



# 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	23.50	25.30	33.00	PASS
				RB1#2	23.68	25.48	33.00	PASS
				RB1#5	23.62	25.42	33.00	PASS
				RB3#0	23.58	25.38	33.00	PASS
				RB3#2	23.69	25.49	33.00	PASS
				RB3#3	23.65	25.45	33.00	PASS
				RB6#0	22.46	24.26	33.00	PASS
			MCH	RB1#0	23.63	25.43	33.00	PASS
				RB1#2	23.76	25.56	33.00	PASS
				RB1#5	23.64	25.44	33.00	PASS
				RB3#0	23.76	25.56	33.00	PASS
				RB3#2	23.79	25.59	33.00	PASS
				RB3#3	23.75	25.55	33.00	PASS
				RB6#0	22.71	24.51	33.00	PASS
			HCH	RB1#0	23.73	25.53	33.00	PASS
				RB1#2	23.76	25.56	33.00	PASS
				RB1#5	23.58	25.38	33.00	PASS
				RB3#0	23.77	25.57	33.00	PASS
				RB3#2	23.73	25.53	33.00	PASS
				RB3#3	23.73	25.53	33.00	PASS
				RB6#0	22.72	24.52	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	22.90	24.70	33.00	PASS
				RB1#2	22.31	24.11	33.00	PASS
				RB1#5	22.38	24.18	33.00	PASS
				RB3#0	22.44	24.24	33.00	PASS
				RB3#2	22.67	24.47	33.00	PASS
				RB3#3	22.83	24.63	33.00	PASS
				RB6#0	21.43	23.23	33.00	PASS
			MCH	RB1#0	22.11	23.91	33.00	PASS
				RB1#2	22.43	24.23	33.00	PASS
				RB1#5	22.37	24.17	33.00	PASS
				RB3#0	22.54	24.34	33.00	PASS
				RB3#2	22.64	24.44	33.00	PASS
				RB3#3	22.53	24.33	33.00	PASS
				RB6#0	21.48	23.28	33.00	PASS
			HCH	RB1#0	22.35	24.15	33.00	PASS
				RB1#2	22.86	24.66	33.00	PASS
				RB1#5	22.67	24.47	33.00	PASS
				RB3#0	22.76	24.56	33.00	PASS
				RB3#2	22.78	24.58	33.00	PASS
				RB3#3	22.65	24.45	33.00	PASS
				RB6#0	21.53	23.33	33.00	PASS



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BAND2	LTE/TM1	3M	LCH	RB1#0	23.63	25.43	33.00	PASS
				RB1#7	23.38	25.18	33.00	PASS
				RB1#14	23.70	25.50	33.00	PASS
				RB8#0	22.52	24.32	33.00	PASS
				RB8#4	22.64	24.44	33.00	PASS
				RB8#7	22.65	24.45	33.00	PASS
				RB15#0	22.56	24.36	33.00	PASS
			MCH	RB1#0	23.64	25.44	33.00	PASS
				RB1#7	23.59	25.39	33.00	PASS
				RB1#14	23.80	25.60	33.00	PASS
				RB8#0	22.74	24.54	33.00	PASS
				RB8#4	22.76	24.56	33.00	PASS
				RB8#7	22.71	24.51	33.00	PASS
				RB15#0	22.70	24.50	33.00	PASS
			HCH	RB1#0	23.81	25.61	33.00	PASS
				RB1#7	23.67	25.47	33.00	PASS
				RB1#14	23.81	25.61	33.00	PASS
				RB8#0	22.68	24.48	33.00	PASS
				RB8#4	22.75	24.55	33.00	PASS
				RB8#7	22.78	24.58	33.00	PASS
				RB15#0	22.70	24.50	33.00	PASS



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BAND2	LTE/TM2	3M	LCH	RB1#0	22.72	24.52	33.00	PASS
				RB1#7	22.46	24.26	33.00	PASS
				RB1#14	22.66	24.46	33.00	PASS
				RB8#0	21.50	23.30	33.00	PASS
				RB8#4	21.69	23.49	33.00	PASS
				RB8#7	21.59	23.39	33.00	PASS
				RB15#0	21.58	23.38	33.00	PASS
			MCH	RB1#0	22.70	24.50	33.00	PASS
				RB1#7	22.54	24.34	33.00	PASS
				RB1#14	22.58	24.38	33.00	PASS
				RB8#0	21.72	23.52	33.00	PASS
				RB8#4	21.39	23.19	33.00	PASS
				RB8#7	21.74	23.54	33.00	PASS
				RB15#0	21.75	23.55	33.00	PASS
			HCH	RB1#0	23.03	24.83	33.00	PASS
				RB1#7	22.83	24.63	33.00	PASS
				RB1#14	22.51	24.31	33.00	PASS
				RB8#0	21.79	23.59	33.00	PASS
				RB8#4	21.72	23.52	33.00	PASS
				RB8#7	21.76	23.56	33.00	PASS
				RB15#0	21.43	23.23	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	5M	LCH	RB1#0	23.60	25.40	33.00	PASS
				RB1#13	23.50	25.30	33.00	PASS
				RB1#24	23.64	25.44	33.00	PASS
				RB12#0	22.43	24.23	33.00	PASS
				RB12#6	22.43	24.23	33.00	PASS
				RB12#13	22.48	24.28	33.00	PASS
				RB25#0	22.43	24.23	33.00	PASS
			MCH	RB1#0	23.30	25.10	33.00	PASS
				RB1#13	23.31	25.11	33.00	PASS
				RB1#24	23.47	25.27	33.00	PASS
				RB12#0	22.57	24.37	33.00	PASS
				RB12#6	22.55	24.35	33.00	PASS
				RB12#13	22.50	24.30	33.00	PASS
				RB25#0	22.52	24.32	33.00	PASS
			HCH	RB1#0	23.54	25.34	33.00	PASS
				RB1#13	23.43	25.23	33.00	PASS
				RB1#24	23.64	25.44	33.00	PASS
				RB12#0	22.57	24.37	33.00	PASS
				RB12#6	22.63	24.43	33.00	PASS
				RB12#13	22.53	24.33	33.00	PASS
				RB25#0	22.53	24.33	33.00	PASS



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BAND2	LTE/TM2	5M	LCH	RB1#0	22.63	24.43	33.00	PASS
				RB1#13	22.58	24.38	33.00	PASS
				RB1#24	22.69	24.49	33.00	PASS
				RB12#0	21.24	23.04	33.00	PASS
				RB12#6	21.26	23.06	33.00	PASS
				RB12#13	21.32	23.12	33.00	PASS
				RB25#0	21.40	23.20	33.00	PASS
			MCH	RB1#0	22.15	23.95	33.00	PASS
				RB1#13	22.07	23.87	33.00	PASS
				RB1#24	22.07	23.87	33.00	PASS
				RB12#0	21.37	23.17	33.00	PASS
				RB12#6	21.40	23.20	33.00	PASS
				RB12#13	21.54	23.34	33.00	PASS
				RB25#0	21.57	23.37	33.00	PASS
			HCH	RB1#0	22.85	24.65	33.00	PASS
				RB1#13	22.41	24.21	33.00	PASS
				RB1#24	22.23	24.03	33.00	PASS
				RB12#0	21.51	23.31	33.00	PASS
				RB12#6	21.43	23.23	33.00	PASS
				RB12#13	21.37	23.17	33.00	PASS
				RB25#0	21.48	23.28	33.00	PASS





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Test Band(LTE)	Test Mode	Test Bandwidth	Test channel	Test RB	Measured (dBm)	EIRP (dBm)	limit (dBm)	Verdict
BAND2	LTE/TM1	10M	LCH	RB1#0	23.82	25.62	33.00	PASS
				RB1#25	23.88	25.68	33.00	PASS
				RB1#49	23.54	25.34	33.00	PASS
				RB25#0	22.51	24.31	33.00	PASS
				RB25#13	22.53	24.33	33.00	PASS
				RB25#25	22.51	24.31	33.00	PASS
				RB50#0	22.5	24.30	33.00	PASS
			MCH	RB1#0	23.46	25.26	33.00	PASS
				RB1#25	23.54	25.34	33.00	PASS
				RB1#49	23.55	25.35	33.00	PASS
				RB25#0	22.52	24.32	33.00	PASS
				RB25#13	22.5	24.30	33.00	PASS
				RB25#25	22.52	24.32	33.00	PASS
				RB50#0	22.52	24.32	33.00	PASS
			HCH	RB1#0	23.68	25.48	33.00	PASS
				RB1#25	23.49	25.29	33.00	PASS
				RB1#49	23.65	25.45	33.00	PASS
				RB25#0	22.65	24.45	33.00	PASS
				RB25#13	22.64	24.44	33.00	PASS
				RB25#25	22.57	24.37	33.00	PASS
				RB50#0	22.61	24.41	33.00	PASS



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Test Band(LTE)	Test Mode	Test Bandwidth	Test channel	Test RB	Measured (dBm)	EIRP (dBm)	limit (dBm)	Verdict
BAND2	LTE/TM2	10M	LCH	RB1#0	22.36	24.16	33.00	PASS
				RB1#25	22.26	24.06	33.00	PASS
				RB1#49	22.08	23.88	33.00	PASS
				RB25#0	21.31	23.11	33.00	PASS
				RB25#13	21.35	23.15	33.00	PASS
				RB25#25	21.25	23.05	33.00	PASS
				RB50#0	21.41	23.21	33.00	PASS
			MCH	RB1#0	22.35	24.15	33.00	PASS
				RB1#25	22.37	24.17	33.00	PASS
				RB1#49	22.41	24.21	33.00	PASS
				RB25#0	21.56	23.36	33.00	PASS
				RB25#13	21.61	23.41	33.00	PASS
				RB25#25	21.55	23.35	33.00	PASS
				RB50#0	21.47	23.27	33.00	PASS
			HCH	RB1#0	22.57	24.37	33.00	PASS
				RB1#25	22.37	24.17	33.00	PASS
				RB1#49	21.94	23.74	33.00	PASS
				RB25#0	21.62	23.42	33.00	PASS
				RB25#13	21.56	23.36	33.00	PASS
				RB25#25	21.56	23.36	33.00	PASS
				RB50#0	21.54	23.34	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	23.90	25.70	33.00	PASS
				RB1#38	23.49	25.29	33.00	PASS
				RB1#74	23.53	25.33	33.00	PASS
				RB36#0	22.60	24.40	33.00	PASS
				RB36#18	22.55	24.35	33.00	PASS
				RB36#39	22.61	24.41	33.00	PASS
				RB75#0	22.61	24.41	33.00	PASS
			MCH	RB1#0	23.72	25.52	33.00	PASS
				RB1#38	23.58	25.38	33.00	PASS
				RB1#74	23.57	25.37	33.00	PASS
				RB36#0	22.67	24.47	33.00	PASS
				RB36#18	22.64	24.44	33.00	PASS
				RB36#39	22.63	24.43	33.00	PASS
				RB75#0	22.63	24.43	33.00	PASS
			HCH	RB1#0	23.60	25.40	33.00	PASS
				RB1#38	23.64	25.44	33.00	PASS
				RB1#74	23.64	25.44	33.00	PASS
				RB36#0	22.66	24.46	33.00	PASS
				RB36#18	22.66	24.46	33.00	PASS
				RB36#39	22.54	24.34	33.00	PASS
				RB75#0	22.61	24.41	33.00	PASS



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Test Band(LTE)	Test Mode	Test Bandwidth	Test channel	Test RB	Measured (dBm)	EIRP (dBm)	limit (dBm)	Verdict
BAND2	LTE/TM2	15M	LCH	RB1#0	22.38	24.18	33.00	PASS
				RB1#38	22.40	24.20	33.00	PASS
				RB1#74	22.22	24.02	33.00	PASS
				RB36#0	21.41	23.21	33.00	PASS
				RB36#18	21.46	23.26	33.00	PASS
				RB36#39	21.43	23.23	33.00	PASS
				RB75#0	21.62	23.42	33.00	PASS
			MCH	RB1#0	22.86	24.66	33.00	PASS
				RB1#38	22.39	24.19	33.00	PASS
				RB1#74	22.85	24.65	33.00	PASS
				RB36#0	21.61	23.41	33.00	PASS
				RB36#18	21.44	23.24	33.00	PASS
				RB36#39	21.48	23.28	33.00	PASS
				RB75#0	21.55	23.35	33.00	PASS
			HCH	RB1#0	22.83	24.63	33.00	PASS
				RB1#38	22.90	24.70	33.00	PASS
				RB1#74	22.85	24.65	33.00	PASS
				RB36#0	21.64	23.44	33.00	PASS
				RB36#18	21.55	23.35	33.00	PASS
				RB36#39	21.56	23.36	33.00	PASS
				RB75#0	21.72	23.52	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	23.81	25.61	33.00	PASS
				RB1#50	23.40	25.20	33.00	PASS
				RB1#99	23.07	24.87	33.00	PASS
				RB50#0	22.57	24.37	33.00	PASS
				RB50#25	22.56	24.36	33.00	PASS
				RB50#50	22.58	24.38	33.00	PASS
				RB100#0	22.63	24.43	33.00	PASS
			MCH	RB1#0	23.39	25.19	33.00	PASS
				RB1#50	23.55	25.35	33.00	PASS
				RB1#99	23.40	25.20	33.00	PASS
				RB50#0	22.60	24.40	33.00	PASS
				RB50#25	22.60	24.40	33.00	PASS
				RB50#50	22.64	24.44	33.00	PASS
				RB100#0	22.66	24.46	33.00	PASS
			HCH	RB1#0	23.48	25.28	33.00	PASS
				RB1#50	23.73	25.53	33.00	PASS
				RB1#99	23.58	25.38	33.00	PASS
				RB50#0	22.63	24.43	33.00	PASS
				RB50#25	22.73	24.53	33.00	PASS
				RB50#50	22.65	24.45	33.00	PASS
				RB100#0	22.68	24.48	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	22.09	23.89	33.00	PASS
				RB1#50	22.26	24.06	33.00	PASS
				RB1#99	22.17	23.97	33.00	PASS
				RB50#0	21.51	23.31	33.00	PASS
				RB50#25	21.49	23.29	33.00	PASS
				RB50#50	21.52	23.32	33.00	PASS
				RB100#0	21.47	23.27	33.00	PASS
			MCH	RB1#0	22.05	23.85	33.00	PASS
				RB1#50	22.40	24.20	33.00	PASS
				RB1#99	22.24	24.04	33.00	PASS
				RB50#0	21.52	23.32	33.00	PASS
				RB50#25	21.53	23.33	33.00	PASS
				RB50#50	21.67	23.47	33.00	PASS
				RB100#0	21.51	23.31	33.00	PASS
			HCH	RB1#0	22.51	24.31	33.00	PASS
				RB1#50	22.85	24.65	33.00	PASS
				RB1#99	22.67	24.47	33.00	PASS
				RB50#0	21.45	23.25	33.00	PASS
				RB50#25	21.55	23.35	33.00	PASS
				RB50#50	21.57	23.37	33.00	PASS
				RB100#0	21.69	23.49	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	4.20	13	PASS
		MCH	4.06	13	PASS
		HCH	4.41	13	PASS
	TM2/20M	LCH	5.30	13	PASS
		MCH	5.04	13	PASS
		HCH	5.42	13	PASS



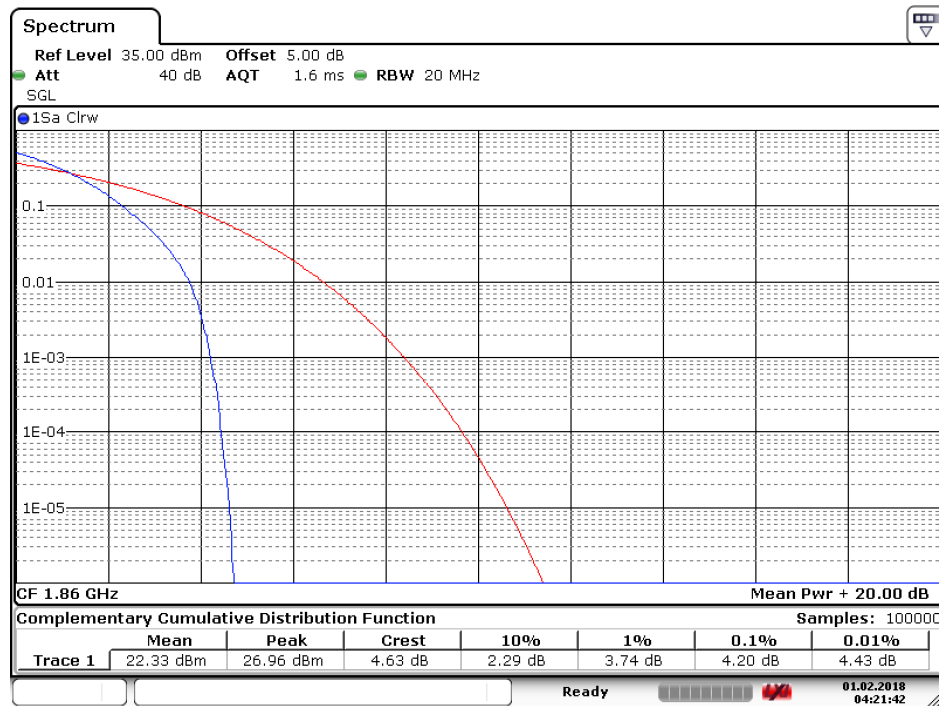
## Part II - Test Plots

### 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

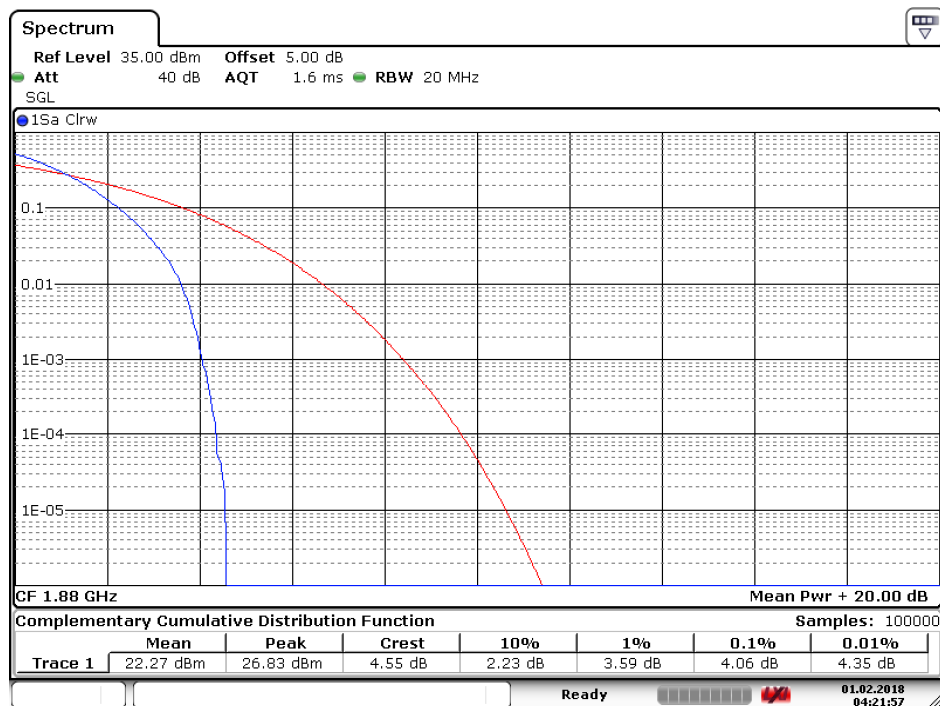


Date: 1.FEB.2018 04:21:42



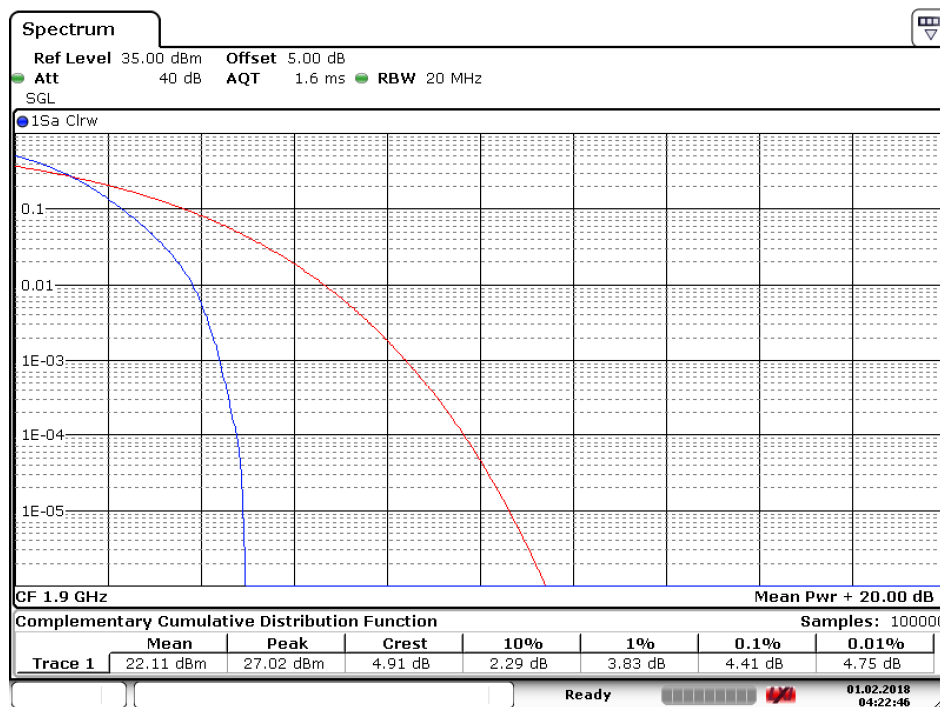


### 2.1.1.1.2 Test Channel = MCH



Date: 1.FEB.2018 04:21:57

### 2.1.1.1.3 Test Channel = HCH

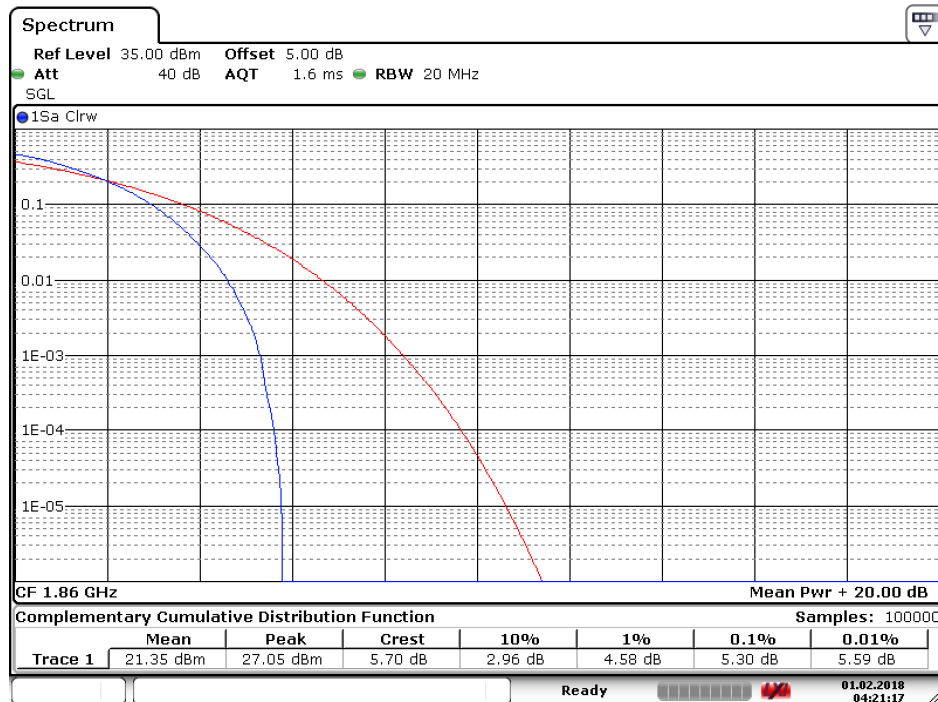


Date: 1.FEB.2018 04:22:46



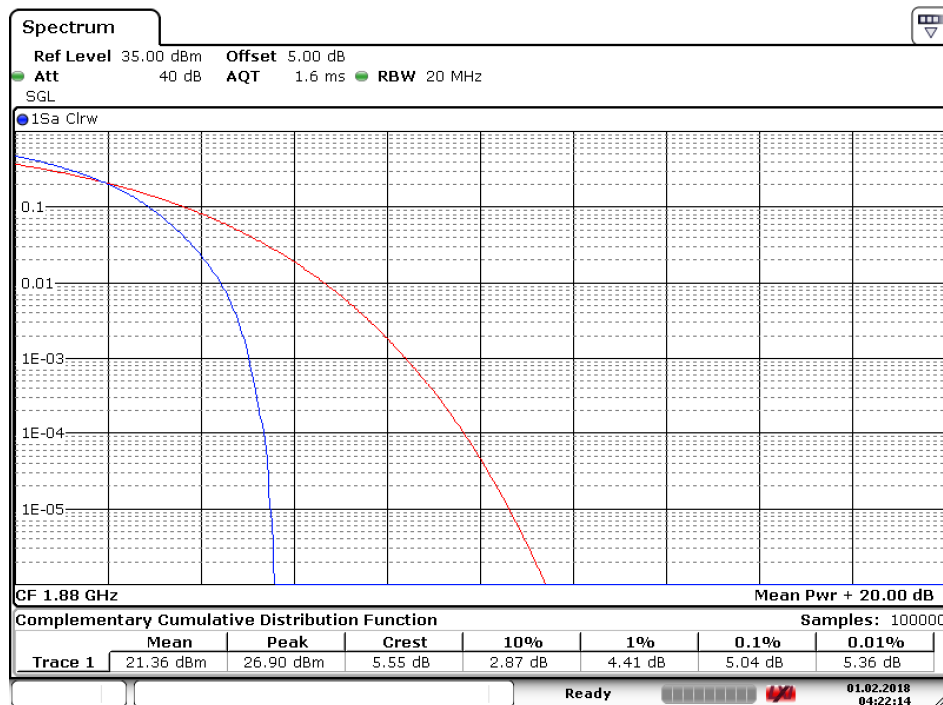
2.1.1.2 Test Mode = LTE/TM2.Bandwidth=20MHz

2.1.1.2.1 Test Channel = LCH



Date: 1.FEB.2018 04:21:18

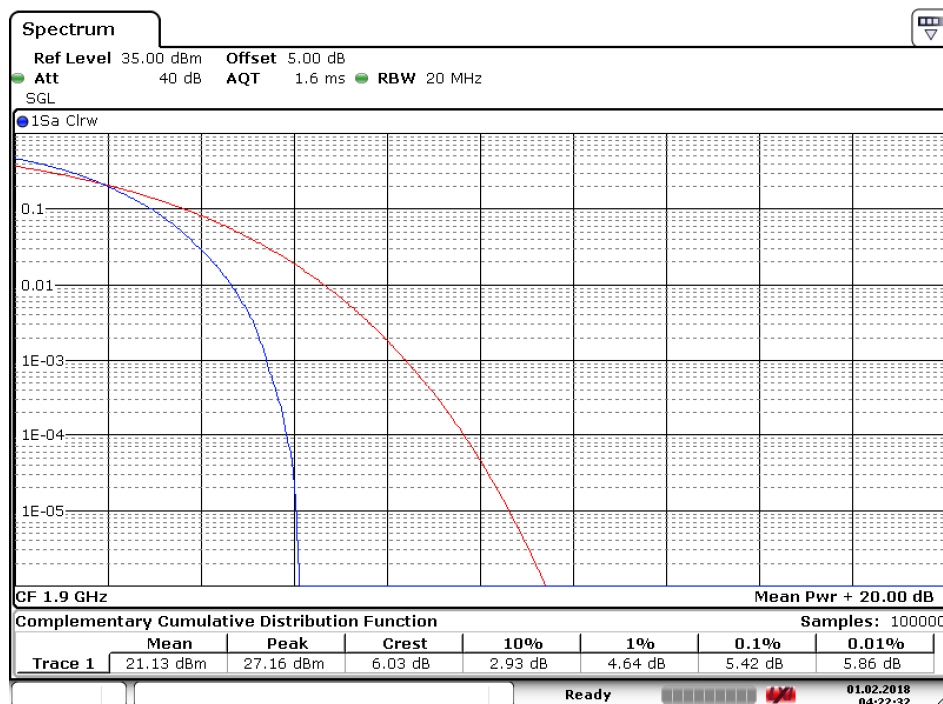
2.1.1.2.2 Test Channel = MCH



Date: 1.FEB.2018 04:22:14



2.1.1.2.3 Test Channel = HCH



Date: 1.FEB.2018 04:22:33



### 3 Modulation Characteristics

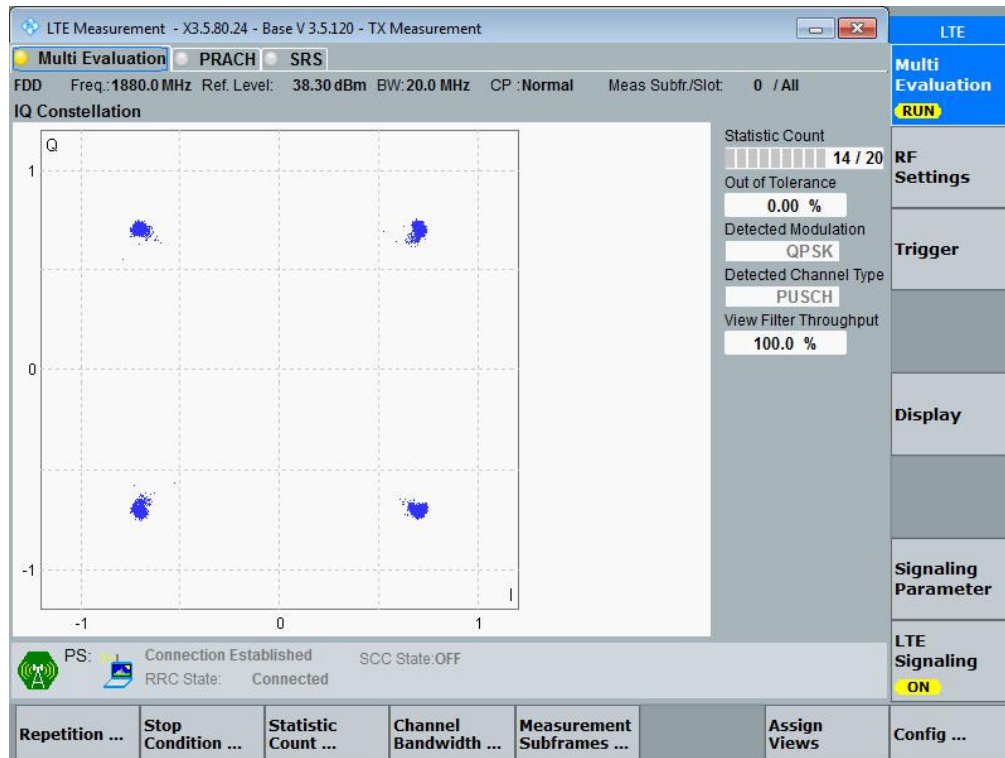
#### Part I - Test Plots

#### 3.1 For LTE

##### 3.1.1 Test Band = LTE band2

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

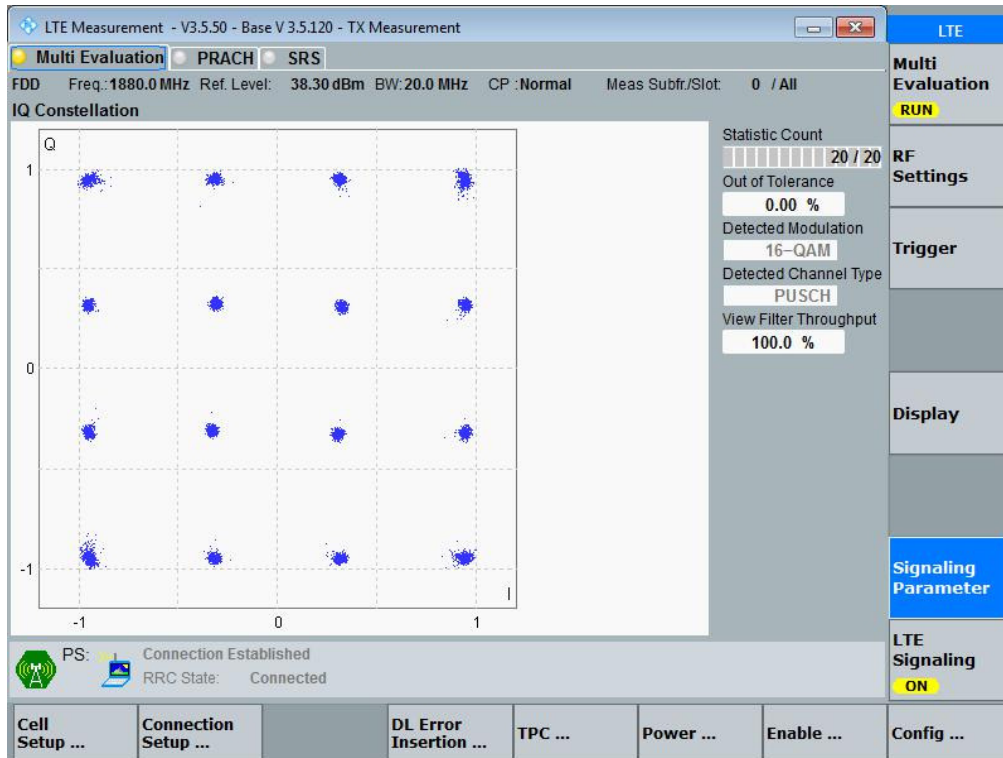
##### 3.1.1.1.1 Test Channel = MCH





### 3.1.1.2 Test Mode = LTE /TM2 20MHz

#### 3.1.1.2.1 Test Channel = MCH





## 4 Bandwidth

### Part I - Test Results

Test Band	Test Mode	Test Channel	Occupied Bandwidth [MHz]	Emission Bandwidth [MHz]	Verdict
Band 2	TM1/1.4MHz	LCH	1.10	1.34	PASS
		MCH	1.10	1.32	PASS
		HCH	1.10	1.31	PASS
	TM2/1.4MHz	LCH	1.09	1.29	PASS
		MCH	1.10	1.32	PASS
		HCH	1.10	1.31	PASS
	TM1/ 3MHz	LCH	2.69	2.94	PASS
		MCH	2.69	2.94	PASS
		HCH	2.69	2.93	PASS
	TM2/3MHz	LCH	2.69	2.94	PASS
		MCH	2.68	2.94	PASS
		HCH	2.69	2.93	PASS
	TM1/ 5MHz	LCH	4.48	4.98	PASS
		MCH	4.49	4.92	PASS
		HCH	4.48	4.93	PASS
	TM2/ 5MHz	LCH	4.48	4.93	PASS
		MCH	4.47	4.92	PASS
		HCH	4.48	4.95	PASS
	TM1/10MHz	LCH	8.93	9.59	PASS
		MCH	8.95	9.65	PASS
		HCH	8.93	9.73	PASS
	TM2/ 10MHz	LCH	8.93	9.69	PASS
		MCH	8.95	9.61	PASS
		HCH	8.93	9.61	PASS
	TM1/ 15MHz	LCH	13.46	14.84	PASS
		MCH	13.43	14.69	PASS
		HCH	13.43	14.81	PASS
	TM2/ 15MHz	LCH	13.43	14.66	PASS
		MCH	13.43	14.69	PASS
		HCH	13.43	14.81	PASS
	TM1/ 20MHz	LCH	17.90	19.50	PASS
		MCH	17.86	19.26	PASS
		HCH	17.86	19.14	PASS
	TM2/ 20MHz	LCH	17.86	19.34	PASS
		MCH	17.86	19.26	PASS
		HCH	17.90	19.26	PASS

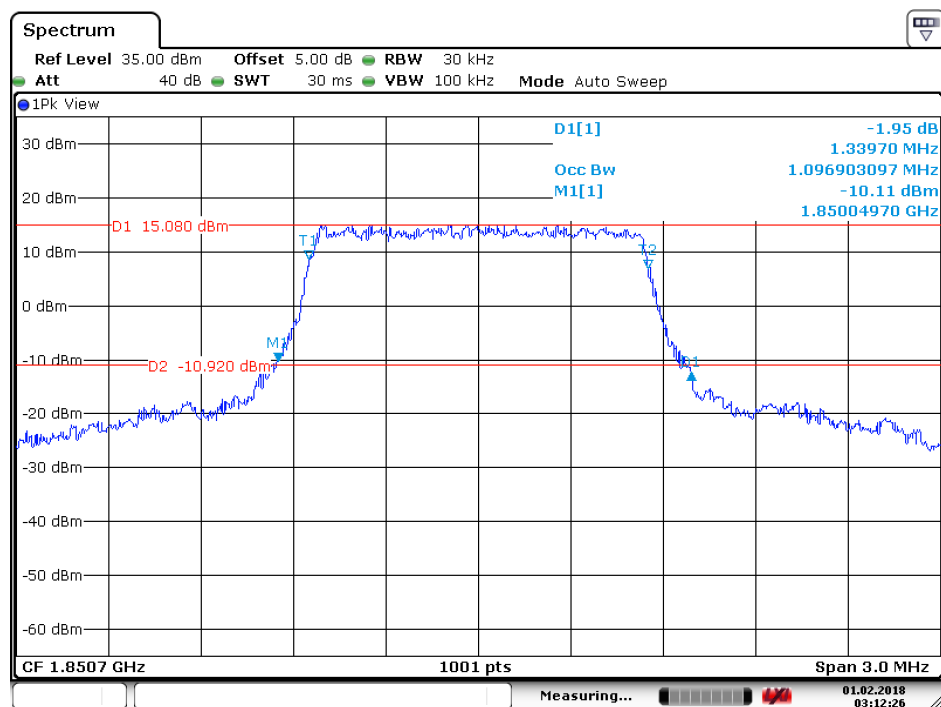


## 4.1 For LTE

### 4.1.1 Test Band = LTE band2

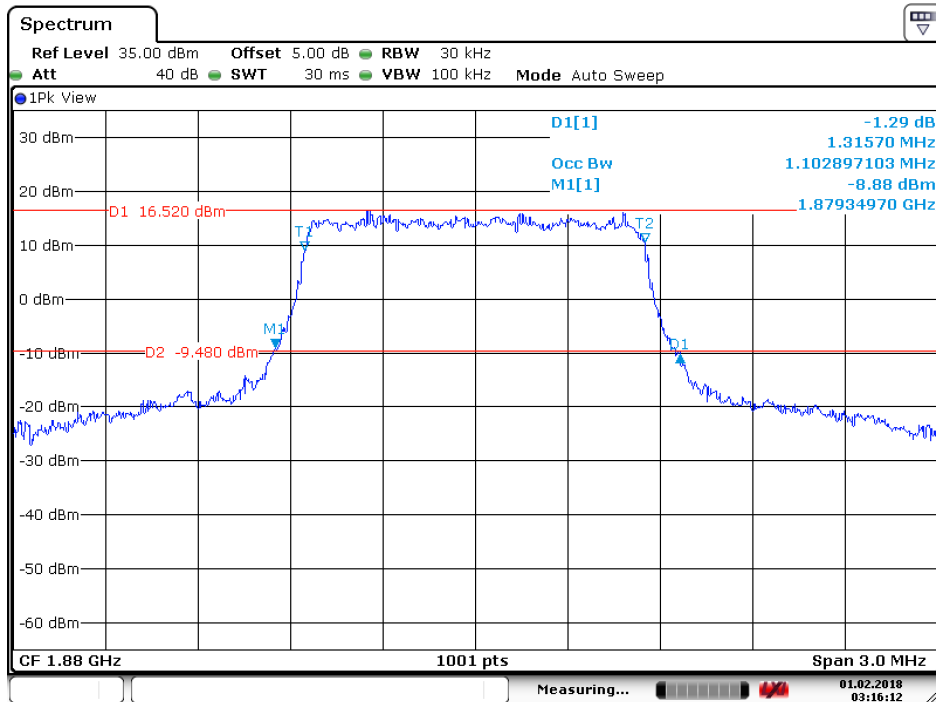
#### 4.1.1.1 Test Mode = LTE/TM1 1.4MHz

##### 4.1.1.1.1 Test Channel = LCH



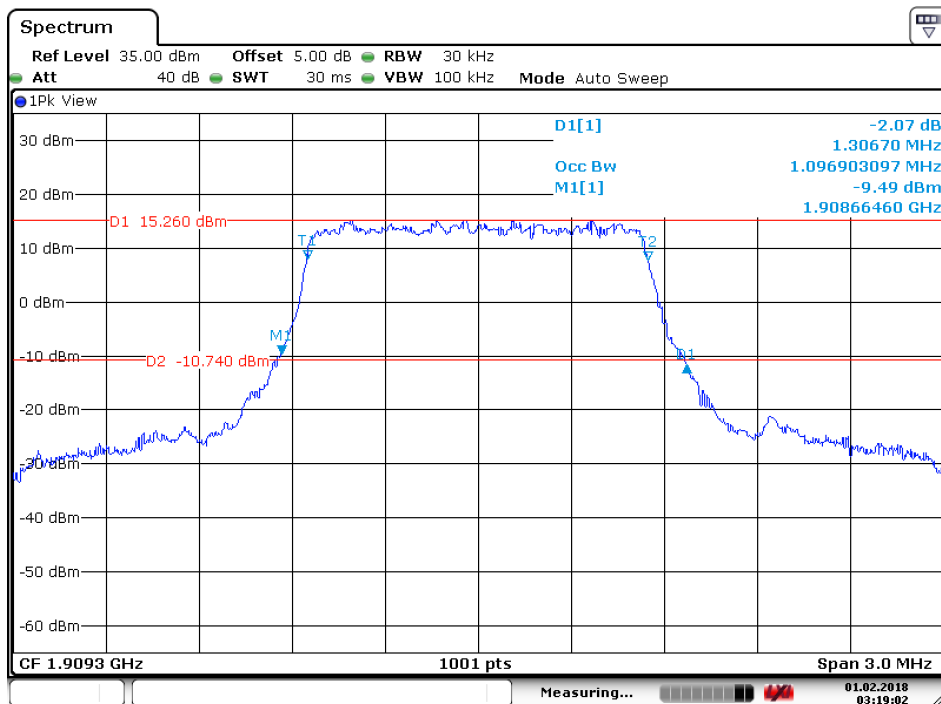
Date: 1.FEB.2018 03:12:27

#### 4.1.1.1.2 Test Channel = MCH



Date: 1.FEB.2018 03:16:13

#### 4.1.1.1.3 Test Channel = HCH



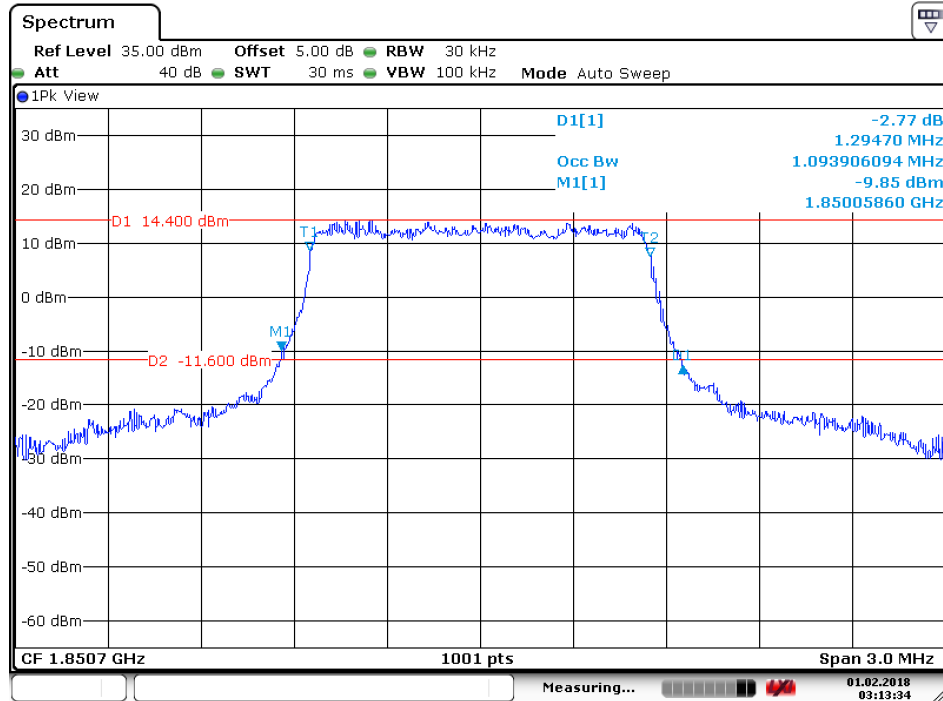
Date: 1.FEB.2018 03:19:02





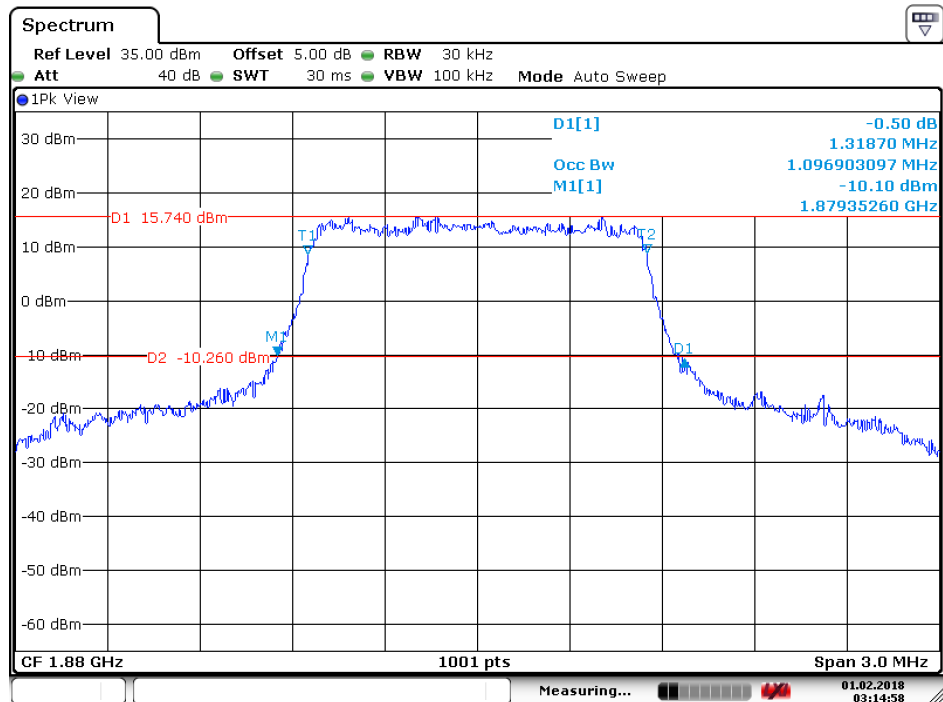
#### 4.1.1.2 Test Mode = LTE/TM2 1.4MHz

##### 4.1.1.2.1 Test Channel = LCH



Date: 1.FEB.2018 03:13:35

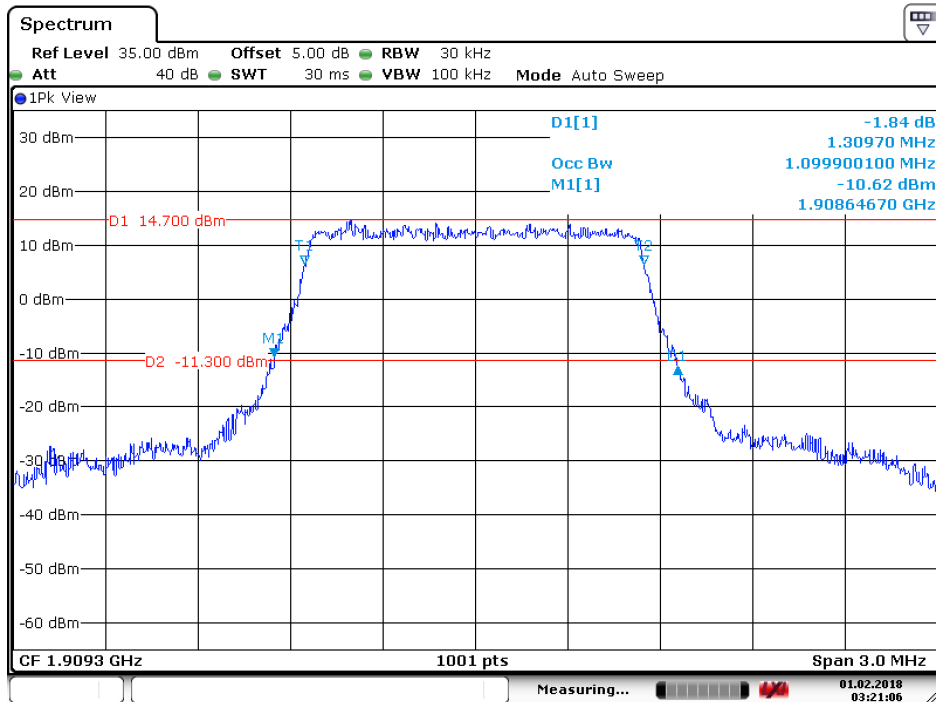
##### 4.1.1.2.2 Test Channel = MCH



Date: 1.FEB.2018 03:14:58



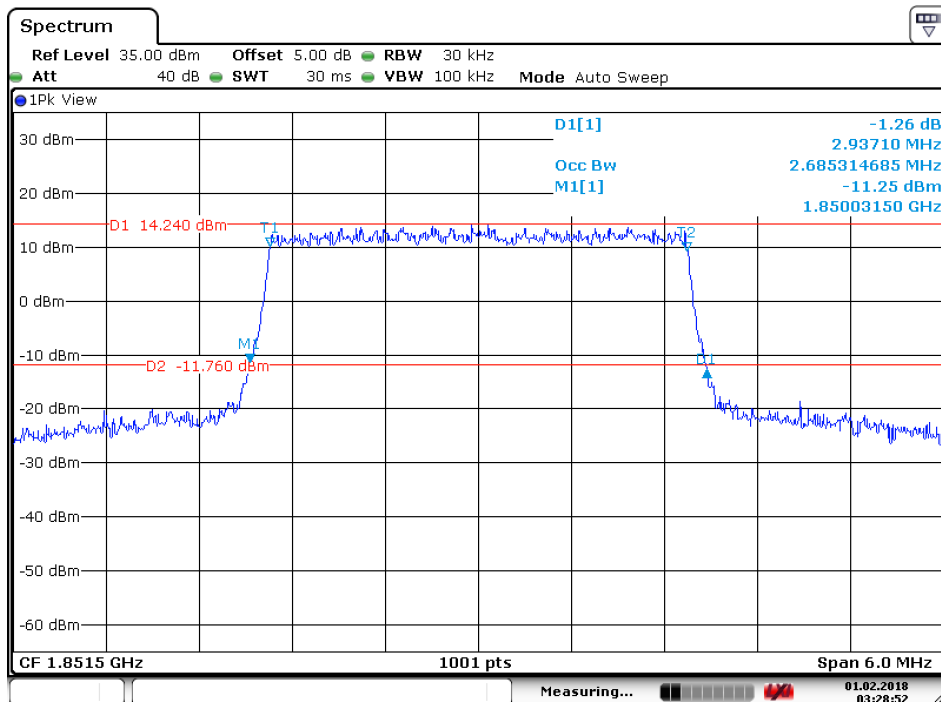
#### 4.1.1.2.3 Test Channel = HCH



Date: 1.FEB.2018 03:21:07

#### 4.1.1.3 Test Mode = LTE/TM1 3MHz

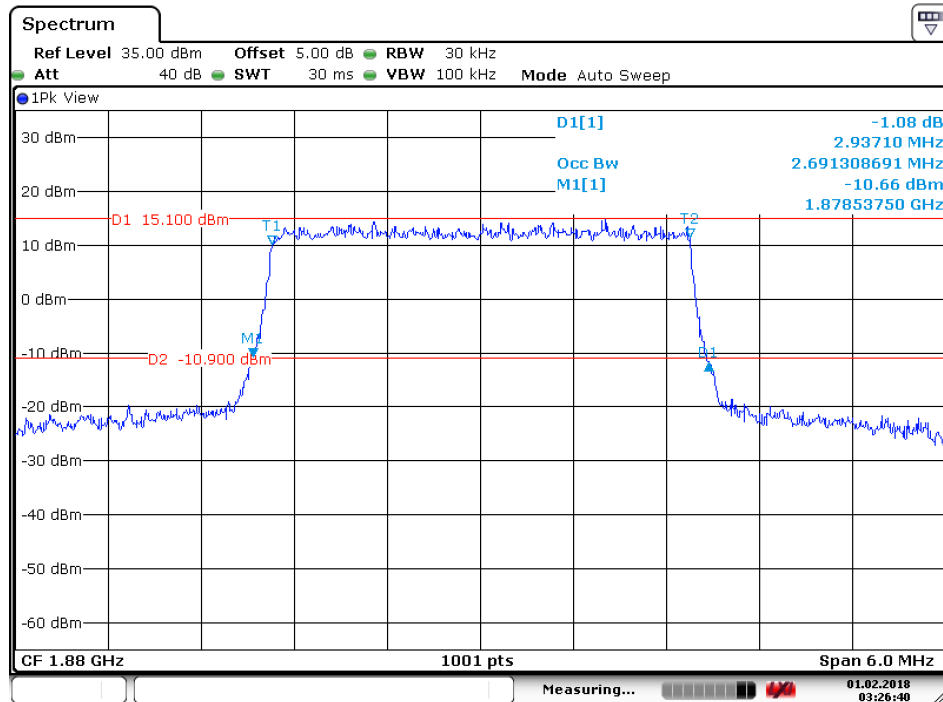
##### 4.1.1.3.1 Test Channel = LCH



Date: 1.FEB.2018 03:28:52

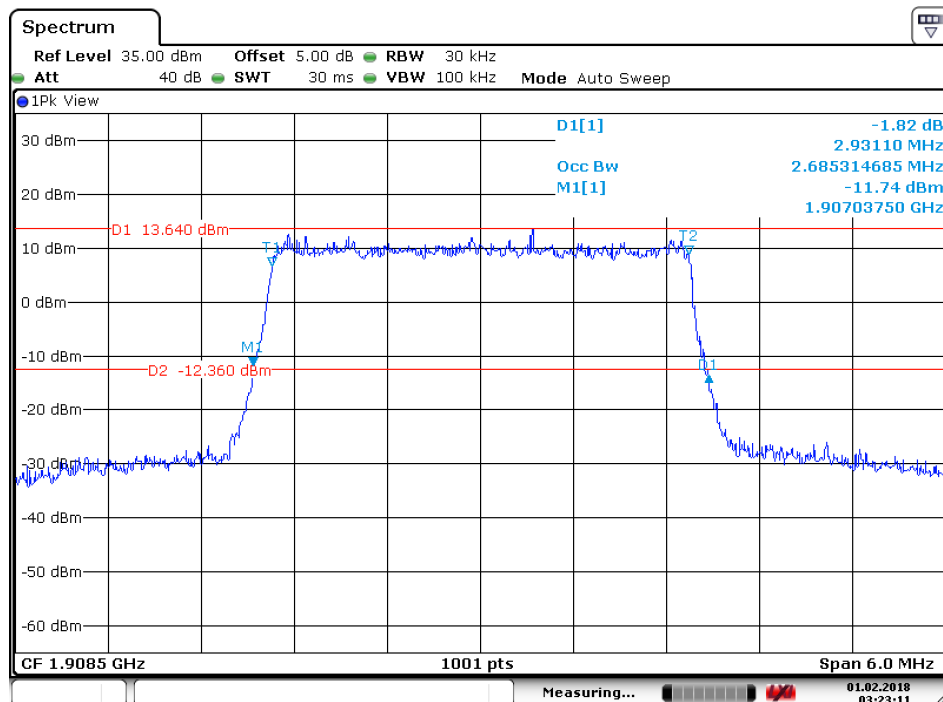


#### 4.1.1.3.2 Test Channel = MCH



Date: 1.FEB.2018 03:26:40

#### 4.1.1.3.3 Test Channel = HCH

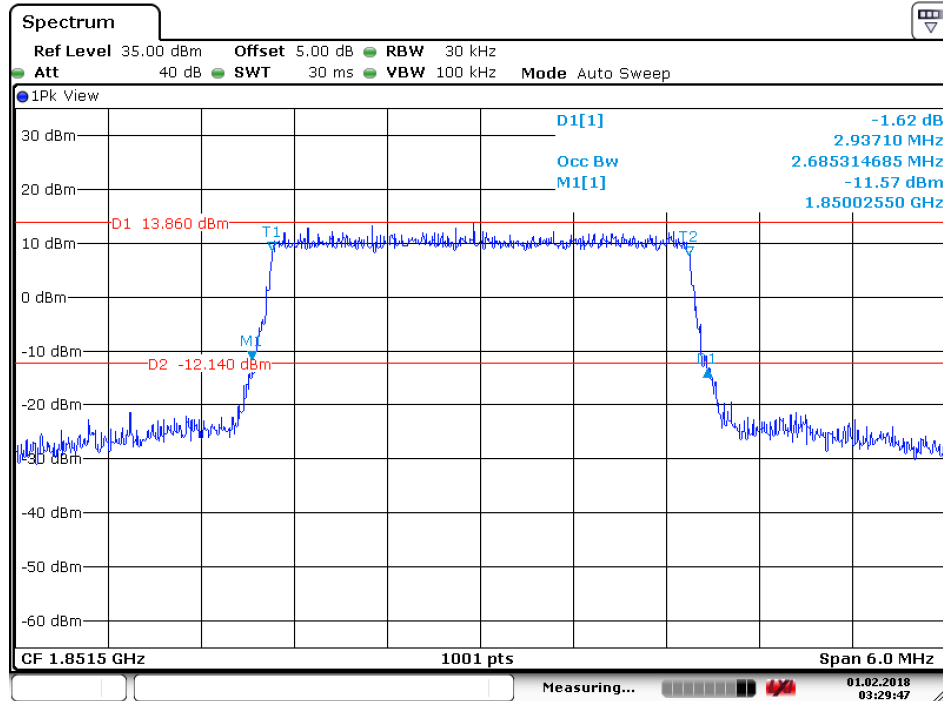


Date: 1.FEB.2018 03:23:11



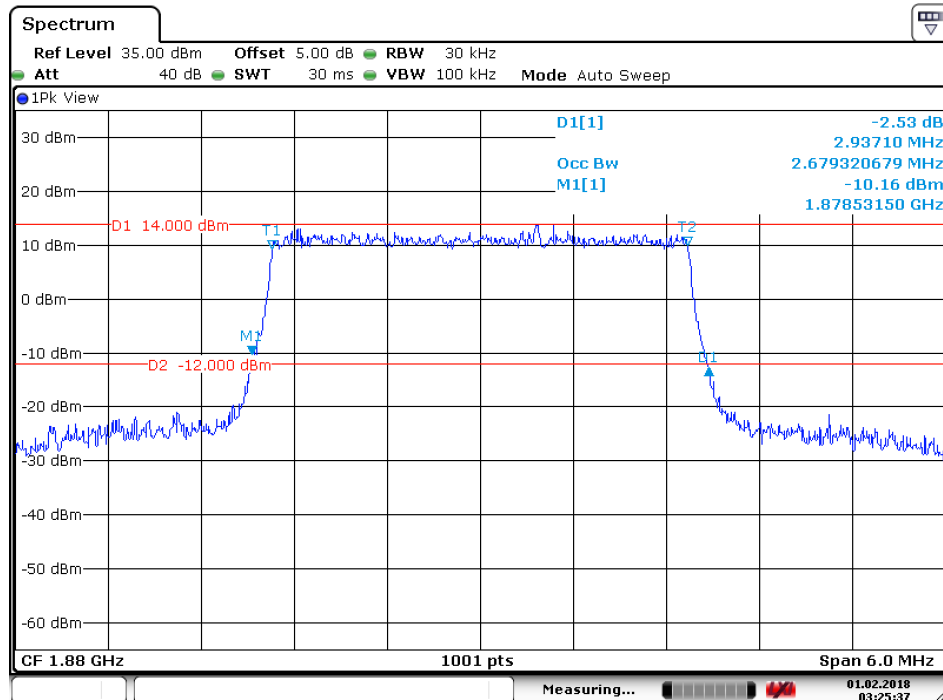
#### 4.1.1.4 Test Mode = LTE/TM2 3MHz

##### 4.1.1.4.1 Test Channel = LCH



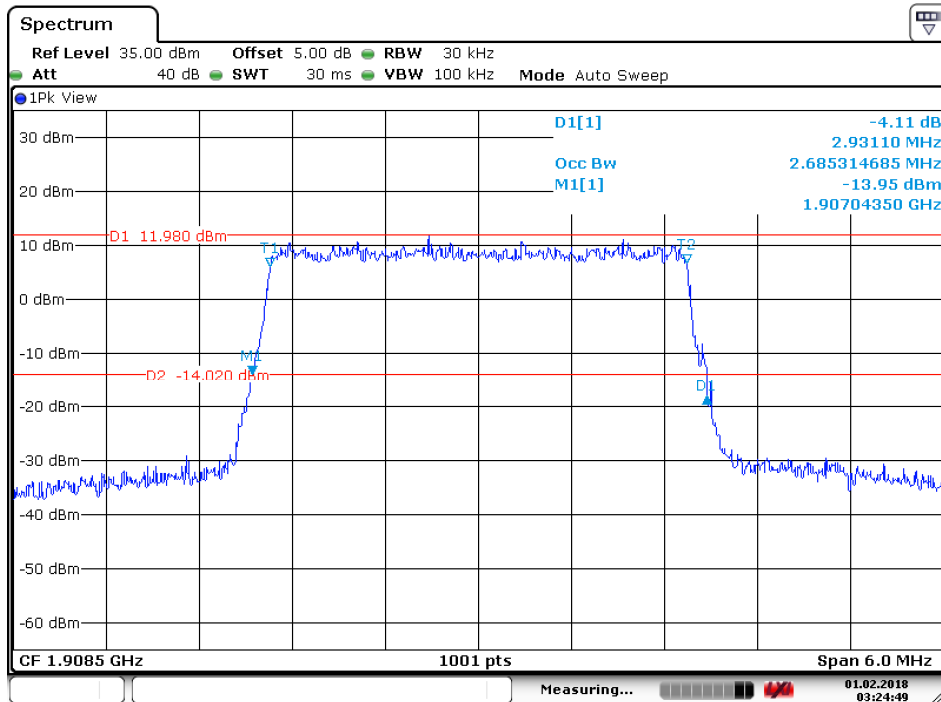
Date: 1.FEB.2018 03:29:47

##### 4.1.1.4.2 Test Channel = MCH



Date: 1.FEB.2018 03:25:38

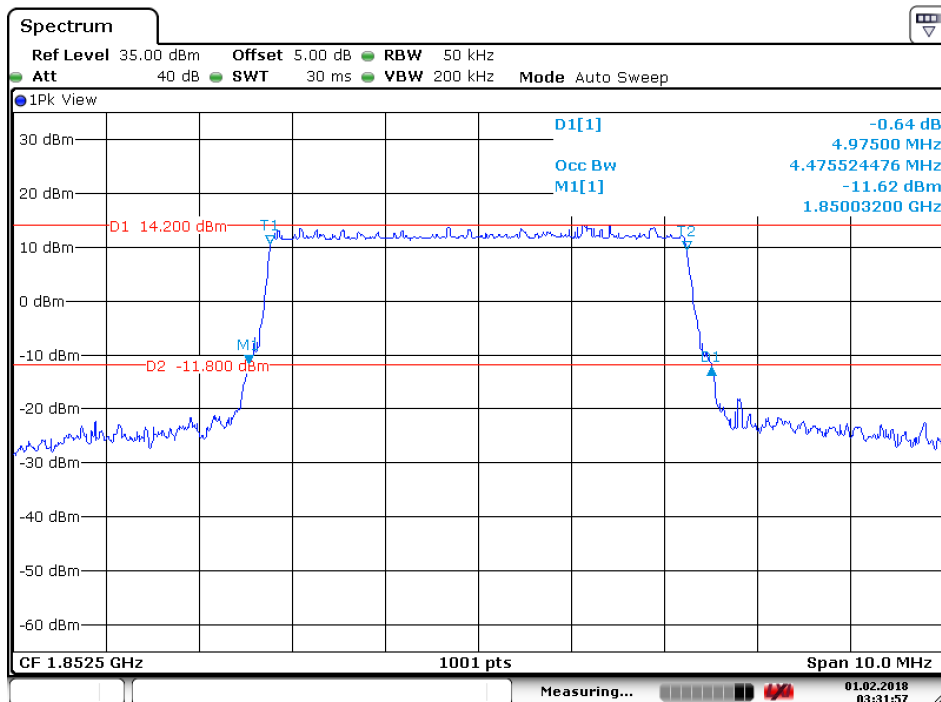
#### 4.1.1.4.3 Test Channel = HCH



Date: 1.FEB.2018 03:24:48

#### 4.1.1.5 Test Mode = LTE/TM1 5MHz

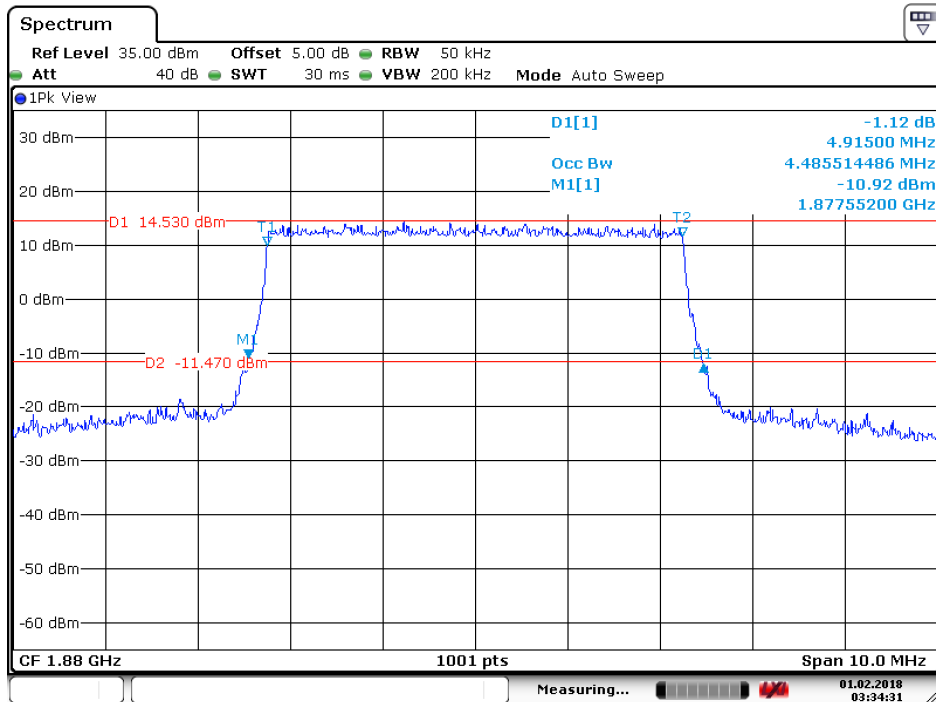
#### 4.1.1.5.1 Test Channel = LCH



Date: 1.FEB.2018 03:31:58

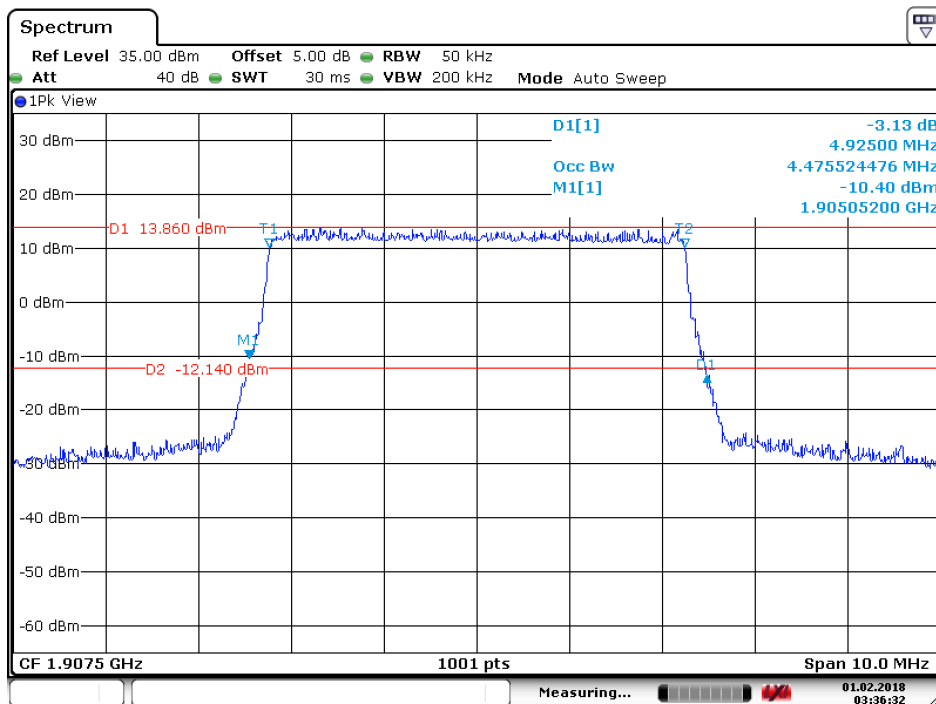


4.1.1.5.2 Test Channel = MCH



Date: 1.FEB.2018 03:34:31

4.1.1.5.3 Test Channel = HCH

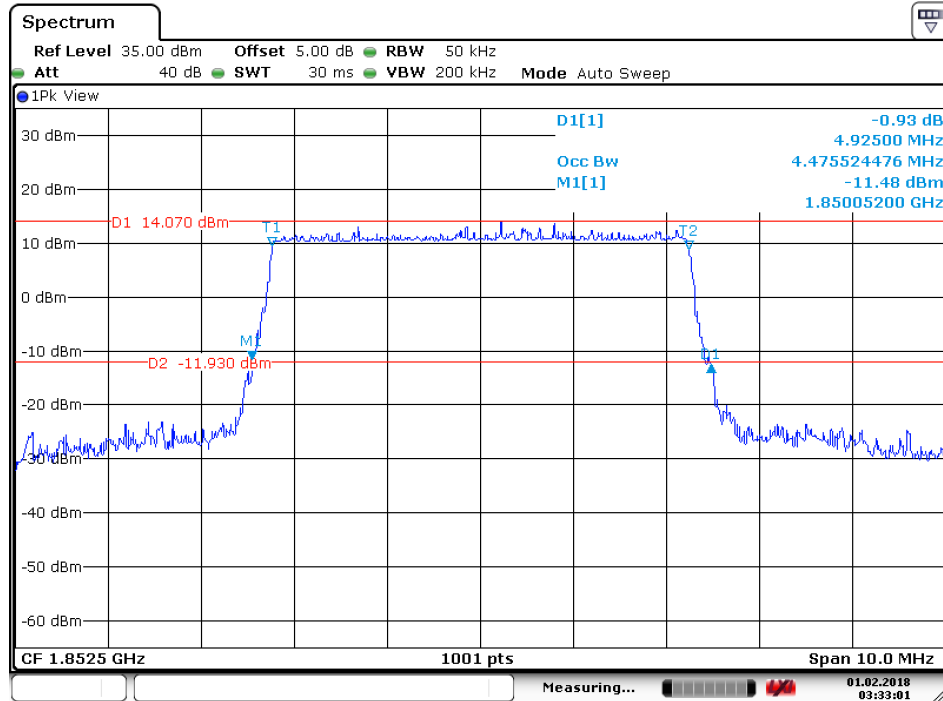


Date: 1.FEB.2018 03:36:32



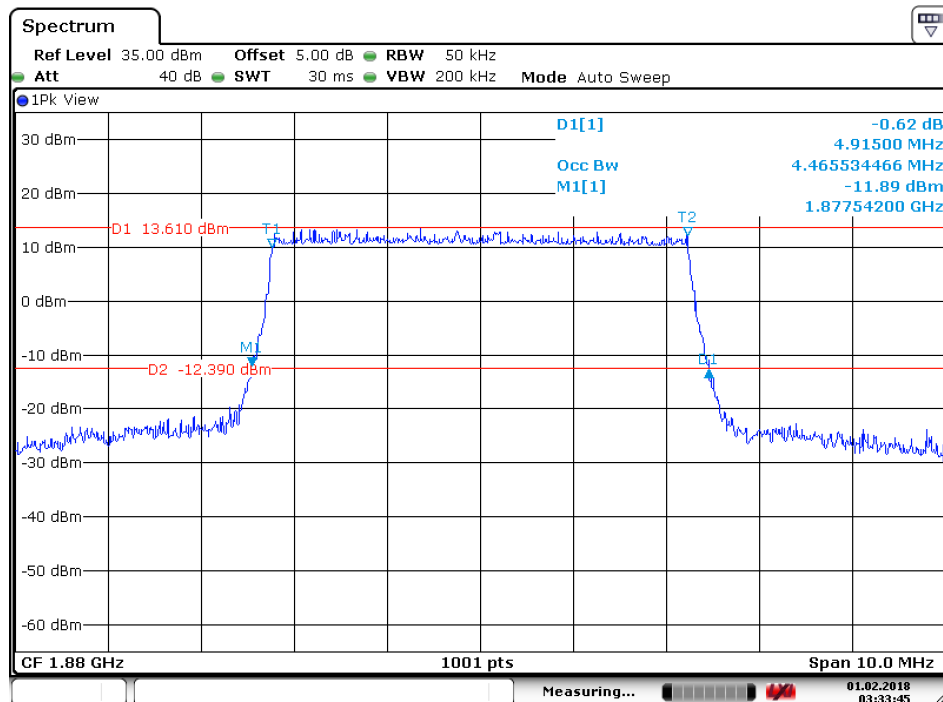
#### 4.1.1.6 Test Mode = LTE/TM2 5MHz

##### 4.1.1.6.1 Test Channel = LCH



Date: 1.FEB.2018 03:33:02

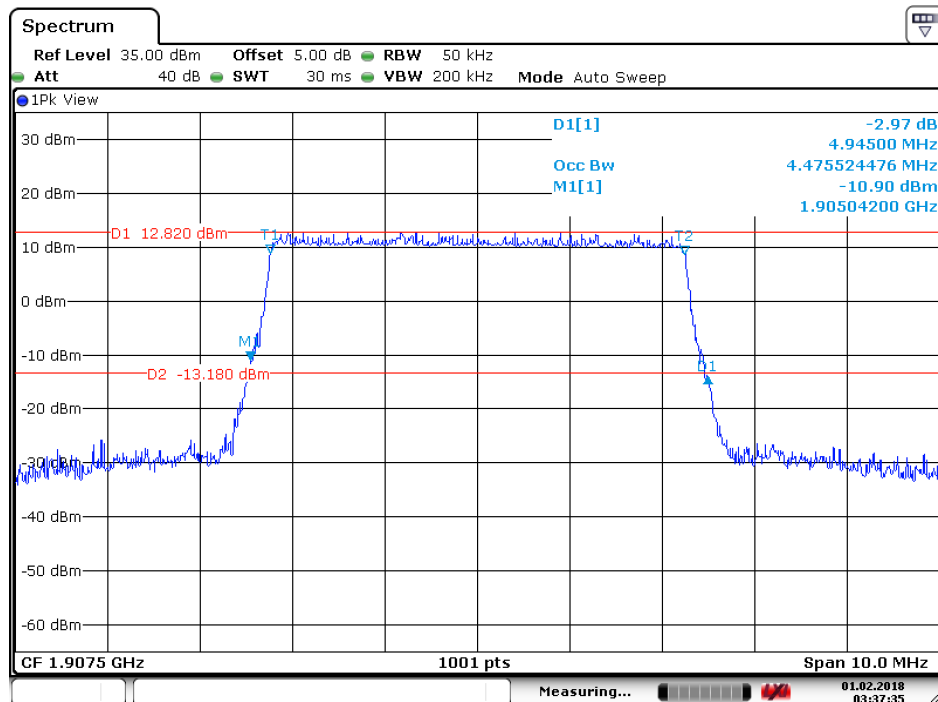
##### 4.1.1.6.2 Test Channel = MCH



Date: 1.FEB.2018 03:33:45



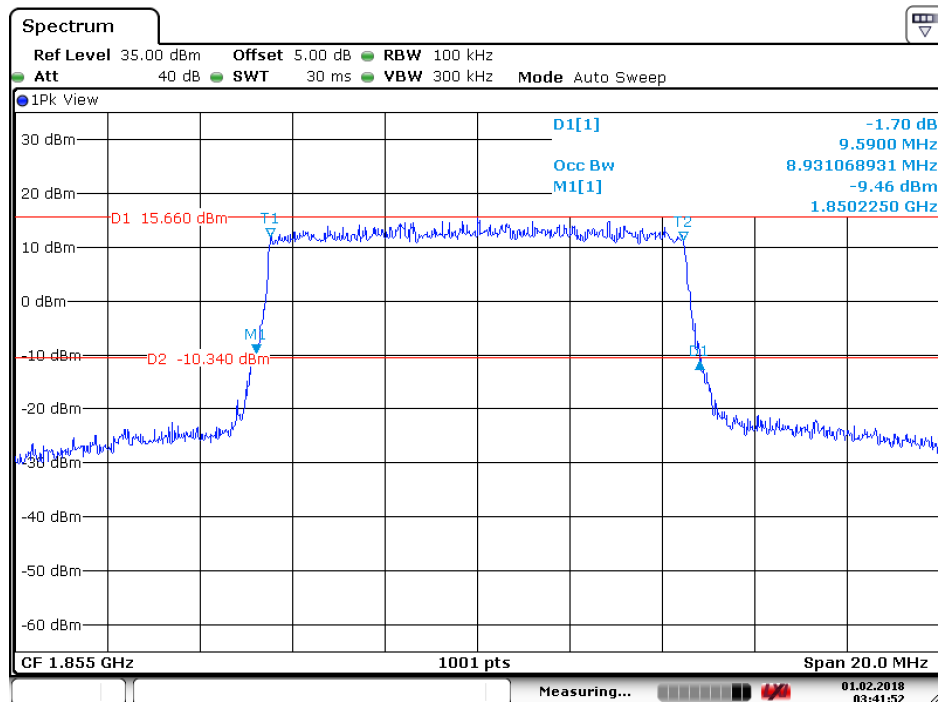
#### 4.1.1.6.3 Test Channel = HCH



Date: 1.FEB.2018 03:37:35

#### 4.1.1.7 Test Mode = LTE/TM1 10MHz

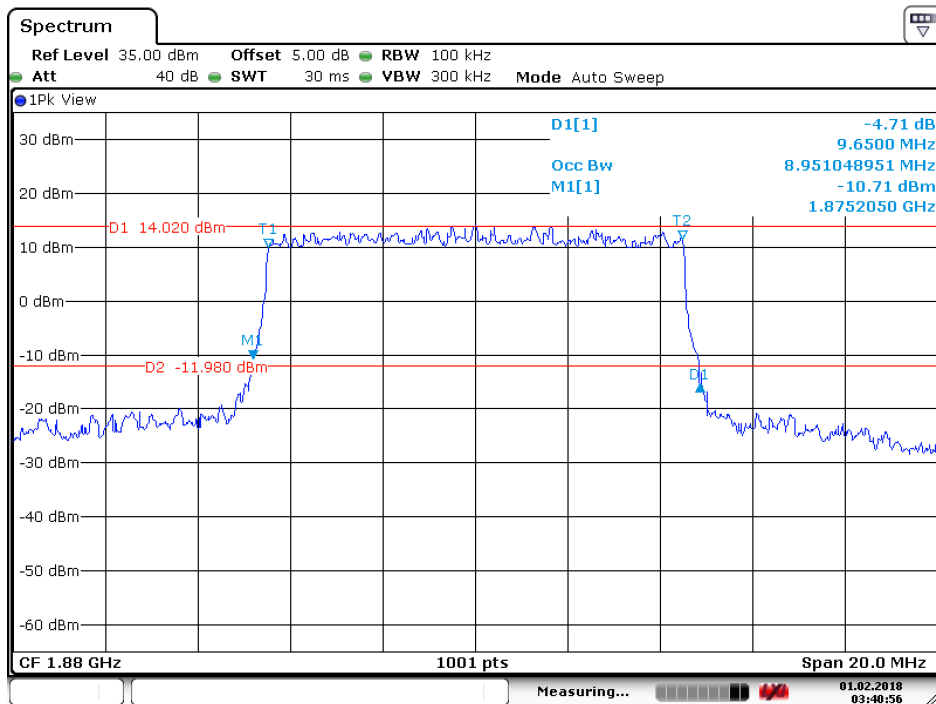
##### 4.1.1.7.1 Test Channel = LCH



Date: 1.FEB.2018 03:41:52

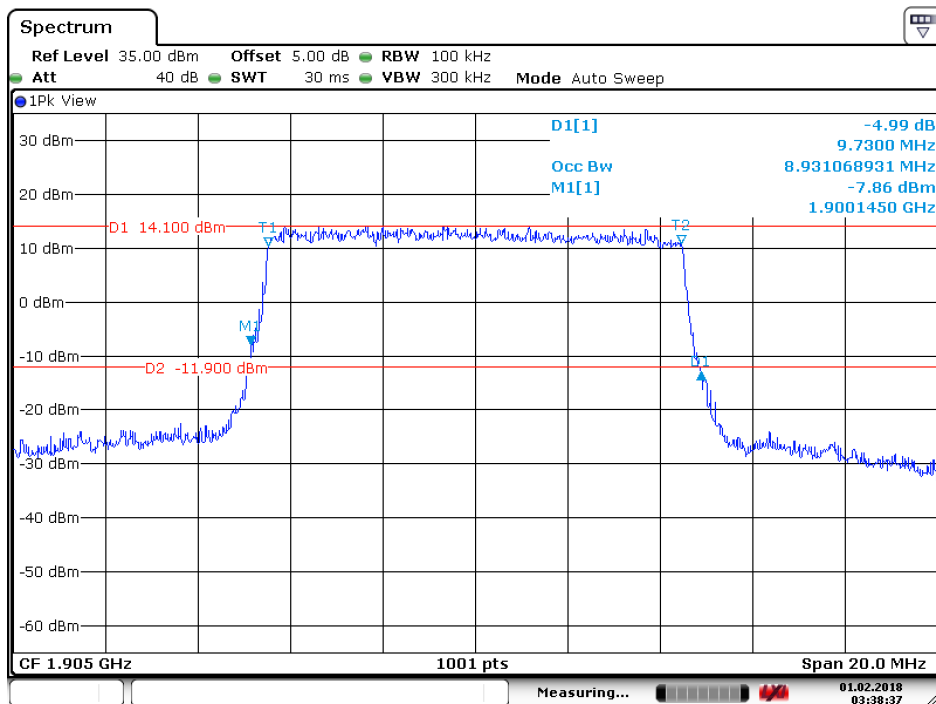


#### 4.1.1.7.2 Test Channel = MCH



Date: 1.FEB.2018 03:40:56

#### 4.1.1.7.3 Test Channel = HCH

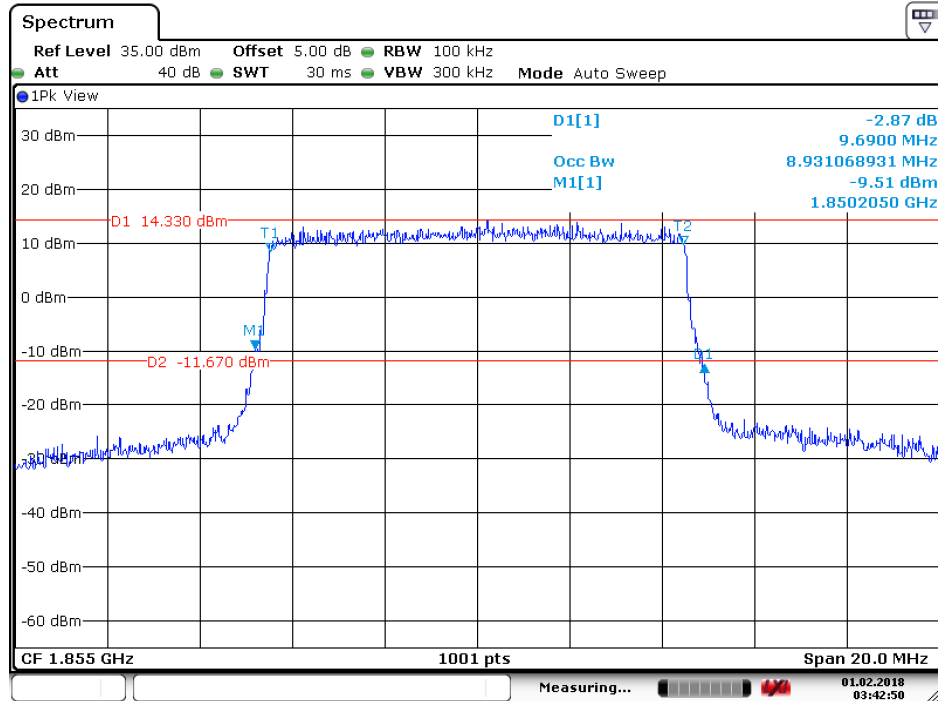


Date: 1.FEB.2018 03:38:38



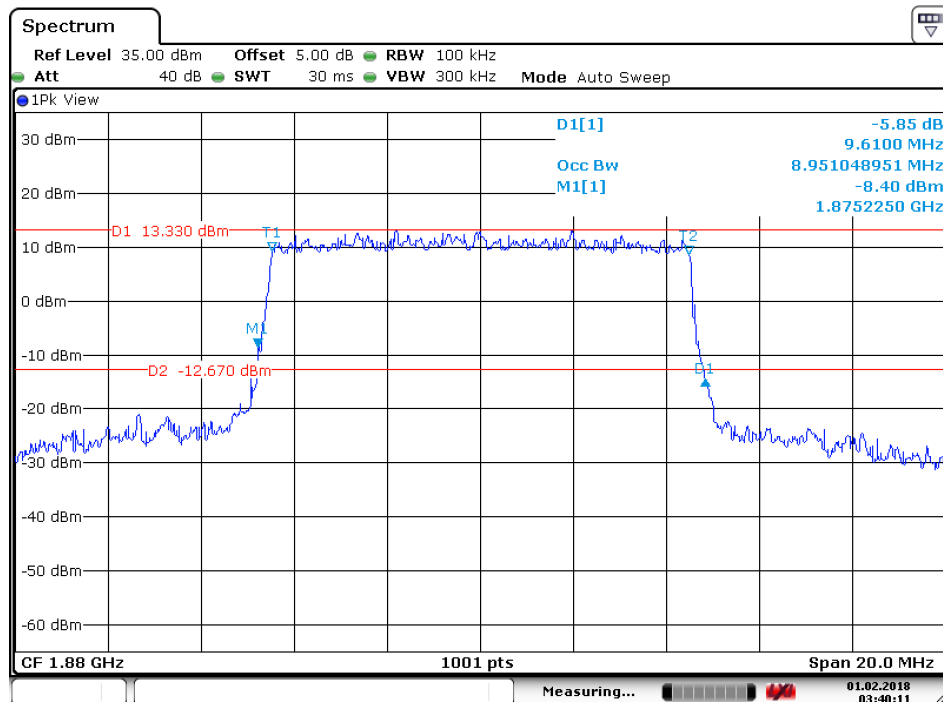
#### 4.1.1.8 Test Mode = LTE/TM2 10MHz

##### 4.1.1.8.1 Test Channel = LCH



Date: 1.FEB.2018 03:42:50

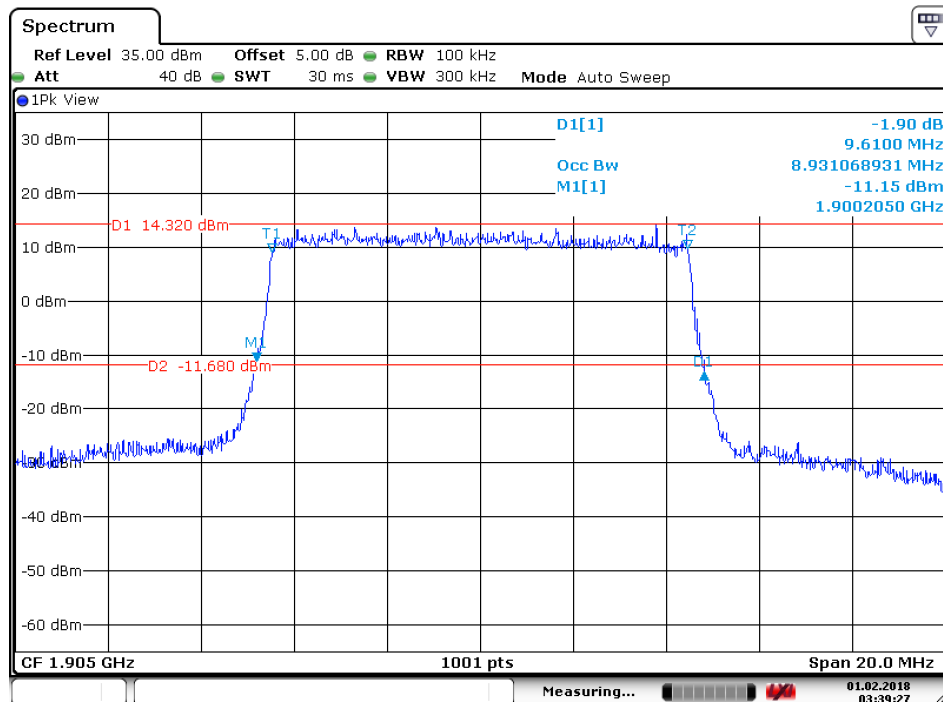
##### 4.1.1.8.2 Test Channel = MCH



Date: 1.FEB.2018 03:40:12



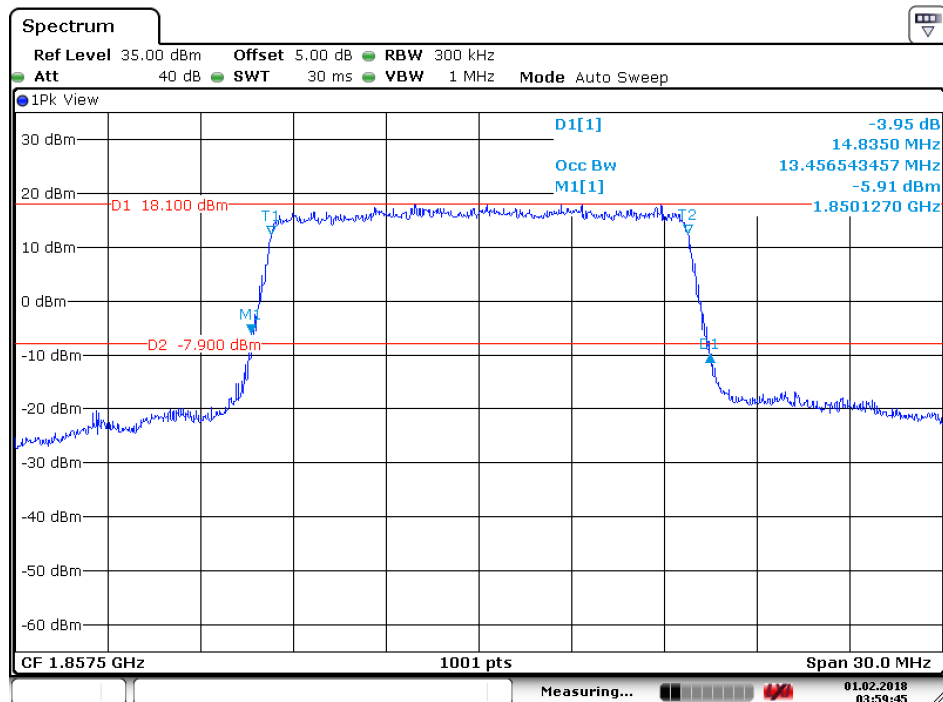
#### 4.1.1.8.3 Test Channel = HCH



Date: 1.FEB.2018 03:39:27

#### 4.1.1.9 Test Mode = LTE/TM1 15MHz

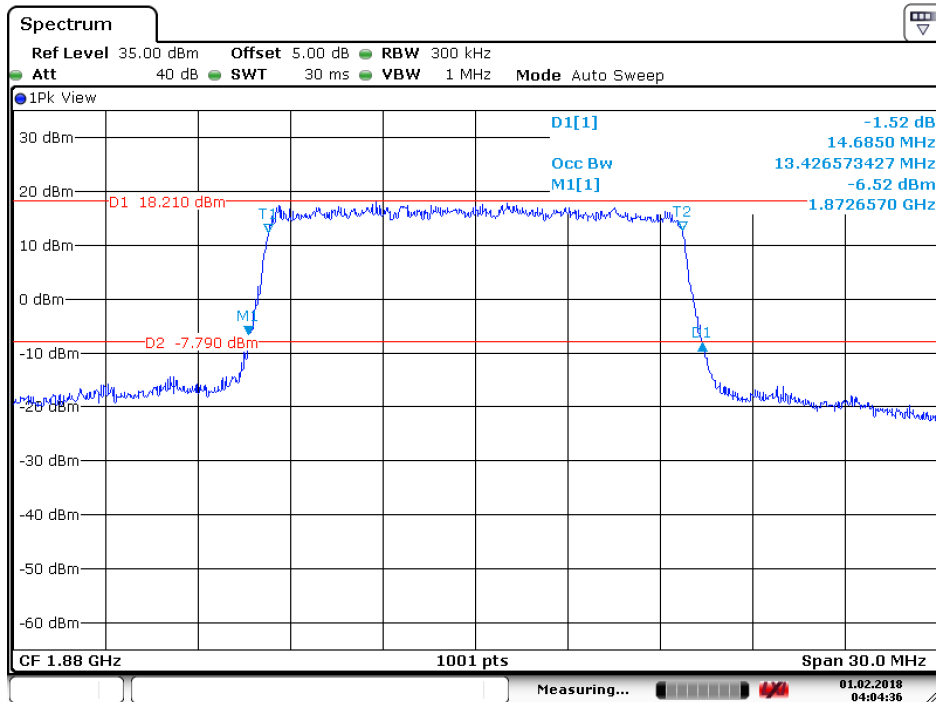
##### 4.1.1.9.1 Test Channel = LCH



Date: 1.FEB.2018 03:59:45

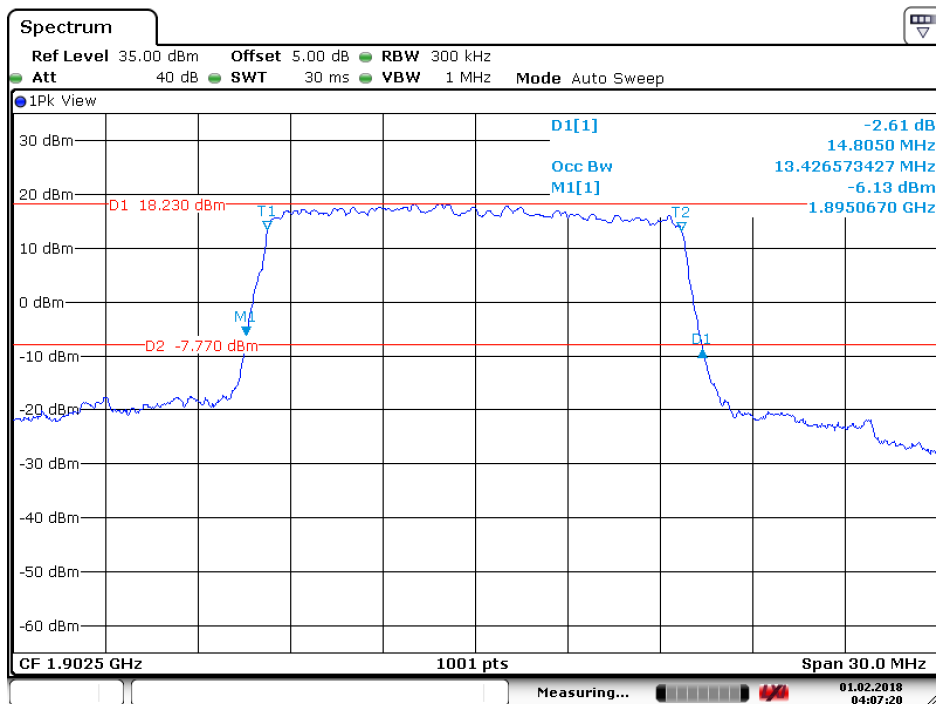


#### 4.1.1.9.2 Test Channel = MCH



Date: 1.FEB.2018 04:04:36

#### 4.1.1.9.3 Test Channel = HCH

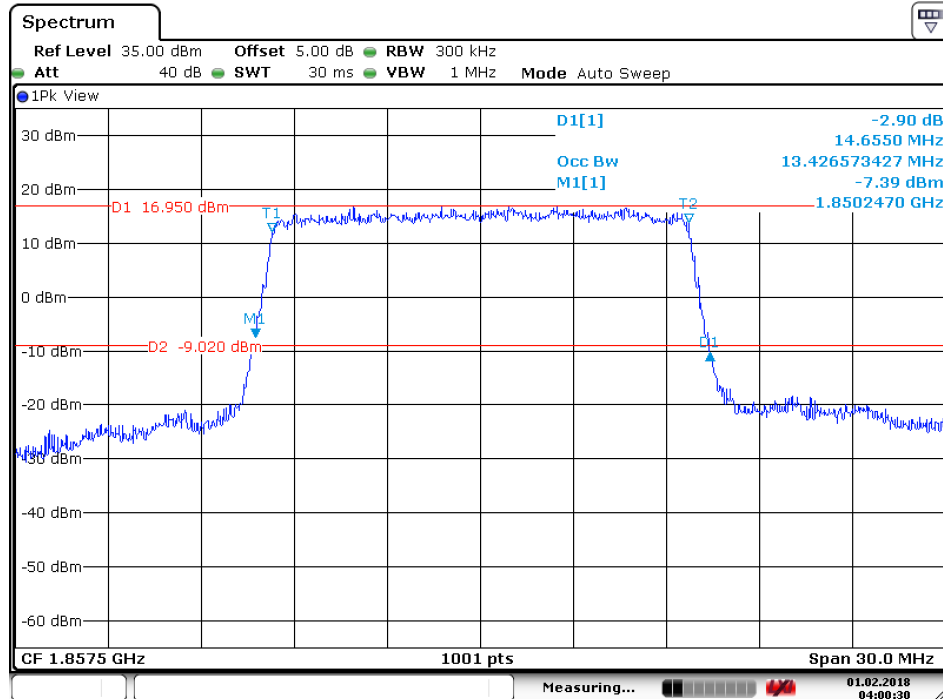


Date: 1.FEB.2018 04:07:20



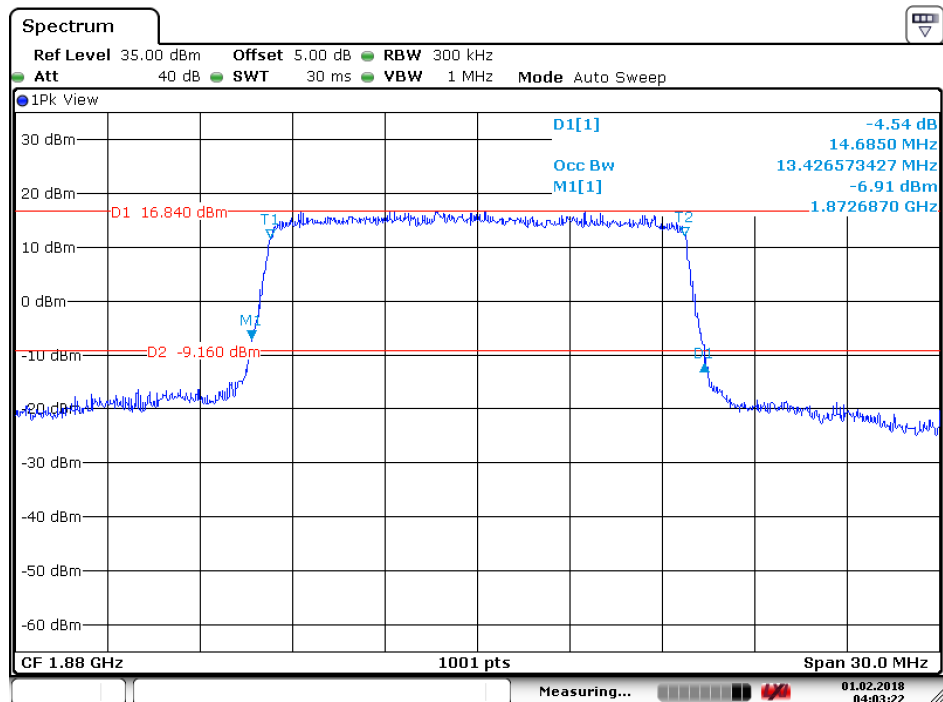
#### 4.1.1.10 Test Mode = LTE/TM2 15MHz

##### 4.1.1.10.1 Test Channel = LCH



Date: 1.FEB.2018 04:00:31

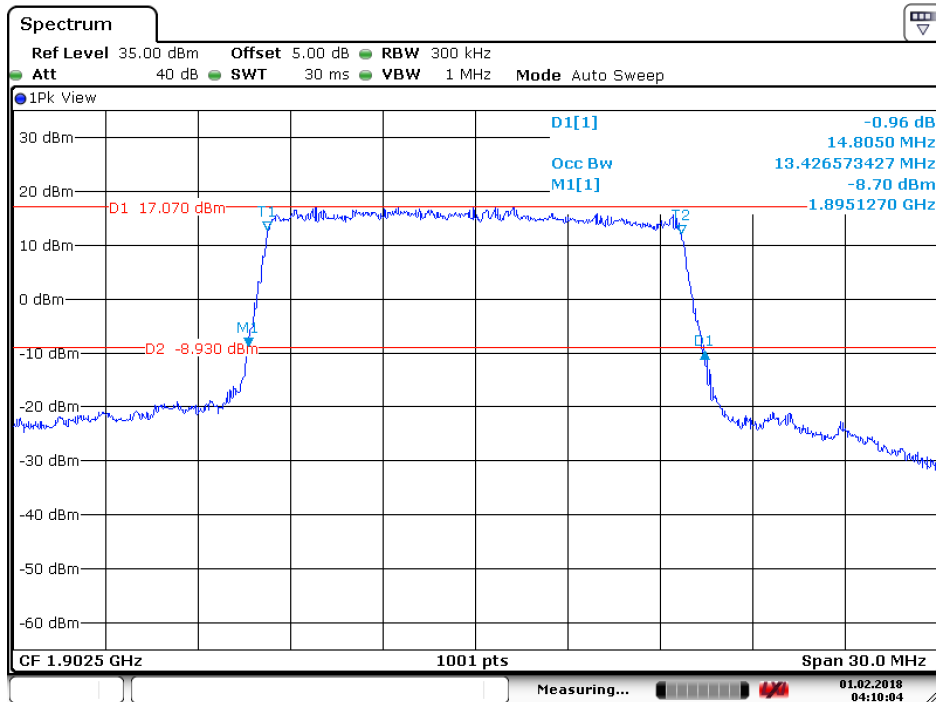
##### 4.1.1.10.2 Test Channel = MCH



Date: 1.FEB.2018 04:03:22



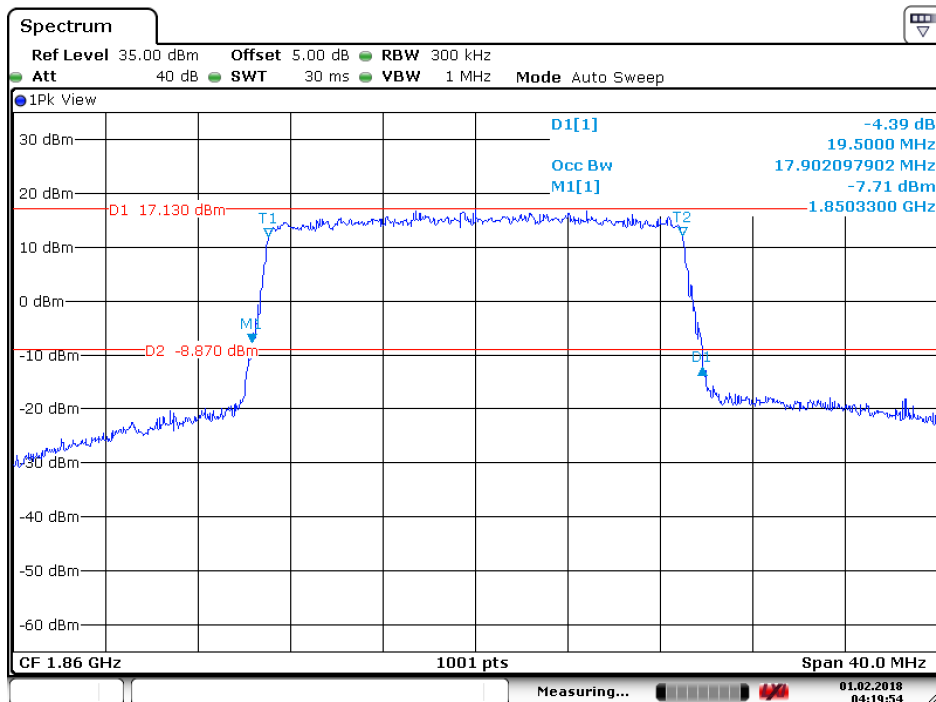
#### 4.1.1.10.3 Test Channel = HCH



Date: 1.FEB.2018 04:10:05

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

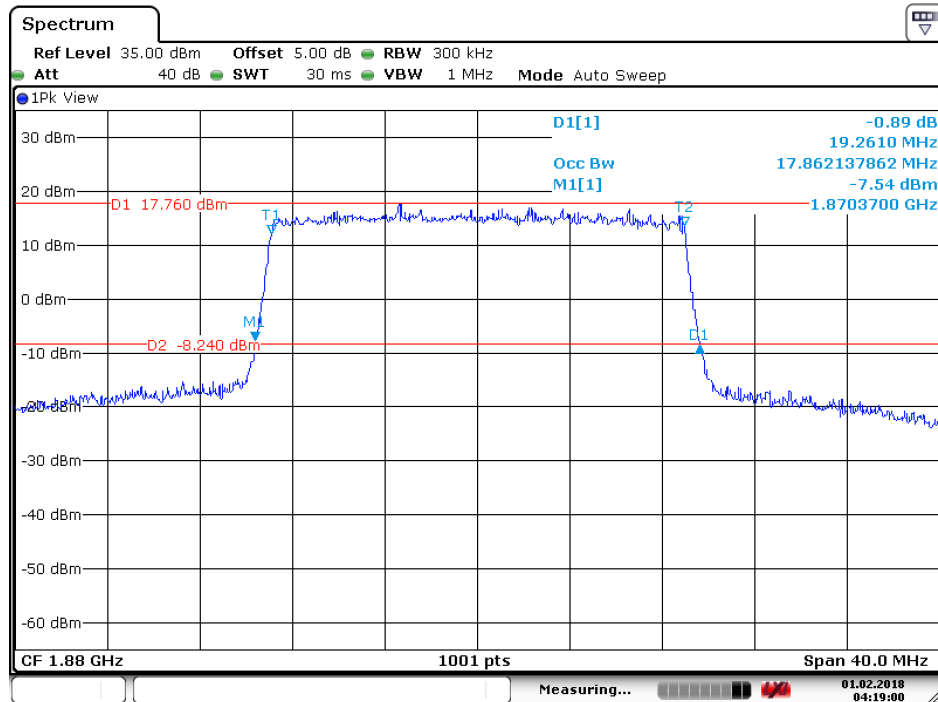
##### 4.1.1.11.1 Test Channel = LCH



Date: 1.FEB.2018 04:19:54

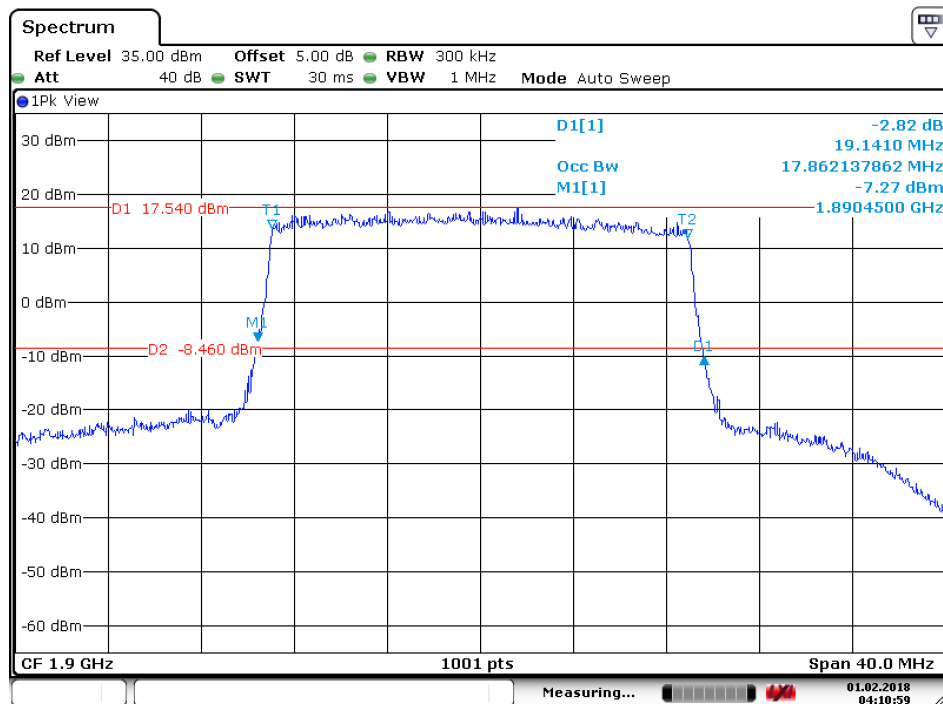


4.1.1.11.2 Test Channel = MCH



Date: 1.FEB.2018 04:19:01

4.1.1.11.3 Test Channel = HCH

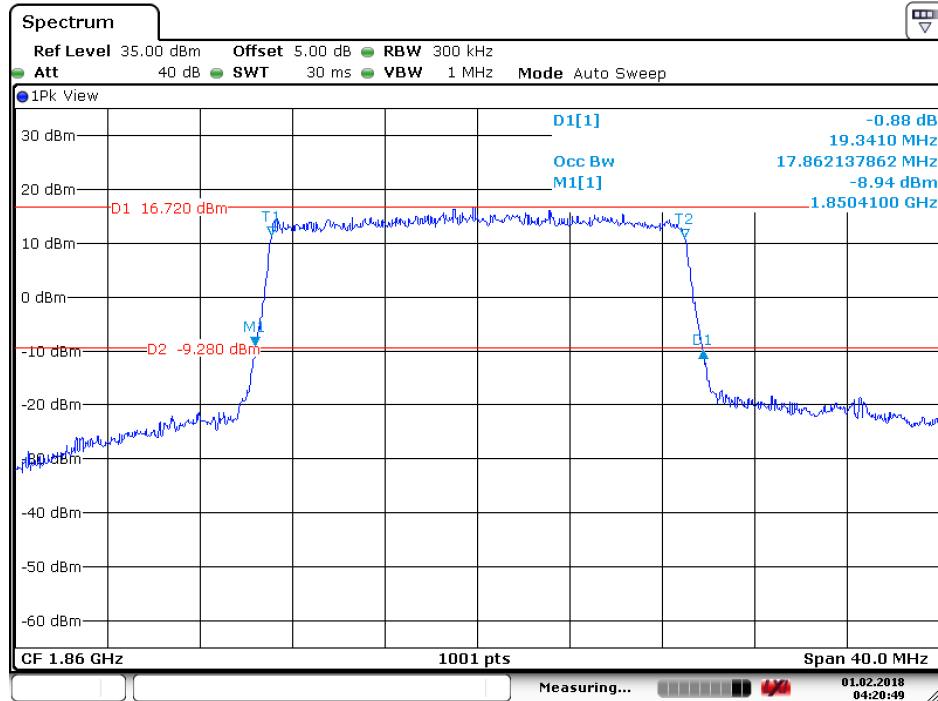


Date: 1.FEB.2018 04:11:00



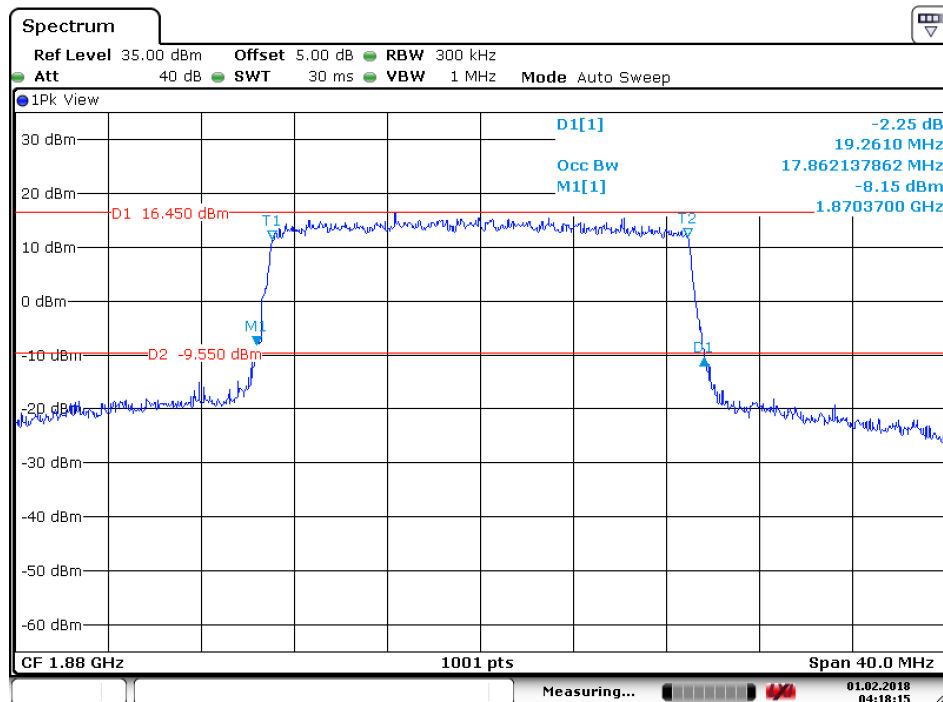
#### 4.1.1.12 Test Mode = LTE/TM2 20MHz

##### 4.1.1.12.1 Test Channel = LCH



Date: 1.FEB.2018 04:20:49

##### 4.1.1.12.2 Test Channel = MCH

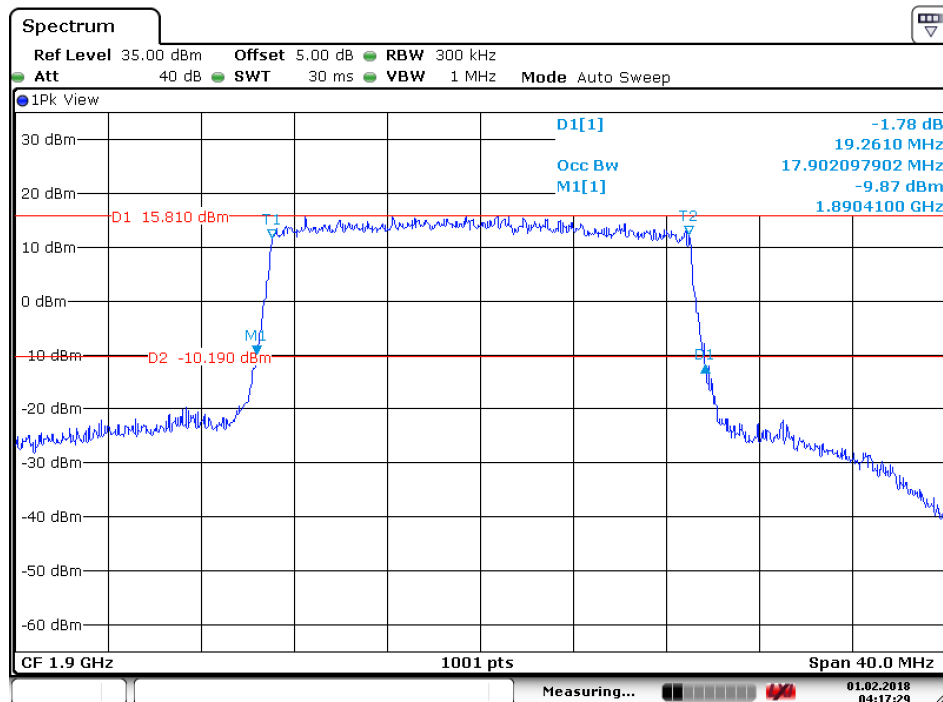


Date: 1.FEB.2018 04:18:15





4.1.1.12.3 Test Channel = HCH



Date: 1.FEB.2018 04:17:30



## 5 Band Edges Compliance

Part I –

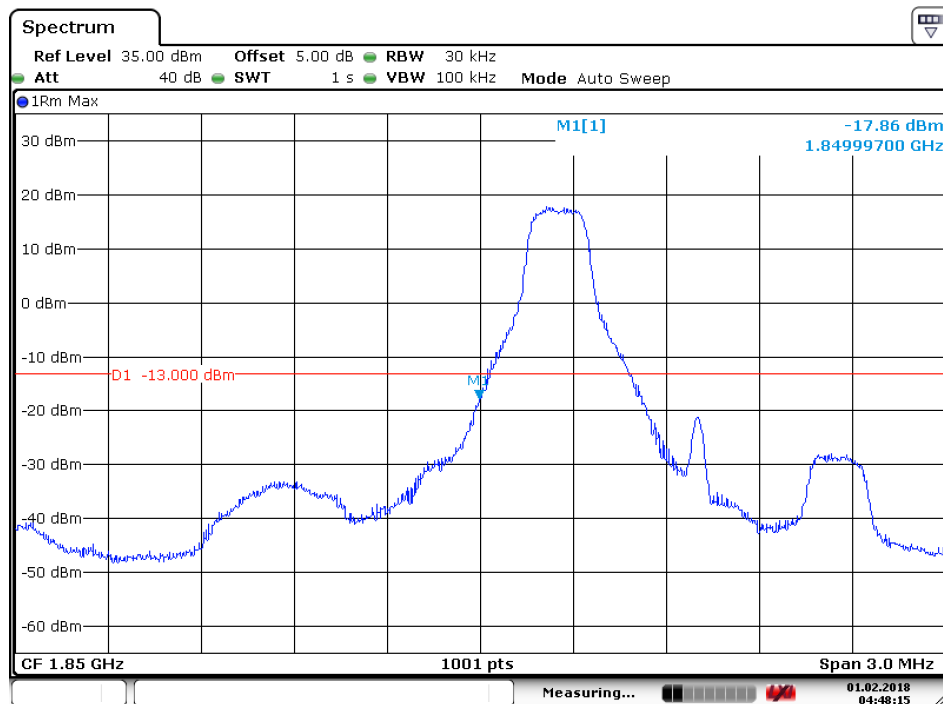
### 5.1 For LTE

#### 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

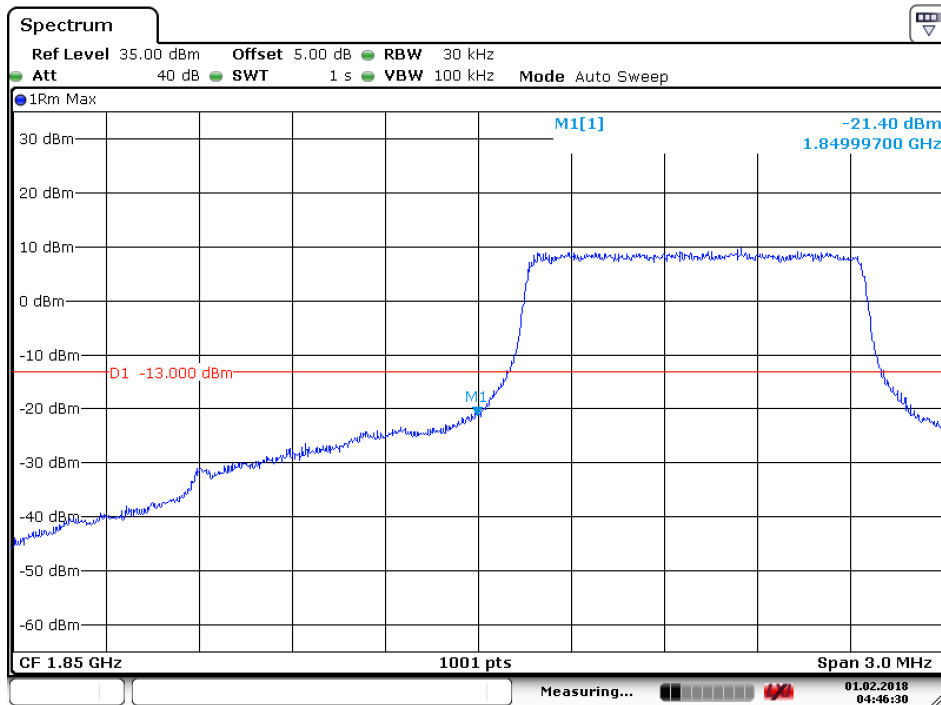
##### 5.1.1.1.1.1 Test RB=1RB



Date: 1.FEB.2018 04:48:15



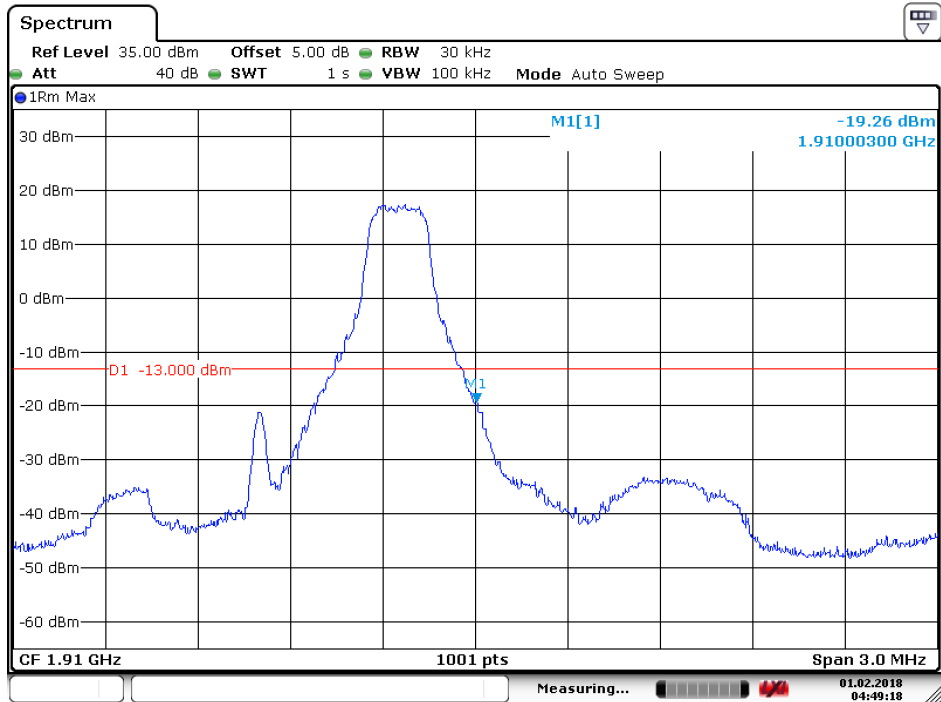
#### 5.1.1.1.2 Test RB=6RB



Date: 1.FEB.2018 04:46:30

#### 5.1.1.1.2 Test Channel = HCH

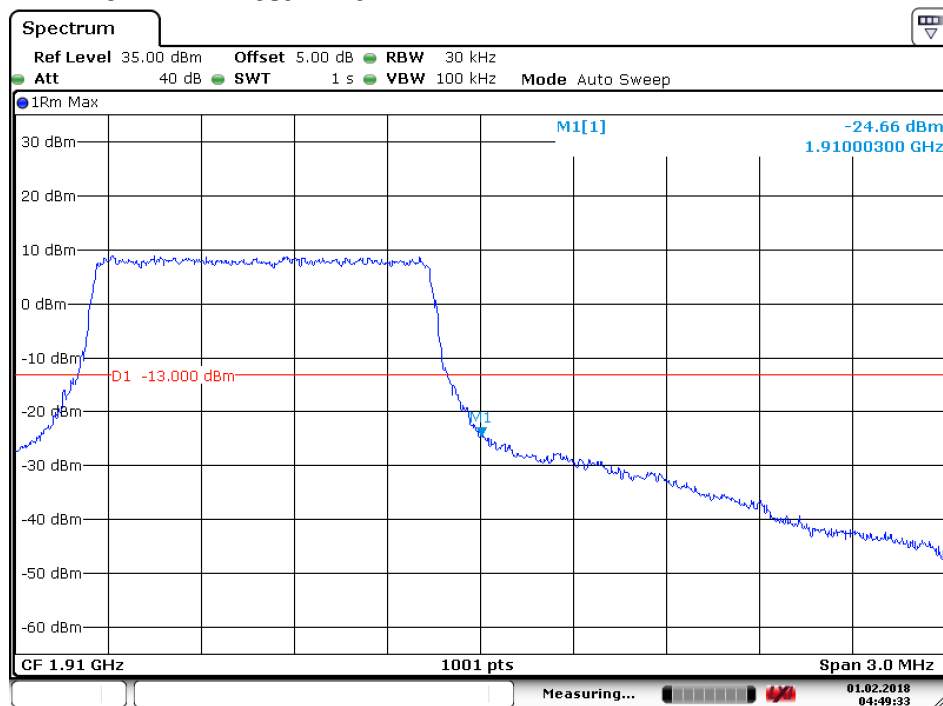
##### 5.1.1.1.2.1 Test RB=1RB



Date: 1.FEB.2018 04:49:18



#### 5.1.1.2.2 Test RB=6RB

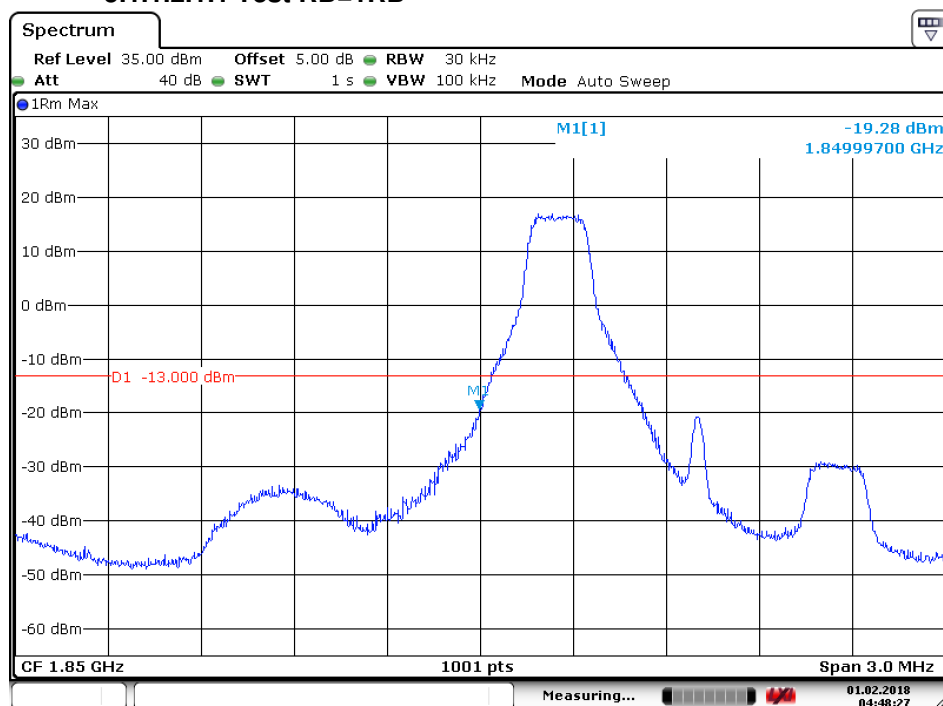


Date: 1.FEB.2018 04:49:33

#### 5.1.1.2 Test Mode = LTE/TM2 1.4MHz

##### 5.1.1.2.1 Test Channel = LCH

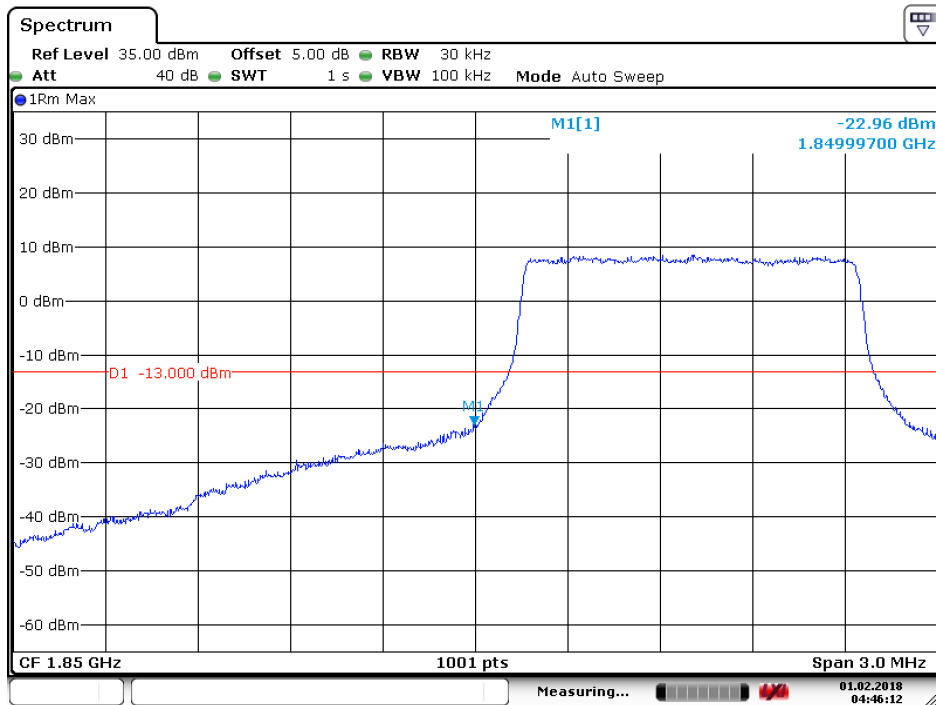
#### 5.1.1.2.1.1 Test RB=1RB



Date: 1.FEB.2018 04:48:28



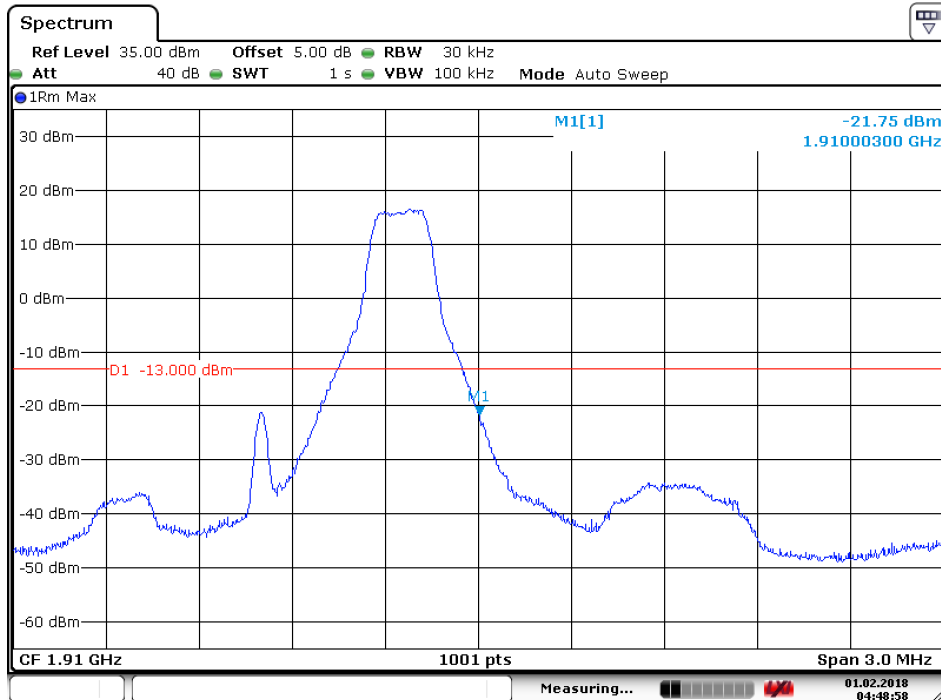
#### 5.1.1.2.1.2 Test RB=6RB



Date: 1.FEB.2018 04:46:12

#### 5.1.1.2.2 Test Channel = HCH

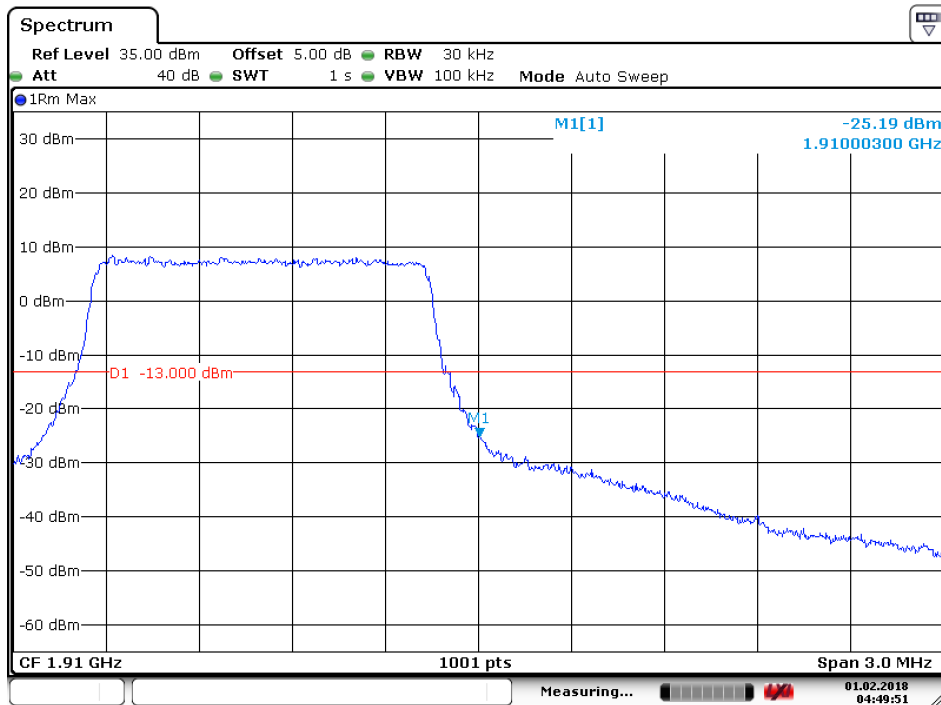
##### 5.1.1.2.2.1 Test RB=1RB



Date: 1.FEB.2018 04:48:58



#### 5.1.1.2.2.2 Test RB=6RB

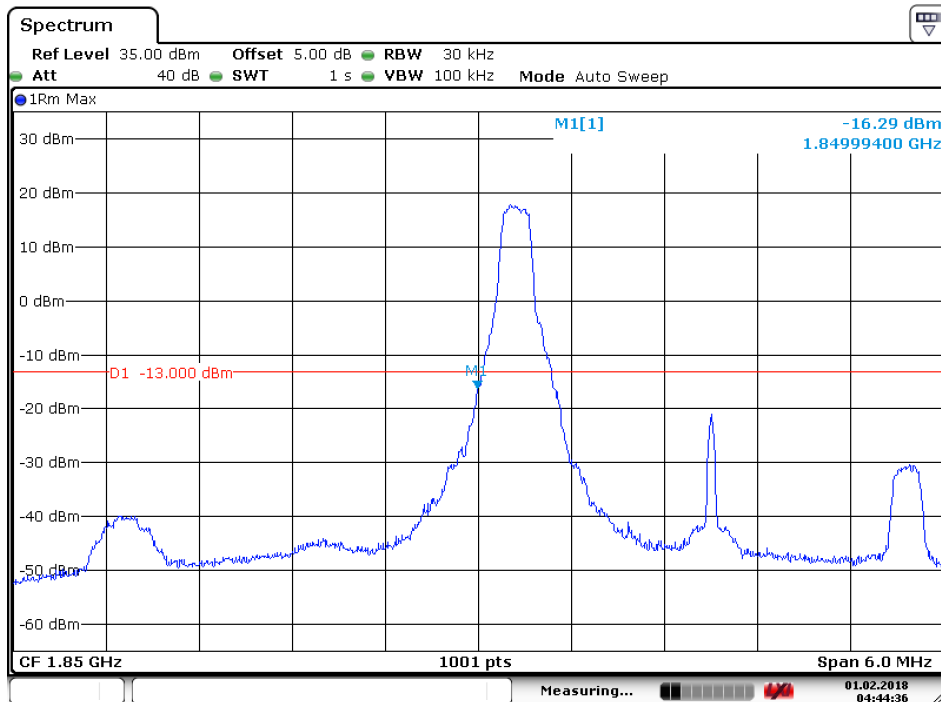


Date: 1.FEB.2018 04:49:52

#### 5.1.1.3 Test Mode = LTE/TM1 3MHz

##### 5.1.1.3.1 Test Channel = LCH

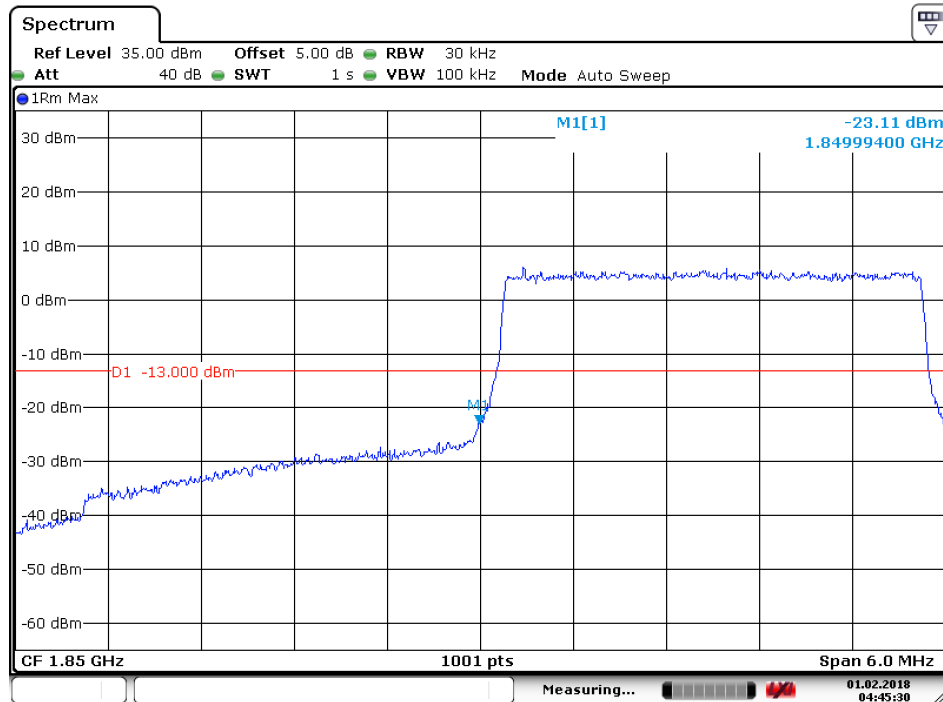
#### 5.1.1.3.1.1 Test RB=1RB



Date: 1.FEB.2018 04:44:36



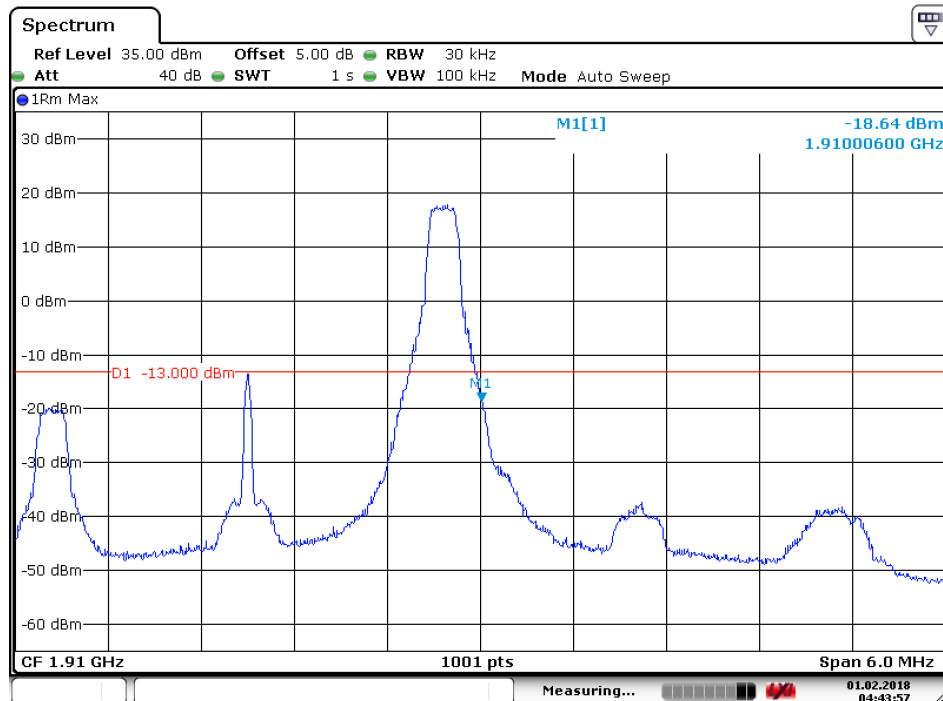
#### 5.1.1.3.1.2 Test RB=15RB



Date: 1.FEB.2018 04:45:31

#### 5.1.1.3.2 Test Channel = HCH

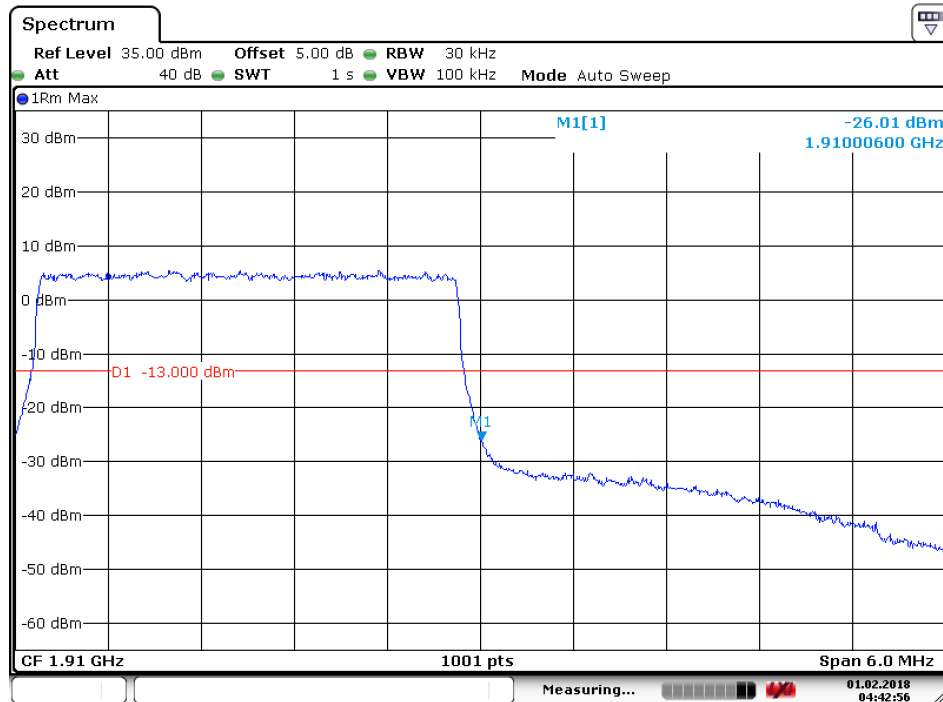
##### 5.1.1.3.2.1 Test RB=1RB



Date: 1.FEB.2018 04:43:58



#### 5.1.1.3.2.2 Test RB=15RB

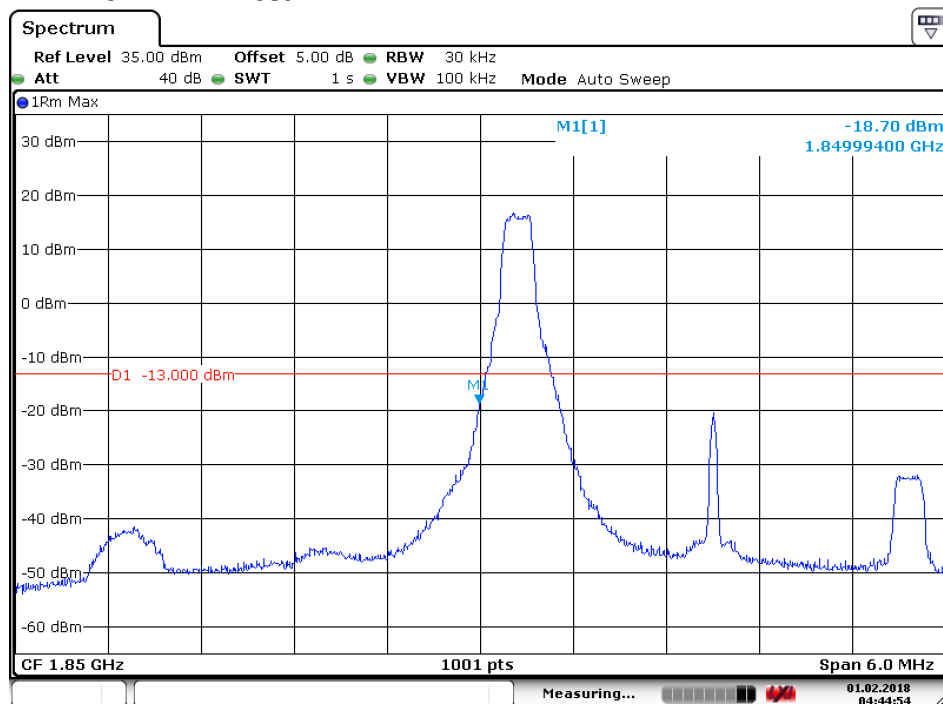


Date: 1.FEB.2018 04:42:57

#### 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

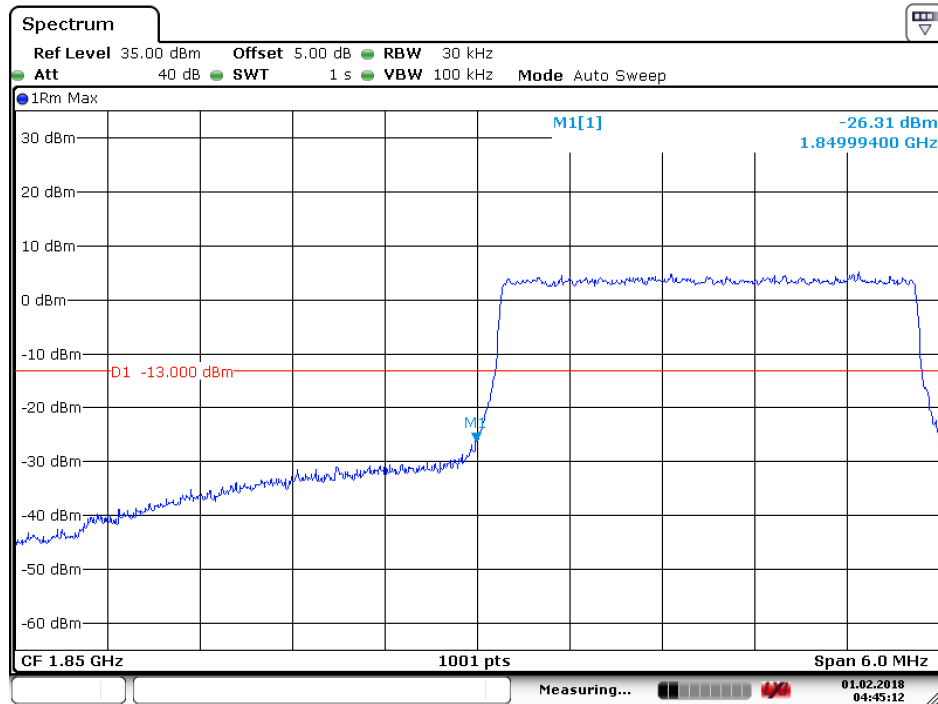


Date: 1.FEB.2018 04:44:54





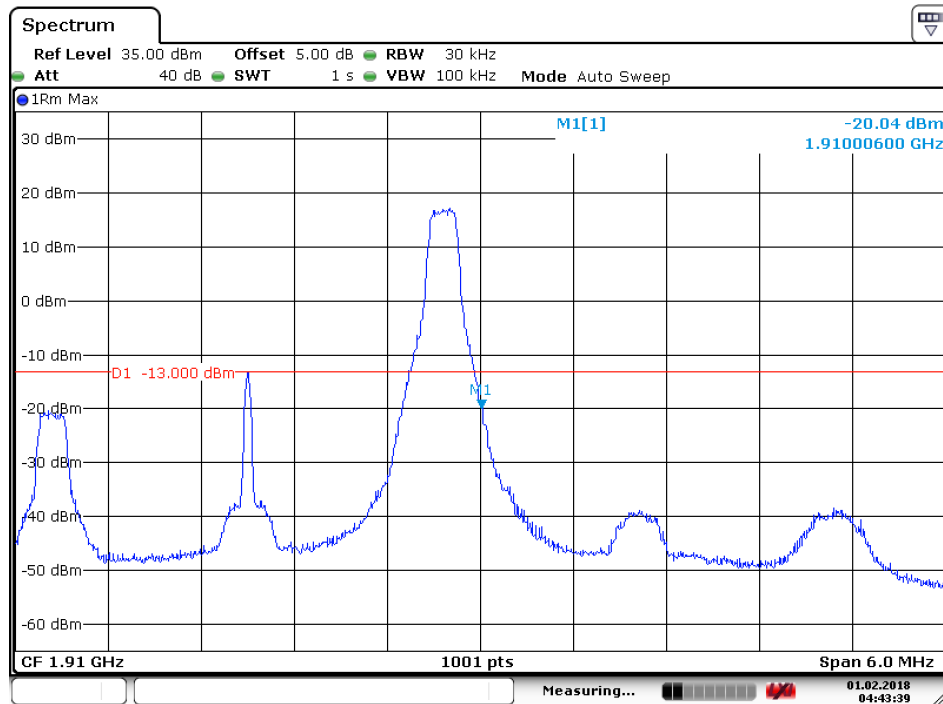
#### 5.1.1.4.1.2 Test RB=15RB



Date: 1.FEB.2018 04:45:13

#### 5.1.1.4.2 Test Channel = HCH

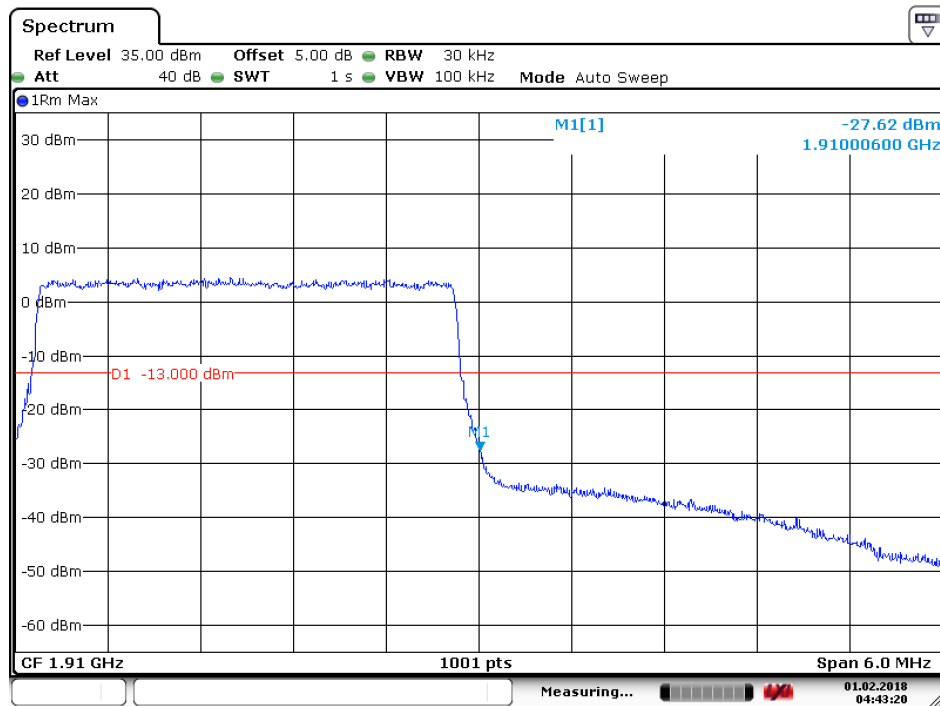
##### 5.1.1.4.2.1 Test RB=1RB



Date: 1.FEB.2018 04:43:39



#### 5.1.1.4.3 Test RB=15RB

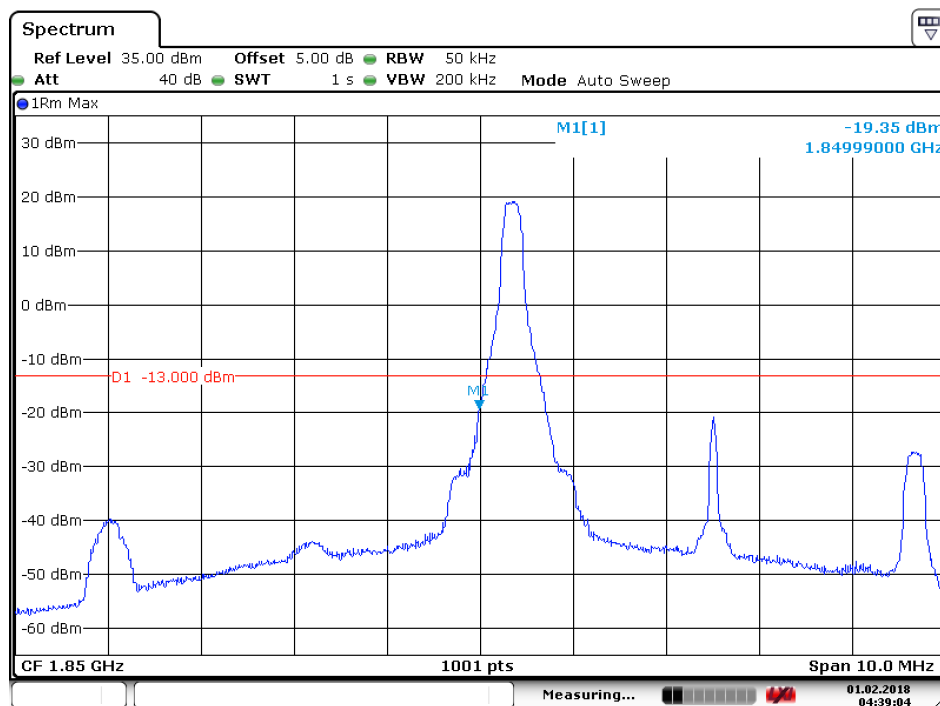


Date: 1.FEB.2018 04:43:20

#### 5.1.1.5 Test Mode = LTE/TM1 5MHz

##### 5.1.1.5.1 Test Channel = LCH

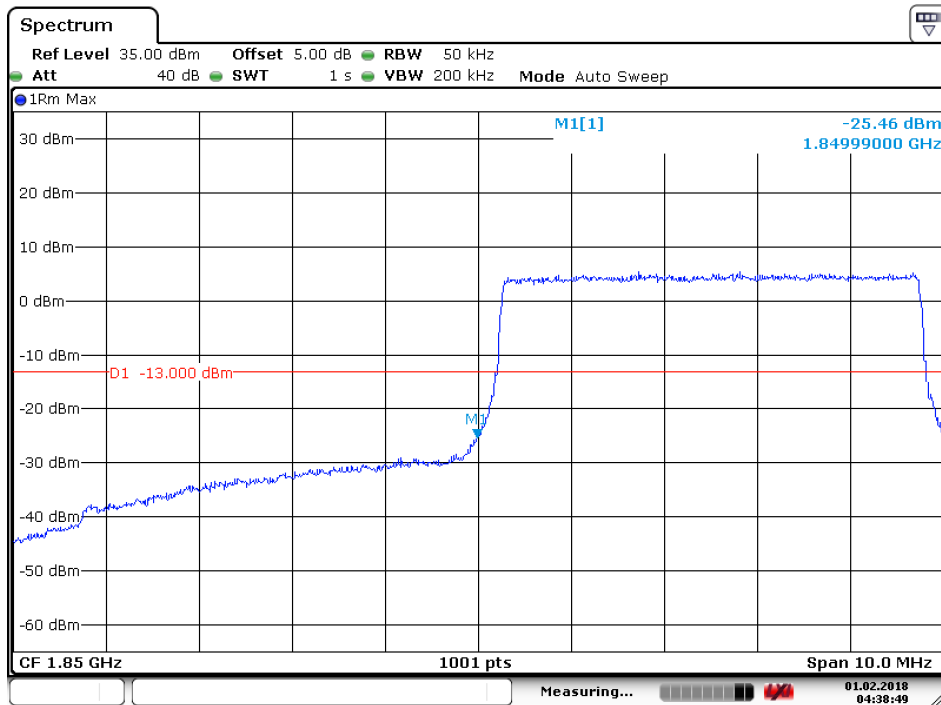
##### 5.1.1.5.1.1 Test RB=1RB



Date: 1.FEB.2018 04:39:05



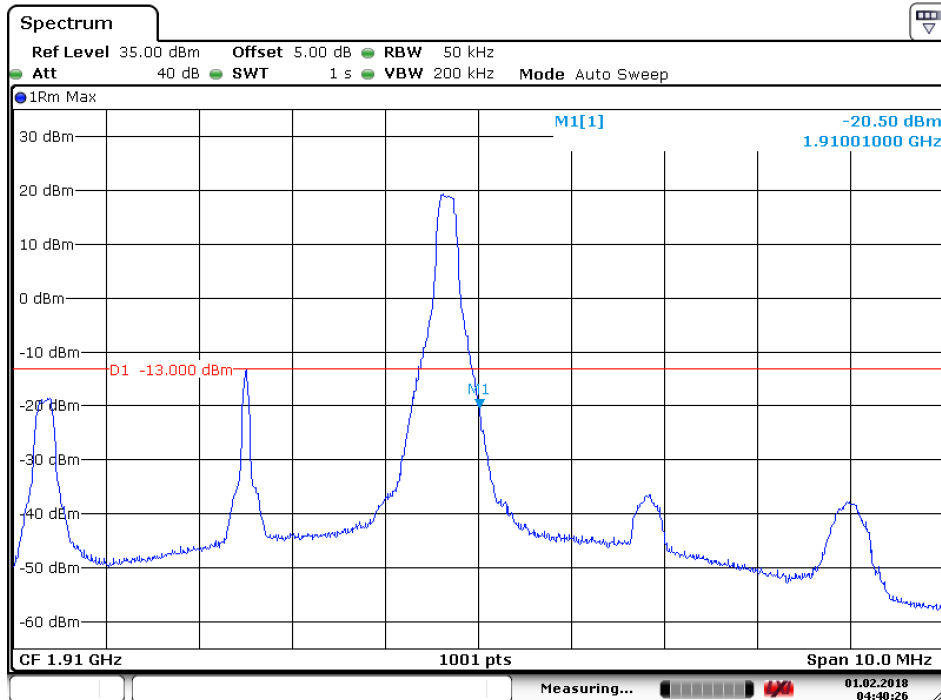
#### 5.1.1.5.1.2 Test RB=25RB



Date: 1.FEB.2018 04:38:50

#### 5.1.1.5.2 Test Channel = HCH

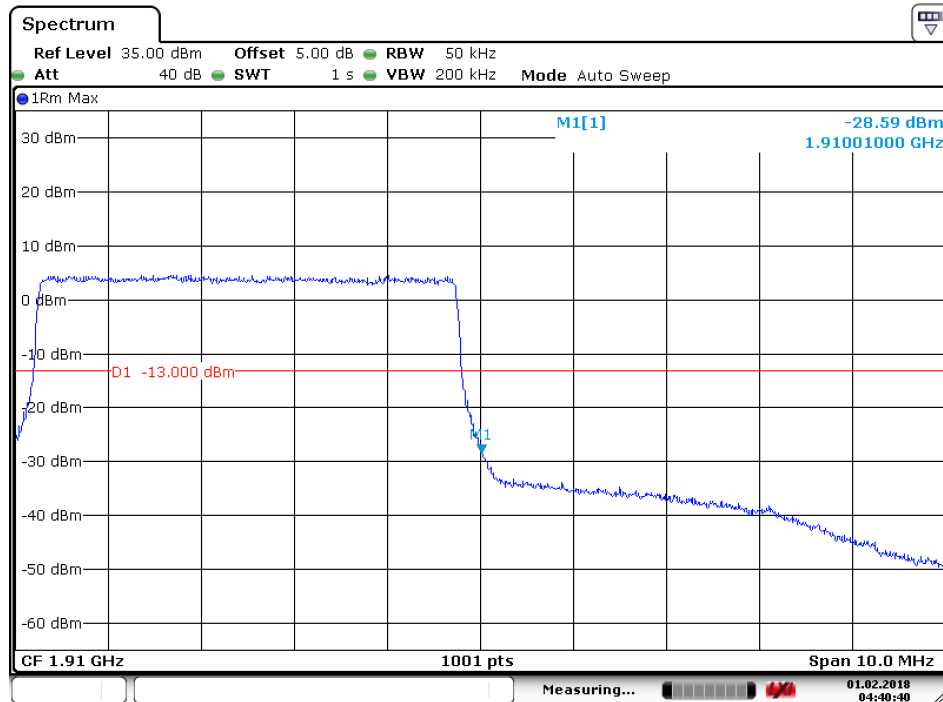
##### 5.1.1.5.2.1 Test RB=1RB



Date: 1.FEB.2018 04:40:27



#### 5.1.1.5.2.2 Test RB=25RB

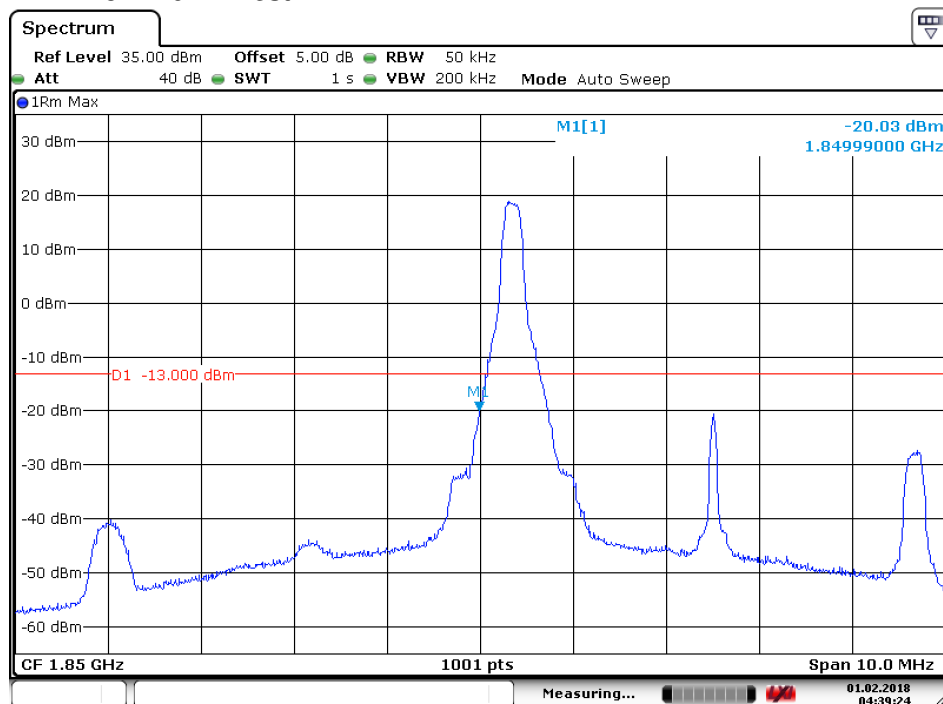


Date: 1.FEB.2018 04:40:41

#### 5.1.1.6 Test Mode = LTE/TM2 5MHz

##### 5.1.1.6.1 Test Channel = LCH

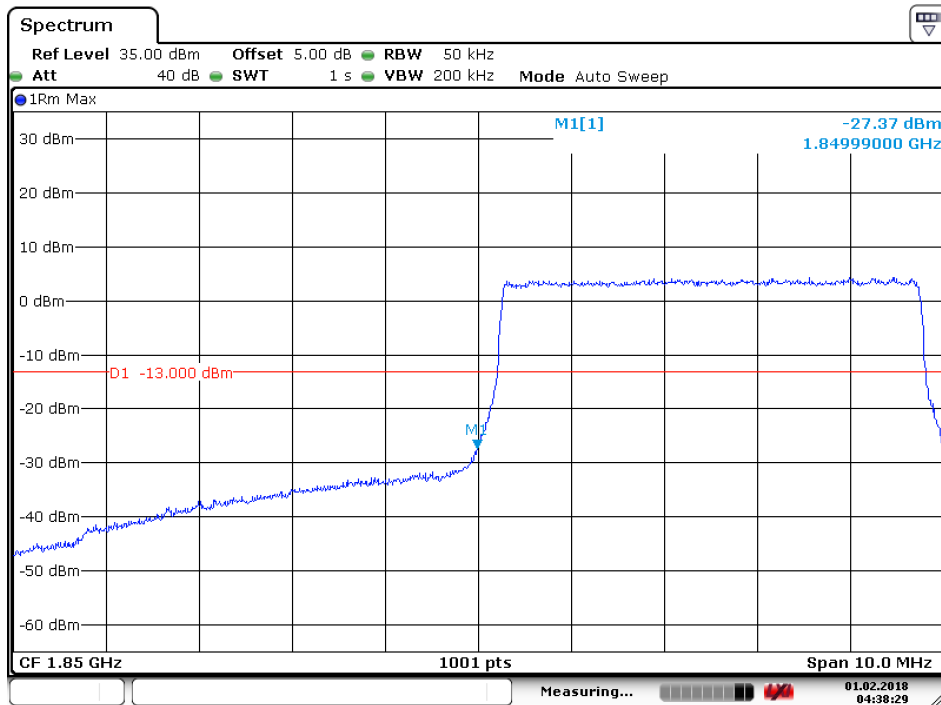
##### 5.1.1.6.1.1 Test RB=1RB



Date: 1.FEB.2018 04:39:25



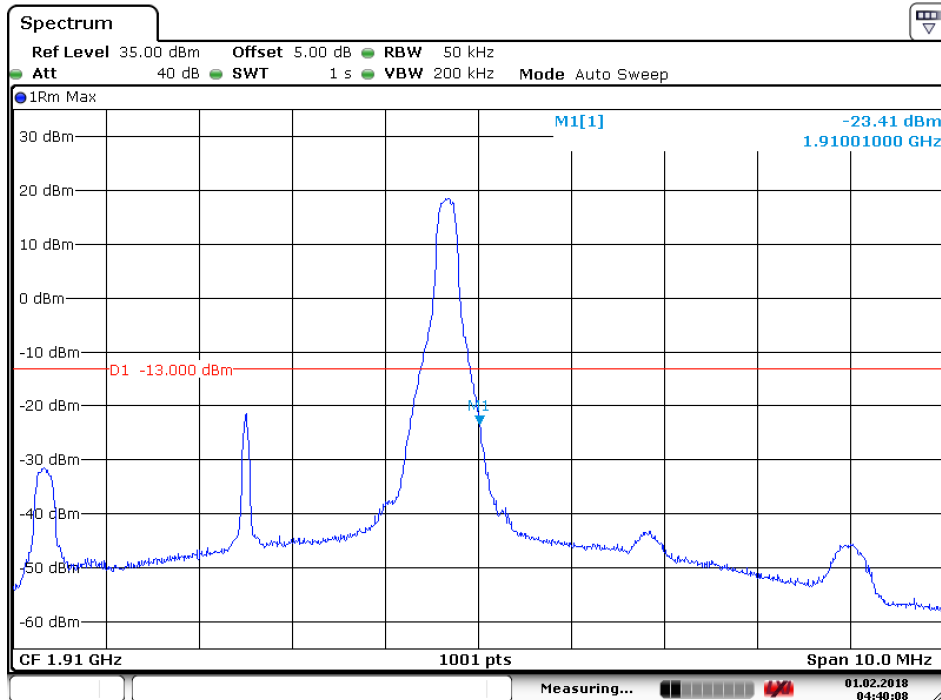
#### 5.1.1.6.1.2 Test RB=25RB



Date: 1.FEB.2018 04:38:29

#### 5.1.1.6.2 Test Channel = HCH

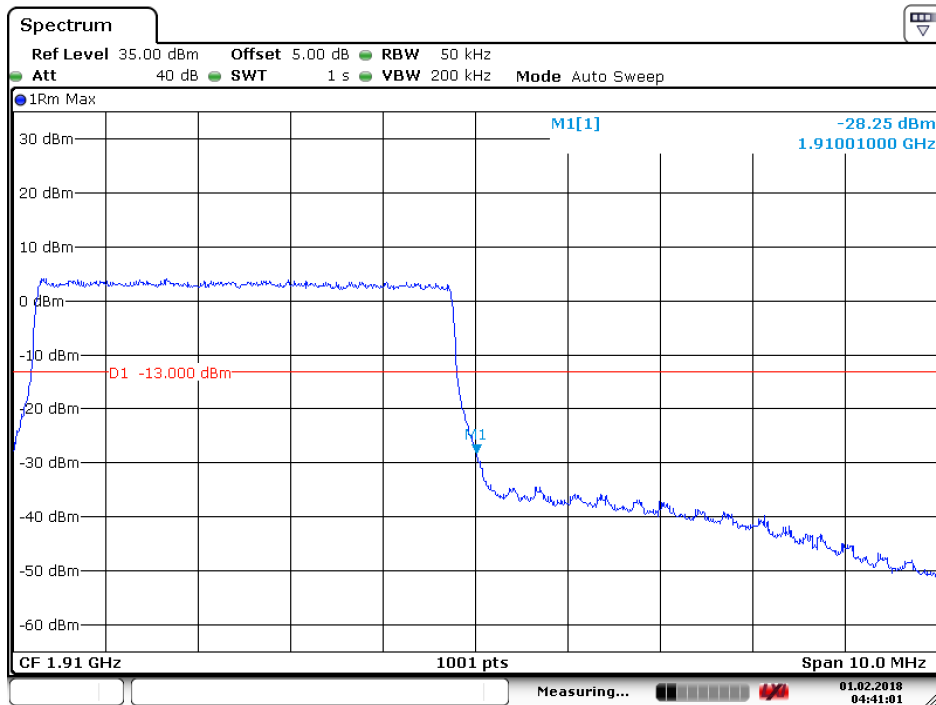
##### 5.1.1.6.2.1 Test RB=1RB



Date: 1.FEB.2018 04:40:09



#### 5.1.1.6.2.2 Test RB=25RB

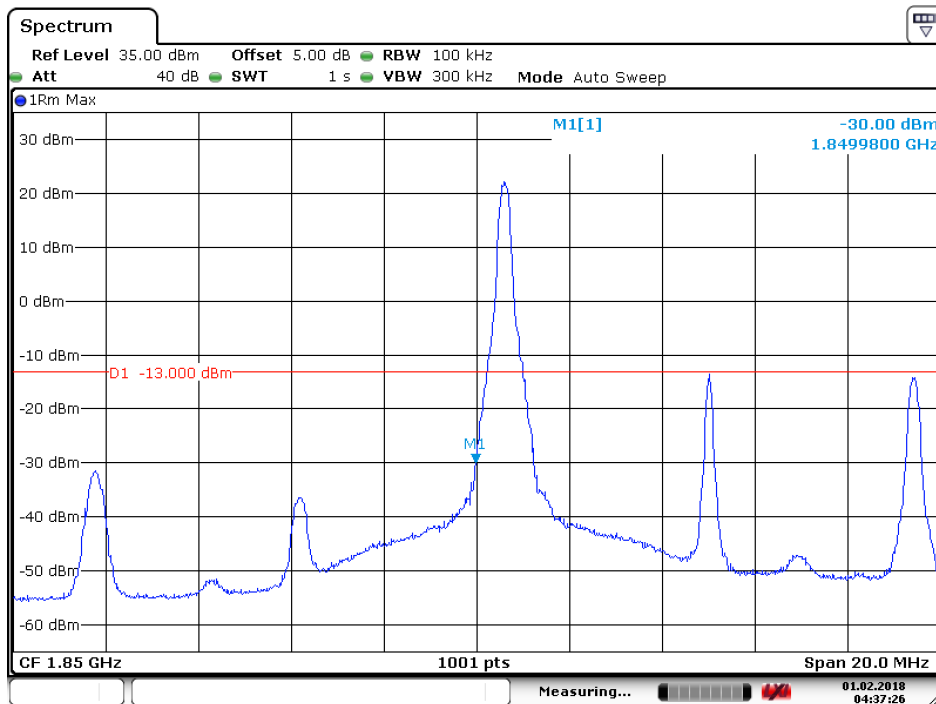


Date: 1.FEB.2018 04:41:01

#### 5.1.1.7 Test Mode = LTE/TM1 10MHz

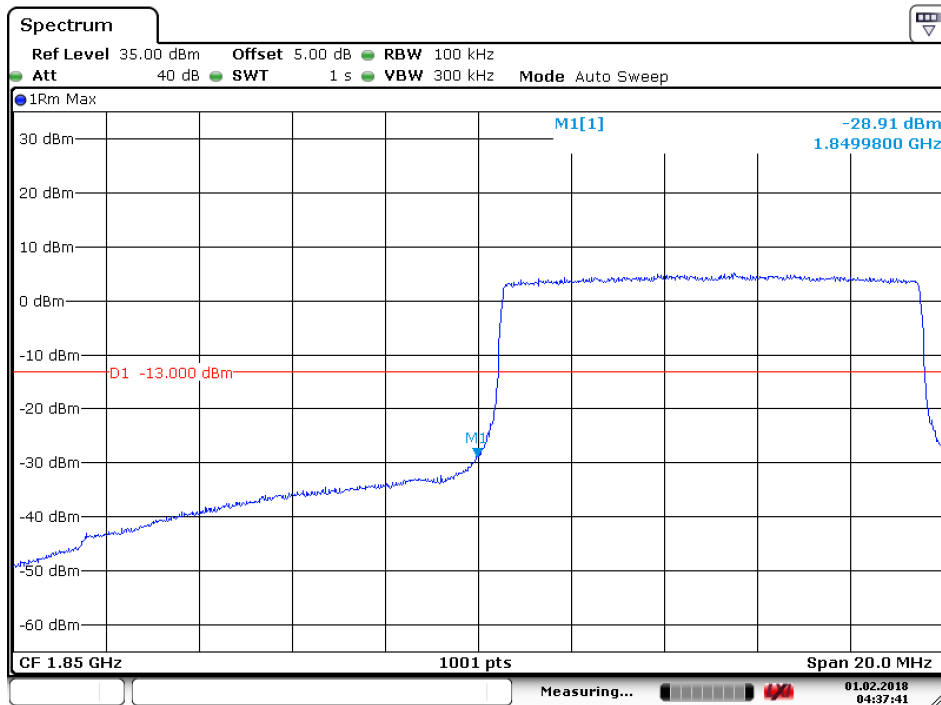
##### 5.1.1.7.1 Test Channel = LCH

##### 5.1.1.7.1.1 Test RB=1RB



Date: 1.FEB.2018 04:37:26

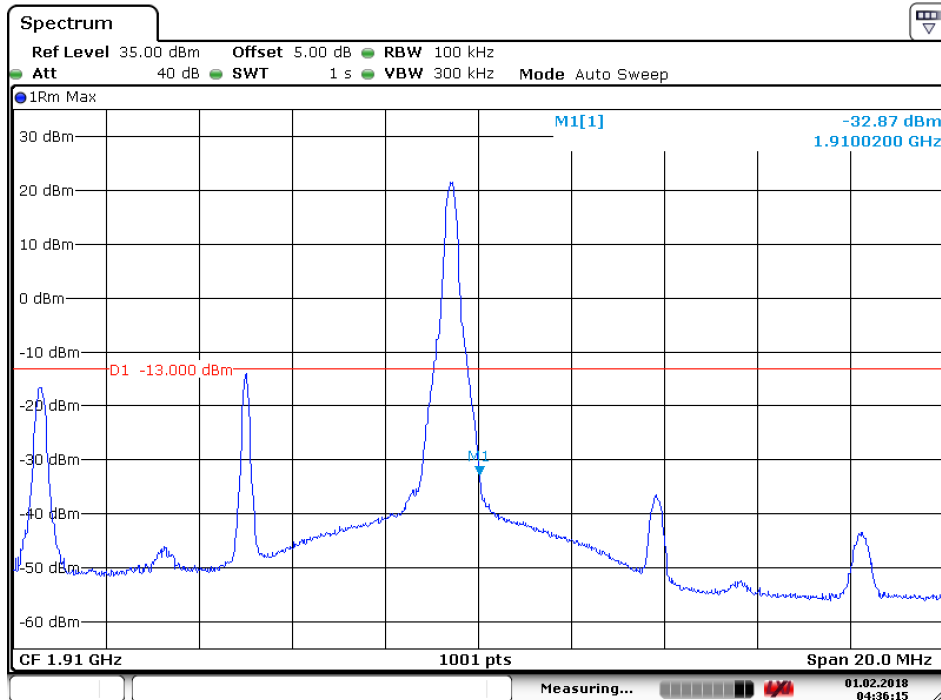
#### 5.1.1.7.1.2 Test RB=50RB



Date: 1.FEB.2018 04:37:41

#### 5.1.1.7.2 Test Channel = HCH

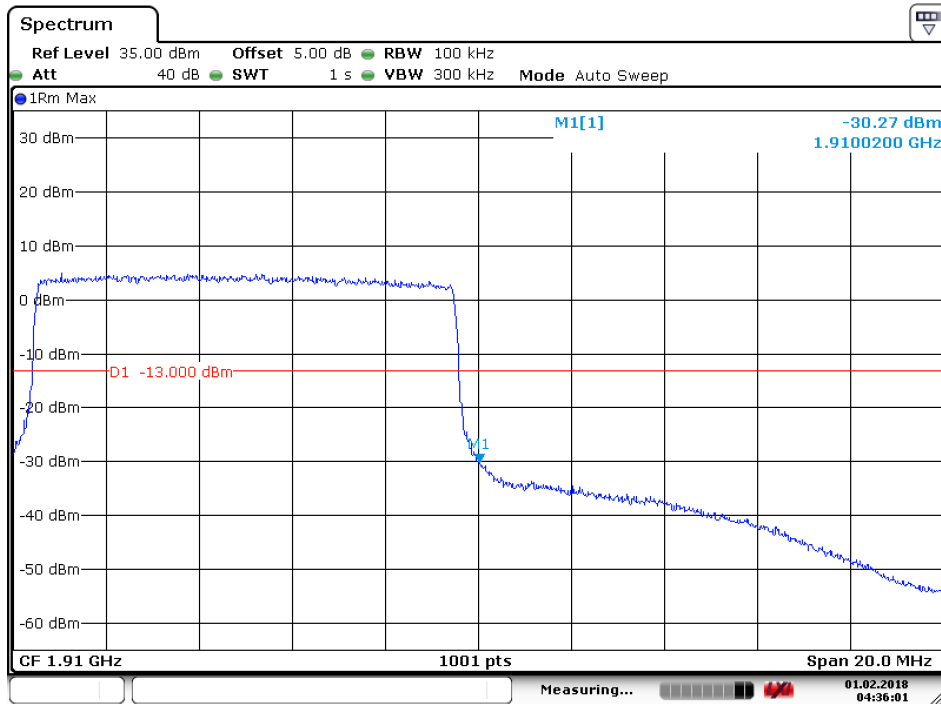
##### 5.1.1.7.2.1 Test RB=1RB



Date: 1.FEB.2018 04:36:15



#### 5.1.1.7.2.2 Test RB=50RB

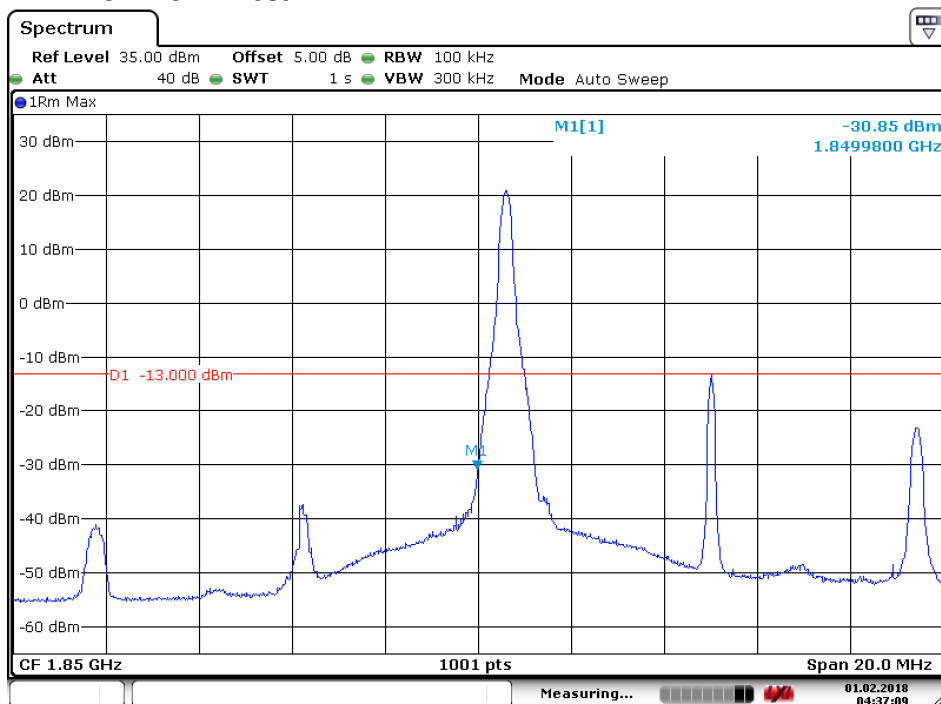


Date: 1.FEB.2018 04:36:01

#### 5.1.1.8 Test Mode = LTE/TM2 10MHz

##### 5.1.1.8.1 Test Channel = LCH

##### 5.1.1.8.1.1 Test RB=1RB

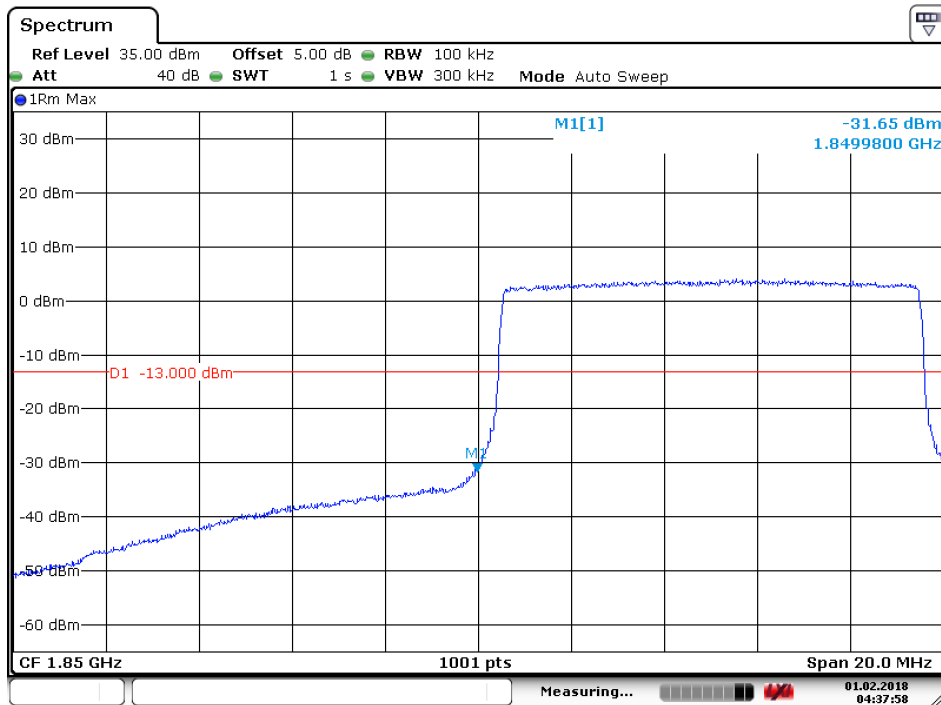


Date: 1.FEB.2018 04:37:08





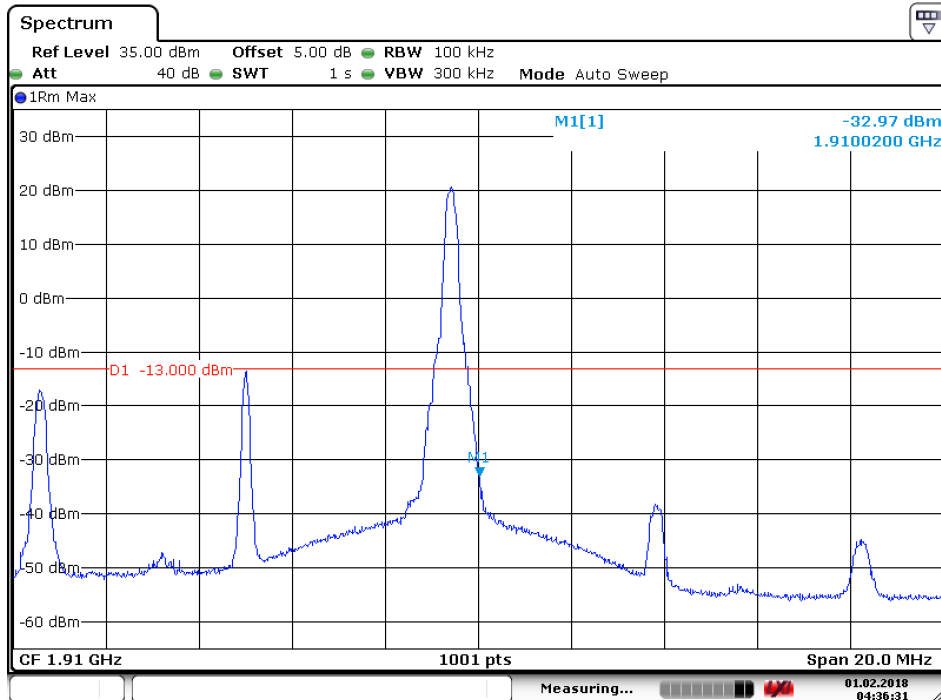
#### 5.1.1.8.1.2 Test RB=50RB



Date: 1.FEB.2018 04:37:59

#### 5.1.1.8.2 Test Channel = HCH

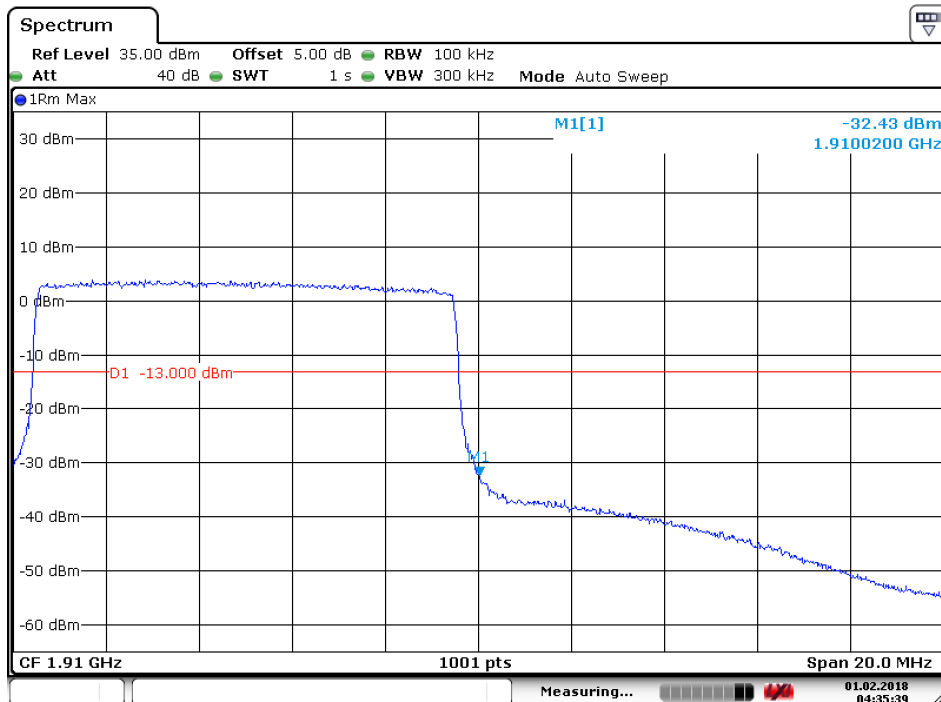
##### 5.1.1.8.2.1 Test RB=1RB



Date: 1.FEB.2018 04:36:32



#### 5.1.1.8.2.2 Test RB=50RB

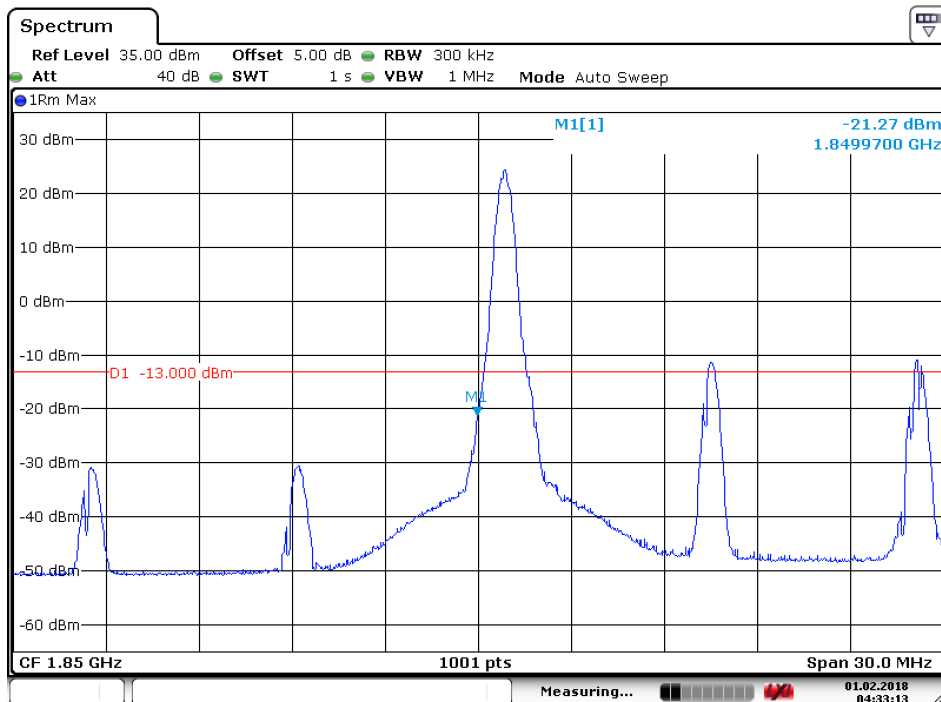


Date: 1.FEB.2018 04:35:40

#### 5.1.1.9 Test Mode = LTE/TM1 15MHz

##### 5.1.1.9.1 Test Channel = LCH

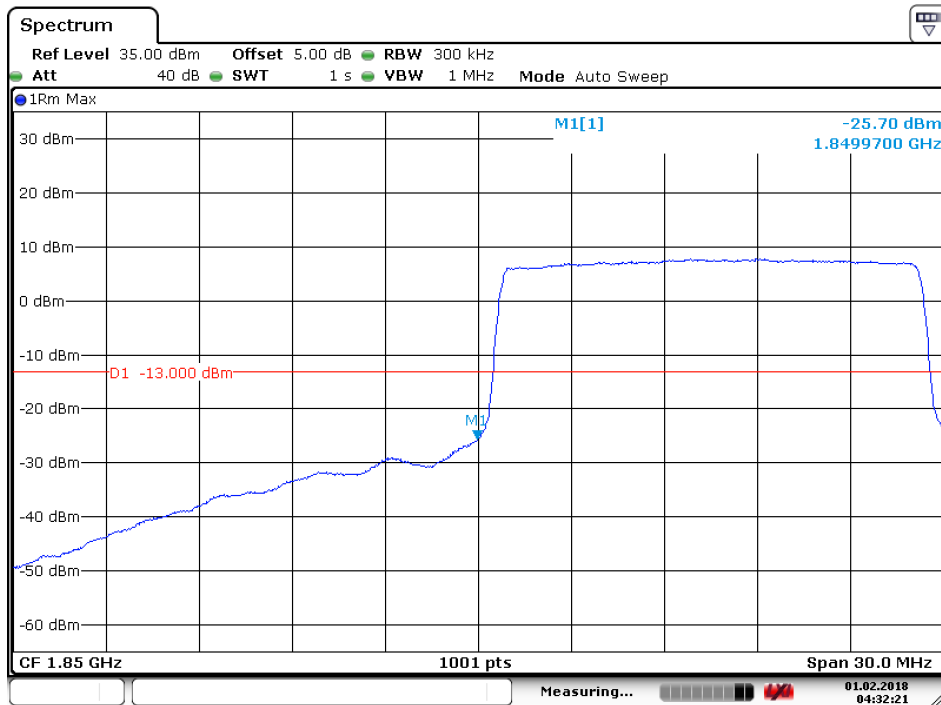
##### 5.1.1.9.1.1 Test RB=1RB



Date: 1.FEB.2018 04:33:14



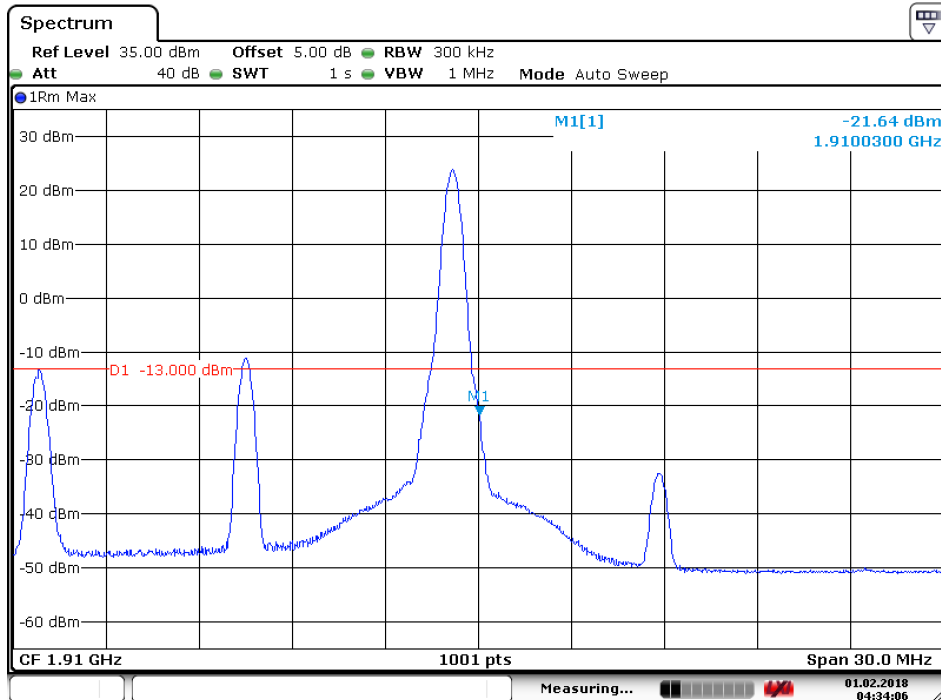
#### 5.1.1.9.1.2 Test RB=75RB



Date: 1.FEB.2018 04:32:21

#### 5.1.1.9.2 Test Channel = HCH

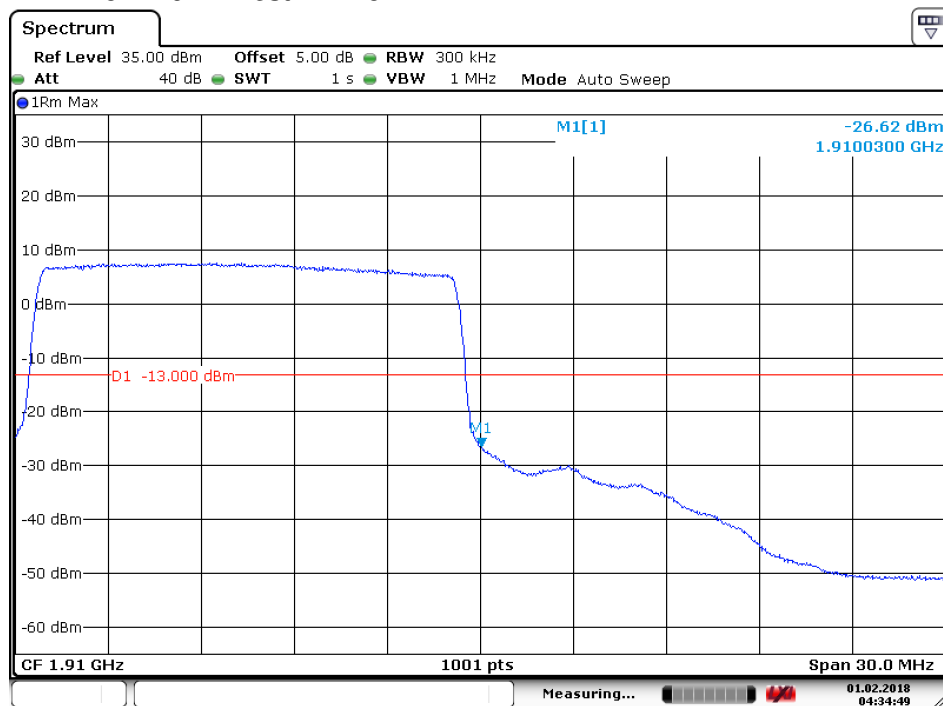
##### 5.1.1.9.2.1 Test RB=1RB



Date: 1.FEB.2018 04:34:06



#### 5.1.1.9.2.2 Test RB=75RB

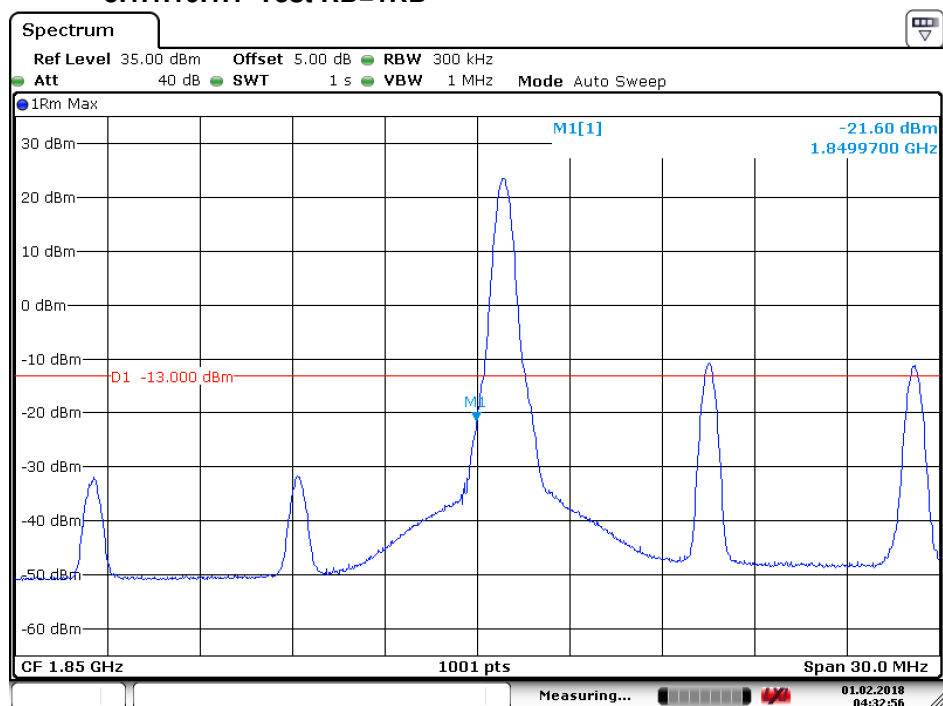


Date: 1.FEB.2018 04:34:49

#### 5.1.1.10 Test Mode = LTE/TM2 15MHz

##### 5.1.1.10.1 Test Channel = LCH

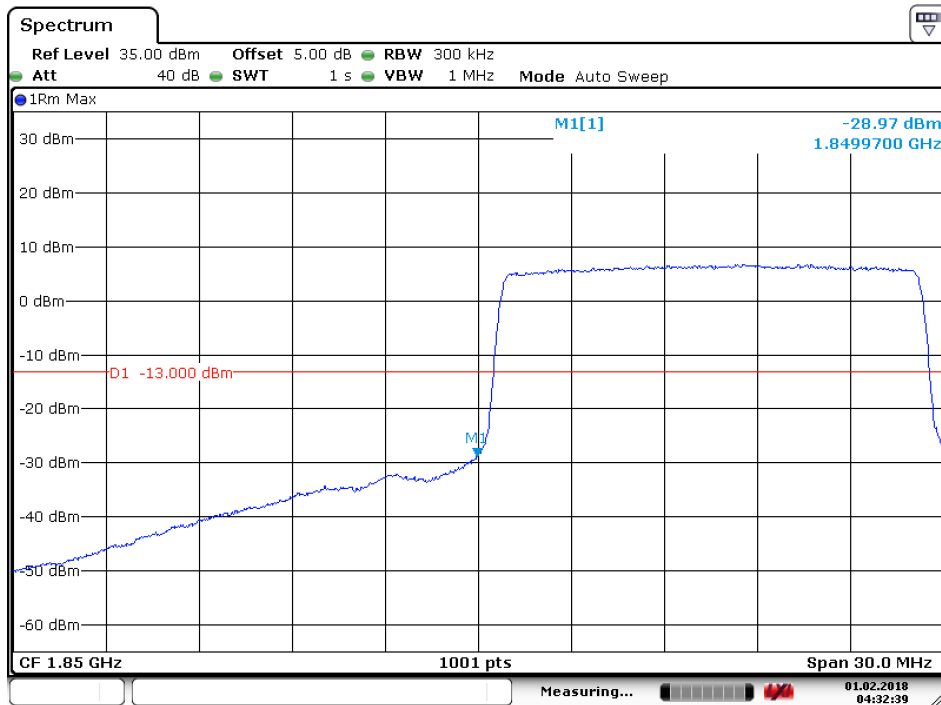
##### 5.1.1.10.1.1 Test RB=1RB



Date: 1.FEB.2018 04:32:56



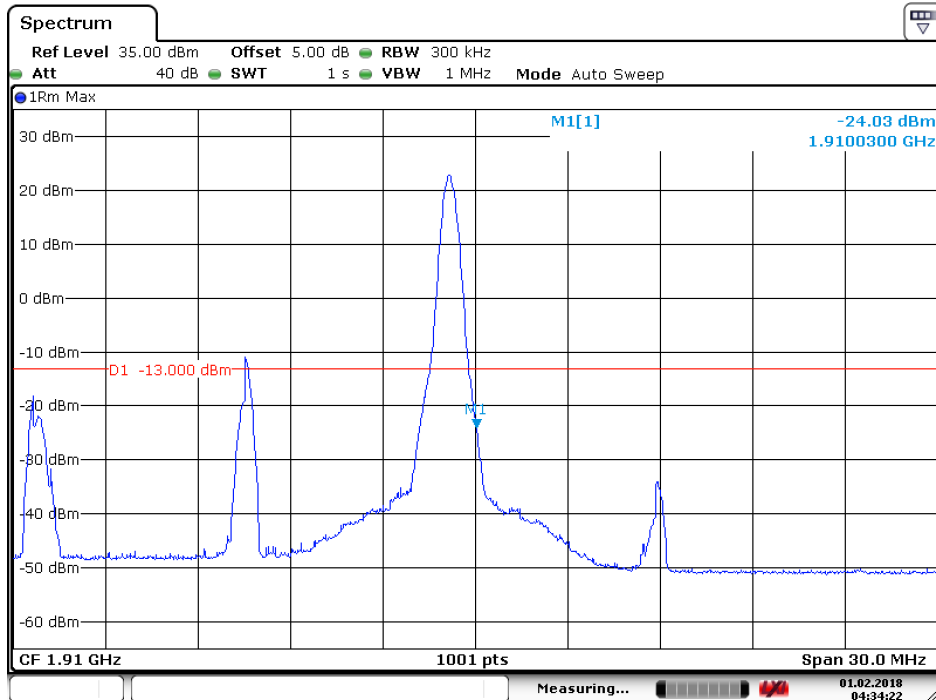
#### 5.1.1.10.1.2 Test RB=75RB



Date: 1.FEB.2018 04:32:39

#### 5.1.1.10.2 Test Channel = HCH

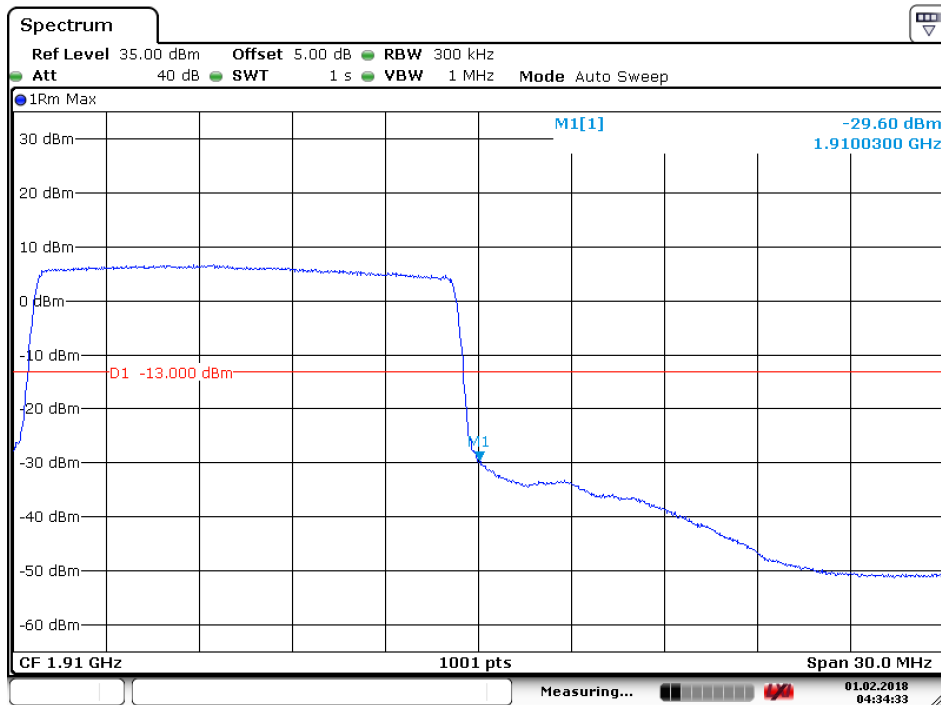
##### 5.1.1.10.2.1 Test RB=1RB



Date: 1.FEB.2018 04:34:23



#### 5.1.1.10.2.2 Test RB=75RB

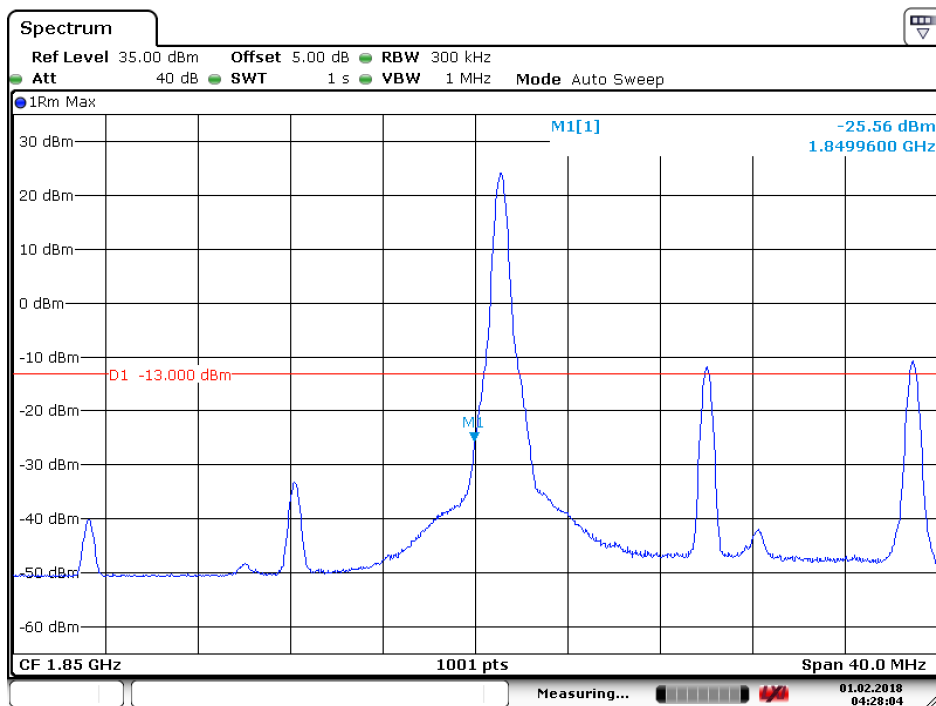


Date: 1.FEB.2018 04:34:34

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

##### 5.1.1.11.1 Test Channel = LCH

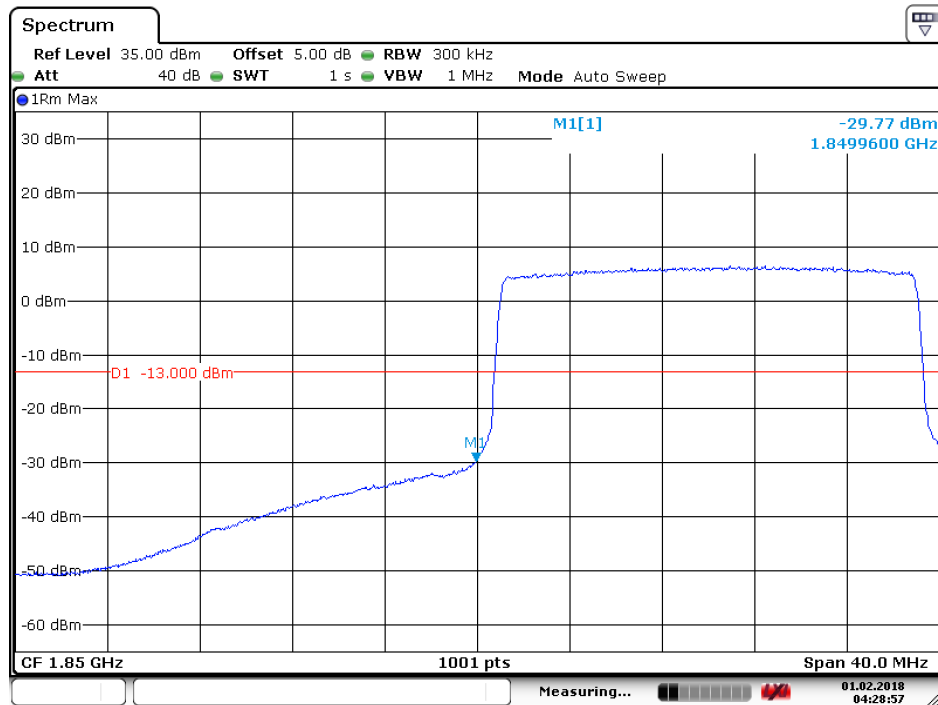
#### 5.1.1.11.1.1 Test RB=1RB



Date: 1.FEB.2018 04:28:05



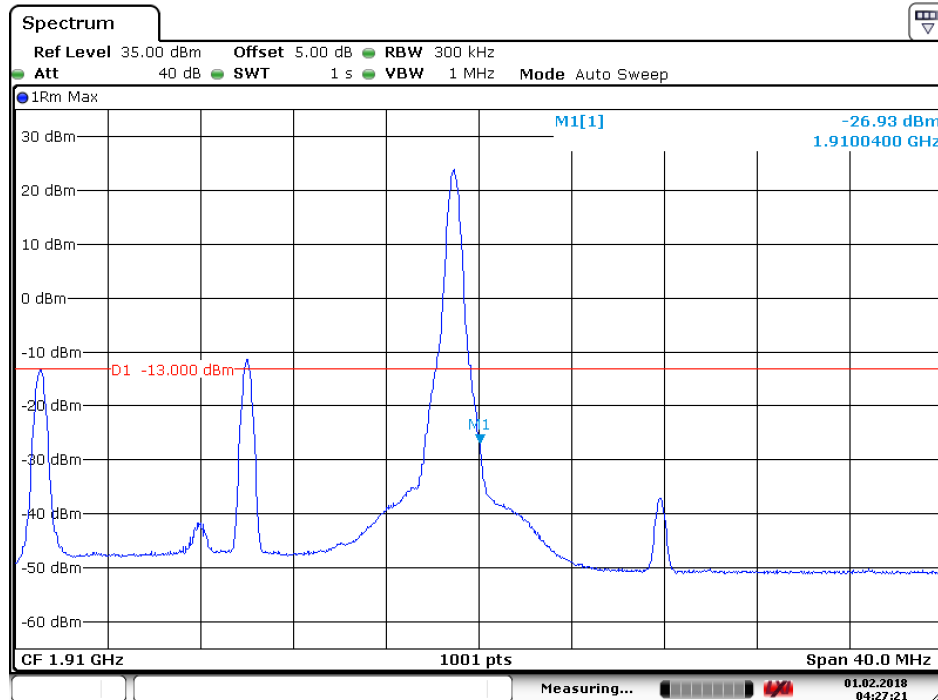
#### 5.1.1.11.2 Test RB=100RB



Date: 1.FEB.2018 04:28:57

#### 5.1.1.11.2 Test Channel = HCH

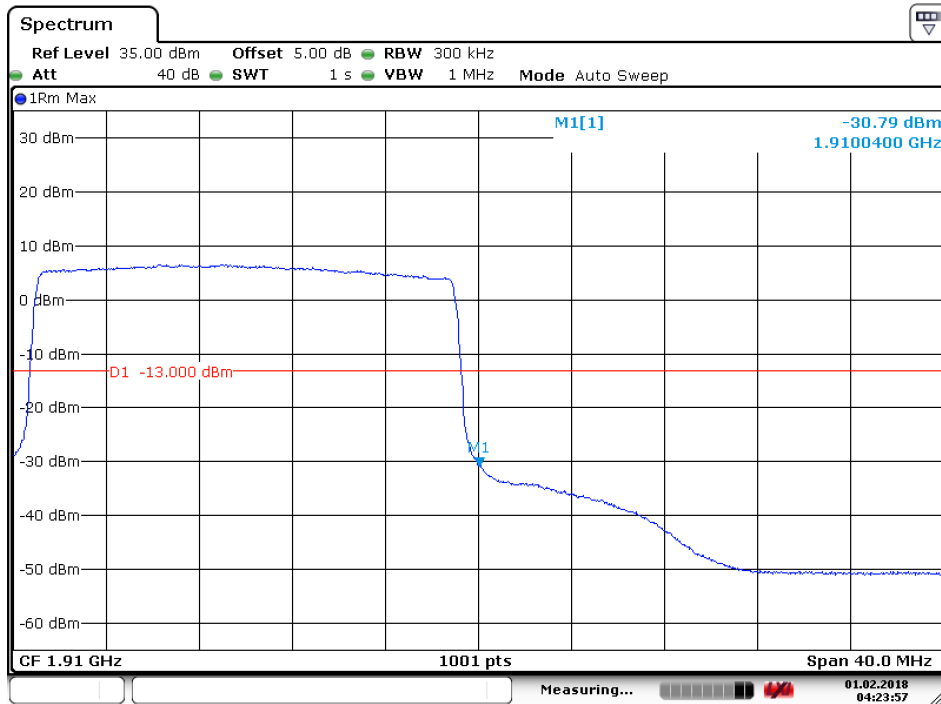
##### 5.1.1.11.2.1 Test RB=1RB



Date: 1.FEB.2018 04:27:21



#### 5.1.1.11.2.2 Test RB=100RB

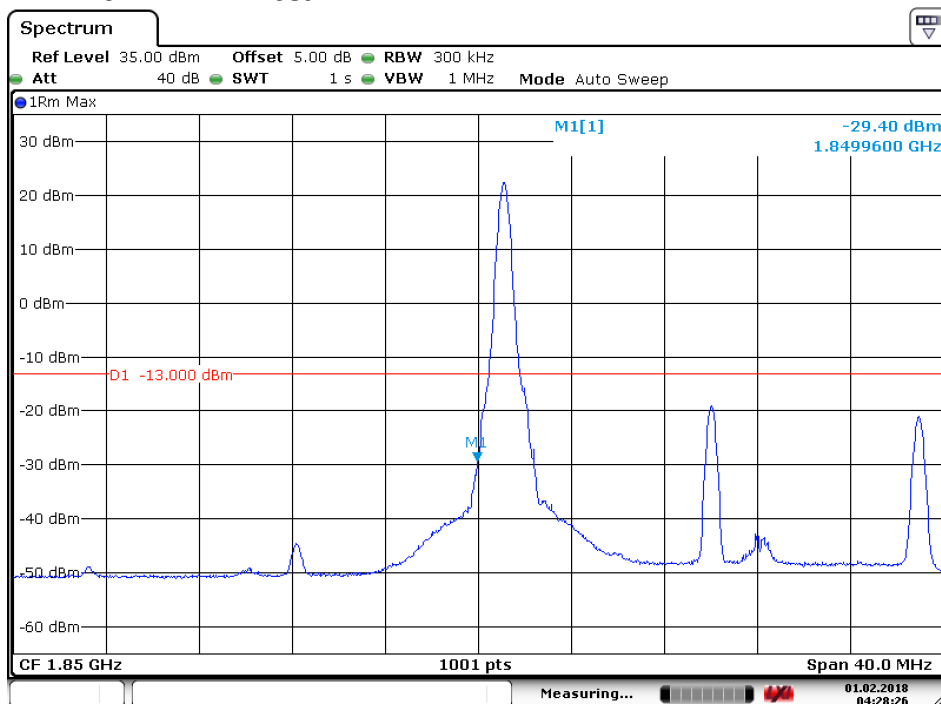


Date: 1.FEB.2018 04:23:57

#### 5.1.1.12 Test Mode = LTE/TM2 20MHz

##### 5.1.1.12.1 Test Channel = LCH

##### 5.1.1.12.1.1 Test RB=1RB

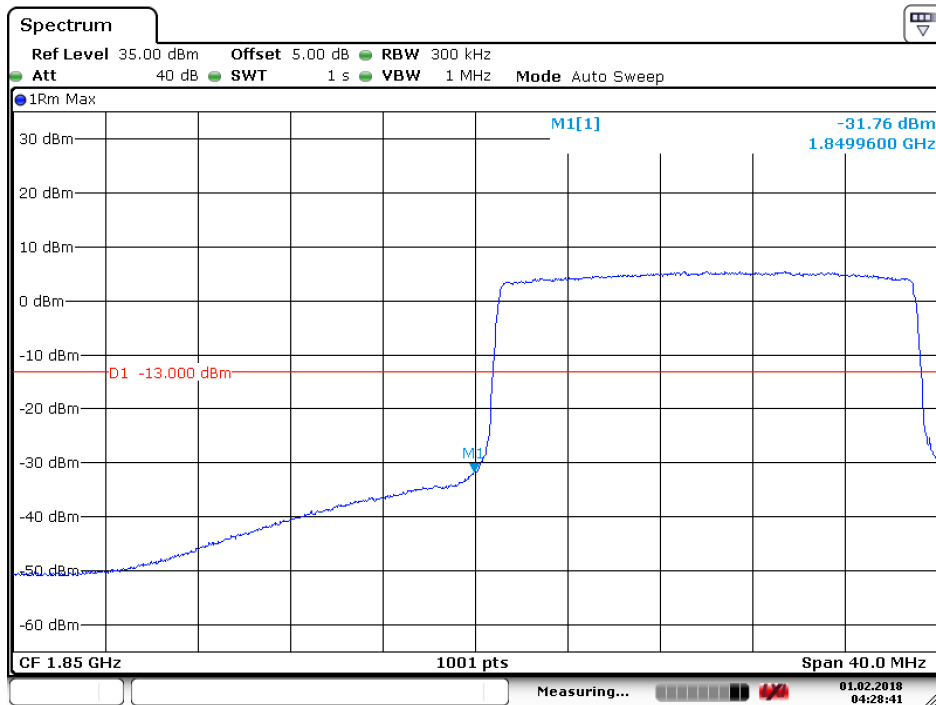


Date: 1.FEB.2018 04:28:27





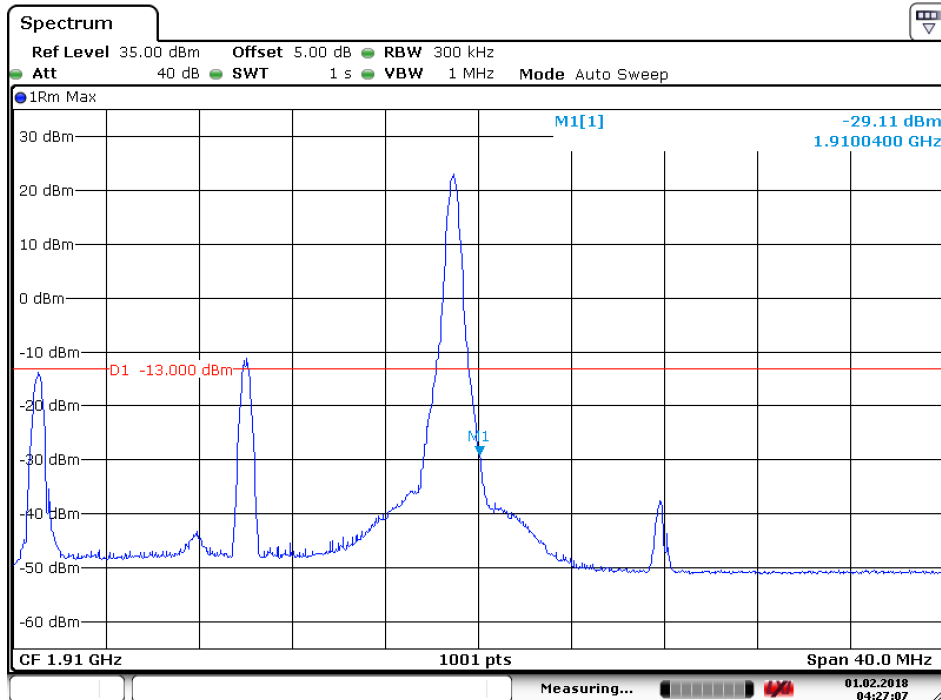
#### 5.1.1.12.1.2 Test RB=100RB



Date: 1.FEB.2018 04:28:42

#### 5.1.1.12.2 Test Channel = HCH

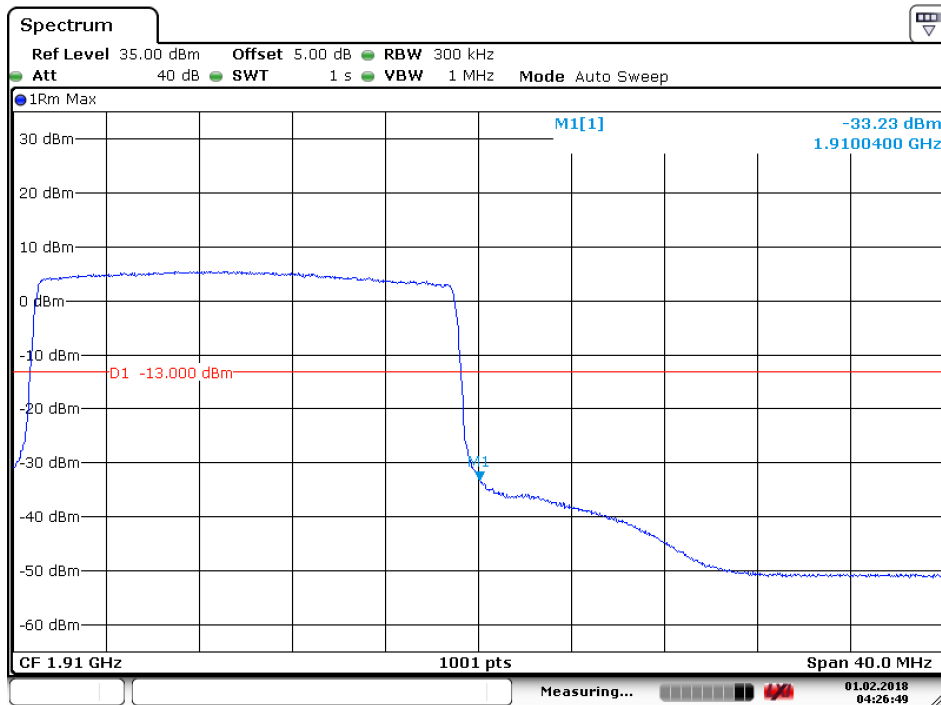
##### 5.1.1.12.2.1 Test RB=1RB



Date: 1.FEB.2018 04:27:08



5.1.1.12.2.2 Test RB=100RB



Date: 1.FEB.2018 04:26:50



## 6 Spurious Emission at Antenna Terminal

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

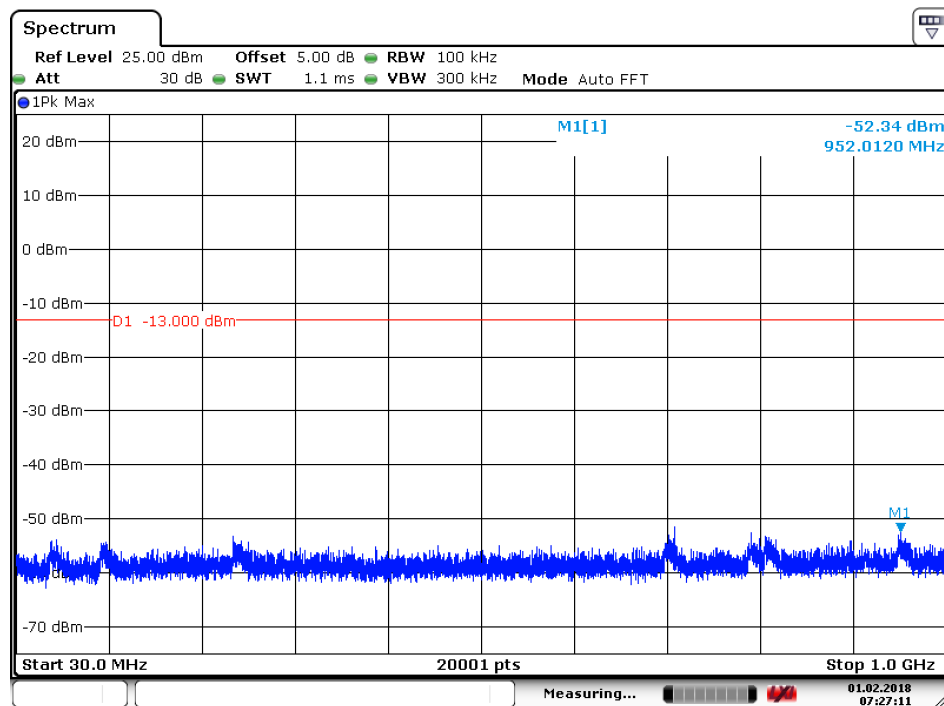
Part I - Test Plots

### 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

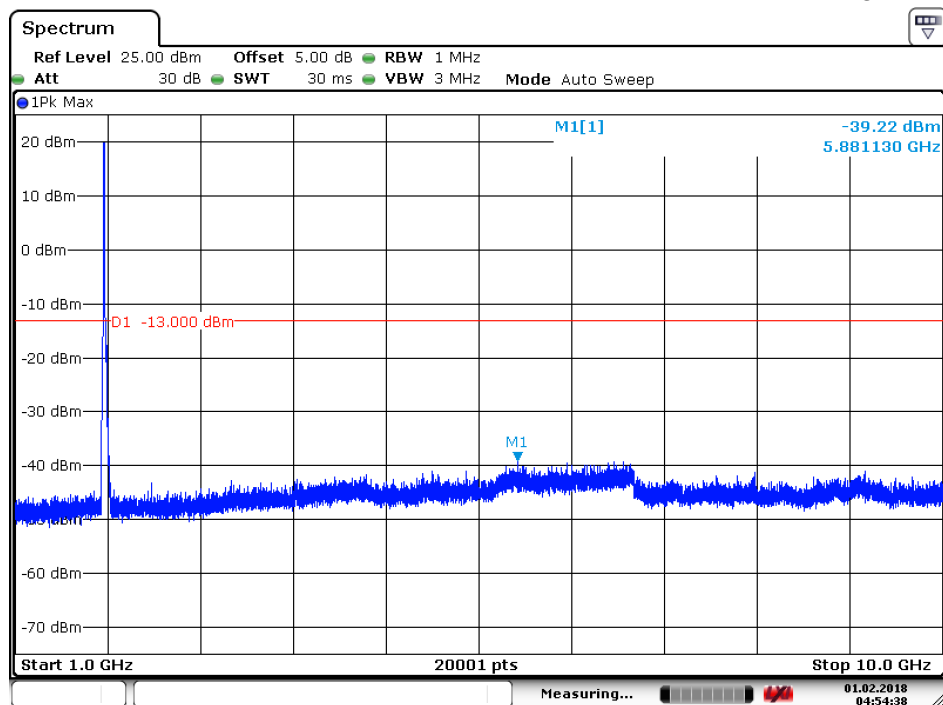


Date: 1.FEB.2018 07:27:12

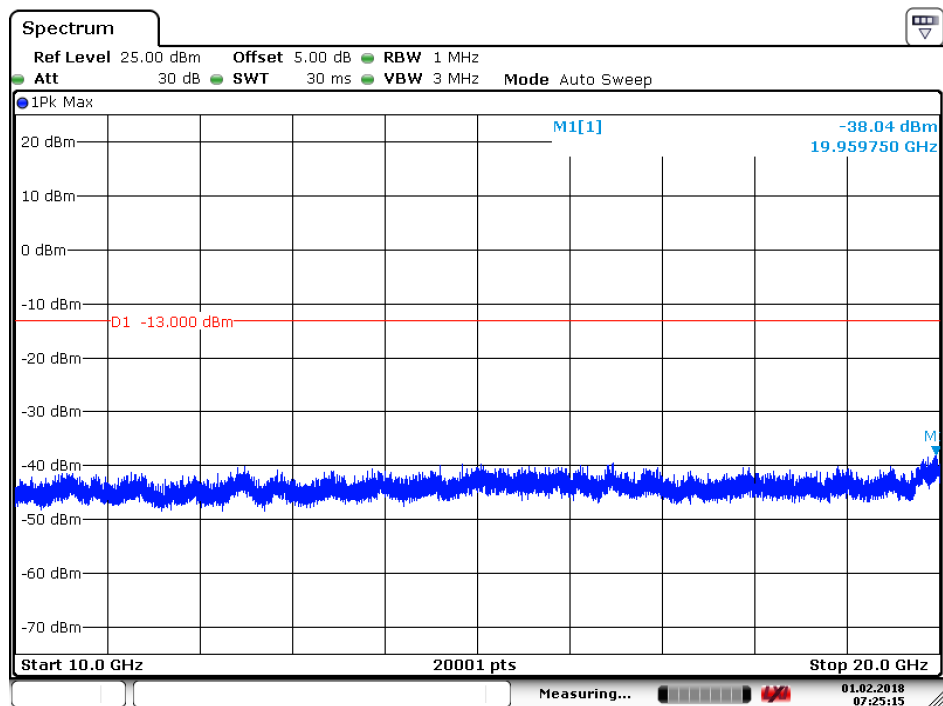


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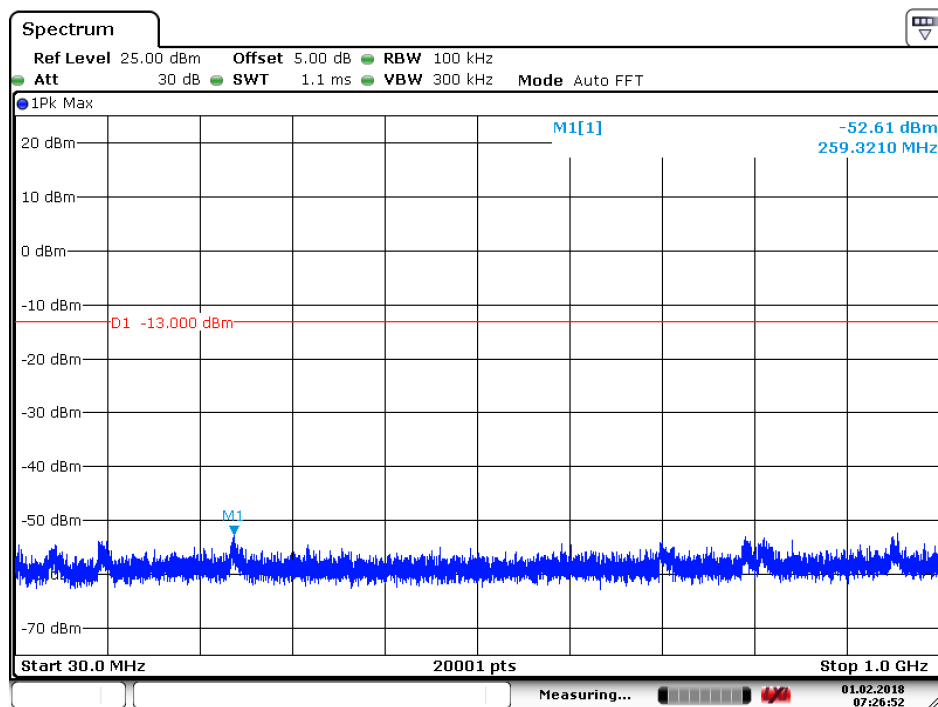
Date: 1.FEB.2018 04:54:39



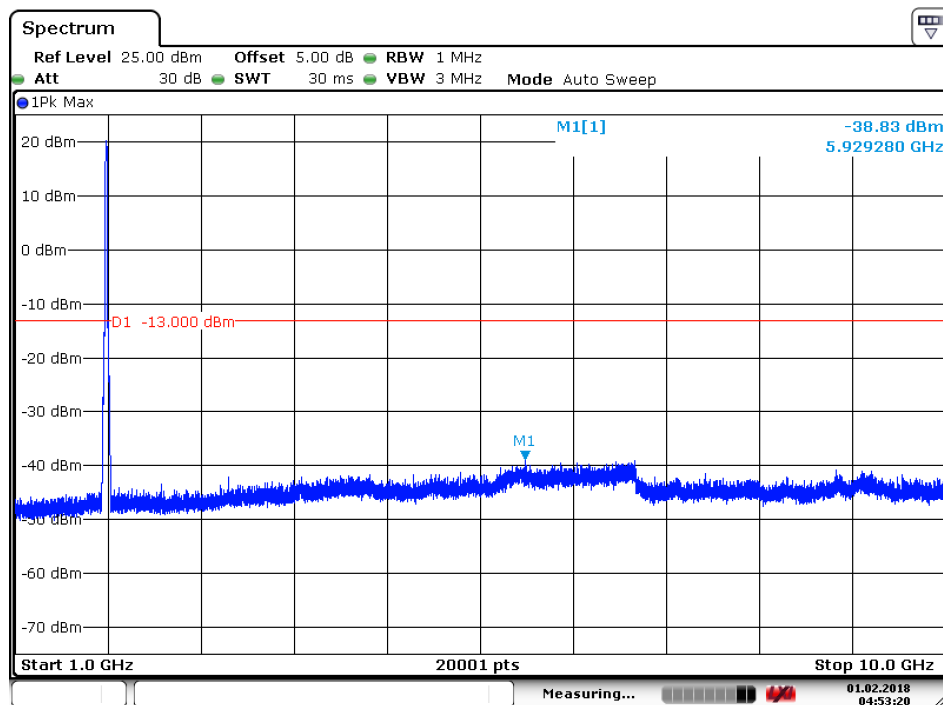
Date: 1.FEB.2018 07:25:15



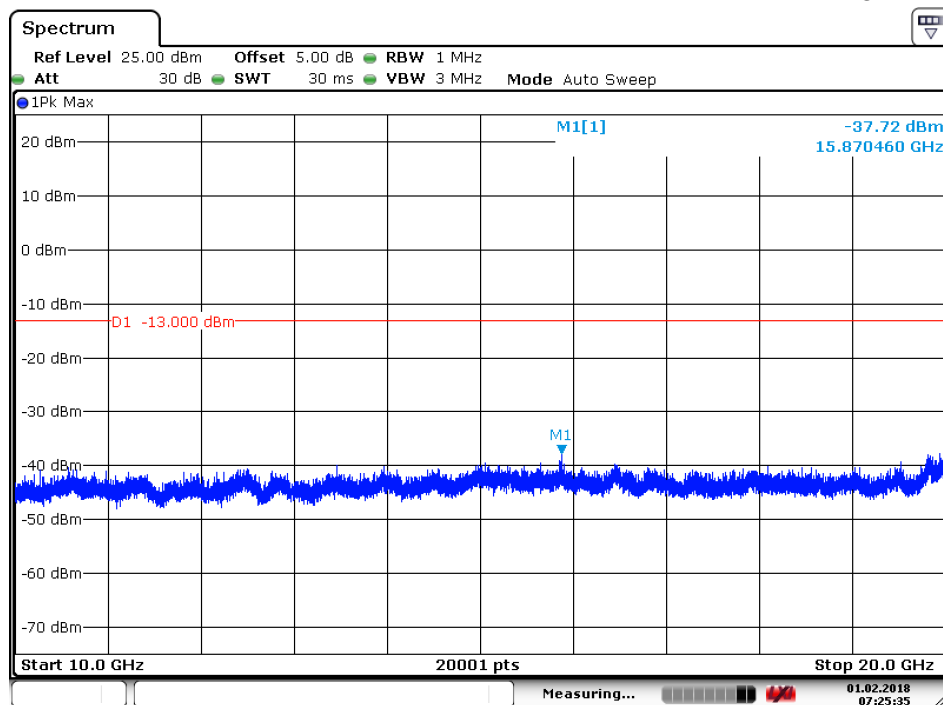
6.1.1.1.2 Test Channel = MCH



Date: 1.FEB.2018 07:26:52

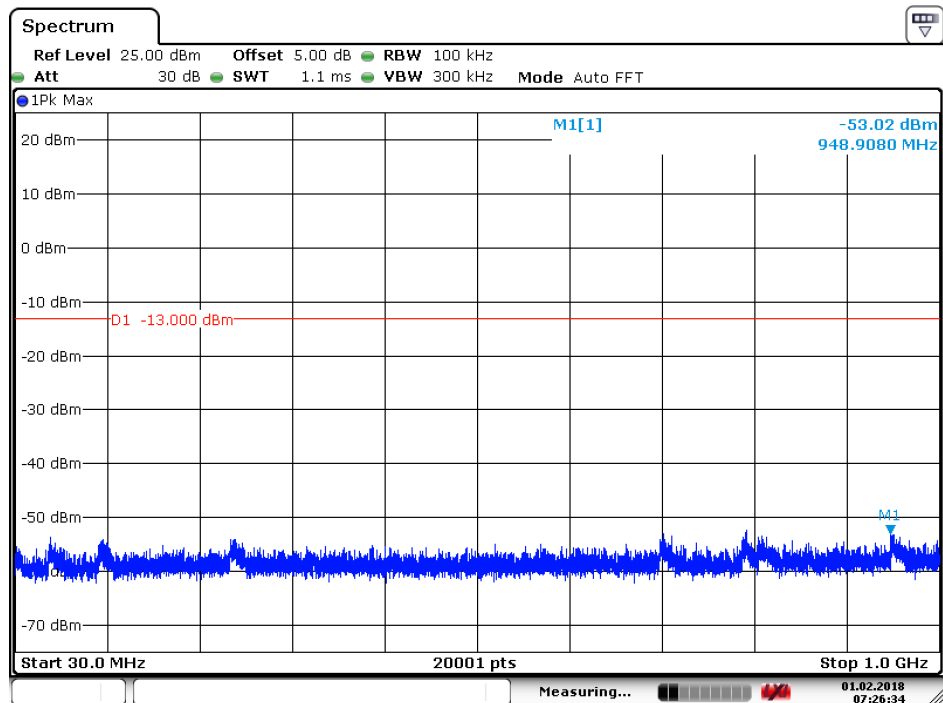


Date: 1.FEB.2018 04:53:20



Date: 1.FEB.2018 07:25:35

#### 6.1.1.1.3 Test Channel = HCH



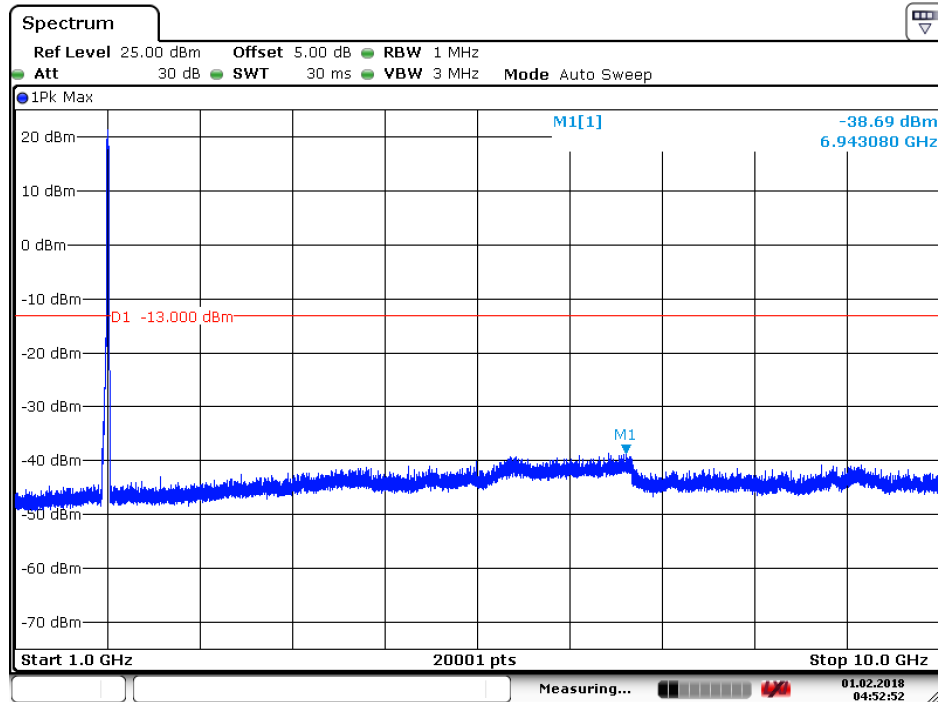
Date: 1.FEB.2018 07:26:34



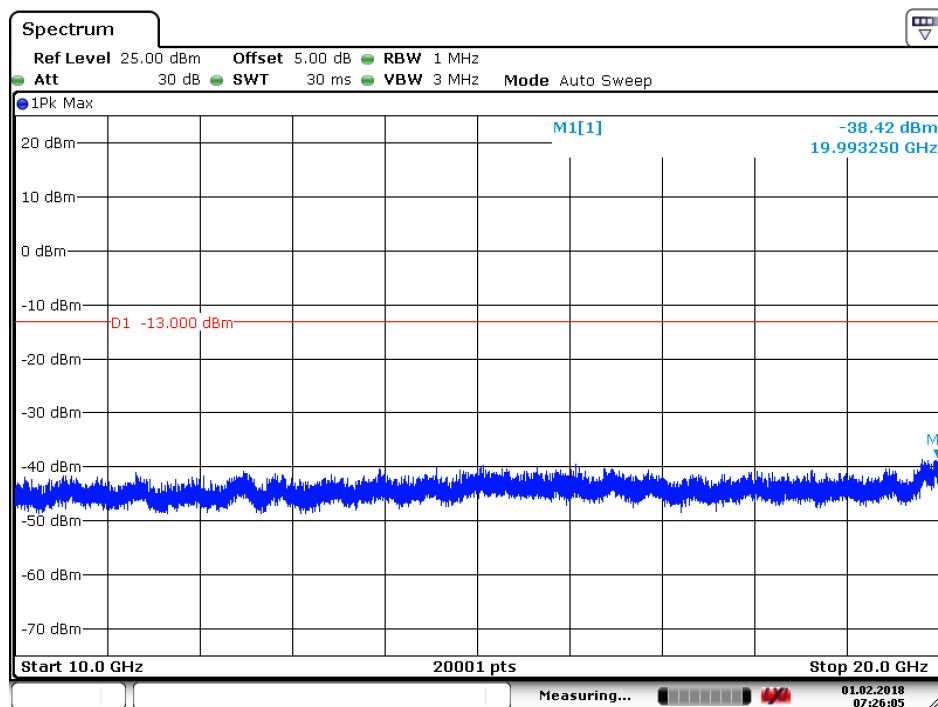
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Date: 1.FEB.2018 07:26:05



## 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

###### 7.1.1.1.1 Test Channel = LCH

Frequency (MHz)	Level (dBm)	Limit Line (dBm)	Over Limit (dB)	Polarization
1199.500000	-66.35	-13.00	53.35	Vertical
1476.500000	-66.56	-13.00	53.56	Vertical
2681.000000	-57.36	-13.00	44.36	Vertical
3725.400000	-68.05	-13.00	55.05	Vertical
5045.225000	-66.35	-13.00	53.35	Vertical
6259.100000	-65.23	-13.00	52.23	Vertical
1213.000000	-67.02	-13.00	54.02	Horizontal
2671.000000	-57.76	-13.00	44.76	Horizontal
4410.500000	-67.10	-13.00	54.10	Horizontal
5802.150000	-66.34	-13.00	53.34	Horizontal
6593.850000	-65.12	-13.00	52.12	Horizontal
7934.475000	-63.68	-13.00	50.68	Horizontal

###### 7.1.1.1.2 Test Channel = MCH

Frequency (MHz)	Level (dBm)	Limit Line (dBm)	Over Limit (dB)	Polarization
1191.500000	-66.70	-13.00	53.70	Vertical
2275.000000	-59.22	-13.00	46.22	Vertical
4023.100000	-67.42	-13.00	54.42	Vertical
4933.750000	-66.61	-13.00	53.61	Vertical
6048.500000	-64.86	-13.00	51.86	Vertical
7872.075000	-63.73	-13.00	50.73	Vertical
1159.500000	-67.49	-13.00	54.49	Horizontal
1504.000000	-66.70	-13.00	53.70	Horizontal
2228.000000	-59.40	-13.00	46.40	Horizontal
3900.250000	-67.74	-13.00	54.74	Horizontal
4842.425000	-66.74	-13.00	53.74	Horizontal
6909.750000	-64.84	-13.00	51.84	Horizontal





**7.1.1.1.3 Test Channel = HCH**

Frequency (MHz)	Level (dBm)	Limit Line (dBm)	Over Limit (dB)	Polarization
1271.000000	-66.34	-13.00	53.34	Vertical
2496.500000	-58.88	-13.00	45.88	Vertical
3545.675000	-68.60	-13.00	55.60	Vertical
4991.275000	-66.75	-13.00	53.75	Vertical
6065.400000	-65.32	-13.00	52.32	Vertical
7244.500000	-64.48	-13.00	51.48	Vertical
1213.000000	-67.06	-13.00	54.06	Horizontal
1623.000000	-65.51	-13.00	52.51	Horizontal
2396.000000	-58.87	-13.00	45.87	Horizontal
4275.625000	-66.69	-13.00	53.69	Horizontal
6095.950000	-65.61	-13.00	52.61	Horizontal
7950.725000	-63.61	-13.00	50.61	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	-5.03	-0.00270	PASS
				VN	3.46	0.00186	PASS
				VH	-7.73	-0.00416	PASS
		MCH	TN	VL	1.40	0.00074	PASS
				VN	-2.84	-0.00151	PASS
				VH	2.63	0.00140	PASS
		HCH	TN	VL	-6.56	-0.00345	PASS
				VN	-5.17	-0.00272	PASS
				VH	-2.79	-0.00147	PASS
	LTE/TM2 20MHz	LCH	TN	VL	-4.28	-0.00230	PASS
				VN	-2.95	-0.00159	PASS
				VH	-5.06	-0.00272	PASS
		MCH	TN	VL	1.46	0.00078	PASS
				VN	-2.80	-0.00149	PASS
				VH	2.59	0.00138	PASS
		HCH	TN	VL	-3.08	-0.00162	PASS
				VN	-3.00	-0.00158	PASS
				VH	2.76	0.00145	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	-4.22	-0.00227	PASS
				-20	-1.34	-0.00072	PASS
				-10	2.38	0.00128	PASS
				0	3.75	0.00202	PASS
				10	1.65	0.00089	PASS
				20	3.11	0.00167	PASS
				30	-0.31	-0.00017	PASS
				40	-4.14	-0.00223	PASS
				50	6.59	0.00354	PASS
		MCH	VN	-30	-3.80	-0.00202	PASS
				-20	-5.95	-0.00316	PASS
				-10	-7.49	-0.00398	PASS
				0	-5.62	-0.00299	PASS
				10	-4.04	-0.00215	PASS
				20	-2.94	-0.00156	PASS
				30	-5.66	-0.00301	PASS
				40	-4.20	-0.00223	PASS
				50	-6.92	-0.00368	PASS
		HCH	VN	-30	0.54	0.00028	PASS
				-20	-5.77	-0.00304	PASS
				-10	1.53	0.00081	PASS
				0	-2.83	-0.00149	PASS
				10	2.60	0.00137	PASS
				20	-1.57	-0.00083	PASS
				30	-2.66	-0.00140	PASS
				40	-6.43	-0.00338	PASS
				50	-5.30	-0.00279	PASS



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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

The End