



# Appendix B

## E-UTRA BAND 4



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## 1 Effective (Isotropic) Radiated Power Output Data

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

Test Band(LTE)	Test Mode	Test Bandwidth	Test channel	Test RB	Measured (dBm)	EIRP (dBm)	limit (dBm)	Verdict
BAND 4	LTE/TM1	1.4M	LCH	RB1#0	22.94	25.94	33.00	PASS
				RB1#2	22.94	25.94	33.00	PASS
				RB1#5	22.88	25.88	33.00	PASS
				RB3#0	22.84	25.84	33.00	PASS
				RB3#2	22.73	25.73	33.00	PASS
				RB3#3	22.68	25.68	33.00	PASS
				RB6#0	21.72	24.72	33.00	PASS
			MCH	RB1#0	22.72	25.72	33.00	PASS
				RB1#2	22.47	25.47	33.00	PASS
				RB1#5	22.38	25.38	33.00	PASS
				RB3#0	22.53	25.53	33.00	PASS
				RB3#2	22.62	25.62	33.00	PASS
				RB3#3	22.50	25.5	33.00	PASS
				RB6#0	21.67	24.67	33.00	PASS
			HCH	RB1#0	22.91	25.91	33.00	PASS
				RB1#2	22.53	25.53	33.00	PASS
				RB1#5	22.94	25.94	33.00	PASS
				RB3#0	22.74	25.74	33.00	PASS
				RB3#2	22.64	25.64	33.00	PASS
				RB3#3	22.76	25.76	33.00	PASS
				RB6#0	21.70	24.7	33.00	PASS



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Test Band(LTE)	Test Mode	Test Bandwidth	Test channel	Test RB	Measured (dBm)	EIRP (dBm)	limit (dBm)	Verdict
BAND 4	LTE/TM2	1.4M	LCH	RB1#0	22.02	25.02	33.00	PASS
				RB1#2	22.16	25.16	33.00	PASS
				RB1#5	22.04	25.04	33.00	PASS
				RB3#0	21.59	24.59	33.00	PASS
				RB3#2	21.59	24.59	33.00	PASS
				RB3#3	21.53	24.53	33.00	PASS
				RB6#0	20.82	23.82	33.00	PASS
			MCH	RB1#0	21.47	24.47	33.00	PASS
				RB1#2	21.67	24.67	33.00	PASS
				RB1#5	21.72	24.72	33.00	PASS
				RB3#0	21.56	24.56	33.00	PASS
				RB3#2	21.57	24.57	33.00	PASS
				RB3#3	21.56	24.56	33.00	PASS
				RB6#0	20.56	23.56	33.00	PASS
			HCH	RB1#0	21.77	24.77	33.00	PASS
				RB1#2	21.85	24.85	33.00	PASS
				RB1#5	21.90	24.9	33.00	PASS
				RB3#0	21.49	24.49	33.00	PASS
				RB3#2	21.39	24.39	33.00	PASS
				RB3#3	21.37	24.37	33.00	PASS
				RB6#0	20.65	23.65	33.00	PASS



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Test Band(LTE)	Test Mode	Test Bandwidth	Test channel	Test RB	Measured (dBm)	EIRP (dBm)	limit (dBm)	Verdict
BAND 4	LTE/TM1	3M	LCH	RB1#0	21.73	24.73	33.00	PASS
				RB1#7	22.75	25.75	33.00	PASS
				RB1#14	22.45	25.45	33.00	PASS
				RB8#0	22.73	25.73	33.00	PASS
				RB8#4	21.68	24.68	33.00	PASS
				RB8#7	21.67	24.67	33.00	PASS
				RB15#0	21.76	24.76	33.00	PASS
			MCH	RB1#0	21.55	24.55	33.00	PASS
				RB1#7	22.91	25.91	33.00	PASS
				RB1#14	22.63	25.63	33.00	PASS
				RB8#0	22.67	25.67	33.00	PASS
				RB8#4	21.70	24.7	33.00	PASS
				RB8#7	21.70	24.7	33.00	PASS
				RB15#0	21.78	24.78	33.00	PASS
			HCH	RB1#0	21.79	24.79	33.00	PASS
				RB1#7	22.33	25.33	33.00	PASS
				RB1#14	22.82	25.82	33.00	PASS
				RB8#0	22.66	25.66	33.00	PASS
				RB8#4	21.58	24.58	33.00	PASS
				RB8#7	21.59	24.59	33.00	PASS
				RB15#0	21.79	24.79	33.00	PASS



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Test Band(LTE)	Test Mode	Test Bandwidth	Test channel	Test RB	Measured (dBm)	EIRP (dBm)	limit (dBm)	Verdict
BAND 4	LTE/TM2	3M	LCH	RB1#0	20.62	23.62	33.00	PASS
				RB1#7	21.85	24.85	33.00	PASS
				RB1#14	21.54	24.54	33.00	PASS
				RB8#0	21.71	24.71	33.00	PASS
				RB8#4	20.57	23.57	33.00	PASS
				RB8#7	20.82	23.82	33.00	PASS
				RB15#0	20.82	23.82	33.00	PASS
			MCH	RB1#0	20.49	23.49	33.00	PASS
				RB1#7	21.93	24.93	33.00	PASS
				RB1#14	21.49	24.49	33.00	PASS
				RB8#0	21.76	24.76	33.00	PASS
				RB8#4	20.64	23.64	33.00	PASS
				RB8#7	20.64	23.64	33.00	PASS
				RB15#0	20.49	23.49	33.00	PASS
			HCH	RB1#0	20.82	23.82	33.00	PASS
				RB1#7	21.52	24.52	33.00	PASS
				RB1#14	21.82	24.82	33.00	PASS
				RB8#0	21.57	24.57	33.00	PASS
				RB8#4	20.66	23.66	33.00	PASS
				RB8#7	20.74	23.74	33.00	PASS
				RB15#0	20.76	23.76	33.00	PASS



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Test Band(LTE)	Test Mode	Test Bandwidth	Test channel	Test RB	Measured (dBm)	EIRP (dBm)	limit (dBm)	Verdict
BAND 4	LTE/TM1	5M	LCH	RB1#0	21.72	24.72	33.00	PASS
				RB1#13	21.61	24.61	33.00	PASS
				RB1#24	21.73	24.73	33.00	PASS
				RB12#0	22.74	25.74	33.00	PASS
				RB12#6	22.86	25.86	33.00	PASS
				RB12#13	22.62	25.62	33.00	PASS
				RB25#0	21.64	24.64	33.00	PASS
			MCH	RB1#0	21.72	24.72	33.00	PASS
				RB1#13	21.66	24.66	33.00	PASS
				RB1#24	21.72	24.72	33.00	PASS
				RB12#0	22.97	25.97	33.00	PASS
				RB12#6	22.91	25.91	33.00	PASS
				RB12#13	22.57	25.57	33.00	PASS
				RB25#0	21.63	24.63	33.00	PASS
			HCH	RB1#0	21.66	24.66	33.00	PASS
				RB1#13	21.89	24.89	33.00	PASS
				RB1#24	21.67	24.67	33.00	PASS
				RB12#0	22.51	25.51	33.00	PASS
				RB12#6	22.85	25.85	33.00	PASS
				RB12#13	22.94	25.94	33.00	PASS
				RB25#0	21.71	24.71	33.00	PASS



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Test Band(LTE)	Test Mode	Test Bandwidth	Test channel	Test RB	Measured (dBm)	EIRP (dBm)	limit (dBm)	Verdict
BAND 4	LTE/TM2	5M	LCH	RB1#0	20.83	23.83	33.00	PASS
				RB1#13	20.72	23.72	33.00	PASS
				RB1#24	20.83	23.83	33.00	PASS
				RB12#0	21.64	24.64	33.00	PASS
				RB12#6	21.72	24.72	33.00	PASS
				RB12#13	21.61	24.61	33.00	PASS
				RB25#0	20.67	23.67	33.00	PASS
			MCH	RB1#0	20.62	23.62	33.00	PASS
				RB1#13	20.50	23.5	33.00	PASS
				RB1#24	20.62	23.62	33.00	PASS
				RB12#0	21.78	24.78	33.00	PASS
				RB12#6	21.69	24.69	33.00	PASS
				RB12#13	21.59	24.59	33.00	PASS
				RB25#0	20.69	23.69	33.00	PASS
			HCH	RB1#0	20.70	23.7	33.00	PASS
				RB1#13	20.79	23.79	33.00	PASS
				RB1#24	20.65	23.65	33.00	PASS
				RB12#0	21.28	24.28	33.00	PASS
				RB12#6	21.27	24.27	33.00	PASS
				RB12#13	21.67	24.67	33.00	PASS
				RB25#0	20.84	23.84	33.00	PASS





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Test Band(LTE)	Test Mode	Test Bandwidth	Test channel	Test RB	Measured (dBm)	EIRP (dBm)	limit (dBm)	Verdict
BAND 4	LTE/TM1	10M	LCH	RB1#0	22.82	25.82	33.00	PASS
				RB1#25	22.82	25.82	33.00	PASS
				RB1#49	22.75	25.75	33.00	PASS
				RB25#0	21.76	24.76	33.00	PASS
				RB25#13	21.77	24.77	33.00	PASS
				RB25#25	21.77	24.77	33.00	PASS
				RB50#0	21.70	24.7	33.00	PASS
			MCH	RB1#0	22.50	25.5	33.00	PASS
				RB1#25	22.93	25.93	33.00	PASS
				RB1#49	22.48	25.48	33.00	PASS
				RB25#0	21.84	24.84	33.00	PASS
				RB25#13	21.82	24.82	33.00	PASS
				RB25#25	21.60	24.6	33.00	PASS
				RB50#0	21.69	24.69	33.00	PASS
			HCH	RB1#0	22.55	25.55	33.00	PASS
				RB1#25	23.00	26	33.00	PASS
				RB1#49	22.77	25.77	33.00	PASS
				RB25#0	21.68	24.68	33.00	PASS
				RB25#13	21.72	24.72	33.00	PASS
				RB25#25	21.82	24.82	33.00	PASS
				RB50#0	21.65	24.65	33.00	PASS



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Test Band(LTE)	Test Mode	Test Bandwidth	Test channel	Test RB	Measured (dBm)	EIRP (dBm)	limit (dBm)	Verdict
BAND 4	LTE/TM1	15M	LCH	RB1#0	22.70	25.7	33.00	PASS
				RB1#38	22.67	25.67	33.00	PASS
				RB1#74	22.62	25.62	33.00	PASS
				RB36#0	22.59	25.59	33.00	PASS
				RB36#18	22.58	25.58	33.00	PASS
				RB36#39	22.60	25.6	33.00	PASS
				RB75#0	21.79	24.79	33.00	PASS
			MCH	RB1#0	22.88	25.88	33.00	PASS
				RB1#38	22.90	25.9	33.00	PASS
				RB1#74	22.52	25.52	33.00	PASS
				RB36#0	22.98	25.98	33.00	PASS
				RB36#18	22.88	25.88	33.00	PASS
				RB36#39	22.48	25.48	33.00	PASS
				RB75#0	21.79	24.79	33.00	PASS
			HCH	RB1#0	22.57	25.57	33.00	PASS
				RB1#38	22.67	25.67	33.00	PASS
				RB1#74	22.67	25.67	33.00	PASS
				RB36#0	22.53	25.53	33.00	PASS
				RB36#18	22.55	25.55	33.00	PASS
				RB36#39	22.72	25.72	33.00	PASS
				RB75#0	21.67	24.67	33.00	PASS



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Test Band(LTE)	Test Mode	Test Bandwidth	Test channel	Test RB	Measured (dBm)	EIRP (dBm)	limit (dBm)	Verdict
BAND 4	LTE/TM1	20M	LCH	RB1#0	21.73	24.73	33.00	PASS
				RB1#50	22.83	25.83	33.00	PASS
				RB1#99	23.09	26.09	33.00	PASS
				RB50#0	22.61	25.61	33.00	PASS
				RB50#25	21.67	24.67	33.00	PASS
				RB50#50	21.70	24.7	33.00	PASS
				RB100#0	21.86	24.86	33.00	PASS
			MCH	RB1#0	21.75	24.75	33.00	PASS
				RB1#50	22.79	25.79	33.00	PASS
				RB1#99	22.93	25.93	33.00	PASS
				RB50#0	22.29	25.29	33.00	PASS
				RB50#25	21.71	24.71	33.00	PASS
				RB50#50	21.66	24.66	33.00	PASS
				RB100#0	21.56	24.56	33.00	PASS
			HCH	RB1#0	21.73	24.73	33.00	PASS
				RB1#50	22.60	25.6	33.00	PASS
				RB1#99	22.81	25.81	33.00	PASS
				RB50#0	22.58	25.58	33.00	PASS
				RB50#25	21.77	24.77	33.00	PASS
				RB50#50	21.75	24.75	33.00	PASS
				RB100#0	21.53	24.53	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



## 2 Peak-to-Average Ratio

### Part I - Test Results

Test Band	Test Mode	Test Channel	Measured[dB]	Limit [dB]	Verdict
BAND 4	TM1/20M	LCH	4.09	13	PASS
		MCH	4.23	13	PASS
		HCH	3.88	13	PASS

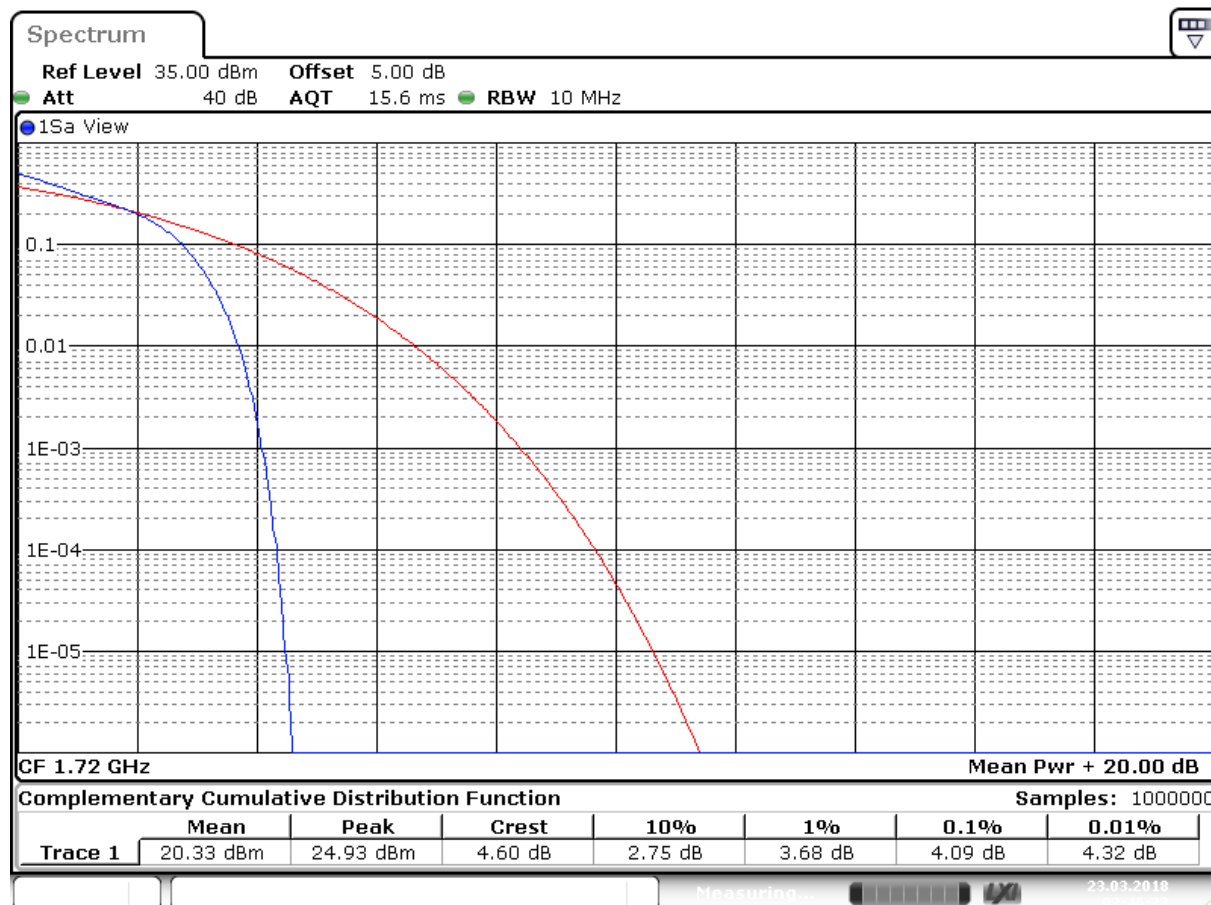
### Part II - Test Plots

#### 2.1 For LTE

##### 2.1.1 Test Band = LTE BAND 4

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

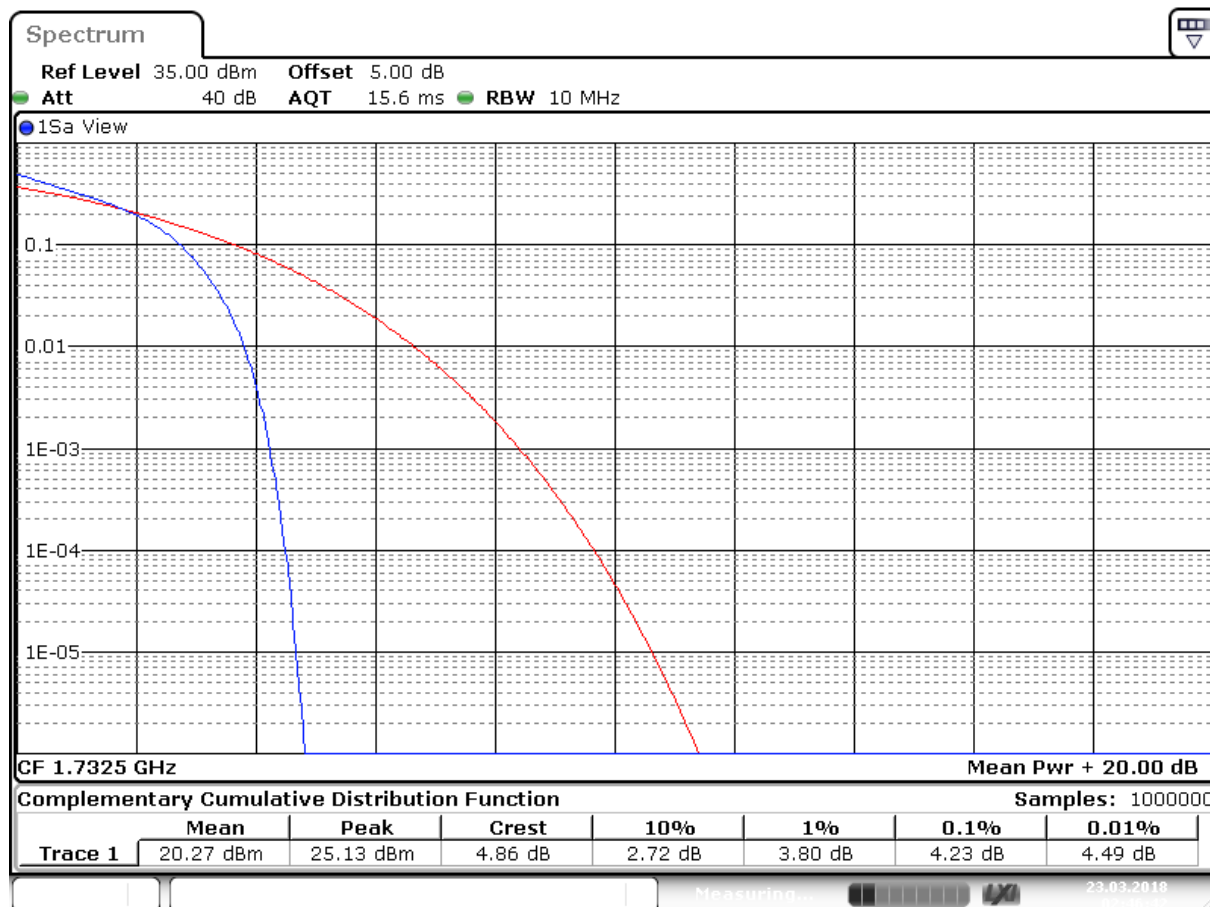
##### 2.1.1.1.1 Test Channel = LCH



Date: 23 MAR 2018 02:46:24



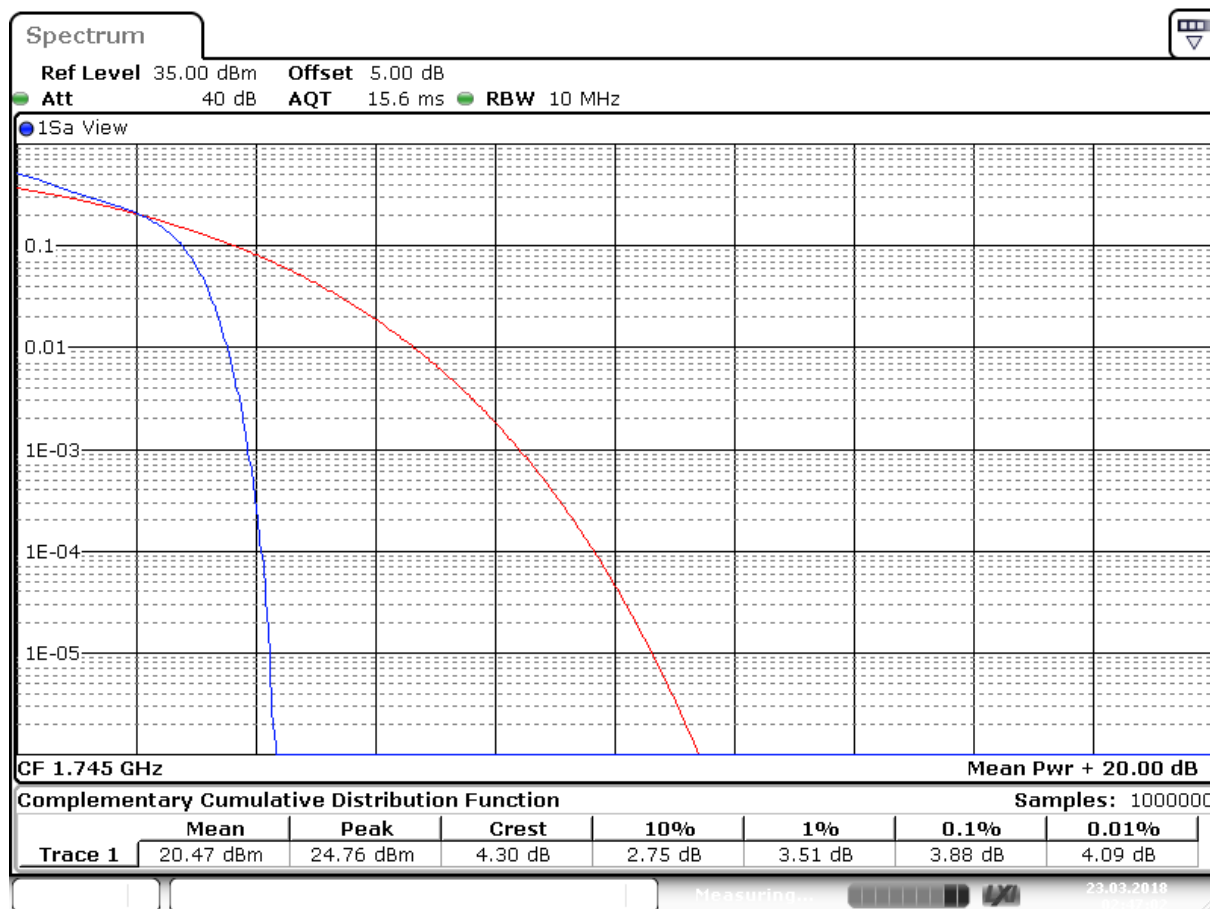
2.1.1.1.2 Test Channel = MCH



Date: 23 MAR 2018 02:46:43



2.1.1.1.3 Test Channel = HCH



Date: 23 MAR 2018 02:47:02

## 3 Modulation Characteristics

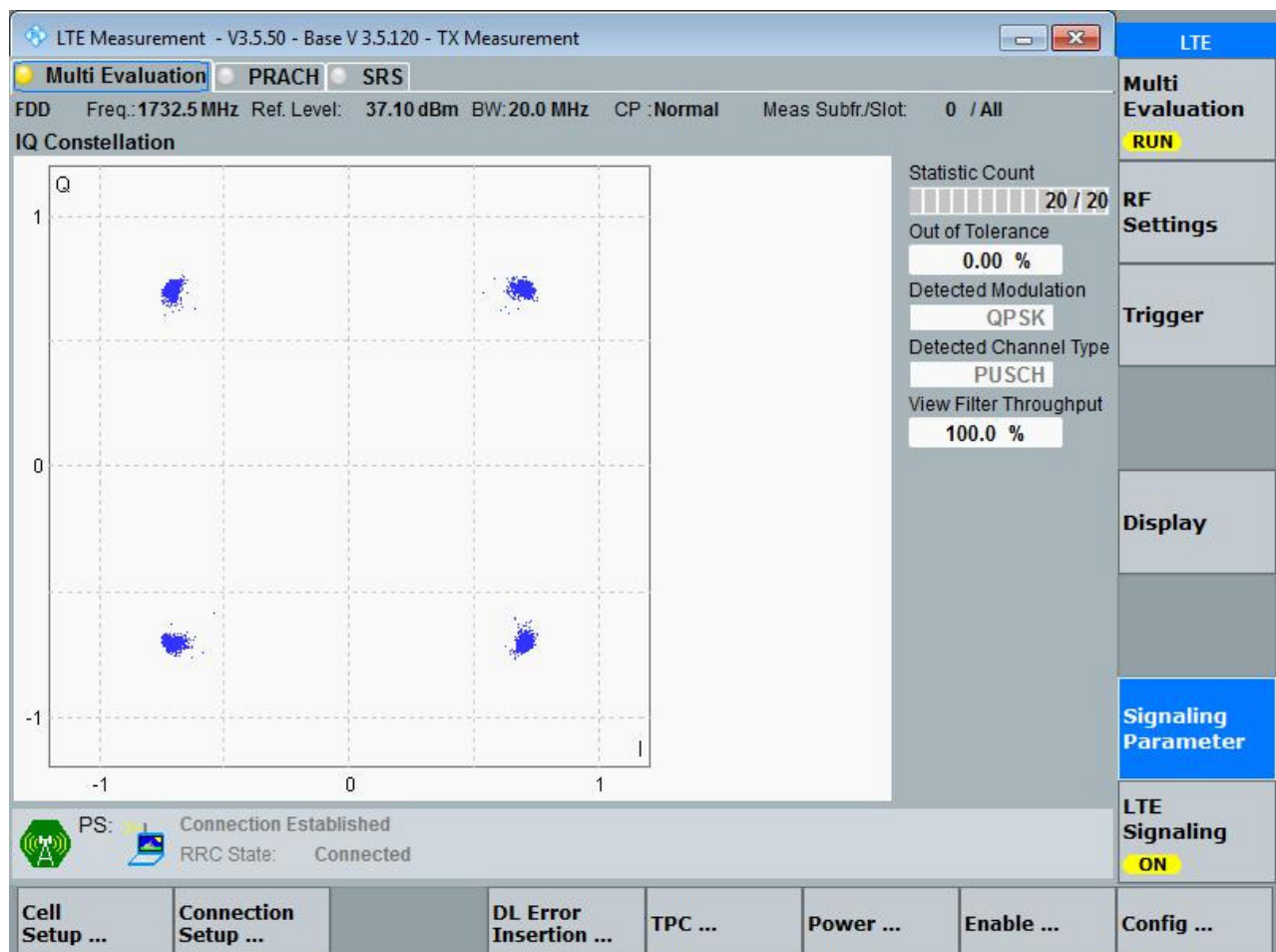
### Part I - Test Plots

### 3.1 For LTE

#### 3.1.1 Test Band = LTE BAND 4

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

#### 3.1.1.1.1 Test Channel = MCH





## 4 Bandwidth

### Part I - Test Results

Test Band	Test Mode	Test Channel	Occupied Bandwidth [MHz]	Emission Bandwidth [MHz]	Verdict
BAND 4	TM1/1.4MHz	LCH	1.091	1.221	PASS
		MCH	1.088	1.221	PASS
		HCH	1.088	1.254	PASS
	TM2/1.4MHz	LCH	1.091	1.248	PASS
		MCH	1.088	1.221	PASS
		HCH	1.091	1.206	PASS
	TM1/ 3MHz	LCH	2.697	2.904	PASS
		MCH	2.697	2.868	PASS
		HCH	2.691	2.886	PASS
	TM2/3MHz	LCH	2.697	2.892	PASS
		MCH	2.697	2.862	PASS
		HCH	2.691	2.868	PASS
	TM1/ 5MHz	LCH	4.476	4.710	PASS
		MCH	4.476	4.720	PASS
		HCH	4.476	4.760	PASS
	TM2/ 5MHz	LCH	4.476	4.760	PASS
		MCH	4.486	4.760	PASS
		HCH	4.486	4.740	PASS
	TM1/10MHz	LCH	8.931	9.300	PASS
		MCH	8.931	9.280	PASS
		HCH	8.931	9.300	PASS
	TM1/15MHz	LCH	13.431	14.842	PASS
		MCH	13.402	14.690	PASS
		HCH	13.433	14.72	PASS
	TM1/20MHz	LCH	17.862	19.342	PASS
		MCH	17.861	19.303	PASS
		HCH	17.823	19.184	PASS



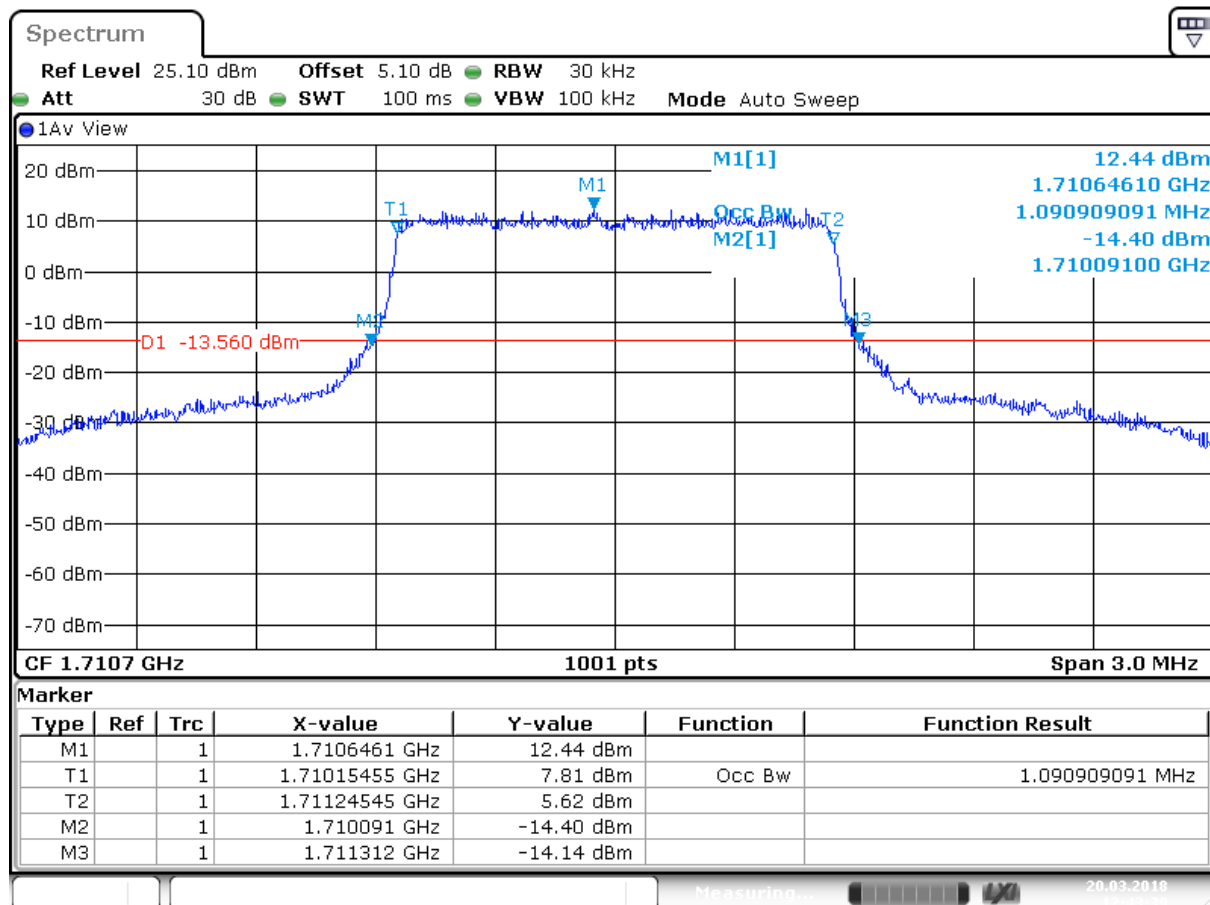


## 4.1 For LTE

### 4.1.1 Test Band = LTE BAND 4

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

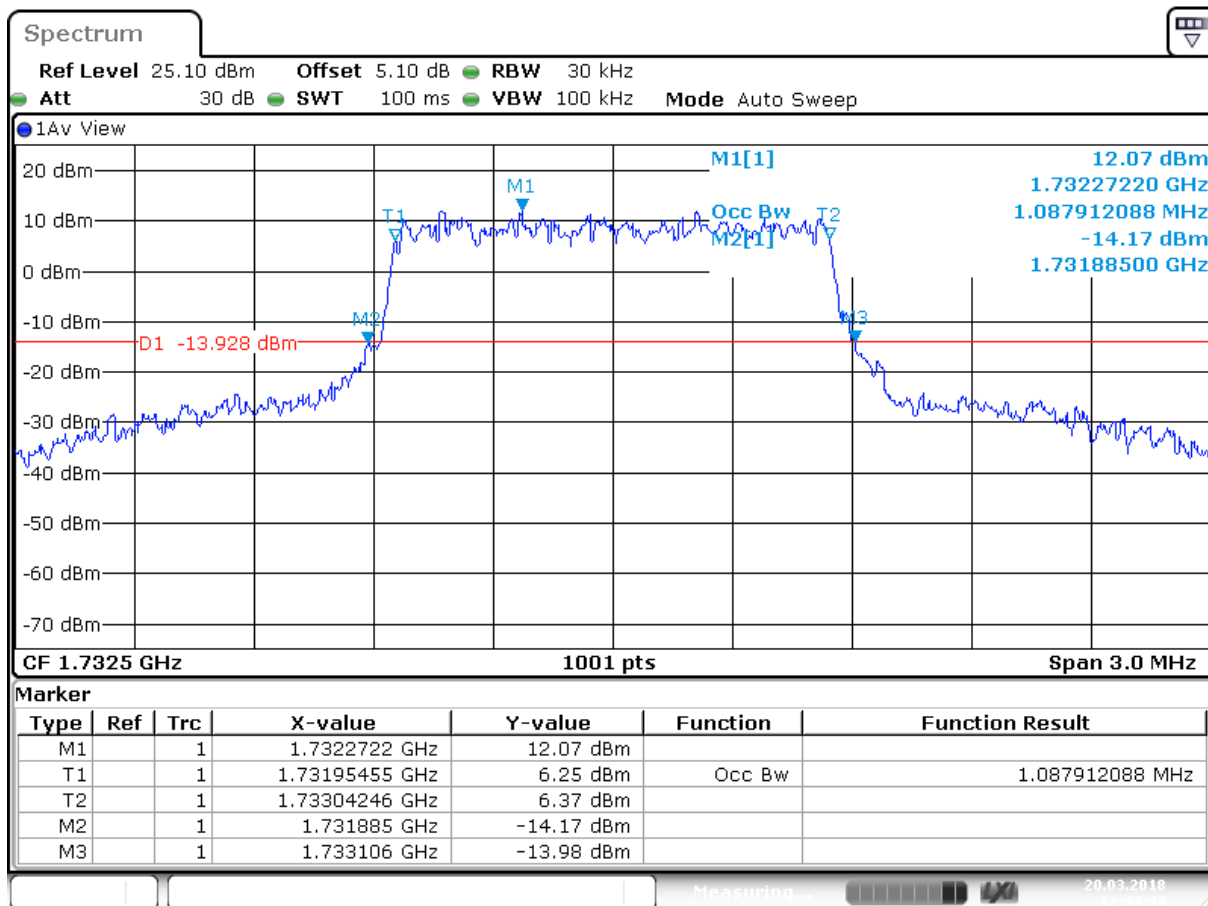
##### 4.1.1.1.1 Test Channel = LCH



Date: 20 MAR 2018 12:43:40



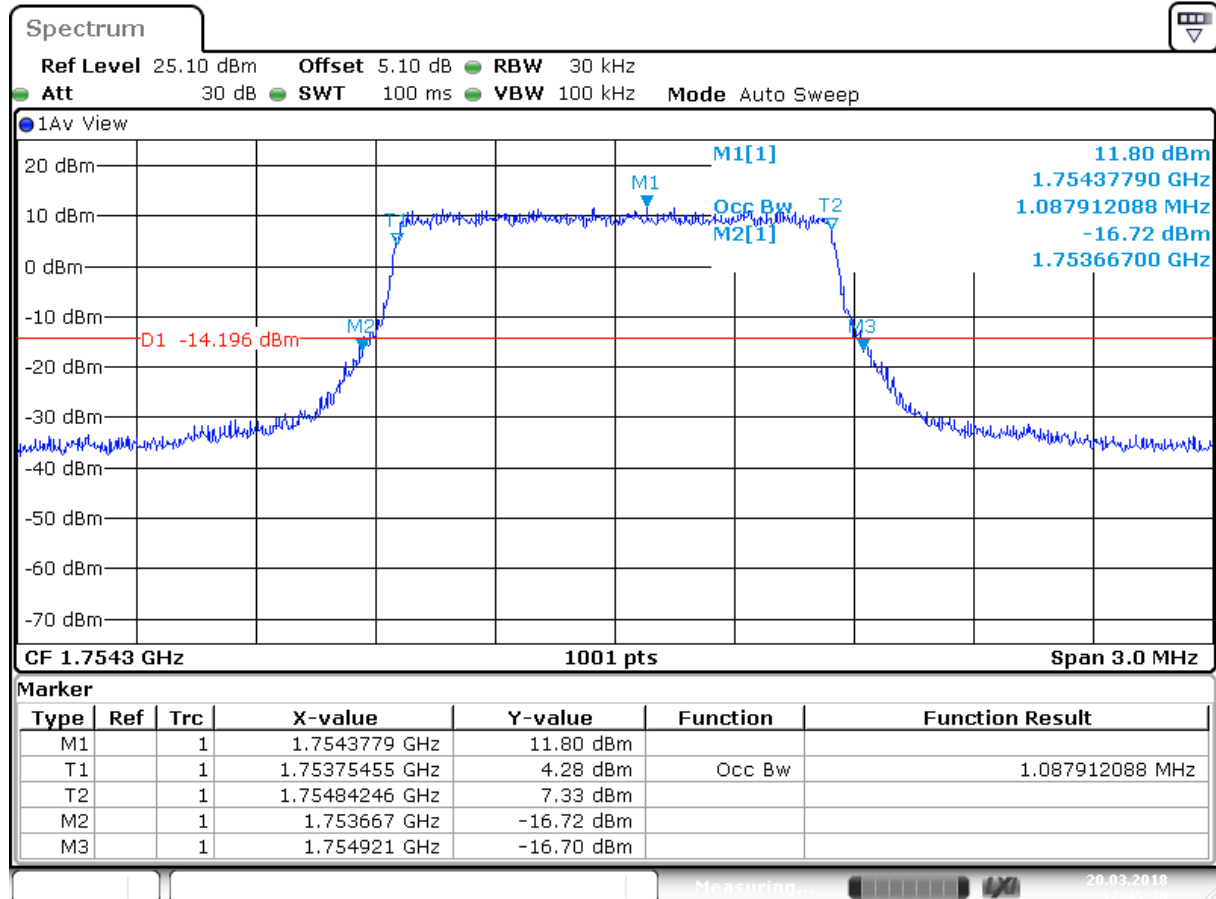
4.1.1.1.2 Test Channel = MCH



Date: 20 MAR 2018 12:44:44



4.1.1.1.3 Test Channel = HCH

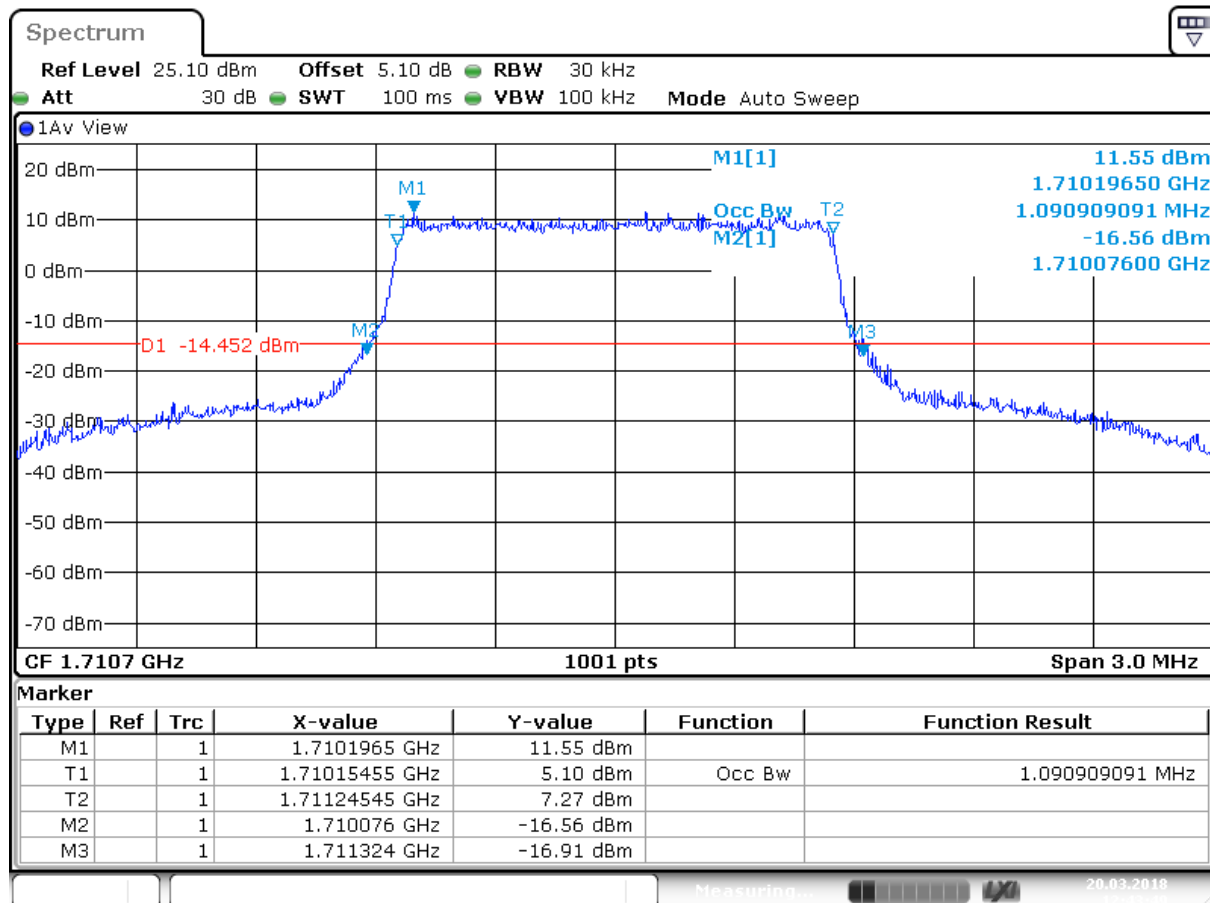


Date: 20 MAR 2018 12:45:30



4.1.1.2 Test Mode = LTE/TM2 1.4MHz

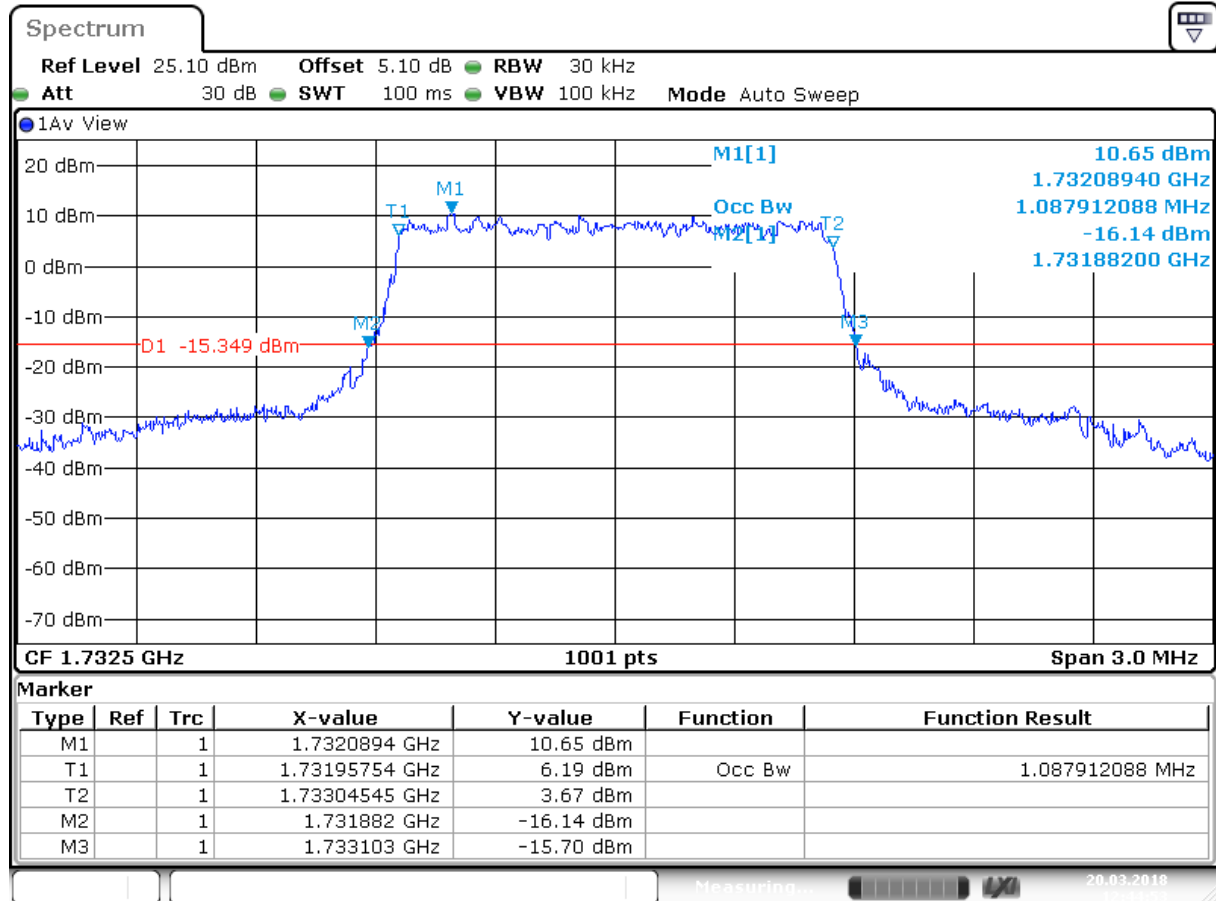
4.1.1.2.1 Test Channel = LCH



Date: 20 MAR 2018 12:43:50



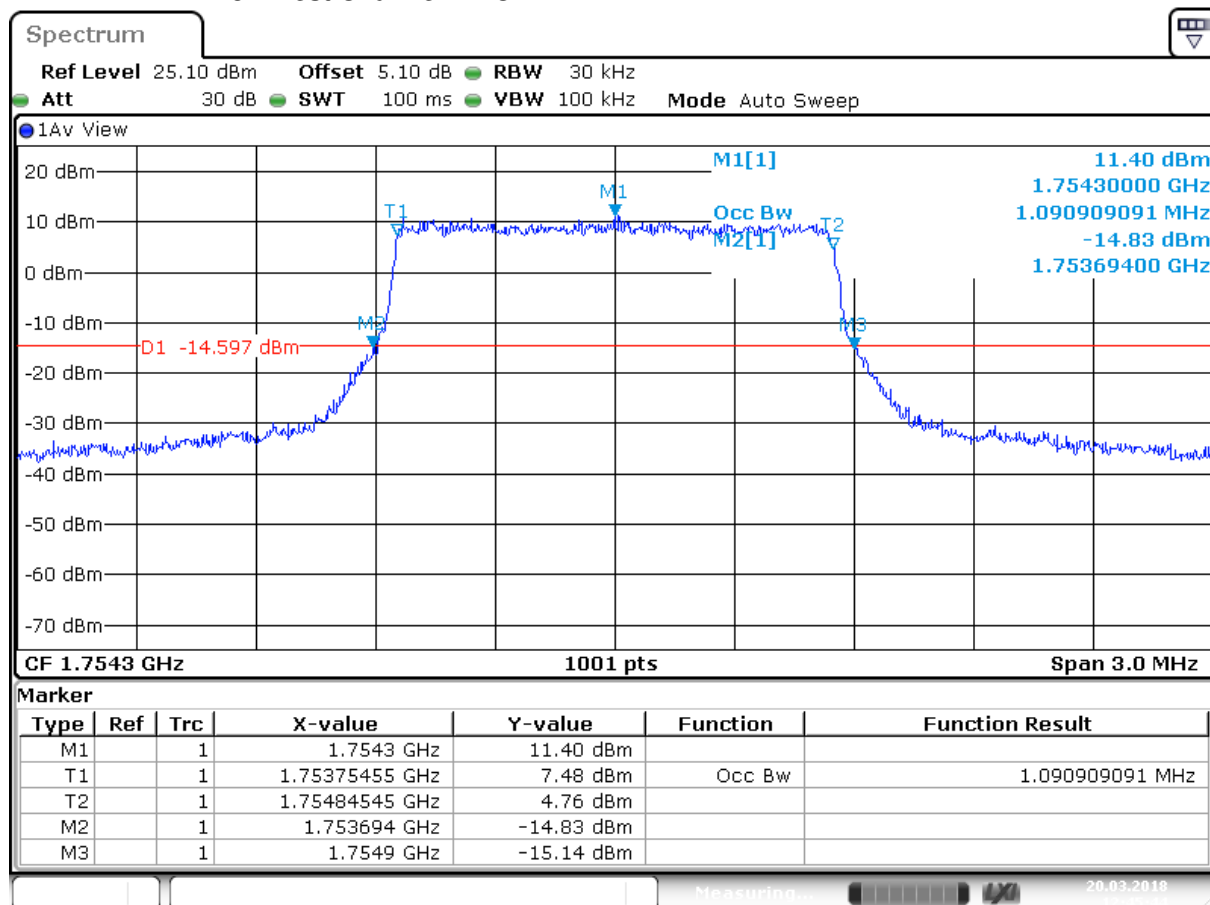
4.1.1.2.2 Test Channel = MCH



Date: 20 MAR 2018 12:44:54



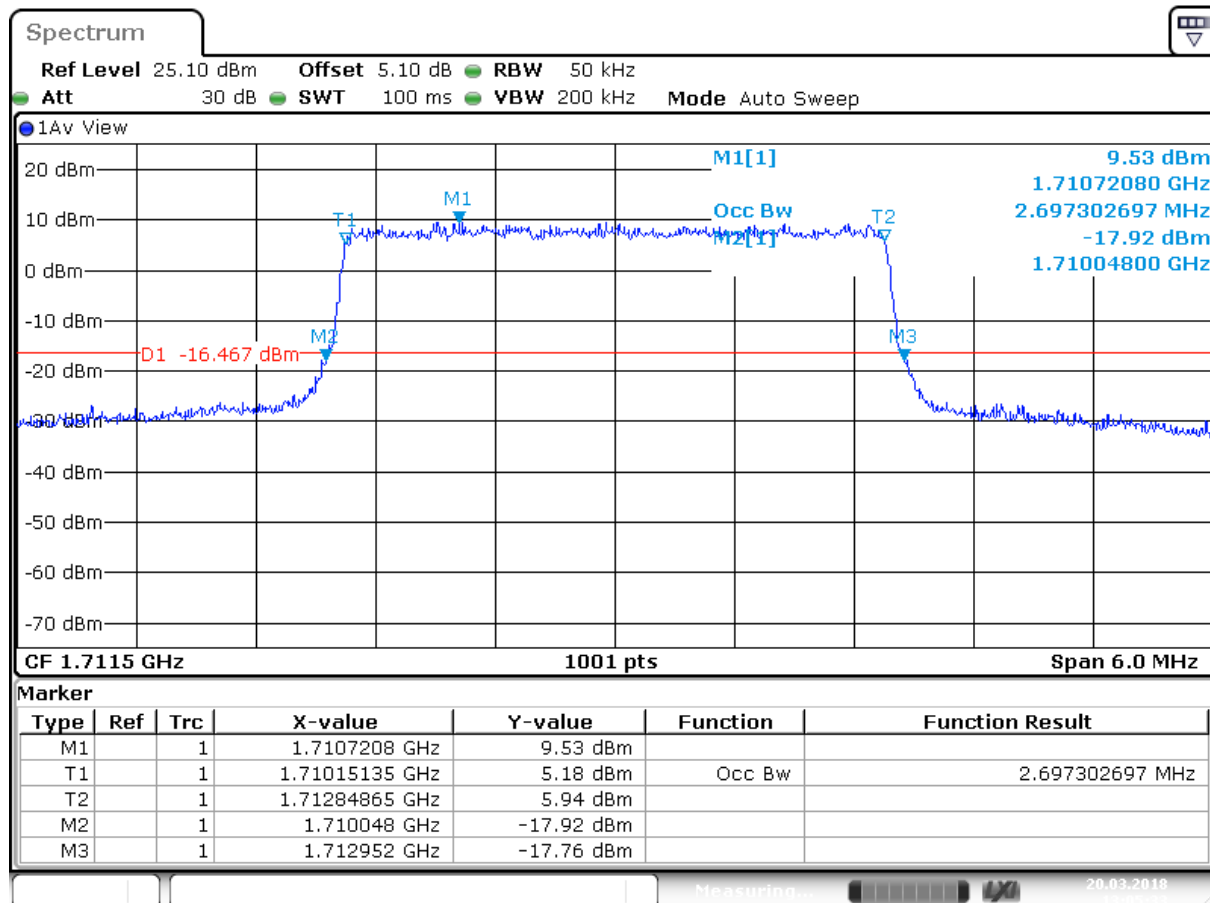
4.1.1.2.3 Test Channel = HCH



Date: 20 MAR 2018 12:45:44



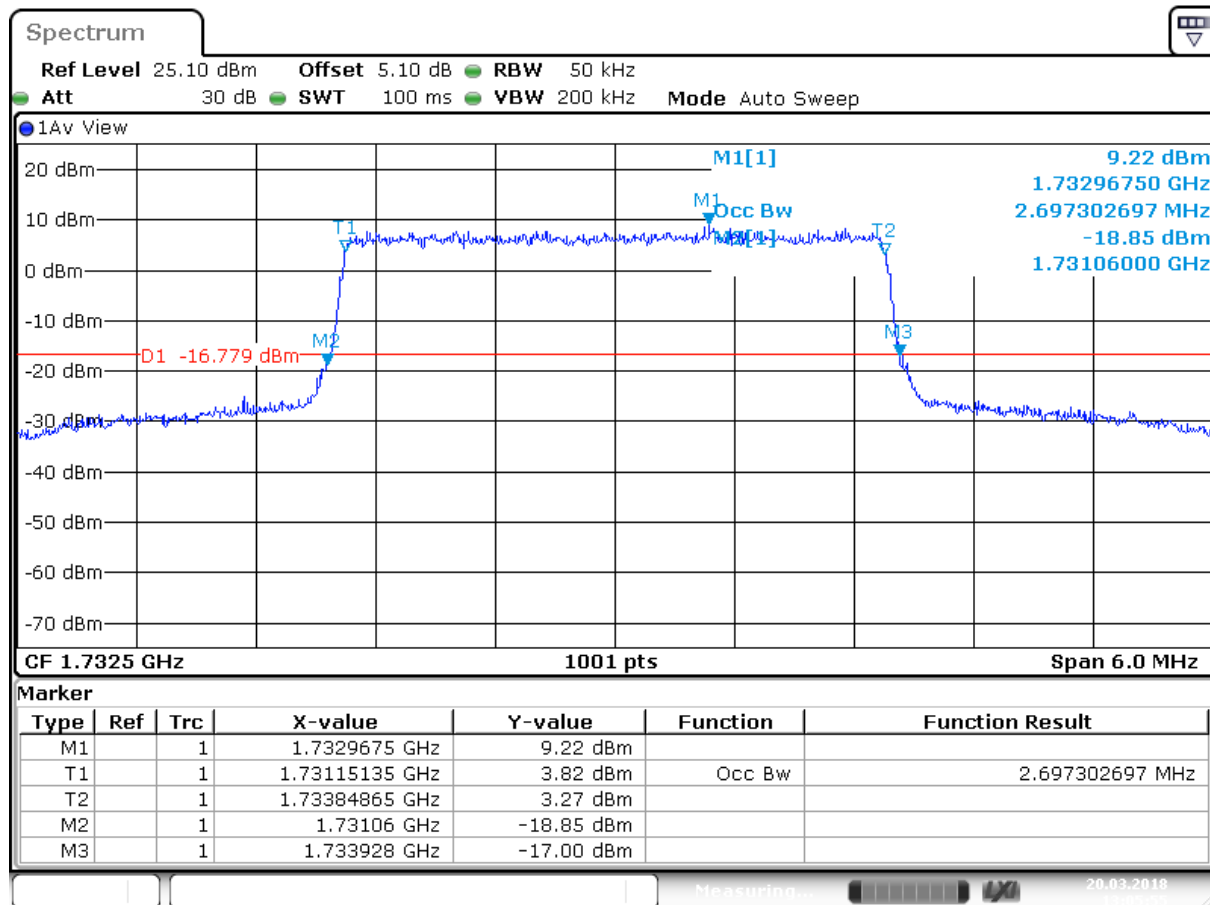
4.1.1.3 Test Mode = LTE/TM1 3MHz  
4.1.1.3.1 Test Channel = LCH



Date: 20 MAR 2018 13:05:33



4.1.1.3.2 Test Channel = MCH

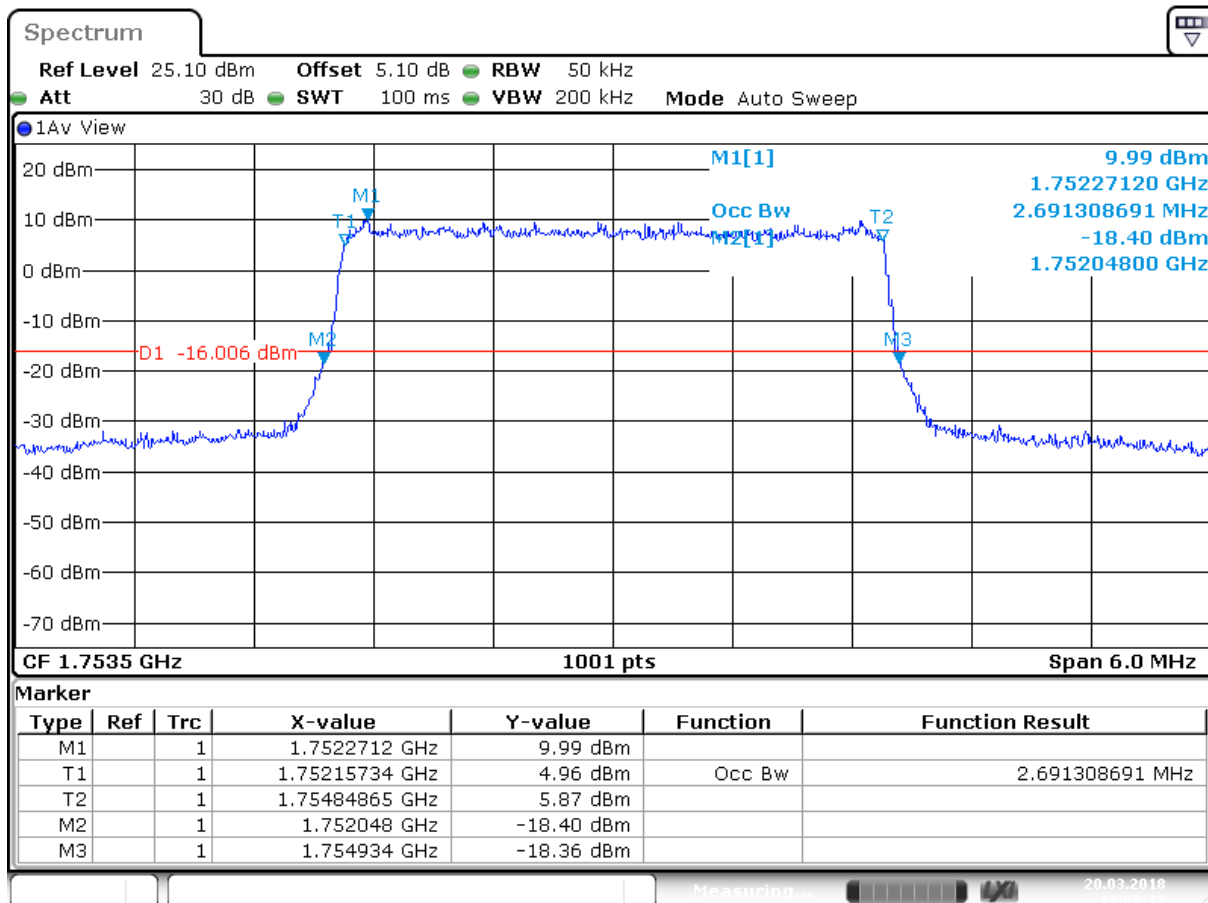


Date: 20 MAR 2018 13:05:55





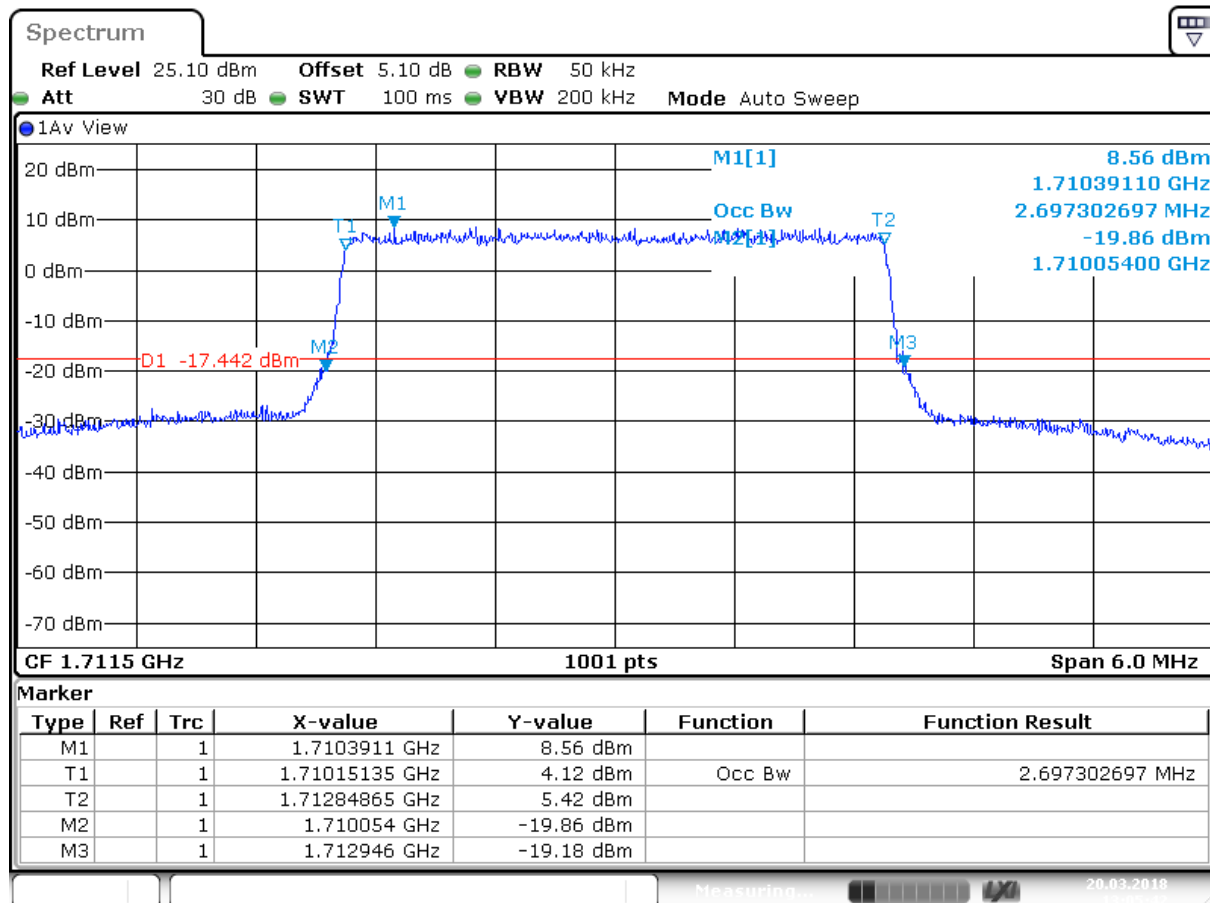
4.1.1.3.3 Test Channel = HCH



Date: 20 MAR 2018 13:06:18



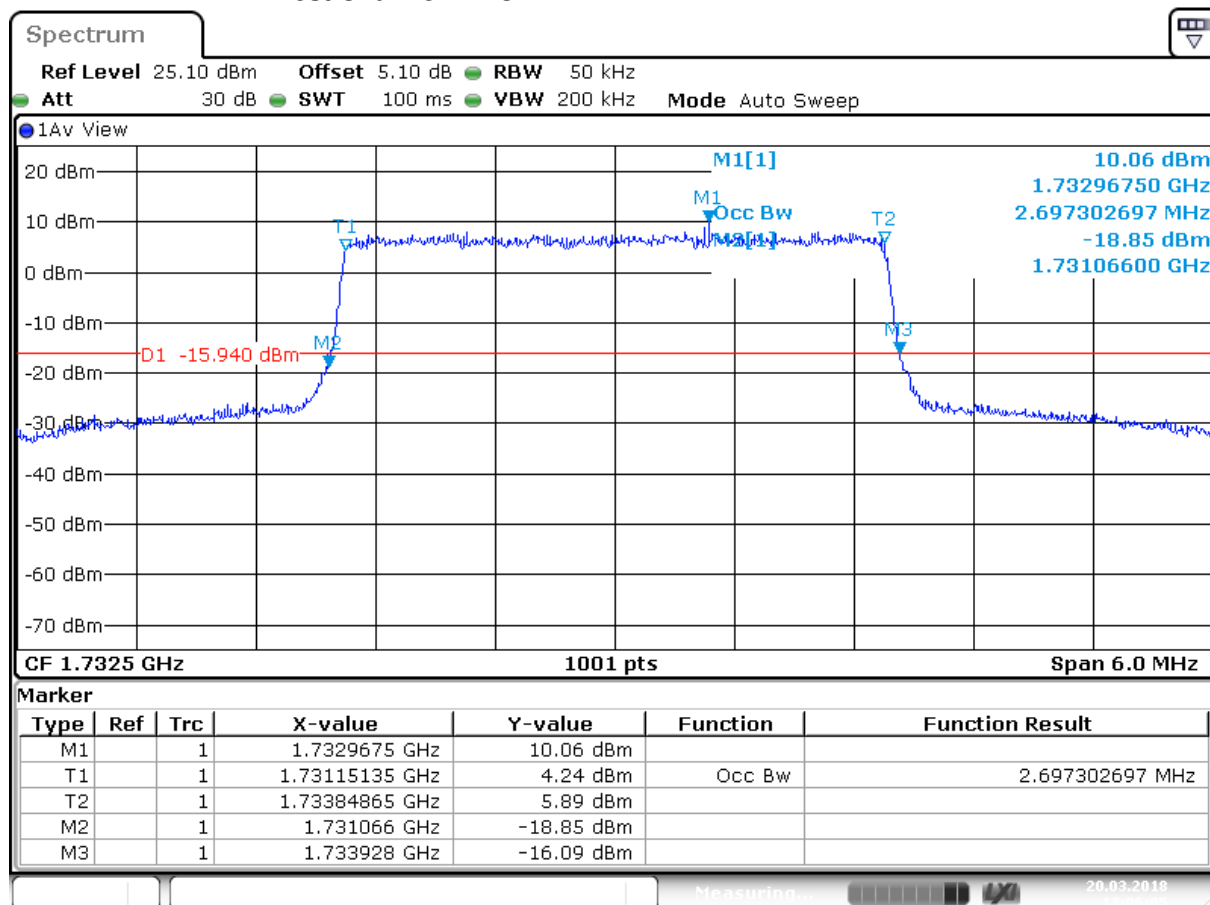
4.1.1.4 Test Mode = LTE/TM2 3MHz  
4.1.1.4.1 Test Channel = LCH



Date: 20 MAR 2018 13:05:43



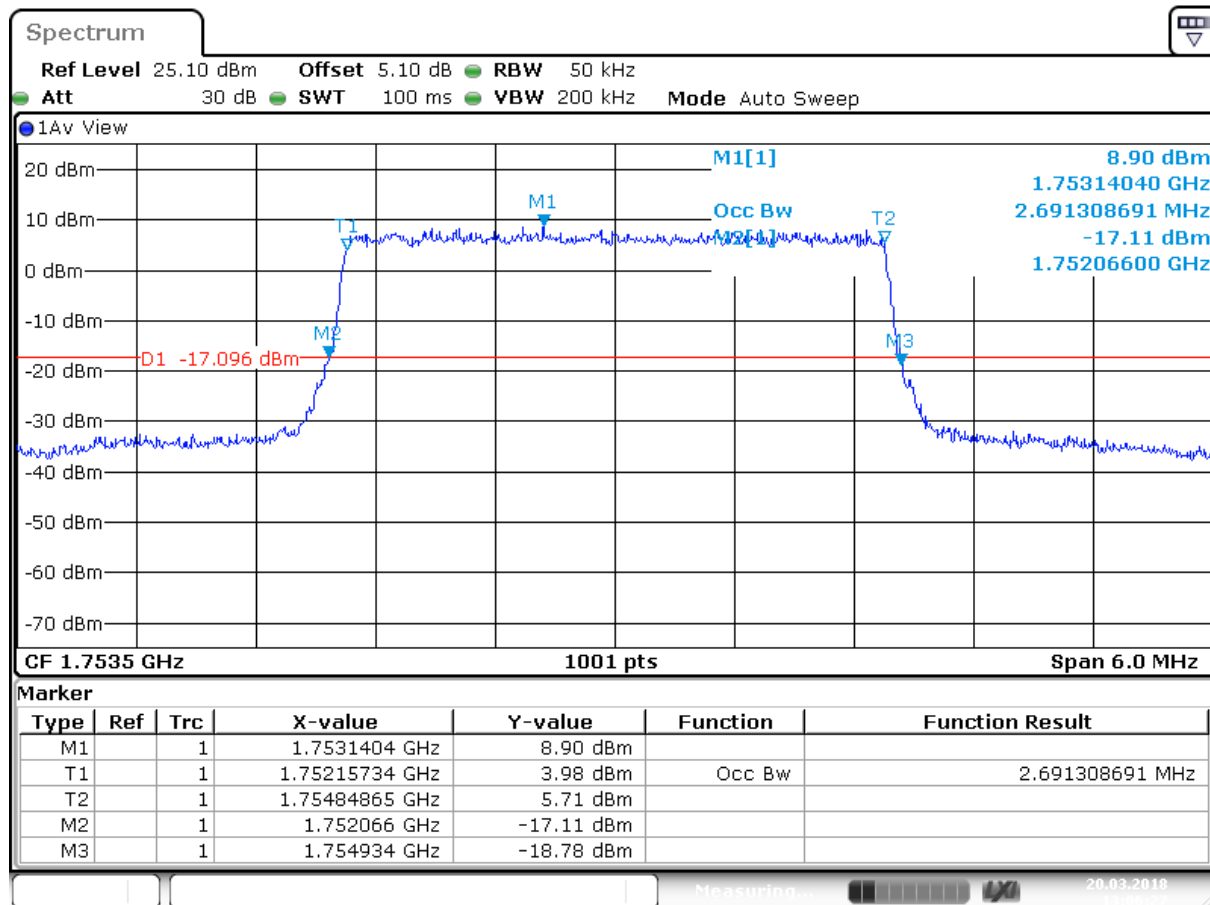
4.1.1.4.2 Test Channel = MCH



Date: 20 MAR 2018 13:06:05



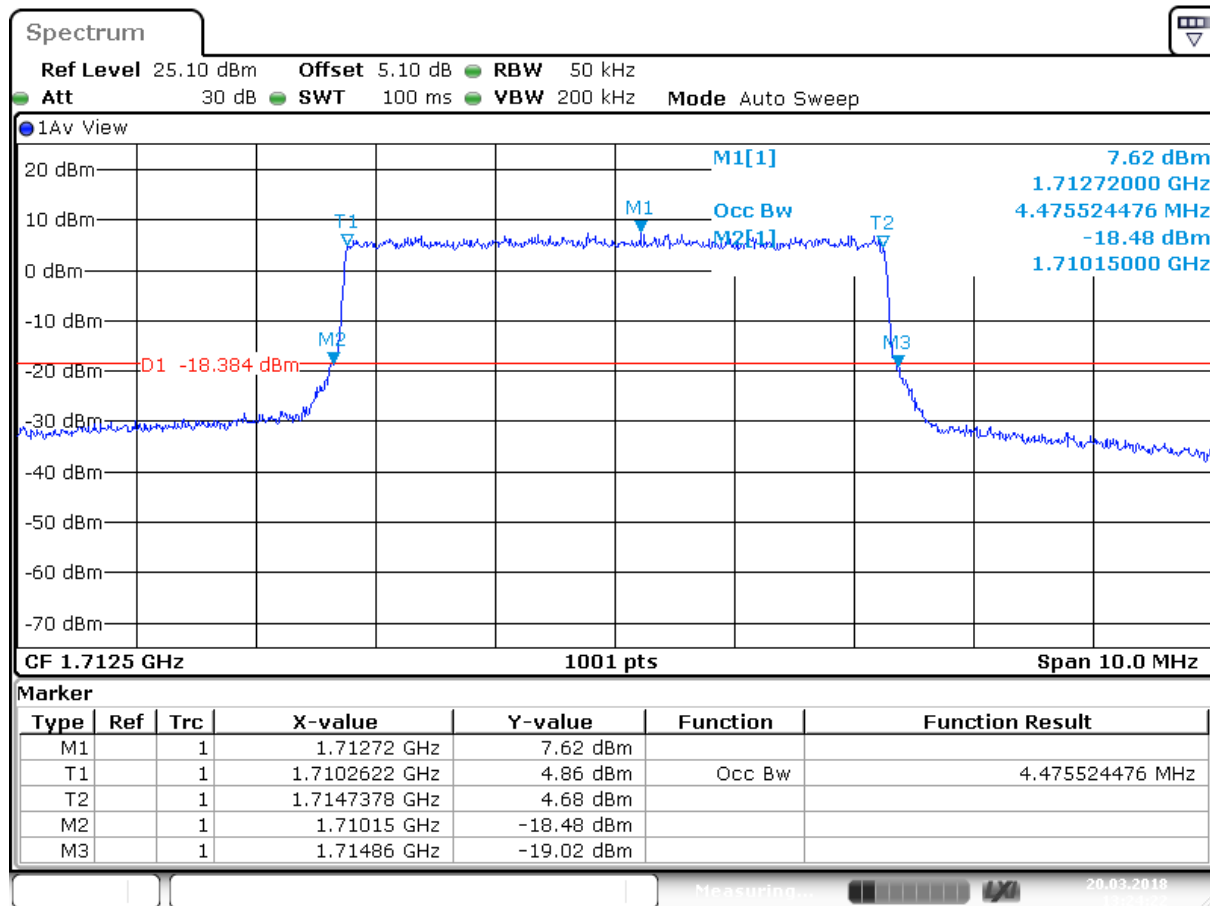
4.1.1.4.3 Test Channel = HCH



Date: 20 MAR 2018 13:06:27



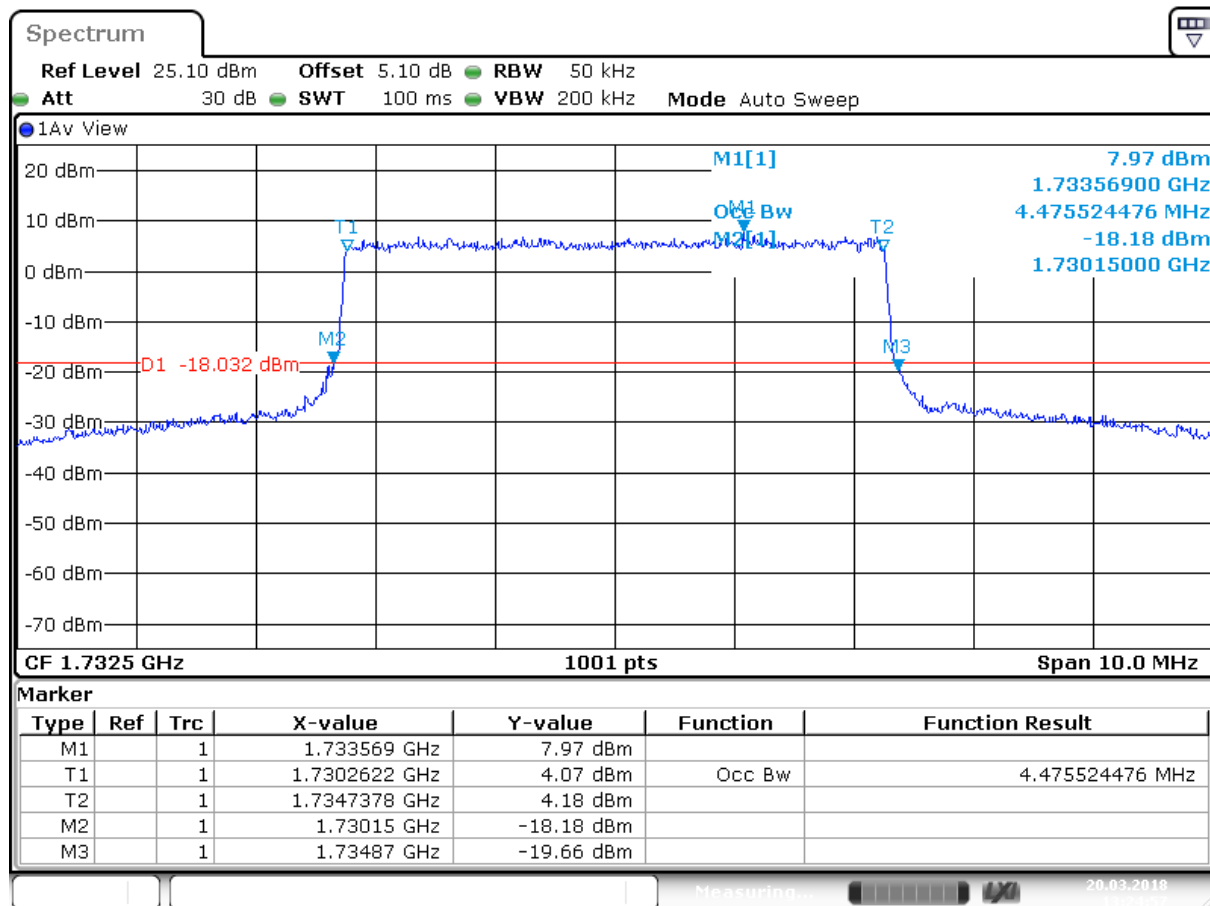
4.1.1.5 Test Mode = LTE/TM1 5MHz  
4.1.1.5.1 Test Channel = LCH



Date: 20 MAR 2018 13:24:22



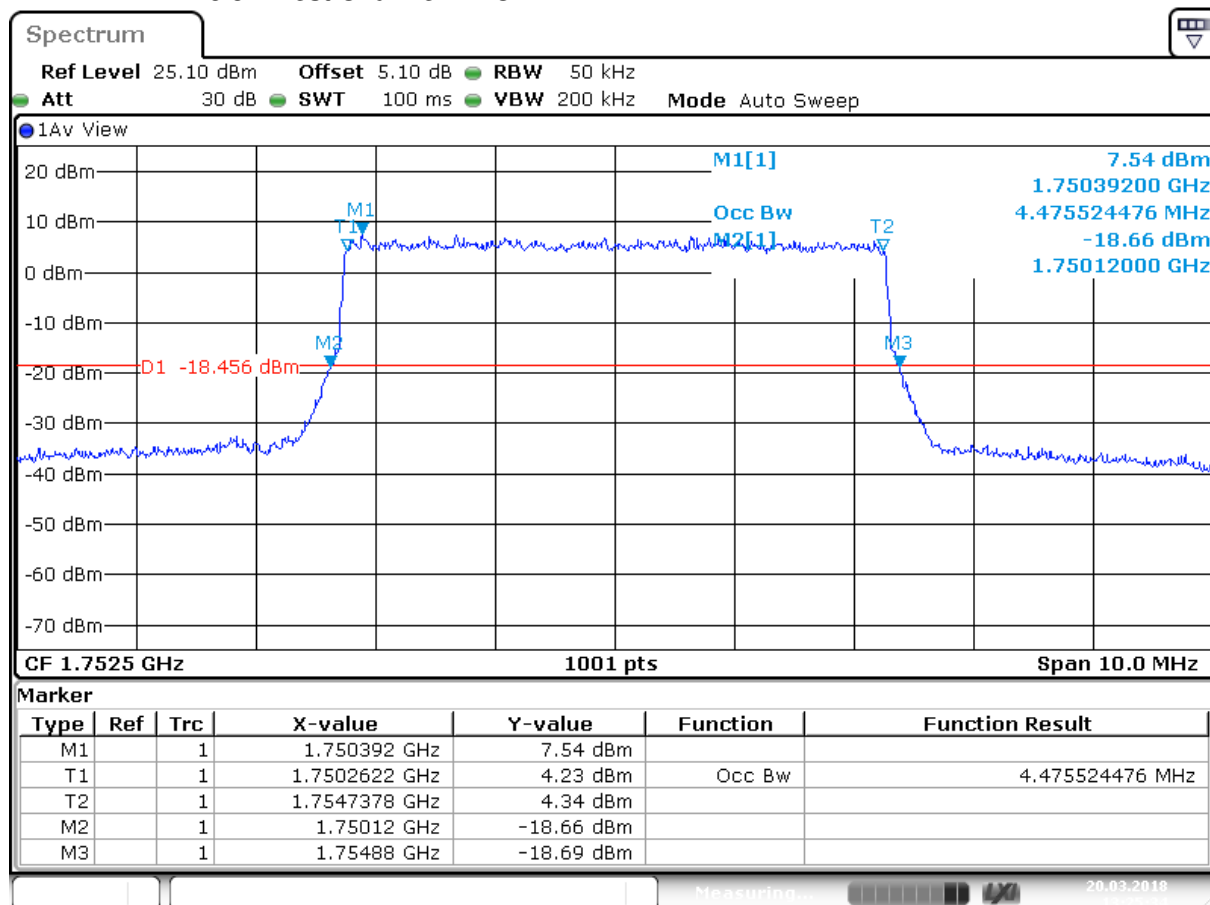
4.1.1.5.2 Test Channel = MCH



Date: 20 MAR 2018 13:24:58



4.1.1.5.3 Test Channel = HCH

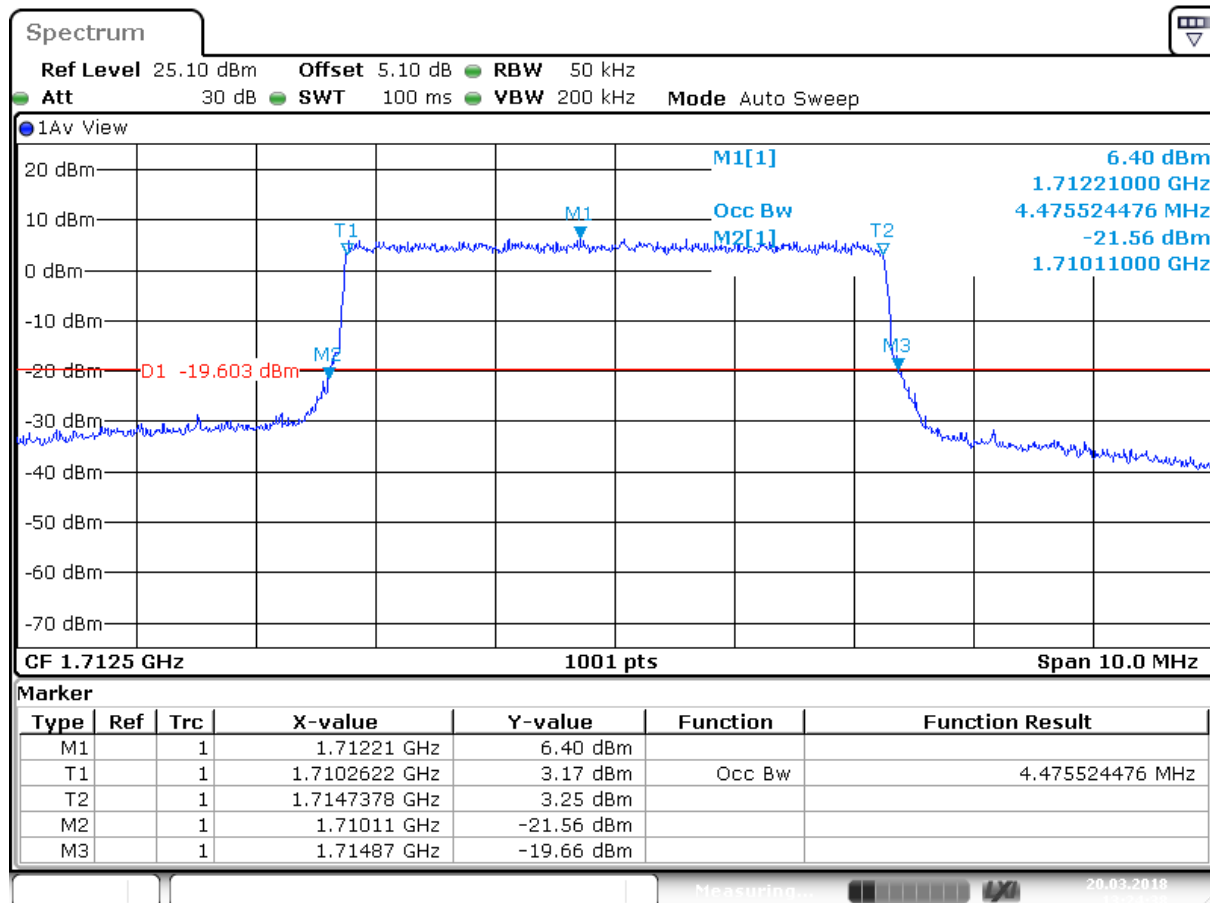


Date: 20 MAR 2018 13:25:34



4.1.1.6 Test Mode = LTE/TM2 5MHz

4.1.1.6.1 Test Channel = LCH

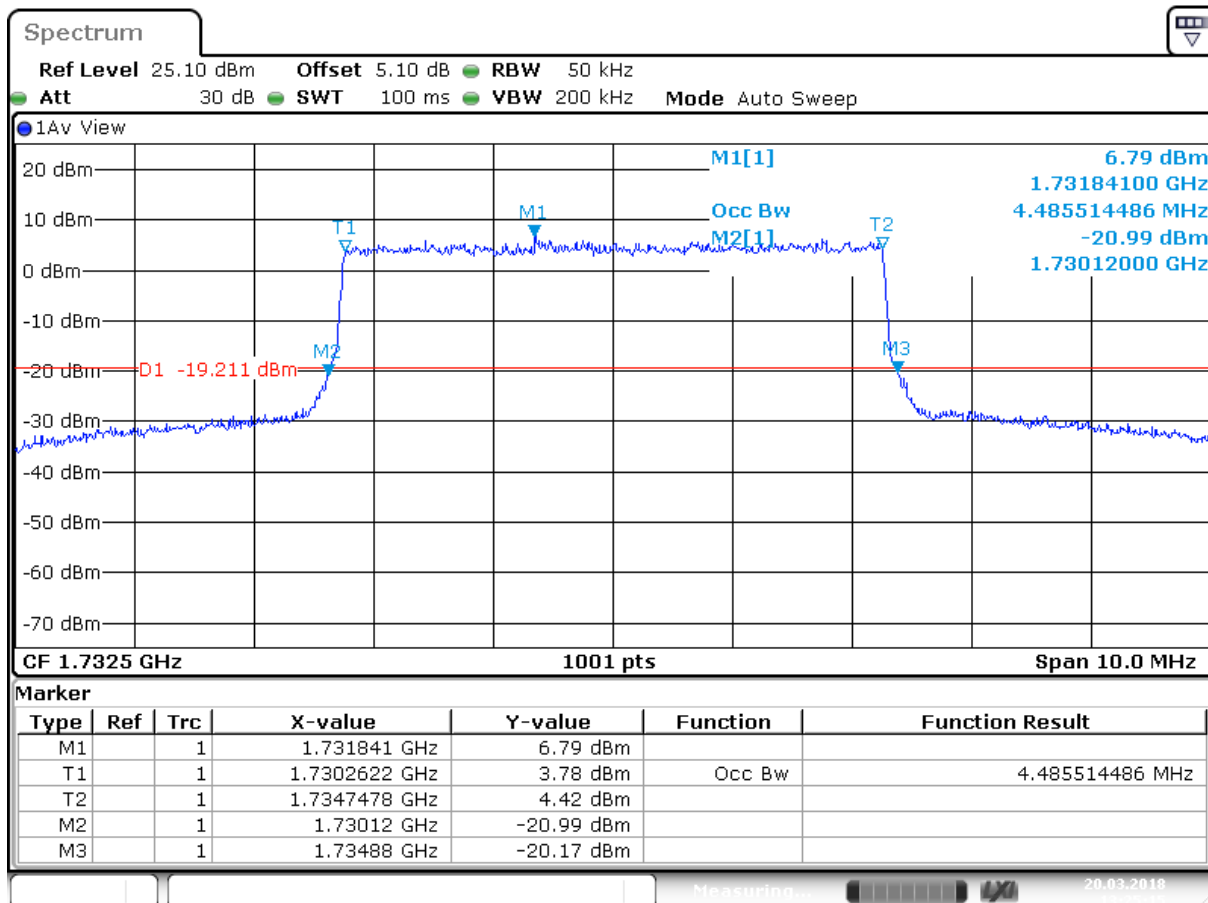


Date: 20 MAR 2018 13:24:38





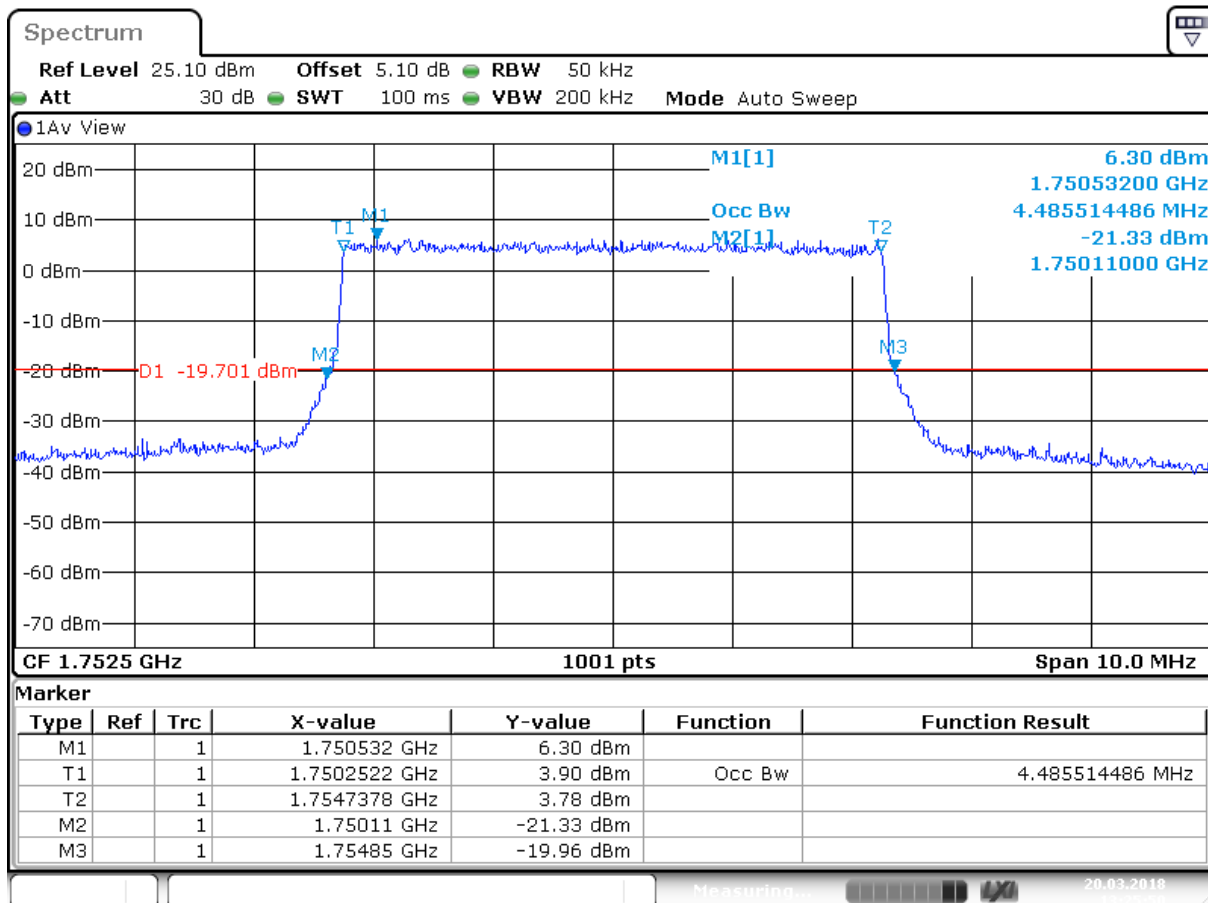
4.1.1.6.2 Test Channel = MCH



Date: 20 MAR 2018 13:25:15



4.1.1.6.3 Test Channel = HCH

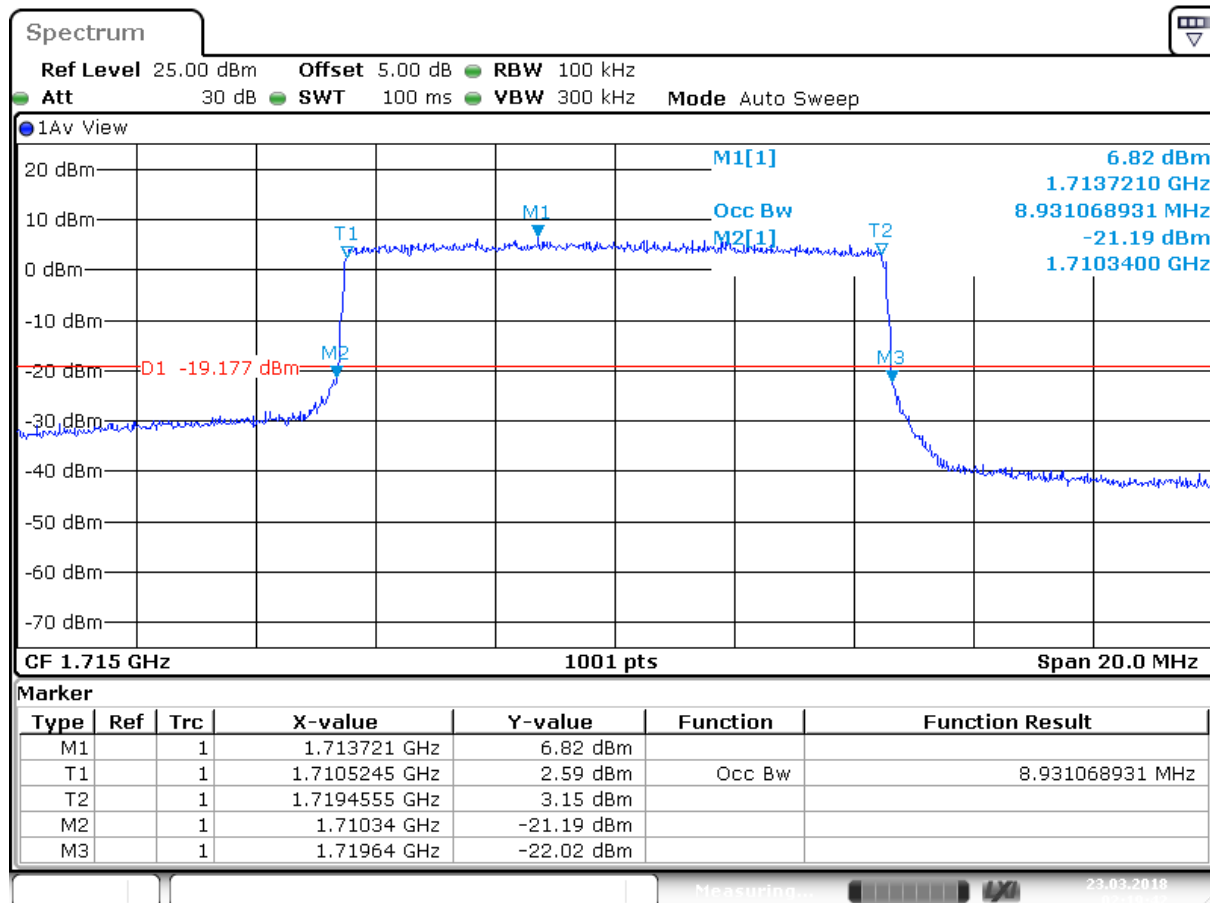


Date: 20 MAR 2018 13:25:51



4.1.1.7 Test Mode = LTE/TM1 10MHz

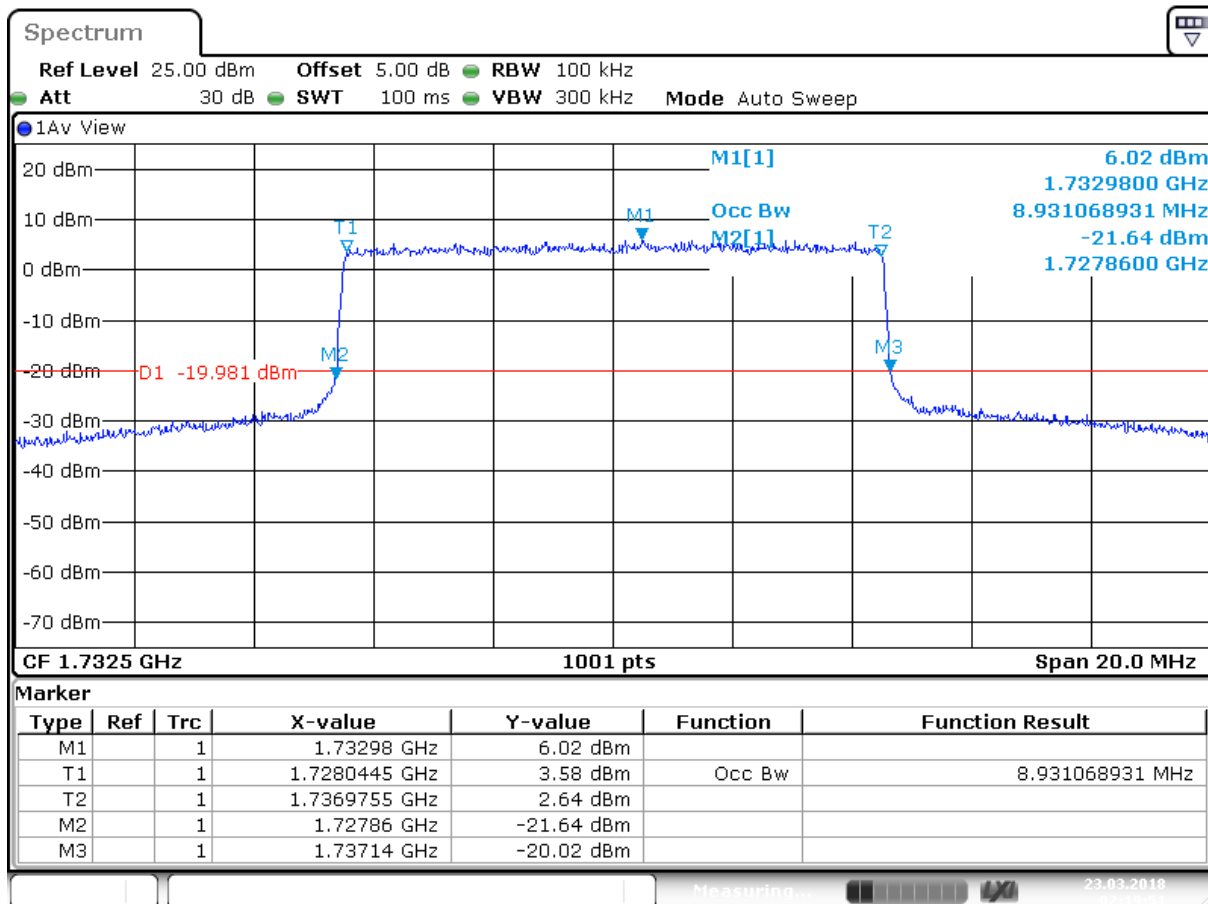
4.1.1.7.1 Test Channel = LCH



Date: 23 MAR 2018 02:19:42



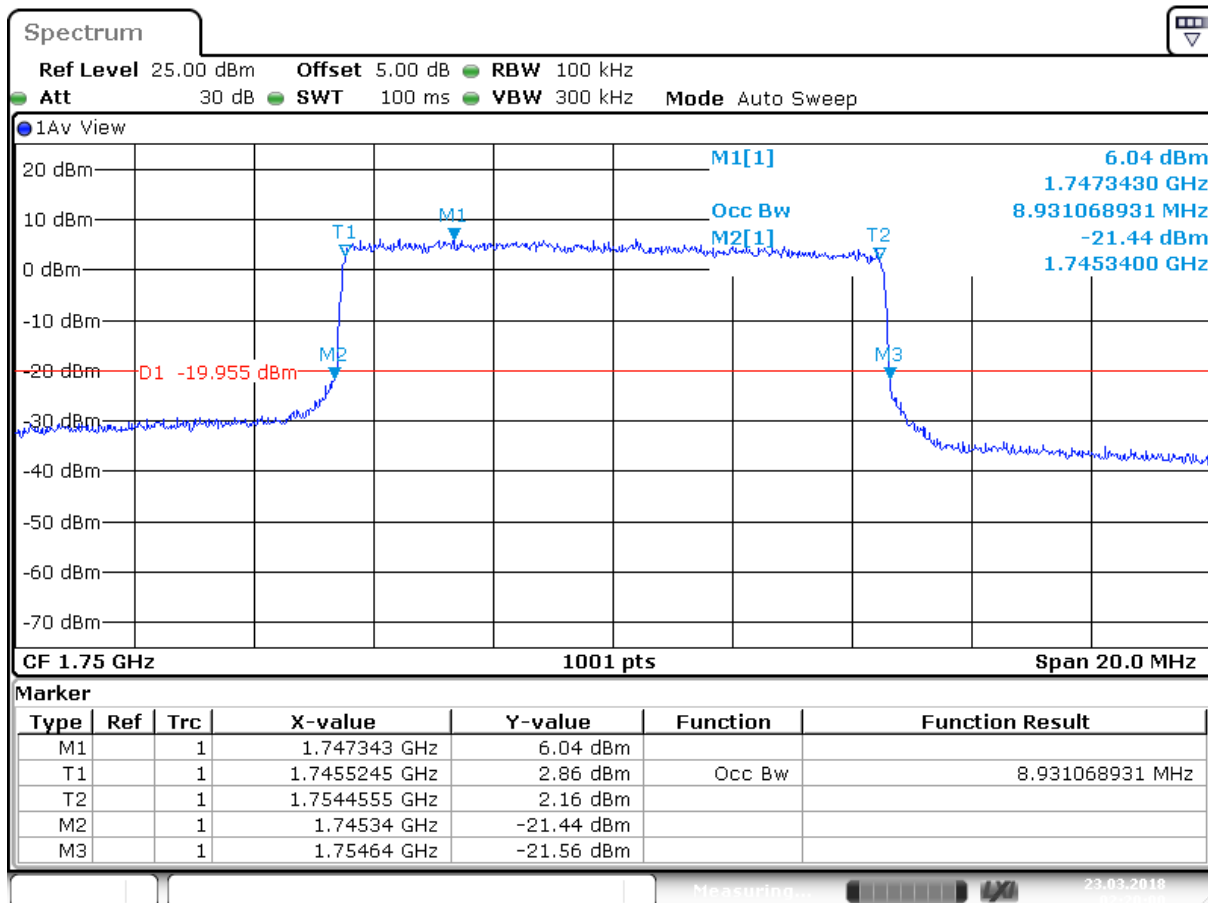
4.1.1.7.2 Test Channel = MCH



Date: 23 MAR 2018 02:19:52



4.1.1.7.3 Test Channel = HCH

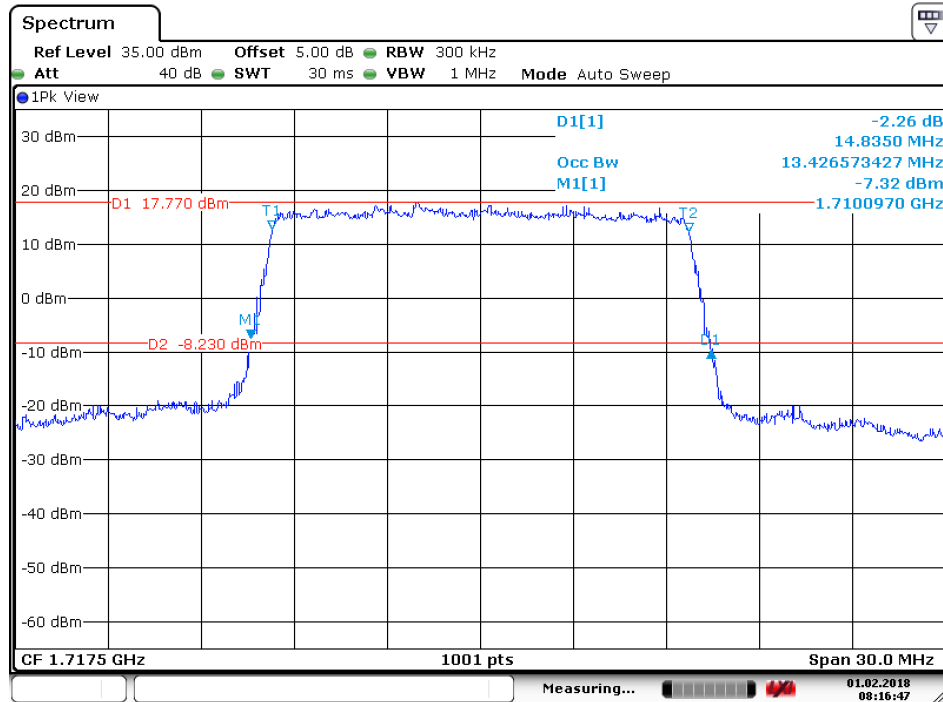


Date: 23 MAR 2018 02:20:01



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

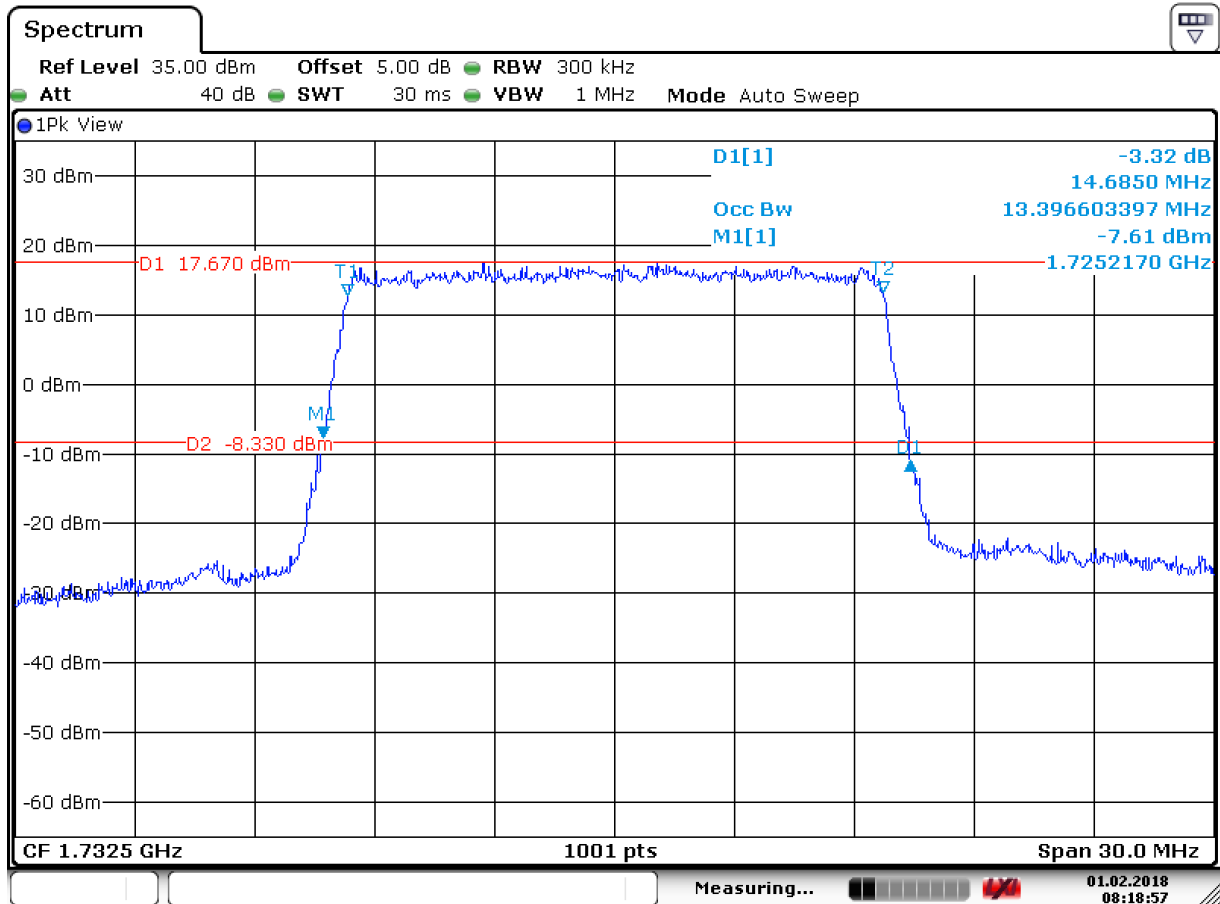
##### 4.1.1.8.1 Test Channel = LCH



Date: 1.FEB.2018 08:16:47



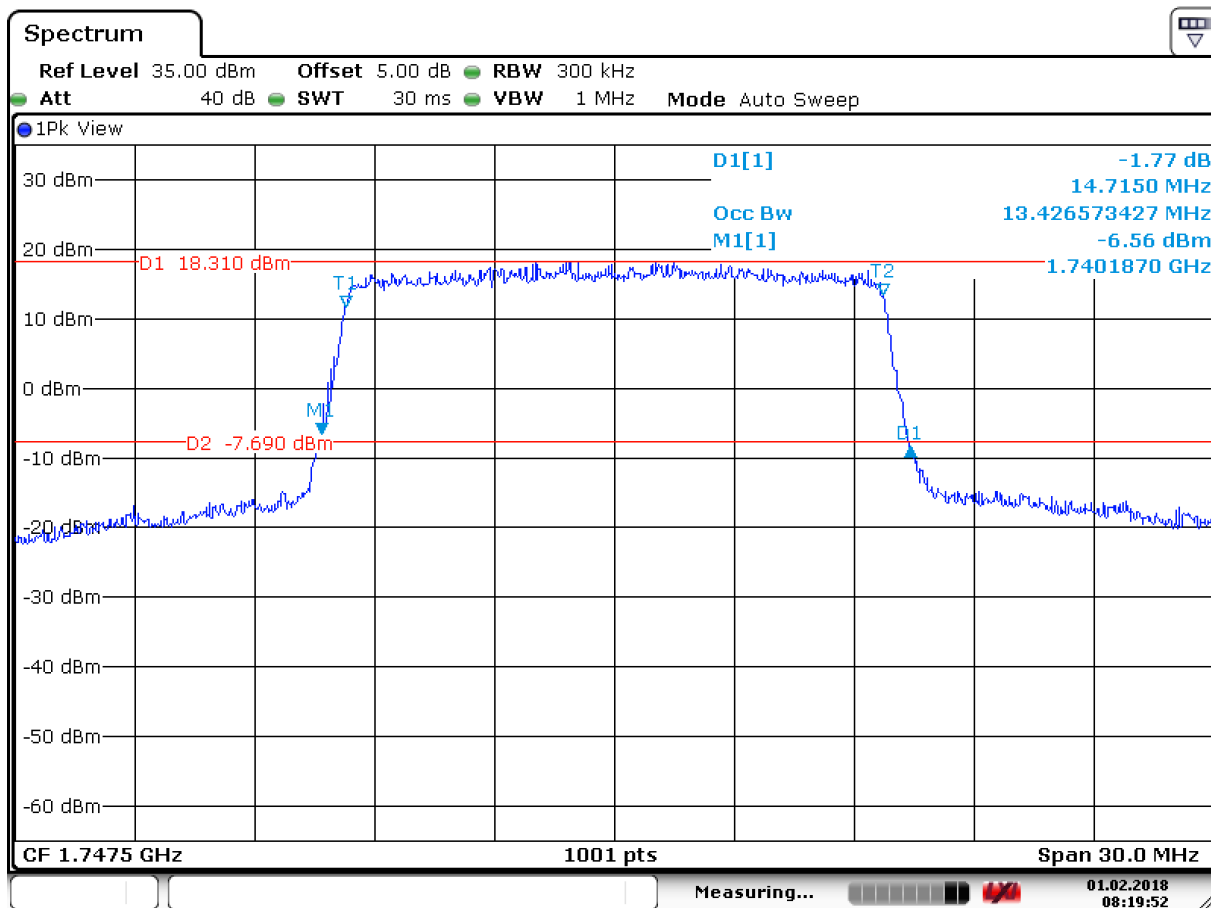
4.1.1.8.2 Test Channel = MCH



Date: 1.FEB.2018 08:18:57



4.1.1.8.3 Test Channel = HCH



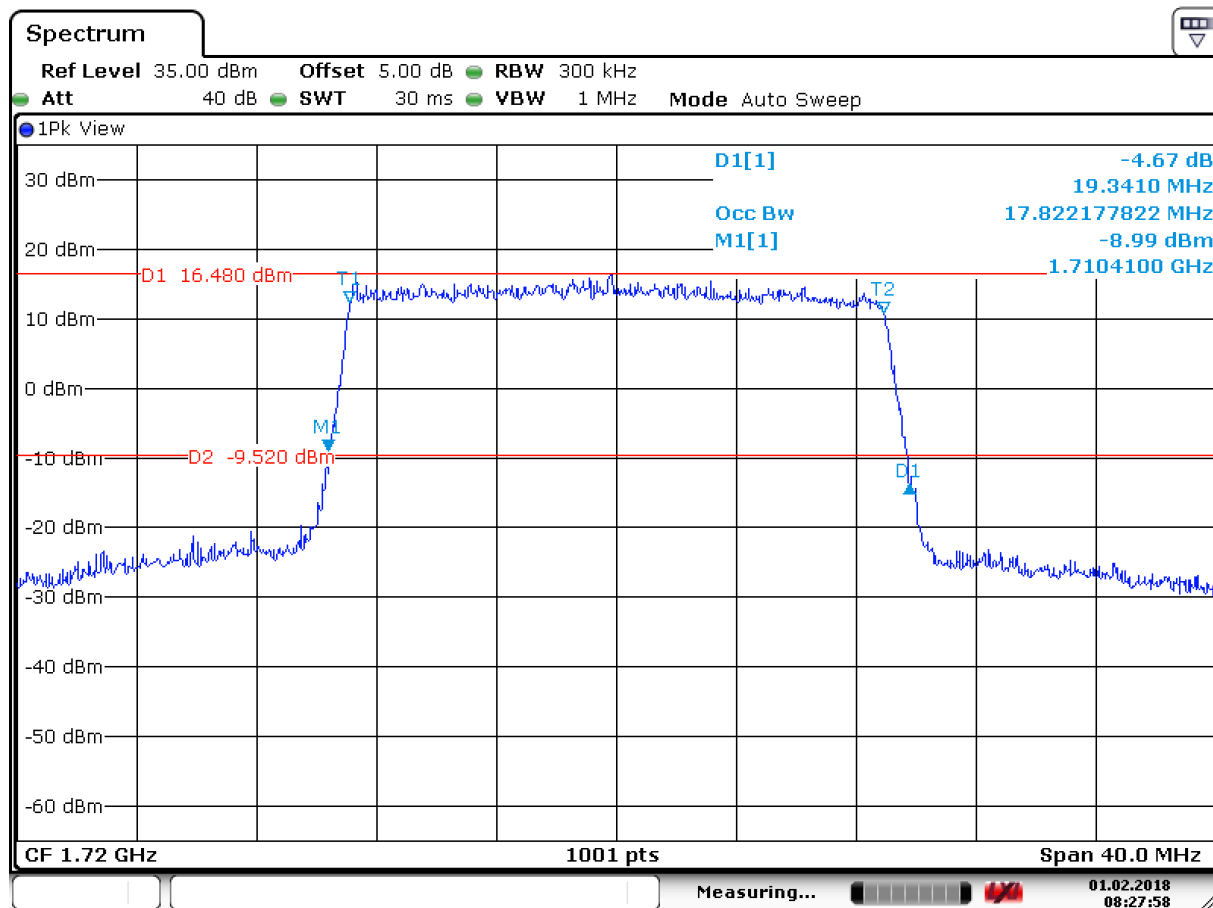
Date: 1.FEB.2018 08:19:52





4.1.1.9 Test Mode = LTE/TM1 20MHz

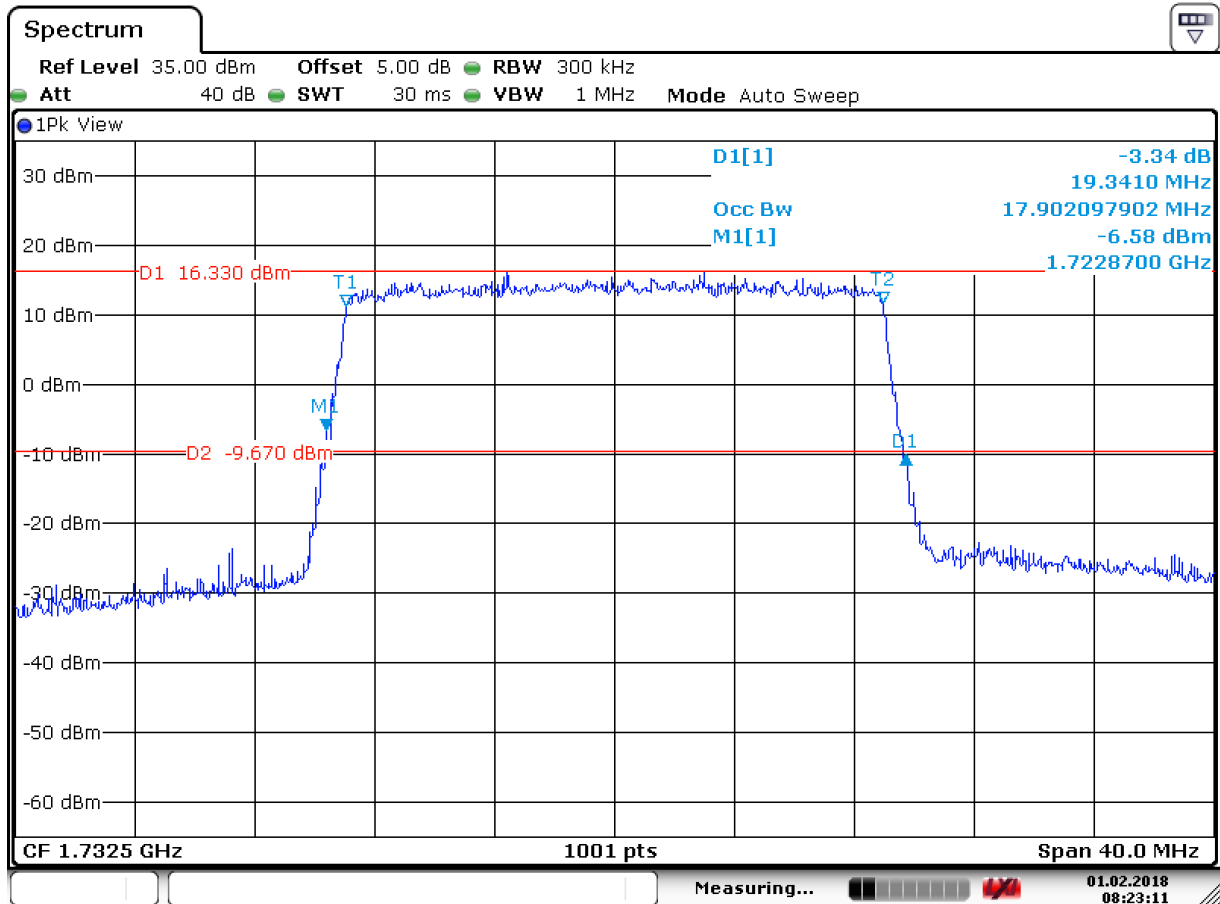
4.1.1.9.1 Test Channel = LCH



Date: 1.FEB.2018 08:27:58



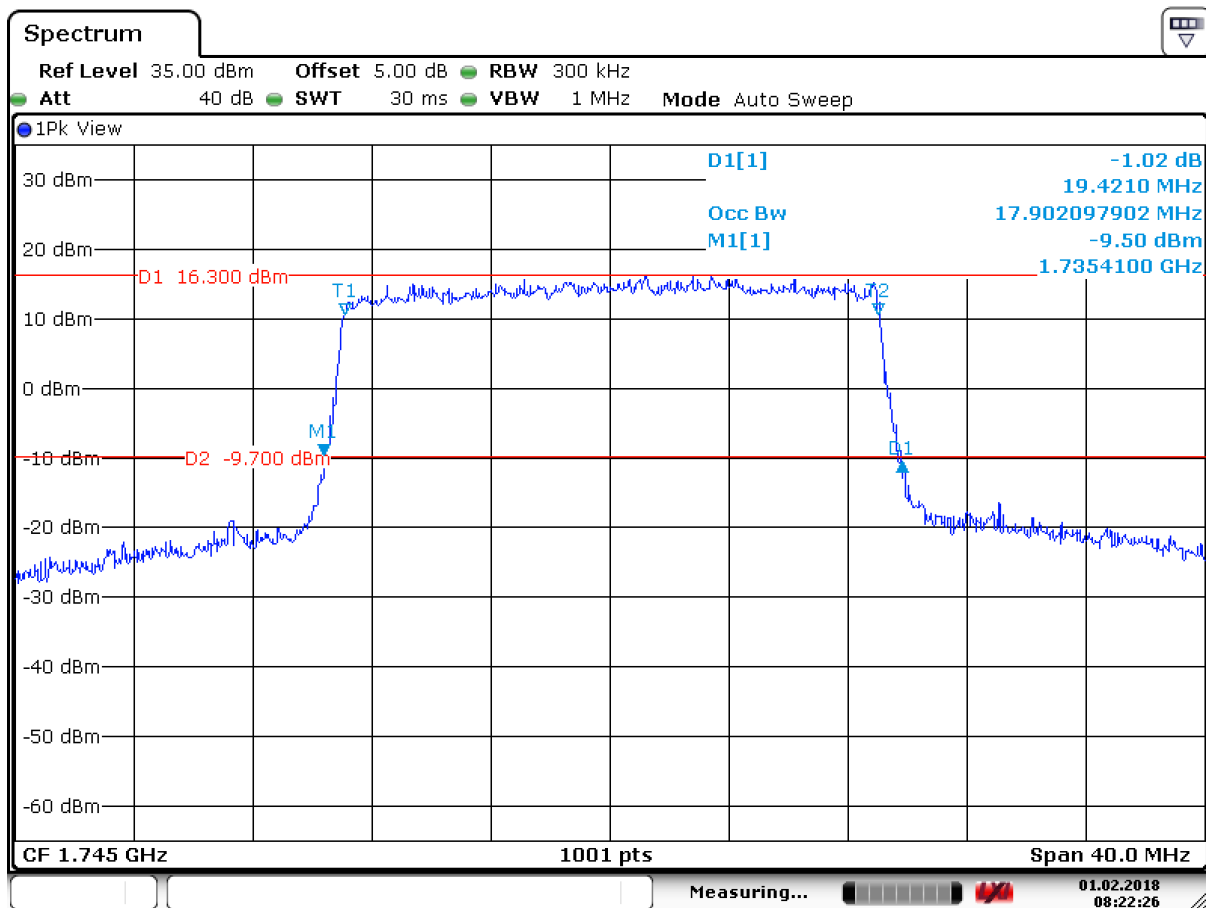
4.1.1.9.2 Test Channel = MCH



Date: 1.FEB.2018 08:23:12



4.1.1.9.3 Test Channel = HCH



Date: 1.FEB.2018 08:22:26

## 5 Band Edges Compliance

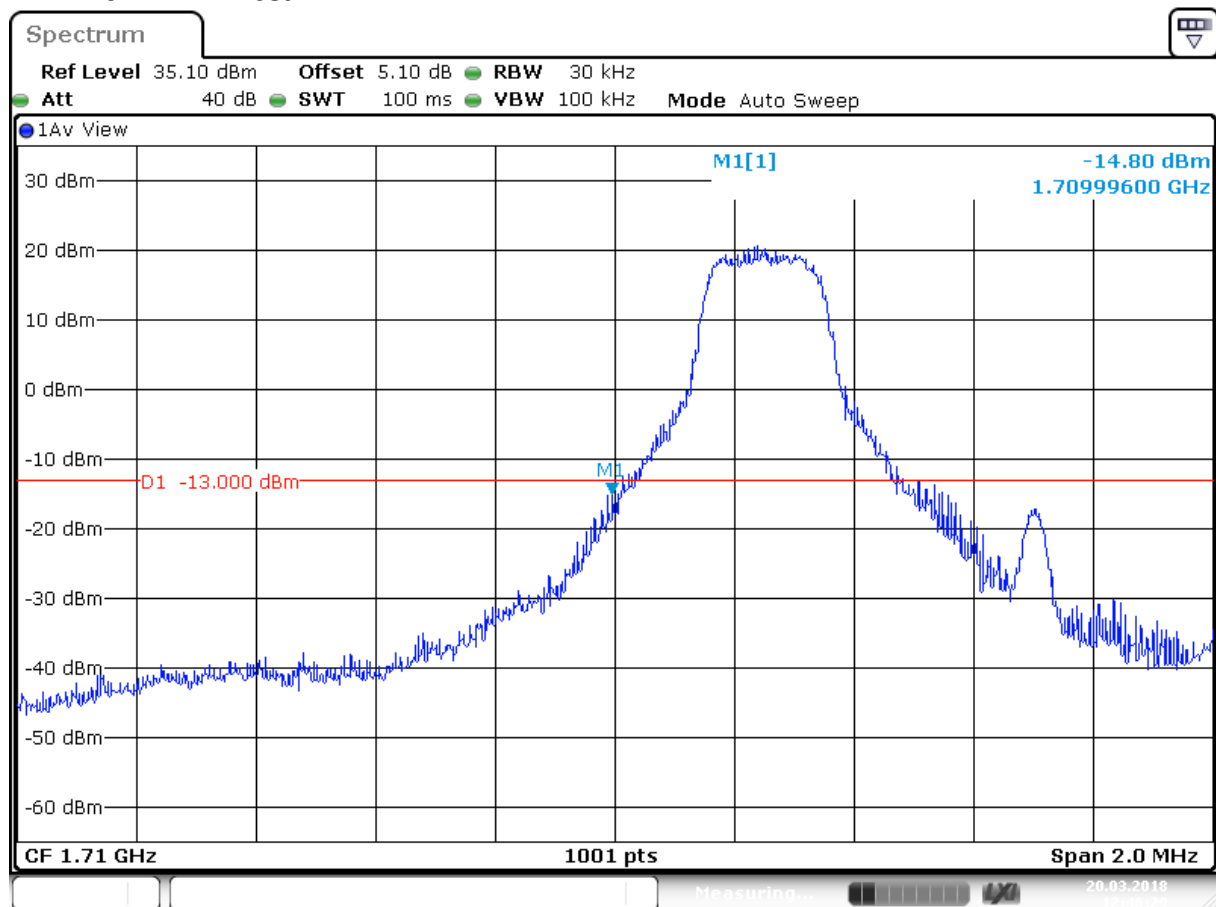
### 5.1 For LTE

#### 5.1.1 Test Band = LTE BAND 4

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

##### 5.1.1.1.1 Test Channel = LCH

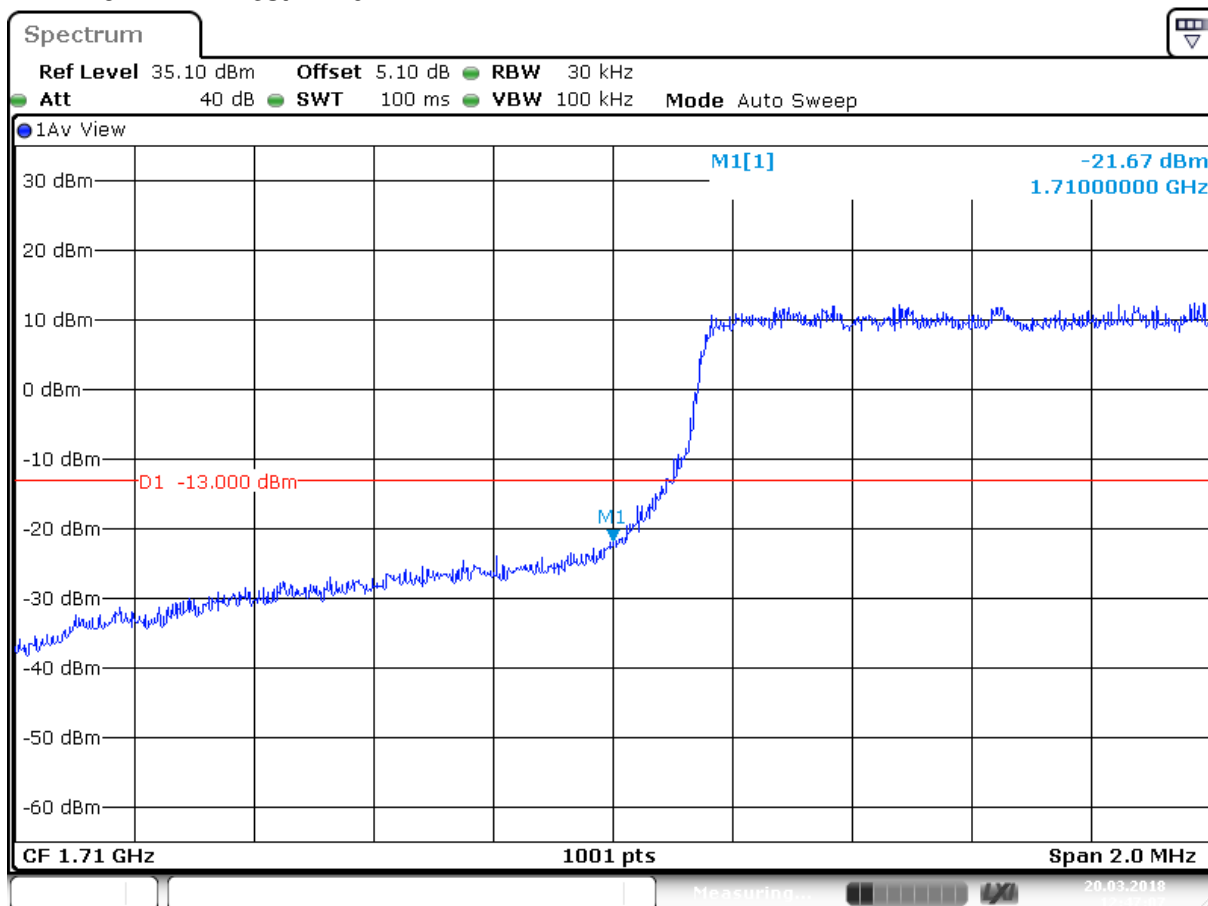
##### 5.1.1.1.1.1 Test RB=1RB



Date: 20 MAR 2018 12:46:30



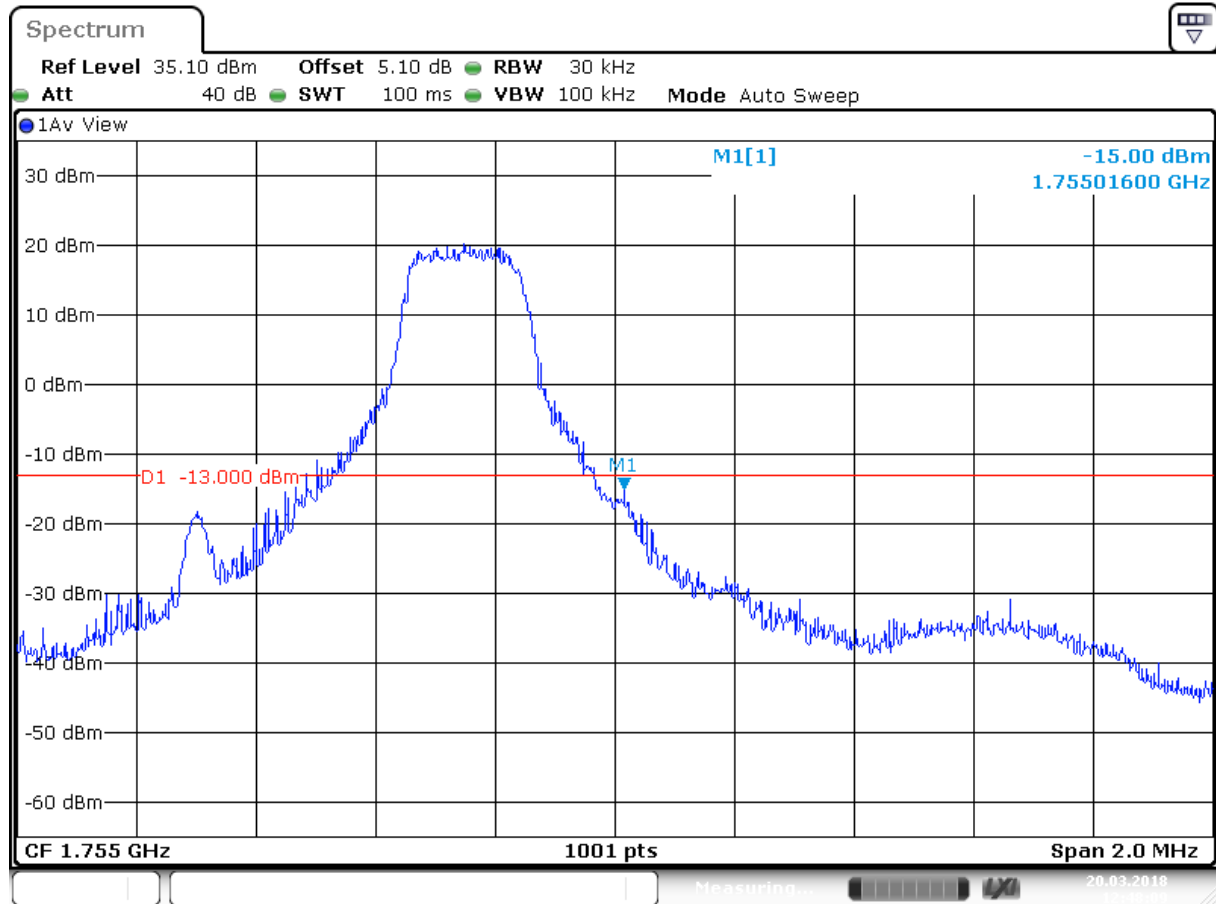
5.1.1.1.2 Test RB=6RB



Date: 20 MAR 2018 12:47:08

### 5.1.1.1.2 Test Channel = HCH

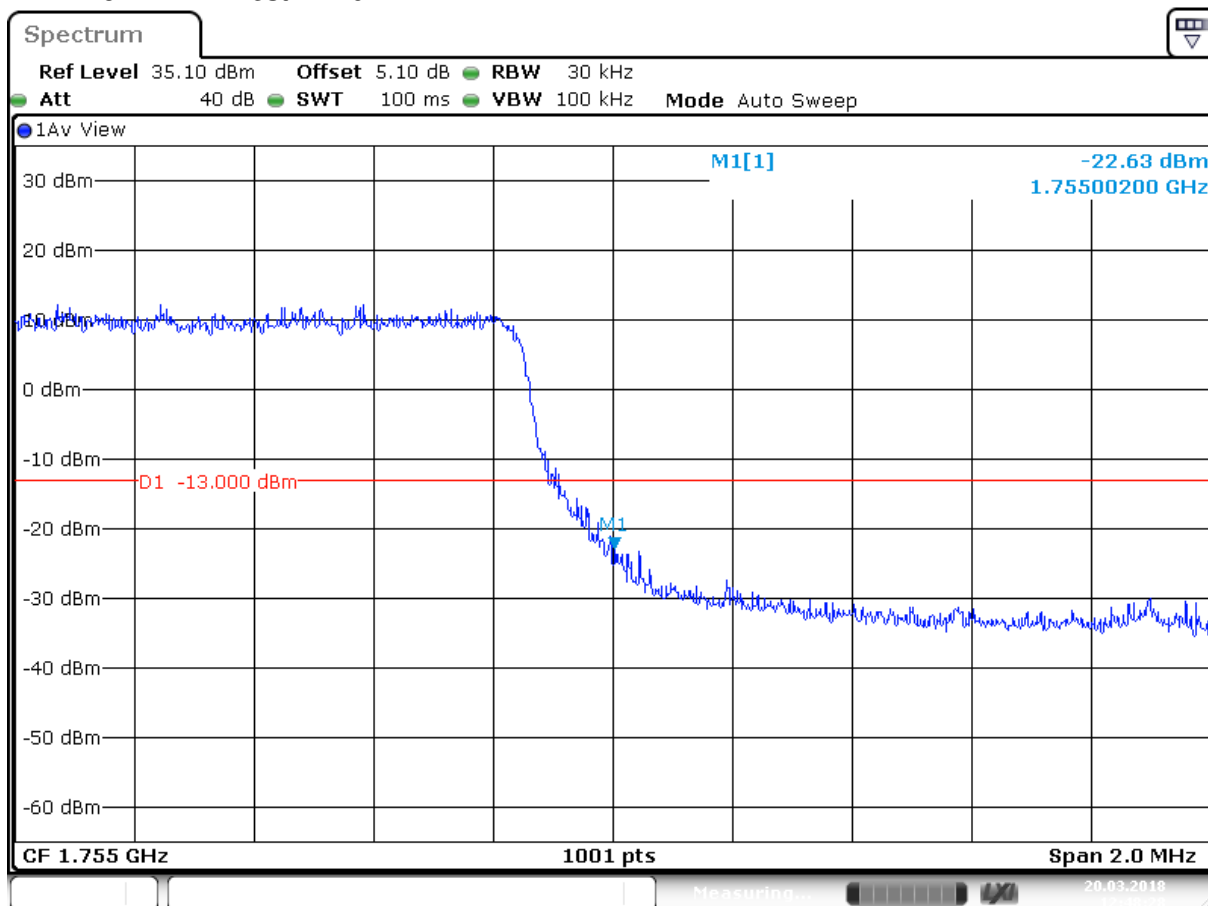
#### 5.1.1.1.2.1 Test RB=1RB



Date: 20 MAR 2018 12:48:09



5.1.1.1.2.2 Test RB=6RB



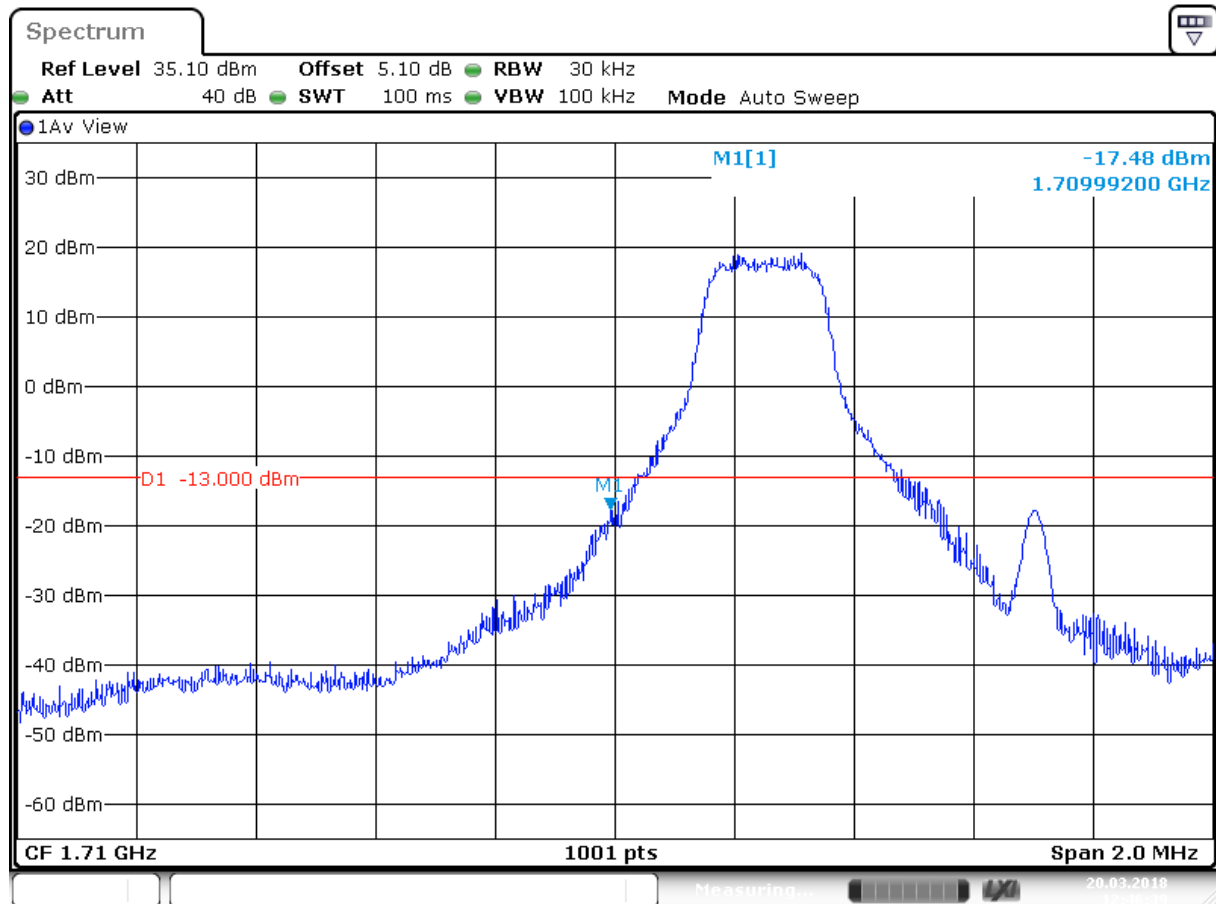
Date: 20 MAR 2018 12:48:28



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

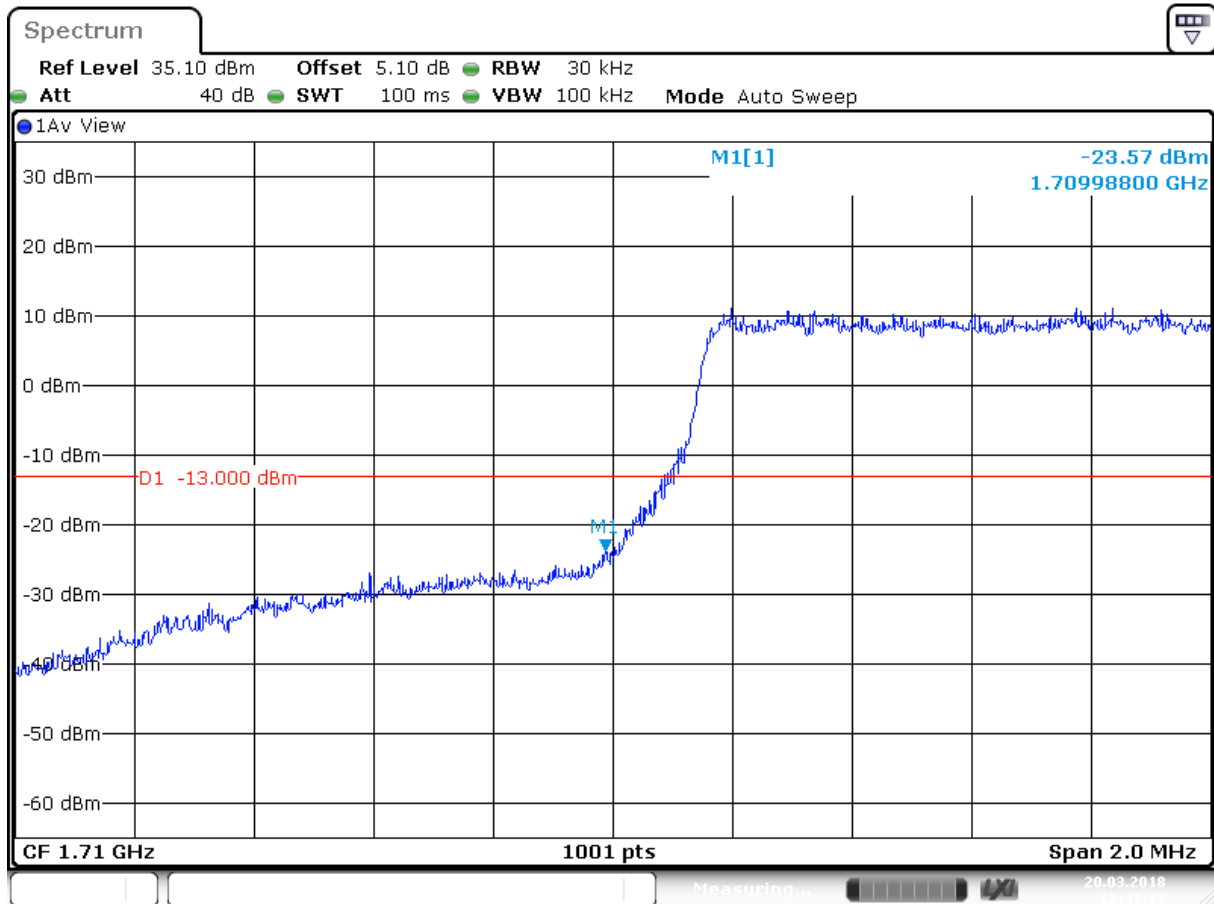


Date: 20 MAR 2018 12:46:39





5.1.1.2.1.2 Test RB=6RB

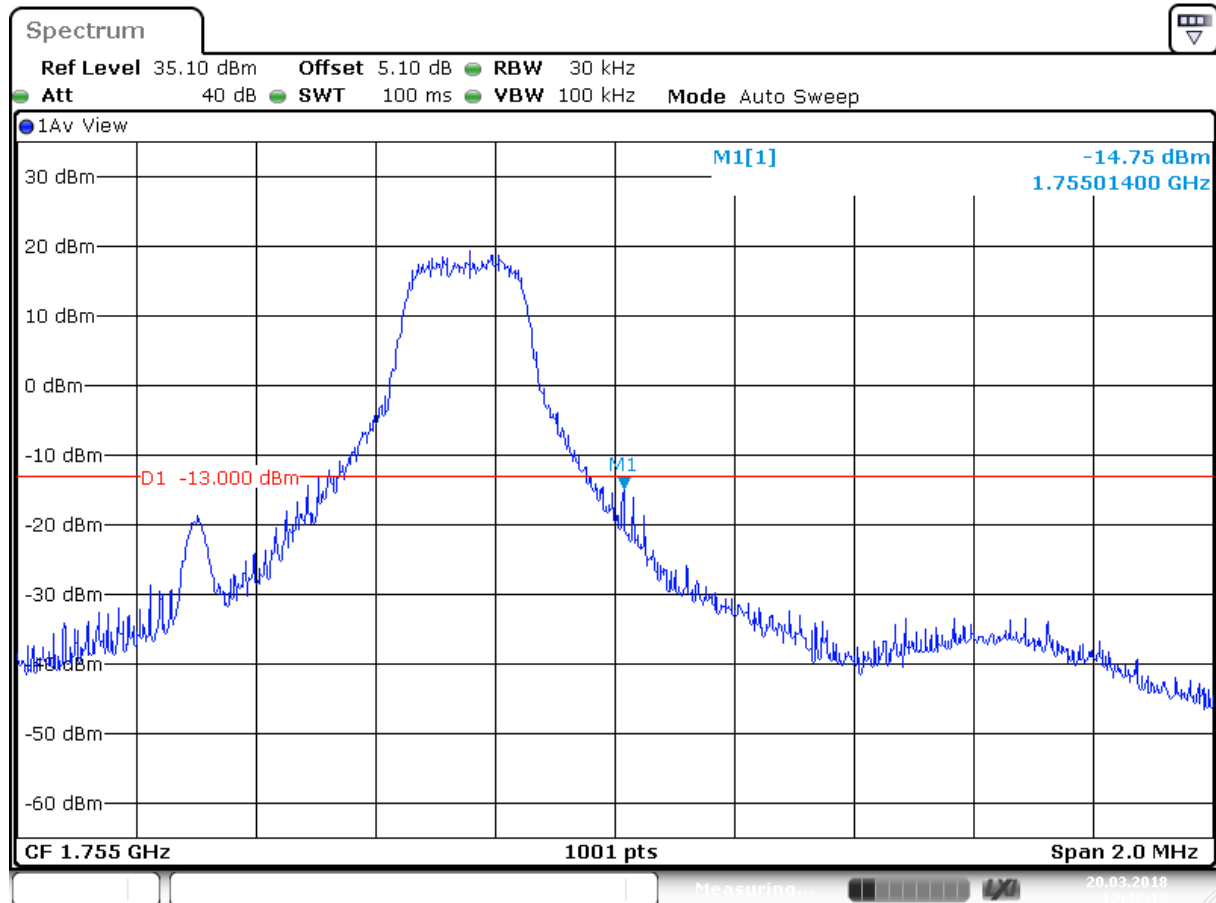


Date: 20 MAR 2018 12:47:17



5.1.1.2.2 Test Channel = HCH

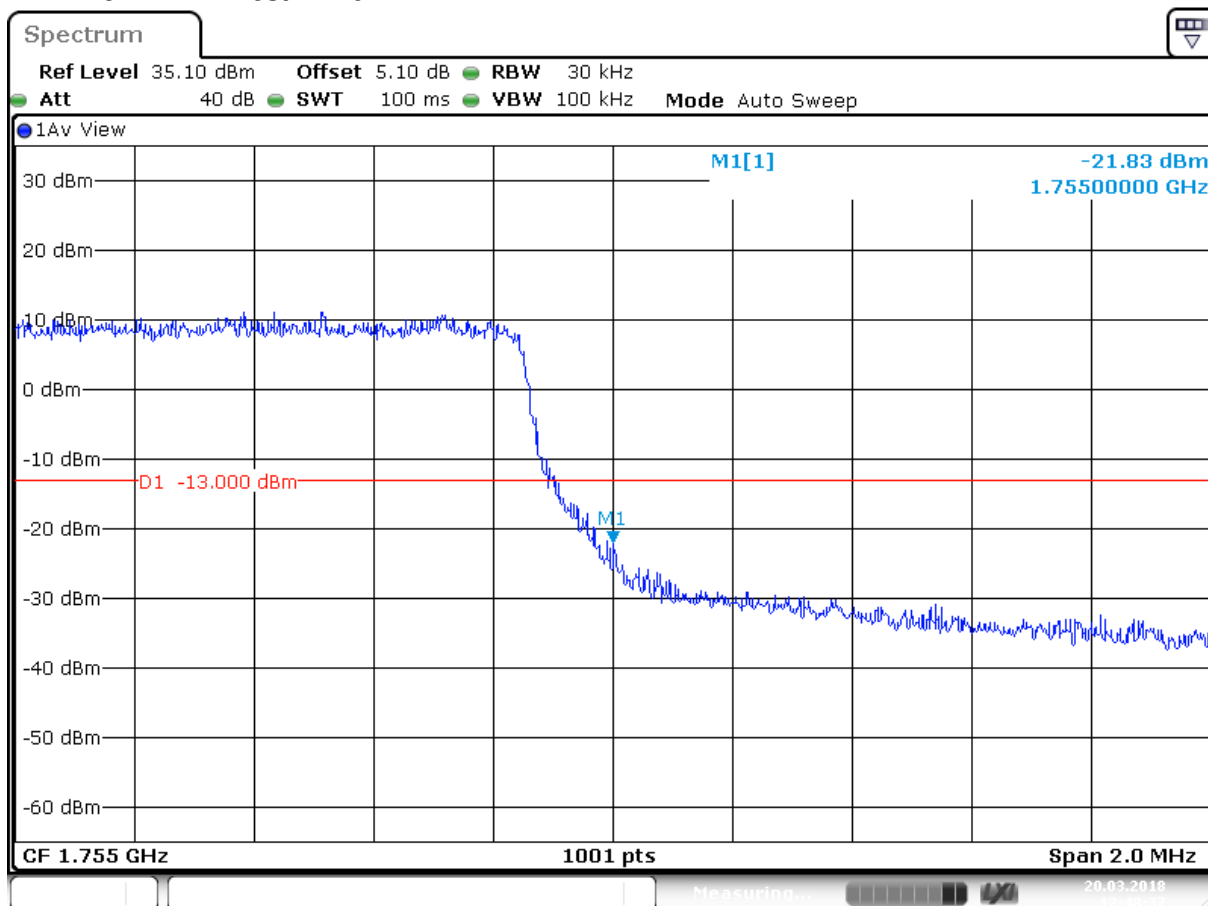
5.1.1.2.2.1 Test RB=1RB



Date: 20 MAR 2018 12:48:19



5.1.1.2.2.2 Test RB=6RB



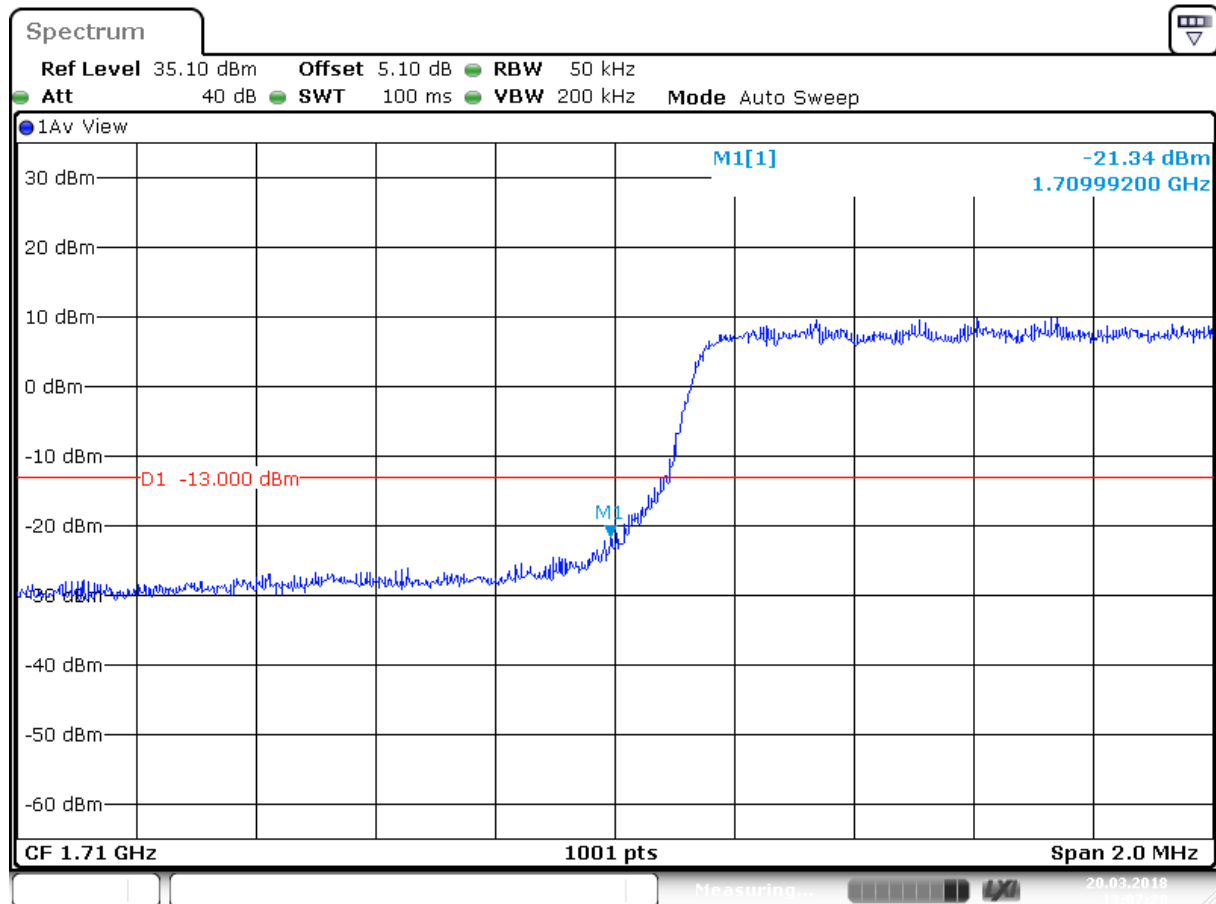
Date: 20 MAR 2018 12:48:38



5.1.1.3 Test Mode = LTE/TM1 3MHz

5.1.1.3.1 Test Channel = LCH

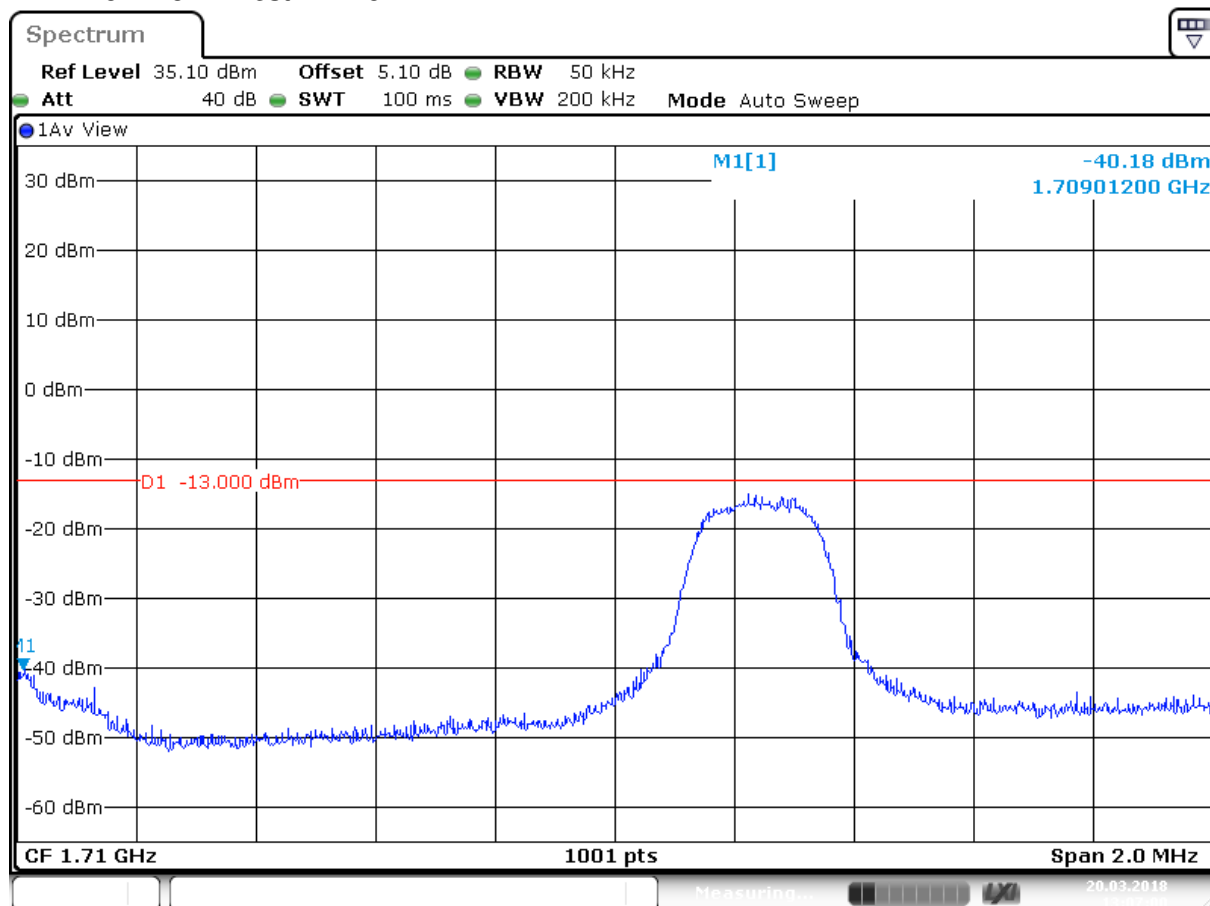
5.1.1.3.1.1 Test RB=1RB



Date: 20 MAR 2018 13:07:20



5.1.1.3.1.2 Test RB=15RB

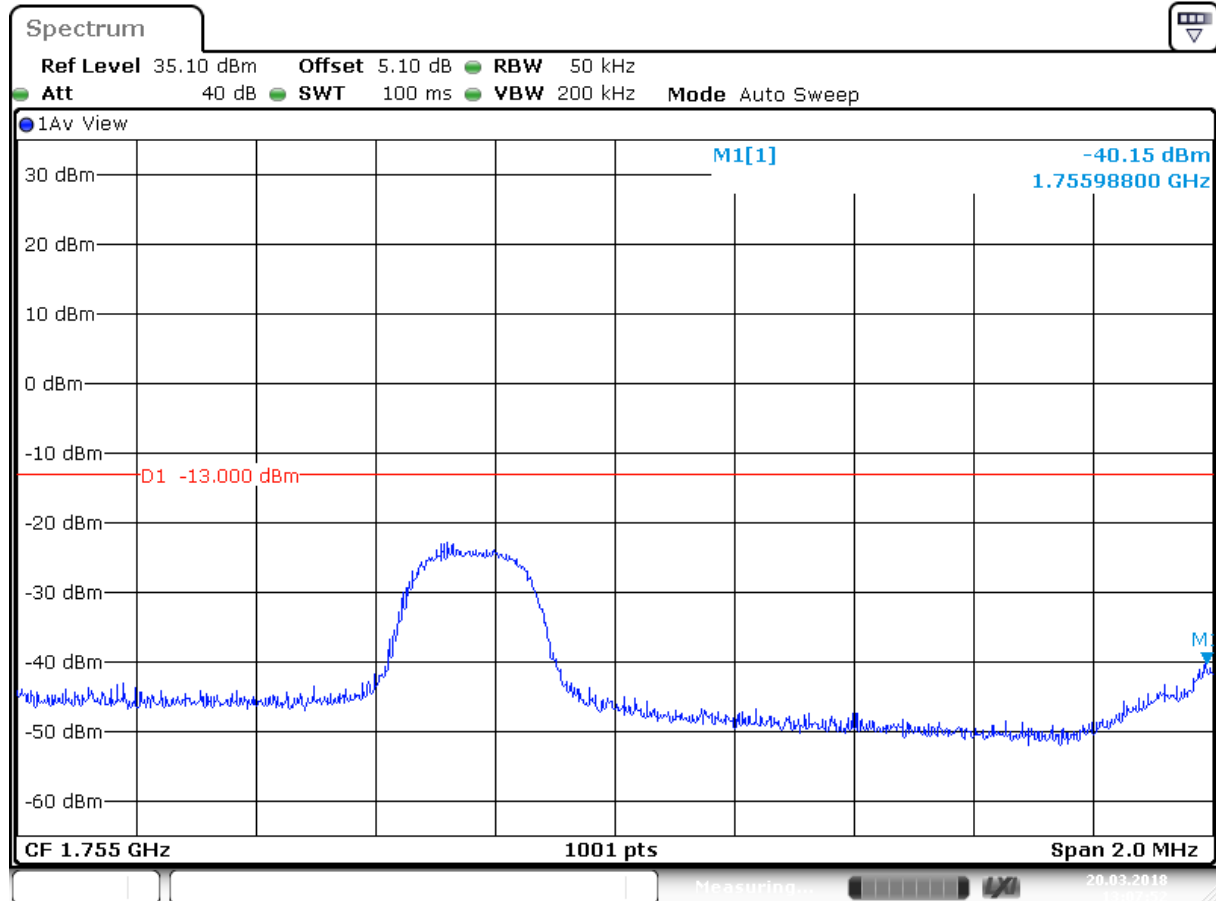


Date: 20 MAR 2018 13:07:01



5.1.1.3.2 Test Channel = HCH

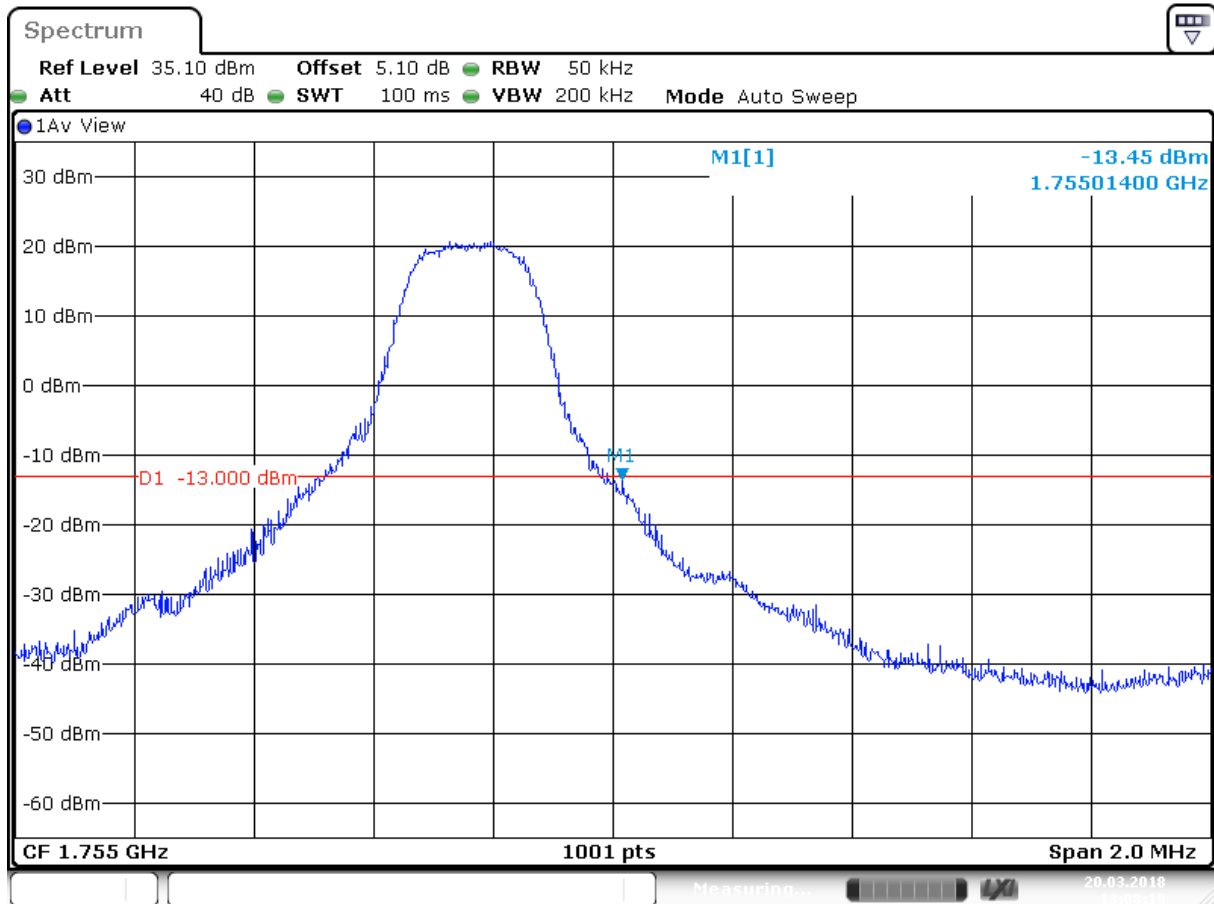
5.1.1.3.2.1 Test RB=1RB



Date: 20 MAR 2018 13:07:53



5.1.1.3.2.2 Test RB=15RB



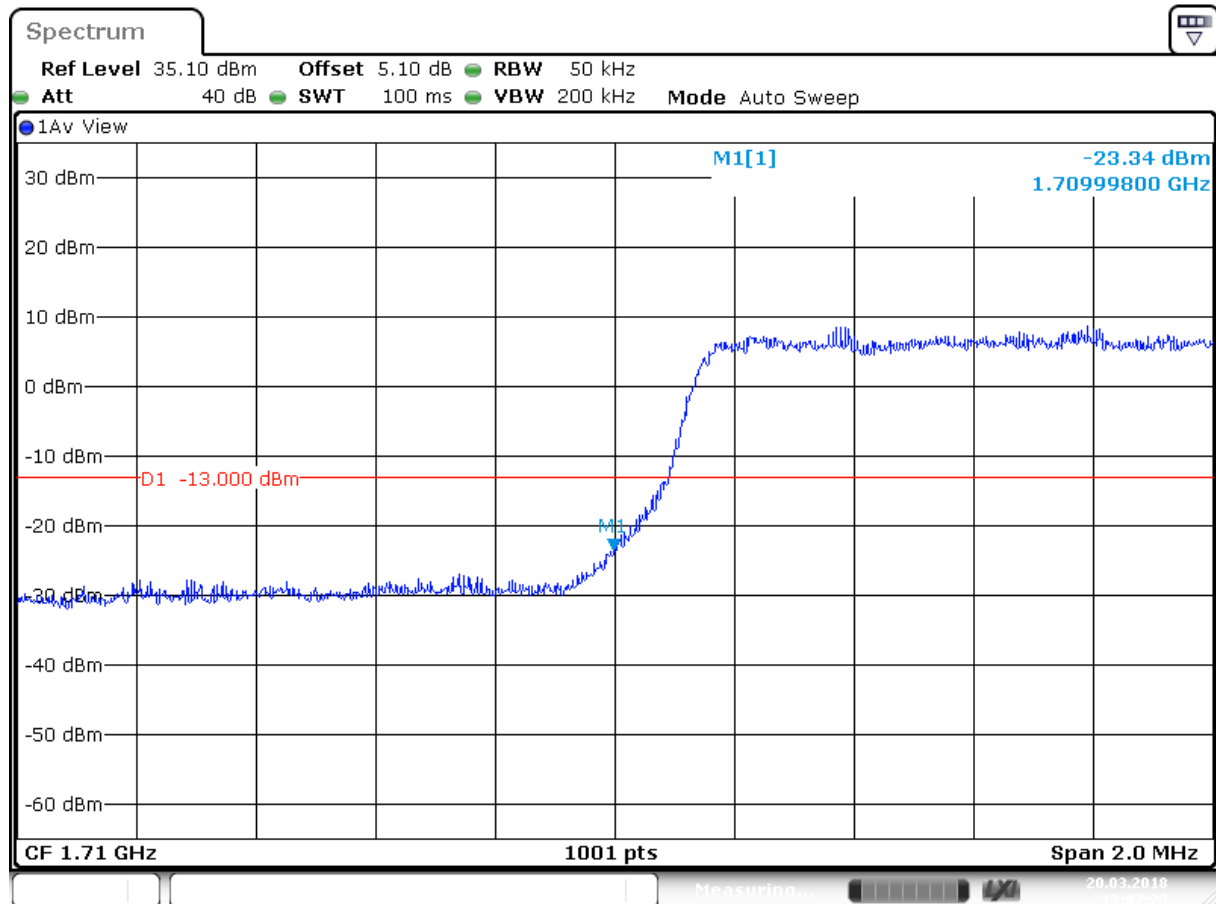
Date: 20 MAR 2018 13:08:11



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

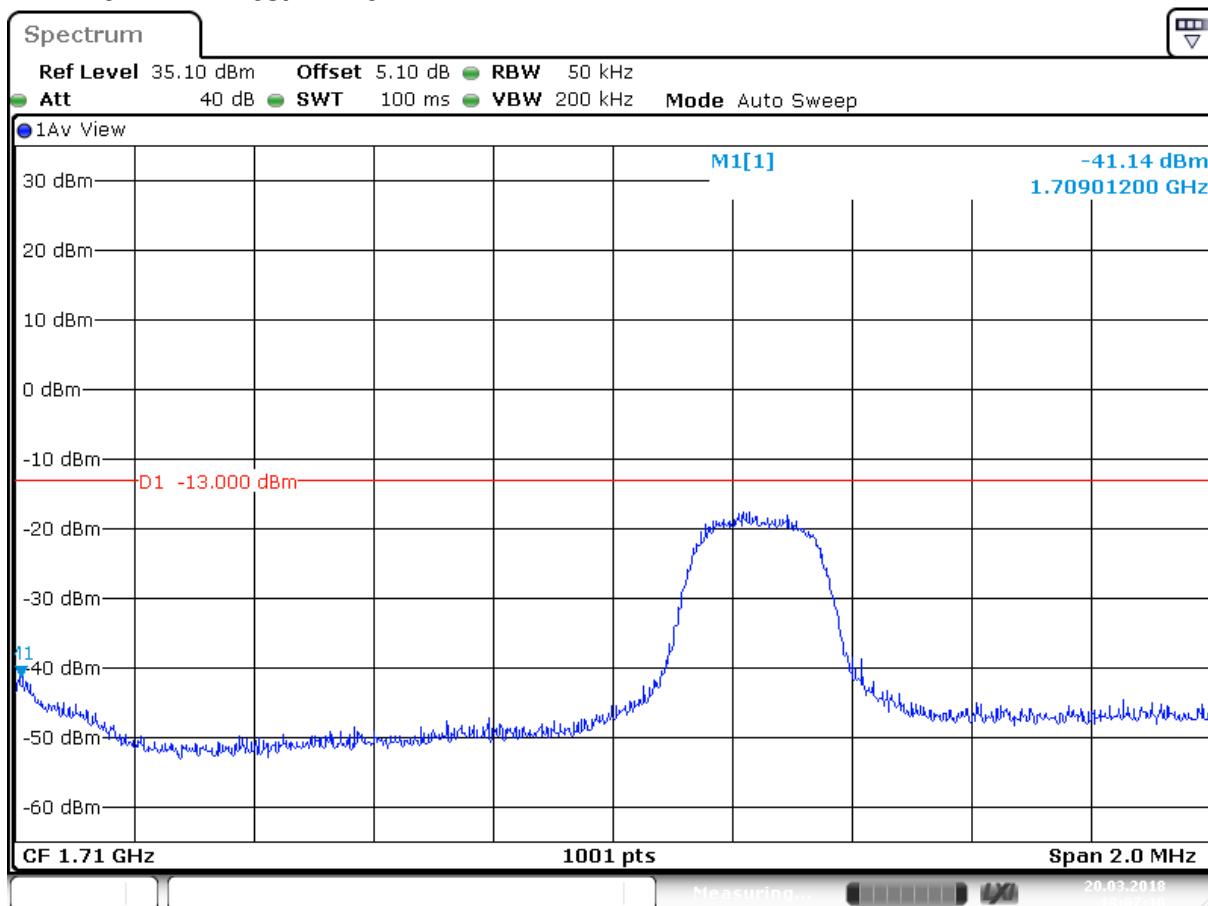


Date: 20 MAR 2018 13:07:29





5.1.1.4.1.2 Test RB=15RB

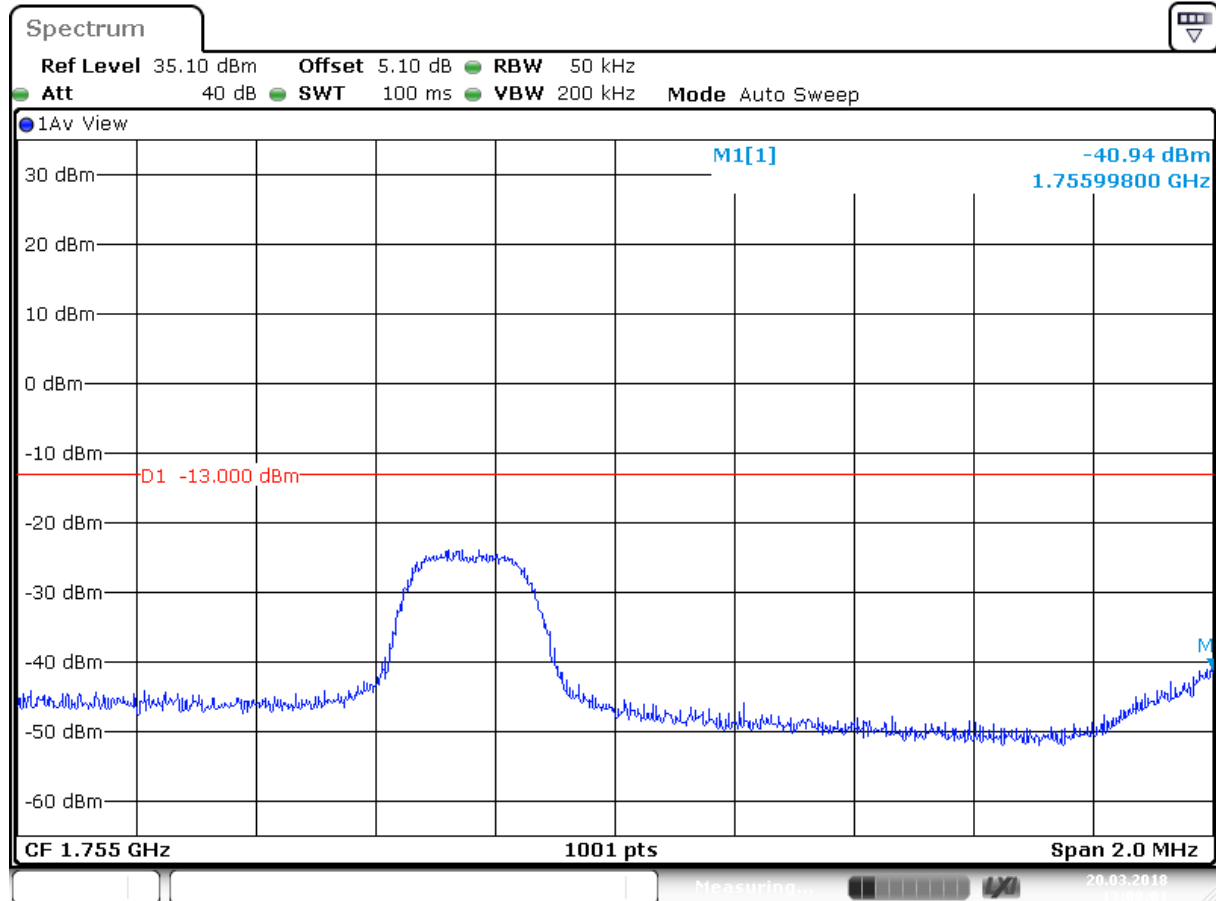


Date: 20 MAR 2018 13:07:10



5.1.1.4.2 Test Channel = HCH

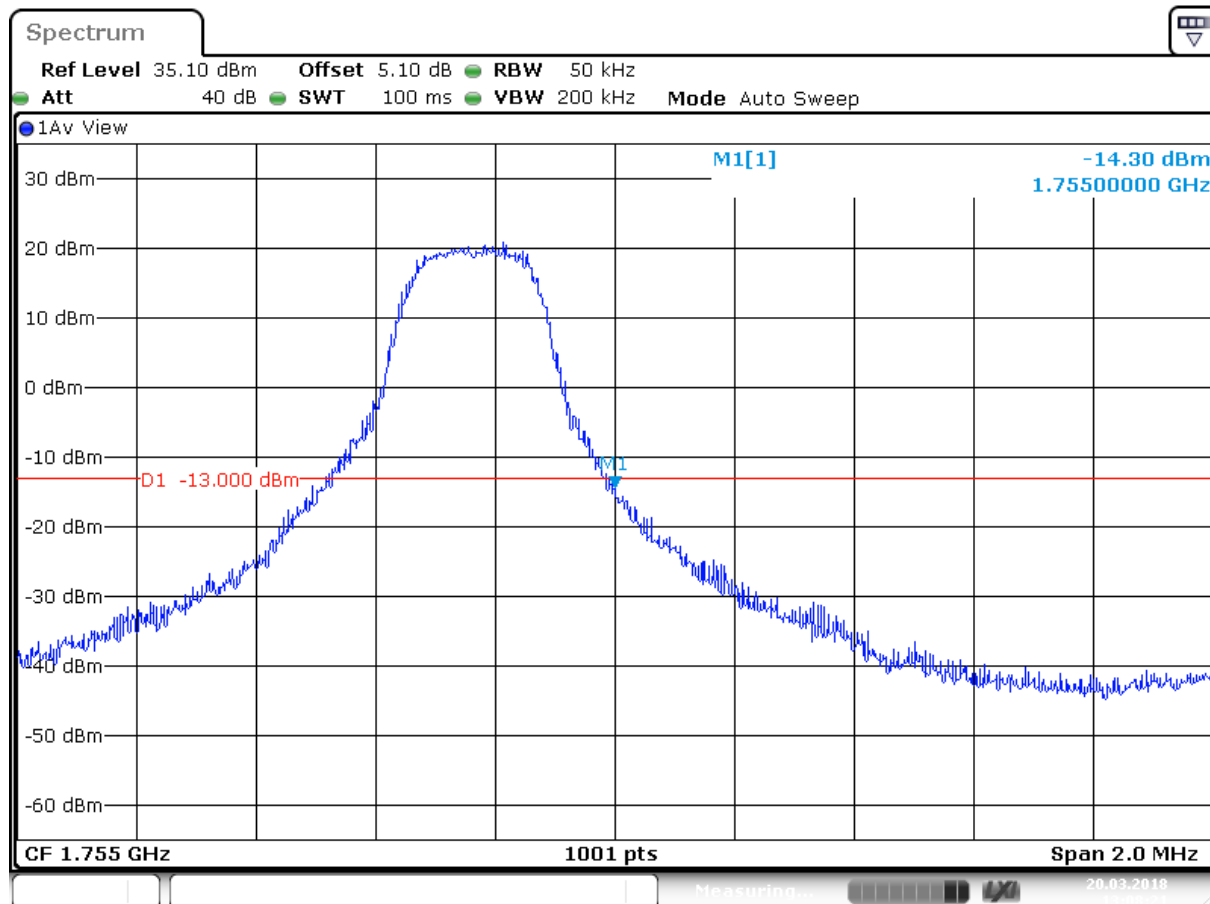
5.1.1.4.2.1 Test RB=1RB



Date: 20 MAR 2018 13:08:02



5.1.1.4.3 Test RB=15RB



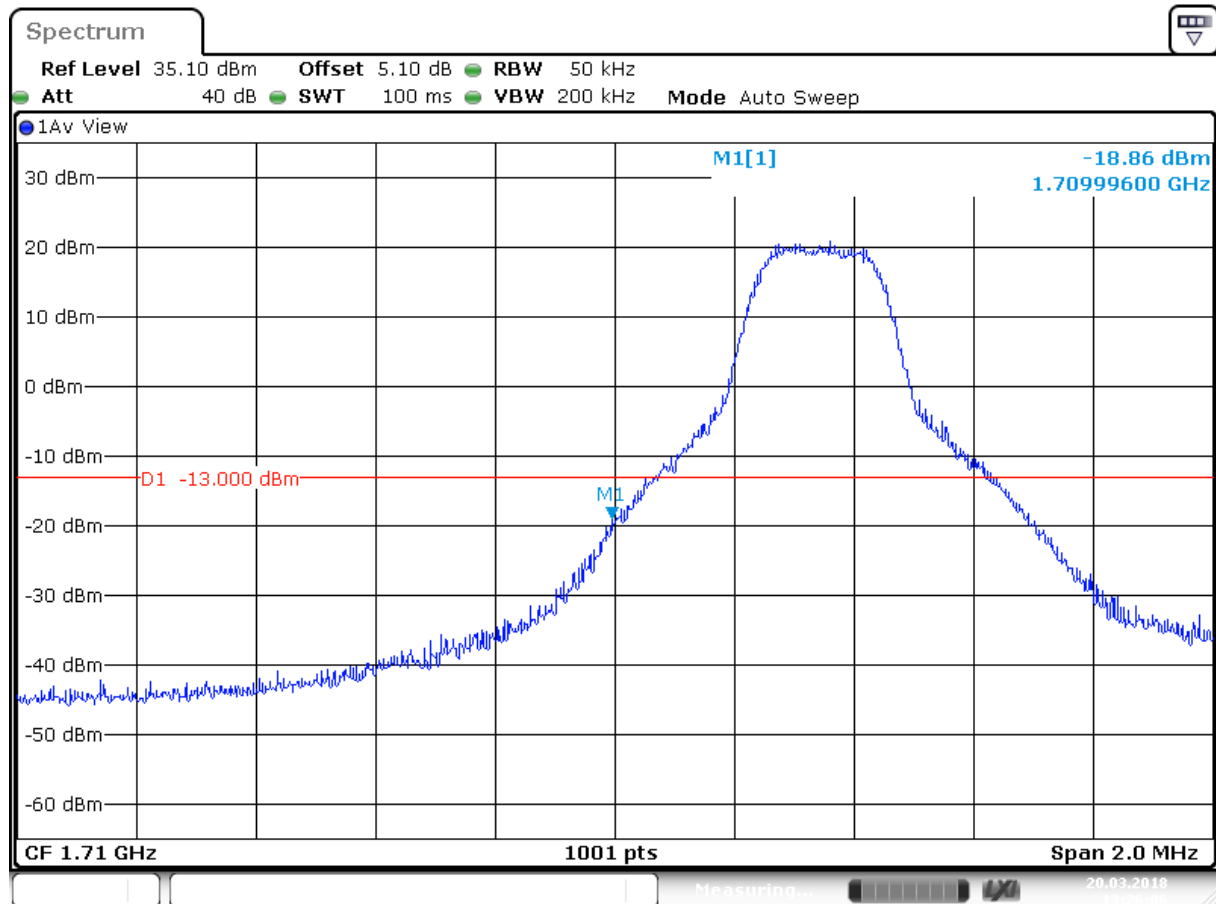
Date: 20 MAR 2018 13:08:20



5.1.1.5 Test Mode = LTE/TM1 5MHz

5.1.1.5.1 Test Channel = LCH

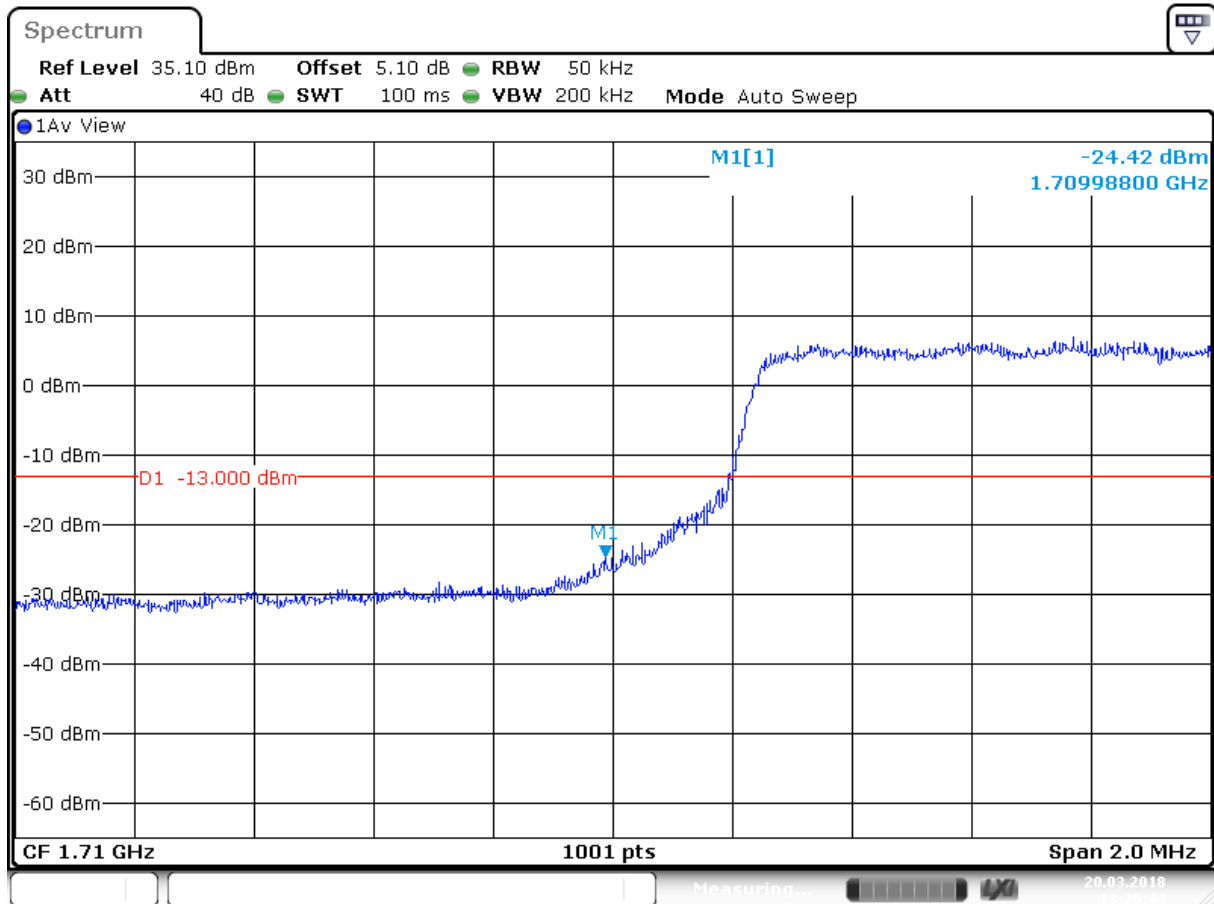
5.1.1.5.1.1 Test RB=1RB



Date: 20 MAR 2018 13:26:06



5.1.1.5.1.2 Test RB=25RB

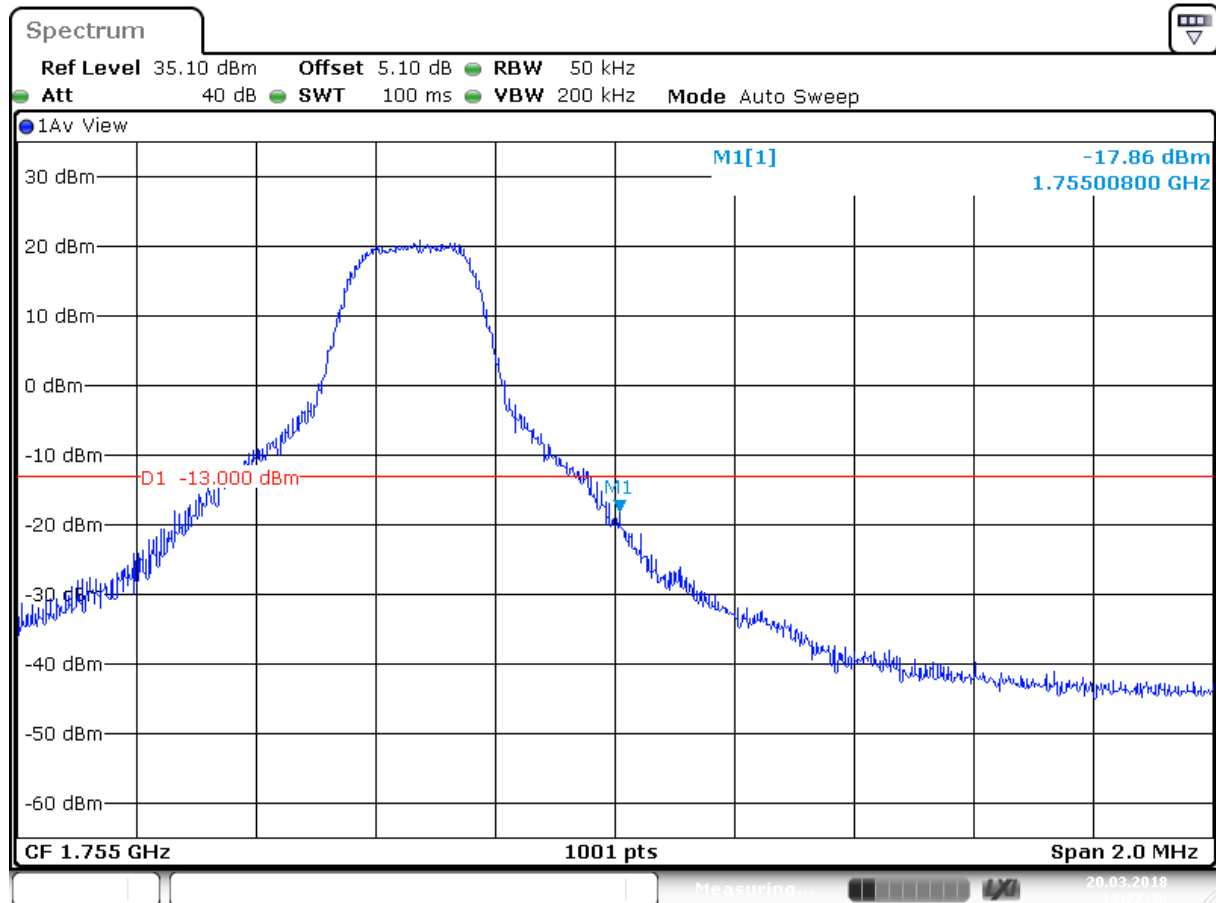


Date: 20 MAR 2018 13:26:44



5.1.1.5.2 Test Channel = HCH

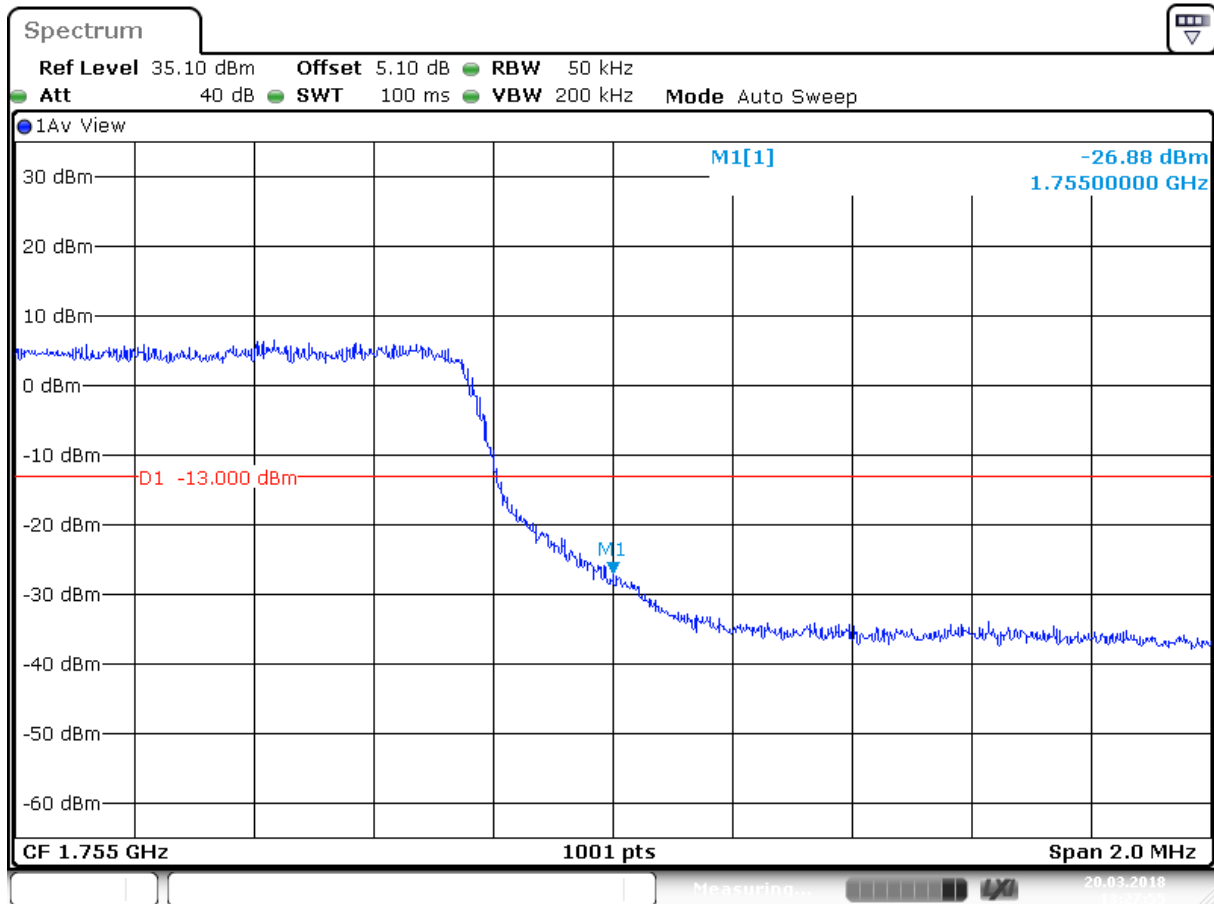
5.1.1.5.2.1 Test RB=1RB



Date: 20 MAR 2018 13:27:36



5.1.1.5.2.2 Test RB=25RB



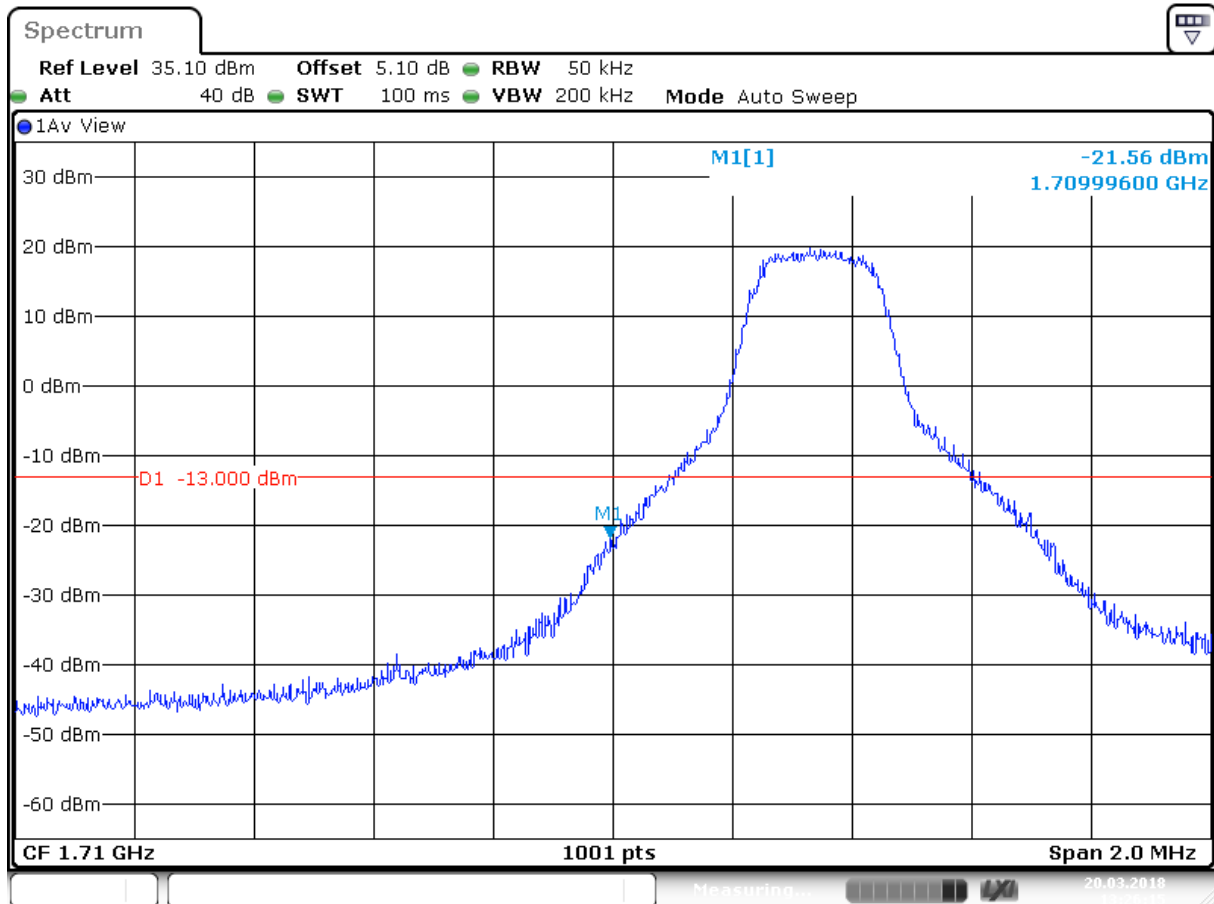
Date: 20 MAR 2018 13:27:55



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

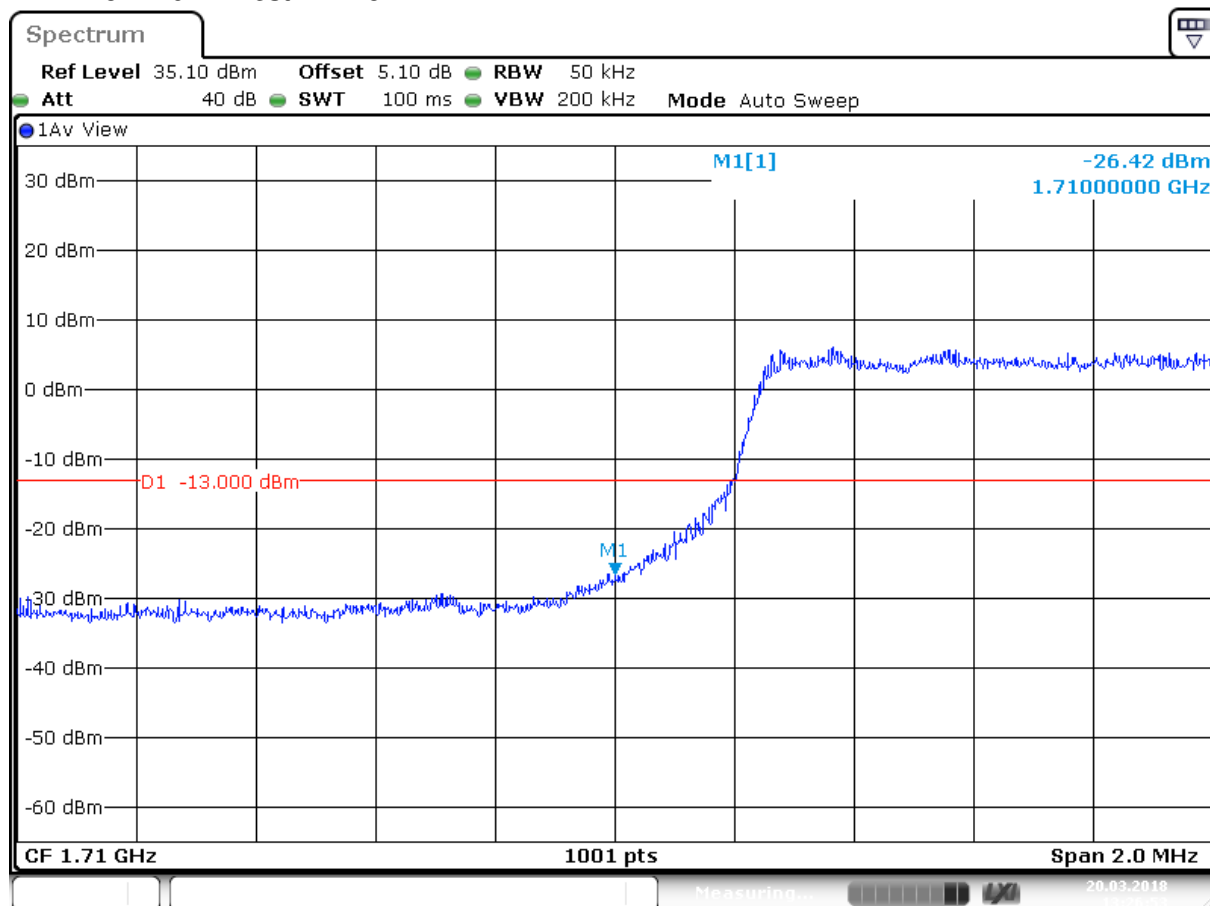


Date: 20 MAR 2018 13:26:16





5.1.1.6.1.2 Test RB=25RB

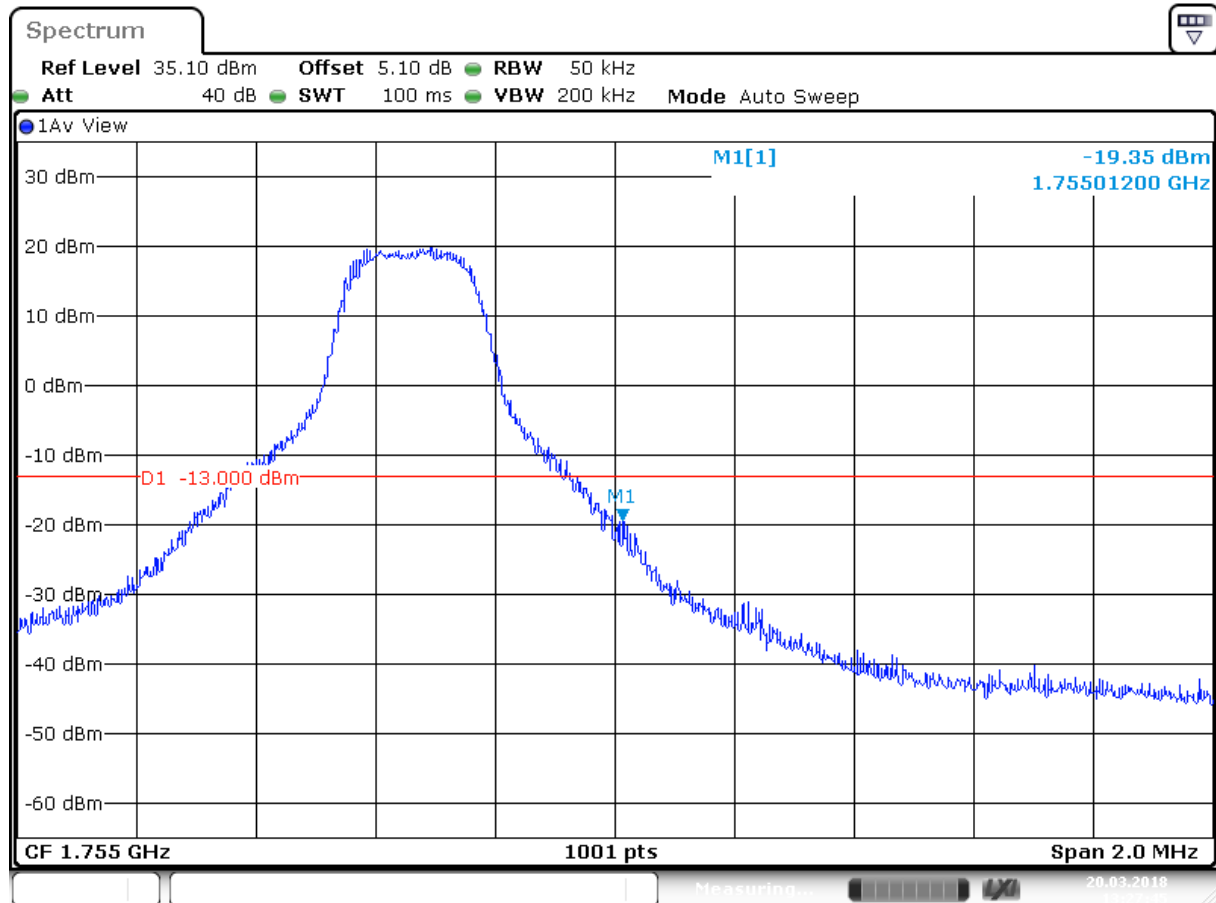


Date: 20 MAR 2018 13:26:53



5.1.1.6.2 Test Channel = HCH

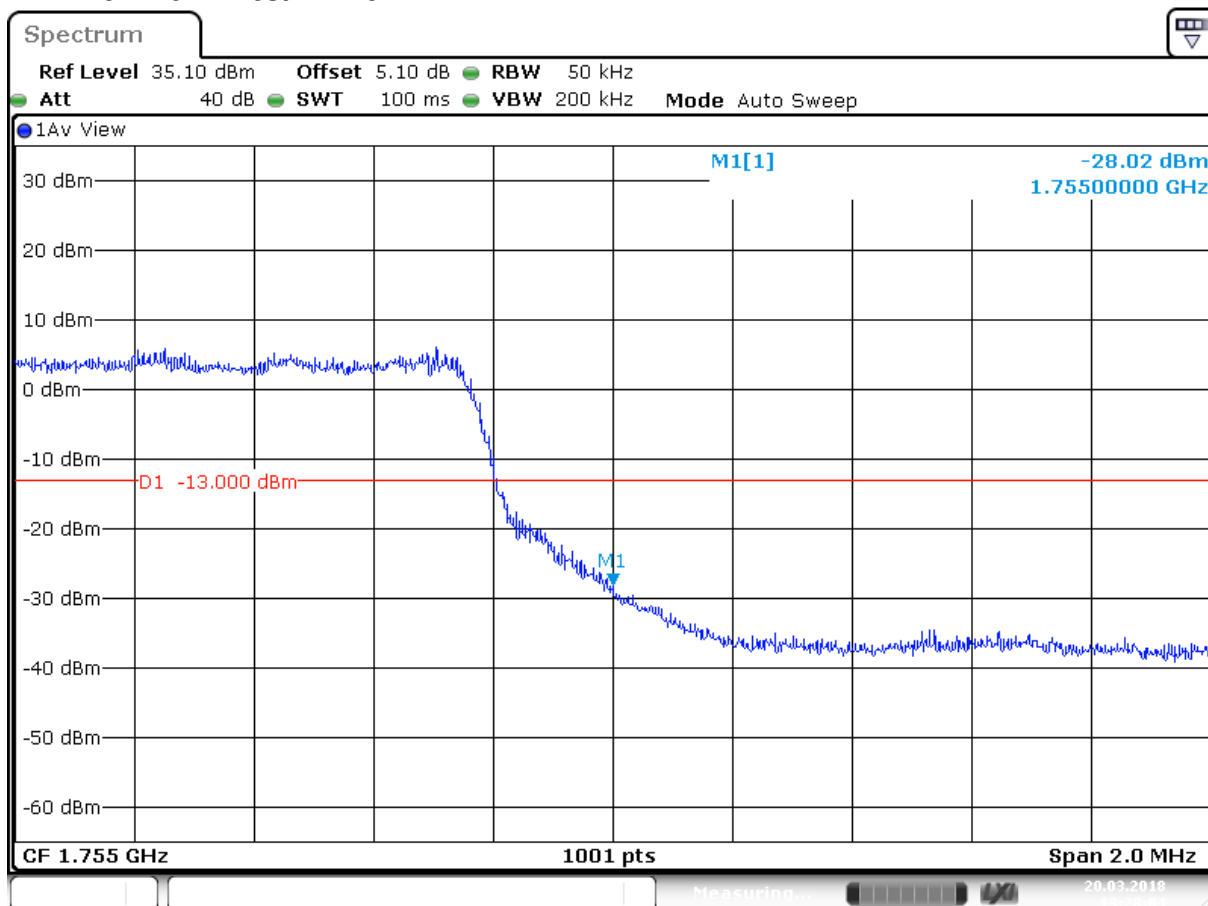
5.1.1.6.2.1 Test RB=1RB



Date: 20 MAR 2018 13:27:45



5.1.1.6.2.2 Test RB=25RB



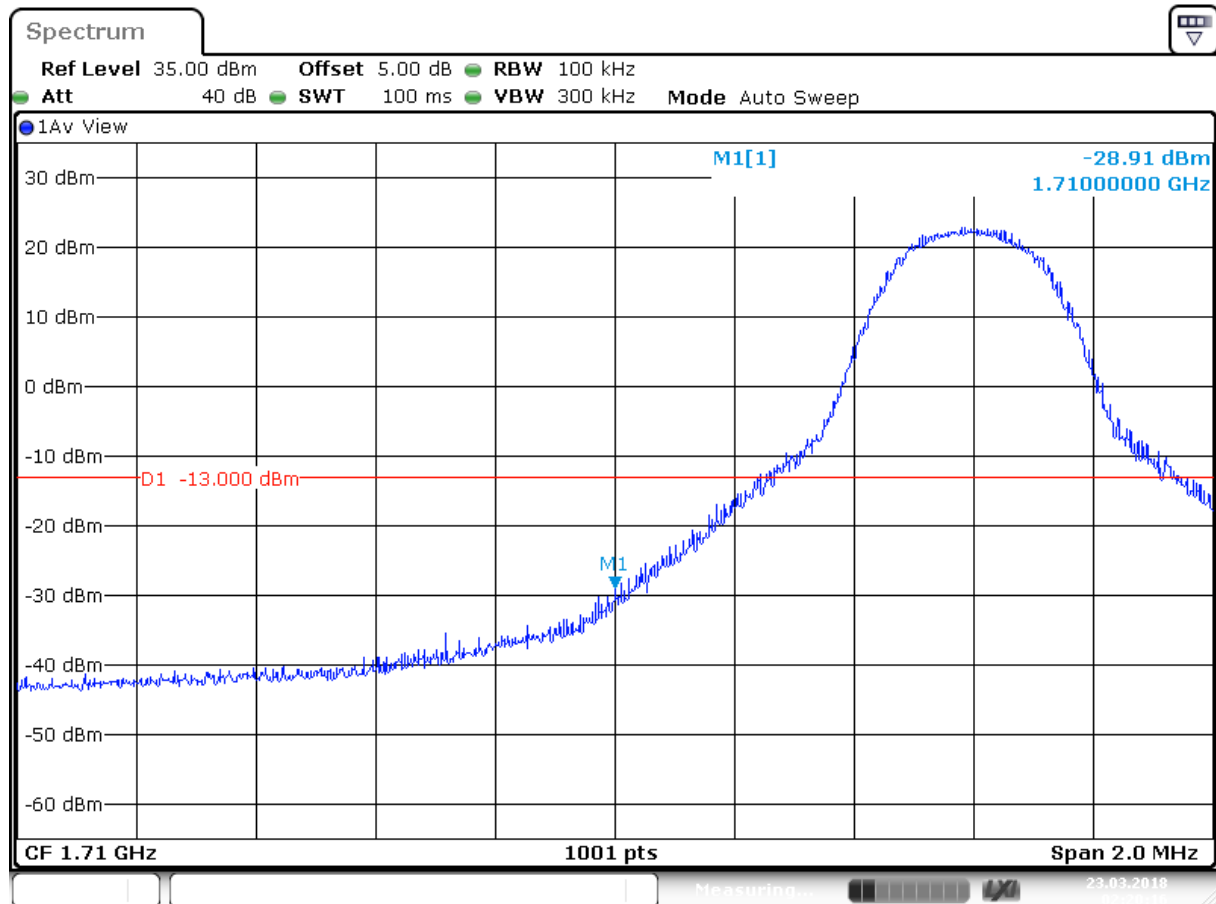
Date: 20 MAR 2018 13:28:04



5.1.1.7 Test Mode = LTE/TM1 10MHz

5.1.1.7.1 Test Channel = LCH

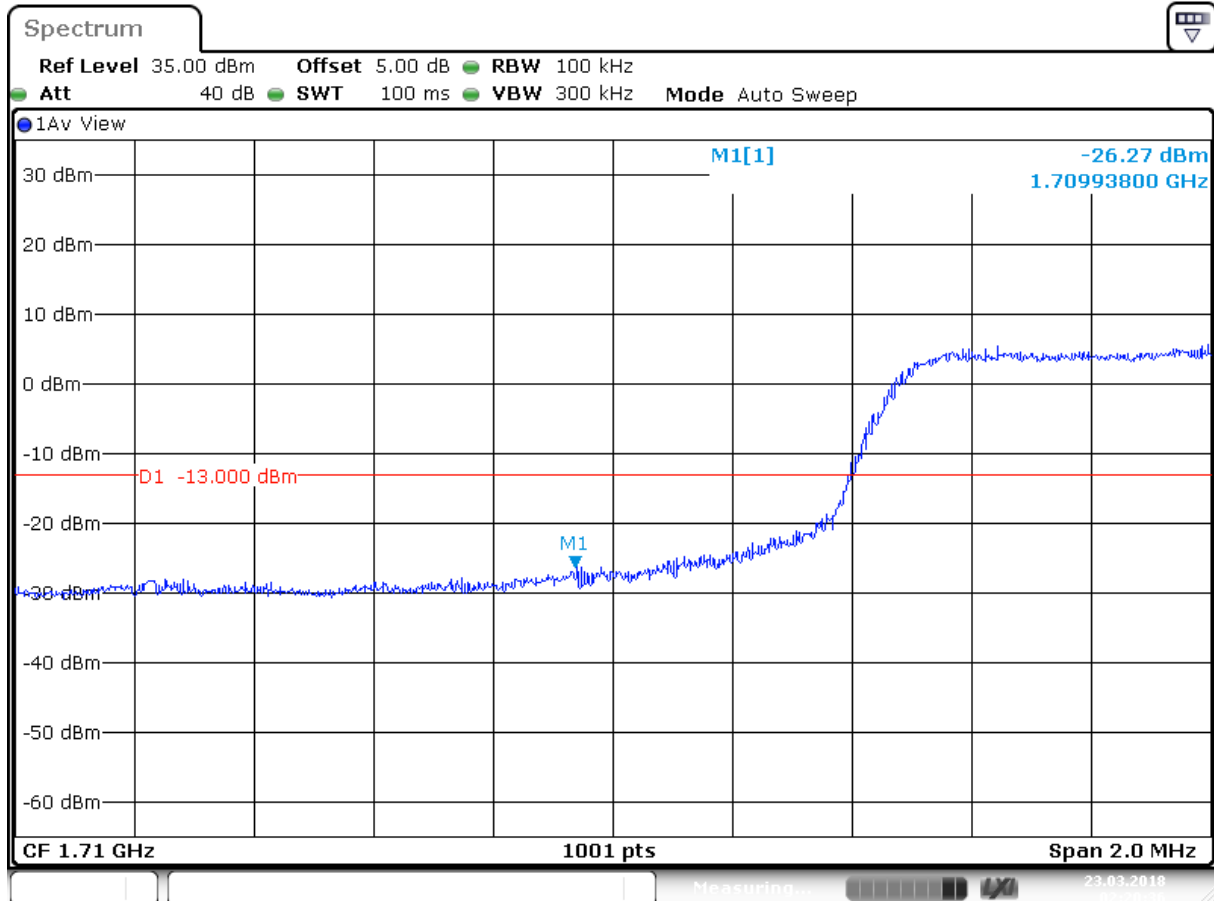
5.1.1.7.1.1 Test RB=1RB



Date: 23 MAR 2018 02:20:17



5.1.1.7.1.2 Test RB=50RB

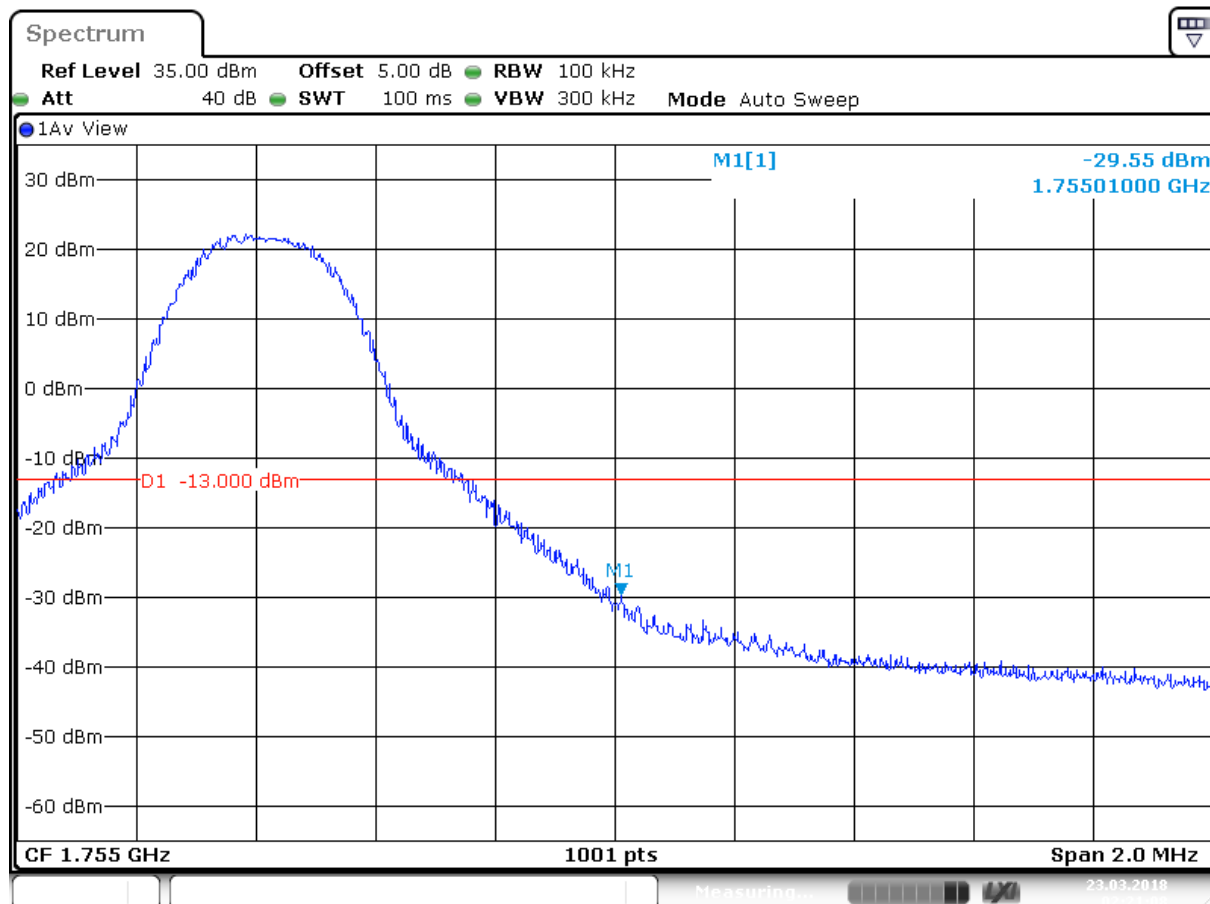


Date: 23 MAR 2018 02:20:36



5.1.1.7.2 Test Channel = HCH

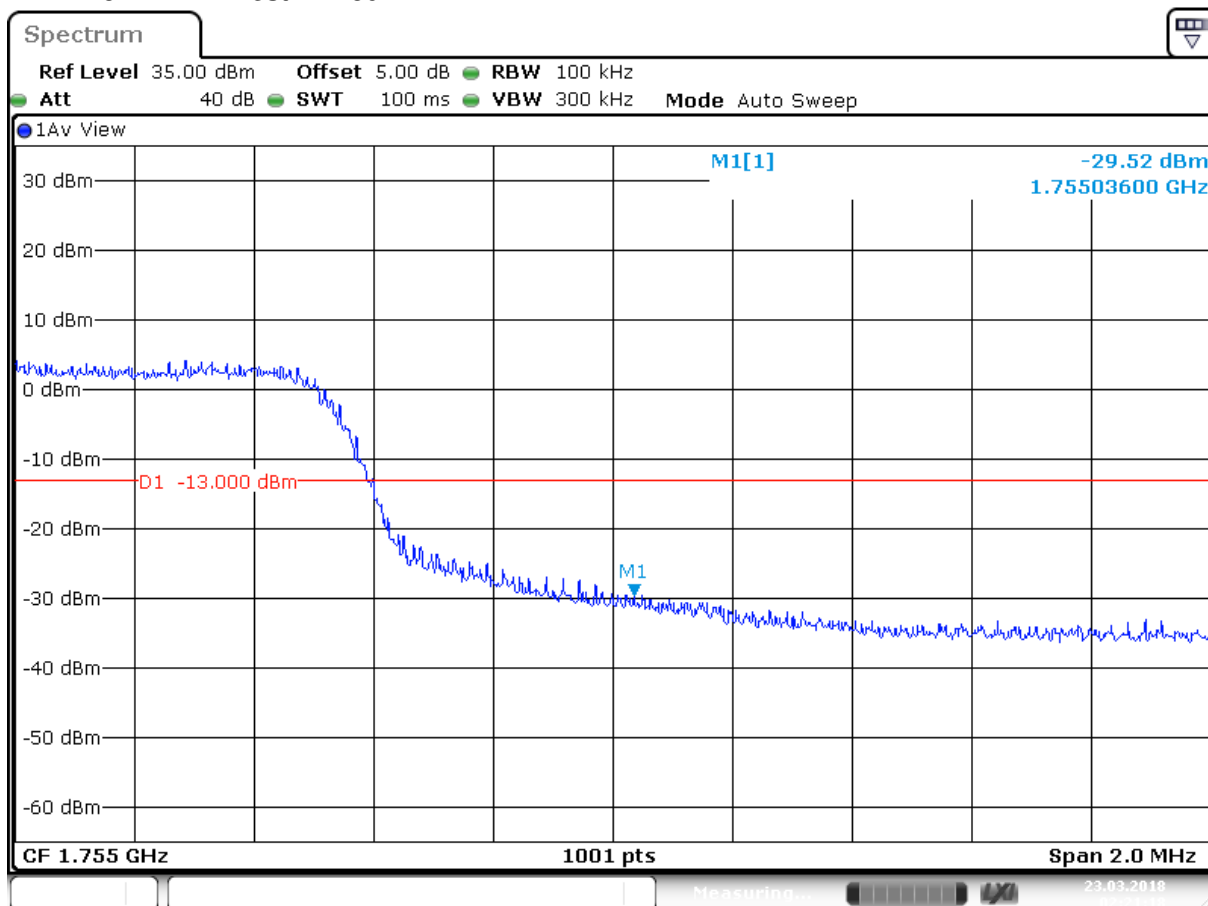
5.1.1.7.2.1 Test RB=1RB



Date: 23 MAR 2018 02:21:09



5.1.1.7.2.2 Test RB=50RB



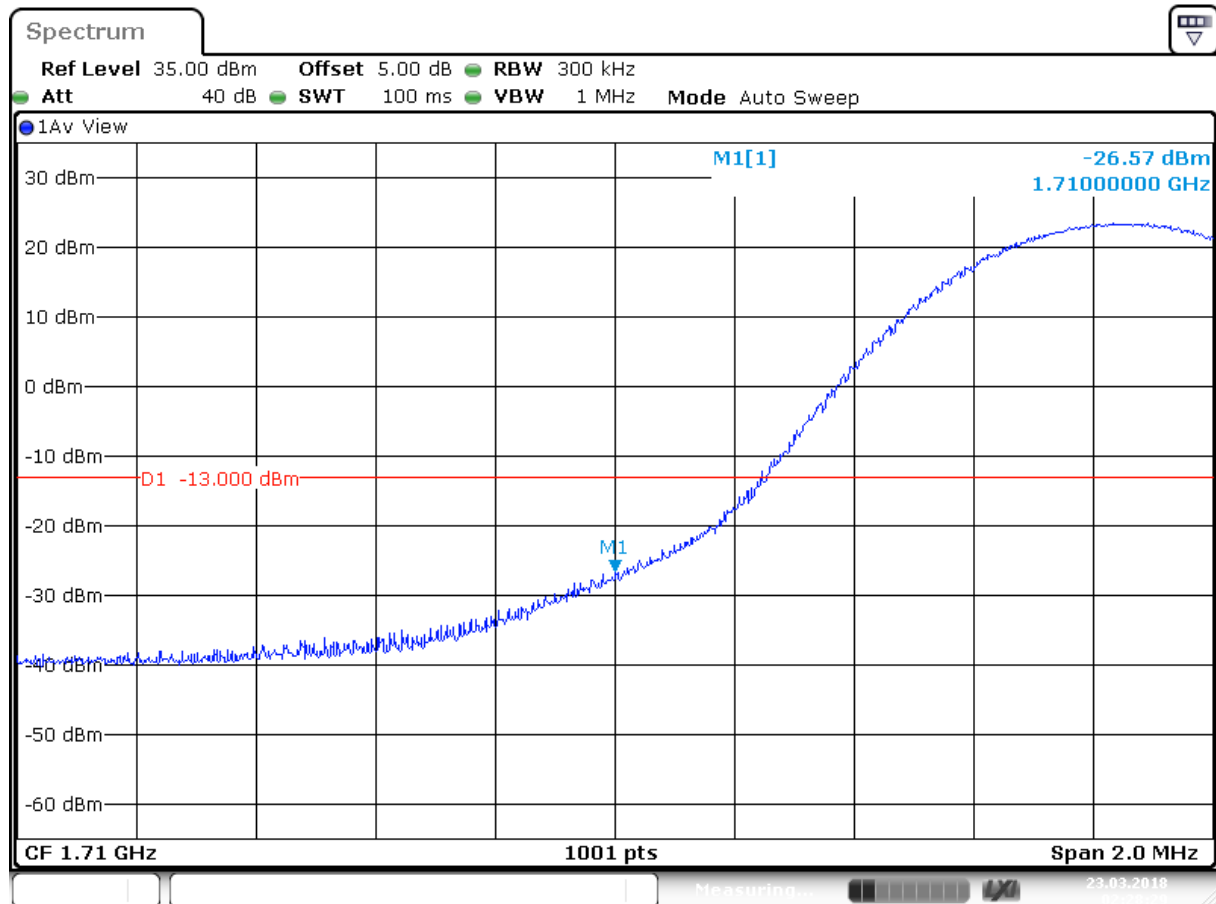
Date: 23 MAR 2018 02:21:19



5.1.1.8 Test Mode = LTE/TM1 15MHz

5.1.1.8.1 Test Channel = LCH

5.1.1.8.1.1 Test RB=1RB

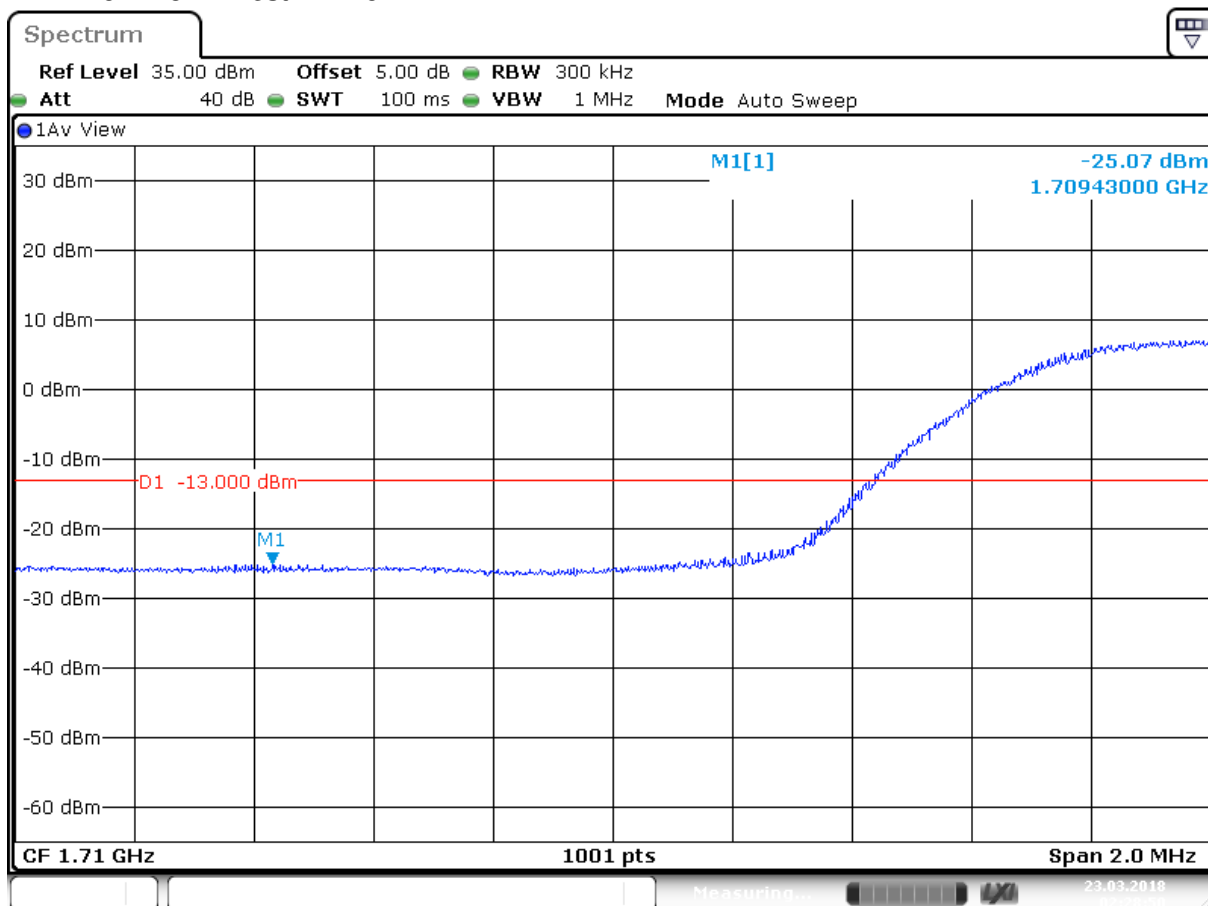


Date: 23 MAR 2018 02:28:30





5.1.1.8.1.2 Test RB=75RB

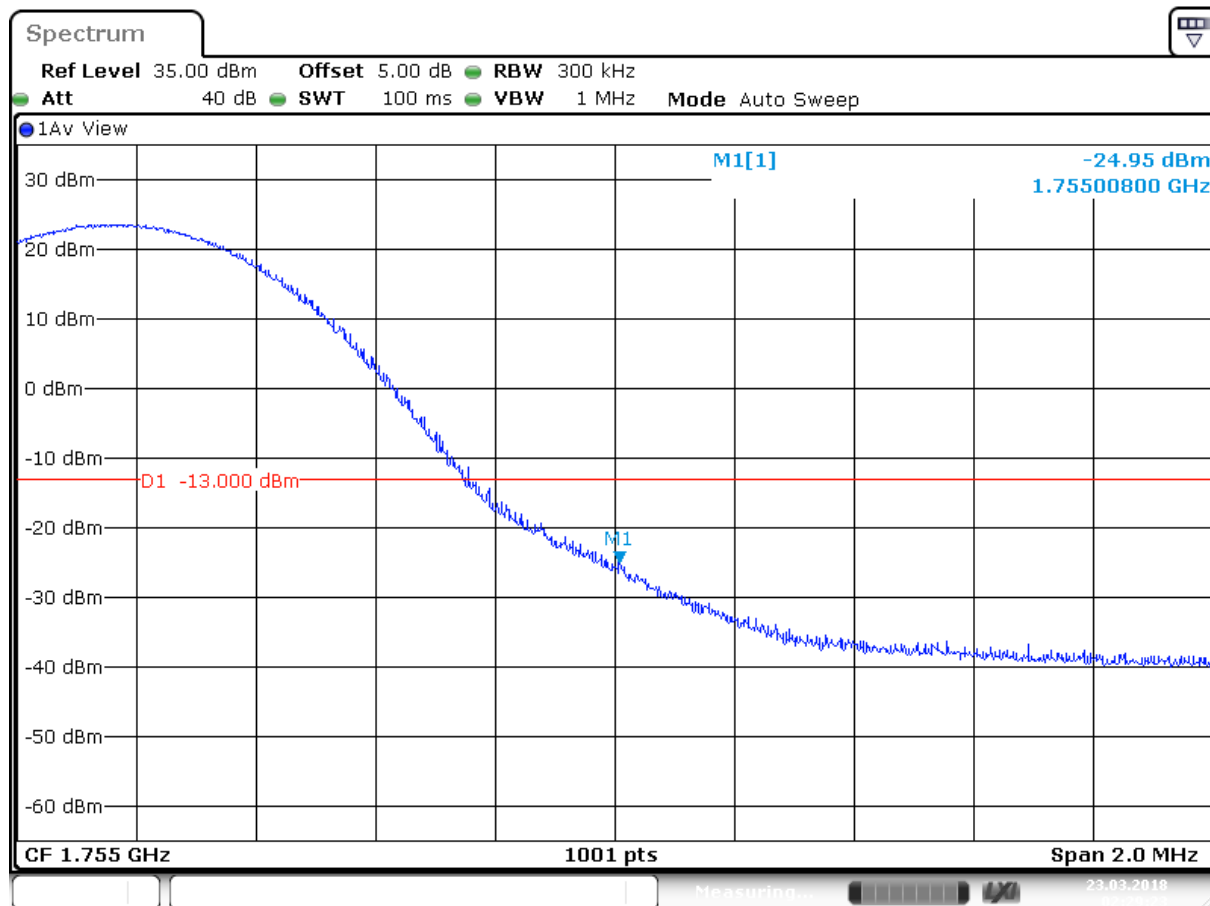


Date: 23 MAR 2018 02:28:50



5.1.1.8.2 Test Channel = HCH

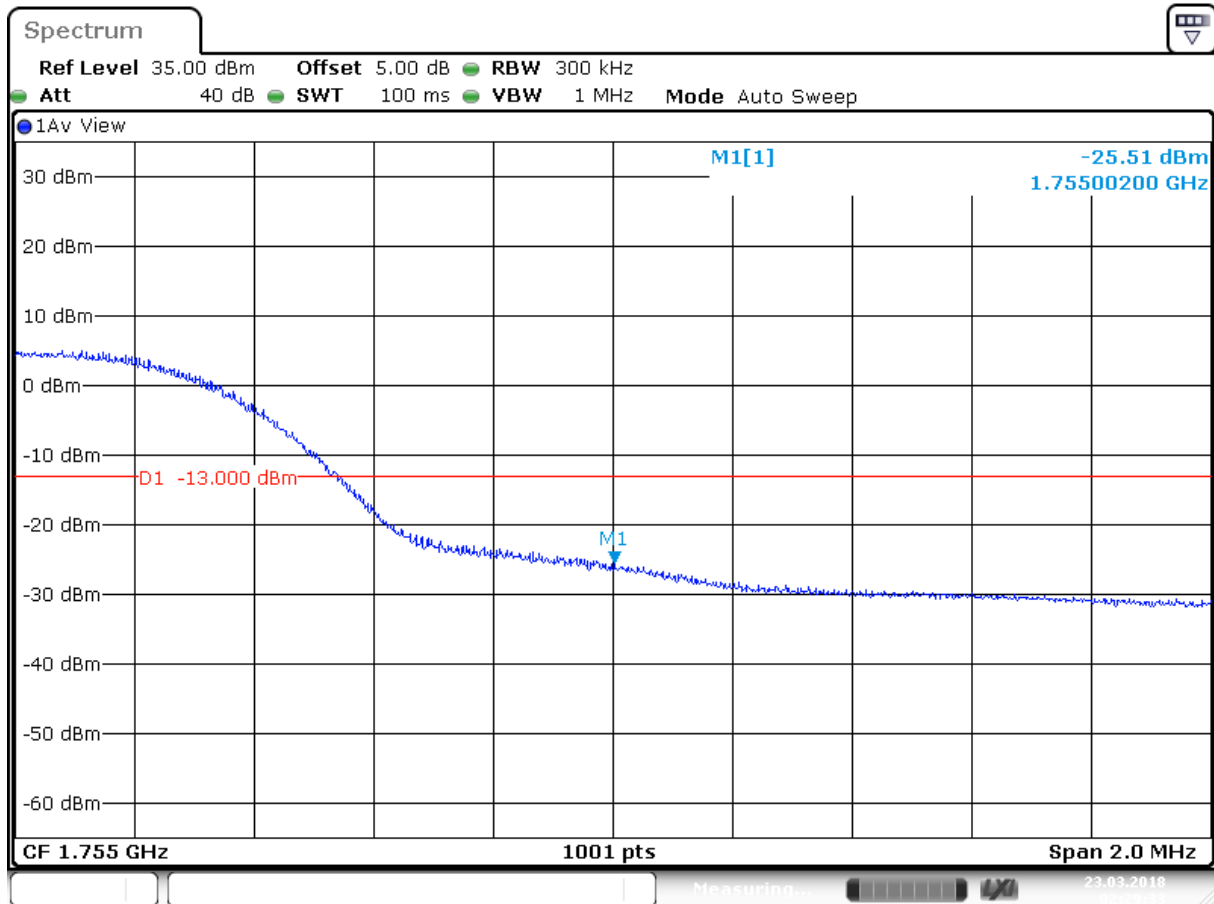
5.1.1.8.2.1 Test RB=1RB



Date: 23 MAR 2018 02:29:24



5.1.1.8.2.2 Test RB=75RB



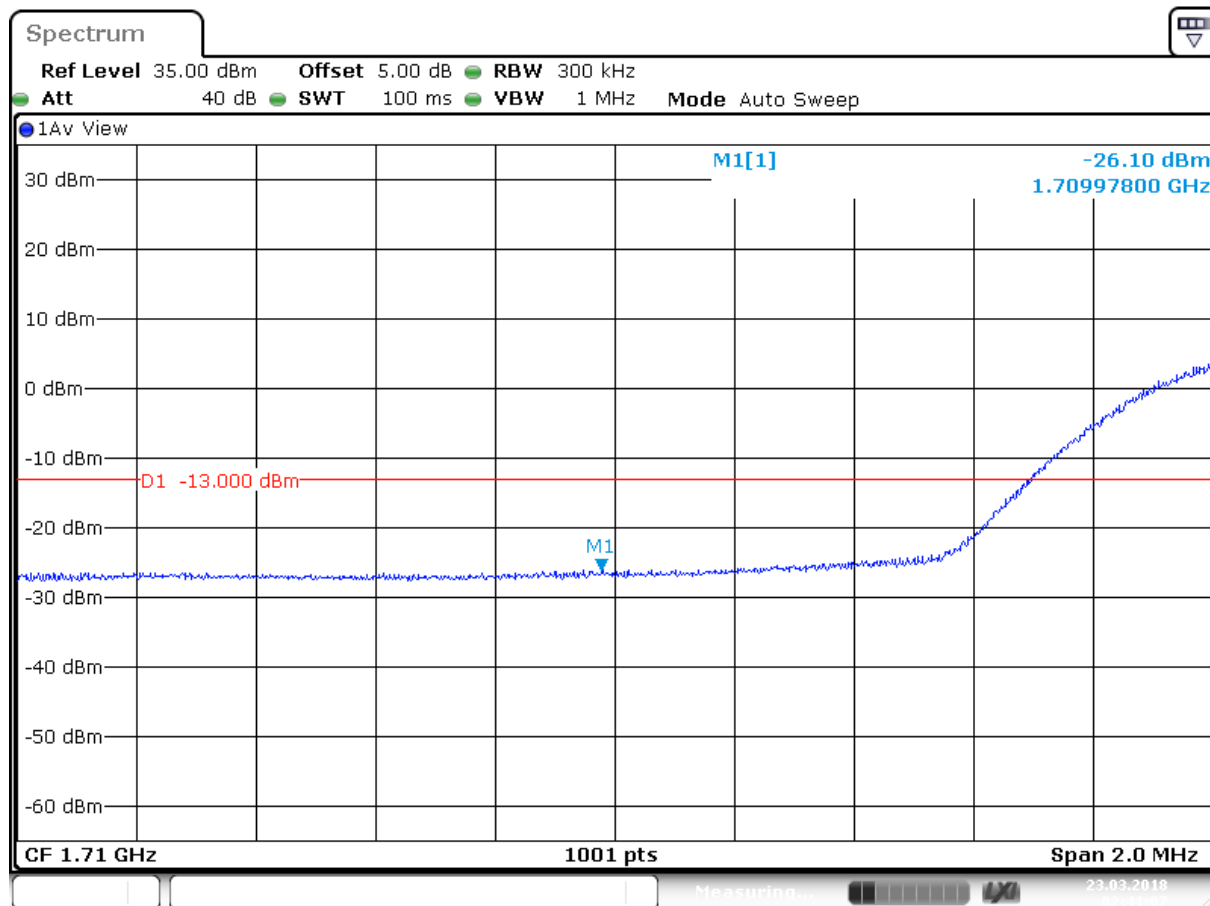
Date: 23 MAR 2018 02:29:34



5.1.1.9 Test Mode = LTE/TM1 20MHz

5.1.1.9.1 Test Channel = LCH

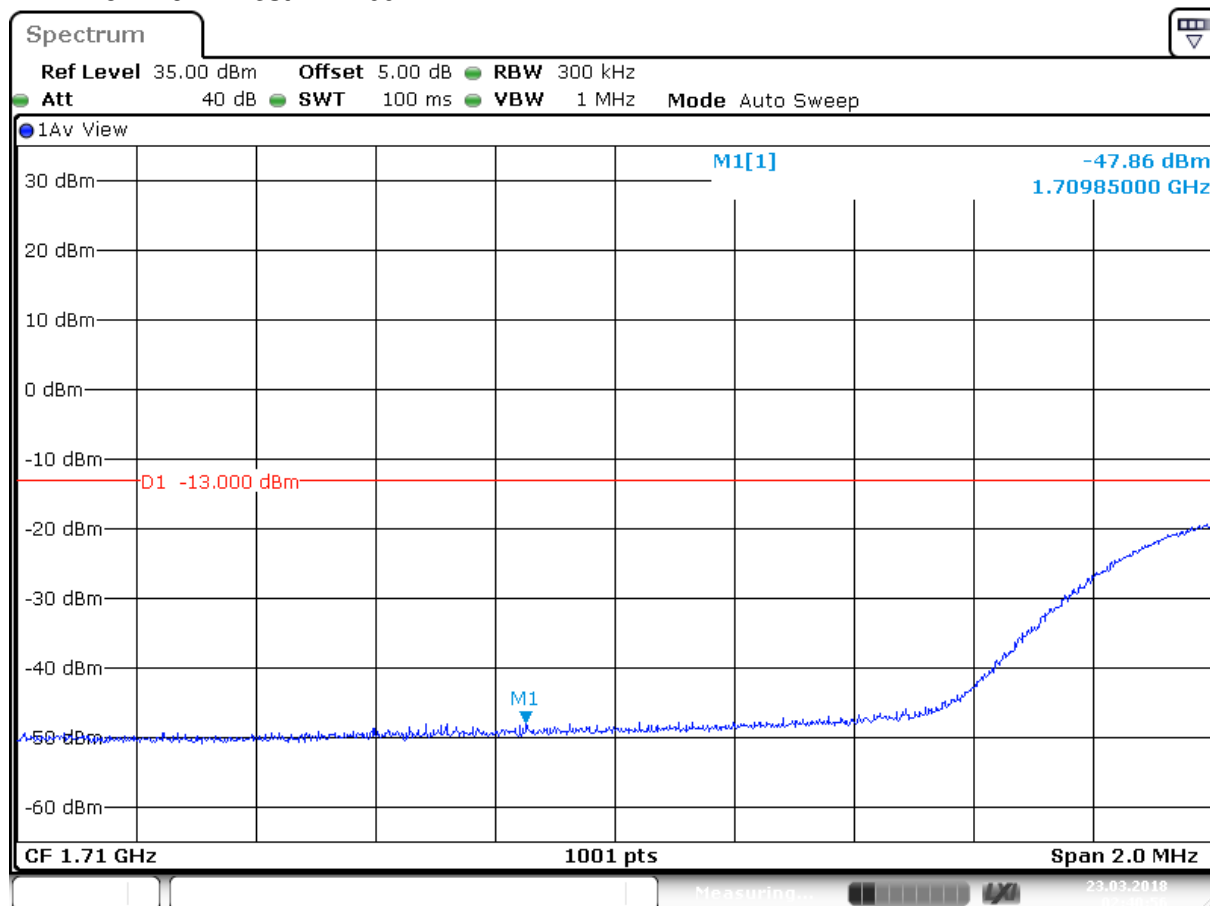
5.1.1.9.1.1 Test RB=1RB



Date: 23 MAR 2018 02:41:07



5.1.1.9.1.2 Test RB=100RB

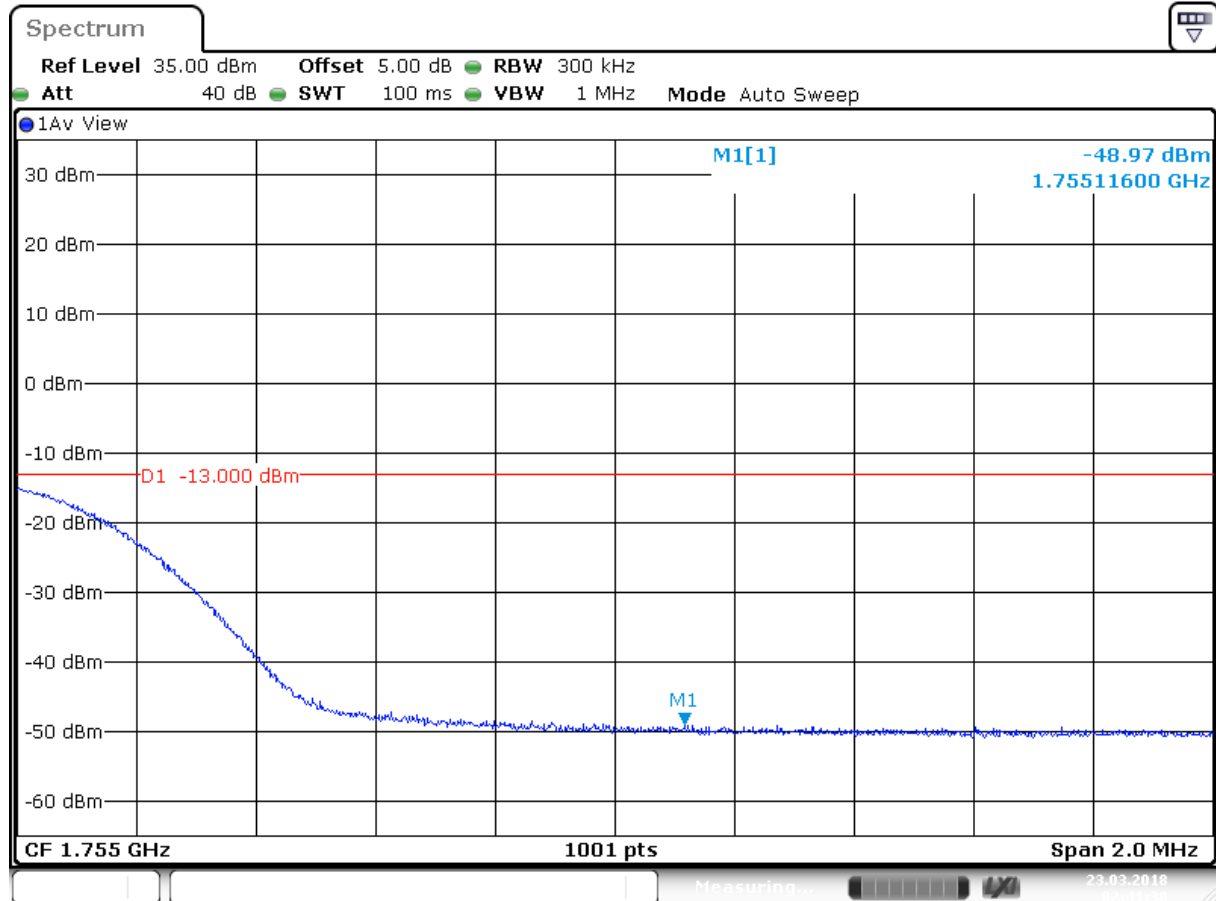


Date: 23 MAR 2018 02:40:56



5.1.1.9.2 Test Channel = HCH

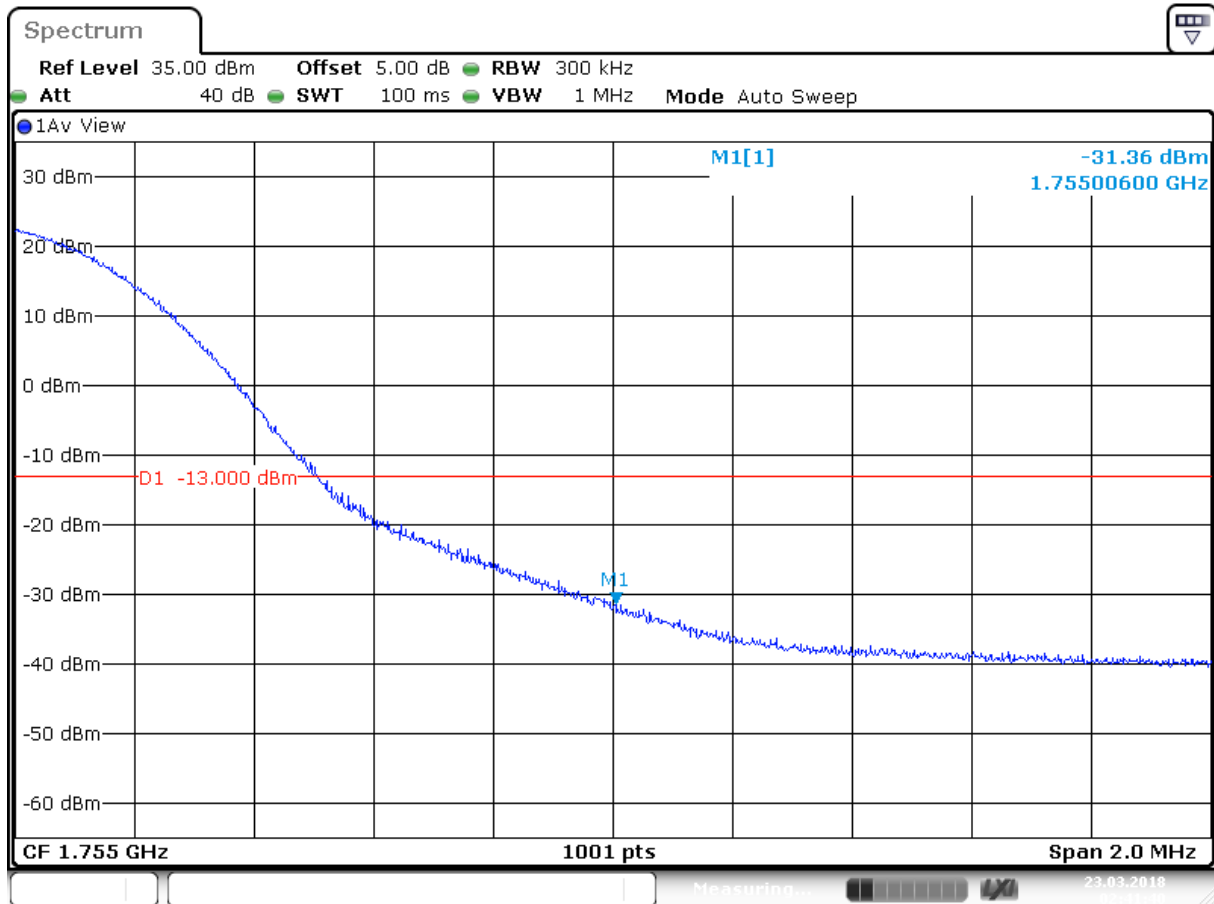
5.1.1.9.2.1 Test RB=1RB



Date: 23 MAR 2018 02:41:31



5.1.1.9.2.2 Test RB=100RB



Date: 23 MAR 2018 02:41:40



## 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.

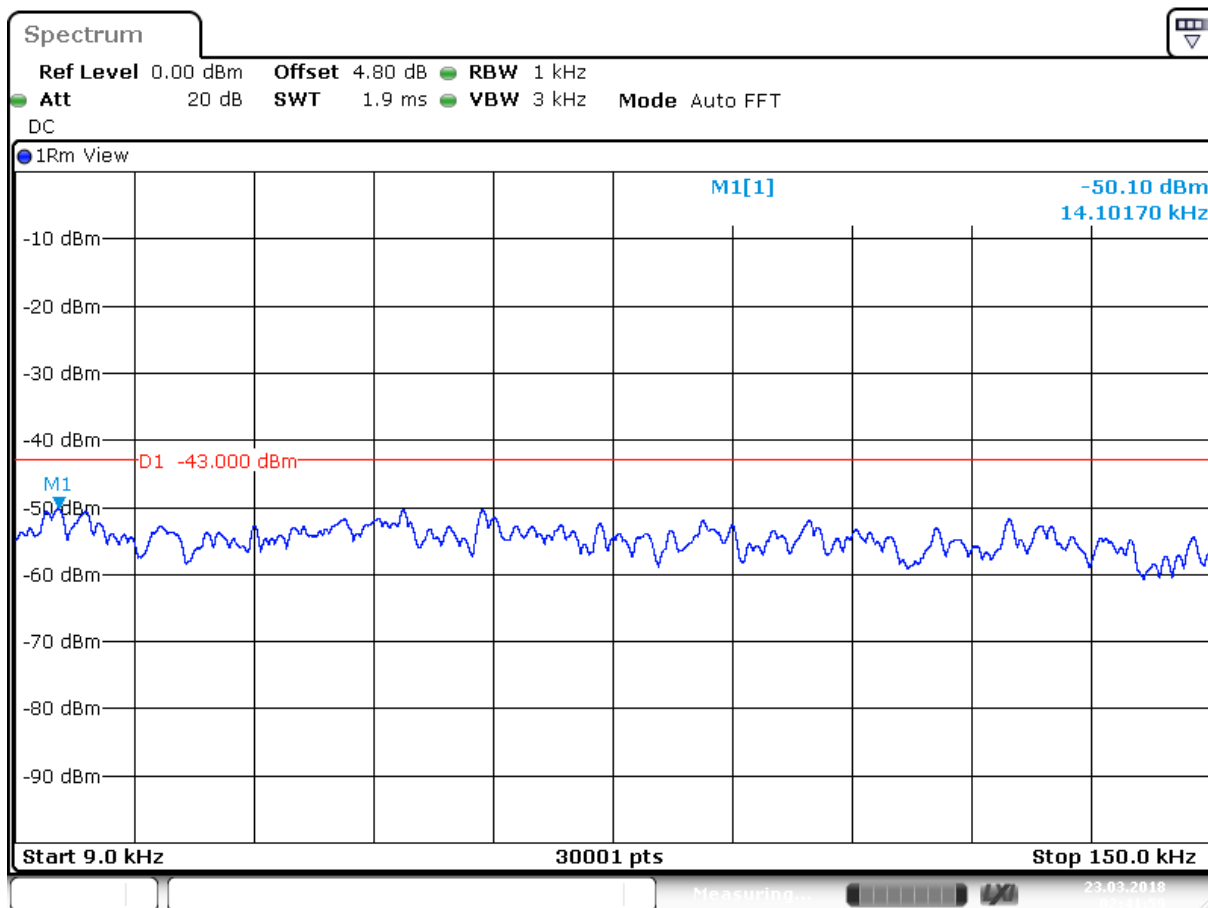
Part I - Test Plots

### 6.1 For LTE

#### 6.1.1 Test Band = LTE BAND 4

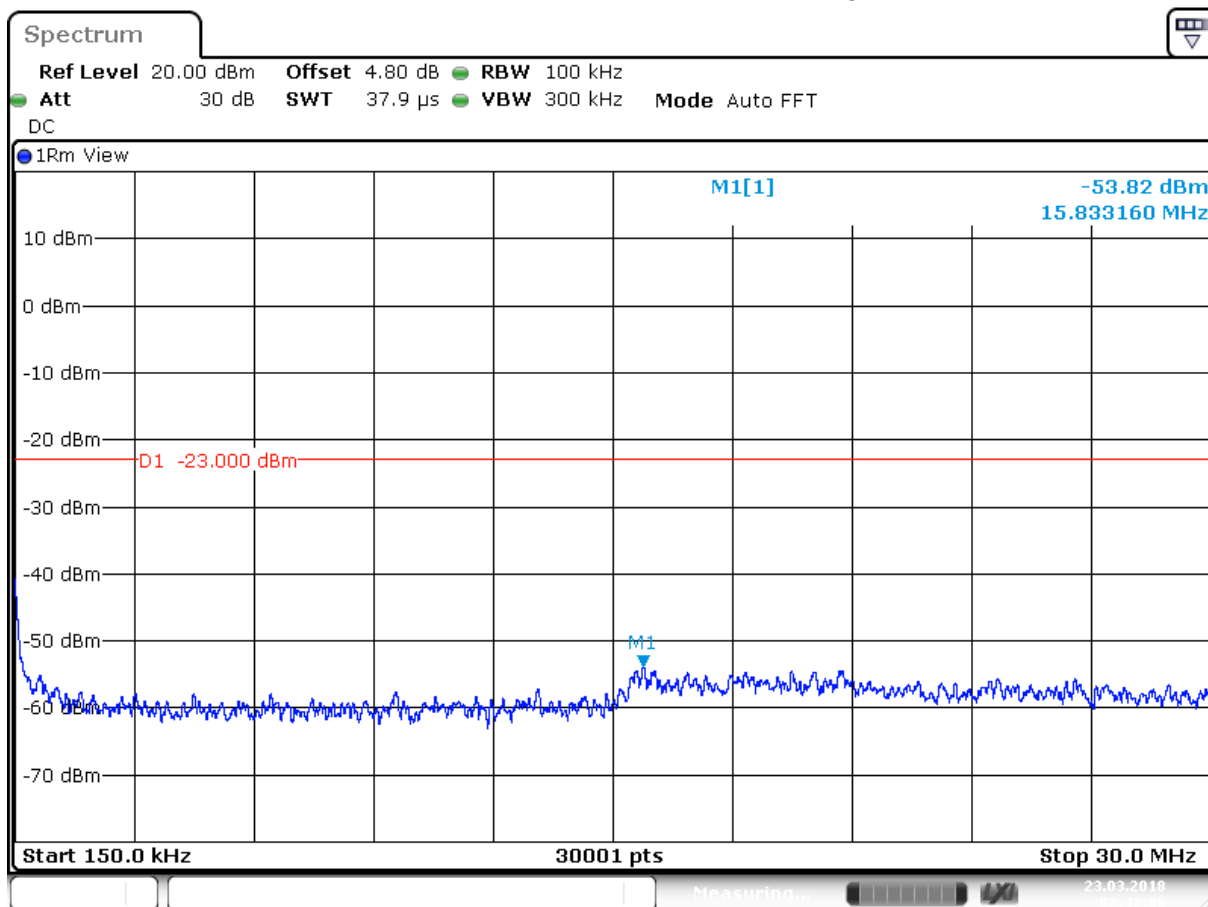
##### 6.1.1.1 Test Mode = LTE / TM1 20MHz RB1#0

##### 6.1.1.1.1 Test Channel = LCH

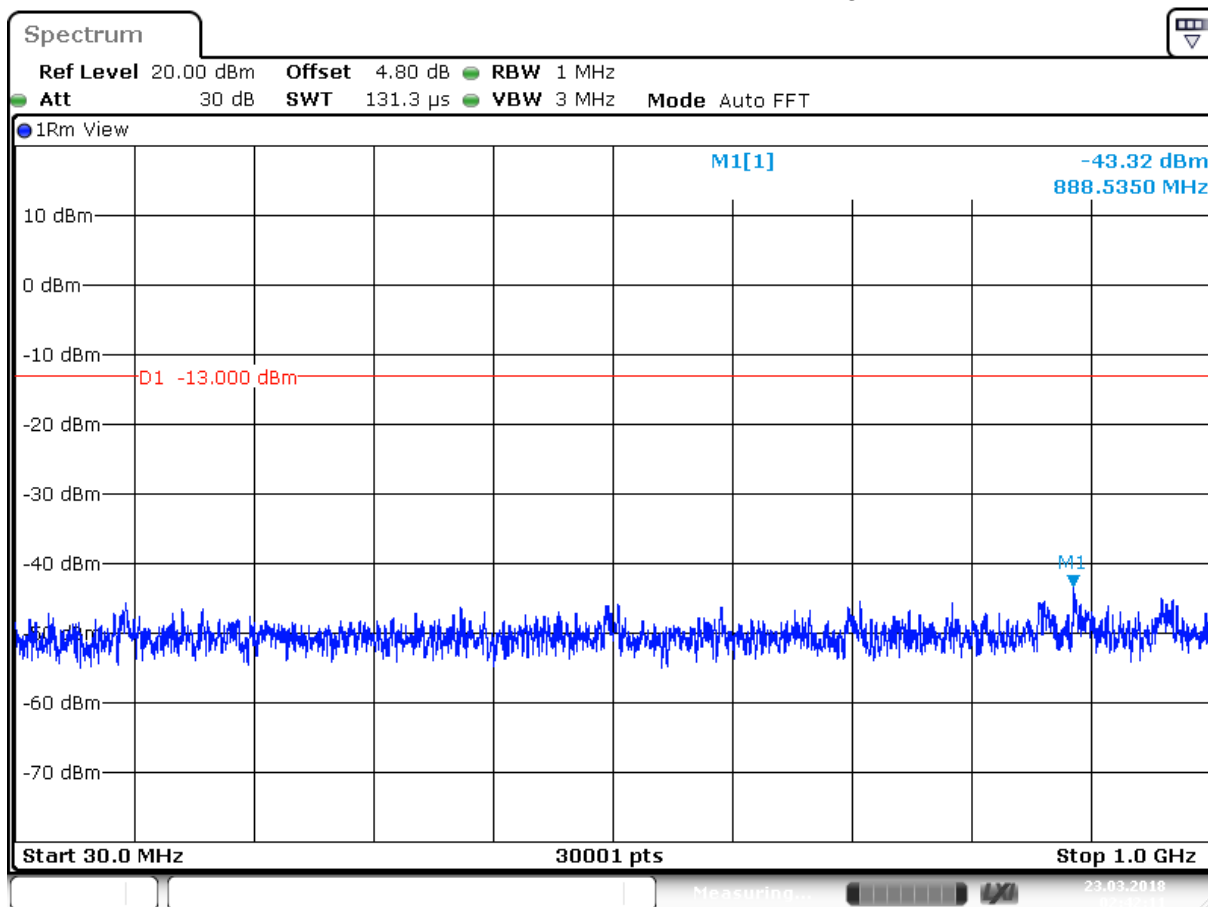


Date: 23 MAR 2018 02:42:00

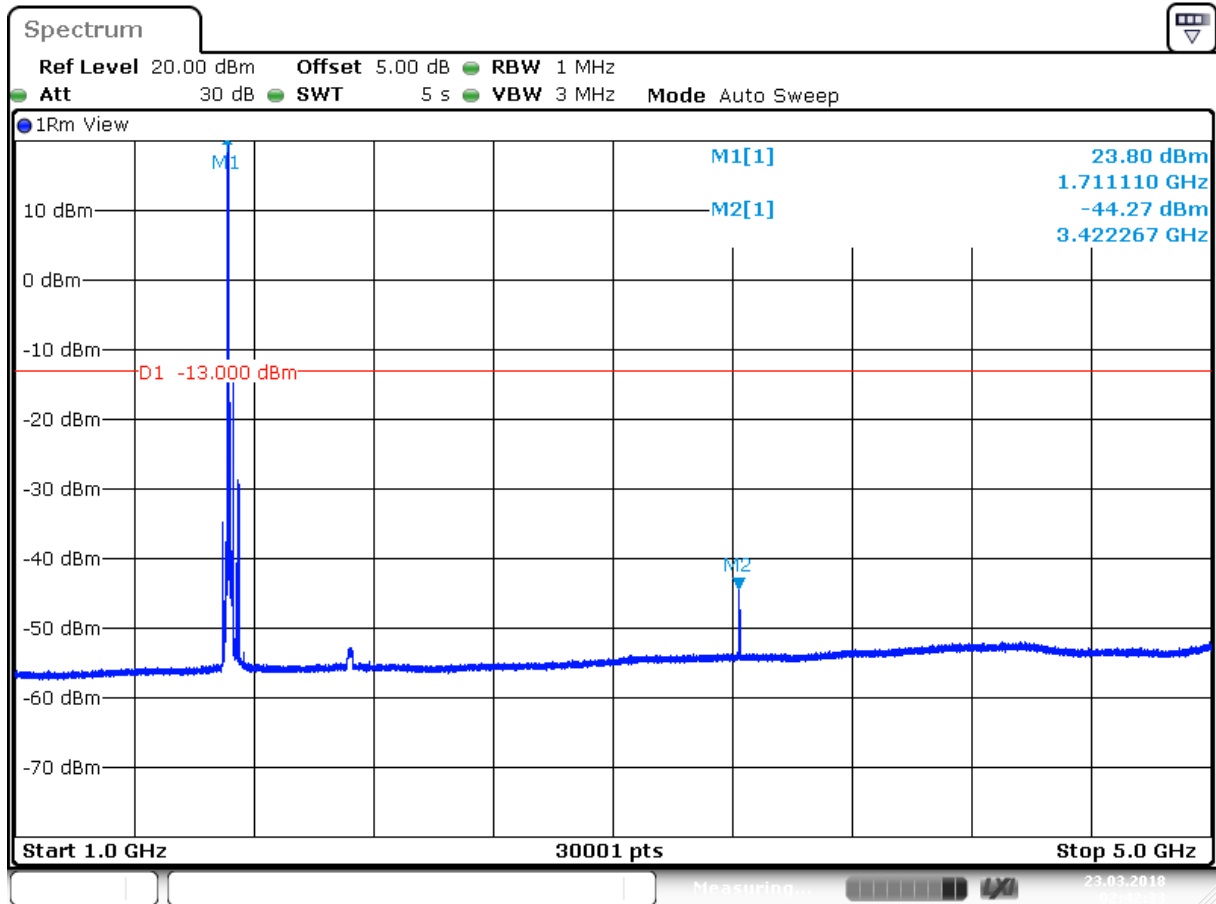




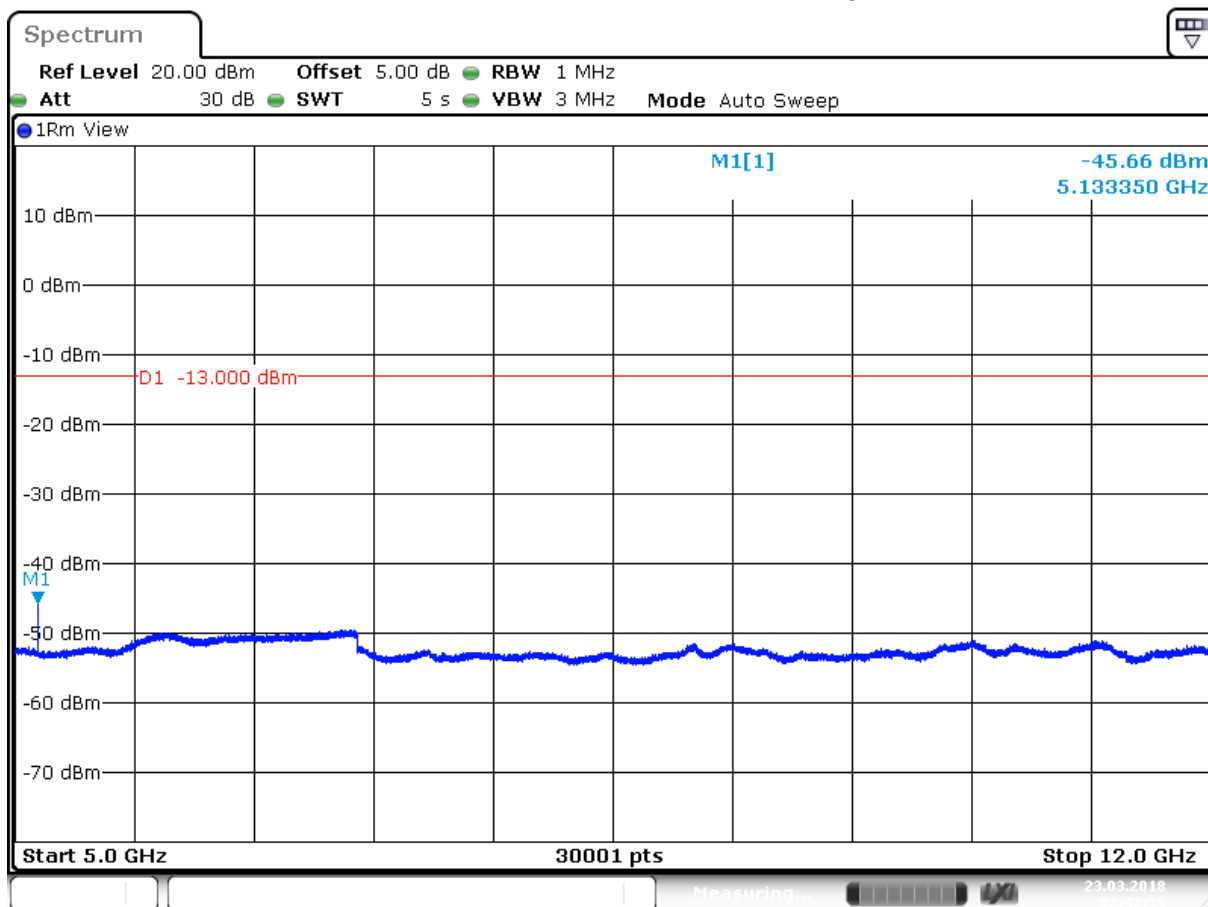
Date: 23 MAR 2018 02:42:06



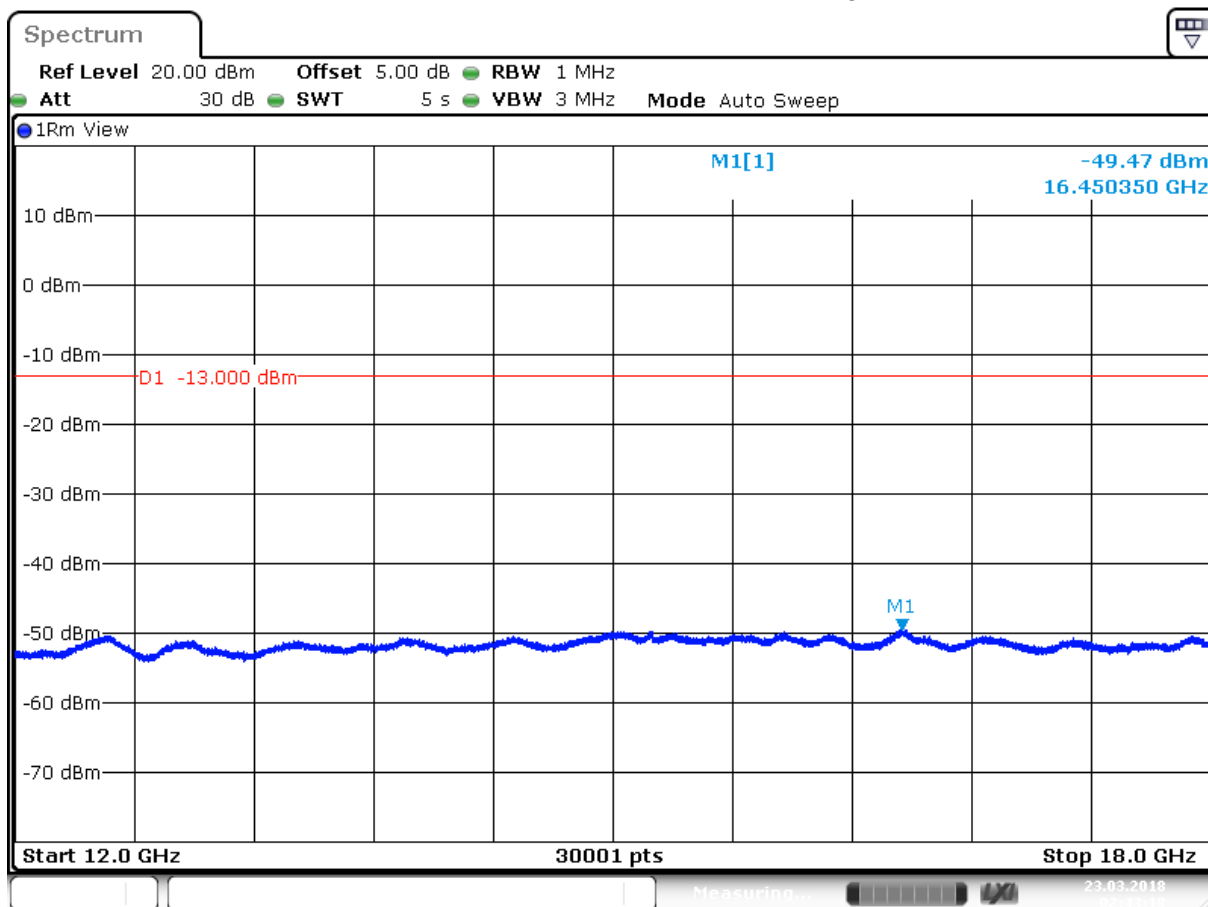
Date: 23 MAR 2018 02:42:11



Date: 23 MAR 2018 02:42:34



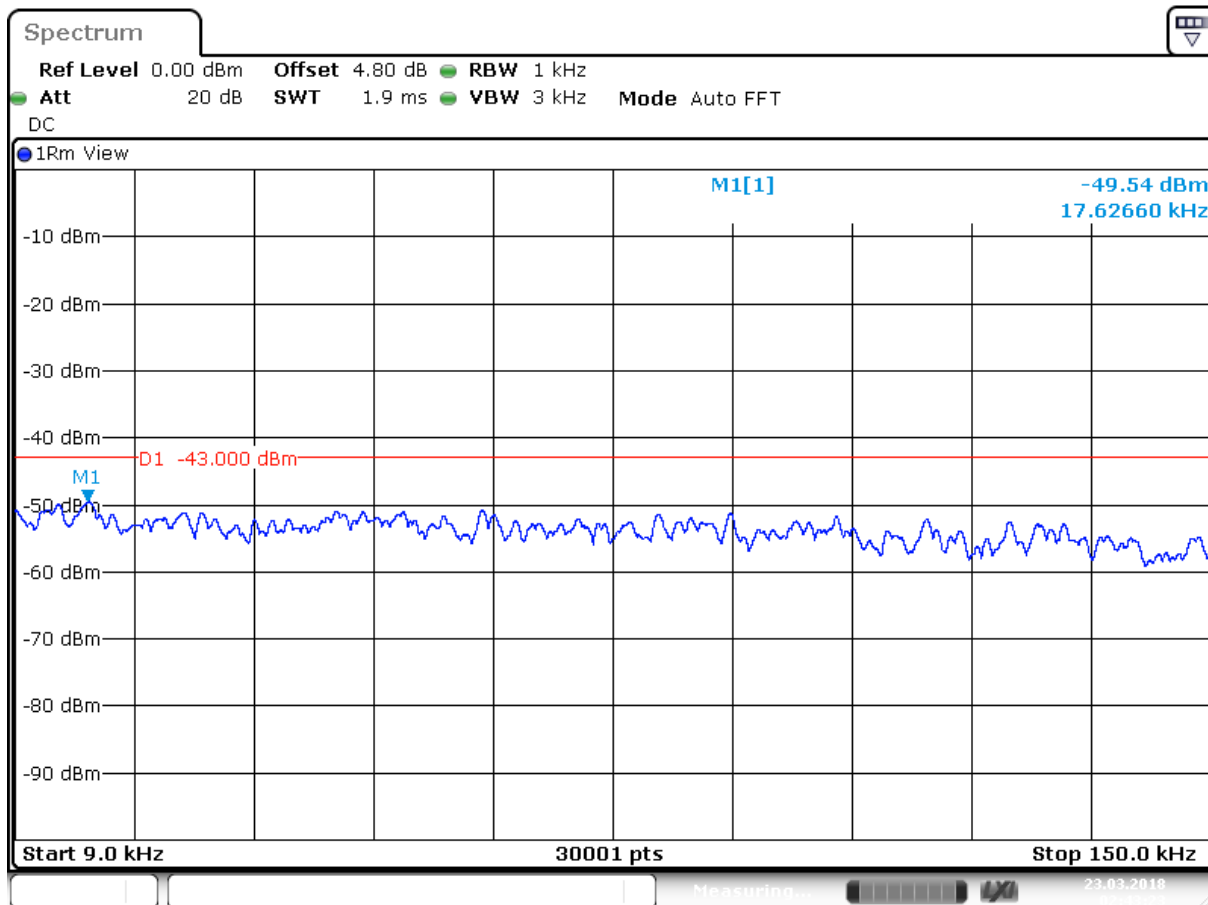
Date: 23 MAR 2018 02:42:56



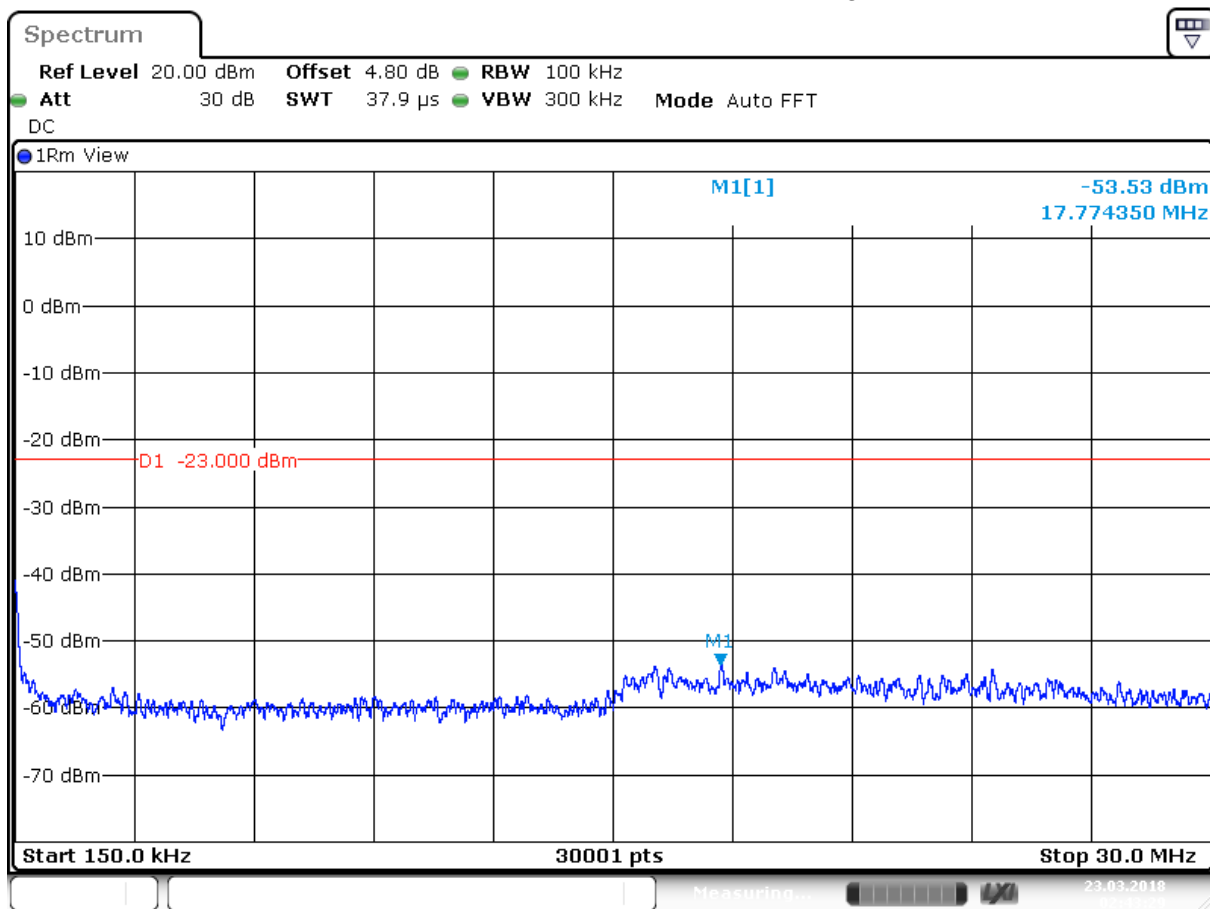
Date: 23 MAR 2018 02:43:18



6.1.1.1.2 Test Channel = MCH



Date: 23 MAR. 2018 02:43:23

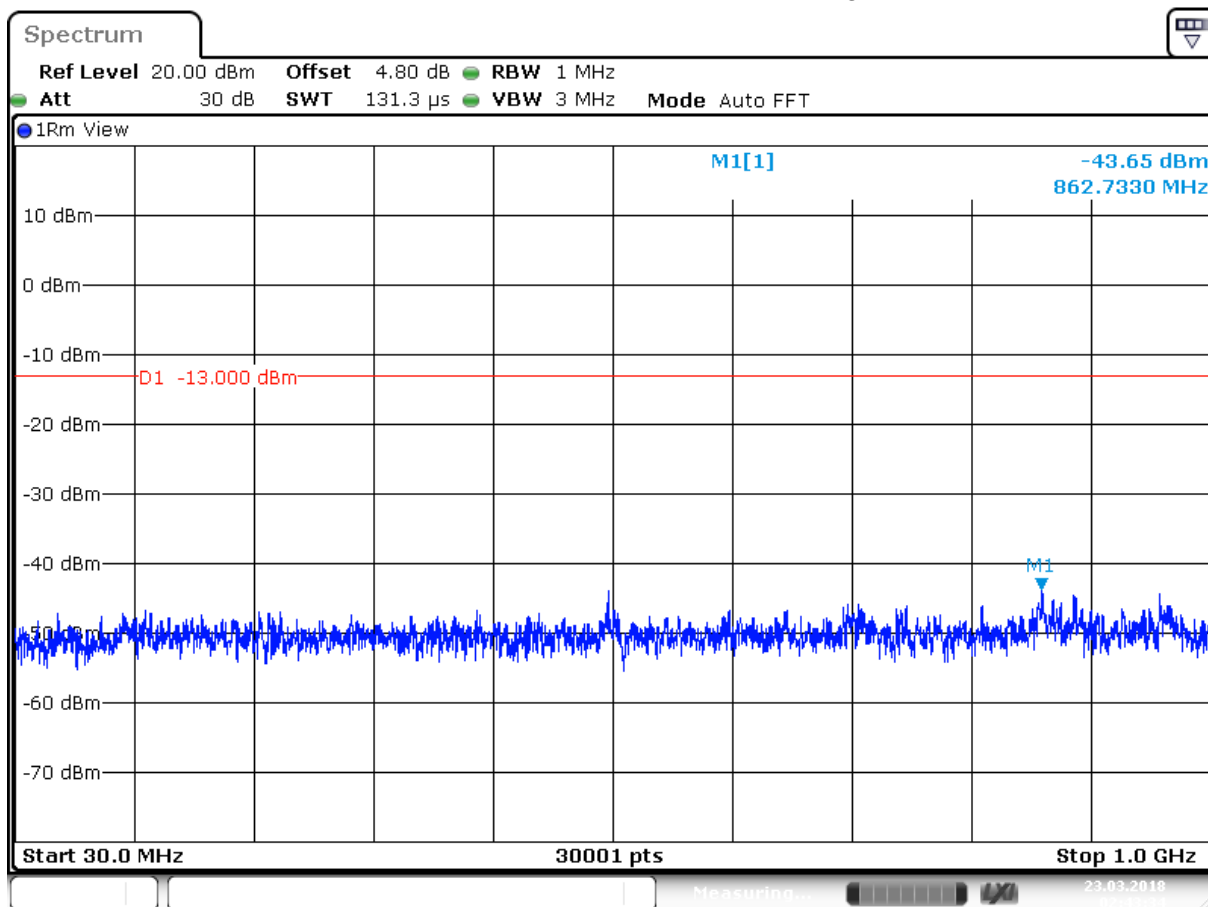


Date: 23 MAR 2018 02:43:29



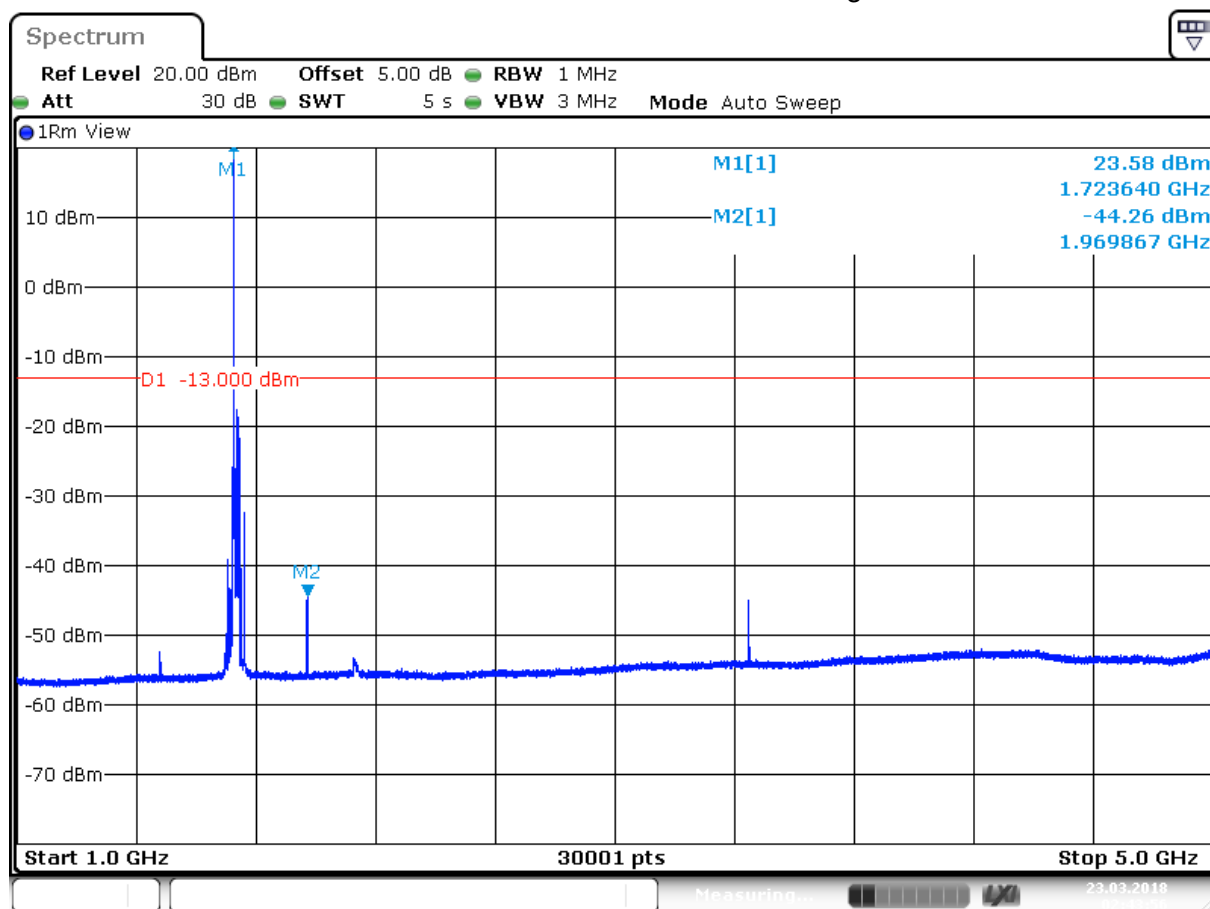
SGS-CSTC Standards Technical Services Co., Ltd.  
Shenzhen Branch

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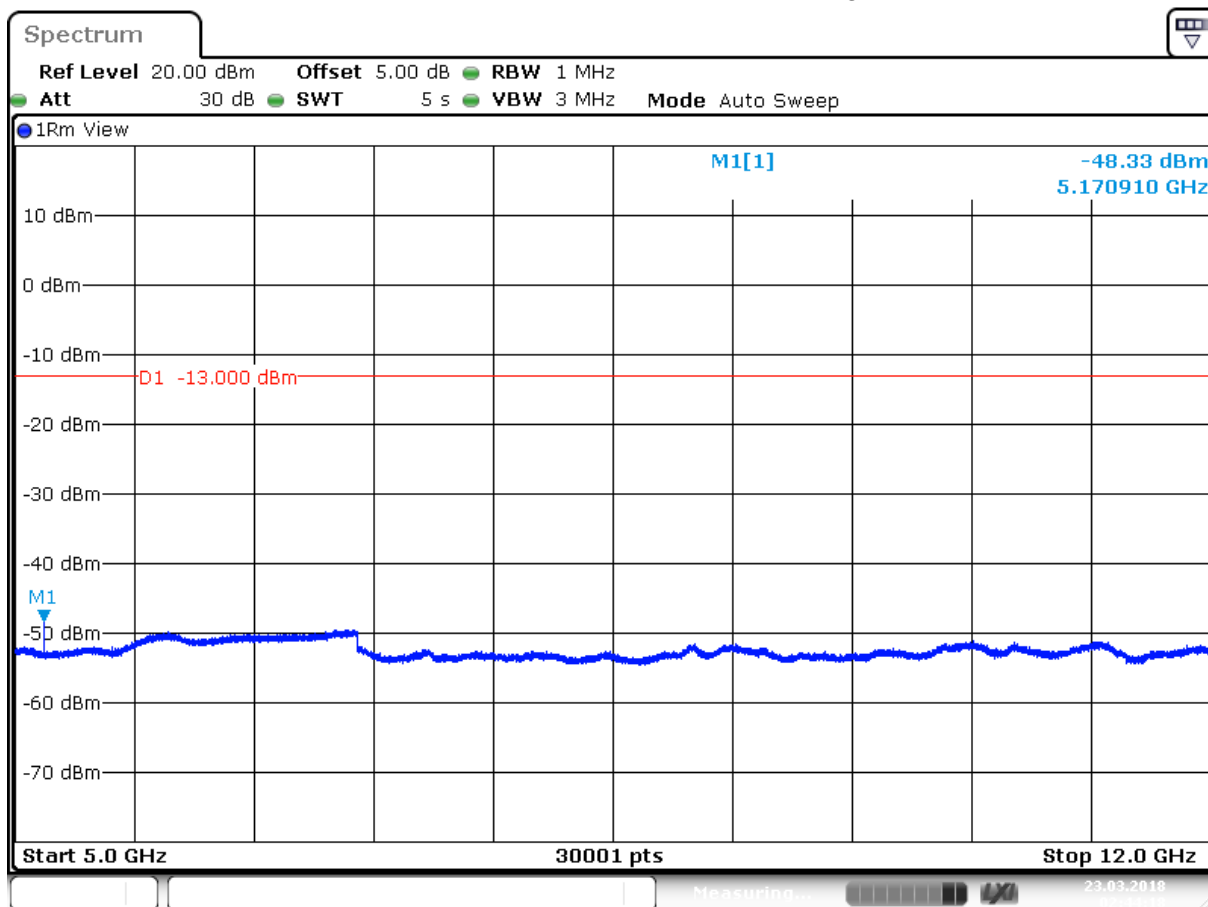


Date: 23 MAR 2018 02:43:34

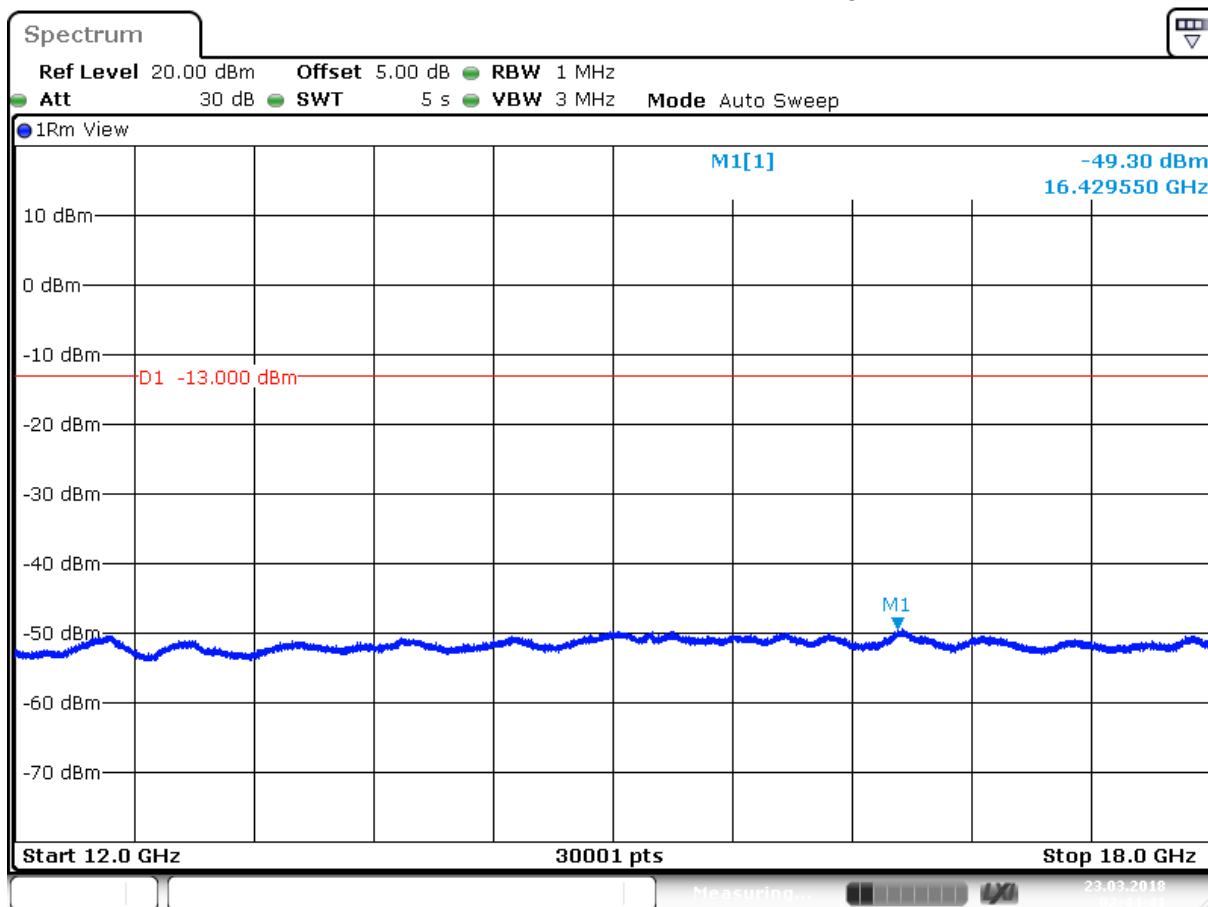




Date: 23 MAR 2018 02:43:57



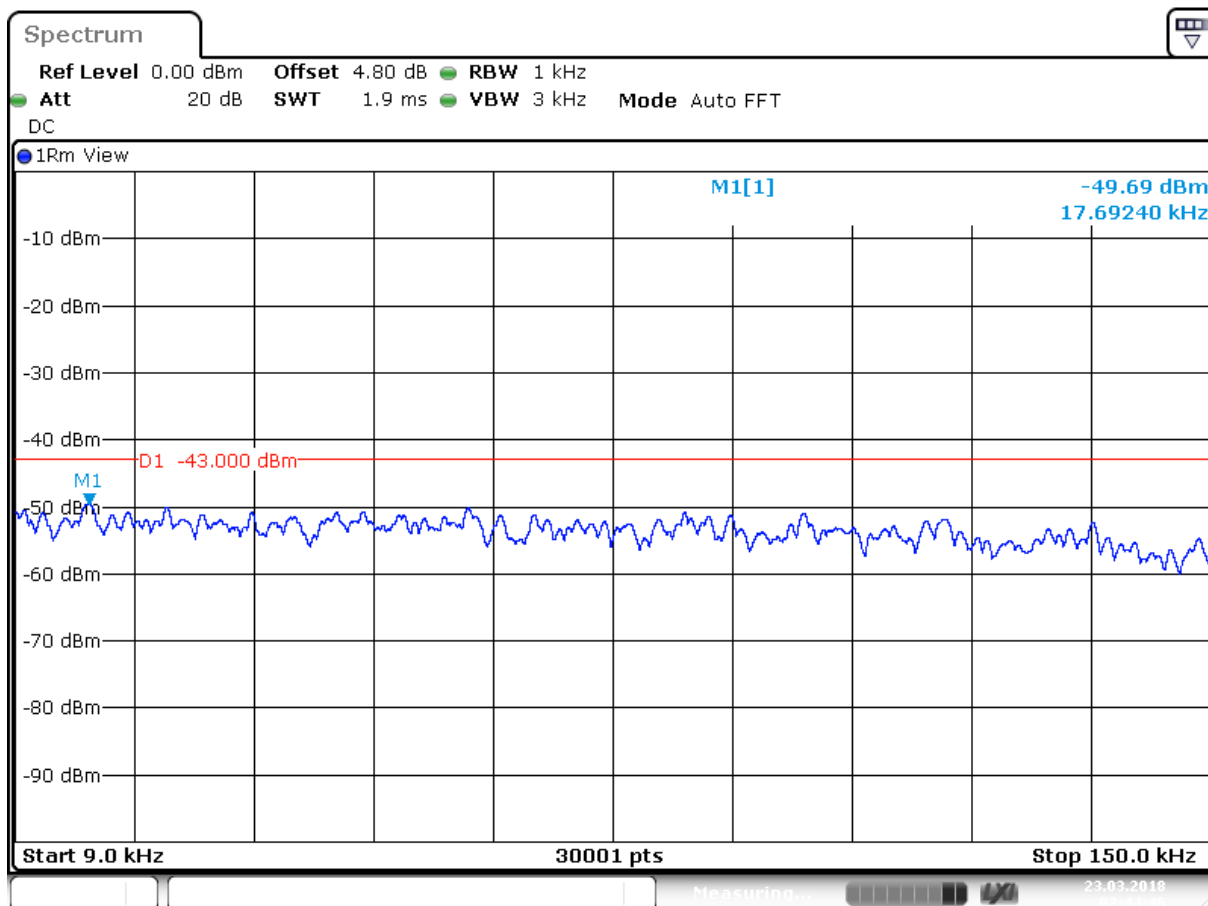
Date: 23 MAR 2018 02:44:19



Date: 23 MAR 2018 02:44:41



6.1.1.1.3 Test Channel = HCH

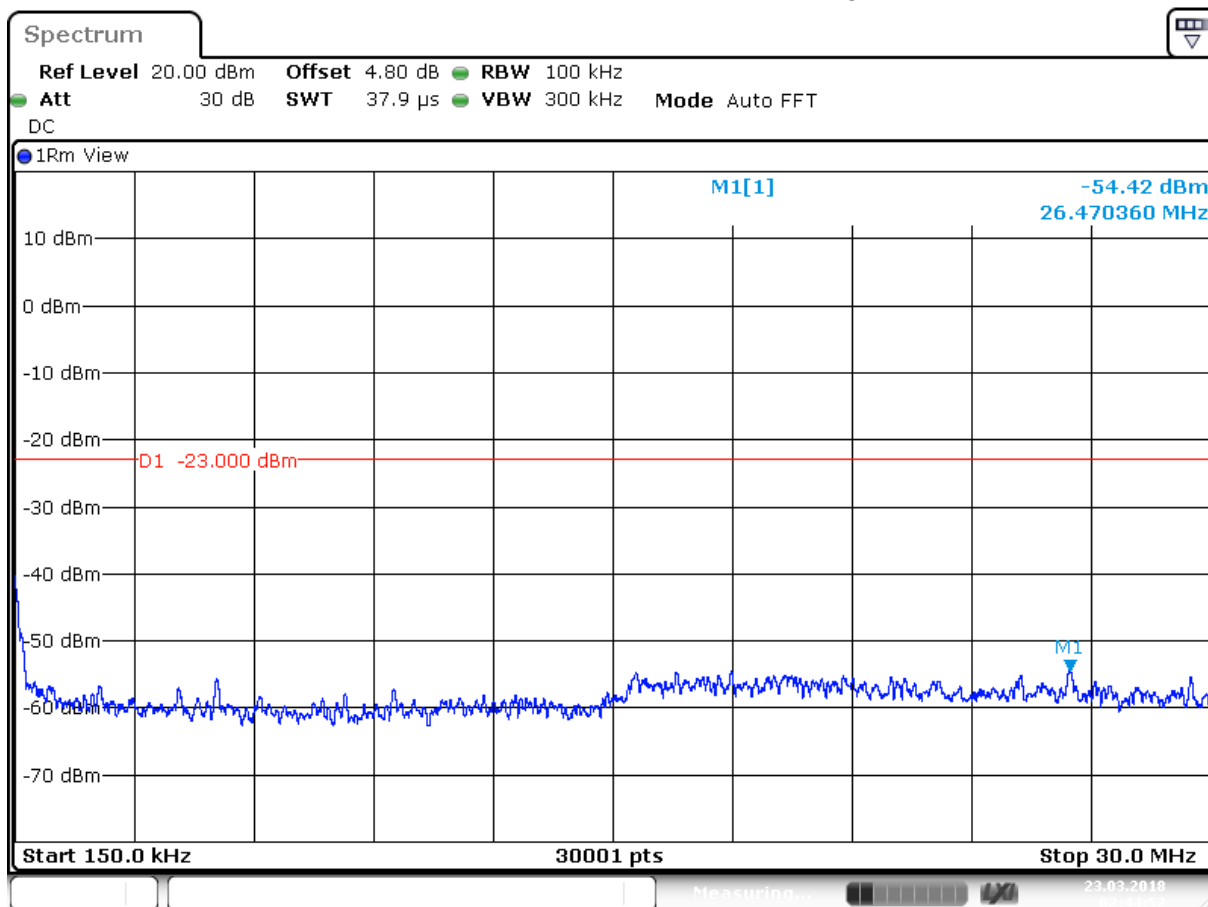


Date: 23 MAR 2018 02:44:46



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Shenzhen Branch

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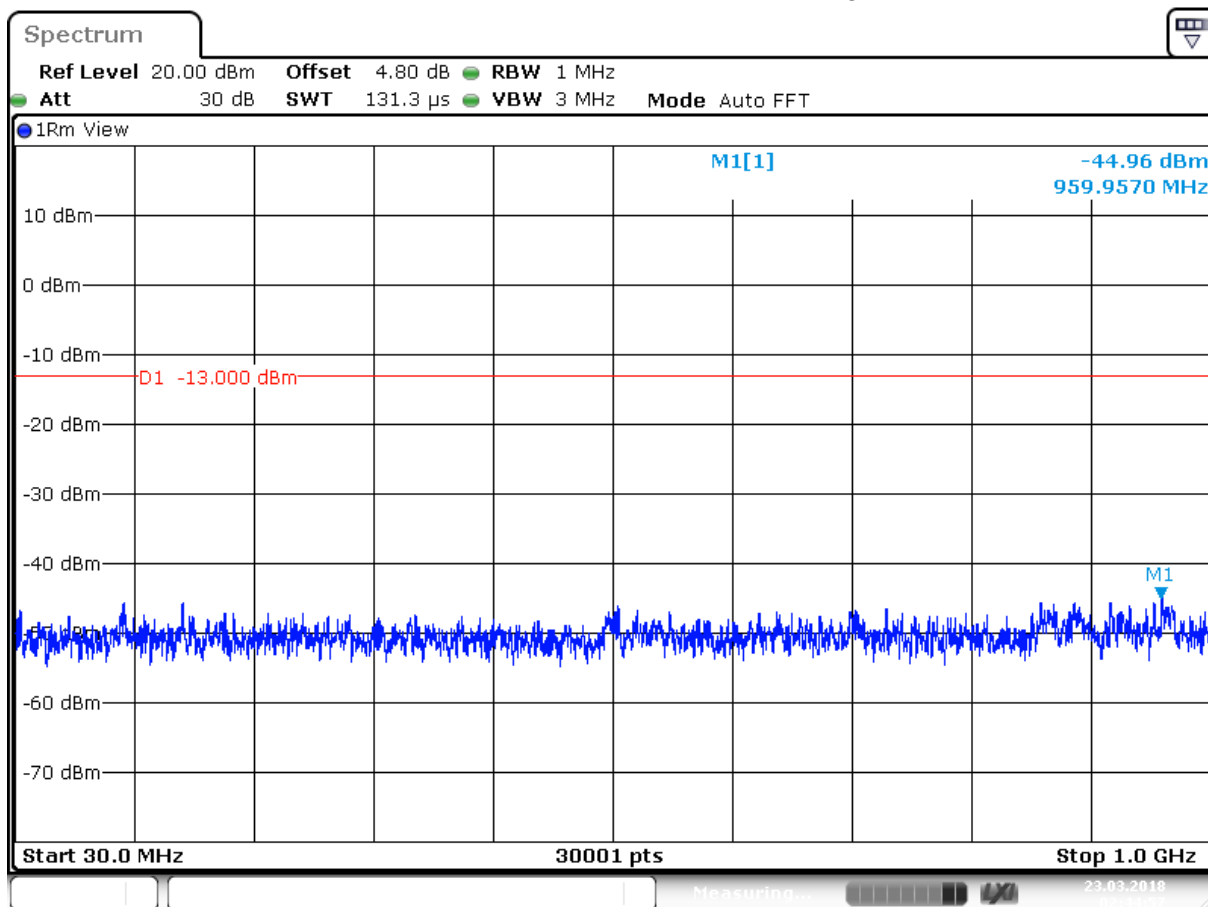


Date: 23 MAR 2018 02:44:52

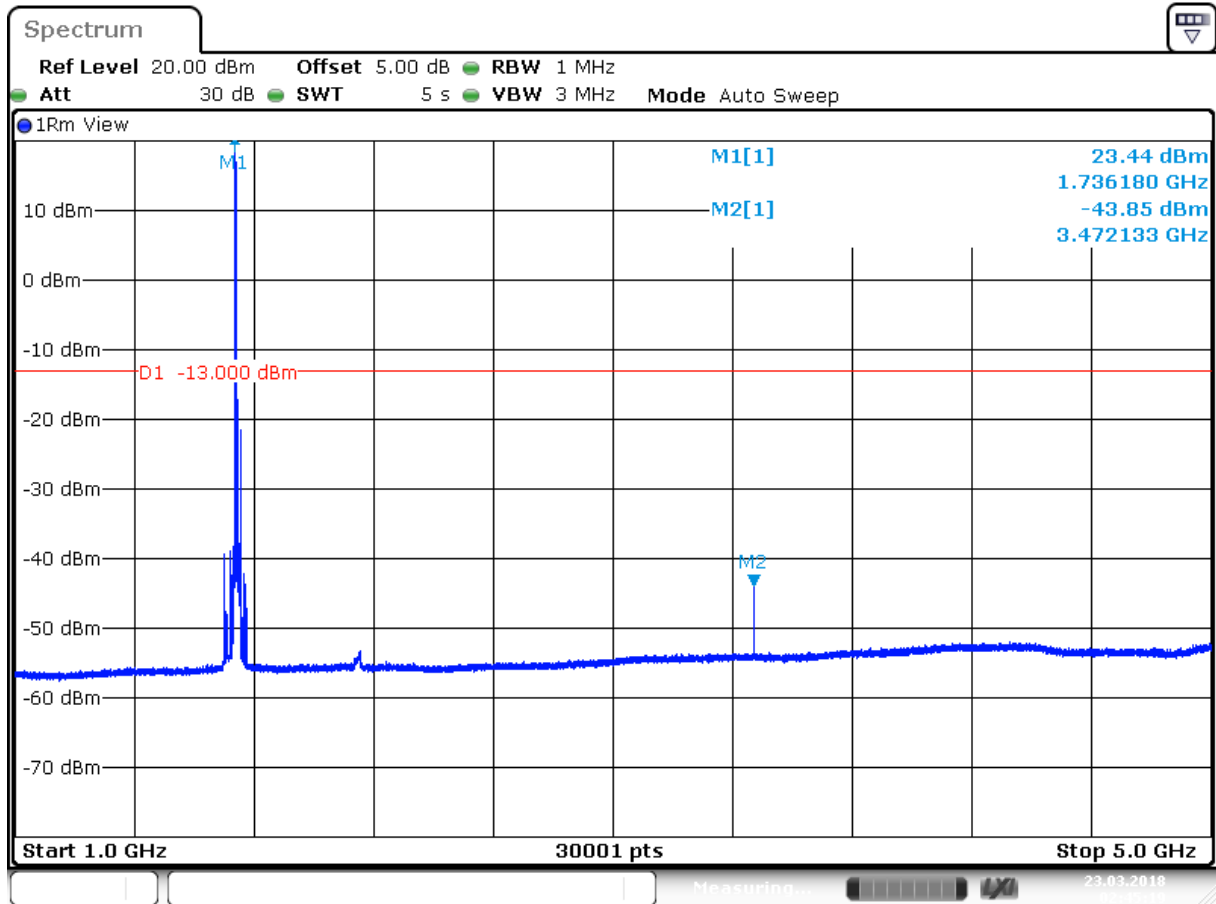


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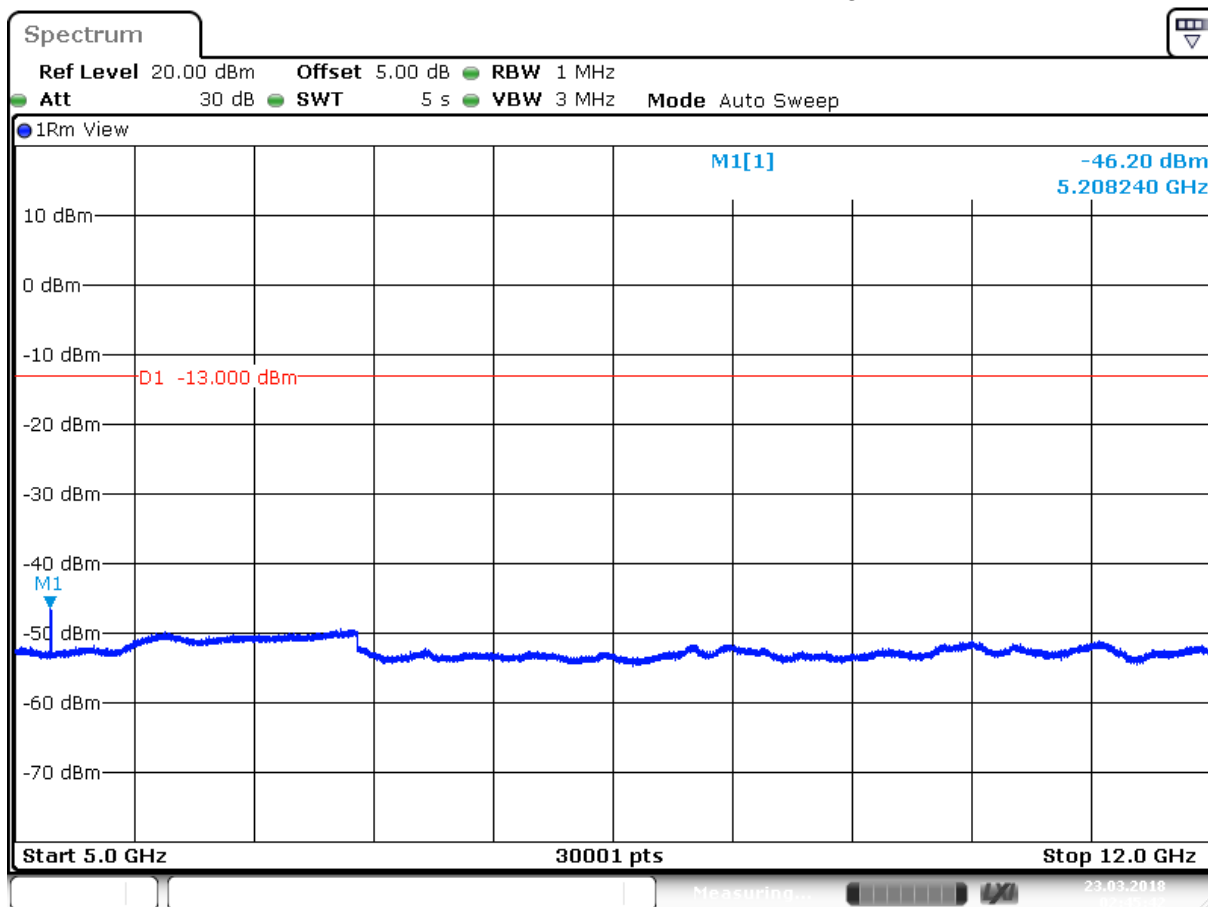
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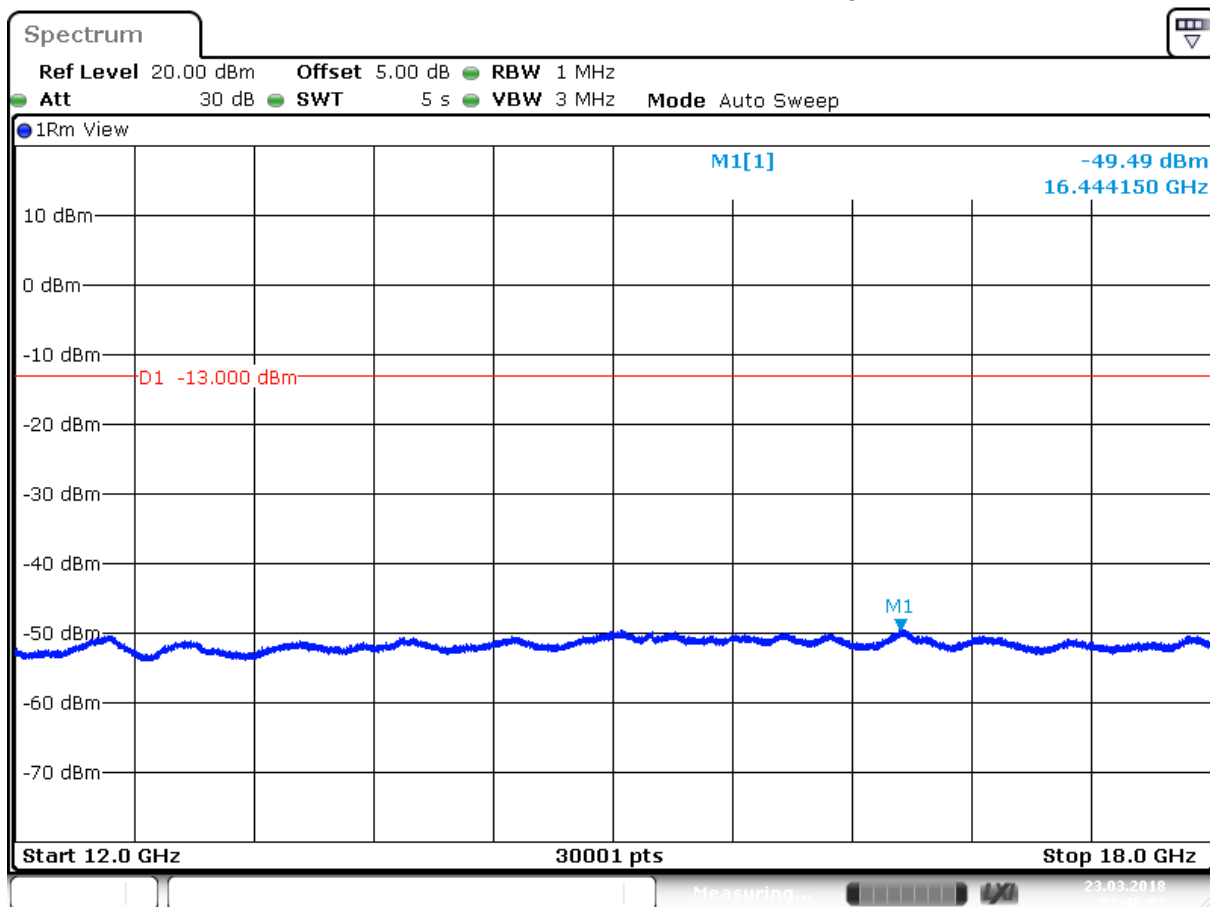


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## 7 Field Strength of Spurious Radiation

### 7.1 For LTE

#### 7.1.1 Test Band = LTE BAND 4

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

###### 7.1.1.1.1 Test Channel = LCH

Frequency (MHz)	Level (dBm)	Limit Line (dBm)	Over Limit (dB)	Polarization
89.600000	-75.67	-13.00	62.67	Vertical
345.600000	-73.50	-13.00	60.50	Vertical
2112.000000	-53.95	-13.00	40.95	Vertical
3421.850000	-52.66	-13.00	39.66	Vertical
5133.300000	-46.22	-13.00	33.22	Vertical
6844.100000	-60.14	-13.00	47.14	Vertical
90.100000	-74.77	-13.00	61.77	Horizontal
310.900000	-70.42	-13.00	57.42	Horizontal
2127.500000	-52.15	-13.00	39.15	Horizontal
3421.850000	-49.57	-13.00	36.57	Horizontal
5133.300000	-52.97	-13.00	39.97	Horizontal
6844.100000	-62.39	-13.00	49.39	Horizontal

###### 7.1.1.1.2 Test Channel = MCH

Frequency (MHz)	Level (dBm)	Limit Line (dBm)	Over Limit (dB)	Polarization
89.550000	-74.77	-13.00	61.77	Vertical
345.600000	-73.02	-13.00	60.02	Vertical
2141.000000	-52.36	-13.00	39.36	Vertical
3446.875000	-53.64	-13.00	40.64	Vertical
5170.675000	-47.92	-13.00	34.92	Vertical
6894.150000	-60.18	-13.00	47.18	Vertical
89.100000	-73.94	-13.00	60.94	Horizontal
310.800000	-69.67	-13.00	56.67	Horizontal
2133.000000	-52.09	-13.00	39.09	Horizontal
3446.875000	-51.39	-13.00	38.39	Horizontal
5170.675000	-52.66	-13.00	39.66	Horizontal
7970.875000	-64.10	-13.00	51.10	Horizontal



**7.1.1.1.3 Test Channel = HCH**

Frequency (MHz)	Level (dBm)	Limit Line (dBm)	Over Limit (dB)	Polarization
89.100000	-75.09	-13.00	62.09	Vertical
345.600000	-73.68	-13.00	60.68	Vertical
2137.500000	-55.12	-13.00	42.12	Vertical
3472.225000	-48.38	-13.00	35.38	Vertical
5208.050000	-54.47	-13.00	41.47	Vertical
6944.200000	-61.16	-13.00	48.16	Vertical
91.150000	-73.06	-13.00	60.06	Horizontal
301.300000	-70.45	-13.00	57.45	Horizontal
2142.500000	-52.14	-13.00	39.14	Horizontal
3471.900000	-48.38	-13.00	35.38	Horizontal
5208.050000	-53.58	-13.00	40.58	Horizontal
6944.200000	-61.59	-13.00	48.59	Horizontal

**NOTE:**

- 1) The disturbance above 13GHz and below 30MHz was very low, and the above harmonics were the highest point could be found when testing, so only the above harmonics had been displayed.
- 2) We have tested all modulation and 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
LTEBAND 4	LTE/TM1 20MHz	LCH	TN	VL	-4.03	-0.00217	PASS
				VN	0.46	0.00025	PASS
				VH	-7.73	-0.00416	PASS
		MCH	TN	VL	1.49	0.00079	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	-0.79	-0.00042	PASS



## 8.2 Frequency Error VS. Temperature

Test Band	Test Mode	Test Channel	Test Volt.	Test Temp.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict
LTEBAND 4	LTE/TM1 20MHz	LCH	VN	-30	-0.40	-0.00022	PASS
				-20	-1.34	-0.00072	PASS
				-10	2.38	0.00128	PASS
				0	1.75	0.00094	PASS
				10	1.65	0.00089	PASS
				20	0.11	0.00006	PASS
				30	-0.31	-0.00017	PASS
				40	-0.14	-0.00008	PASS
				50	0.59	0.00032	PASS
		MCH	VN	-30	-7.80	-0.00415	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	-9.94	-0.00529	PASS
				30	-5.66	-0.00301	PASS
				40	-4.62	-0.00246	PASS
				50	-6.92	-0.00368	PASS
		HCH	VN	-30	0.54	0.00028	PASS
				-20	-1.49	-0.00078	PASS
				-10	1.53	0.00081	PASS
				0	-2.83	-0.00149	PASS
				10	2.60	0.00137	PASS
				20	-0.57	-0.00030	PASS
				30	-2.66	-0.00140	PASS
				40	-5.43	-0.00286	PASS
				50	-8.90	-0.00468	PASS

The End