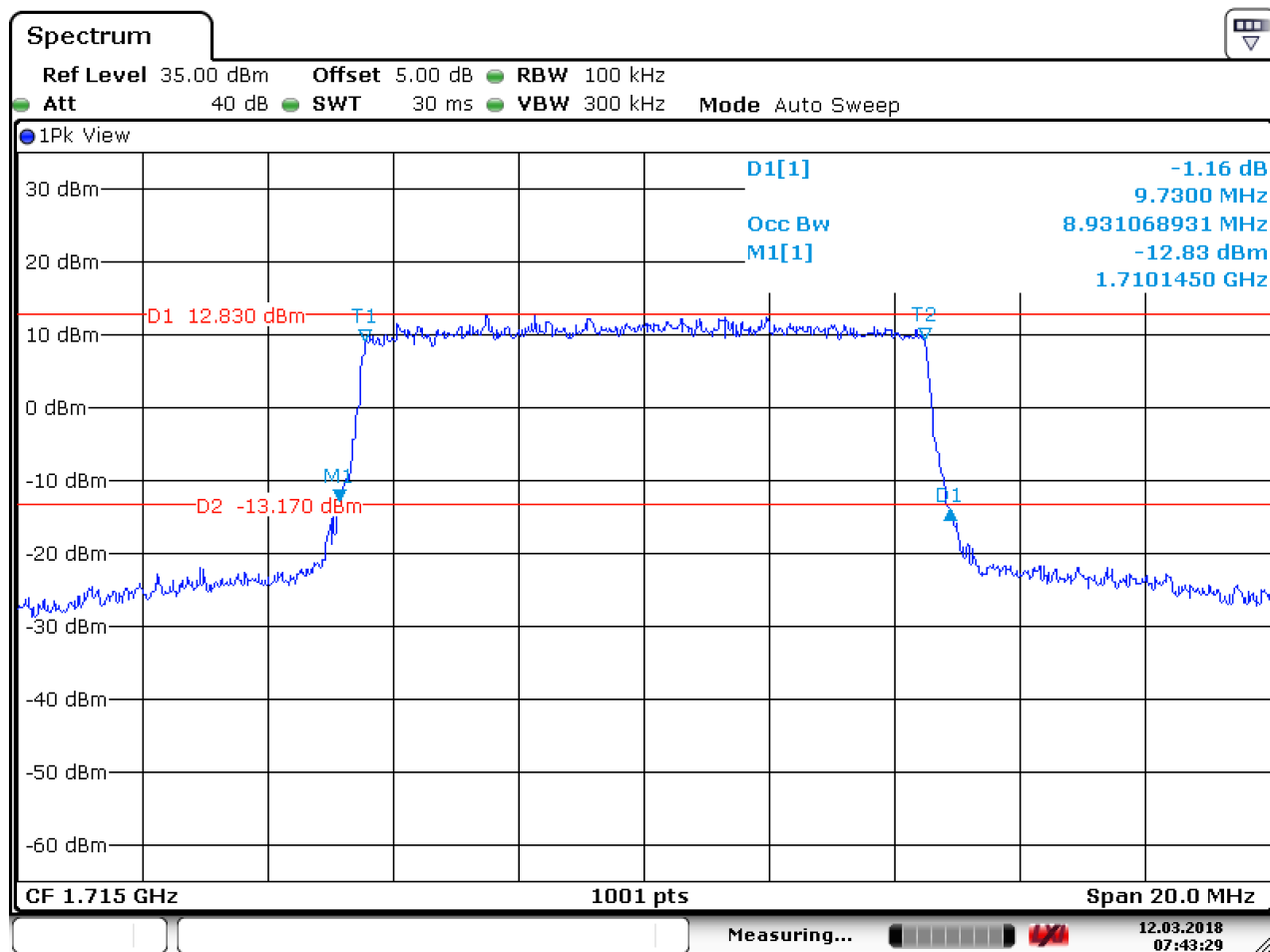


Date: 12.MAR.2018 07:46:29



4.1.1.8 Test Mode = LTE/TM2 10MHz

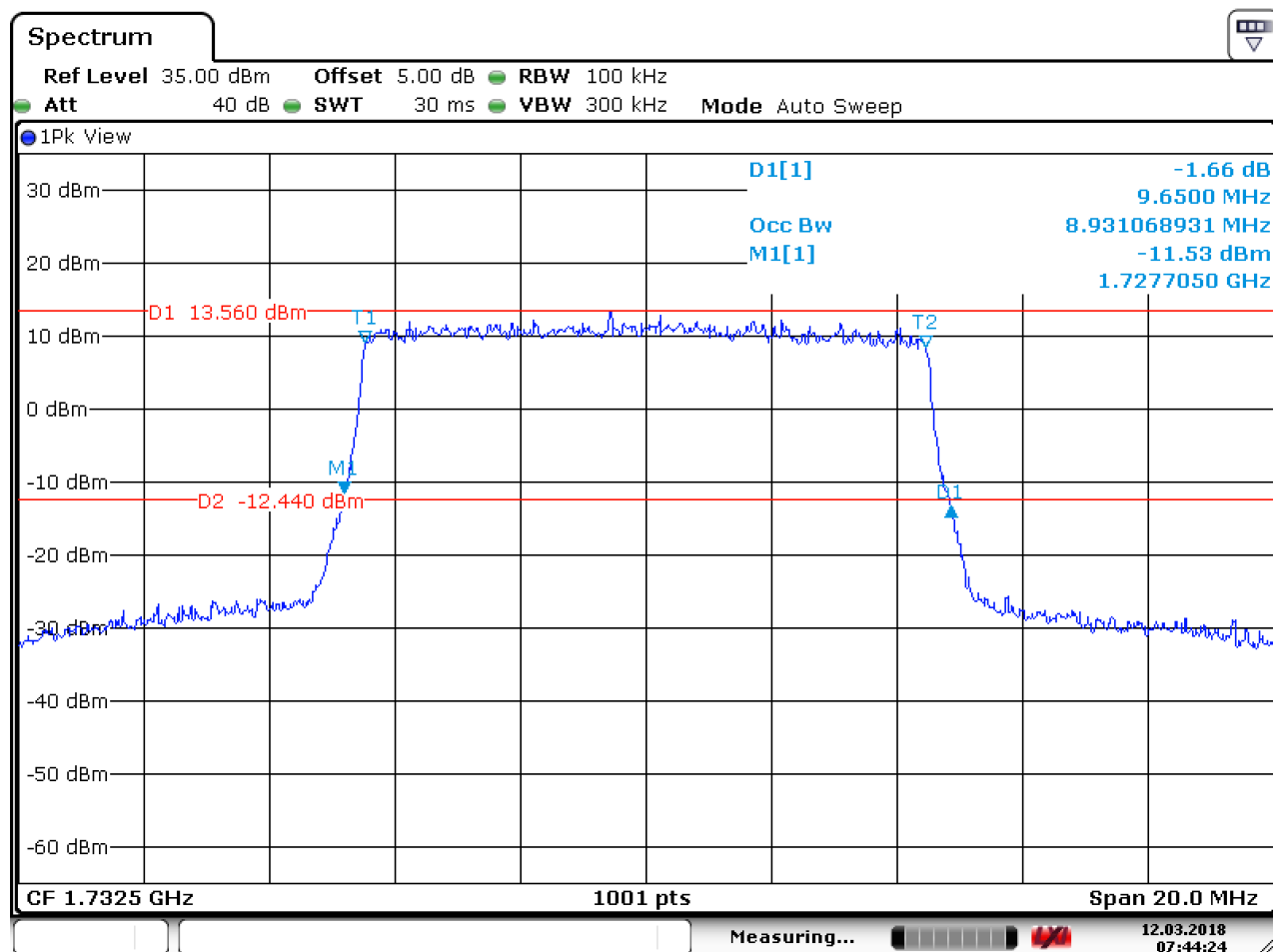
4.1.1.8.1 Test Channel = LCH



Date: 12.MAR.2018 07:43:29



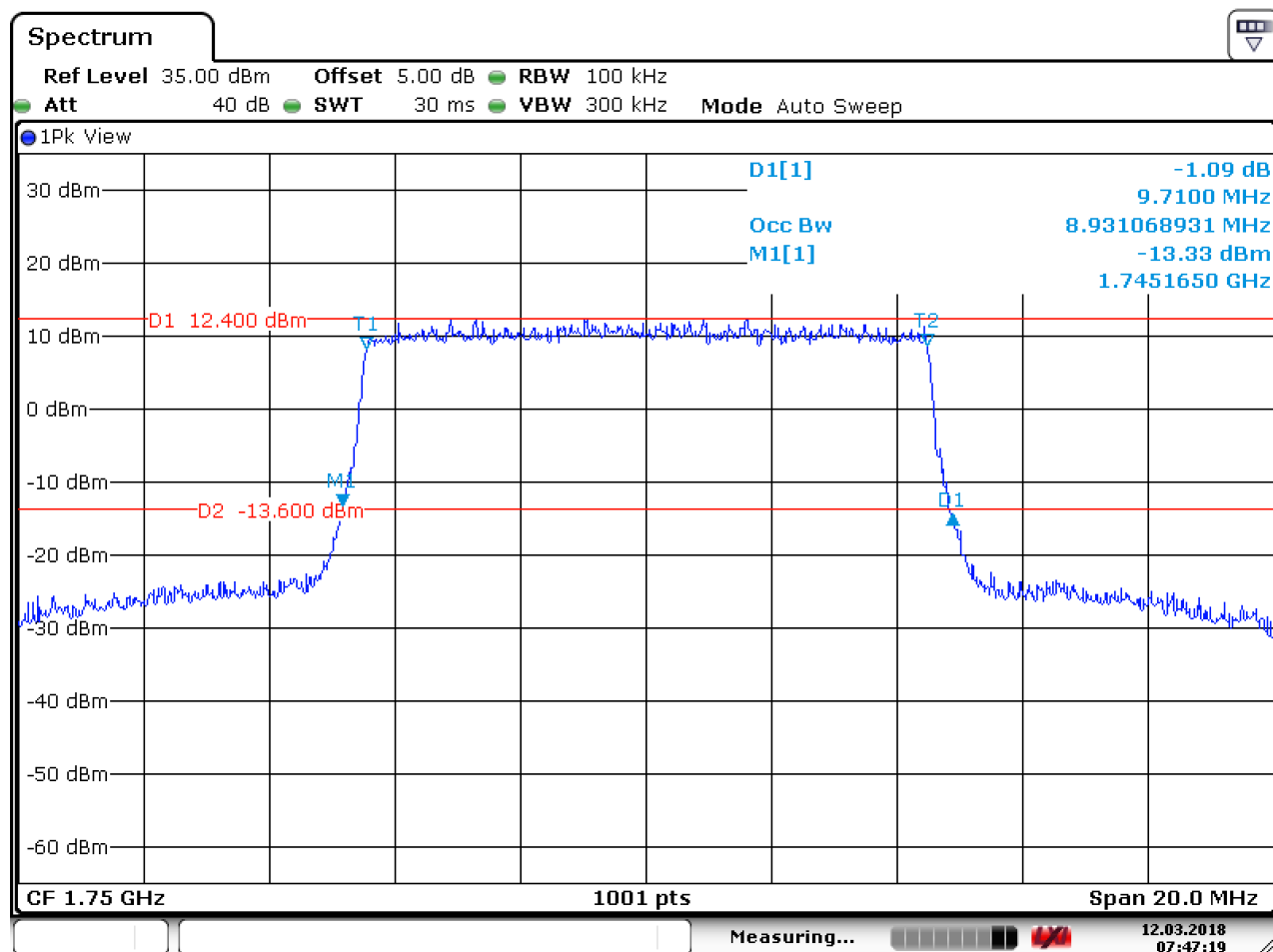
4.1.1.8.2 Test Channel = MCH



Date: 12.MAR.2018 07:44:24



4.1.1.8.3 Test Channel = HCH



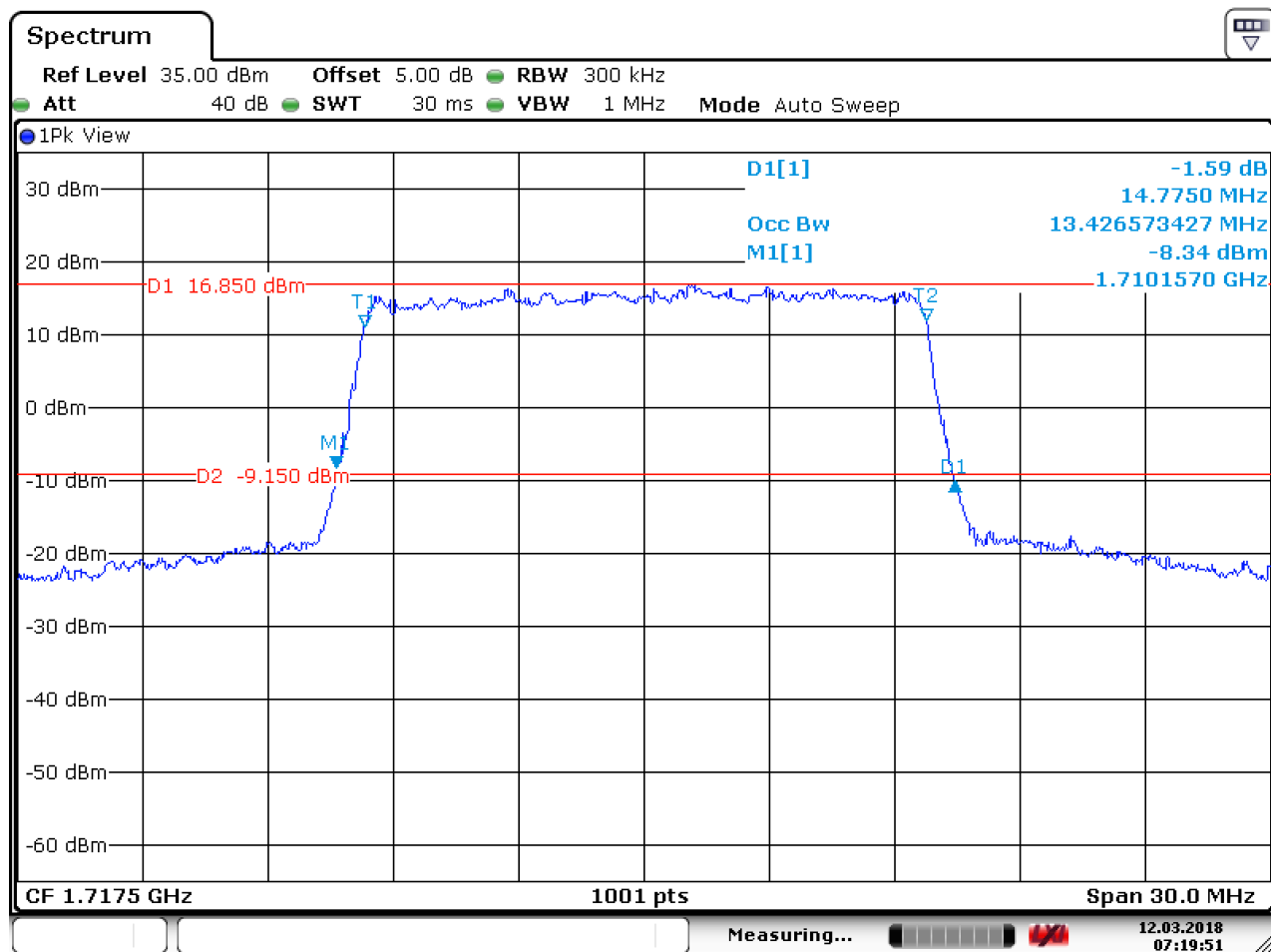
Date: 12.MAR.2018 07:47:19





4.1.1.9 Test Mode = LTE/TM1 15MHz

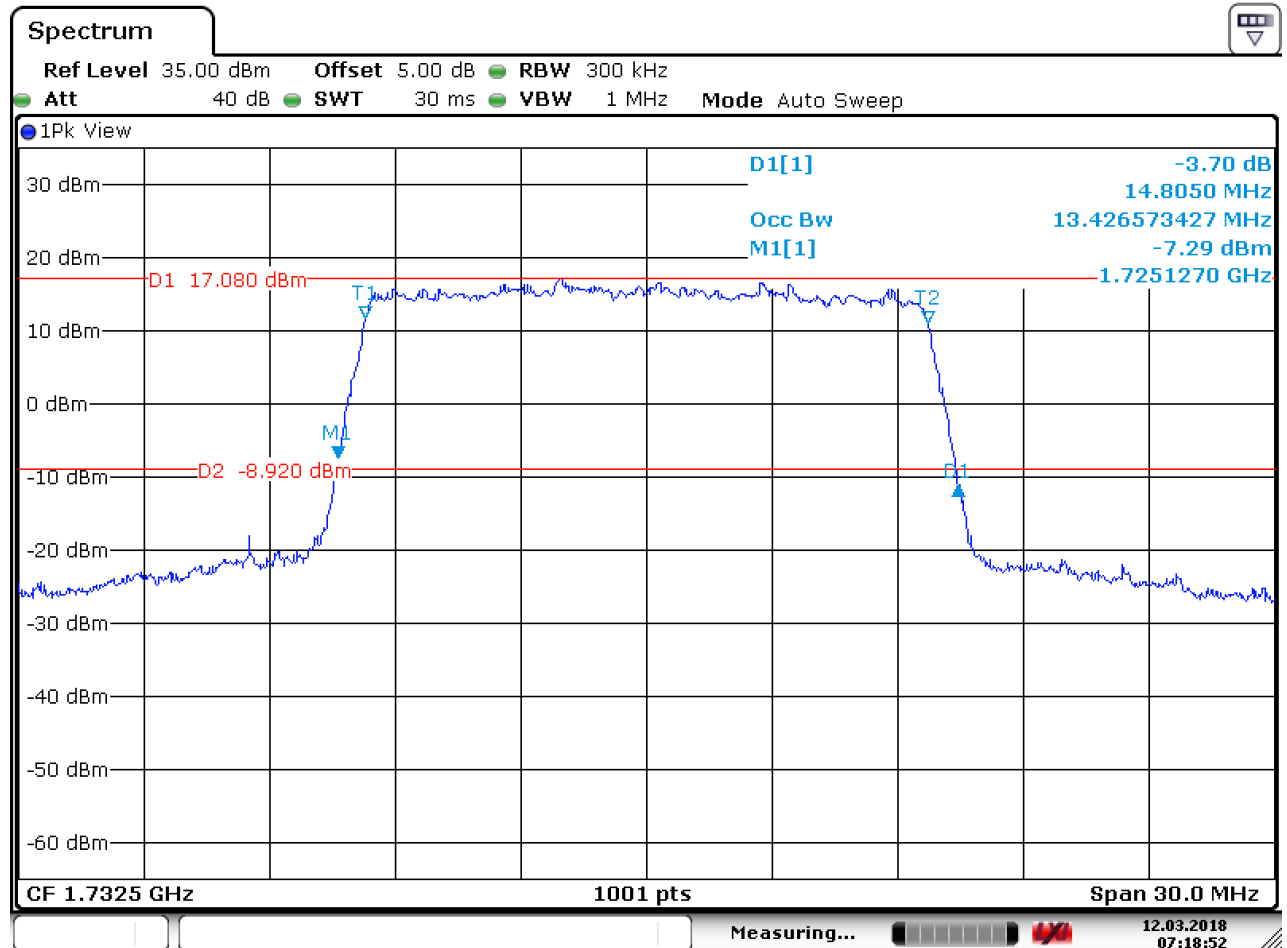
4.1.1.9.1 Test Channel = LCH



Date: 12.MAR.2018 07:19:51



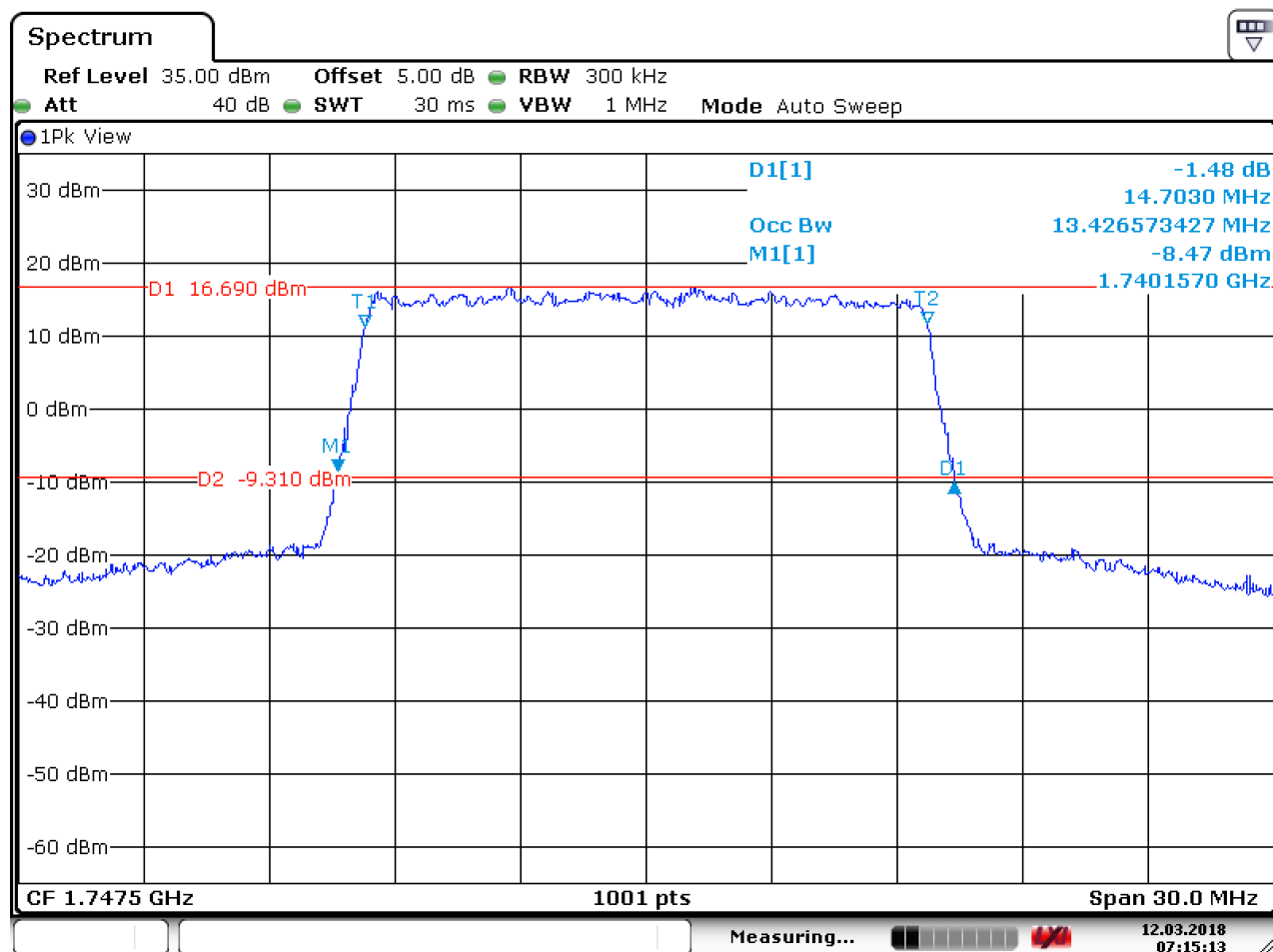
4.1.1.9.2 Test Channel = MCH



Date: 12.MAR.2018 07:18:52



4.1.1.9.3 Test Channel = HCH

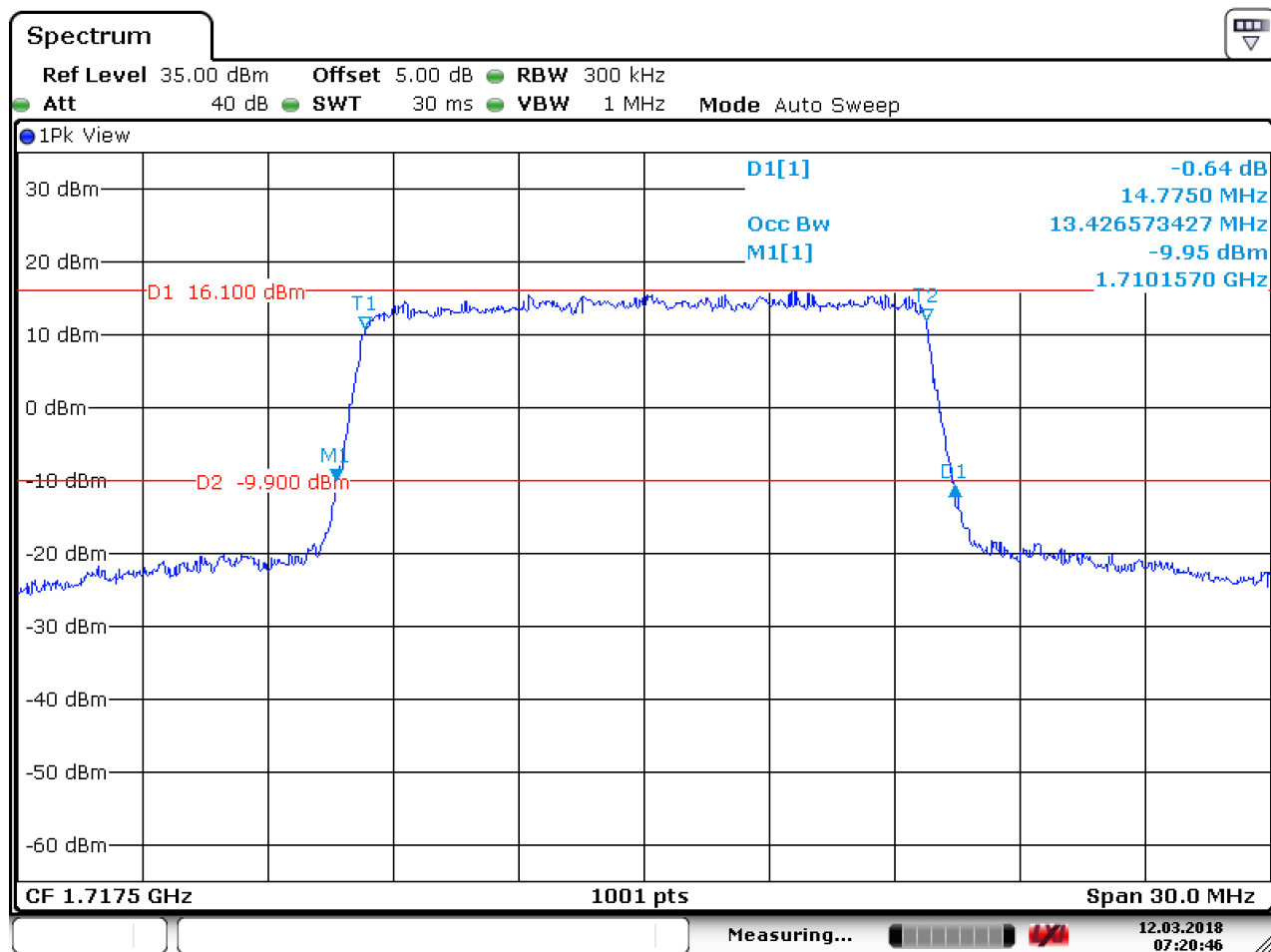


Date: 12.MAR.2018 07:15:13



4.1.1.10 Test Mode = LTE/TM2 15MHz

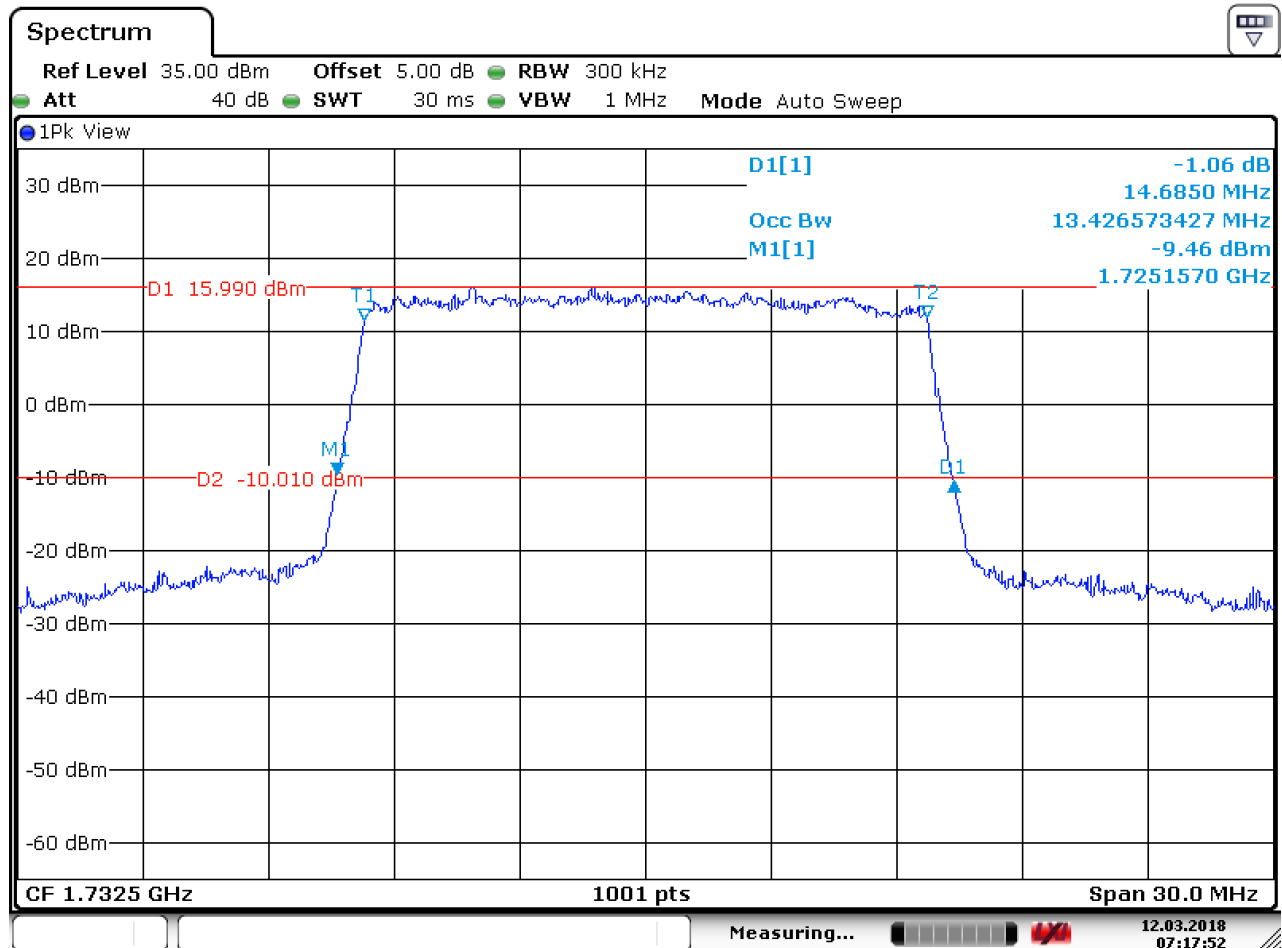
4.1.1.10.1 Test Channel = LCH



Date: 12.MAR.2018 07:20:47

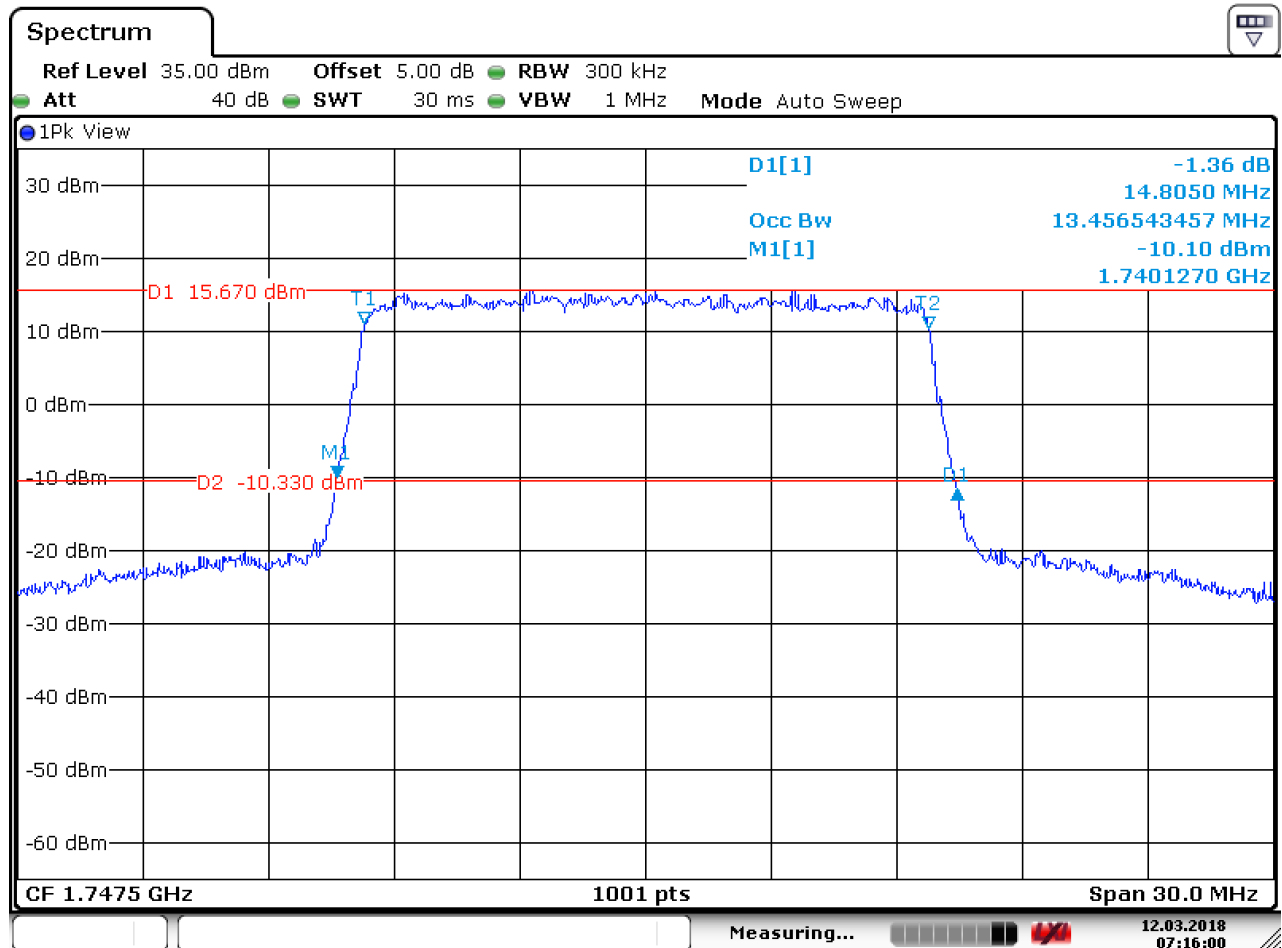


4.1.1.10.2 Test Channel = MCH



Date: 12.MAR.2018 07:17:53

#### 4.1.1.10.3 Test Channel = HCH

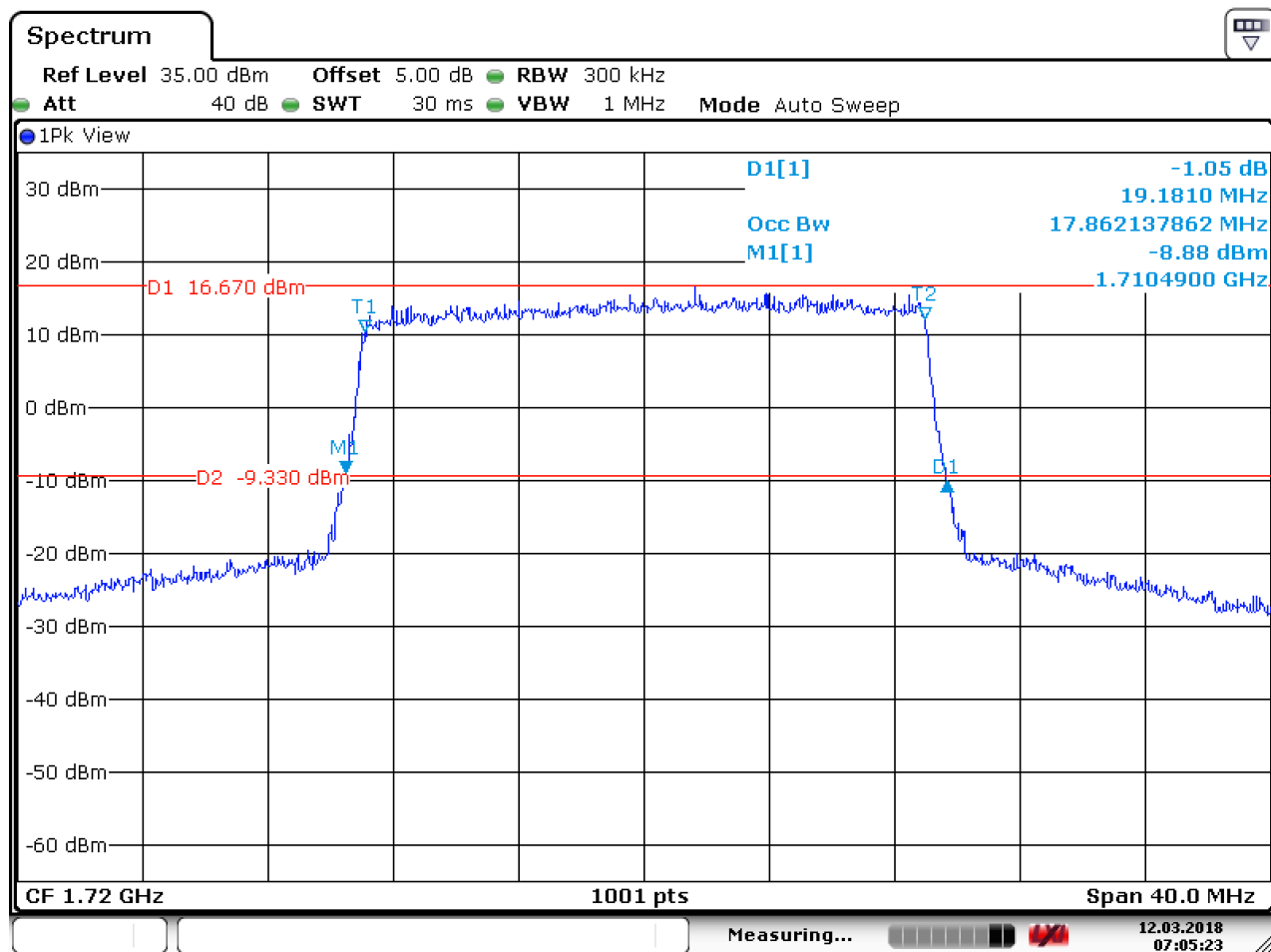


Date: 12.MAR.2018 07:16:01



4.1.1.11 Test Mode = LTE/TM1 20MHz

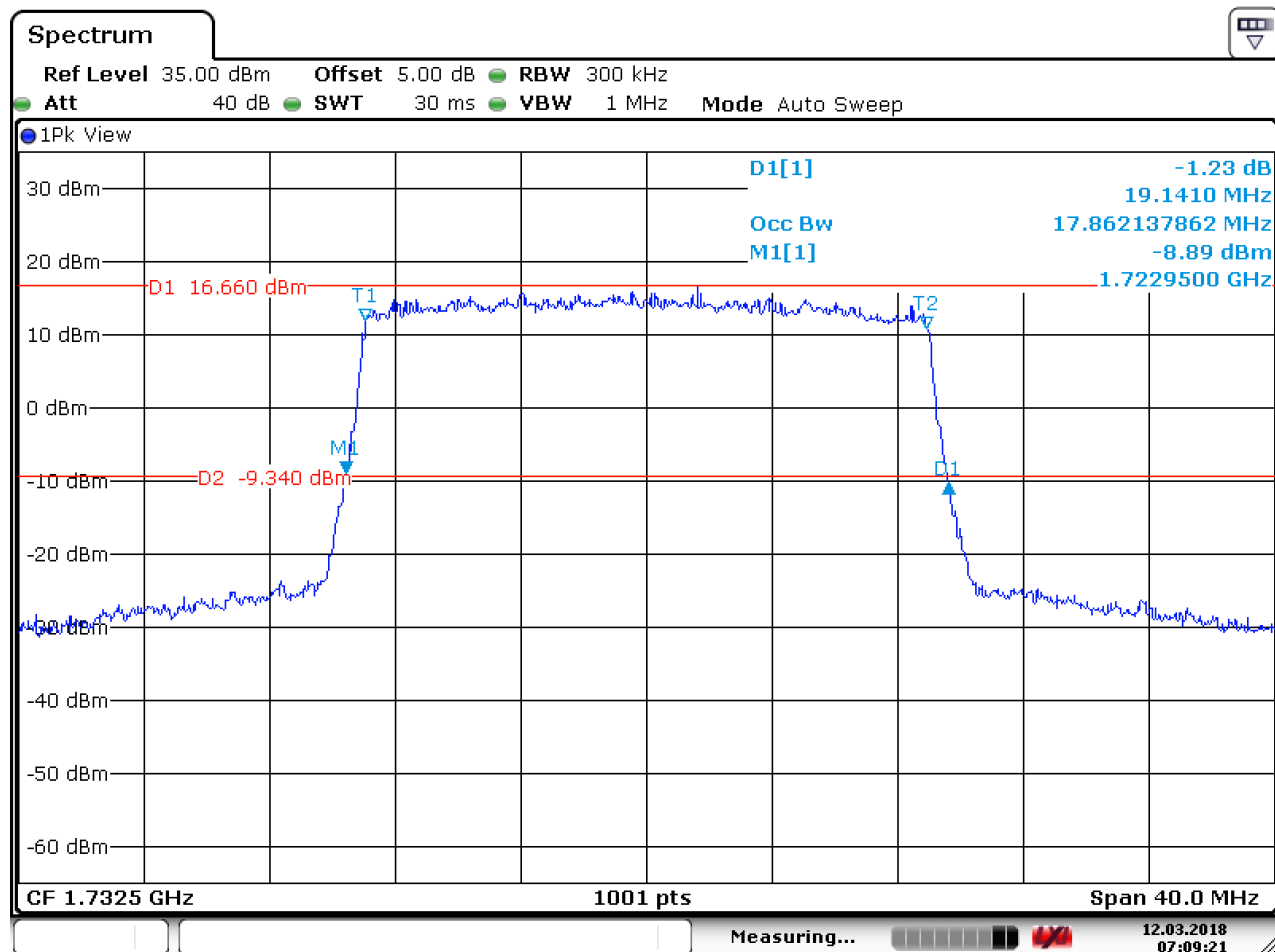
4.1.1.11.1 Test Channel = LCH



Date: 12.MAR.2018 07:05:23



4.1.1.11.2 Test Channel = MCH

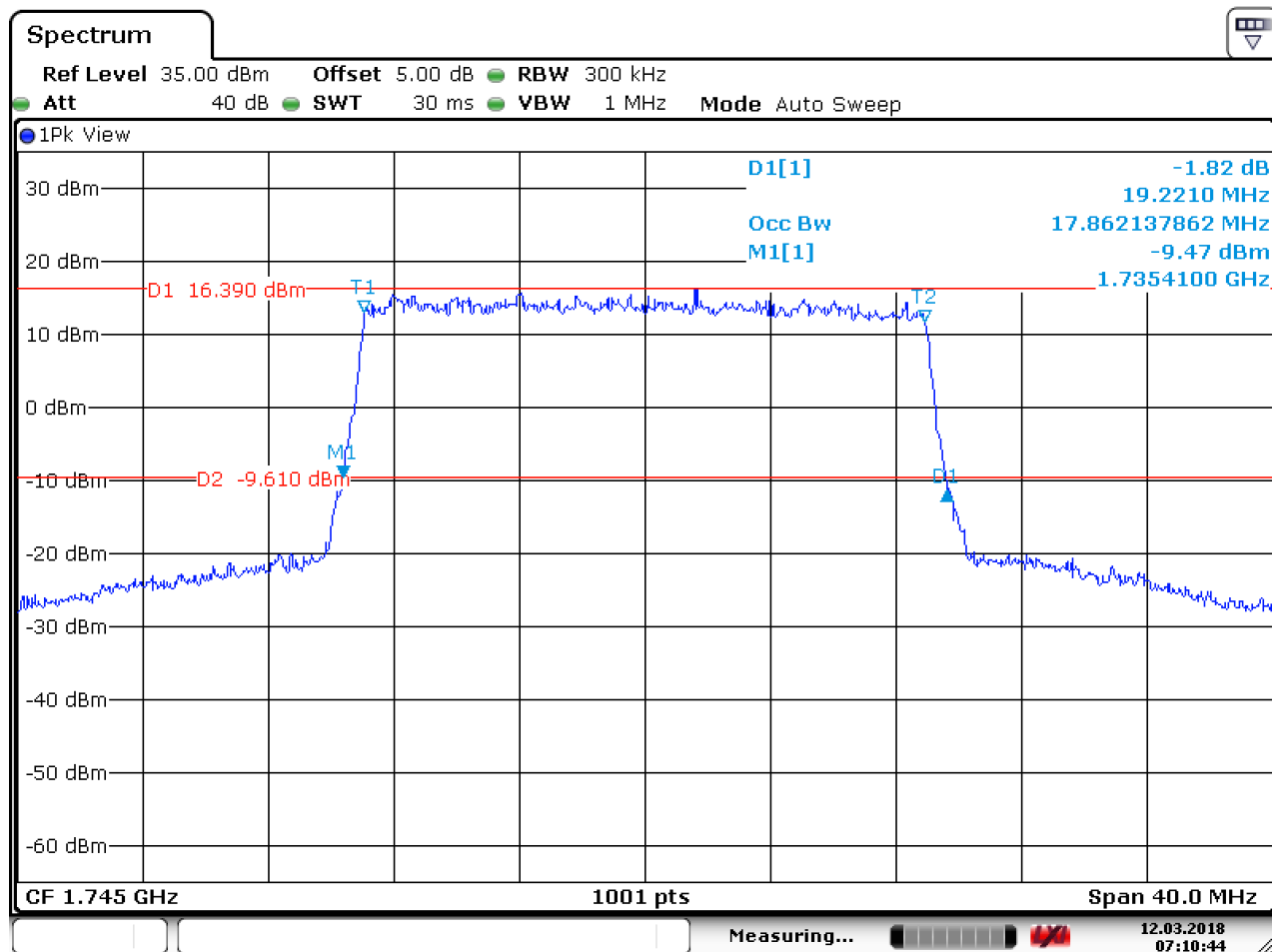


Date: 12.MAR.2018 07:09:22





4.1.1.11.3 Test Channel = HCH

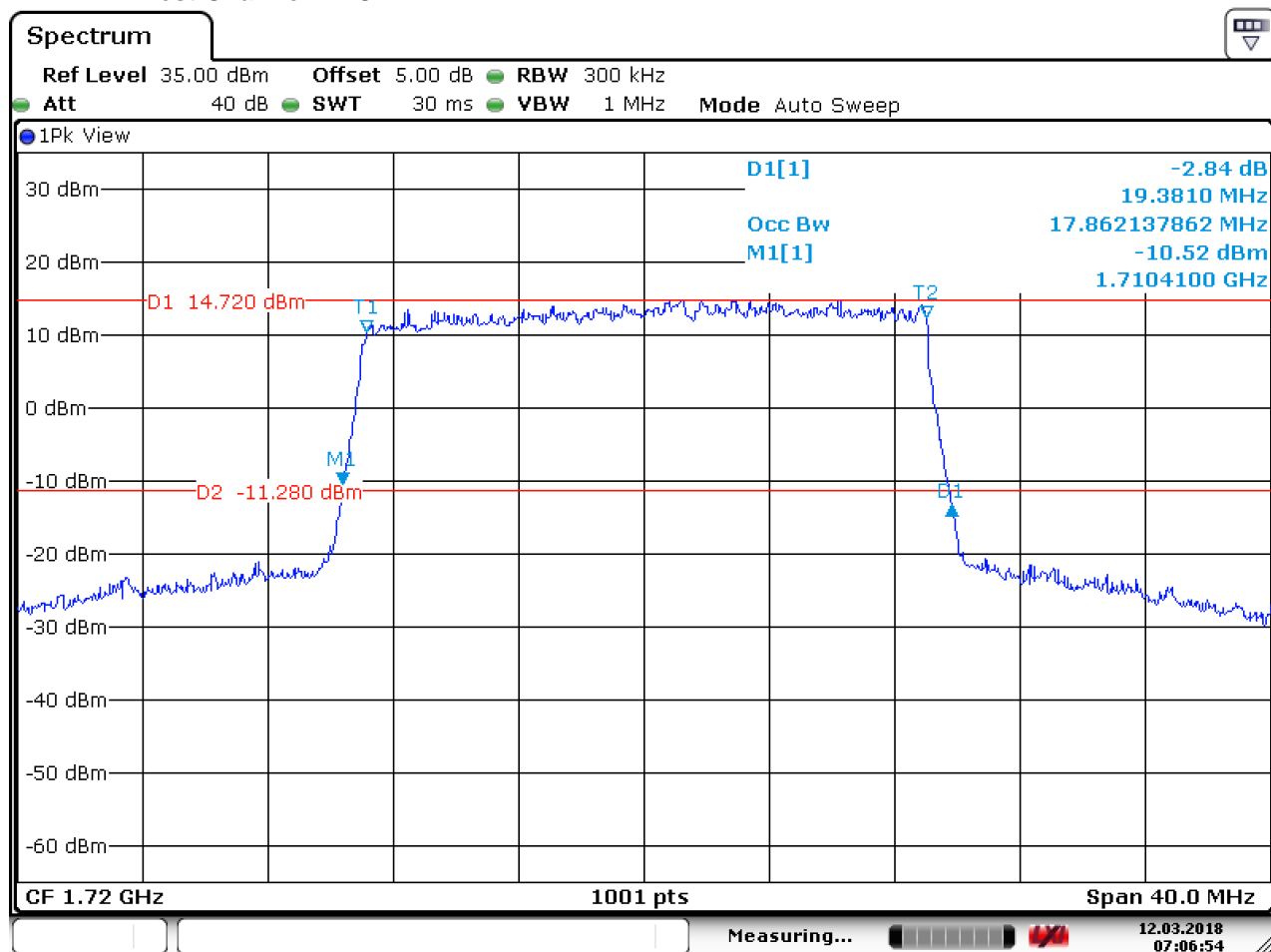


Date: 12.MAR.2018 07:10:44



4.1.1.12 Test Mode = LTE/TM2 20MHz

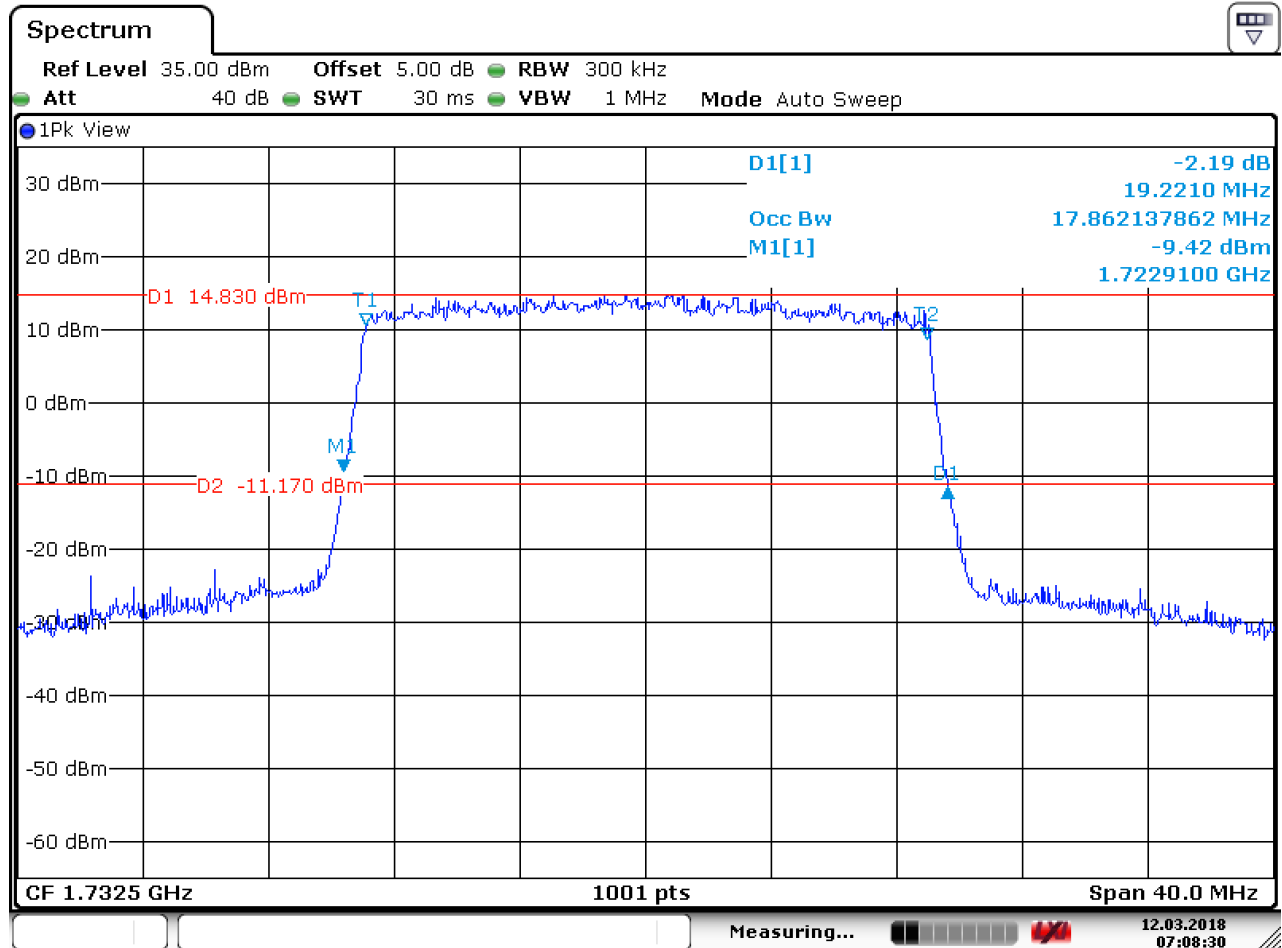
4.1.1.12.1 Test Channel = LCH



Date: 12.MAR.2018 07:06:54



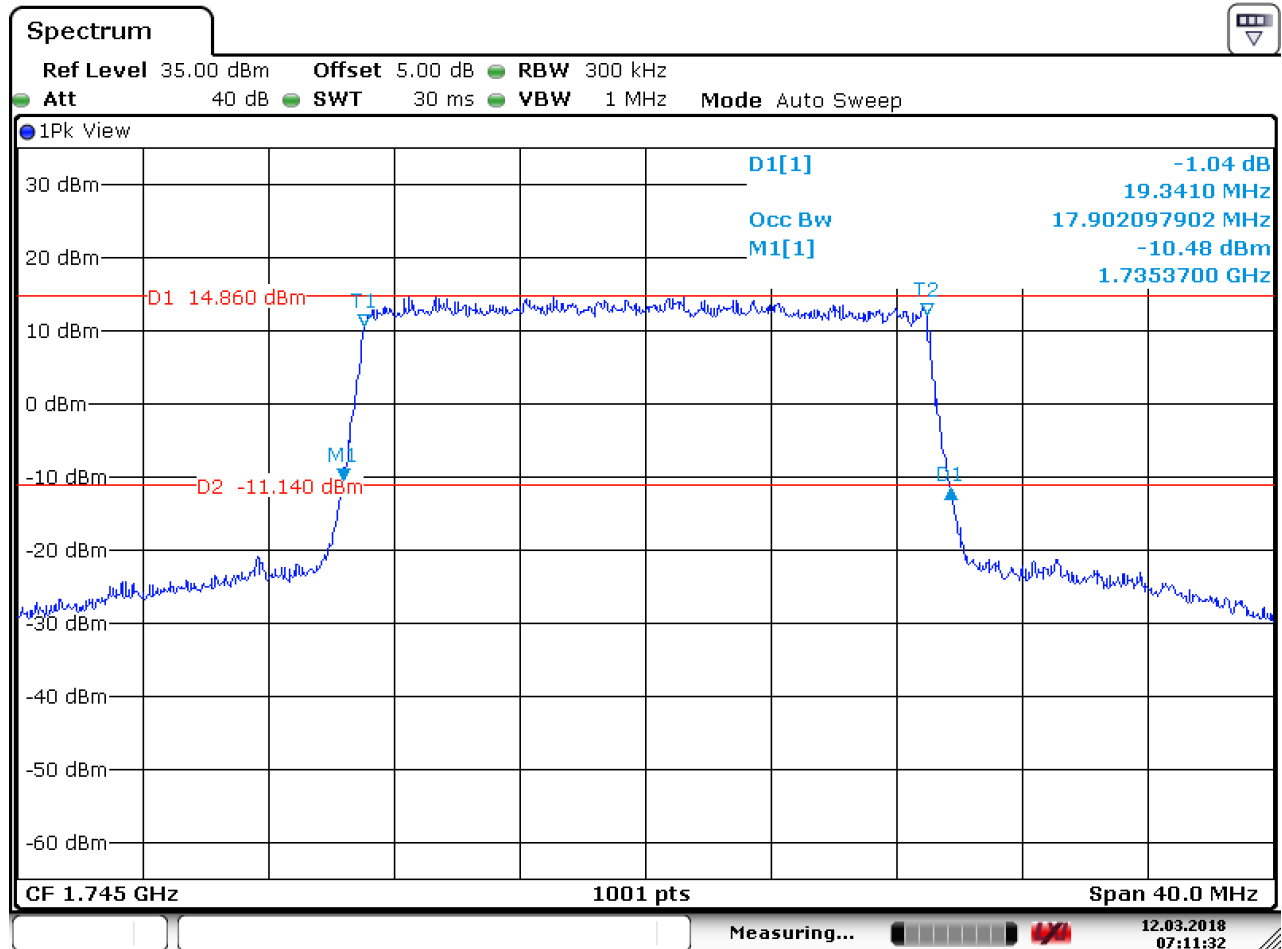
4.1.1.12.2 Test Channel = MCH



Date: 12.MAR.2018 07:08:31



4.1.1.12.3 Test Channel = HCH



Date: 12.MAR.2018 07:11:32

## 5 Band Edges Compliance

### Part I - Test Plots

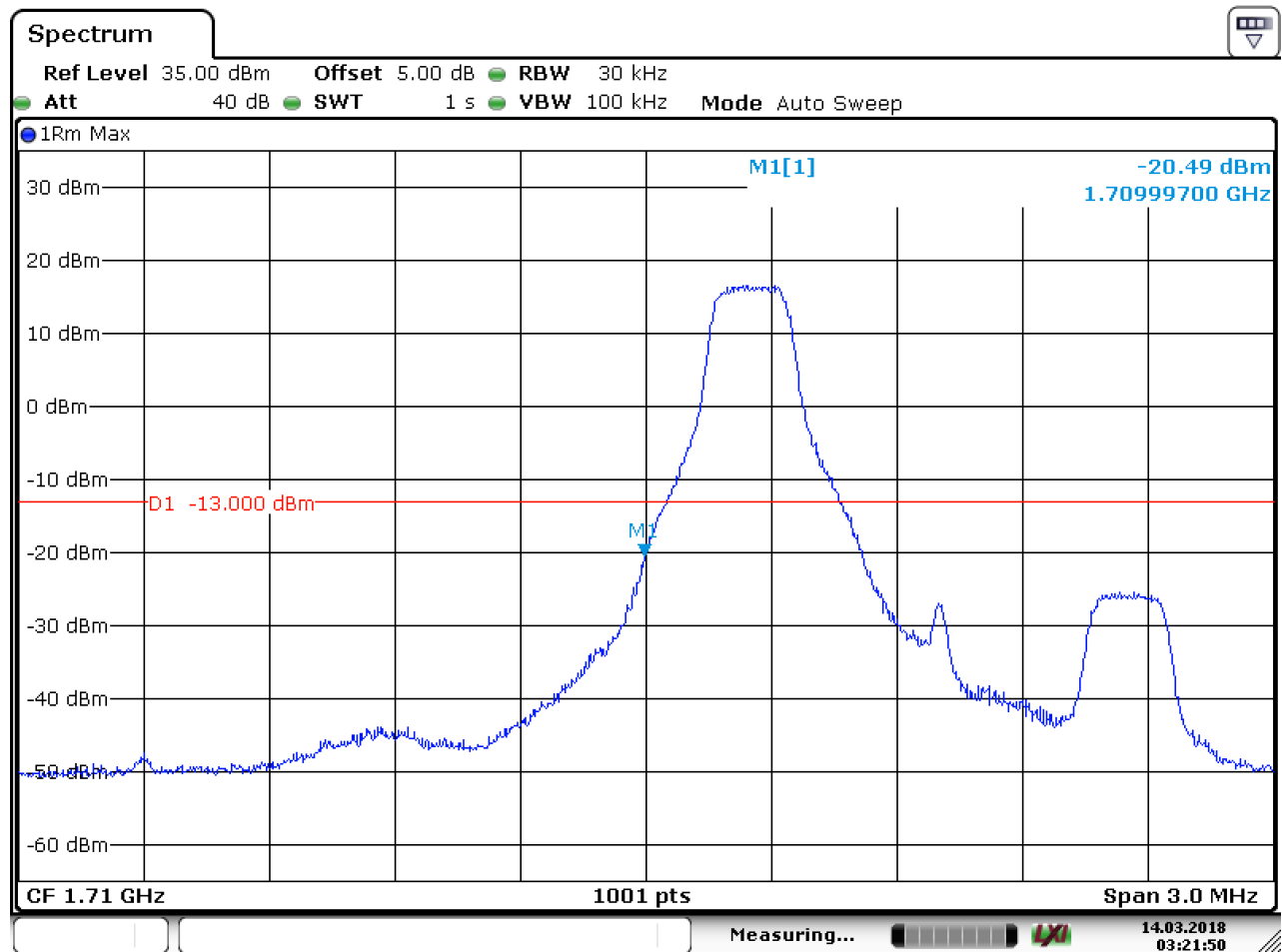
#### 5.1 For LTE

##### 5.1.1 Test Band = LTE Band4

##### 5.1.1.1 Test Mode = LTE/TM1 1.4MHz

##### 5.1.1.1.1 Test Channel = LCH

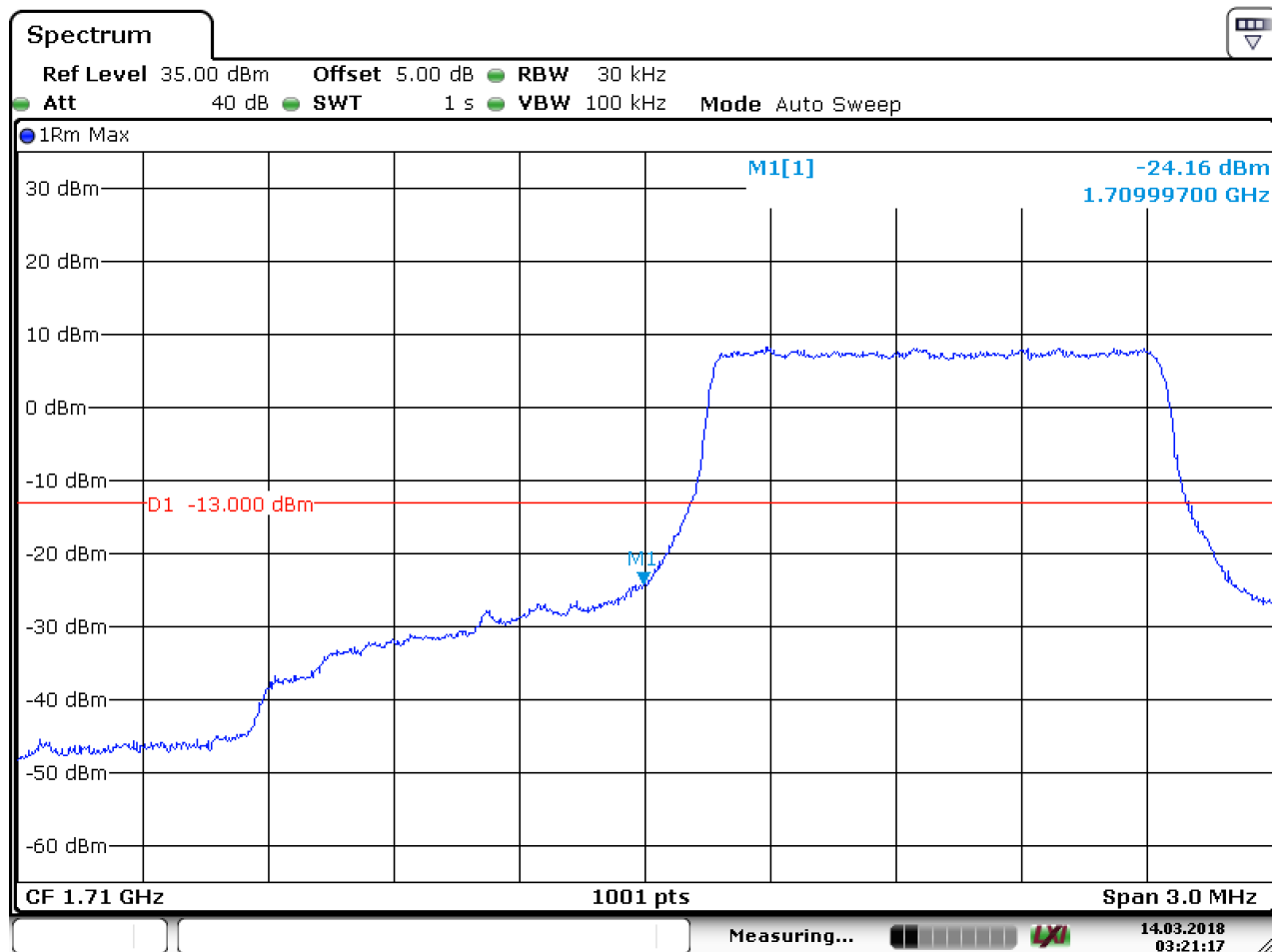
##### 5.1.1.1.1.1 Test RB=1RB



Date: 14.MAR.2018 03:21:50



5.1.1.1.2 Test RB=6RB

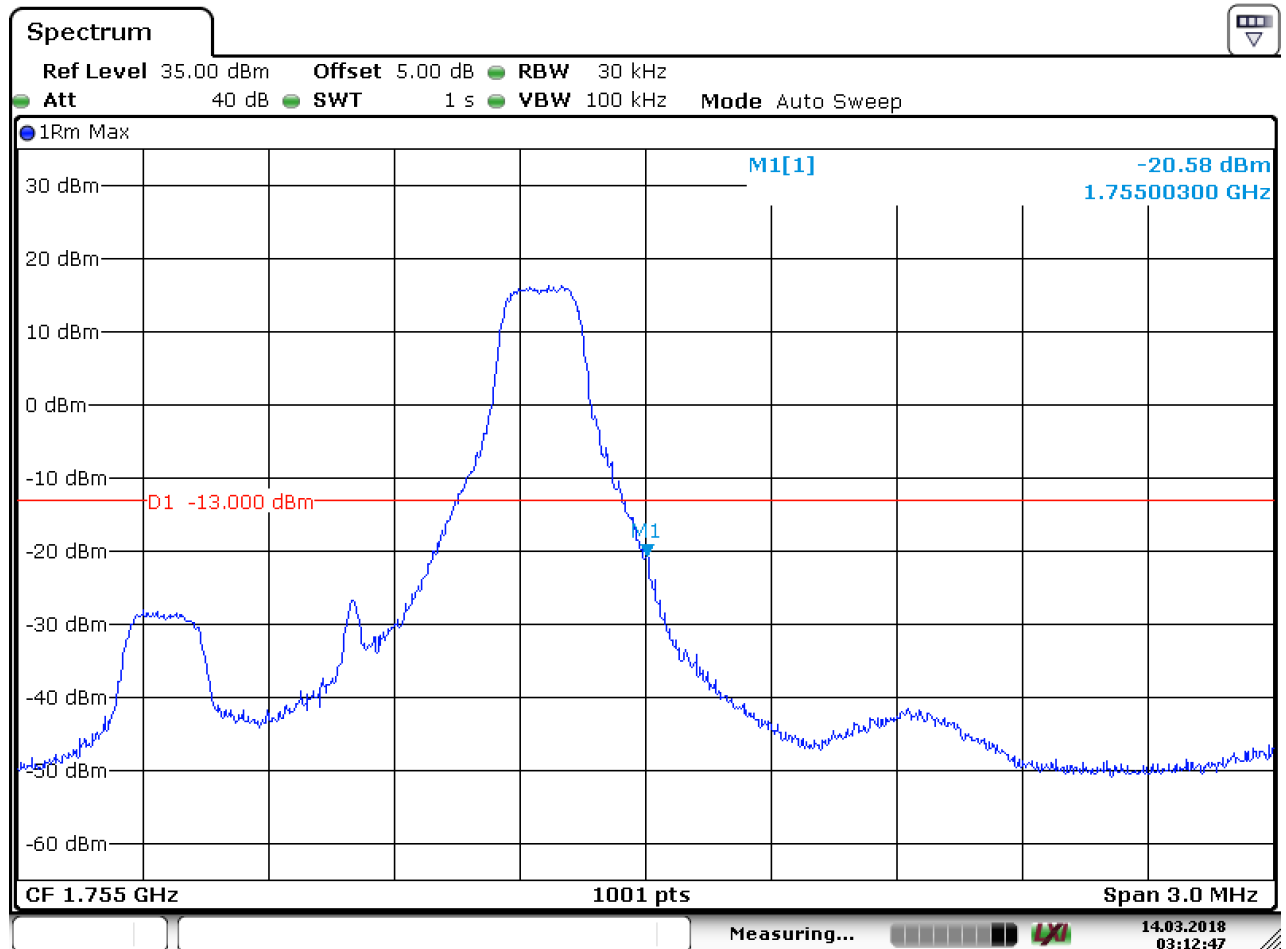


Date: 14.MAR.2018 03:21:18



5.1.1.1.2 Test Channel = HCH

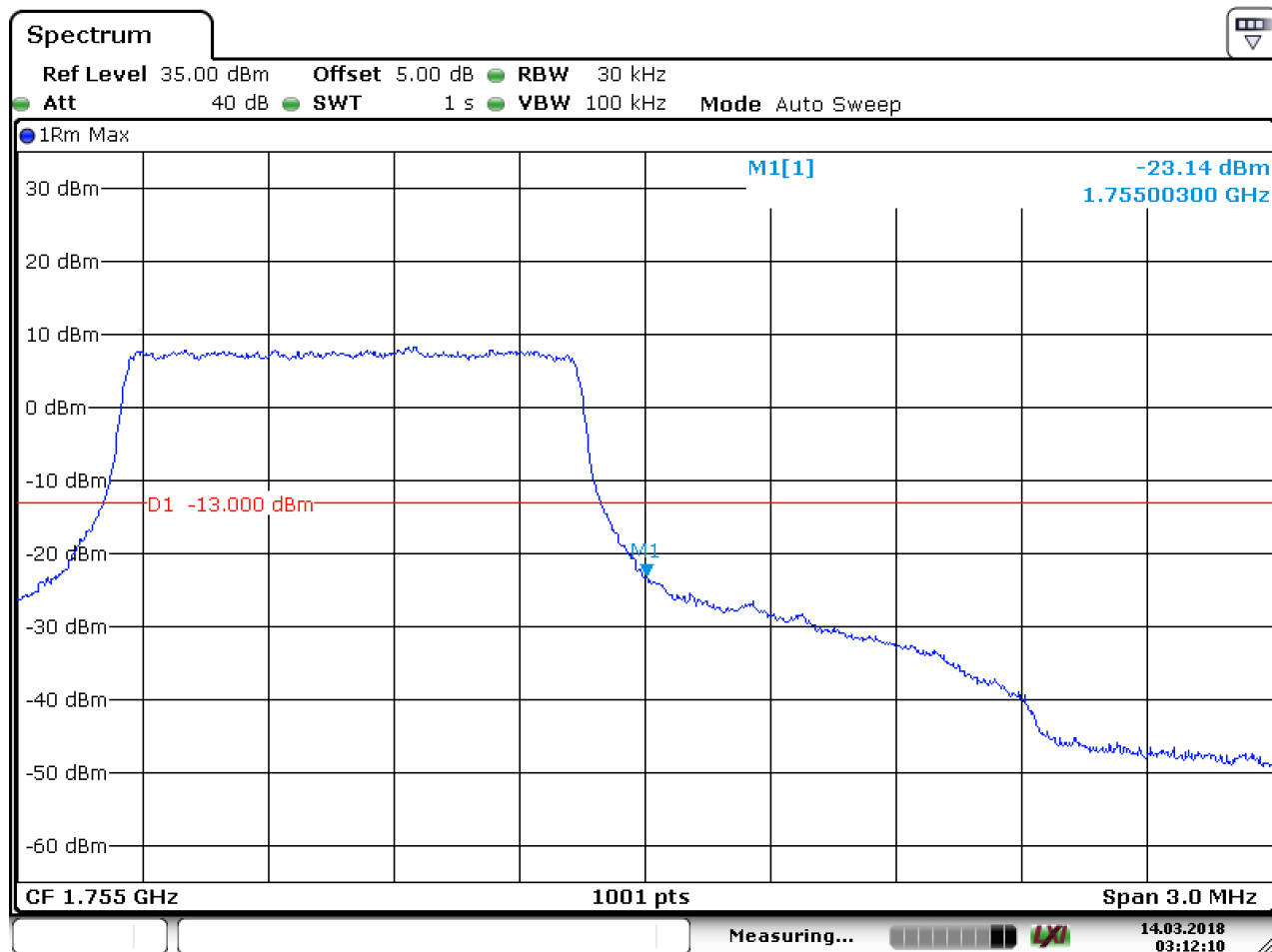
5.1.1.1.2.1 Test RB=1RB



Date: 14.MAR.2018 03:12:47



5.1.1.1.2.2 Test RB=6RB



Date: 14.MAR.2018 03:12:10

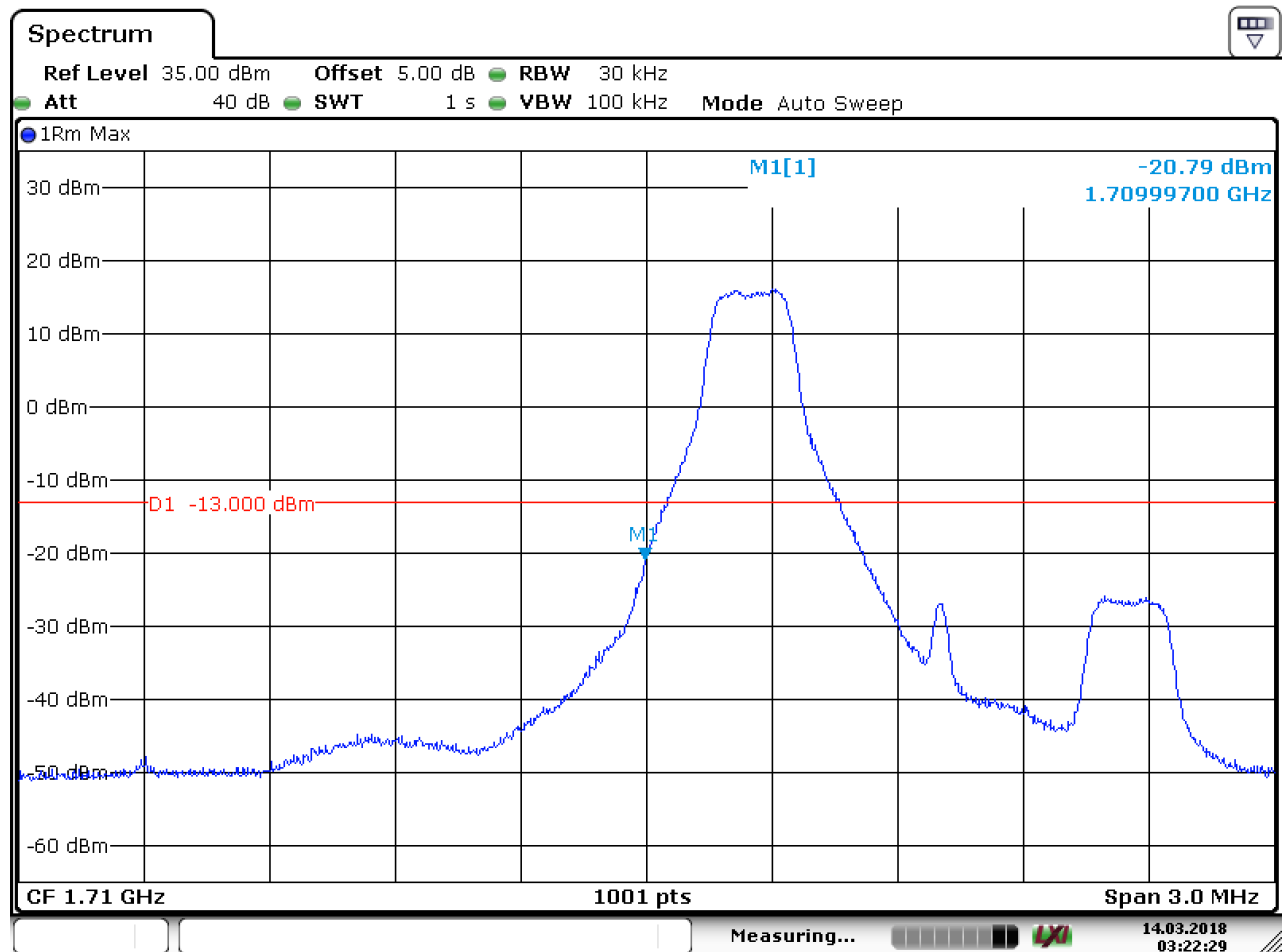




5.1.1.2 Test Mode = LTE/TM2 1.4MHz

5.1.1.2.1 Test Channel = LCH

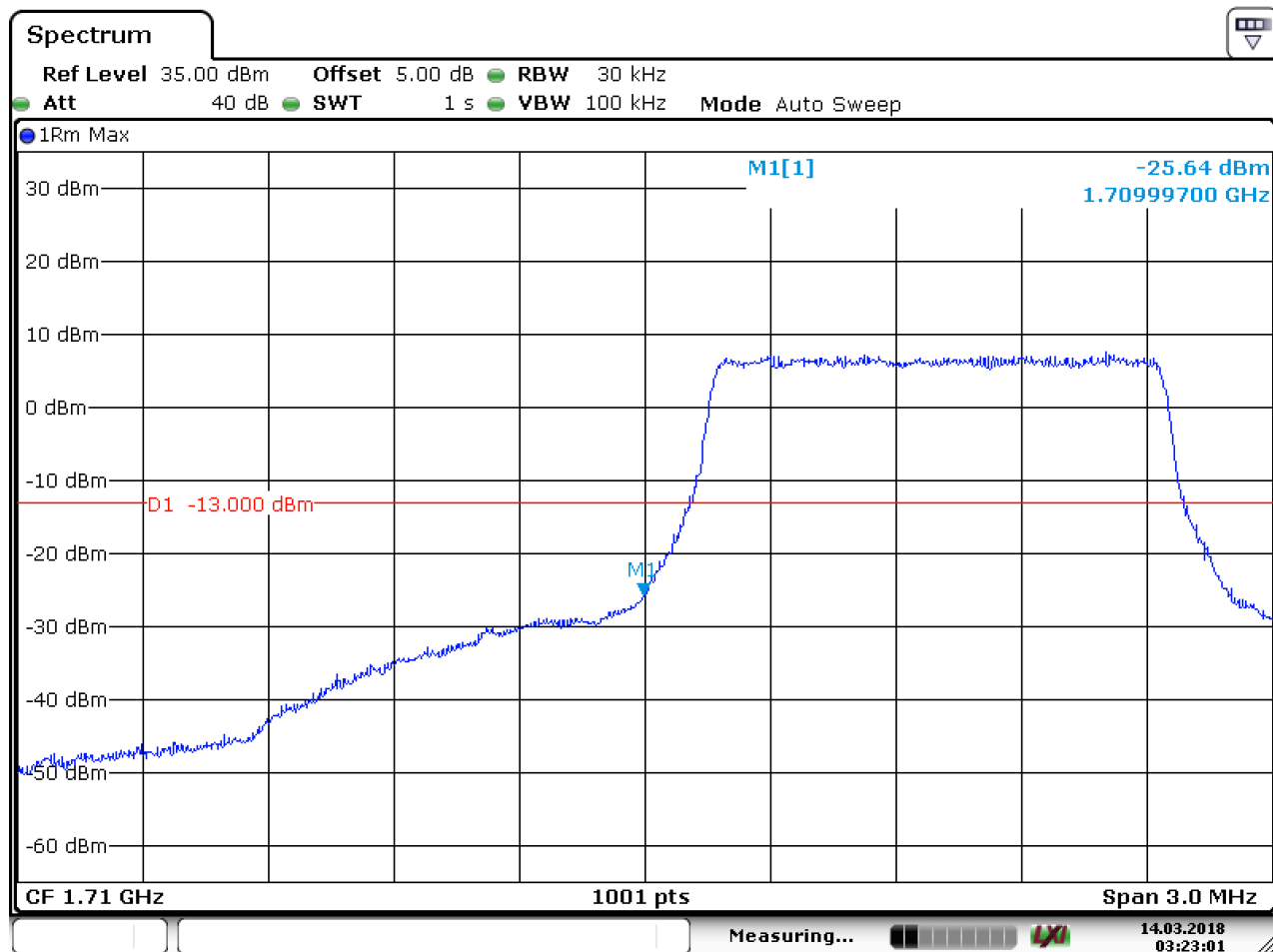
5.1.1.2.1.1 Test RB=1RB



Date: 14.MAR.2018 03:22:30



5.1.1.2.1.2 Test RB=6RB

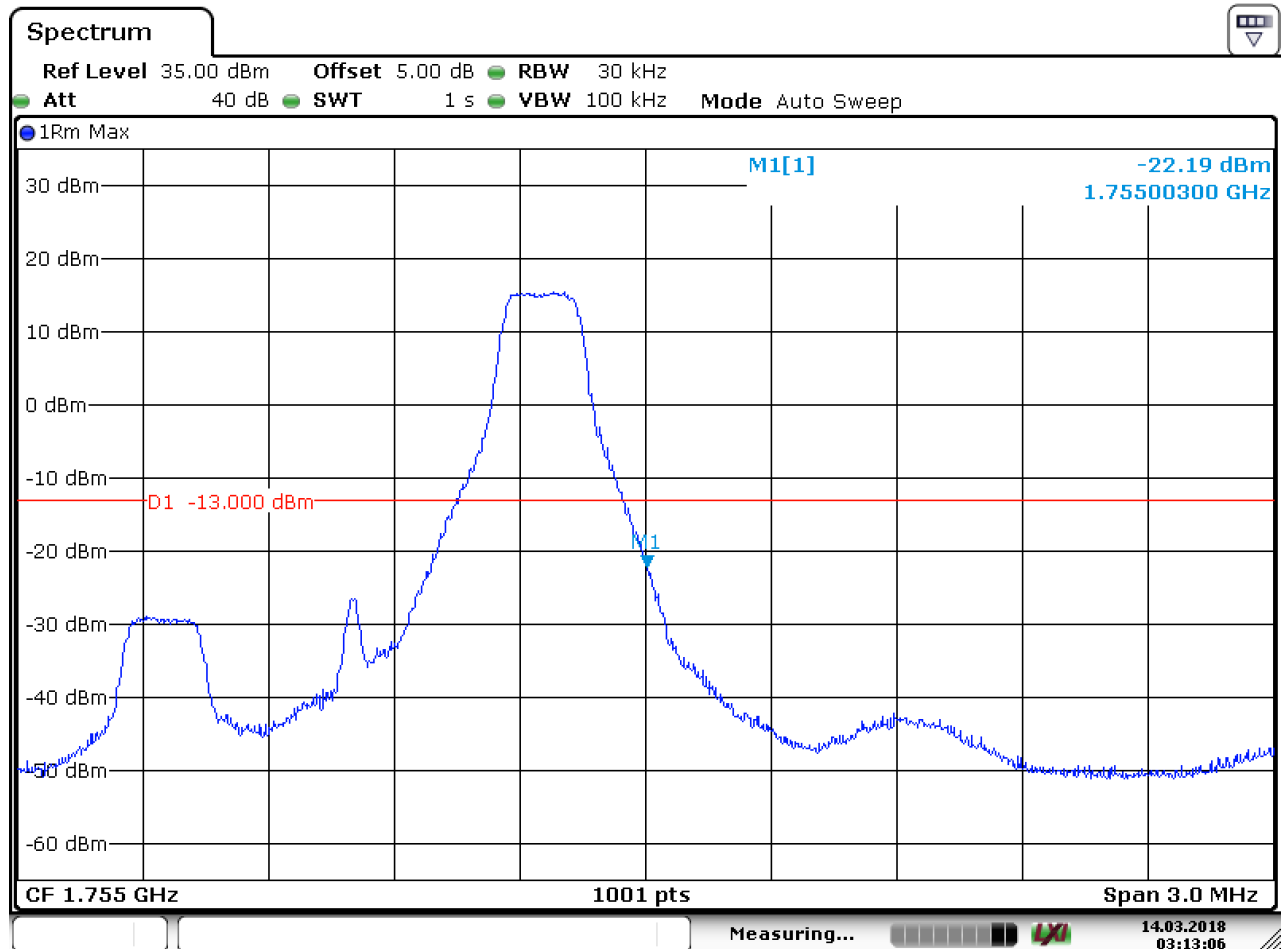


Date: 14.MAR.2018 03:23:01



5.1.1.2.2 Test Channel = HCH

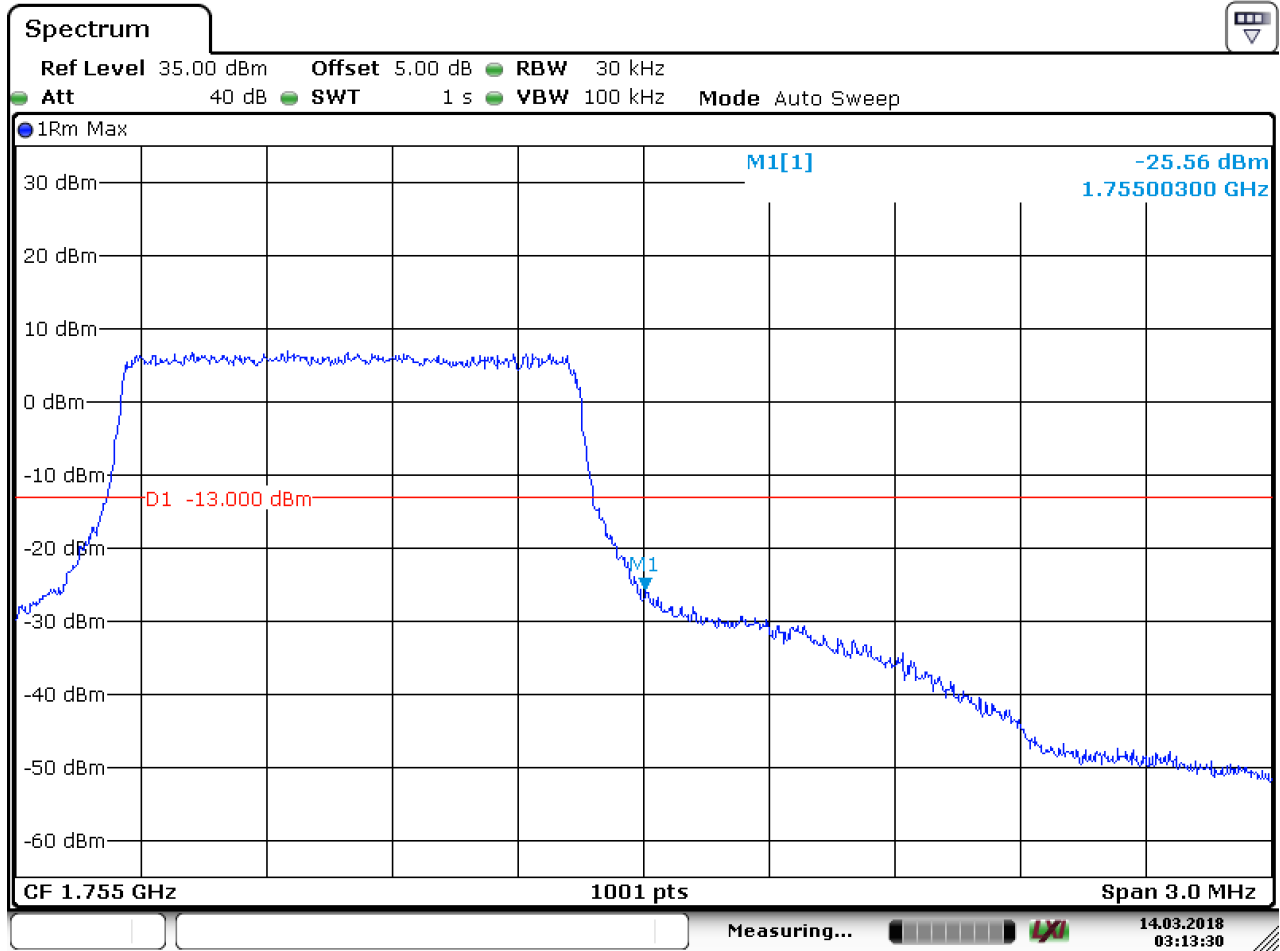
5.1.1.2.2.1 Test RB=1RB



Date: 14.MAR.2018 03:13:07



5.1.1.2.2.2 Test RB=6RB



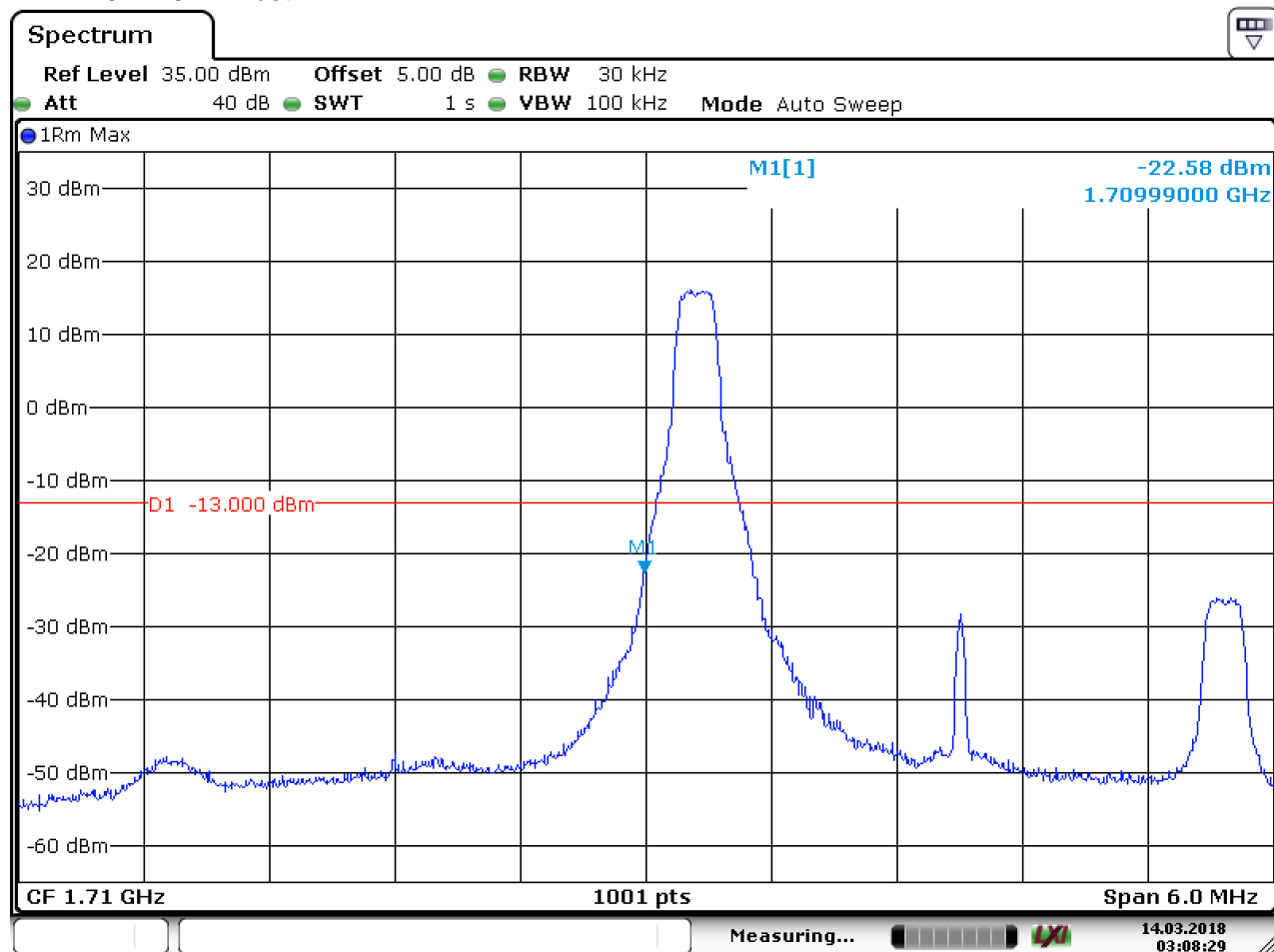
Date: 14.MAR.2018 03:13:30



5.1.1.3 Test Mode = LTE/TM1 3MHz

5.1.1.3.1 Test Channel = LCH

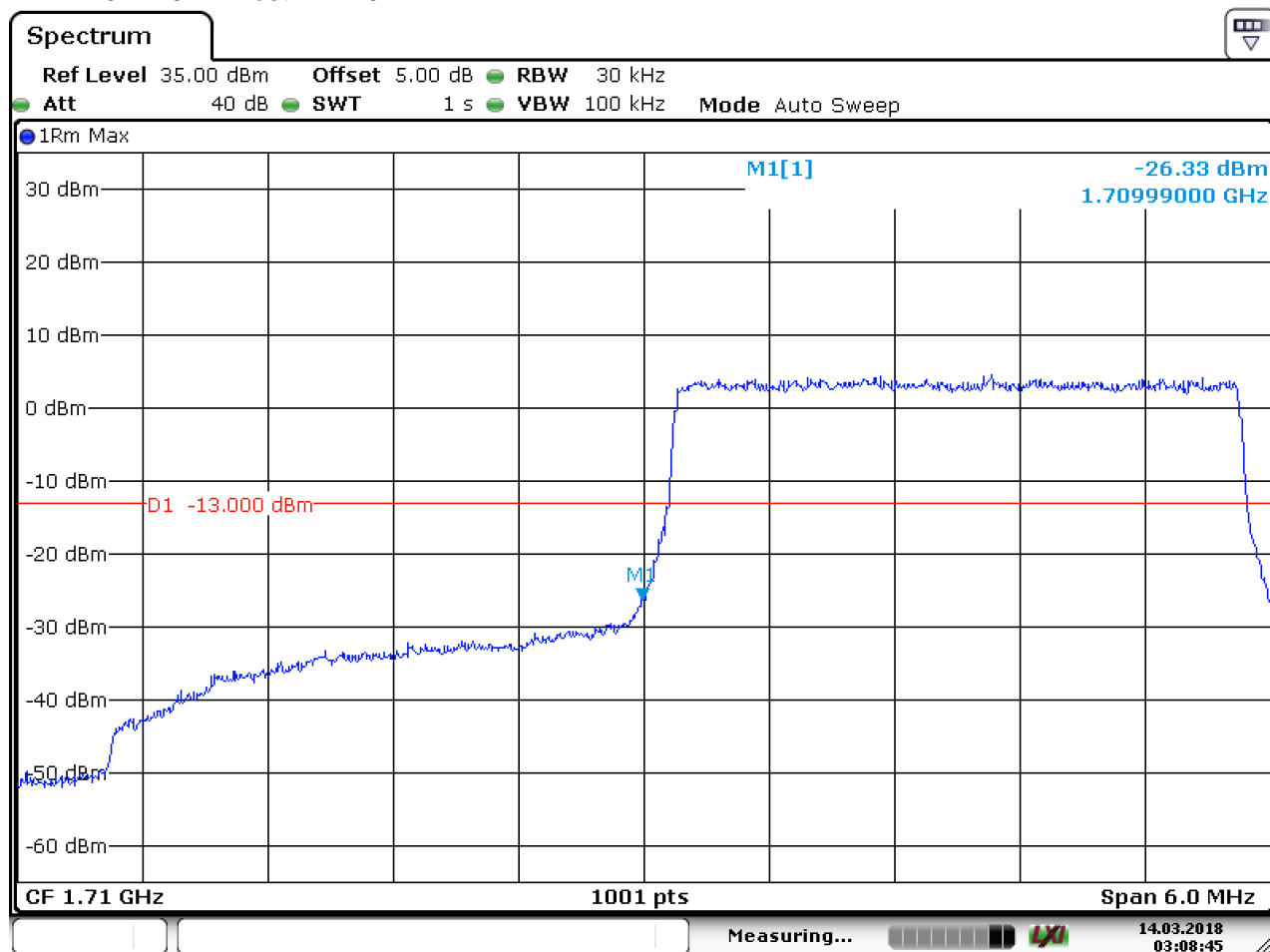
5.1.1.3.1.1 Test RB=1RB



Date: 14.MAR.2018 03:08:29



5.1.1.3.1.2 Test RB=15RB

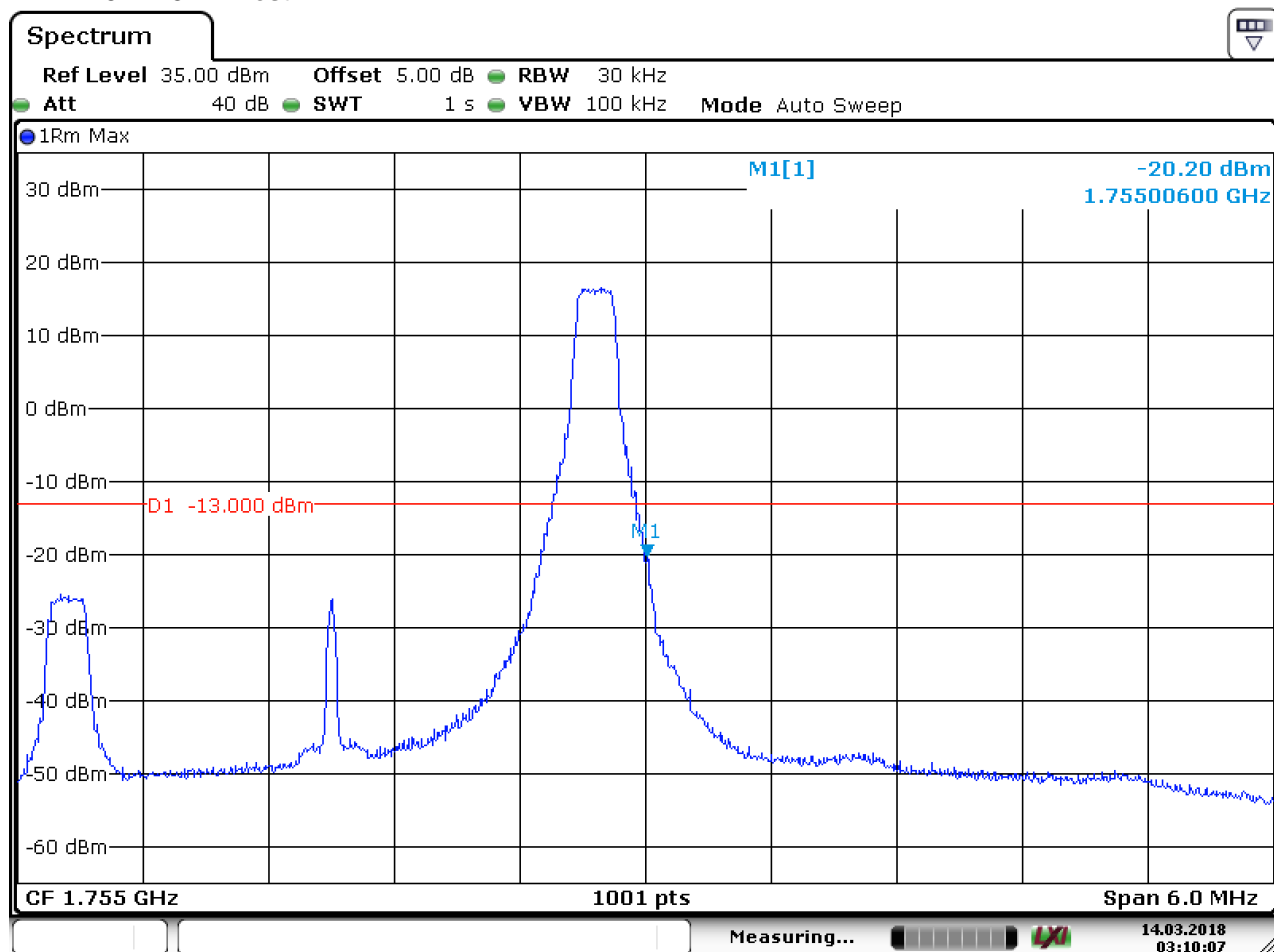


Date: 14.MAR.2018 03:08:45



5.1.1.3.2 Test Channel = HCH

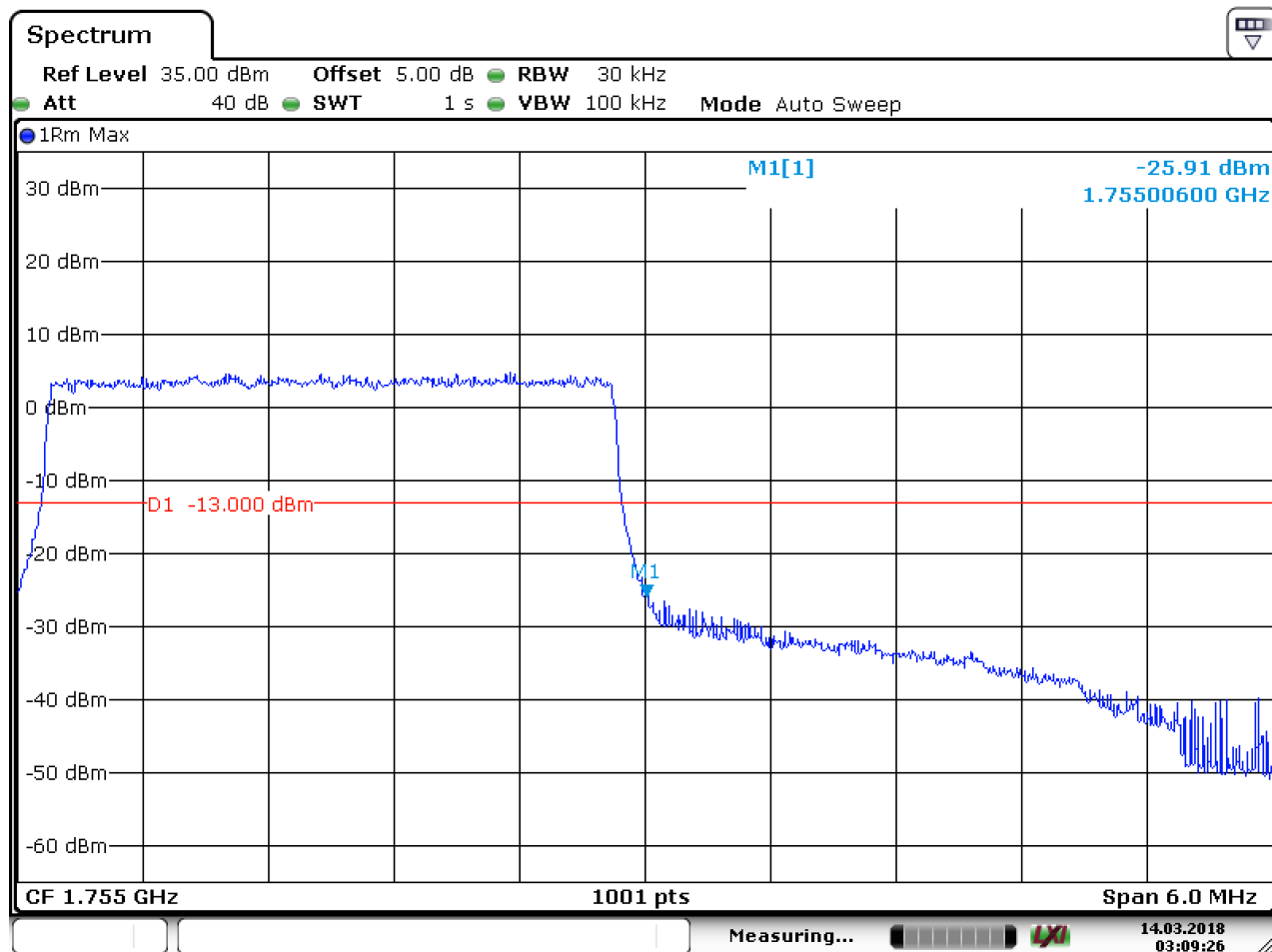
5.1.1.3.2.1 Test RB=1RB



Date: 14.MAR.2018 03:10:07



5.1.1.3.2.2 Test RB=15RB



Date: 14.MAR.2018 03:09:27

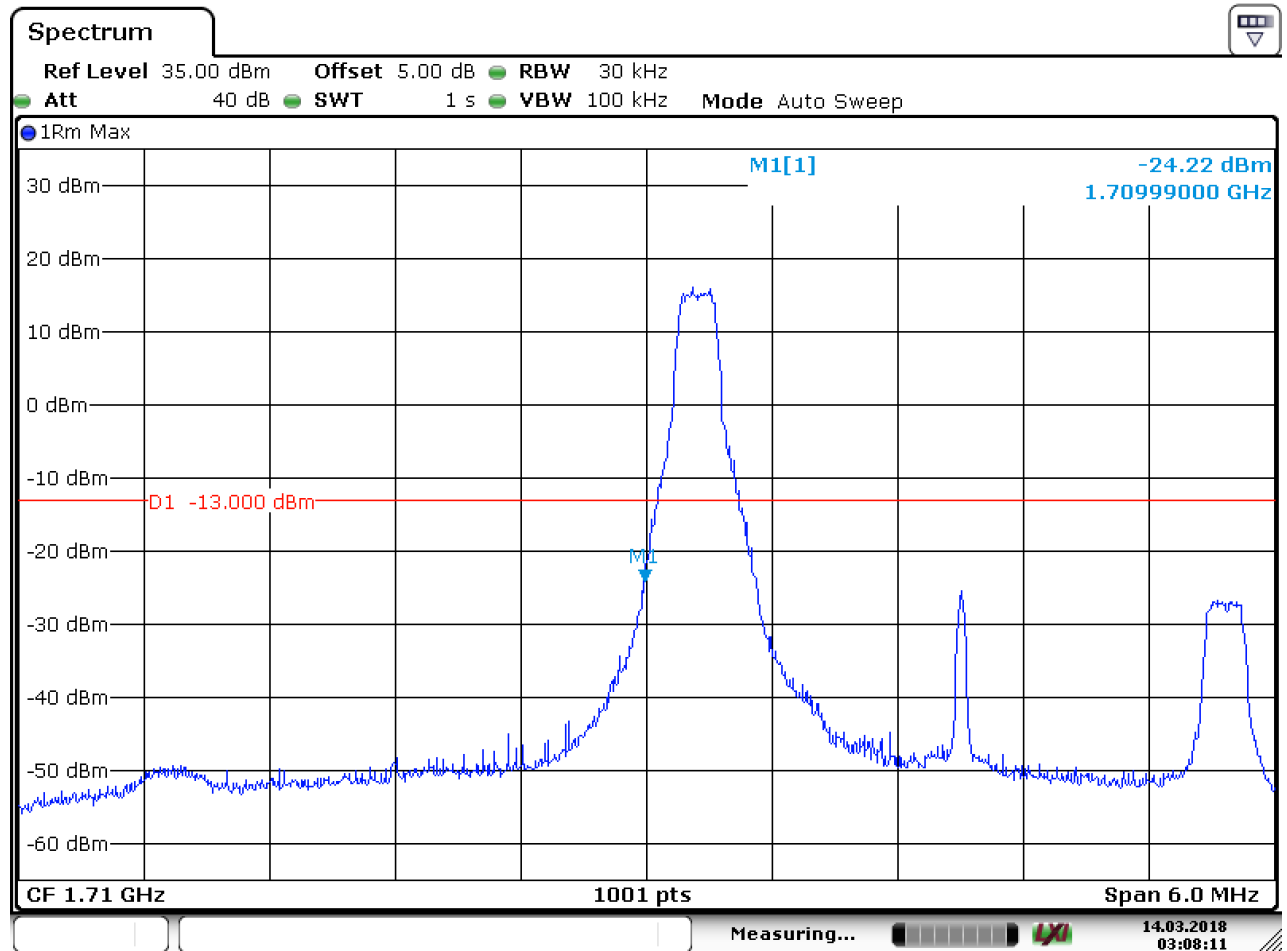




5.1.1.4 Test Mode = LTE/TM2 3MHz

5.1.1.4.1 Test Channel = LCH

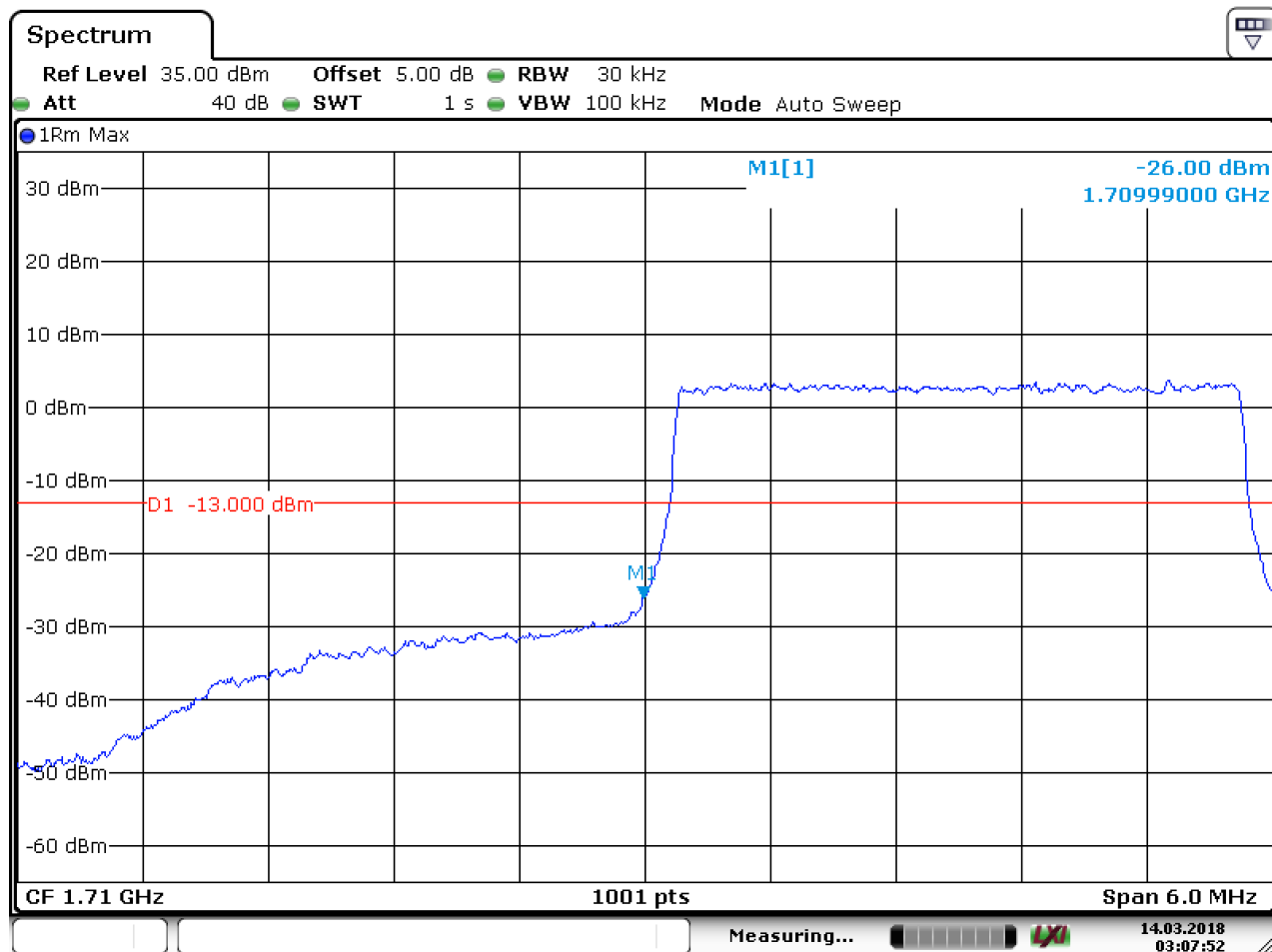
5.1.1.4.1.1 Test RB=1RB



Date: 14.MAR.2018 03:08:12



5.1.1.4.1.2 Test RB=15RB

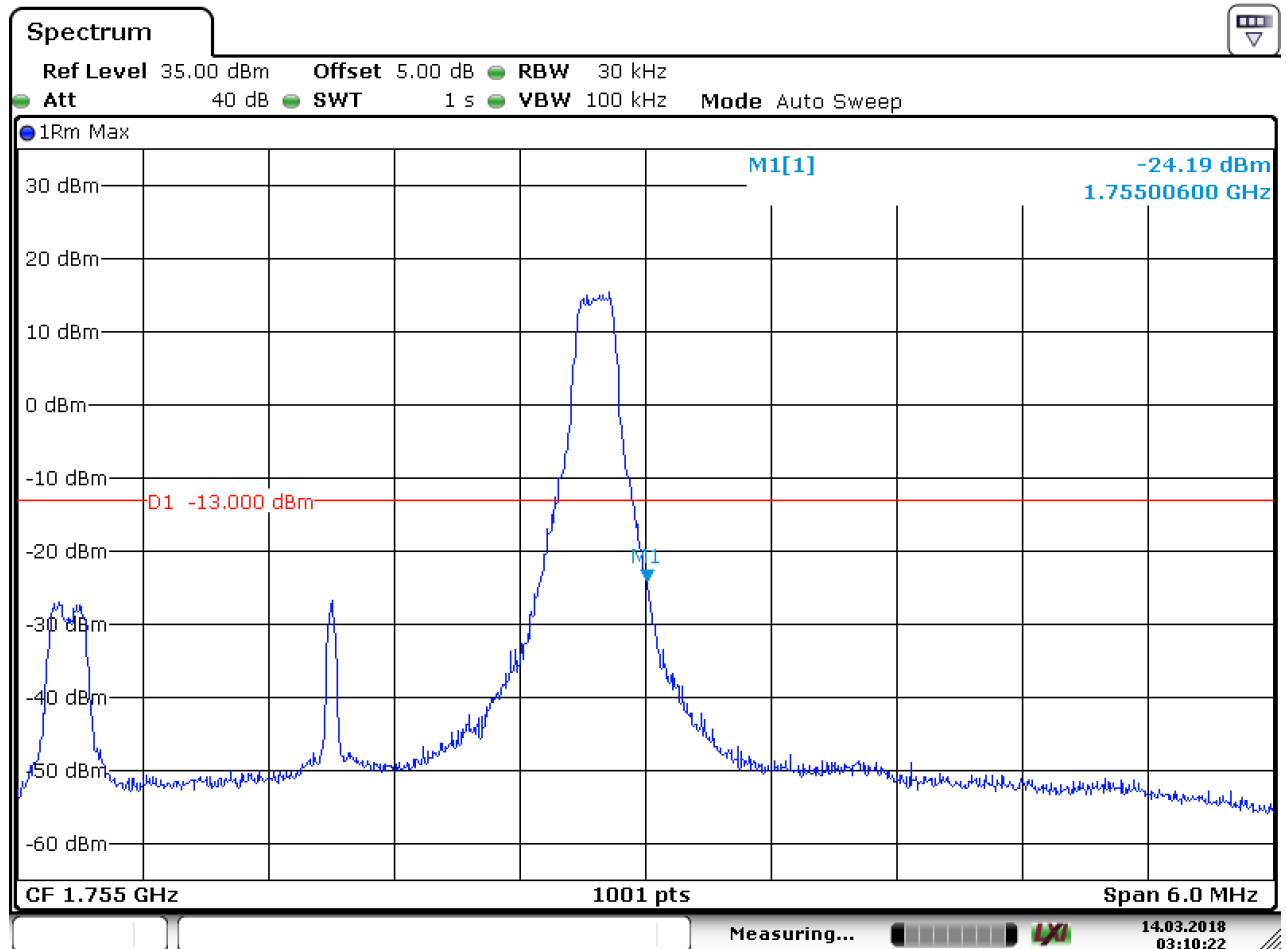


Date: 14.MAR.2018 03:07:53



5.1.1.4.2 Test Channel = HCH

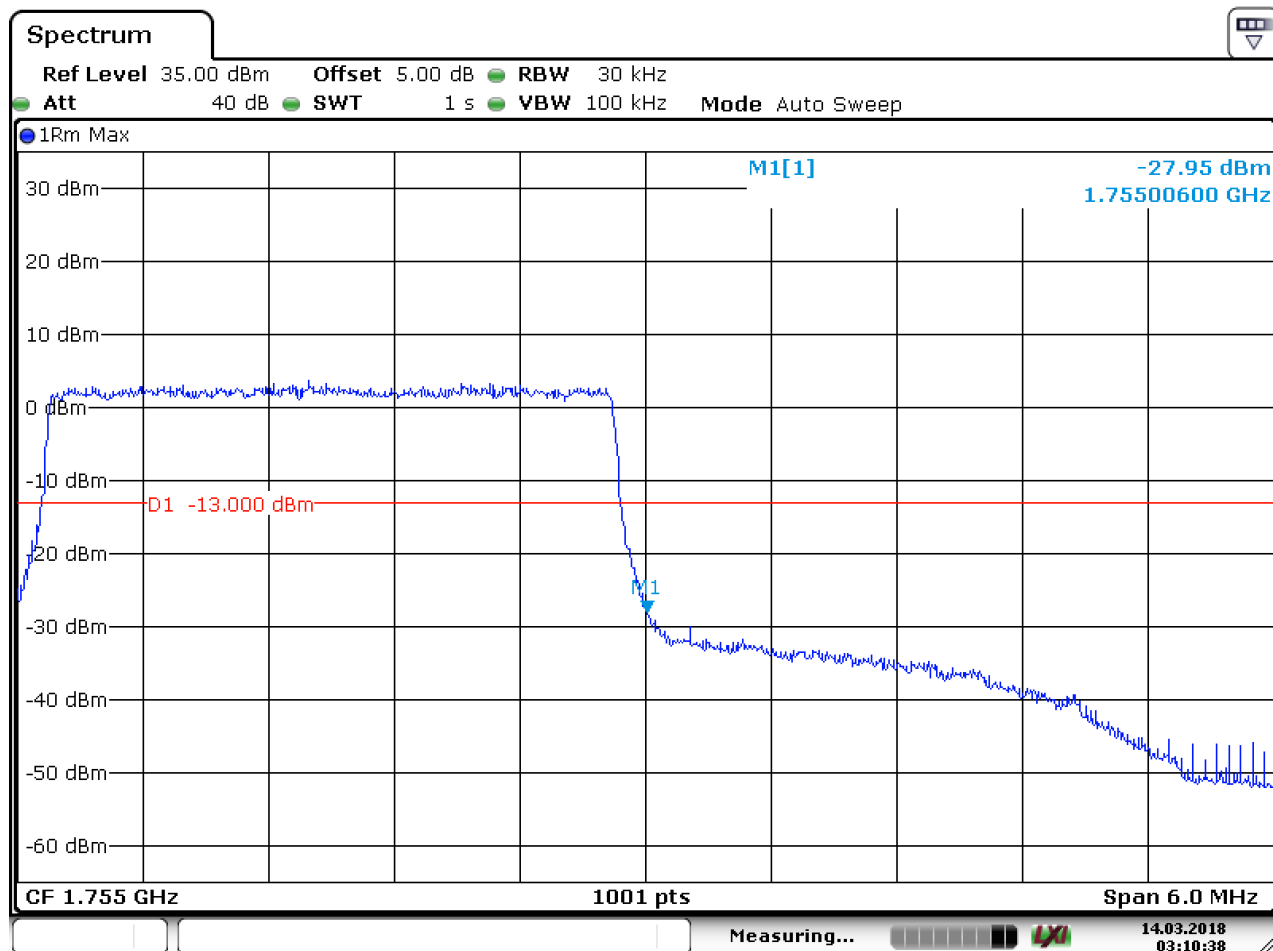
5.1.1.4.3 Test RB=1RB



Date: 14.MAR.2018 03:10:22



5.1.1.4.4 Test RB=15RB



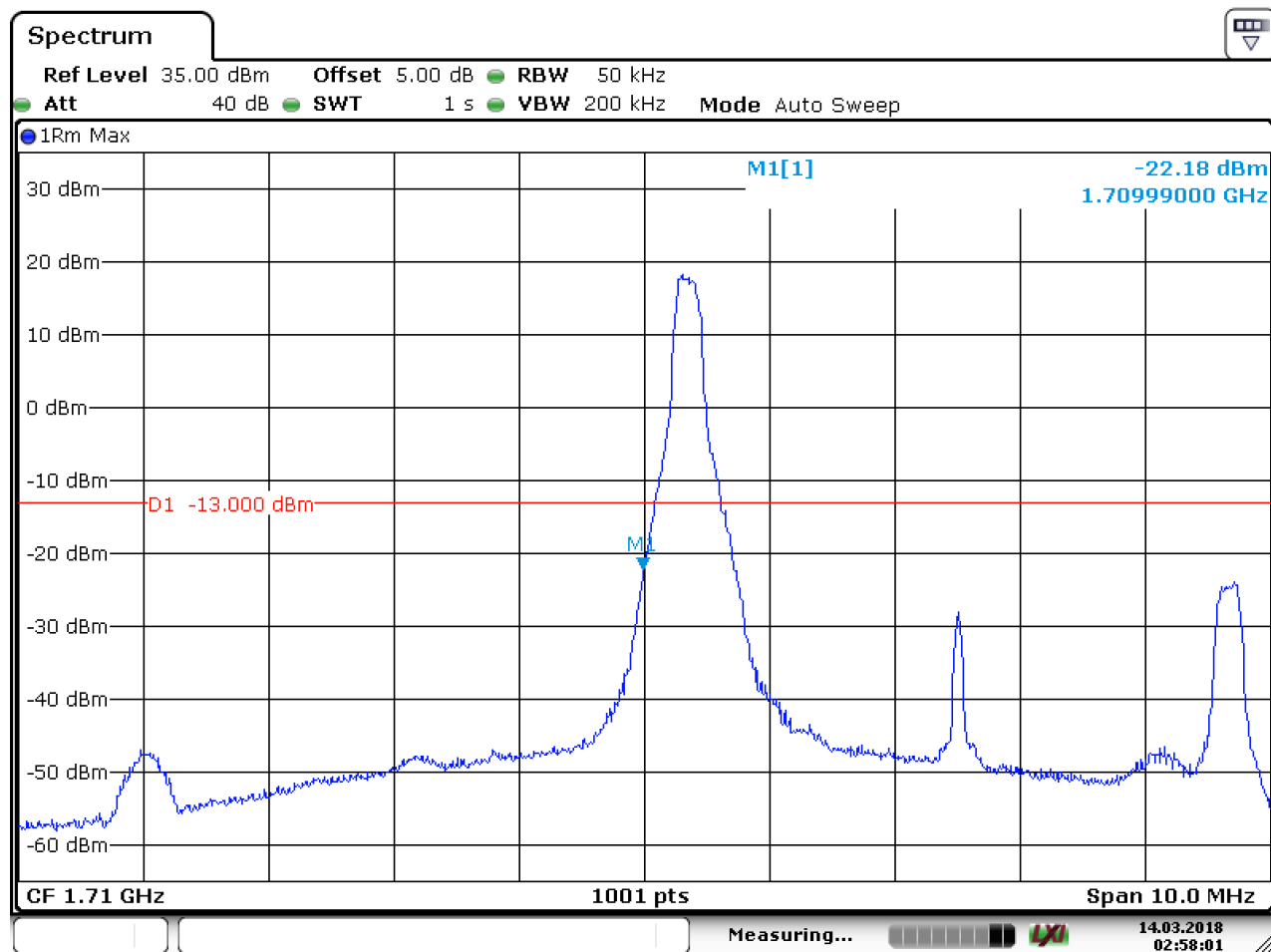
Date: 14.MAR.2018 03:10:39



5.1.1.5 Test Mode = LTE/TM1 5MHz

5.1.1.5.1 Test Channel = LCH

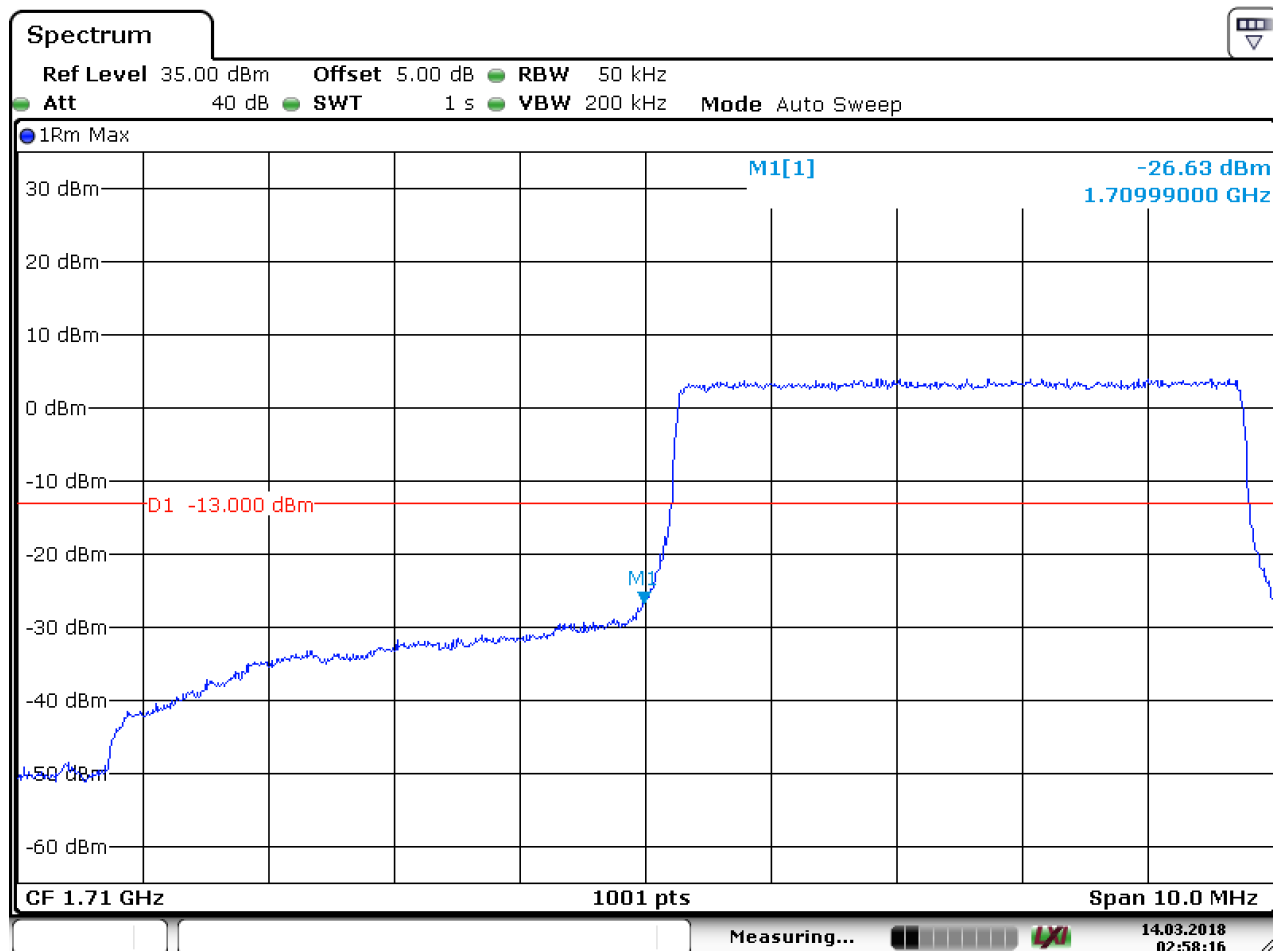
5.1.1.5.1.1 Test RB=1RB



Date: 14.MAR.2018 02:58:01



5.1.1.5.1.2 Test RB=25RB

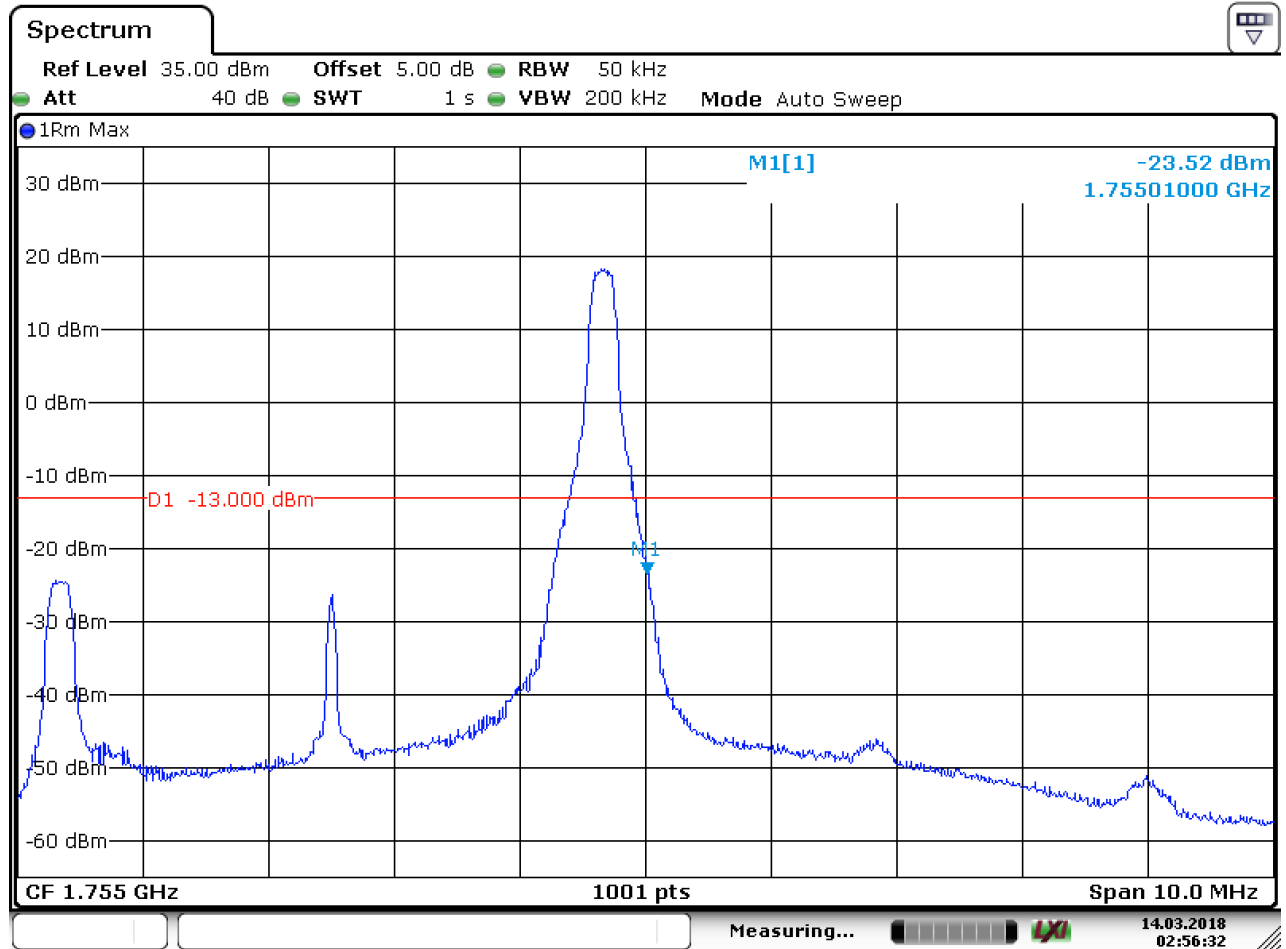


Date: 14.MAR.2018 02:58:16



5.1.1.5.2 Test Channel = HCH

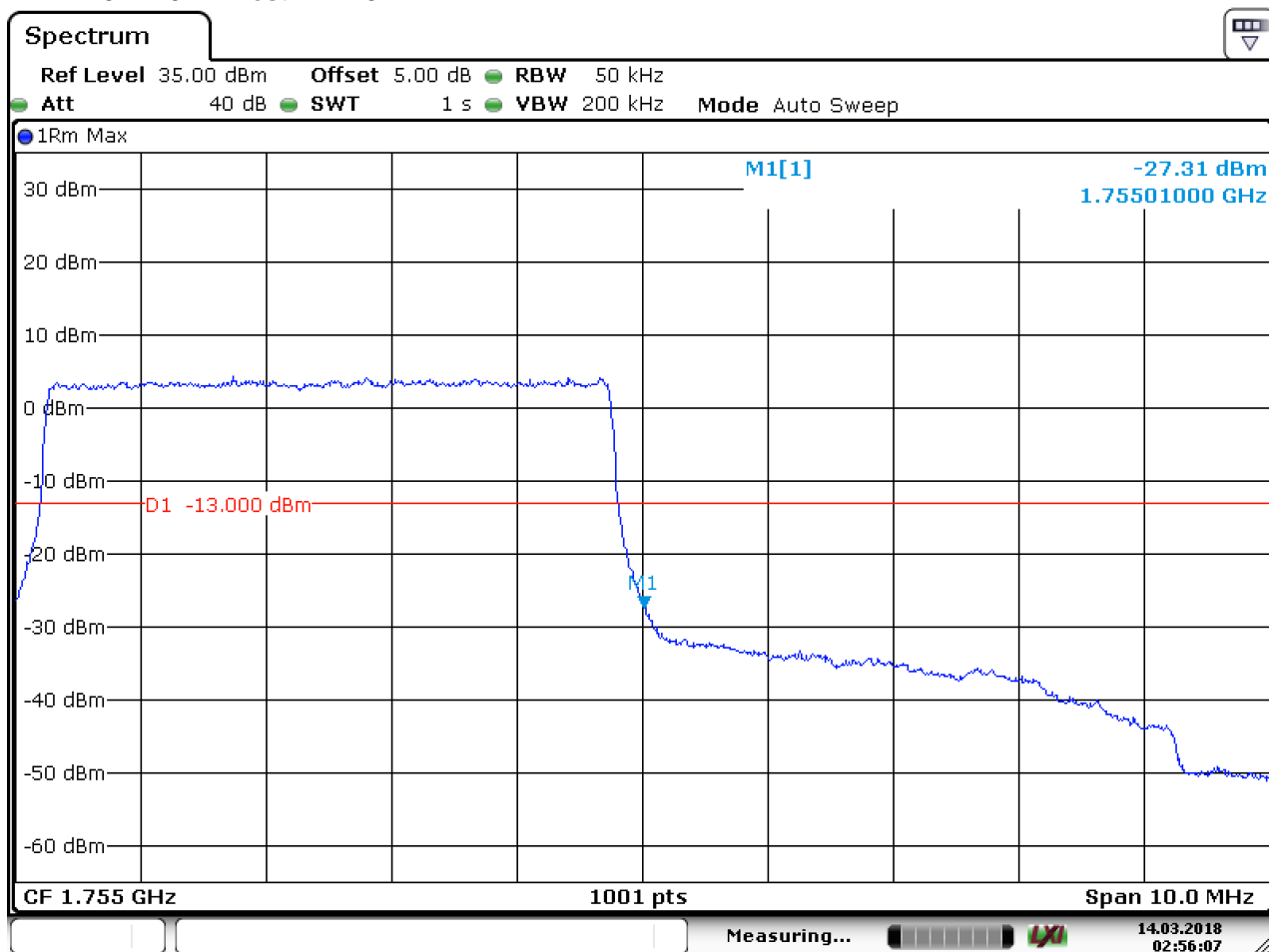
5.1.1.5.2.1 Test RB=1RB



Date: 14.MAR.2018 02:56:32



5.1.1.5.2.2 Test RB=25RB



Date: 14.MAR.2018 02:56:08

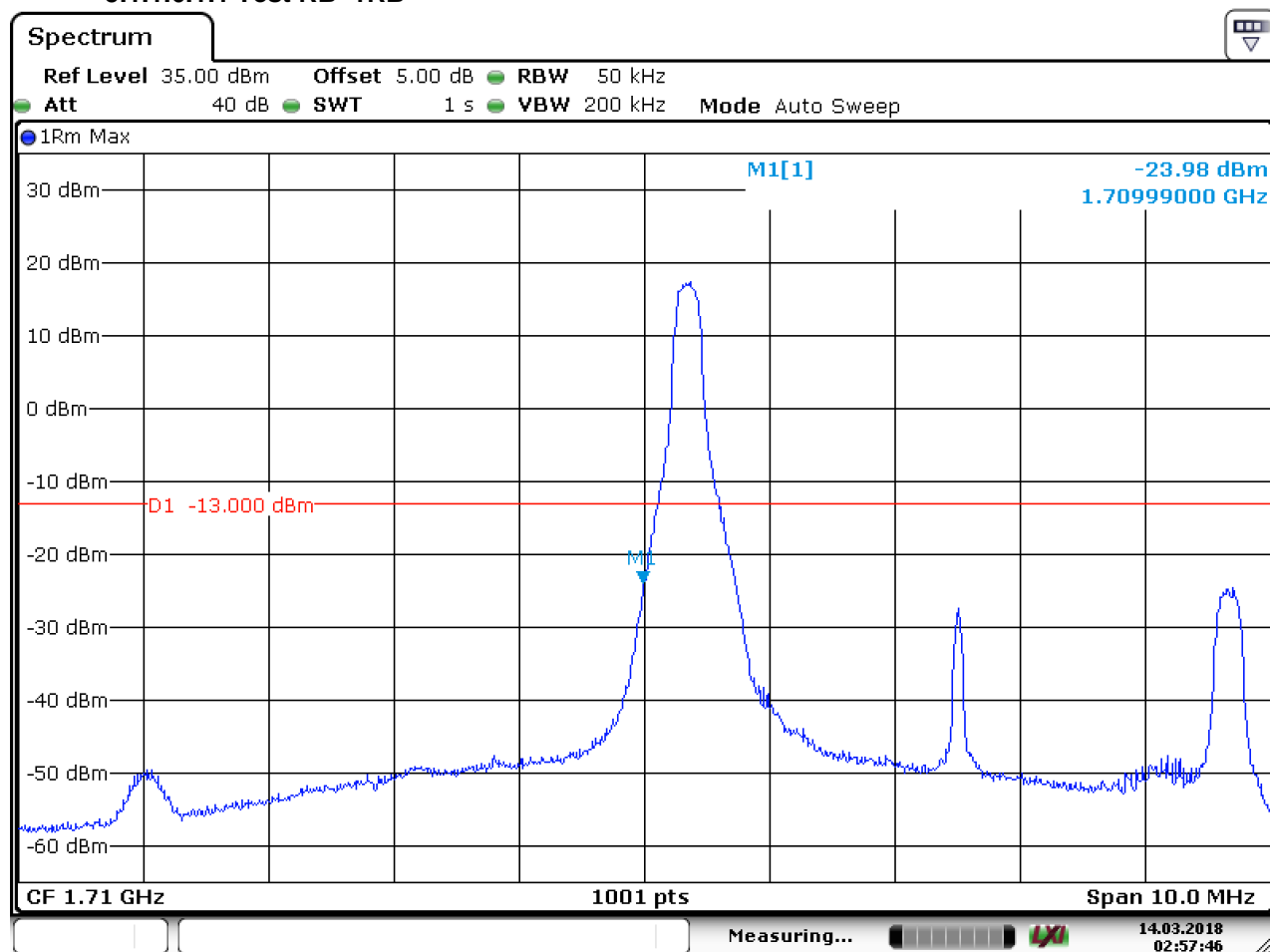




5.1.1.6 Test Mode = LTE/TM2 5MHz

5.1.1.6.1 Test Channel = LCH

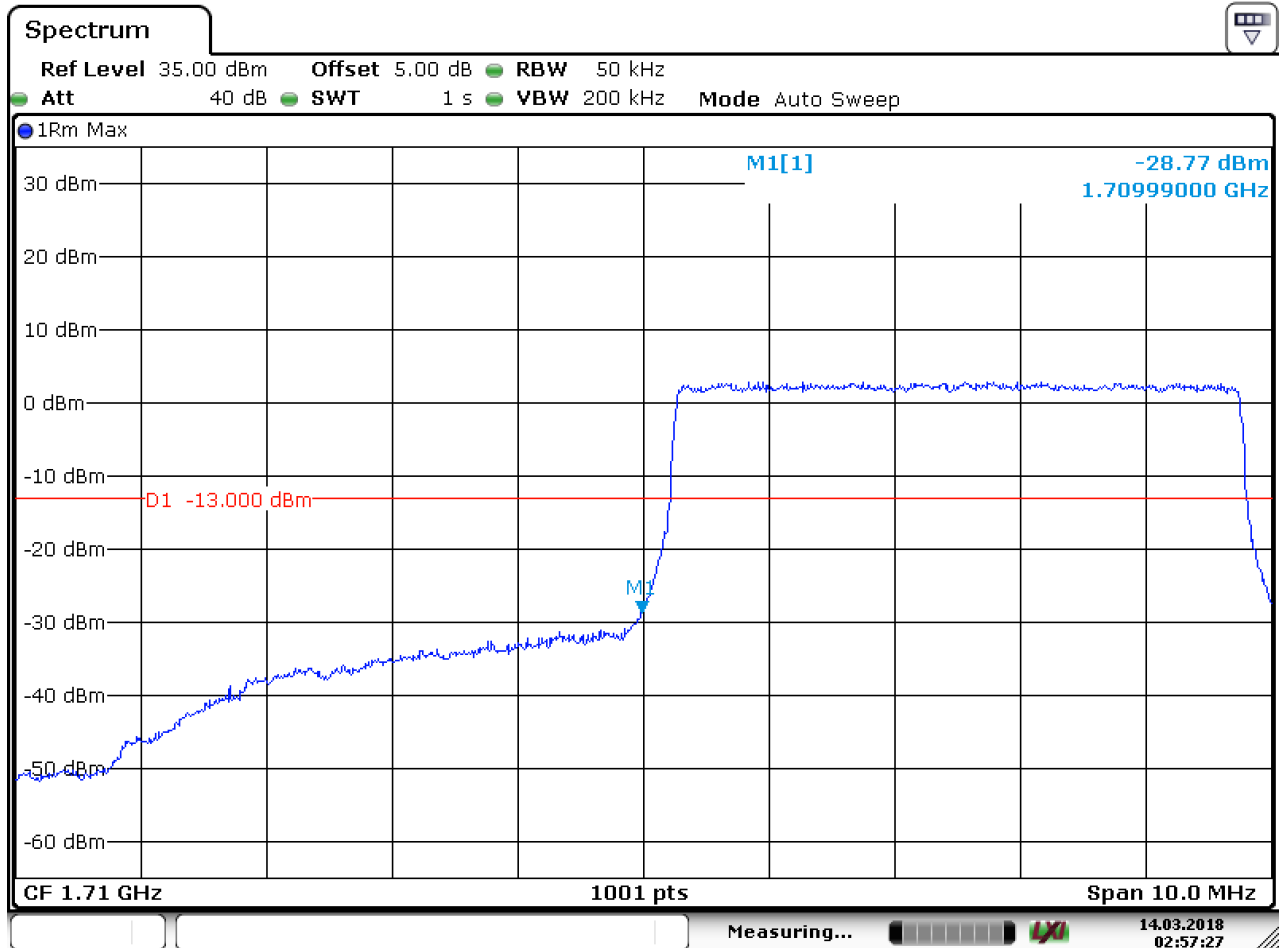
5.1.1.6.1.1 Test RB=1RB



Date: 14.MAR.2018 02:57:46



5.1.1.6.1.2 Test RB=25RB

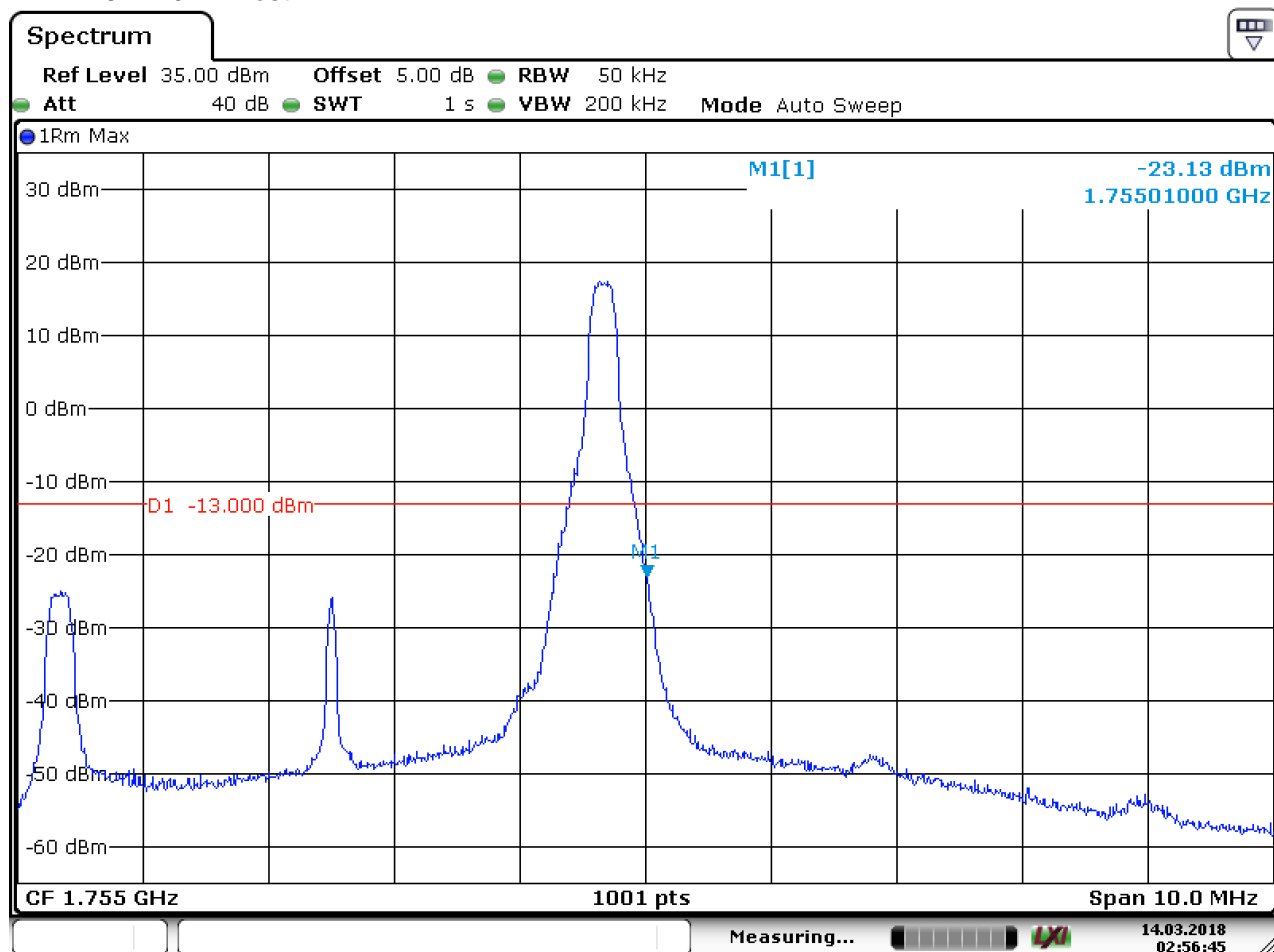


Date: 14.MAR.2018 02:57:28



5.1.1.6.2 Test Channel = HCH

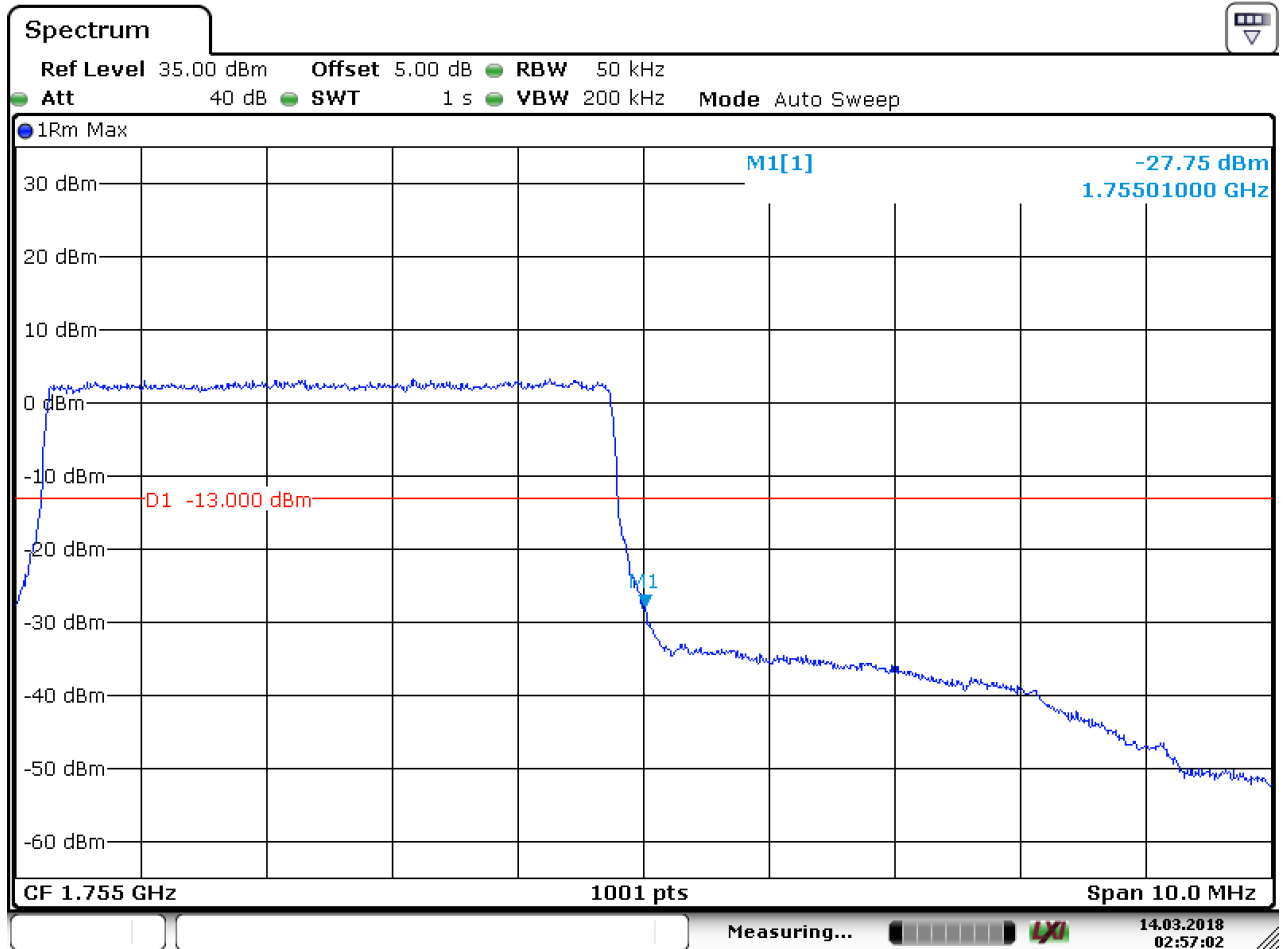
5.1.1.6.2.1 Test RB=1RB



Date: 14.MAR.2018 02:56:46



5.1.1.6.2.2 Test RB=25RB



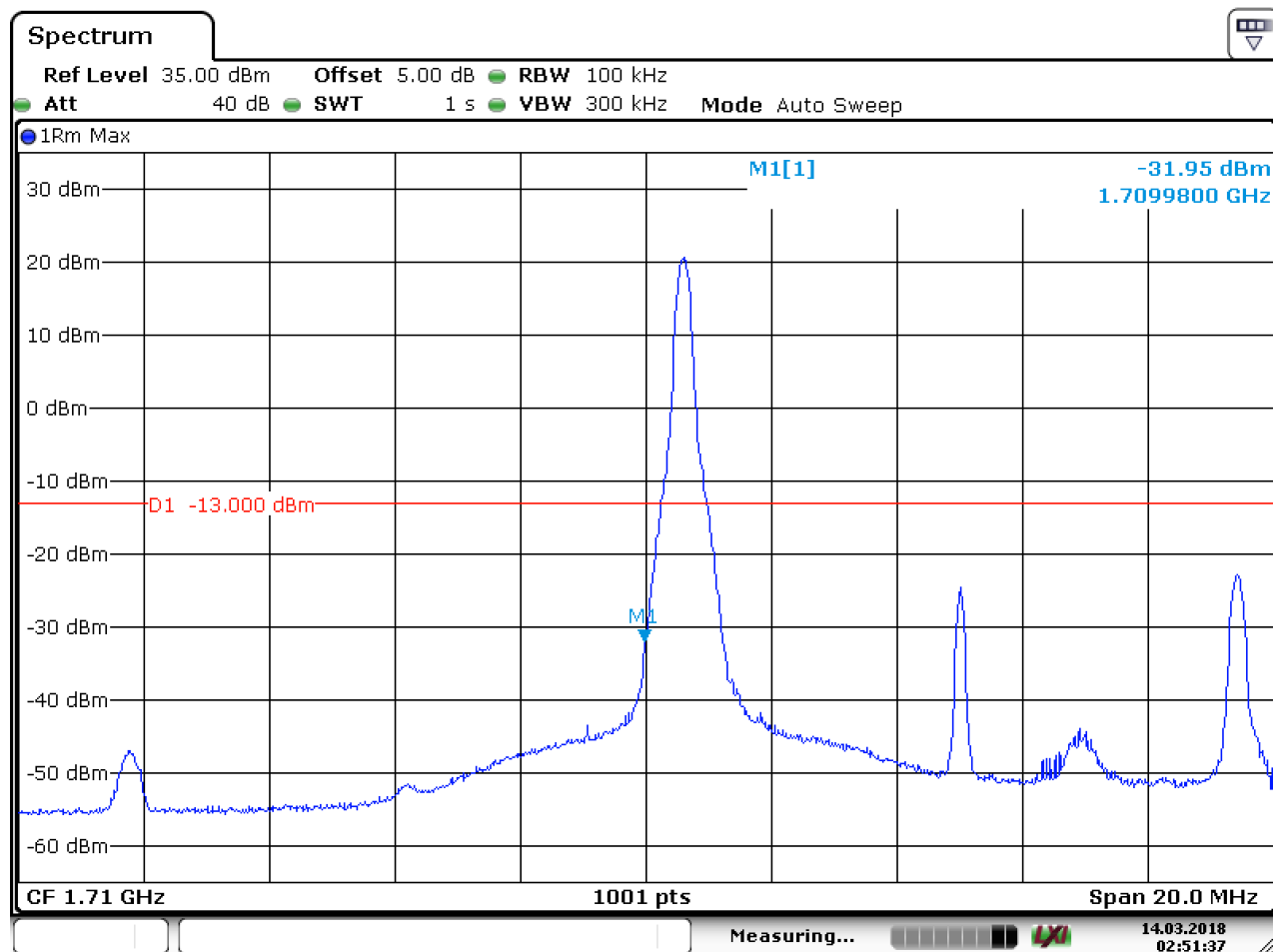
Date: 14.MAR.2018 02:57:02



Test Mode = LTE/TM1 10MHz

5.1.1.6.3 Test Channel = LCH

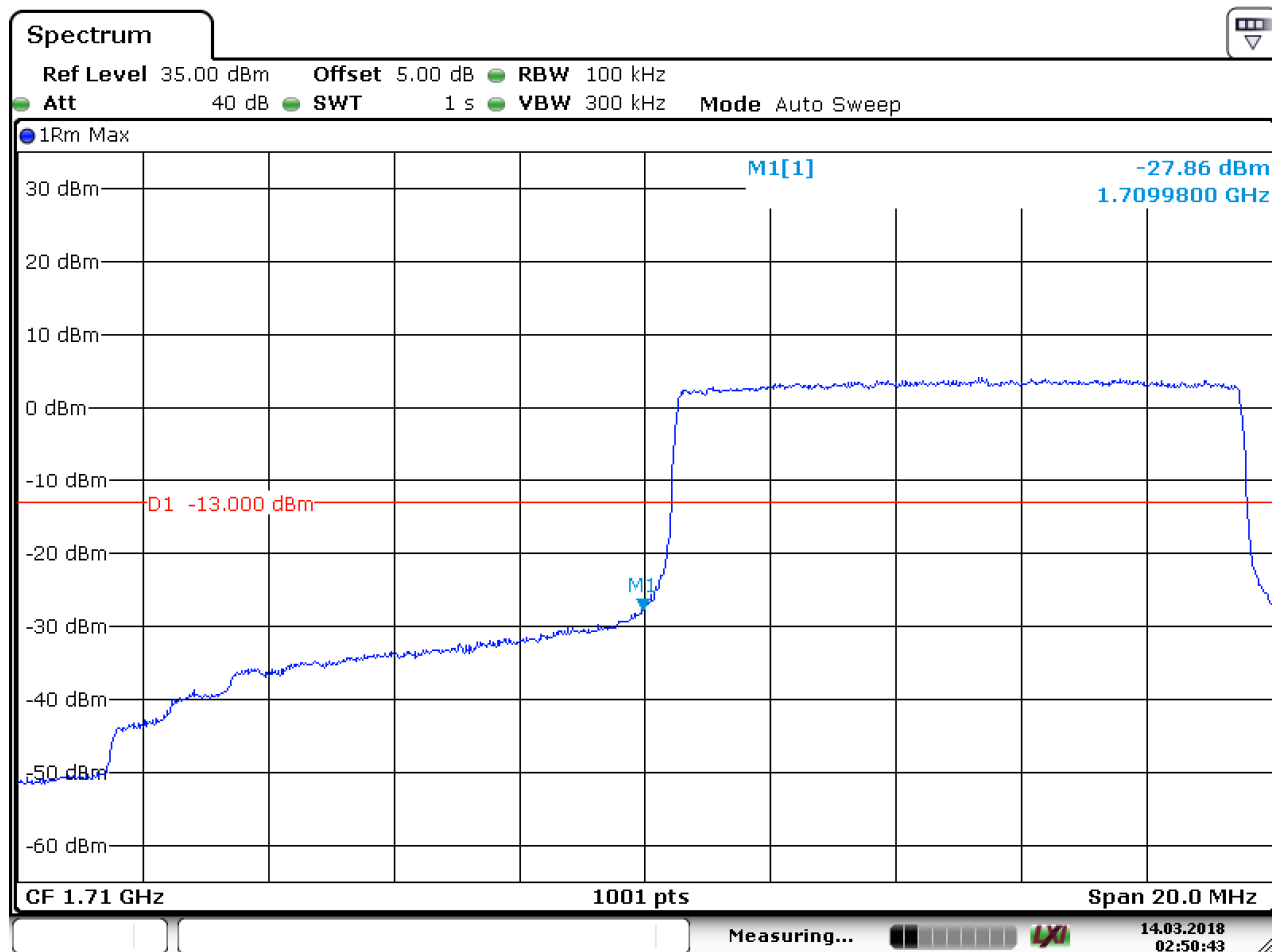
5.1.1.6.3.1 Test RB=1RB



Date: 14.MAR.2018 02:51:37



5.1.1.6.3.2 Test RB=50RB

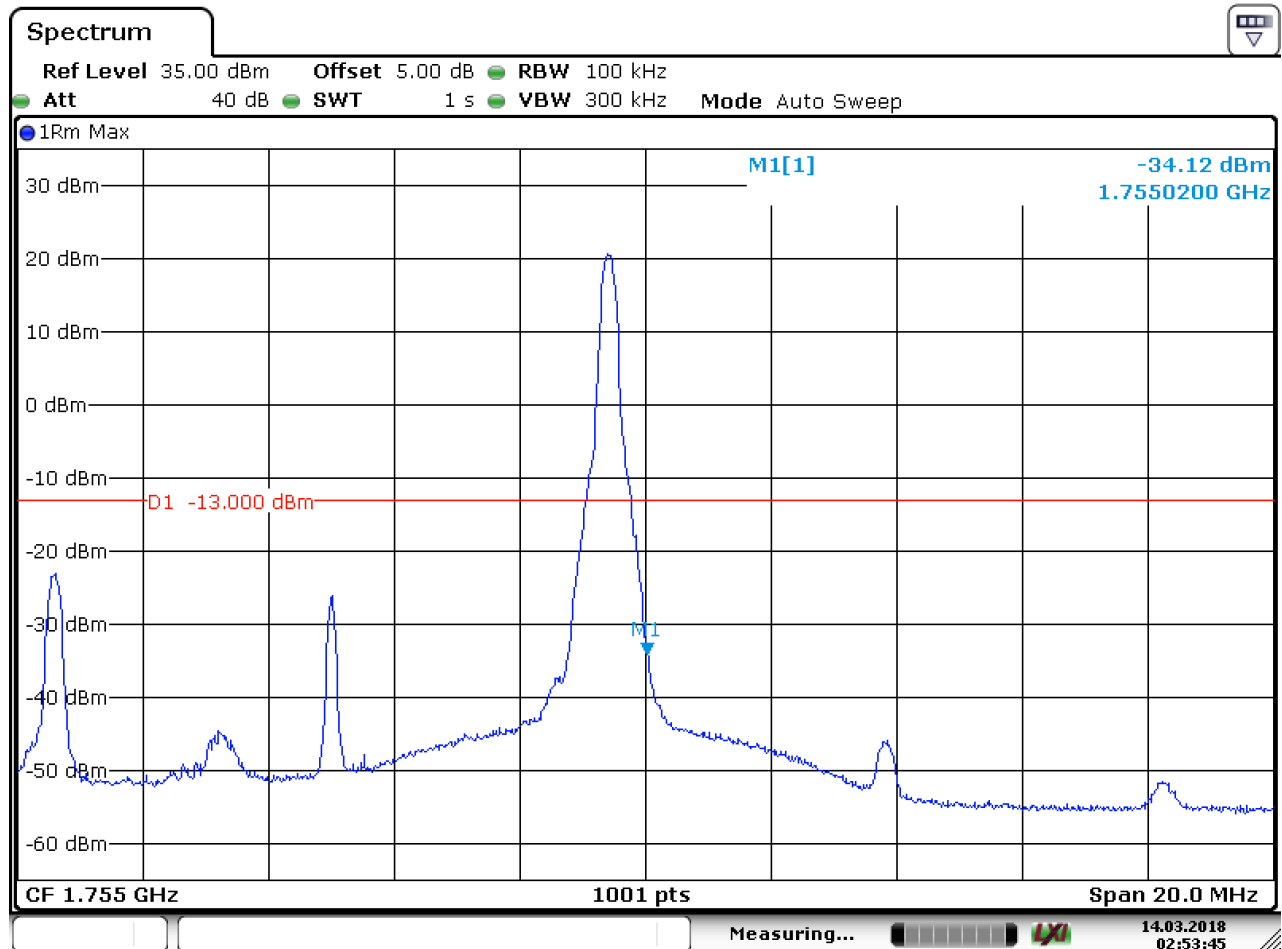


Date: 14.MAR.2018 02:50:43



5.1.1.6.4 Test Channel = HCH

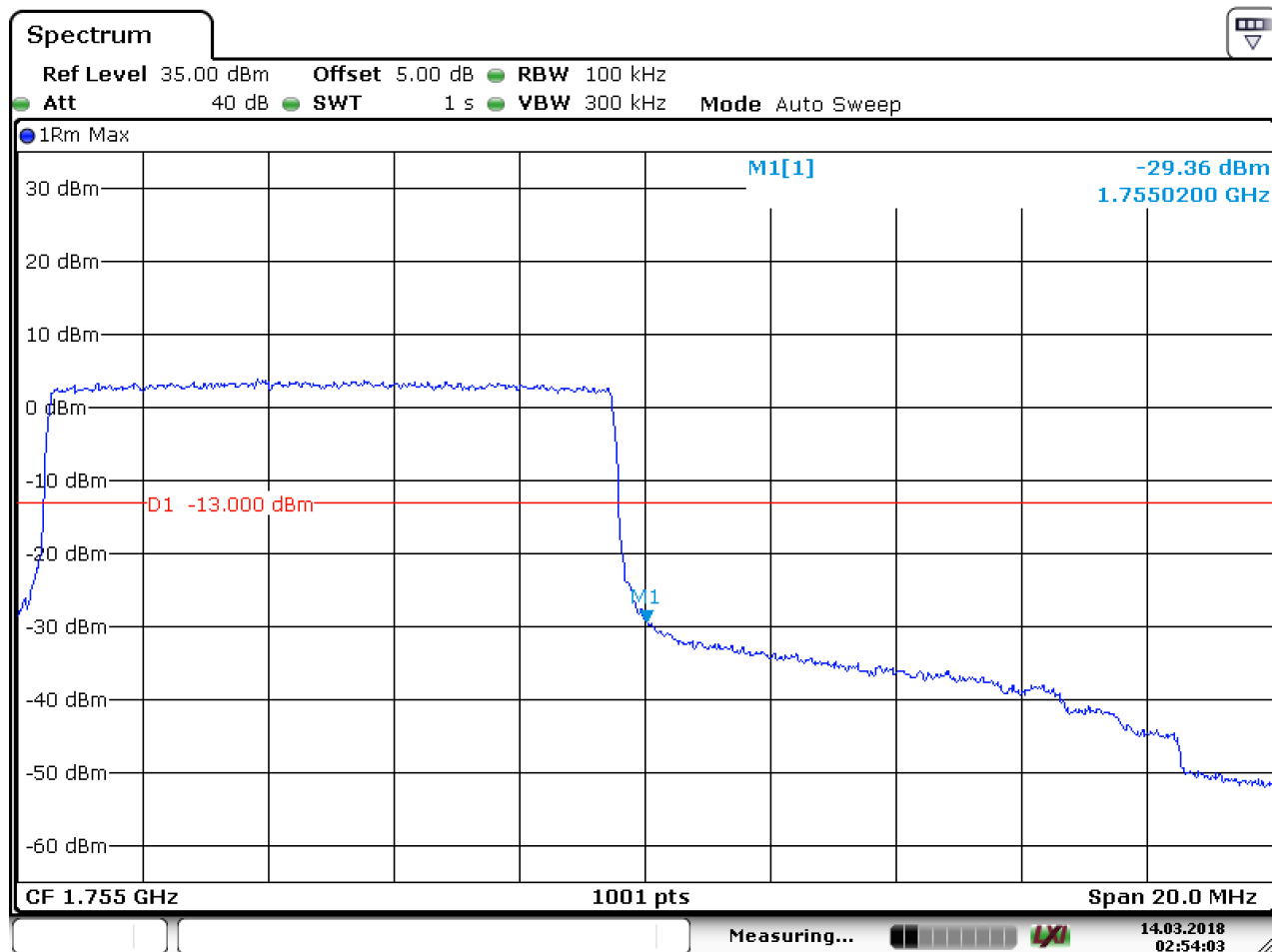
5.1.1.6.4.1 Test RB=1RB



Date: 14.MAR.2018 02:53:45



5.1.1.6.4.2 Test RB=50RB



Date: 14.MAR.2018 02:54:03

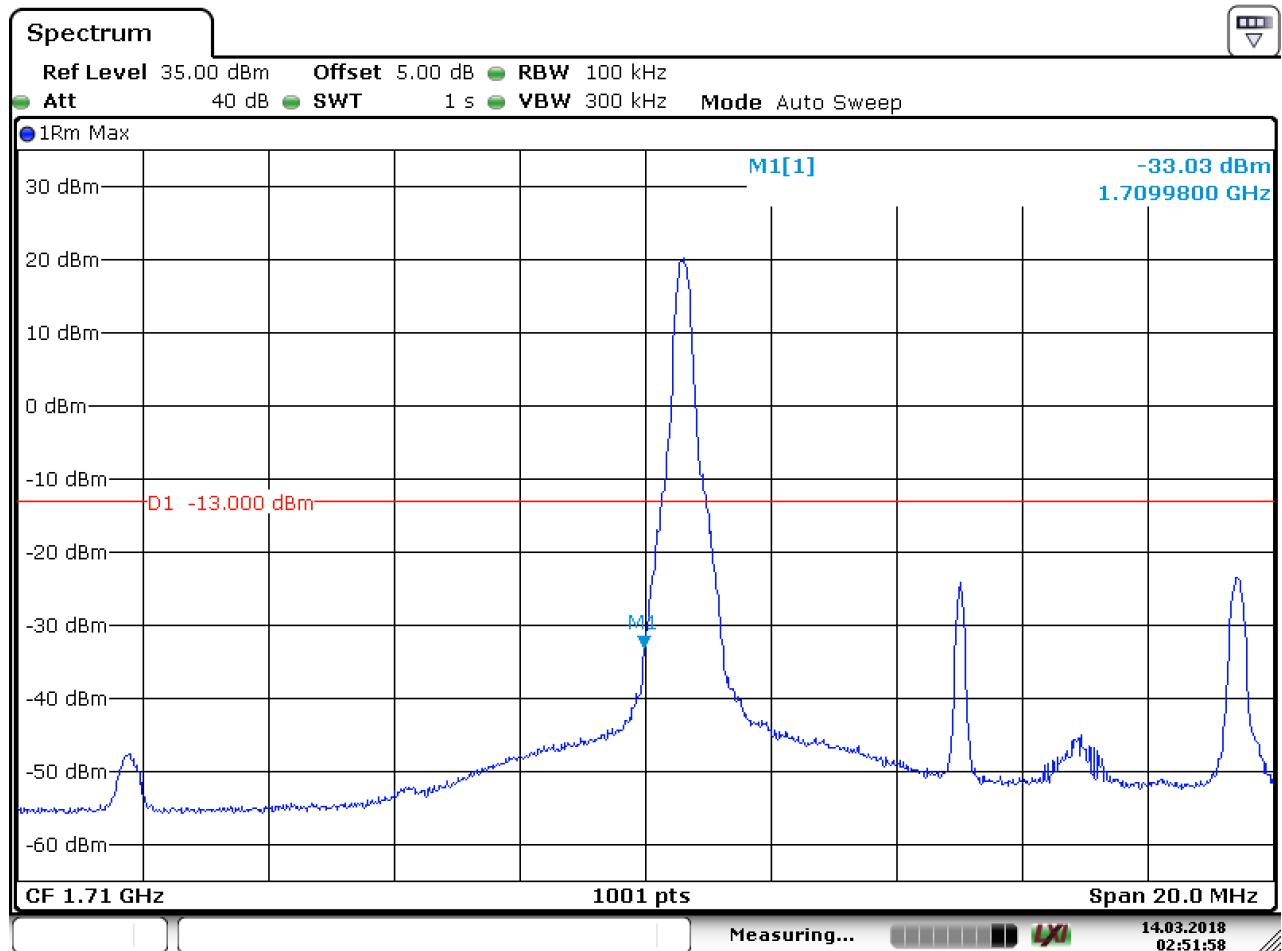




5.1.1.7 Test Mode = LTE/TM2 10MHz

5.1.1.7.1 Test Channel = LCH

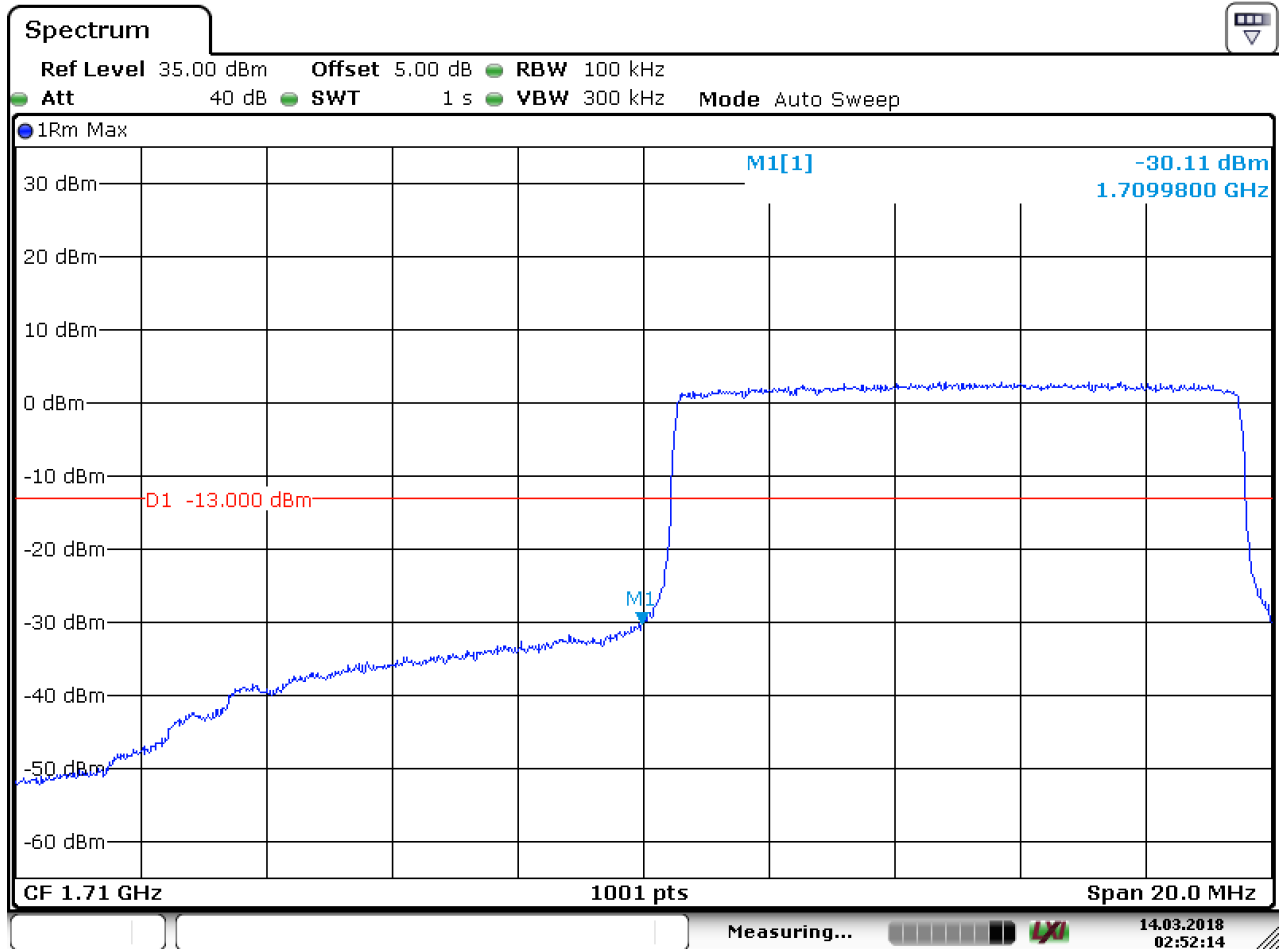
5.1.1.7.1.1 Test RB=1RB



Date: 14.MAR.2018 02:51:58



5.1.1.7.1.2 Test RB=50RB

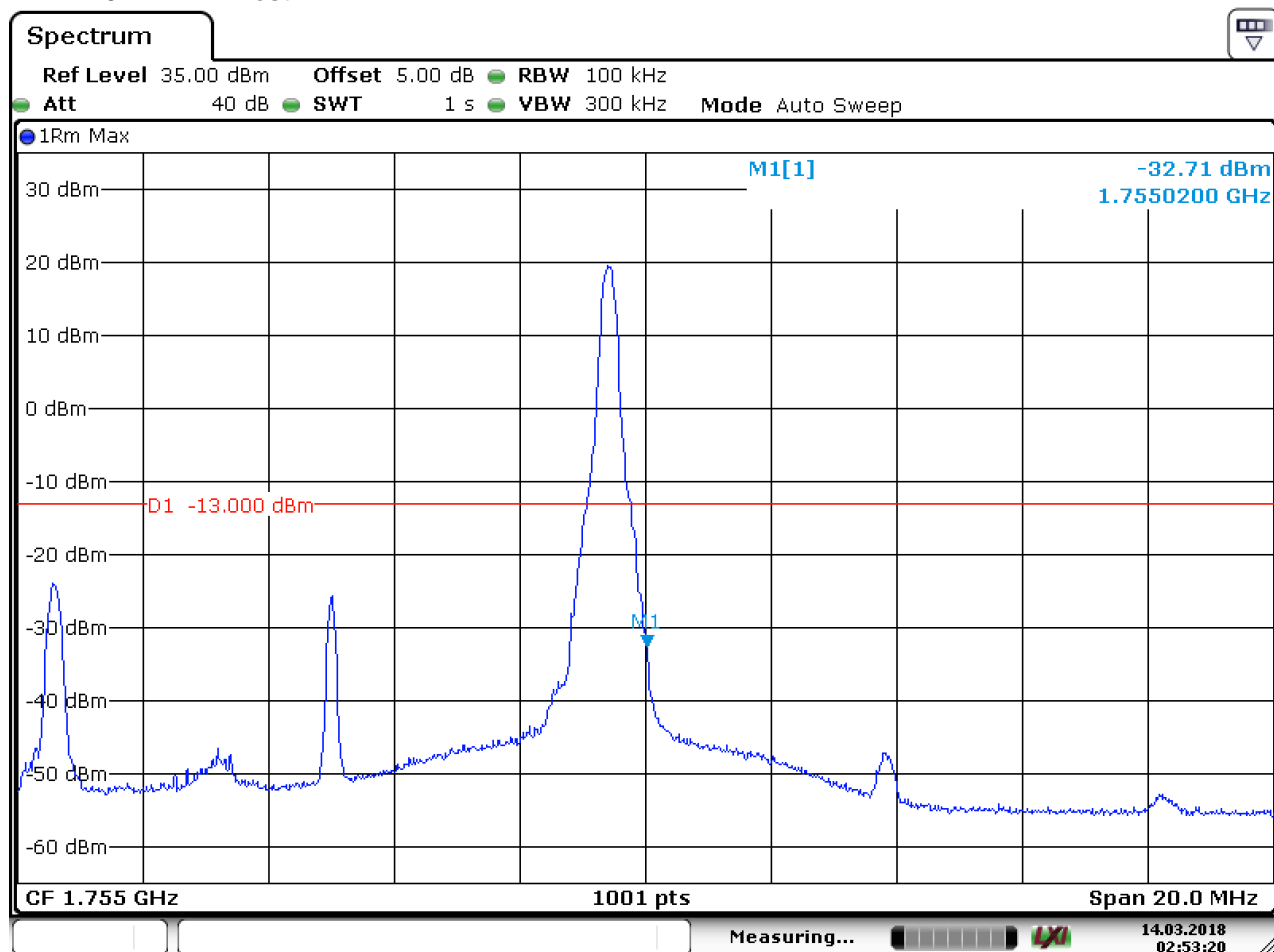


Date: 14.MAR.2018 02:52:15



5.1.1.7.2 Test Channel = HCH

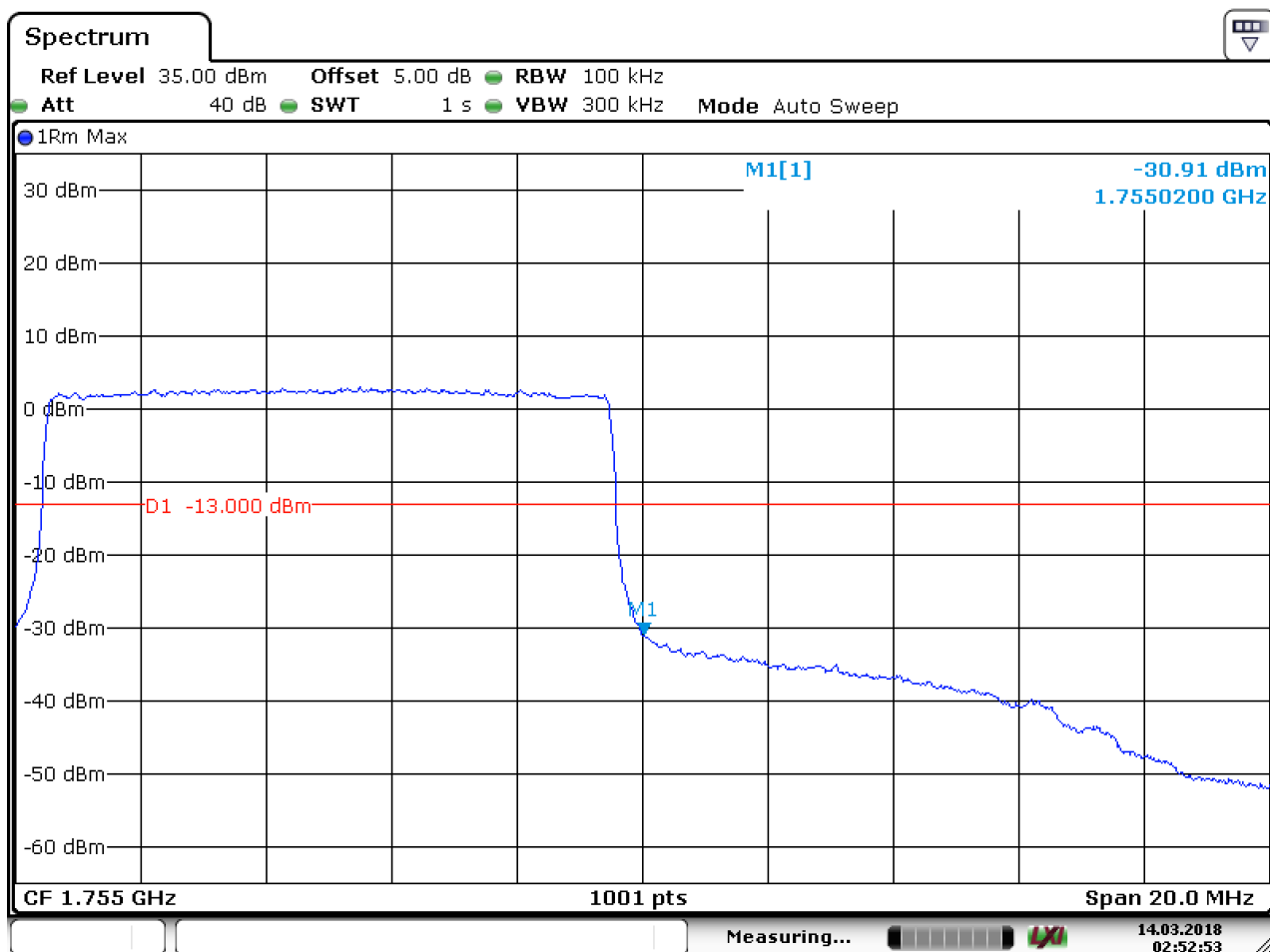
5.1.1.7.2.1 Test RB=1RB



Date: 14.MAR.2018 02:53:20



5.1.1.7.2.2 Test RB=50RB

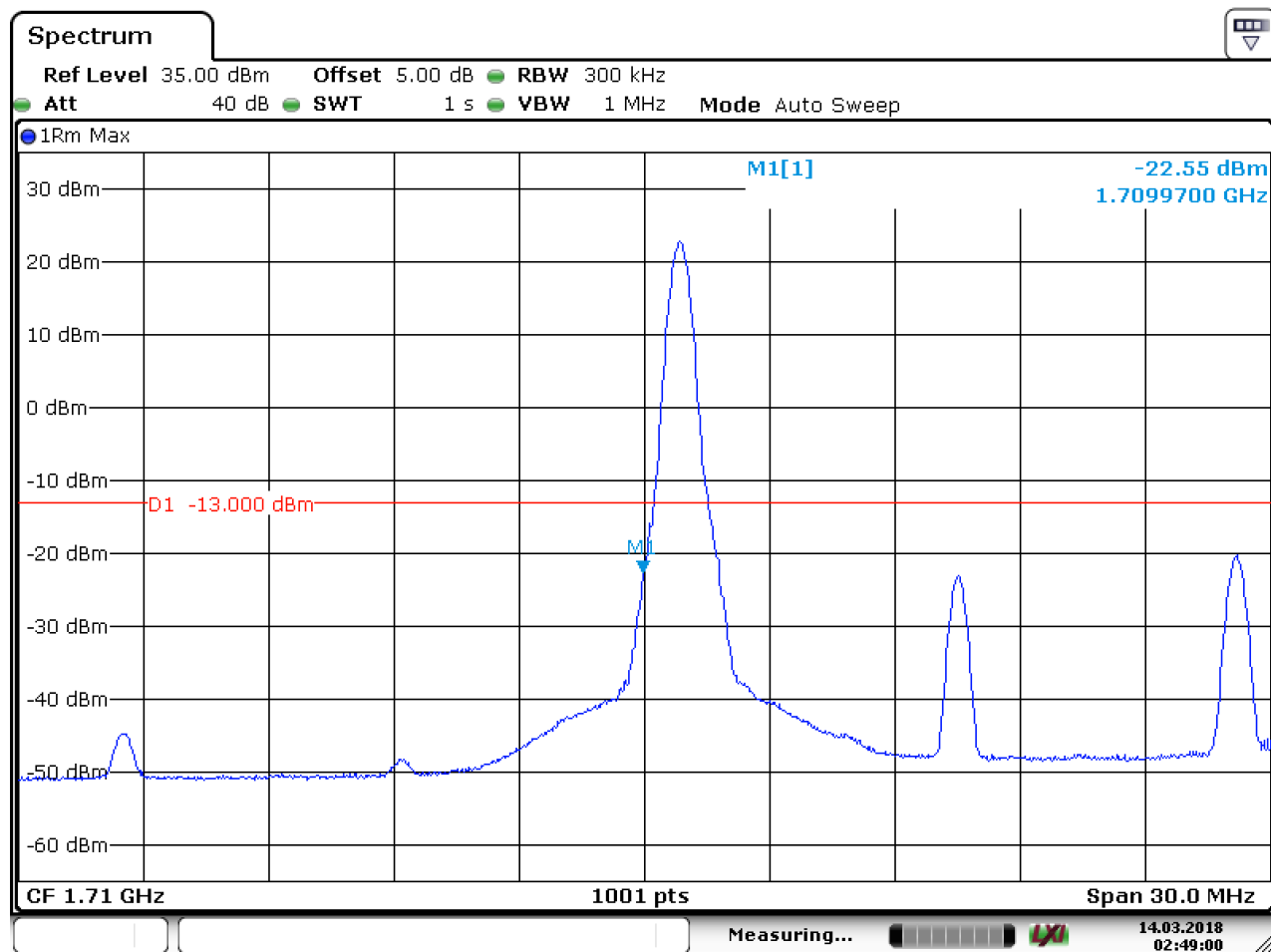


Date: 14.MAR.2018 02:52:53



Test Mode = LTE/TM1 15MHz  
5.1.1.7.3 Test Channel = LCH

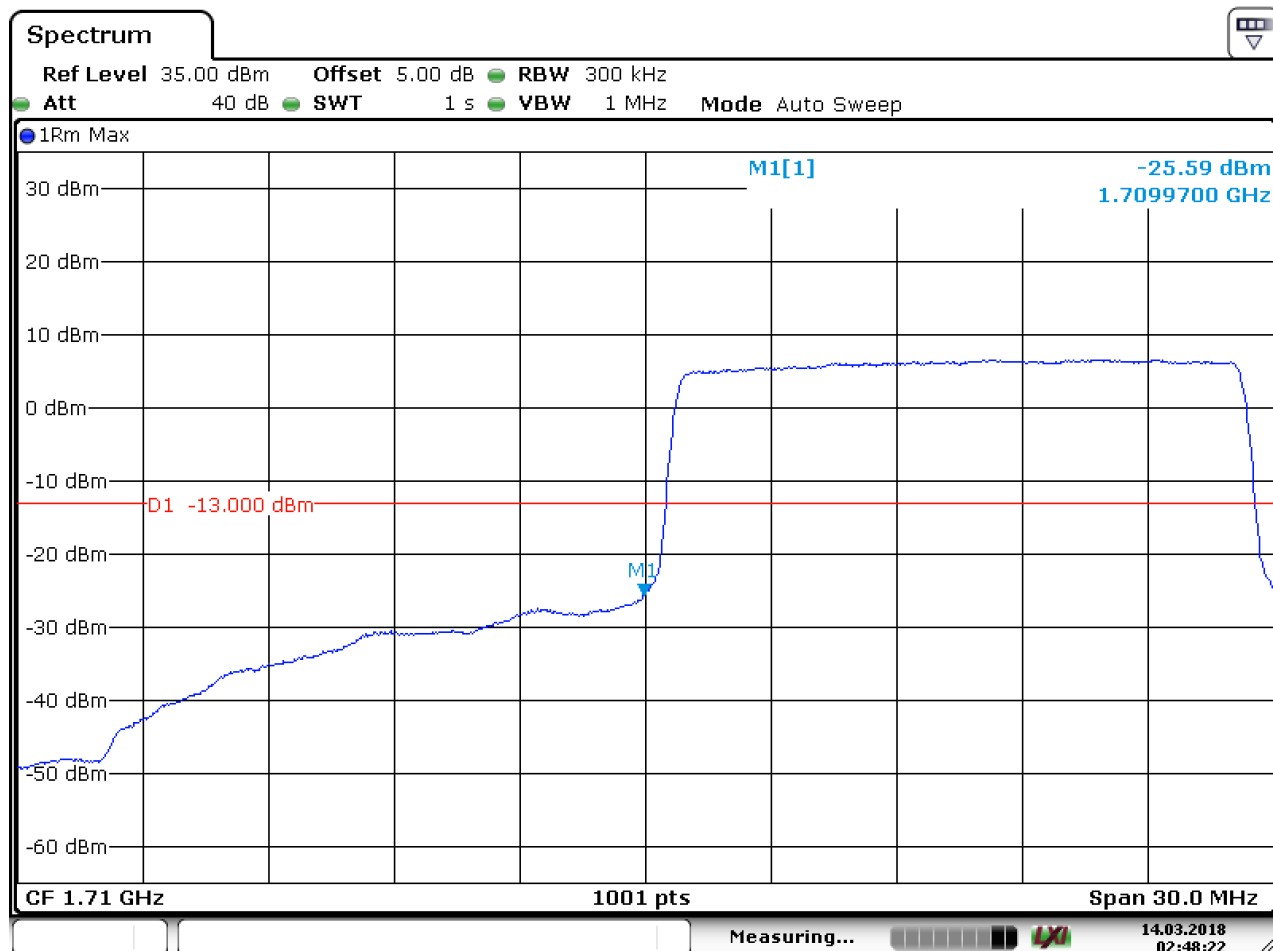
5.1.1.7.3.1 Test RB=1RB



Date: 14.MAR.2018 02:49:01



5.1.1.7.3.2 Test RB=75RB

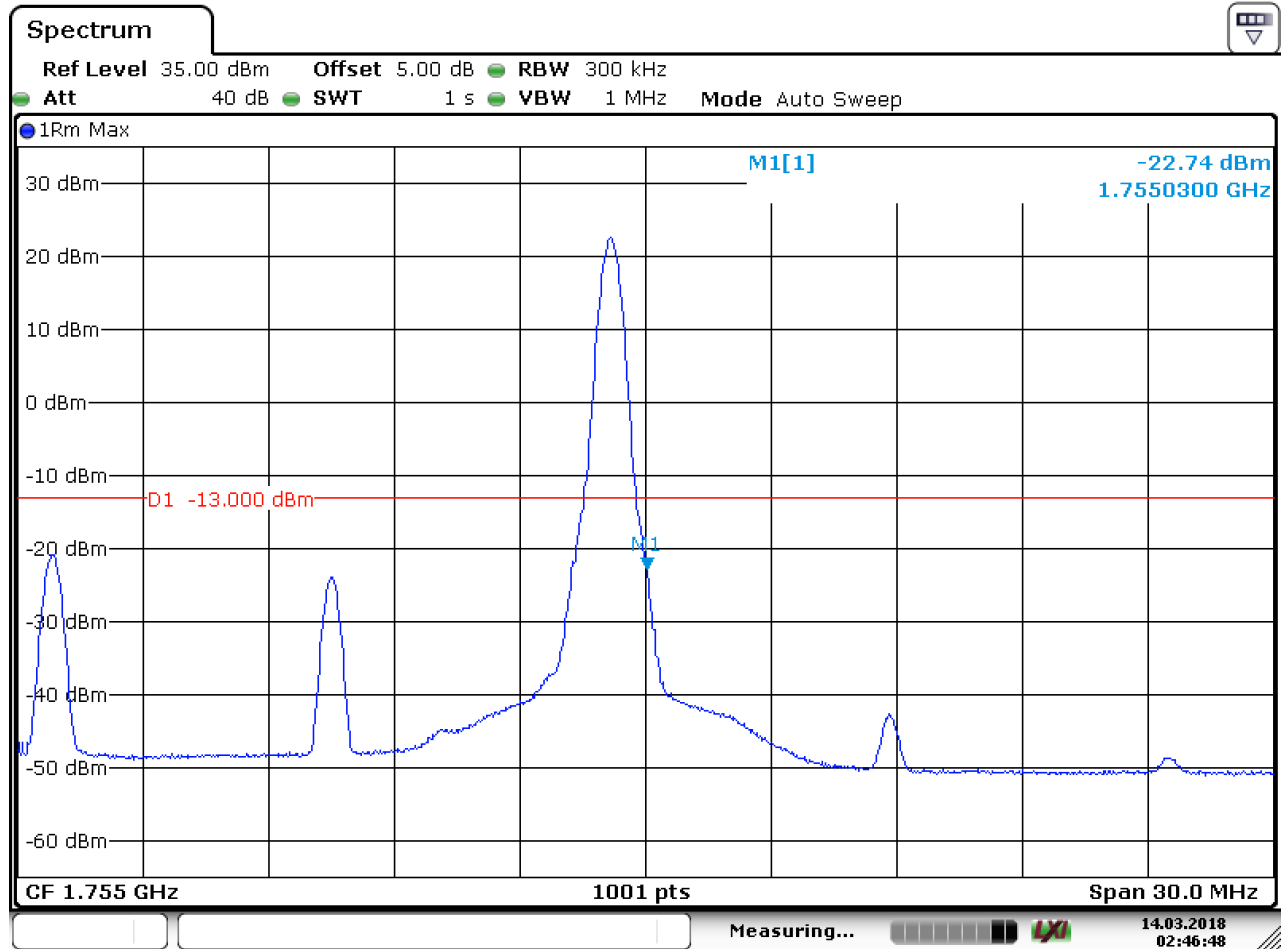


Date: 14.MAR.2018 02:48:22



5.1.1.7.4 Test Channel = HCH

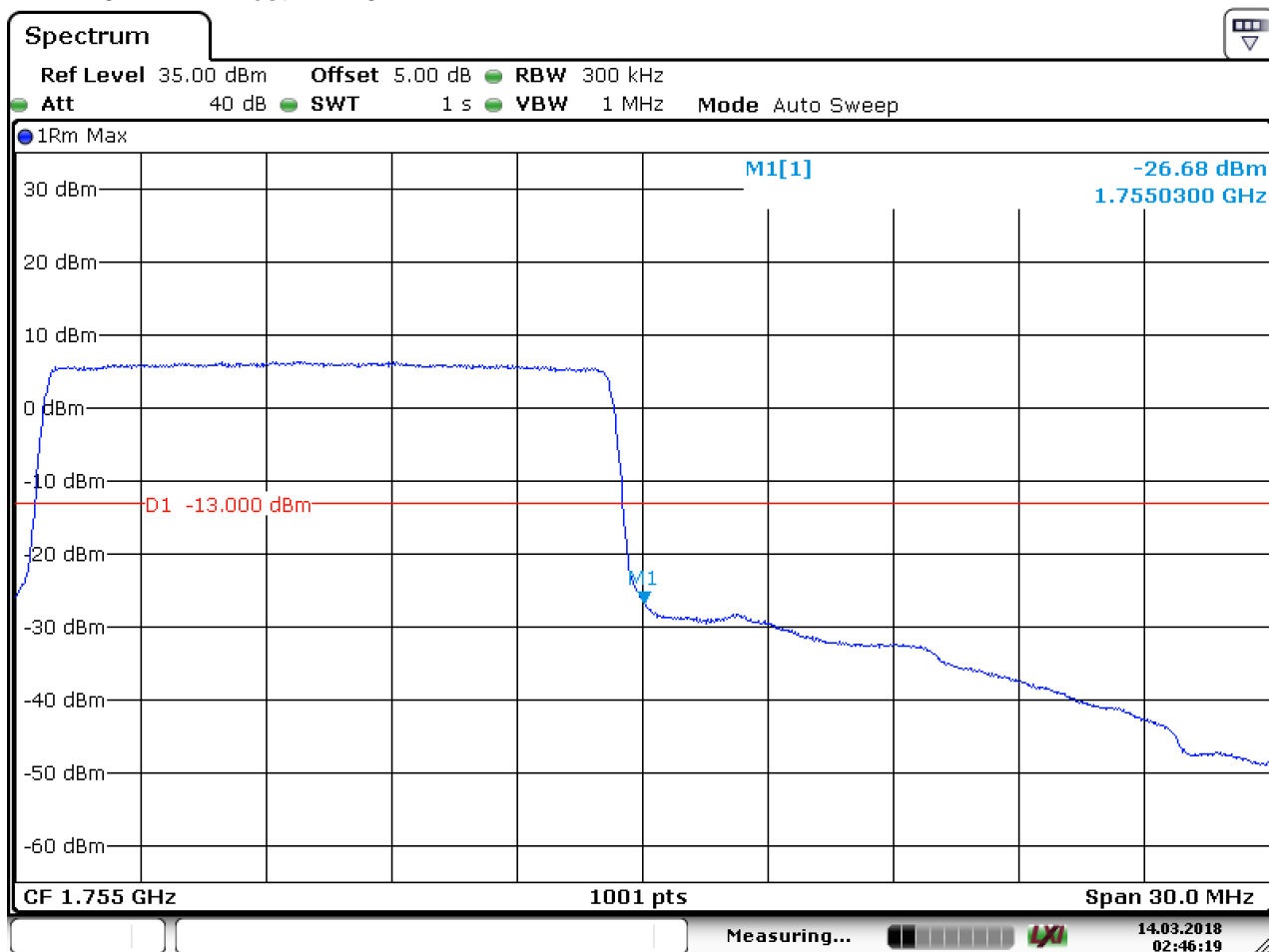
5.1.1.7.4.1 Test RB=1RB



Date: 14.MAR.2018 02:46:48



5.1.1.7.4.2 Test RB=75RB



Date: 14.MAR.2018 02:46:20

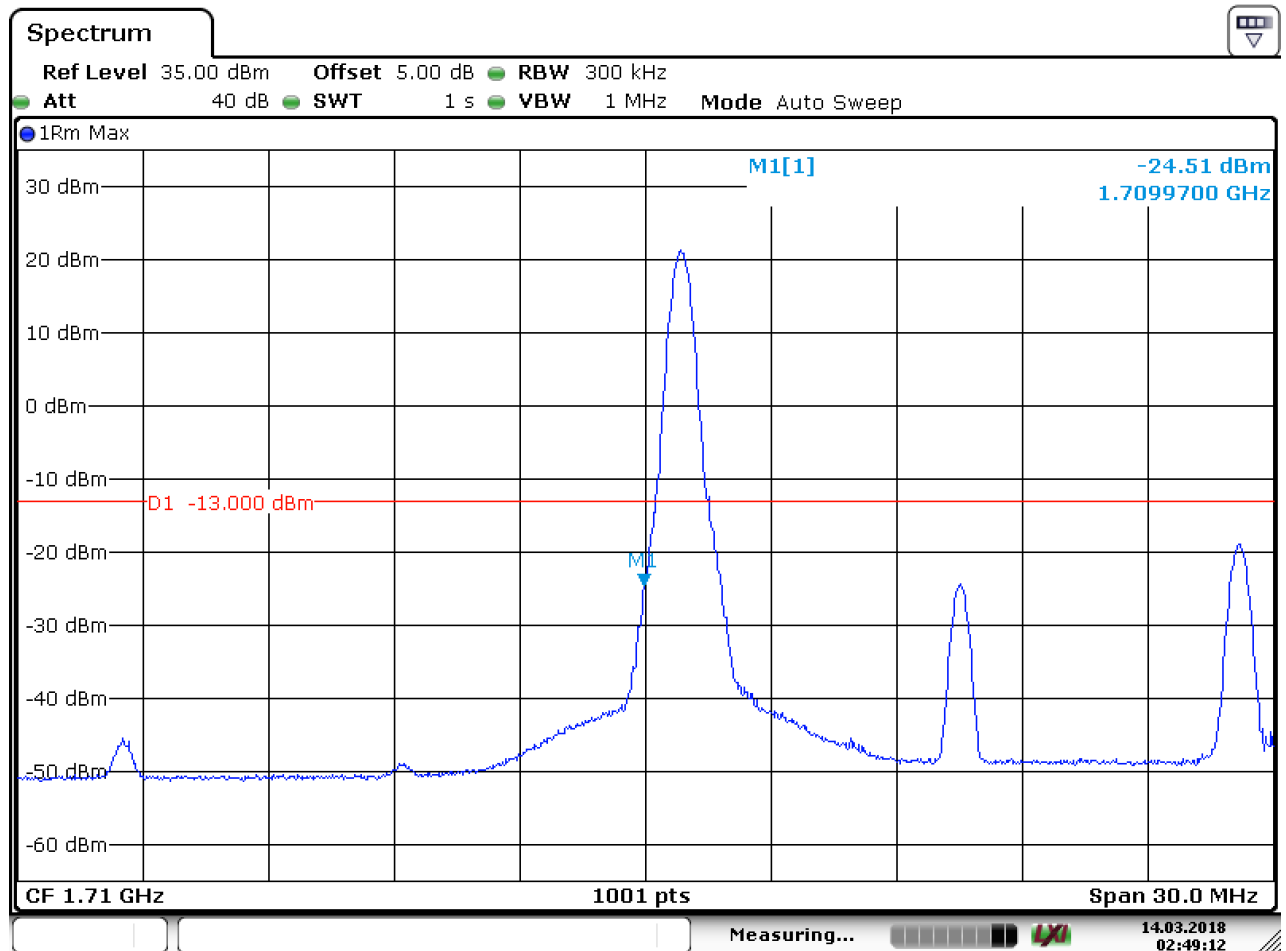




5.1.1.8 Test Mode = LTE/TM2 15MHz

5.1.1.8.1 Test Channel = LCH

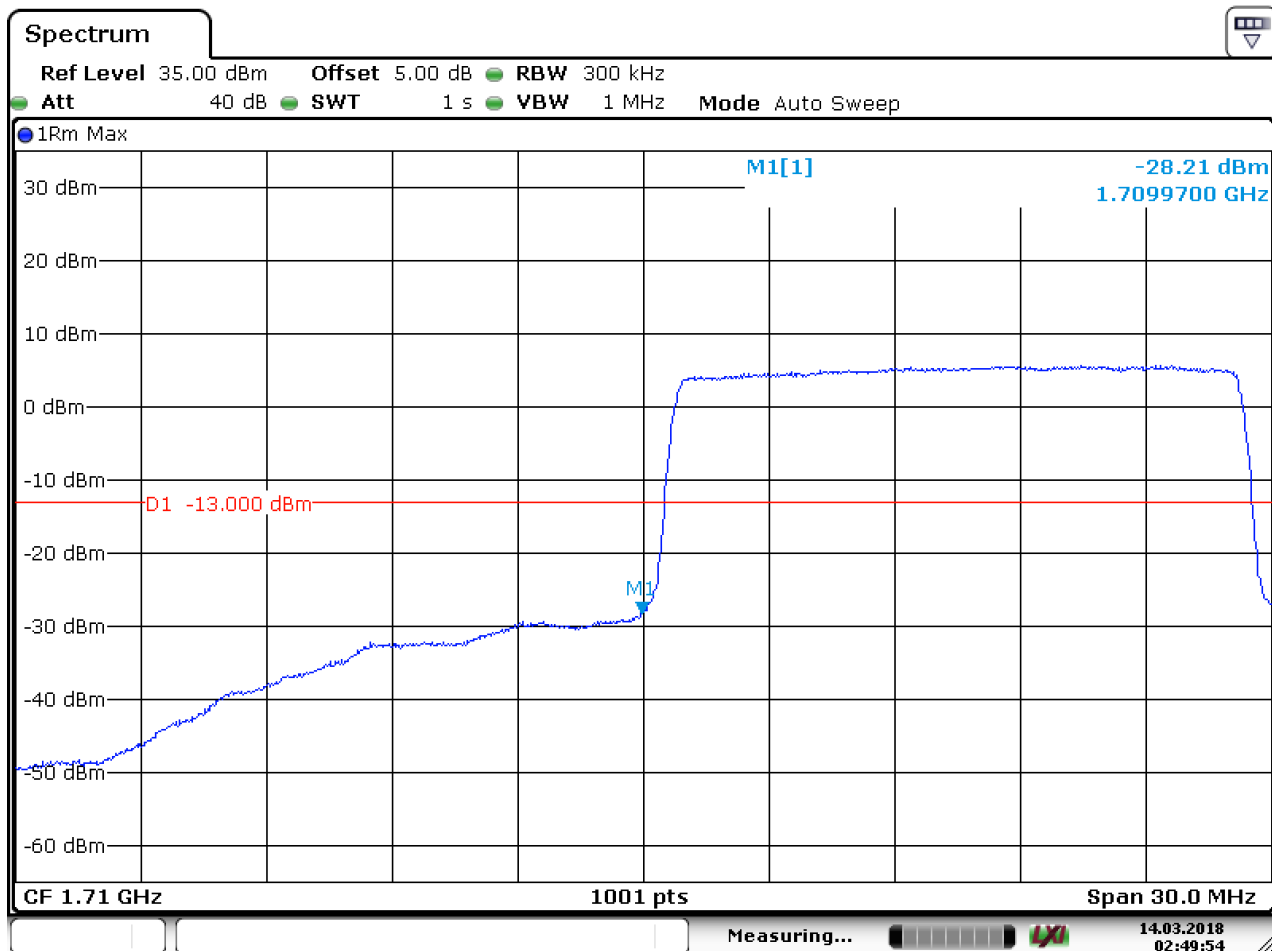
5.1.1.8.1.1 Test RB=1RB



Date: 14.MAR.2018 02:49:12



5.1.1.8.1.2 Test RB=75RB

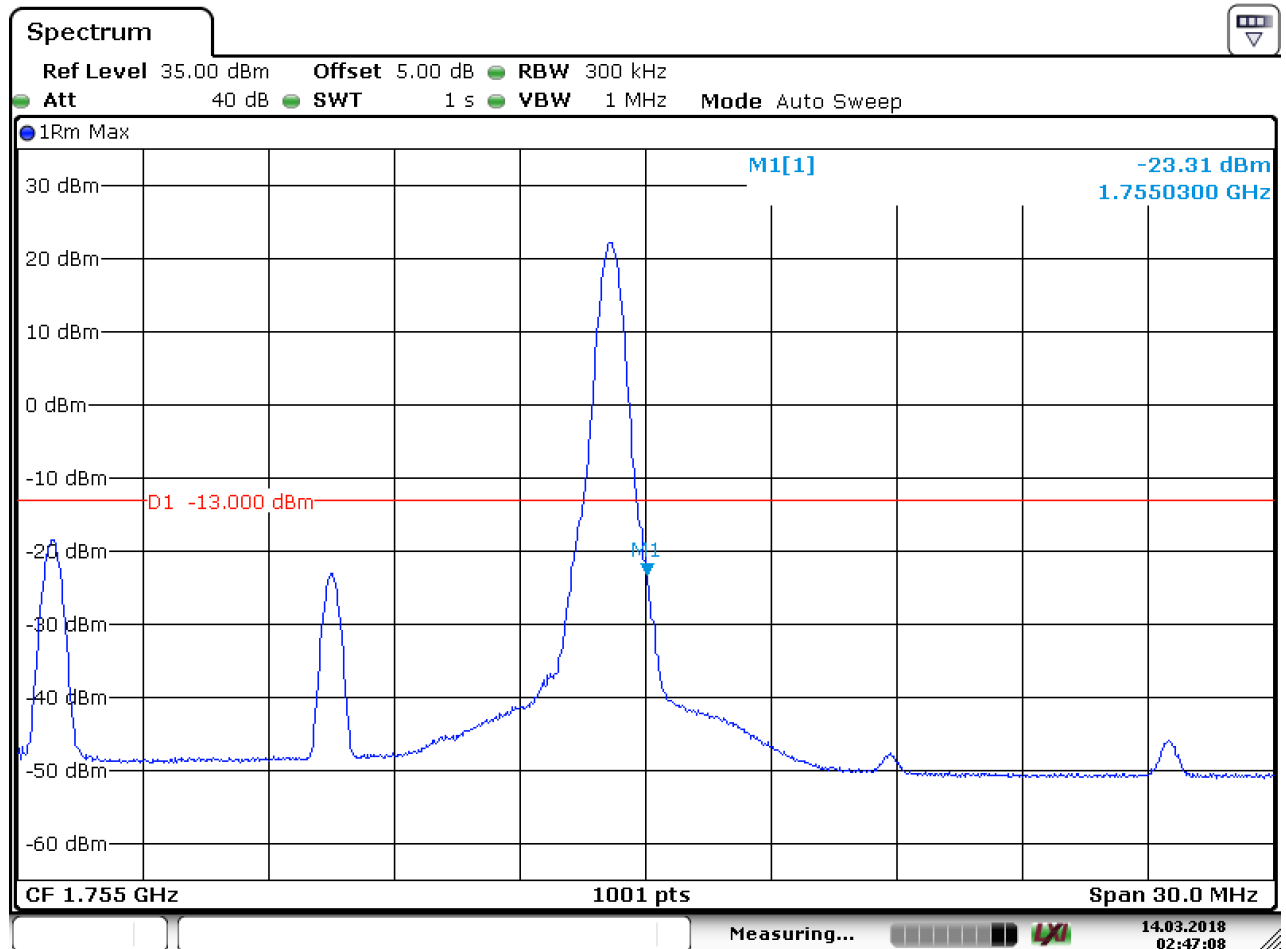


Date: 14.MAR.2018 02:49:55



5.1.1.8.2 Test Channel = HCH

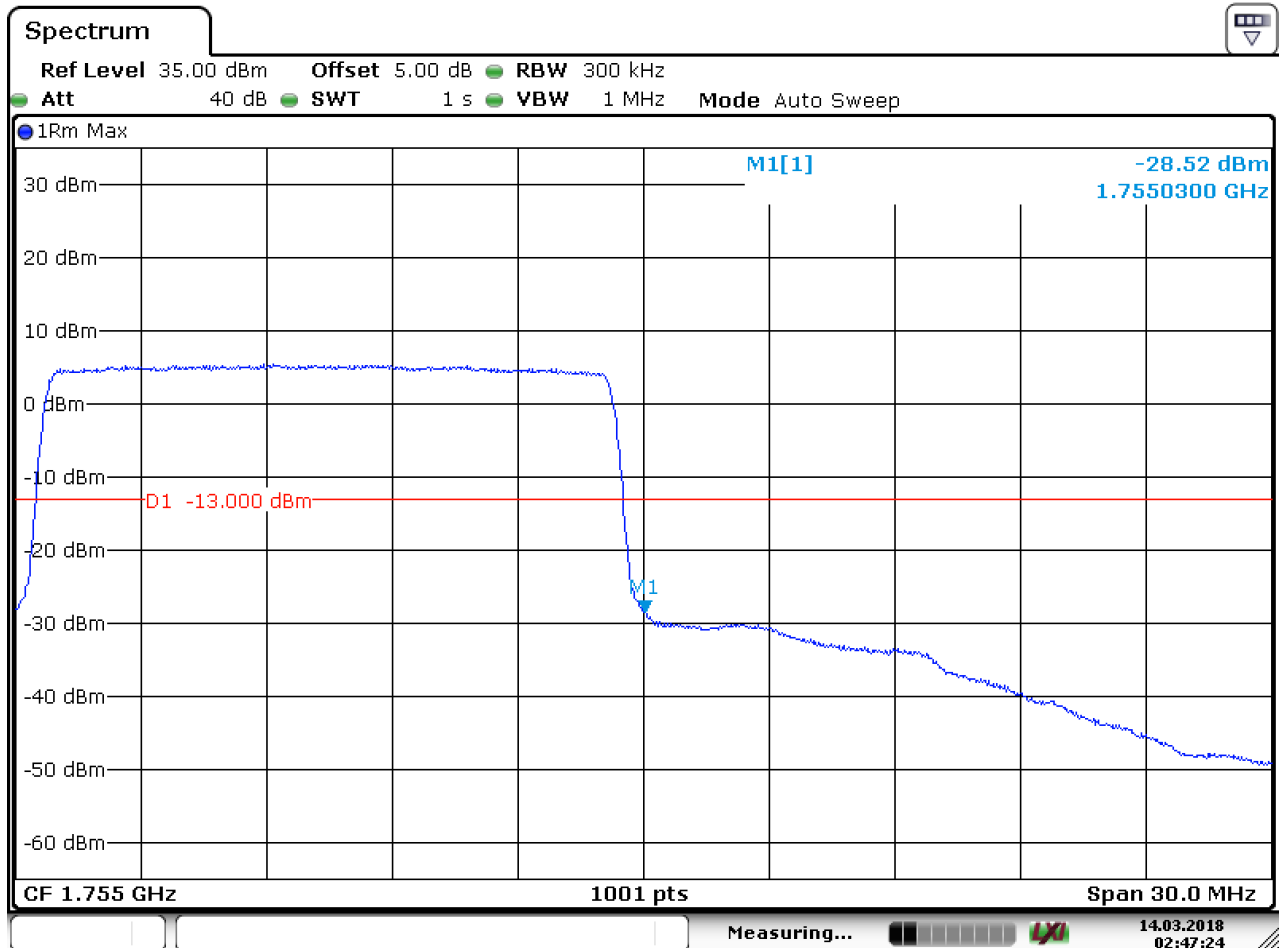
5.1.1.8.2.1 Test RB=1RB



Date: 14.MAR.2018 02:47:08



5.1.1.8.2.2 Test RB=75RB



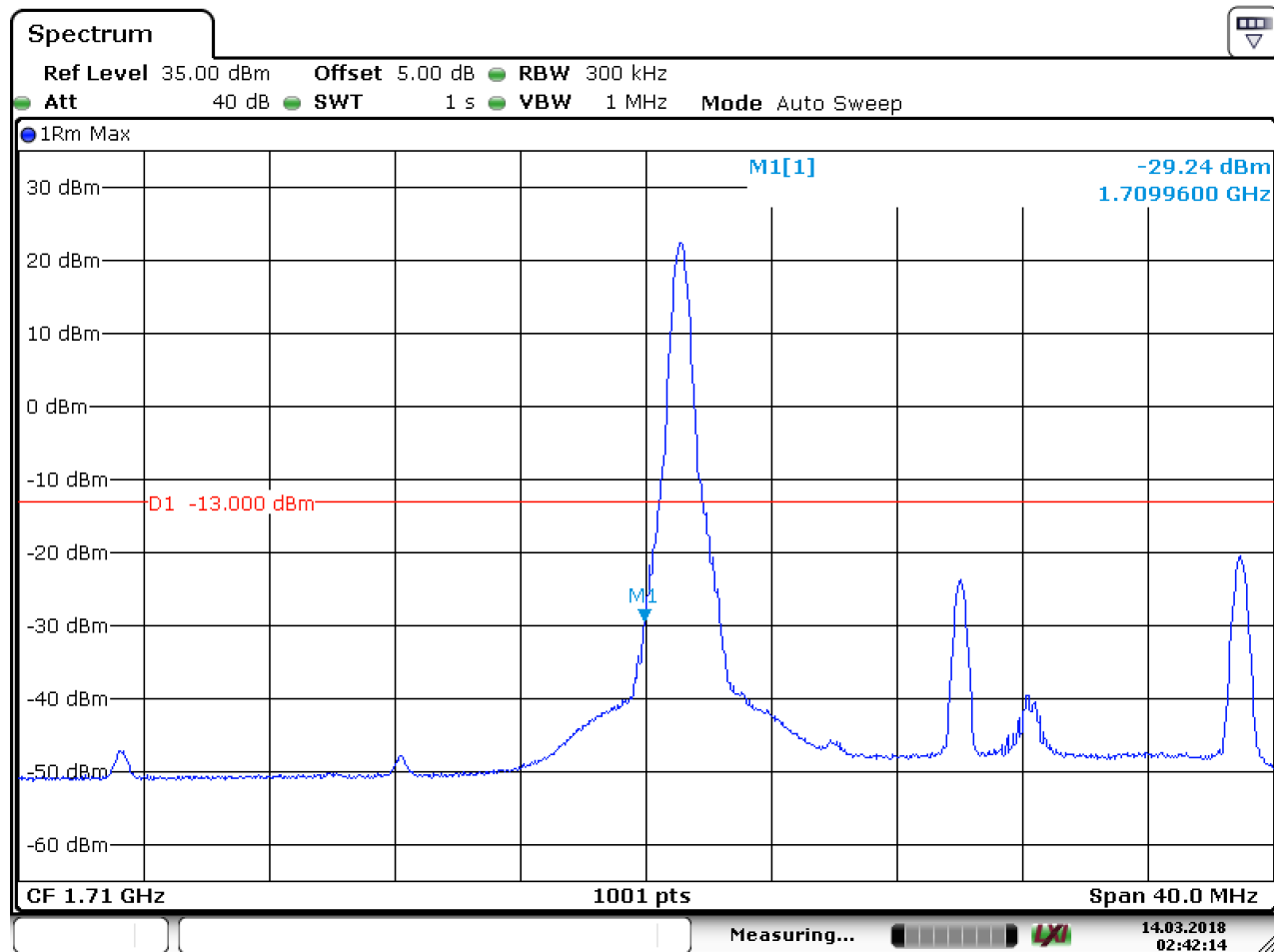
Date: 14.MAR.2018 02:47:24



Test Mode = LTE/TM1 20MHz

5.1.1.8.3 Test Channel = LCH

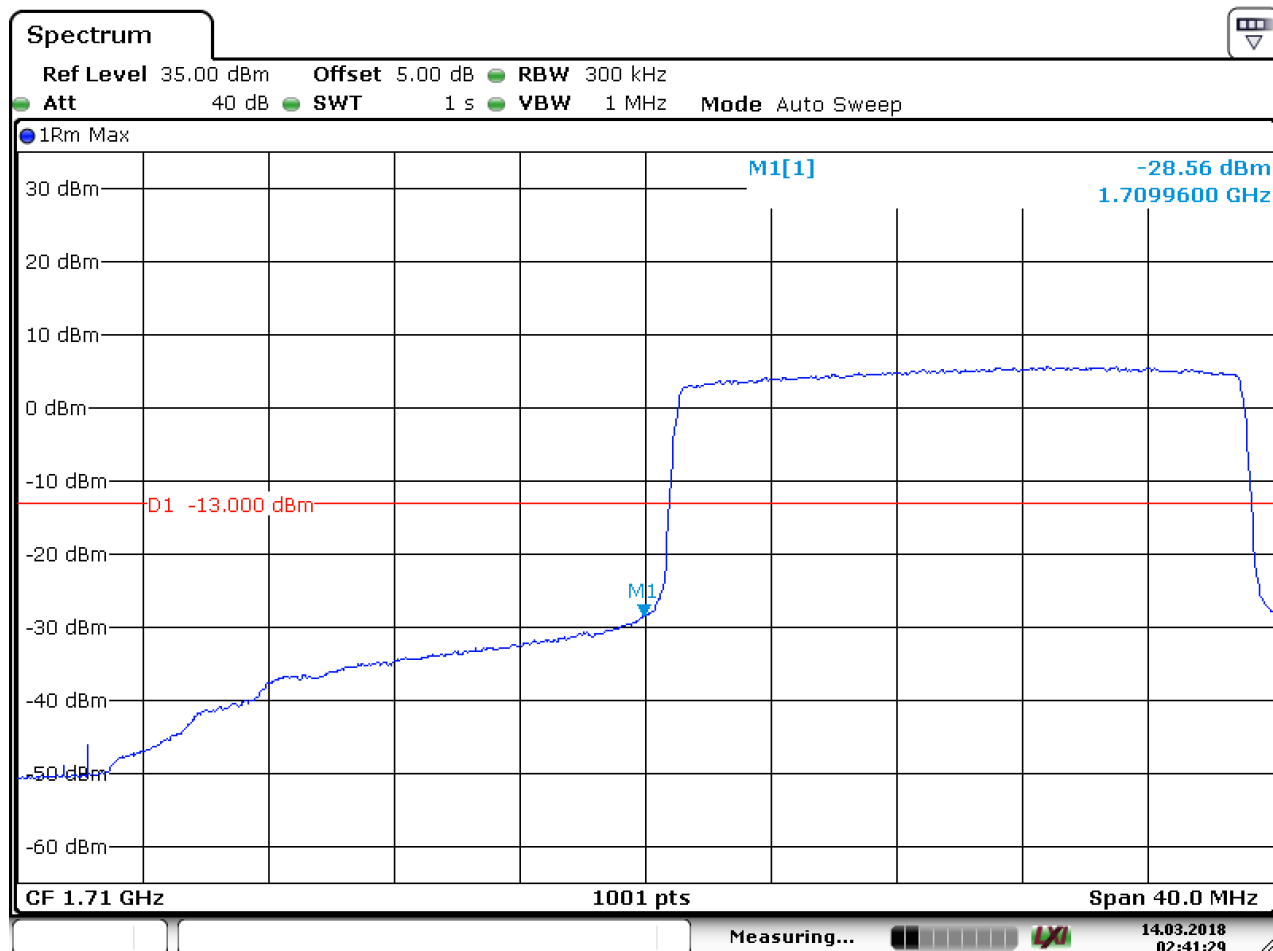
5.1.1.8.3.1 Test RB=1RB



Date: 14.MAR.2018 02:42:14



5.1.1.8.3.2 Test RB=100RB

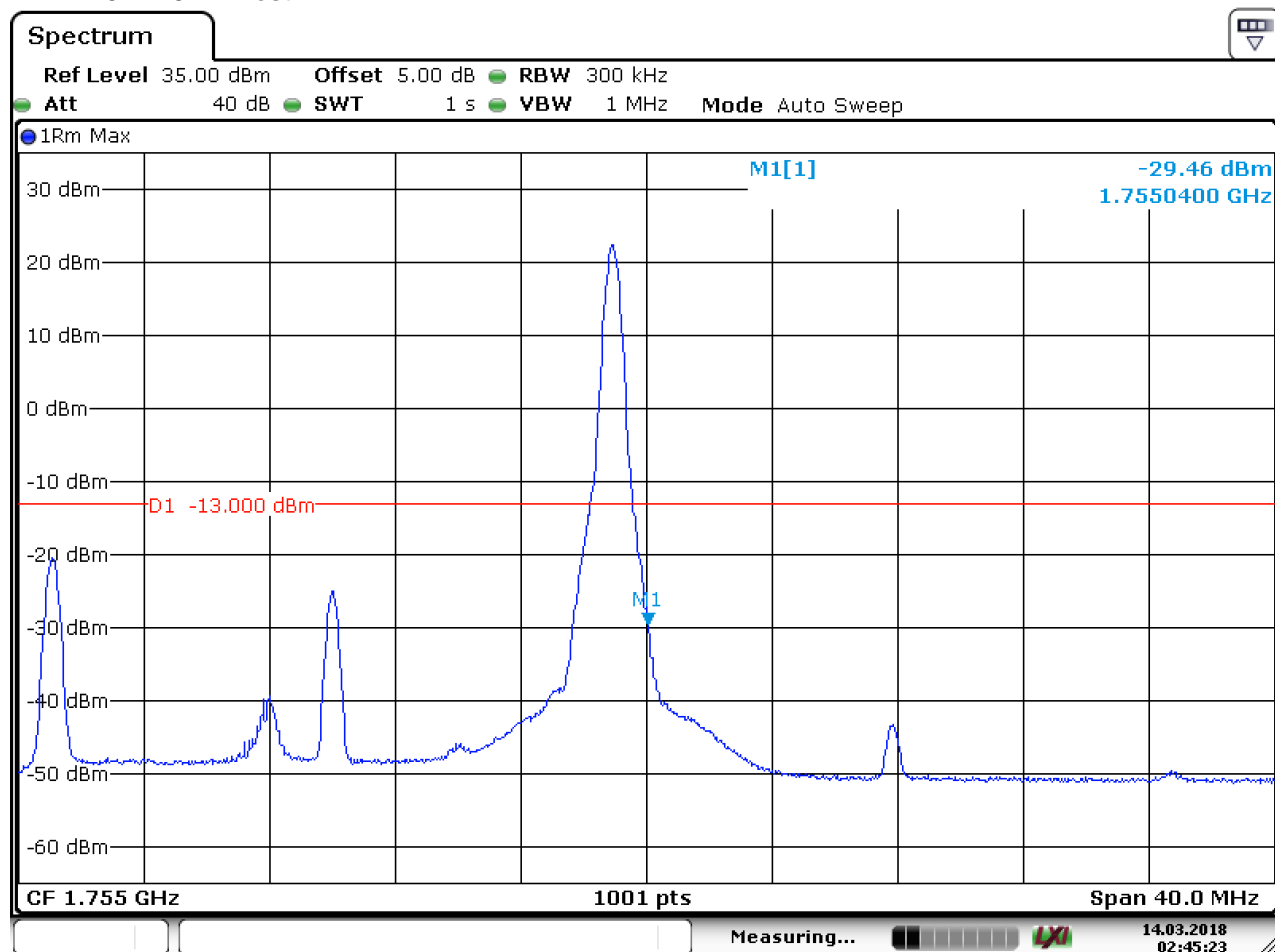


Date: 14.MAR.2018 02:41:30



5.1.1.8.4 Test Channel = HCH

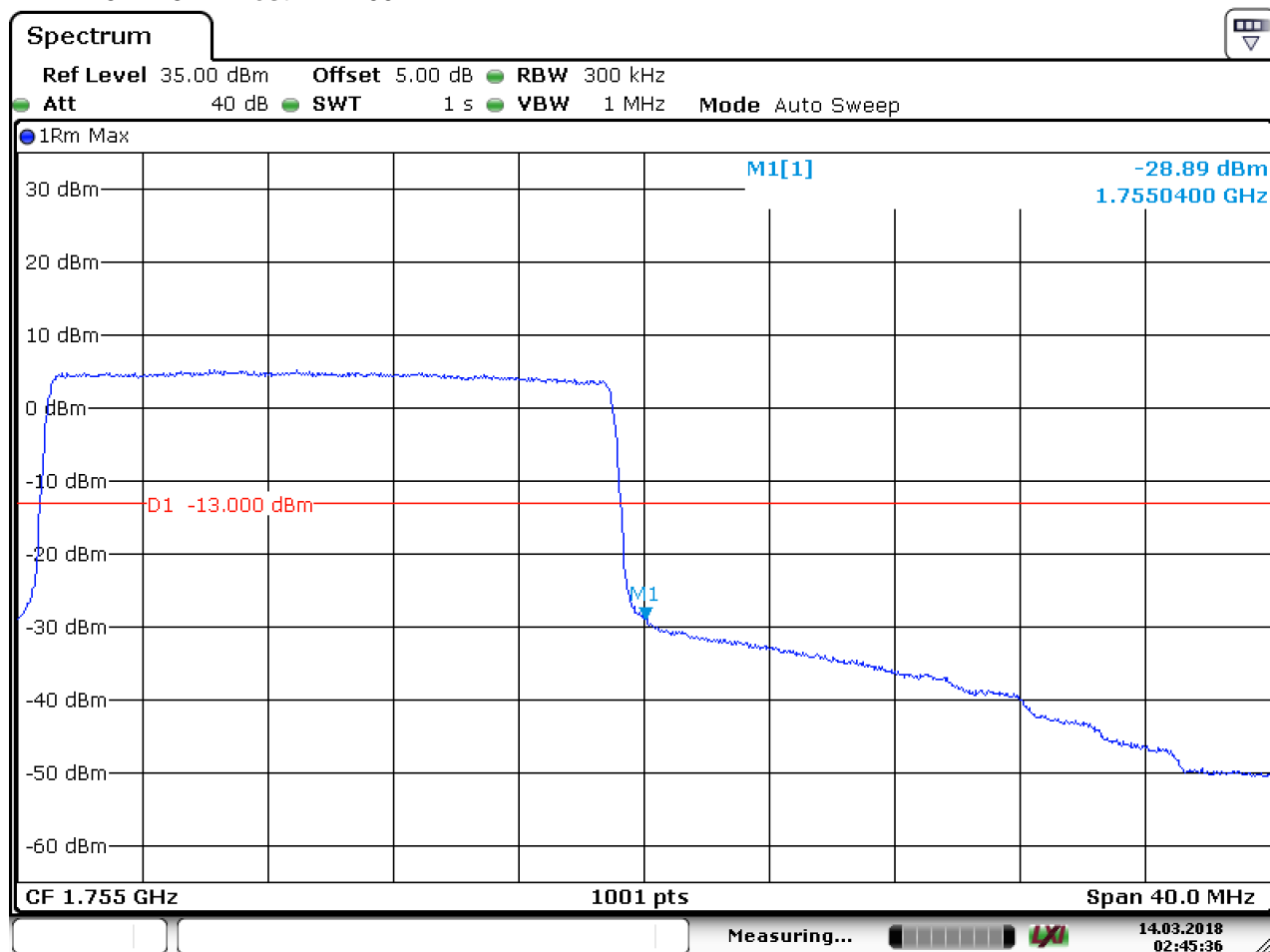
5.1.1.8.4.1 Test RB=1RB



Date: 14.MAR.2018 02:45:24



5.1.1.8.4.2 Test RB=100RB



Date: 14.MAR.2018 02:45:36

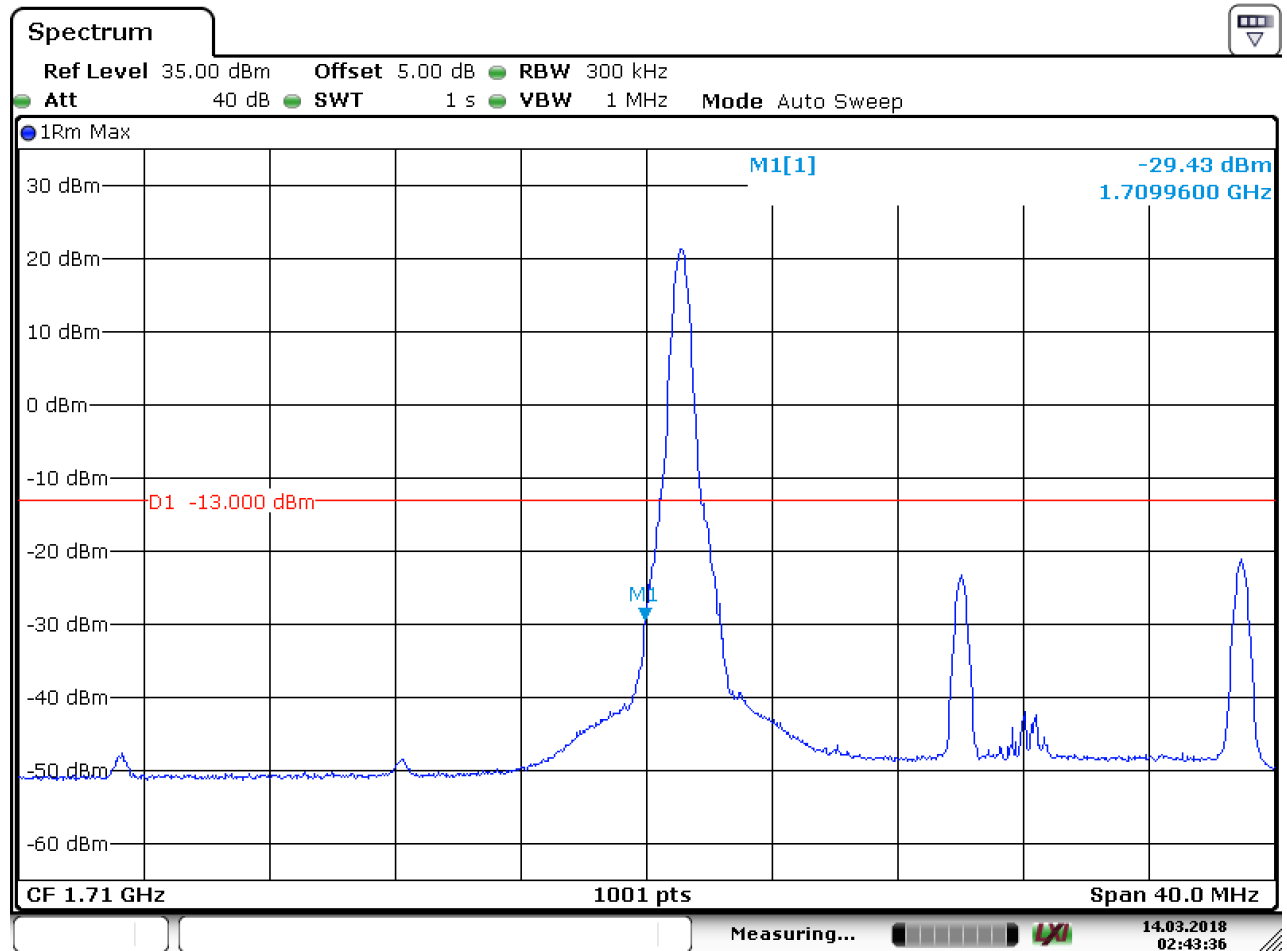




5.1.1.9 Test Mode = LTE/TM2 20MHz

5.1.1.9.1 Test Channel = LCH

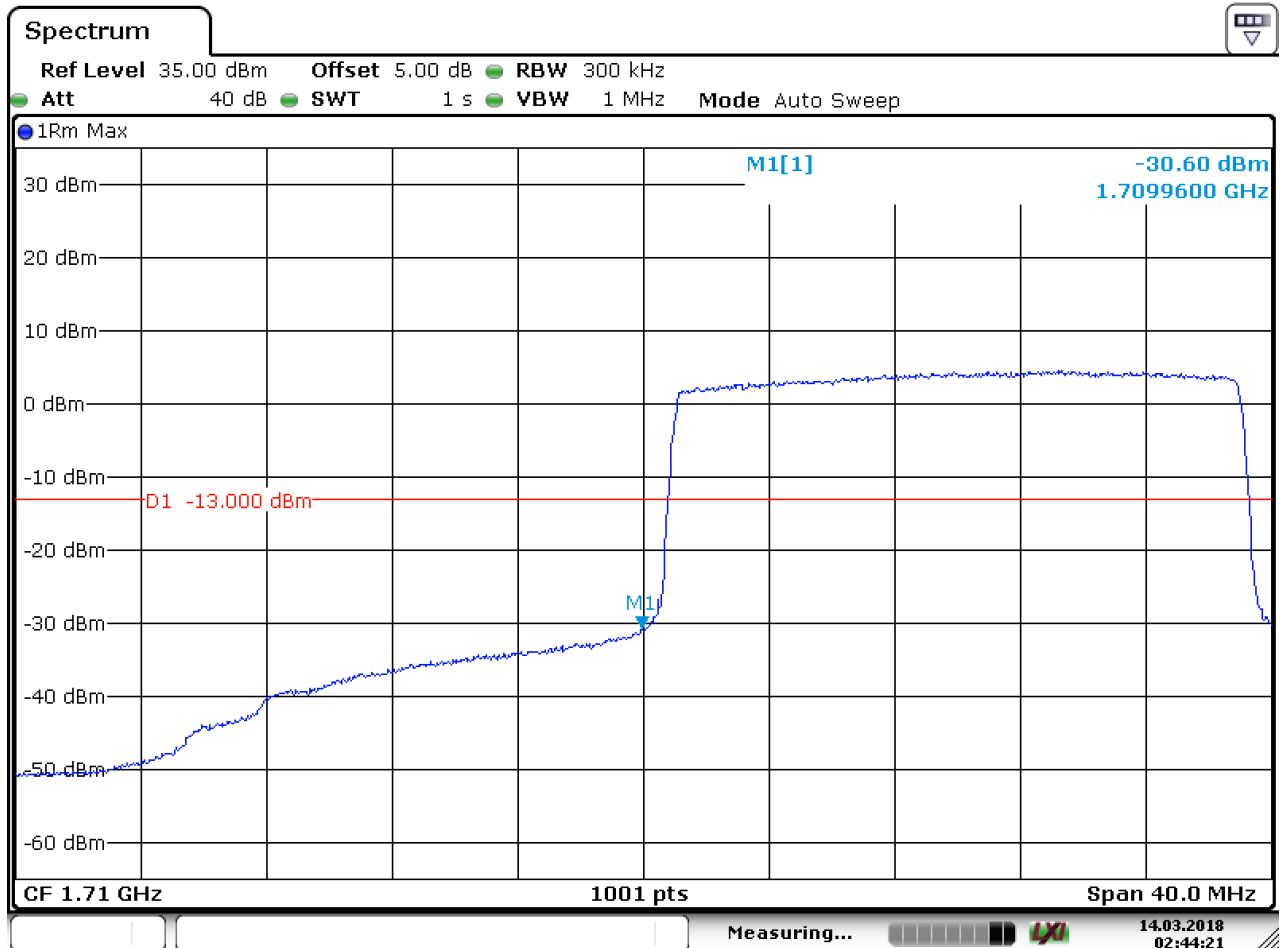
5.1.1.9.1.1 Test RB=1RB



Date: 14.MAR.2018 02:43:36



5.1.1.9.1.2 Test RB=100RB

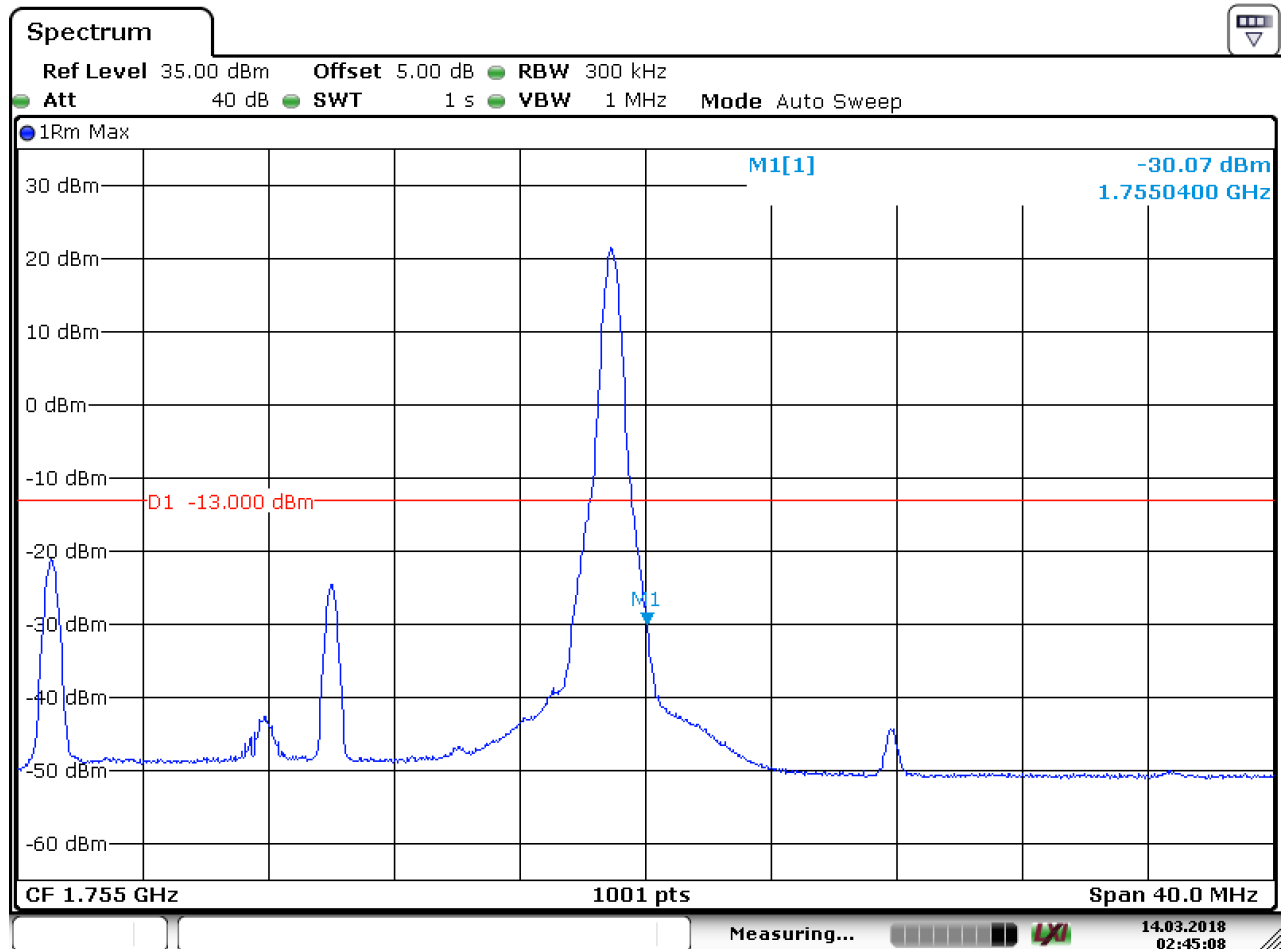


Date: 14.MAR.2018 02:44:21



5.1.1.9.2 Test Channel = HCH

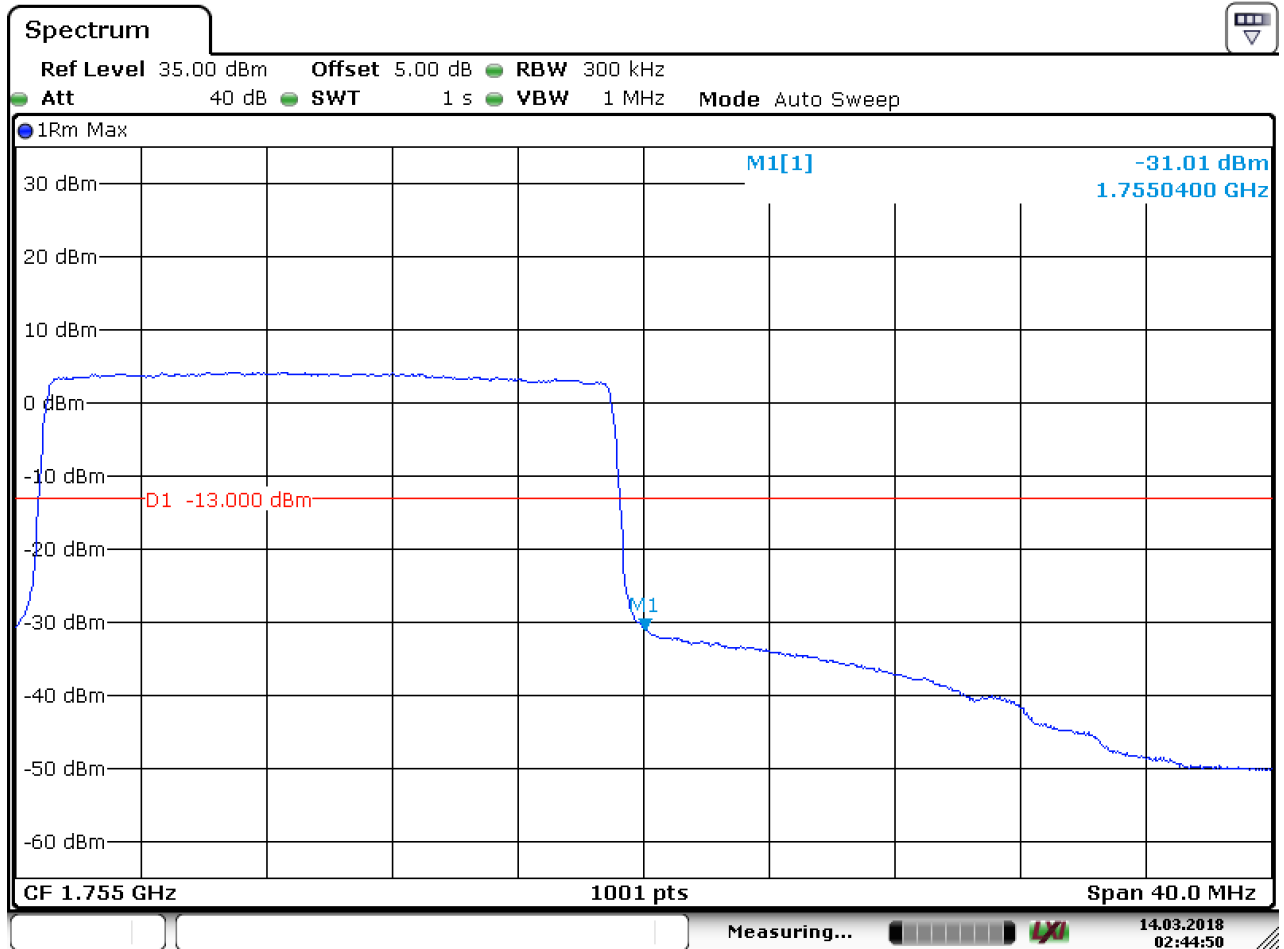
5.1.1.9.2.1 Test RB=1RB



Date: 14.MAR.2018 02:45:09



5.1.1.9.2.2 Test RB=100RB



Date: 14.MAR.2018 02:44:50

## 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.

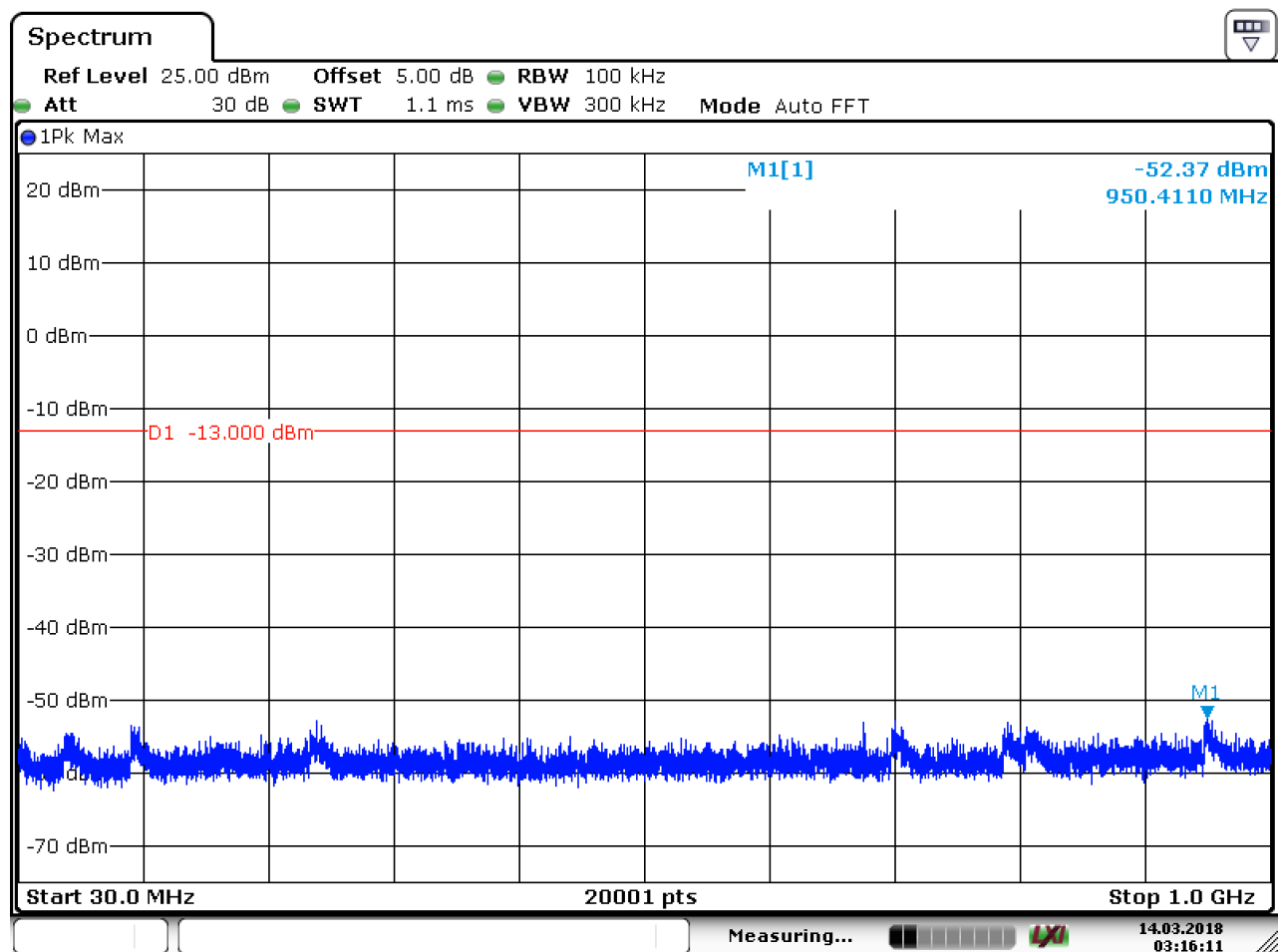
### Part I - Test Plots

#### 6.1 For LTE

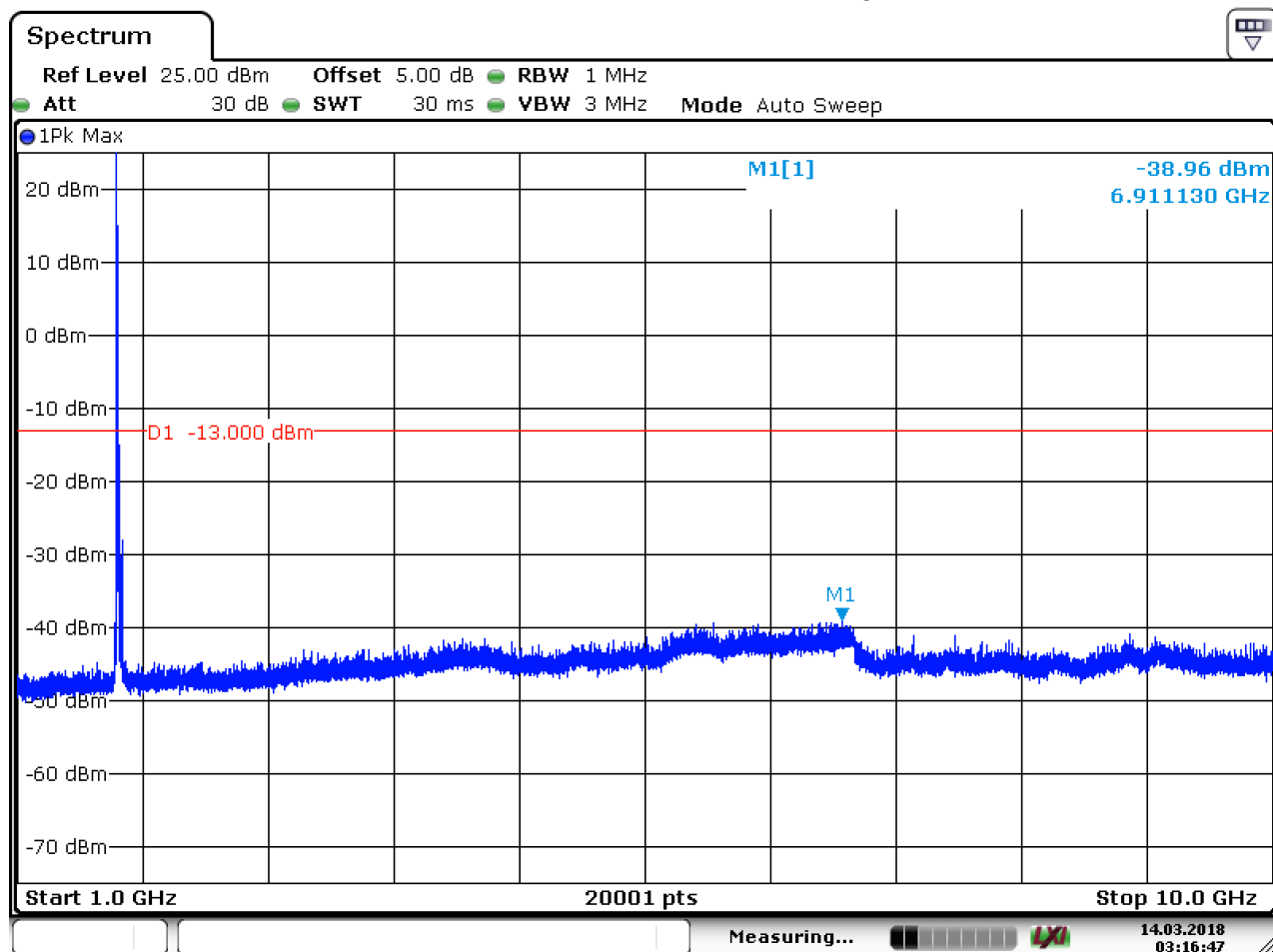
##### 6.1.1 Test Band = LTE band4

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

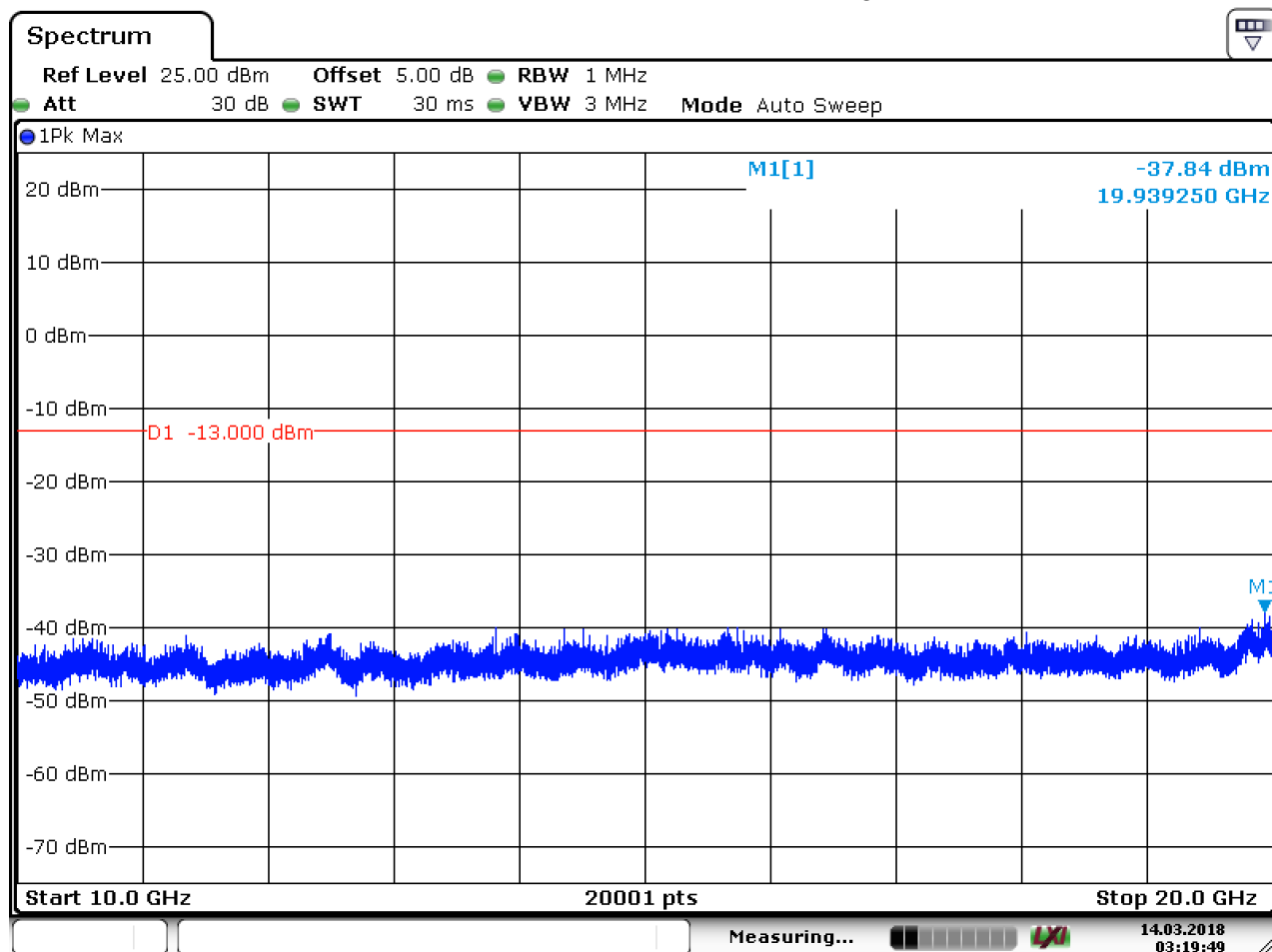
##### 6.1.1.1.1 Test Channel = LCH



Date: 14.MAR.2018 03:16:11



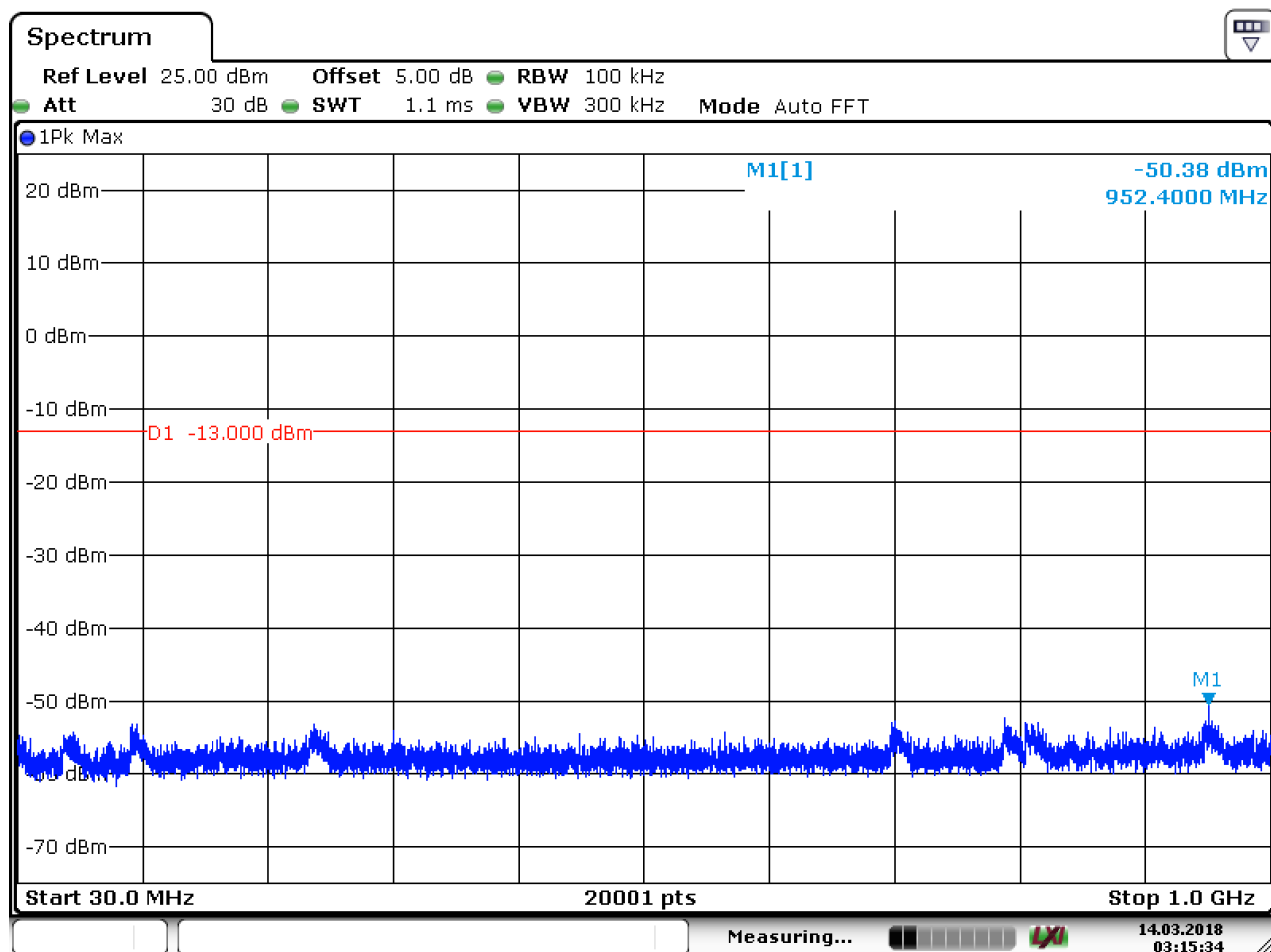
Date: 14.MAR.2018 03:16:48



Date: 14.MAR.2018 03:19:49

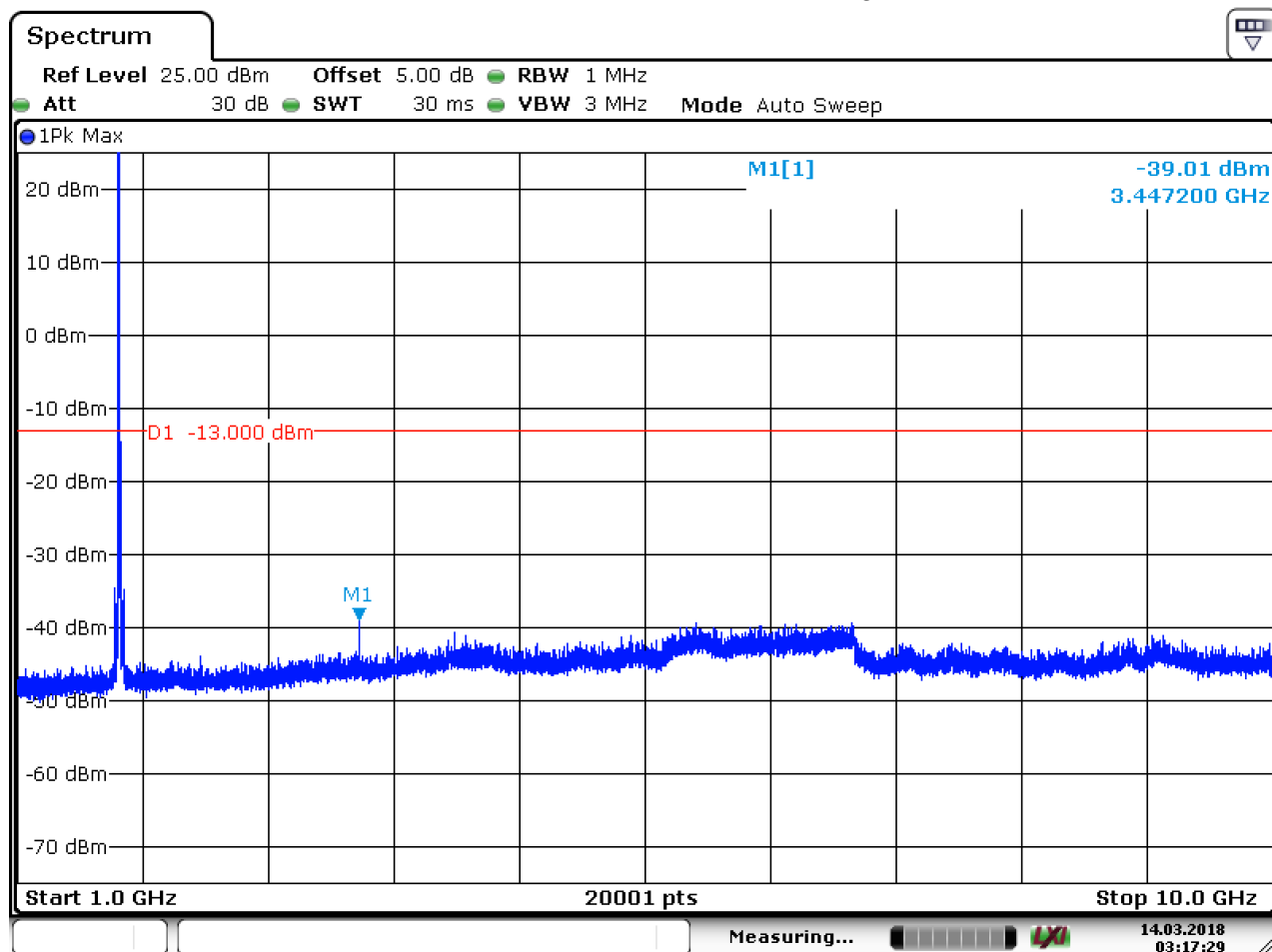


6.1.1.1.2 Test Channel = MCH



Date: 14.MAR.2018 03:15:35



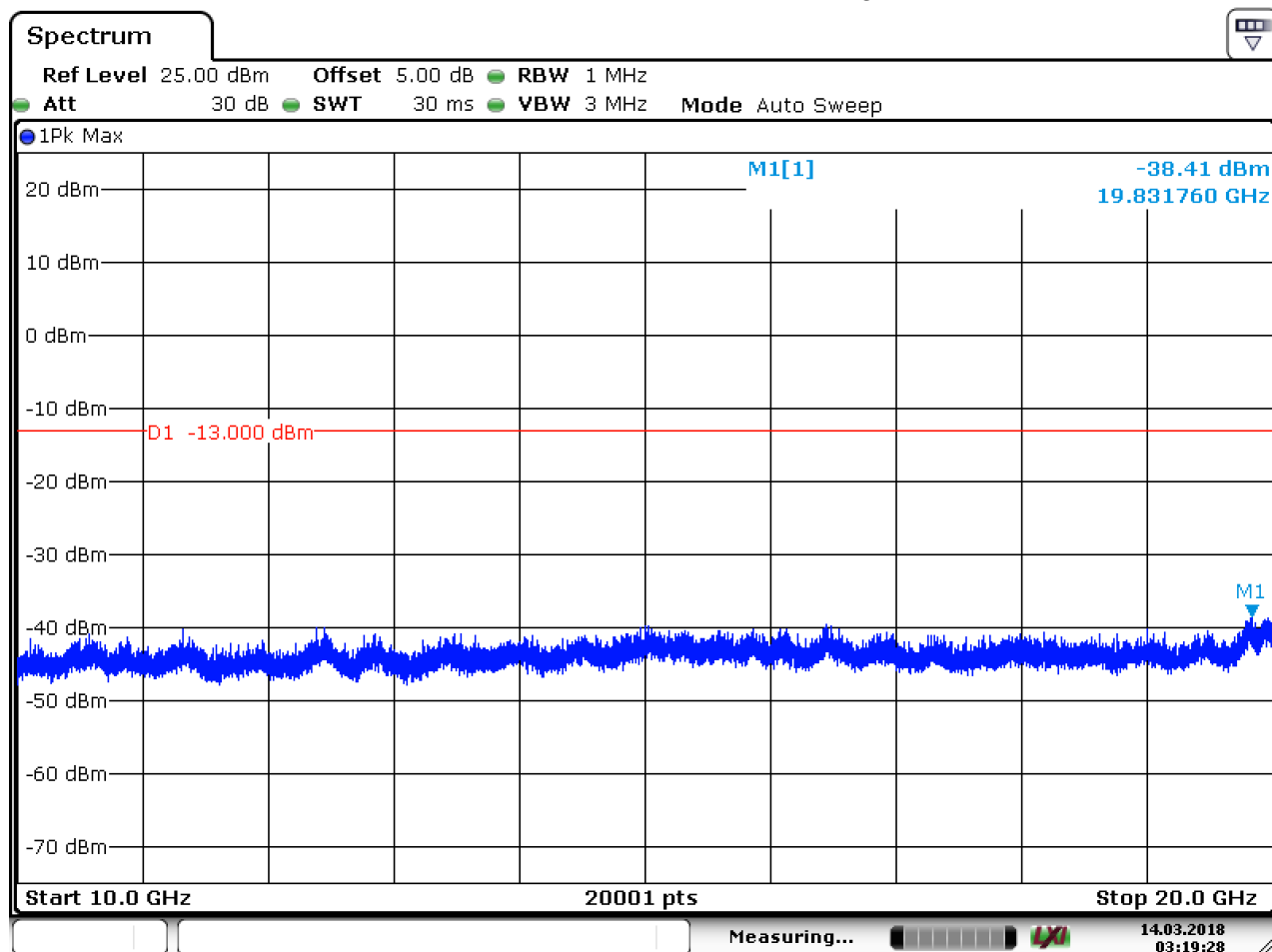


Date: 14.MAR.2018 03:17:29



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

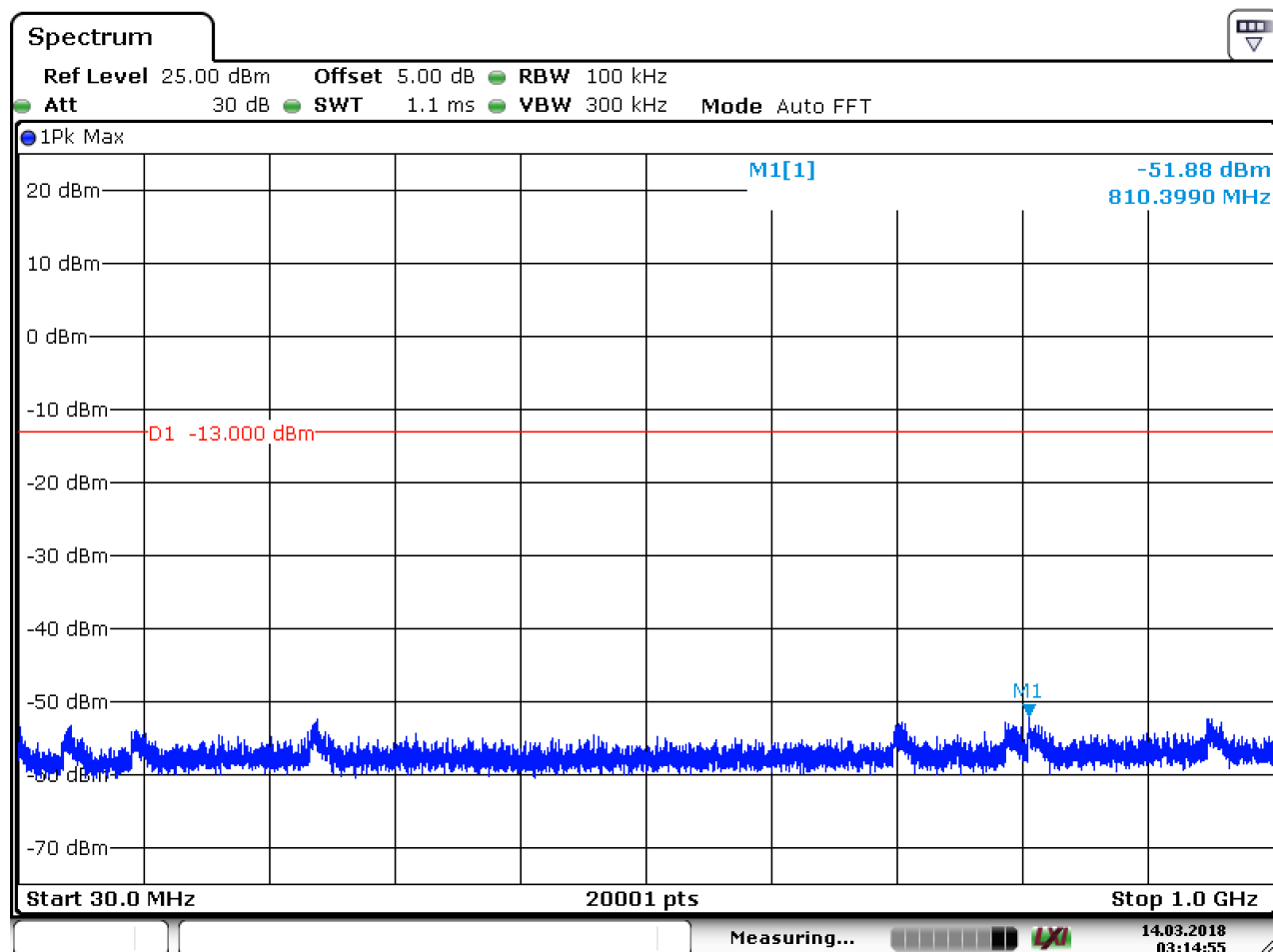
Report No.: SZEM180100100001  
Page: 114 of 122



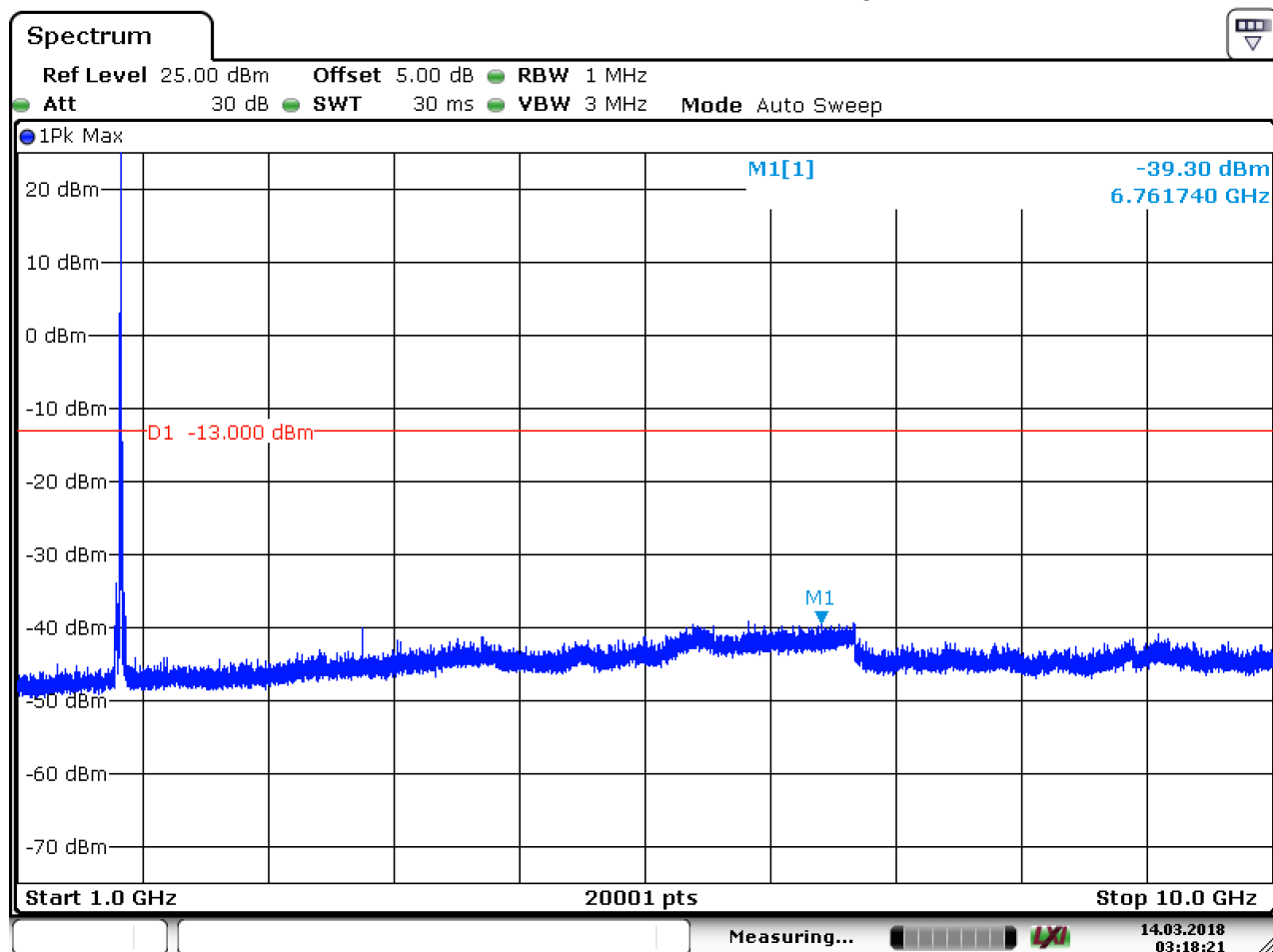
Date: 14.MAR.2018 03:19:28



6.1.1.1.3 Test Channel = HCH



Date: 14.MAR.2018 03:14:56

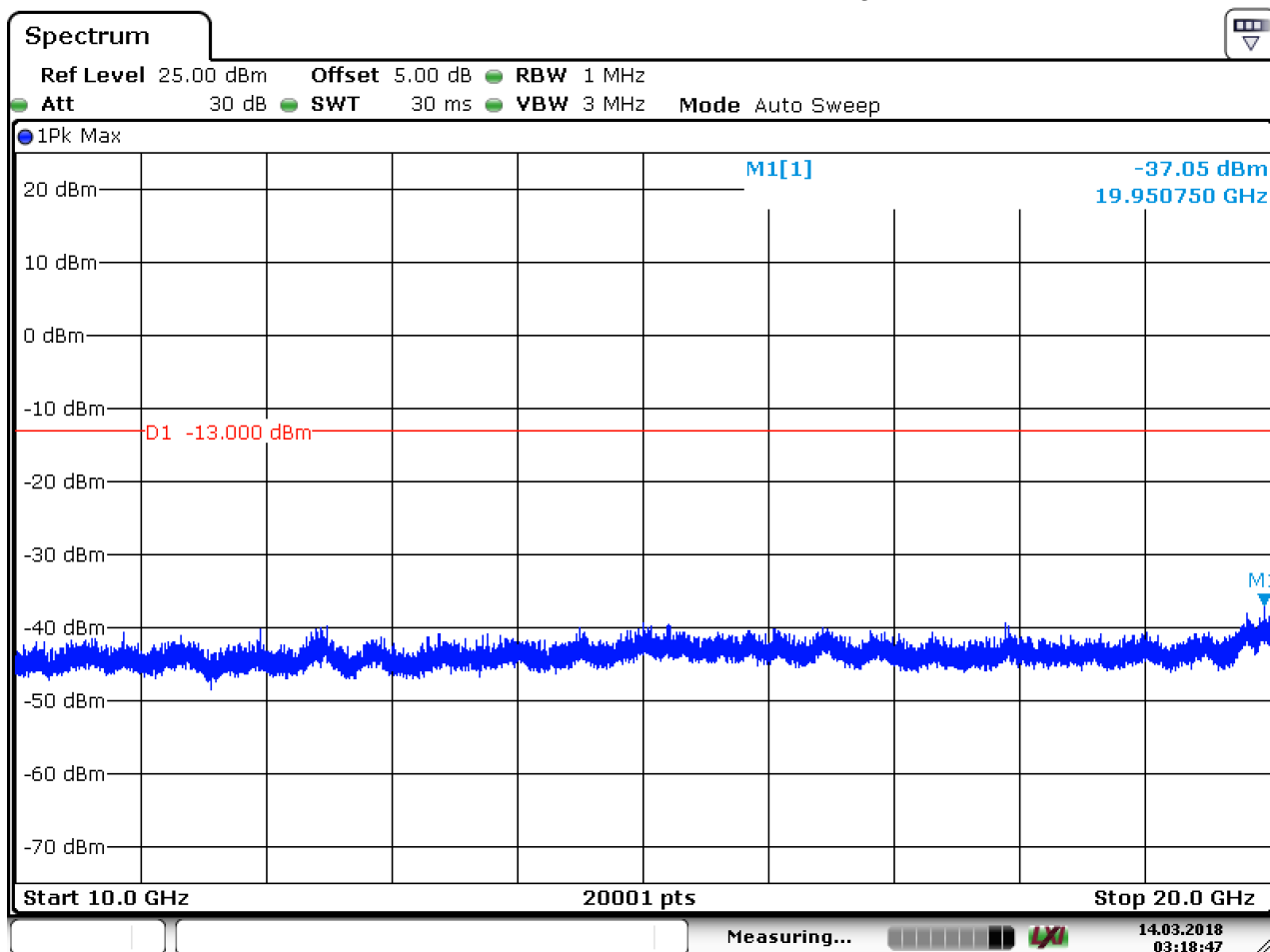


Date: 14.MAR.2018 03:18:21



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

Report No.: SZEM180100100001  
Page: 117 of 122



Date: 14.MAR.2018 03:18:47



## 7 Field Strength of Spurious Radiation

### Part I - Test Results

#### 7.1 For LTE

##### 7.1.1 Test Band = LTE Band4

##### 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
63.350000	-81.79	-13.00	68.79	Vertical
668.166667	-70.90	-13.00	57.90	Vertical
1362.500000	-52.56	-13.00	39.56	Vertical
3421.850000	-61.28	-13.00	48.28	Vertical
5132.975000	-63.71	-13.00	50.71	Vertical
9084.975000	-64.14	-13.00	51.14	Vertical
56.300000	-77.67	-13.00	64.67	Horizontal
134.400000	-74.79	-13.00	61.79	Horizontal
1362.500000	-56.30	-13.00	43.30	Horizontal
2112.000000	-54.79	-13.00	41.79	Horizontal
3421.850000	-66.01	-13.00	53.01	Horizontal
7071.275000	-64.81	-13.00	51.81	Horizontal

##### 7.1.1.1.2 Test Channel = MCH

Frequency (MHz)	Level (dBm)	Limit Line (dBm)	Over Limit (dB)	Polarization
65.050000	-81.87	-13.00	68.87	Vertical
645.112500	-69.96	-13.00	56.96	Vertical
1375.000000	-51.77	-13.00	38.77	Vertical
2137.500000	-51.95	-13.00	38.95	Vertical
3446.875000	-65.63	-13.00	52.63	Vertical
8026.450000	-64.42	-13.00	51.42	Vertical
56.000000	-77.83	-13.00	64.83	Horizontal
104.250000	-84.21	-13.00	71.21	Horizontal
1375.500000	-55.92	-13.00	42.92	Horizontal
2134.500000	-54.25	-13.00	41.25	Horizontal
3446.550000	-66.84	-13.00	53.84	Horizontal
6926.325000	-65.12	-13.00	52.12	Horizontal



**7.1.1.1.3 Test Channel = HCH**

Frequency (MHz)	Level (dBm)	Limit Line (dBm)	Over Limit (dB)	Polarization
65.700000	-82.91	-13.00	69.91	Vertical
706.529167	-73.78	-13.00	60.78	Vertical
1387.500000	-50.26	-13.00	37.26	Vertical
2144.000000	-49.67	-13.00	36.67	Vertical
3472.225000	-60.78	-13.00	47.78	Vertical
6494.400000	-64.81	-13.00	51.81	Vertical
55.650000	-78.03	-13.00	65.03	Horizontal
691.175000	-69.59	-13.00	56.59	Horizontal
1387.500000	-54.16	-13.00	41.16	Horizontal
3471.900000	-65.55	-13.00	52.55	Horizontal
7041.700000	-64.96	-13.00	51.96	Horizontal
9851.975000	-64.50	-13.00	51.50	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, but only the worst case data presented in this report.



## 8 Frequency Stability

### 8.1 Frequency Error VS. Voltage

#### Part I - Test Results

Test Band	Test Mode	Test Channel	Test Temp.	Test Volt.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict
LTEBand4	LTE/TM1 20MHz	LCH	TN	VL	-5.55	-0.003203	PASS
				VN	5.66	0.003267	PASS
				VH	6.42	0.003706	PASS
		MCH	TN	VL	-7.85	-0.004492	PASS
				VN	-5.46	-0.003124	PASS
				VH	6.77	0.003874	PASS
		HCH	TN	VL	-6.05	-0.003523	PASS
				VN	6.09	0.003546	PASS
				VH	-6.28	-0.003656	PASS
	LTE/TM2 20MHz	LCH	TN	VL	-6.27	-0.003619	PASS
				VN	6.38	0.003683	PASS
				VH	5.25	0.003030	PASS
		MCH	TN	VL	6.45	0.003691	PASS
				VN	5.32	0.003044	PASS
				VH	-6.02	-0.003445	PASS
		HCH	TN	VL	-5.55	-0.003203	PASS
				VN	5.66	0.003267	PASS
				VH	6.42	0.003706	PASS





## 8.2 Frequency Error VS. Temperature

### Part I - Test Results

Test Band	Test Mode	Test Channel	Test Volt.	Test Temp.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict
LTEBand4	LTE/TM1 20MHz	LCH	VN	-30	6.11	0.003527	PASS
				-20	4.55	0.002626	PASS
				-10	-5.46	-0.003152	PASS
				0	6.51	0.003758	PASS
				10	5.35	0.003088	PASS
				20	8.58	0.004903	PASS
				30	7.11	0.004063	PASS
				40	4.98	0.002846	PASS
				50	7.58	0.004331	PASS
		MCH	VN	-30	5.56	0.003177	PASS
				-20	-8.84	-0.005155	PASS
				-10	-9.86	-0.005749	PASS
				0	-7.51	-0.004379	PASS
				10	-6.59	-0.003843	PASS
				20	-7.52	-0.004385	PASS
				30	6.24	0.003602	PASS
				40	7.07	0.004081	PASS
				50	7.37	0.004254	PASS
		HCH	VN	-30	5.61	0.003238	PASS
				-20	5.78	0.003336	PASS
				-10	7.62	0.004354	PASS
				0	6.11	0.003527	PASS
				10	4.55	0.002626	PASS
				20	-5.46	-0.003152	PASS
				30	6.51	0.003758	PASS
				40	5.35	0.003088	PASS
				50	8.58	0.004903	PASS



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

Report No.: SZEM180100100001

Page: 122 of 122

Test Band	Test Mode	Test Channel	Test Volt.	Test Temp.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict
LTEBand4	LTE/TM2 20MHz	LCH	VN	-30	6.47	0.003697	PASS
				-20	6.49	0.003709	PASS
				-10	7.65	0.004371	PASS
				0	7.48	0.004274	PASS
				10	5.62	0.003272	PASS
				20	-6.12	-0.003563	PASS
				30	5.02	0.002923	PASS
				40	-5.34	-0.003109	PASS
				50	-7.30	-0.004250	PASS
		MCH	VN	-30	6.91	0.003988	PASS
				-20	-5.39	-0.003111	PASS
				-10	-7.30	-0.004214	PASS
				0	5.44	0.003140	PASS
				10	6.15	0.003550	PASS
				20	-5.78	-0.003308	PASS
				30	-5.36	-0.003067	PASS
				40	6.90	0.003948	PASS
				50	-5.02	-0.002873	PASS
		HCH	VN	-30	5.55	0.003176	PASS
				-20	4.89	0.002847	PASS
				-10	8.04	0.004681	PASS
				0	-6.90	-0.004017	PASS
				10	6.44	0.003750	PASS
				20	-6.41	-0.003732	PASS
				30	6.78	0.003913	PASS
				40	5.49	0.003169	PASS
				50	-5.51	-0.003180	PASS

The End