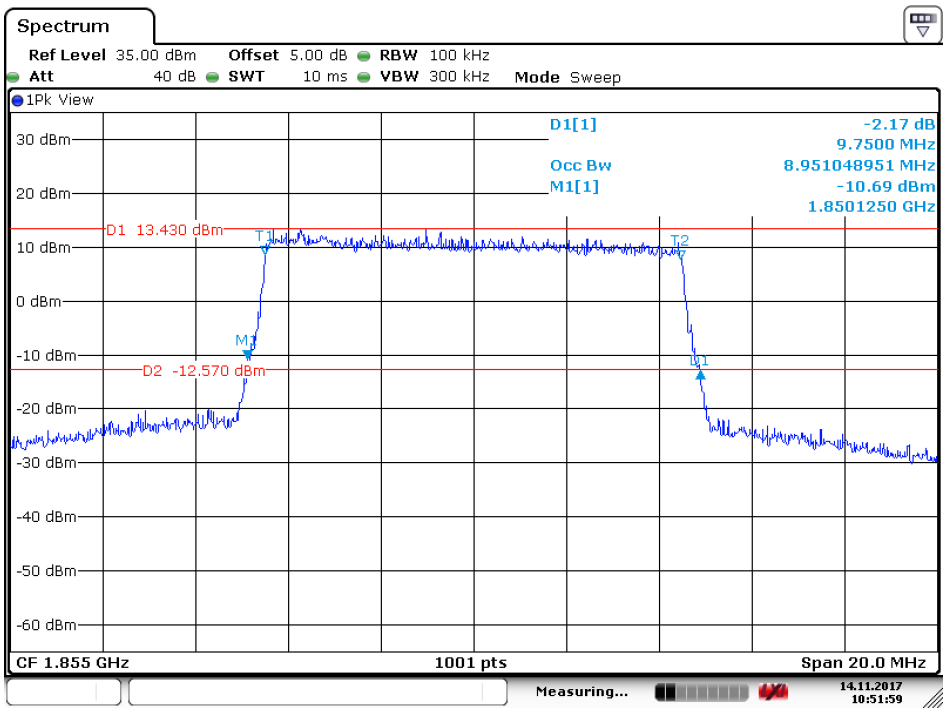
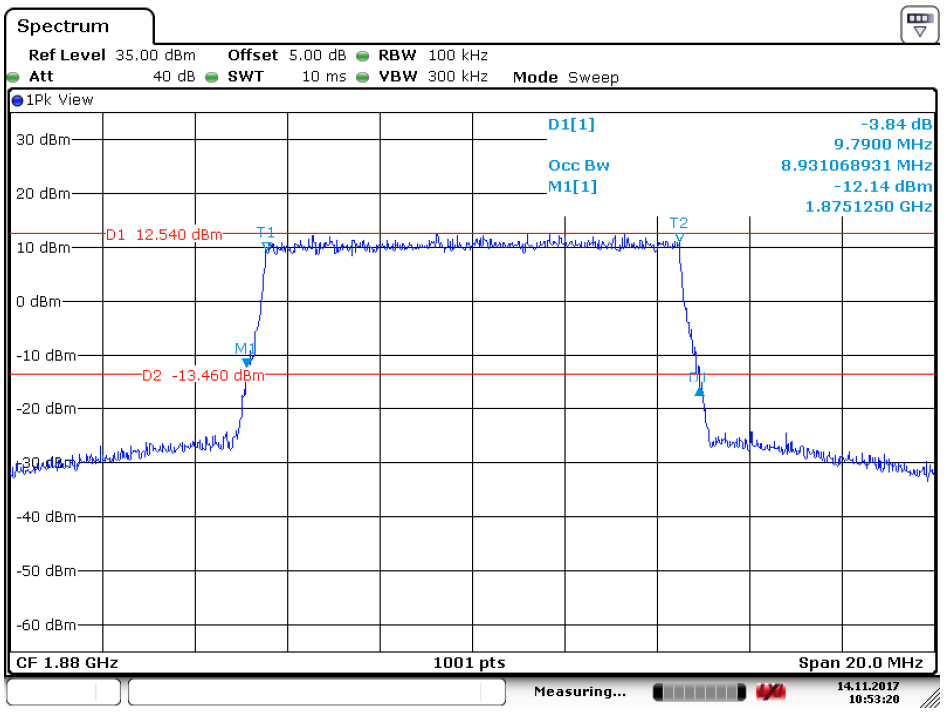
4.1.1.11 Test Mode = LTE/TM2 10MHz

4.1.1.11.1 Test Channel = LCH



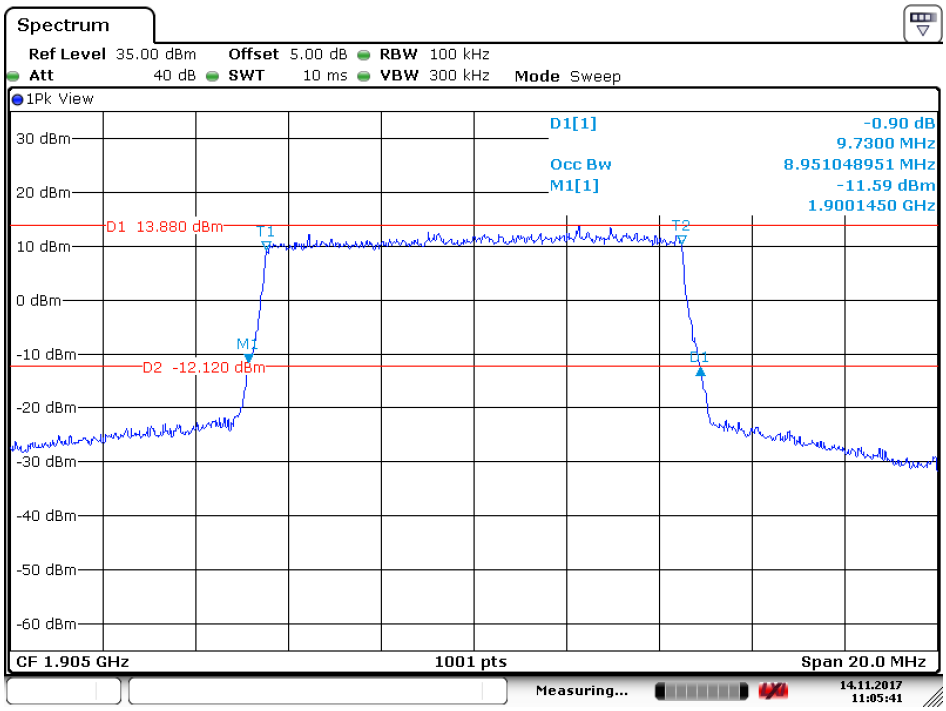
Date: 14.NOV.2017 10:51:59

4.1.1.11.2 Test Channel = MCH



Date: 14.NOV.2017 10:53:20

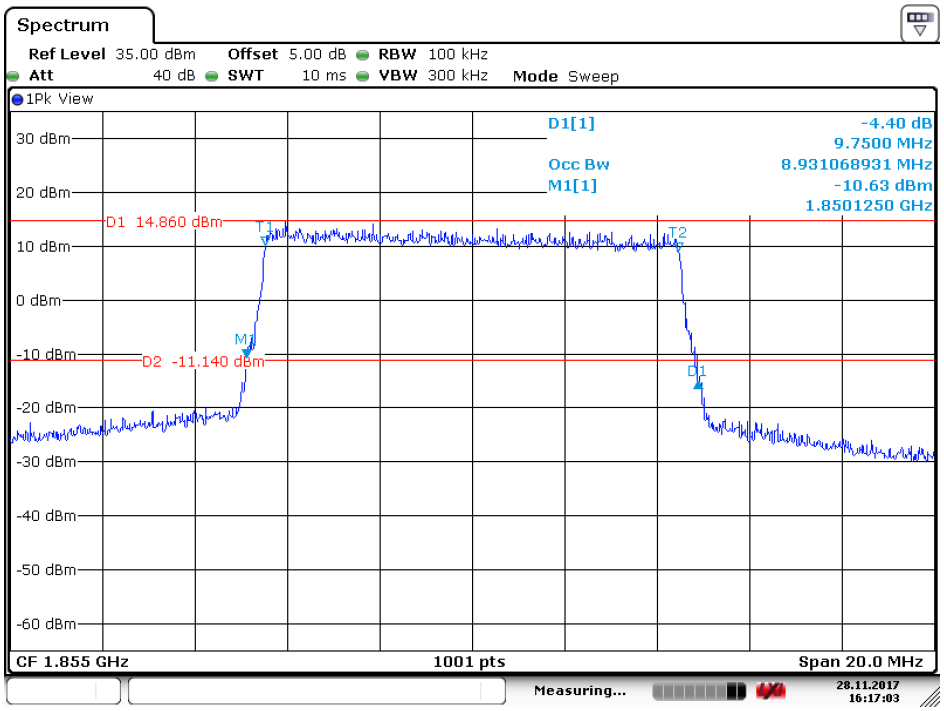
4.1.1.11.3 Test Channel = HCH



Date: 14.NOV.2017 11:05:42

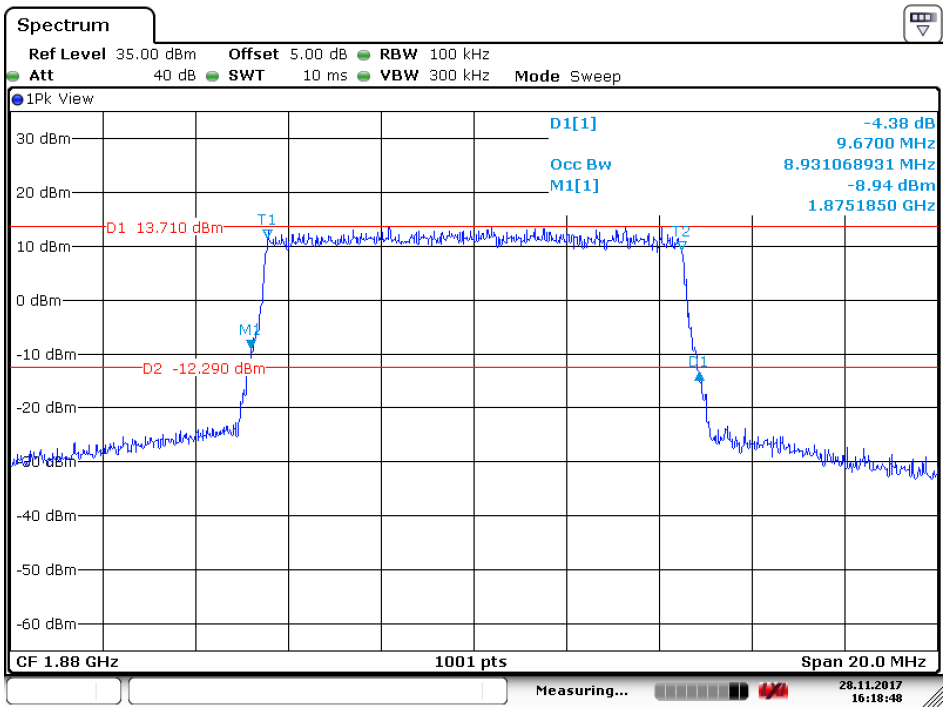
4.1.1.12 Test Mode = LTE/TM3 10MHz

4.1.1.12.1 Test Channel = LCH



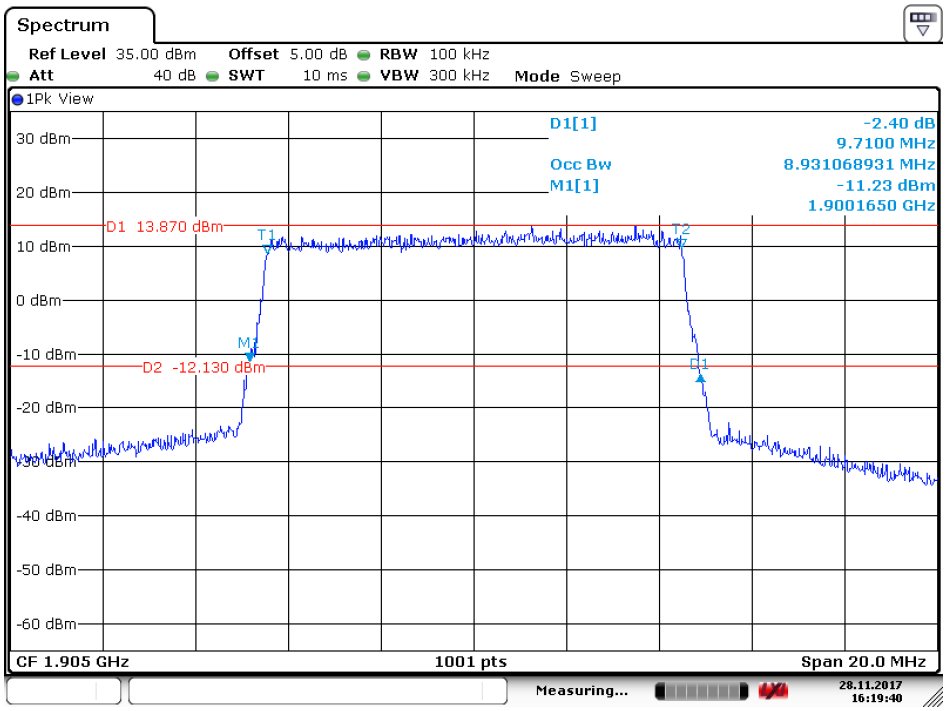
Date: 28.NOV.2017 16:17:03

4.1.1.12.2 Test Channel = MCH



Date: 28.NOV.2017 16:18:48

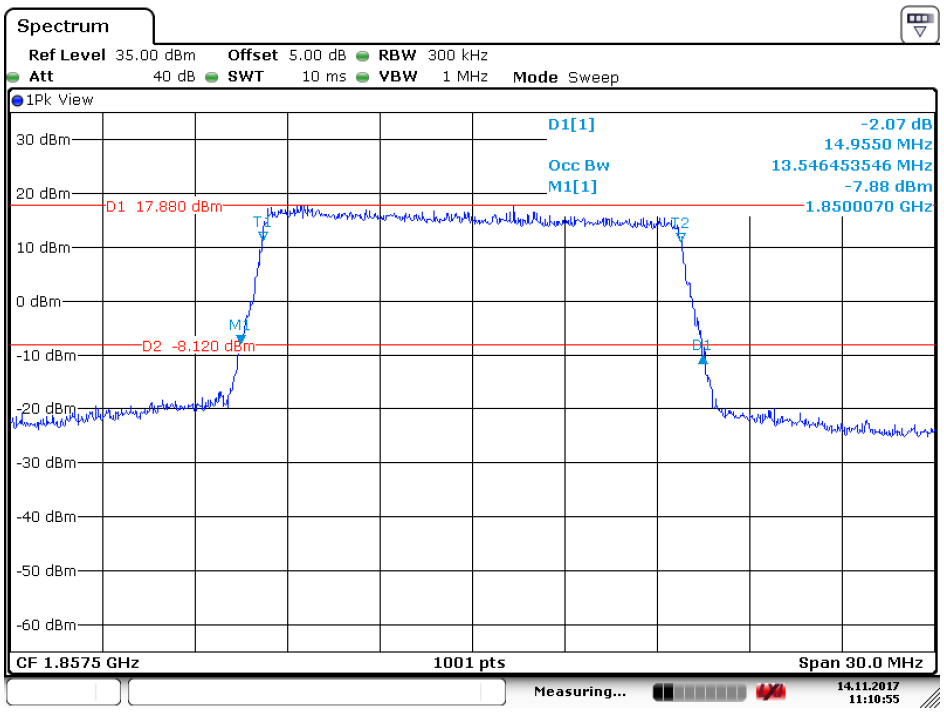
4.1.1.12.3 Test Channel = HCH



Date: 28.NOV.2017 16:19:41

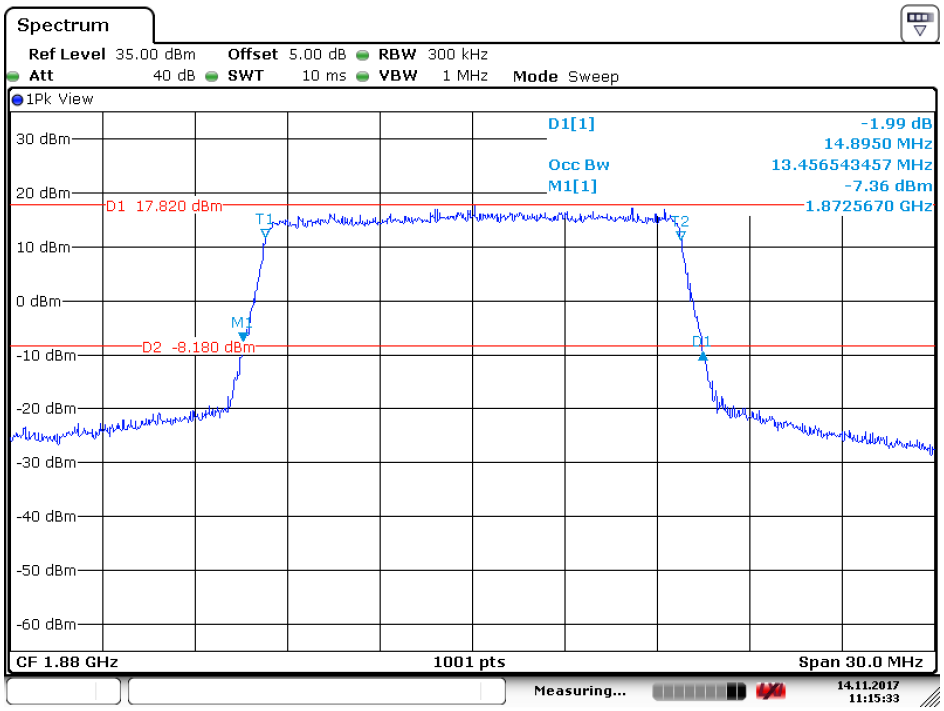
4.1.1.13 Test Mode = LTE/TM1 15MHz

4.1.1.13.1 Test Channel = LCH



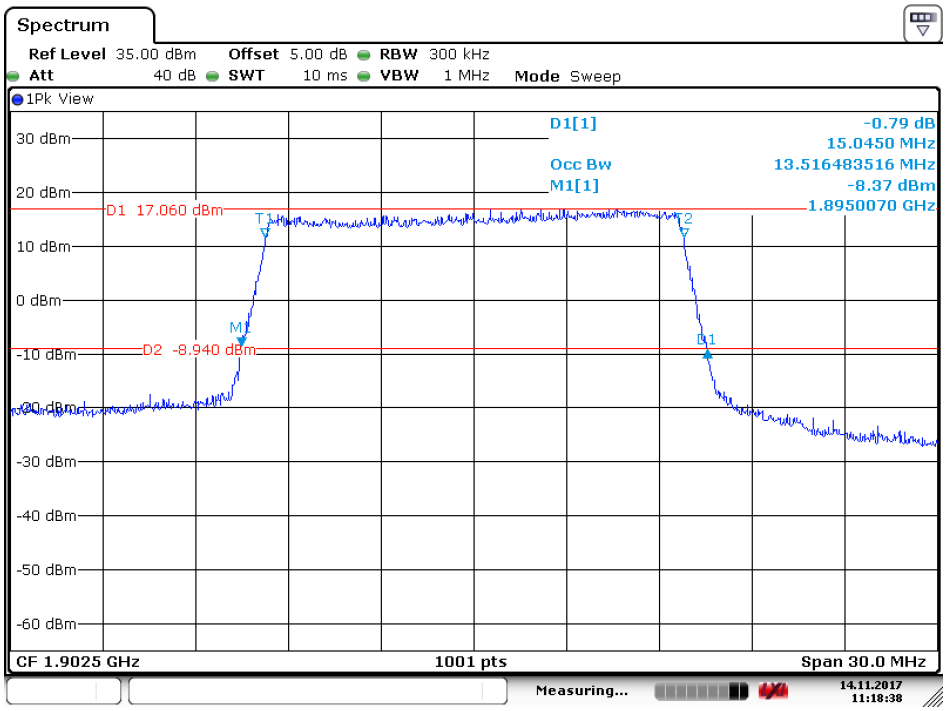
Date: 14.NOV.2017 11:10:55

4.1.1.13.2 Test Channel = MCH



Date: 14.NOV.2017 11:15:34

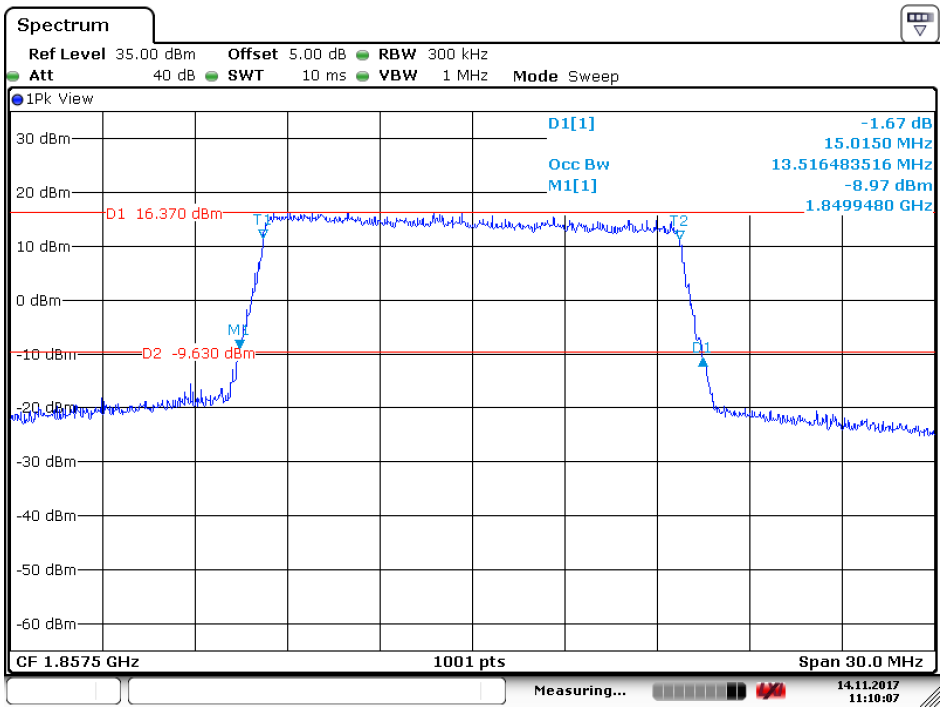
4.1.1.13.3 Test Channel = HCH



Date: 14.NOV.2017 11:18:39

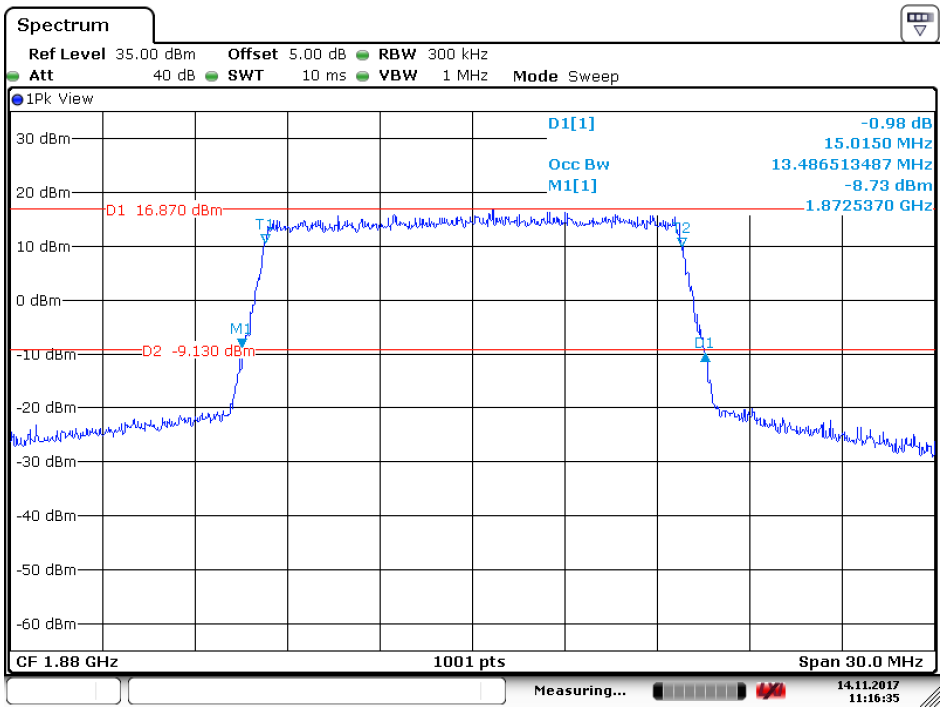
4.1.1.14 Test Mode = LTE/TM2 15MHz

4.1.1.14.1 Test Channel = LCH



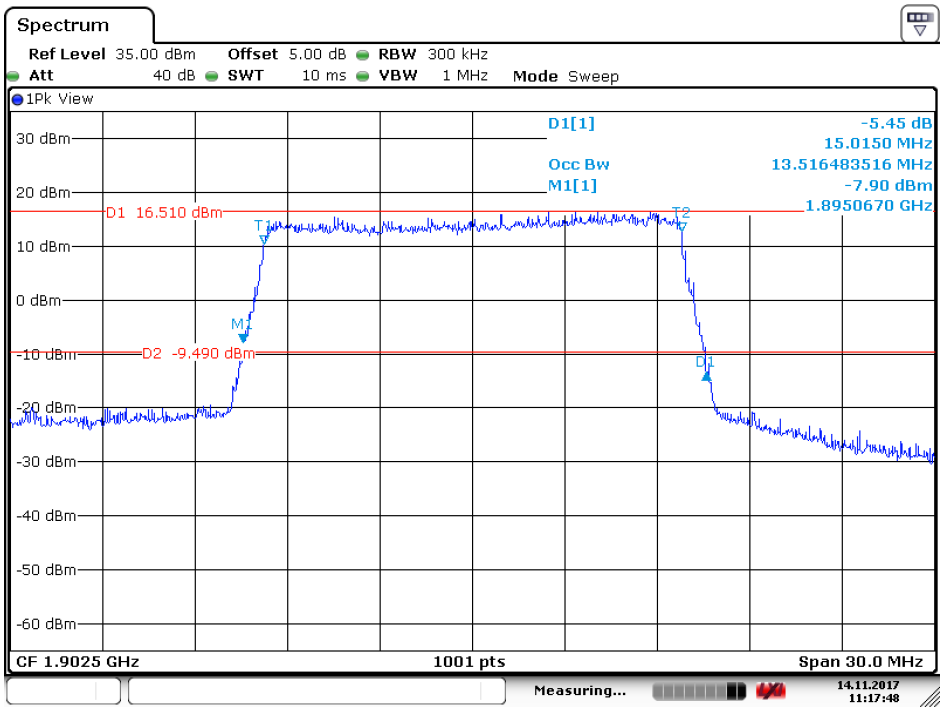
Date: 14.NOV.2017 11:10:07

4.1.1.14.2 Test Channel = MCH



Date: 14.NOV.2017 11:16:36

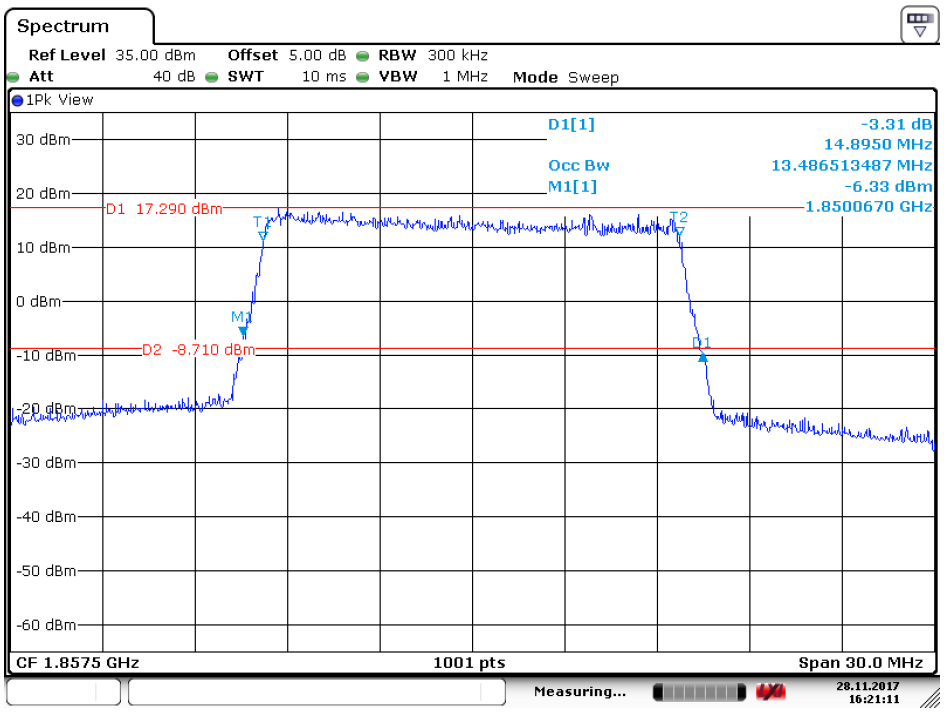
4.1.1.14.3 Test Channel = HCH



Date: 14.NOV.2017 11:17:49

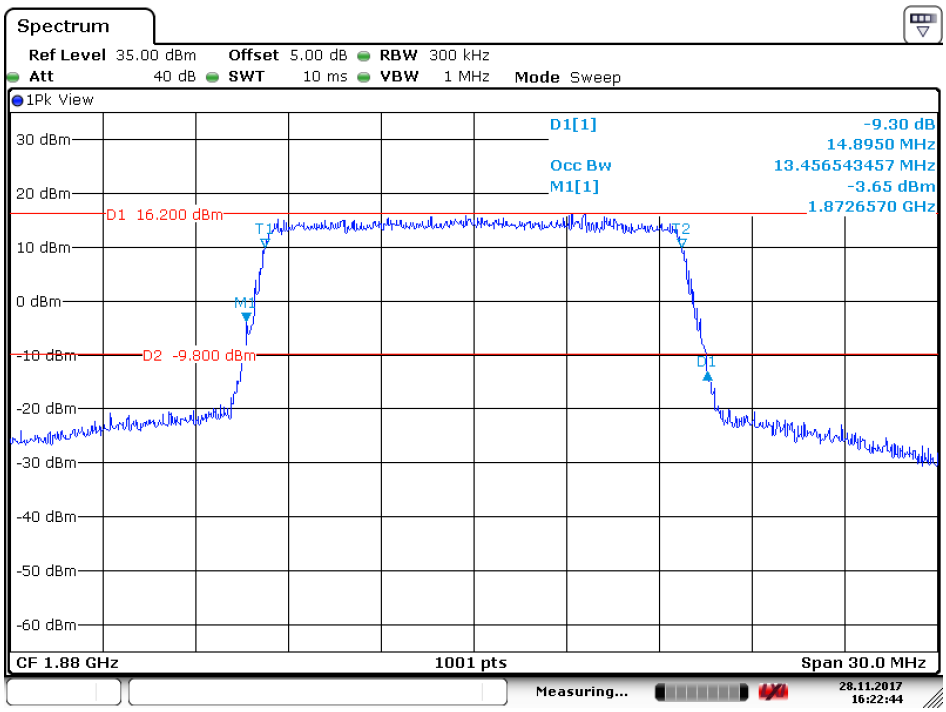
4.1.1.15 Test Mode = LTE/TM3 15MHz

4.1.1.15.1 Test Channel = LCH



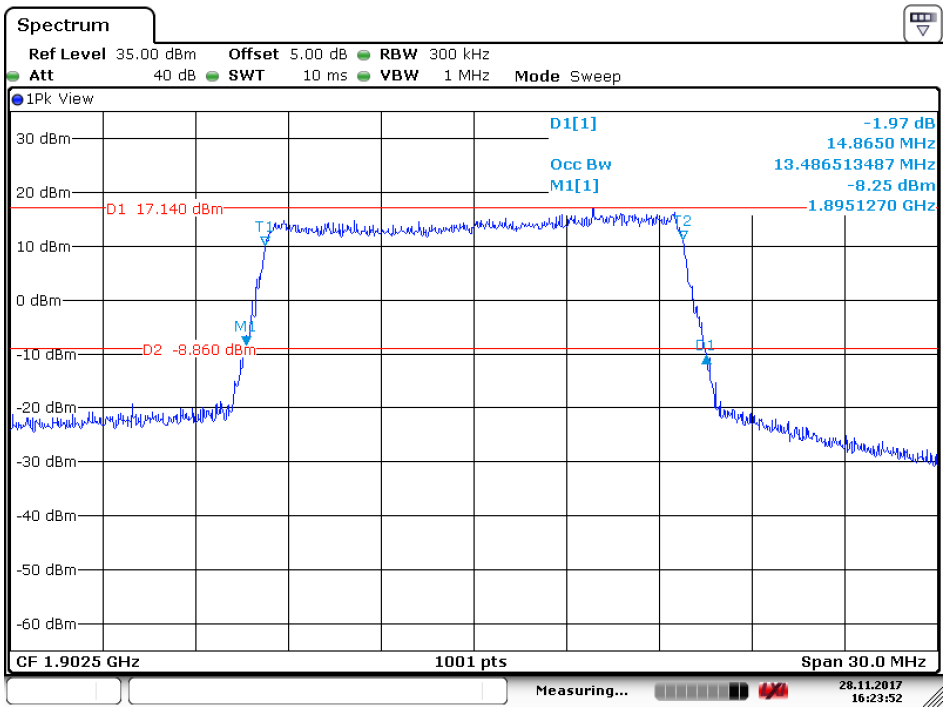
Date: 28.NOV.2017 16:21:11

4.1.1.15.2 Test Channel = MCH



Date: 28.NOV.2017 16:22:45

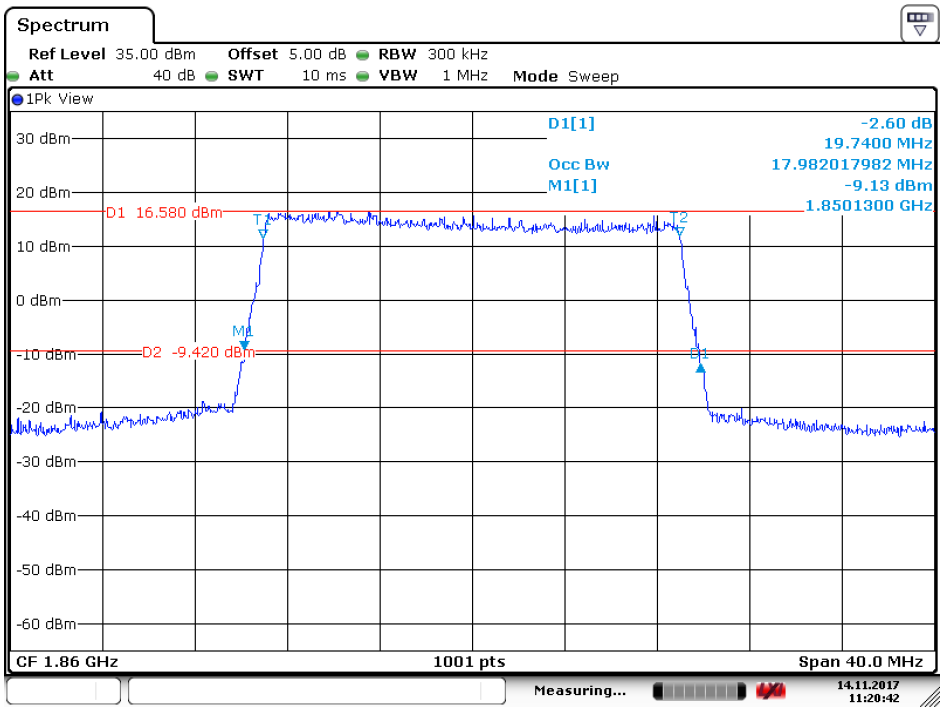
4.1.1.15.3 Test Channel = HCH



Date: 28.NOV.2017 16:23:53

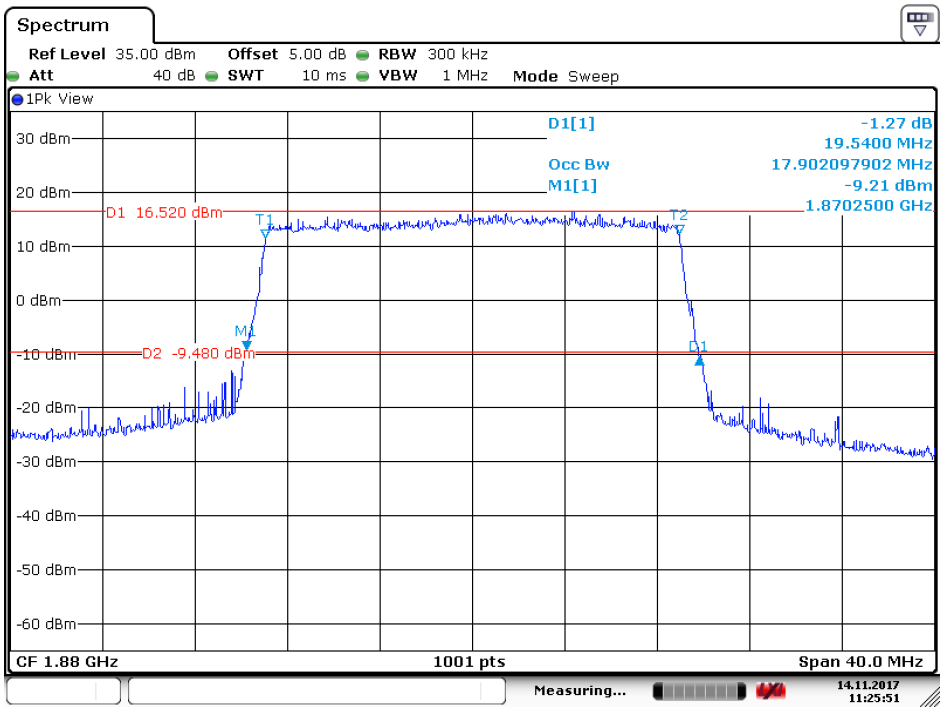
4.1.1.16 Test Mode = LTE/TM1 20MHz

4.1.1.16.1 Test Channel = LCH



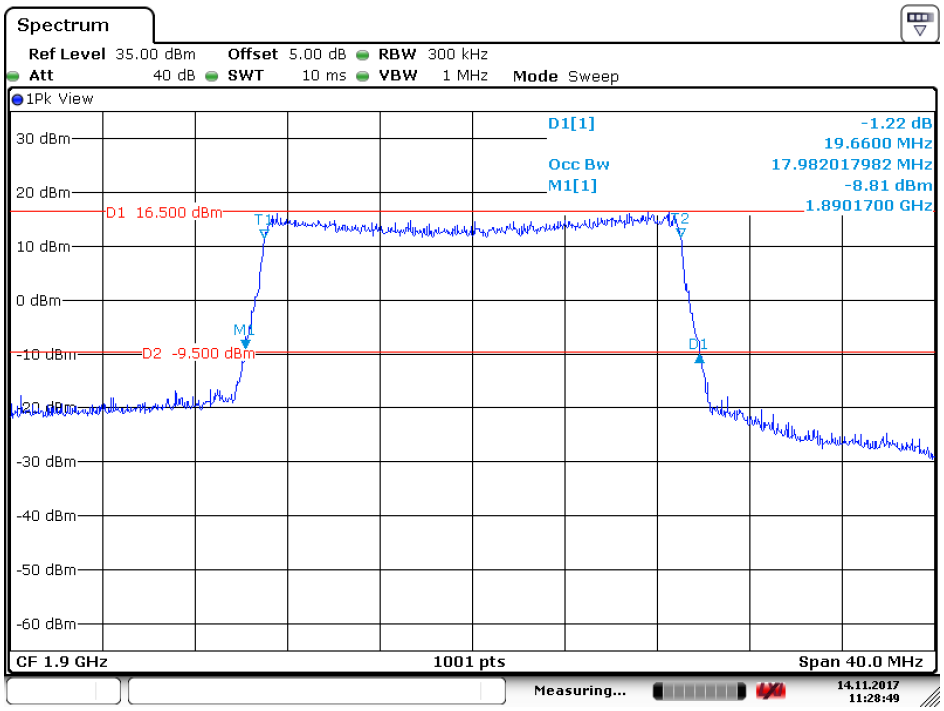
Date: 14.NOV.2017 11:20:42

4.1.1.16.2 Test Channel = MCH



Date: 14.NOV.2017 11:25:52

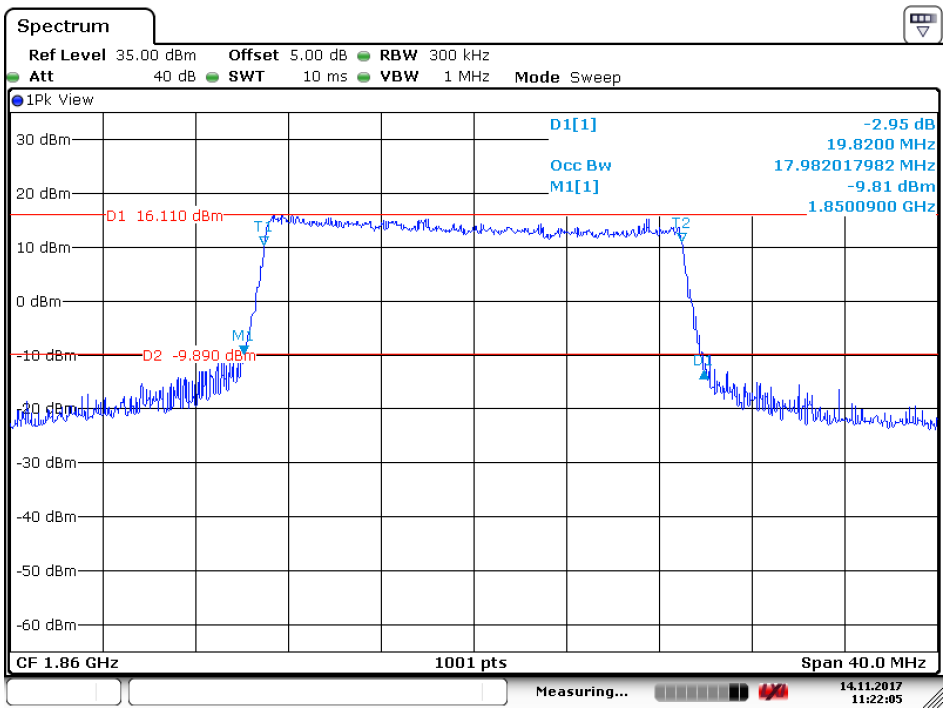
4.1.1.16.3 Test Channel = HCH



Date: 14.NOV.2017 11:28:50

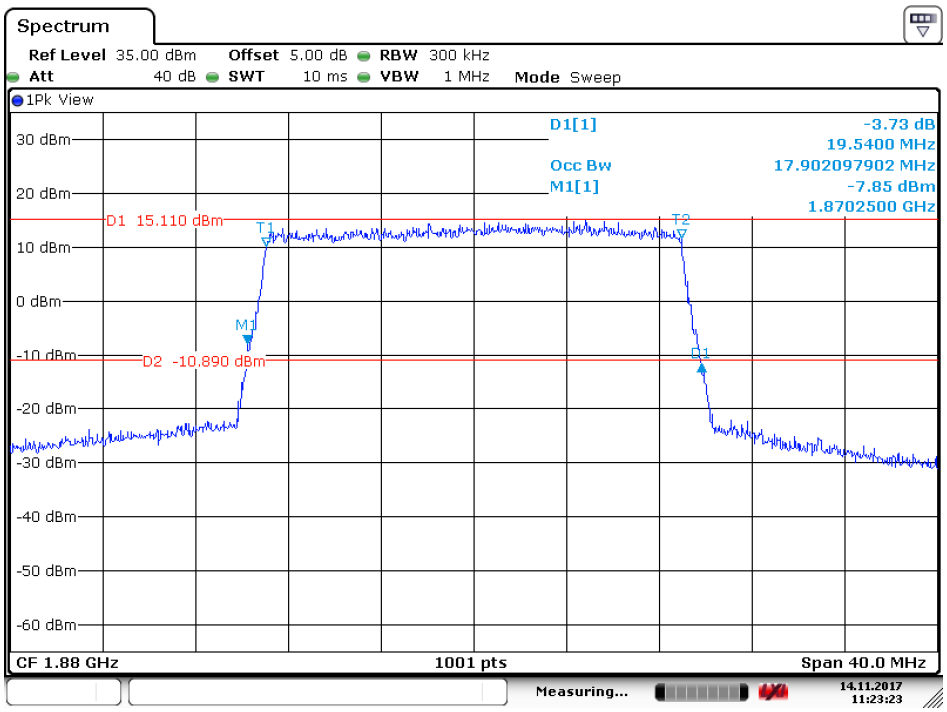
4.1.1.17 Test Mode = LTE/TM2 20MHz

4.1.1.17.1 Test Channel = LCH



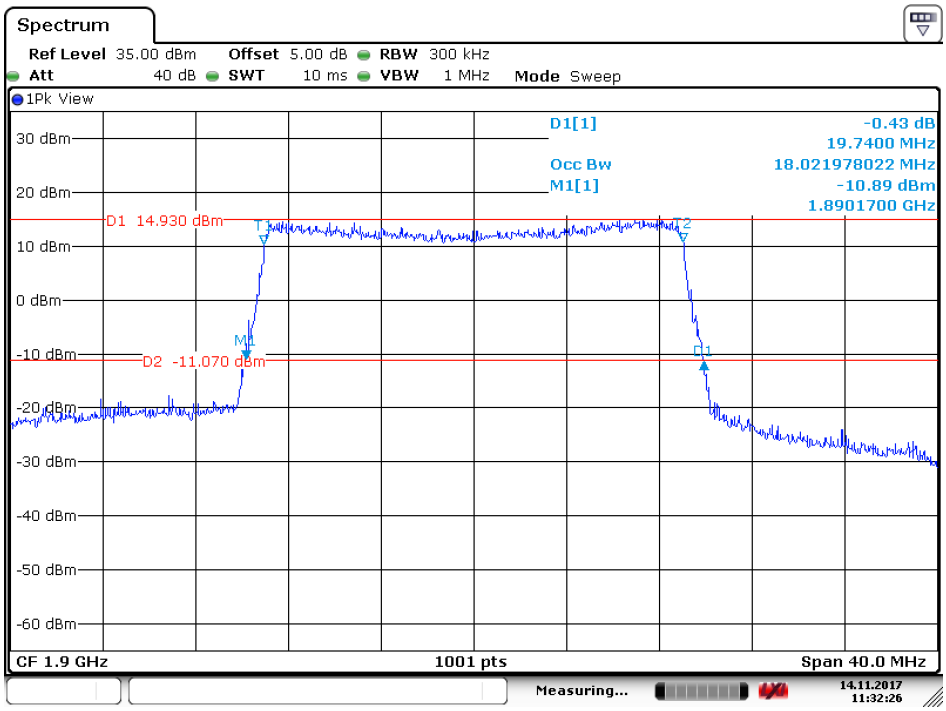
Date: 14.NOV.2017 11:22:05

4.1.1.17.2 Test Channel = MCH



Date: 14.NOV.2017 11:23:23

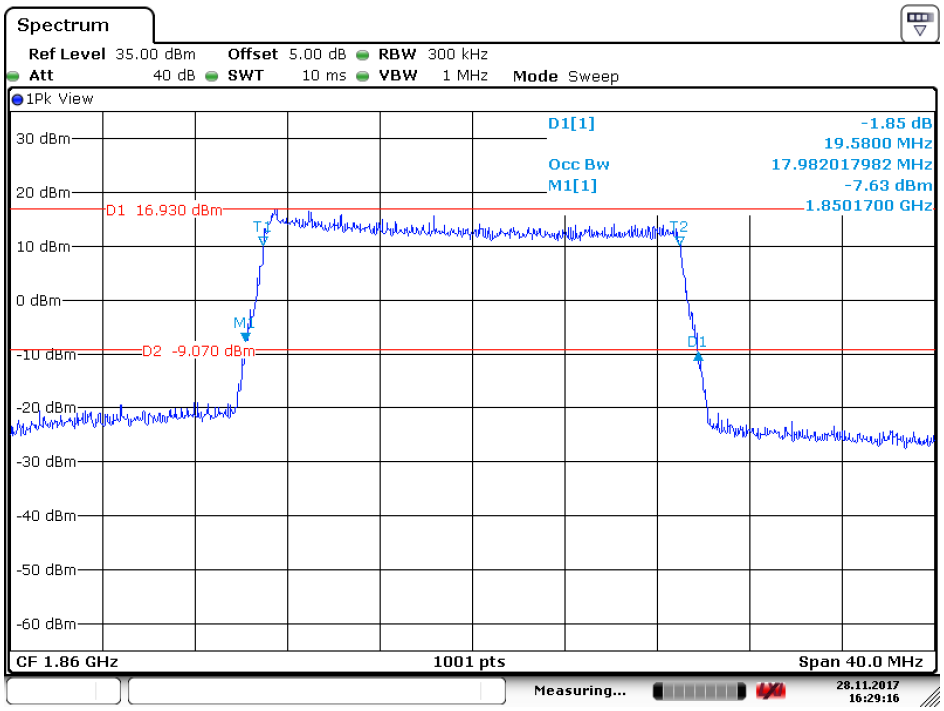
4.1.1.17.3 Test Channel = HCH



Date: 14.NOV.2017 11:32:27

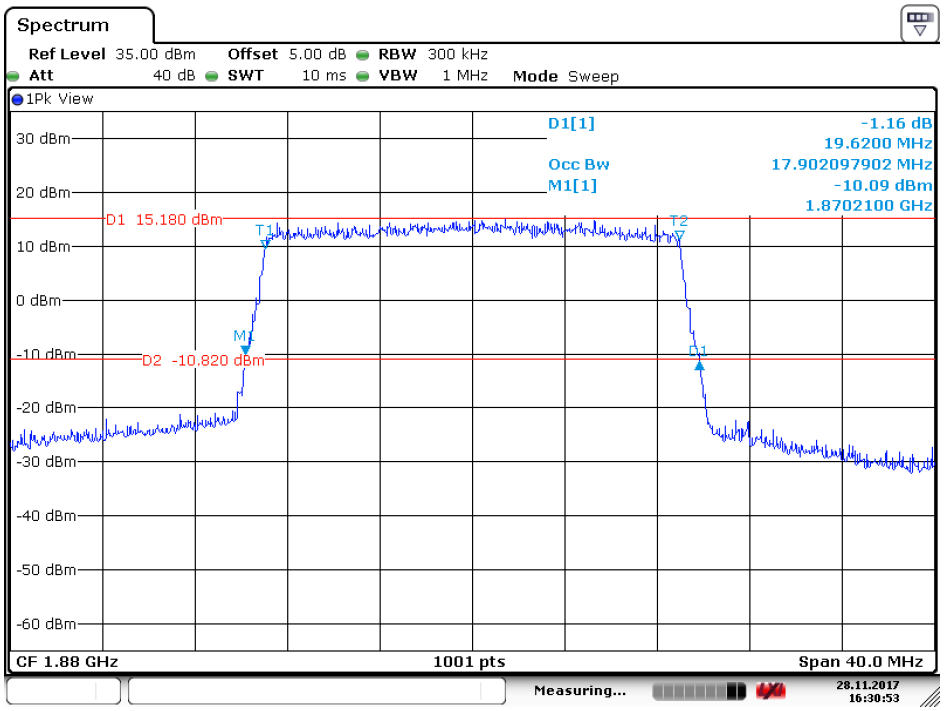
4.1.1.18 Test Mode = LTE/TM3 20MHz

4.1.1.18.1 Test Channel = LCH



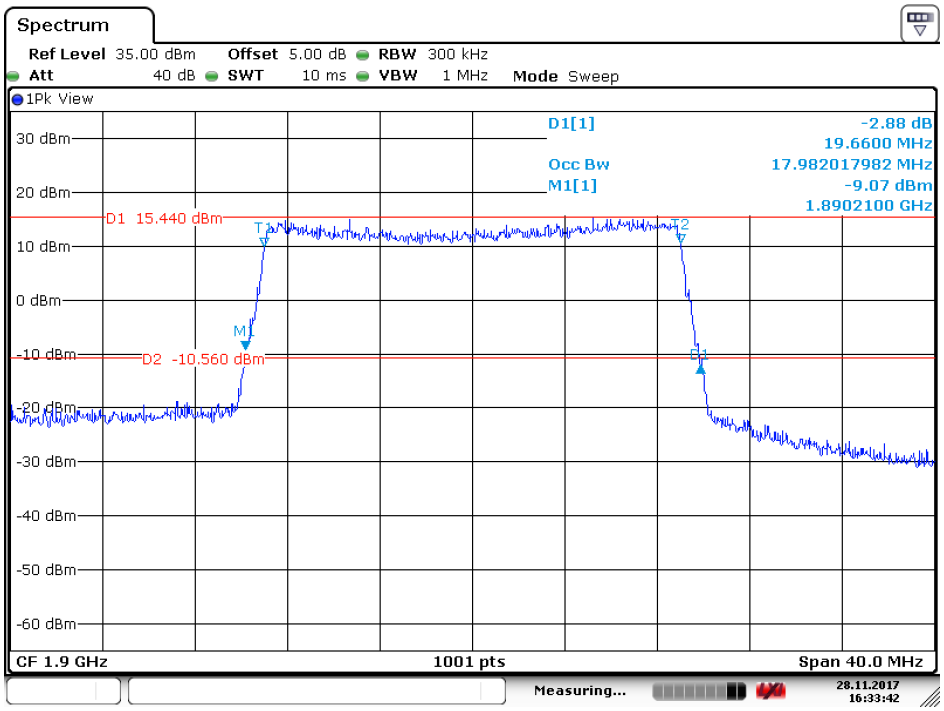
Date: 28.NOV.2017 16:29:17

4.1.1.18.2 Test Channel = MCH



Date: 28.NOV.2017 16:30:53

4.1.1.18.3 Test Channel = HCH



Date: 28.NOV.2017 16:33:43

5 Band Edges Compliance

Part I –

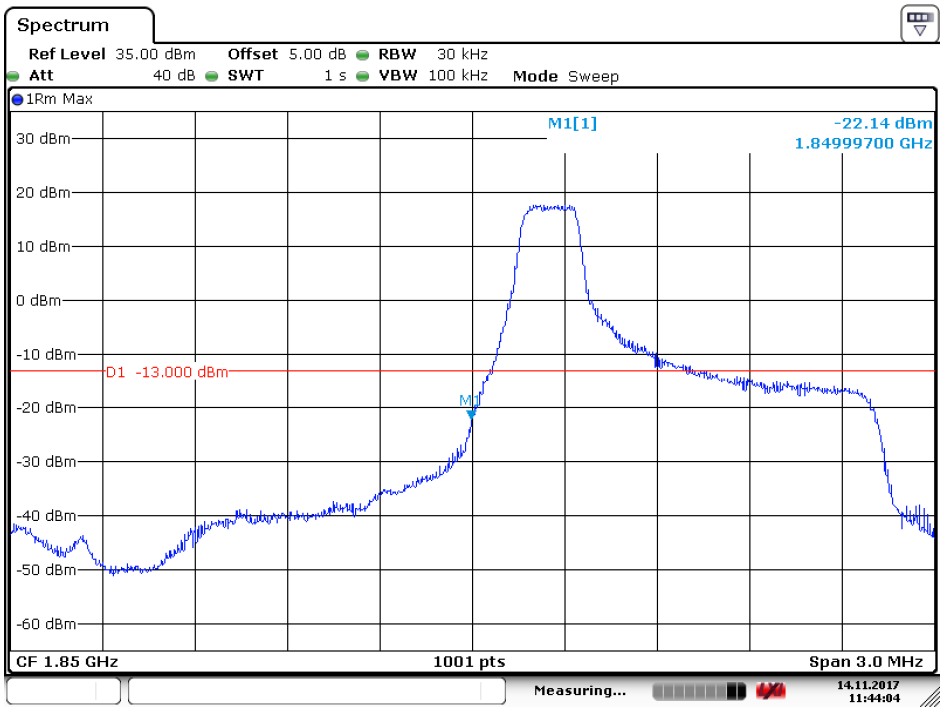
5.1 For LTE

5.1.1 Test Band = LTE band2

5.1.1.1 Test Mode = LTE/TM1 1.4MHz

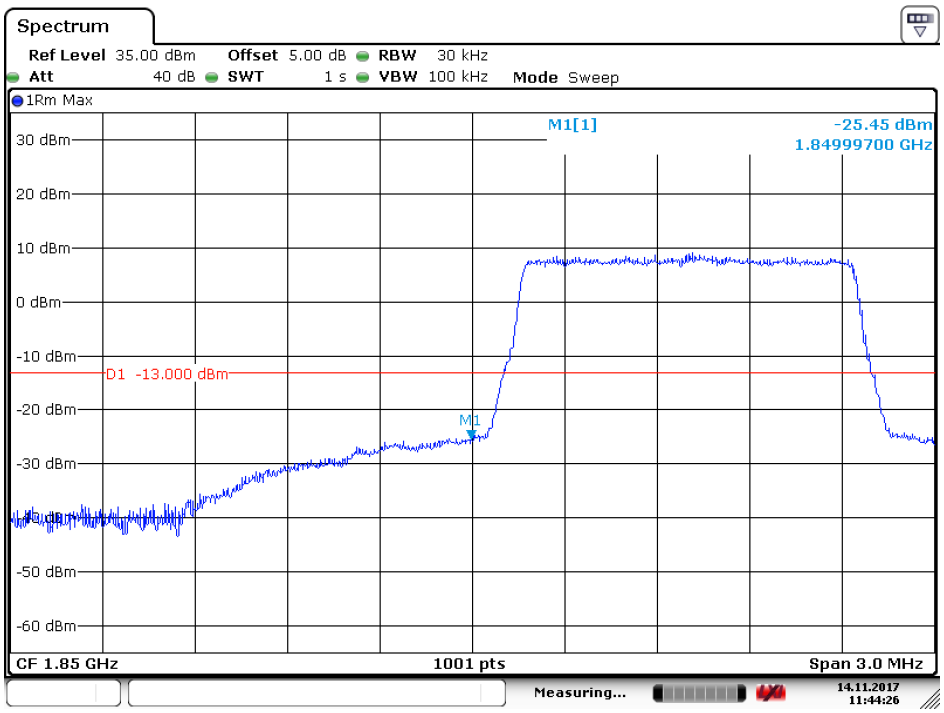
5.1.1.1.1 Test Channel = LCH

5.1.1.1.1.1 Test RB=1RB



Date: 14.NOV.2017 11:44:05

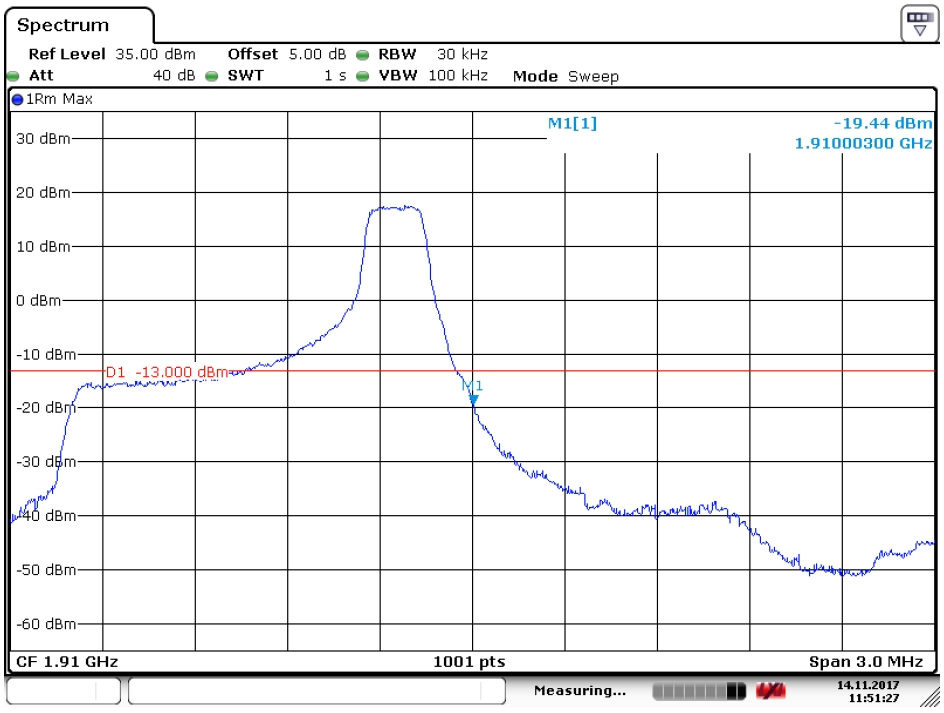
5.1.1.1.1.2 Test RB=6RB



Date: 14.NOV.2017 11:44:27

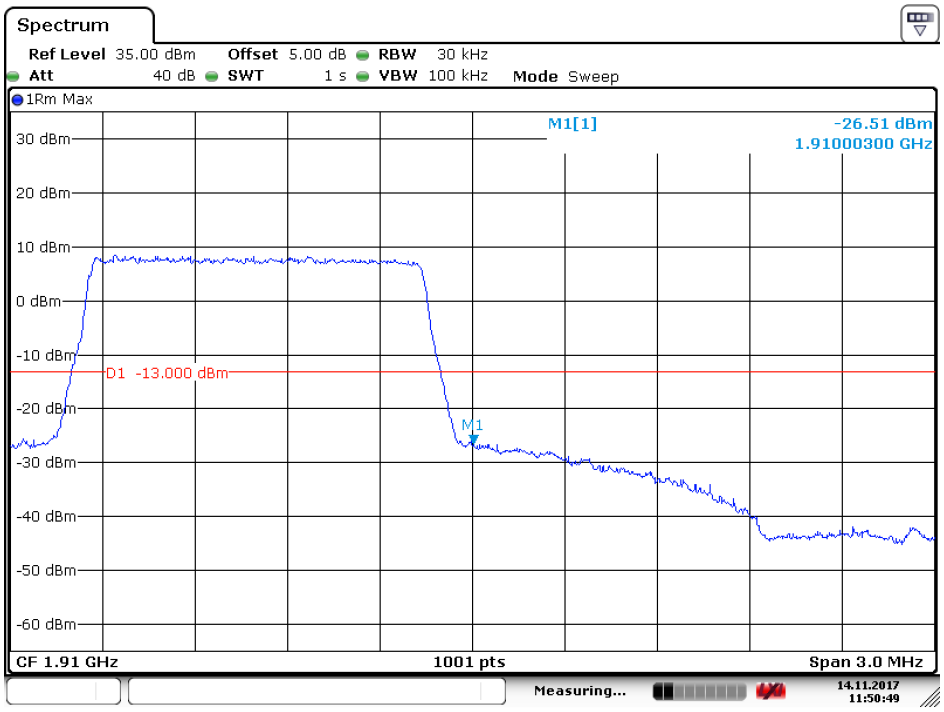
5.1.1.1.2 Test Channel = HCH

5.1.1.1.2.1 Test RB=1RB



Date: 14.NOV.2017 11:51:27

5.1.1.1.2.2 Test RB=6RB

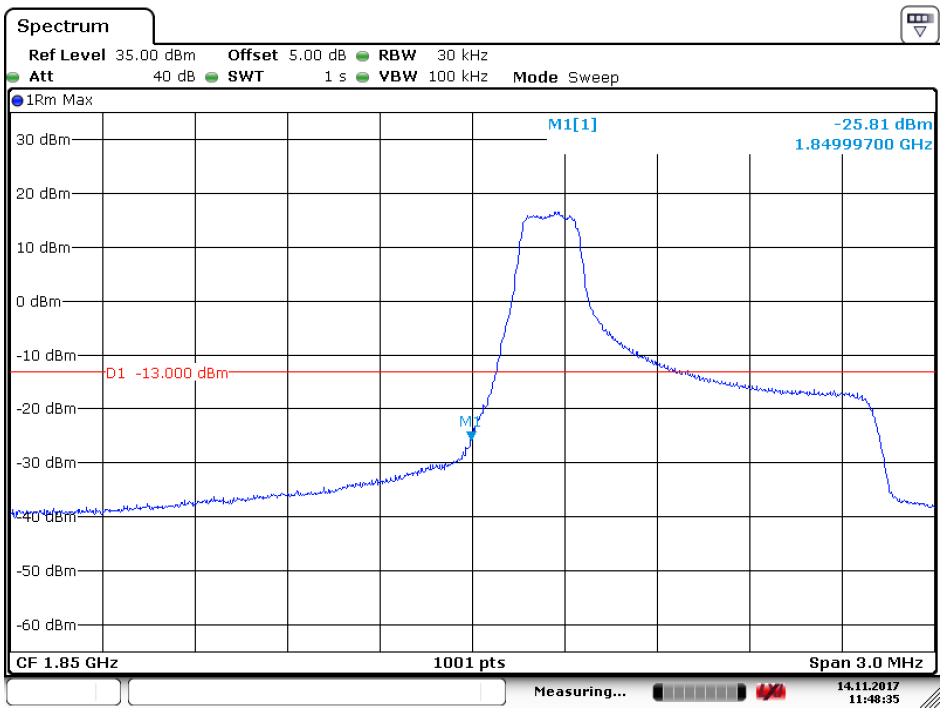


Date: 14.NOV.2017 11:50:49

5.1.1.2 Test Mode = LTE/TM2 1.4MHz

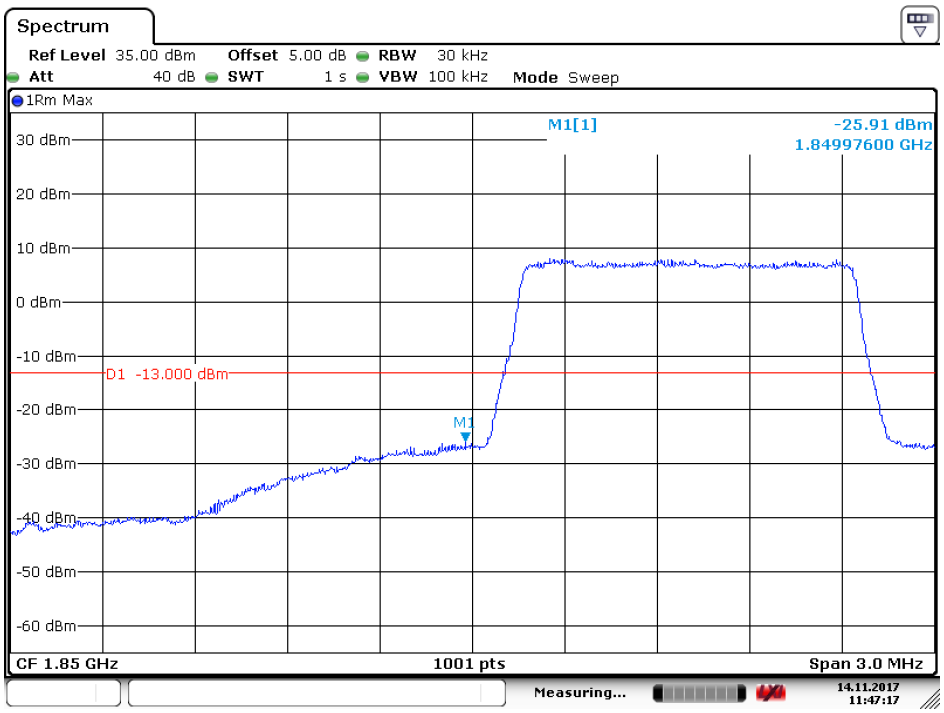
5.1.1.2.1 Test Channel = LCH

5.1.1.2.1.1 Test RB=1RB



Date: 14.NOV.2017 11:48:36

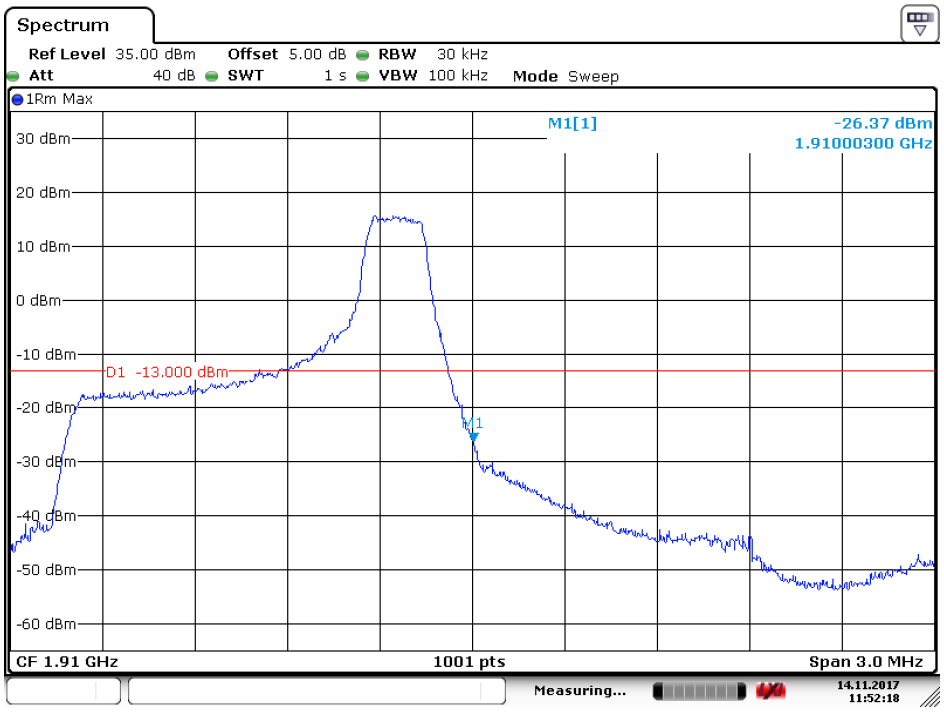
5.1.1.2.1.2 Test RB=6RB



Date: 14.NOV.2017 11:47:17

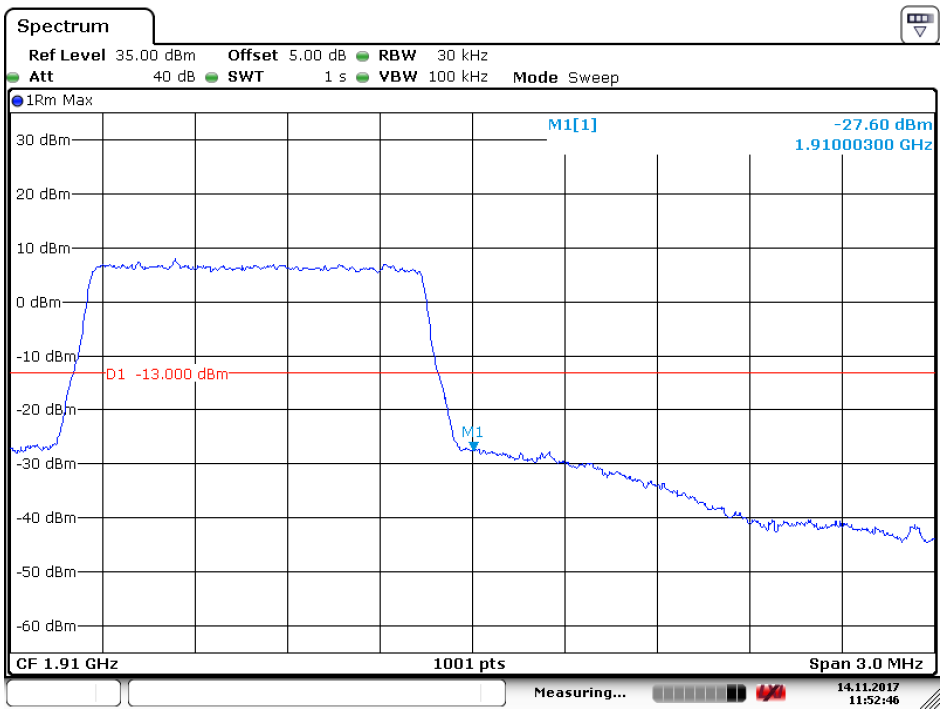
5.1.1.2.2 Test Channel = HCH

5.1.1.2.2.1 Test RB=1RB



Date: 14.NOV.2017 11:52:18

5.1.1.2.2.2 Test RB=6RB

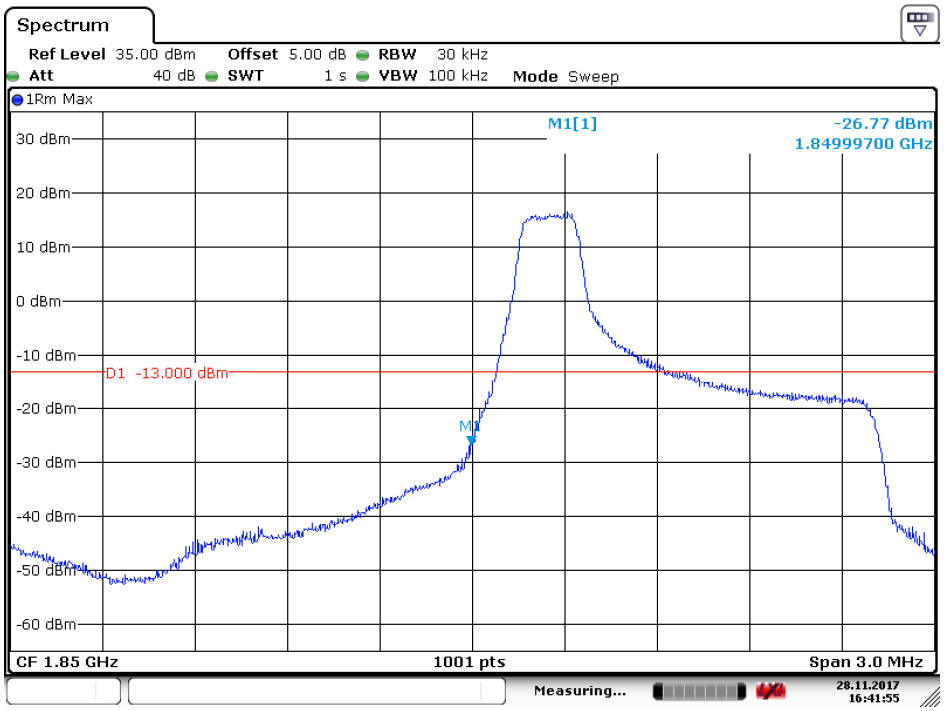


Date: 14.NOV.2017 11:52:47

5.1.1.3 Test Mode = LTE/TM3 1.4MHz

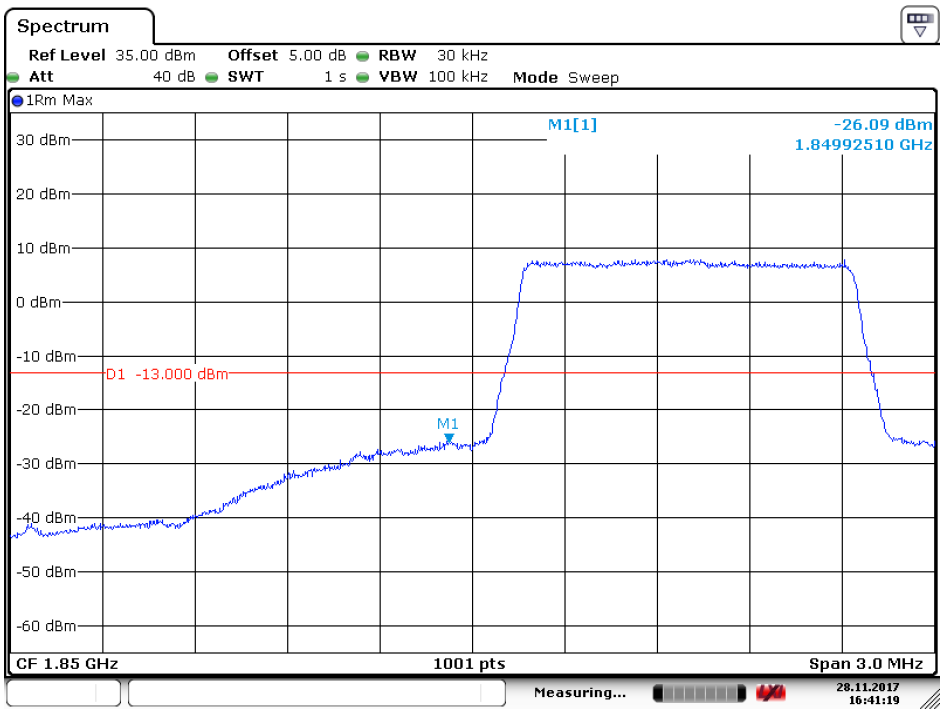
5.1.1.3.1 Test Channel = LCH

5.1.1.3.1.1 Test RB=1RB



Date: 28.NOV.2017 16:41:56

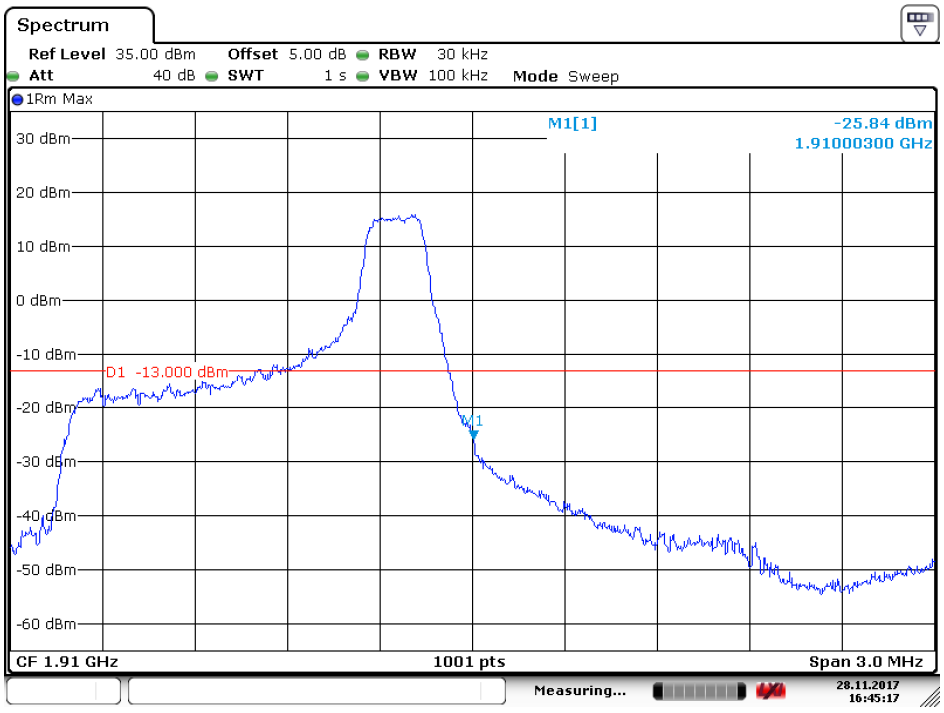
5.1.1.3.1.2 Test RB=6RB



Date: 28.NOV.2017 16:41:19

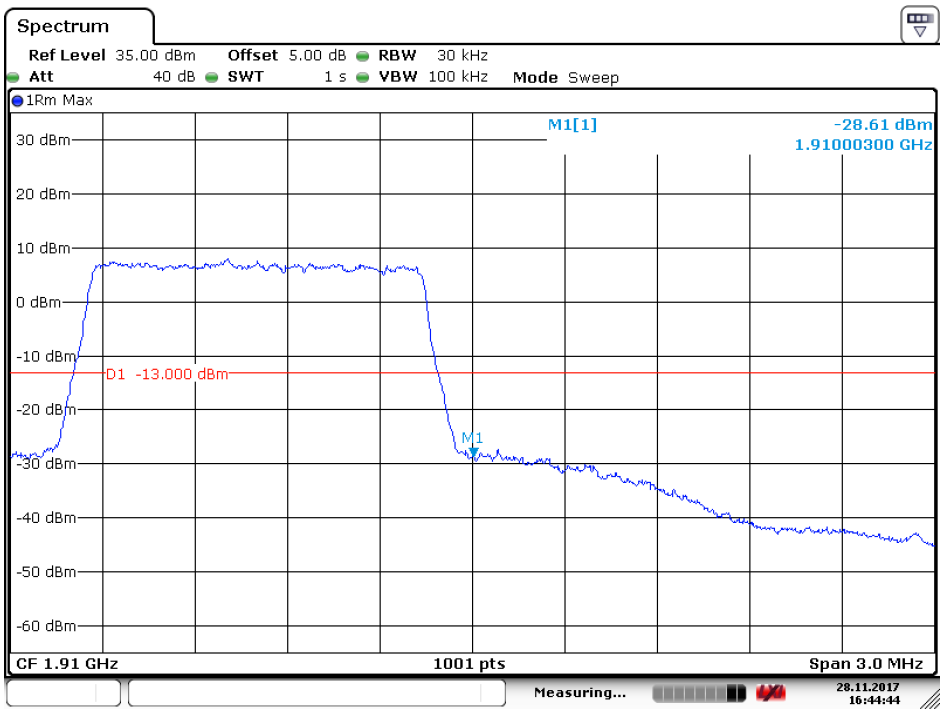
5.1.1.3.2 Test Channel = HCH

5.1.1.3.2.1 Test RB=1RB



Date: 28.NOV.2017 16:45:17

5.1.1.3.2.2 Test RB=6RB

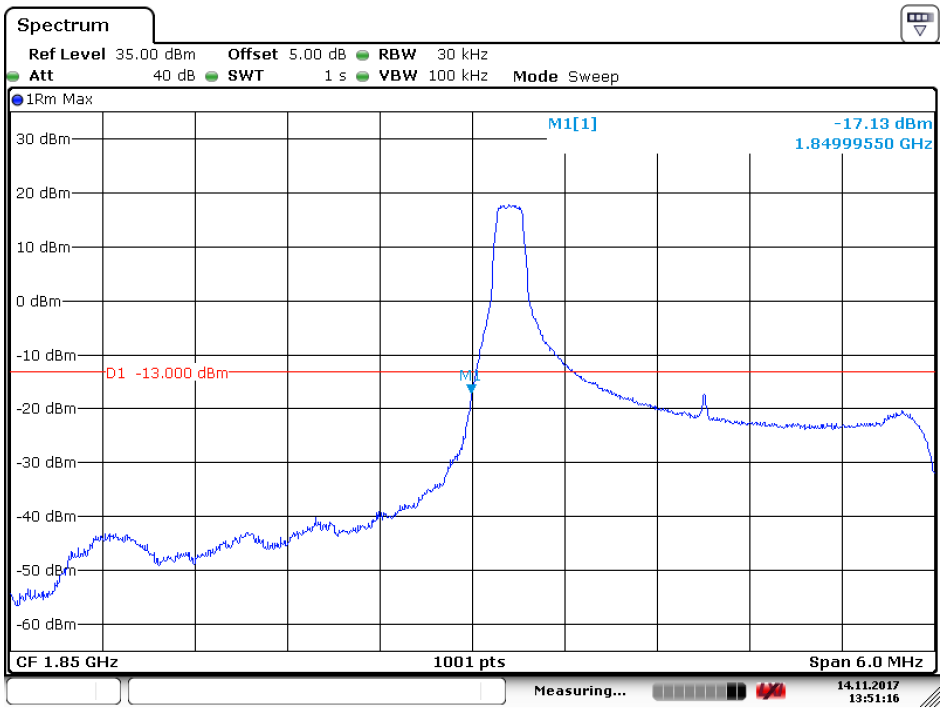


Date: 28.NOV.2017 16:44:45

5.1.1.4 Test Mode = LTE/TM1 3MHz

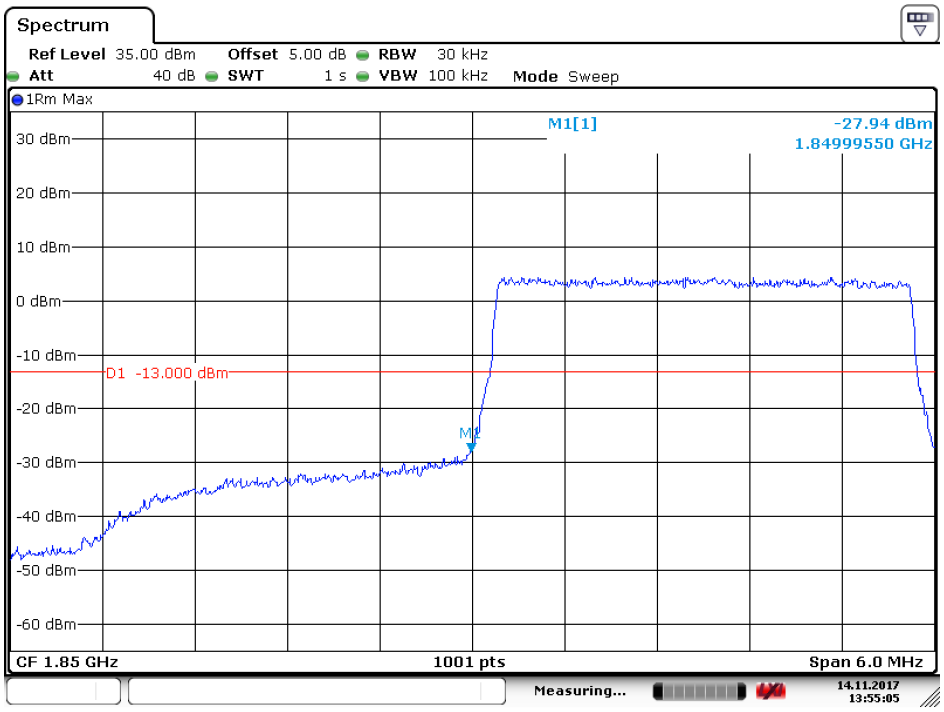
5.1.1.4.1 Test Channel = LCH

5.1.1.4.1.1 Test RB=1RB



Date: 14.NOV.2017 13:51:16

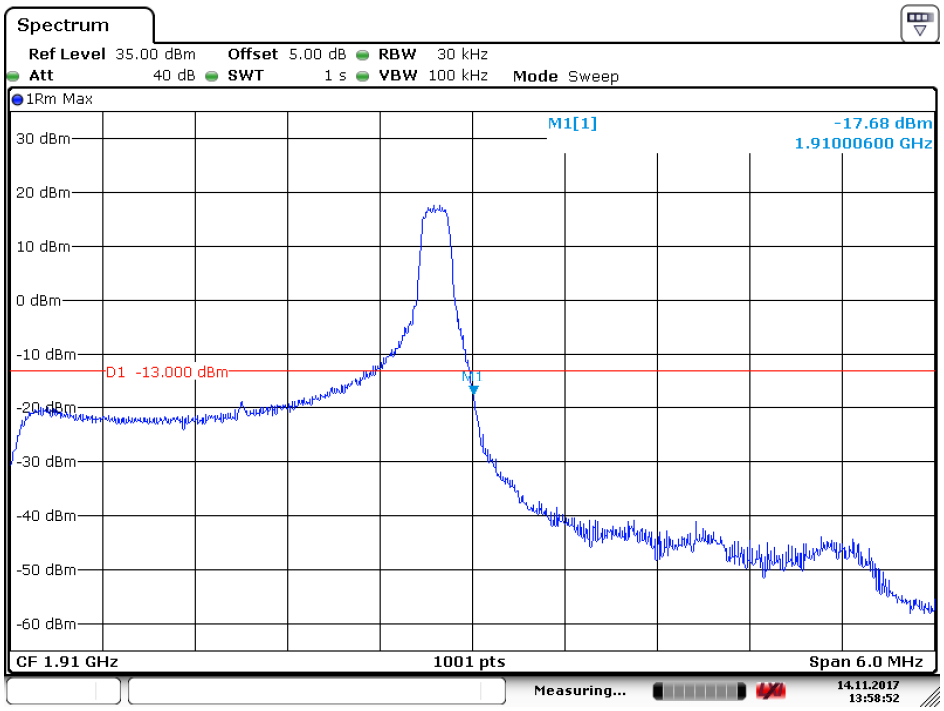
5.1.1.4.1.2 Test RB=15RB



Date: 14.NOV.2017 13:55:05

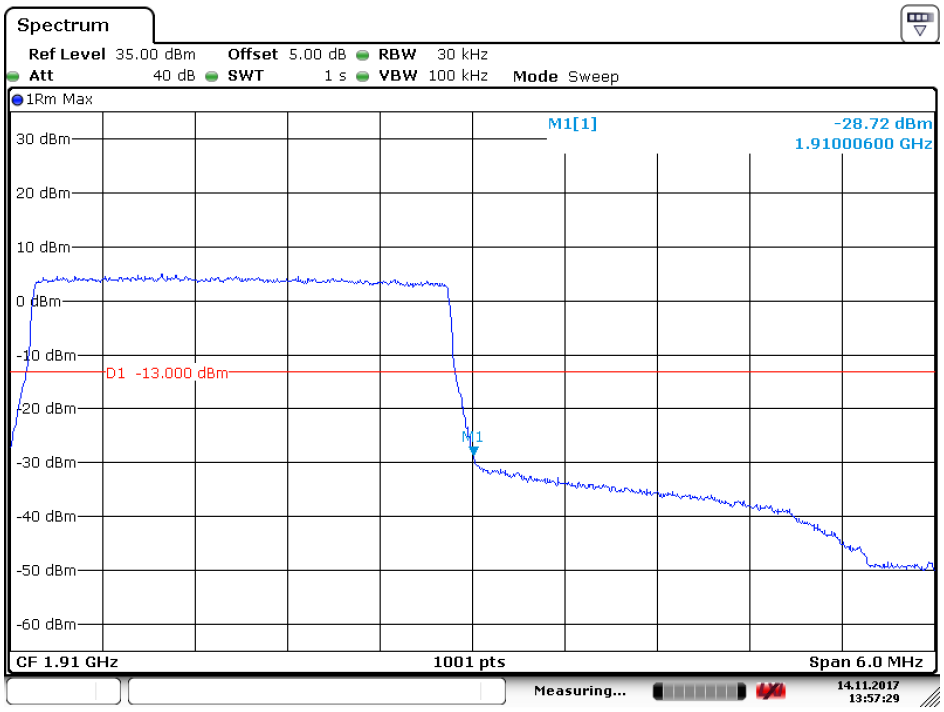
5.1.1.4.2 Test Channel = HCH

5.1.1.4.2.1 Test RB=1RB



Date: 14.NOV.2017 13:58:52

5.1.1.4.2.2 Test RB=15RB

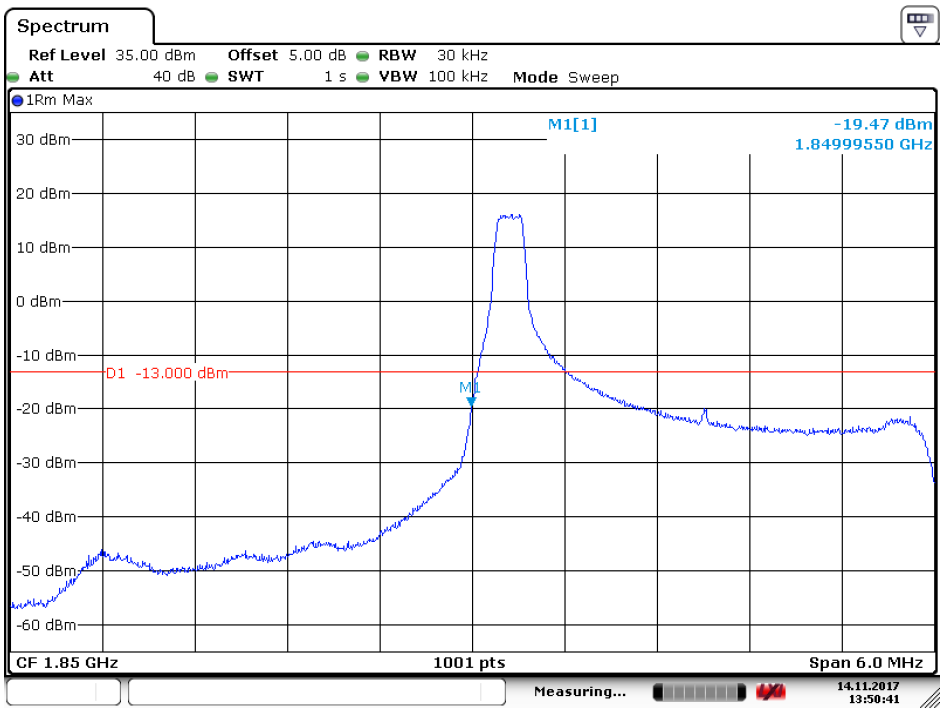


Date: 14.NOV.2017 13:57:29

5.1.1.5 Test Mode = LTE/TM2 3MHz

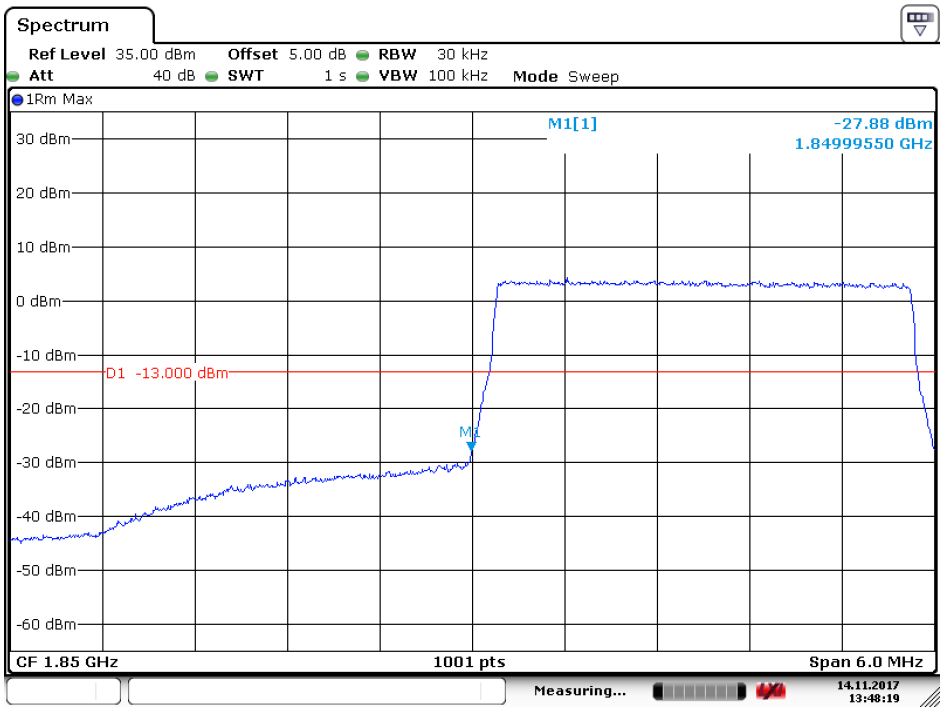
5.1.1.5.1 Test Channel = LCH

5.1.1.5.1.1 Test RB=1RB



Date: 14.NOV.2017 13:50:41

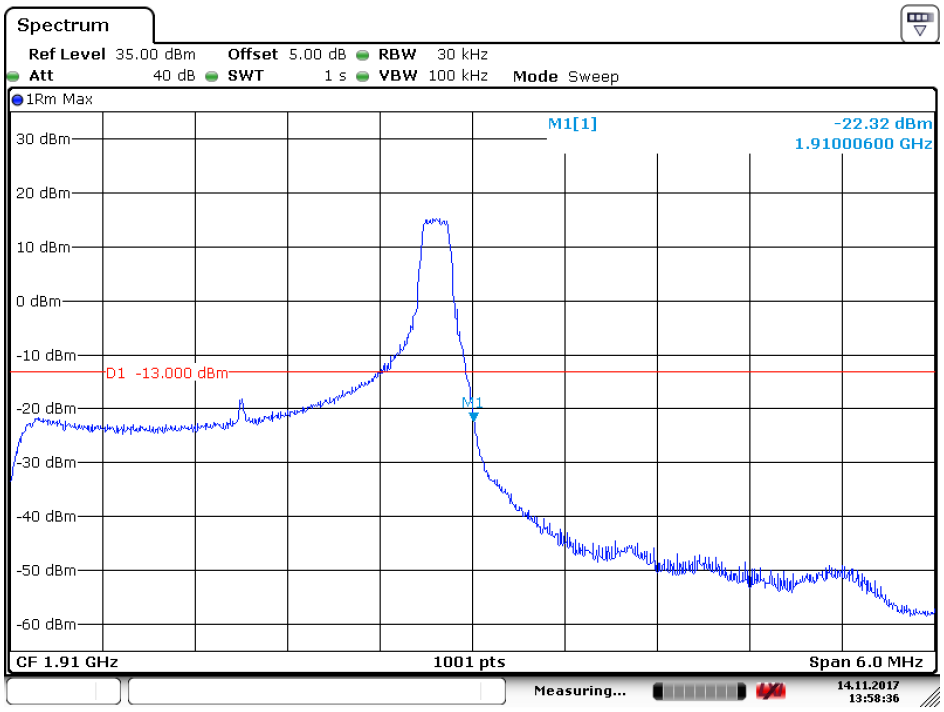
5.1.1.5.1.2 Test RB=15RB



Date: 14.NOV.2017 13:48:19

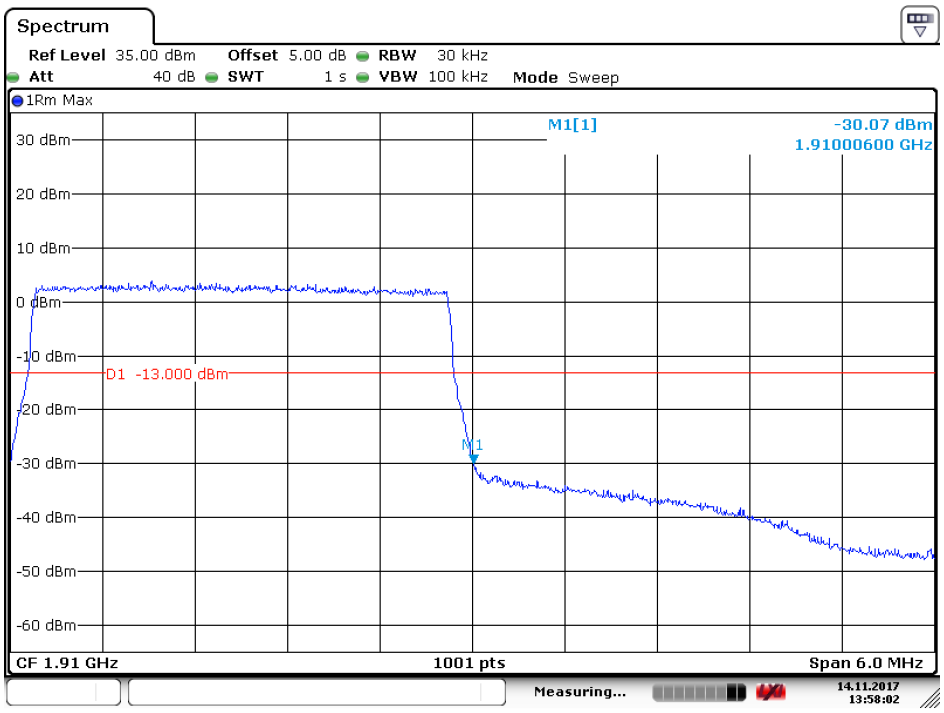
5.1.1.5.2 Test Channel = HCH

5.1.1.5.2.1 Test RB=1RB



Date: 14.NOV.2017 13:58:36

5.1.1.5.3 Test RB=15RB

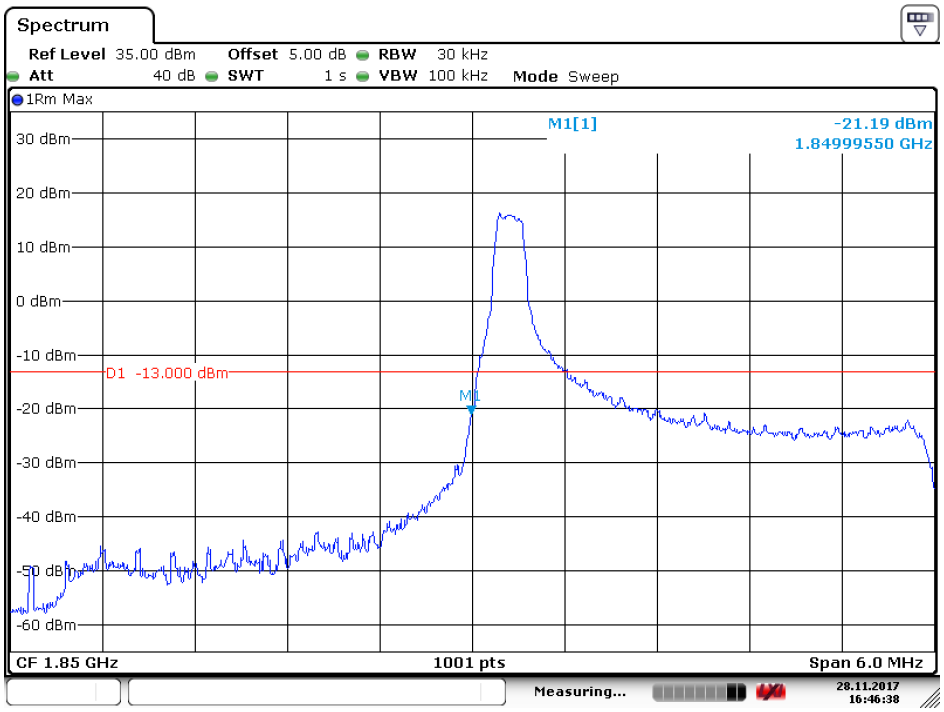


Date: 14.NOV.2017 13:58:02

5.1.1.6 Test Mode = LTE/TM3 3MHz

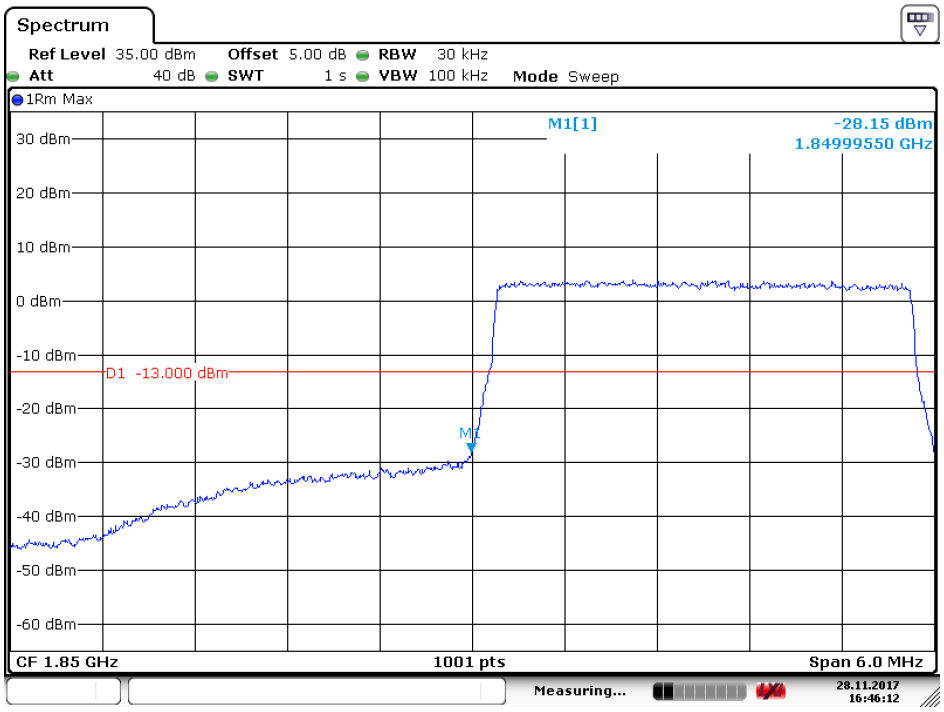
5.1.1.6.1 Test Channel = LCH

5.1.1.6.2 Test RB=1RB



Date: 28.NOV.2017 16:46:38

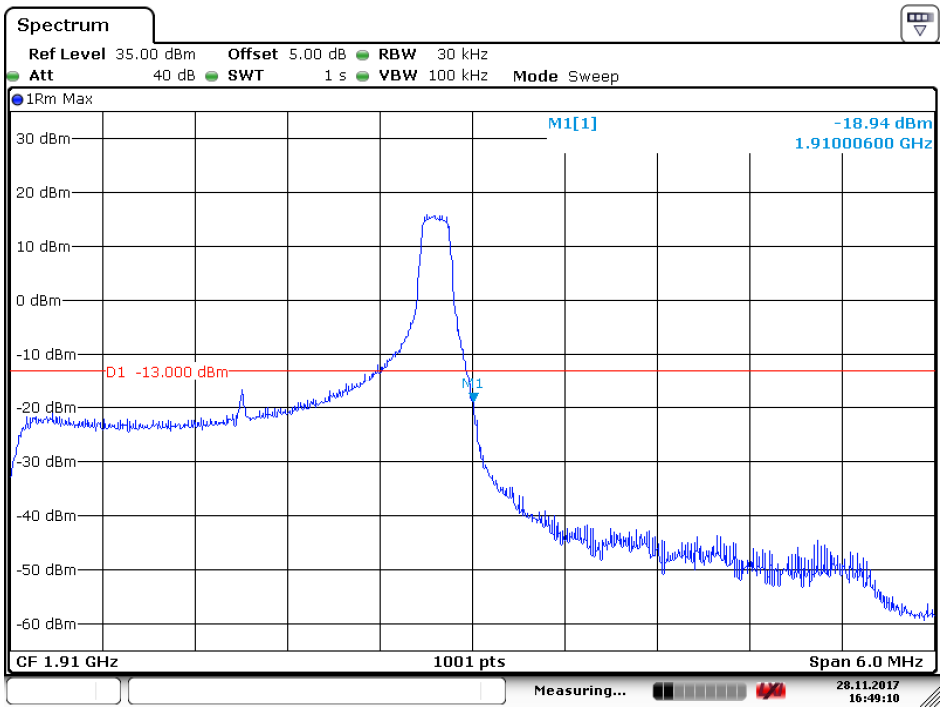
5.1.1.6.2.1 Test RB=15RB



Date: 28.NOV.2017 16:46:13

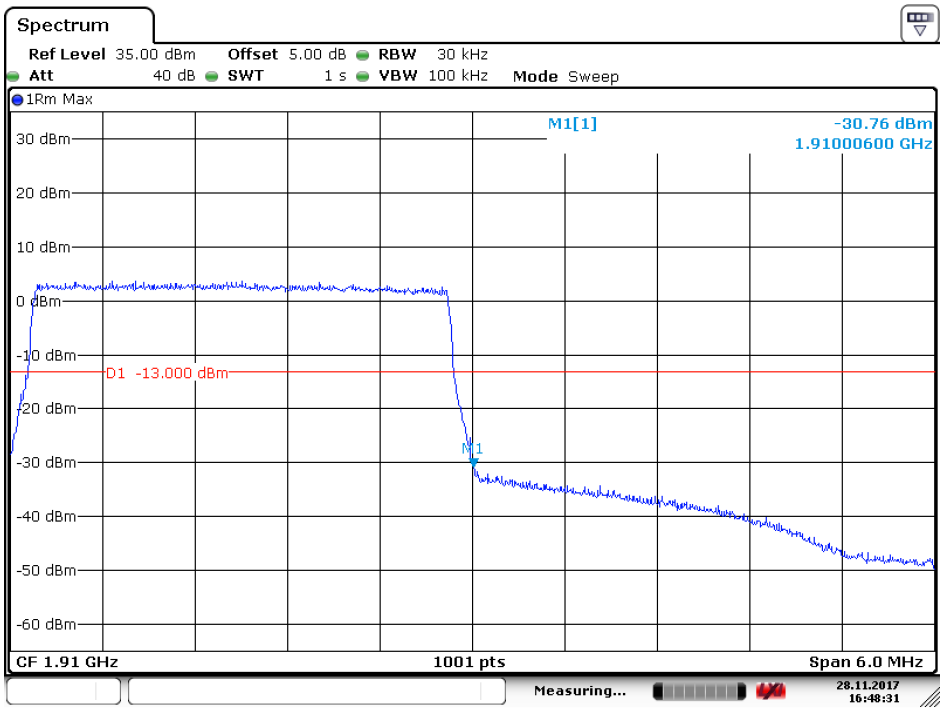
5.1.1.6.3 Test Channel = HCH

5.1.1.6.3.1 Test RB=1RB



Date: 28.NOV.2017 16:49:10

5.1.1.6.3.2 Test RB=15RB

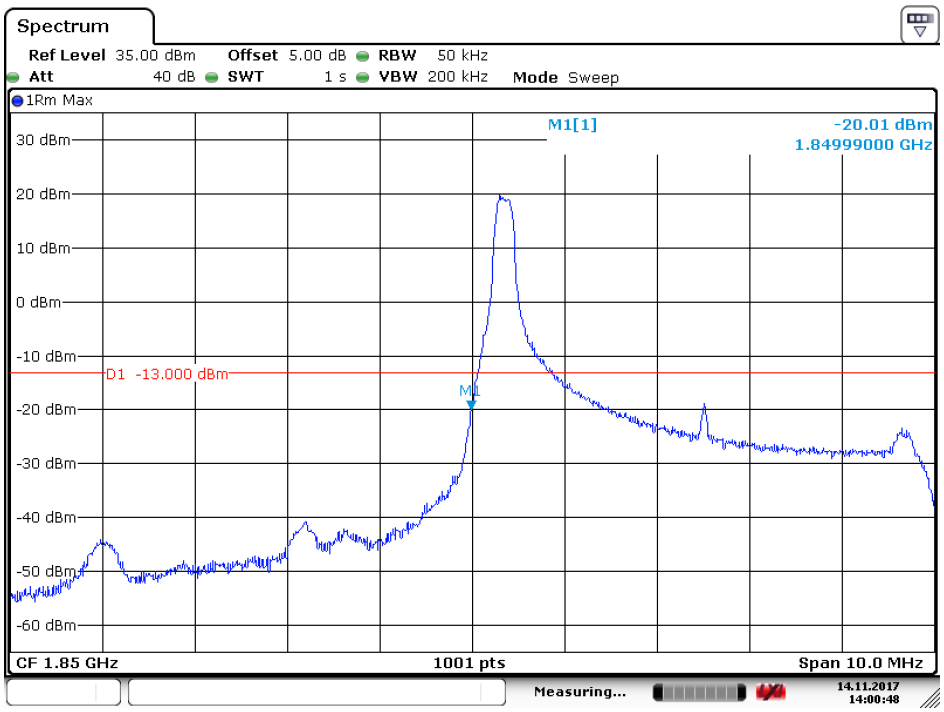


Date: 28.NOV.2017 16:48:31

5.1.1.7 Test Mode = LTE/TM1 5MHz

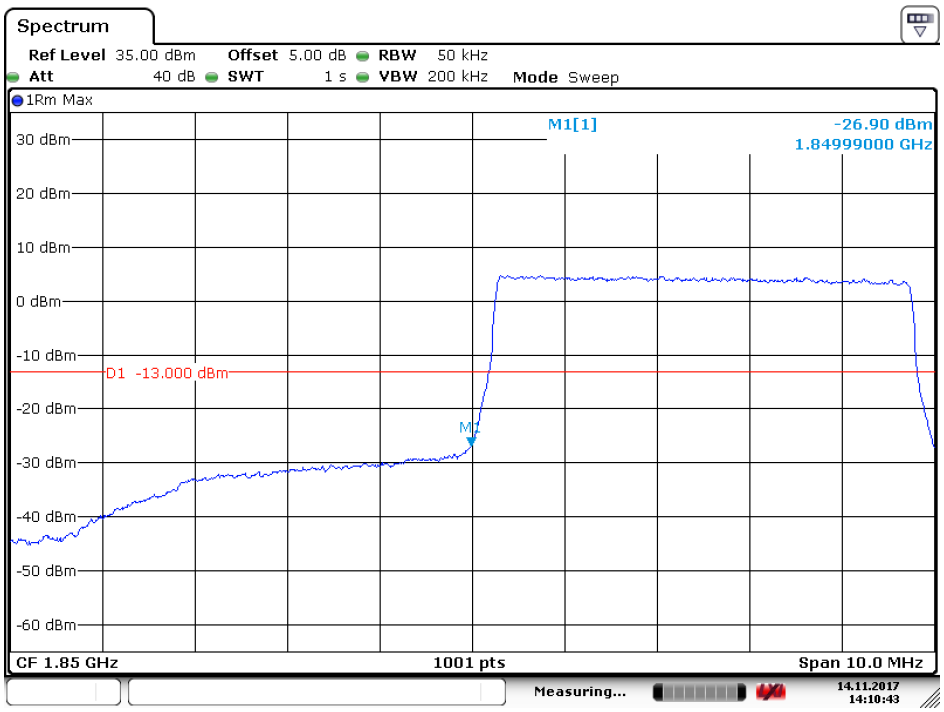
5.1.1.7.1 Test Channel = LCH

5.1.1.7.1.1 Test RB=1RB



Date: 14.NOV.2017 14:00:48

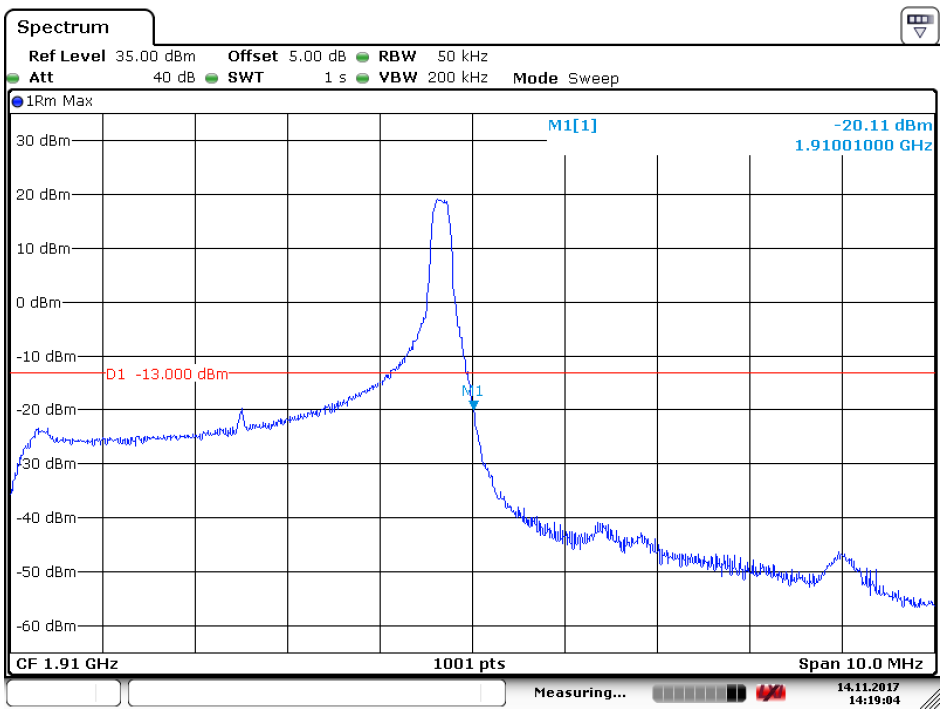
5.1.1.7.1.2 Test RB=25RB



Date: 14.NOV.2017 14:10:43

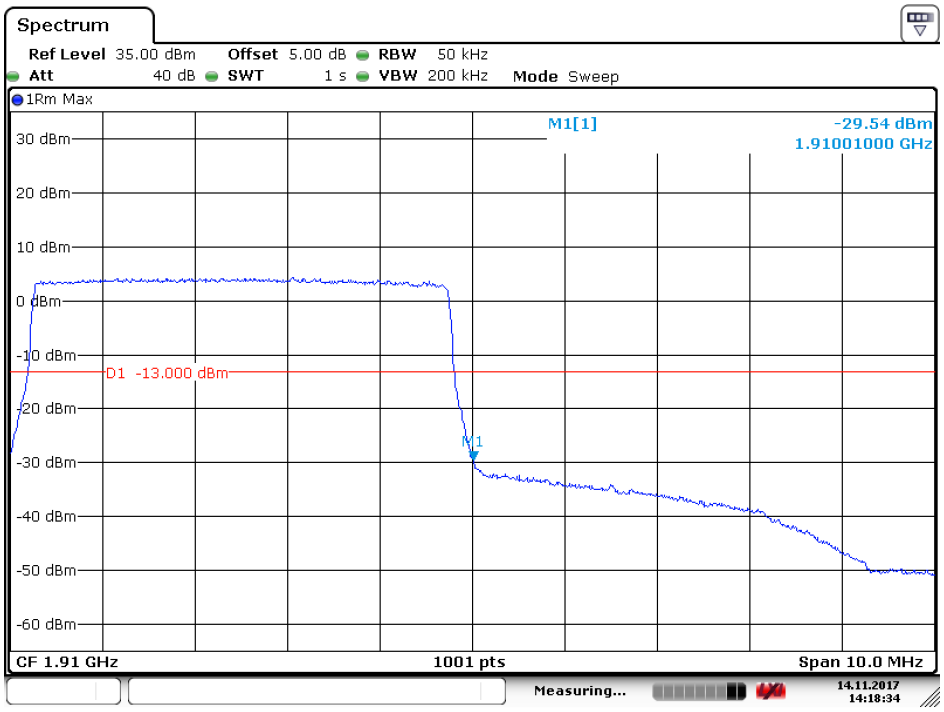
5.1.1.7.2 Test Channel = HCH

5.1.1.7.2.1 Test RB=1RB



Date: 14.NOV.2017 14:19:04

5.1.1.7.2.2 Test RB=25RB

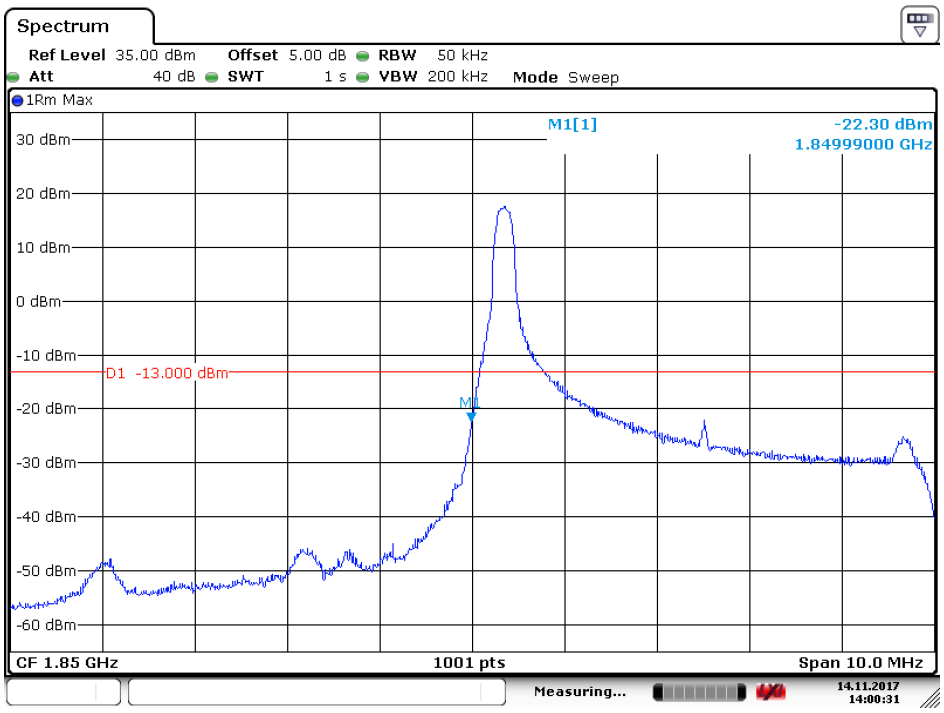


Date: 14.NOV.2017 14:18:34

5.1.1.8 Test Mode = LTE/TM2 5MHz

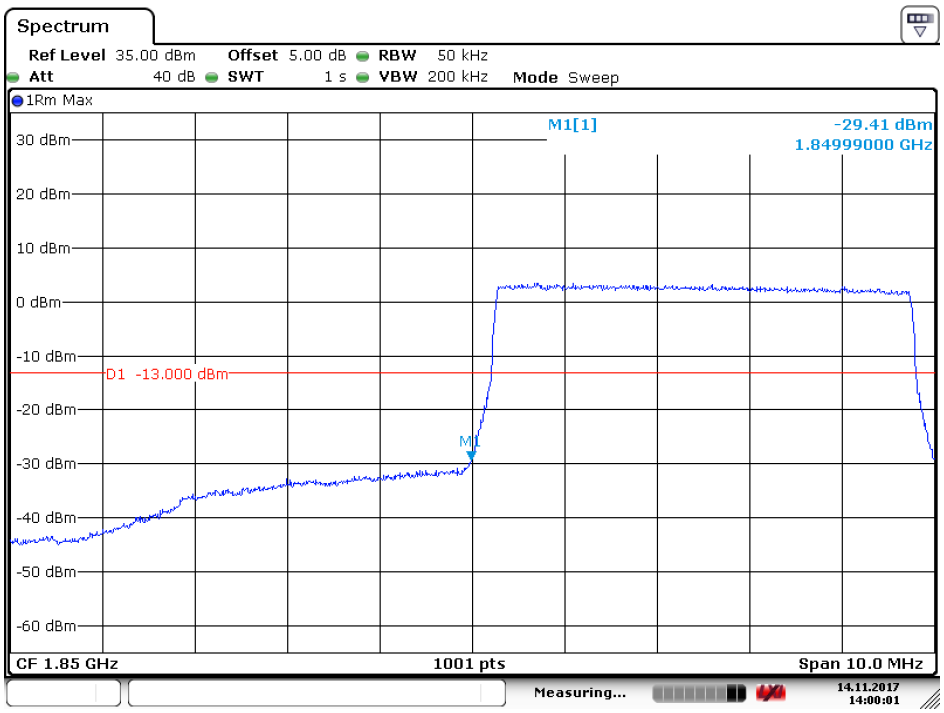
5.1.1.8.1 Test Channel = LCH

5.1.1.8.1.1 Test RB=1RB



Date: 14.NOV.2017 14:00:32

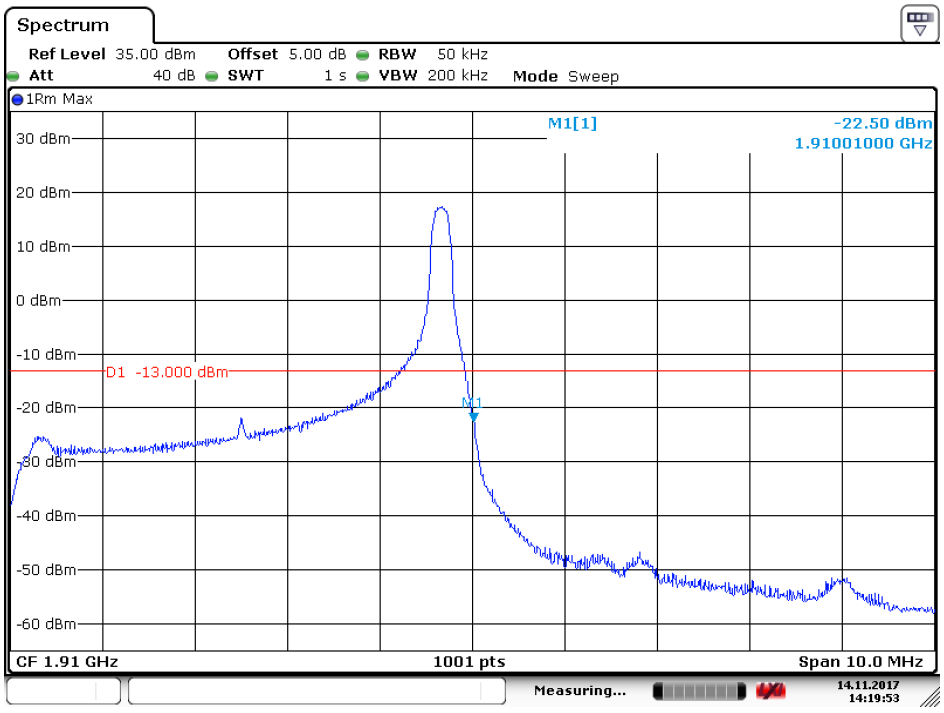
5.1.1.8.1.2 Test RB=25RB



Date: 14.NOV.2017 14:00:01

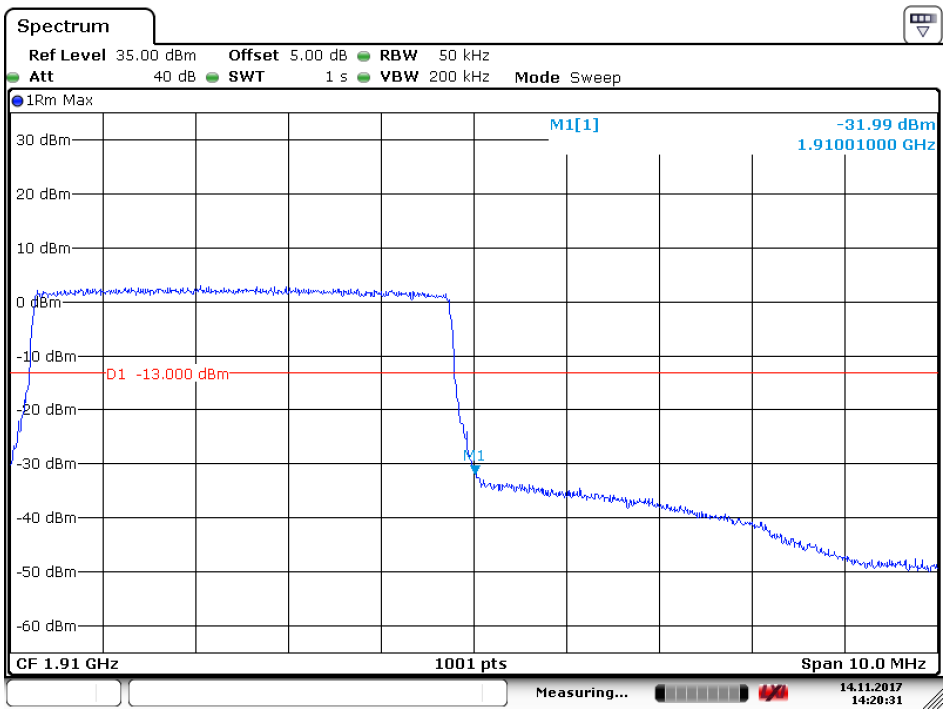
5.1.1.8.2 Test Channel = HCH

5.1.1.8.2.1 Test RB=1RB



Date: 14.NOV.2017 14:19:53

5.1.1.8.2.2 Test RB=25RB

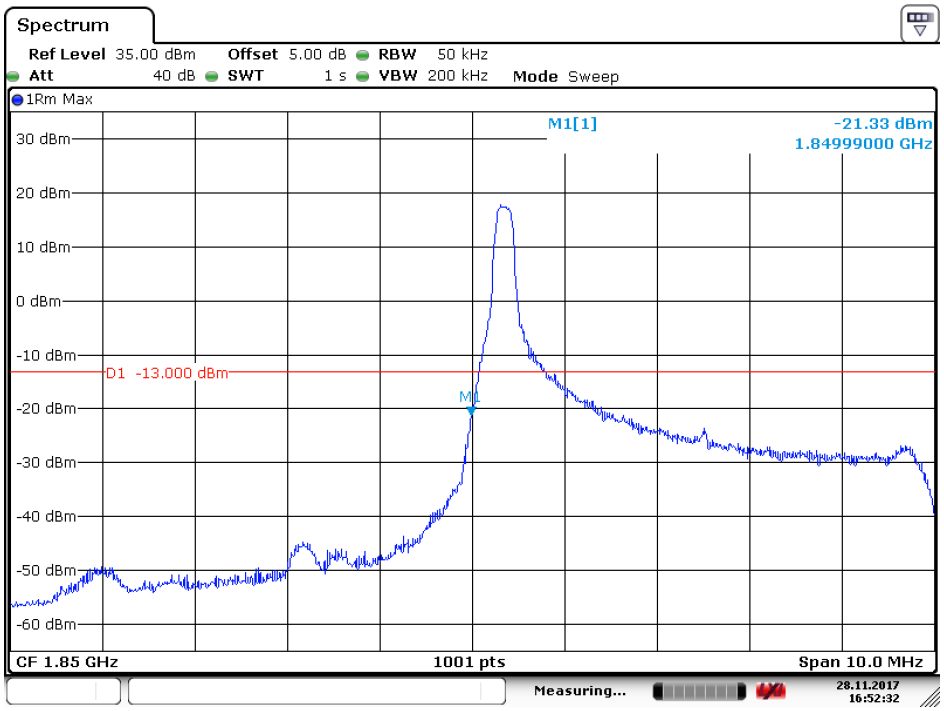


Date: 14.NOV.2017 14:20:31

5.1.1.9 Test Mode = LTE/TM3 5MHz

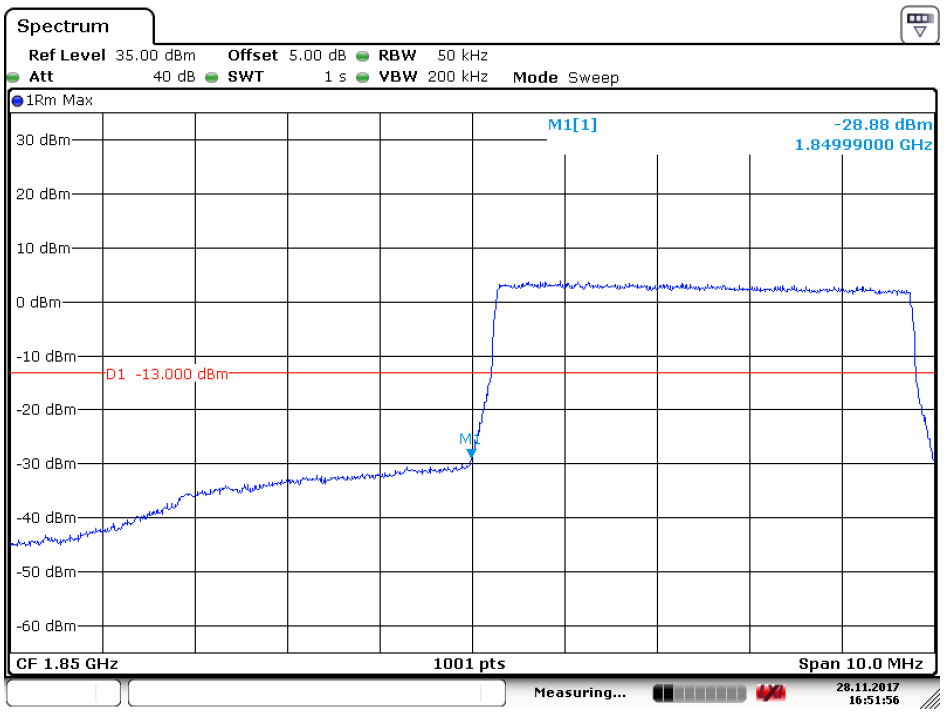
5.1.1.9.1 Test Channel = LCH

5.1.1.9.1.1 Test RB=1RB



Date: 28.NOV.2017 16:52:32

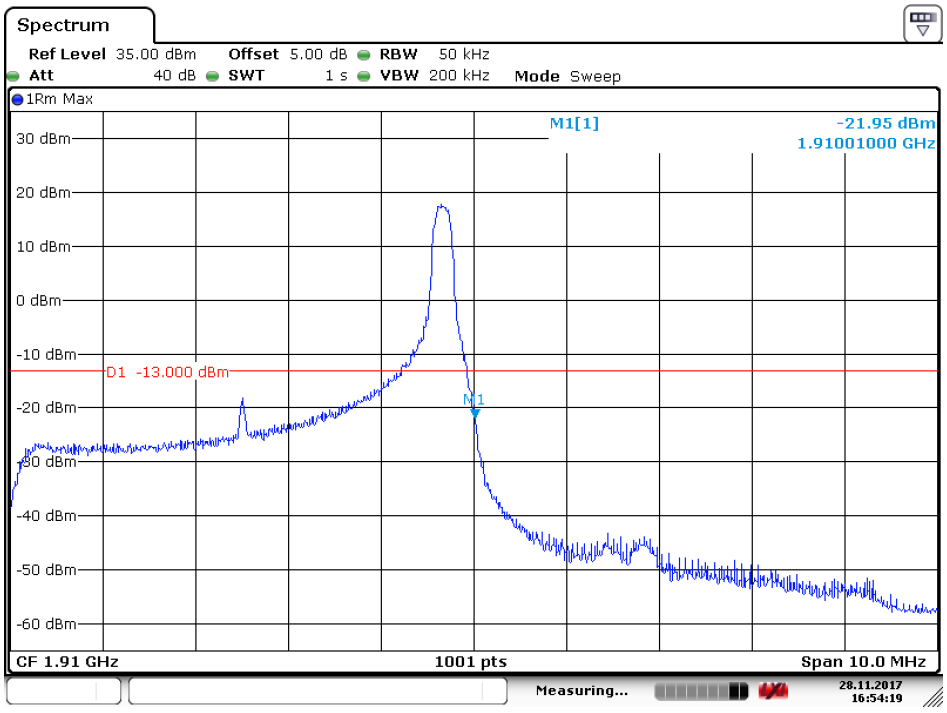
5.1.1.9.1.2 Test RB=25RB



Date: 28.NOV.2017 16:51:56

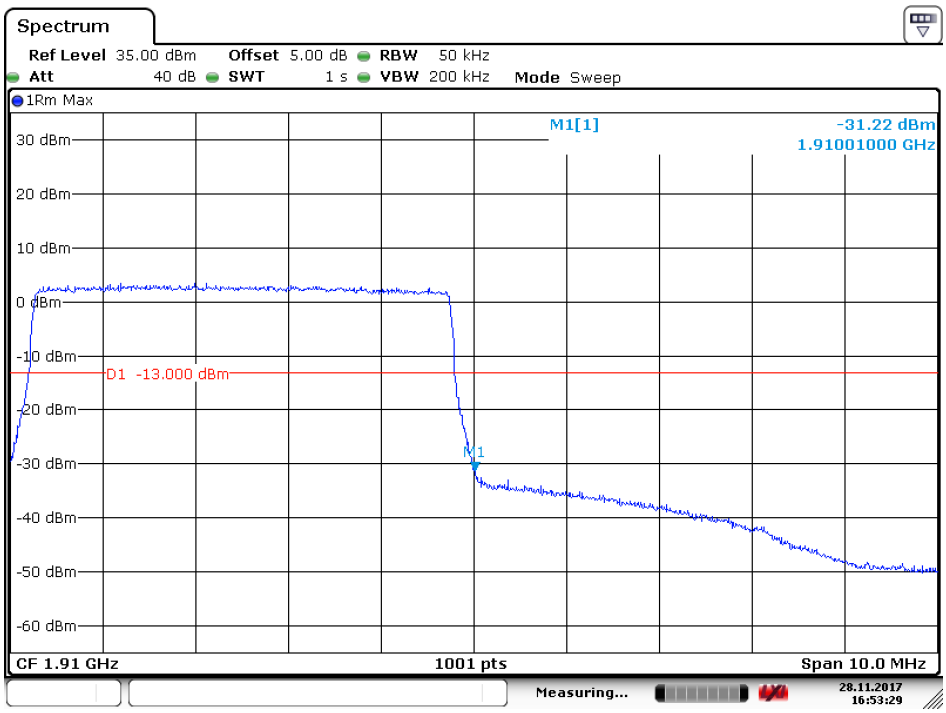
5.1.1.9.2 Test Channel = HCH

5.1.1.9.2.1 Test RB=1RB



Date: 28.NOV.2017 16:54:19

5.1.1.9.2.2 Test RB=25RB

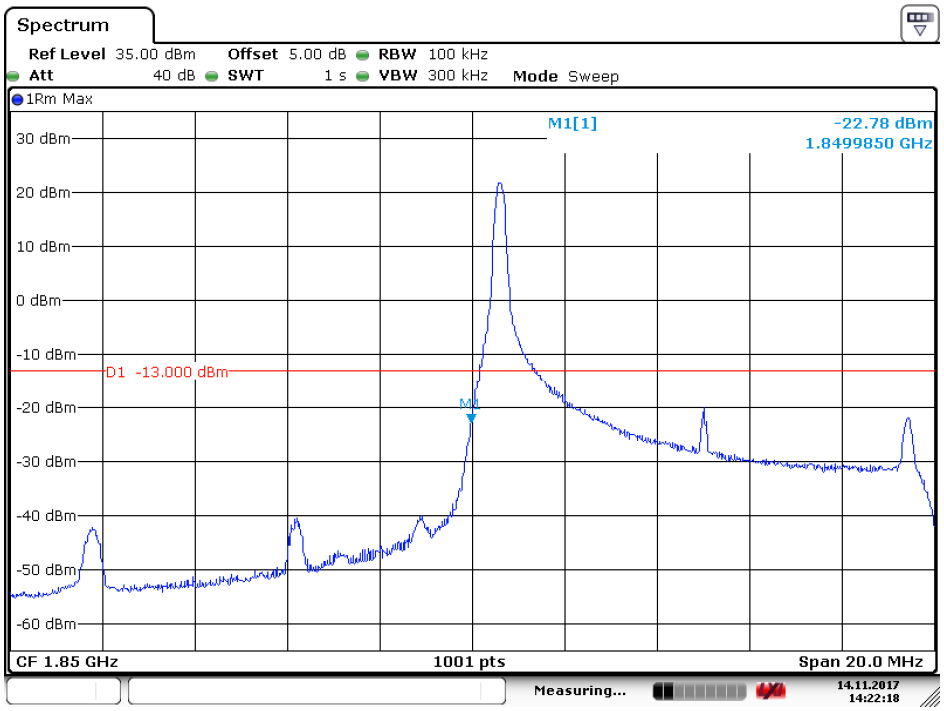


Date: 28.NOV.2017 16:53:29

5.1.1.10 Test Mode = LTE/TM1 10MHz

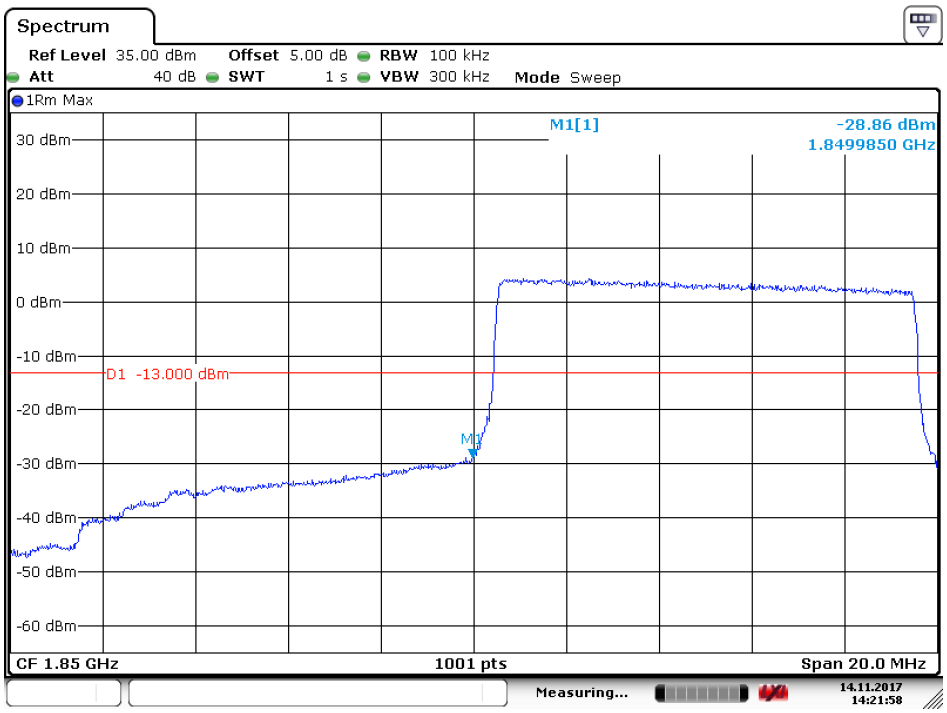
5.1.1.10.1 Test Channel = LCH

5.1.1.10.1.1 Test RB=1RB



Date: 14.NOV.2017 14:22:18

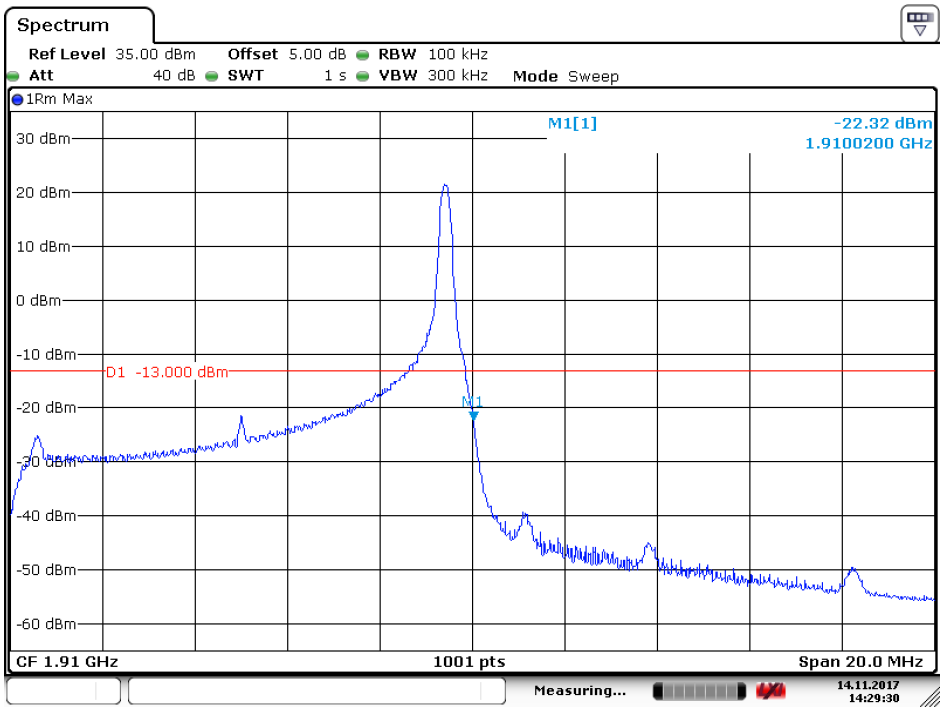
5.1.1.10.1.2 Test RB=50RB



Date: 14.NOV.2017 14:21:59

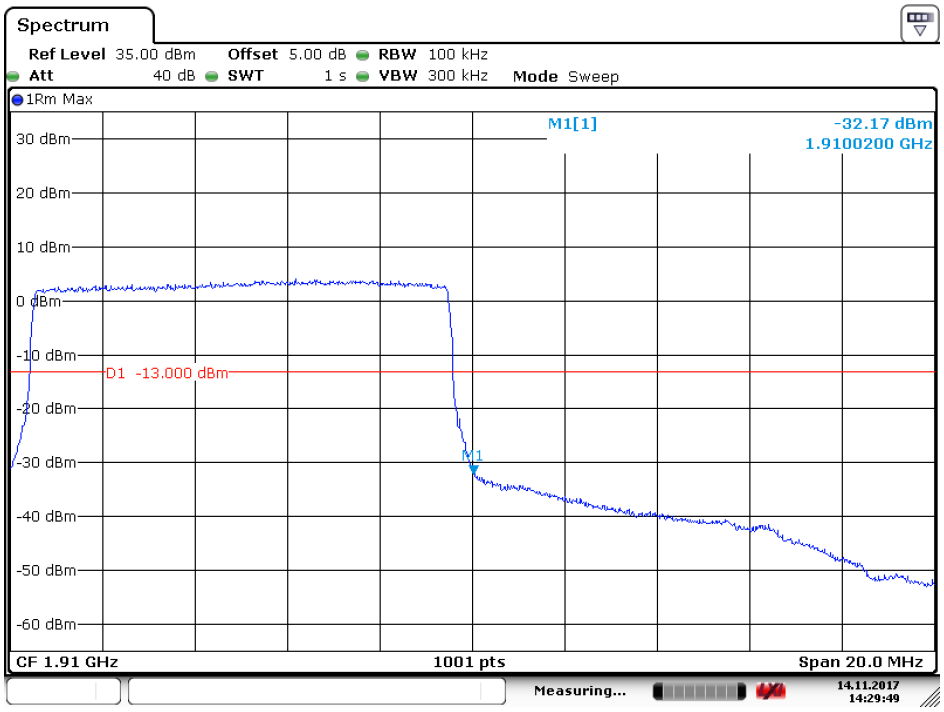
5.1.1.10.2 Test Channel = HCH

5.1.1.10.2.1 Test RB=1RB



Date: 14.NOV.2017 14:29:30

5.1.1.10.2.2 Test RB=50RB

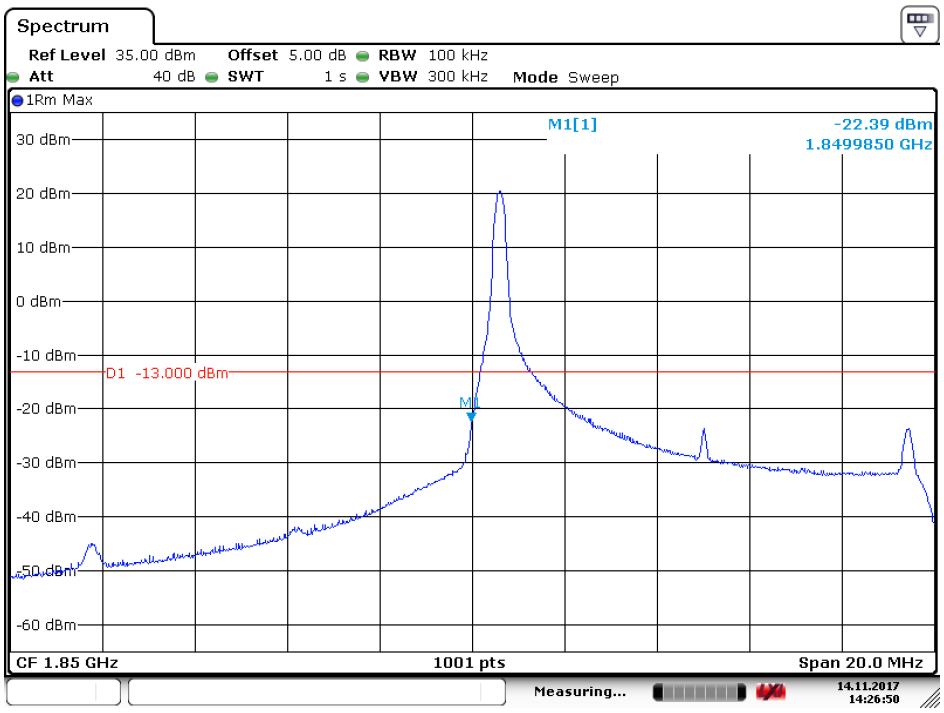


Date: 14.NOV.2017 14:29:49

5.1.1.11 Test Mode = LTE/TM2 10MHz

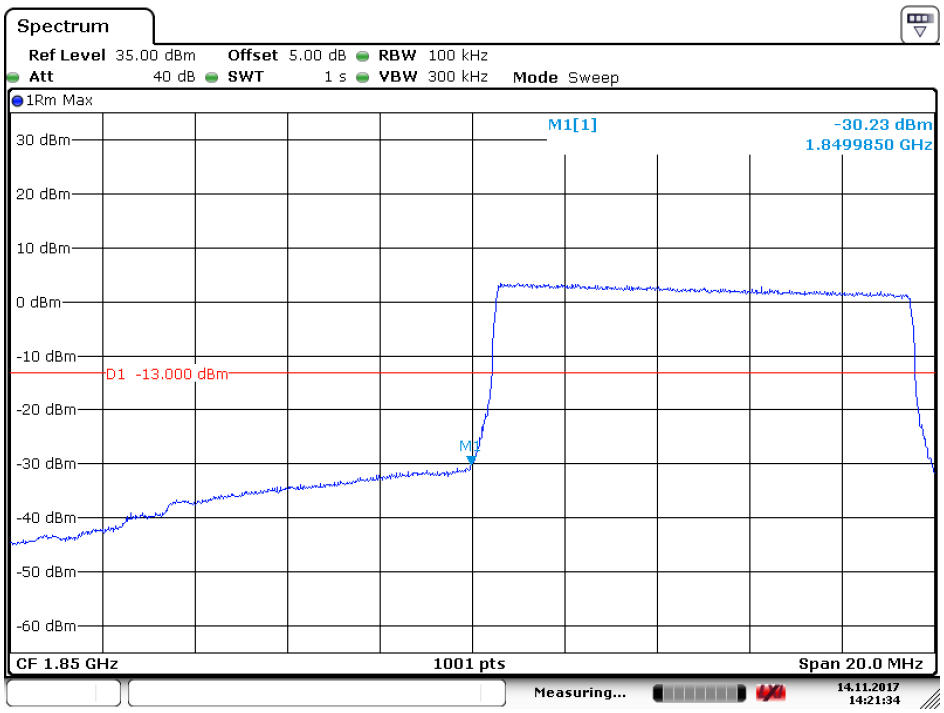
5.1.1.11.1 Test Channel = LCH

5.1.1.11.1.1 Test RB=1RB



Date: 14.NOV.2017 14:26:51

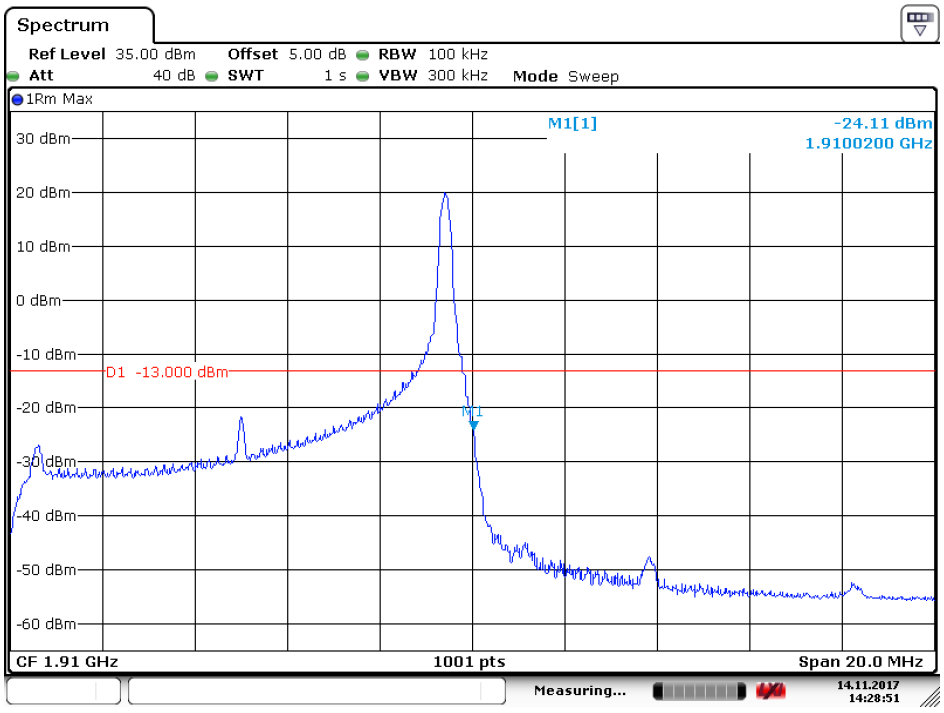
5.1.1.11.1.2 Test RB=50RB



Date: 14.NOV.2017 14:21:34

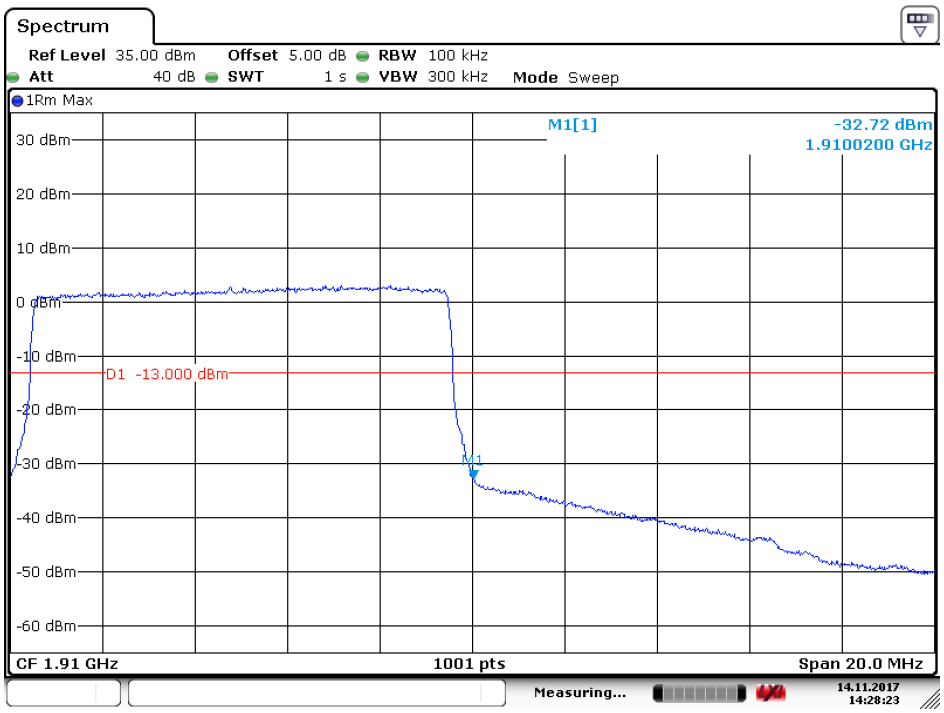
5.1.1.11.2 Test Channel = HCH

5.1.1.11.2.1 Test RB=1RB



Date: 14.NOV.2017 14:28:52

5.1.1.11.2.2 Test RB=50RB

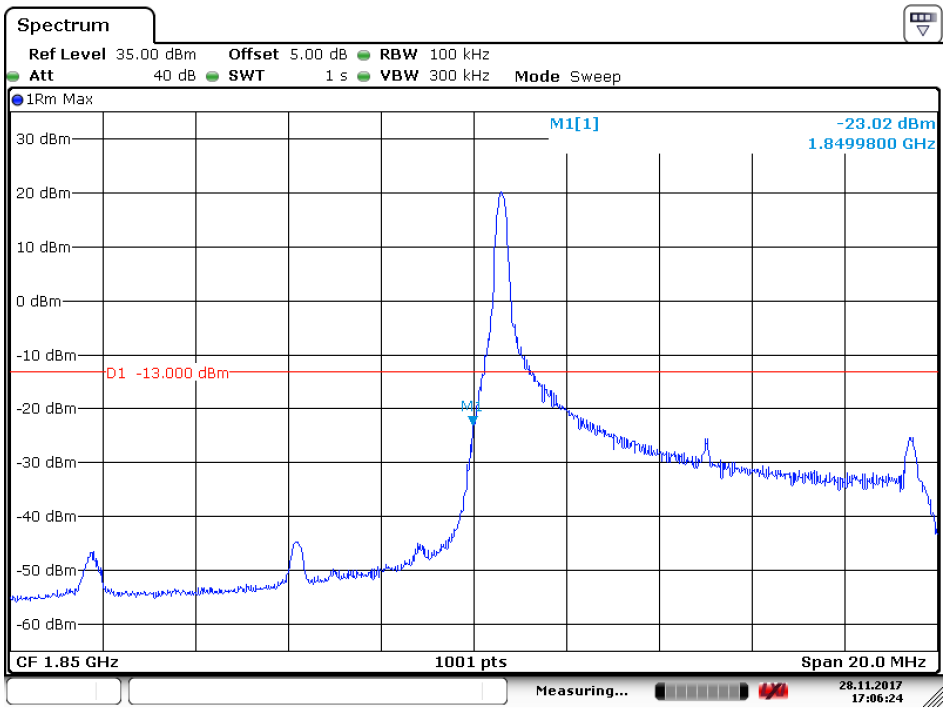


Date: 14.NOV.2017 14:28:23

5.1.1.12 Test Mode = LTE/TM3 10MHz

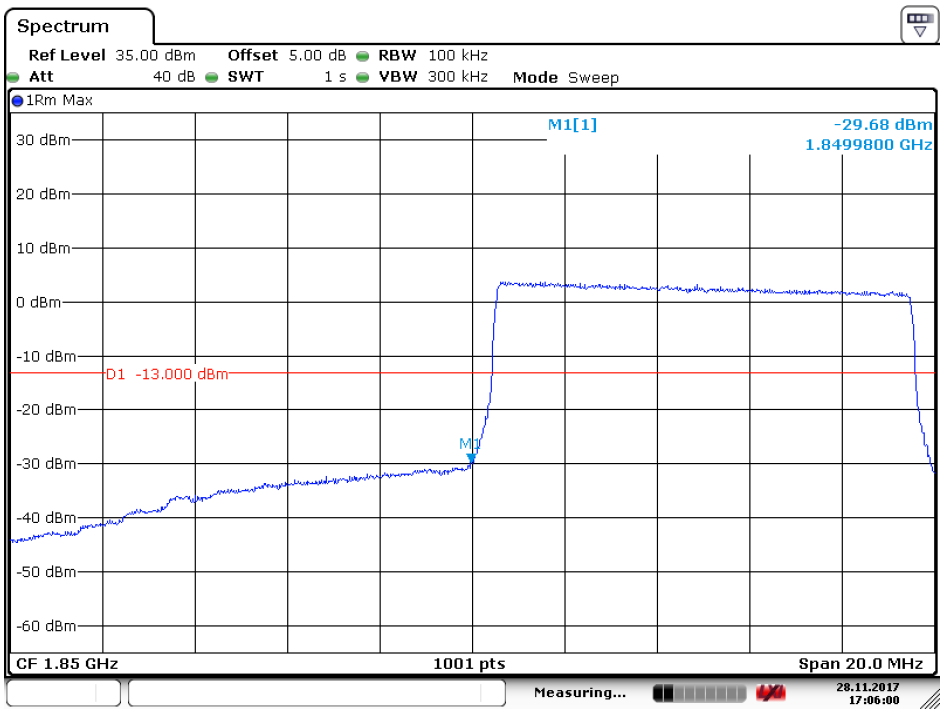
5.1.1.12.1 Test Channel = LCH

5.1.1.12.1.1 Test RB=1RB



Date: 28.NOV.2017 17:06:25

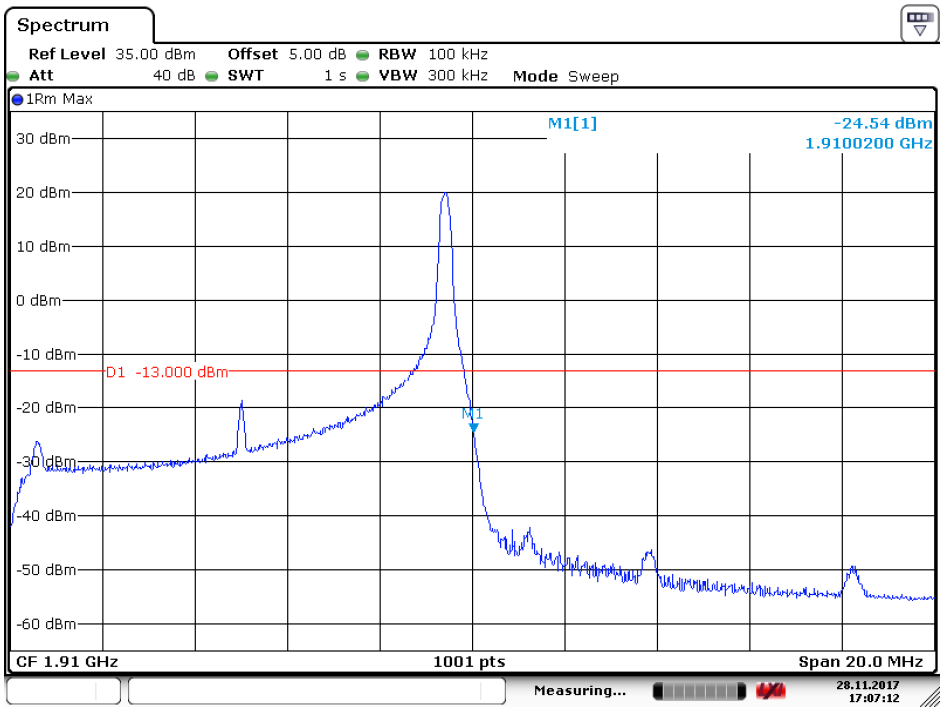
5.1.1.12.1.2 Test RB=50RB



Date: 28.NOV.2017 17:06:00

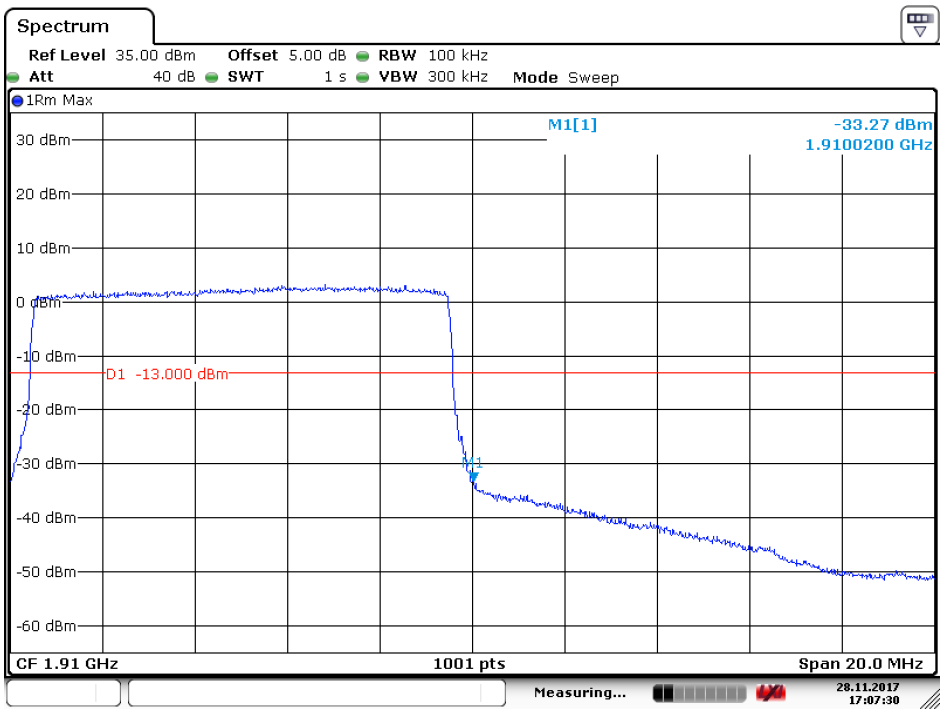
5.1.1.12.2 Test Channel = HCH

5.1.1.12.2.1 Test RB=1RB



Date: 28.NOV.2017 17:07:12

5.1.1.12.2.2 Test RB=50RB

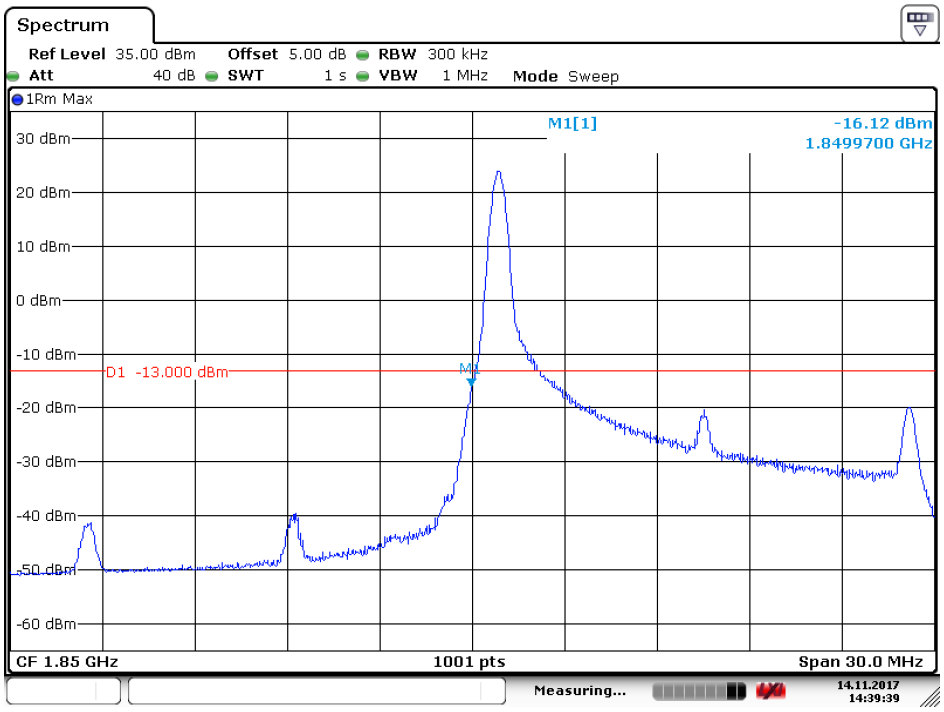


Date: 28.NOV.2017 17:07:30

Test Mode = LTE/TM1 15MHz

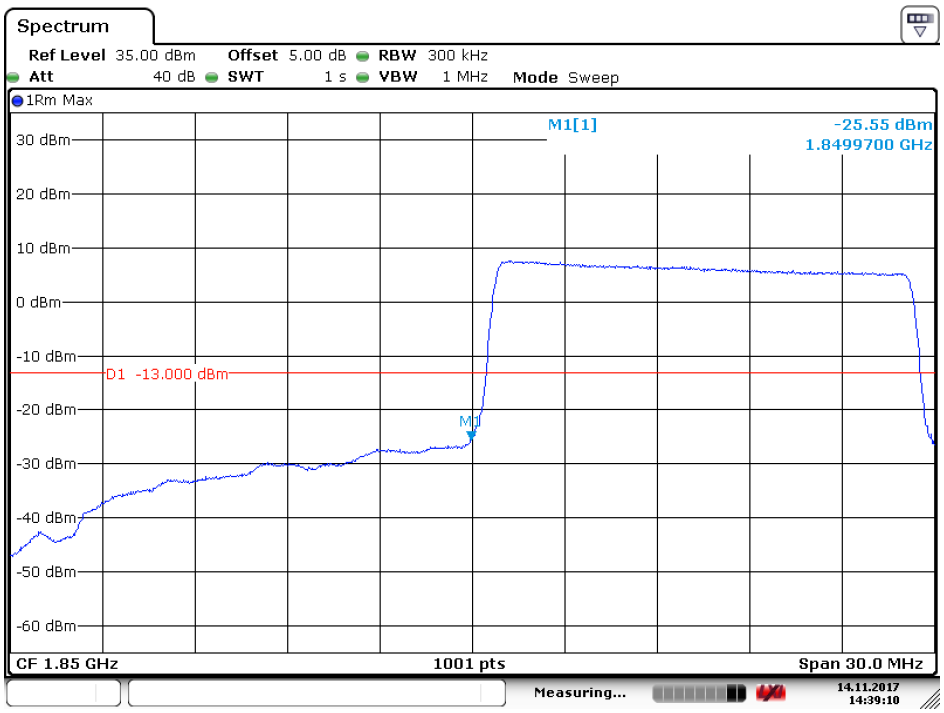
5.1.1.12.3 Test Channel = LCH

5.1.1.12.3.1 Test RB=1RB



Date: 14.NOV.2017 14:39:40

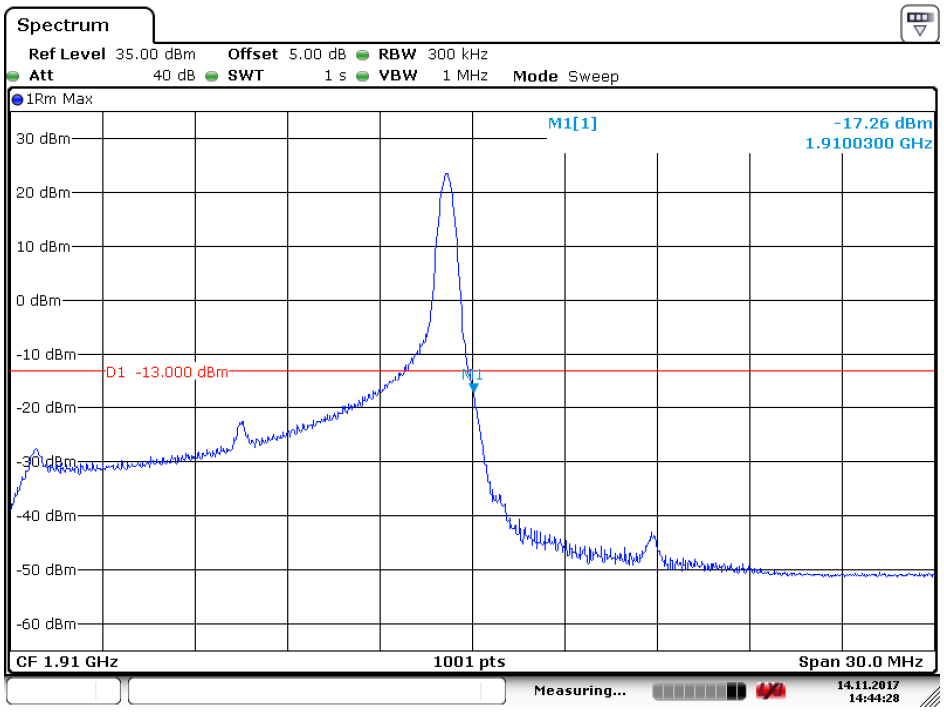
5.1.1.12.3.2 Test RB=75RB



Date: 14.NOV.2017 14:39:10

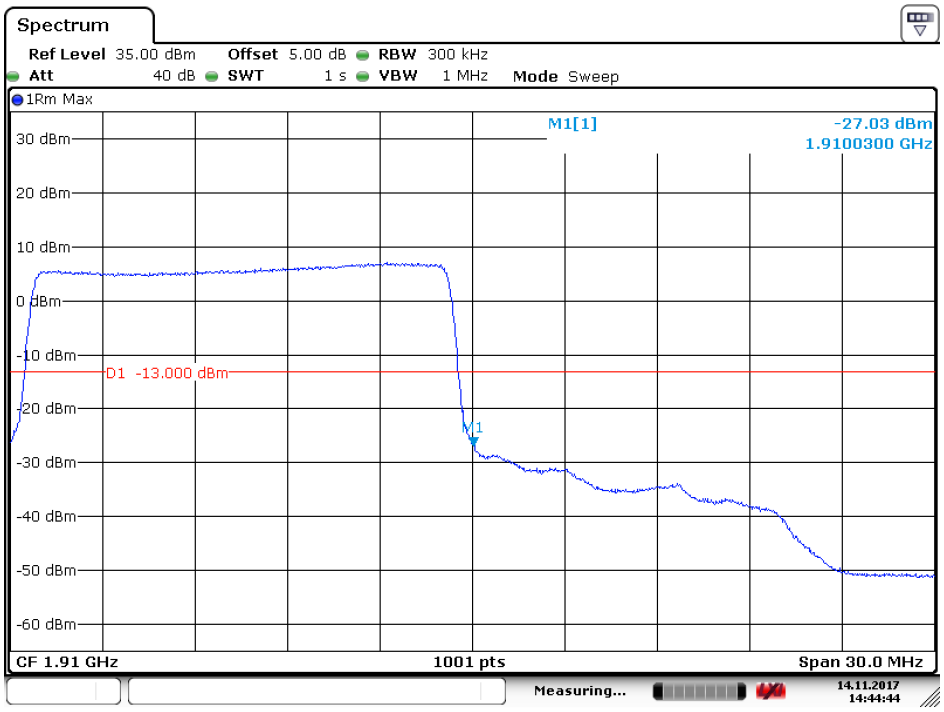
5.1.1.12.4 Test Channel = HCH

5.1.1.12.4.1 Test RB=1RB



Date: 14.NOV.2017 14:44:29

5.1.1.12.4.2 Test RB=75RB

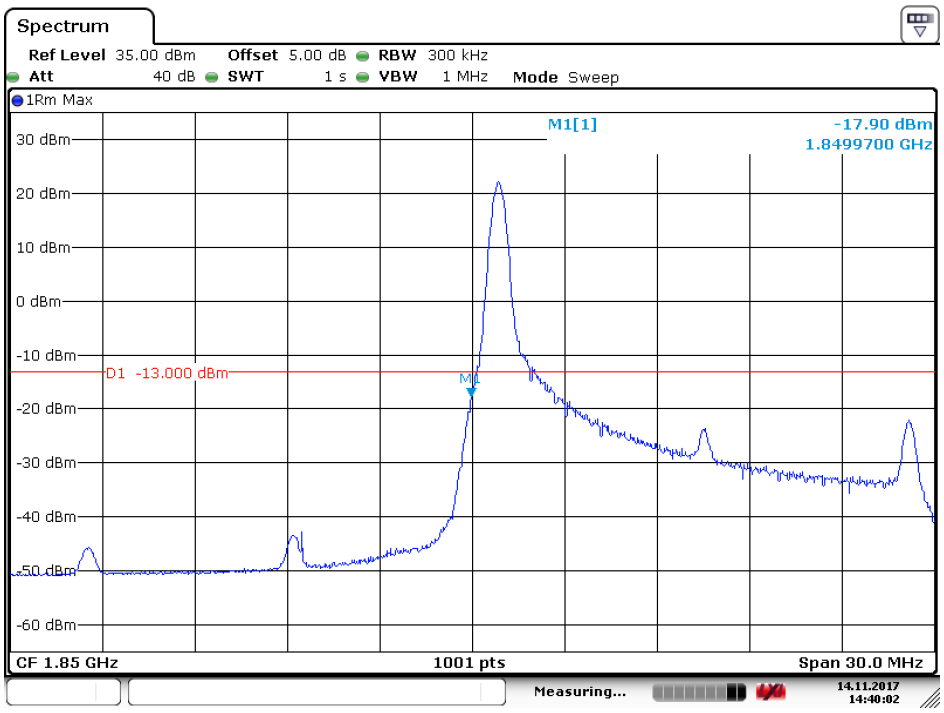


Date: 14.NOV.2017 14:44:45

5.1.1.13 Test Mode = LTE/TM2 15MHz

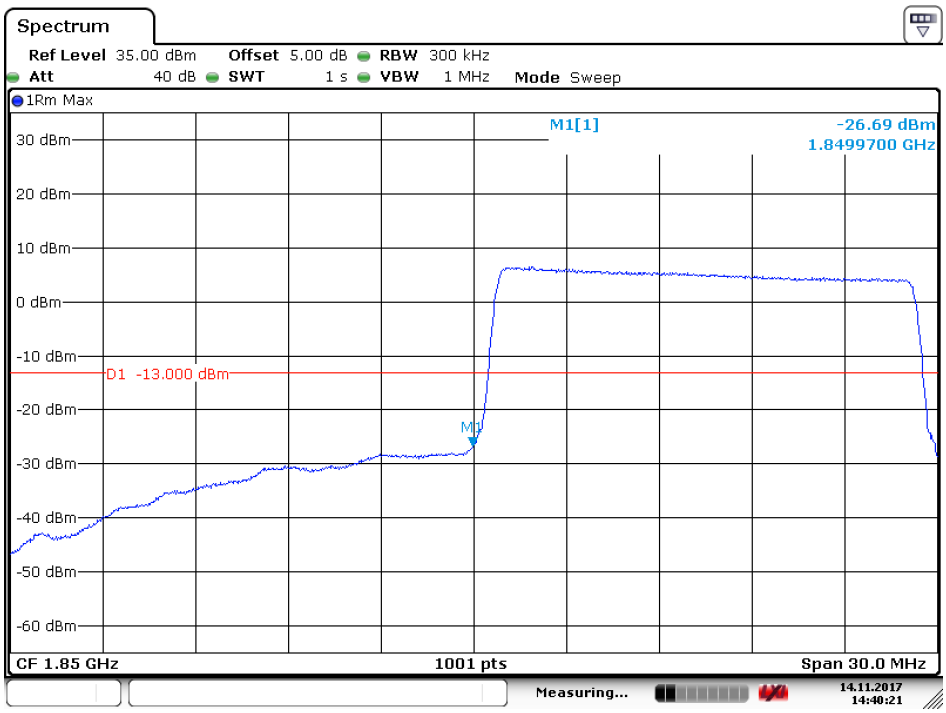
5.1.1.13.1 Test Channel = LCH

5.1.1.13.1.1 Test RB=1RB



Date: 14.NOV.2017 14:40:03

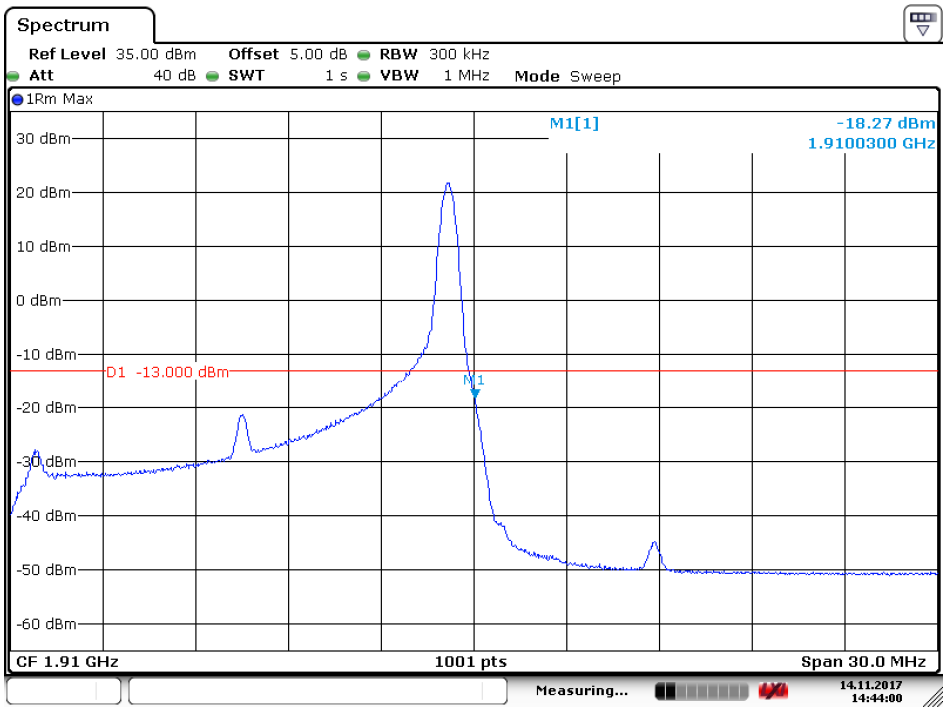
5.1.1.13.1.2 Test RB=75RB



Date: 14.NOV.2017 14:40:21

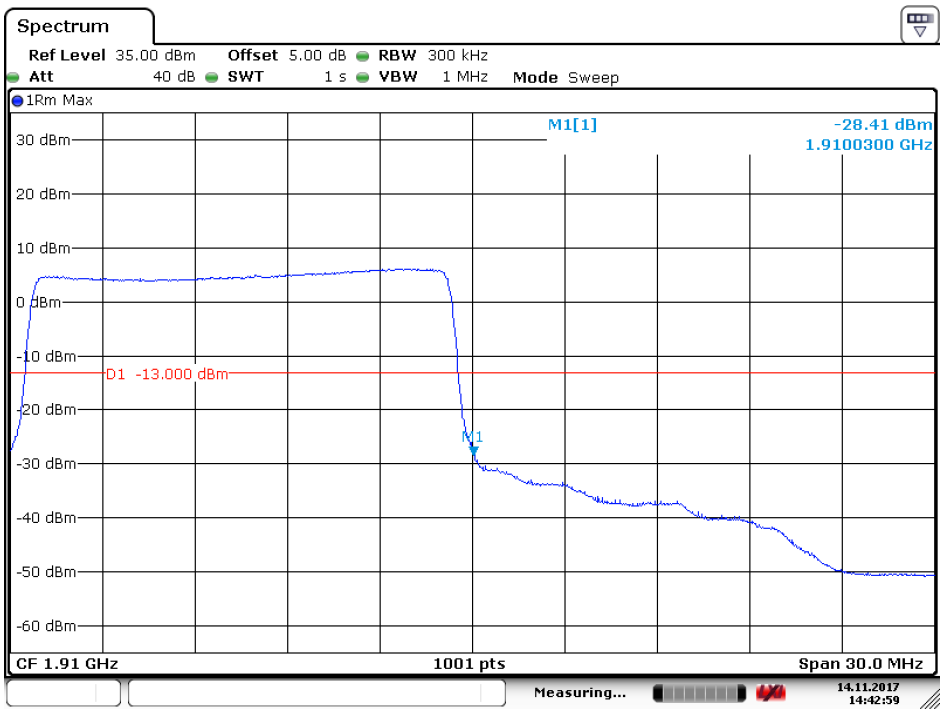
5.1.1.13.2 Test Channel = HCH

5.1.1.13.2.1 Test RB=1RB



Date: 14.NOV.2017 14:44:00

5.1.1.13.2.2 Test RB=75RB

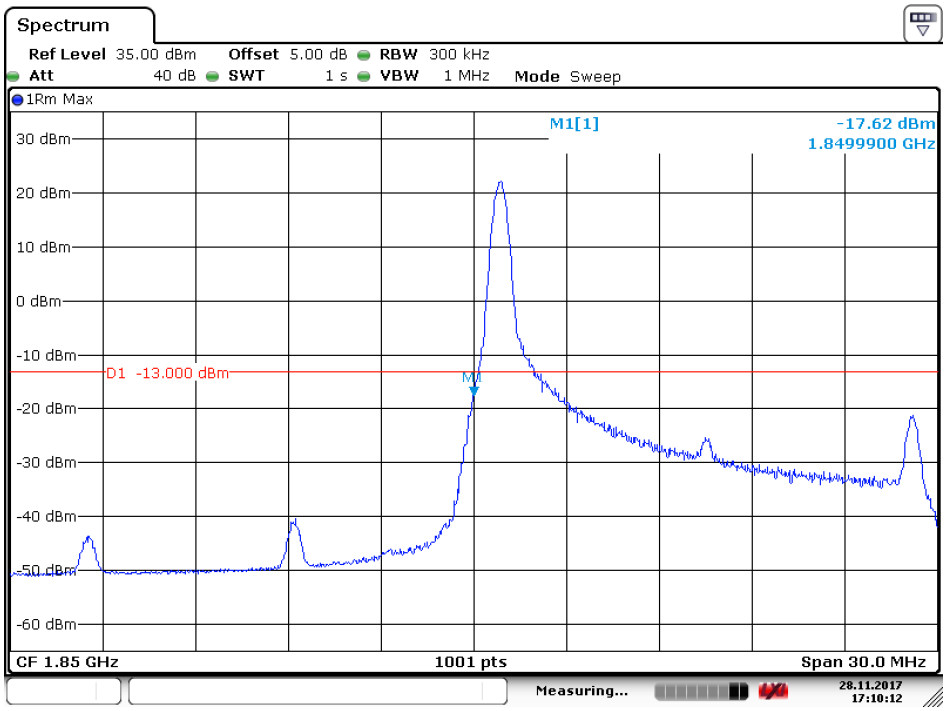


Date: 14.NOV.2017 14:42:59

5.1.1.14 Test Mode = LTE/TM3 15MHz

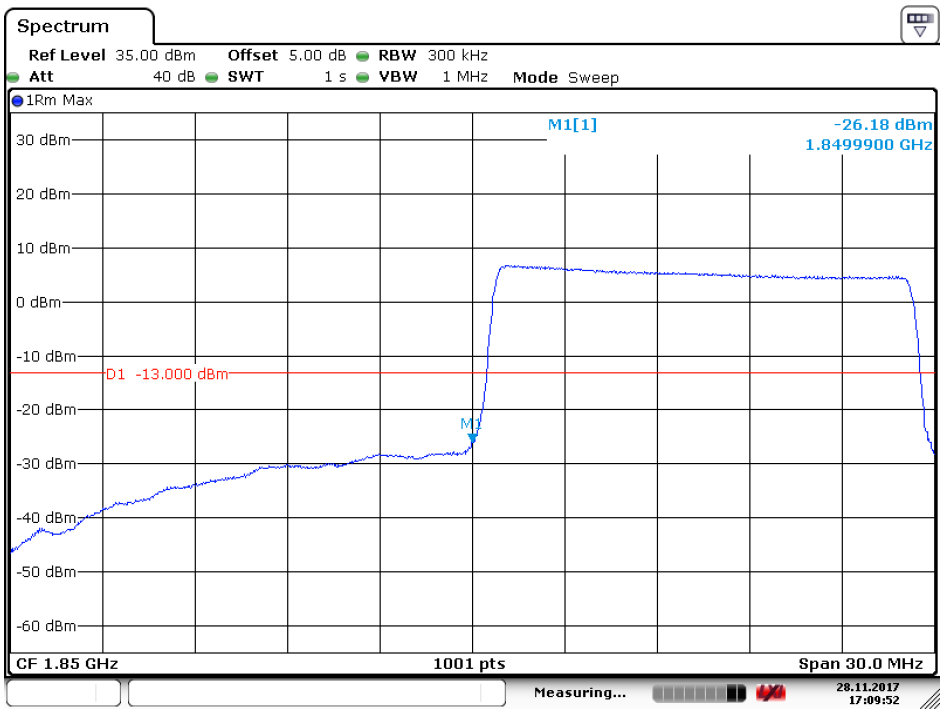
5.1.1.14.1 Test Channel = LCH

5.1.1.14.1.1 Test RB=1RB



Date: 28.NOV.2017 17:10:12

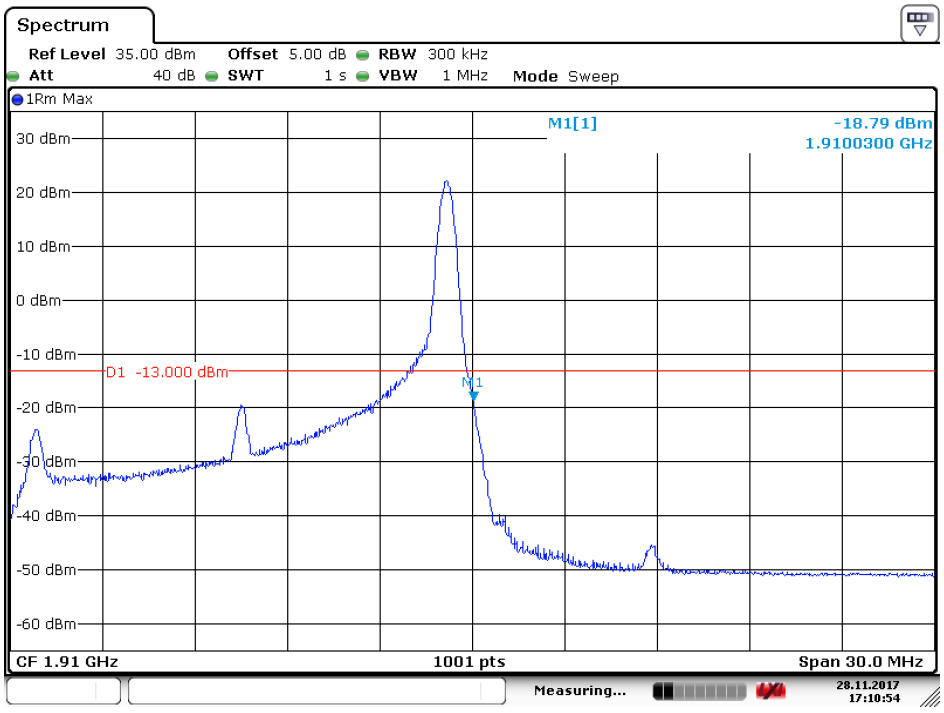
5.1.1.14.1.2 Test RB=75RB



Date: 28.NOV.2017 17:09:52

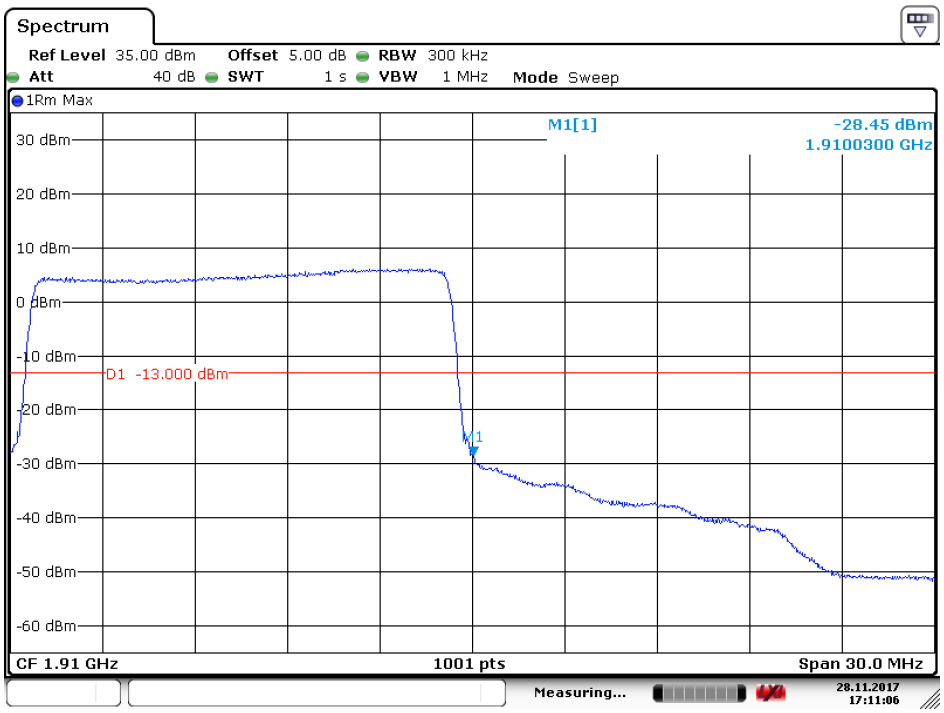
5.1.1.14.2 Test Channel = HCH

5.1.1.14.2.1 Test RB=1RB



Date: 28.NOV.2017 17:10:54

5.1.1.14.2.2 Test RB=75RB

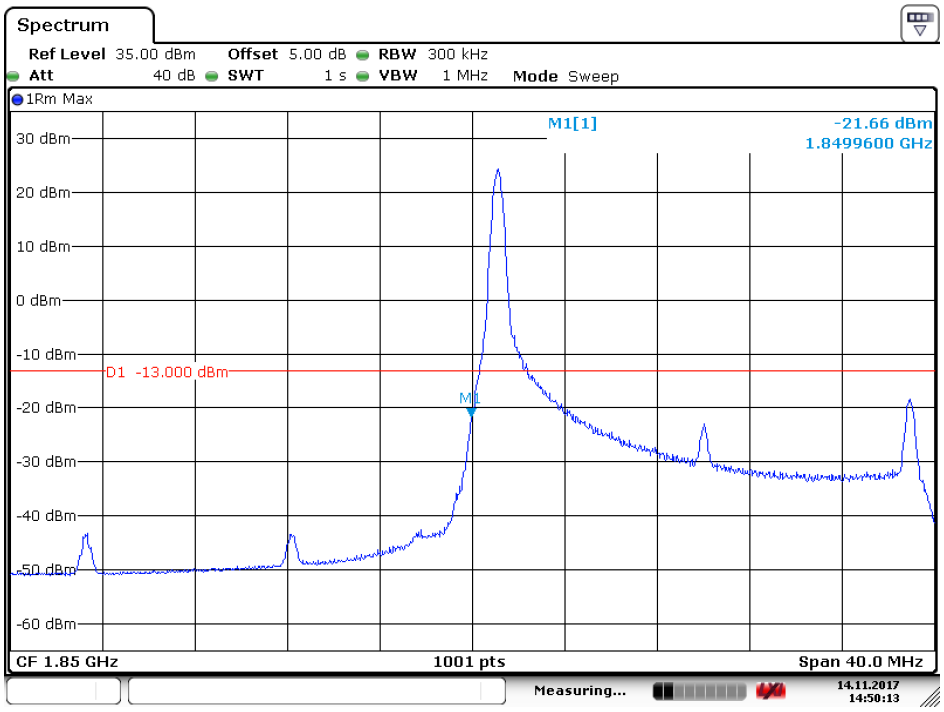


Date: 28.NOV.2017 17:11:07

5.1.1.15 Test Mode = LTE/TM1 20MHz

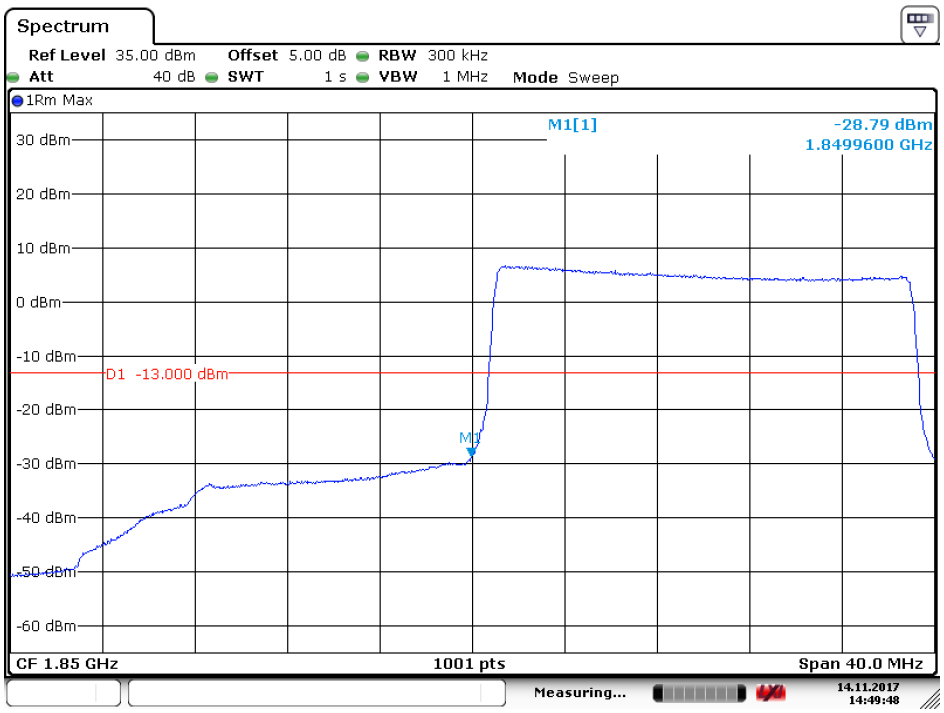
5.1.1.15.1 Test Channel = LCH

5.1.1.15.1.1 Test RB=1RB



Date: 14.NOV.2017 14:50:13

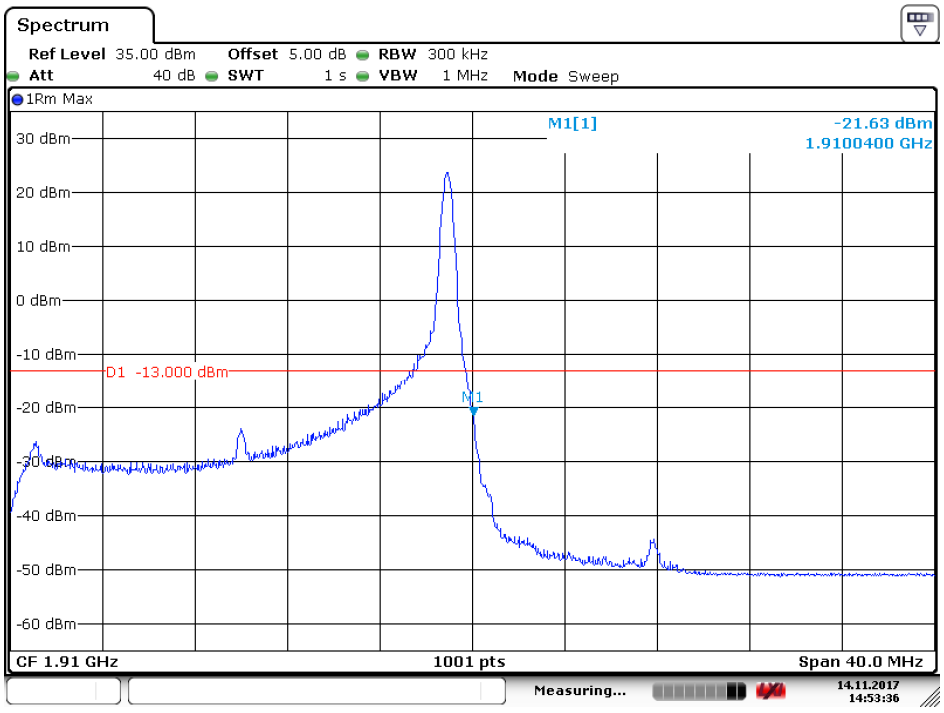
5.1.1.15.1.2 Test RB=100RB



Date: 14.NOV.2017 14:49:49

5.1.1.15.2 Test Channel = HCH

5.1.1.15.2.1 Test RB=1RB



Date: 14.NOV.2017 14:53:37

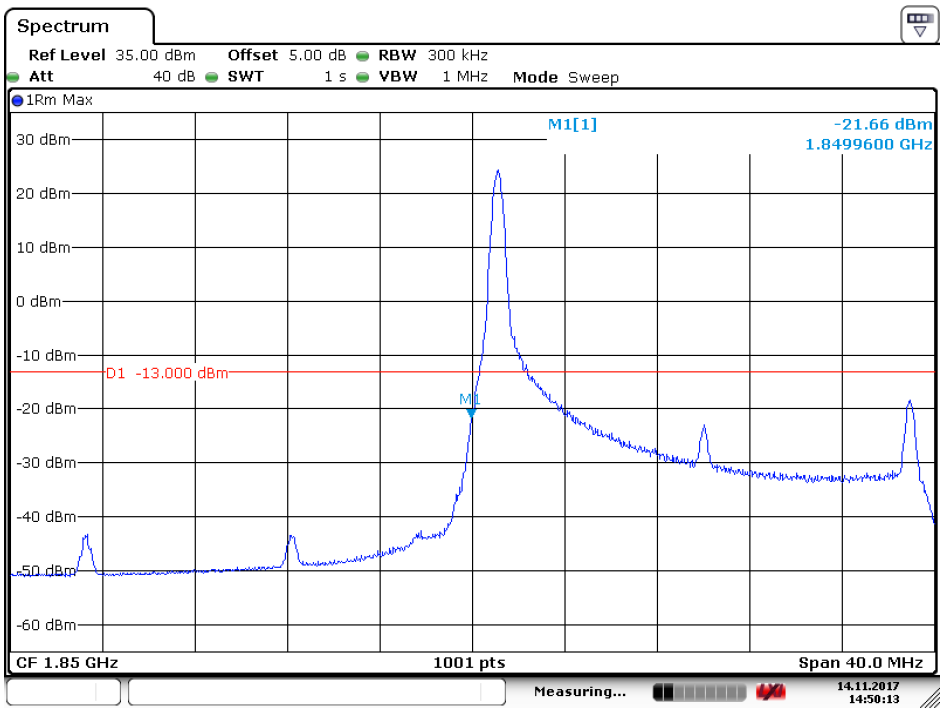
5.1.1.15.2.2 Test RB=100RB

Date: 14.NOV.2017 14:53:59

5.1.1.16 Test Mode = LTE/TM2 20MHz

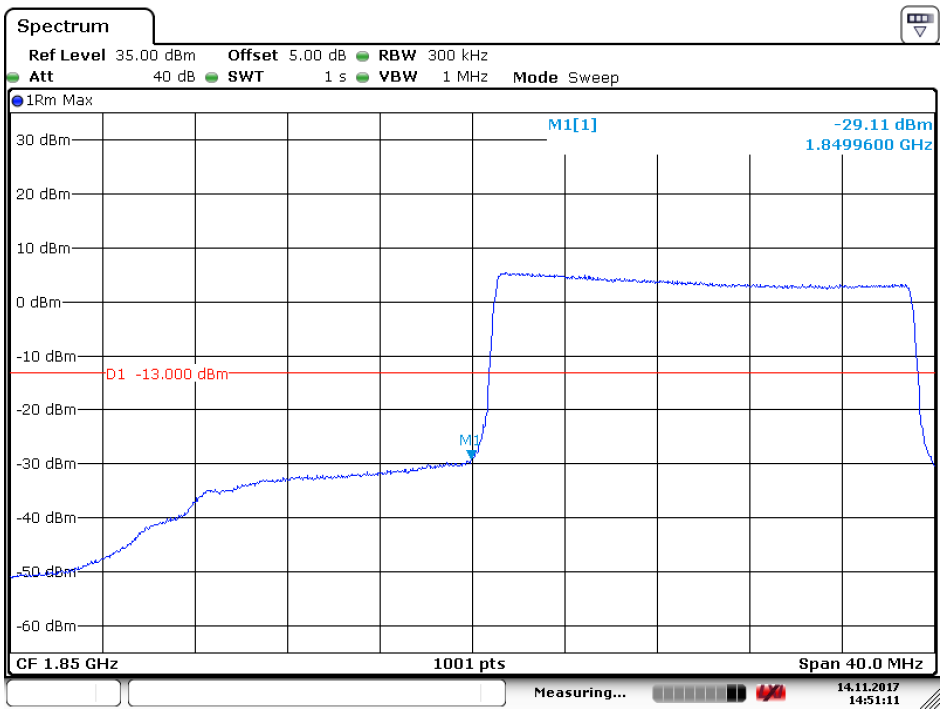
5.1.1.16.1 Test Channel = LCH

5.1.1.16.1.1 Test RB=1RB



Date: 14.NOV.2017 14:50:13

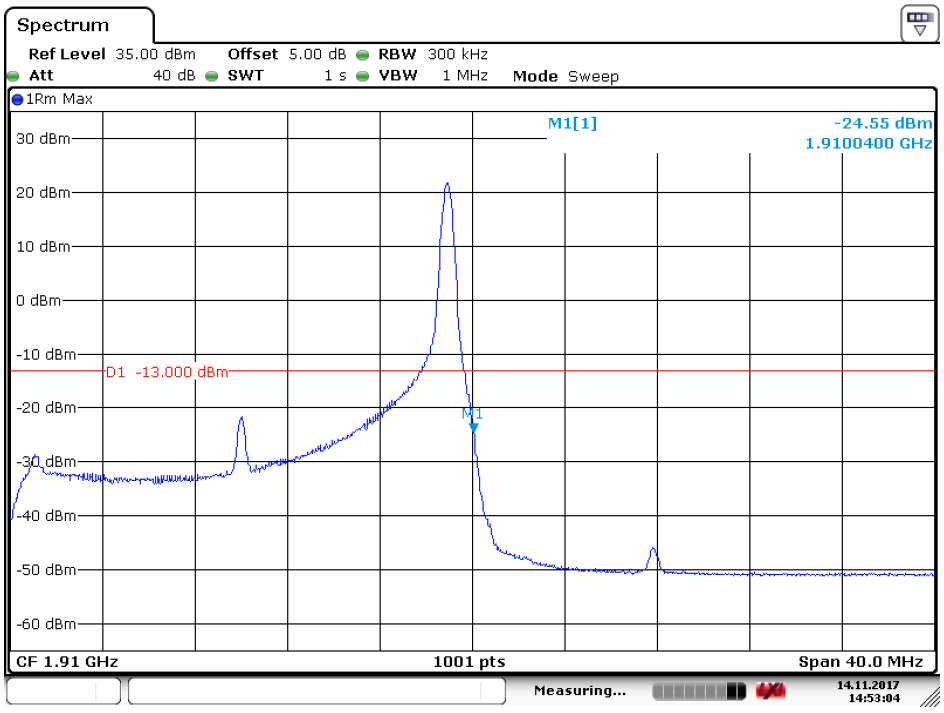
5.1.1.16.1.2 Test RB=100RB



Date: 14.NOV.2017 14:51:11

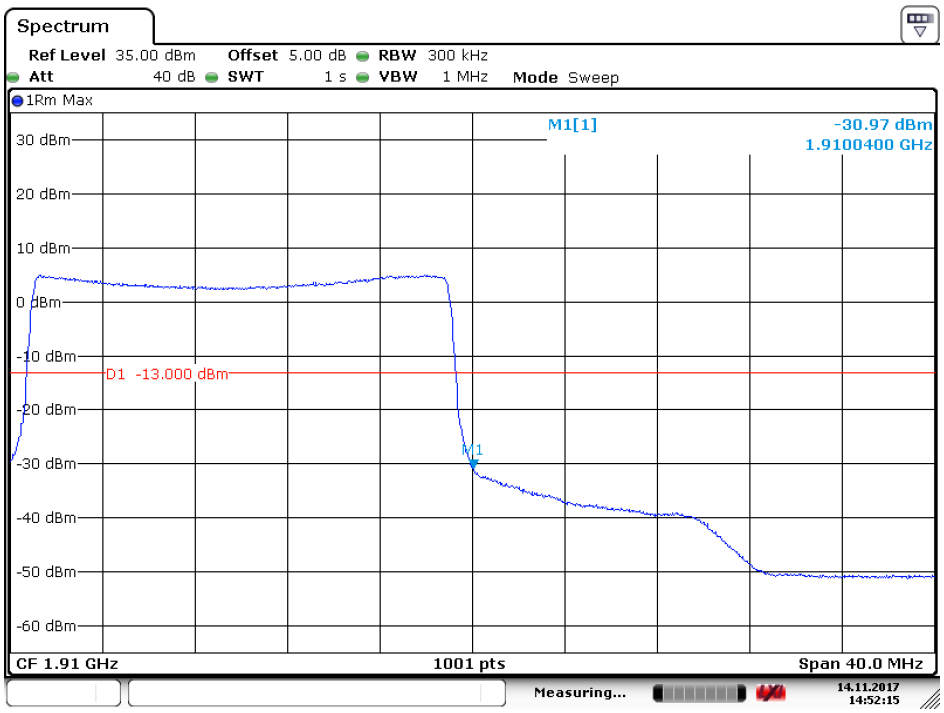
5.1.1.16.2 Test Channel = HCH

5.1.1.16.2.1 Test RB=1RB



Date: 14.NOV.2017 14:53:04

5.1.1.16.2.2 Test RB=100RB

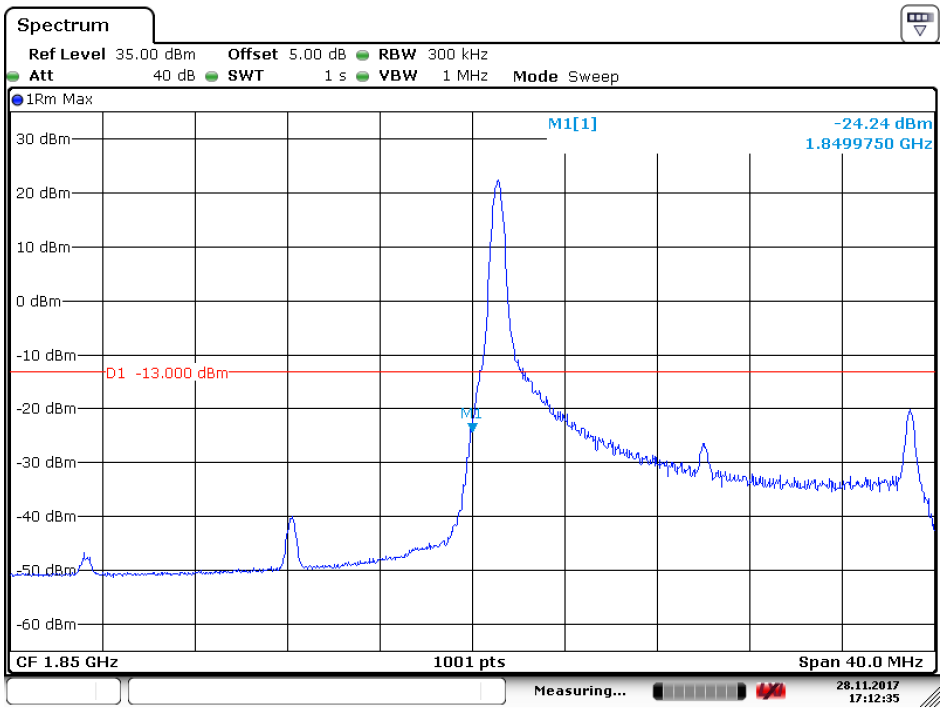


Date: 14.NOV.2017 14:52:16

5.1.1.17 Test Mode = LTE/TM3 20MHz

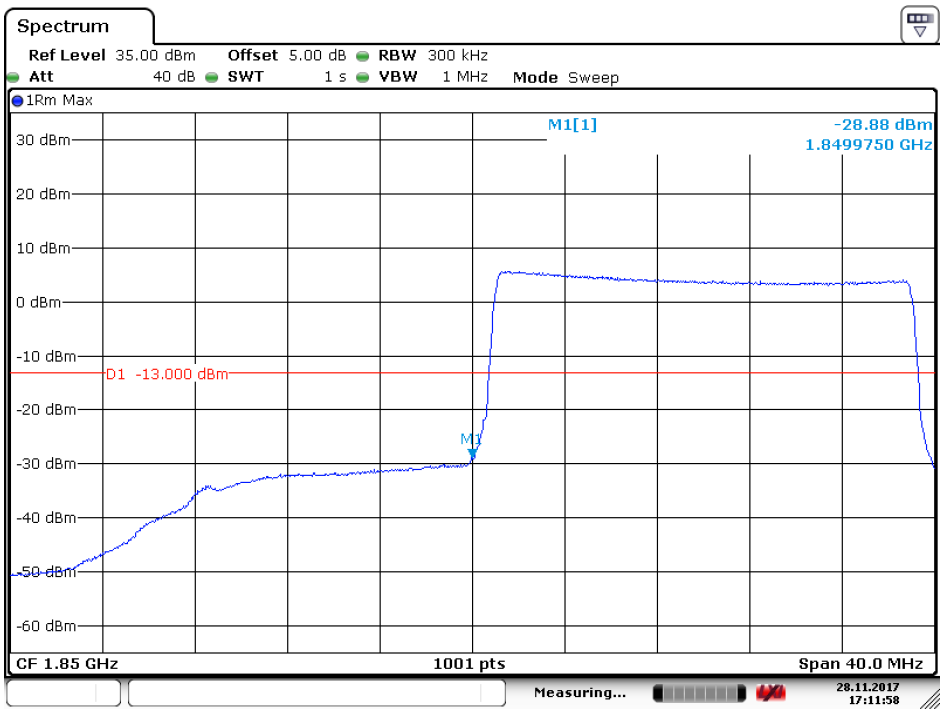
5.1.1.17.1 Test Channel = LCH

5.1.1.17.1.1 Test RB=1RB



Date: 28.NOV.2017 17:12:36

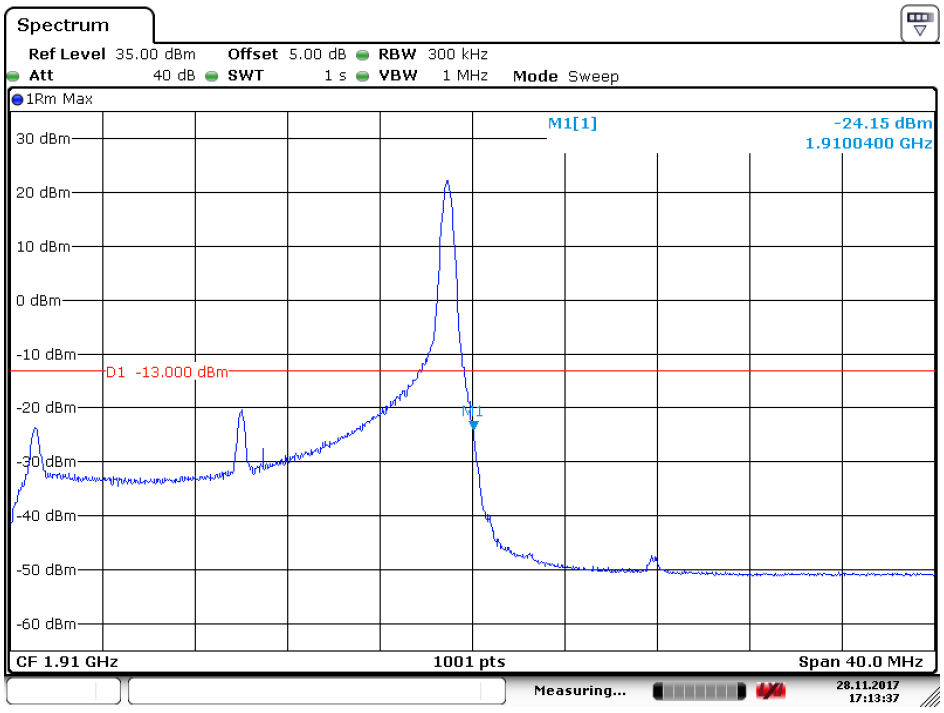
5.1.1.17.1.2 Test RB=100RB



Date: 28.NOV.2017 17:11:58

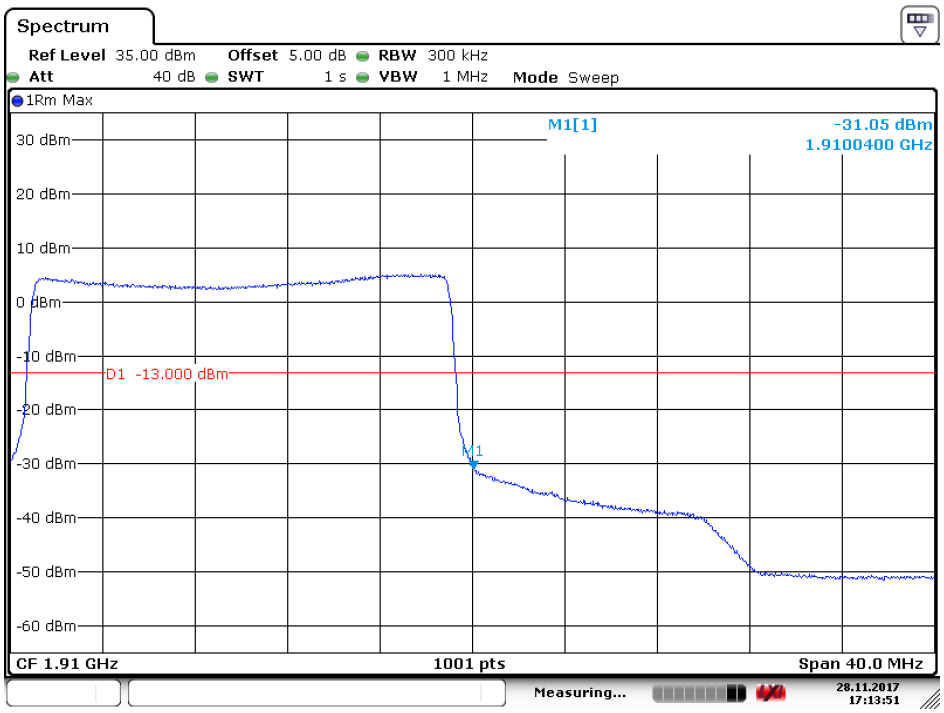
5.1.1.17.2 Test Channel = HCH

5.1.1.17.2.1 Test RB=1RB



Date: 28.NOV.2017 17:13:37

5.1.1.17.2.2 Test RB=100RB



Date: 28.NOV.2017 17:13:52

6 Spurious Emission at Antenna Terminal

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

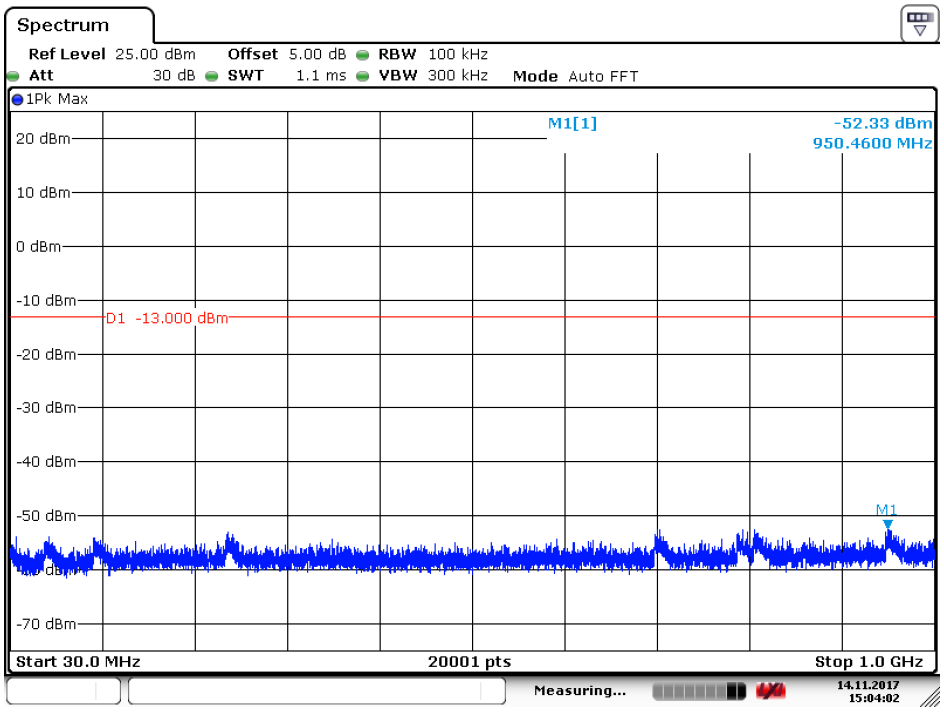
Part I - Test Plots

6.1 For LTE

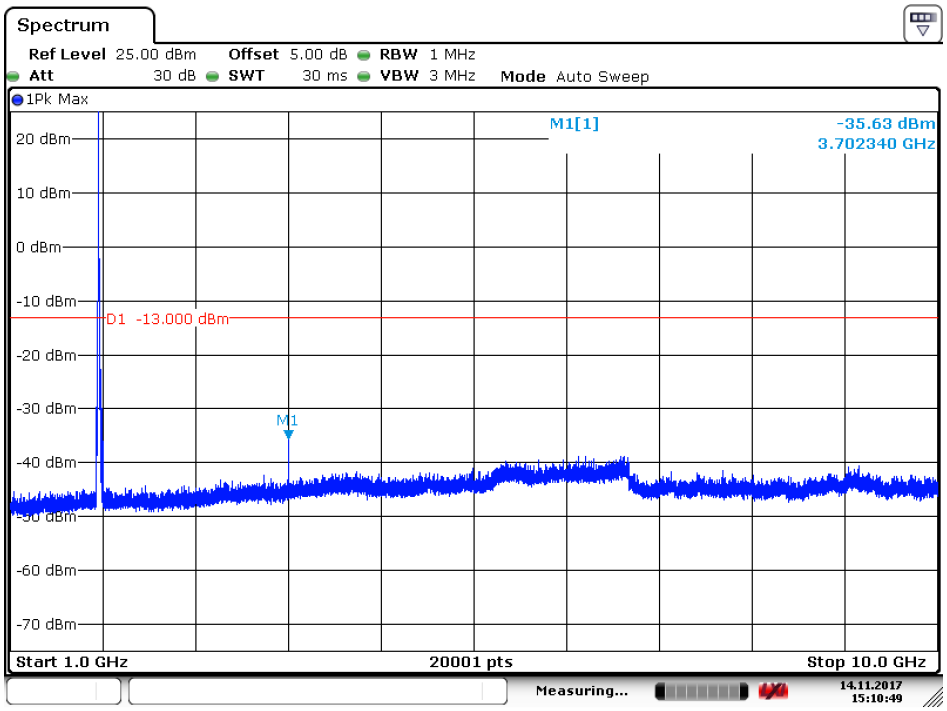
6.1.1 Test Band = LTE band2

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

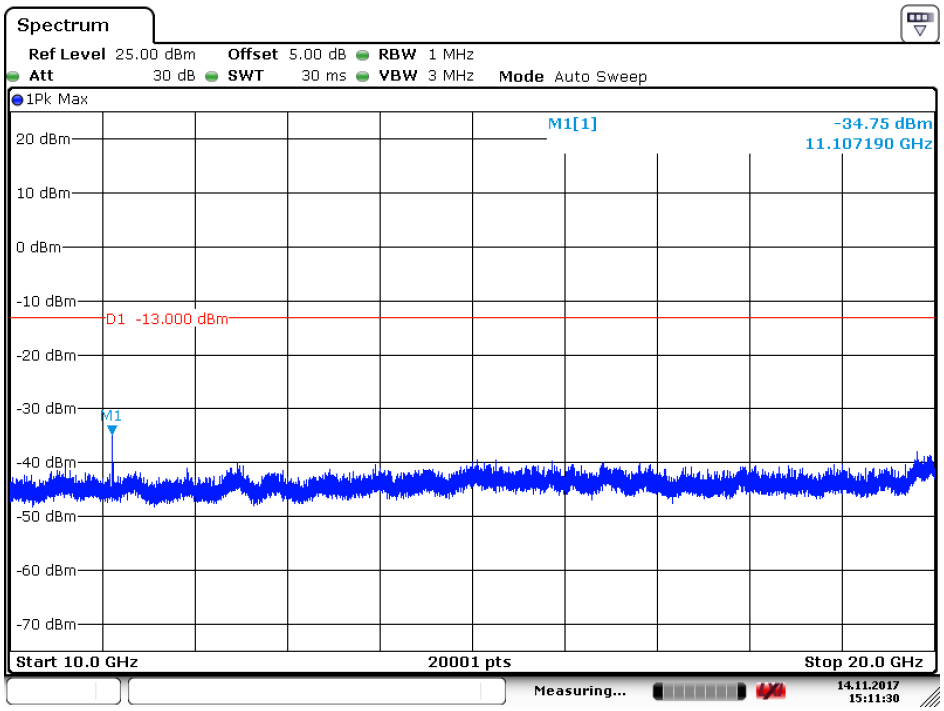
6.1.1.1.1 Test Channel = LCH



Date: 14.NOV.2017 15:04:03

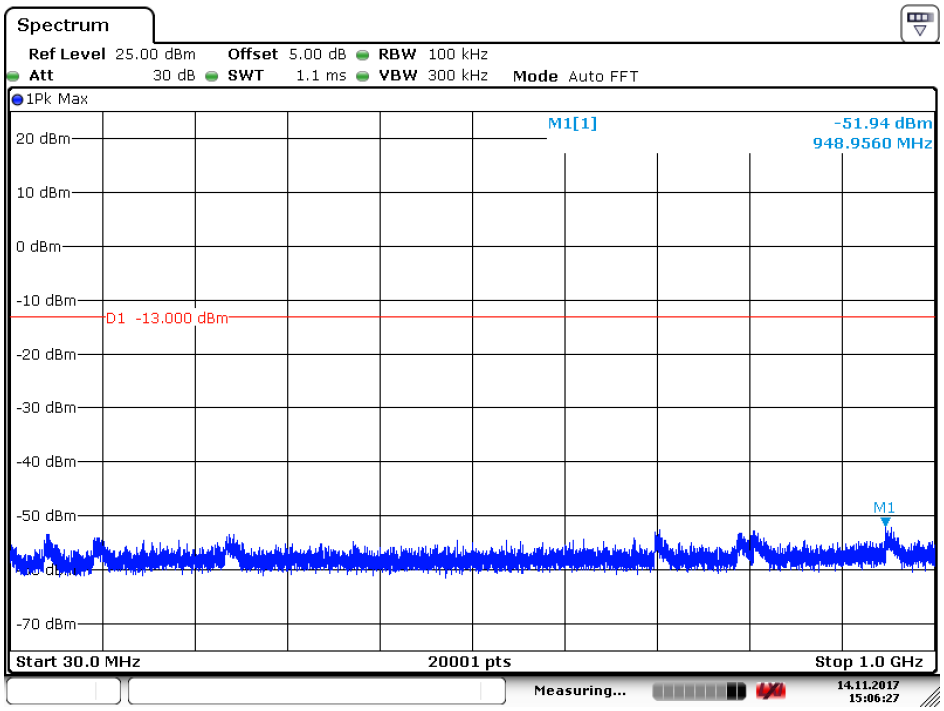


Date: 14.NOV.2017 15:10:49

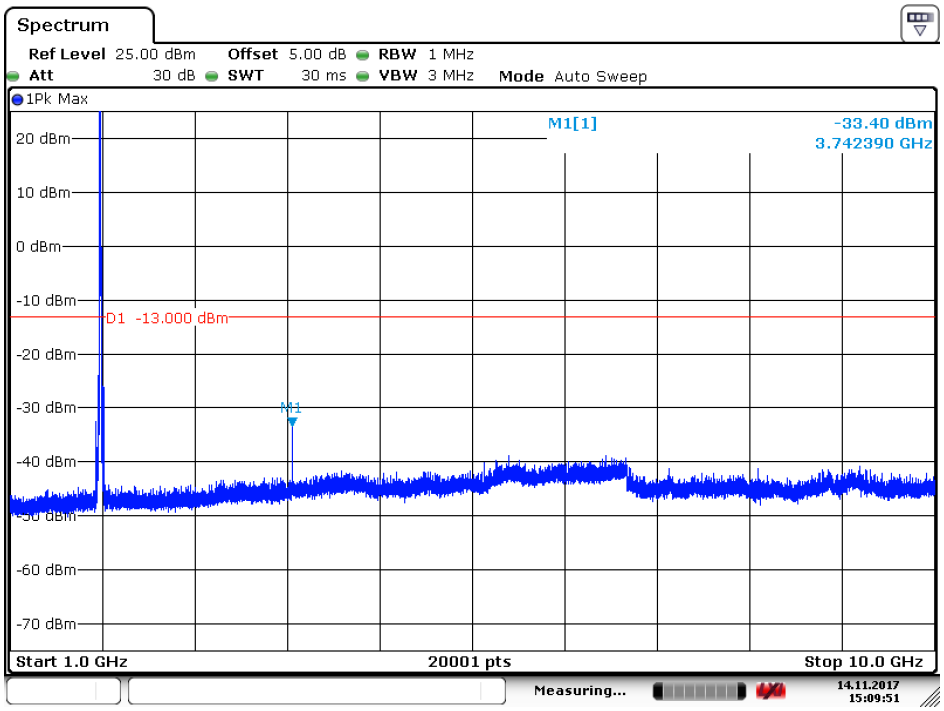


Date: 14.NOV.2017 15:11:31

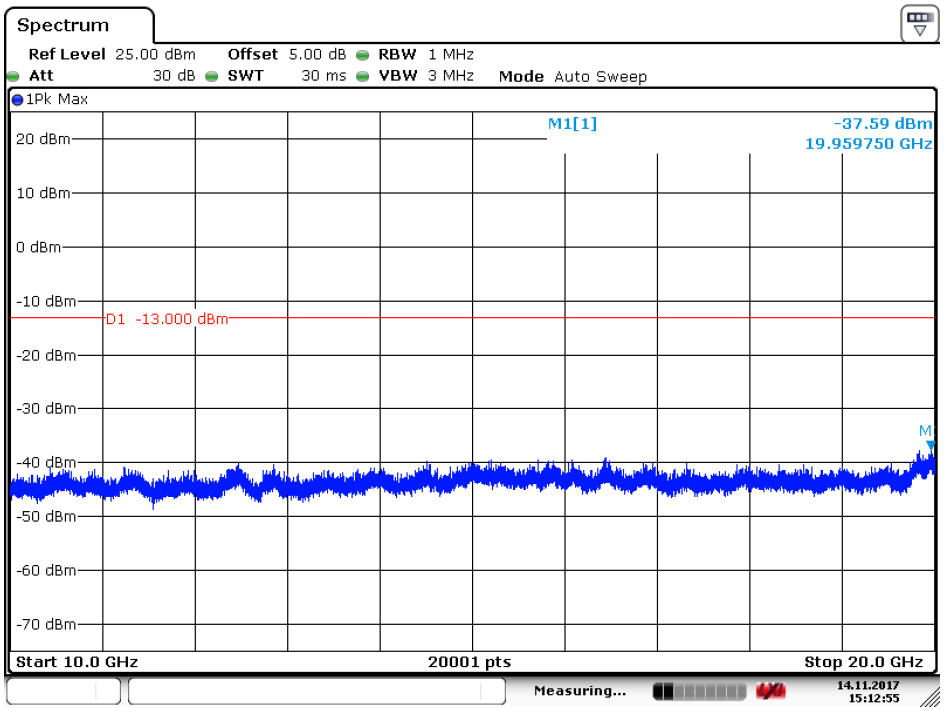
6.1.1.1.2 Test Channel = MCH



Date: 14.NOV.2017 15:06:27

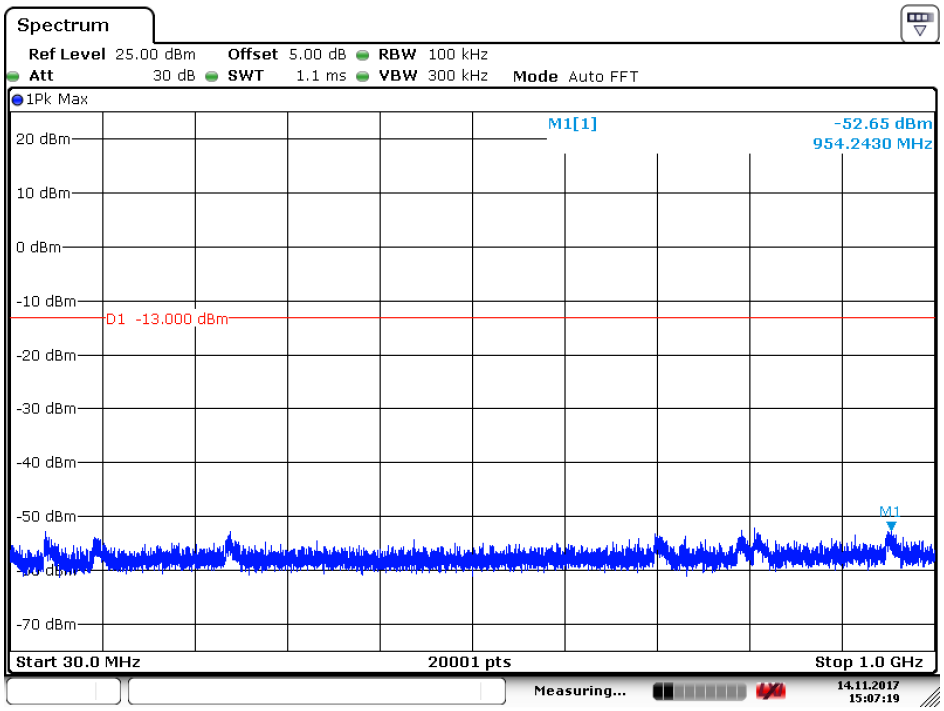


Date: 14.NOV.2017 15:09:52

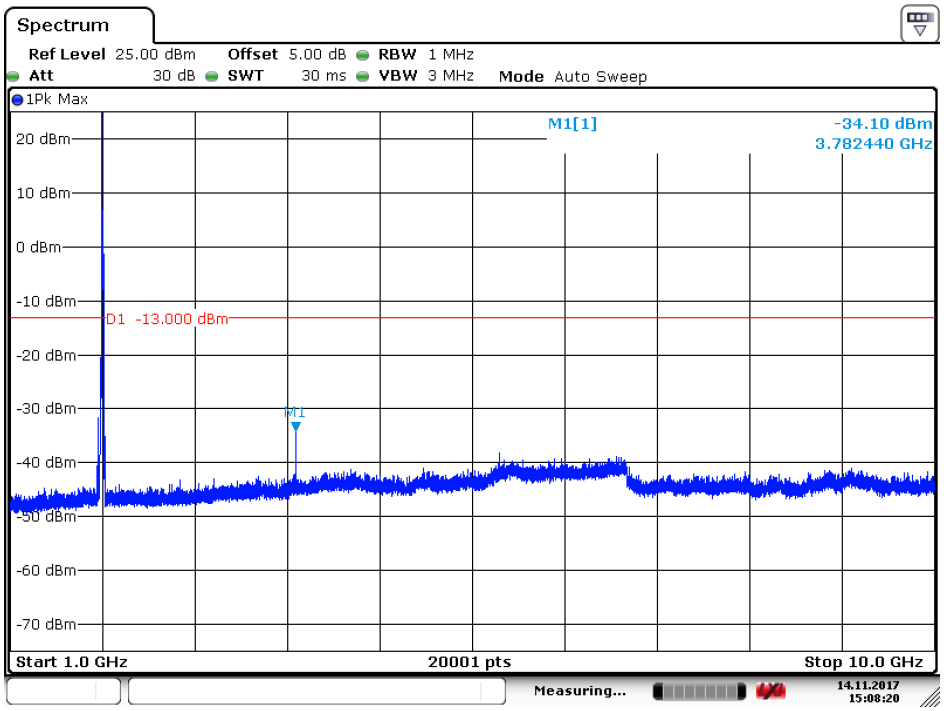


Date: 14.NOV.2017 15:12:55

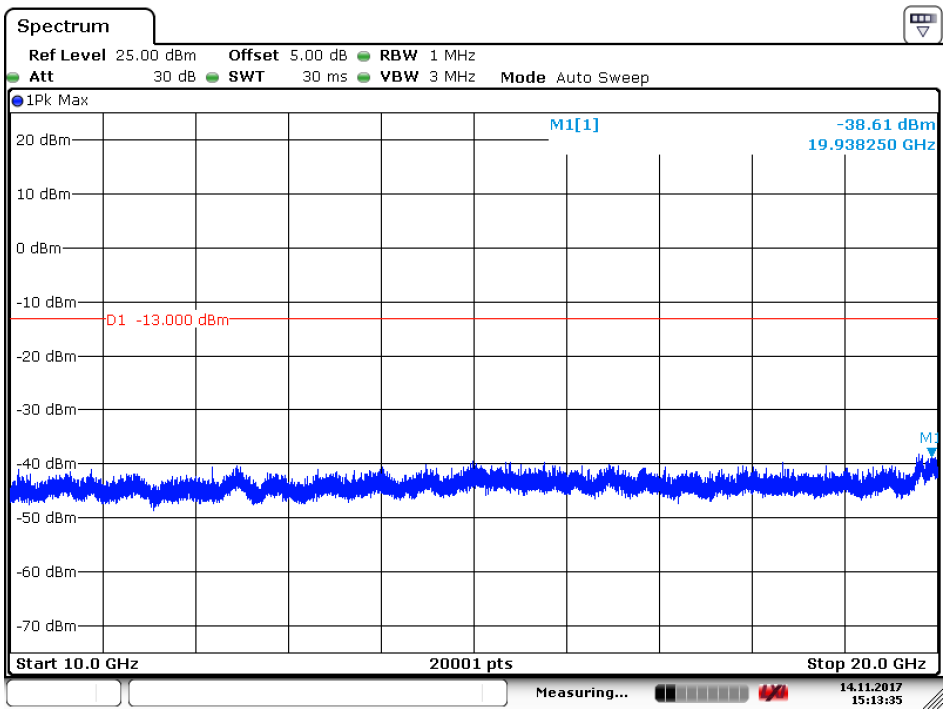
6.1.1.1.3 Test Channel = HCH



Date: 14.NOV.2017 15:07:19



Date: 14.NOV.2017 15:08:20



Date: 14.NOV.2017 15:13:35

7 Field Strength of Spurious Radiation

7.1 For LTE

7.1.1 Test Band = LTE band2

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

Diversity antenna

7.1.1.1.1 Test Channel = LCH

Frequency (MHz)	Level (dBm)	Limit Line (dBm)	Over Limit (dB)	Polarization
1276.000	-66.35	-13.00	-53.35	Vertical
2134.000	-51.61	-13.00	-38.61	Vertical
5586.000	-63.79	-13.00	-50.79	Vertical
1199.000	-66.83	-13.00	-53.83	Horizontal
2123.000	-49.70	-13.00	-36.70	Horizontal
5586.500	-65.37	-13.00	-52.37	Horizontal

7.1.1.1.2 Test Channel = MCH

Frequency (MHz)	Level (dBm)	Limit Line (dBm)	Over Limit (dB)	Polarization
1100.000	-66.40	-13.00	53.40	Vertical
2672.000	-57.39	-13.00	44.39	Vertical
5632.500	-64.95	-13.00	51.95	Vertical
1177.000	-67.38	-13.00	54.38	Horizontal
2744.000	-57.31	-13.00	44.31	Horizontal
5632.500	-62.79	-13.00	49.79	Horizontal

7.1.1.1.3 Test Channel = HCH

Frequency (MHz)	Level (dBm)	Limit Line (dBm)	Over Limit (dB)	Polarization
1397.000	-65.87	-13.00	-52.87	Vertical
2156.000	-49.25	-13.00	-36.25	Vertical
5705.500	-64.22	-13.00	-51.22	Vertical
1397.000	-64.07	-13.00	-51.07	Horizontal
2156.000	-50.75	-13.00	-37.75	Horizontal
5705.500	-62.00	-13.00	-49.00	Horizontal

Main antenna

7.1.1.1.4 Test Channel = LCH

Frequency (MHz)	Level (dBm)	Limit Line (dBm)	Over Limit (dB)	Polarization
3720.445	-60.06	-13.00	-47.06	Vertical
5580.000	-55.80	-13.00	-42.80	Vertical
7440.125	-50.51	-13.00	-37.51	Vertical
3720.445	-64.11	-13.00	-51.11	Horizontal
5580.000	-48.69	-13.00	-35.69	Horizontal
7440.125	-55.89	-13.00	-42.89	Horizontal

7.1.1.1.5 Test Channel = MCH

Frequency (MHz)	Level (dBm)	Limit Line (dBm)	Over Limit (dB)	Polarization
3760.175	-60.86	-13.00	47.86	Vertical
5640.300	-53.73	-13.00	40.73	Vertical
7520.425	-48.72	-13.00	35.72	Vertical
1213.500	-62.27	-13.00	49.27	Horizontal
5640.300	-45.83	-13.00	32.83	Horizontal
7520.425	-51.74	-13.00	38.74	Horizontal

7.1.1.1.6 Test Channel = HCH

Frequency (MHz)	Level (dBm)	Limit Line (dBm)	Over Limit (dB)	Polarization
3800.225	-60.06	-13.00	-47.06	Vertical
5700.000	-54.65	-13.00	-41.65	Vertical
7601.125	-50.68	-13.00	-37.68	Vertical
3800.225	-62.26	-13.00	-49.26	Horizontal
5700.000	-53.08	-13.00	-40.08	Horizontal
7601.125	-50.31	-13.00	-37.31	Horizontal

NOTE:

1) The disturbance above 13GHz and below 30MHz was very low, and the above harmonics were the highest point could be found when testing, so only the above harmonics had been displayed.

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
LTEband2	LTE/TM1 20MHz	LCH	TN	VL	-4.63	-0.00249	PASS
				VN	3.46	0.00186	PASS
				VH	-6.73	-0.00362	PASS
		MCH	TN	VL	1.29	0.00069	PASS
				VN	-6.84	-0.00364	PASS
				VH	2.13	0.00113	PASS
		HCH	TN	VL	-3.56	-0.00187	PASS
				VN	-5.19	-0.00273	PASS
				VH	-2.79	-0.00147	PASS
	LTE/TM2 20MHz	LCH	TN	VL	-4.25	-0.00228	PASS
				VN	-2.25	-0.00121	PASS
				VH	-5.66	-0.00304	PASS
		MCH	TN	VL	6.56	0.00349	PASS
				VN	-2.50	-0.00133	PASS
				VH	4.59	0.00244	PASS
		HCH	TN	VL	-3.78	-0.00199	PASS
				VN	-8.02	-0.00422	PASS
				VH	4.44	0.00234	PASS
	LTE/TM3 20MHz	LCH	TN	VL	2.39	0.00128	PASS
				VN	-2.32	-0.00125	PASS
				VH	4.36	0.00234	PASS
		MCH	TN	VL	-2.23	-0.00119	PASS
				VN	0.93	0.00049	PASS
				VH	-2.54	-0.00135	PASS
		HCH	TN	VL	3.29	0.00173	PASS
				VN	1.25	0.00066	PASS
				VH	-2.45	-0.00129	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
LTEband2	LTE/TM1 20MHz	LCH	VN	-30	-0.49	-0.00026	PASS
				-20	-1.35	-0.00073	PASS
				-10	2.18	0.00117	PASS
				0	1.70	0.00091	PASS
				10	1.55	0.00083	PASS
				20	0.12	0.00006	PASS
				30	-0.61	-0.00033	PASS
				40	-0.11	-0.00006	PASS
				50	0.69	0.00037	PASS
		MCH	VN	-30	-2.80	-0.00149	PASS
				-20	-5.91	-0.00314	PASS
				-10	-5.49	-0.00292	PASS
				0	-5.69	-0.00303	PASS
				10	-0.04	-0.00002	PASS
				20	-4.94	-0.00263	PASS
				30	-3.66	-0.00195	PASS
				40	-4.02	-0.00214	PASS
				50	-1.92	-0.00102	PASS
		HCH	VN	-30	0.94	0.00049	PASS
				-20	-1.43	-0.00075	PASS
				-10	1.23	0.00065	PASS
				0	-2.43	-0.00128	PASS
				10	2.61	0.00137	PASS
				20	-3.57	-0.00188	PASS
				30	-2.60	-0.00137	PASS
				40	-3.43	-0.00181	PASS
				50	-8.00	-0.00421	PASS

Test Band	Test Mode	Test Channel	Test Volt.	Test Temp.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict
LTEband2	LTE/TM2 20MHz	LCH	VN	-30	-0.50	-0.00027	PASS
				-20	-2.45	-0.00132	PASS
				-10	3.38	0.00182	PASS
				0	2.64	0.00142	PASS
				10	1.60	0.00086	PASS
				20	-0.23	-0.00012	PASS
				30	-0.44	-0.00024	PASS
				40	5.34	0.00287	PASS
				50	0.79	0.00042	PASS
		MCH	VN	-30	-3.80	-0.00202	PASS
				-20	-5.38	-0.00286	PASS
				-10	-7.29	-0.00388	PASS
				0	-4.32	-0.00230	PASS
				10	-0.34	-0.00018	PASS
				20	1.74	0.00093	PASS
				30	-3.64	-0.00194	PASS
				40	-2.62	-0.00139	PASS
				50	-3.91	-0.00208	PASS
		HCH	VN	-30	1.34	0.00071	PASS
				-20	-2.55	-0.00134	PASS
				-10	1.59	0.00084	PASS
				0	-3.73	-0.00196	PASS
				10	2.88	0.00152	PASS
				20	-1.47	-0.00077	PASS
				30	-2.59	-0.00136	PASS
				40	-4.33	-0.00228	PASS
				50	-7.60	-0.00400	PASS

Test Band	Test Mode	Test Channel	Test Volt.	Test Temp.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict
LTEband2	LTE/TM3 20MHz	LCH	VN	-30	1.50	0.00081	PASS
				-20	-1.60	-0.00086	PASS
				-10	4.38	0.00235	PASS
				0	1.69	0.00091	PASS
				10	1.43	0.00077	PASS
				20	0.54	0.00029	PASS
				30	-2.61	-0.00140	PASS
				40	-0.69	-0.00037	PASS
				50	3.52	0.00189	PASS
		MCH	VN	-30	-7.34	-0.00390	PASS
				-20	-5.33	-0.00284	PASS
				-10	-7.23	-0.00385	PASS
				0	-5.34	-0.00284	PASS
				10	-4.04	-0.00215	PASS
				20	-6.34	-0.00337	PASS
				30	-5.26	-0.00280	PASS
				40	-4.13	-0.00220	PASS
				50	-6.47	-0.00344	PASS
		HCH	VN	-30	2.34	0.00123	PASS
				-20	-1.83	-0.00096	PASS
				-10	1.57	0.00083	PASS
				0	-2.43	-0.00128	PASS
				10	1.60	0.00084	PASS
				20	-0.57	-0.00030	PASS
				30	0.66	0.00035	PASS
				40	-5.43	-0.00286	PASS
				50	-5.90	-0.00311	PASS

The End