



Appendix B

E-UTRA Band 4



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1 Effective (Isotropic) Radiated Power Output Data

Effective Isotropic Radiated Power of Transmitter (EIRP) for LTE BAND 4

Test Band(LTE)	Test Mode	Test Bandwidth	Test channel	Test RB	Measured (dBm)	EIRP (dBm)	limit (dBm)	Verdict
BAND 4	LTE/TM1	5M	LCH	RB1#0	22.85	24.23	33.00	PASS
				RB1#13	22.91	24.29	33.00	PASS
				RB1#24	23.06	24.44	33.00	PASS
				RB12#0	22.96	24.34	33.00	PASS
				RB12#6	22.98	24.36	33.00	PASS
				RB12#13	23.09	24.47	33.00	PASS
				RB25#0	22.03	23.41	33.00	PASS
			MCH	RB1#0	23.44	24.82	33.00	PASS
				RB1#13	23.39	24.77	33.00	PASS
				RB1#24	23.08	24.46	33.00	PASS
				RB12#0	23.52	24.9	33.00	PASS
				RB12#6	23.46	24.84	33.00	PASS
				RB12#13	23.38	24.76	33.00	PASS
				RB25#0	22.56	23.94	33.00	PASS
			HCH	RB1#0	23.46	24.84	33.00	PASS
				RB1#13	23.54	24.92	33.00	PASS
				RB1#24	23.5	24.88	33.00	PASS
				RB12#0	23.37	24.75	33.00	PASS
				RB12#6	23.34	24.72	33.00	PASS
				RB12#13	23.36	24.74	33.00	PASS
				RB25#0	22.47	23.85	33.00	PASS

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Test Band(LTE)	Test Mode	Test Bandwidth	Test channel	Test RB	Measured (dBm)	EIRP (dBm)	limit (dBm)	Verdict
BAND 4	LTE/TM2	5M	LCH	RB1#0	23.14	24.52	33.00	PASS
				RB1#13	23.31	24.69	33.00	PASS
				RB1#24	23.38	24.76	33.00	PASS
				RB12#0	21.39	22.77	33.00	PASS
				RB12#6	21.6	22.98	33.00	PASS
				RB12#13	21.66	23.04	33.00	PASS
				RB25#0	21.67	23.05	33.00	PASS
			MCH	RB1#0	22.8	24.18	33.00	PASS
				RB1#13	22.87	24.25	33.00	PASS
				RB1#24	22.36	23.74	33.00	PASS
				RB12#0	21.41	22.79	33.00	PASS
				RB12#6	21.16	22.54	33.00	PASS
				RB12#13	21.18	22.56	33.00	PASS
				RB25#0	21.2	22.58	33.00	PASS
			HCH	RB1#0	22.32	23.7	33.00	PASS
				RB1#13	22.95	24.33	33.00	PASS
				RB1#24	23.03	24.41	33.00	PASS
				RB12#0	21.27	22.65	33.00	PASS
				RB12#6	21.09	22.47	33.00	PASS
				RB12#13	21.24	22.62	33.00	PASS
				RB25#0	21.35	22.73	33.00	PASS

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BAND 4	LTE/TM1	10M	LCH	RB1#0	23.37	24.75	33.00	PASS
				RB1#25	23.68	25.06	33.00	PASS
				RB1#49	24.03	25.41	33.00	PASS
				RB25#0	22.74	24.12	33.00	PASS
				RB25#13	22.89	24.27	33.00	PASS
				RB25#25	23.01	24.39	33.00	PASS
				RB50#0	22.86	24.24	33.00	PASS
			MCH	RB1#0	23.63	25.01	33.00	PASS
				RB1#25	23.36	24.74	33.00	PASS
				RB1#49	23.11	24.49	33.00	PASS
				RB25#0	22.53	23.91	33.00	PASS
				RB25#13	22.4	23.78	33.00	PASS
				RB25#25	22.23	23.61	33.00	PASS
				RB50#0	22.42	23.8	33.00	PASS
			HCH	RB1#0	23.12	24.5	33.00	PASS
				RB1#25	23.44	24.82	33.00	PASS
				RB1#49	23.49	24.87	33.00	PASS
				RB25#0	22.46	23.84	33.00	PASS
				RB25#13	22.48	23.86	33.00	PASS
				RB25#25	22.58	23.96	33.00	PASS
				RB50#0	22.49	23.87	33.00	PASS

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Test Band(LTE)	Test Mode	Test Bandwidth	Test channel	Test RB	Measured (dBm)	EIRP (dBm)	limit (dBm)	Verdict
BAND 4	LTE/TM2	10M	LCH	RB1#0	22.6	23.98	33.00	PASS
				RB1#25	23.52	24.9	33.00	PASS
				RB1#49	23.86	25.24	33.00	PASS
				RB25#0	21.71	23.09	33.00	PASS
				RB25#13	21.87	23.25	33.00	PASS
				RB25#25	22.05	23.43	33.00	PASS
				RB50#0	21.83	23.21	33.00	PASS
			MCH	RB1#0	23.16	24.54	33.00	PASS
				RB1#25	22.32	23.7	33.00	PASS
				RB1#49	22.06	23.44	33.00	PASS
				RB25#0	21.35	22.73	33.00	PASS
				RB25#13	21.18	22.56	33.00	PASS
				RB25#25	21.14	22.52	33.00	PASS
				RB50#0	21.33	22.71	33.00	PASS
			HCH	RB1#0	22.05	23.43	33.00	PASS
				RB1#25	22.7	24.08	33.00	PASS
				RB1#49	22.72	24.1	33.00	PASS
				RB25#0	21.2	22.58	33.00	PASS
				RB25#13	21.38	22.76	33.00	PASS
				RB25#25	21.29	22.67	33.00	PASS
				RB50#0	21.3	22.68	33.00	PASS

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Test Band(LTE)	Test Mode	Test Bandwidth	Test channel	Test RB	Measured (dBm)	EIRP (dBm)	limit (dBm)	Verdict
BAND 4	LTE/TM1	15M	LCH	RB1#0	23.69	25.07	33.00	PASS
				RB1#38	23.71	25.09	33.00	PASS
				RB1#74	24.06	25.44	33.00	PASS
				RB36#0	22.78	24.16	33.00	PASS
				RB36#18	23.03	24.41	33.00	PASS
				RB36#39	23.07	24.45	33.00	PASS
				RB75#0	22.95	24.33	33.00	PASS
			MCH	RB1#0	23.93	25.31	33.00	PASS
				RB1#38	23.53	24.91	33.00	PASS
				RB1#74	23.31	24.69	33.00	PASS
				RB36#0	22.61	23.99	33.00	PASS
				RB36#18	22.42	23.8	33.00	PASS
				RB36#39	22.27	23.65	33.00	PASS
				RB75#0	22.46	23.84	33.00	PASS
			HCH	RB1#0	23.06	24.44	33.00	PASS
				RB1#38	23.19	24.57	33.00	PASS
				RB1#74	23.46	24.84	33.00	PASS
				RB36#0	22.27	23.65	33.00	PASS
				RB36#18	22.44	23.82	33.00	PASS
				RB36#39	22.52	23.9	33.00	PASS
				RB75#0	22.43	23.81	33.00	PASS

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Test Band(LTE)	Test Mode	Test Bandwidth	Test channel	Test RB	Measured (dBm)	EIRP (dBm)	limit (dBm)	Verdict
BAND 4	LTE/TM2	15M	LCH	RB1#0	22.88	24.26	33.00	PASS
				RB1#38	23.68	25.06	33.00	PASS
				RB1#74	24.13	25.51	33.00	PASS
				RB36#0	21.81	23.19	33.00	PASS
				RB36#18	21.99	23.37	33.00	PASS
				RB36#39	22.05	23.43	33.00	PASS
				RB75#0	21.97	23.35	33.00	PASS
			MCH	RB1#0	22.96	24.34	33.00	PASS
				RB1#38	22.34	23.72	33.00	PASS
				RB1#74	21.87	23.25	33.00	PASS
				RB36#0	21.63	23.01	33.00	PASS
				RB36#18	21.27	22.65	33.00	PASS
				RB36#39	21.12	22.5	33.00	PASS
				RB75#0	21.43	22.81	33.00	PASS
			HCH	RB1#0	22.73	24.11	33.00	PASS
				RB1#38	22.69	24.07	33.00	PASS
				RB1#74	22.52	23.9	33.00	PASS
				RB36#0	21.23	22.61	33.00	PASS
				RB36#18	21.24	22.62	33.00	PASS
				RB36#39	21.29	22.67	33.00	PASS
				RB75#0	21.28	22.66	33.00	PASS

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Test Band(LTE)	Test Mode	Test Bandwidth	Test channel	Test RB	Measured (dBm)	EIRP (dBm)	limit (dBm)	Verdict
BAND 4	LTE/TM1	20M	LCH	RB1#0	23.54	24.92	33.00	PASS
				RB1#50	23.96	25.34	33.00	PASS
				RB1#99	23.5	24.88	33.00	PASS
				RB50#0	22.87	24.25	33.00	PASS
				RB50#25	23.03	24.41	33.00	PASS
				RB50#50	22.9	24.28	33.00	PASS
				RB100#0	22.93	24.31	33.00	PASS
			MCH	RB1#0	24.04	25.42	33.00	PASS
				RB1#50	23.83	25.21	33.00	PASS
				RB1#99	23.27	24.65	33.00	PASS
				RB50#0	22.62	24	33.00	PASS
				RB50#25	22.38	23.76	33.00	PASS
				RB50#50	22.14	23.52	33.00	PASS
				RB100#0	22.38	23.76	33.00	PASS
			HCH	RB1#0	23.35	24.73	33.00	PASS
				RB1#50	23.45	24.83	33.00	PASS
				RB1#99	23.57	24.95	33.00	PASS
				RB50#0	22.19	23.57	33.00	PASS
				RB50#25	22.23	23.61	33.00	PASS
				RB50#50	22.4	23.78	33.00	PASS
				RB100#0	22.27	23.65	33.00	PASS

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Test Band(LTE)	Test Mode	Test Bandwidth	Test channel	Test RB	Measured (dBm)	EIRP (dBm)	limit (dBm)	Verdict
BAND 4	LTE/TM2	20M	LCH	RB1#0	22.21	23.59	33.00	PASS
				RB1#50	22.8	24.18	33.00	PASS
				RB1#99	22.54	23.92	33.00	PASS
				RB50#0	21.87	23.25	33.00	PASS
				RB50#25	22.02	23.4	33.00	PASS
				RB50#50	21.87	23.25	33.00	PASS
				RB100#0	21.73	23.11	33.00	PASS
			MCH	RB1#0	22.24	23.62	33.00	PASS
				RB1#50	22.18	23.56	33.00	PASS
				RB1#99	21.99	23.37	33.00	PASS
				RB50#0	21.67	23.05	33.00	PASS
				RB50#25	21.37	22.75	33.00	PASS
				RB50#50	21.17	22.55	33.00	PASS
				RB100#0	21.5	22.88	33.00	PASS
			HCH	RB1#0	22.32	23.7	33.00	PASS
				RB1#50	21.95	23.33	33.00	PASS
				RB1#99	21.98	23.36	33.00	PASS
				RB50#0	21.07	22.45	33.00	PASS
				RB50#25	21.24	22.62	33.00	PASS
				RB50#50	21.27	22.65	33.00	PASS
				RB100#0	21.35	22.73	33.00	PASS

Note:

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

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

b: SGP=Signal Generator Level

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2 Peak-to-Average Ratio

Part I - Test Results

Test Band	Test Mode	Test Channel	Measured[dB]	Limit [dB]	Verdict
BAND 4	TM1/20M	LCH	5.16	13	PASS
		MCH	5.36	13	PASS
		HCH	5.36	13	PASS
	TM2/20M	LCH	6.06	13	PASS
		MCH	6.14	13	PASS
		HCH	6.20	13	PASS

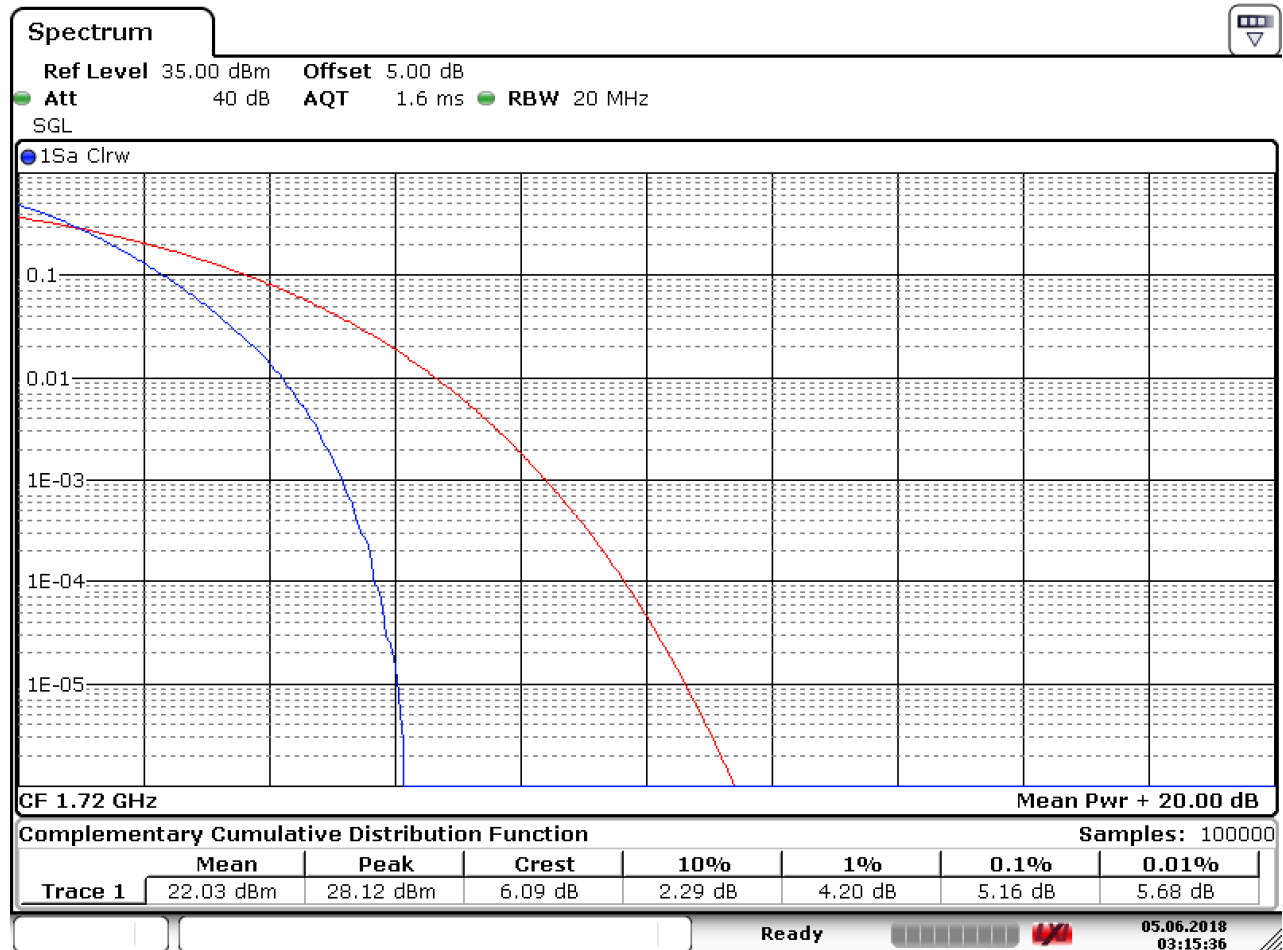
Part II - Test Plots

2.1 For LTE

2.1.1 Test Band = LTE BAND 4

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

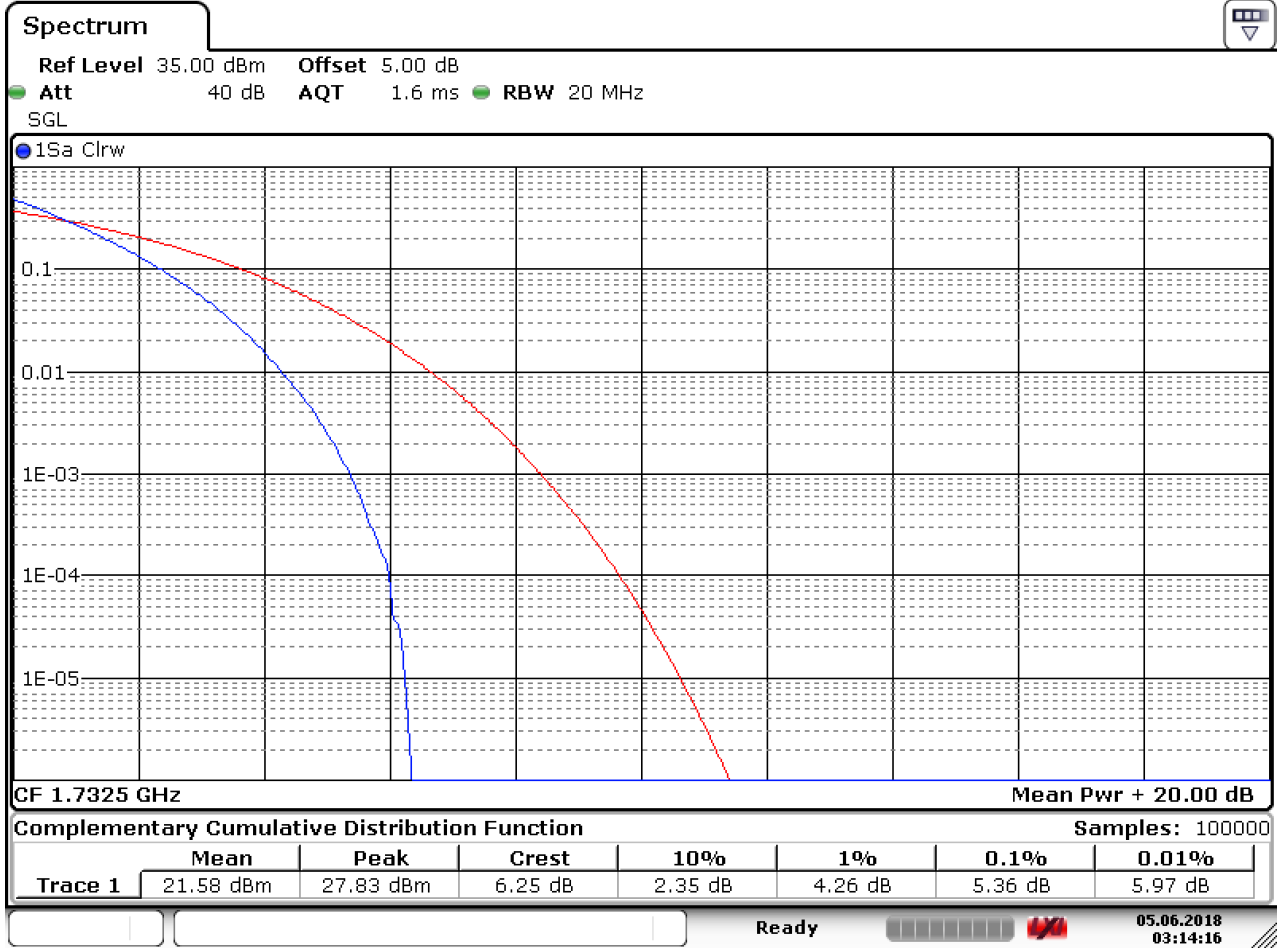
2.1.1.1.1 Test Channel = LCH



Date: 5.JUN.2018 03:15:36



2.1.1.1.2 Test Channel = MCH

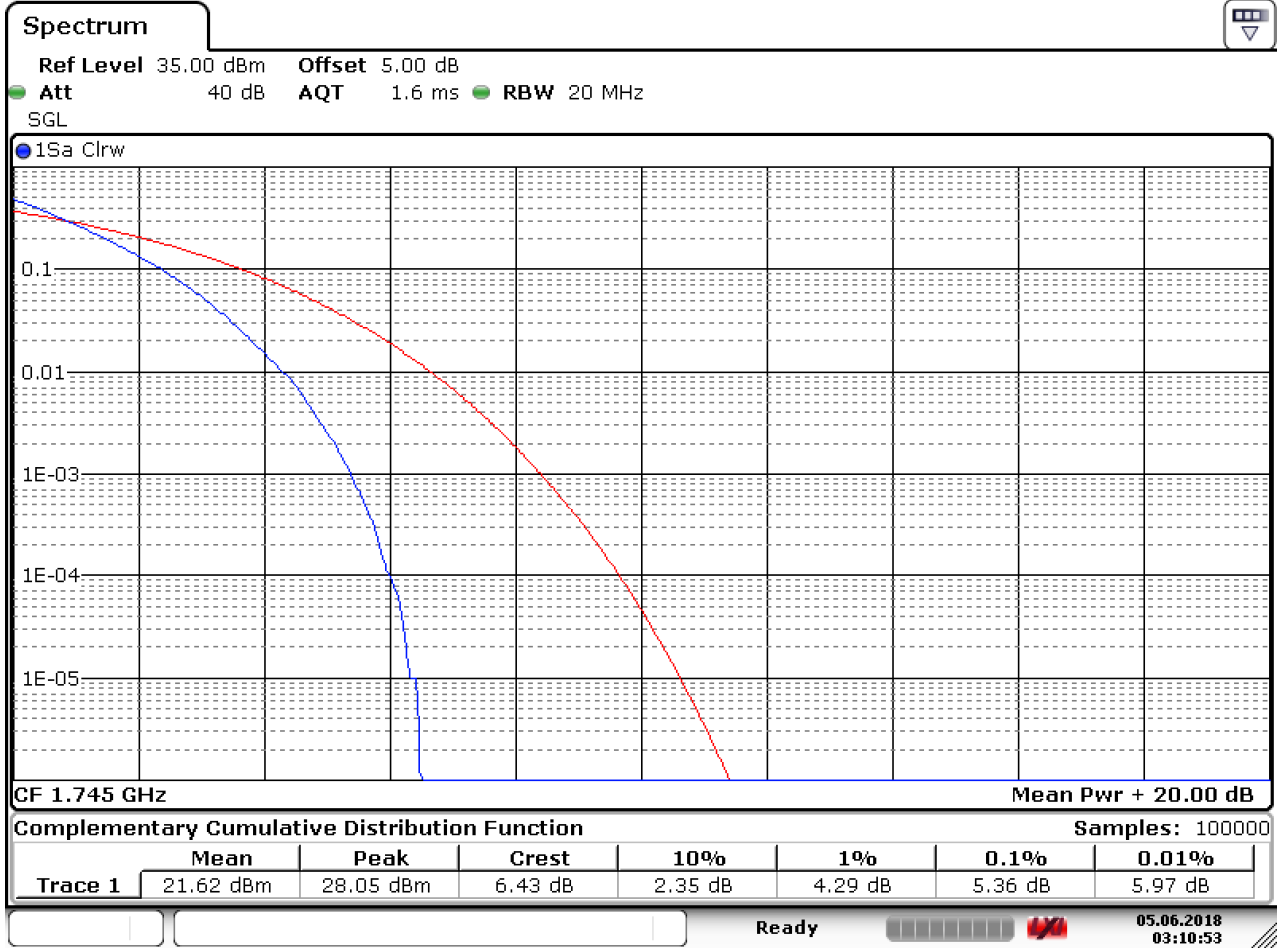


Date: 5.JUN.2018 03:14:16

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2.1.1.1.3 Test Channel = HCH



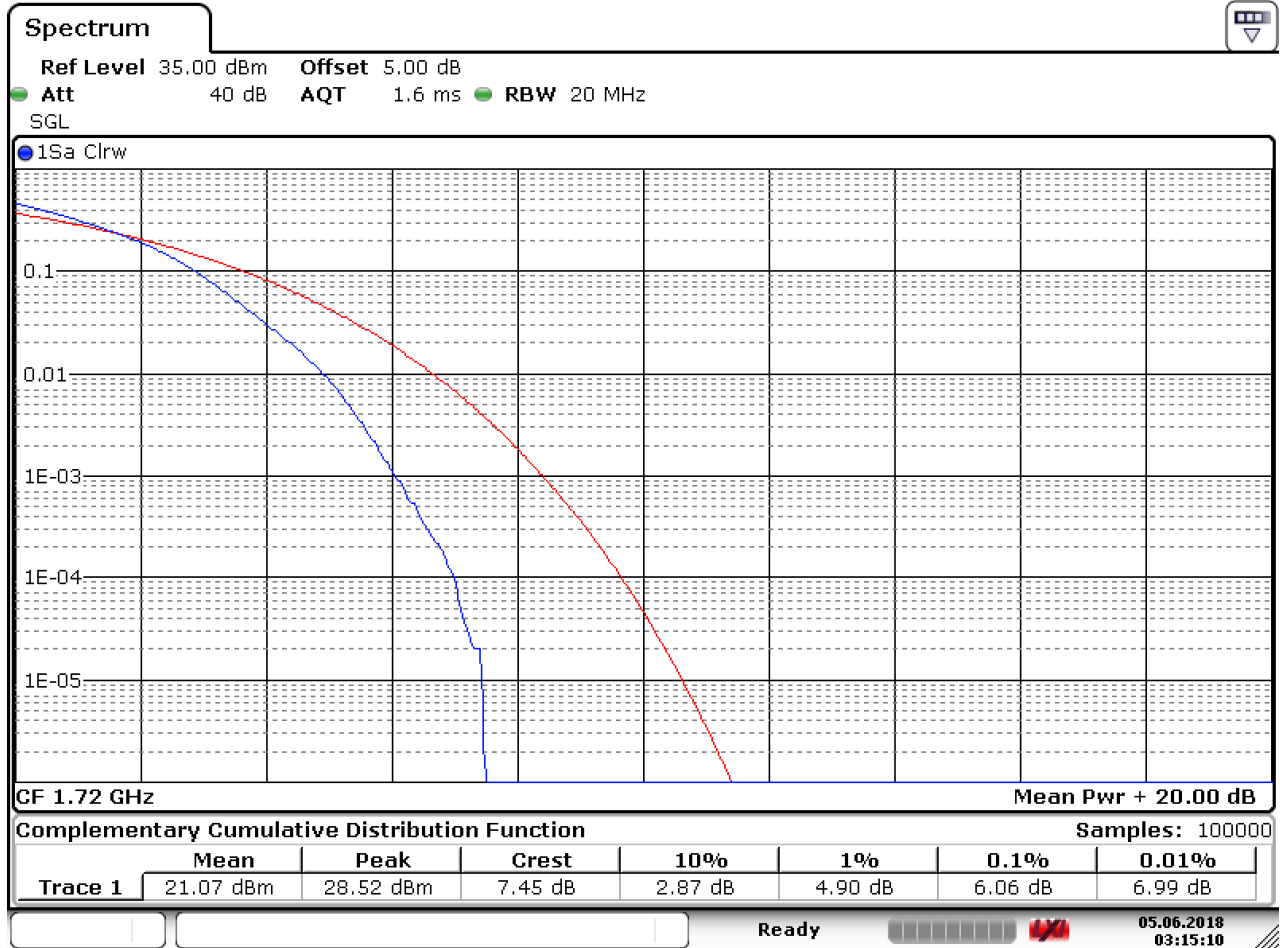
Date: 5.JUN.2018 03:10:54

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

2.1.1.2.1 Test Channel = LCH

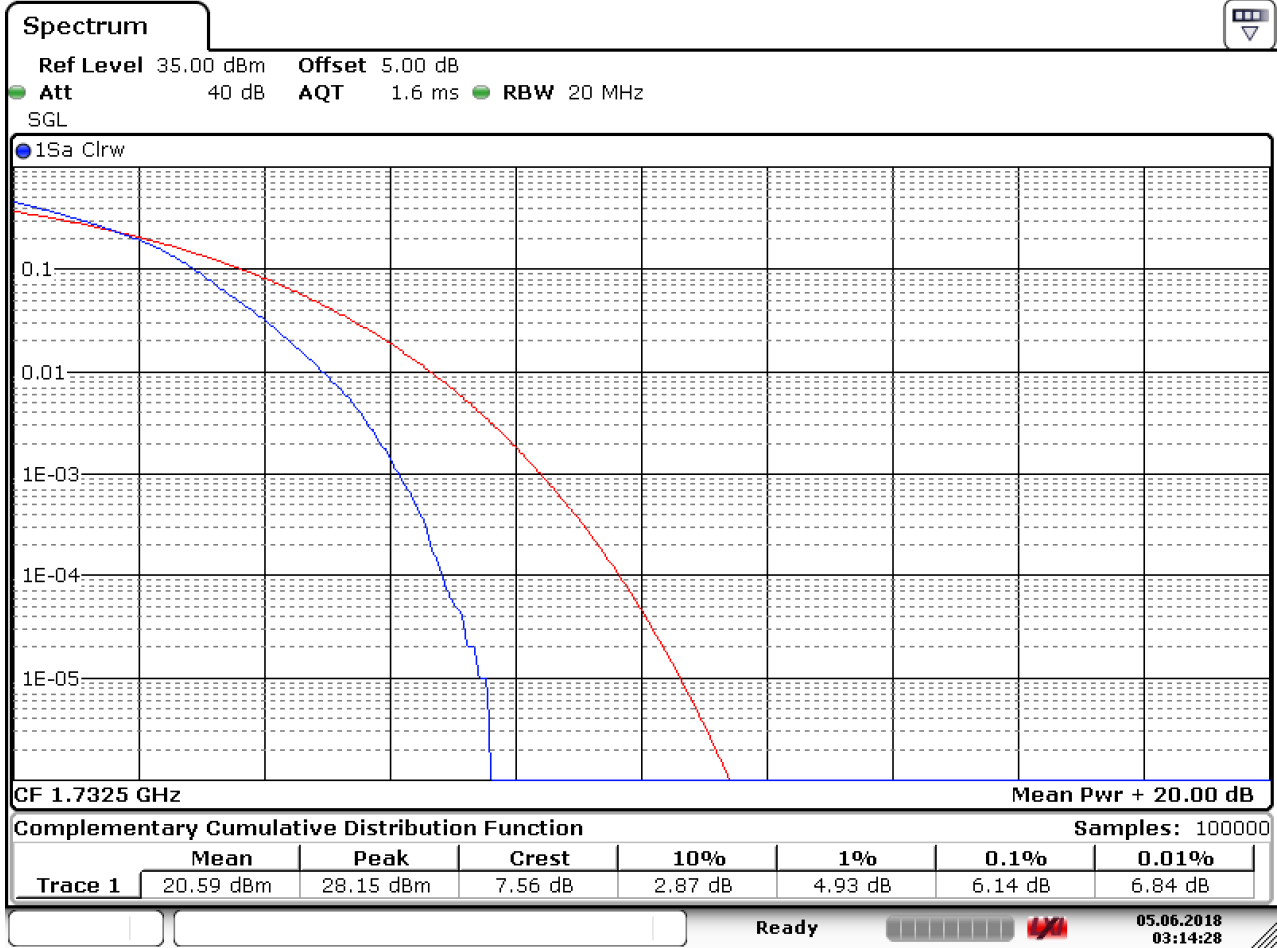


Date: 5.JUN.2018 03:15:10

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2.1.1.2.2 Test Channel = MCH

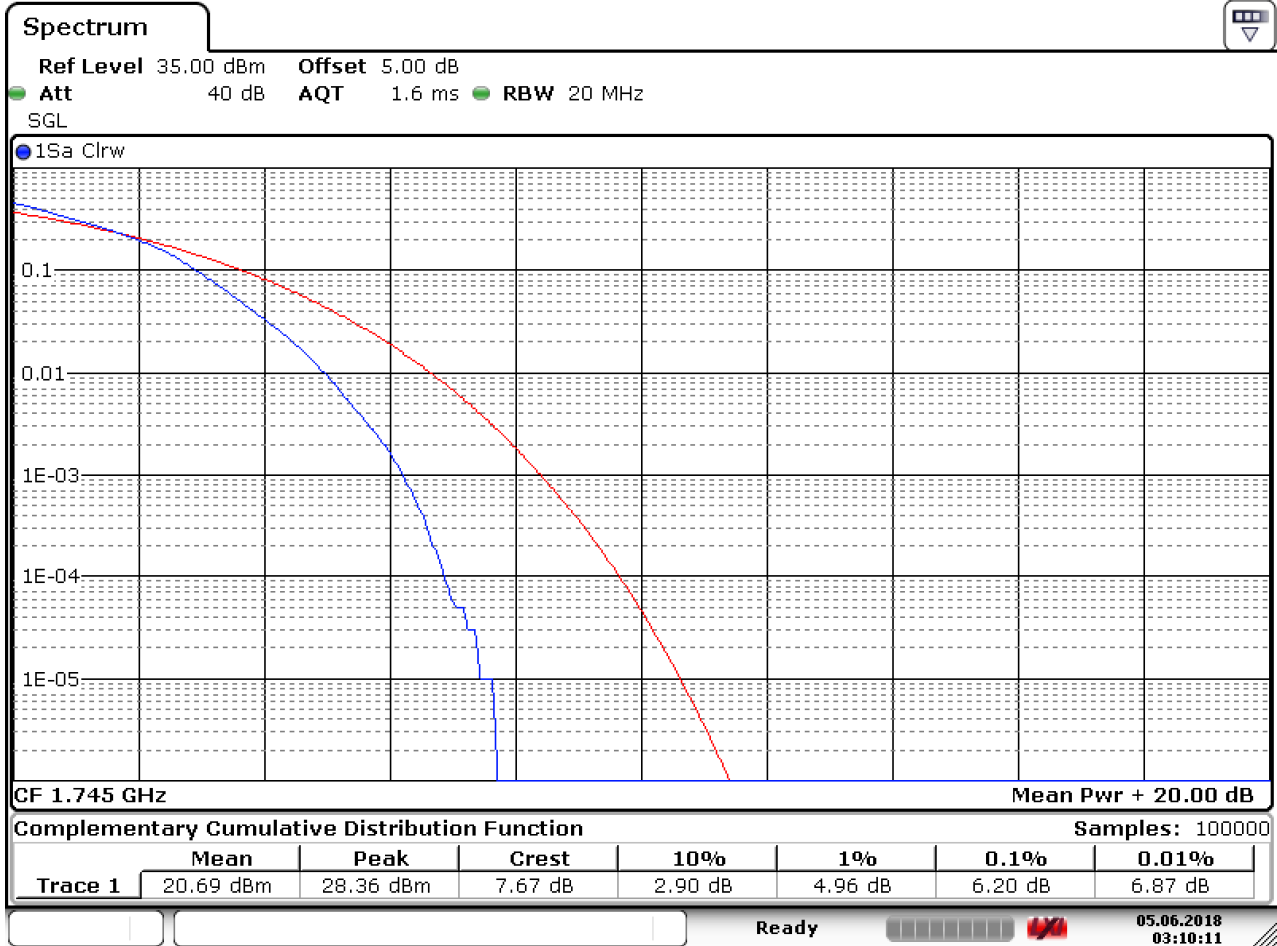


Date: 5.JUN.2018 03:14:29

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2.1.1.2.3 Test Channel = HCH



Date: 5.JUN.2018 03:10:10

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3 Modulation Characteristics

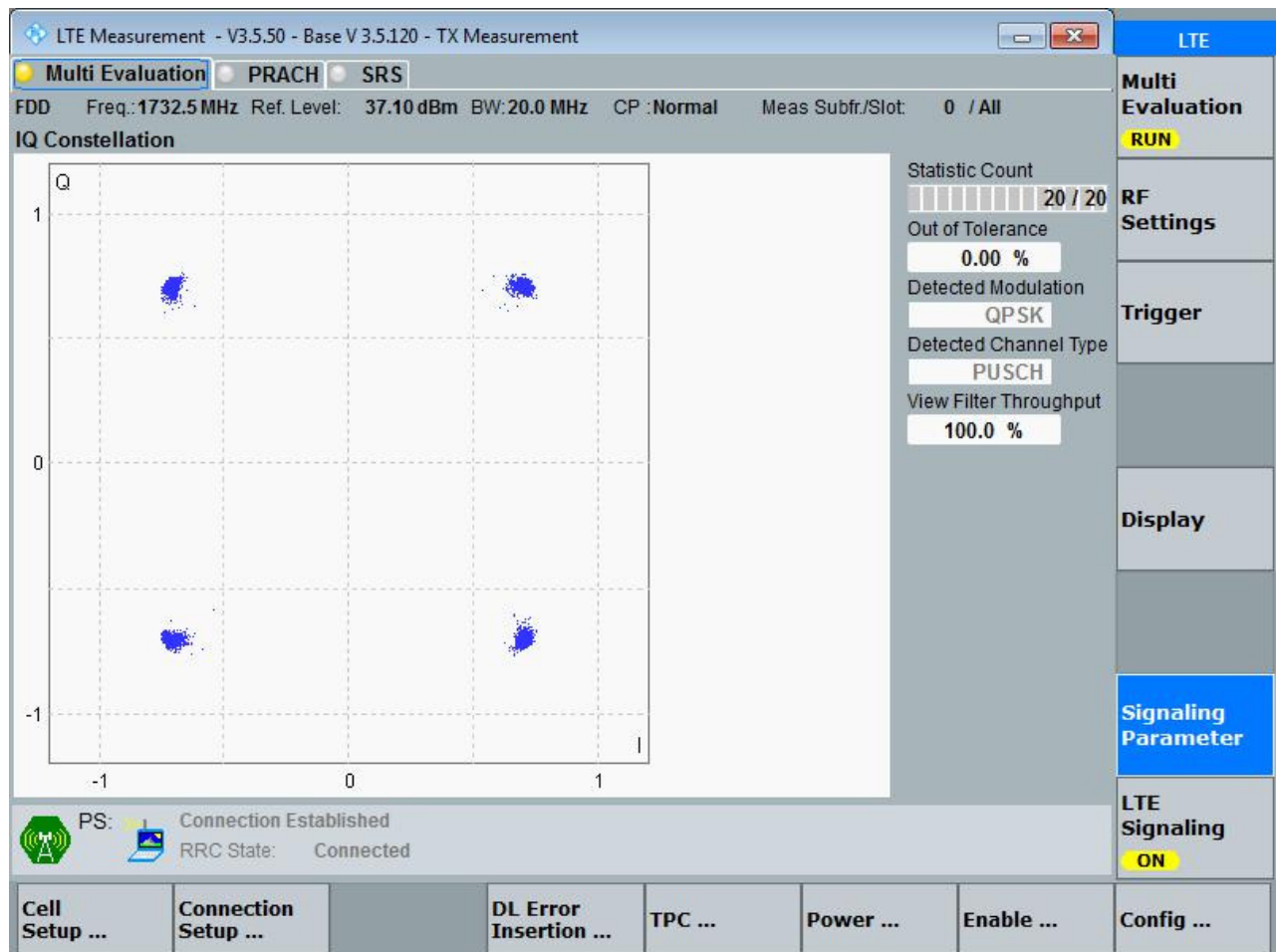
Part I - Test Plots

3.1 For LTE

3.1.1 Test Band = LTE BAND 4

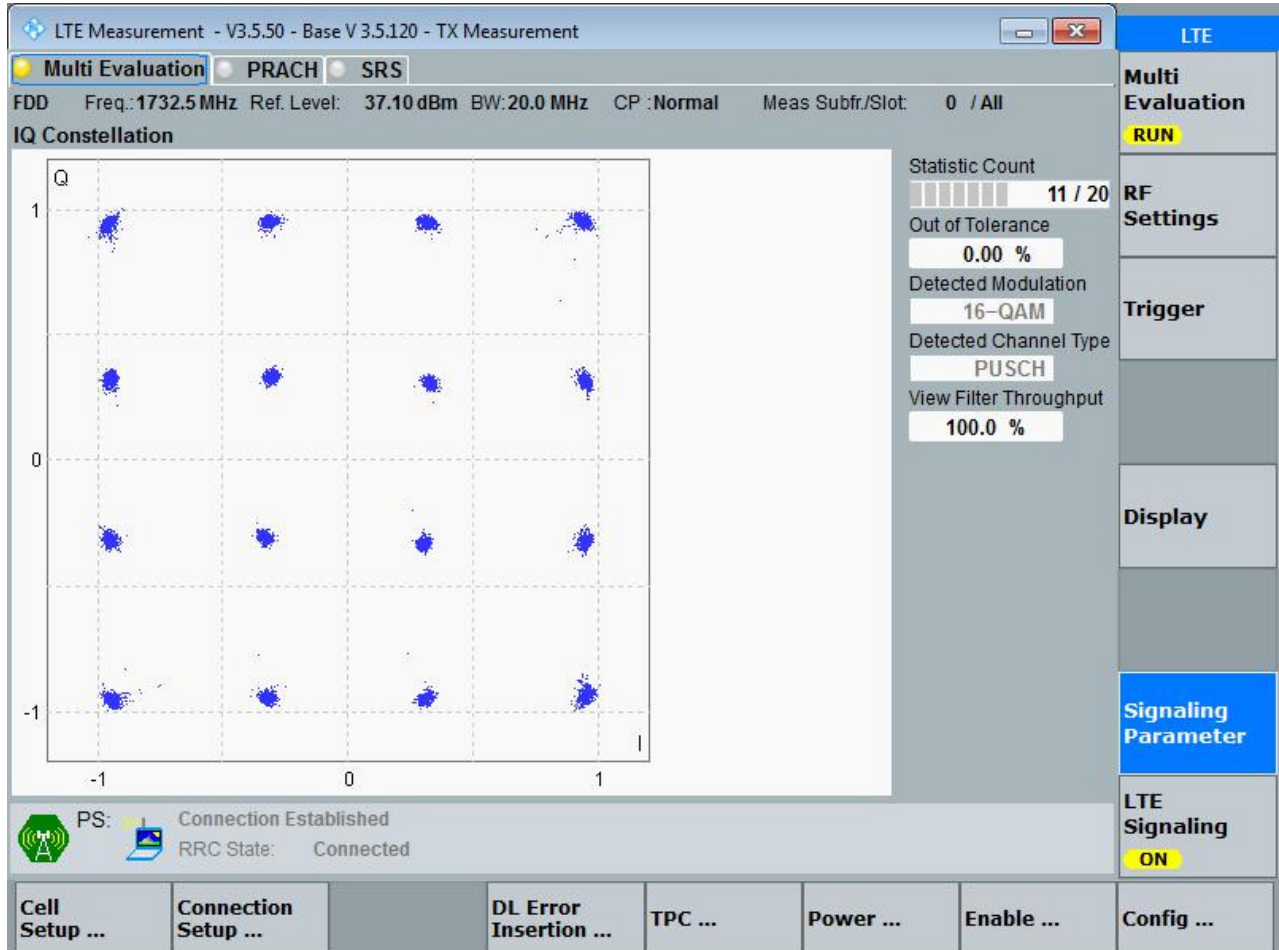
3.1.1.1 Test Mode = LTE /TM1 20MHz

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



The screenshot displays the LTE Measurement software interface. The main window shows the 'IQ Constellation' plot with a 4x4 grid of points, indicating 16-QAM modulation. The plot axes are labeled 'Q' (vertical) and 'I' (horizontal), ranging from -1 to 1. To the right of the plot, the 'Statistic Count' is shown as 11 / 20, with a bar chart. Below this, the 'Out of Tolerance' is 0.00 %, 'Detected Modulation' is 16-QAM, 'Detected Channel Type' is PUSCH, and 'View Filter Throughput' is 100.0 %.

The interface includes a top menu bar with 'Multi Evaluation', 'PRACH', and 'SRS' options. Below the menu, the following parameters are displayed: FDD, Freq.: 1732.5 MHz, Ref. Level: 37.10 dBm, BW: 20.0 MHz, CP: Normal, Meas Subfr./Slot: 0 / All.

On the right side, there is a vertical toolbar with buttons for 'LTE', 'Multi Evaluation', 'RF Settings', 'Trigger', 'Display', 'Signaling Parameter', and 'LTE Signaling'. The 'Multi Evaluation' button is highlighted in yellow and labeled 'RUN'. The 'LTE Signaling' button is also highlighted in yellow and labeled 'ON'.

At the bottom of the interface, there is a status bar showing 'PS: Connection Established' and 'RRC State: Connected'. Below the status bar, there are several tabs: 'Cell Setup ...', 'Connection Setup ...', 'DL Error Insertion ...', 'TPC ...', 'Power ...', 'Enable ...', and 'Config ...'.



4 Bandwidth

Part I - Test Results

Test Band	Test Mode	Test Channel	Occupied Bandwidth [MHz]	Emission Bandwidth [MHz]	Verdict
LTE Band 4	TM1/ 5MHz	LCH	4.46	4.78	PASS
		MCH	4.49	4.84	PASS
		HCH	4.47	4.82	PASS
	TM2/ 5MHz	LCH	4.47	4.80	PASS
		MCH	4.47	4.85	PASS
		HCH	4.47	4.84	PASS
	TM1/10MHz	LCH	8.95	9.61	PASS
		MCH	8.91	9.53	PASS
		HCH	8.93	9.51	PASS
	TM2/ 10MHz	LCH	8.91	9.67	PASS
		MCH	8.95	9.59	PASS
		HCH	8.91	9.51	PASS
	TM1/ 15MHz	LCH	13.46	14.75	PASS
		MCH	13.49	14.78	PASS
		HCH	13.47	14.78	PASS
	TM2/ 15MHz	LCH	13.49	14.81	PASS
		MCH	13.49	14.78	PASS
		HCH	13.49	14.72	PASS
	TM1/ 20MHz	LCH	17.90	19.18	PASS
		MCH	17.86	19.42	PASS
		HCH	17.90	19.46	PASS
	TM2/ 20MHz	LCH	17.90	19.26	PASS
		MCH	17.90	19.30	PASS
		HCH	17.94	19.34	PASS

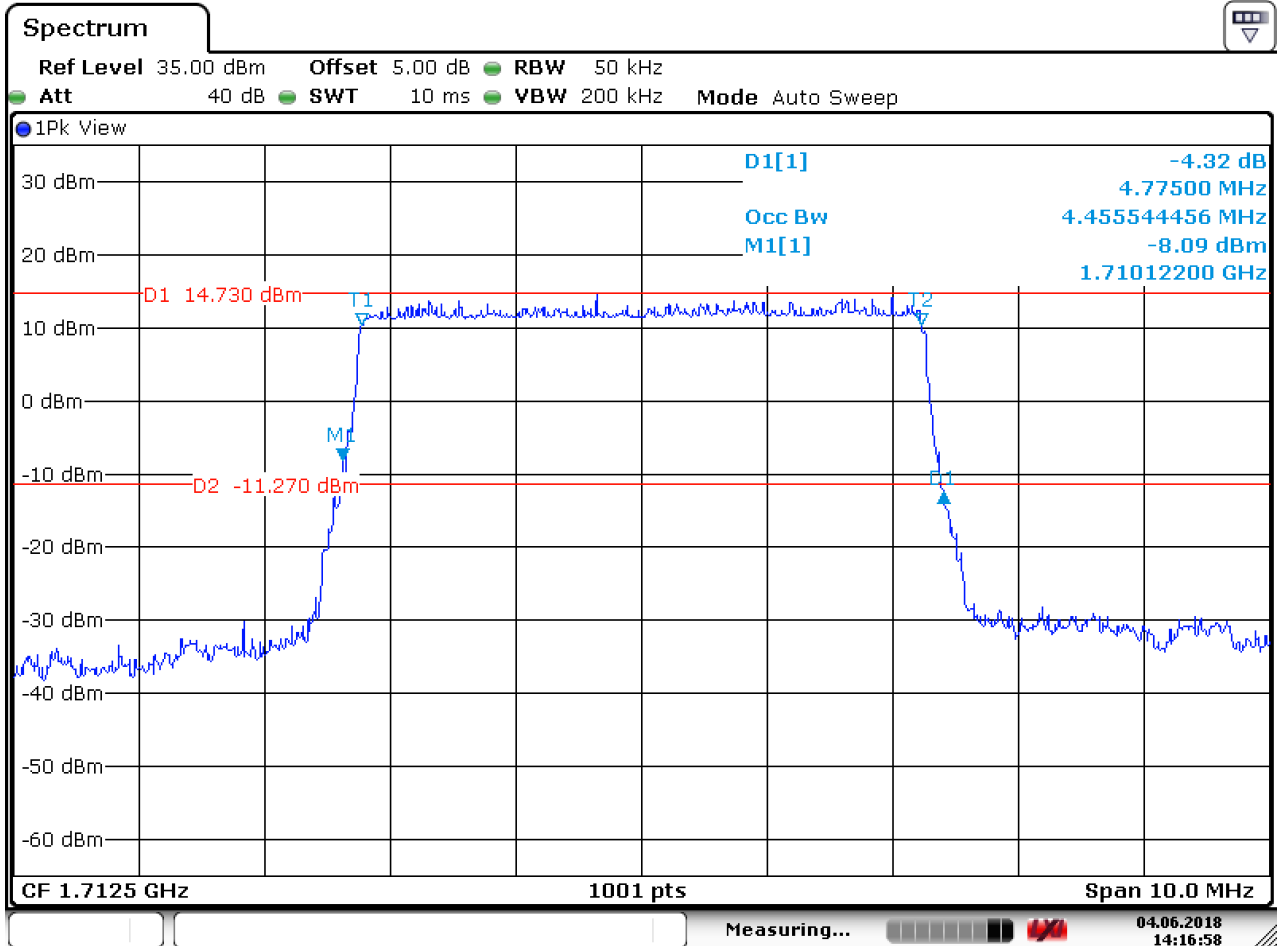


4.1 For LTE

4.1.1 Test Band = LTE BAND 4

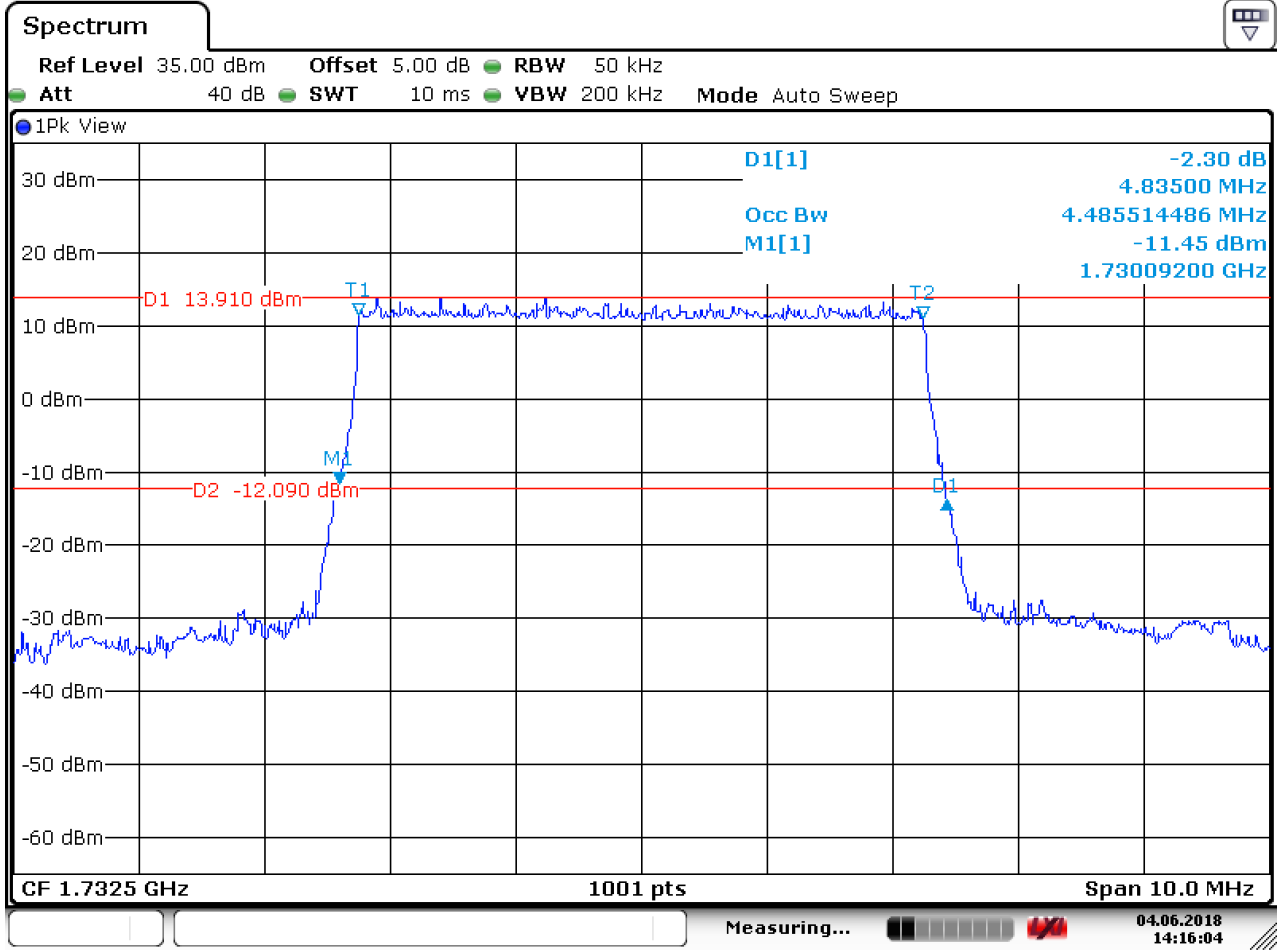
4.1.1.1 Test Mode = LTE/TM1 5MHz

4.1.1.1.1 Test Channel = LCH



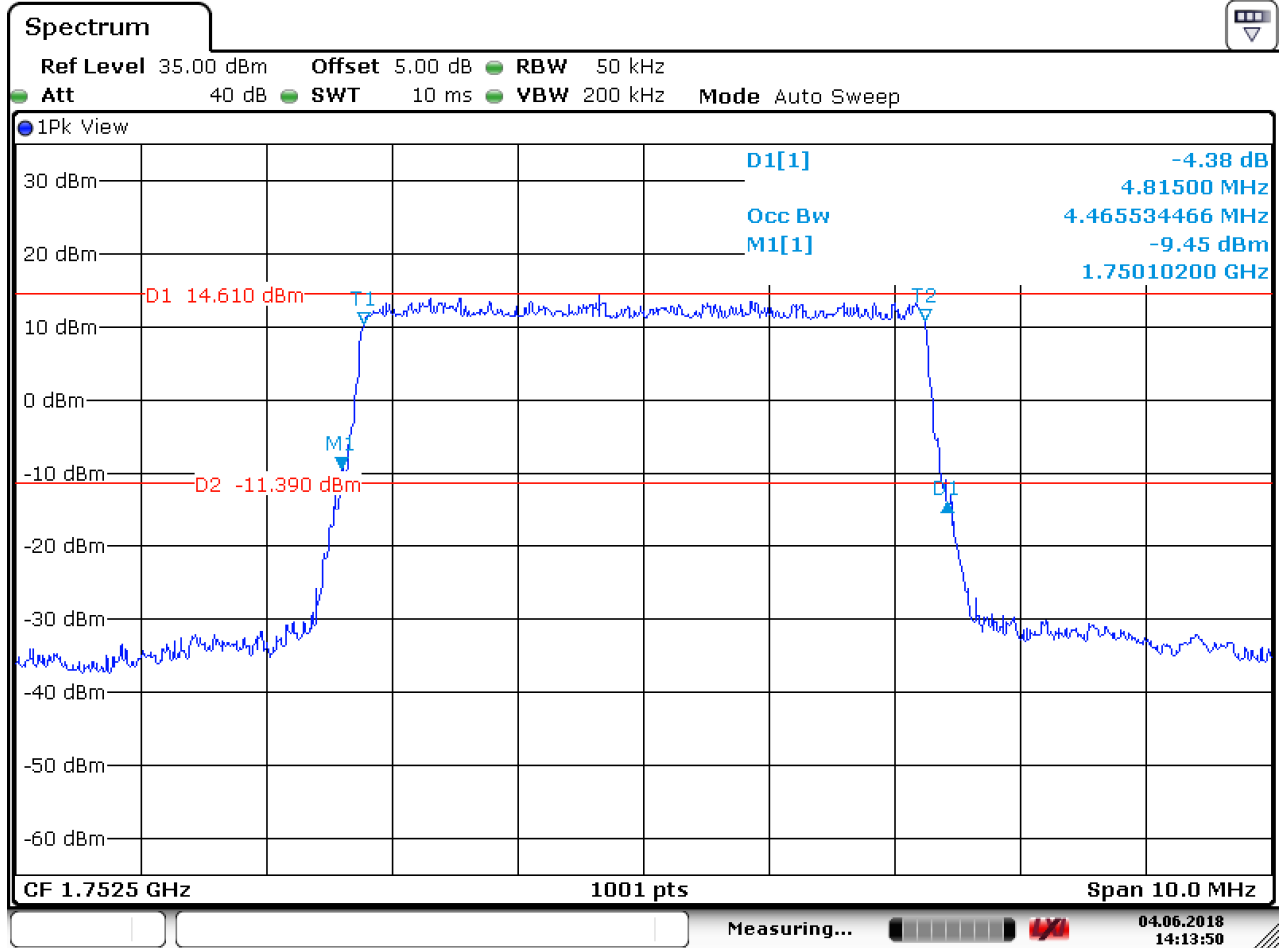
Date: 4.JUN.2018 14:16:59

4.1.1.1.2 Test Channel = MCH



Date: 4.JUN.2018 14:16:04

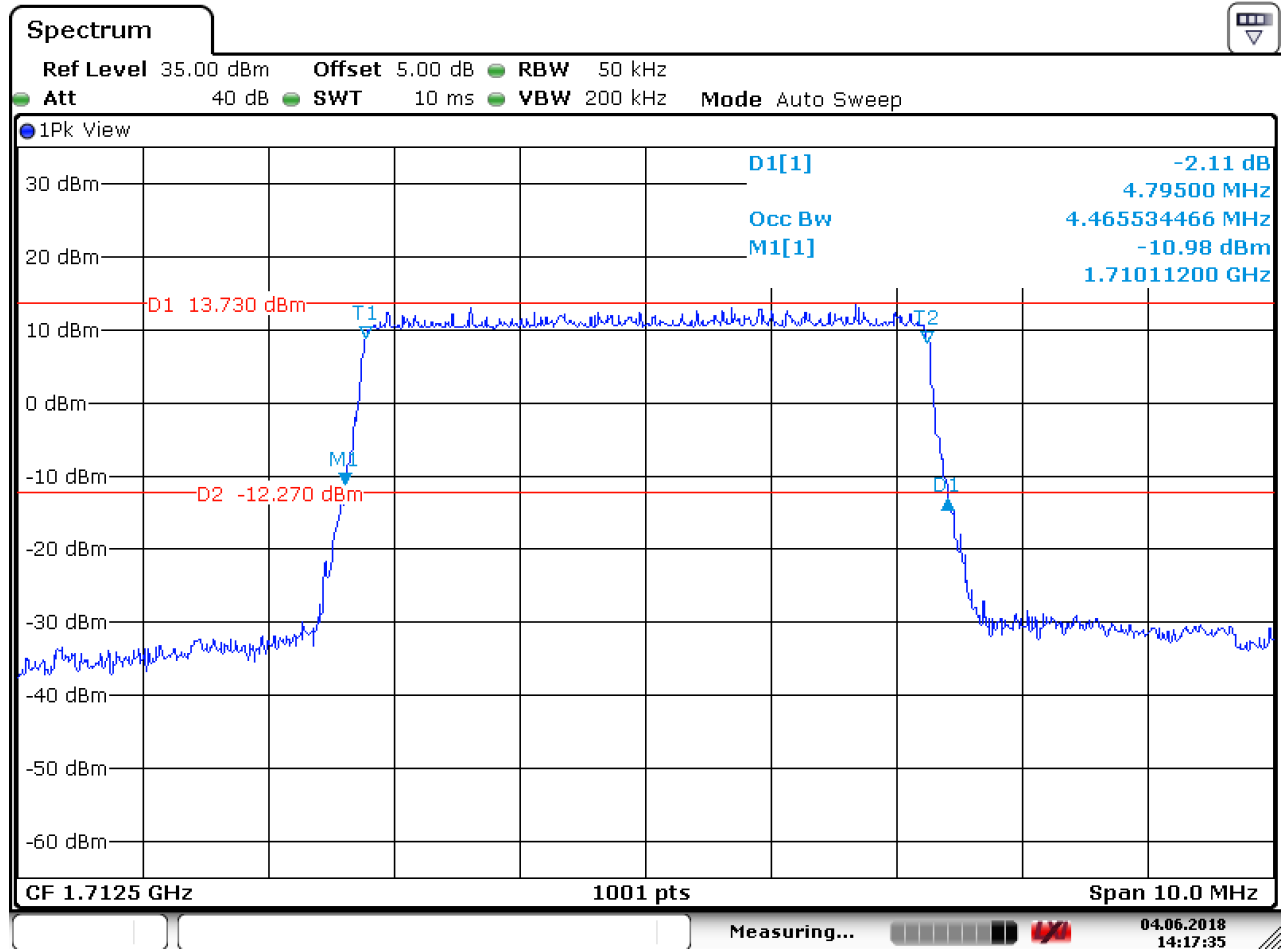
4.1.1.1.3 Test Channel = HCH



Date: 4.JUN.2018 14:13:50

4.1.1.2 Test Mode = LTE/TM2 5MHz

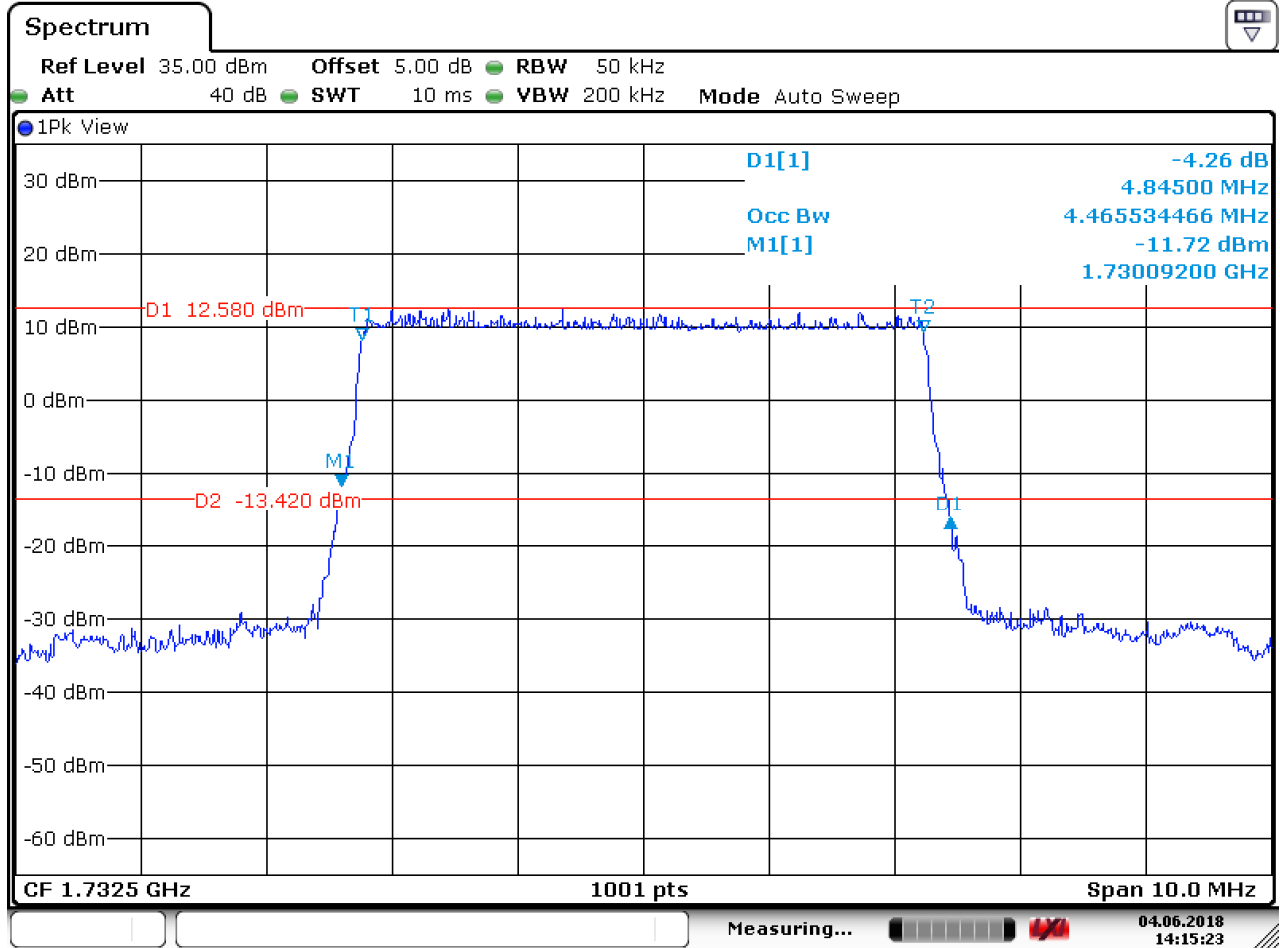
4.1.1.2.1 Test Channel = LCH



Date: 4.JUN.2018 14:17:35



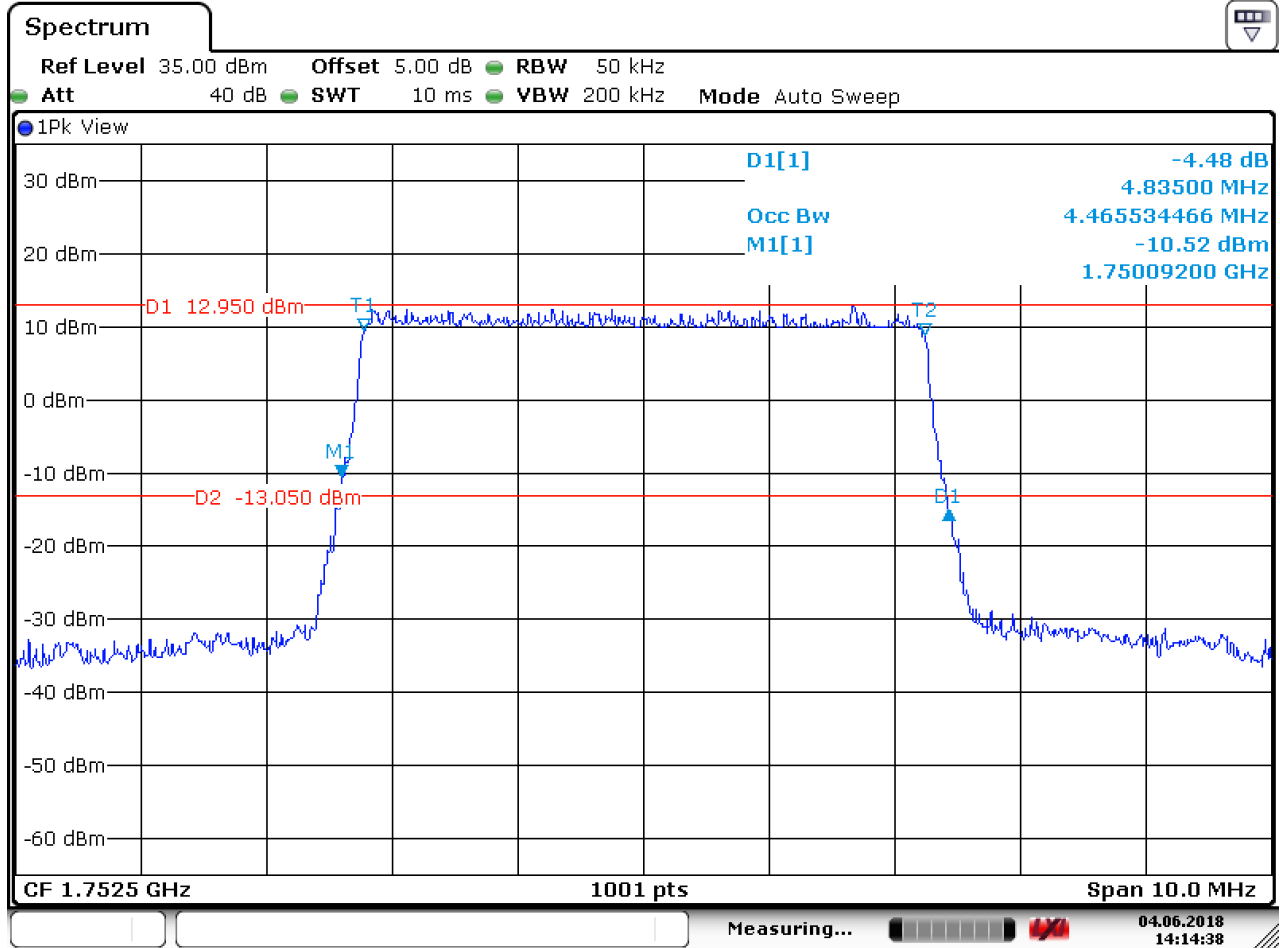
4.1.1.2.2 Test Channel = MCH



Date: 4.JUN.2018 14:15:23



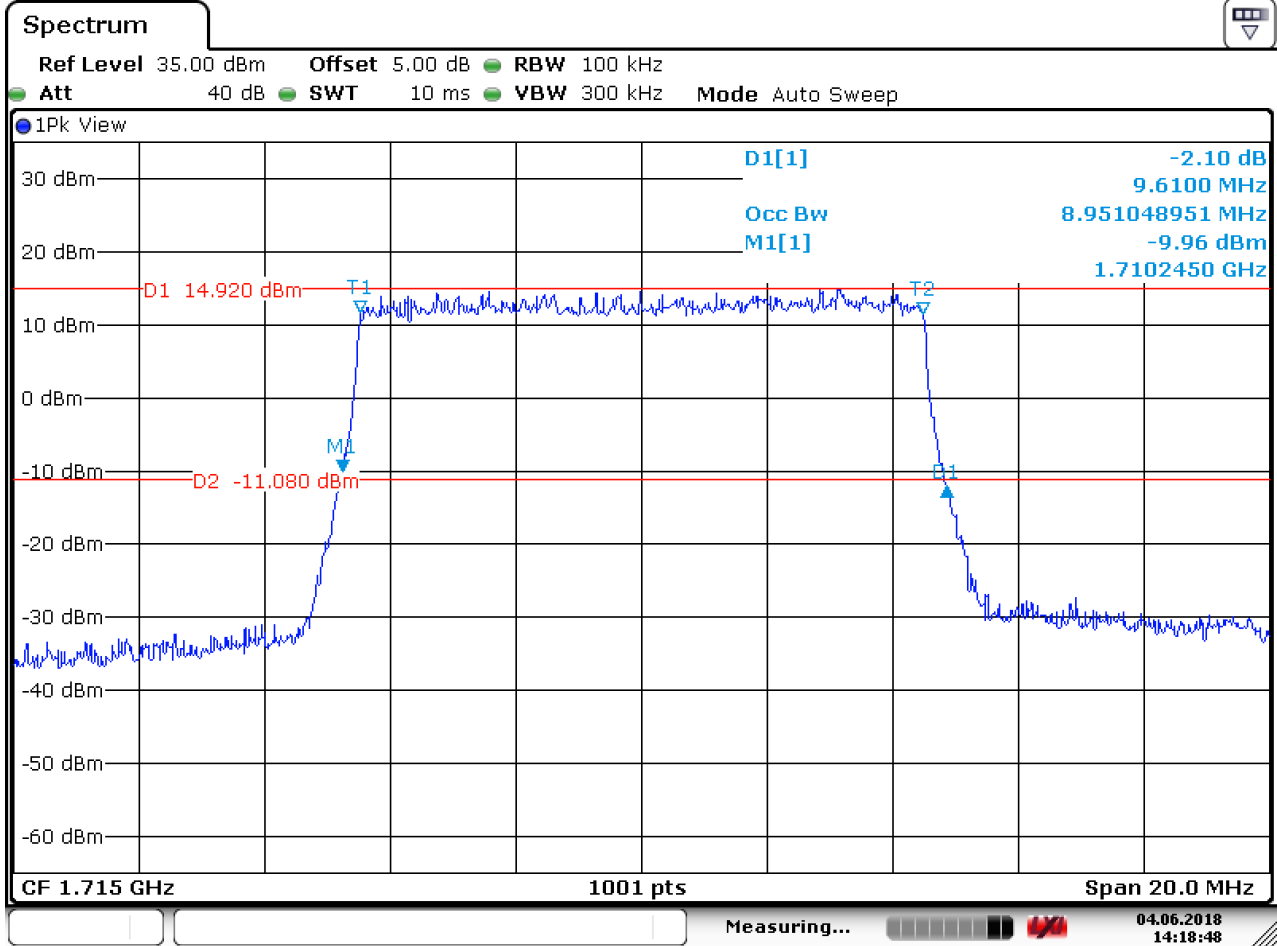
4.1.1.2.3 Test Channel = HCH



Date: 4.JUN.2018 14:14:38

4.1.1.3 Test Mode = LTE/TM1 10MHz

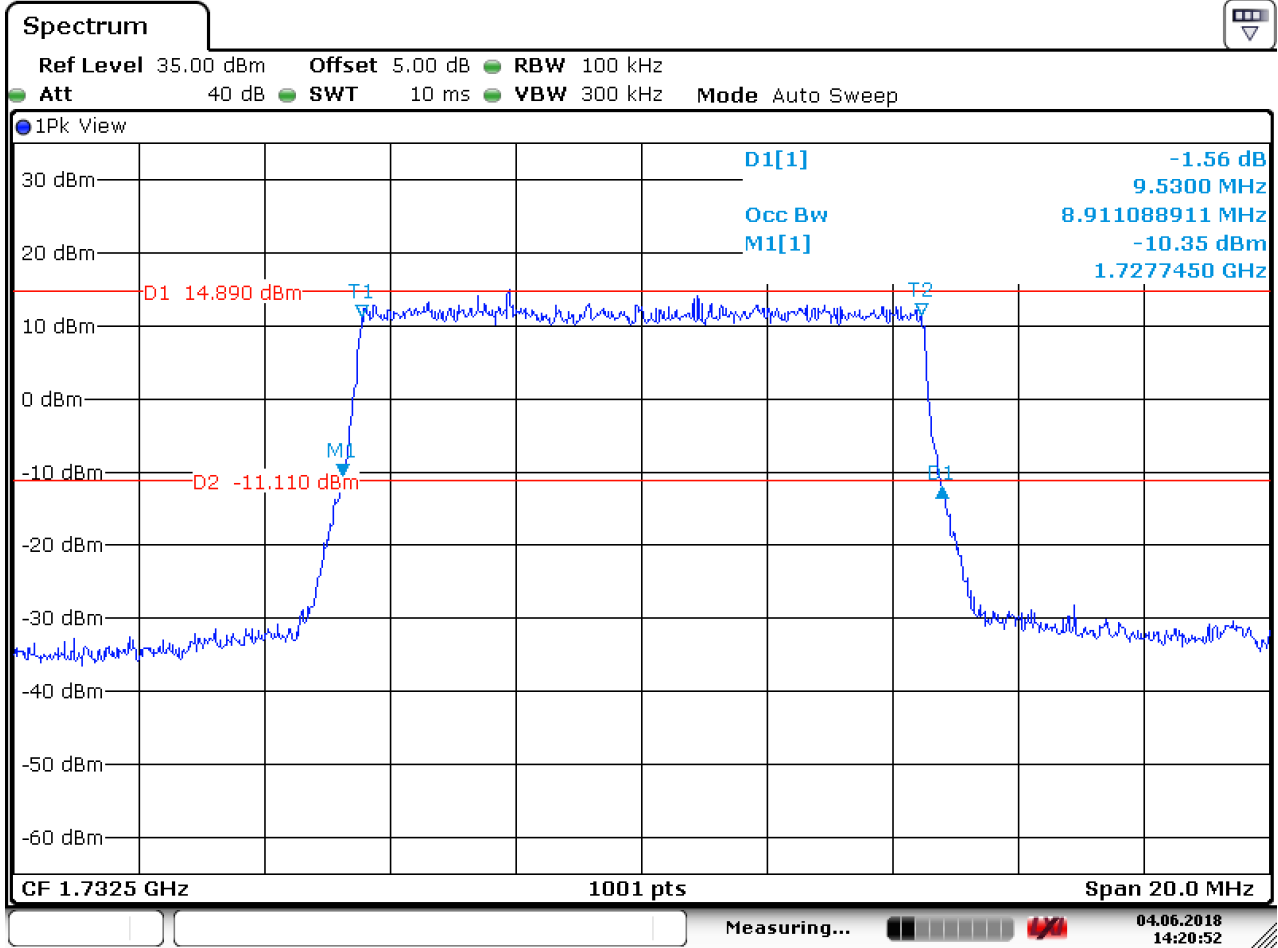
4.1.1.3.1 Test Channel = LCH



Date: 4.JUN.2018 14:18:48

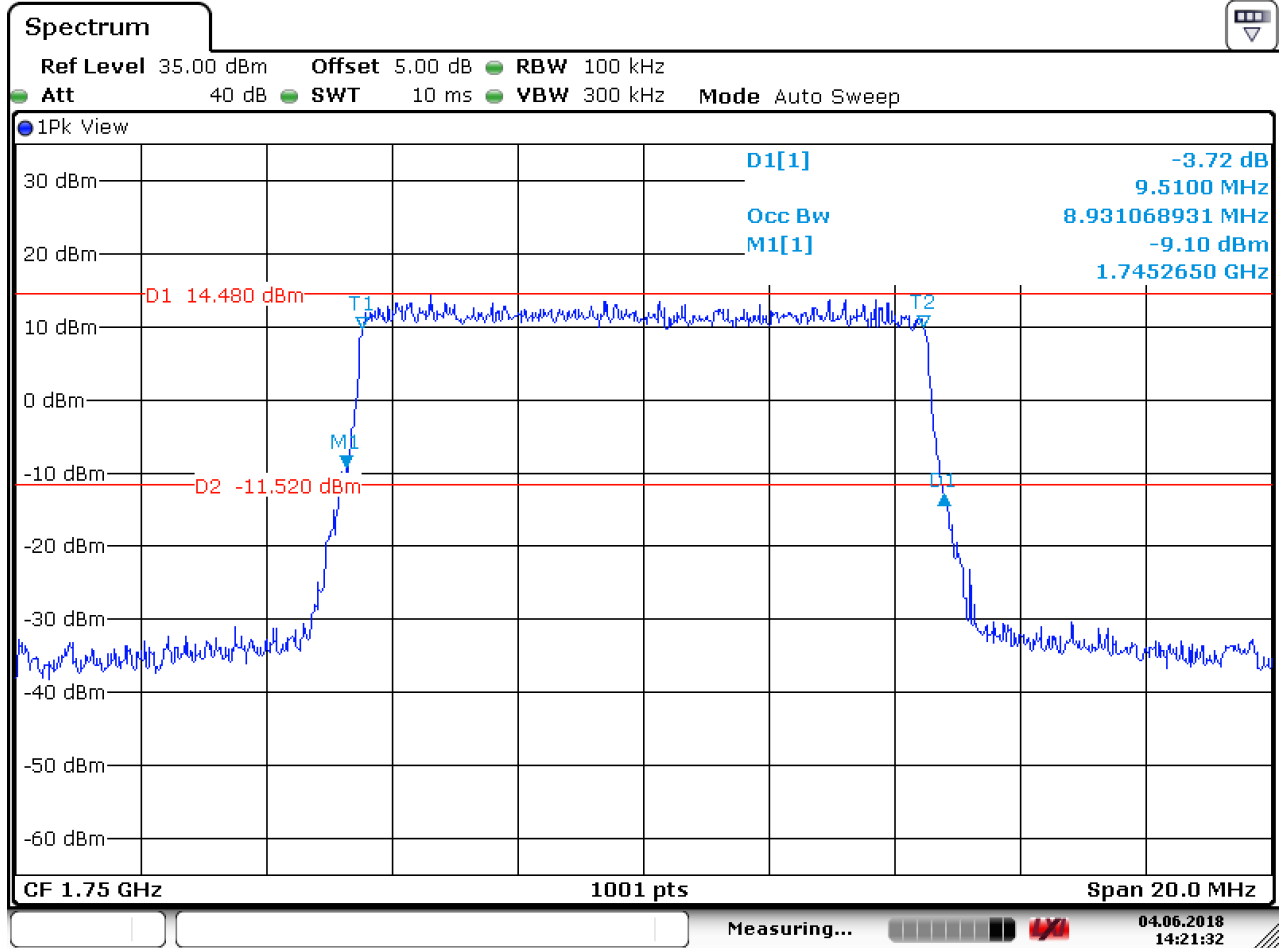


4.1.1.3.2 Test Channel = MCH



Date: 4.JUN.2018 14:20:52

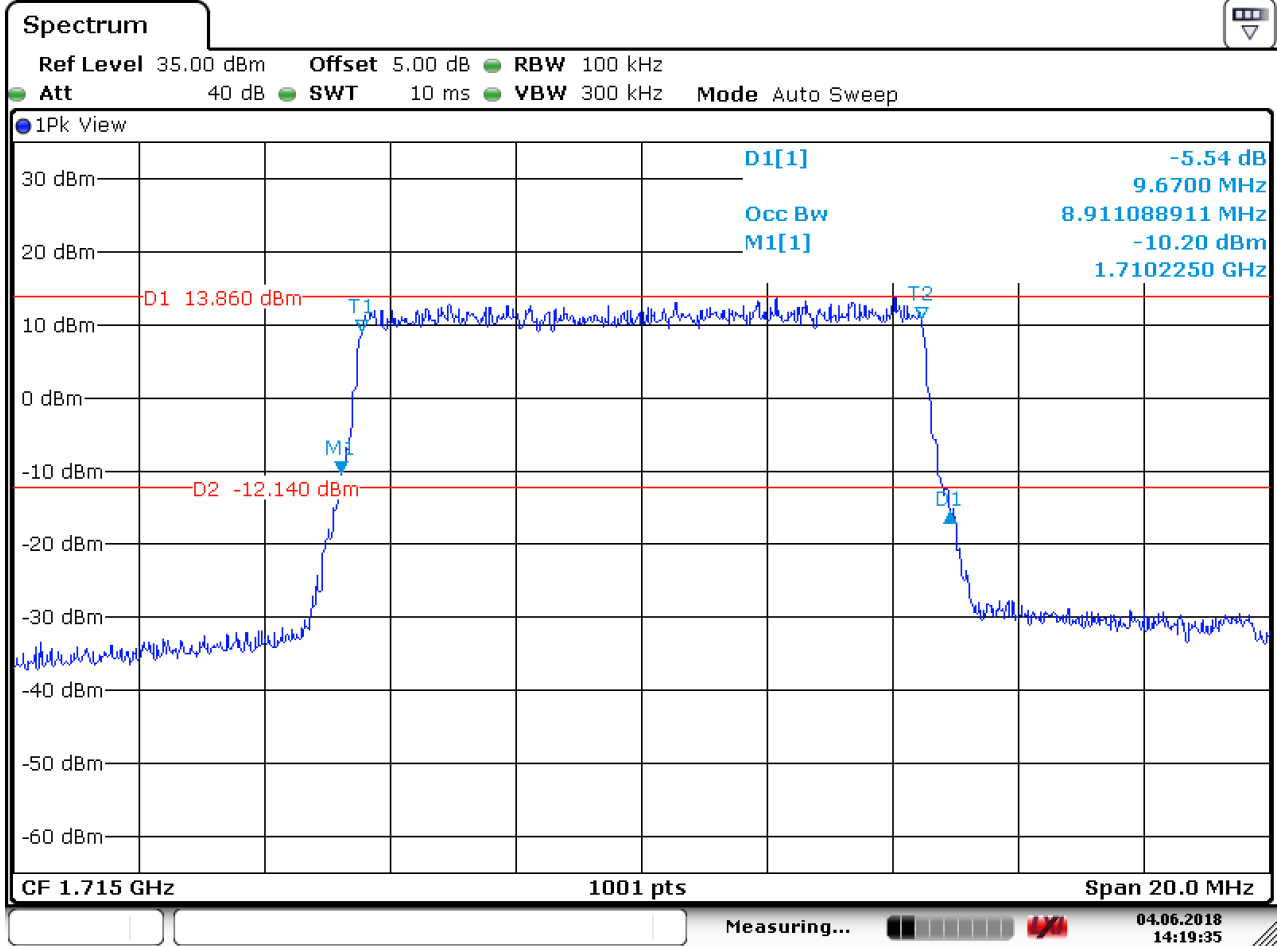
4.1.1.3.3 Test Channel = HCH



Date: 4.JUN.2018 14:21:33

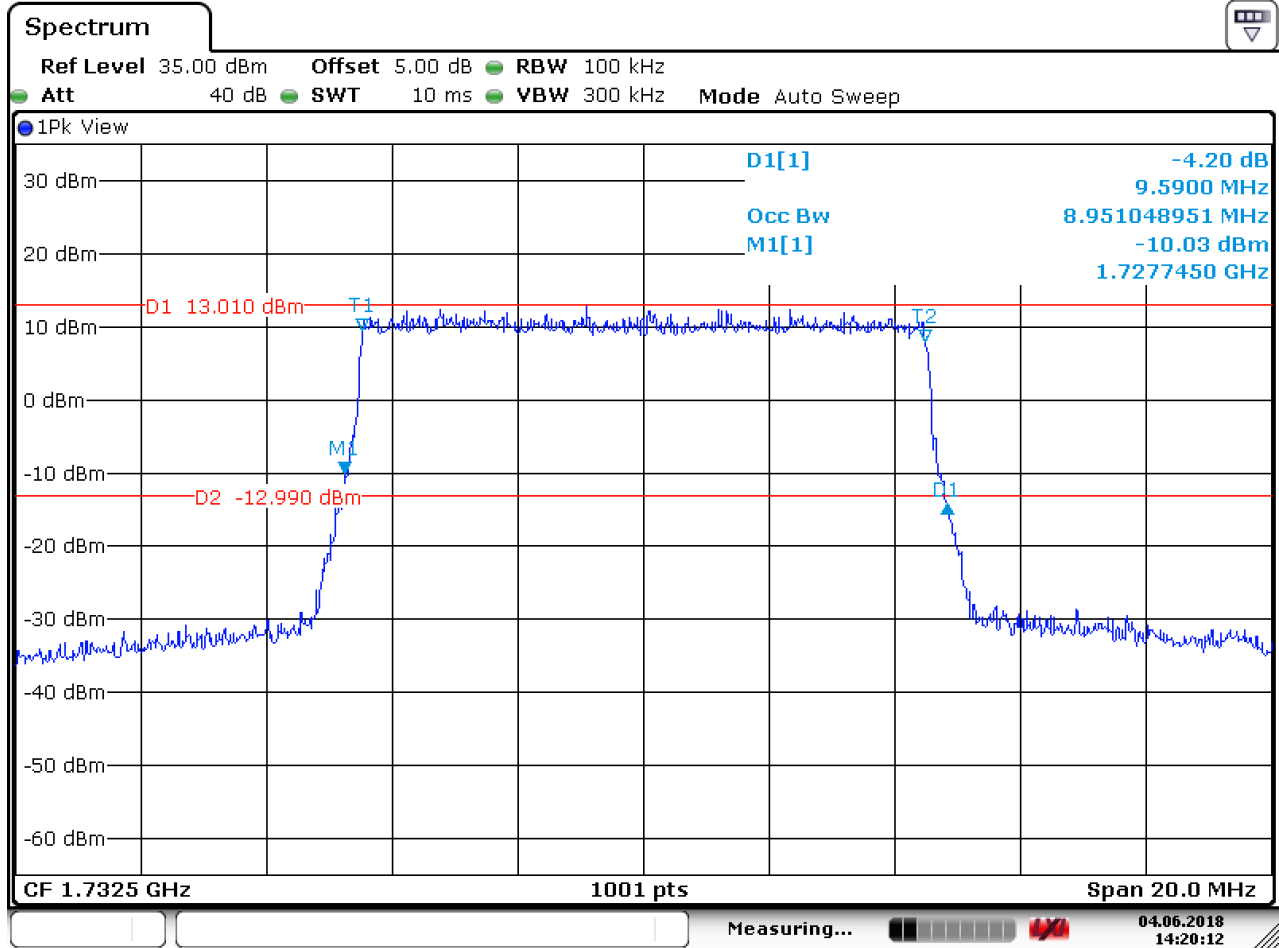
4.1.1.4 Test Mode = LTE/TM2 10MHz

4.1.1.4.1 Test Channel = LCH



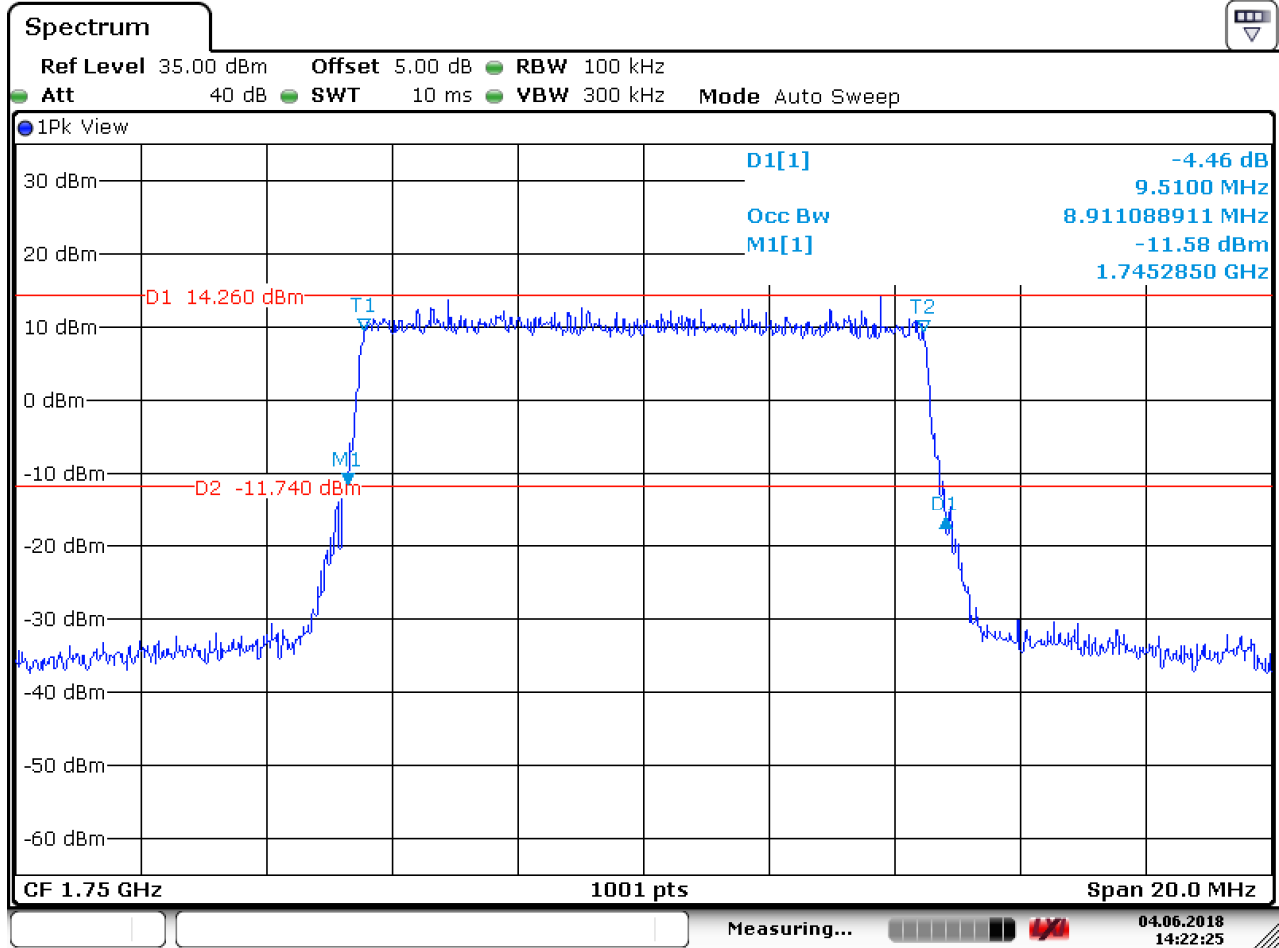
Date: 4.JUN.2018 14:19:36

4.1.1.4.2 Test Channel = MCH



Date: 4.JUN.2018 14:20:12

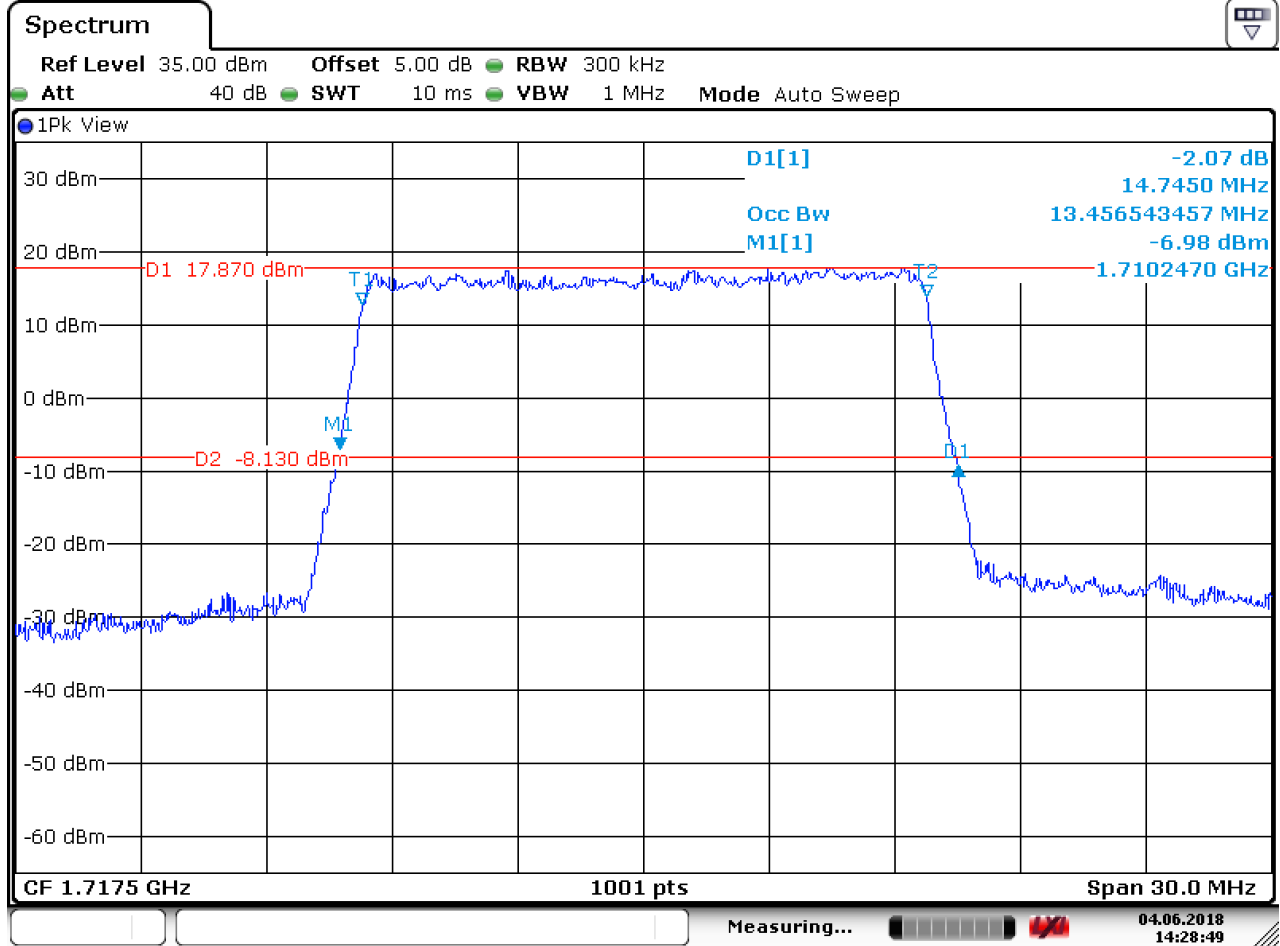
4.1.1.4.3 Test Channel = HCH



Date: 4.JUN.2018 14:22:26

4.1.1.5 Test Mode = LTE/TM1 15MHz

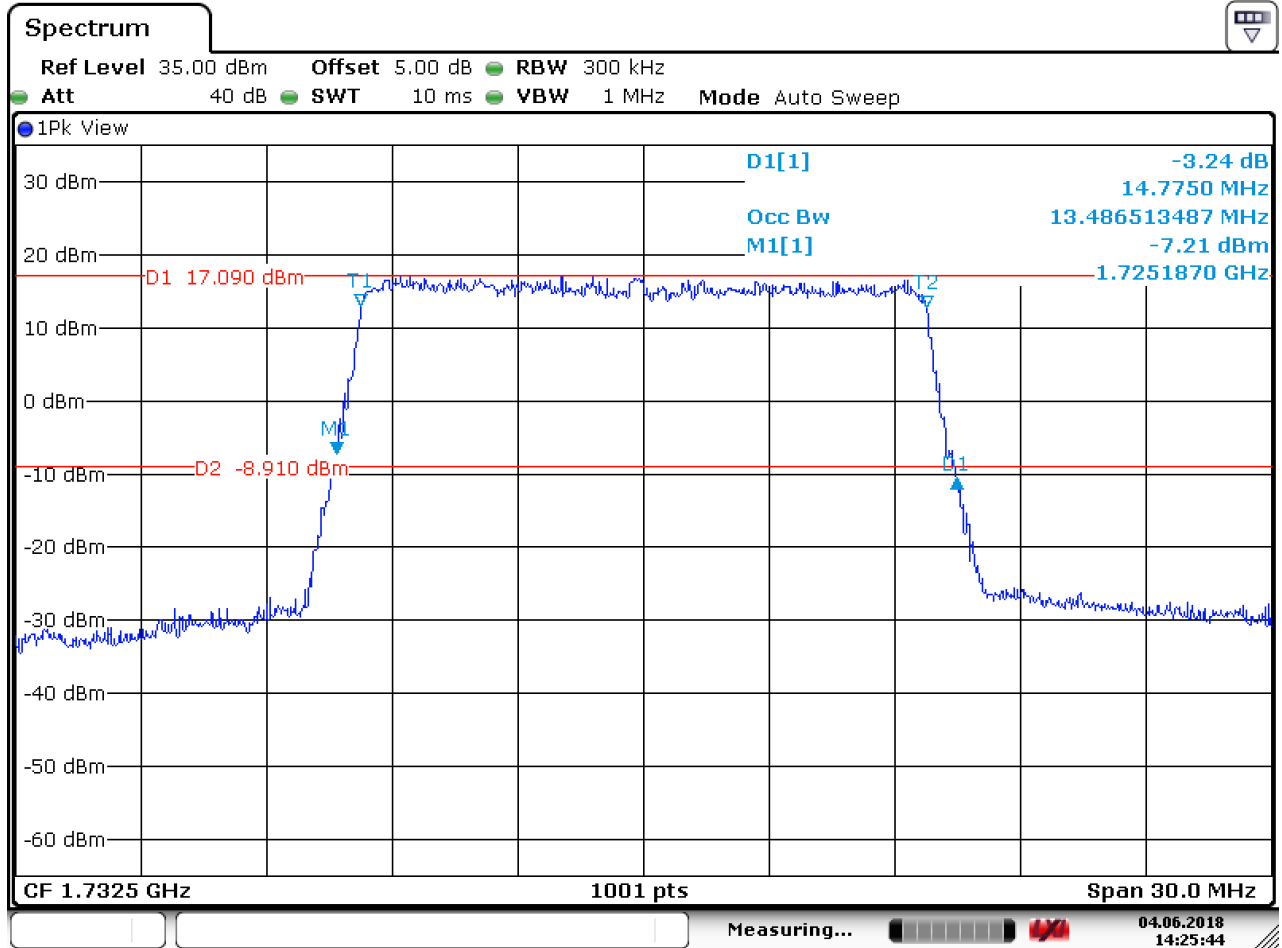
4.1.1.5.1 Test Channel = LCH



Date: 4.JUN.2018 14:28:49



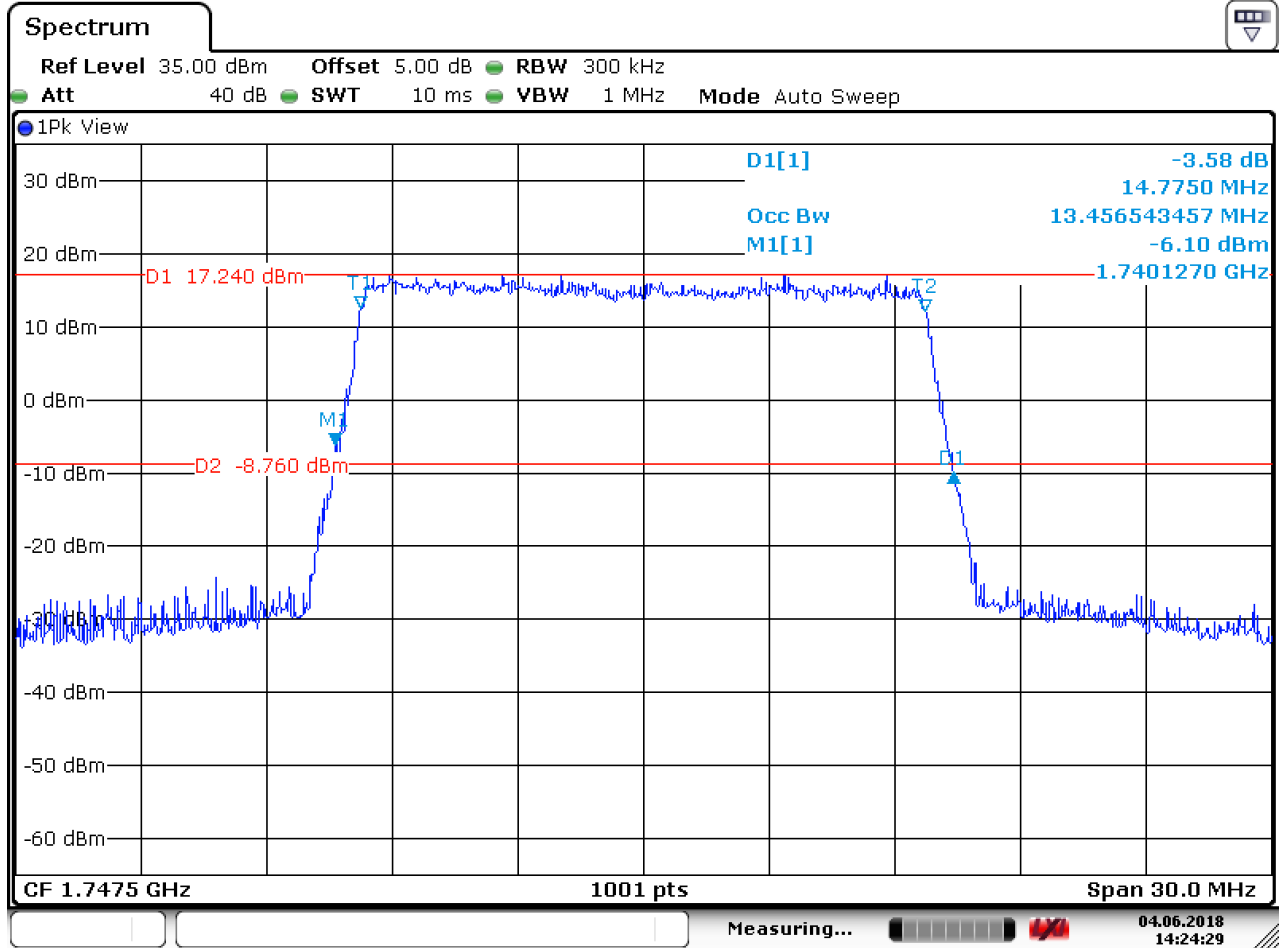
4.1.1.5.2 Test Channel = MCH



Date: 4.JUN.2018 14:25:44

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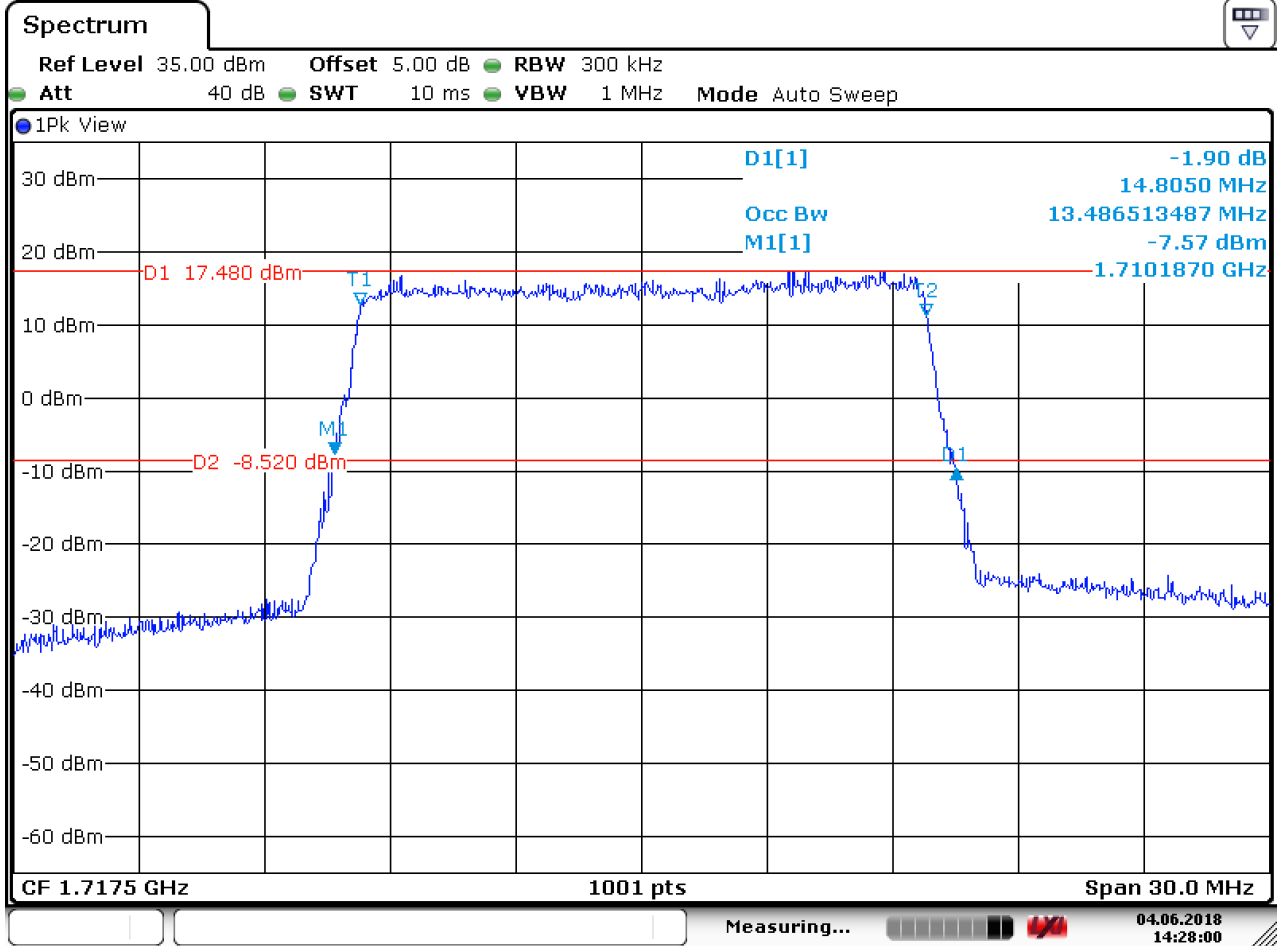
4.1.1.5.3 Test Channel = HCH



Date: 4.JUN.2018 14:24:29

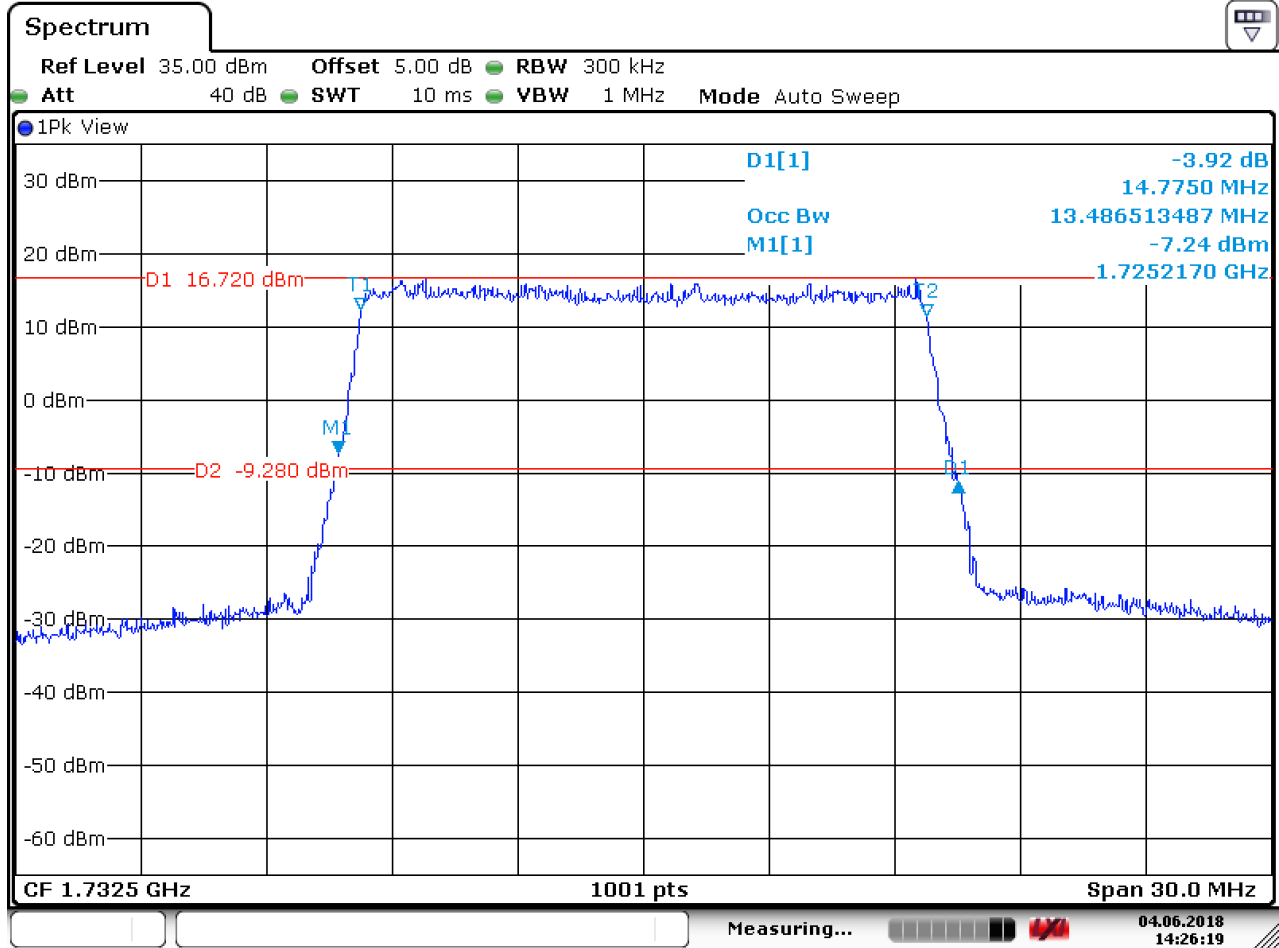
4.1.1.6 Test Mode = LTE/TM2 15MHz

4.1.1.6.1 Test Channel = LCH



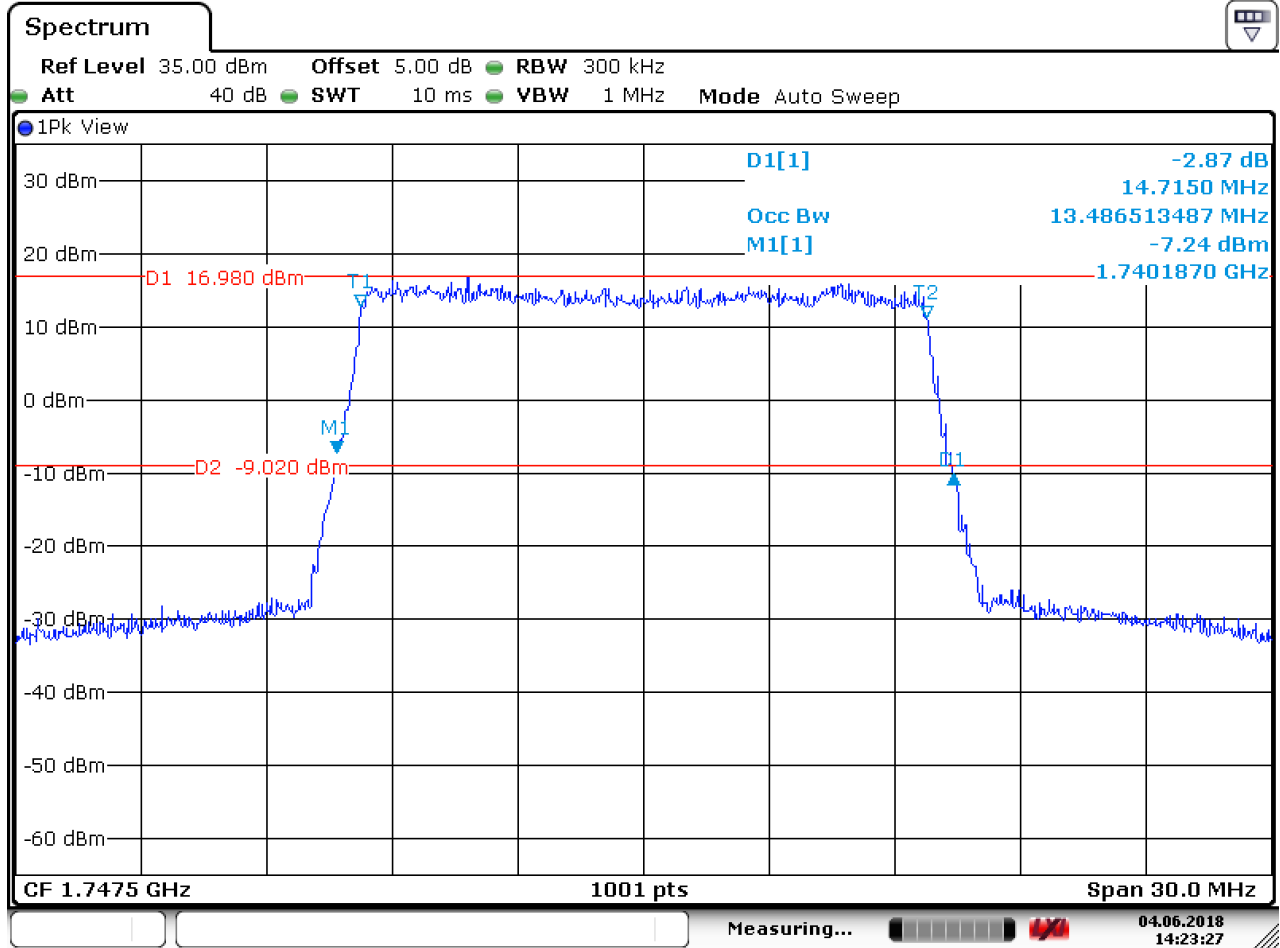
Date: 4.JUN.2018 14:28:00

4.1.1.6.2 Test Channel = MCH



Date: 4.JUN.2018 14:26:19

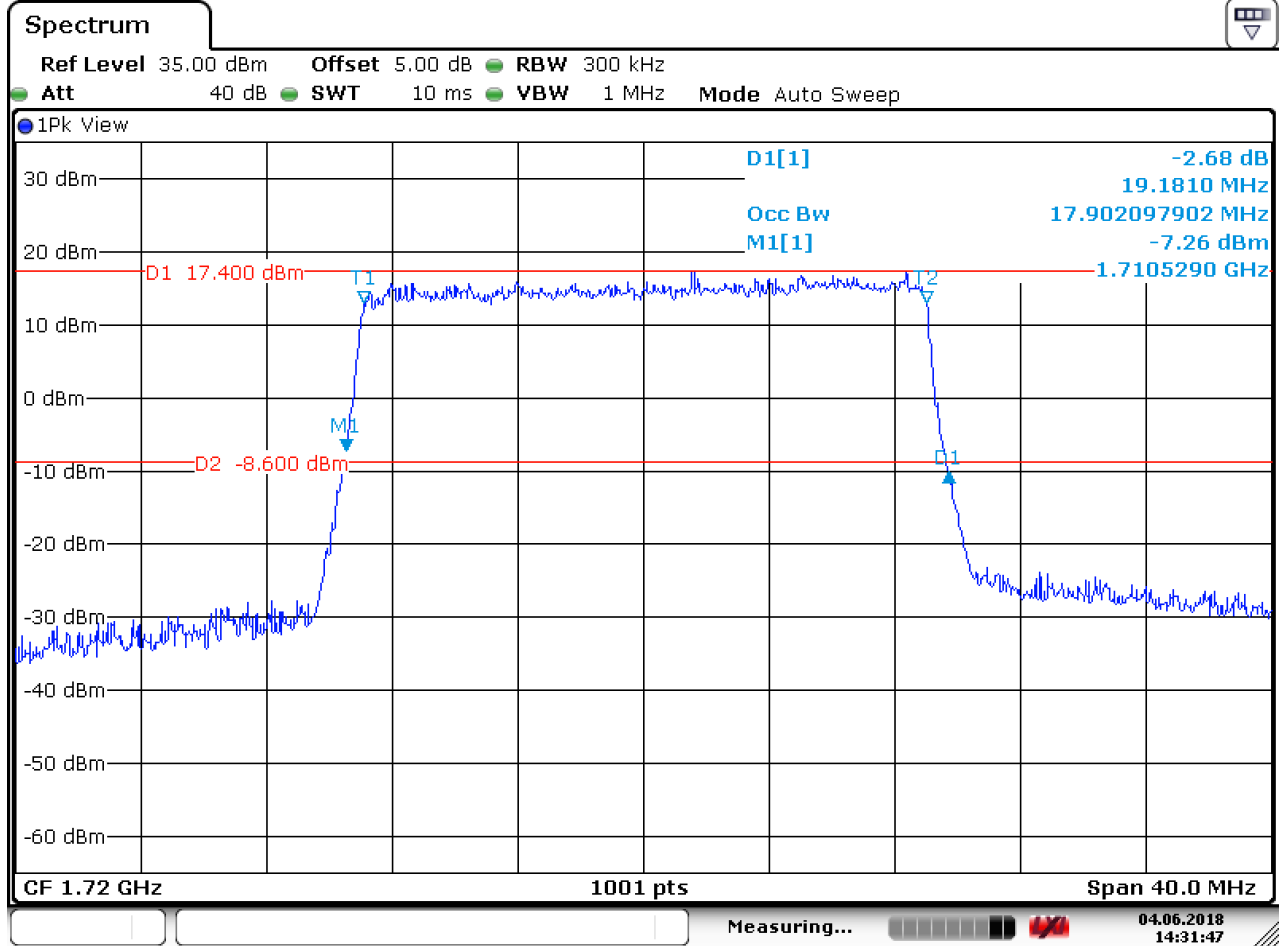
4.1.1.6.3 Test Channel = HCH



Date: 4.JUN.2018 14:23:27

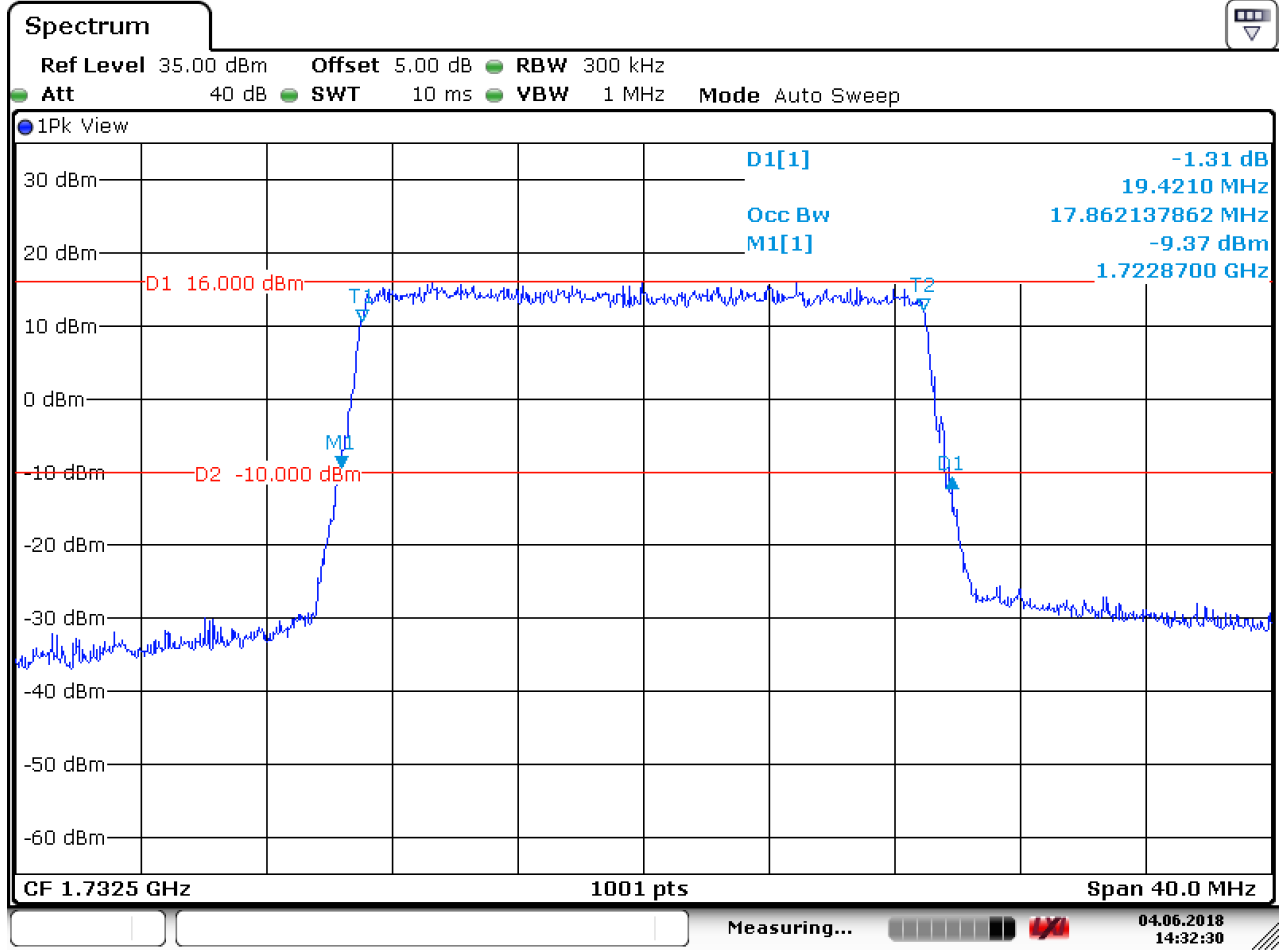
4.1.1.7 Test Mode = LTE/TM1 20MHz

4.1.1.7.1 Test Channel = LCH



Date: 4.JUN.2018 14:31:47

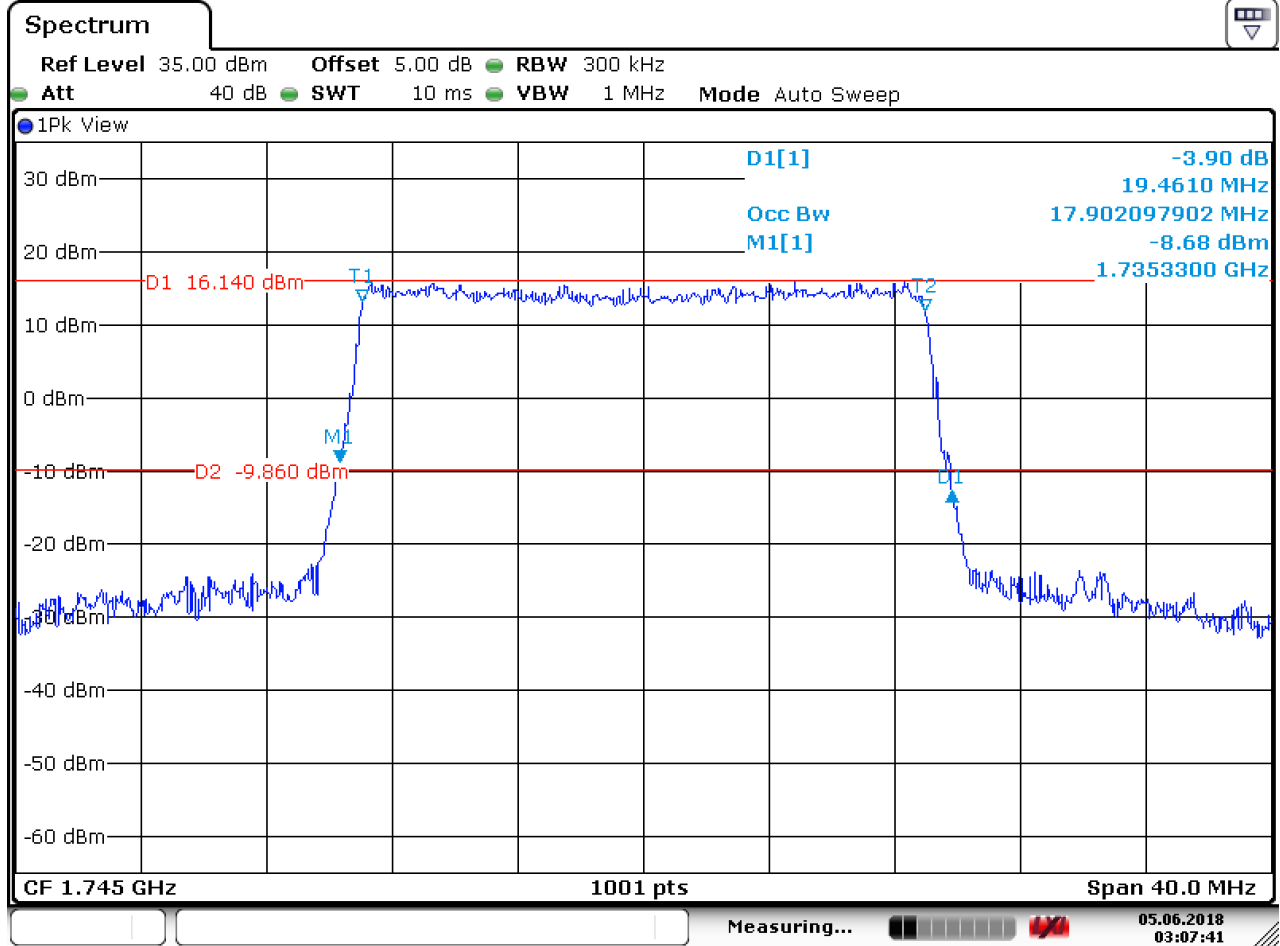
4.1.1.7.2 Test Channel = MCH



Date: 4.JUN.2018 14:32:30



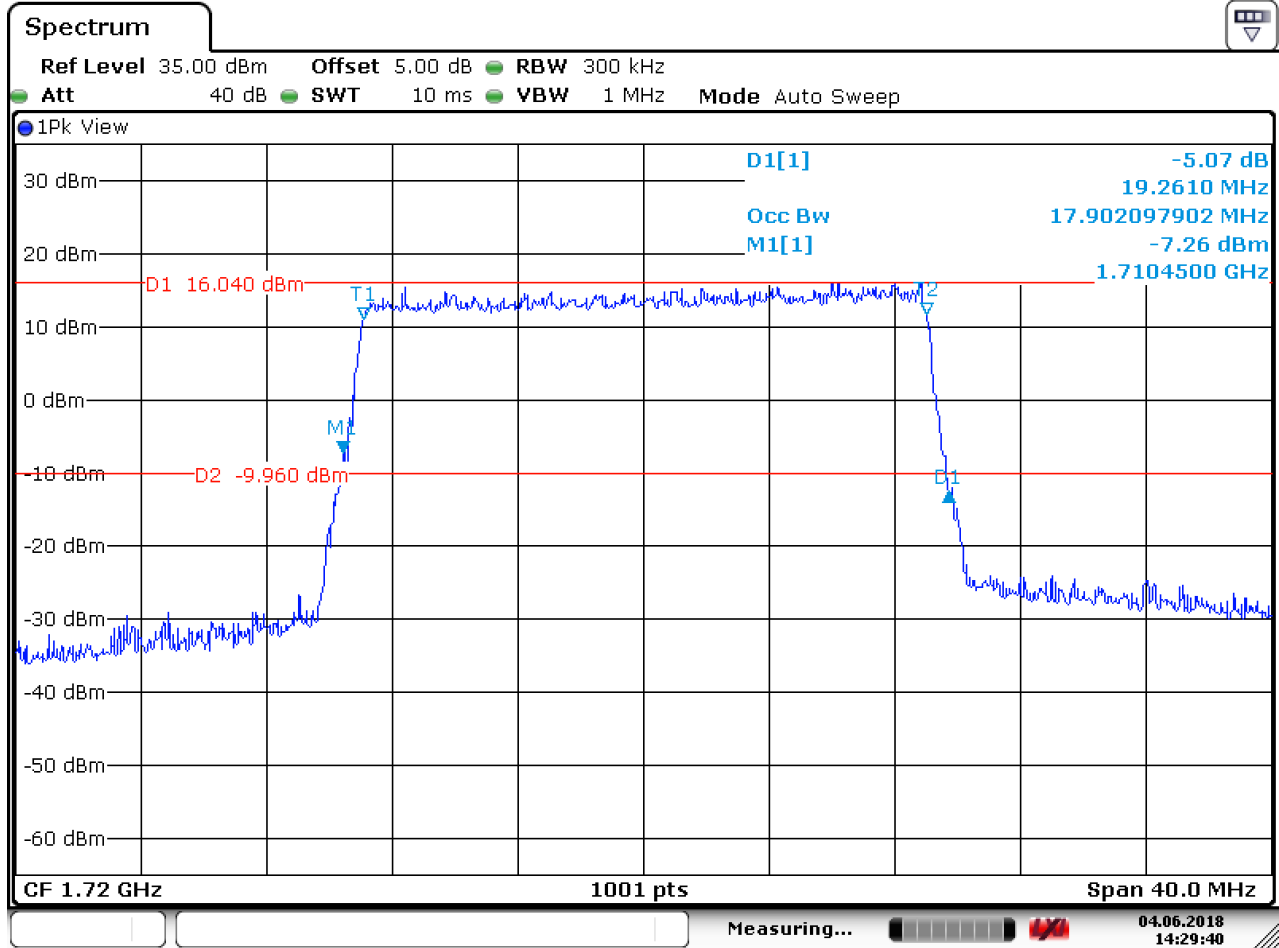
4.1.1.7.3 Test Channel = HCH



Date: 5.JUN.2018 03:07:42

4.1.1.8 Test Mode = LTE/TM2 20MHz

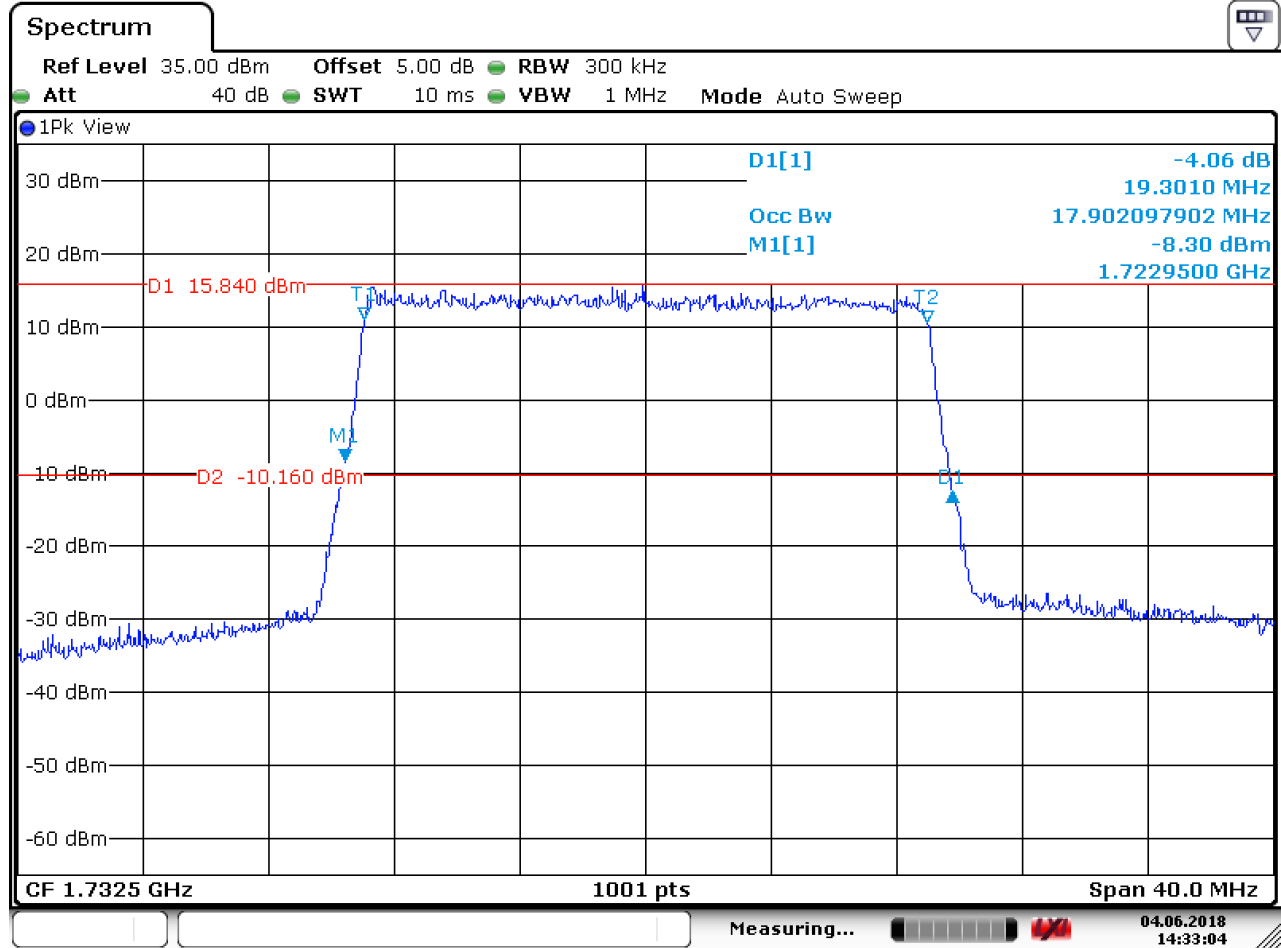
4.1.1.8.1 Test Channel = LCH



Date: 4.JUN.2018 14:29:40

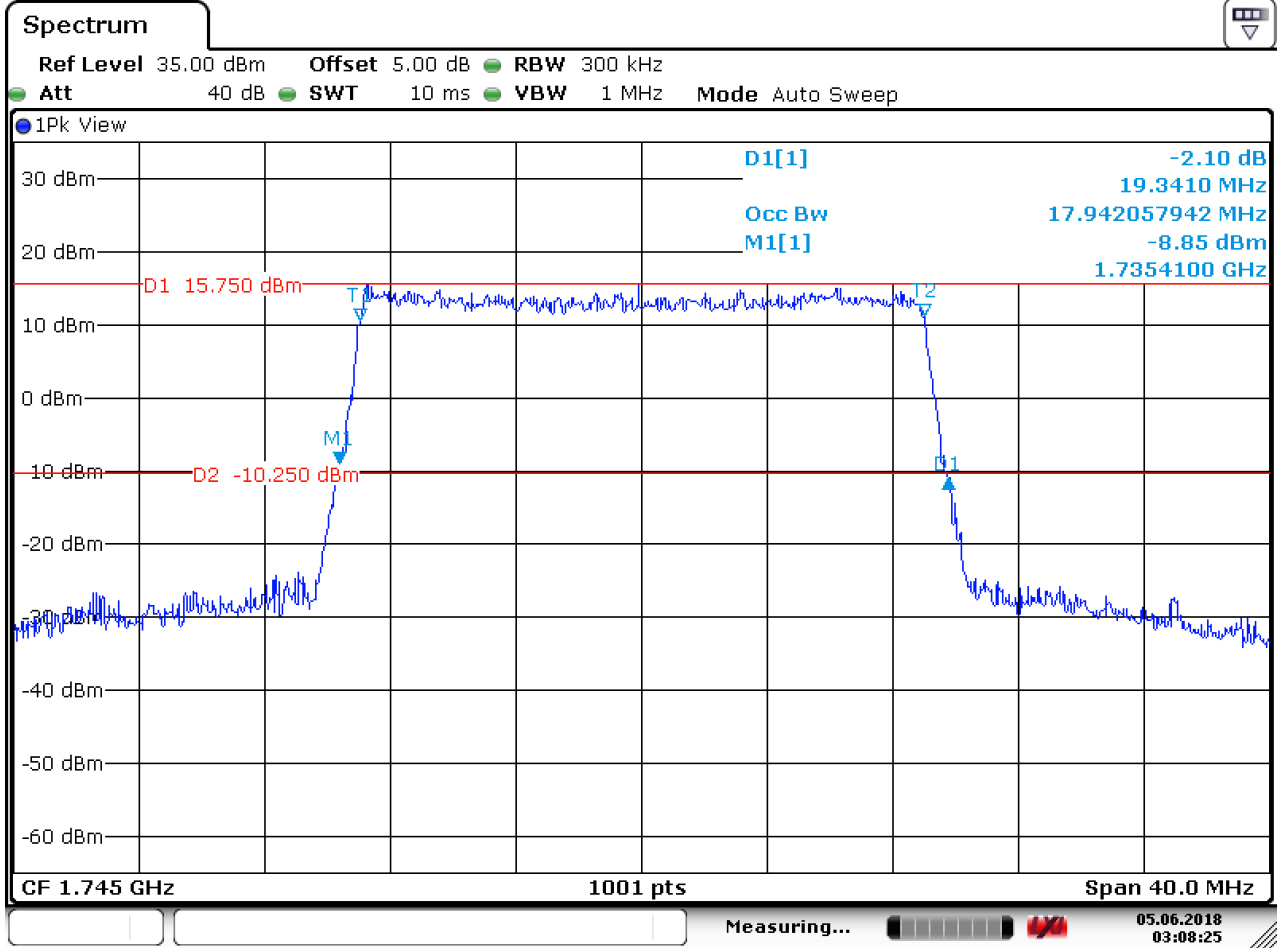


4.1.1.8.2 Test Channel = MCH



Date: 4.JUN.2018 14:33:05

4.1.1.8.3 Test Channel = HCH



Date: 5 JUN.2018 03:08:25

5 Band Edges Compliance

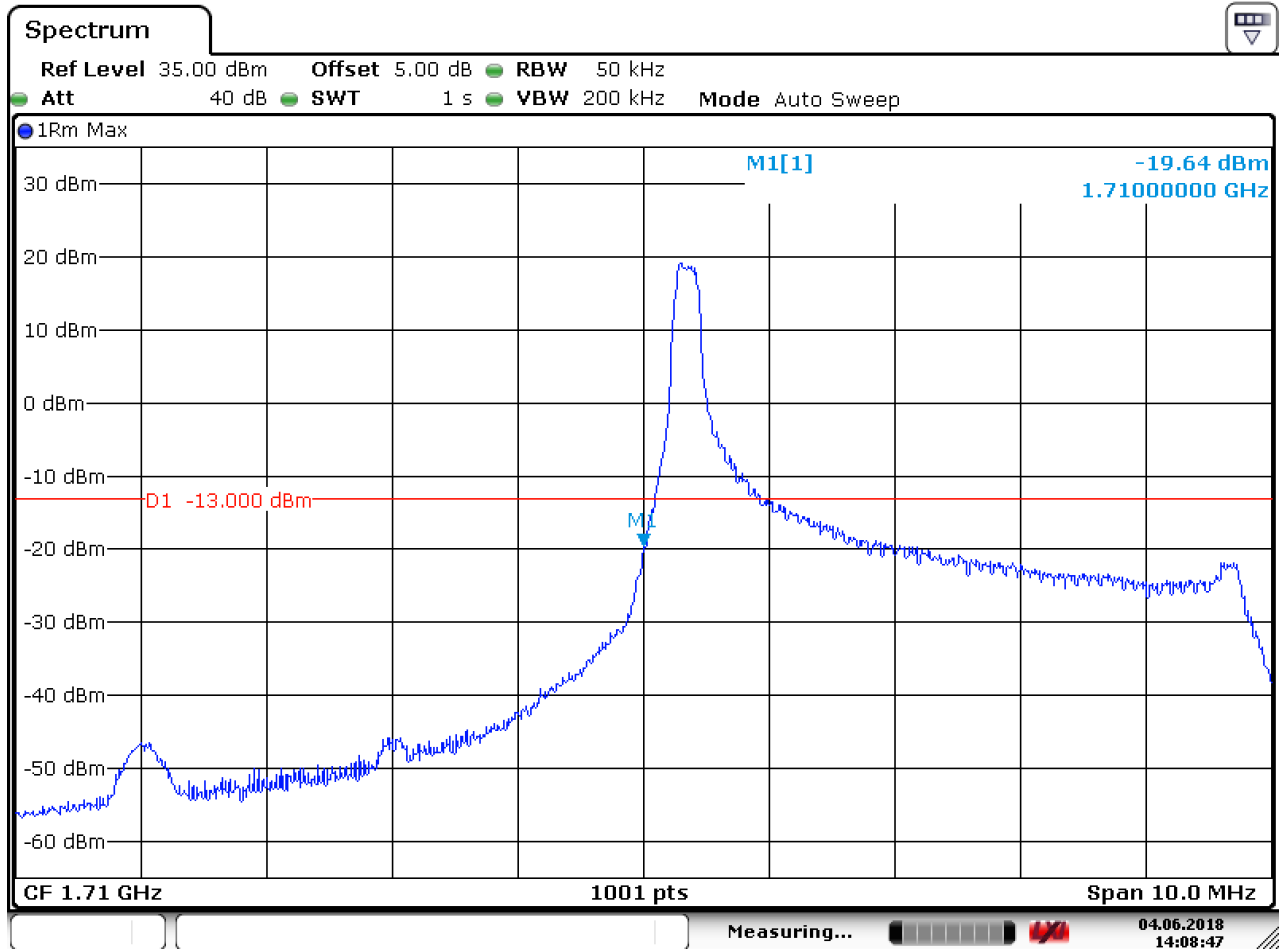
5.1 For LTE

5.1.1 Test Band = LTE BAND 4

5.1.1.1 Test Mode = LTE/TM1 5MHz

5.1.1.1.1 Test Channel = LCH

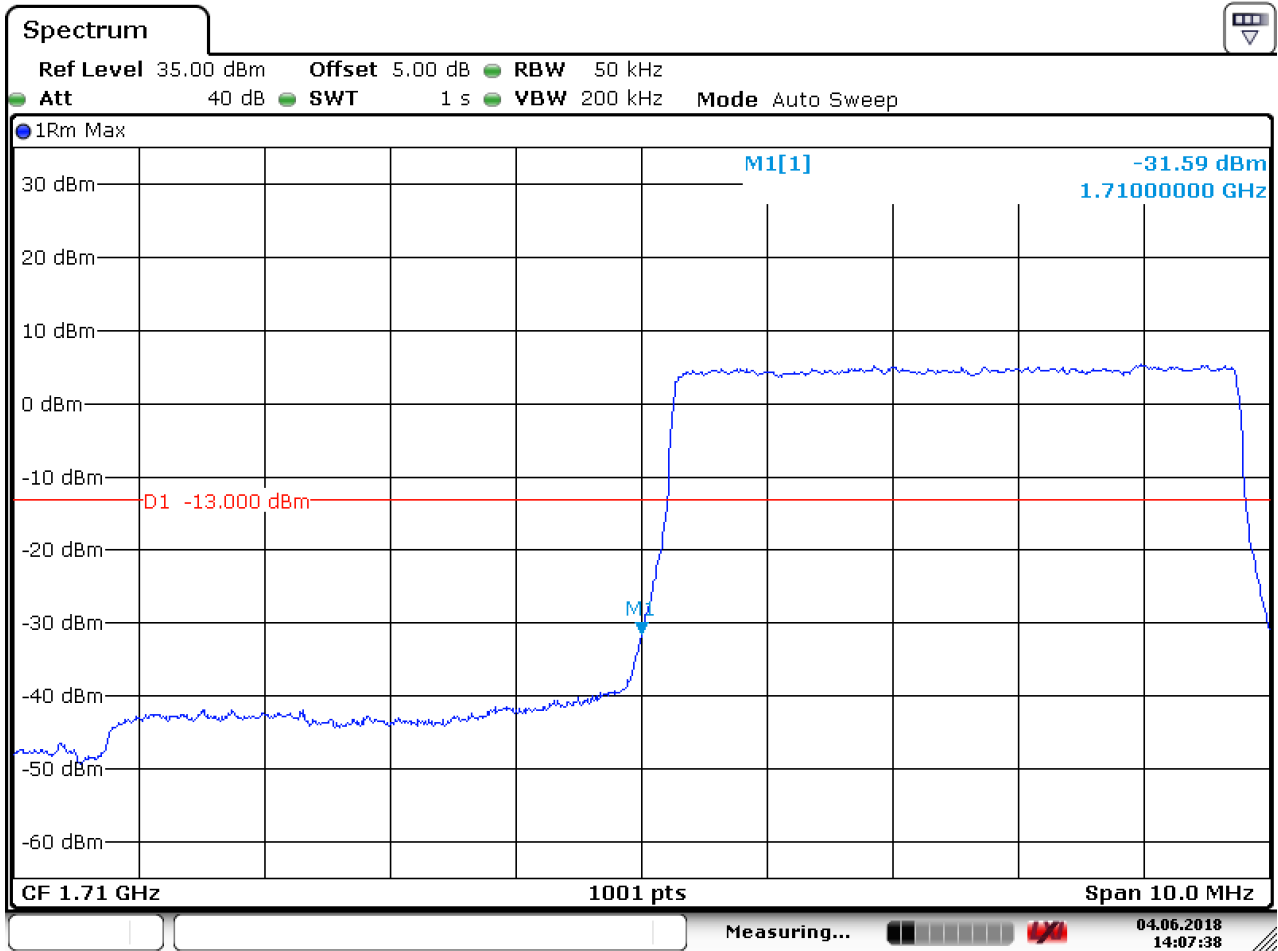
5.1.1.1.1.1 Test RB=1RB



Date: 4.JUN.2018 14:08:47



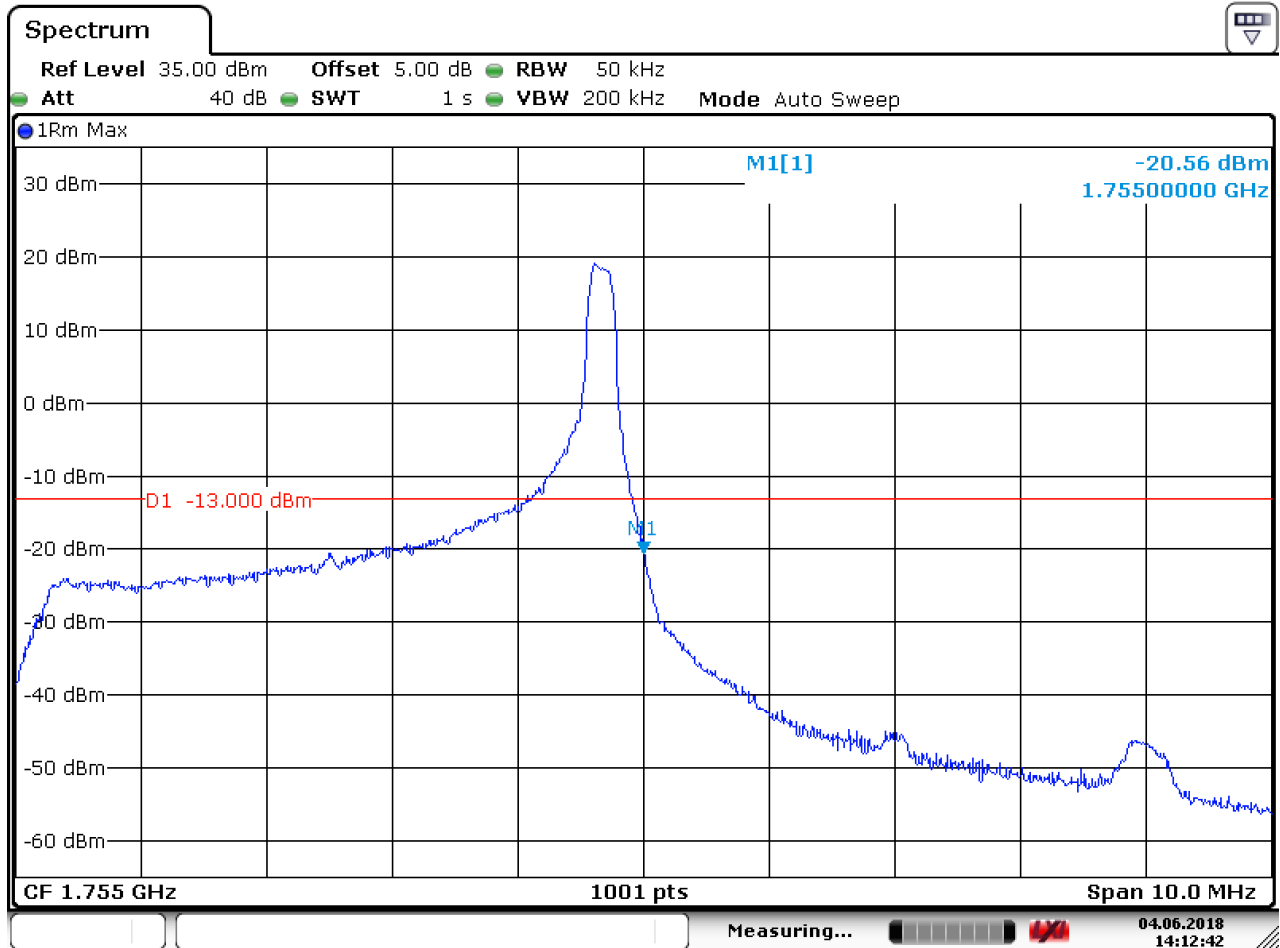
5.1.1.1.2 Test RB=25RB



Date: 4.JUN.2018 14:07:38

5.1.1.1.2 Test Channel = HCH

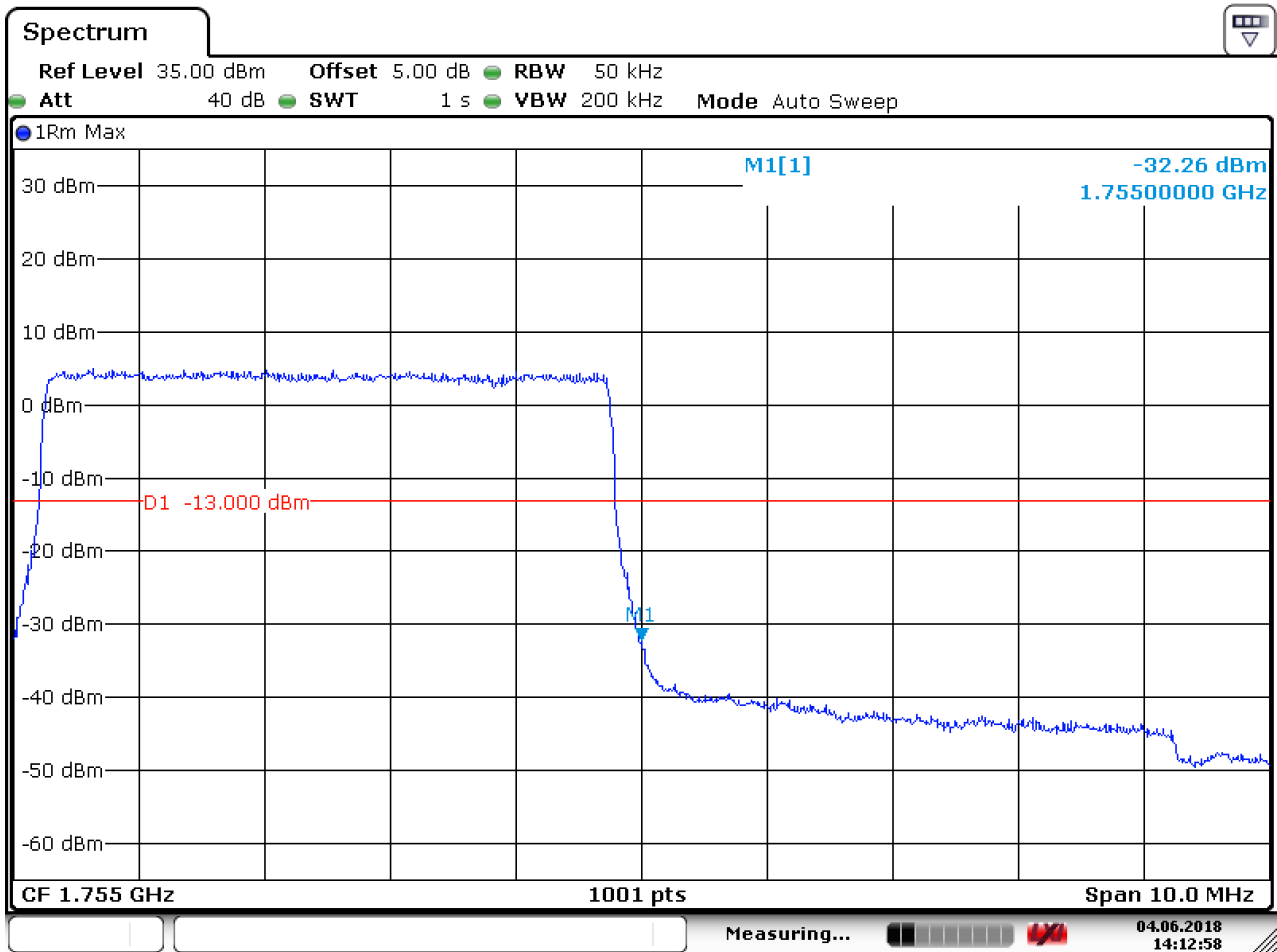
5.1.1.1.2.1 Test RB=1RB



Date: 4.JUN.2018 14:12:42



5.1.1.1.2.2 Test RB=25RB

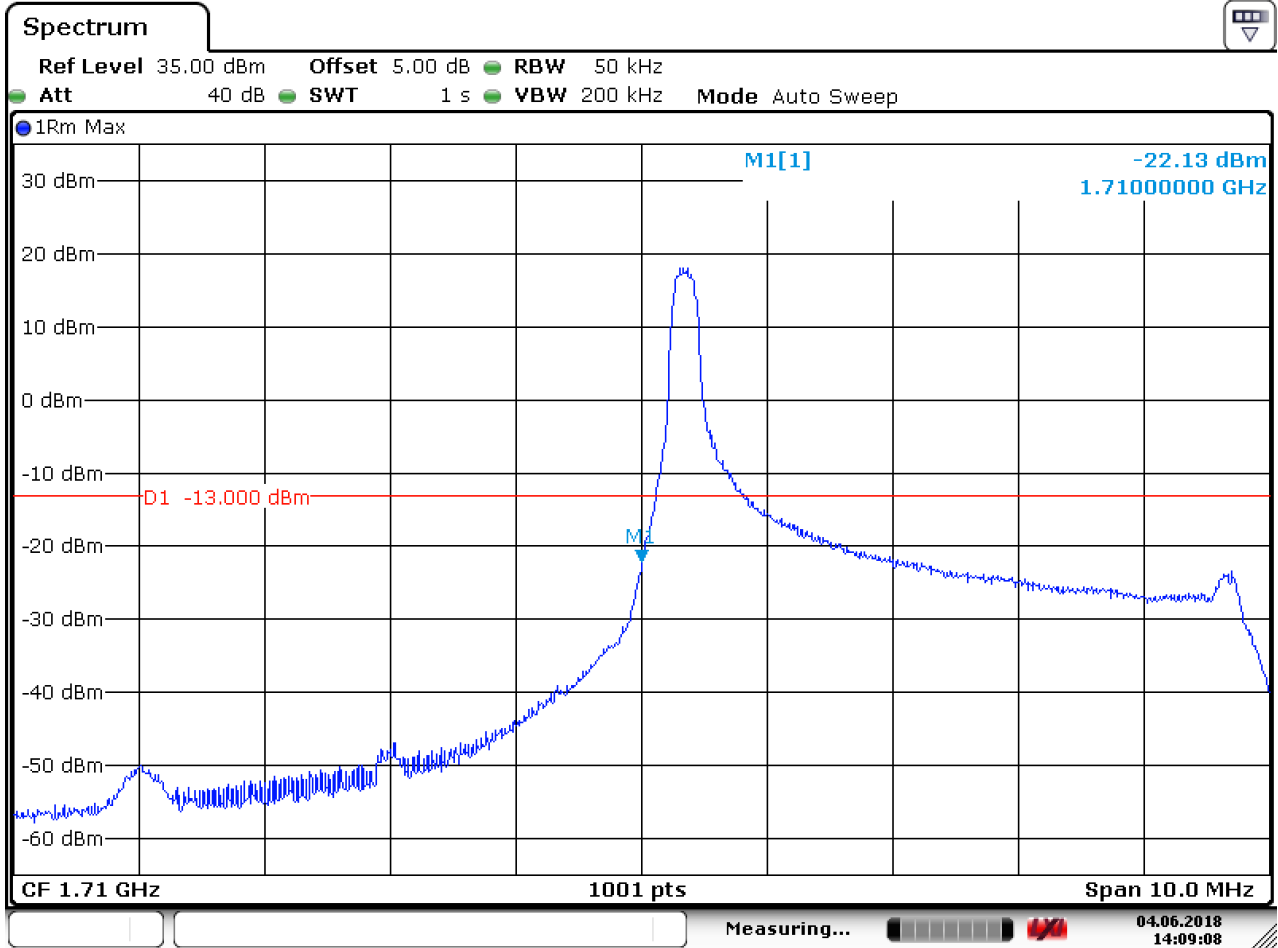


Date: 4.JUN.2018 14:12:58

5.1.1.2 Test Mode = LTE/TM2 5MHz

5.1.1.2.1 Test Channel = LCH

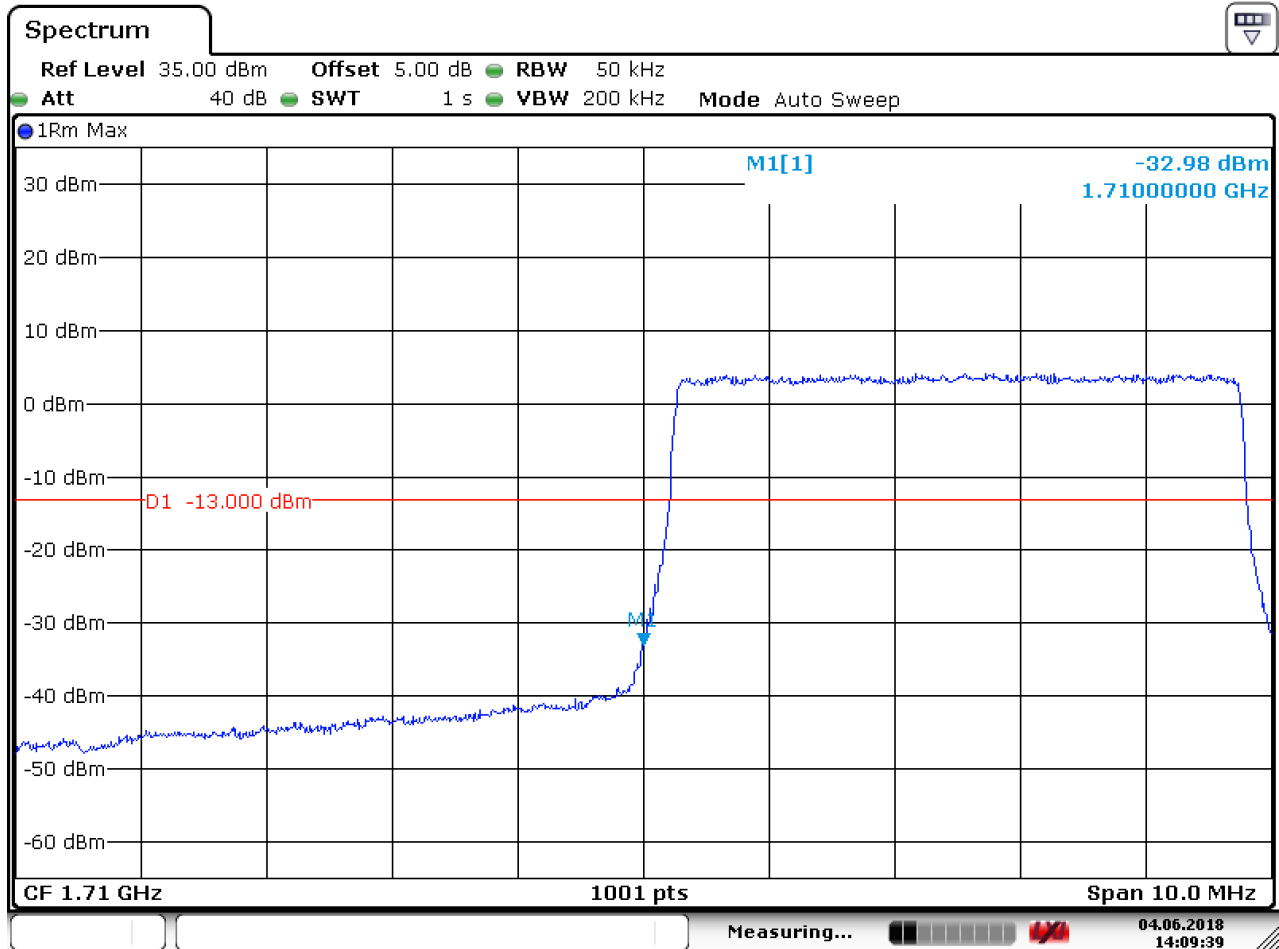
5.1.1.2.1.1 Test RB=1RB



Date: 4.JUN.2018 14:09:08



5.1.1.2.1.2 Test RB=25RB

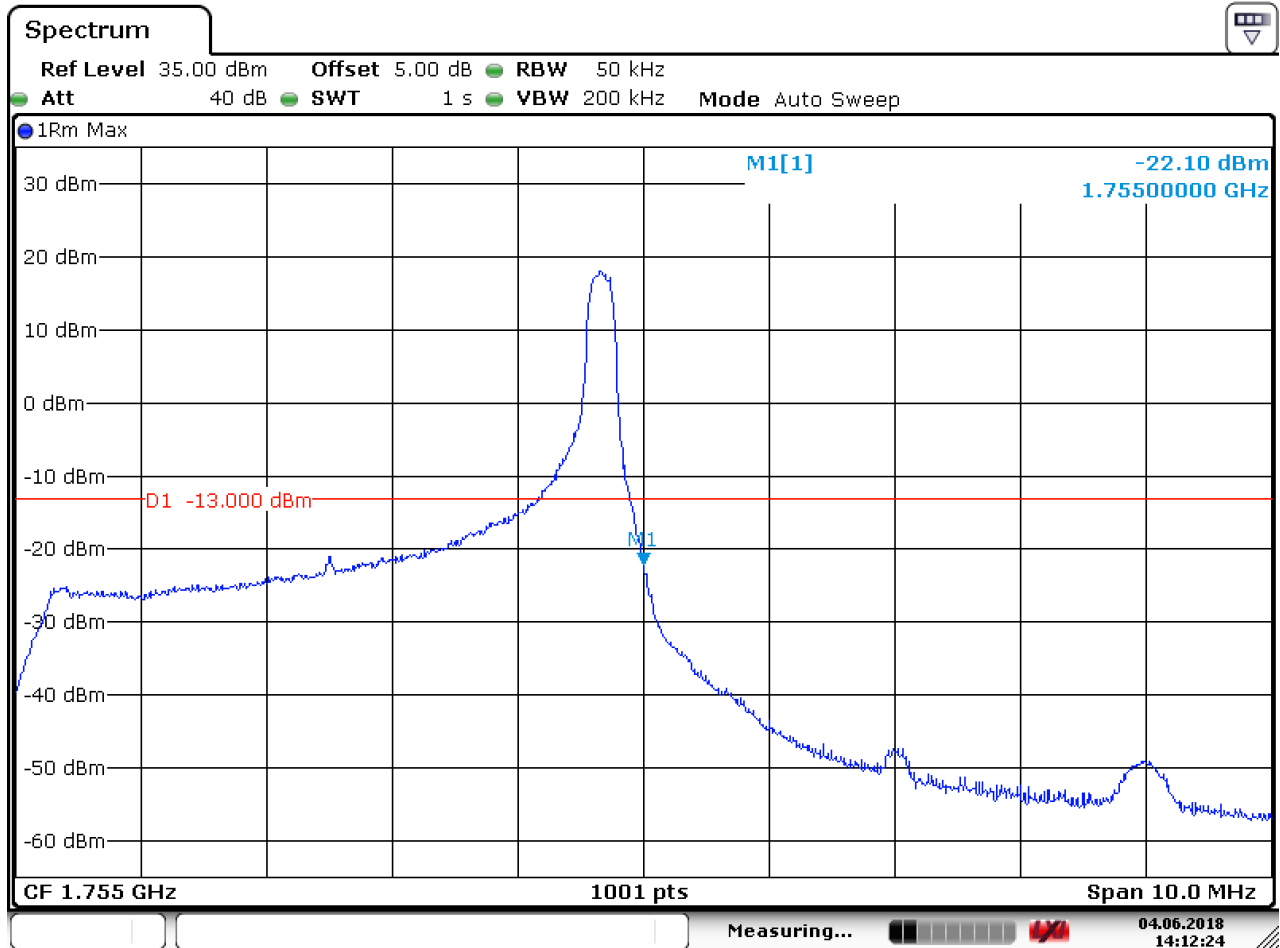


Date: 4. JUN. 2018 14:09:39



5.1.1.2.2 Test Channel = HCH

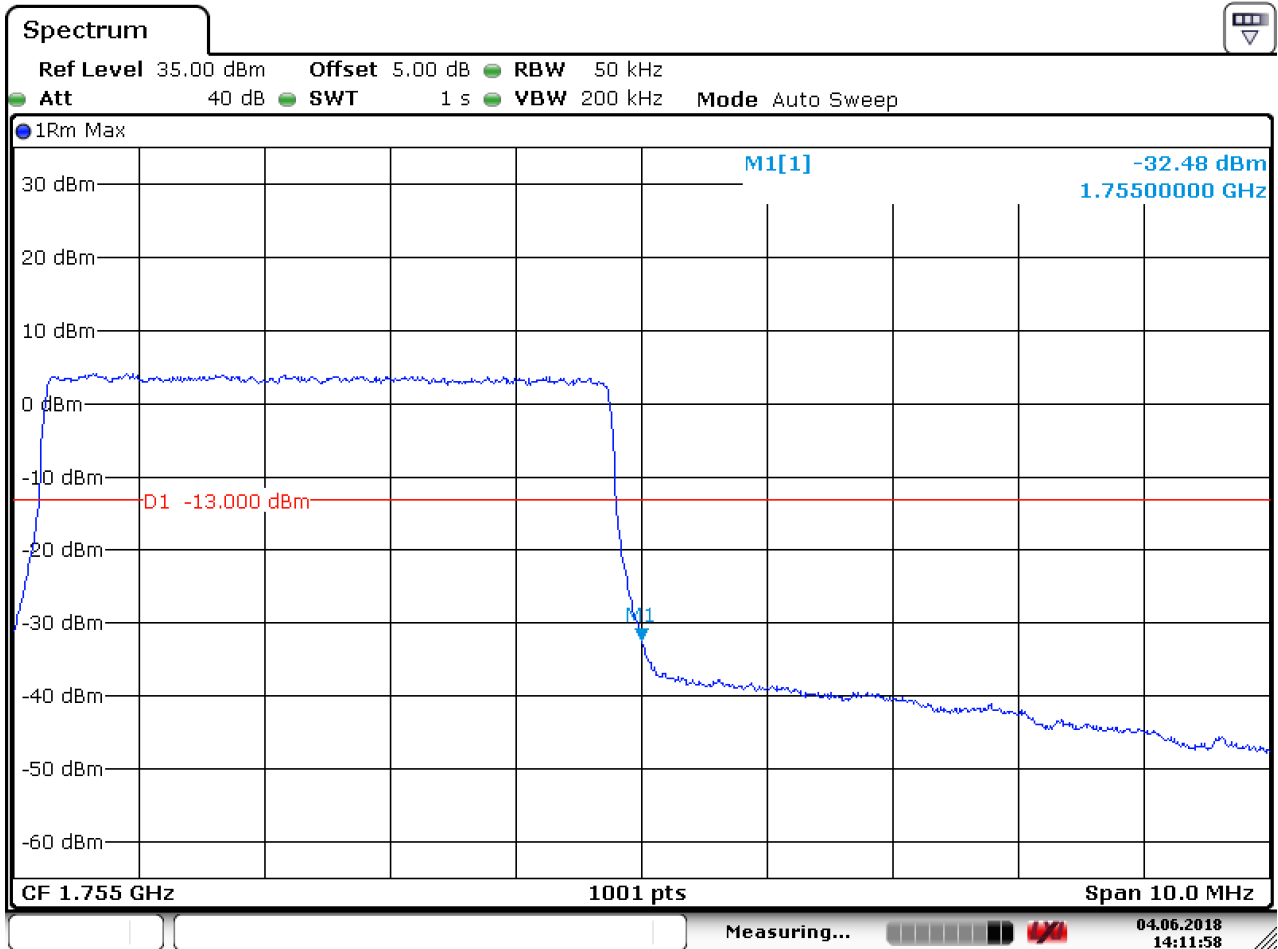
5.1.1.2.2.1 Test RB=1RB



Date: 4.JUN.2018 14:12:24



5.1.1.2.2.2 Test RB=25RB

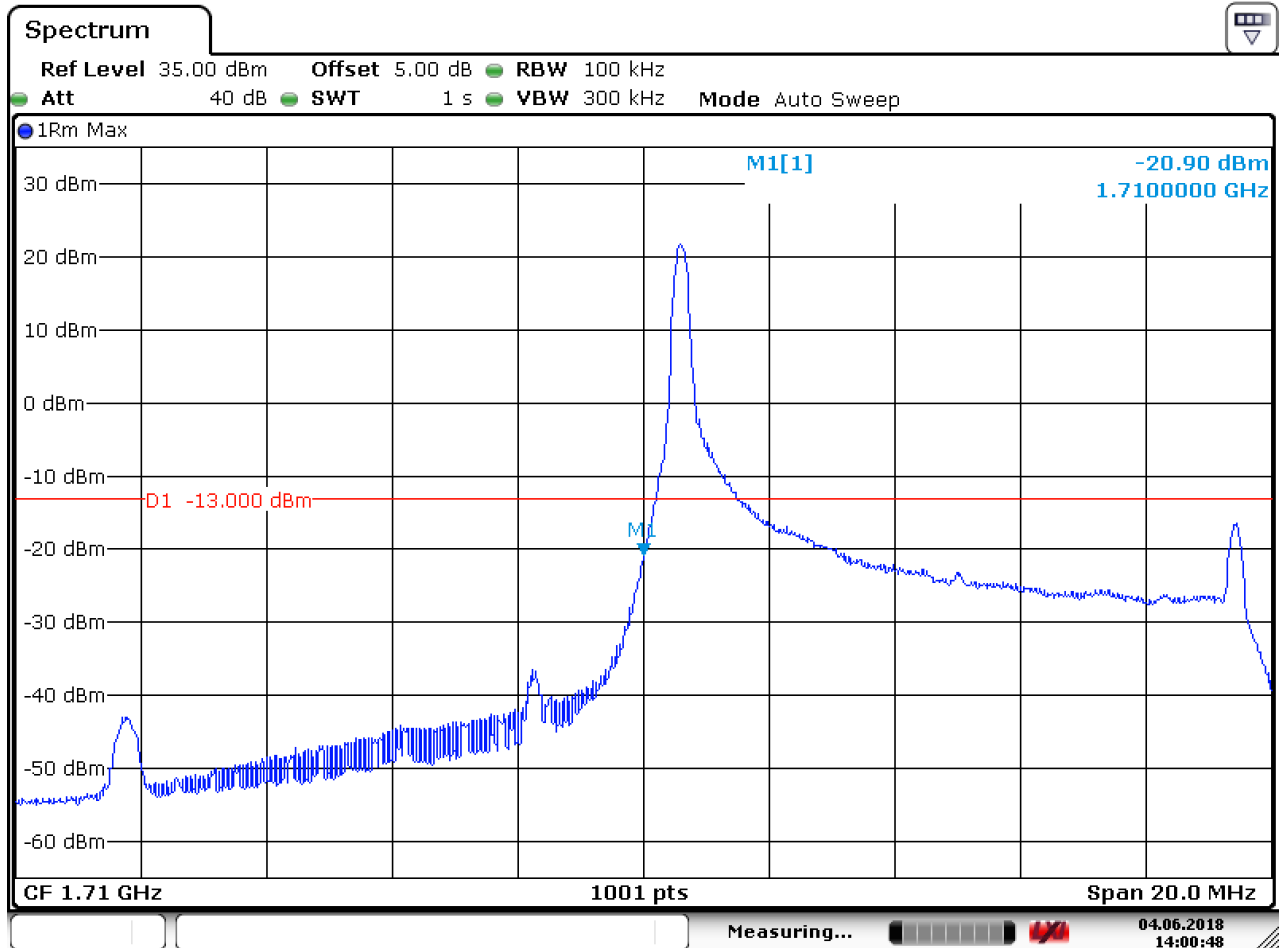


Date: 4.JUN.2018 14:11:59

5.1.1.3 Test Mode = LTE/TM1 10MHz

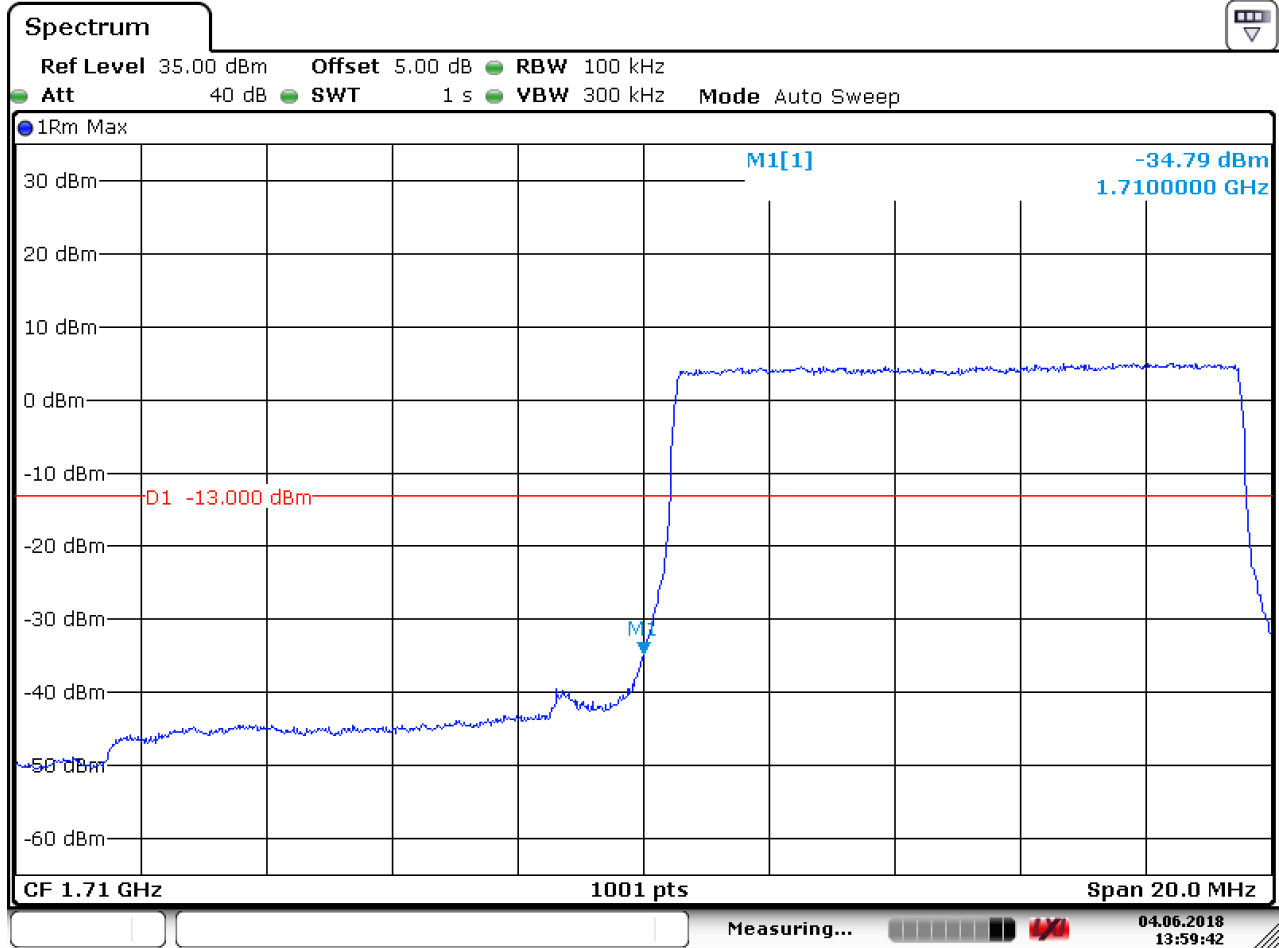
5.1.1.3.1 Test Channel = LCH

5.1.1.3.1.1 Test RB=1RB



Date: 4.JUN.2018 14:00:49

5.1.1.3.1.2 Test RB=50RB

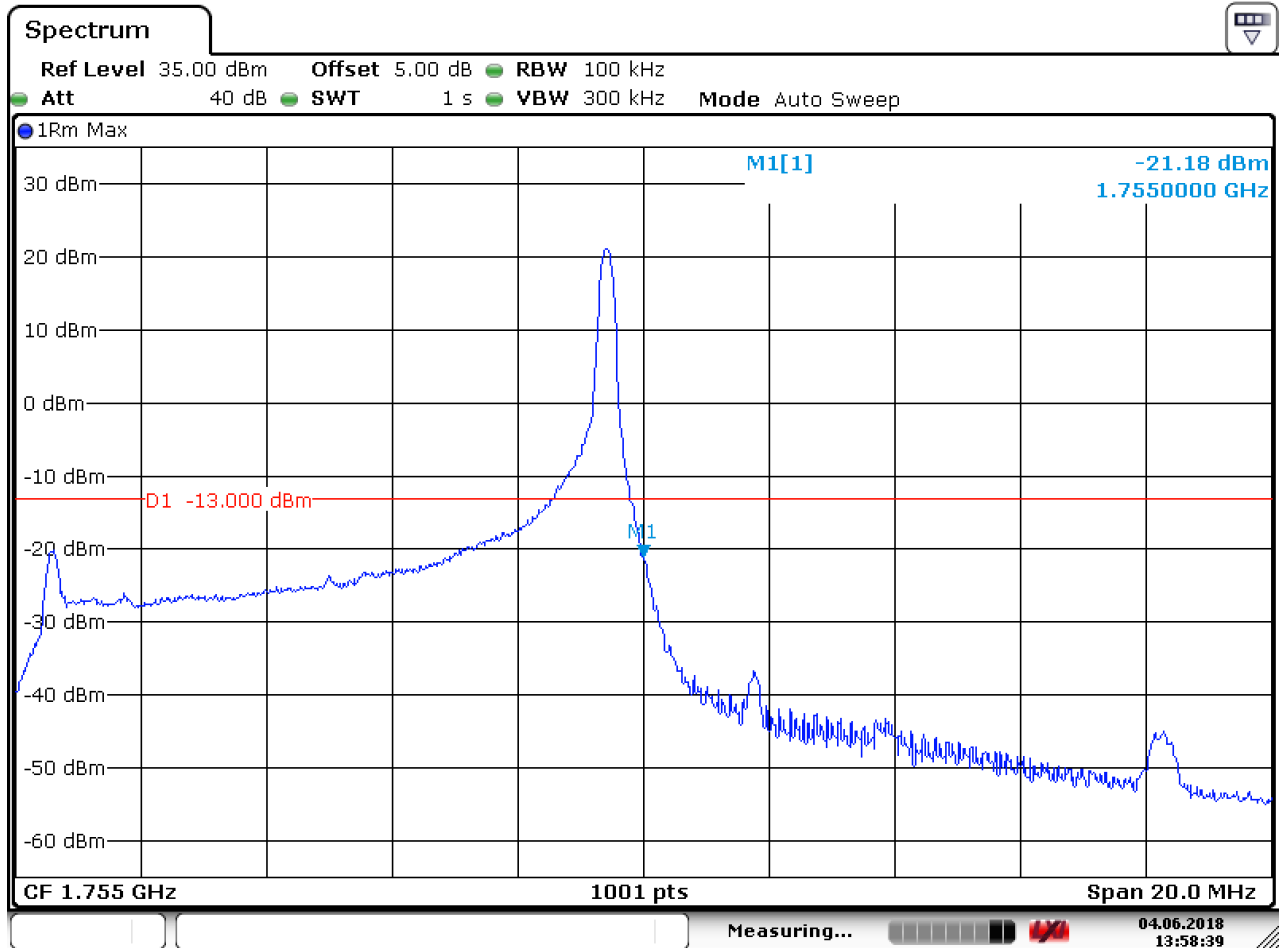


Date: 4.JUN.2018 13:59:42



5.1.1.3.2 Test Channel = HCH

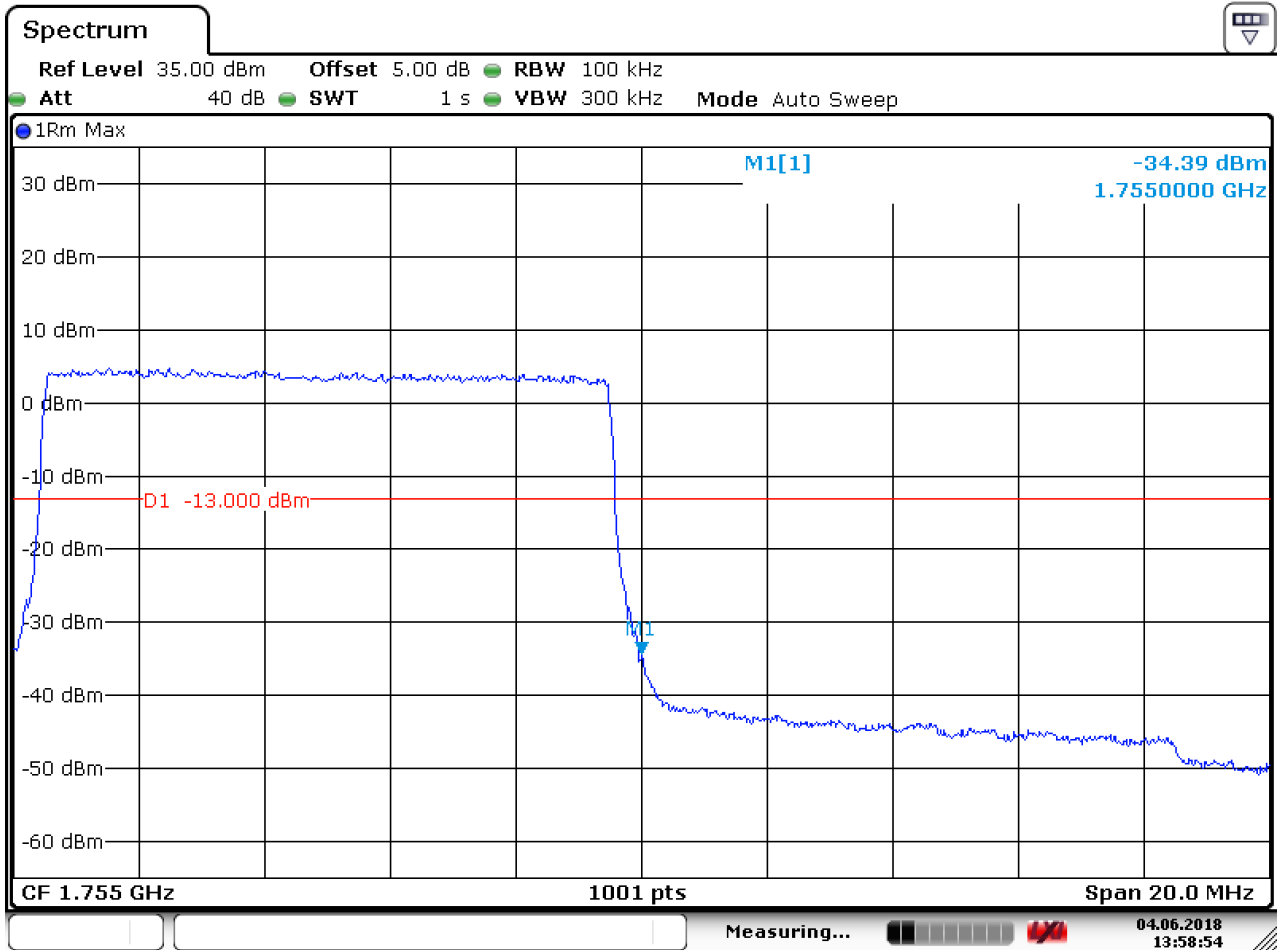
5.1.1.3.2.1 Test RB=1RB



Date: 4.JUN.2018 13:58:39



5.1.1.3.2.2 Test RB=50RB

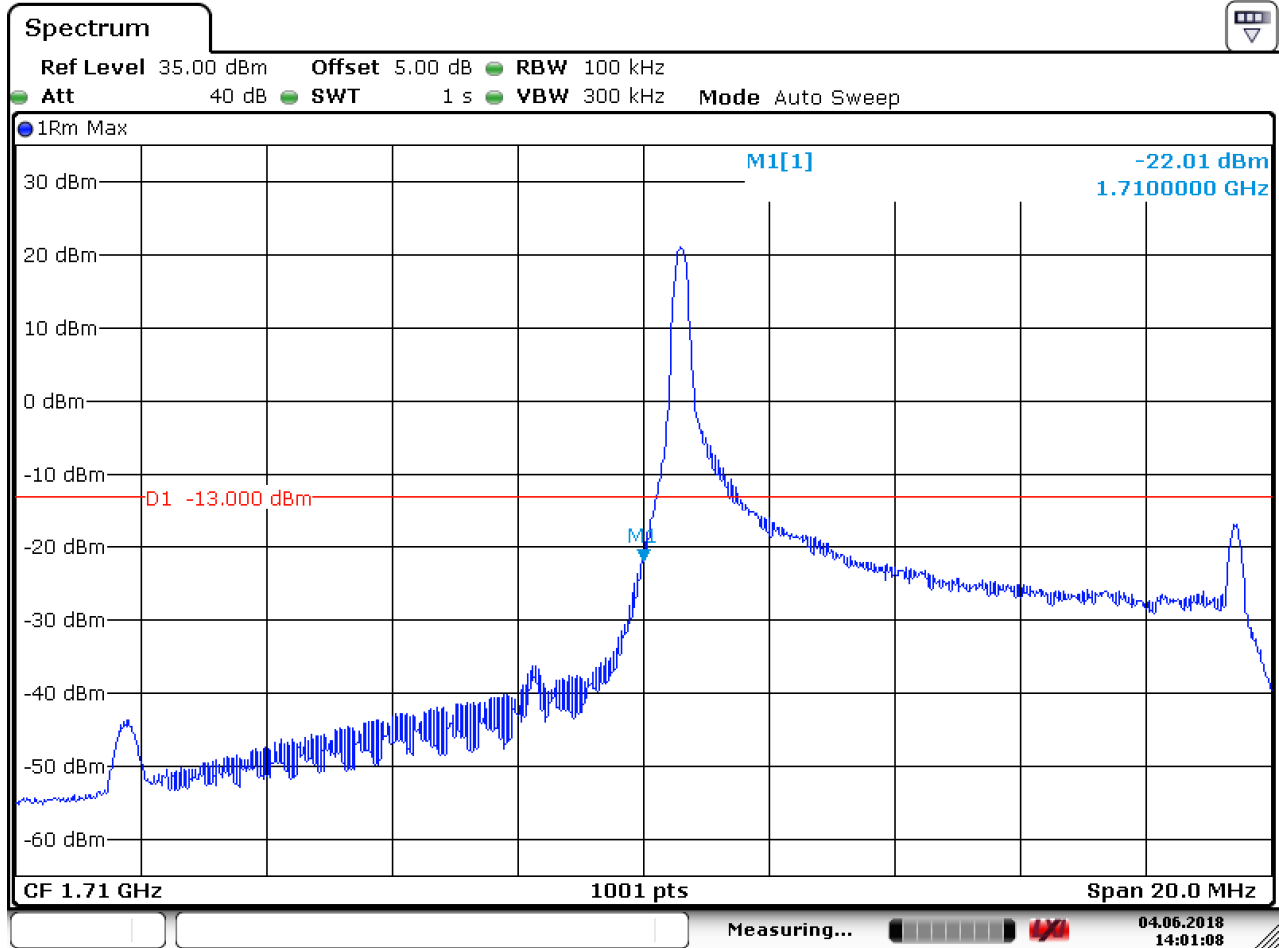


Date: 4.JUN.2018 13:58:54

5.1.1.4 Test Mode = LTE/TM2 10MHz

5.1.1.4.1 Test Channel = LCH

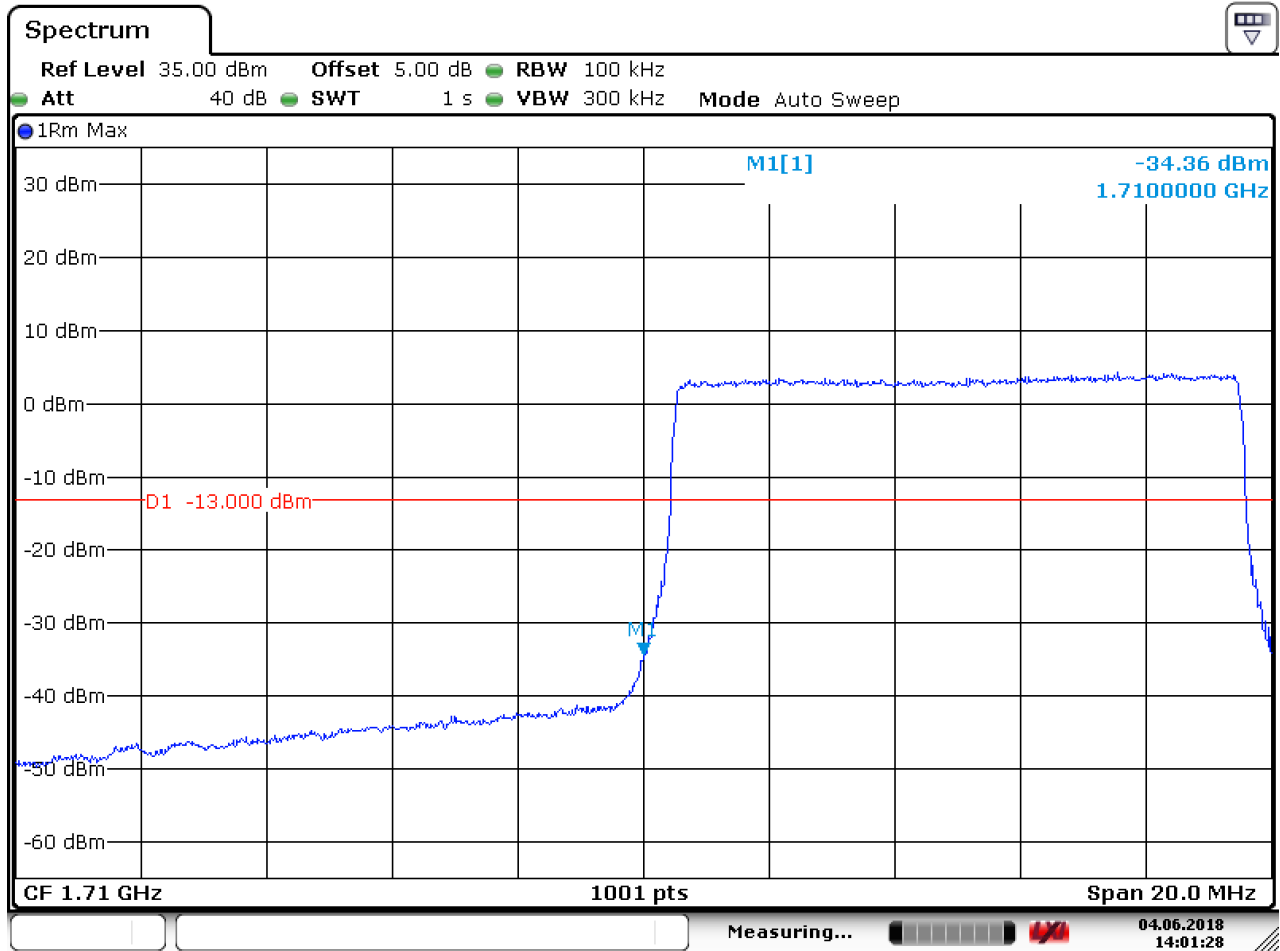
5.1.1.4.1.1 Test RB=1RB



Date: 4.JUN.2018 14:01:09



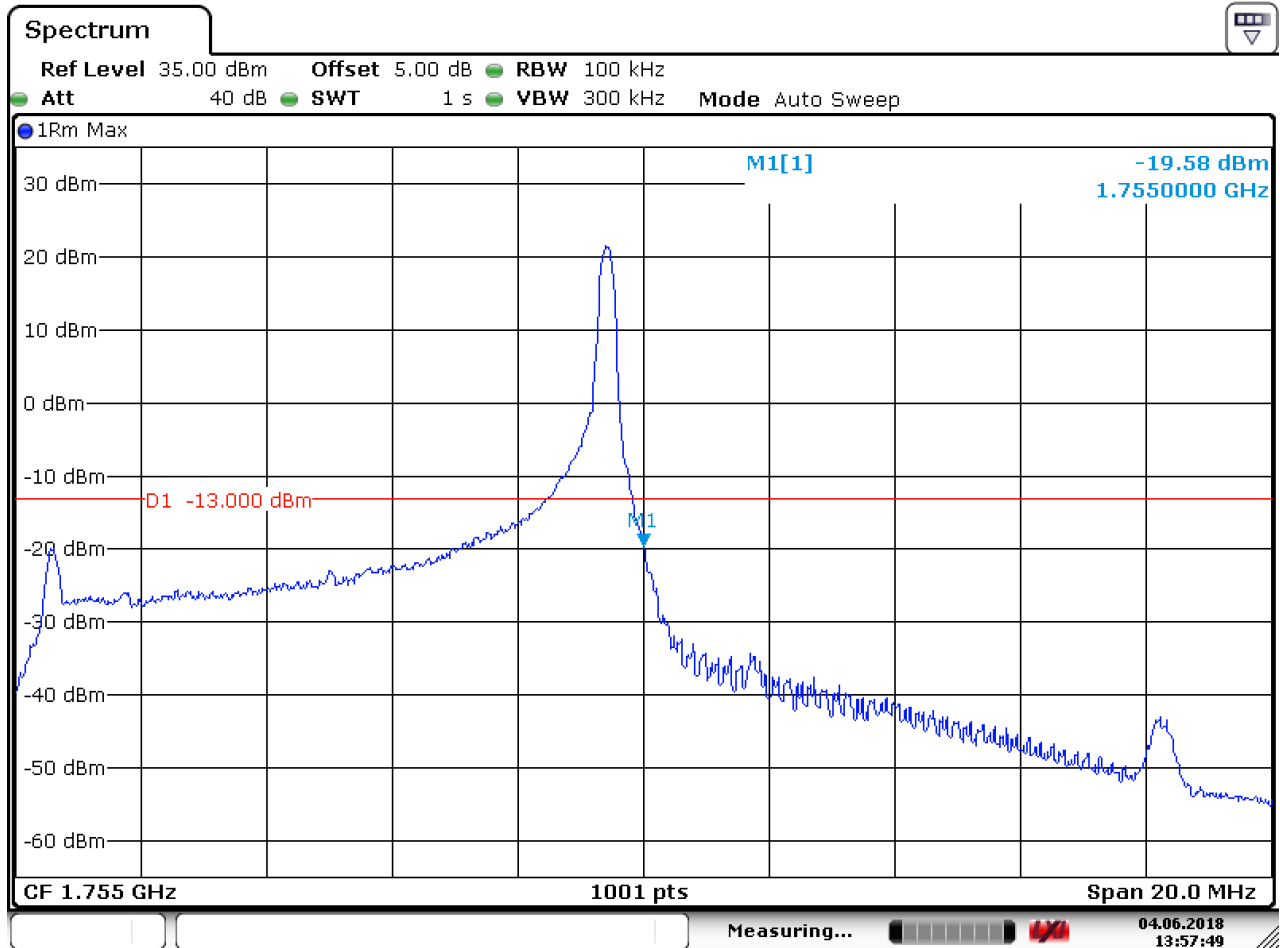
5.1.1.4.1.2 Test RB=50RB



Date: 4.JUN.2018 14:01:29

5.1.1.4.2 Test Channel = HCH

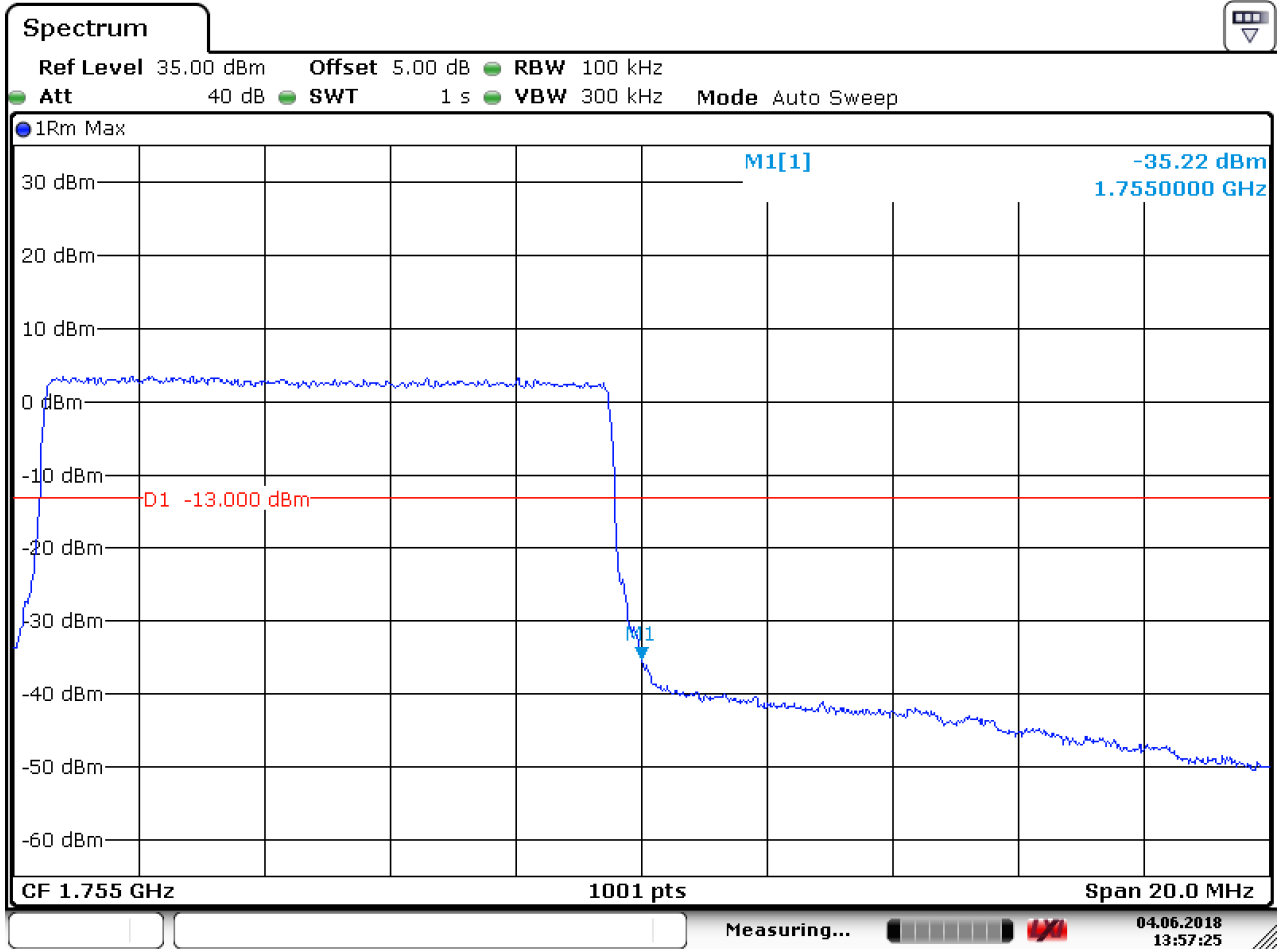
5.1.1.4.2.1 Test RB=1RB



Date: 4.JUN.2018 13:57:50



5.1.1.4.2.2 Test RB=50RB



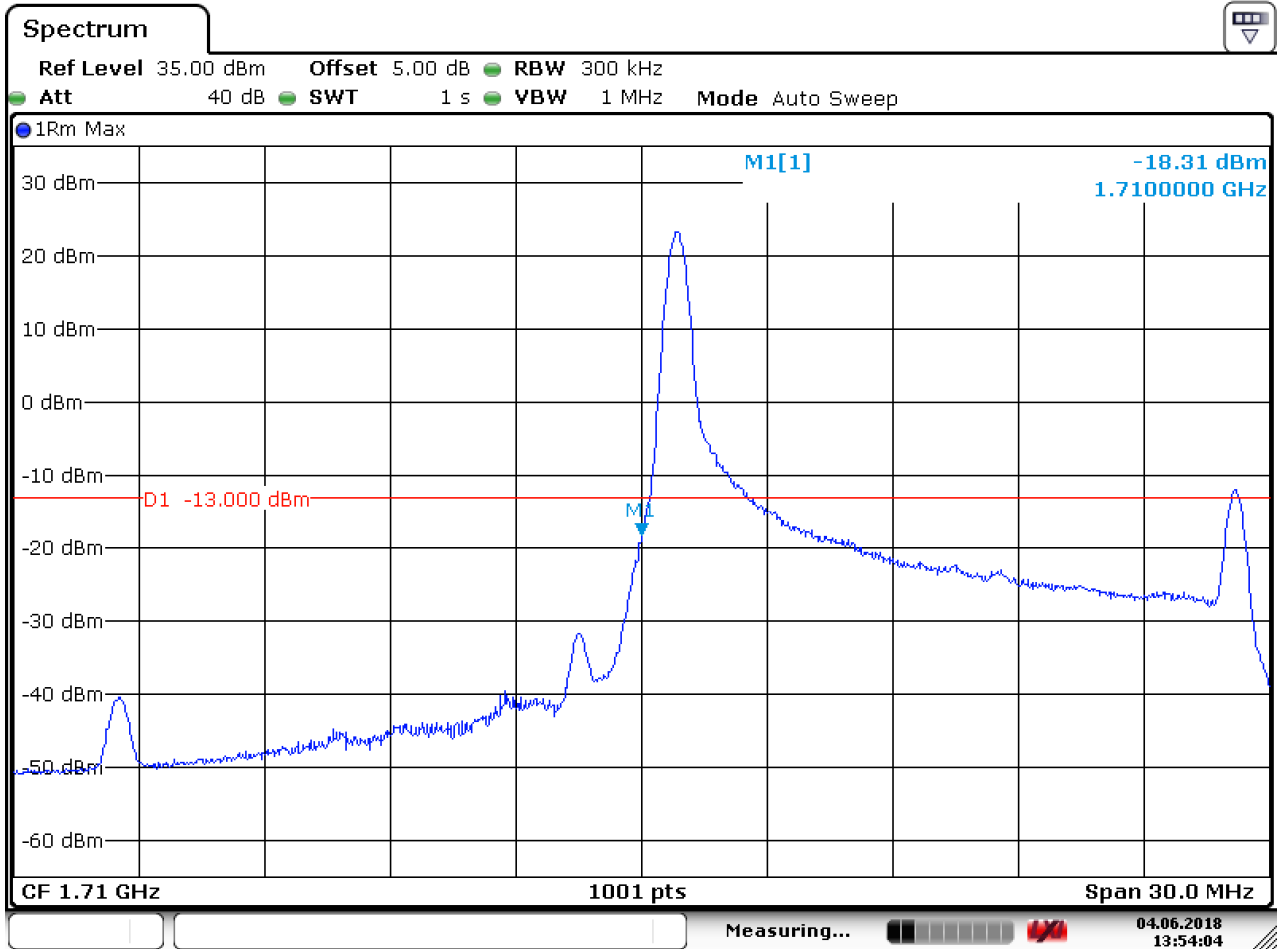
Date: 4.JUN.2018 13:57:25

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5.1.1.5 Test Mode = LTE/TM1 15MHz

5.1.1.5.1 Test Channel = LCH

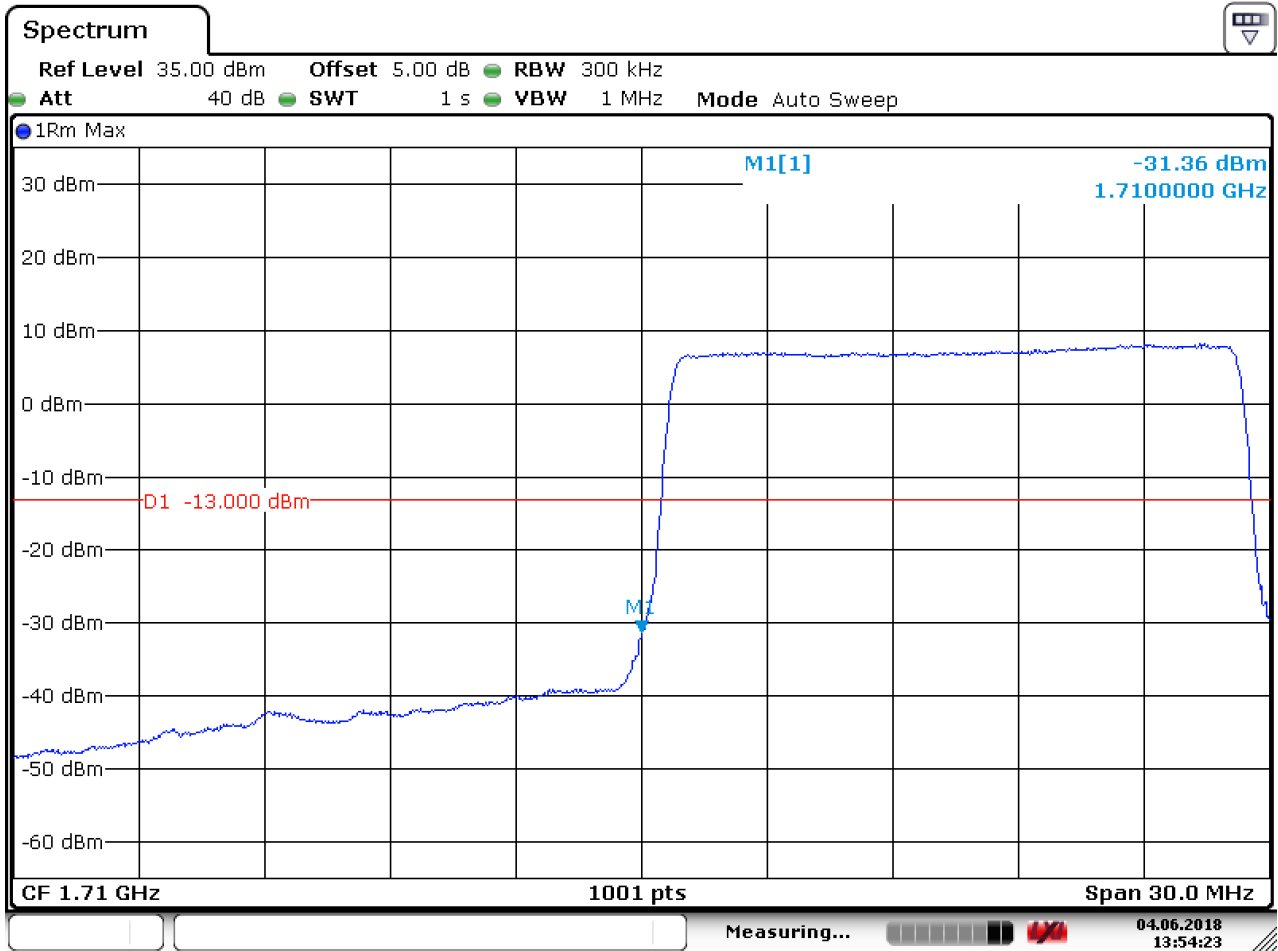
5.1.1.5.1.1 Test RB=1RB



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5.1.1.5.1.2 Test RB=75RB



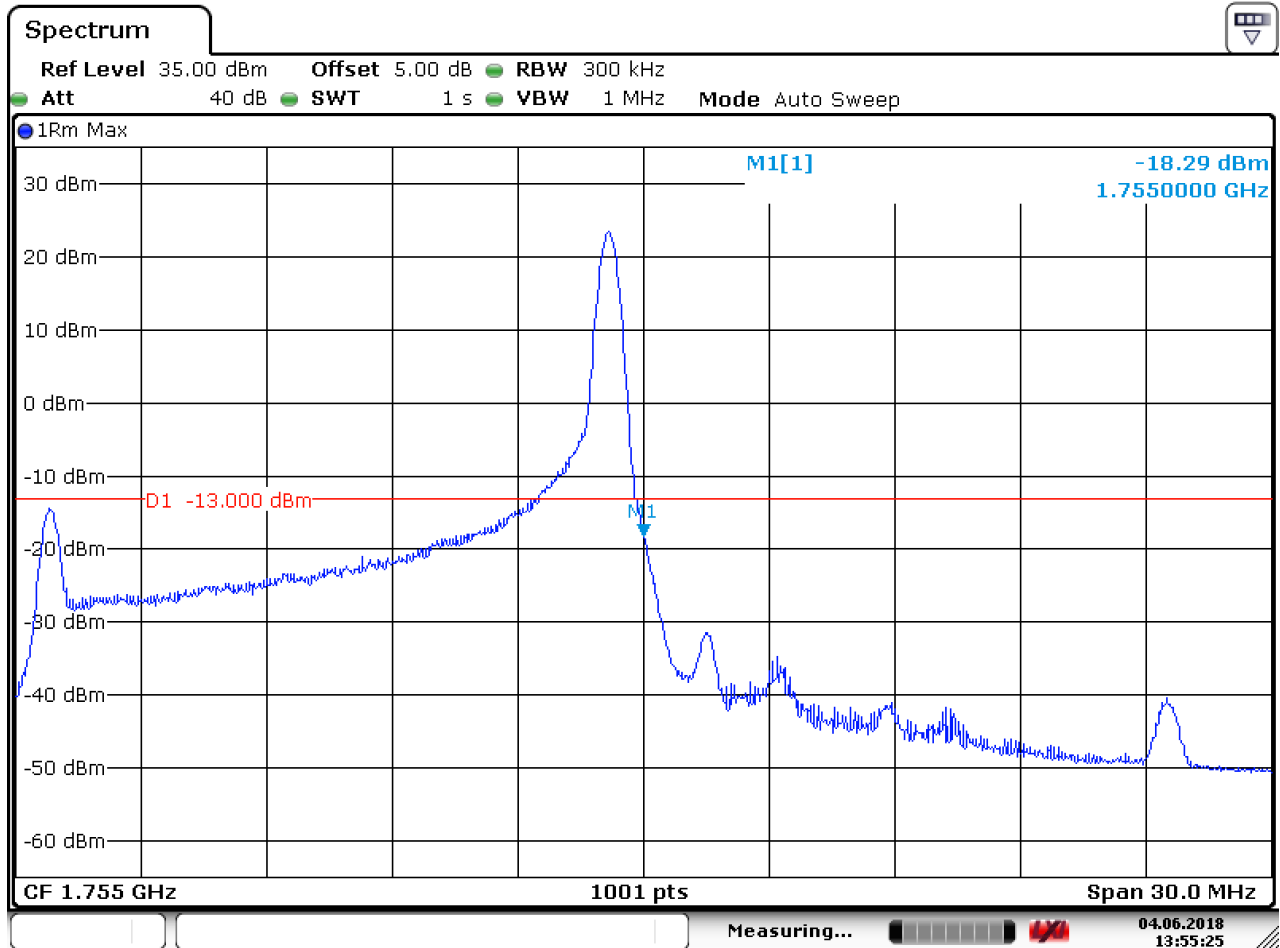
Date: 4.JUN.2018 13:54:23

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5.1.1.5.2 Test Channel = HCH

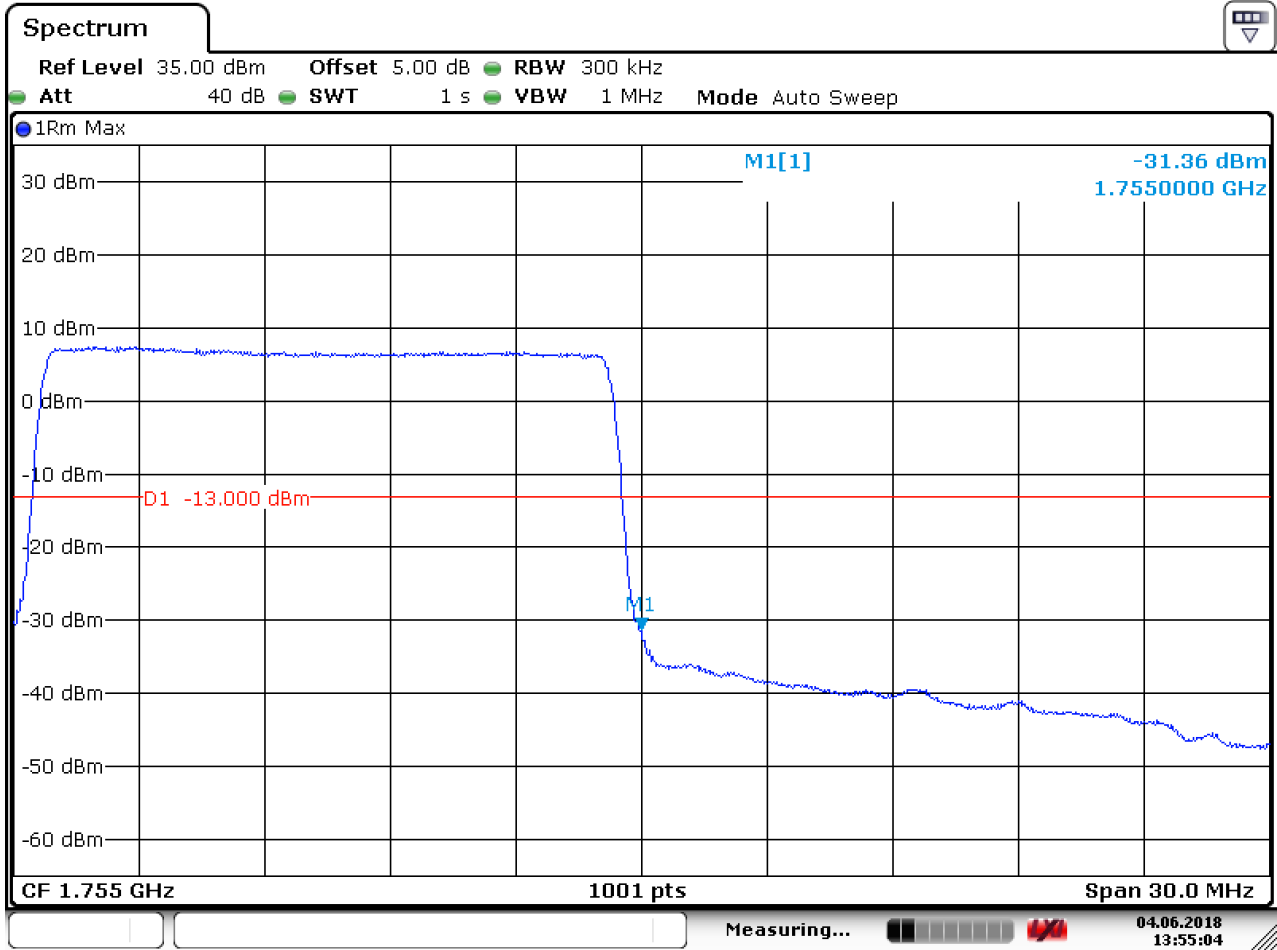
5.1.1.5.2.1 Test RB=1RB



Date: 4.JUN.2018 13:55:25



5.1.1.5.2.2 Test RB=75RB



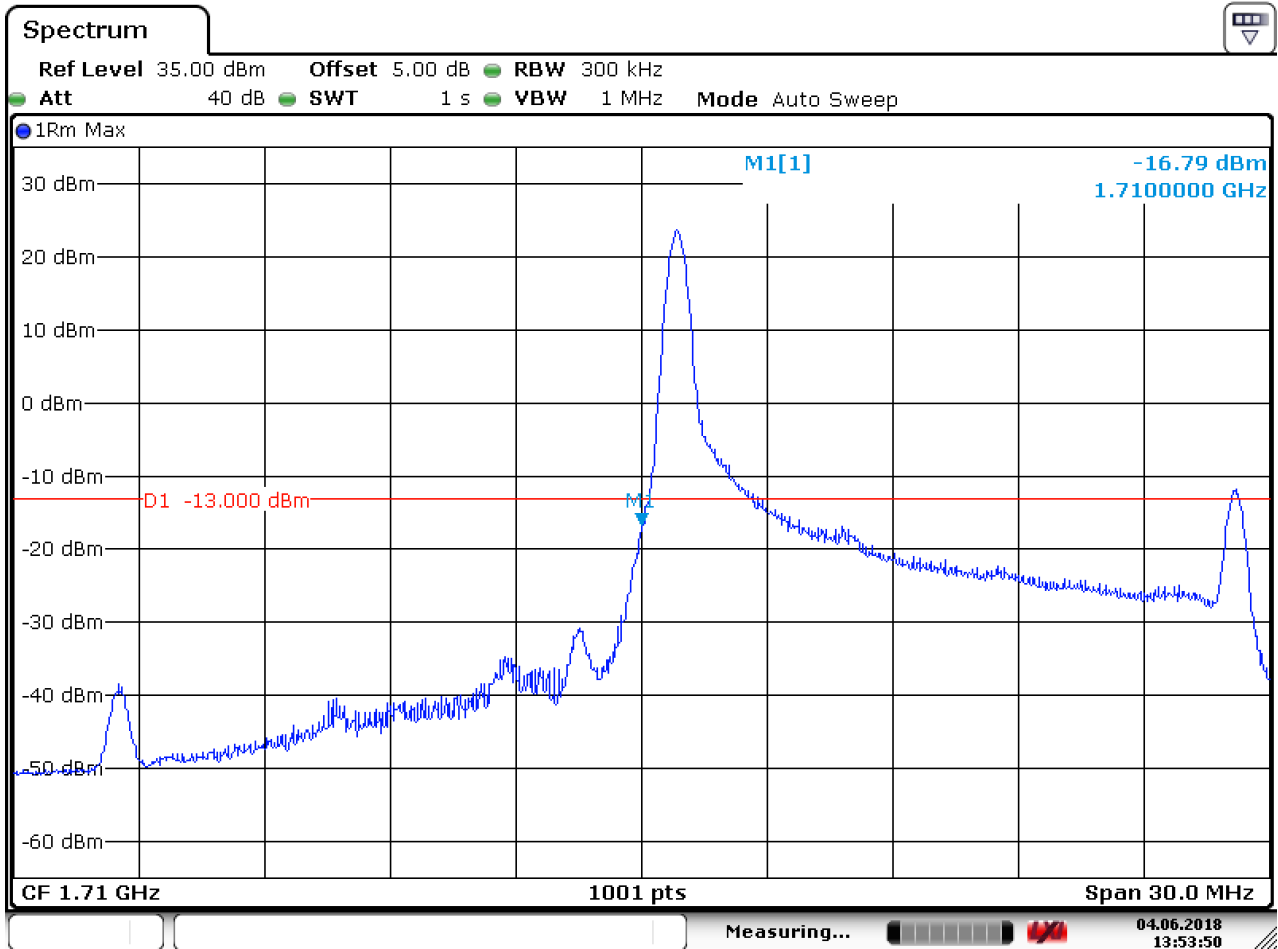
Date: 4.JUN.2018 13:55:04

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5.1.1.6 Test Mode = LTE/TM2 15MHz

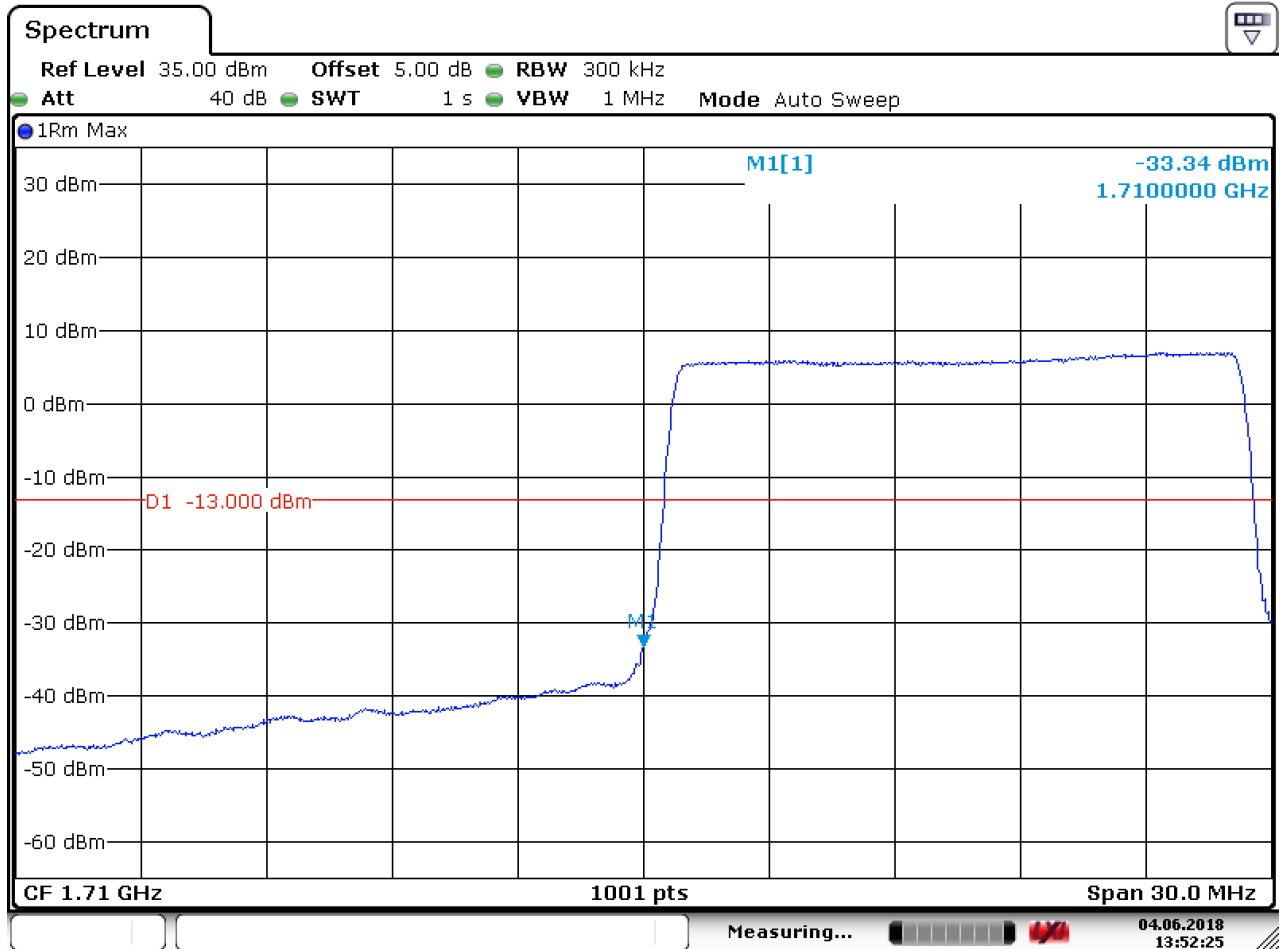
5.1.1.6.1 Test Channel = LCH

5.1.1.6.1.1 Test RB=1RB



Date: 4.JUN.2018 13:53:50

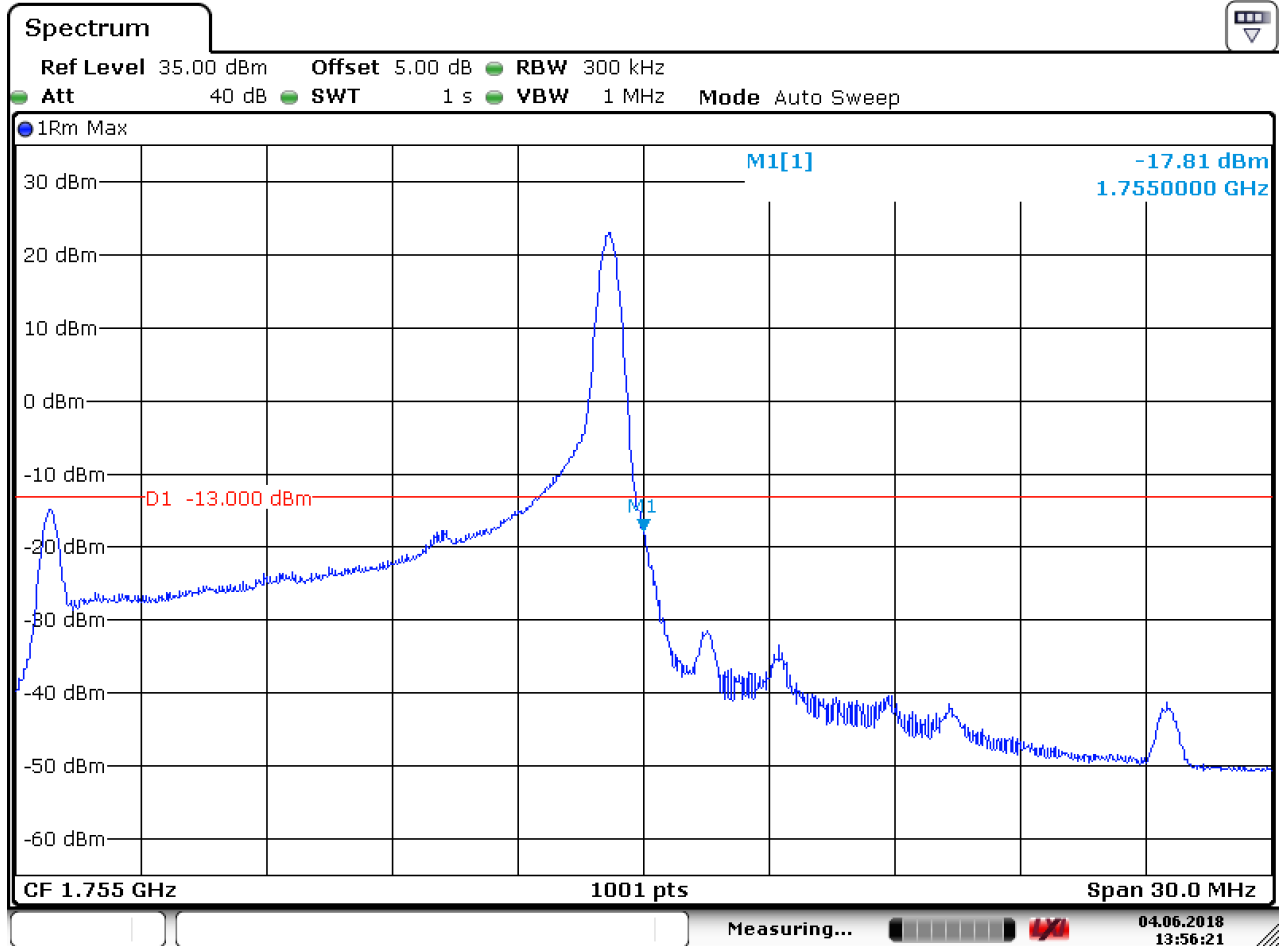
5.1.1.6.1.2 Test RB=75RB



Date: 4. JUN. 2018 13:52:25

5.1.1.6.2 Test Channel = HCH

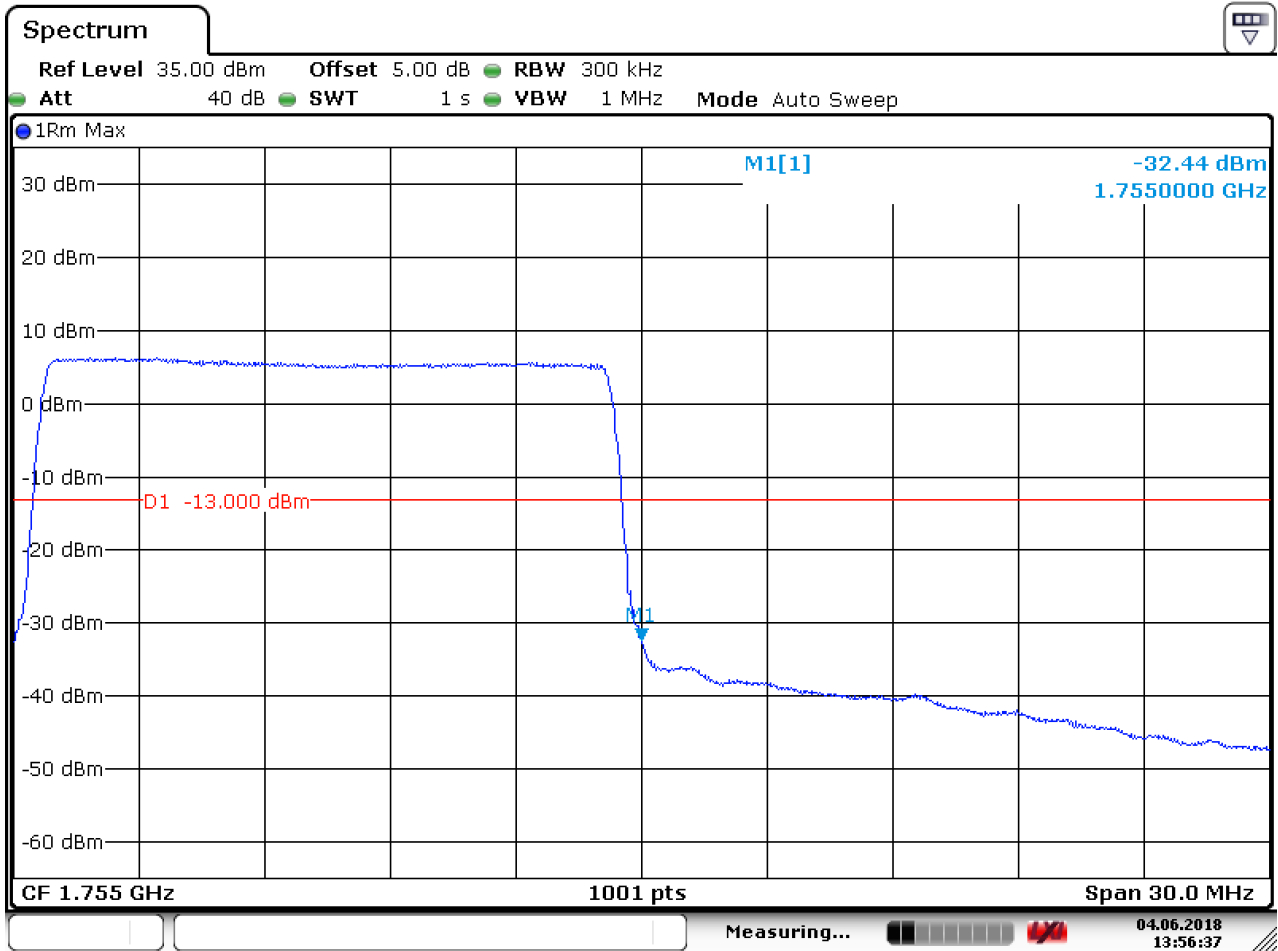
5.1.1.6.2.1 Test RB=1RB



Date: 4.JUN.2018 13:56:22



5.1.1.6.2.2 Test RB=75RB

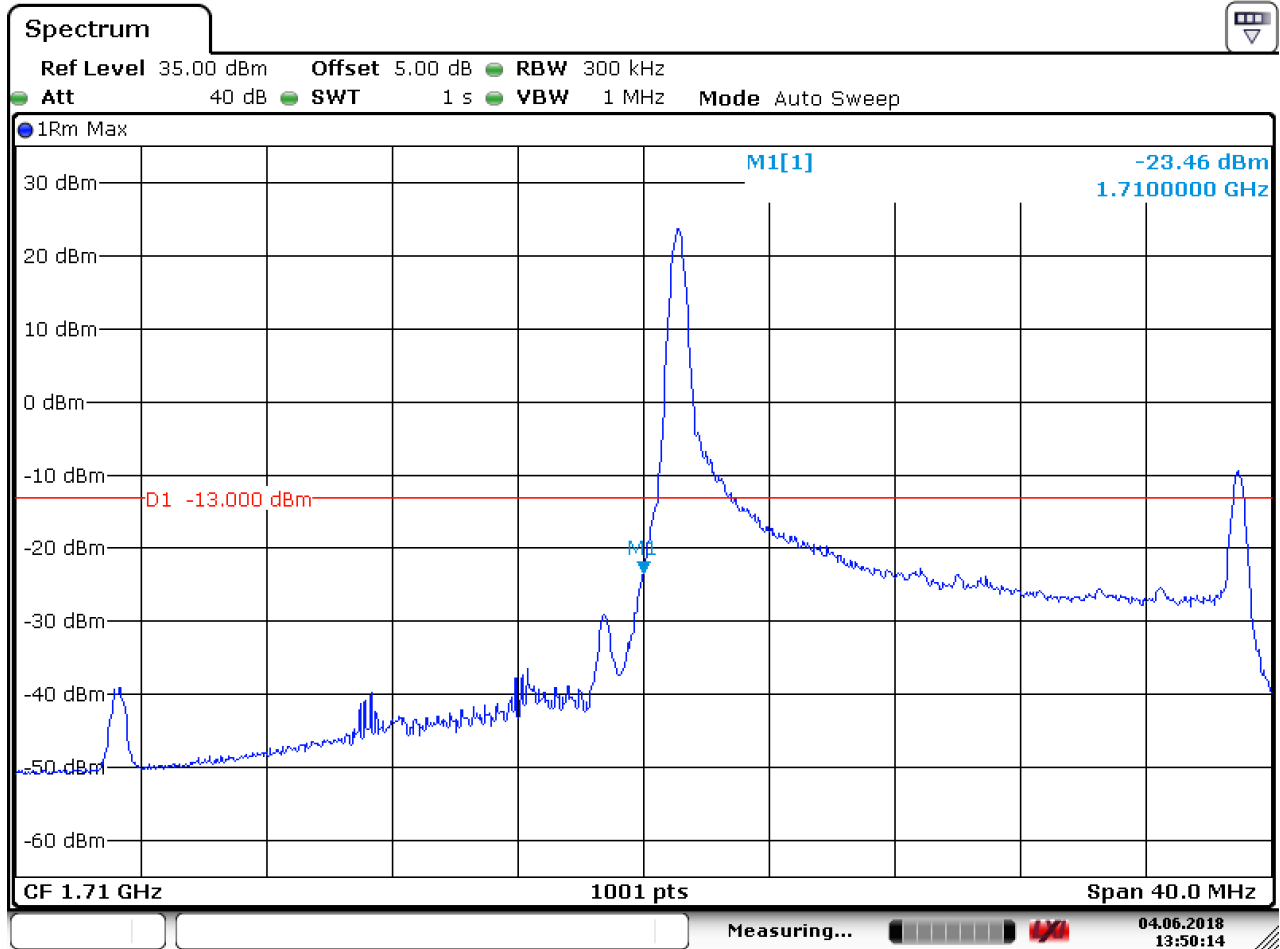


Date: 4. JUN. 2018 13:56:38

5.1.1.7 Test Mode = LTE/TM1 20MHz

5.1.1.7.1 Test Channel = LCH

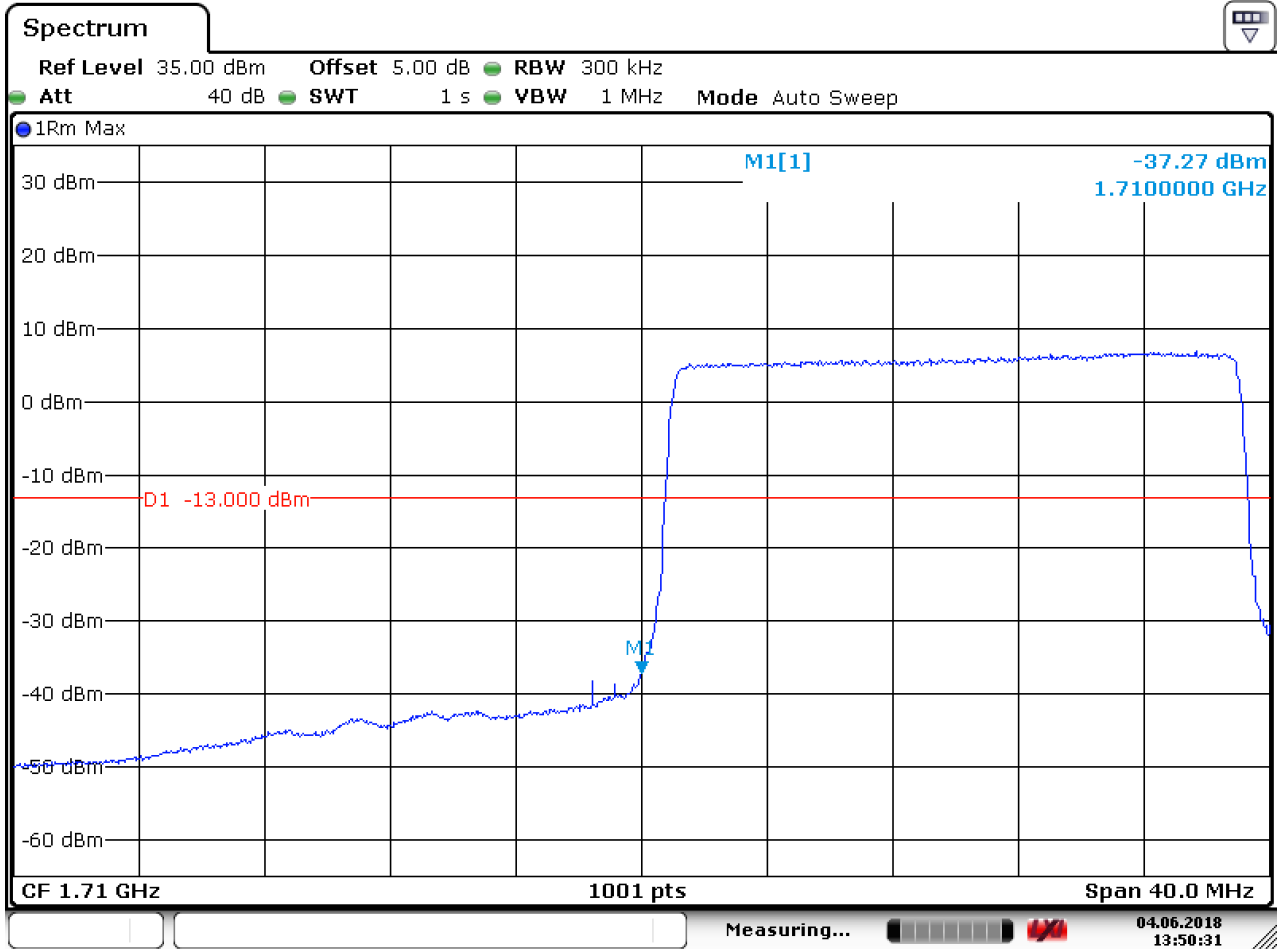
5.1.1.7.1.1 Test RB=1RB



Date: 4.JUN.2018 13:50:14



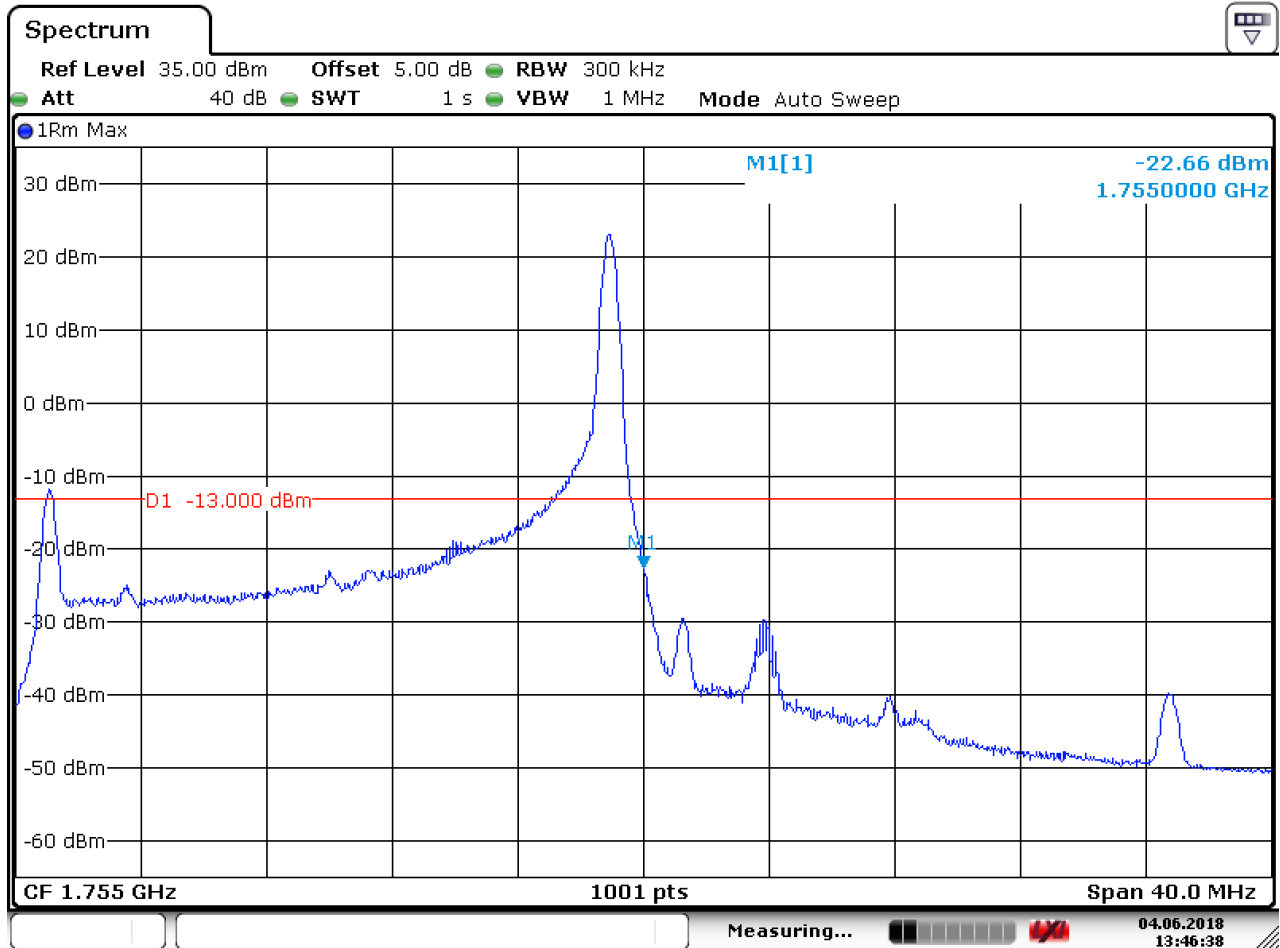
5.1.1.7.1.2 Test RB=100RB



Date: 4.JUN.2018 13:50:31

5.1.1.7.2 Test Channel = HCH

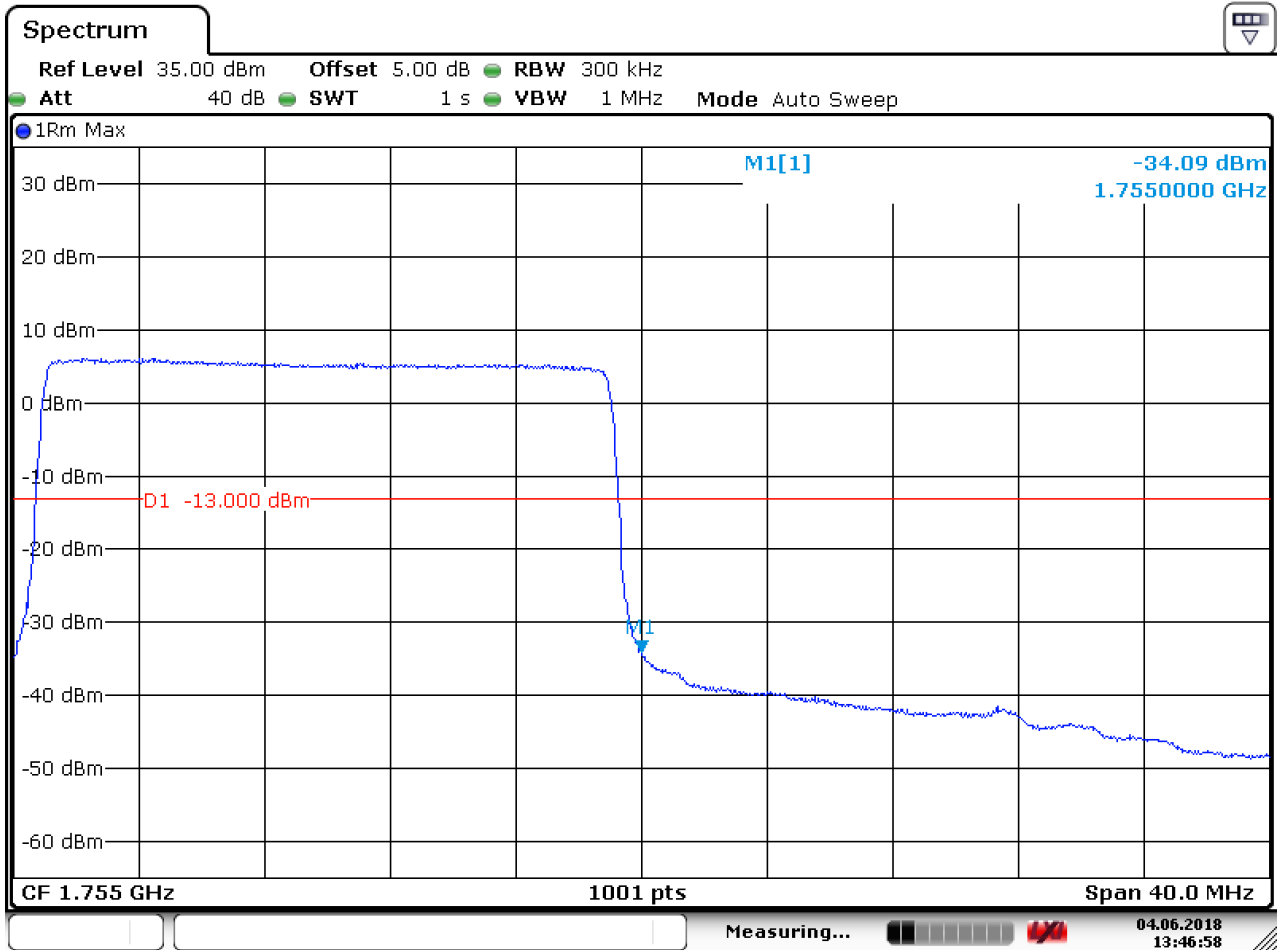
5.1.1.7.2.1 Test RB=1RB



Date: 4.JUN.2018 13:46:39



5.1.1.7.2.2 Test RB=100RB



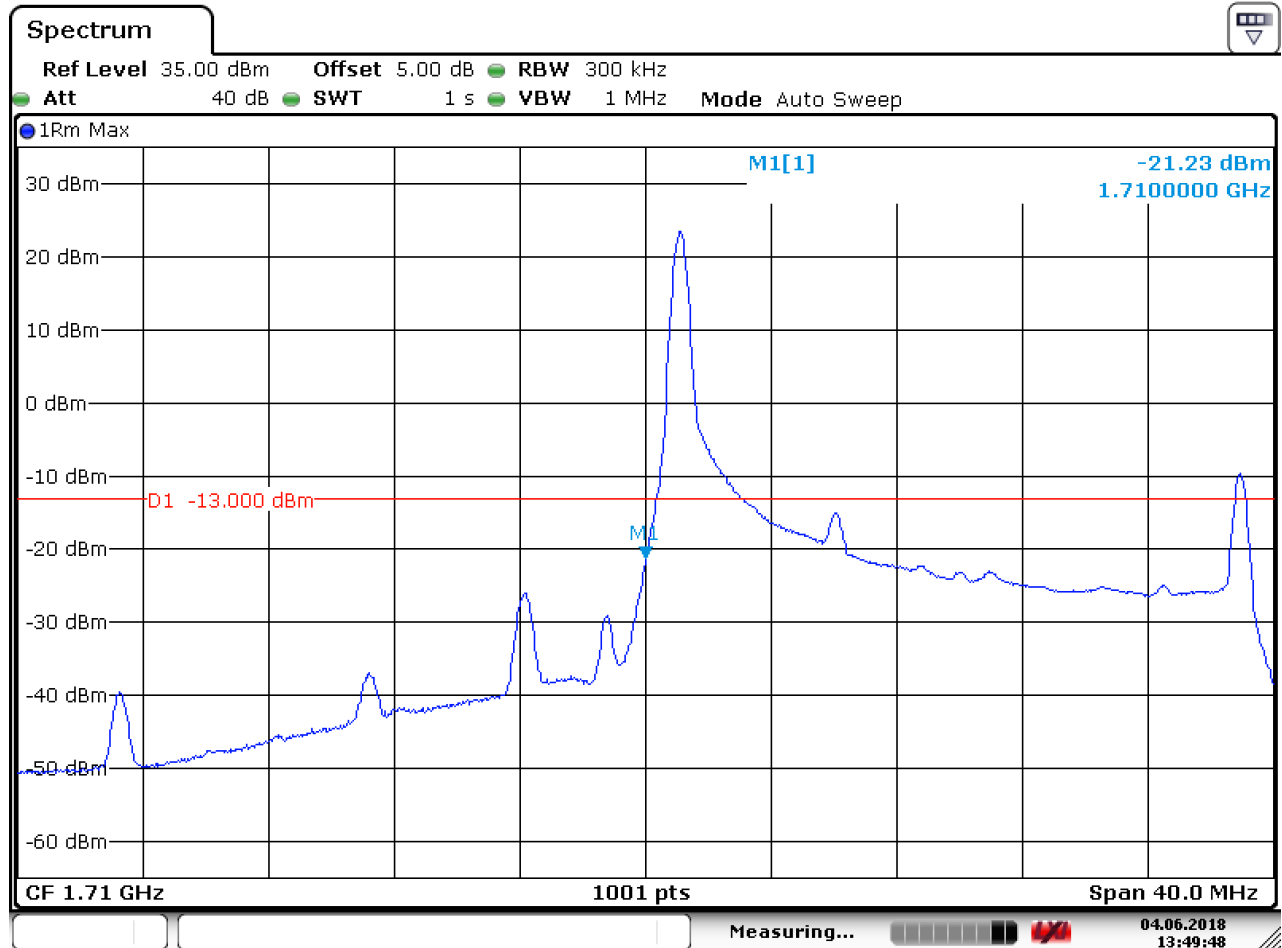
Date: 4.JUN.2018 13:46:59



5.1.1.8 Test Mode = LTE/TM2 20MHz

5.1.1.8.1 Test Channel = LCH

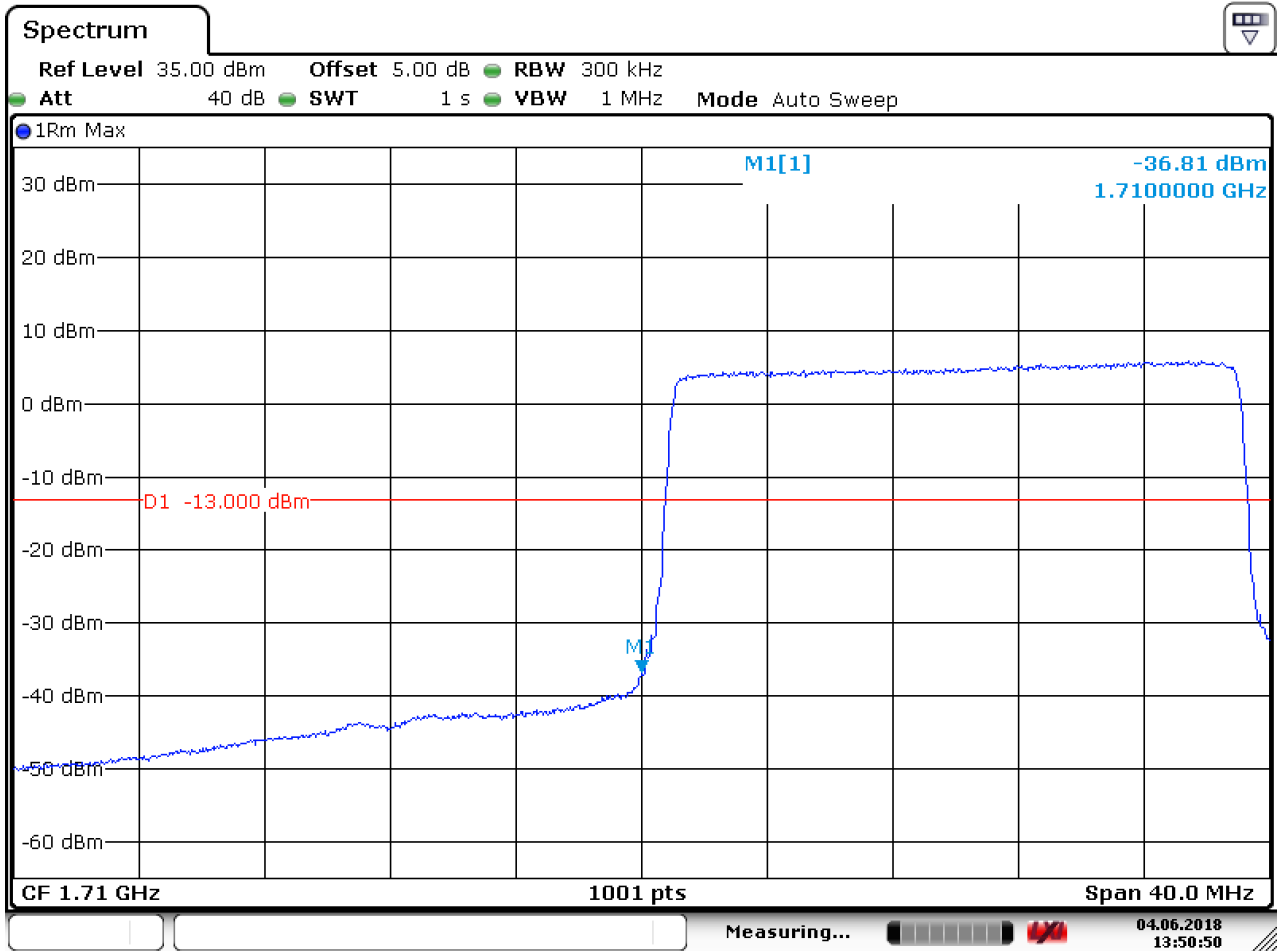
5.1.1.8.1.1 Test RB=1RB



Date: 4.JUN.2018 13:49:48



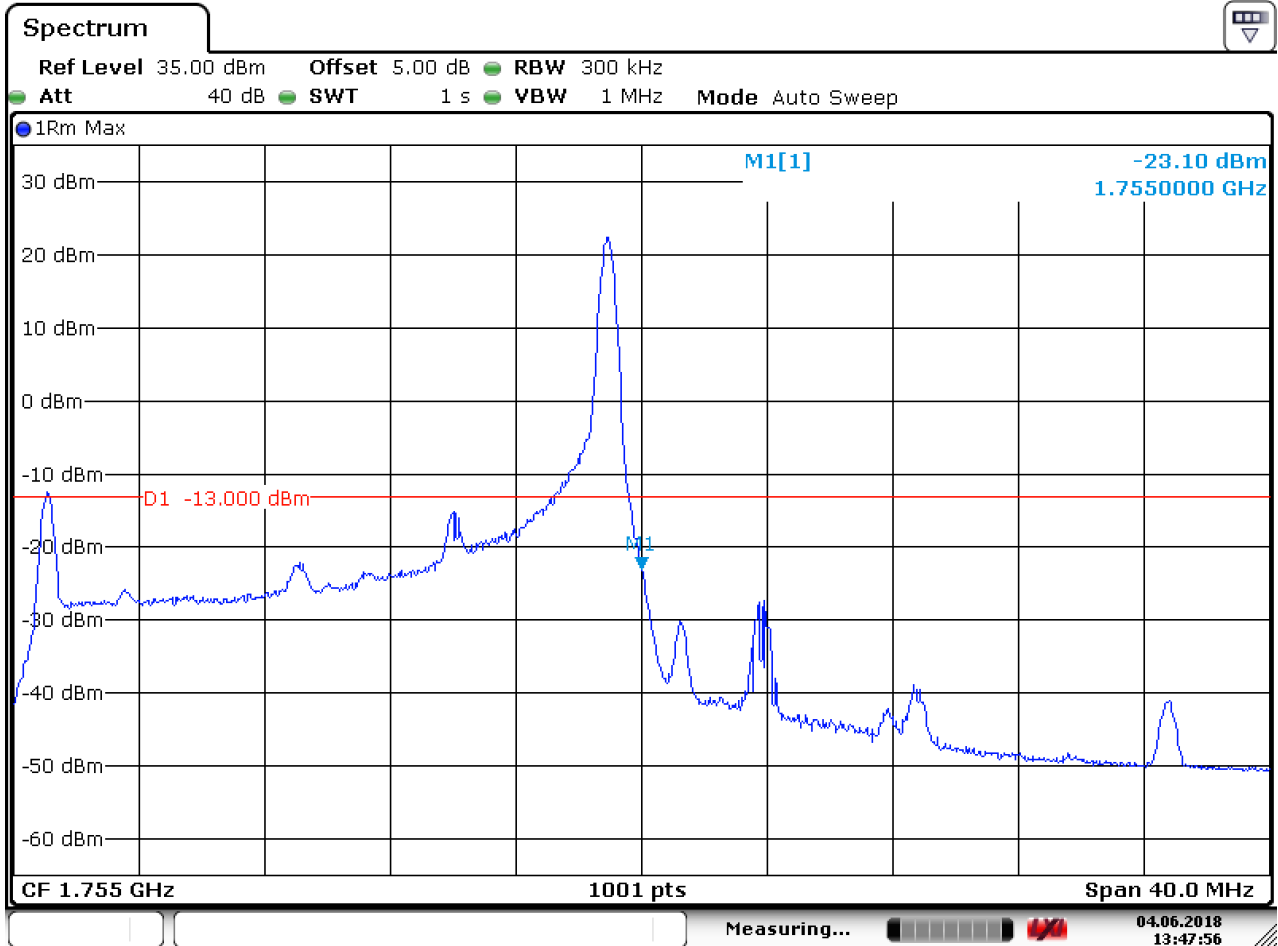
5.1.1.8.1.2 Test RB=100RB



Date: 4.JUN.2018 13:50:50

5.1.1.8.2 Test Channel = HCH

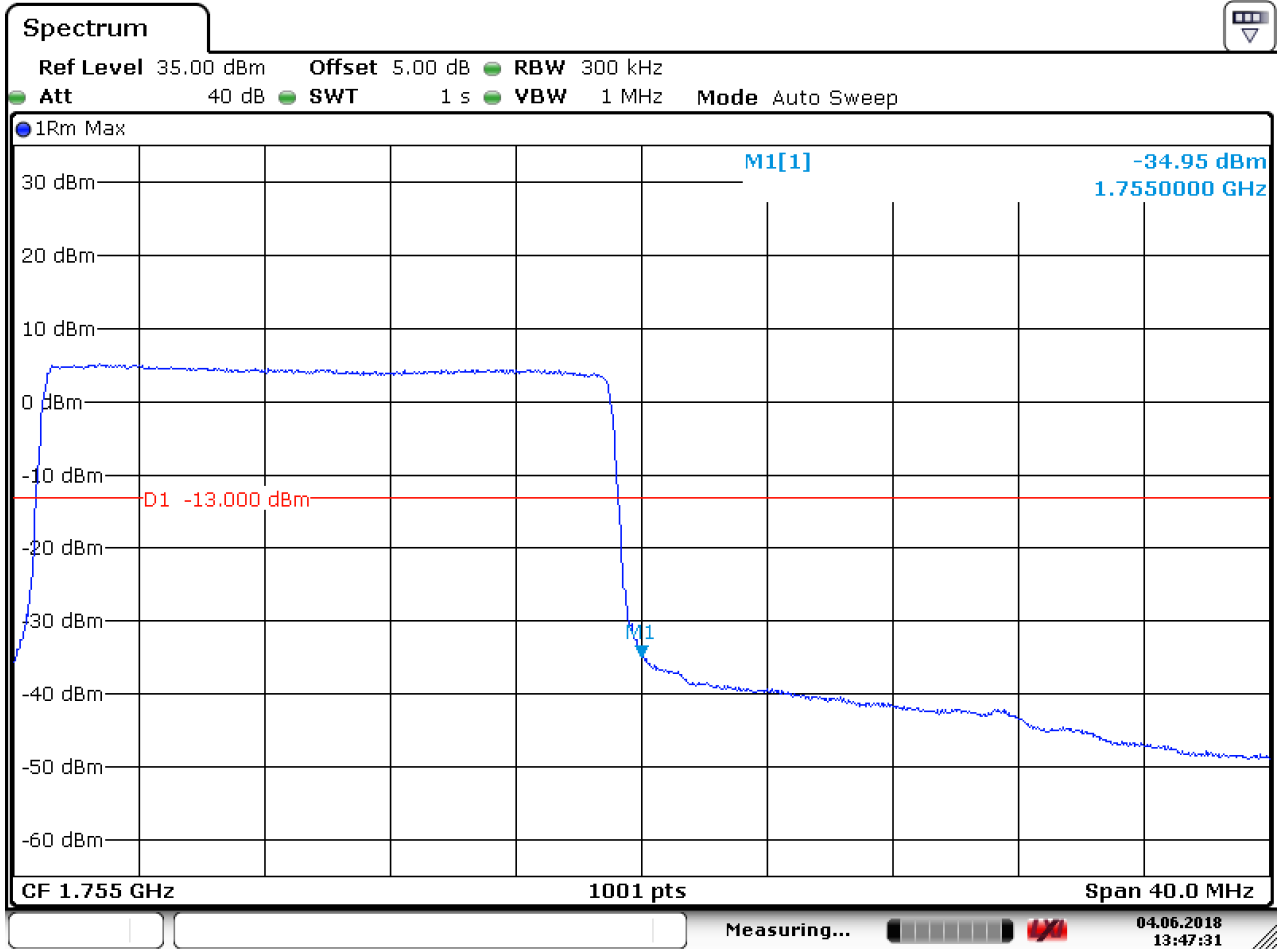
5.1.1.8.2.1 Test RB=1RB



Date: 4.JUN.2018 13:47:56



5.1.1.8.2.2 Test RB=100RB



Date: 4.JUN.2018 13:47:31

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.

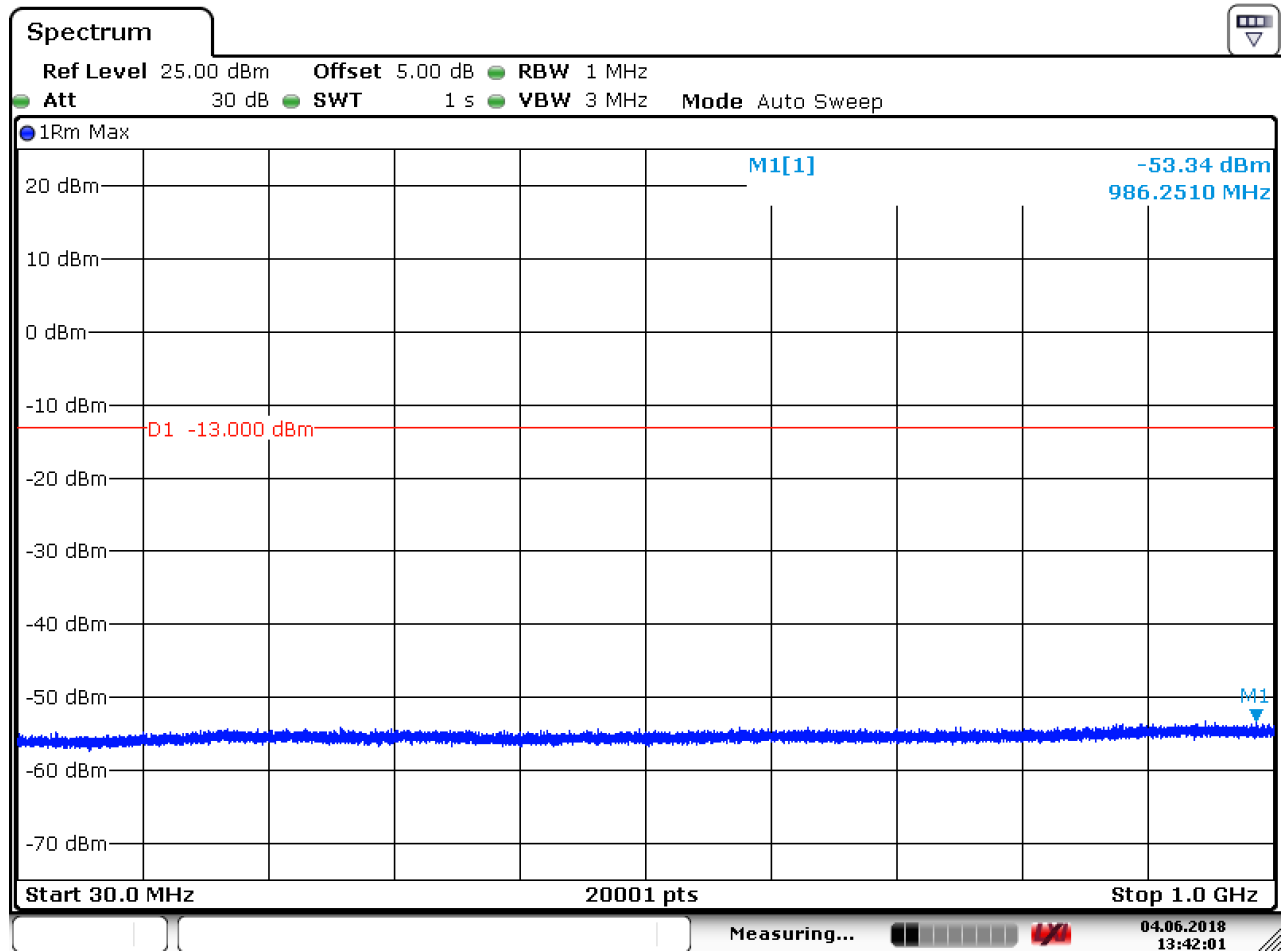
Part I - Test Plots

6.1 For LTE

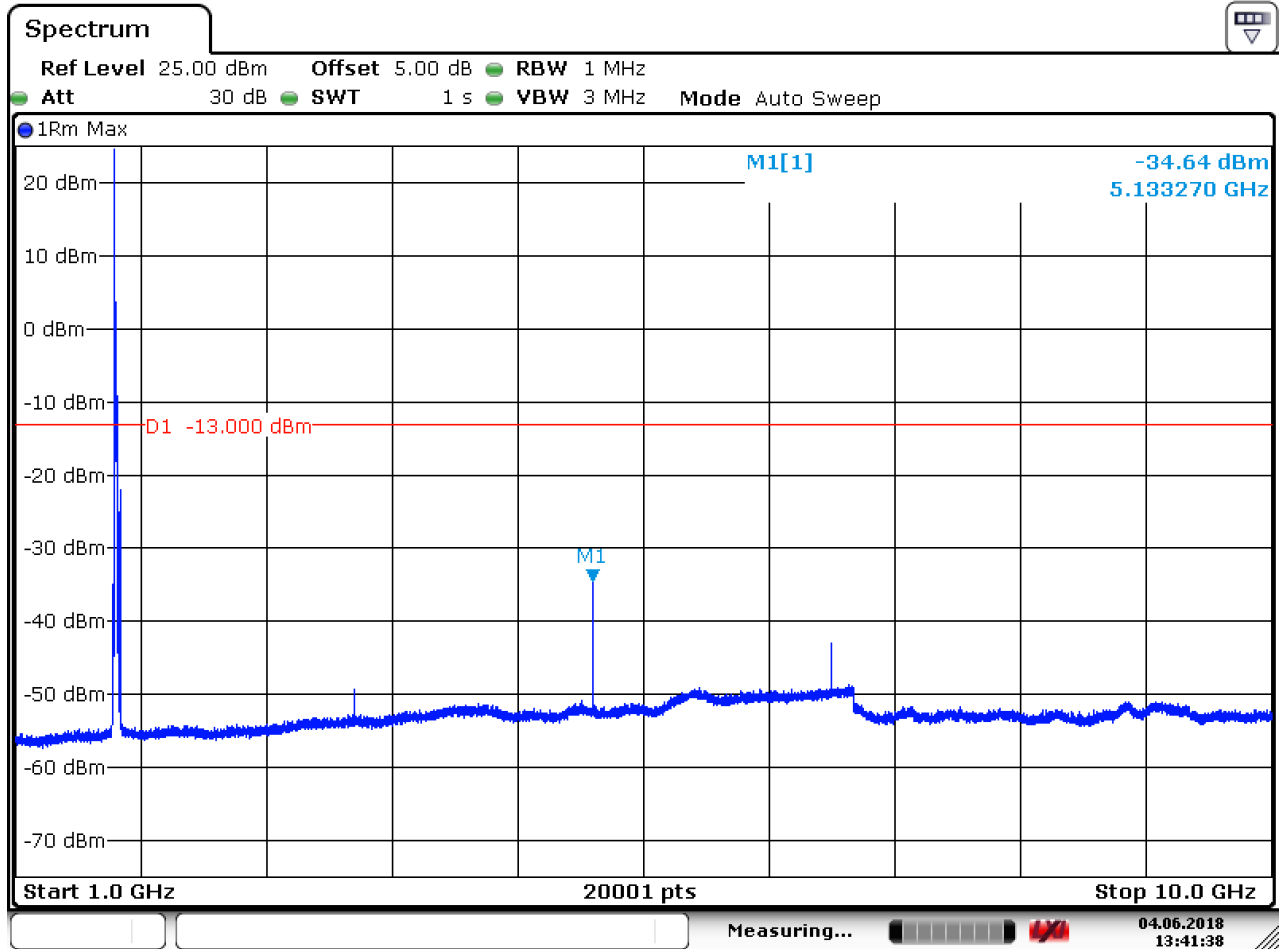
6.1.1 Test Band = LTE BAND 4

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

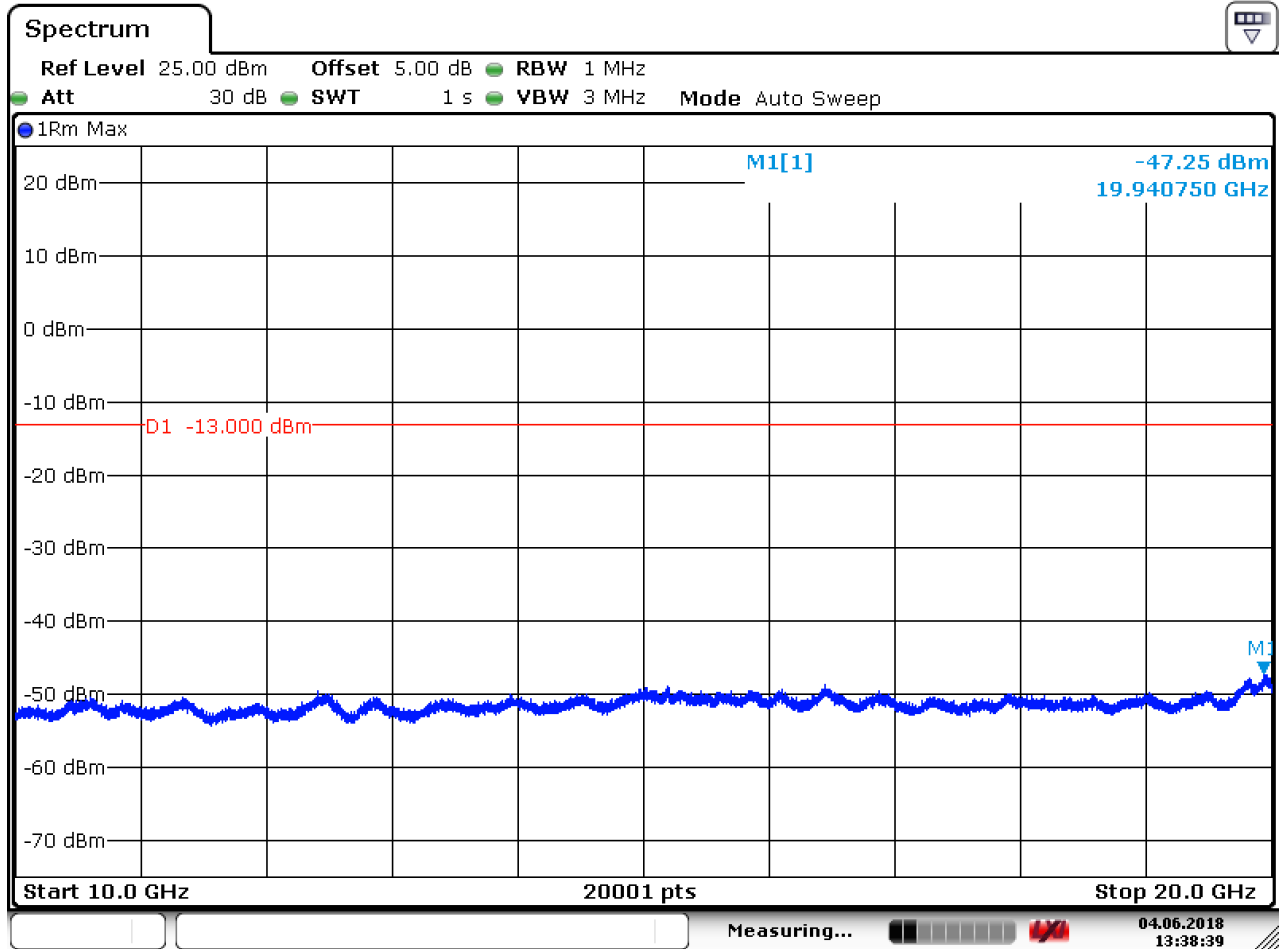
6.1.1.1.1 Test Channel = LCH



Date: 4.JUN.2018 13:42:02



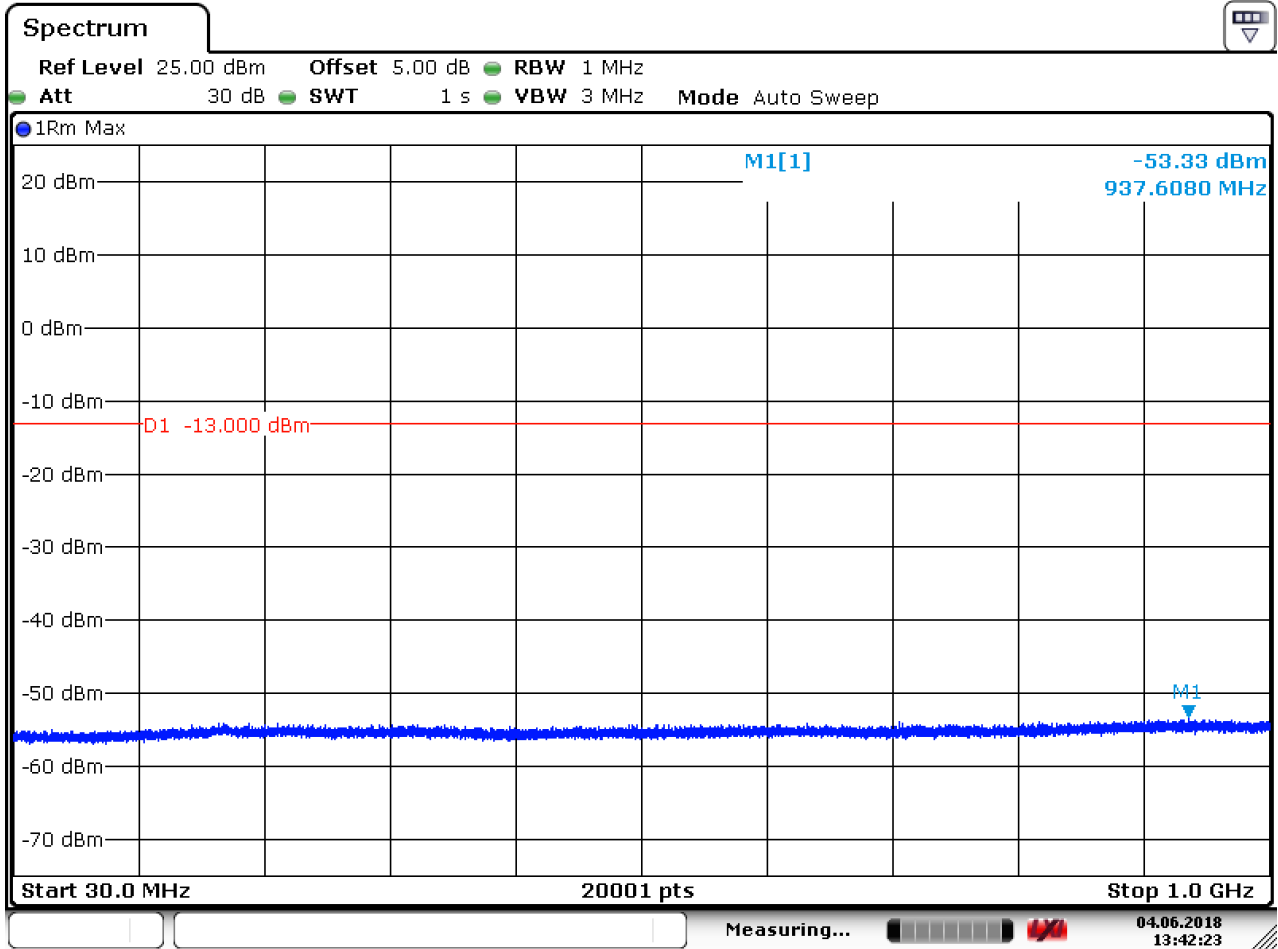
Date: 4.JUN.2018 13:41:39



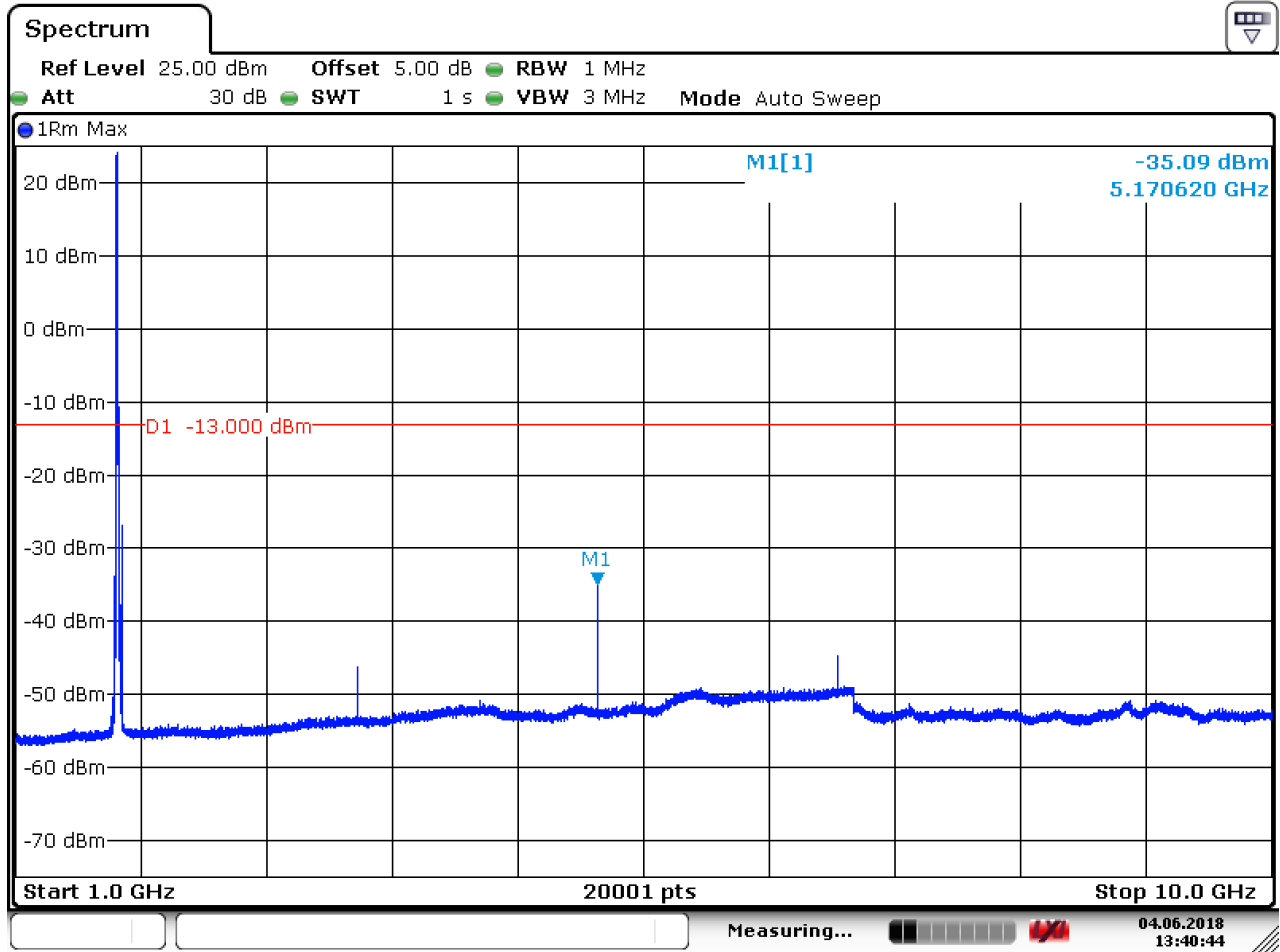
Date: 4.JUN.2018 13:38:39



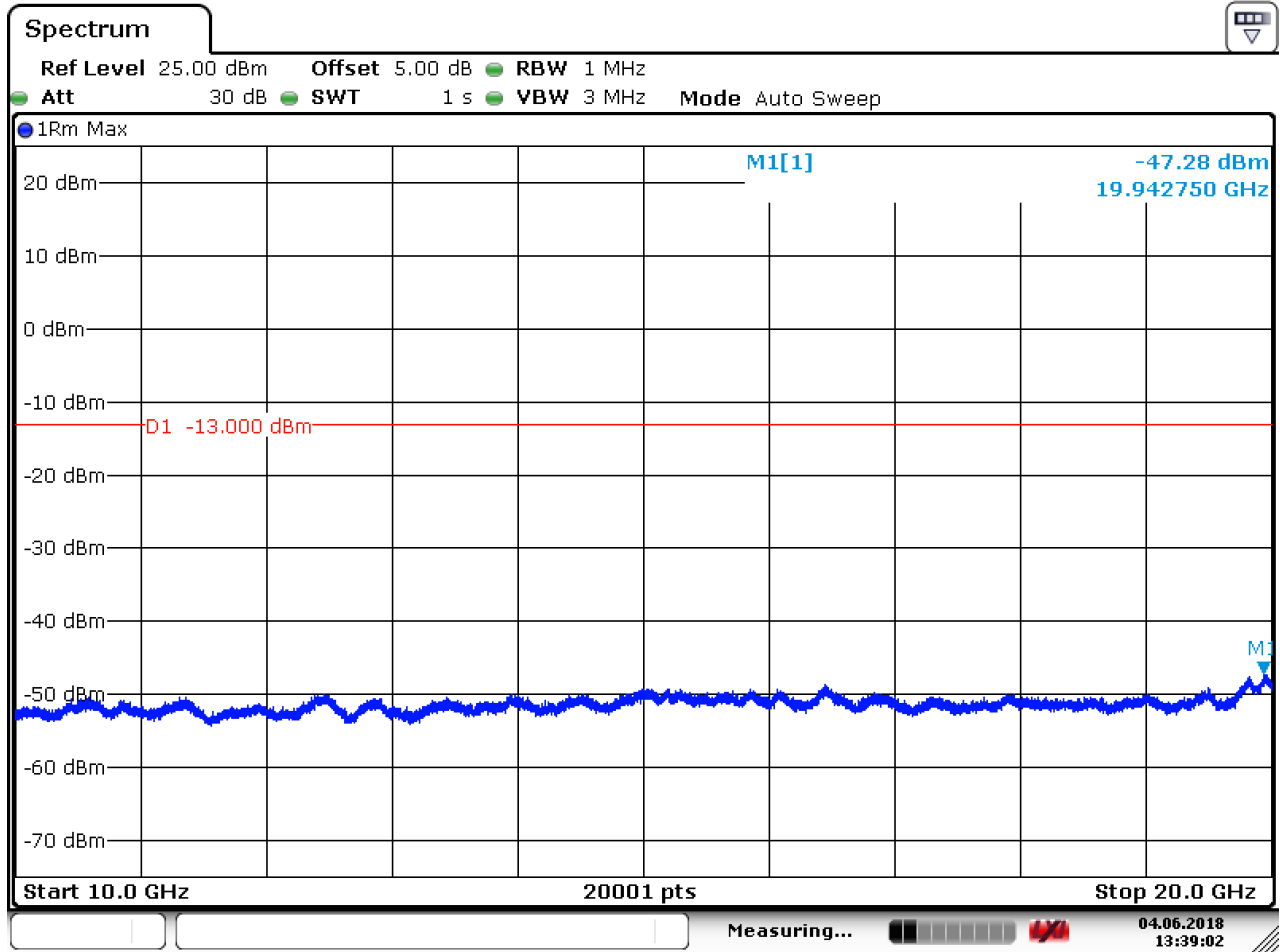
6.1.1.1.2 Test Channel = MCH



Date: 4.JUN.2018 13:42:23



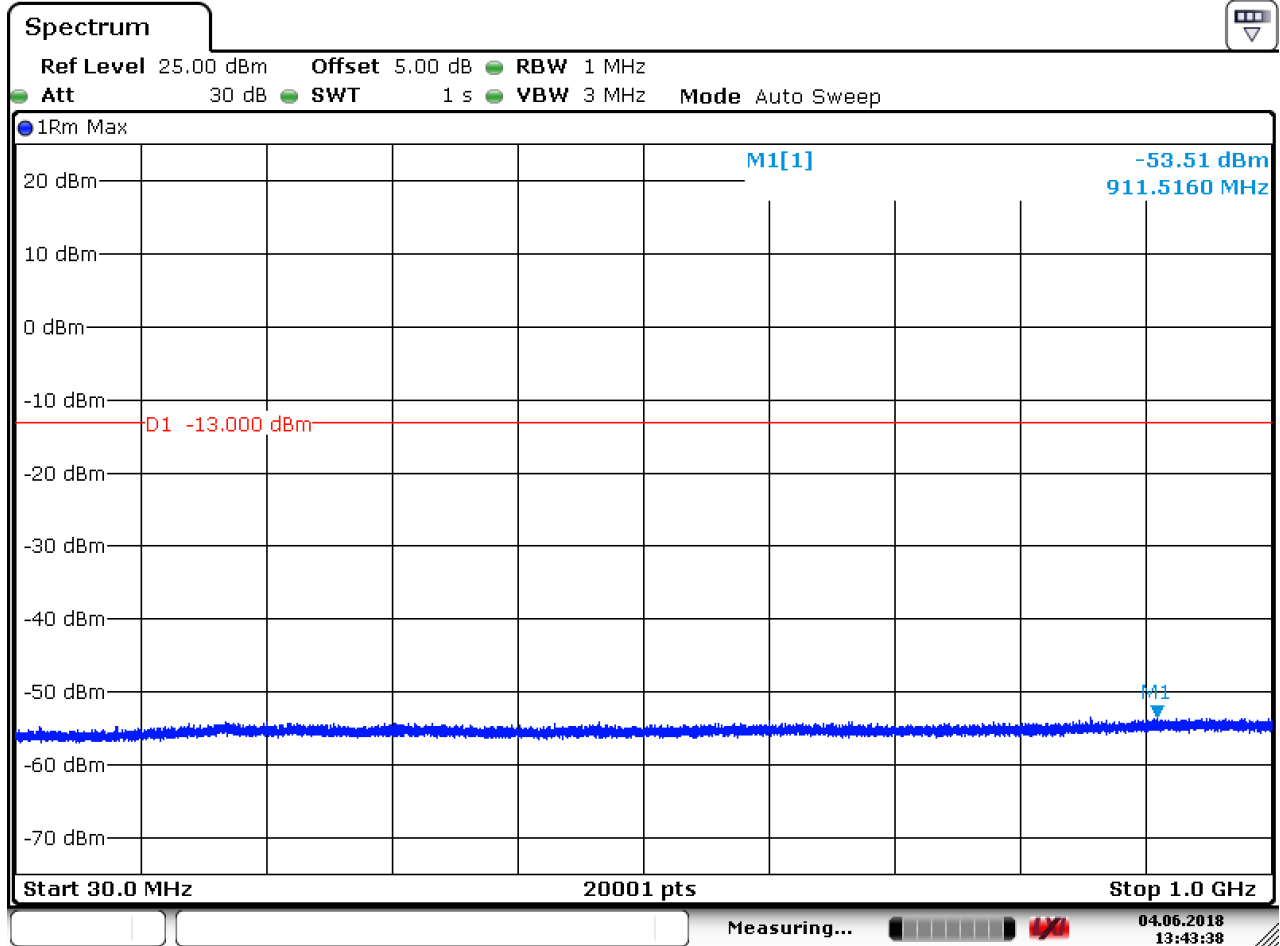
Date: 4.JUN.2018 13:40:45



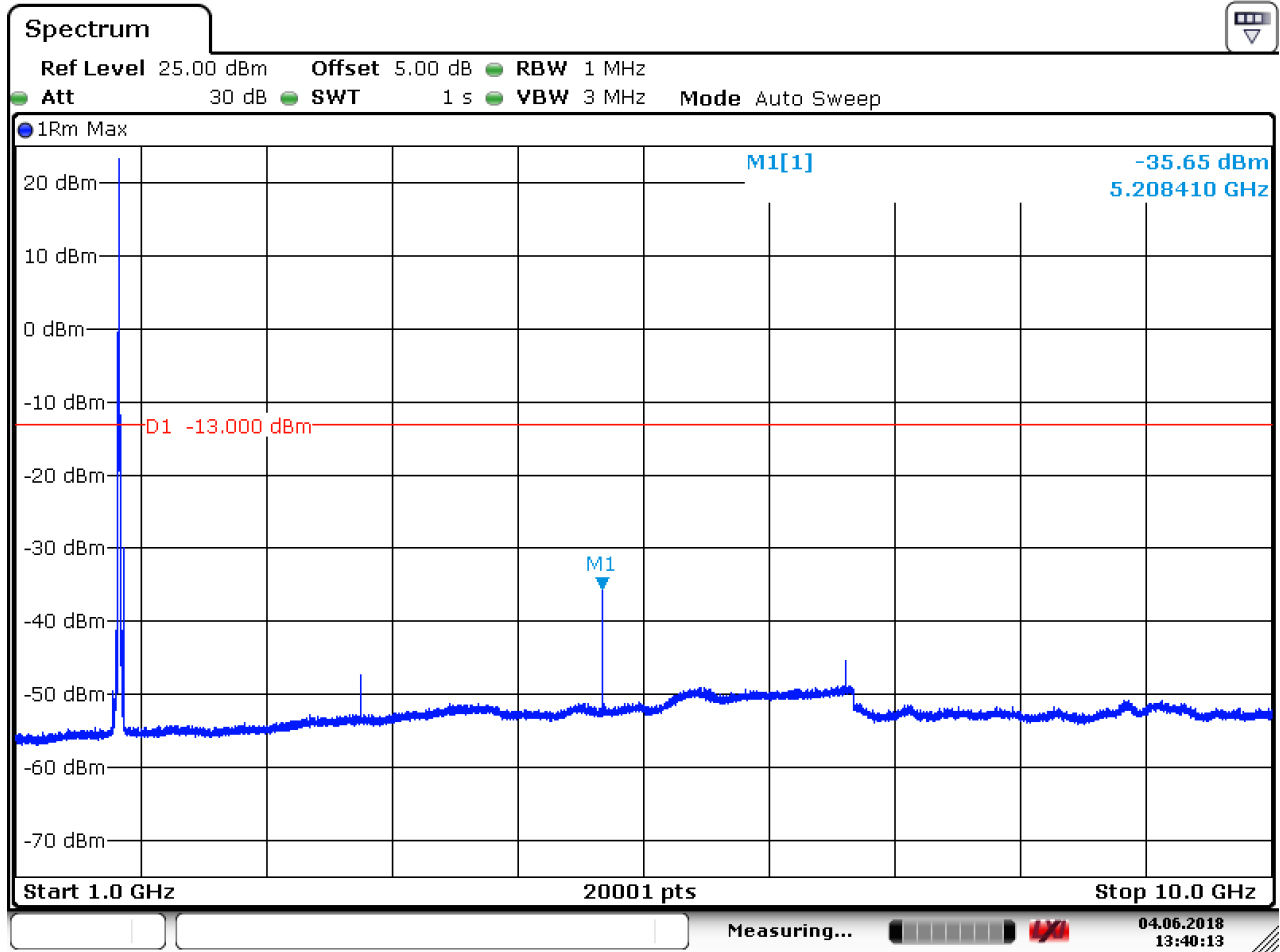
Date: 4.JUN.2018 13:39:02



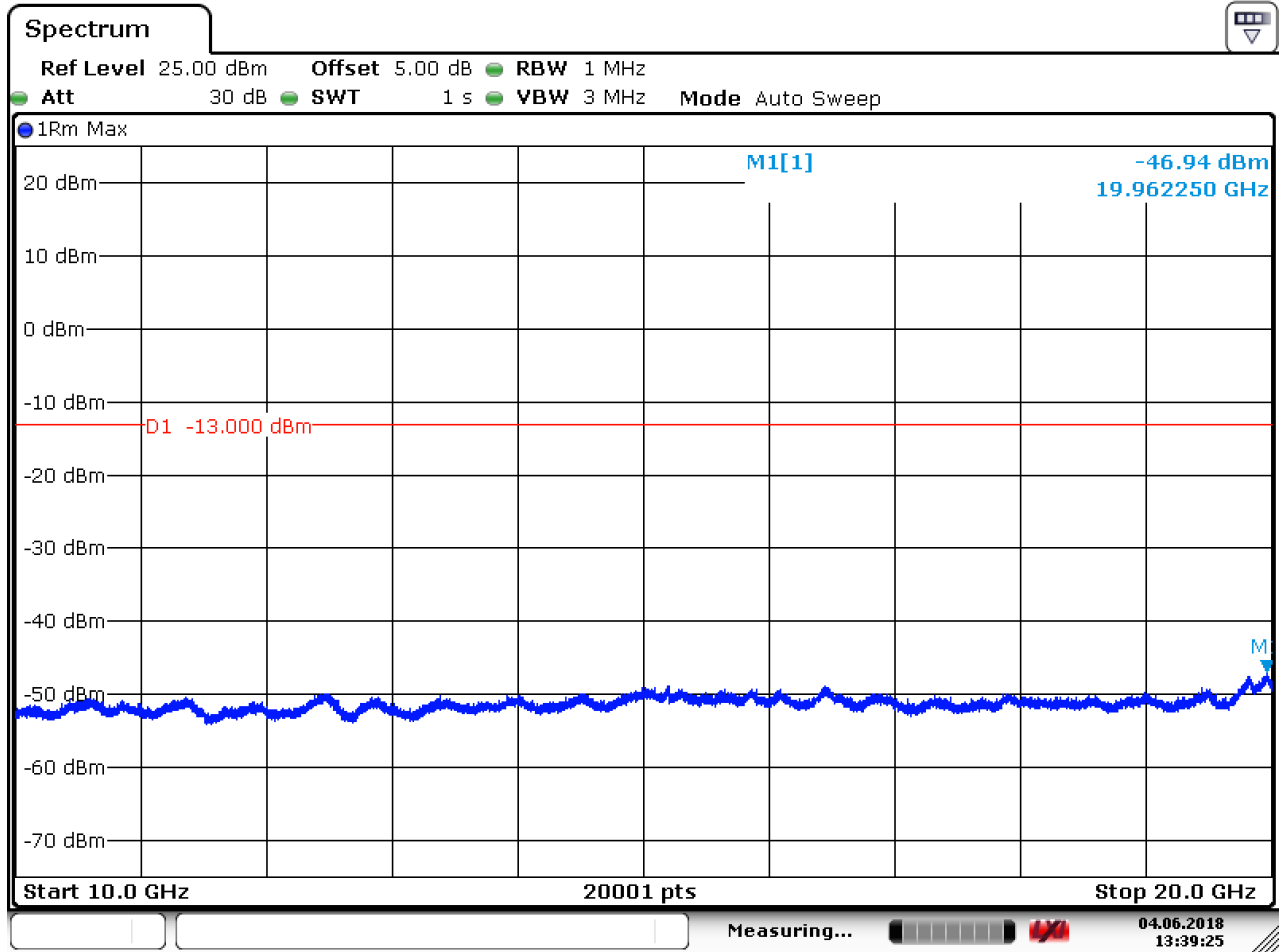
6.1.1.1.3 Test Channel = HCH



Date: 4.JUN.2018 13:43:38



Date: 4.JUN.2018 13:40:13



Date: 4.JUN.2018 13:39:25



7 Field Strength of Spurious Radiation

7.1 For LTE

7.1.1 Test Band = LTE BAND 4

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
297.700000	-70.07	-13.00	57.07	Vertical
1362.500000	-54.00	-13.00	41.00	Vertical
3422.175000	-64.43	-13.00	51.43	Vertical
5133.300000	-49.28	-13.00	36.28	Vertical
6844.425000	-54.73	-13.00	41.73	Vertical
10266.675000	-60.90	-13.00	47.90	Vertical
63.000000	-76.74	-13.00	63.74	Horizontal
289.800000	-78.11	-13.00	65.11	Horizontal
1362.500000	-63.62	-13.00	50.62	Horizontal
3421.850000	-65.80	-13.00	52.80	Horizontal
5132.975000	-55.43	-13.00	42.43	Horizontal
6844.100000	-63.23	-13.00	50.23	Horizontal

7.1.1.1.2 Test Channel = MCH

Frequency (MHz)	Level (dBm)	Limit Line (dBm)	Over Limit (dB)	Polarization
66.100000	-76.06	-13.00	63.06	Vertical
304.350000	-71.64	-13.00	58.64	Vertical
1375.000000	-50.80	-13.00	37.80	Vertical
3446.875000	-64.23	-13.00	51.23	Vertical
5170.675000	-49.92	-13.00	36.92	Vertical
6894.150000	-57.26	-13.00	44.26	Vertical
66.100000	-76.06	-13.00	63.06	Horizontal
304.350000	-71.64	-13.00	58.64	Horizontal
1375.000000	-50.80	-13.00	37.80	Horizontal
3446.875000	-64.23	-13.00	51.23	Horizontal
5170.675000	-49.92	-13.00	36.92	Horizontal
6894.150000	-57.26	-13.00	44.26	Horizontal



7.1.1.1.3 Test Channel = HCH

Frequency (MHz)	Level (dBm)	Limit Line (dBm)	Over Limit (dB)	Polarization
65.450000	-76.55	-13.00	63.55	Vertical
315.600000	-72.29	-13.00	59.29	Vertical
1387.500000	-54.04	-13.00	41.04	Vertical
3471.575000	-65.98	-13.00	52.98	Vertical
5208.050000	-51.44	-13.00	38.44	Vertical
6944.200000	-60.93	-13.00	47.93	Vertical
62.900000	-76.87	-13.00	63.87	Horizontal
378.000000	-73.59	-13.00	60.59	Horizontal
1387.500000	-64.25	-13.00	51.25	Horizontal
3471.900000	-65.59	-13.00	52.59	Horizontal
5208.050000	-59.25	-13.00	46.25	Horizontal
6944.525000	-64.64	-13.00	51.64	Horizontal

NOTE:

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

8 Frequency Stability

8.1 Frequency Error VS. Voltage

Test Band	Test Mode	Test Channel	Test Temp.	Test Volt.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict
LTEBAND4	LTE/TM1 20MHz	LCH	TN	VL	-5.75	-0.00334	PASS
				VN	2.81	0.00163	PASS
				VH	-7.00	-0.00407	PASS
		MCH	TN	VL	6.62	0.00382	PASS
				VN	-9.80	-0.00566	PASS
				VH	-7.14	-0.00412	PASS
		HCH	TN	VL	7.88	0.00452	PASS
				VN	1.62	0.00093	PASS
				VH	-6.32	-0.00362	PASS
	LTE/TM2 20MHz	LCH	TN	VL	9.20	0.00535	PASS
				VN	-1.81	-0.00105	PASS
				VH	-9.92	-0.00577	PASS
		MCH	TN	VL	1.50	0.00087	PASS
				VN	8.25	0.00476	PASS
				VH	-7.03	-0.00406	PASS
		HCH	TN	VL	9.93	0.00569	PASS
				VN	0.61	0.00035	PASS
				VH	7.47	0.00428	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
LTEBAND 4	LTE/TM1 20MHz	LCH	VN	-30	3.88	0.00226	PASS
				-20	1.38	0.00080	PASS
				-10	3.78	0.00220	PASS
				0	-7.66	-0.00446	PASS
				10	-9.13	-0.00531	PASS
				20	-2.79	-0.00162	PASS
				30	5.31	0.00308	PASS
				40	-4.43	-0.00258	PASS
				50	8.33	0.00484	PASS
		MCH	VN	-30	-3.69	-0.00213	PASS
				-20	7.25	0.00418	PASS
				-10	-1.09	-0.00063	PASS
				0	2.61	0.00151	PASS
				10	-2.23	-0.00129	PASS
				20	0.10	0.00006	PASS
				30	-1.73	-0.00100	PASS
				40	6.17	0.00356	PASS
				50	4.86	0.00280	PASS
		HCH	VN	-30	8.31	0.00476	PASS
				-20	-0.50	-0.00029	PASS
				-10	-6.01	-0.00344	PASS
				0	-1.75	-0.00100	PASS
				10	-0.24	-0.00014	PASS
				20	5.60	0.00321	PASS
				30	-2.82	-0.00161	PASS
				40	-8.96	-0.00514	PASS
				50	8.16	0.00468	PASS



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Test Band	Test Mode	Test Channel	Test Volt.	Test Temp.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict
LTEBAND 4	LTE/TM2 20MHz	LCH	VN	-30	7.76	0.00451	PASS
				-20	3.30	0.00192	PASS
				-10	-9.68	-0.00563	PASS
				0	3.52	0.00205	PASS
				10	-4.55	-0.00265	PASS
				20	5.38	0.00313	PASS
				30	0.18	0.00011	PASS
				40	-6.42	-0.00373	PASS
		MCH	VN	-30	8.86	0.00511	PASS
				-20	2.09	0.00121	PASS
				-10	9.10	0.00525	PASS
				0	-5.82	-0.00336	PASS
				10	-4.75	-0.00274	PASS
				20	1.03	0.00059	PASS
				30	-0.77	-0.00044	PASS
				40	-6.25	-0.00361	PASS
		HCH	VN	-30	6.27	0.00359	PASS
				-20	4.75	0.00272	PASS
				-10	4.79	0.00275	PASS
				0	-7.89	-0.00452	PASS
				10	-4.39	-0.00252	PASS
				20	6.74	0.00386	PASS
				30	-1.25	-0.00072	PASS
				40	7.85	0.00450	PASS
			50	9.59	0.00550	PASS	

The End

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