



# 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	22.33	23.18	38.45	PASS
				RB1#2	22.43	23.28	38.45	PASS
				RB1#5	22.44	23.29	38.45	PASS
				RB3#0	22.73	23.58	38.45	PASS
				RB3#2	22.48	23.33	38.45	PASS
				RB3#3	22.42	23.27	38.45	PASS
				RB6#0	21.66	22.51	38.45	PASS
			MCH	RB1#0	22.50	23.35	38.45	PASS
				RB1#2	22.42	23.27	38.45	PASS
				RB1#5	22.36	23.21	38.45	PASS
				RB3#0	22.58	23.43	38.45	PASS
				RB3#2	22.59	23.44	38.45	PASS
				RB3#3	22.40	23.25	38.45	PASS
				RB6#0	21.57	22.42	38.45	PASS
			HCH	RB1#0	22.78	23.63	38.45	PASS
				RB1#2	22.63	23.48	38.45	PASS
				RB1#5	22.69	23.54	38.45	PASS
				RB3#0	22.45	23.3	38.45	PASS
				RB3#2	22.44	23.29	38.45	PASS
				RB3#3	22.43	23.28	38.45	PASS
				RB6#0	21.60	22.45	38.45	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	21.58	22.43	38.45	PASS
				RB1#2	21.56	22.41	38.45	PASS
				RB1#5	21.50	22.35	38.45	PASS
				RB3#0	21.73	22.58	38.45	PASS
				RB3#2	21.43	22.28	38.45	PASS
				RB3#3	21.48	22.33	38.45	PASS
				RB6#0	20.57	21.42	38.45	PASS
			MCH	RB1#0	21.72	22.57	38.45	PASS
				RB1#2	21.86	22.71	38.45	PASS
				RB1#5	21.68	22.53	38.45	PASS
				RB3#0	21.52	22.37	38.45	PASS
				RB3#2	21.53	22.38	38.45	PASS
				RB3#3	21.48	22.33	38.45	PASS
				RB6#0	20.66	21.51	38.45	PASS
			HCH	RB1#0	21.92	22.77	38.45	PASS
				RB1#2	21.86	22.71	38.45	PASS
				RB1#5	21.76	22.61	38.45	PASS
				RB3#0	21.42	22.27	38.45	PASS
				RB3#2	21.40	22.25	38.45	PASS
				RB3#3	21.39	22.24	38.45	PASS
				RB6#0	20.70	21.55	38.45	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	21.51	22.36	38.45	PASS
				RB1#7	22.26	23.11	38.45	PASS
				RB1#14	22.77	23.62	38.45	PASS
				RB8#0	22.25	23.1	38.45	PASS
				RB8#4	21.55	22.4	38.45	PASS
				RB8#7	21.61	22.46	38.45	PASS
				RB15#0	21.65	22.5	38.45	PASS
			MCH	RB1#0	21.48	22.33	38.45	PASS
				RB1#7	22.49	23.34	38.45	PASS
				RB1#14	22.25	23.1	38.45	PASS
				RB8#0	22.14	22.99	38.45	PASS
				RB8#4	21.67	22.52	38.45	PASS
				RB8#7	21.55	22.4	38.45	PASS
				RB15#0	21.40	22.25	38.45	PASS
			HCH	RB1#0	21.54	22.39	38.45	PASS
				RB1#7	22.54	23.39	38.45	PASS
				RB1#14	22.53	23.38	38.45	PASS
				RB8#0	22.84	23.69	38.45	PASS
				RB8#4	21.65	22.5	38.45	PASS
				RB8#7	21.51	22.36	38.45	PASS
				RB15#0	21.54	22.39	38.45	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	20.41	21.26	38.45	PASS
				RB1#7	21.24	22.09	38.45	PASS
				RB1#14	21.27	22.12	38.45	PASS
				RB8#0	21.53	22.38	38.45	PASS
				RB8#4	20.38	21.23	38.45	PASS
				RB8#7	20.41	21.26	38.45	PASS
				RB15#0	20.70	21.55	38.45	PASS
			MCH	RB1#0	20.47	21.32	38.45	PASS
				RB1#7	21.57	22.42	38.45	PASS
				RB1#14	21.58	22.43	38.45	PASS
				RB8#0	21.54	22.39	38.45	PASS
				RB8#4	20.63	21.48	38.45	PASS
				RB8#7	20.63	21.48	38.45	PASS
				RB15#0	20.62	21.47	38.45	PASS
			HCH	RB1#0	20.39	21.24	38.45	PASS
				RB1#7	21.73	22.58	38.45	PASS
				RB1#14	21.73	22.58	38.45	PASS
				RB8#0	21.74	22.59	38.45	PASS
				RB8#4	20.54	21.39	38.45	PASS
				RB8#7	20.53	21.38	38.45	PASS
				RB15#0	20.58	21.43	38.45	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	21.47	22.32	38.45	PASS
				RB1#13	21.59	22.44	38.45	PASS
				RB1#24	21.46	22.31	38.45	PASS
				RB12#0	22.61	23.46	38.45	PASS
				RB12#6	22.62	23.47	38.45	PASS
				RB12#13	22.45	23.3	38.45	PASS
				RB25#0	21.44	22.29	38.45	PASS
			MCH	RB1#0	21.58	22.43	38.45	PASS
				RB1#13	21.51	22.36	38.45	PASS
				RB1#24	21.50	22.35	38.45	PASS
				RB12#0	22.49	23.34	38.45	PASS
				RB12#6	22.44	23.29	38.45	PASS
				RB12#13	22.55	23.4	38.45	PASS
				RB25#0	21.58	22.43	38.45	PASS
			HCH	RB1#0	21.52	22.37	38.45	PASS
				RB1#13	21.57	22.42	38.45	PASS
				RB1#24	21.50	22.35	38.45	PASS
				RB12#0	22.51	23.36	38.45	PASS
				RB12#6	22.53	23.38	38.45	PASS
				RB12#13	22.29	23.14	38.45	PASS
				RB25#0	21.55	22.4	38.45	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	20.58	21.43	38.45	PASS
				RB1#13	20.56	21.41	38.45	PASS
				RB1#24	20.57	21.42	38.45	PASS
				RB12#0	21.37	22.22	38.45	PASS
				RB12#6	21.39	22.24	38.45	PASS
				RB12#13	21.57	22.42	38.45	PASS
				RB25#0	20.45	21.3	38.45	PASS
			MCH	RB1#0	20.48	21.33	38.45	PASS
				RB1#13	20.52	21.37	38.45	PASS
				RB1#24	20.49	21.34	38.45	PASS
				RB12#0	21.50	22.35	38.45	PASS
				RB12#6	21.60	22.45	38.45	PASS
				RB12#13	21.64	22.49	38.45	PASS
				RB25#0	20.55	21.4	38.45	PASS
			HCH	RB1#0	20.45	21.3	38.45	PASS
				RB1#13	20.40	21.25	38.45	PASS
				RB1#24	20.45	21.3	38.45	PASS
				RB12#0	21.15	22	38.45	PASS
				RB12#6	21.57	22.42	38.45	PASS
				RB12#13	21.21	22.06	38.45	PASS
				RB25#0	20.50	21.35	38.45	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	22.41	23.26	38.45	PASS
				RB1#25	23.00	23.85	38.45	PASS
				RB1#49	22.38	23.23	38.45	PASS
				RB25#0	21.50	22.35	38.45	PASS
				RB25#13	21.51	22.36	38.45	PASS
				RB25#25	21.79	22.64	38.45	PASS
				RB50#0	21.57	22.42	38.45	PASS
			MCH	RB1#0	22.41	23.26	38.45	PASS
				RB1#25	22.56	23.41	38.45	PASS
				RB1#49	22.41	23.26	38.45	PASS
				RB25#0	21.79	22.64	38.45	PASS
				RB25#13	21.69	22.54	38.45	PASS
				RB25#25	21.51	22.36	38.45	PASS
				RB50#0	21.75	22.6	38.45	PASS
			HCH	RB1#0	22.69	23.54	38.45	PASS
				RB1#25	22.56	23.41	38.45	PASS
				RB1#49	22.45	23.3	38.45	PASS
				RB25#0	21.70	22.55	38.45	PASS
				RB25#13	21.73	22.58	38.45	PASS
				RB25#25	21.72	22.57	38.45	PASS
				RB50#0	21.71	22.56	38.45	PASS

Note:

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

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

b: SGP=Signal Generator Level



## 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	4.49	13	PASS
		MCH	4.78	13	PASS
		HCH	5.04	13	PASS

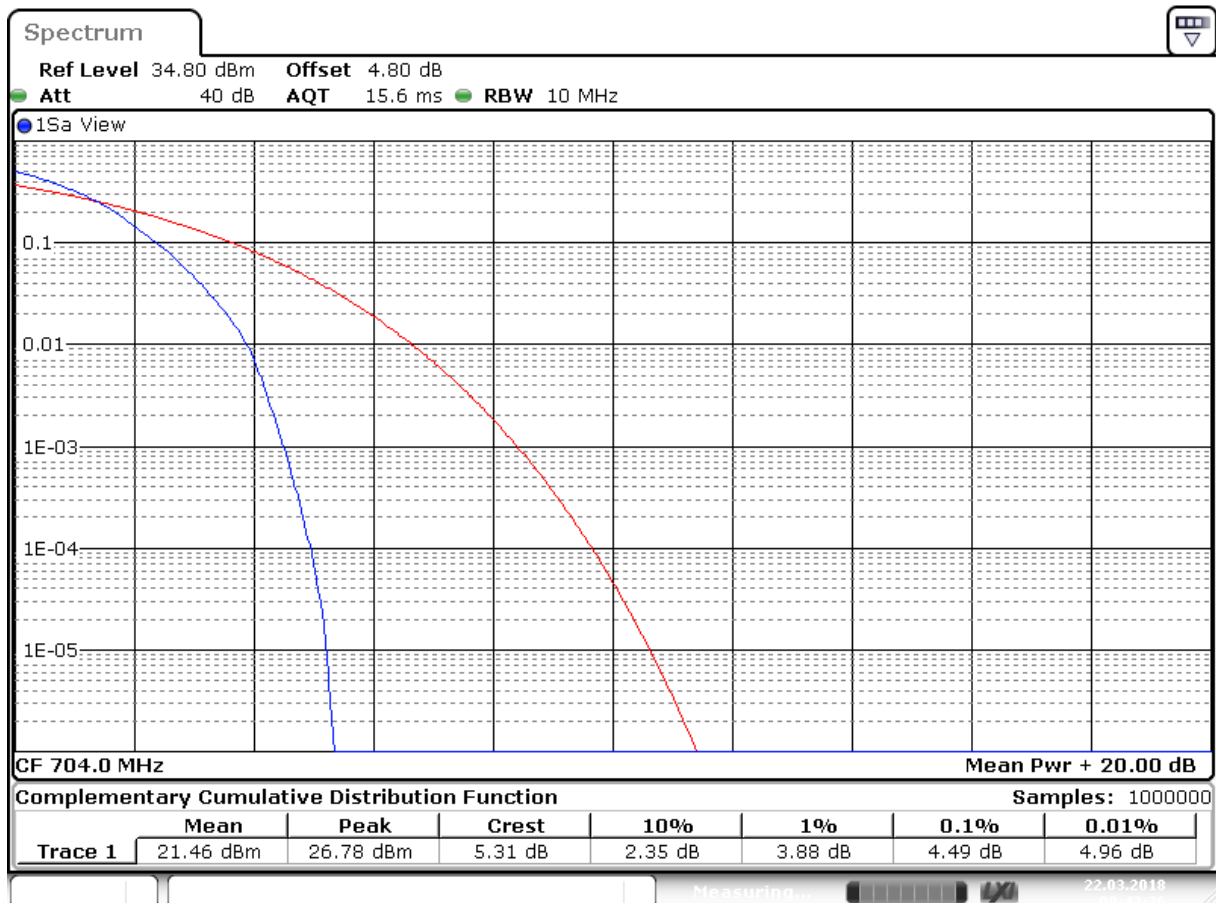
### Part II - Test Plots

## 2.1 For LTE

### 2.1.1 Test Band = LTE BAND12

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

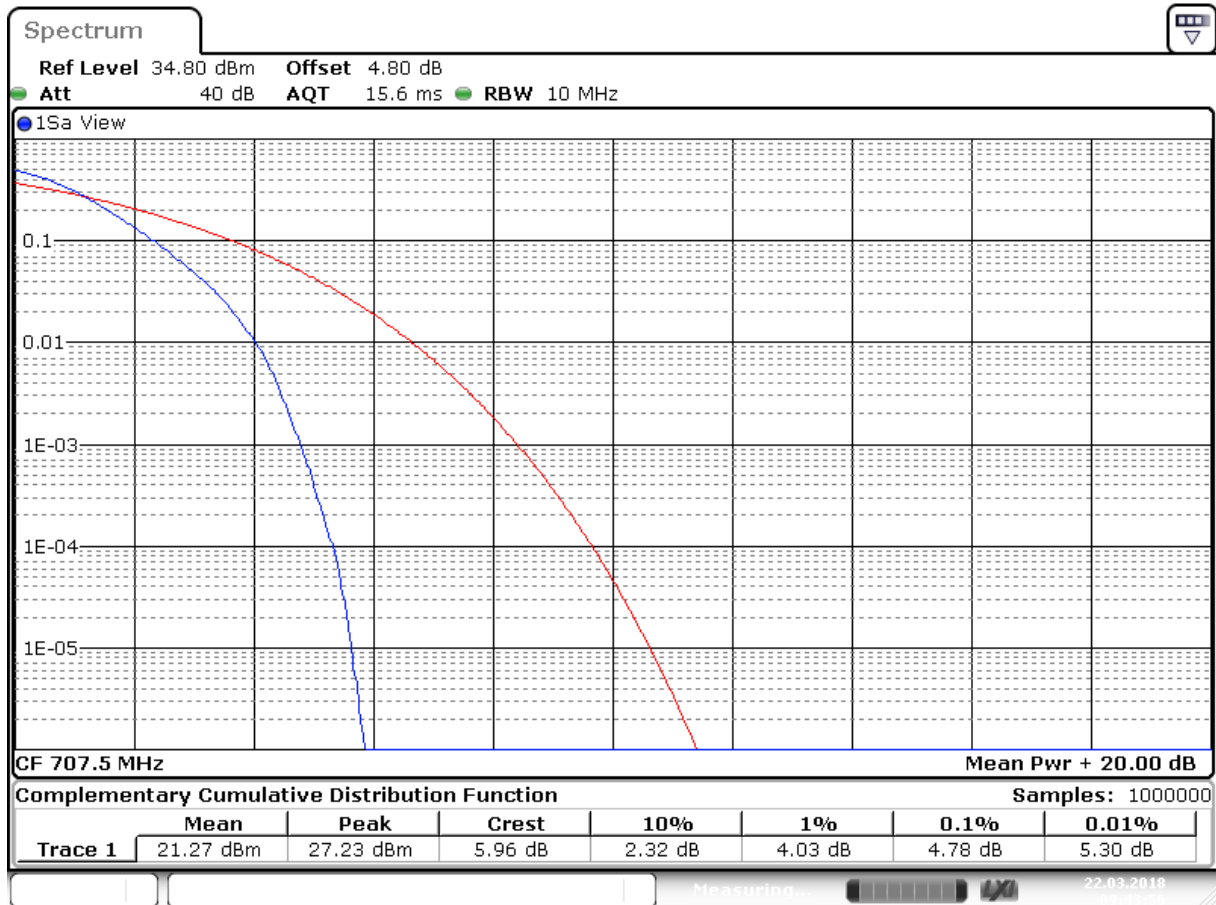
##### 2.1.1.1.1 Test Channel = LCH



Date: 22 MAR 2018 09:43:37



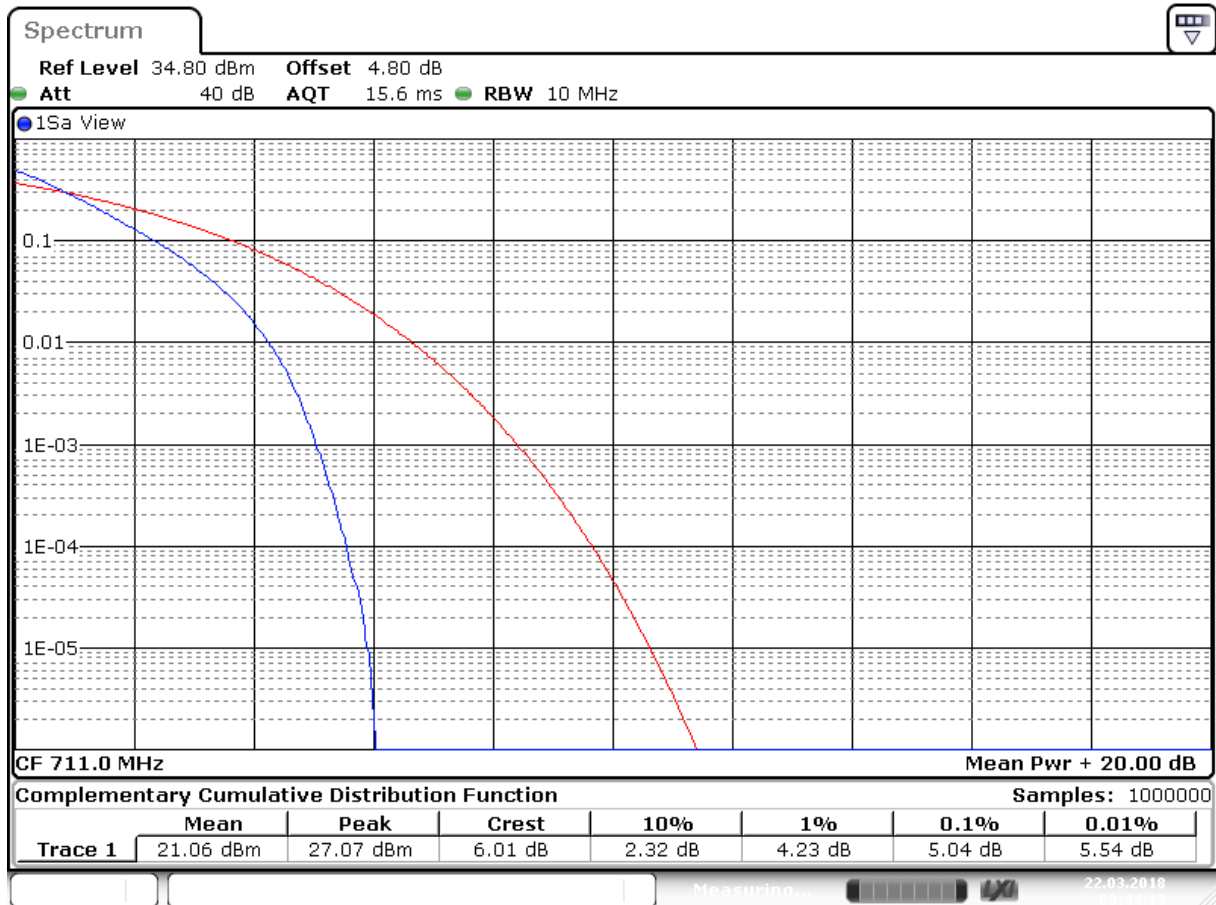
2.1.1.1.2 Test Channel = MCH



Date: 22 MAR 2018 09:43:56



2.1.1.1.3 Test Channel = HCH



Date: 22 MAR 2018 09:44:15

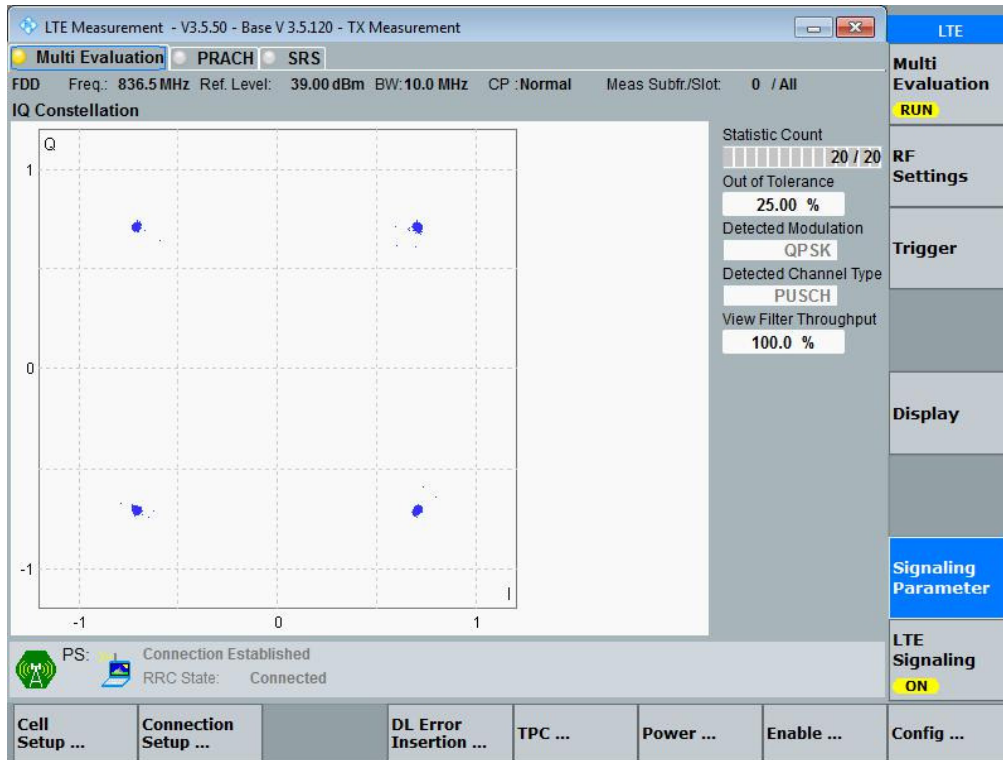
### 3 Modulation Characteristics

#### 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





## 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	1.091	1.236	PASS
		MCH	1.088	1.230	PASS
		HCH	1.088	1.230	PASS
	TM2/1.4MHz	LCH	1.085	1.212	PASS
		MCH	1.091	1.245	PASS
		HCH	1.091	1.224	PASS
	TM1/ 3MHz	LCH	2.697	2.862	PASS
		MCH	2.703	2.886	PASS
		HCH	2.697	2.856	PASS
	TM2/3MHz	LCH	2.697	2.880	PASS
		MCH	2.697	2.868	PASS
		HCH	2.697	2.856	PASS
	TM1/ 5MHz	LCH	4.476	4.740	PASS
		MCH	4.466	4.710	PASS
		HCH	4.476	4.710	PASS
	TM2/ 5MHz	LCH	4.476	4.670	PASS
		MCH	4.466	4.750	PASS
		HCH	4.486	4.720	PASS
	TM1/10MHz	LCH	8.891	9.280	PASS
		MCH	8.931	9.280	PASS
		HCH	8.931	9.300	PASS



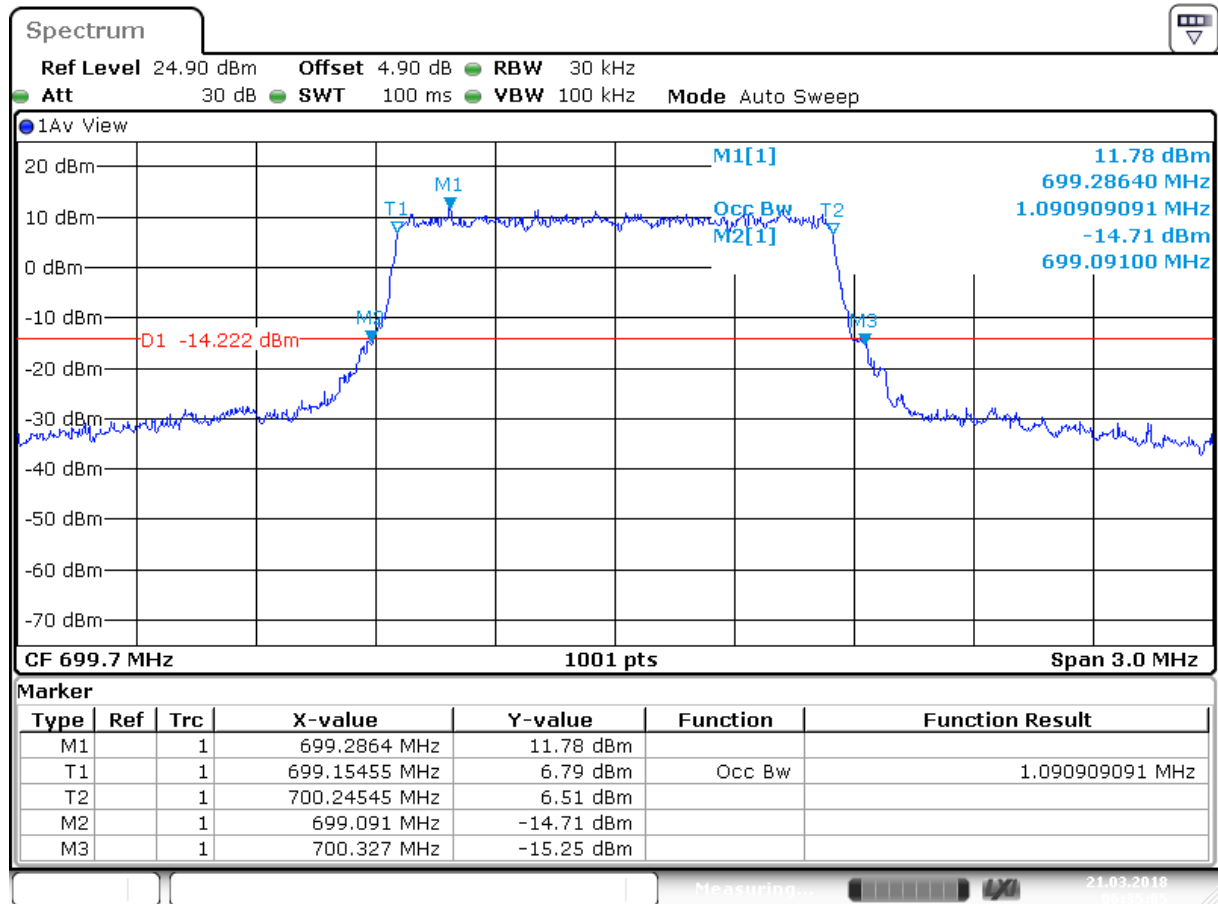
Part II –Test Plots

4.1 For LTE

4.1.1 Test Band = LTE BAND12

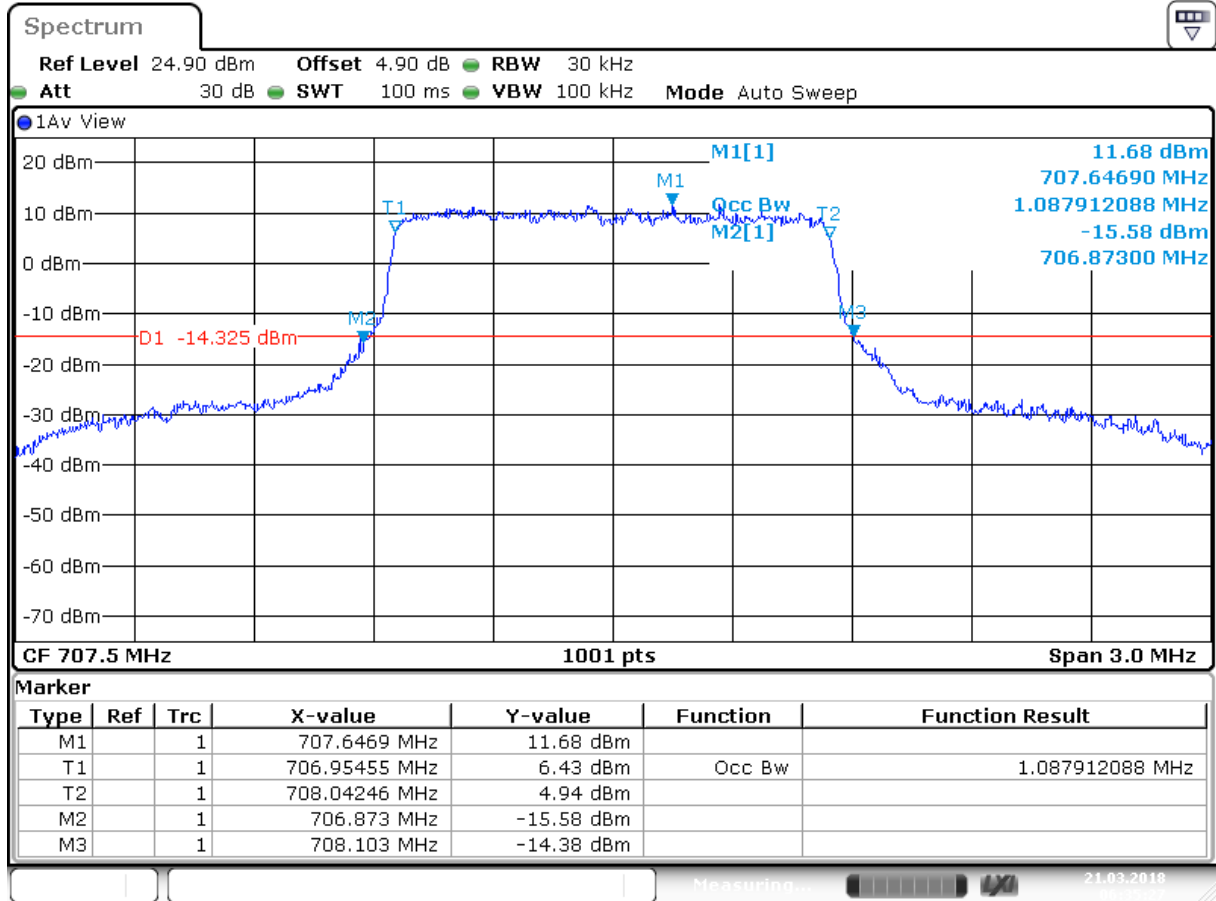
4.1.1.1 Test Mode = LTE/TM1 1.4MHz

4.1.1.1.1 Test Channel = LCH



Date: 21 MAR 2018 06:35:05

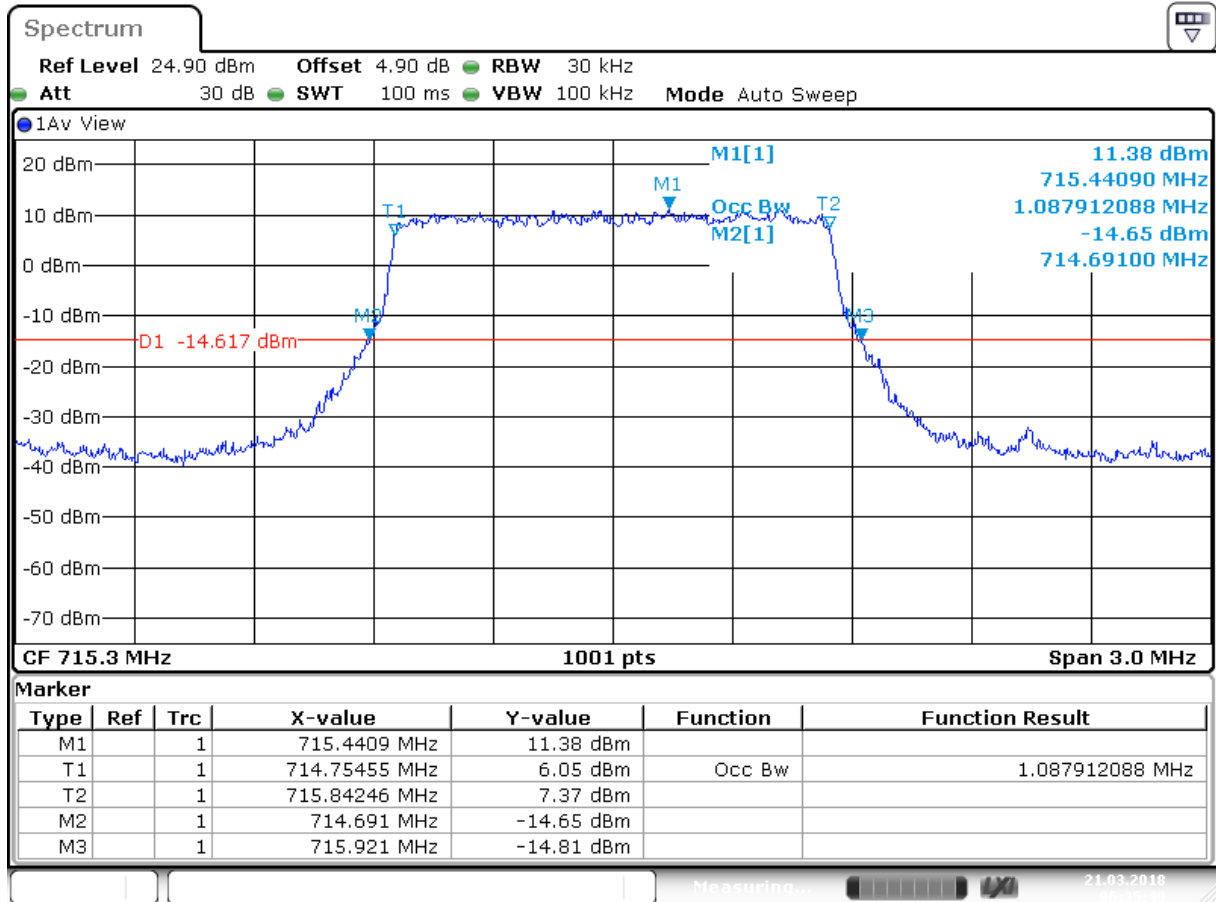
**4.1.1.1.2 Test Channel = MCH**



Date: 21 MAR 2018 06:35:27



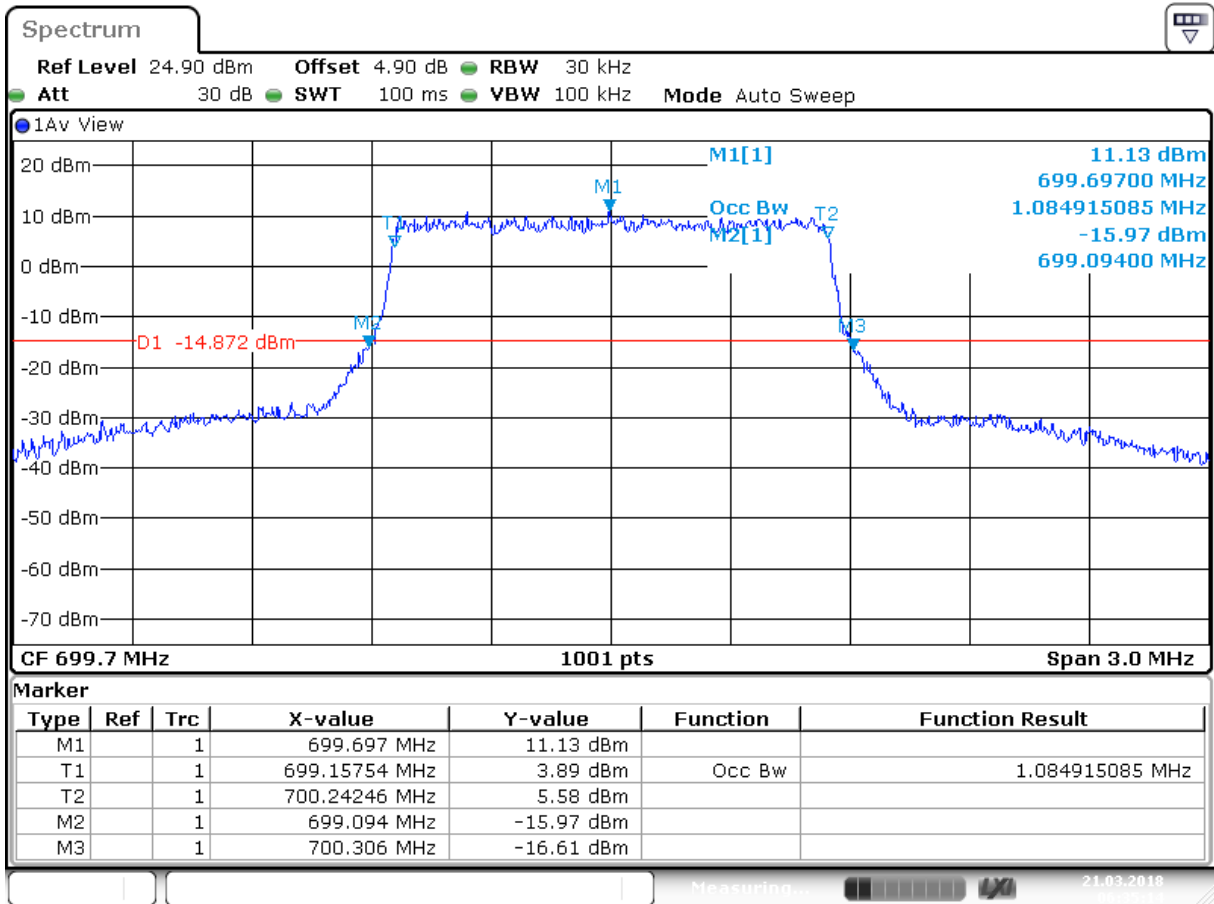
**4.1.1.1.3 Test Channel = HCH**



Date: 21 MAR. 2018 06:35:50

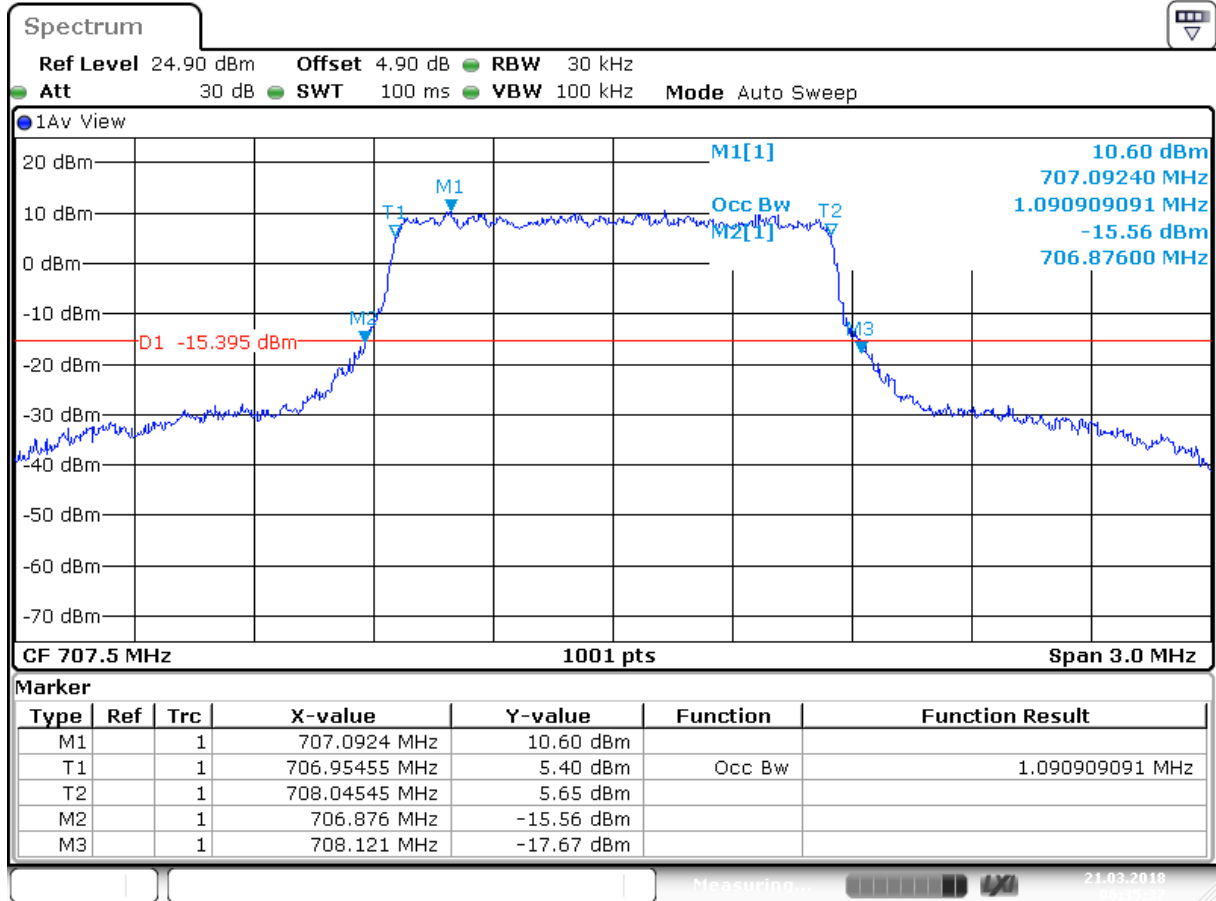
**4.1.1.2 Test Mode = LTE/TM2 1.4MHz**

**4.1.1.2.1 Test Channel = LCH**



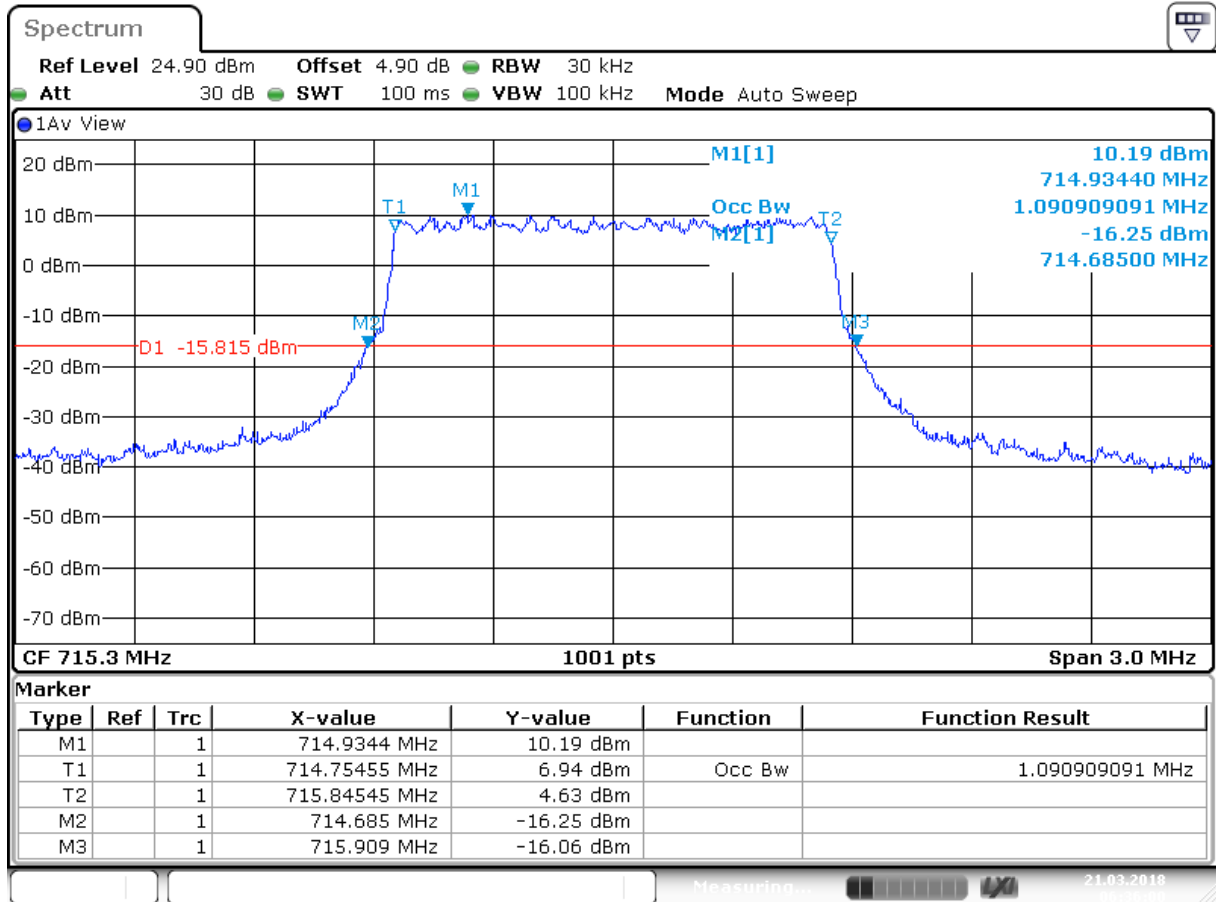
Date: 21 MAR 2018 06:35:15

**4.1.1.2.2 Test Channel = MCH**



Date: 21 MAR 2018 06:35:37

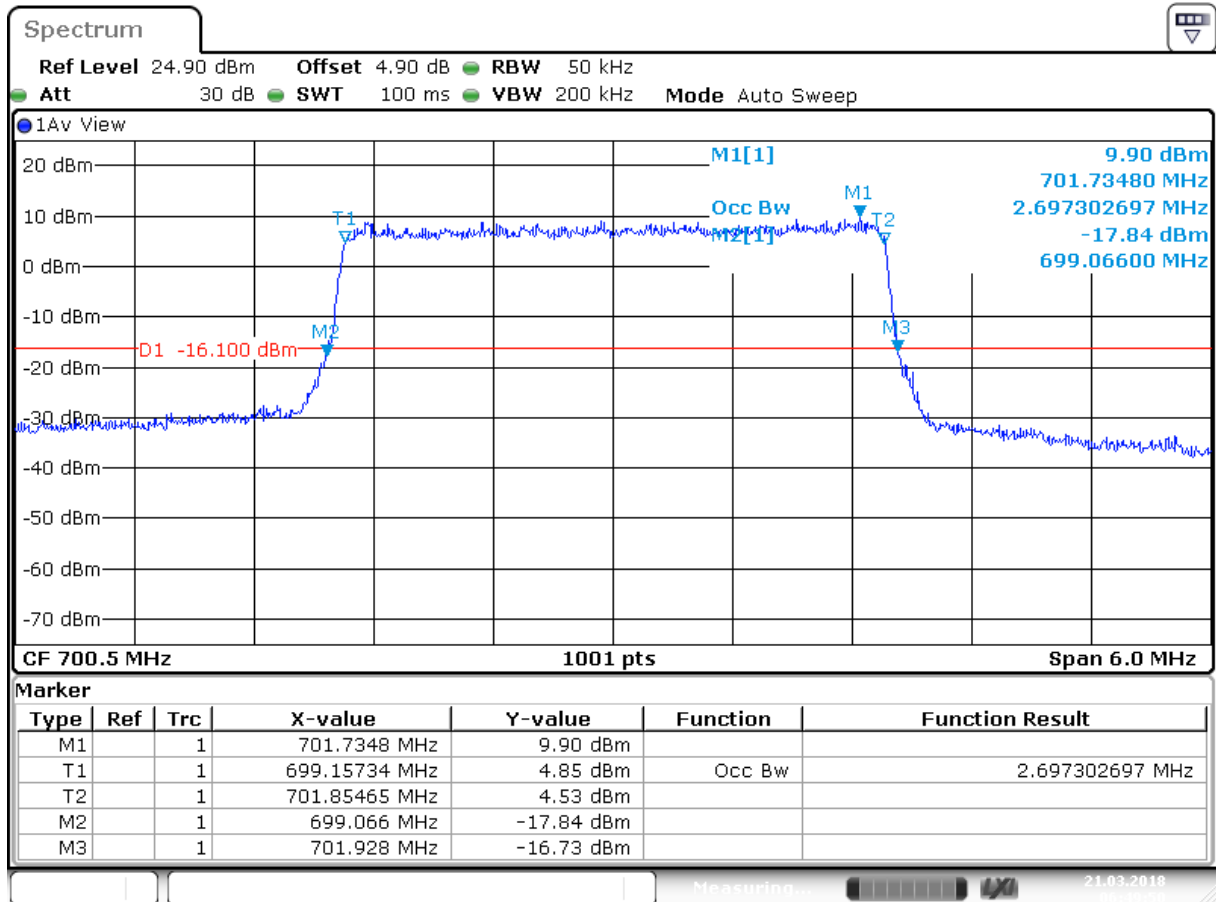
**4.1.1.2.3 Test Channel = HCH**



Date: 21 MAR 2018 06:36:00

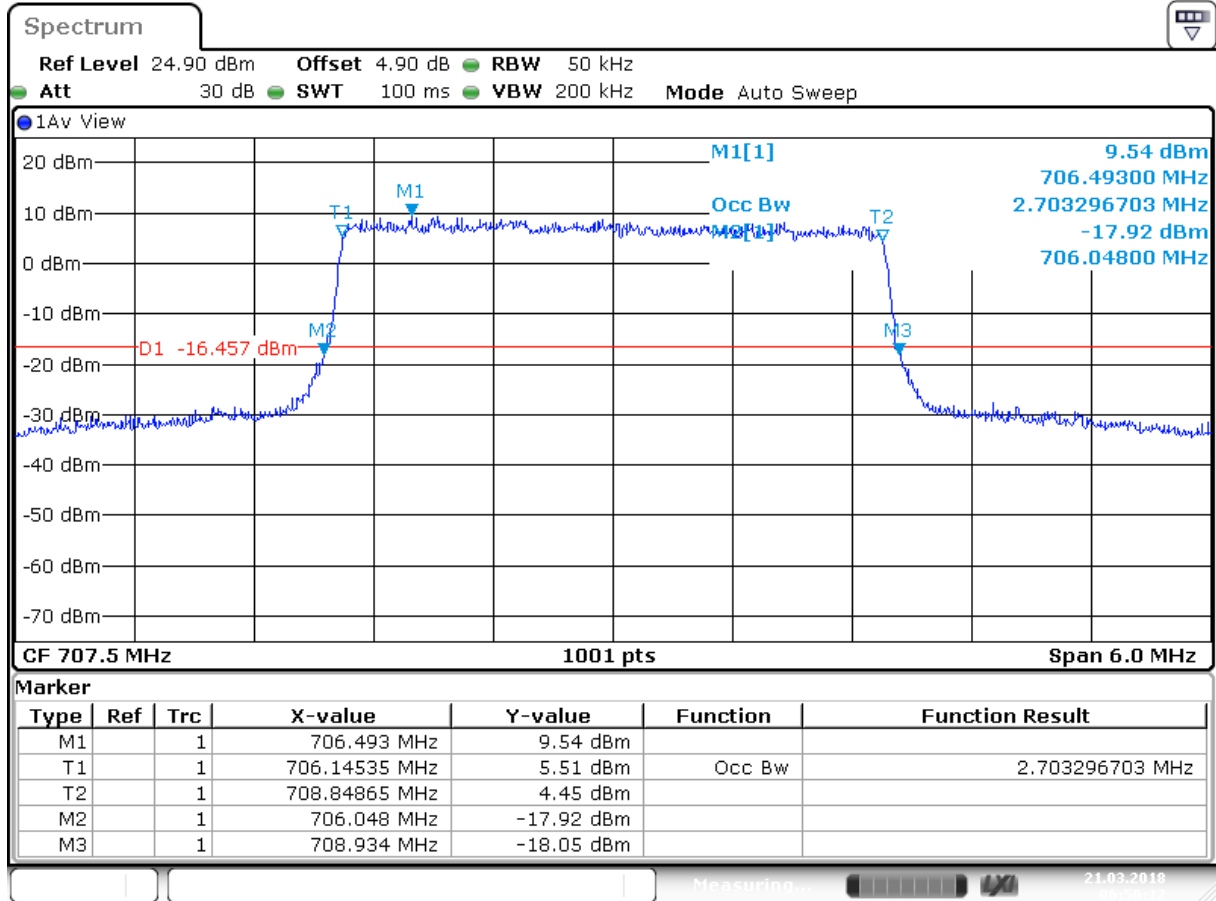
**4.1.1.3 Test Mode = LTE/TM1 3MHz**

**4.1.1.3.1 Test Channel = LCH**



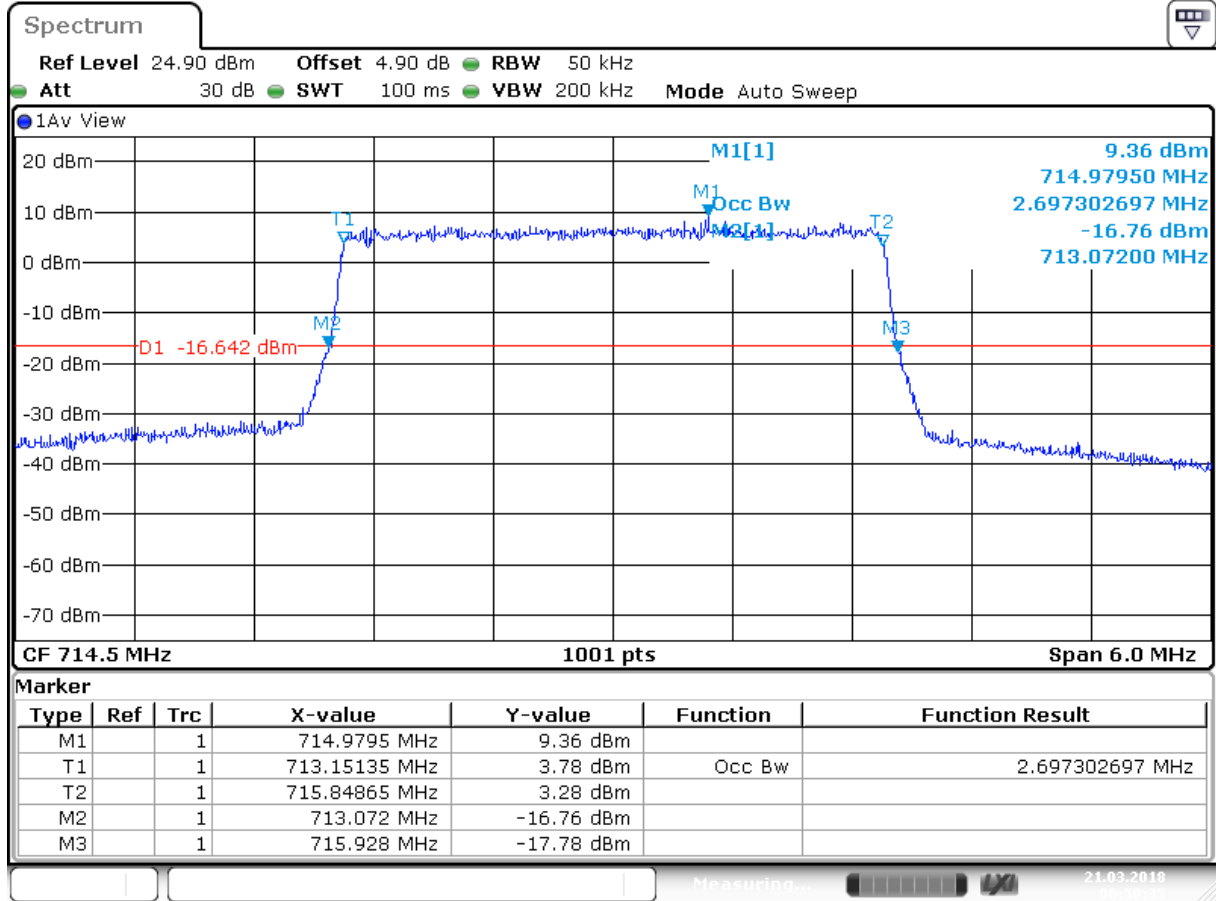
Date: 21 MAR 2018 06:49:51

**4.1.1.3.2 Test Channel = MCH**



Date: 21 MAR 2018 06:50:13

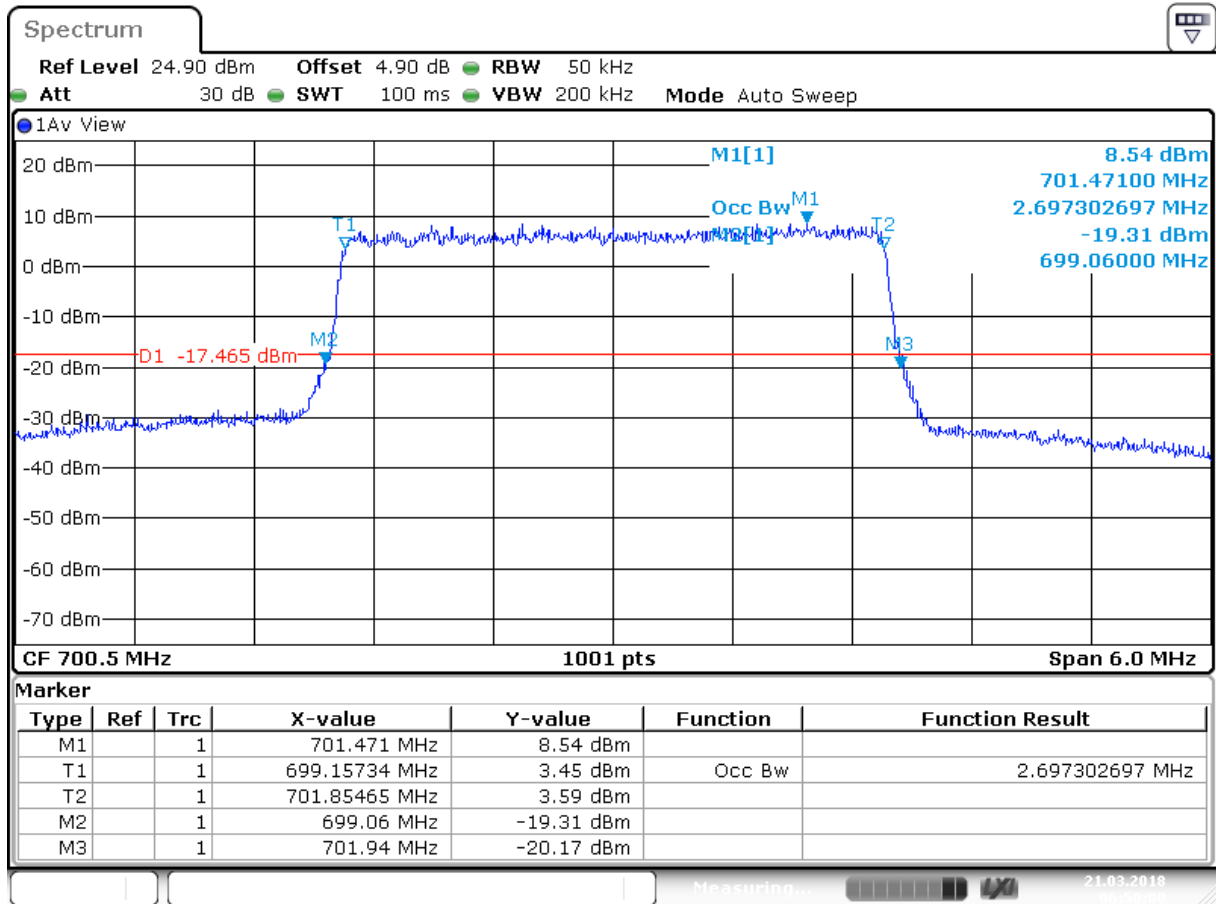
**4.1.1.3.3 Test Channel = HCH**



Date: 21 MAR 2018 06:50:35

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

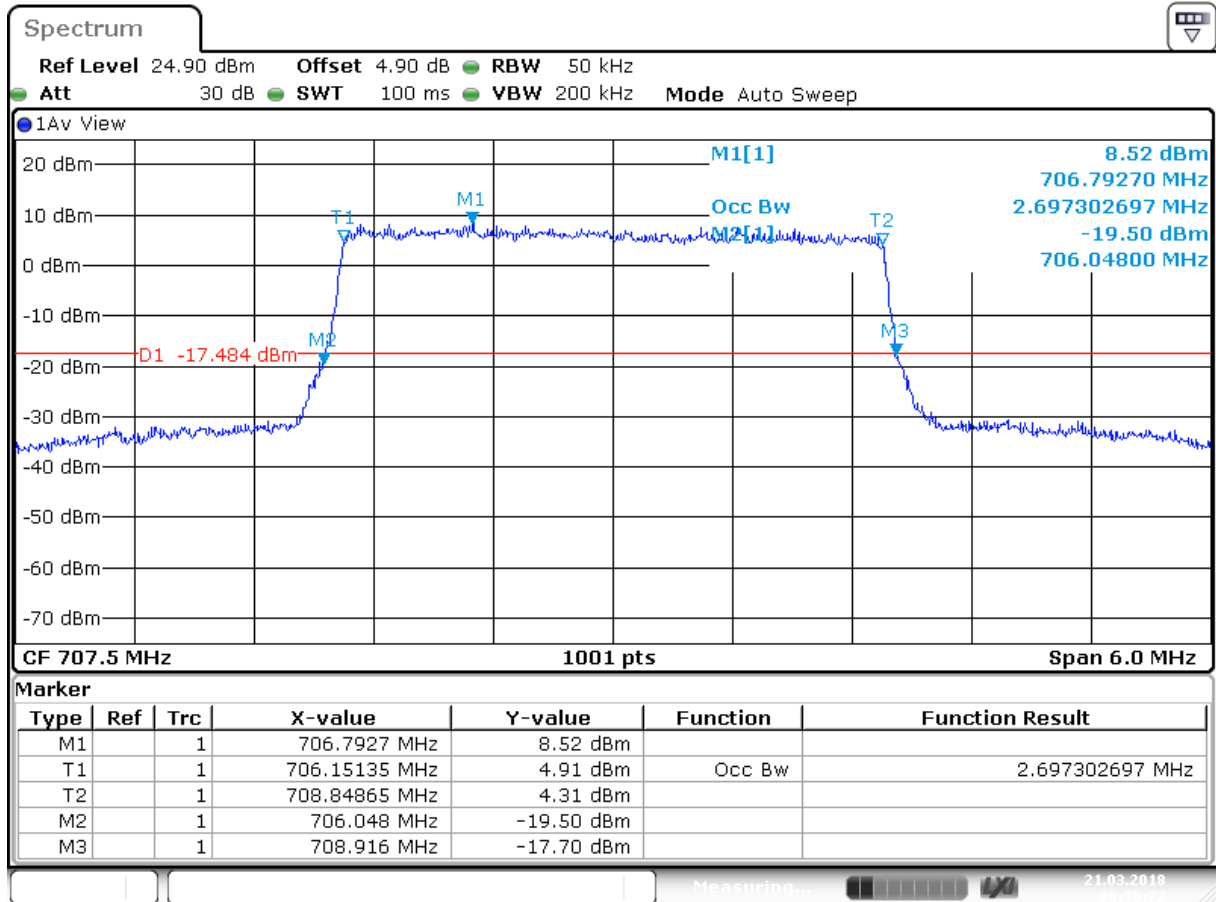
**4.1.1.4.1 Test Channel = LCH**



Date: 21 MAR 2018 06:50:00

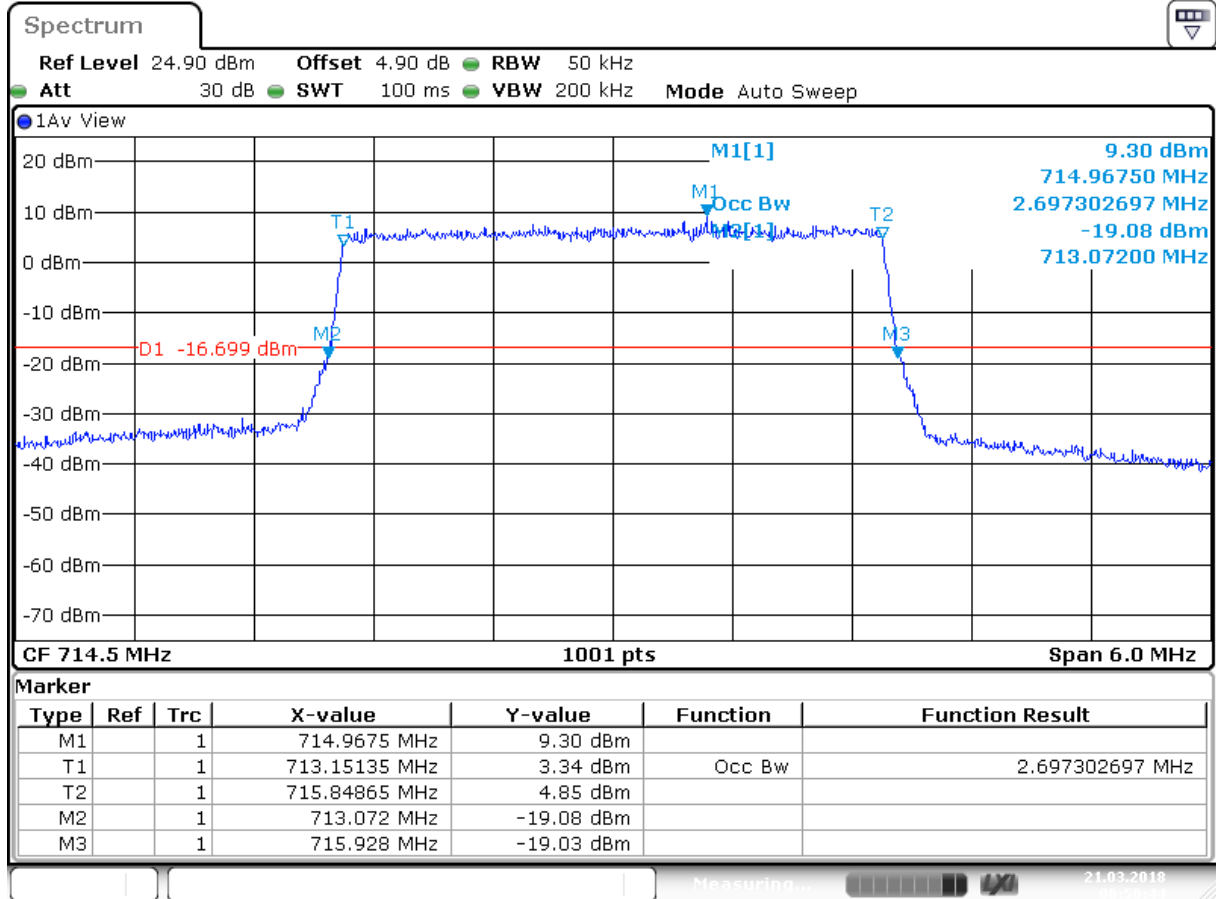


**4.1.1.4.2 Test Channel = MCH**



Date: 21 MAR. 2018 06:50:22

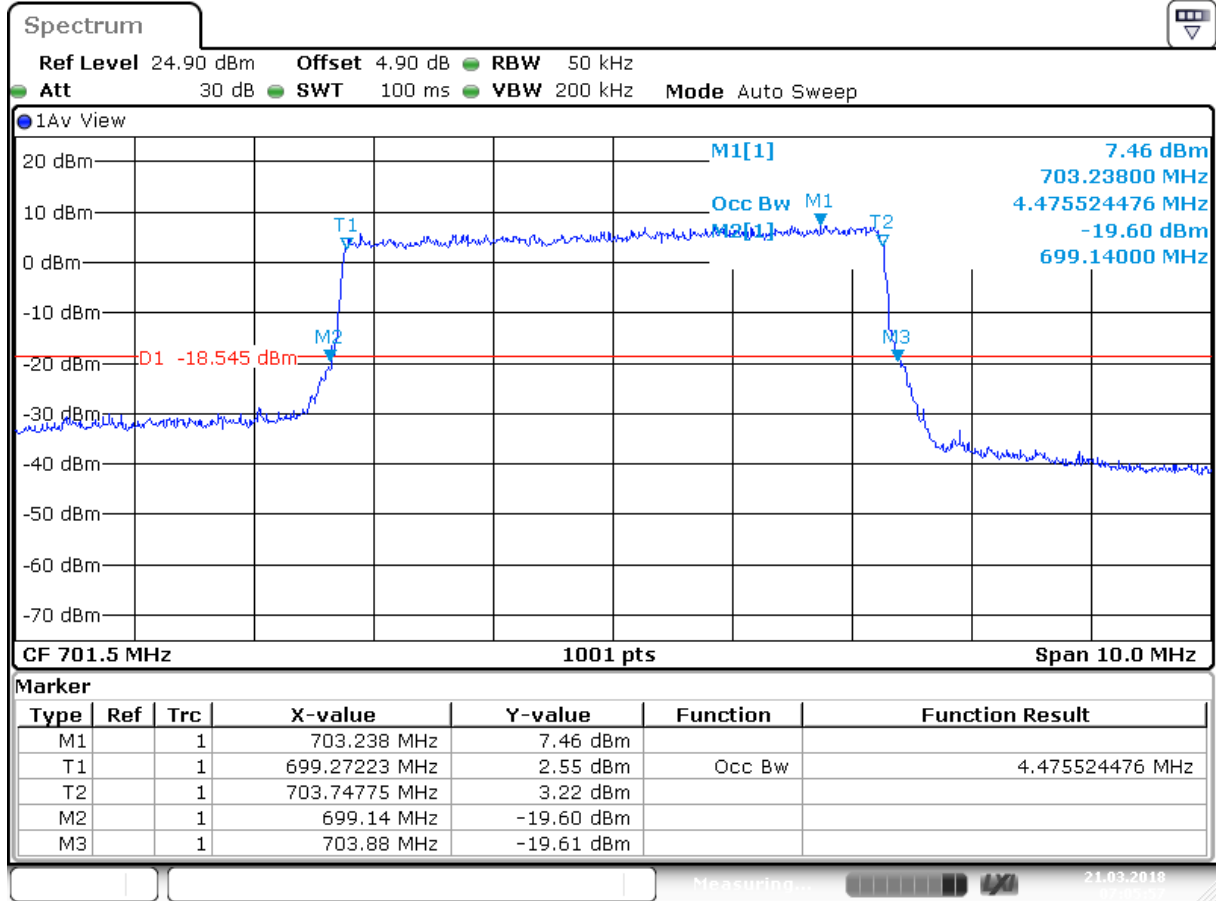
**4.1.1.4.3 Test Channel = HCH**



Date: 21 MAR. 2018 06:50:45

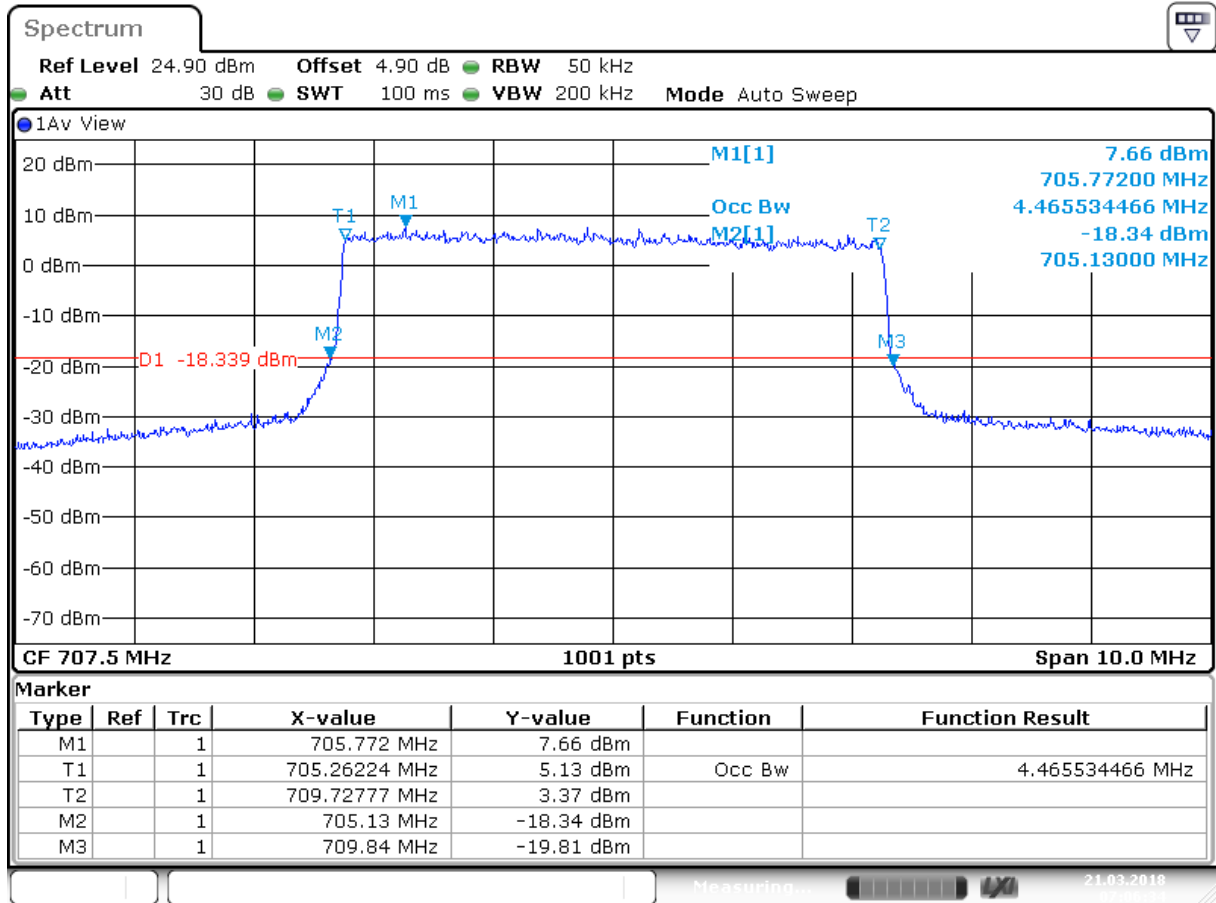
**4.1.1.5 Test Mode = LTE/TM1 5MHz**

**4.1.1.5.1 Test Channel = LCH**



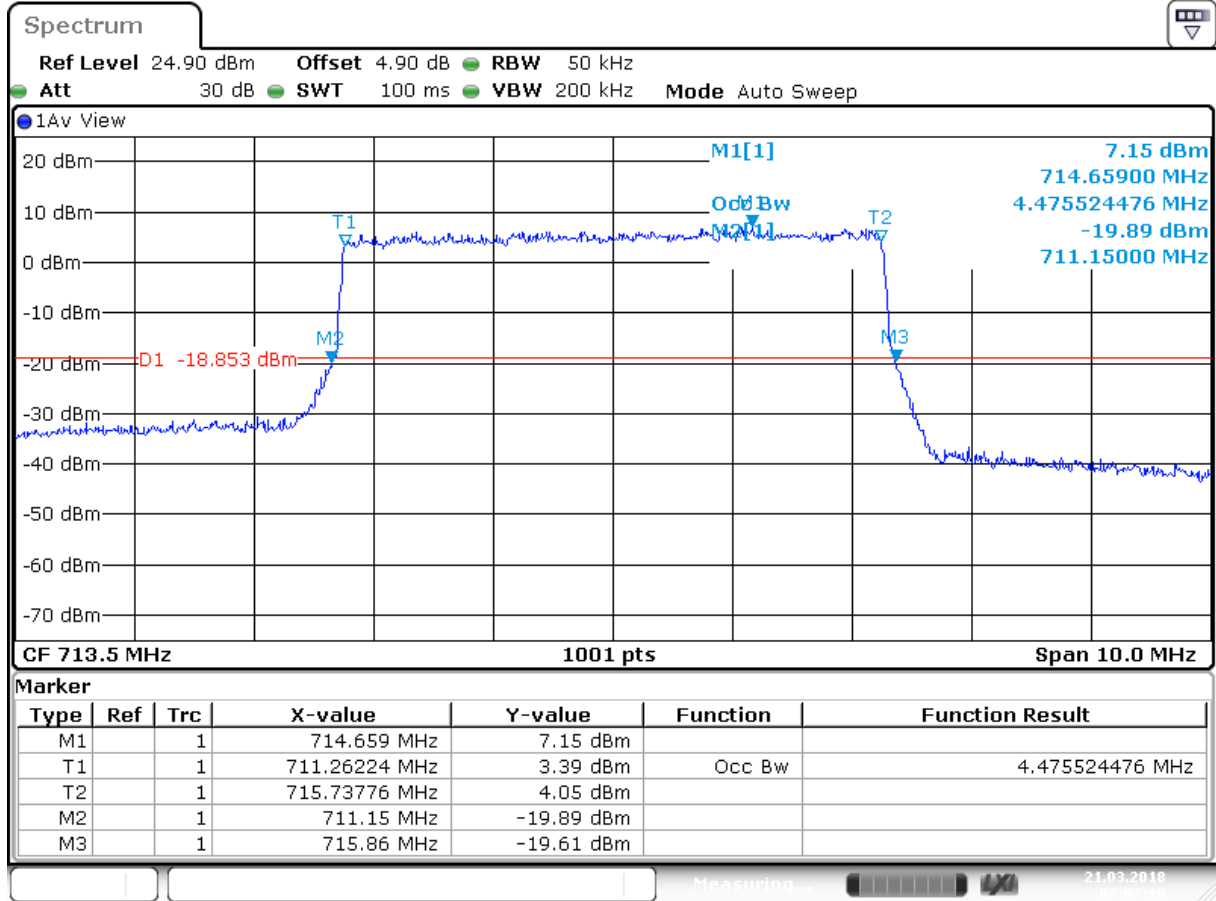
Date: 21 MAR. 2018 07:05:57

**4.1.1.5.2 Test Channel = MCH**



Date: 21 MAR 2018 07:06:34

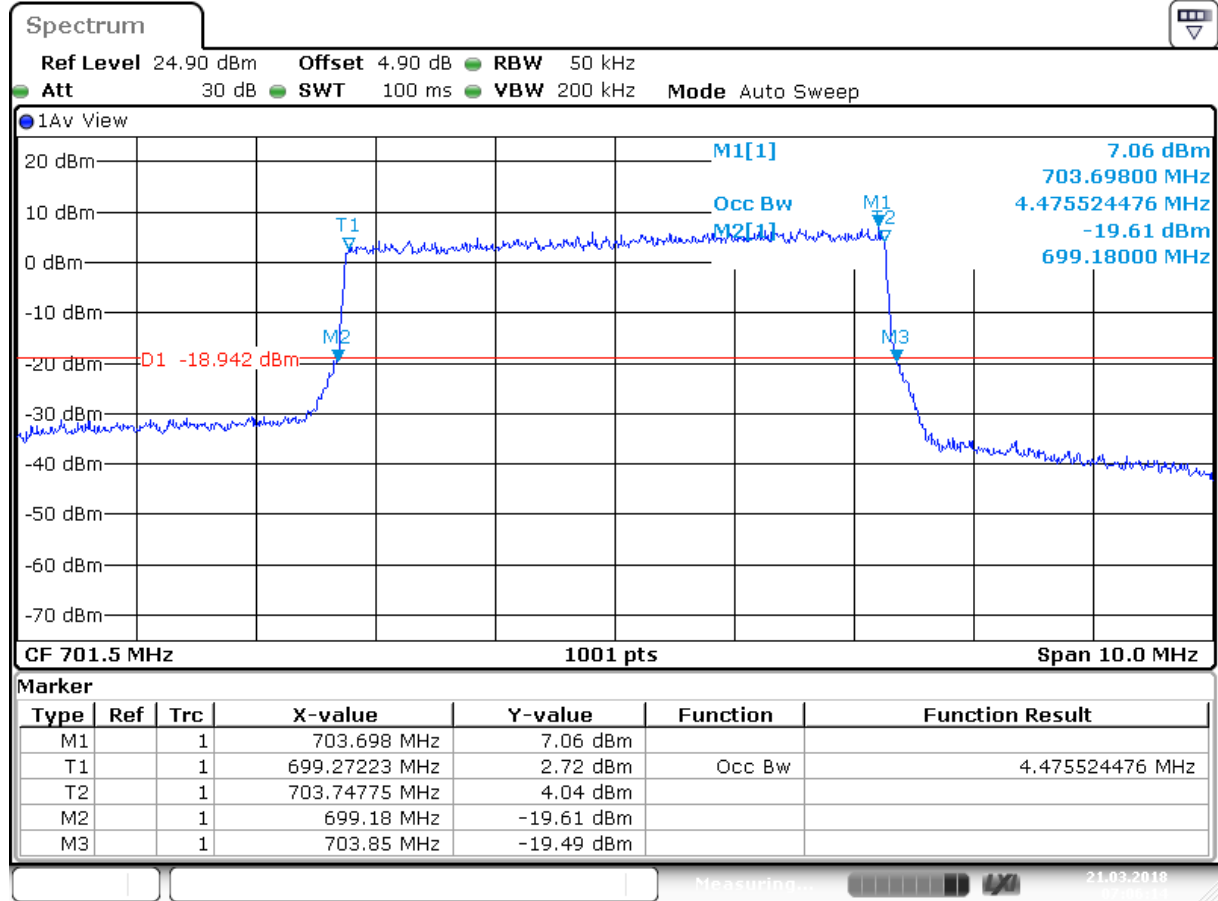
**4.1.1.5.3 Test Channel = HCH**



Date: 21 MAR 2018 07:07:11

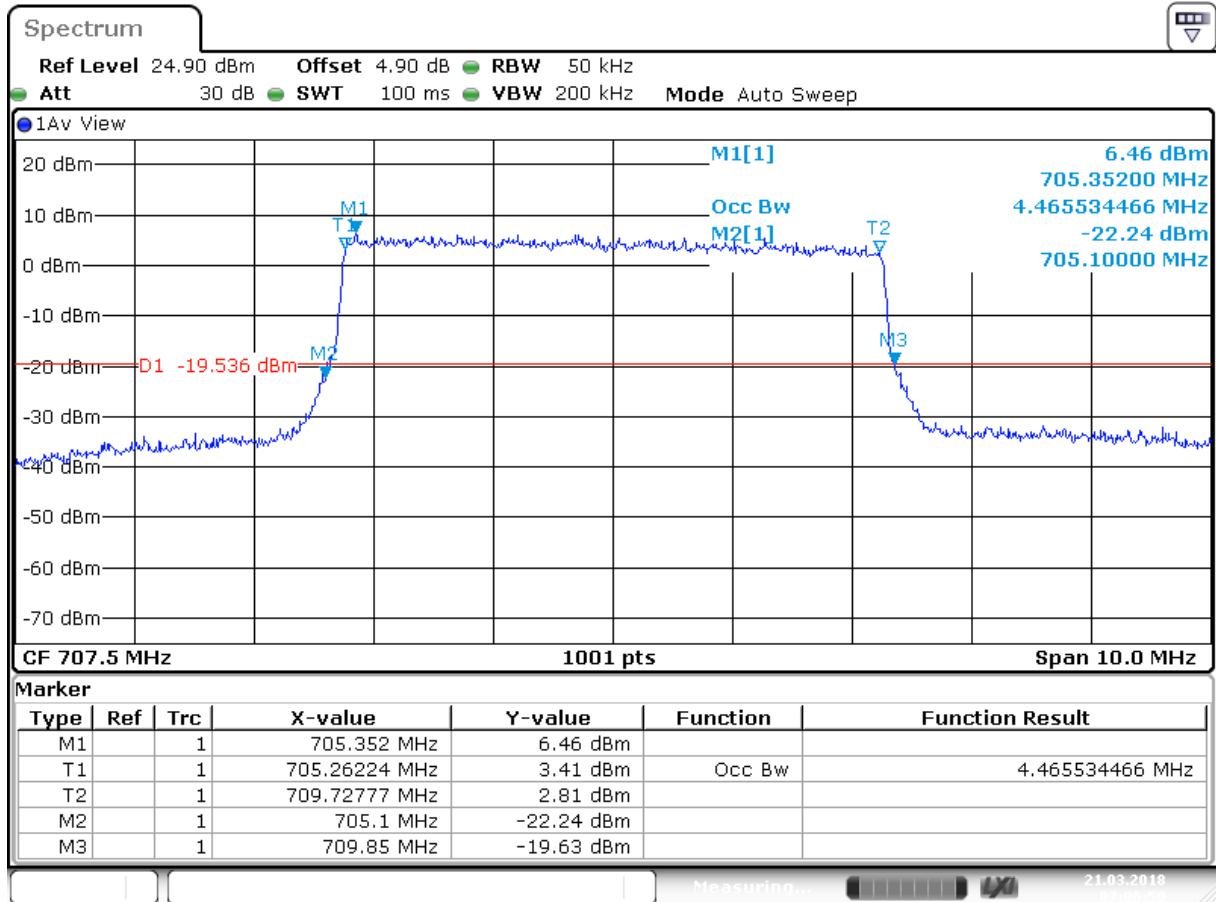
**4.1.1.6 Test Mode = LTE/TM2 5MHz**

**4.1.1.6.1 Test Channel = LCH**



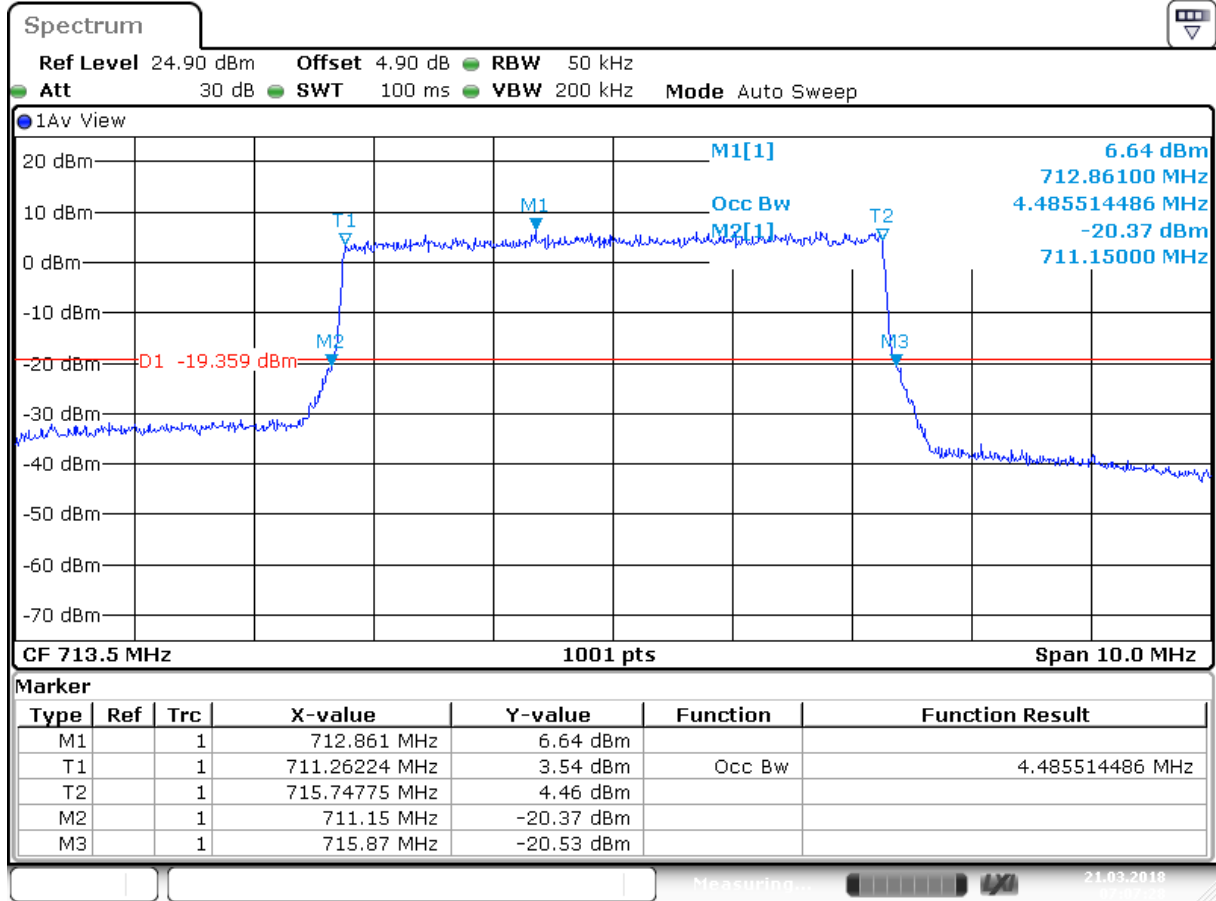
Date: 21 MAR 2018 07:06:14

**4.1.1.6.2 Test Channel = MCH**



Date: 21 MAR 2018 07:06:51

**4.1.1.6.3 Test Channel = HCH**

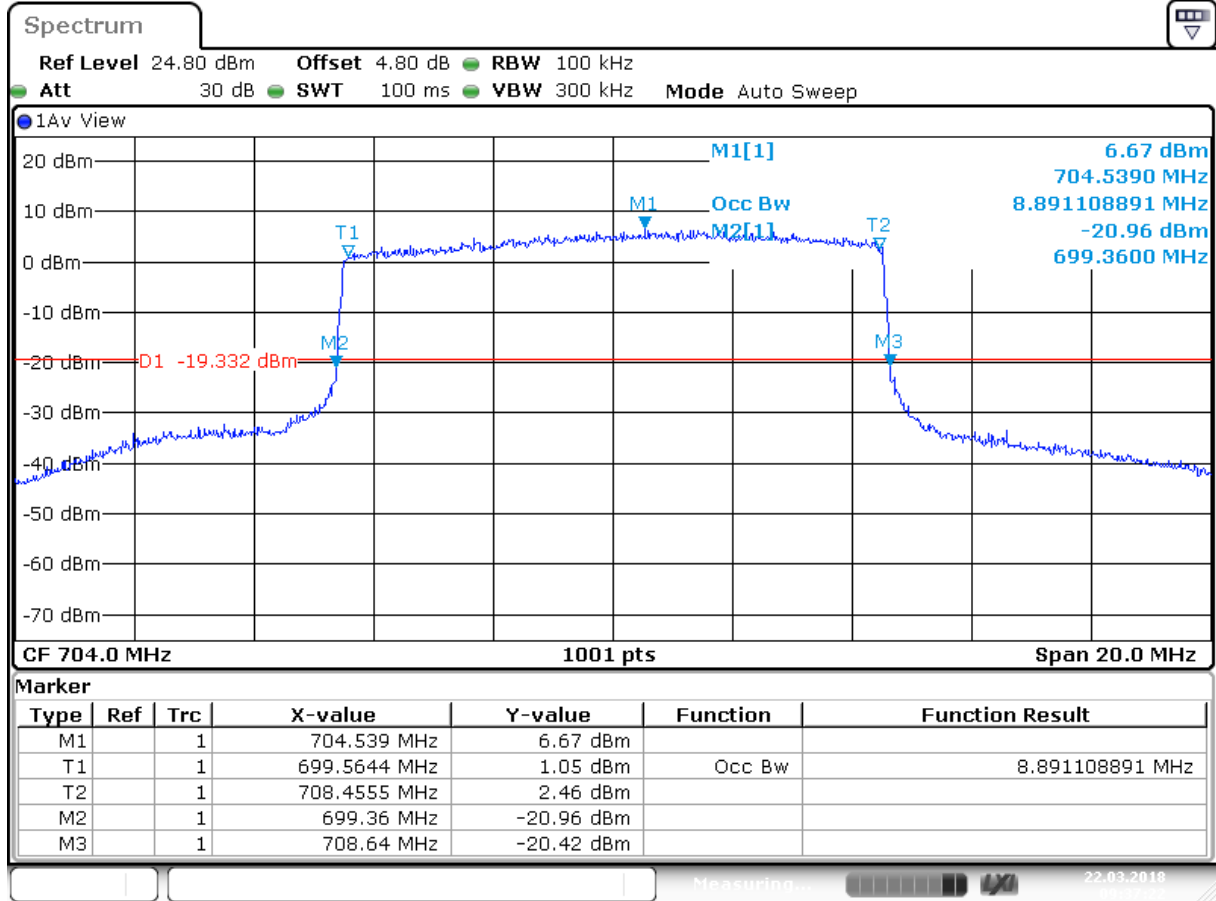


Date: 21 MAR 2018 07:07:28



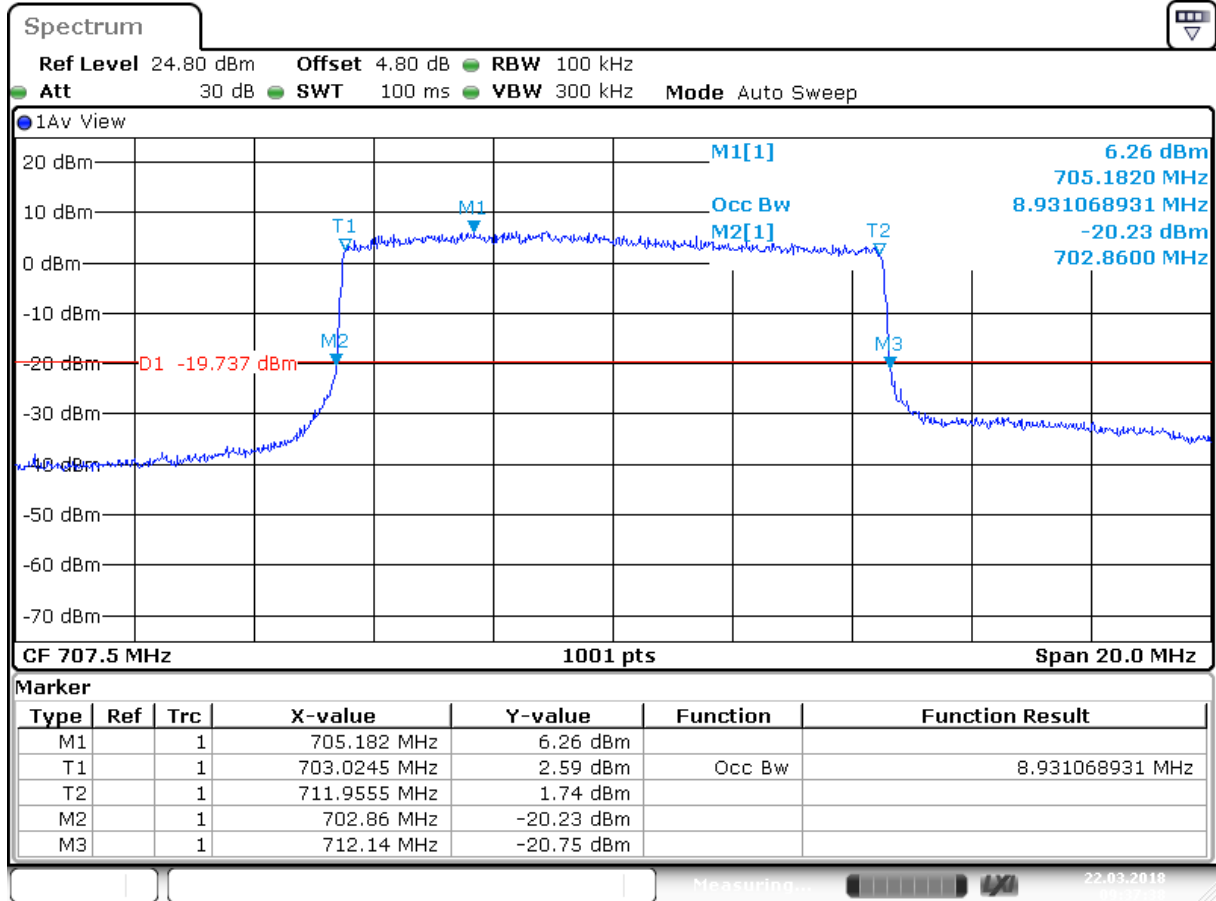
**4.1.1.7 Test Mode = LTE/TM1 10MHz**

**4.1.1.7.1 Test Channel = LCH**



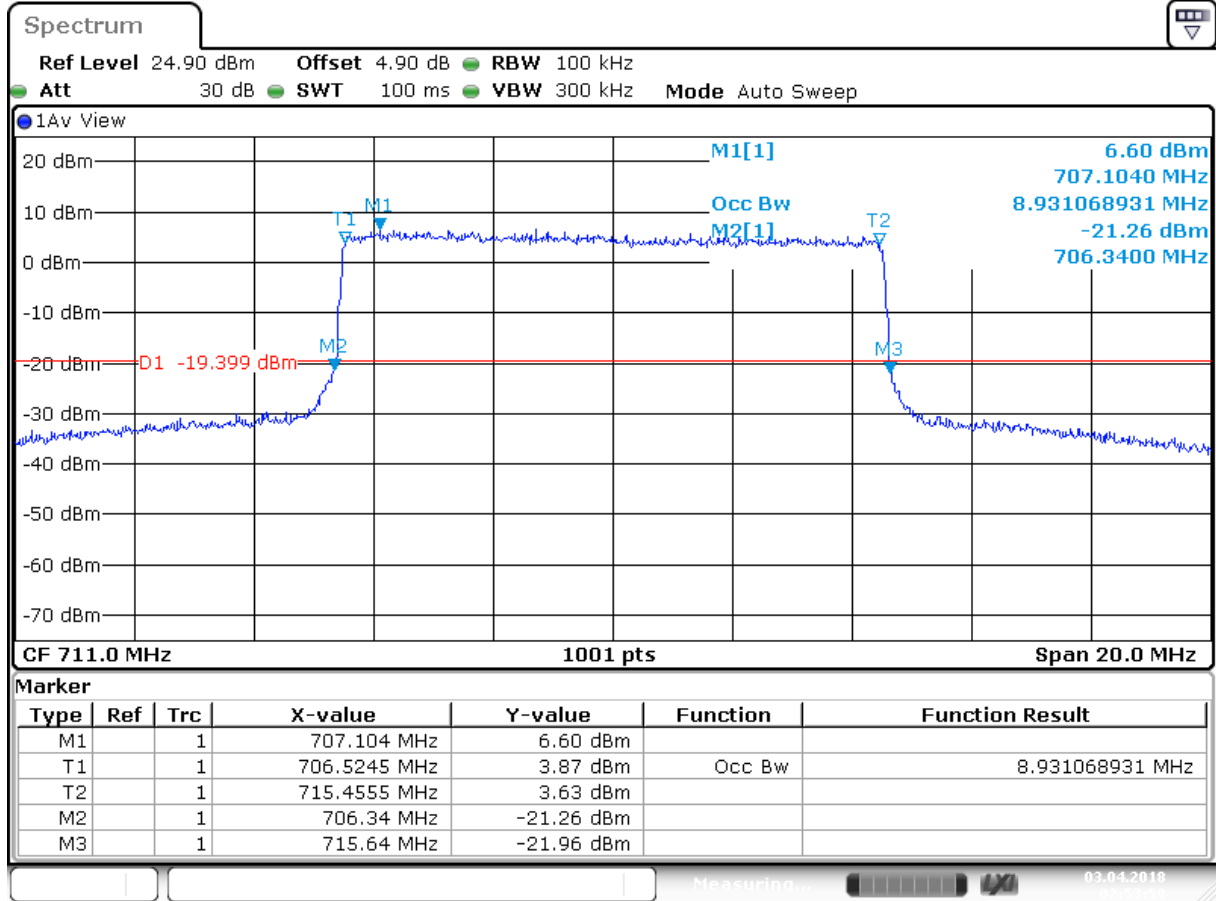
Date: 22 MAR 2018 09:37:22

**4.1.1.7.2 Test Channel = MCH**



Date: 22 MAR 2018 09:37:39

**4.1.1.7.3 Test Channel = HCH**



Date: 3 APR 2018 02:54:00

## 5 Band Edges Compliance

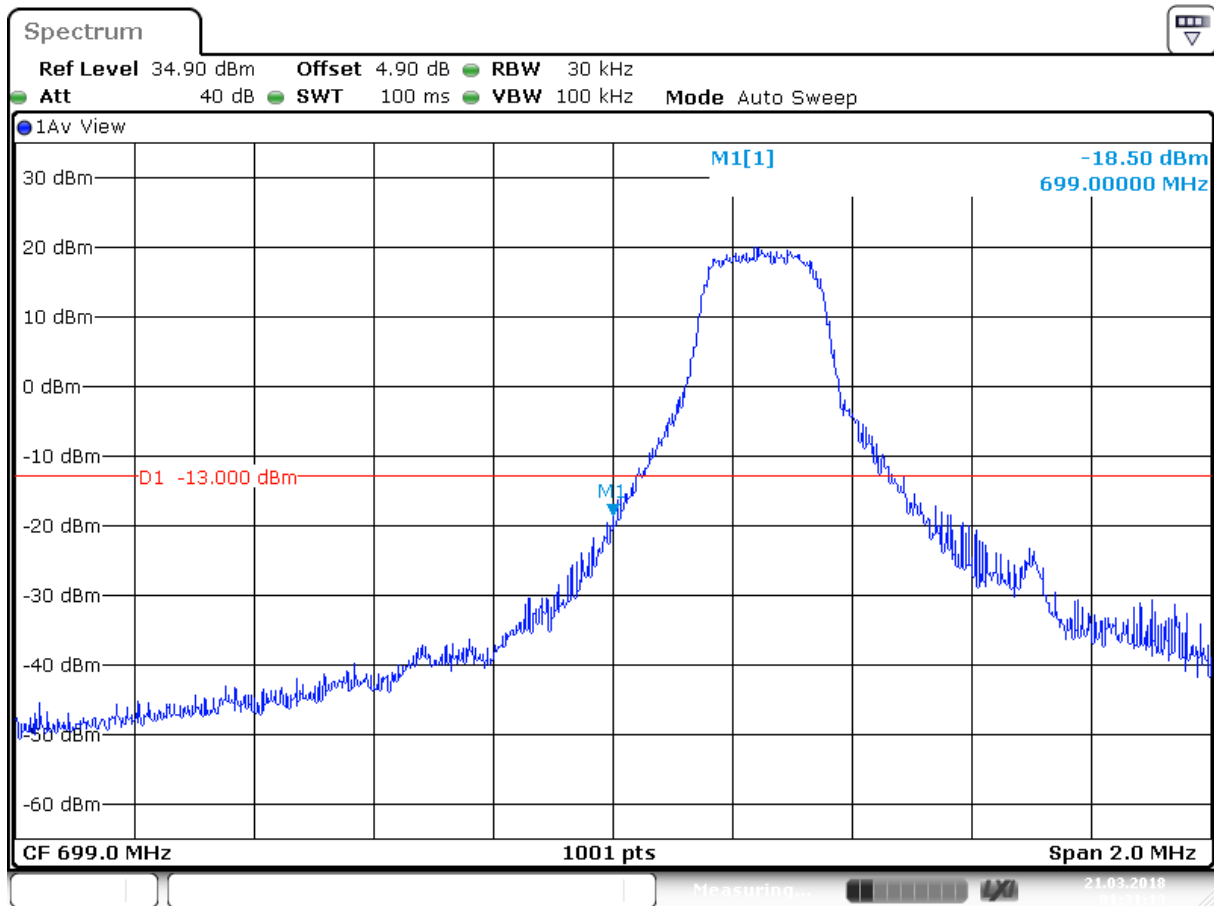
### 5.1 For LTE

#### 5.1.1 Test Band = LTE BAND12

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

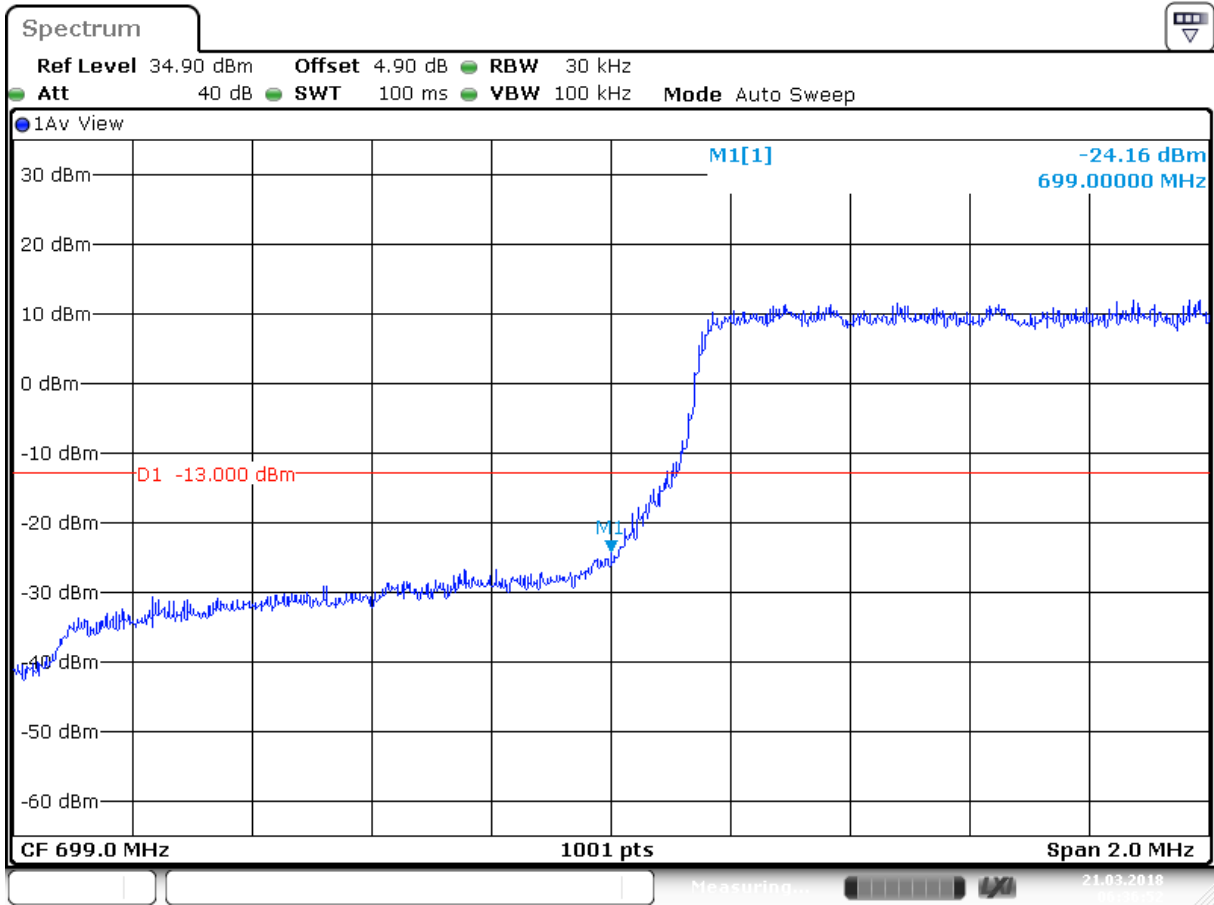
##### 5.1.1.1.1 Test Channel = LCH

##### 5.1.1.1.1.1 Test RB=1RB



Date: 21 MAR 2018 01:31:14

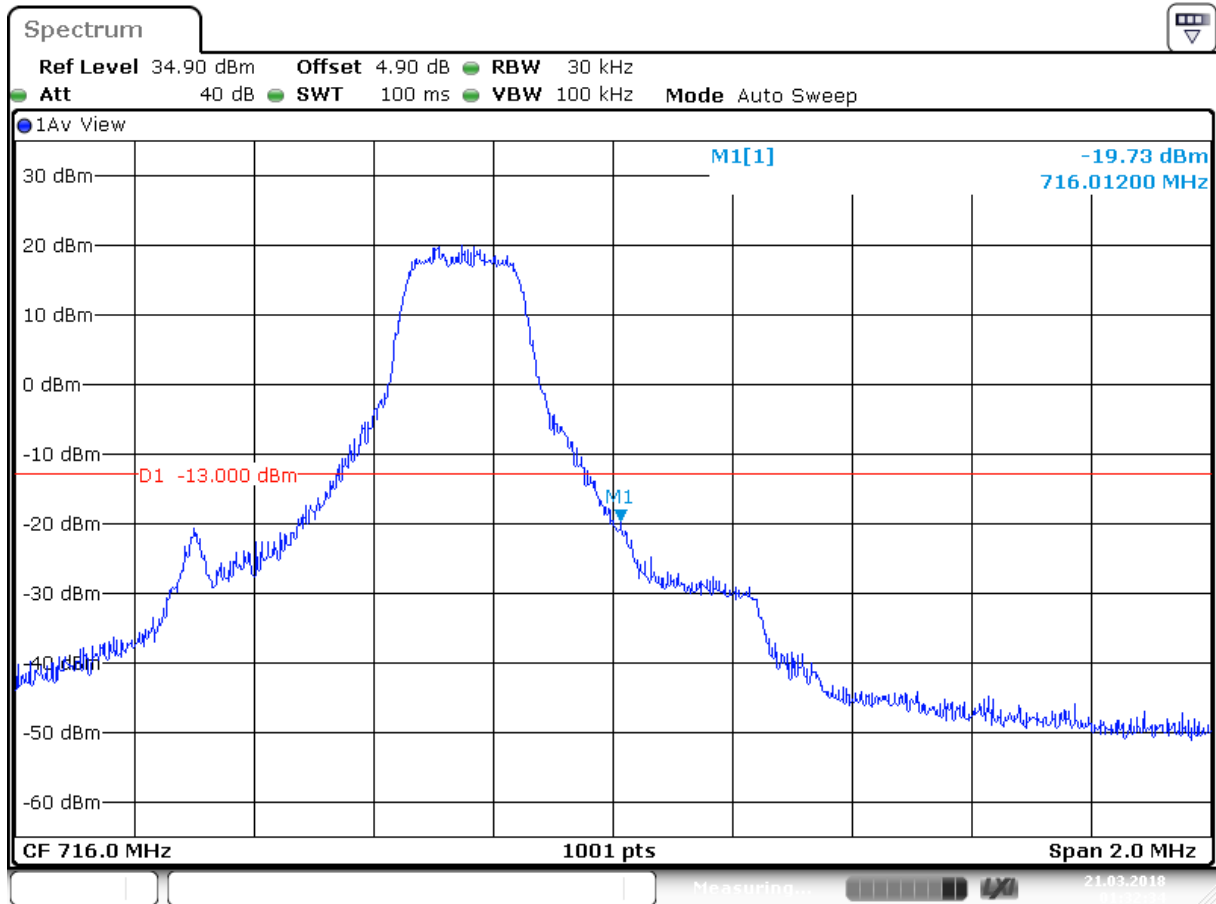
**5.1.1.1.2 Test RB=6RB**



Date: 21 MAR 2018 06:36:52

**5.1.1.1.2 Test Channel = HCH**

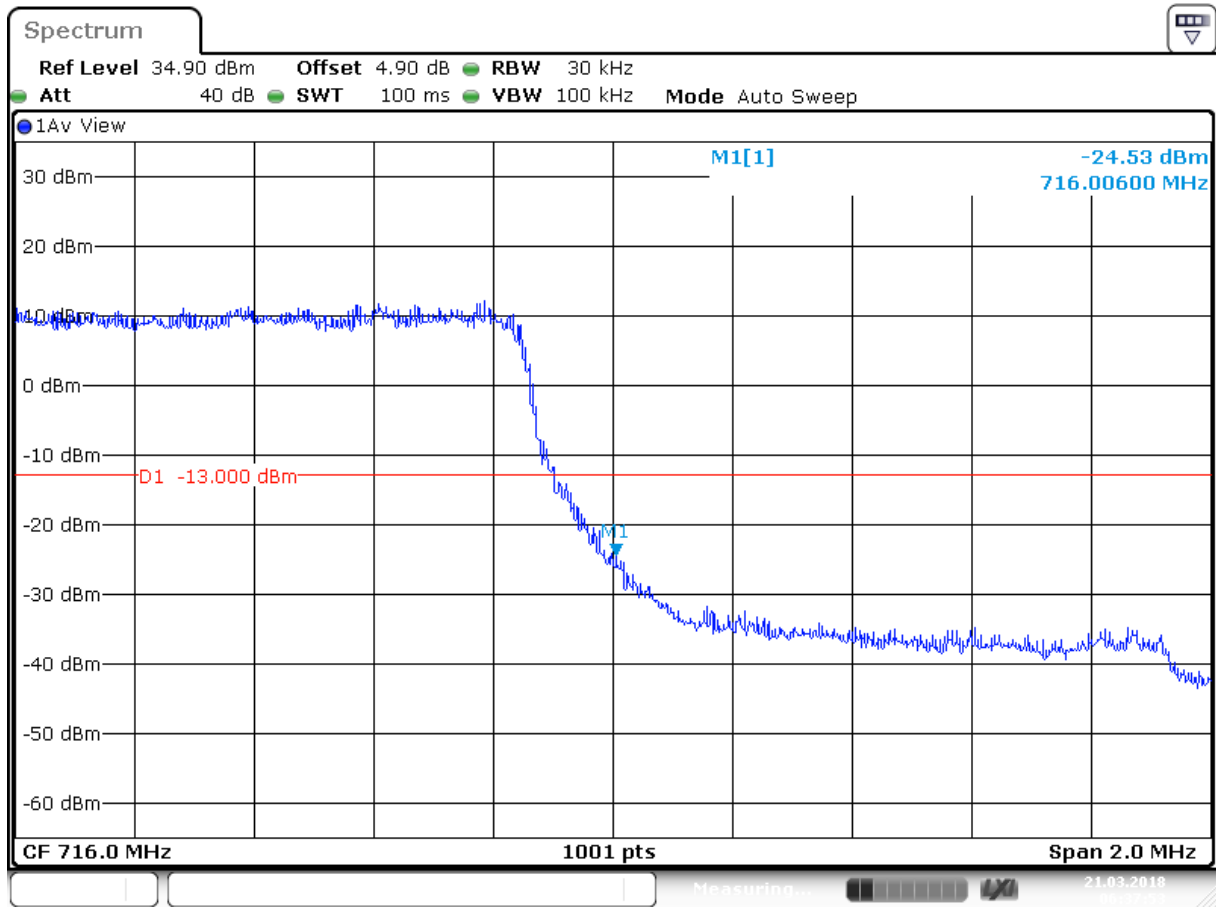
**5.1.1.1.2.1 Test RB=1RB**



Date: 21 MAR 2018 01:32:34



5.1.1.1.2.2 Test RB=6RB

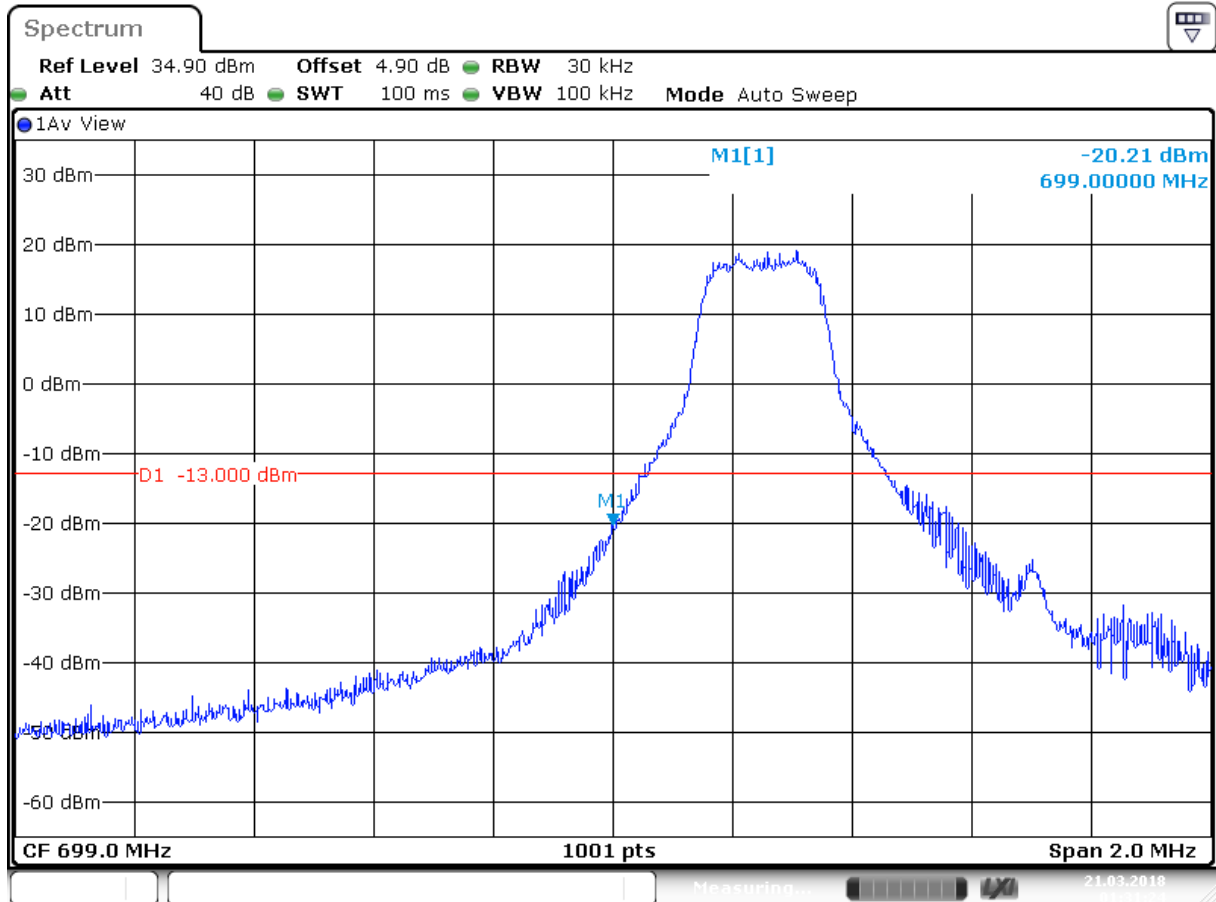


Date: 21 MAR 2018 06:37:54

**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**

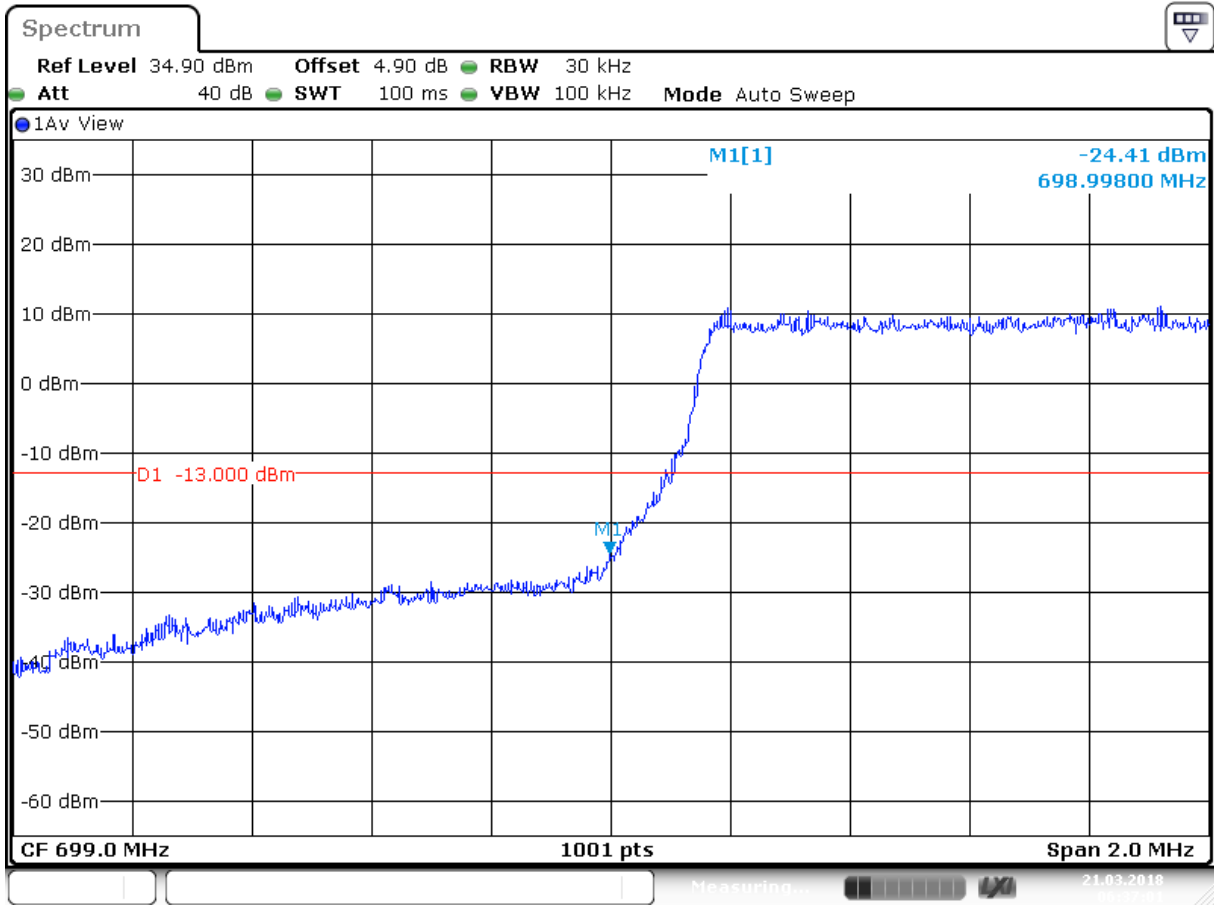


Date: 21 MAR 2018 01:31:24





5.1.1.2.1.2 Test RB=6RB

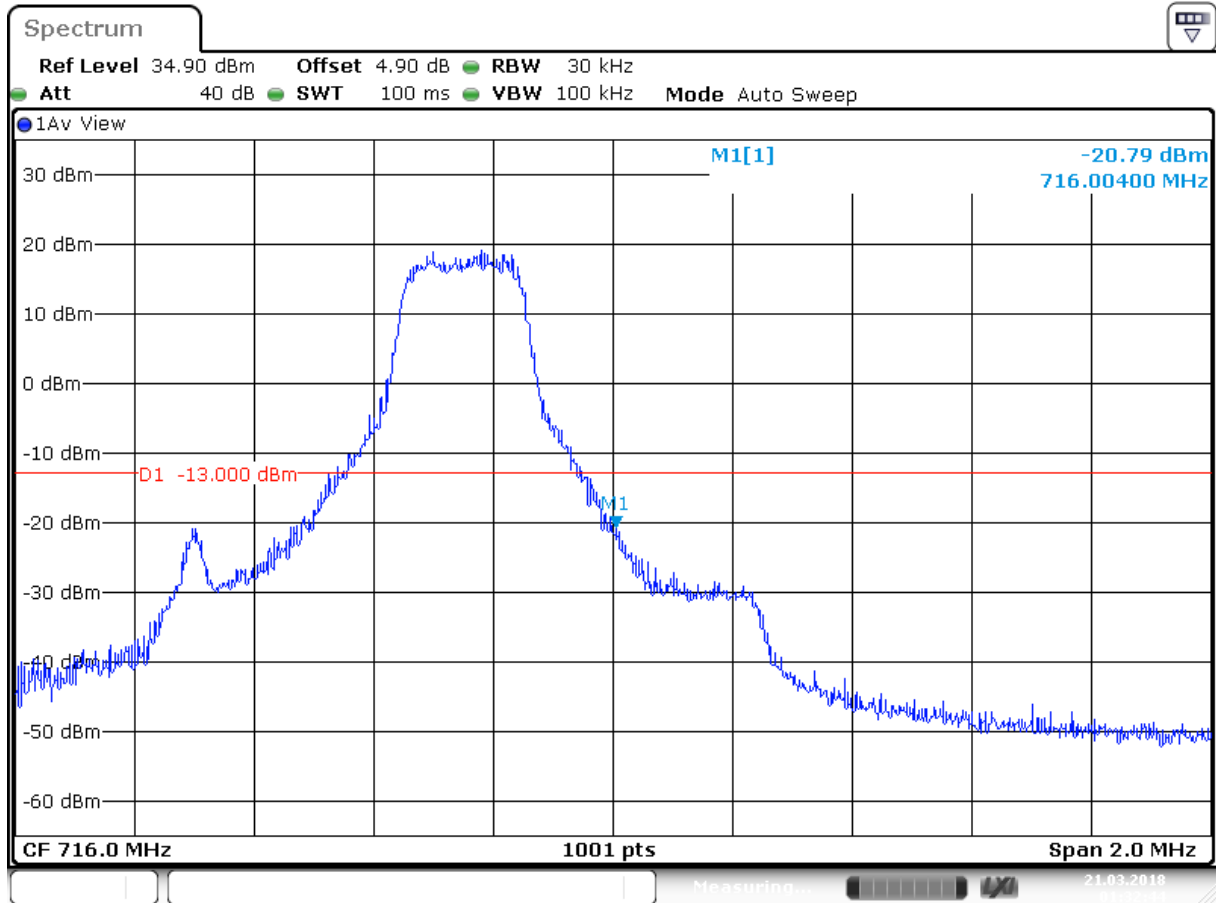


Date: 21 MAR 2018 06:37:02



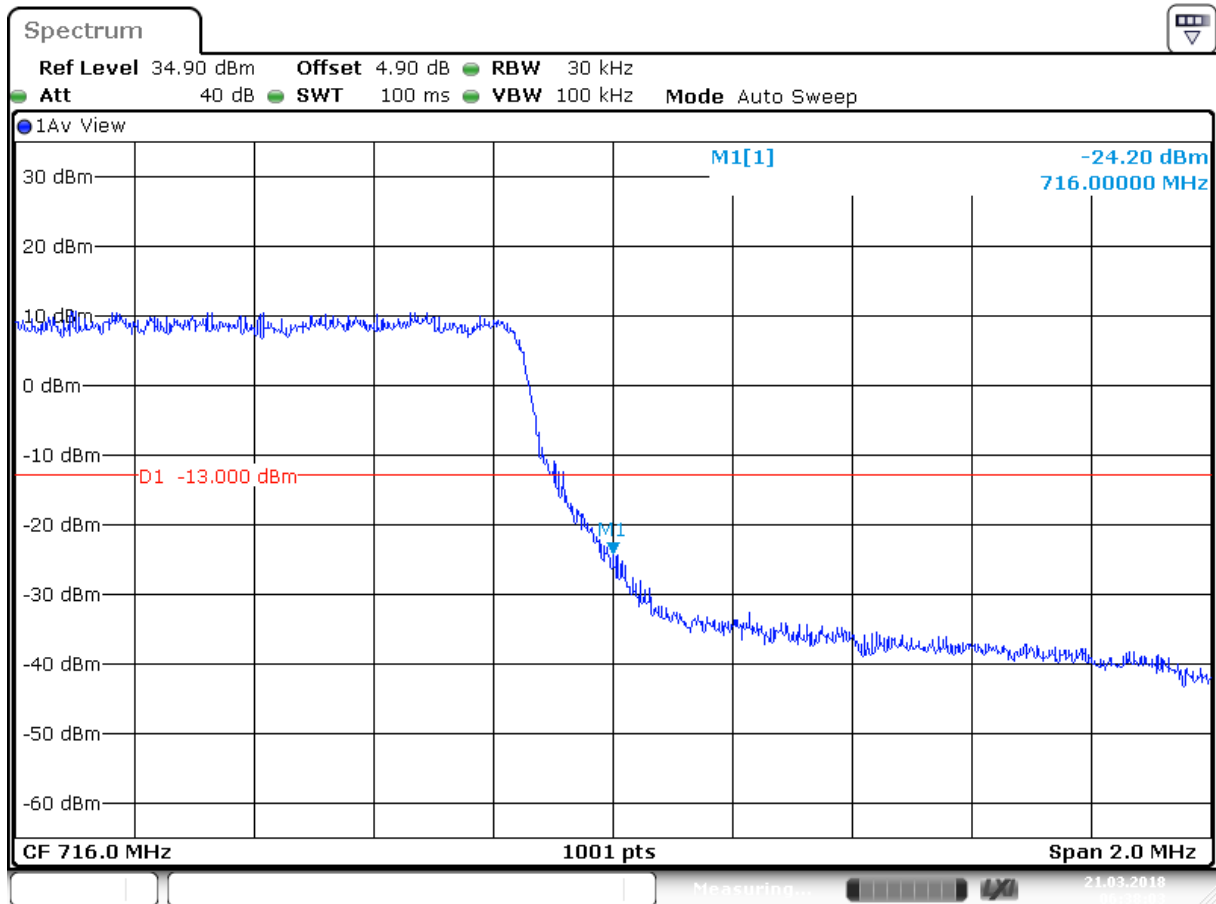
5.1.1.2.2 Test Channel = HCH

5.1.1.2.2.1 Test RB=1RB



Date: 21 MAR 2018 01:32:44

**5.1.1.2.2.2 Test RB=6RB**



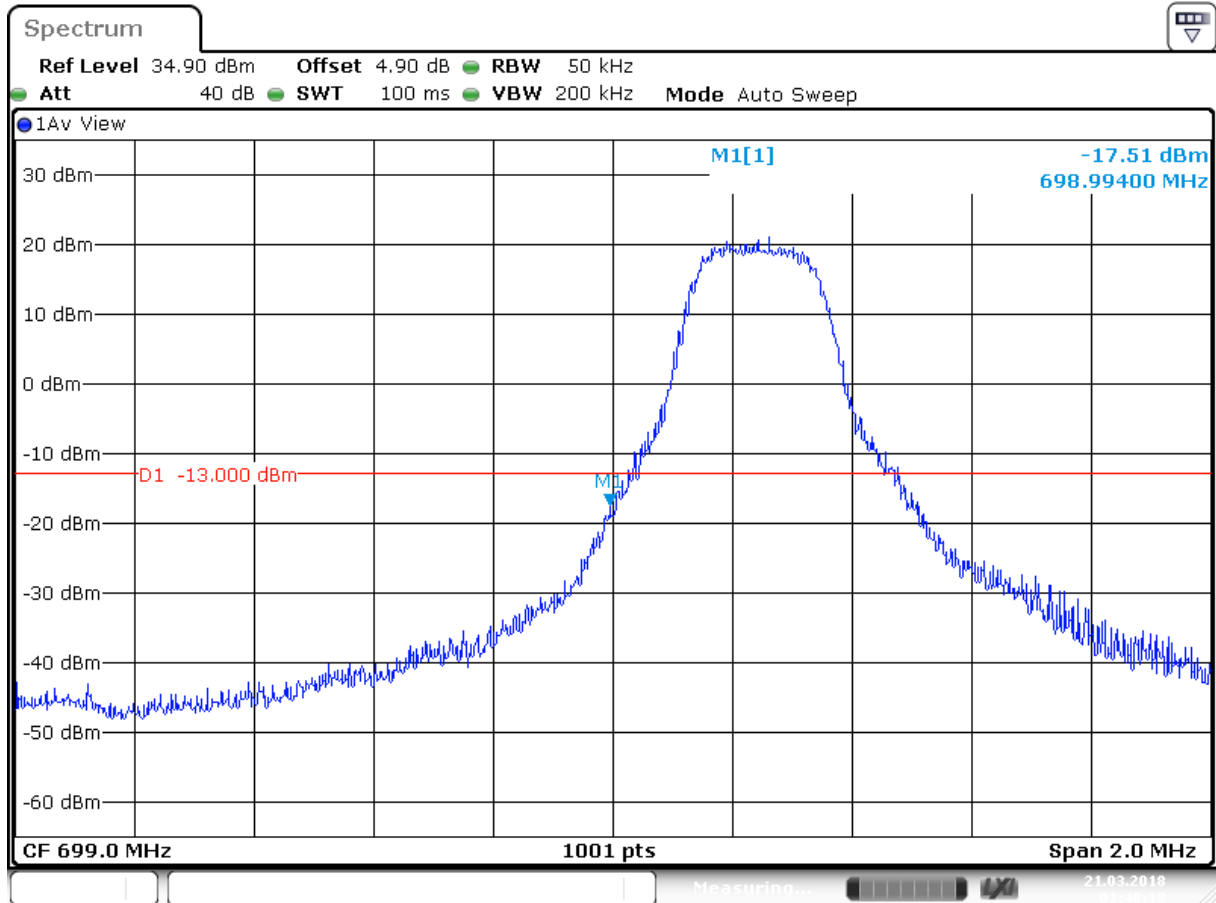
Date: 21 MAR 2018 06:38:03



5.1.1.3 Test Mode = LTE/TM1 3MHz

5.1.1.3.1 Test Channel = LCH

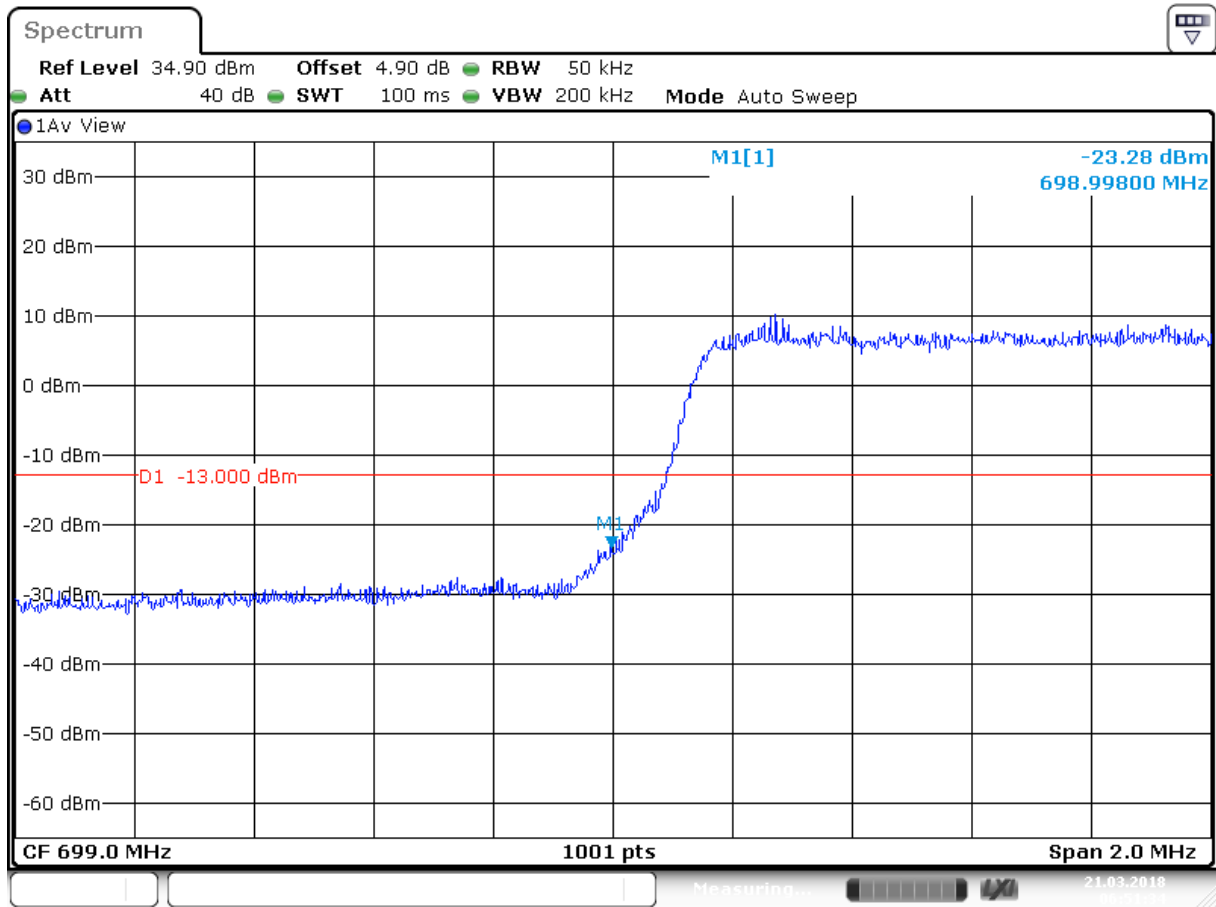
5.1.1.3.1.1 Test RB=1RB



Date: 21 MAR 2018 01:48:18



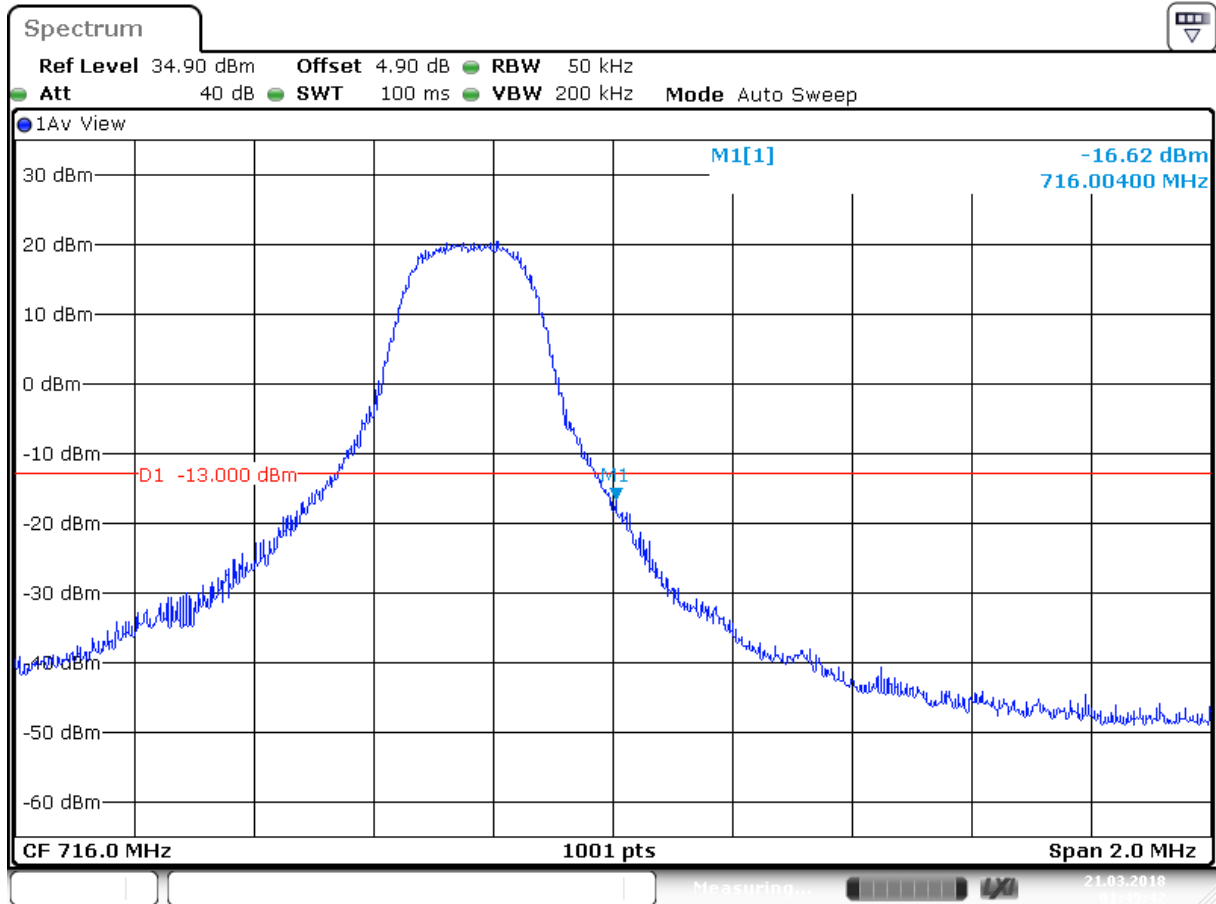
5.1.1.3.1.2 Test RB=15RB



Date: 21 MAR 2018 06:51:35

**5.1.1.3.2 Test Channel = HCH**

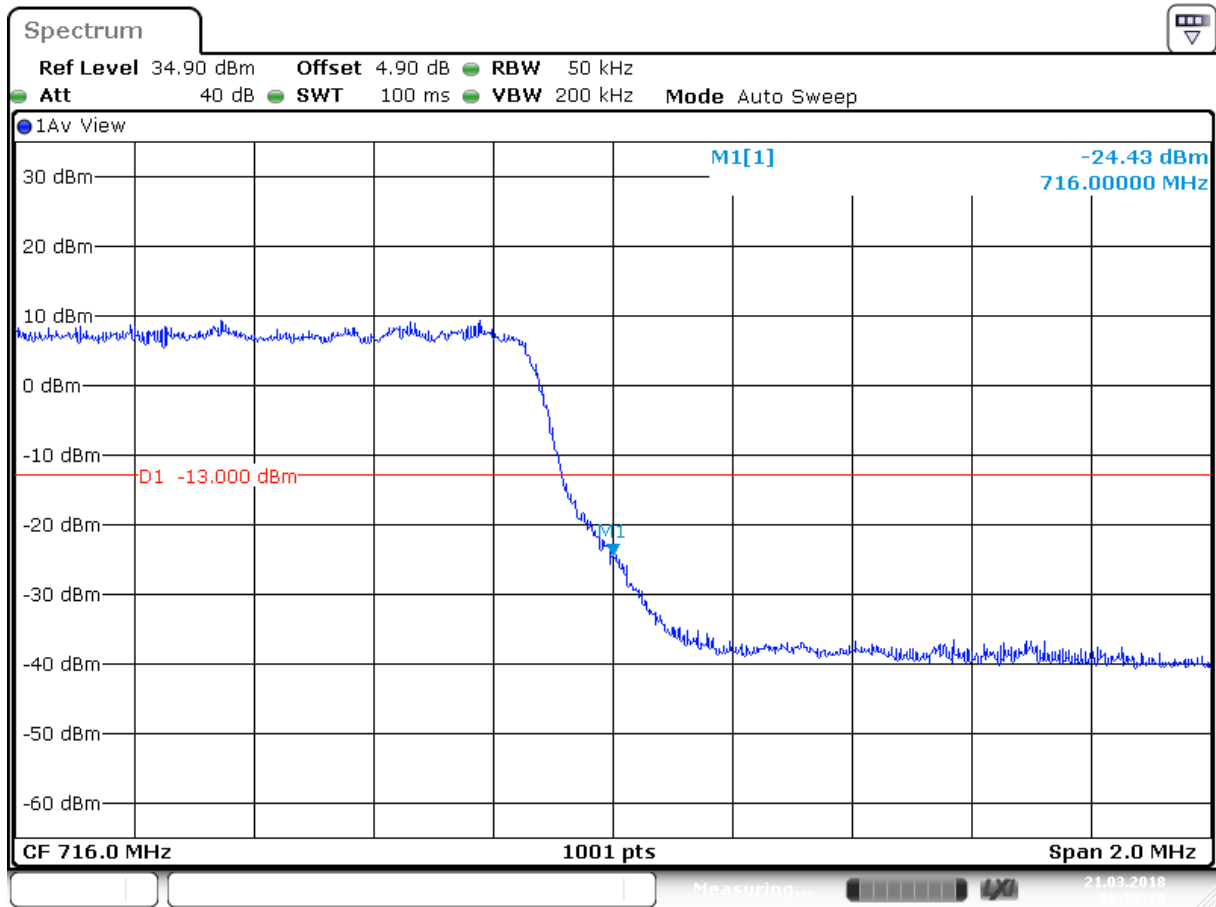
**5.1.1.3.2.1 Test RB=1RB**



Date: 21 MAR 2018 01:49:42



5.1.1.3.2.2 Test RB=15RB



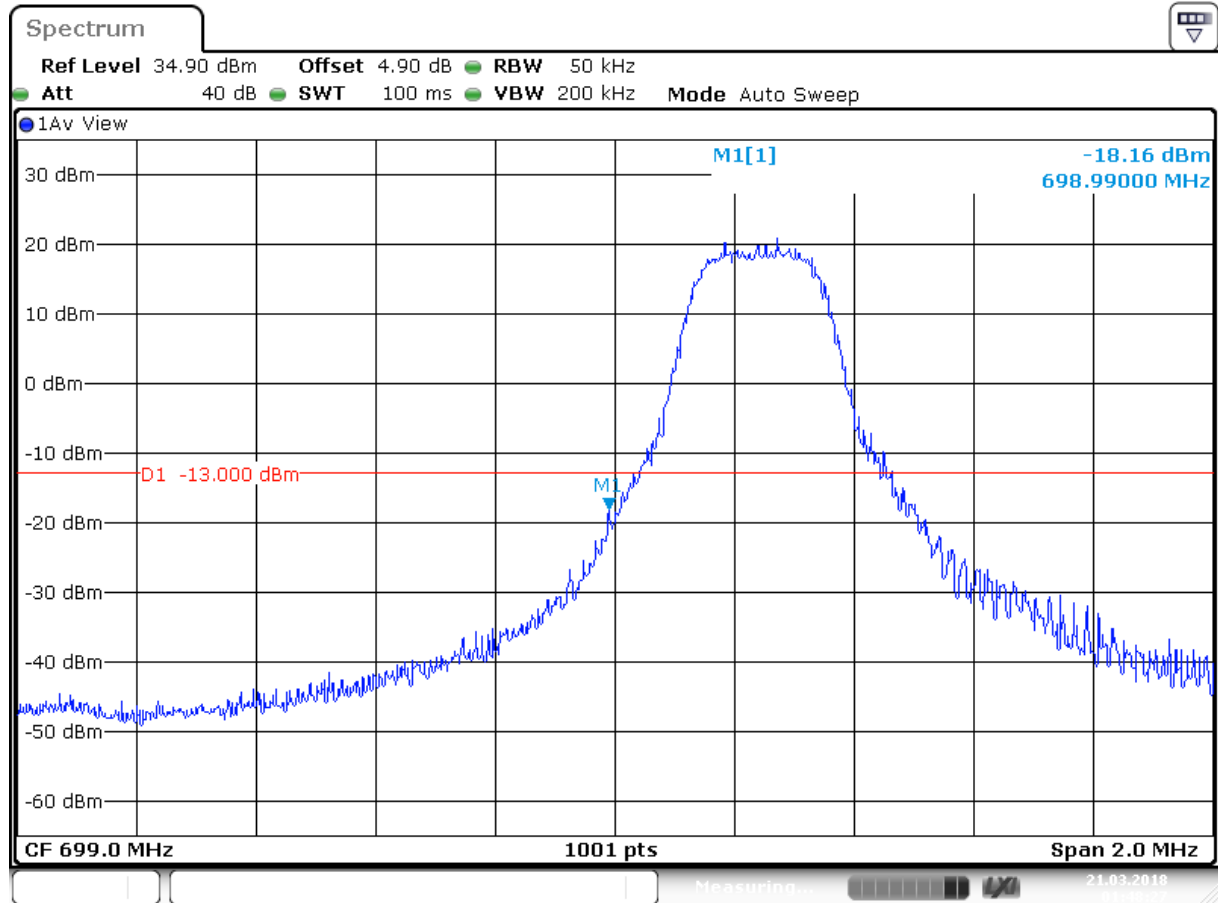
Date: 21 MAR 2018 06:52:38



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

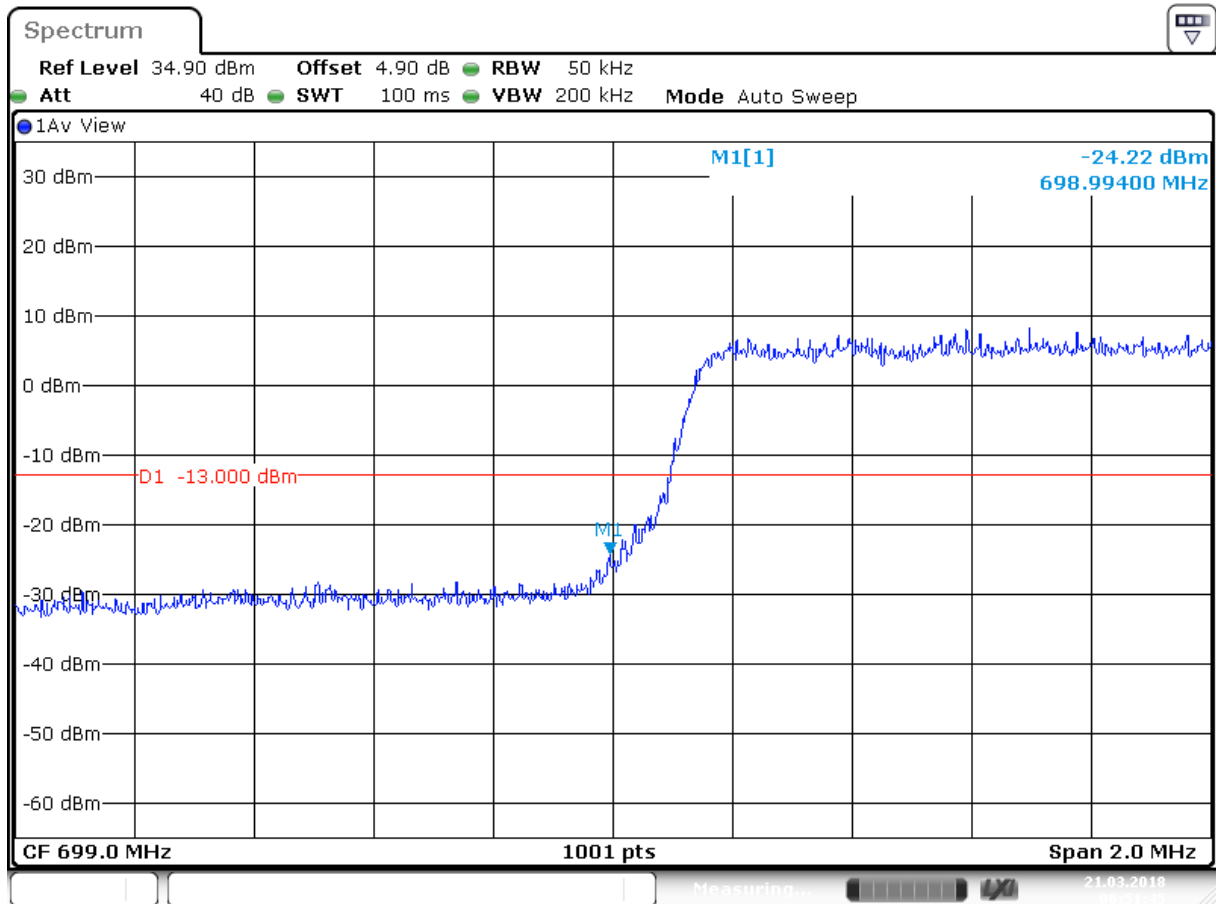


Date: 21 MAR. 2018 01:48:27





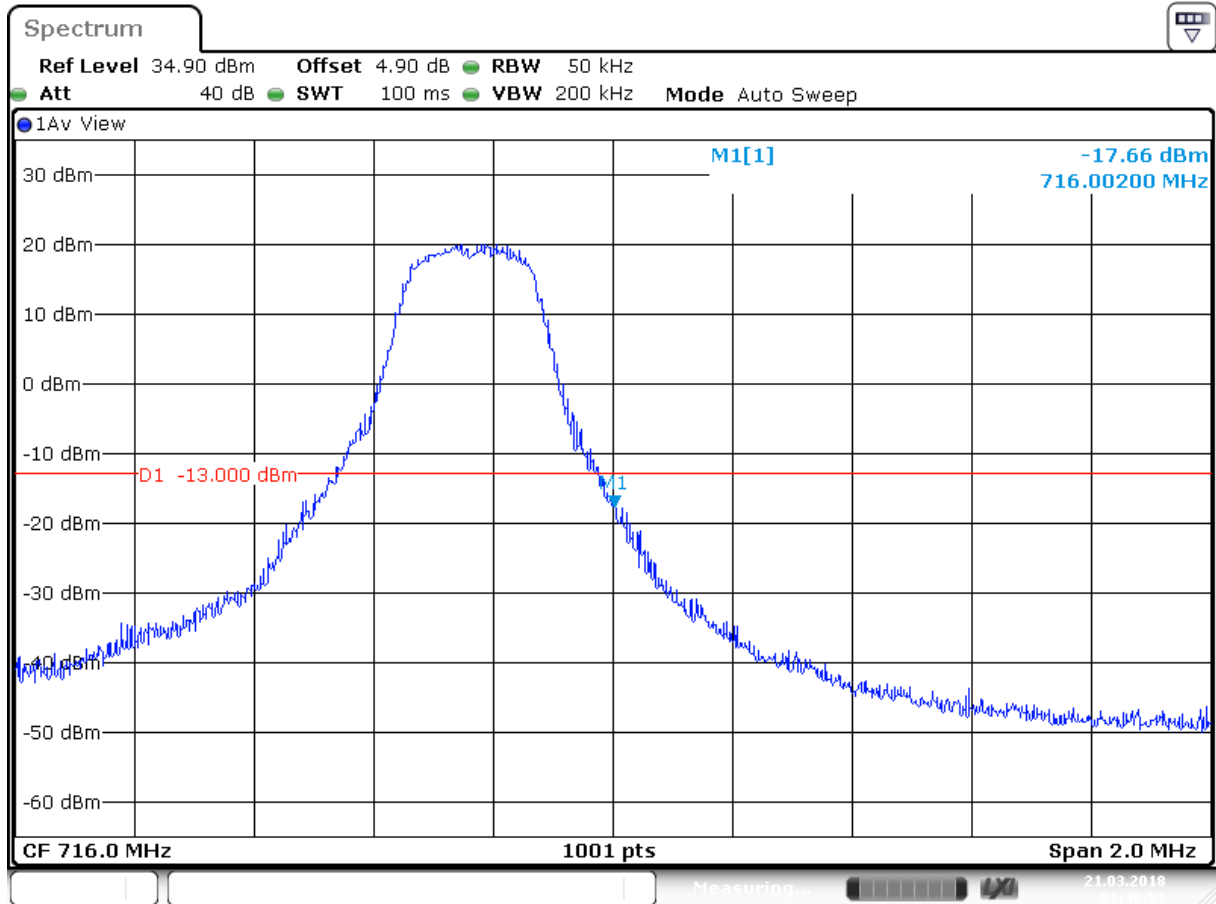
5.1.1.4.1.2 Test RB=15RB



Date: 21 MAR 2018 06:51:45

**5.1.1.4.2 Test Channel = HCH**

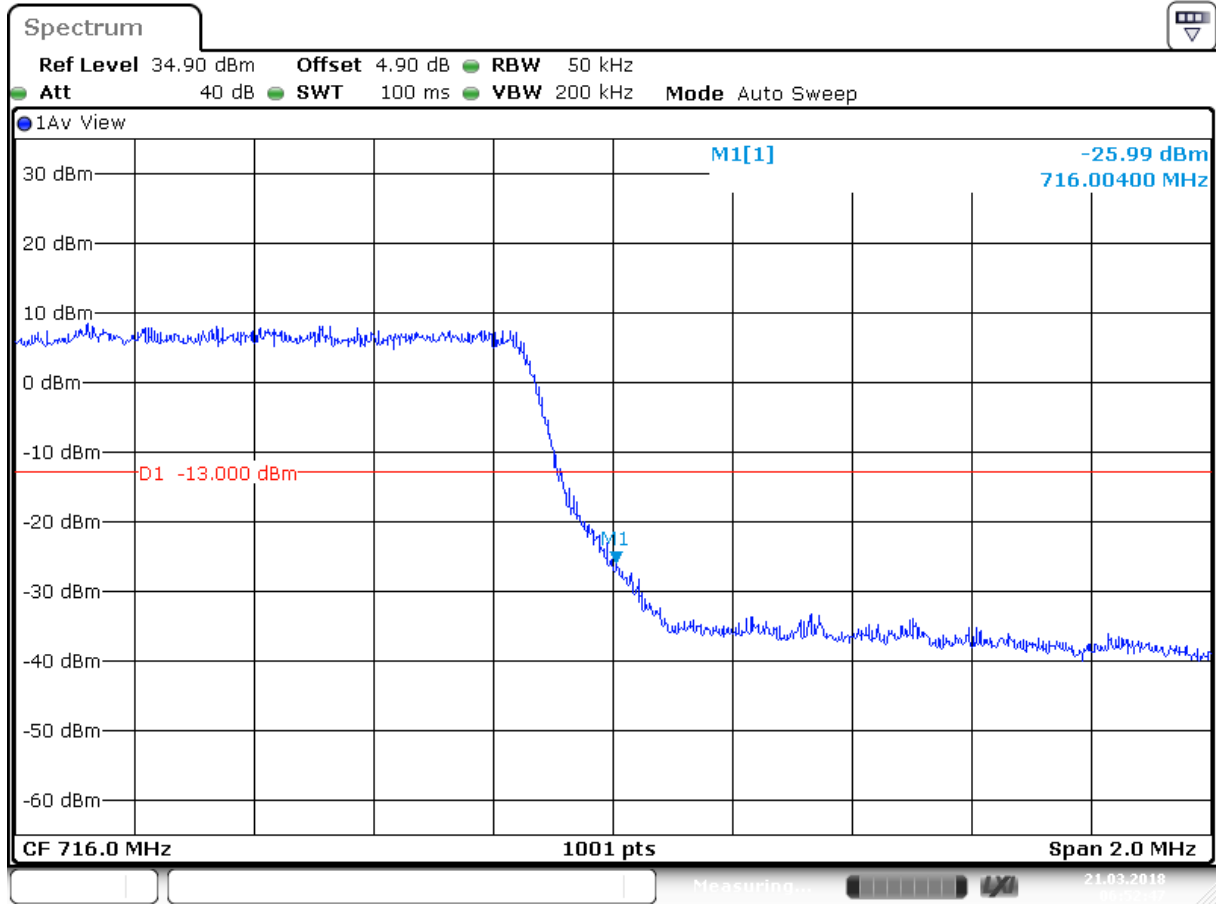
**5.1.1.4.2.1 Test RB=1RB**



Date: 21 MAR 2018 01:49:51



5.1.1.4.3 Test RB=15RB



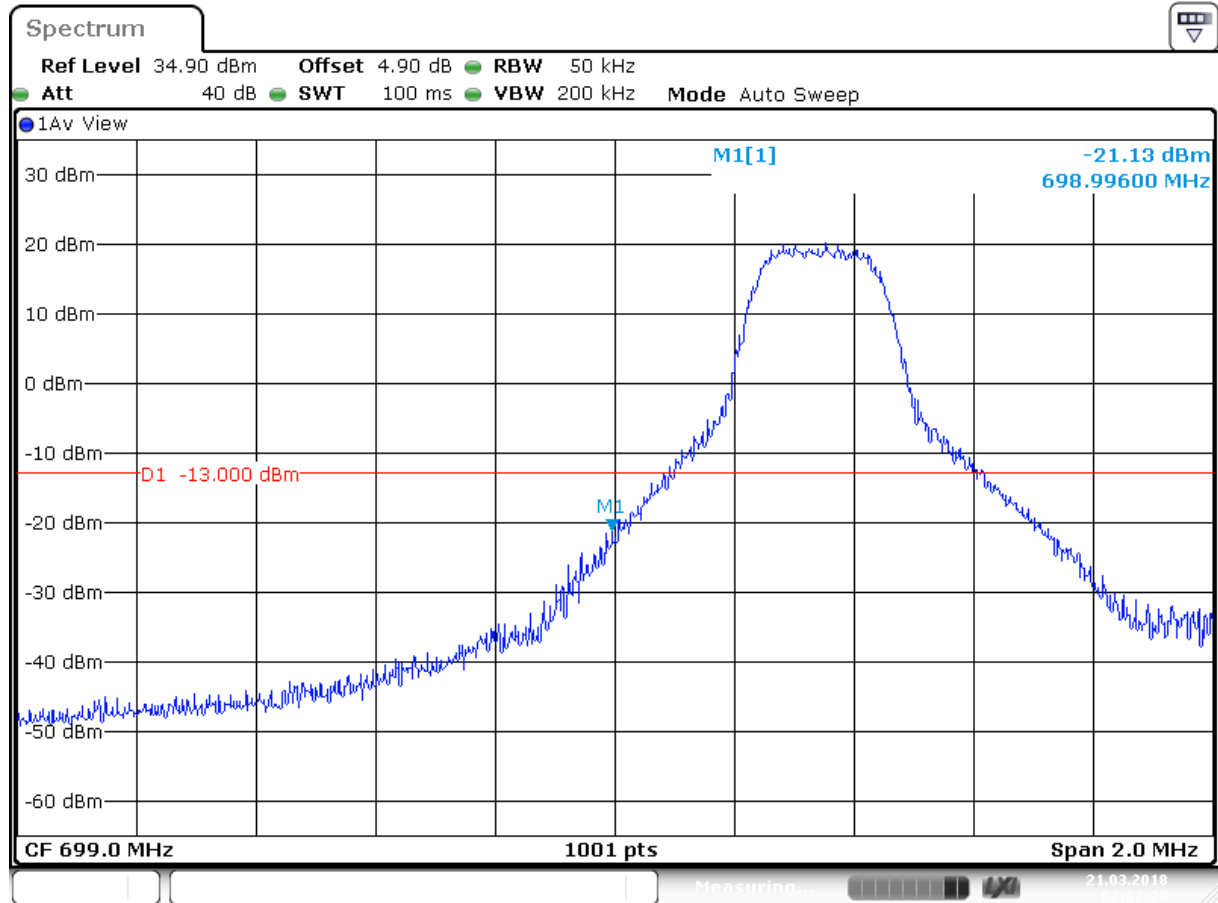
Date: 21 MAR 2018 06:52:47



5.1.1.5 Test Mode = LTE/TM1 5MHz

5.1.1.5.1 Test Channel = LCH

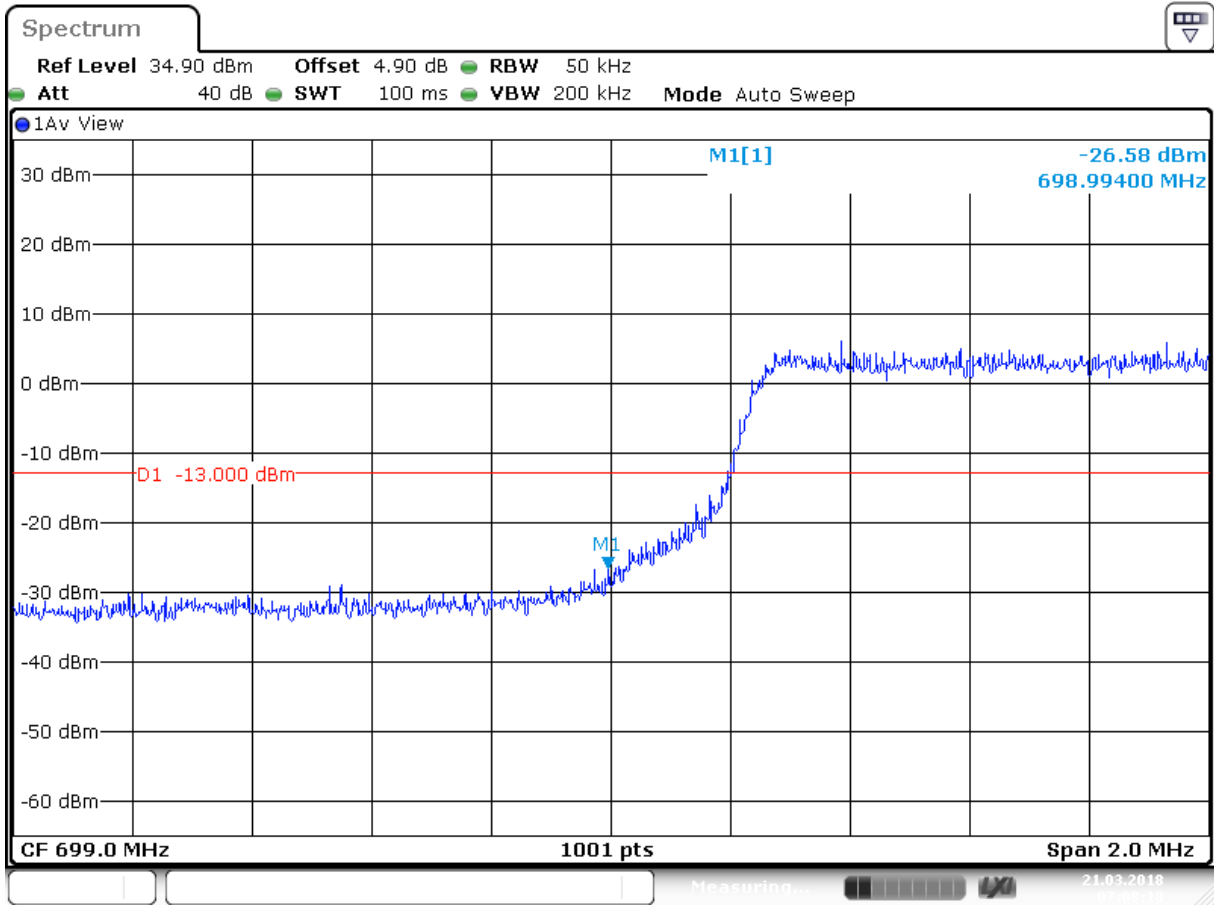
5.1.1.5.1.1 Test RB=1RB



Date: 21 MAR. 2018 02:07:20



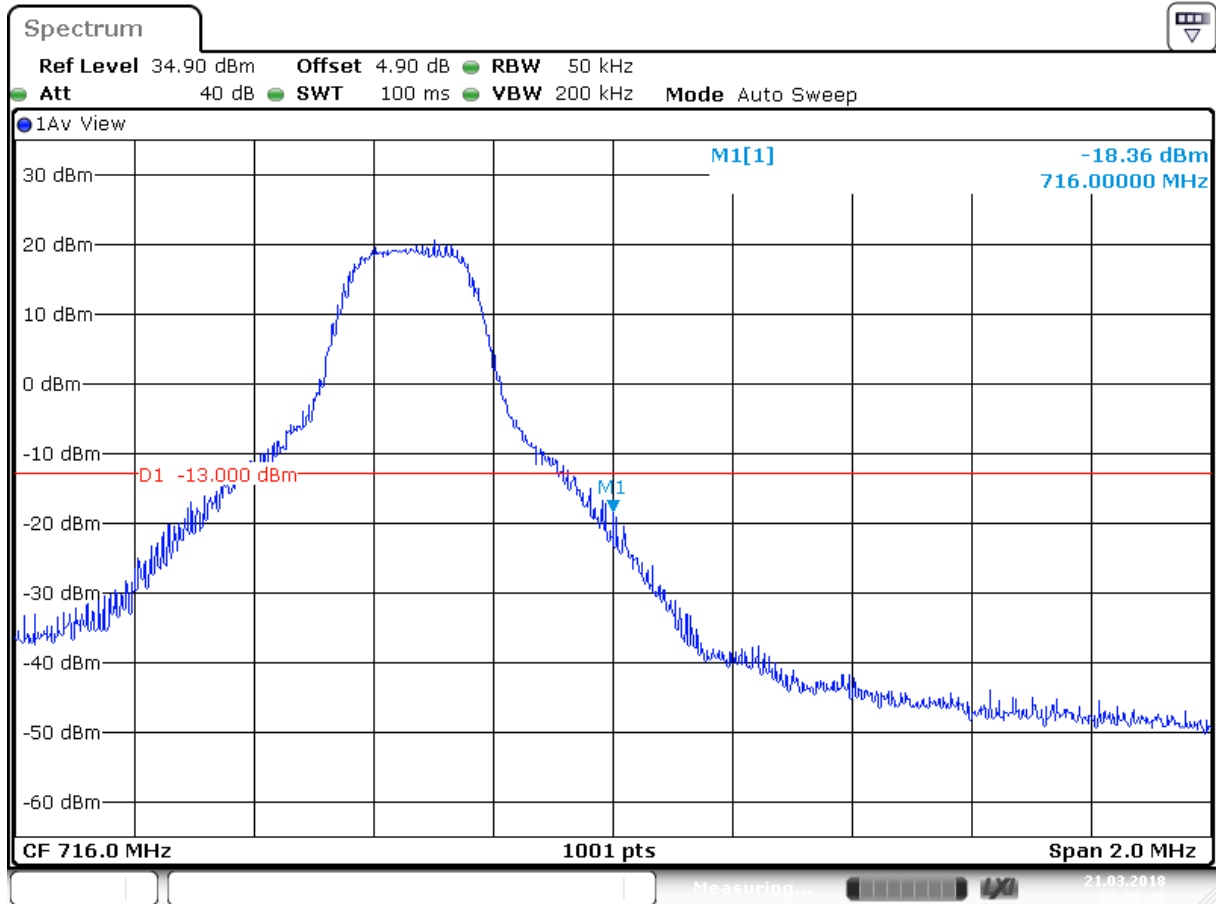
5.1.1.5.1.2 Test RB=25RB



Date: 21 MAR 2018 07:08:19

**5.1.1.5.2 Test Channel = HCH**

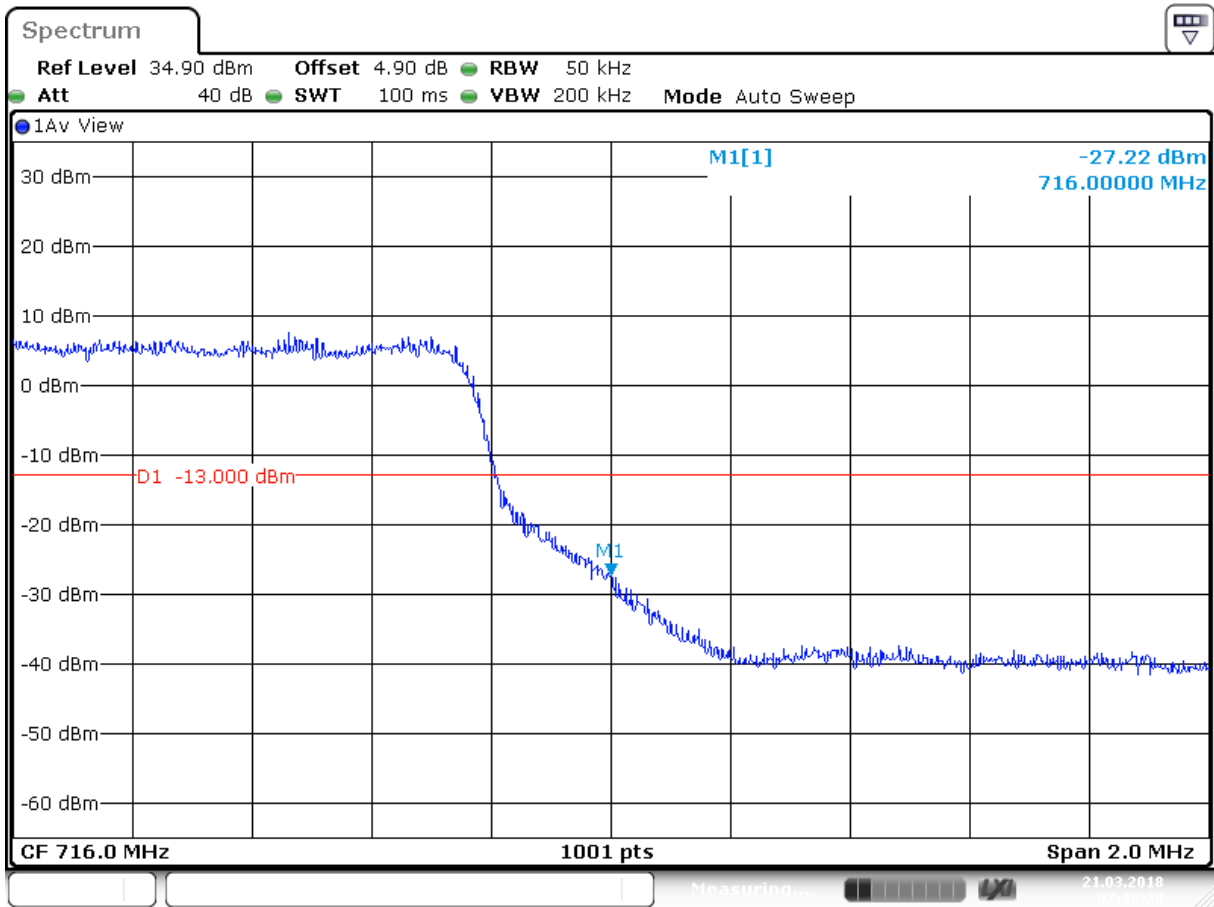
**5.1.1.5.2.1 Test RB=1RB**



Date: 21 MAR 2018 02:08:42



5.1.1.5.2.2 Test RB=25RB



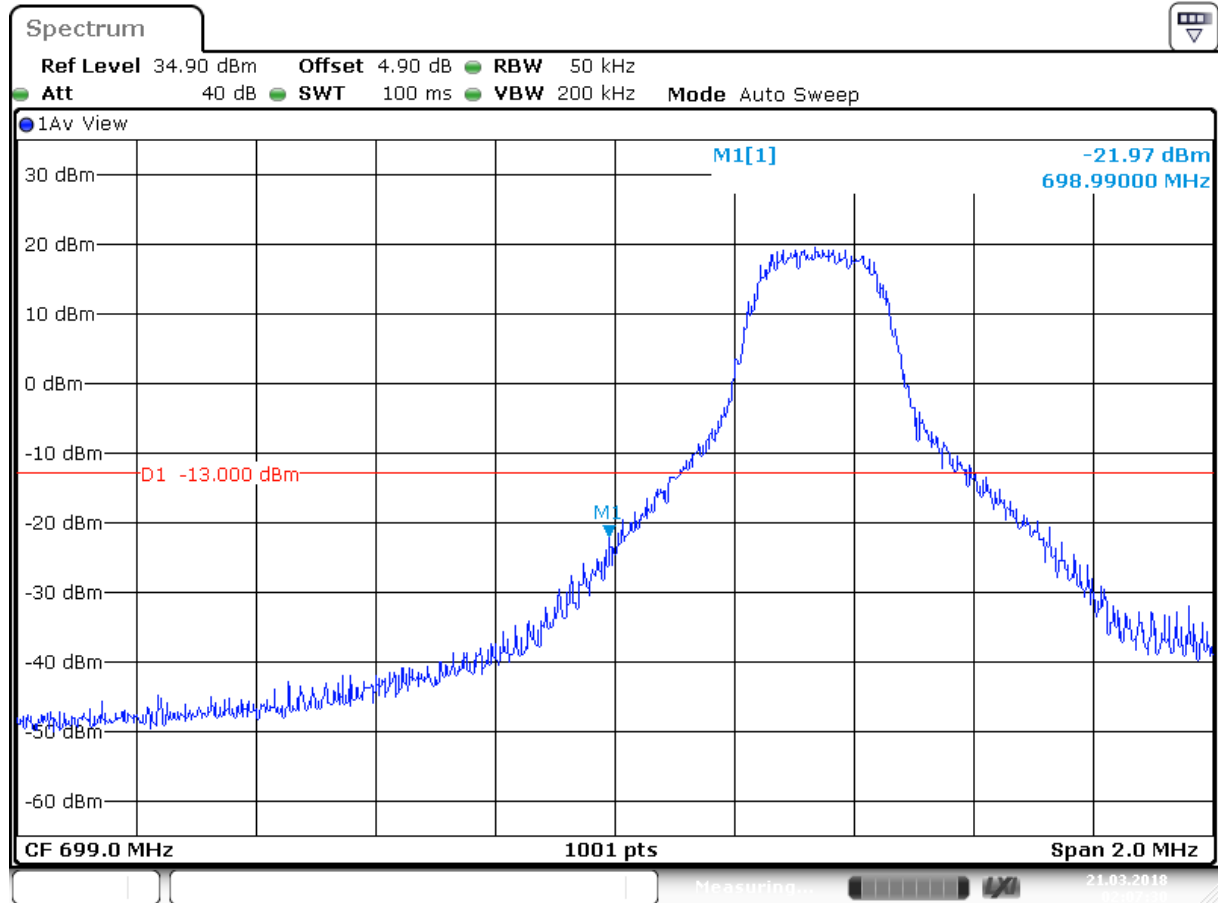
Date: 21 MAR 2018 07:09:21



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

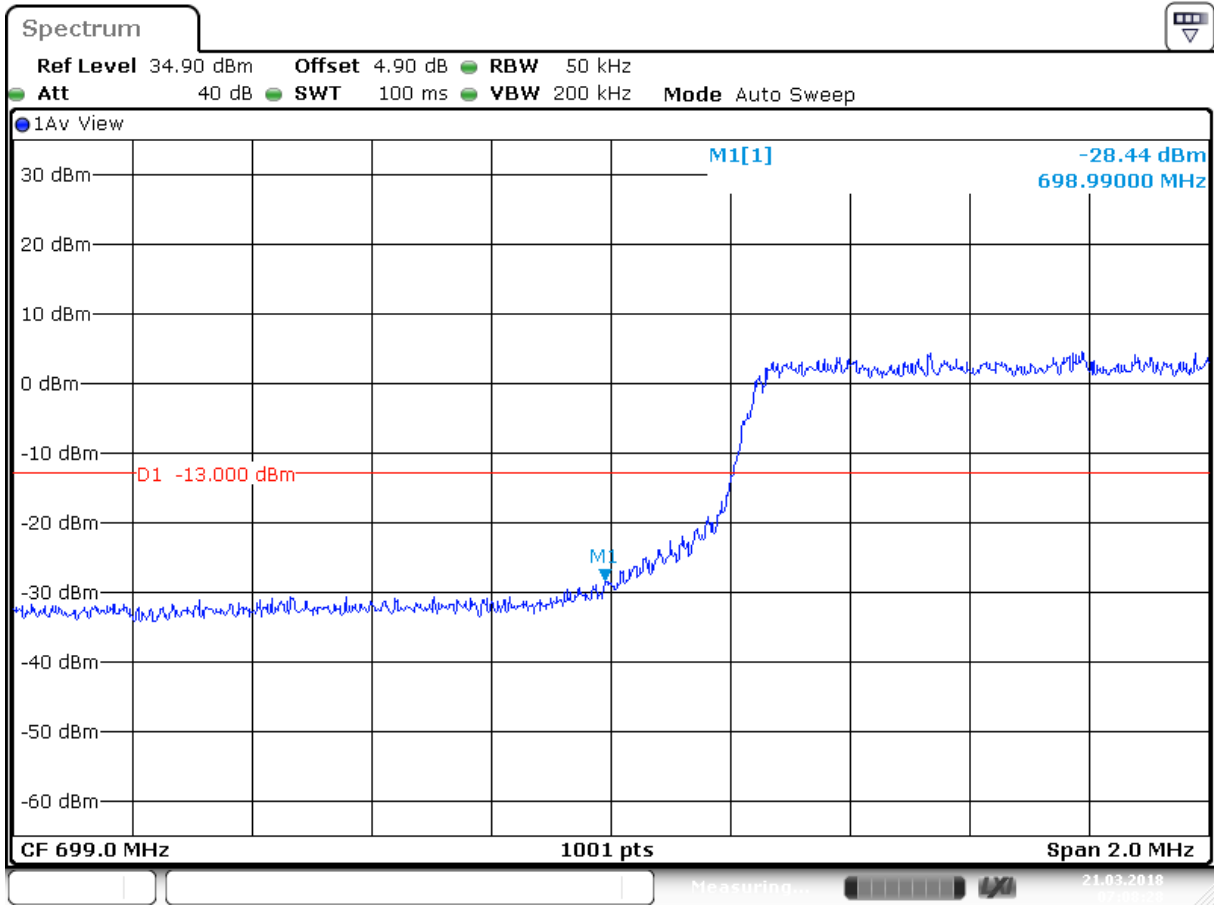


Date: 21 MAR. 2018 02:07:30





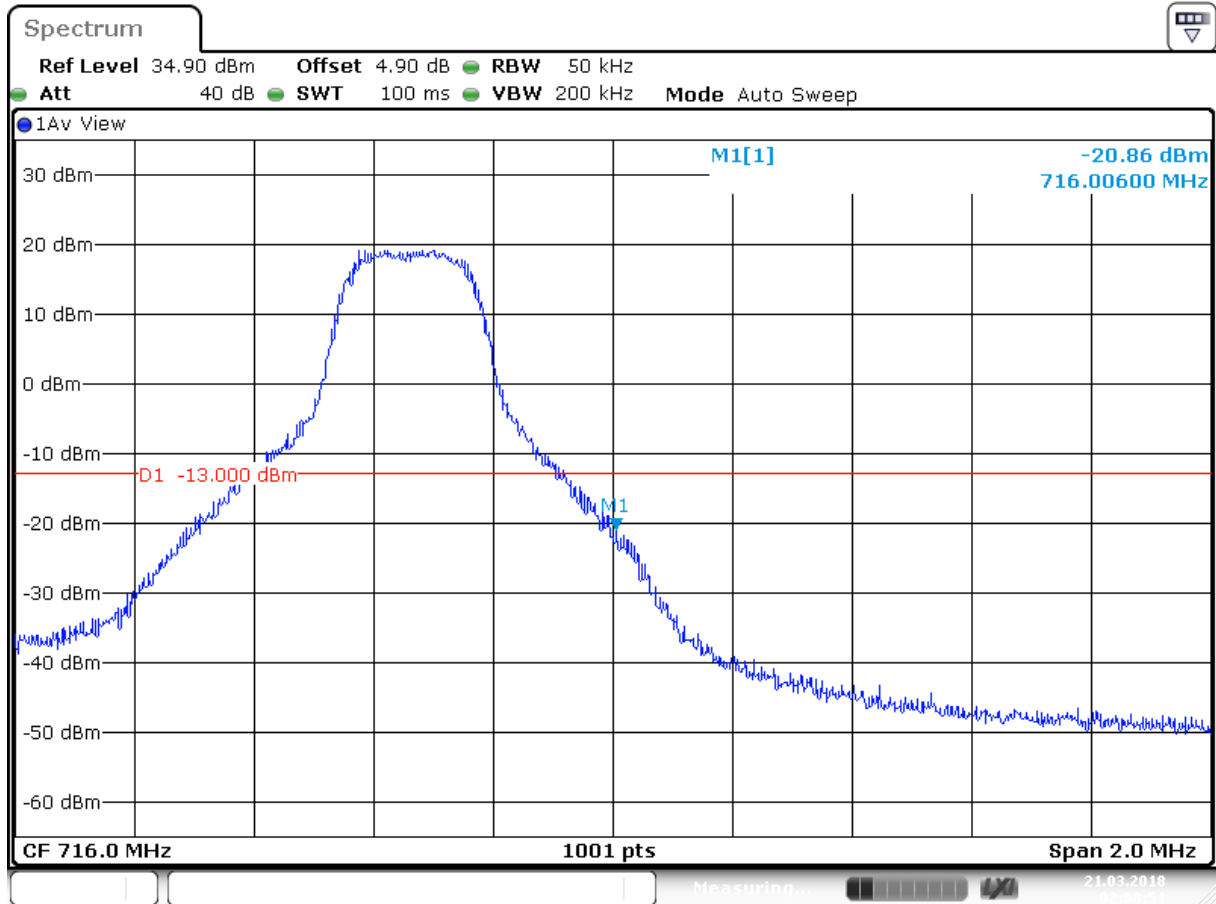
5.1.1.6.1.2 Test RB=25RB



Date: 21 MAR 2018 07:08:29

**5.1.1.6.2 Test Channel = HCH**

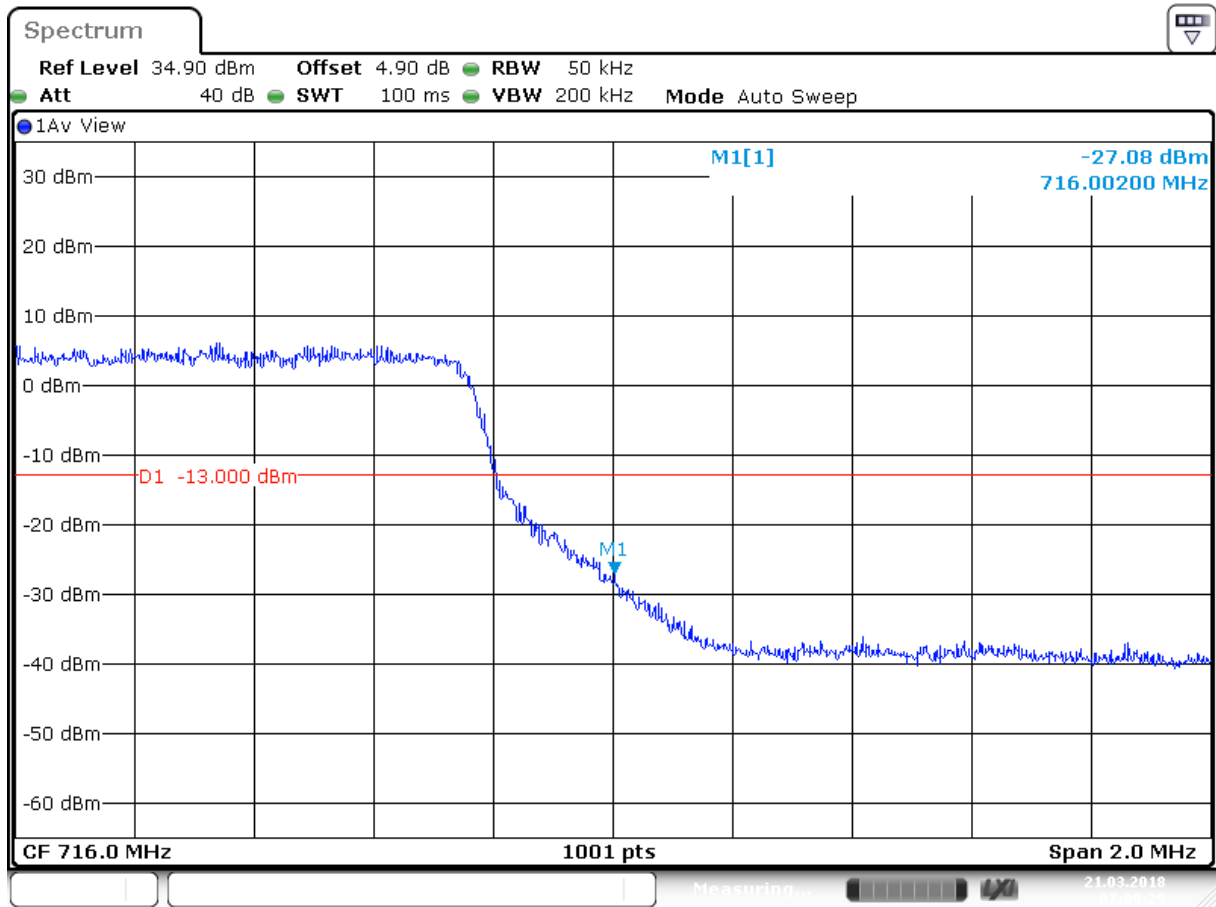
**5.1.1.6.2.1 Test RB=1RB**



Date: 21 MAR 2018 02:08:51



5.1.1.6.2.2 Test RB=25RB



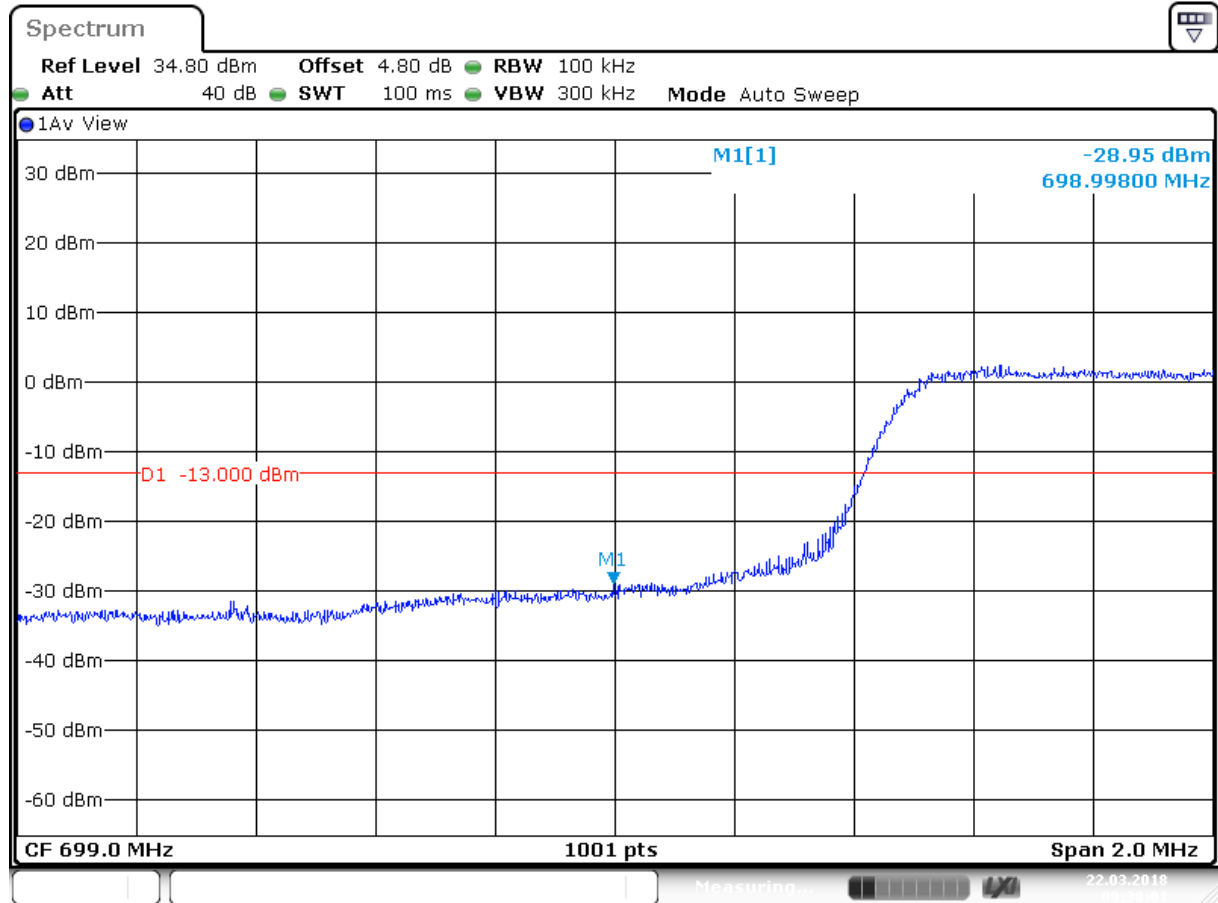
Date: 21 MAR 2018 07:09:30



5.1.1.7 Test Mode = LTE/TM1 10MHz

5.1.1.7.1 Test Channel = LCH

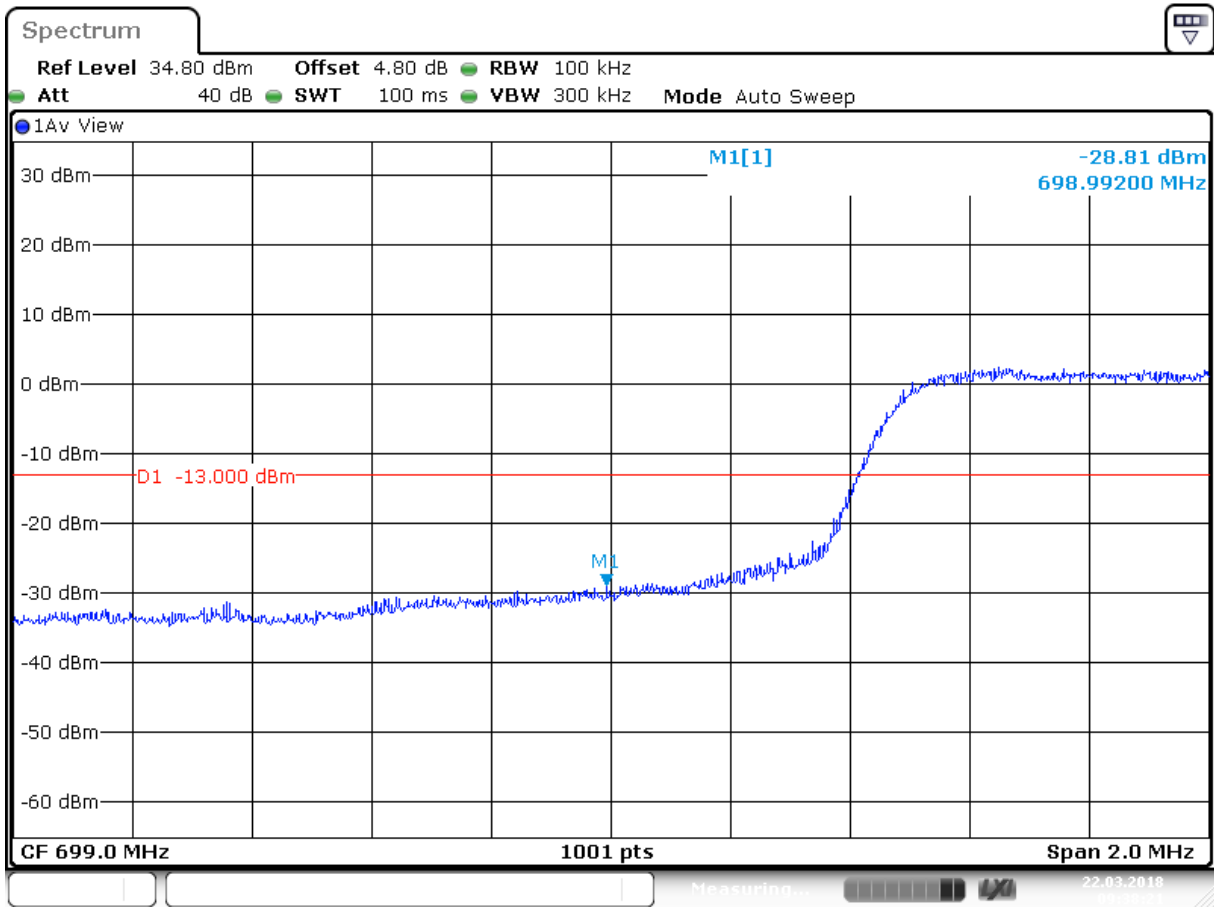
5.1.1.7.1.1 Test RB=1RB



Date: 22 MAR. 2018 09:38:02



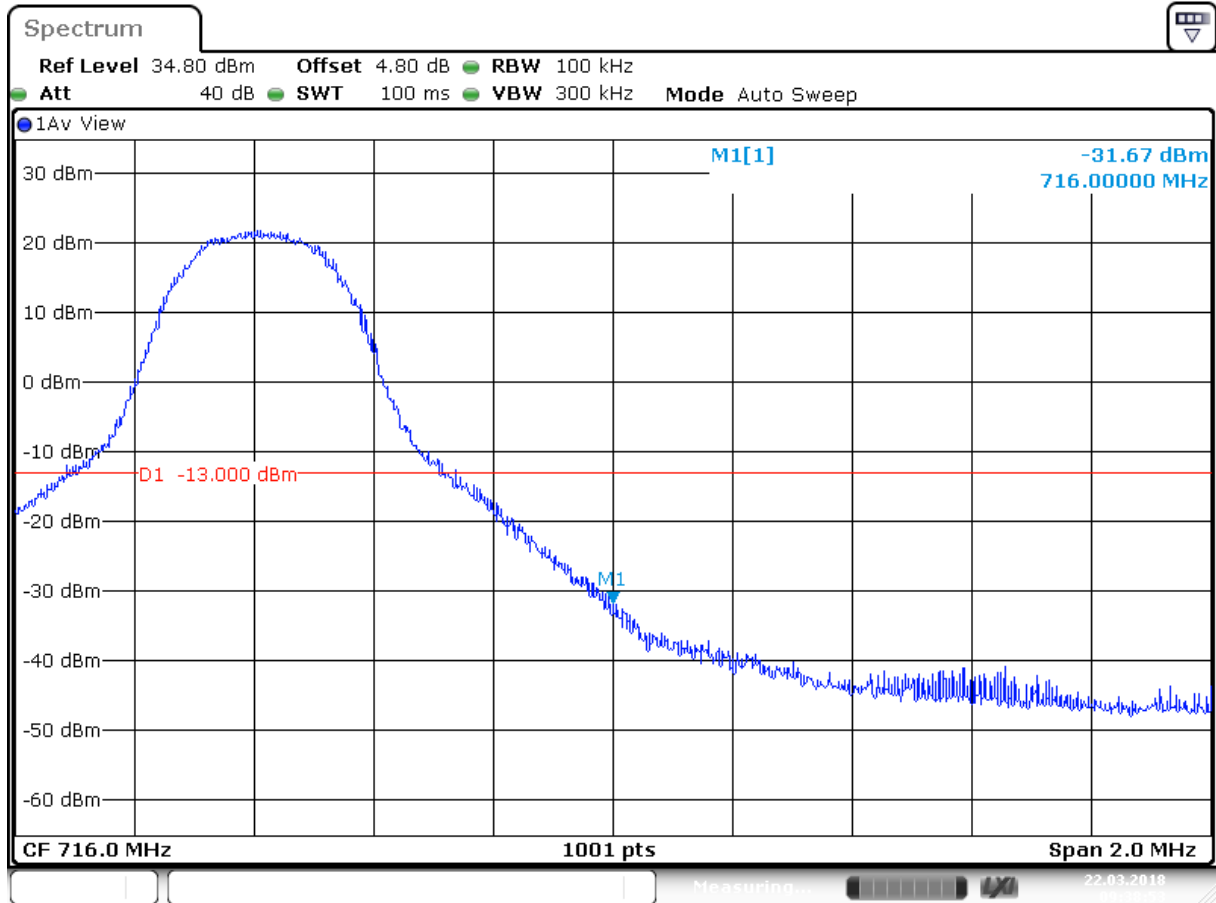
5.1.1.7.1.2 Test RB=50RB



Date: 22 MAR 2018 09:38:21

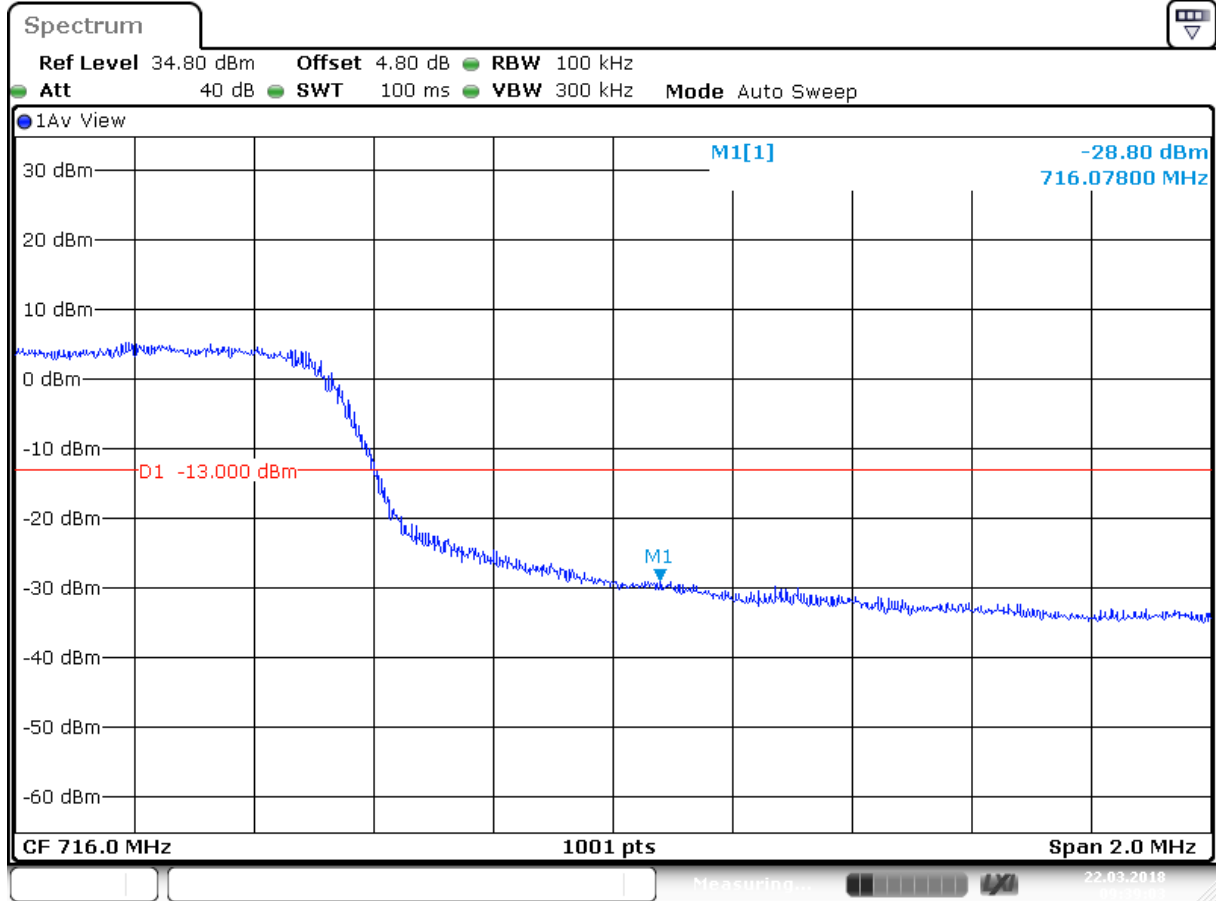
**5.1.1.7.2 Test Channel = HCH**

**5.1.1.7.2.1 Test RB=1RB**



Date: 22 MAR 2018 09:38:54

**5.1.1.7.2.2 Test RB=50RB**



Date: 22 MAR 2018 09:39:04

## 6 Spurious Emission at Antenna Terminal

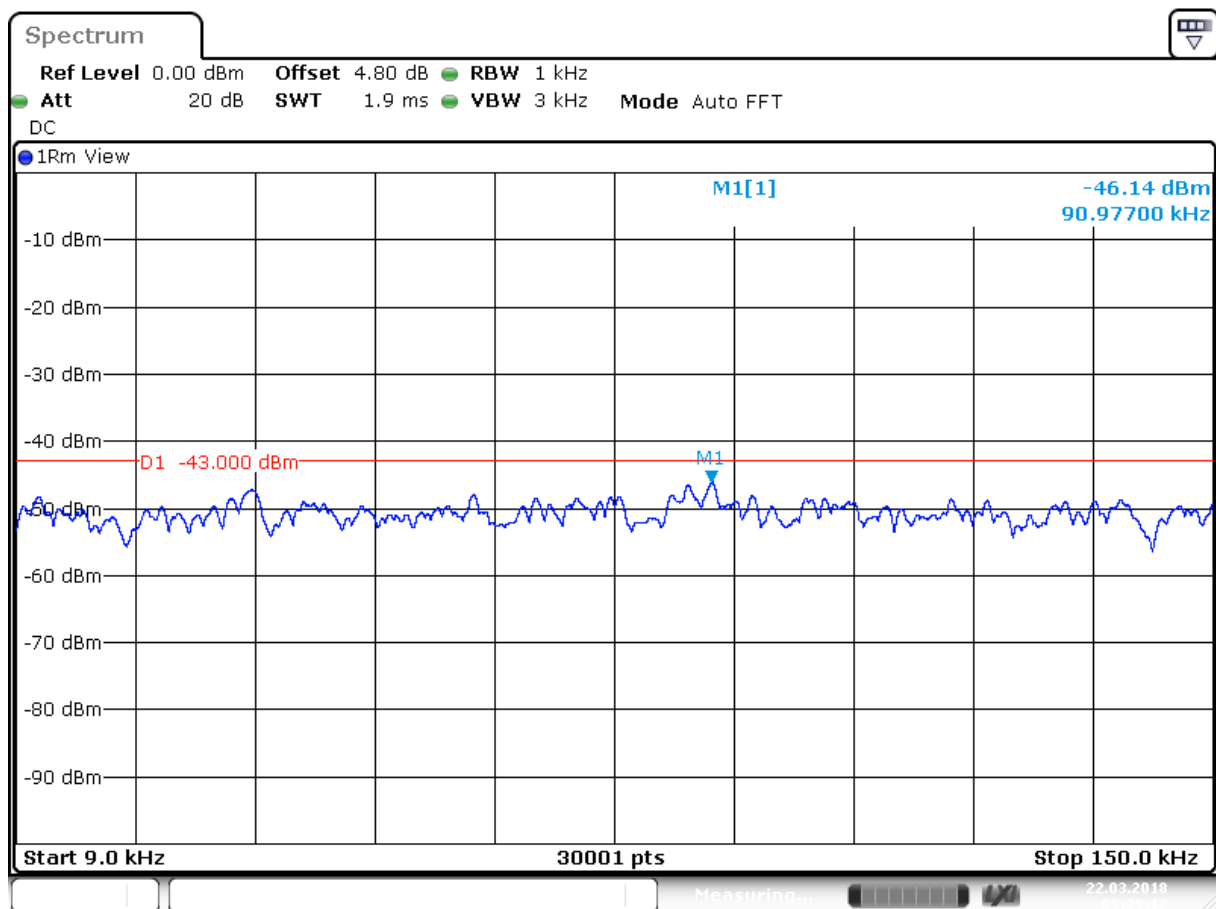
NOTE: For the averaged unwanted emissions measurements, the measurement points in each sweep is greater than twice the Span/RBW in order to ensure bin-to-bin spacing of  $< RBW/2$  so that narrowband signals are not lost between frequency bins. As to the present test item, the "Measurement Points = 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

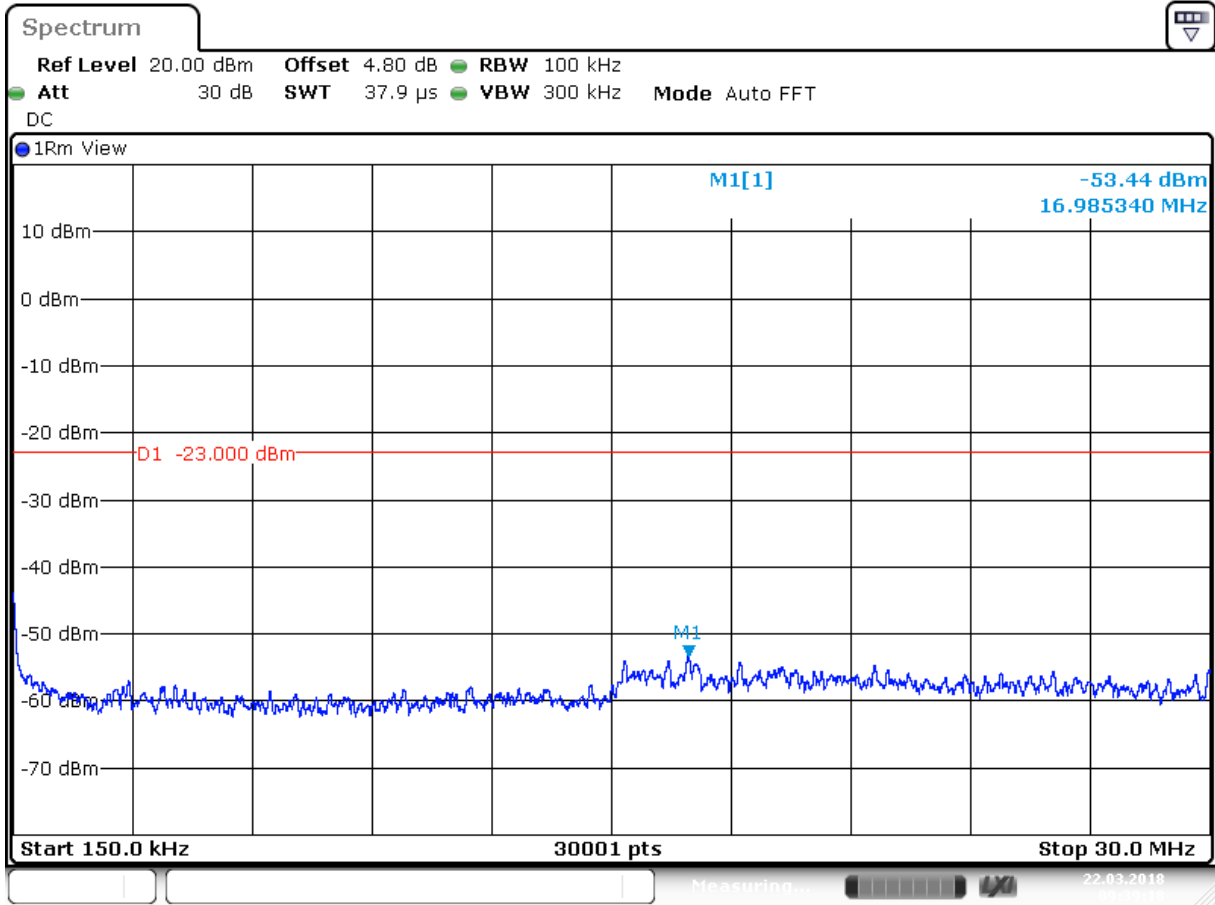
#### 6.1.1.1 Test Mode = LTE / TM1 10MHz RB1#0

##### 6.1.1.1.1 Test Channel = LCH

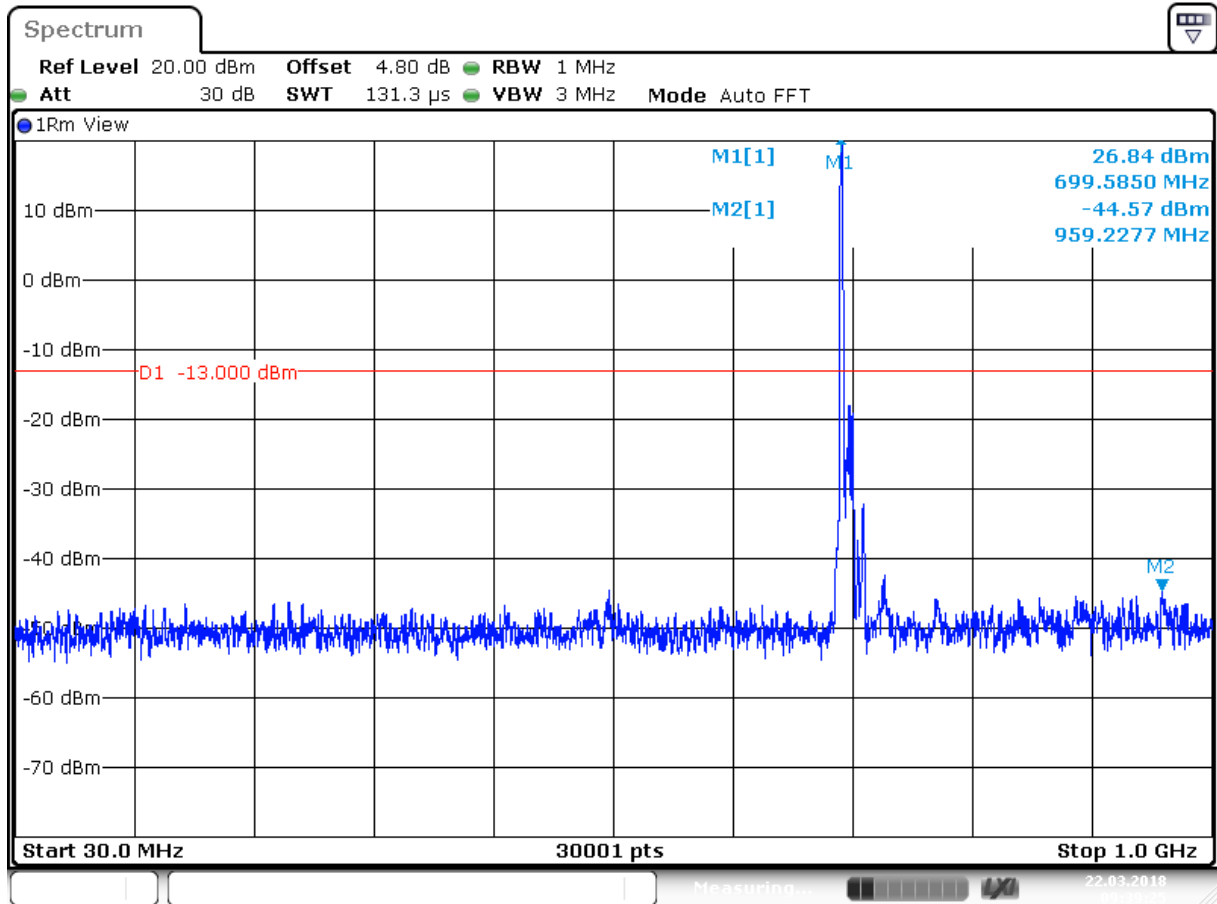


Date: 22 MAR 2018 09:39:13

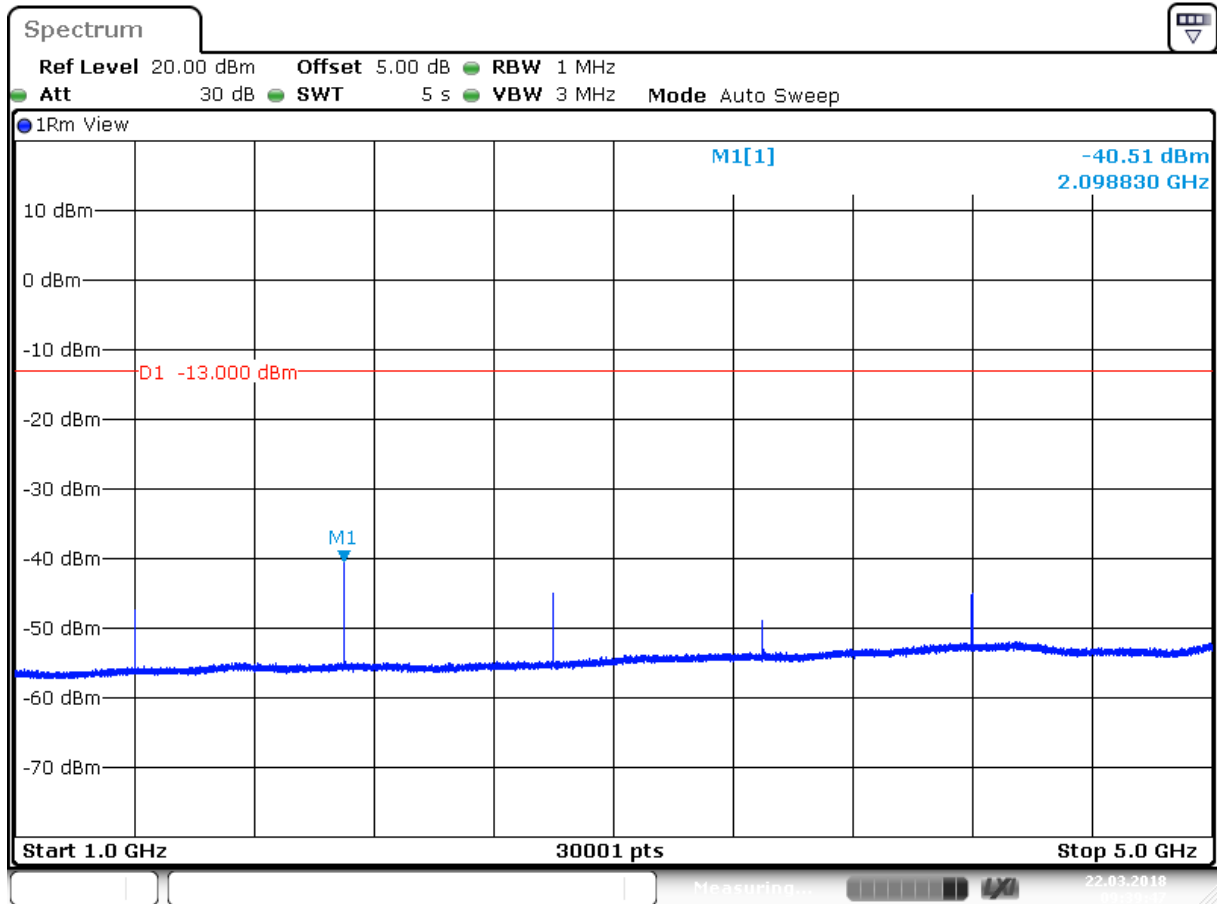




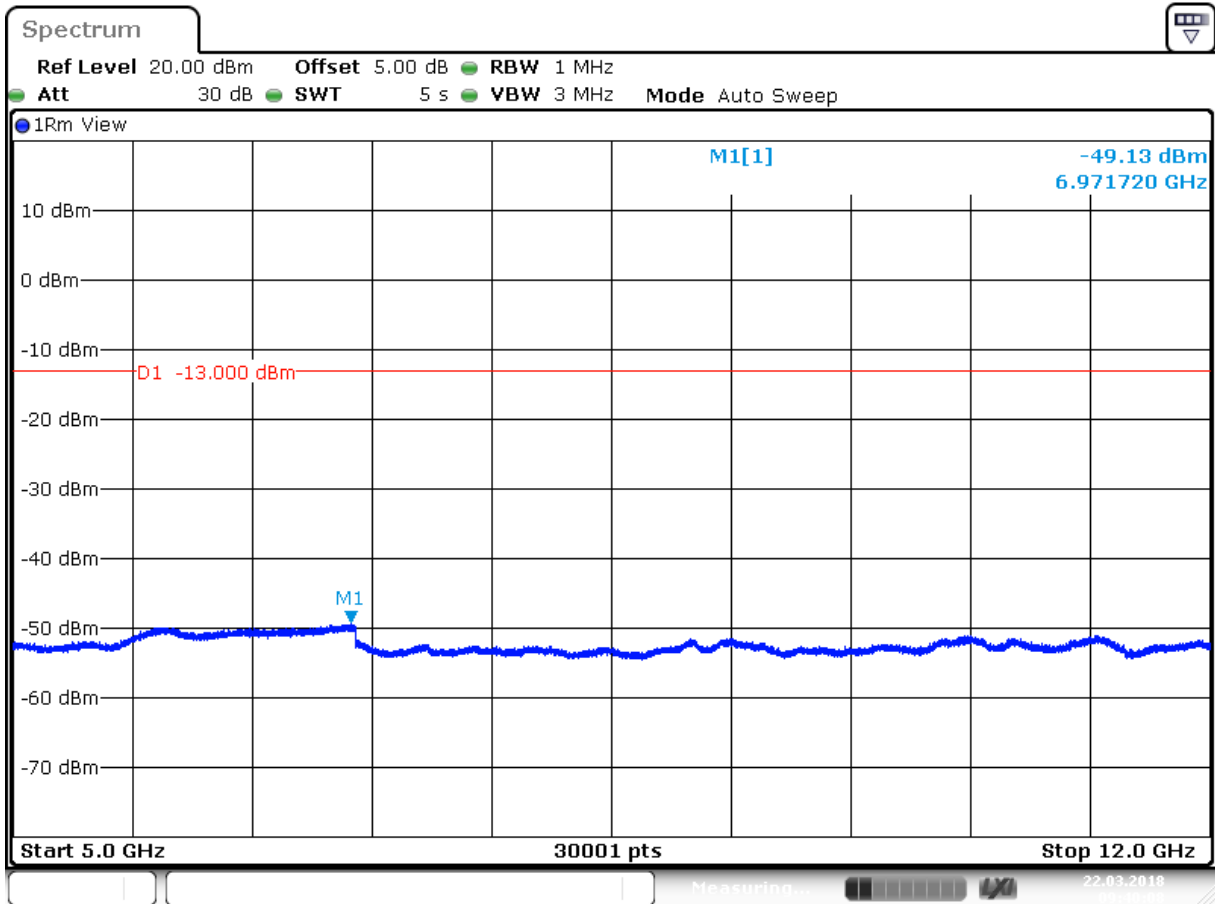
Date: 22 MAR 2018 09:39:19



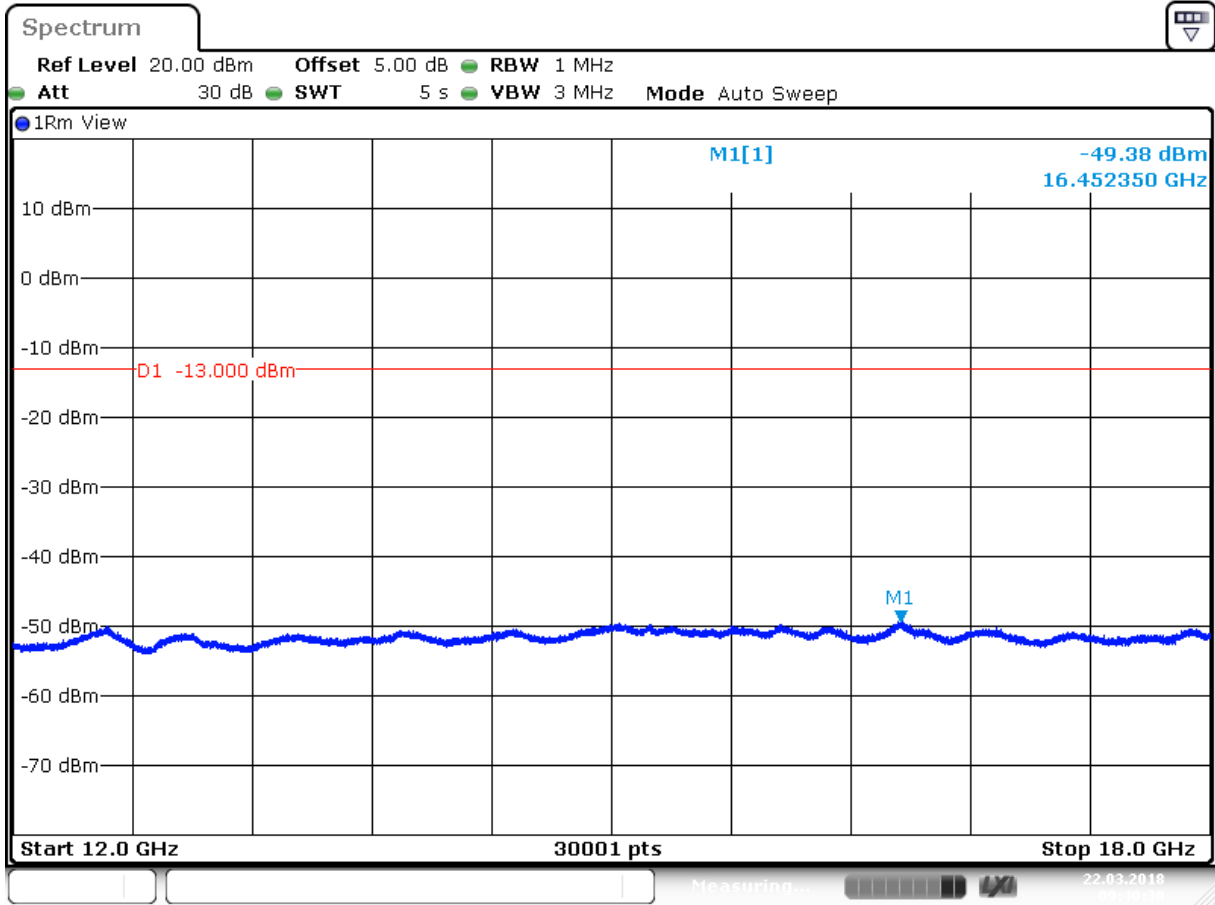
Date: 22 MAR 2018 09:39:25



Date: 22 MAR 2018 09:39:47



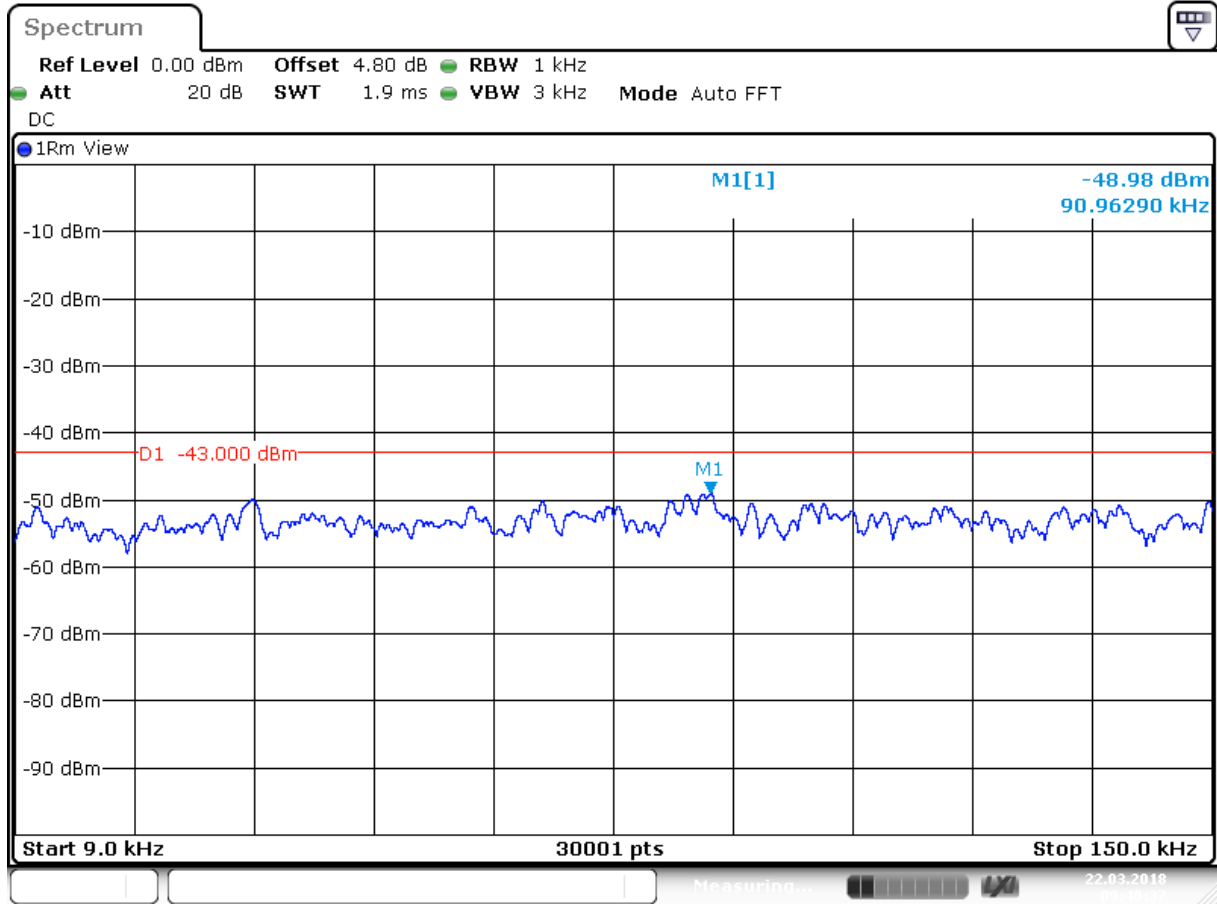
Date: 22 MAR 2018 09:40:09



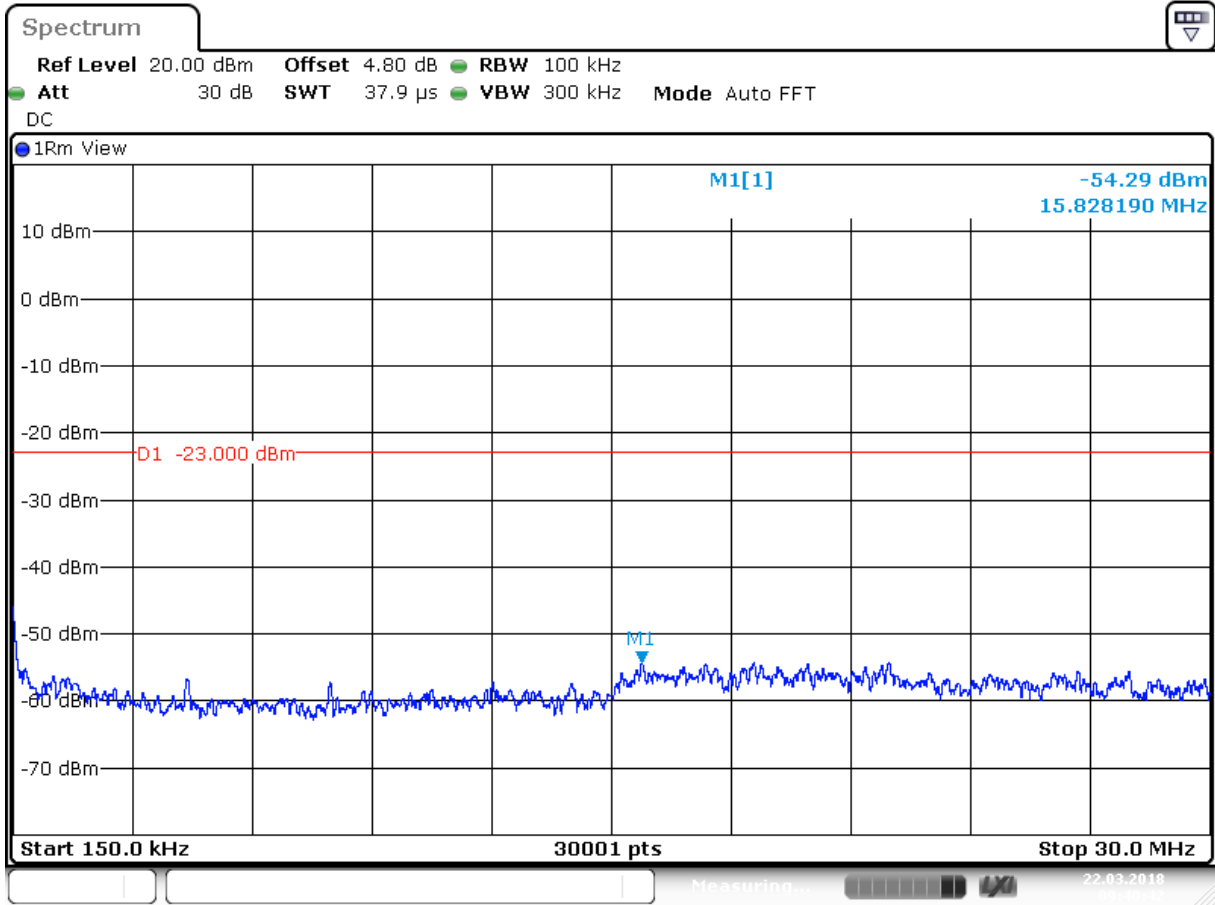
Date: 22 MAR 2018 09:40:31



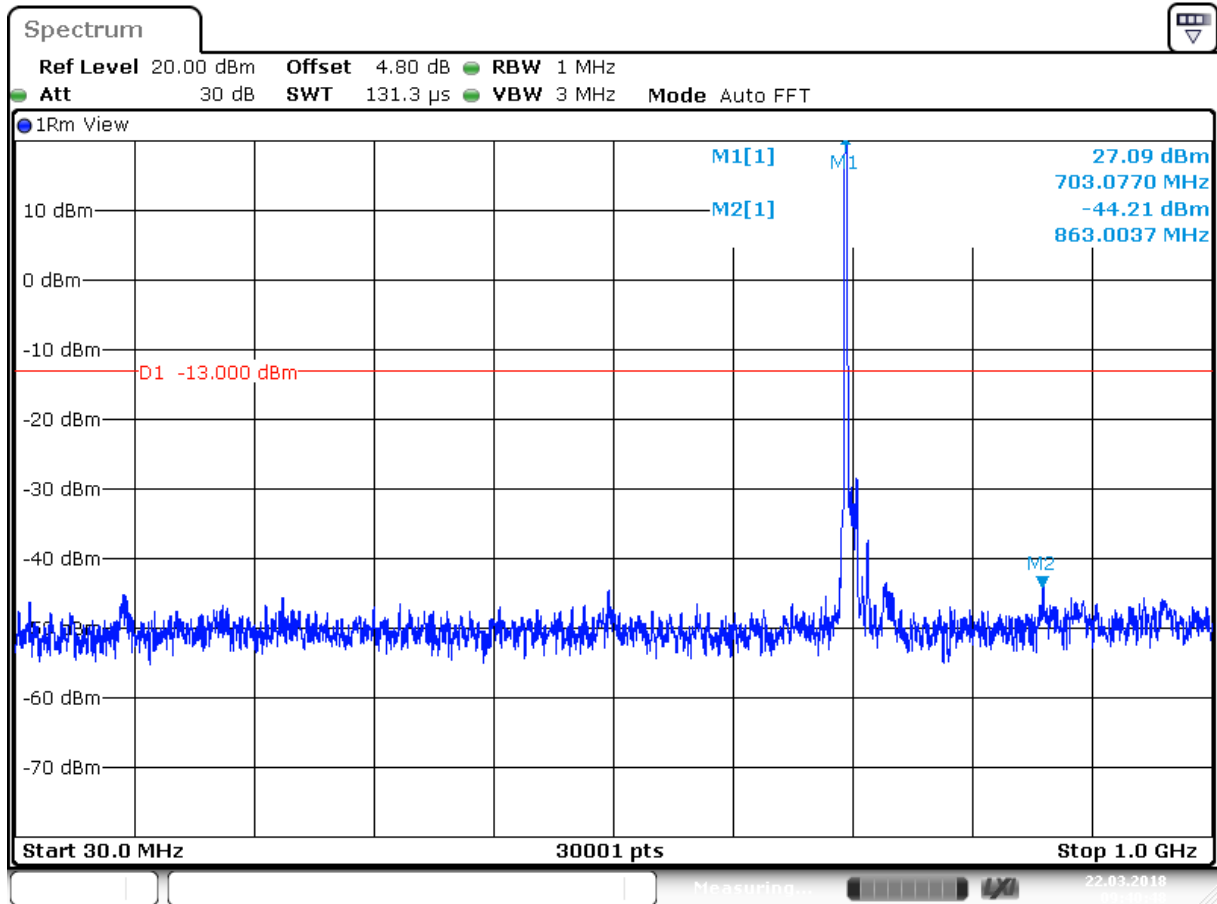
6.1.1.1.2 Test Channel = MCH



Date: 22 MAR 2018 09:40:37

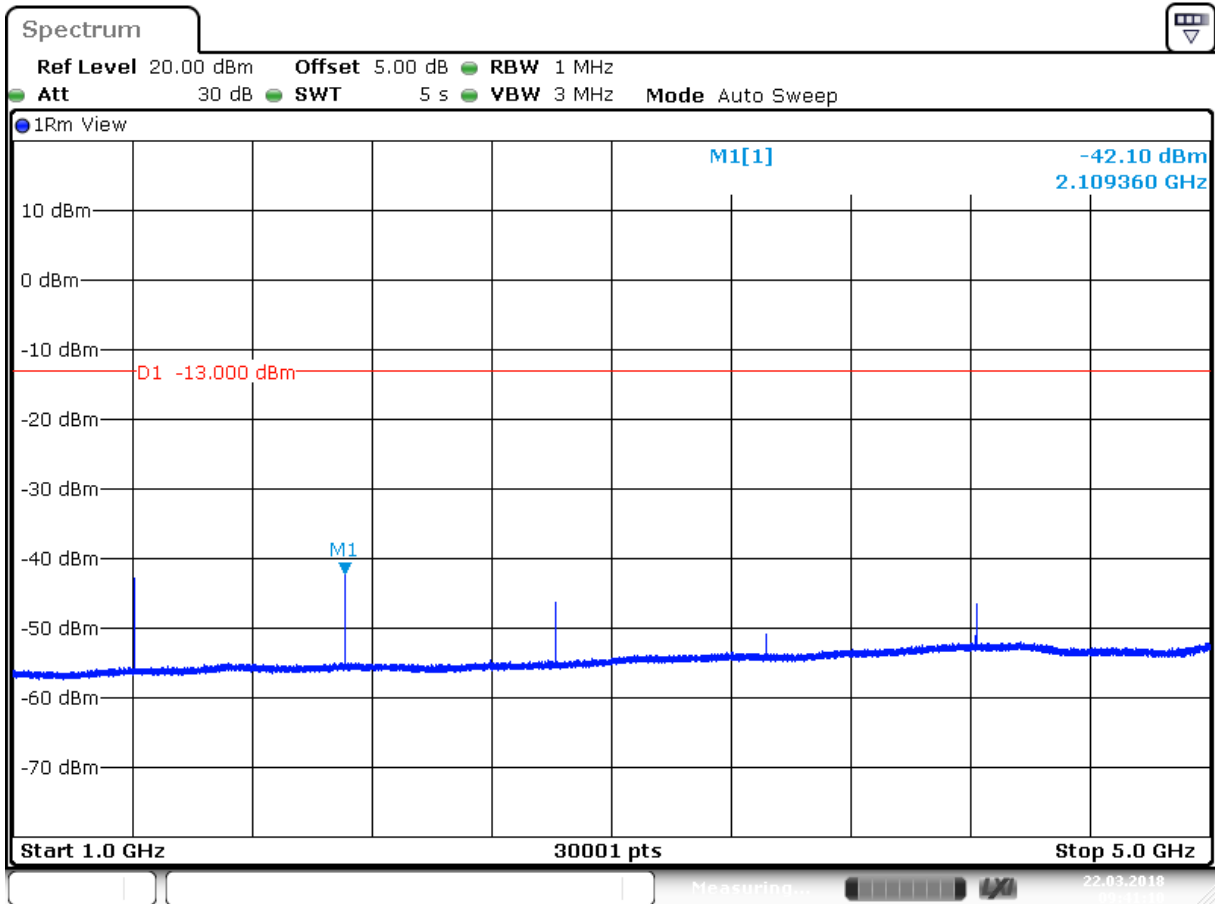


Date: 22 MAR 2018 09:40:42

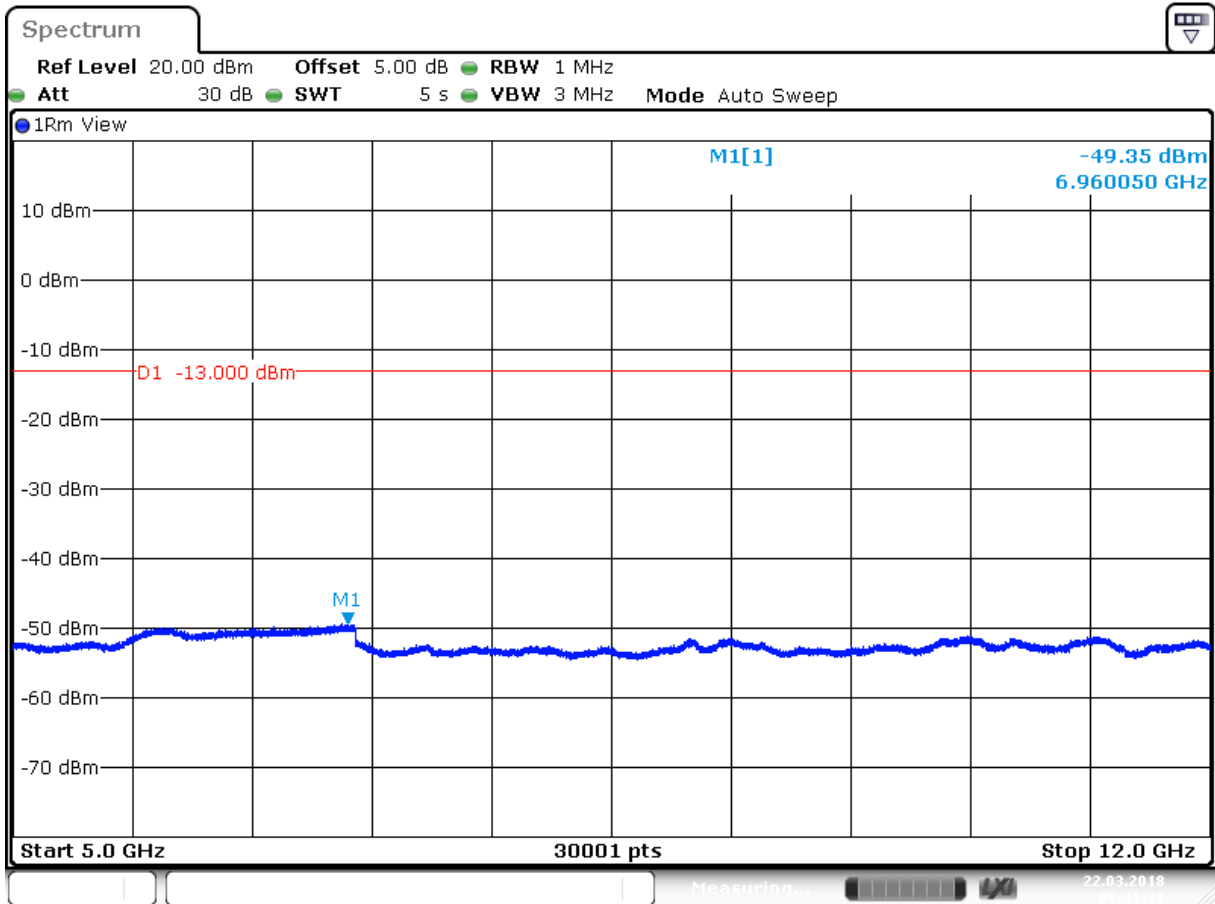


Date: 22 MAR 2018 09:40:48

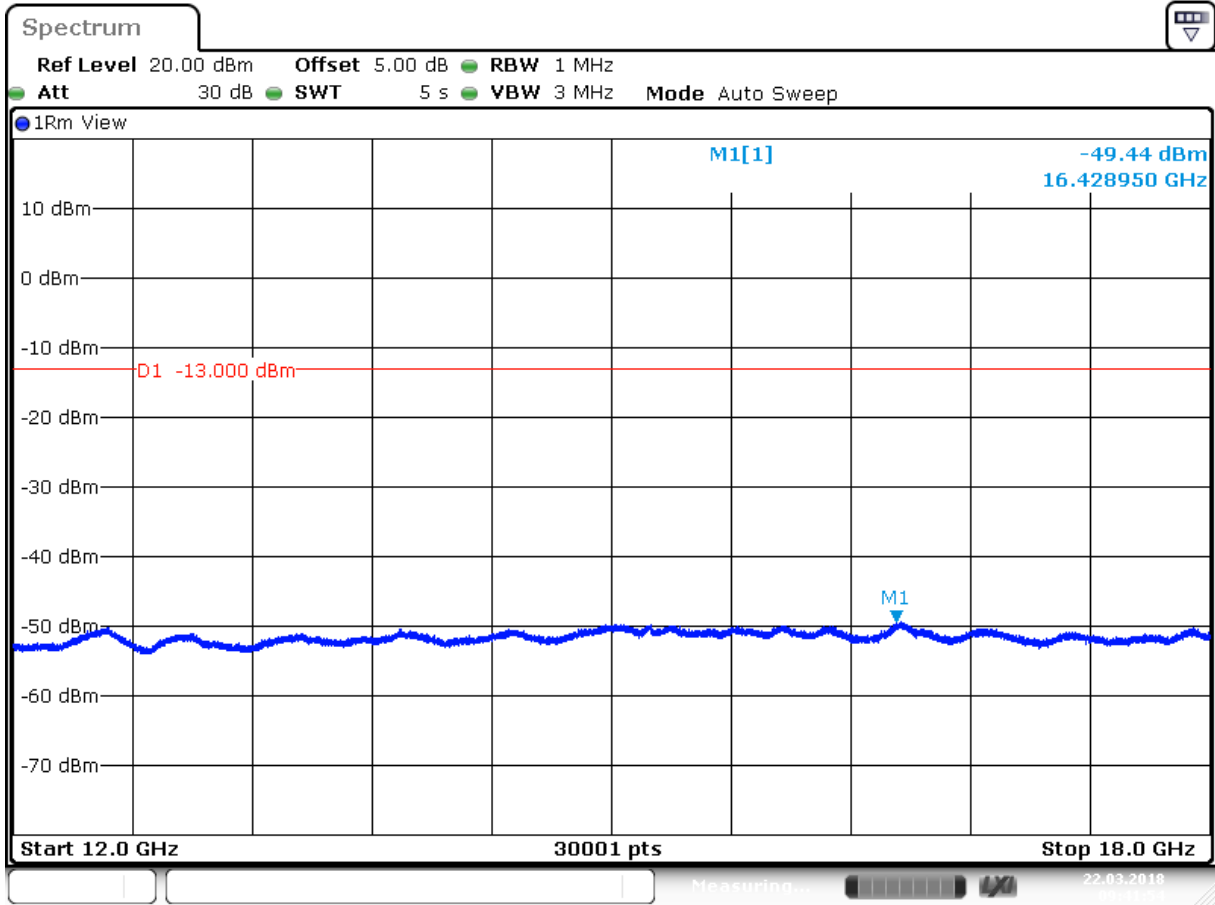




Date: 22 MAR 2018 09:41:10

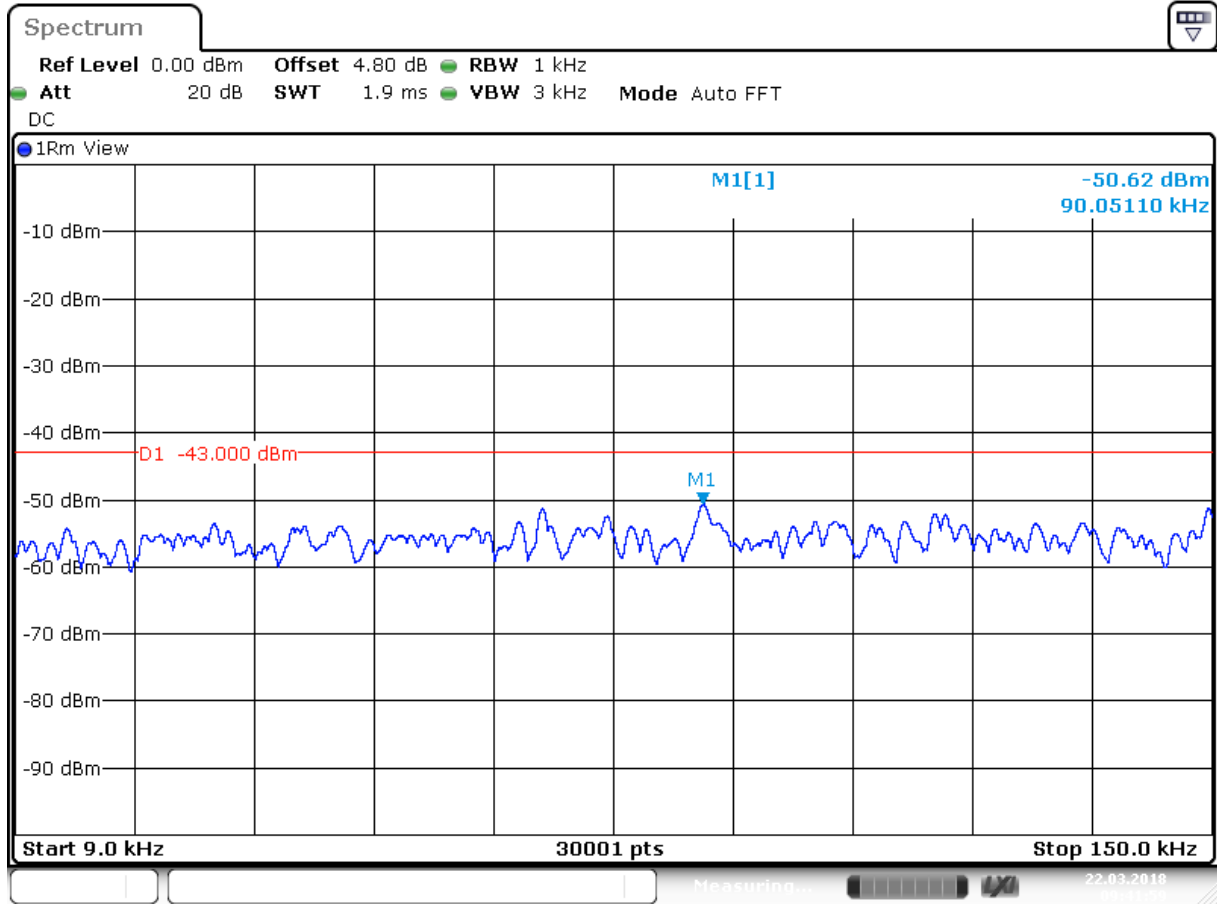


Date: 22 MAR 2018 09:41:32

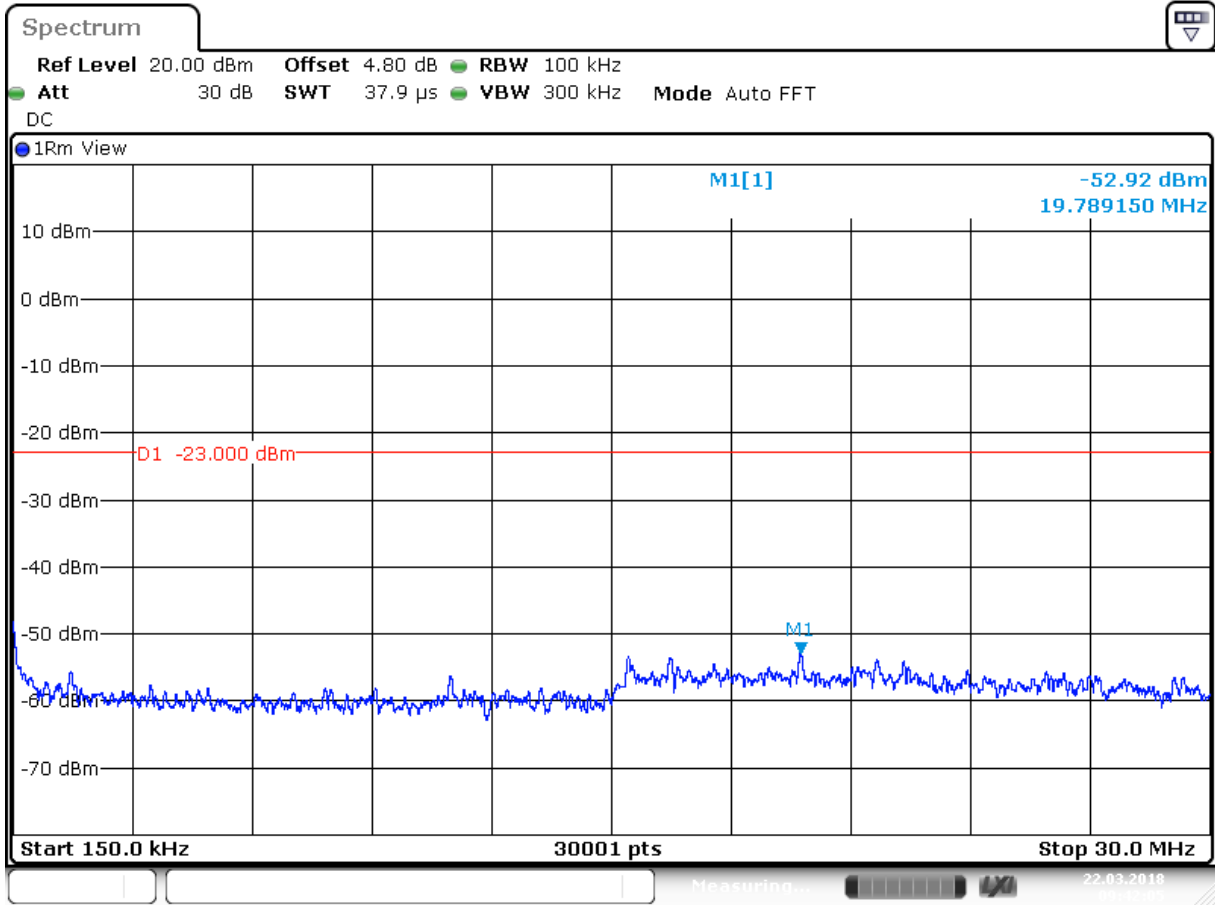


Date: 22 MAR 2018 09:41:54

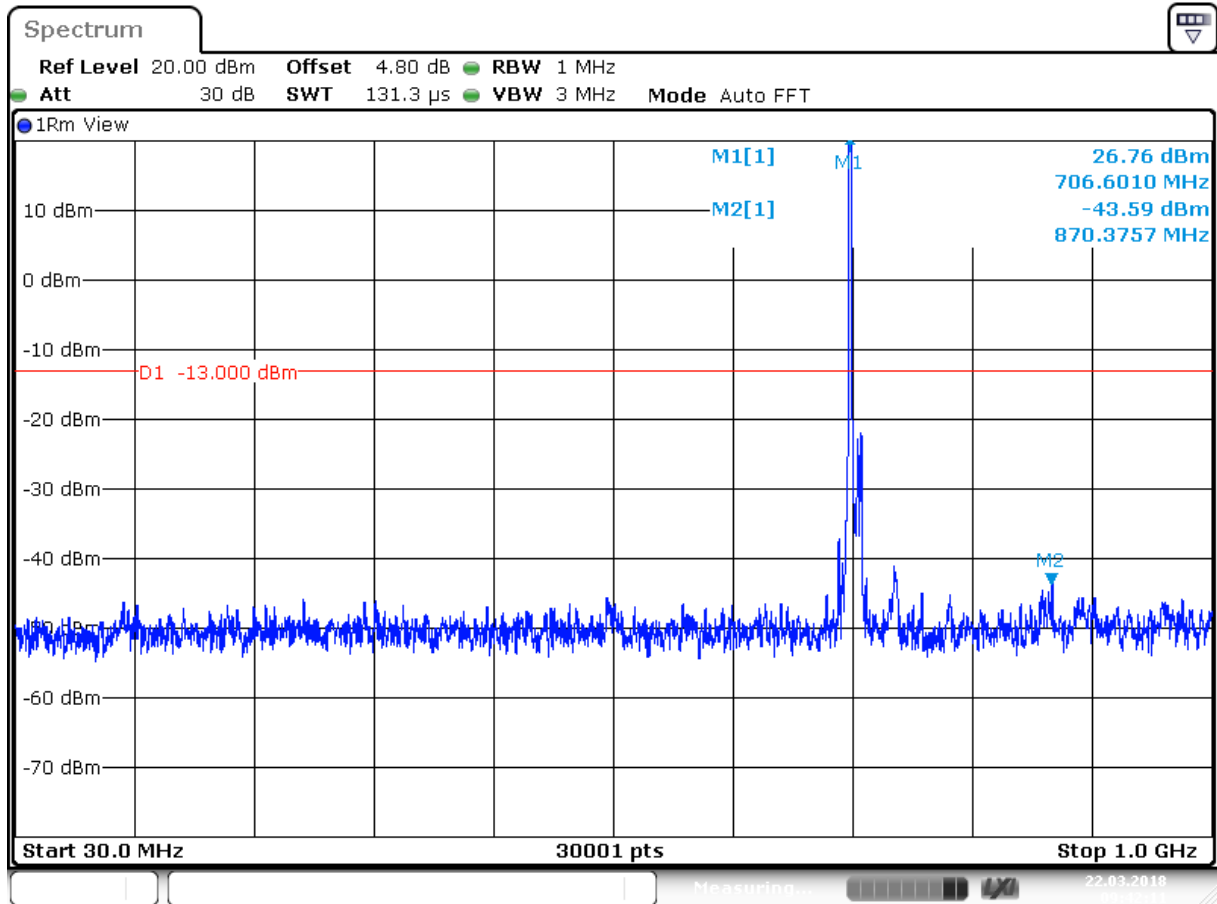
**6.1.1.1.3 Test Channel = HCH**



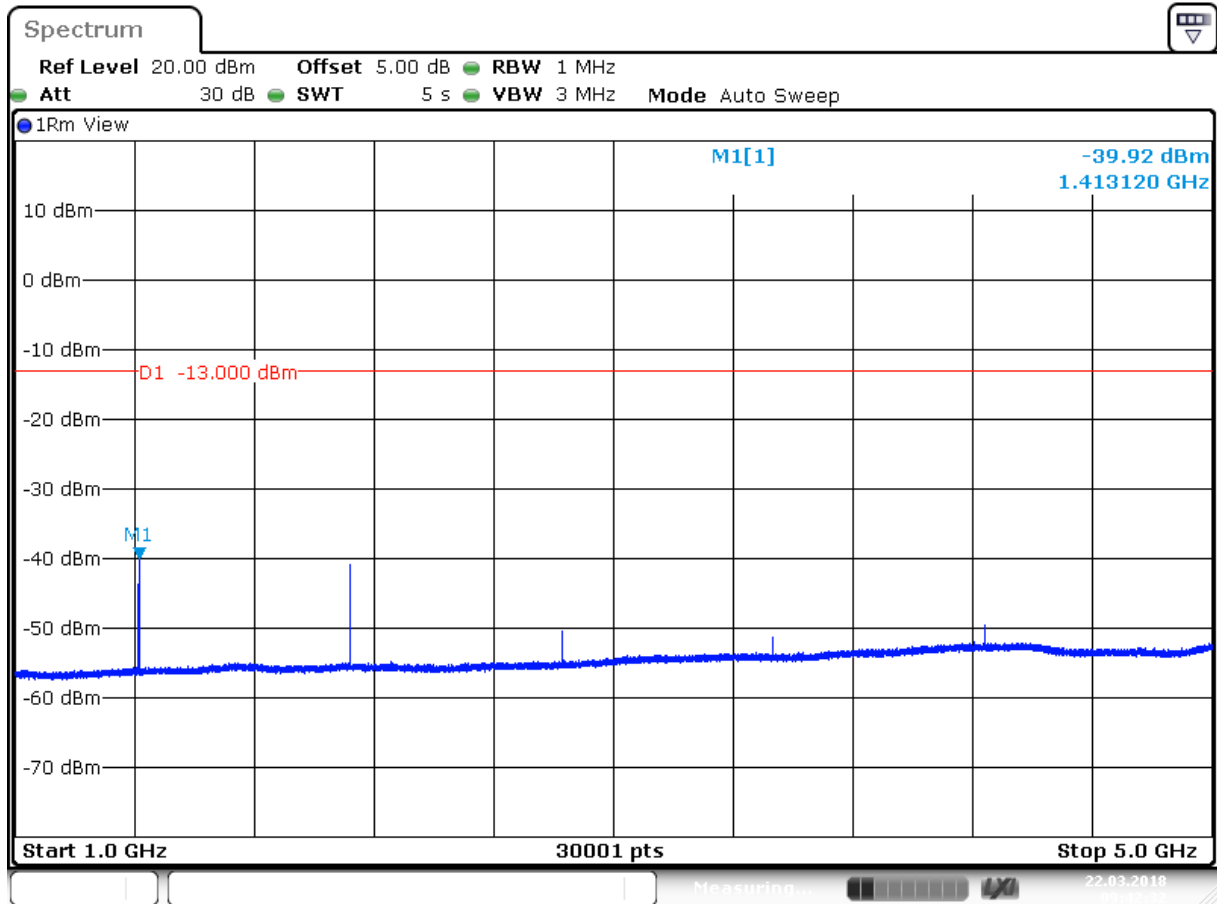
Date: 22 MAR 2018 09:42:00



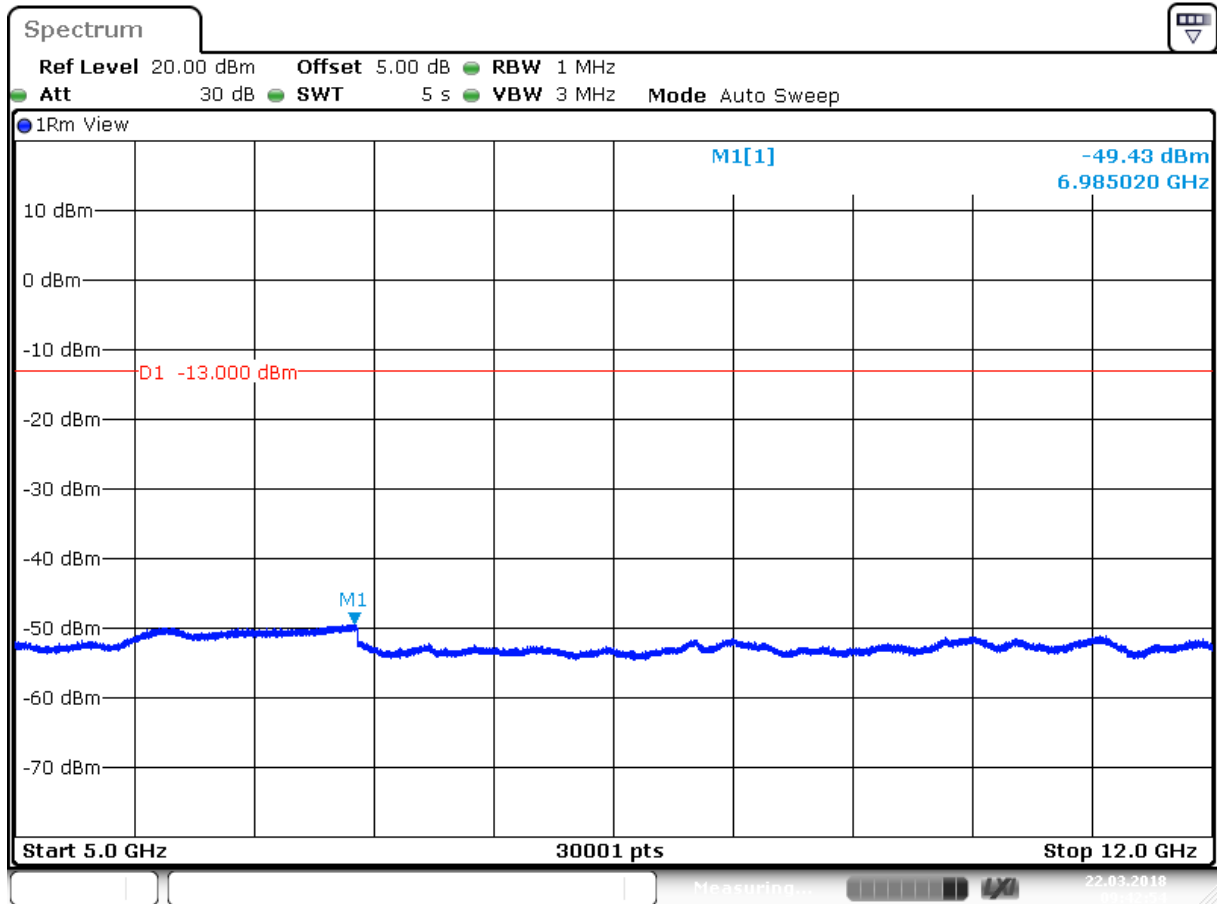
Date: 22 MAR 2018 09:42:05



Date: 22 MAR 2018 09:42:11

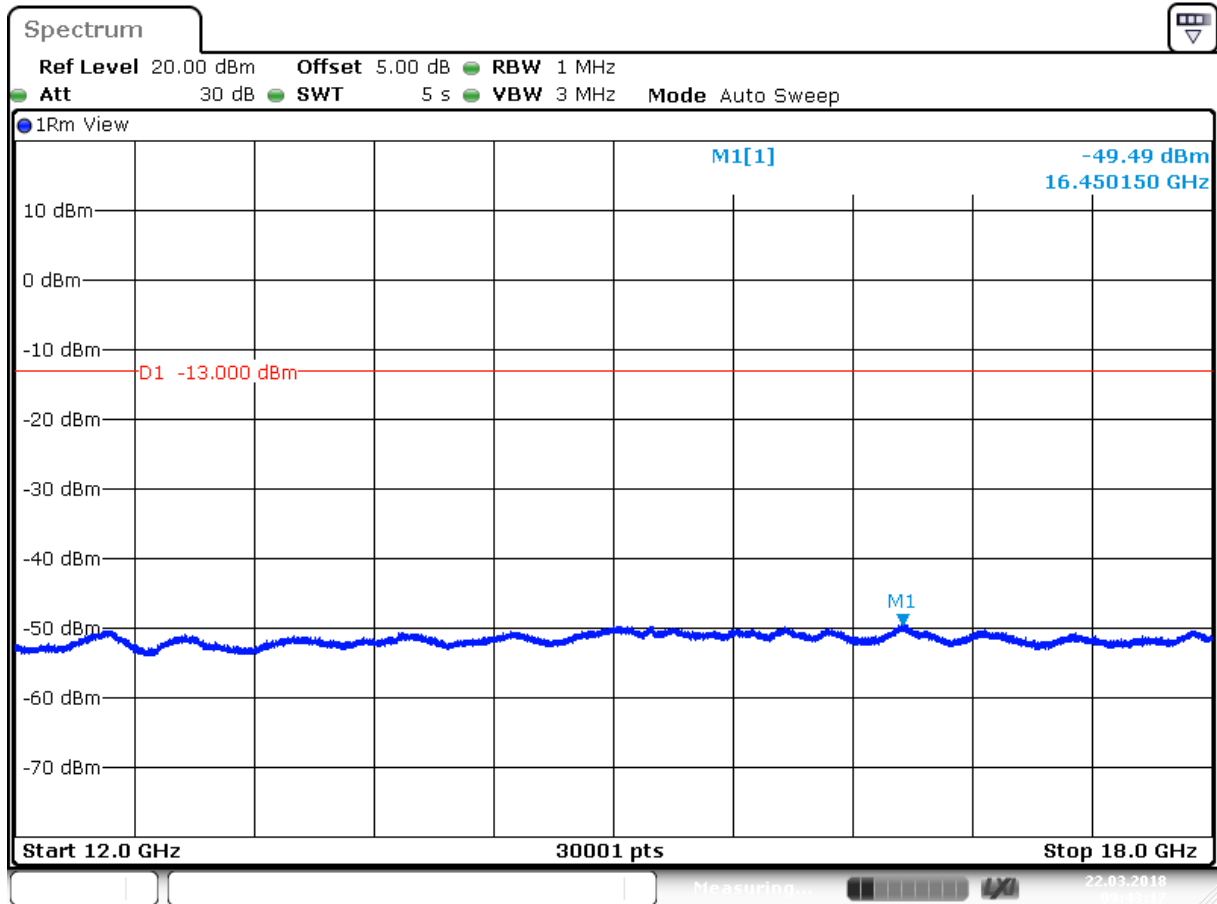


Date: 22 MAR 2018 09:42:33



Date: 22 MAR 2018 09:42:55





Date: 22 MAR 2018 09:43:17



## 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
90.666667	-73.98	-13.00	60.98	Vertical
345.606667	-73.37	-13.00	60.37	Vertical
1399.000000	-51.24	-13.00	38.24	Vertical
2099.000000	-48.38	-13.00	35.38	Vertical
3497.900000	-64.52	-13.00	51.52	Vertical
4197.300000	-65.45	-13.00	52.45	Vertical
88.100000	-72.69	-13.00	59.69	Horizontal
312.473333	-68.20	-13.00	55.20	Horizontal
1399.000000	-42.72	-13.00	29.72	Horizontal
2099.000000	-47.50	-13.00	34.50	Horizontal
2798.500000	-51.98	-13.00	38.98	Horizontal
4197.300000	-58.39	-13.00	45.39	Horizontal

###### 7.1.1.1.2 Test Channel = MCH

Frequency (MHz)	Level (dBm)	Limit Line (dBm)	Over Limit (dB)	Polarization
89.126667	-73.86	-13.00	60.86	Vertical
345.606667	-72.41	-13.00	59.41	Vertical
1406.000000	-57.71	-13.00	44.71	Vertical
2109.500000	-50.02	-13.00	37.02	Vertical
2812.500000	-53.69	-13.00	40.69	Vertical
3515.125000	-66.32	-13.00	53.32	Vertical
89.640000	-72.67	-13.00	59.67	Horizontal
306.920000	-68.21	-13.00	55.21	Horizontal
1406.000000	-47.19	-13.00	34.19	Horizontal
2109.500000	-48.10	-13.00	35.10	Horizontal
2812.500000	-52.96	-13.00	39.96	Horizontal
4218.425000	-60.59	-13.00	47.59	Horizontal



**7.1.1.1.3 Test Channel = HCH**

Frequency (MHz)	Level (dBm)	Limit Line (dBm)	Over Limit (dB)	Polarization
89.126667	-74.15	-13.00	61.15	Vertical
345.606667	-72.44	-13.00	59.44	Vertical
1413.000000	-57.01	-13.00	44.01	Vertical
2120.000000	-51.46	-13.00	38.46	Vertical
2826.500000	-55.61	-13.00	42.61	Vertical
3532.675000	-66.64	-13.00	53.64	Vertical
89.126667	-72.95	-13.00	59.95	Horizontal
308.973333	-67.98	-13.00	54.98	Horizontal
1413.000000	-47.76	-13.00	34.76	Horizontal
2119.500000	-52.07	-13.00	39.07	Horizontal
2826.500000	-54.79	-13.00	41.79	Horizontal
4239.225000	-62.17	-13.00	49.17	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.
- 2) We have tested all modulation and all Bandwidth, but only the worst case data presented in this report.



## 8 Frequency Stability

### 8.1 Frequency Error VS. Voltage

Test Band	Test Mode	Test Channel	Test Temp.	Test Volt.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict
LTE BAND12	LTE/TM1 10MHz	LCH	TN	VL	-2.66	-0.00321	PASS
				VN	1.42	0.00171	PASS
				VH	-5.23	-0.00631	PASS
		MCH	TN	VL	-1.56	-0.00186	PASS
				VN	-2.80	-0.00335	PASS
				VH	1.72	0.00206	PASS
		HCH	TN	VL	-5.36	-0.00635	PASS
				VN	-4.90	-0.00581	PASS
				VH	-1.88	-0.00223	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	-0.00519	PASS
				-20	-2.38	-0.00287	PASS
				-10	-2.77	-0.00334	PASS
				0	1.20	0.00145	PASS
				10	1.22	0.00147	PASS
				20	0.59	0.00071	PASS
				30	-0.68	-0.00082	PASS
				40	-2.70	-0.00326	PASS
				50	-6.02	-0.00726	PASS
		MCH	VN	-30	-5.44	-0.00650	PASS
				-20	-5.20	-0.00622	PASS
				-10	-3.32	-0.00397	PASS
				0	-1.55	-0.00185	PASS
				10	-2.27	-0.00271	PASS
				20	-0.89	-0.00106	PASS
				30	-3.09	-0.00369	PASS
				40	-4.88	-0.00583	PASS
				50	-5.42	-0.00648	PASS
		HCH	VN	-30	-6.66	-0.00789	PASS
				-20	-3.24	-0.00384	PASS
				-10	0.69	0.00082	PASS
				0	-2.40	-0.00284	PASS
				10	2.44	0.00289	PASS
				20	-0.39	-0.00046	PASS
30	-2.49			-0.00295	PASS		
40	-4.39			-0.00520	PASS		
50	-3.88			-0.00460	PASS		

The End