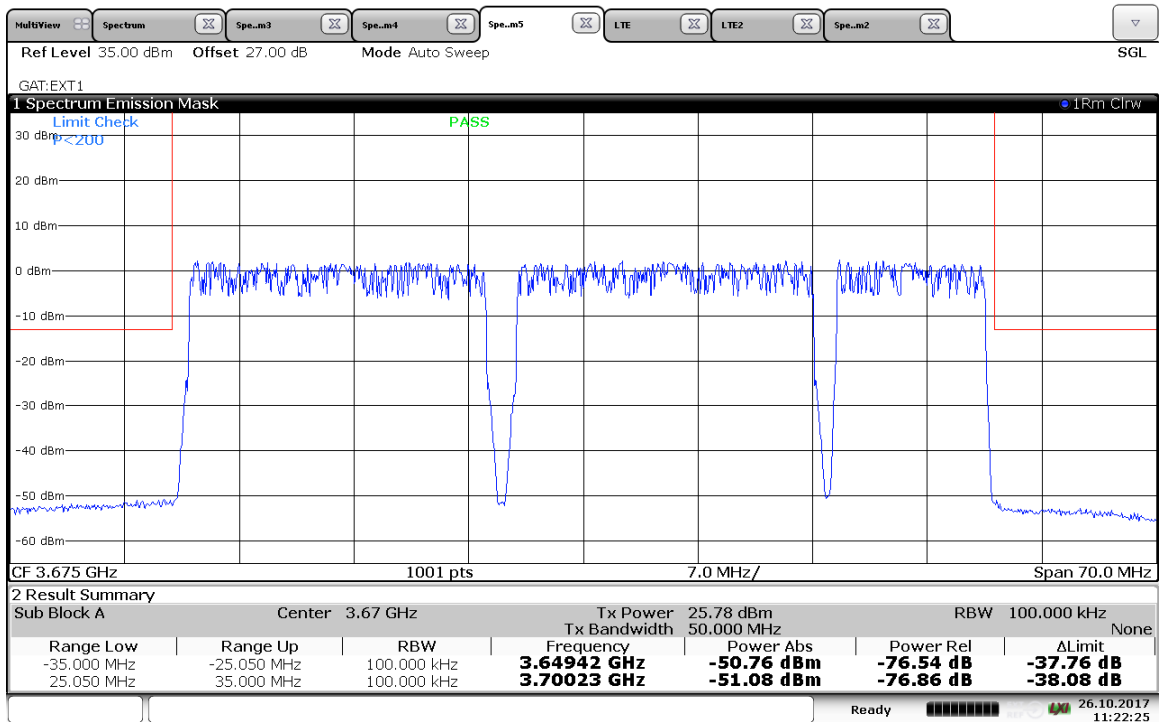
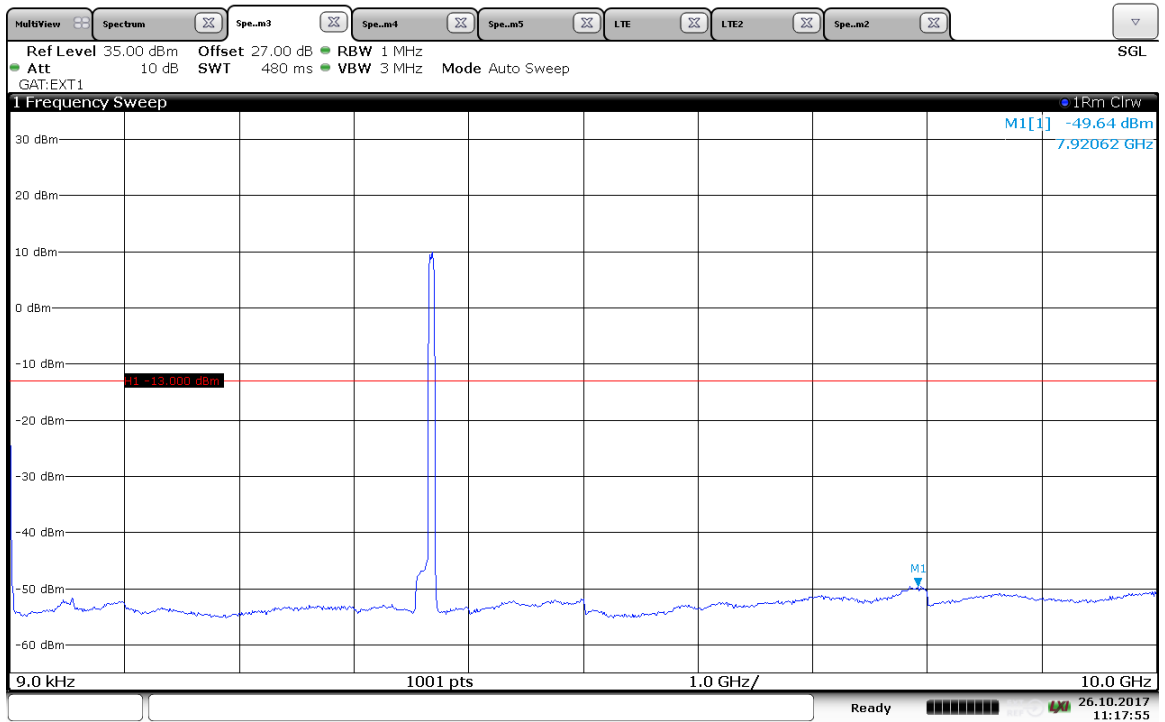


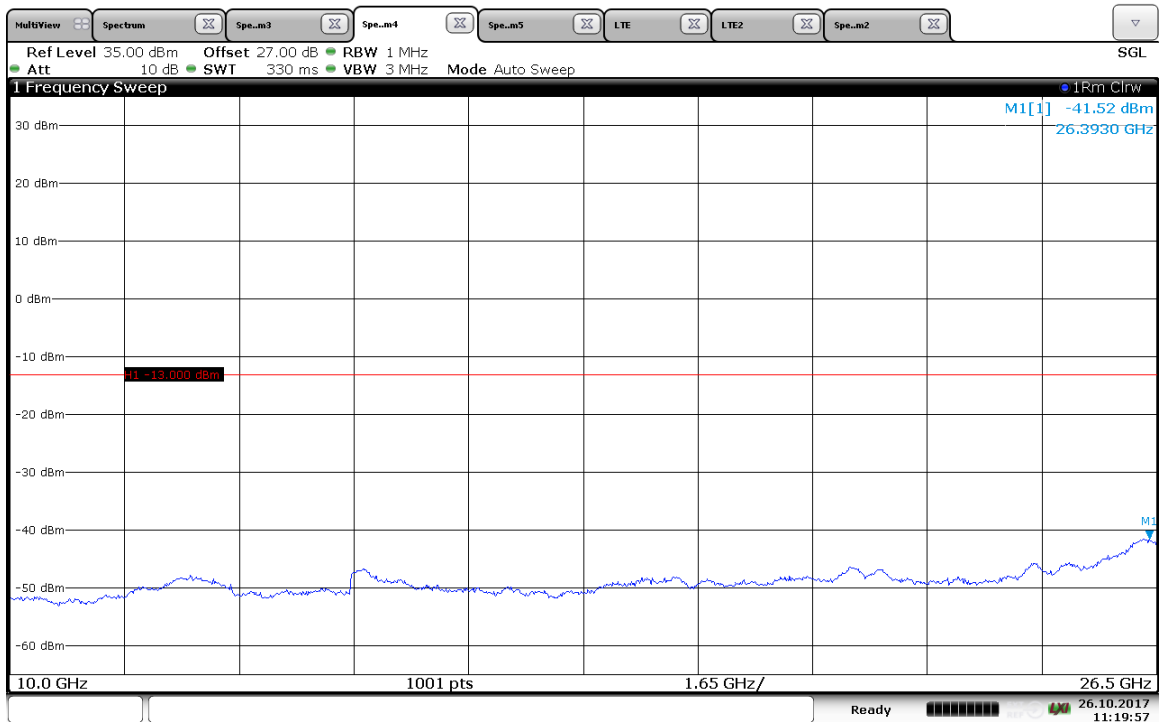
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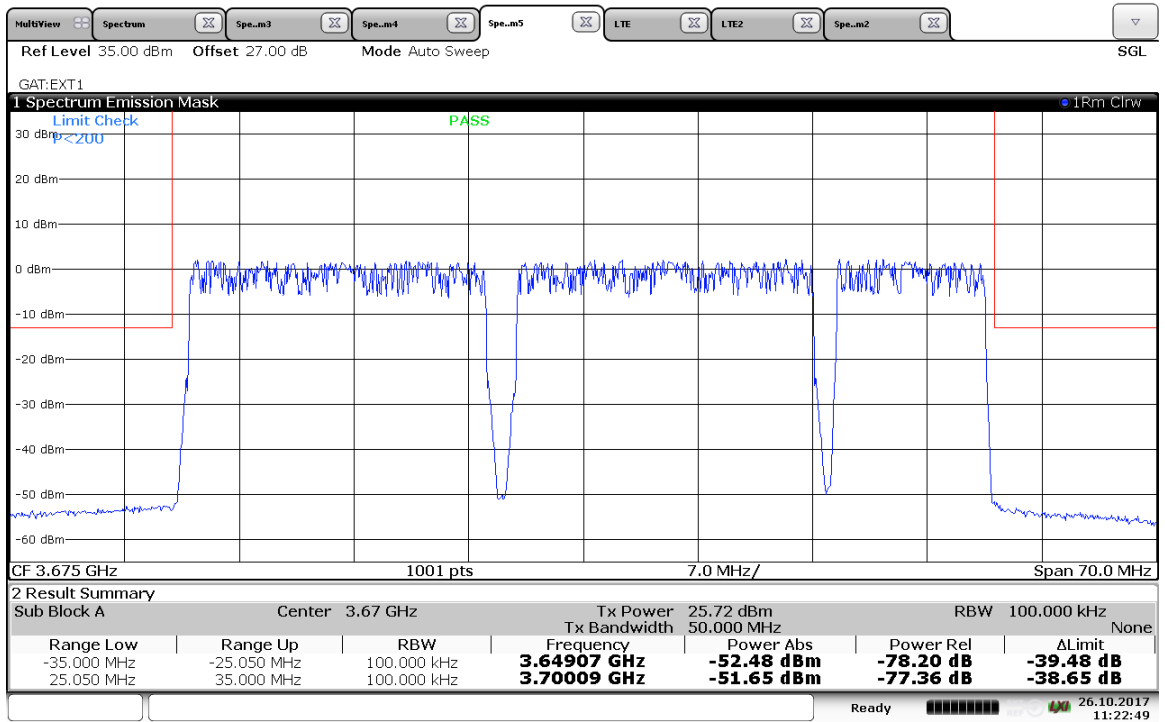
11:22:25 26.10.2017



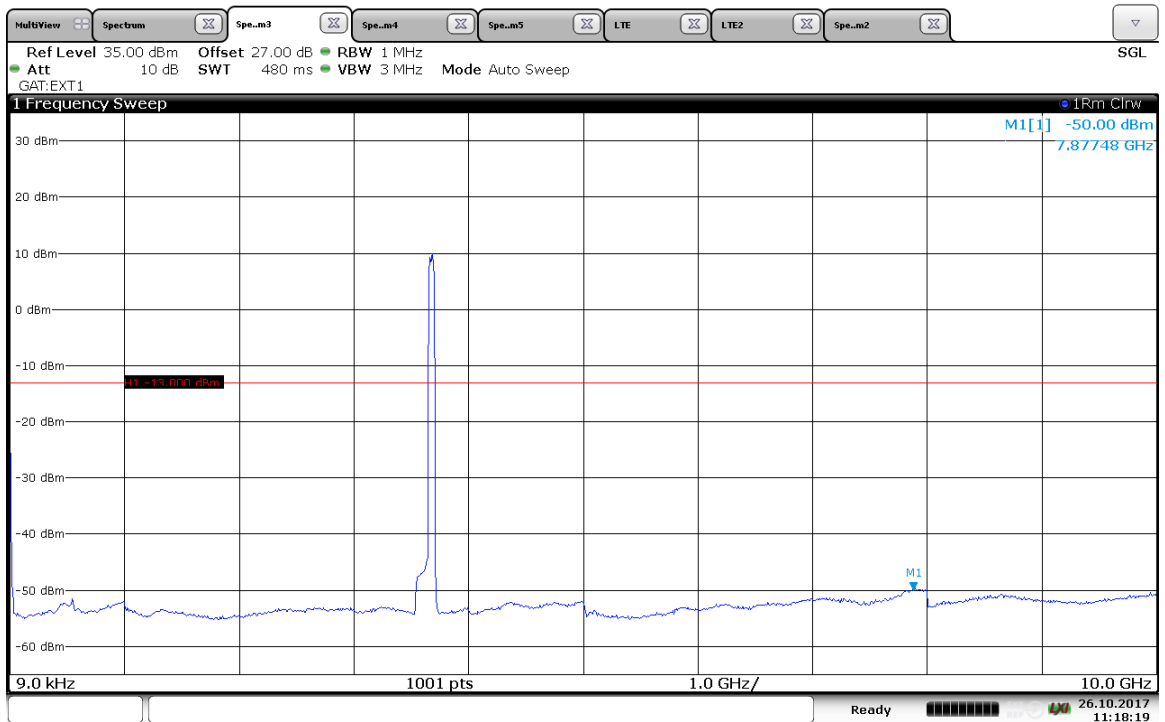
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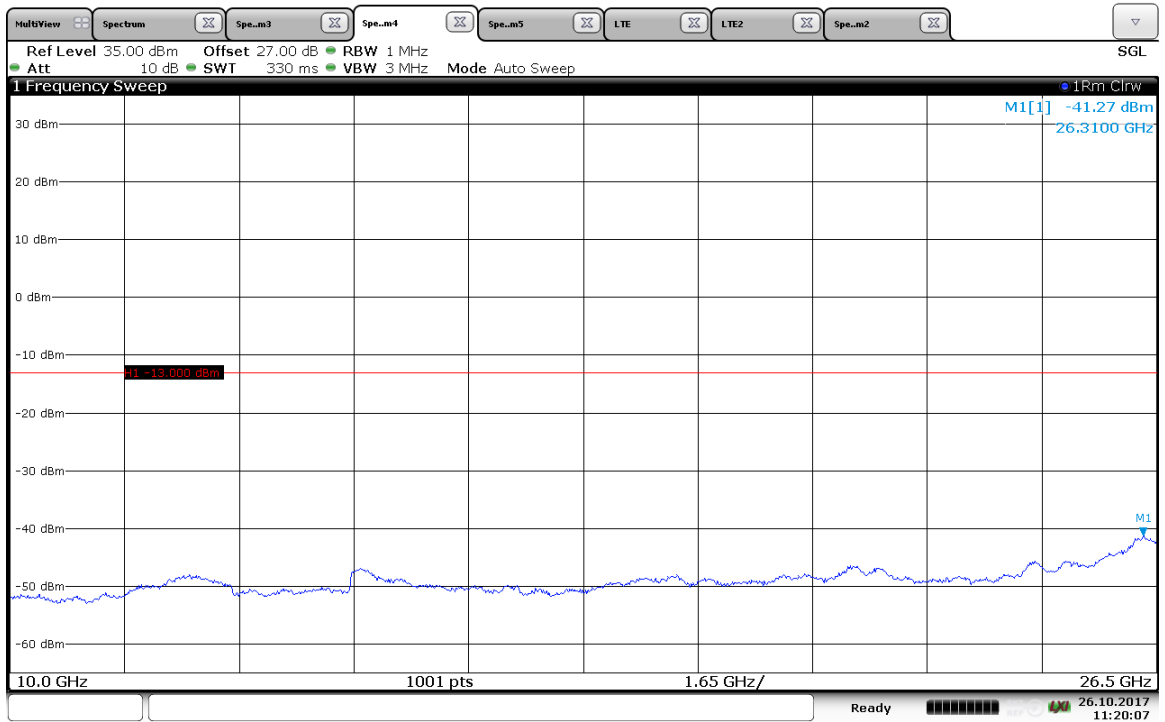
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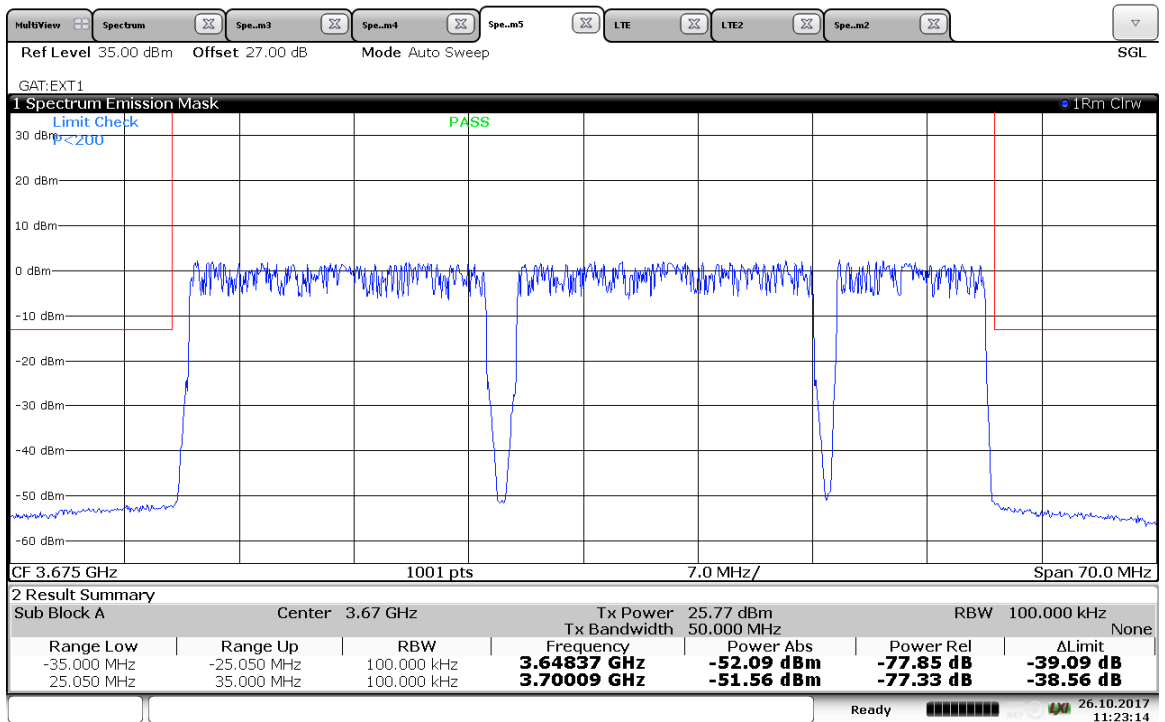
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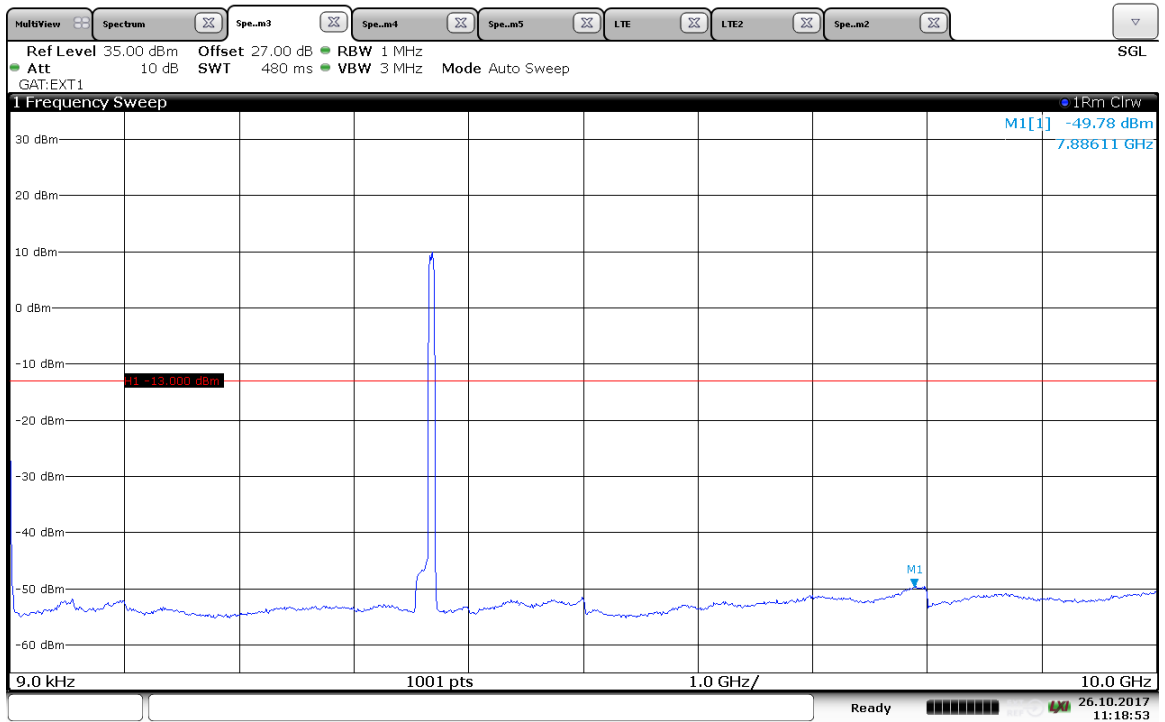
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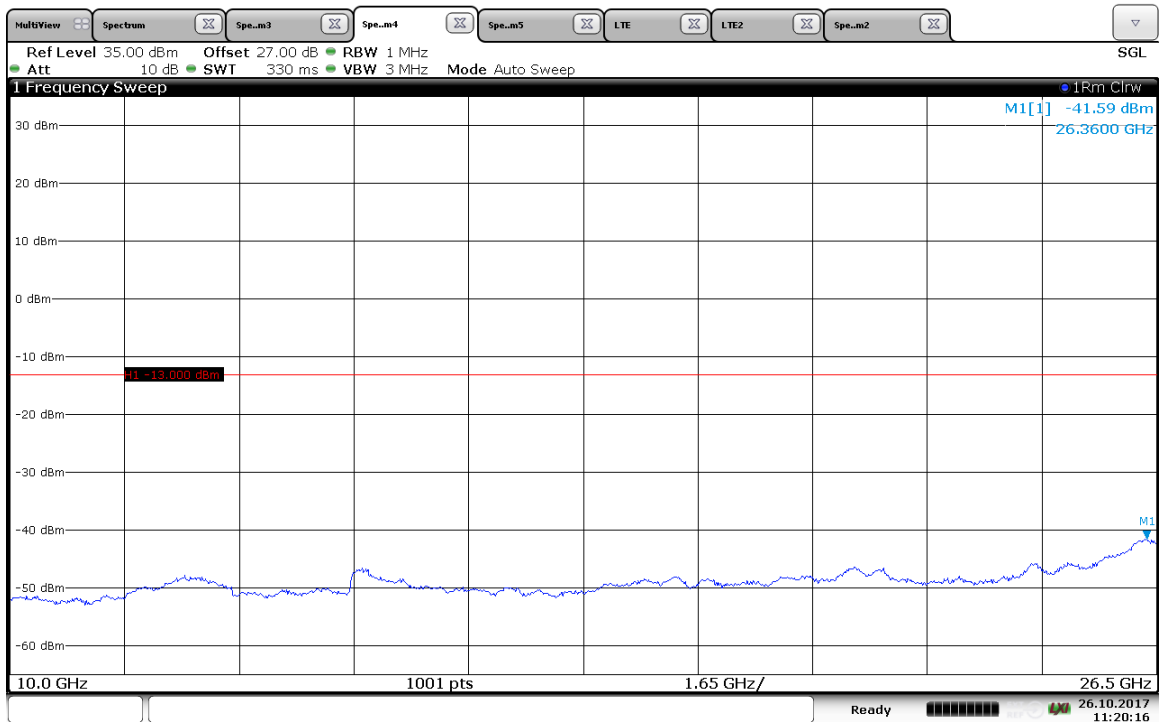
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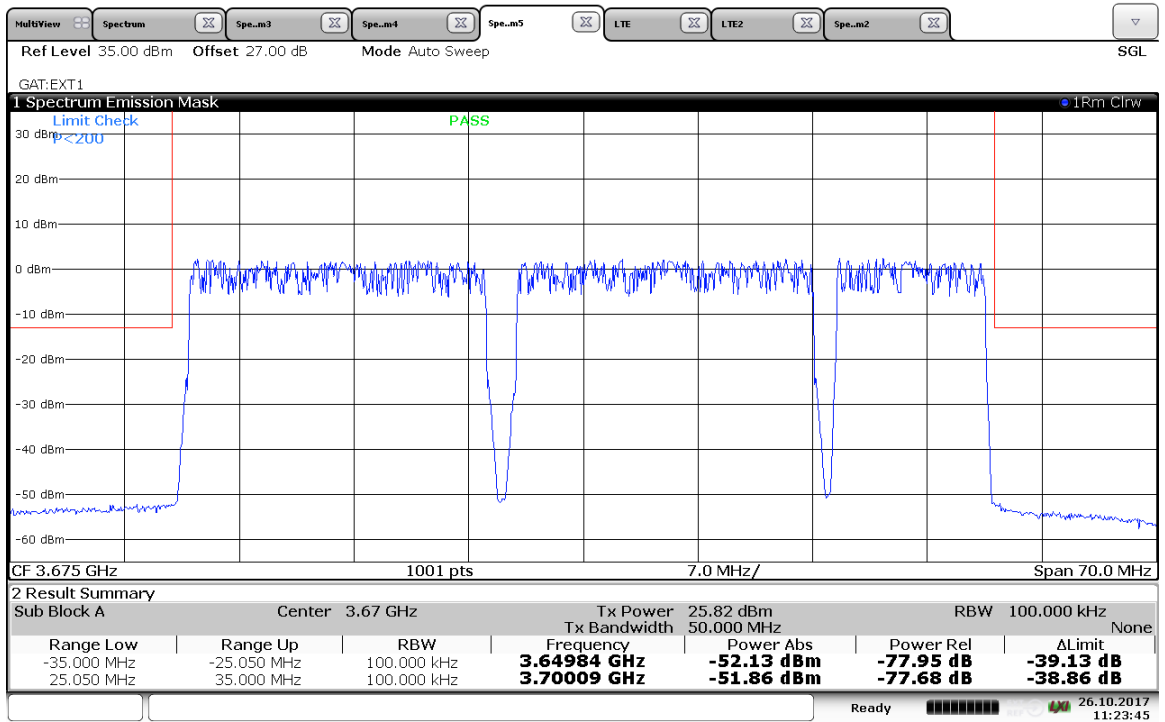
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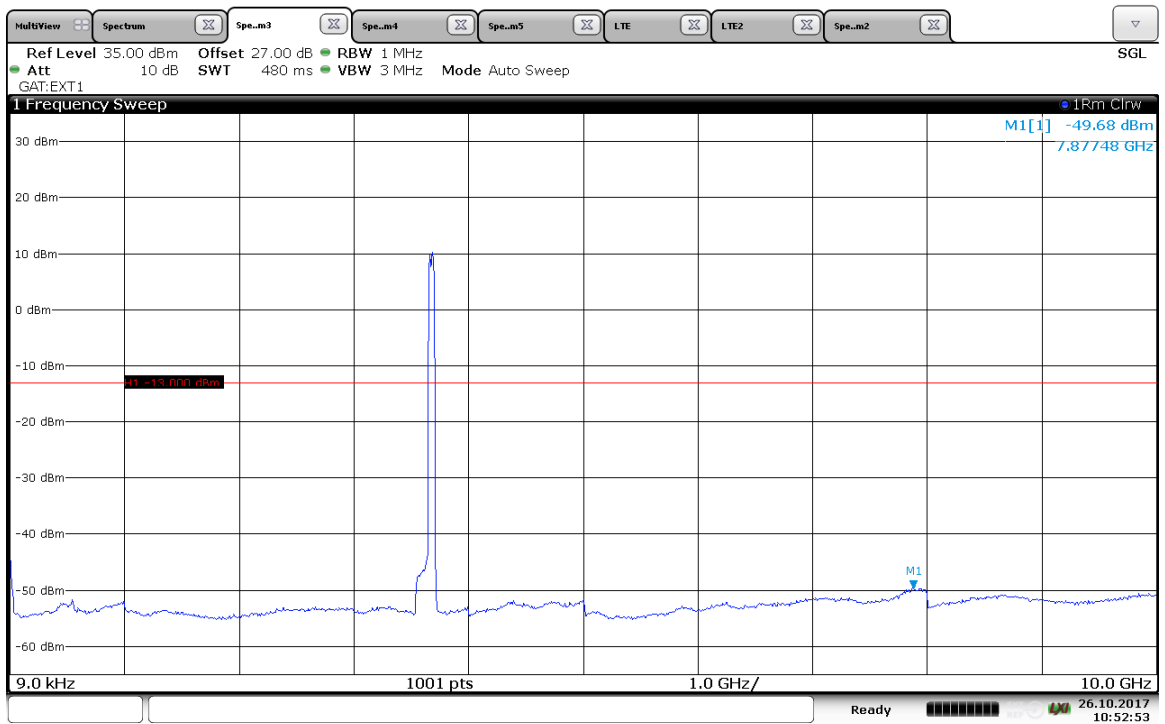
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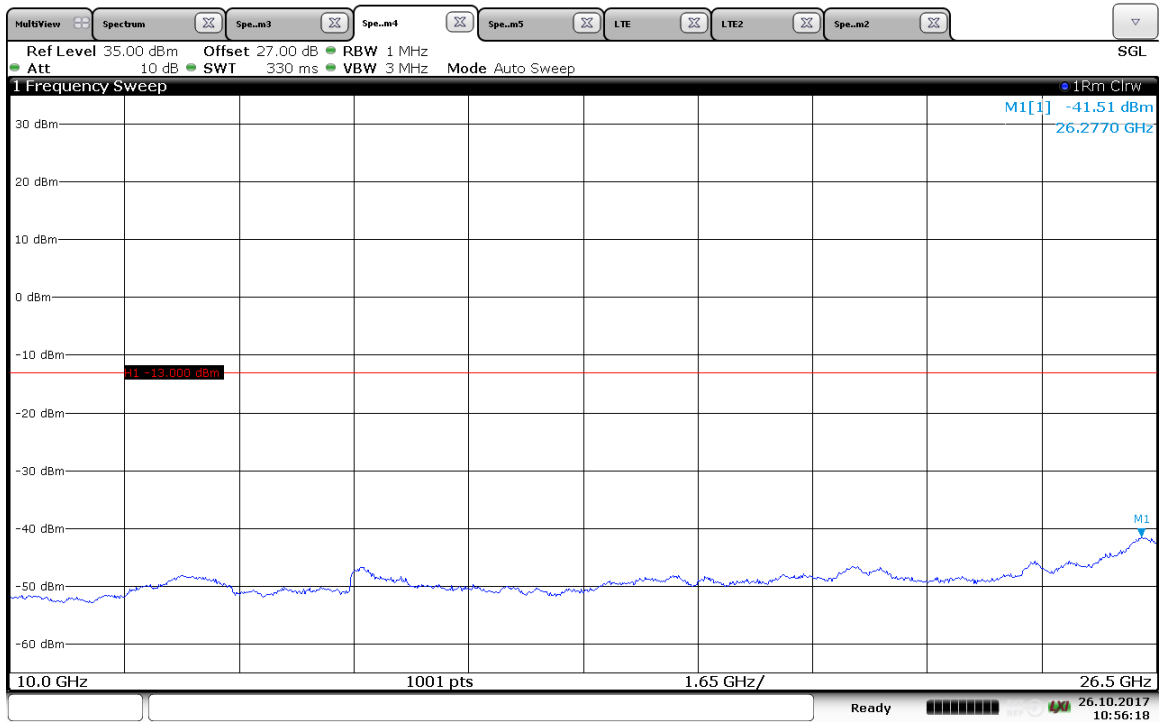
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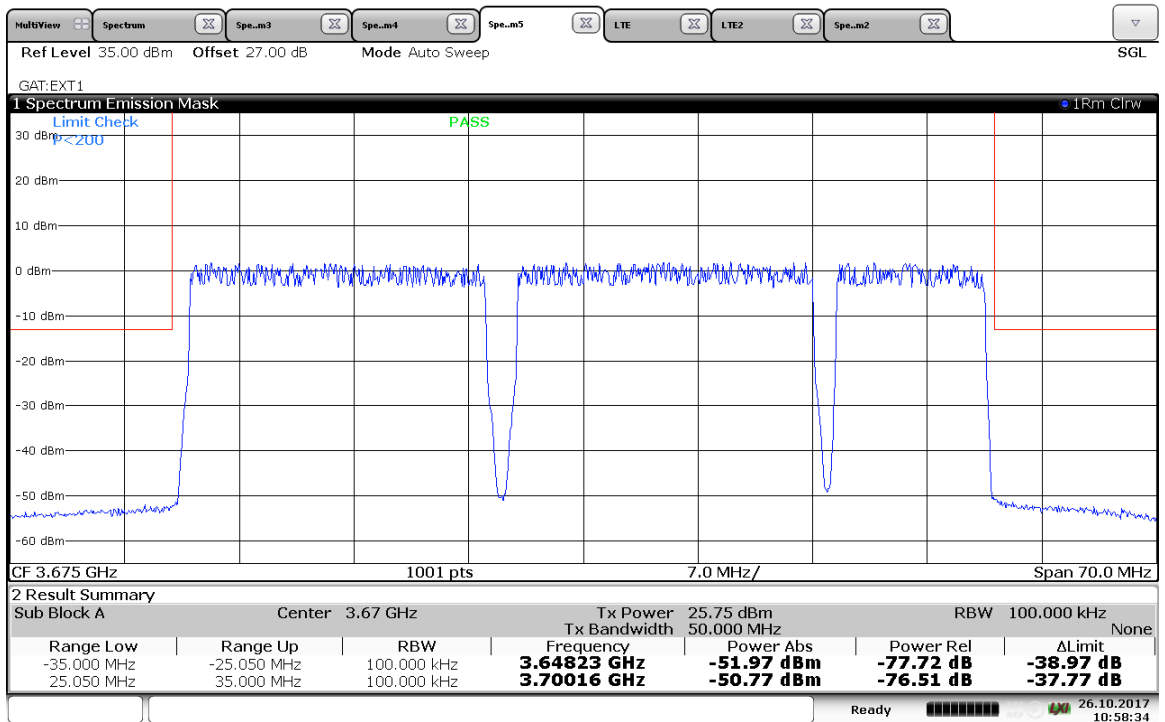
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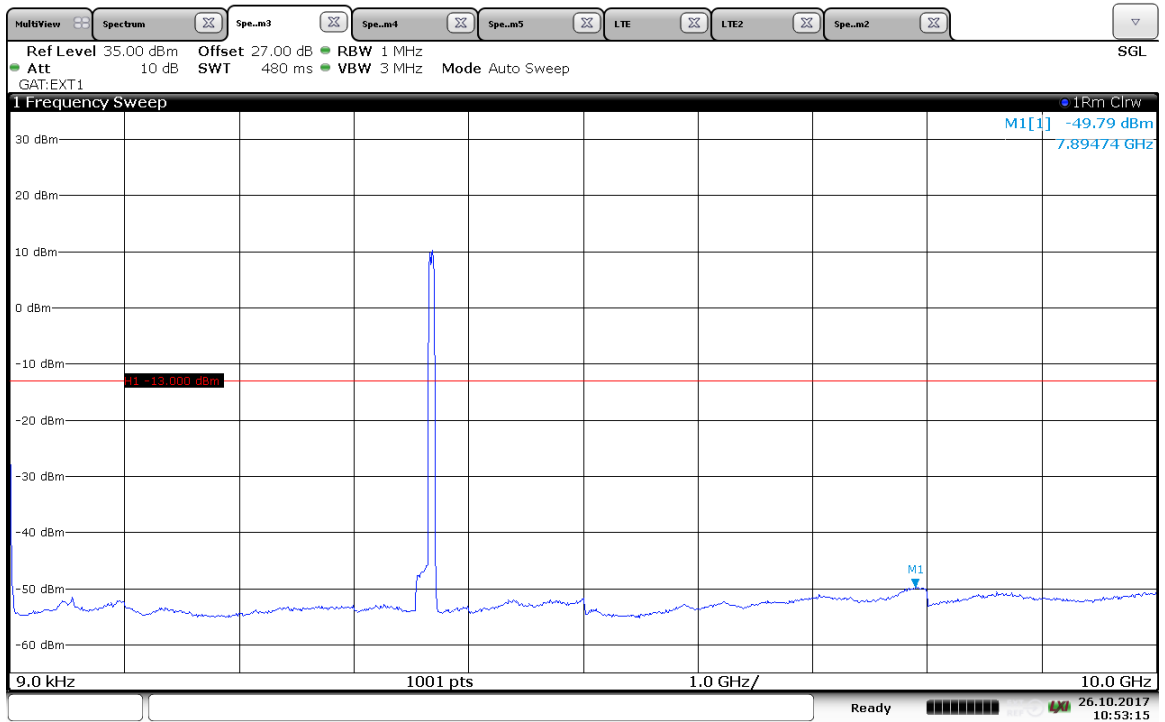
10:52:54 26.10.2017



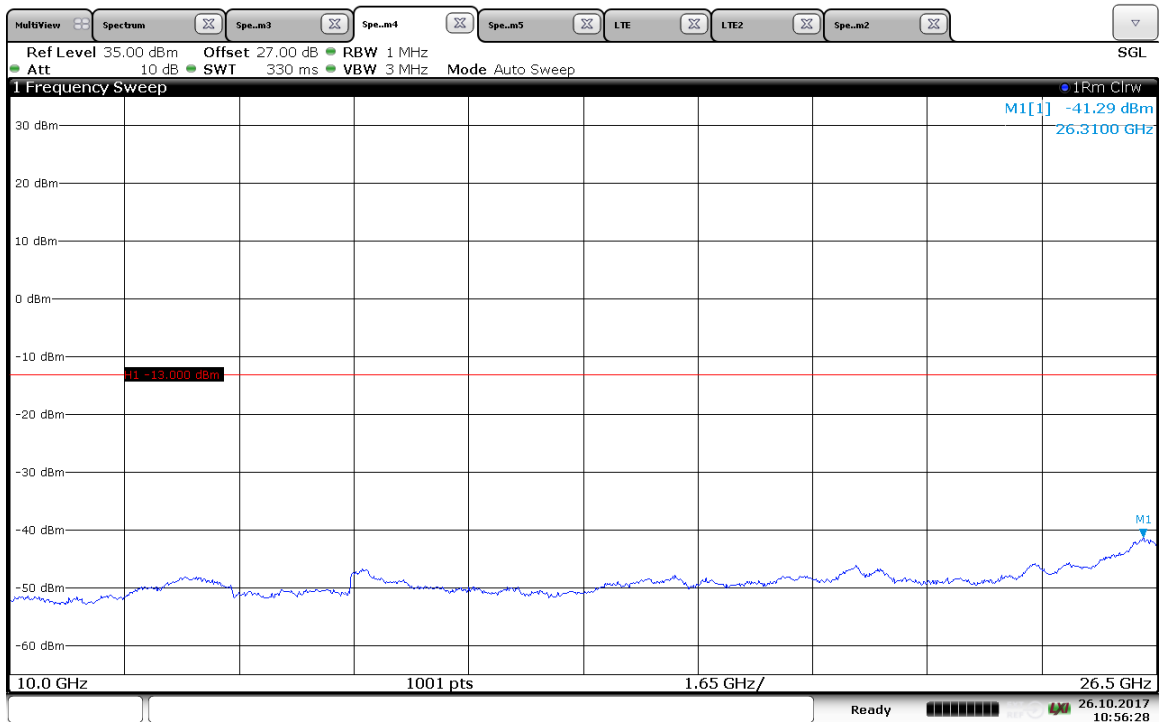
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10:58:35 26.10.2017

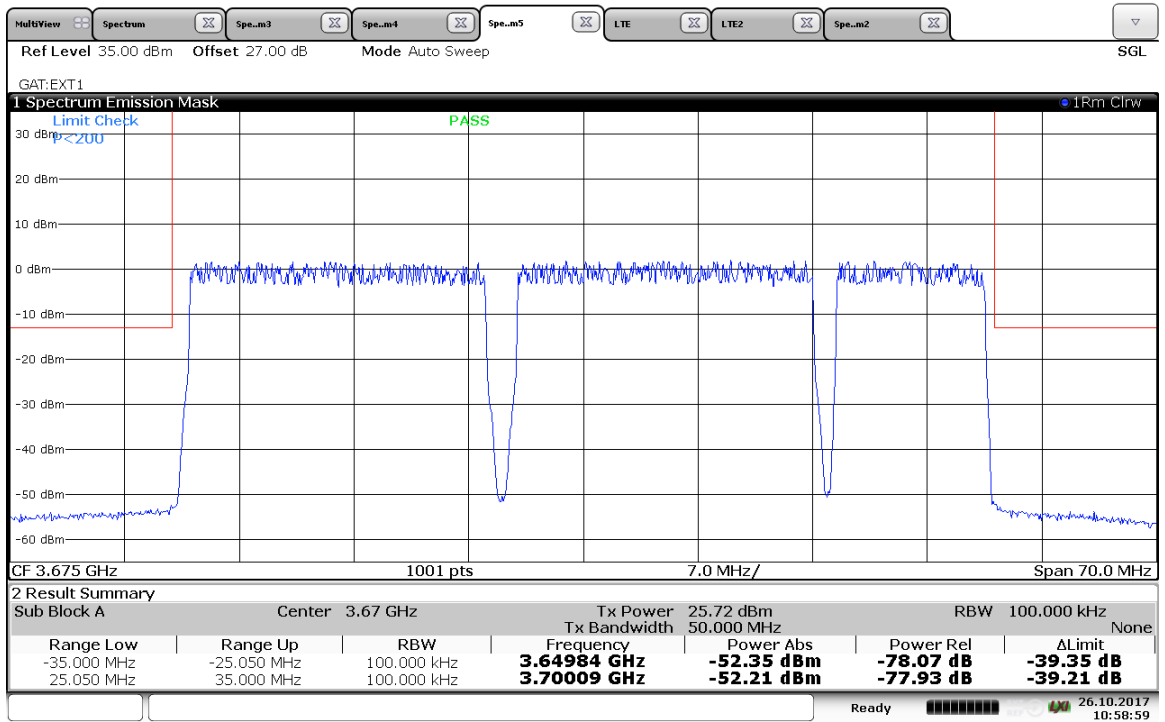


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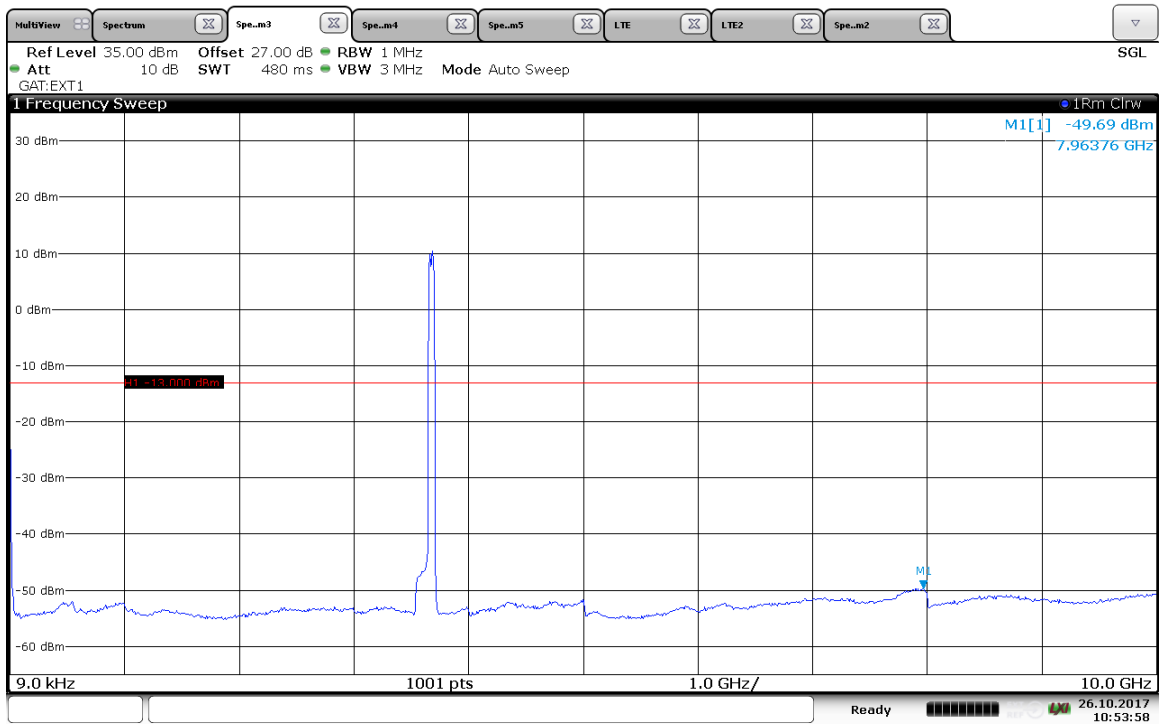


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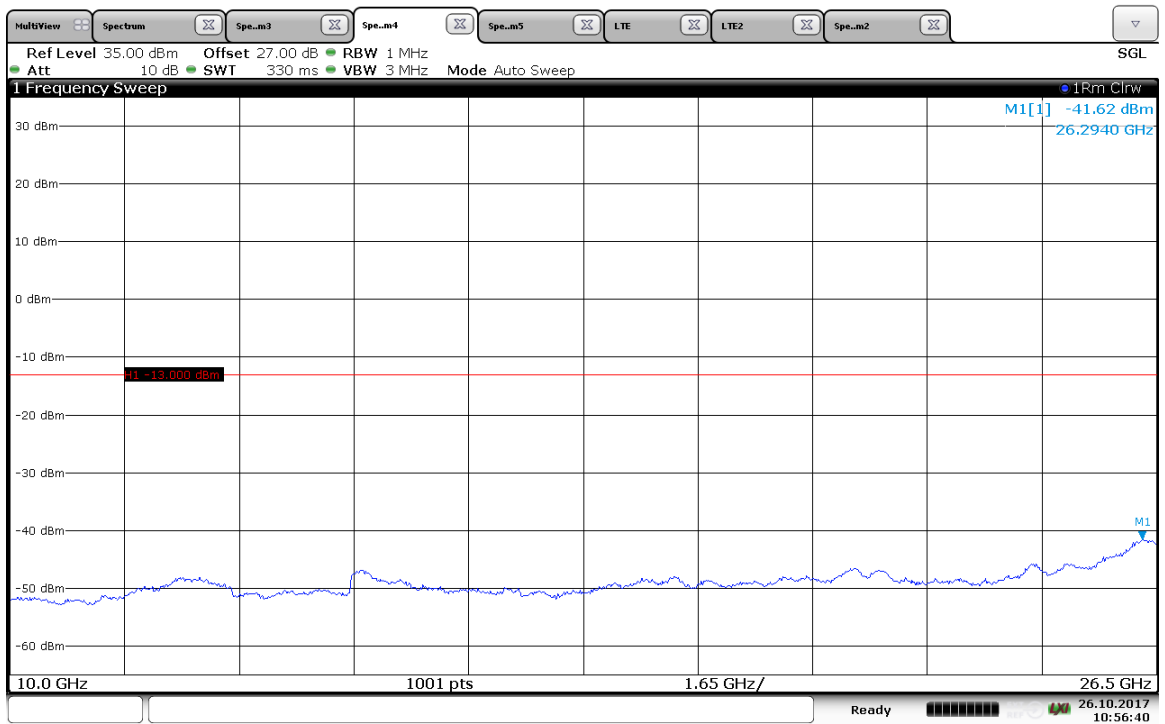




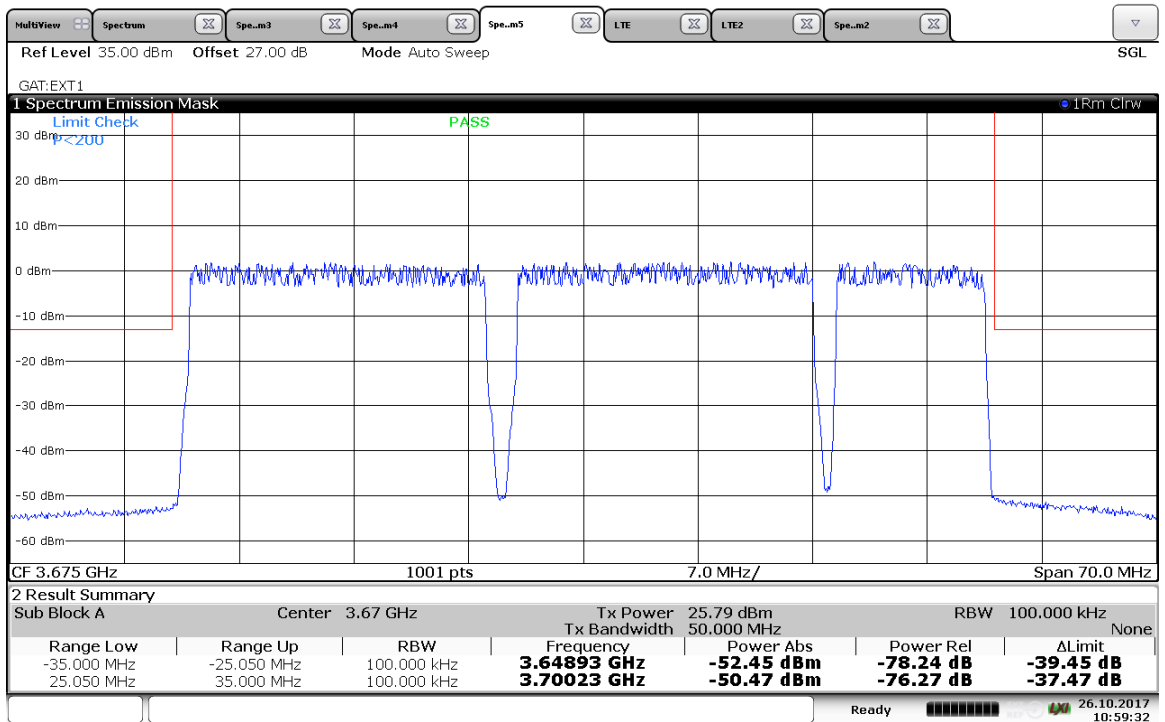
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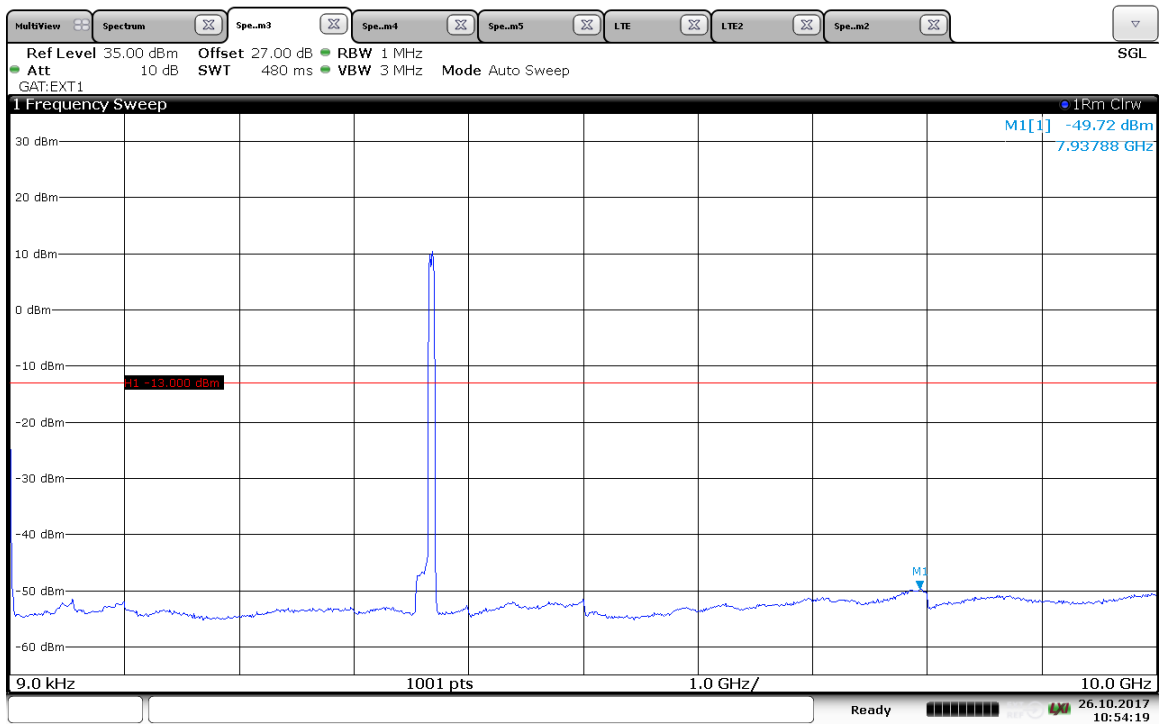
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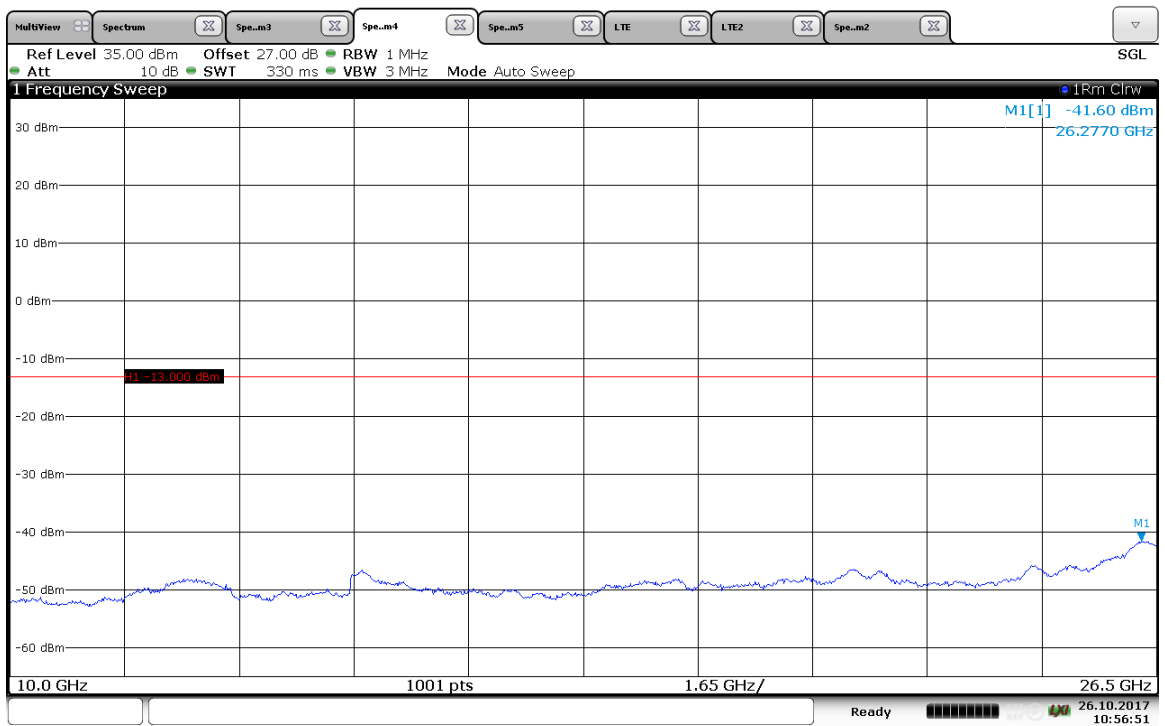
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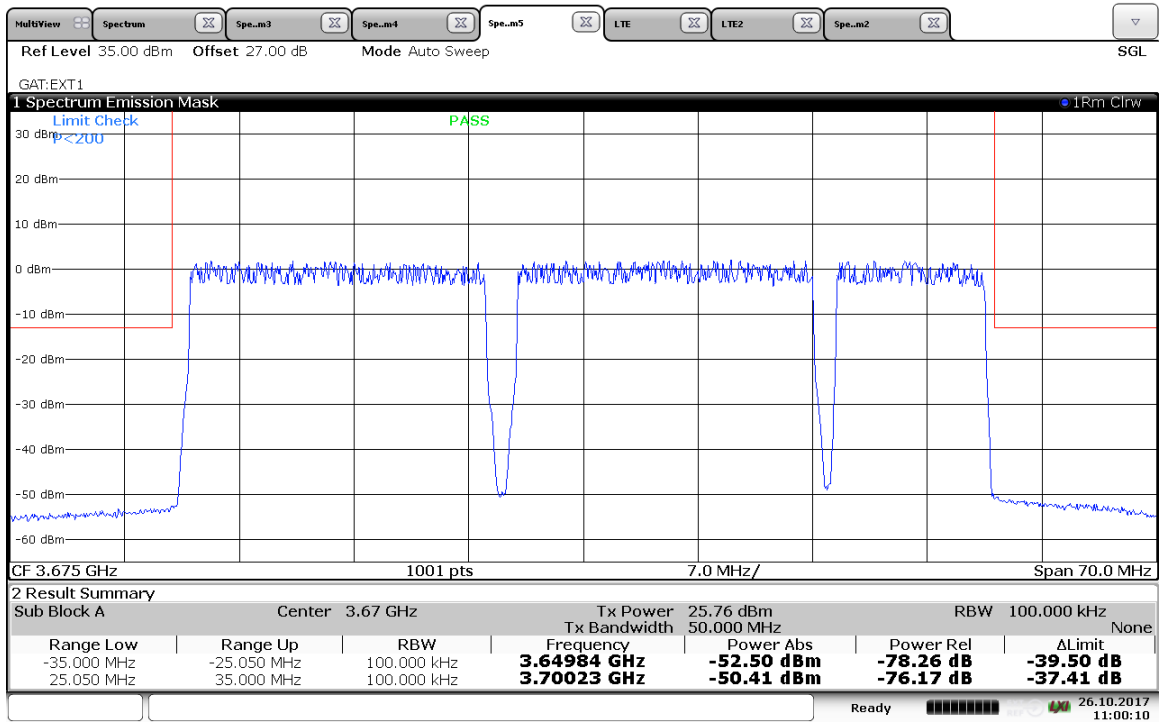
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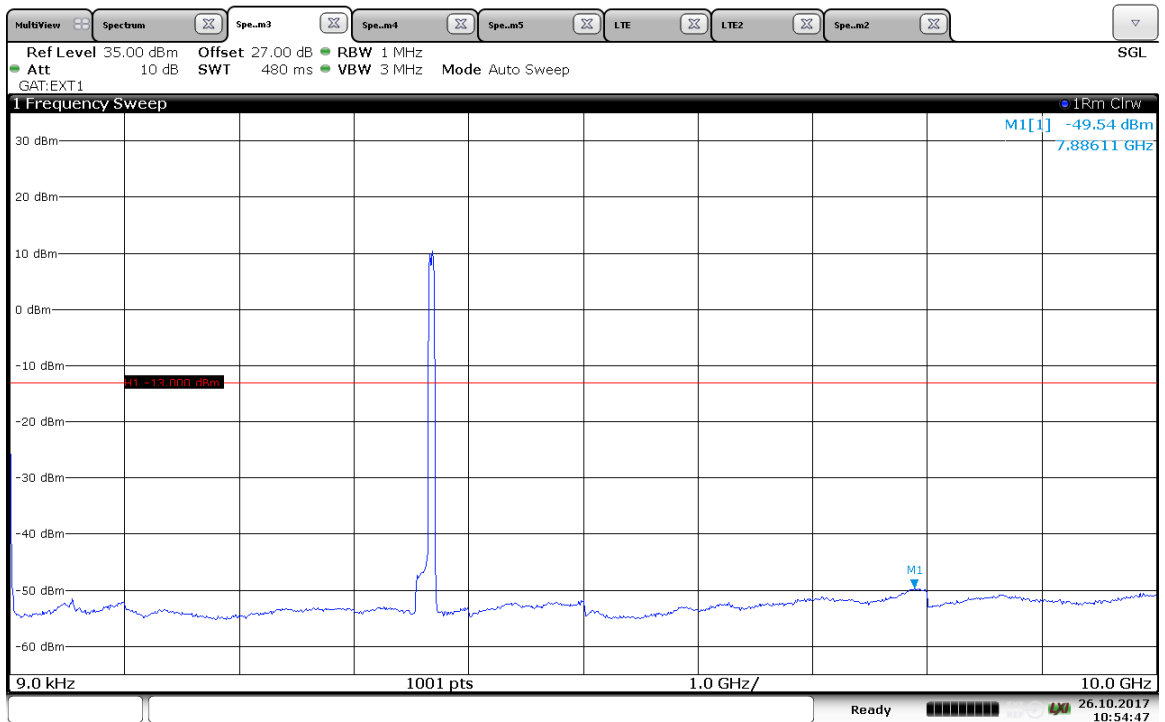
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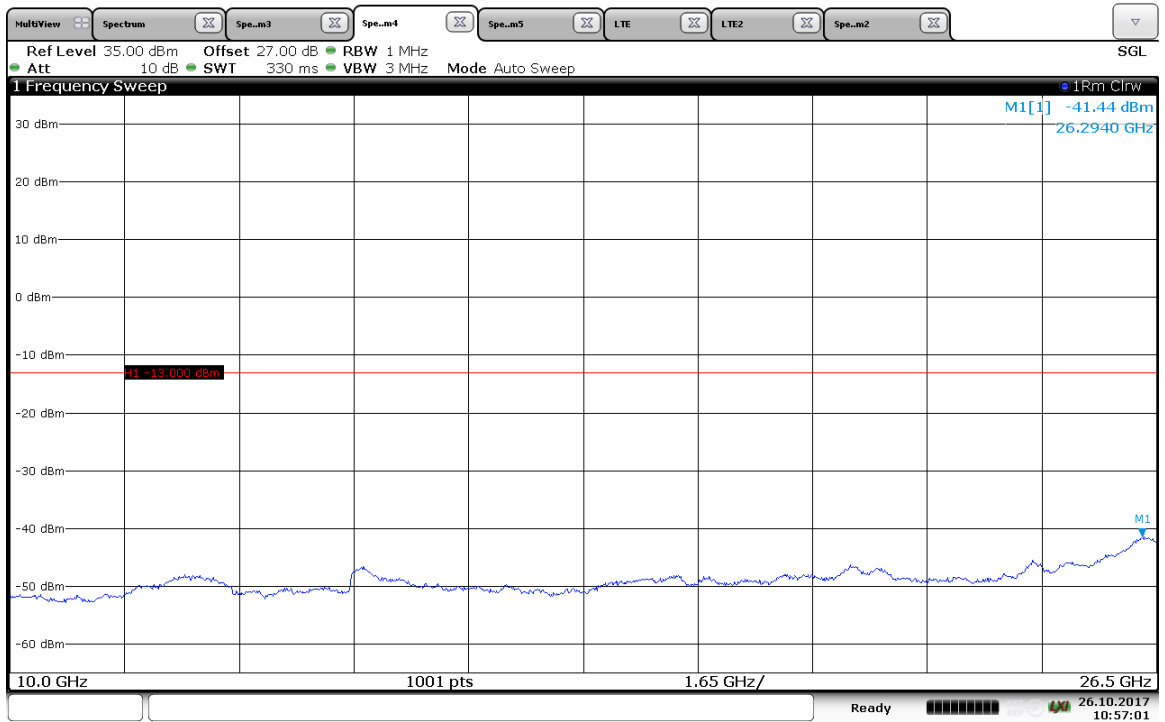
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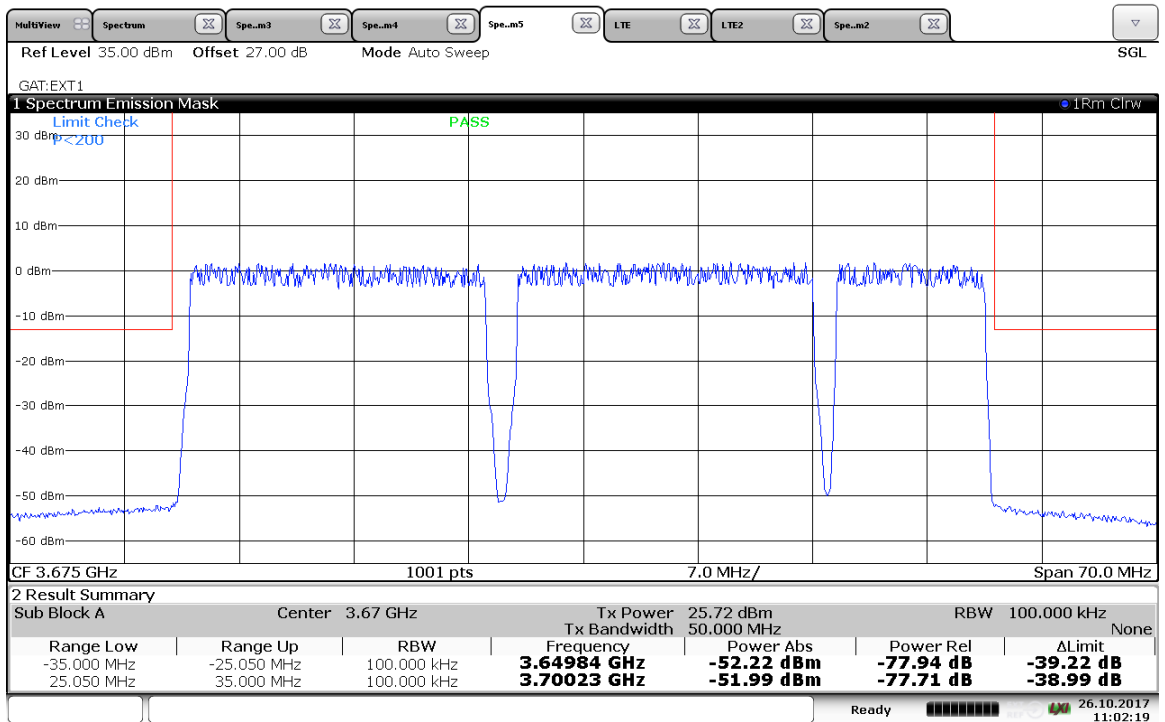
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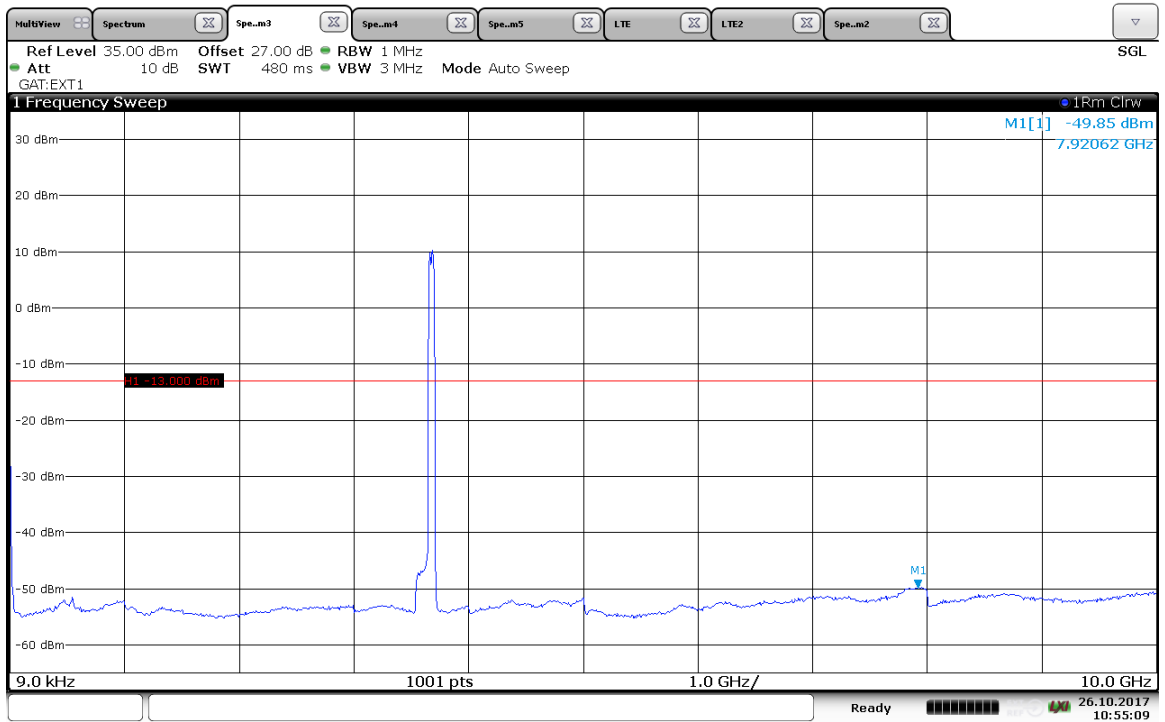
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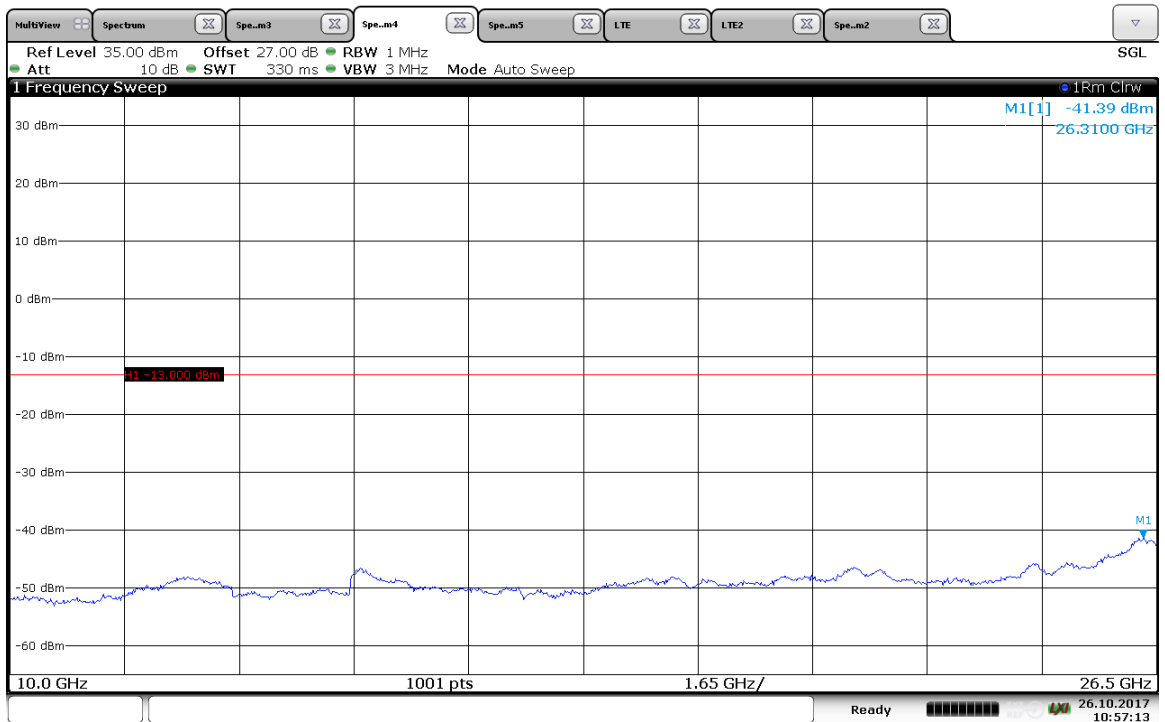
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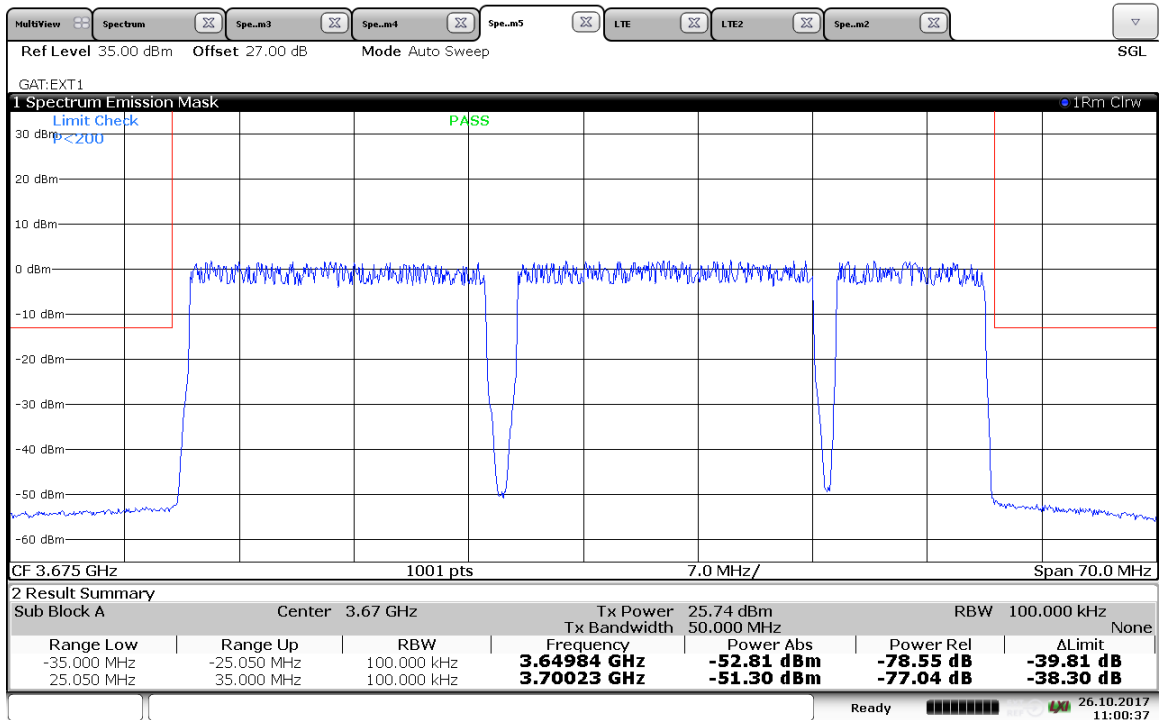
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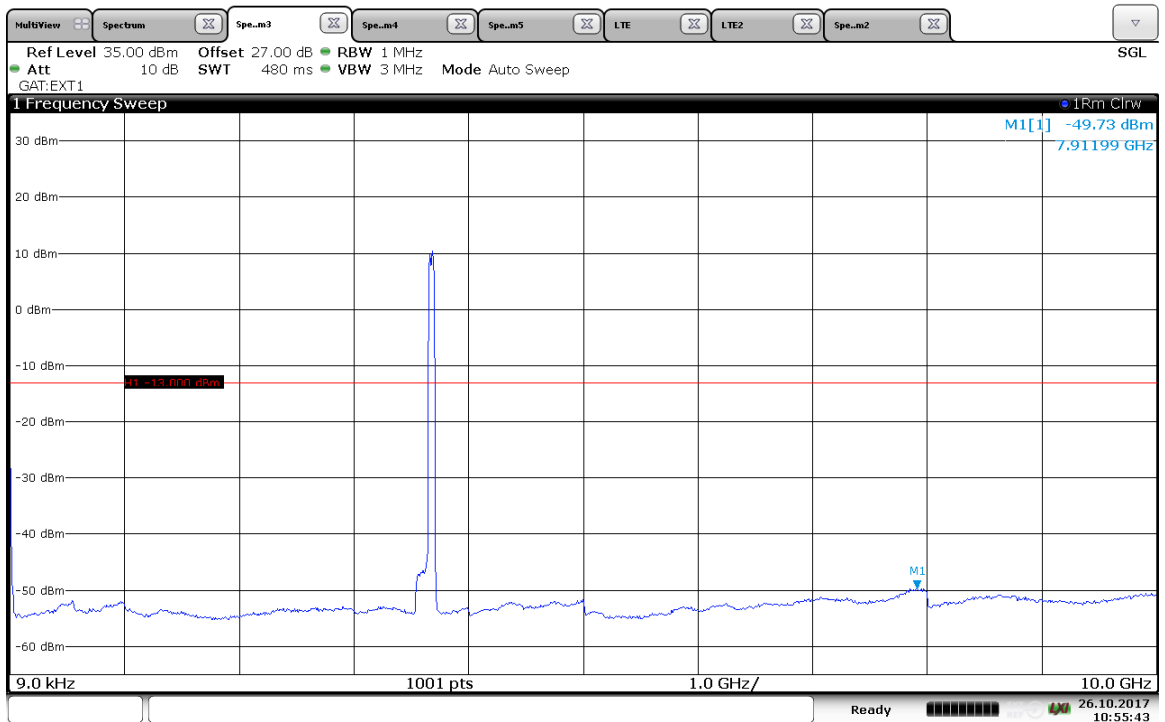
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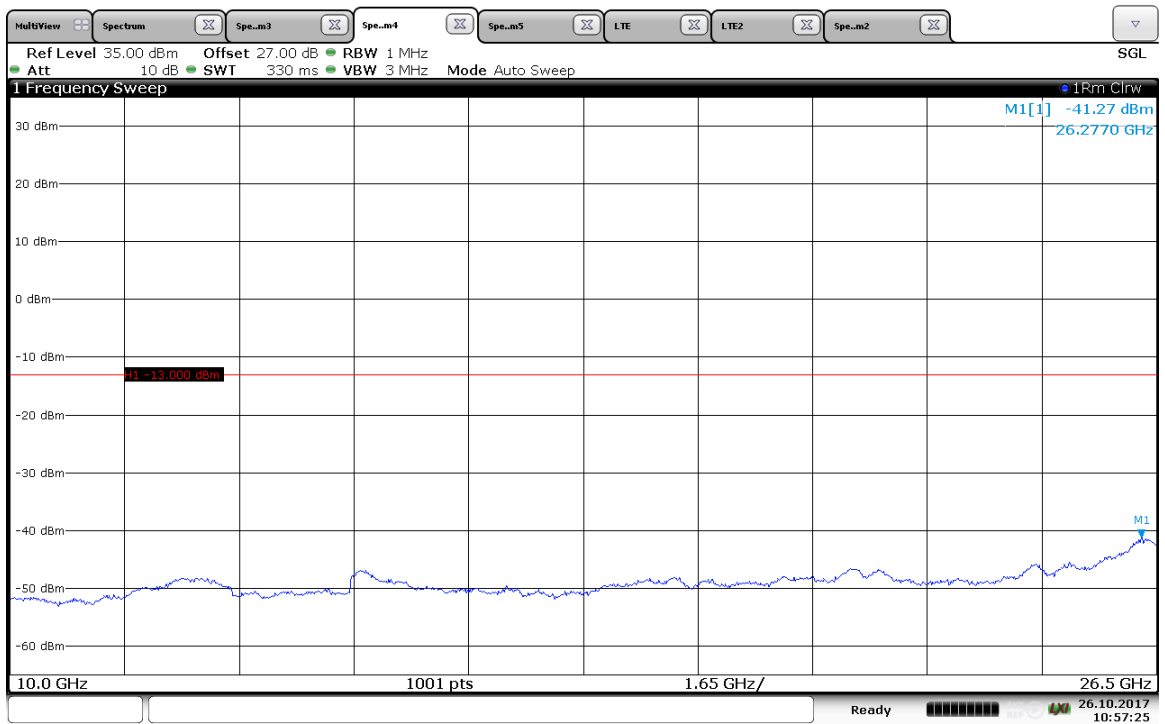
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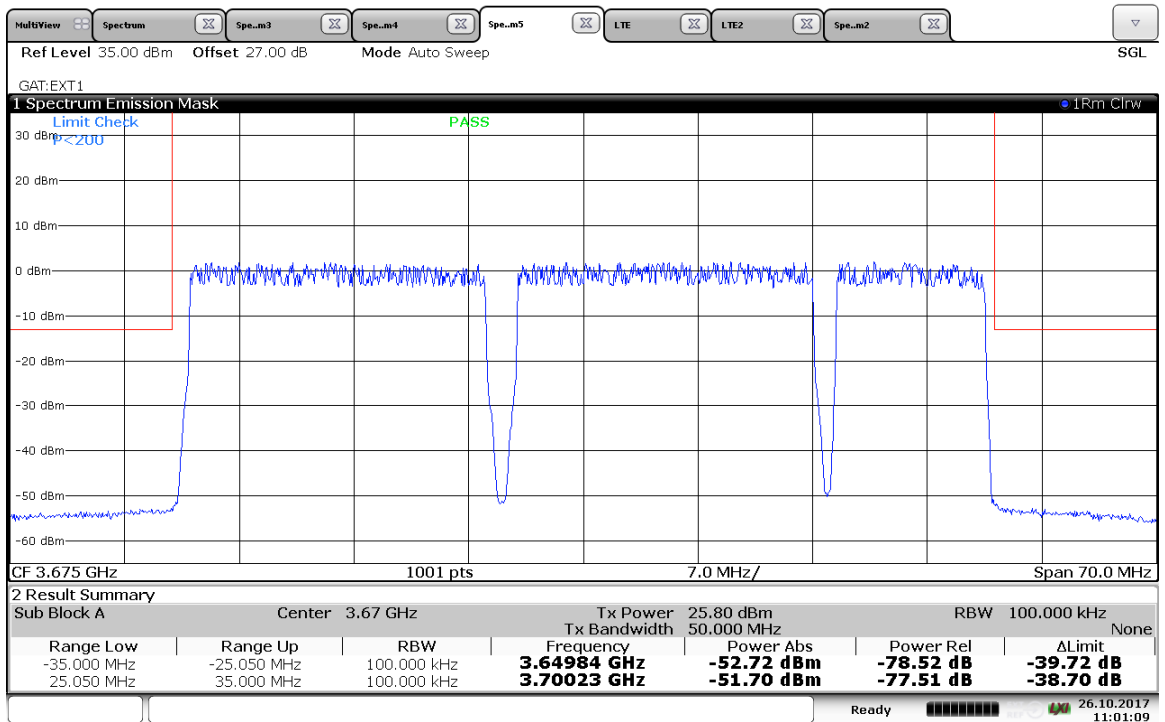
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10:55:44 26.10.2017

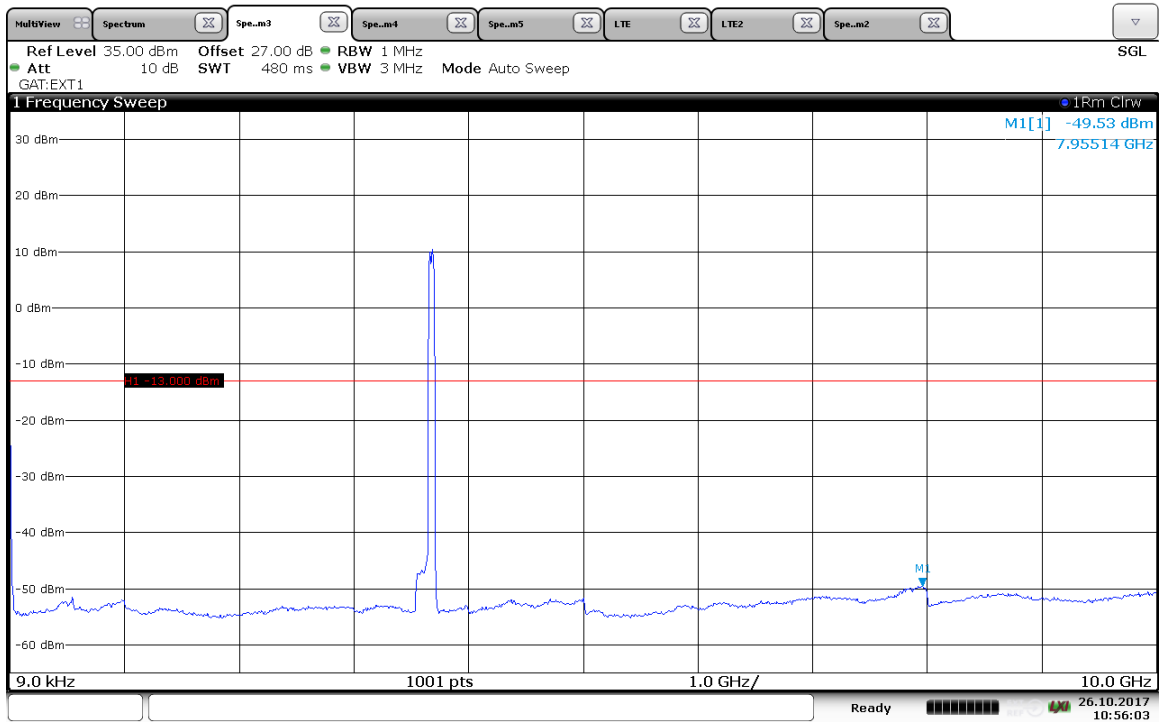


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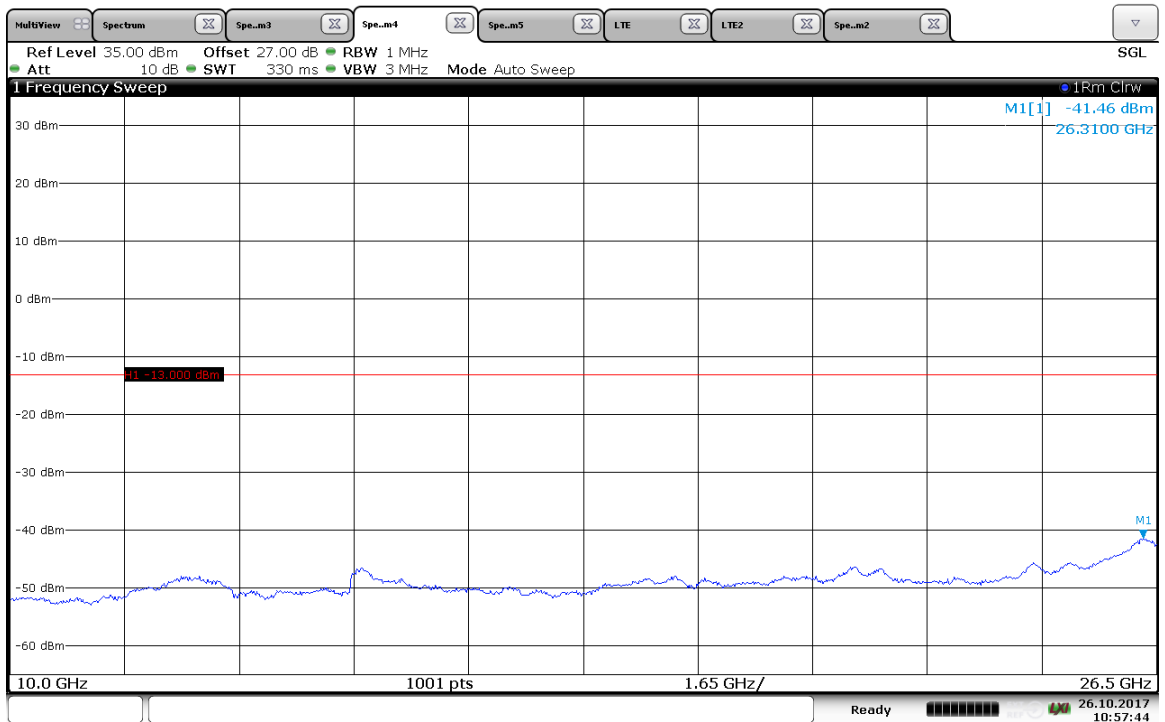


11:01:10 26.10.2017

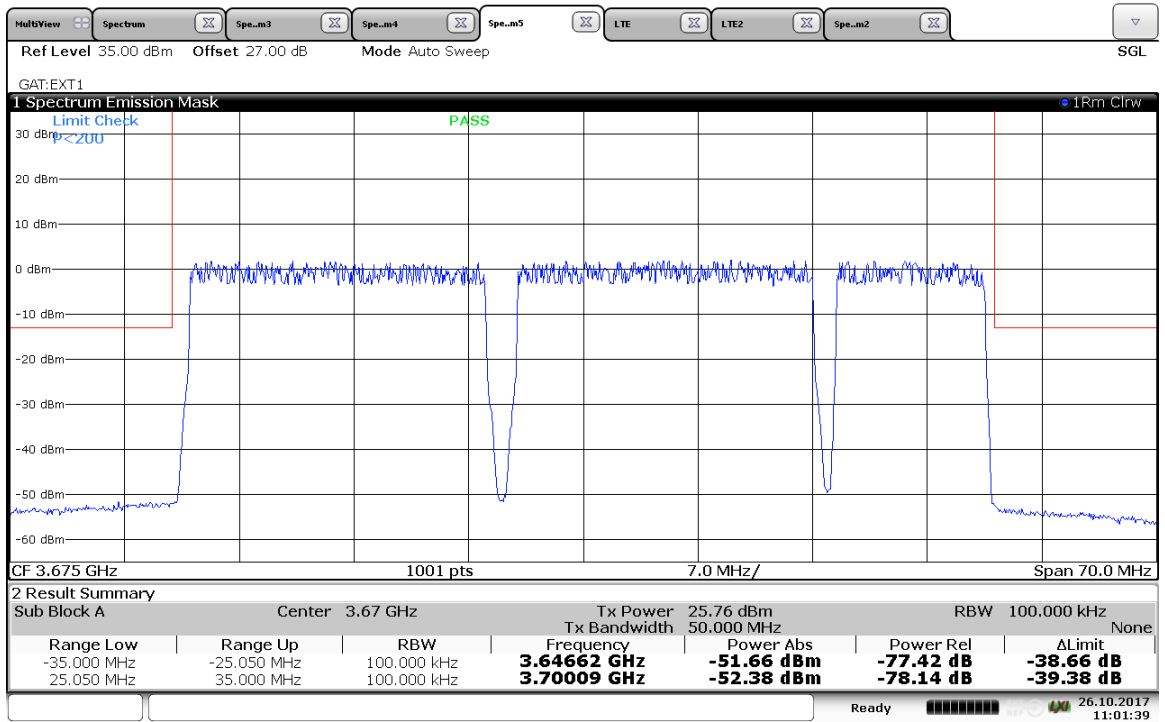




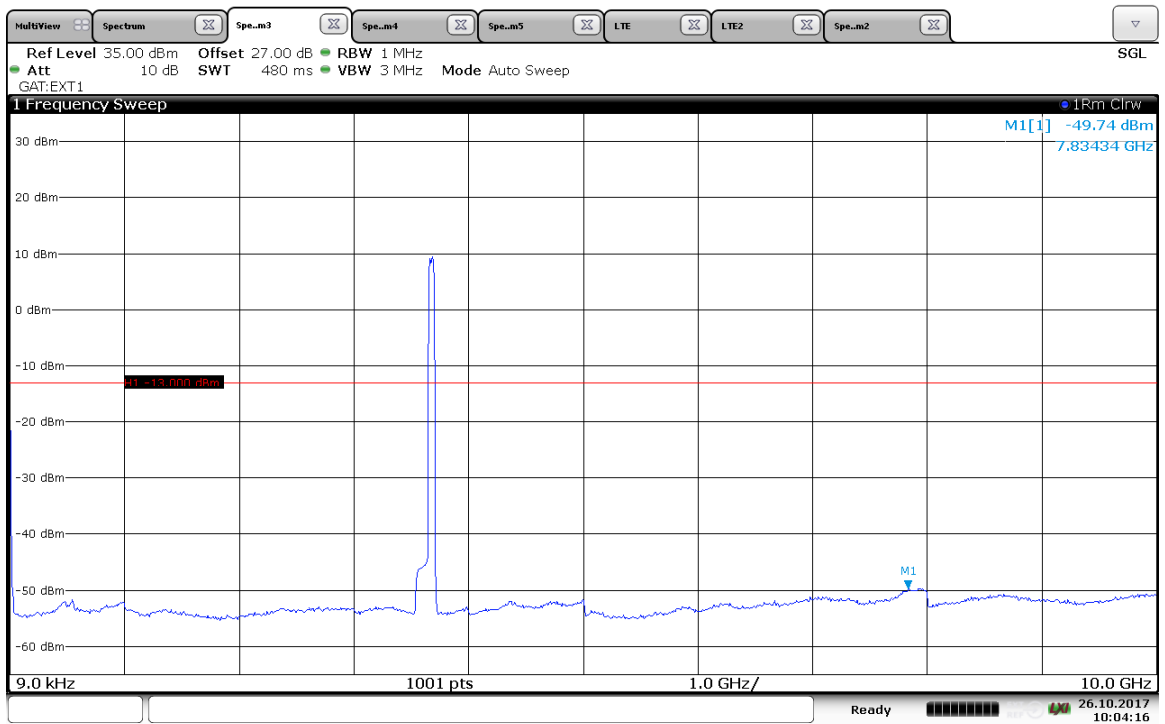
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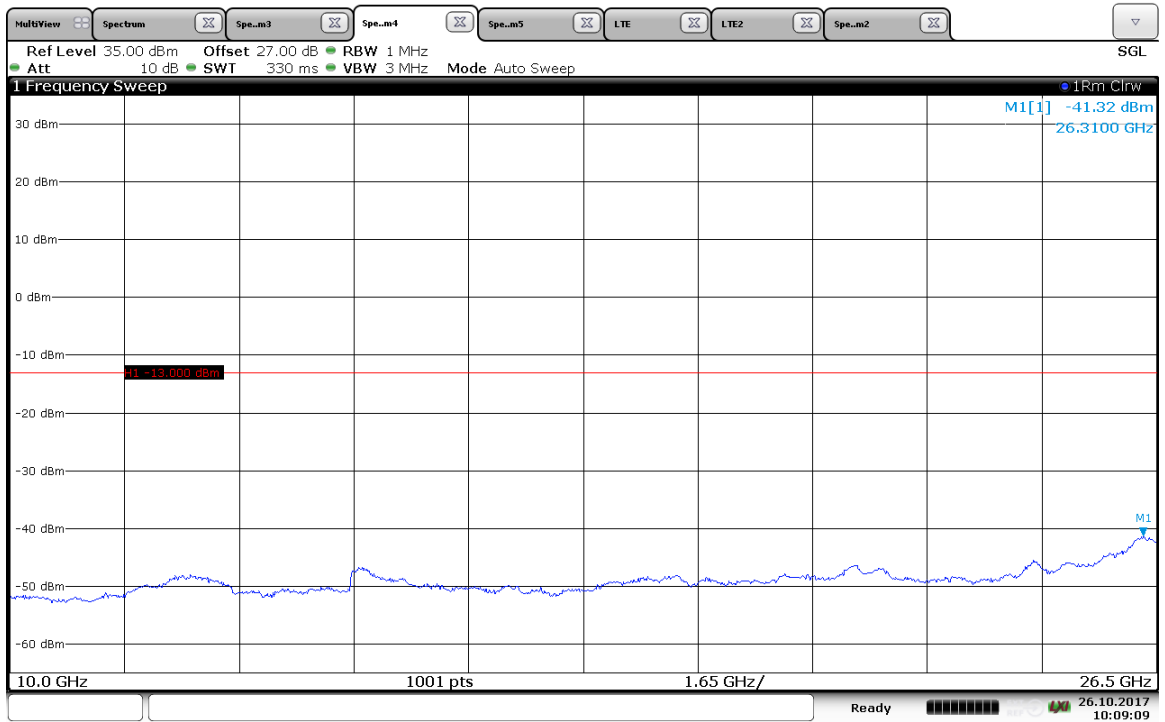
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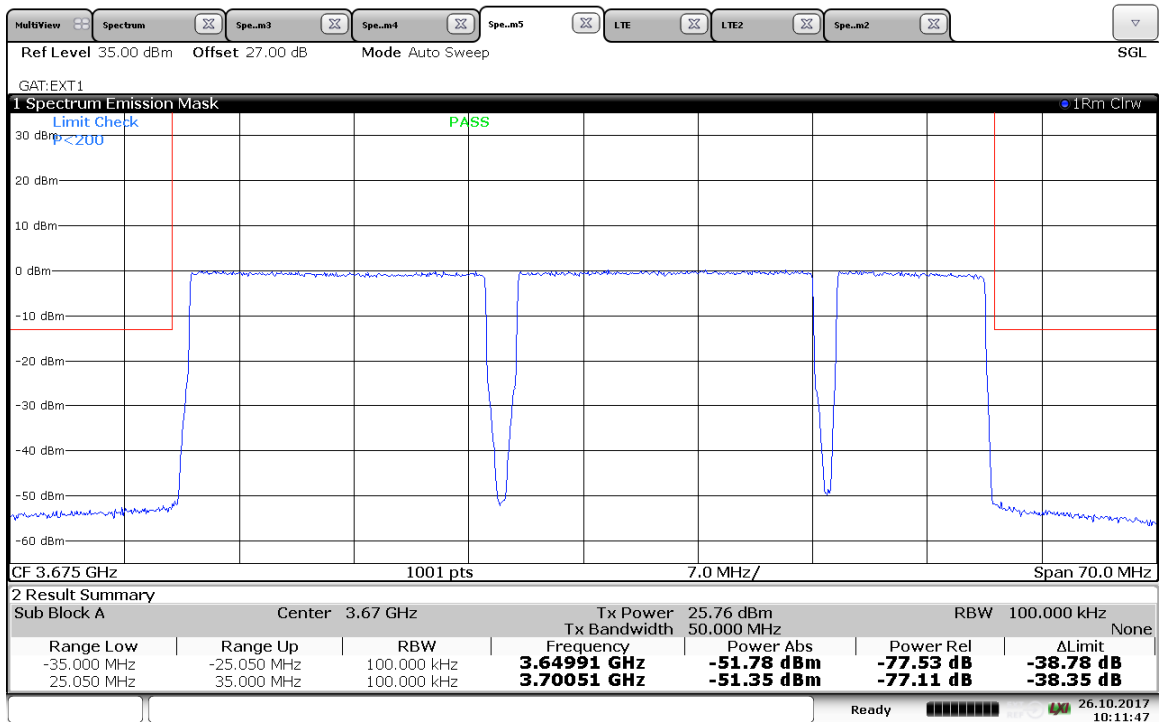
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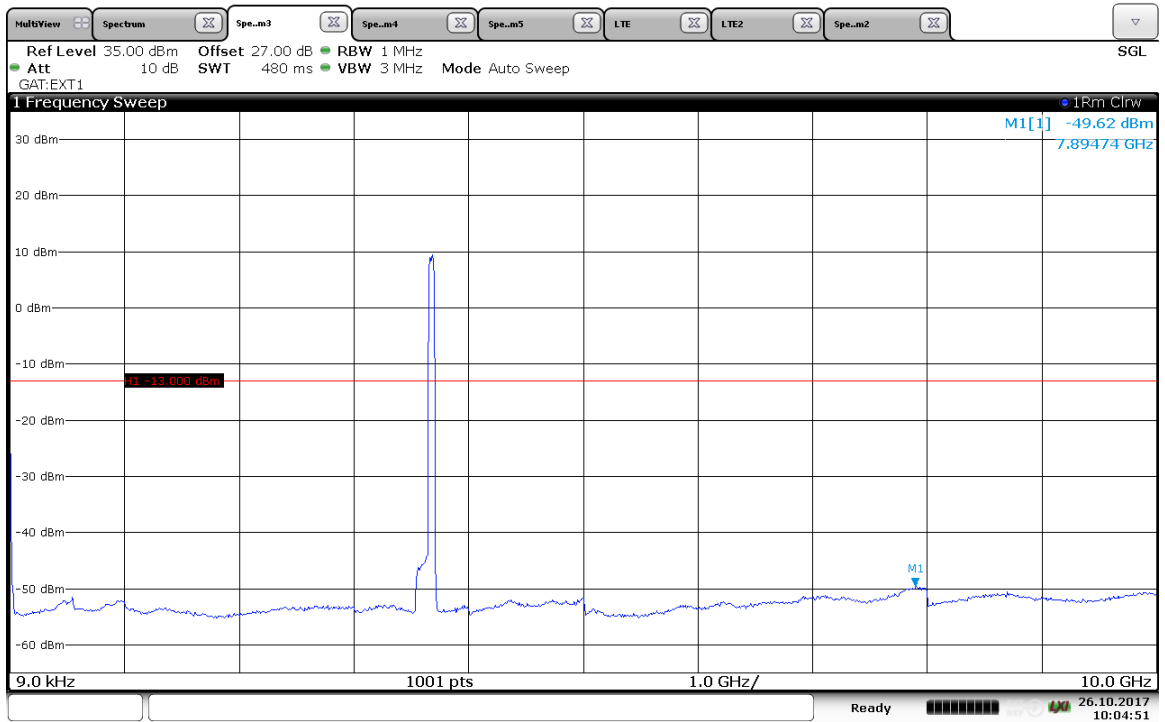
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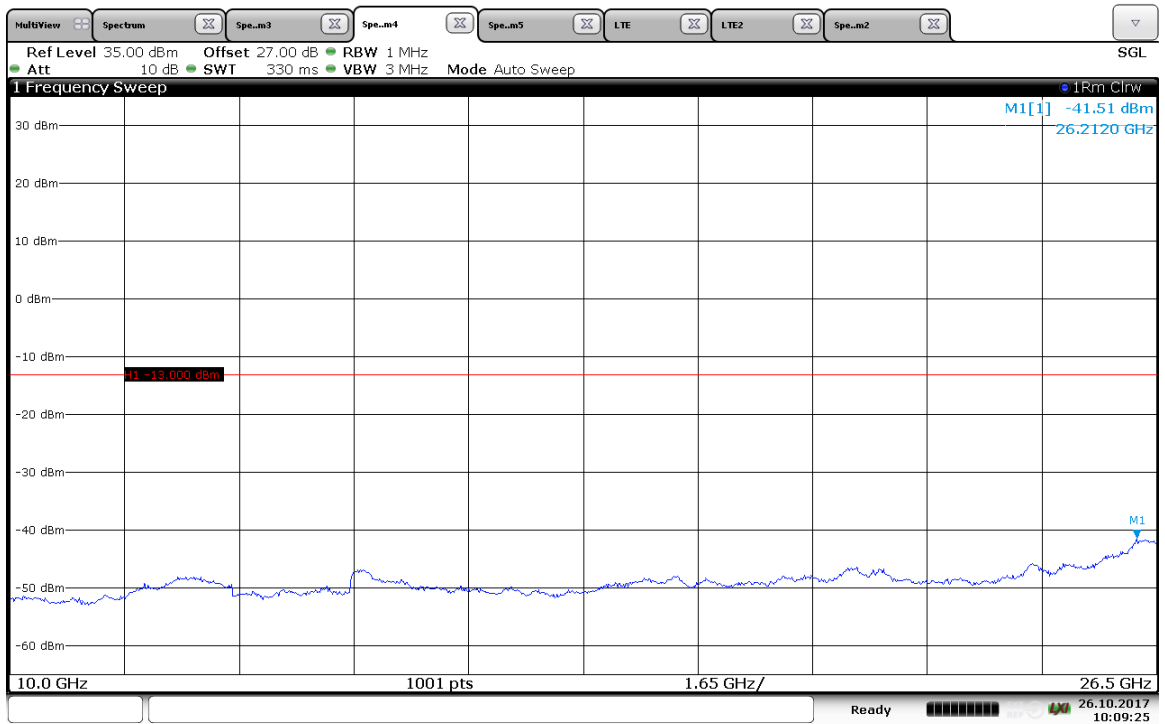
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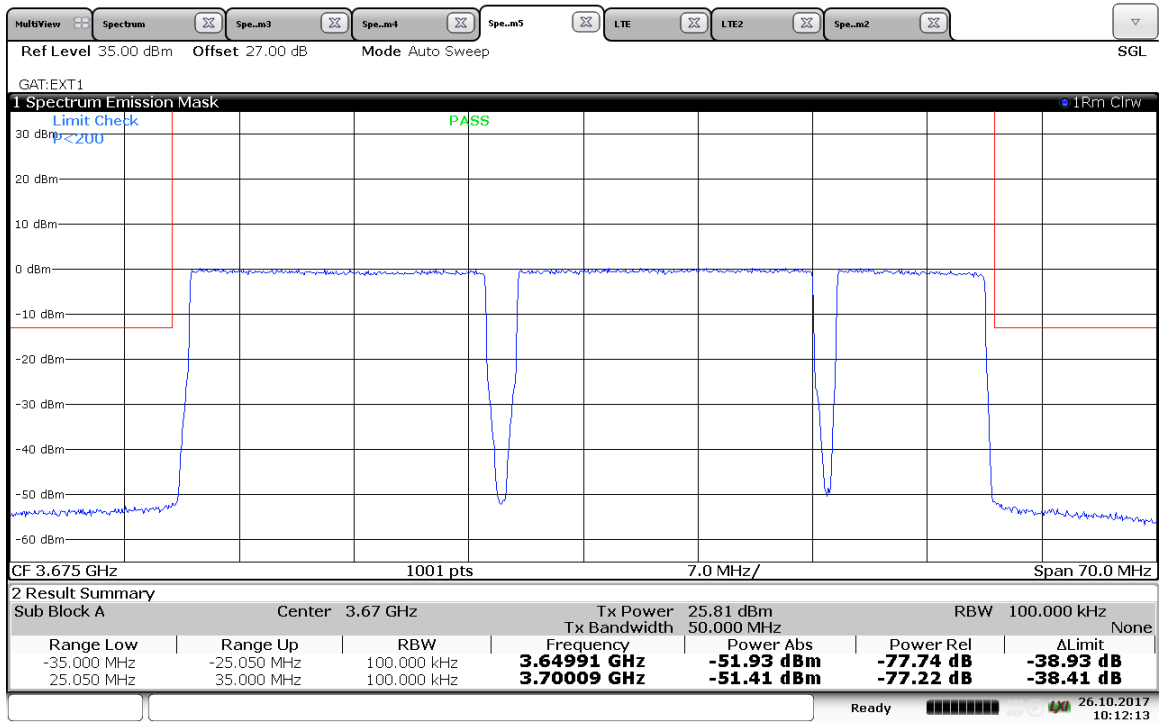
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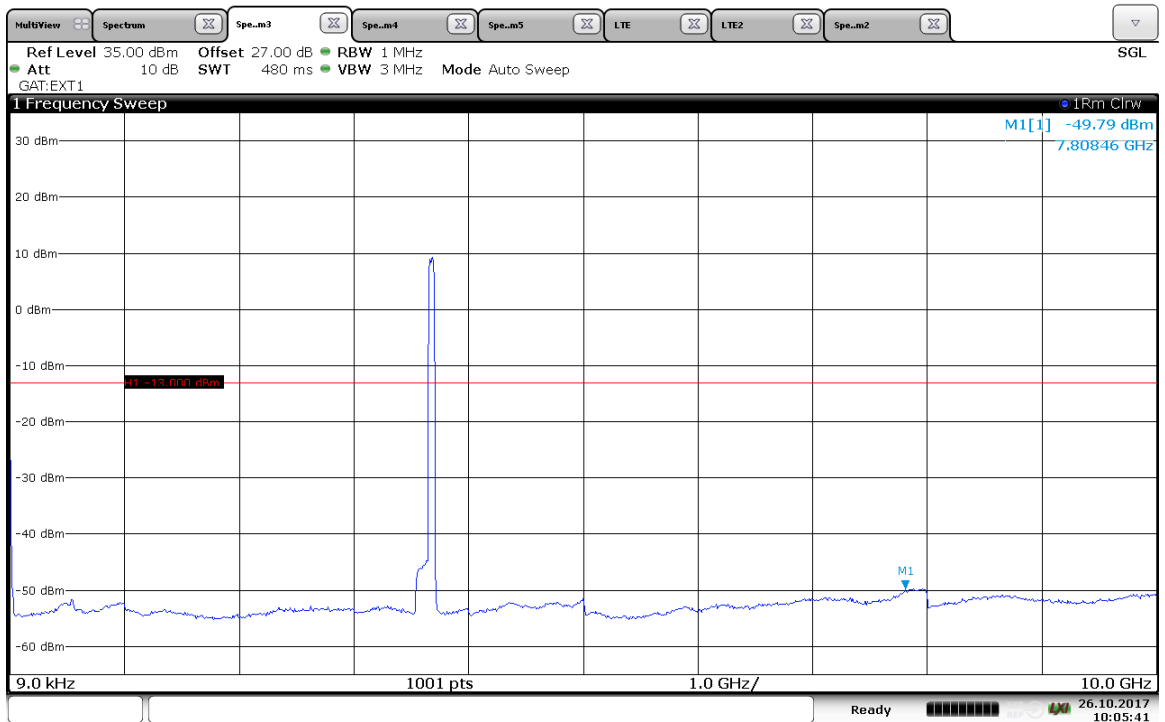
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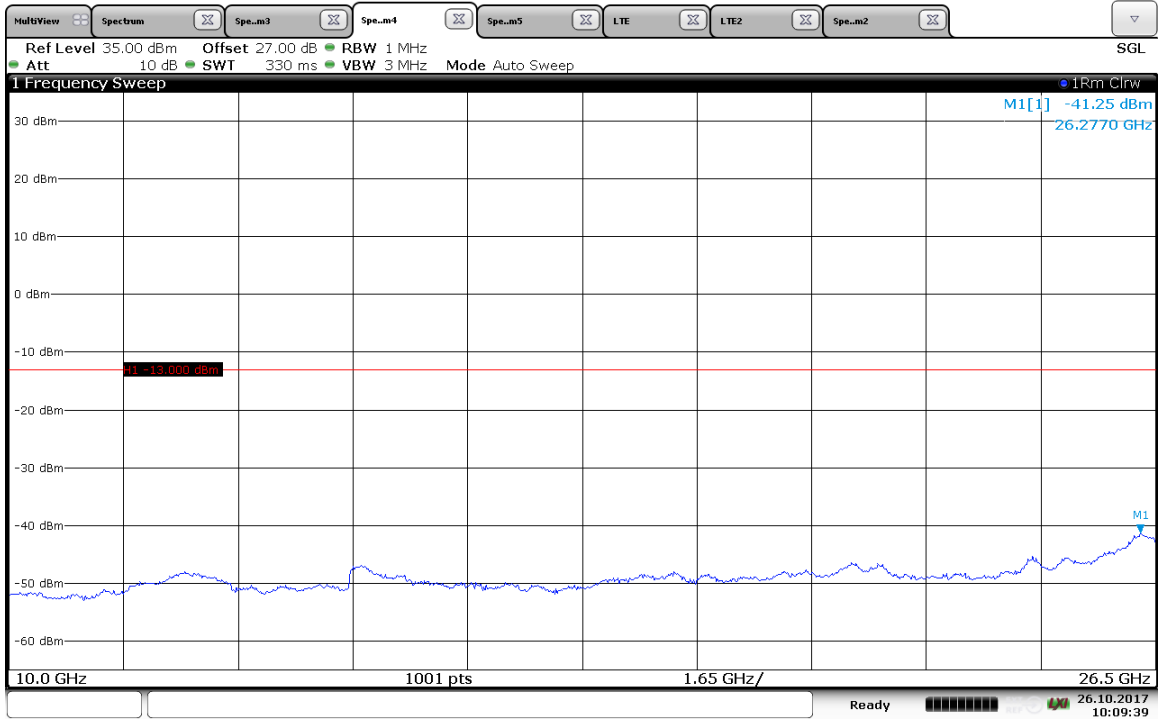
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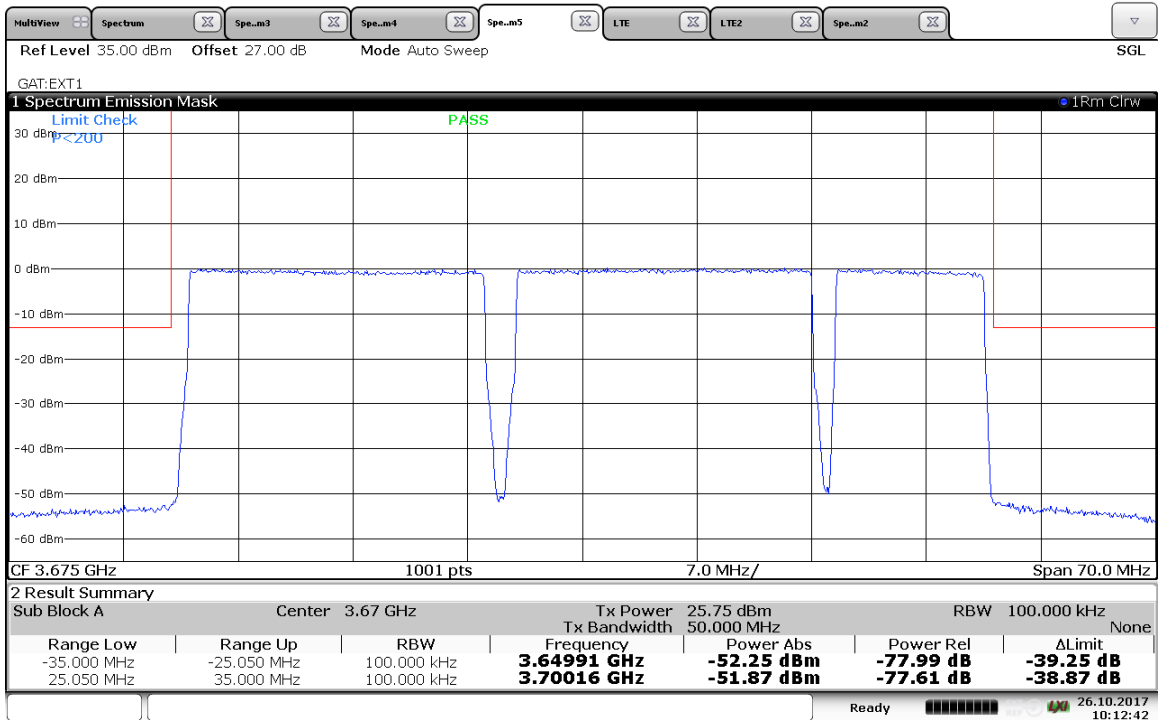
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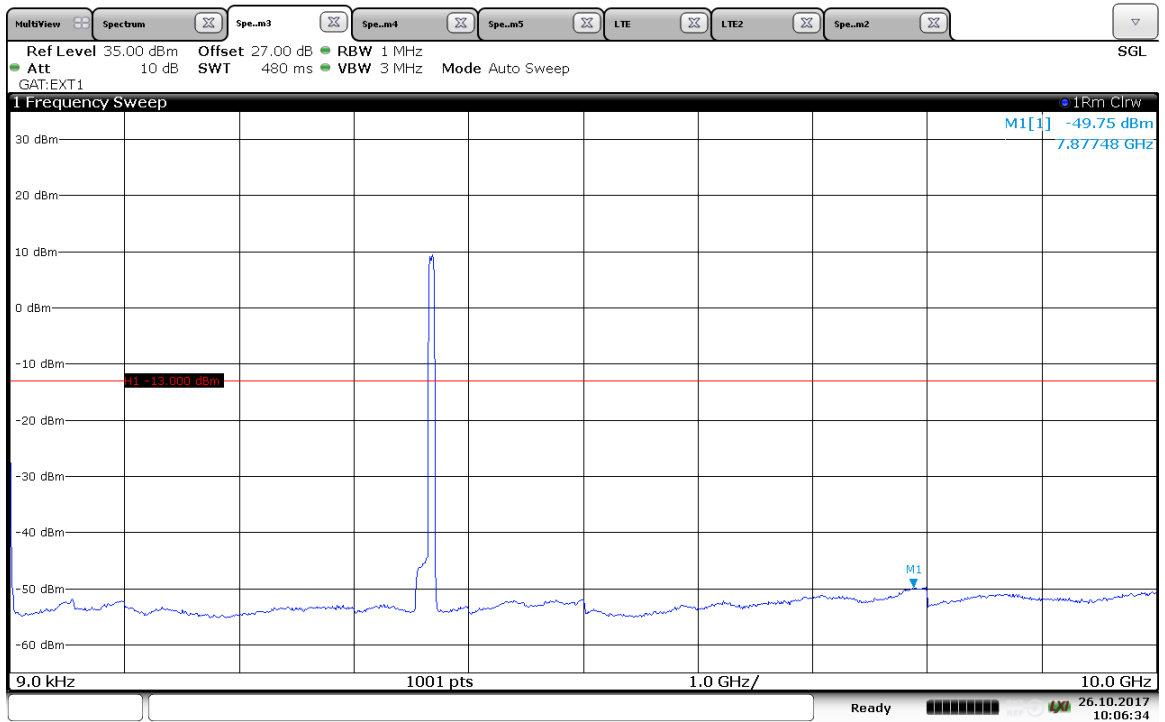
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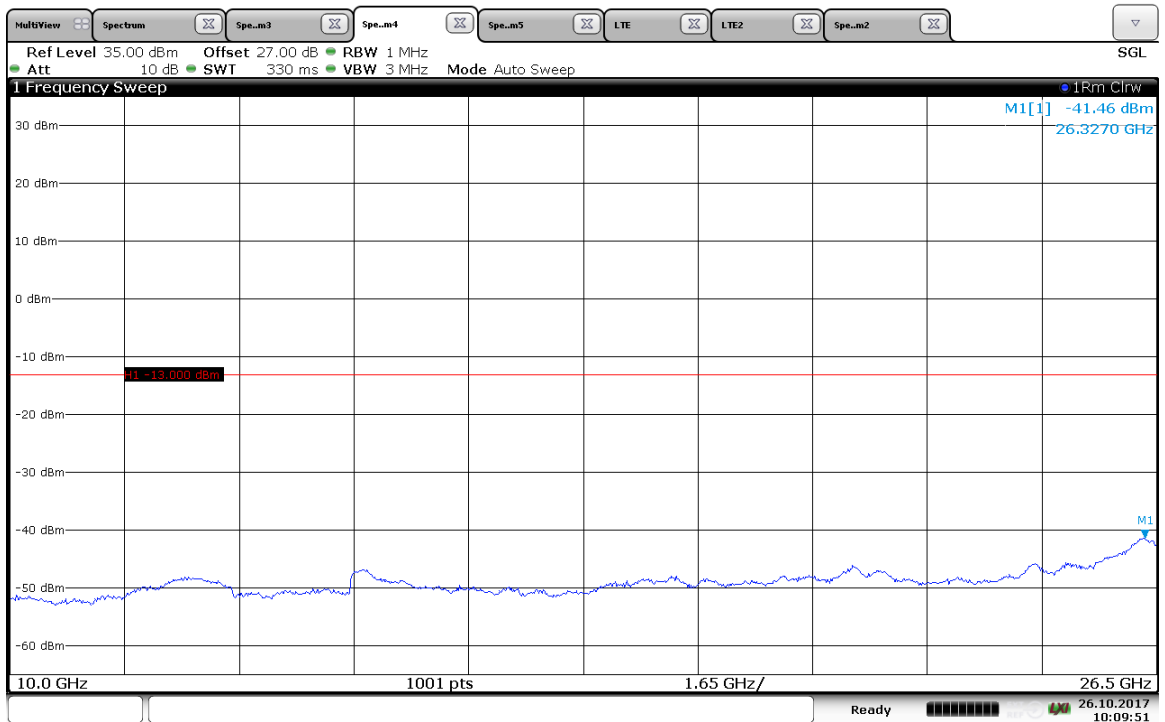
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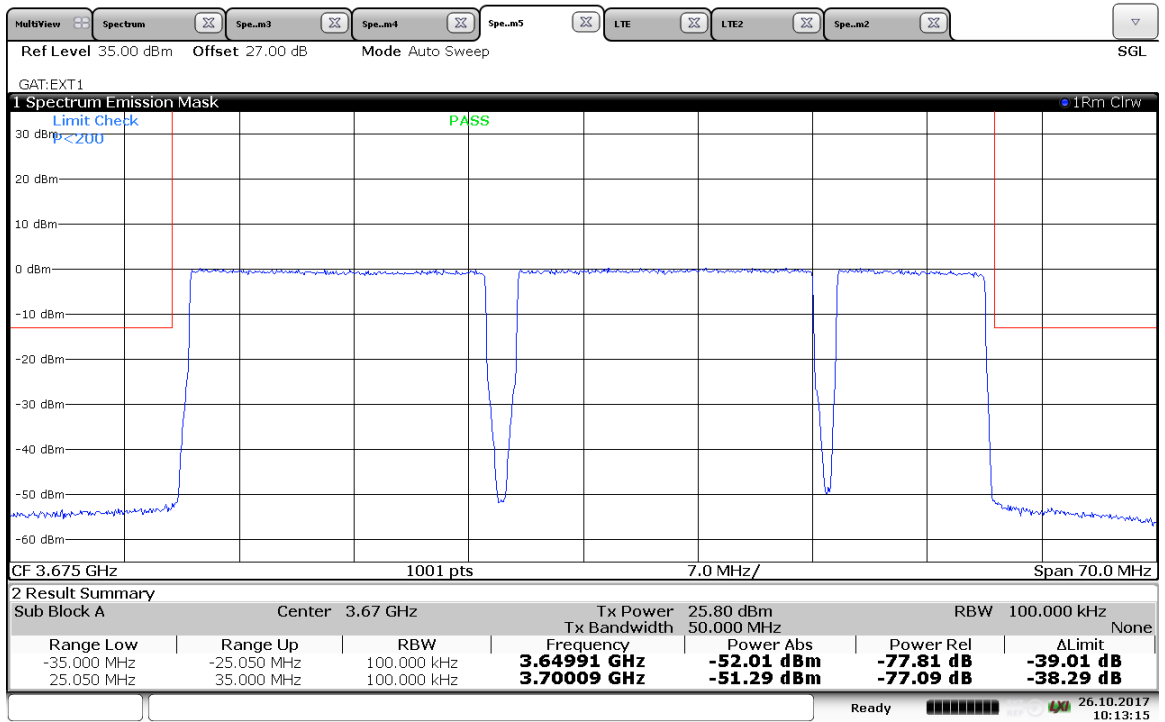
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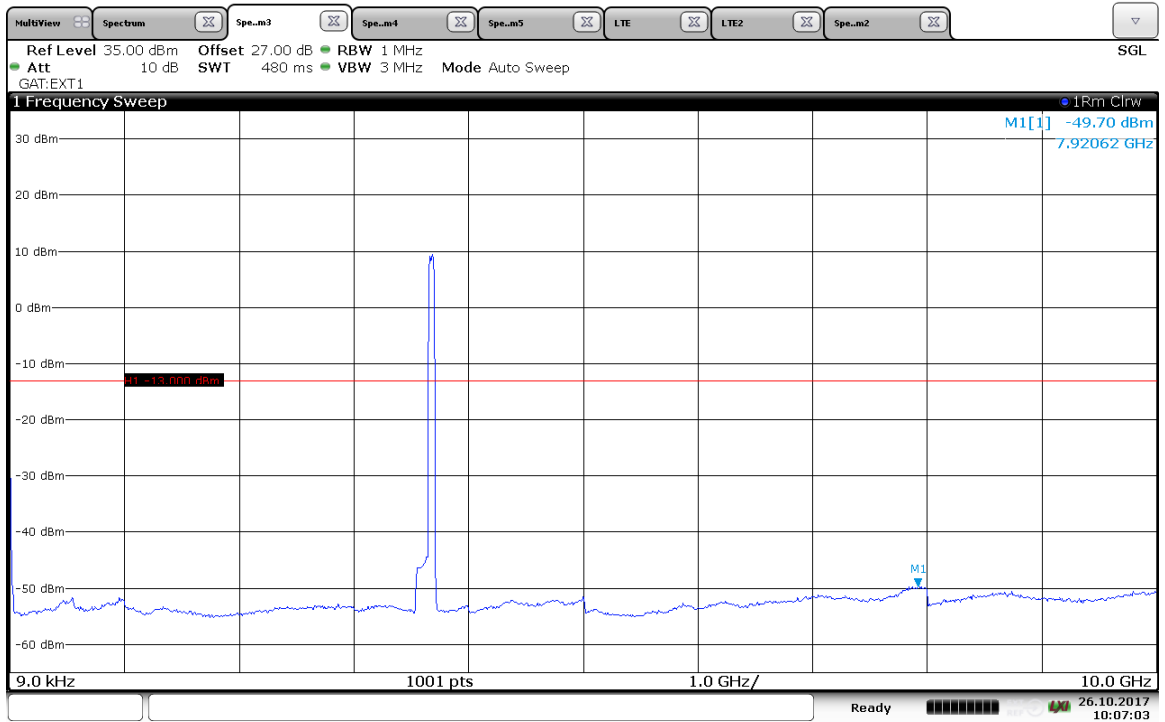
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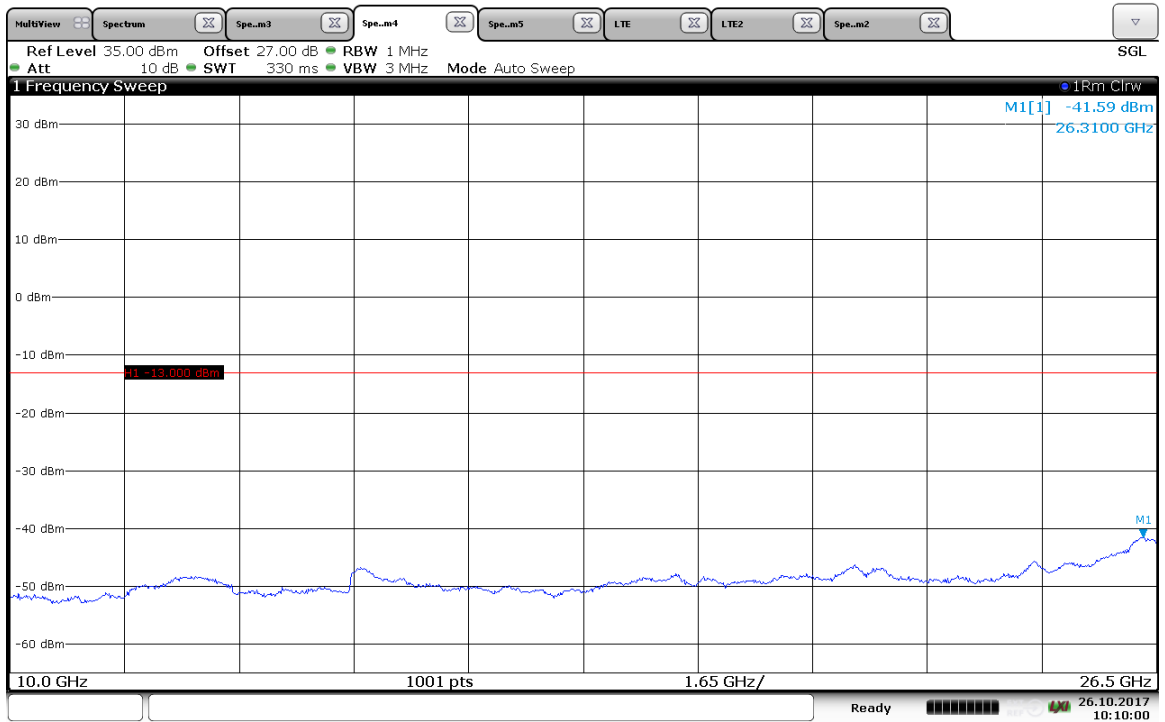


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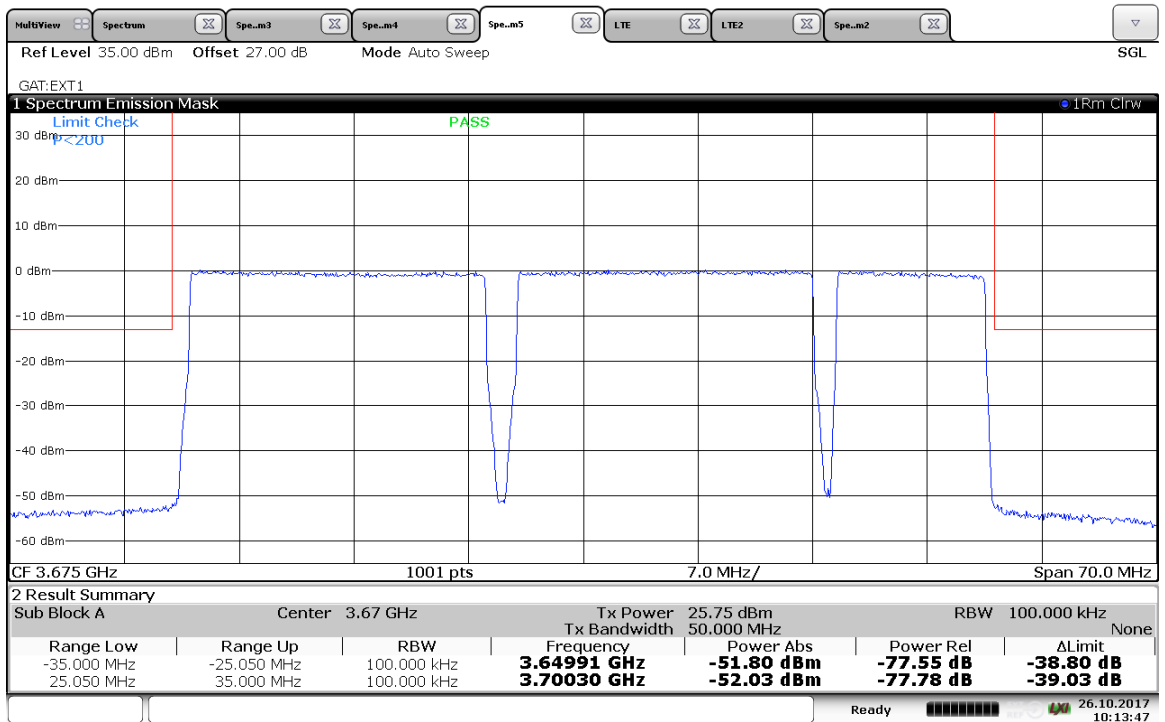


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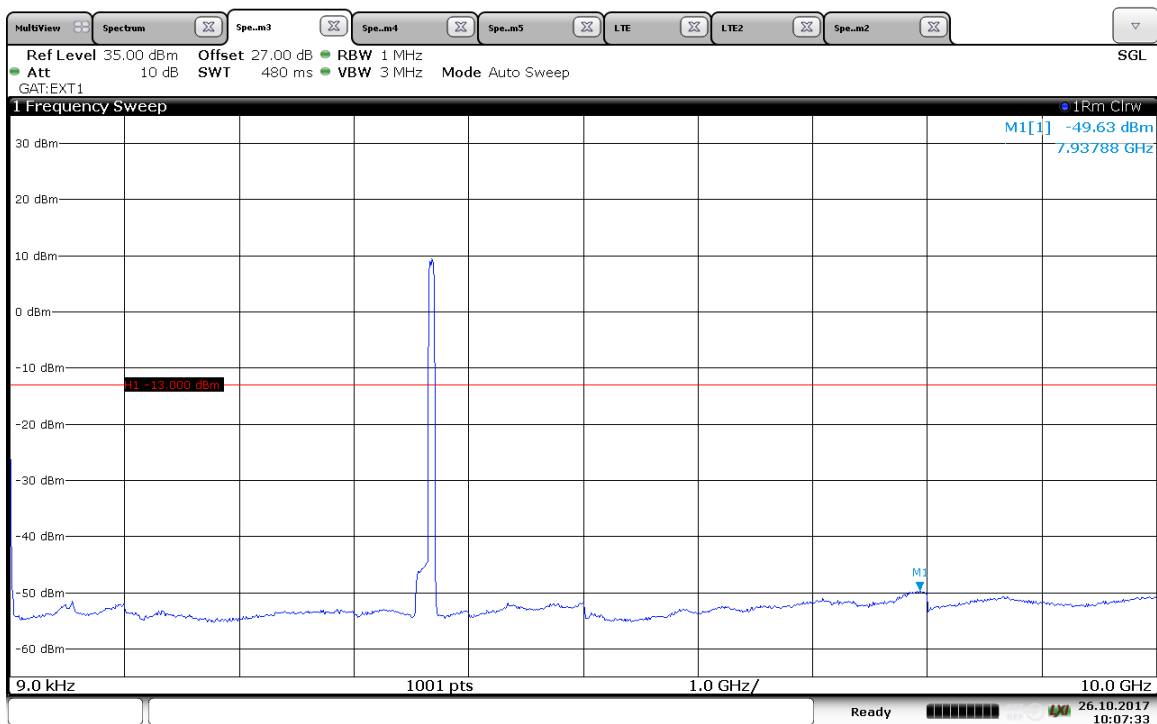




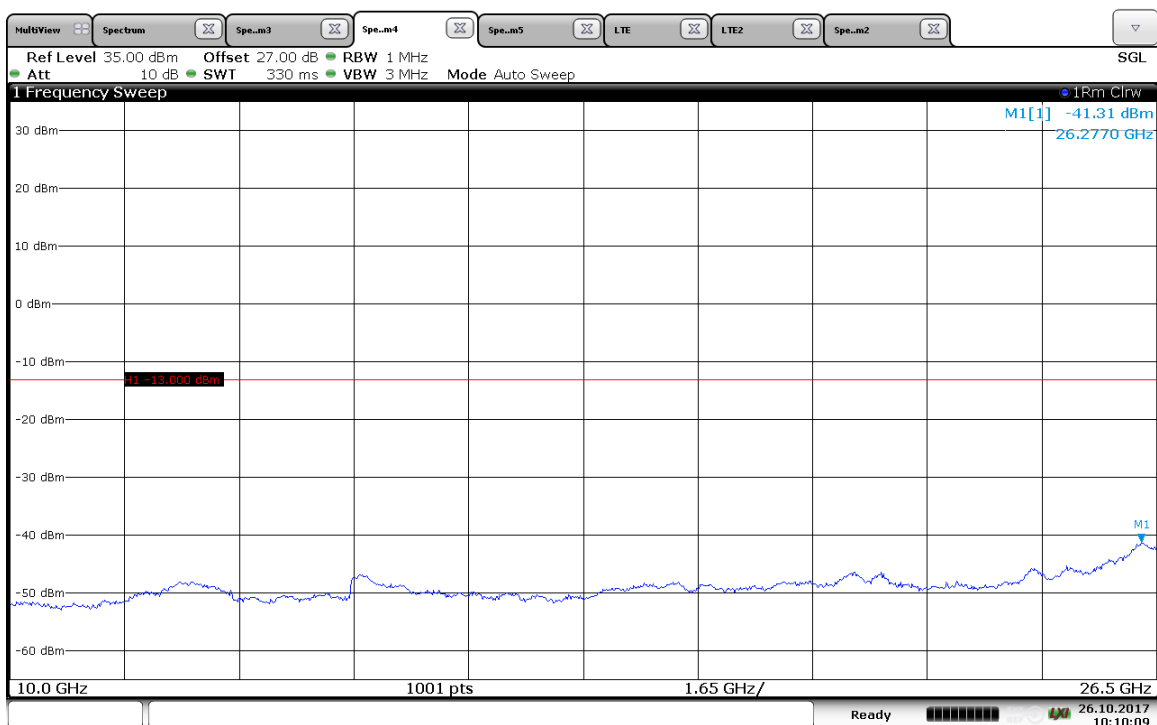
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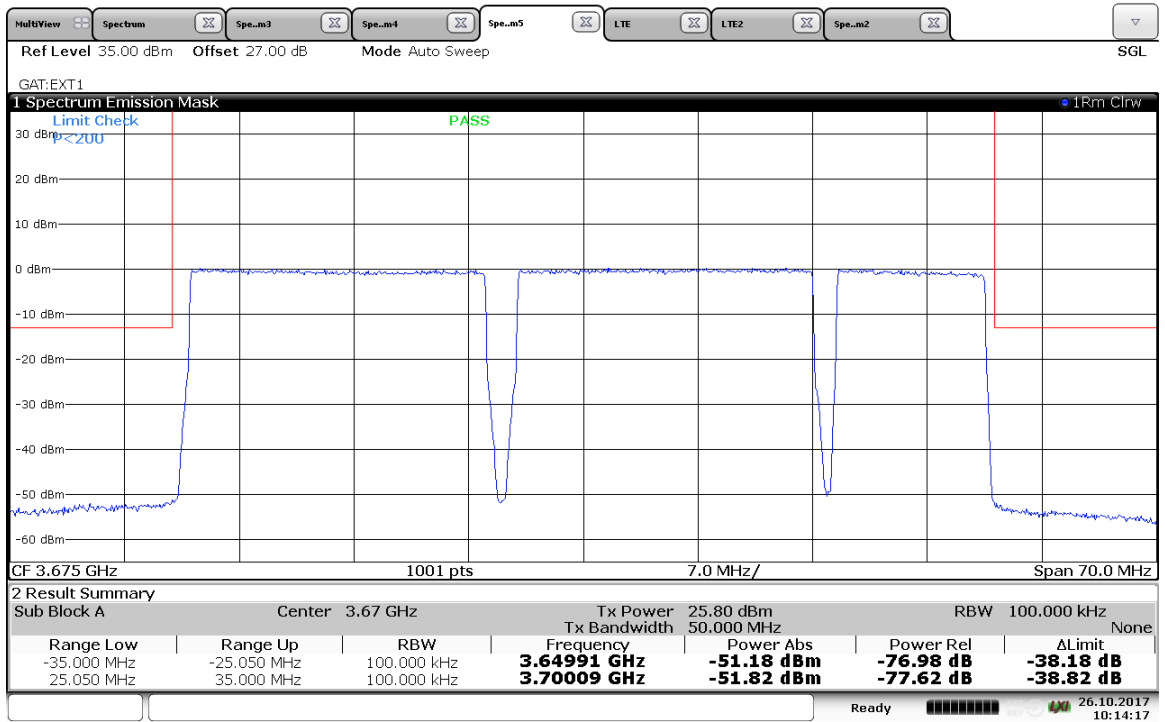
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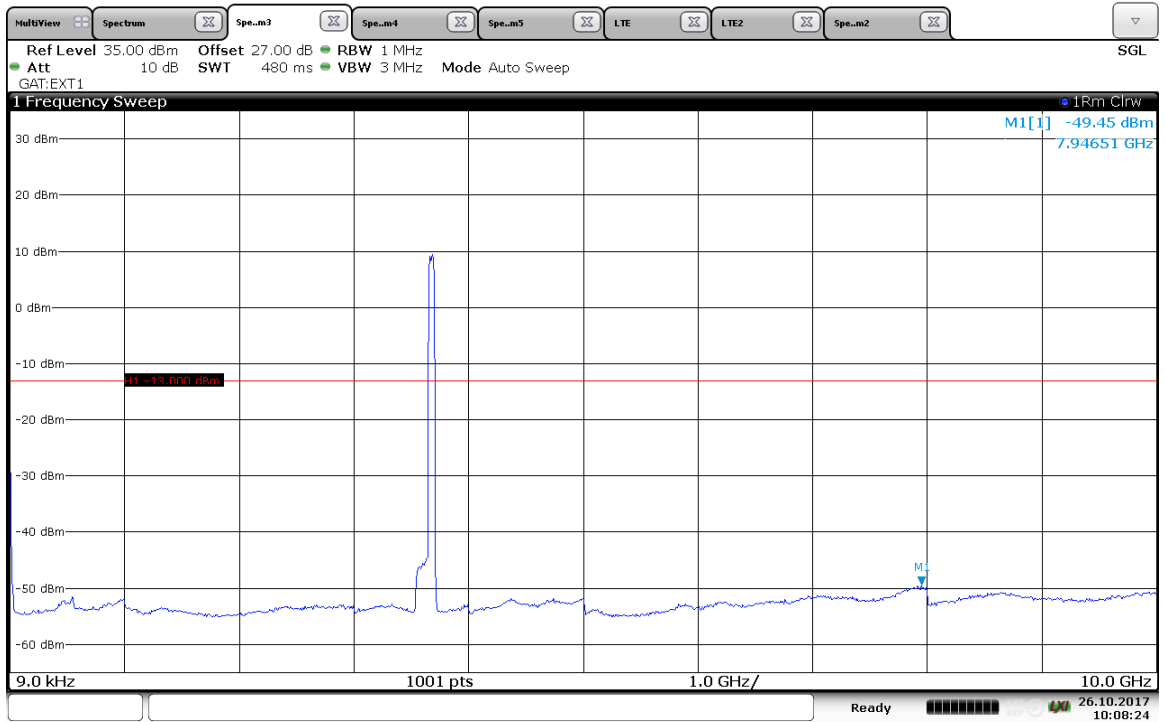
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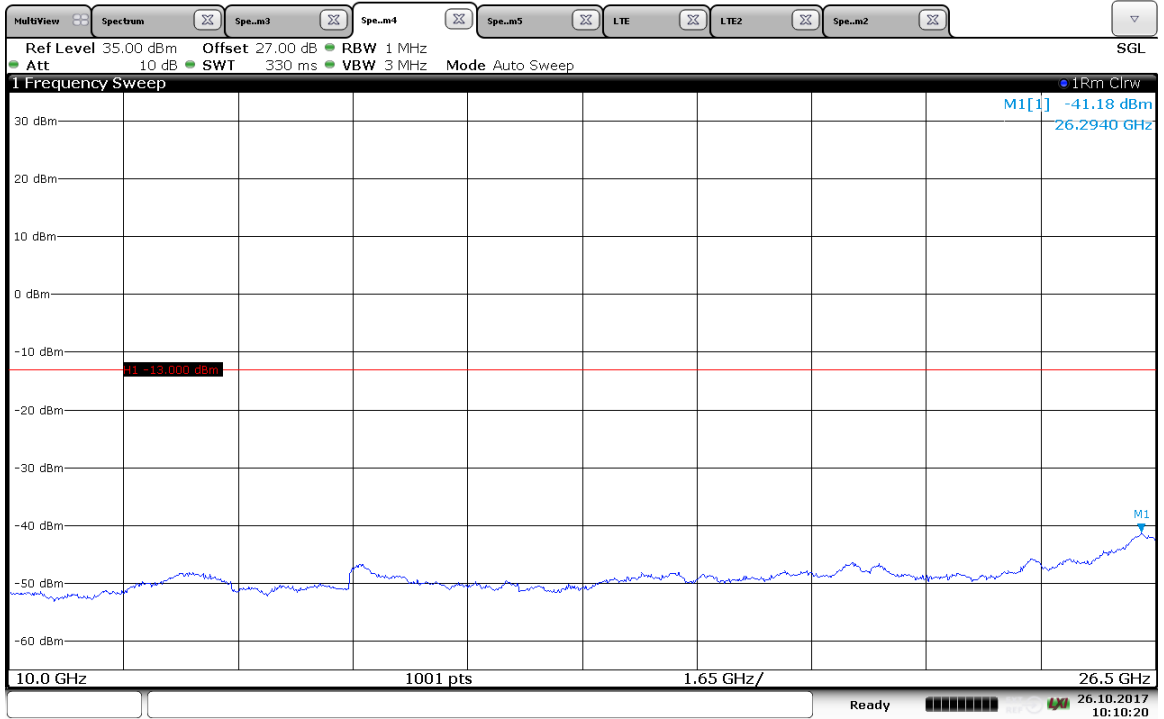
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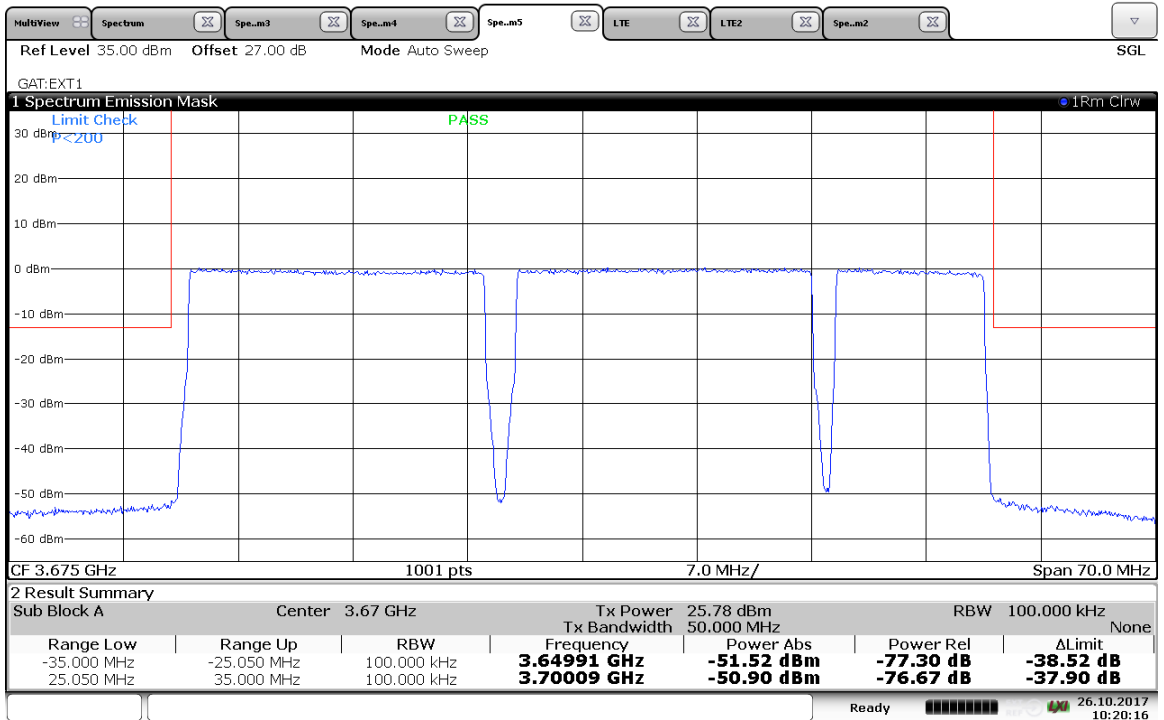
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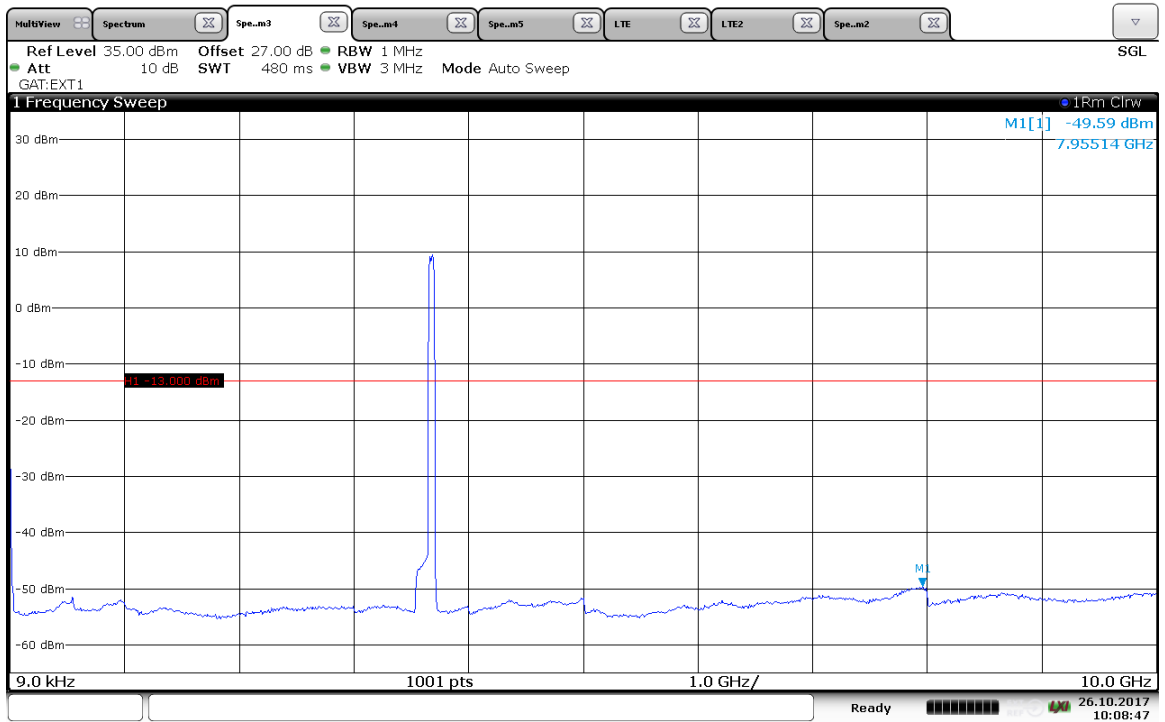
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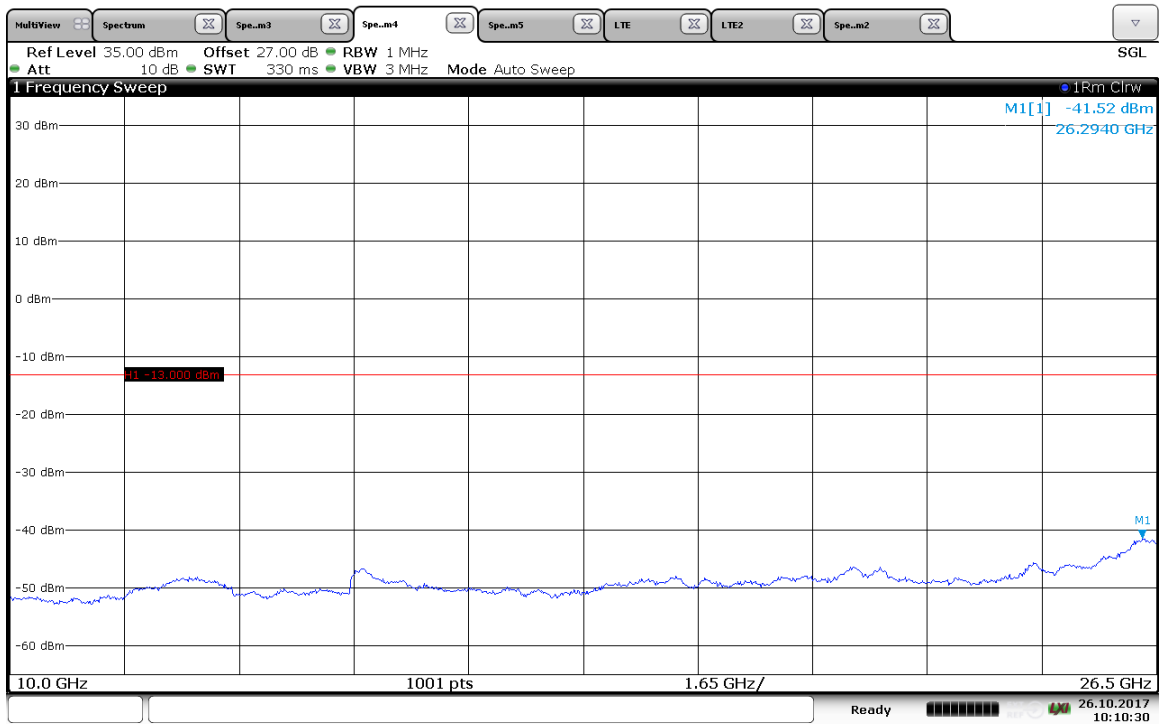
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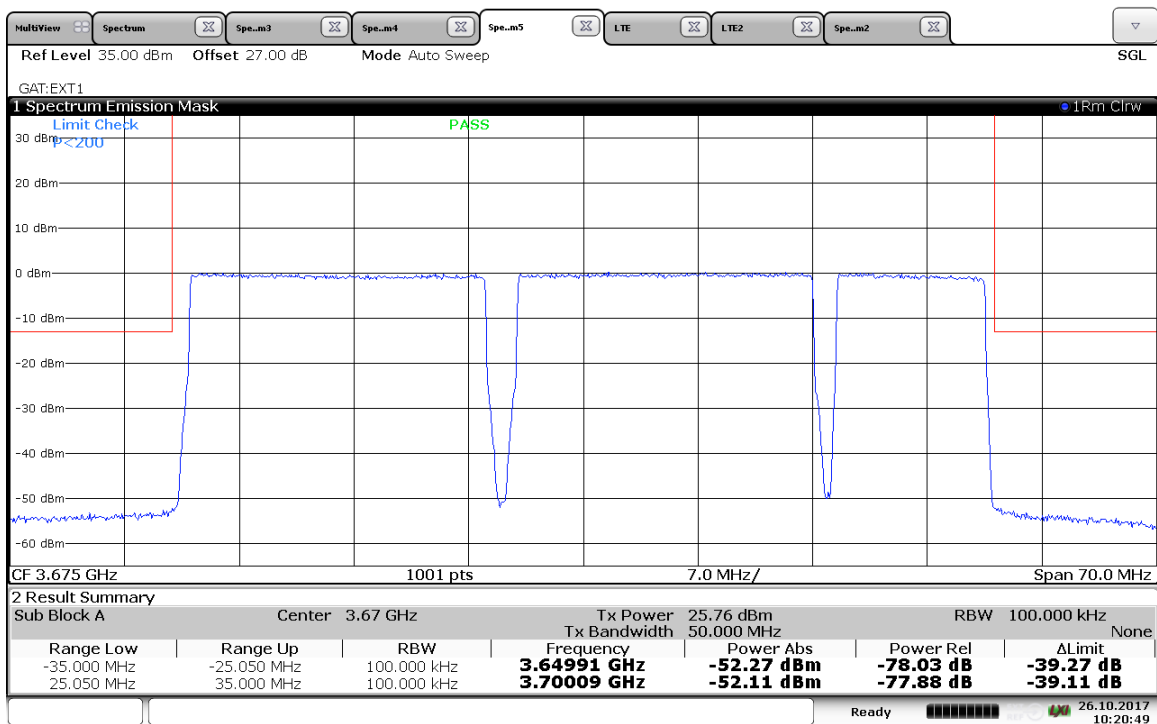
10:20:16 26.10.2017



10:08:48 26.10.2017



10:10:31 26.10.2017



10:20:50 26.10.2017

### 3.5. Spurious Emissions Radiated

#### 3.5.1. Applicable Standard: FCC§2.1053, §90.1323

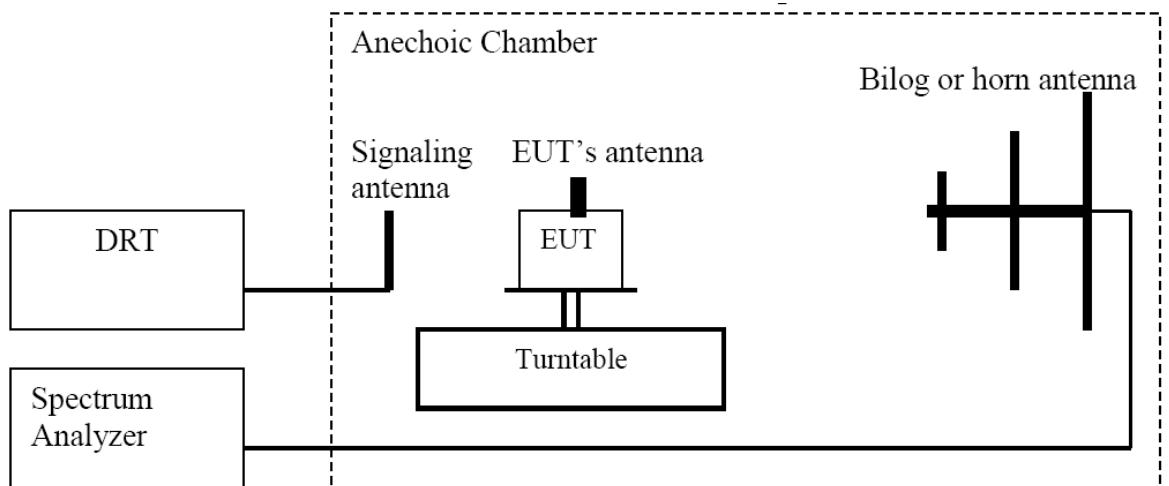
The power of any emission outside a licensee's frequency band(s) of operation shall be attenuated below the transmitter power (P) within the licensed band(s) of operation, measured in watts, by at least  $43 + 10 \log (P)$  dB. Compliance with this provision is based on the use of measurement instrumentation employing a resolution bandwidth of 1 MHz or less, but at least one percent of the emission bandwidth of the fundamental emission of the transmitter, provided the measured energy is integrated over a 1 MHz bandwidth.

#### 3.5.2. Test Equipment List and Details

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
R&S	EMI Test Receiver	ESU40	SB8501/09	2017.3.21	2018.3.20
Schwarzbeck	Bilog Antenna	VULB9163	SB3955	2017.3.21	2018.3.20
R&S	Horn Antenna	HF906	SB3435	2017.1.3	2012.1.2
R&S	Preamplifier	SCU-03	SB8501/14	2017.3.6	2018.3.5
R&S	Preamplifier	SCU-18	SB8501/17	2017.3.6	2018.3.5

**\*statement of traceability:** SMQ attests that all calibration has been performed per the A2LA requirements, traceable to NIM.

#### 3.5.3. Test Procedure



1. Connect the equipment as shown in the above diagram with the EUT's antenna in a horizontal orientation.
2. The RRU Controlled by CPRI via to set the EUT to its maximum power at the required channel.
3. Set the spectrum analyzer to measure peak hold with the required settings.
4. Place the measurement antenna in a horizontal orientation. Rotate the EUT 360 . Raise the measurement antenna at 1.5 meters increments and rotate the EUT 360 at maximize all emissions. Measure and record all spurious emissions (LVL) up to the tenth harmonic of the carrier frequency.

Spectrum analyzer settings: RBW=VBW=1MHz

#### 3.5.4.Environmental Conditions

Temperature:	22 °C
RelativeHumidity:	58 %
ATM Pressure:	1007 mbar

3.5.5.Test Result: Pass

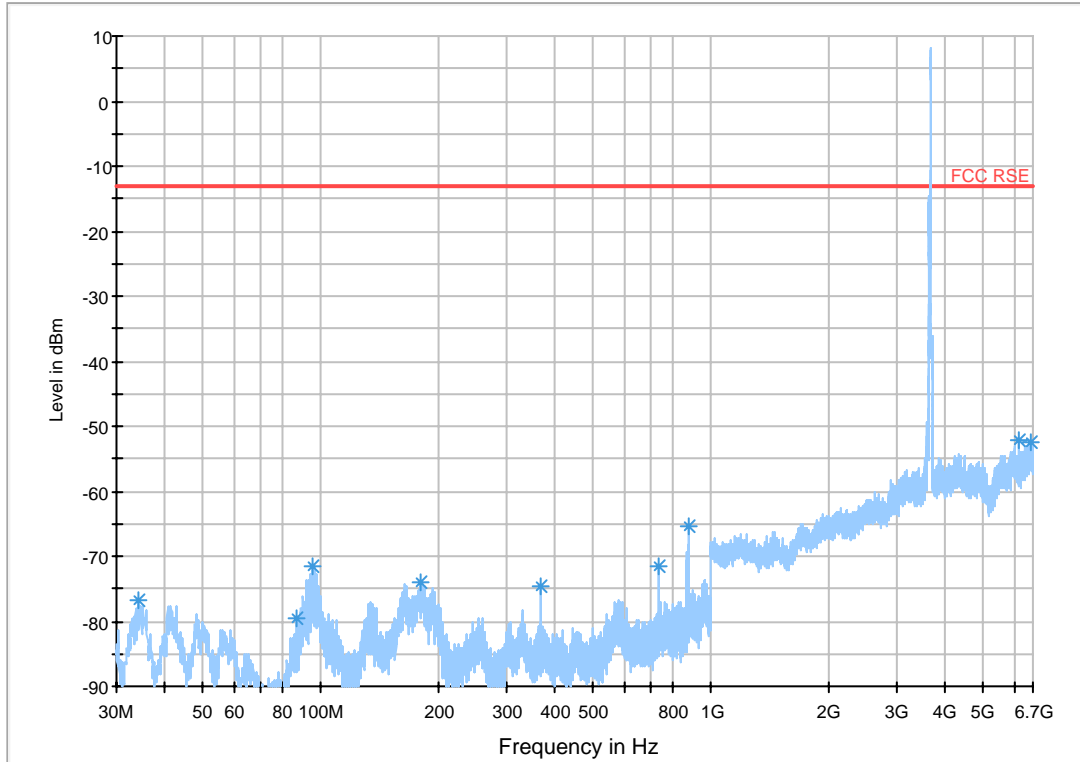
3.5.6.Test Mode: Transmitting LTE



### 3.5.7.Test Data

## FCC RSE 5.1G HP 30MHz-6.7GHz -H MS Sans Serif;

FCC RSE 5.1G HP 30MHz-6.7GHz -H

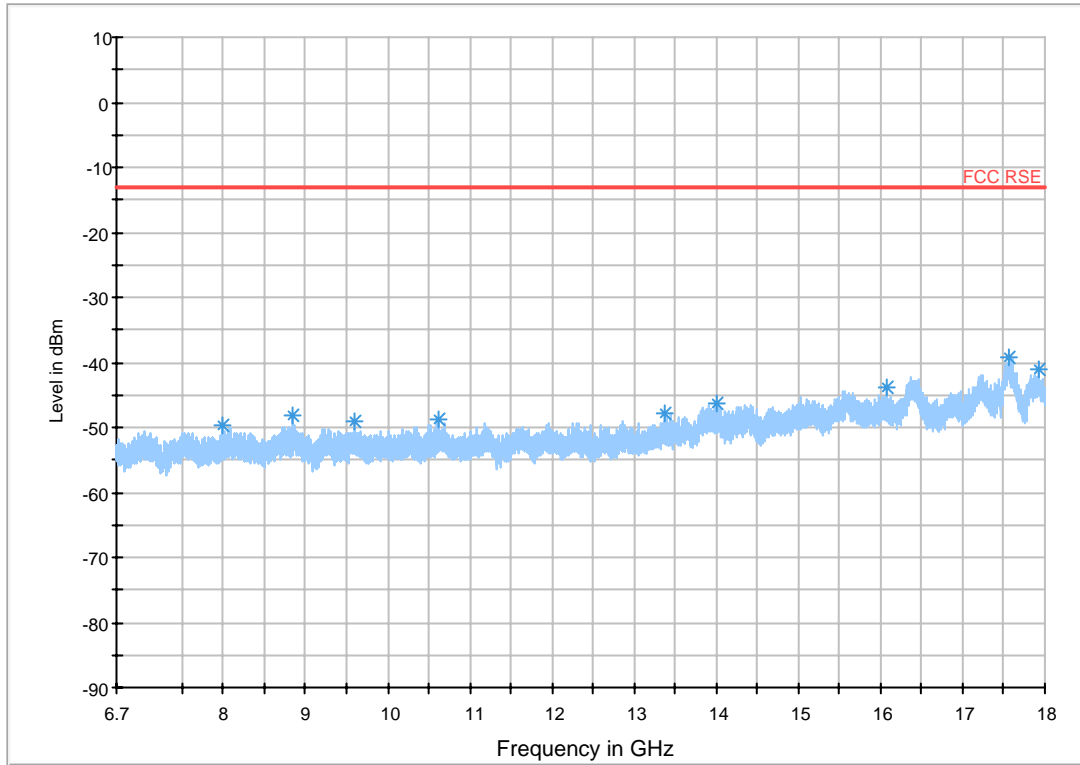


### Data Reduction Result 1 [1]

Frequency (MHz)	MaxPeak-MaxHold (dBm)	Height (cm)	Polarization	Azimuth (deg)	Corr. (dB)	Limit (dBm)	Margin (dB)
34.171	-76.7	150	H	75	-108.6	-36	40.7
86.745	-79.5	150	H	114	-109.3	-36	43.5
95.4265	-71.6	150	H	114	-108.6	-36	35.6
181.2715	-74.1	150	H	114	-108.8	-36	38.1
368.1905	-74.5	150	H	187	-105.5	-36	38.5
737.2755	-71.5	150	H	334	-101.7	-36	35.5
878.2165	-65.4	150	H	0	-99.5	-36	29.4
6144.26	-52.1	150	H	125	-100.2	-30	22.1
6652.27	-52.5	150	H	270	-99	-30	22.5

# FCC RSE 5.1G HP 6.7GHz-18GHz -H MS Sans Serif;

FCC RSE 5.1G HP 6.7GHz-18GHz -H

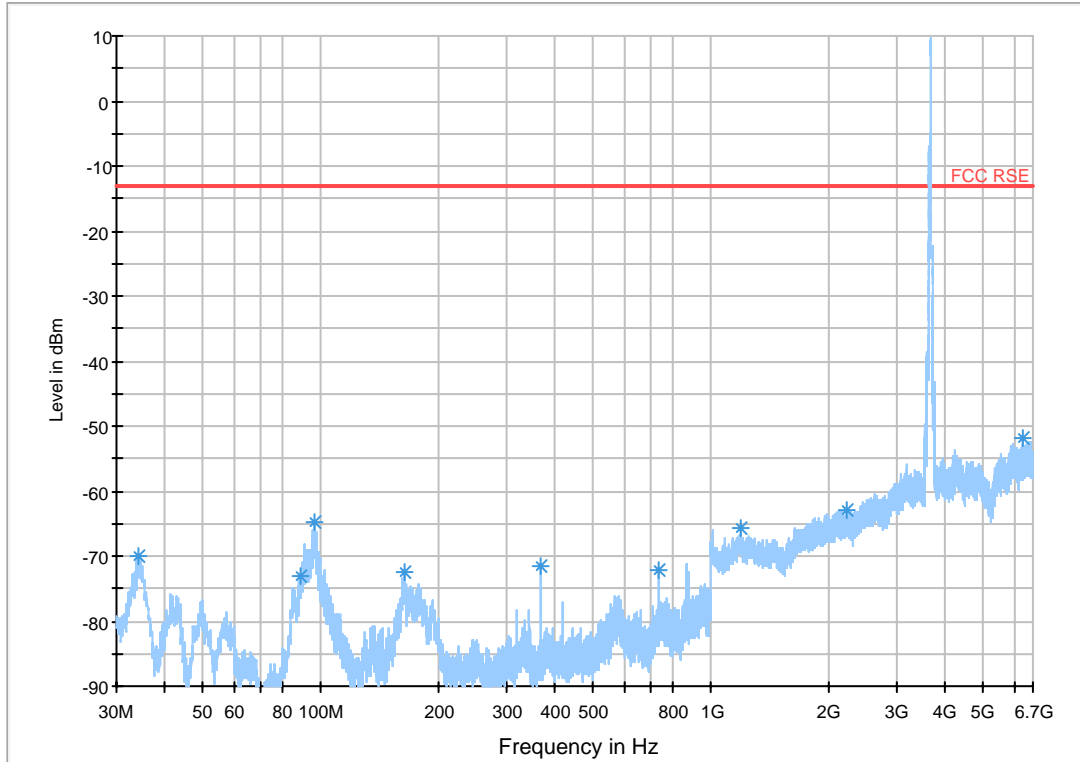


## Data Reduction Result 1 [4]

Frequency (MHz)	MaxPeak-MaxHold (dBm)	Height (cm)	Polarization	Azimuth (deg)	Corr. (dB)	Limit (dBm)	Margin (dB)
7987.07	-49.7	150	H	143	-95.5	-30	19.7
8847	-48.3	150	H	150	-94.8	-30	18.3
9607.113333	-49	150	H	176	-94.3	-30	19
10625.24333	-48.8	150	H	166	-93.7	-30	18.8
13372.27333	-47.9	150	H	188	-91.2	-30	17.9
14003.56667	-46.3	150	H	159	-89.1	-30	16.3
16071.84333	-43.8	150	H	343	-86.9	-30	13.8
17567.96333	-39.2	150	H	153	-78.4	-30	9.2
17930.69333	-41.2	150	H	176	-80.4	-30	11.2

# FCC RSE 5.1G HP 30MHz-6.7GHz -V MS Sans Serif;

FCC RSE 5.1G HP 30MHz-6.7GHz -V

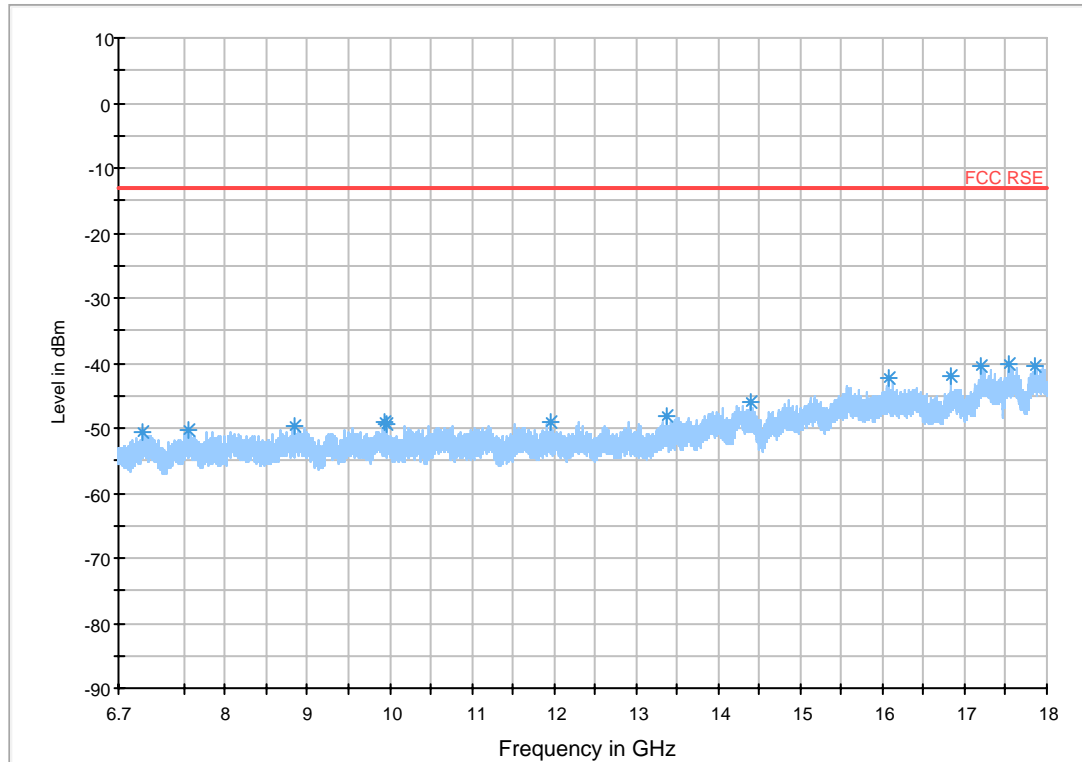


## Data Reduction Result 1 [1]

Frequency (MHz)	MaxPeak-MaxHold (dBm)	Height (cm)	Polarization	Azimuth (deg)	Corr. (dB)	Limit (dBm)	Margin (dB)
34.1225	-70.1	150	V	140	-110.2	-36	34.1
88.394	-73.2	150	V	218	-110.5	-36	37.2
96.9785	-64.6	150	V	168	-105.3	-36	28.6
163.763	-72.3	150	V	4	-108.5	-36	36.3
368.1905	-71.5	150	V	20	-106.9	-36	35.5
737.2755	-72.2	150	V	243	-100.9	-36	36.2
1192.8	-65.7	150	V	0	-112.1	-30	35.7
2227.2	-62.9	150	V	259	-108.8	-30	32.9
6321.49	-52	150	V	14	-99.9	-30	22

## FCC RSE 5.1G HP 6.7GHz-18GHz -V MS Sans Serif;

FCC RSE 5.1G HP 6.7GHz-18GHz -V



### Data Reduction Result 1 [4]

Frequency (MHz)	MaxPeak-MaxHold (dBm)	Height (cm)	Polarization	Azimuth (deg)	Corr. (dB)	Limit (dBm)	Margin (dB)
6992.293333	-50.7	150	V	276	-96.4	-30	20.7
7546.746667	-50.2	150	V	2	-95.7	-30	20.2
8838.713333	-49.8	150	V	291	-94.8	-30	19.8
9929.163333	-49	150	V	157	-94.7	-30	19
9956.66	-49.3	150	V	357	-95	-30	19.3
11956.38333	-49	150	V	209	-92.8	-30	19
13379.05333	-48.2	150	V	326	-91.2	-30	18.2
14388.14333	-46.1	150	V	348	-88.4	-30	16.1
16063.93333	-42.3	150	V	326	-85.8	-30	12.3
16831.20333	-42	150	V	18	-85	-30	12
17208.24667	-40.6	150	V	316	-82.1	-30	10.6
17548.37667	-40.1	150	V	8	-80.2	-30	10.1
17848.20333	-40.3	150	V	218	-80.8	-30	10.3

### 3.6. Frequency Stability

#### 3.6.1. Applicable Standard: FCC § 2.1055

Requirements: FCC § 2.1055 (a)(d), The frequency stability shall be sufficient to ensure that the fundamental emissions stay within the authorized bands of operation.

#### 3.6.2. Test Equipment List and Details

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
R&S	Signal & Spectrum Analyzer	FSW26	SB12724/01	2017.6.19	2018.6.18
Espec	Temperature & Humidity Test chamber	EH-010U	SB11818	2017.3.24	2017.3.23

**\*statement of traceability:** SMQ attests that all calibration has been performed per the A2LA requirements, traceable to NIM.

#### 3.6.3. Test Procedure

Frequency Stability vs. Temperature: The equipment under test was connected to an external DC power supply and the RF output was connected to a Spectrum Analyzer via feed-through attenuators. The EUT was placed inside the temperature chamber. The DC leads and RF output cable exited the chamber through an opening made for the purpose.

After the temperature stabilized for approximately 150 minutes, the frequency output was recorded from the counter.

Frequency Stability vs. Voltage: An external variable DC power supply Source. The voltage was set to 115% of the nominal value and was then decreased until the transmitter light no longer illuminated; i.e., the end point. The output frequency was recorded for each voltage.

#### 3.6.4. Environmental Conditions

Normal condition:	25° C
Relative Humidity:	54%
ATM Pressure:	1011 mbar

#### 3.6.5. Test Result: Pass

#### 3.6.6. Test Mode: Transmitting LTE

#### 3.6.7. Test Data

Frequency Stability versus Temperature

Frequency Stability vs. Temperature ( Channel Bandwidth:20M Frequency :3660MHz) FL=3650.74MHz, FH=3669.27MHz									
Temperature (°C)	Power Supplied (VDC)	Port	Modulation	Frequency Measure Error ( Hz)	FL+ Frequency Offset ( MHz)	FH+ Frequency Offset ( MHz)	Result		
-40	-48	0	QPSK	1.03	3650.74	3669.27	Pass		
			16QAM	2.16	3650.74	3669.27	Pass		
			64QAM	-1.01	3650.74	3669.27	Pass		
		1	QPSK	-1.13	3650.74	3669.27	Pass		
			16QAM	-1.65	3650.74	3669.27	Pass		
			64QAM	0.96	3650.74	3669.27	Pass		
		2	QPSK	0.21	3650.74	3669.27	Pass		
			16QAM	-2.15	3650.74	3669.27	Pass		
			64QAM	2.38	3650.74	3669.27	Pass		
		3	QPSK	-1.42	3650.74	3669.27	Pass		
			16QAM	2.72	3650.74	3669.27	Pass		
			64QAM	1.24	3650.74	3669.27	Pass		
		4	QPSK	2.11	3650.74	3669.27	Pass		
			16QAM	-2.73	3650.74	3669.27	Pass		
			64QAM	-1.08	3650.74	3669.27	Pass		
		5	QPSK	-2.53	3650.74	3669.27	Pass		
			16QAM	1.09	3650.74	3669.27	Pass		
			64QAM	-0.56	3650.74	3669.27	Pass		
		6	QPSK	2.63	3650.74	3669.27	Pass		
			16QAM	1.42	3650.74	3669.27	Pass		
			64QAM	-0.35	3650.74	3669.27	Pass		
		7	QPSK	0.74	3650.74	3669.27	Pass		
			16QAM	0.35	3650.74	3669.27	Pass		
			64QAM	1.22	3650.74	3669.27	Pass		
		-30	-48	0	QPSK	2.69	3650.74	3669.27	Pass
					16QAM	-0.32	3650.74	3669.27	Pass
					64QAM	-1.42	3650.74	3669.27	Pass
1	QPSK			-1.28	3650.74	3669.27	Pass		
	16QAM			2.71	3650.74	3669.27	Pass		
	64QAM			0.88	3650.74	3669.27	Pass		
2	QPSK			0.80	3650.74	3669.27	Pass		
	16QAM			0.26	3650.74	3669.27	Pass		
	64QAM			1.80	3650.74	3669.27	Pass		
3	QPSK	0.16	3650.74	3669.27	Pass				
	16QAM	-2.44	3650.74	3669.27	Pass				

**Frequency Stability vs. Temperature ( Channel Bandwidth:20M Frequency :3660MHz)  
FL=3650.74MHz, FH=3669.27MHz**

Temperature (°C)	Power Supplied (VDC)	Port	Modulation	Frequency Measure Error ( Hz)	FL+ Frequency Offset ( MHz)	FH+ Frequency Offset ( MHz)	Result		
		4	64QAM	-1.62	3650.74	3669.27	Pass		
			QPSK	-0.80	3650.74	3669.27	Pass		
			16QAM	-1.77	3650.74	3669.27	Pass		
		5	64QAM	2.86	3650.74	3669.27	Pass		
			QPSK	1.68	3650.74	3669.27	Pass		
			16QAM	2.40	3650.74	3669.27	Pass		
		6	64QAM	-1.08	3650.74	3669.27	Pass		
			QPSK	2.11	3650.74	3669.27	Pass		
			16QAM	-2.73	3650.74	3669.27	Pass		
		7	64QAM	-1.08	3650.74	3669.27	Pass		
			QPSK	1.86	3650.74	3669.27	Pass		
			16QAM	-1.12	3650.74	3669.27	Pass		
		-20	-48	0	64QAM	0.45	3650.74	3669.27	Pass
					QPSK	-1.28	3650.74	3669.27	Pass
					16QAM	-2.30	3650.74	3669.27	Pass
1	64QAM			-1.32	3650.74	3669.27	Pass		
	QPSK			0.70	3650.74	3669.27	Pass		
	16QAM			0.27	3650.74	3669.27	Pass		
2	64QAM			-2.11	3650.74	3669.27	Pass		
	QPSK			1.76	3650.74	3669.27	Pass		
	16QAM			2.43	3650.74	3669.27	Pass		
3	64QAM			-2.80	3650.74	3669.27	Pass		
	QPSK			0.00	3650.74	3669.27	Pass		
	16QAM			-2.63	3650.74	3669.27	Pass		
4	64QAM			-2.77	3650.74	3669.27	Pass		
	QPSK			1.15	3650.74	3669.27	Pass		
	16QAM			0.62	3650.74	3669.27	Pass		
5	64QAM	2.77	3650.74	3669.27	Pass				
	QPSK	-2.80	3650.74	3669.27	Pass				
	16QAM	2.87	3650.74	3669.27	Pass				
6	64QAM	-1.32	3650.74	3669.27	Pass				
	QPSK	-0.63	3650.74	3669.27	Pass				
	16QAM	-2.74	3650.74	3669.27	Pass				
7	64QAM	1.63	3650.74	3669.27	Pass				
	QPSK	-0.92	3650.74	3669.27	Pass				
			16QAM	-2.45	3650.74	3669.27	Pass		

**Frequency Stability vs. Temperature ( Channel Bandwidth:20M Frequency :3660MHz)  
FL=3650.74MHz, FH=3669.27MHz**

Temperature (°C)	Power Supplied (VDC)	Port	Modulation	Frequency Measure Error ( Hz)	FL+ Frequency Offset ( MHz)	FH+ Frequency Offset ( MHz)	Result
			64QAM	-0.23	3650.74	3669.27	Pass
-10	-48	0	QPSK	-2.59	3650.74	3669.27	Pass
			16QAM	0.31	3650.74	3669.27	Pass
			64QAM	1.62	3650.74	3669.27	Pass
		1	QPSK	1.86	3650.74	3669.27	Pass
			16QAM	-1.12	3650.74	3669.27	Pass
			64QAM	0.45	3650.74	3669.27	Pass
		2	QPSK	2.82	3650.74	3669.27	Pass
			16QAM	-0.26	3650.74	3669.27	Pass
			64QAM	1.24	3650.74	3669.27	Pass
		3	QPSK	1.79	3650.74	3669.27	Pass
			16QAM	-0.39	3650.74	3669.27	Pass
			64QAM	-2.52	3650.74	3669.27	Pass
		4	QPSK	2.86	3650.74	3669.27	Pass
			16QAM	2.62	3650.74	3669.27	Pass
			64QAM	-0.45	3650.74	3669.27	Pass
		5	QPSK	2.06	3650.74	3669.27	Pass
			16QAM	1.51	3650.74	3669.27	Pass
			64QAM	-2.17	3650.74	3669.27	Pass
		6	QPSK	2.17	3650.74	3669.27	Pass
			16QAM	-1.50	3650.74	3669.27	Pass
			64QAM	-2.36	3650.74	3669.27	Pass
		7	QPSK	-1.01	3650.74	3669.27	Pass
			16QAM	-2.92	3650.74	3669.27	Pass
			64QAM	0.12	3650.74	3669.27	Pass
0	-48	0	QPSK	-1.04	3650.74	3669.27	Pass
			16QAM	-2.60	3650.74	3669.27	Pass
			64QAM	-2.81	3650.74	3669.27	Pass
		1	QPSK	2.45	3650.74	3669.27	Pass
			16QAM	-2.33	3650.74	3669.27	Pass
			64QAM	0.07	3650.74	3669.27	Pass
		2	QPSK	0.65	3650.74	3669.27	Pass
			16QAM	-2.20	3650.74	3669.27	Pass
			64QAM	1.85	3650.74	3669.27	Pass
3	QPSK	2.42	3650.74	3669.27	Pass		
	16QAM	-2.57	3650.74	3669.27	Pass		



**Frequency Stability vs. Temperature ( Channel Bandwidth:20M Frequency :3660MHz)  
FL=3650.74MHz, FH=3669.27MHz**

Temperature (°C)	Power Supplied (VDC)	Port	Modulation	Frequency Measure Error ( Hz)	FL+ Frequency Offset ( MHz)	FH+ Frequency Offset ( MHz)	Result
		4	64QAM	-1.08	3650.74	3669.27	Pass
			QPSK	2.82	3650.74	3669.27	Pass
			16QAM	-0.26	3650.74	3669.27	Pass
		5	64QAM	1.24	3650.74	3669.27	Pass
			QPSK	2.88	3650.74	3669.27	Pass
			16QAM	-2.31	3650.74	3669.27	Pass
		6	64QAM	1.81	3650.74	3669.27	Pass
			QPSK	-0.83	3650.74	3669.27	Pass
			16QAM	-2.14	3650.74	3669.27	Pass
		7	64QAM	-1.76	3650.74	3669.27	Pass
			QPSK	1.31	3650.74	3669.27	Pass
			16QAM	2.67	3650.74	3669.27	Pass
10	-48	0	64QAM	-2.46	3650.74	3669.27	Pass
			QPSK	-0.43	3650.74	3669.27	Pass
			16QAM	2.07	3650.74	3669.27	Pass
		1	64QAM	-1.19	3650.74	3669.27	Pass
			QPSK	0.65	3650.74	3669.27	Pass
			16QAM	-2.97	3650.74	3669.27	Pass
		2	64QAM	-2.75	3650.74	3669.27	Pass
			QPSK	-0.30	3650.74	3669.27	Pass
			16QAM	-2.52	3650.74	3669.27	Pass
		3	64QAM	0.22	3650.74	3669.27	Pass
			QPSK	1.65	3650.74	3669.27	Pass
			16QAM	1.57	3650.74	3669.27	Pass
		4	64QAM	2.70	3650.74	3669.27	Pass
			QPSK	0.75	3650.74	3669.27	Pass
			16QAM	-2.78	3650.74	3669.27	Pass
		5	64QAM	0.34	3650.74	3669.27	Pass
			QPSK	-2.77	3650.74	3669.27	Pass
			16QAM	0.89	3650.74	3669.27	Pass
		6	64QAM	0.69	3650.74	3669.27	Pass
			QPSK	-0.95	3650.74	3669.27	Pass
			16QAM	0.25	3650.74	3669.27	Pass
7	64QAM	-2.08	3650.74	3669.27	Pass		
	QPSK	2.88	3650.74	3669.27	Pass		
			16QAM	-2.31	3650.74	3669.27	Pass

**Frequency Stability vs. Temperature ( Channel Bandwidth:20M Frequency :3660MHz)  
FL=3650.74MHz, FH=3669.27MHz**

Temperature (°C)	Power Supplied (VDC)	Port	Modulation	Frequency Measure Error ( Hz)	FL+ Frequency Offset ( MHz)	FH+ Frequency Offset ( MHz)	Result
			64QAM	1.81	3650.74	3669.27	Pass
20	-48	0	QPSK	-2.82	3650.74	3669.27	Pass
			16QAM	-1.24	3650.74	3669.27	Pass
			64QAM	-1.84	3650.74	3669.27	Pass
		1	QPSK	0.53	3650.74	3669.27	Pass
			16QAM	-3.46	3650.74	3669.27	Pass
			64QAM	0.25	3650.74	3669.27	Pass
		2	QPSK	-1.17	3650.74	3669.27	Pass
			16QAM	-1.69	3650.74	3669.27	Pass
			64QAM	0.26	3650.74	3669.27	Pass
		3	QPSK	0.66	3650.74	3669.27	Pass
			16QAM	3.90	3650.74	3669.27	Pass
			64QAM	-1.32	3650.74	3669.27	Pass
		4	QPSK	0.04	3650.74	3669.27	Pass
			16QAM	3.08	3650.74	3669.27	Pass
			64QAM	0.09	3650.74	3669.27	Pass
		5	QPSK	1.37	3650.74	3669.27	Pass
			16QAM	3.31	3650.74	3669.27	Pass
			64QAM	0.00	3650.74	3669.27	Pass
		6	QPSK	-1.52	3650.74	3669.27	Pass
			16QAM	-0.75	3650.74	3669.27	Pass
			64QAM	-3.68	3650.74	3669.27	Pass
		7	QPSK	-3.69	3650.74	3669.27	Pass
			16QAM	3.64	3650.74	3669.27	Pass
			64QAM	1.35	3650.74	3669.27	Pass
30	-48	0	QPSK	3.53	3650.74	3669.27	Pass
			16QAM	-1.84	3650.74	3669.27	Pass
			64QAM	-0.92	3650.74	3669.27	Pass
		1	QPSK	3.60	3650.74	3669.27	Pass
			16QAM	3.65	3650.74	3669.27	Pass
			64QAM	3.79	3650.74	3669.27	Pass
		2	QPSK	-2.82	3650.74	3669.27	Pass
			16QAM	-1.24	3650.74	3669.27	Pass
			64QAM	-1.84	3650.74	3669.27	Pass
3	QPSK	3.83	3650.74	3669.27	Pass		
	16QAM	-2.10	3650.74	3669.27	Pass		

**Frequency Stability vs. Temperature ( Channel Bandwidth:20M Frequency :3660MHz)  
FL=3650.74MHz, FH=3669.27MHz**

Temperature (°C)	Power Supplied (VDC)	Port	Modulation	Frequency Measure Error ( Hz)	FL+ Frequency Offset ( MHz)	FH+ Frequency Offset ( MHz)	Result		
		4	64QAM	-0.44	3650.74	3669.27	Pass		
			QPSK	-3.58	3650.74	3669.27	Pass		
			16QAM	1.36	3650.74	3669.27	Pass		
		5	64QAM	2.23	3650.74	3669.27	Pass		
			QPSK	3.38	3650.74	3669.27	Pass		
			16QAM	2.49	3650.74	3669.27	Pass		
		6	64QAM	3.40	3650.74	3669.27	Pass		
			QPSK	1.45	3650.74	3669.27	Pass		
			16QAM	2.00	3650.74	3669.27	Pass		
		7	64QAM	-1.39	3650.74	3669.27	Pass		
			QPSK	3.54	3650.74	3669.27	Pass		
			16QAM	-0.53	3650.74	3669.27	Pass		
		40	-48	0	64QAM	0.36	3650.74	3669.27	Pass
					QPSK	-2.57	3650.74	3669.27	Pass
					16QAM	-0.73	3650.74	3669.27	Pass
				1	64QAM	-2.19	3650.74	3669.27	Pass
					QPSK	3.47	3650.74	3669.27	Pass
					16QAM	3.99	3650.74	3669.27	Pass
2	64QAM			1.04	3650.74	3669.27	Pass		
	QPSK			-0.38	3650.74	3669.27	Pass		
	16QAM			0.53	3650.74	3669.27	Pass		
3	64QAM			-0.57	3650.74	3669.27	Pass		
	QPSK			-1.16	3650.74	3669.27	Pass		
	16QAM			-2.08	3650.74	3669.27	Pass		
4	64QAM			-2.82	3650.74	3669.27	Pass		
	QPSK			-1.13	3650.74	3669.27	Pass		
	16QAM			-3.82	3650.74	3669.27	Pass		
5	64QAM			-0.71	3650.74	3669.27	Pass		
	QPSK			3.83	3650.74	3669.27	Pass		
	16QAM			-2.10	3650.74	3669.27	Pass		
6	64QAM			-0.44	3650.74	3669.27	Pass		
	QPSK			-2.46	3650.74	3669.27	Pass		
	16QAM			-1.98	3650.74	3669.27	Pass		
7	64QAM	3.66	3650.74	3669.27	Pass				
	QPSK	-3.95	3650.74	3669.27	Pass				
			16QAM	0.79	3650.74	3669.27	Pass		

**Frequency Stability vs. Temperature ( Channel Bandwidth:20M Frequency :3660MHz)  
FL=3650.74MHz, FH=3669.27MHz**

Temperature (°C)	Power Supplied (VDC)	Port	Modulation	Frequency Measure Error ( Hz)	FL+ Frequency Offset ( MHz)	FH+ Frequency Offset ( MHz)	Result
			64QAM	1.87	3650.74	3669.27	Pass
50	-48	0	QPSK	0.49	3650.74	3669.27	Pass
			16QAM	-1.51	3650.74	3669.27	Pass
			64QAM	2.83	3650.74	3669.27	Pass
		1	QPSK	-1.66	3650.74	3669.27	Pass
			16QAM	-0.22	3650.74	3669.27	Pass
			64QAM	-3.42	3650.74	3669.27	Pass
		2	QPSK	-3.02	3650.74	3669.27	Pass
			16QAM	-2.34	3650.74	3669.27	Pass
			64QAM	3.24	3650.74	3669.27	Pass
		3	QPSK	3.53	3650.74	3669.27	Pass
			16QAM	0.28	3650.74	3669.27	Pass
			64QAM	3.28	3650.74	3669.27	Pass
		4	QPSK	2.31	3650.74	3669.27	Pass
			16QAM	-1.60	3650.74	3669.27	Pass
			64QAM	-1.23	3650.74	3669.27	Pass
		5	QPSK	2.95	3650.74	3669.27	Pass
			16QAM	-1.43	3650.74	3669.27	Pass
			64QAM	-2.15	3650.74	3669.27	Pass
		6	QPSK	1.22	3650.74	3669.27	Pass
			16QAM	-3.16	3650.74	3669.27	Pass
			64QAM	-0.80	3650.74	3669.27	Pass
		7	QPSK	2.09	3650.74	3669.27	Pass
			16QAM	-0.42	3650.74	3669.27	Pass
			64QAM	-0.47	3650.74	3669.27	Pass
55	-48	0	QPSK	-2.46	3650.74	3669.27	Pass
			16QAM	-1.98	3650.74	3669.27	Pass
			64QAM	3.66	3650.74	3669.27	Pass
		1	QPSK	-0.10	3650.74	3669.27	Pass
			16QAM	0.87	3650.74	3669.27	Pass
			64QAM	-0.61	3650.74	3669.27	Pass
		2	QPSK	-1.64	3650.74	3669.27	Pass
			16QAM	2.68	3650.74	3669.27	Pass
			64QAM	-0.61	3650.74	3669.27	Pass
		3	QPSK	-1.33	3650.74	3669.27	Pass
			16QAM	1.30	3650.74	3669.27	Pass

**Frequency Stability vs. Temperature ( Channel Bandwidth:20M Frequency :3660MHz)  
FL=3650.74MHz, FH=3669.27MHz**

Temperature (°C)	Power Supplied (VDC)	Port	Modulation	Frequency Measure Error ( Hz)	FL+ Frequency Offset ( MHz)	FH+ Frequency Offset ( MHz)	Result		
		4	64QAM	-1.14	3650.74	3669.27	Pass		
			QPSK	-3.48	3650.74	3669.27	Pass		
			16QAM	-2.89	3650.74	3669.27	Pass		
		5	64QAM	2.57	3650.74	3669.27	Pass		
			QPSK	2.69	3650.74	3669.27	Pass		
			16QAM	-1.39	3650.74	3669.27	Pass		
		6	64QAM	-3.79	3650.74	3669.27	Pass		
			QPSK	2.57	3650.74	3669.27	Pass		
			16QAM	0.43	3650.74	3669.27	Pass		
		7	64QAM	-3.72	3650.74	3669.27	Pass		
			QPSK	-1.47	3650.74	3669.27	Pass		
			16QAM	-3.50	3650.74	3669.27	Pass		
					64QAM	3.13	3650.74	3669.27	Pass

**Frequency Stability vs. Temperature ( Channel Bandwidth:20M Frequency :3675MHz)  
FL=3665.71MHz, FH=3695.29MHz**

Temperature (°C)	Power Supplied (VDC)	Port	Modulation	Frequency Measure Error ( Hz)	FL+ Frequency Offset ( MHz)	FH+ Frequency Offset ( MHz)	Result
-40	-48	0	QPSK	-1.11	3665.71	3695.29	Pass
			16QAM	-1.19	3665.71	3695.29	Pass
			64QAM	-1.63	3665.71	3695.29	Pass
		1	QPSK	-2.65	3665.71	3695.29	Pass
			16QAM	3.96	3665.71	3695.29	Pass
			64QAM	-3.40	3665.71	3695.29	Pass
		2	QPSK	-3.00	3665.71	3695.29	Pass
			16QAM	-2.32	3665.71	3695.29	Pass
			64QAM	-3.97	3665.71	3695.29	Pass
		3	QPSK	-2.14	3665.71	3695.29	Pass
			16QAM	3.48	3665.71	3695.29	Pass
			64QAM	-2.09	3665.71	3695.29	Pass
		4	QPSK	-0.56	3665.71	3695.29	Pass
			16QAM	3.36	3665.71	3695.29	Pass
			64QAM	1.66	3665.71	3695.29	Pass
		5	QPSK	0.75	3665.71	3695.29	Pass
			16QAM	1.64	3665.71	3695.29	Pass

**Frequency Stability vs. Temperature ( Channel Bandwidth:20M Frequency :3675MHz)  
FL=3665.71MHz, FH=3695.29MHz**

Temperature (°C)	Power Supplied (VDC)	Port	Modulation	Frequency Measure Error ( Hz)	FL+ Frequency Offset ( MHz)	FH+ Frequency Offset ( MHz)	Result		
		6	64QAM	-1.56	3665.71	3695.29	Pass		
			QPSK	-3.34	3665.71	3695.29	Pass		
			16QAM	1.29	3665.71	3695.29	Pass		
		7		64QAM	1.47	3665.71	3695.29	Pass	
				QPSK	0.94	3665.71	3695.29	Pass	
				16QAM	2.53	3665.71	3695.29	Pass	
					64QAM	-0.65	3665.71	3695.29	Pass
					QPSK	-3.90	3665.71	3695.29	Pass
					16QAM	1.07	3665.71	3695.29	Pass
-30	-48	0	64QAM	-0.59	3665.71	3695.29	Pass		
			QPSK	-2.80	3665.71	3695.29	Pass		
			16QAM	-1.14	3665.71	3695.29	Pass		
		1		64QAM	-3.65	3665.71	3695.29	Pass	
				QPSK	1.80	3665.71	3695.29	Pass	
				16QAM	-2.45	3665.71	3695.29	Pass	
		2		64QAM	0.84	3665.71	3695.29	Pass	
				QPSK	-1.70	3665.71	3695.29	Pass	
				16QAM	2.68	3665.71	3695.29	Pass	
		3		64QAM	-3.90	3665.71	3695.29	Pass	
				QPSK	-3.00	3665.71	3695.29	Pass	
				16QAM	-2.32	3665.71	3695.29	Pass	
		4		64QAM	-3.97	3665.71	3695.29	Pass	
				QPSK	-1.74	3665.71	3695.29	Pass	
				16QAM	3.48	3665.71	3695.29	Pass	
		5		64QAM	-3.20	3665.71	3695.29	Pass	
				QPSK	1.46	3665.71	3695.29	Pass	
				16QAM	2.29	3665.71	3695.29	Pass	
		6		64QAM	-0.90	3665.71	3695.29	Pass	
				QPSK	-2.11	3665.71	3695.29	Pass	
				16QAM	2.07	3665.71	3695.29	Pass	
		7		64QAM	-0.05	3665.71	3695.29	Pass	
				QPSK	0.44	3665.71	3695.29	Pass	
				16QAM	0.33	3665.71	3695.29	Pass	
		-20	-48	0	64QAM	3.00	3665.71	3695.29	Pass
					QPSK	-3.60	3665.71	3695.29	Pass
					16QAM	-1.44	3665.71	3695.29	Pass
1				QPSK	-3.60	3665.71	3695.29	Pass	

**Frequency Stability vs. Temperature ( Channel Bandwidth:20M Frequency :3675MHz)  
FL=3665.71MHz, FH=3695.29MHz**

Temperature (°C)	Power Supplied (VDC)	Port	Modulation	Frequency Measure Error ( Hz)	FL+ Frequency Offset ( MHz)	FH+ Frequency Offset ( MHz)	Result		
		2	64QAM	1.61	3665.71	3695.29	Pass		
			QPSK	-0.88	3665.71	3695.29	Pass		
			16QAM	1.51	3665.71	3695.29	Pass		
		3	64QAM	-3.05	3665.71	3695.29	Pass		
			QPSK	3.70	3665.71	3695.29	Pass		
			16QAM	-1.46	3665.71	3695.29	Pass		
		4	64QAM	-3.60	3665.71	3695.29	Pass		
			QPSK	0.73	3665.71	3695.29	Pass		
			16QAM	2.12	3665.71	3695.29	Pass		
		5	64QAM	-1.97	3665.71	3695.29	Pass		
			QPSK	0.86	3665.71	3695.29	Pass		
			16QAM	2.45	3665.71	3695.29	Pass		
		6	64QAM	3.20	3665.71	3695.29	Pass		
			QPSK	1.64	3665.71	3695.29	Pass		
			16QAM	2.90	3665.71	3695.29	Pass		
		7	64QAM	3.90	3665.71	3695.29	Pass		
			QPSK	-1.74	3665.71	3695.29	Pass		
			16QAM	3.48	3665.71	3695.29	Pass		
		-10	-48	0	64QAM	-3.20	3665.71	3695.29	Pass
					QPSK	-2.19	3665.71	3695.29	Pass
					16QAM	0.98	3665.71	3695.29	Pass
1	64QAM			0.84	3665.71	3695.29	Pass		
	QPSK			-3.06	3665.71	3695.29	Pass		
	16QAM			3.46	3665.71	3695.29	Pass		
2	64QAM			3.12	3665.71	3695.29	Pass		
	QPSK			1.75	3665.71	3695.29	Pass		
	16QAM			-1.34	3665.71	3695.29	Pass		
3	64QAM			-0.37	3665.71	3695.29	Pass		
	QPSK			-3.08	3665.71	3695.29	Pass		
	16QAM			1.07	3665.71	3695.29	Pass		
4	64QAM			-1.72	3665.71	3695.29	Pass		
	QPSK			1.97	3665.71	3695.29	Pass		
	16QAM			1.23	3665.71	3695.29	Pass		
5	64QAM	2.66	3665.71	3695.29	Pass				
	QPSK	0.22	3665.71	3695.29	Pass				
			16QAM	-2.71	3665.71	3695.29	Pass		

**Frequency Stability vs. Temperature ( Channel Bandwidth:20M Frequency :3675MHz)  
FL=3665.71MHz, FH=3695.29MHz**

Temperature (°C)	Power Supplied (VDC)	Port	Modulation	Frequency Measure Error ( Hz)	FL+ Frequency Offset ( MHz)	FH+ Frequency Offset ( MHz)	Result		
		6	64QAM	2.67	3665.71	3695.29	Pass		
			QPSK	1.59	3665.71	3695.29	Pass		
			16QAM	-2.06	3665.71	3695.29	Pass		
		7	64QAM	2.49	3665.71	3695.29	Pass		
			QPSK	2.92	3665.71	3695.29	Pass		
			16QAM	0.90	3665.71	3695.29	Pass		
		0	-48	0	64QAM	2.58	3665.71	3695.29	Pass
					QPSK	3.55	3665.71	3695.29	Pass
					16QAM	0.96	3665.71	3695.29	Pass
1	64QAM			-3.15	3665.71	3695.29	Pass		
	QPSK			2.75	3665.71	3695.29	Pass		
	16QAM			0.84	3665.71	3695.29	Pass		
2	64QAM			-3.16	3665.71	3695.29	Pass		
	QPSK			-2.19	3665.71	3695.29	Pass		
	16QAM			0.98	3665.71	3695.29	Pass		
3	64QAM			0.84	3665.71	3695.29	Pass		
	QPSK			-1.99	3665.71	3695.29	Pass		
	16QAM			-3.17	3665.71	3695.29	Pass		
4	64QAM			-3.86	3665.71	3695.29	Pass		
	QPSK			-2.85	3665.71	3695.29	Pass		
	16QAM			-3.88	3665.71	3695.29	Pass		
5	64QAM			-1.41	3665.71	3695.29	Pass		
	QPSK			0.67	3665.71	3695.29	Pass		
	16QAM			2.86	3665.71	3695.29	Pass		
6	64QAM			-2.08	3665.71	3695.29	Pass		
	QPSK			2.41	3665.71	3695.29	Pass		
	16QAM			1.60	3665.71	3695.29	Pass		
7	64QAM			3.66	3665.71	3695.29	Pass		
	QPSK			-3.61	3665.71	3695.29	Pass		
	16QAM			-0.65	3665.71	3695.29	Pass		
10	-48			0	64QAM	-3.65	3665.71	3695.29	Pass
					QPSK	-2.50	3665.71	3695.29	Pass
					16QAM	0.81	3665.71	3695.29	Pass
		1	64QAM	-1.27	3665.71	3695.29	Pass		
QPSK	3.83		3665.71	3695.29	Pass				
			16QAM	0.86	3665.71	3695.29	Pass		



**Frequency Stability vs. Temperature ( Channel Bandwidth:20M Frequency :3675MHz)  
FL=3665.71MHz, FH=3695.29MHz**

Temperature (°C)	Power Supplied (VDC)	Port	Modulation	Frequency Measure Error ( Hz)	FL+ Frequency Offset ( MHz)	FH+ Frequency Offset ( MHz)	Result		
20	-48	2	64QAM	1.51	3665.71	3695.29	Pass		
			QPSK	2.67	3665.71	3695.29	Pass		
			16QAM	-3.77	3665.71	3695.29	Pass		
		3	64QAM	-3.54	3665.71	3695.29	Pass		
			QPSK	-0.82	3665.71	3695.29	Pass		
			16QAM	-3.37	3665.71	3695.29	Pass		
		4	64QAM	-1.40	3665.71	3695.29	Pass		
			QPSK	1.57	3665.71	3695.29	Pass		
			16QAM	-0.73	3665.71	3695.29	Pass		
		5	64QAM	2.69	3665.71	3695.29	Pass		
			QPSK	-1.99	3665.71	3695.29	Pass		
			16QAM	-3.17	3665.71	3695.29	Pass		
		6	64QAM	-3.86	3665.71	3695.29	Pass		
			QPSK	-1.21	3665.71	3695.29	Pass		
			16QAM	2.49	3665.71	3695.29	Pass		
		7	64QAM	-1.57	3665.71	3695.29	Pass		
			QPSK	0.72	3665.71	3695.29	Pass		
			16QAM	-0.71	3665.71	3695.29	Pass		
		0	-48	0	64QAM	-0.67	3665.71	3695.29	Pass
					QPSK	3.38	3665.71	3695.29	Pass
					16QAM	-1.18	3665.71	3695.29	Pass
				1	64QAM	0.42	3665.71	3695.29	Pass
					QPSK	-2.24	3665.71	3695.29	Pass
					16QAM	-0.53	3665.71	3695.29	Pass
				2	64QAM	0.51	3665.71	3695.29	Pass
					QPSK	0.93	3665.71	3695.29	Pass
					16QAM	3.76	3665.71	3695.29	Pass
				3	64QAM	1.79	3665.71	3695.29	Pass
					QPSK	1.49	3665.71	3695.29	Pass
					16QAM	-2.97	3665.71	3695.29	Pass
4	64QAM			-2.69	3665.71	3695.29	Pass		
	QPSK			-0.56	3665.71	3695.29	Pass		
	16QAM			-1.91	3665.71	3695.29	Pass		
5	64QAM	-1.90	3665.71	3695.29	Pass				
	QPSK	-1.68	3665.71	3695.29	Pass				
	16QAM	-2.24	3665.71	3695.29	Pass				

**Frequency Stability vs. Temperature ( Channel Bandwidth:20M Frequency :3675MHz)  
FL=3665.71MHz, FH=3695.29MHz**

Temperature (°C)	Power Supplied (VDC)	Port	Modulation	Frequency Measure Error ( Hz)	FL+ Frequency Offset ( MHz)	FH+ Frequency Offset ( MHz)	Result		
		6	64QAM	-1.44	3665.71	3695.29	Pass		
			QPSK	3.74	3665.71	3695.29	Pass		
			16QAM	-2.27	3665.71	3695.29	Pass		
		7	64QAM	-0.31	3665.71	3695.29	Pass		
			QPSK	0.53	3665.71	3695.29	Pass		
			16QAM	3.43	3665.71	3695.29	Pass		
		30	-48	0	64QAM	-1.48	3665.71	3695.29	Pass
					QPSK	-1.21	3665.71	3695.29	Pass
					16QAM	2.49	3665.71	3695.29	Pass
1	64QAM			-1.57	3665.71	3695.29	Pass		
	QPSK			2.18	3665.71	3695.29	Pass		
	16QAM			-3.47	3665.71	3695.29	Pass		
2	64QAM			3.34	3665.71	3695.29	Pass		
	QPSK			-2.01	3665.71	3695.29	Pass		
	16QAM			-3.09	3665.71	3695.29	Pass		
3	64QAM			-3.91	3665.71	3695.29	Pass		
	QPSK			1.61	3665.71	3695.29	Pass		
	16QAM			-2.83	3665.71	3695.29	Pass		
4	64QAM			-0.91	3665.71	3695.29	Pass		
	QPSK			2.41	3665.71	3695.29	Pass		
	16QAM			3.11	3665.71	3695.29	Pass		
5	64QAM			2.69	3665.71	3695.29	Pass		
	QPSK			-3.94	3665.71	3695.29	Pass		
	16QAM			-3.30	3665.71	3695.29	Pass		
6	64QAM			0.24	3665.71	3695.29	Pass		
	QPSK			0.04	3665.71	3695.29	Pass		
	16QAM			-1.35	3665.71	3695.29	Pass		
7	64QAM	-1.01	3665.71	3695.29	Pass				
	QPSK	-1.36	3665.71	3695.29	Pass				
	16QAM	2.94	3665.71	3695.29	Pass				
40	-48	0	64QAM	1.38	3665.71	3695.29	Pass		
			QPSK	-1.36	3665.71	3695.29	Pass		
			16QAM	2.94	3665.71	3695.29	Pass		
		1	QPSK	-0.96	3665.71	3695.29	Pass		
			16QAM	-3.86	3665.71	3695.29	Pass		