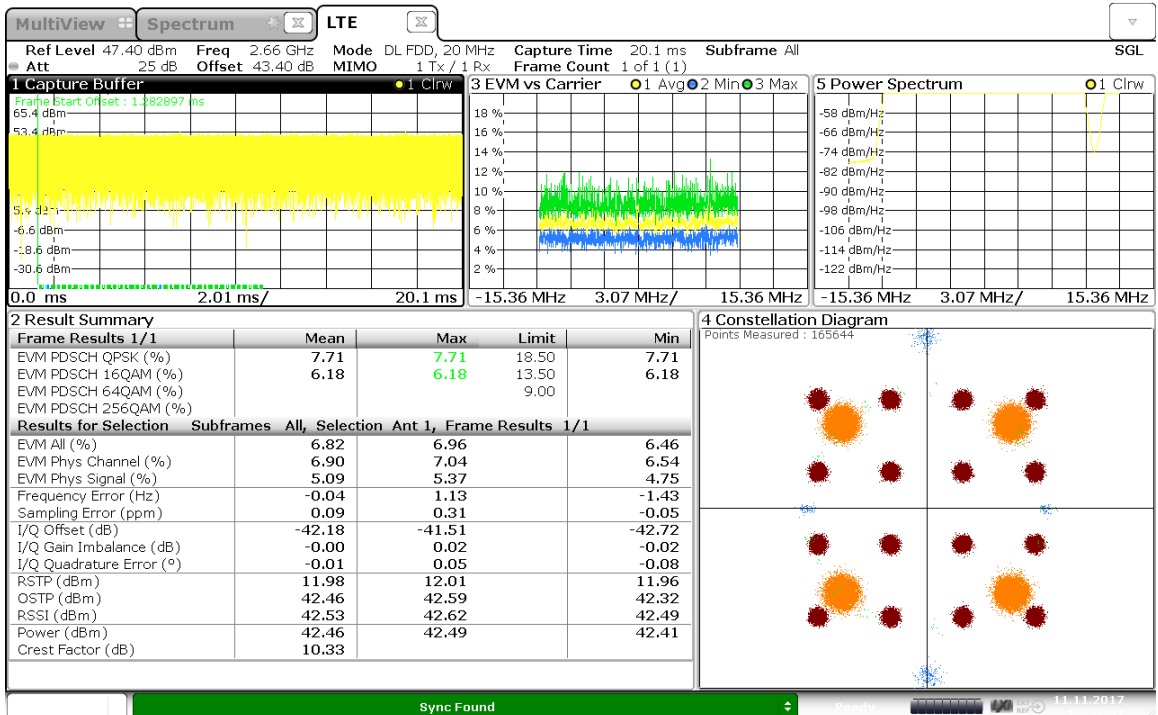
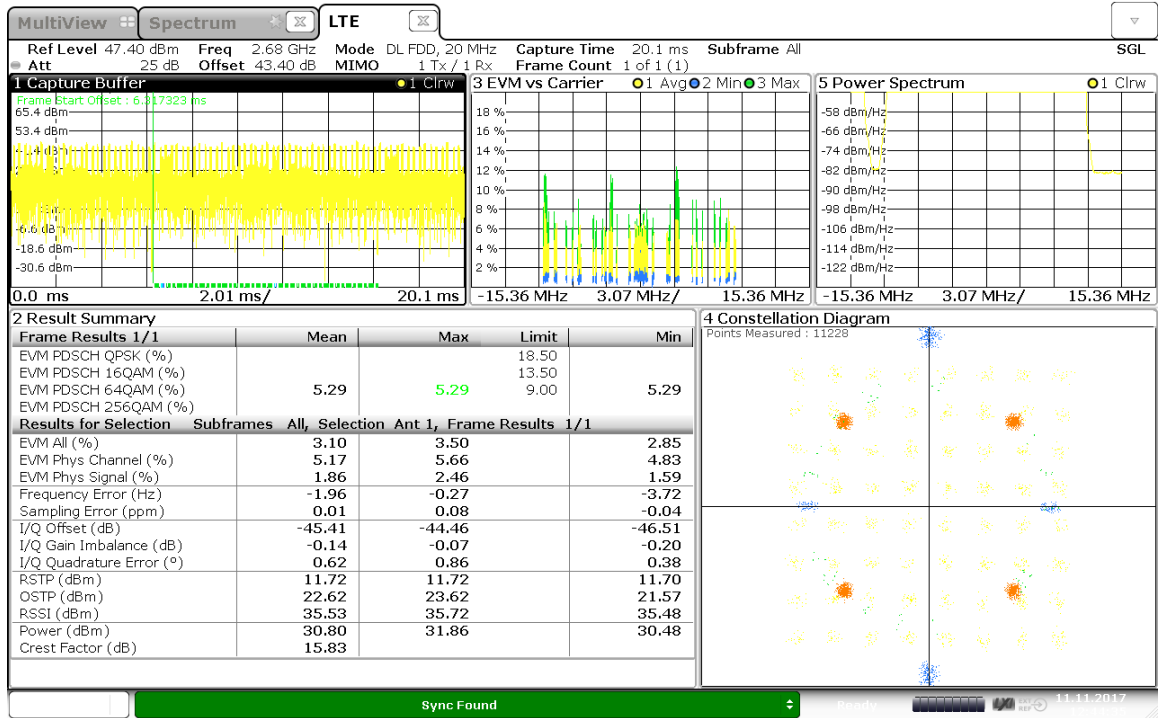


12:57:03 11.11.2017

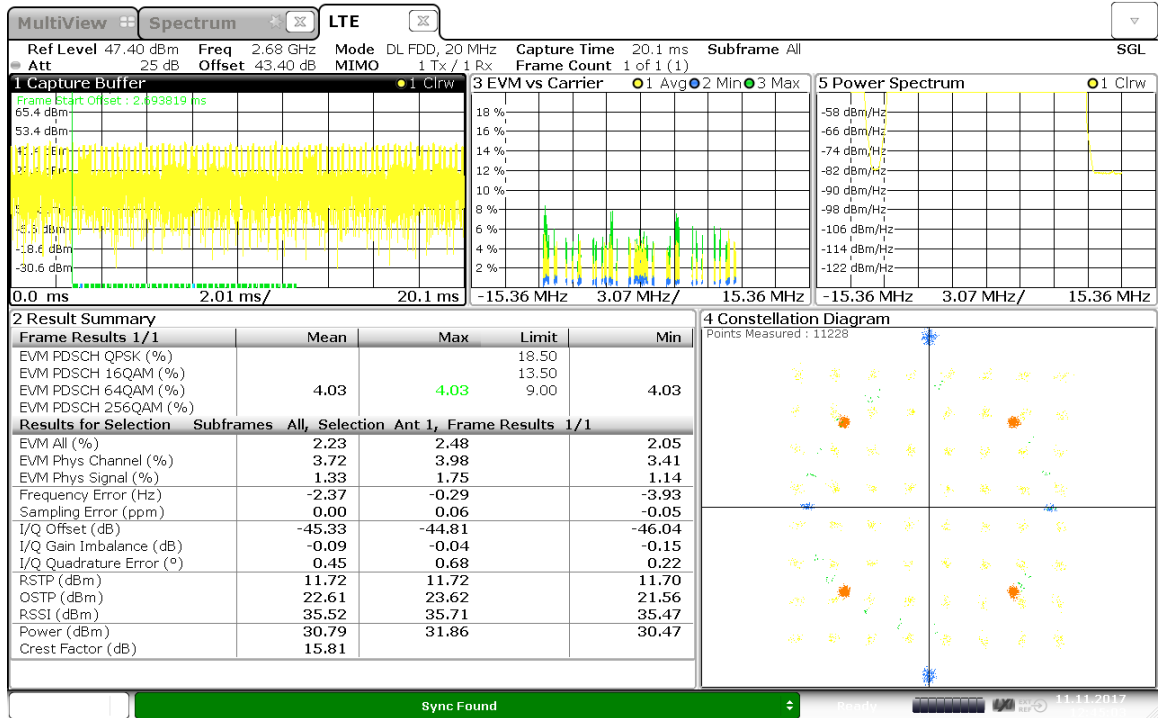


12:57:31 11.11.2017

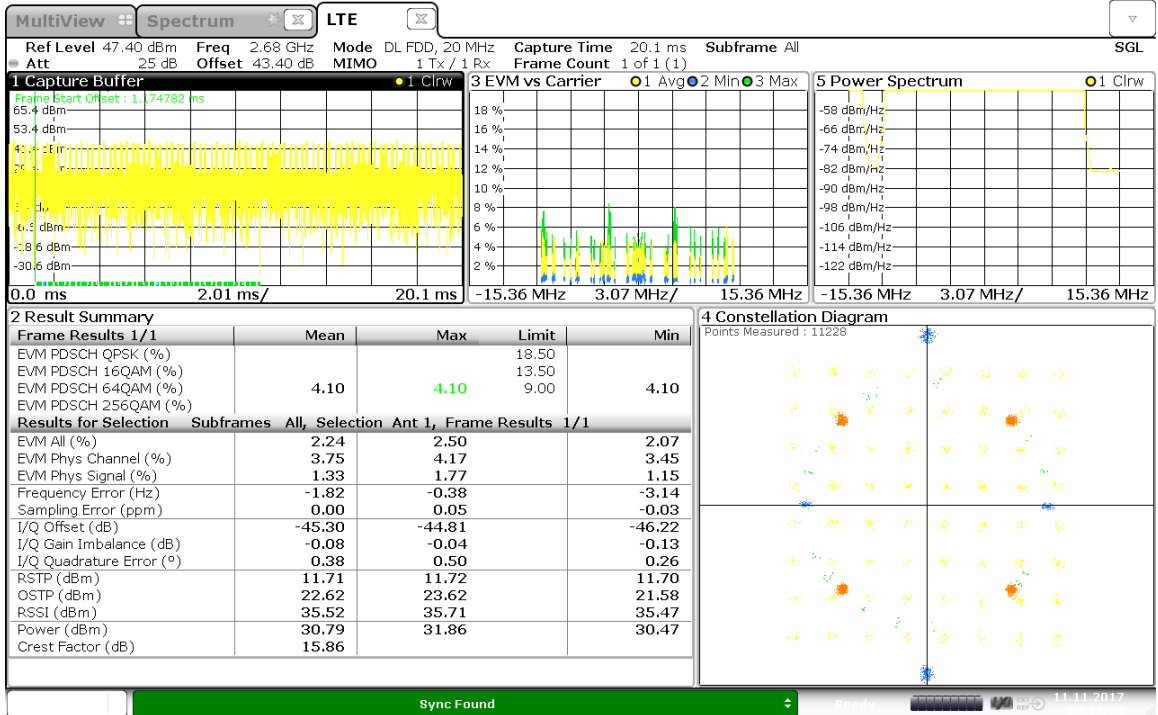
20M -2680MHz-TM2.0-Port 1 ~4:



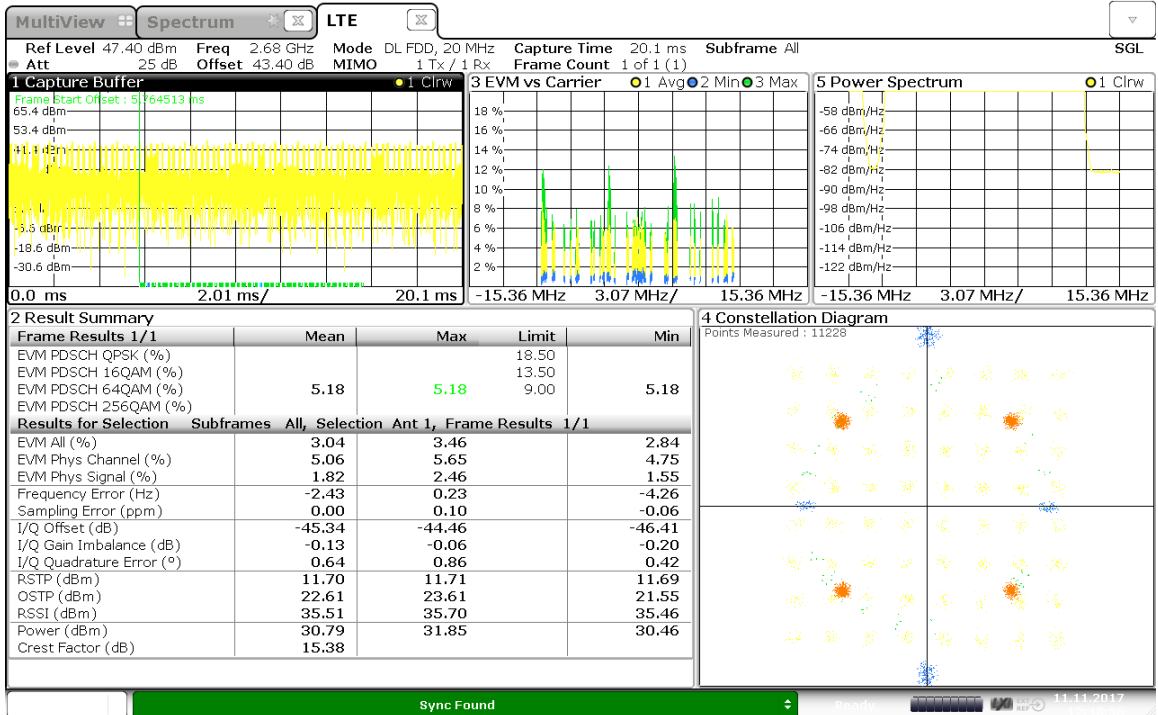
12:44:36 11.11.2017



12:45:03 11.11.2017

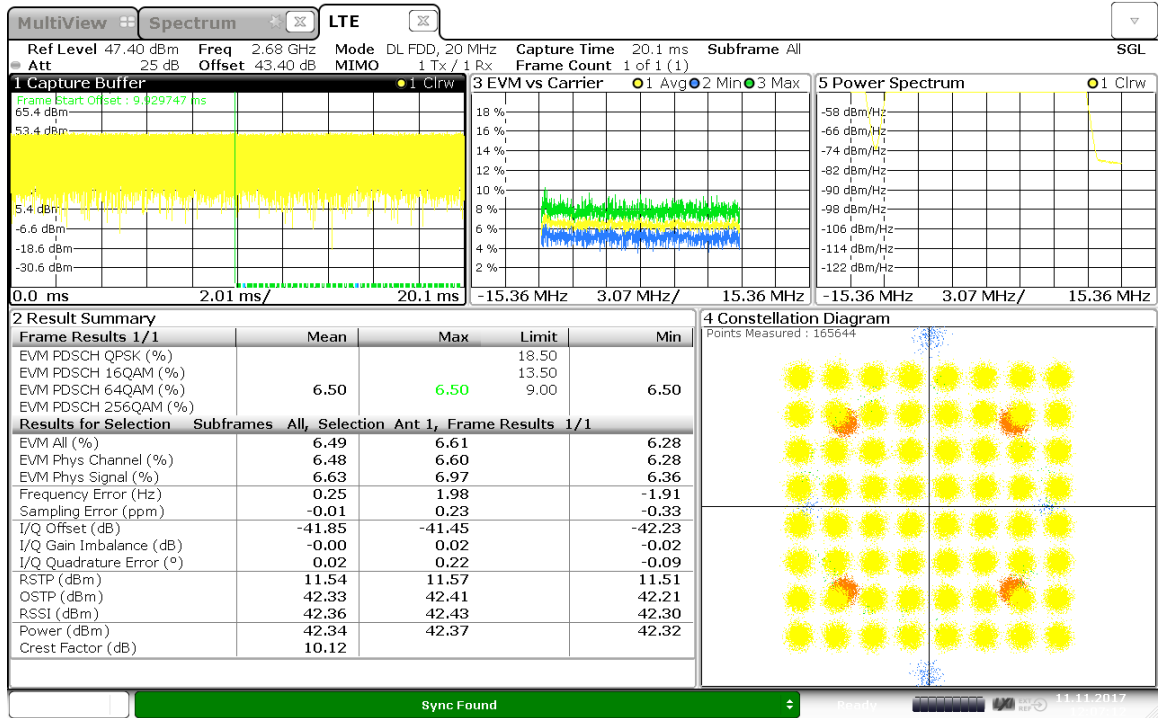


12:45:30 11.11.2017

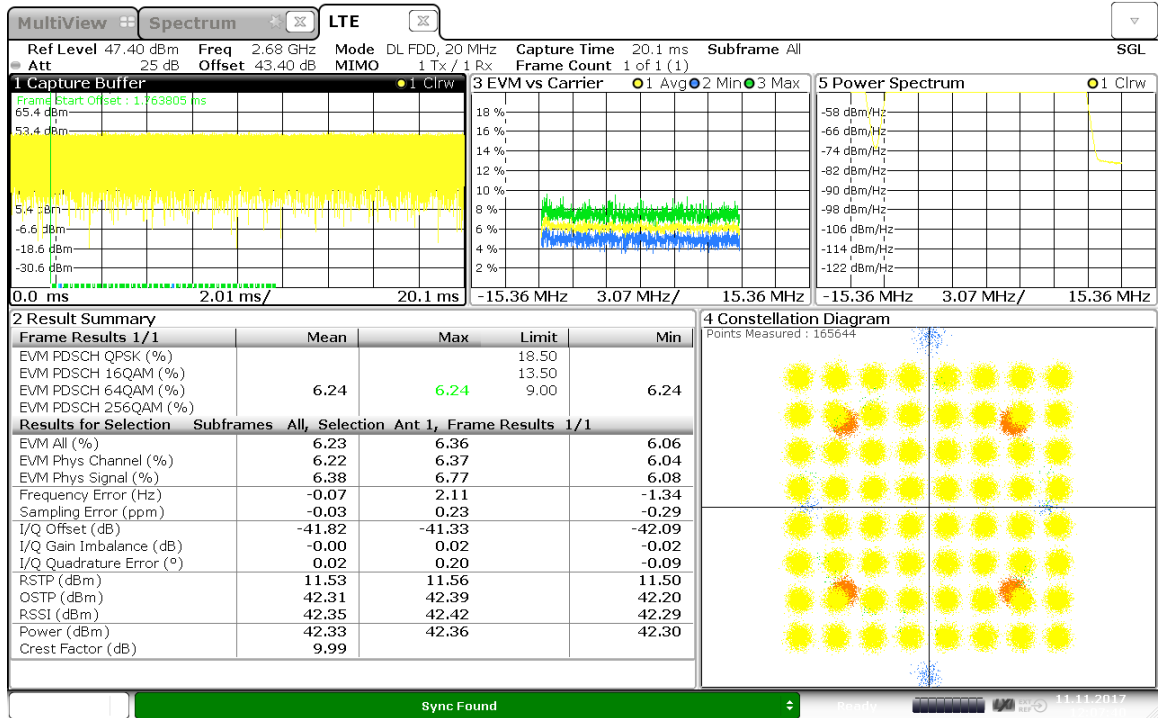


12:45:57 11.11.2017

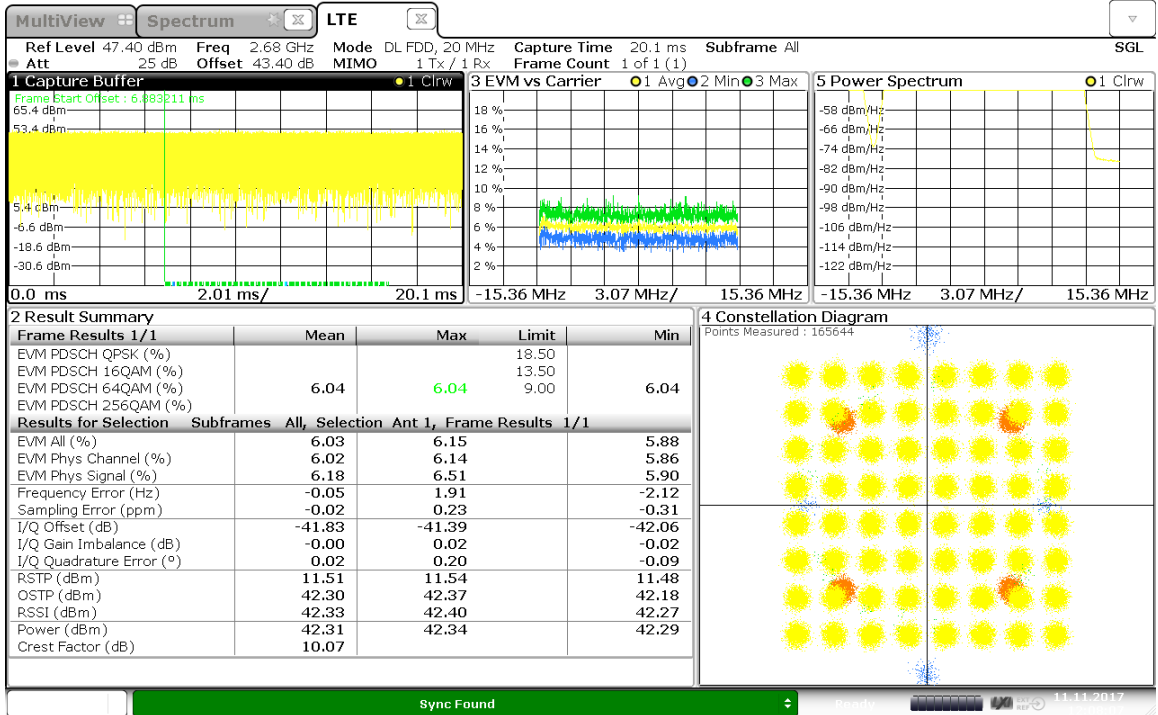
20M -2680MHz-TM3.1-Port 1 ~4:



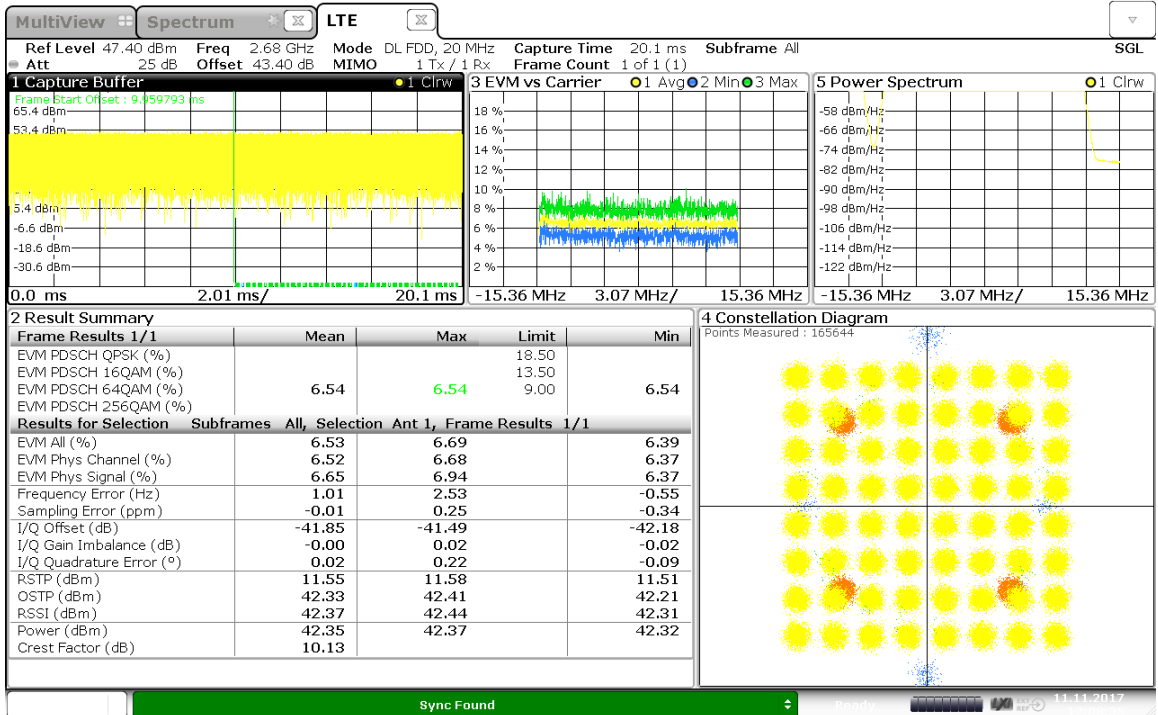
12:07:13 11.11.2017



12:07:40 11.11.2017

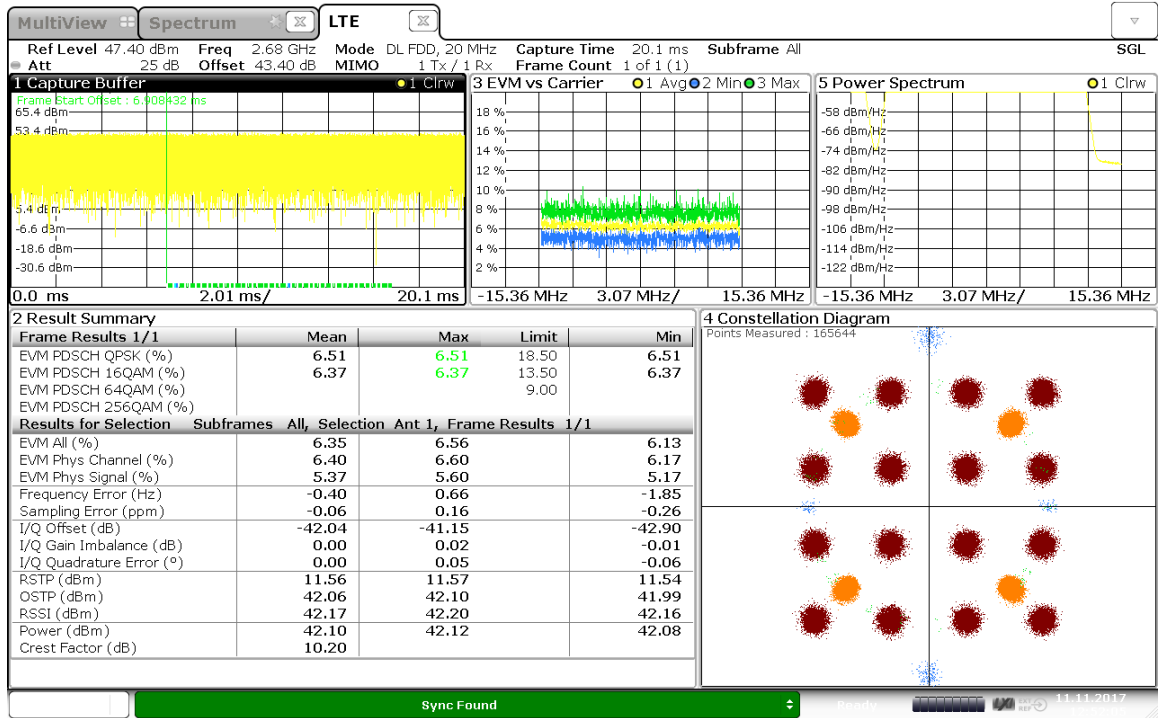


12:08:08 11.11.2017

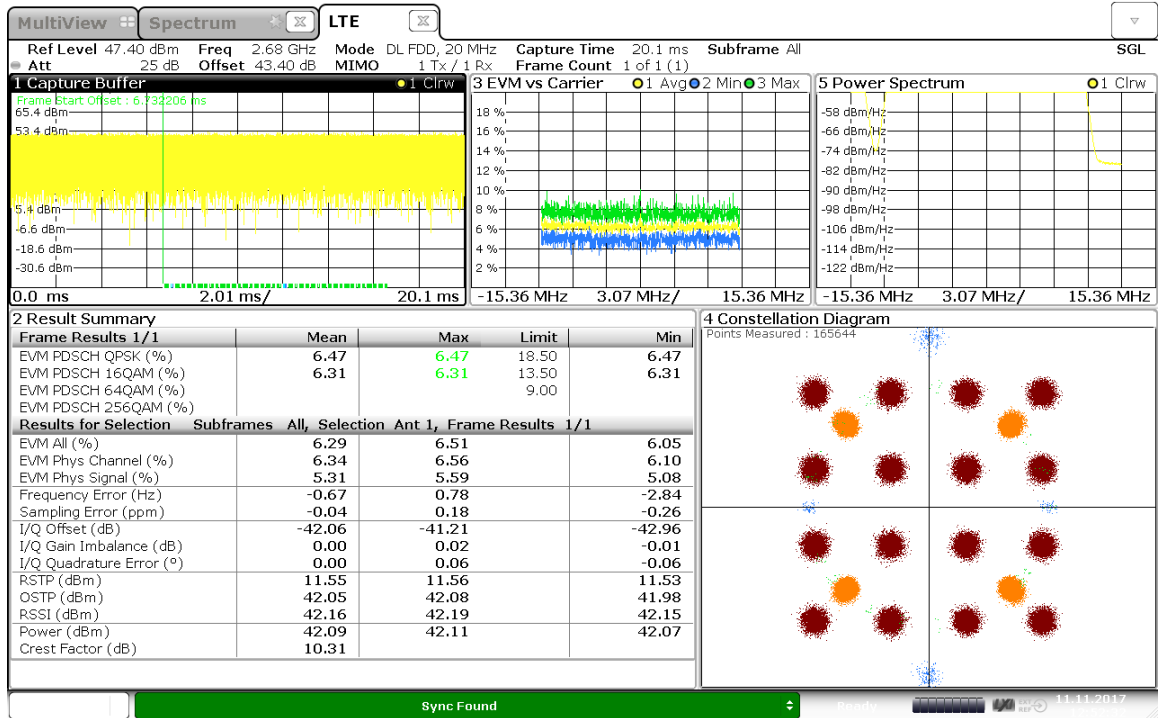


12:08:36 11.11.2017

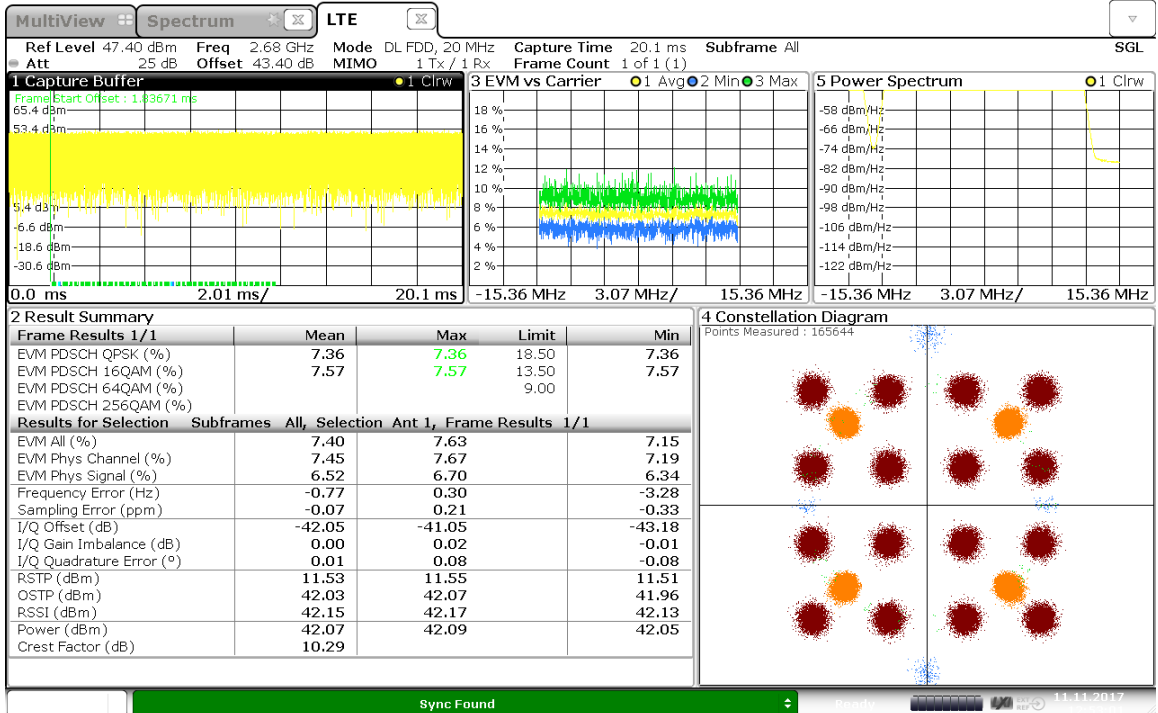
20M -2680MHz-TM3.2-Port 1 ~4:



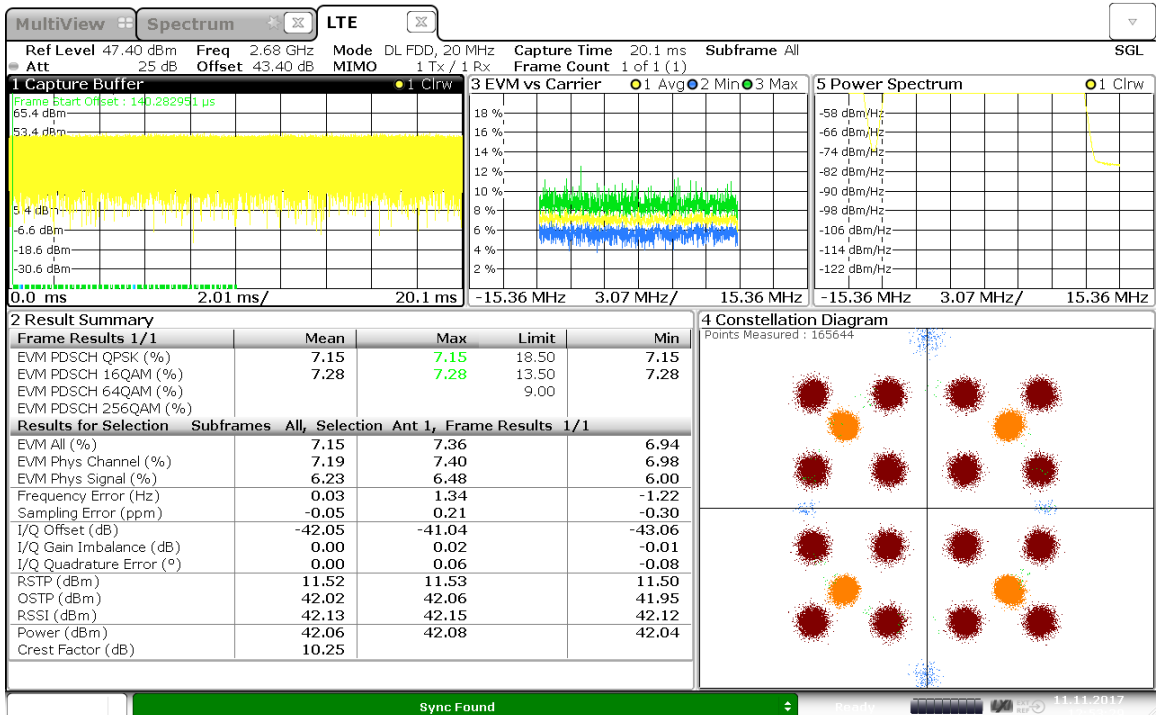
12:52:05 11.11.2017



12:52:33 11.11.2017

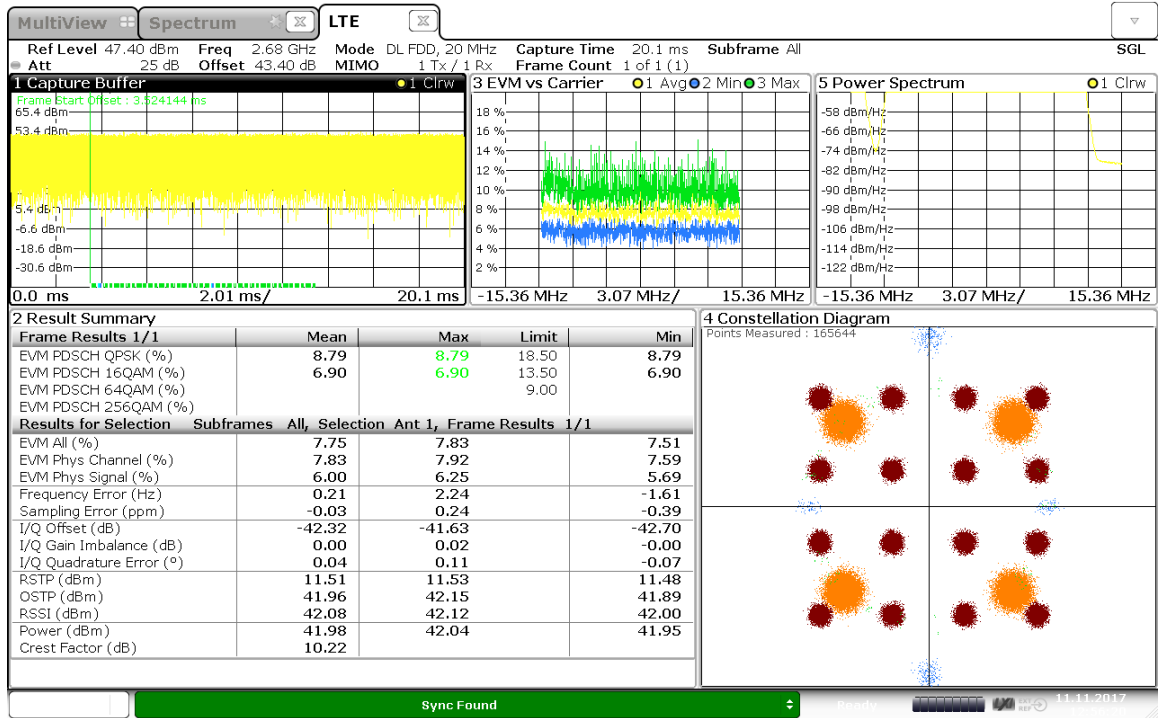


12:53:01 11.11.2017

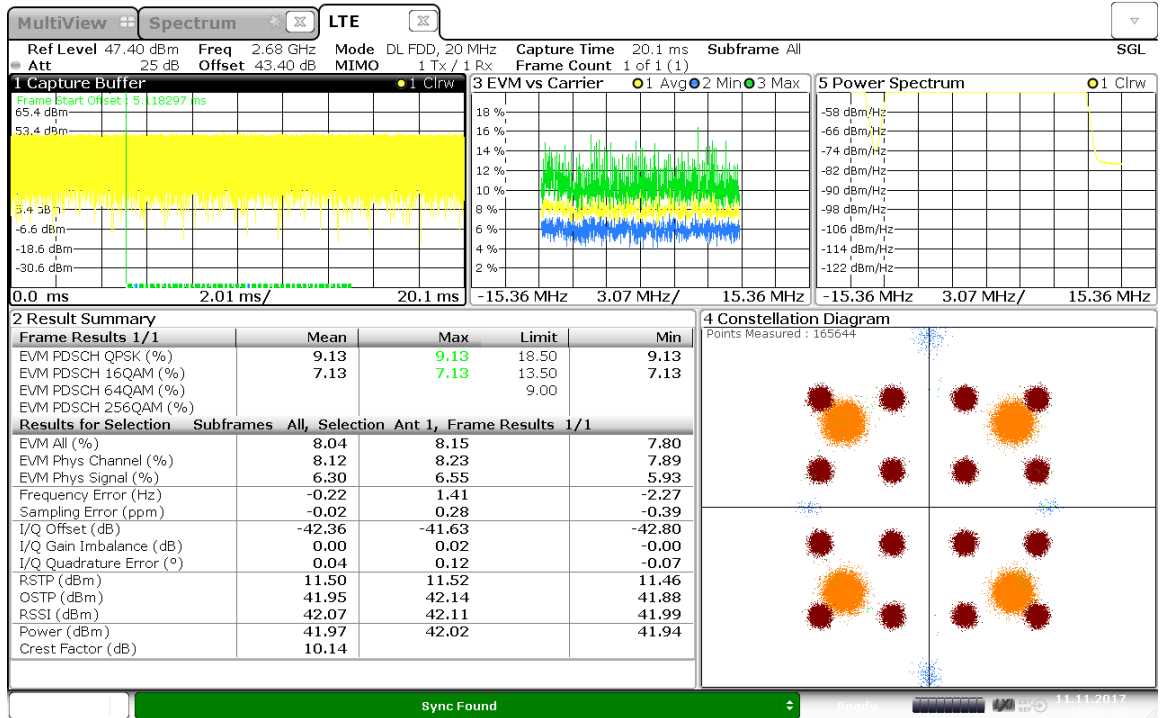


12:53:29 11.11.2017

20M -2680MHz-TM3.3-Port 1 ~4:

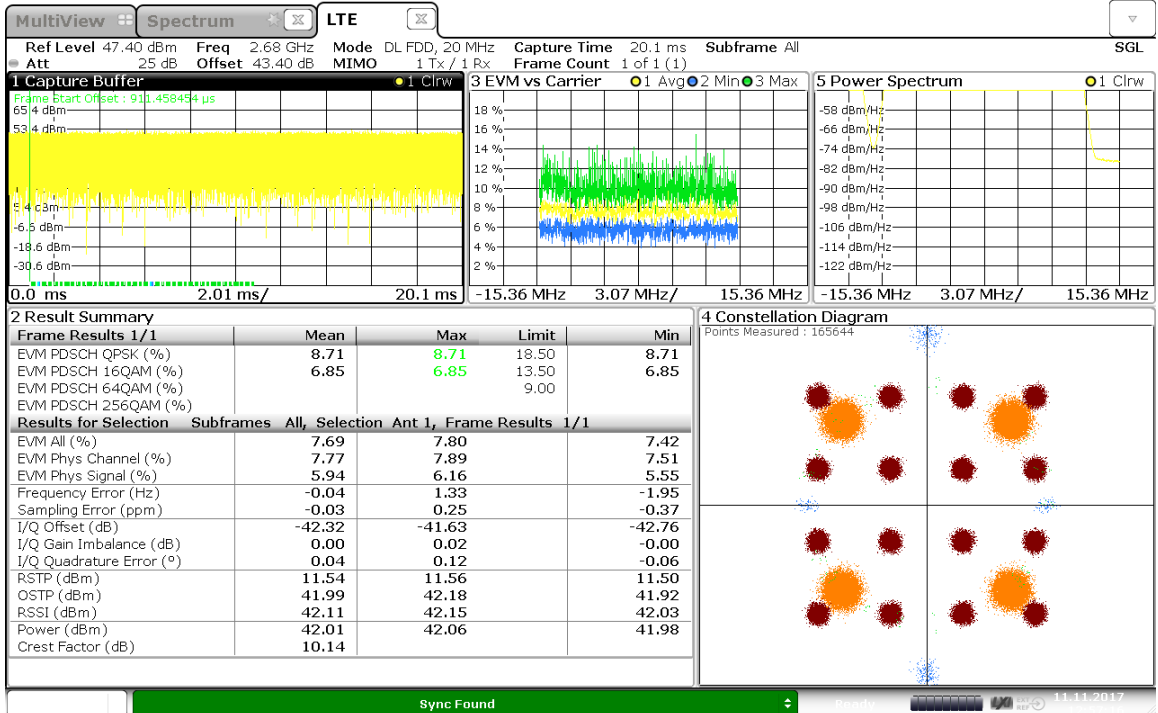


12:56:21 11.11.2017

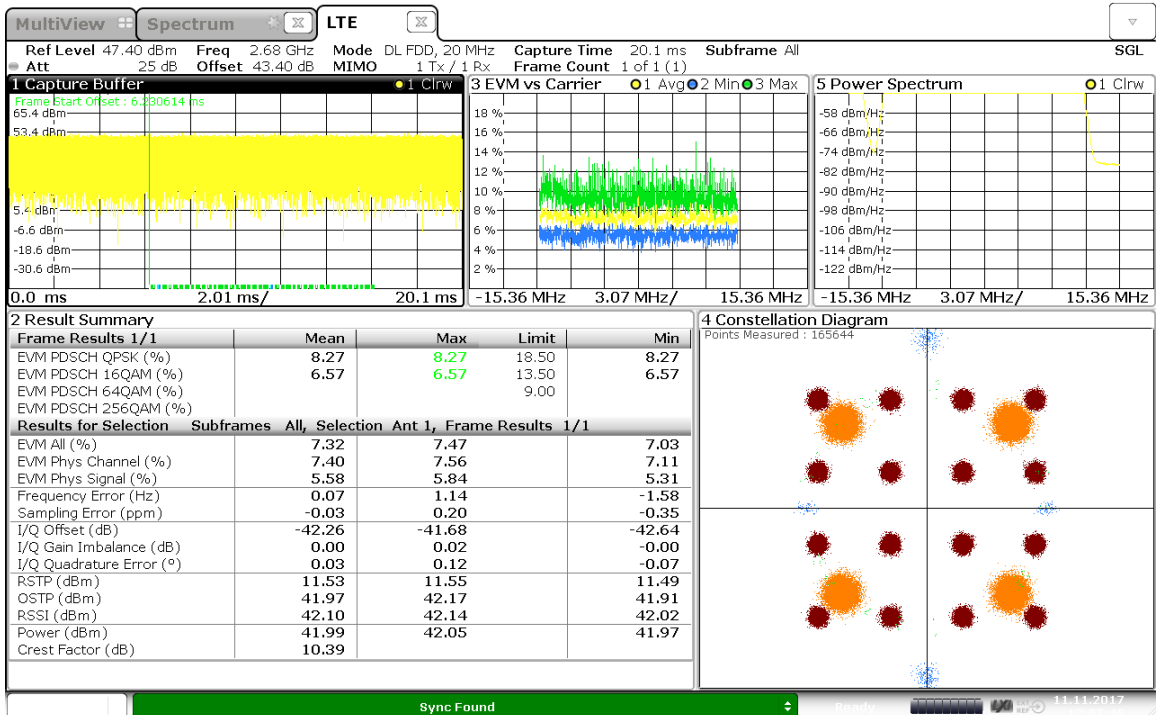


12:56:49 11.11.2017





12:57:17 11.11.2017



12:57:45 11.11.2017

### 3.4. Spurious Emissions Radiated

#### 3.4.1. Applicable Standard: FCC§2.1053

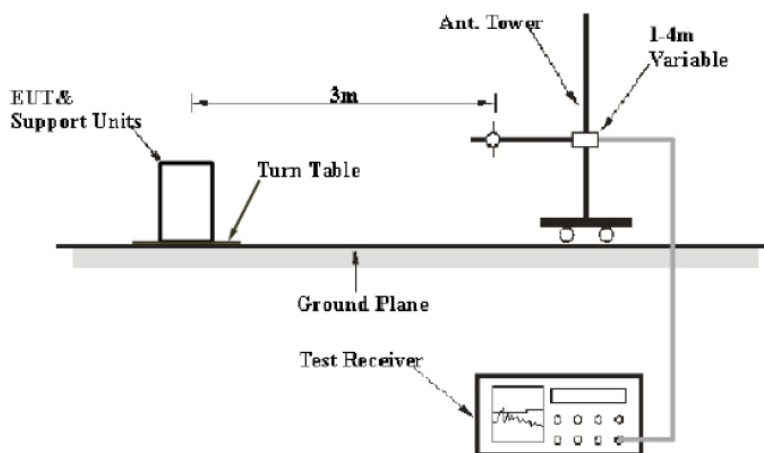
The power of any emission outside a licensee's frequency band(s) of operation shall be attenuated below the transmitter power (P) within the licensed band(s) of operation, measured in watts, by at least  $43 + 10 \log (P)$  dB. Compliance with this provision is based on the use of measurement instrumentation 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.

#### 3.4.2. 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	2018.1.2
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.

#### 3.4.3. 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

### 3.4.4.Environmental Conditions

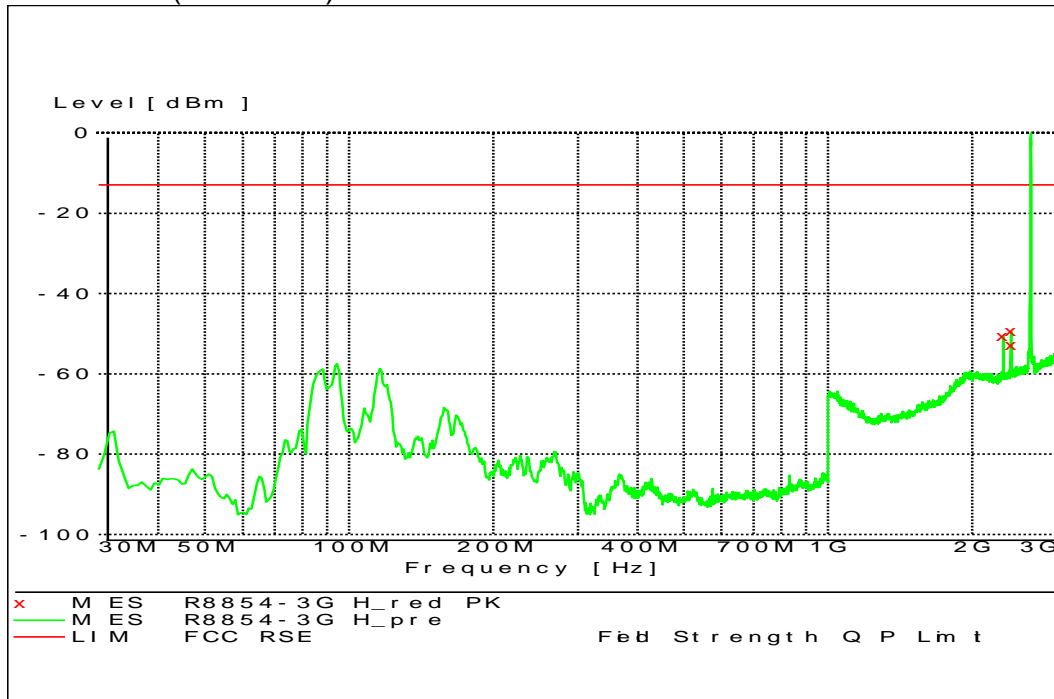
Temperature:	26°C
Relative Humidity:	60 %
ATM Pressure:	1009 mbar

### 3.4.5.Test Result: Pass

### 3.4.6.Test Mode: Transmitting LTE

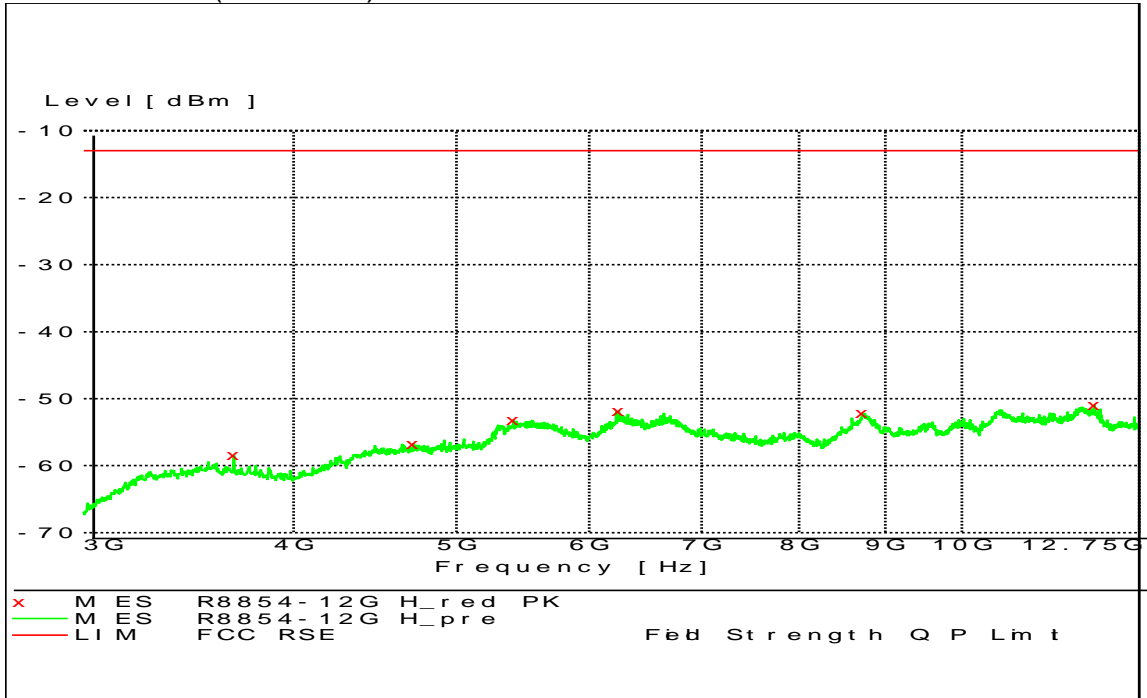
### 3.4.7.Test Data

#### 30M-3GHz (Horizontal)



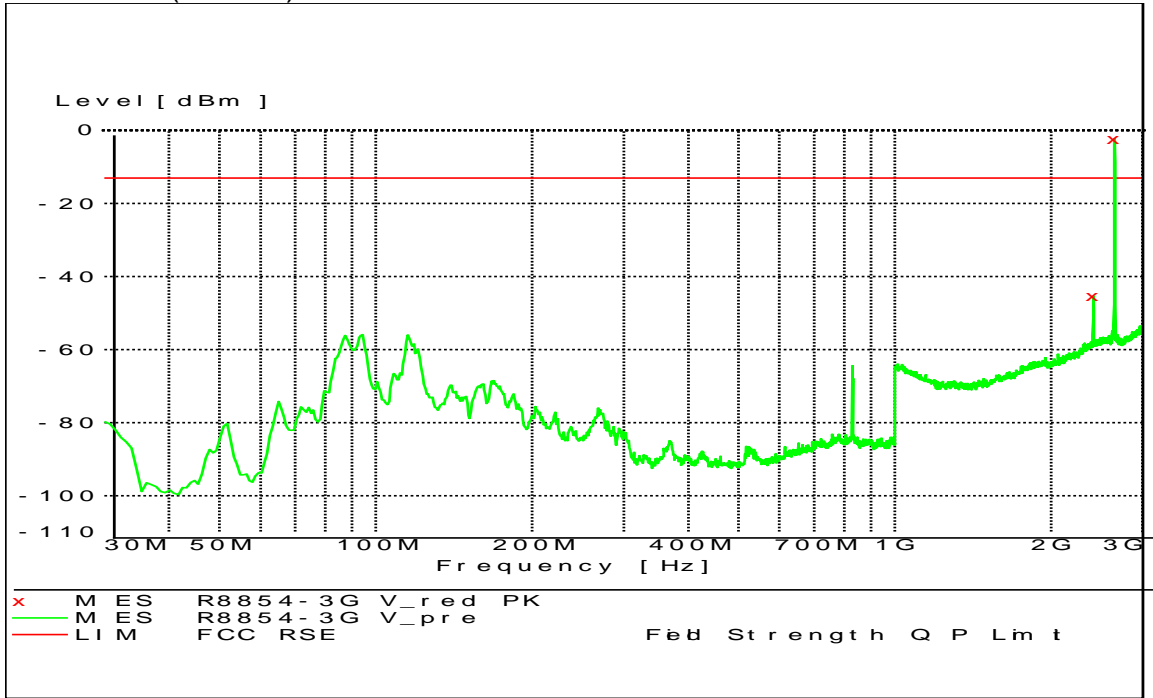
Frequency MHz	Level dBm	Azimuth deg	Height cm	Polarization	Transd dBm	Limit dBm	Margin dB
2323.200000	-50.57	273.10	100.0	HOR	-102.8	-13	37.6
2409.600000	-49.42	24	200.0	HOR	-102.8	-13	36.4
2417.600000	-52.86	154.8	100.0	HOR	-102.8	-13	39.9
2651.200000	0.18	273.1	100.0	HOR	-102.8	-13	-13.2

### 3G-12.75GHz (Horizontal)



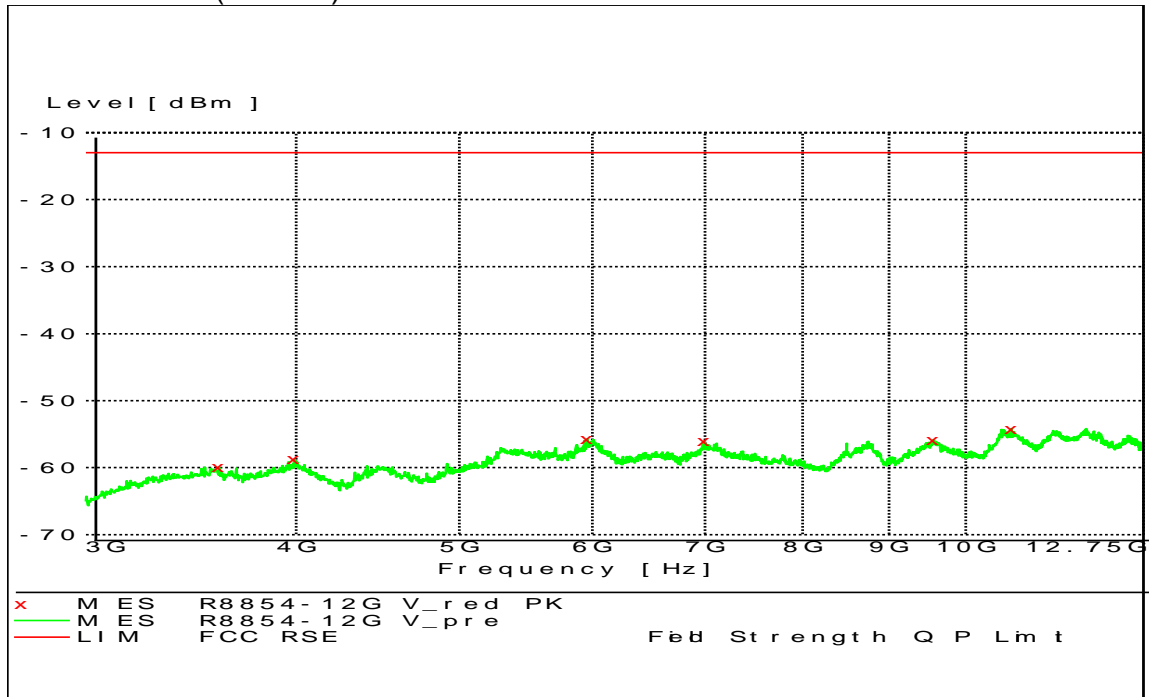
Frequency	Level	Azimuth	Height	Polarization	Transd	Limit	Margin
MHz	dBm	deg	cm		dBm	dBm	dB
3684.800000	-58.48	57.1	200	HOR	-89.1	-13	45.5
4712.000000	-56.72	301.9	200	HOR	-84.7	-13	43.7
5409.600000	-53.2	156.8	100	HOR	-80.4	-13	40.2
6248.000000	-51.87	100.2	200	HOR	-77.1	-13	38.9
8725.000000	-52.22	156.8	100	HOR	-72.5	-13	39.2
11995.600000	-50.94	245.6	200	HOR	-72.8	-13	37.9

### 30M-3GHz (Vertical)



Frequency	Level	Azimuth	Height	Polarization	Transd	Limit	Margin
MHz	dBm	deg	cm		dBm	dBm	dB
2414.400000	-45.35	260.90	200	VER	-101.2	-13	32.4
2648.000000	-2.22	39.50	100	VER	-99.6	-13	-10.8

### 3G-12.75GHz (Vertical)



Frequency	Level	Azimuth	Height	Polarization	Transd	Limit	Margin
MHz	dBm	deg	cm		dBm	dBm	dB
3598.400000	-59.96	175.20	100	HOR	-89.5	-13	47.0
3988.800000	-58.71	244.60	100	HOR	-87.3	-13	45.7
5956.800000	-55.74	209.90	100	HOR	-81.7	-13	42.7
6996.800000	-56.02	189.40	200	HOR	-79.8	-13	43.0
9566.800000	-55.89	8.10	100	HOR	-77.9	-13	42.9
10647.800000	-54.17	84.60	200	HOR	-76.2	-13	41.2

### 3.5. Spurious Emissions At Antenna Terminals

#### 3.5.1. Applicable Standard: FCC§2.1051, §27.53

The spectrum was to be investigated to the tenth harmonics of the highest fundamental frequency as specified.

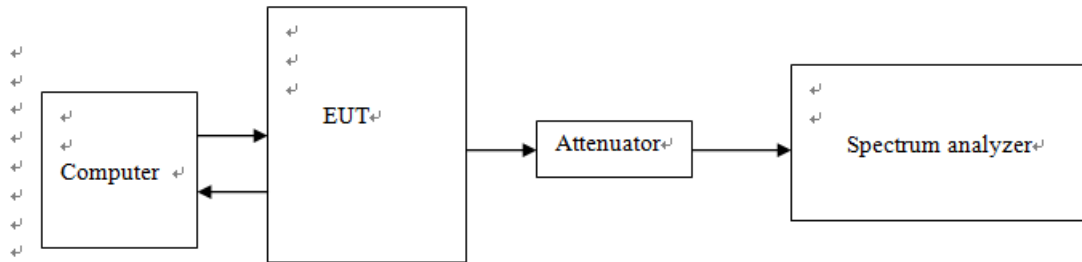
#### 3.5.2. Test Equipment List and Details

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
R&S	Signal & Spectrum Analyzer	FSW26	SB12724/01	2017.6.19	2018.6.18
DTS	DTS 40dB Attenuator	DTS100-40-3-1	09112005	2017.03.15	2018.03.15

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

#### 3.5.3. Test Procedure

EUT Setup:



REMARKS: Attenuator loss (dB)=40dB, Cable Loss (dB)=1.5dB.

The RF output of the transceiver was connected to a spectrum analyzer through appropriate attenuation. Compliance with this provision is based on the use of measurement instrumentation employing a resolution bandwidth of 100 kilohertz or greater. However, in the 100 kilohertz bands immediately outside and adjacent to a licensee's frequency block, a resolution bandwidth of at least 30 kHz may be employed. Sufficient scans were taken to show any out of band emissions up to 10th harmonic.

#### 3.5.4. Environmental Conditions

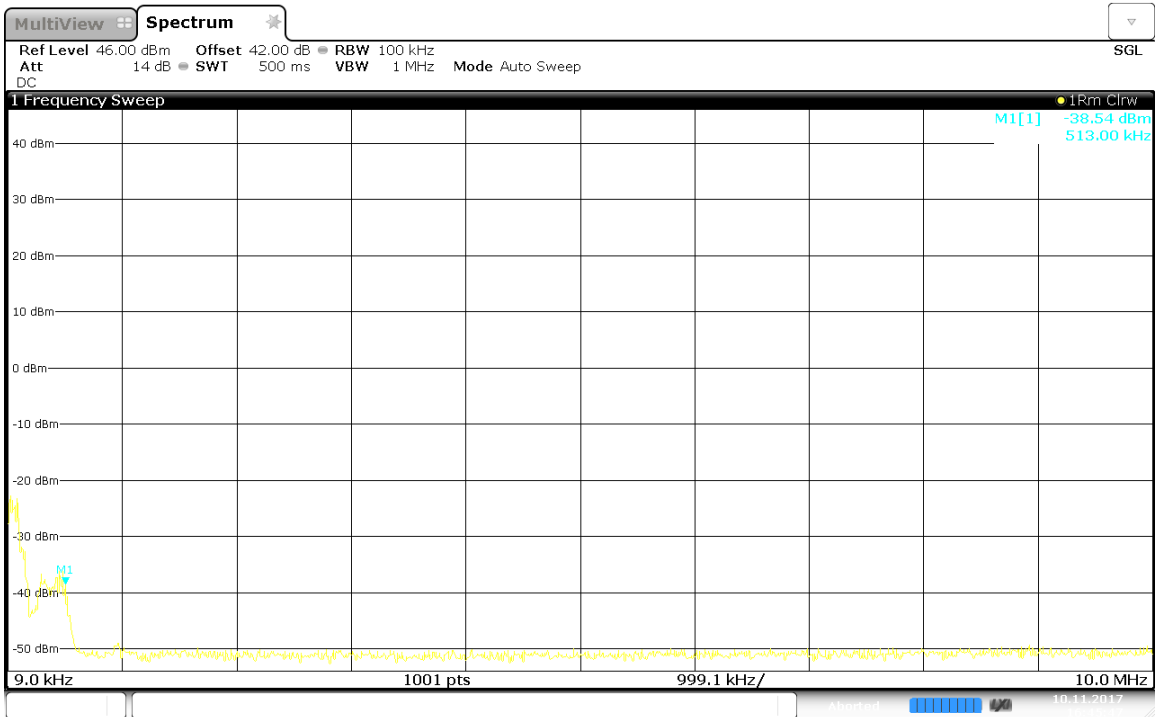
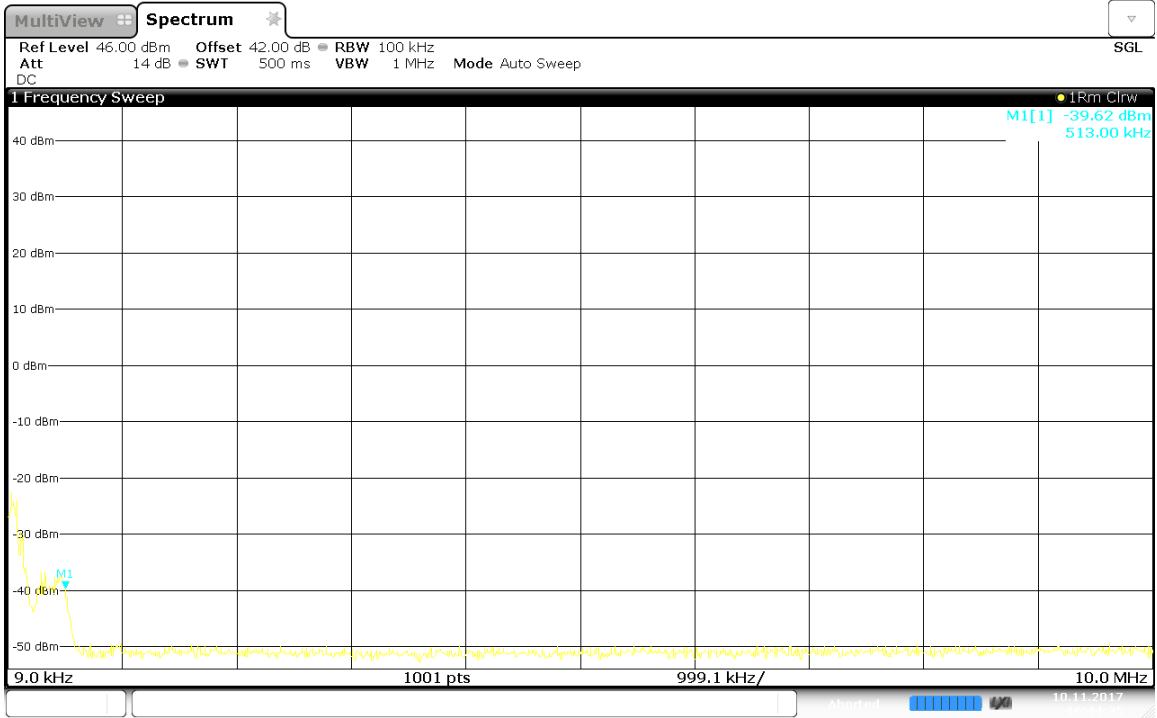
Temperature:	20 °C
Relative Humidity:	53 %
ATM Pressure:	1009 mbar

#### 3.5.5. Test Result: Pass

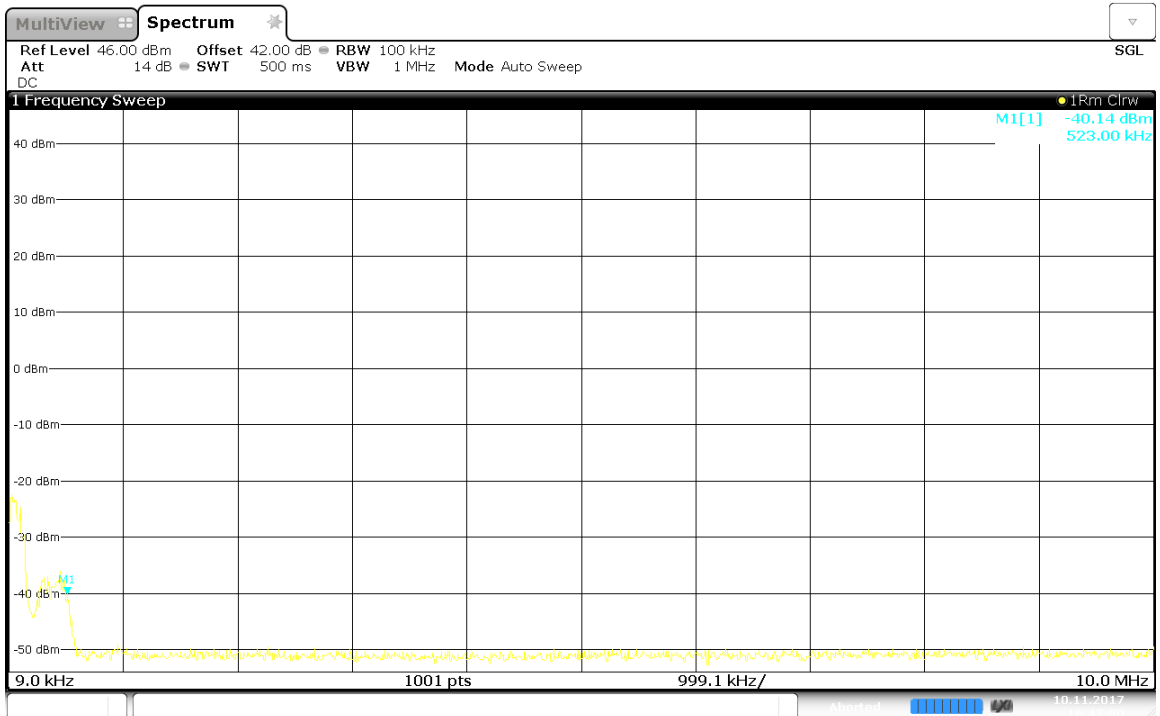
#### 3.5.6. Test Mode: Transmitting LTE

#### 3.5.7. Test Data:

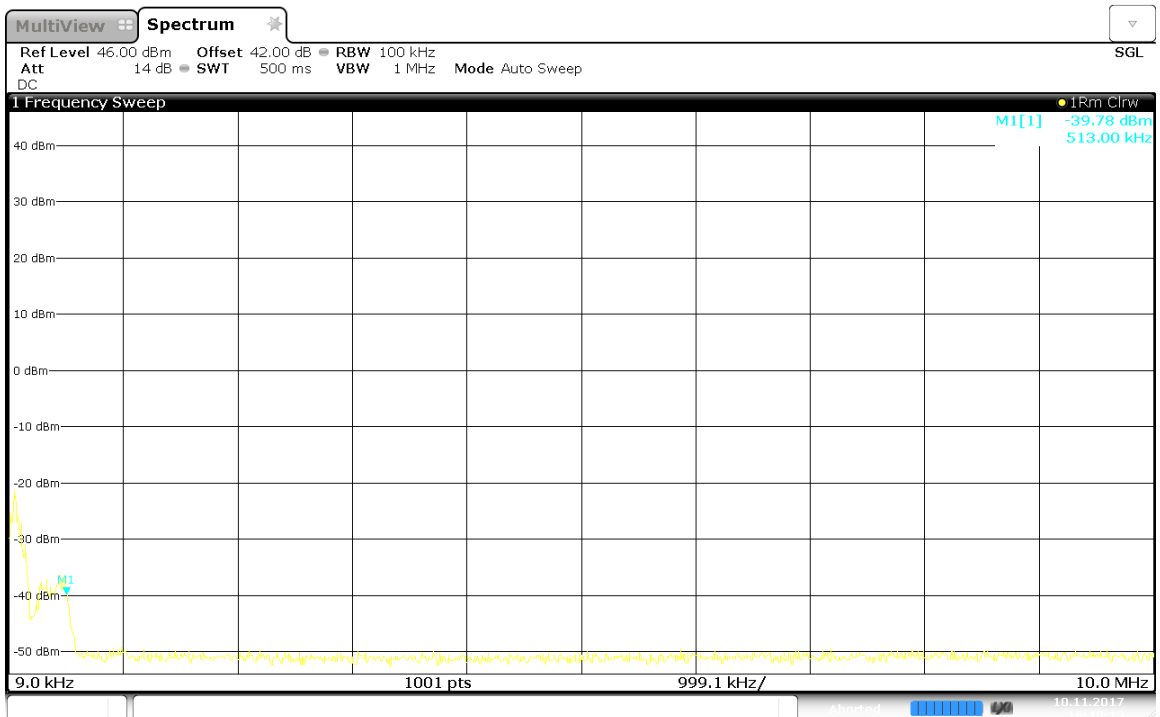
Single Carrier:  
5M -2622.5MHz-Port 1~4:



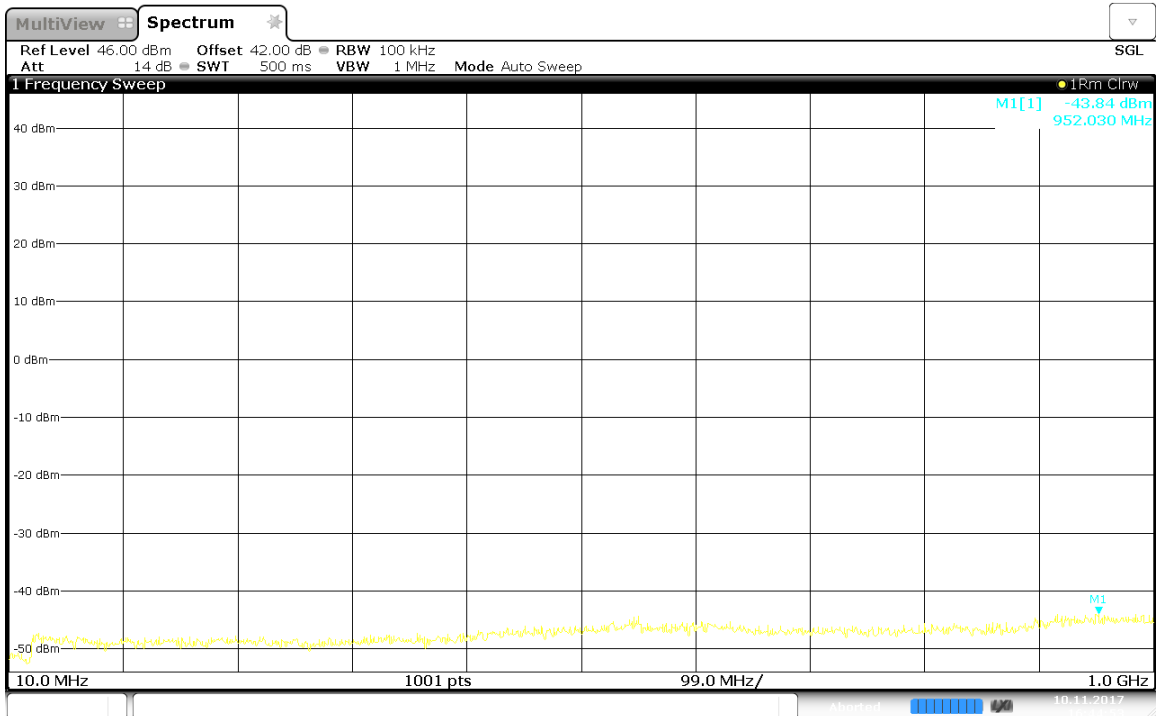




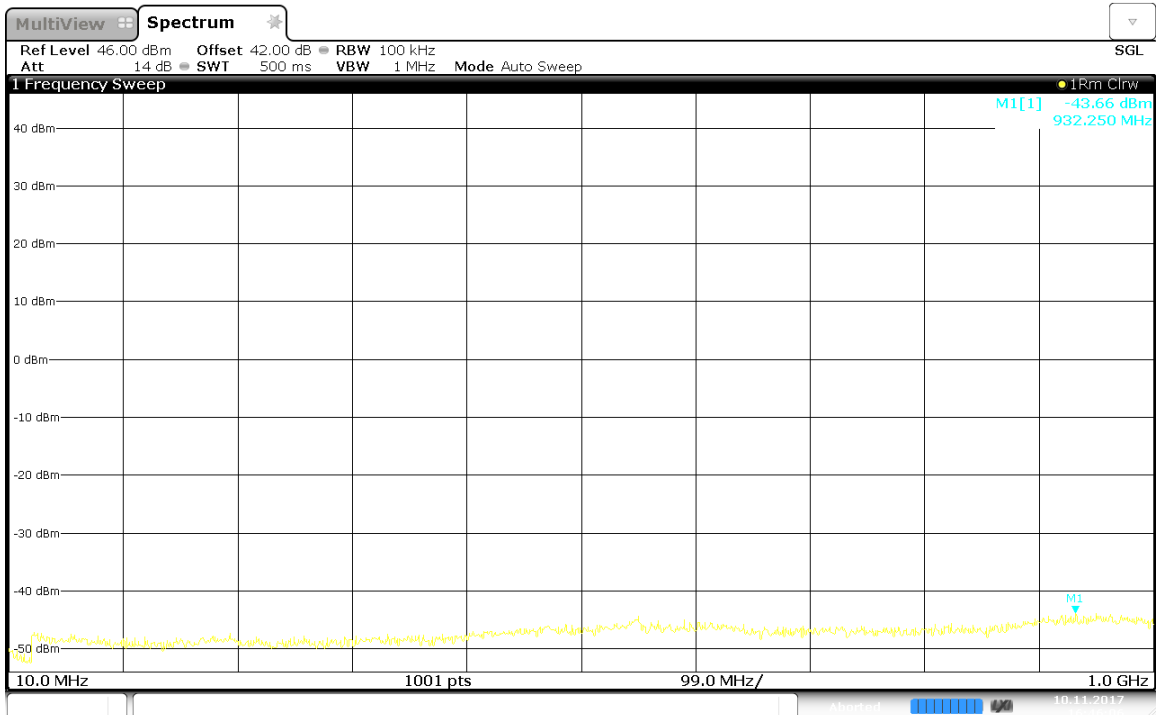
16:47:01 10.11.2017



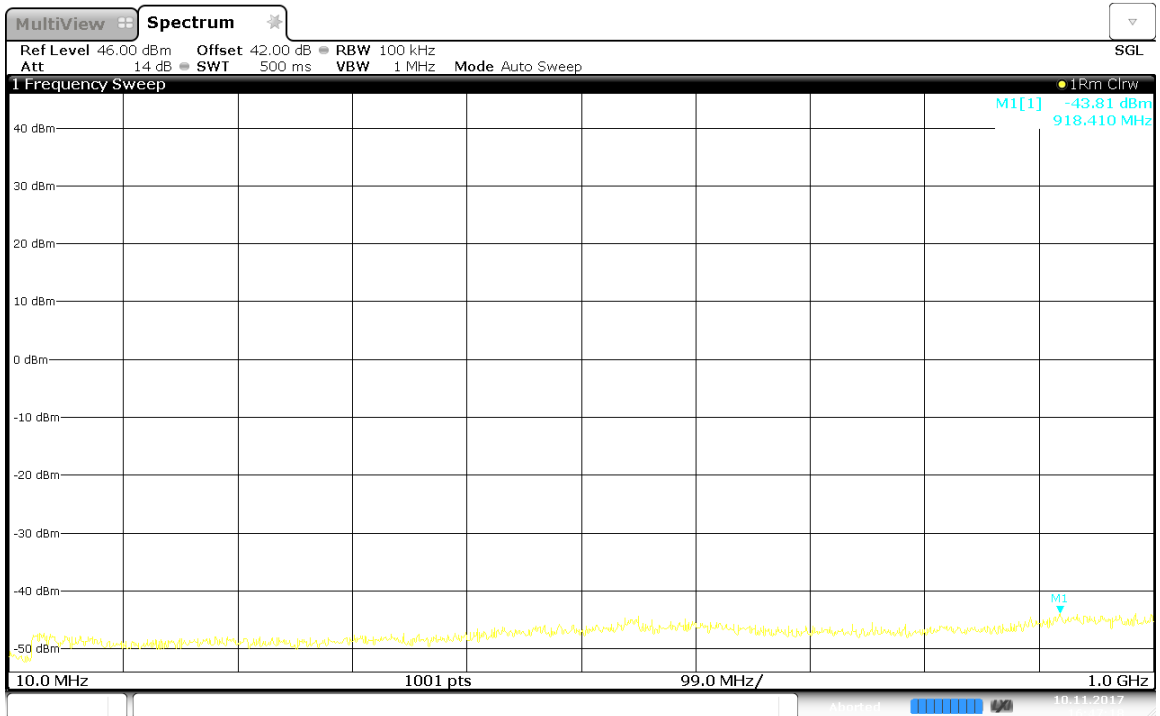
16:48:14 10.11.2017



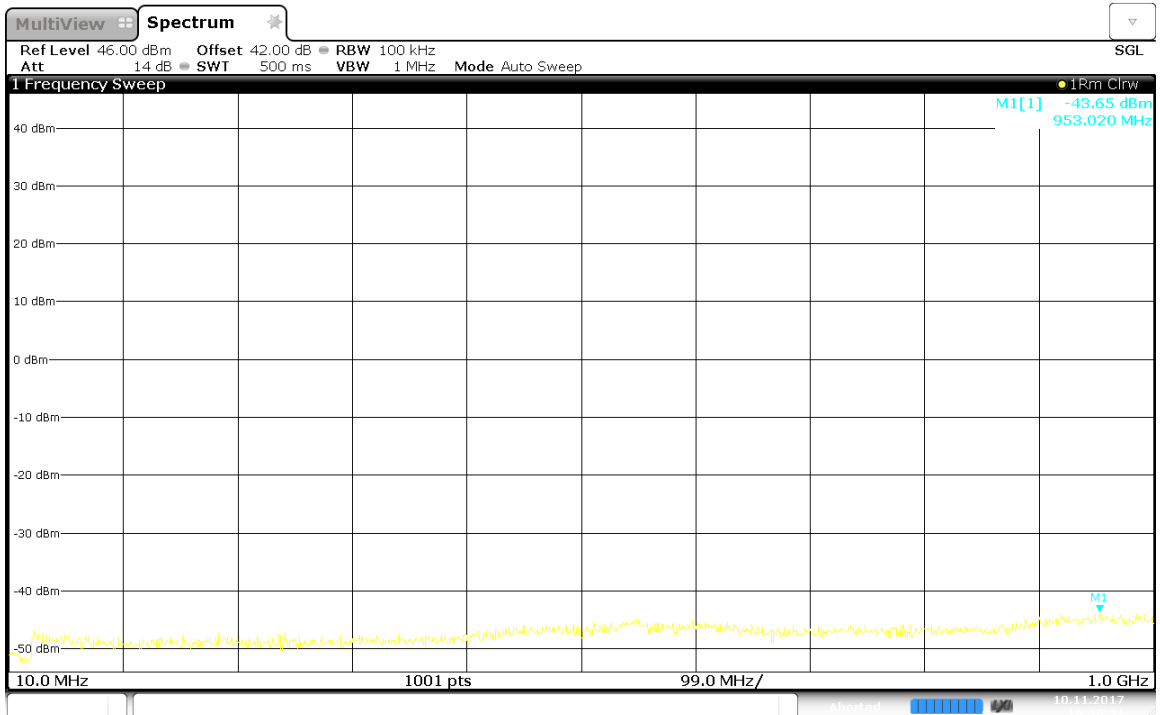
16:44:53 10.11.2017



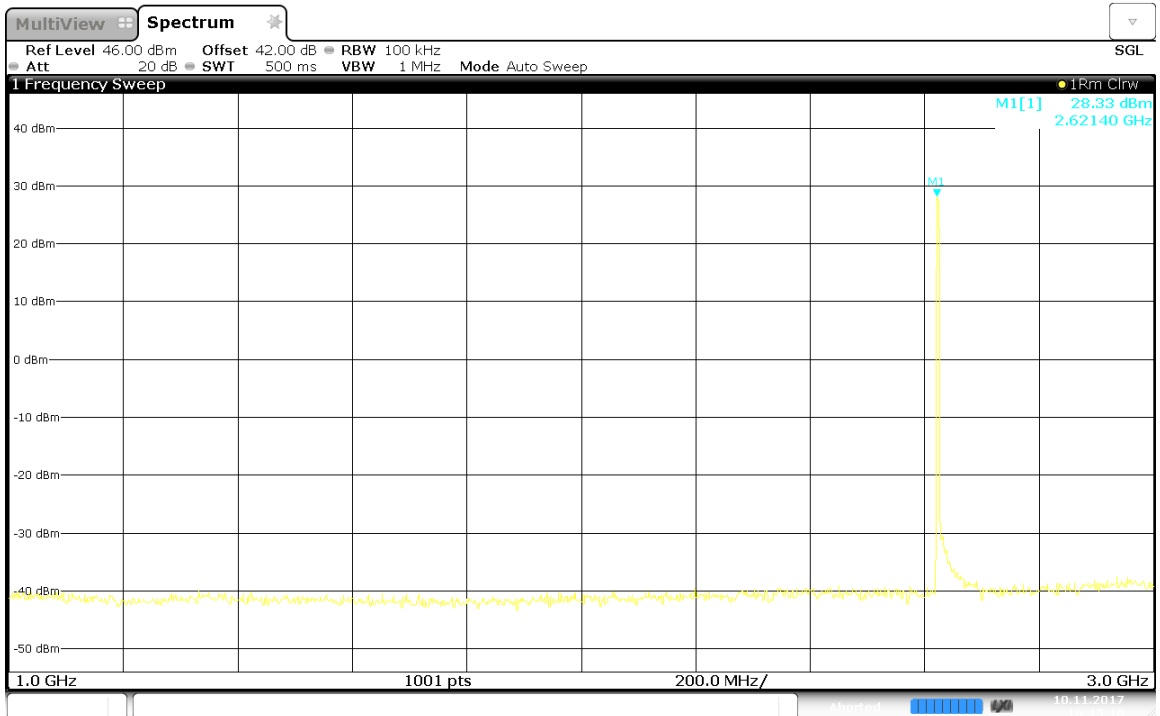
16:46:06 10.11.2017



16:47:19 10.11.2017



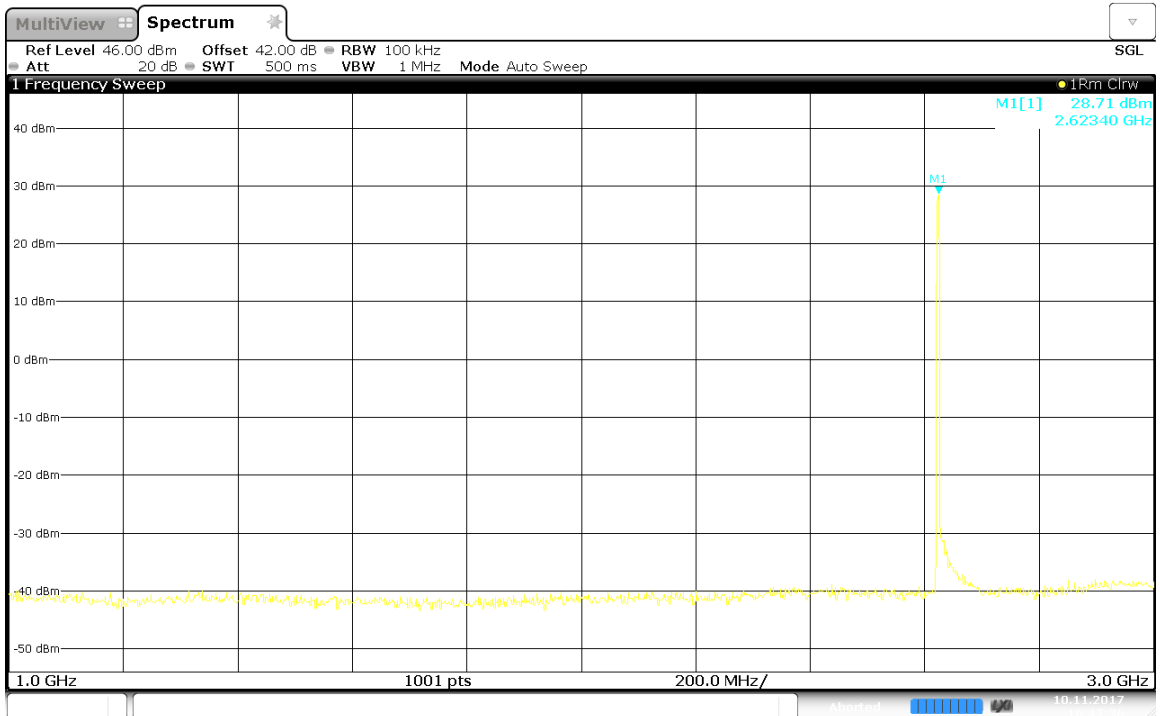
16:48:31 10.11.2017



16:45:10 10.11.2017



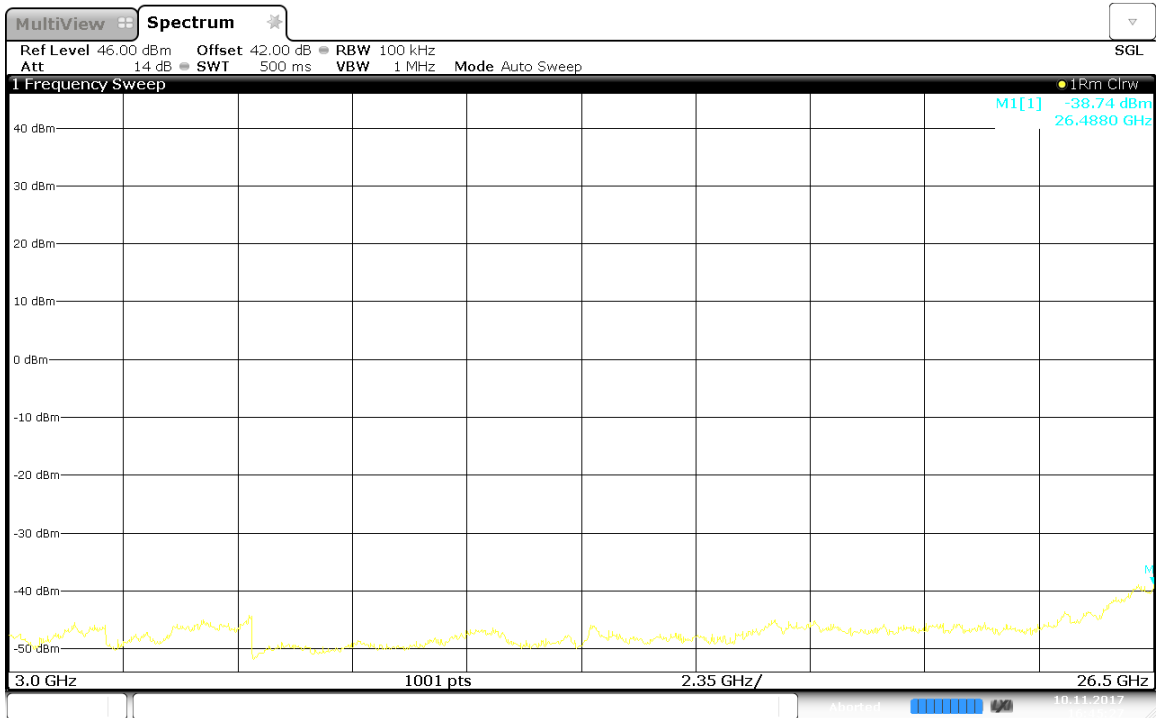
16:46:23 10.11.2017



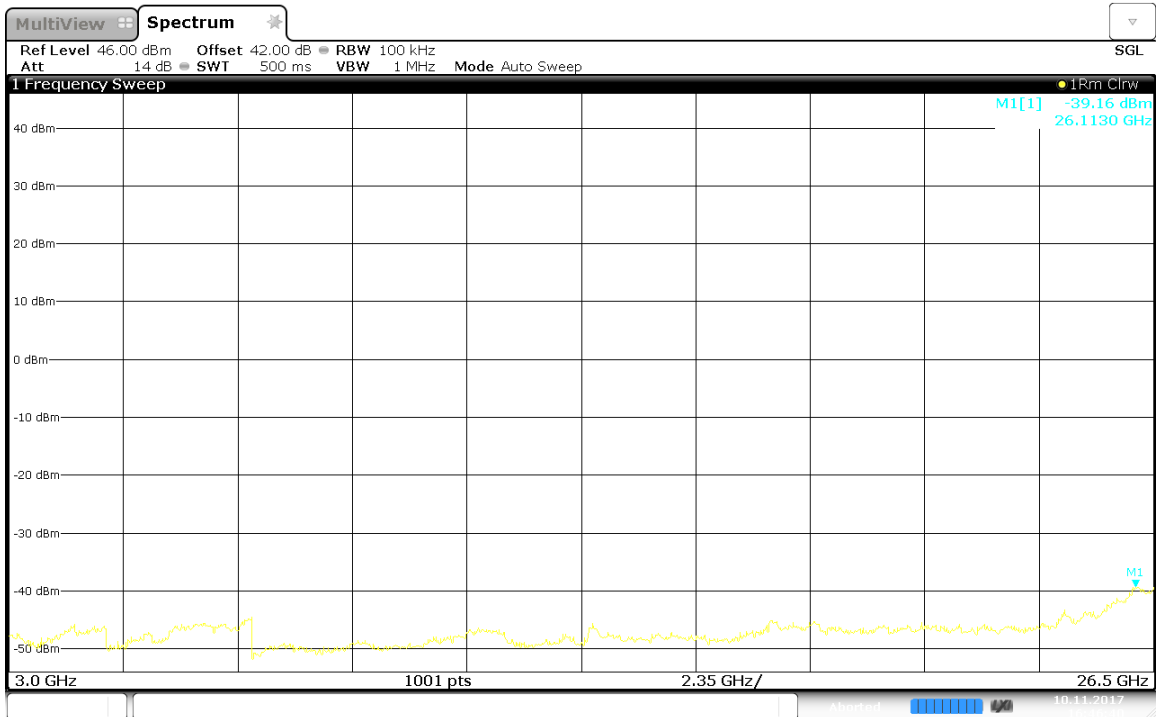
16:47:36 10.11.2017



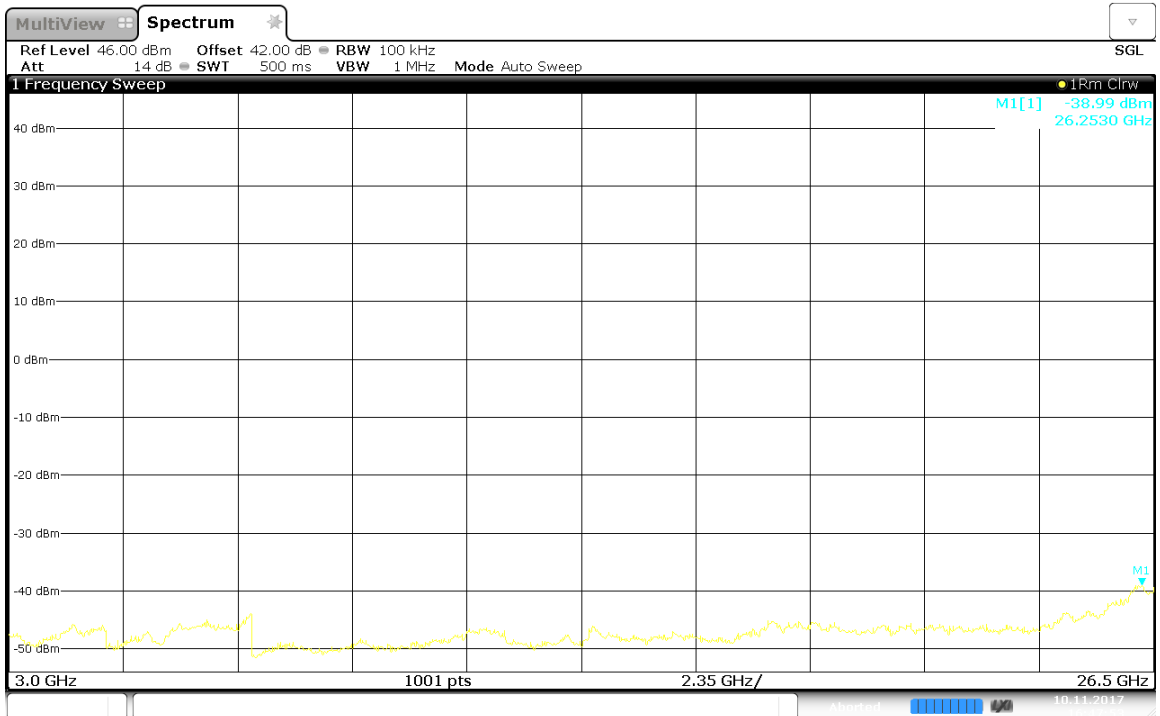
16:48:49 10.11.2017



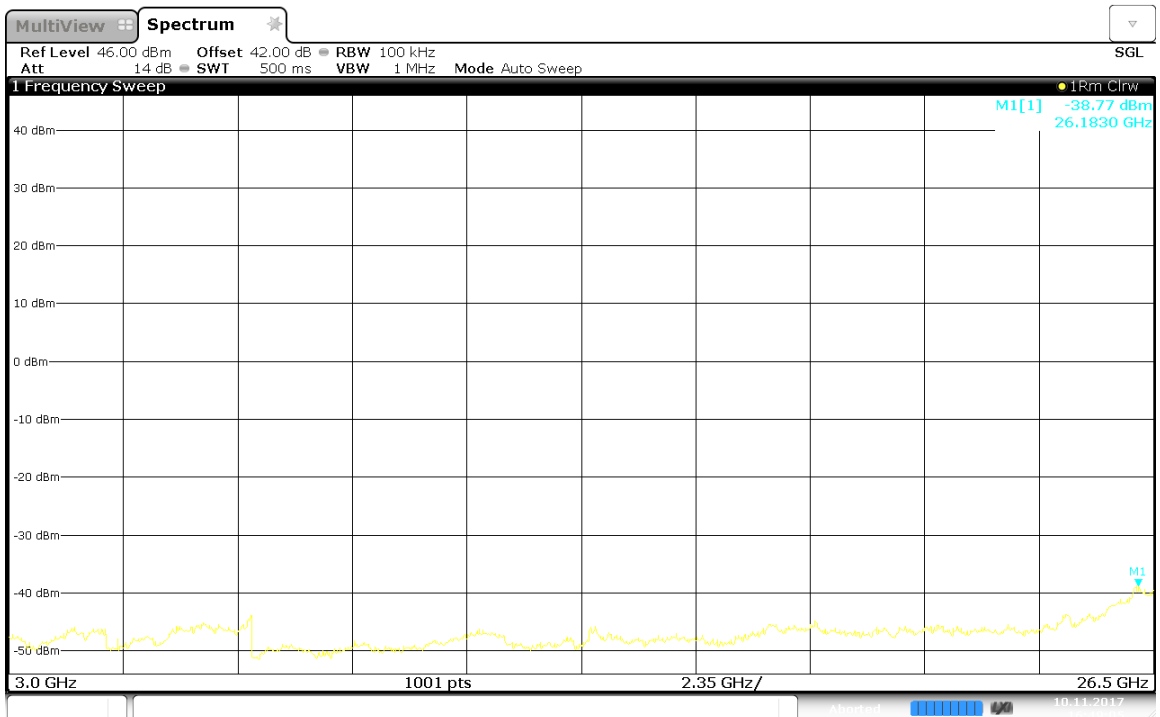
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16:46:41 10.11.2017

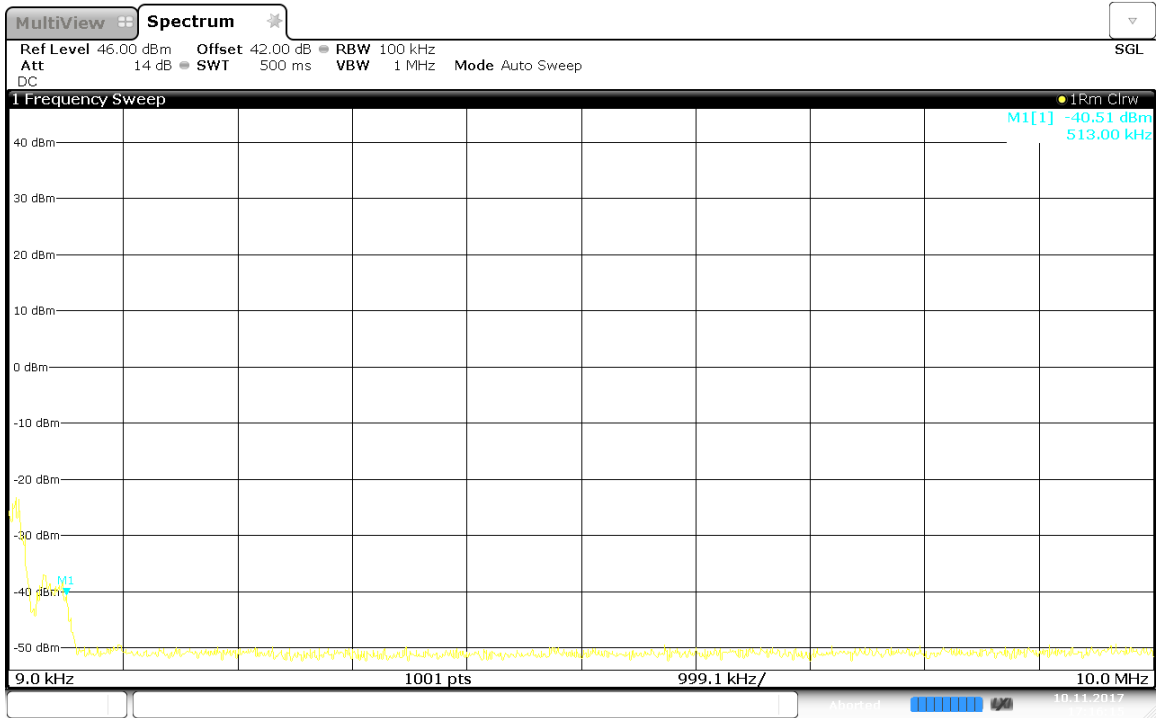


16:47:53 10.11.2017

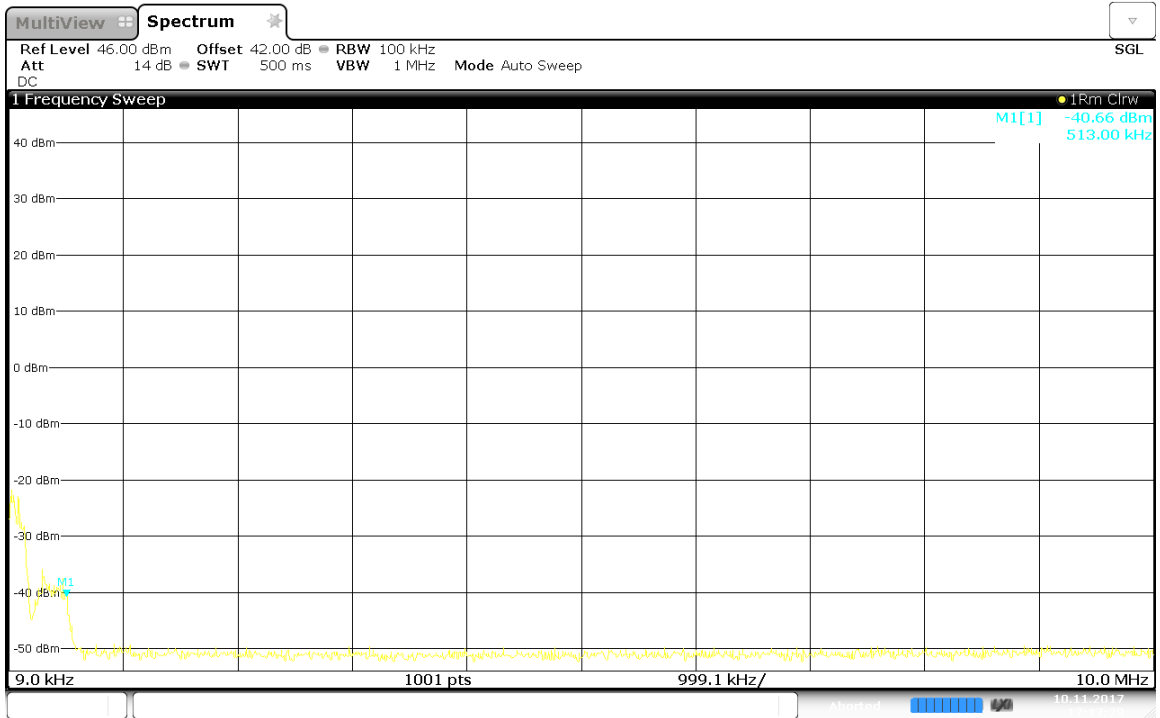


16:49:06 10.11.2017

# 5M -2655MHz-Port 1~4:

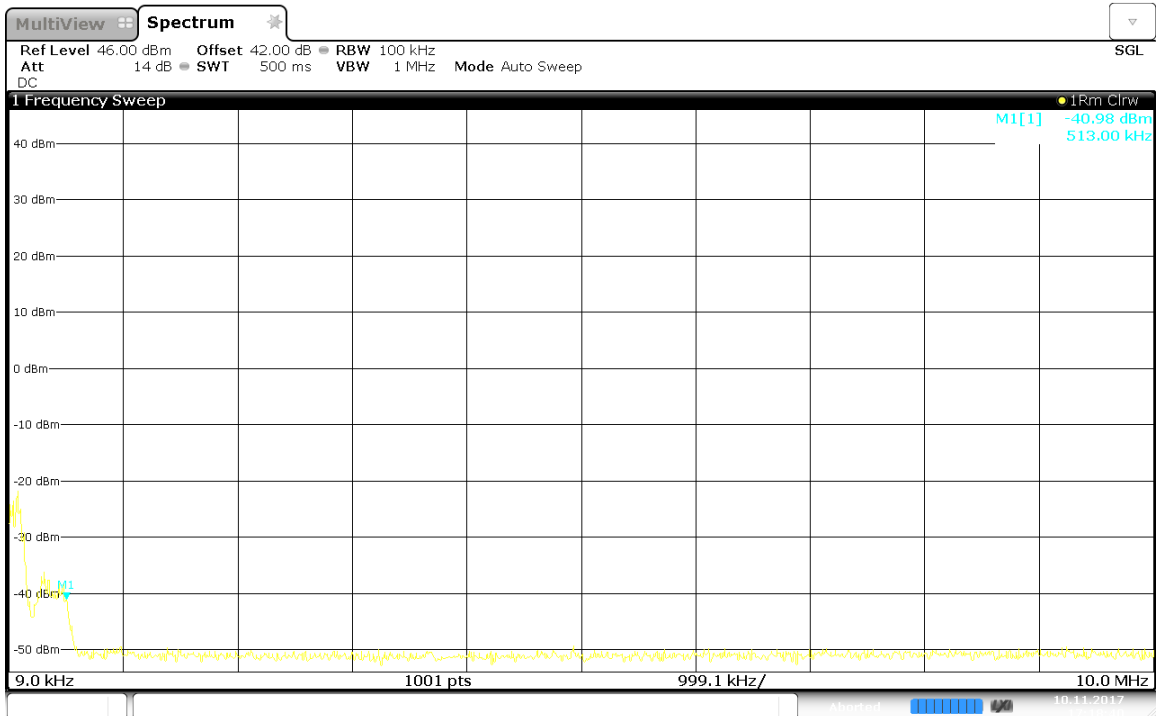


17:16:15 10.11.2017

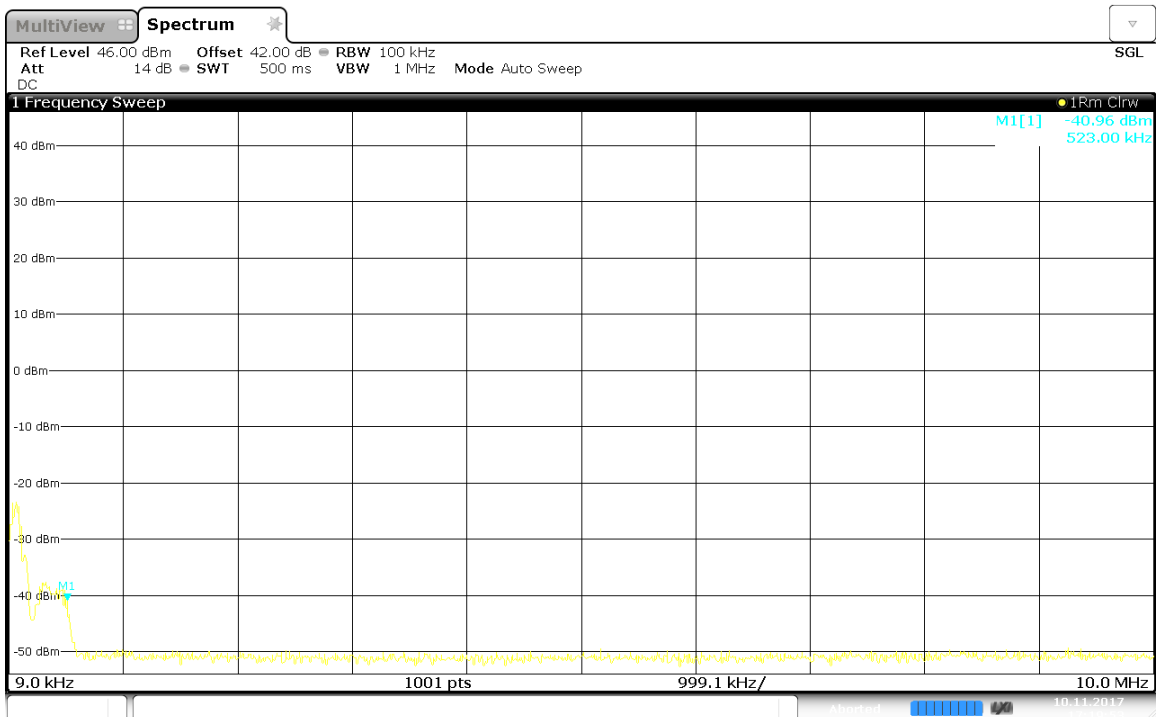


17:17:28 10.11.2017

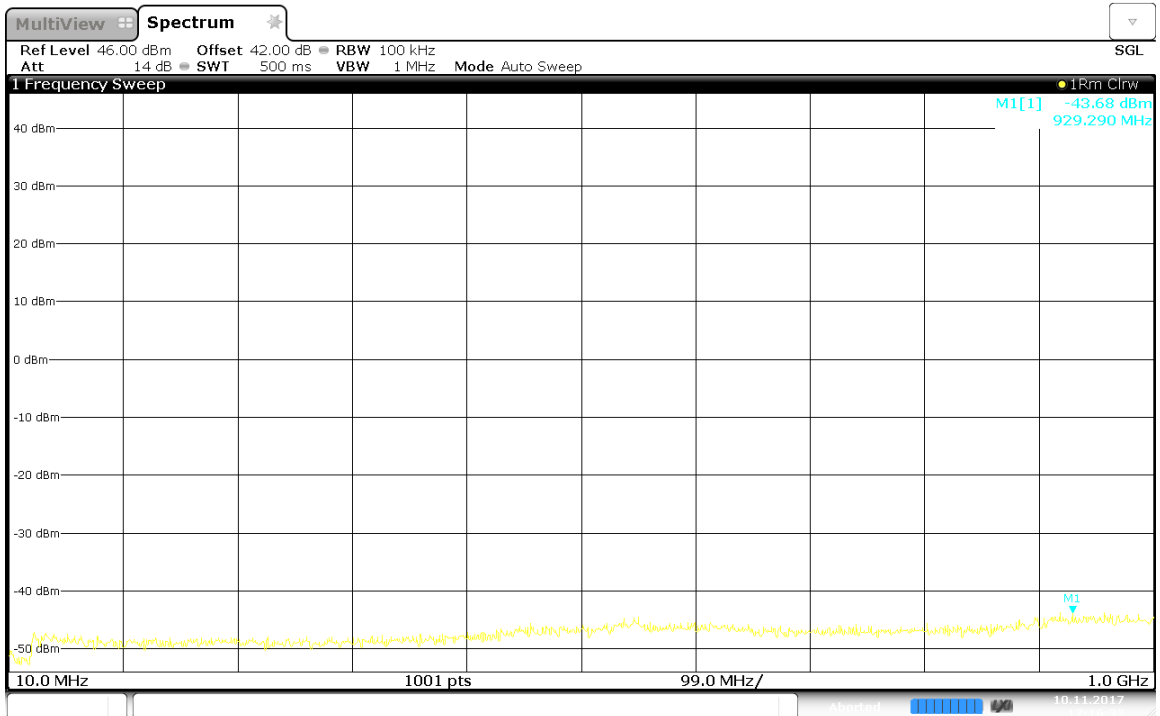




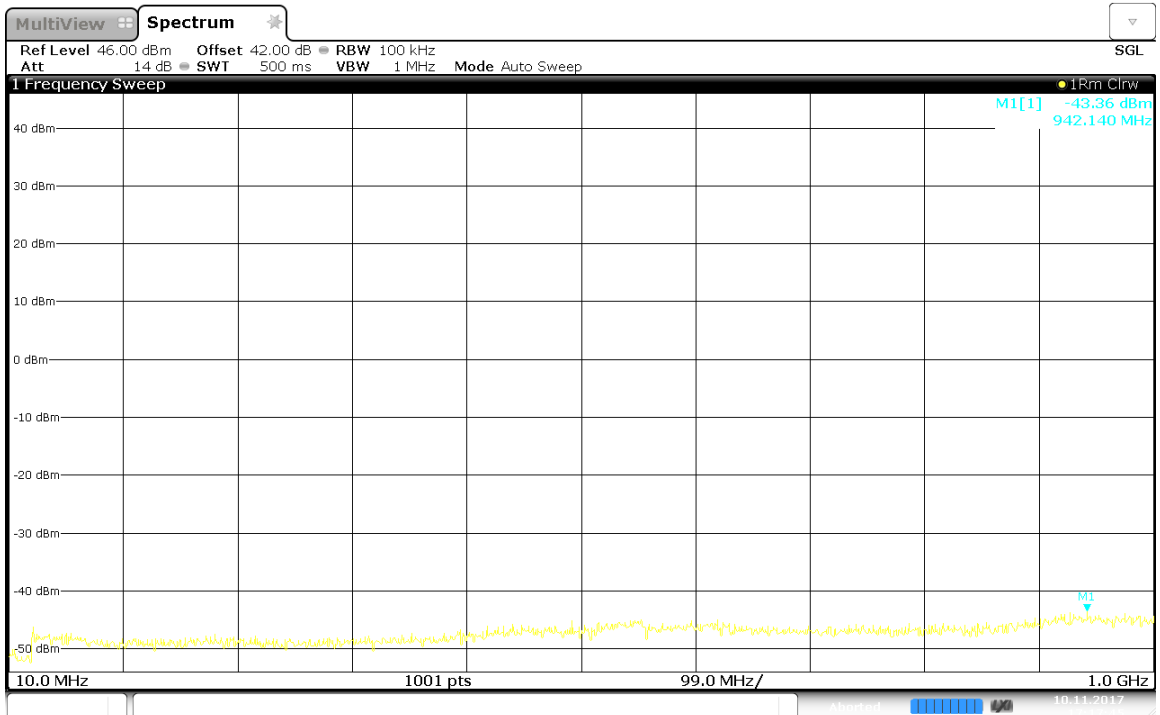
17:18:40 10.11.2017



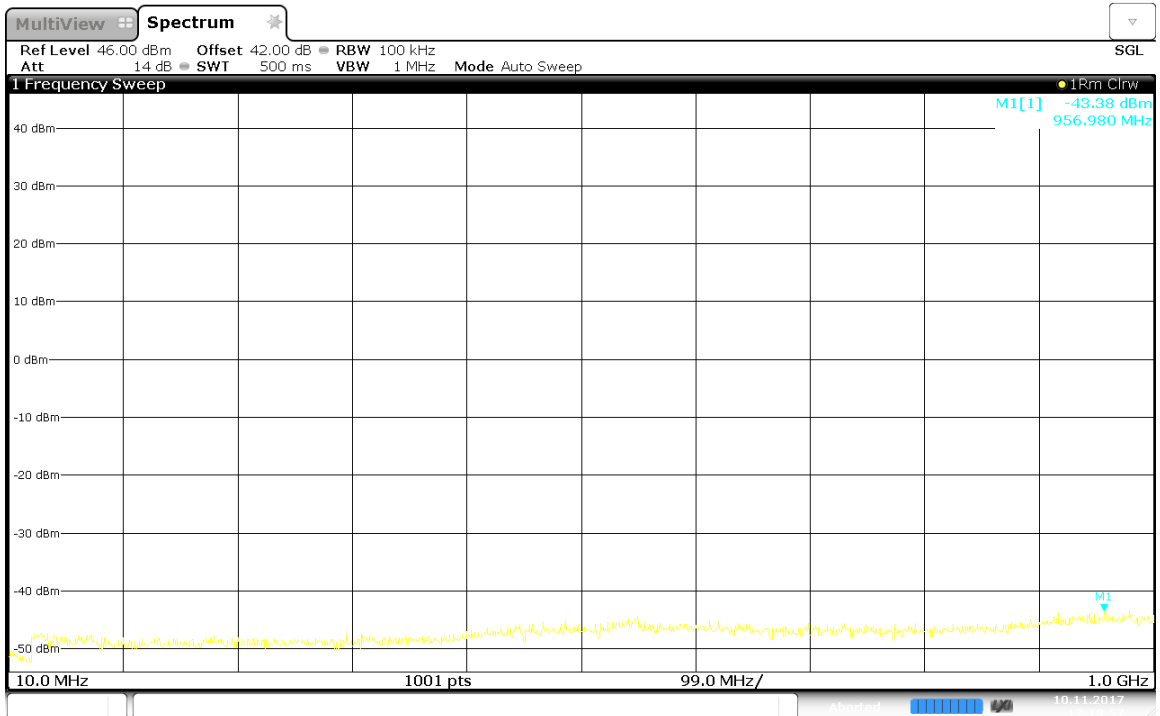
17:19:53 10.11.2017



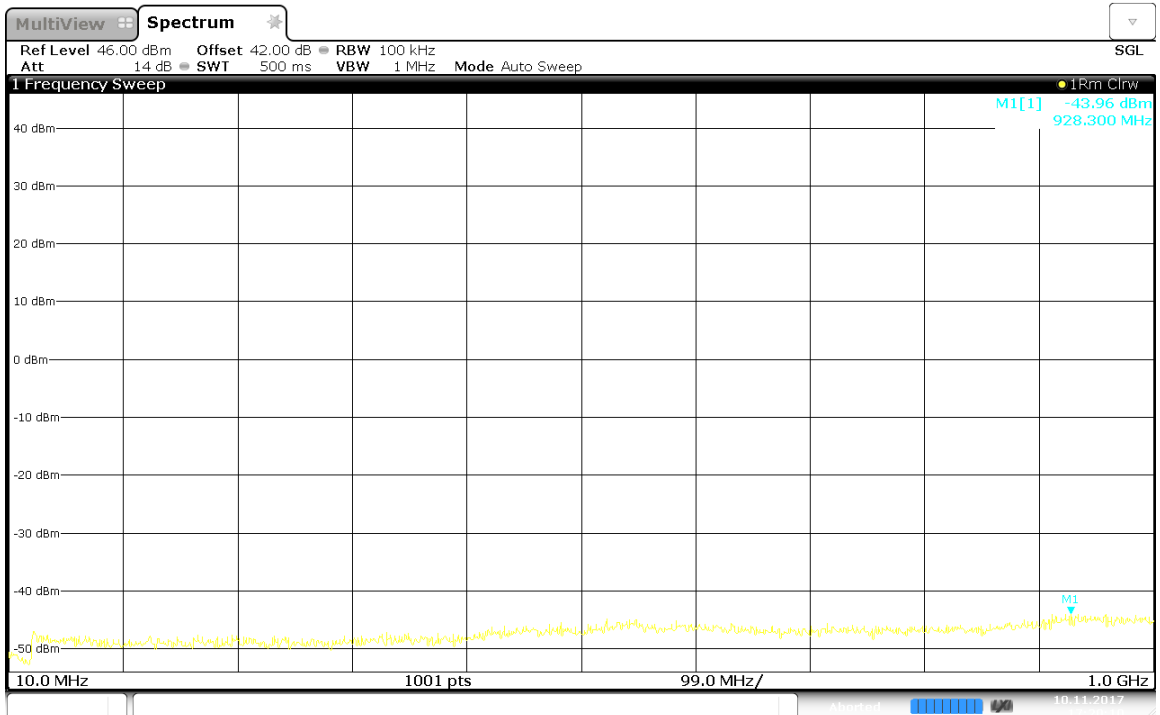
17:16:32 10.11.2017



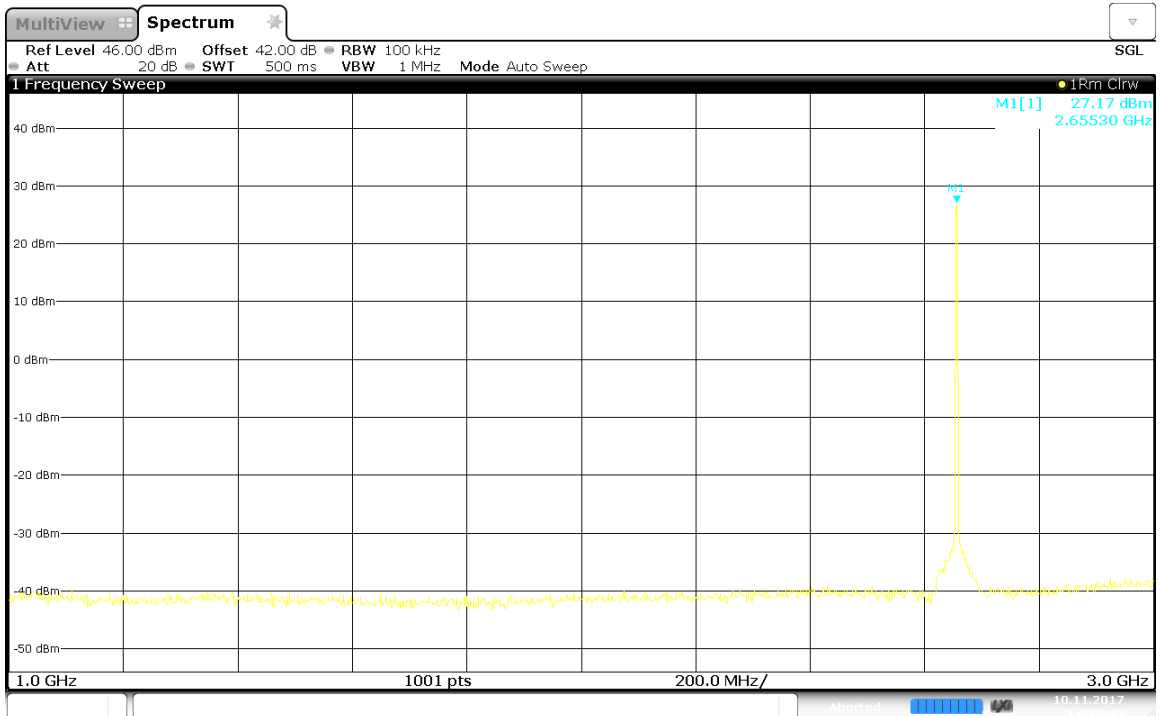
17:17:45 10.11.2017



17:18:58 10.11.2017



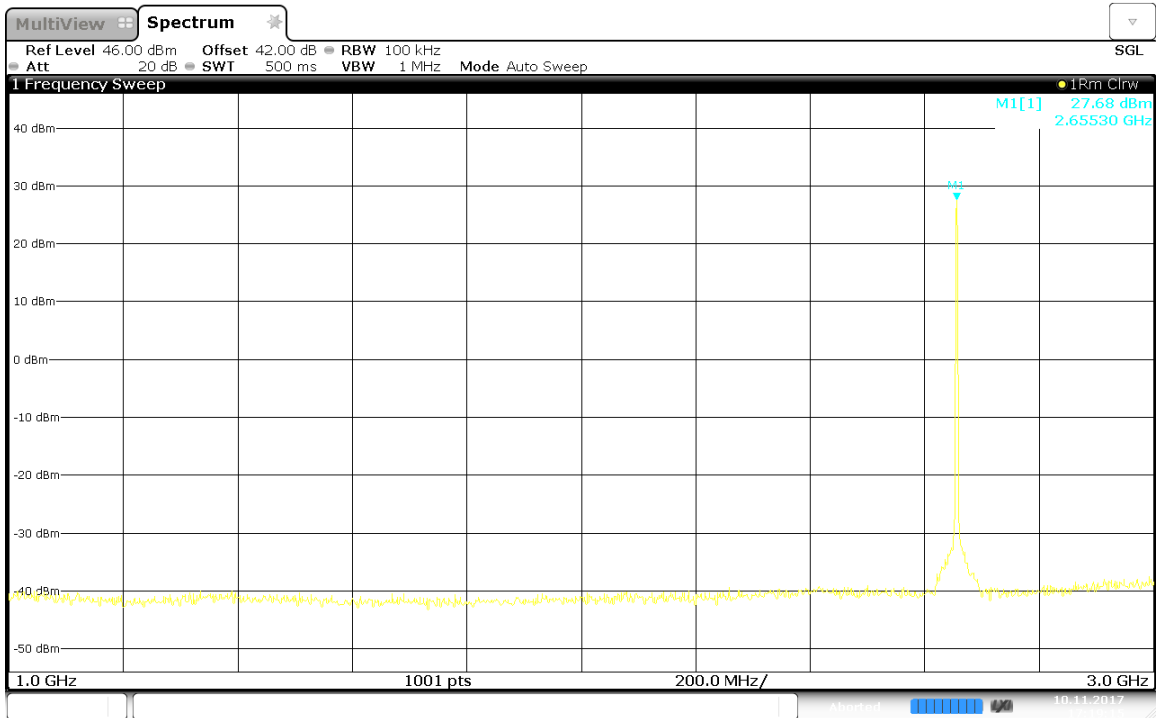
17:20:11 10.11.2017



17:16:50 10.11.2017



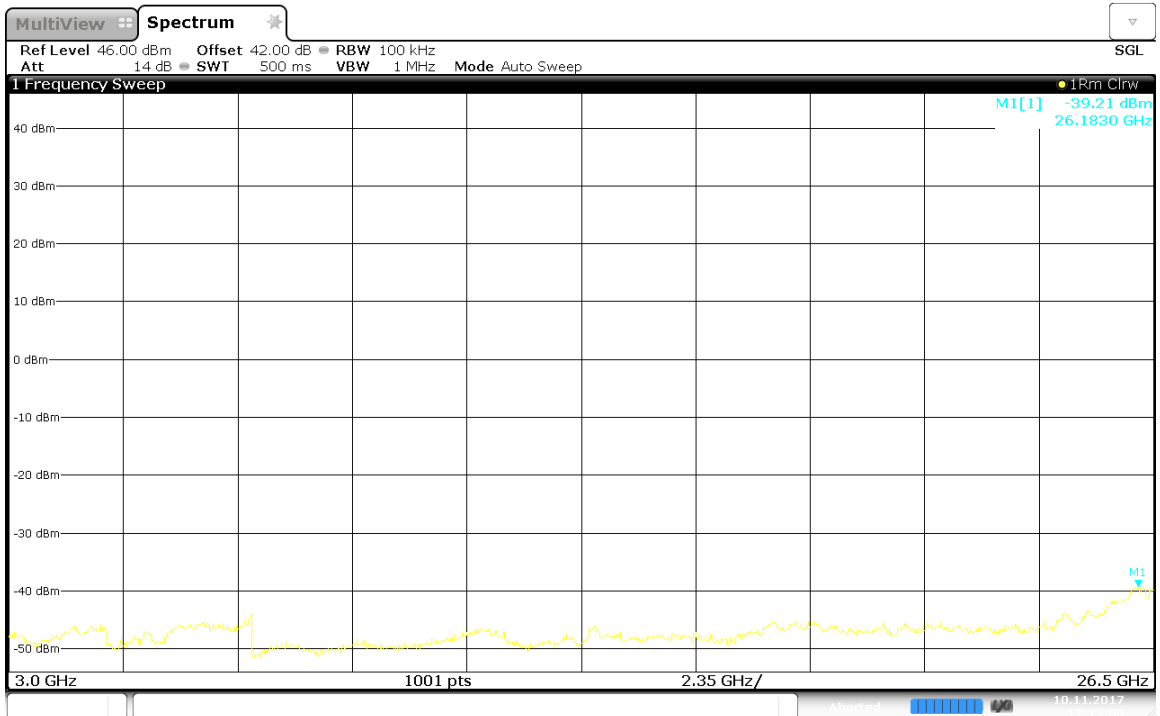
17:18:03 10.11.2017



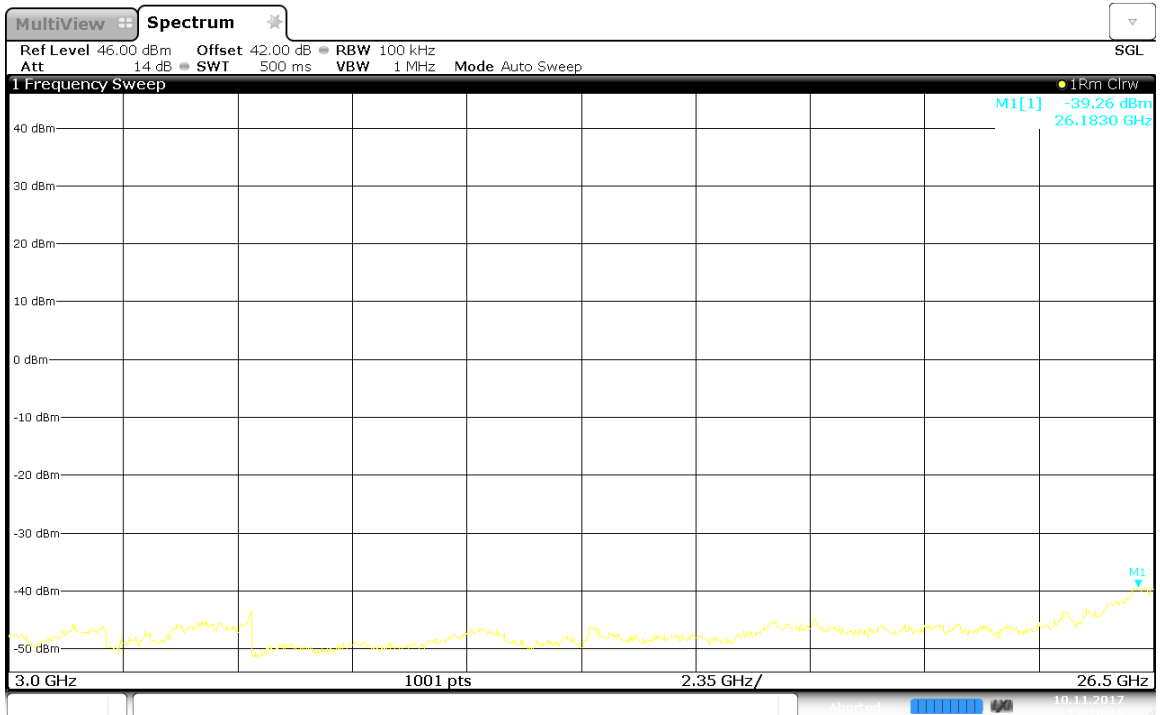
17:19:15 10.11.2017



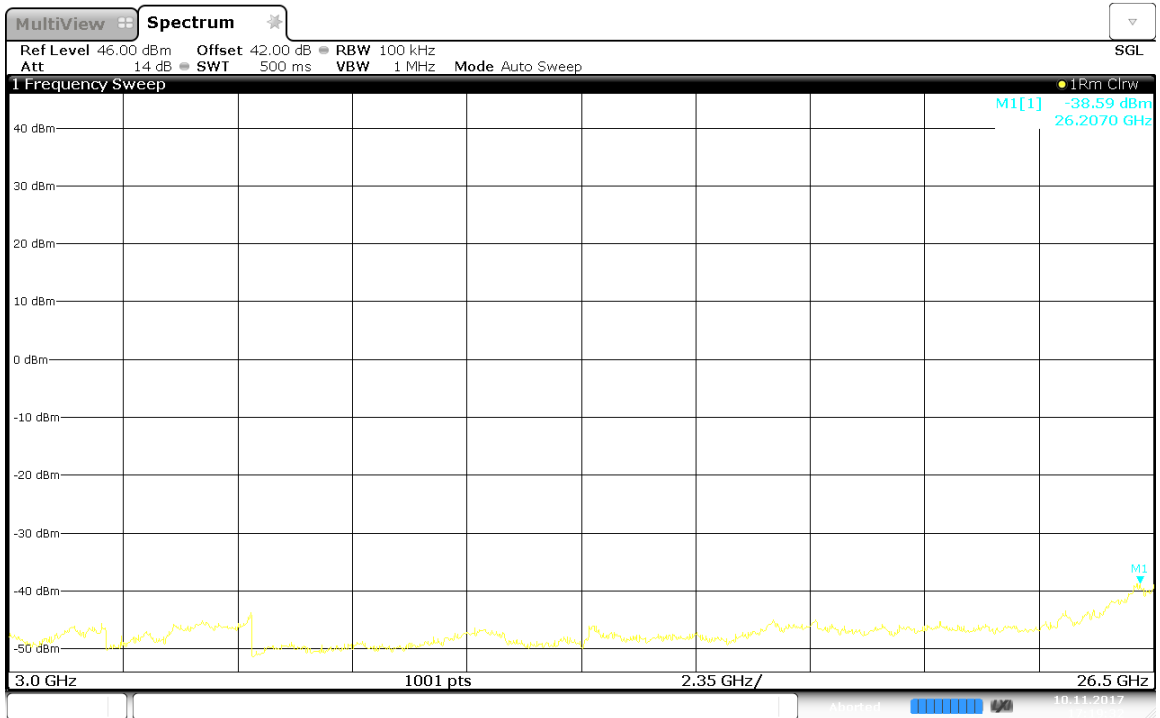
17:20:28 10.11.2017



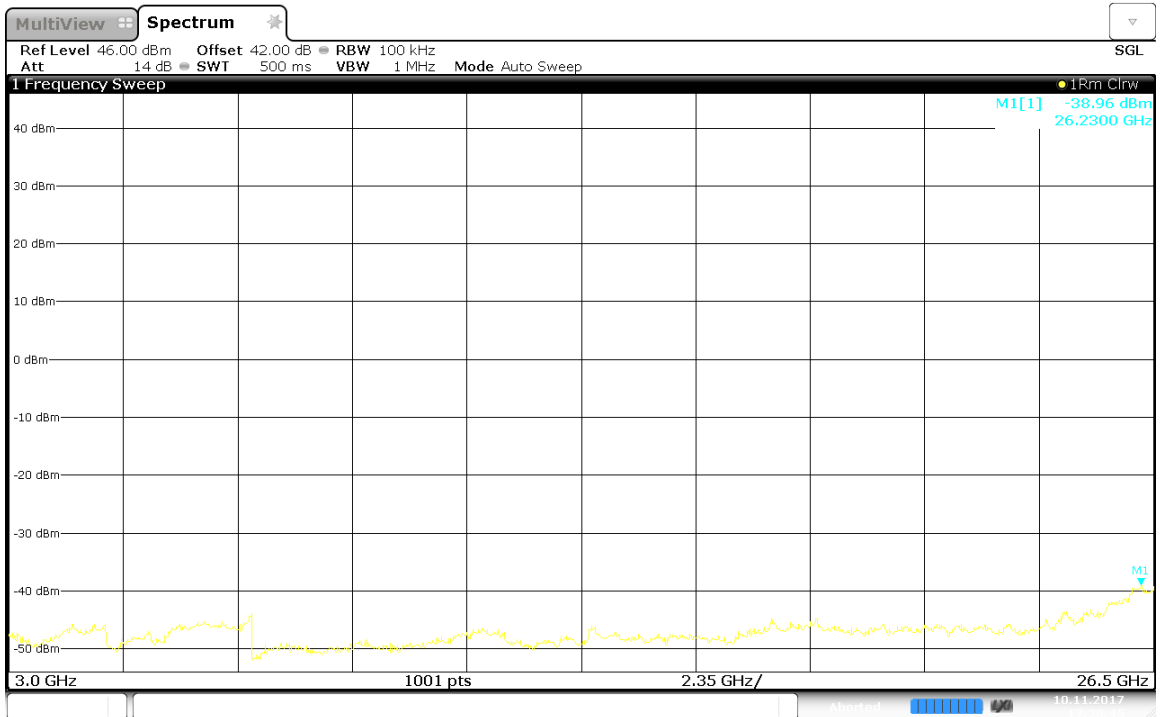
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17:18:20 10.11.2017

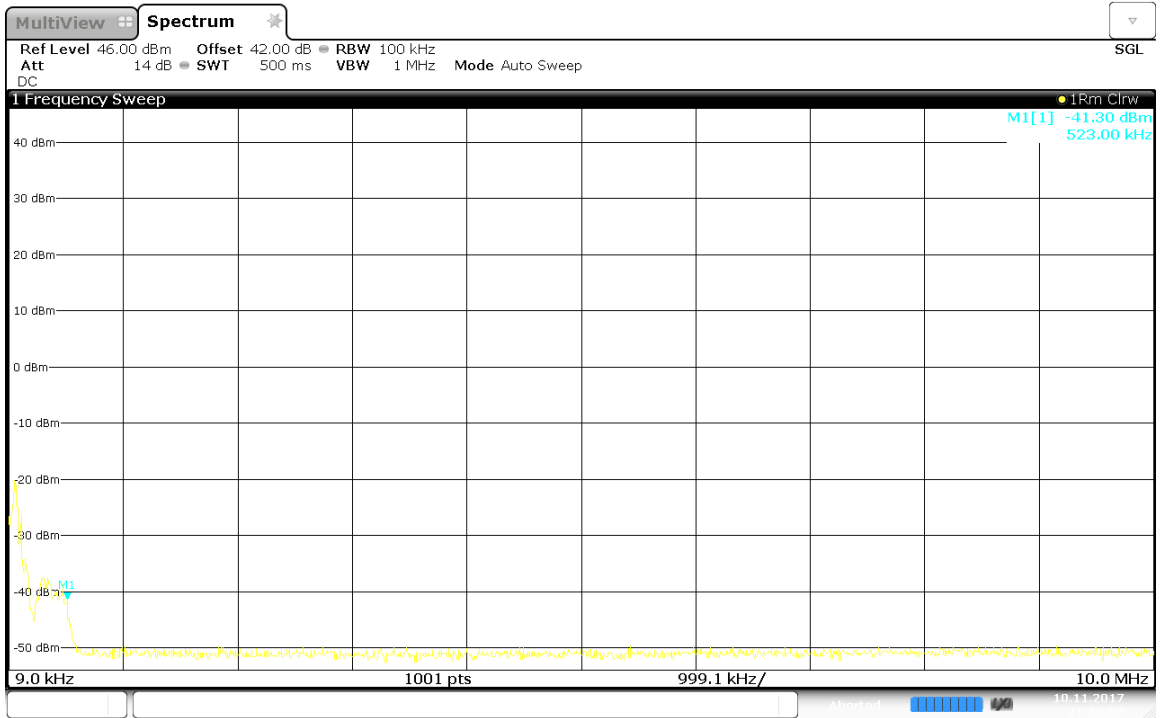


17:19:33 10.11.2017

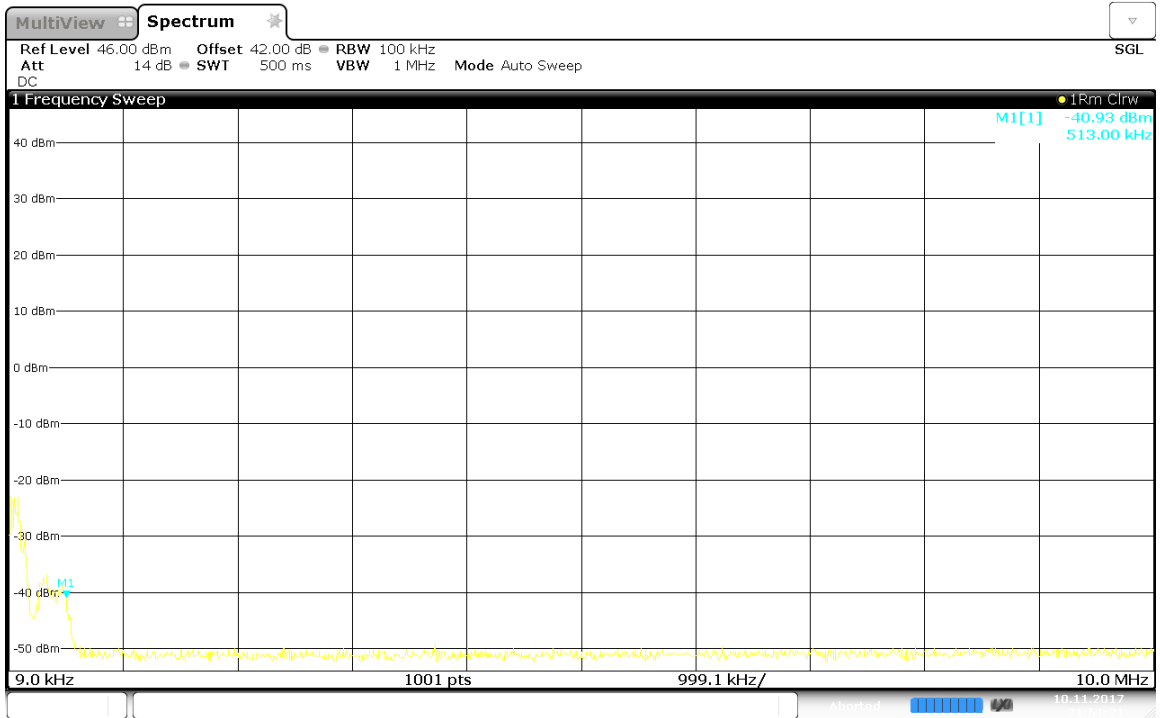


17:20:46 10.11.2017

# 5M -2687.5MHz-Port 1~4:

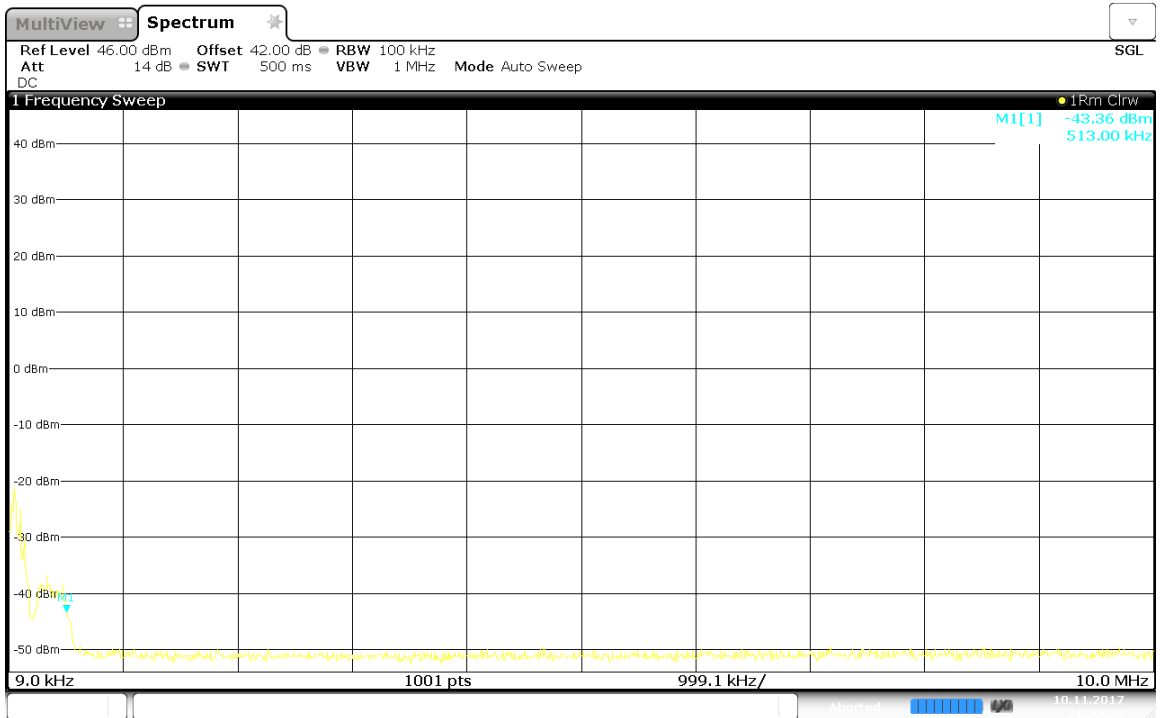


21:50:08 10.11.2017

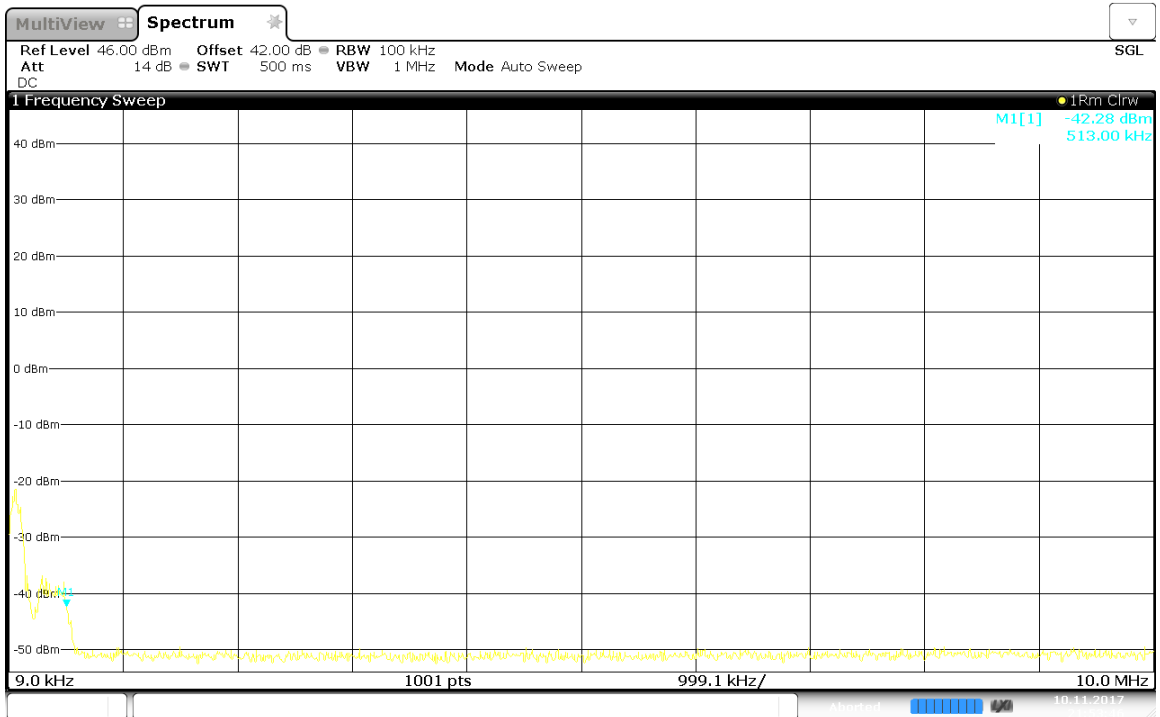


21:51:21 10.11.2017

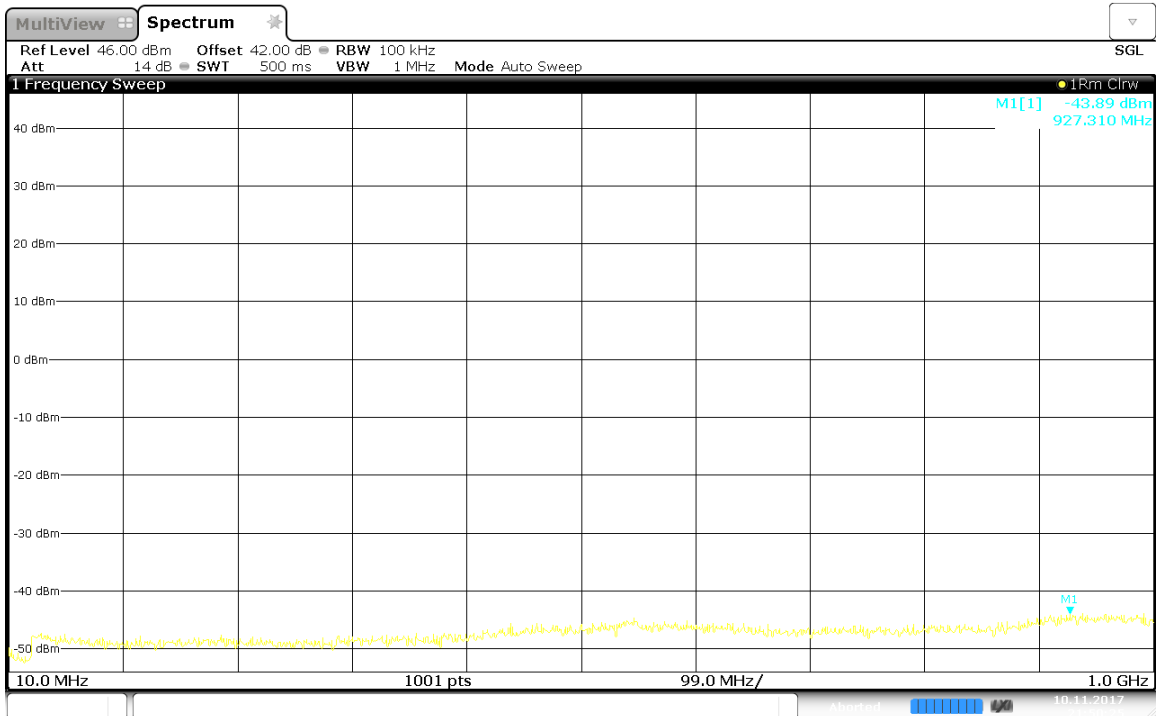




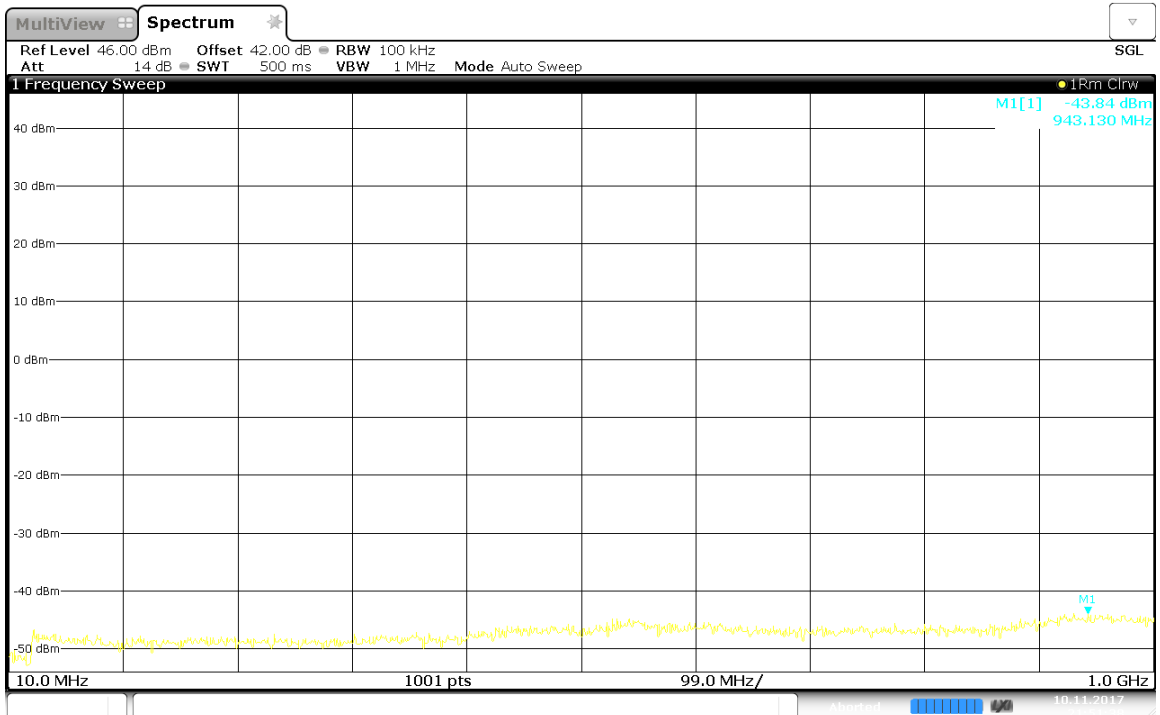
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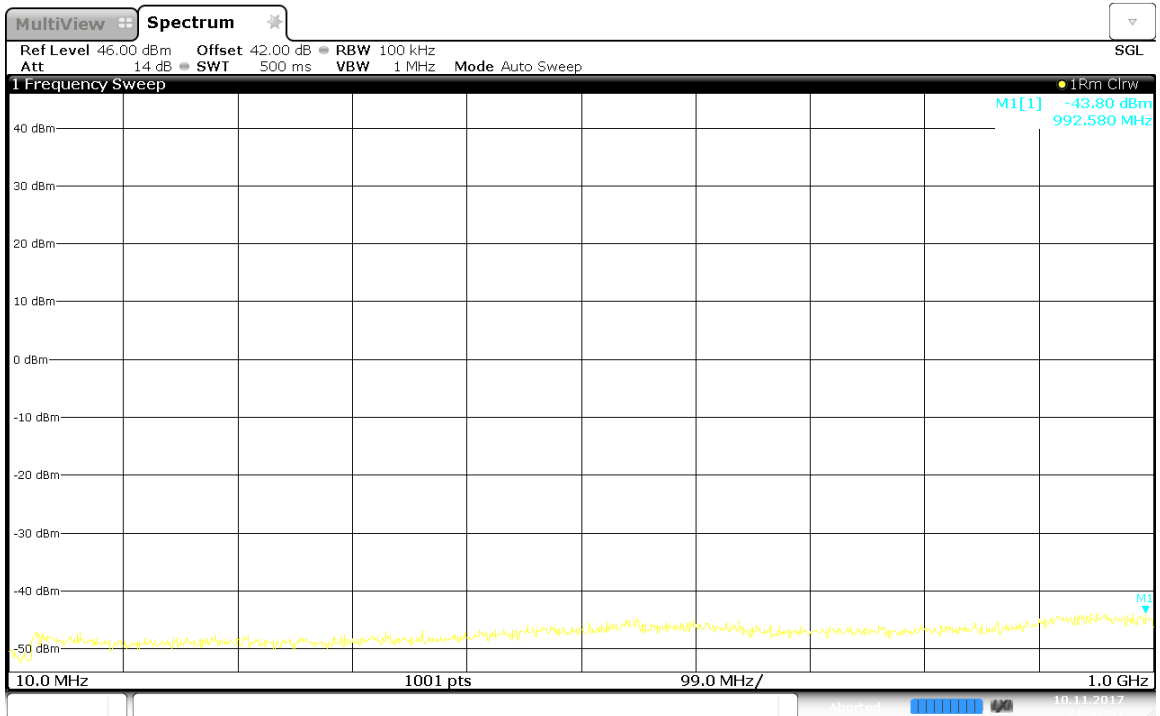
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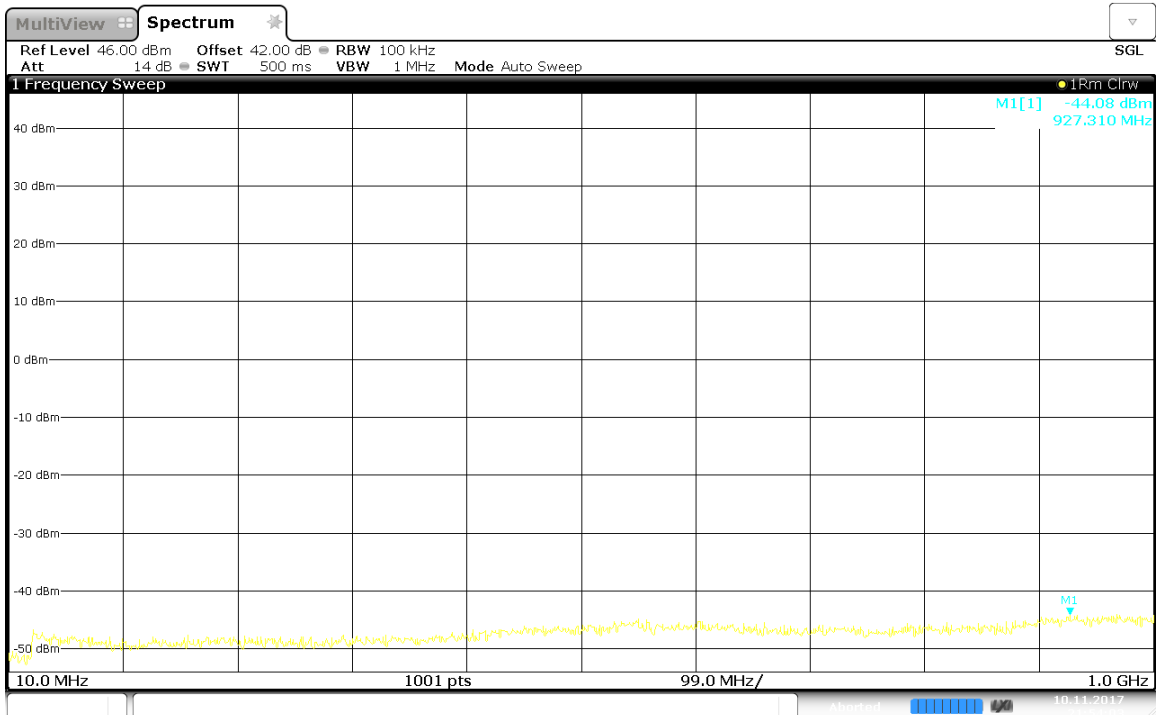
21:50:26 10.11.2017



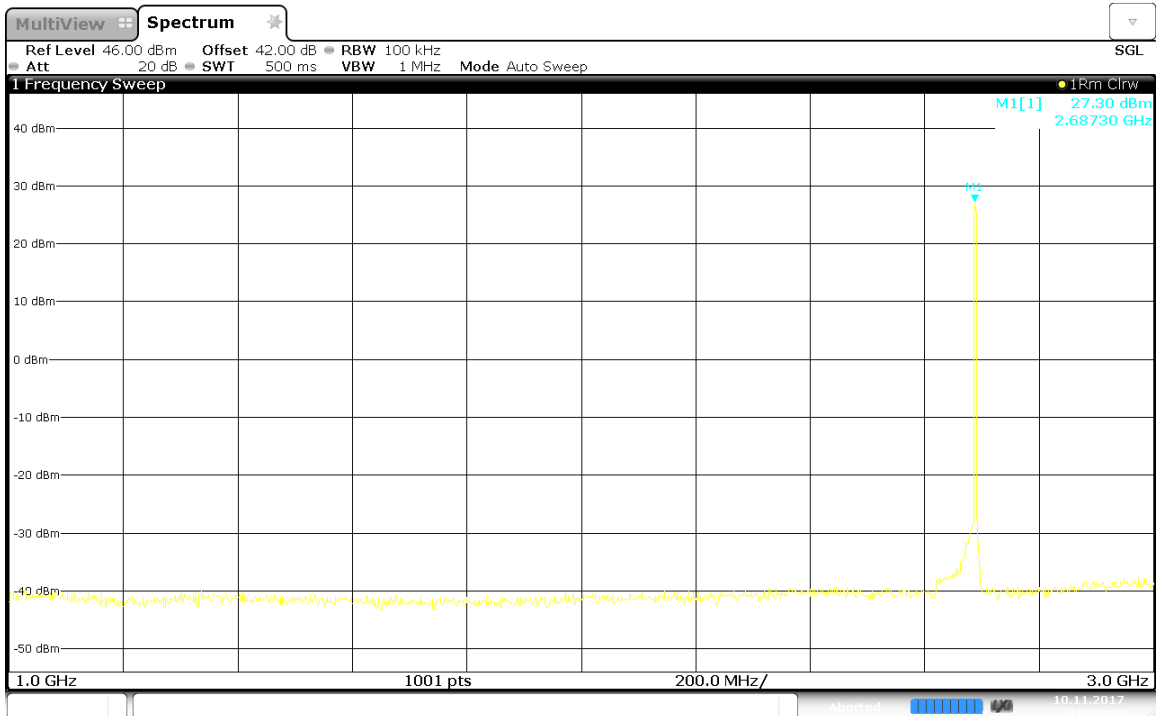
21:51:38 10.11.2017



21:52:51 10.11.2017



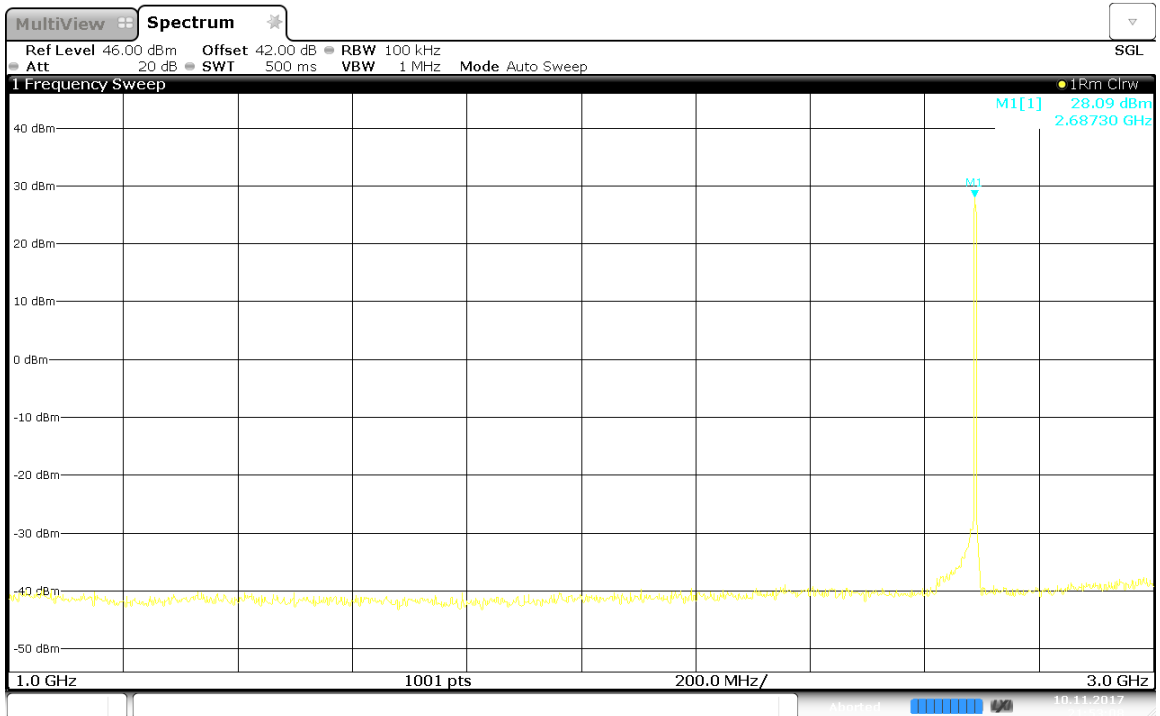
21:54:04 10.11.2017



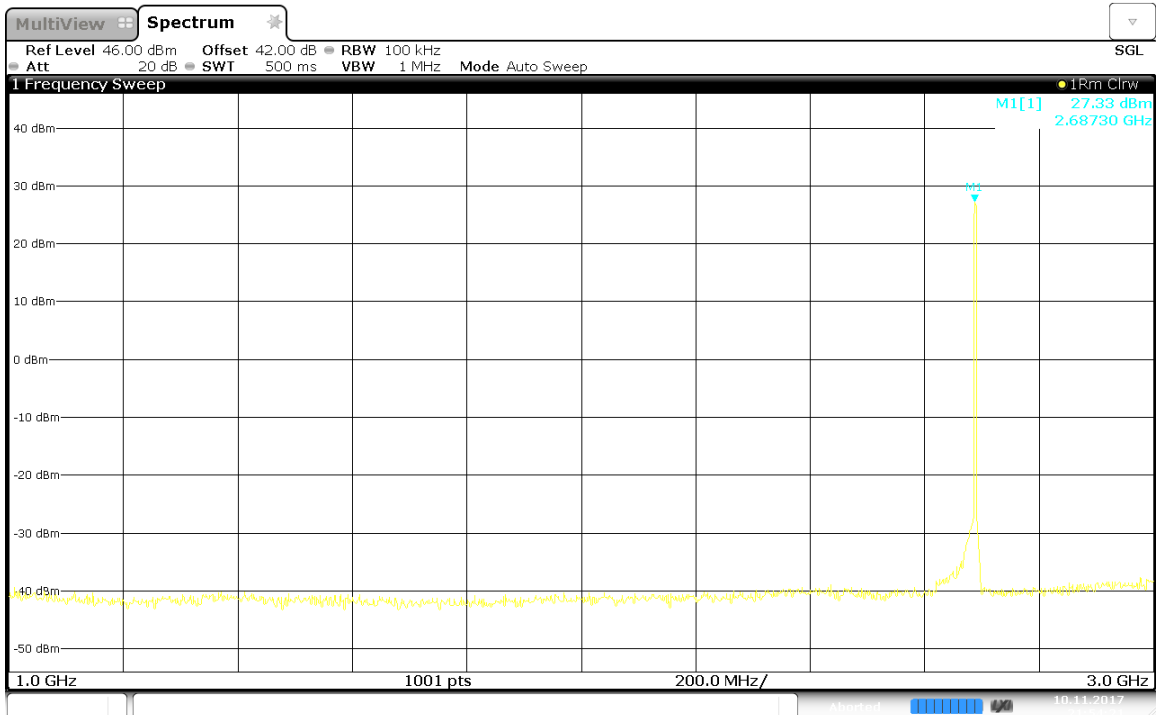
21:50:43 10.11.2017



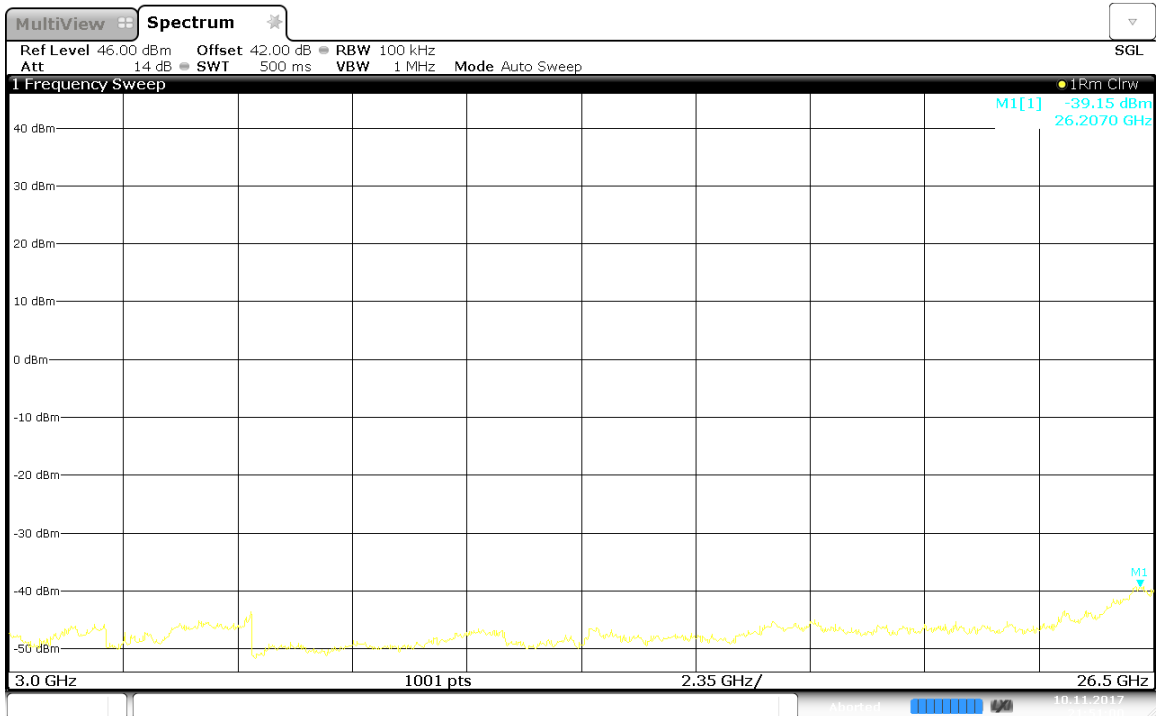
21:51:56 10.11.2017



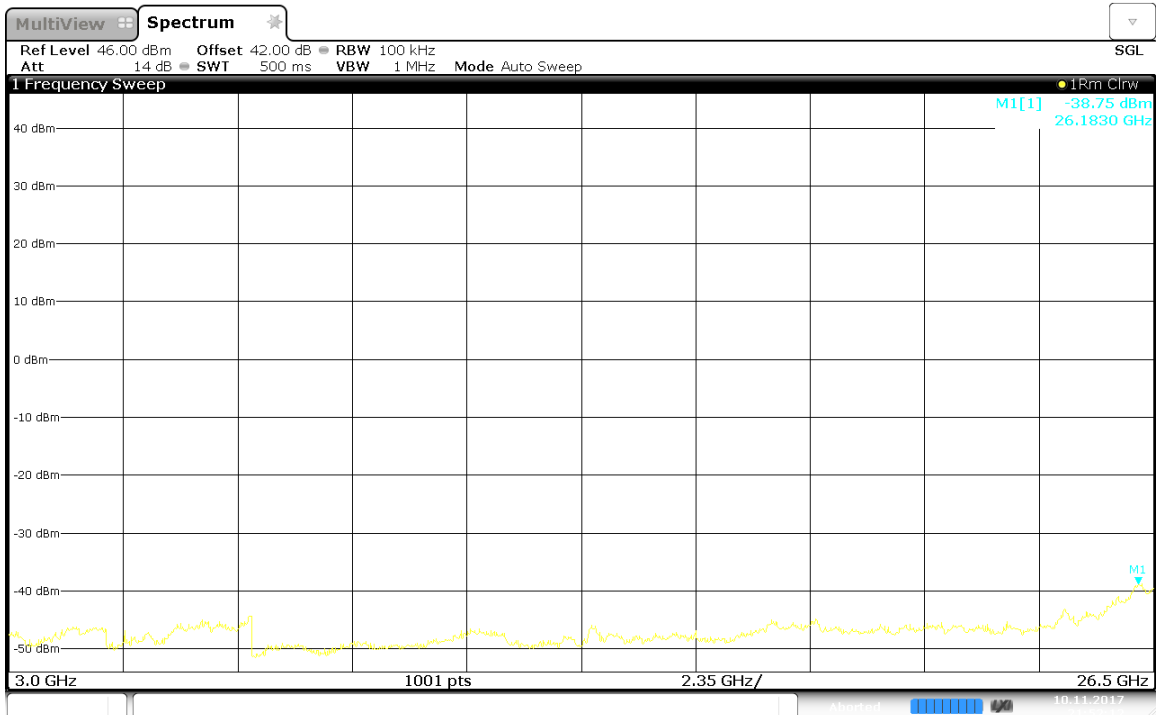
21:53:09 10.11.2017



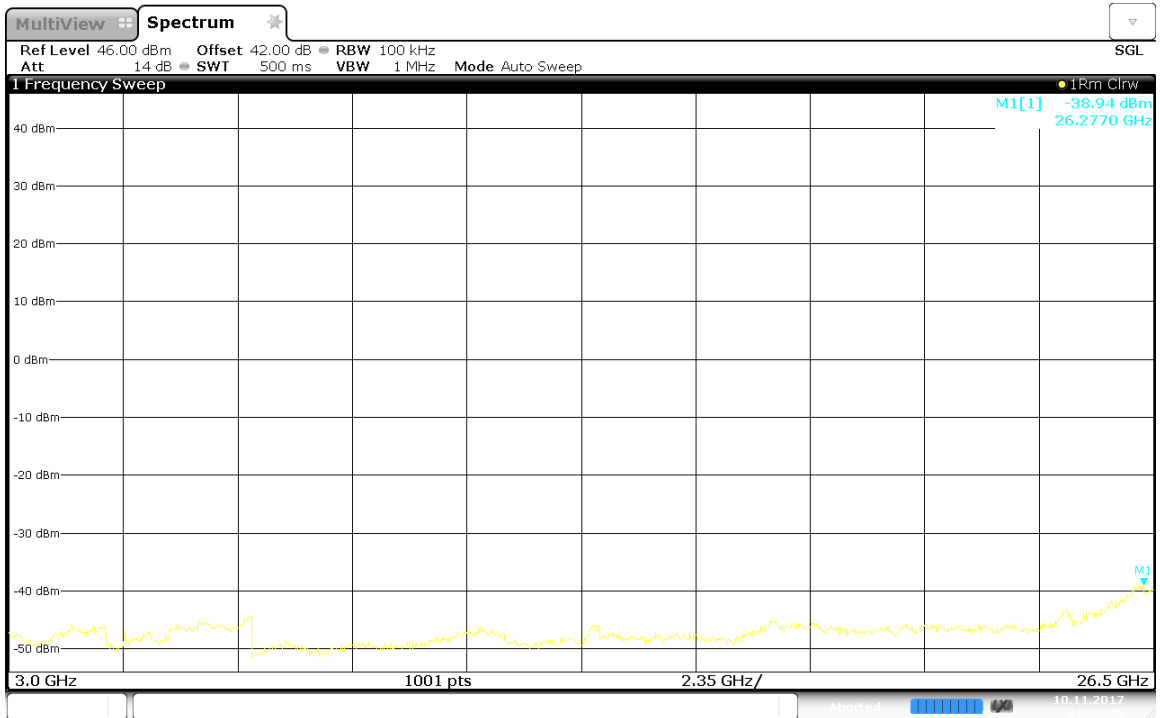
21:54:21 10.11.2017



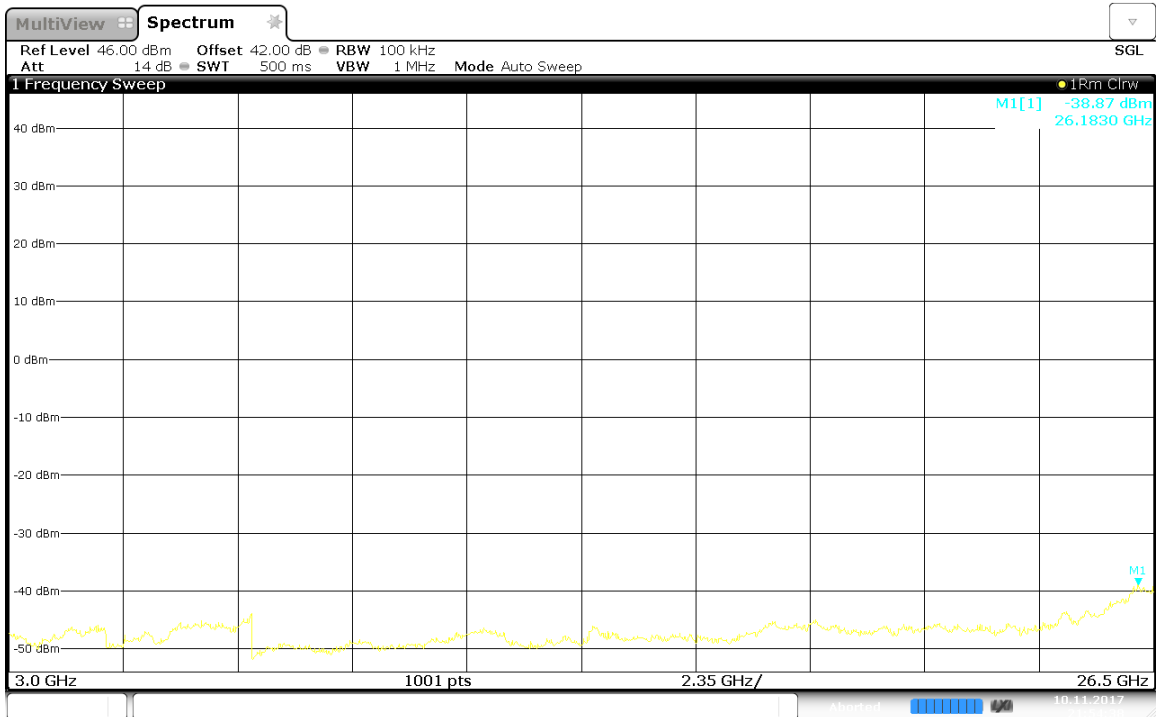
21:51:01 10.11.2017



21:52:13 10.11.2017

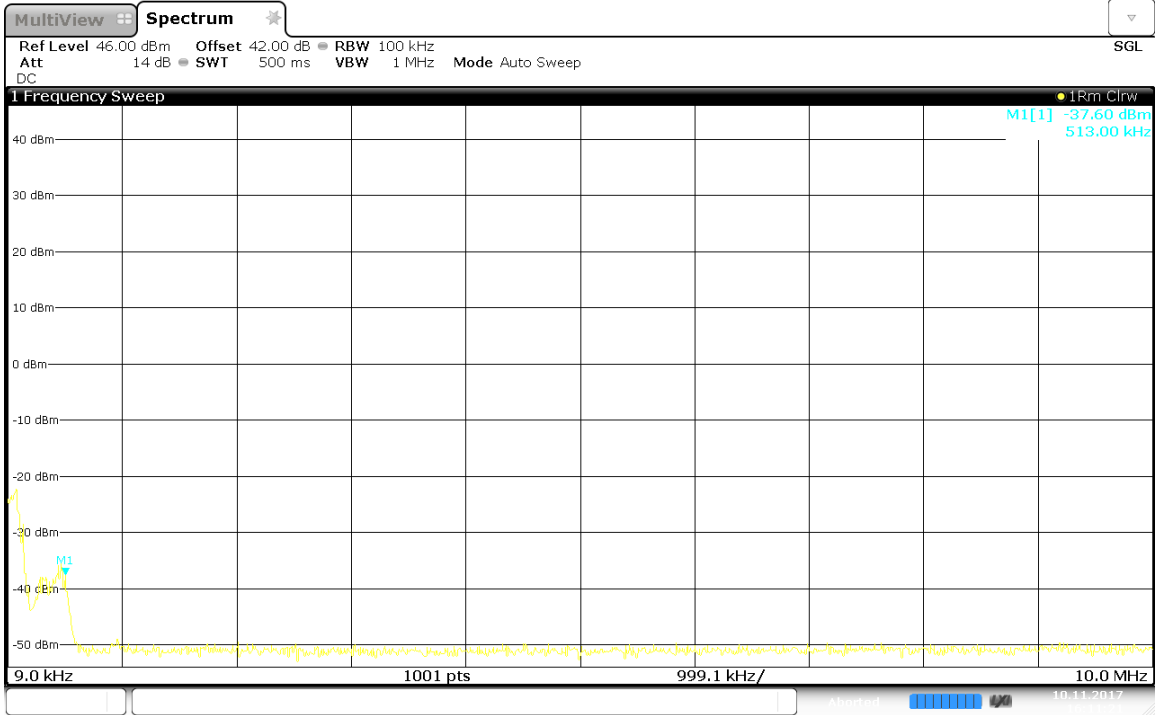


21:53:26 10.11.2017

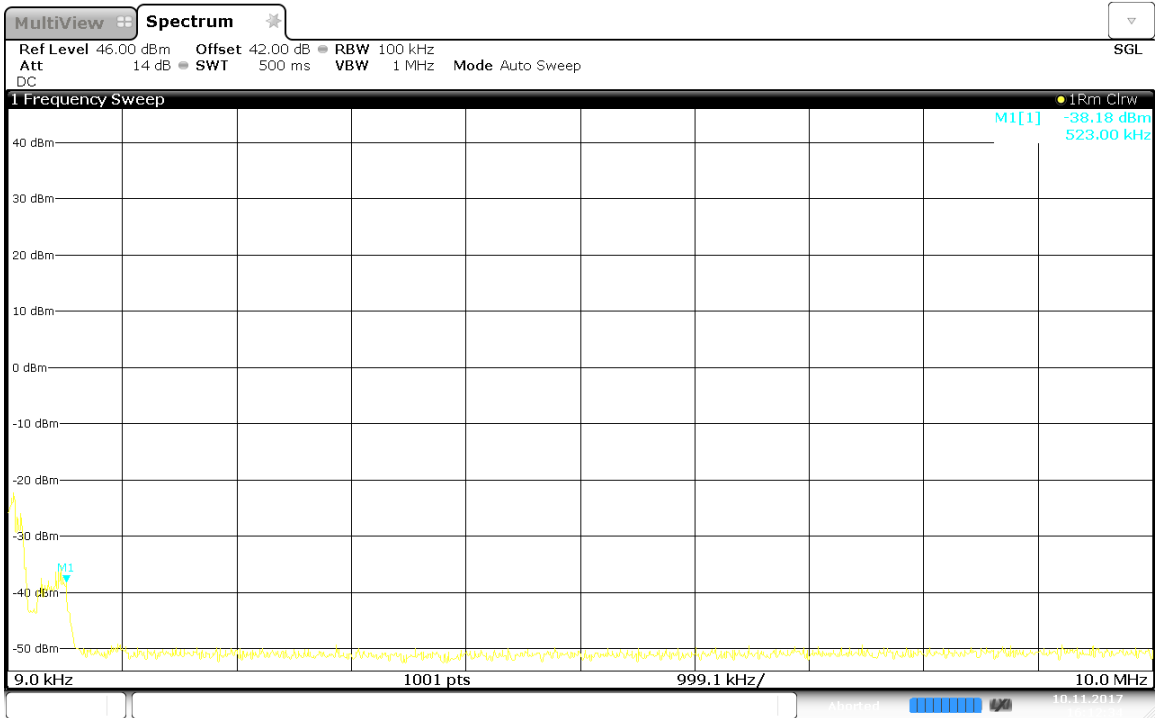


21:54:39 10.11.2017

10M -2625MHz-Port 1~4:

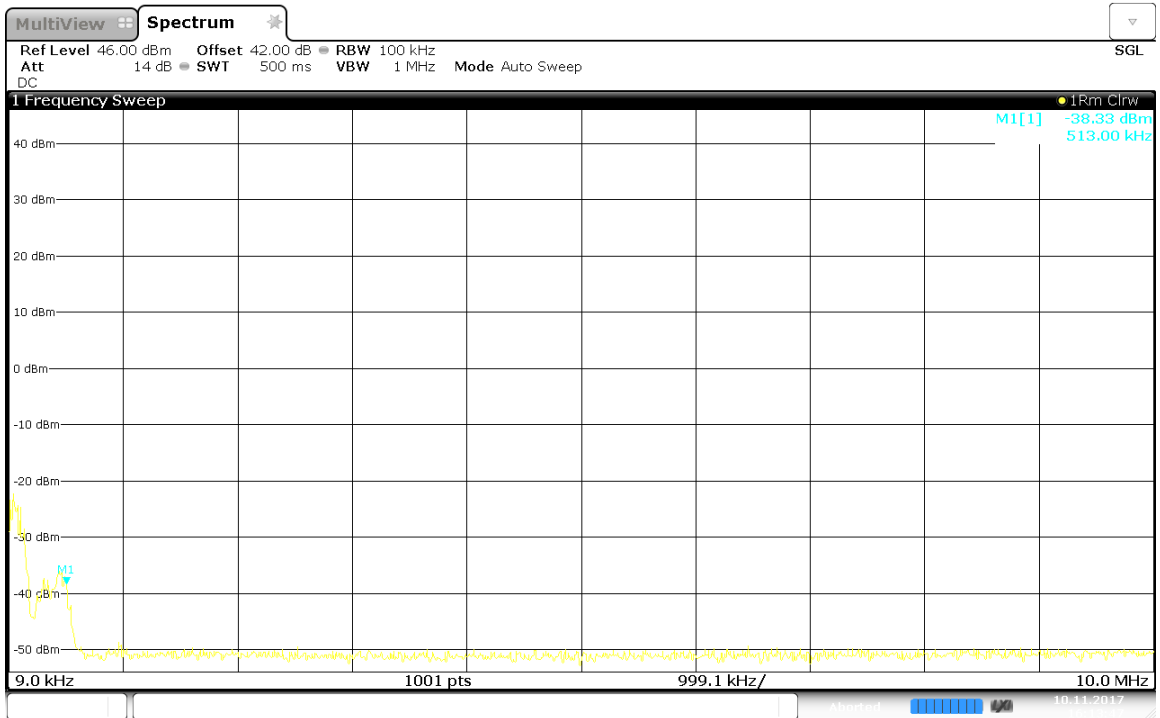


16:11:22 10.11.2017

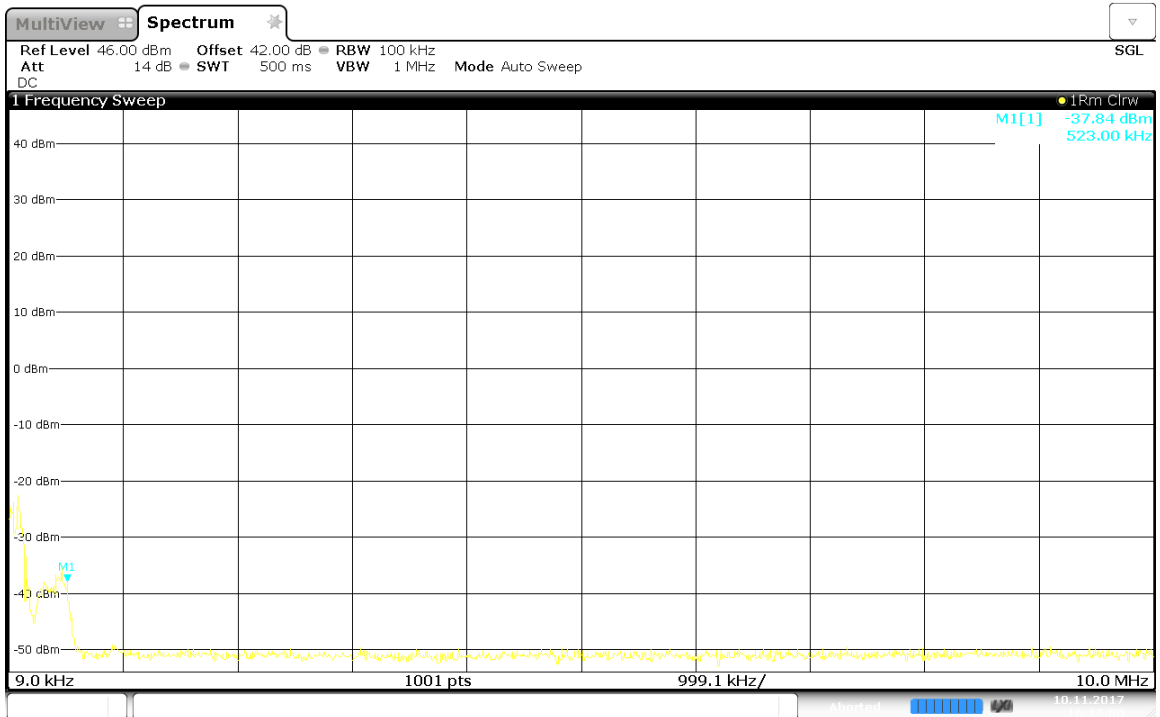


16:12:34 10.11.2017

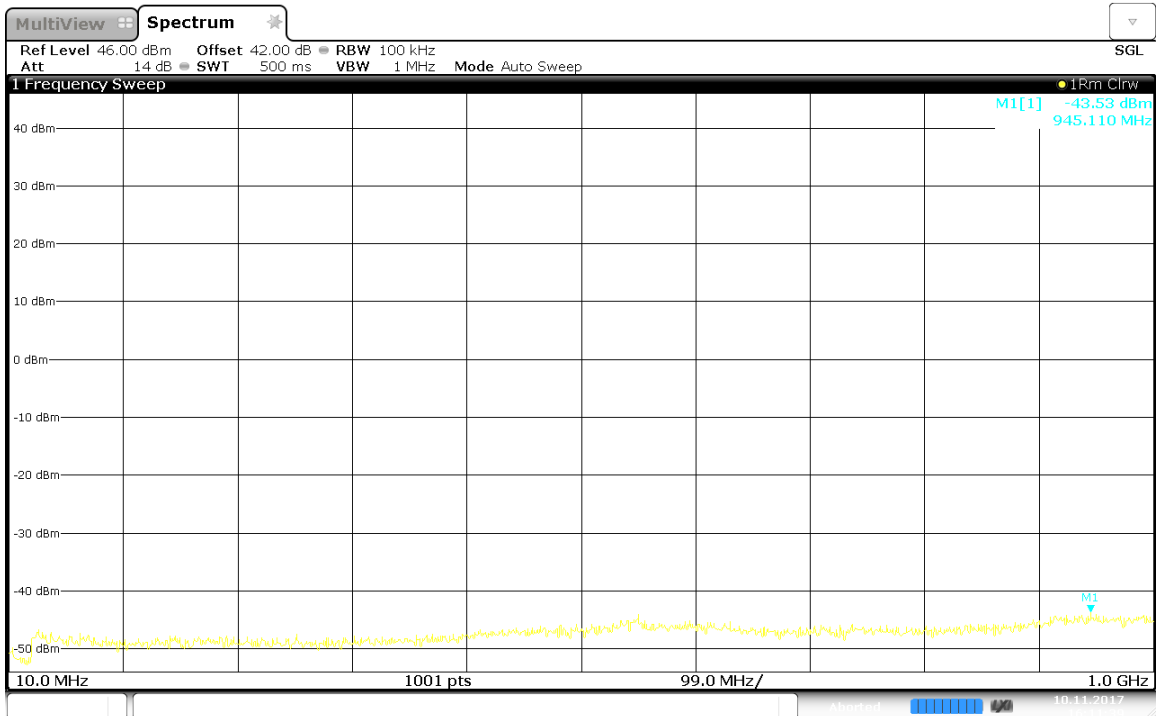




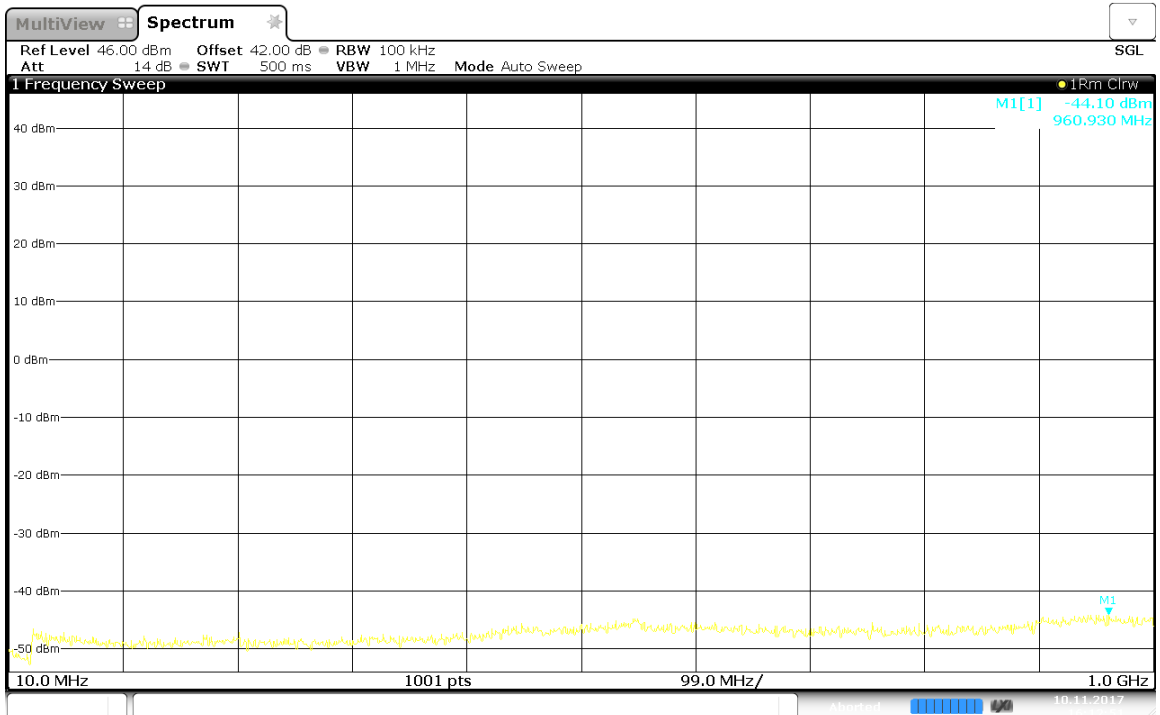
16:13:47 10.11.2017



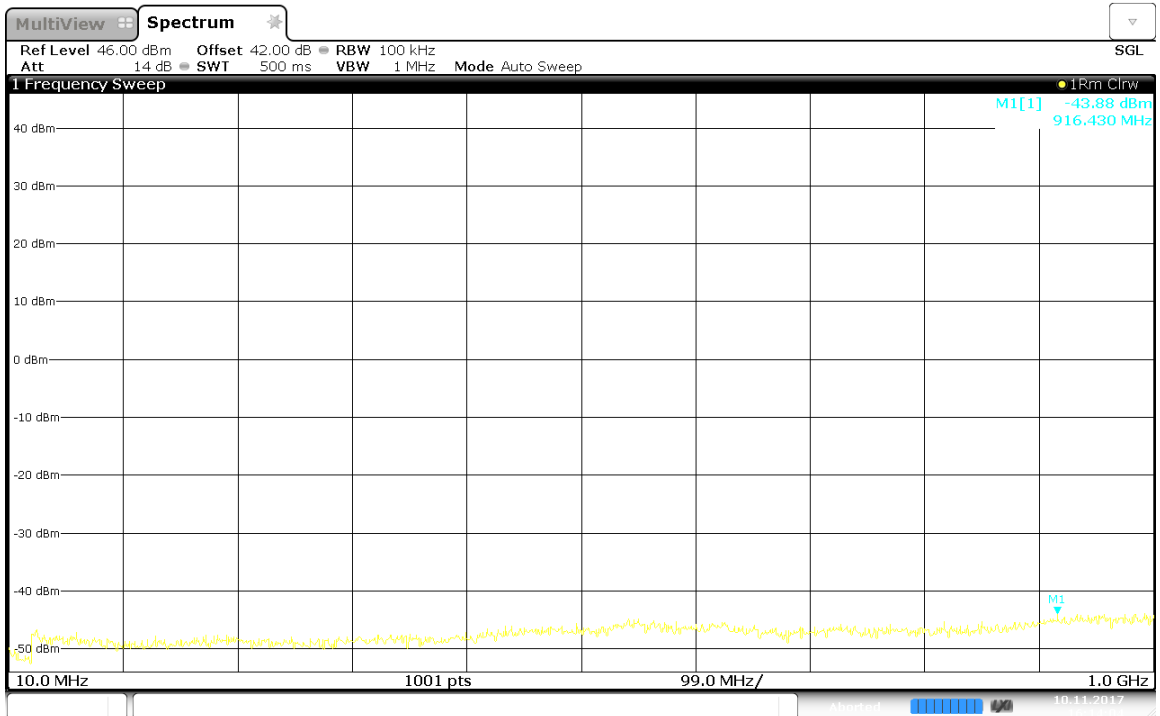
16:15:00 10.11.2017



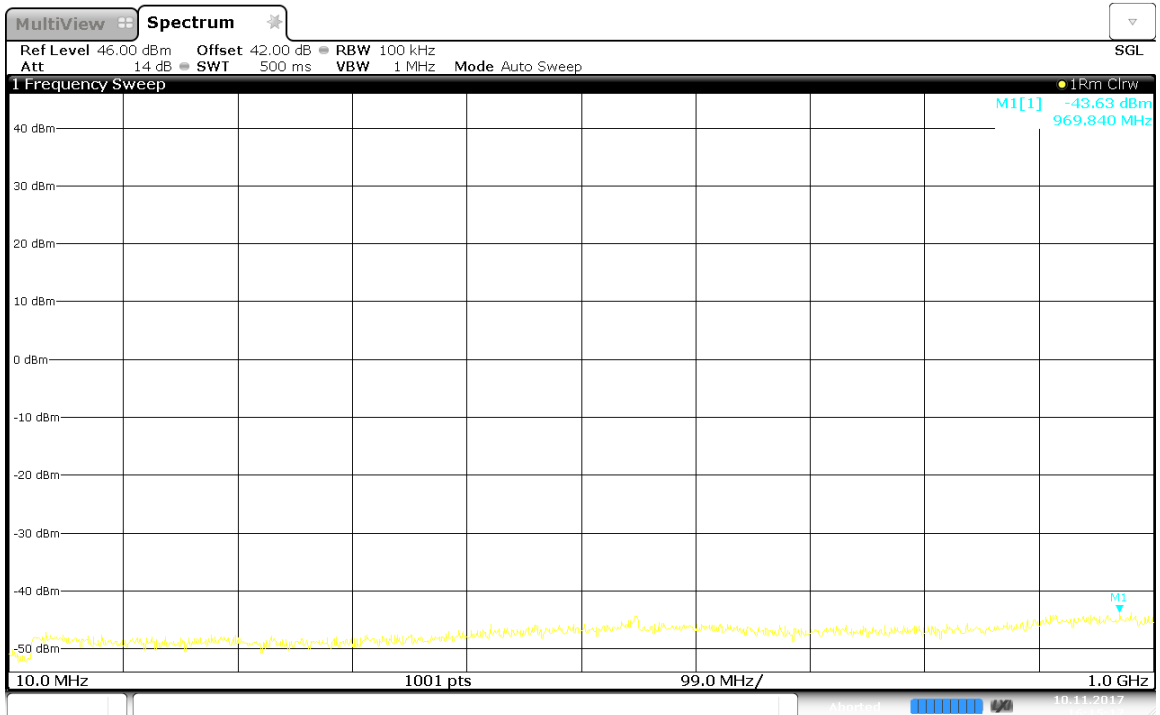
16:11:39 10.11.2017



16:12:52 10.11.2017



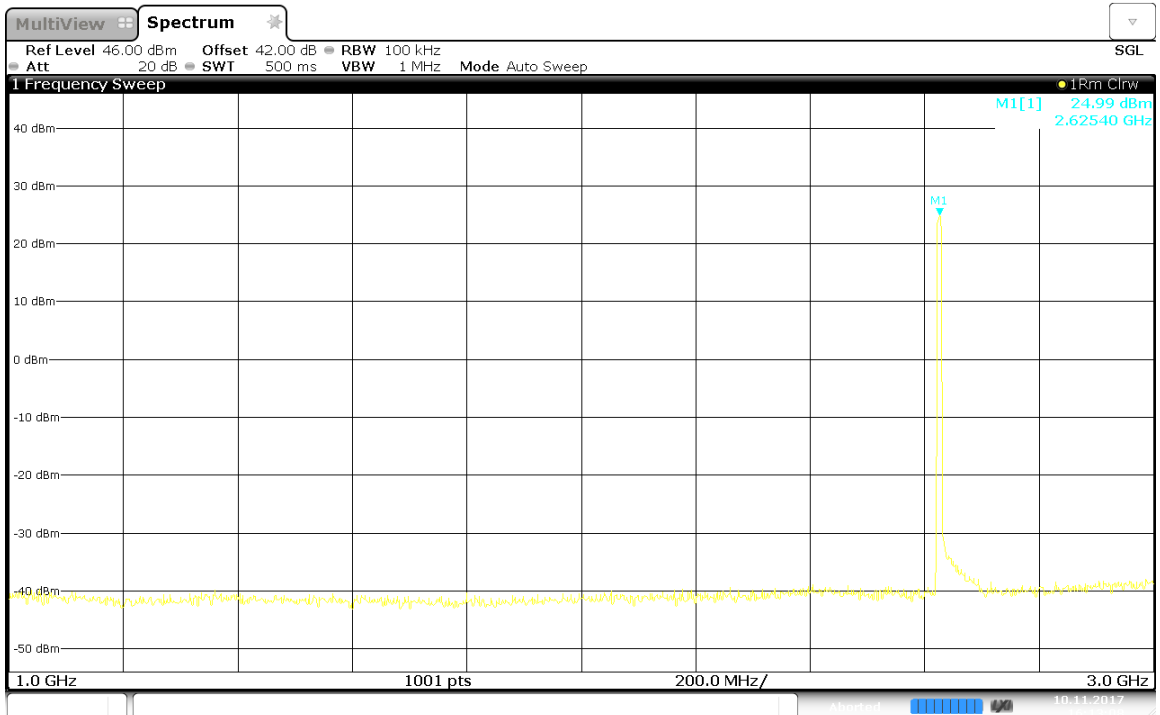
16:14:05 10.11.2017



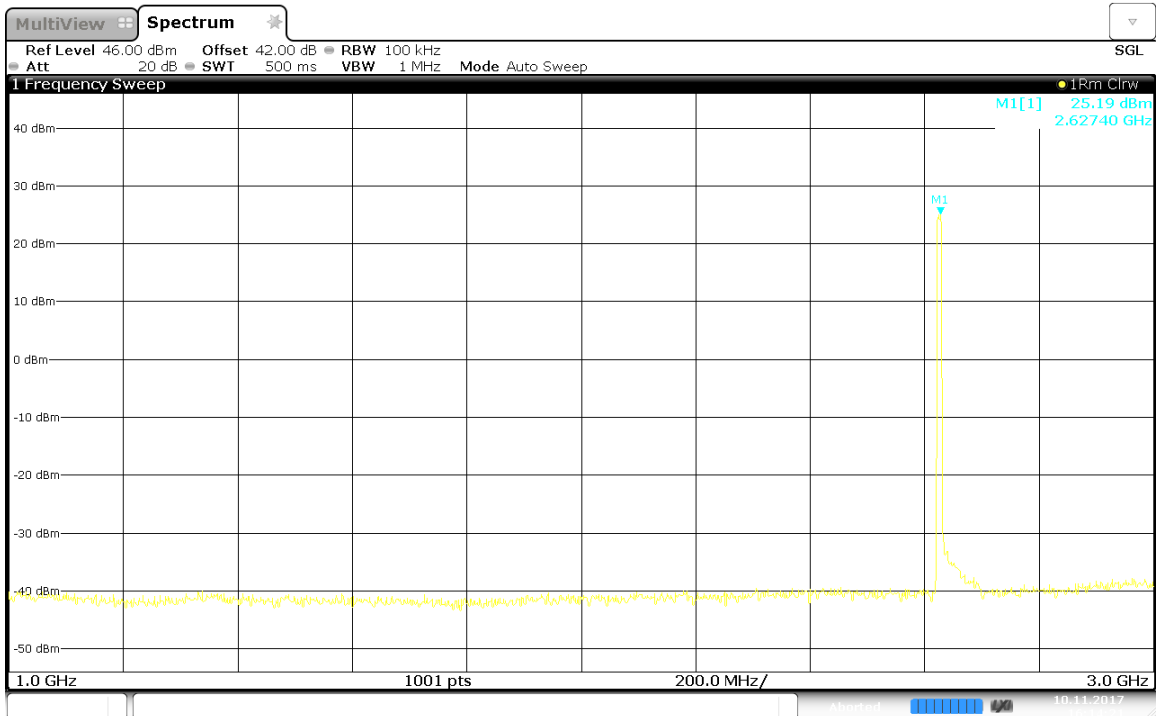
16:15:17 10.11.2017



16:11:57 10.11.2017



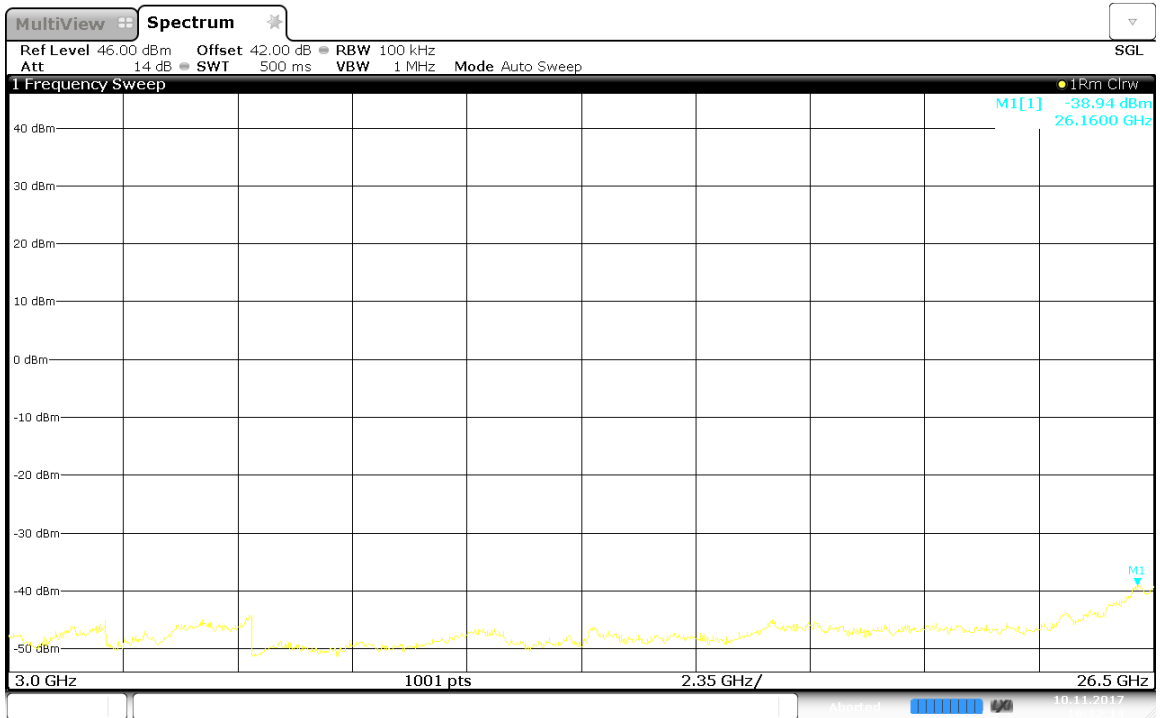
16:13:09 10.11.2017



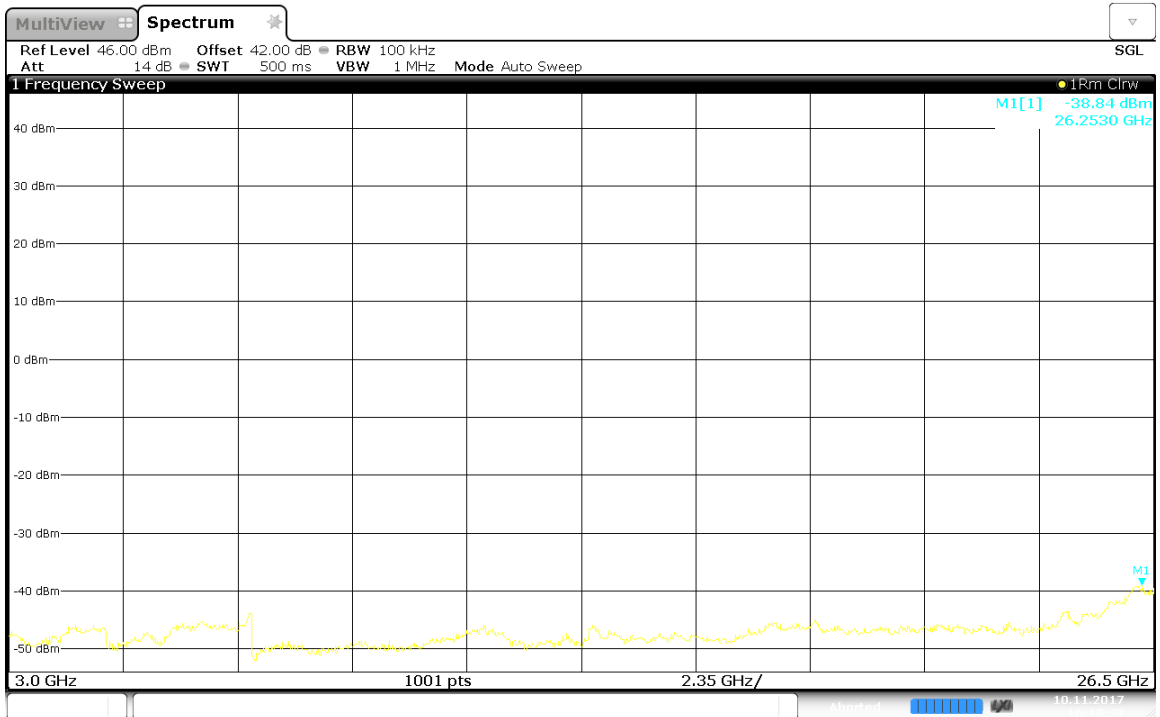
16:14:22 10.11.2017



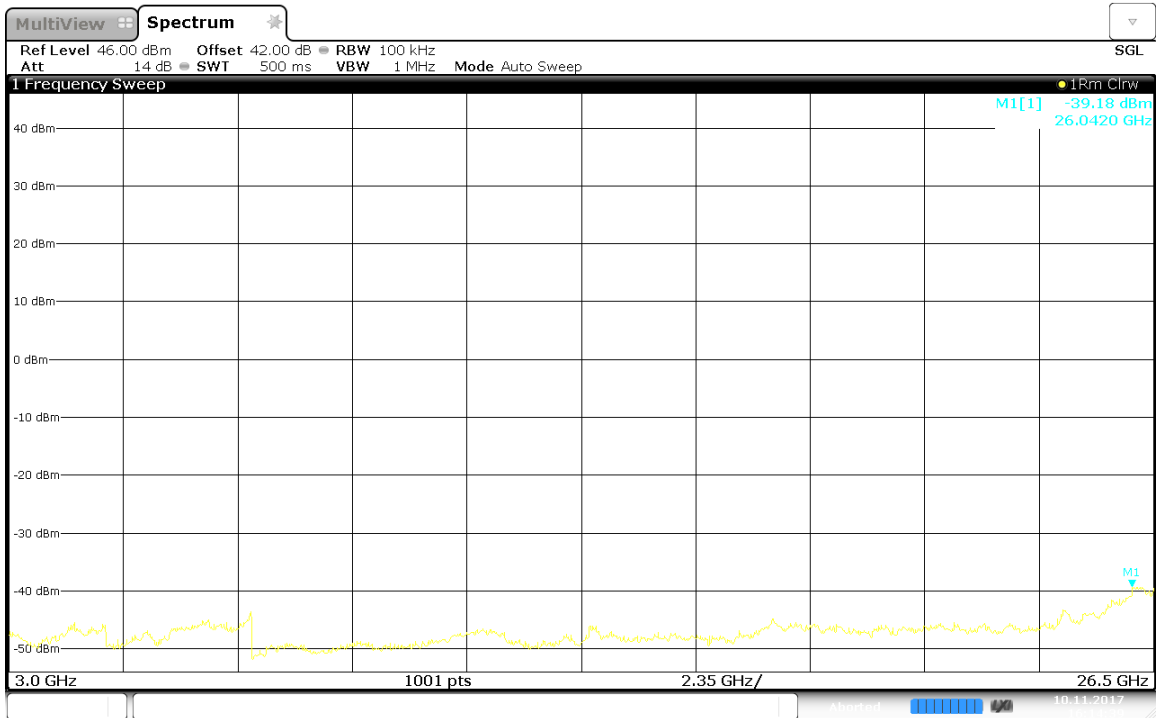
16:15:35 10.11.2017



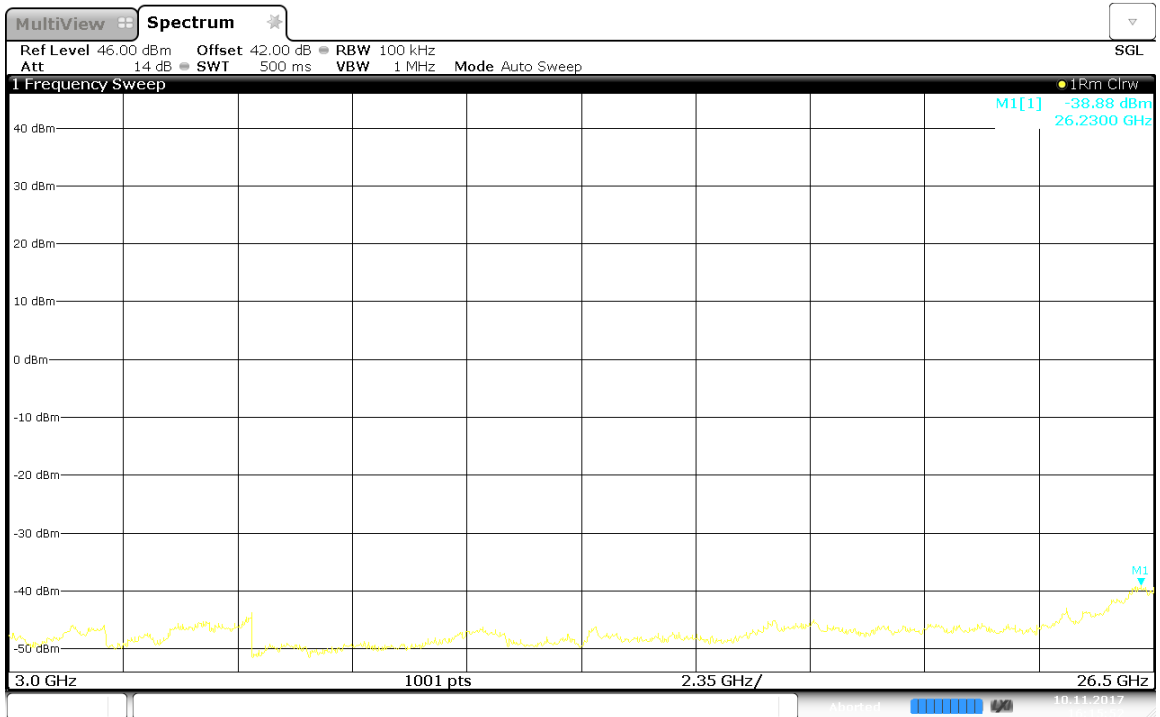
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16:13:27 10.11.2017

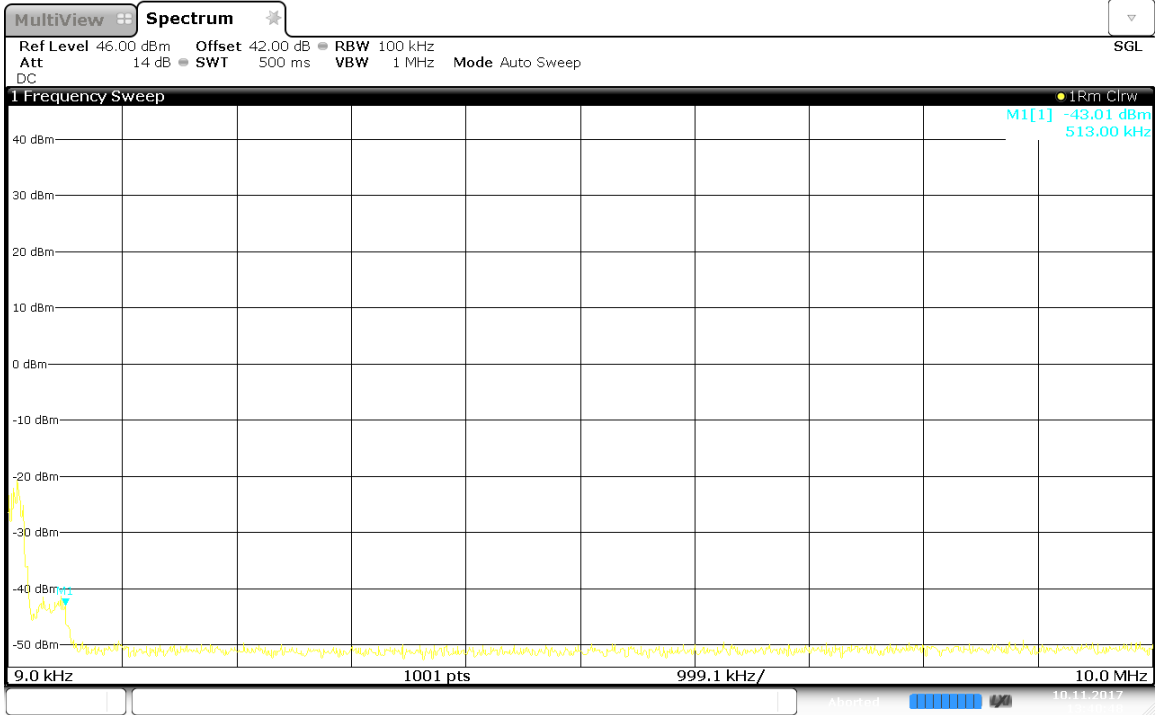


16:14:40 10.11.2017

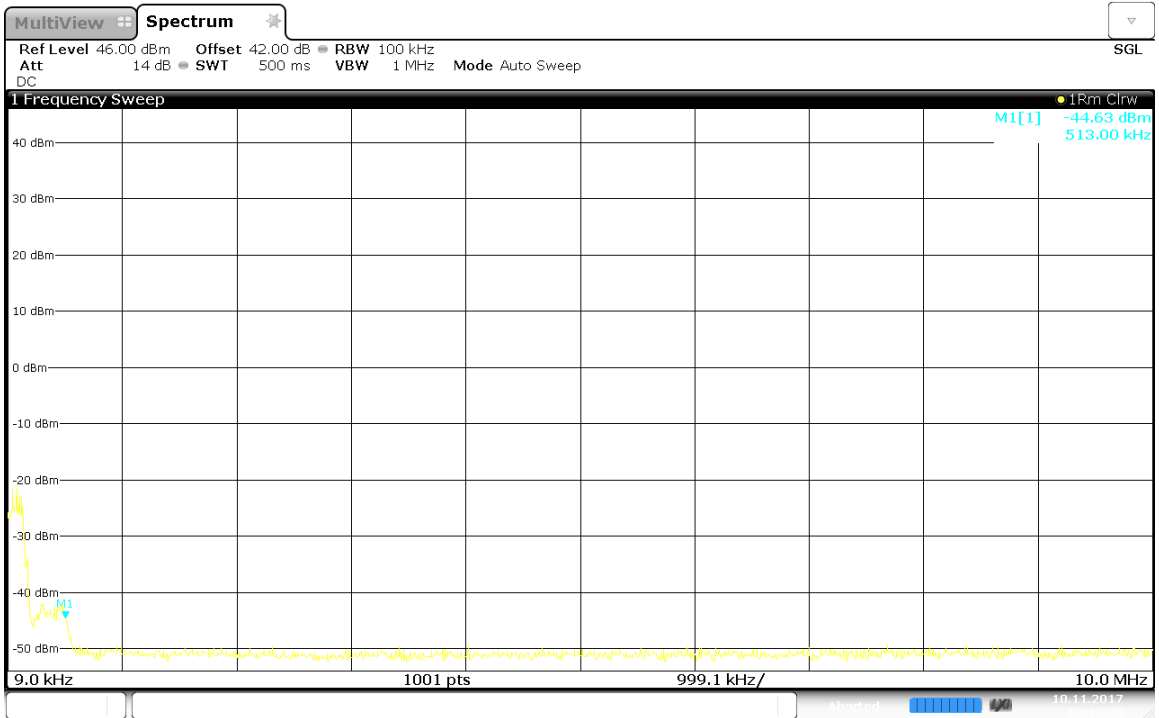


16:15:52 10.11.2017

# 10M -2655MHz-Port 1~4:



13:40:48 10.11.2017

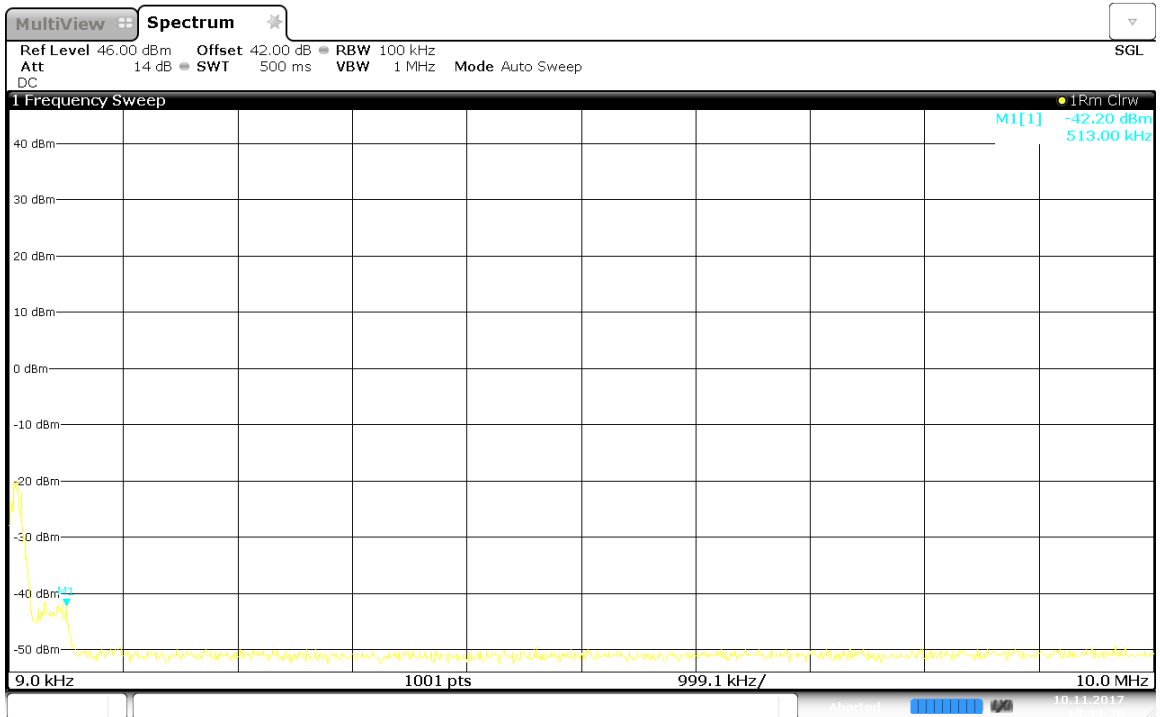


13:42:01 10.11.2017

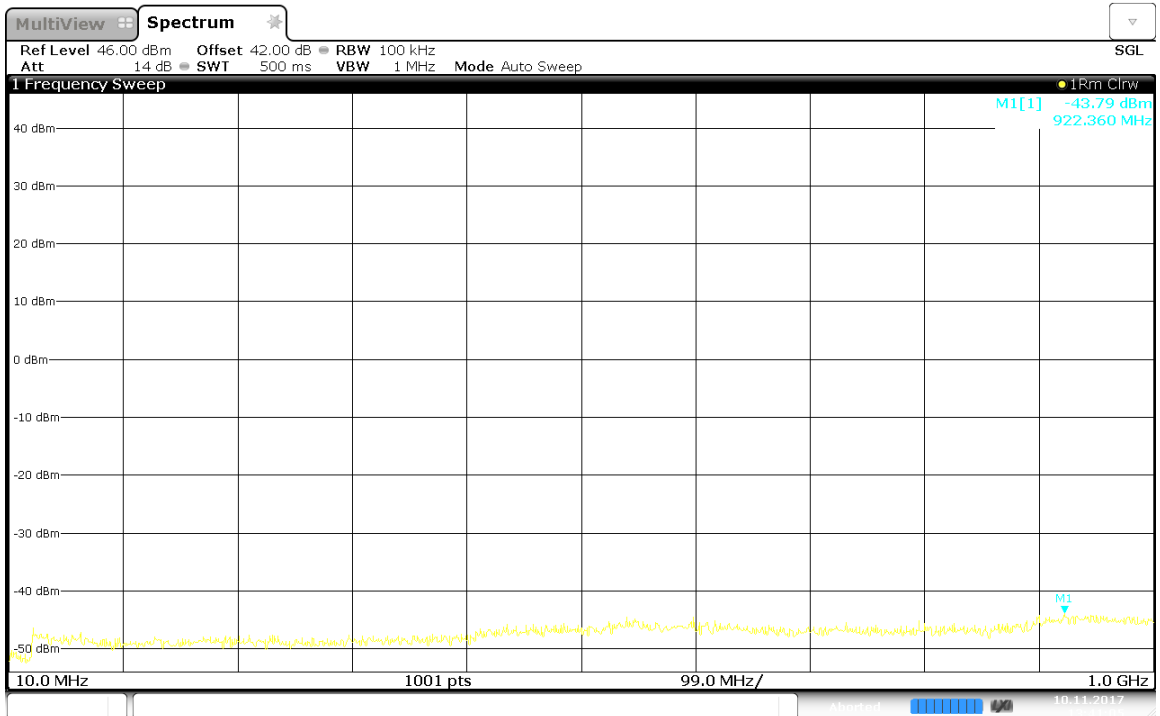




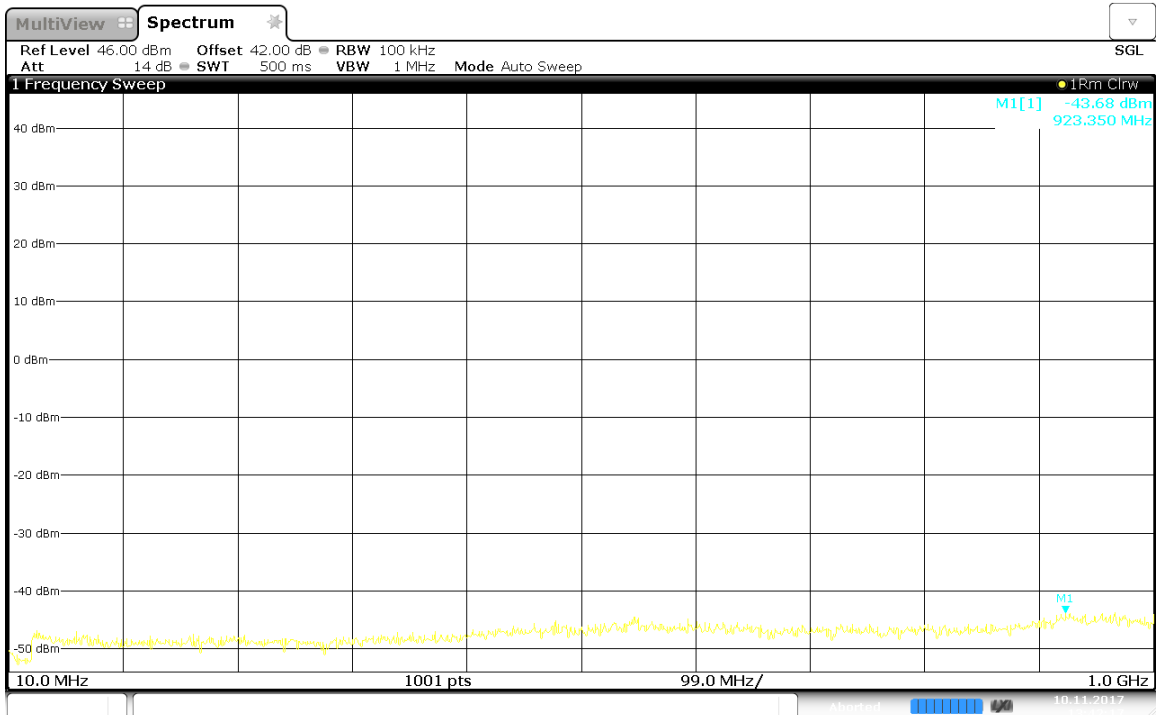
13:43:13 10.11.2017



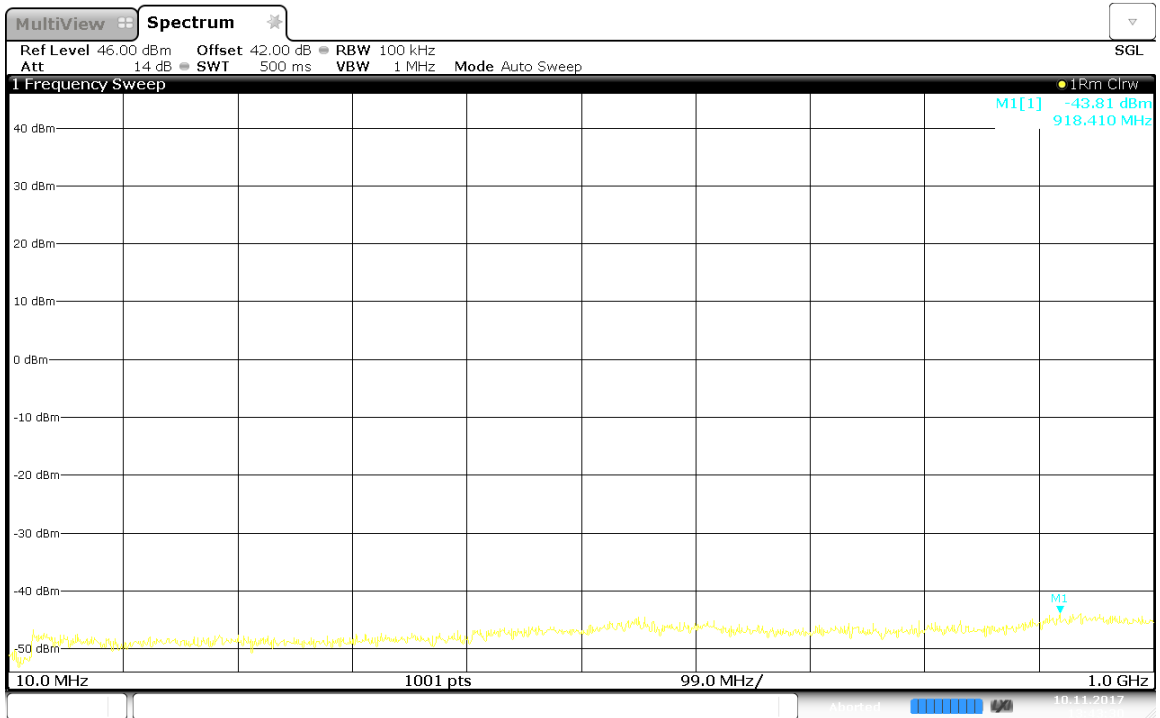
13:44:26 10.11.2017



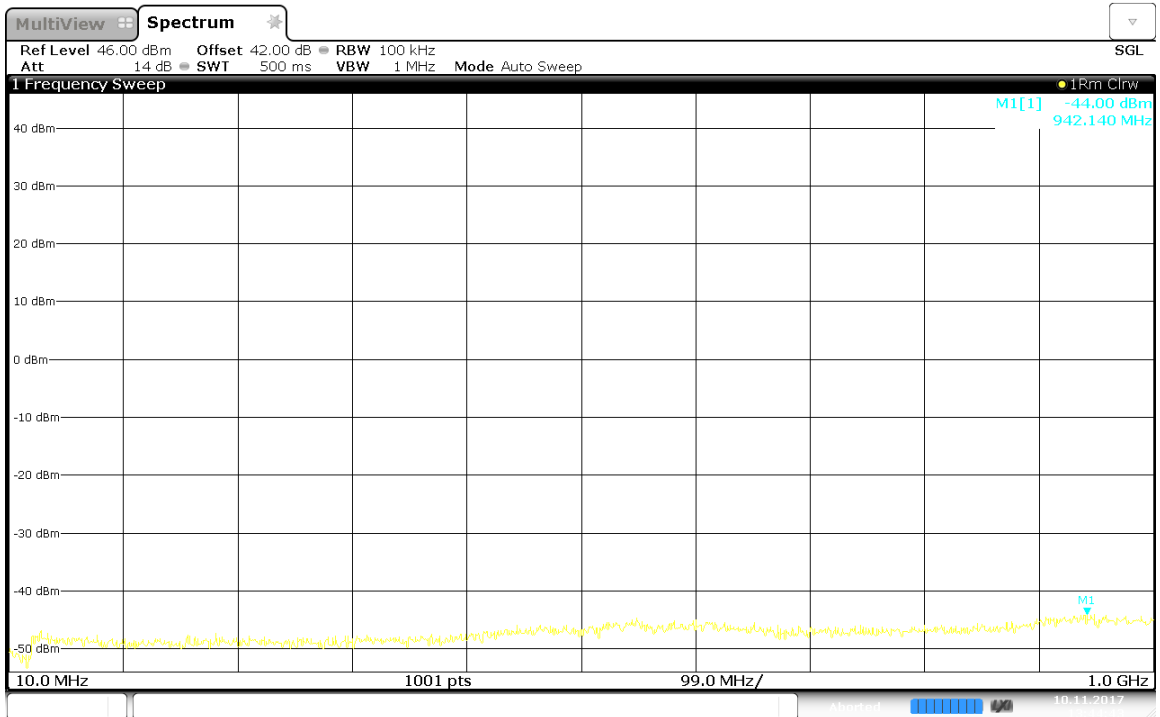
13:41:05 10.11.2017



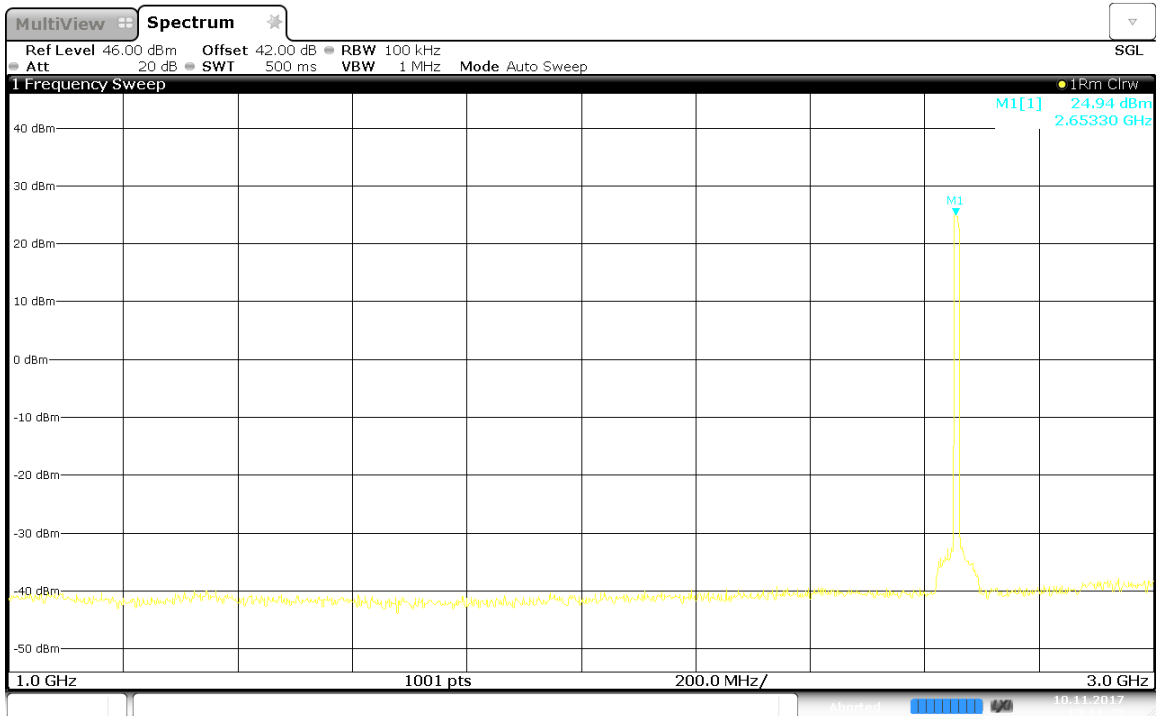
13:42:18 10.11.2017



13:43:31 10.11.2017



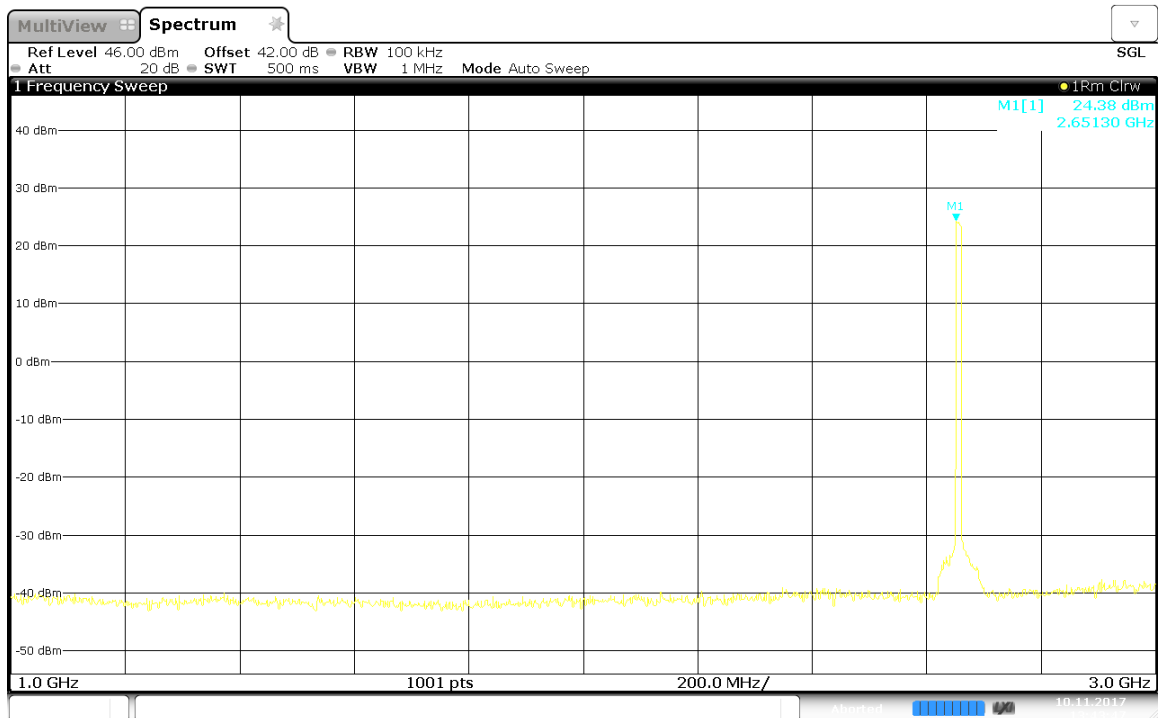
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13:41:23 10.11.2017



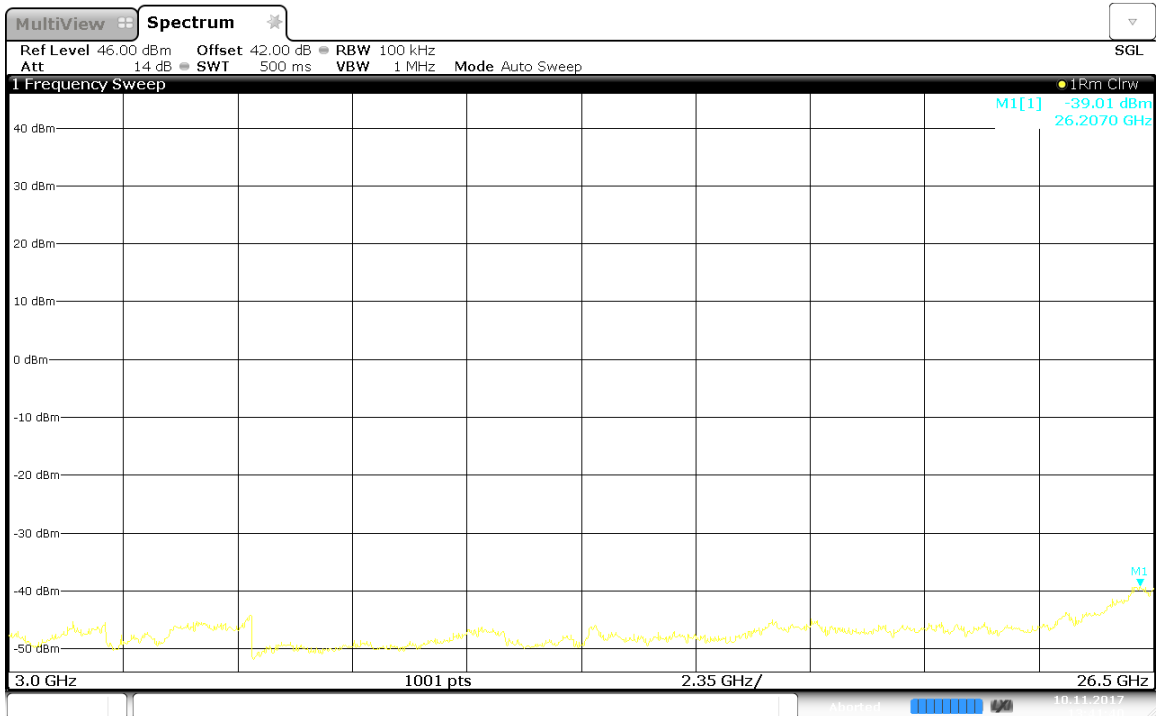
13:42:36 10.11.2017



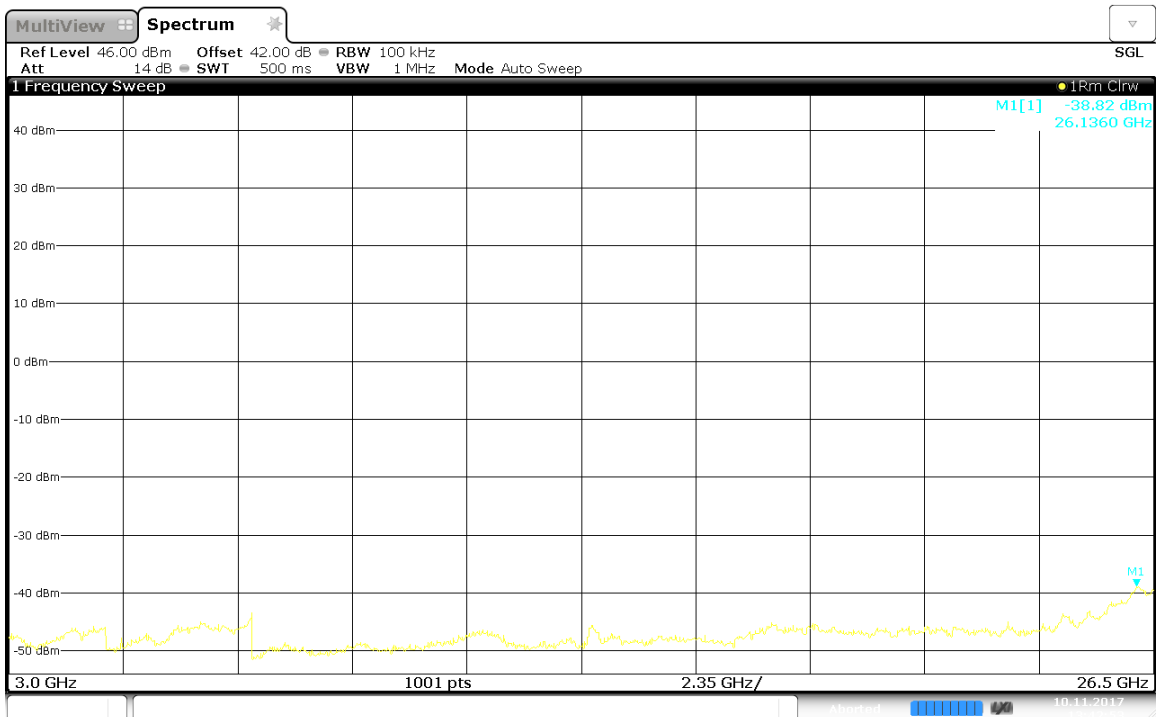
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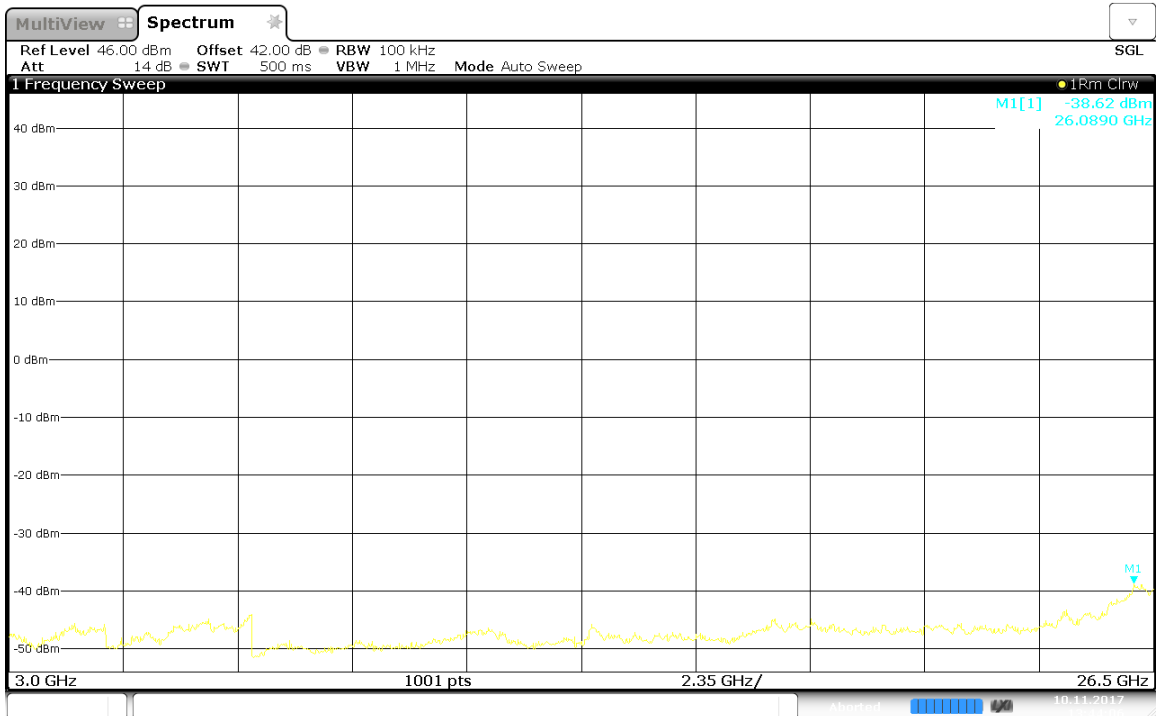
13:45:01 10.11.2017



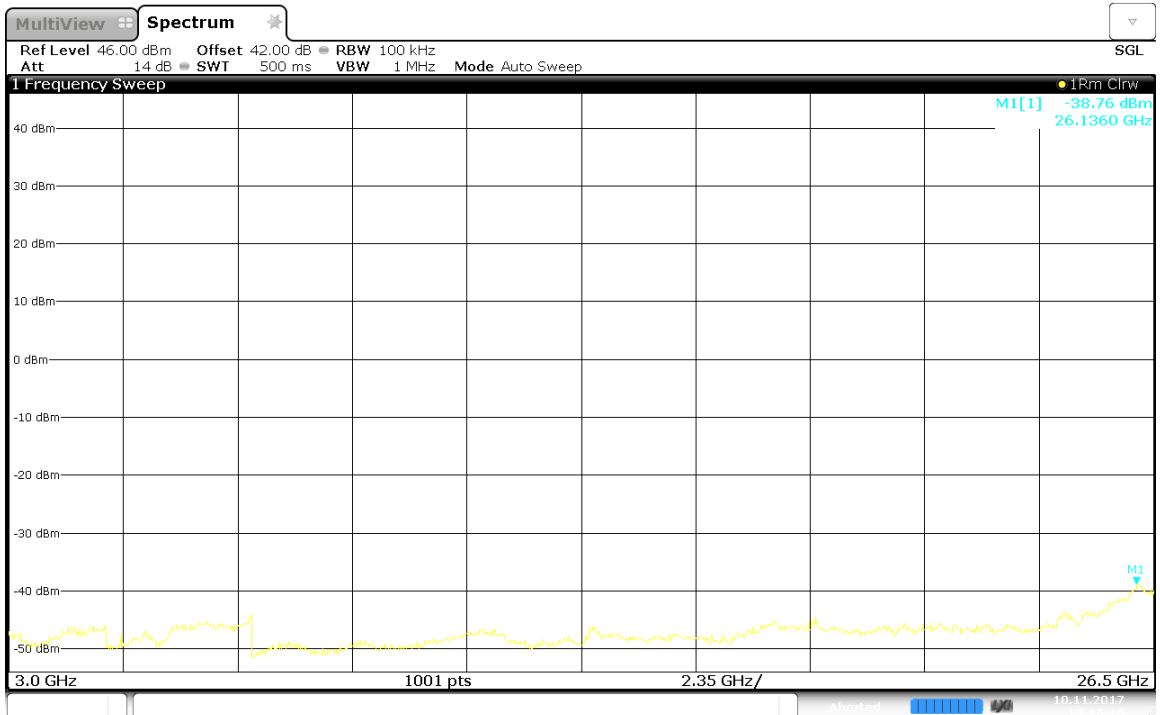
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13:42:53 10.11.2017

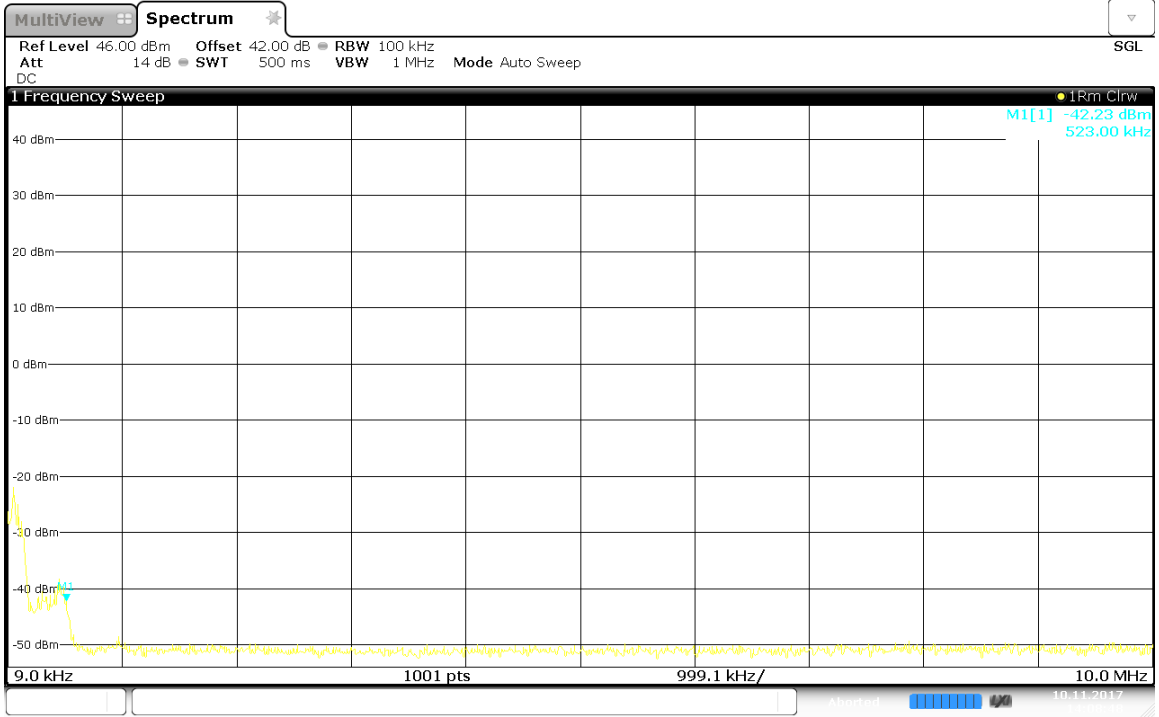


13:44:06 10.11.2017

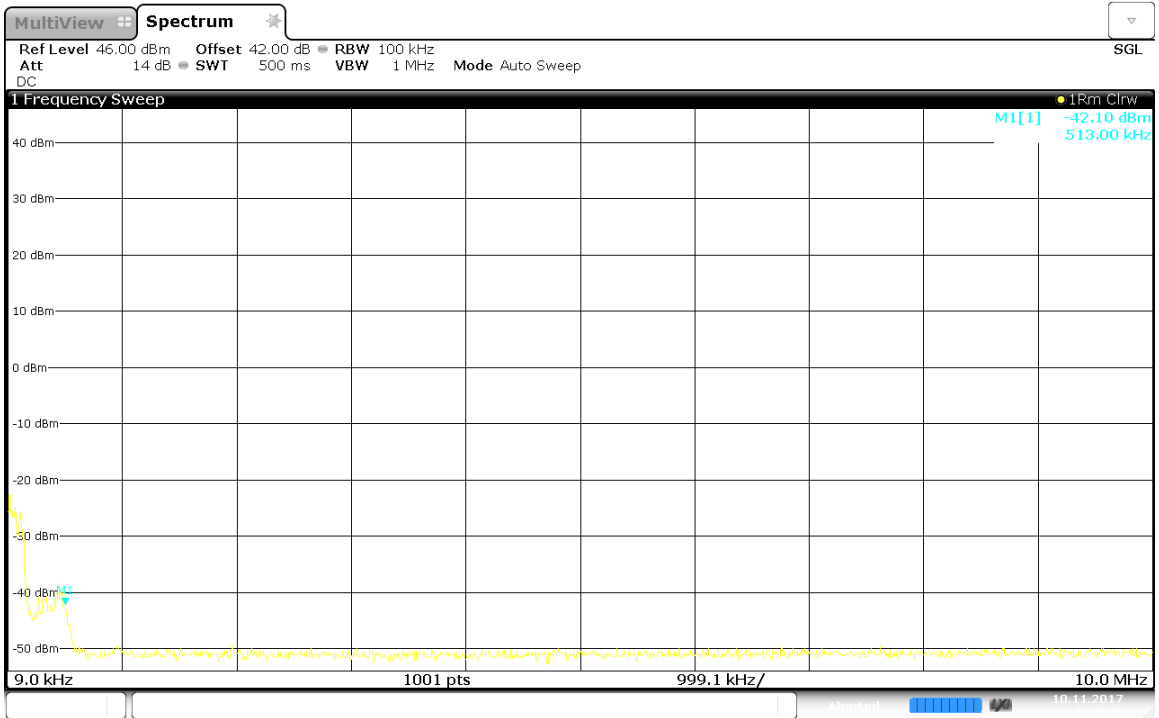


13:45:19 10.11.2017

# 10M -2685MHz-Port 1~4:

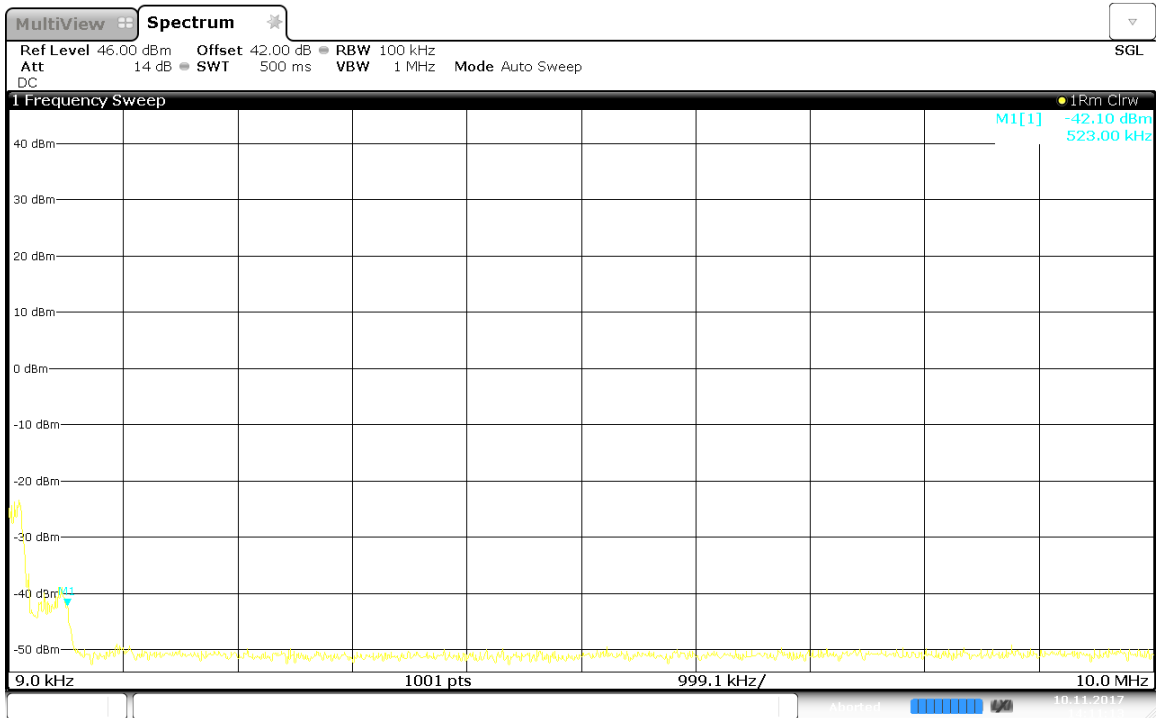


14:08:48 10.11.2017

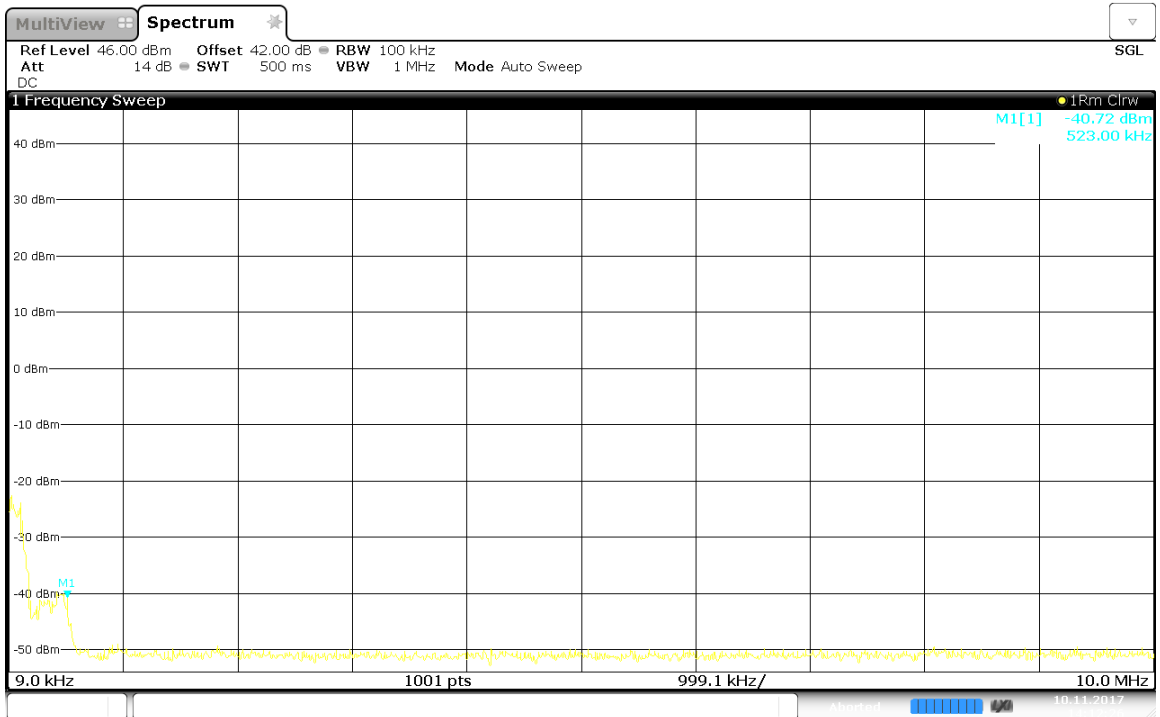


14:10:01 10.11.2017

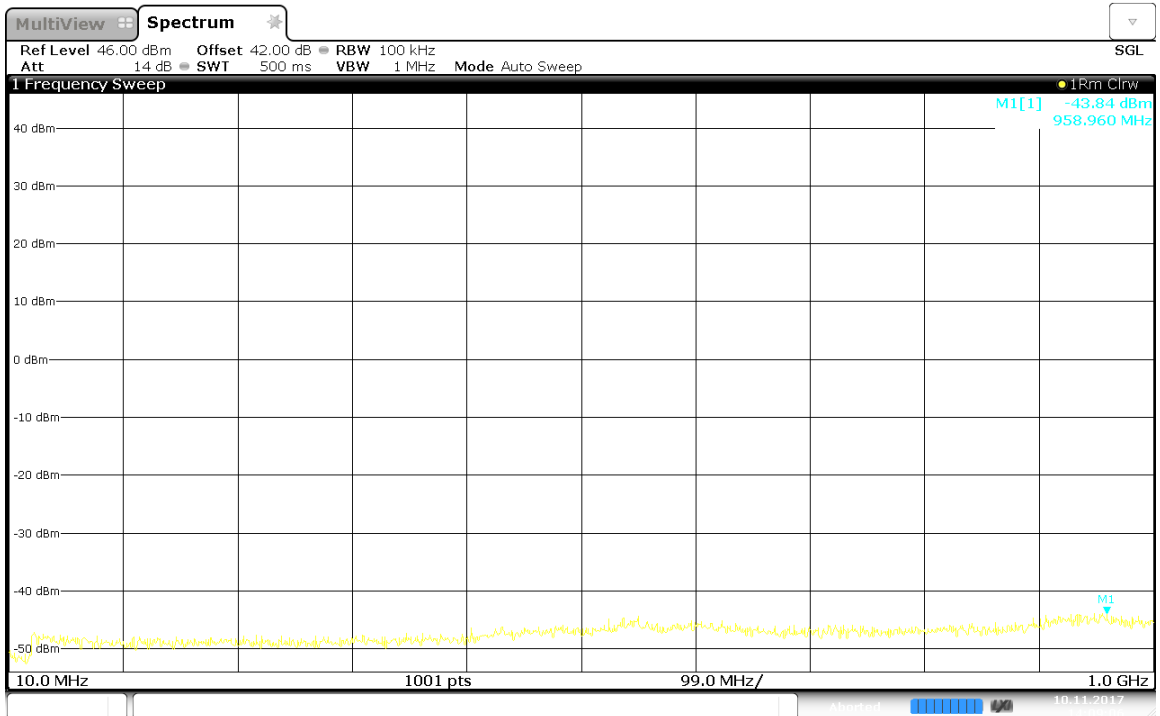




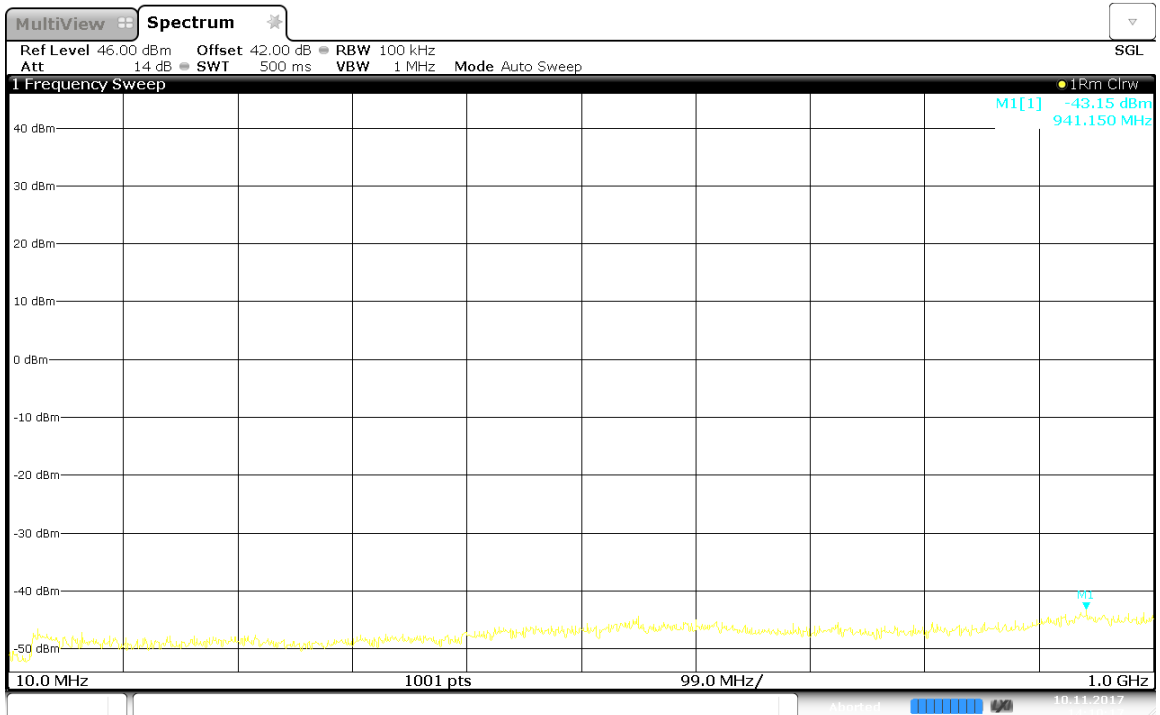
14:11:14 10.11.2017



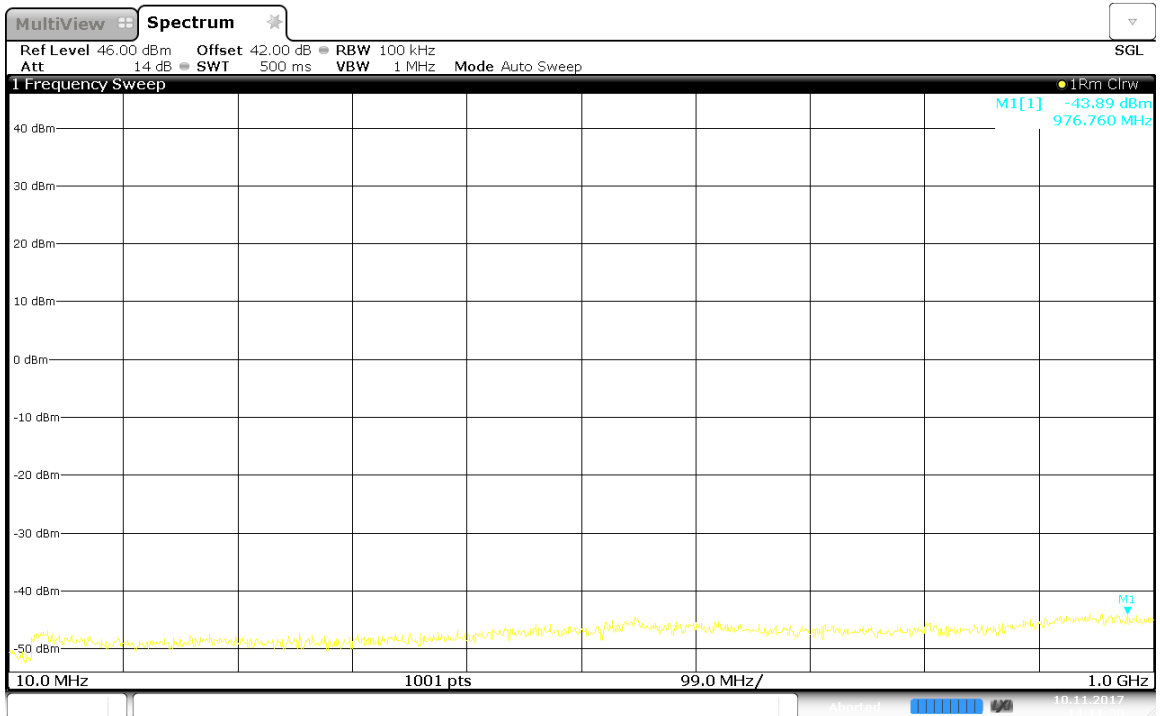
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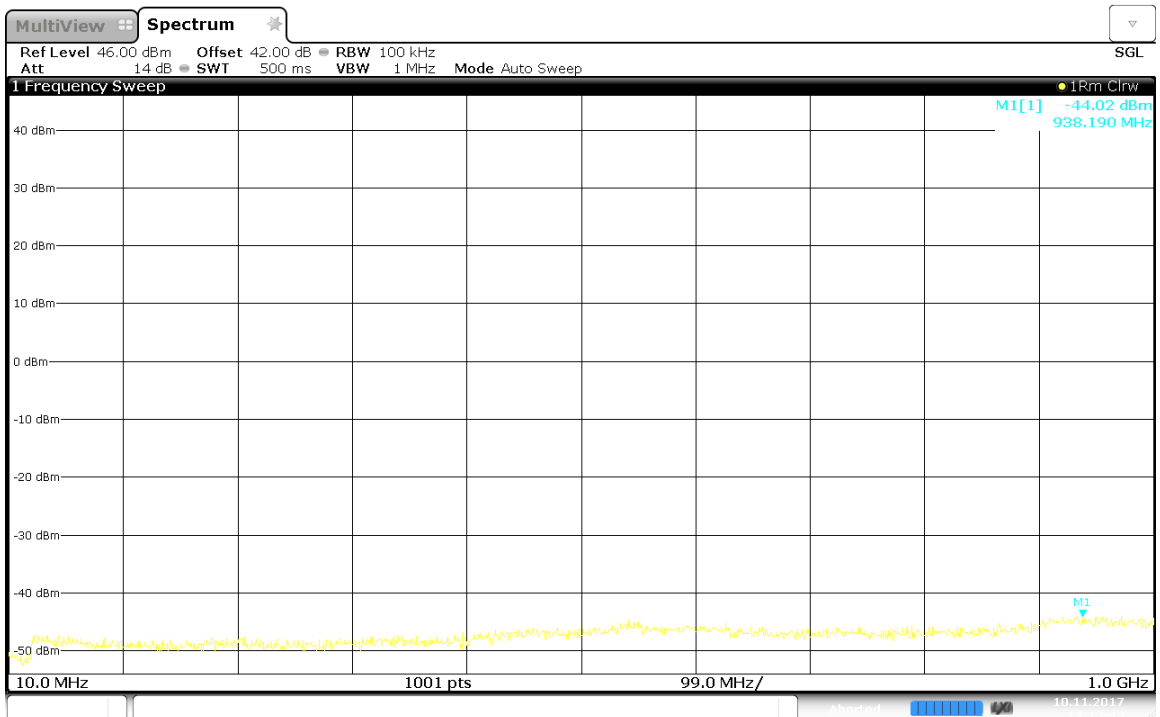
14:09:06 10.11.2017



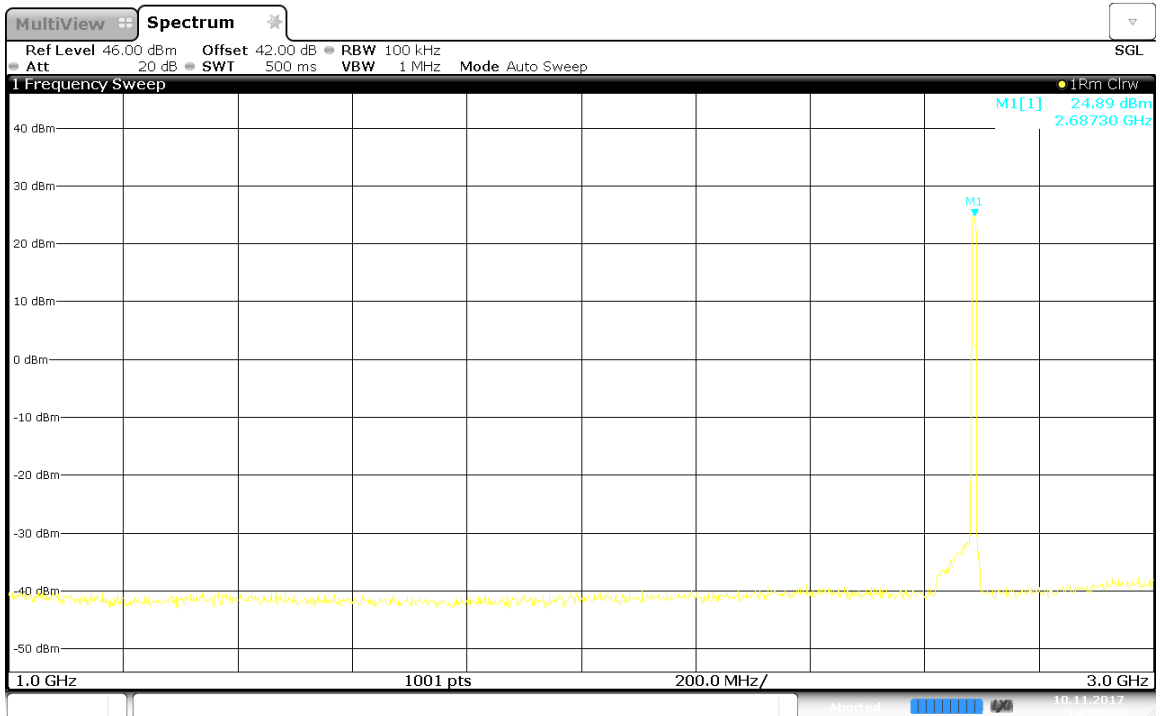
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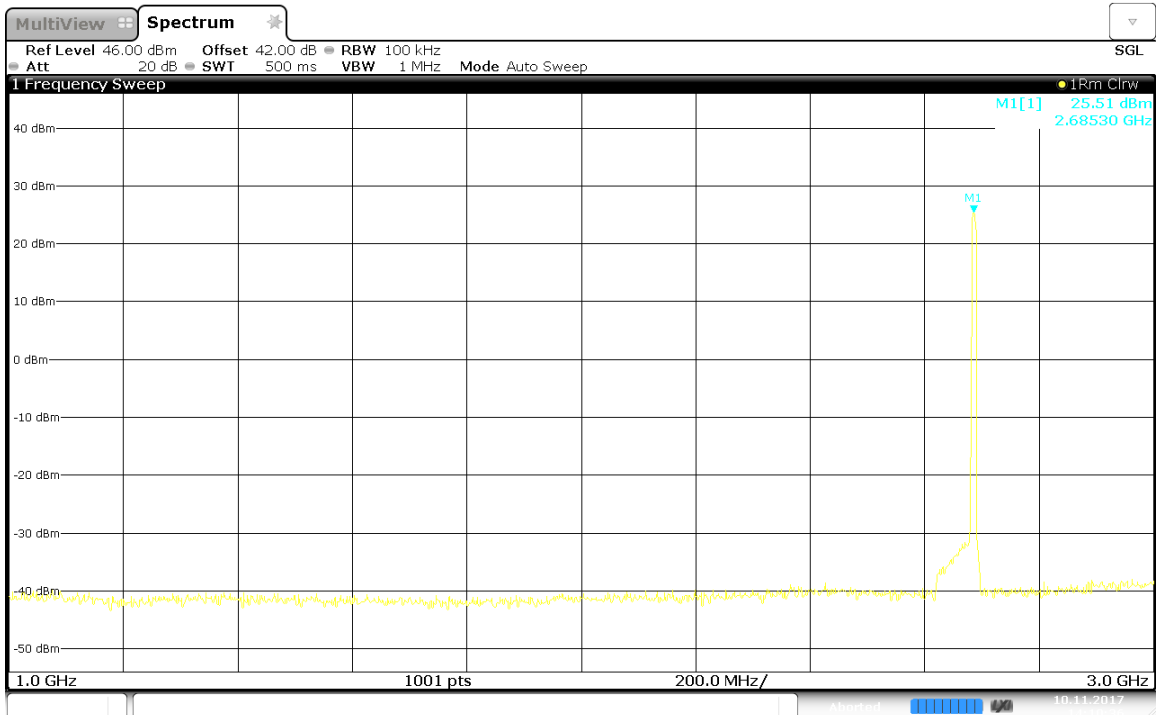
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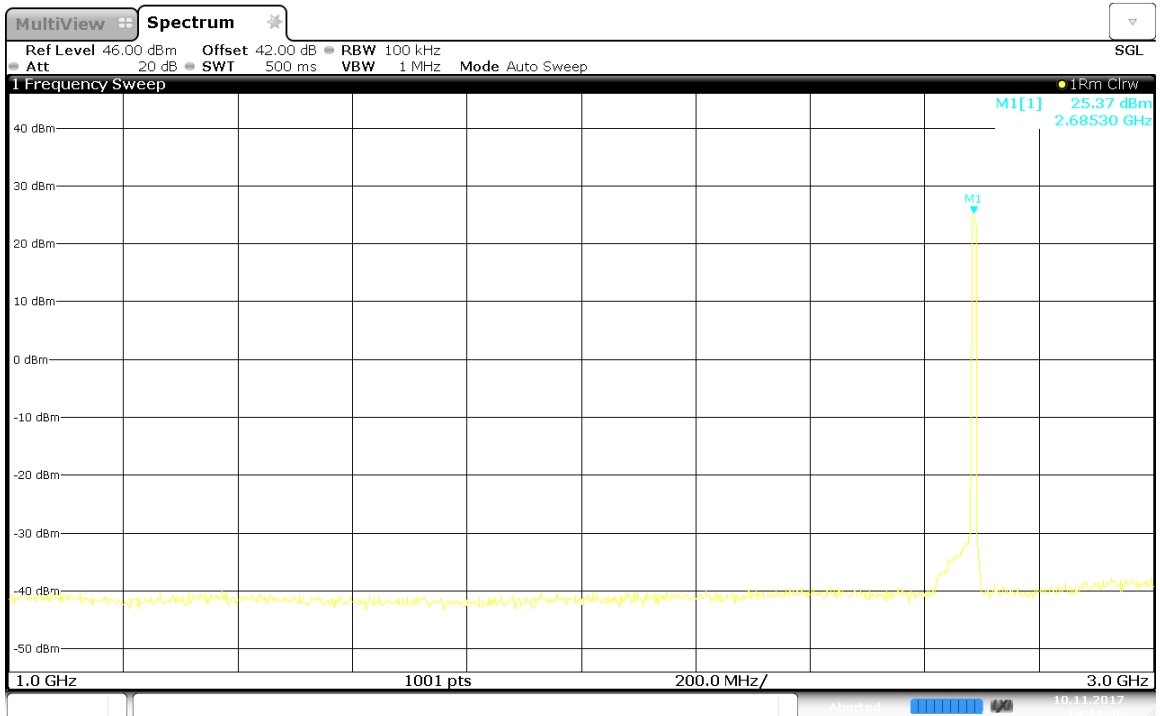
14:12:44 10.11.2017



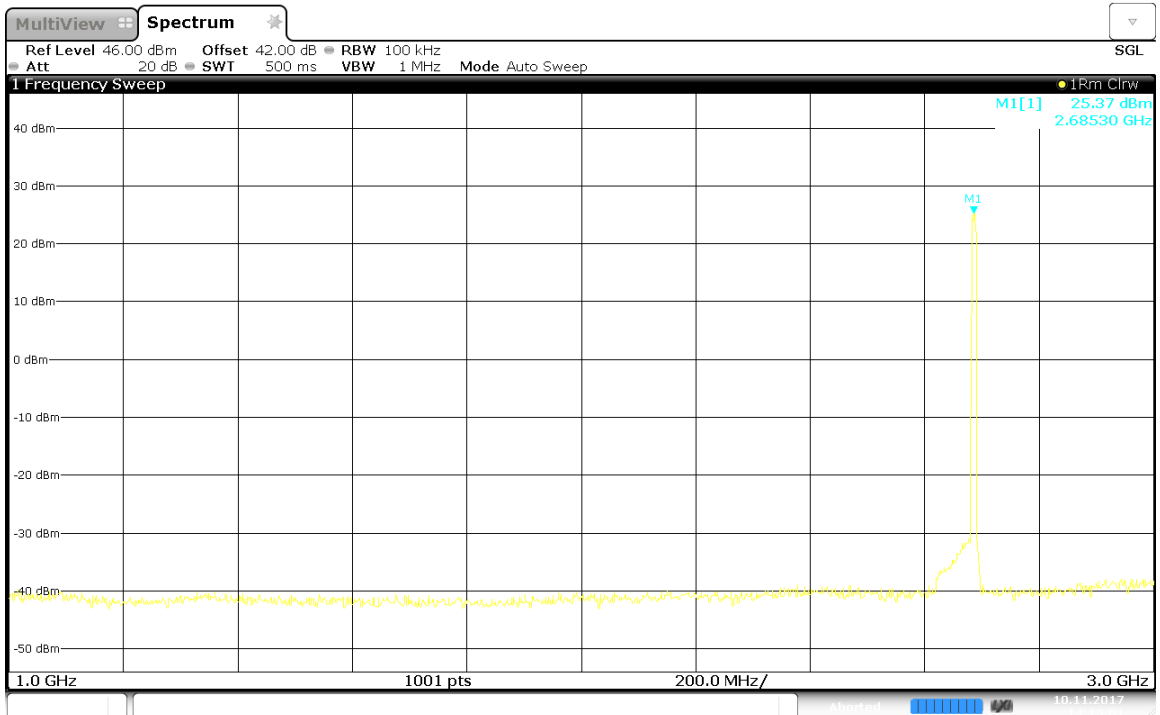
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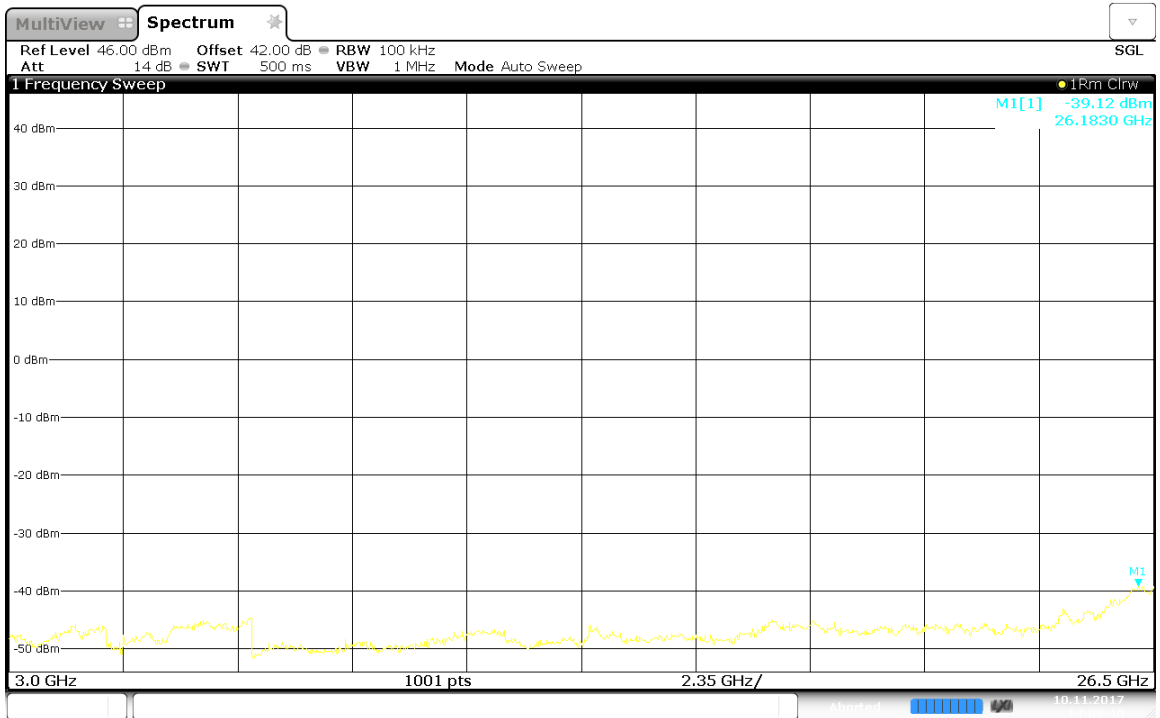
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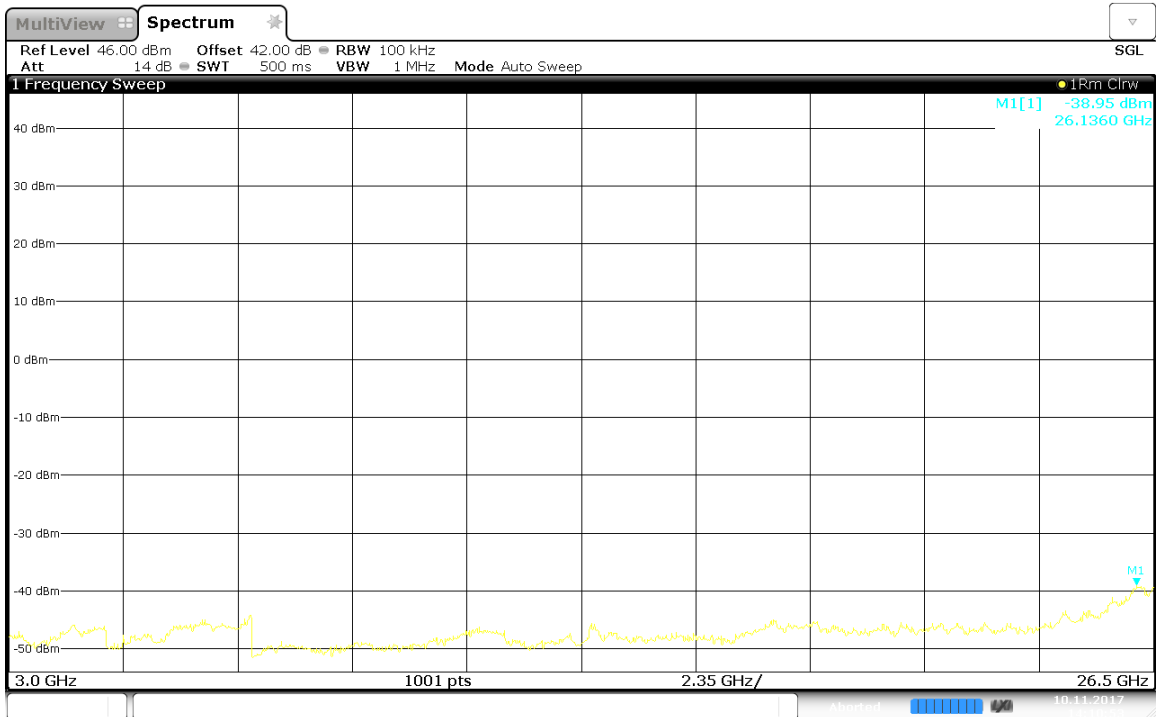
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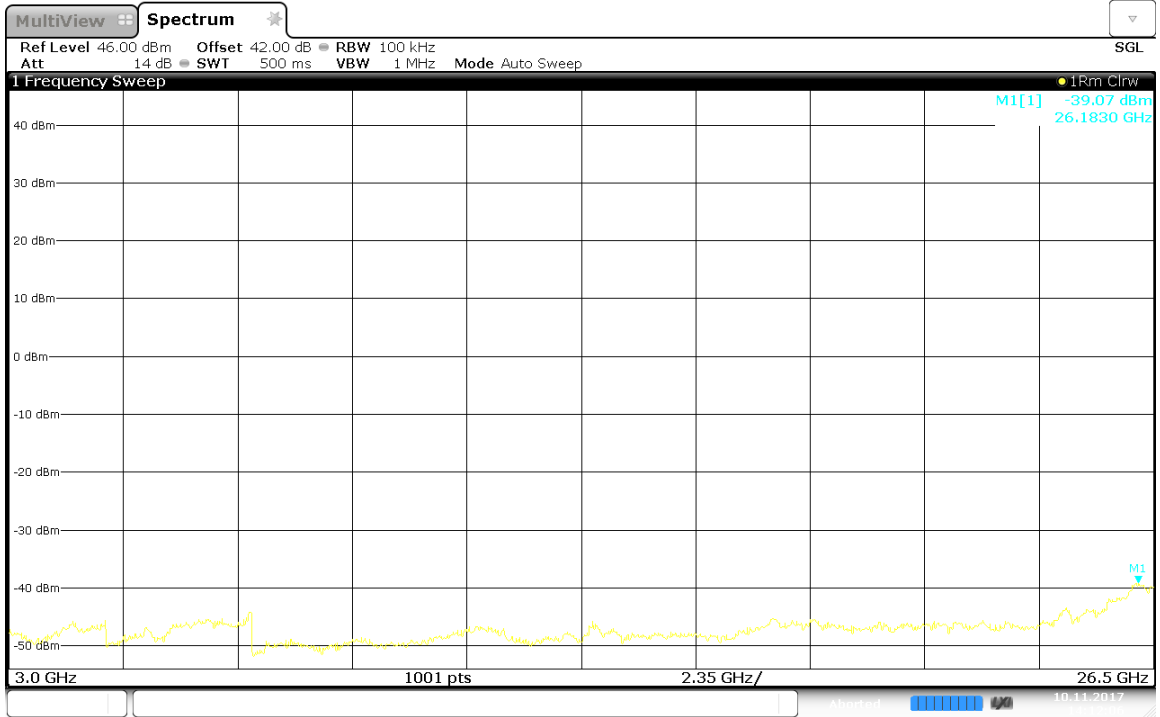
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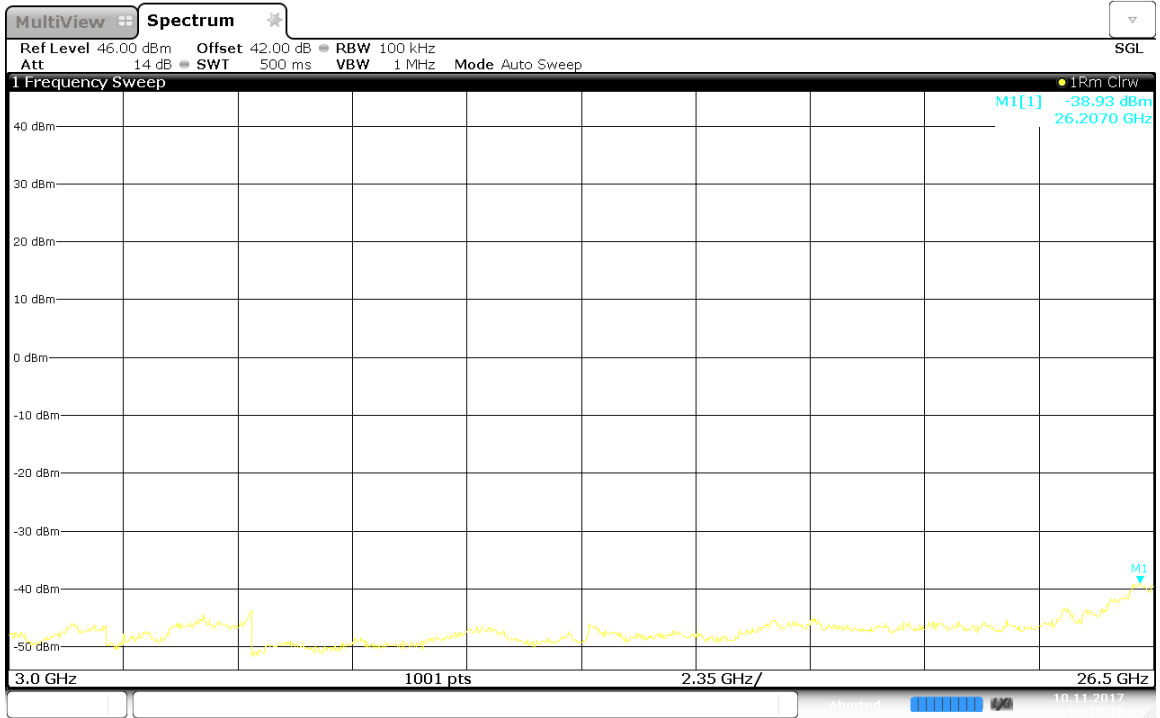
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14:10:53 10.11.2017

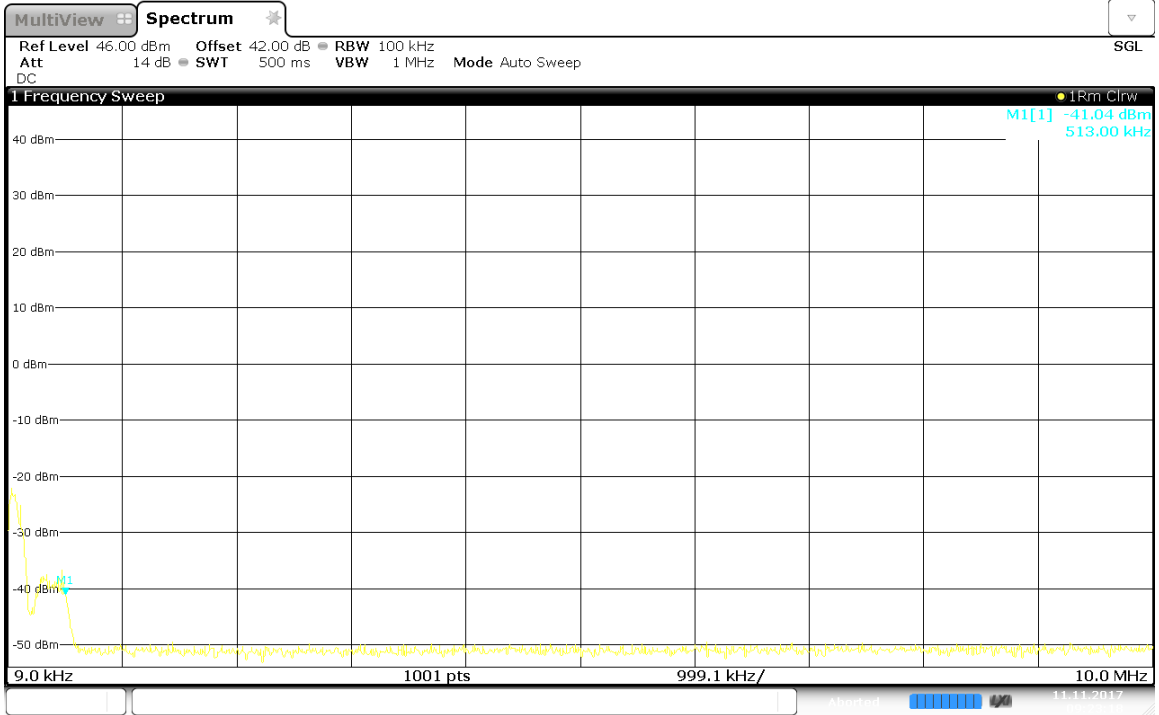


14:12:06 10.11.2017

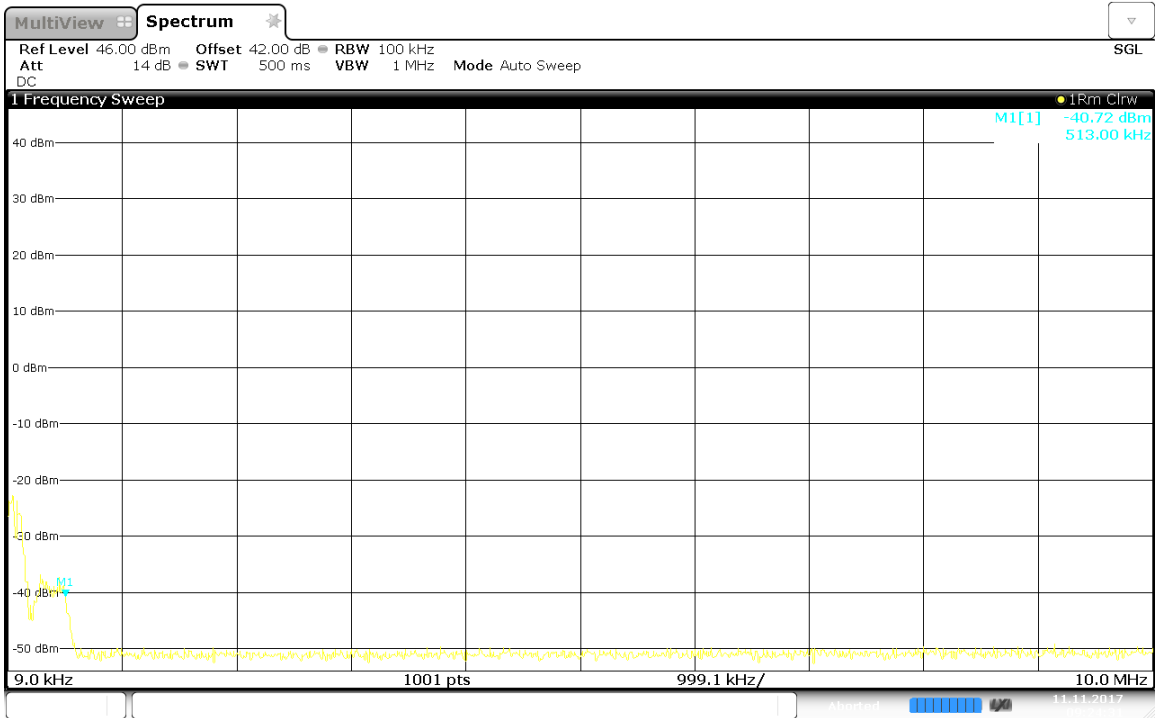


14:13:19 10.11.2017

15M -2627.5MHz-Port 1~4:

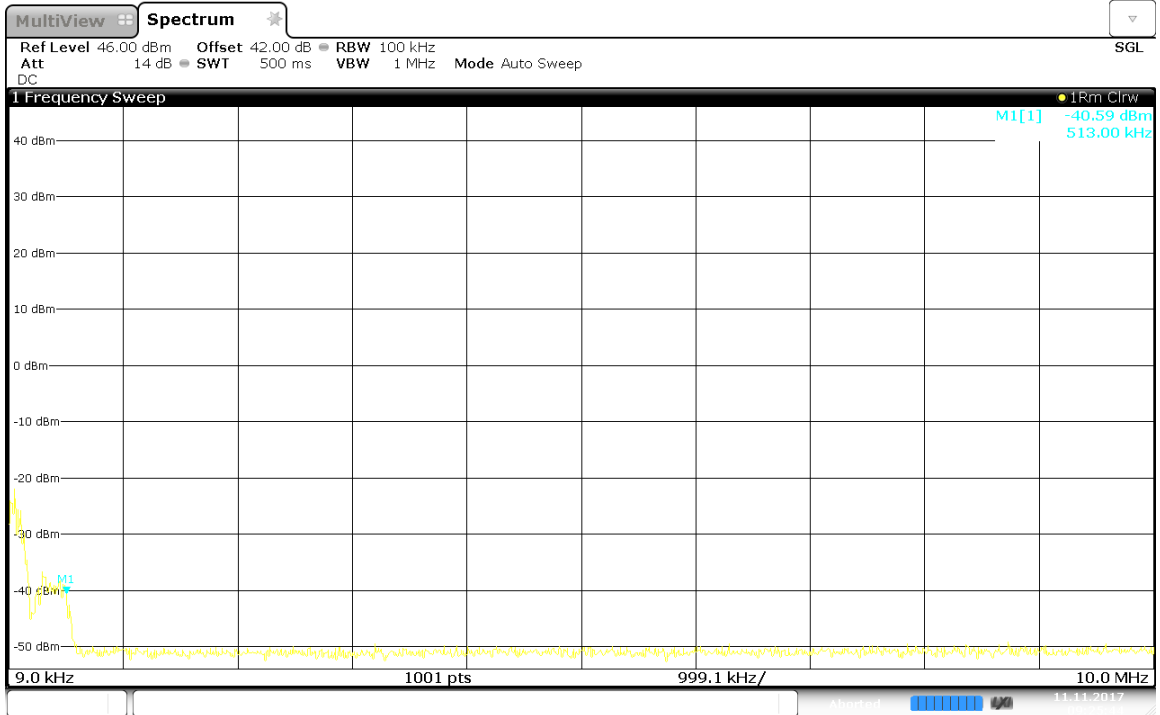


09:23:19 11.11.2017

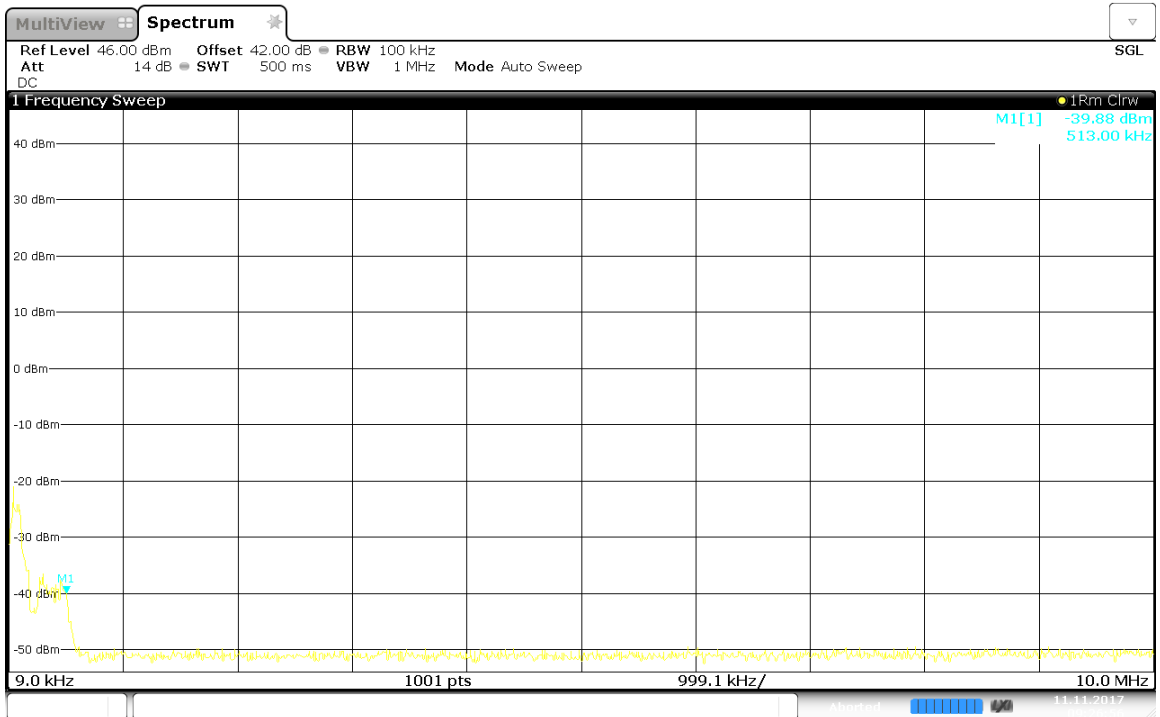


09:24:31 11.11.2017

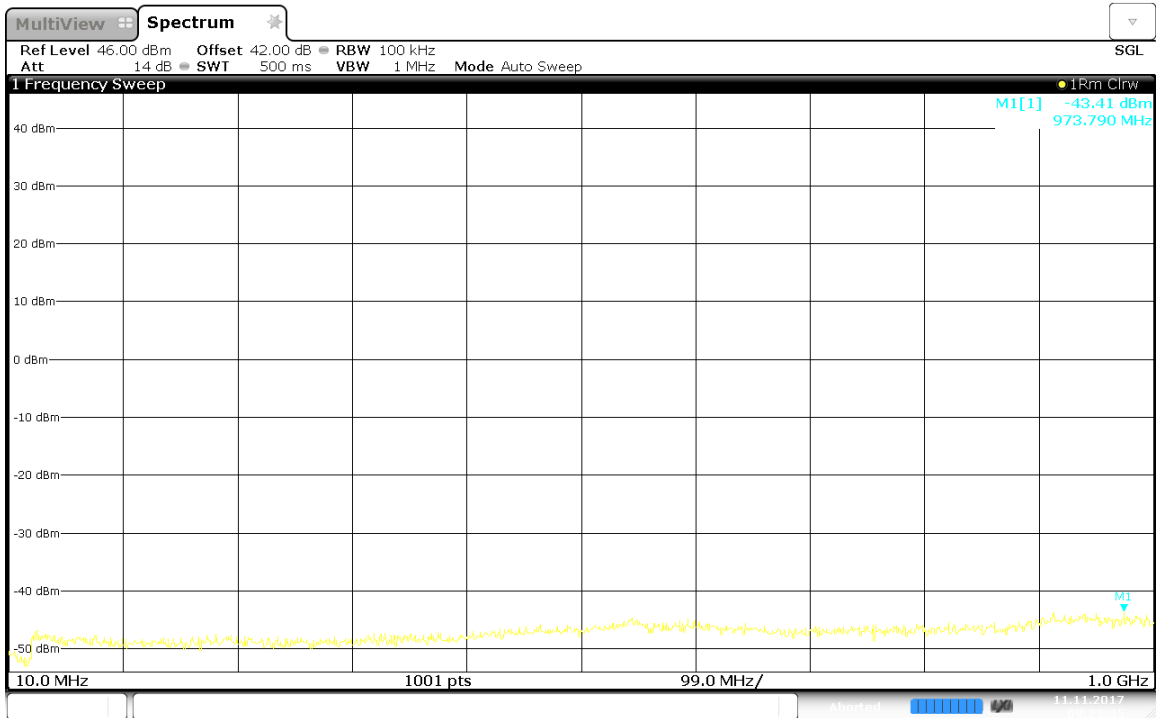




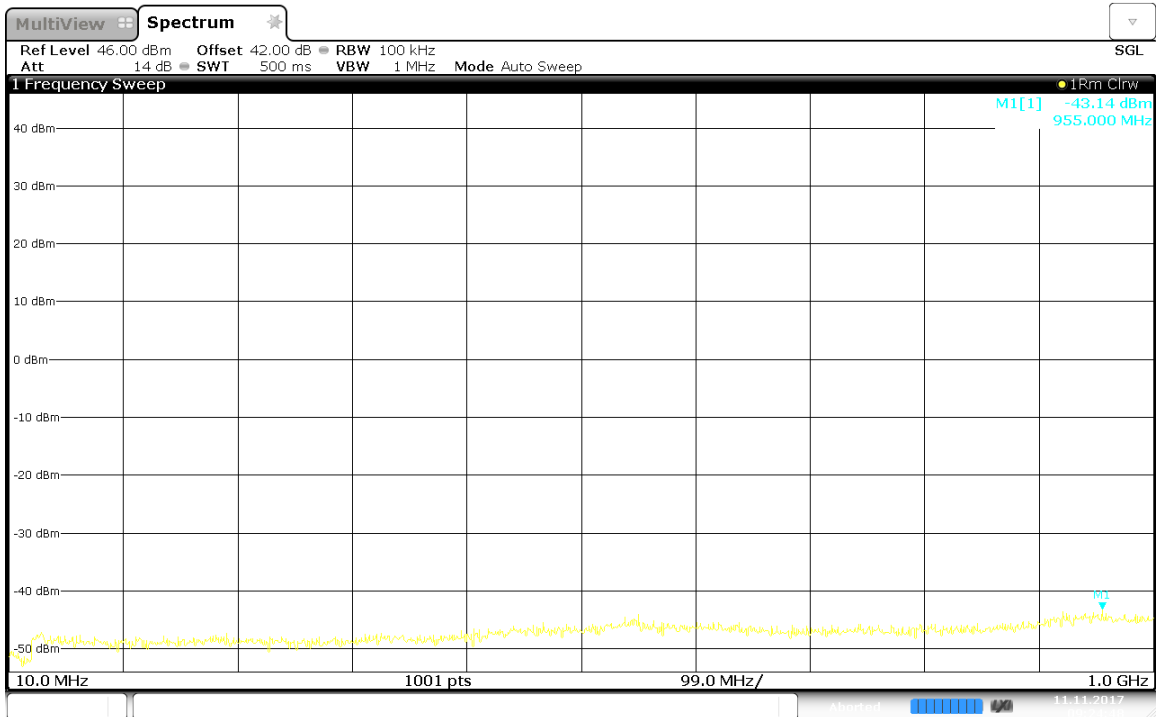
09:25:44 11.11.2017



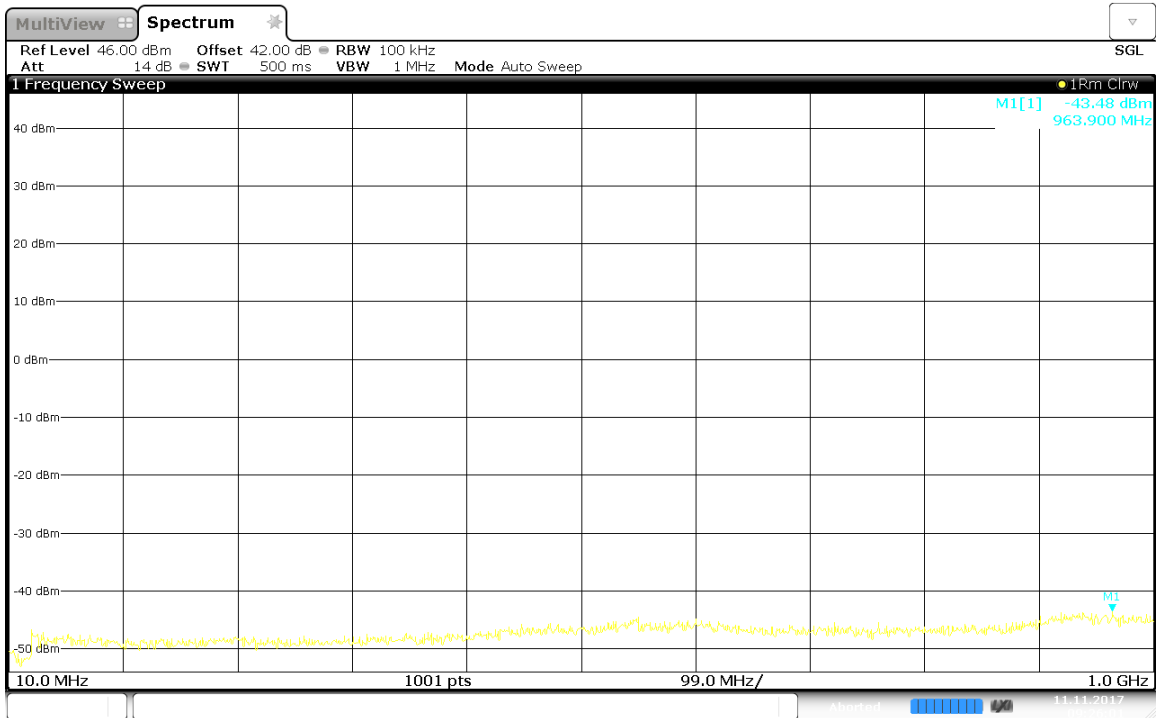
09:26:57 11.11.2017



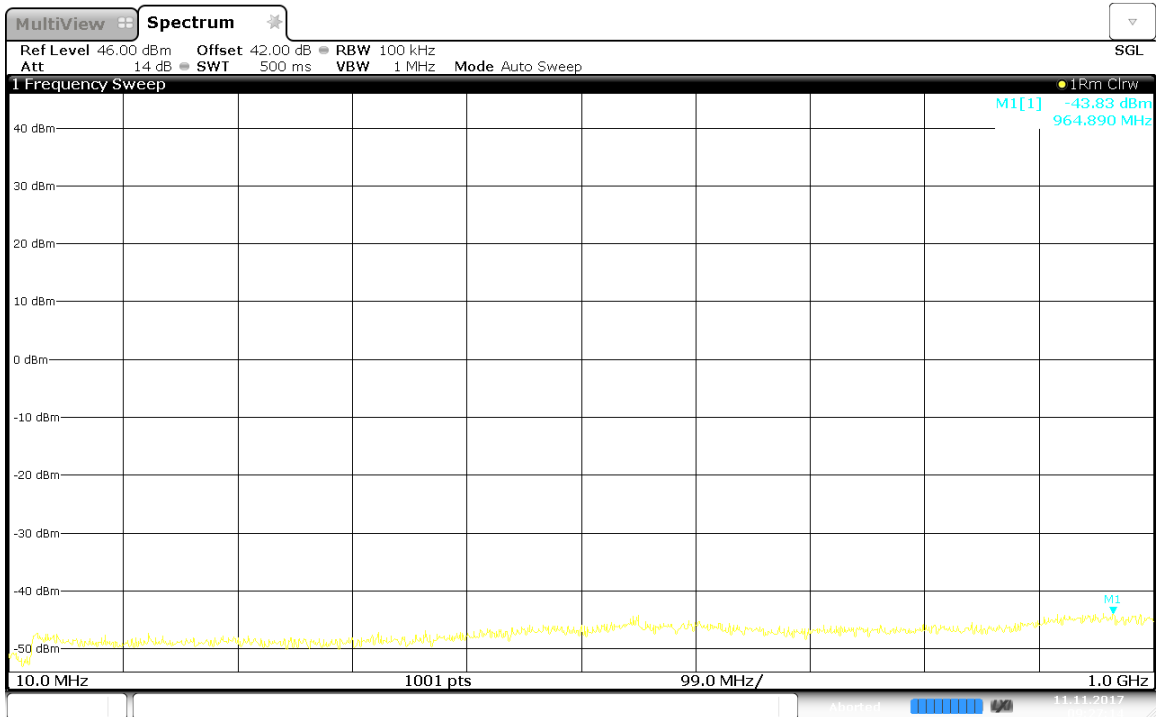
09:23:36 11.11.2017



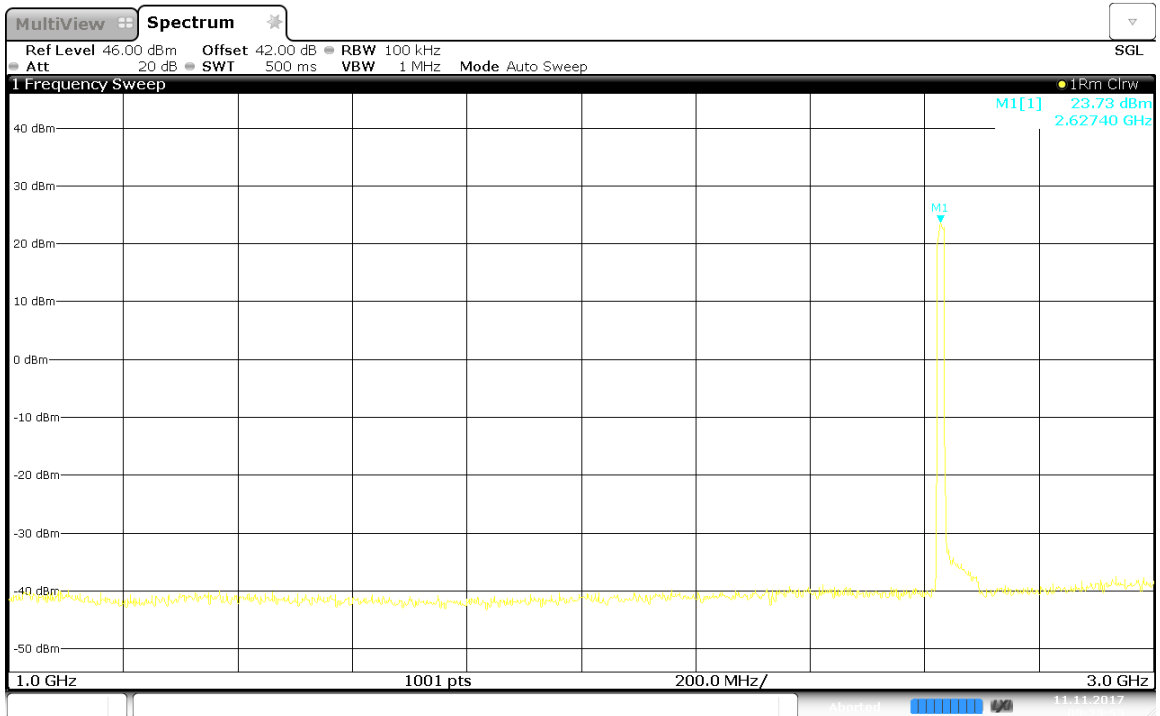
09:24:49 11.11.2017



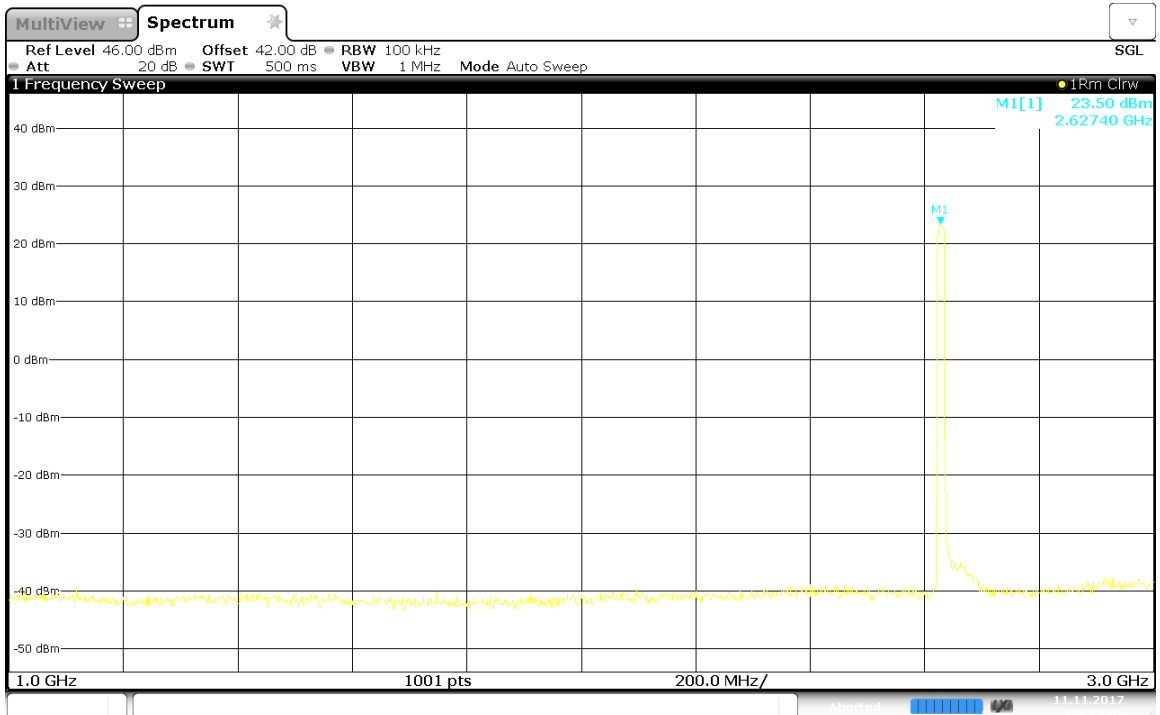
09:26:01 11.11.2017



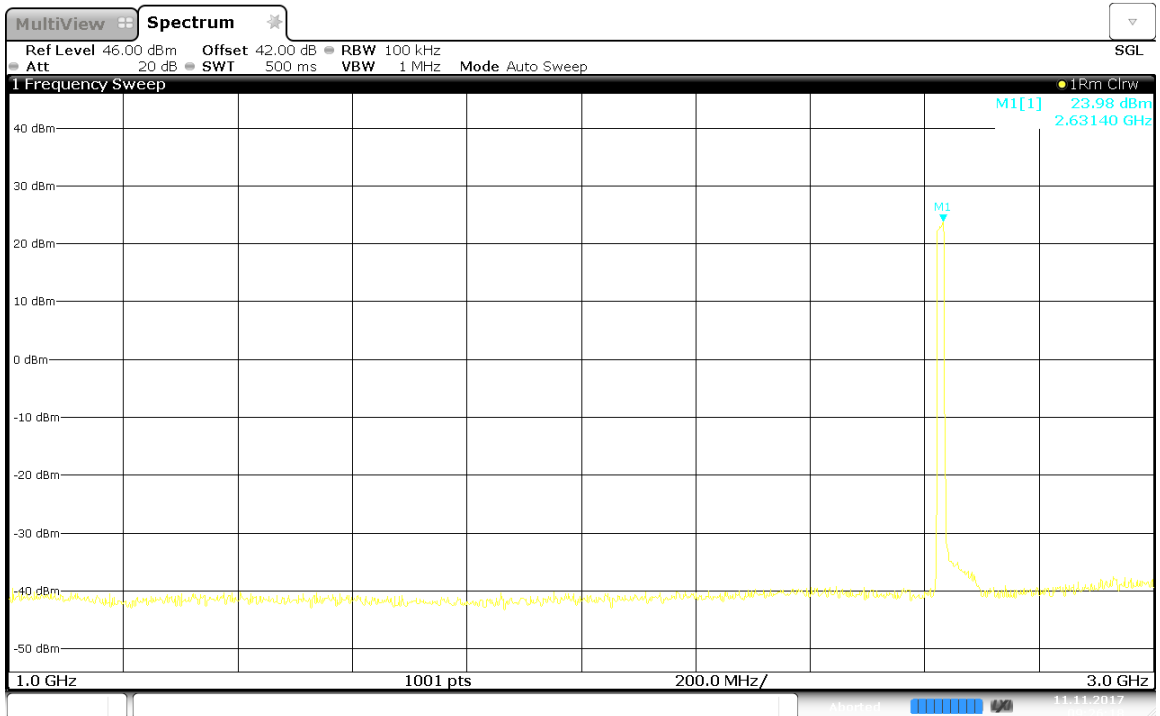
09:27:14 11.11.2017



09:23:53 11.11.2017



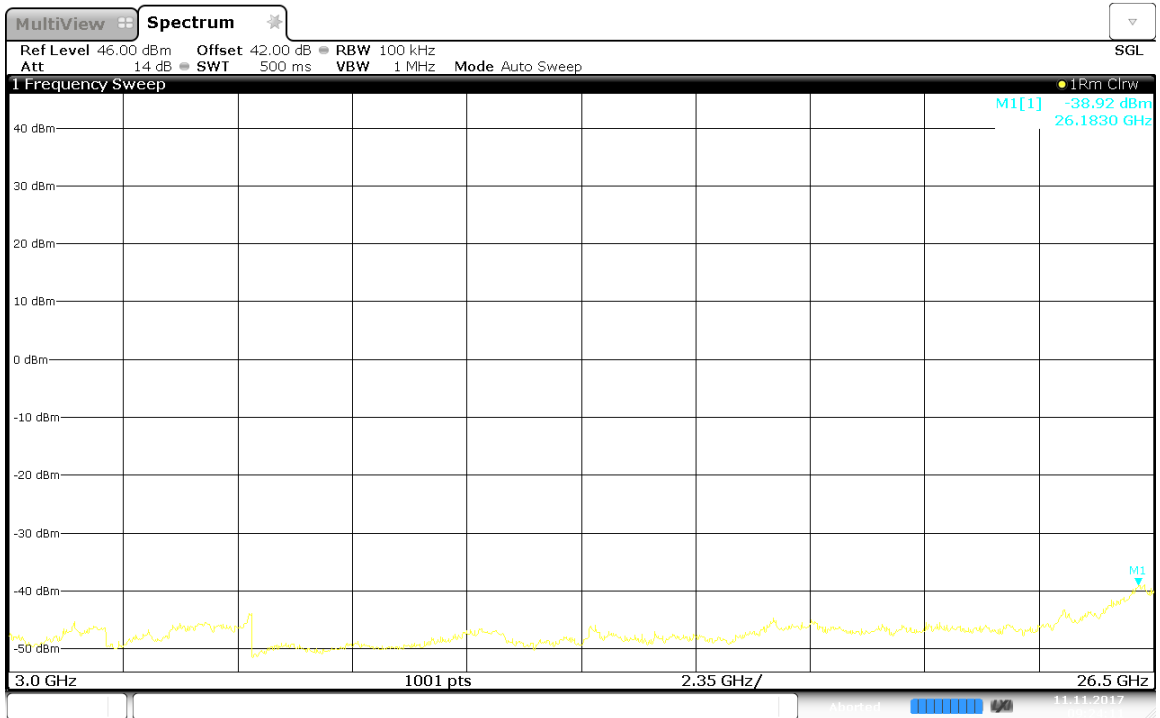
09:25:06 11.11.2017



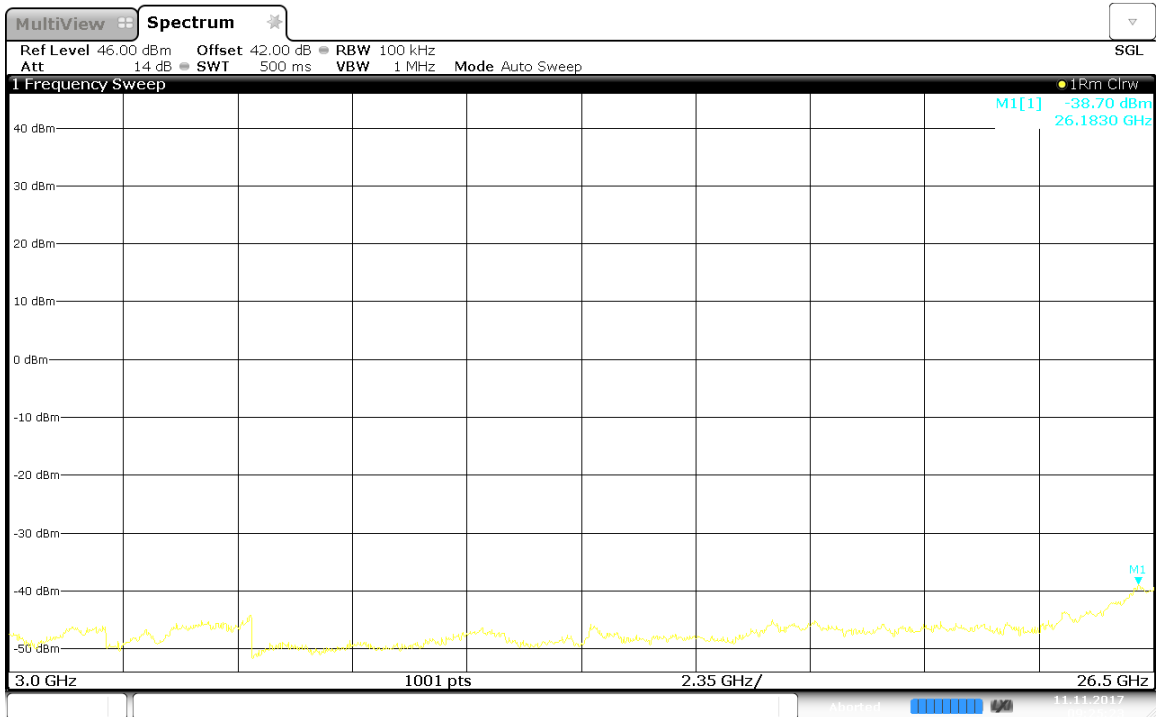
09:26:19 11.11.2017



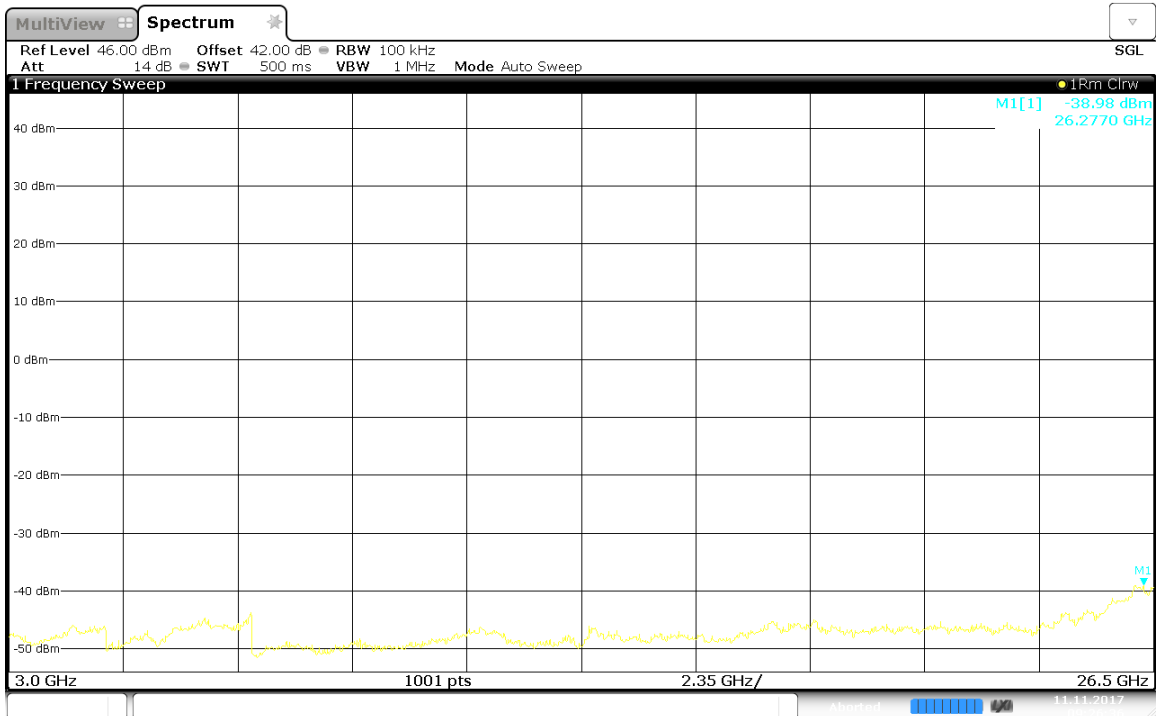
09:27:32 11.11.2017



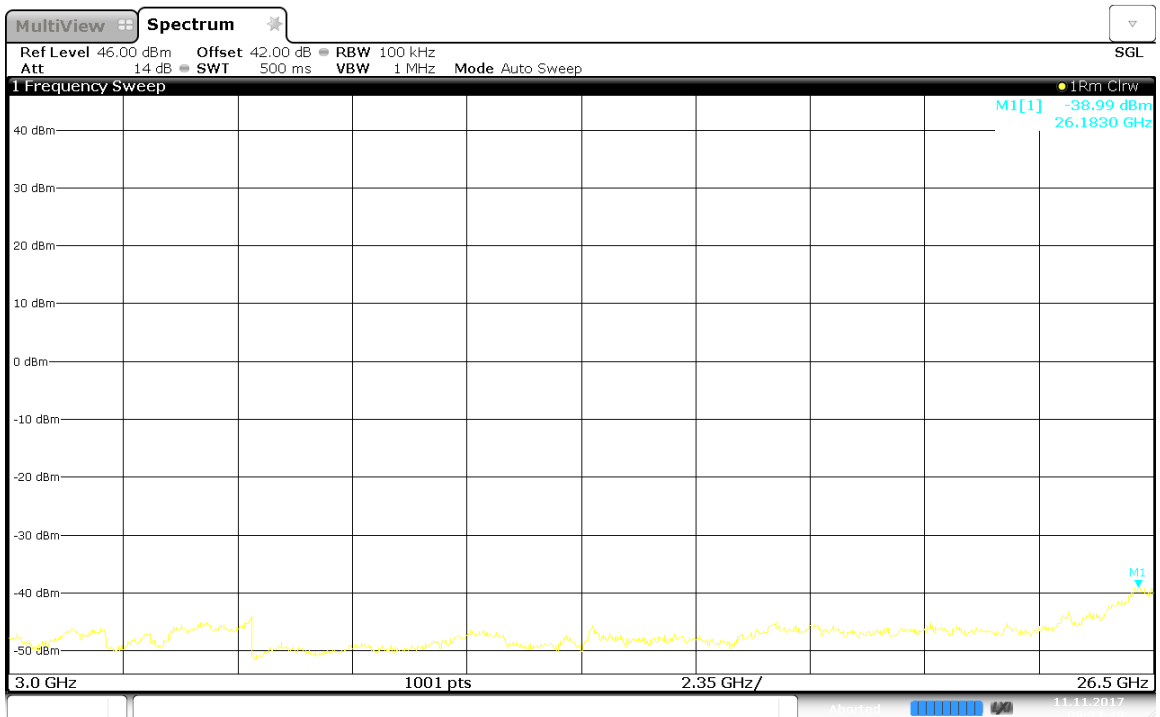
09:24:11 11.11.2017



09:25:24 11.11.2017

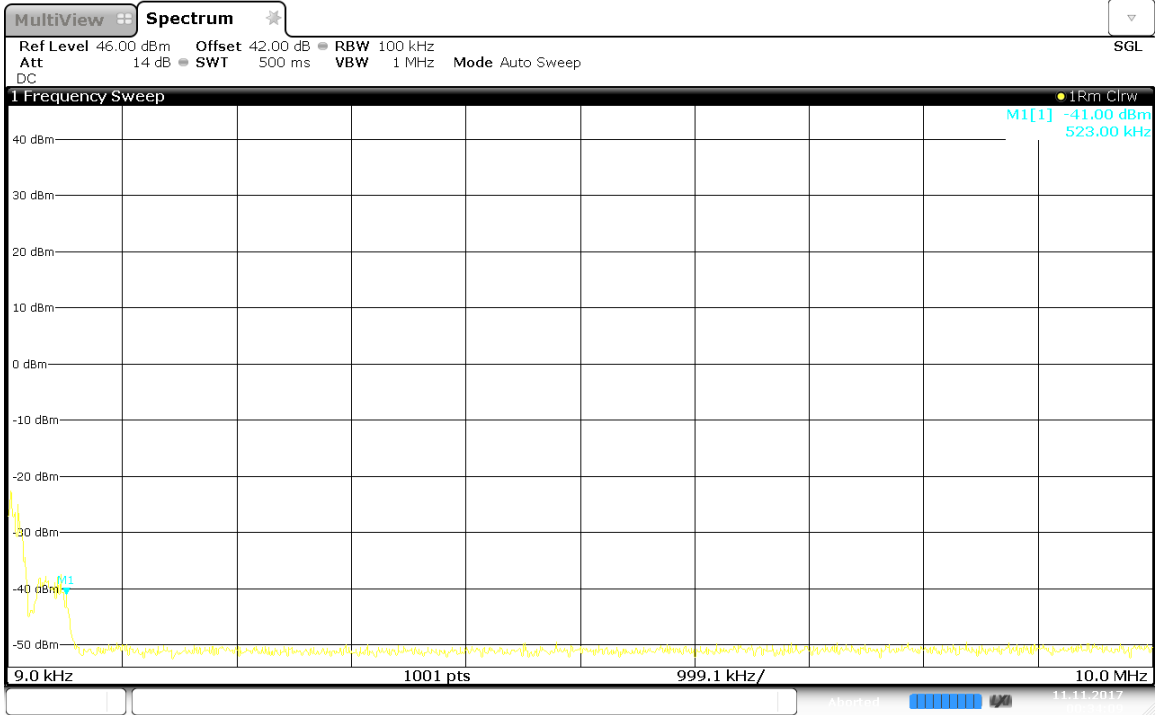


09:26:36 11.11.2017

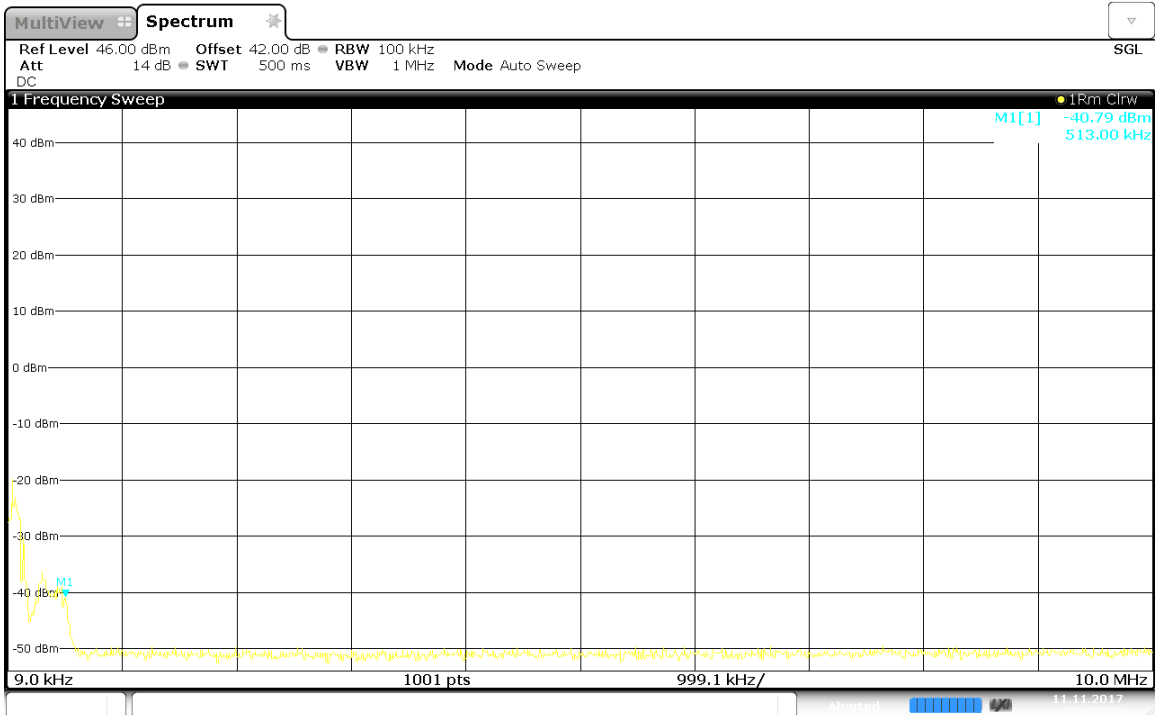


09:27:49 11.11.2017

# 15M -2655MHz-Port 1~4:

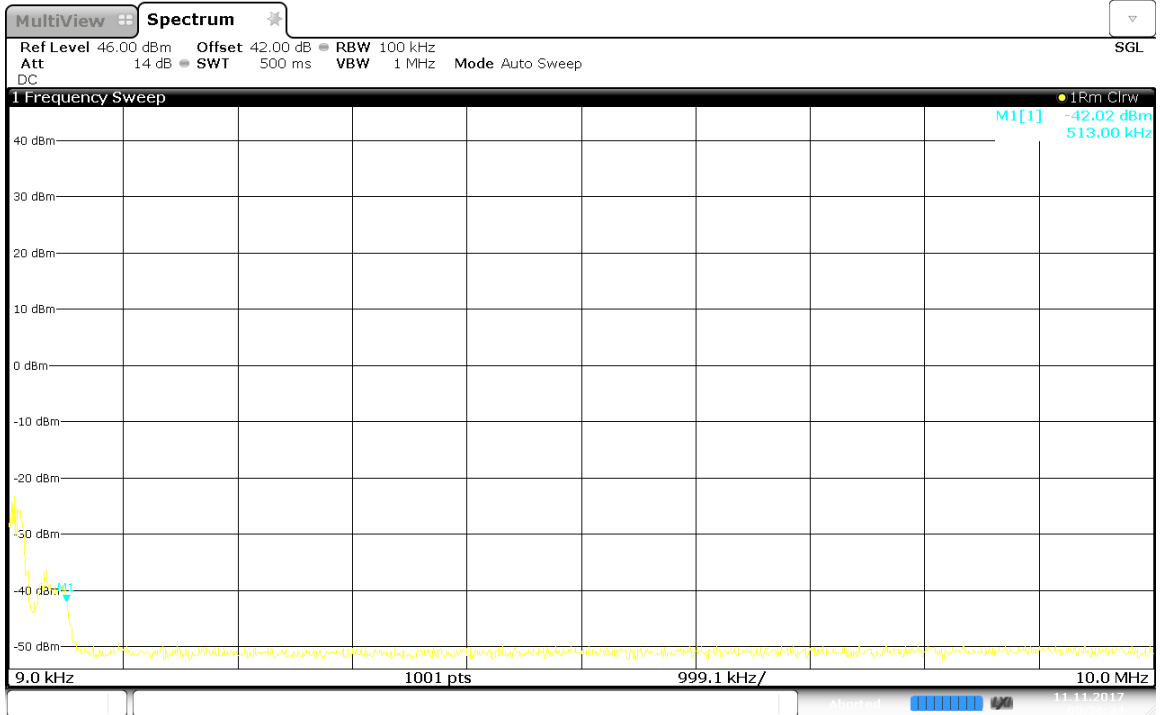


00:34:09 11.11.2017

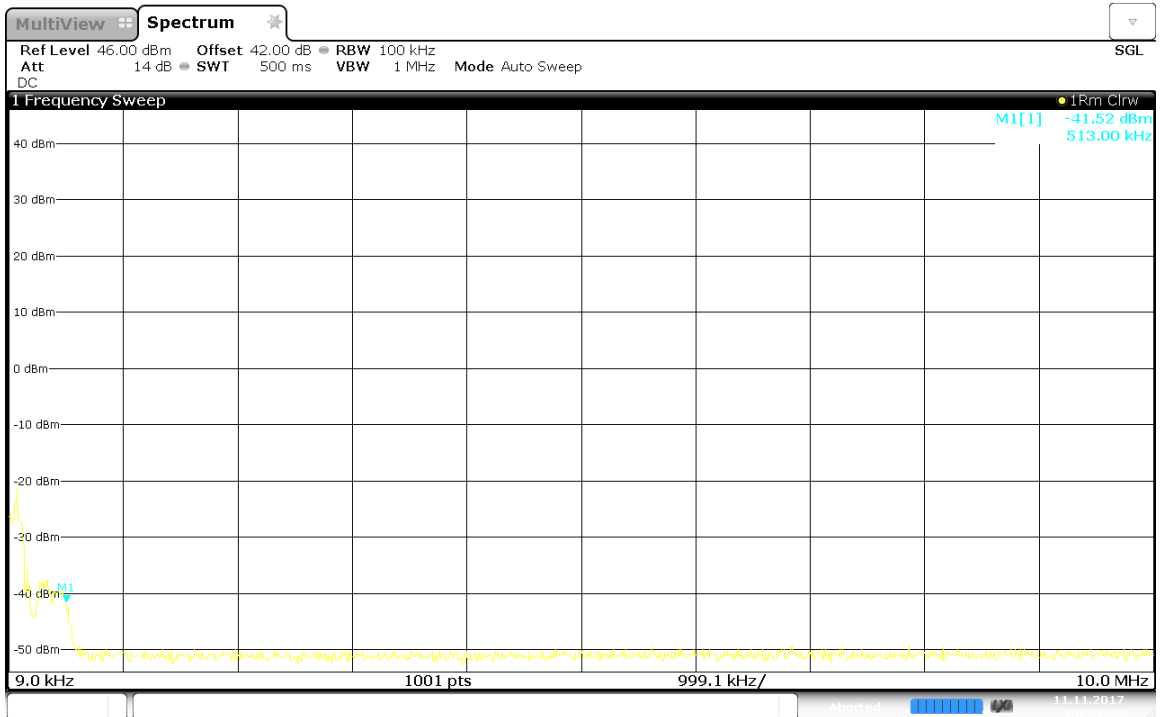


00:35:22 11.11.2017

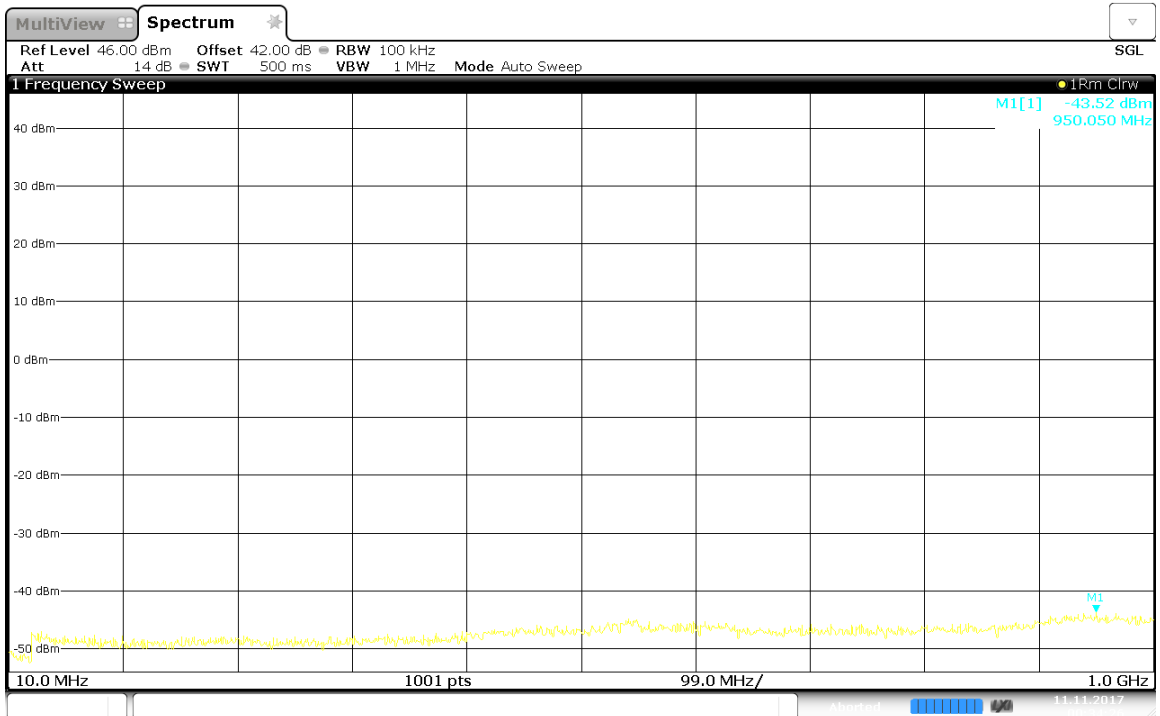




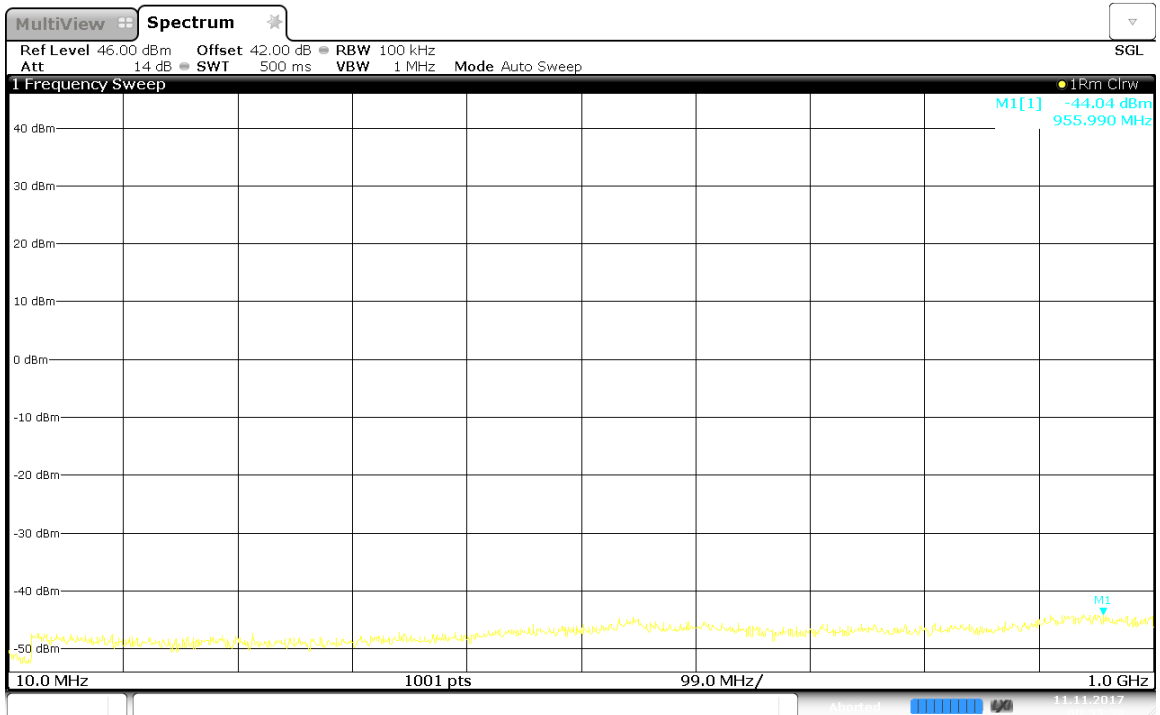
00:36:35 11.11.2017



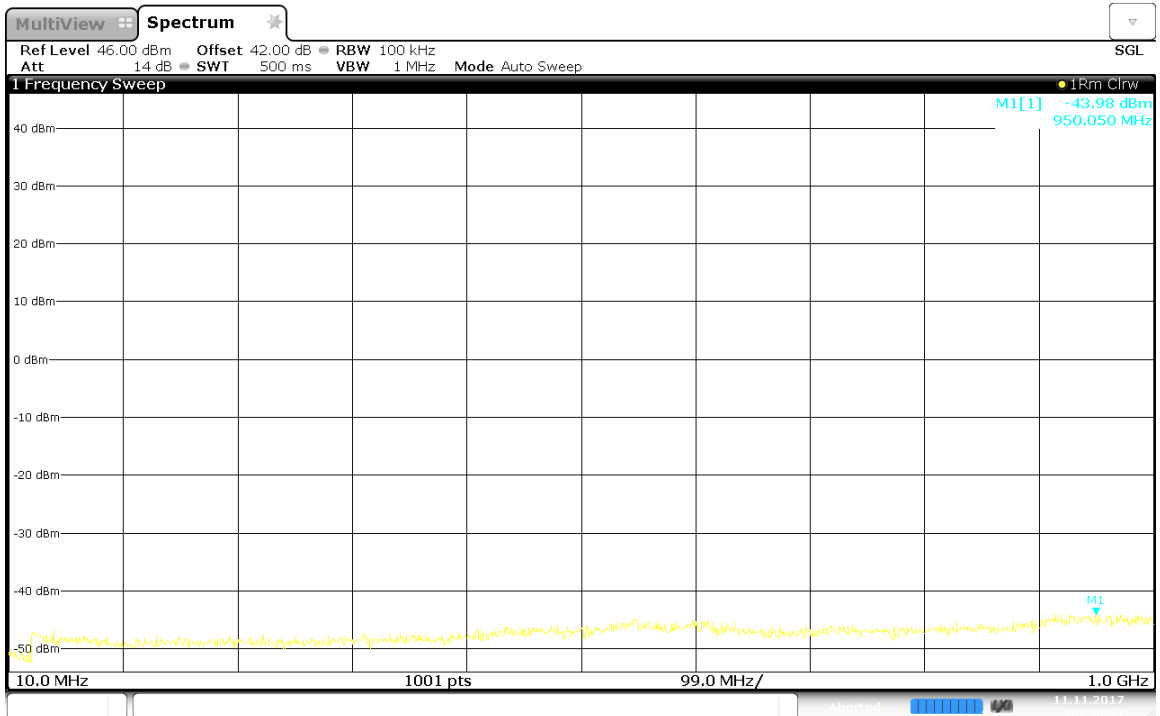
00:37:47 11.11.2017



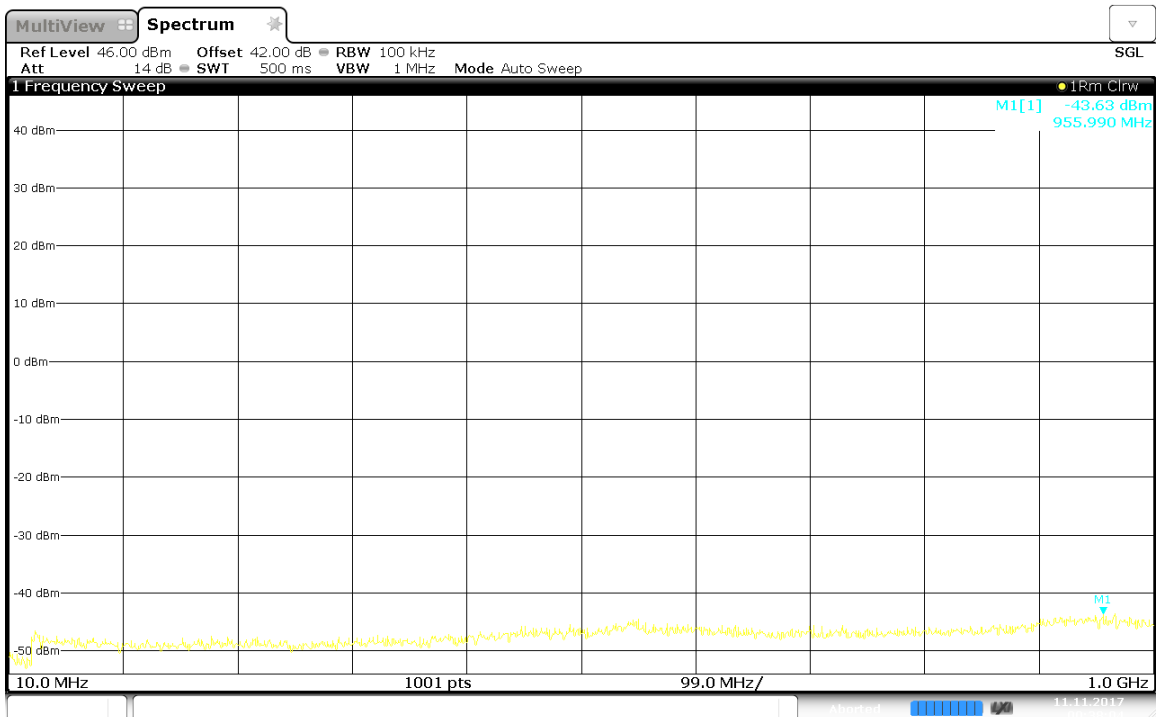
00:34:27 11.11.2017



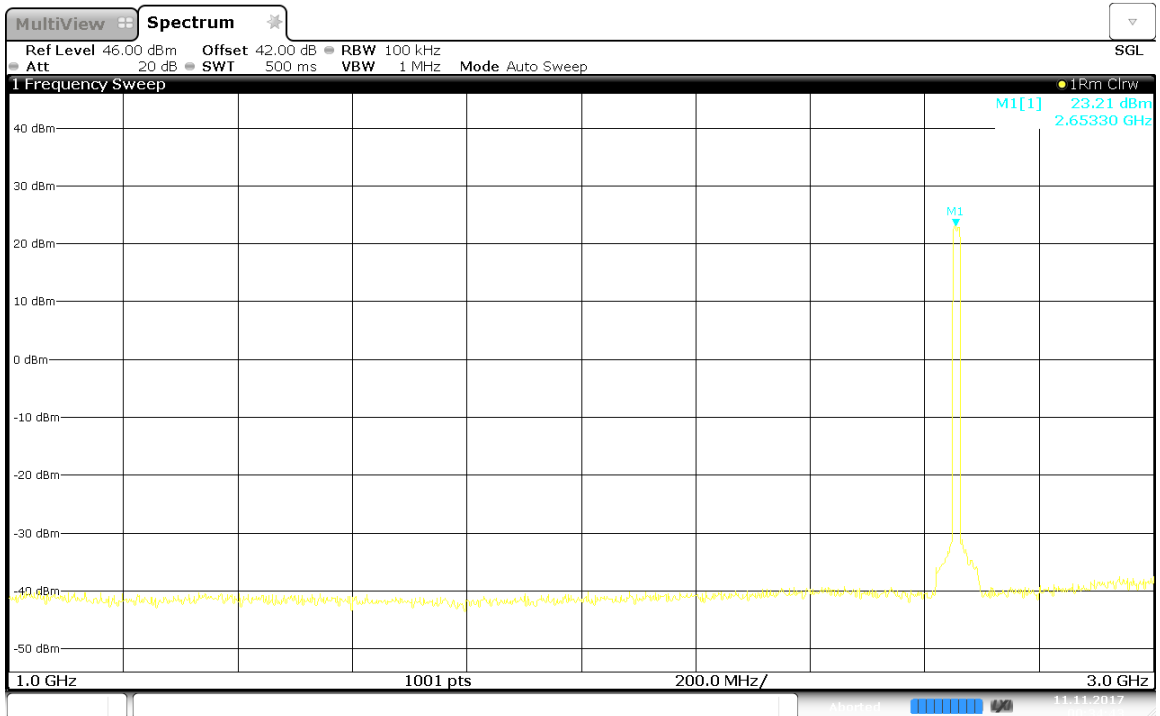
00:35:39 11.11.2017



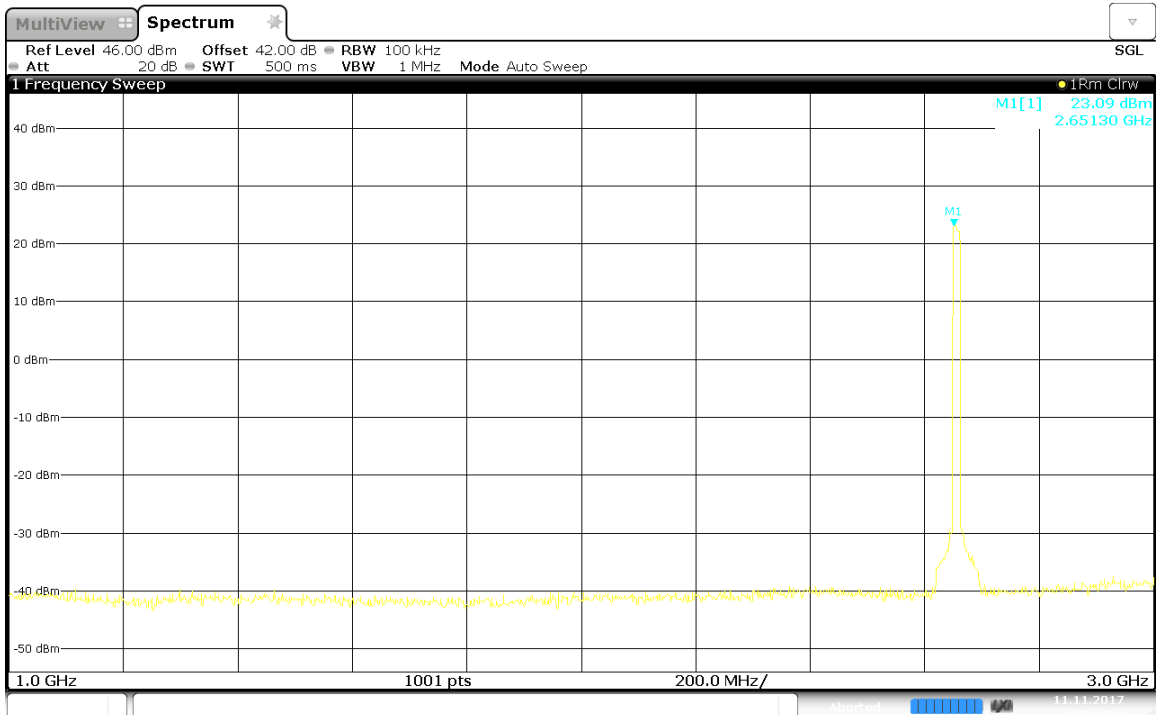
00:36:52 11.11.2017



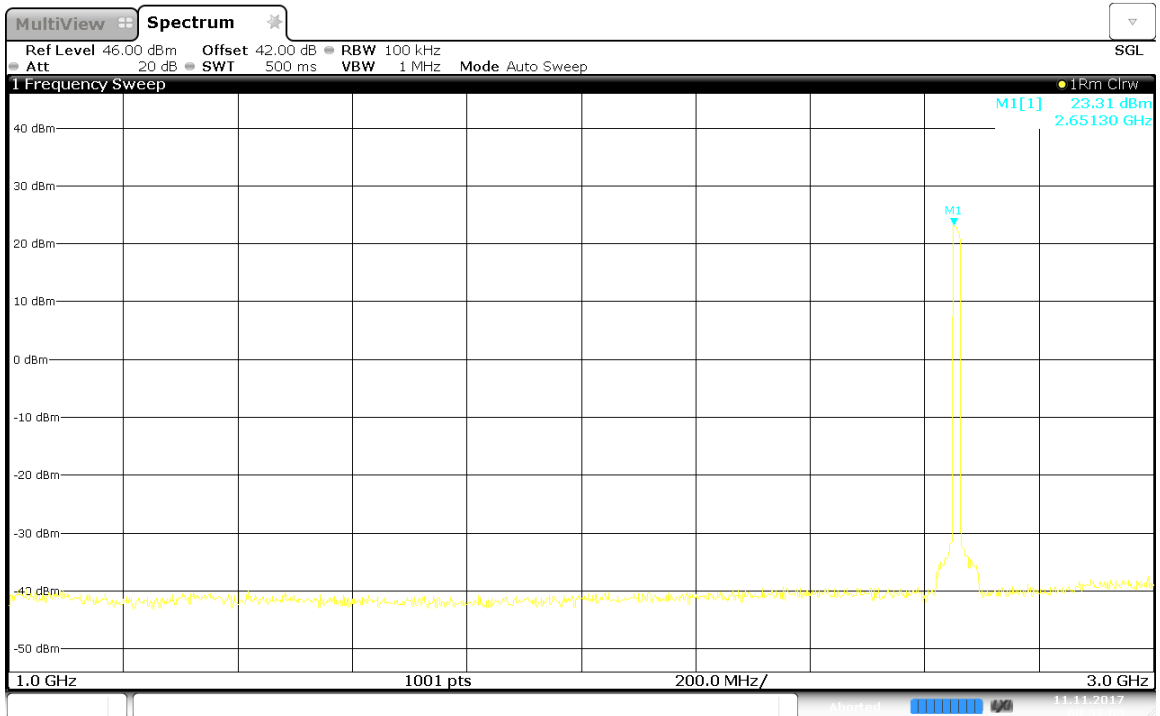
00:38:05 11.11.2017



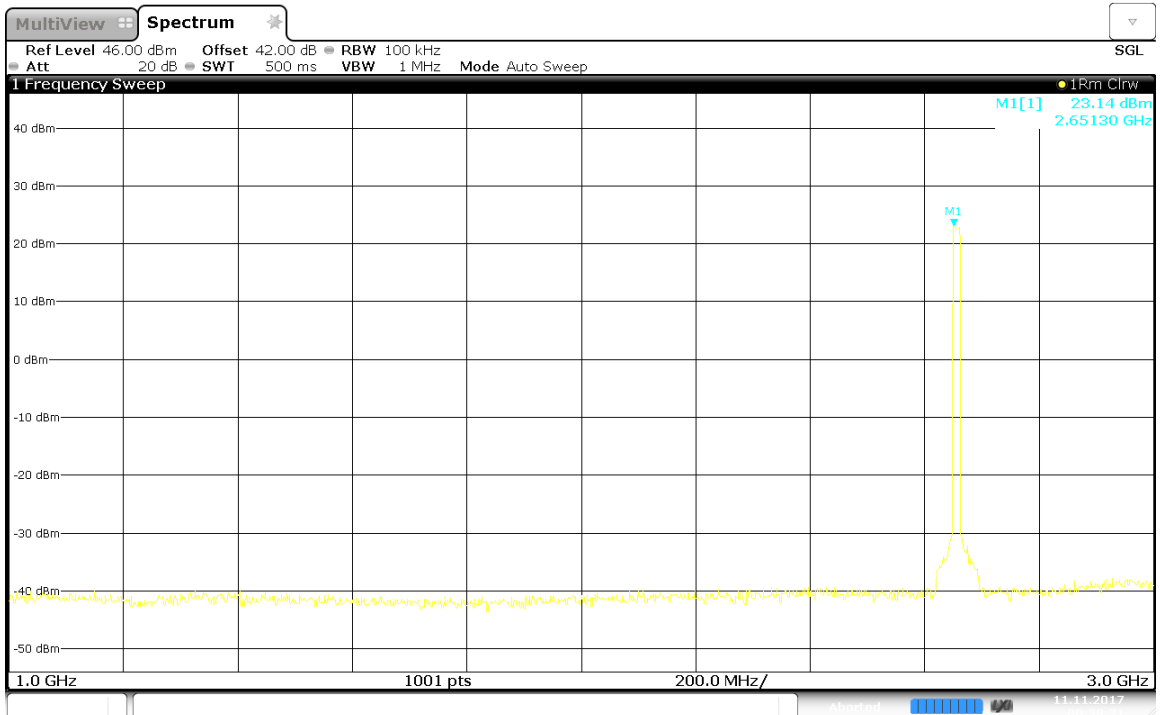
00:34:44 11.11.2017



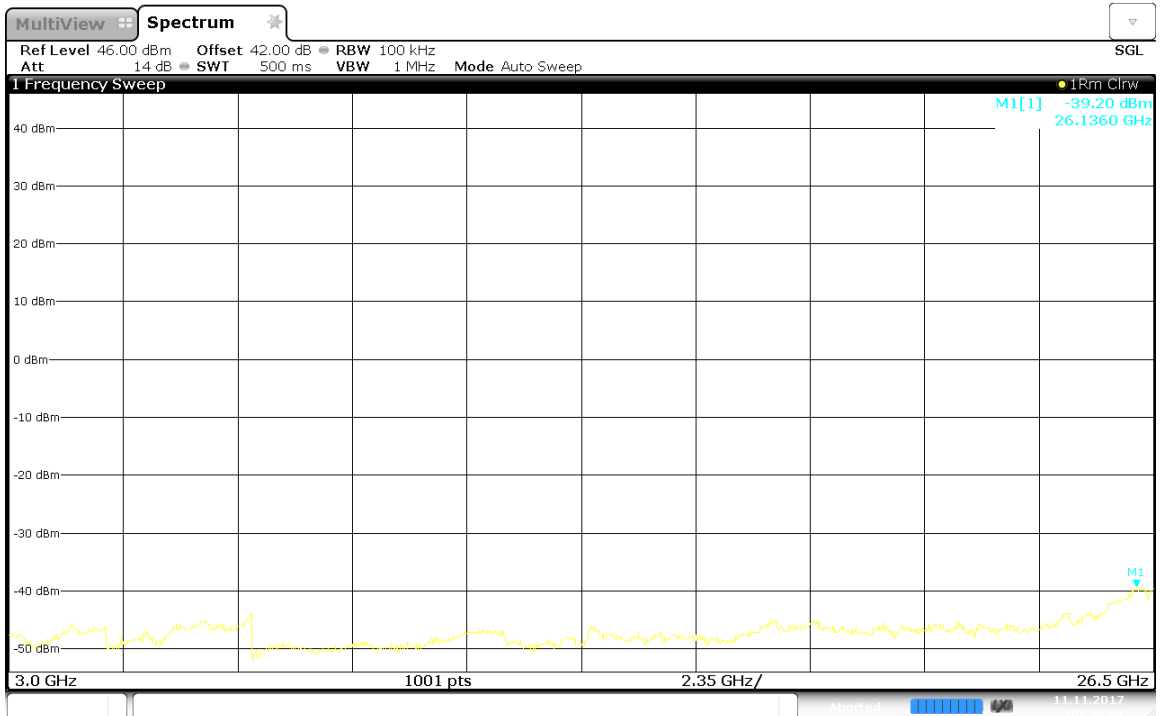
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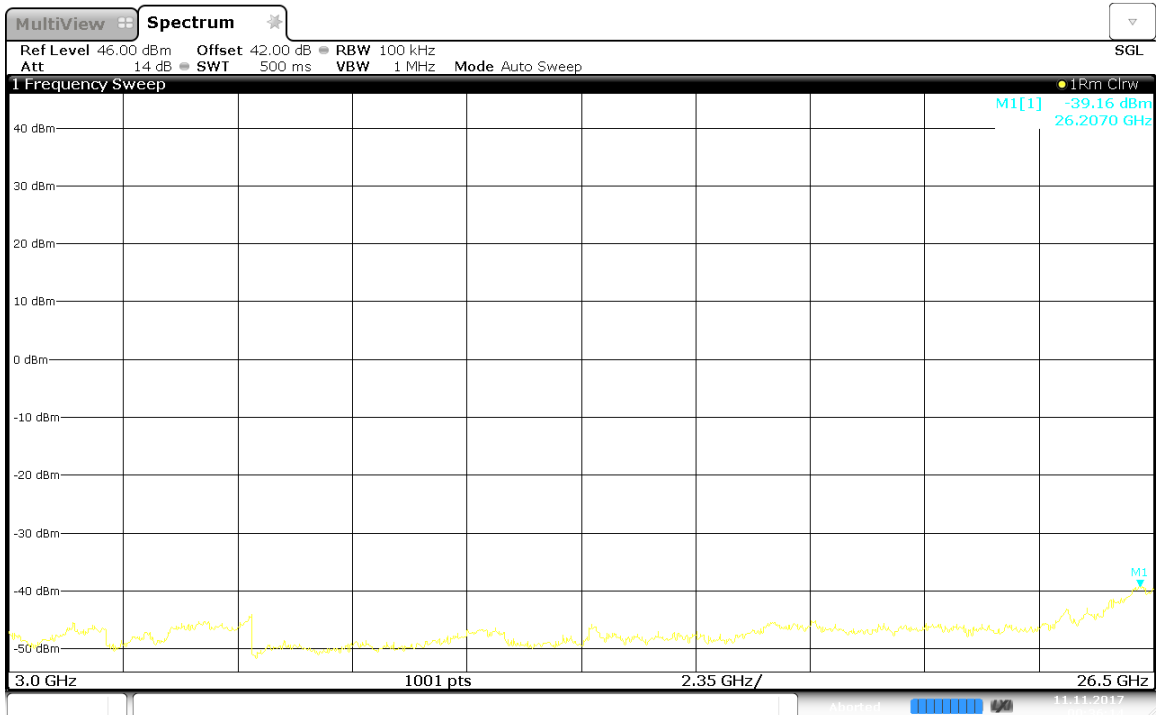
00:37:10 11.11.2017



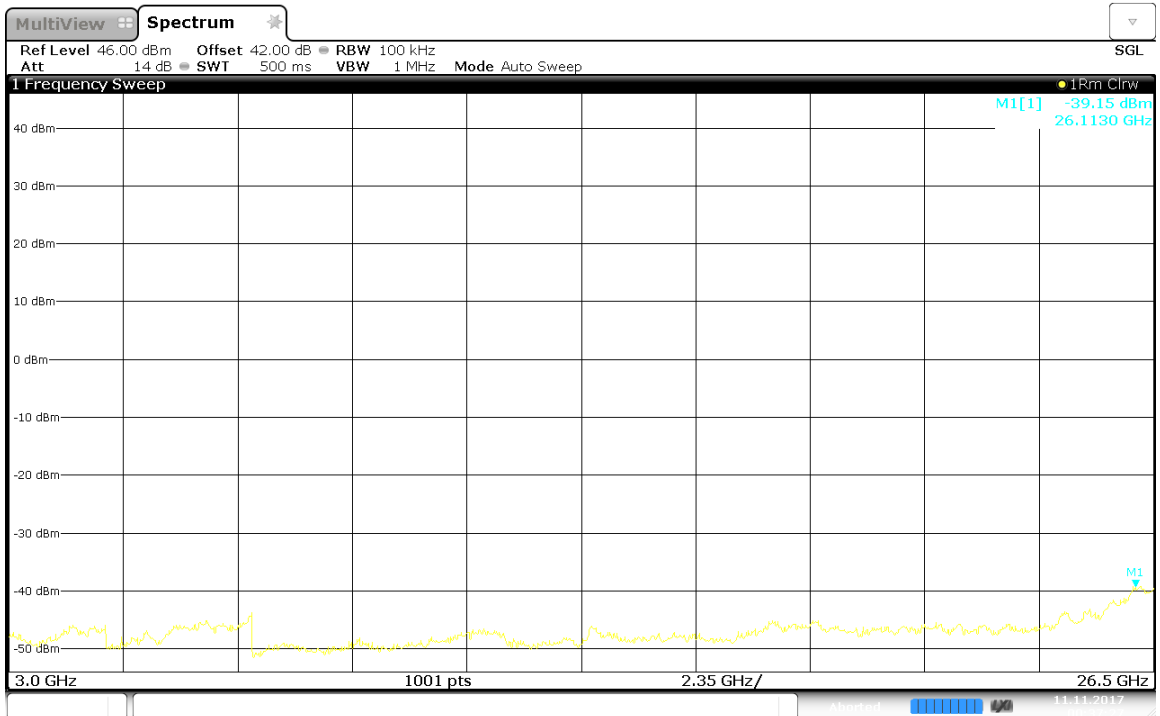
00:38:22 11.11.2017



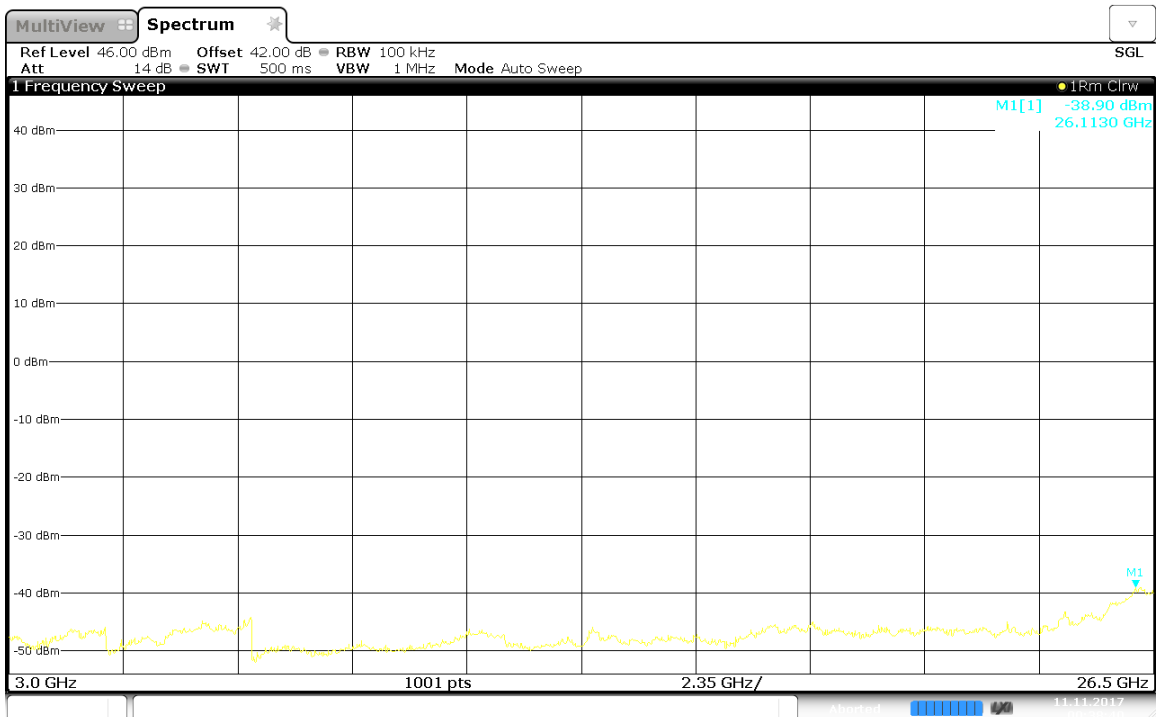
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00:36:14 11.11.2017

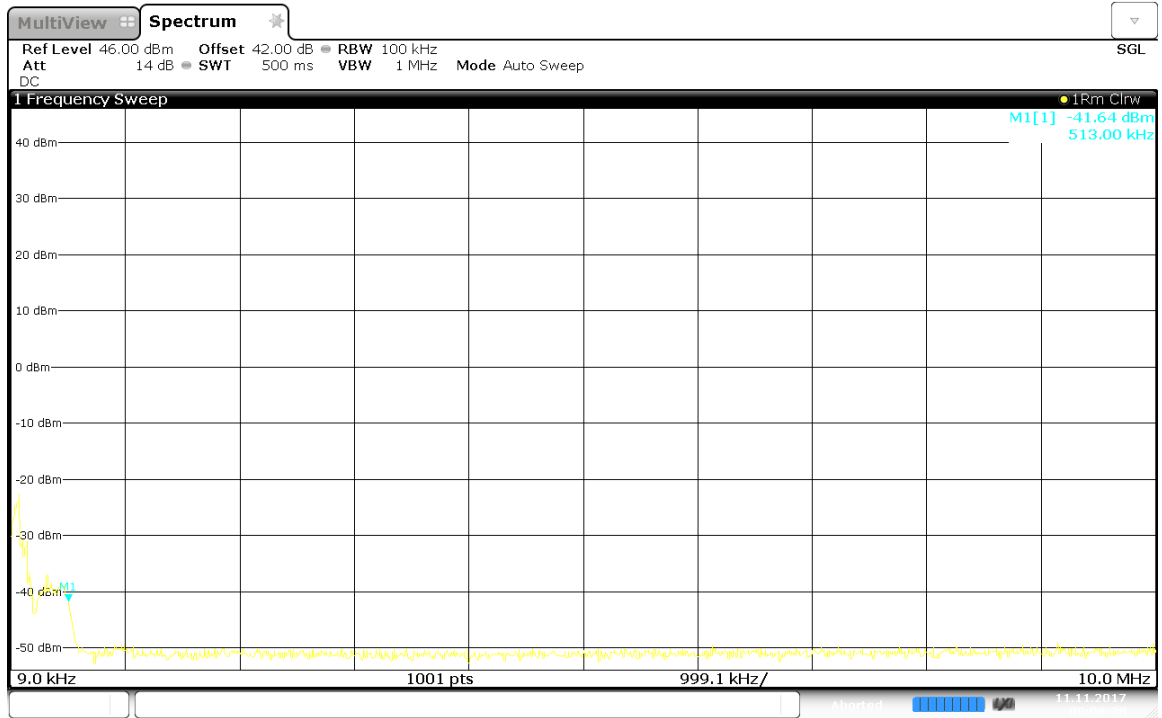


00:37:27 11.11.2017

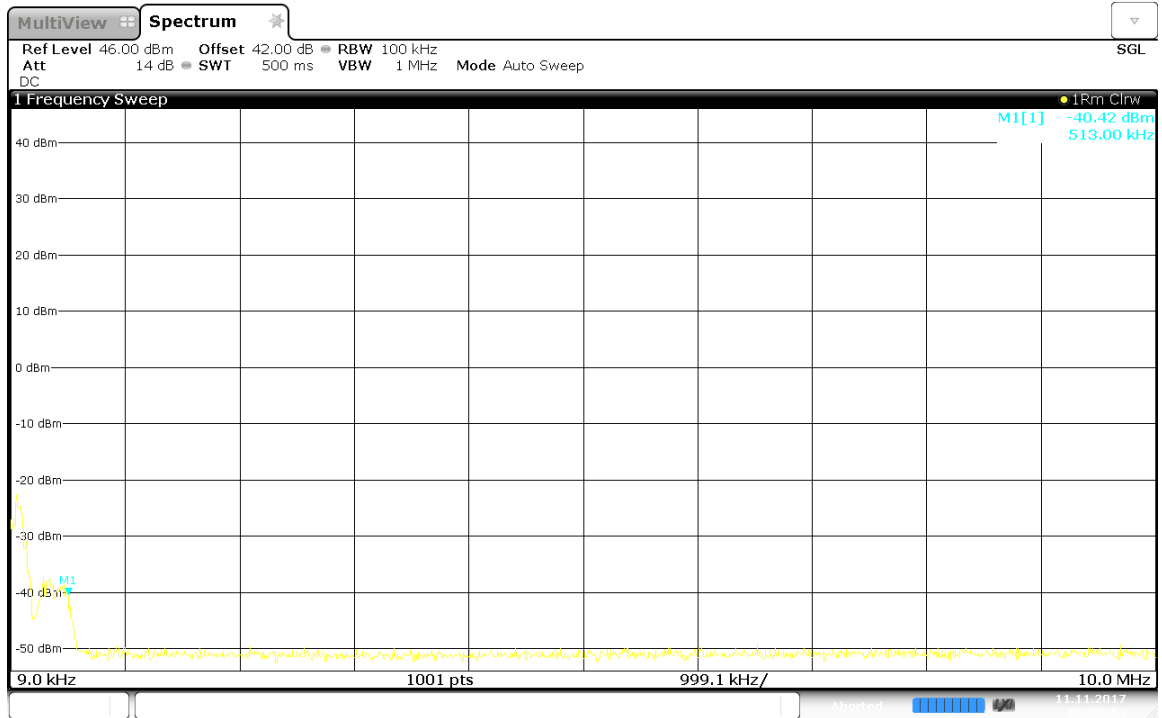


00:38:40 11.11.2017

15M -2682.5MHz-Port 1~4:

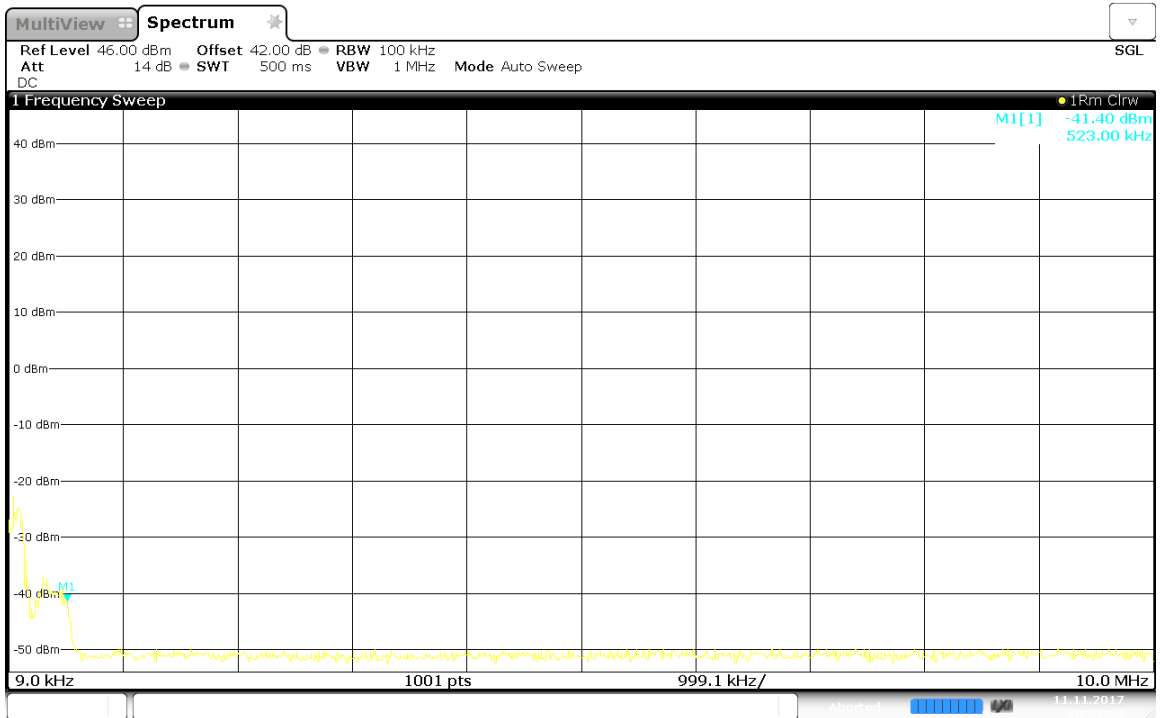


00:06:39 11.11.2017

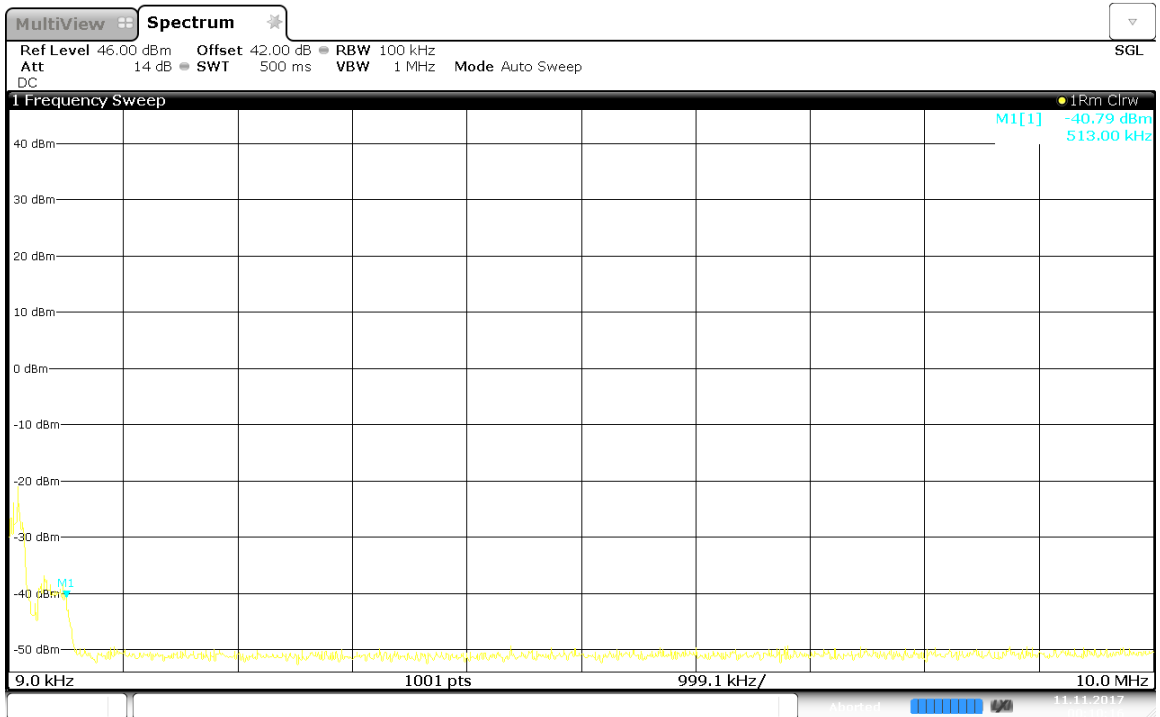


00:07:52 11.11.2017

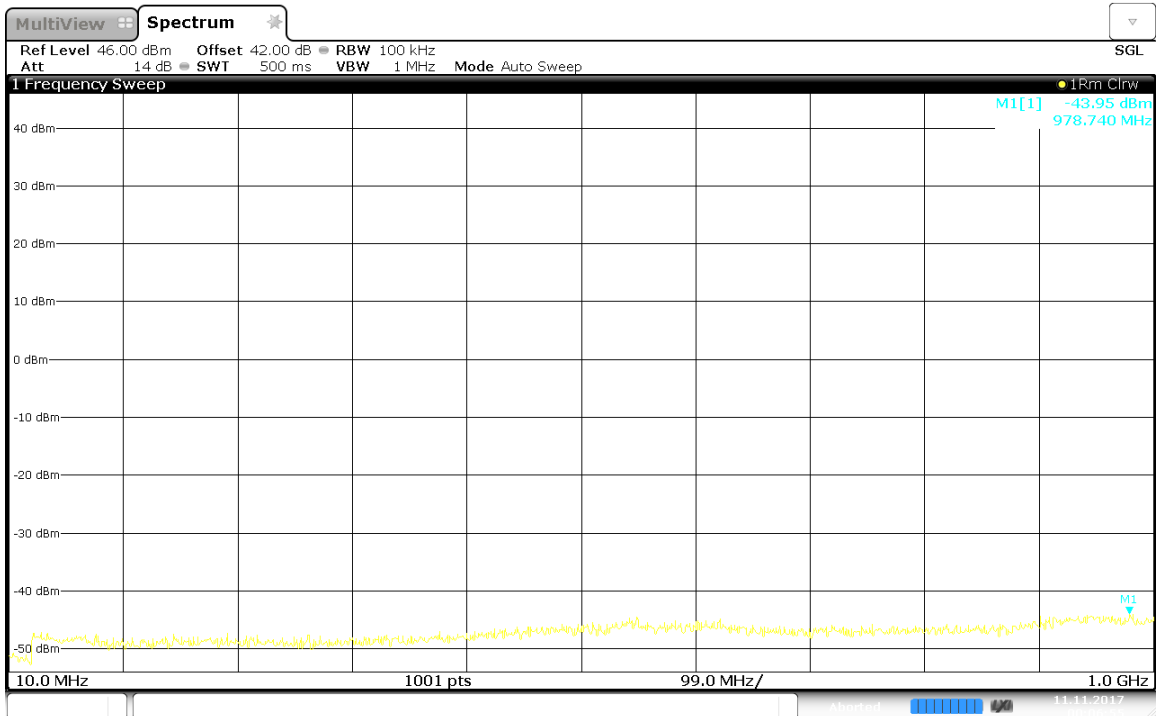




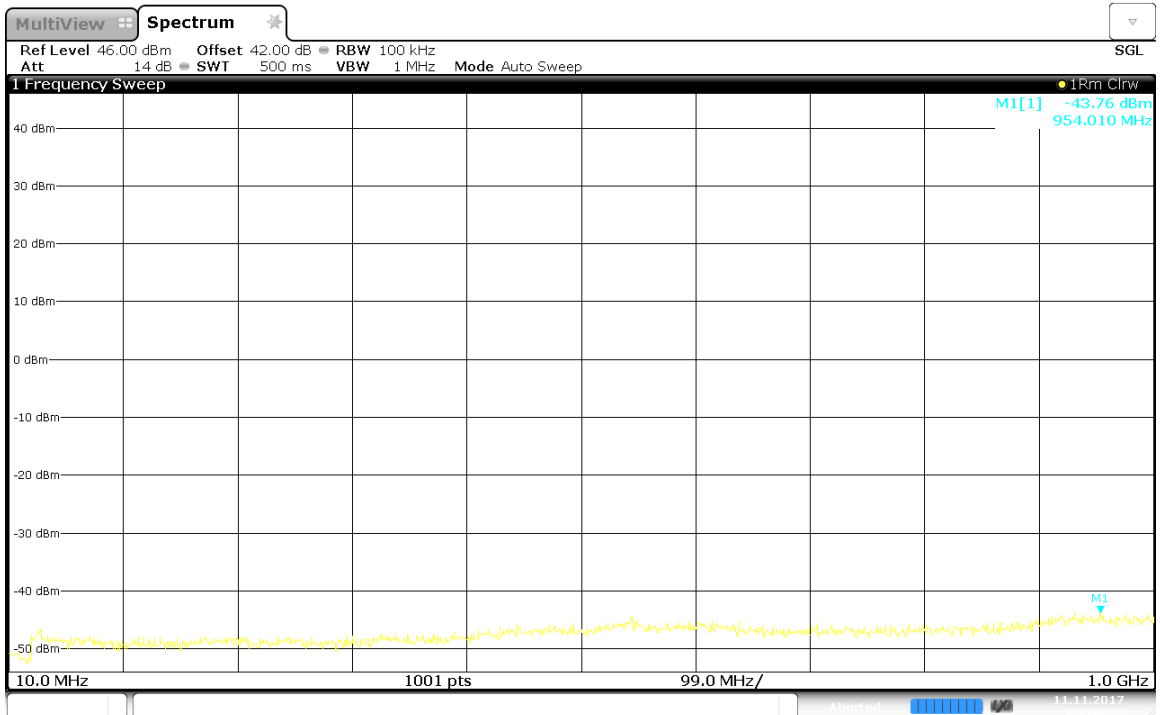
00:09:04 11.11.2017



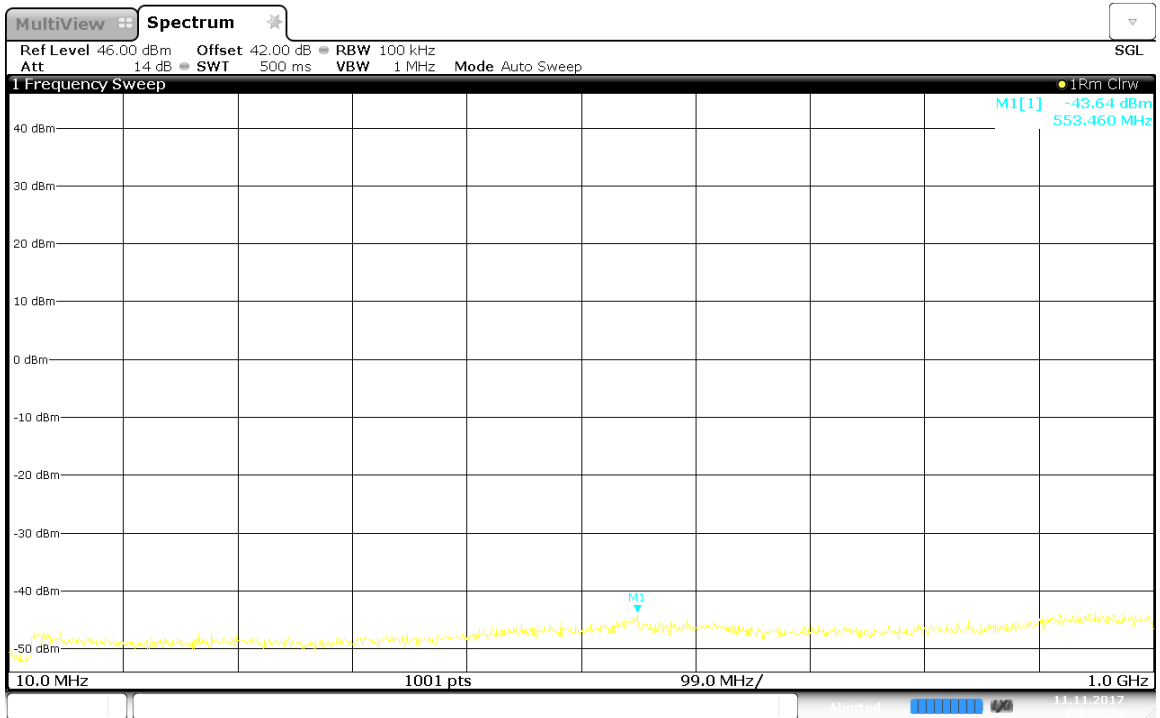
00:10:17 11.11.2017



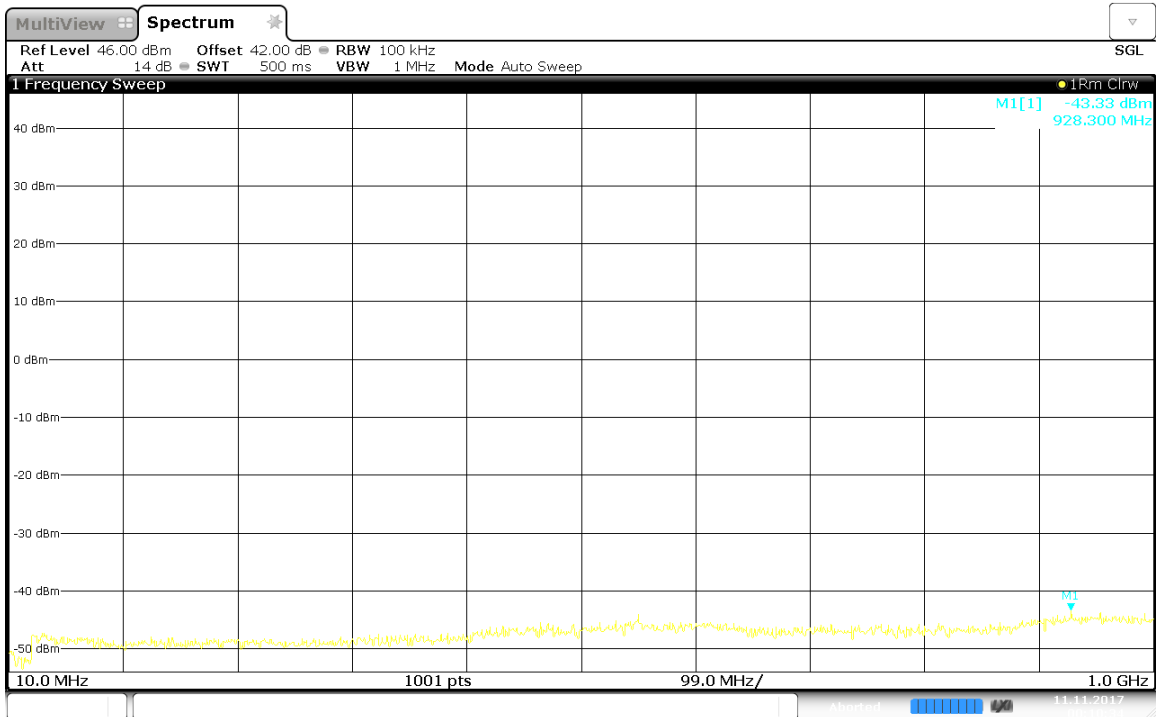
00:06:56 11.11.2017



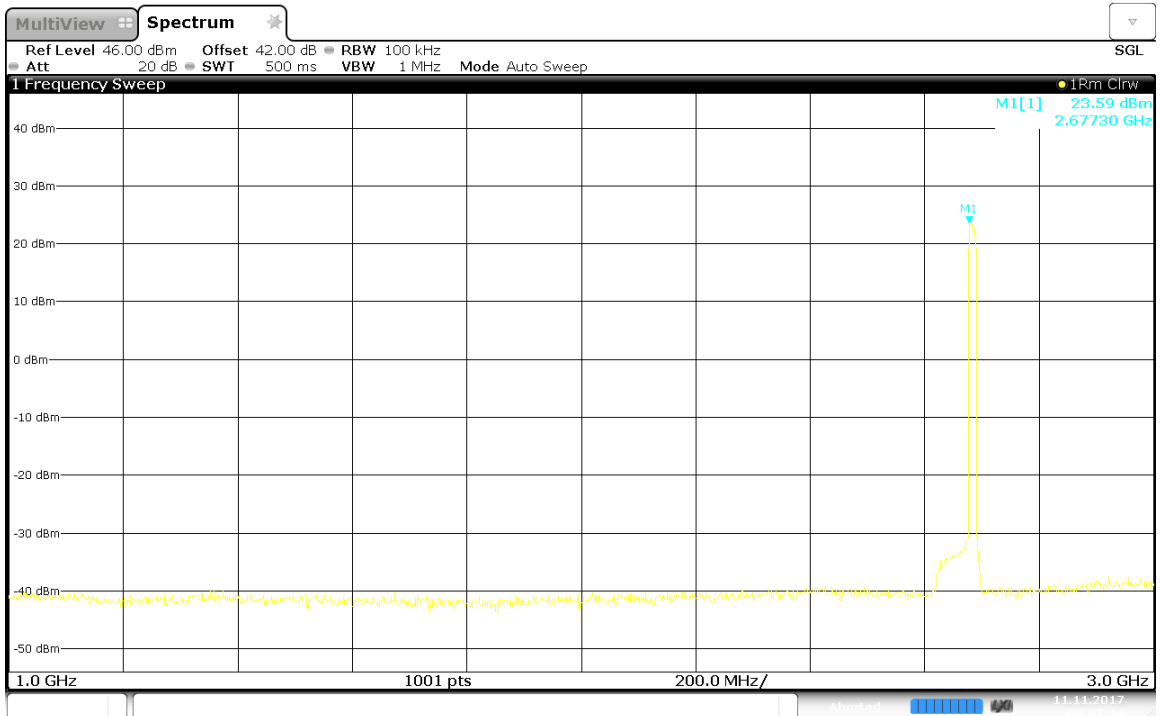
00:08:09 11.11.2017



00:09:22 11.11.2017



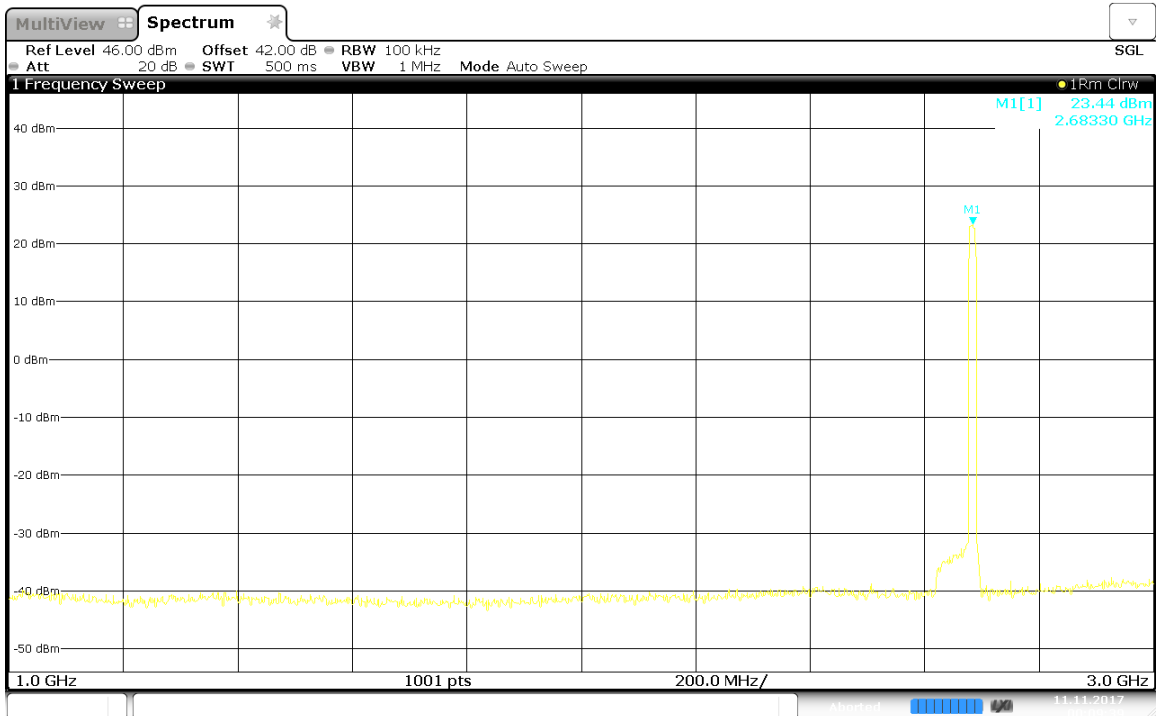
00:10:35 11.11.2017



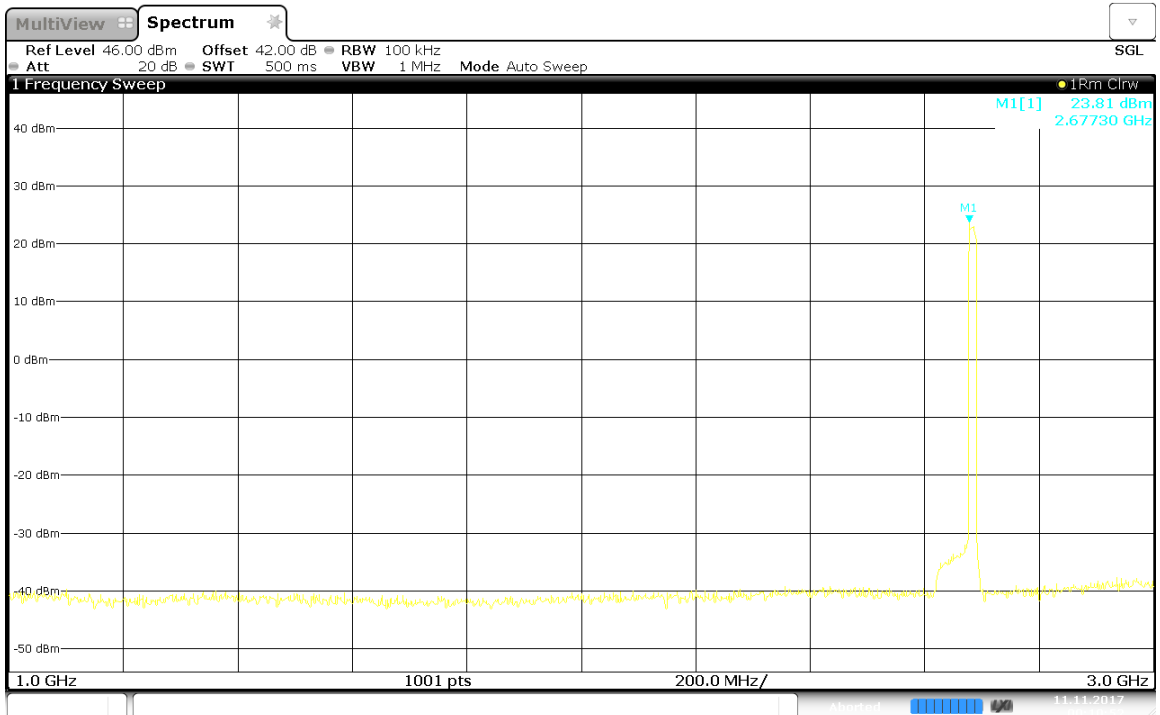
00:07:14 11.11.2017



00:08:26 11.11.2017



00:09:39 11.11.2017



00:10:52 11.11.2017