



Appendix B

E-UTRA Band 2



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1 Effective (Isotropic) Radiated Power Output Data

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

Test Band(LTE)	Test Mode	Test Bandwidth	Test channel	Test RB	Measured (dBm)	EIRP (dBm)	limit (dBm)	Verdict
BAND2	LTE/TM1	1.4M	LCH	RB1#0	22.87	22.87	33.00	PASS
				RB1#2	22.96	22.96	33.00	PASS
				RB1#5	22.86	22.86	33.00	PASS
				RB3#0	21.95	21.95	33.00	PASS
				RB3#2	21.94	21.94	33.00	PASS
				RB3#3	21.92	21.92	33.00	PASS
			MCH	RB6#0	21.98	21.98	33.00	PASS
				RB1#0	22.87	22.87	33.00	PASS
				RB1#2	22.97	22.97	33.00	PASS
				RB1#5	22.90	22.90	33.00	PASS
				RB3#0	21.97	21.97	33.00	PASS
				RB3#2	21.93	21.93	33.00	PASS
			HCH	RB3#3	21.95	21.95	33.00	PASS
				RB6#0	21.97	21.97	33.00	PASS
				RB1#0	22.85	22.85	33.00	PASS
				RB1#2	22.94	22.94	33.00	PASS
				RB1#5	22.84	22.84	33.00	PASS
				RB3#0	21.93	21.93	33.00	PASS
			RB3#2	21.91	21.91	33.00	PASS	
			RB3#3	21.90	21.90	33.00	PASS	
			RB6#0	21.98	21.98	33.00	PASS	



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Test Band(LTE)	Test Mode	Test Bandwidth	Test channel	Test RB	Measured (dBm)	EIRP (dBm)	limit (dBm)	Verdict
BAND2	LTE/TM2	1.4M	LCH	RB1#0	22.08	22.08	33.00	PASS
				RB1#2	22.17	22.17	33.00	PASS
				RB1#5	22.09	22.09	33.00	PASS
				RB3#0	21.93	21.93	33.00	PASS
				RB3#2	21.89	21.89	33.00	PASS
				RB3#3	21.91	21.91	33.00	PASS
				RB6#0	20.99	20.99	33.00	PASS
			MCH	RB1#0	22.08	22.08	33.00	PASS
				RB1#2	22.18	22.18	33.00	PASS
				RB1#5	22.09	22.09	33.00	PASS
				RB3#0	21.95	21.95	33.00	PASS
				RB3#2	21.92	21.92	33.00	PASS
				RB3#3	21.95	21.95	33.00	PASS
				RB6#0	21.01	21.01	33.00	PASS
			HCH	RB1#0	22.01	22.01	33.00	PASS
				RB1#2	22.11	22.11	33.00	PASS
				RB1#5	22.00	22.00	33.00	PASS
				RB3#0	21.90	21.90	33.00	PASS
				RB3#2	21.87	21.87	33.00	PASS
				RB3#3	21.89	21.89	33.00	PASS
				RB6#0	20.95	20.95	33.00	PASS



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BAND2	LTE/TM1	3M	LCH	RB1#0	22.88	22.88	33.00	PASS
				RB1#7	22.89	22.89	33.00	PASS
				RB1#14	22.83	22.83	33.00	PASS
				RB8#0	21.97	21.97	33.00	PASS
				RB8#4	21.95	21.95	33.00	PASS
				RB8#7	21.94	21.94	33.00	PASS
				RB15#0	21.96	21.96	33.00	PASS
			MCH	RB1#0	22.84	22.84	33.00	PASS
				RB1#7	22.89	22.89	33.00	PASS
				RB1#14	22.83	22.83	33.00	PASS
				RB8#0	21.99	21.99	33.00	PASS
				RB8#4	21.94	21.94	33.00	PASS
				RB8#7	21.96	21.96	33.00	PASS
				RB15#0	21.97	21.97	33.00	PASS
			HCH	RB1#0	22.83	22.83	33.00	PASS
				RB1#7	22.85	22.85	33.00	PASS
				RB1#14	22.80	22.80	33.00	PASS
				RB8#0	21.95	21.95	33.00	PASS
				RB8#4	21.94	21.94	33.00	PASS
				RB8#7	21.93	21.93	33.00	PASS
				RB15#0	21.95	21.95	33.00	PASS



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BAND2	LTE/TM2	3M	LCH	RB1#0	21.98	21.98	33.00	PASS
				RB1#7	22.03	22.03	33.00	PASS
				RB1#14	21.94	21.94	33.00	PASS
				RB8#0	20.90	20.90	33.00	PASS
				RB8#4	20.89	20.89	33.00	PASS
				RB8#7	20.88	20.88	33.00	PASS
				RB15#0	20.85	20.85	33.00	PASS
			MCH	RB1#0	21.98	21.98	33.00	PASS
				RB1#7	22.07	22.07	33.00	PASS
				RB1#14	22.00	22.00	33.00	PASS
				RB8#0	20.94	20.94	33.00	PASS
				RB8#4	20.90	20.90	33.00	PASS
				RB8#7	20.92	20.92	33.00	PASS
				RB15#0	20.89	20.89	33.00	PASS
			HCH	RB1#0	21.98	21.98	33.00	PASS
				RB1#7	21.99	21.99	33.00	PASS
				RB1#14	21.93	21.93	33.00	PASS
				RB8#0	20.86	20.86	33.00	PASS
				RB8#4	20.85	20.85	33.00	PASS
				RB8#7	20.86	20.86	33.00	PASS
				RB15#0	20.82	20.82	33.00	PASS



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BAND2	LTE/TM1	5M	LCH	RB1#0	22.81	22.81	33.00	PASS
				RB1#13	22.80	22.80	33.00	PASS
				RB1#24	22.70	22.70	33.00	PASS
				RB12#0	21.89	21.89	33.00	PASS
				RB12#6	21.87	21.87	33.00	PASS
				RB12#13	21.84	21.84	33.00	PASS
				RB25#0	21.85	21.85	33.00	PASS
			MCH	RB1#0	22.82	22.82	33.00	PASS
				RB1#13	22.82	22.82	33.00	PASS
				RB1#24	22.72	22.72	33.00	PASS
				RB12#0	21.91	21.91	33.00	PASS
				RB12#6	21.87	21.87	33.00	PASS
				RB12#13	21.88	21.88	33.00	PASS
				RB25#0	21.85	21.85	33.00	PASS
			HCH	RB1#0	22.78	22.78	33.00	PASS
				RB1#13	22.78	22.78	33.00	PASS
				RB1#24	22.69	22.69	33.00	PASS
				RB12#0	21.87	21.87	33.00	PASS
				RB12#6	21.86	21.86	33.00	PASS
				RB12#13	21.83	21.83	33.00	PASS
				RB25#0	21.84	21.84	33.00	PASS



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BAND2	LTE/TM2	5M	LCH	RB1#0	22.13	22.13	33.00	PASS
				RB1#13	22.12	22.12	33.00	PASS
				RB1#24	22.04	22.04	33.00	PASS
				RB12#0	20.96	20.96	33.00	PASS
				RB12#6	20.94	20.94	33.00	PASS
				RB12#13	20.90	20.90	33.00	PASS
				RB25#0	20.91	20.91	33.00	PASS
			MCH	RB1#0	22.15	22.15	33.00	PASS
				RB1#13	22.13	22.13	33.00	PASS
				RB1#24	22.04	22.04	33.00	PASS
				RB12#0	20.96	20.96	33.00	PASS
				RB12#6	20.92	20.92	33.00	PASS
				RB12#13	20.93	20.93	33.00	PASS
				RB25#0	20.89	20.89	33.00	PASS
			HCH	RB1#0	22.08	22.08	33.00	PASS
				RB1#13	22.04	22.04	33.00	PASS
				RB1#24	21.97	21.97	33.00	PASS
				RB12#0	20.88	20.88	33.00	PASS
				RB12#6	20.89	20.89	33.00	PASS
				RB12#13	20.86	20.86	33.00	PASS
				RB25#0	20.86	20.86	33.00	PASS



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Test Band(LTE)	Test Mode	Test Bandwidth	Test channel	Test RB	Measured (dBm)	EIRP (dBm)	limit (dBm)	Verdict
BAND2	LTE/TM1	10M	LCH	RB1#0	22.83	22.83	33.00	PASS
				RB1#25	22.75	22.75	33.00	PASS
				RB1#49	22.72	22.72	33.00	PASS
				RB25#0	21.82	21.82	33.00	PASS
				RB25#13	21.79	21.79	33.00	PASS
				RB25#25	21.77	21.77	33.00	PASS
				RB50#0	21.84	21.84	33.00	PASS
			MCH	RB1#0	22.79	22.79	33.00	PASS
				RB1#25	22.74	22.74	33.00	PASS
				RB1#49	22.71	22.71	33.00	PASS
				RB25#0	21.82	21.82	33.00	PASS
				RB25#13	21.79	21.79	33.00	PASS
				RB25#25	21.77	21.77	33.00	PASS
				RB50#0	21.81	21.81	33.00	PASS
			HCH	RB1#0	22.75	22.75	33.00	PASS
				RB1#25	22.71	22.71	33.00	PASS
				RB1#49	22.66	22.66	33.00	PASS
				RB25#0	21.80	21.80	33.00	PASS
				RB25#13	21.78	21.78	33.00	PASS
				RB25#25	21.75	21.75	33.00	PASS
				RB50#0	21.79	21.79	33.00	PASS



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Test Band(LTE)	Test Mode	Test Bandwidth	Test channel	Test RB	Measured (dBm)	EIRP (dBm)	limit (dBm)	Verdict
BAND2	LTE/TM2	10M	LCH	RB1#0	22.08	22.08	33.00	PASS
				RB1#25	21.99	21.99	33.00	PASS
				RB1#49	21.99	21.99	33.00	PASS
				RB25#0	20.82	20.82	33.00	PASS
				RB25#13	20.79	20.79	33.00	PASS
				RB25#25	20.79	20.79	33.00	PASS
				RB50#0	20.82	20.82	33.00	PASS
			MCH	RB1#0	22.05	22.05	33.00	PASS
				RB1#25	21.98	21.98	33.00	PASS
				RB1#49	21.94	21.94	33.00	PASS
				RB25#0	20.83	20.83	33.00	PASS
				RB25#13	20.81	20.81	33.00	PASS
				RB25#25	20.78	20.78	33.00	PASS
				RB50#0	20.81	20.81	33.00	PASS
			HCH	RB1#0	21.99	21.99	33.00	PASS
				RB1#25	21.95	21.95	33.00	PASS
				RB1#49	21.89	21.89	33.00	PASS
				RB25#0	20.80	20.80	33.00	PASS
				RB25#13	20.78	20.78	33.00	PASS
				RB25#25	20.75	20.75	33.00	PASS
				RB50#0	20.79	20.79	33.00	PASS



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Test Band(LTE)	Test Mode	Test Bandwidth	Test channel	Test RB	Measured (dBm)	EIRP (dBm)	limit (dBm)	Verdict
BAND2	LTE/TM1	15M	LCH	RB1#0	22.90	22.90	33.00	PASS
				RB1#38	22.82	22.82	33.00	PASS
				RB1#74	22.78	22.78	33.00	PASS
				RB36#0	21.93	21.93	33.00	PASS
				RB36#18	21.87	21.87	33.00	PASS
				RB36#39	21.84	21.84	33.00	PASS
				RB75#0	21.88	21.88	33.00	PASS
			MCH	RB1#0	22.88	22.88	33.00	PASS
				RB1#38	22.81	22.81	33.00	PASS
				RB1#74	22.80	22.80	33.00	PASS
				RB36#0	21.92	21.92	33.00	PASS
				RB36#18	21.87	21.87	33.00	PASS
				RB36#39	21.86	21.86	33.00	PASS
				RB75#0	21.88	21.88	33.00	PASS
			HCH	RB1#0	22.82	22.82	33.00	PASS
				RB1#38	22.75	22.75	33.00	PASS
				RB1#74	22.73	22.73	33.00	PASS
				RB36#0	21.88	21.88	33.00	PASS
				RB36#18	21.86	21.86	33.00	PASS
				RB36#39	21.83	21.83	33.00	PASS
				RB75#0	21.86	21.86	33.00	PASS



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Test Band(LTE)	Test Mode	Test Bandwidth	Test channel	Test RB	Measured (dBm)	EIRP (dBm)	limit (dBm)	Verdict
BAND2	LTE/TM2	15M	LCH	RB1#0	22.15	22.15	33.00	PASS
				RB1#38	22.08	22.08	33.00	PASS
				RB1#74	22.04	22.04	33.00	PASS
				RB36#0	20.93	20.93	33.00	PASS
				RB36#18	20.90	20.90	33.00	PASS
				RB36#39	20.85	20.85	33.00	PASS
				RB75#0	20.91	20.91	33.00	PASS
			MCH	RB1#0	22.15	22.15	33.00	PASS
				RB1#38	22.06	22.06	33.00	PASS
				RB1#74	22.08	22.08	33.00	PASS
				RB36#0	20.93	20.93	33.00	PASS
				RB36#18	20.89	20.89	33.00	PASS
				RB36#39	20.88	20.88	33.00	PASS
				RB75#0	20.89	20.89	33.00	PASS
			HCH	RB1#0	22.10	22.10	33.00	PASS
				RB1#38	22.02	22.02	33.00	PASS
				RB1#74	21.98	21.98	33.00	PASS
				RB36#0	20.85	20.85	33.00	PASS
				RB36#18	20.84	20.84	33.00	PASS
				RB36#39	20.83	20.83	33.00	PASS
				RB75#0	20.82	20.82	33.00	PASS



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Test Band(LTE)	Test Mode	Test Bandwidth	Test channel	Test RB	Measured (dBm)	EIRP (dBm)	limit (dBm)	Verdict
BAND2	LTE/TM1	20M	LCH	RB1#0	22.91	22.91	33.00	PASS
				RB1#50	22.79	22.79	33.00	PASS
				RB1#99	22.83	22.83	33.00	PASS
				RB50#0	21.78	21.78	33.00	PASS
				RB50#25	21.75	21.75	33.00	PASS
				RB50#50	21.72	21.72	33.00	PASS
				RB100#0	21.75	21.75	33.00	PASS
			MCH	RB1#0	22.89	22.89	33.00	PASS
				RB1#50	22.79	22.79	33.00	PASS
				RB1#99	22.86	22.86	33.00	PASS
				RB50#0	21.81	21.81	33.00	PASS
				RB50#25	21.77	21.77	33.00	PASS
				RB50#50	21.76	21.76	33.00	PASS
				RB100#0	21.77	21.77	33.00	PASS
			HCH	RB1#0	22.88	22.88	33.00	PASS
				RB1#50	22.85	22.85	33.00	PASS
				RB1#99	22.78	22.78	33.00	PASS
				RB50#0	21.82	21.82	33.00	PASS
				RB50#25	21.74	21.74	33.00	PASS
				RB50#50	21.76	21.76	33.00	PASS
				RB100#0	21.77	21.77	33.00	PASS



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Test Band(LTE)	Test Mode	Test Bandwidth	Test channel	Test RB	Measured (dBm)	EIRP (dBm)	limit (dBm)	Verdict
BAND2	LTE/TM2	20M	LCH	RB1#0	22.38	22.38	33.00	PASS
				RB1#50	22.31	22.31	33.00	PASS
				RB1#99	22.23	22.23	33.00	PASS
				RB50#0	20.84	20.84	33.00	PASS
				RB50#25	20.77	20.77	33.00	PASS
				RB50#50	20.76	20.76	33.00	PASS
				RB100#0	20.84	20.84	33.00	PASS
			MCH	RB1#0	22.23	22.23	33.00	PASS
				RB1#50	22.22	22.22	33.00	PASS
				RB1#99	22.28	22.28	33.00	PASS
				RB50#0	20.82	20.82	33.00	PASS
				RB50#25	20.83	20.83	33.00	PASS
				RB50#50	20.83	20.83	33.00	PASS
				RB100#0	20.80	20.80	33.00	PASS
			HCH	RB1#0	22.21	22.21	33.00	PASS
				RB1#50	22.12	22.12	33.00	PASS
				RB1#99	22.13	22.13	33.00	PASS
				RB50#0	20.83	20.83	33.00	PASS
				RB50#25	20.82	20.82	33.00	PASS
				RB50#50	20.81	20.81	33.00	PASS
				RB100#0	20.81	20.81	33.00	PASS

Note:

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

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

b: SGP=Signal Generator Level

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

Detector: RMS



2 Peak-to-Average Ratio

Part I - Test Results

Test Band	Test Mode	Test Channel	Measured[dB]	Limit [dB]	Verdict
Band 2	TM1/20M	LCH	4.75	13	PASS
		MCH	4.96	13	PASS
		HCH	5.04	13	PASS
	TM2/20M	LCH	5.74	13	PASS
		MCH	5.88	13	PASS
		HCH	5.94	13	PASS



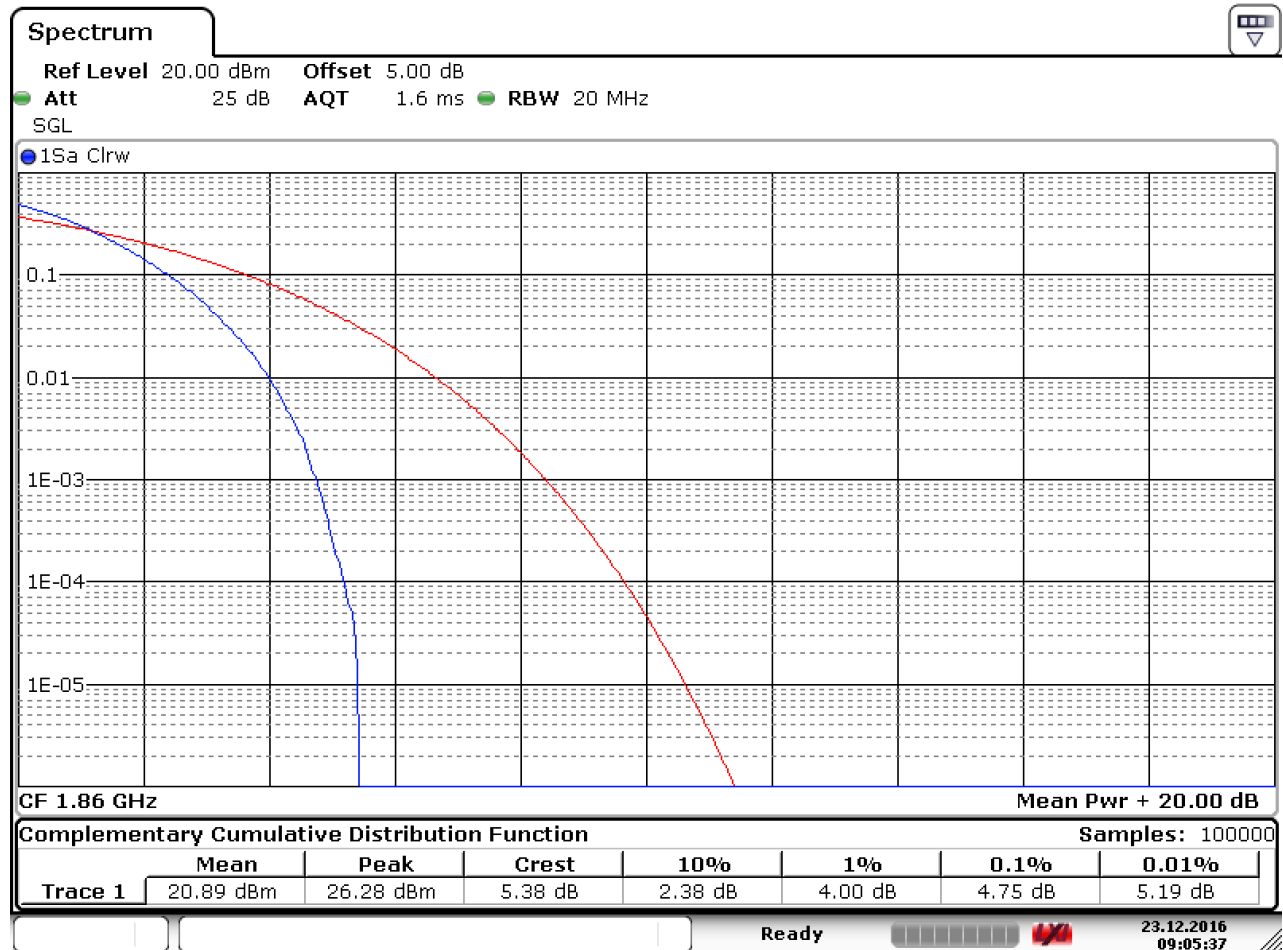
Part II - Test Plots

2.1 For LTE

2.1.1 Test Band = LTE band2

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

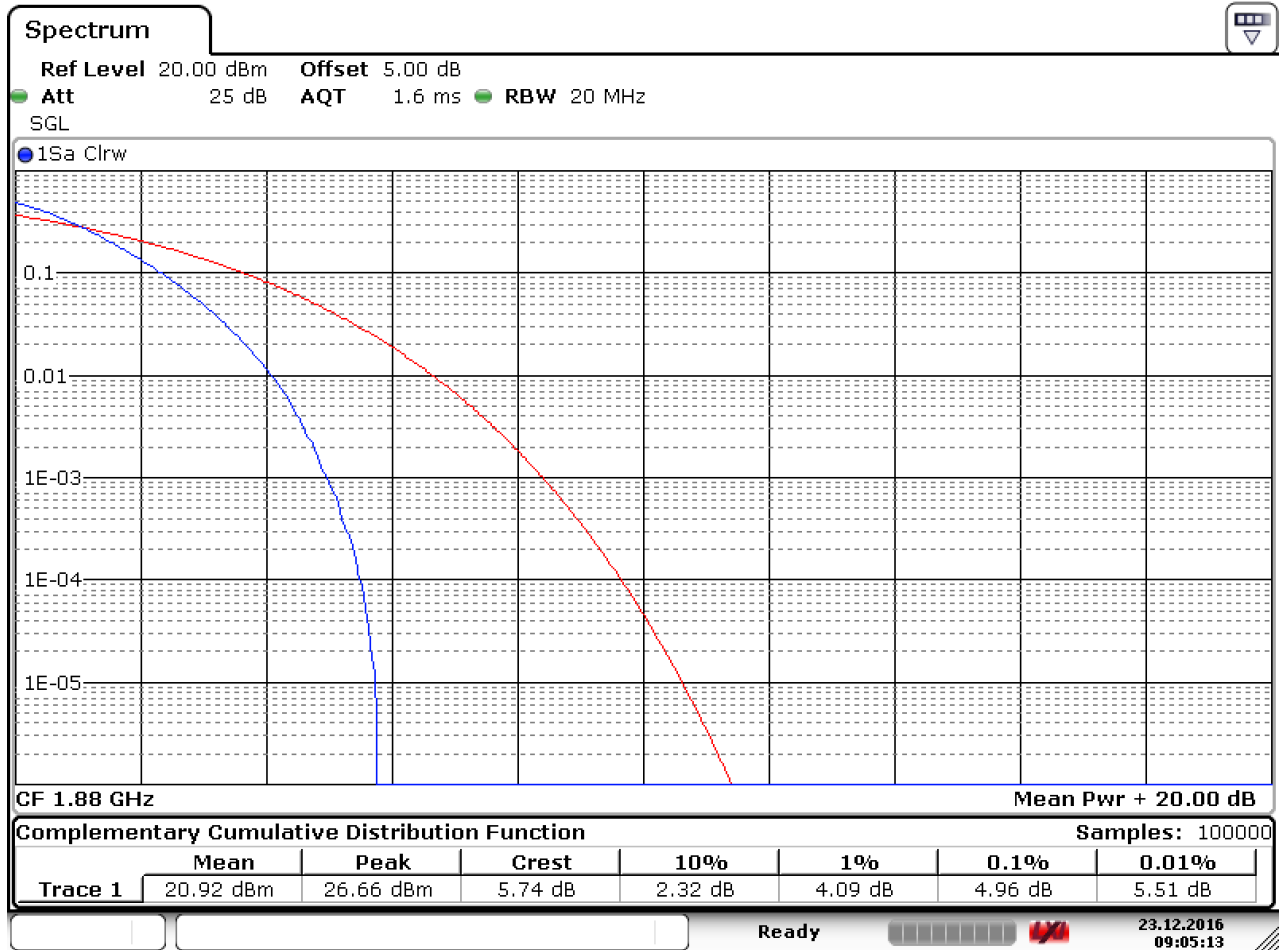
2.1.1.1.1 Test Channel = LCH



Date: 23.DEC.2016 09:05:38



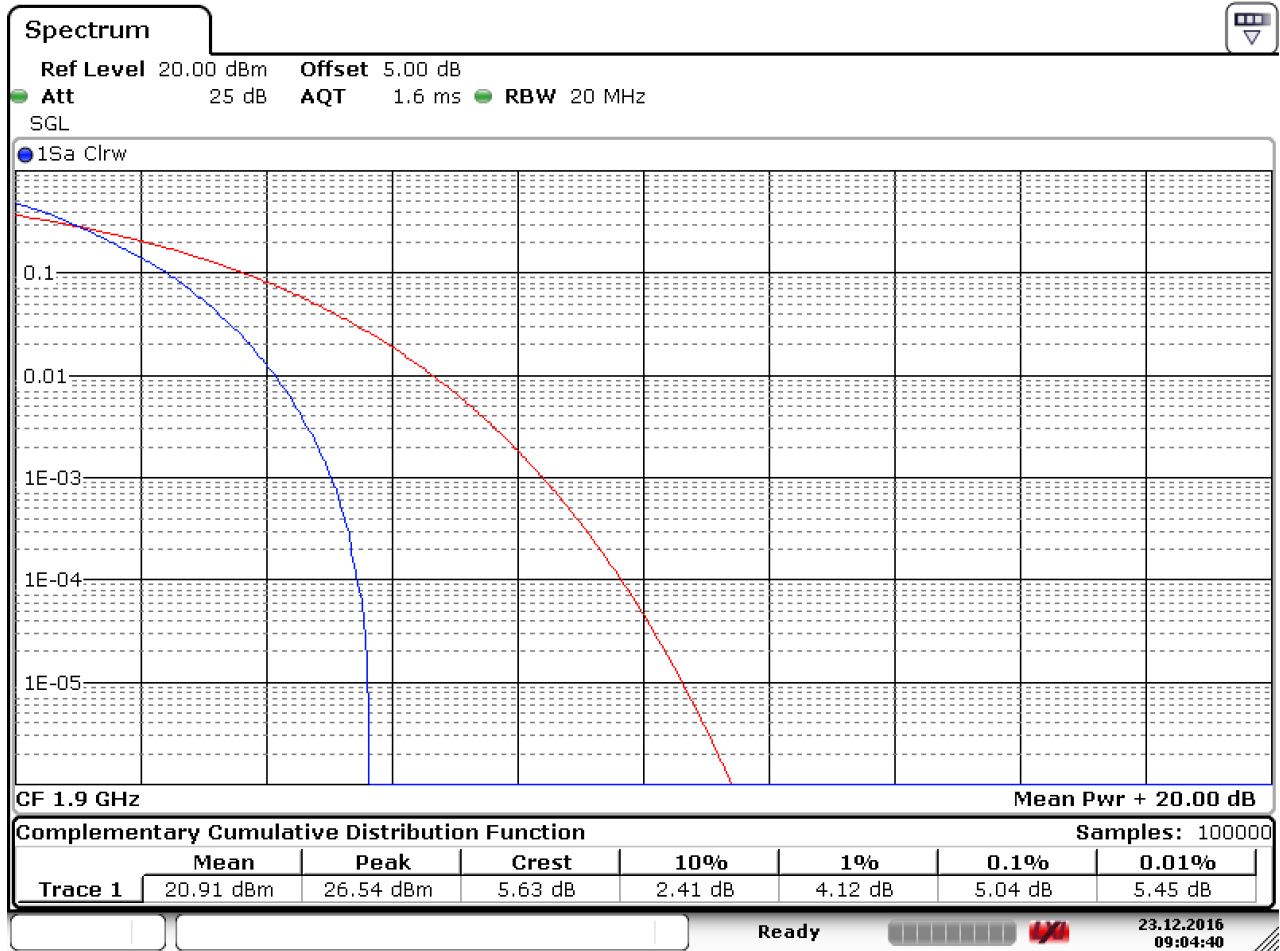
2.1.1.1.2 Test Channel = MCH



Date: 23.DEC.2016 09:05:14



2.1.1.1.3 Test Channel = HCH

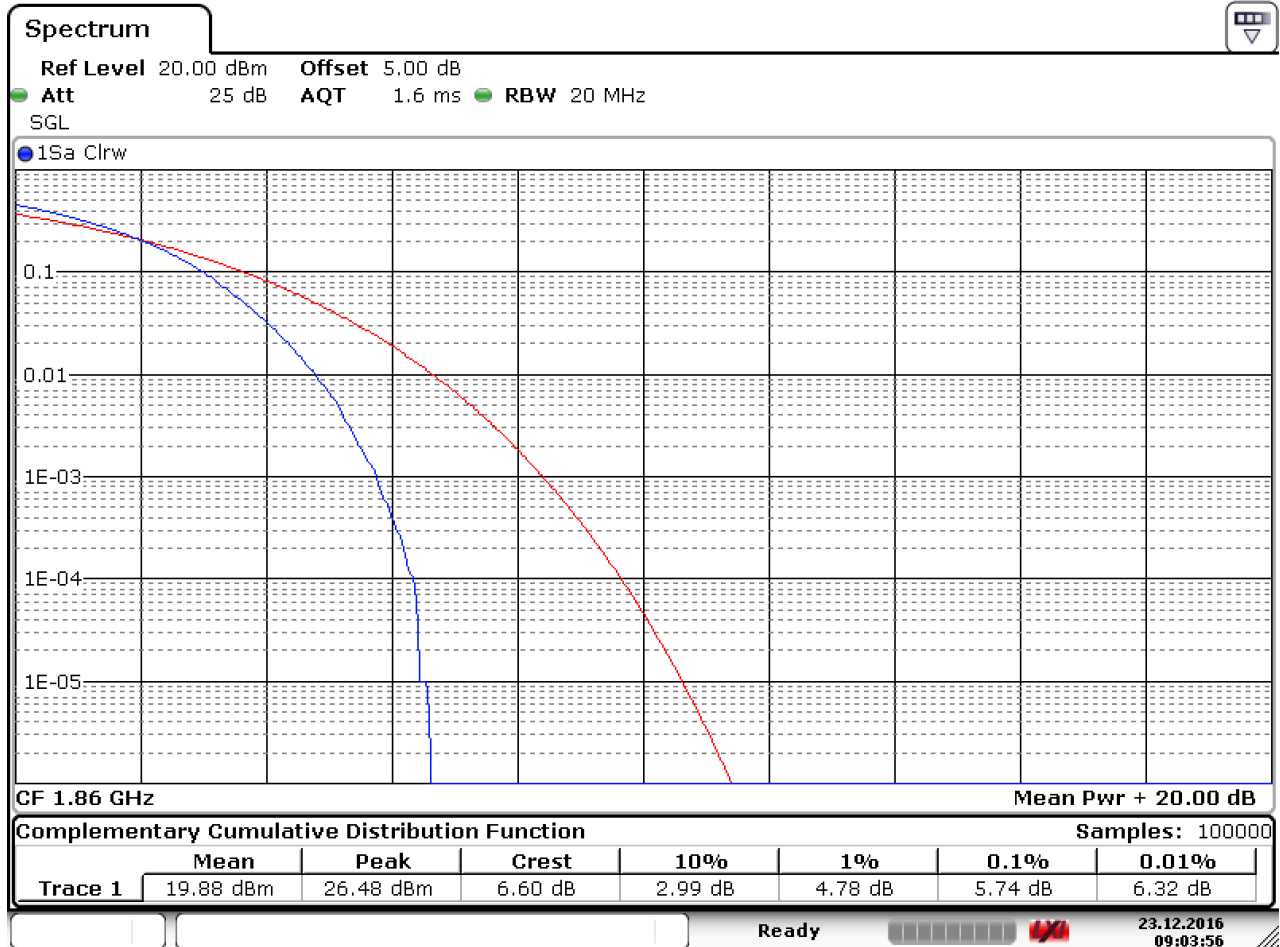


Date: 23.DEC.2016 09:04:40



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

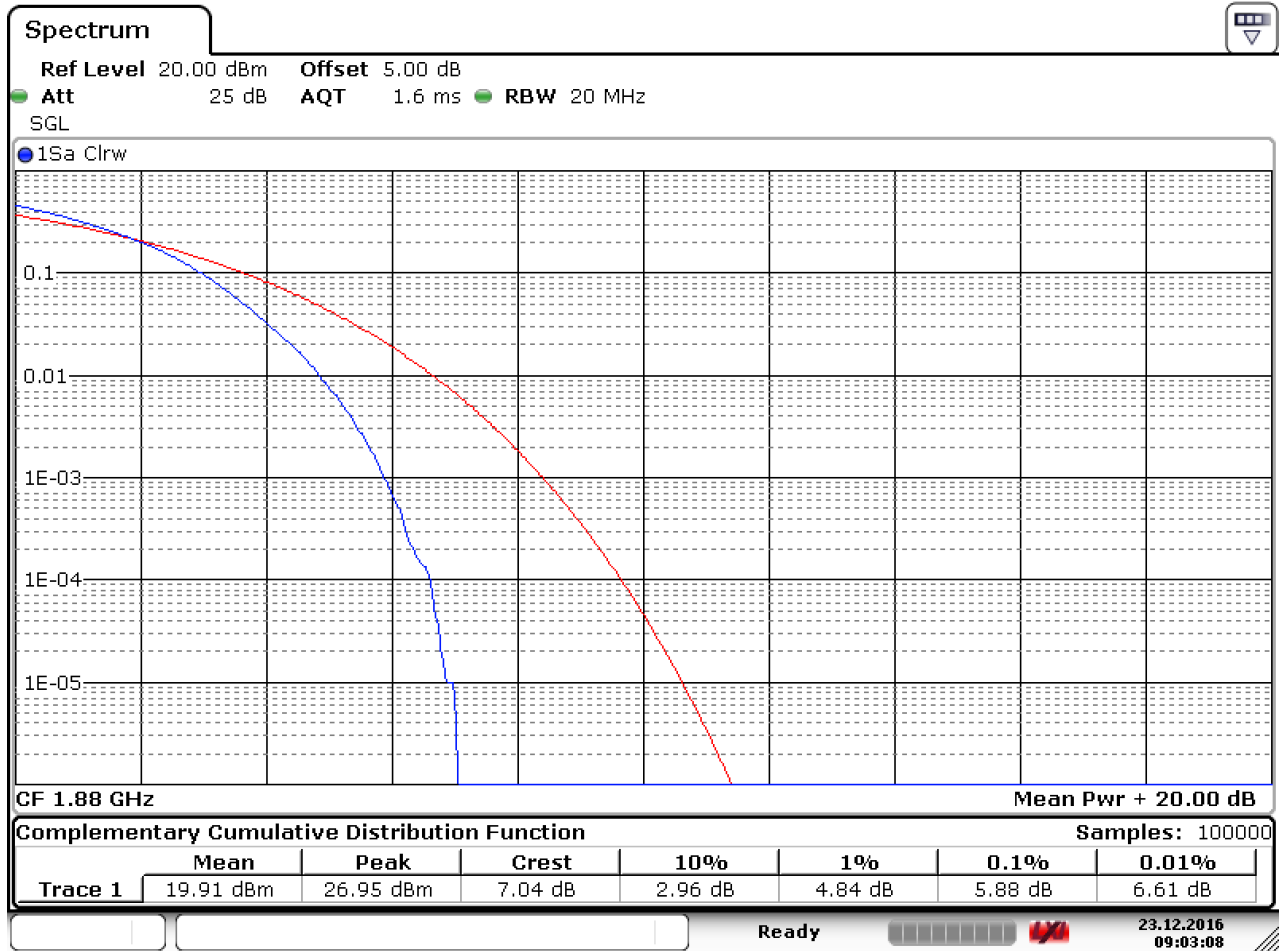
2.1.1.2.1 Test Channel = LCH



Date: 23.DEC.2016 09:03:56



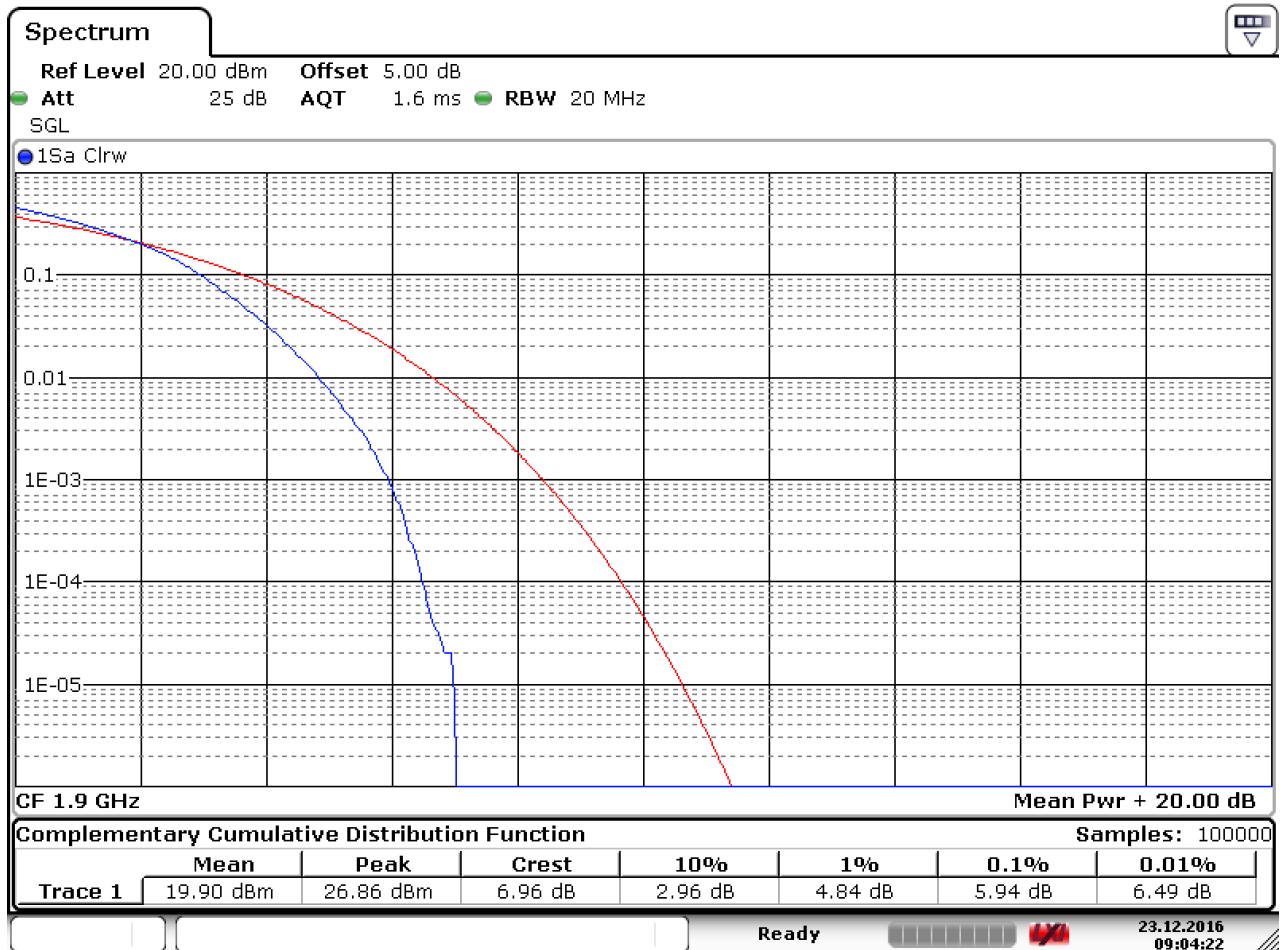
2.1.1.2.2 Test Channel = MCH



Date: 23.DEC.2016 09:03:08



2.1.1.2.3 Test Channel = HCH



Date: 23.DEC.2016 09:04:22

3 Modulation Characteristics

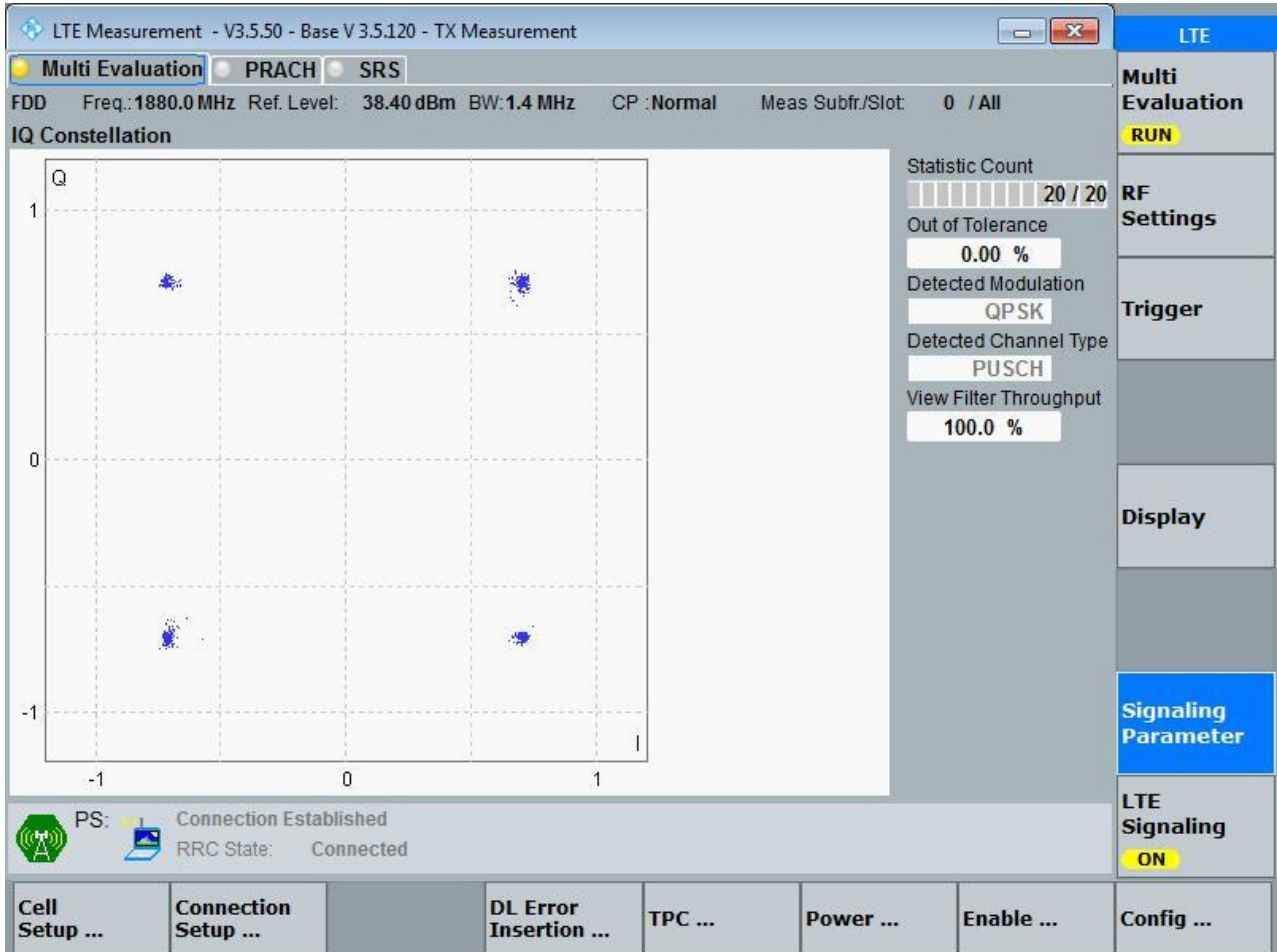
Part I - Test Plots

3.1 For LTE

3.1.1 Test Band = LTE band2

3.1.1.1 Test Mode = LTE /TM1 1.4MHz

3.1.1.1.1 Test Channel = MCH





3.1.1.2 Test Mode = LTE /TM1 3MHz

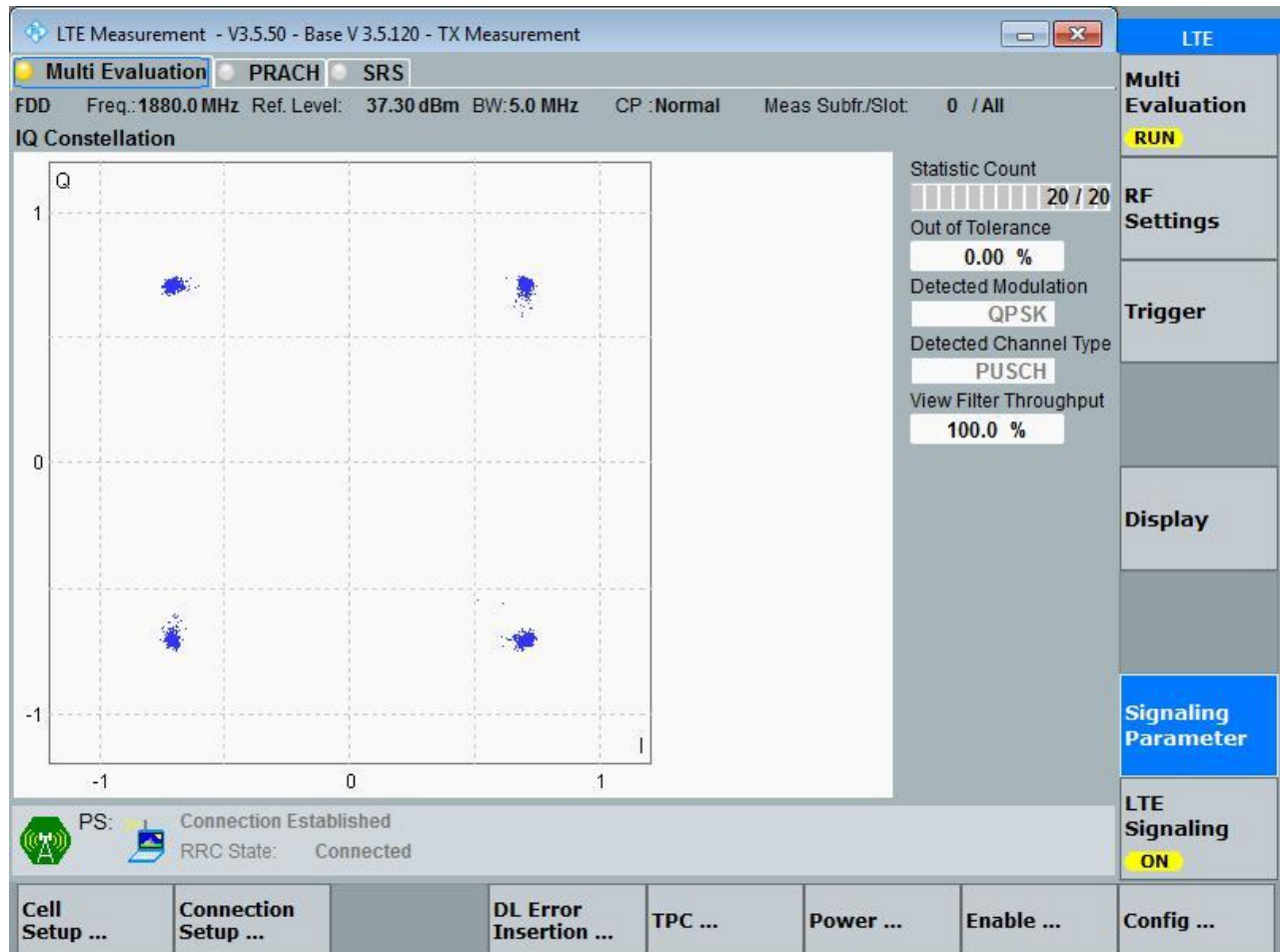
3.1.1.2.1 Test Channel = MCH

The screenshot displays the 'LTE Measurement' software interface. The main window title is 'LTE Measurement - V3.5.50 - Base V 3.5.120 - TX Measurement'. The interface is divided into several sections:

- Top Bar:** Shows 'Multi Evaluation' (selected), 'PRACH', and 'SRS' tabs. Below this, it displays 'FDD', 'Freq.: 1880.0 MHz', 'Ref. Level: 37.40 dBm', 'BW: 3.0 MHz', 'CP: Normal', and 'Meas Subfr./Slot: 0 / All'.
- IQ Constellation:** A scatter plot showing four distinct clusters of blue dots in a square pattern, representing QPSK modulation. The axes are labeled 'Q' (vertical) and 'I' (horizontal), both ranging from -1 to 1.
- Statistics Panel:** Located on the right side of the plot area, it shows:
 - Statistic Count: 20 / 20
 - Out of Tolerance: 0.00 %
 - Detected Modulation: QPSK
 - Detected Channel Type: PUSCH
 - View Filter Throughput: 100.0 %
- Right Sidebar:** Contains several control buttons: 'LTE', 'Multi Evaluation', 'RUN', 'RF Settings', 'Trigger', 'Display', 'Signaling Parameter', and 'LTE Signaling ON'.
- Bottom Status Bar:** Shows 'PS: Connection Established' and 'RRC State: Connected'. Below this is a row of configuration buttons: 'Cell Setup ...', 'Connection Setup ...', 'DL Error Insertion ...', 'TPC ...', 'Power ...', 'Enable ...', and 'Config ...'.

3.1.1.3 Test Mode = LTE /TM1 5MHz

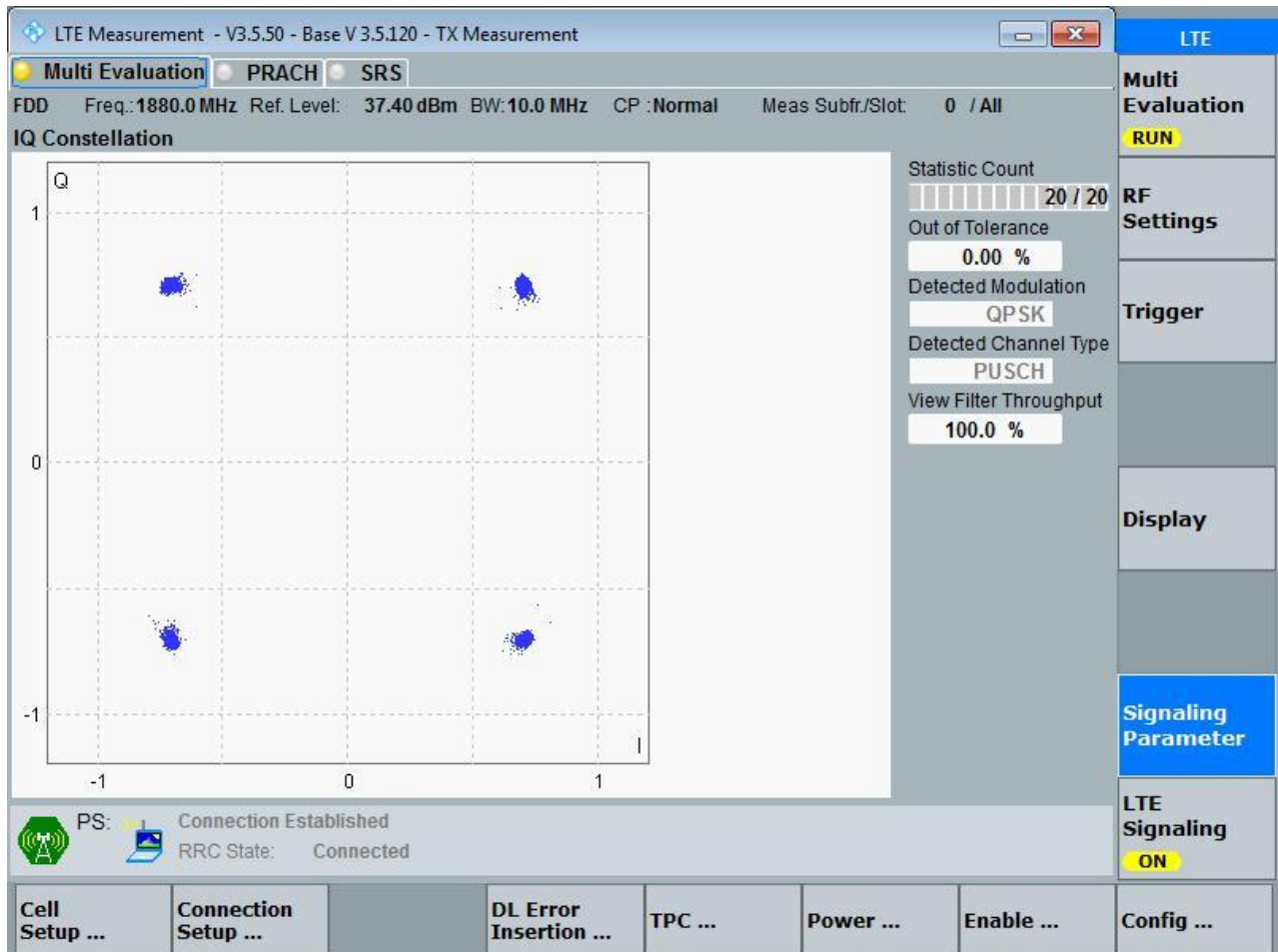
3.1.1.3.1 Test Channel = MCH



The screenshot displays the 'LTE Measurement' software interface. The main window shows an 'IQ Constellation' plot with four clusters of blue dots in a square pattern, indicating QPSK modulation. The axes are labeled 'Q' (vertical) and 'I' (horizontal), ranging from -1 to 1. To the right of the plot, a 'Statistic Count' bar shows 20/20, and 'Out of Tolerance' is 0.00%. Below this, 'Detected Modulation' is QPSK and 'Detected Channel Type' is PUSCH. The 'View Filter Throughput' is 100.0%. The interface includes a top menu bar with 'Multi Evaluation', 'PRACH', and 'SRS' options. A status bar at the bottom indicates 'PS: Connection Established' and 'RRC State: Connected'. A vertical sidebar on the right contains buttons for 'LTE', 'Multi Evaluation', 'RF Settings', 'Trigger', 'Display', 'Signaling Parameter', and 'LTE Signaling'. At the bottom, there are several configuration buttons: 'Cell Setup ...', 'Connection Setup ...', 'DL Error Insertion ...', 'TPC ...', 'Power ...', 'Enable ...', and 'Config ...'.

3.1.1.4 Test Mode = LTE /TM1 10MHz

3.1.1.4.1 Test Channel = MCH

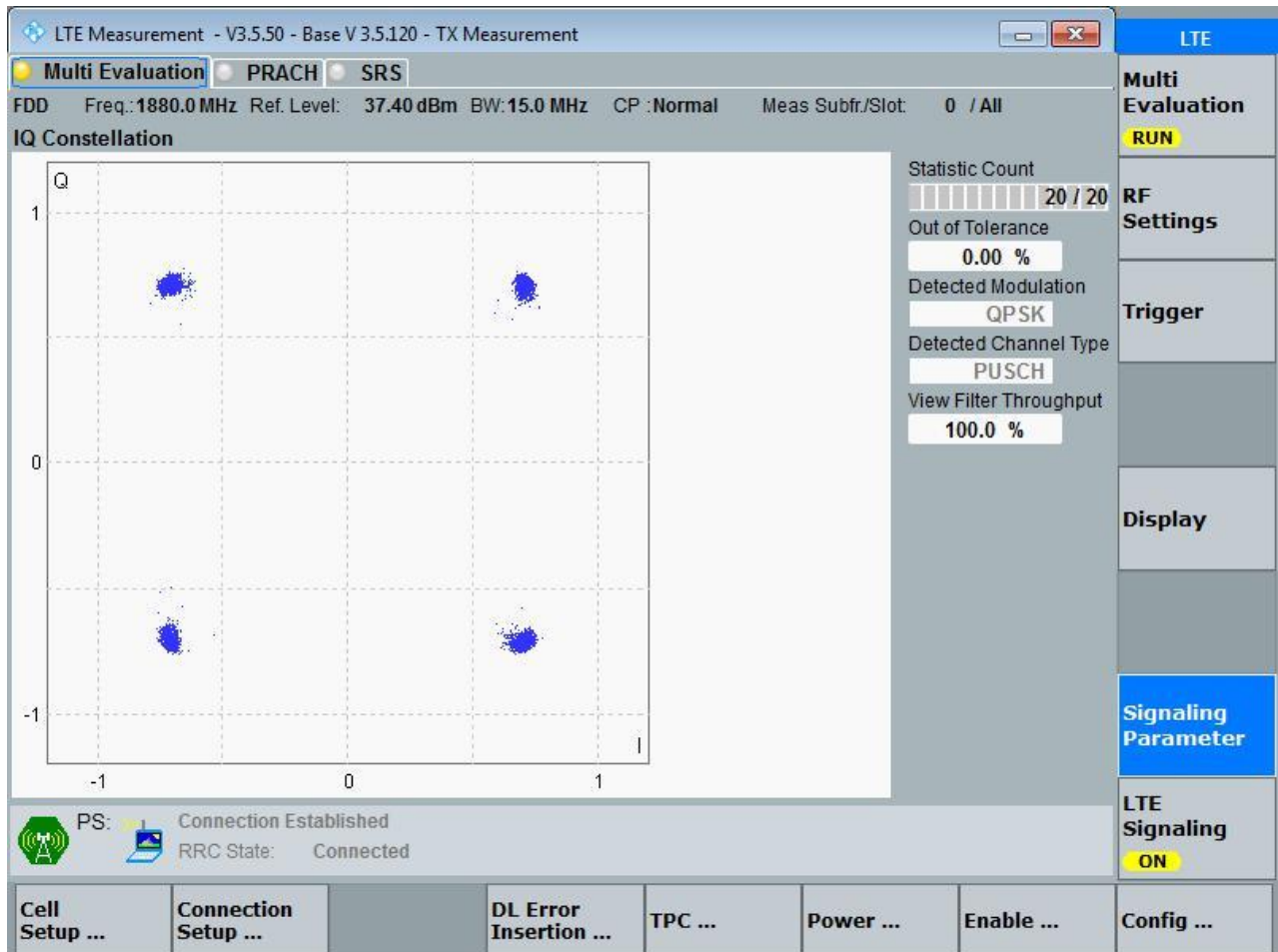


The screenshot displays the LTE Measurement software interface. The main window shows the 'IQ Constellation' plot with four clusters of blue dots representing the QPSK modulation scheme. The axes are labeled 'Q' (vertical) and 'I' (horizontal), ranging from -1 to 1. To the right of the plot, the 'Statistic Count' is shown as 20 / 20, with a progress bar. Below this, the 'Out of Tolerance' is 0.00 %, 'Detected Modulation' is QPSK, '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 plot, the status bar shows 'PS: Connection Established' and 'RRC State: Connected'. At the bottom, there are several buttons: 'Cell Setup ...', 'Connection Setup ...', 'DL Error Insertion ...', 'TPC ...', 'Power ...', 'Enable ...', and 'Config ...'. On the right side, there is a vertical toolbar with buttons for 'LTE', 'Multi Evaluation', 'RF Settings', 'Trigger', 'Display', 'Signaling Parameter', and 'LTE Signaling'.

3.1.1.5 Test Mode = LTE /TM1 15MHz

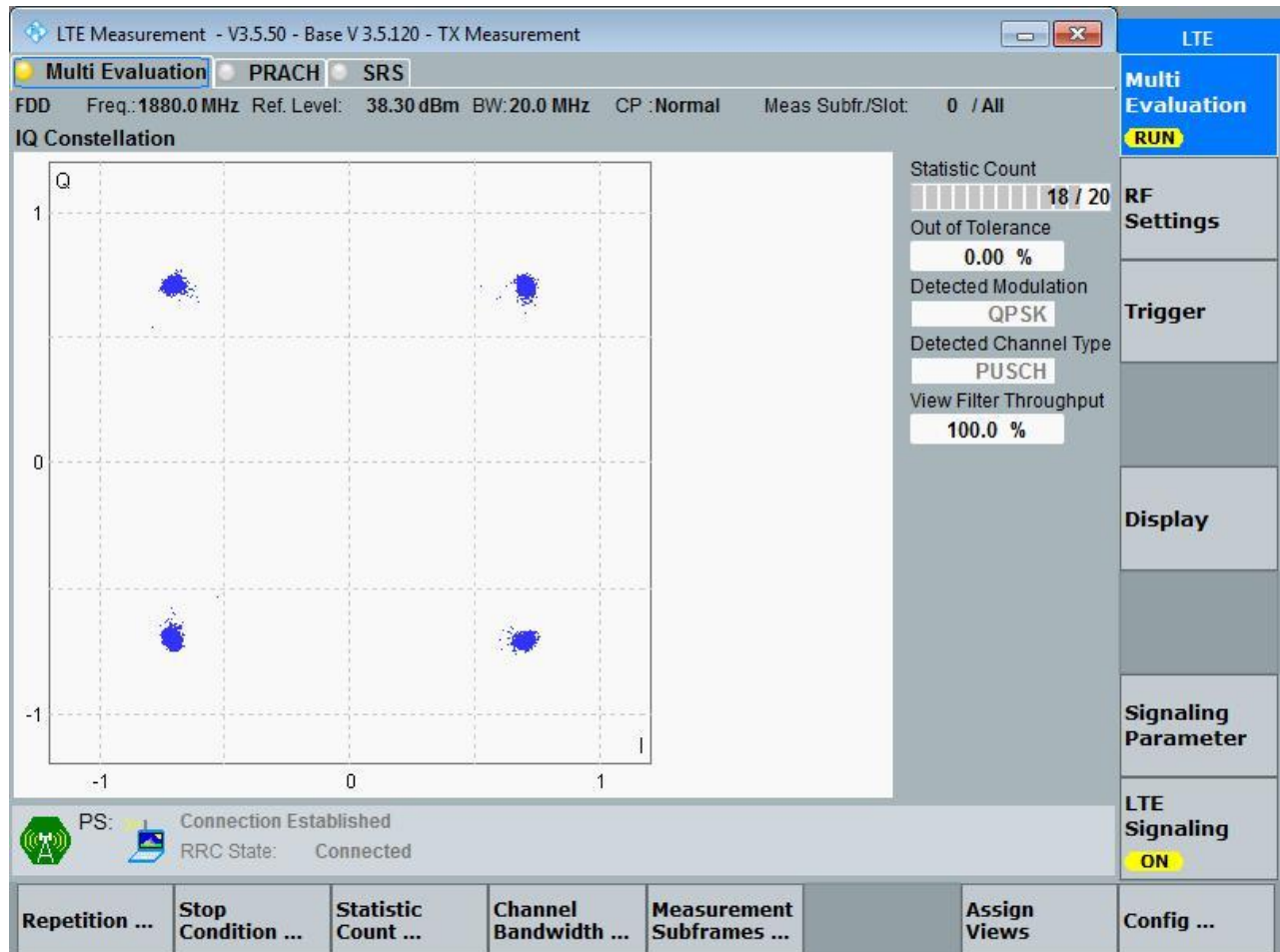
3.1.1.5.1 Test Channel = MCH



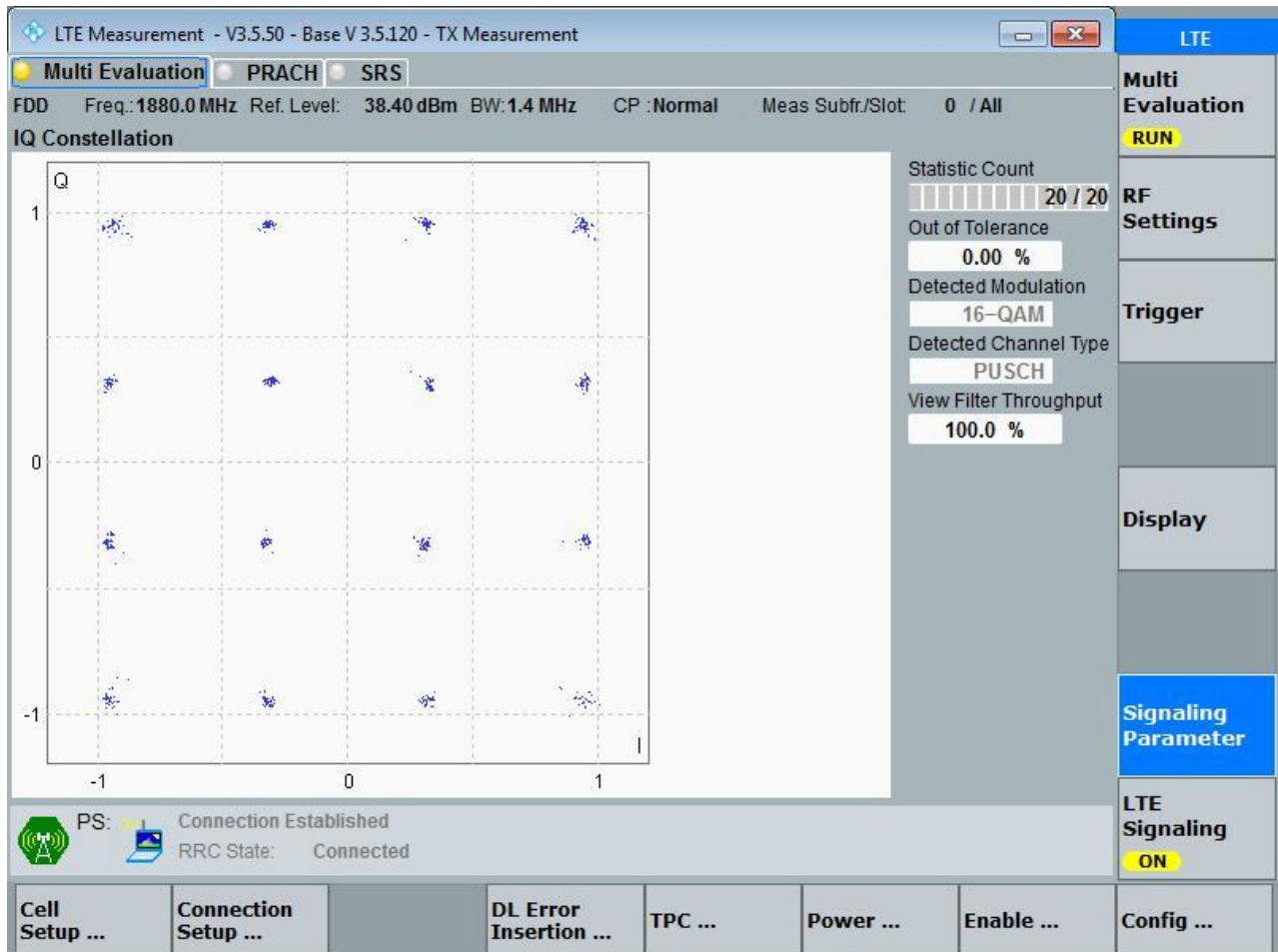
The screenshot displays the 'LTE Measurement' software interface. The main window shows 'IQ Constellation' with a scatter plot of blue dots forming a square pattern on a grid from -1 to 1 on both axes. The plot is titled 'Q' and 'I'. To the right of the plot, a 'Statistic Count' bar shows 20/20, 'Out of Tolerance' is 0.00%, 'Detected Modulation' is QPSK, '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 plot, it shows 'PS: Connection Established' and 'RRC State: Connected'. A bottom toolbar contains buttons for 'Cell Setup ...', 'Connection Setup ...', 'DL Error Insertion ...', 'TPC ...', 'Power ...', 'Enable ...', and 'Config ...'. On the far right, a vertical sidebar contains buttons for 'LTE', 'Multi Evaluation', 'RF Settings', 'Trigger', 'Display', 'Signaling Parameter', and 'LTE Signaling'.

3.1.1.6 Test Mode = LTE /TM1 20MHz

3.1.1.6.1 Test Channel = MCH



3.1.1.7 Test Mode = LTE /TM2 1.4MHz
3.1.1.7.1 Test Channel = MCH



The screenshot displays the LTE Measurement software interface. The main window is titled "LTE Measurement - V3.5.50 - Base V 3.5.120 - TX Measurement". It features a "Multi Evaluation" tab and a "PRACH" radio button. The interface shows the following parameters:

- FDD Freq.: 1880.0 MHz Ref. Level: 38.40 dBm BW: 1.4 MHz CP: Normal Meas Subfr./Slot: 0 / All
- IQ Constellation: A scatter plot showing 16-QAM modulation with points clustered around the center of a 4x4 grid.
- Statistic Count: 20 / 20
- Out of Tolerance: 0.00 %
- Detected Modulation: 16-QAM
- Detected Channel Type: PUSCH
- View Filter Throughput: 100.0 %

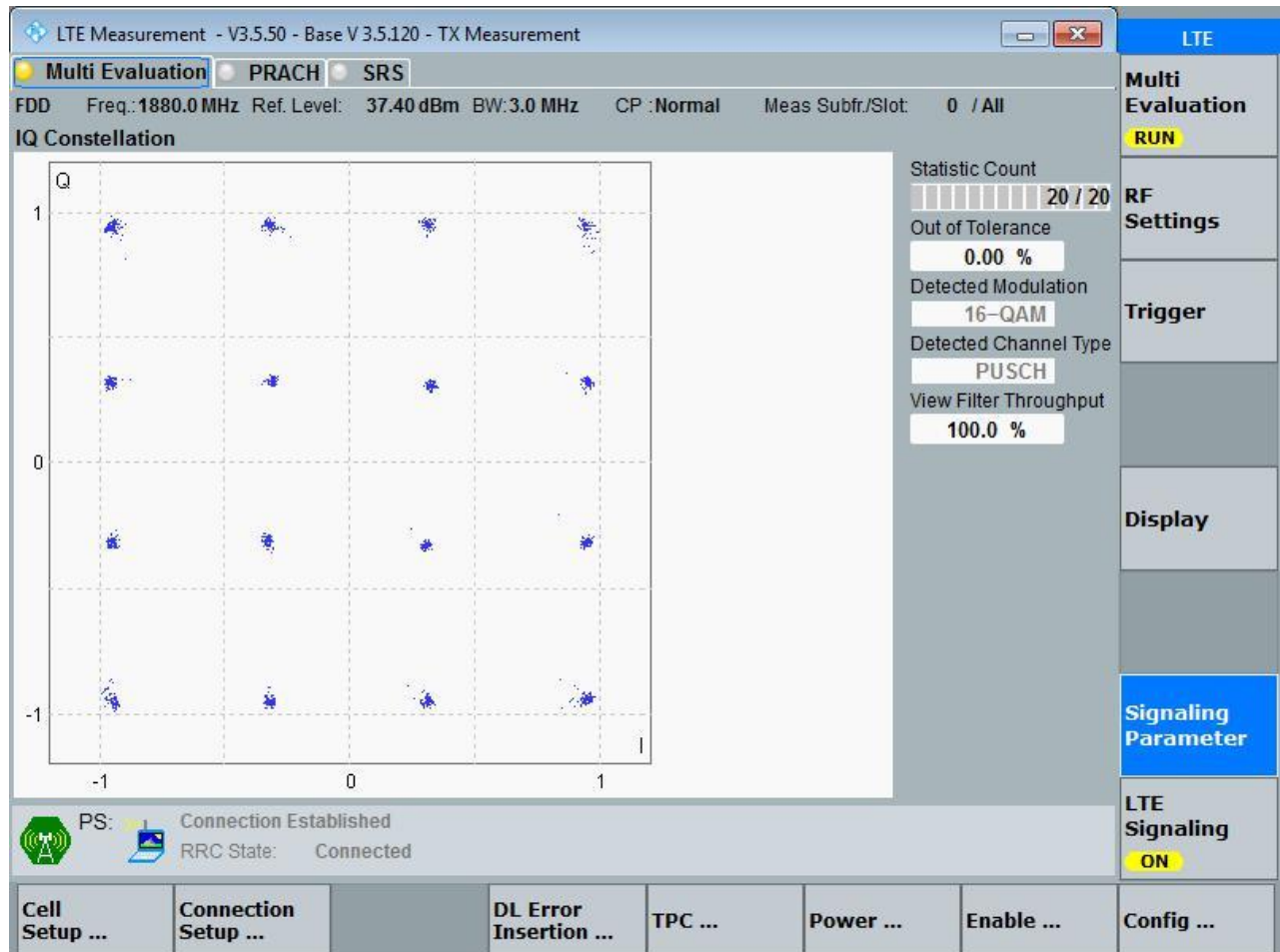
The right-hand side of the interface contains a vertical menu with the following options:

- LTE
- Multi Evaluation (RUN)
- RF Settings
- Trigger
- Display
- Signaling Parameter
- LTE Signaling (ON)

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

3.1.1.8 Test Mode = LTE /TM2 3MHz

3.1.1.8.1 Test Channel = MCH

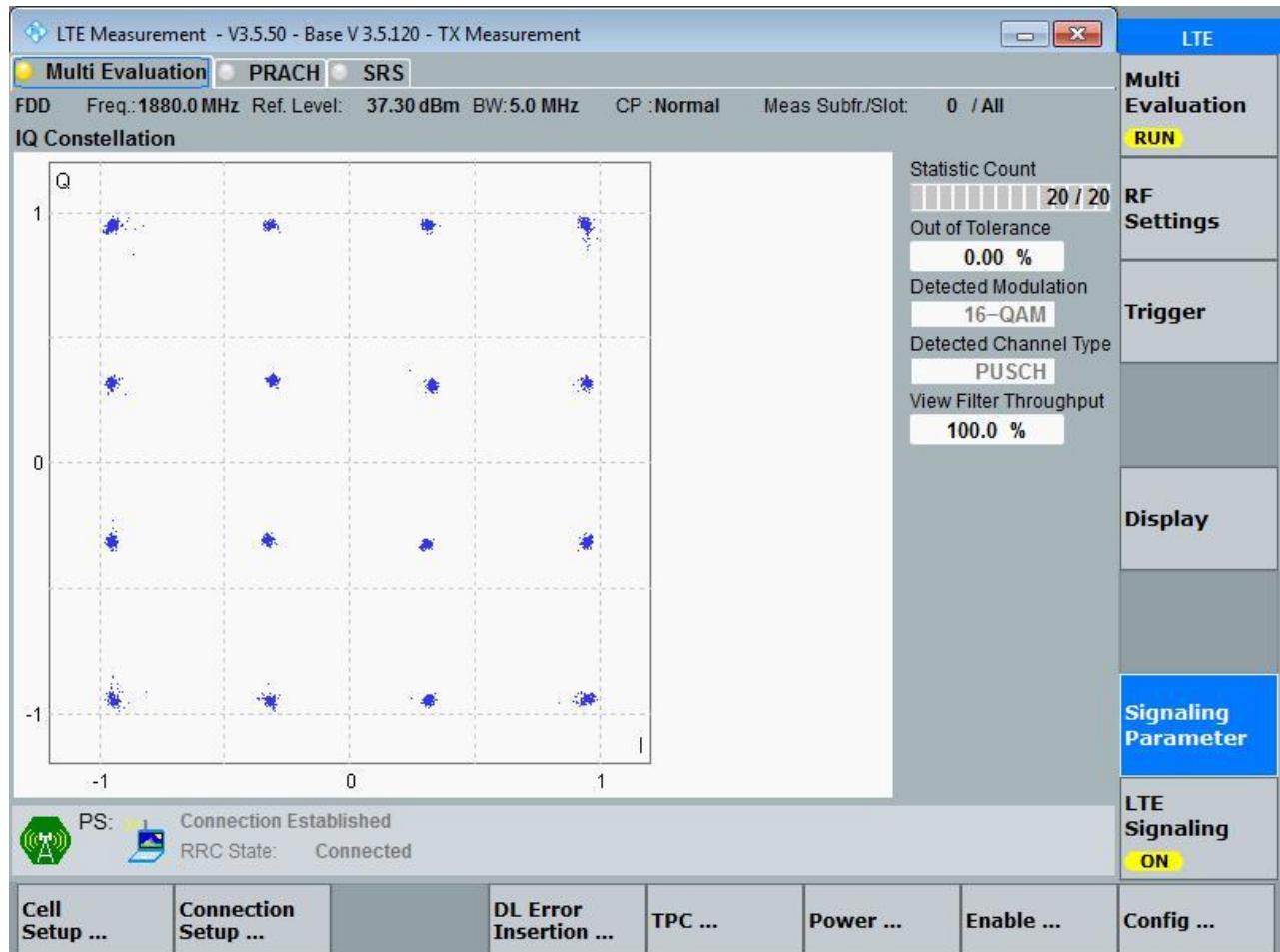


The screenshot displays the LTE Measurement software interface. The main window is titled "LTE Measurement - V3.5.50 - Base V 3.5.120 - TX Measurement". It features a "Multi Evaluation" tab and a "PRACH" radio button. The interface shows the following parameters and settings:

- Measurement Parameters:** FDD, Freq.: 1880.0 MHz, Ref. Level: 37.40 dBm, BW: 3.0 MHz, CP: Normal, Meas Subfr/Slot: 0 / All.
- IQ Constellation:** A scatter plot showing the constellation points in the IQ plane, with axes ranging from -1 to 1.
- Statistic Count:** 20 / 20.
- Out of Tolerance:** 0.00 %.
- Detected Modulation:** 16-QAM.
- Detected Channel Type:** PUSCH.
- View Filter Throughput:** 100.0 %.
- Connection Status:** PS: Connection Established, RRC State: Connected.
- Navigation Panel:** Includes buttons for "Cell Setup ...", "Connection Setup ...", "DL Error Insertion ...", "TPC ...", "Power ...", "Enable ...", and "Config ...".
- Right-Hand Side Panel:** Contains tabs for "LTE", "Multi Evaluation" (with a "RUN" button), "RF Settings", "Trigger", "Display", "Signaling Parameter" (with a "Signaling ON" indicator), and "LTE Signaling".

3.1.1.9 Test Mode = LTE /TM2 5MHz

3.1.1.9.1 Test Channel = MCH



The screenshot displays the LTE Measurement software interface. The main window is titled "LTE Measurement - V3.5.50 - Base V 3.5.120 - TX Measurement". It features a "Multi Evaluation" tab and a "PRACH" radio button. The interface shows the following parameters:

- FDD Freq.: 1880.0 MHz Ref. Level: 37.30 dBm BW: 5.0 MHz CP: Normal Meas Subfr/Slot: 0 / All
- Statistic Count: 20 / 20
- Out of Tolerance: 0.00 %
- Detected Modulation: 16-QAM
- Detected Channel Type: PUSCH
- View Filter Throughput: 100.0 %

The "IQ Constellation" plot shows a 16-QAM signal with points clustered around the center of the constellation diagram. The axes are labeled "Q" (vertical) and "I" (horizontal), ranging from -1 to 1. The interface also includes a "PS" status bar showing "Connection Established" and "RRC State: Connected".

On the right side, there is a vertical toolbar with the following buttons: "LTE", "Multi Evaluation", "RUN", "RF Settings", "Trigger", "Display", "Signaling Parameter", "LTE Signaling", and "ON".

At the bottom, there is a row of buttons: "Cell Setup ...", "Connection Setup ...", "DL Error Insertion ...", "TPC ...", "Power ...", "Enable ...", and "Config ...".

3.1.1.10 Test Mode = LTE /TM2 10MHz

3.1.1.10.1 Test Channel = MCH

LTE Measurement - V3.5.50 - Base V 3.5.120 - TX Measurement
☐ ☒

Multi Evaluation
PRACH
SRS

FDD
Freq.: 1880.0 MHz
Ref. Level: 37.40 dBm
BW: 10.0 MHz
CP: Normal
Meas Subfr./Slot: 0 / All

IQ Constellation

Statistic Count

20 / 20

Out of Tolerance

0.00 %

Detected Modulation

16-QAM

Detected Channel Type

PUSCH

View Filter Throughput

100.0 %

PS: Connection Established

RRC State: Connected

LTE

Multi Evaluation

RUN

RF Settings

Trigger

Display

Signaling Parameter

LTE Signaling

ON

Cell Setup ...

Connection Setup ...

DL Error Insertion ...

TPC ...

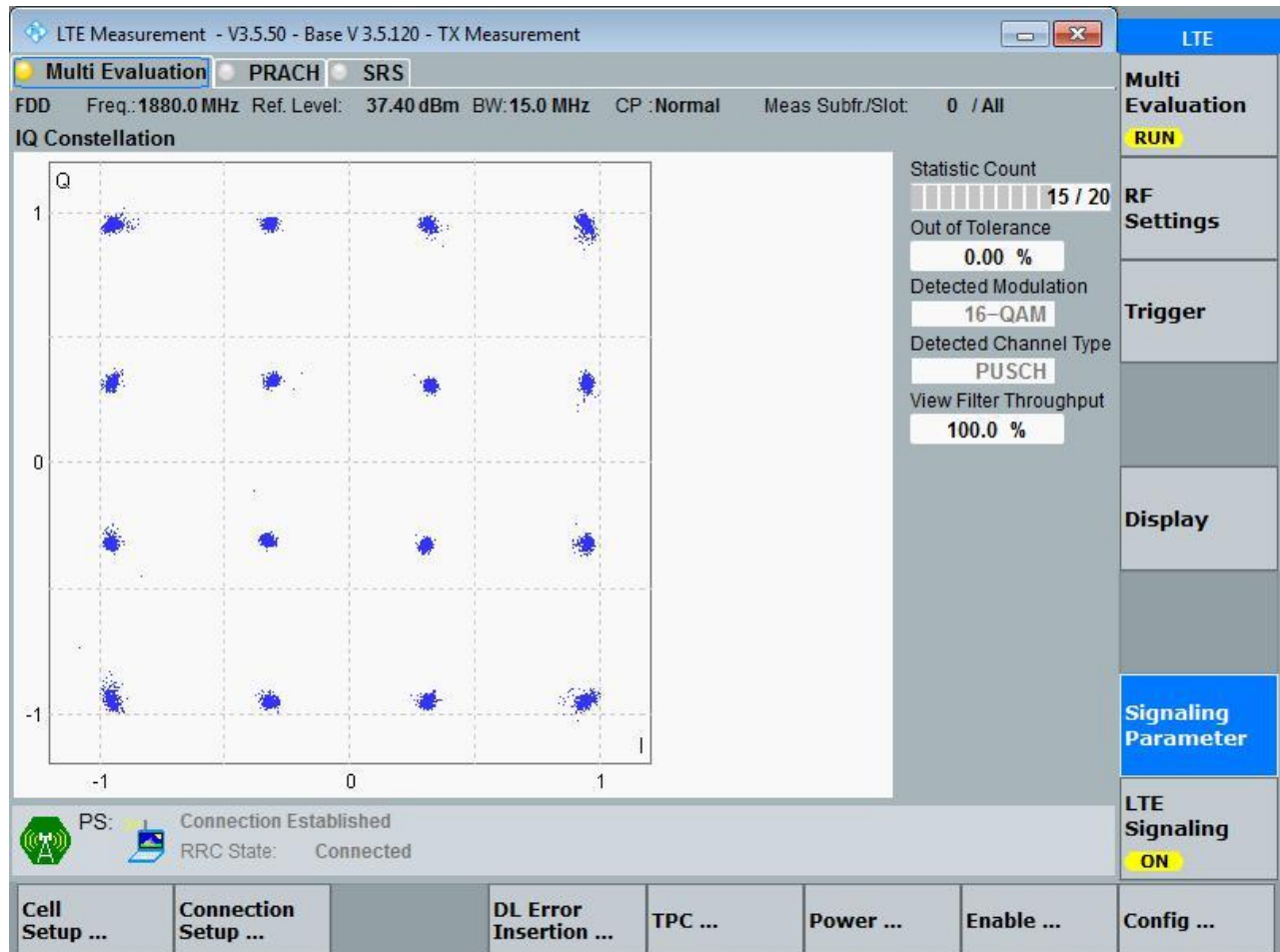
Power ...

Enable ...

Config ...

3.1.1.11 Test Mode = LTE /TM2 15MHz

3.1.1.11.1 Test Channel = MCH



The screenshot displays the LTE Measurement software interface. The main window is titled "LTE Measurement - V3.5.50 - Base V 3.5.120 - TX Measurement". It features a "Multi Evaluation" tab and shows the following parameters: FDD, Freq.: 1880.0 MHz, Ref. Level: 37.40 dBm, BW: 15.0 MHz, CP: Normal, Meas Subfr/Slot: 0 / All.

The "IQ Constellation" plot shows a 16-QAM modulation scheme with 16 distinct clusters of blue dots arranged in a 4x4 grid. The axes are labeled "Q" (vertical) and "I" (horizontal), both ranging from -1 to 1.

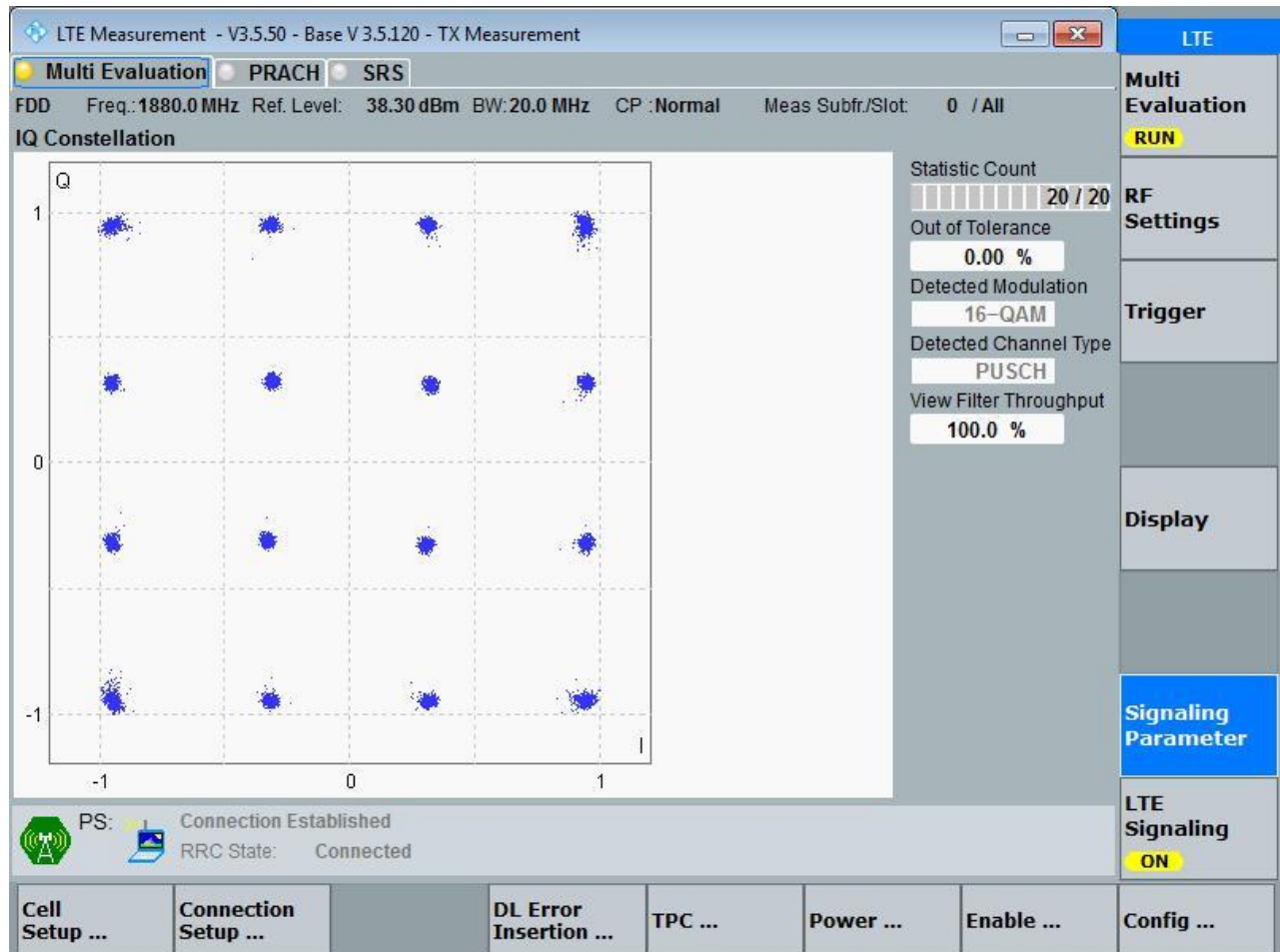
On the right side, the "Statistic Count" is 15 / 20. The "Out of Tolerance" percentage is 0.00%. The "Detected Modulation" is 16-QAM, and the "Detected Channel Type" is PUSCH. The "View Filter Throughput" is 100.0%.

The bottom status bar indicates "PS: Connection Established" and "RRC State: Connected". The "LTE Signaling" is ON.

The interface includes a sidebar on the right with buttons for "Multi Evaluation", "RF Settings", "Trigger", "Display", "Signaling Parameter", and "LTE Signaling". At the bottom, there are several configuration buttons: "Cell Setup ...", "Connection Setup ...", "DL Error Insertion ...", "TPC ...", "Power ...", "Enable ...", and "Config ...".

3.1.1.12 Test Mode = LTE /TM2 20MHz

3.1.1.12.1 Test Channel = MCH



The screenshot displays the LTE Measurement software interface. The main window is titled "LTE Measurement - V3.5.50 - Base V 3.5.120 - TX Measurement". It features a "Multi Evaluation" tab and a "PRACH" radio button. The interface shows the following parameters:

- FDD Freq.: 1880.0 MHz Ref. Level: 38.30 dBm BW: 20.0 MHz CP: Normal Meas Subfr/Slot: 0 / All
- IQ Constellation: A scatter plot showing 16-QAM modulation with points clustered around a 4x4 grid.
- Statistic Count: 20 / 20
- Out of Tolerance: 0.00 %
- Detected Modulation: 16-QAM
- Detected Channel Type: PUSCH
- View Filter Throughput: 100.0 %

The right-hand side of the interface contains a vertical menu with the following options:

- LTE
- Multi Evaluation (RUN)
- RF Settings
- Trigger
- Display
- Signaling Parameter
- LTE Signaling (ON)

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

4 Bandwidth

Part I - Test Results

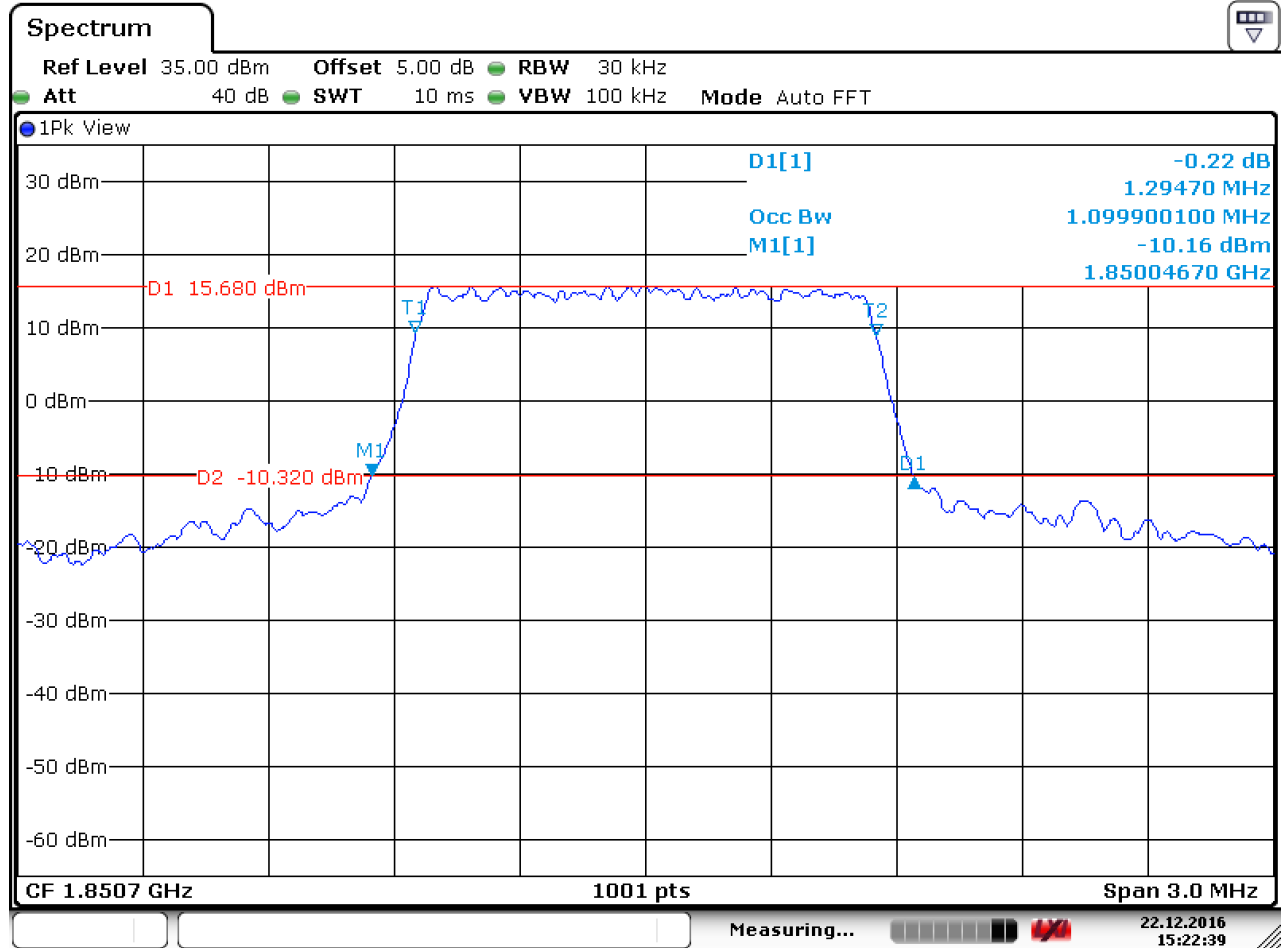
Test Band	Test Mode	Test Channel	Occupied Bandwidth [MHz]	Emission Bandwidth [MHz]	Verdict
Band 2	TM1/1.4MHz	LCH	1.10	1.29	PASS
		MCH	1.09	1.27	PASS
		HCH	1.10	1.27	PASS
	TM2/1.4MHz	LCH	1.09	1.27	PASS
		MCH	1.10	1.28	PASS
		HCH	1.10	1.28	PASS
	TM1/ 3MHz	LCH	2.69	2.91	PASS
		MCH	2.69	2.91	PASS
		HCH	2.69	2.92	PASS
	TM2/3MHz	LCH	2.69	2.92	PASS
		MCH	2.69	2.93	PASS
		HCH	2.69	2.92	PASS
	TM1/ 5MHz	LCH	4.50	4.99	PASS
		MCH	4.49	4.99	PASS
		HCH	4.49	4.99	PASS
	TM2/ 5MHz	LCH	4.49	5.00	PASS
		MCH	4.49	4.93	PASS
		HCH	4.49	4.99	PASS
	TM1/10MHz	LCH	8.91	9.65	PASS
		MCH	8.97	9.83	PASS
		HCH	8.95	9.79	PASS
	TM2/ 10MHz	LCH	8.95	9.69	PASS
		MCH	8.93	9.63	PASS
		HCH	8.95	9.77	PASS
	TM1/ 15MHz	LCH	13.46	14.84	PASS
		MCH	13.52	14.96	PASS
		HCH	13.52	15.05	PASS
TM2/ 15MHz	LCH	13.46	14.84	PASS	
	MCH	13.52	14.96	PASS	
	HCH	13.55	14.96	PASS	
TM1/ 20MHz	LCH	17.90	19.38	PASS	
	MCH	17.94	19.42	PASS	
	HCH	18.02	19.70	PASS	
TM2/ 20MHz	LCH	17.94	19.58	PASS	
	MCH	17.94	19.50	PASS	
	HCH	18.02	19.70	PASS	

4.1 For LTE

4.1.1 Test Band = LTE band2

4.1.1.1 Test Mode = LTE/TM1 1.4MHz

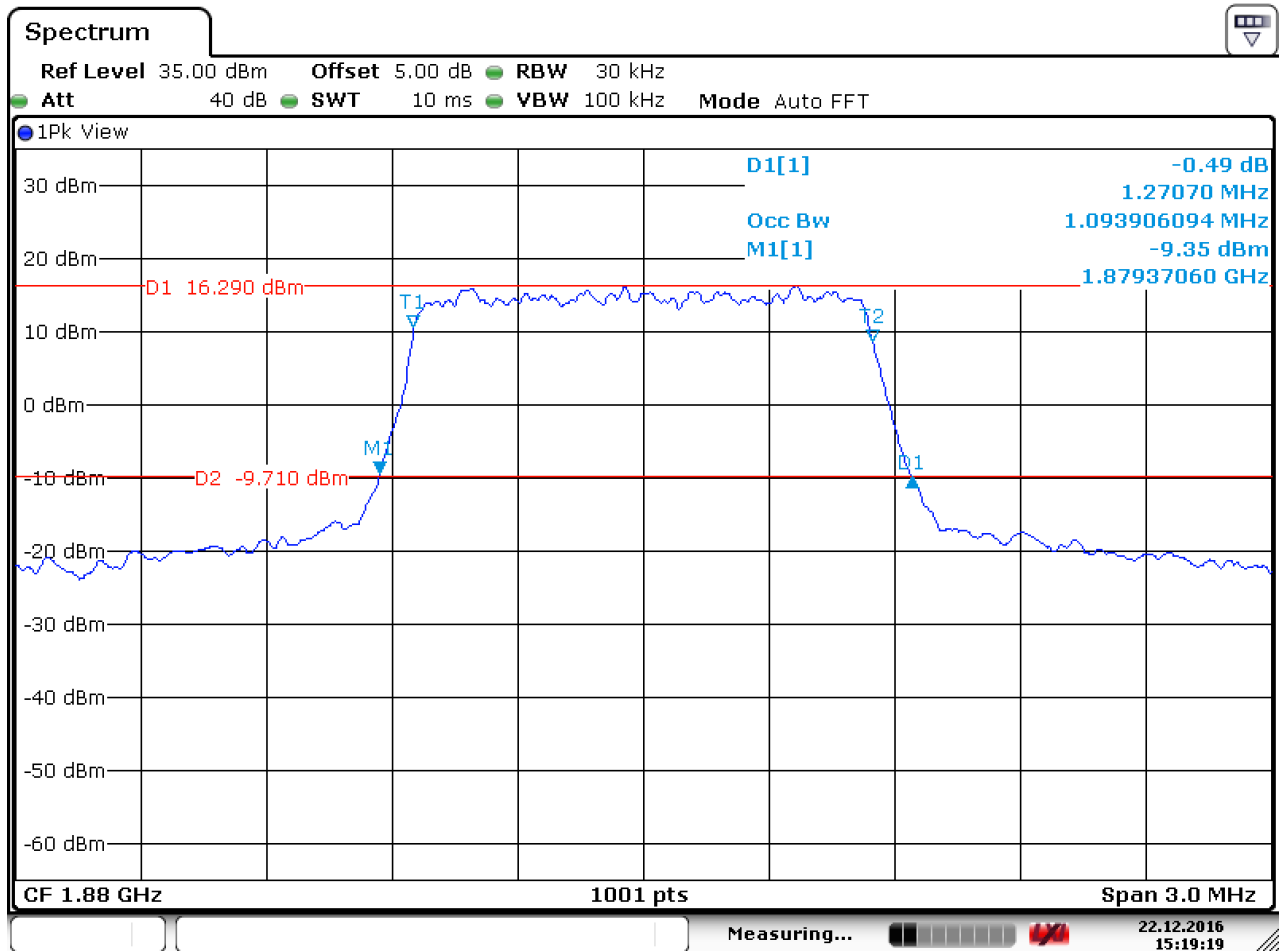
4.1.1.1.1 Test Channel = LCH



Date: 22.DEC.2016 15:22:39



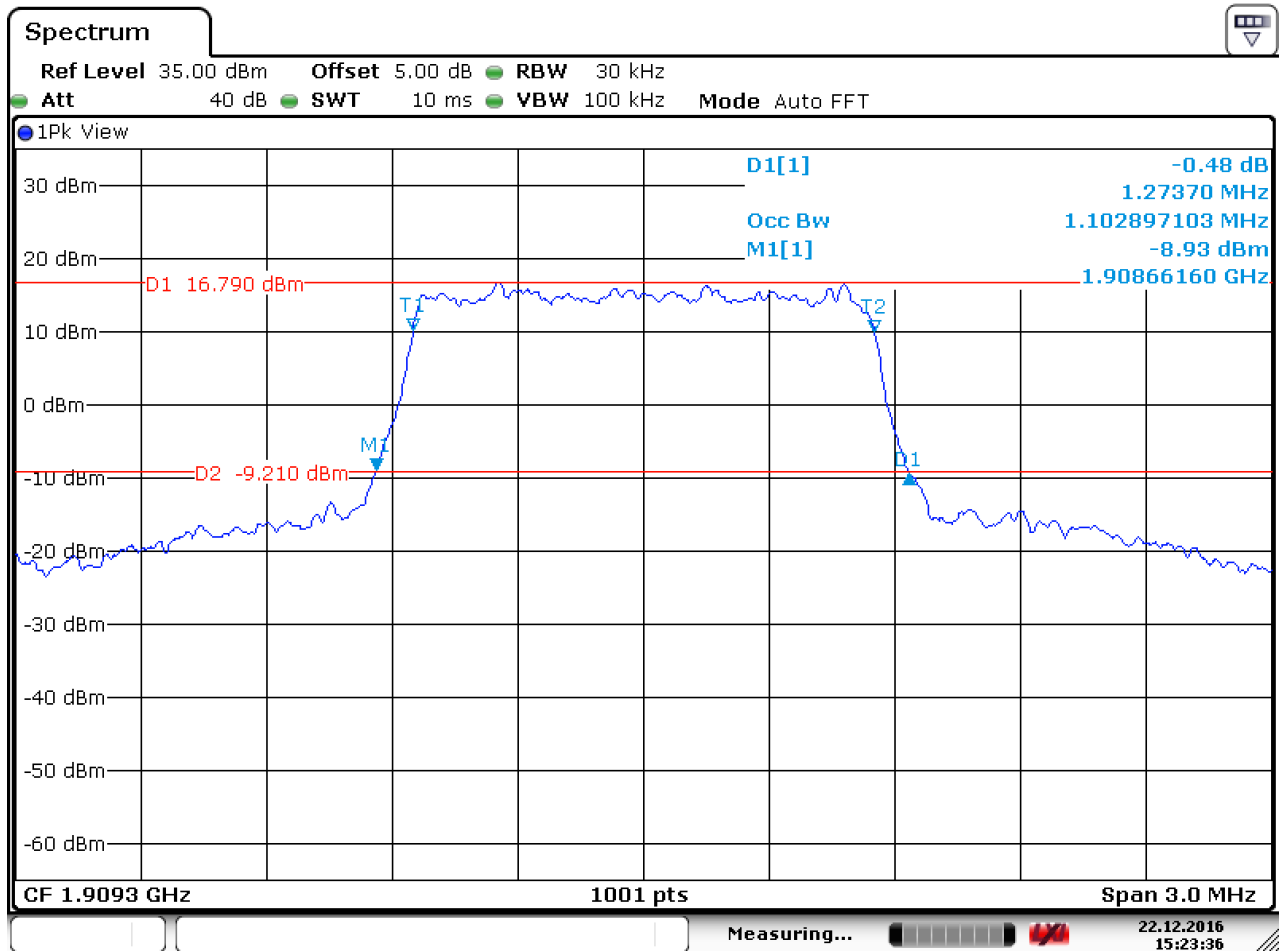
4.1.1.1.2 Test Channel = MCH



Date: 22.DEC.2016 15:19:20



4.1.1.1.3 Test Channel = HCH

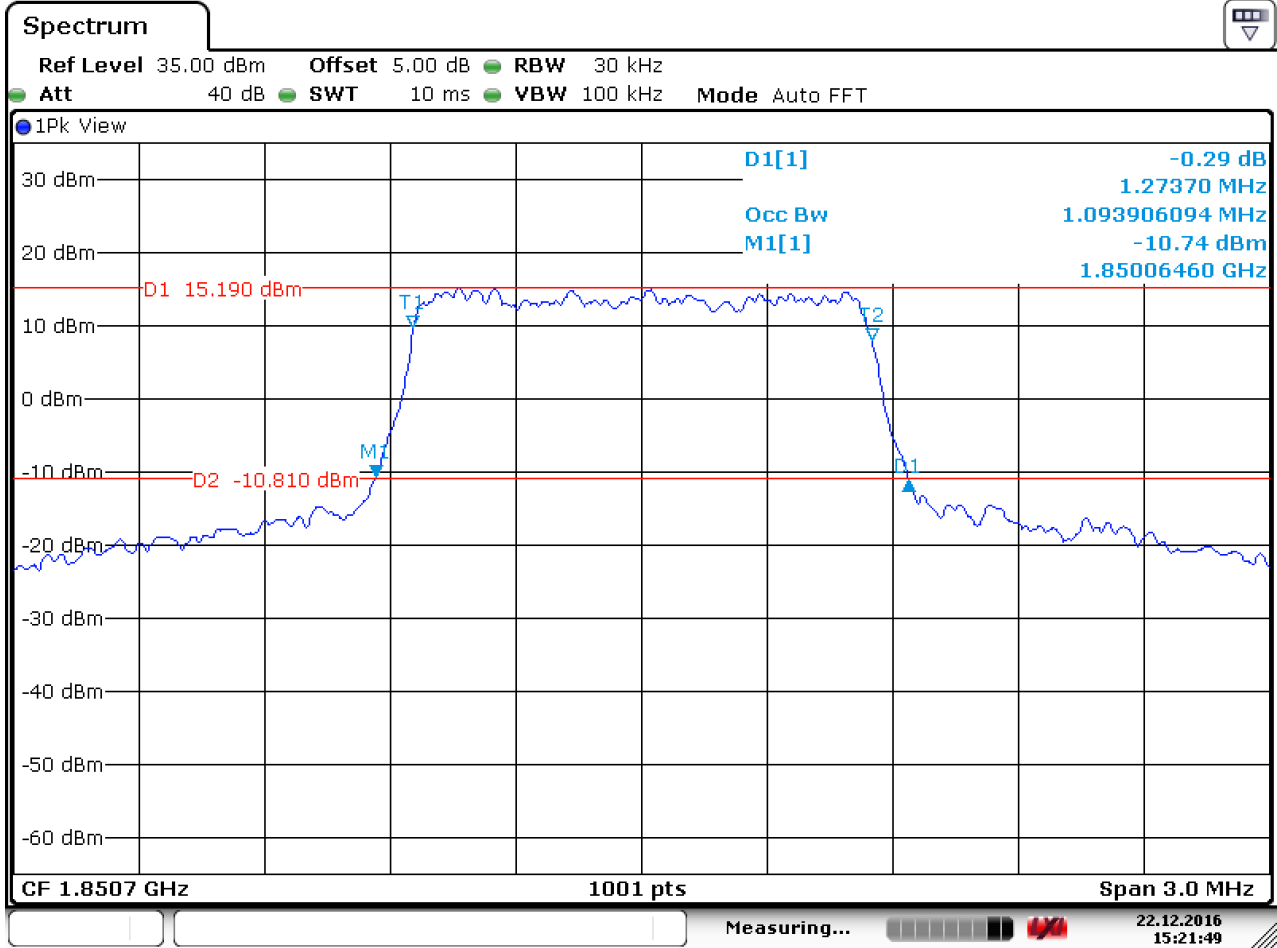


Date: 22.DEC.2016 15:23:36



4.1.1.2 Test Mode = LTE/TM2 1.4MHz

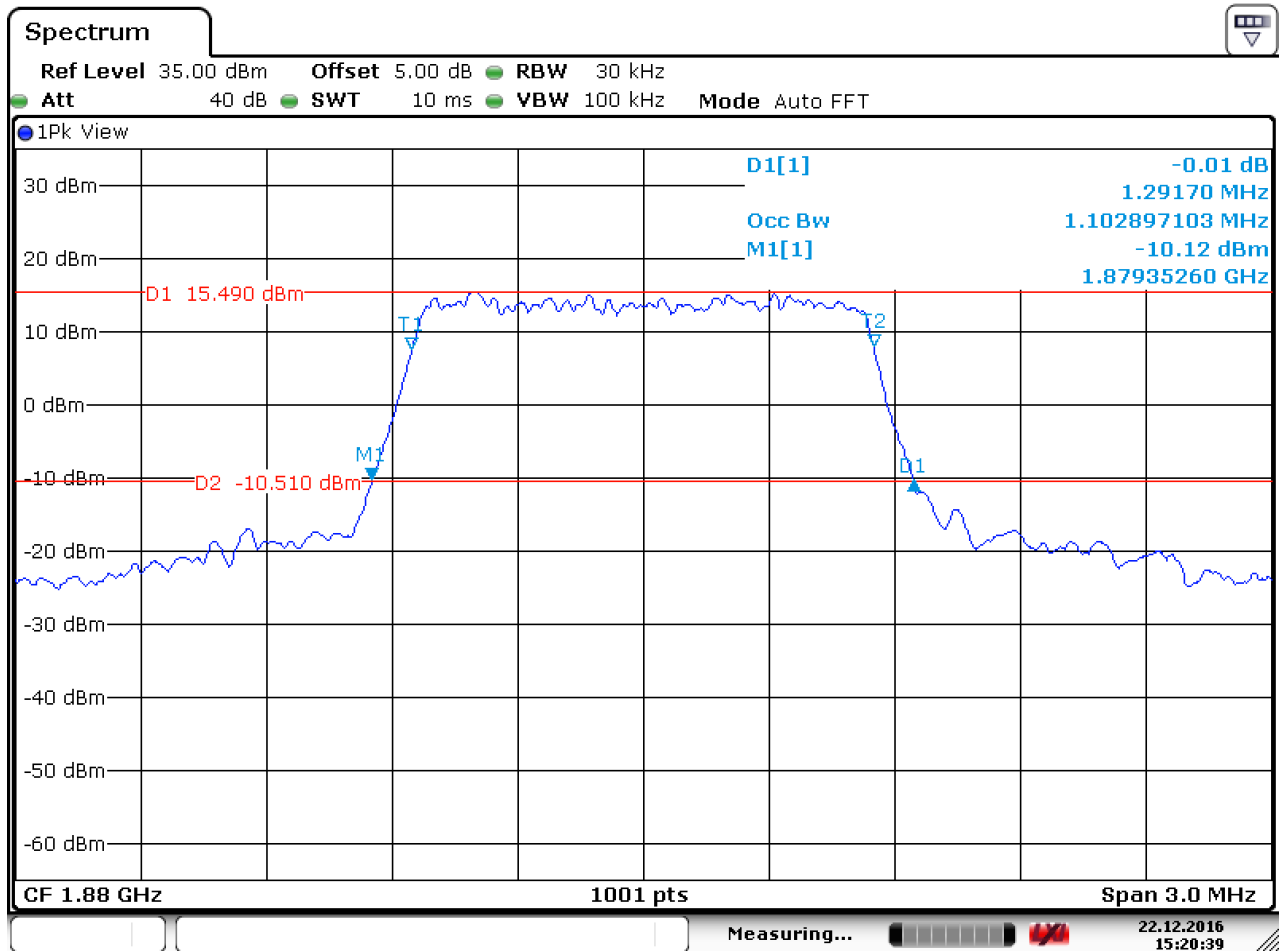
4.1.1.2.1 Test Channel = LCH



Date: 22.DEC.2016 15:21:50



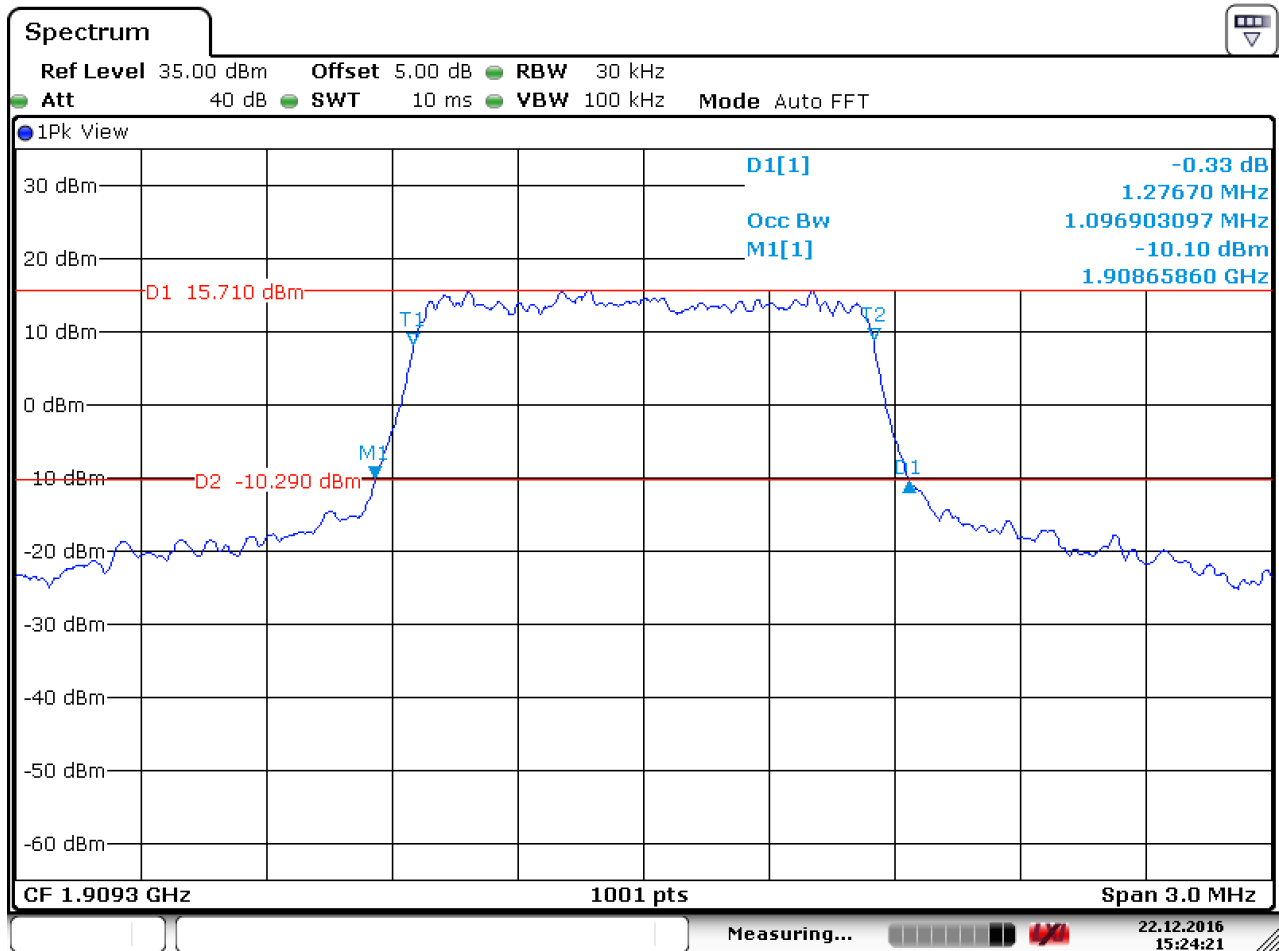
4.1.1.2.2 Test Channel = MCH



Date: 22.DEC.2016 15:20:40



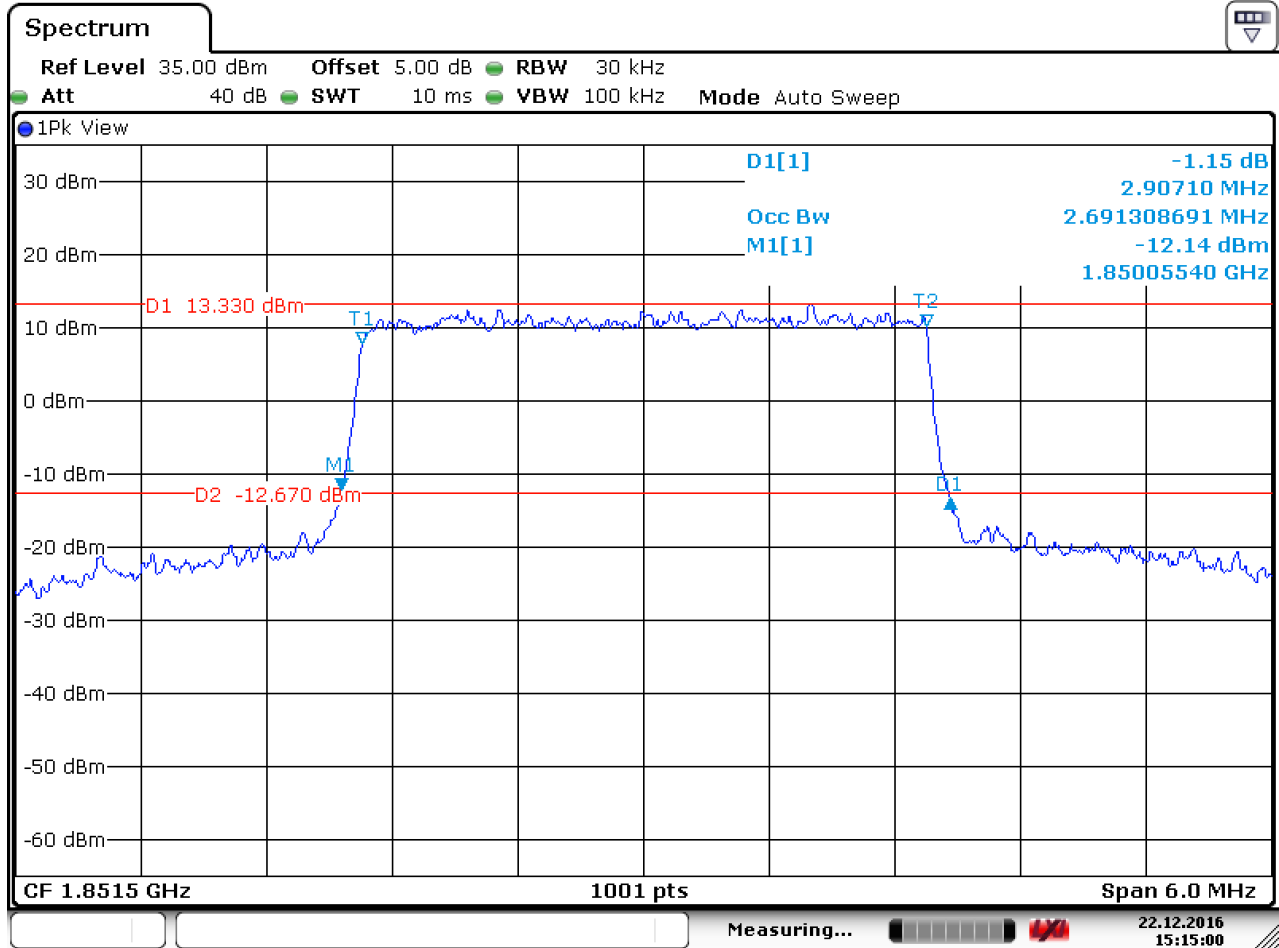
4.1.1.2.3 Test Channel = HCH



Date: 22.DEC.2016 15:24:22

4.1.1.3 Test Mode = LTE/TM1 3MHz

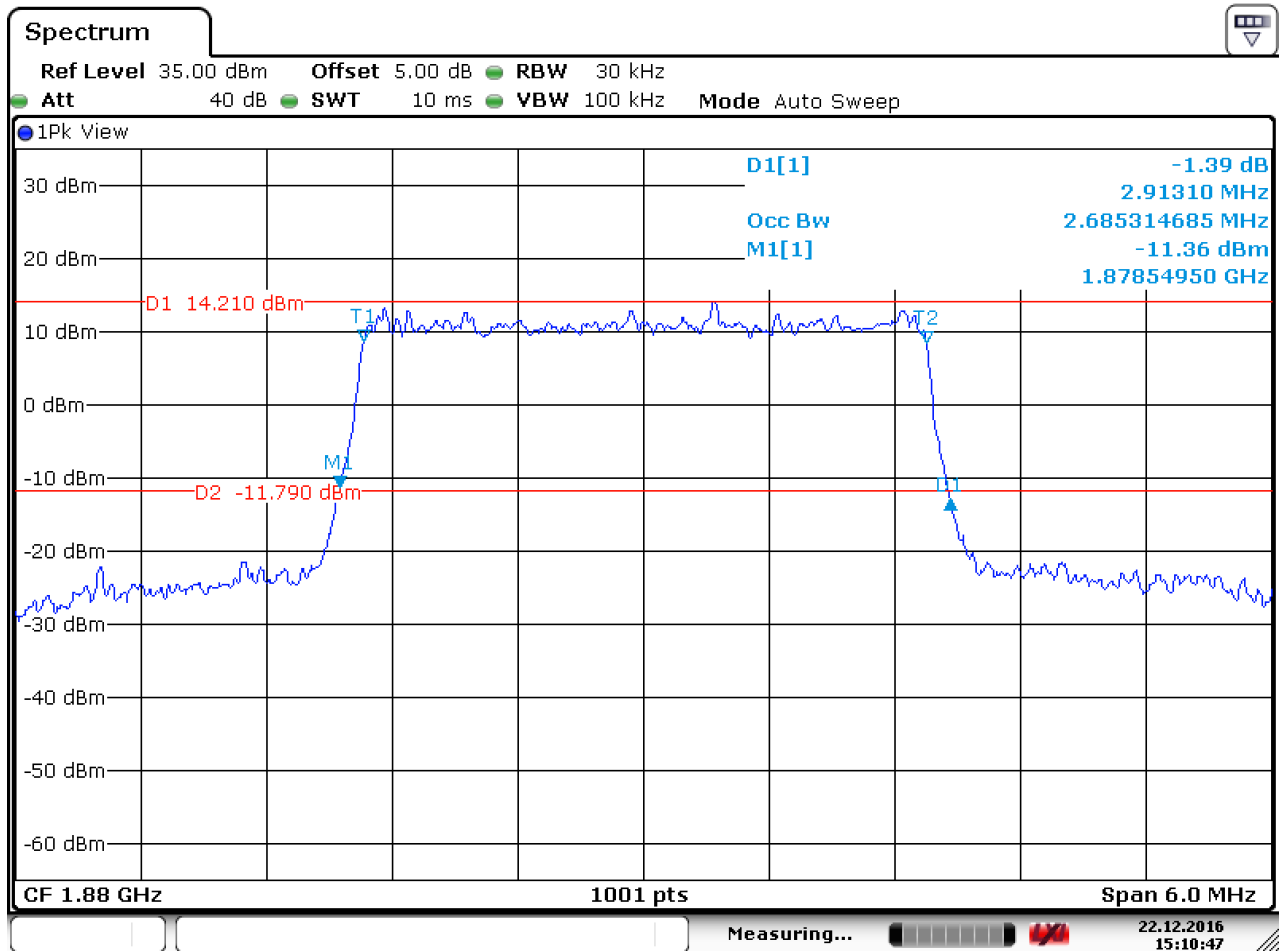
4.1.1.3.1 Test Channel = LCH



Date: 22.DEC.2016 15:15:00



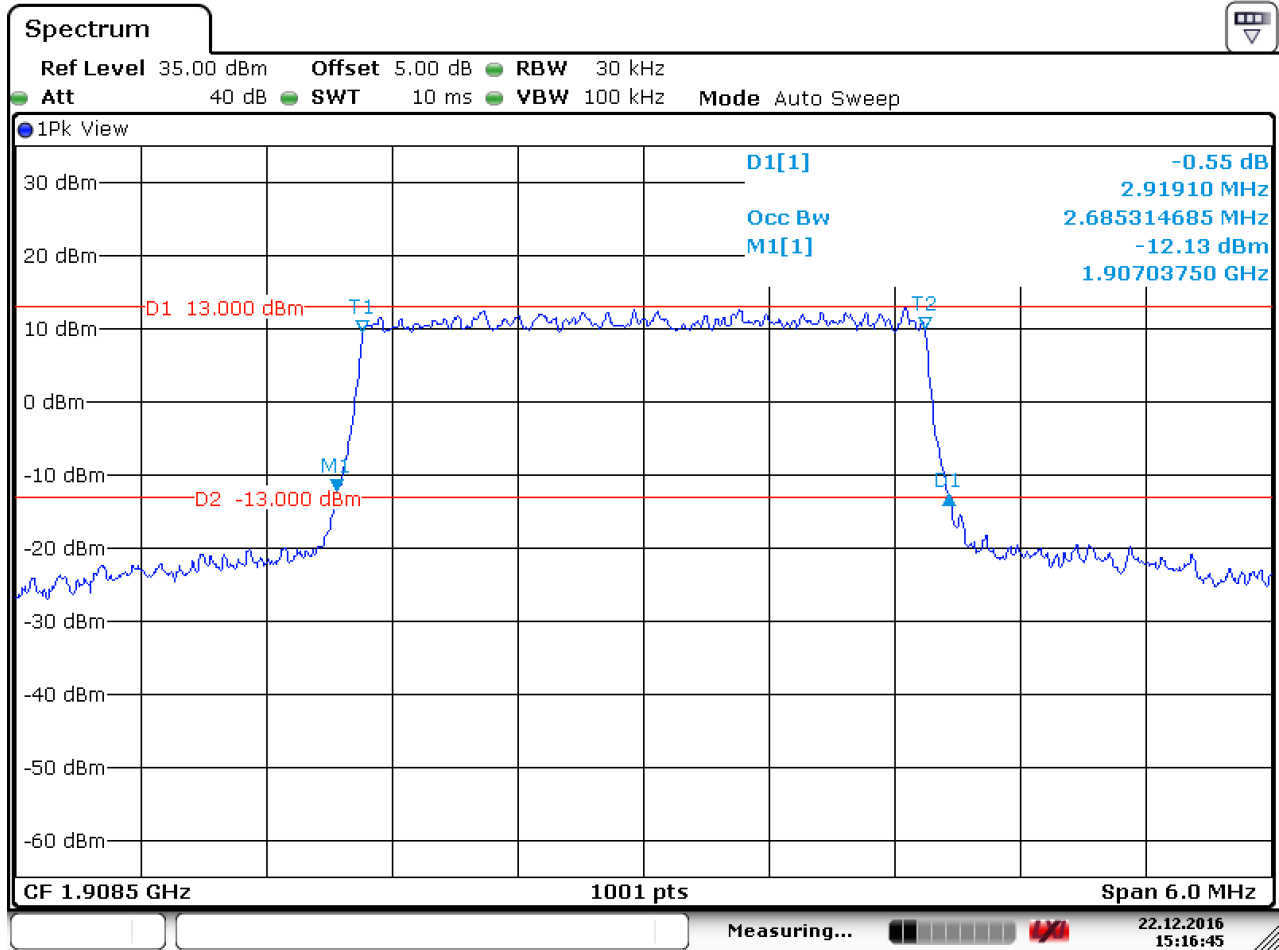
4.1.1.3.2 Test Channel = MCH



Date: 22.DEC.2016 15:10:48



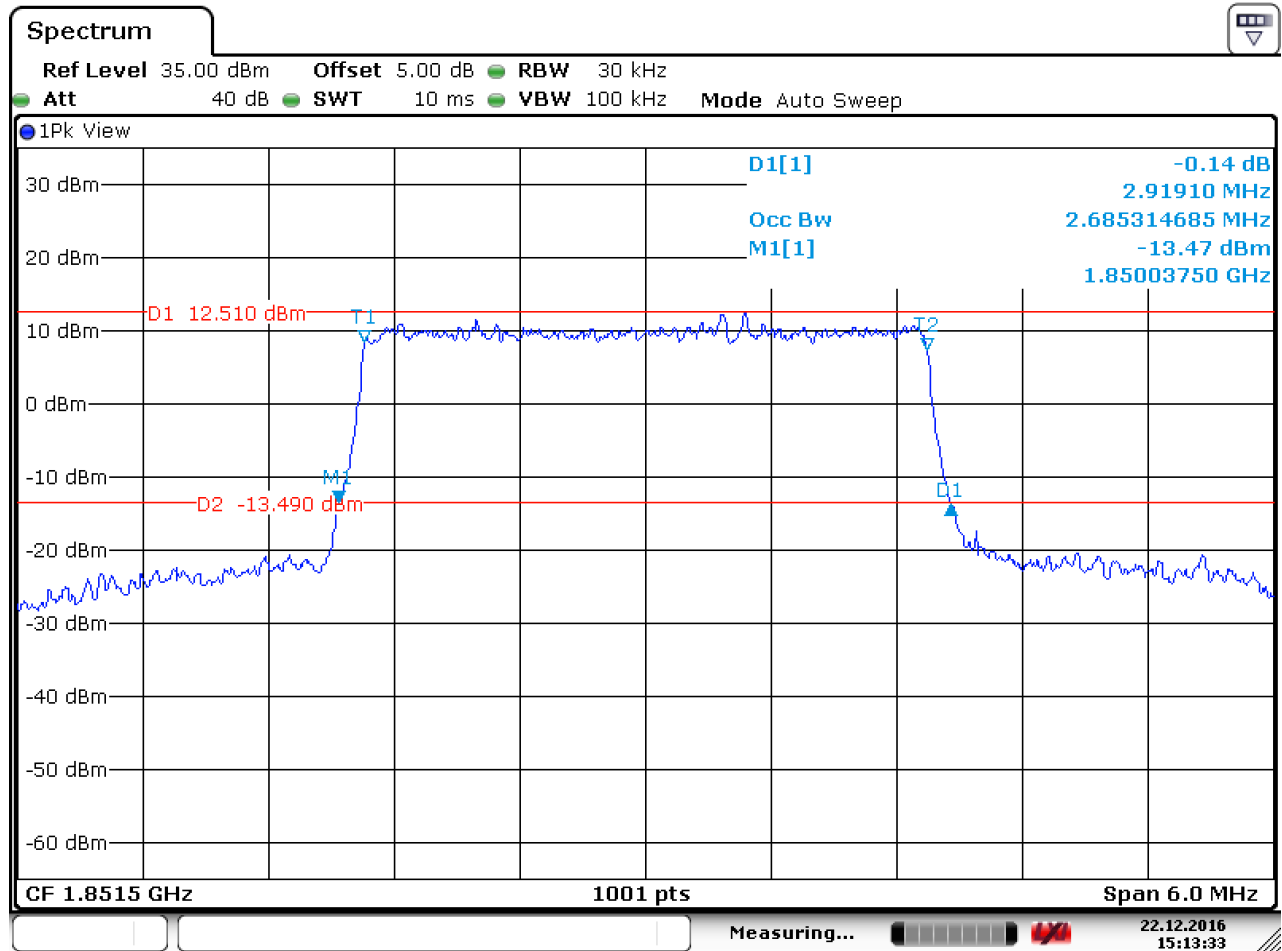
4.1.1.3.3 Test Channel = HCH



Date: 22.DEC.2016 15:16:45

4.1.1.4 Test Mode = LTE/TM2 3MHz

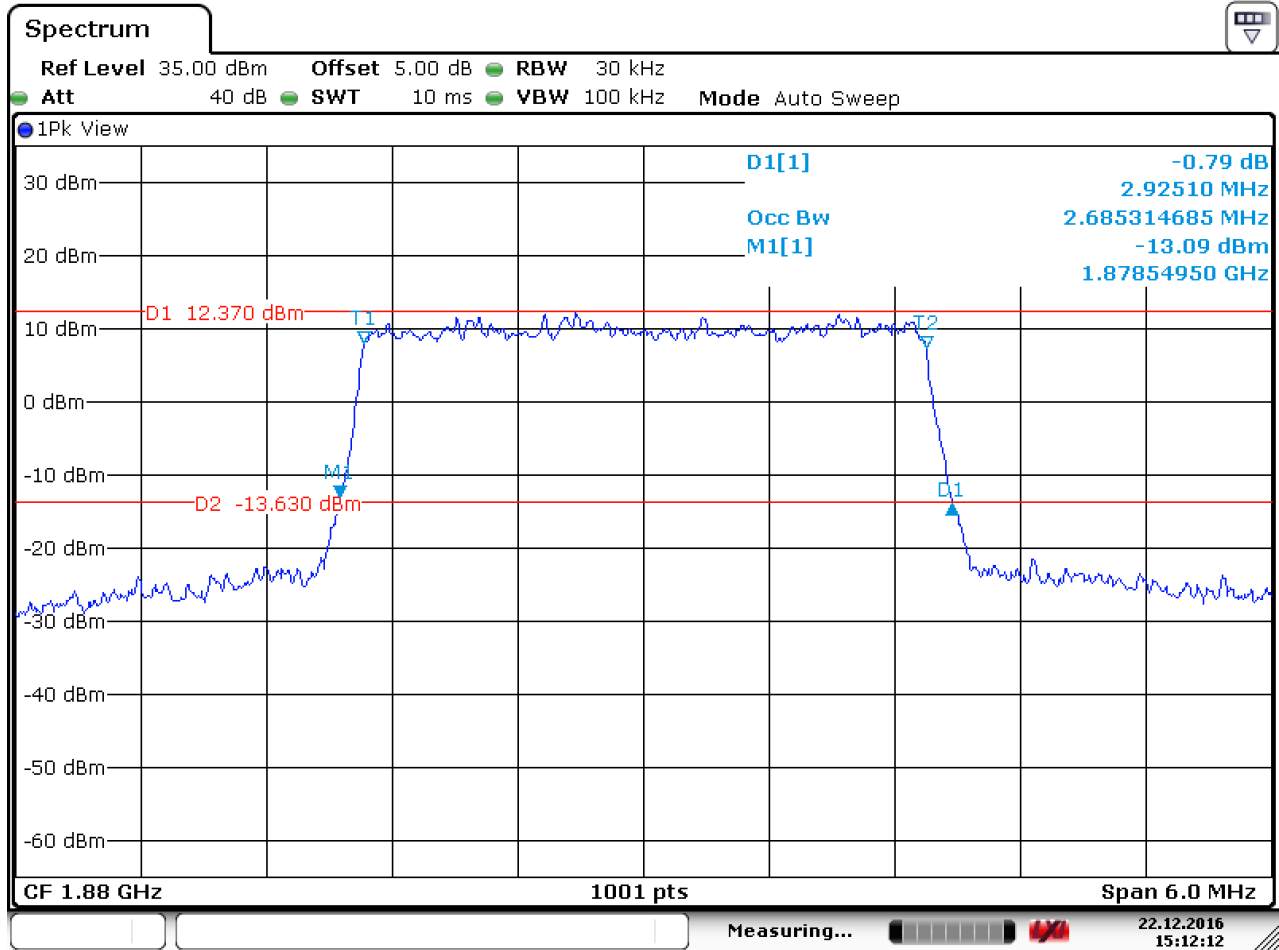
4.1.1.4.1 Test Channel = LCH



Date: 22.DEC.2016 15:13:33

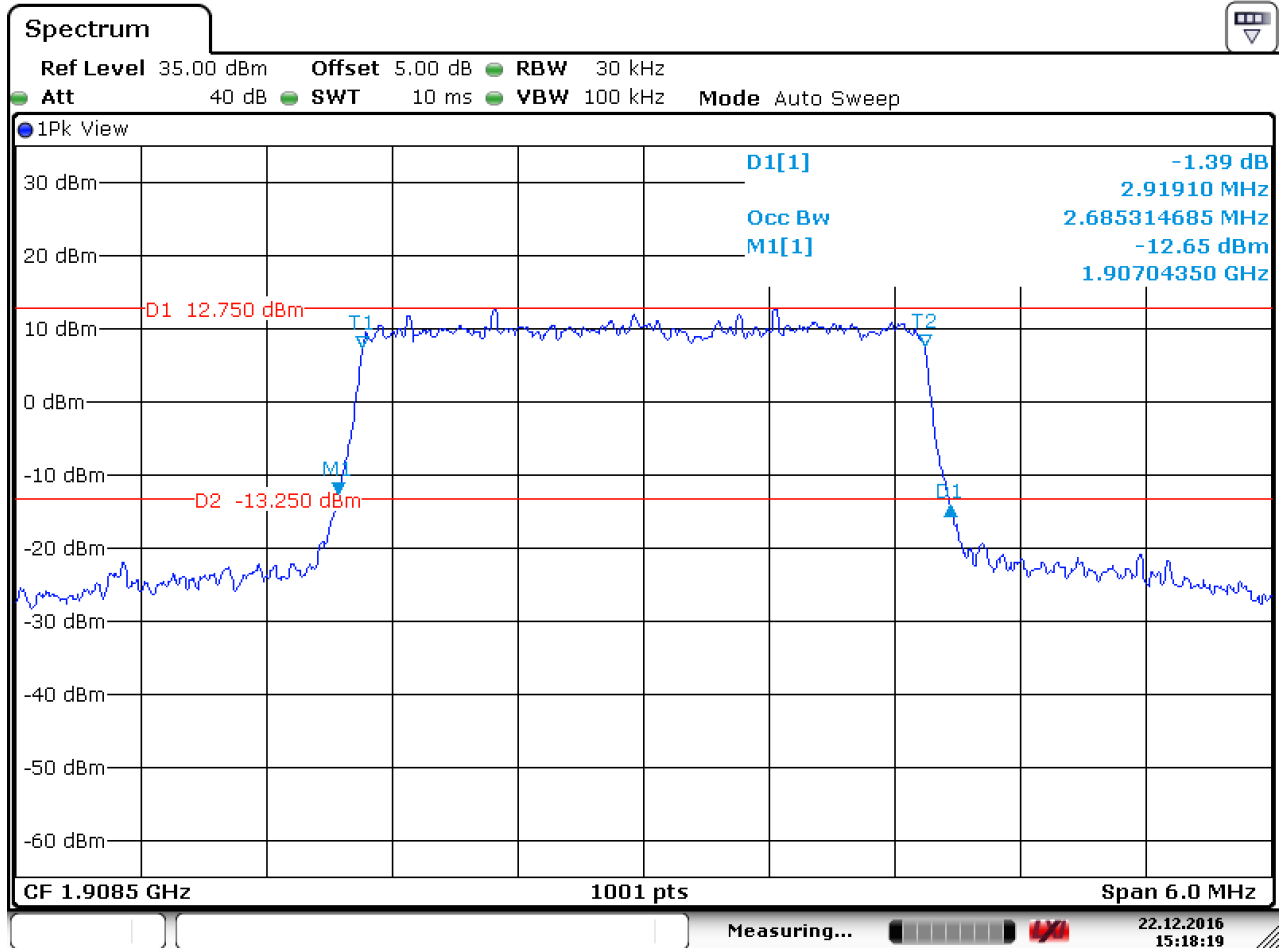


4.1.1.4.2 Test Channel = MCH



Date: 22.DEC.2016 15:12:13

4.1.1.4.3 Test Channel = HCH

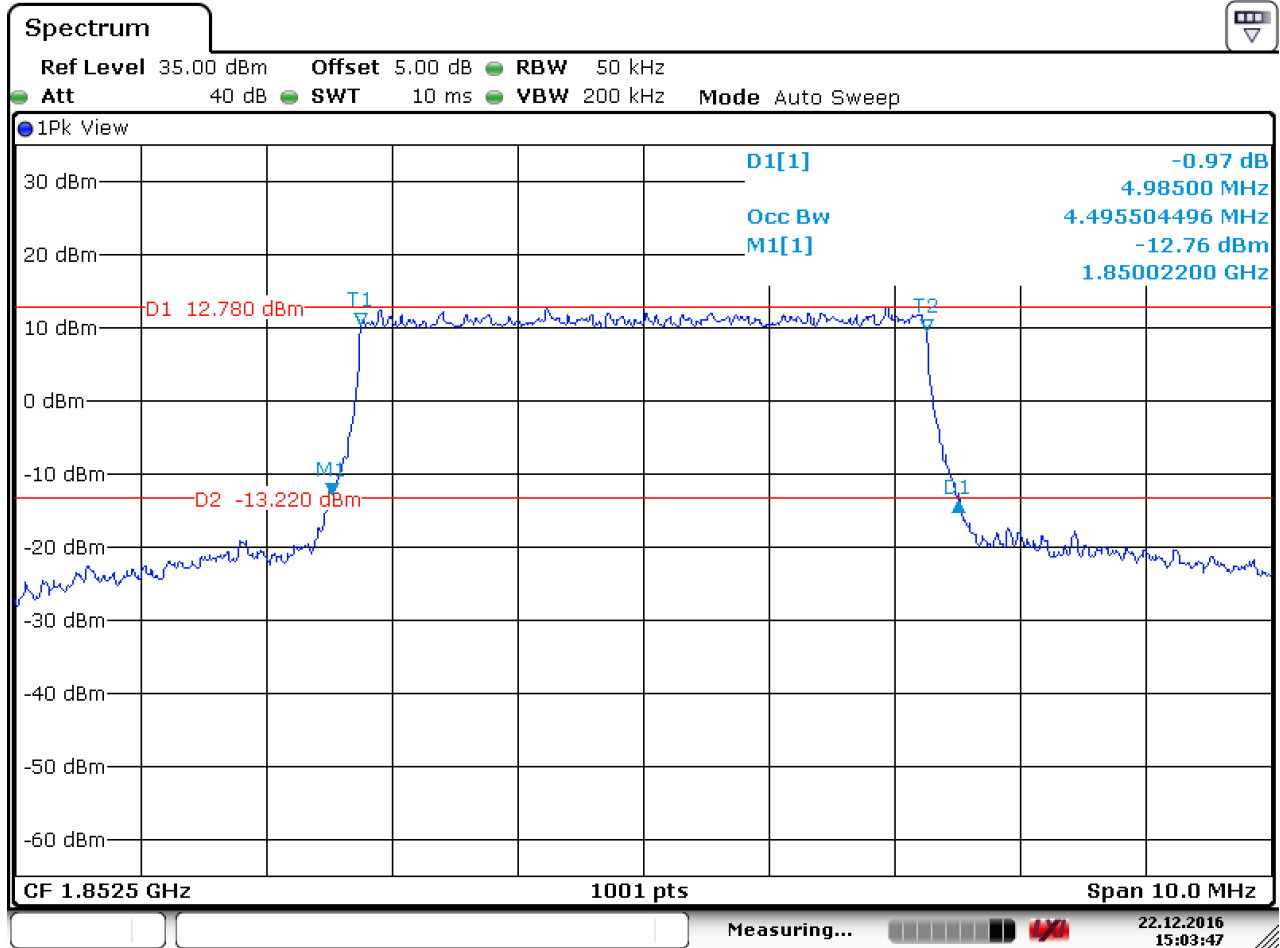


Date: 22.DEC.2016 15:18:20



4.1.1.5 Test Mode = LTE/TM1 5MHz

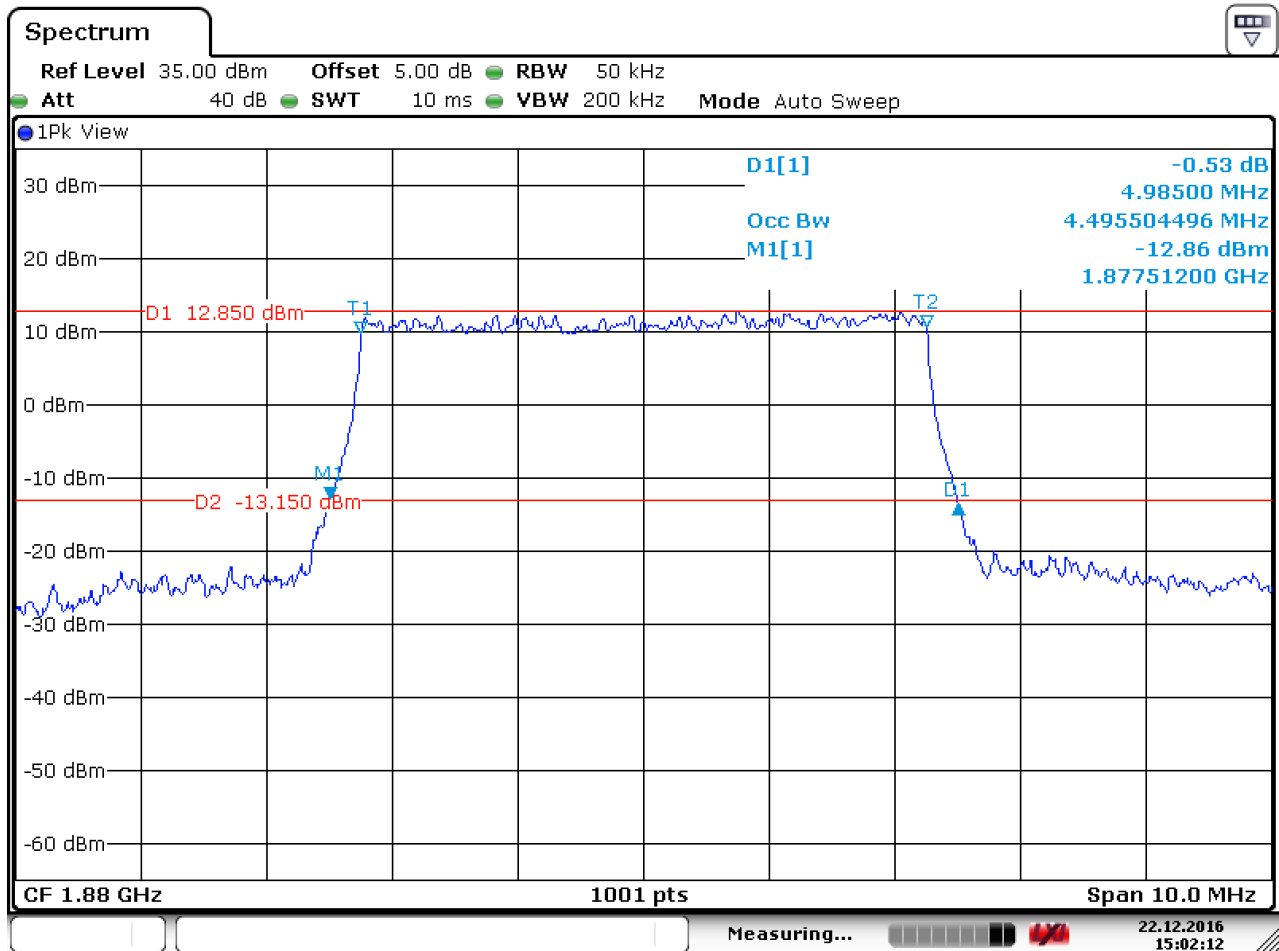
4.1.1.5.1 Test Channel = LCH



Date: 22.DEC.2016 15:03:47

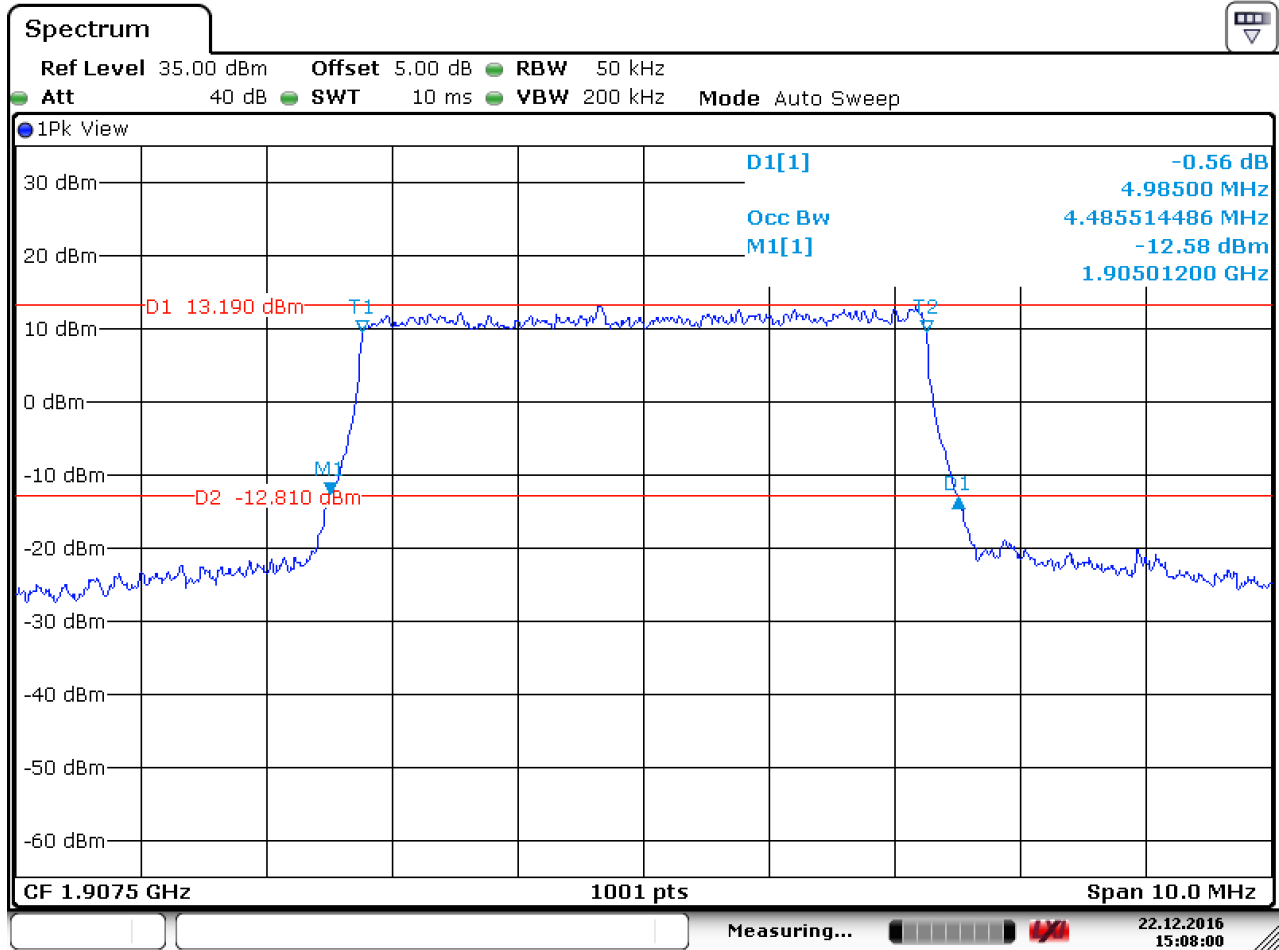


4.1.1.5.2 Test Channel = MCH



Date: 22.DEC.2016 15:02:12

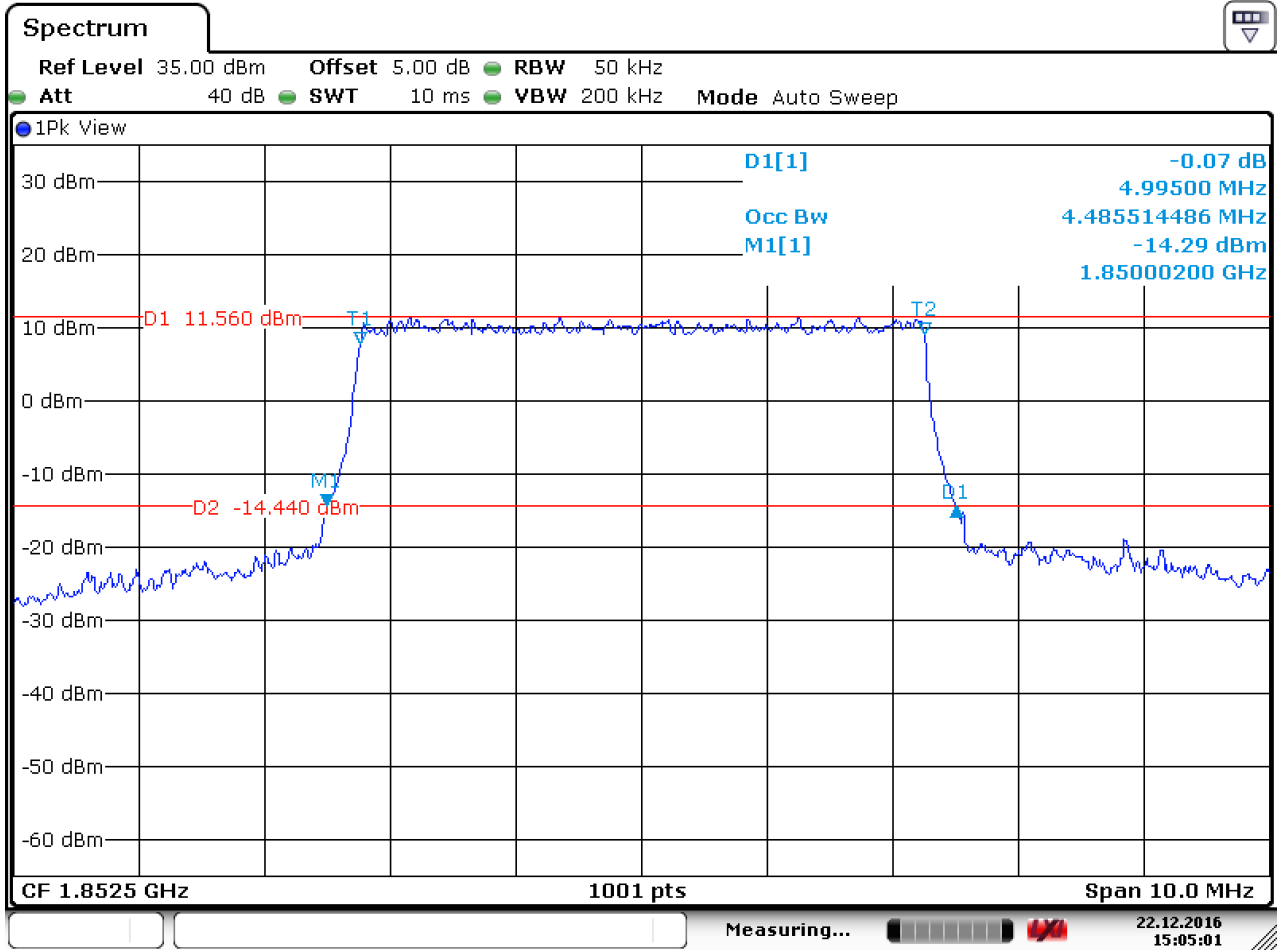
4.1.1.5.3 Test Channel = HCH



Date: 22.DEC.2016 15:08:00

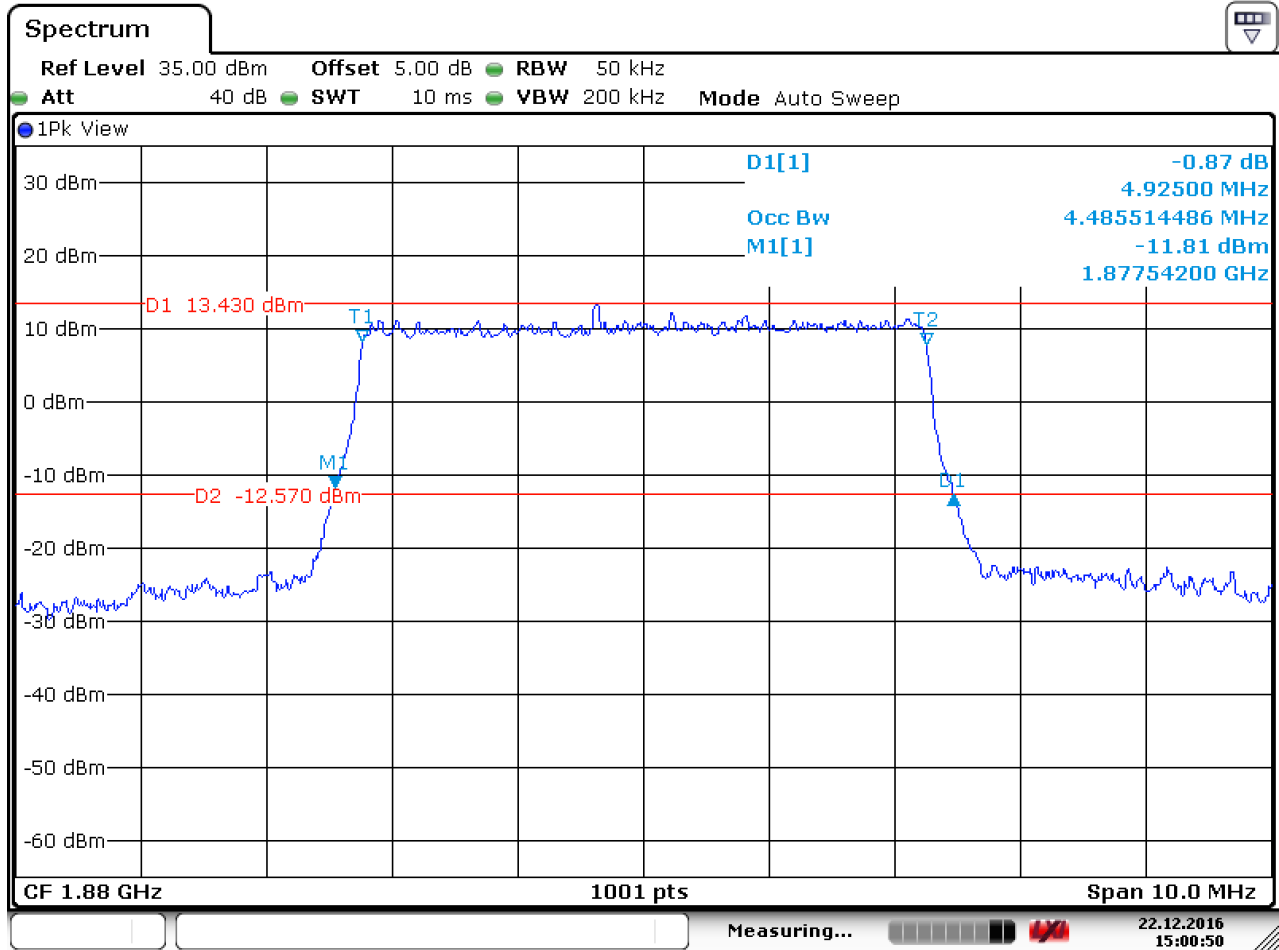
4.1.1.6 Test Mode = LTE/TM2 5MHz

4.1.1.6.1 Test Channel = LCH



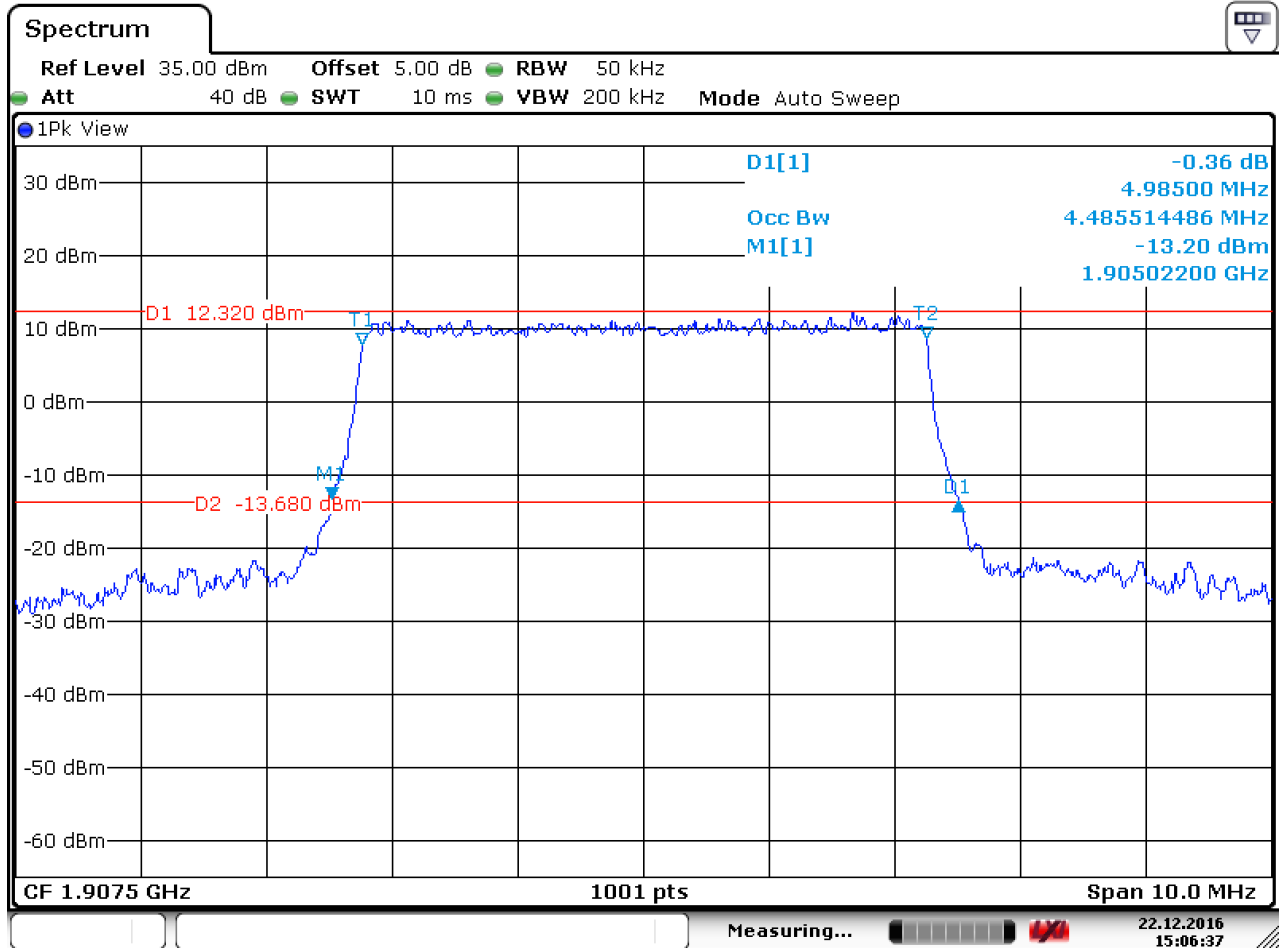
Date: 22.DEC.2016 15:05:02

4.1.1.6.2 Test Channel = MCH



Date: 22.DEC.2016 15:00:50

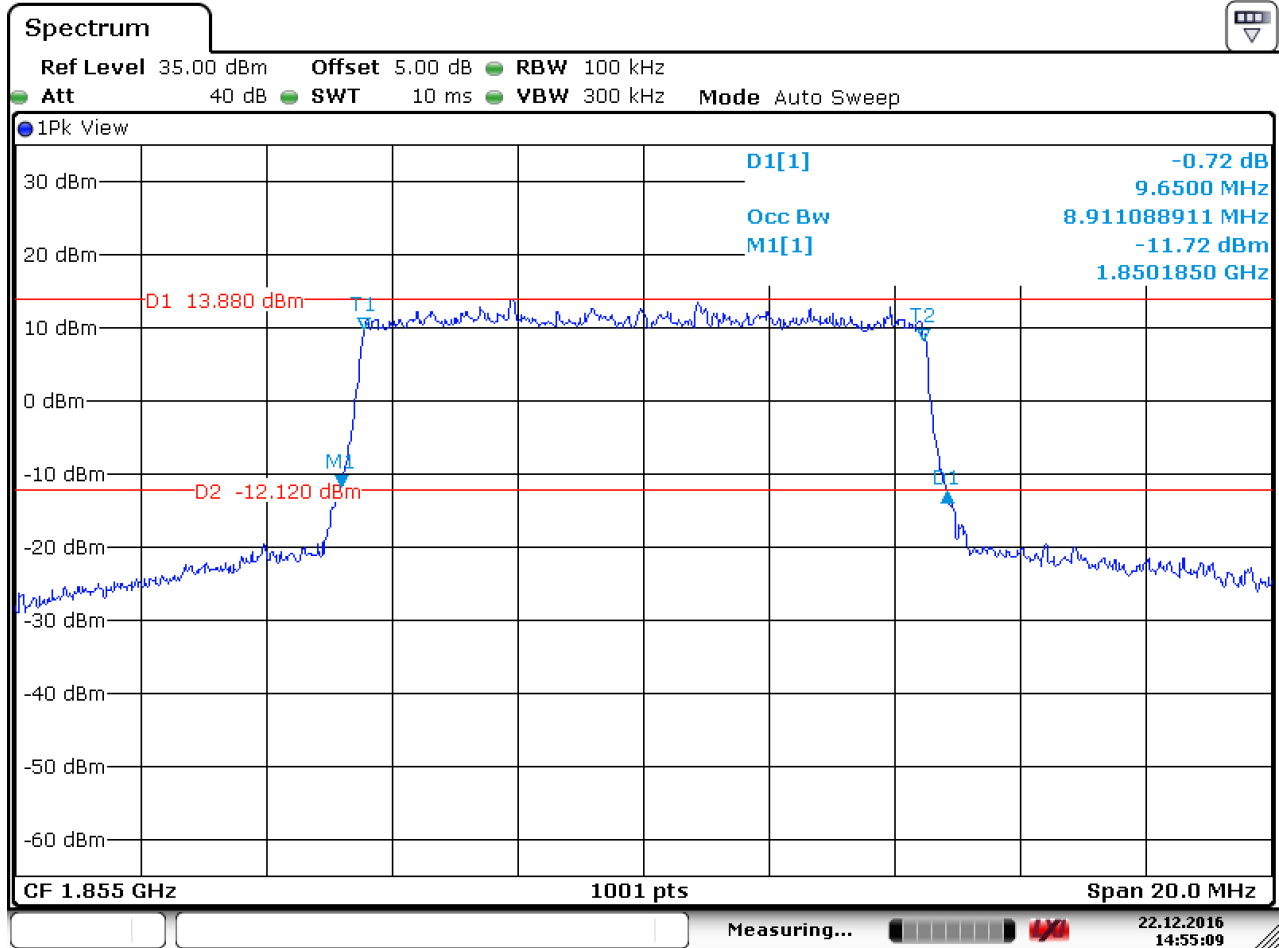
4.1.1.6.3 Test Channel = HCH



Date: 22.DEC.2016 15:06:37

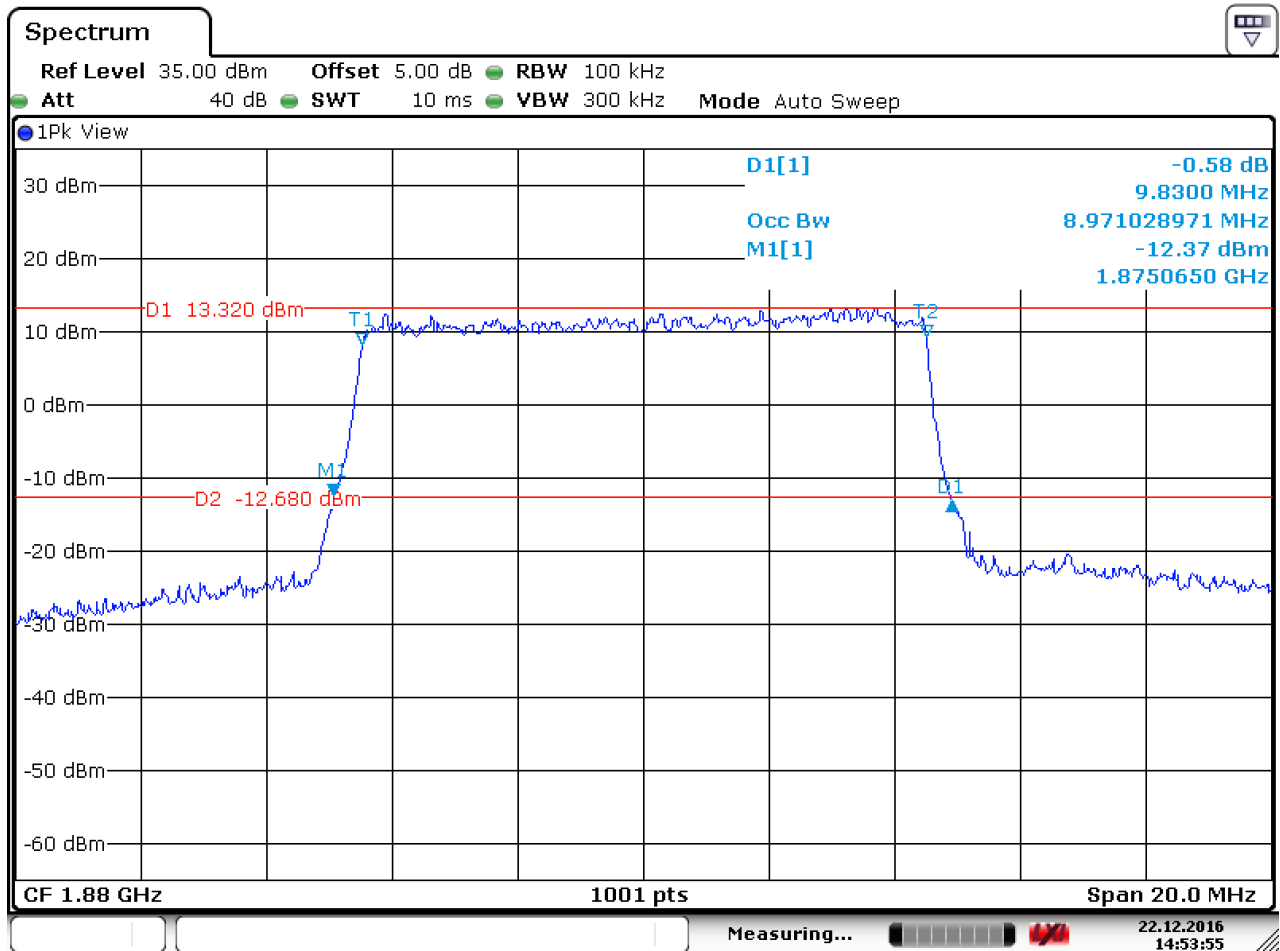
4.1.1.7 Test Mode = LTE/TM1 10MHz

4.1.1.7.1 Test Channel = LCH



Date: 22.DEC.2016 14:55:10

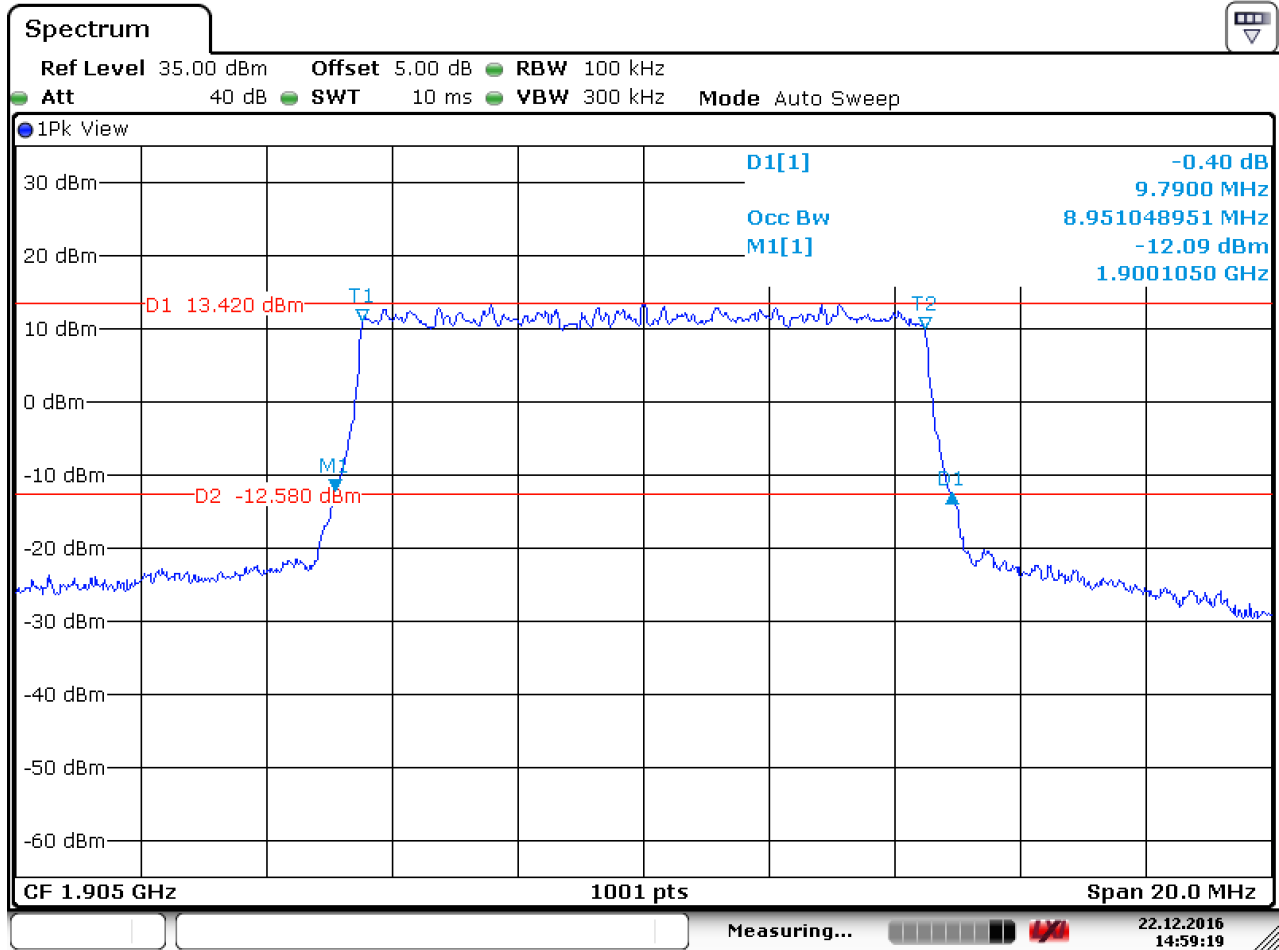
4.1.1.7.2 Test Channel = MCH



Date: 22.DEC.2016 14:53:56



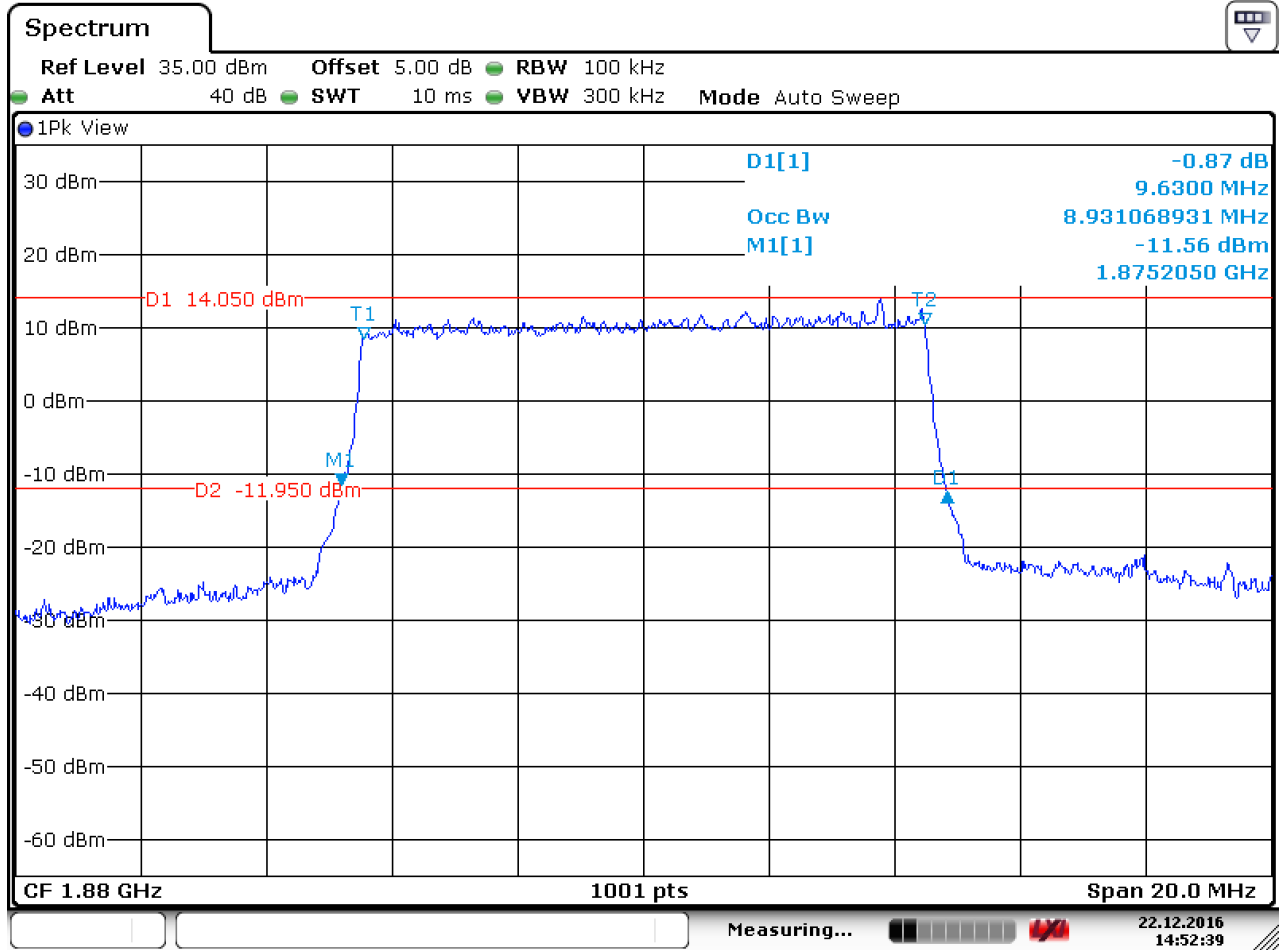
4.1.1.7.3 Test Channel = HCH



Date: 22.DEC.2016 14:59:18

4.1.1.8 Test Mode = LTE/TM2 10MHz

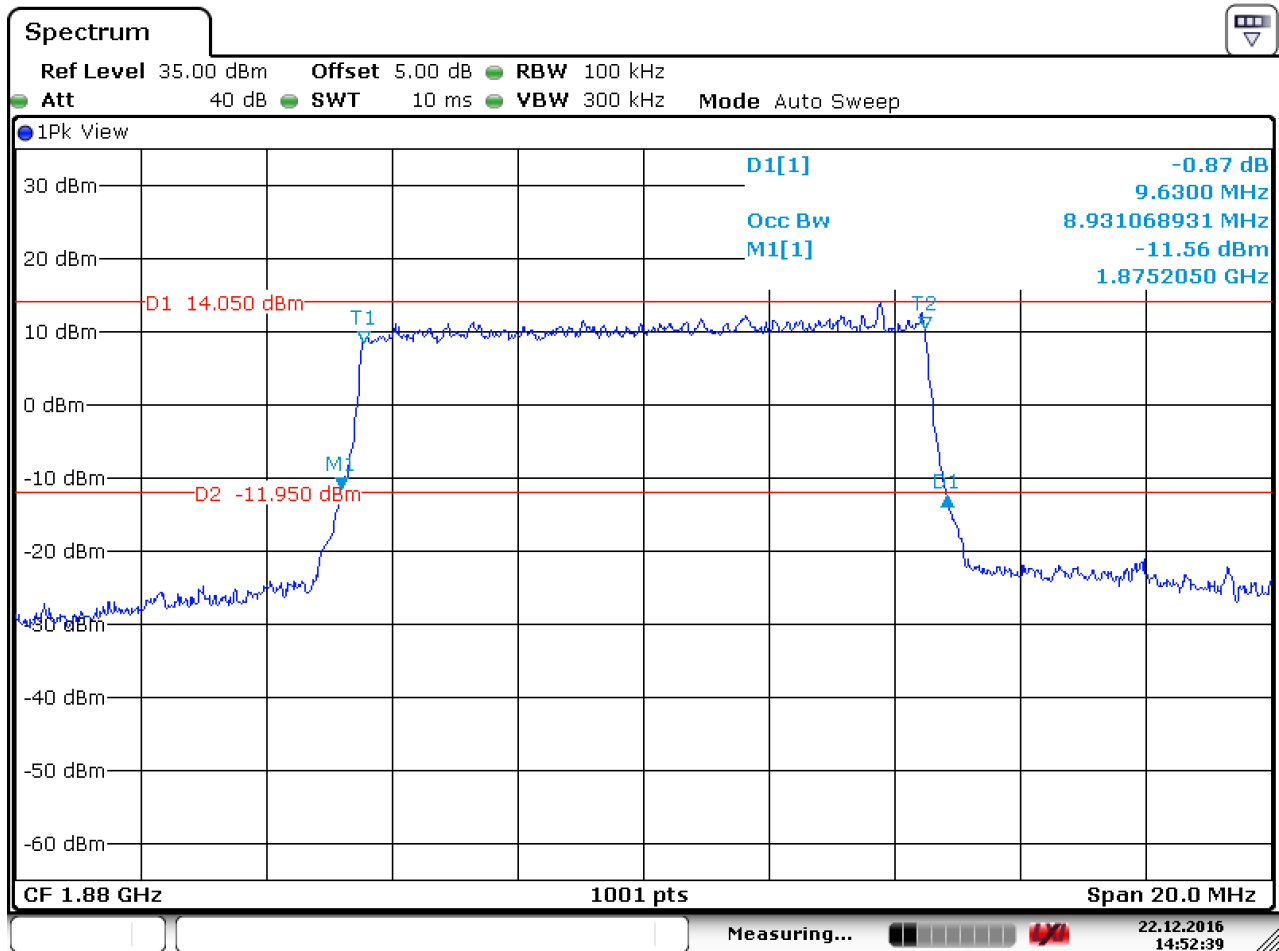
4.1.1.8.1 Test Channel = LCH



Date: 22.DEC.2016 14:52:39



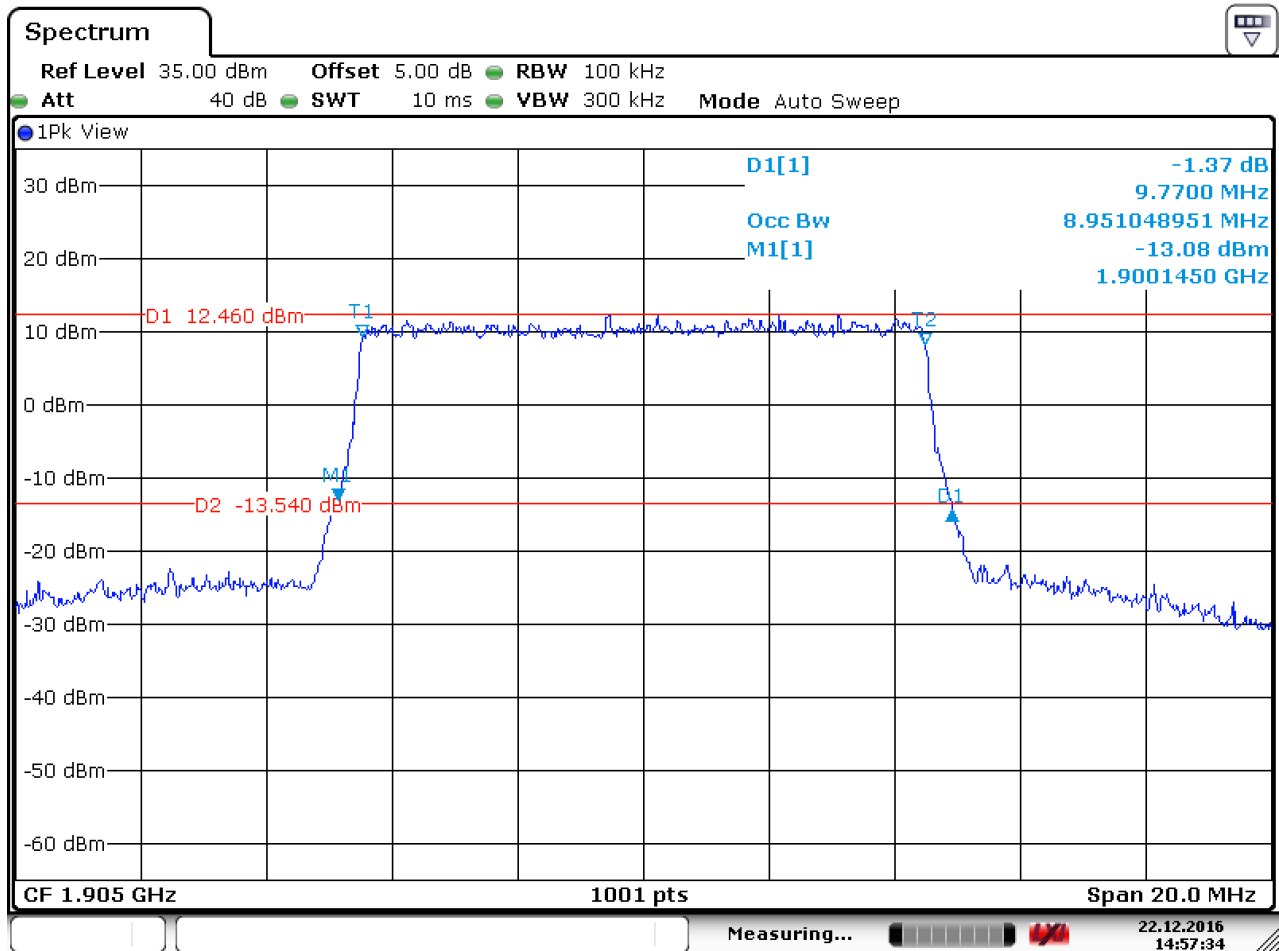
4.1.1.8.2 Test Channel = MCH



Date: 22.DEC.2016 14:52:39



4.1.1.8.3 Test Channel = HCH

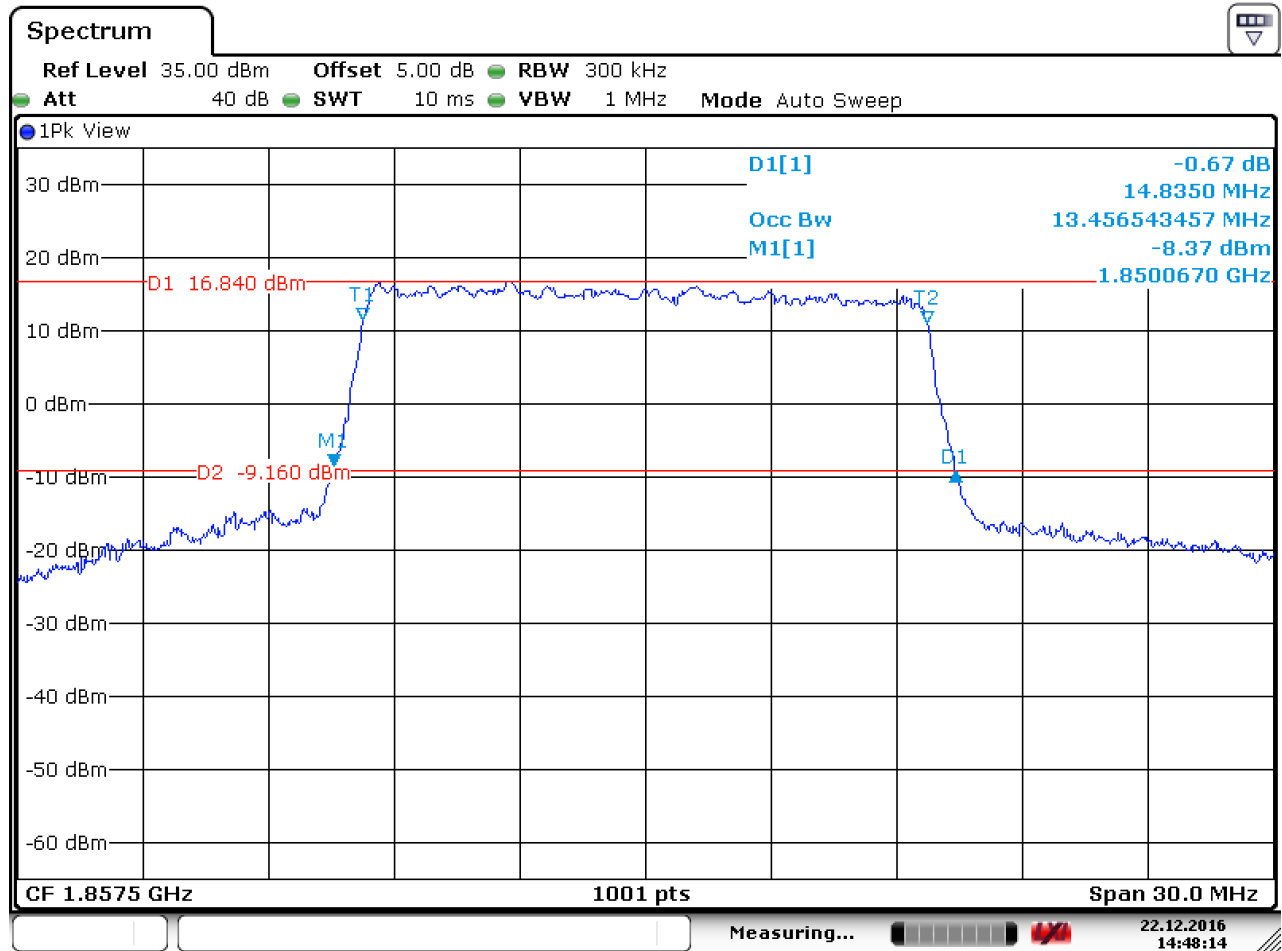


Date: 22.DEC.2016 14:57:34



4.1.1.9 Test Mode = LTE/TM1 15MHz

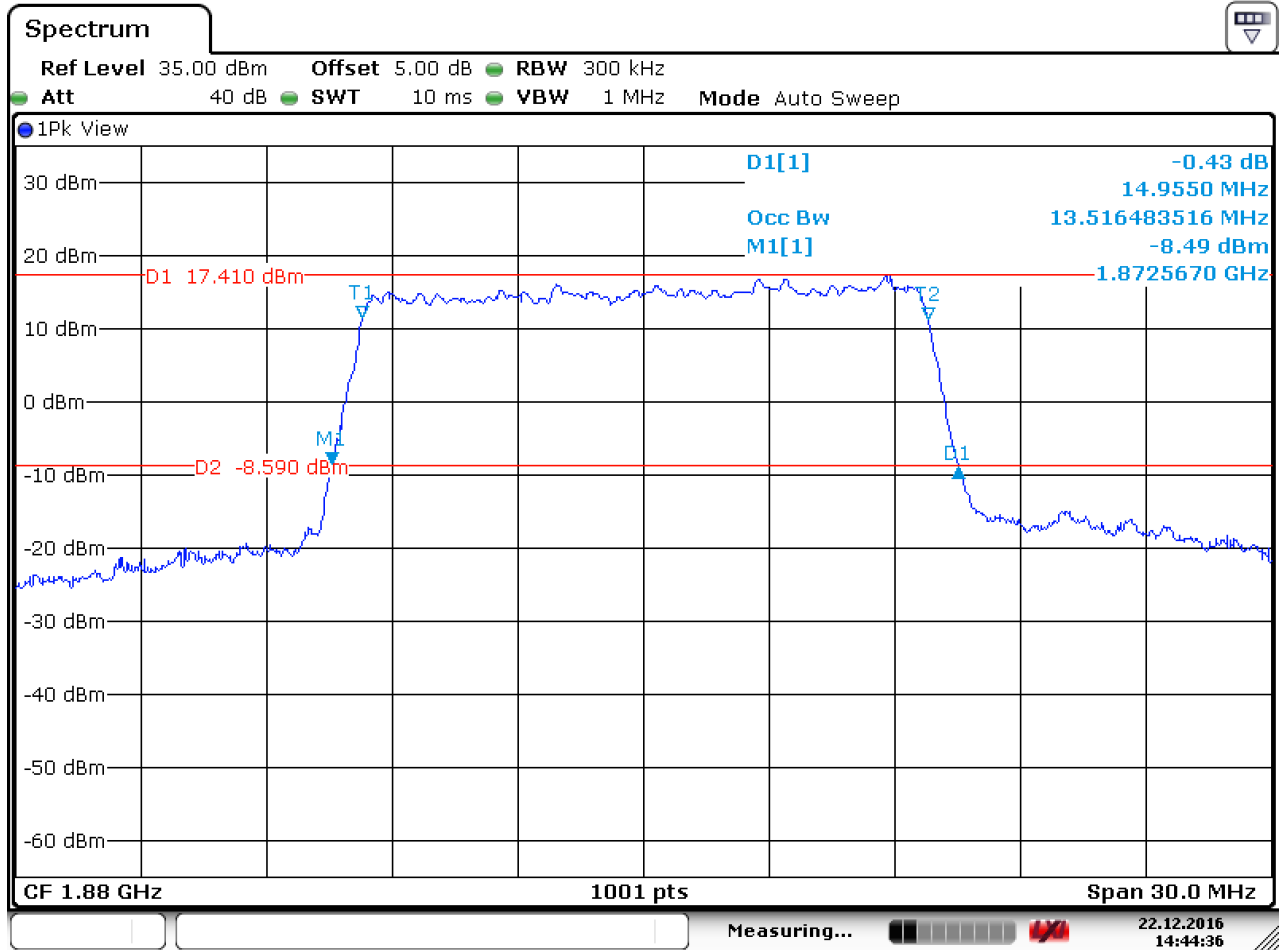
4.1.1.9.1 Test Channel = LCH



Date: 22.DEC.2016 14:48:15



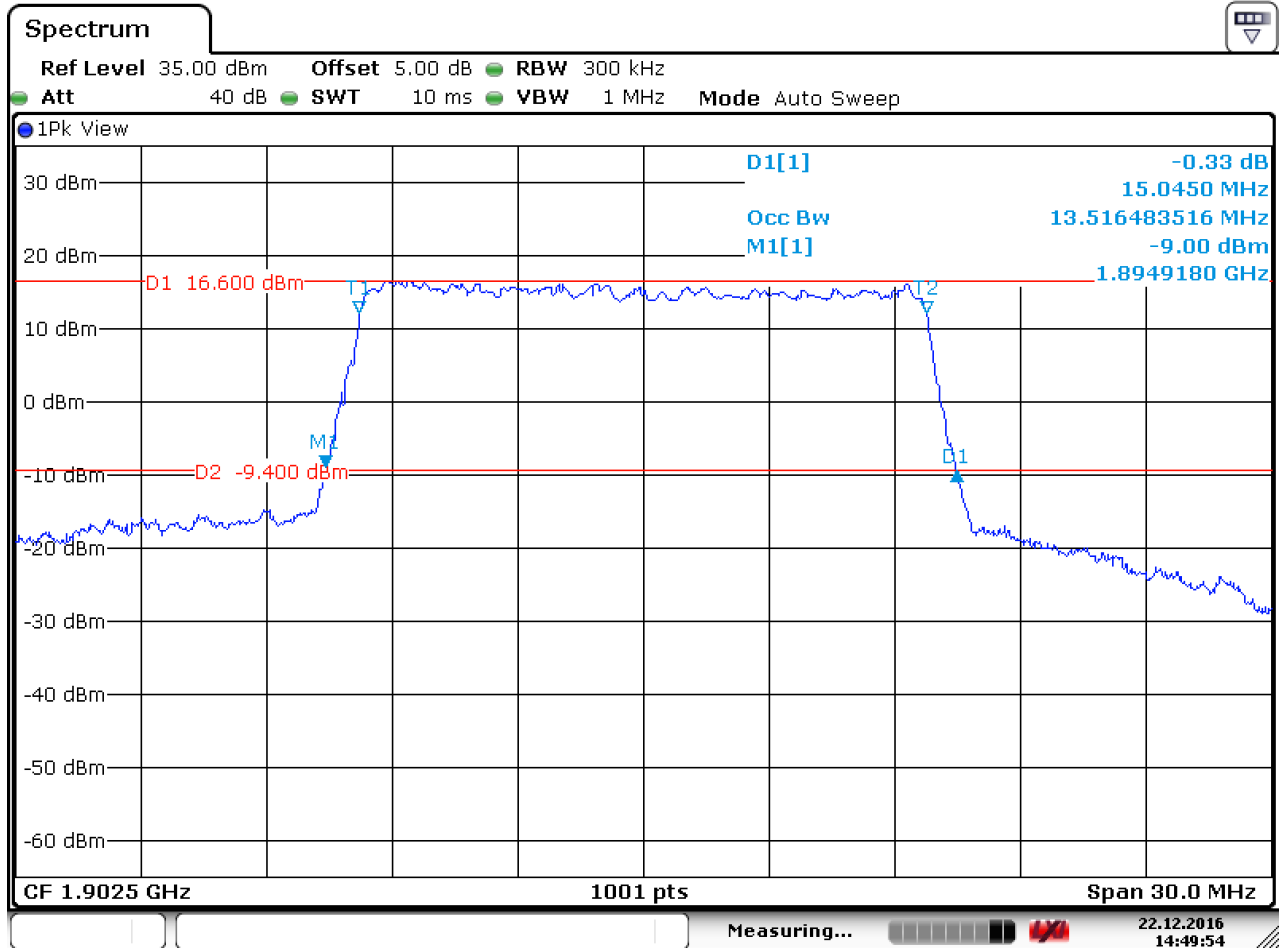
4.1.1.9.2 Test Channel = MCH



Date: 22.DEC.2016 14:44:37



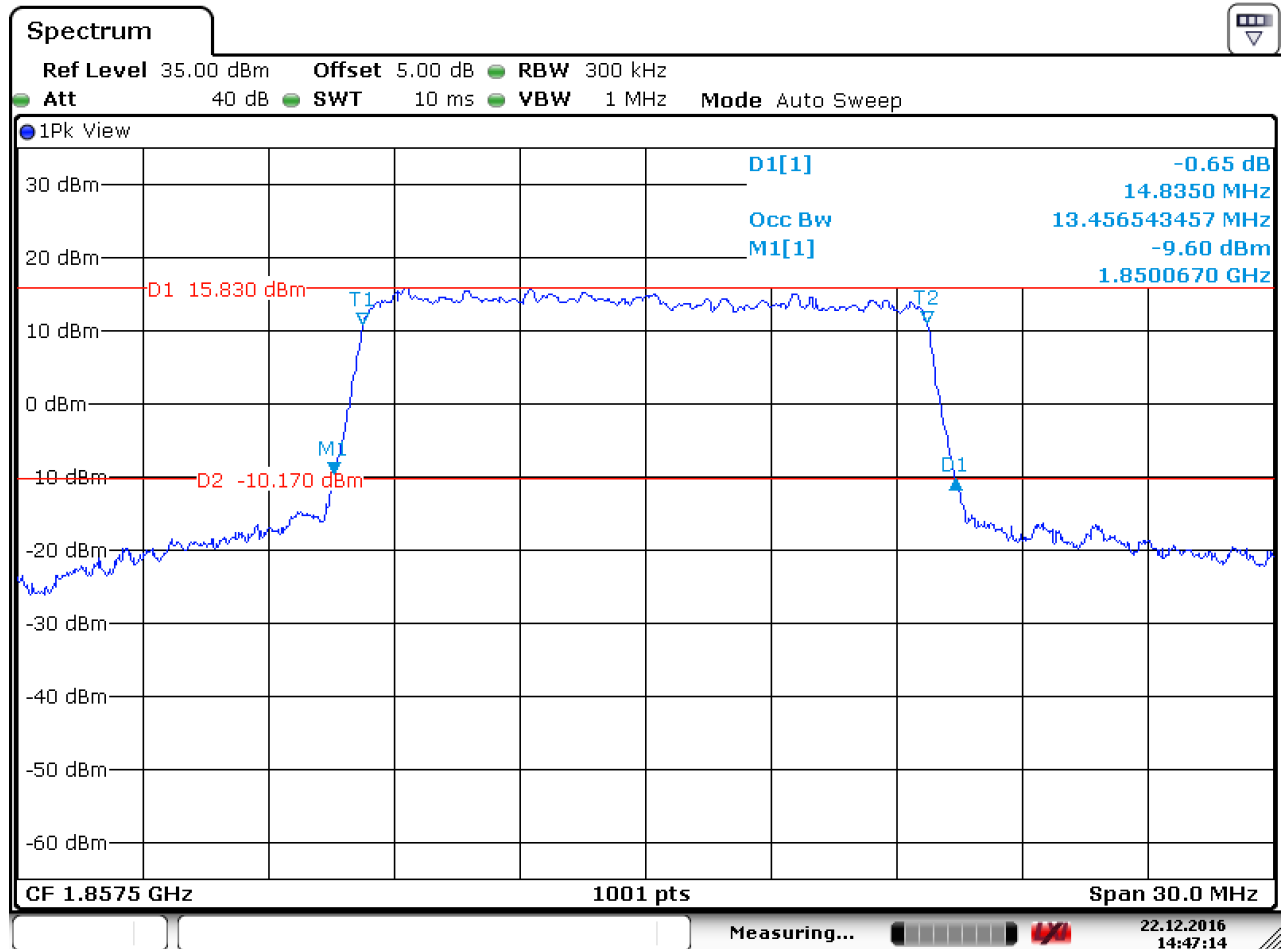
4.1.1.9.3 Test Channel = HCH



Date: 22.DEC.2016 14:49:54

4.1.1.10 Test Mode = LTE/TM2 15MHz

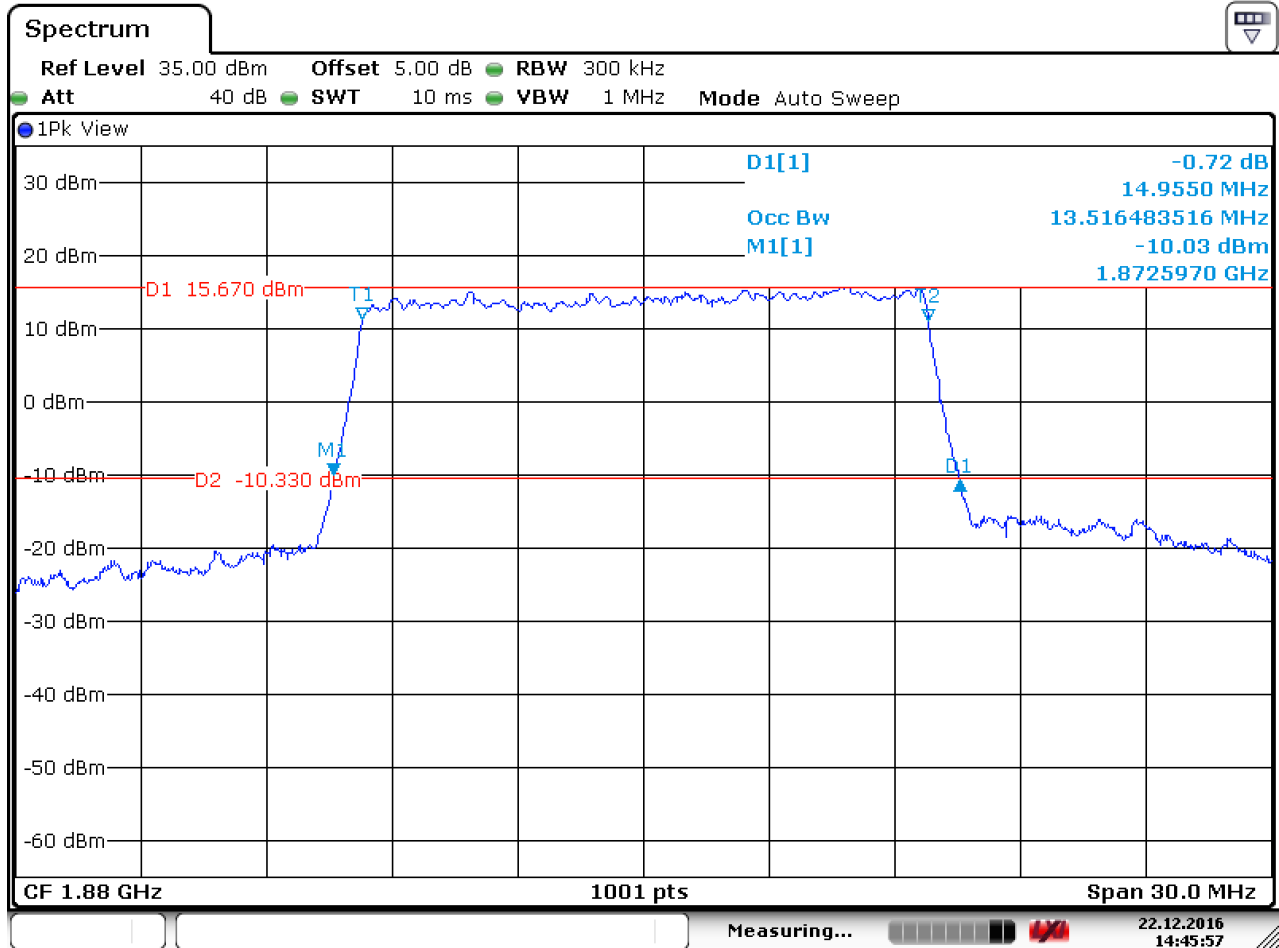
4.1.1.10.1 Test Channel = LCH



Date: 22.DEC.2016 14:47:14

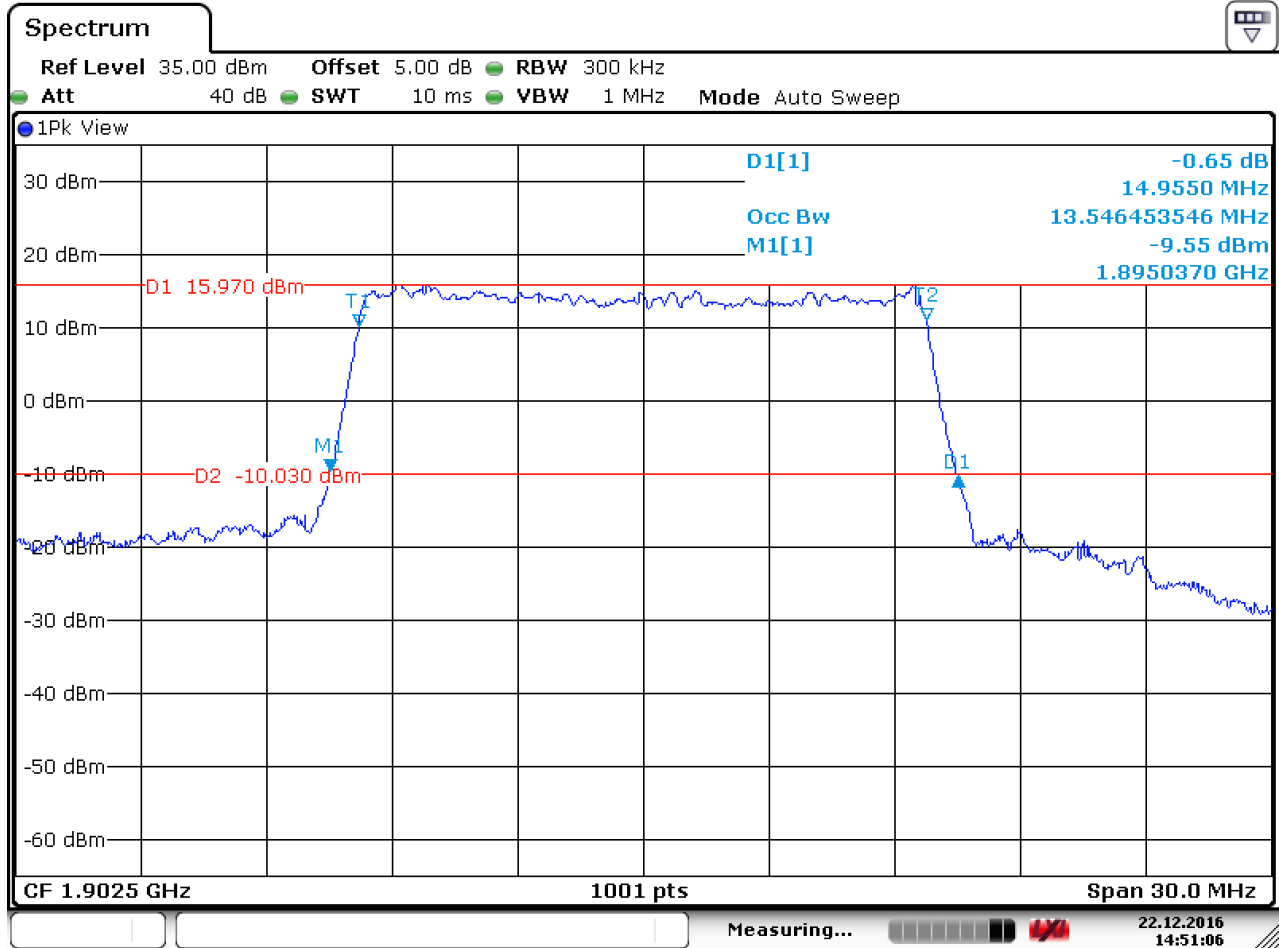


4.1.1.10.2 Test Channel = MCH



Date: 22.DEC.2016 14:45:57

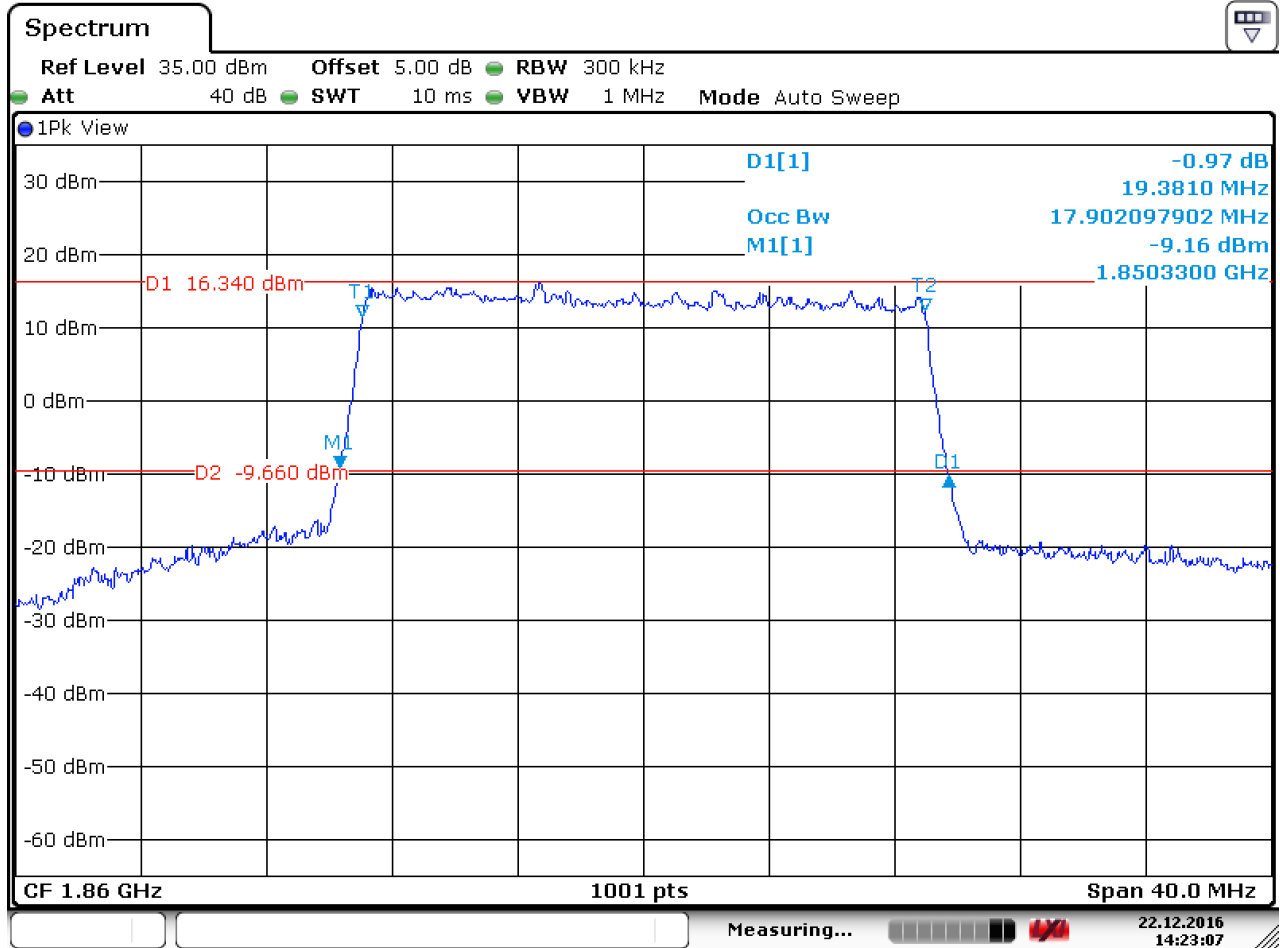
4.1.1.10.3 Test Channel = HCH



Date: 22.DEC.2016 14:51:06

4.1.1.11 Test Mode = LTE/TM1 20MHz

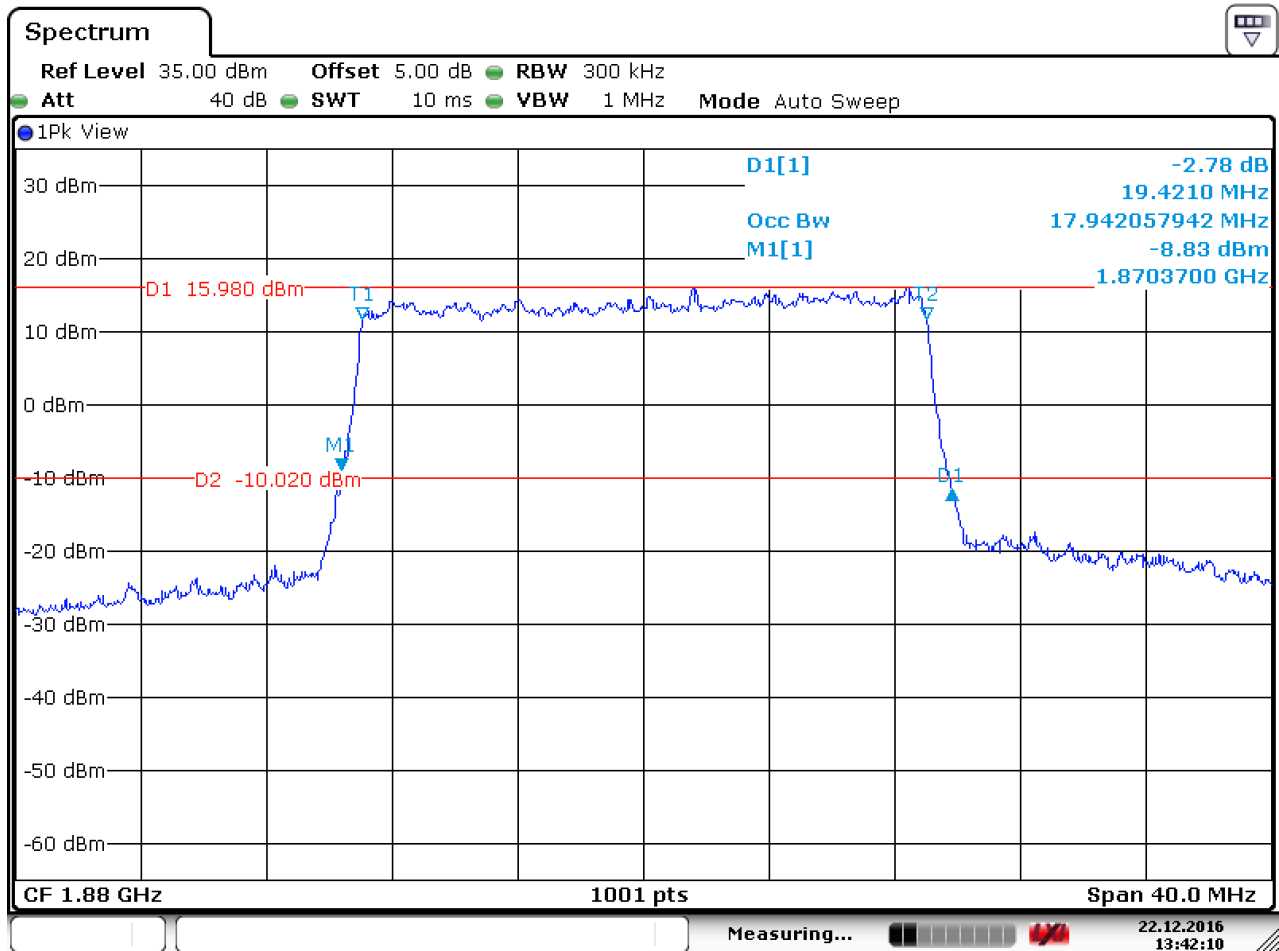
4.1.1.11.1 Test Channel = LCH



Date: 22.DEC.2016 14:23:07



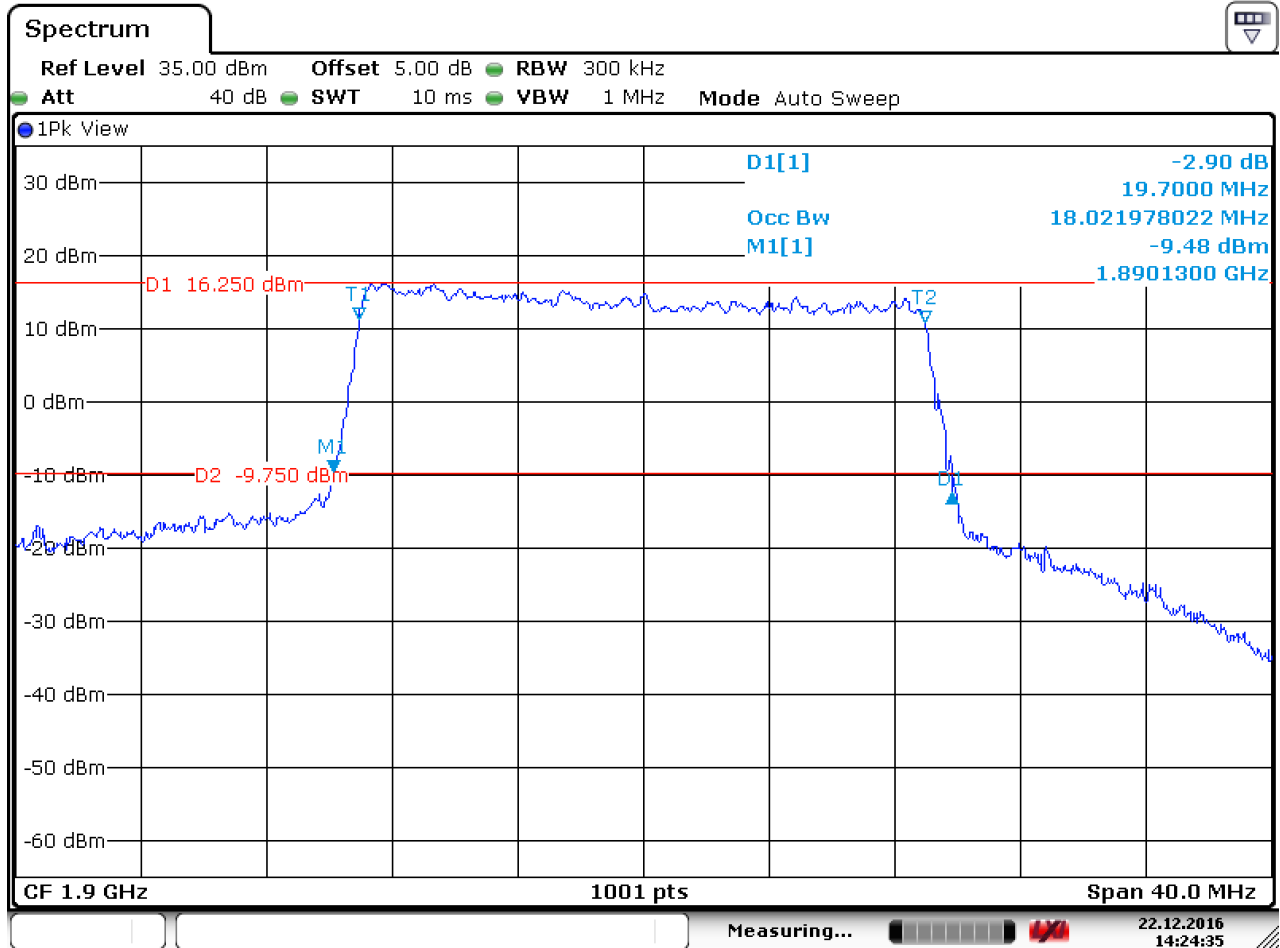
4.1.1.11.2 Test Channel = MCH



Date: 22.DEC.2016 13:42:10



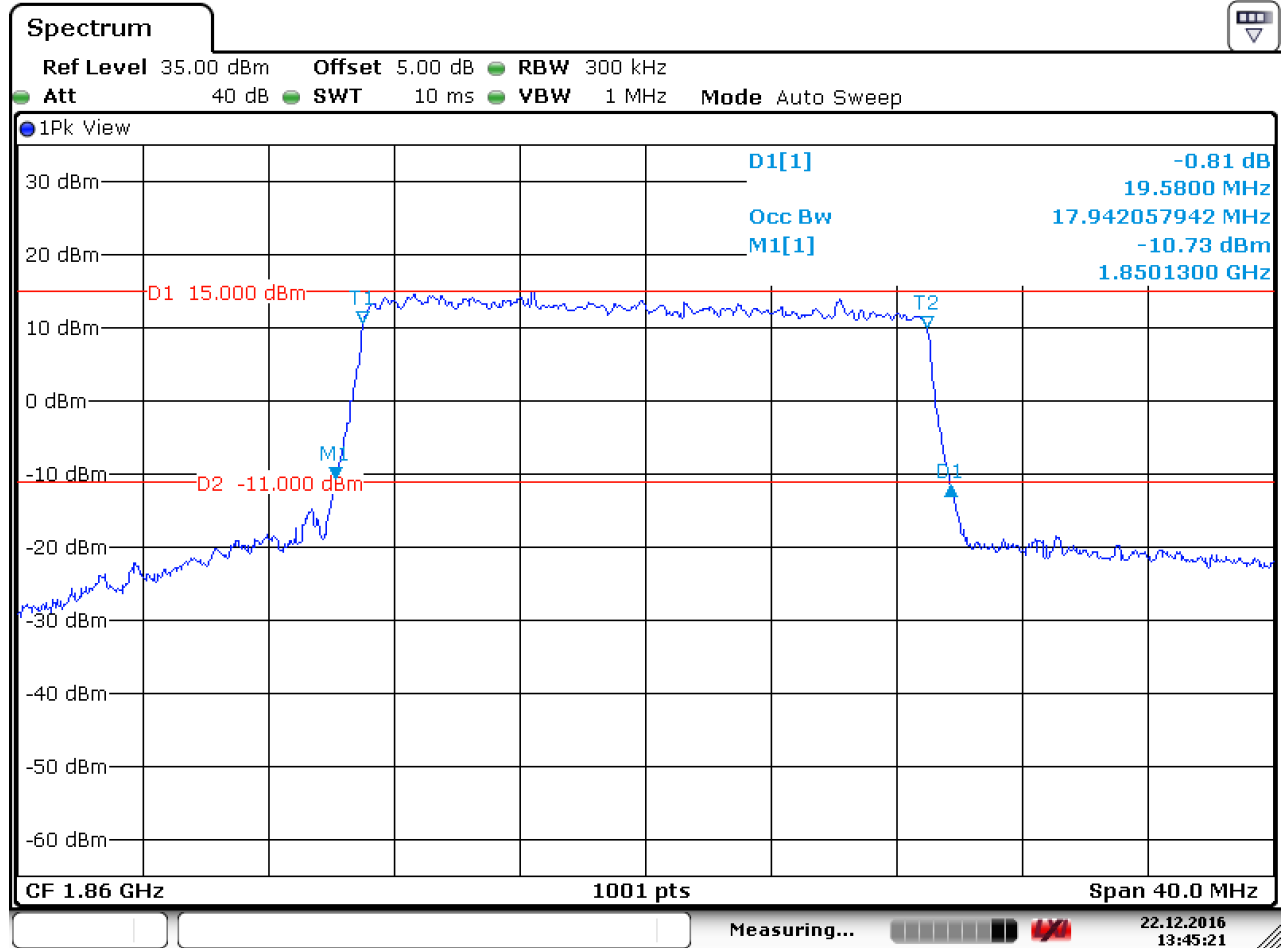
4.1.1.11.3 Test Channel = HCH



Date: 22.DEC.2016 14:24:35

4.1.1.12 Test Mode = LTE/TM2 20MHz

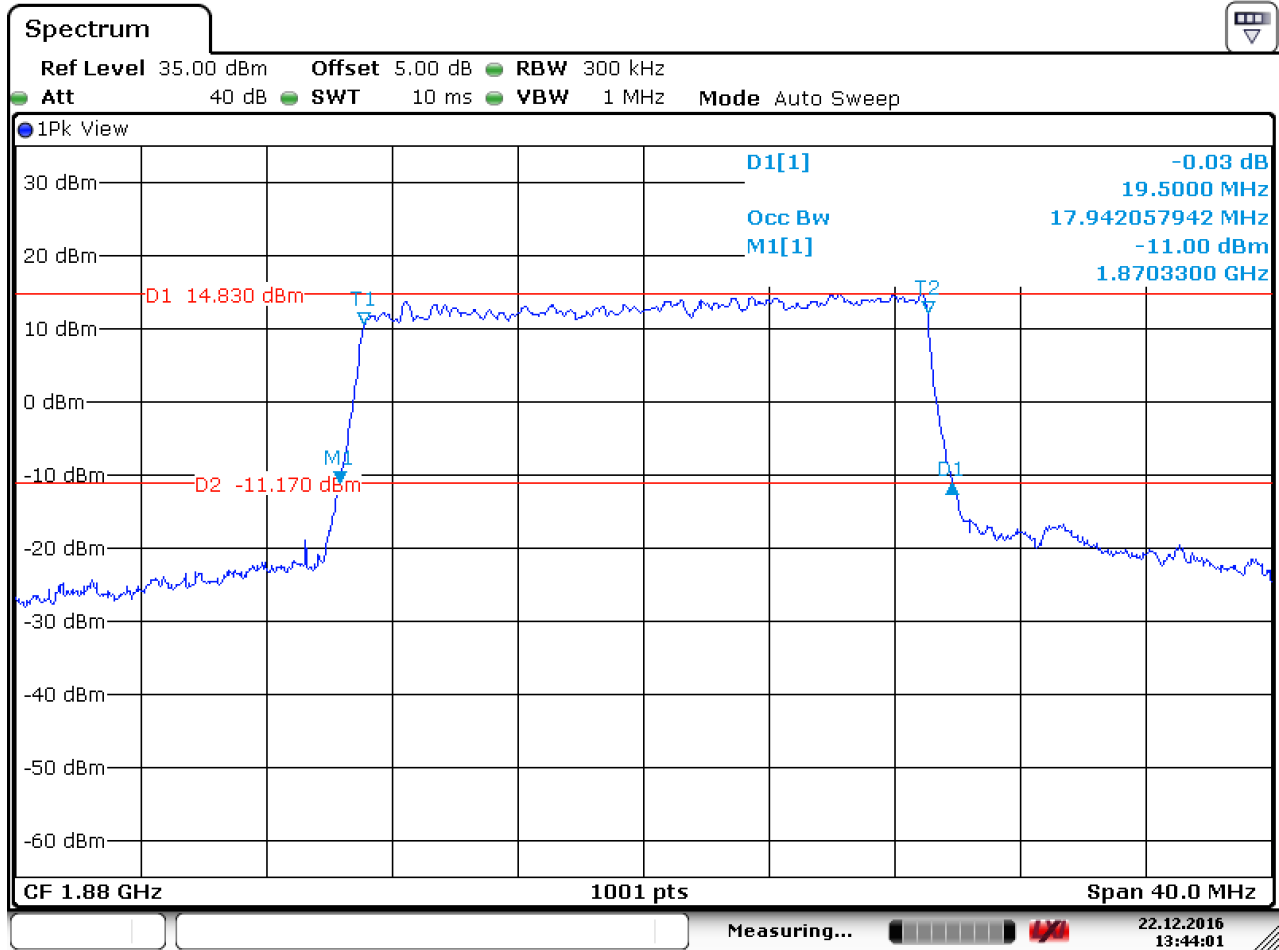
4.1.1.12.1 Test Channel = LCH



Date: 22.DEC.2016 13:45:21

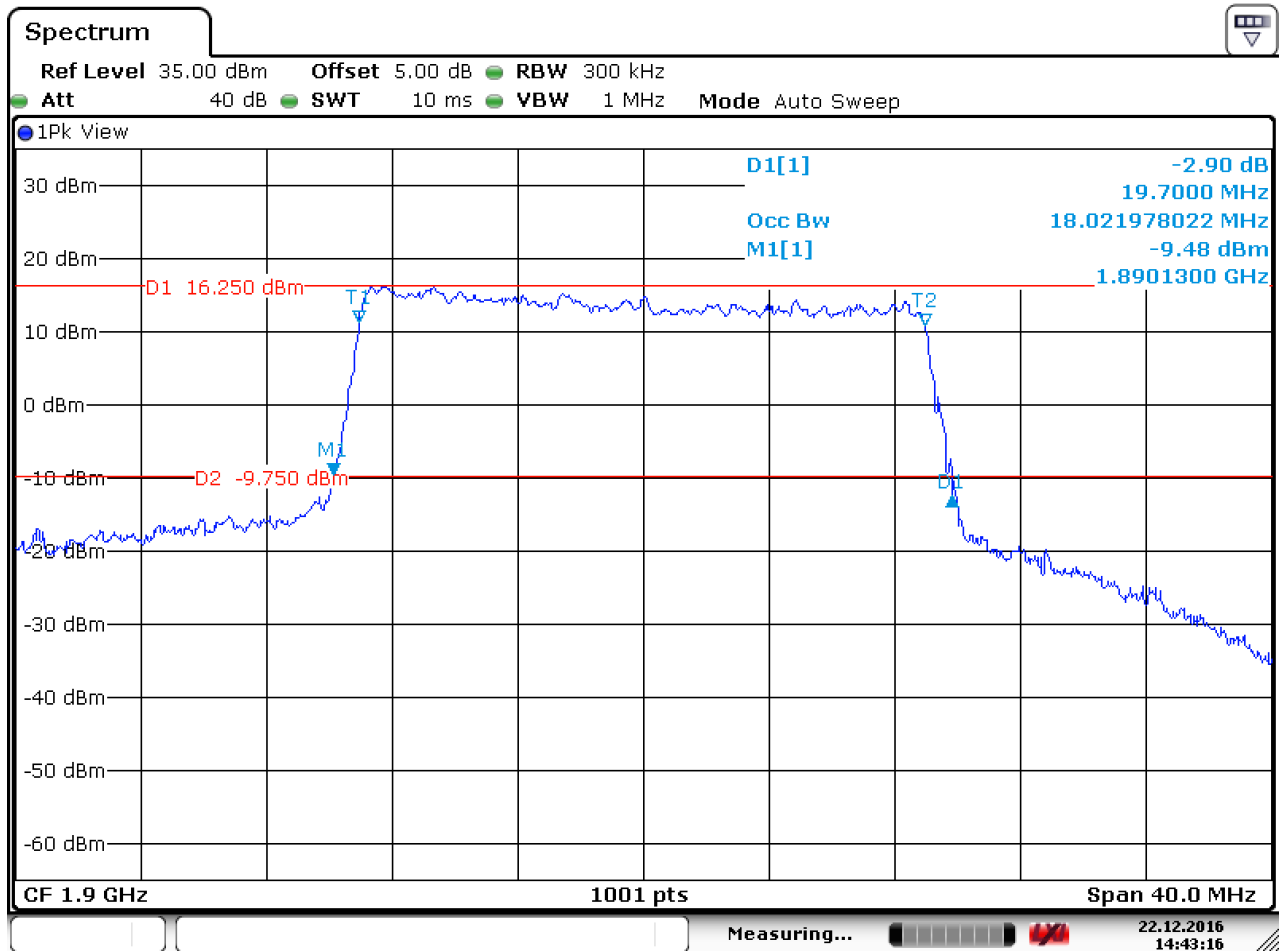


4.1.1.12.2 Test Channel = MCH



Date: 22.DEC.2016 13:44:02

4.1.1.12.3 Test Channel = HCH



Date: 22.DEC.2016 14:43:17

5 Band Edges Compliance

Part I –

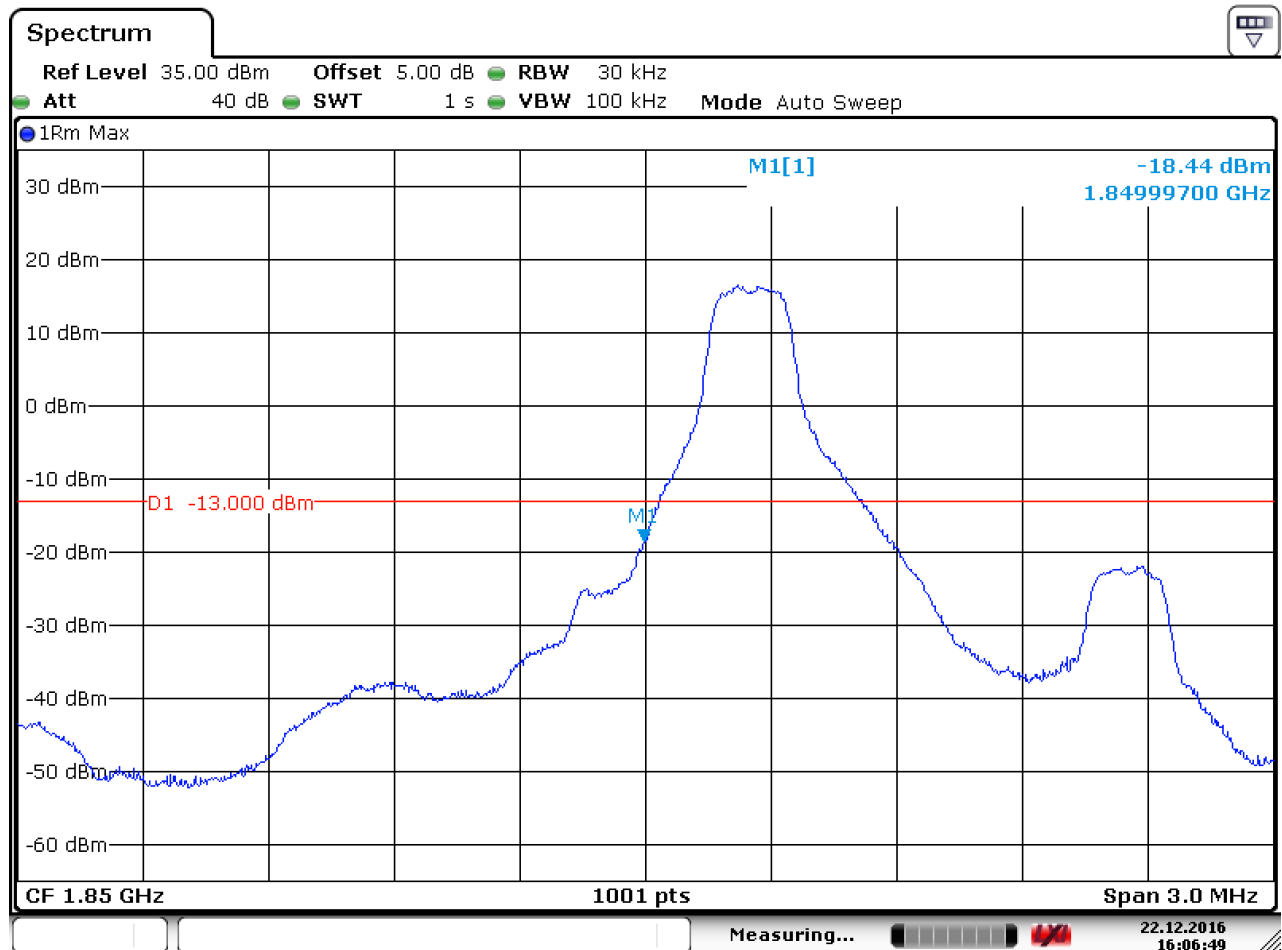
5.1 For LTE

5.1.1 Test Band = LTE band2

5.1.1.1 Test Mode = LTE/TM1 1.4MHz

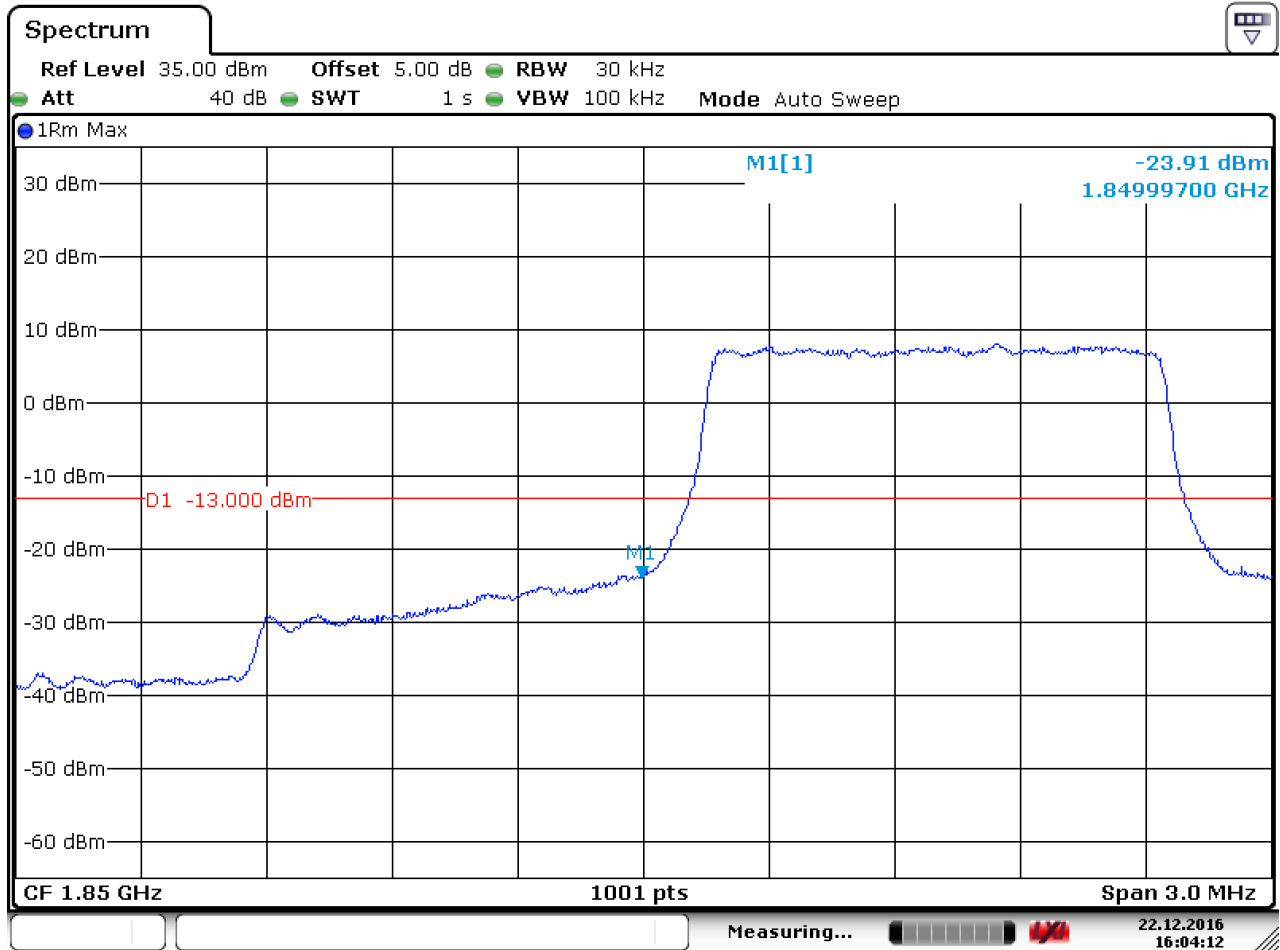
5.1.1.1.1 Test Channel = LCH

5.1.1.1.1.1 Test RB=1RB



Date: 22.DEC.2016 16:06:49

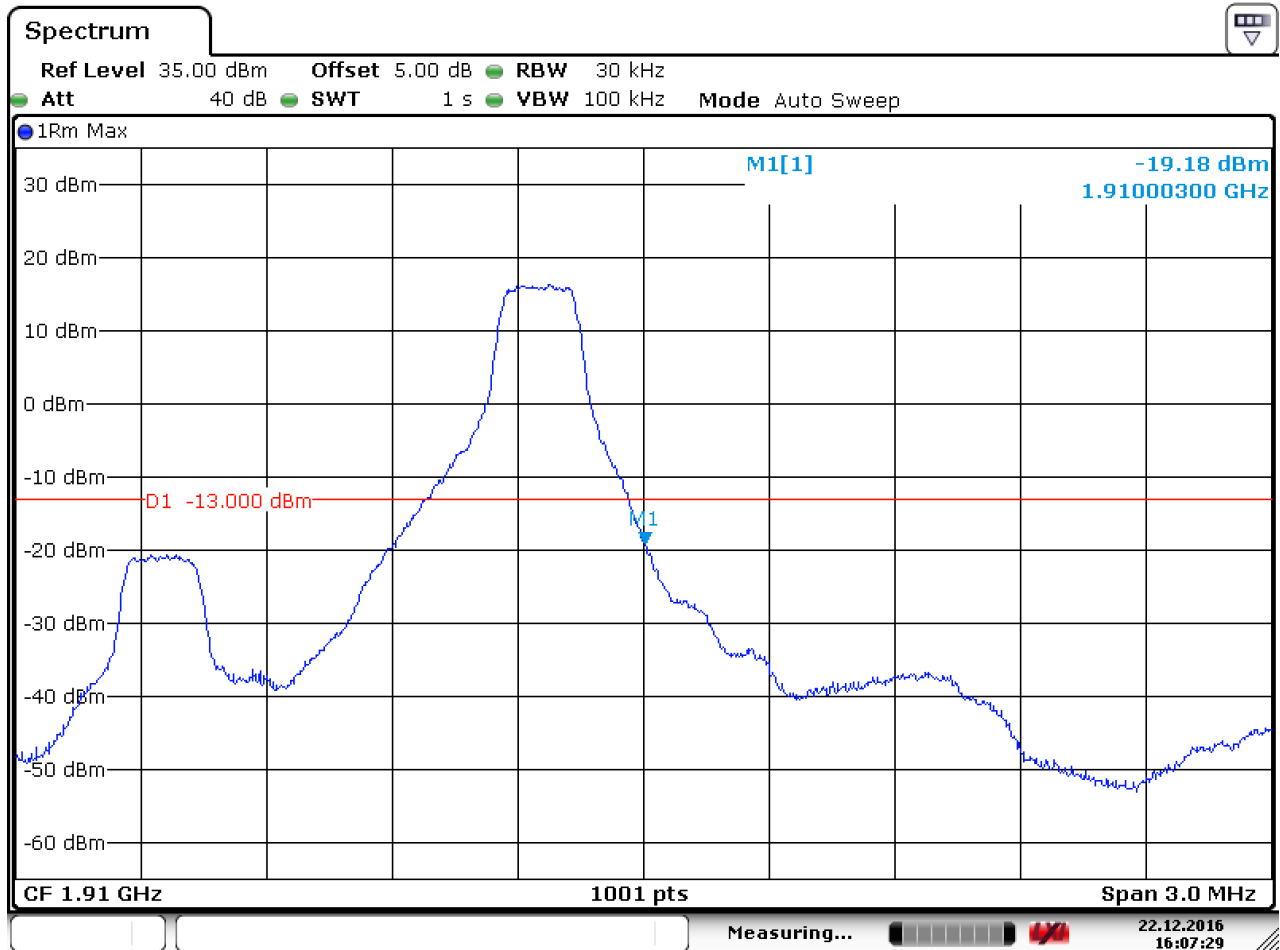
5.1.1.1.2 Test RB=6RB



Date: 22.DEC.2016 16:04:13

5.1.1.1.2 Test Channel = HCH

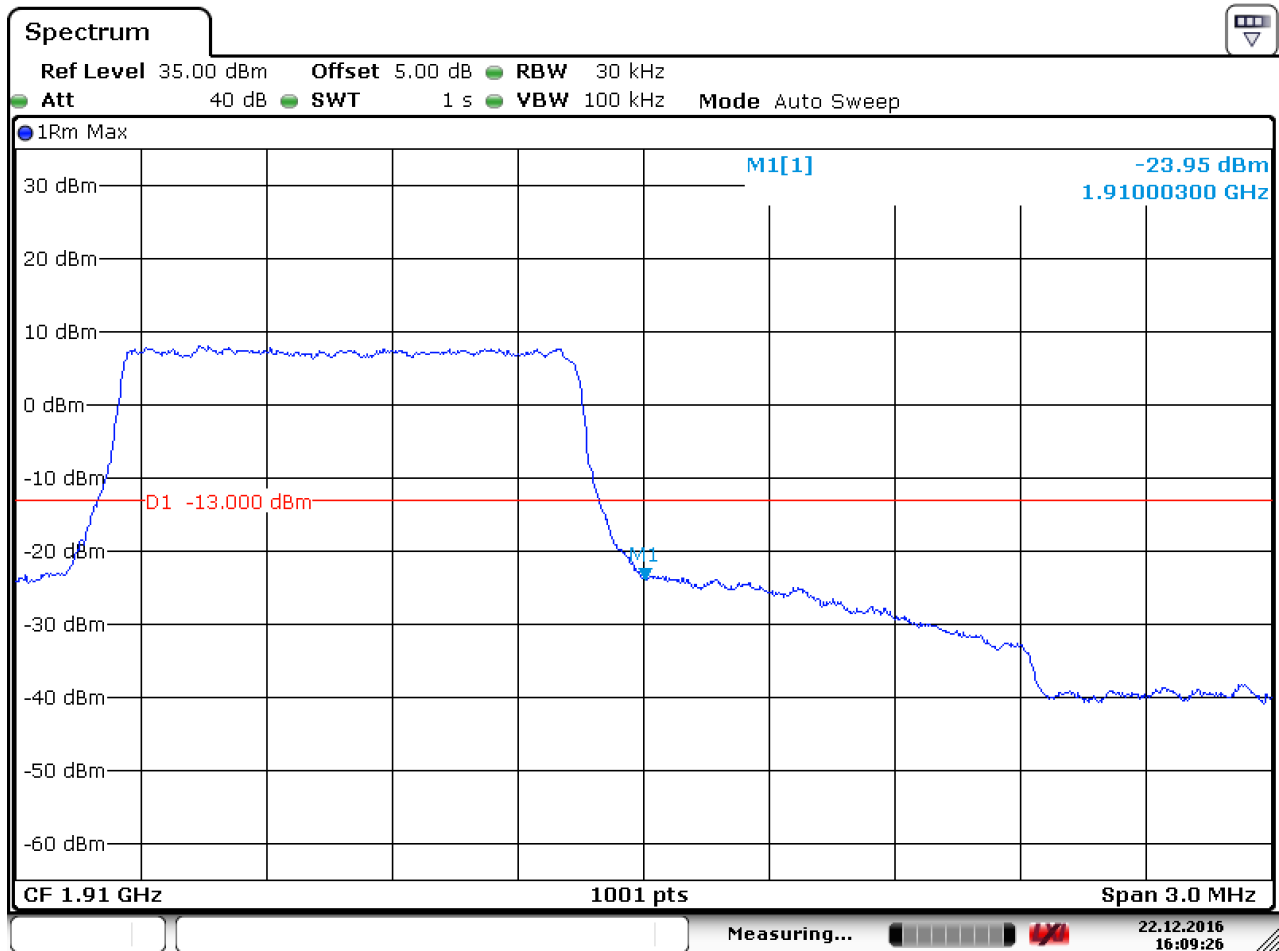
5.1.1.1.2.1 Test RB=1RB



Date: 22.DEC.2016 16:07:30



5.1.1.1.2.2 Test RB=6RB



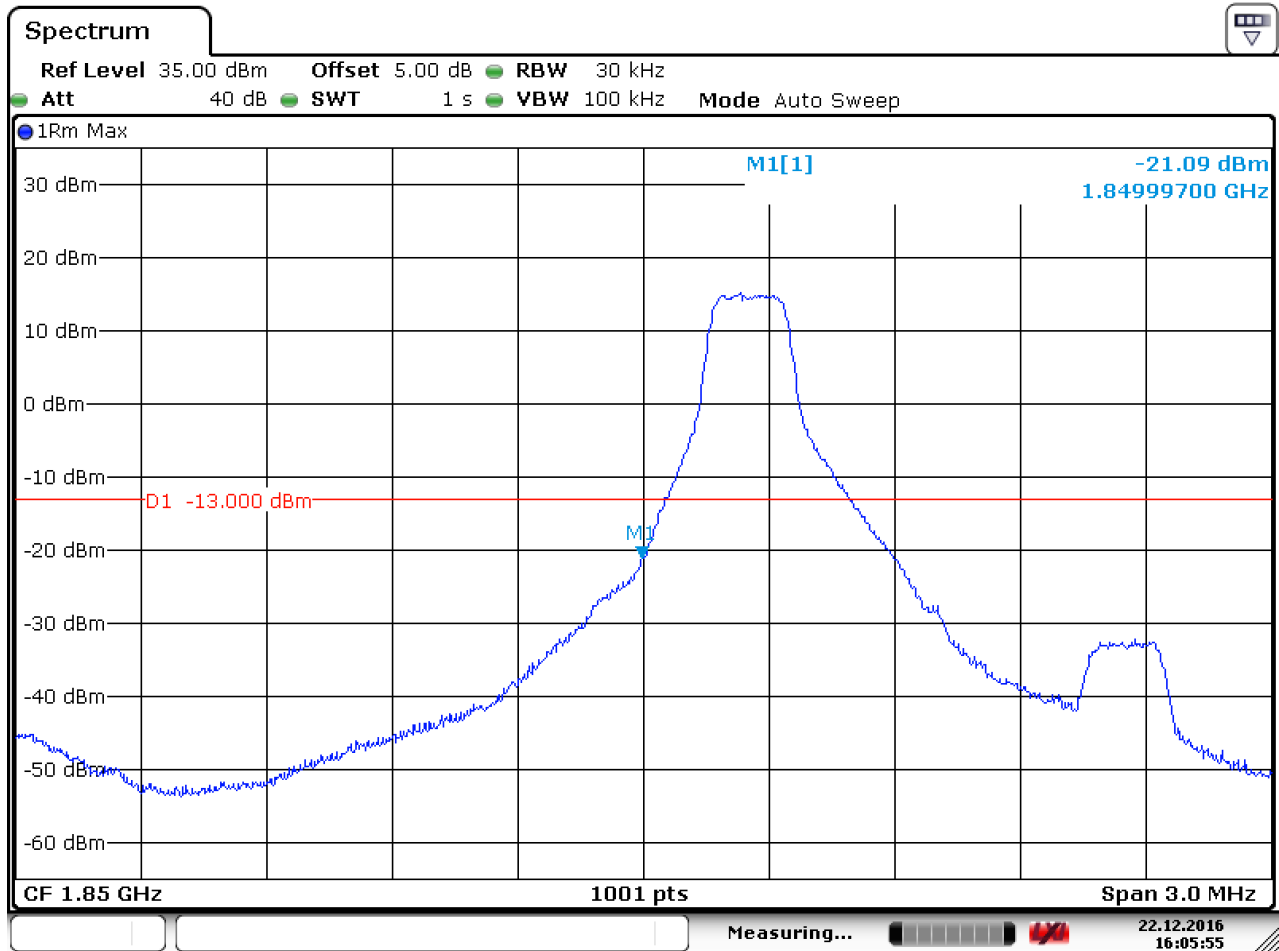
Date: 22.DEC.2016 16:09:26



5.1.1.2 Test Mode = LTE/TM2 1.4MHz

5.1.1.2.1 Test Channel = LCH

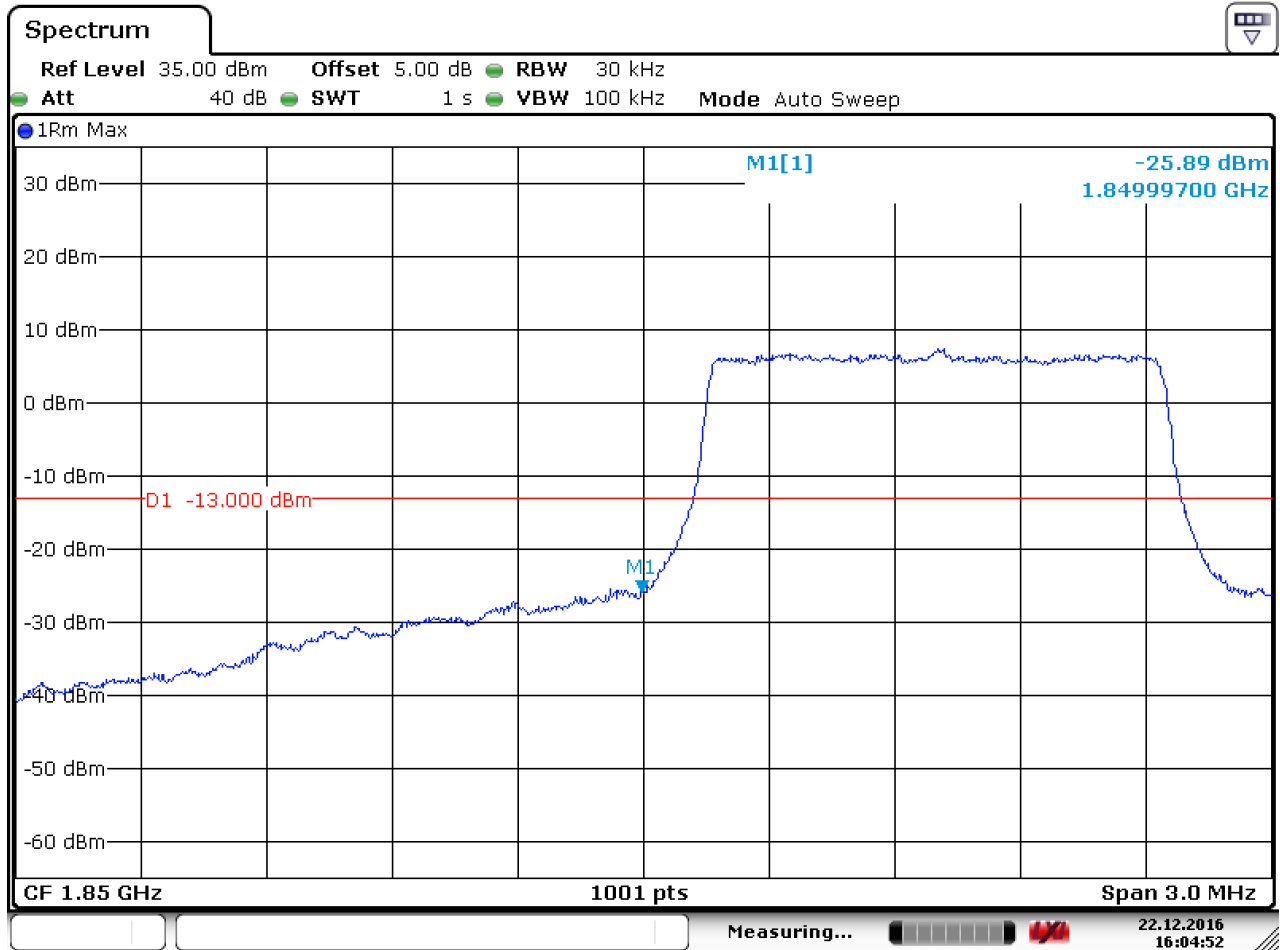
5.1.1.2.1.1 Test RB=1RB



Date: 22.DEC.2016 16:05:56



5.1.1.2.1.2 Test RB=6RB

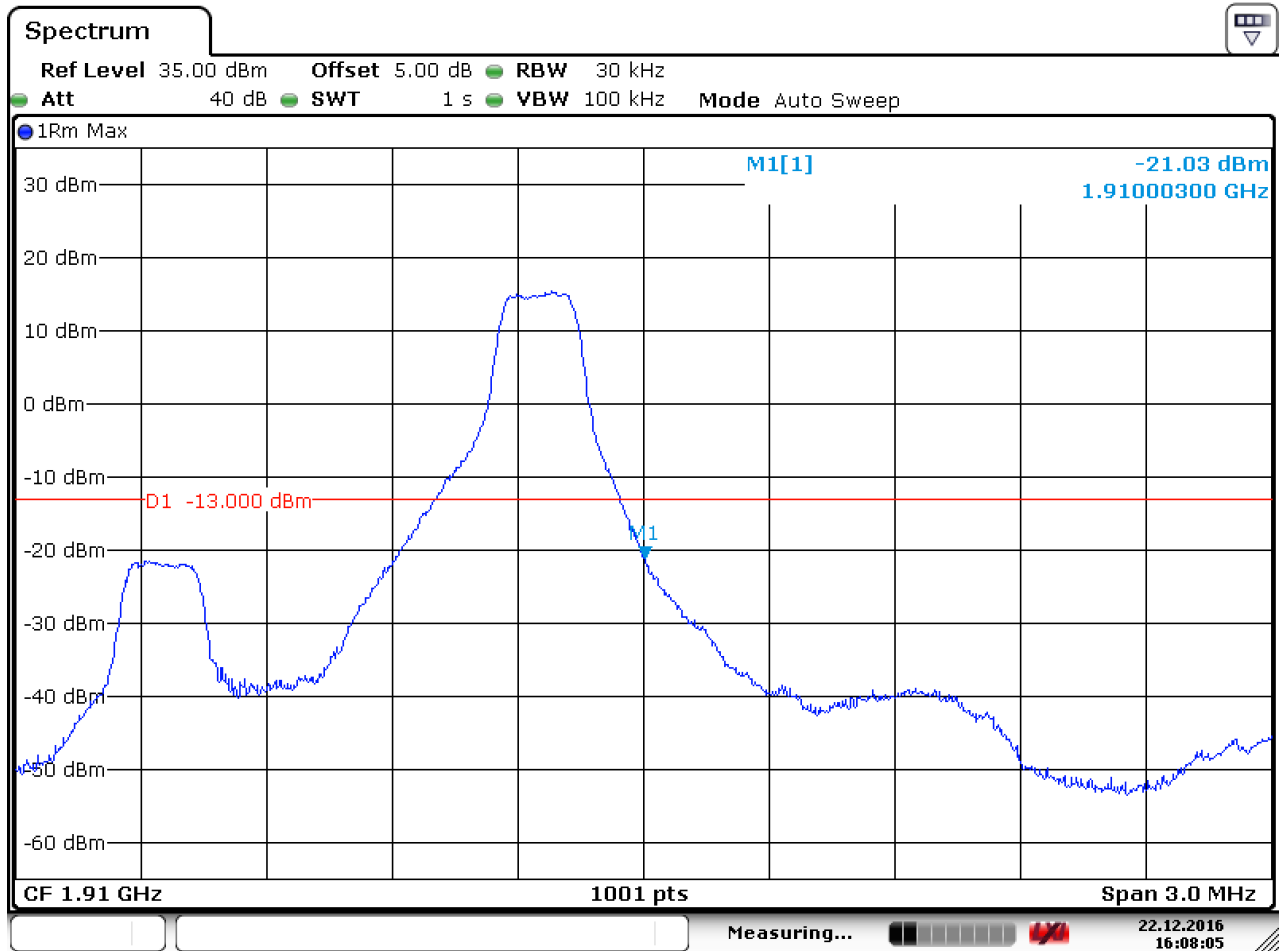


Date: 22.DEC.2016 16:04:53



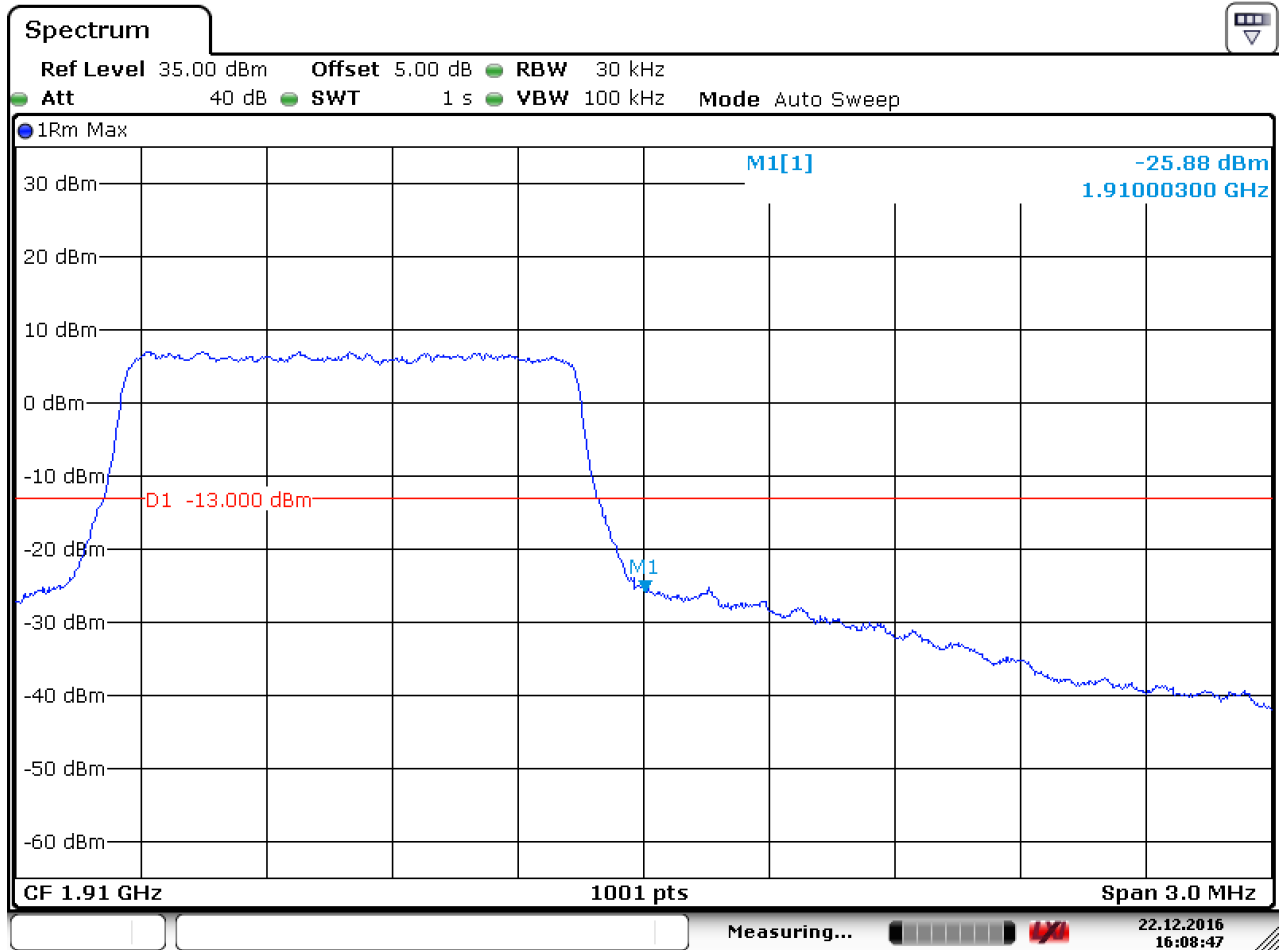
5.1.1.2.2 Test Channel = HCH

5.1.1.2.2.1 Test RB=1RB



Date: 22.DEC.2016 16:08:05

5.1.1.2.2.2 Test RB=6RB

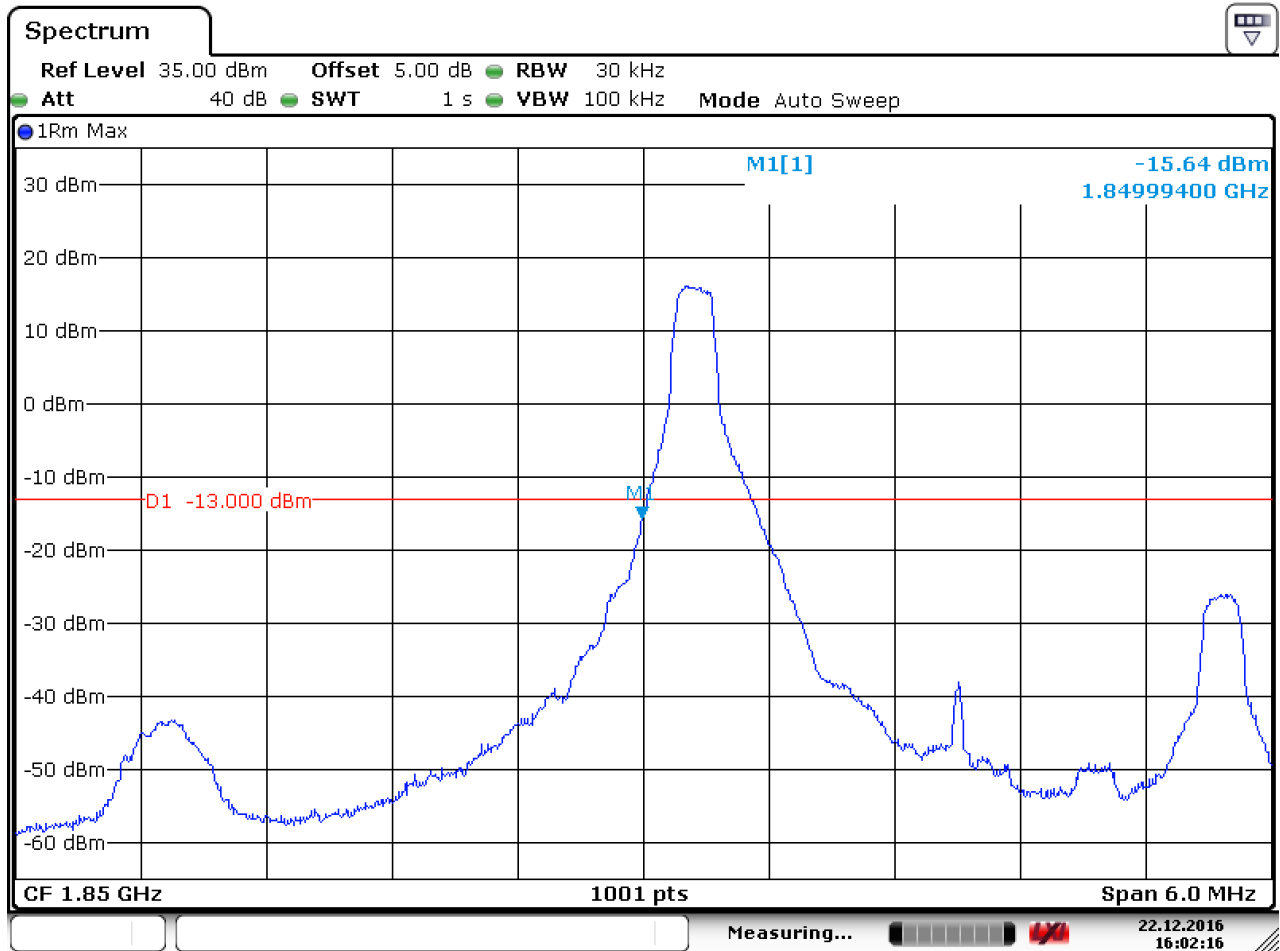


Date: 22.DEC.2016 16:08:48

5.1.1.3 Test Mode = LTE/TM1 3MHz

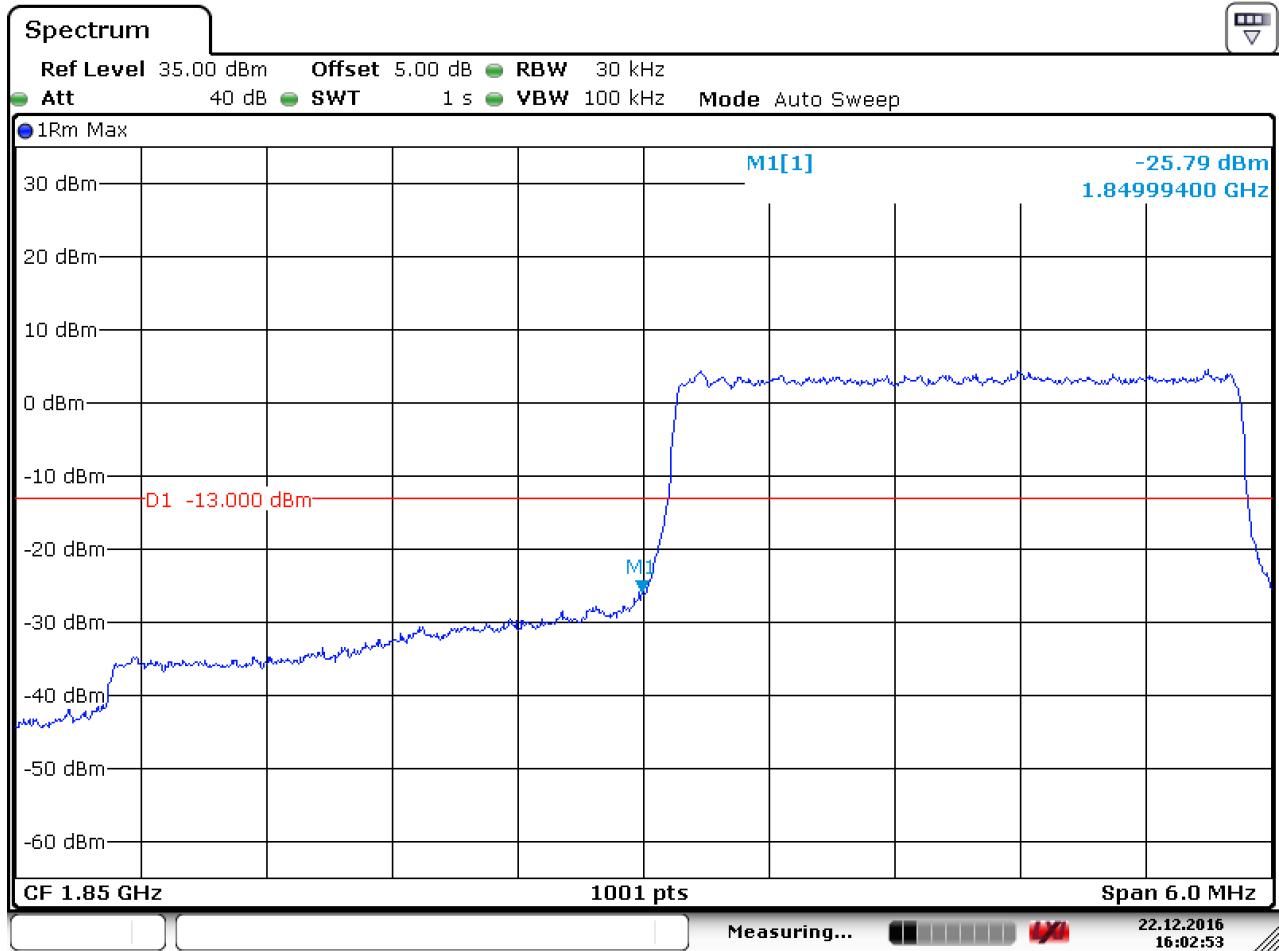
5.1.1.3.1 Test Channel = LCH

5.1.1.3.1.1 Test RB=1RB



Date: 22.DEC.2016 16:02:16

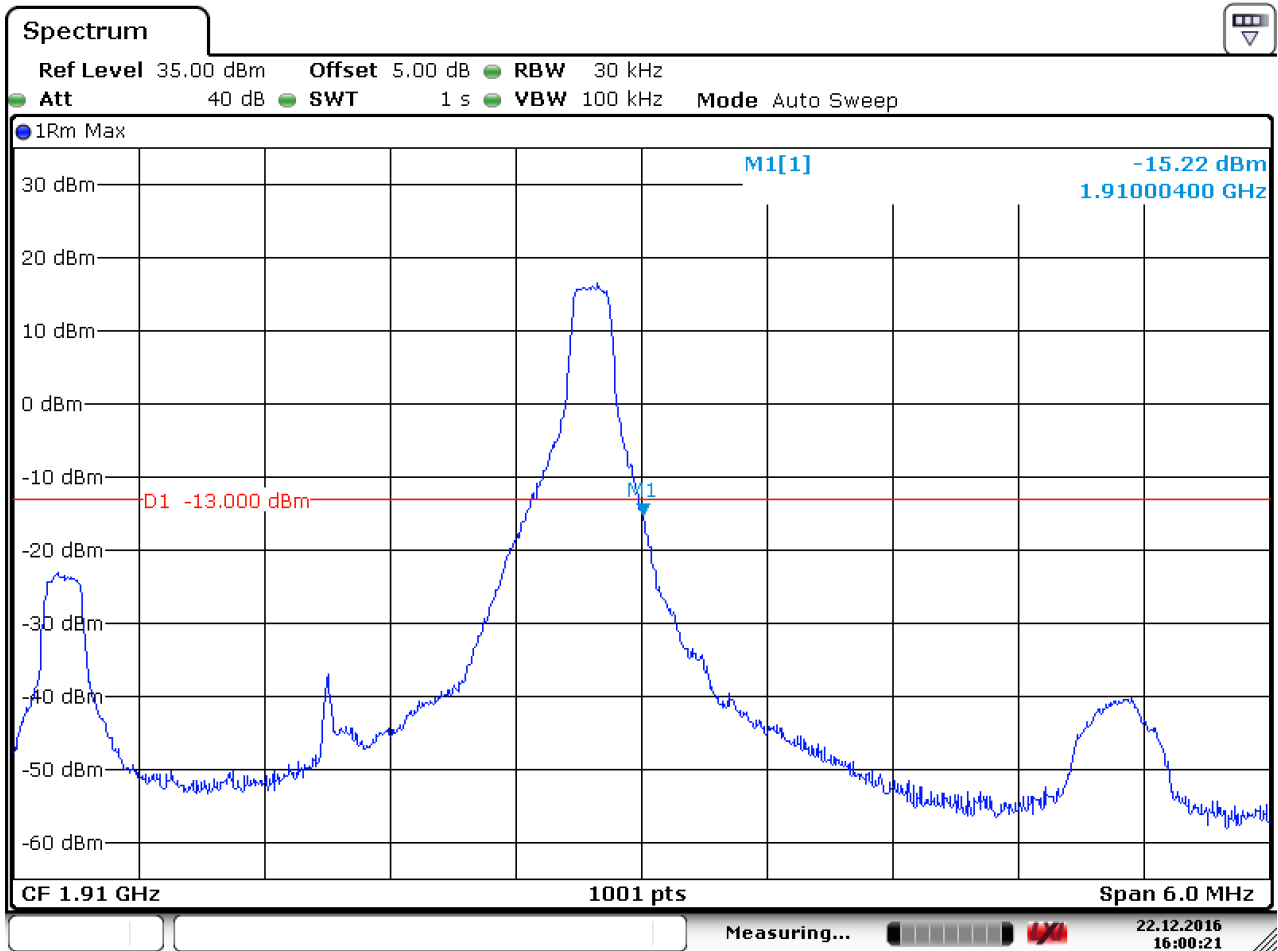
5.1.1.3.1.2 Test RB=15RB



Date: 22.DEC.2016 16:02:53

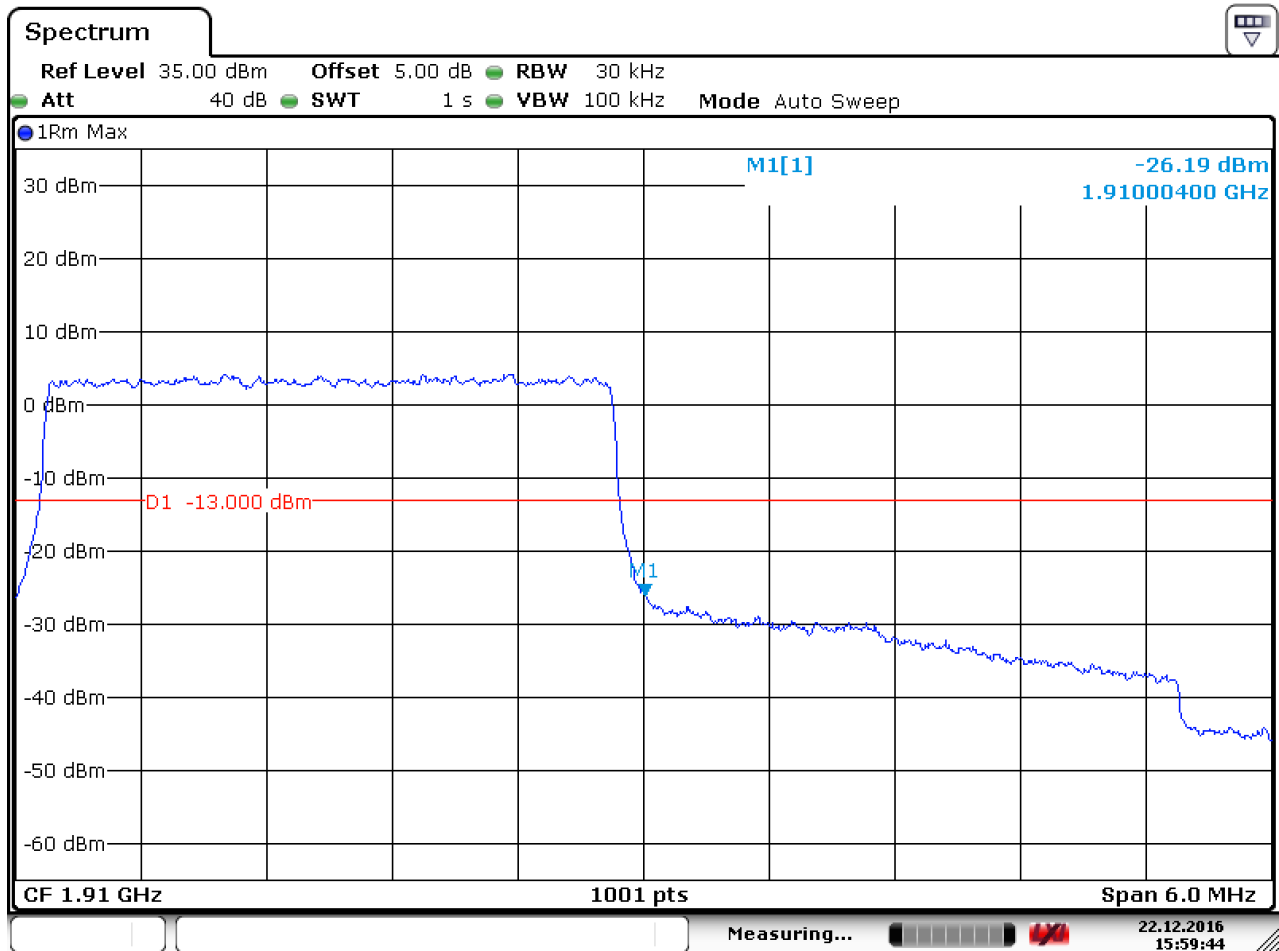
5.1.1.3.2 Test Channel = HCH

5.1.1.3.2.1 Test RB=1RB



Date: 22.DEC.2016 16:00:21

5.1.1.3.2.2 Test RB=15RB

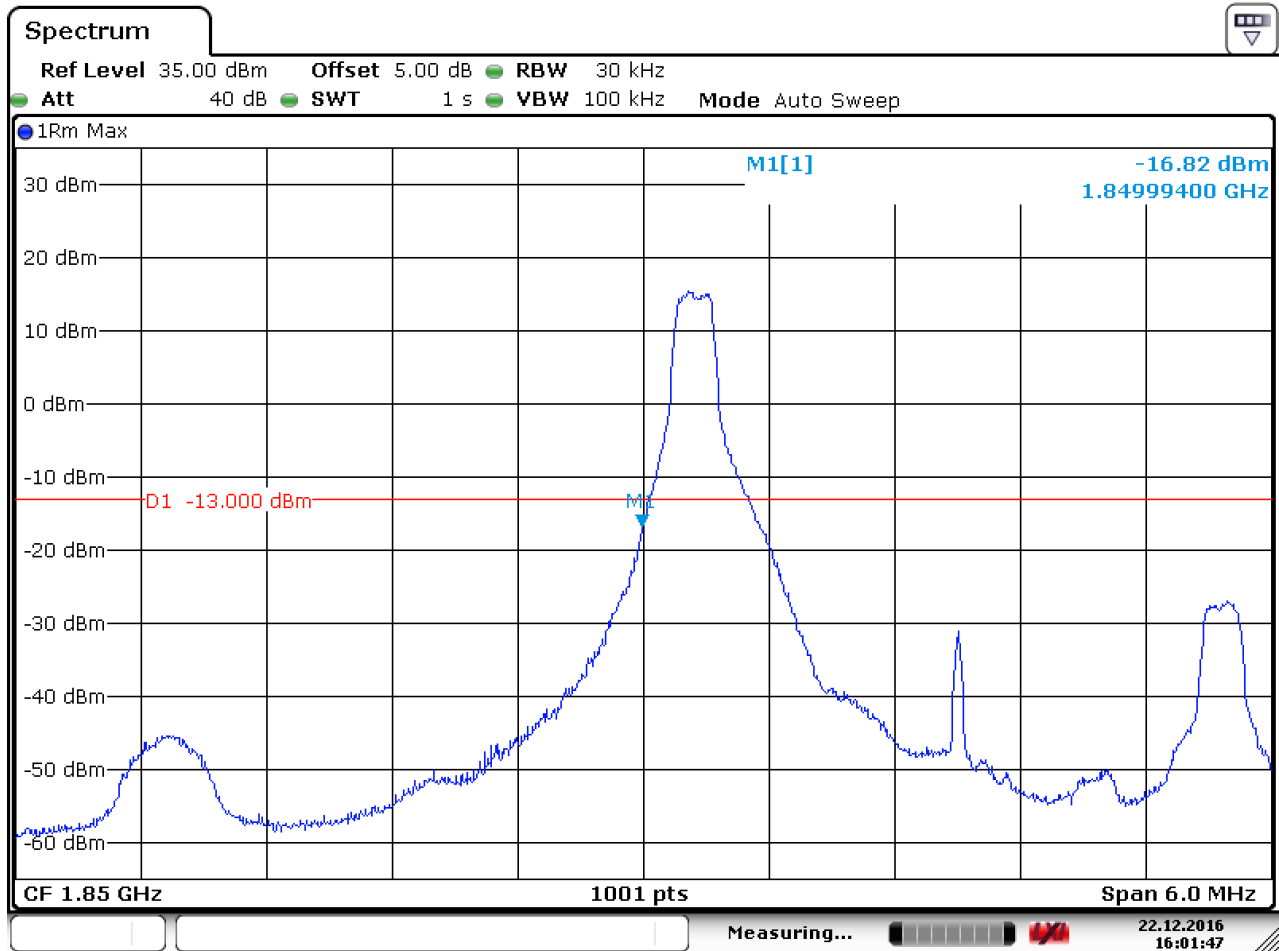


Date: 22.DEC.2016 15:59:45

5.1.1.4 Test Mode = LTE/TM2 3MHz

5.1.1.4.1 Test Channel = LCH

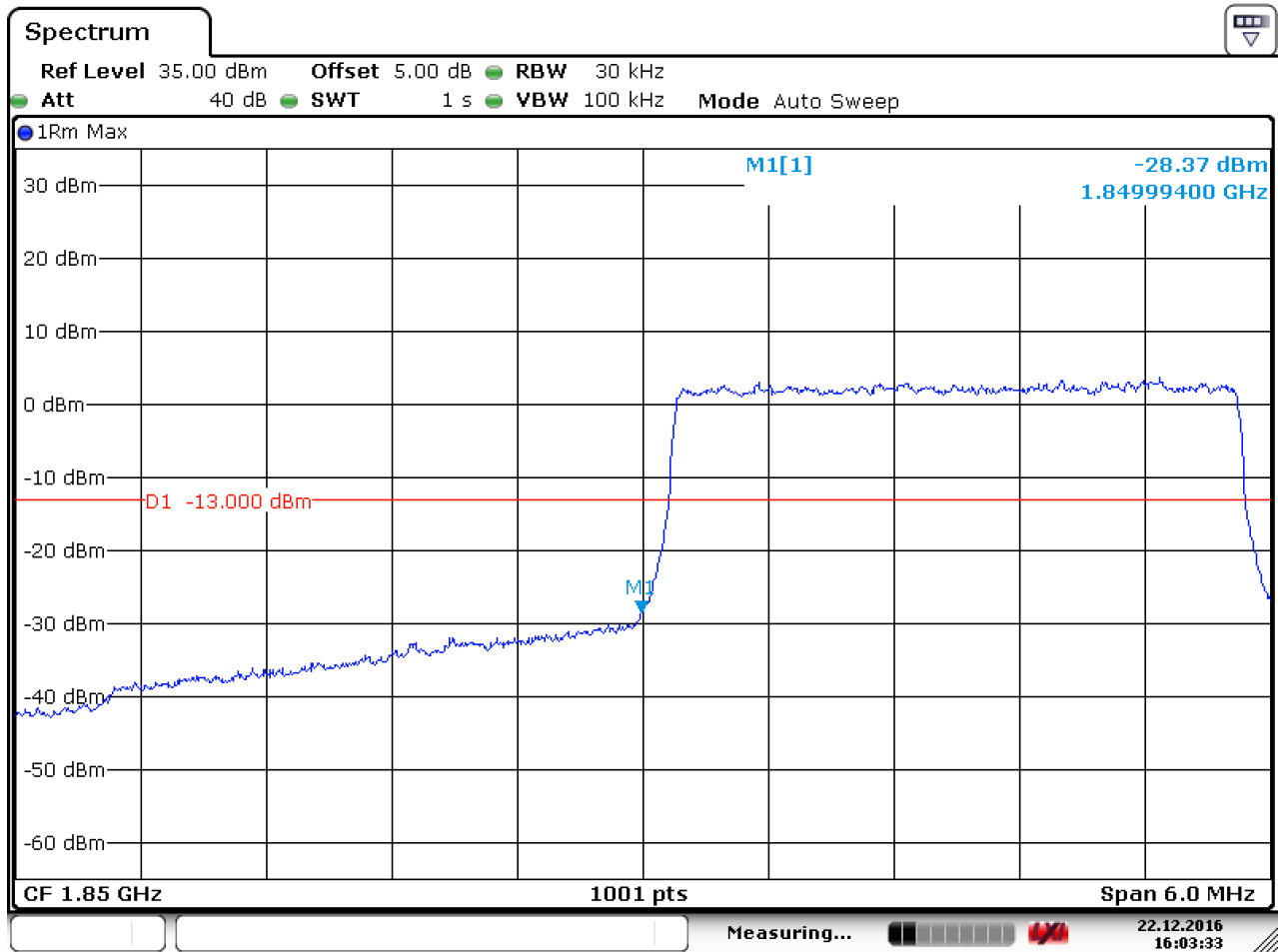
5.1.1.4.1.1 Test RB=1RB



Date: 22.DEC.2016 16:01:47



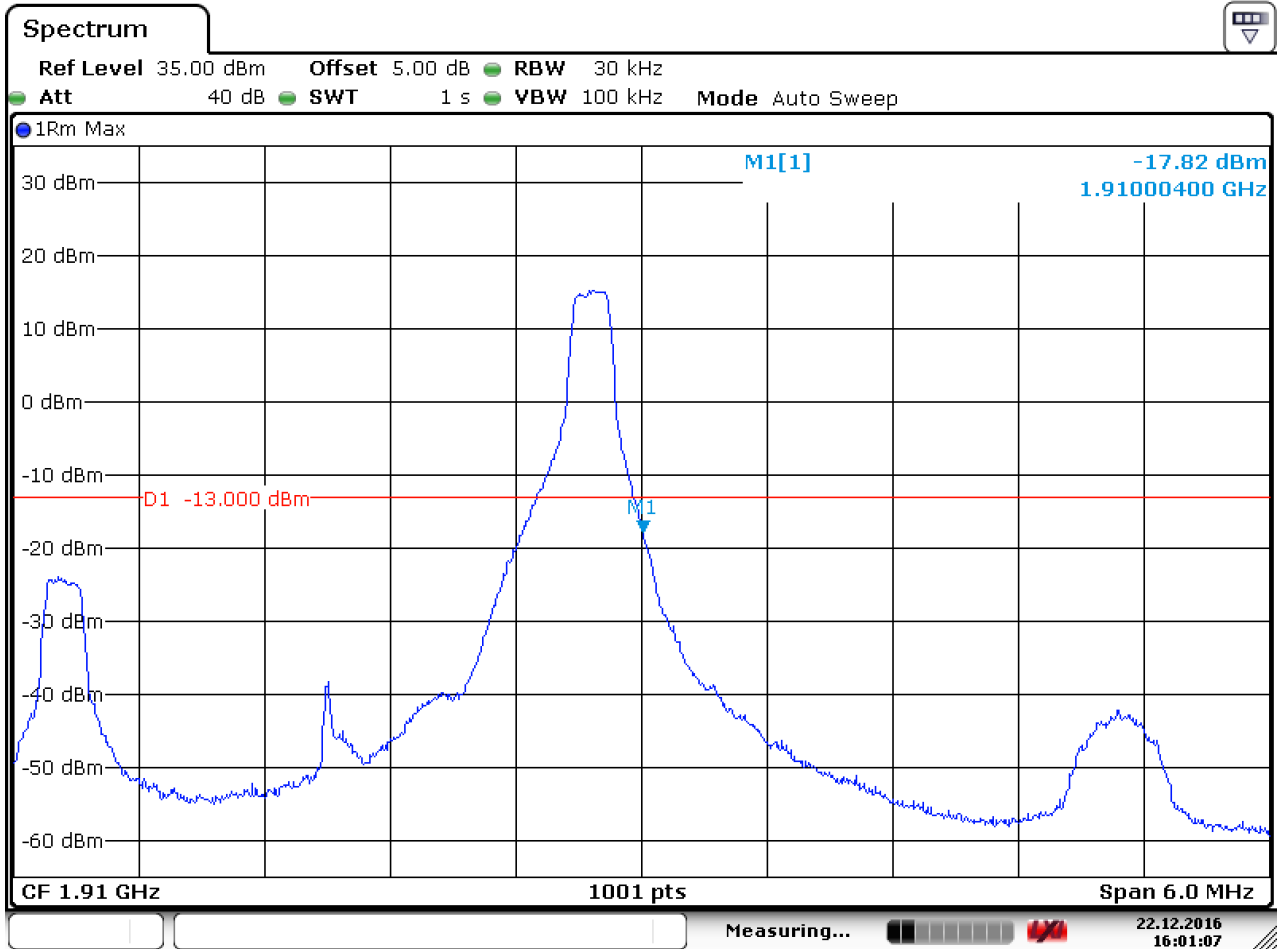
5.1.1.4.1.2 Test RB=15RB



Date: 22.DEC.2016 16:03:33

5.1.1.4.2 Test Channel = HCH

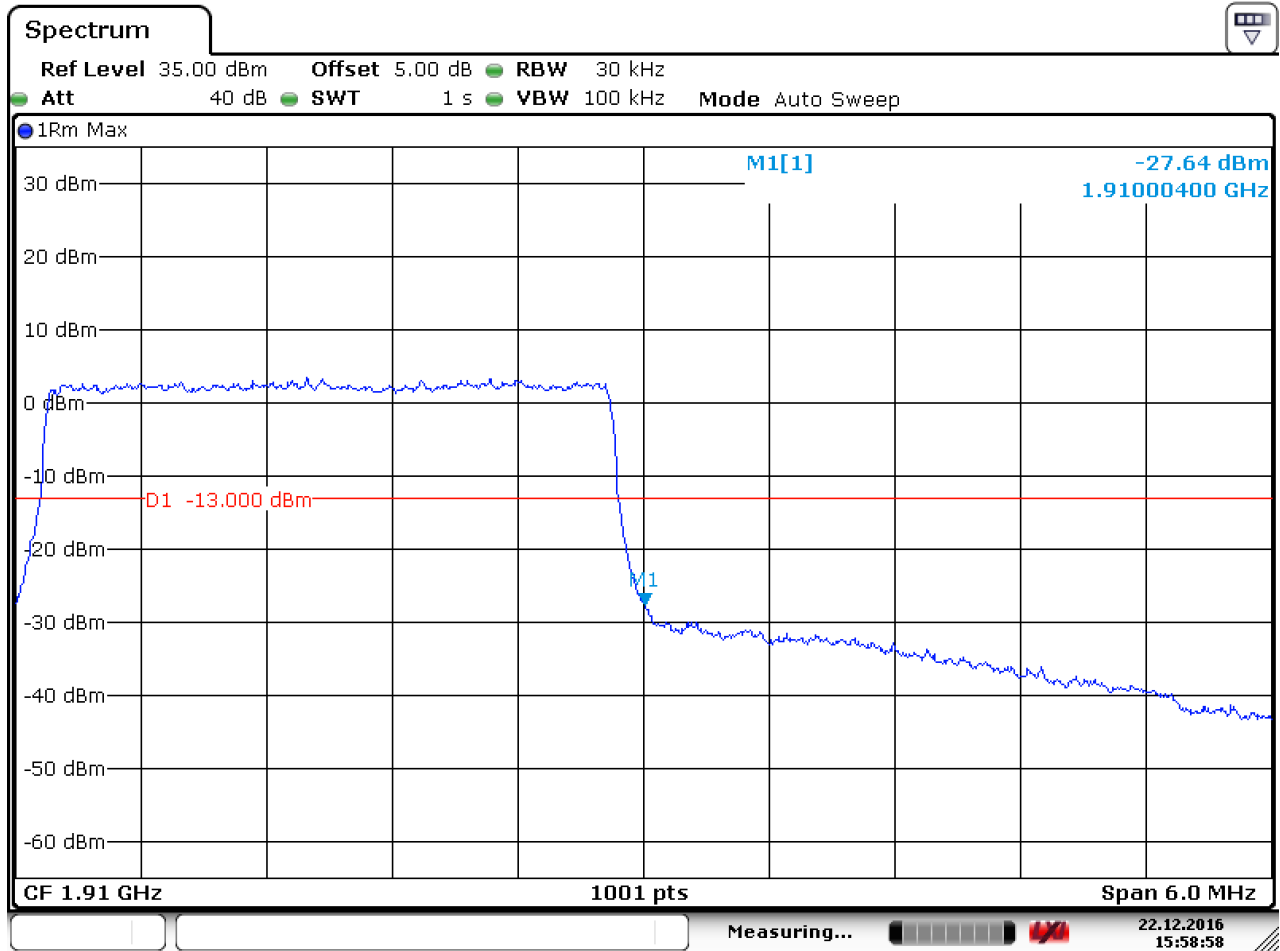
5.1.1.4.2.1 Test RB=1RB



Date: 22.DEC.2016 16:01:07



5.1.1.4.3 Test RB=15RB



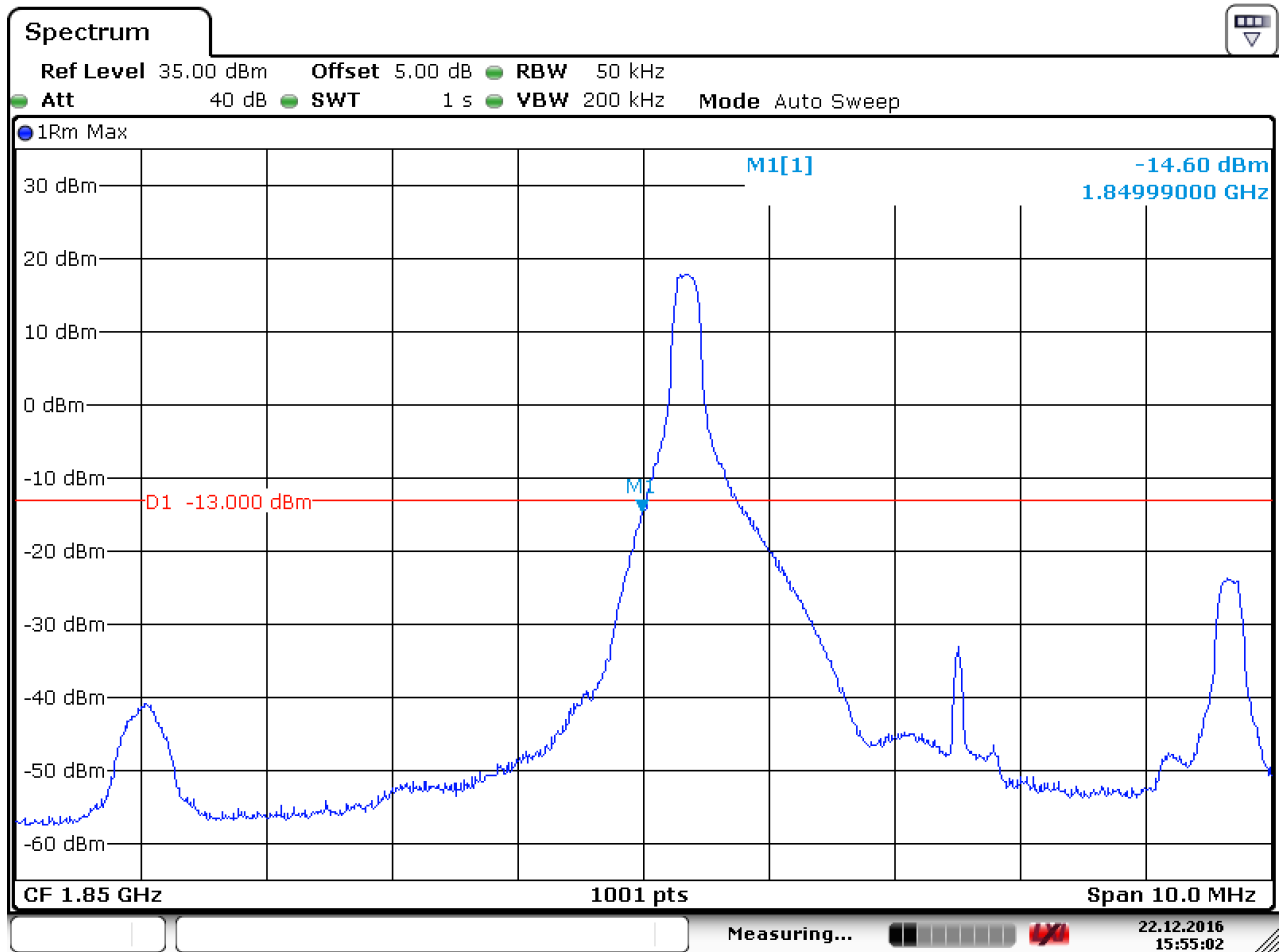
Date: 22.DEC.2016 15:58:59



5.1.1.5 Test Mode = LTE/TM1 5MHz

5.1.1.5.1 Test Channel = LCH

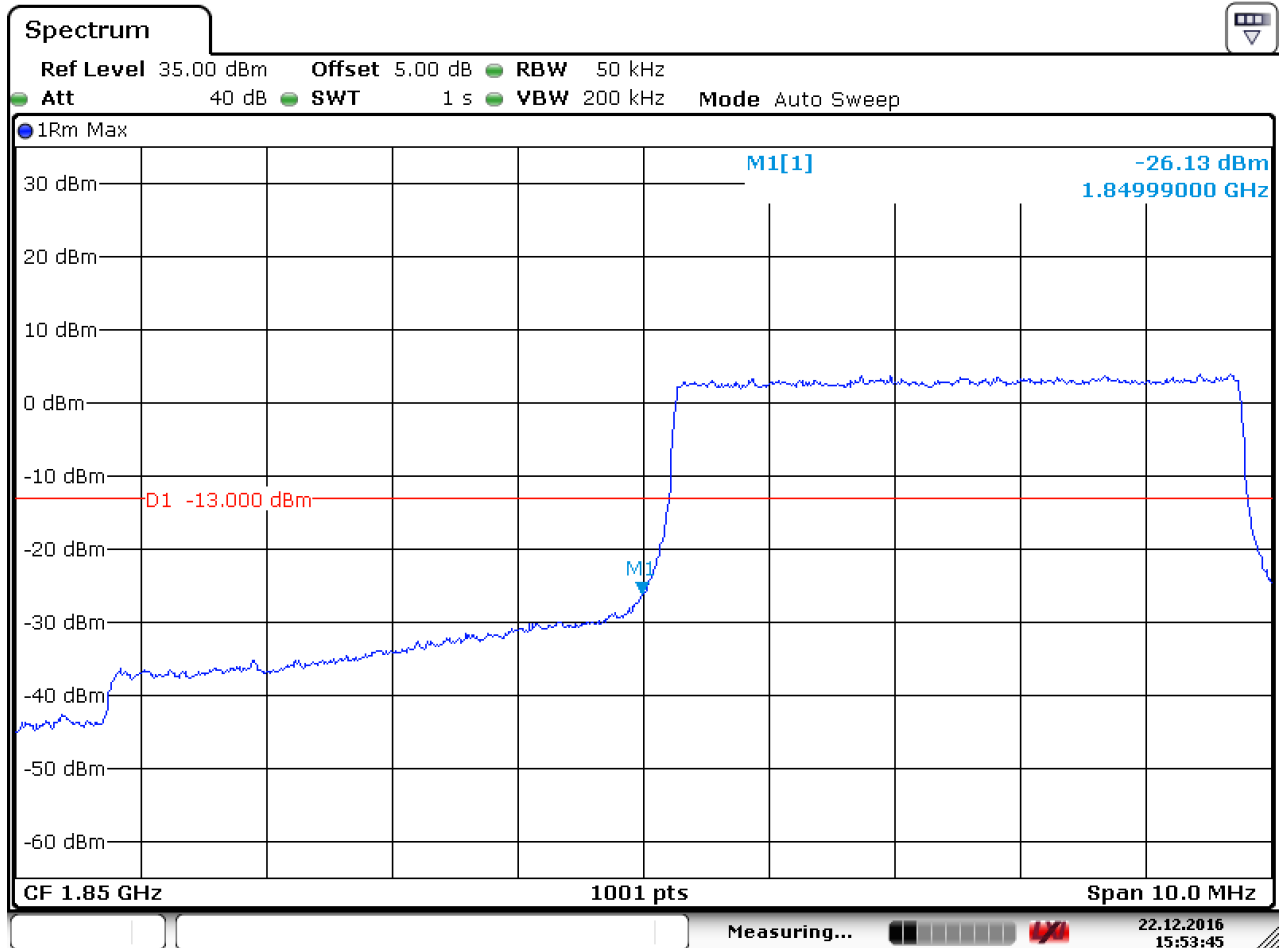
5.1.1.5.1.1 Test RB=1RB



Date: 22.DEC.2016 15:55:02



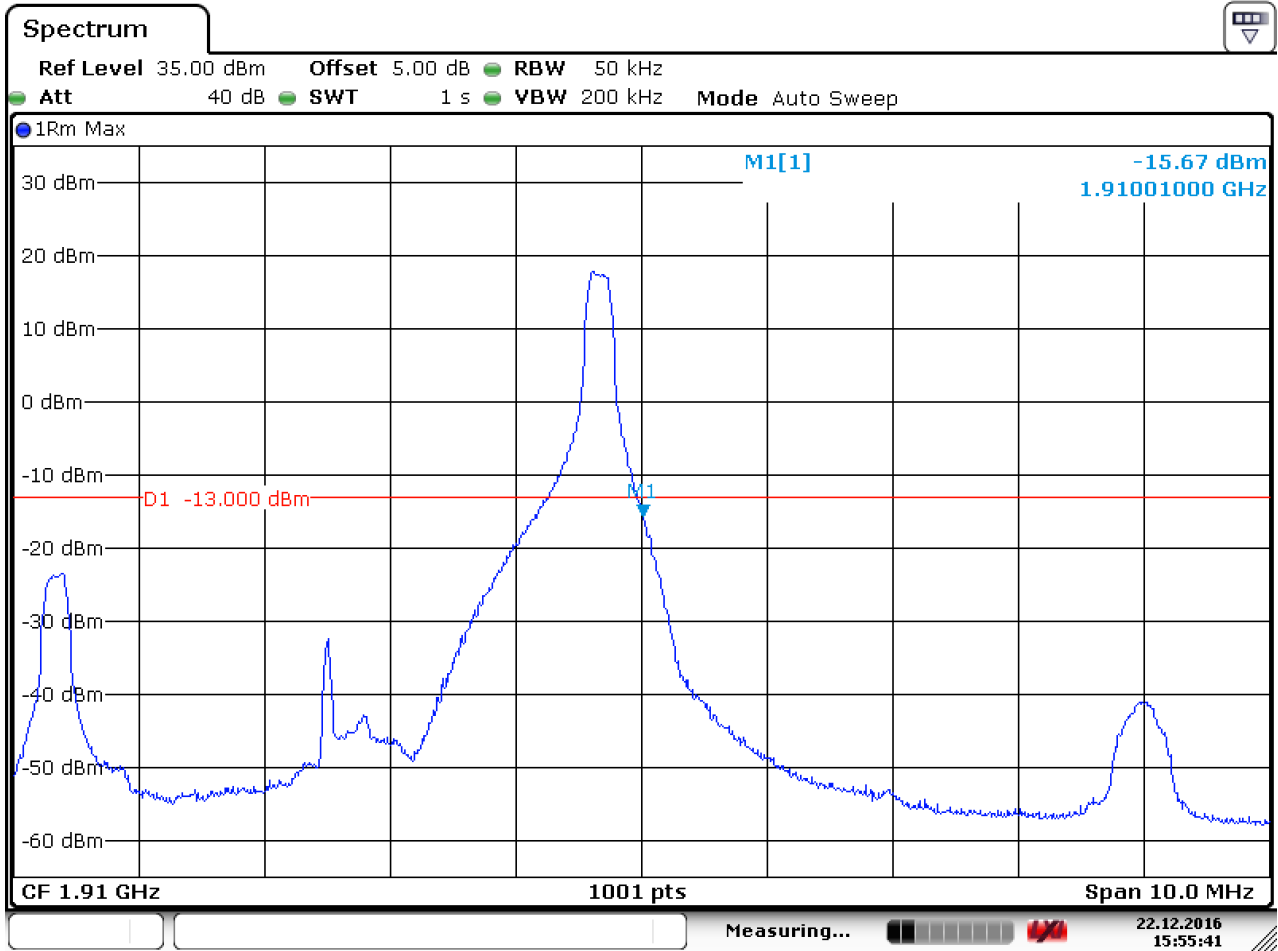
5.1.1.5.1.2 Test RB=25RB



Date: 22.DEC.2016 15:53:45

5.1.1.5.2 Test Channel = HCH

5.1.1.5.2.1 Test RB=1RB



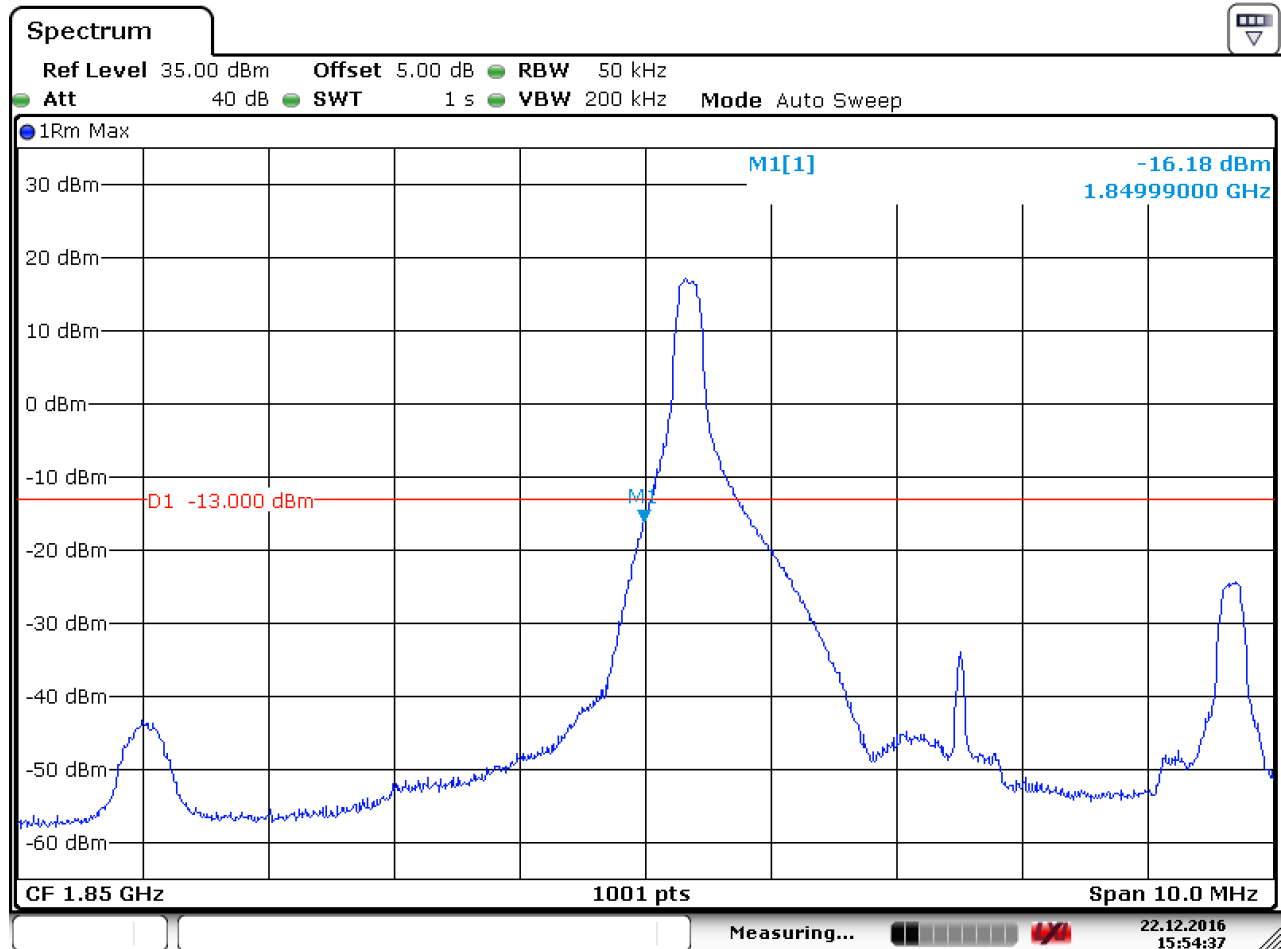
Date: 22.DEC.2016 15:55:42



5.1.1.6 Test Mode = LTE/TM2 5MHz

5.1.1.6.1 Test Channel = LCH

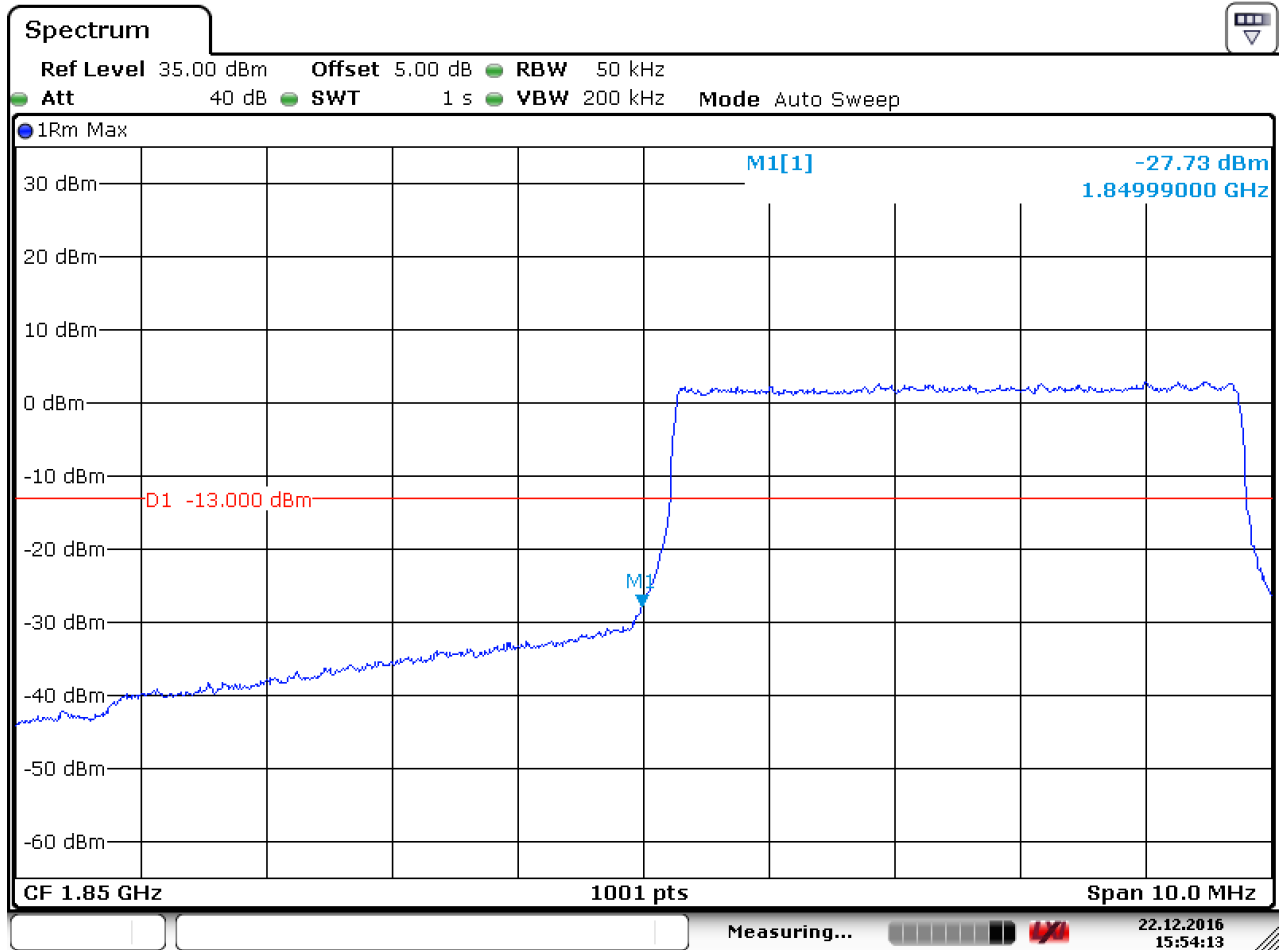
5.1.1.6.1.1 Test RB=1RB



Date: 22.DEC.2016 15:54:38



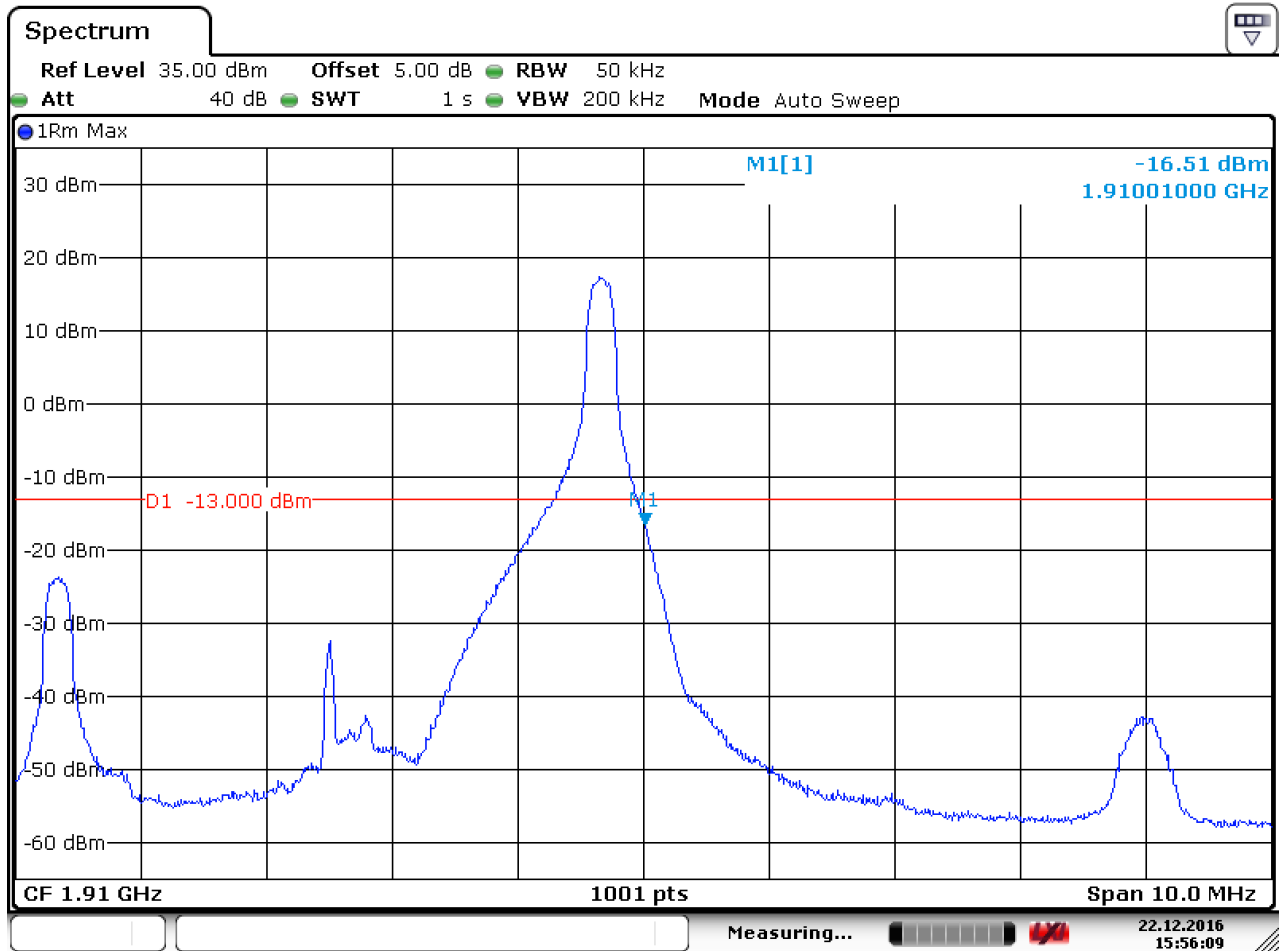
5.1.1.6.1.2 Test RB=25RB



Date: 22.DEC.2016 15:54:13

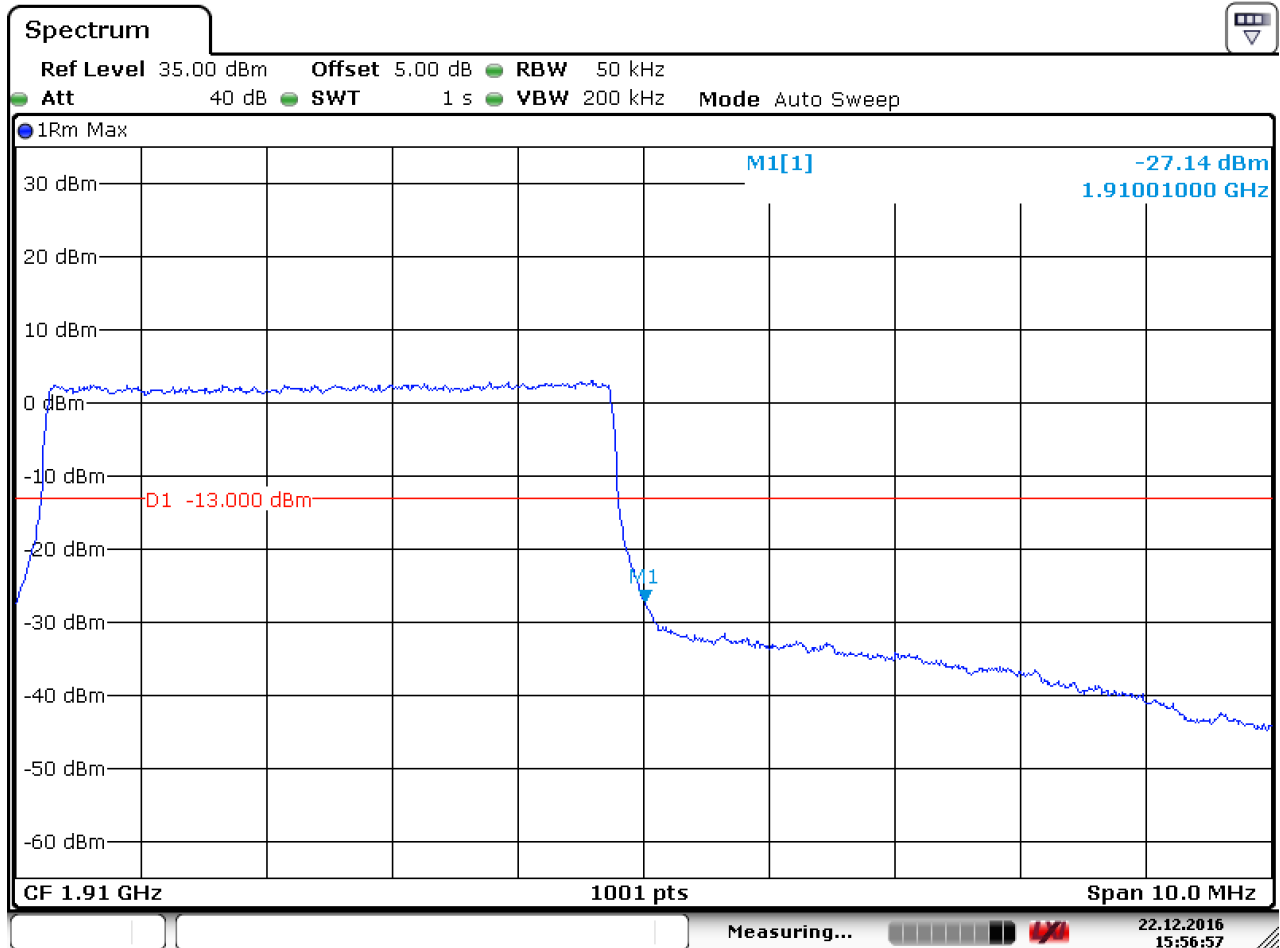
5.1.1.6.2 Test Channel = HCH

5.1.1.6.2.1 Test RB=1RB



Date: 22.DEC.2016 15:56:09

5.1.1.6.2.2 Test RB=25RB

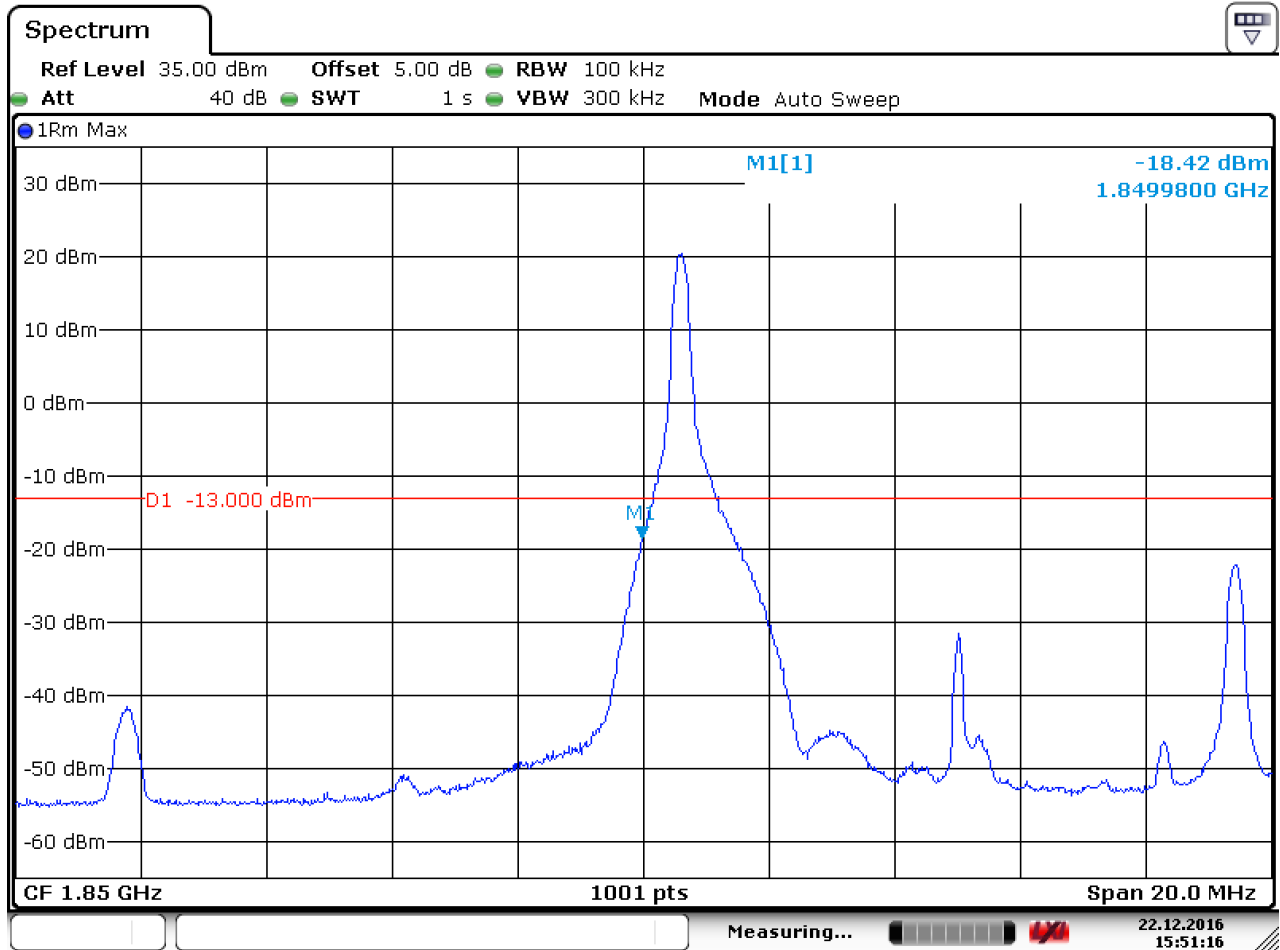


Date: 22.DEC.2016 15:56:58

5.1.1.7 Test Mode = LTE/TM1 10MHz

5.1.1.7.1 Test Channel = LCH

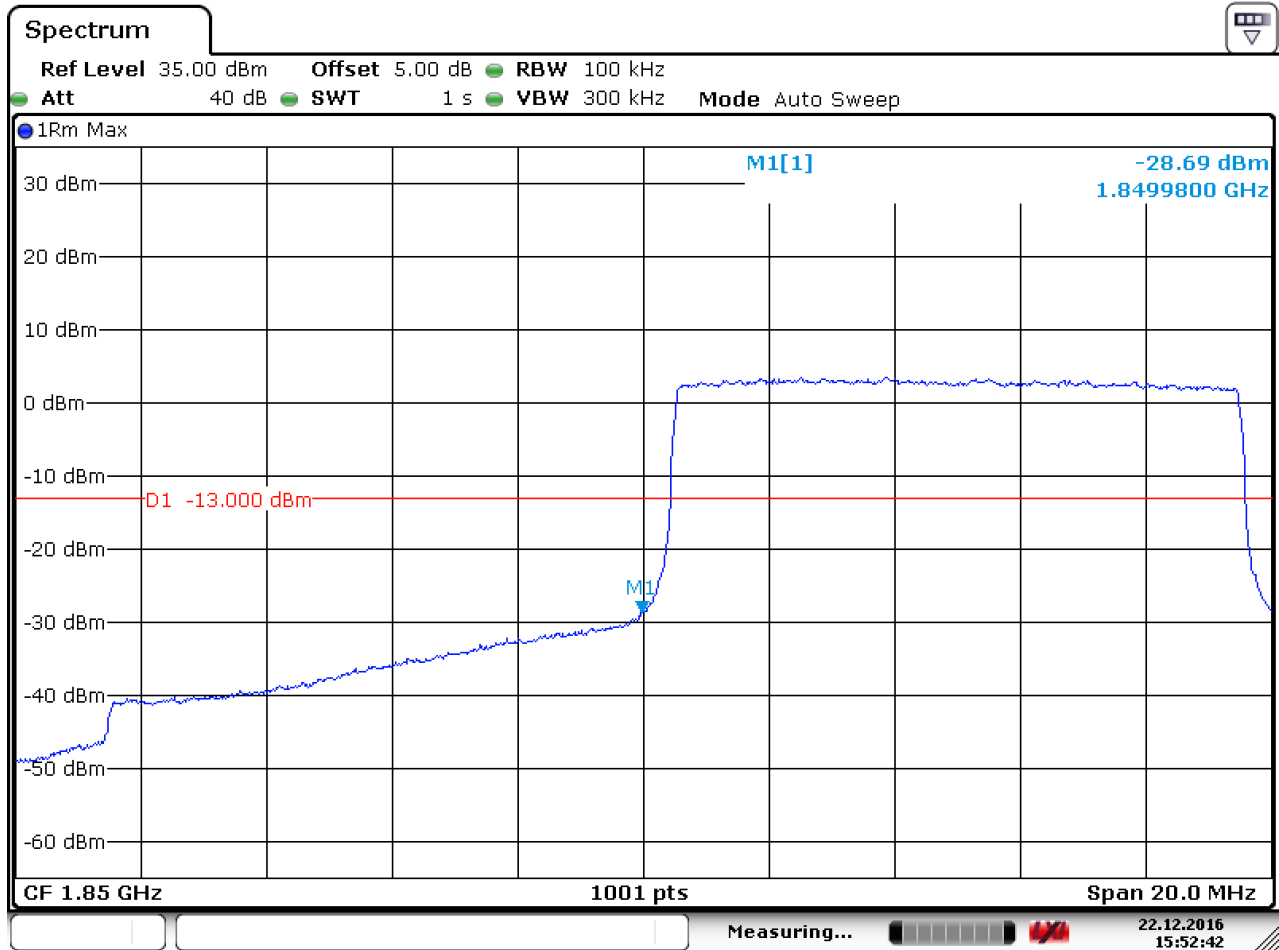
5.1.1.7.1.1 Test RB=1RB



Date: 22.DEC.2016 15:51:16



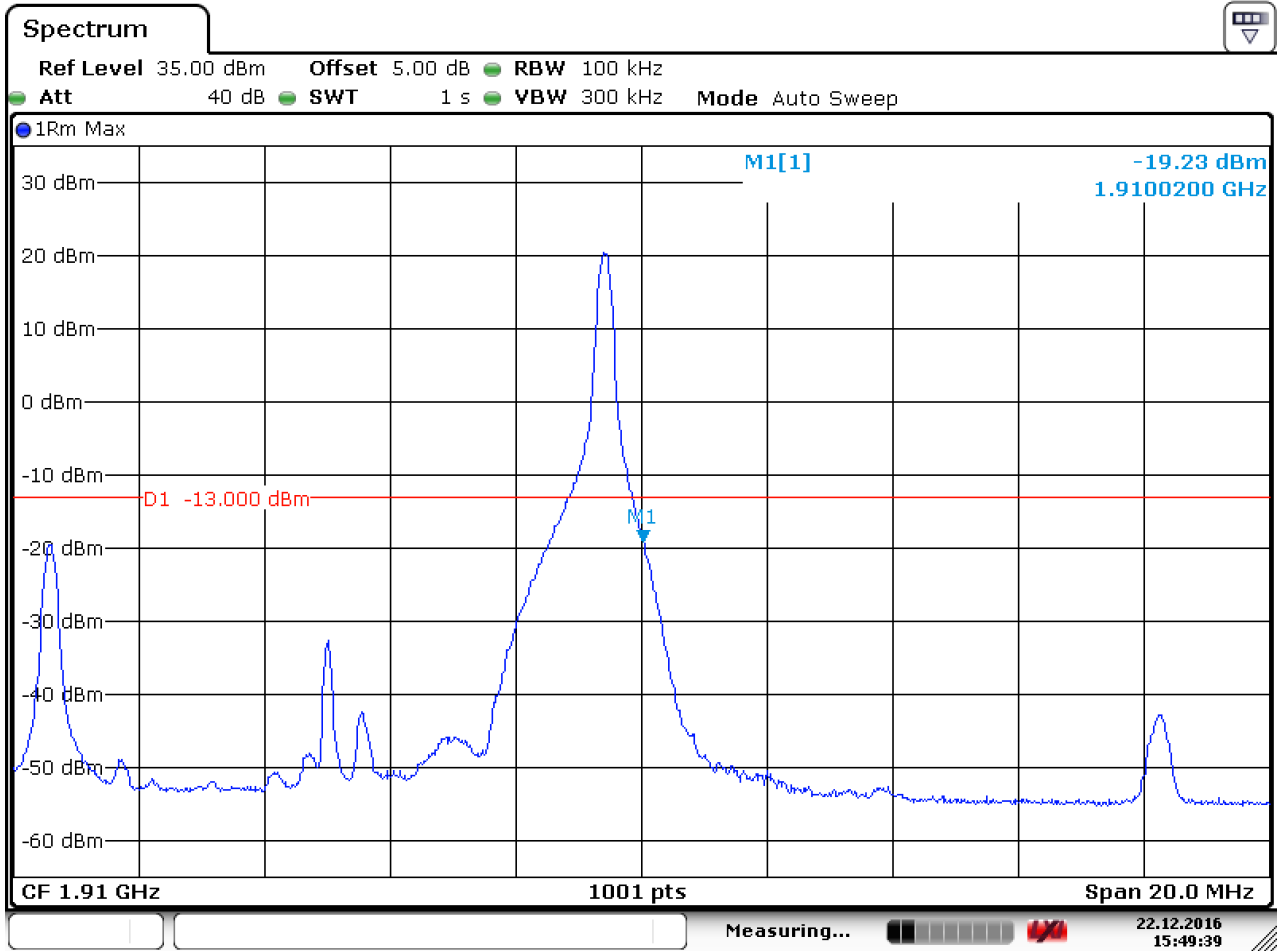
5.1.1.7.1.2 Test RB=50RB



Date: 22.DEC.2016 15:52:43

5.1.1.7.2 Test Channel = HCH

5.1.1.7.2.1 Test RB=1RB



Date: 22.DEC.2016 15:49:40