



# Appendix B

## E-UTRA Band 12



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# 1 Effective (Isotropic) Radiated Power Output Data

**Effective Radiated Power of Transmitter (ERP) for LTE BAND 12**

Test Band(LTE)	Test Mode	Test Bandwidth	Test channel	Test RB	Measured (dBm)	ERP (dBm)	limit (dBm)	Verdict
BAND12	LTE/TM1	1.4M	LCH	RB1#0	23.17	19.72	34.77	PASS
				RB1#2	23.40	19.95	34.77	PASS
				RB1#5	23.40	19.95	34.77	PASS
				RB3#0	23.31	19.86	34.77	PASS
				RB3#2	23.48	20.03	34.77	PASS
				RB3#3	23.56	20.11	34.77	PASS
				RB6#0	22.46	19.01	34.77	PASS
			MCH	RB1#0	23.36	19.91	34.77	PASS
				RB1#2	23.28	19.83	34.77	PASS
				RB1#5	23.17	19.72	34.77	PASS
				RB3#0	23.36	19.91	34.77	PASS
				RB3#2	23.32	19.87	34.77	PASS
				RB3#3	23.44	19.99	34.77	PASS
				RB6#0	22.40	18.95	34.77	PASS
			HCH	RB1#0	23.19	19.74	34.77	PASS
				RB1#2	23.17	19.72	34.77	PASS
				RB1#5	22.98	19.53	34.77	PASS
				RB3#0	23.24	19.79	34.77	PASS
				RB3#2	23.26	19.81	34.77	PASS
				RB3#3	23.36	19.91	34.77	PASS
				RB6#0	22.34	18.89	34.77	PASS



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Test Band(LTE)	Test Mode	Test Bandwidth	Test channel	Test RB	Measured (dBm)	ERP (dBm)	limit (dBm)	Verdict
BAND12	LTE/TM2	1.4M	LCH	RB1#0	21.79	18.34	34.77	PASS
				RB1#2	22.09	18.64	34.77	PASS
				RB1#5	22.50	19.05	34.77	PASS
				RB3#0	22.32	18.87	34.77	PASS
				RB3#2	22.50	19.05	34.77	PASS
				RB3#3	22.39	18.94	34.77	PASS
				RB6#0	21.31	17.86	34.77	PASS
			MCH	RB1#0	21.86	18.41	34.77	PASS
				RB1#2	22.02	18.57	34.77	PASS
				RB1#5	21.85	18.4	34.77	PASS
				RB3#0	22.40	18.95	34.77	PASS
				RB3#2	22.24	18.79	34.77	PASS
				RB3#3	22.15	18.70	34.77	PASS
				RB6#0	21.20	17.75	34.77	PASS
			HCH	RB1#0	21.84	18.39	34.77	PASS
				RB1#2	21.96	18.51	34.77	PASS
				RB1#5	21.84	18.39	34.77	PASS
				RB3#0	22.14	18.69	34.77	PASS
				RB3#2	22.27	18.82	34.77	PASS
				RB3#3	22.13	18.68	34.77	PASS
				RB6#0	21.17	17.72	34.77	PASS



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Test Band(LTE)	Test Mode	Test Bandwidth	Test channel	Test RB	Measured (dBm)	ERP (dBm)	limit (dBm)	Verdict
BAND12	LTE/TM1	3M	LCH	RB1#0	23.50	20.05	34.77	PASS
				RB1#7	23.73	20.28	34.77	PASS
				RB1#14	23.64	20.19	34.77	PASS
				RB8#0	22.38	18.93	34.77	PASS
				RB8#4	22.44	18.99	34.77	PASS
				RB8#7	22.46	19.01	34.77	PASS
				RB15#0	22.44	18.99	34.77	PASS
			MCH	RB1#0	23.30	19.85	34.77	PASS
				RB1#7	23.26	19.81	34.77	PASS
				RB1#14	23.02	19.57	34.77	PASS
				RB8#0	22.49	19.04	34.77	PASS
				RB8#4	22.35	18.9	34.77	PASS
				RB8#7	22.40	18.95	34.77	PASS
				RB15#0	22.42	18.97	34.77	PASS
			HCH	RB1#0	23.23	19.78	34.77	PASS
				RB1#7	23.32	19.87	34.77	PASS
				RB1#14	23.00	19.55	34.77	PASS
				RB8#0	22.54	19.09	34.77	PASS
				RB8#4	22.49	19.04	34.77	PASS
				RB8#7	22.38	18.93	34.77	PASS
				RB15#0	22.49	19.04	34.77	PASS



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Test Band(LTE)	Test Mode	Test Bandwidth	Test channel	Test RB	Measured (dBm)	ERP (dBm)	limit (dBm)	Verdict
BAND12	LTE/TM2	3M	LCH	RB1#0	21.80	18.35	34.77	PASS
				RB1#7	22.07	18.62	34.77	PASS
				RB1#14	21.92	18.47	34.77	PASS
				RB8#0	21.08	17.63	34.77	PASS
				RB8#4	21.56	18.11	34.77	PASS
				RB8#7	21.81	18.36	34.77	PASS
				RB15#0	21.54	18.09	34.77	PASS
			MCH	RB1#0	22.60	19.15	34.77	PASS
				RB1#7	21.97	18.52	34.77	PASS
				RB1#14	21.84	18.39	34.77	PASS
				RB8#0	21.24	17.79	34.77	PASS
				RB8#4	21.21	17.76	34.77	PASS
				RB8#7	21.32	17.87	34.77	PASS
				RB15#0	21.15	17.7	34.77	PASS
			HCH	RB1#0	22.26	18.81	34.77	PASS
				RB1#7	22.12	18.67	34.77	PASS
				RB1#14	22.02	18.57	34.77	PASS
				RB8#0	21.49	18.04	34.77	PASS
				RB8#4	21.46	18.01	34.77	PASS
				RB8#7	21.27	17.82	34.77	PASS
				RB15#0	21.43	17.98	34.77	PASS



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Test Band(LTE)	Test Mode	Test Bandwidth	Test channel	Test RB	Measured (dBm)	ERP (dBm)	limit (dBm)	Verdict
BAND12	LTE/TM1	5M	LCH	RB1#0	23.24	19.79	34.77	PASS
				RB1#13	23.41	19.96	34.77	PASS
				RB1#24	23.45	20	34.77	PASS
				RB12#0	22.48	19.03	34.77	PASS
				RB12#6	22.58	19.13	34.77	PASS
				RB12#13	22.50	19.05	34.77	PASS
				RB25#0	22.50	19.05	34.77	PASS
			MCH	RB1#0	23.31	19.86	34.77	PASS
				RB1#13	23.21	19.76	34.77	PASS
				RB1#24	23.03	19.58	34.77	PASS
				RB12#0	22.53	19.08	34.77	PASS
				RB12#6	22.35	18.9	34.77	PASS
				RB12#13	22.37	18.92	34.77	PASS
				RB25#0	22.38	18.93	34.77	PASS
			HCH	RB1#0	23.27	19.82	34.77	PASS
				RB1#13	23.25	19.8	34.77	PASS
				RB1#24	23.01	19.56	34.77	PASS
				RB12#0	22.41	18.96	34.77	PASS
				RB12#6	22.42	18.97	34.77	PASS
				RB12#13	22.38	18.93	34.77	PASS
				RB25#0	22.36	18.91	34.77	PASS



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Test Band(LTE)	Test Mode	Test Bandwidth	Test channel	Test RB	Measured (dBm)	ERP (dBm)	limit (dBm)	Verdict
BAND12	LTE/TM2	5M	LCH	RB1#0	21.82	18.37	34.77	PASS
				RB1#13	22.63	19.18	34.77	PASS
				RB1#24	22.64	19.19	34.77	PASS
				RB12#0	21.55	18.1	34.77	PASS
				RB12#6	21.56	18.11	34.77	PASS
				RB12#13	21.67	18.22	34.77	PASS
				RB25#0	21.51	18.06	34.77	PASS
			MCH	RB1#0	22.42	18.97	34.77	PASS
				RB1#13	22.09	18.64	34.77	PASS
				RB1#24	21.50	18.05	34.77	PASS
				RB12#0	21.45	18.00	34.77	PASS
				RB12#6	21.27	17.82	34.77	PASS
				RB12#13	21.14	17.69	34.77	PASS
				RB25#0	21.4	17.95	34.77	PASS
			HCH	RB1#0	22.05	18.6	34.77	PASS
				RB1#13	21.87	18.42	34.77	PASS
				RB1#24	21.99	18.54	34.77	PASS
				RB12#0	21.20	17.75	34.77	PASS
				RB12#6	21.44	17.99	34.77	PASS
				RB12#13	21.22	17.77	34.77	PASS
				RB25#0	21.20	17.75	34.77	PASS





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Test Band(LTE)	Test Mode	Test Bandwidth	Test channel	Test RB	Measured (dBm)	ERP (dBm)	limit (dBm)	Verdict
BAND12	LTE/TM1	10M	LCH	RB1#0	23.04	19.59	34.77	PASS
				RB1#25	23.74	20.29	34.77	PASS
				RB1#49	23.15	19.7	34.77	PASS
				RB25#0	22.49	19.04	34.77	PASS
				RB25#13	22.57	19.12	34.77	PASS
				RB25#25	22.50	19.05	34.77	PASS
				RB50#0	22.57	19.12	34.77	PASS
			MCH	RB1#0	23.42	19.97	34.77	PASS
				RB1#25	23.17	19.72	34.77	PASS
				RB1#49	23.15	19.7	34.77	PASS
				RB25#0	22.57	19.12	34.77	PASS
				RB25#13	22.37	18.92	34.77	PASS
				RB25#25	22.37	18.92	34.77	PASS
				RB50#0	22.40	18.95	34.77	PASS
			HCH	RB1#0	23.30	19.85	34.77	PASS
				RB1#25	23.19	19.74	34.77	PASS
				RB1#49	23.05	19.6	34.77	PASS
				RB25#0	22.38	18.93	34.77	PASS
				RB25#13	22.48	19.03	34.77	PASS
				RB25#25	22.42	18.97	34.77	PASS
				RB50#0	22.44	18.99	34.77	PASS



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Test Band(LTE)	Test Mode	Test Bandwidth	Test channel	Test RB	Measured (dBm)	ERP (dBm)	limit (dBm)	Verdict
BAND12	LTE/TM2	10M	LCH	RB1#0	22.08	18.63	34.77	PASS
				RB1#25	22.80	19.35	34.77	PASS
				RB1#49	21.99	18.54	34.77	PASS
				RB25#0	21.47	18.02	34.77	PASS
				RB25#13	21.56	18.11	34.77	PASS
				RB25#25	21.40	17.95	34.77	PASS
				RB50#0	21.47	18.02	34.77	PASS
			MCH	RB1#0	21.78	18.33	34.77	PASS
				RB1#25	21.72	18.27	34.77	PASS
				RB1#49	22.06	18.61	34.77	PASS
				RB25#0	21.48	18.03	34.77	PASS
				RB25#13	21.39	17.94	34.77	PASS
				RB25#25	21.37	17.92	34.77	PASS
				RB50#0	21.30	17.85	34.77	PASS
			HCH	RB1#0	21.88	18.43	34.77	PASS
				RB1#25	21.99	18.54	34.77	PASS
				RB1#49	21.89	18.44	34.77	PASS
				RB25#0	21.39	17.94	34.77	PASS
				RB25#13	21.59	18.14	34.77	PASS
				RB25#25	21.42	17.97	34.77	PASS
				RB50#0	21.44	17.99	34.77	PASS

Note:

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

$$ERP [dBm] = SGP [dBm] - Cable Loss [dB] + Gain [dBd]$$

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 12	TM1/10M	LCH	5.04	13	PASS
		MCH	5.36	13	PASS
		HCH	4.99	13	PASS
	TM2/10M	LCH	6.00	13	PASS
		MCH	6.17	13	PASS
		HCH	6.00	13	PASS



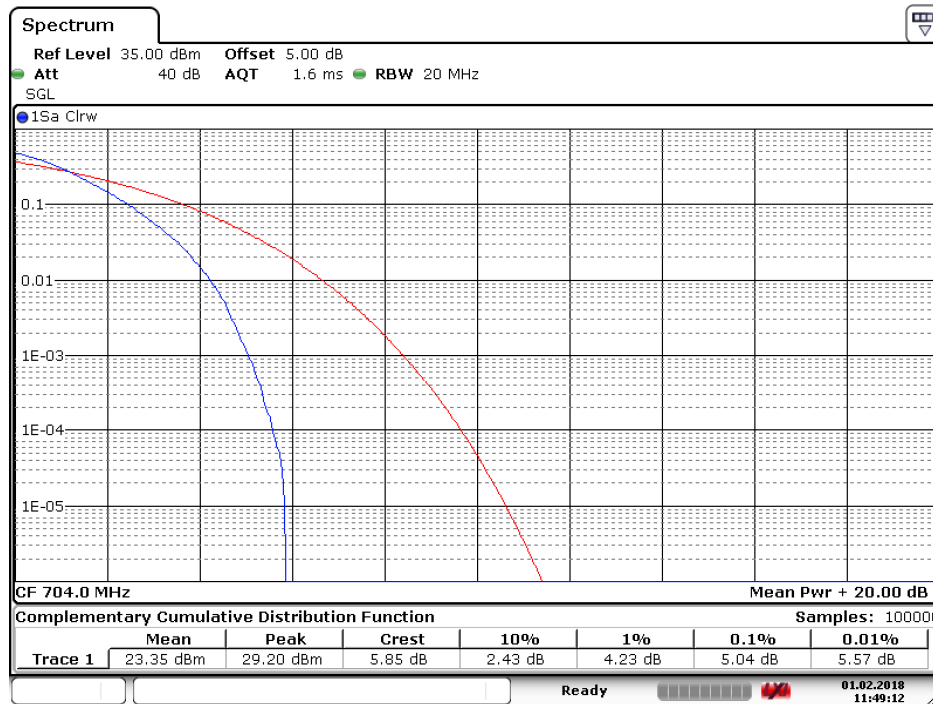
Part II - Test Plots

2.1 For LTE

2.1.1 Test Band = LTE band12

2.1.1.1 Test Mode = LTE/TM1.Bandwidth=10MHz

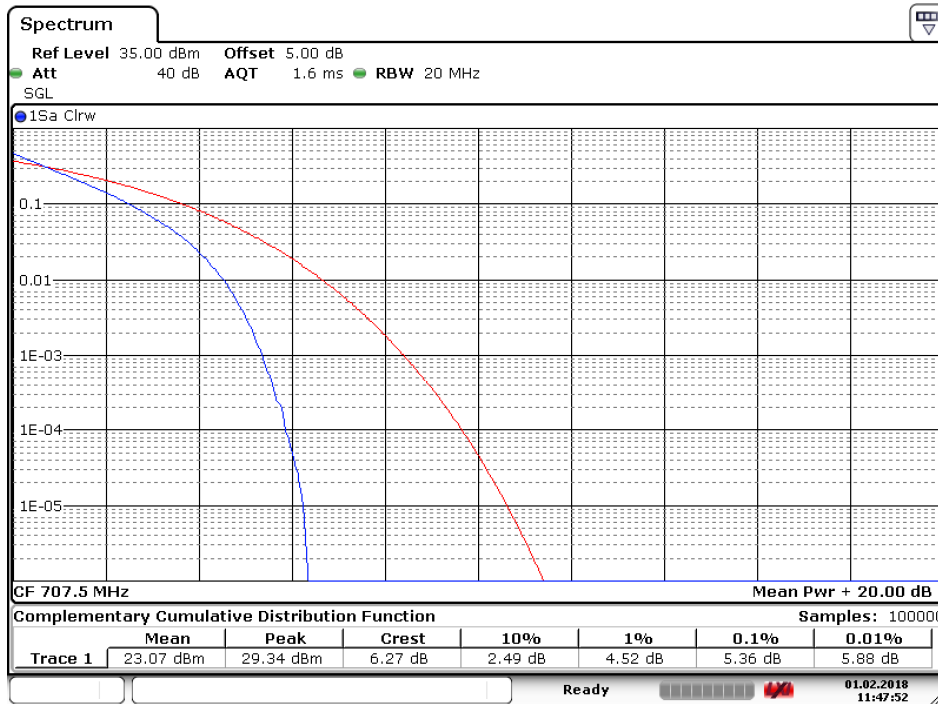
2.1.1.1.1 Test Channel = LCH



Date: 1.FEB.2018 11:49:12

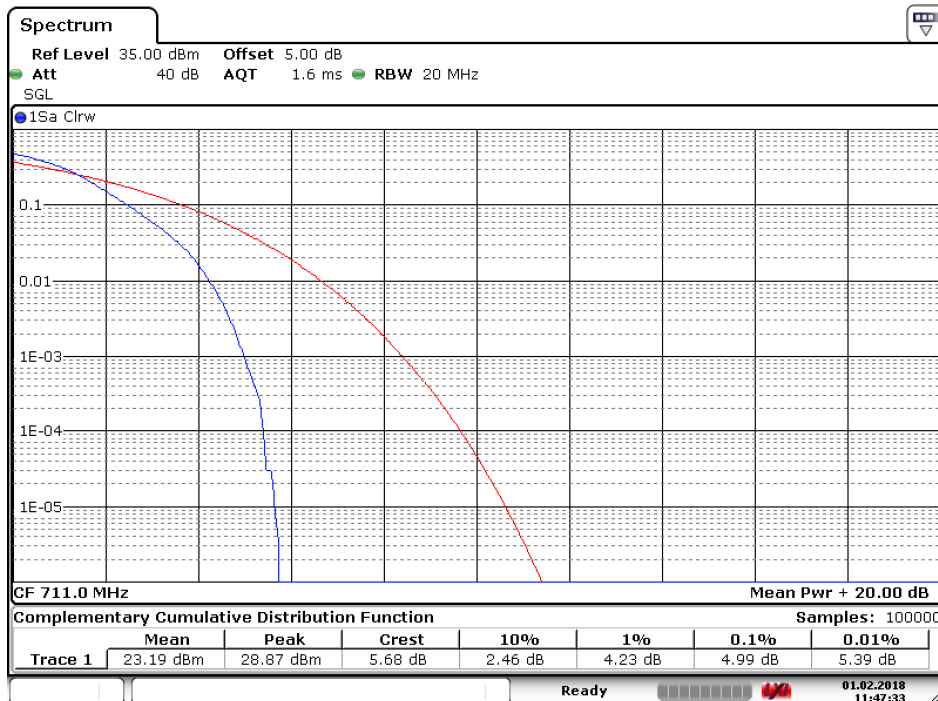


2.1.1.1.2 Test Channel = MCH



Date: 1.FEB.2018 11:47:53

2.1.1.1.3 Test Channel = HCH

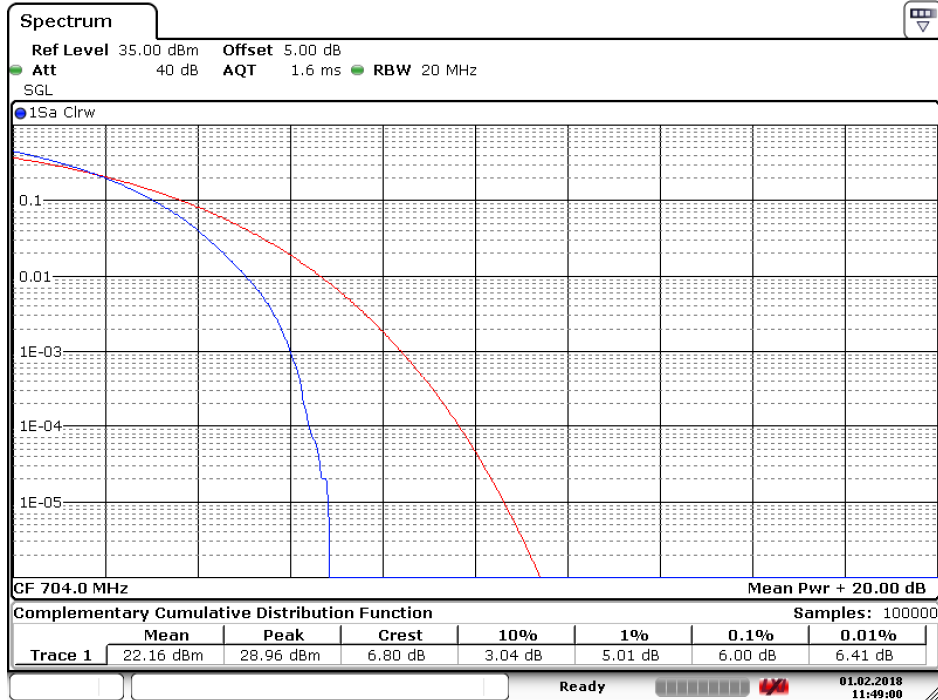


Date: 1.FEB.2018 11:47:34



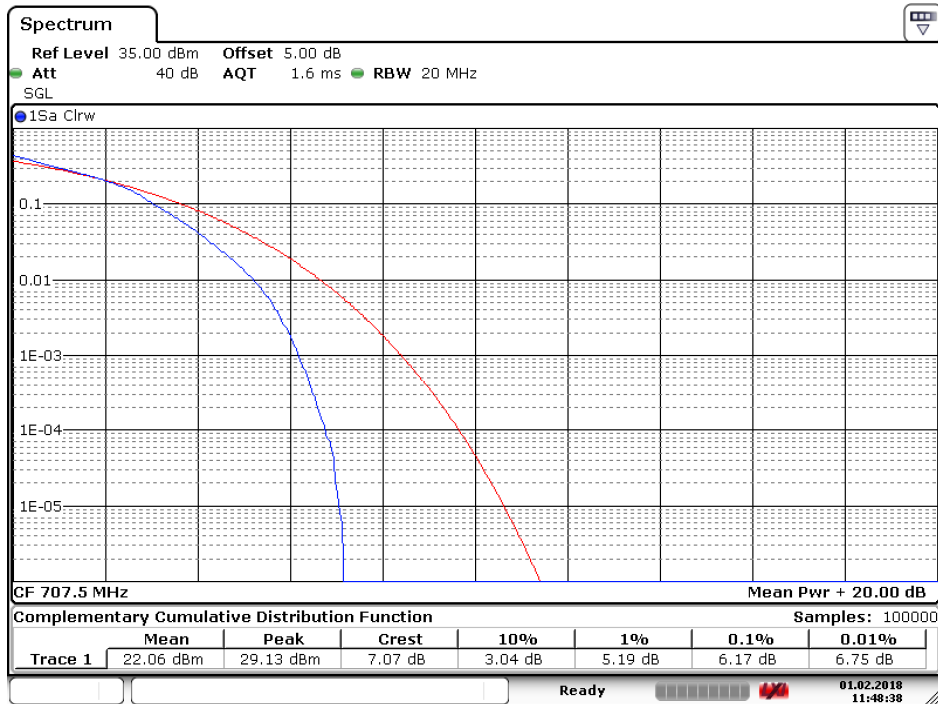
2.1.1.2 Test Mode = LTE/TM2.Bandwidth=10MHz

2.1.1.2.1 Test Channel = LCH



Date: 1.FEB.2018 11:49:00

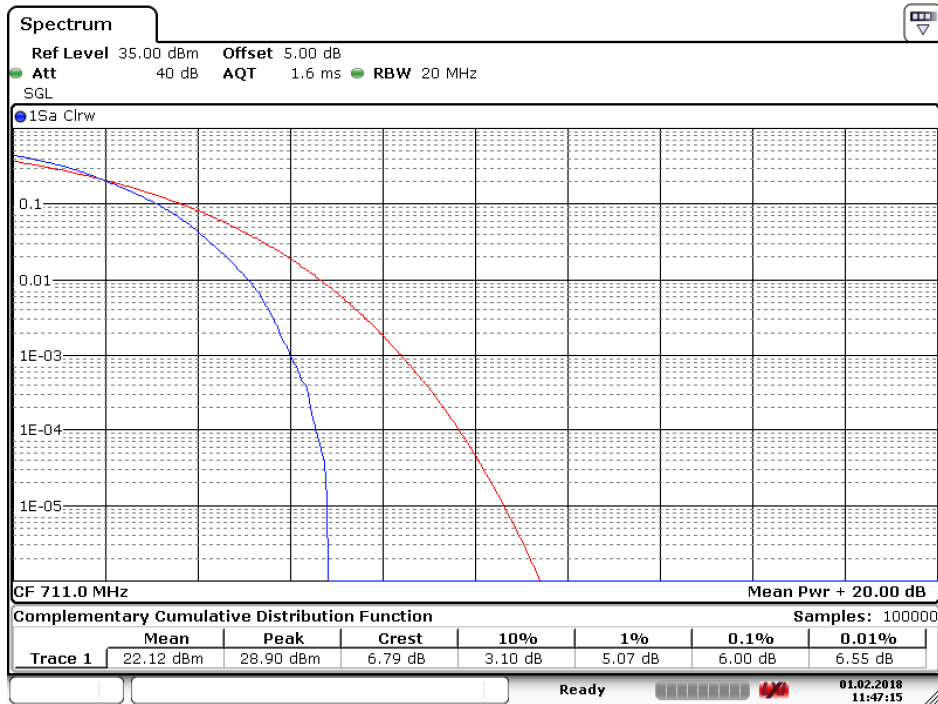
2.1.1.2.2 Test Channel = MCH



Date: 1.FEB.2018 11:48:38



**2.1.1.2.3 Test Channel = HCH**



Date: 1.FEB.2018 11:47:16

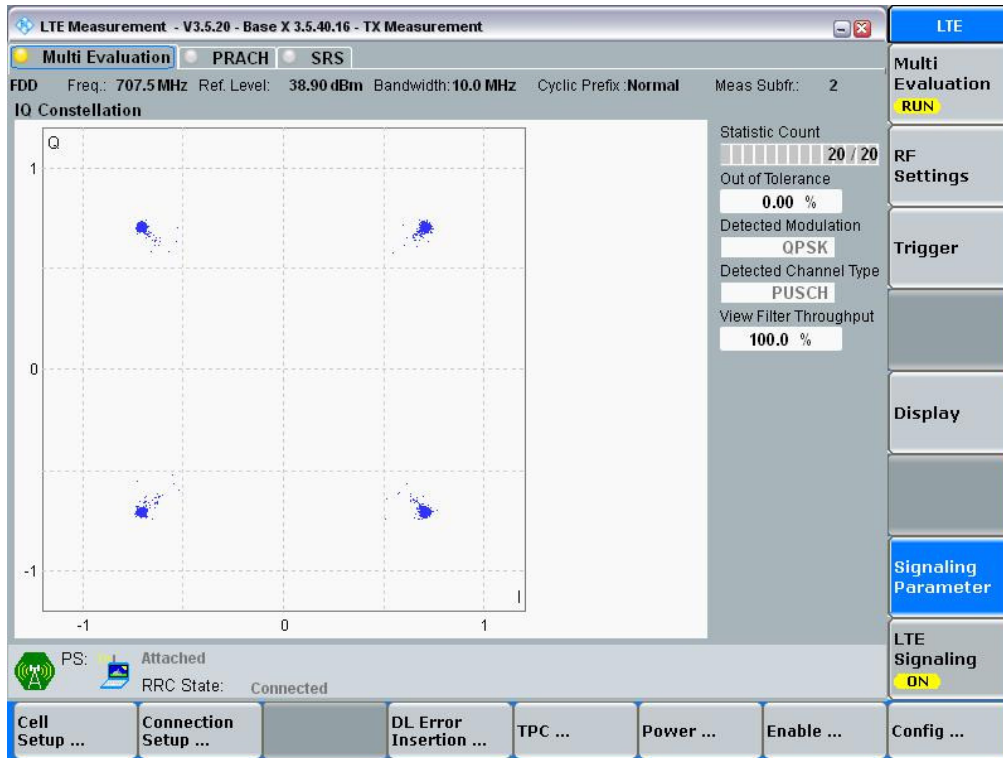
### 3 Modulation Characteristics

#### 3.1 For LTE

##### 3.1.1 Test Band = LTE band12

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

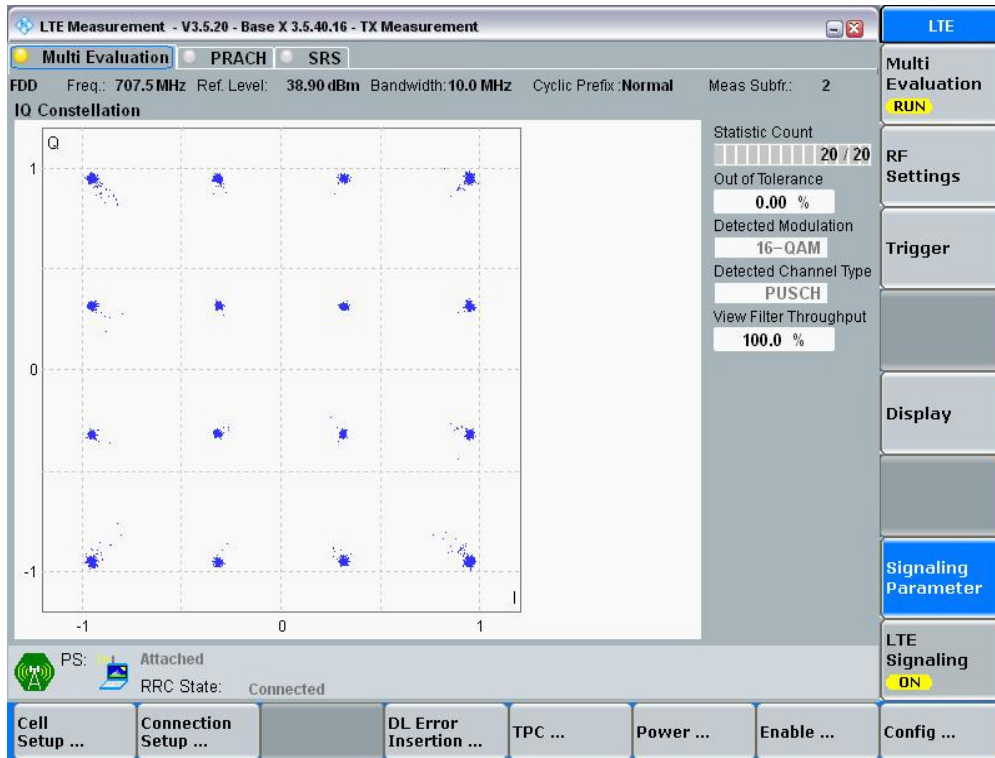
##### 3.1.1.1.1 Test Channel = MCH





**3.1.1.2 Test Mode = LTE /TM2 10MHz**

**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 12	TM1/1.4MHz	LCH	1.10	1.28	PASS
		MCH	1.09	1.29	PASS
		HCH	1.10	1.30	PASS
	TM2/1.4MHz	LCH	1.10	1.29	PASS
		MCH	1.10	1.28	PASS
		HCH	1.10	1.28	PASS
	TM1/ 3MHz	LCH	2.69	2.92	PASS
		MCH	2.69	2.93	PASS
		HCH	2.69	2.93	PASS
	TM2/3MHz	LCH	2.67	2.93	PASS
		MCH	2.69	2.93	PASS
		HCH	2.68	2.93	PASS
	TM1/ 5MHz	LCH	4.47	4.89	PASS
		MCH	4.49	4.90	PASS
		HCH	4.45	4.86	PASS
	TM2/ 5MHz	LCH	4.46	4.81	PASS
		MCH	4.48	4.93	PASS
		HCH	4.46	4.90	PASS
	TM1/10MHz	LCH	8.89	9.63	PASS
		MCH	8.99	9.83	PASS
		HCH	8.89	9.61	PASS
TM2/ 10MHz	LCH	8.89	9.45	PASS	
	MCH	8.95	9.73	PASS	
	HCH	8.89	9.55	PASS	



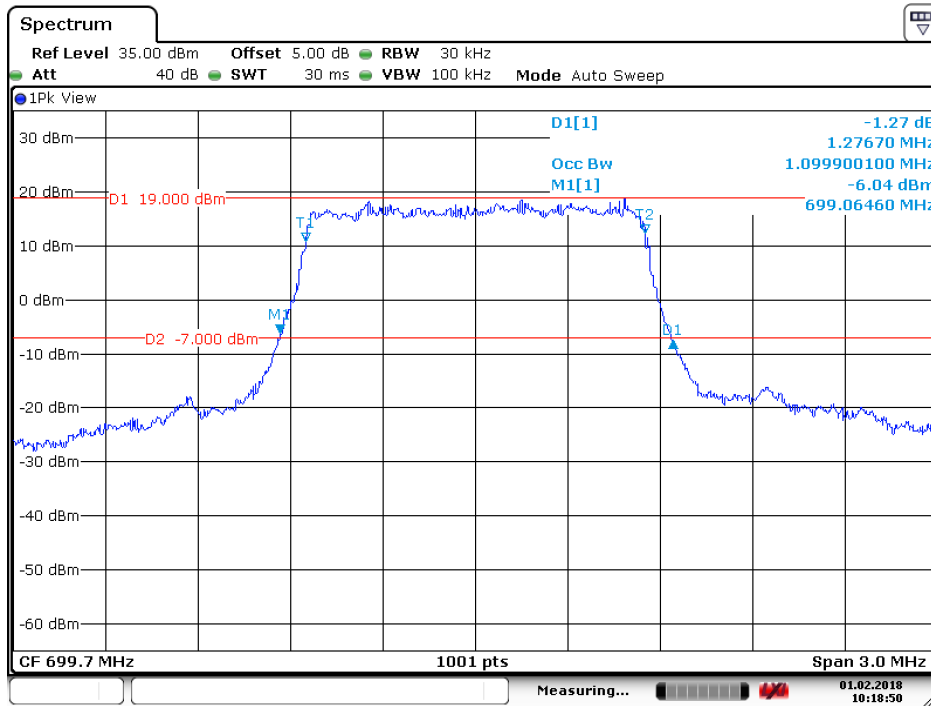
Part II –Test Plots

4.1 For LTE

4.1.1 Test Band = LTE band12

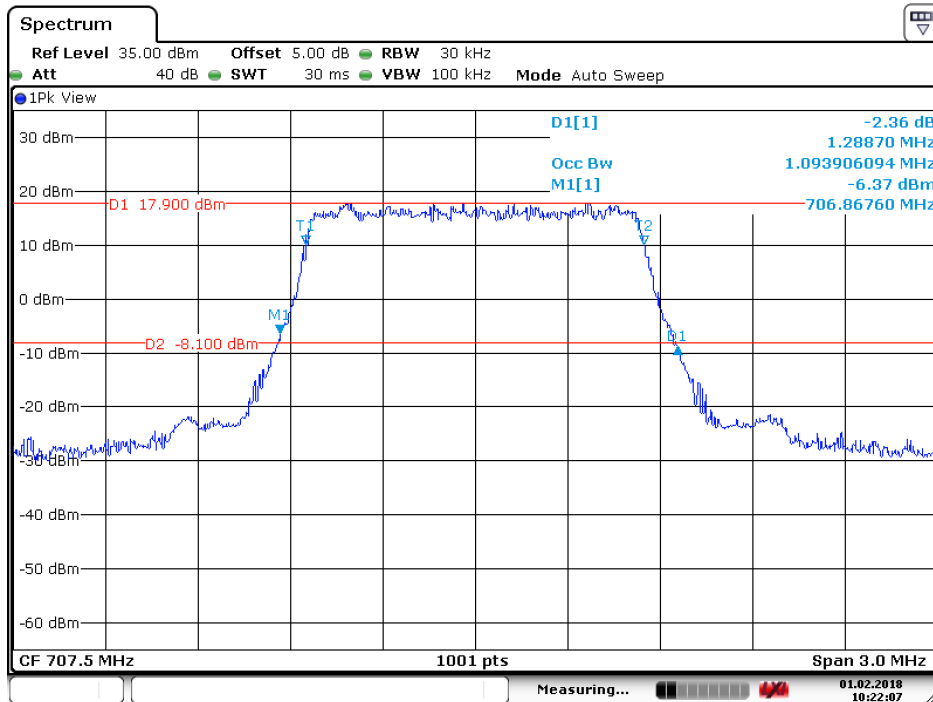
4.1.1.1 Test Mode = LTE/TM1 1.4MHz

4.1.1.1.1 Test Channel = LCH



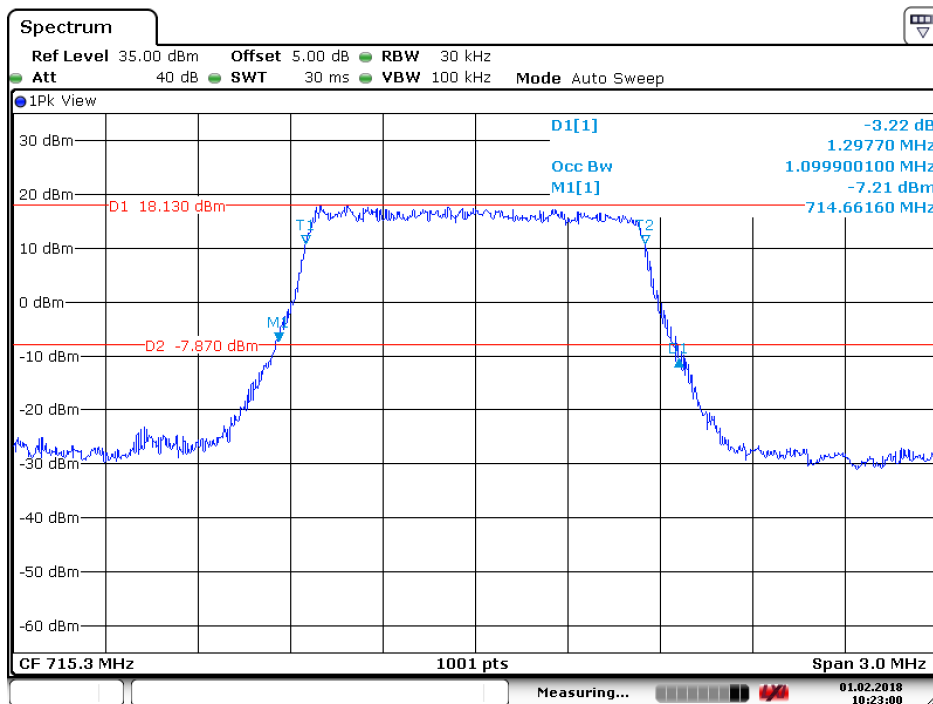
Date: 1.FEB.2018 10:18:51

**4.1.1.1.2 Test Channel = MCH**



Date: 1.FEB.2018 10:22:07

**4.1.1.1.3 Test Channel = HCH**

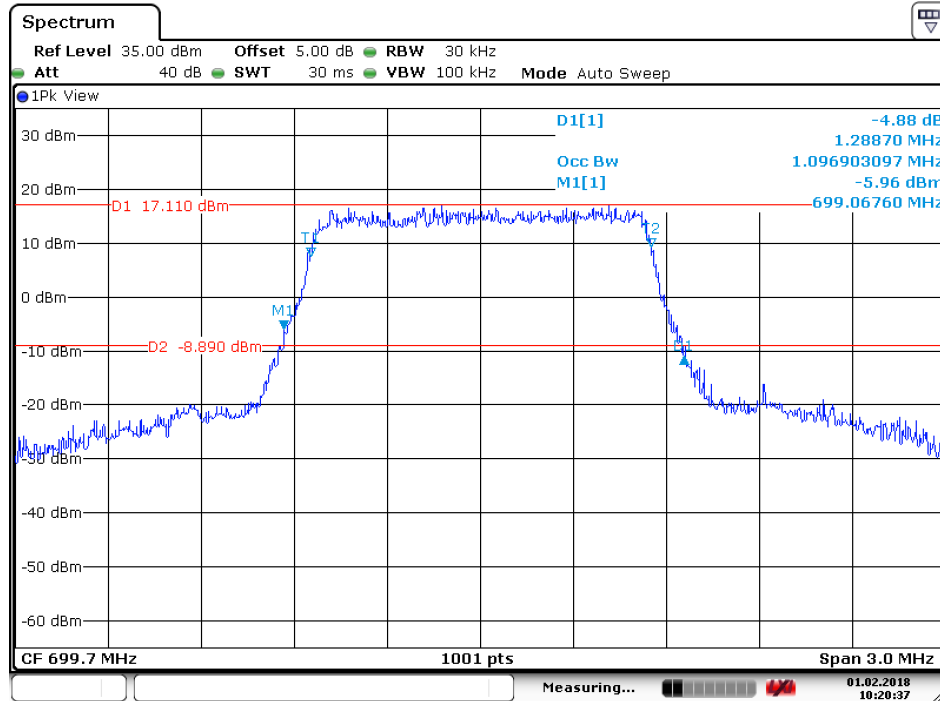


Date: 1.FEB.2018 10:23:01



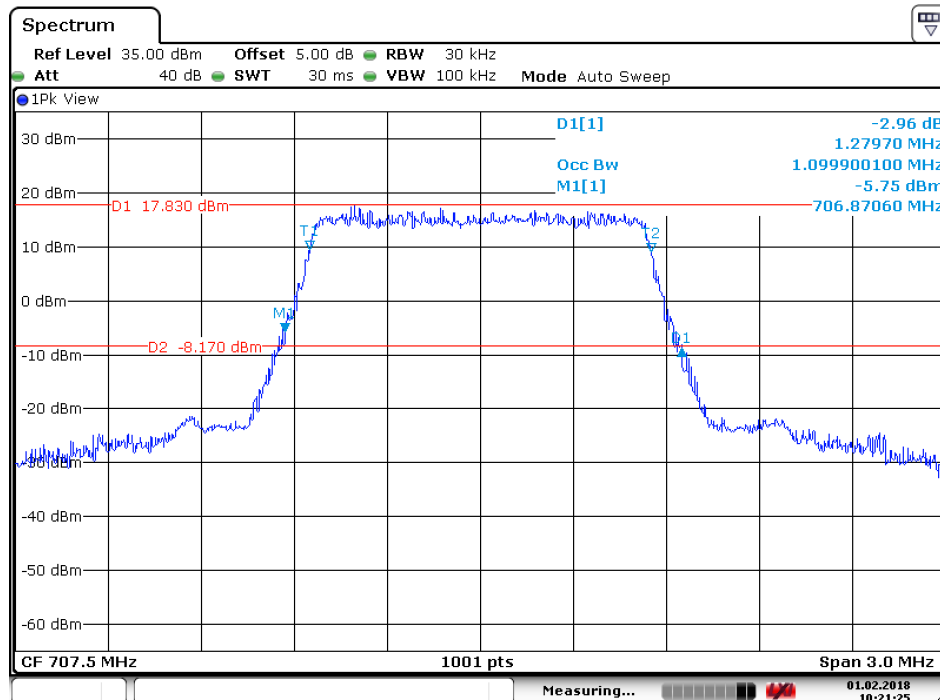
4.1.1.2 Test Mode = LTE/TM2 1.4MHz

4.1.1.2.1 Test Channel = LCH



Date: 1.FEB.2018 10:20:38

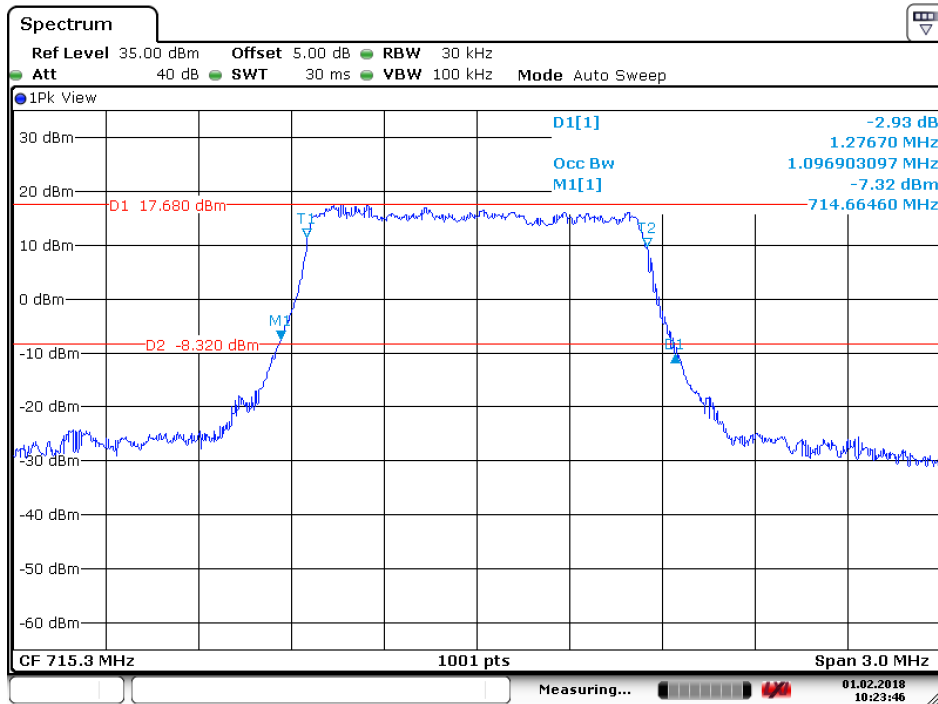
4.1.1.2.2 Test Channel = MCH



Date: 1.FEB.2018 10:21:26



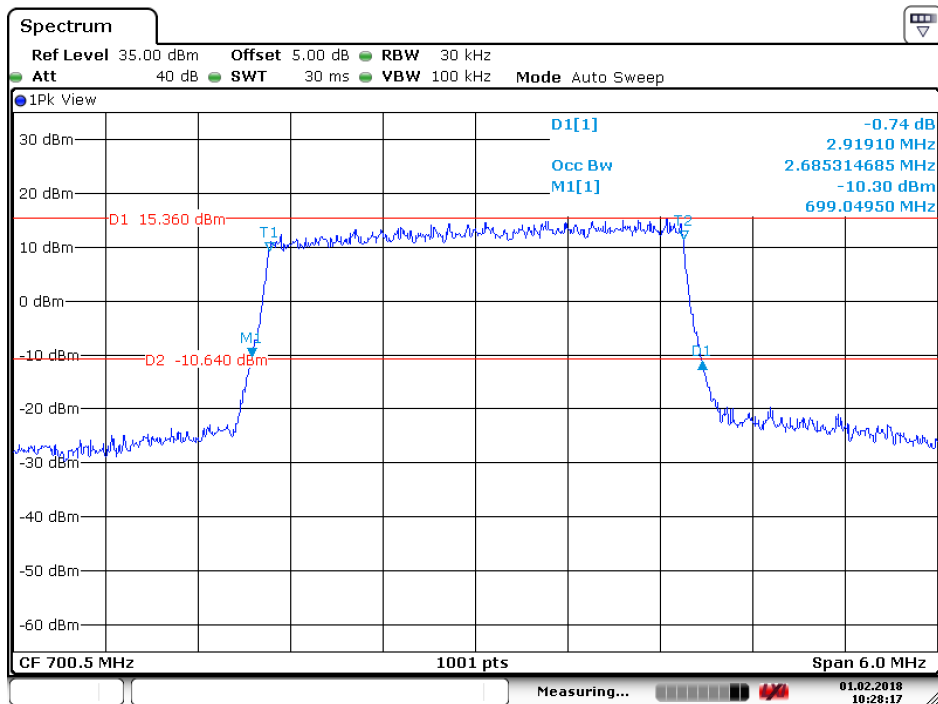
4.1.1.2.3 Test Channel = HCH



Date: 1.FEB.2018 10:23:47

4.1.1.3 Test Mode = LTE/TM1 3MHz

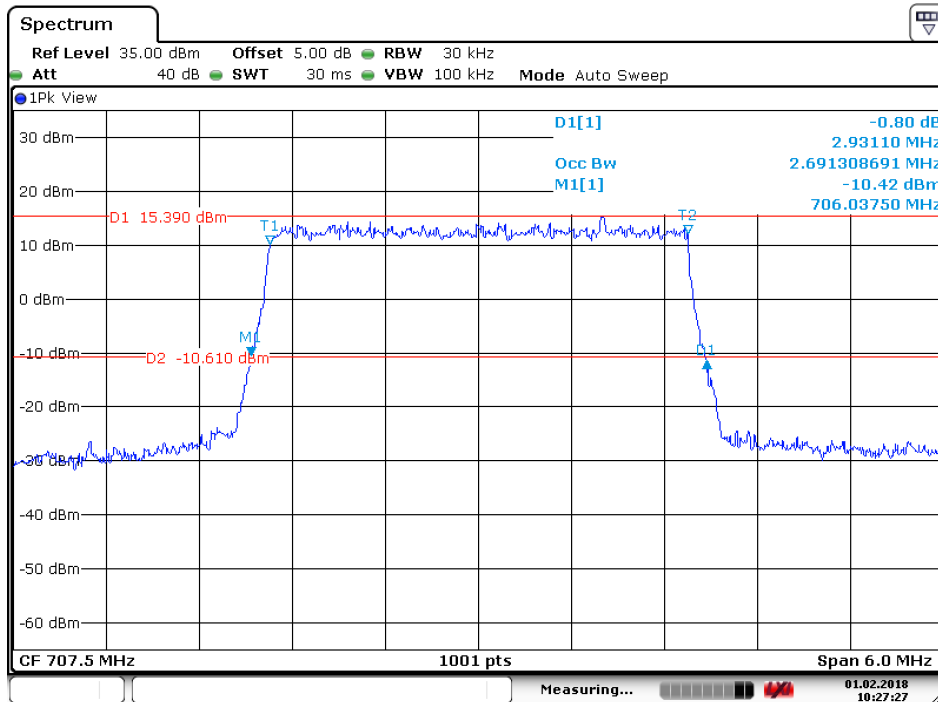
4.1.1.3.1 Test Channel = LCH



Date: 1.FEB.2018 10:28:17

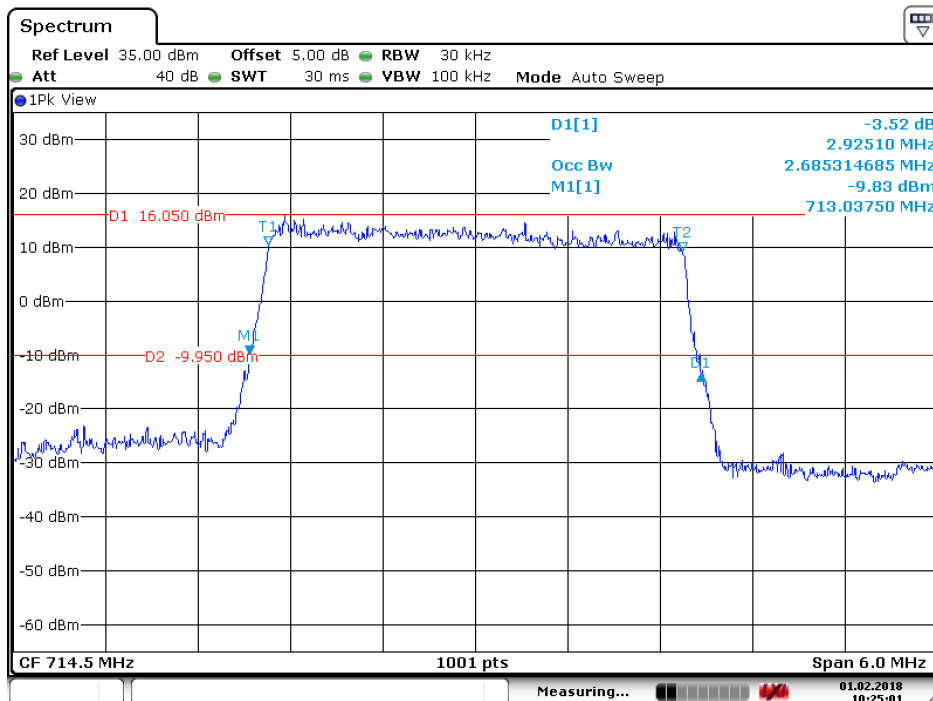


4.1.1.3.2 Test Channel = MCH



Date: 1.FEB.2018 10:27:27

4.1.1.3.3 Test Channel = HCH

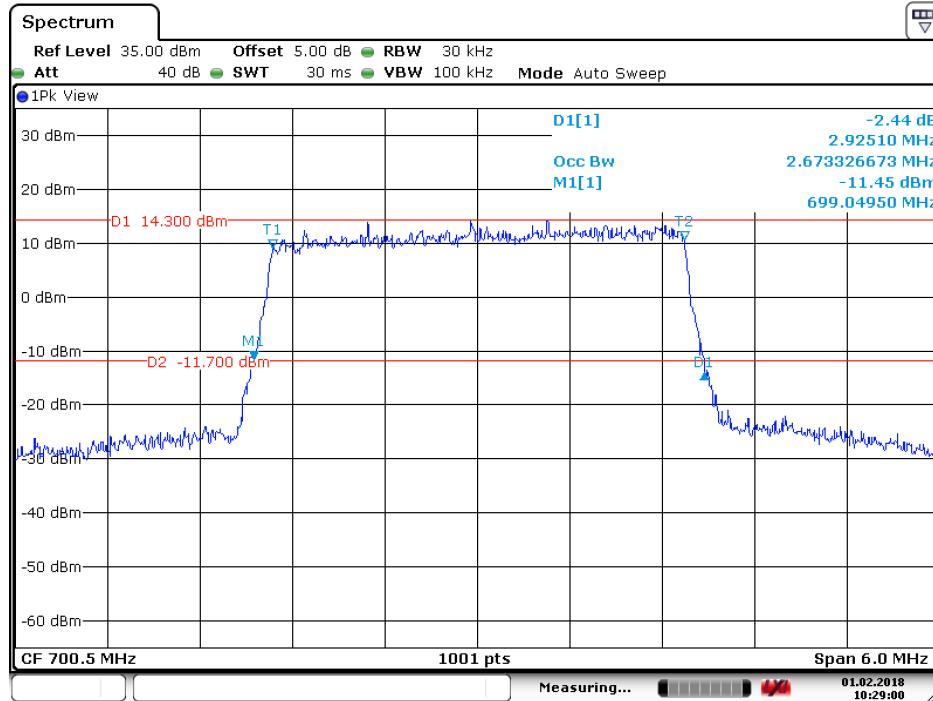


Date: 1.FEB.2018 10:25:01



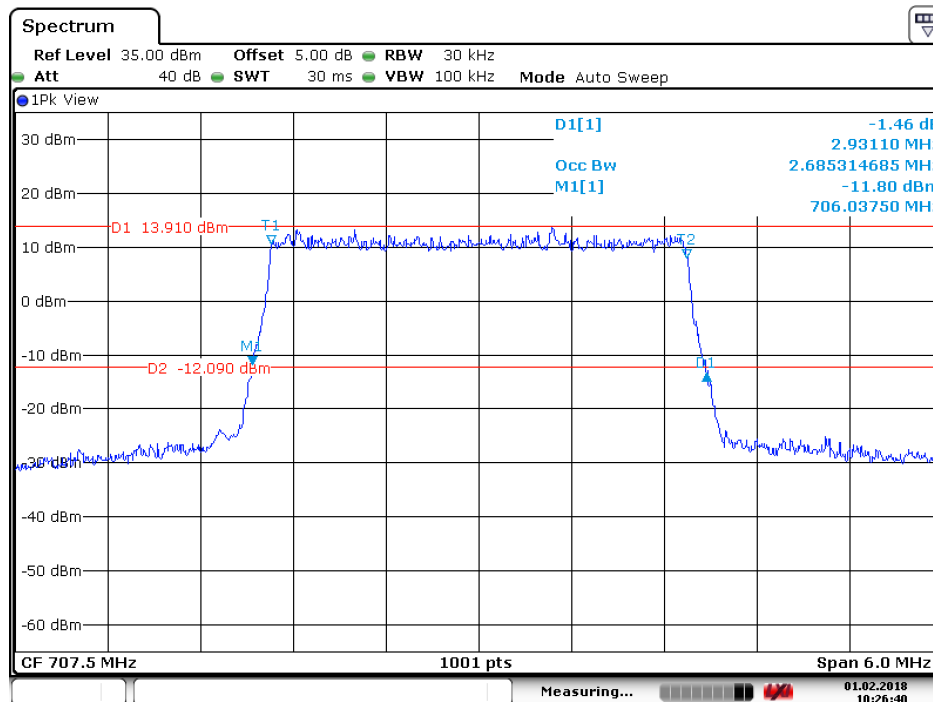
4.1.1.4 Test Mode = LTE/TM2 3MHz

4.1.1.4.1 Test Channel = LCH



Date: 1.FEB.2018 10:29:01

4.1.1.4.2 Test Channel = MCH

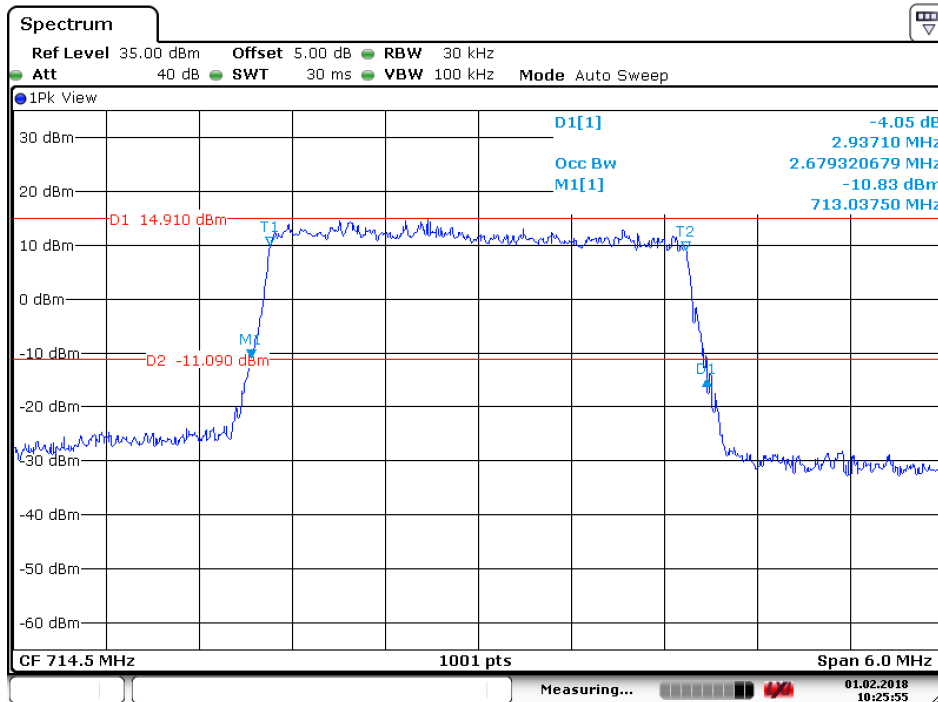


Date: 1.FEB.2018 10:26:41





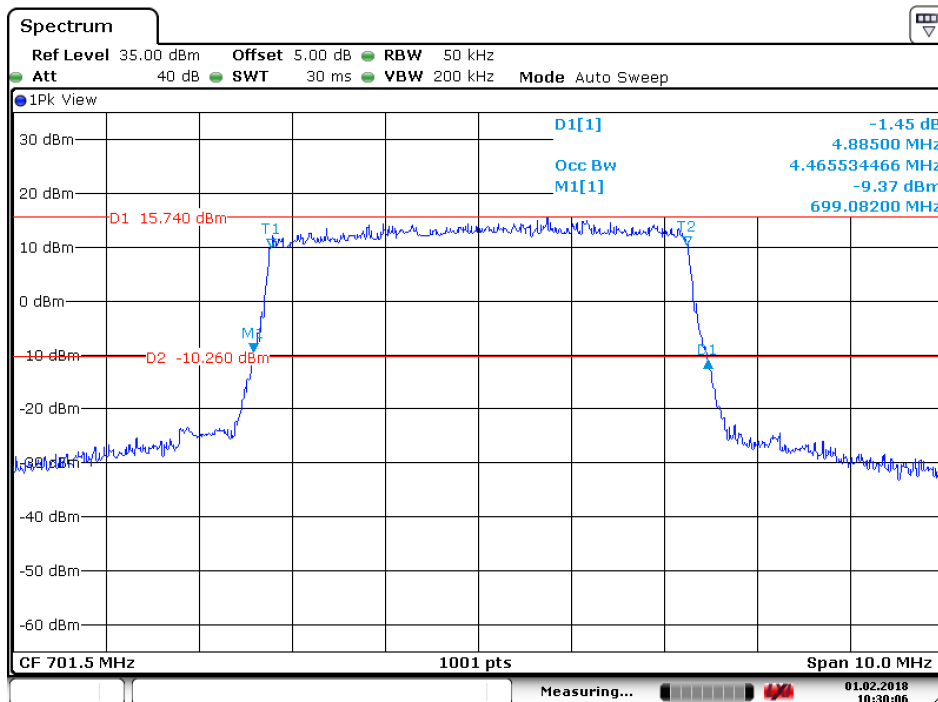
**4.1.1.4.3 Test Channel = HCH**



Date: 1.FEB.2018 10:25:55

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

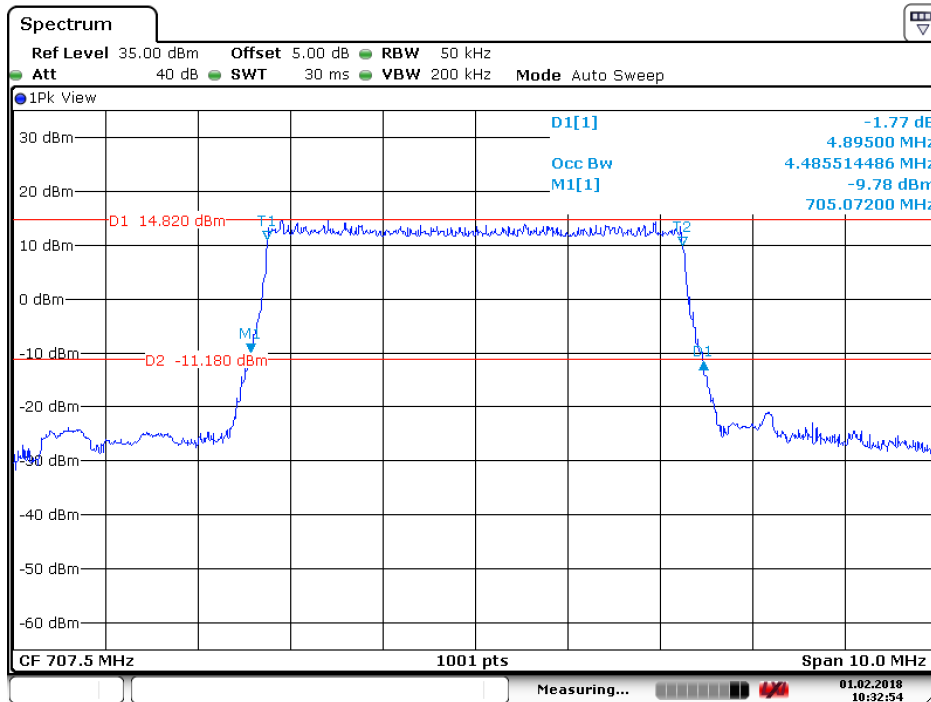
**4.1.1.5.1 Test Channel = LCH**



Date: 1.FEB.2018 10:30:06

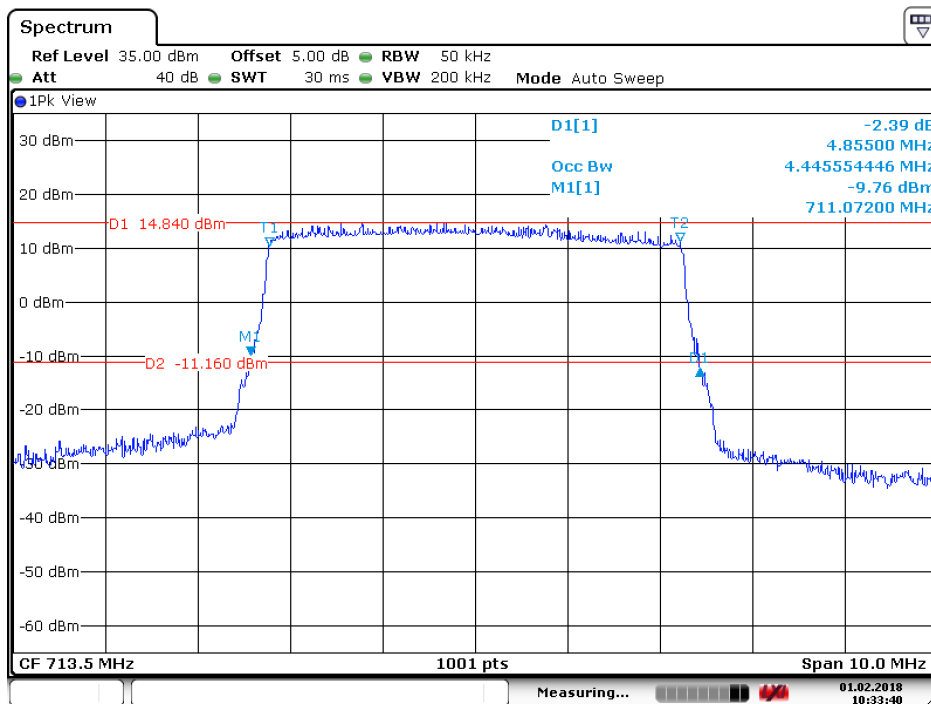


4.1.1.5.2 Test Channel = MCH



Date: 1.FEB.2018 10:32:54

4.1.1.5.3 Test Channel = HCH

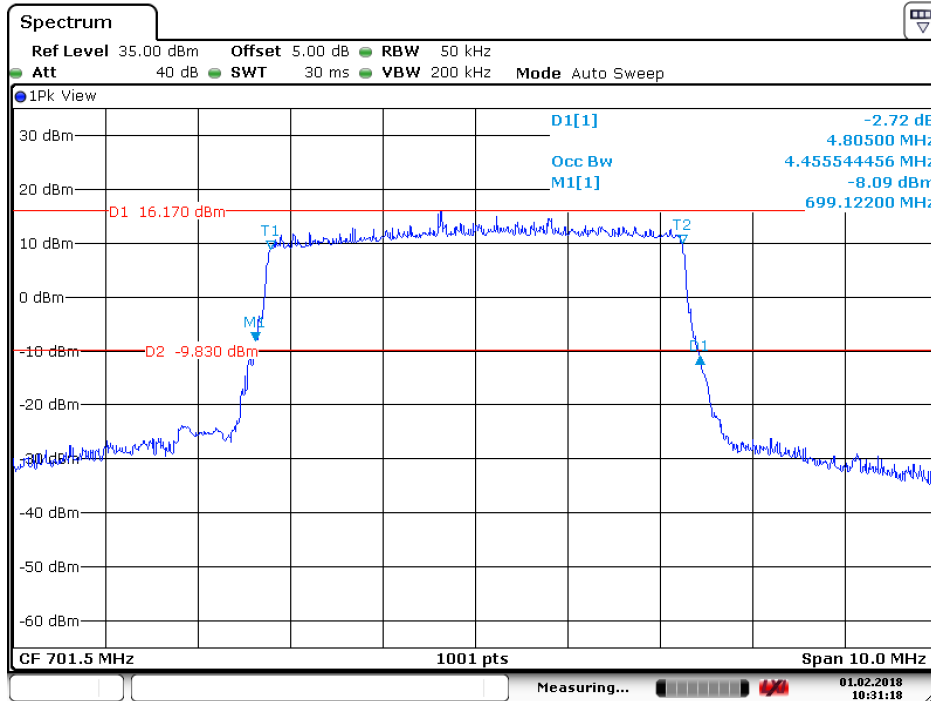


Date: 1.FEB.2018 10:33:41



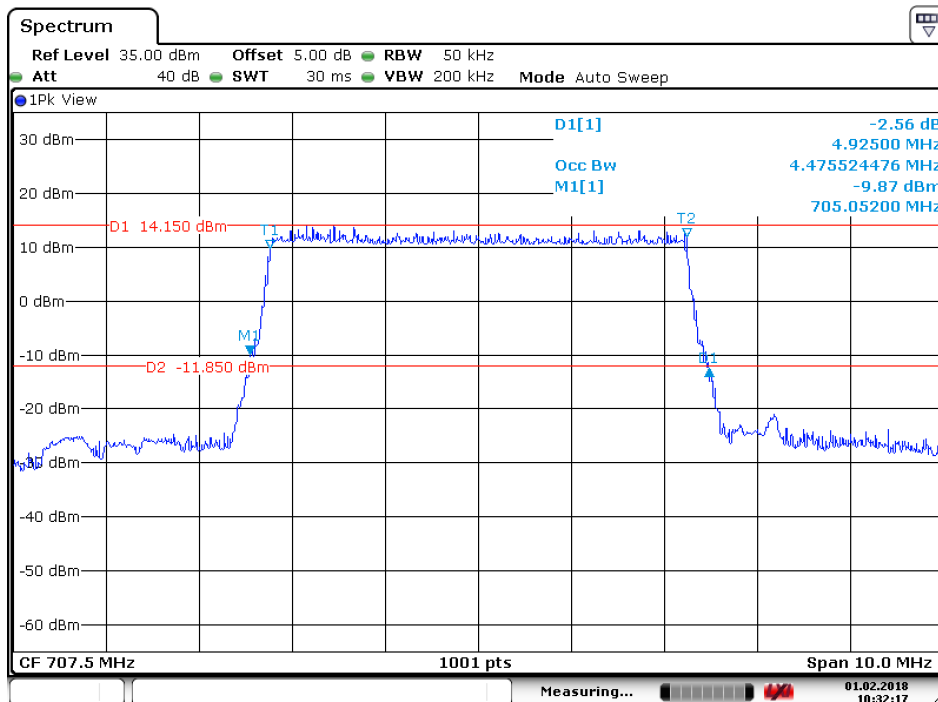
4.1.1.6 Test Mode = LTE/TM2 5MHz

4.1.1.6.1 Test Channel = LCH



Date: 1.FEB.2018 10:31:19

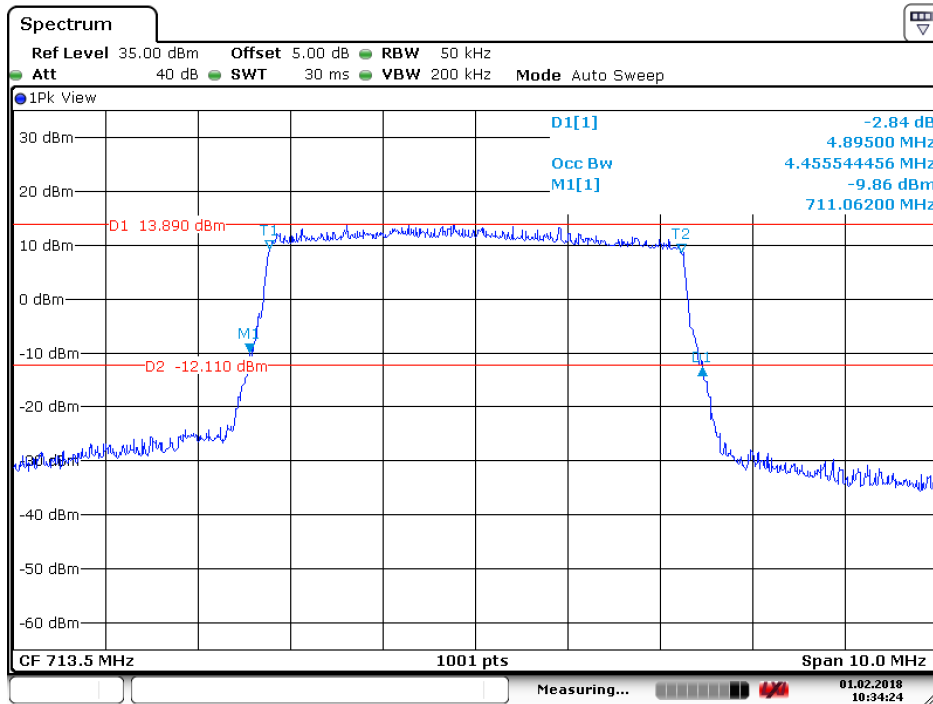
4.1.1.6.2 Test Channel = MCH



Date: 1.FEB.2018 10:32:17



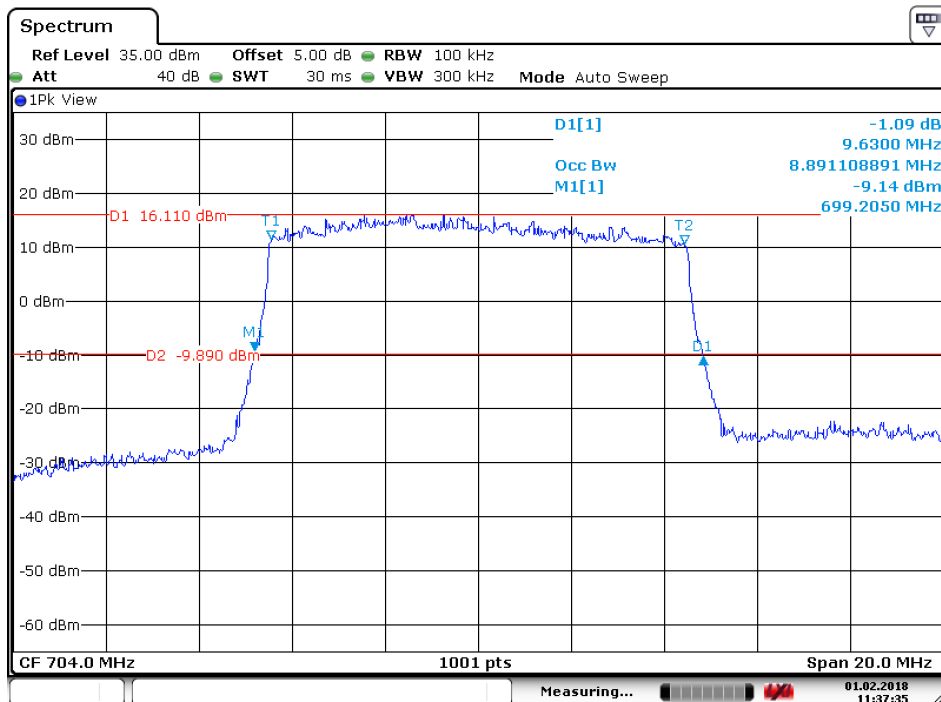
#### 4.1.1.6.3 Test Channel = HCH



Date: 1.FEB.2018 10:34:24

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

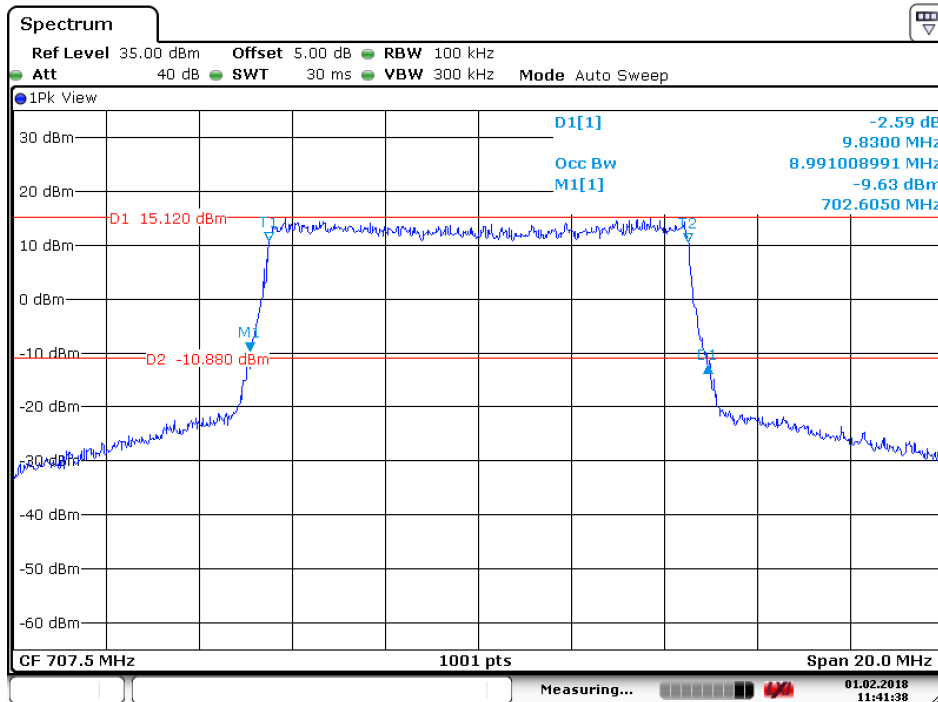
##### 4.1.1.7.1 Test Channel = LCH



Date: 1.FEB.2018 11:37:36

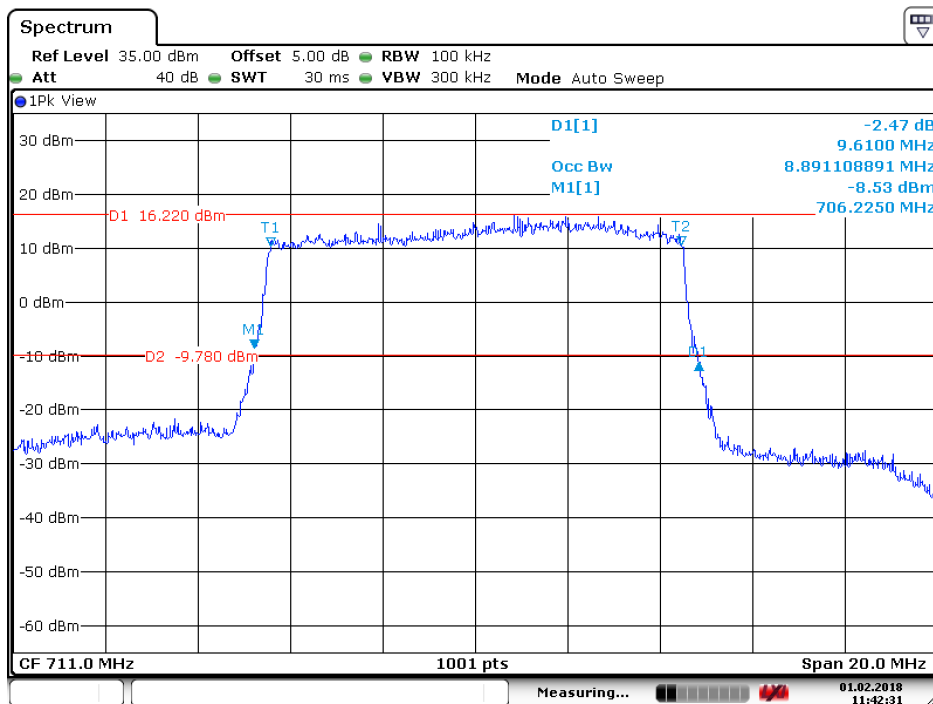


4.1.1.7.2 Test Channel = MCH



Date: 1.FEB.2018 11:41:38

4.1.1.7.3 Test Channel = HCH

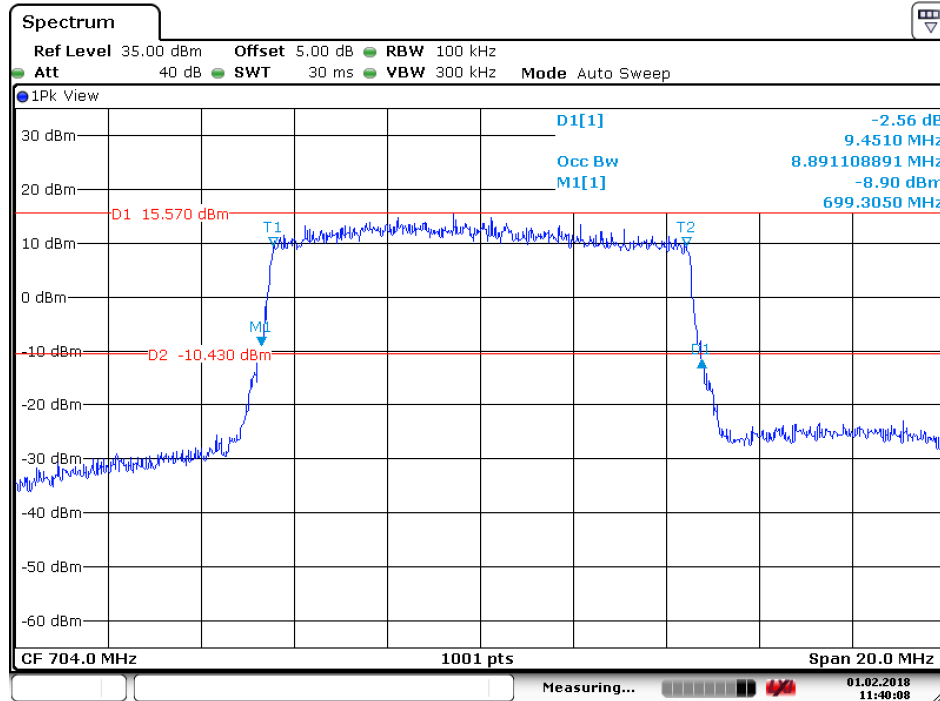


Date: 1.FEB.2018 11:42:32



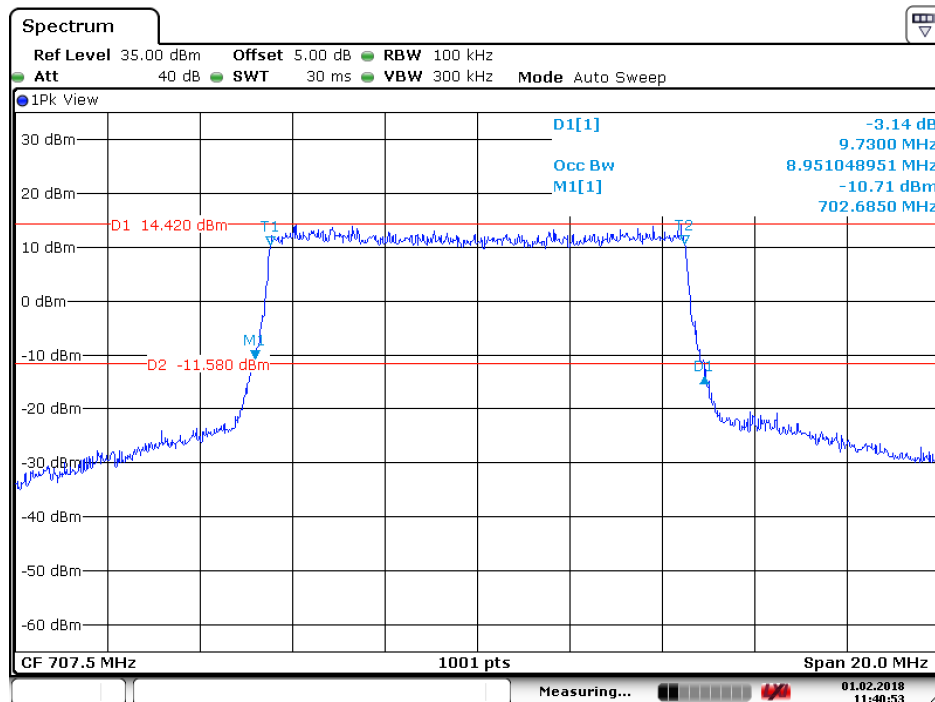
4.1.1.8 Test Mode = LTE/TM2 10MHz

4.1.1.8.1 Test Channel = LCH



Date: 1.FEB.2018 11:40:08

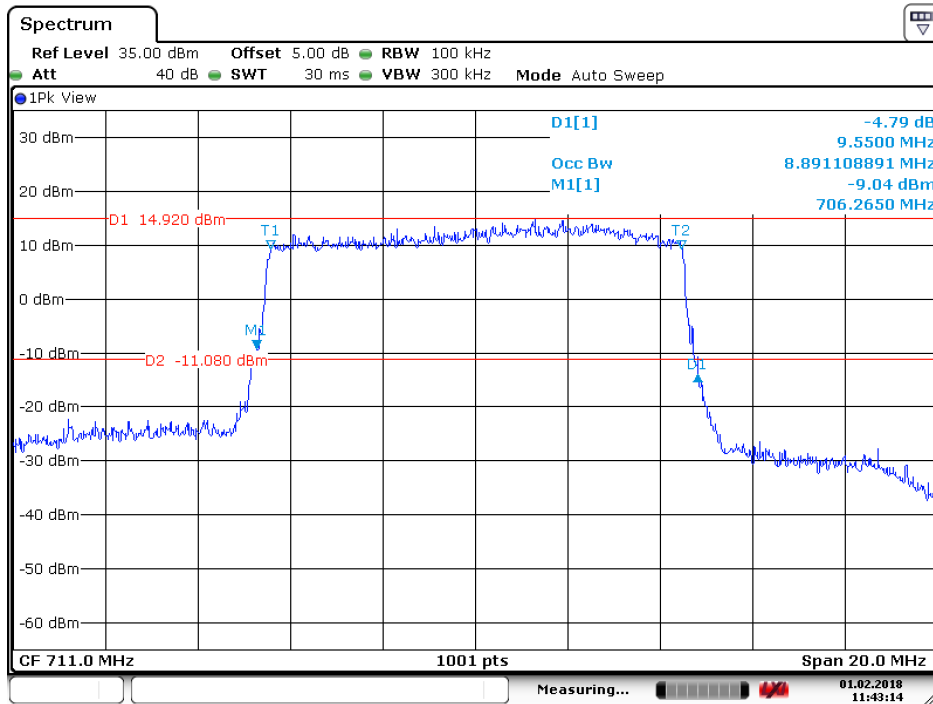
4.1.1.8.2 Test Channel = MCH



Date: 1.FEB.2018 11:40:53



4.1.1.8.3 Test Channel = HCH



Date: 1.FEB.2018 11:43:14



## 5 Band Edges Compliance

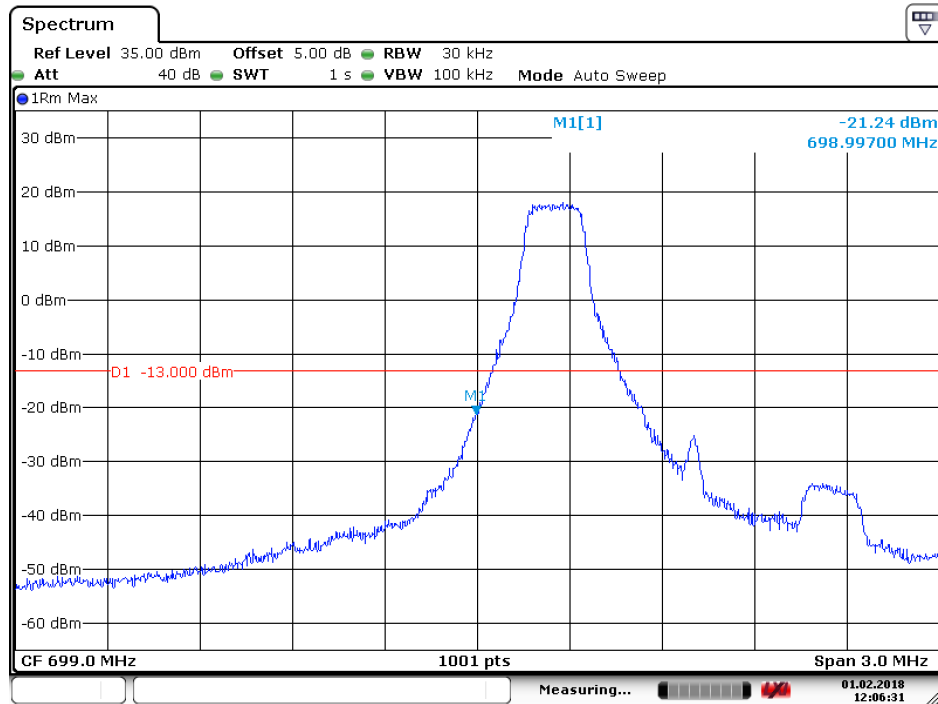
### 5.1 For LTE

#### 5.1.1 Test Band = LTE band12

##### 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

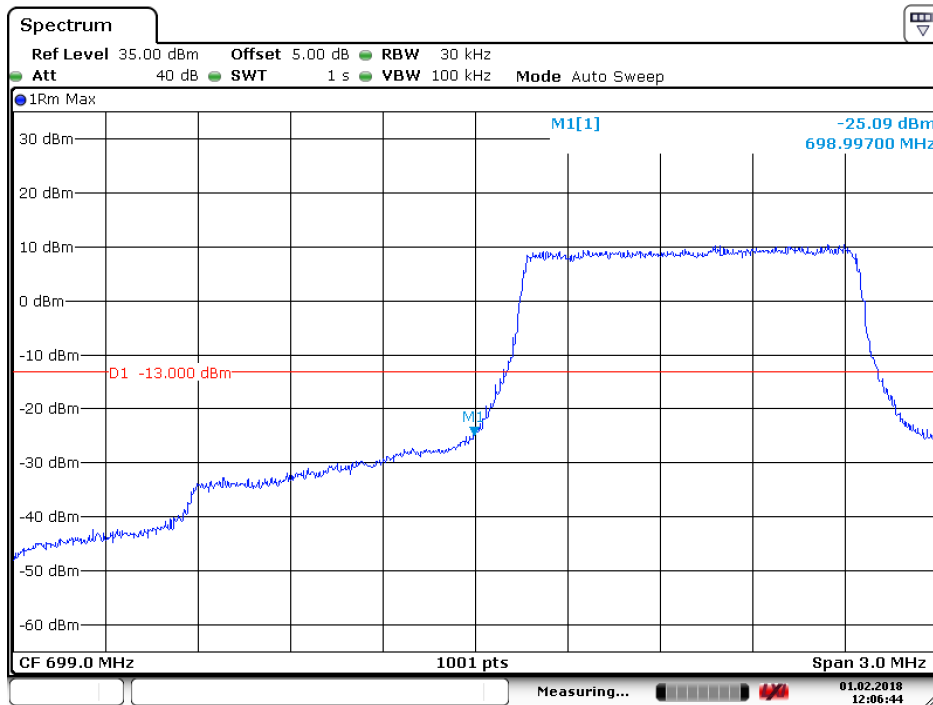


Date: 1.FEB.2018 12:06:31





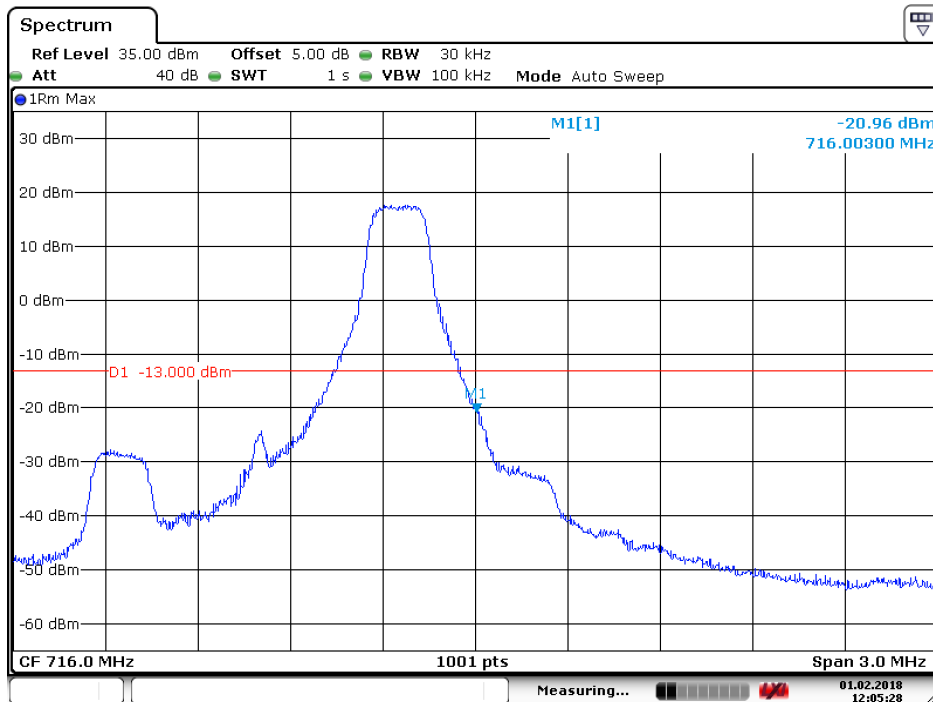
### 5.1.1.1.2 Test RB=6RB



Date: 1.FEB.2018 12:06:44

### 5.1.1.1.2 Test Channel = HCH

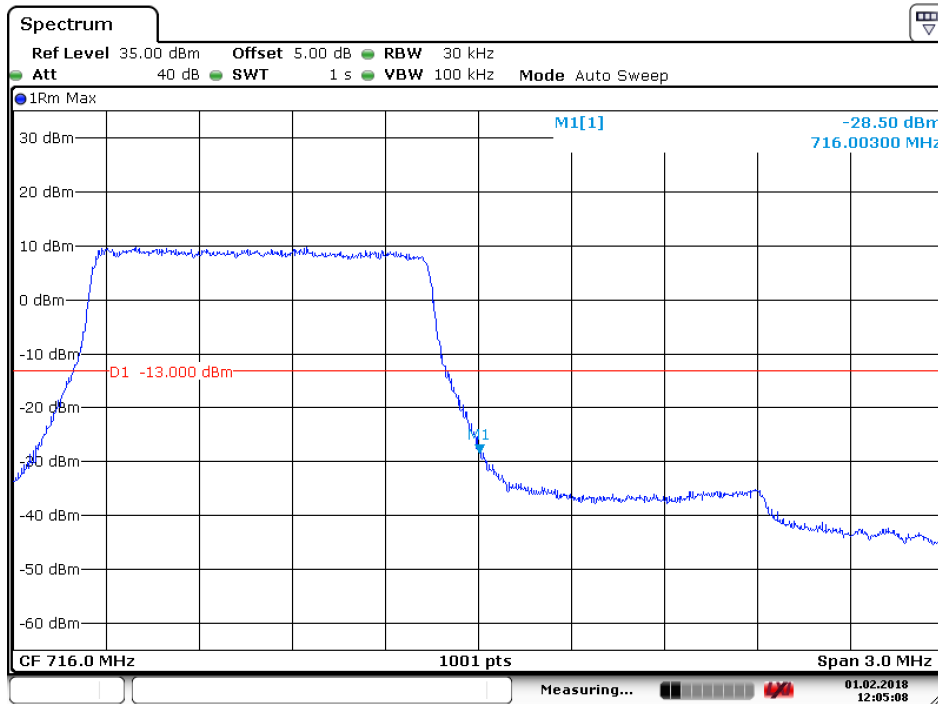
#### 5.1.1.1.2.1 Test RB=1RB



Date: 1.FEB.2018 12:05:29



5.1.1.1.2.2 Test RB=6RB

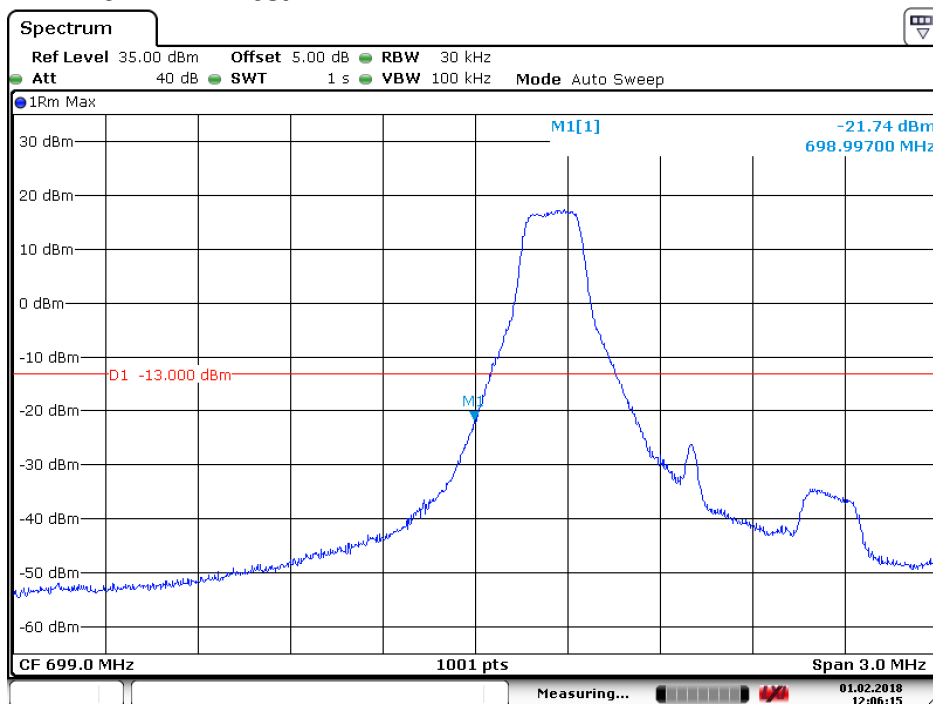


Date: 1.FEB.2018 12:05:08

5.1.1.2 Test Mode = LTE/TM2 1.4MHz

5.1.1.2.1 Test Channel = LCH

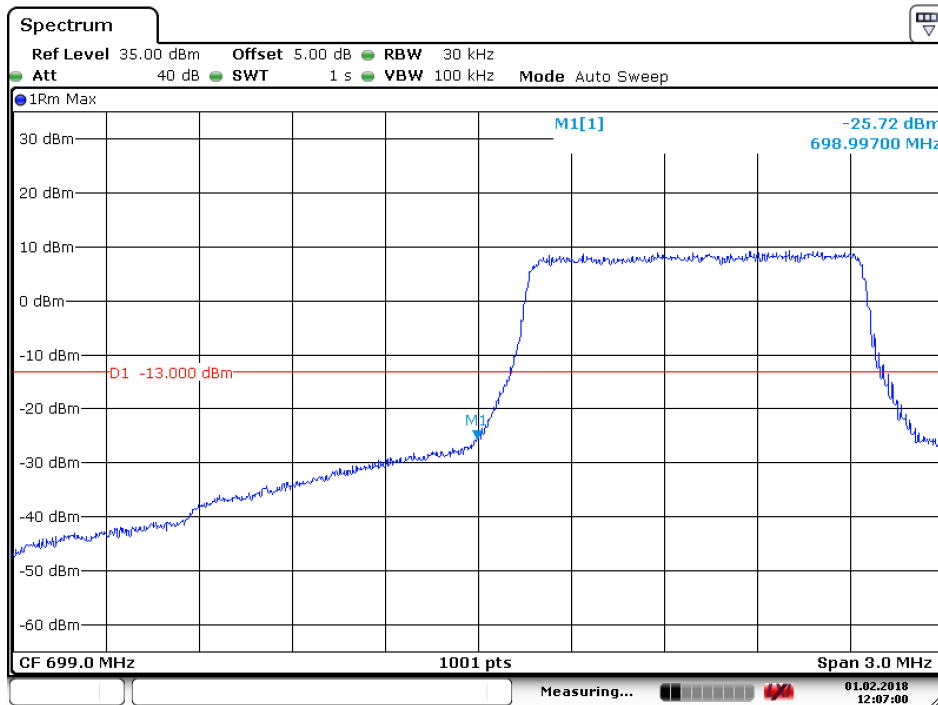
5.1.1.2.1.1 Test RB=1RB



Date: 1.FEB.2018 12:06:15



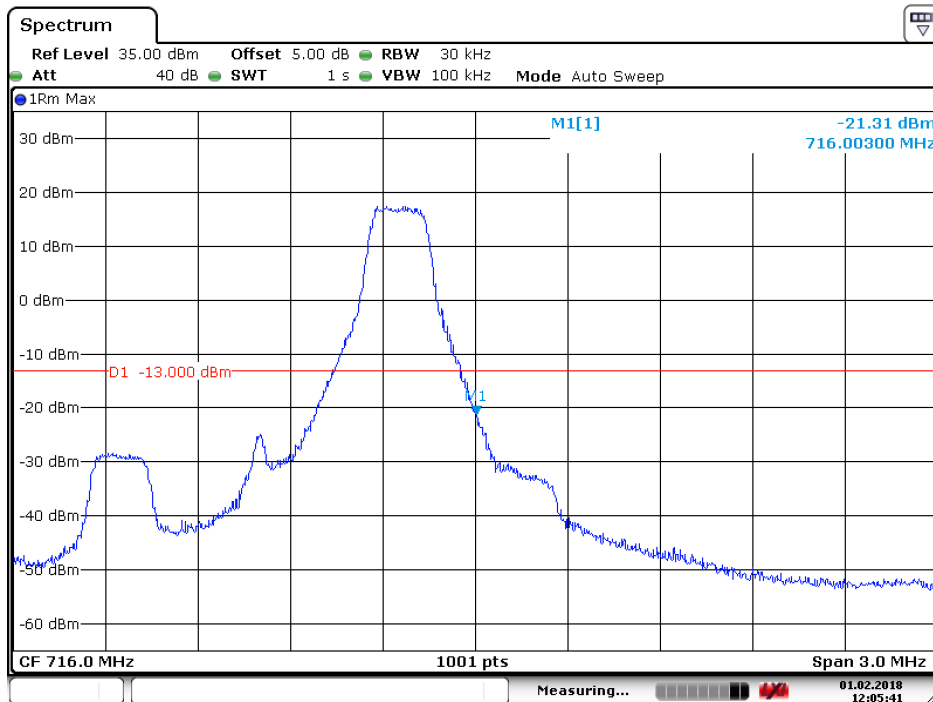
### 5.1.1.2.1.2 Test RB=6RB



Date: 1.FEB.2018 12:07:01

### 5.1.1.2.2 Test Channel = HCH

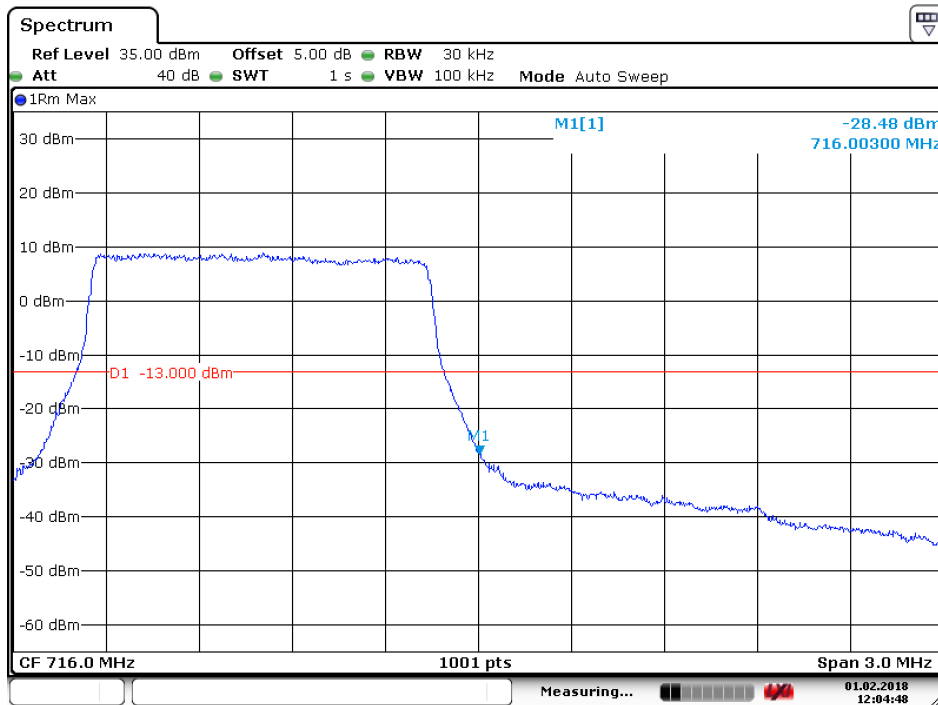
#### 5.1.1.2.2.1 Test RB=1RB



Date: 1.FEB.2018 12:05:41



### 5.1.1.2.2 Test RB=6RB

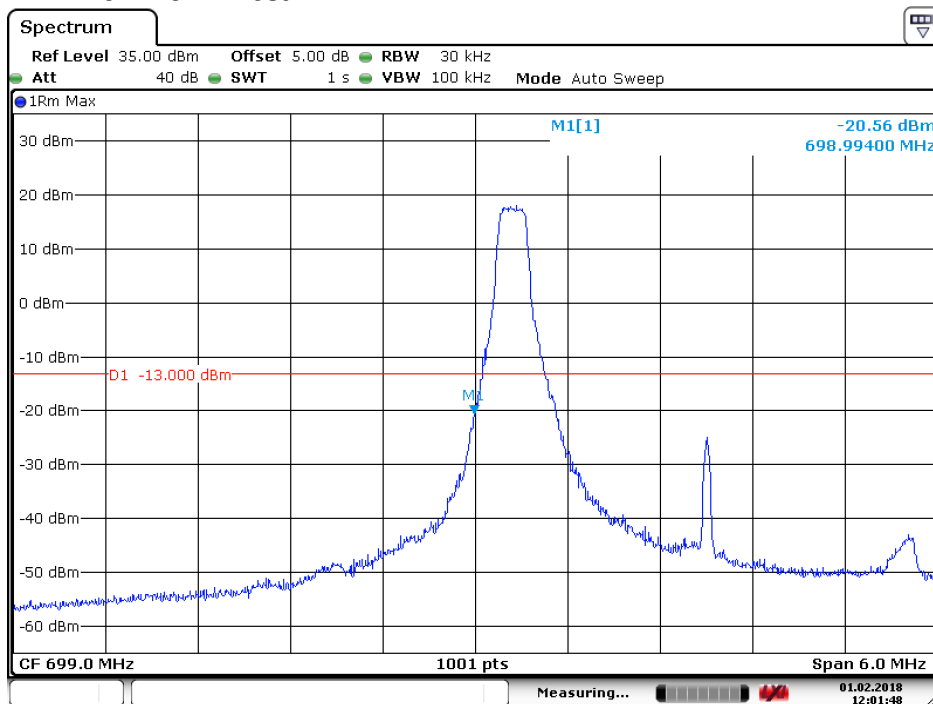


Date: 1.FEB.2018 12:04:48

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

#### 5.1.1.3.1 Test Channel = LCH

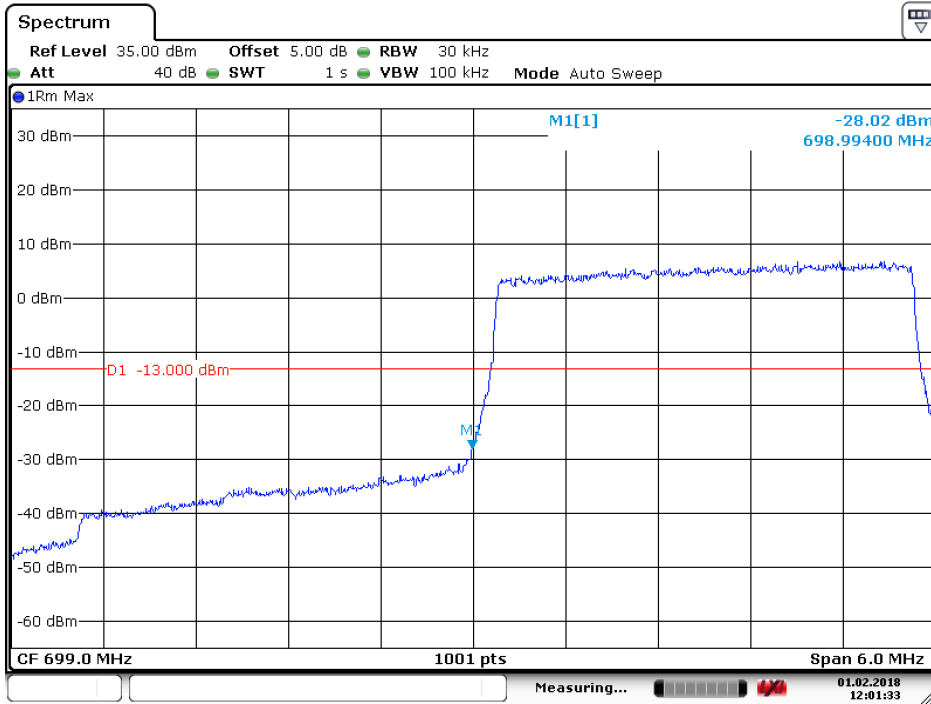
##### 5.1.1.3.1.1 Test RB=1RB



Date: 1.FEB.2018 12:01:49



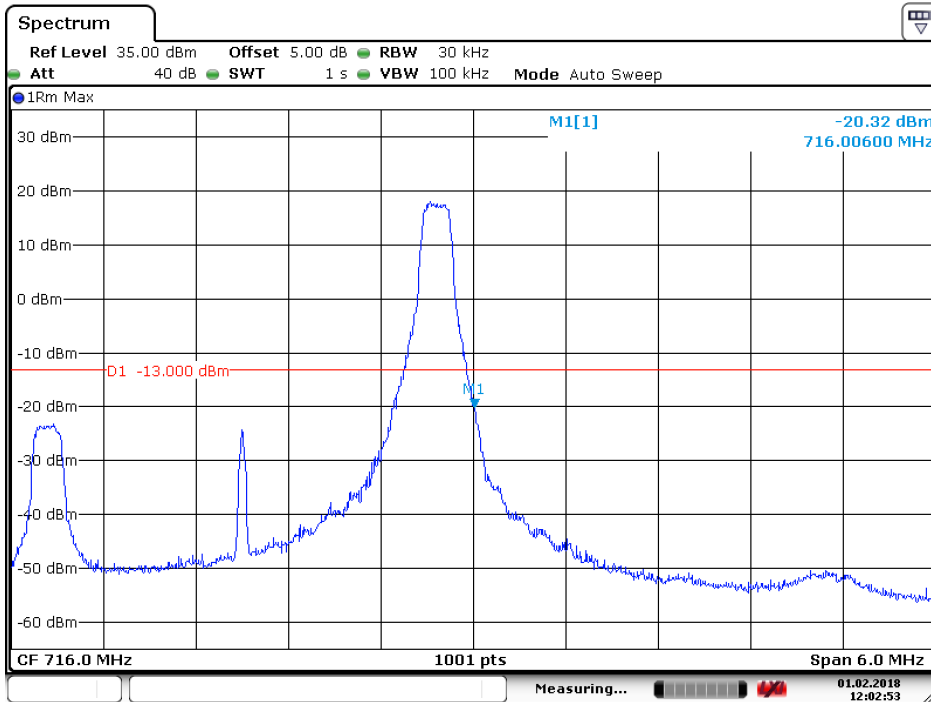
5.1.1.3.1.2 Test RB=15RB



Date: 1.FEB.2018 12:01:34

5.1.1.3.2 Test Channel = HCH

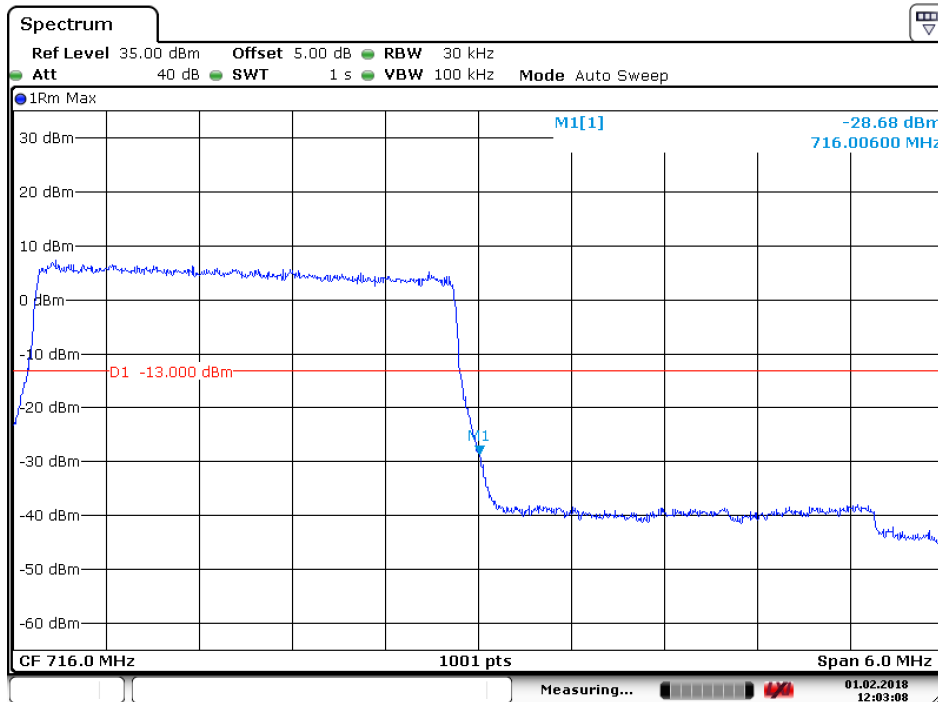
5.1.1.3.2.1 Test RB=1RB



Date: 1.FEB.2018 12:02:53



### 5.1.1.3.2.2 Test RB=15RB

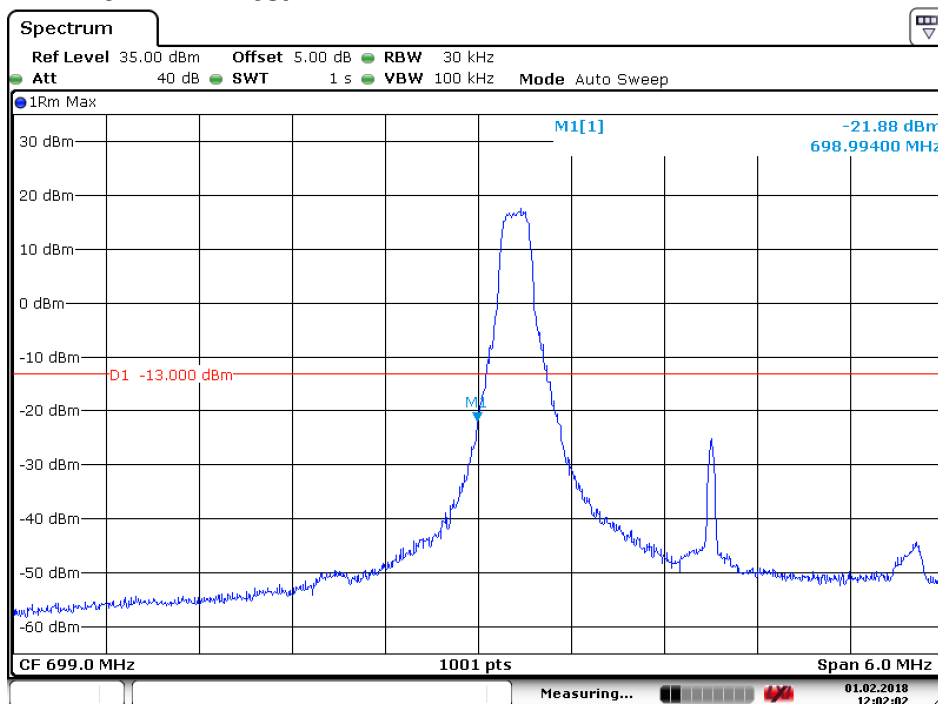


Date: 1.FEB.2018 12:03:08

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

#### 5.1.1.4.1 Test Channel = LCH

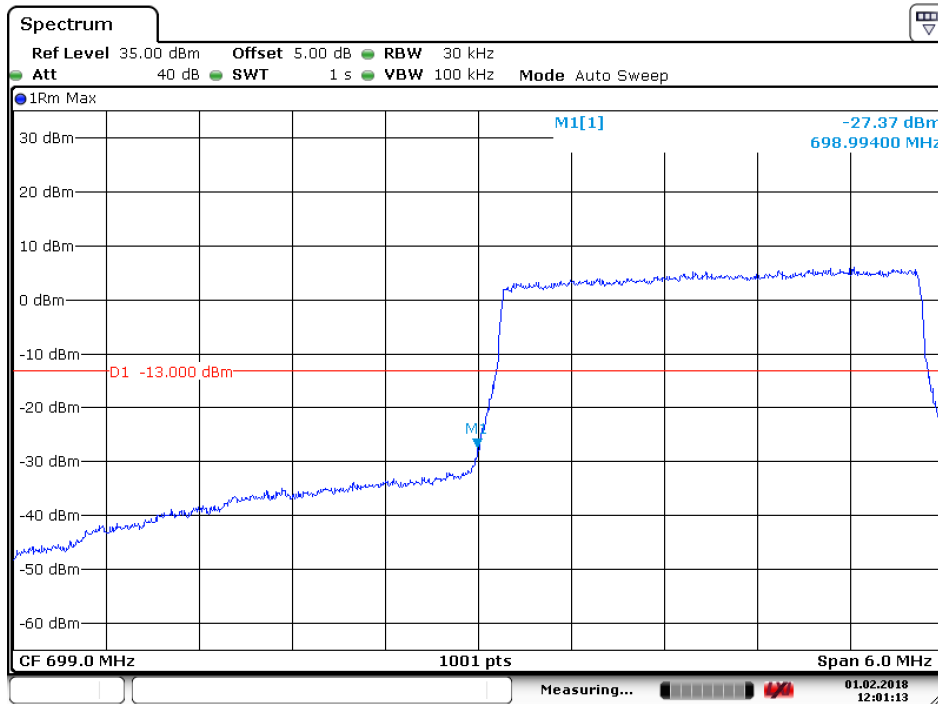
##### 5.1.1.4.1.1 Test RB=1RB



Date: 1.FEB.2018 12:02:02



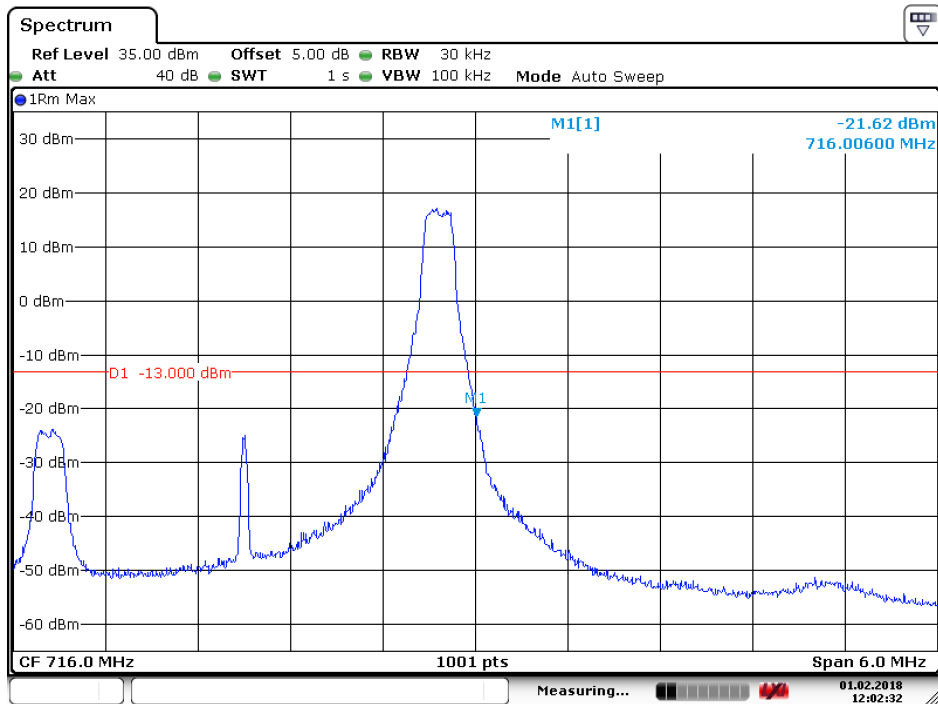
### 5.1.1.4.1.2 Test RB=15RB



Date: 1.FEB.2018 12:01:13

### 5.1.1.4.2 Test Channel = HCH

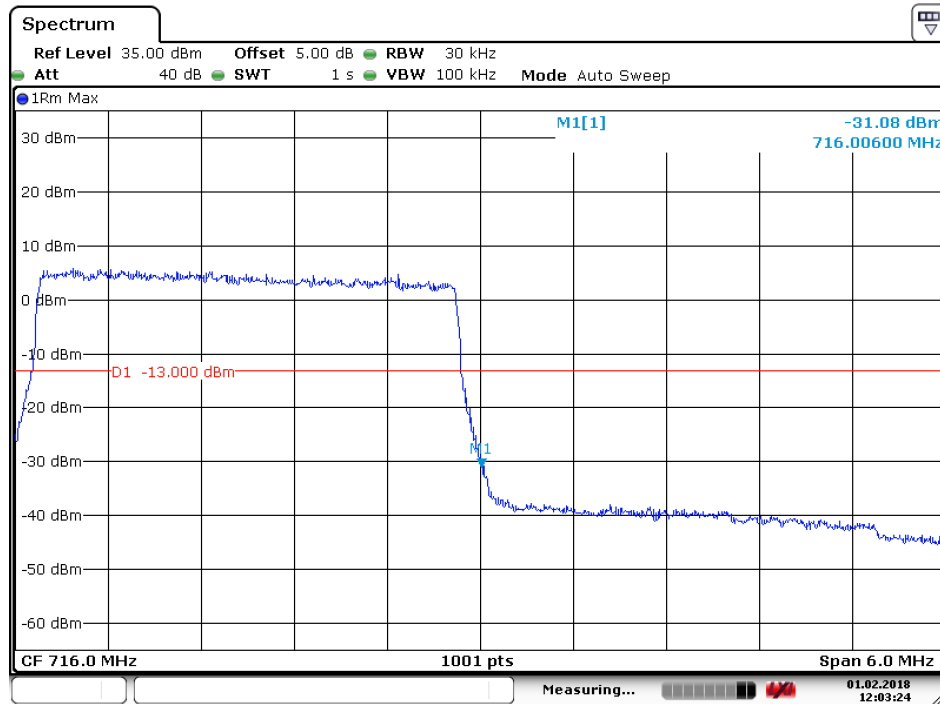
#### 5.1.1.4.2.1 Test RB=1RB



Date: 1.FEB.2018 12:02:32



5.1.1.4.3 Test RB=15RB

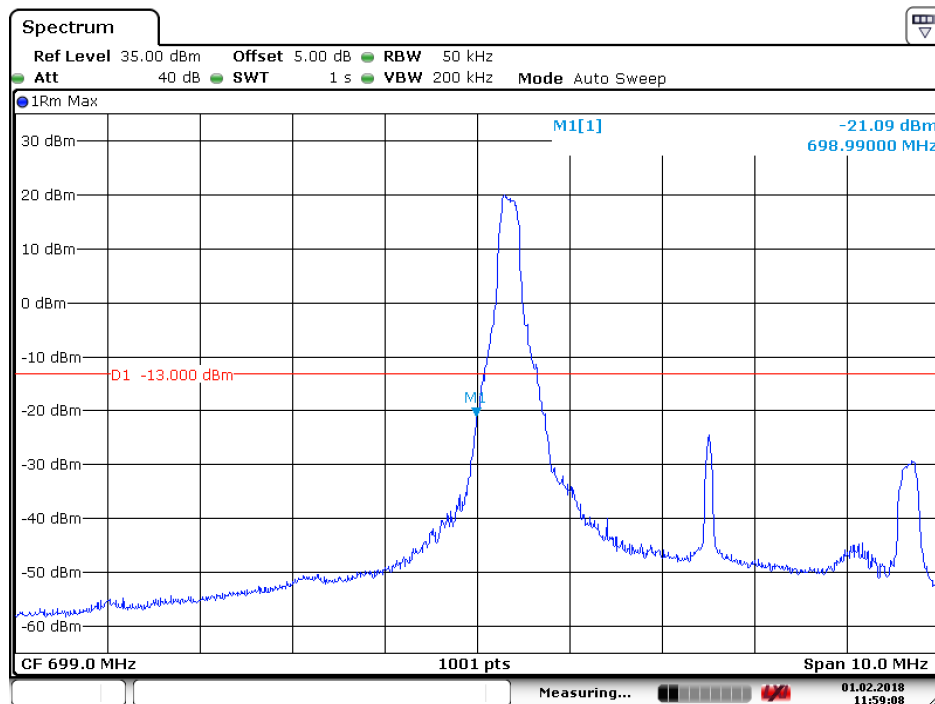


Date: 1.FEB.2018 12:03:24

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

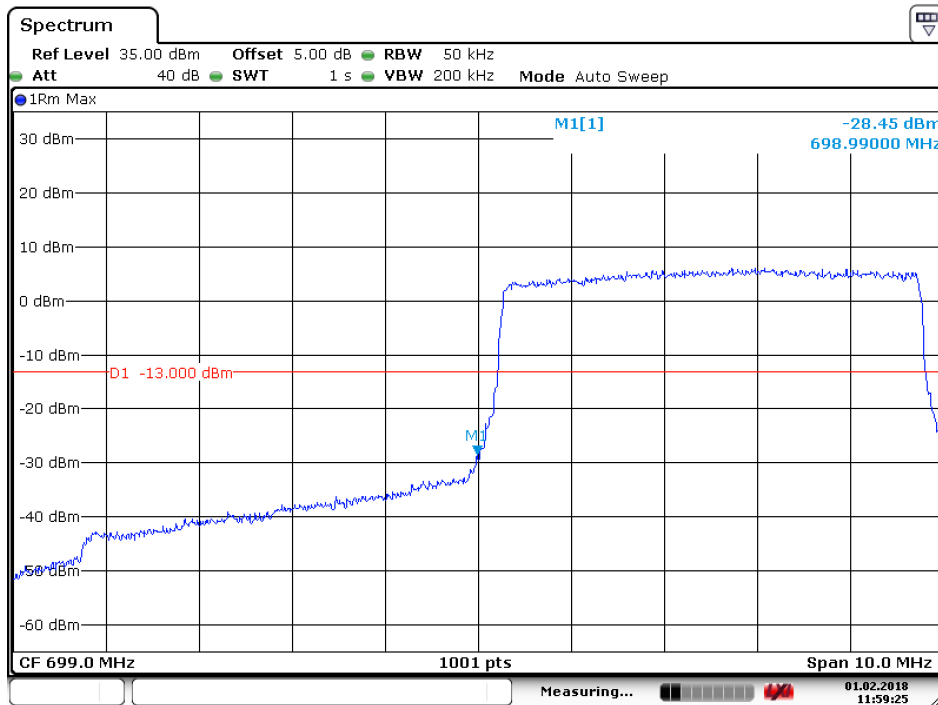


Date: 1.FEB.2018 11:59:08





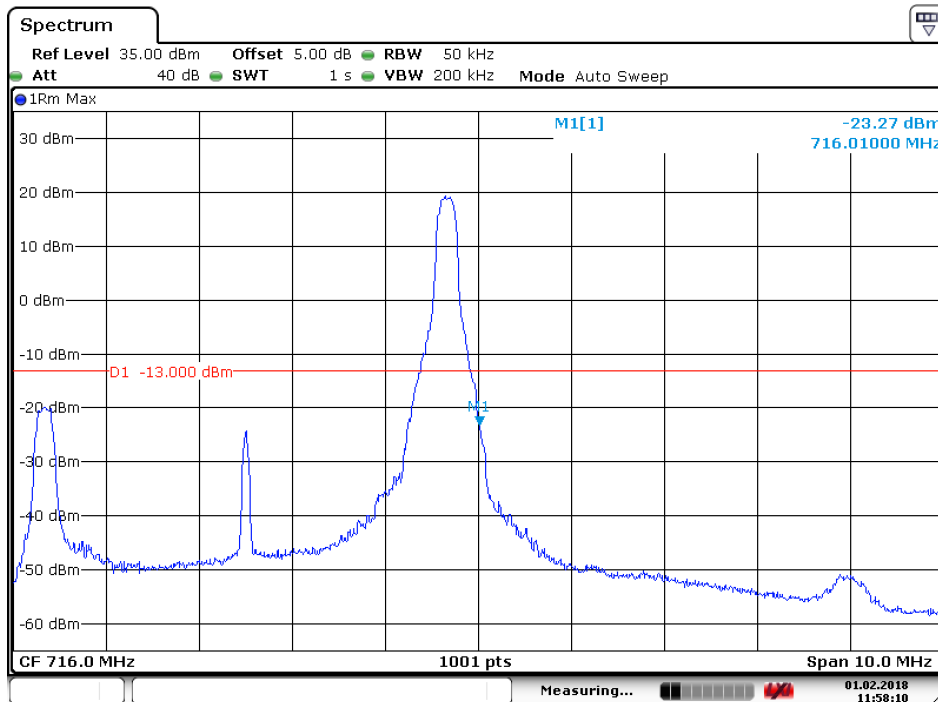
### 5.1.1.5.1.2 Test RB=25RB



Date: 1.FEB.2018 11:59:26

### 5.1.1.5.2 Test Channel = HCH

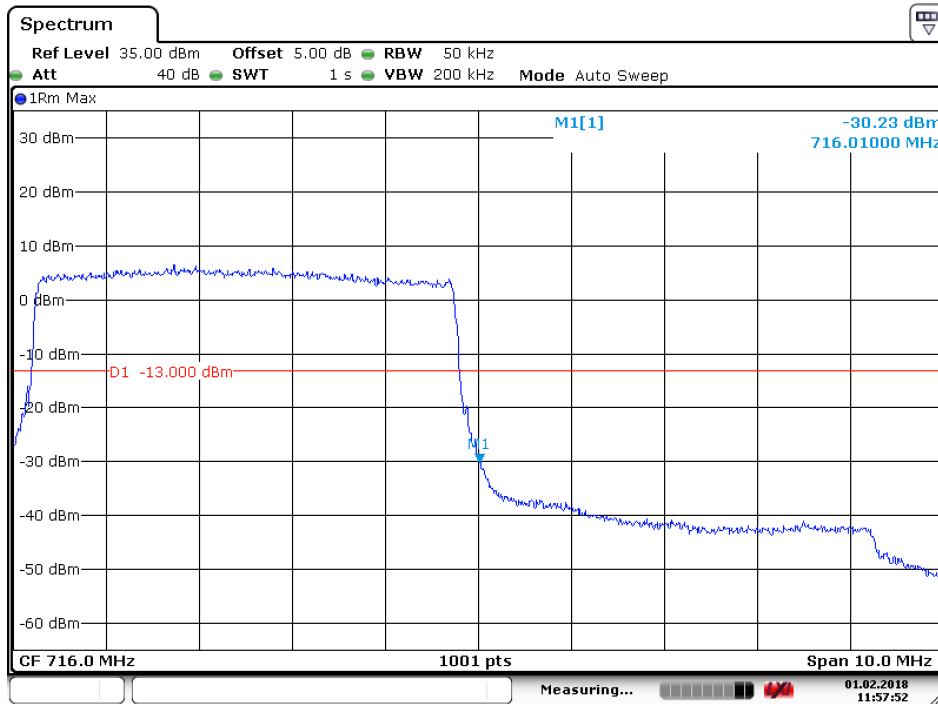
#### 5.1.1.5.2.1 Test RB=1RB



Date: 1.FEB.2018 11:58:11



### 5.1.1.5.2.2 Test RB=25RB

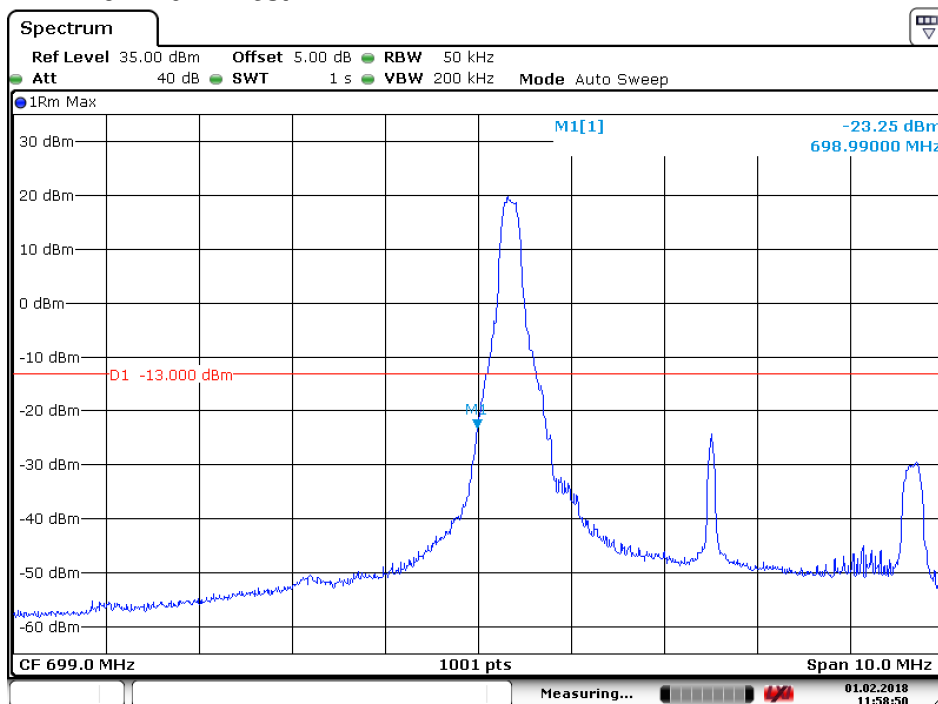


Date: 1.FEB.2018 11:57:52

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

#### 5.1.1.6.1 Test Channel = LCH

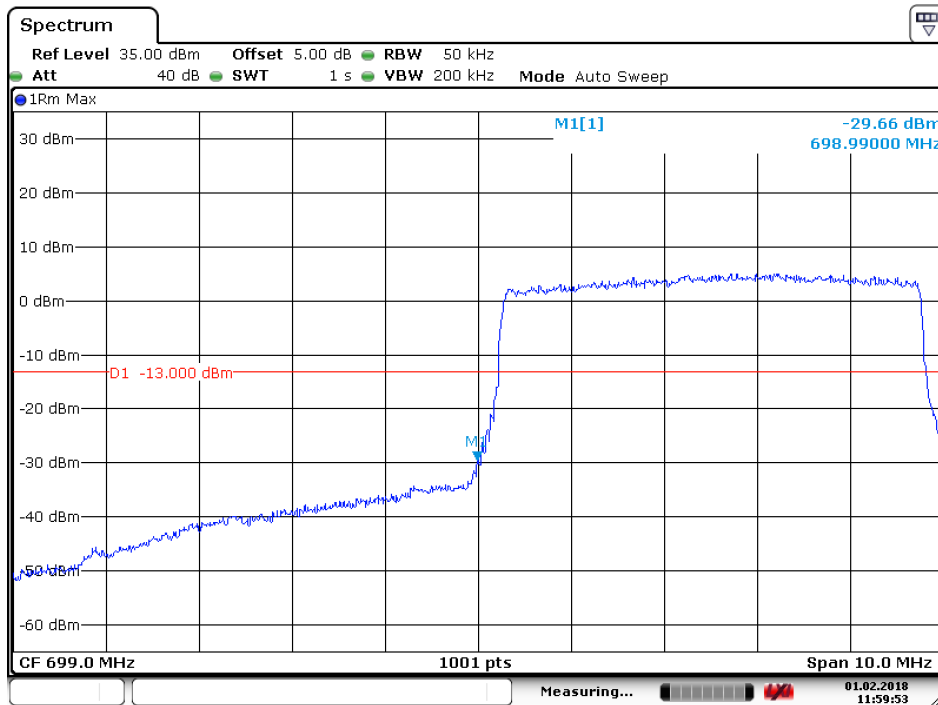
##### 5.1.1.6.1.1 Test RB=1RB



Date: 1.FEB.2018 11:58:50



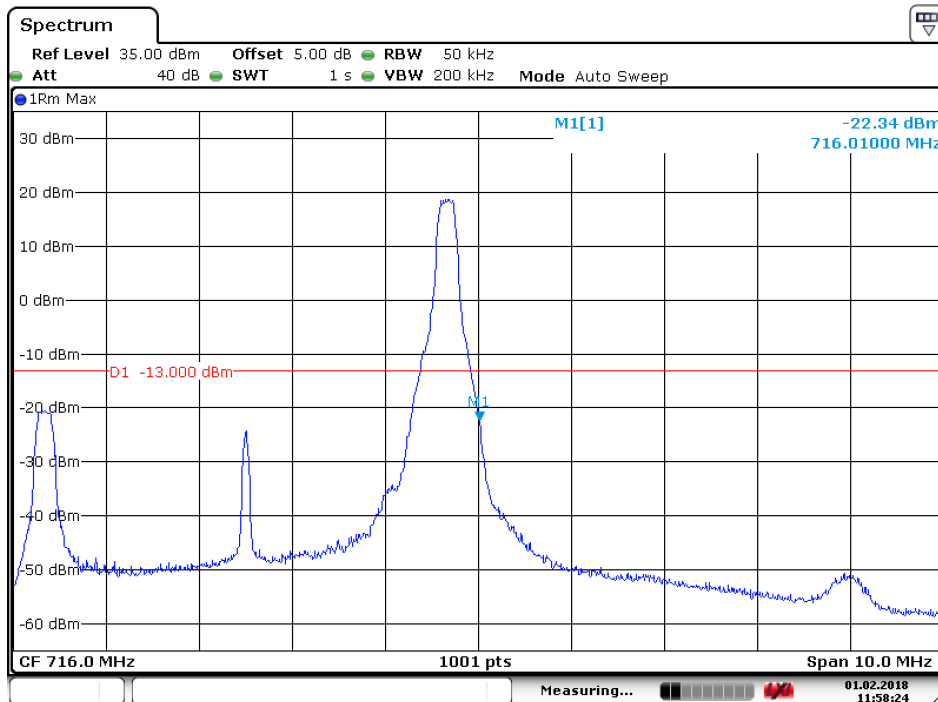
5.1.1.6.1.2 Test RB=25RB



Date: 1.FEB.2018 11:59:53

5.1.1.6.2 Test Channel = HCH

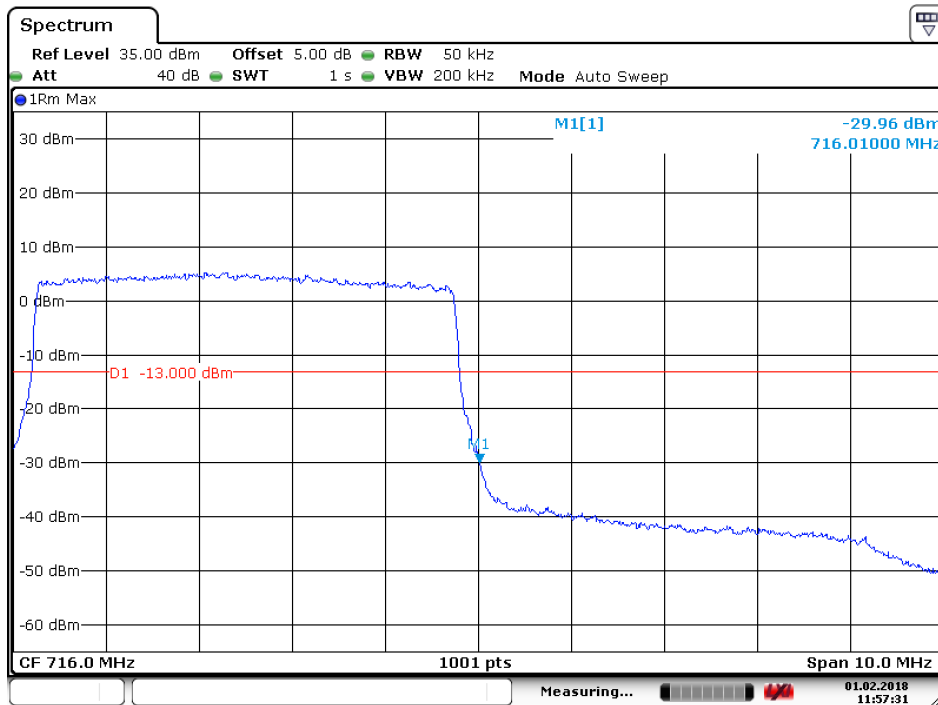
5.1.1.6.2.1 Test RB=1RB



Date: 1.FEB.2018 11:58:24



5.1.1.6.2.2 Test RB=25RB

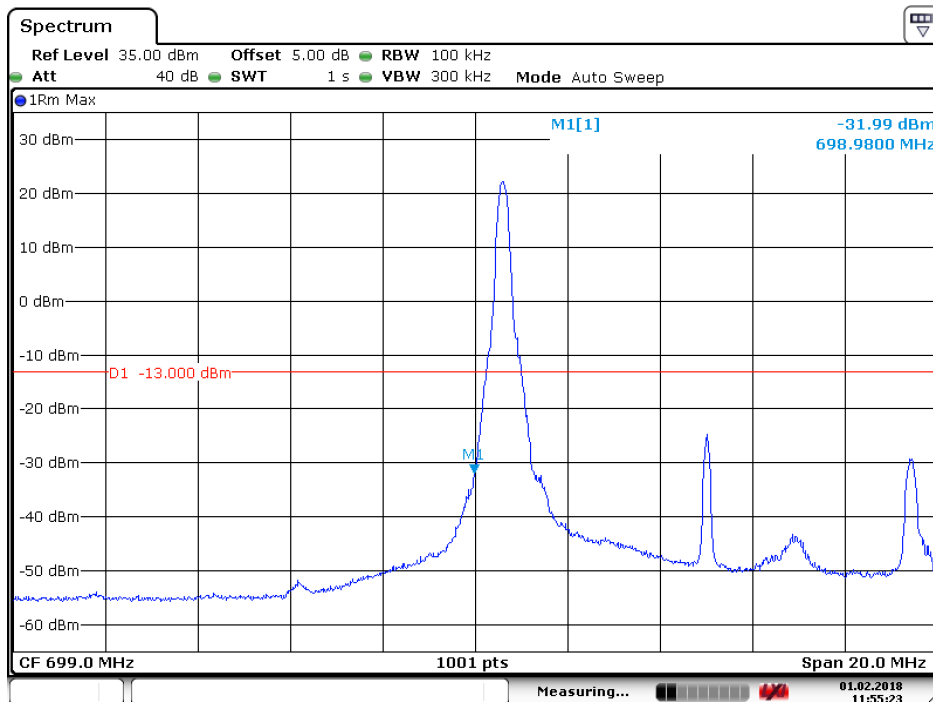


Date: 1.FEB.2018 11:57:31

5.1.1.7 Test Mode = LTE/TM1 10MHz

5.1.1.7.1 Test Channel = LCH

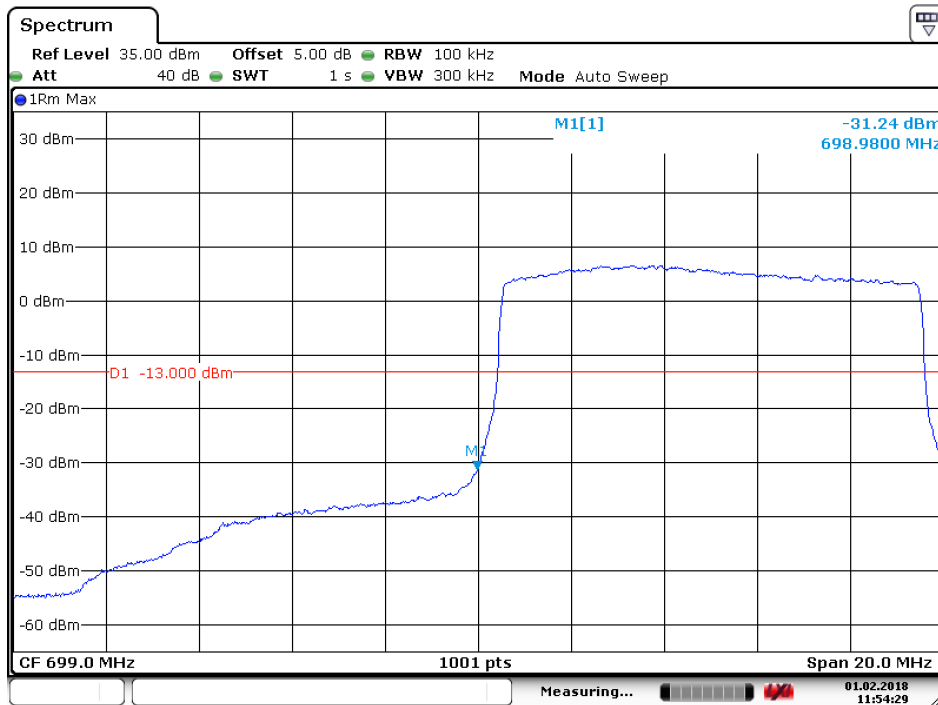
5.1.1.7.1.1 Test RB=1RB



Date: 1.FEB.2018 11:55:23



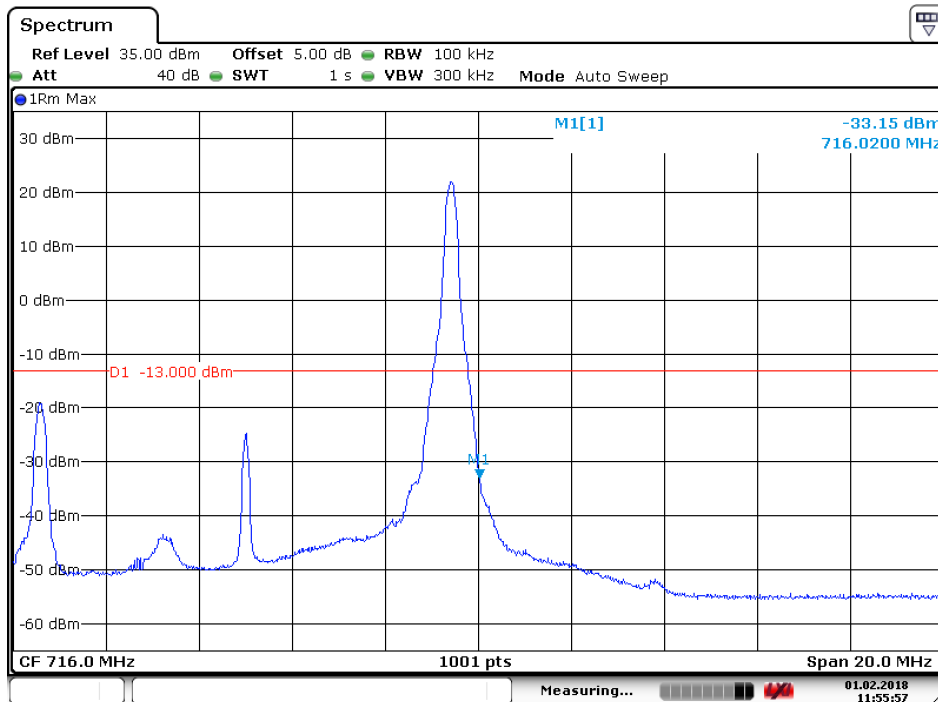
### 5.1.1.7.1.2 Test RB=50RB



Date: 1.FEB.2018 11:54:30

### 5.1.1.7.2 Test Channel = HCH

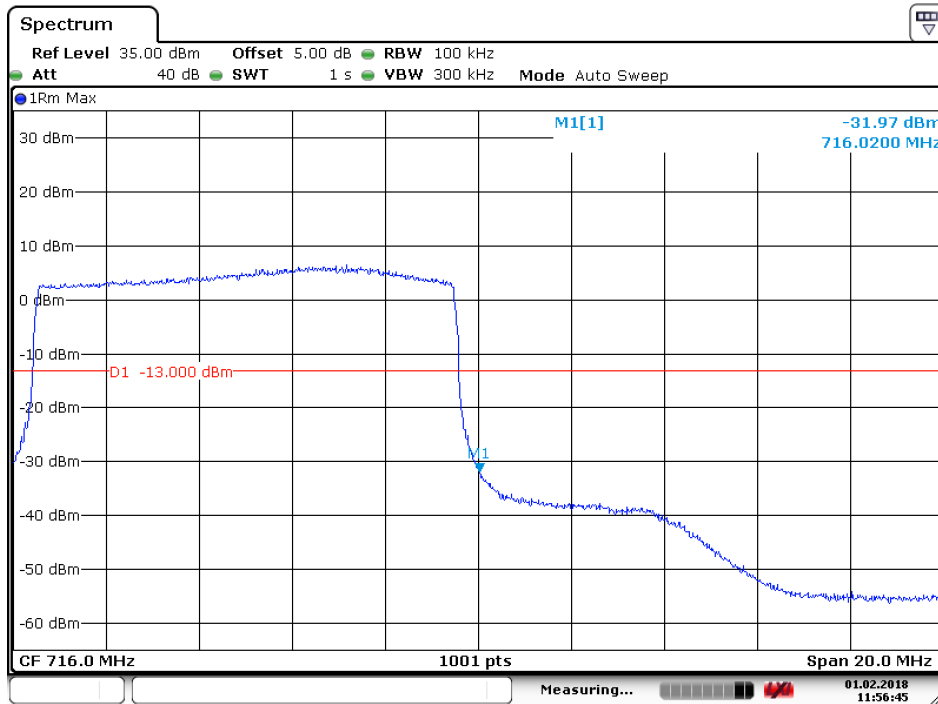
#### 5.1.1.7.2.1 Test RB=1RB



Date: 1.FEB.2018 11:55:57



### 5.1.1.7.2.2 Test RB=50RB

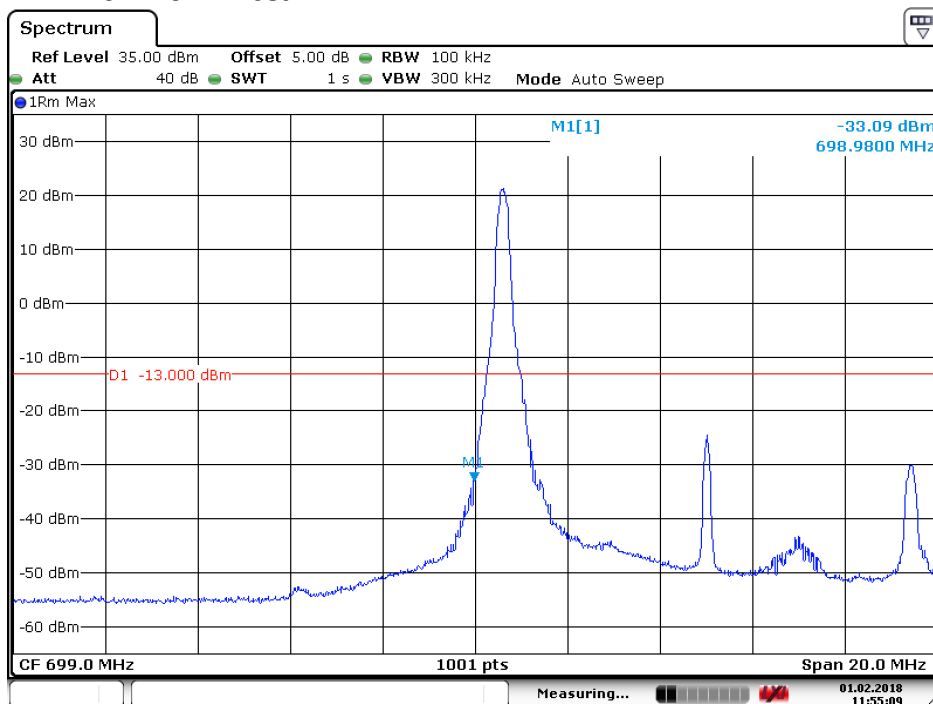


Date: 1.FEB.2018 11:56:45

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

#### 5.1.1.8.1 Test Channel = LCH

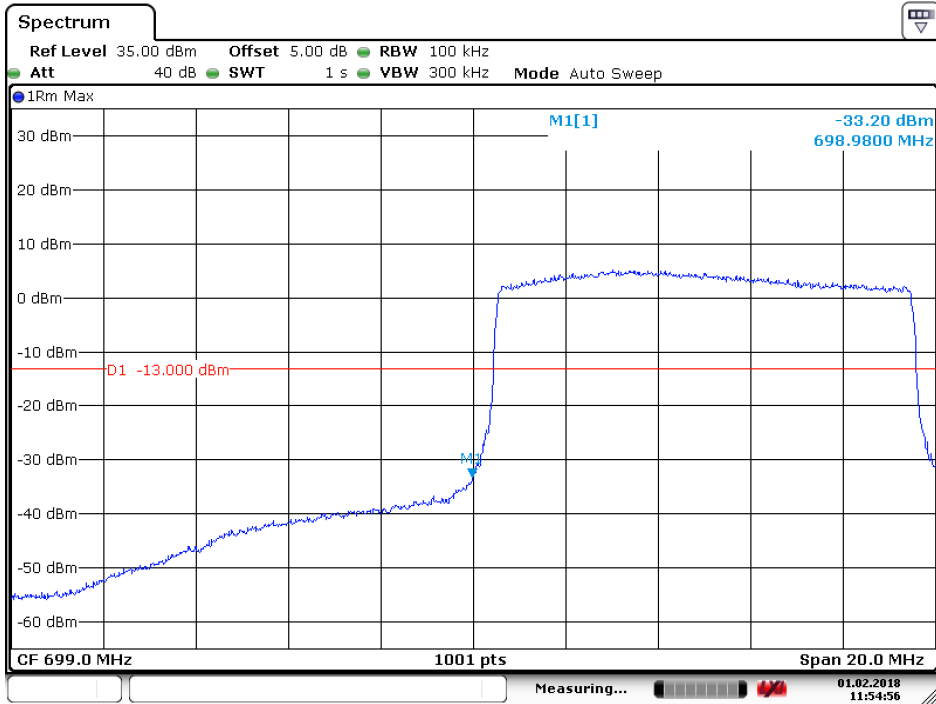
##### 5.1.1.8.1.1 Test RB=1RB



Date: 1.FEB.2018 11:55:09



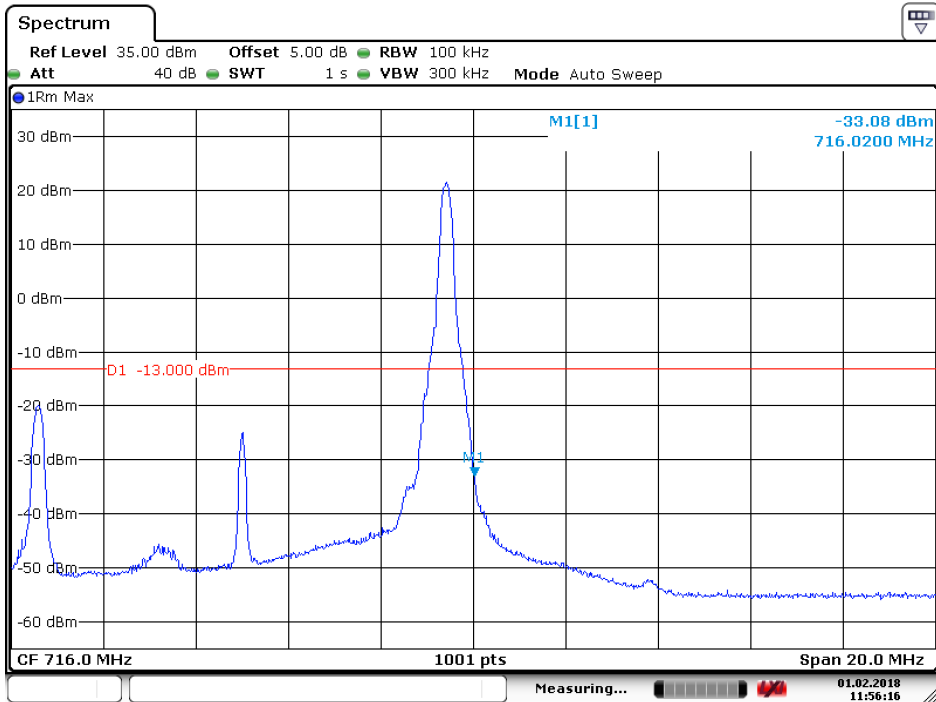
5.1.1.8.1.2 Test RB=50RB



Date: 1.FEB.2018 11:54:57

5.1.1.8.2 Test Channel = HCH

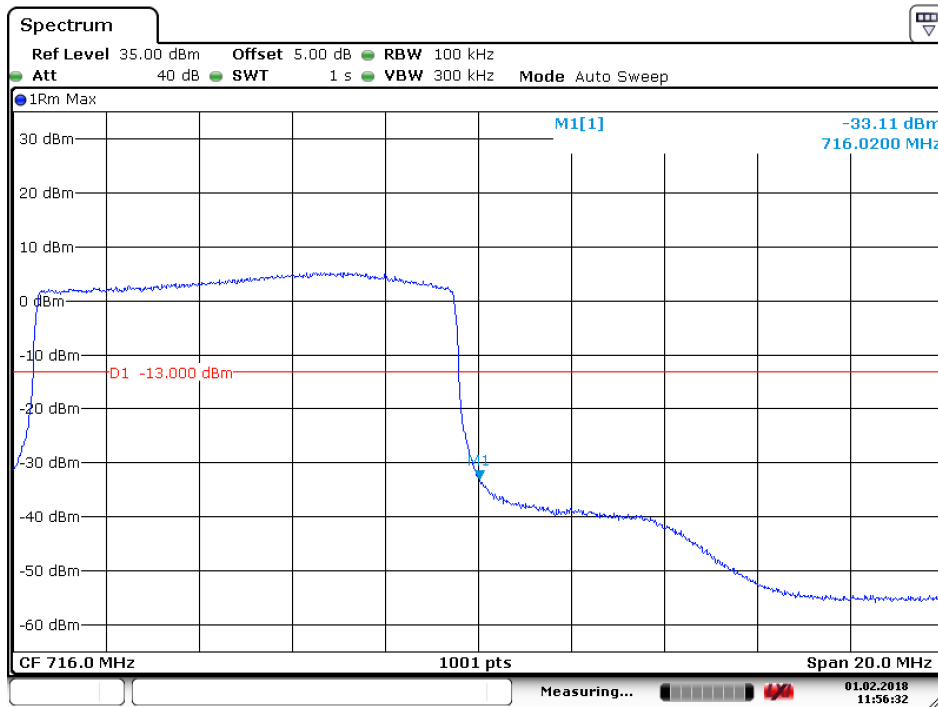
5.1.1.8.2.1 Test RB=1RB



Date: 1.FEB.2018 11:56:16



5.1.1.8.2.2 Test RB=50RB



Date: 1.FEB.2018 11:56:32



## 6 Spurious Emission at Antenna Terminal

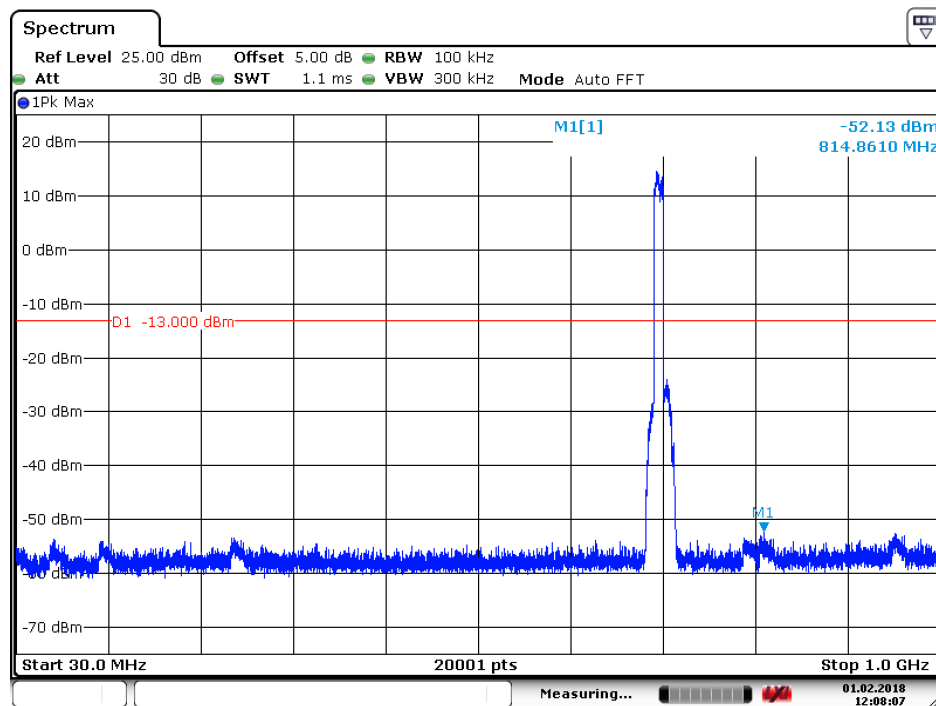
NOTE: For the averaged unwanted emissions measurements, the measurement points in each sweep is greater than twice the Span/RBW in order to ensure bin-to-bin spacing of  $< RBW/2$  so that narrowband signals are not lost between frequency bins. As to the present test item, the "Measurement Points = 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

Part I - Test Plots

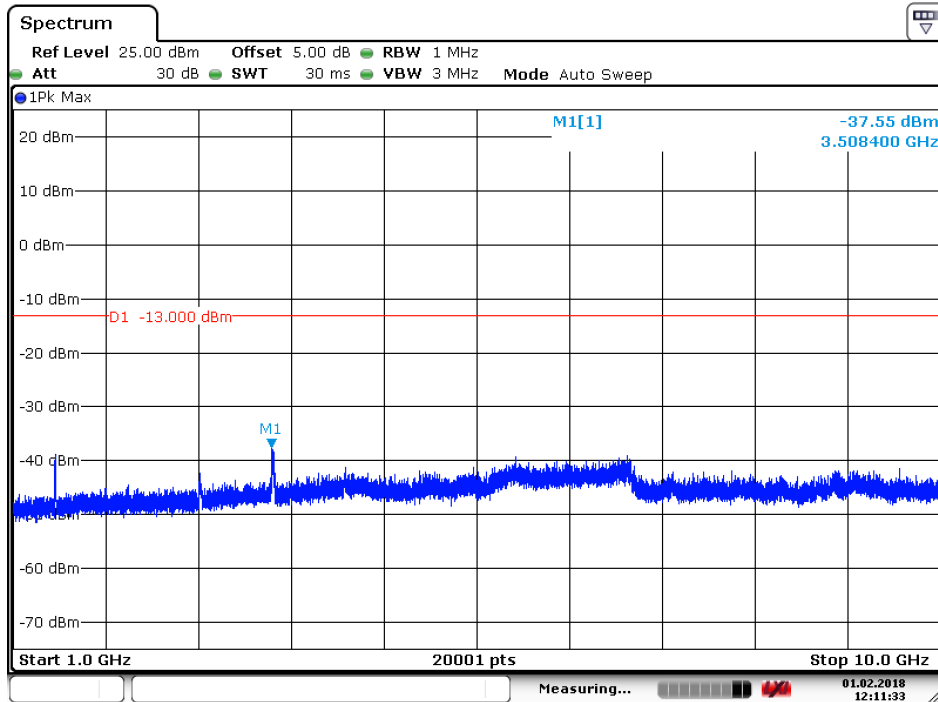
### 6.1 For LTE

#### 6.1.1.1 Test Mode = LTE / TM1 10MHz RB1#0

##### 6.1.1.1.1 Test Channel = LCH

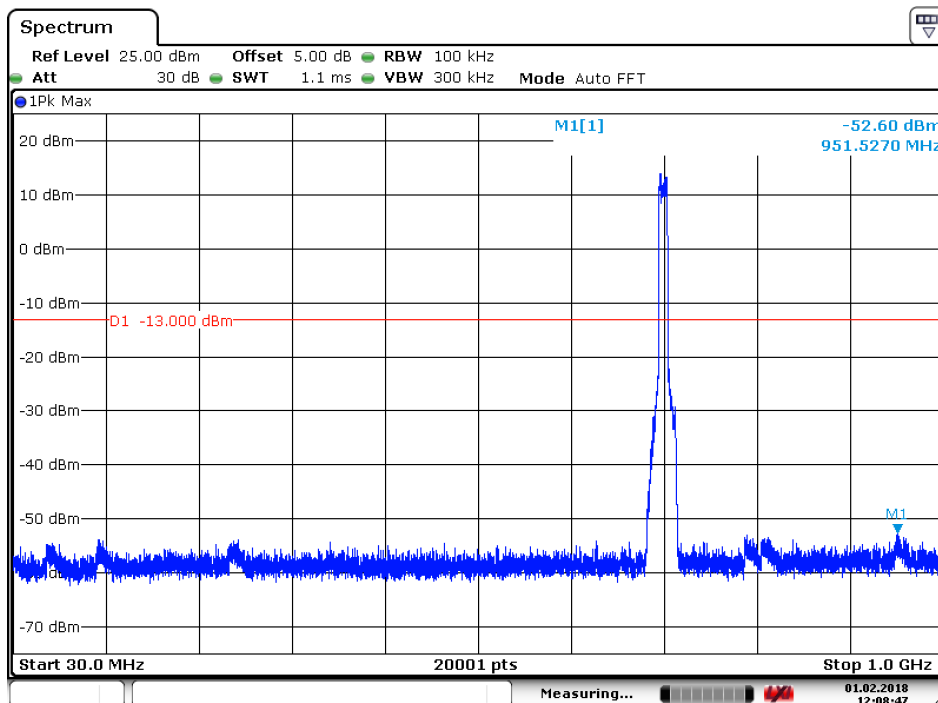


Date: 1.FEB.2018 12:08:08

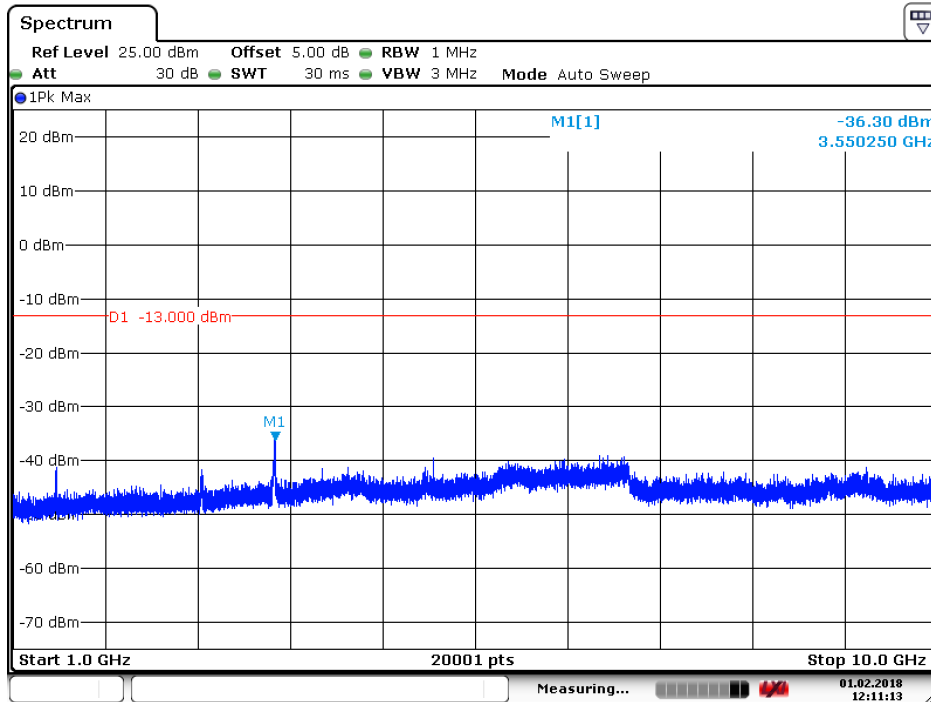


Date: 1.FEB.2018 12:11:34

### 6.1.1.1.2 Test Channel = MCH

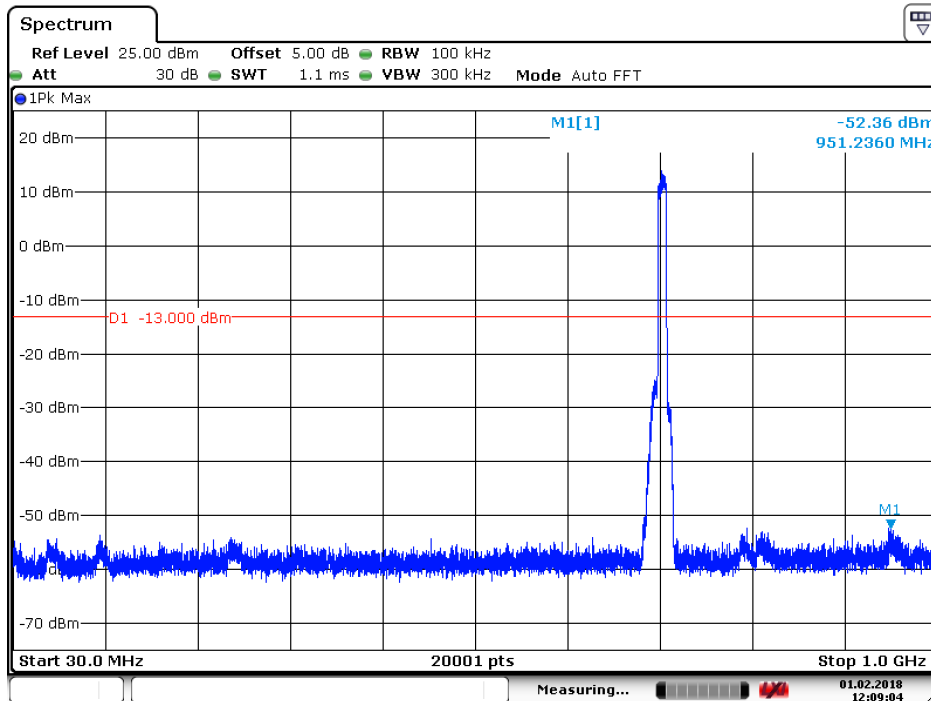


Date: 1.FEB.2018 12:08:47

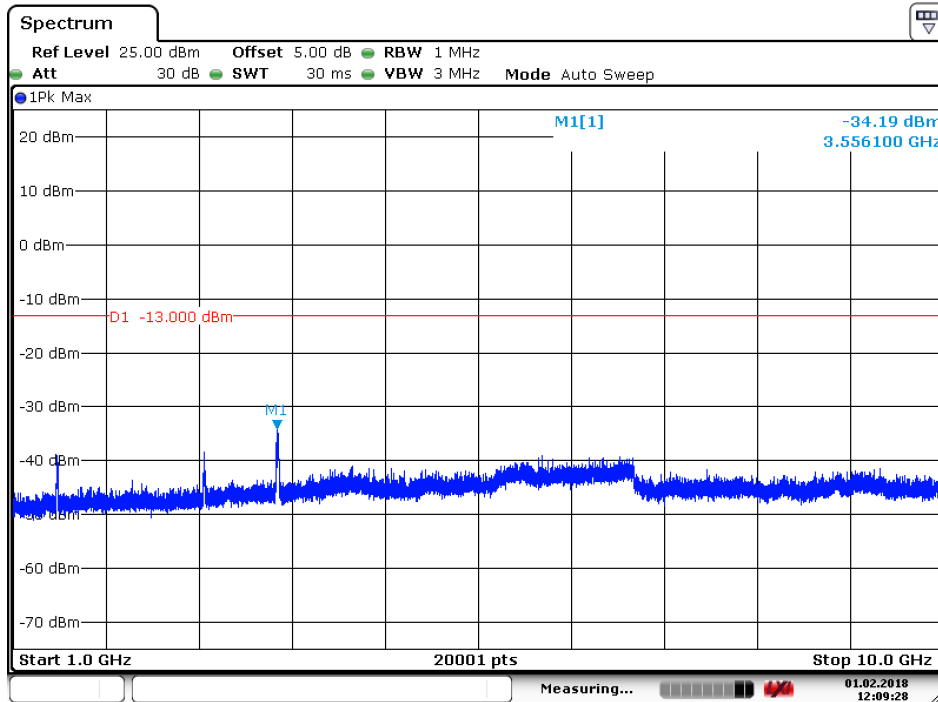


Date: 1.FEB.2018 12:11:13

### 6.1.1.1.3 Test Channel = HCH



Date: 1.FEB.2018 12:09:04



Date: 1.FEB.2018 12:09:29



## 7 Field Strength of Spurious Radiation

### 7.1 For LTE

#### 7.1.1 Test Band = LTE band12

##### 7.1.1.1 Test Mode =LTE/TM1 10MHz RB1#0

###### 7.1.1.1.1 Test Channel = LCH

Frequency (MHz)	Level (dBm)	Limit Line (dBm)	Over Limit (dB)	Polarization
1405.000000	-22.27	-13.00	-9.27	Vertical
1694.000000	-64.36	-13.00	51.36	Vertical
2108.500000	-18.56	-13.00	-5.56	Vertical
4152.450000	-67.89	-13.00	54.89	Vertical
6262.675000	-65.16	-13.00	52.16	Vertical
6916.250000	-64.73	-13.00	51.73	Vertical
1408.000000	-21.03	-13.00	-8.03	Horizontal
1653.000000	-65.23	-13.00	52.23	Horizontal
2116.000000	-19.98	-13.00	-6.98	Horizontal
4294.150000	-66.71	-13.00	53.71	Horizontal
5946.450000	-65.60	-13.00	52.60	Horizontal
7241.575000	-64.58	-13.00	51.58	Horizontal

###### 7.1.1.1.2 Test Channel = MCH

Frequency (MHz)	Level (dBm)	Limit Line (dBm)	Over Limit (dB)	Polarization
1407.000000	-21.26	-13.00	-8.26	Vertical
2108.000000	-16.97	-13.00	-3.97	Vertical
4842.425000	-66.78	-13.00	53.78	Vertical
6176.875000	-65.21	-13.00	52.21	Vertical
7041.375000	-64.78	-13.00	51.78	Vertical
9270.225000	-64.15	-13.00	51.15	Vertical
1403.000000	-22.97	-13.00	-9.97	Horizontal
1622.000000	-65.58	-13.00	52.58	Horizontal
2108.000000	-17.12	-13.00	-4.12	Horizontal
4081.925000	-67.84	-13.00	54.84	Horizontal
5917.850000	-65.80	-13.00	52.80	Horizontal
7243.850000	-64.86	-13.00	51.86	Horizontal



**7.1.1.1.3 Test Channel = HCH**

Frequency (MHz)	Level (dBm)	Limit Line (dBm)	Over Limit (dB)	Polarization
1404.000000	-20.35	-13.00	-7.35	Vertical
1681.500000	-64.86	-13.00	51.86	Vertical
2108.500000	-18.23	-13.00	-5.23	Vertical
4708.525000	-67.06	-13.00	54.06	Vertical
5278.250000	-66.71	-13.00	53.71	Vertical
6718.650000	-65.21	-13.00	52.21	Vertical
1414.000000	-20.91	-13.00	-7.91	Horizontal
2108.000000	-17.12	-13.00	-4.12	Horizontal
2763.000000	-57.50	-13.00	44.50	Horizontal
4005.225000	-67.82	-13.00	54.82	Horizontal
5222.025000	-66.73	-13.00	53.73	Horizontal
7959.500000	-63.70	-13.00	50.70	Horizontal

**NOTE:**

- 1) All modes are tested, but the data presented above is the worst case. 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
LTE band12	LTE/TM1 10MHz	LCH	TN	VL	-2.66	-0.00378	PASS
				VN	1.42	0.00202	PASS
				VH	-5.23	-0.00743	PASS
		MCH	TN	VL	-1.56	-0.00220	PASS
				VN	-2.80	-0.00396	PASS
				VH	1.72	0.00243	PASS
		HCH	TN	VL	-5.36	-0.00754	PASS
				VN	-4.90	-0.00689	PASS
				VH	-1.88	-0.00264	PASS
	LTE/TM2 10MHz	LCH	TN	VL	-4.30	-0.00611	PASS
				VN	-3.33	-0.00473	PASS
				VH	-4.13	-0.00587	PASS
		MCH	TN	VL	1.20	0.00170	PASS
				VN	-3.99	-0.00564	PASS
				VH	1.63	0.00230	PASS
		HCH	TN	VL	-2.01	-0.00283	PASS
				VN	-6.10	-0.00858	PASS
				VH	5.11	0.00719	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
LTE band12	LTE/TM1 10MHz	LCH	VN	-30	-4.30	-0.00611	PASS
				-20	-2.38	-0.00338	PASS
				-10	-2.77	-0.00393	PASS
				0	1.20	0.00170	PASS
				10	1.22	0.00173	PASS
				20	0.59	0.00084	PASS
				30	-0.68	-0.00097	PASS
				40	-2.70	-0.00384	PASS
				50	-6.02	-0.00855	PASS
		MCH	VN	-30	-5.44	-0.00769	PASS
				-20	-5.20	-0.00735	PASS
				-10	-3.32	-0.00469	PASS
				0	-1.55	-0.00219	PASS
				10	-2.27	-0.00321	PASS
				20	-0.89	-0.00126	PASS
				30	-3.09	-0.00437	PASS
				40	-4.88	-0.00690	PASS
				50	-5.42	-0.00766	PASS
		HCH	VN	-30	-6.66	-0.00937	PASS
				-20	-3.24	-0.00456	PASS
				-10	0.69	0.00097	PASS
				0	-2.40	-0.00338	PASS
				10	2.44	0.00343	PASS
				20	-0.39	-0.00055	PASS
30	-2.49			-0.00350	PASS		
40	-4.39			-0.00617	PASS		
50	-3.88			-0.00546	PASS		





**SGS-CSTC Standards Technical Services Co., Ltd.**  
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Test Band	Test Mode	Test Channel	Test Volt.	Test Temp.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict
LTE band12	LTE/TM2 10MHz	LCH	VN	-30	-3.67	-0.00443	PASS
				-20	-2.55	-0.00292	PASS
				-10	1.20	0.00145	PASS
				0	2.21	0.00267	PASS
				10	1.77	0.00214	PASS
				20	-0.83	-0.00100	PASS
				30	-3.03	-0.00366	PASS
				40	2.20	0.00274	PASS
		MCH	VN	-30	-3.32	-0.00397	PASS
				-20	-2.66	-0.00318	PASS
				-10	4.10	-0.00251	PASS
				0	-1.83	-0.00219	PASS
				10	-0.79	-0.00094	PASS
				20	1.23	0.00147	PASS
				30	3.29	-0.00274	PASS
				40	-6.78	-0.00811	PASS
		HCH	VN	-30	-3.03	-0.00359	PASS
				-20	-4.60	-0.00545	PASS
				-10	2.09	0.00248	PASS
				0	-3.32	-0.00412	PASS
				10	2.76	0.00327	PASS
				20	-1.07	-0.00236	PASS
				30	-3.39	-0.00402	PASS
				40	5.70	-0.00557	PASS
			50	-4.34	-0.00513	PASS	

The End