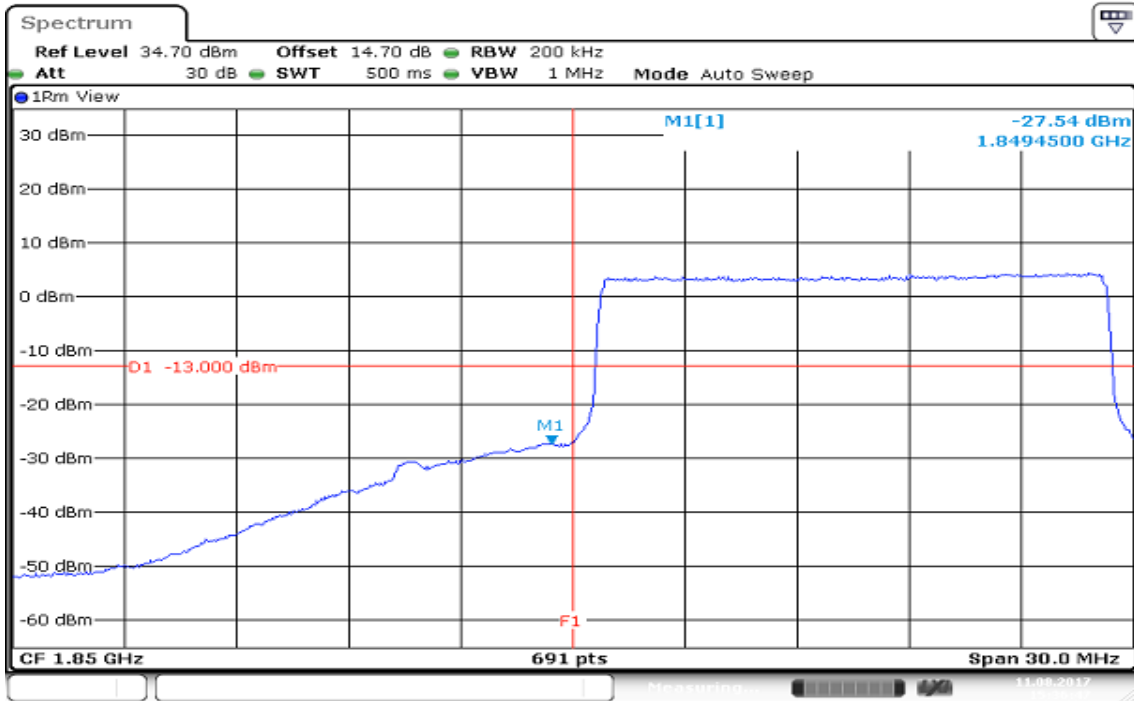
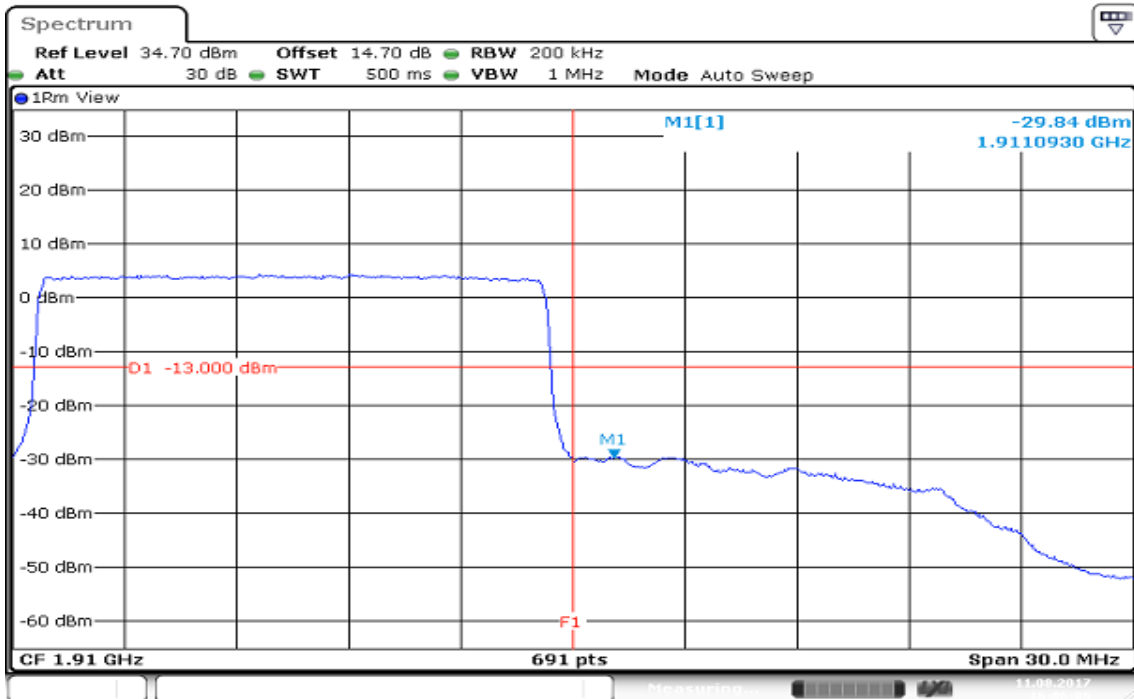


### CHANNEL BANDWIDTH: 15MHz / QPSK / 100% RB ALLOCATED LOWER BAND EDGE



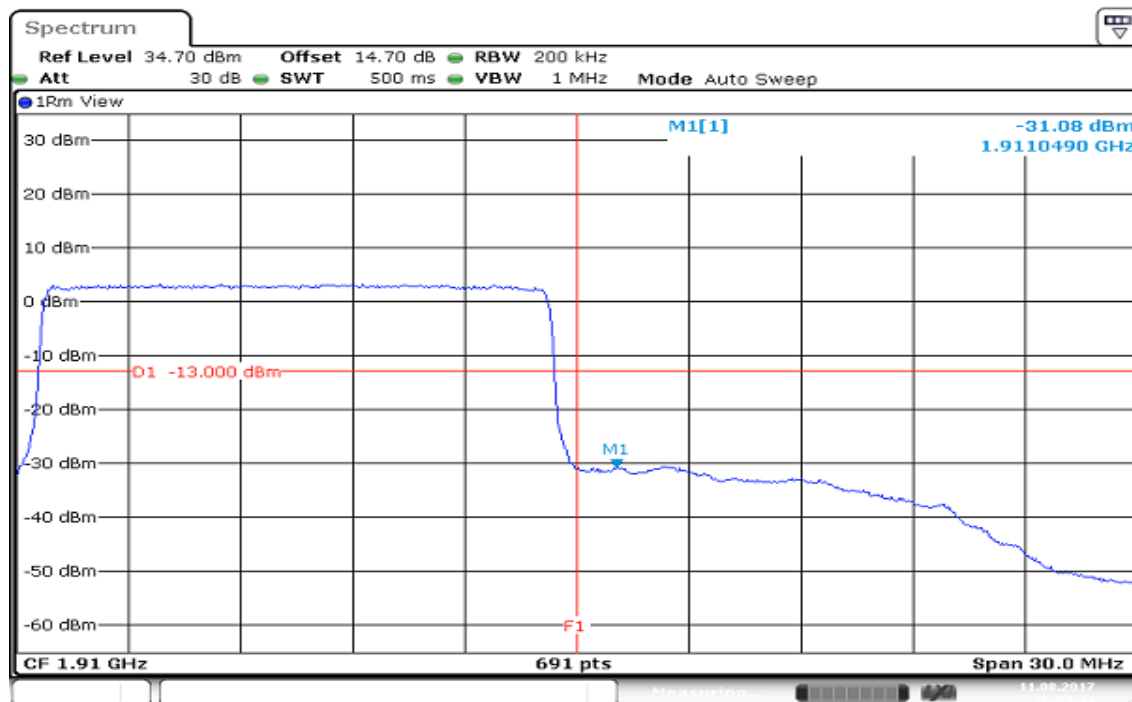
Date: 11.AUG.2017 15:26:48

### HIGHER BAND EDGE



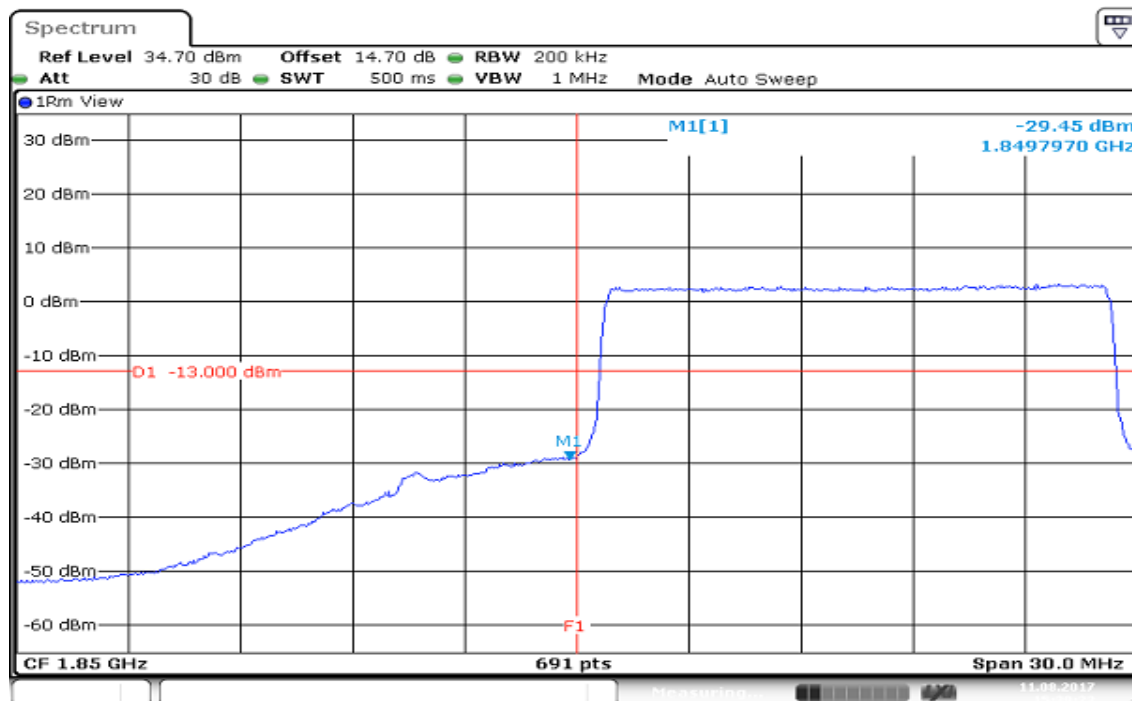
Date: 11.AUG.2017 16:06:06

### CHANNEL BANDWIDTH: 15 MHz / 16QAM / 100% RB ALLOCATED LOWER BAND EDGE



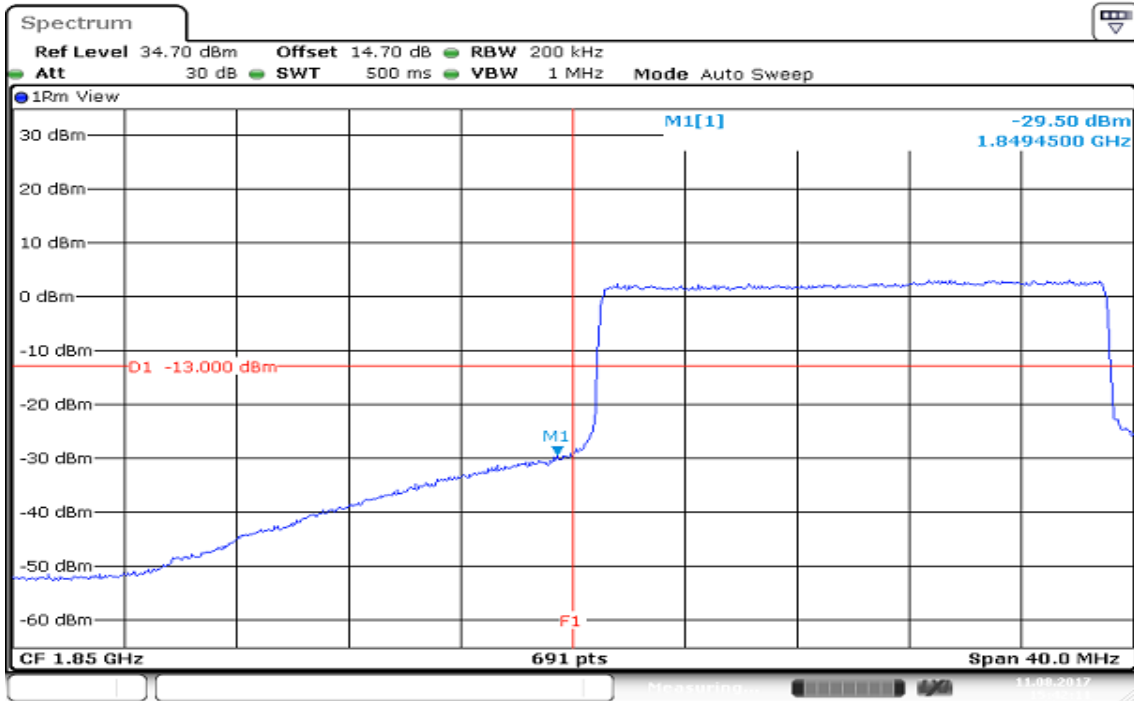
Date: 11.AUG.2017 16:03:44

### HIGHER BAND EDGE



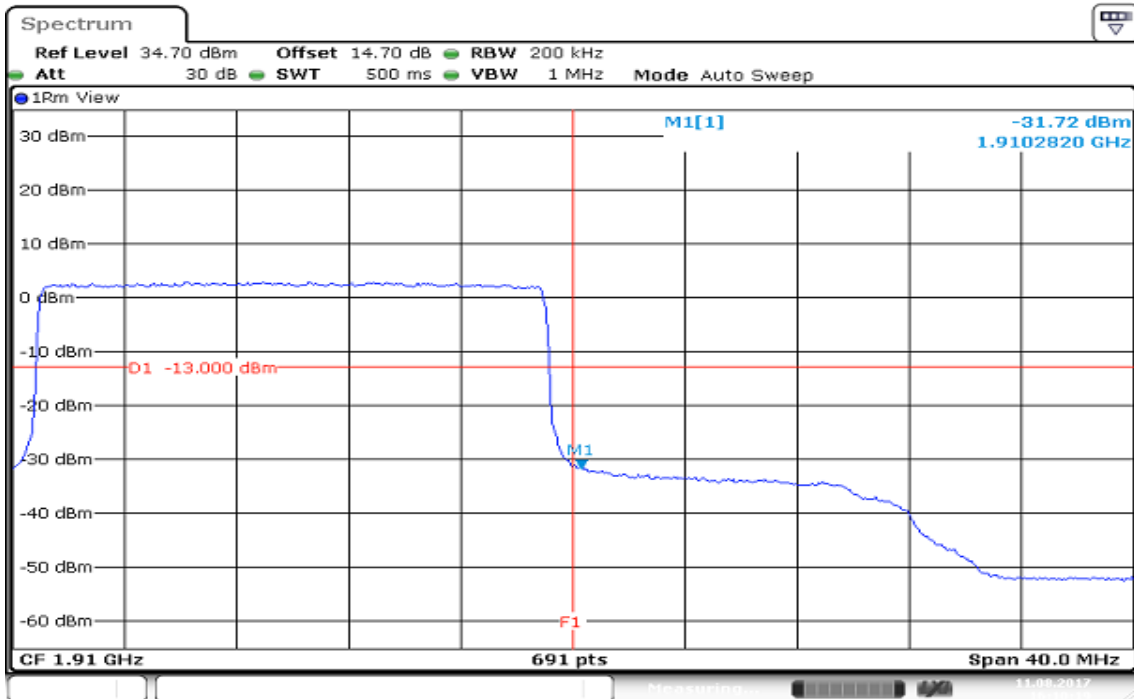
Date: 11.AUG.2017 15:39:24

### CHANNEL BANDWIDTH: 20MHz / QPSK / 100% RB ALLOCATED LOWER BAND EDGE



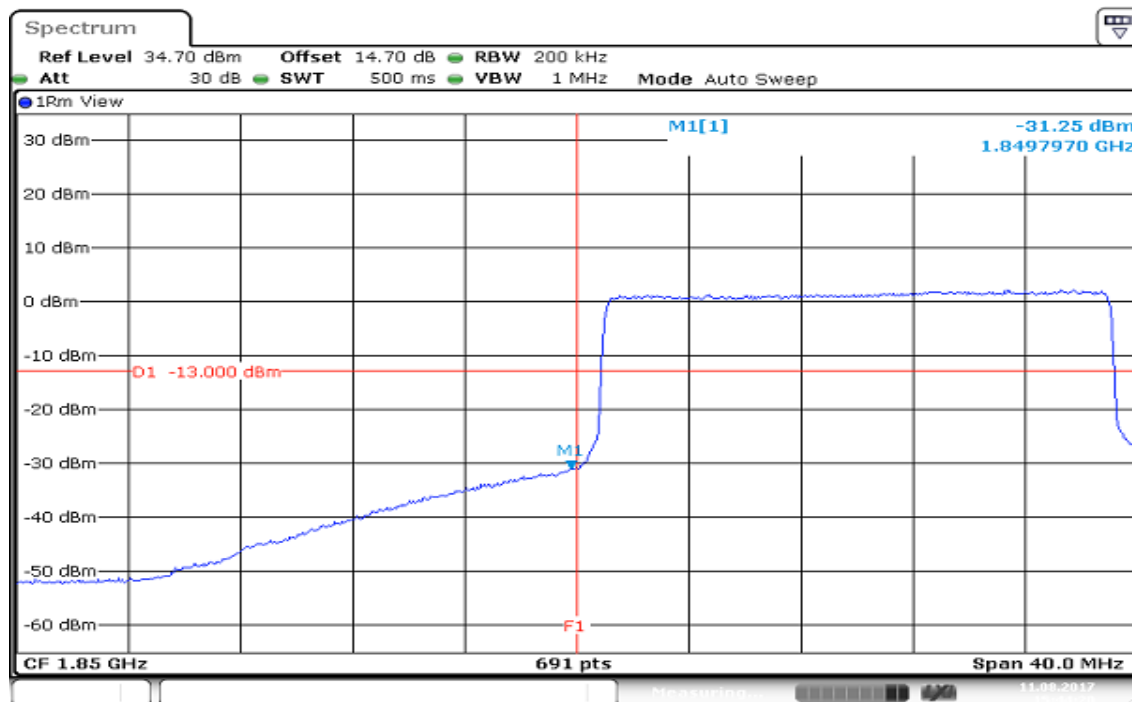
Date: 11.AUG.2017 15:42:11

### HIGHER BAND EDGE



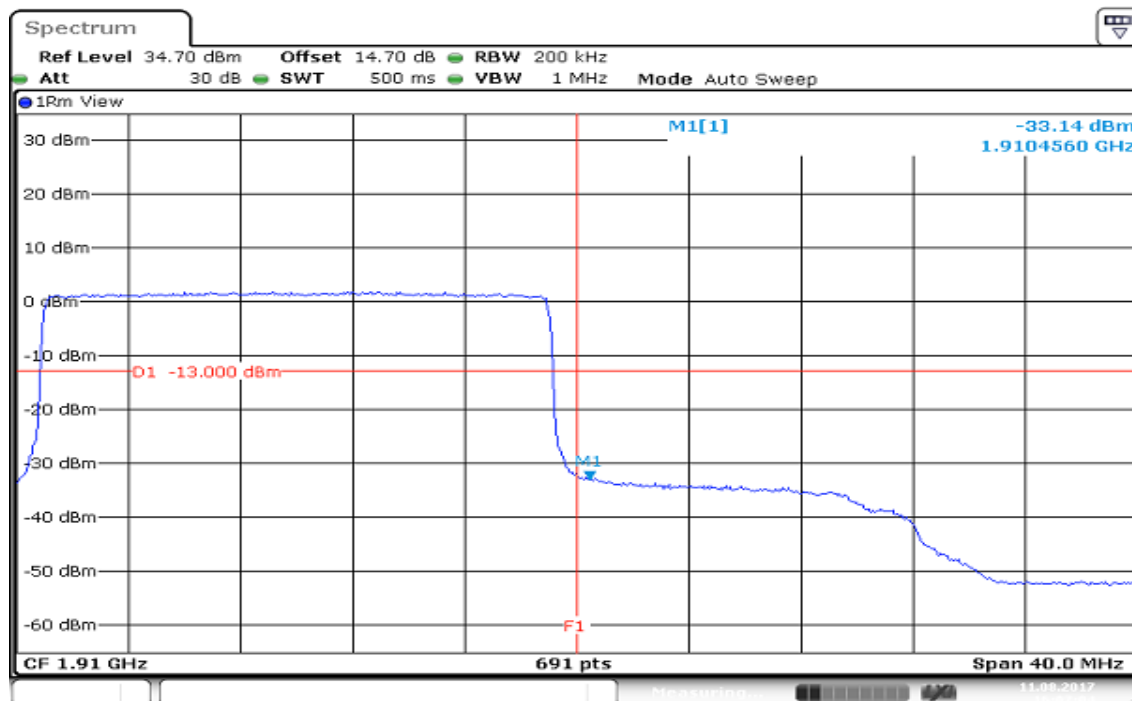
Date: 11.AUG.2017 16:10:20

**CHANNEL BANDWIDTH: 20MHz / 16QAM / 100% RB ALLOCATED**  
**LOWER BAND EDGE**



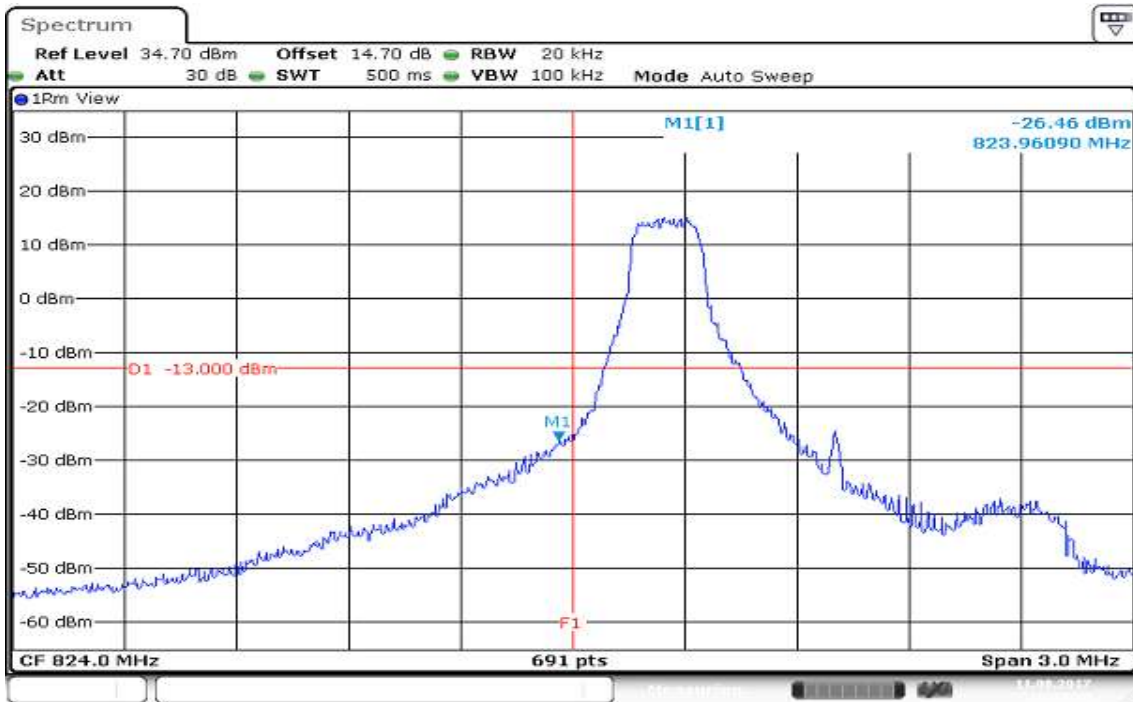
Date: 11.AUG.2017 15:44:20

**HIGHER BAND EDGE**



Date: 11.AUG.2017 16:07:05

### LTE Band 5 CHANNEL BANDWIDTH: 1.4MHz / QPSK / 1 RB ALLOCATED LOWER BAND EDGE



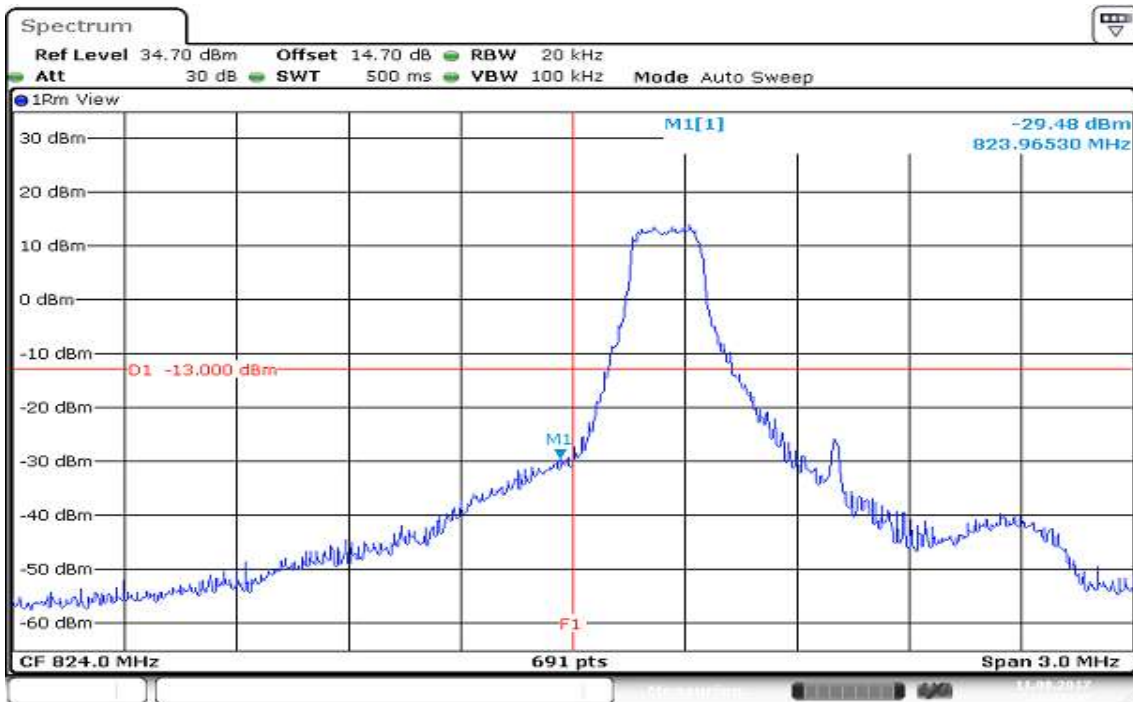
Date: 11 AUG 2017 16:24:29

### HIGHER BAND EDGE



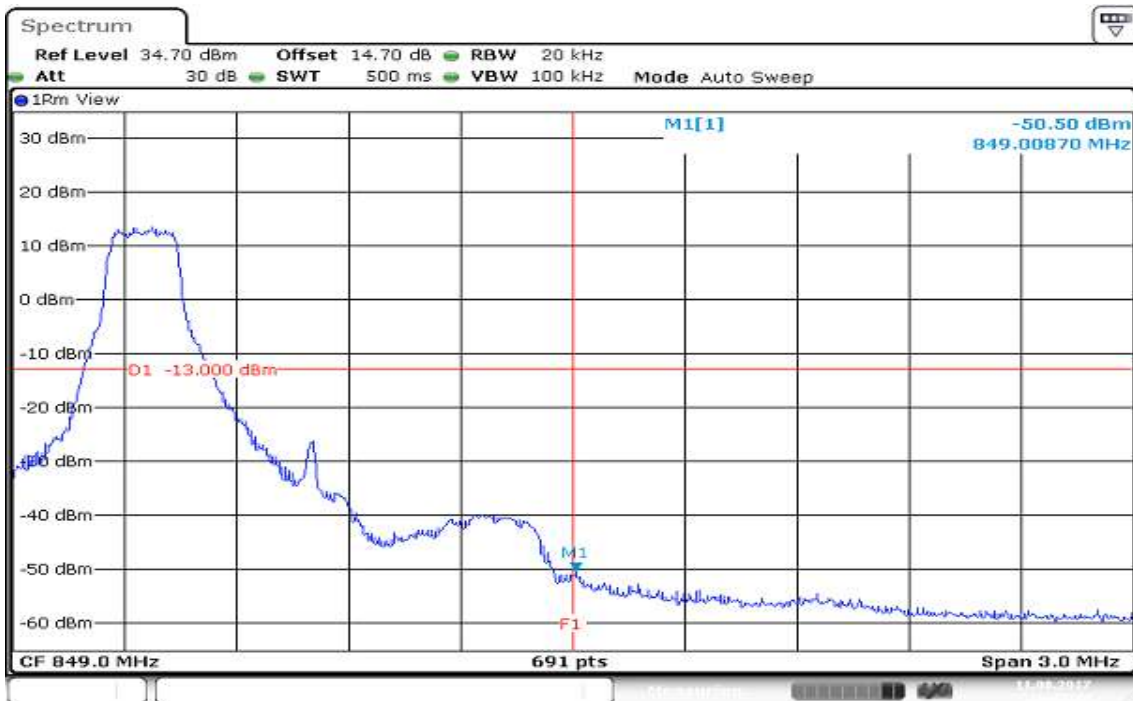
Date: 11 AUG 2017 16:41:07

### CHANNEL BANDWIDTH: 1.4MHz / 16QAM / 1 RB ALLOCATED LOWER BAND EDGE



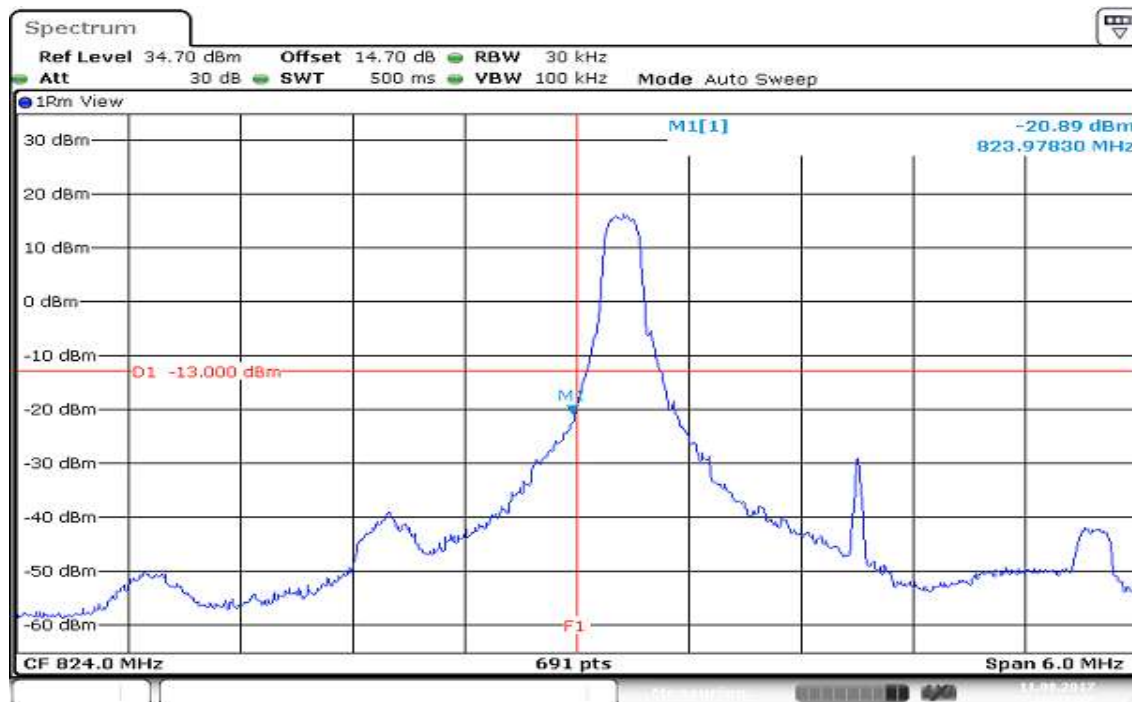
Date: 11 AUG 2017 16:20:47

### HIGHER BAND EDGE



Date: 11 AUG 2017 16:43:23

### CHANNEL BANDWIDTH: 3MHz / QPSK / 1 RB ALLOCATED LOWER BAND EDGE



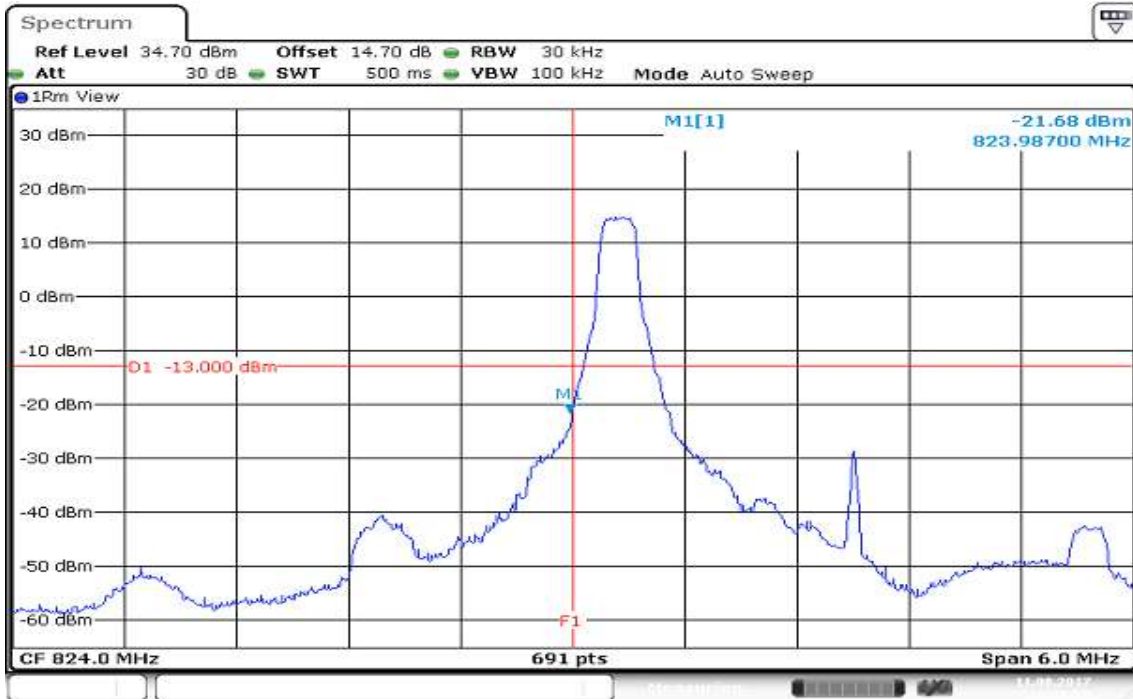
Date: 11 AUG 2017 16:29:48

### HIGHER BAND EDGE



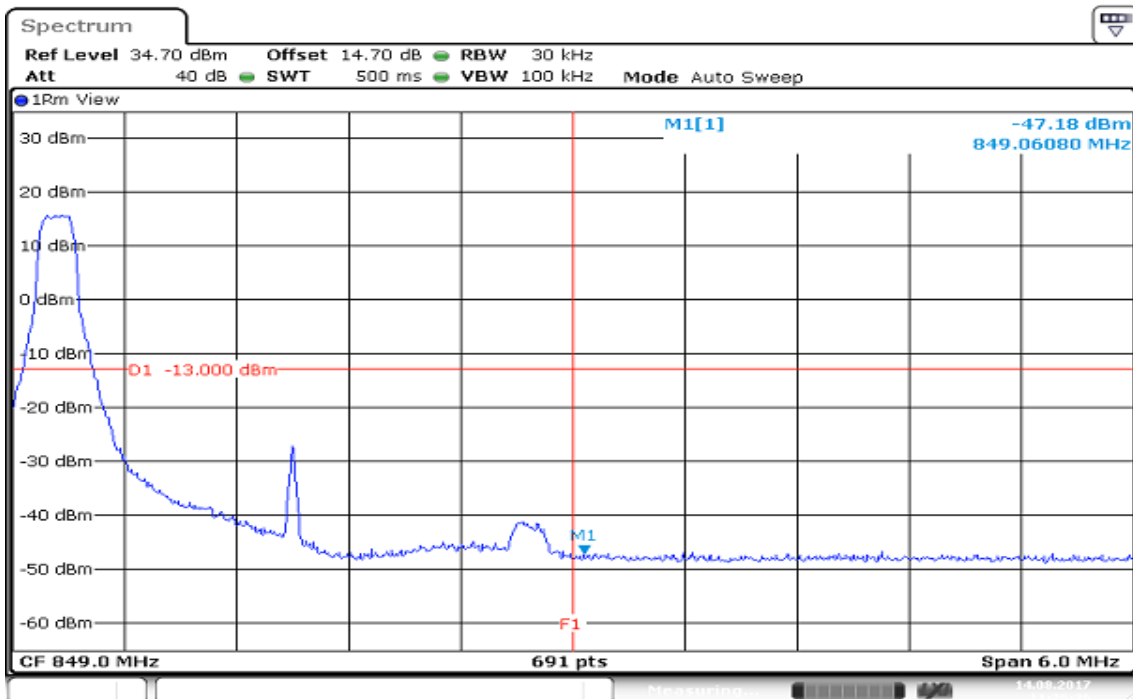
Date: 11 AUG 2017 16:45:04

### CHANNEL BANDWIDTH: 3MHz / 16QAM / 1 RB ALLOCATED LOWER BAND EDGE



Date: 11 AUG 2017 16:26:59

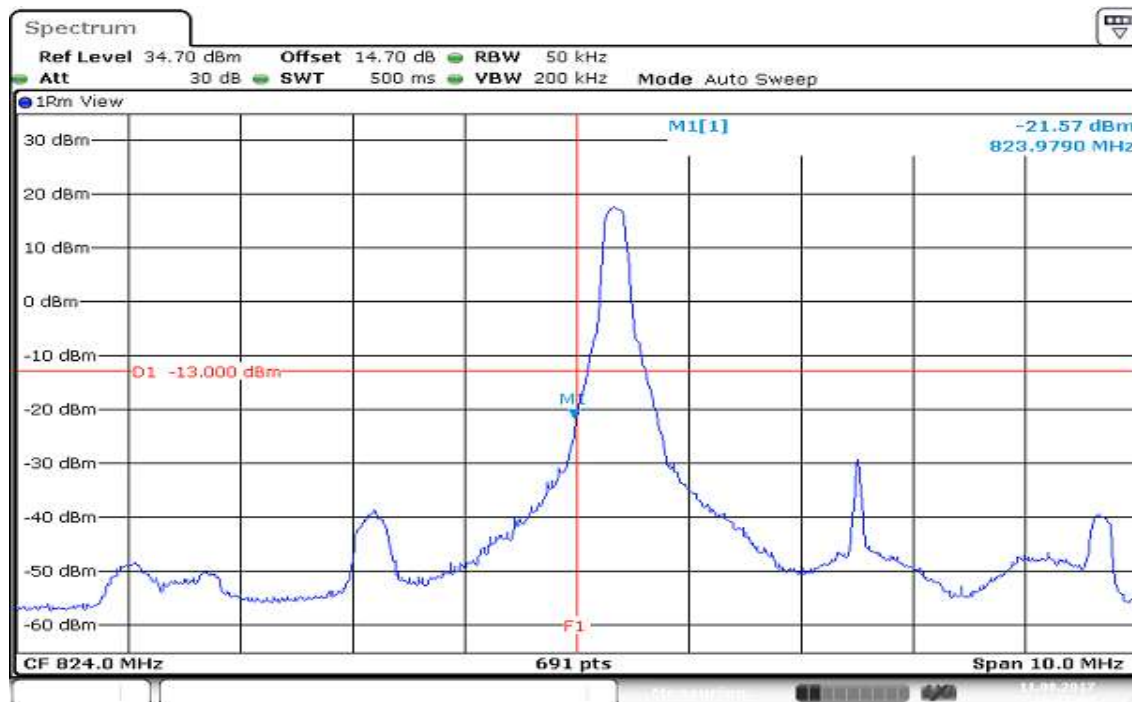
### HIGHER BAND EDGE



Date: 14 AUG 2017 11:26:36



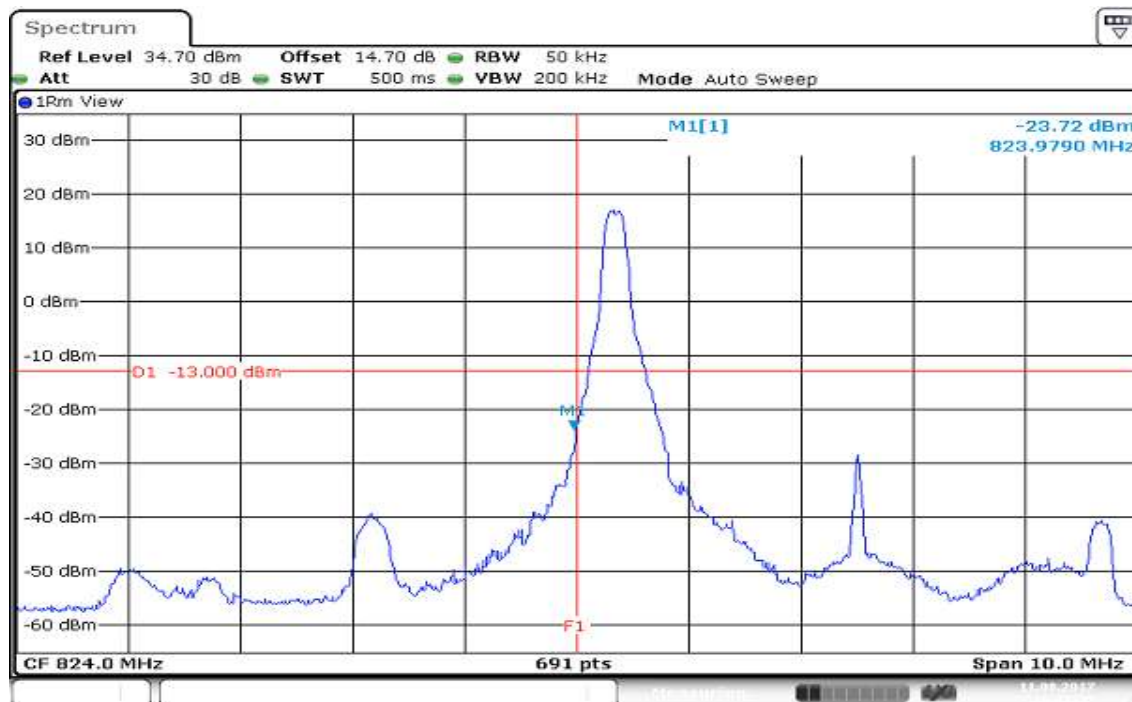
### CHANNEL BANDWIDTH: 5MHz / QPSK / 1 RB ALLOCATED LOWER BAND EDGE



### HIGHER BAND EDGE

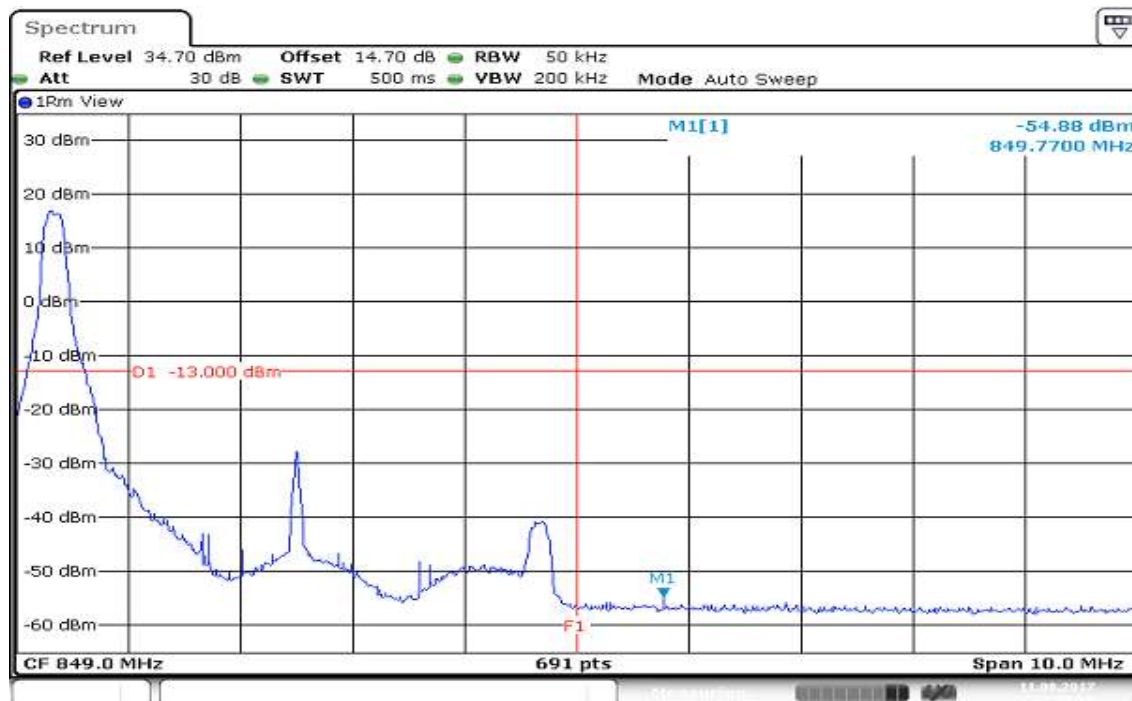


### CHANNEL BANDWIDTH: 5MHz / 16QAM / 1 RB ALLOCATED LOWER BAND EDGE



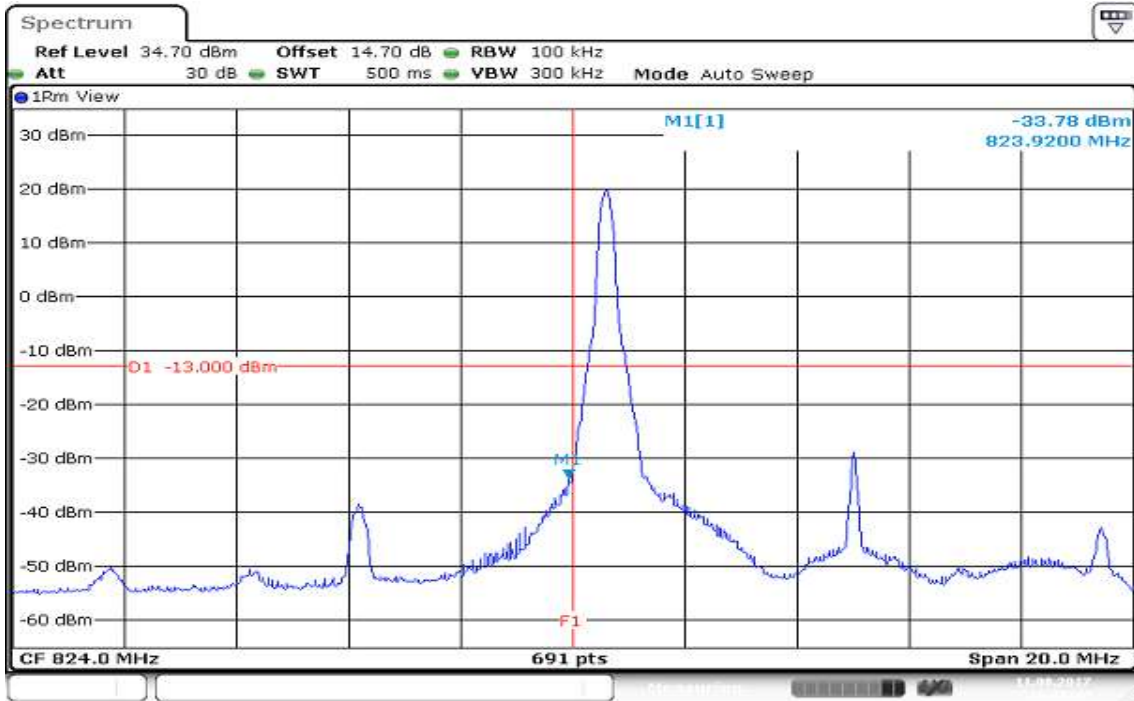
Date: 11 AUG 2017 16:23:25

### HIGHER BAND EDGE



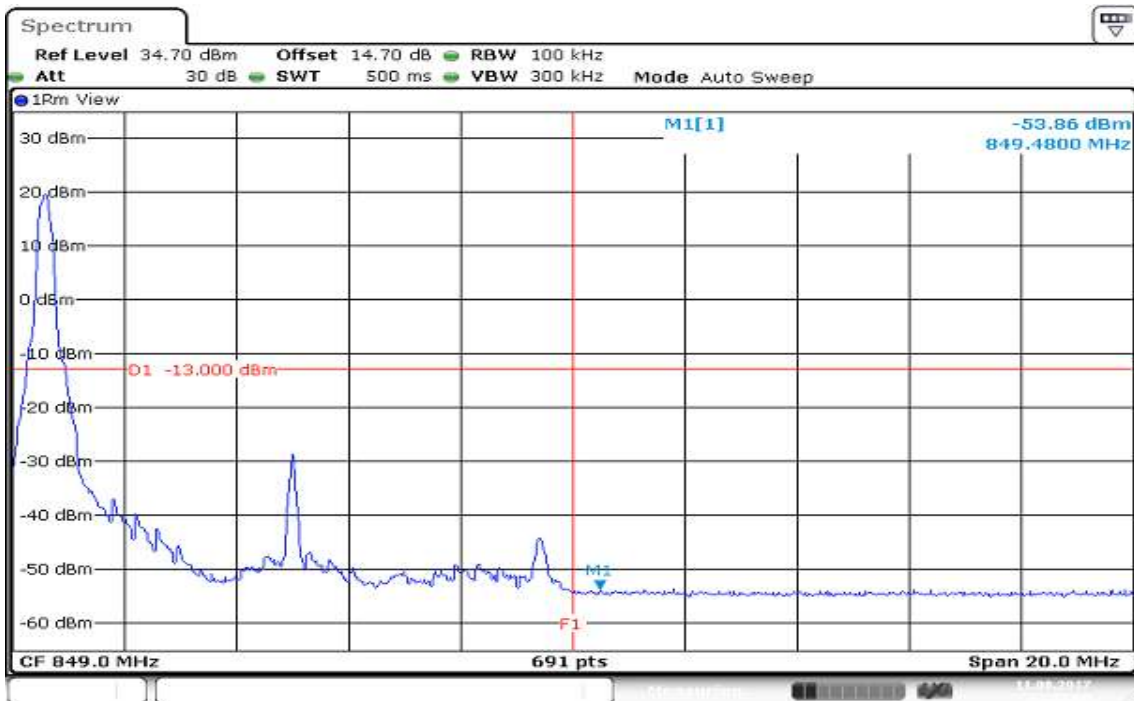
Date: 11 AUG 2017 17:00:57

### CHANNEL BANDWIDTH: 10MHz / QPSK / 1 RB ALLOCATED LOWER BAND EDGE



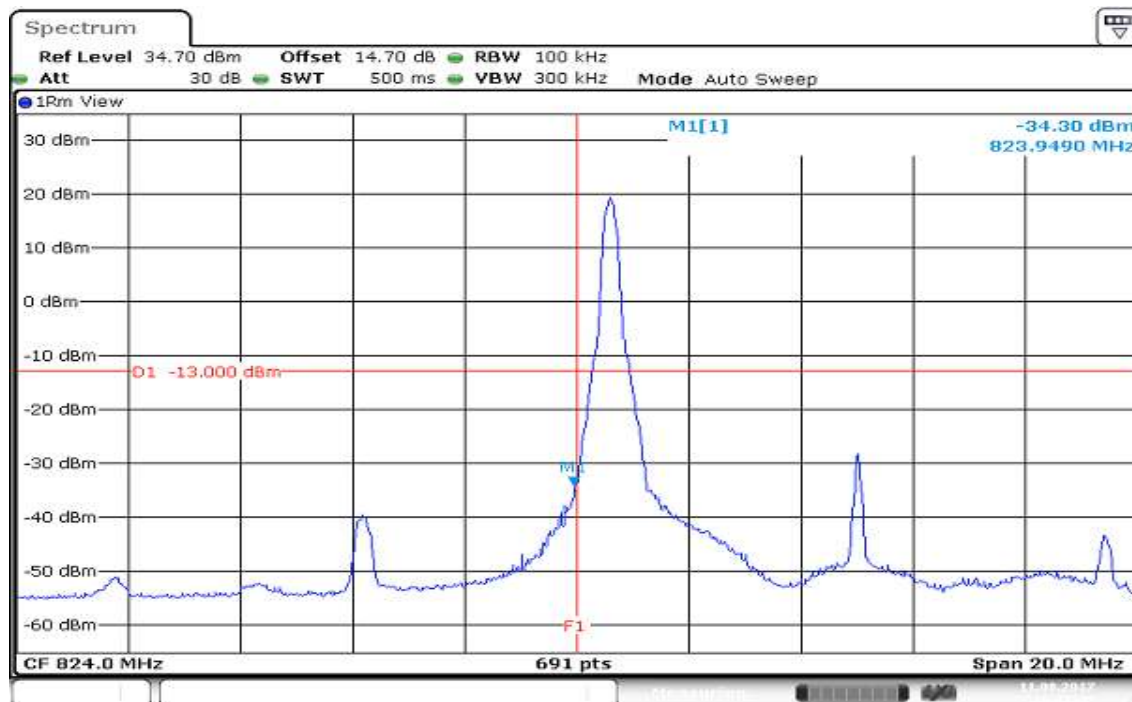
Date: 11 AUG 2017 16:26:40

### HIGHER BAND EDGE



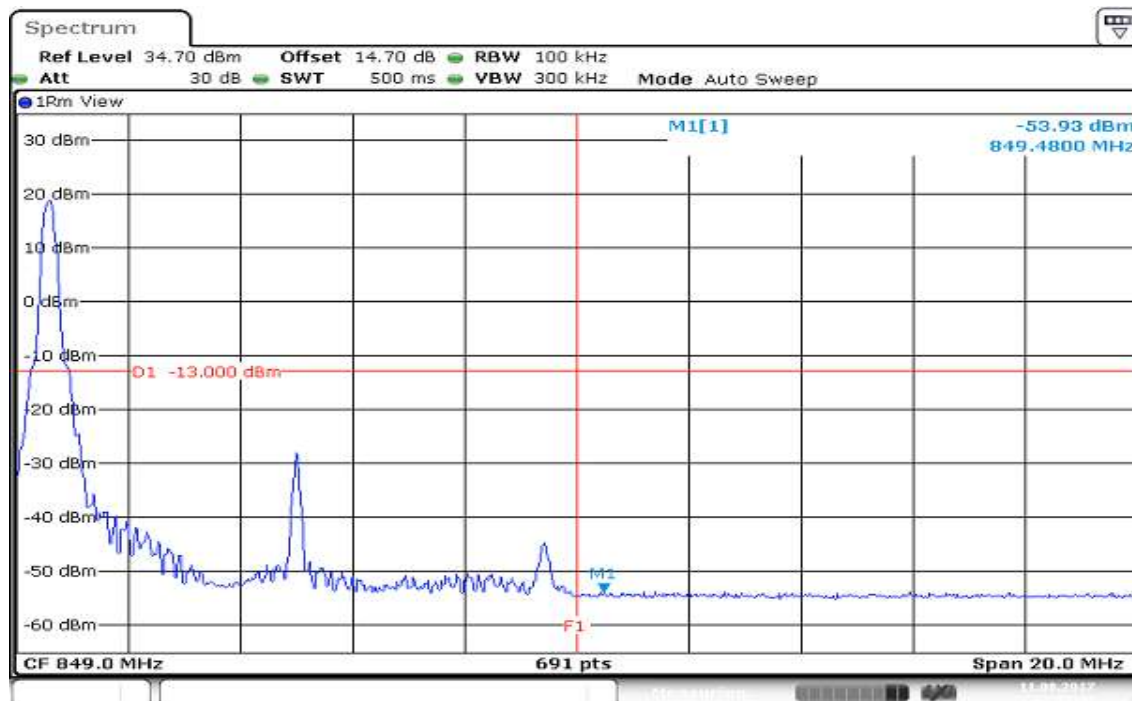
Date: 11 AUG 2017 17:05:09

**CHANNEL BANDWIDTH: 10MHz / 16QAM / 1 RB ALLOCATED**  
**LOWER BAND EDGE**



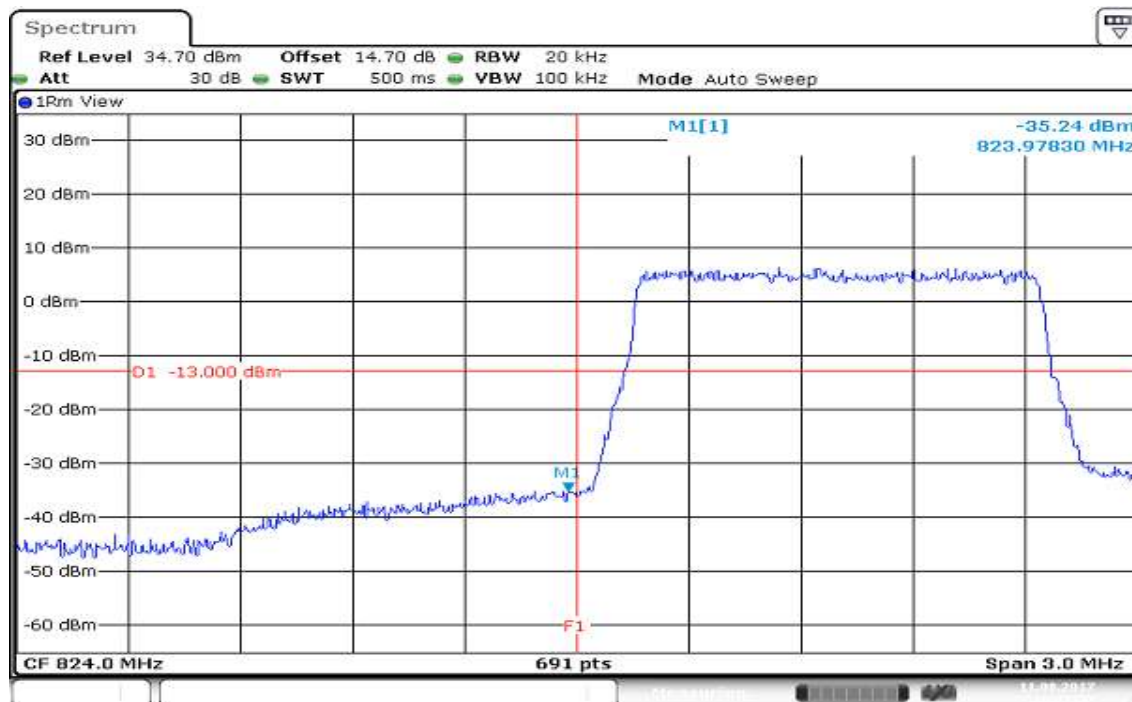
Date: 11 AUG 2017 16:25:48

**HIGHER BAND EDGE**

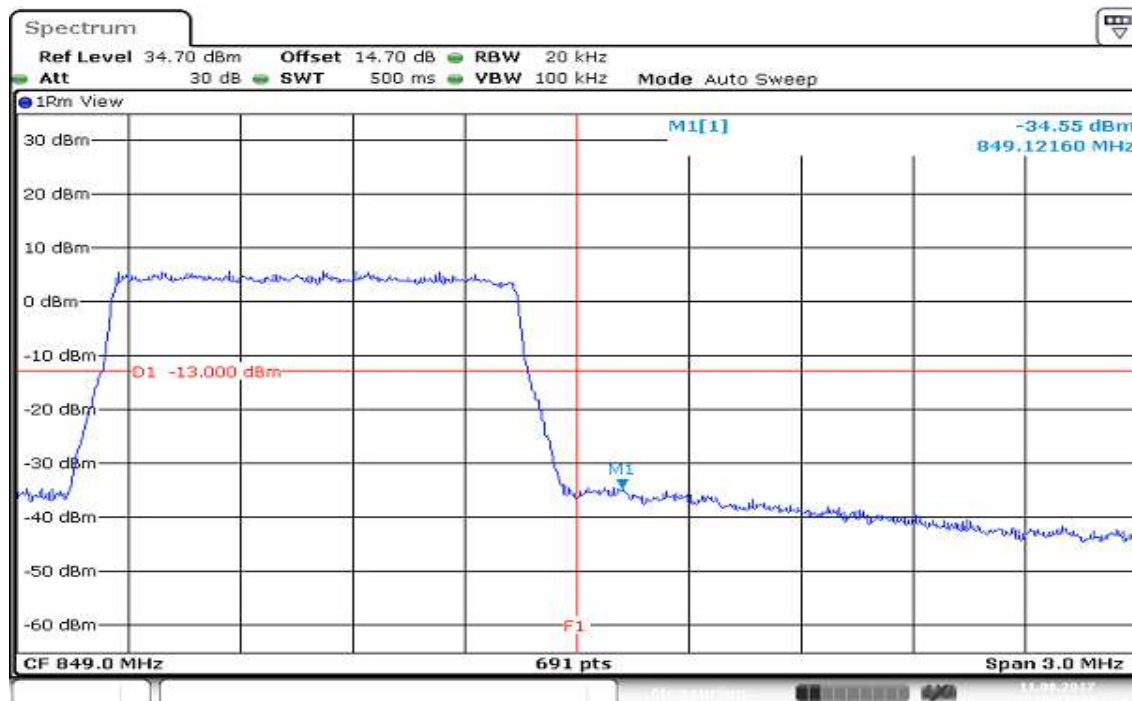


Date: 11 AUG 2017 17:05:44

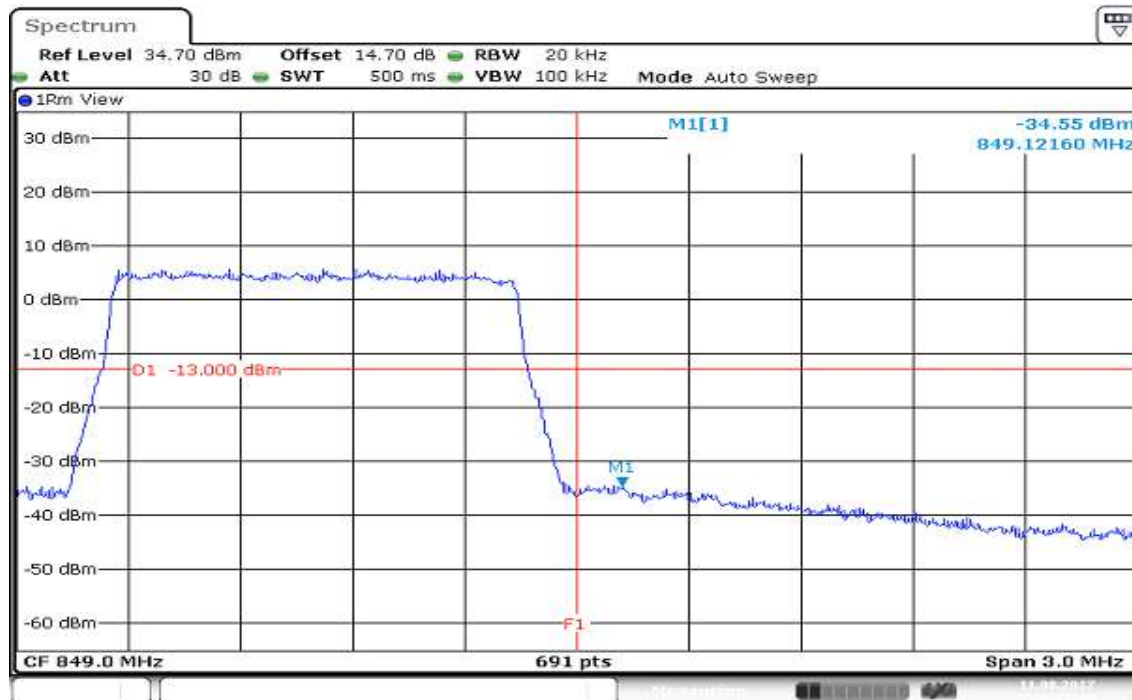
### CHANNEL BANDWIDTH: 1.4MHz / QPSK / 100% RB ALLOCATED LOWER BAND EDGE



### HIGHER BAND EDGE

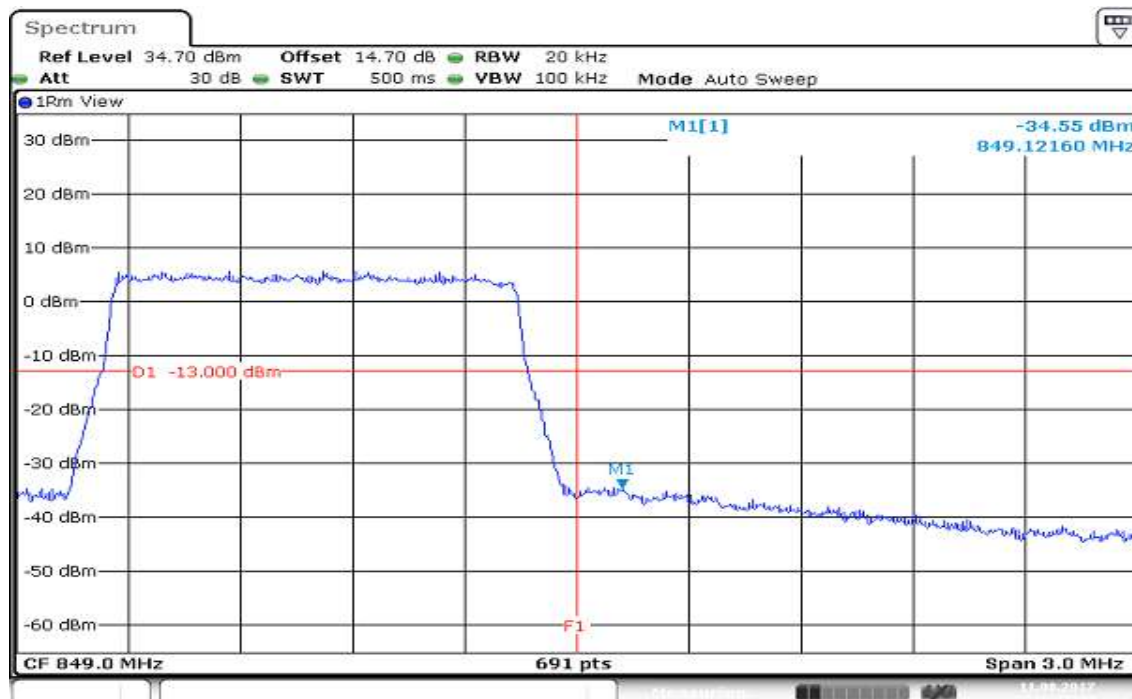


**CHANNEL BANDWIDTH: 1.4MHz / 16QAM / 100% RB ALLOCATED**  
**LOWER BAND EDGE**



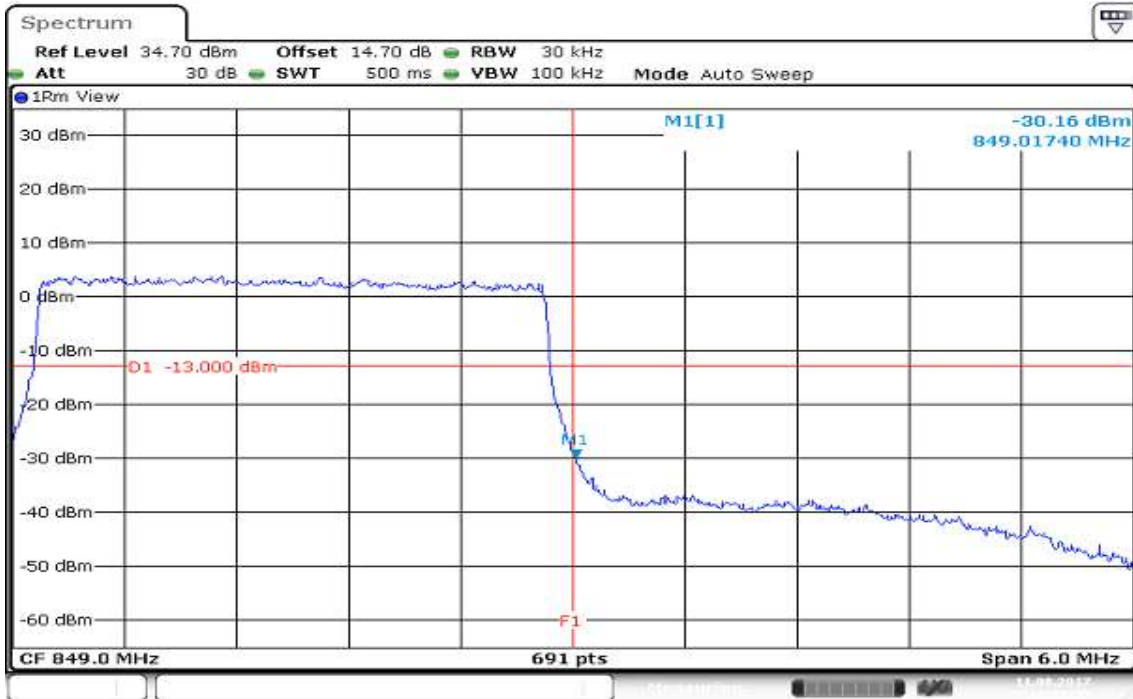
Date: 11 AUG 2017 16:41:49

**HIGHER BAND EDGE**



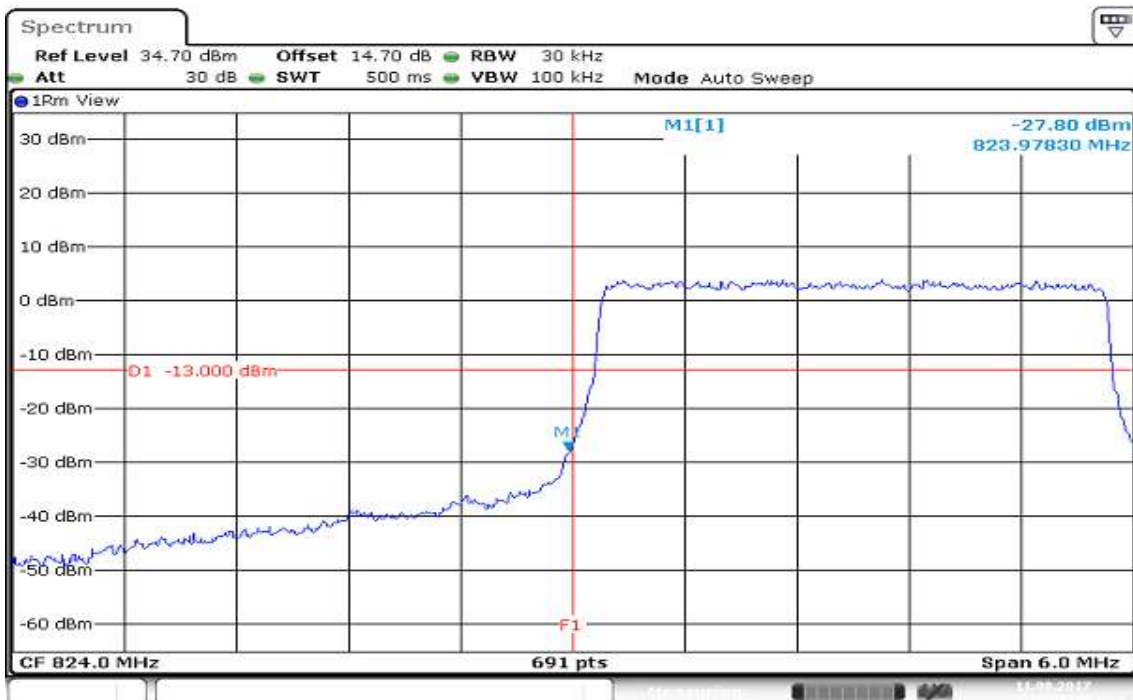
Date: 11 AUG 2017 16:41:49

**CHANNEL BANDWIDTH: 3MHz / QPSK / 100% RB ALLOCATED**  
**LOWER BAND EDGE**



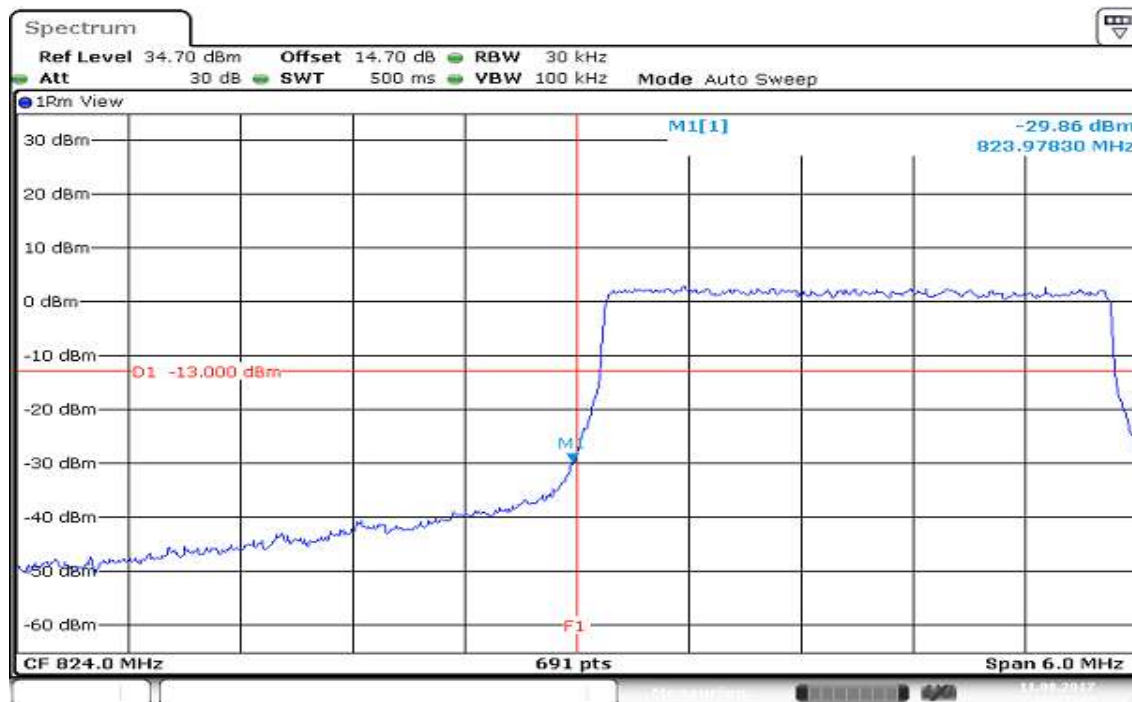
Date: 11 AUG 2017 16:59:12

**HIGHER BAND EDGE**



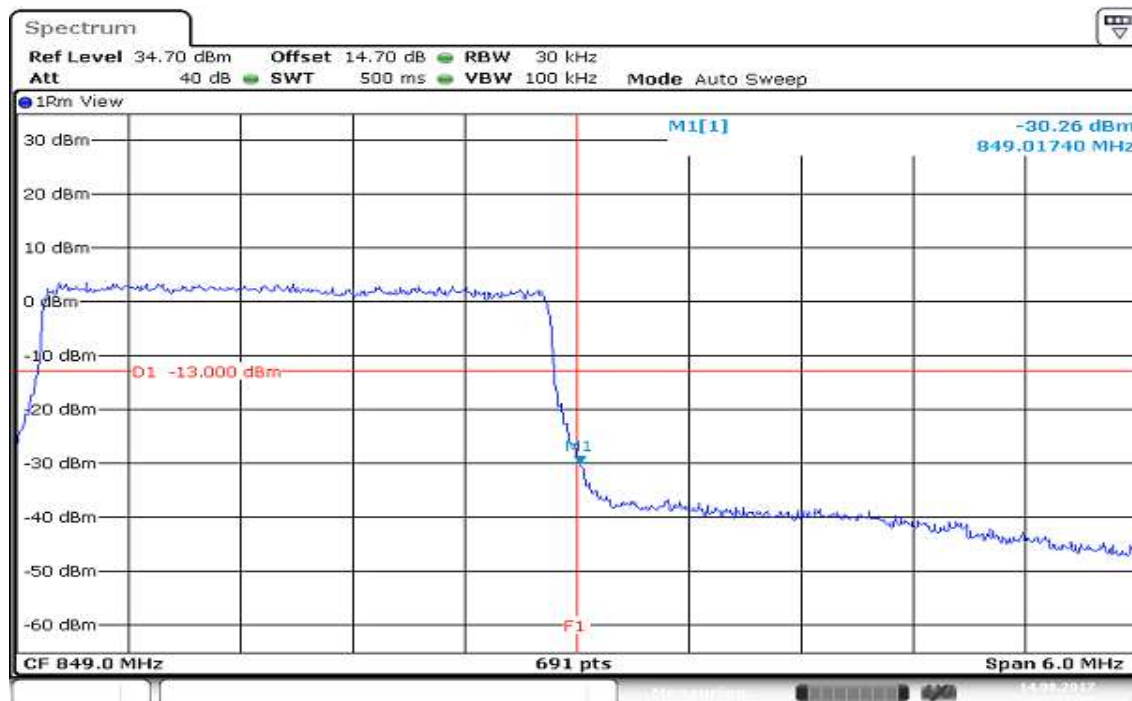
Date: 11 AUG 2017 16:28:15

### CHANNEL BANDWIDTH: 3MHz / 16QAM / 100% RB ALLOCATED LOWER BAND EDGE



Date: 11 AUG 2017 16:27:40

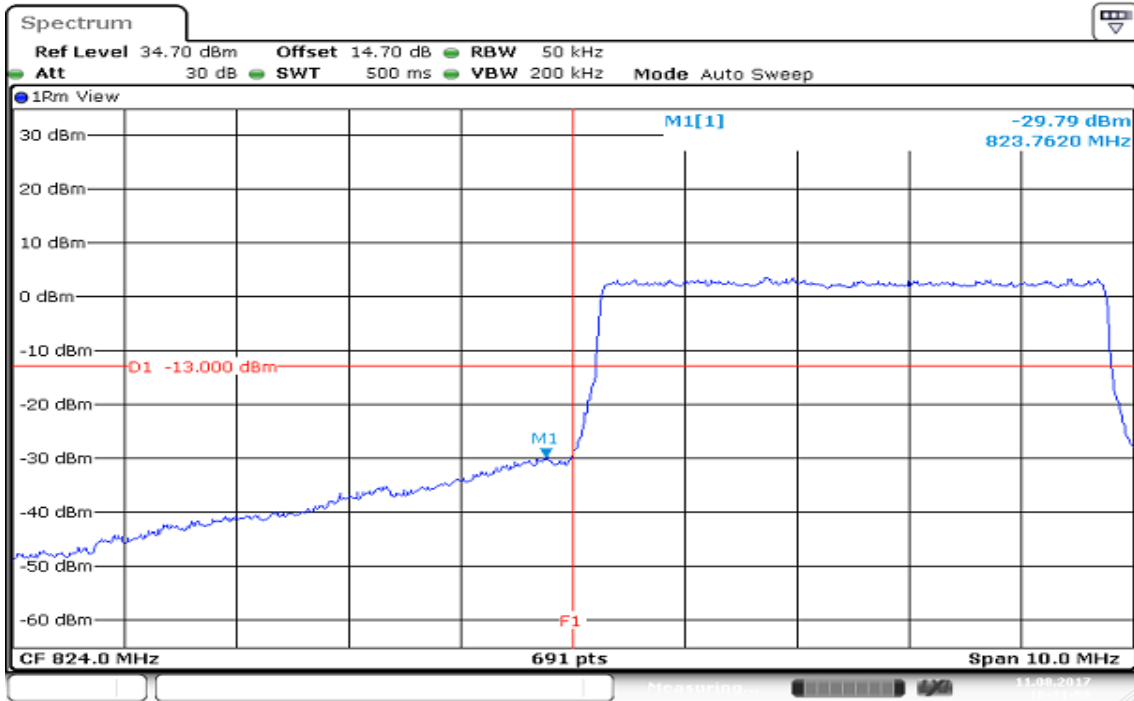
### HIGHER BAND EDGE



Date: 14 AUG 2017 11:27:39



### CHANNEL BANDWIDTH: 5MHz / QPSK / 100% RB ALLOCATED LOWER BAND EDGE



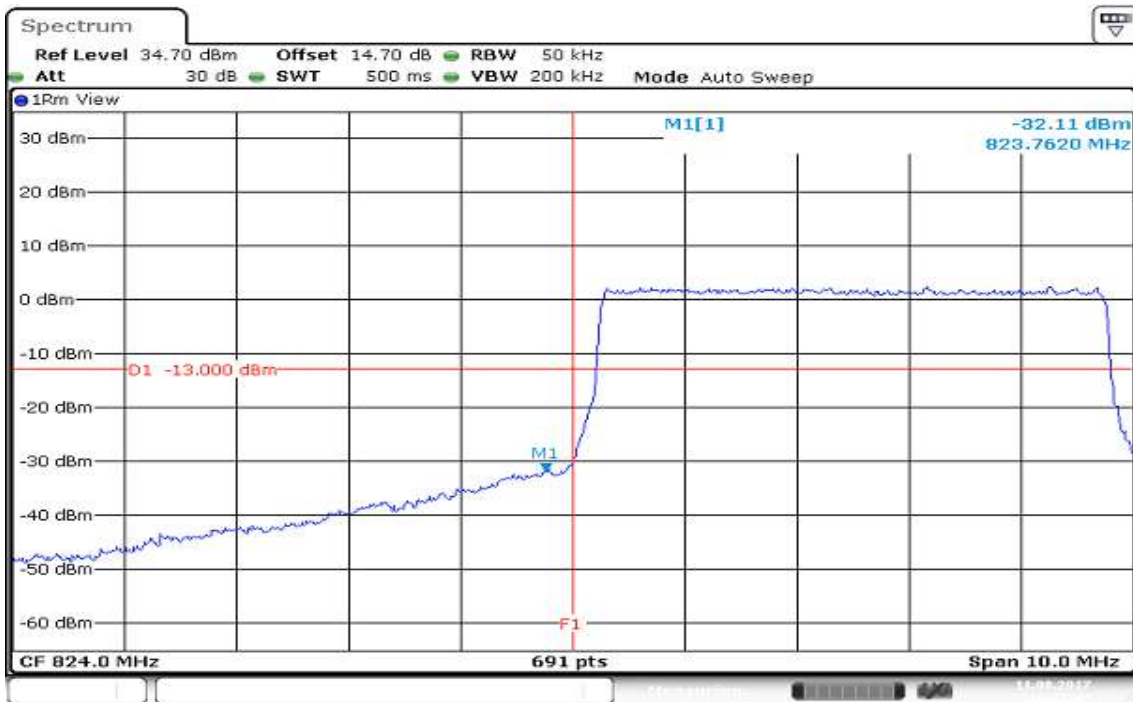
Date: 11.AUG.2017 16:21:58

### HIGHER BAND EDGE



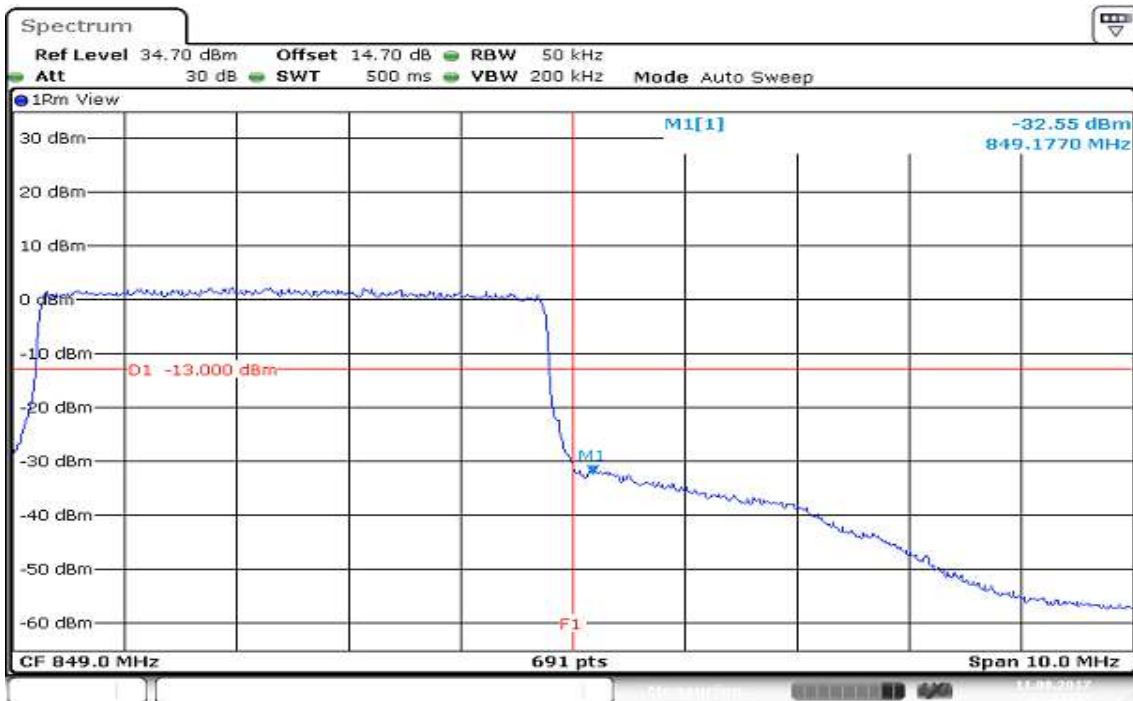
Date: 11.AUG.2017 17:02:09

**CHANNEL BANDWIDTH: 5MHz / 16QAM / 100% RB ALLOCATED**  
**LOWER BAND EDGE**



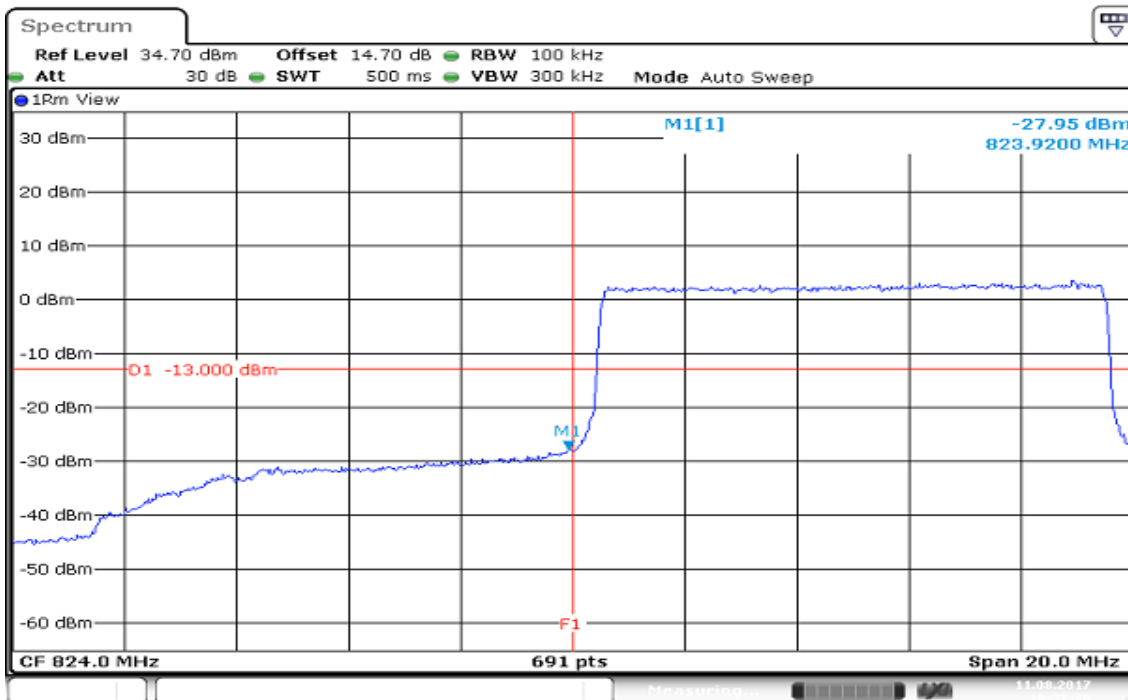
Date: 11 AUG 2017 16:32:40

**HIGHER BAND EDGE**



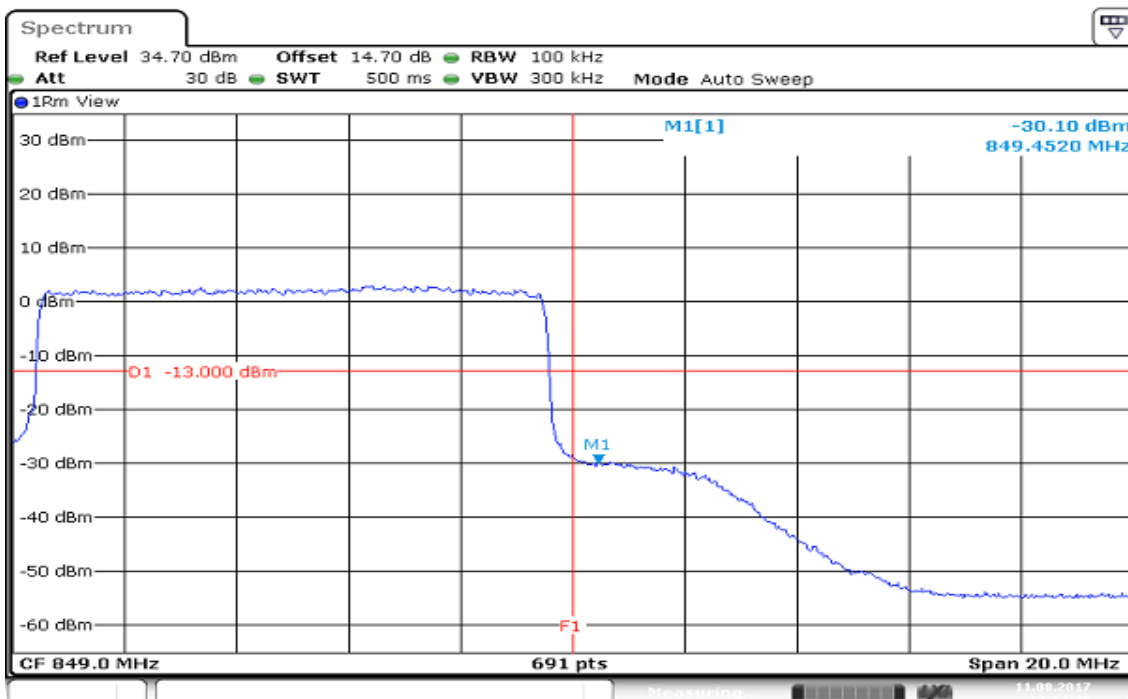
Date: 11 AUG 2017 17:01:37

### CHANNEL BANDWIDTH: 10MHz / QPSK / 100% RB ALLOCATED LOWER BAND EDGE



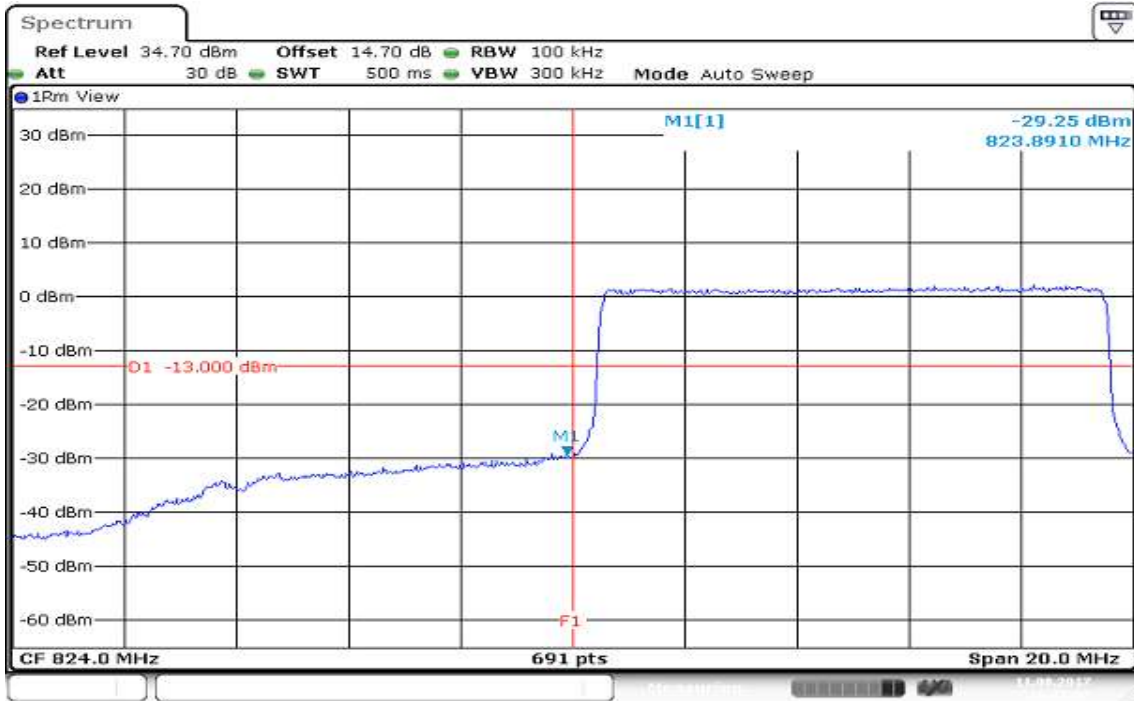
Date: 11 AUG 2017 16:27:26

### HIGHER BAND EDGE



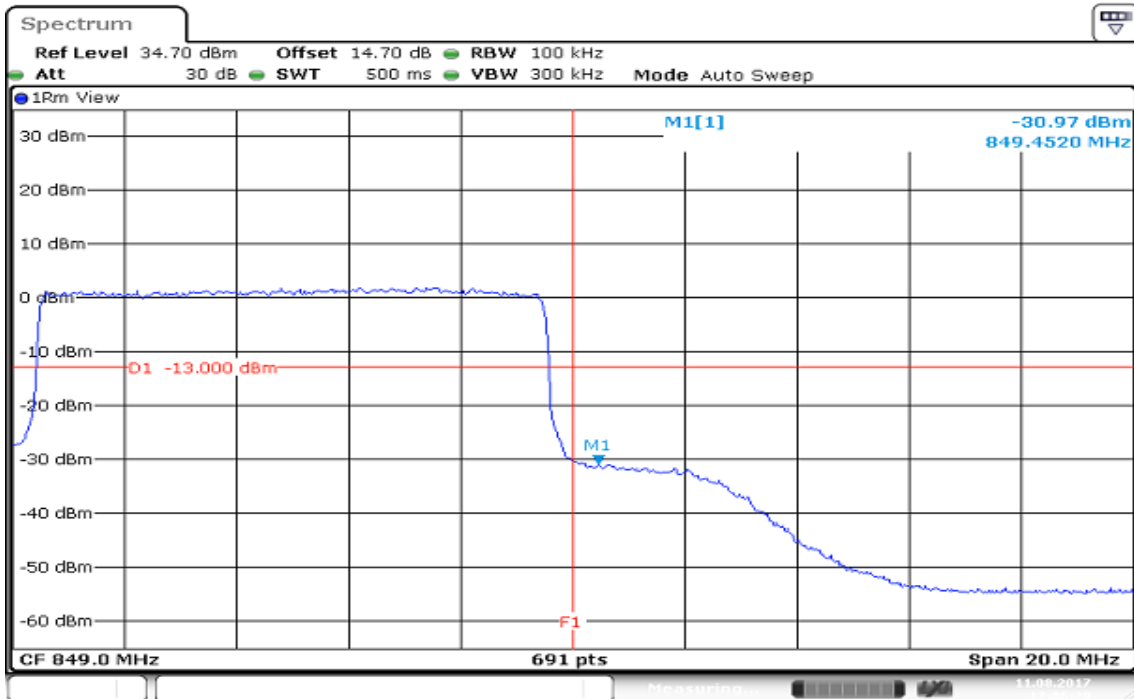
Date: 11 AUG 2017 17:04:20

**CHANNEL BANDWIDTH: 10MHz / 16QAM / 100% RB ALLOCATED**  
**LOWER BAND EDGE**



Date: 11 AUG 2017 16:25:02

**HIGHER BAND EDGE**



Date: 11 AUG 2017 17:06:29

## **7.7 CONDUCTED SPURIOUS EMISSIONS**

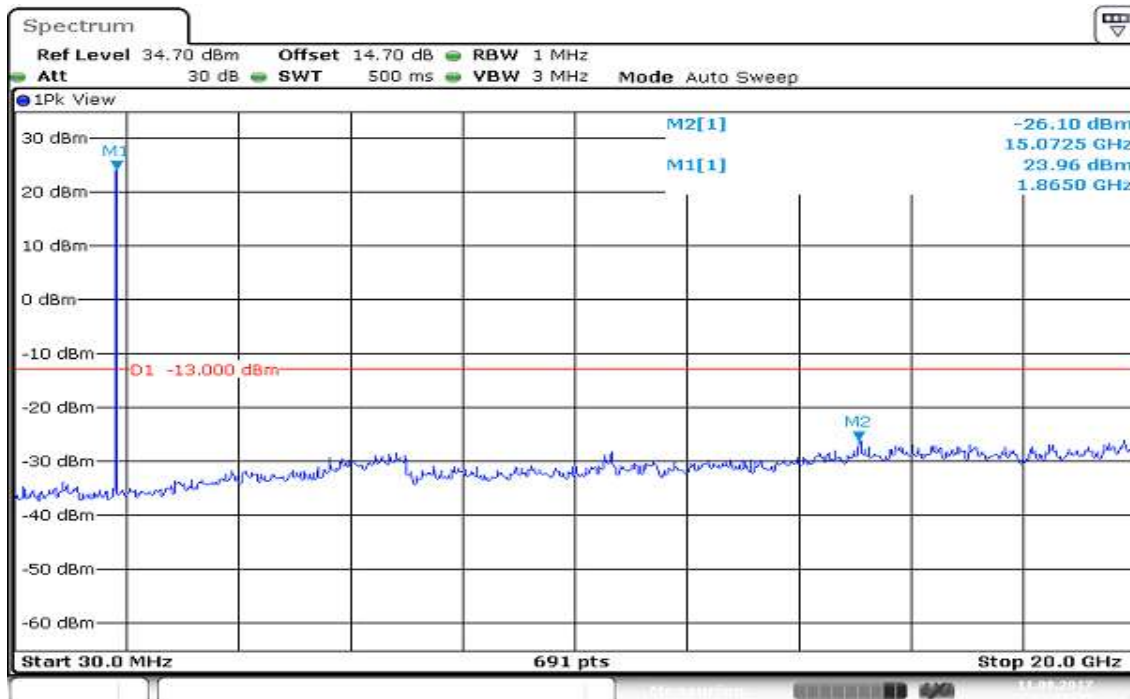
### **Limits**

The power of any emission outside a licensee's frequency block shall be attenuated below the transmitter power (P) by at least  $43 + 10 \log_{10}(P)$  dB. The limit of emission equal to  $-13\text{dBm}$

### **Test Procedures**

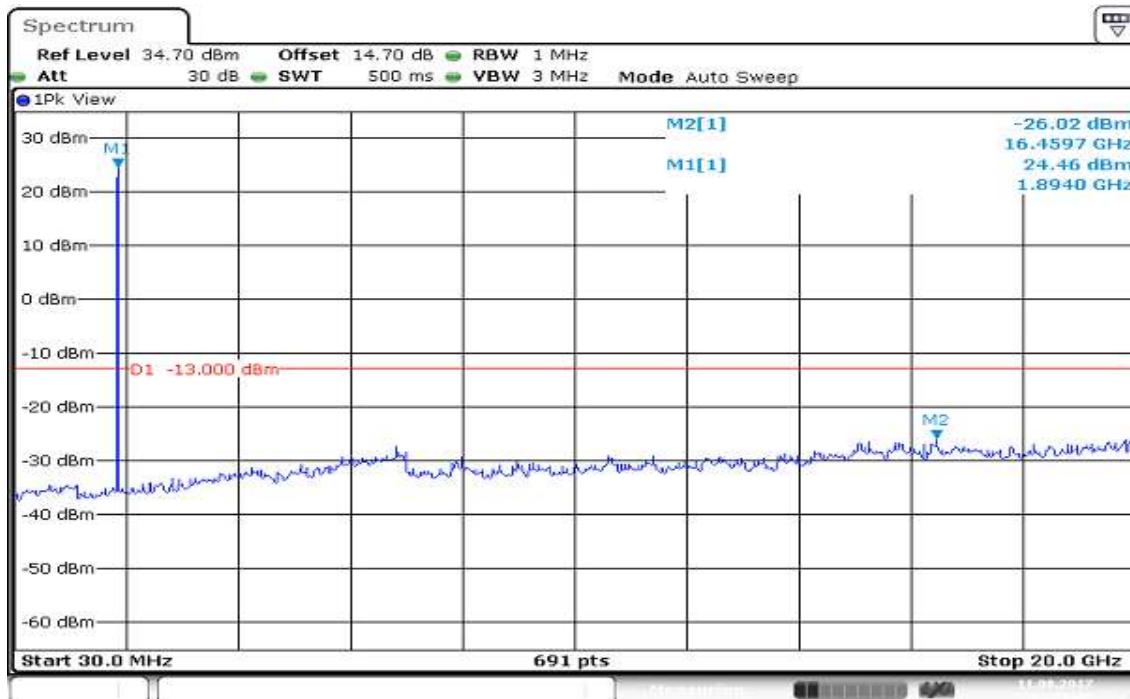
1. The EUT was set up for the maximum peak power with LTE link data modulation. The power was measured with Spectrum Analyzer. All measurements were done at 3 channels (low, middle and high operational frequency range.).
2. The conducted spurious emission used the power splitter via EUT RF power connector between simulation base station and spectrum analyzer.
3. When the spectrum scanned from 30MHz to 3GHz, it shall be connected to the band reject filter attenuated the carried frequency. The spectrum set RB=1MHz, VB=3MHz.
4. When the spectrum scanned from 3GHz to 20GHz, it shall be connected to the high pass filter attenuated the carried frequency. The spectrum set RB=1MHz, VB=3MHz.

**Test Results**  
**LTE Band 2**  
**CHANNEL BANDWIDTH: 1.4MHz / QPSK**  
**CH Low**



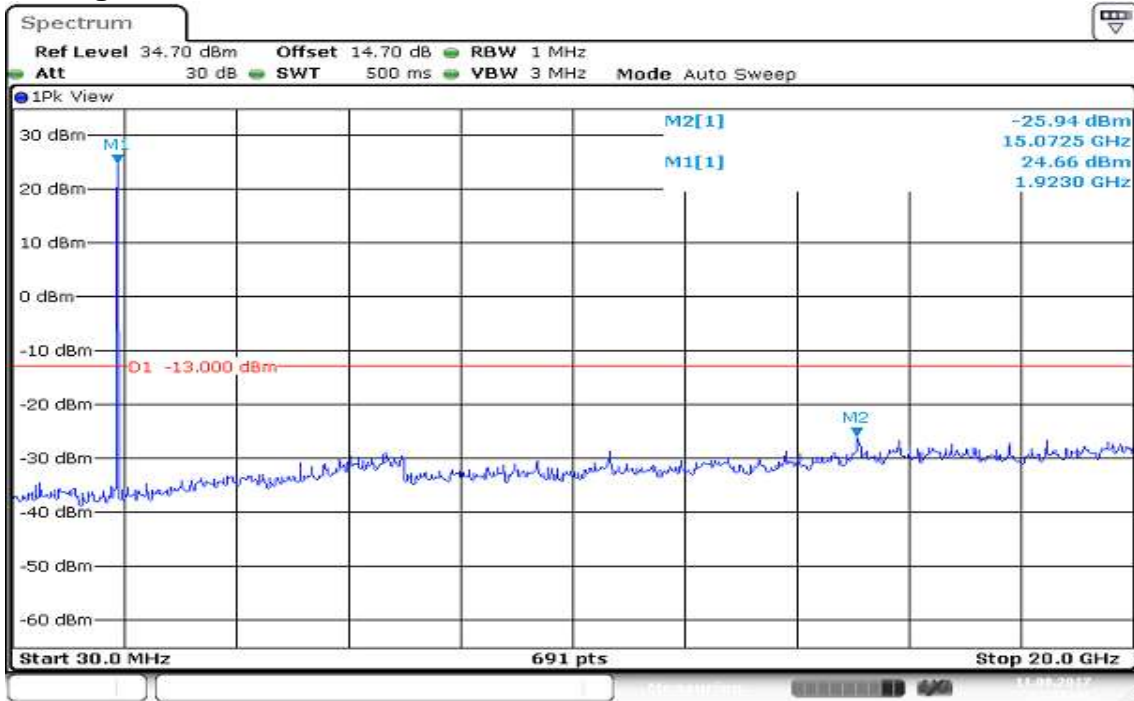
Date: 11 AUG 2017 11:20:25

**CH Mid**



Date: 11 AUG 2017 11:29:45

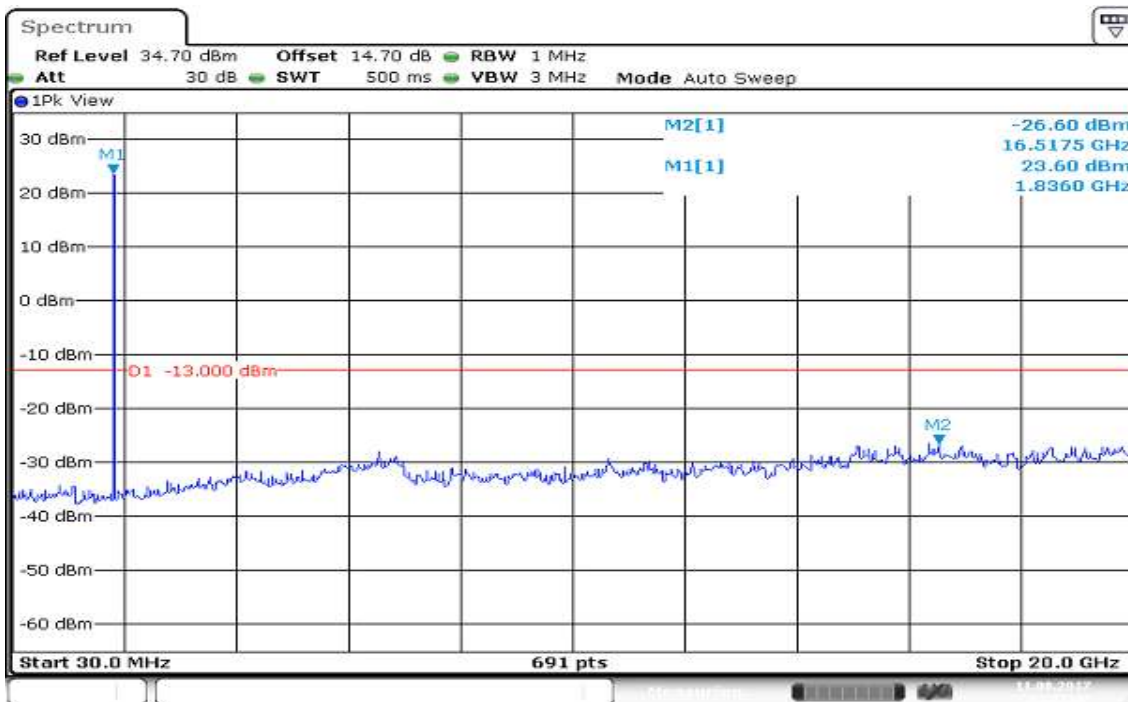
### CH High



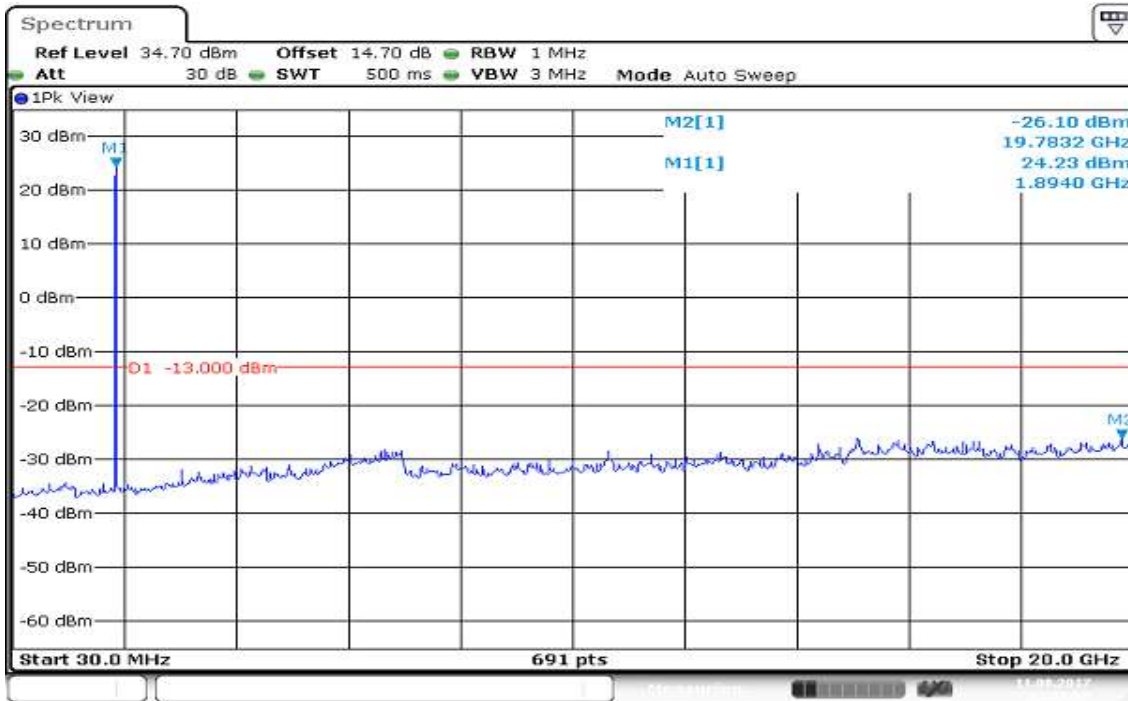
Date: 11 AUG 2017 11:28:41

**CHANNEL BANDWIDTH: 1.4MHz / 16QAM**

**CH Low**

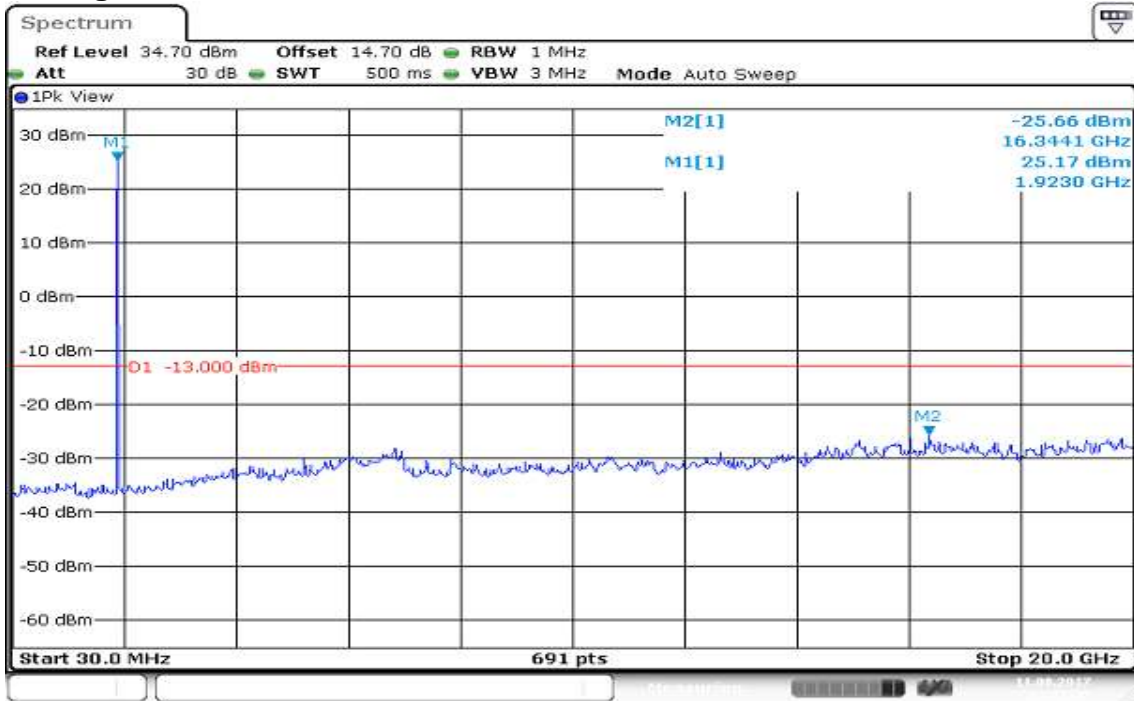


**CH Mid**



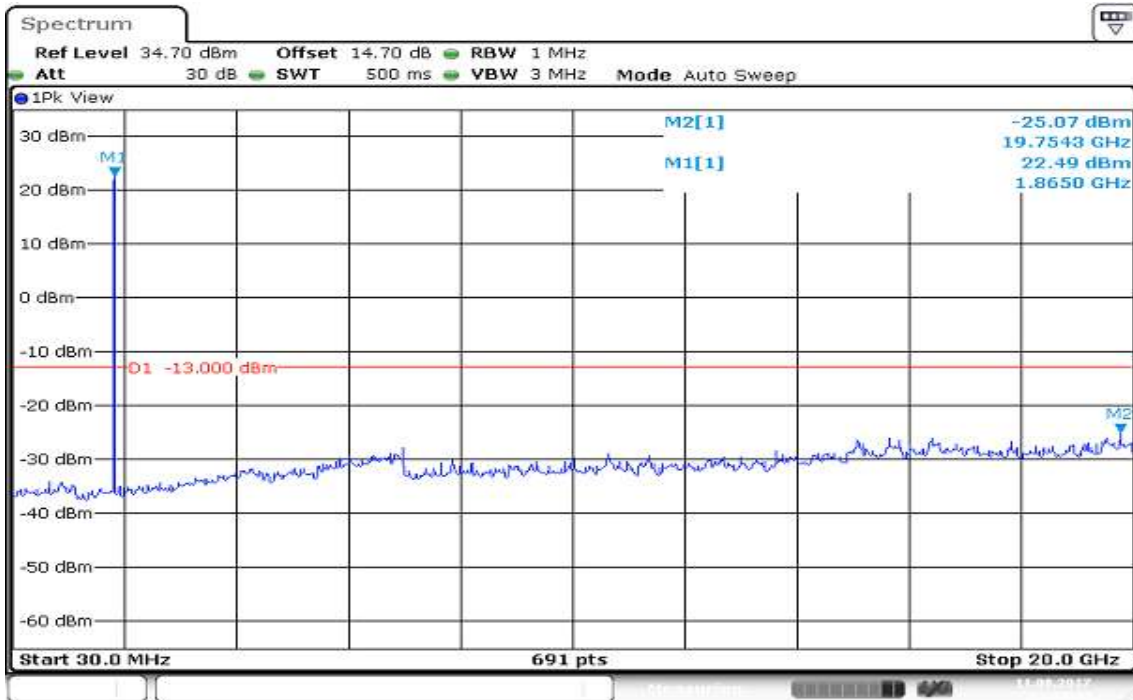


### CH High

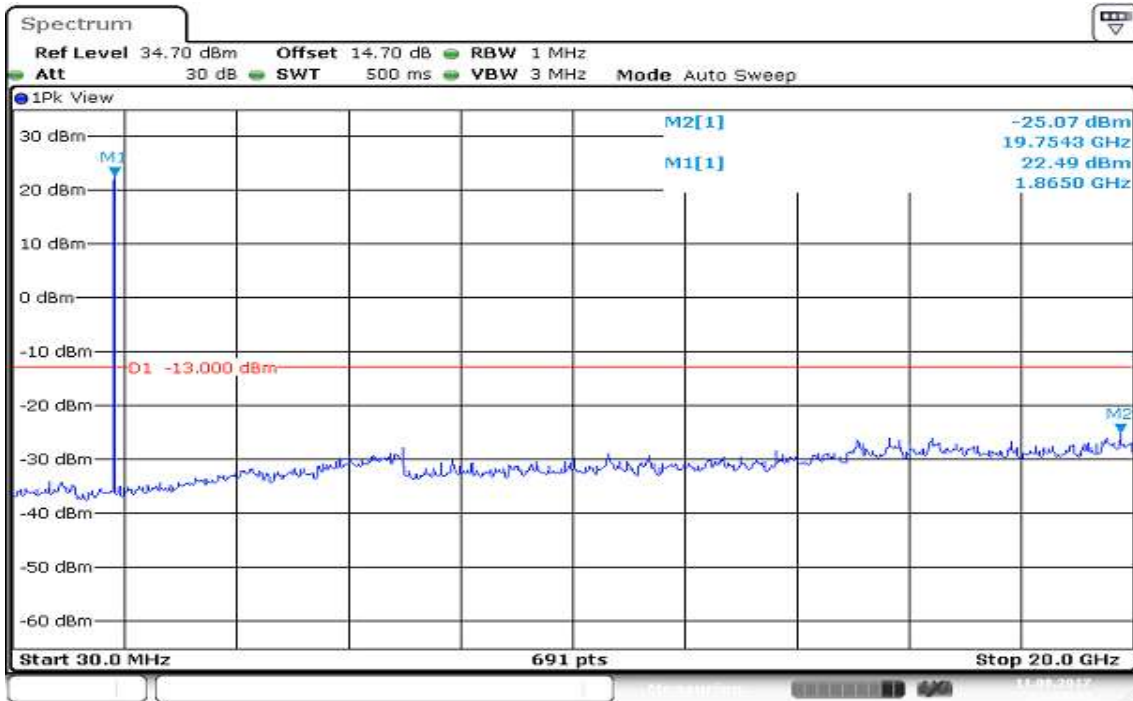


Date: 11 AUG 2017 11:27:25

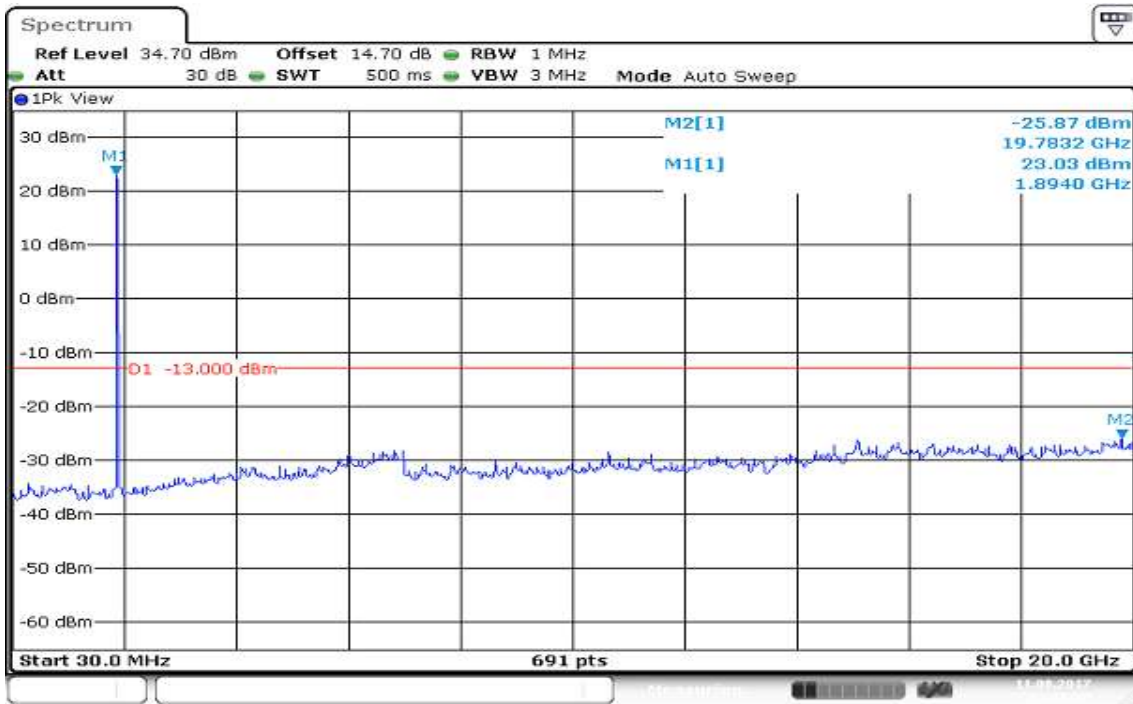
**CHANNEL BANDWIDTH: 3MHz / QPSK**  
**CH Low**



**CH Mid**

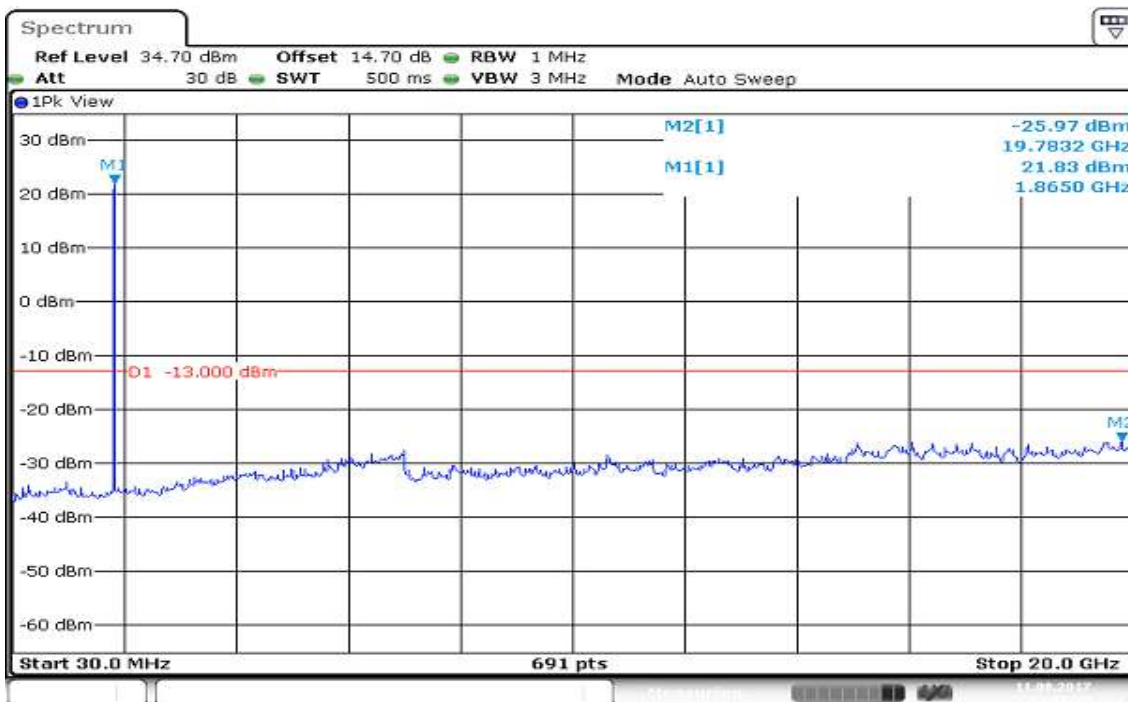


### CH High



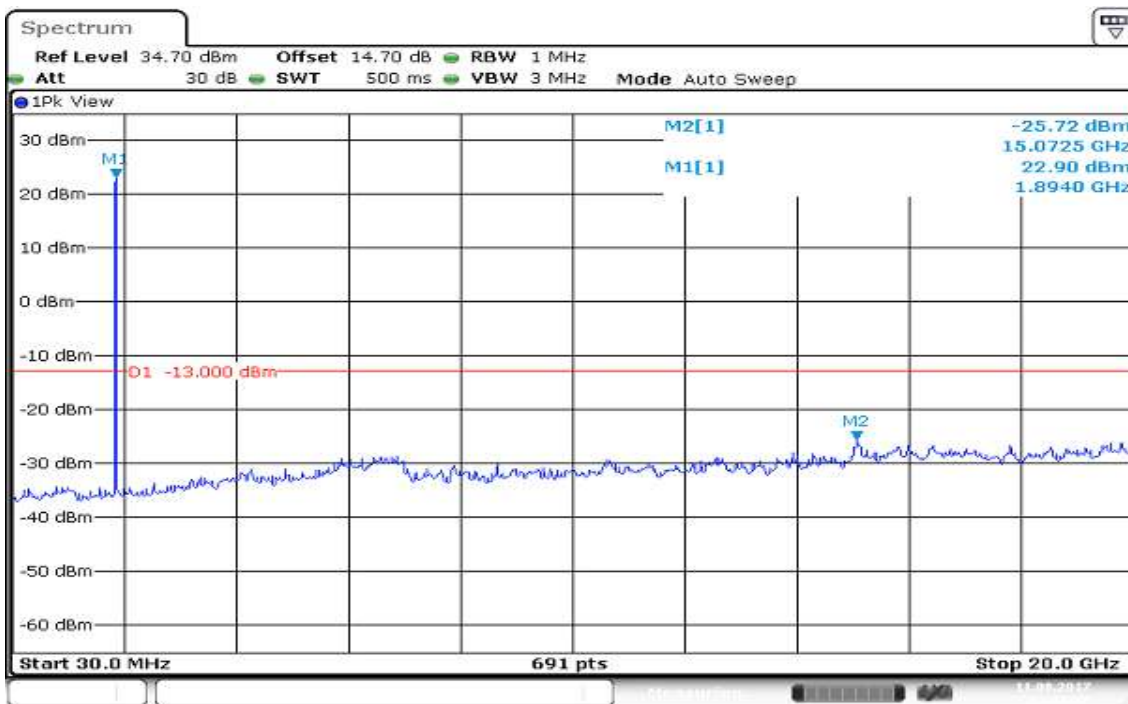
**CHANNEL BANDWIDTH: 3MHz / 16QAM**

**CH Low**



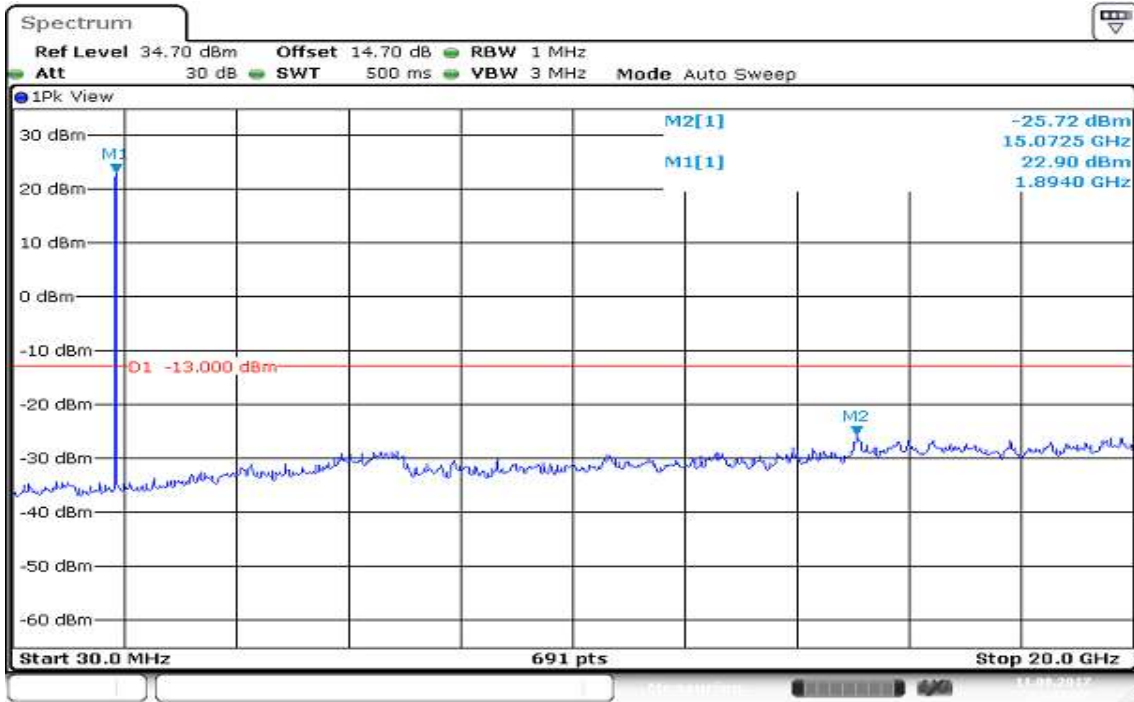
Date: 11 AUG 2017 11:39:29

**CH Mid**

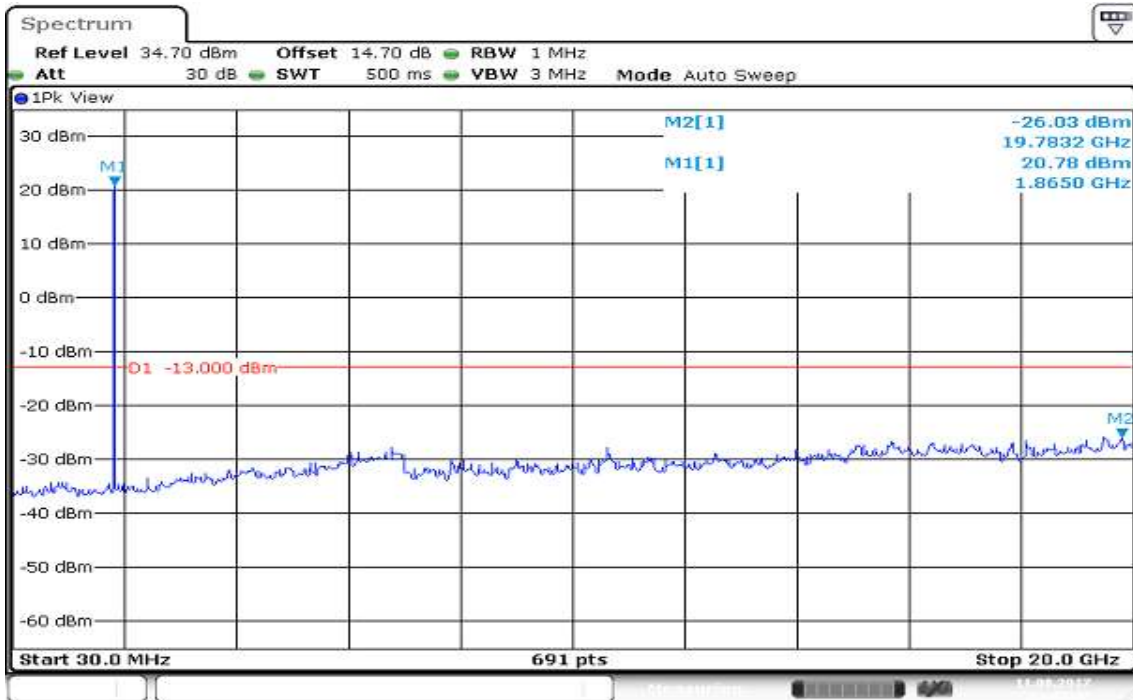


Date: 11 AUG 2017 11:38:16

### CH High

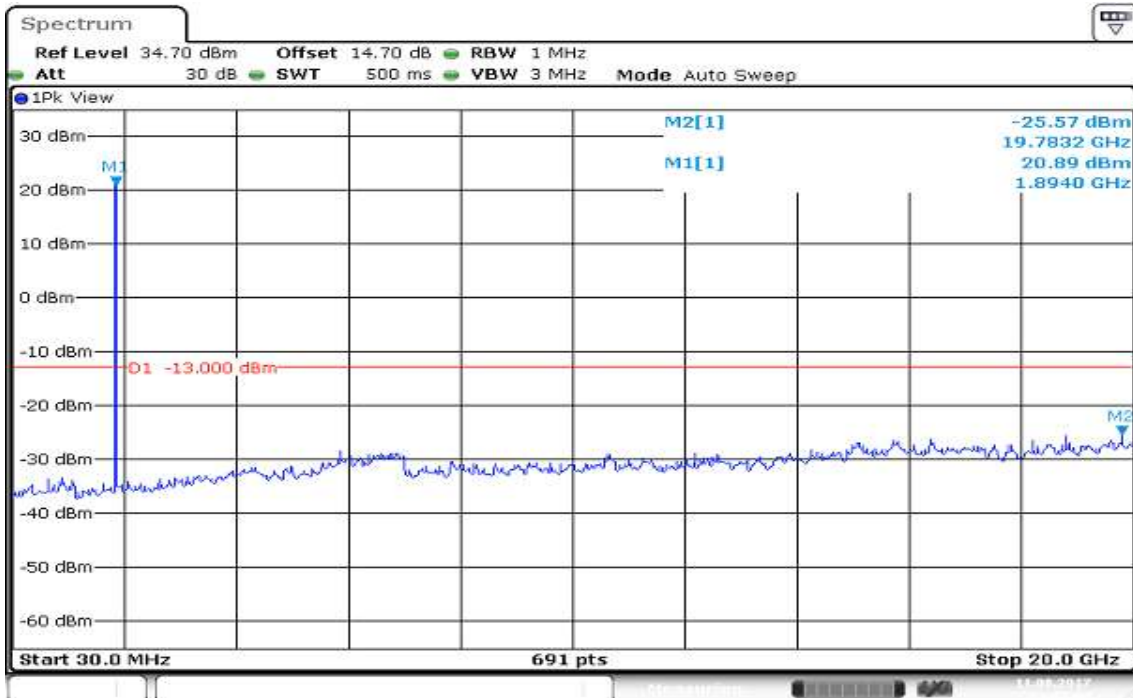


**CHANNEL BANDWIDTH: 5MHz / QPSK**  
**CH Low**



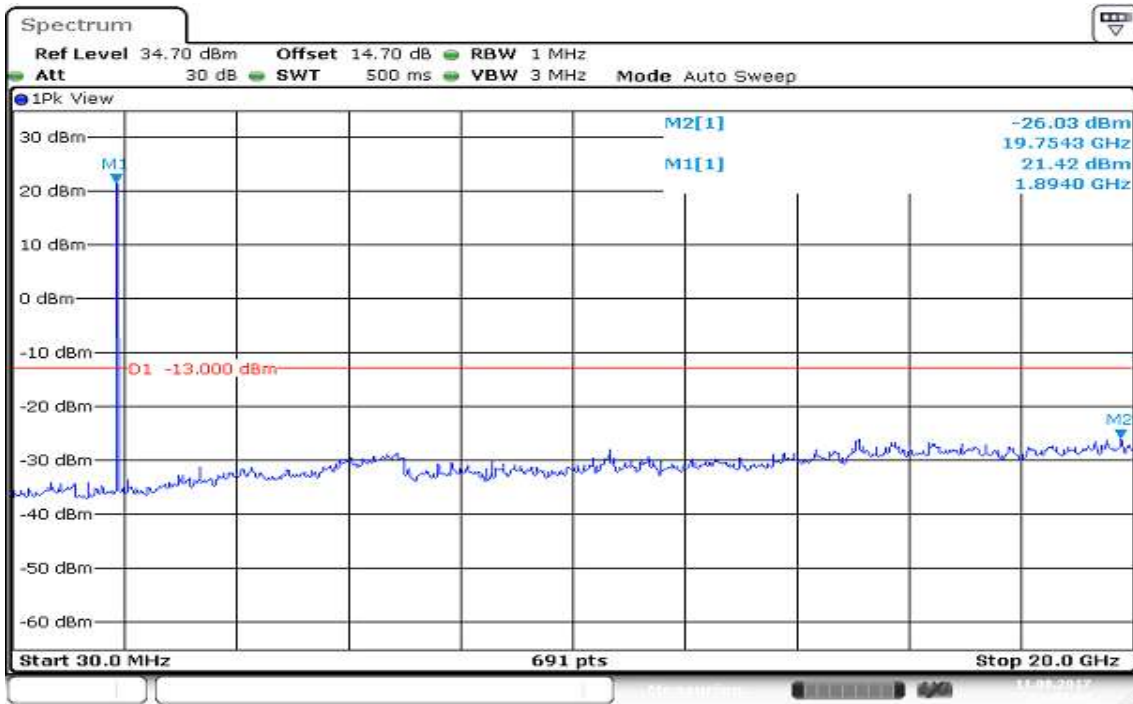
Date: 11 AUG 2017 11:45:42

**CH Mid**



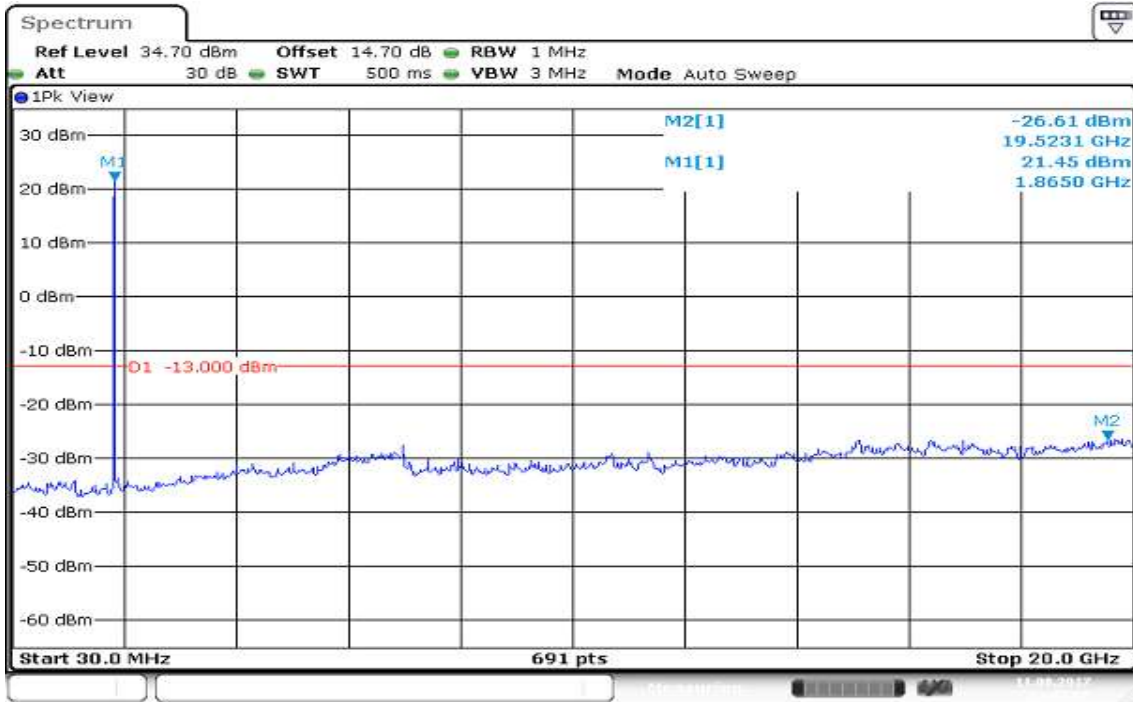
Date: 11 AUG 2017 11:45:04

### CH High



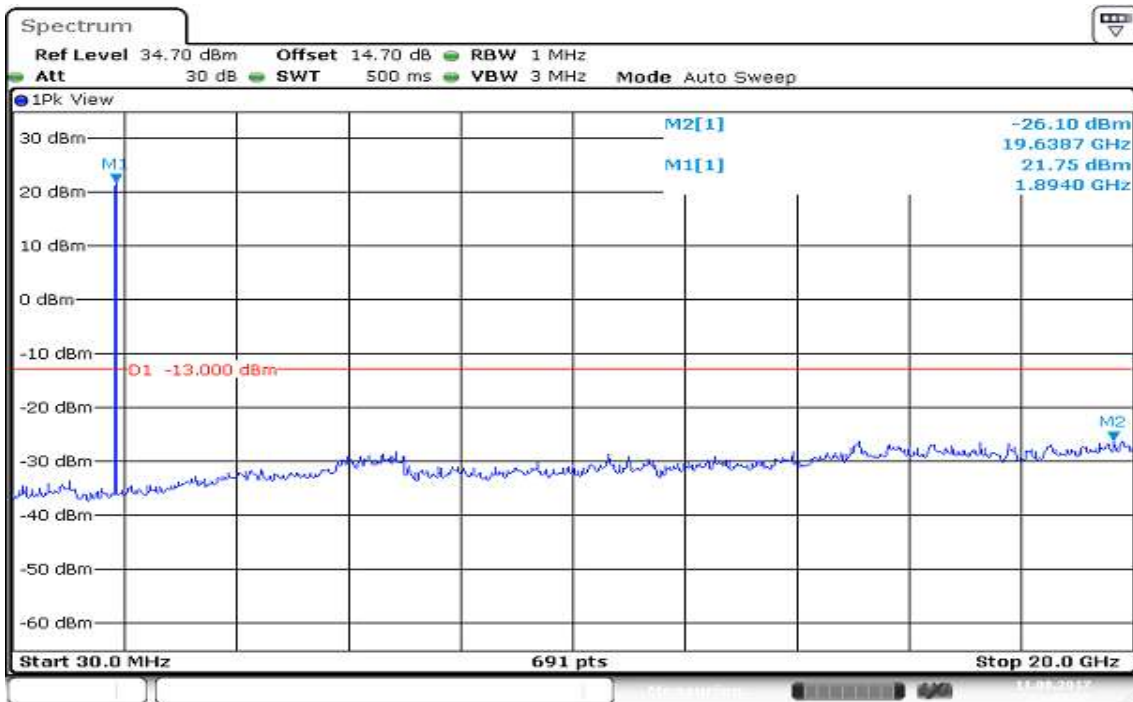
### CHANNEL BANDWIDTH: 5MHz / 16QAM

#### CH Low



Date: 11 AUG 2017 11:42:09

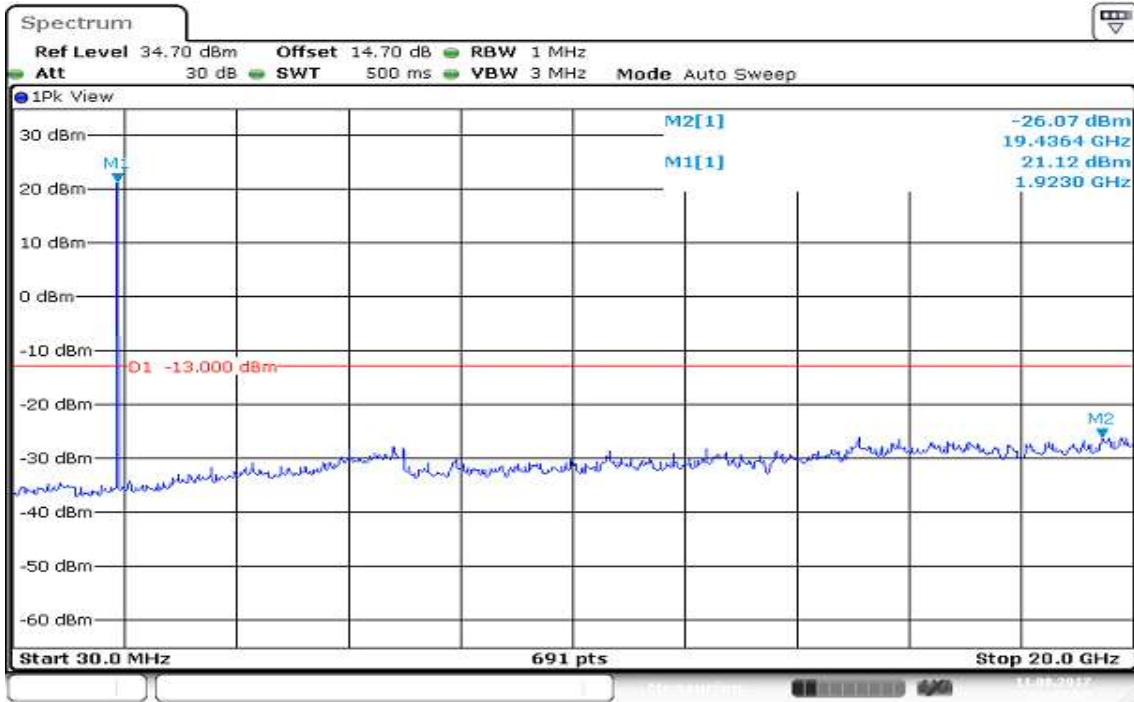
#### CH Mid



Date: 11 AUG 2017 11:40:54

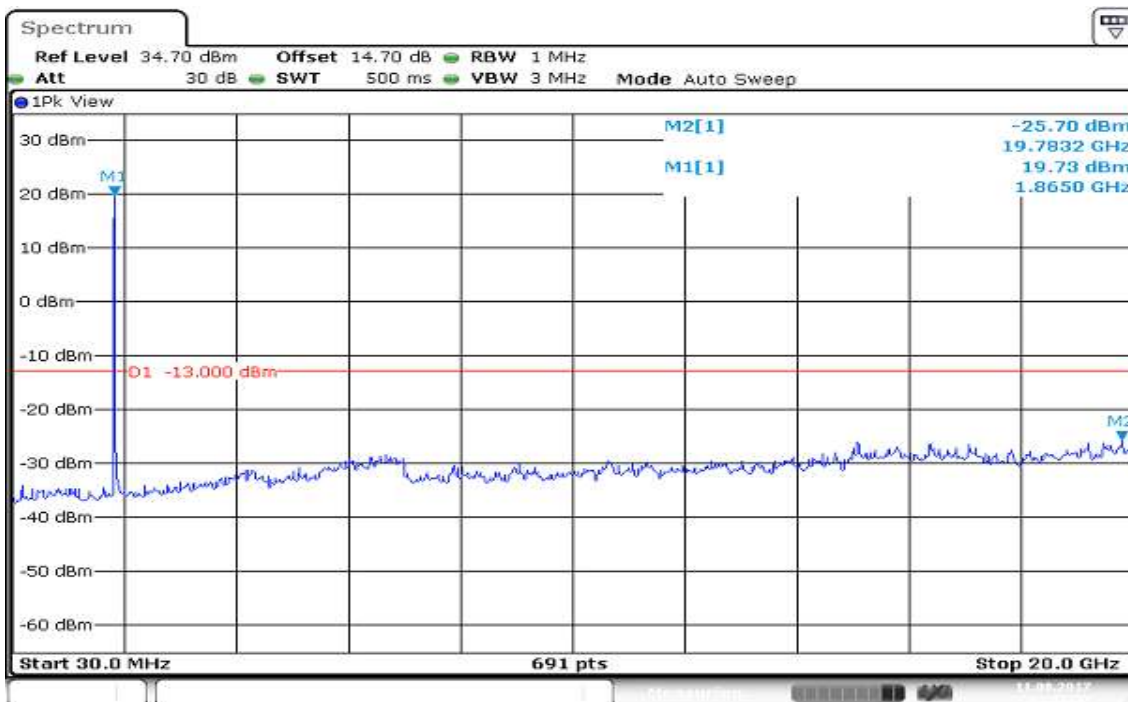


### CH High



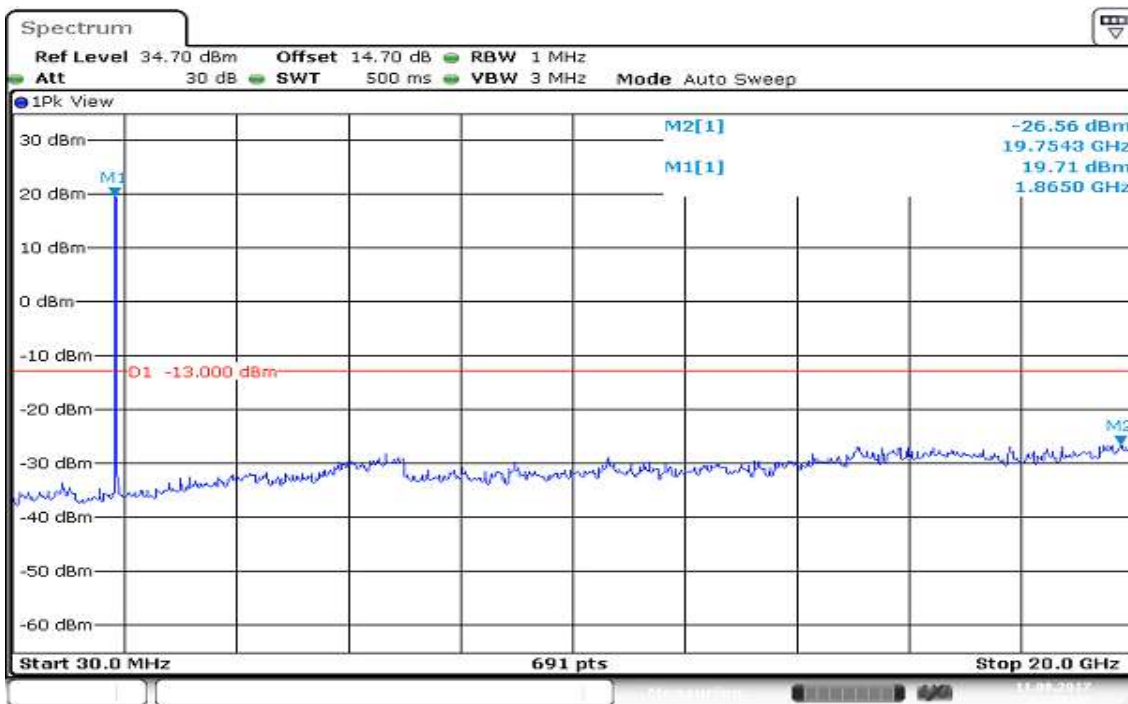
**CHANNEL BANDWIDTH: 10MHz / QPSK**

**CH Low**



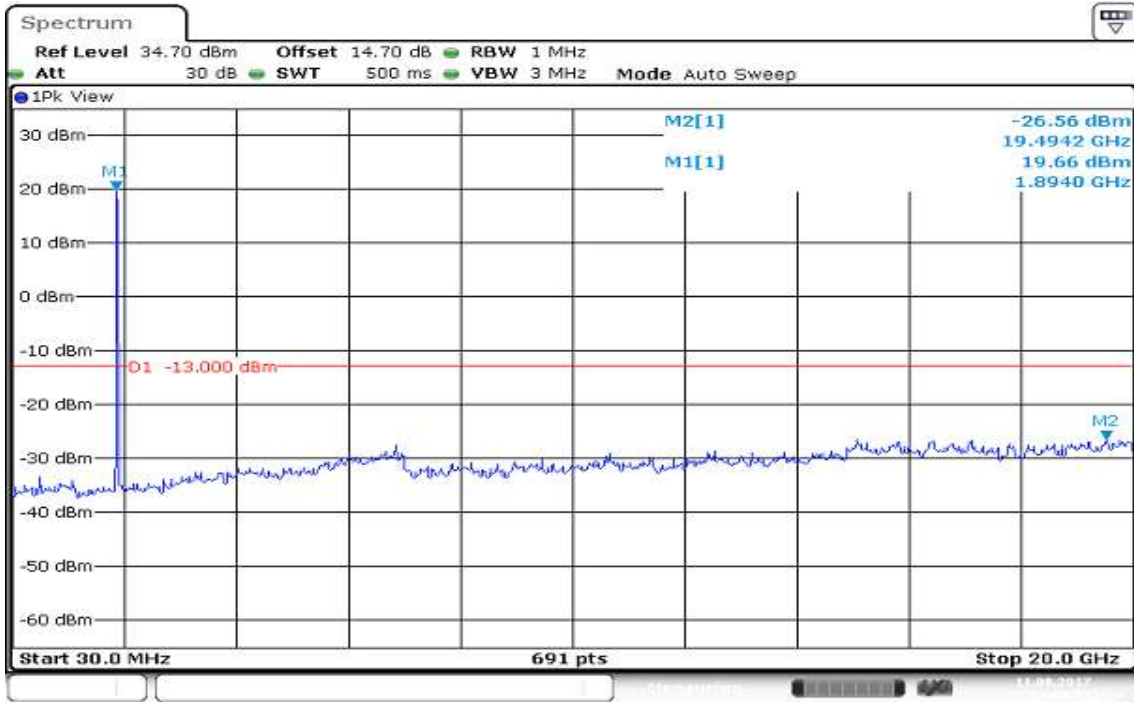
Date: 11 AUG 2017 11:51:27

**CH Mid**



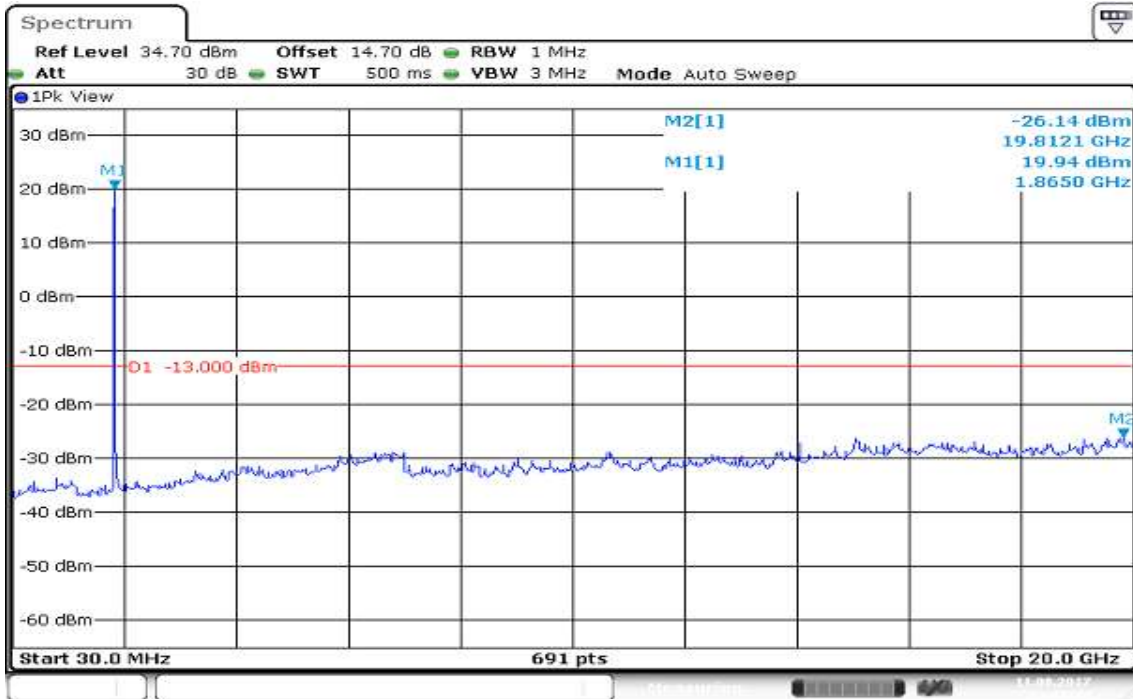
Date: 11 AUG 2017 11:50:42

### CH High



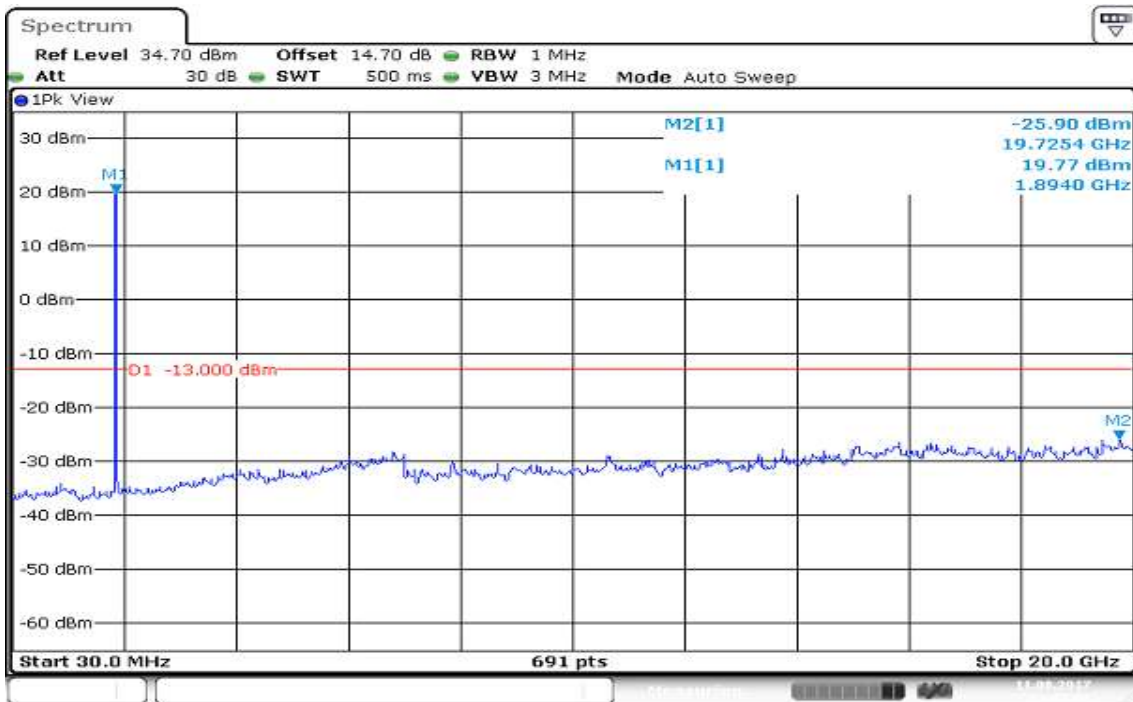
**CHANNEL BANDWIDTH: 10MHz / 16QAM**

**CH Low**



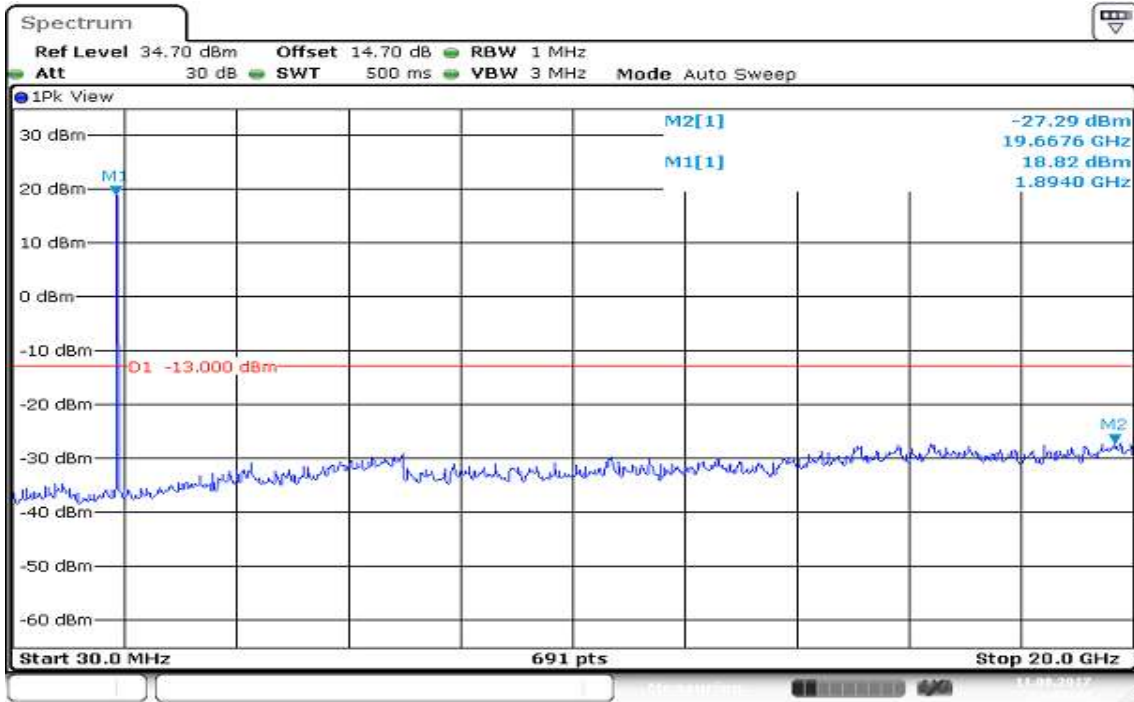
Date: 11 AUG 2017 11:48:24

**CH Mid**



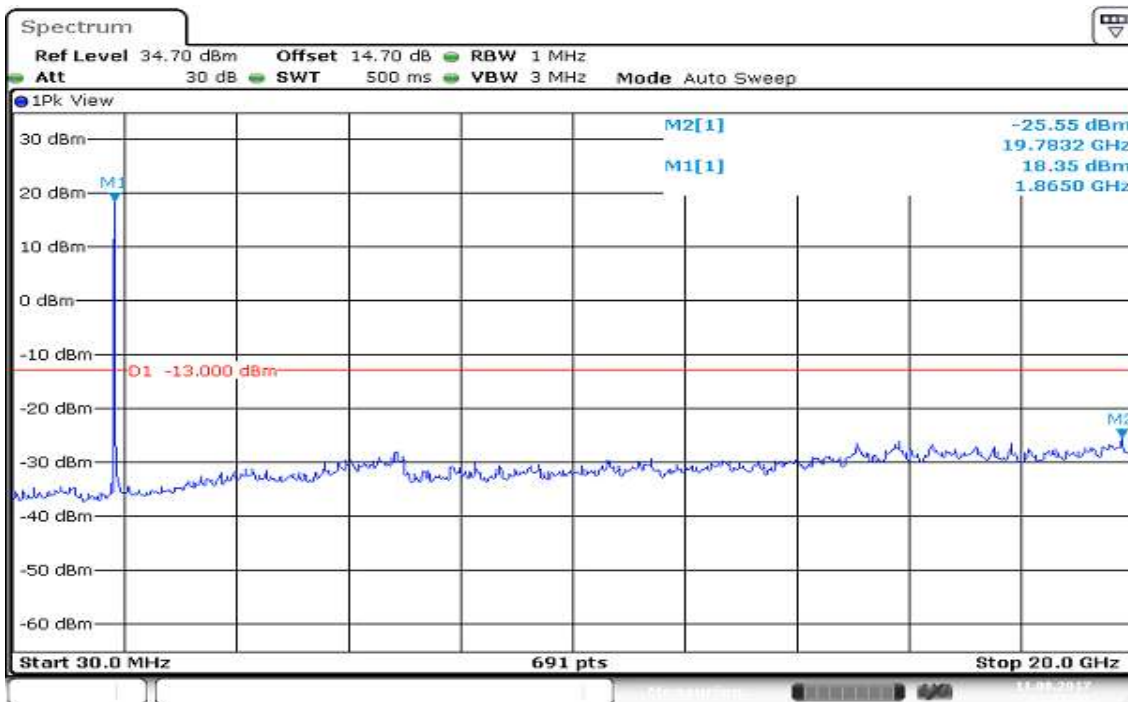
Date: 11 AUG 2017 11:47:01

### CH High



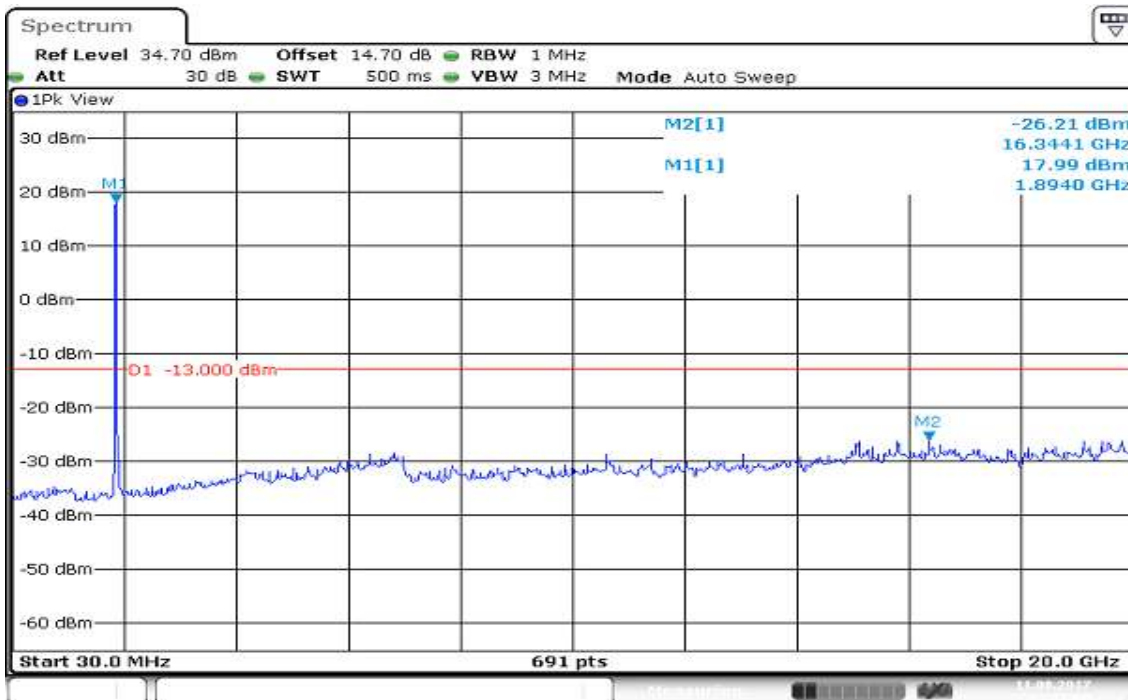
**CHANNEL BANDWIDTH: 15MHz / QPSK**

**CH Low**



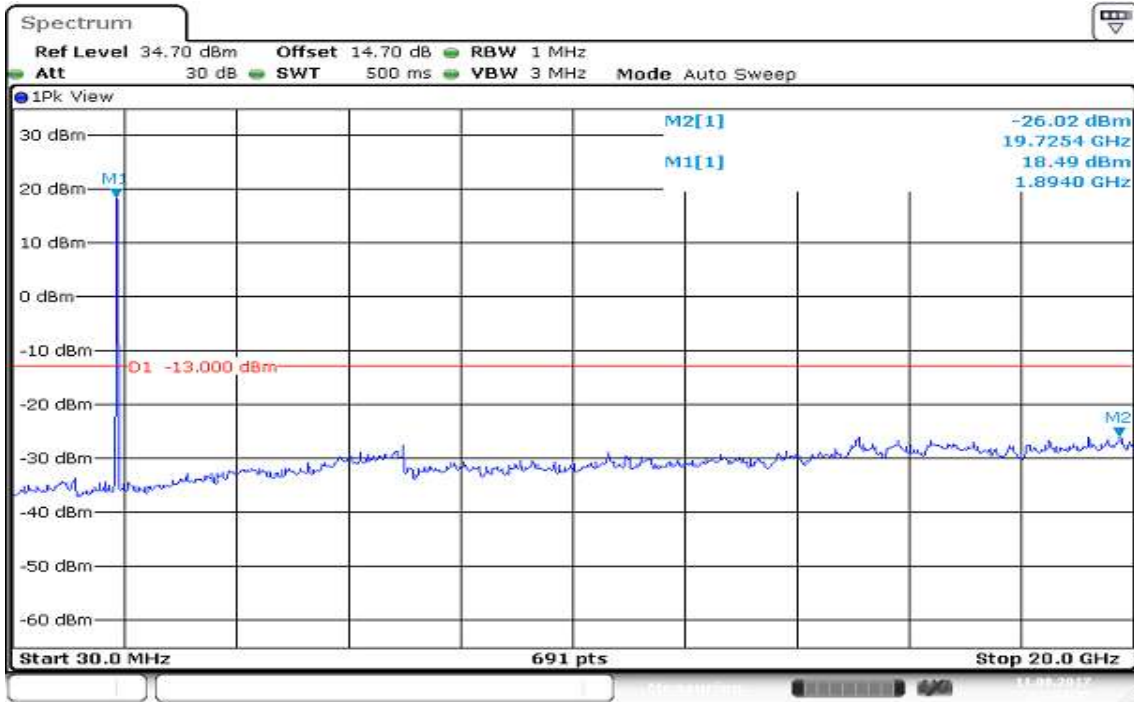
Date: 11 AUG 2017 11:55:52

**CH Mid**



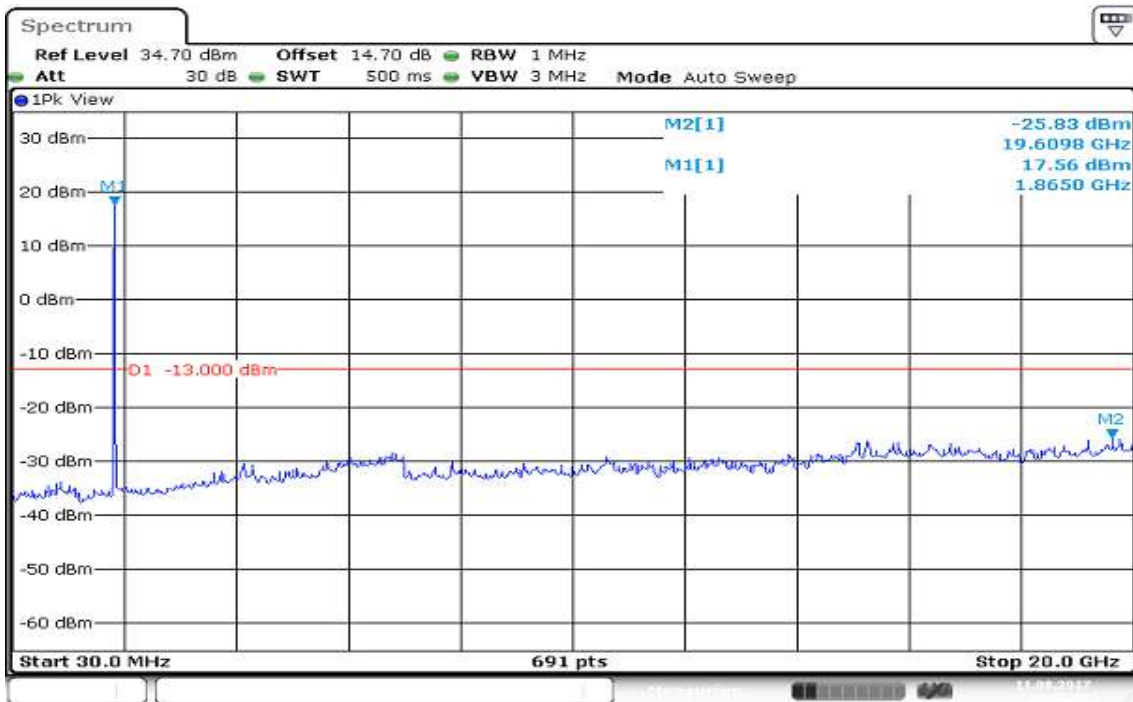
Date: 11 AUG 2017 11:55:09

### CH High



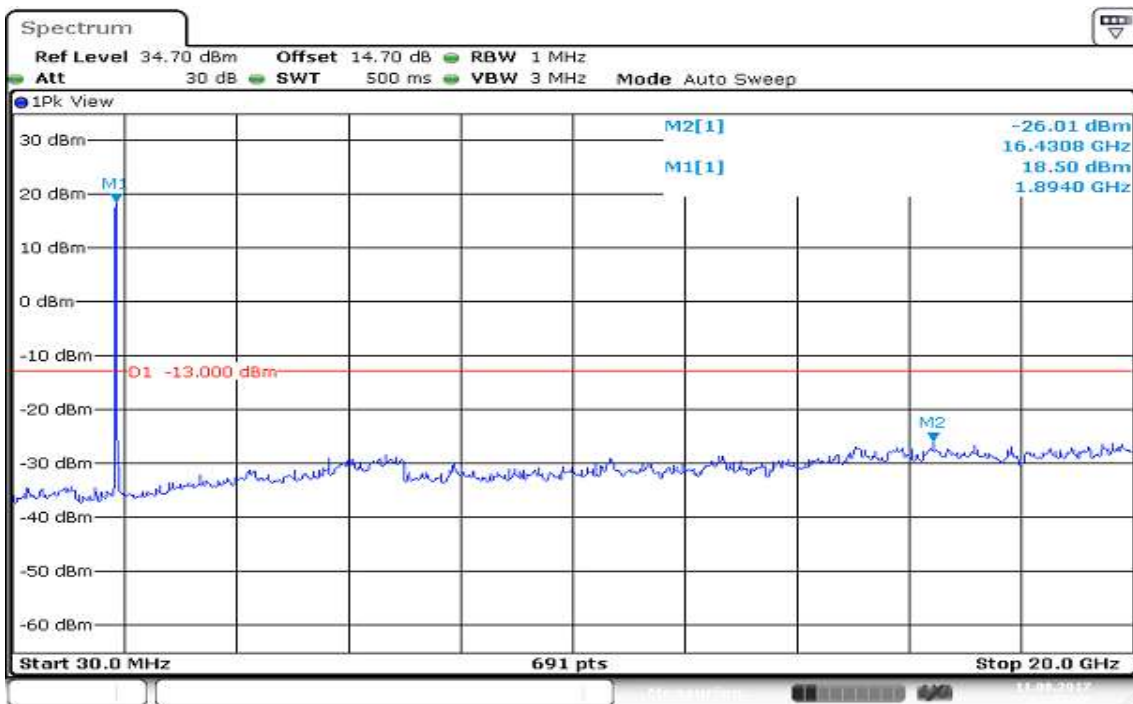
**CHANNEL BANDWIDTH: 15MHz / 16QAM**

**CH Low**



Date: 11 AUG 2017 11:53:01

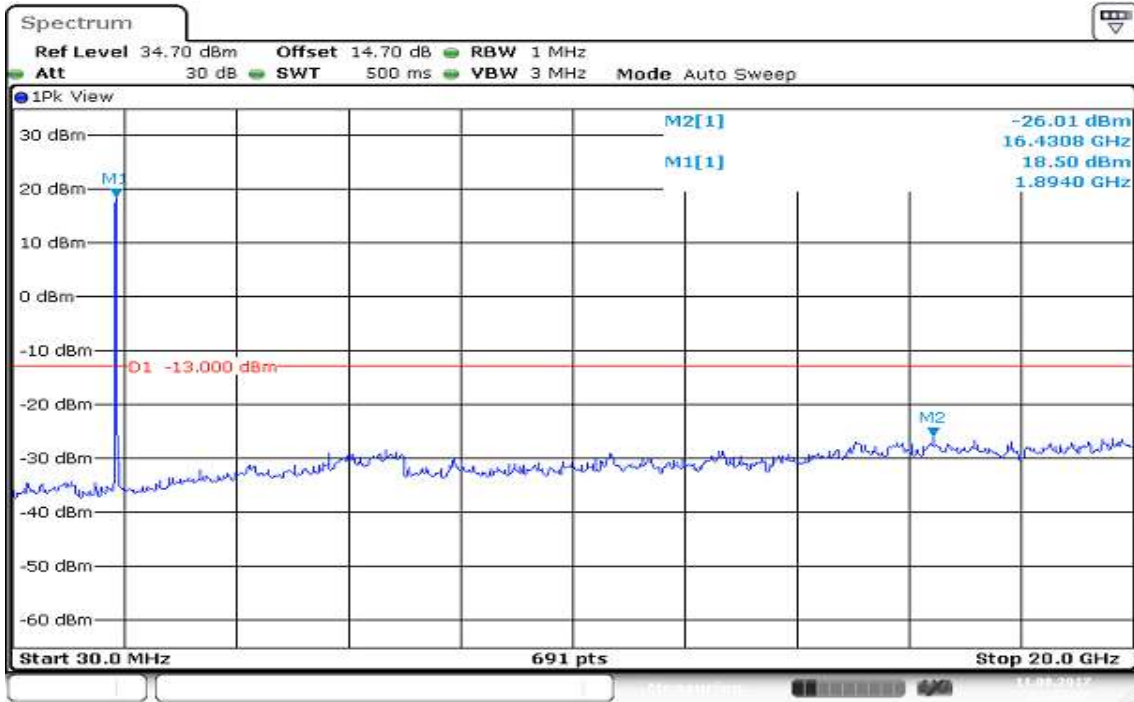
**CH Mid**



Date: 11 AUG 2017 11:52:18



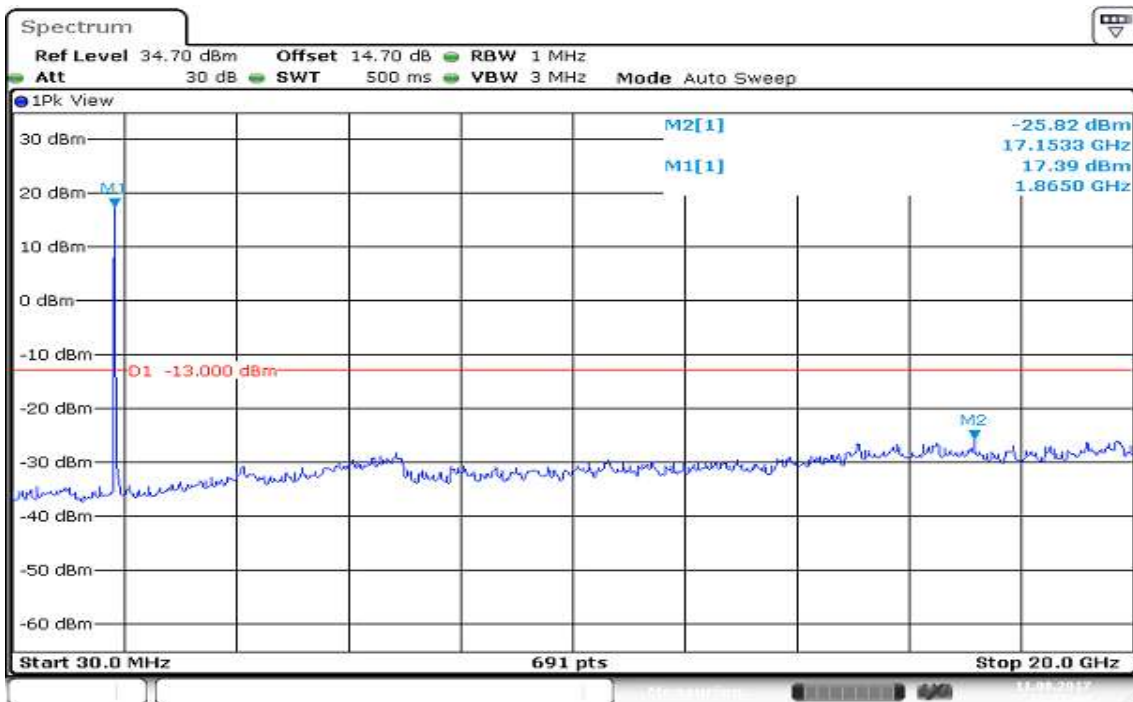
### CH High



Date: 11 AUG 2017 11:52:48

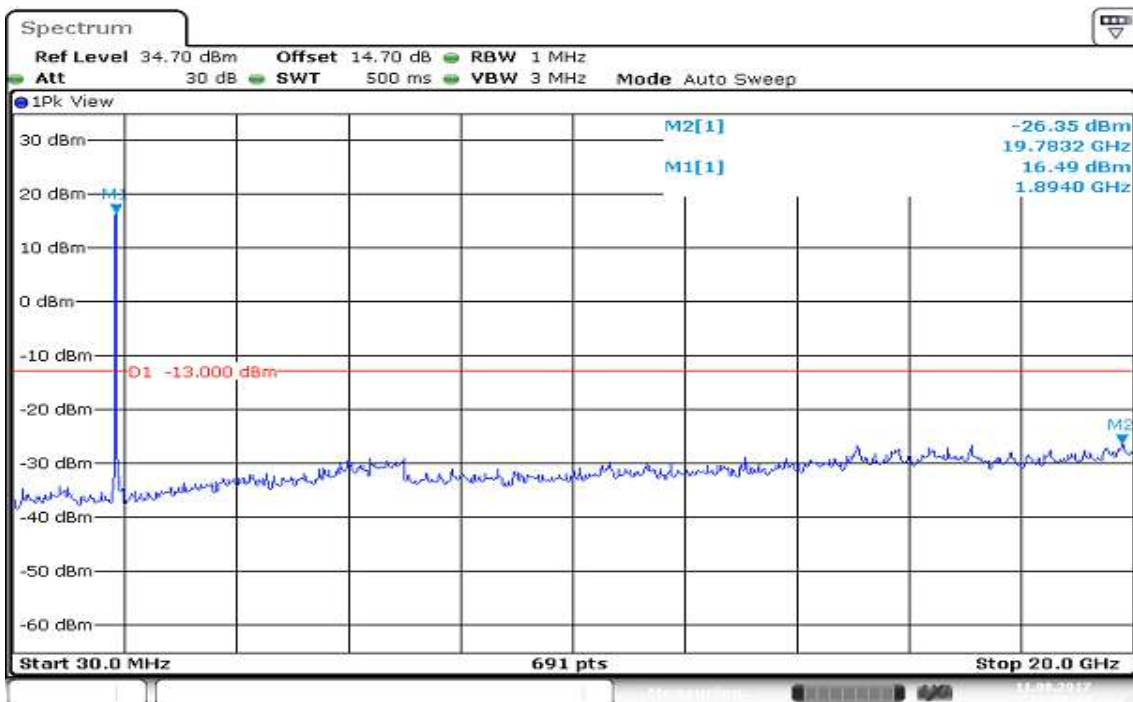
**CHANNEL BANDWIDTH: 20MHz / QPSK**

**CH Low**



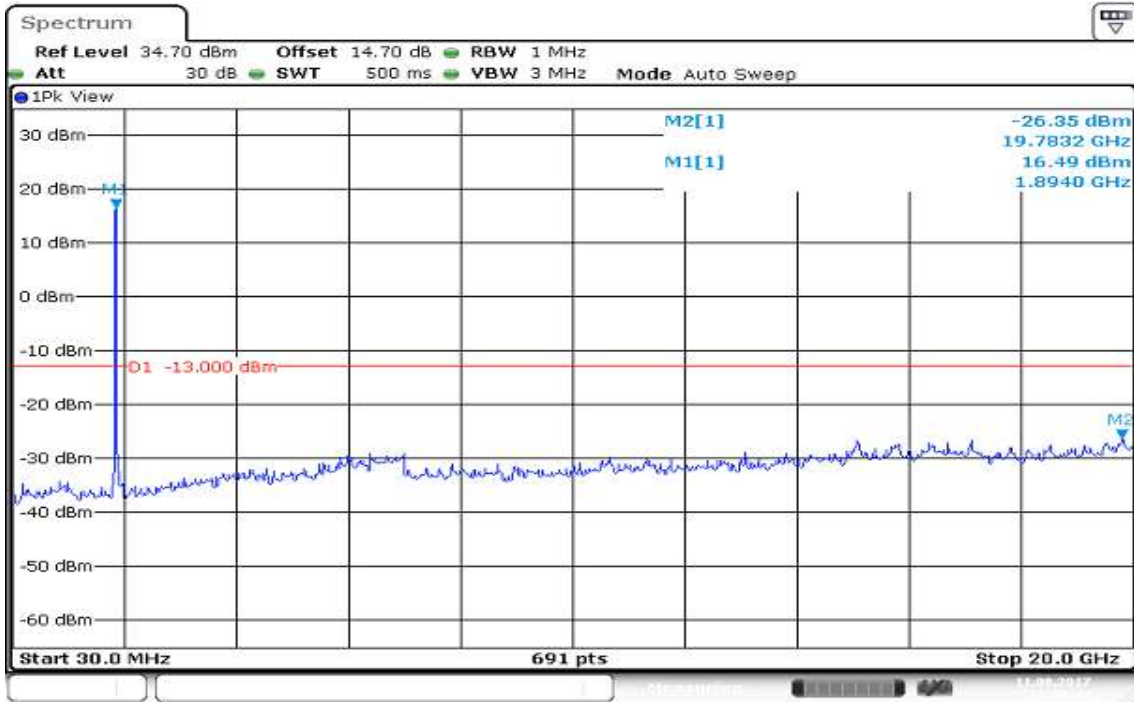
Date: 11 AUG 2017 13:01:04

**CH Mid**



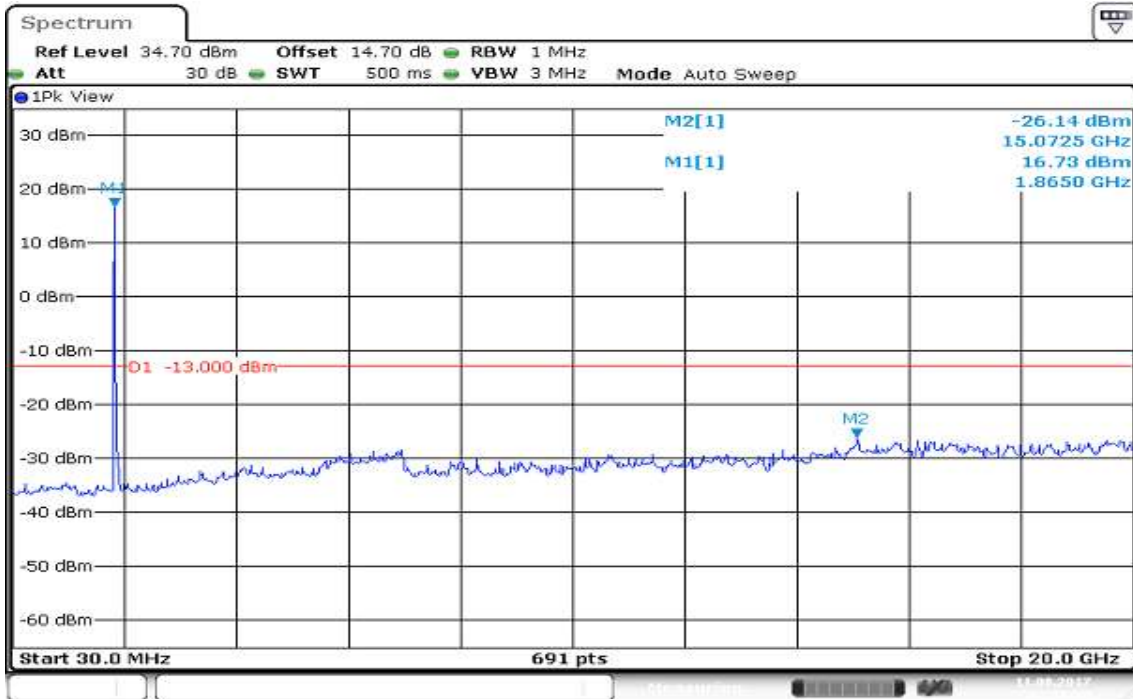
Date: 11 AUG 2017 13:00:24

### CH High



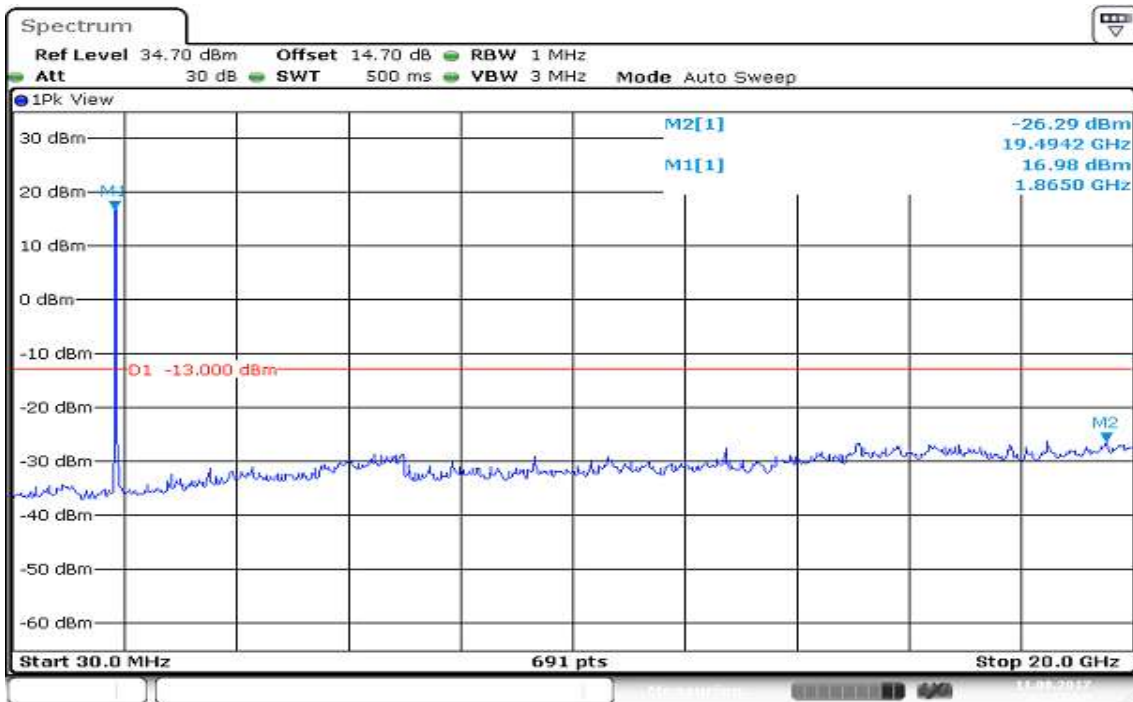
**CHANNEL BANDWIDTH: 20MHz / 16QAM**

**CH Low**



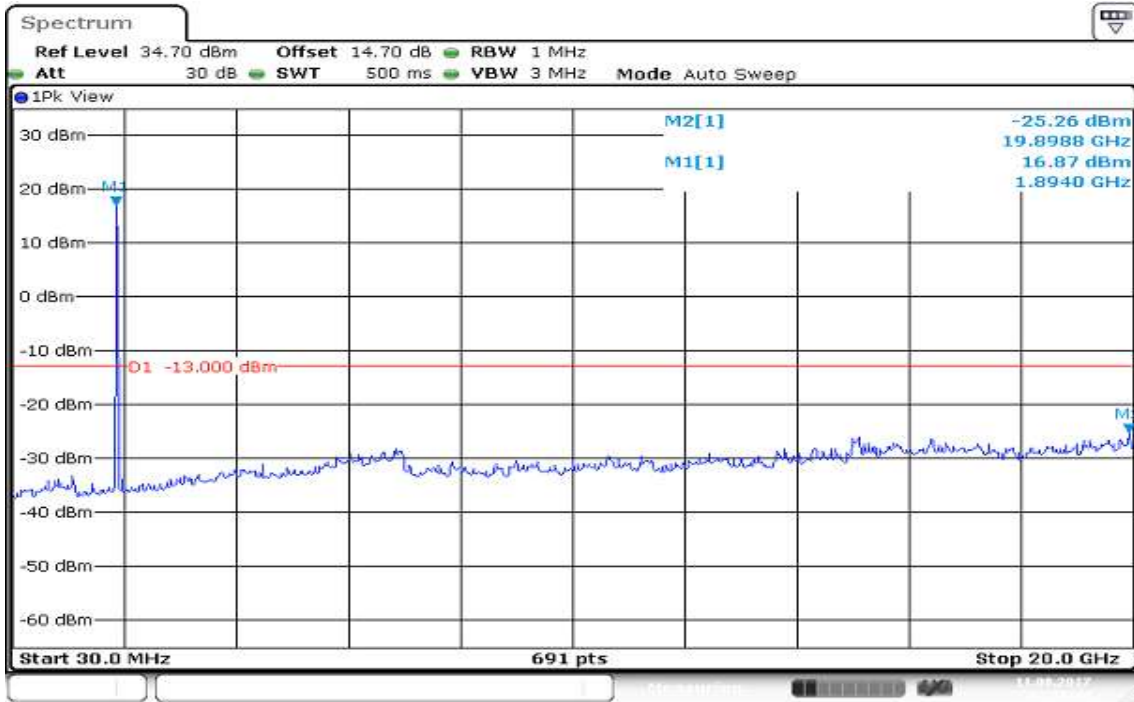
Date: 11 AUG 2017 12:58:40

**CH Mid**

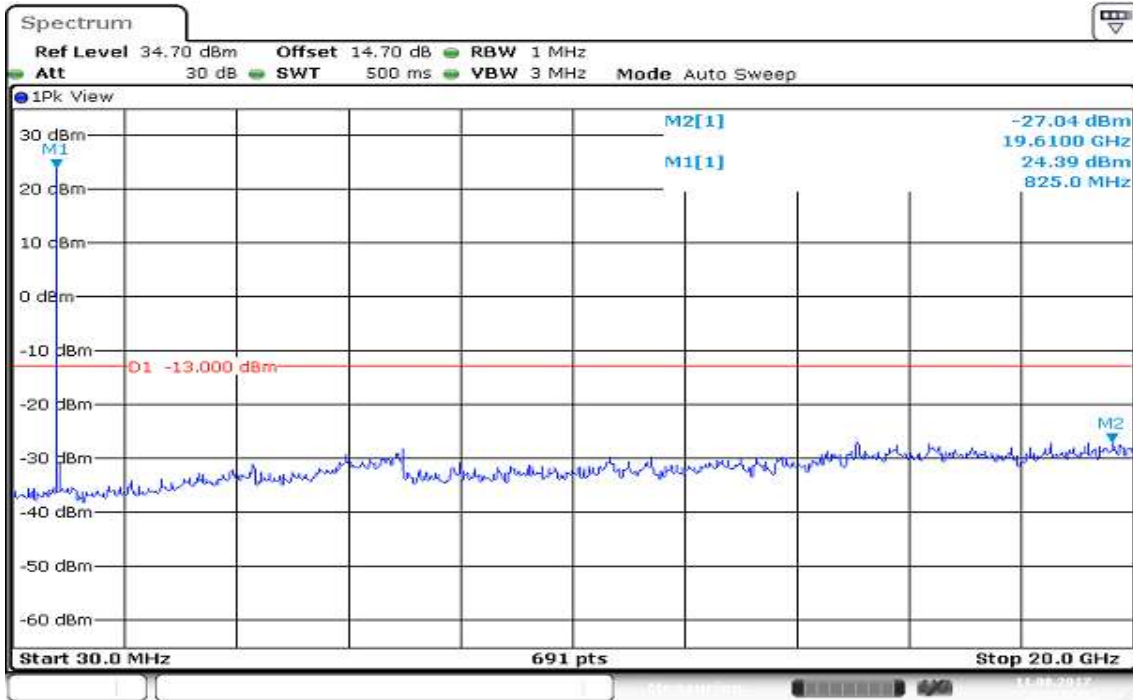


Date: 11 AUG 2017 12:57:50

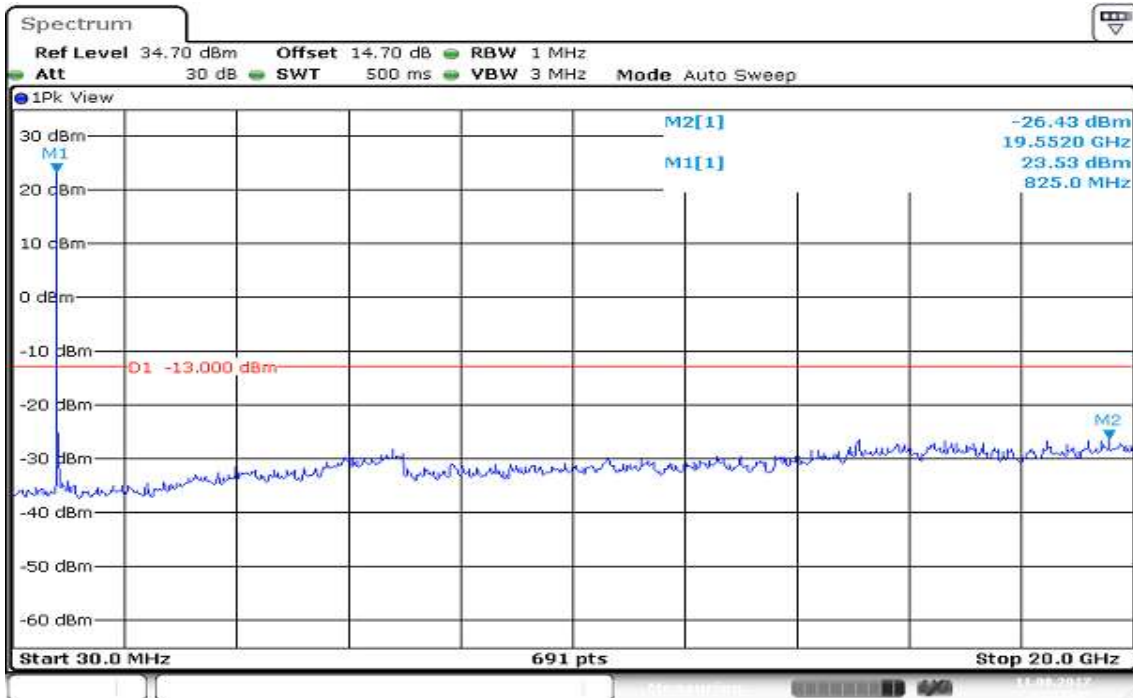
### CH High



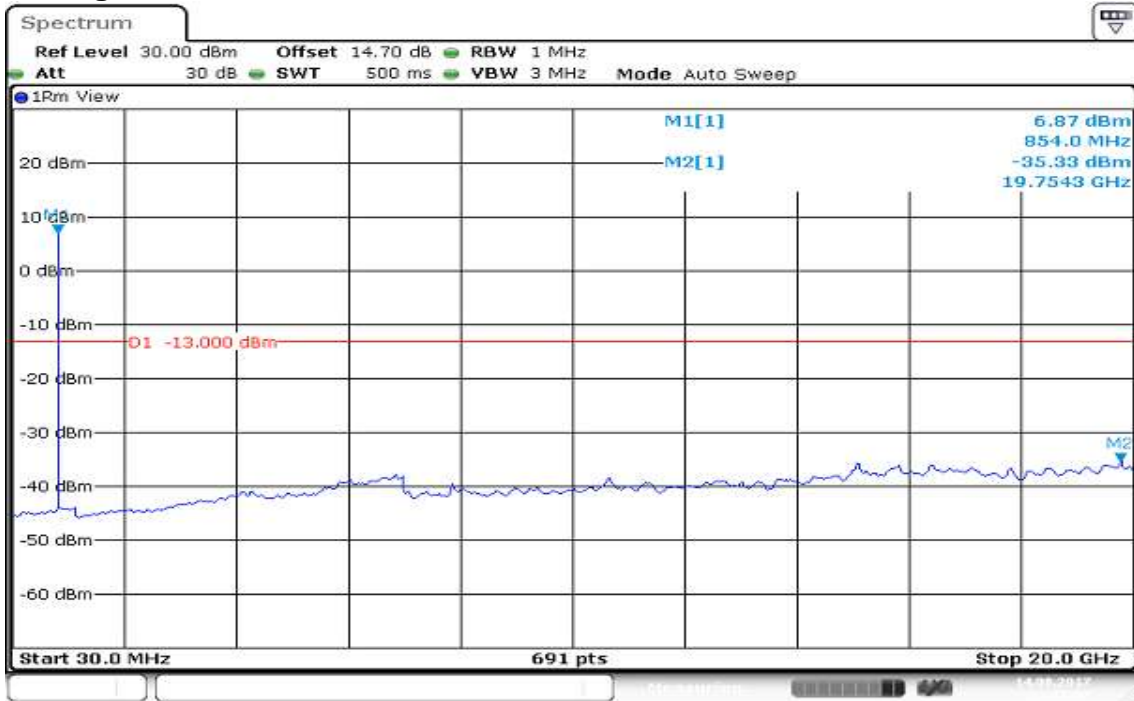
**LTE Band 5**  
**CHANNEL BANDWIDTH: 1.4MHz / QPSK**  
**CH Low**



**CH Mid**



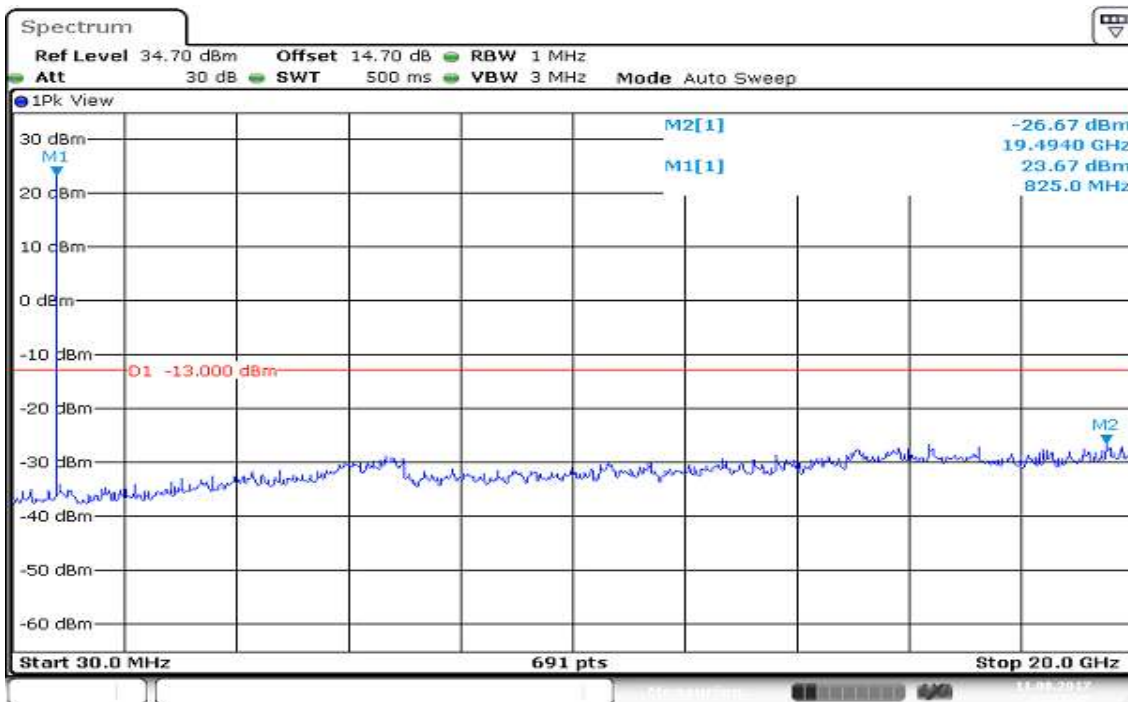
### CH High



Date: 14 AUG 2017 11:37:08

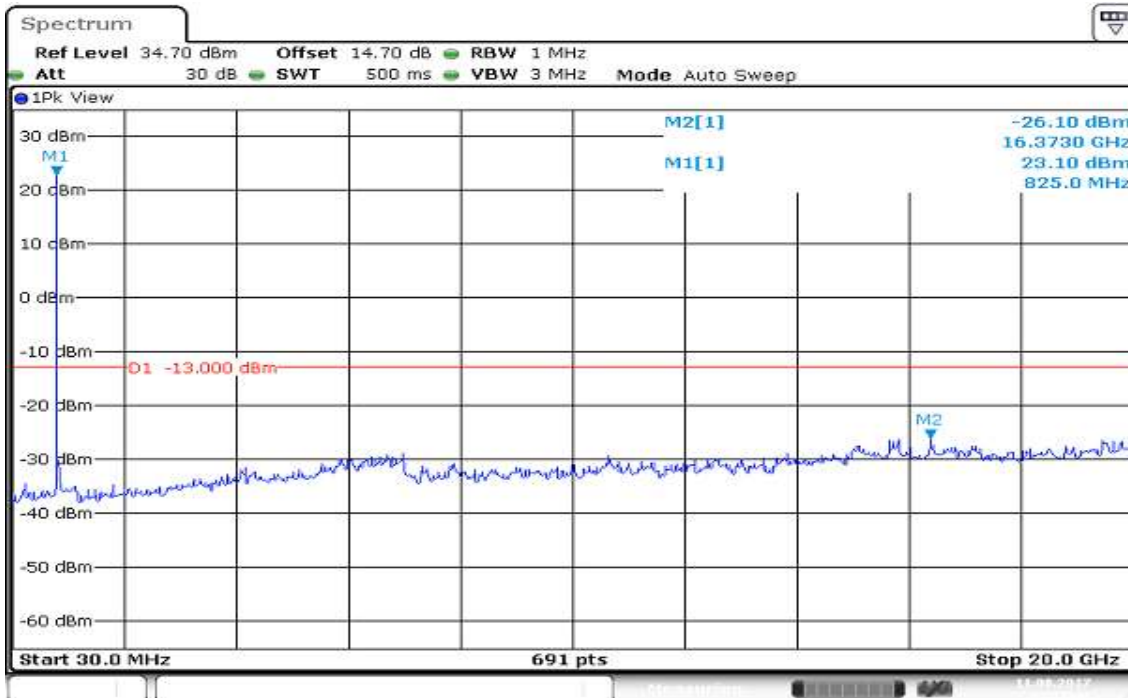
**CHANNEL BANDWIDTH: 1.4MHz / 16QAM**

**CH Low**



Date: 11 AUG 2017 14:12:38

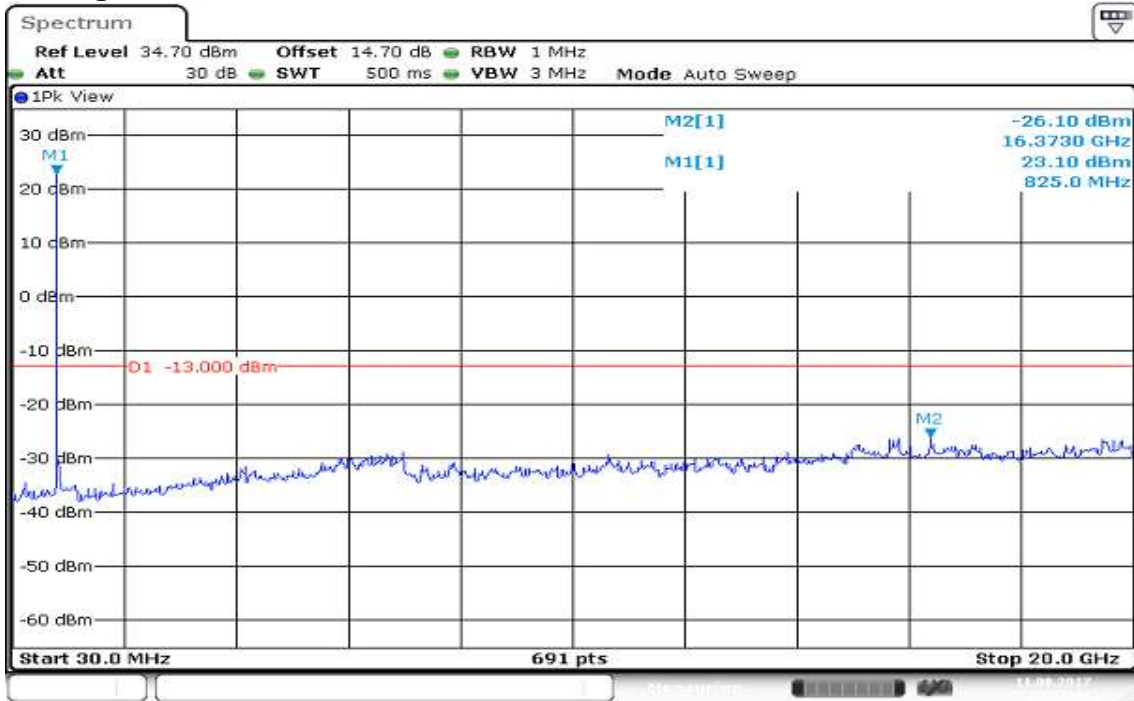
**CH Mid**



Date: 11 AUG 2017 14:13:42

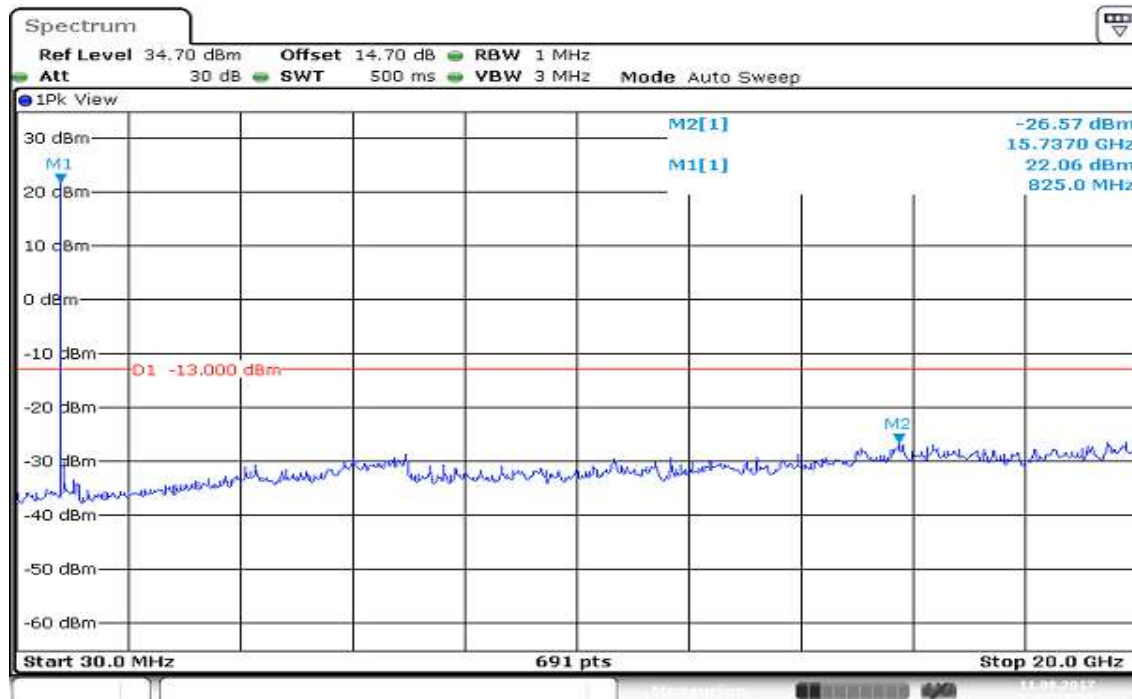


### CH High



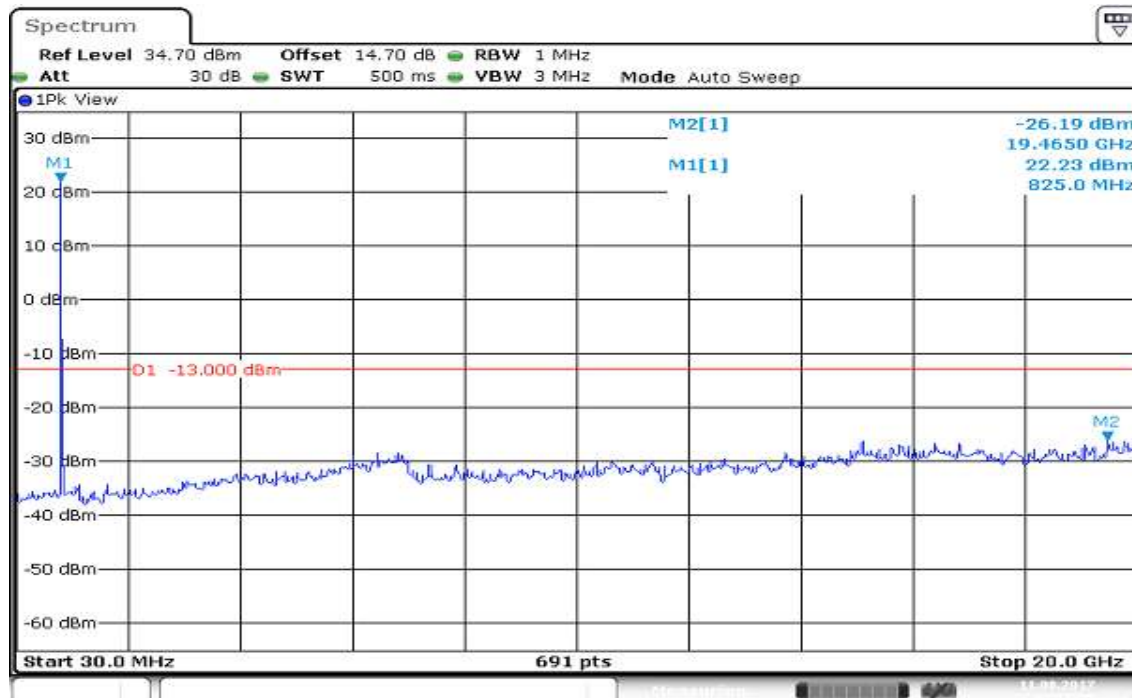
Date: 11 AUG 2017 14:13:42

**CHANNEL BANDWIDTH: 3MHz / QPSK**  
**CH Low**



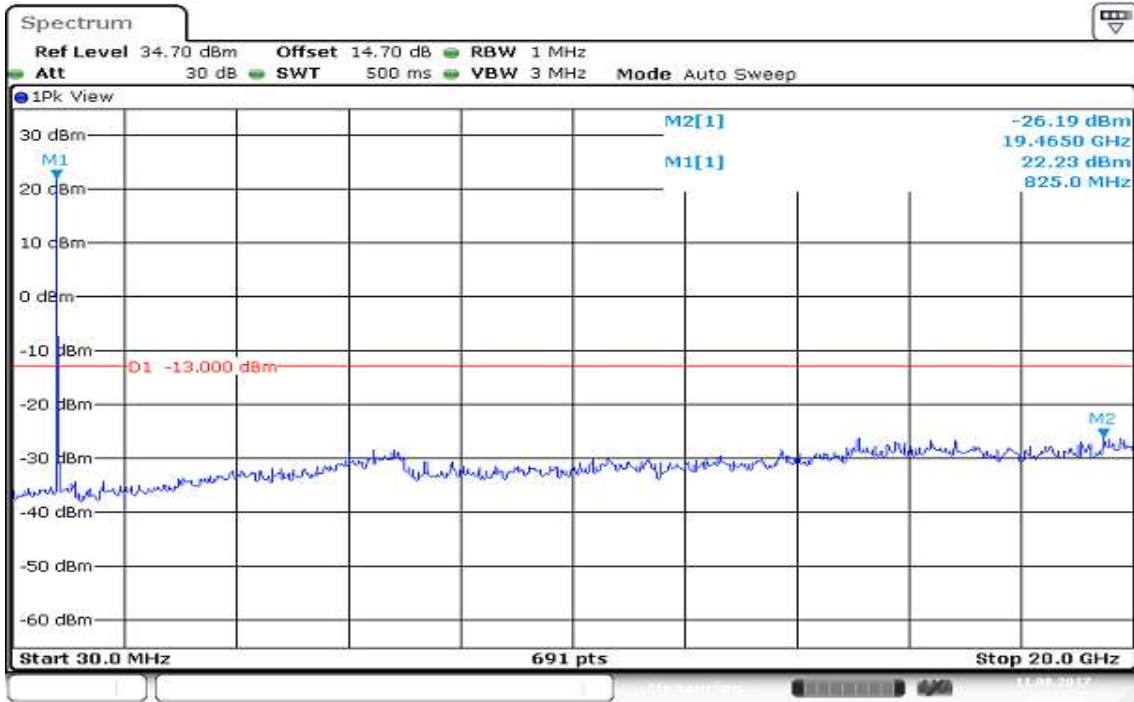
Date: 11 AUG 2017 14:16:51

**CH Mid**



Date: 11 AUG 2017 14:17:46

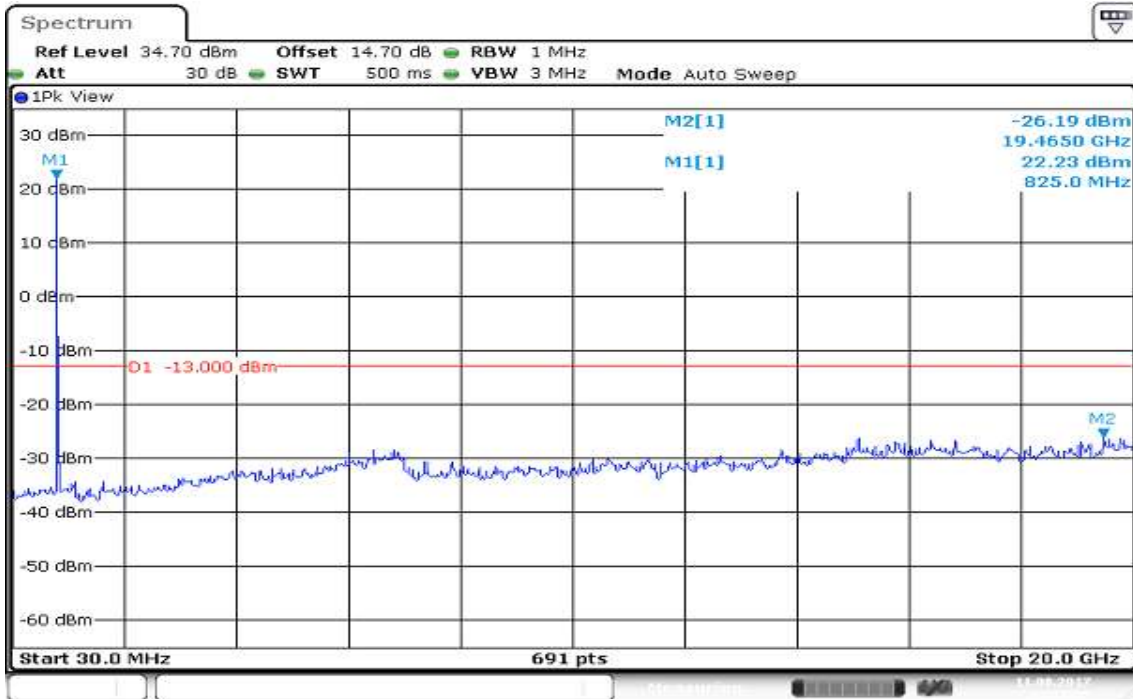
### CH High



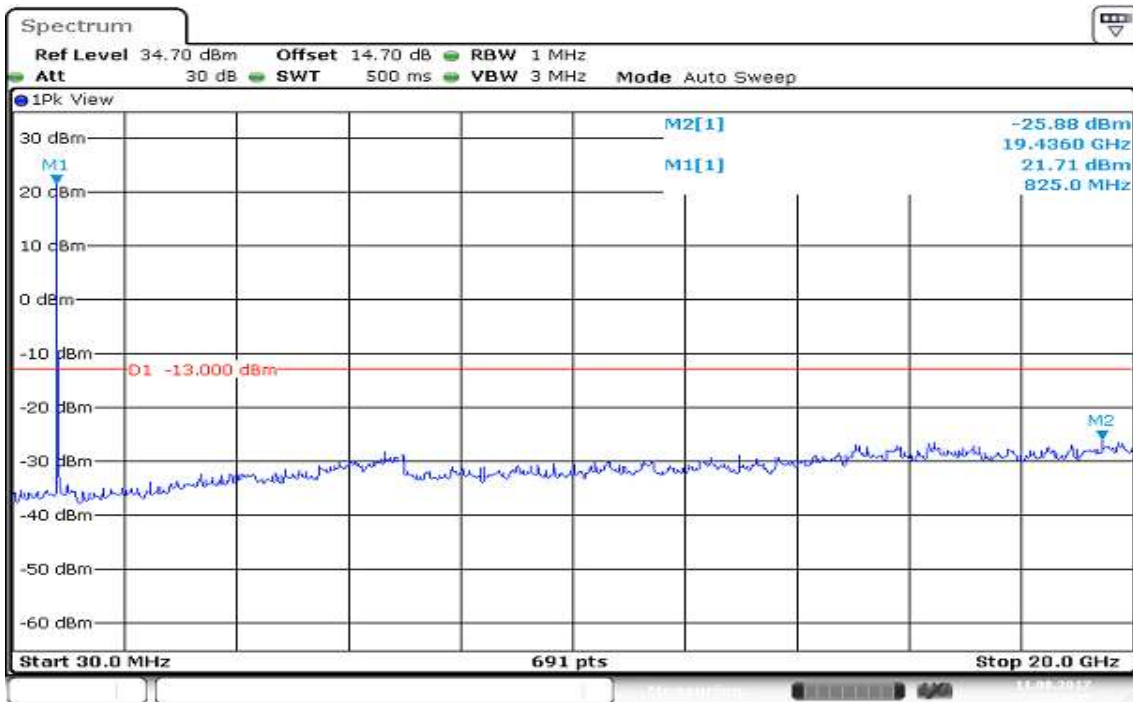
Date: 11 AUG 2017 14:17:46

**CHANNEL BANDWIDTH: 3MHz / 16QAM**

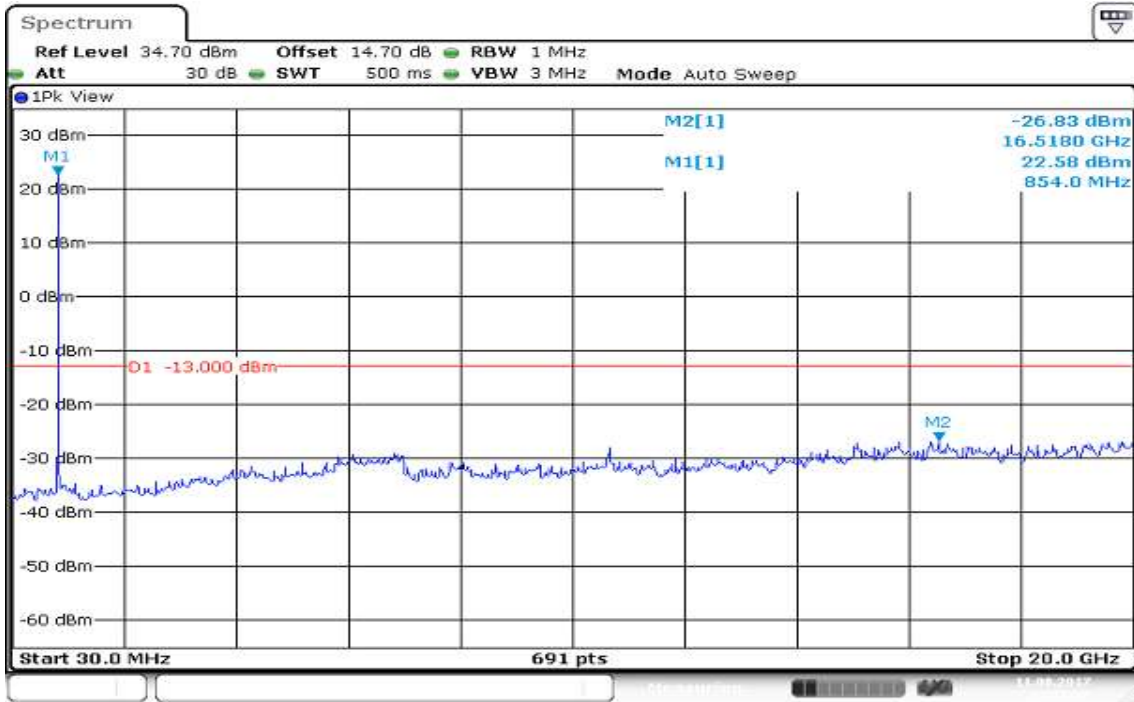
**CH Low**



**CH Mid**

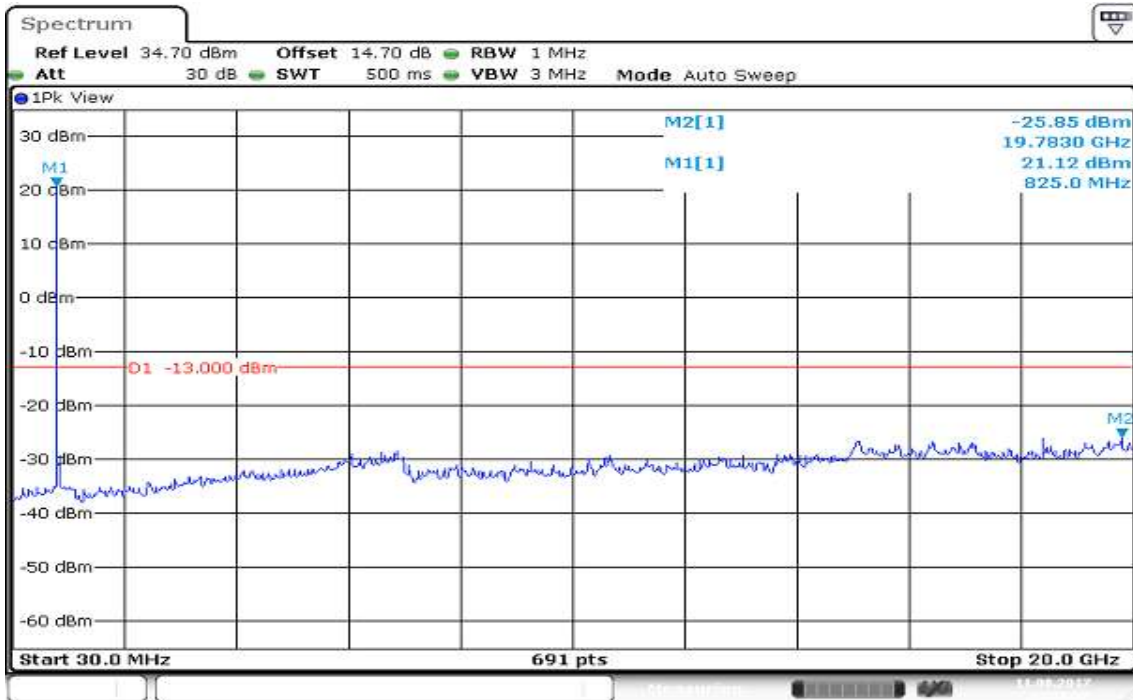


### CH High

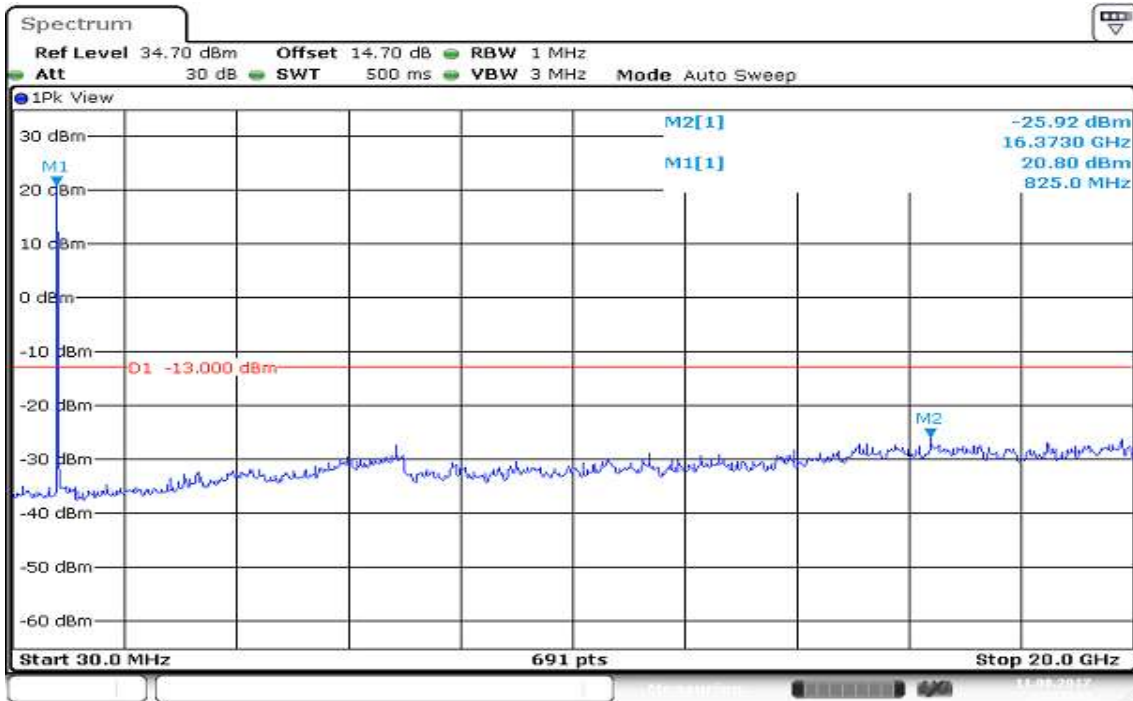


Date: 11.AUG.2017 14:15:26

**CHANNEL BANDWIDTH: 5MHz / QPSK**  
**CH Low**



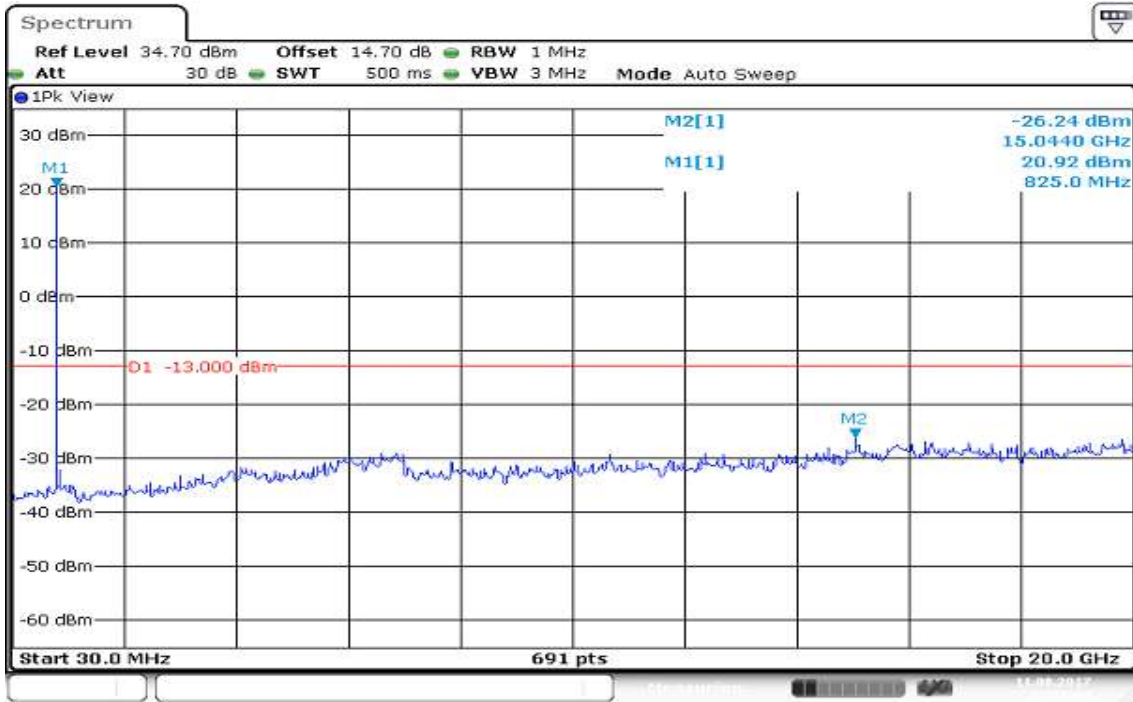
**CH Mid**



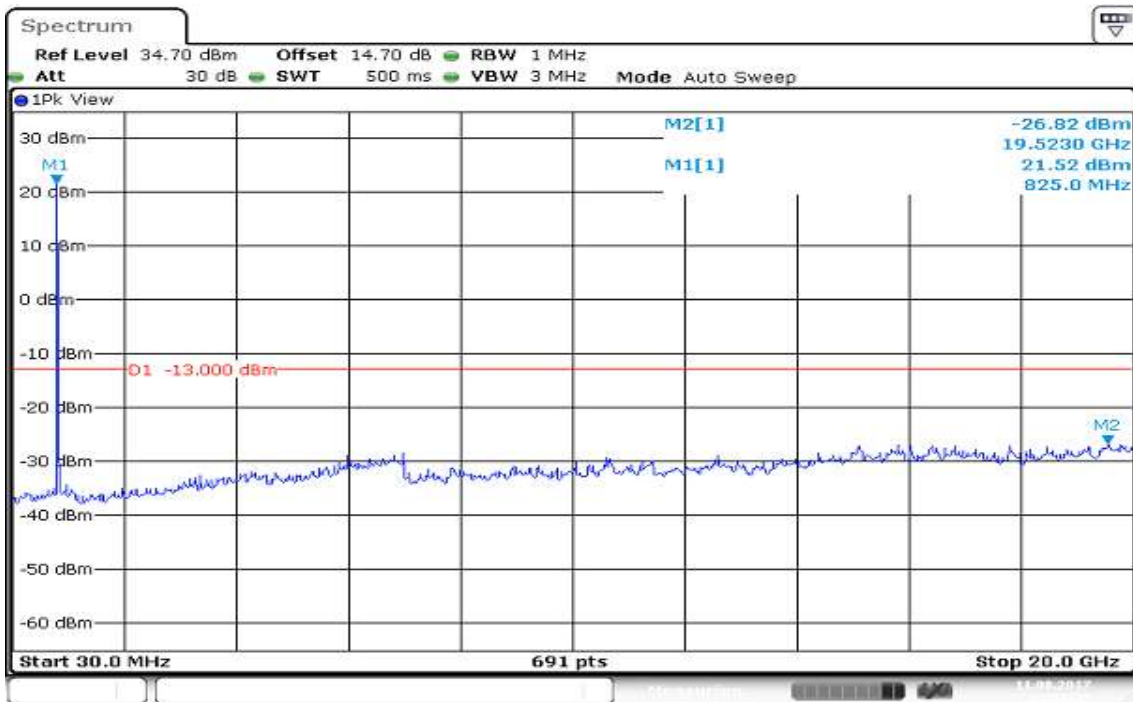


**CHANNEL BANDWIDTH: 5MHz / 16QAM**

**CH Low**

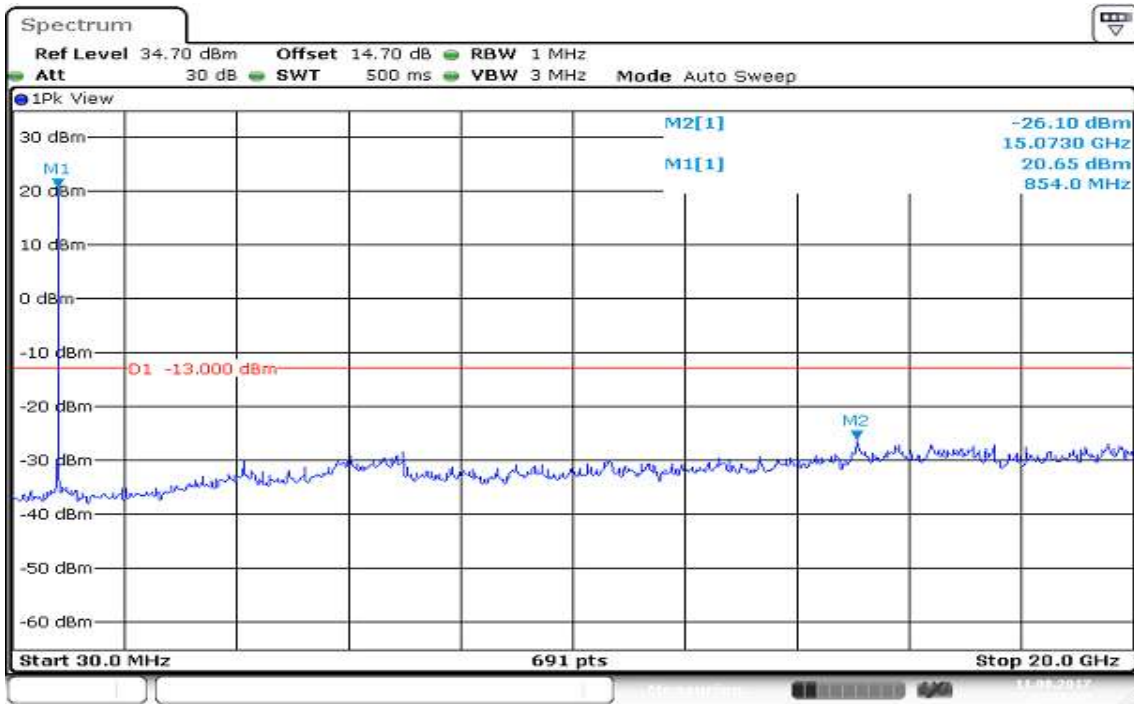


**CH Mid**





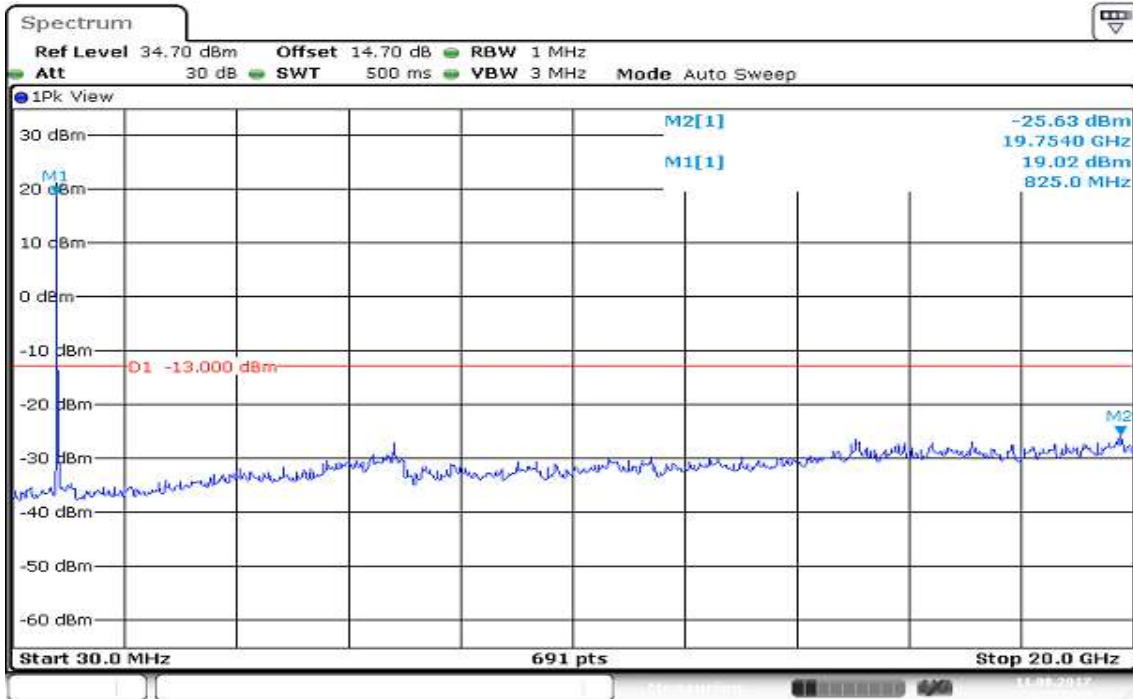
### CH High



Date: 11 AUG 2017 14:19:21

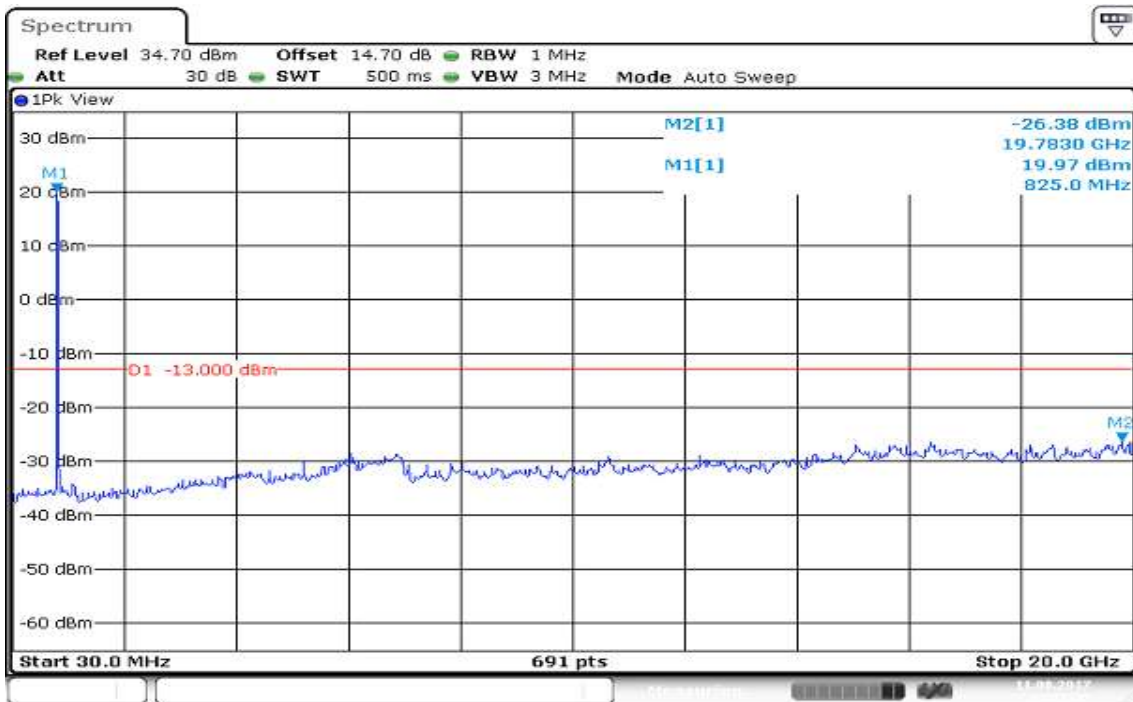
**CHANNEL BANDWIDTH: 10MHz / QPSK**

**CH Low**



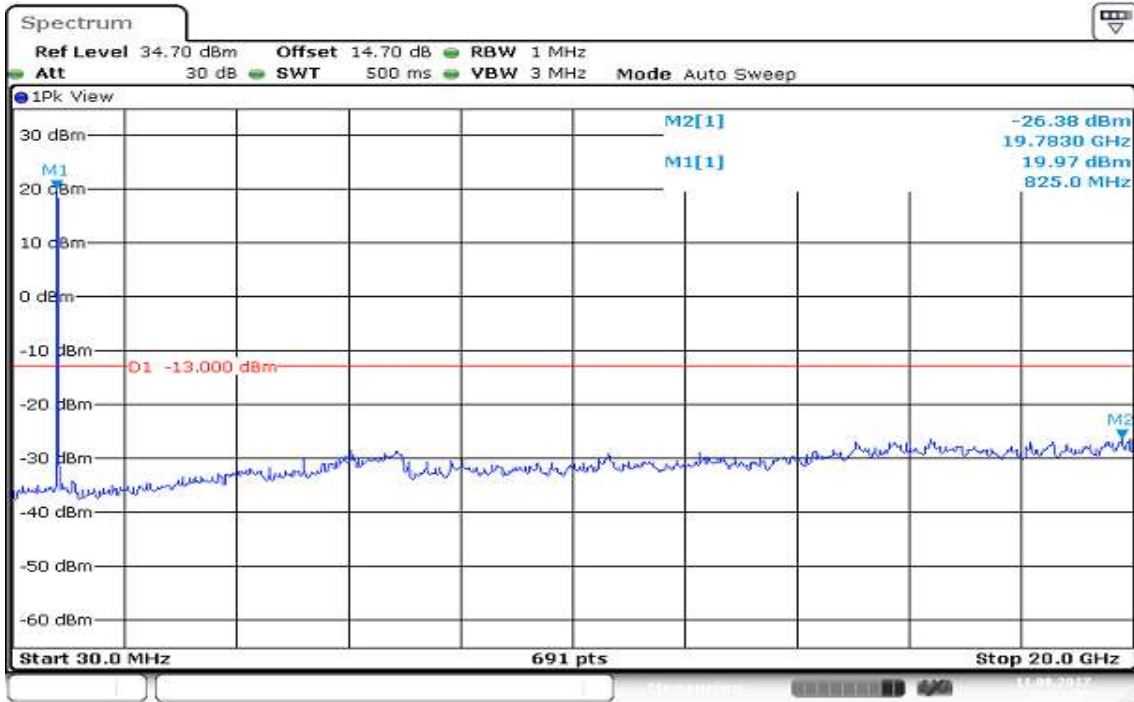
Date: 11 AUG 2017 14:22:20

**CH Mid**



Date: 11 AUG 2017 14:21:26

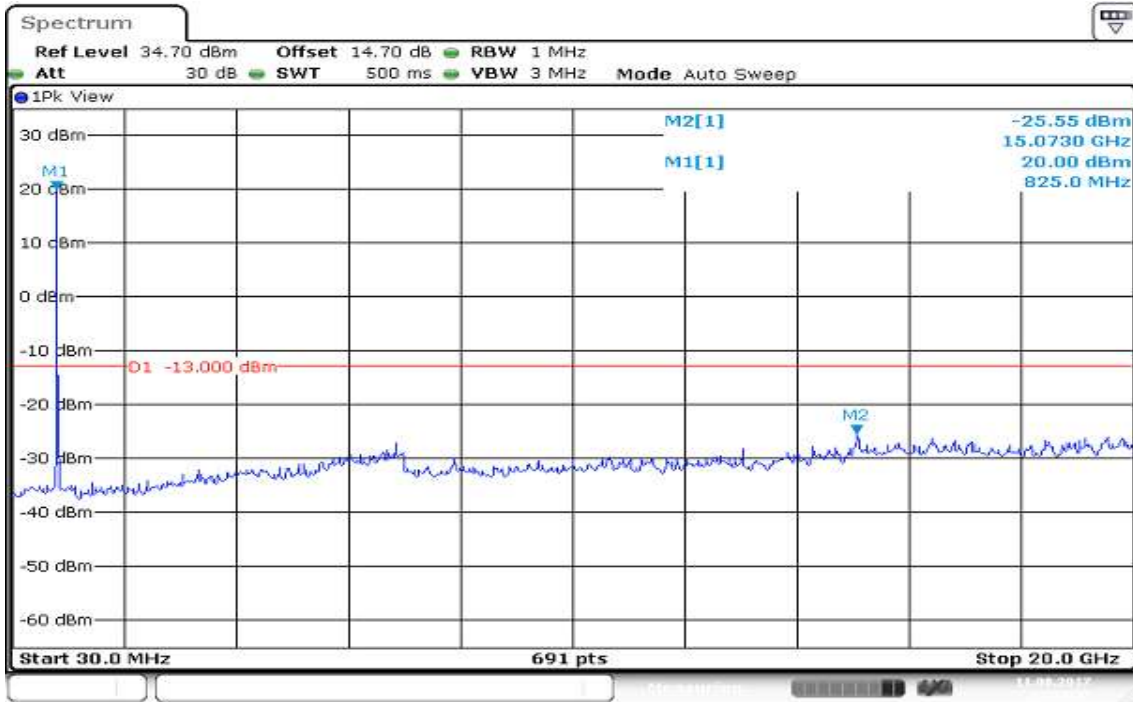
### CH High



Date: 11 AUG 2017 14:21:26

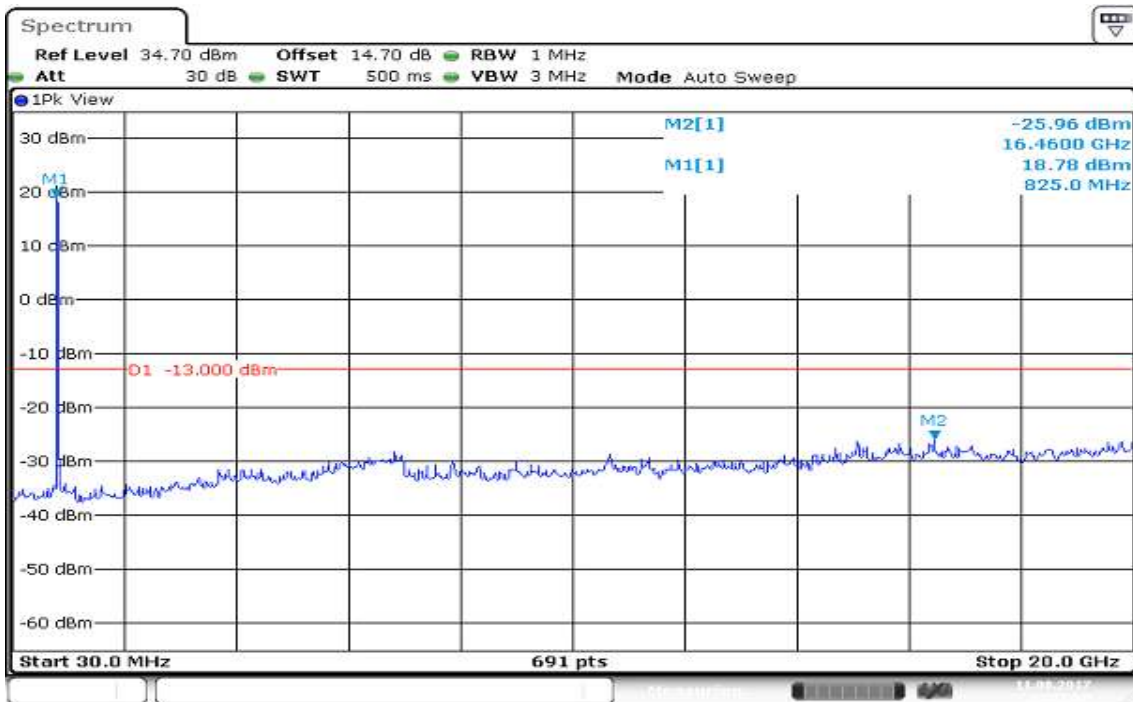
**CHANNEL BANDWIDTH: 10MHz / 16QAM**

**CH Low**



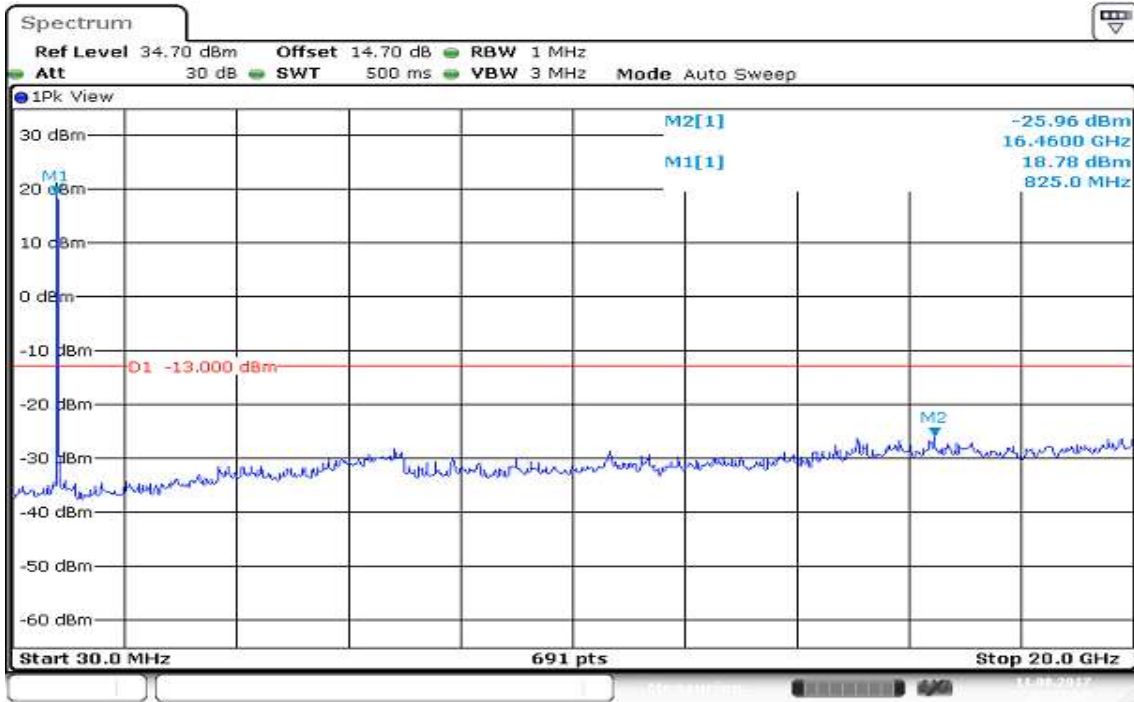
Date: 11 AUG 2017 14:24:24

**CH Mid**



Date: 11 AUG 2017 14:23:50

### CH High



Date: 11.AUG.2017 14:23:50

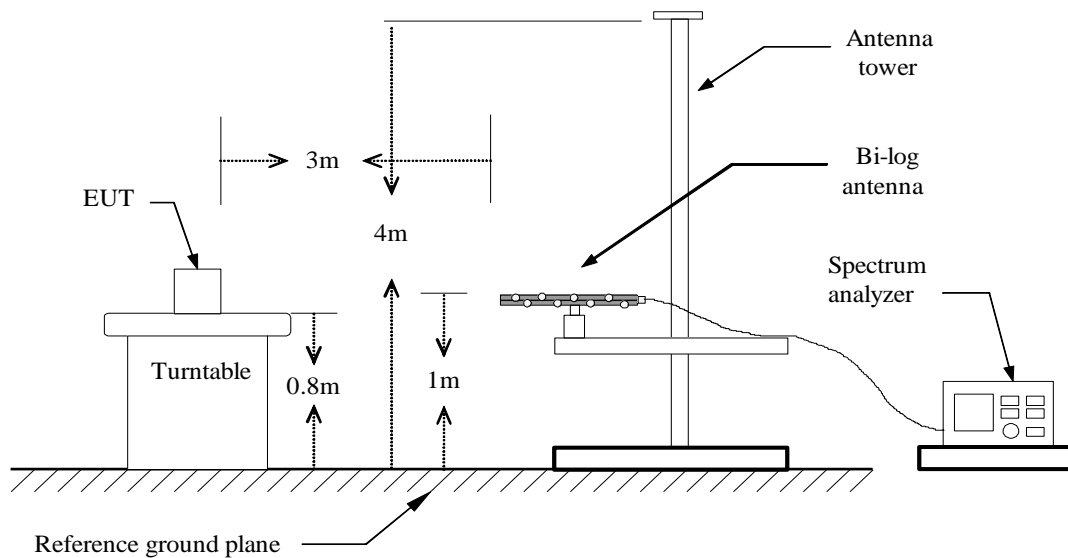
## 7.8 FIELD STRENGTH OF SPURIOUS RADIATION MEASUREMENT

### LIMIT

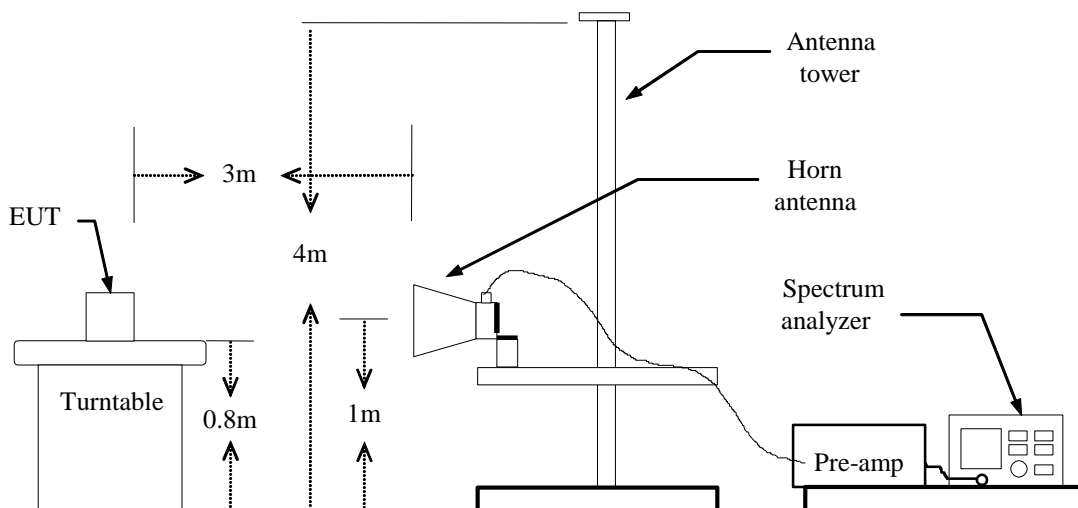
According to FCC §2.1053

### Test Configuration

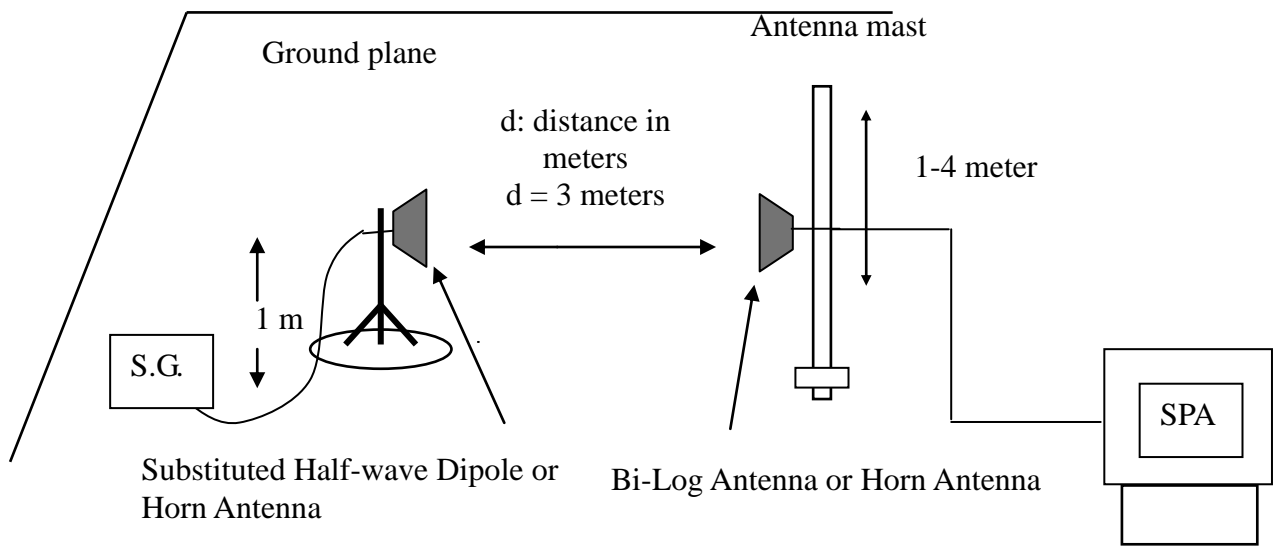
#### Below 1 GHz



#### Above 1 GHz



**Substituted Method Test Set-up**



**TEST PROCEDURE**

The EUT was placed on a non-conductive, the measurement antenna was placed at a distance of 3 meters from the EUT. During the tests, the antenna height and the EUT azimuth were varied in order to identify the maximum level of emissions from the EUT. This maximization process was repeated with the EUT positioned in each of its three orthogonal orientations.

The frequency range up to tenth harmonic was investigated for each of three fundamental frequency (low, middle and high channels). Once spurious emission were identified, the power of the emission was determined using the substitution method.

The spurious emissions attenuation was calculated as the difference between radiated power at the fundamental frequency and the spurious emissions frequency.

$$ERP = \text{S.G. output (dBm)} + \text{Antenna Gain (dBd)} - \text{Cable (dB)}$$

$$EIRP = \text{S.G. output (dBm)} + \text{Antenna Gain (dBi)} - \text{Cable (dB)}$$

**TEST RESULTS**

*Refer to the attached tabular data sheets.*

**Test Results**

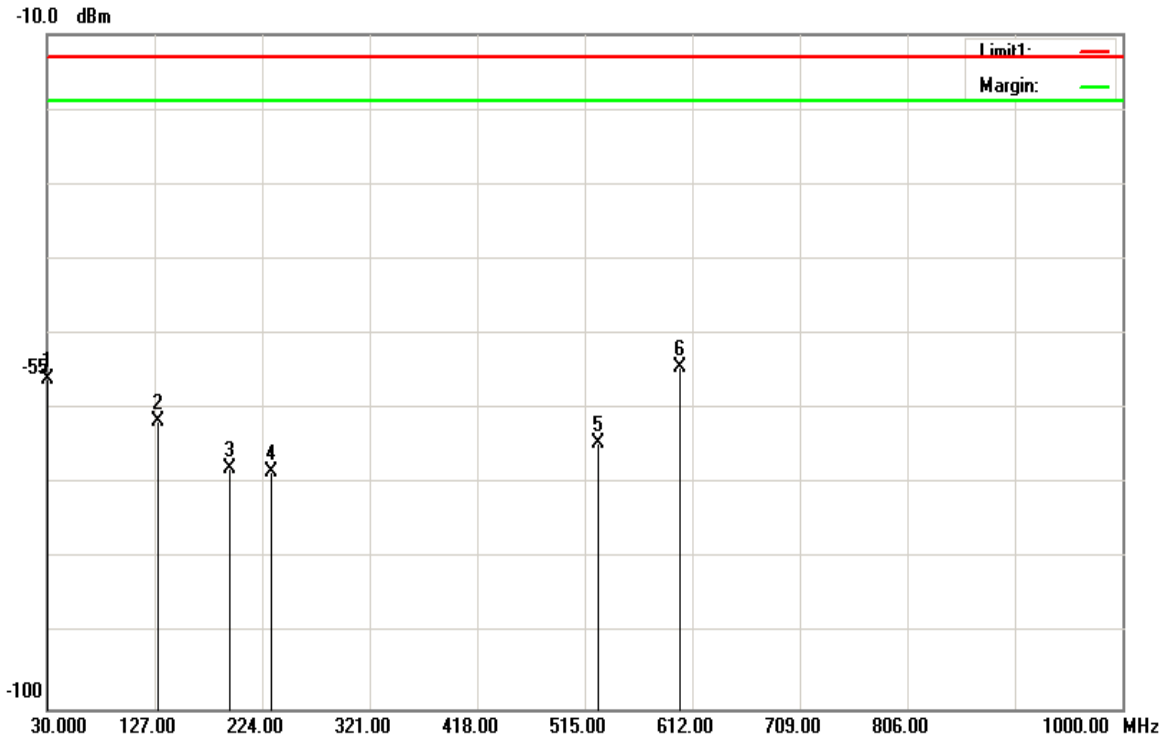
**Below 1GHz**

**LTE Band 2 / BW: 20MHz / QPSK / RB =1, RB Offset = 0**

**Operation Mode:** Tx / Mid CH      **Test Date:** Aug 15, 2017

**Temperature:** 21°C      **Tested by:** Kevin Kuo

**Humidity:** 52% RH      **Polarity:** Ver.



Frequency (MHz)	S.G. (dBm)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
30.0000	-50.26	-5.7	-55.96	-13.00	-42.96	V
129.9100	-62.58	1.05	-61.53	-13.00	-48.53	V
194.9000	-71.99	4.1	-67.89	-13.00	-54.89	V
231.7600	-74.48	6.2	-68.28	-13.00	-55.28	V
527.6100	-71.39	6.83	-64.56	-13.00	-51.56	V
600.3600	-52.87	-1.56	-54.43	-13.00	-41.43	V



**Operation Mode:** Tx / Mid CH

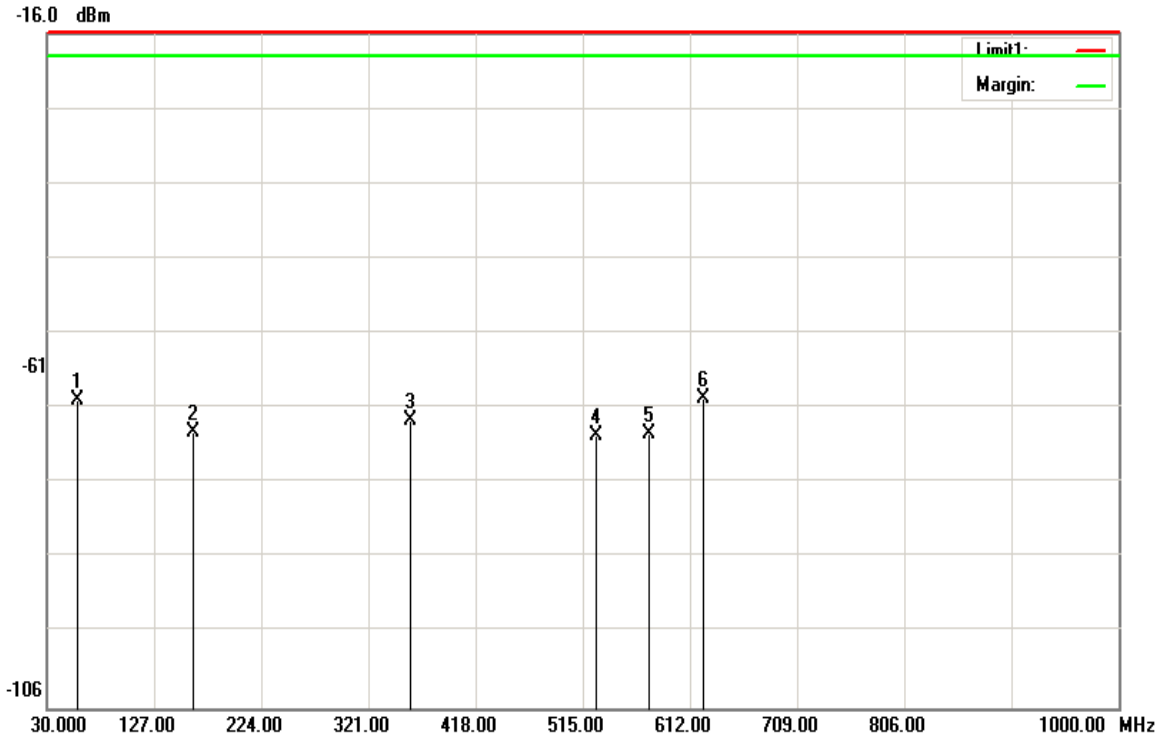
**Test Date:** Aug 15, 2017

**Temperature:** 21°C

**Tested by:** Kevin Kuo

**Humidity:** 52% RH

**Polarity:** Hor.



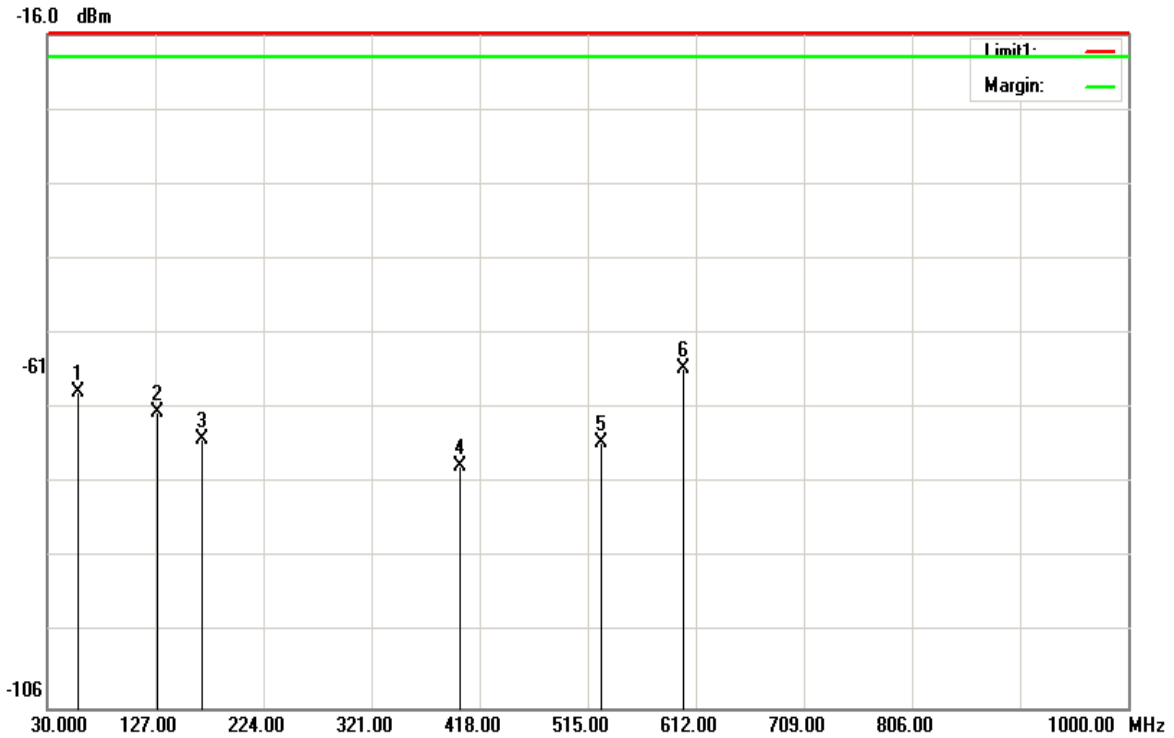
Frequency (MHz)	S.G. (dBm)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
57.1600	-63.47	-1.58	-65.05	-13.00	-52.05	H
162.8900	-69.23	0.08	-69.15	-13.00	-56.15	H
358.8300	-74.77	7.14	-67.63	-13.00	-54.63	H
527.6100	-76.53	6.83	-69.70	-13.00	-56.70	H
575.1400	-72.07	2.61	-69.46	-13.00	-56.46	H
624.6100	-64.5	-0.17	-64.67	-13.00	-51.67	H

**LTE Band 2 / BW: 20MHz / 16QAM / RB =1, RB Offset = 0**

**Operation Mode:** Tx / Mid CH      **Test Date:** Aug 15, 2017

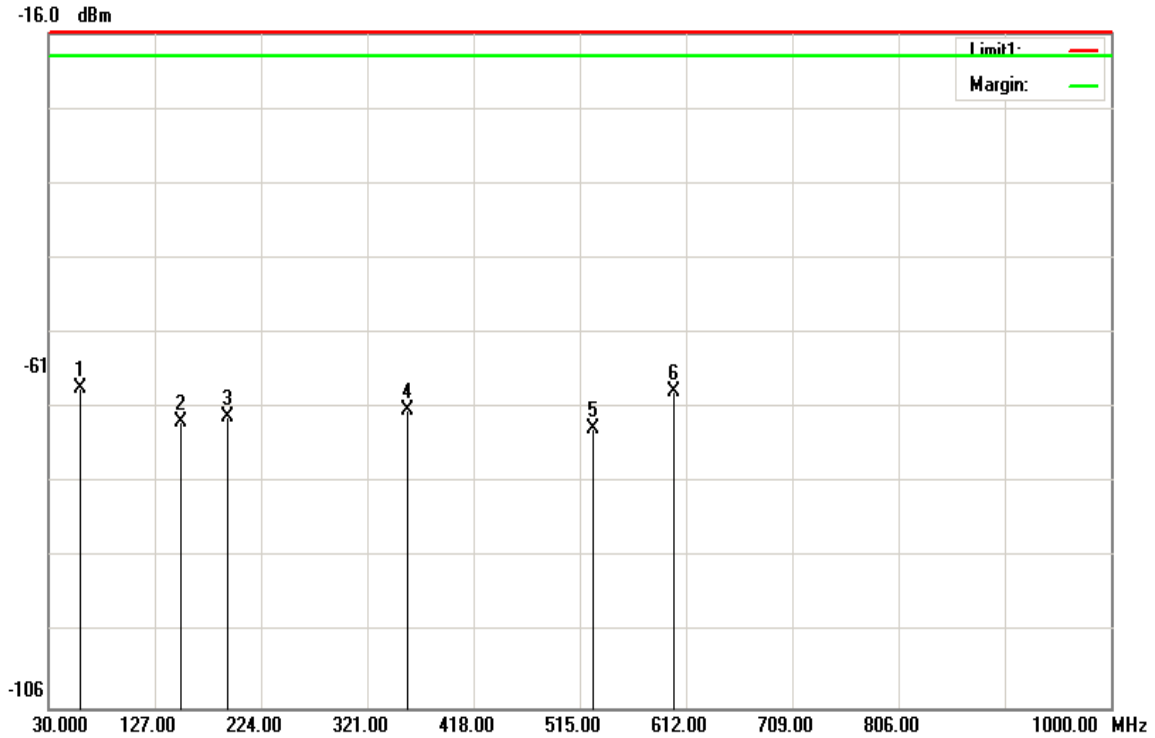
**Temperature:** 21°C      **Tested by:** Kevin Kuo

**Humidity:** 52% RH      **Polarity:** Ver.



Frequency (MHz)	S.G. (dBm)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
58.1300	-62.3	-1.49	-63.79	-13.00	-50.79	V
128.9400	-67.45	1.03	-66.42	-13.00	-53.42	V
168.7100	-71.49	1.45	-70.04	-13.00	-57.04	V
400.5400	-81	7.3	-73.70	-13.00	-60.70	V
527.6100	-77.3	6.83	-70.47	-13.00	-57.47	V
600.3600	-59.16	-1.56	-60.72	-13.00	-47.72	V

**Operation Mode:** Tx / Mid CH      **Test Date:** Aug 15, 2017  
**Temperature:** 21°C      **Tested by:** Kevin Kuo  
**Humidity:** 52% RH      **Polarity:** Hor.



Frequency (MHz)	S.G. (dBm)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
59.1000	-61.86	-1.39	-63.25	-13.00	-50.25	H
150.2800	-68.17	0.27	-67.90	-13.00	-54.90	H
193.9300	-71.33	4.1	-67.23	-13.00	-54.23	H
357.8600	-73.52	7.13	-66.39	-13.00	-53.39	H
527.6100	-75.6	6.83	-68.77	-13.00	-55.77	H
600.3600	-62.31	-1.56	-63.87	-13.00	-50.87	H

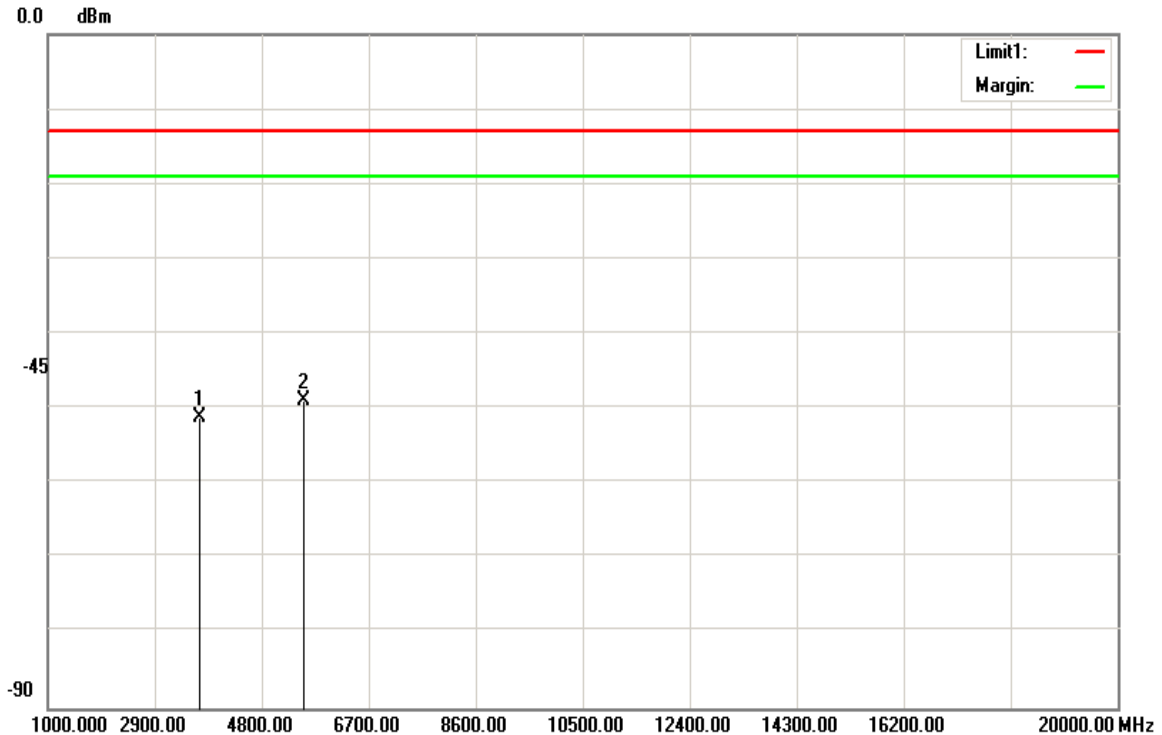
**Above 1GHz**

LTE Band 2 / BW: 20MHz / QPSK RB =1, RB Offset = 0

Operation Mode: Tx / Low CH      Test Date: Aug 18, 2017

Temperature: 21°C      Tested by: Kevin Kuo

Humidity: 52% RH      Polarity: Ver.



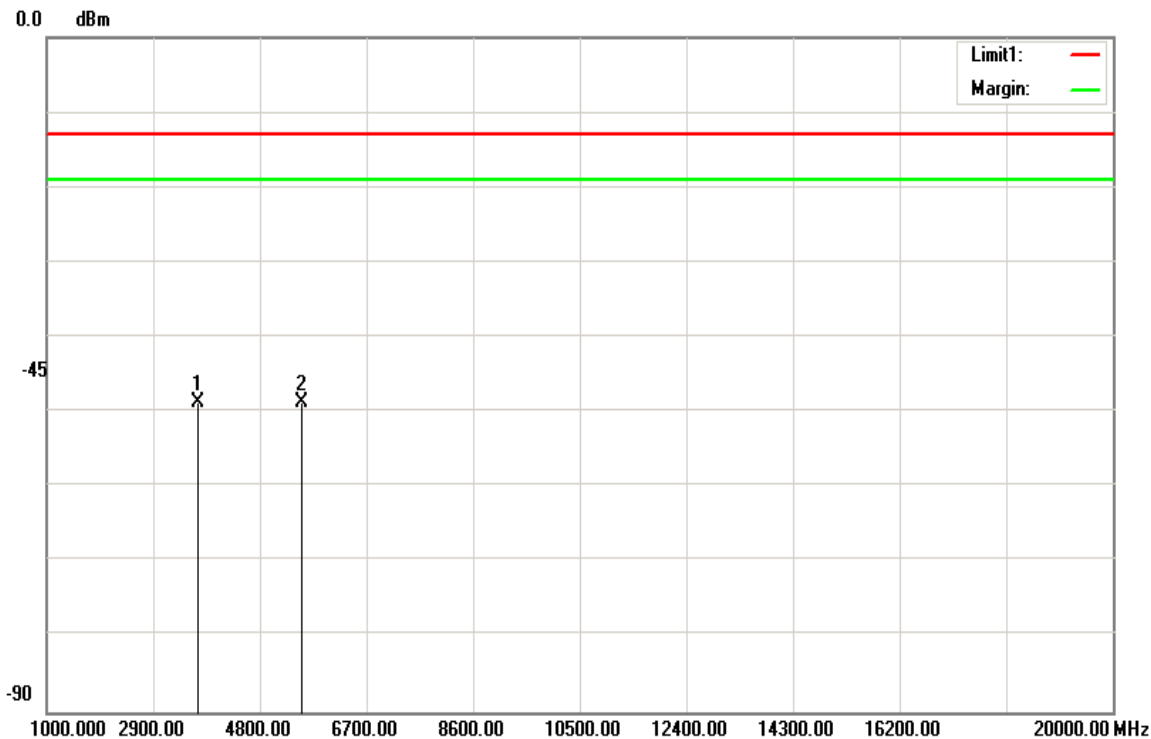
Frequency (MHz)	S.G. (dBm)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
3702.000	-63.72	12.54	-51.18	-13.00	-38.18	V
5550.000	-61.82	12.88	-48.94	-13.00	-35.94	V
N/A						

**Remark:**

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.

**Operation Mode:** Tx / Low CH  
**Temperature:** 21°C  
**Humidity:** 52% RH

**Test Date:** Aug 18, 2017  
**Tested by:** Kevin Kuo  
**Polarity:** Hor.



Frequency (MHz)	S.G. (dBm)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
3702.000	-61.32	12.54	-48.78	-13.00	-35.78	H
5555.000	-61.57	12.88	-48.69	-13.00	-35.69	H
N/A						

**Remark:**

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.

**Operation Mode:** Tx / Mid CH

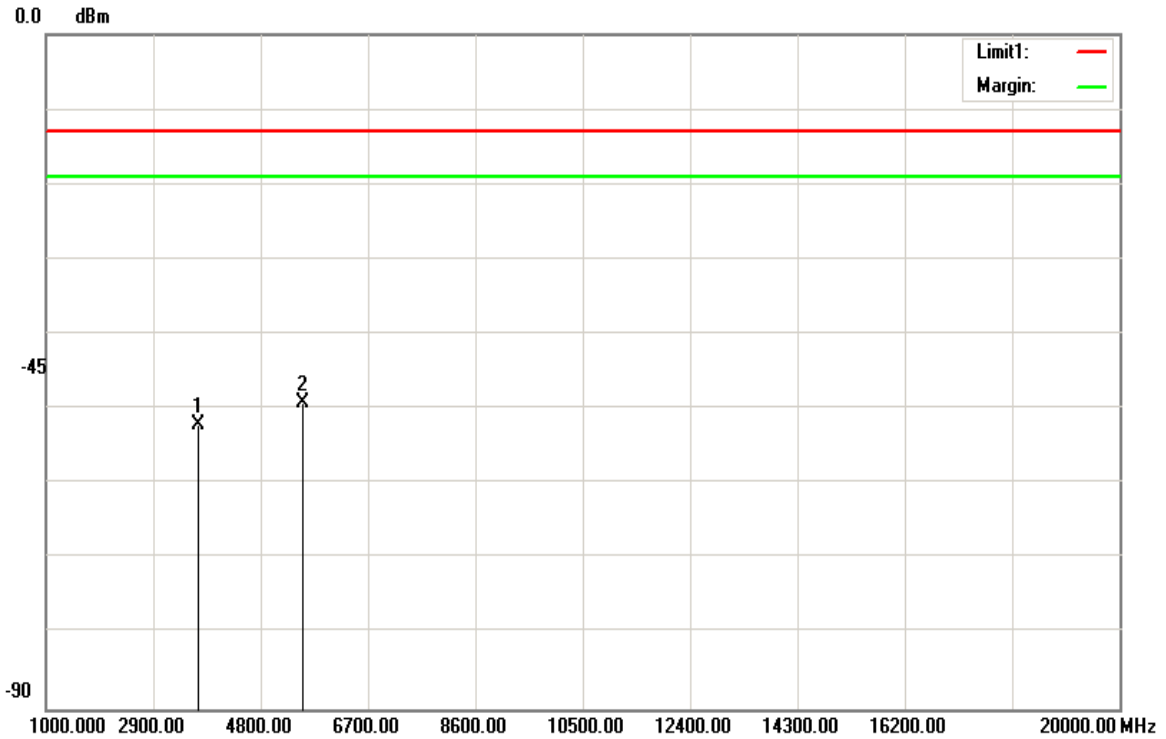
**Test Date:** Aug 18, 2017

**Temperature:** 21°C

**Tested by:** Kevin Kuo

**Humidity:** 52% RH

**Polarity:** Ver.

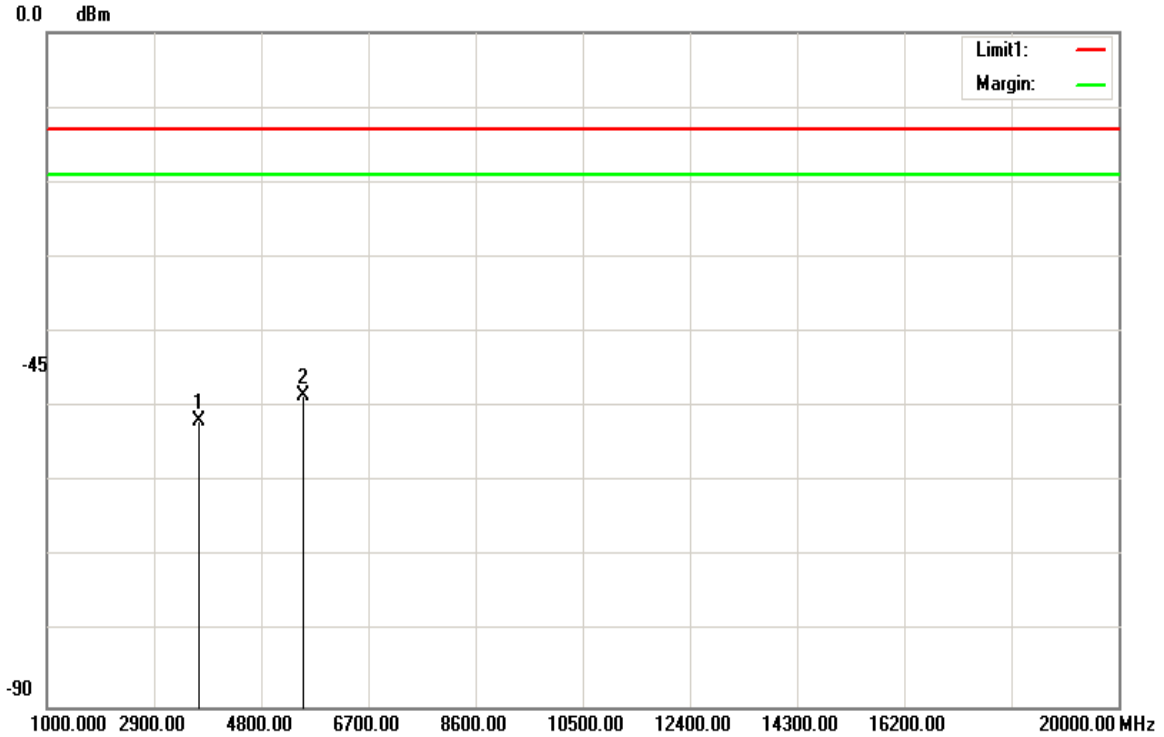


Frequency (MHz)	S.G. (dBm)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
3740.000	-64.68	12.54	-52.14	-13.00	-39.14	V
5610.000	-62.12	12.88	-49.24	-13.00	-36.24	V
N/A						

**Remark:**

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.

**Operation Mode:** Tx / Mid CH      **Test Date:** Aug 18, 2017  
**Temperature:** 21°C      **Tested by:** Kevin Kuo  
**Humidity:** 52% RH      **Polarity:** Hor.



Frequency (MHz)	S.G. (dBm)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
3740.000	-64.34	12.54	-51.80	-13.00	-38.80	H
5610.000	-61.28	12.88	-48.40	-13.00	-35.40	H
N/A						

**Remark:**

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.

**Operation Mode:** Tx / High CH

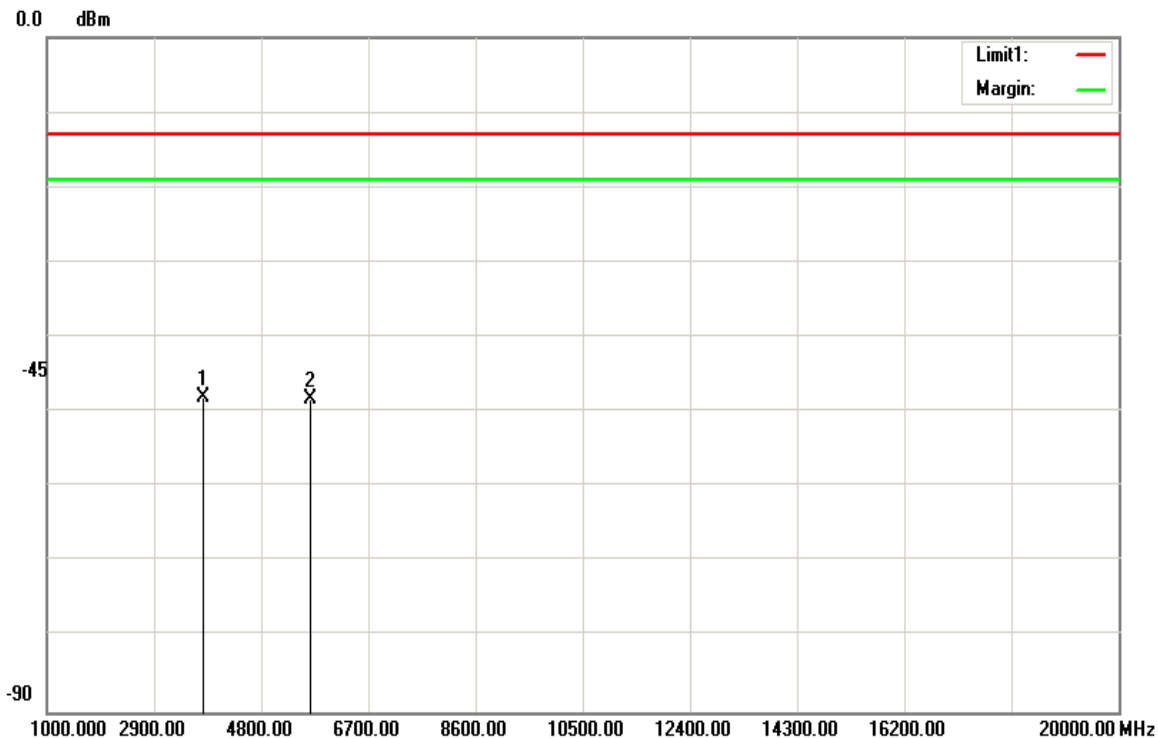
**Test Date:** Aug 18, 2017

**Temperature:** 21°C

**Tested by:** Kevin Kuo

**Humidity:** 52% RH

**Polarity:** Ver.



Frequency (MHz)	S.G. (dBm)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
3779.000	-60.54	12.56	-47.98	-13.00	-34.98	V
5676.000	-61.14	12.83	-48.31	-13.00	-35.31	V
N/A						

**Remark:**

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.



**Operation Mode:** Tx / High CH

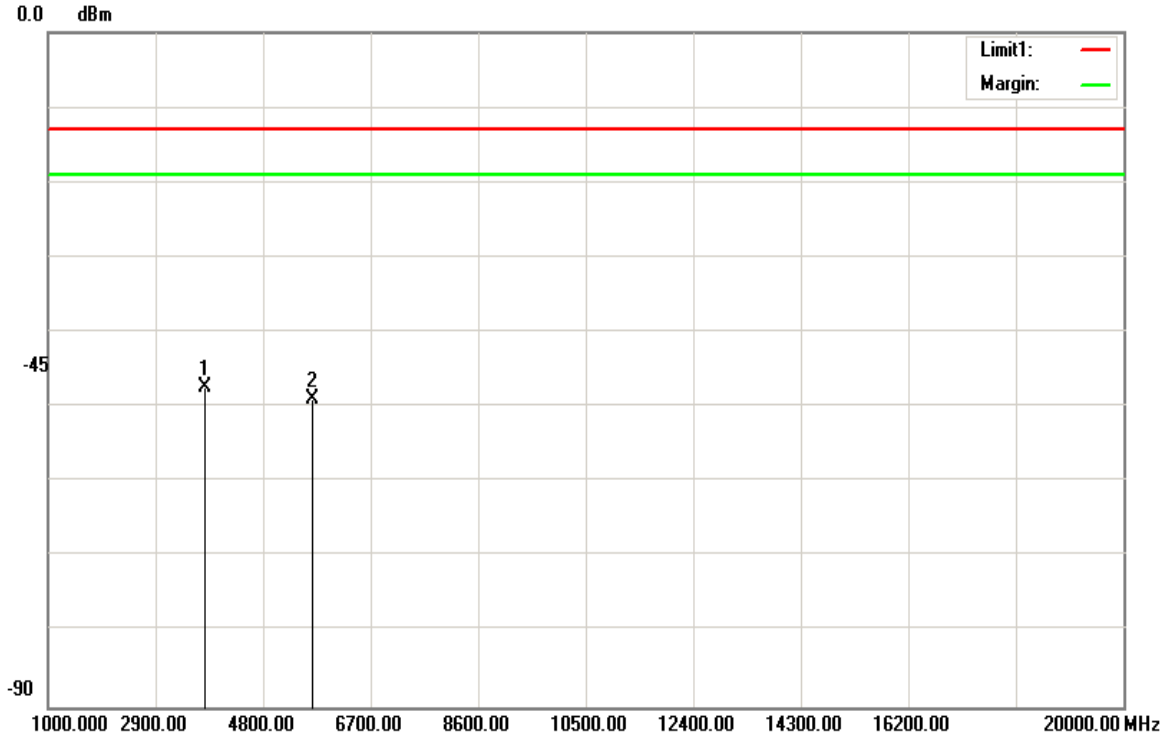
**Test Date:** Aug 18, 2017

**Temperature:** 21°C

**Tested by:** Kevin Kuo

**Humidity:** 52% RH

**Polarity:** Hor.



Frequency (MHz)	S.G. (dBm)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
3779.000	-59.92	12.56	-47.36	-13.00	-34.36	H
5676.000	-61.81	12.83	-48.98	-13.00	-35.98	H
N/A						

**Remark:**

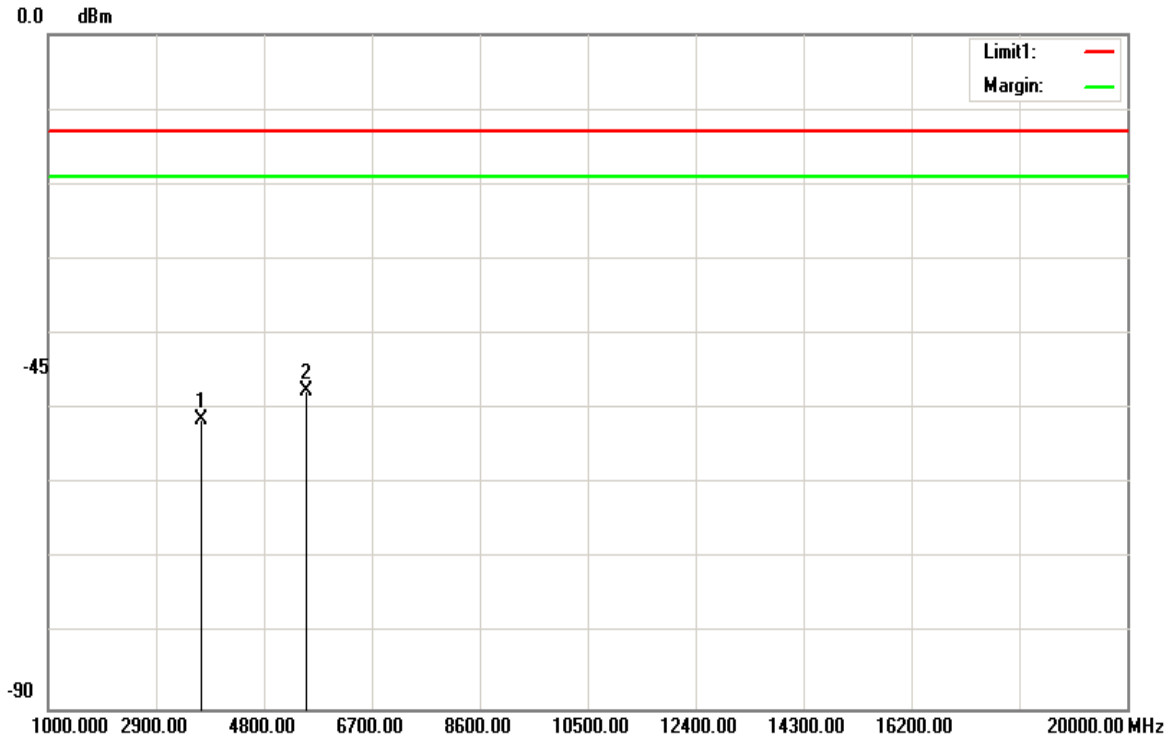
1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.

**LTE Band 2 / BW: 20MHz / 16QAM / RB =1, RB Offset = 0**

**Operation Mode:** Tx / Low CH      **Test Date:** Aug 18, 2017

**Temperature:** 21°C      **Tested by:** Kevin Kuo

**Humidity:** 52% RH      **Polarity:** Ver.

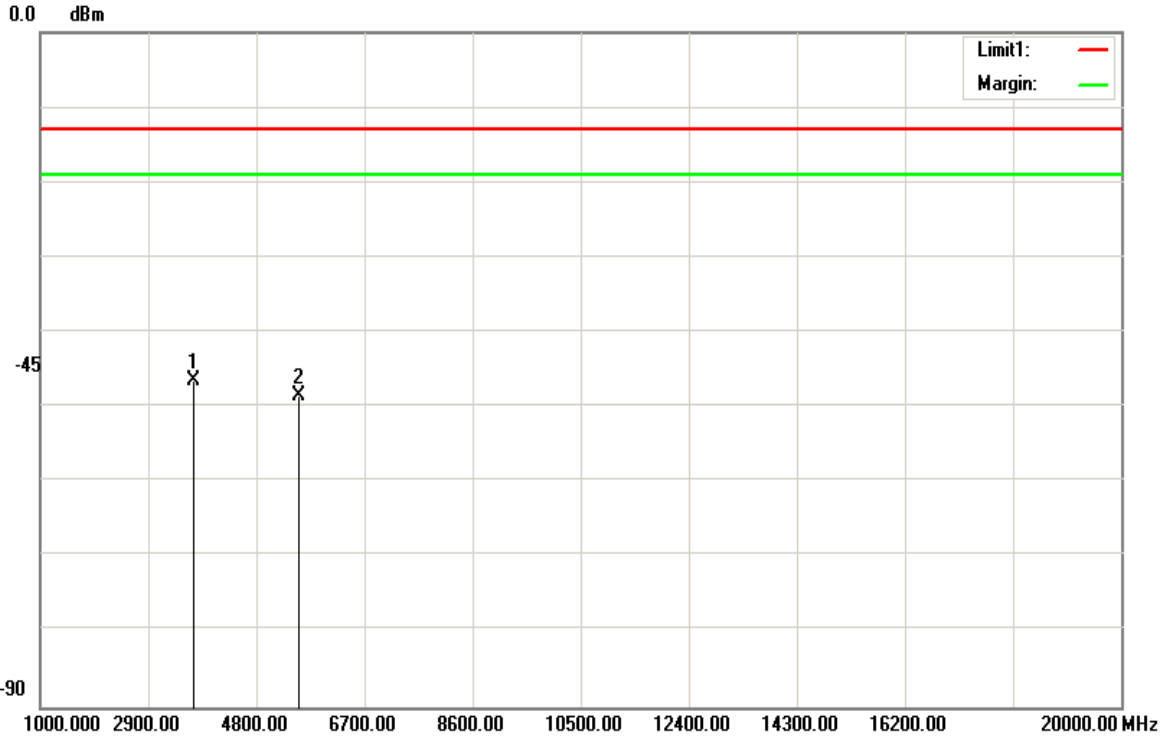


Frequency (MHz)	S.G. (dBm)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
3702.000	-63.93	12.54	-51.39	-13.00	-38.39	V
5555.000	-60.51	12.88	-47.63	-13.00	-34.63	V
N/A						

**Remark:**

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.

**Operation Mode:** Tx / Low CH      **Test Date:** Aug 18, 2017  
**Temperature:** 21°C      **Tested by:** Kevin Kuo  
**Humidity:** 52% RH      **Polarity:** Hor.



Frequency (MHz)	S.G. (dBm)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
3702.000	-59.06	12.54	-46.52	-13.00	-33.52	H
5555.000	-61.27	12.88	-48.39	-13.00	-35.39	H
N/A						

**Remark:**

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.

**Operation Mode:** Tx / Mid CH

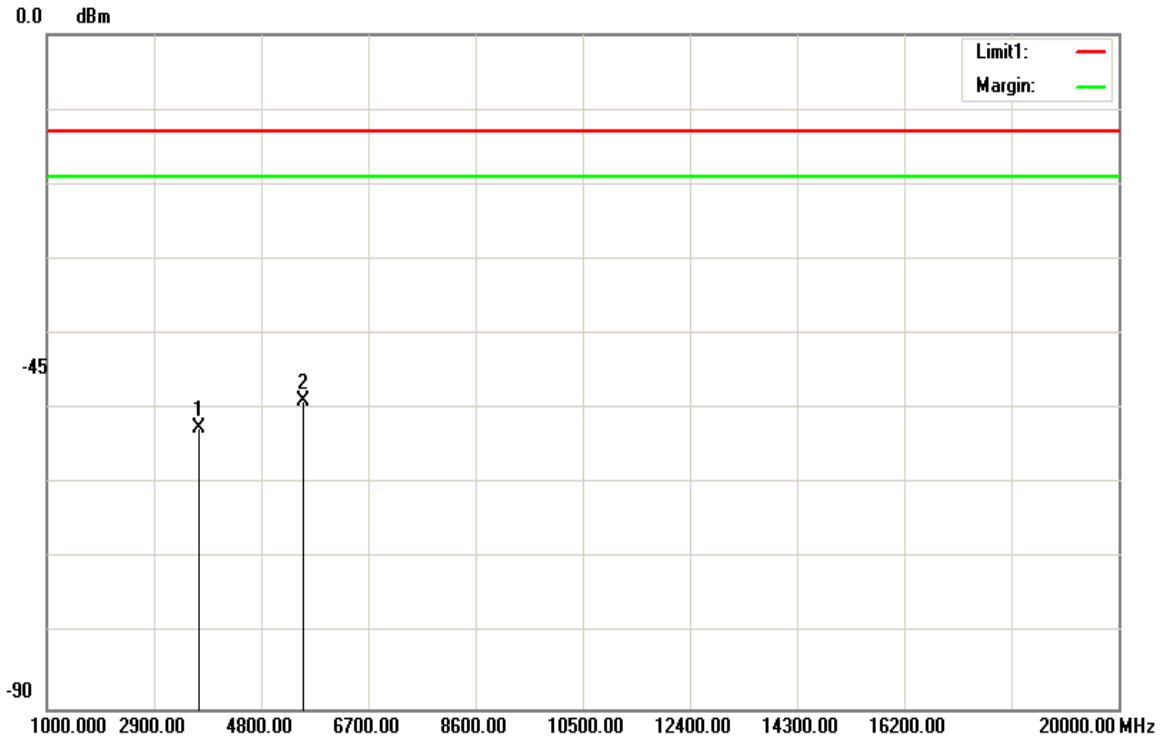
**Test Date:** Aug 18, 2017

**Temperature:** 21°C

**Tested by:** Kevin Kuo

**Humidity:** 52% RH

**Polarity:** Ver.



Frequency (MHz)	S.G. (dBm)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
3740.000	-65	12.54	-52.46	-13.00	-39.46	V
5610.000	-61.71	12.88	-48.83	-13.00	-35.83	V
N/A						

**Remark:**

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.

**Operation Mode:** Tx / Mid CH

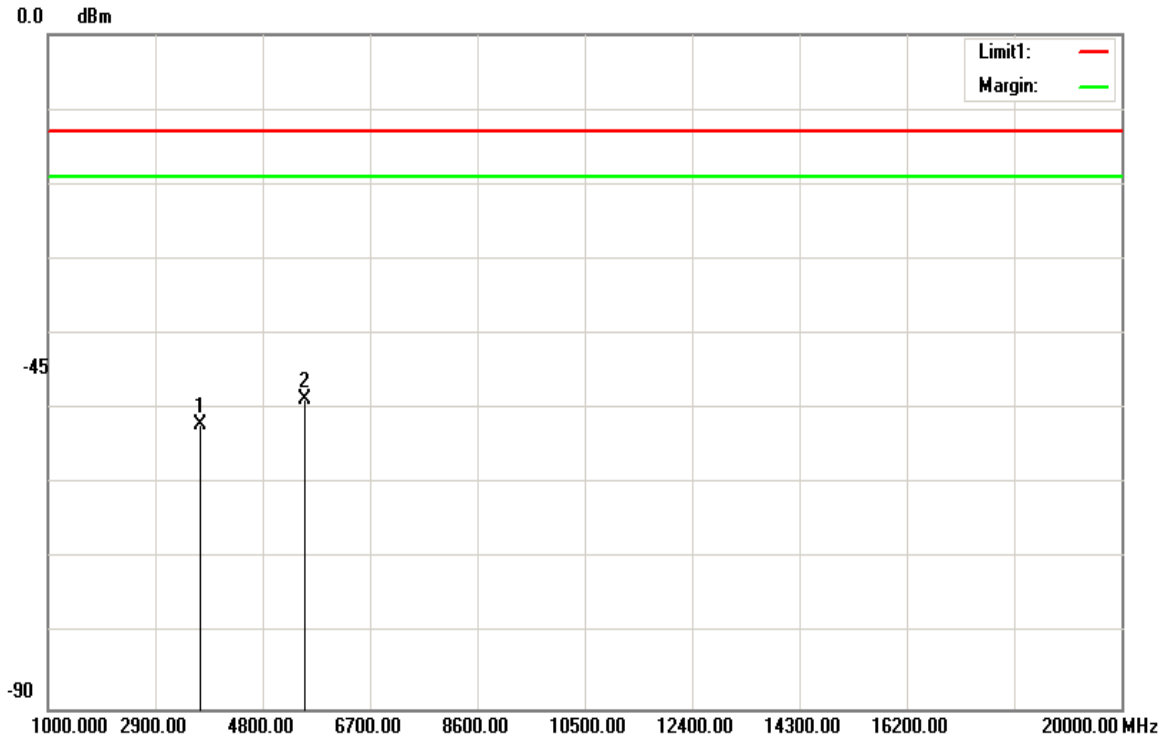
**Test Date:** Aug 18, 2017

**Temperature:** 21°C

**Tested by:** Kevin Kuo

**Humidity:** 52% RH

**Polarity:** Hor.



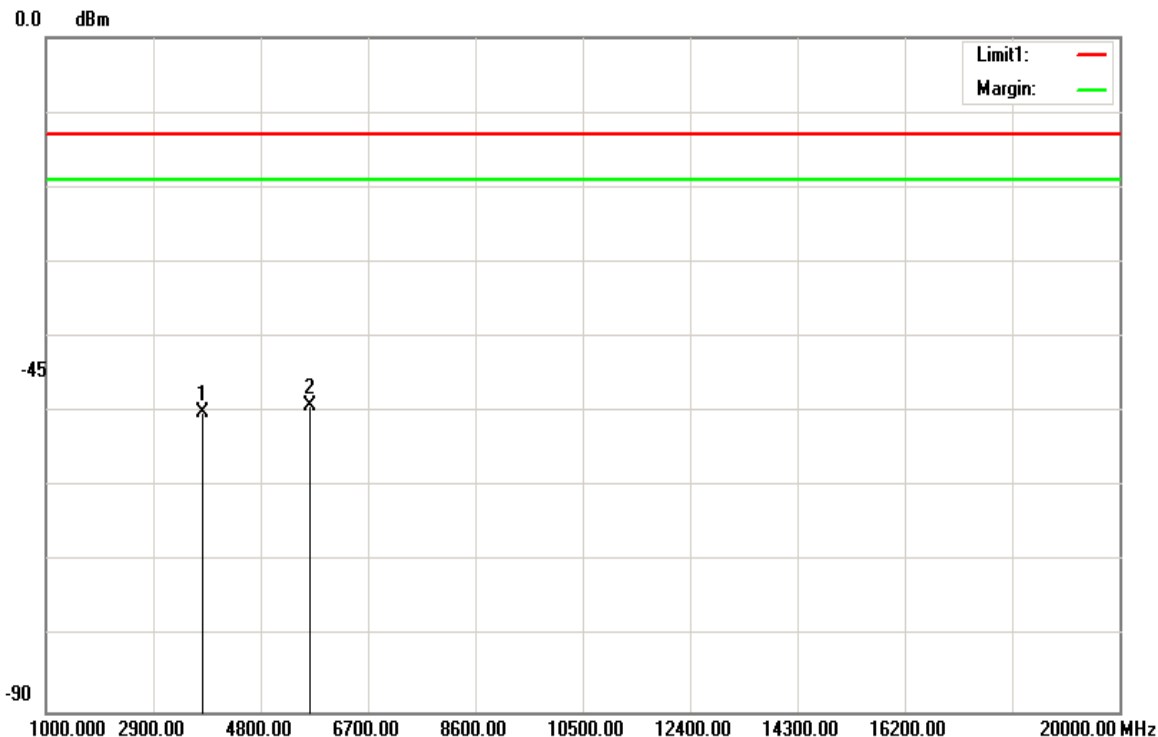
Frequency (MHz)	S.G. (dBm)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
3740.000	-64.53	12.54	-51.99	-13.00	-38.99	H
5610.000	-61.57	12.88	-48.69	-13.00	-35.69	H
N/A						

**Remark:**

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.

**Operation Mode:** Tx / High CH  
**Temperature:** 21°C  
**Humidity:** 52% RH

**Test Date:** Aug 18, 2017  
**Tested by:** Kevin Kuo  
**Polarity:** Ver.



Frequency (MHz)	S.G. (dBm)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
3779.000	-62.54	12.56	-49.98	-13.00	-36.98	V
5676.000	-61.92	12.83	-49.09	-13.00	-36.09	V
N/A						

**Remark:**

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.

**Operation Mode:** Tx / High CH

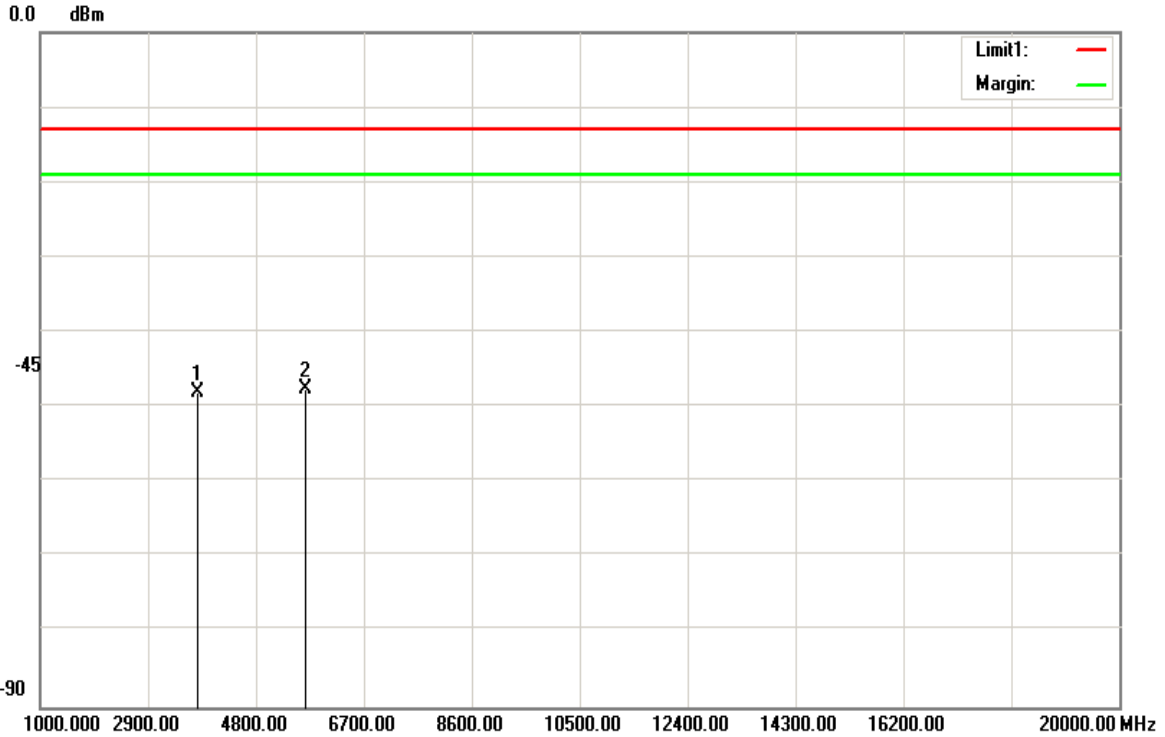
**Test Date:** Aug 18, 2017

**Temperature:** 21°C

**Tested by:** Kevin Kuo

**Humidity:** 52% RH

**Polarity:** Hor.



Frequency (MHz)	S.G. (dBm)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
3779.000	-60.61	12.56	-48.05	-13.00	-35.05	H
5676.000	-60.31	12.83	-47.48	-13.00	-34.48	H
N/A						

**Remark:**

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.

**Test Results**

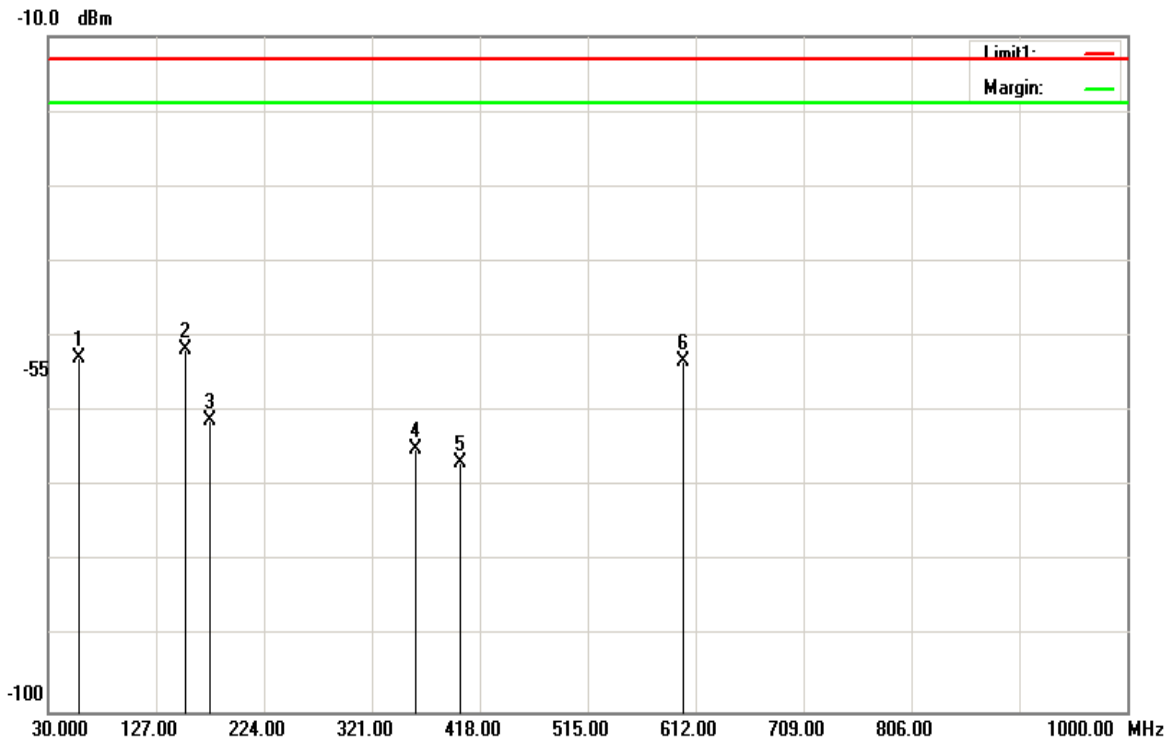
**Below 1GHz**

**LTE Band 5 / BW: 10MHz / QPSK / RB =1, RB Offset = 0**

**Operation Mode:** Tx / Mid CH      **Test Date:** Aug 16, 2017

**Temperature:** 21°C      **Tested by:** Kevin Kuo

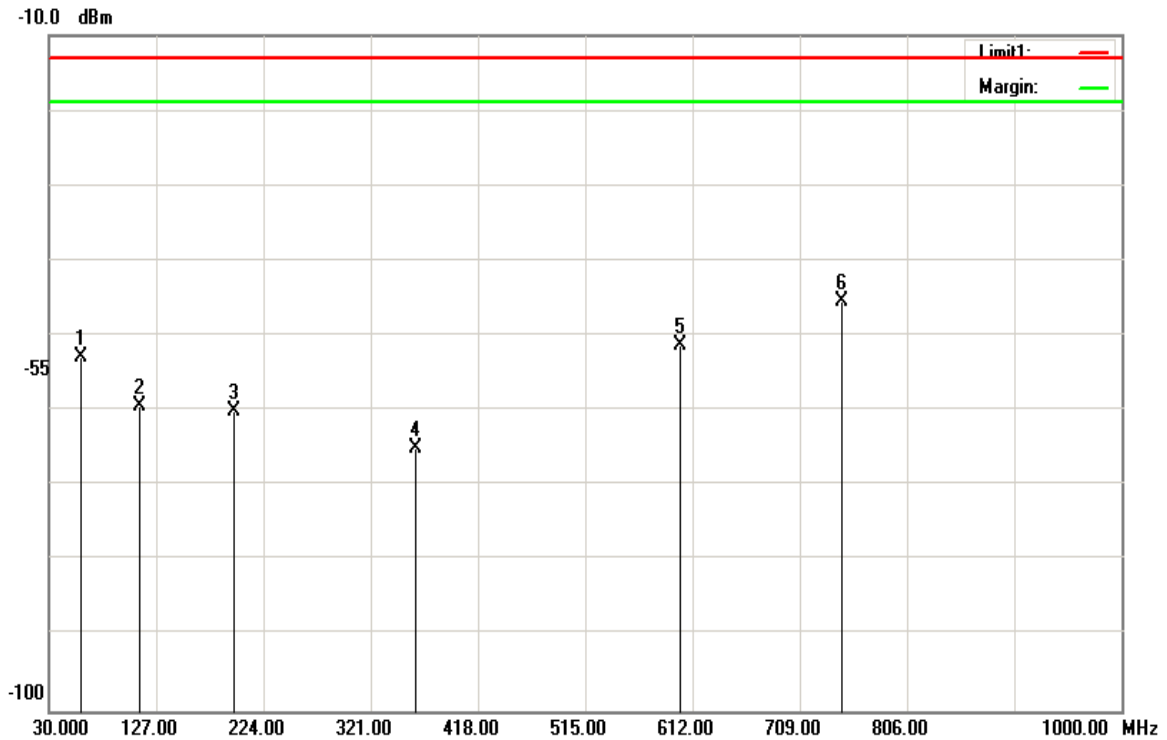
**Humidity:** 52% RH      **Polarity:** Ver.



Frequency (MHz)	S.G. (dBm)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
58.1300	-51.28	-1.49	-52.77	-13.00	-39.77	V
153.1900	-51.84	0.01	-51.83	-13.00	-38.83	V
175.5000	-64.13	3.04	-61.09	-13.00	-48.09	V
360.7700	-72.22	7.14	-65.08	-13.00	-52.08	V
400.5400	-74.03	7.3	-66.73	-13.00	-53.73	V
600.3600	-51.75	-1.56	-53.31	-13.00	-40.31	V



**Operation Mode:** Tx / Mid CH      **Test Date:** Aug 16, 2017  
**Temperature:** 21°C      **Tested by:** Kevin Kuo  
**Humidity:** 52% RH      **Polarity:** Hor.



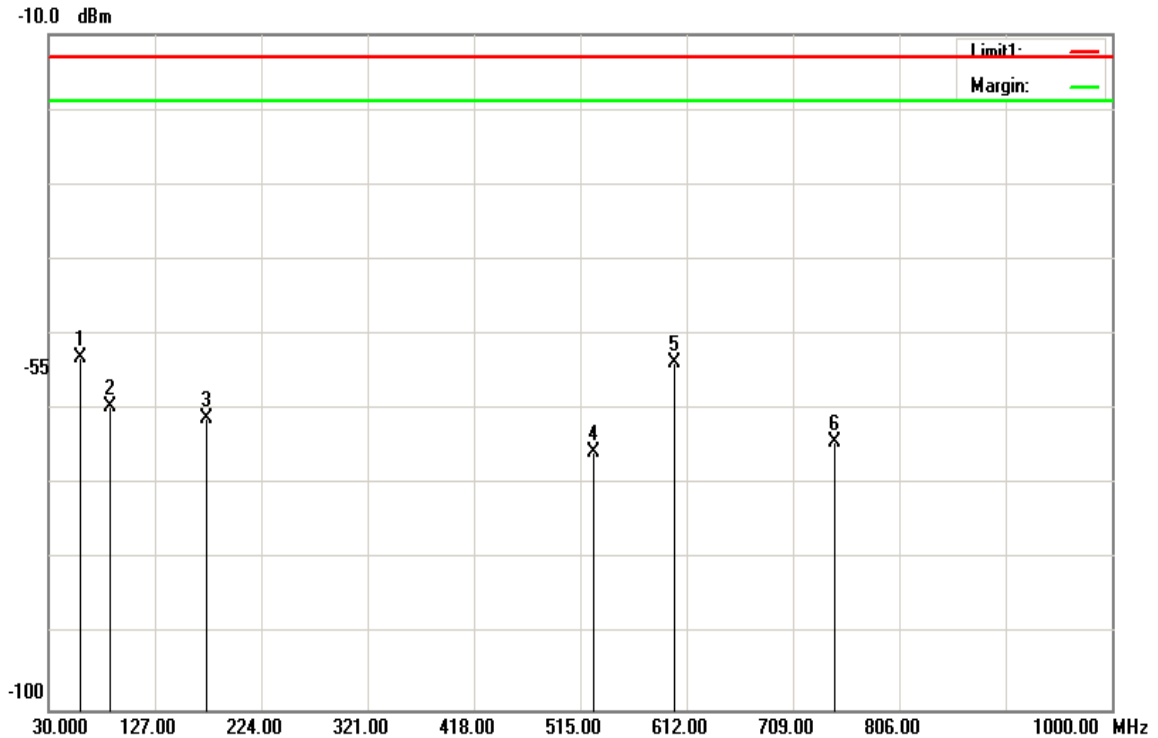
Frequency (MHz)	S.G. (dBm)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
59.1000	-51.42	-1.39	-52.81	-13.00	-39.81	H
111.4800	-59.91	0.56	-59.35	-13.00	-46.35	H
196.8400	-64.26	4.1	-60.16	-13.00	-47.16	H
361.7400	-72.27	7.15	-65.12	-13.00	-52.12	H
600.3600	-49.72	-1.56	-51.28	-13.00	-38.28	H
746.8300	-47.08	1.69	-45.39	-13.00	-32.39	H

**LTE Band 5 / BW: 10MHz / 16QAM / RB =1, RB Offset = 0**

**Operation Mode:** Tx / Mid CH      **Test Date:** Aug 16, 2017

**Temperature:** 21°C      **Tested by:** Kevin Kuo

**Humidity:** 52% RH      **Polarity:** Ver.



Frequency (MHz)	S.G. (dBm)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
59.1000	-51.62	-1.39	-53.01	-13.00	-40.01	V
86.2600	-60.01	0.37	-59.64	-13.00	-46.64	V
174.5300	-64.06	2.81	-61.25	-13.00	-48.25	V
527.6100	-72.59	6.83	-65.76	-13.00	-52.76	V
600.3600	-52.18	-1.56	-53.74	-13.00	-40.74	V
746.8300	-66.04	1.69	-64.35	-13.00	-51.35	V

**Operation Mode:** Tx / Mid CH I

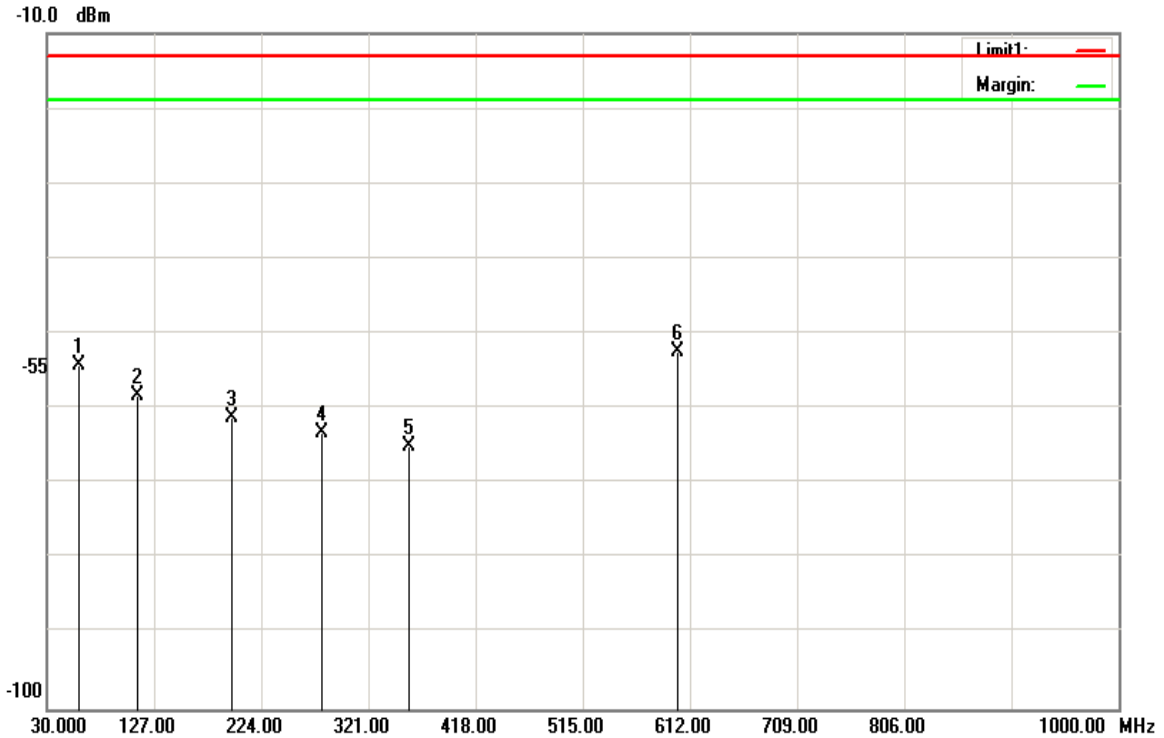
**Test Date:** Aug 16, 2017

**Temperature:** 21°C

**Tested by:** Kevin Kuo

**Humidity:** 52% RH

**Polarity:** Hor.



Frequency (MHz)	S.G. (dBm)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
59.1000	-52.74	-1.39	-54.13	-13.00	-41.13	H
111.4800	-58.79	0.56	-58.23	-13.00	-45.23	H
196.8400	-65.35	4.1	-61.25	-13.00	-48.25	H
279.2900	-70.23	7.11	-63.12	-13.00	-50.12	H
357.8600	-72.22	7.13	-65.09	-13.00	-52.09	H
600.3600	-50.82	-1.56	-52.38	-13.00	-39.38	H

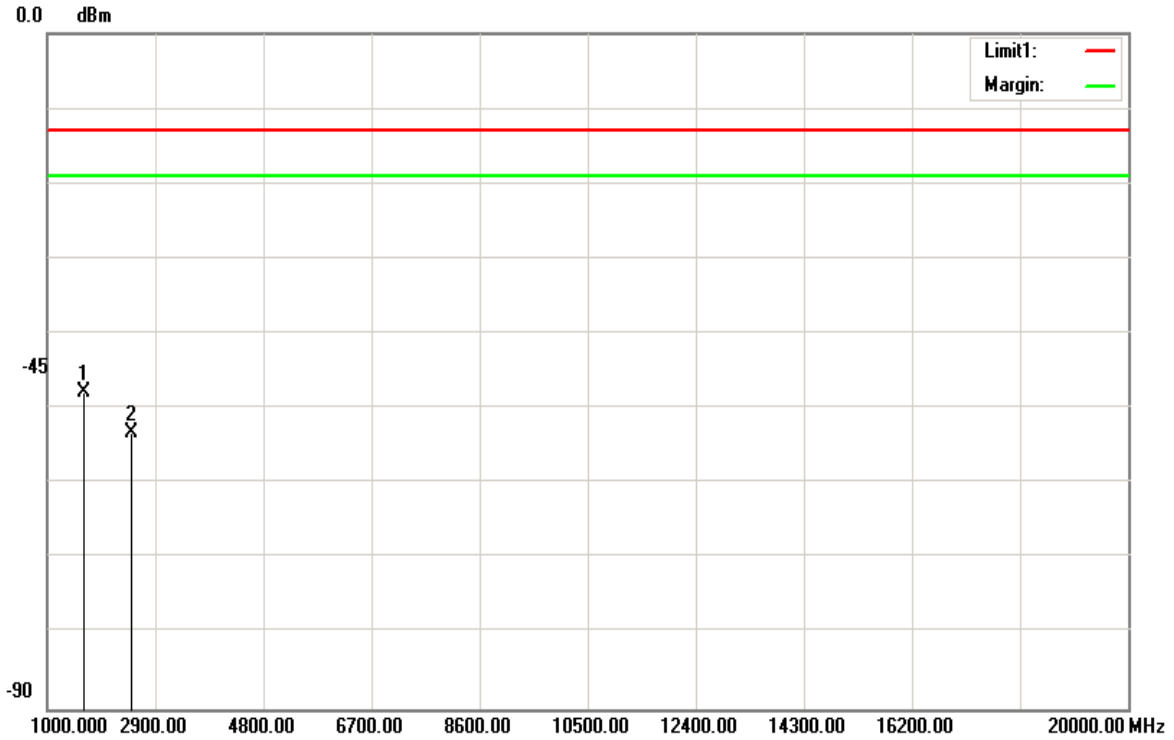
**Above 1GHz**

**LTE Band 5 / BW: 10 MHz / QPSK / RB =1, RB Offset = 0**

**Operation Mode: Tx / Low CH      Test Date: Aug 18, 2017**

**Temperature: 21°C      Tested by: Kevin Kuo**

**Humidity: 52% RH      Polarity: Ver.**



Frequency (MHz)	S.G. (dBm)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
1651.000	-49.26	1.52	-47.74	-13.00	-34.74	V
2473.000	-55.04	1.83	-53.21	-13.00	-40.21	V
N/A						

**Remark:**

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.

**Operation Mode:** Tx / Low CH

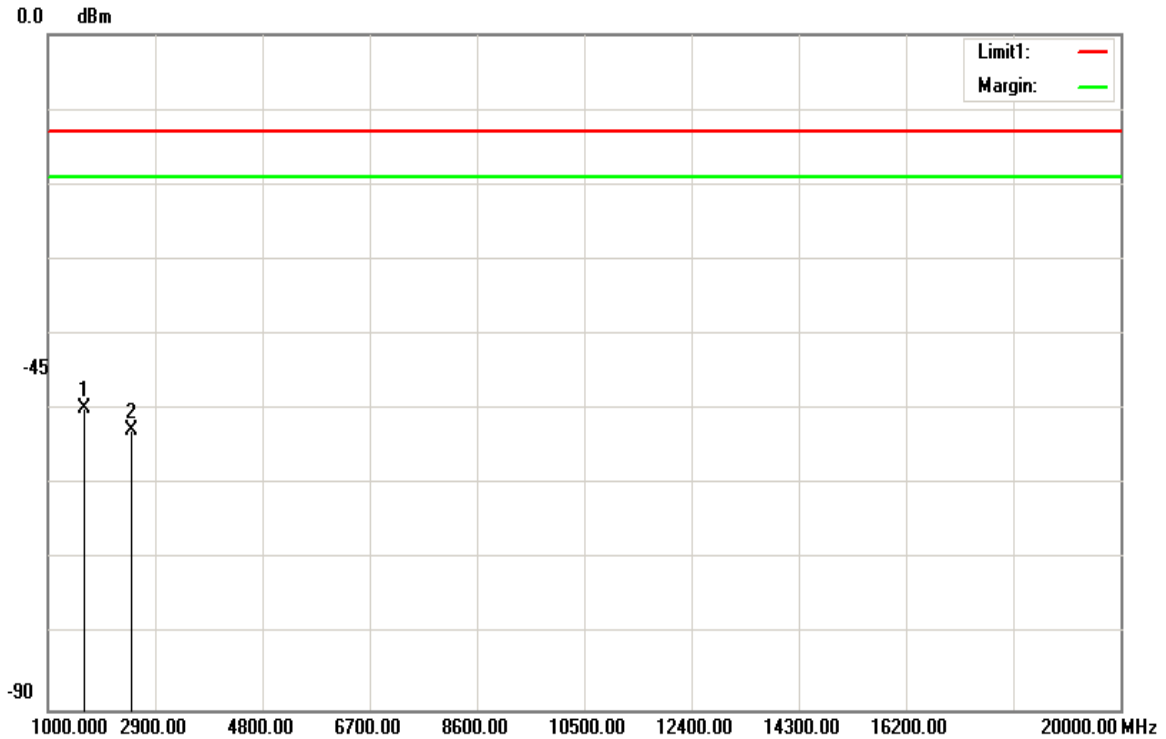
**Test Date:** Aug 18, 2017

**Temperature:** 21°C

**Tested by:** Kevin Kuo

**Humidity:** 52% RH

**Polarity:** Hor.



Frequency (MHz)	S.G. (dBm)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
1649.000	-51.27	1.52	-49.75	-13.00	-36.75	H
2473.000	-54.66	1.83	-52.83	-13.00	-39.83	H
N/A						

**Remark:**

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.

**Operation Mode:** Tx / Mid CH

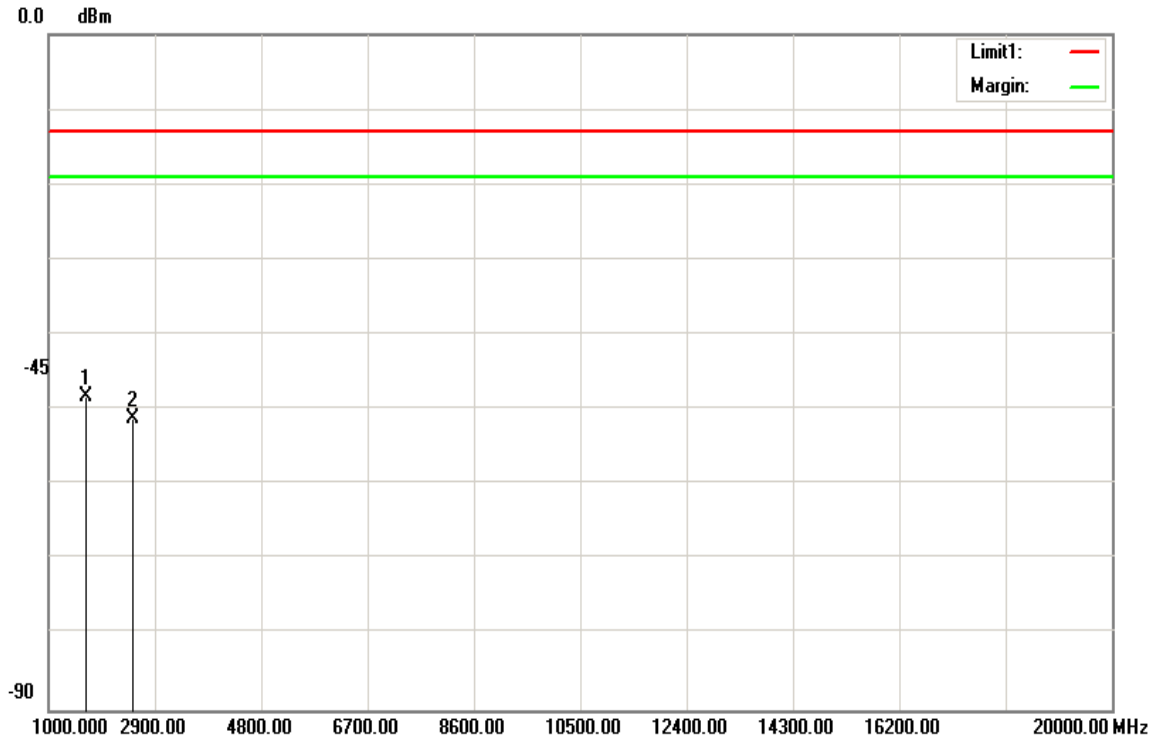
**Test Date:** Aug 18, 2017

**Temperature:** 21°C

**Tested by:** Kevin Kuo

**Humidity:** 52% RH

**Polarity:** Ver.



Frequency (MHz)	S.G. (dBm)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
1664.000	-49.86	1.52	-48.34	-13.00	-35.34	V
2496.000	-52.99	1.85	-51.14	-13.00	-38.14	V
N/A						

**Remark:**

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.

**Operation Mode:** Tx / Mid CH

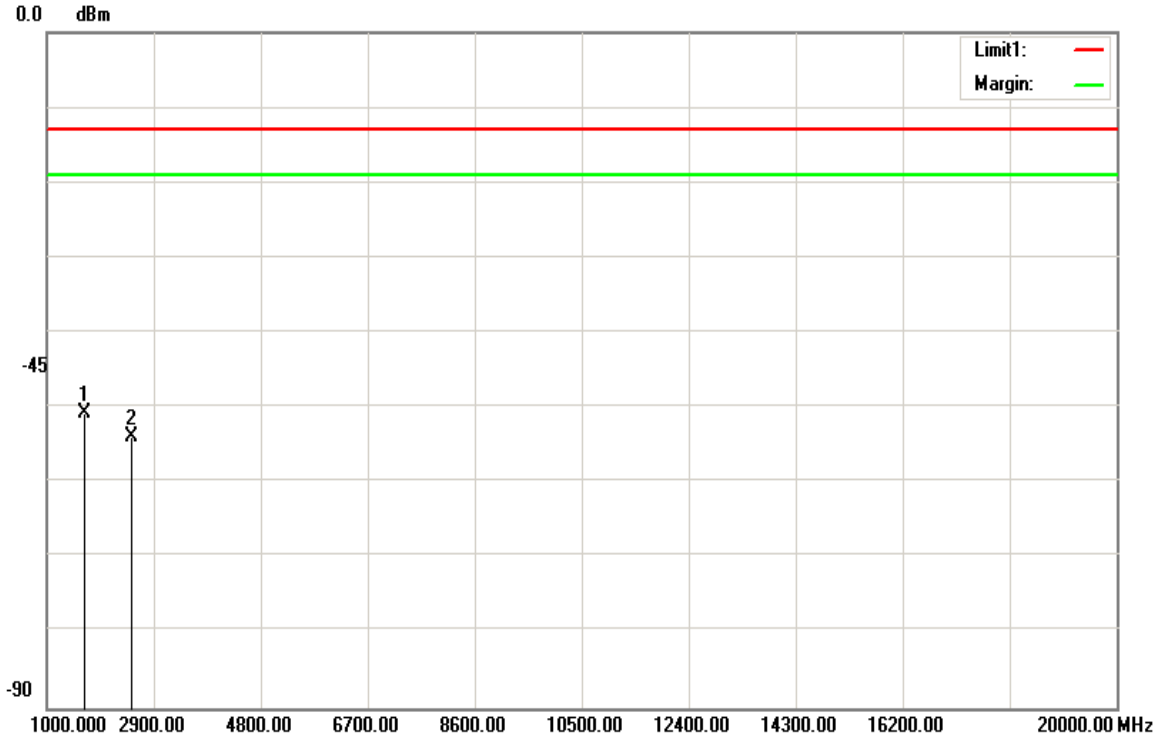
**Test Date:** Aug 18, 2017

**Temperature:** 21°C

**Tested by:** Kevin Kuo

**Humidity:** 52% RH

**Polarity:** Hor.



Frequency (MHz)	S.G. (dBm)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
1664.000	-52.2	1.52	-50.68	-13.00	-37.68	H
2496.000	-55.68	1.85	-53.83	-13.00	-40.83	H
N/A						

**Remark:**

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.

**Operation Mode:** Tx / High CH

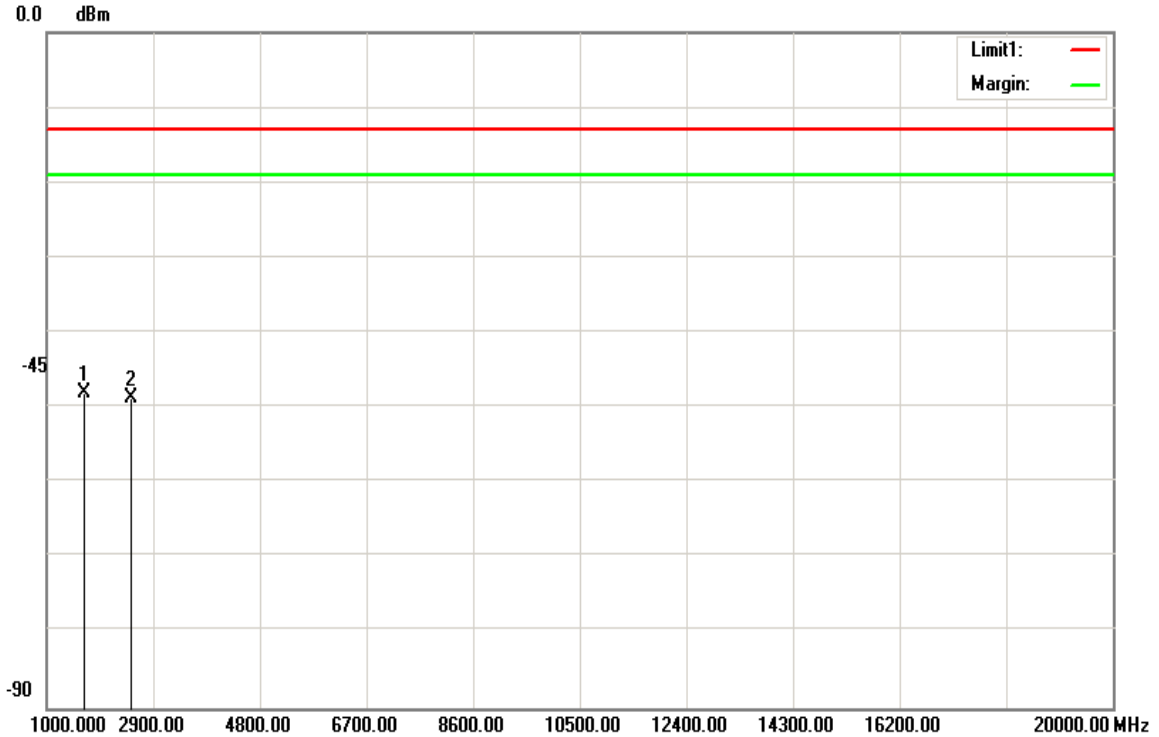
**Test Date:** Aug 18, 2017

**Temperature:** 21°C

**Tested by:** Kevin Kuo

**Humidity:** 52% RH

**Polarity:** Ver.



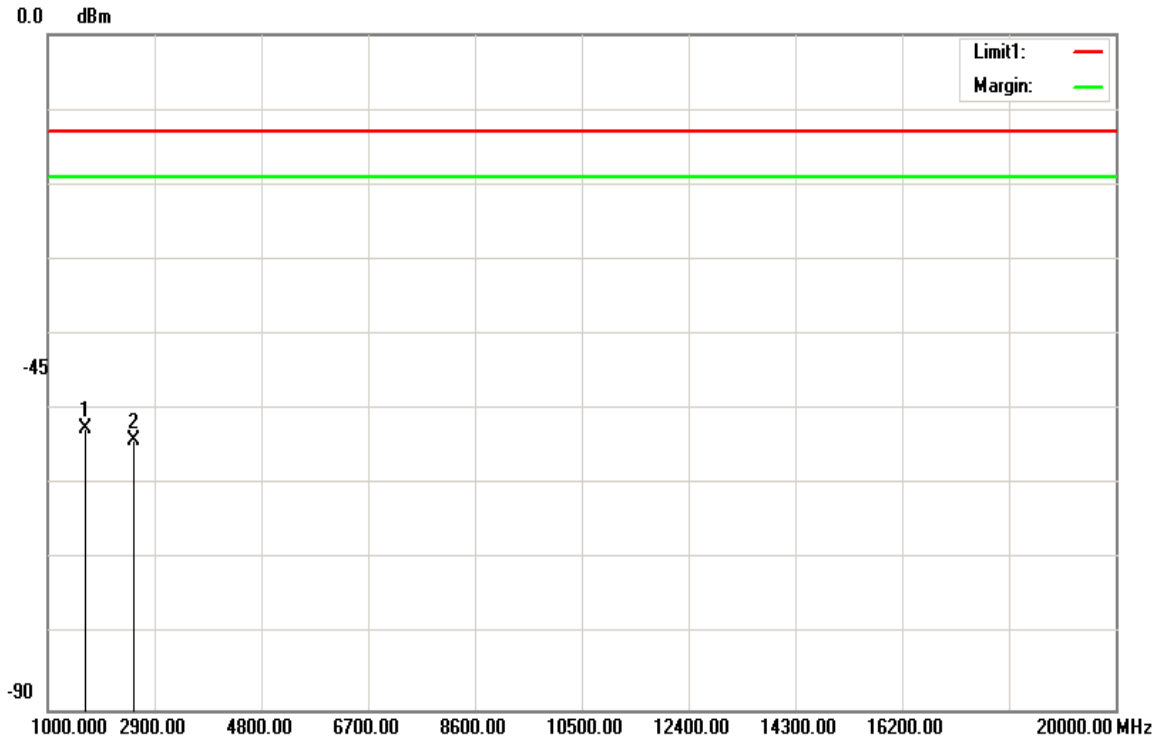
Frequency (MHz)	S.G. (dBm)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
1679.000	-49.64	1.52	-48.12	-13.00	-35.12	V
2519.000	-50.87	2.21	-48.66	-13.00	-35.66	V
N/A						

**Remark:**

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.



**Operation Mode:** Tx / High CH      **Test Date:** Aug 18, 2017  
**Temperature:** 21°C      **Tested by:** Kevin Kuo  
**Humidity:** 52% RH      **Polarity:** Hor.



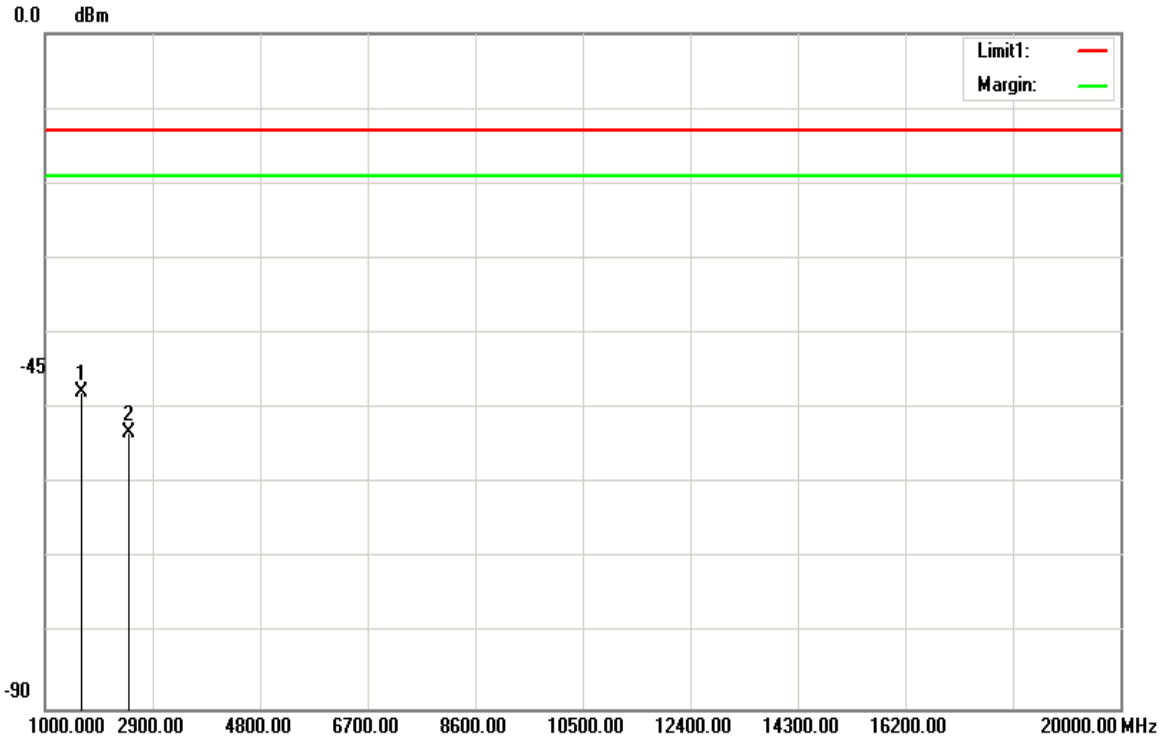
Frequency (MHz)	S.G. (dBm)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
1680.000	-54.11	1.52	-52.59	-13.00	-39.59	H
2520.000	-56.34	2.22	-54.12	-13.00	-41.12	H
N/A						

**Remark:**

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.

**LTE Band 5 / BW: 10MHz / 16QAM / RB =1, RB Offset = 0**

**Operation Mode:** Tx / Low CH      **Test Date:** Aug 18, 2017  
**Temperature:** 21°C      **Tested by:** Kevin Kuo  
**Humidity:** 52% RH      **Polarity:** Ver.



Frequency (MHz)	S.G. (dBm)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
1649.000	-49.33	1.52	-47.81	-13.00	-34.81	V
2473.000	-54.99	1.83	-53.16	-13.00	-40.16	V
N/A						

**Remark:**

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.

**Operation Mode:** Tx / Low CH

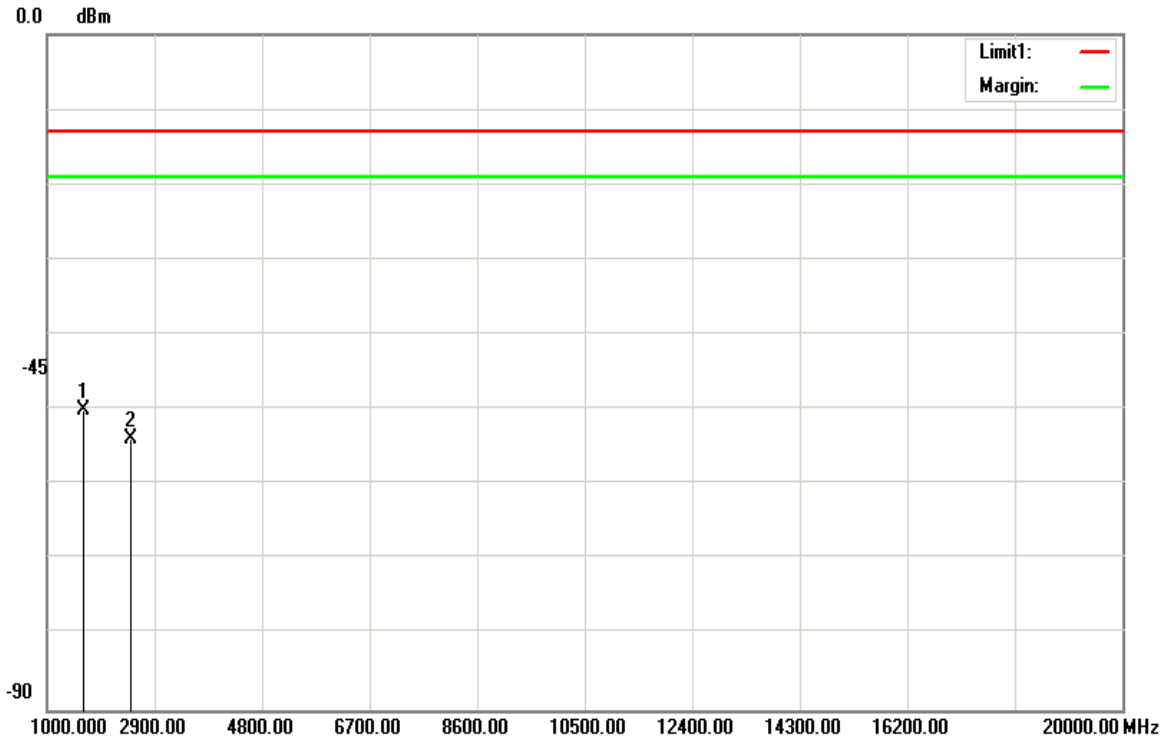
**Test Date:** Aug 18, 2017

**Temperature:** 21°C

**Tested by:** Kevin Kuo

**Humidity:** 52% RH

**Polarity:** Hor.



Frequency (MHz)	S.G. (dBm)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
1651.000	-51.59	1.52	-50.07	-13.00	-37.07	H
2473.000	-55.76	1.83	-53.93	-13.00	-40.93	H
N/A						

**Remark:**

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.

**Operation Mode:** Tx / Mid CH

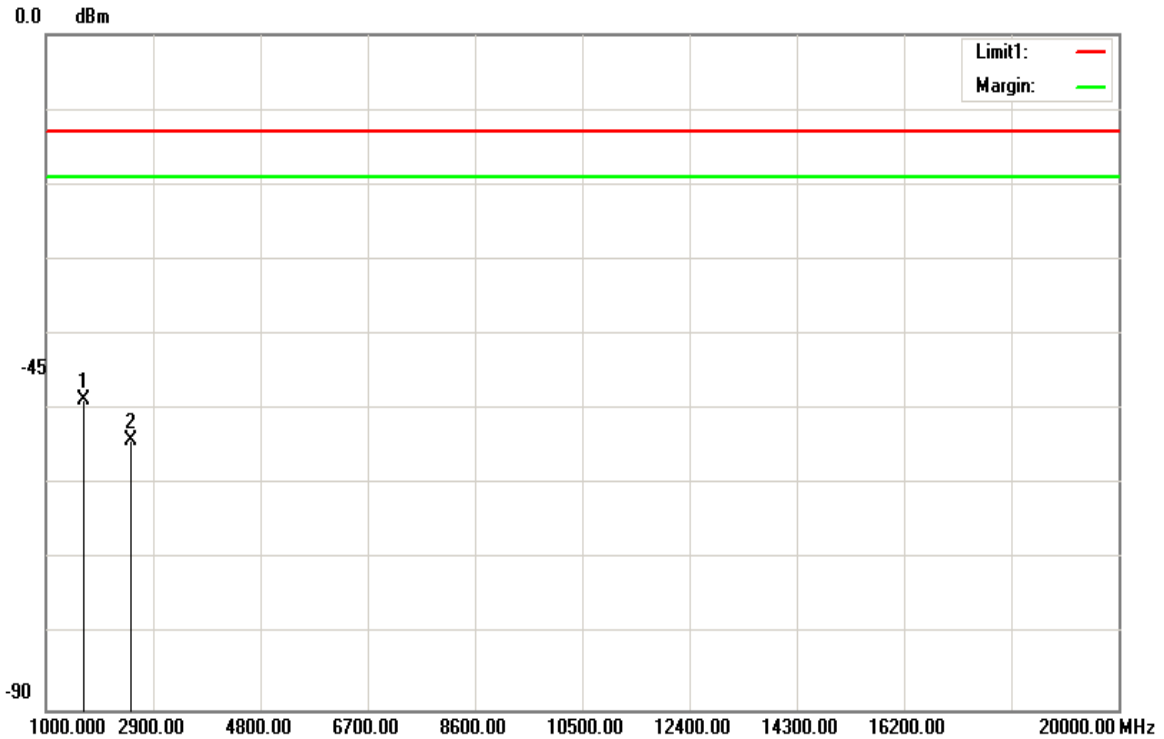
**Test Date:** Aug 18, 2017

**Temperature:** 21°C

**Tested by:** Kevin Kuo

**Humidity:** 52% RH

**Polarity:** Ver.



Frequency (MHz)	S.G. (dBm)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
1664.000	-50.18	1.52	-48.66	-13.00	-35.66	V
2496.000	-55.96	1.85	-54.11	-13.00	-41.11	V
N/A						

**Remark:**

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.

**Operation Mode:** Tx / Mid CH

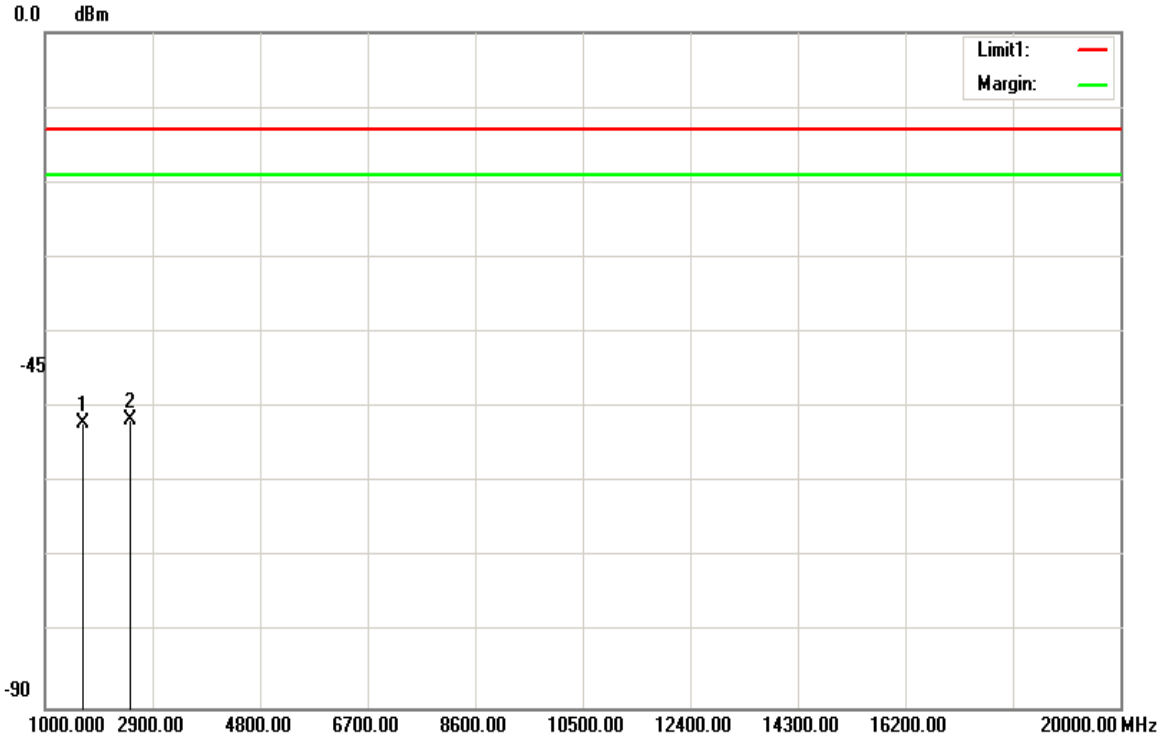
**Test Date:** Aug 18, 2017

**Temperature:** 21°C

**Tested by:** Kevin Kuo

**Humidity:** 52% RH

**Polarity:** Hor.



Frequency (MHz)	S.G. (dBm)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
1664.000	-53.51	1.52	-51.99	-13.00	-38.99	H
2496.000	-53.46	1.85	-51.61	-13.00	-38.61	H
N/A						

**Remark:**

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.

**Operation Mode:** Tx / High CH

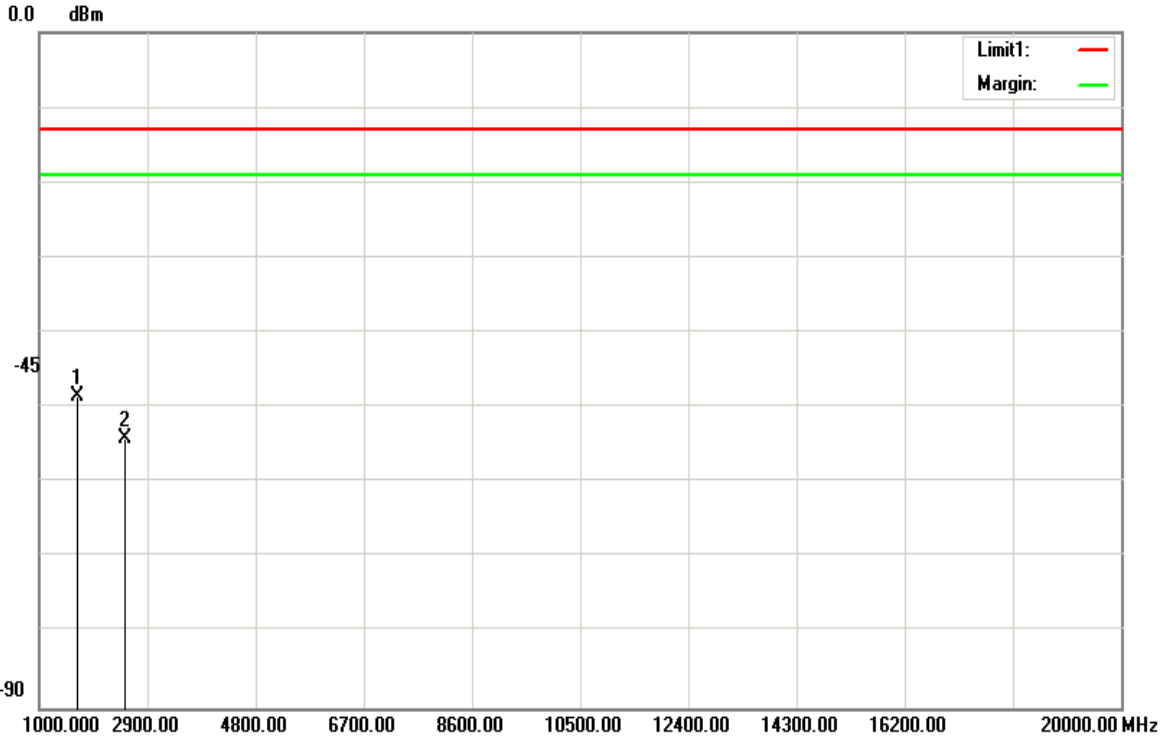
**Test Date:** Aug 18, 2017

**Temperature:** 21°C

**Tested by:** Kevin Kuo

**Humidity:** 52% RH

**Polarity:** Ver.



Frequency (MHz)	S.G. (dBm)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
1679.000	-49.99	1.52	-48.47	-13.00	-35.47	V
2519.000	-56.28	2.21	-54.07	-13.00	-41.07	V
N/A						

**Remark:**

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.

**Operation Mode:** Tx / High CH

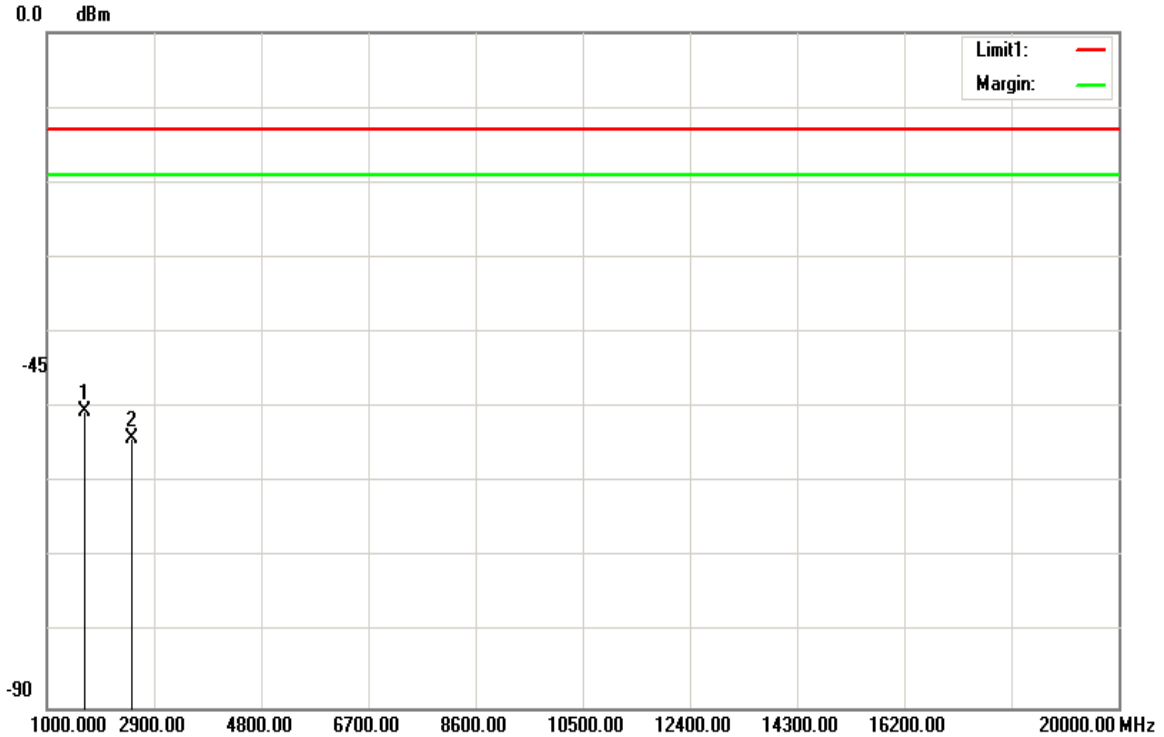
**Test Date:** Aug 18, 2017

**Temperature:** 21°C

**Tested by:** Kevin Kuo

**Humidity:** 52% RH

**Polarity:** Hor.



Frequency (MHz)	S.G. (dBm)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
1679.000	-51.94	1.52	-50.42	-13.00	-37.42	H
2519.000	-56.43	2.21	-54.22	-13.00	-41.22	H
N/A						

**Remark:**

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.