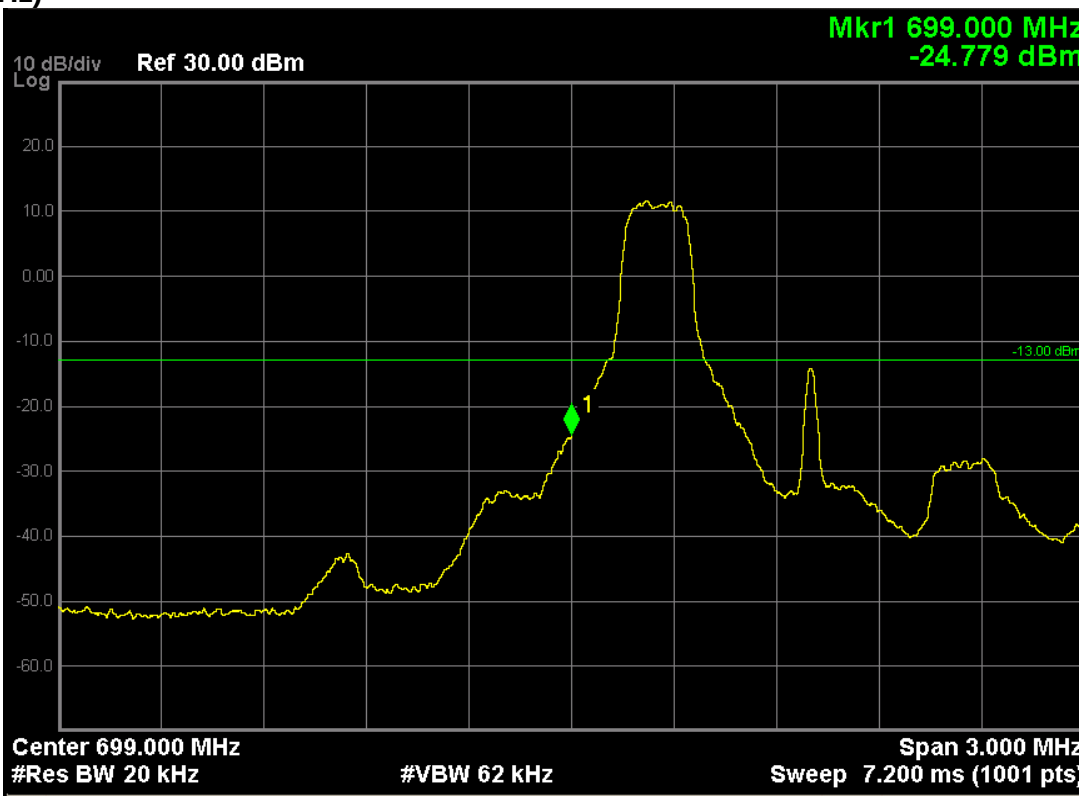
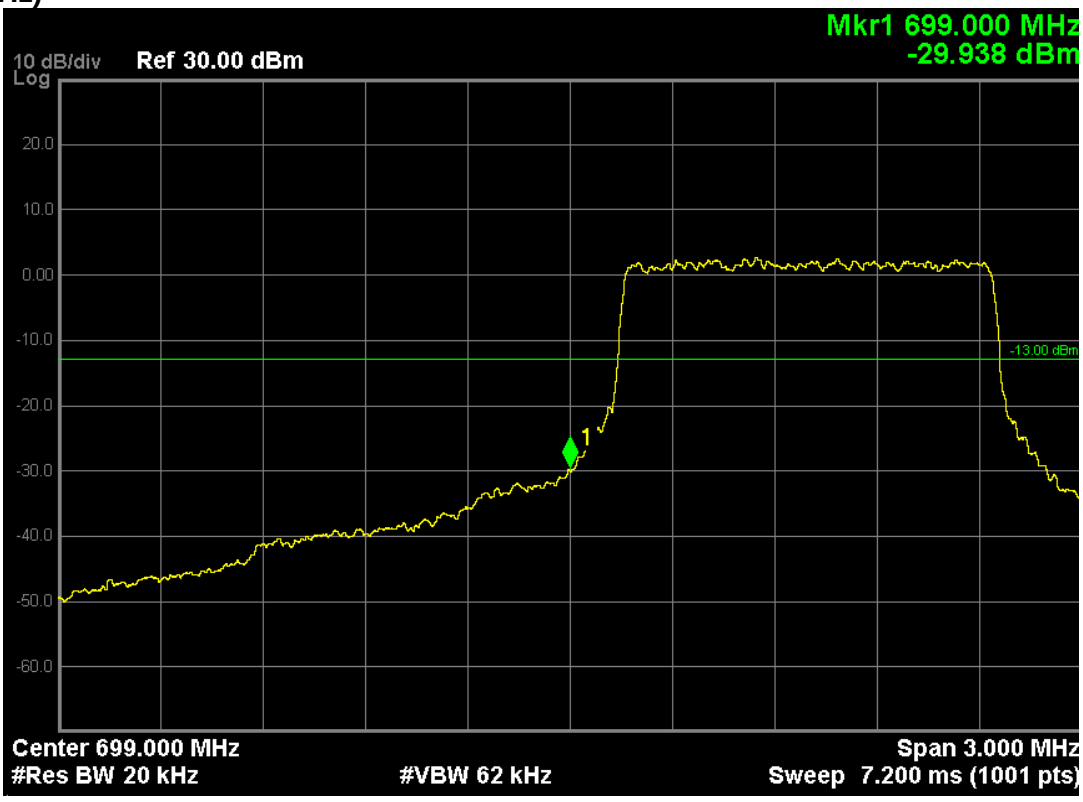
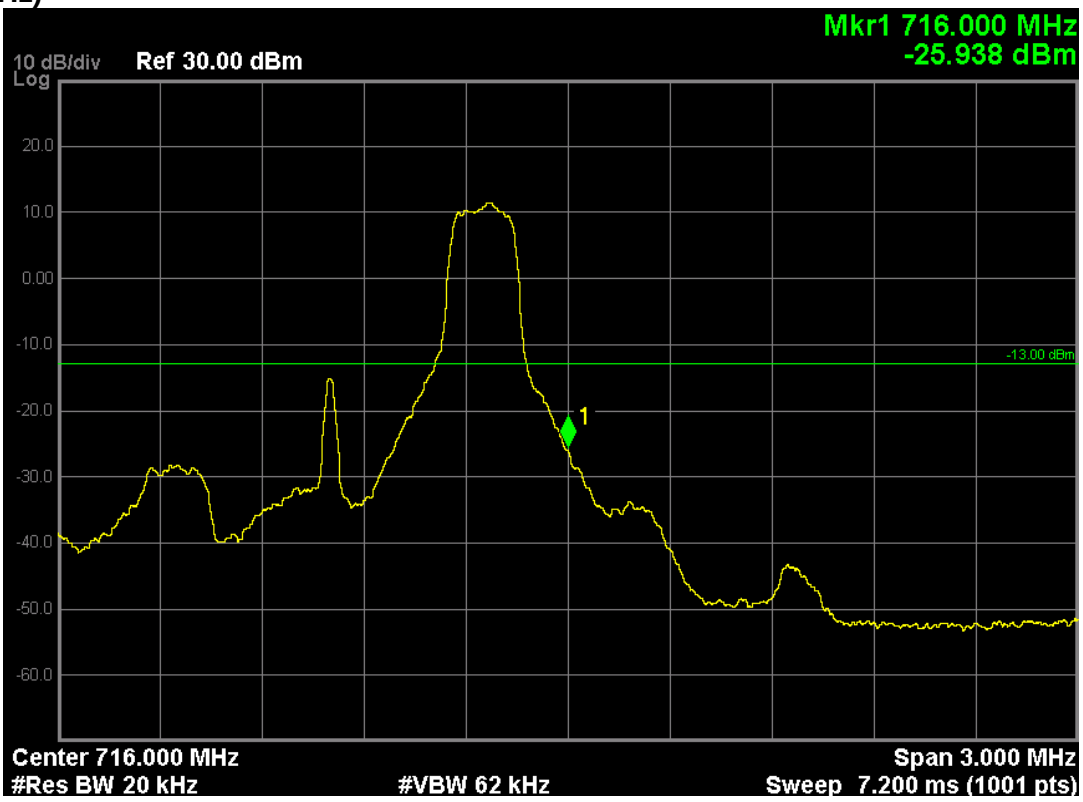
LTE Band 12 (16-QAM, Band Width 1.4MHz,RB Size 1,RB Offset 0,Channel 23017,Frequeny 699.7MHz)



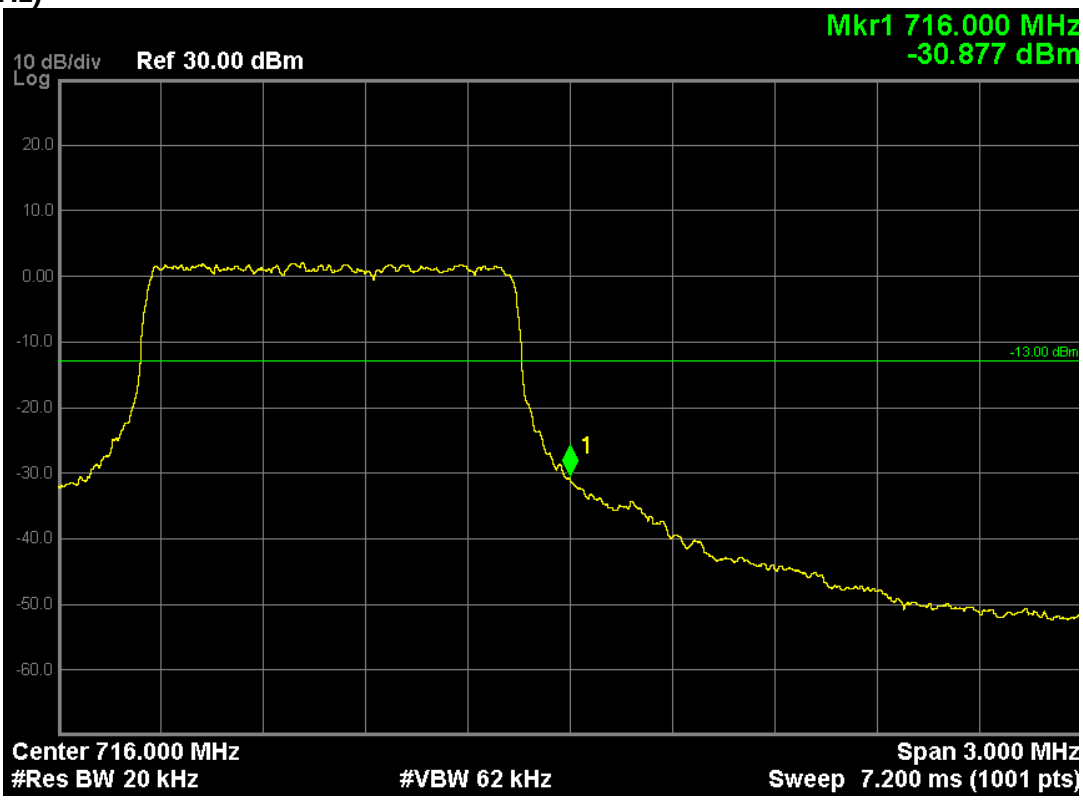
LTE Band 12 (16-QAM, Band Width 1.4MHz,RB Size 6,RB Offset 0,Channel 23017,Frequeny 699.7MHz)



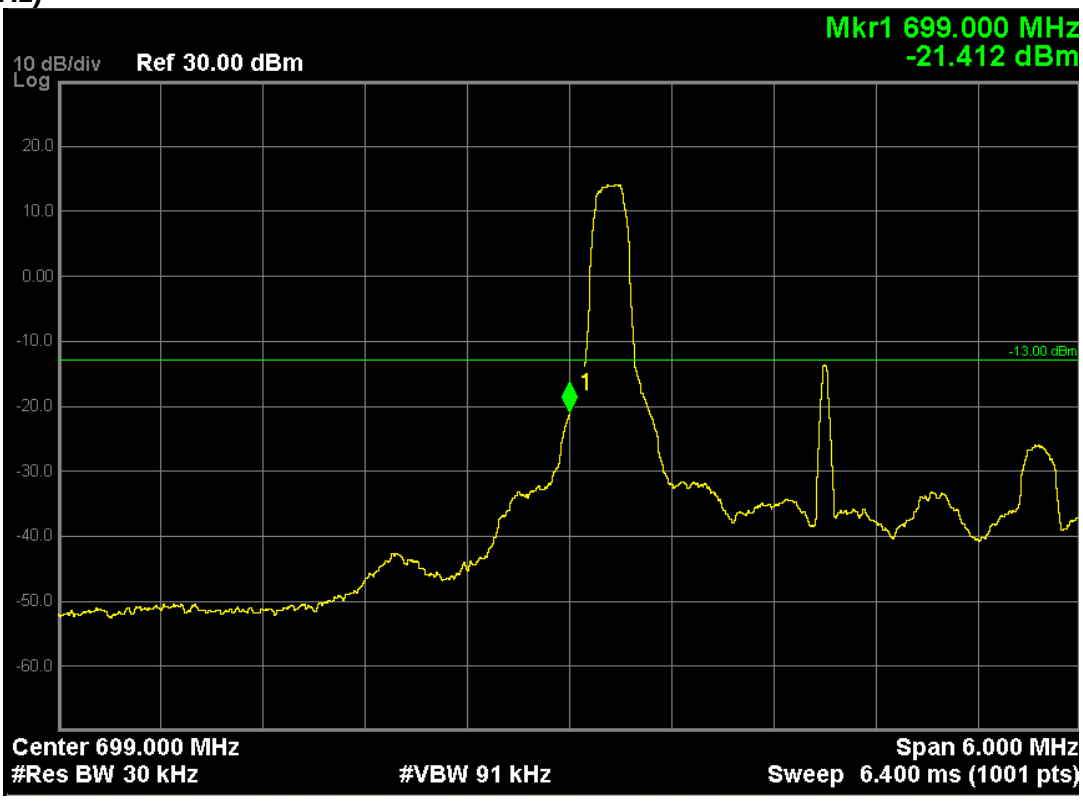
LTE Band 12 (16-QAM, Band Width 1.4MHz,RB Size 1,RB Offset 5,Channel 23173,Frequeny 715.3MHz)



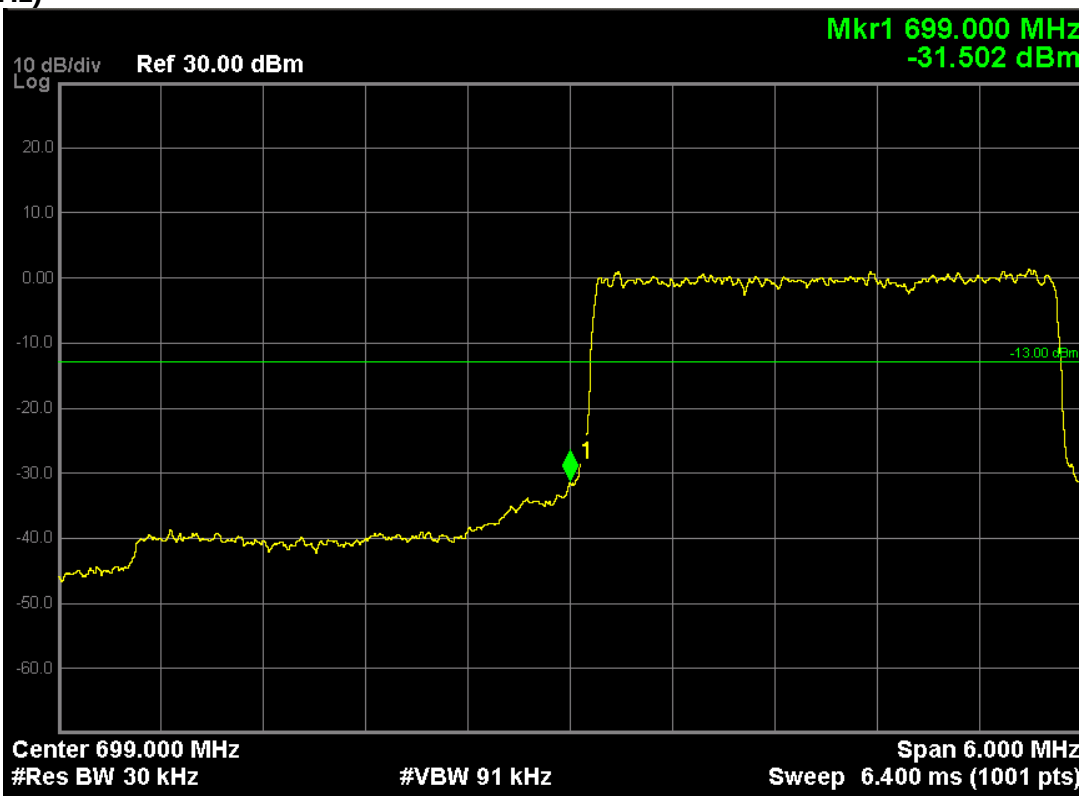
LTE Band 12 (16-QAM, Band Width 1.4MHz,RB Size 6,RB Offset 0,Channel 23173,Frequeny 715.3MHz)



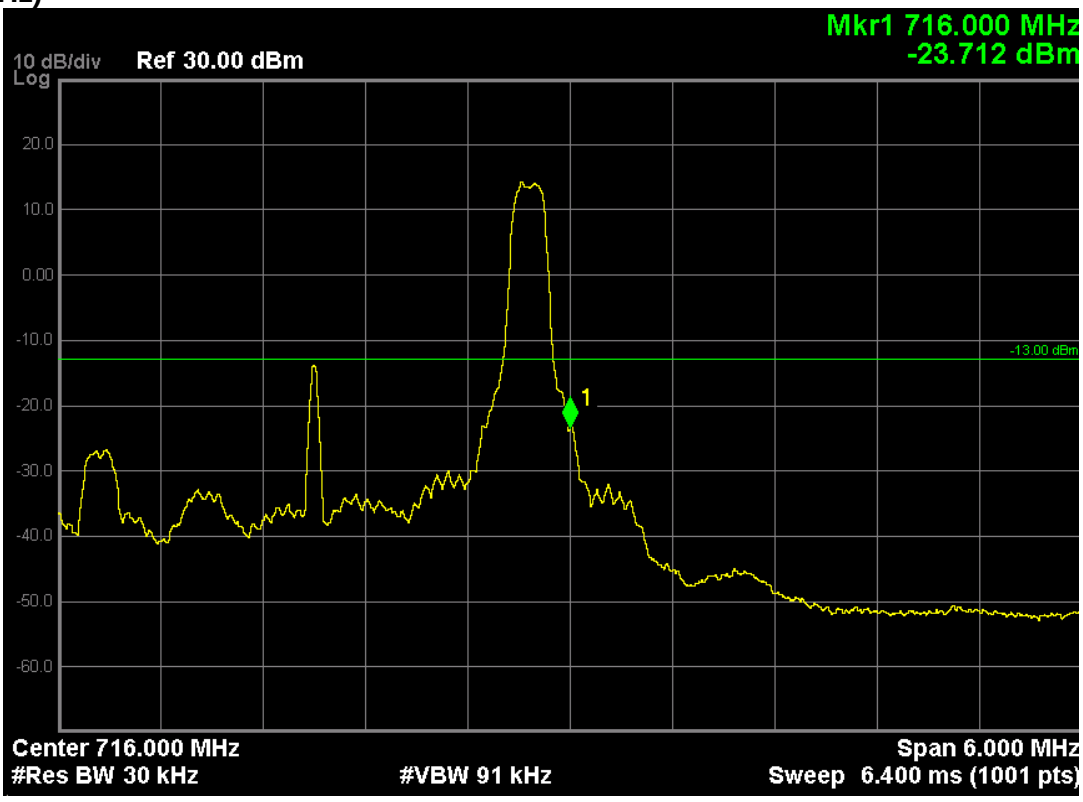
LTE Band 12 (QPSK, Band Width 3MHz,RB Size 1,RB Offset 0,Channel 23025,Frequeny 700.5MHz)



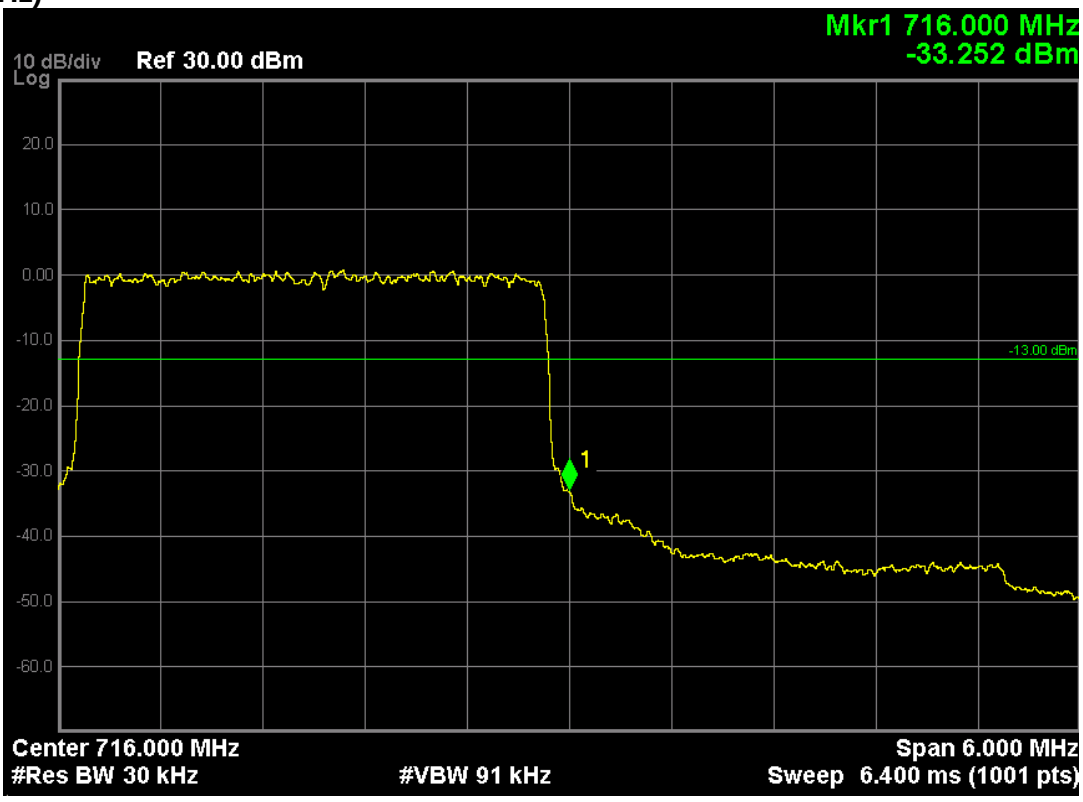
LTE Band 12 (QPSK, Band Width 3MHz,RB Size 15,RB Offset 0,Channel 23025,Frequeny 700.5MHz)



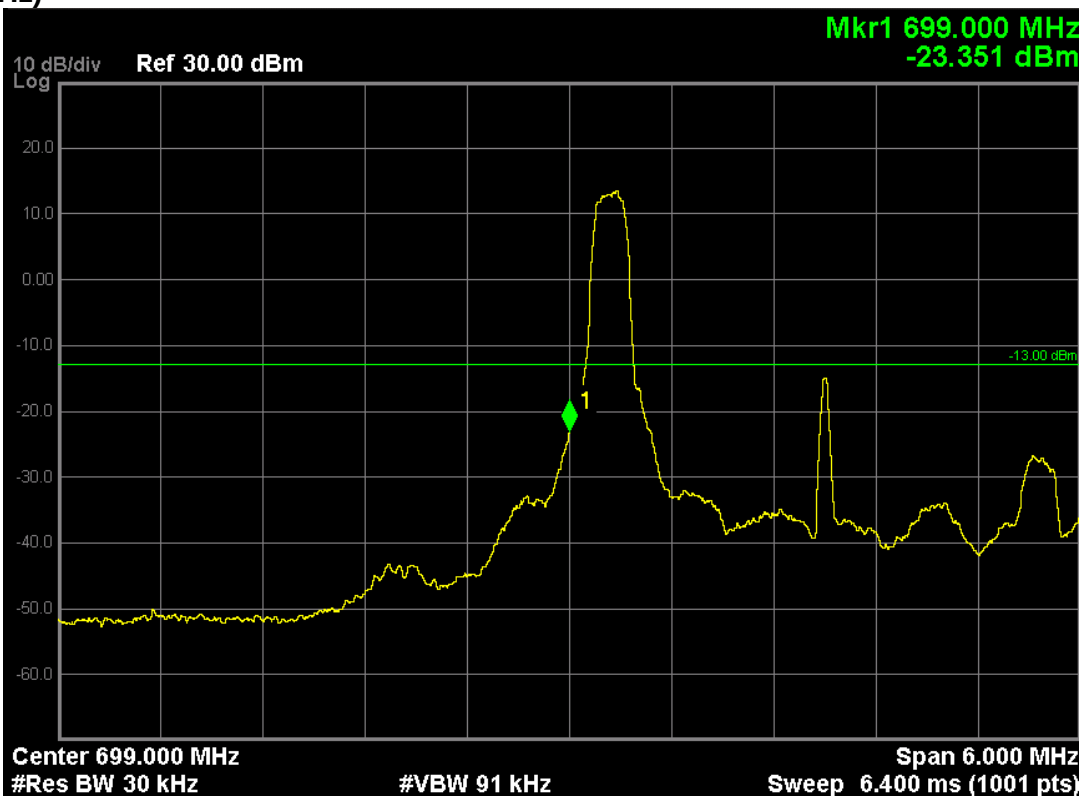
LTE Band 12 (QPSK, Band Width 3MHz,RB Size 1,RB Offset 14,Channel 23165,Frequeny 714.5MHz)



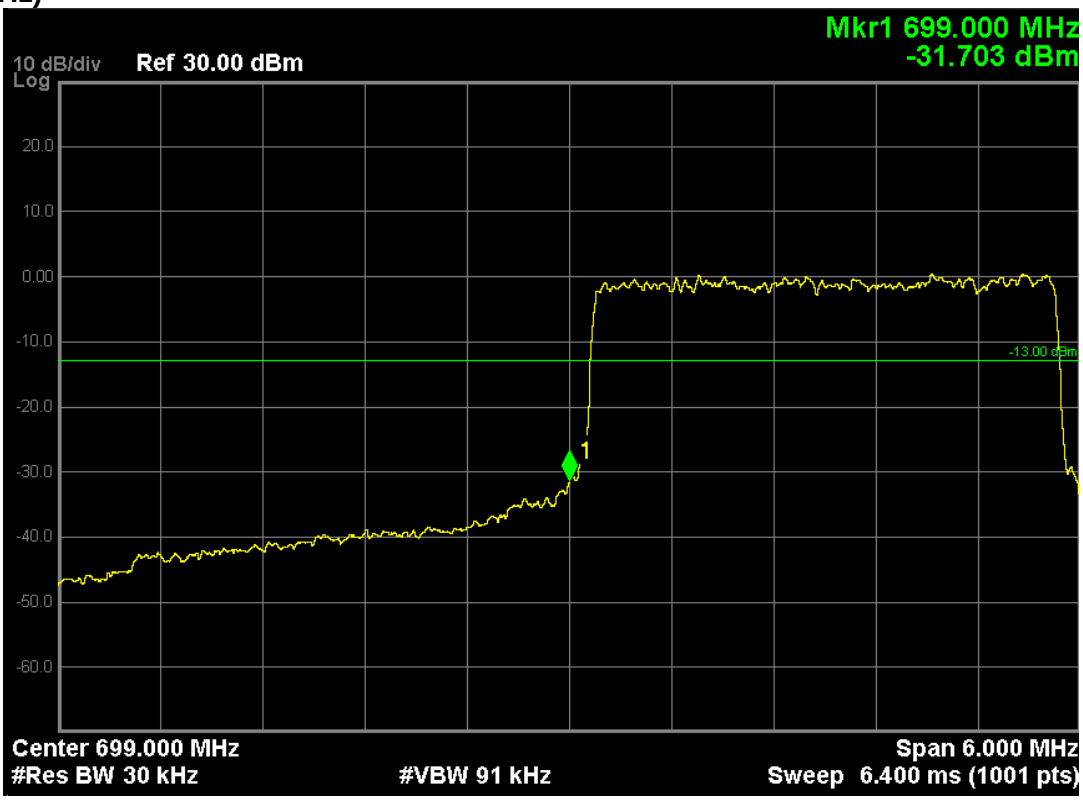
LTE Band 12 (QPSK, Band Width 3MHz,RB Size 15,RB Offset 0,Channel 23165,Frequeny 714.5MHz)



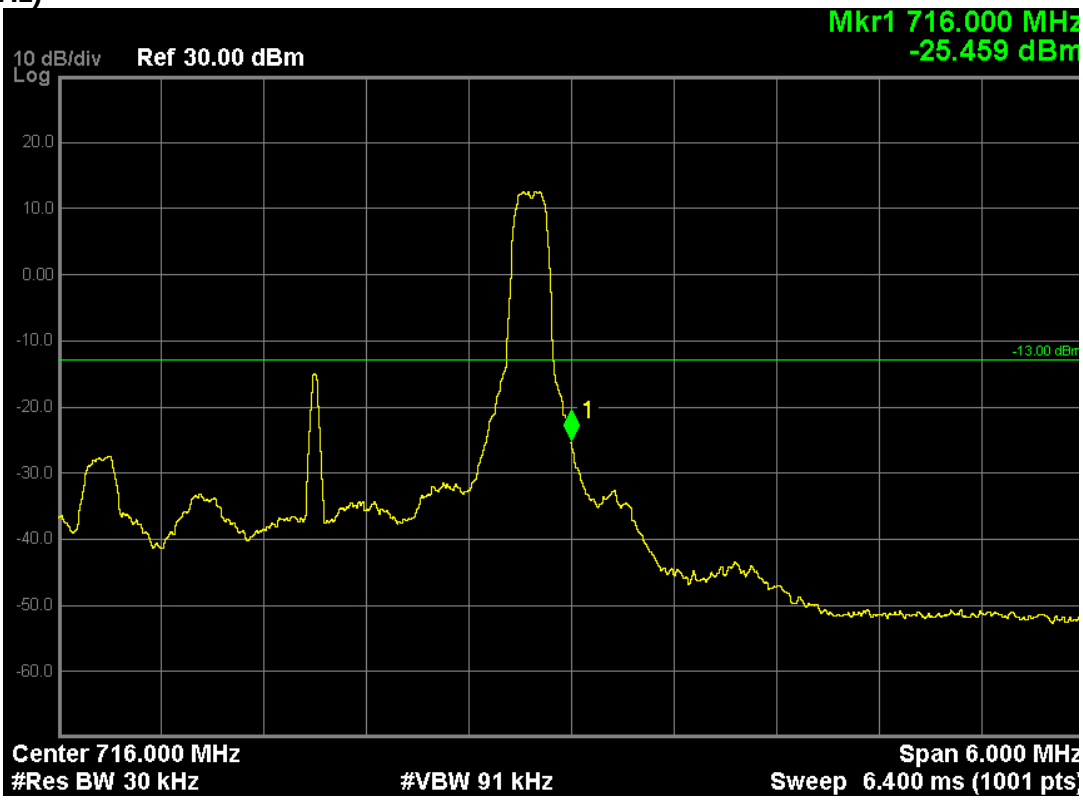
LTE Band 12 (16-QAM, Band Width 3MHz,RB Size 1,RB Offset 0,Channel 23025,Frequeny 700.5MHz)



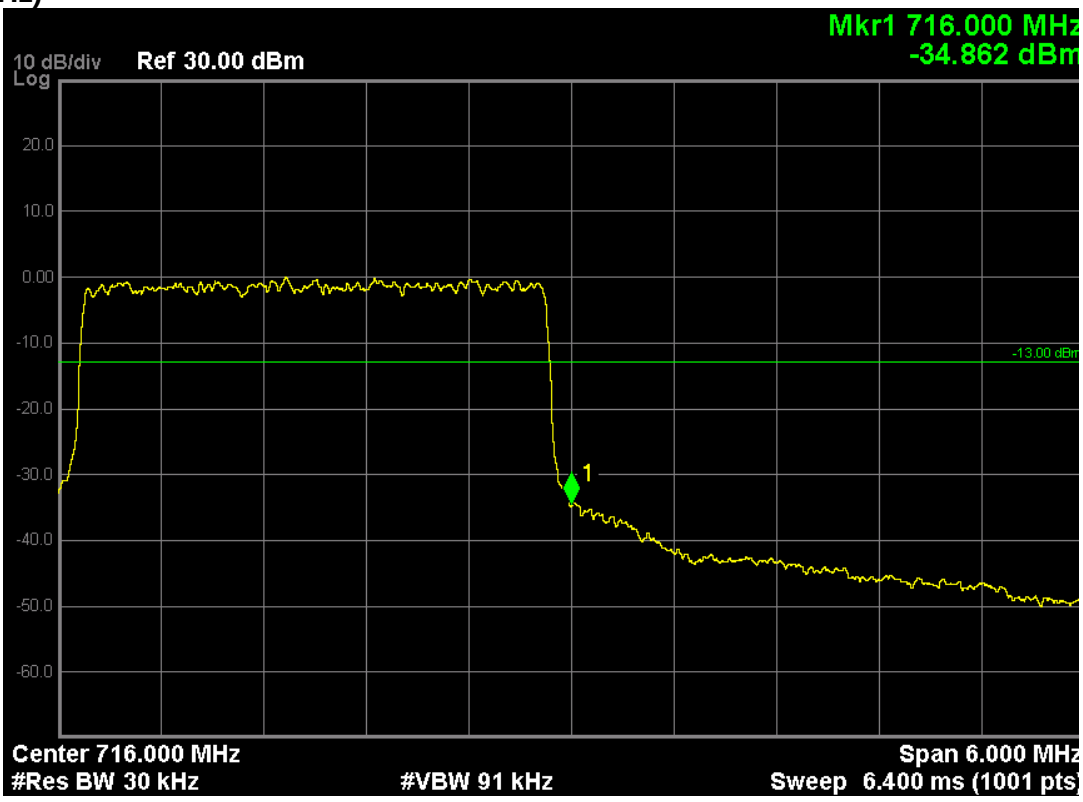
LTE Band 12 (16-QAM, Band Width 3MHz,RB Size 15,RB Offset 0,Channel 23025,Frequeny 700.5MHz)



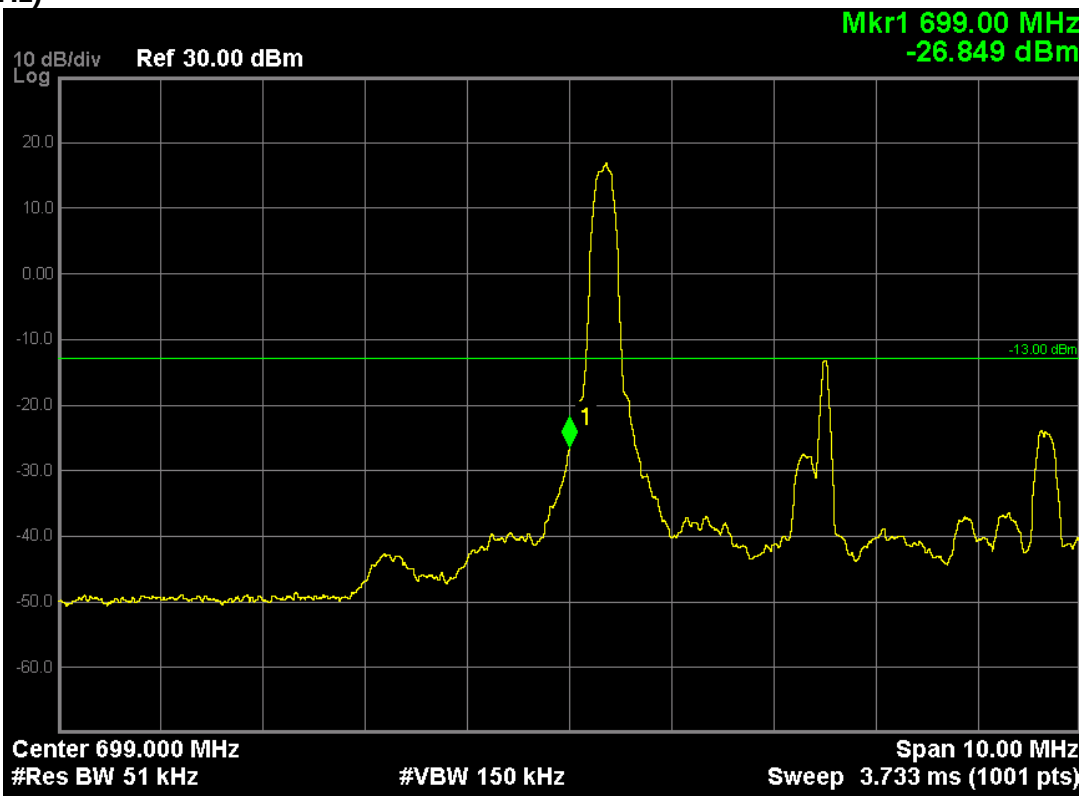
LTE Band 12 (16-QAM, Band Width 3MHz,RB Size 1,RB Offset 14,Channel 23165,Frequeny 714.5MHz)



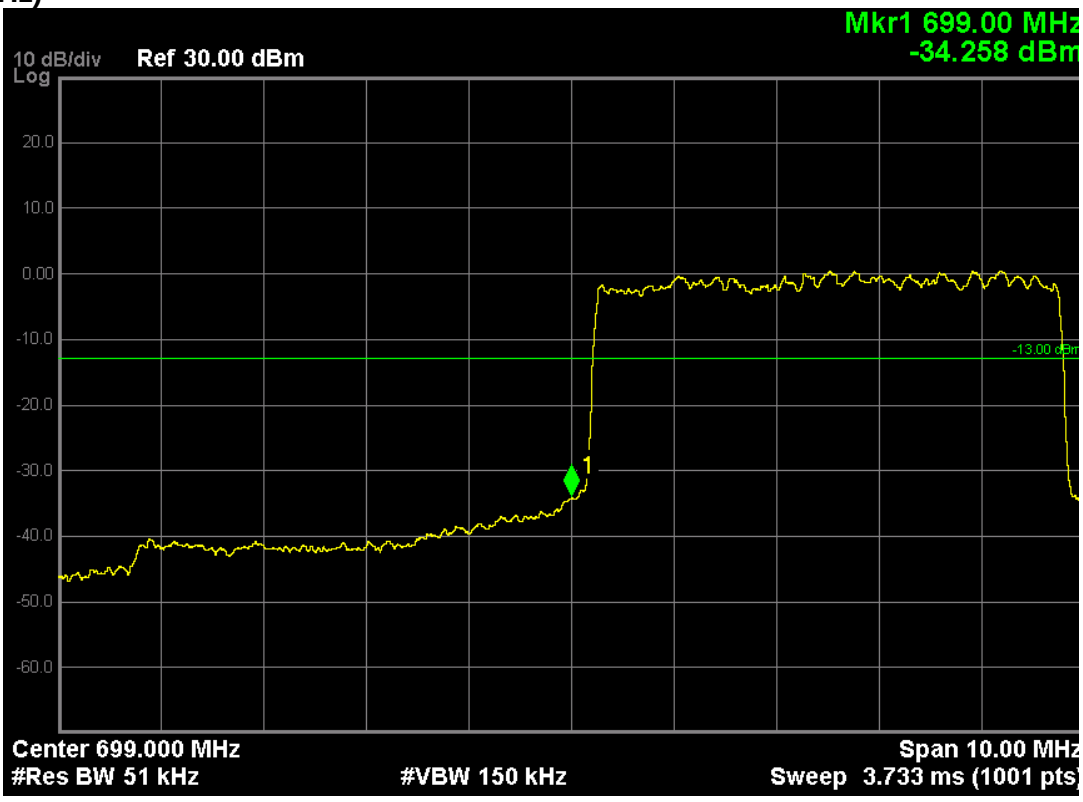
LTE Band 12 (16-QAM, Band Width 3MHz,RB Size 15,RB Offset 0,Channel 23165,Frequeny 714.5MHz)



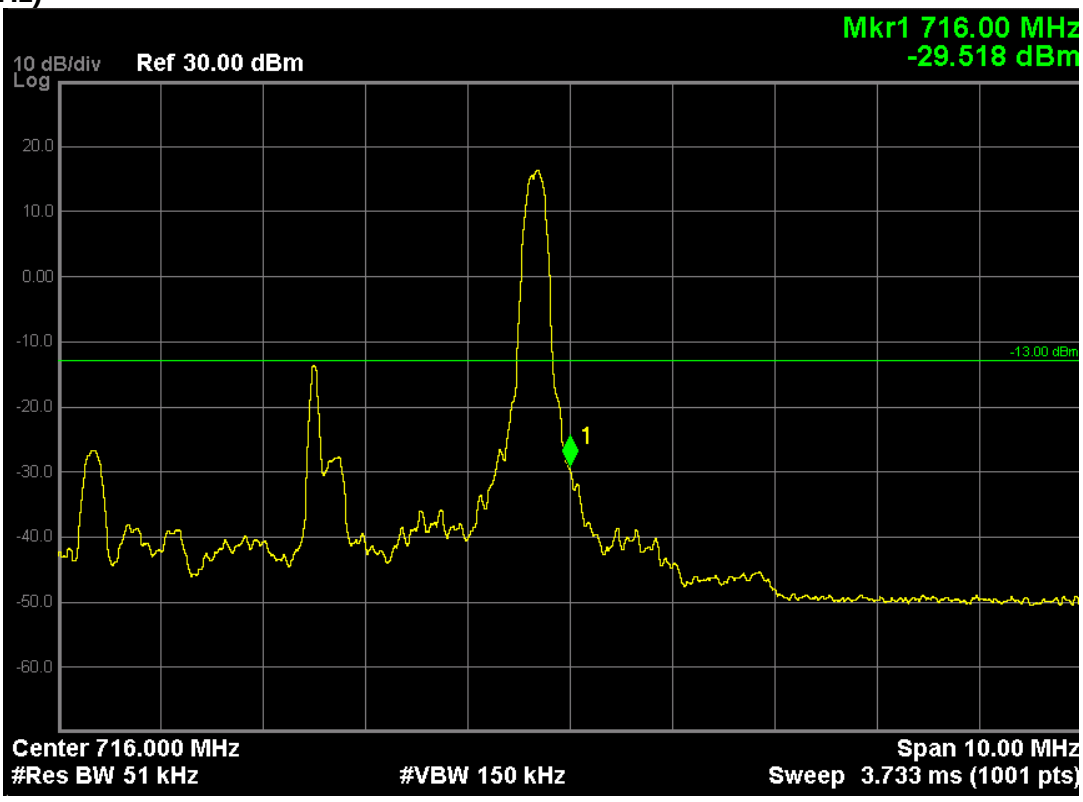
LTE Band 12 (QPSK, Band Width 5MHz,RB Size 1,RB Offset 0,Channel 23035,Frequeny 701.5MHz)



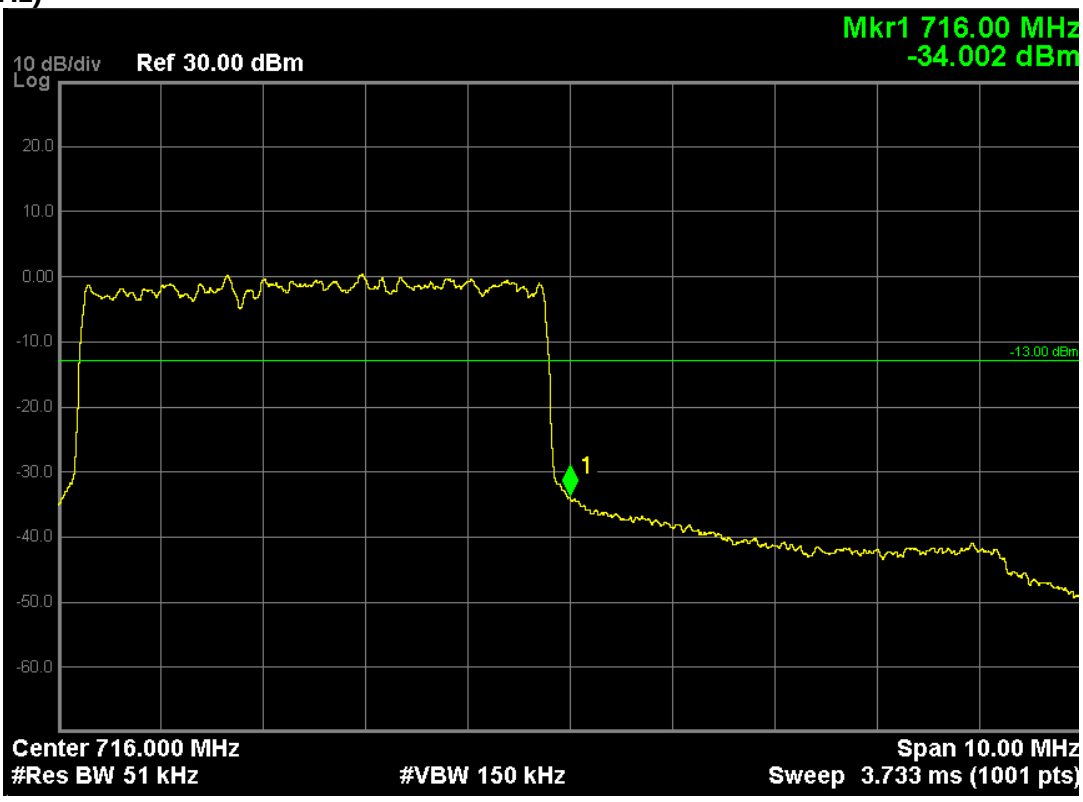
LTE Band 12 (QPSK, Band Width 5MHz,RB Size 25,RB Offset 0,Channel 23035,Frequeny 701.5MHz)



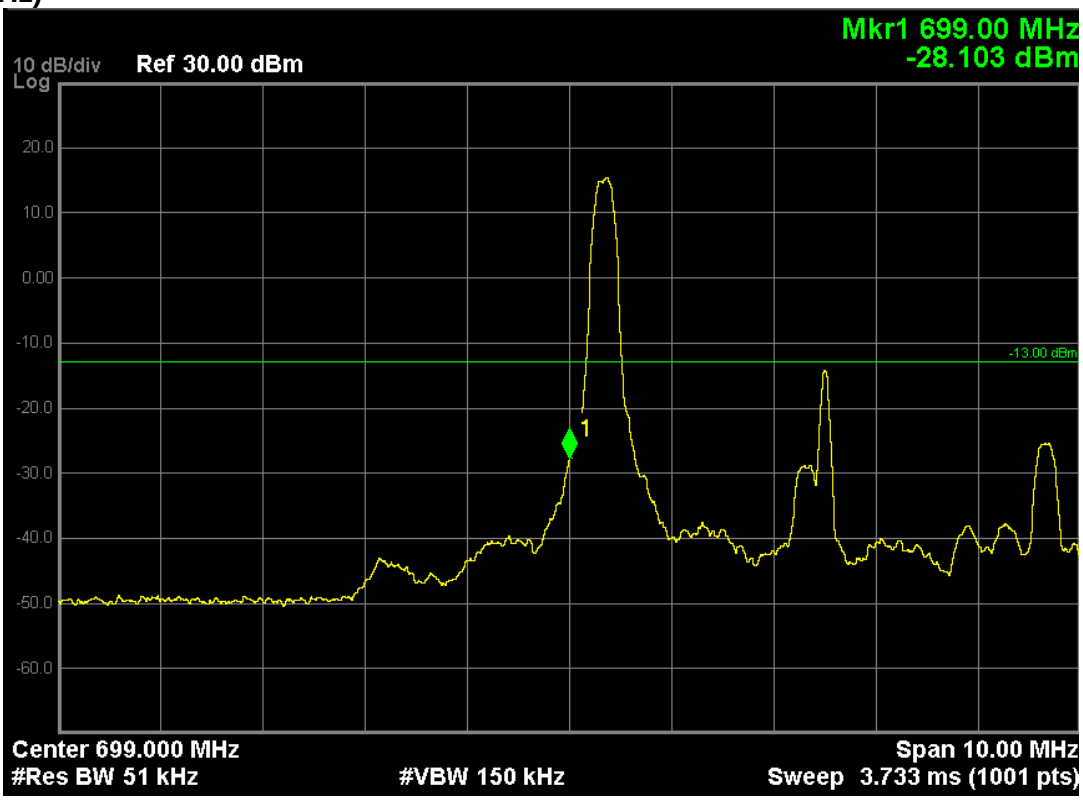
LTE Band 12 (QPSK, Band Width 5MHz,RB Size 1,RB Offset 24,Channel 23155,Frequeny 713.5MHz)



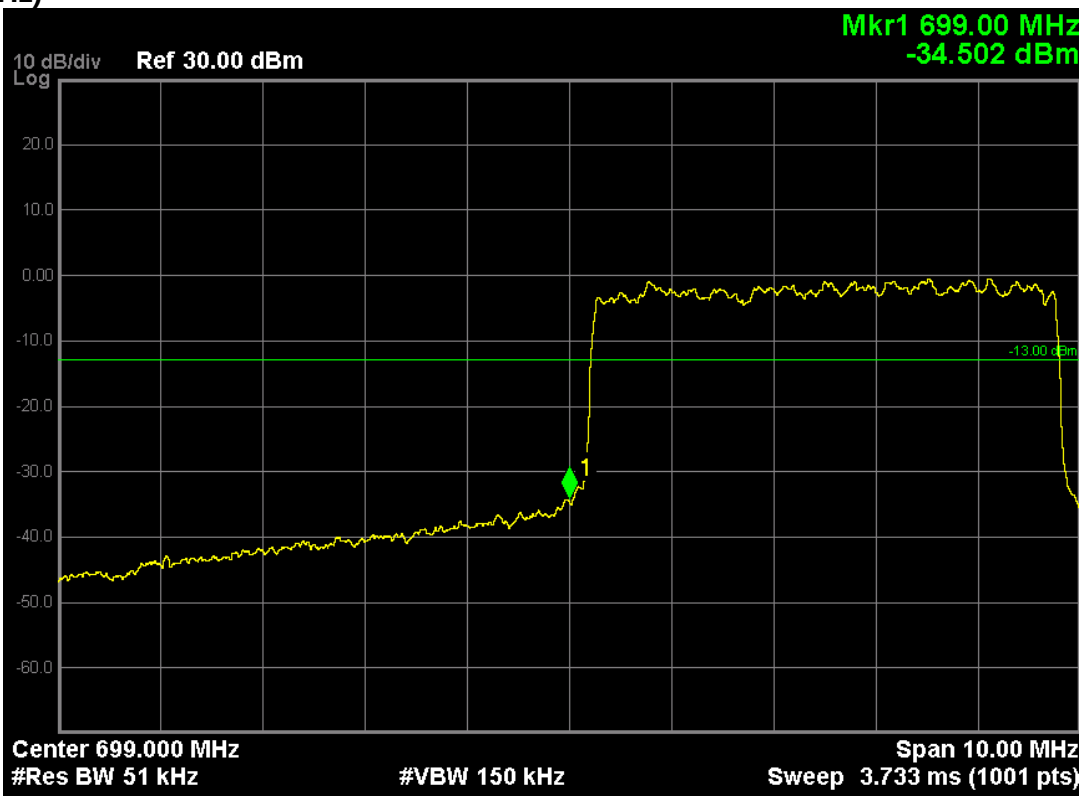
LTE Band 12 (QPSK, Band Width 5MHz,RB Size 25,RB Offset 0,Channel 23155,Frequeny 713.5MHz)



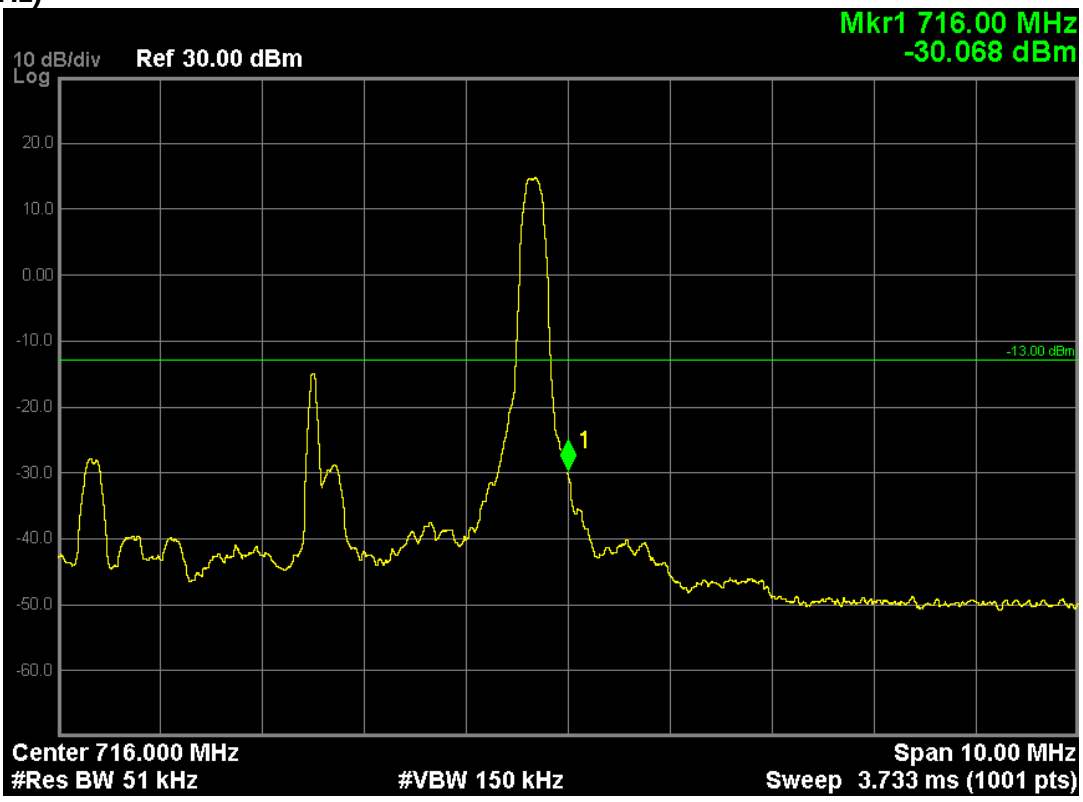
LTE Band 12 (16-QAM, Band Width 5MHz,RB Size 1,RB Offset 0,Channel 23035,Frequeny 701.5MHz)



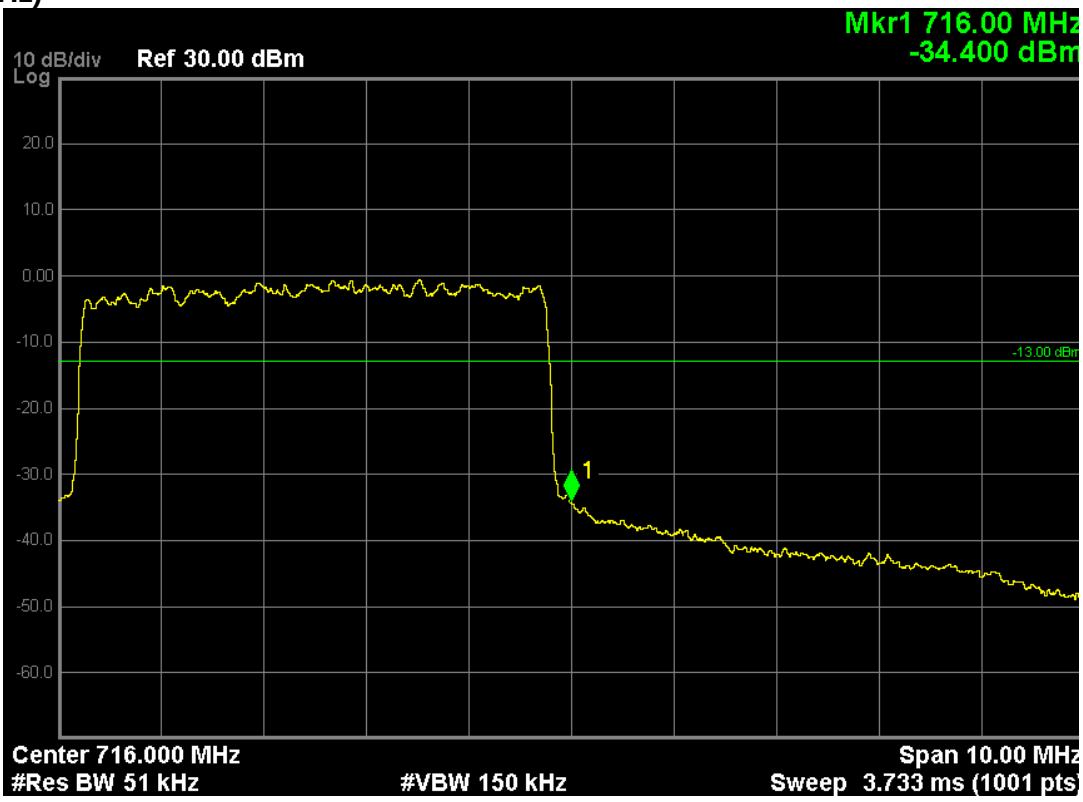
LTE Band 12 (16-QAM, Band Width 5MHz,RB Size 25,RB Offset 0,Channel 23035,Frequeny 701.5MHz)



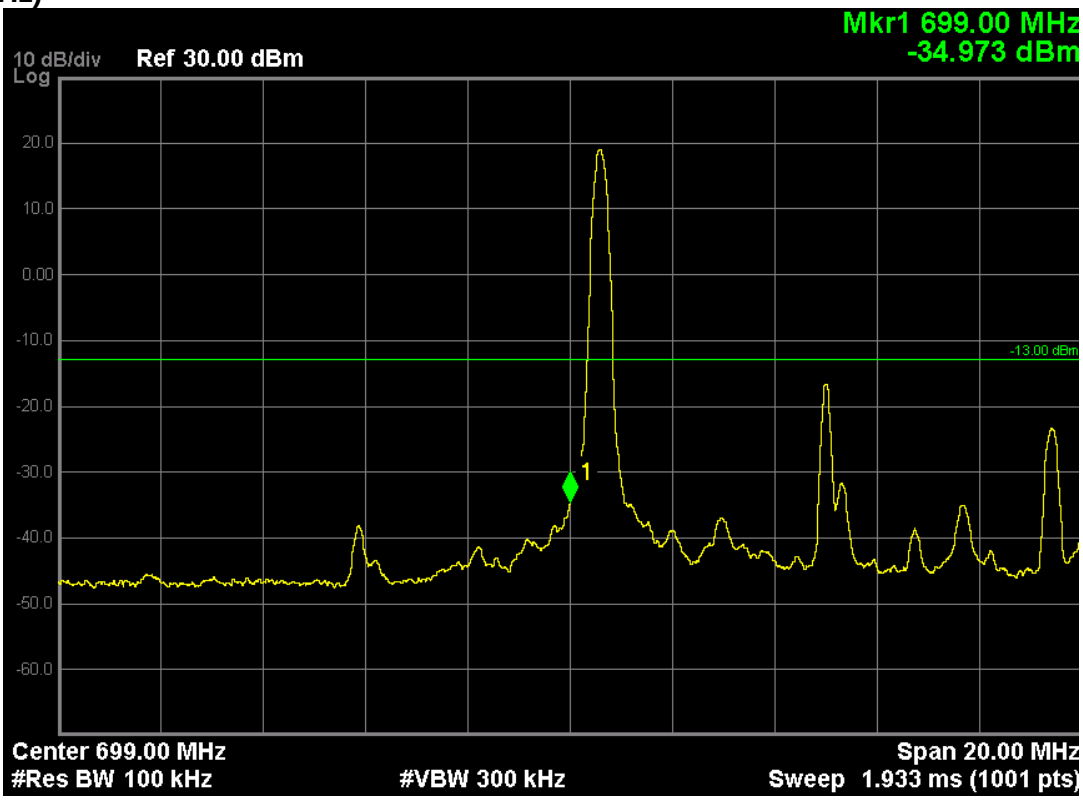
LTE Band 12 (16-QAM, Band Width 5MHz,RB Size 1,RB Offset 24,Channel 23155,Frequeny 713.5MHz)



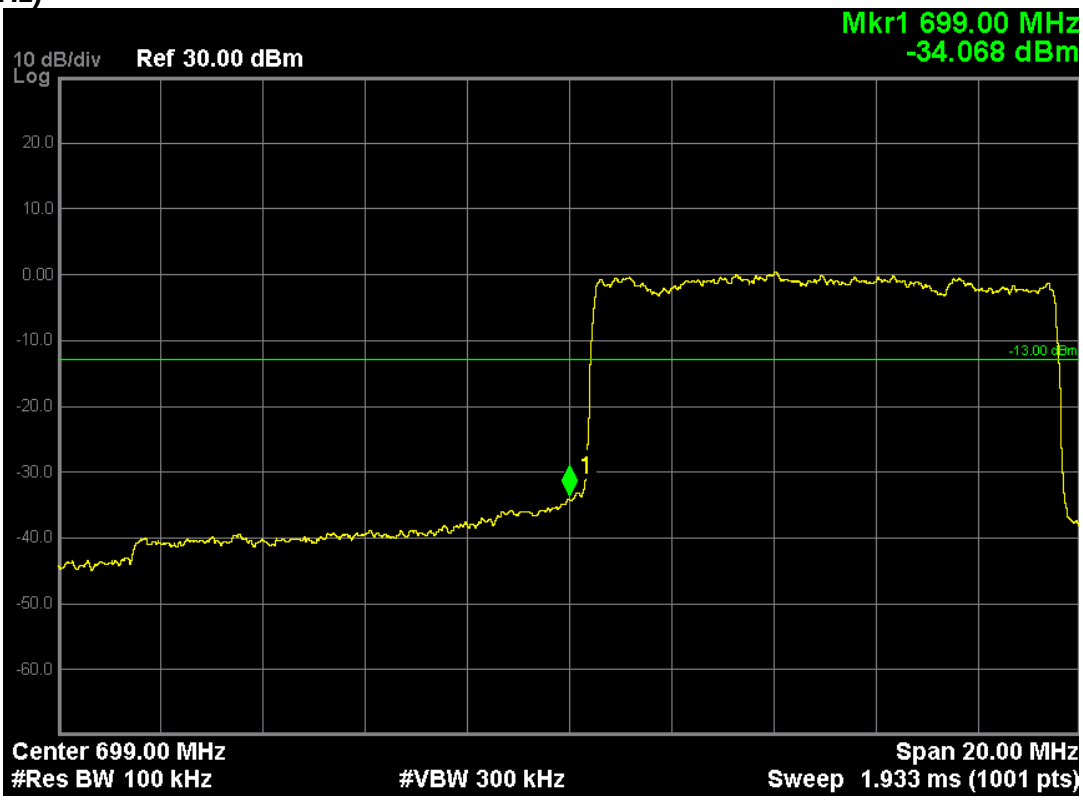
LTE Band 12 (16-QAM, Band Width 5MHz,RB Size 25,RB Offset 0,Channel 23155,Frequeny 713.5MHz)



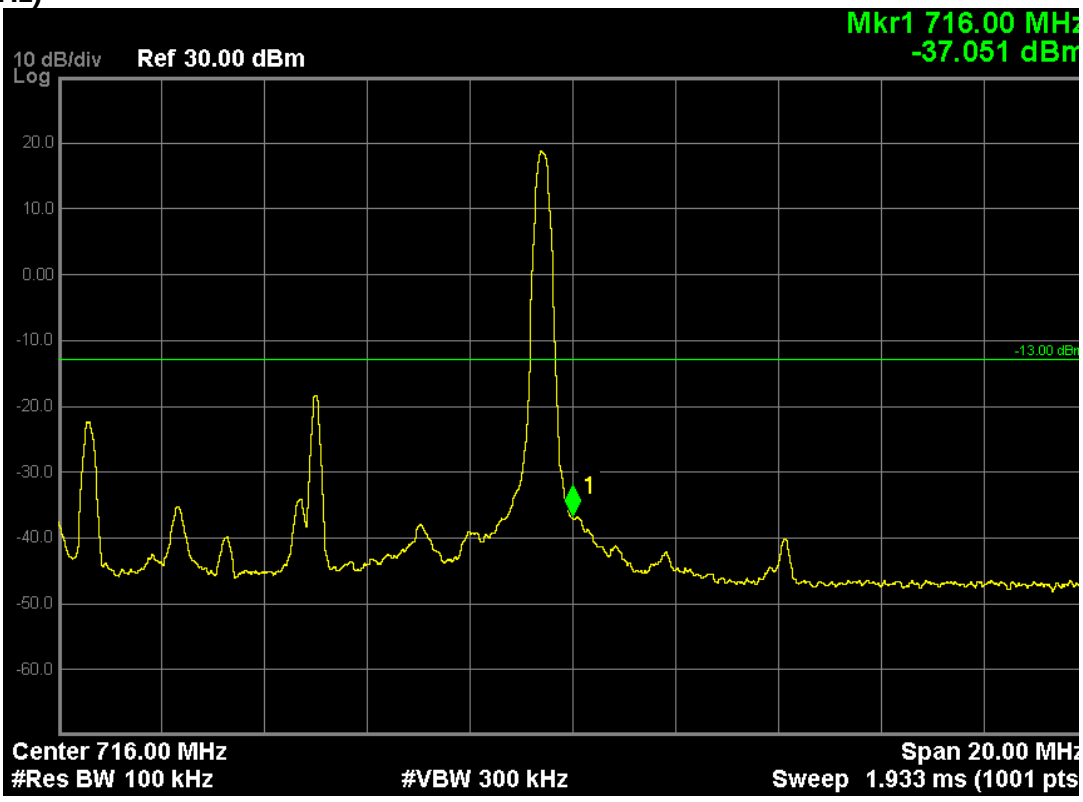
LTE Band 12 (QPSK, Band Width 10MHz,RB Size 1,RB Offset 0,Channel 23060,Frequeny 704.0MHz)



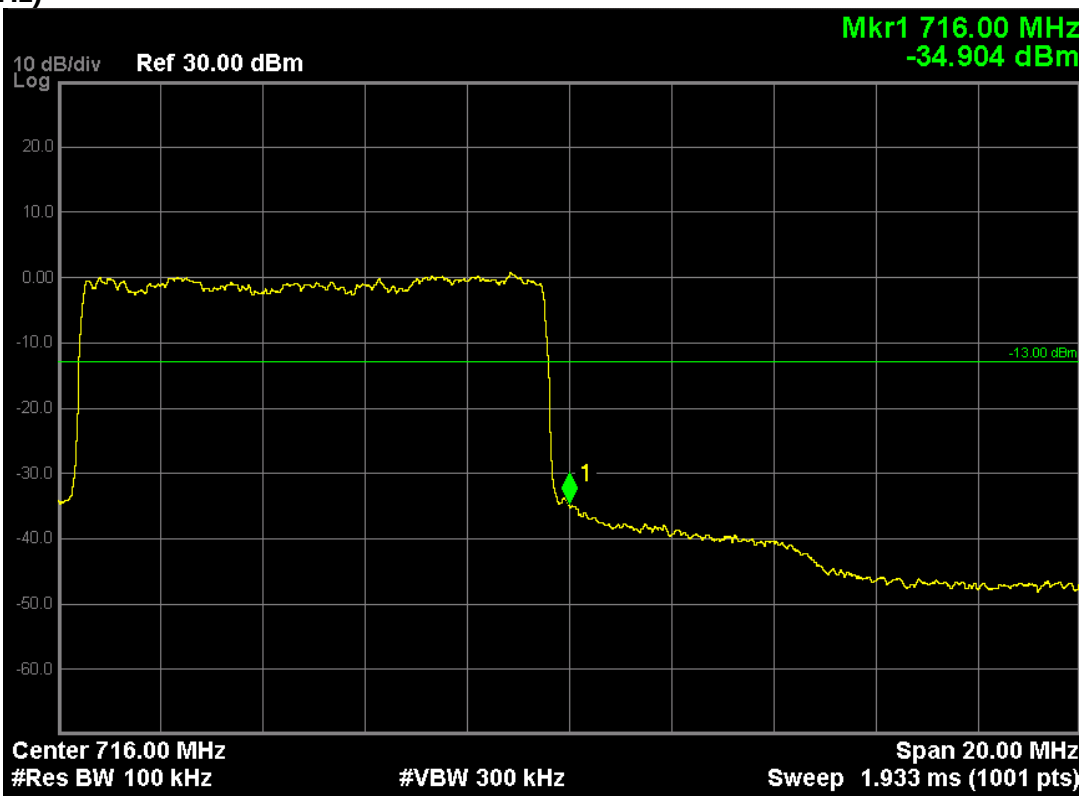
LTE Band 12 (QPSK, Band Width 10MHz,RB Size 50,RB Offset 0,Channel 23060,Frequeny 704.0MHz)



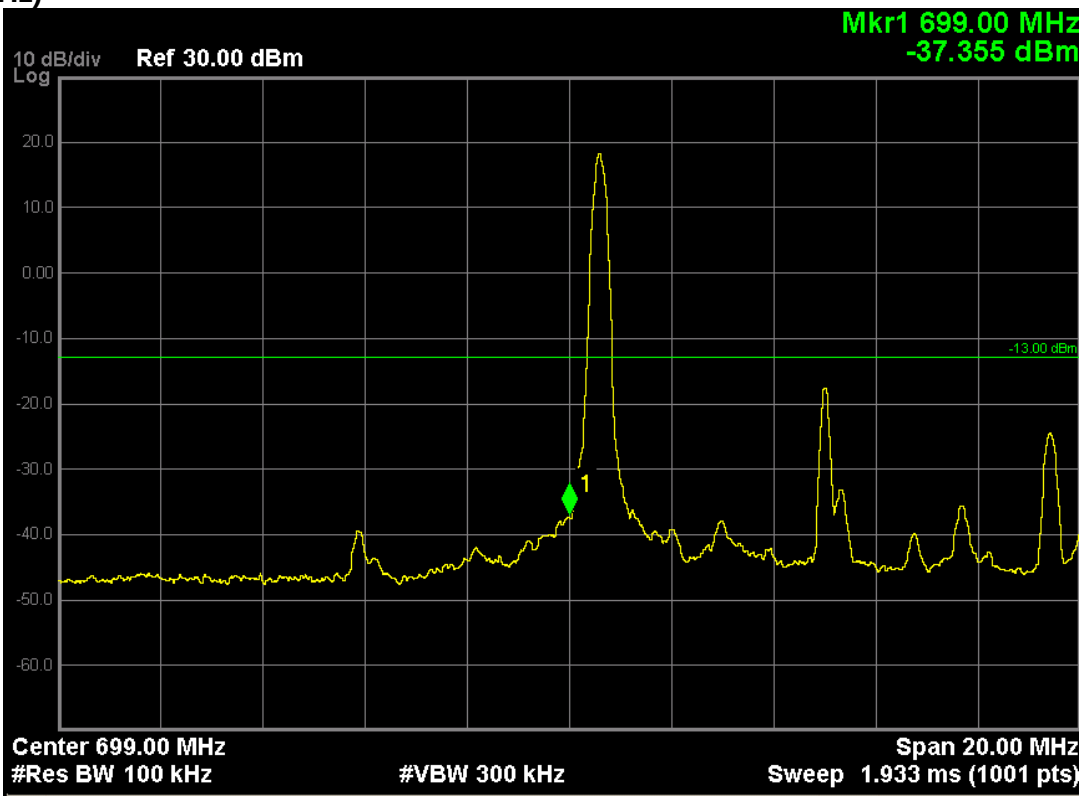
LTE Band 12 (QPSK, Band Width 10MHz,RB Size 1,RB Offset 49,Channel 23130,Frequeny 711.0MHz)



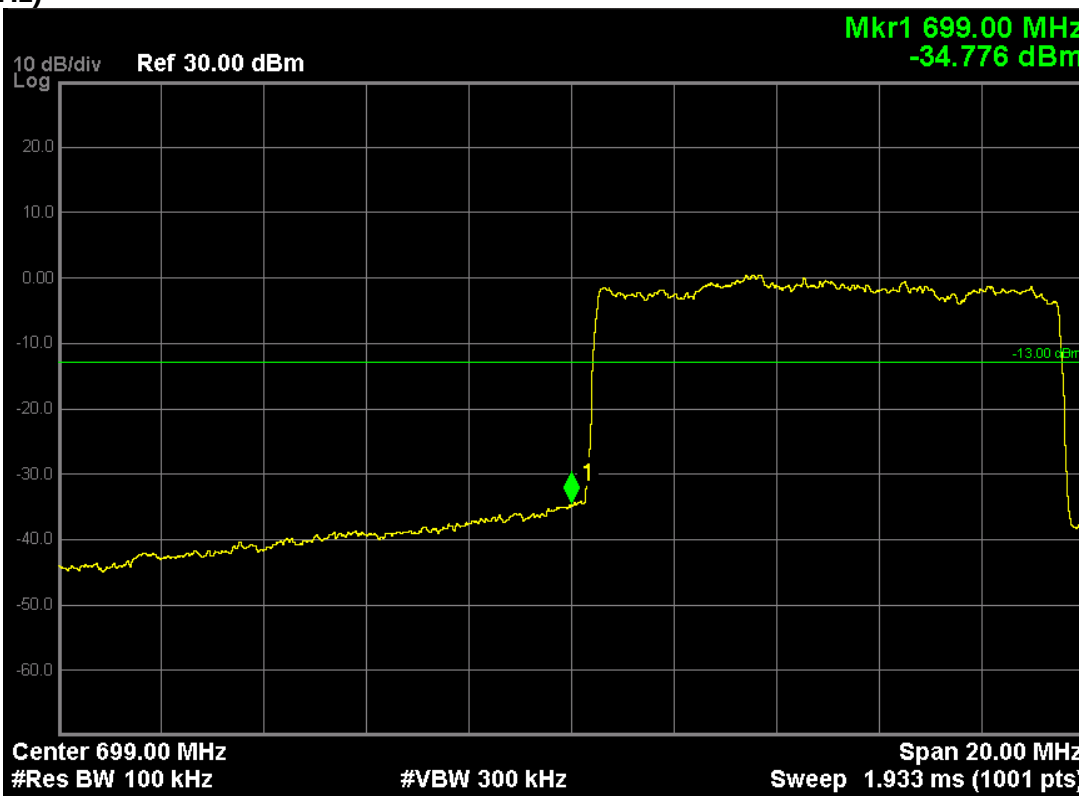
LTE Band 12 (QPSK, Band Width 10MHz,RB Size 50,RB Offset 0,Channel 23130,Frequeny 711.0MHz)



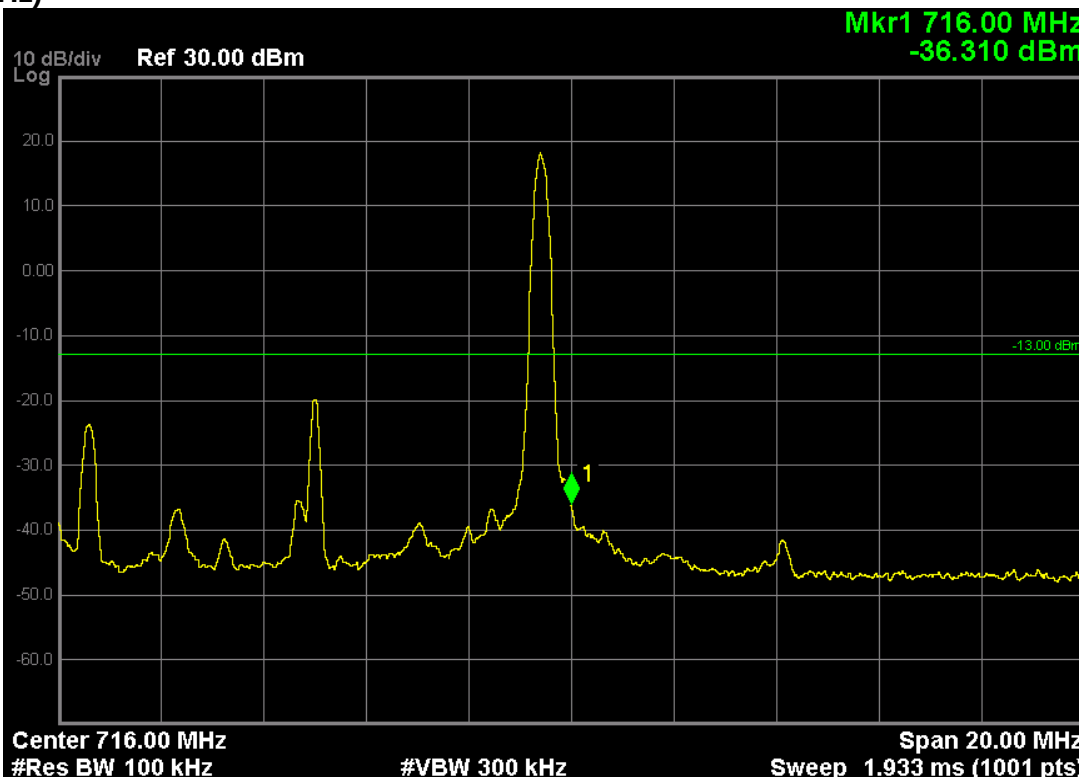
LTE Band 12 (16-QAM, Band Width 10MHz,RB Size 1,RB Offset 0,Channel 23060,Frequeny 704.0MHz)



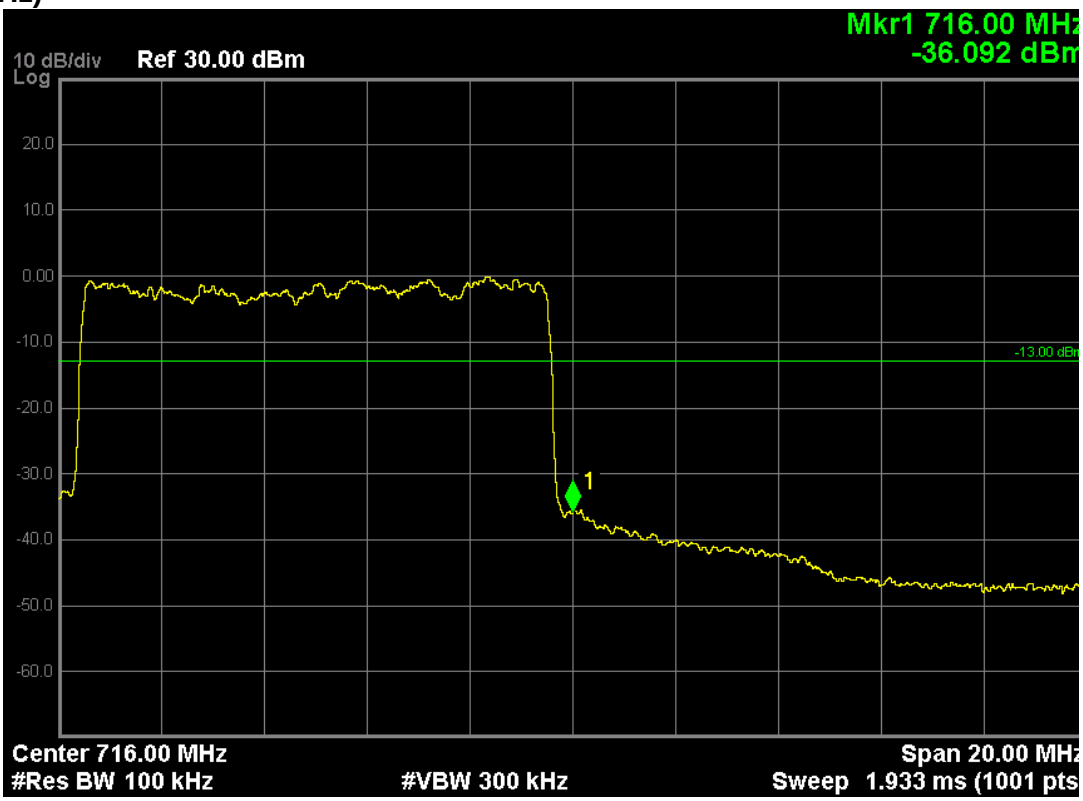
LTE Band 12 (16-QAM, Band Width 10MHz,RB Size 50,RB Offset 0,Channel 23060,Frequeny 704.0MHz)



LTE Band 12 (16-QAM, Band Width 10MHz,RB Size 1,RB Offset 49,Channel 23130,Frequeny 711.0MHz)



LTE Band 12 (16-QAM, Band Width 10MHz,RB Size 50,RB Offset 0,Channel 23130,Frequeny 711.0MHz)



6.Spurious Emission

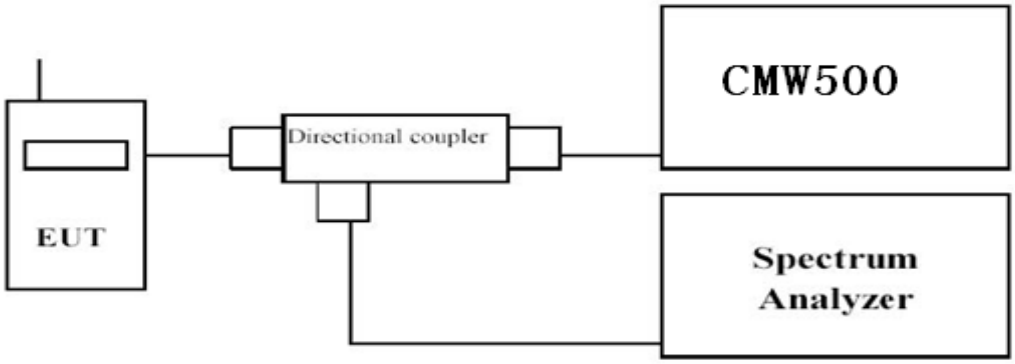
6.1. Test Equipment

Instrument	Manufacturer	Model	Serial No.	Cali. Due Date
Spectrum Analyzer	Agilent	N9038A	MY51210142	11/05/2016
Radio Communication Tester	R&S	CMW500	147483	11/08/2016
Signal Generator	Agilent	N5183A	MY50140938	01/04/2016
Preamplifier	CEM	EM30180	3008A0245	02/27/2016
Loop Antenna	Schwarzbeck	FMZB1519	1519-020	03/25/2016
Bilog Antenna	Schwarzbeck	VULB9160	9160-3316	09/19/2016
VHF-UHF-Biconical Antenna	Schwarzbeck	VUBA9117	9117-263	09/19/2016
Broad-Band Horn Antenna	Schwarzbeck	BBHA9120D	9120D-942	09/19/2016
Broad-Band Horn Antenna	Schwarzbeck	BBHA9120D	9120D-943	09/19/2016

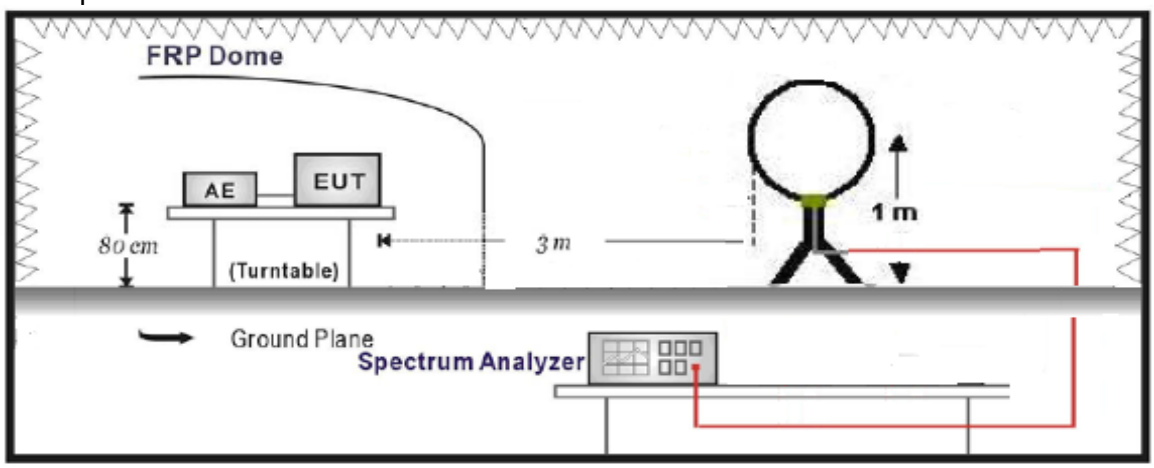
The measure equipment had been calibrated once a year.

6.2. Test Setup

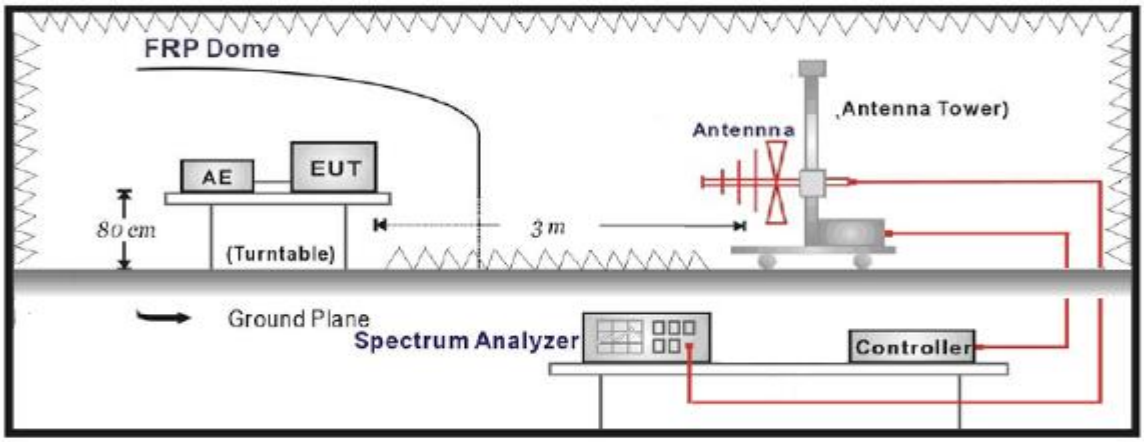
Conducted Spurious Emission Measurement:



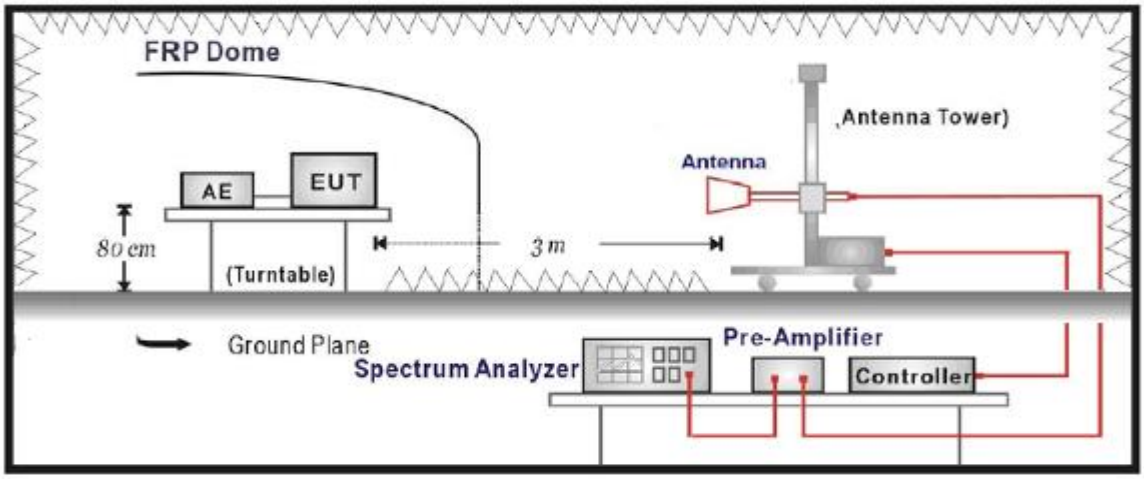
Radiated Spurious Measurement: below 30MHz



Radiated Spurious Measurement: 30MHz to 1GHz



Radiated Spurious Measurement: above 1GHz



6.3. Limit

The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least 43 + 10log(P) dB.

6.4. Test Procedure

Conducted Spurious Measurement:

a. The testing follows FCC KDB 972268 v02v02 Section 6.0;
b. Place the EUT on a bench and set it in transmitting mode.
c. Connect a low loss RF cable from the antenna port to a spectrum analyzer and CMW500 by a Directional Couple.
d. EUT Communicate with CMW500, then select a channel for testing.
e. Add a correction factor to the display of spectrum, and then test.
f. The resolution bandwidth of the spectrum analyzer was set at 1 MHz, sufficient scans were taken to show the out of band Emission if any up to 10th harmonic.

Radiated Spurious Measurement:

a. The testing follows FCC KDB 972268 v02v02 Section 5.8 and ANSI/TIA-603-C-2004 Section 2.2.12;
b. The EUT shall be placed at the specified height on a support, and in the position closest to normal use as declared by provider.
c. The test antenna shall be oriented initially for vertical polarization and shall be chosen to correspond to the frequency of the transmitter
d. The output of the test antenna shall be connected to the measuring receiver. The transmitter shall be switched on and the measuring receiver shall be tuned to the frequency of the transmitter under test.
e. The test antenna shall be raised and lowered through the specified range of height until a

maximum signal level is detected by the measuring receiver.

f. The transmitter shall then be rotated through 360° in the horizontal plane, until the maximum signal level is detected by the measuring receiver.

g. The test antenna shall be raised and lowered again through the specified range of height until a maximum signal level is detected by the measuring receiver.
h. The maximum signal level detected by the measuring receiver shall be noted.
i. The transmitter shall be replaced by a substitution antenna.
j. The substitution antenna shall be orientated for vertical polarization and the length of the substitution antenna shall be adjusted to correspond to the frequency of the transmitter.
k. The substitution antenna shall be connected to a calibrated signal generator.
l. If necessary, the input attenuator setting of the measuring receiver shall be adjusted in order to increase the sensitivity of the measuring receiver.
m. The test antenna shall be raised and lowered through the specified range of height to ensure that the maximum signal is received.
n. The input signal to the substitution antenna shall be adjusted to the level that produces a level detected by the measuring receiver, that is equal to the level noted while the transmitter radiated power was measured, corrected for the change of input attenuator setting of the measuring receiver.
o. The measurement shall be repeated with the test antenna and the substitution antenna orientated for horizontal polarization.
p. The measure of the effective radiated power is the larger of the two levels recorded at the input to the substitution antenna, corrected for gain of the substitution antenna if necessary.
q. The frequency range was checked up to 10^{th} harmonic.

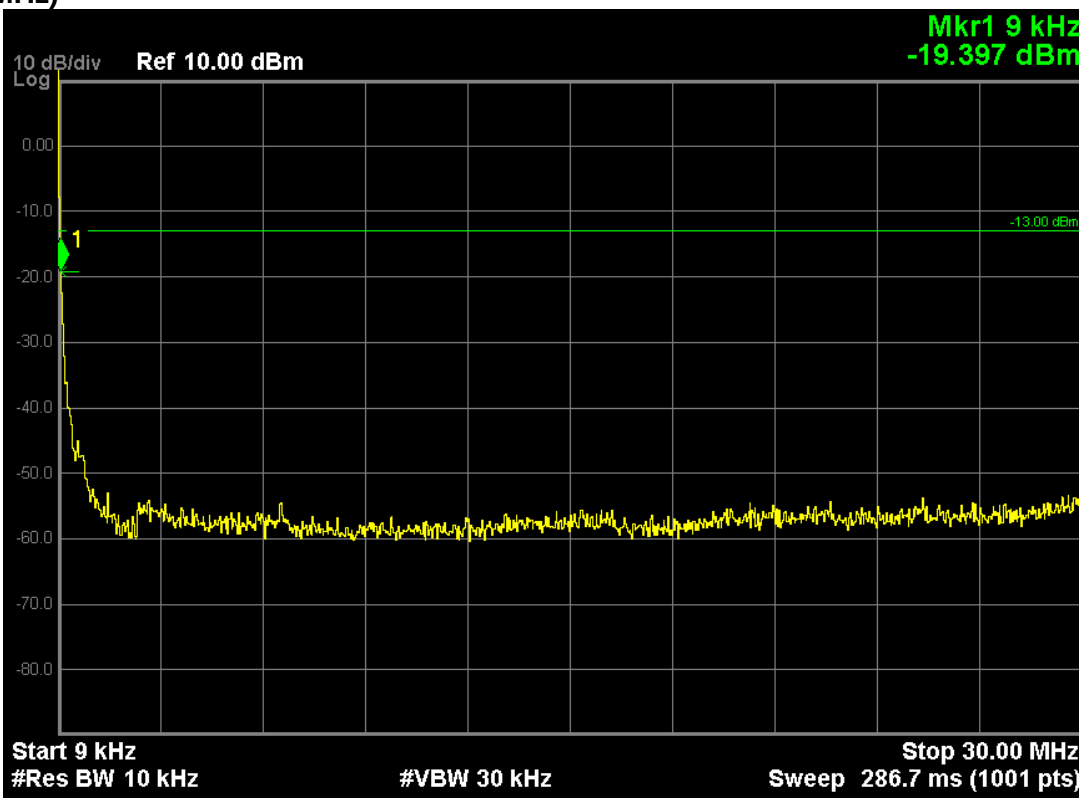
6.5. Uncertainty

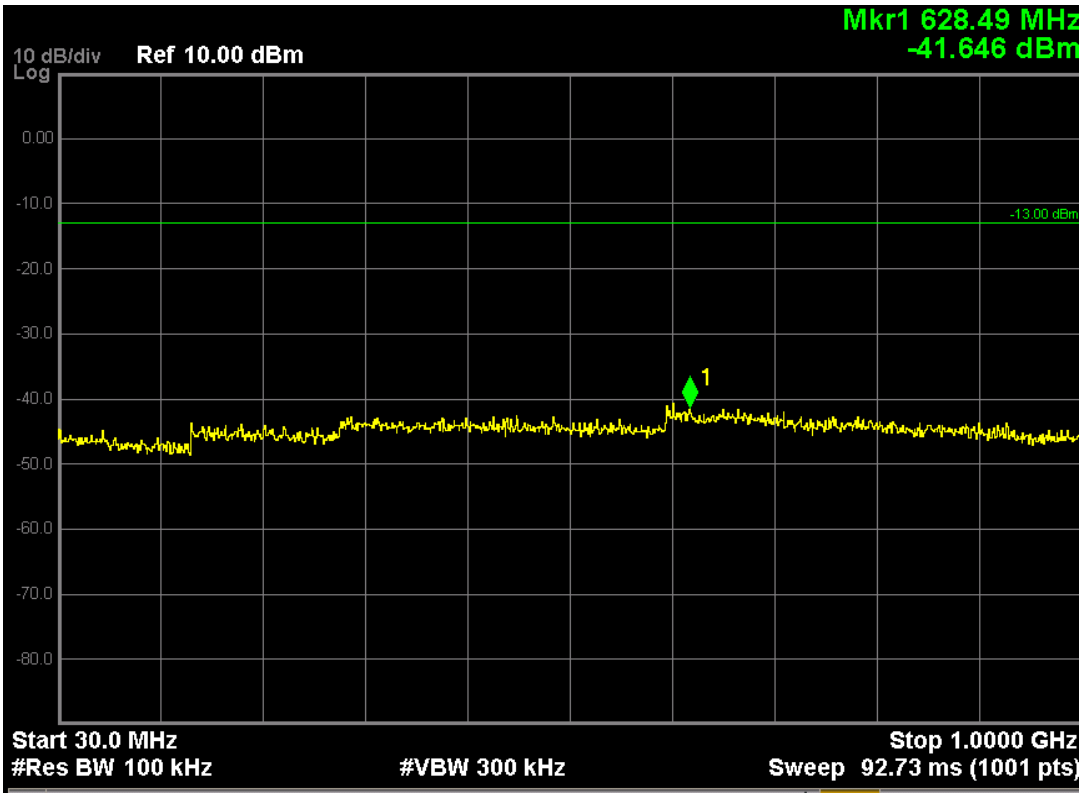
The measurement uncertainty is defined as 3.2 dB for Radiated Power Measurement.

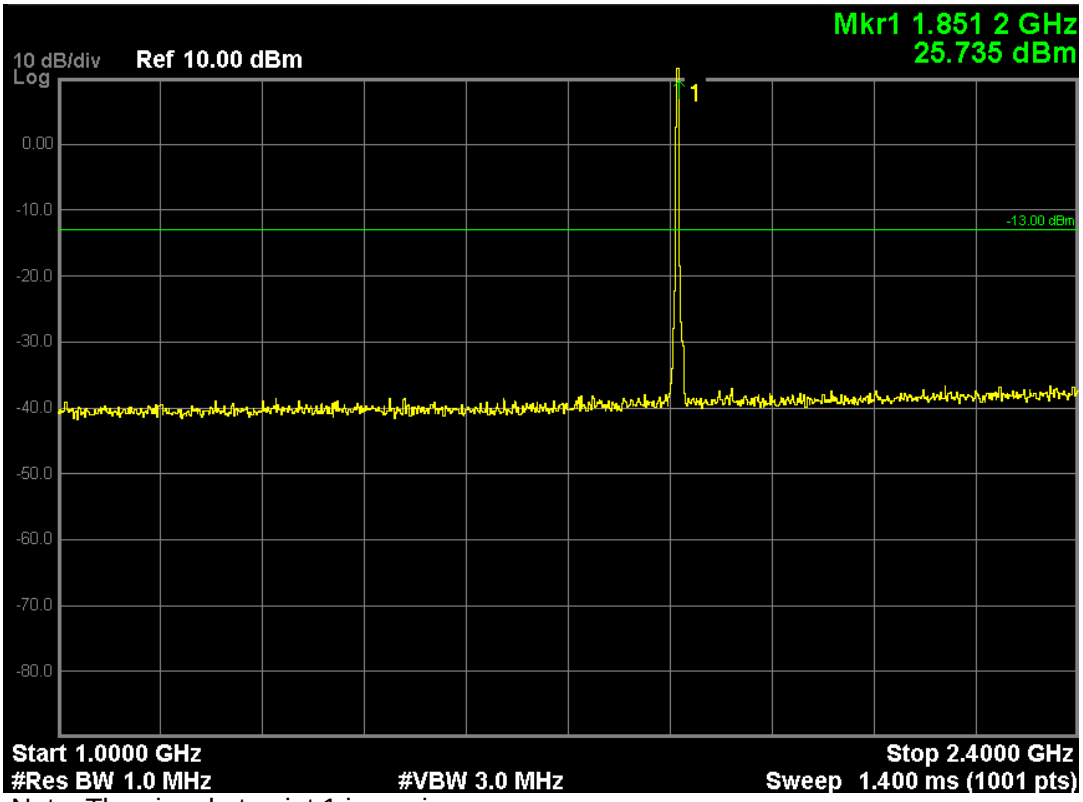
6.6. Test Result

Conducted Spurious Measurement:

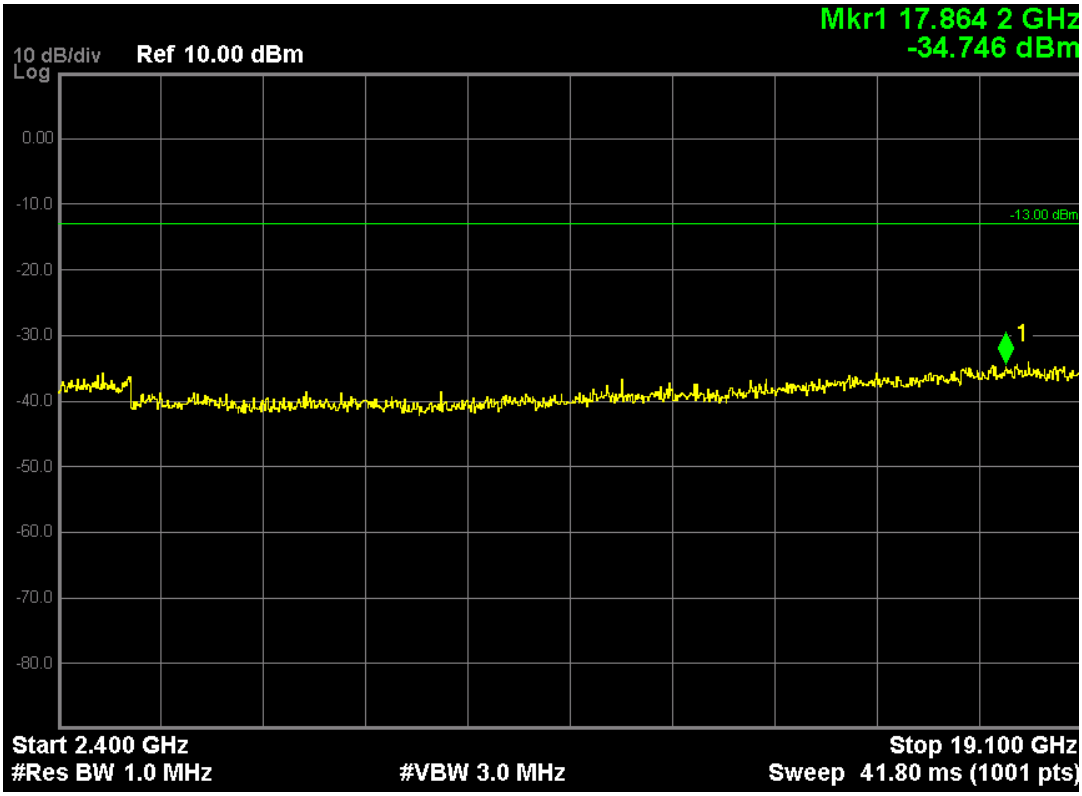
LTE Band 2 (QPSK, Band Width 1.4MHz,RB Size 1,RB Offset 0,Channel 18607,Frequeny 1850.7MHz)



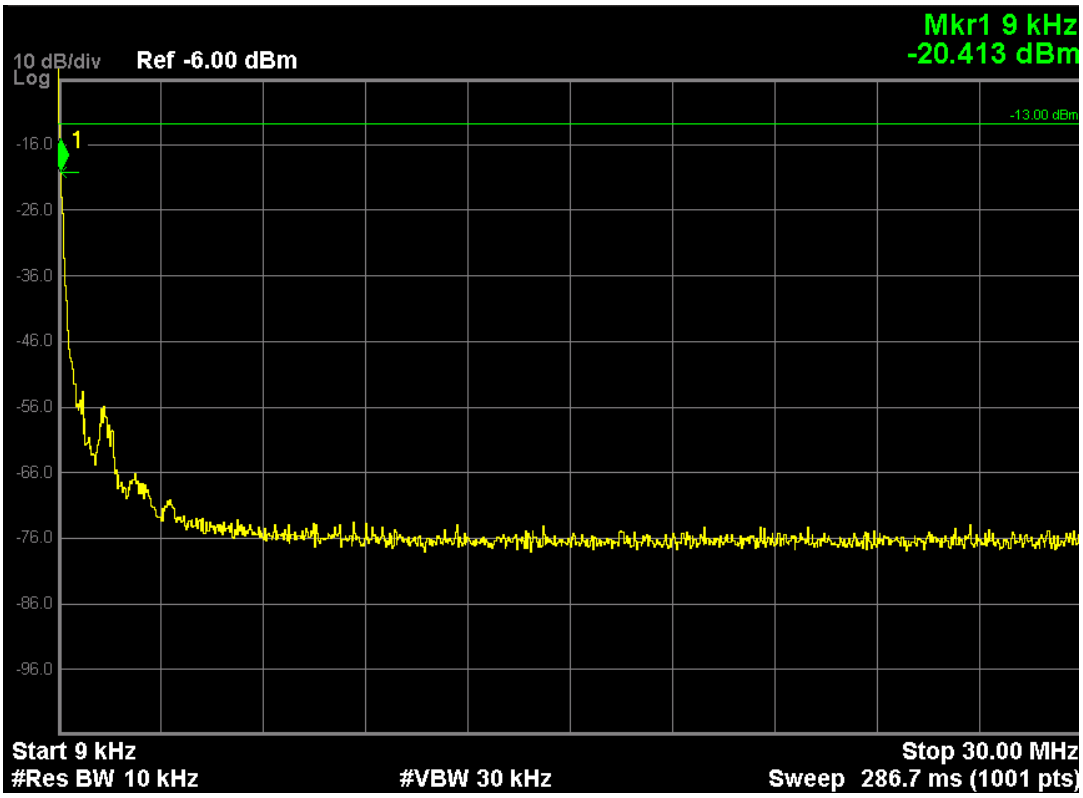


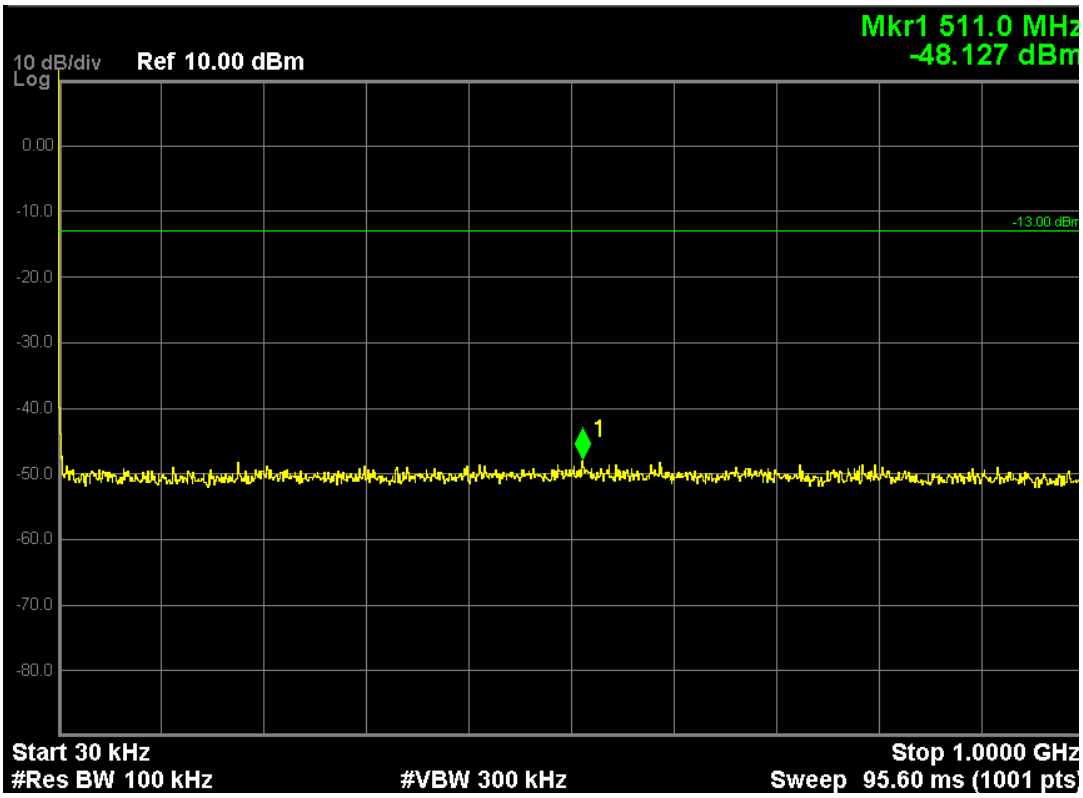


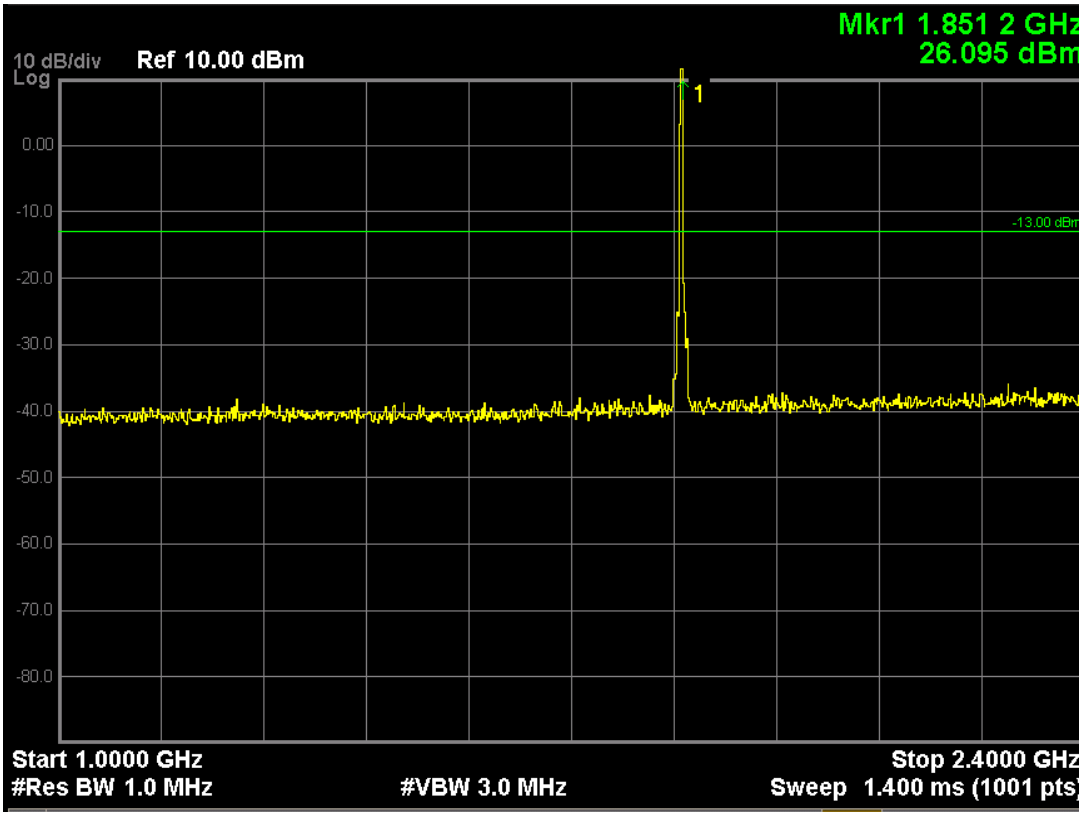
Note: The signal at point 1 is carrier



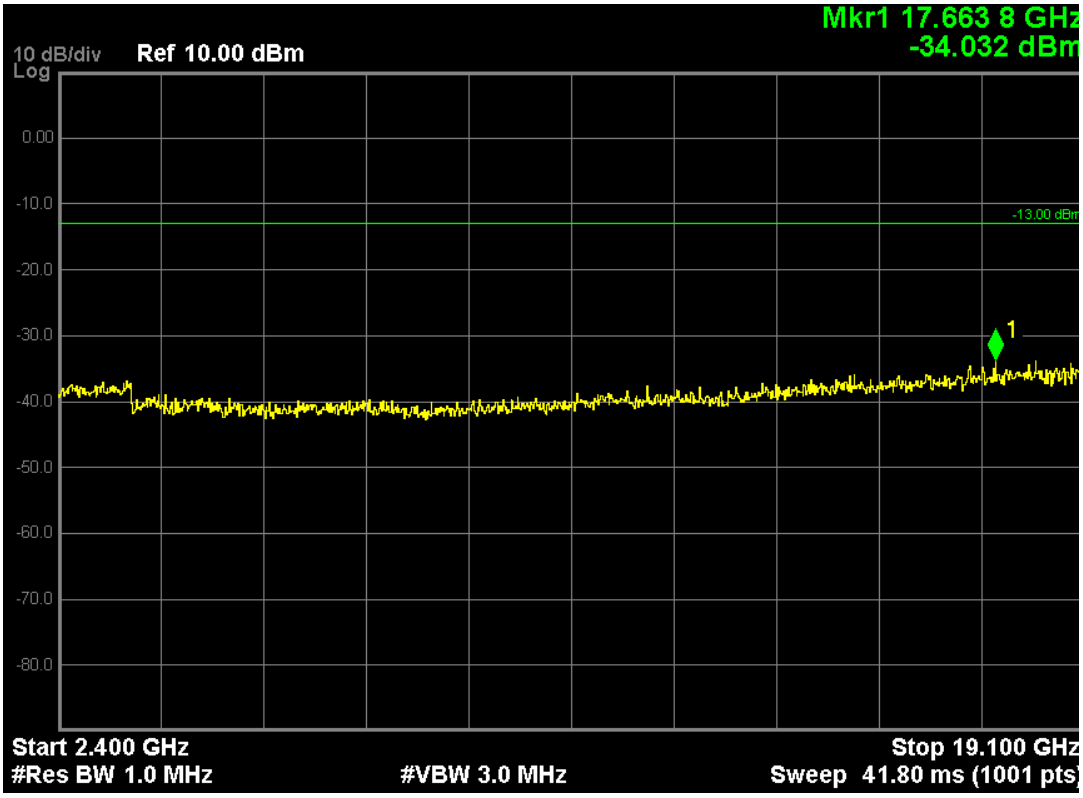
LTE Band 2 (16-QAM, Band Width 1.4MHz,RB Size 1,RB Offset 0,Channel 18607,Frequeny 1850.7MHz)



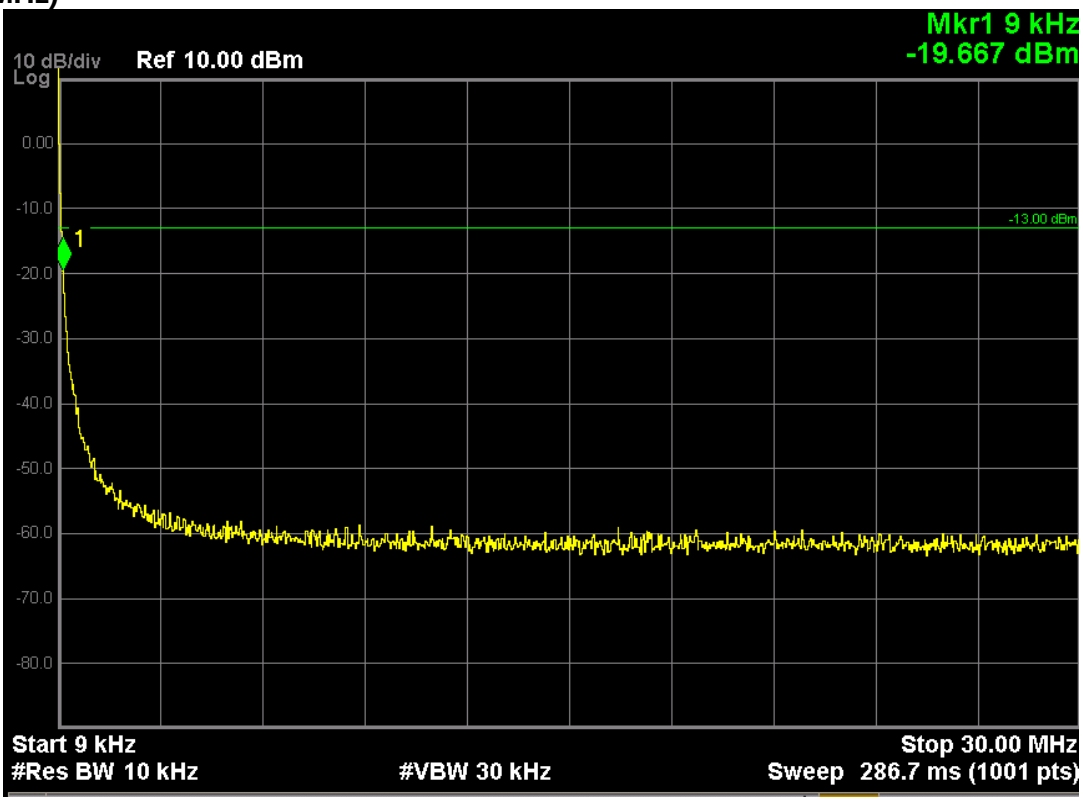


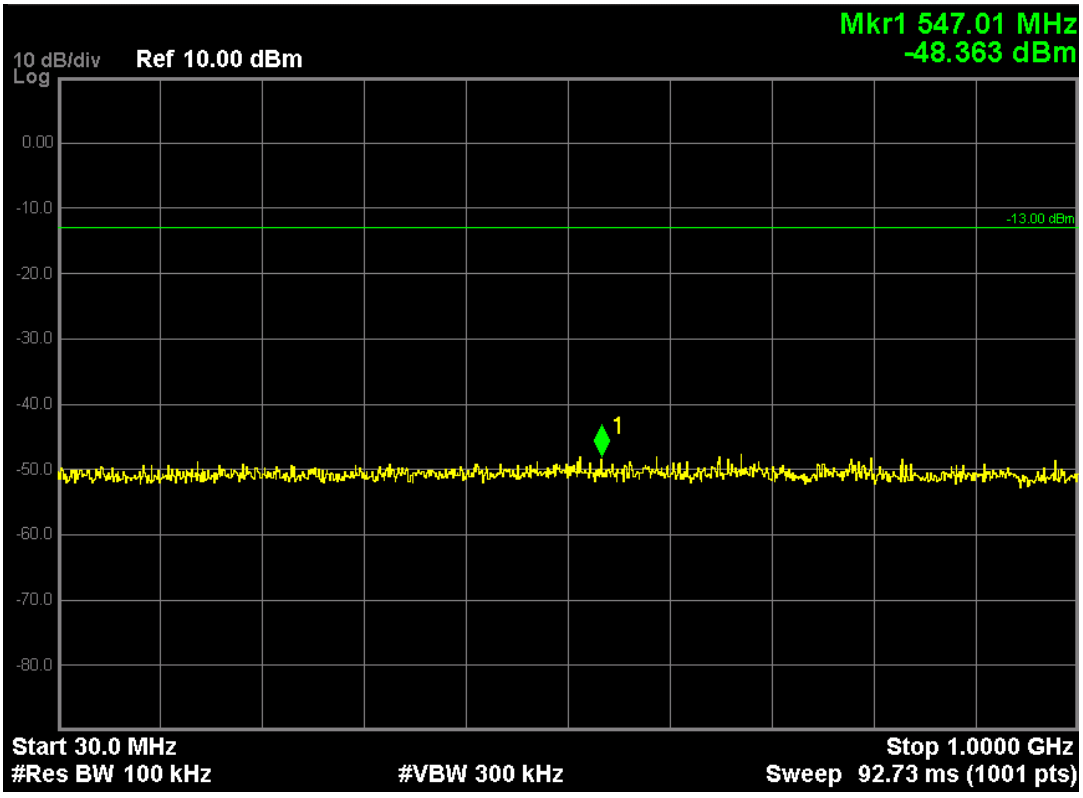


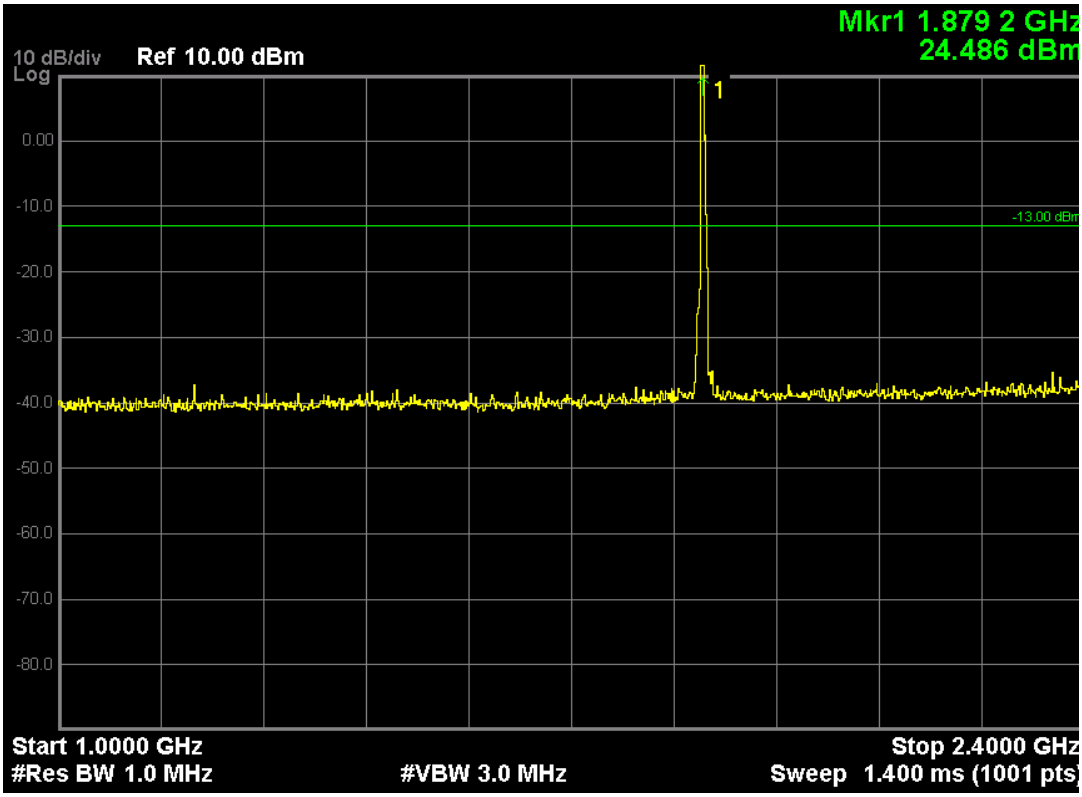
Note: The signal at point 1 is carrier



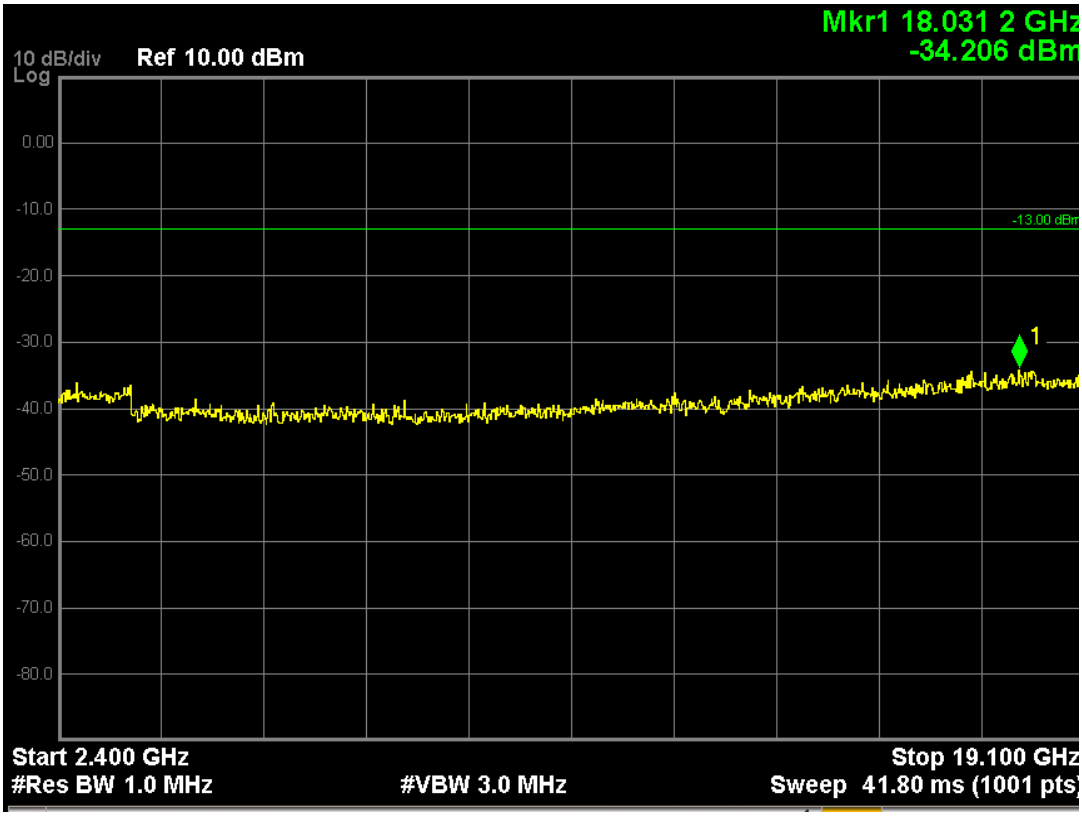
LTE Band 2 (QPSK, Band Width 3MHz,RB Size 1,RB Offset 0,Channel 18900,Frequeny 1880.0MHz)



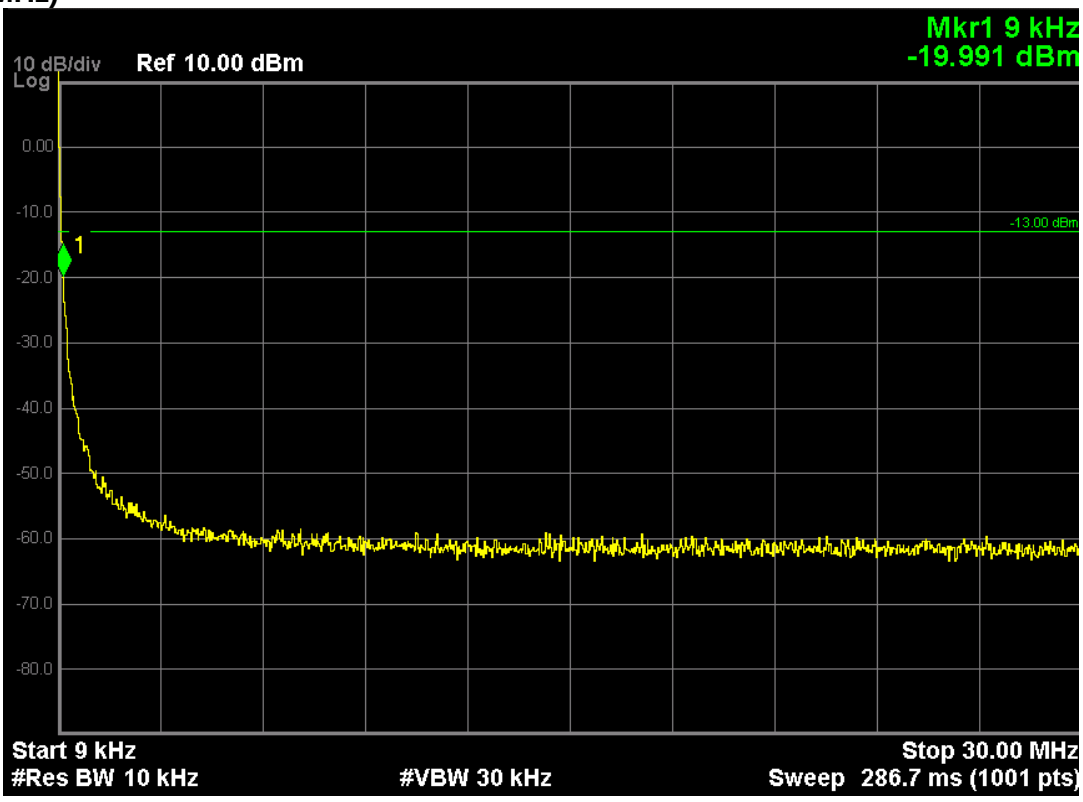


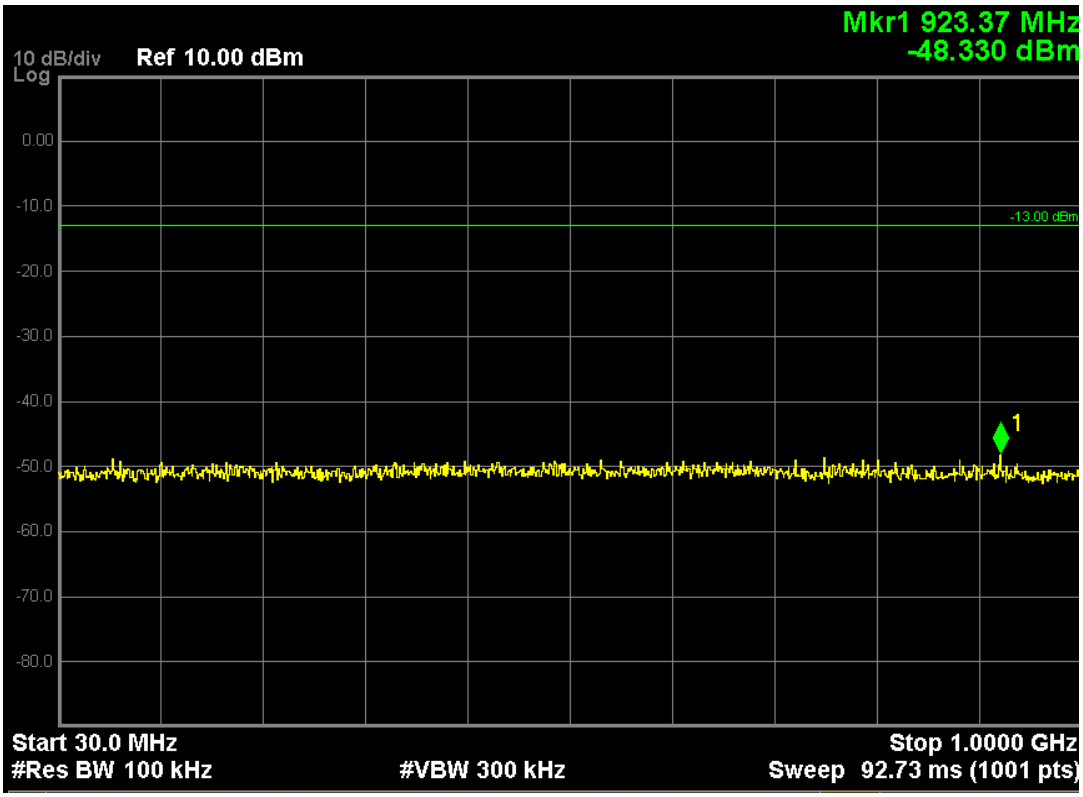


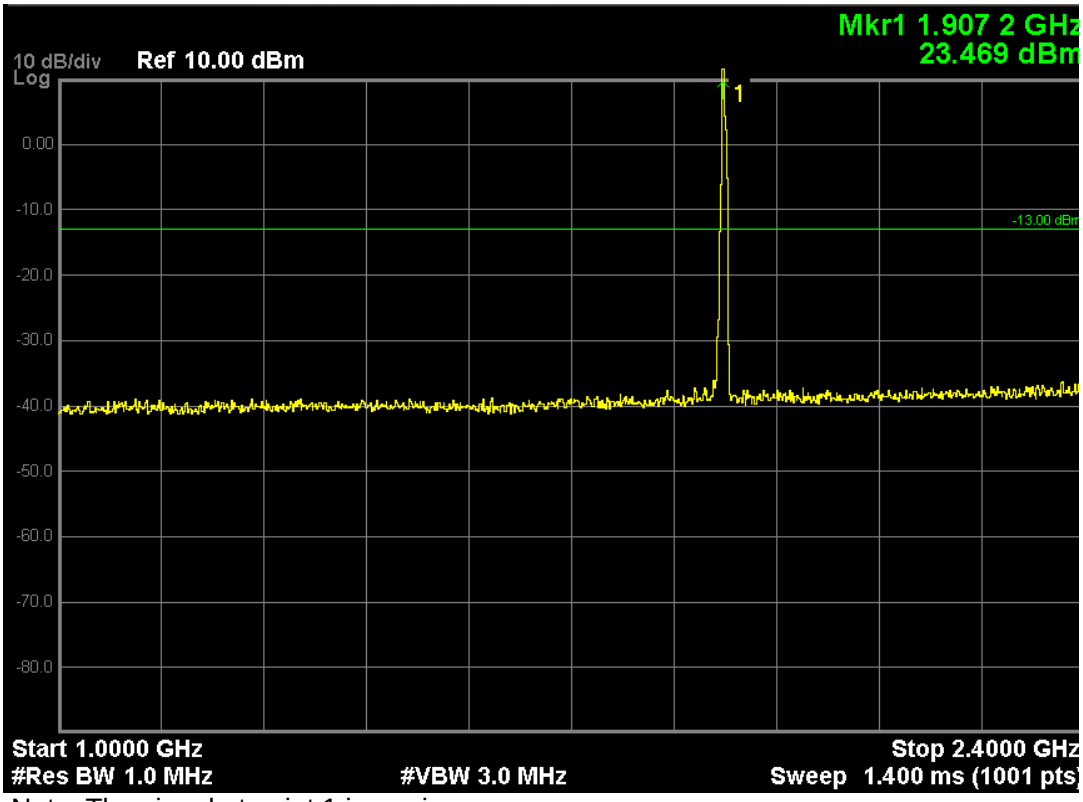
Note: The signal at point 1 is carrier



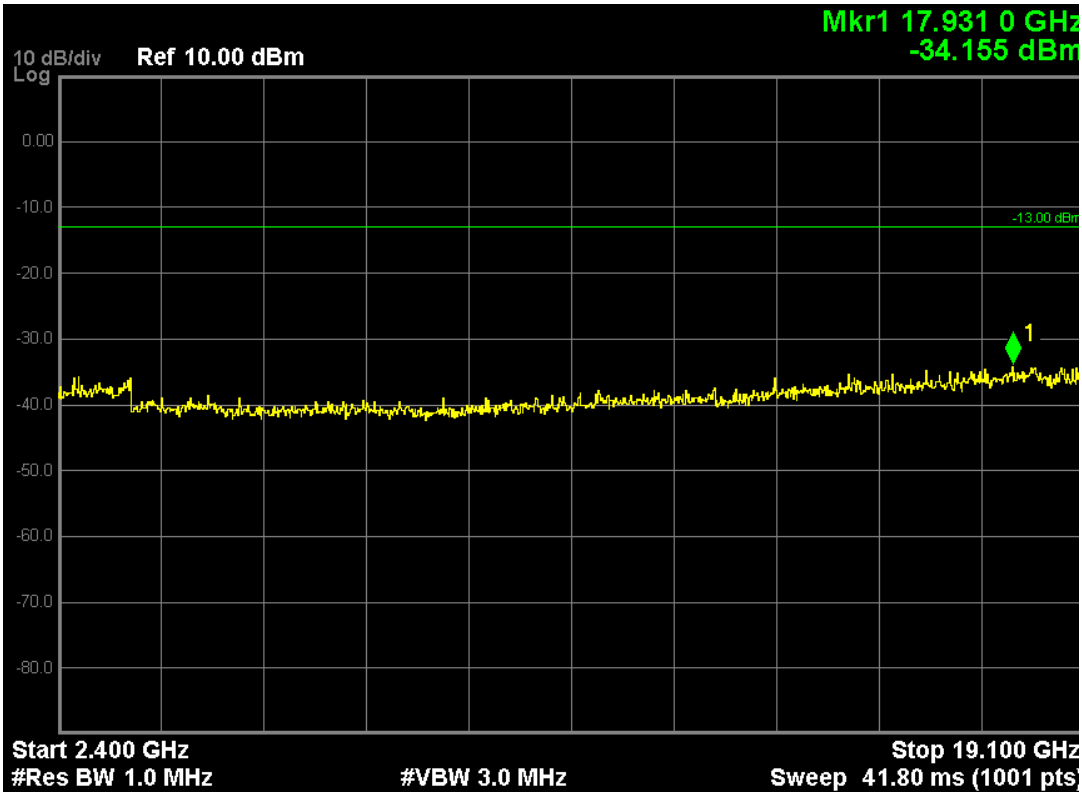
LTE Band 2 (16-QAM, Band Width 3MHz,RB Size 1,RB Offset 0,Channel 19185,Frequeny 1908.5MHz)



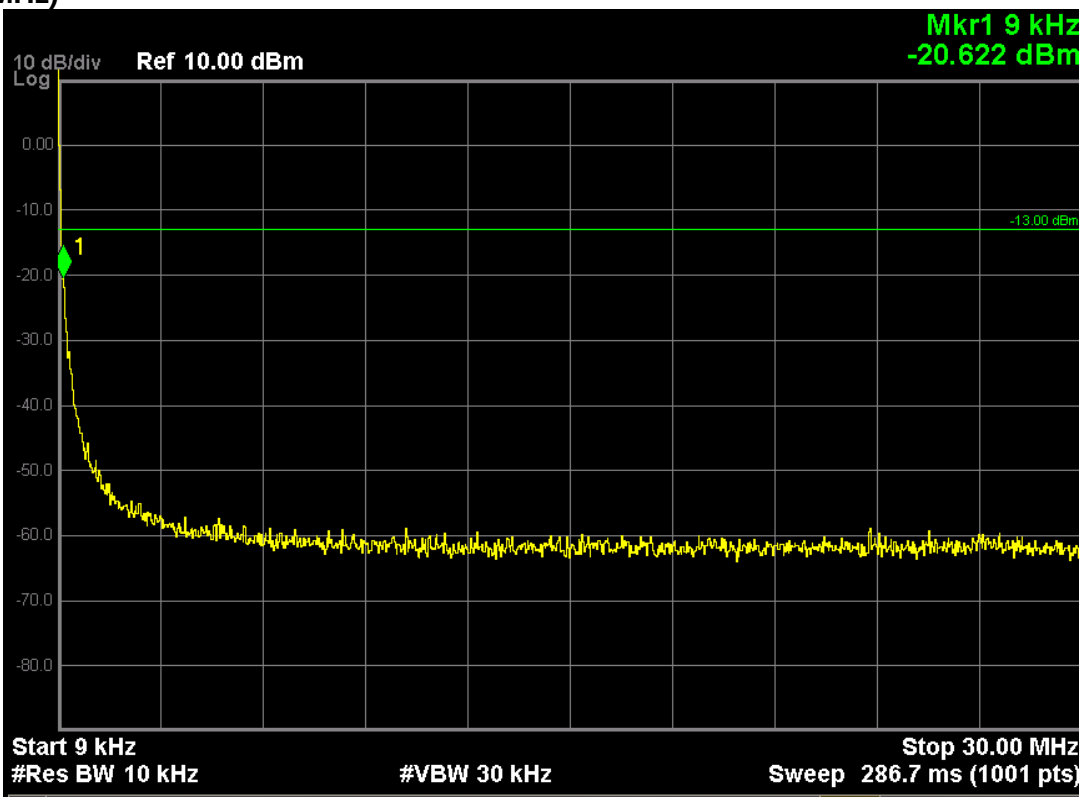


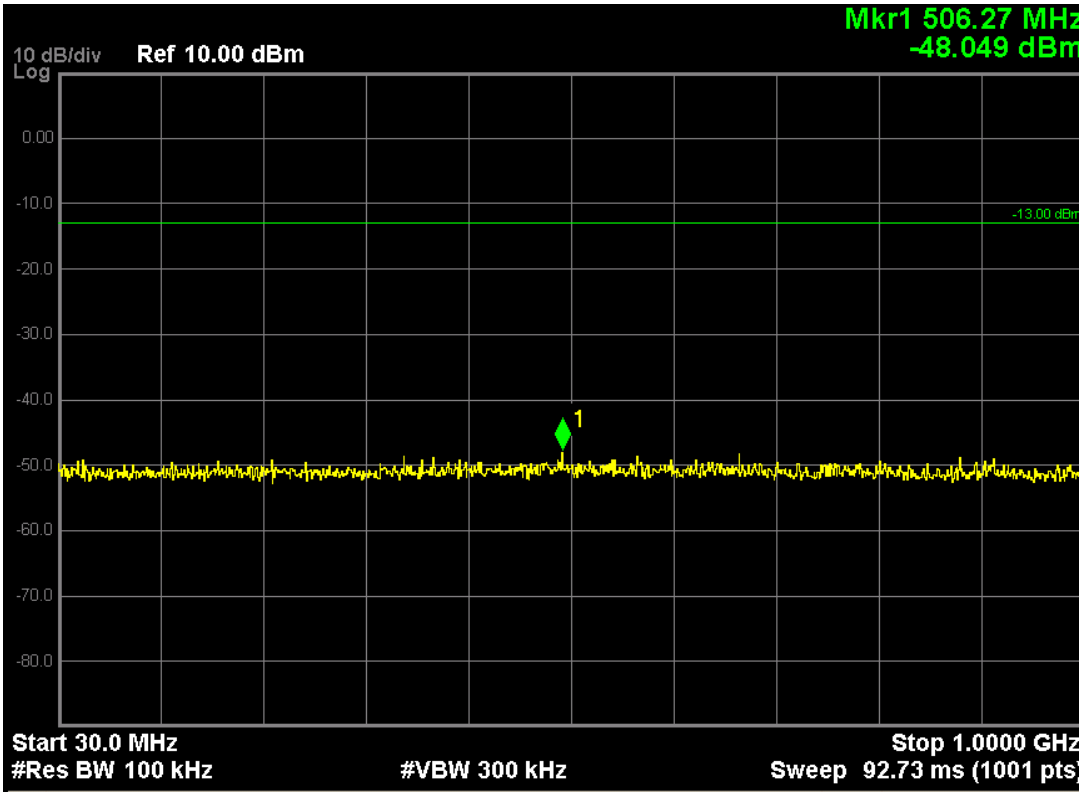


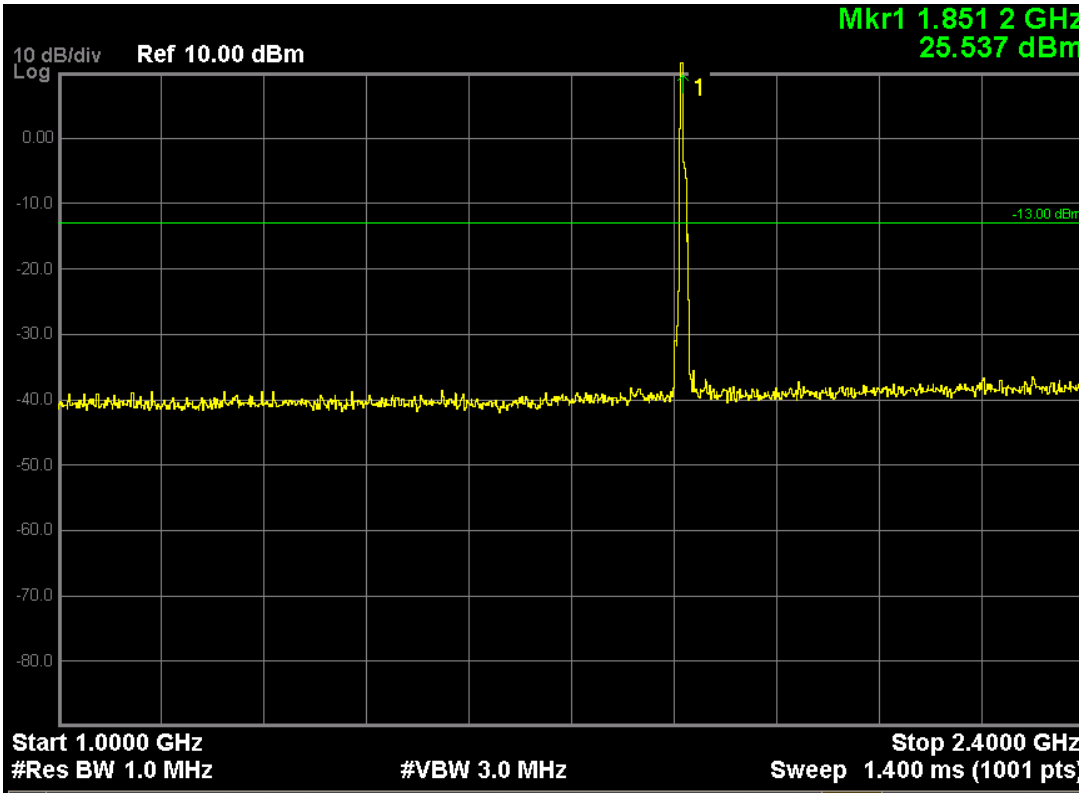
Note: The signal at point 1 is carrier



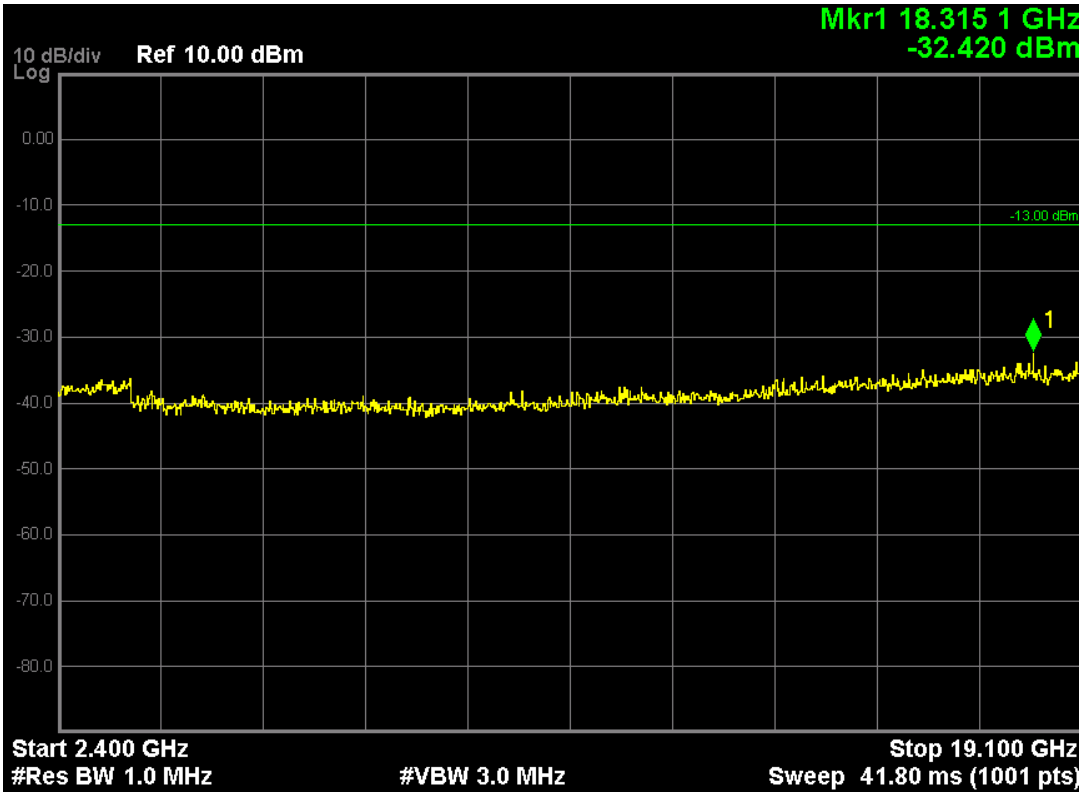
LTE Band 2 (QPSK, Band Width 5MHz,RB Size 1,RB Offset 24,Channel 18625,Frequeny 1852.5MHz)



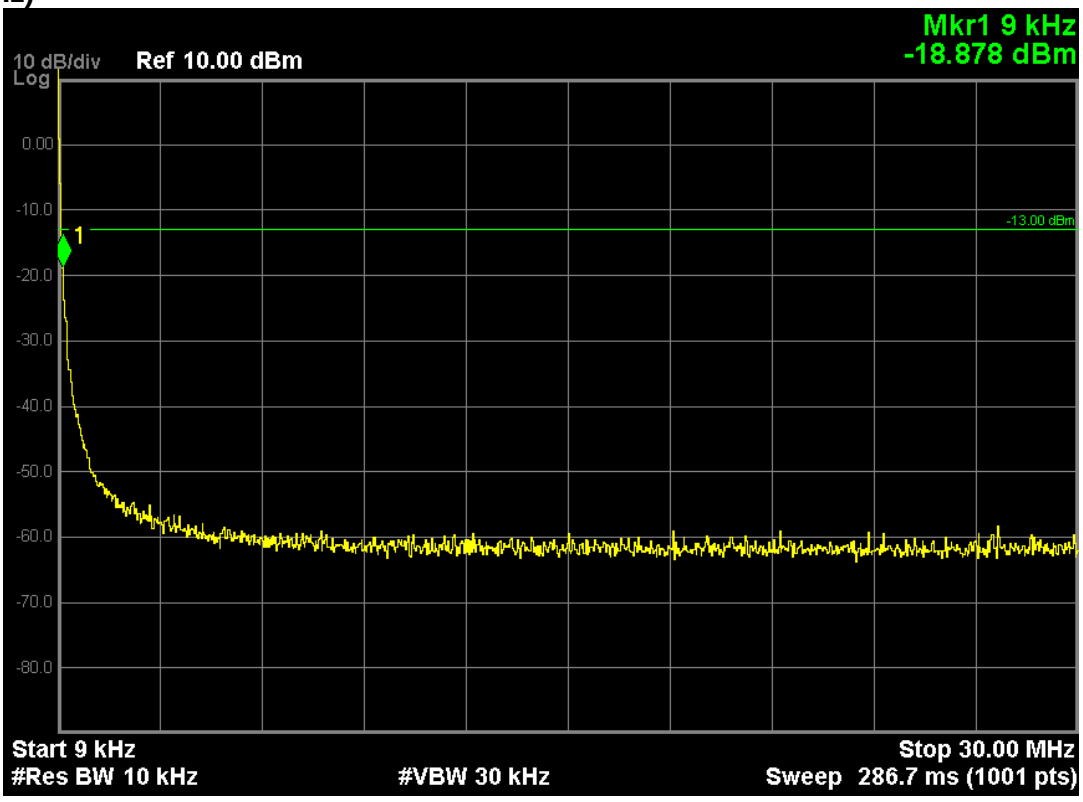


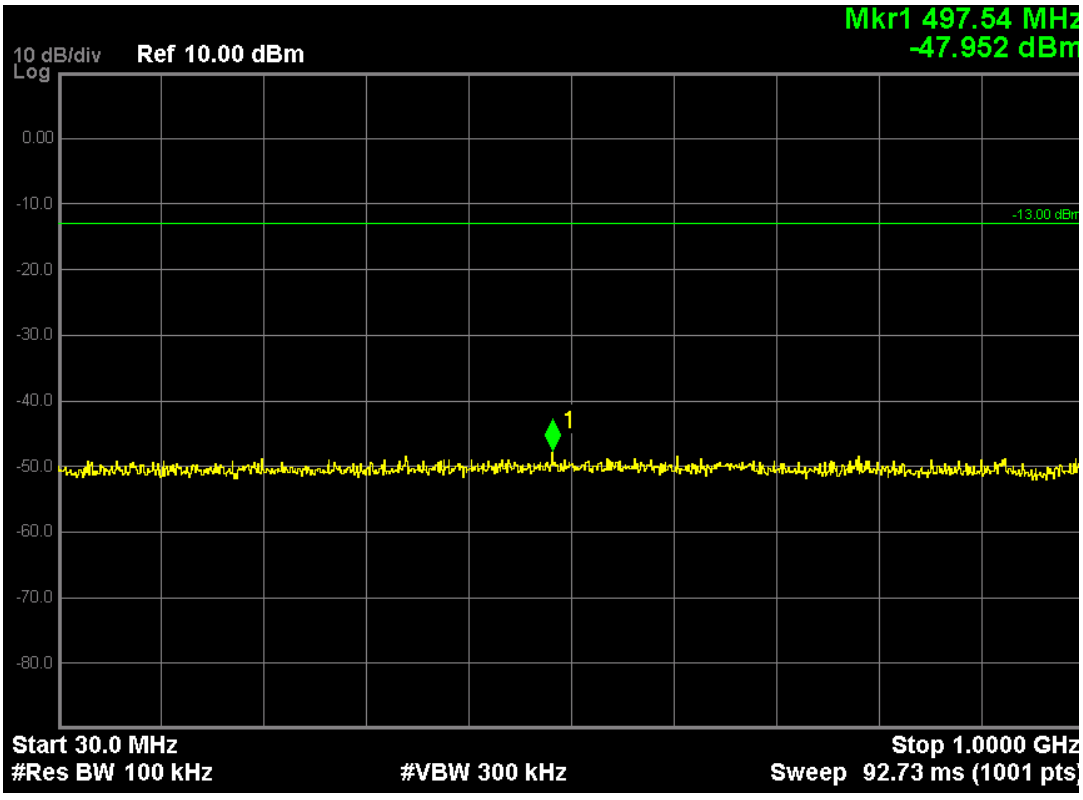


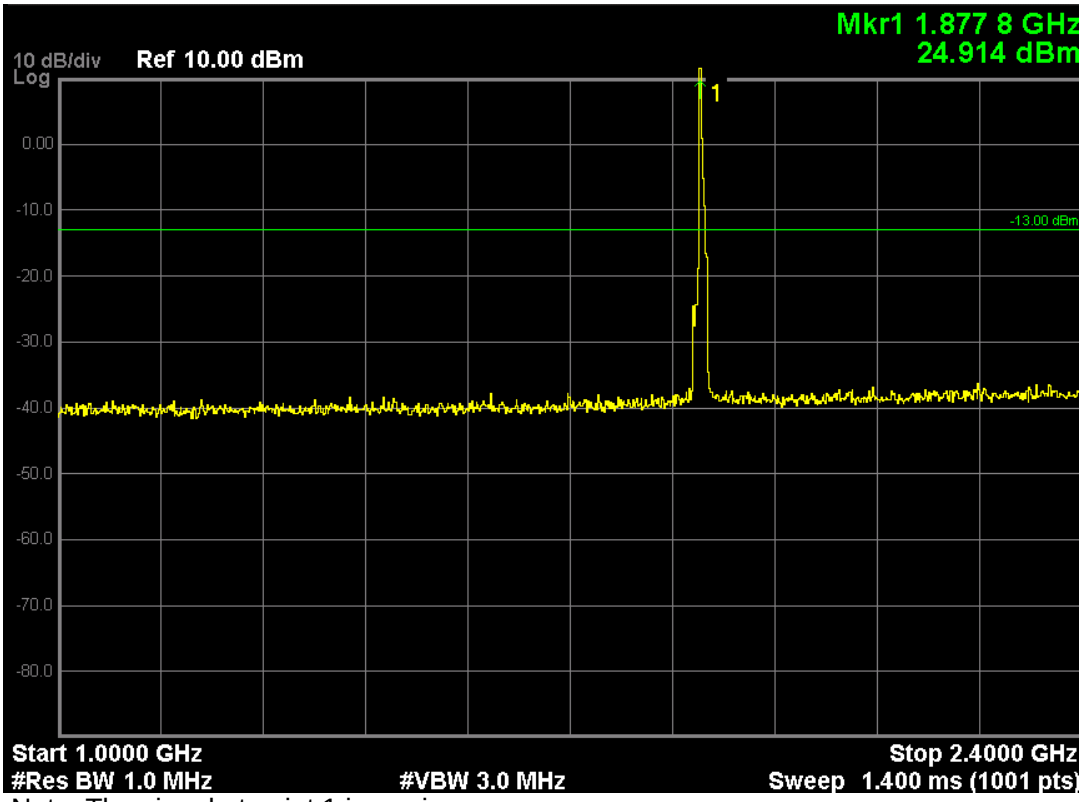
Note: The signal at point 1 is carrier



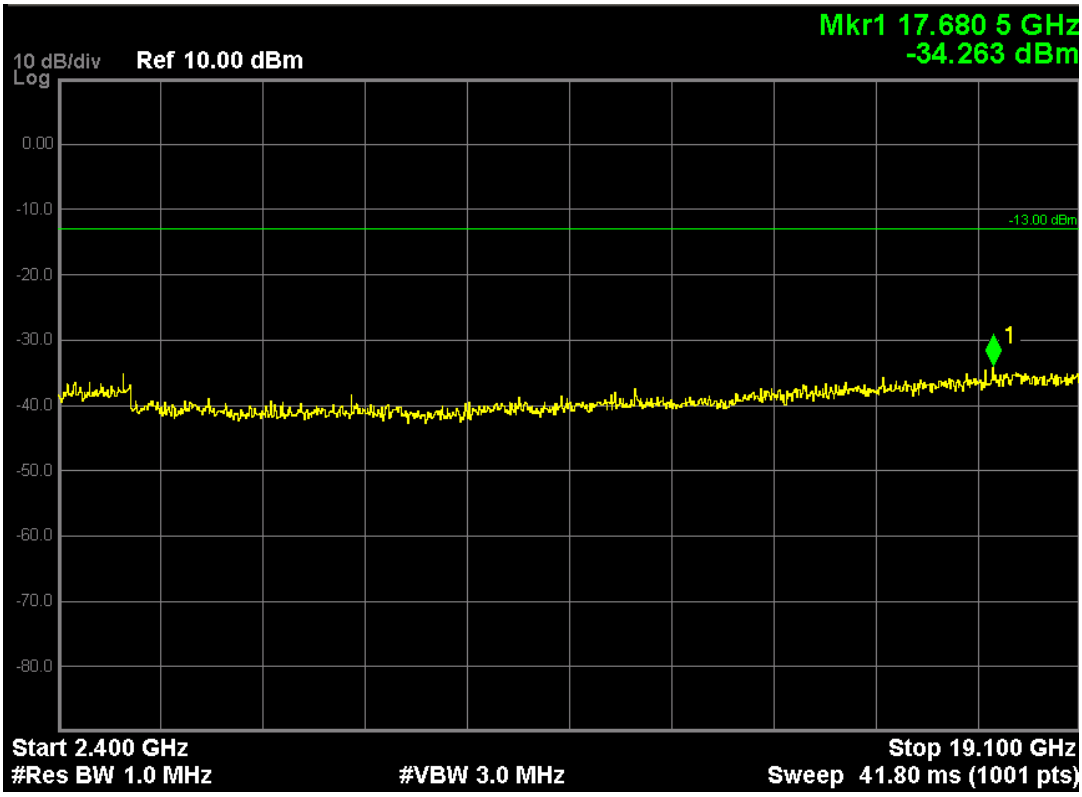
LTE Band 2 (16-QAM, Band Width 5MHz,RB Size 1,RB Offset 0,Channel 18900,Frequeny 1880MHz)



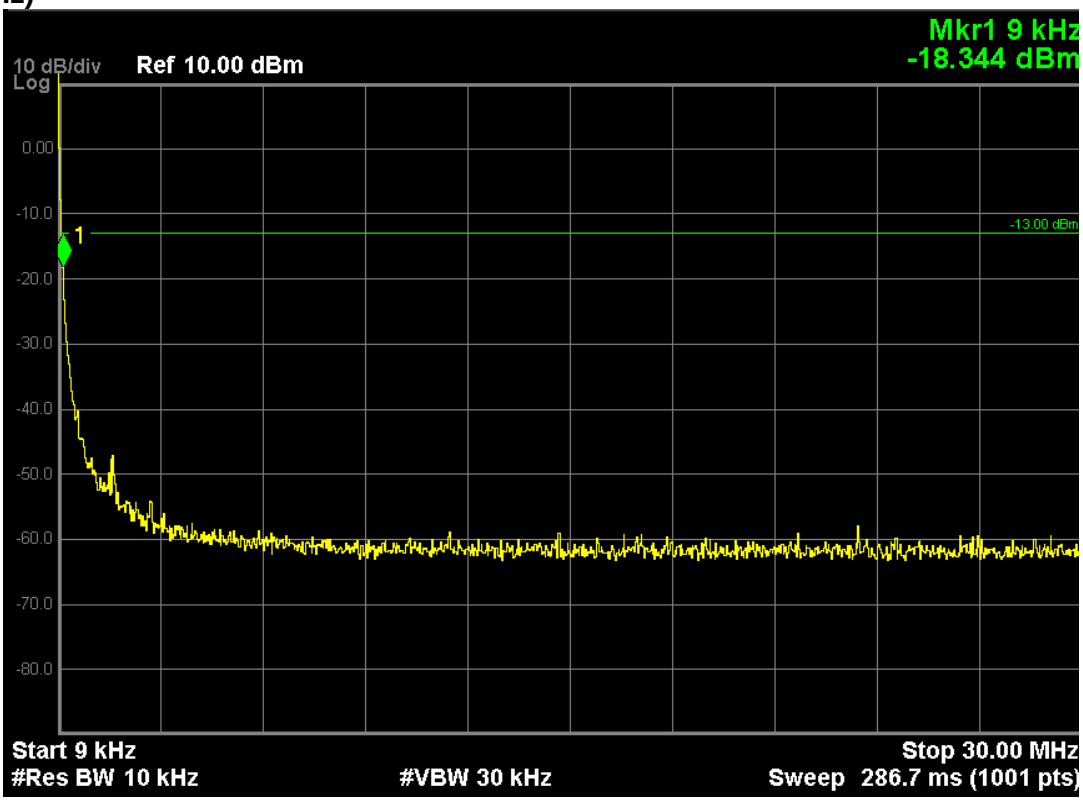


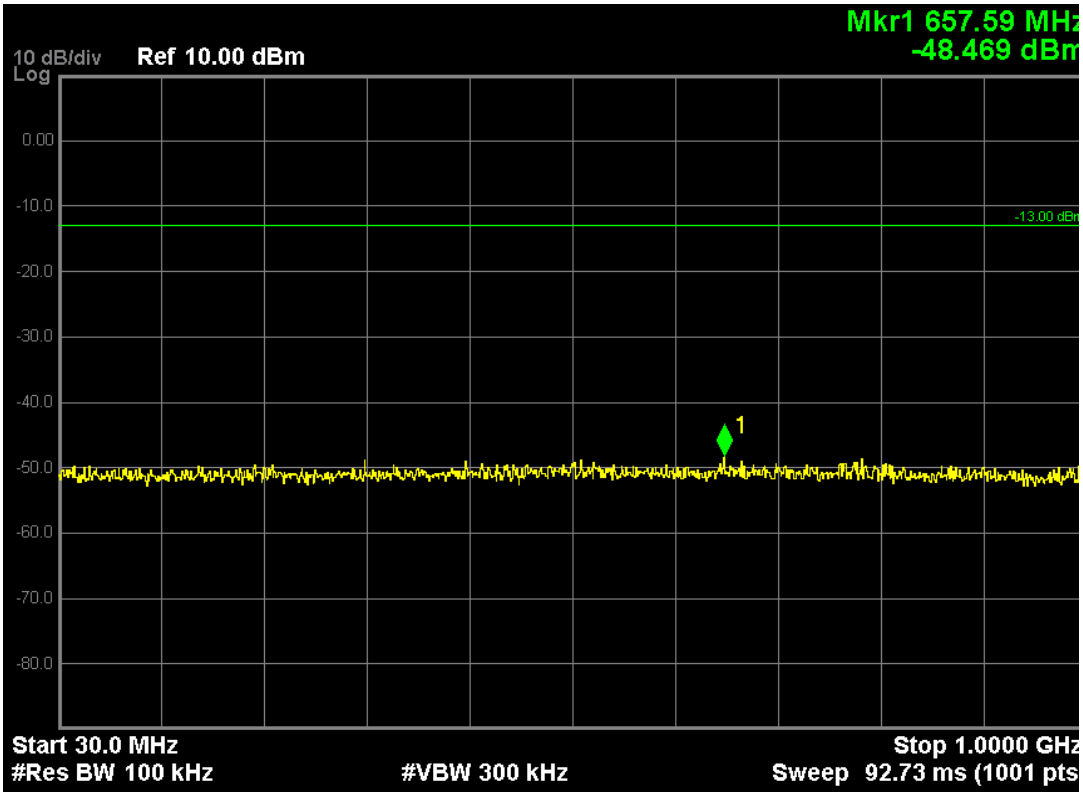


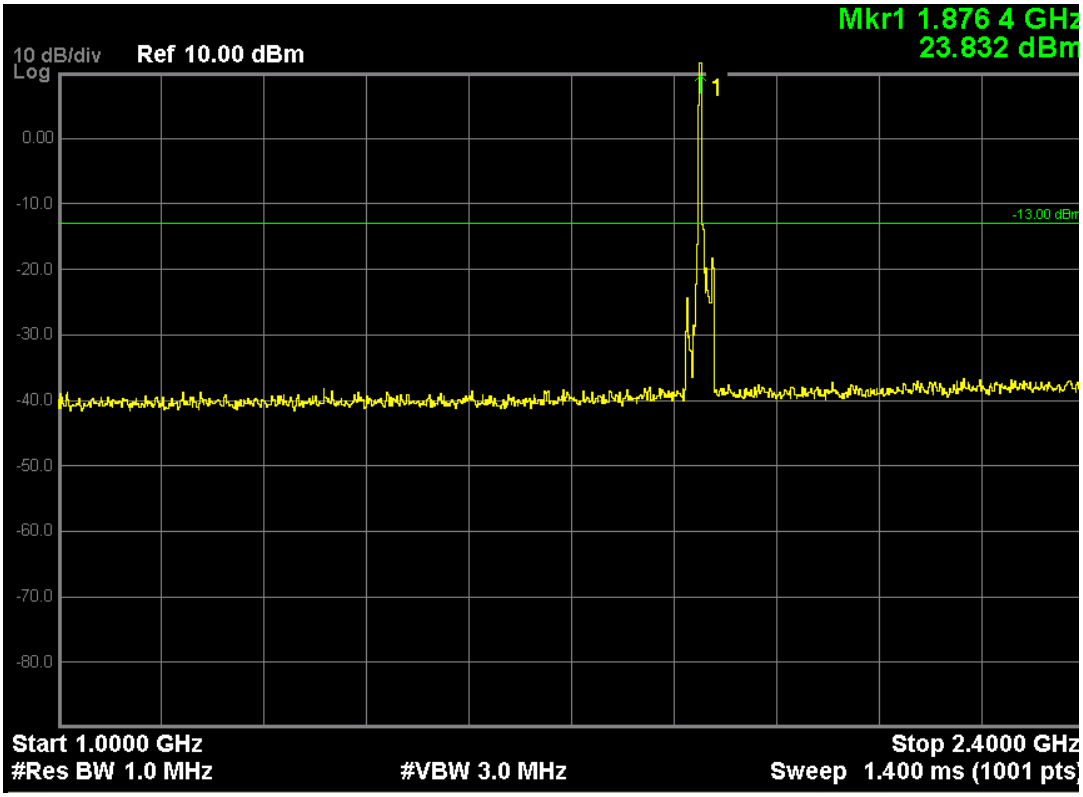
Note: The signal at point 1 is carrier



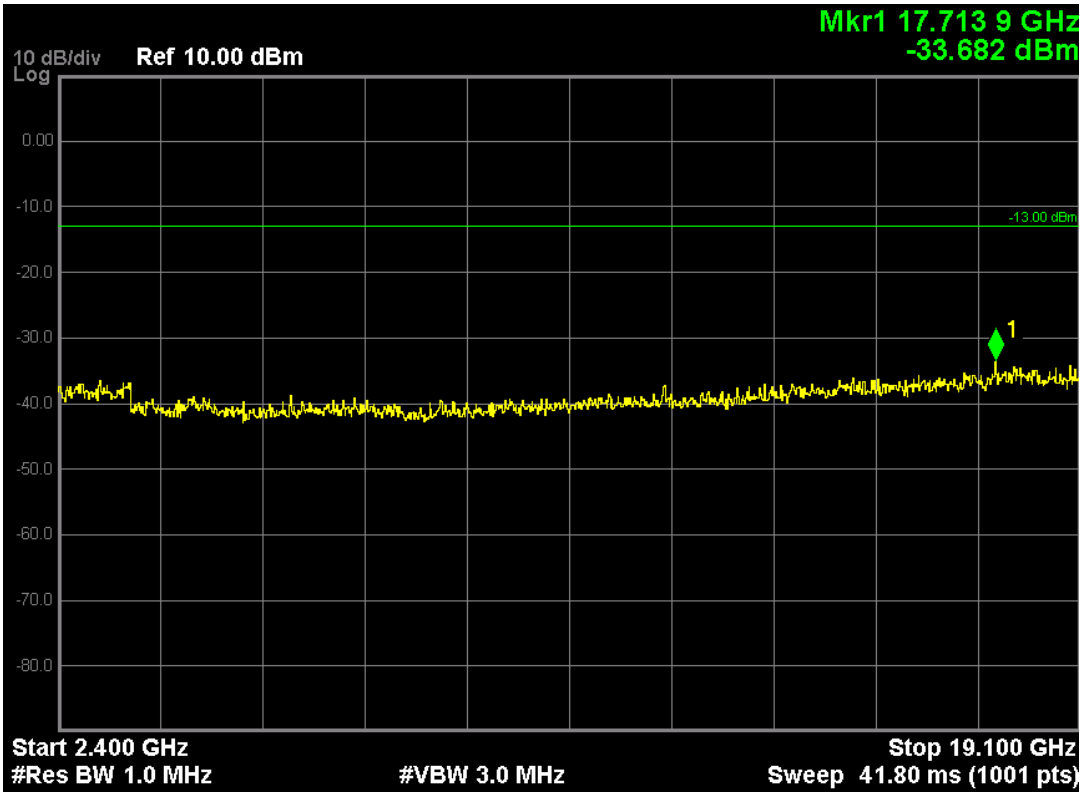
LTE Band 2 (QPSK, Band Width 10MHz,RB Size 1,RB Offset,Channel 18900,Frequeny 1880MHz)



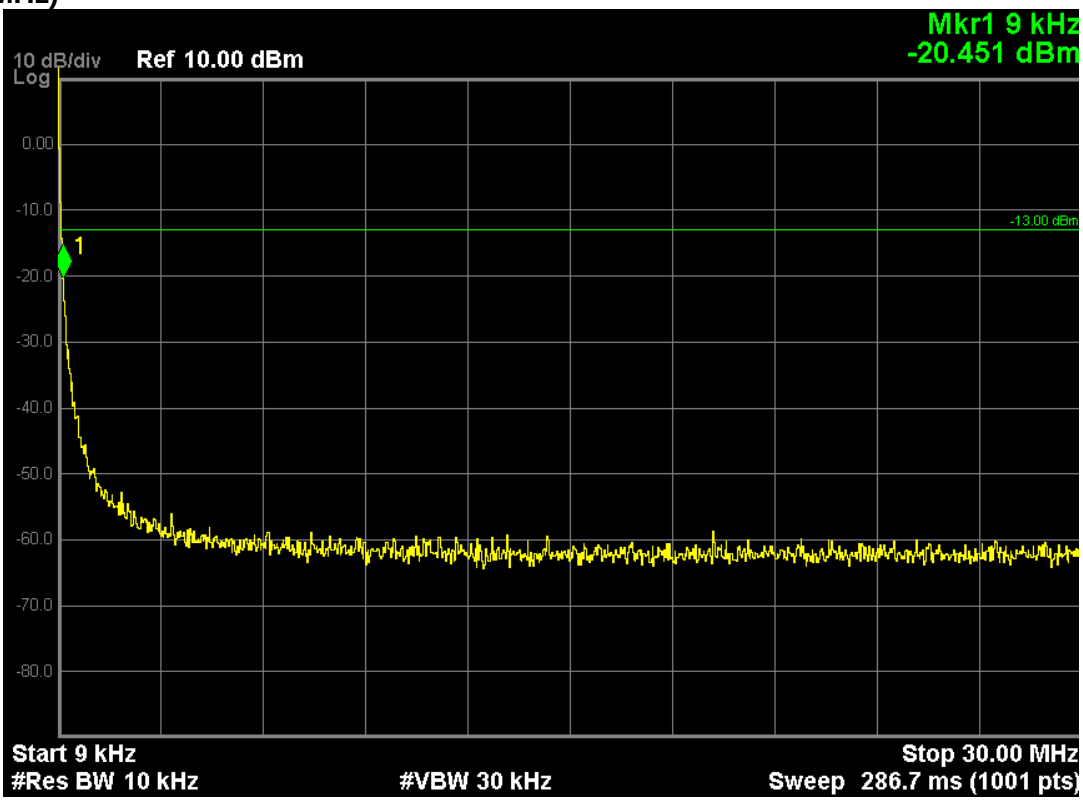


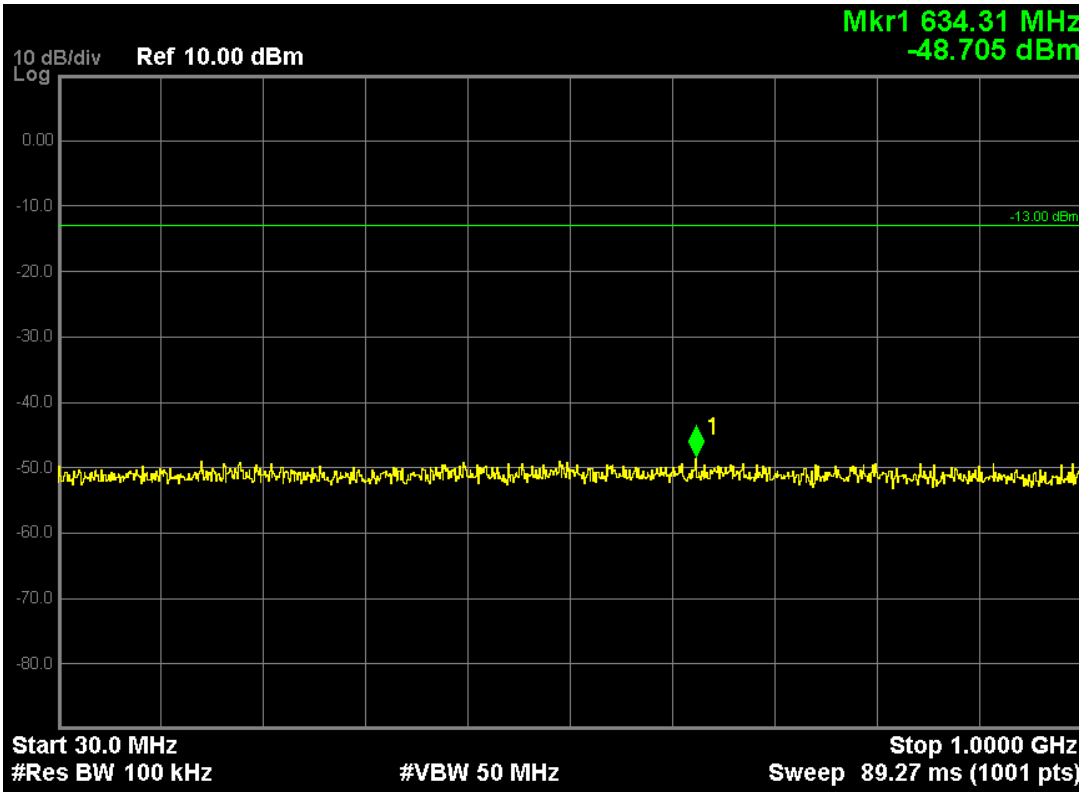


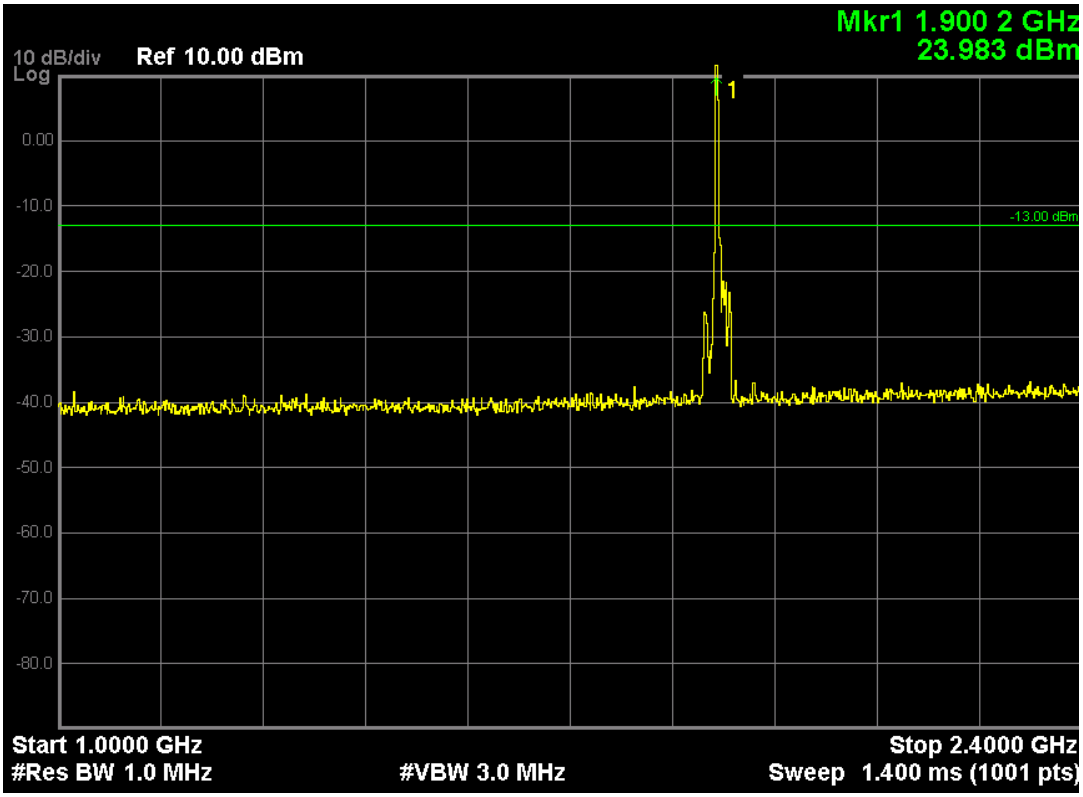
Note: The signal at point 1 is carrier



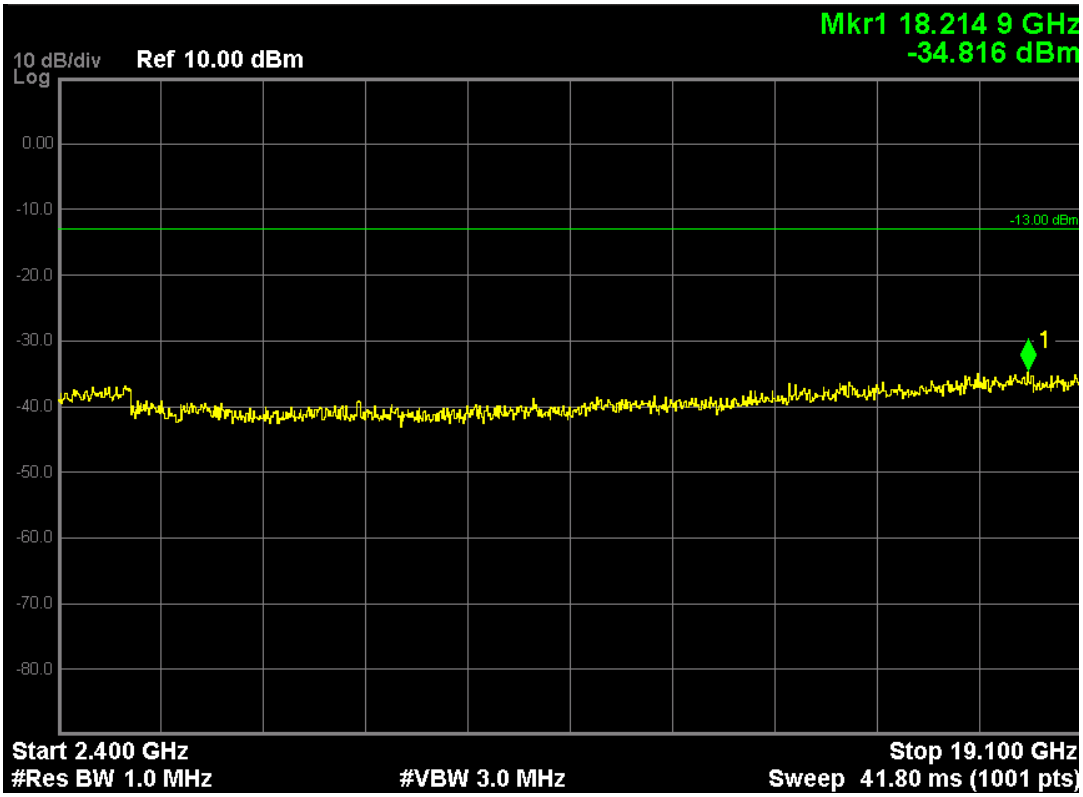
LTE Band 2 (16-QAM, Band Width 10MHz,RB Size 1,RB Offset 0,Channel 19150,Frequeny 1905.0MHz)



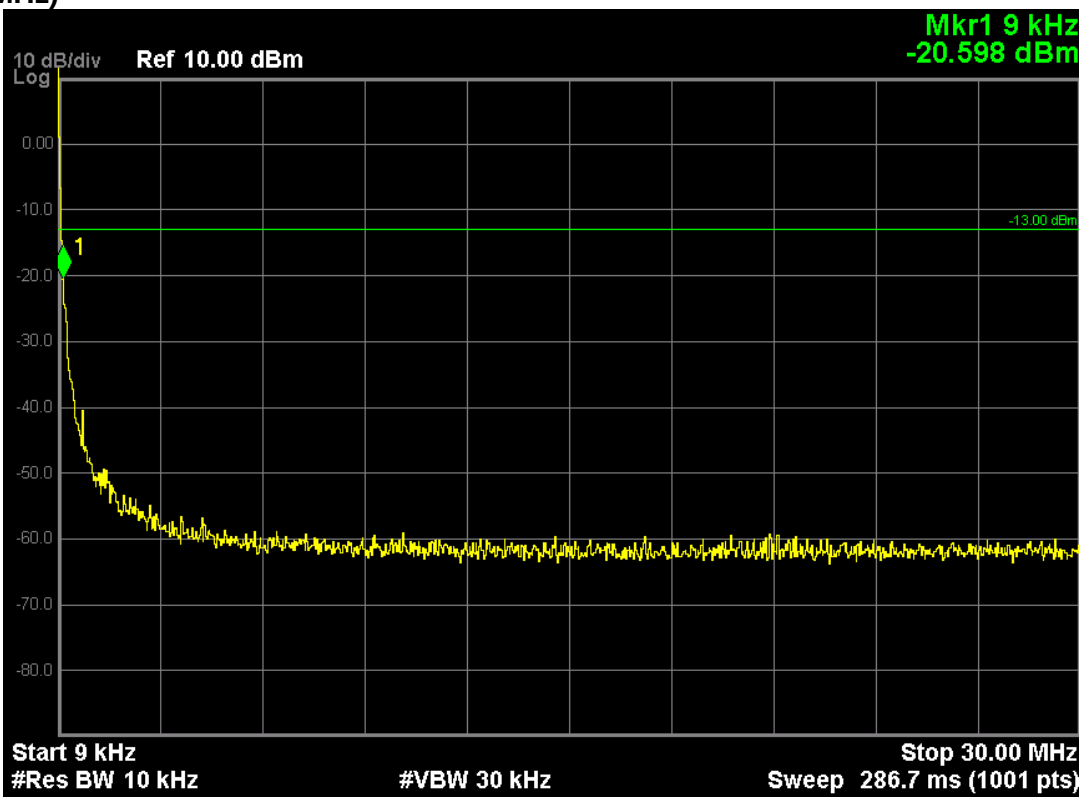


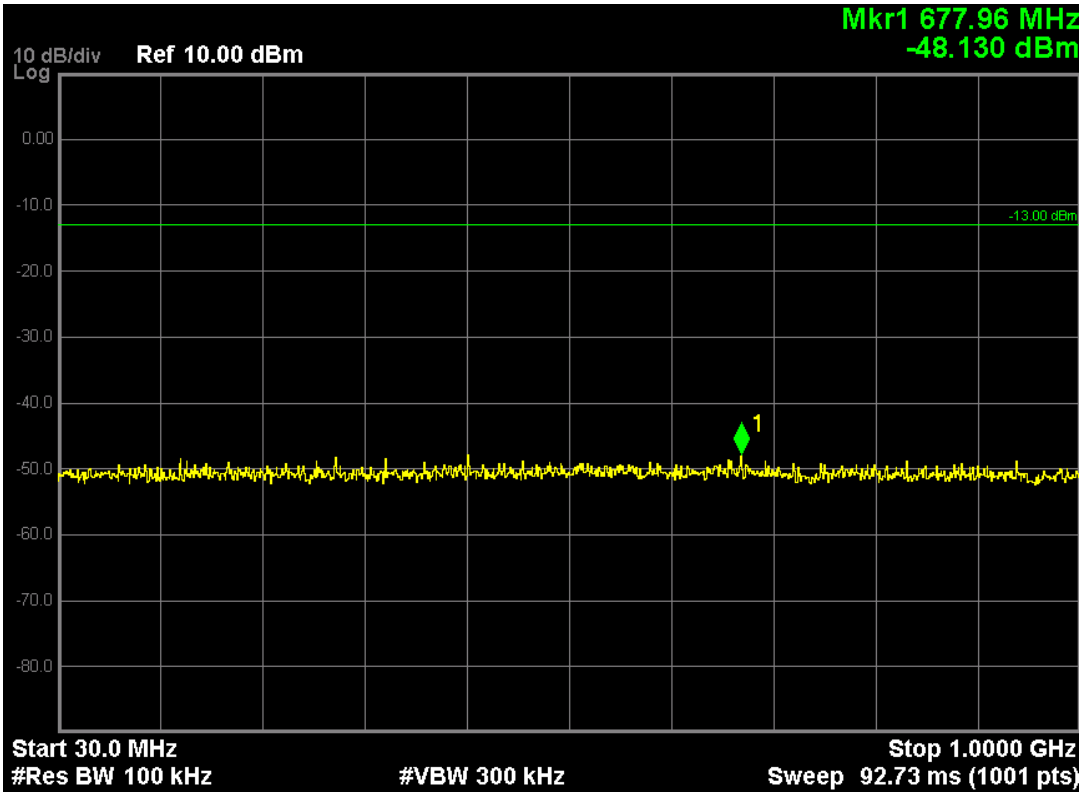


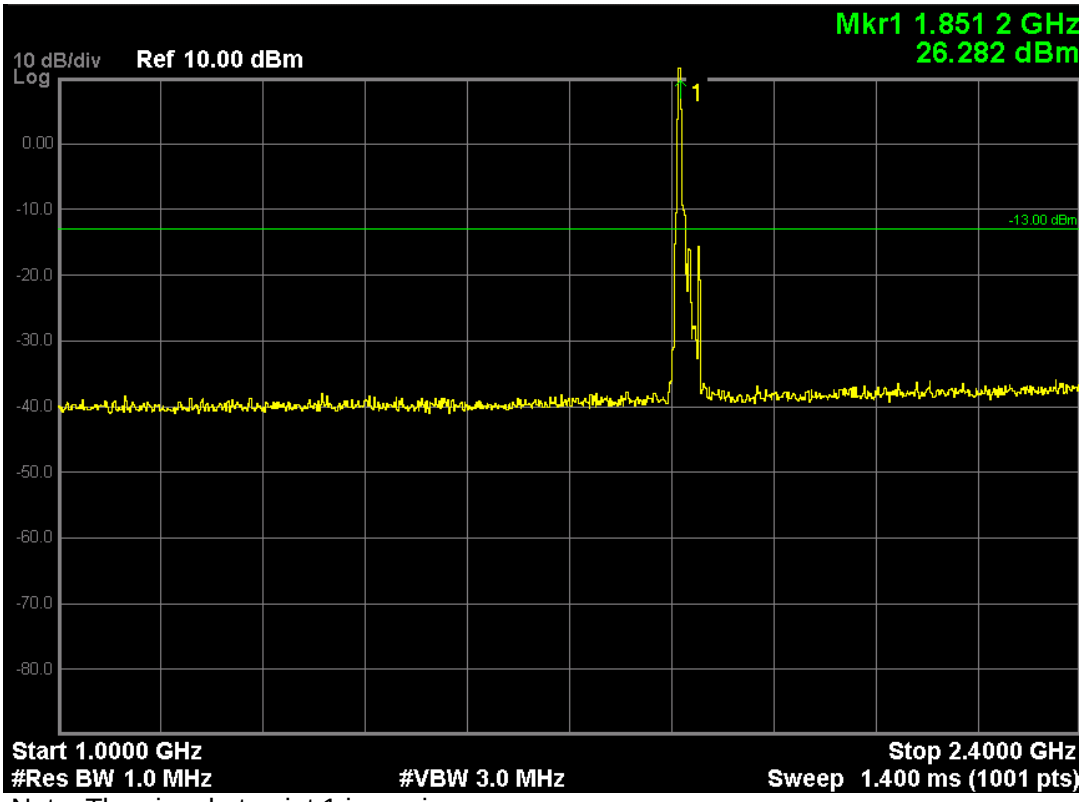
Note: The signal at point 1 is carrier



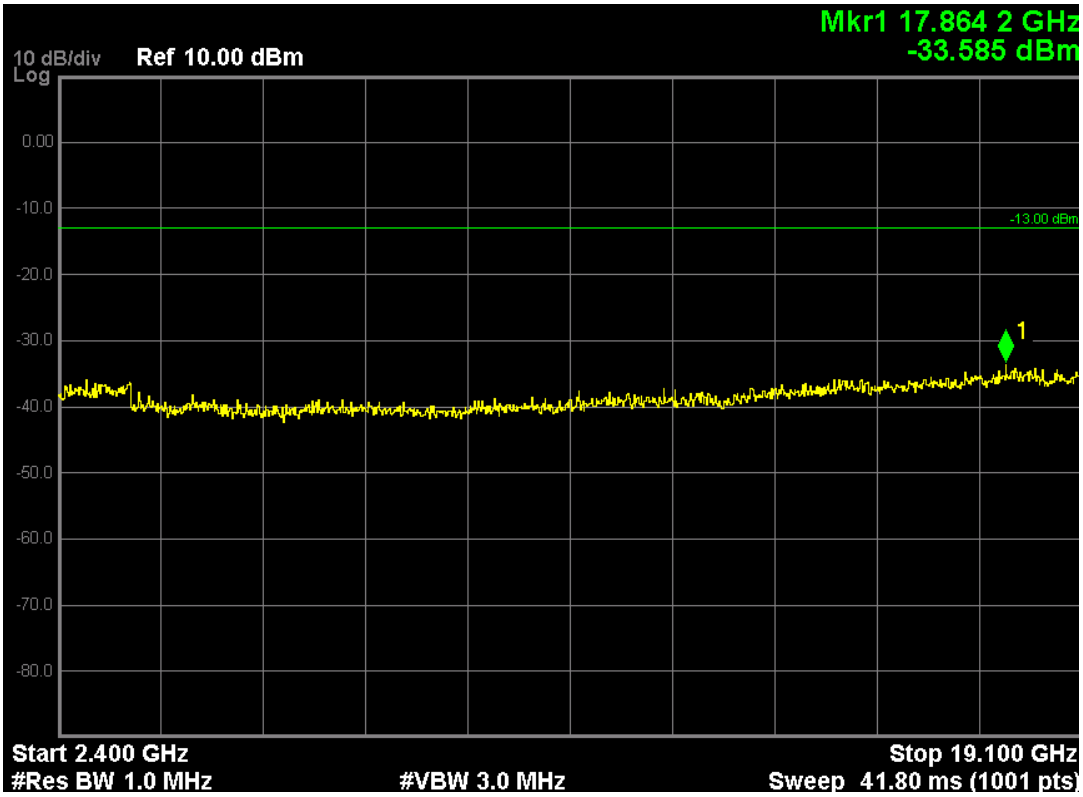
LTE Band 2 (QPSK, Band Width 15MHz,RB Size 1,RB Offset 0,Channel 18675,Frequeny 1857.5MHz)



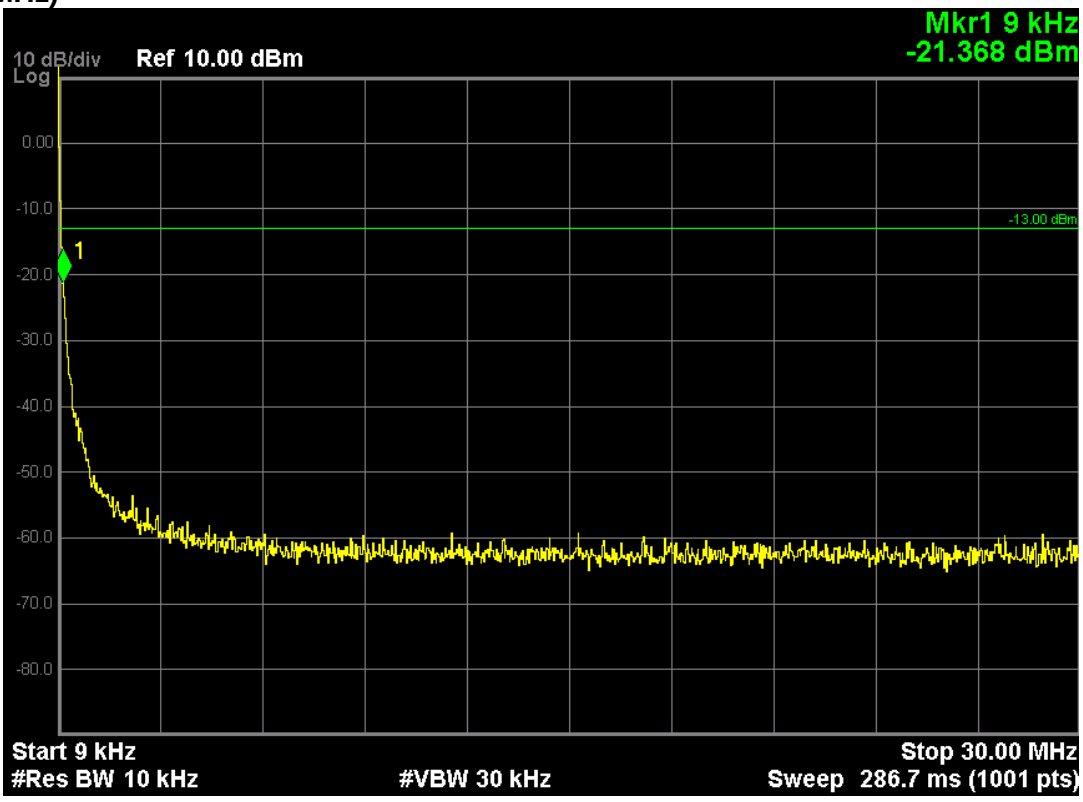


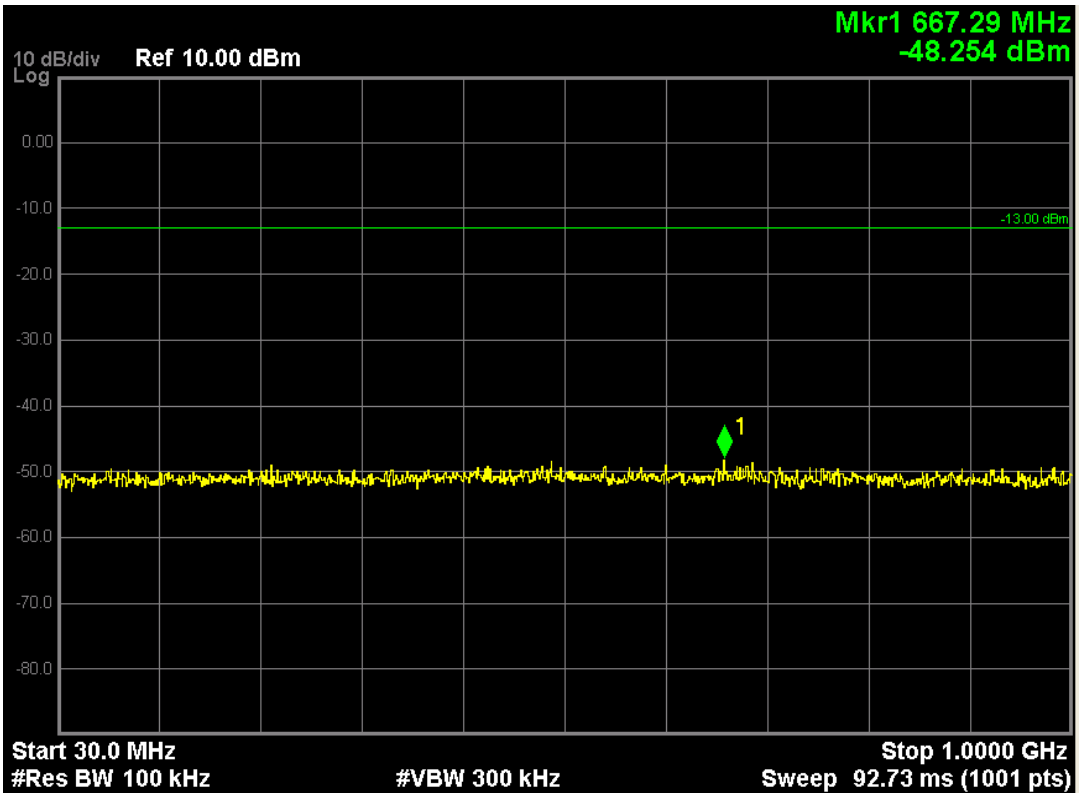


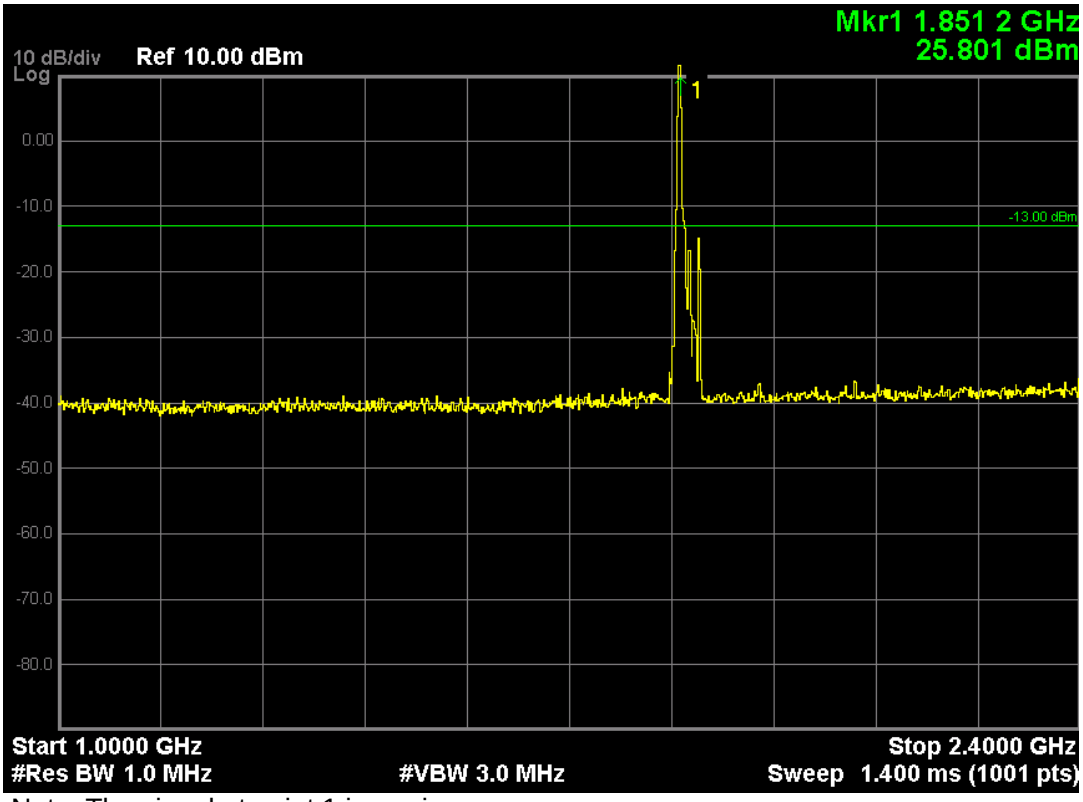
Note: The signal at point 1 is carrier



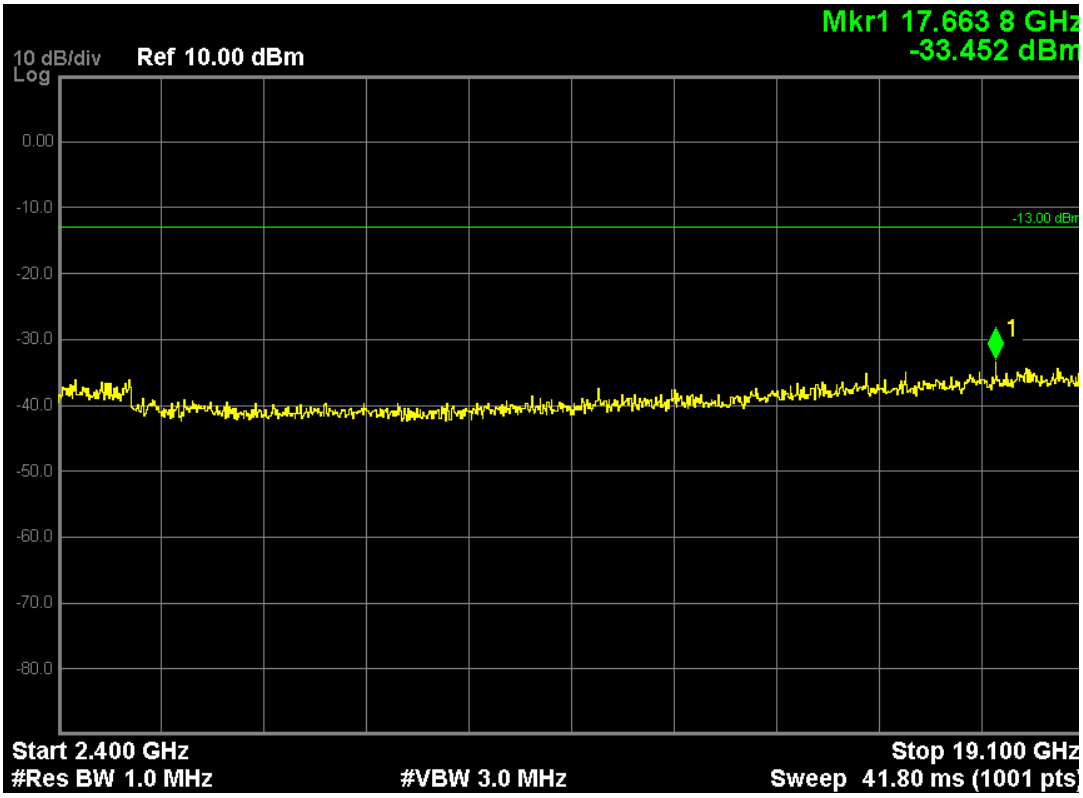
LTE Band 2 (16-QAM, Band Width 15MHz,RB Size 1,RB Offset 0,Channel 19675,Frequeny 1857.5MHz)



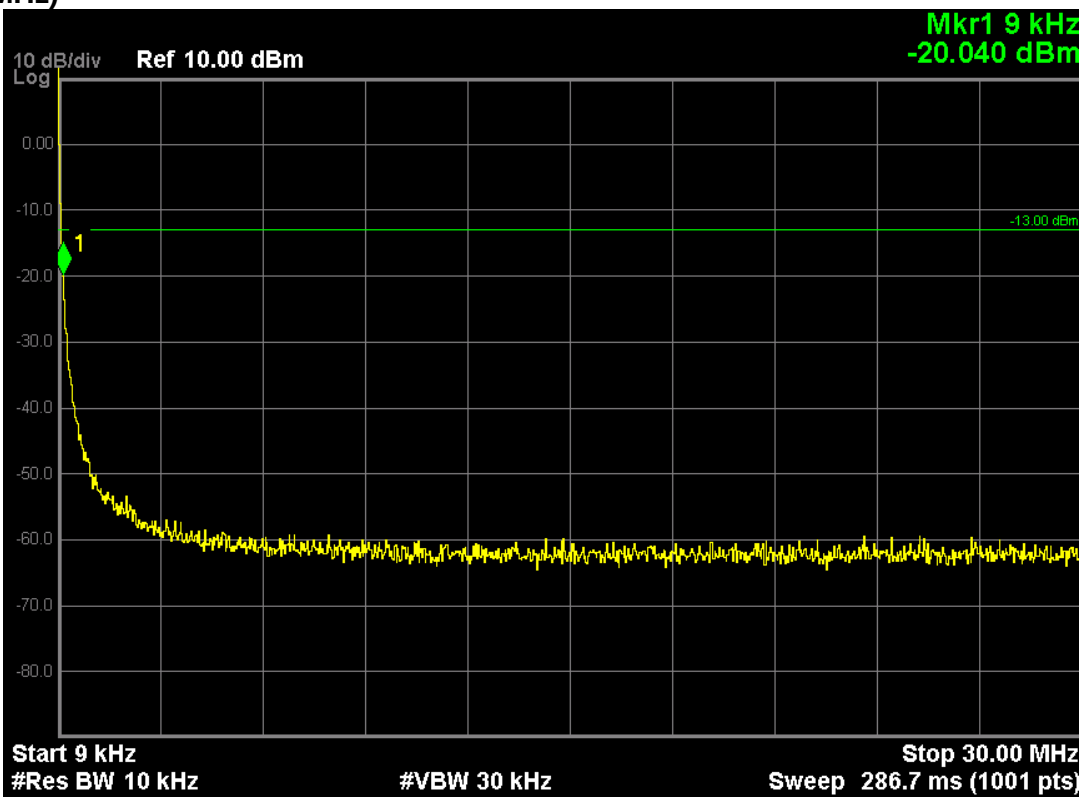


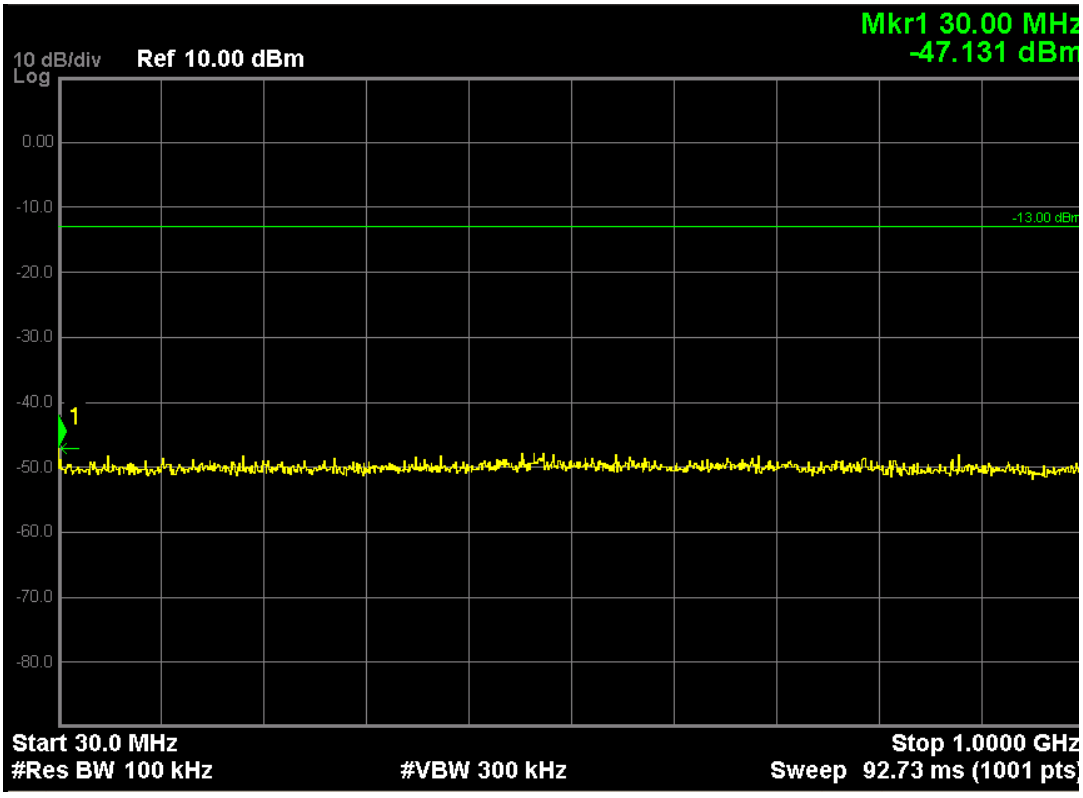


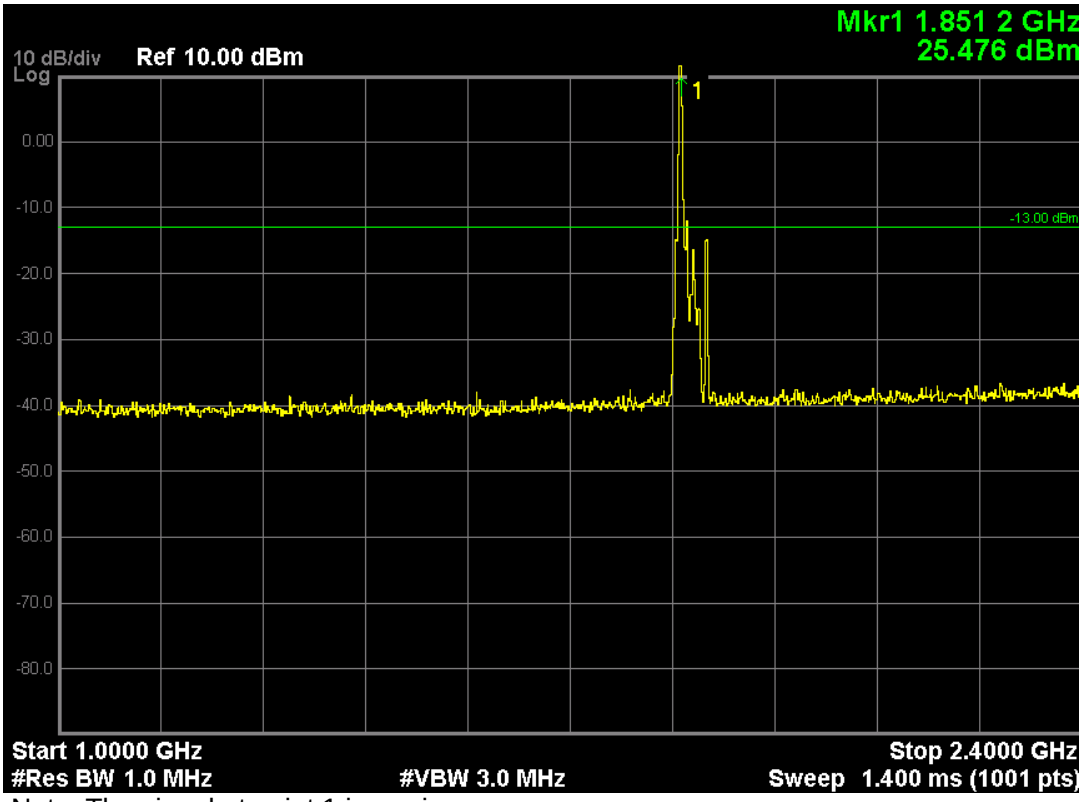
Note: The signal at point 1 is carrier



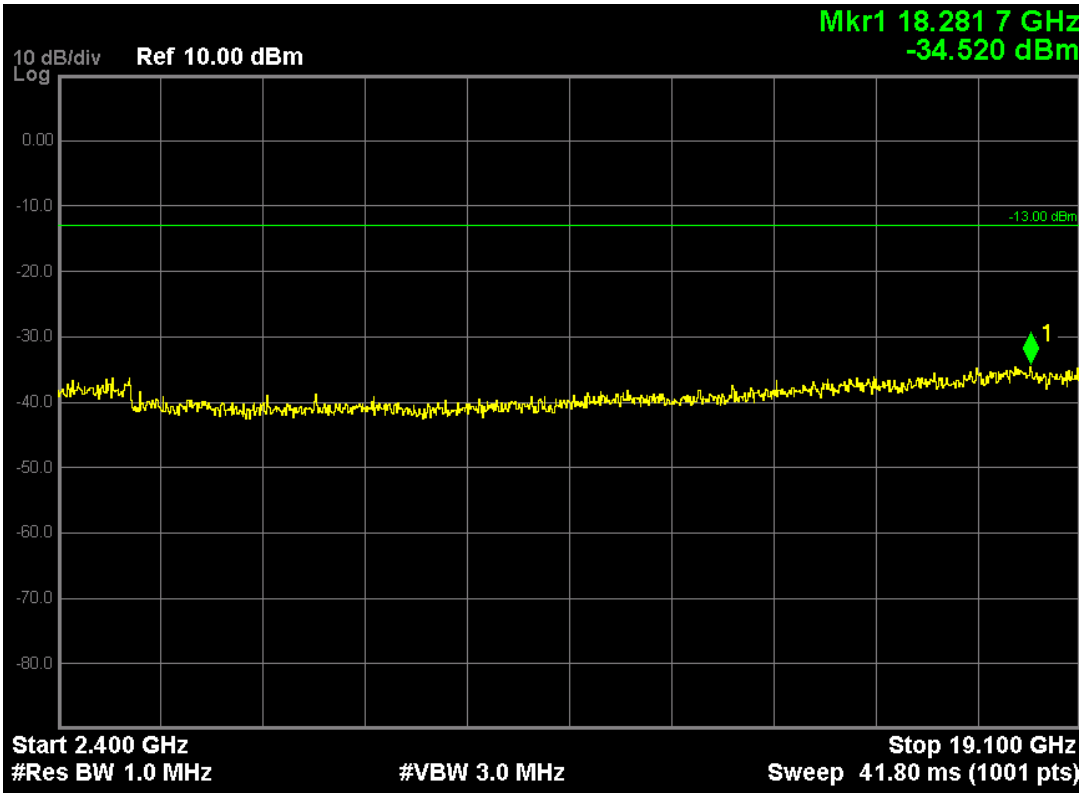
LTE Band 2 (QPSK, Band Width 20MHz,RB Size 1,RB Offset 0,Channel 18700,Frequeny 1860.0MHz)



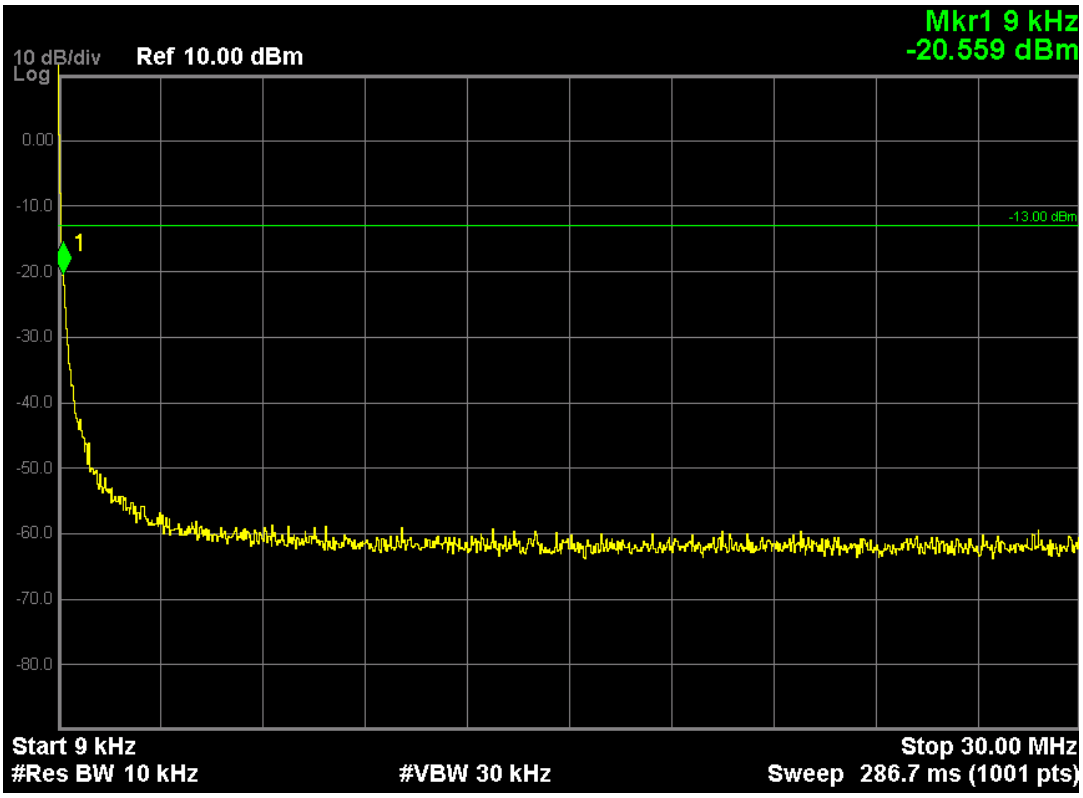


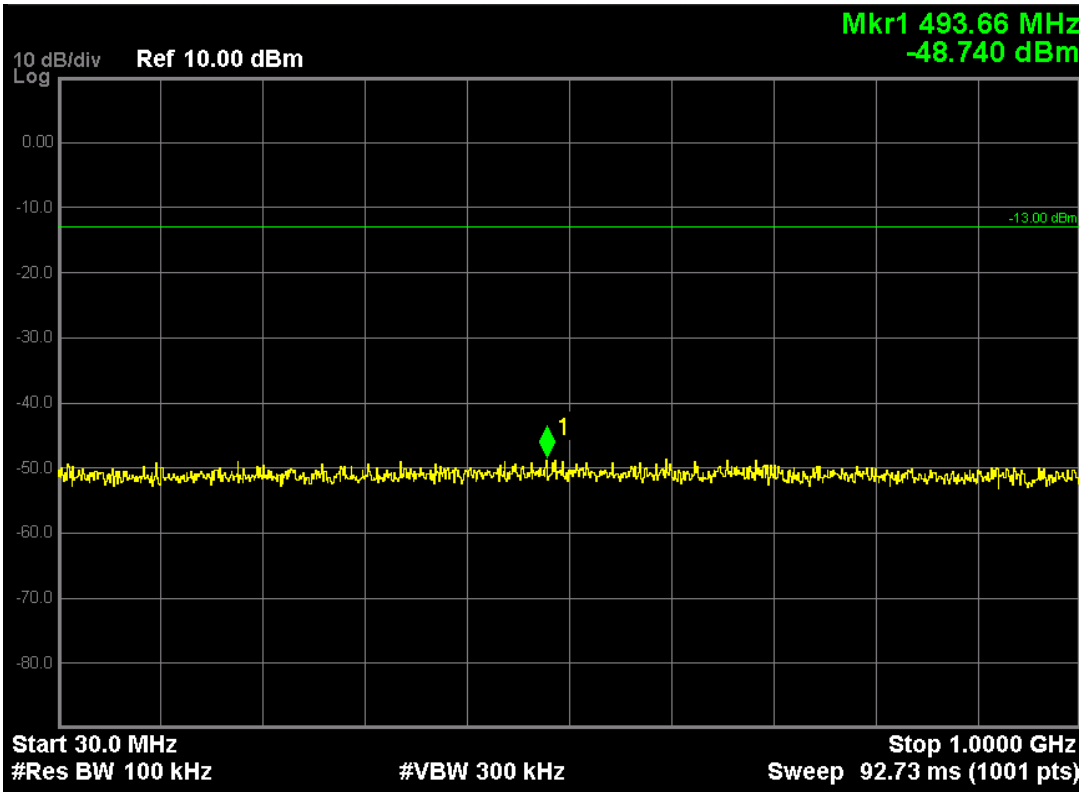


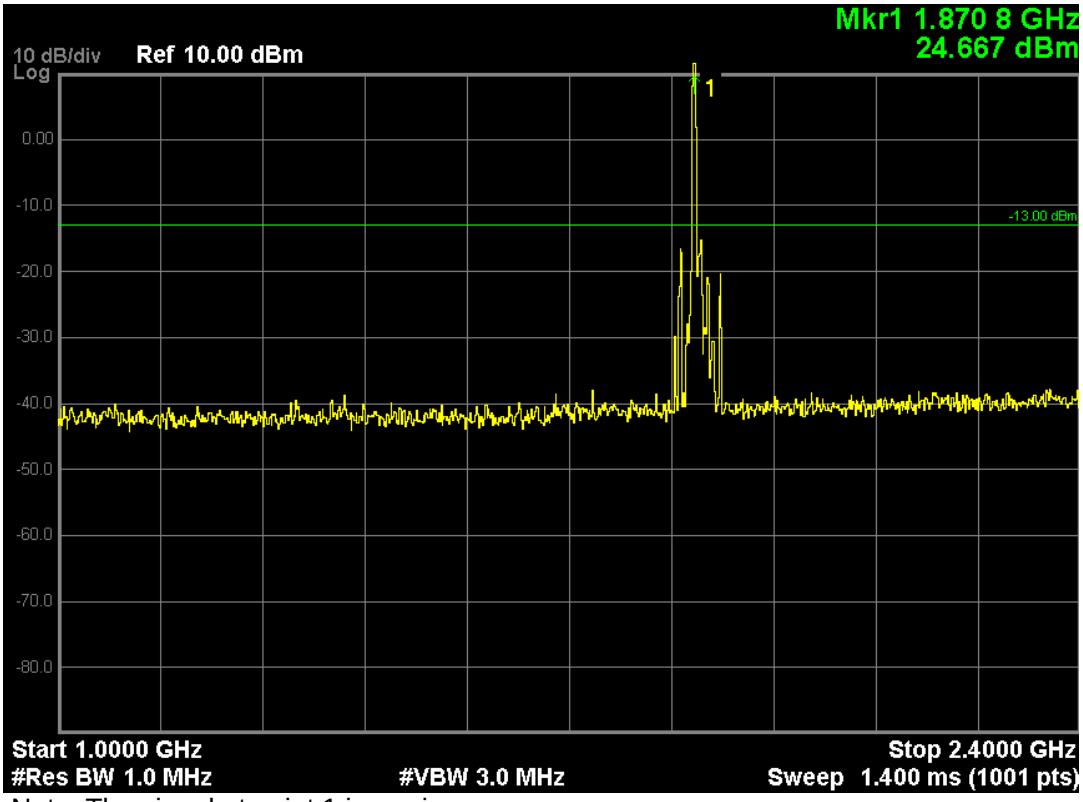
Note: The signal at point 1 is carrier



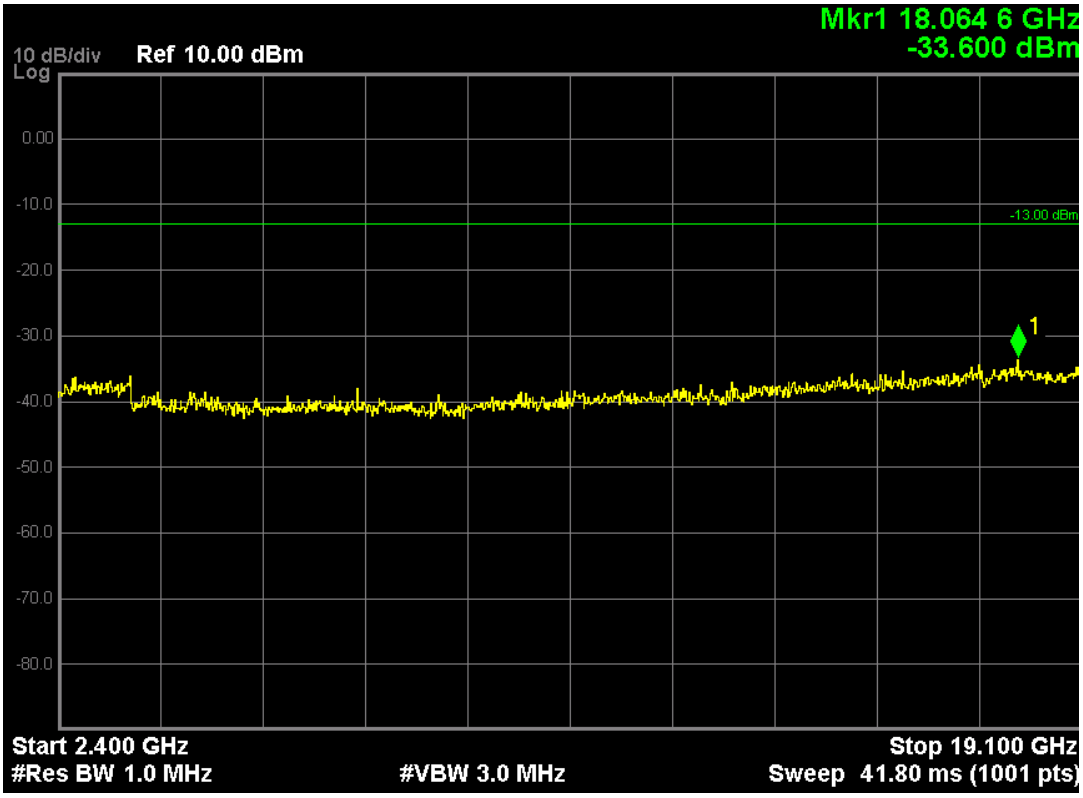
LTE Band 2 (16-QAM, Band Width 20MHz, RB Size 1,RB Offset 0,Channel 18900,Frequeny 1880.0MHz)



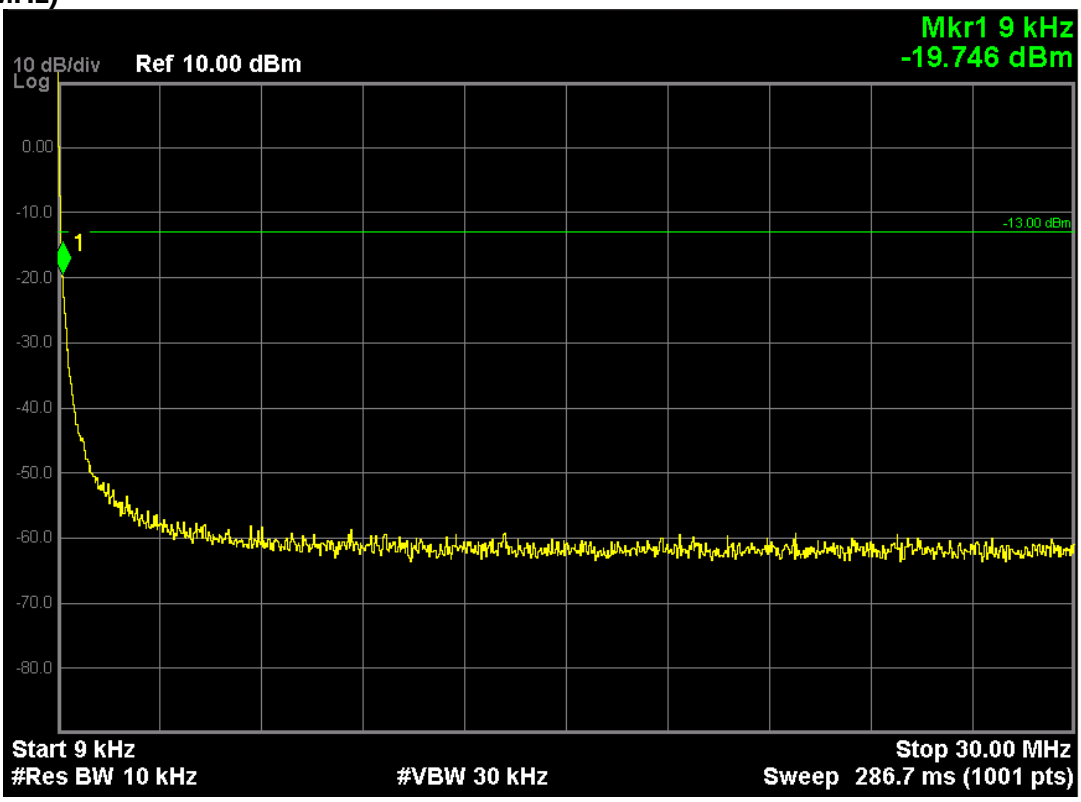


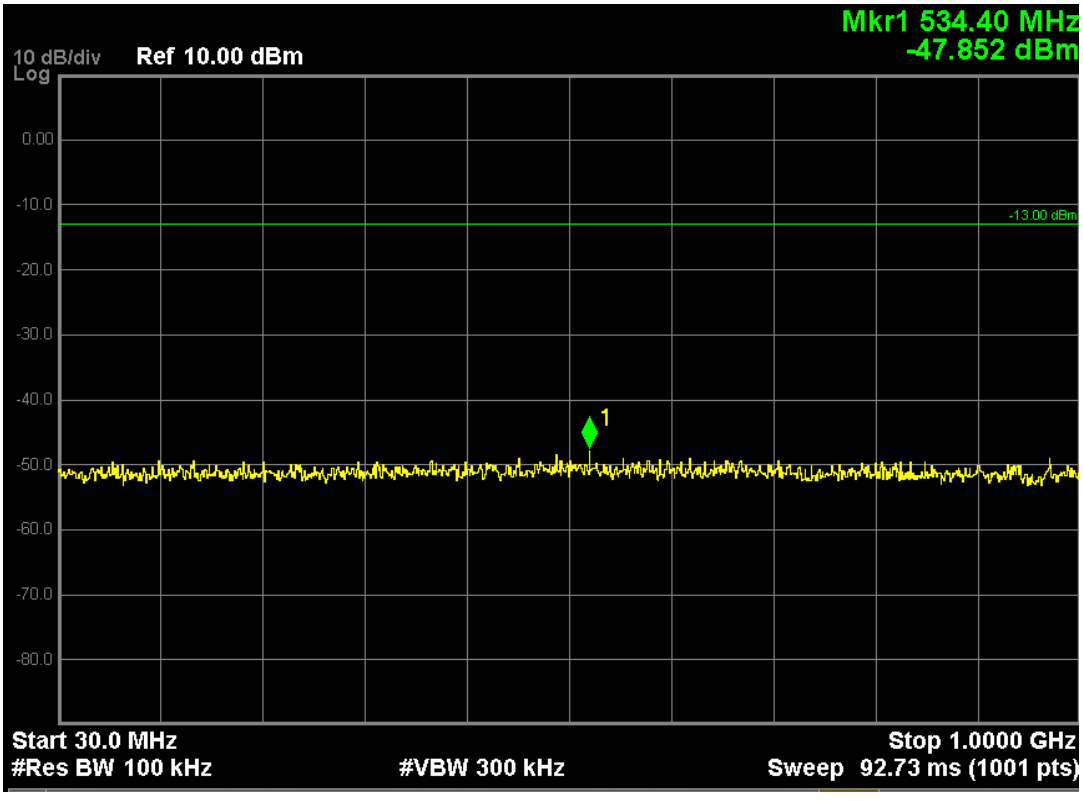


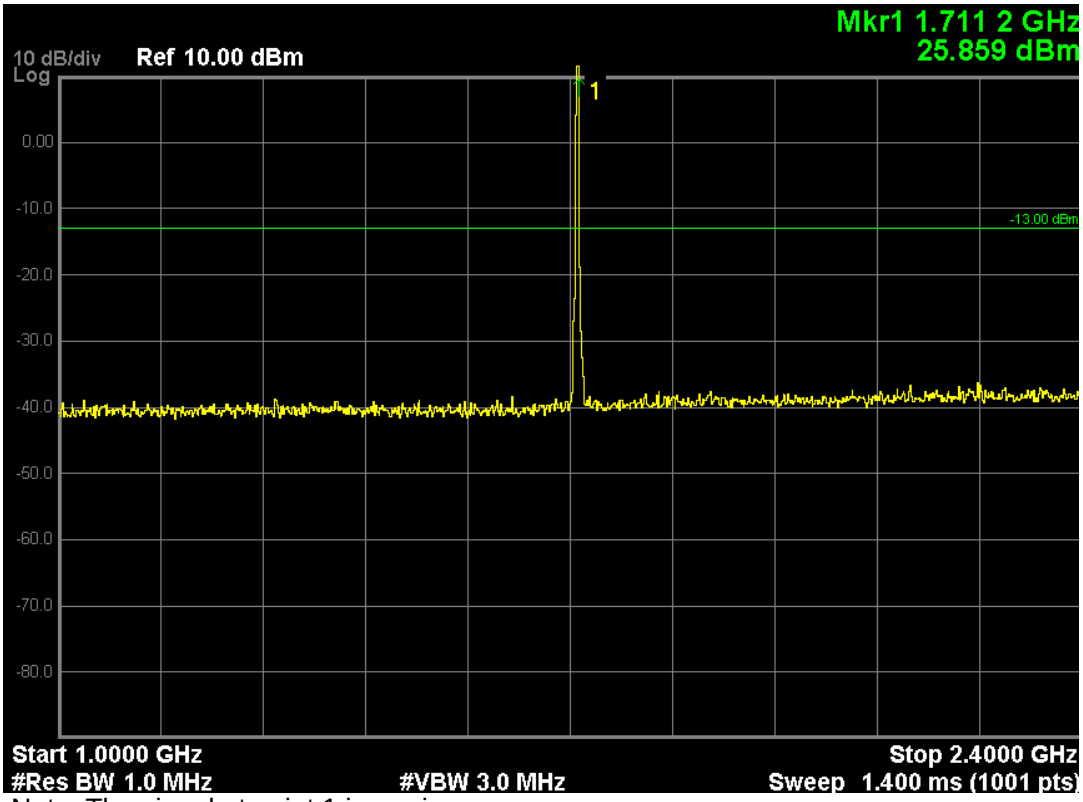
Note: The signal at point 1 is carrier



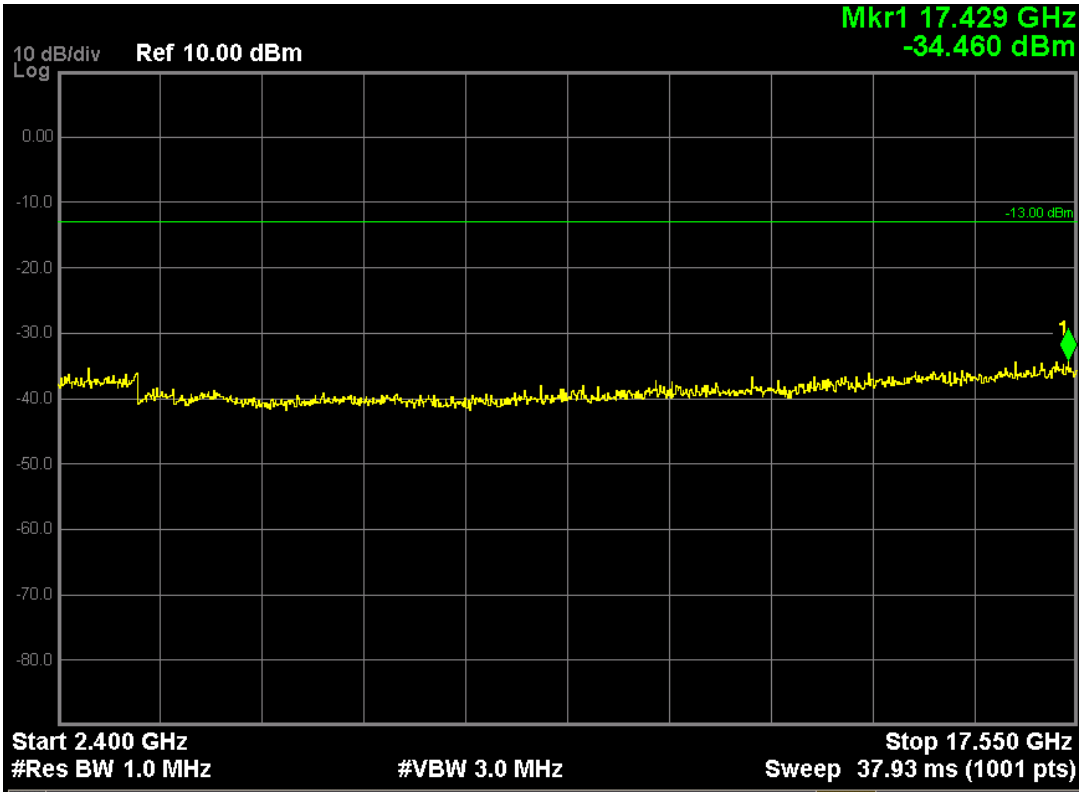
LTE Band 4 (QPSK, Band Width 1.4MHz,RB Size 1,RB Offset 0,Channel 19957,Frequeny 1710.7MHz)



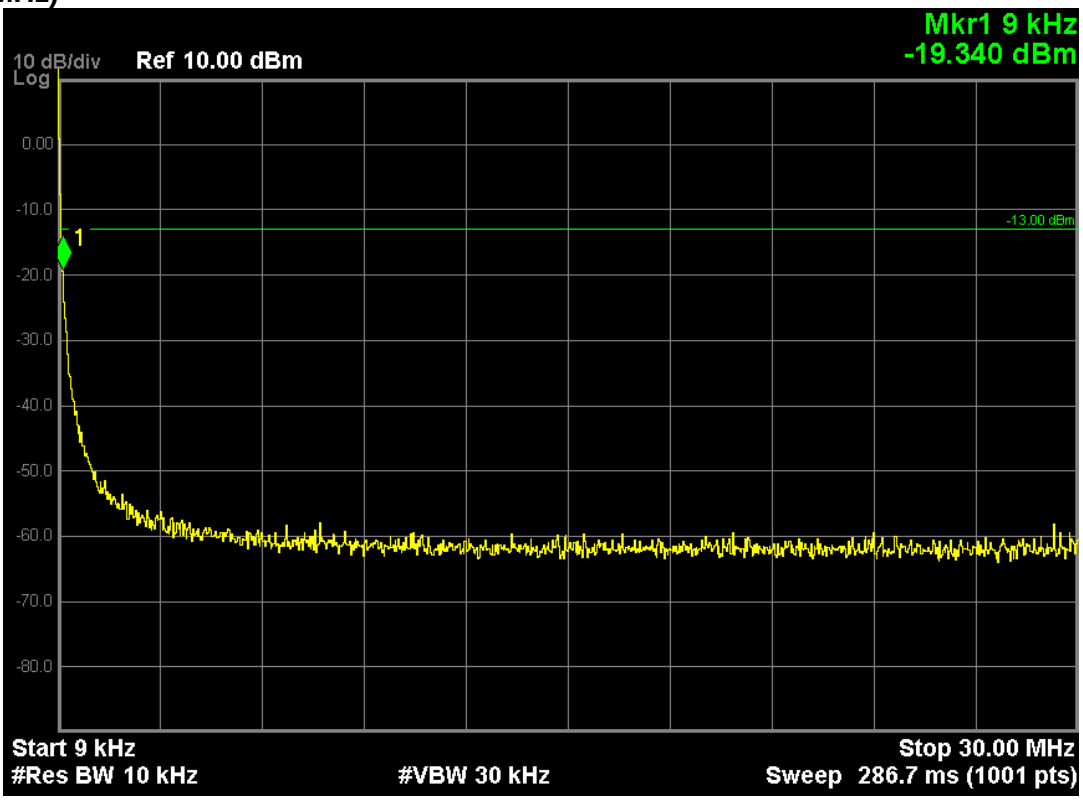


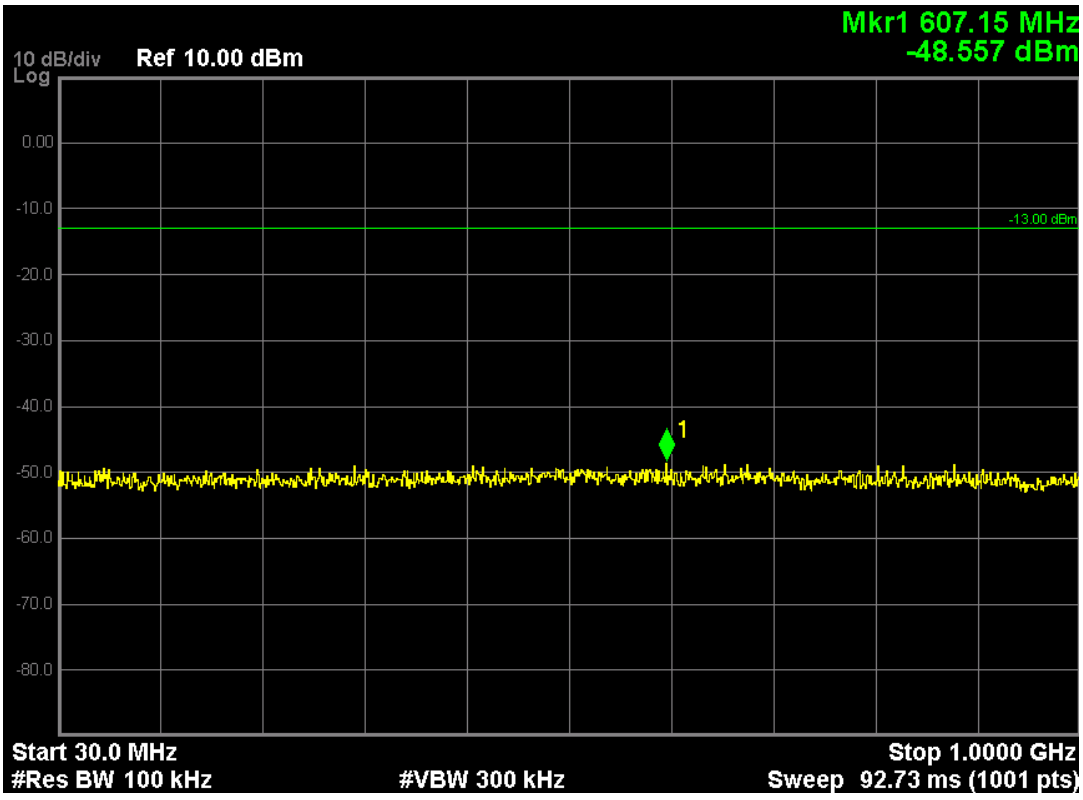


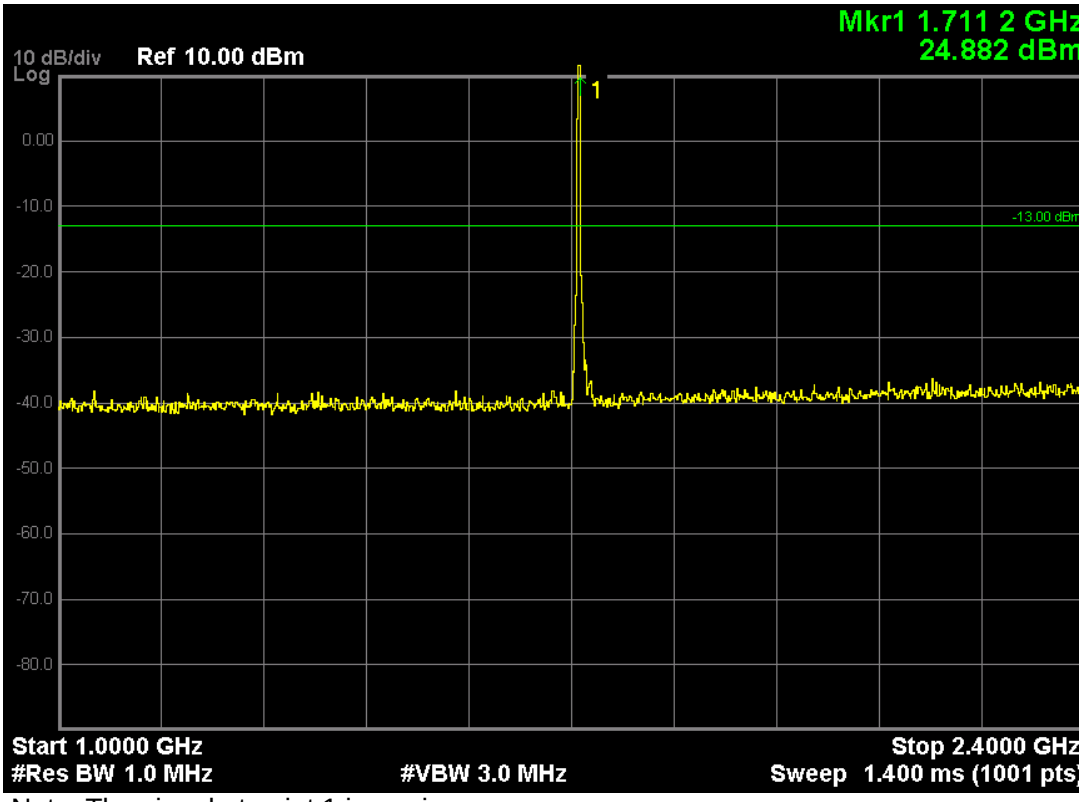
Note: The signal at point 1 is carrier



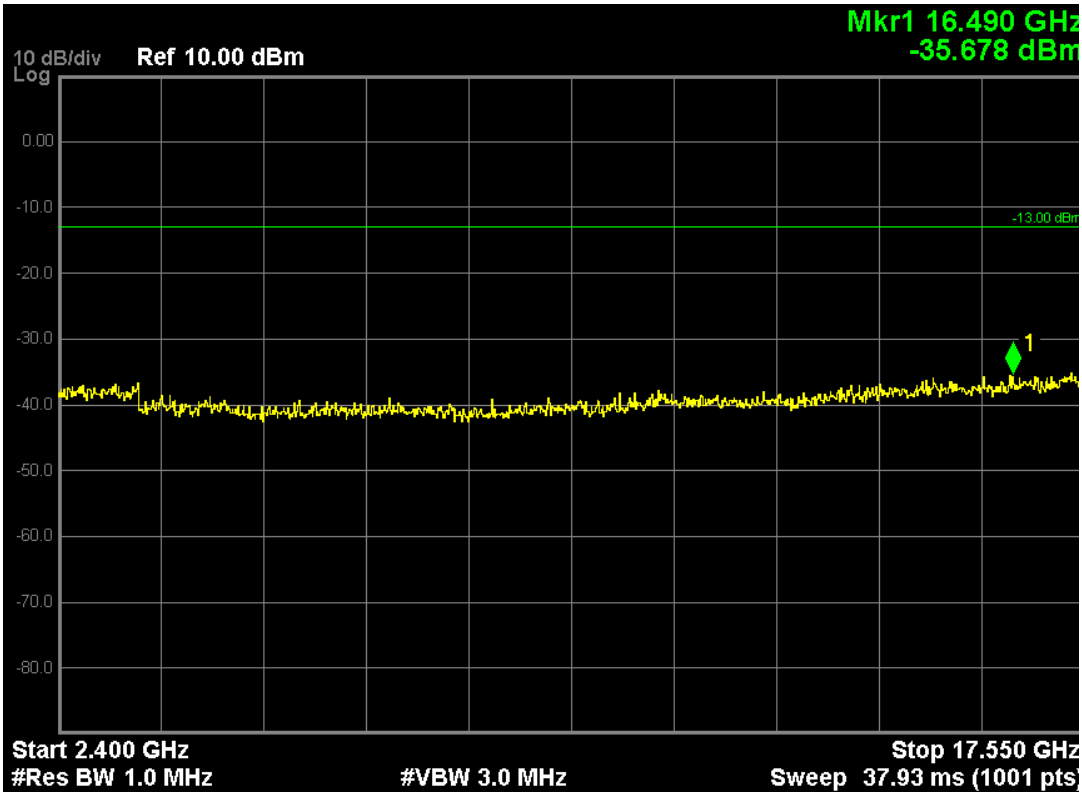
LTE Band 4 (16-QAM, Band Width 1.4MHz,RB Size 1,RB Offset 0,Channel 19957,Frequeny 1710.7MHz)



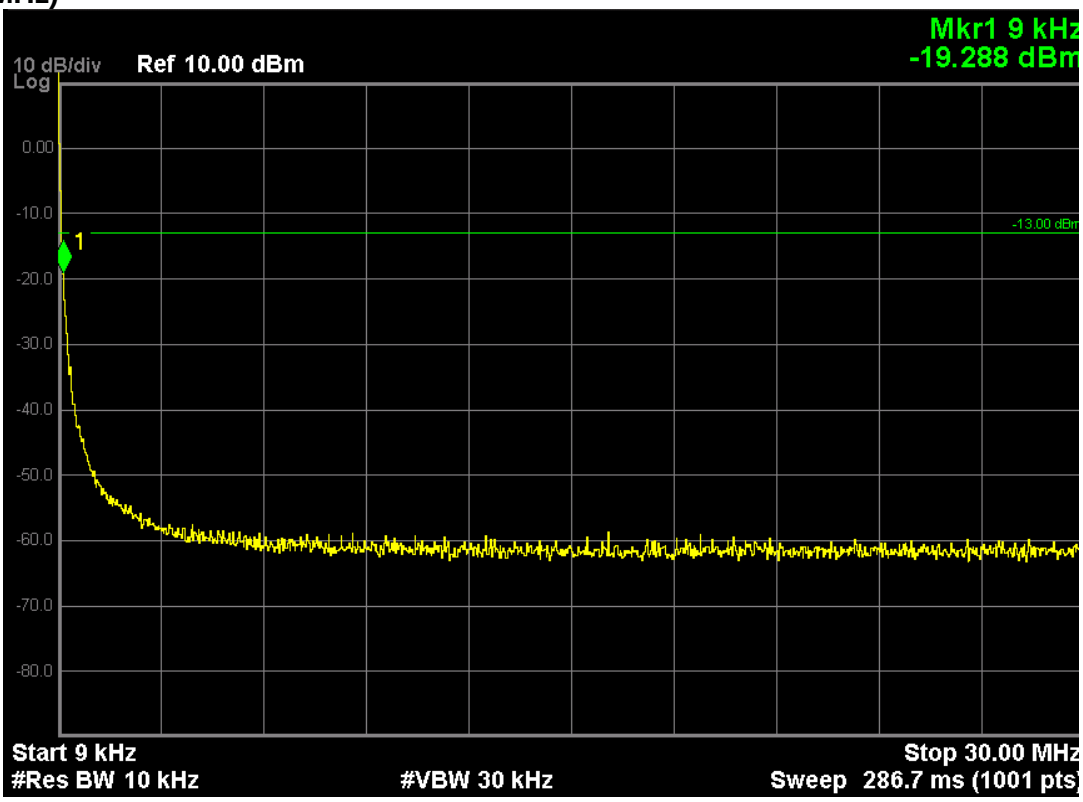


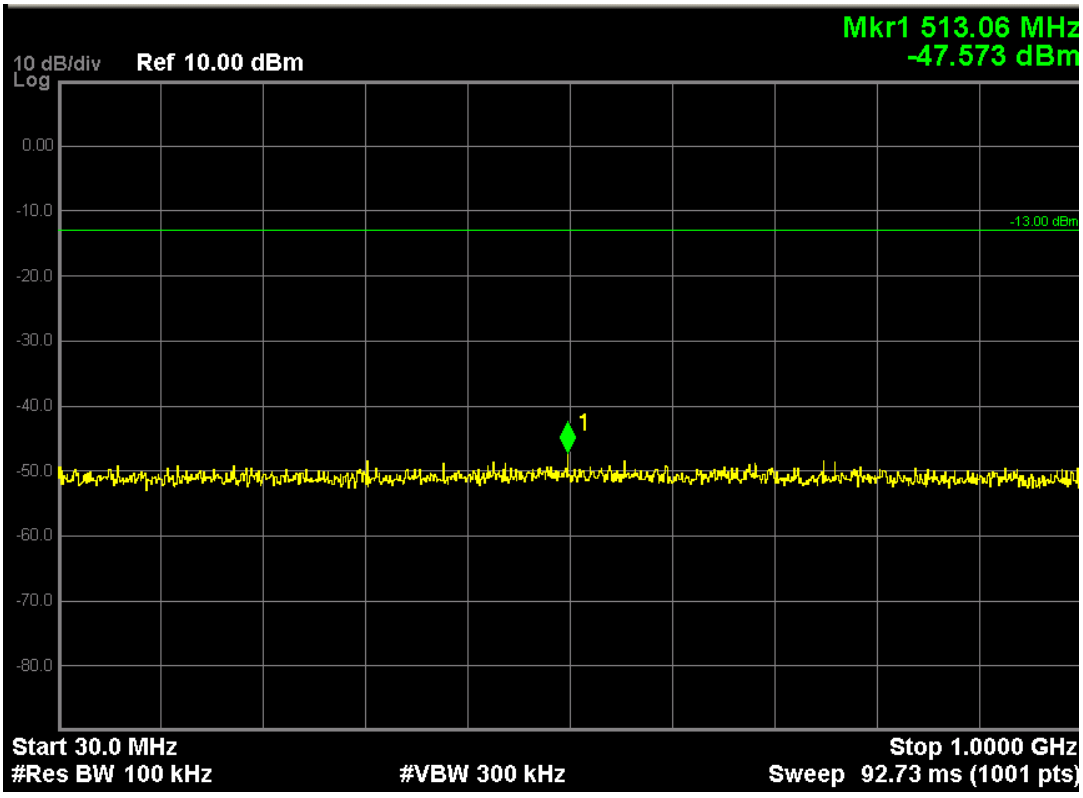


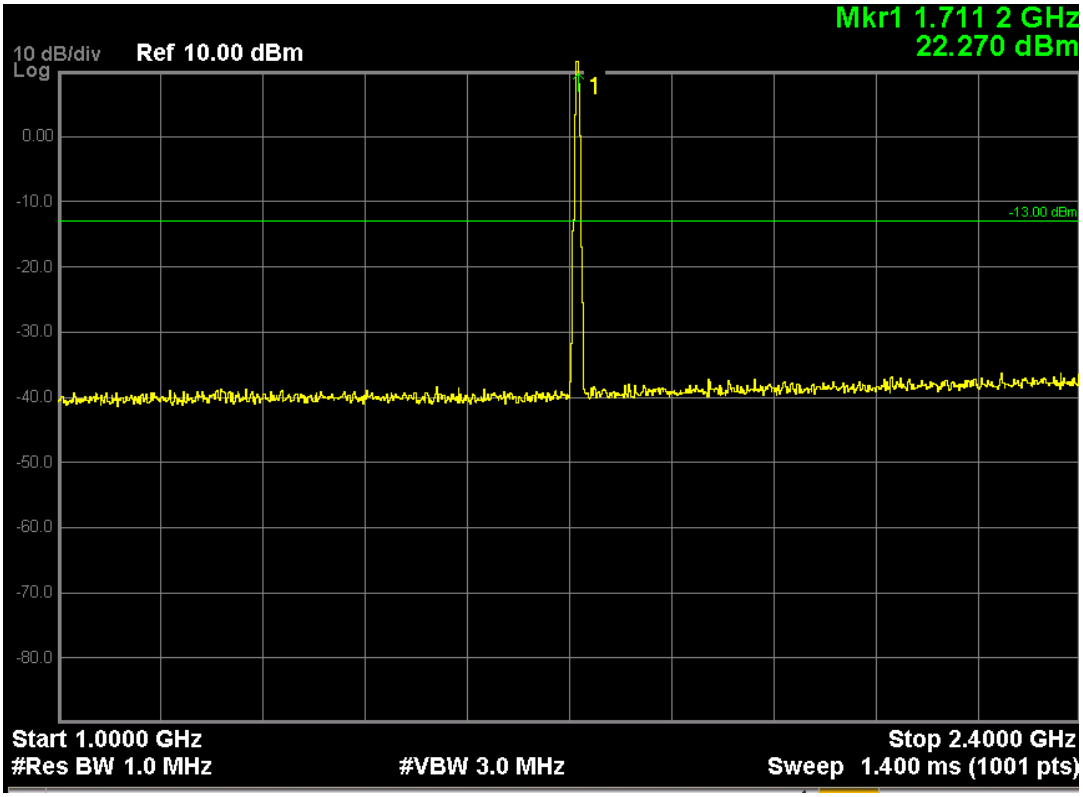
Note: The signal at point 1 is carrier



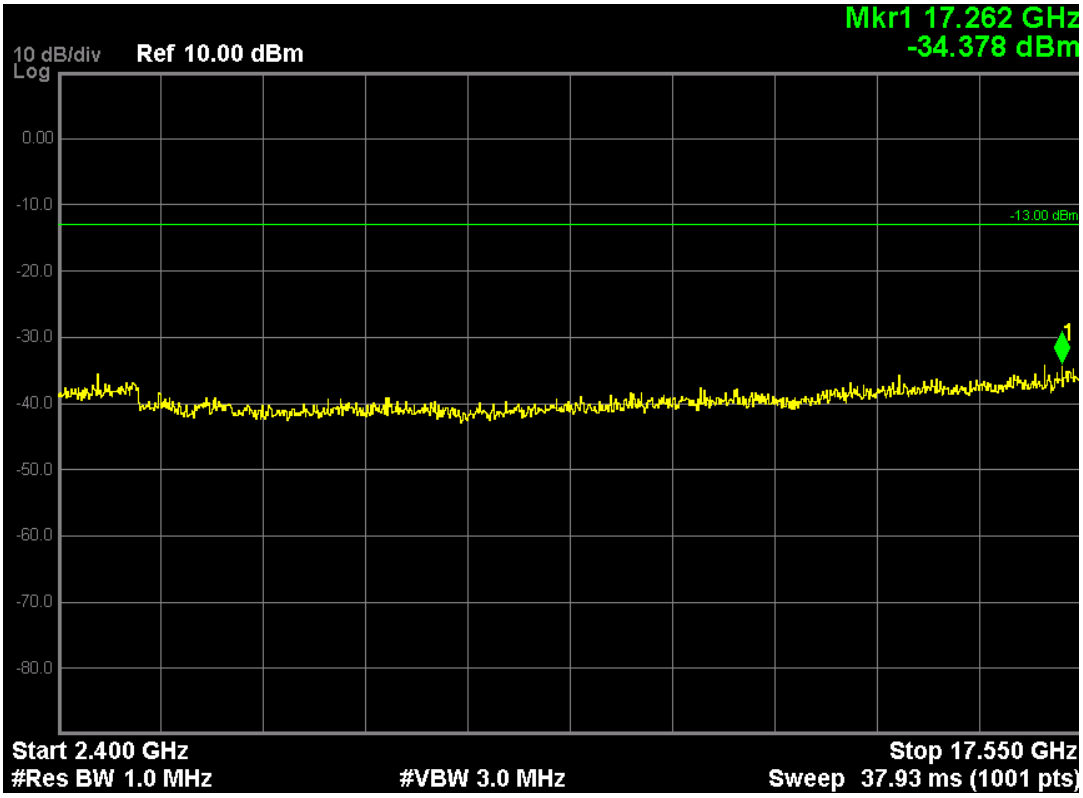
LTE Band 4 (QPSK, Band Width 3MHz,RB Size 1,RB Offset 0,Channel 19965,Frequeny 1711.5MHz)



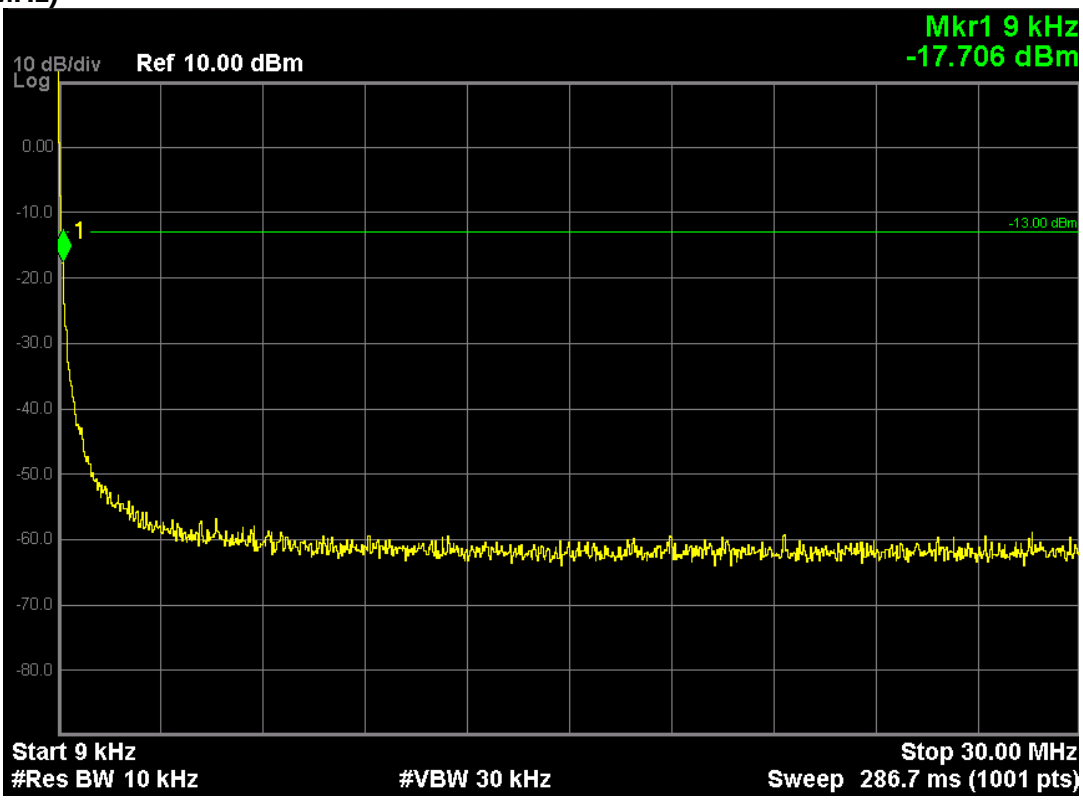


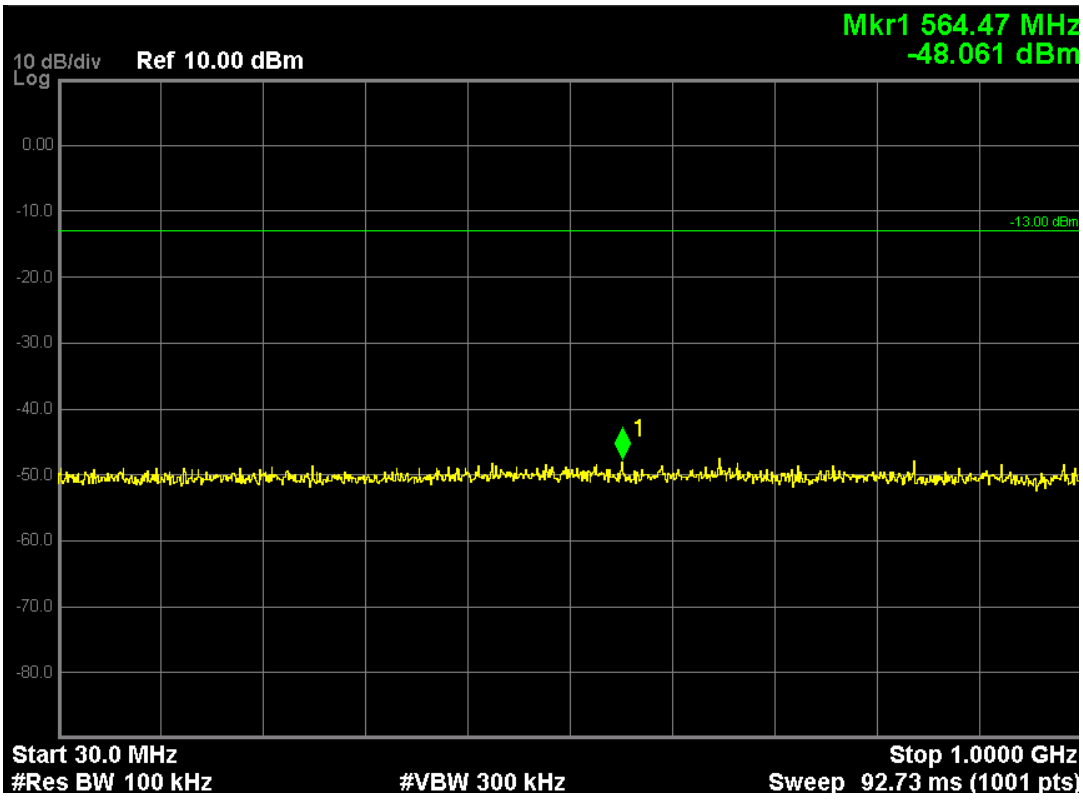


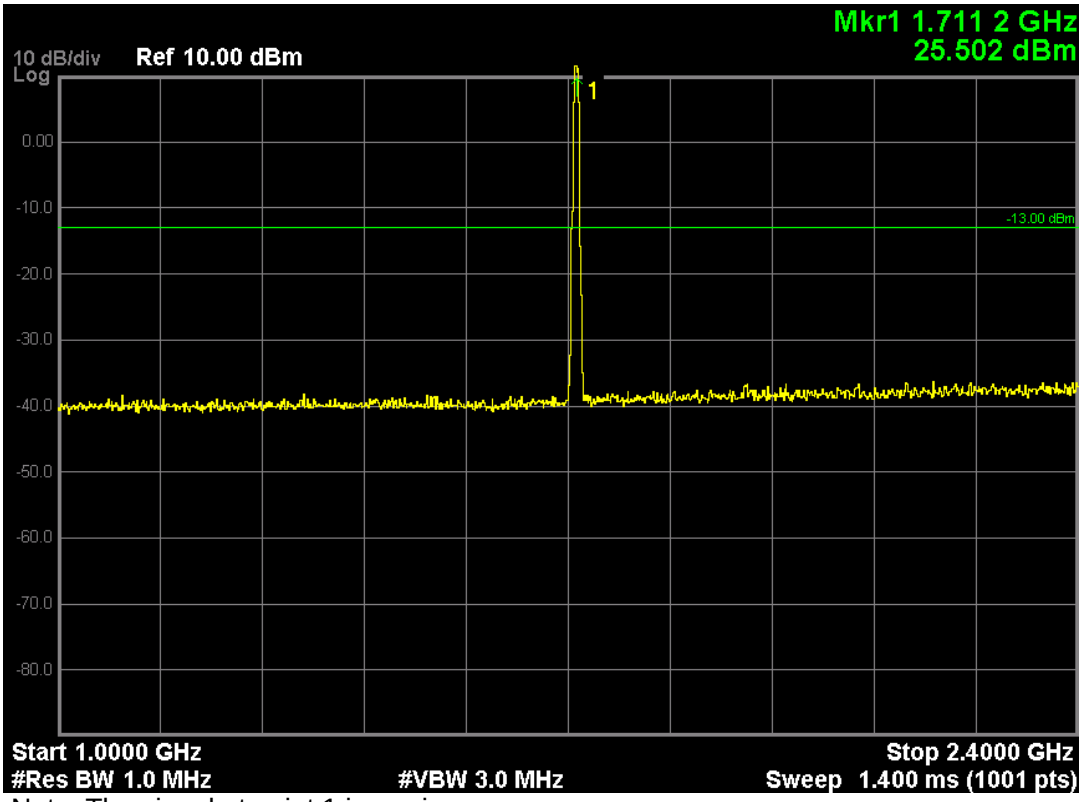
Note: The signal at point 1 is carrier



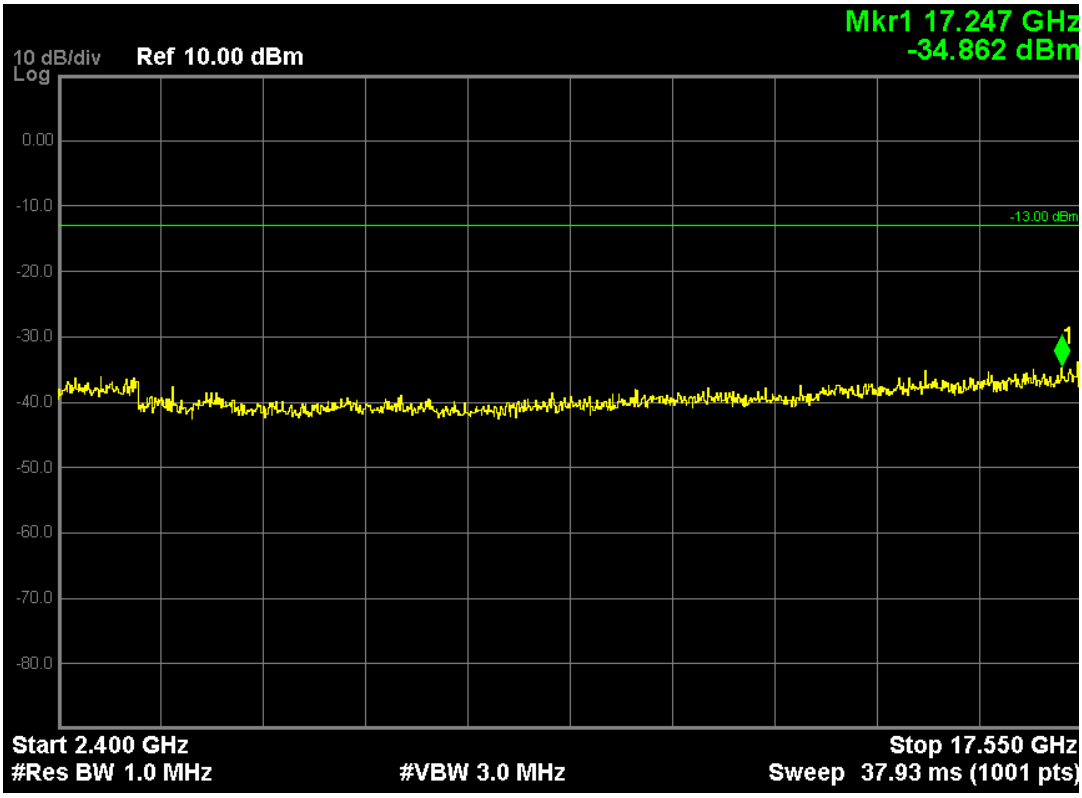
LTE Band 4 (16-QAM, Band Width 3MHz,RB Size 1,RB Offset 0,Channel 19965,Frequeny 1711.5MHz)



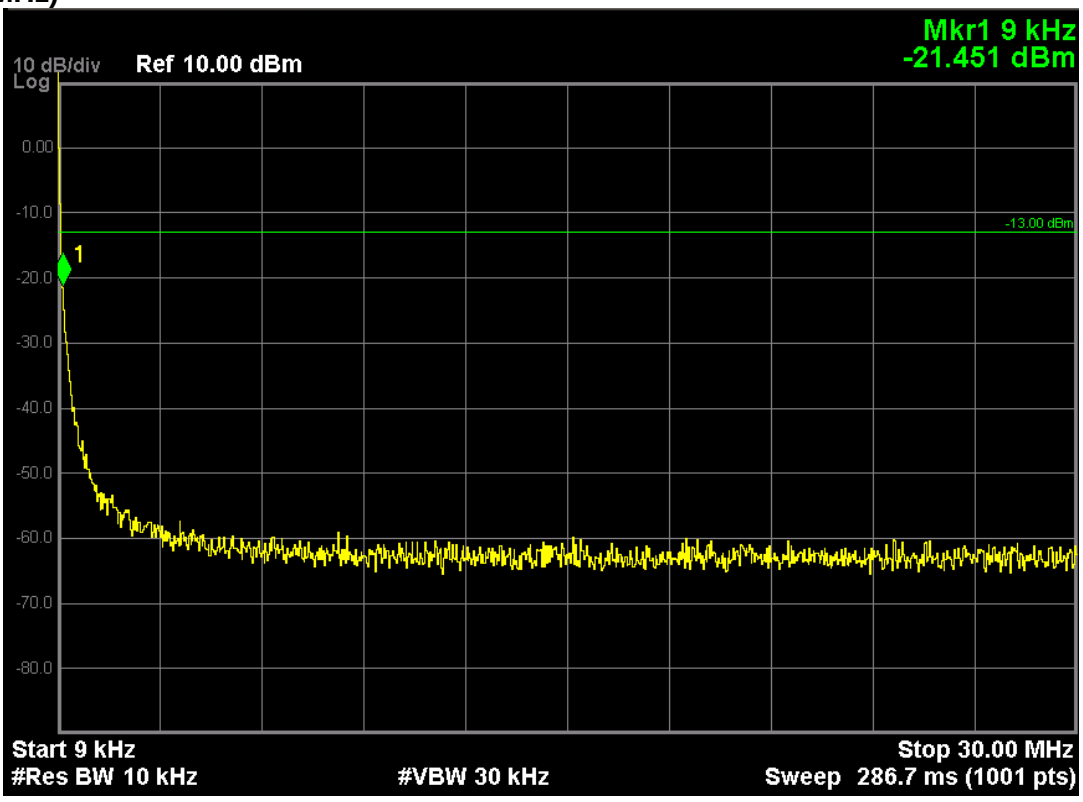


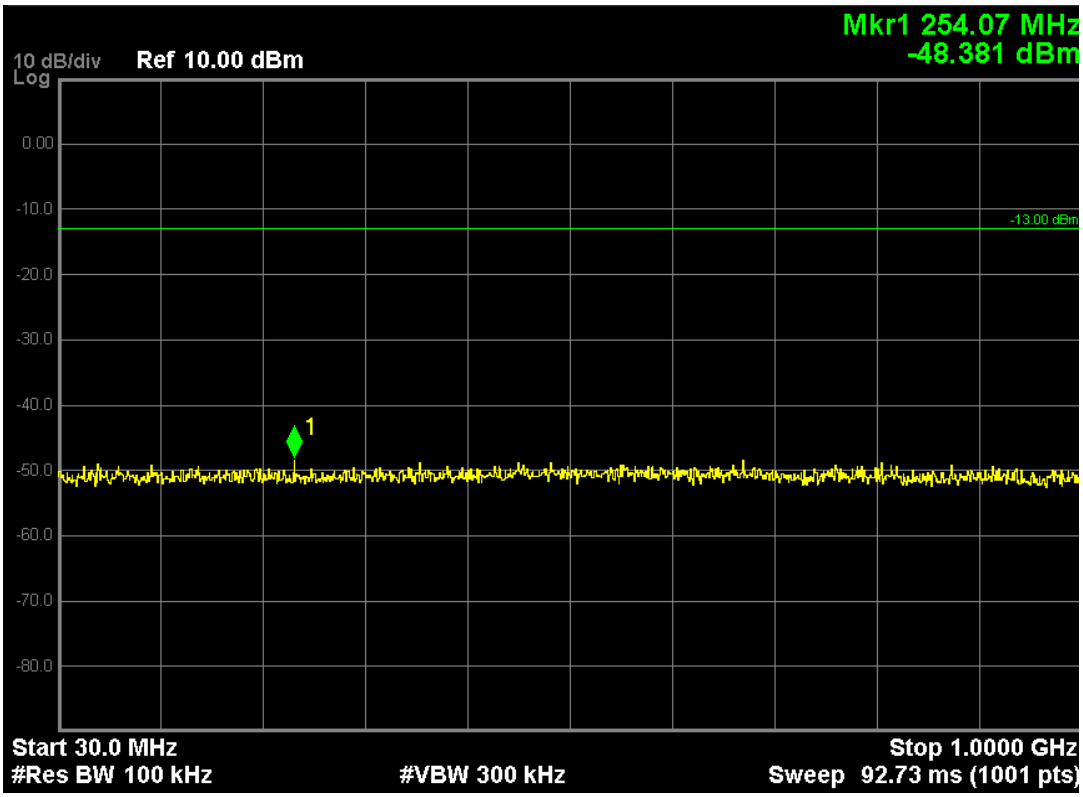


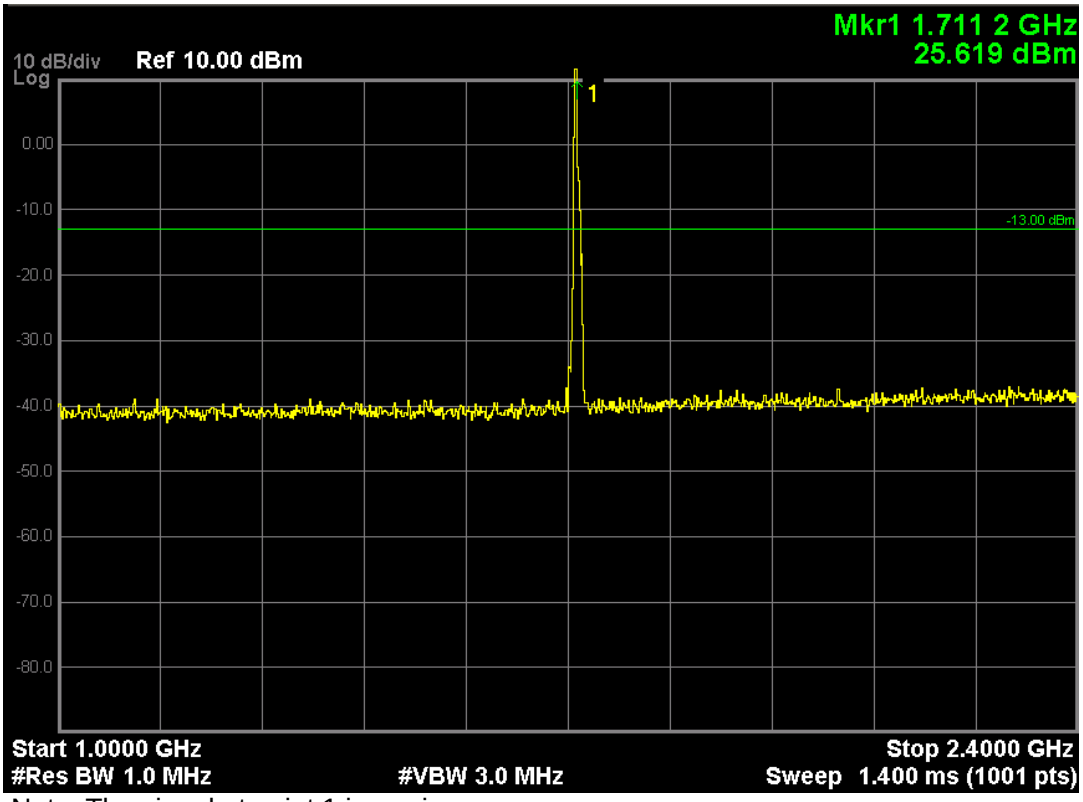
Note: The signal at point 1 is carrier



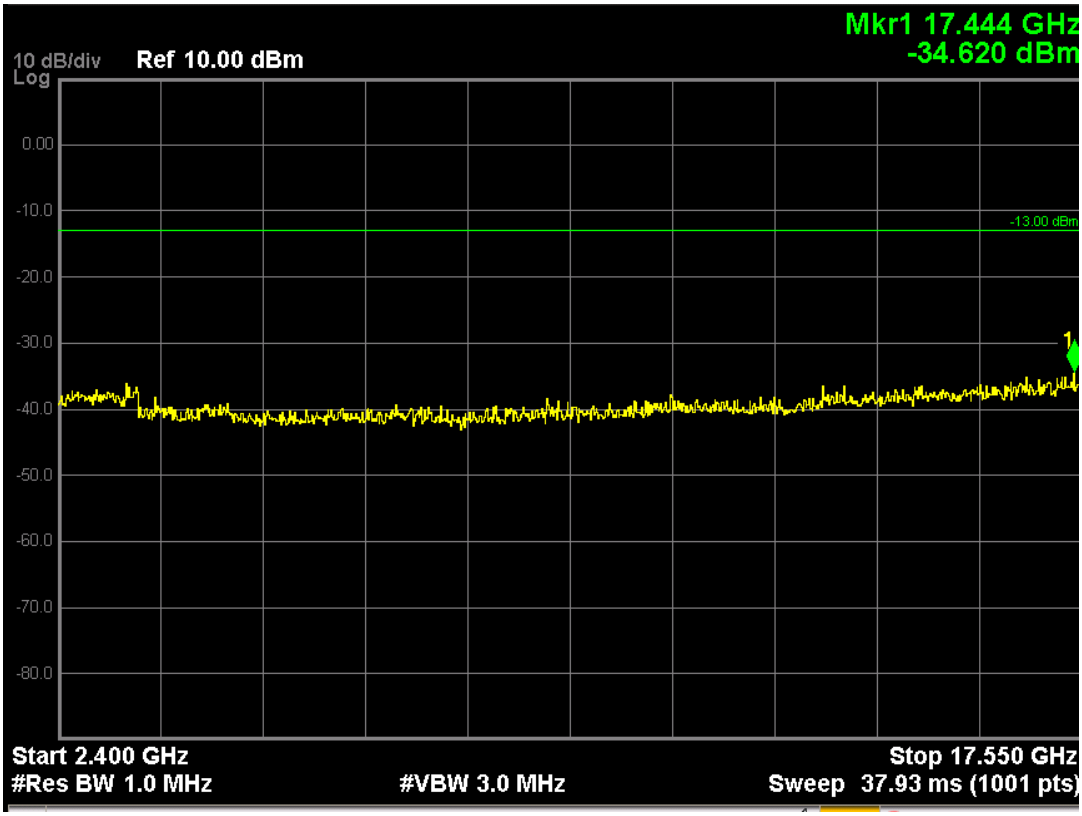
LTE Band 4 (QPSK, Band Width 5MHz,RB Size 1,RB Offset 0,Channel 19975,Frequeny 1712.5MHz)



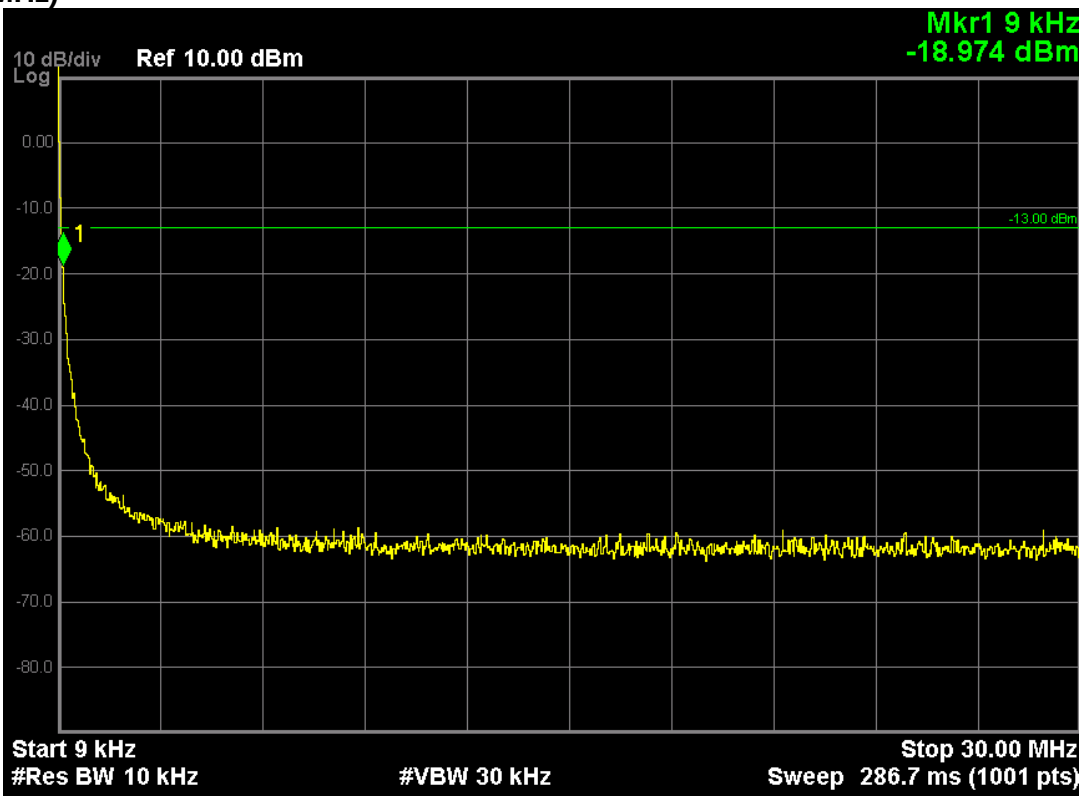


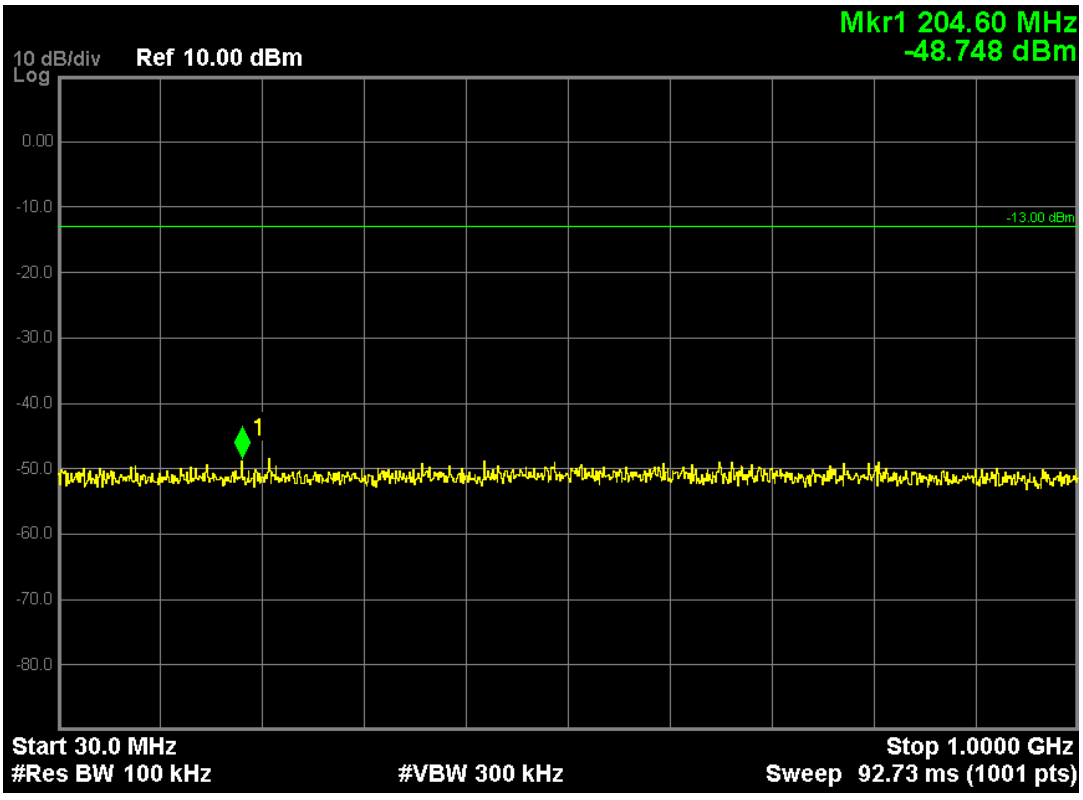


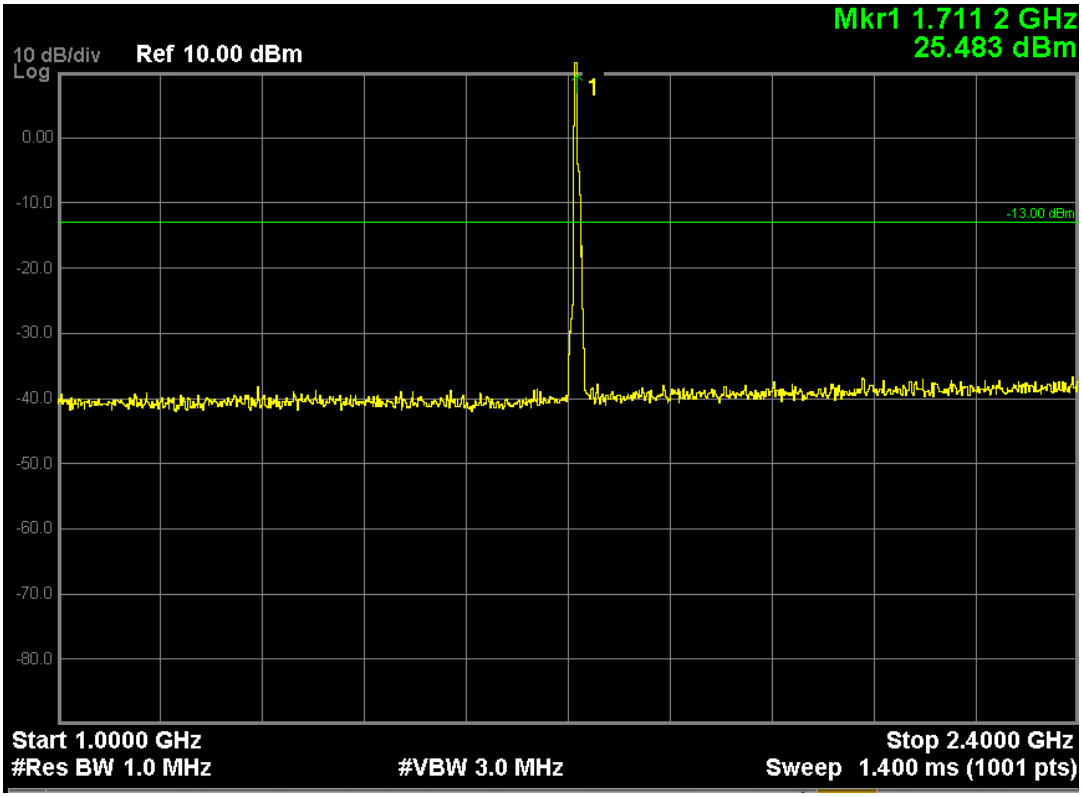
Note: The signal at point 1 is carrier



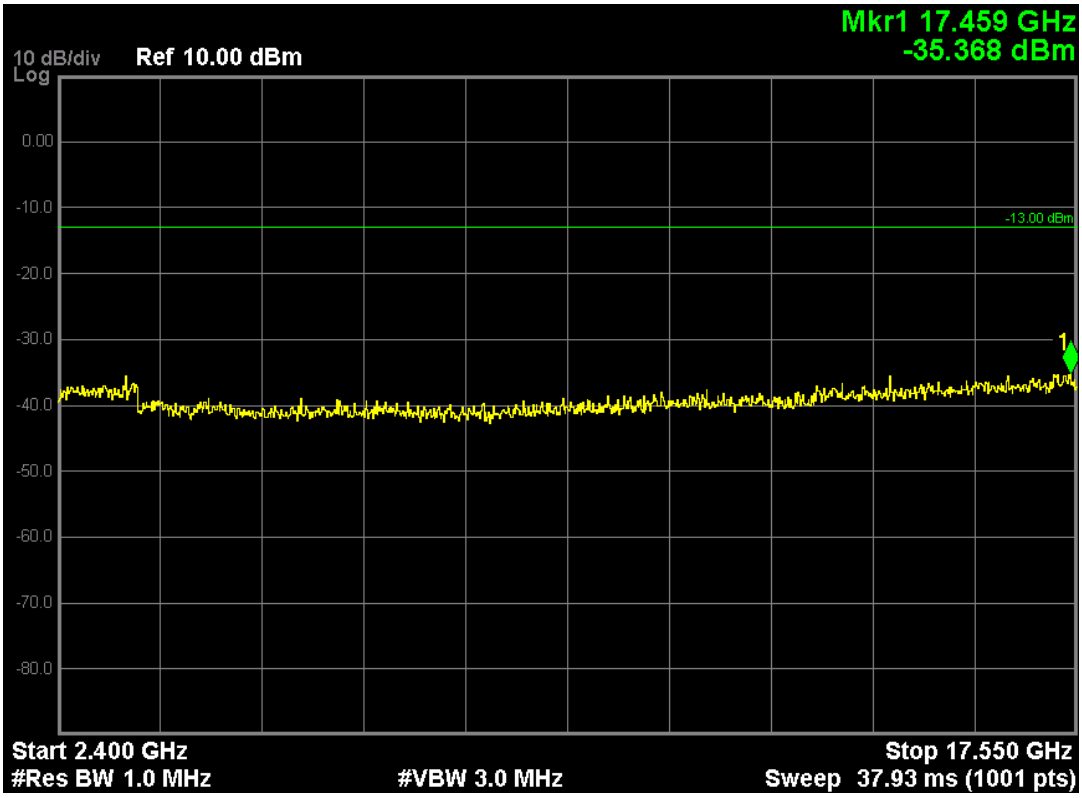
LTE Band 4 (16-QAM, Band Width 5MHz,RB Size 1,RB Offset 0,Channel 19975,Frequeny 1712.5MHz)



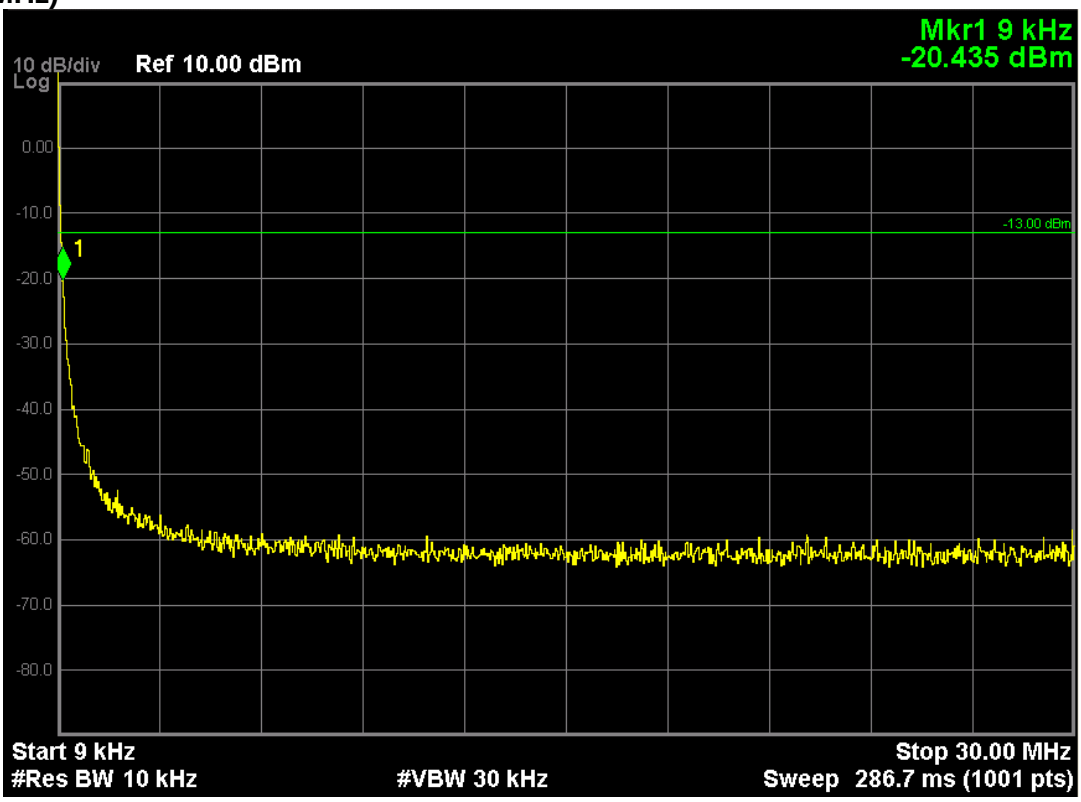


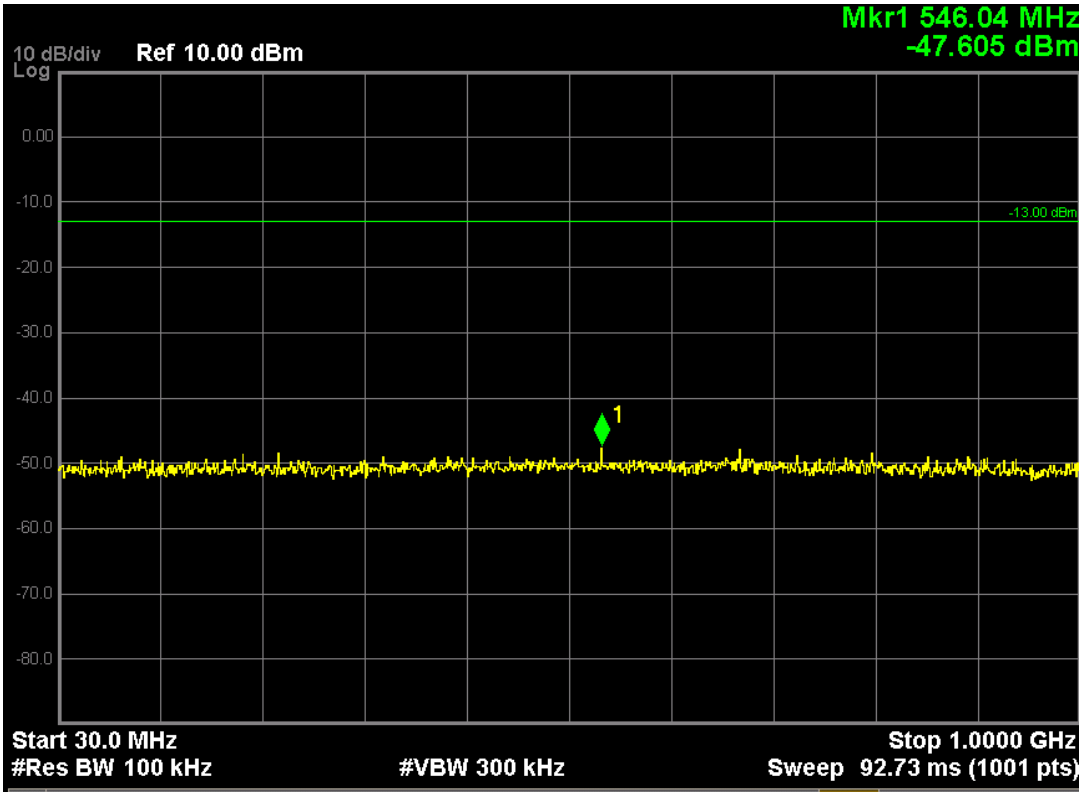


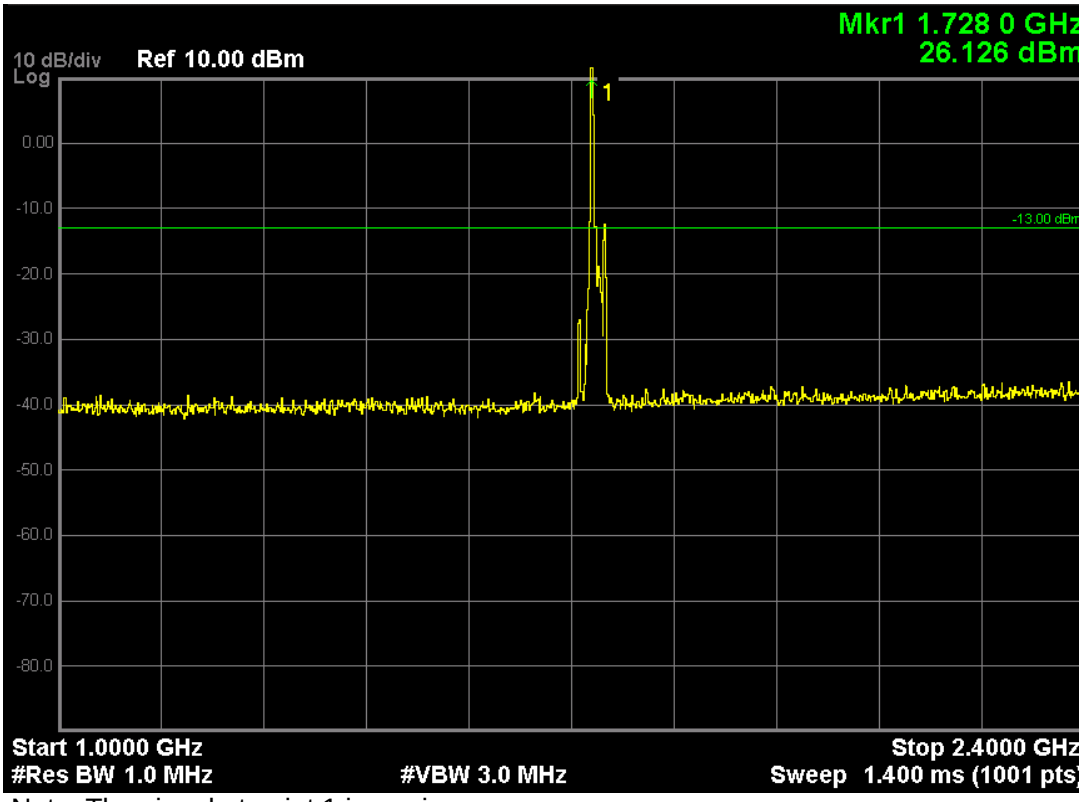
Note: The signal at point 1 is carrier



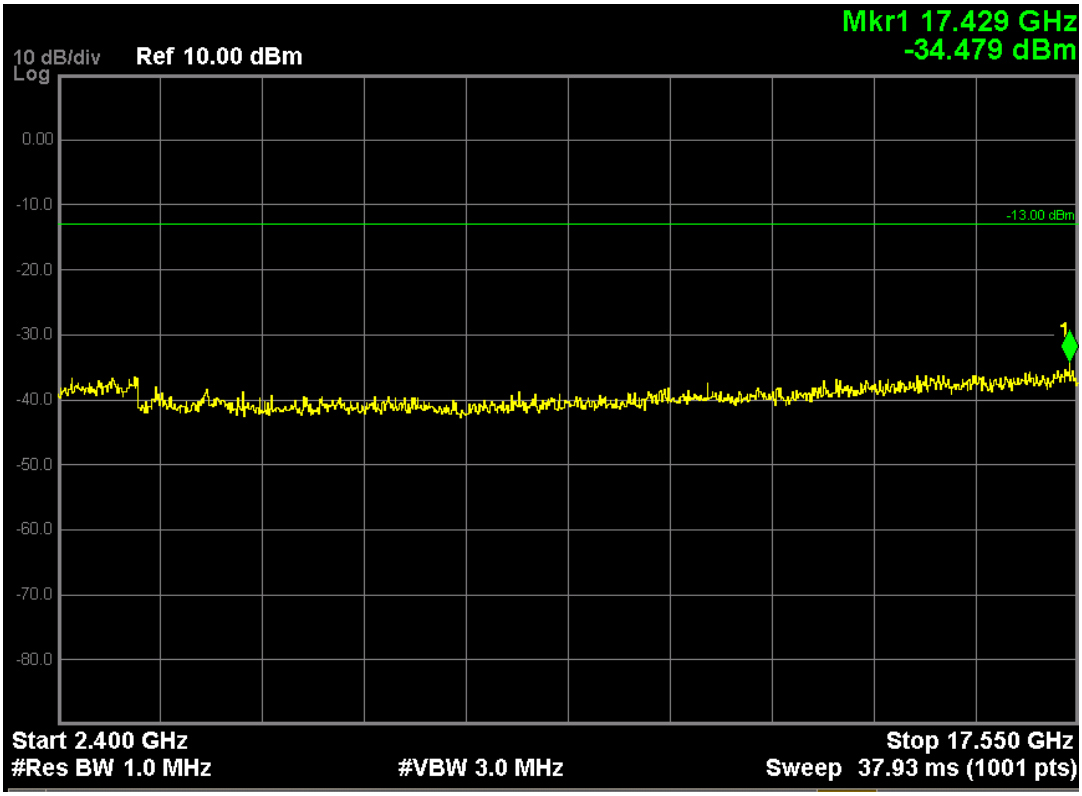
LTE Band 4 (QPSK, Band Width 10MHz,RB Size 1,RB Offset 0,Channel 20175,Frequeny 1721.5MHz)



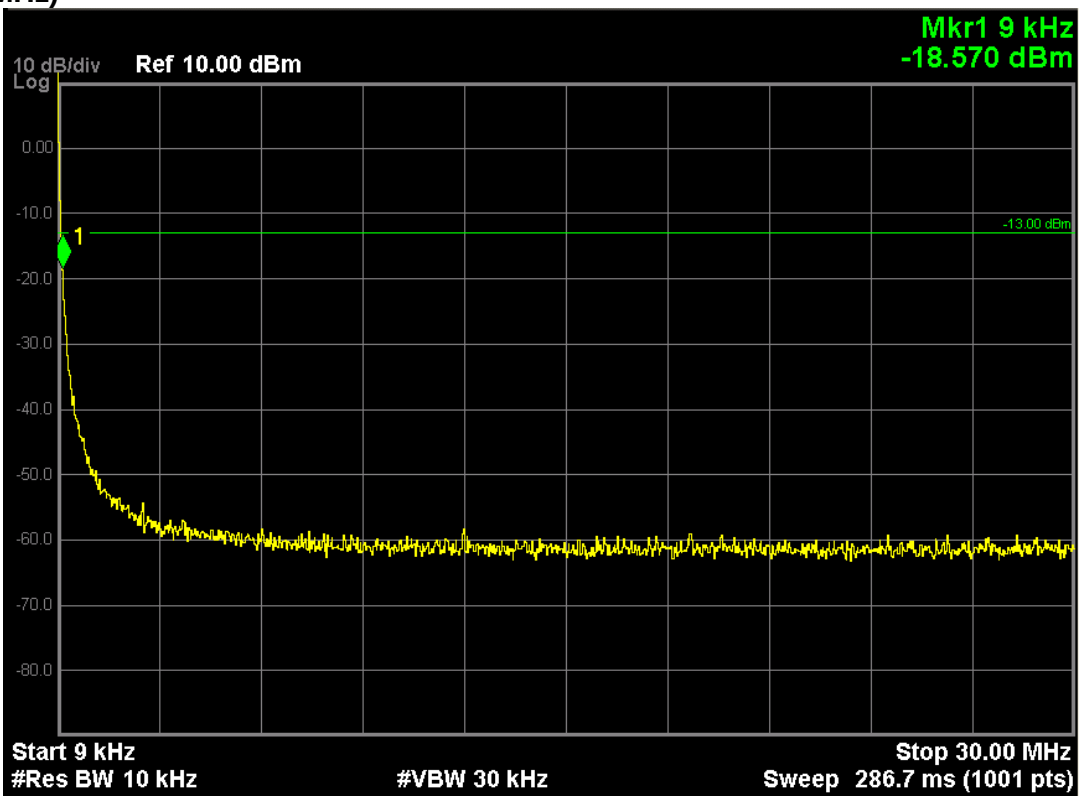


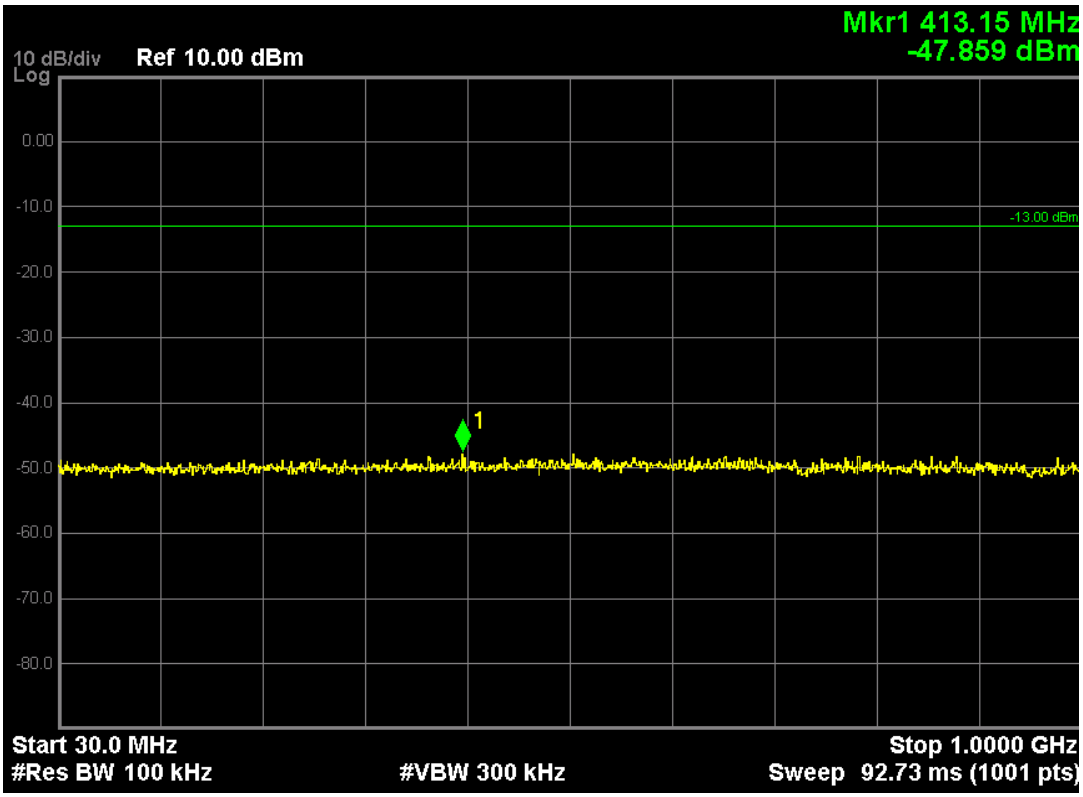


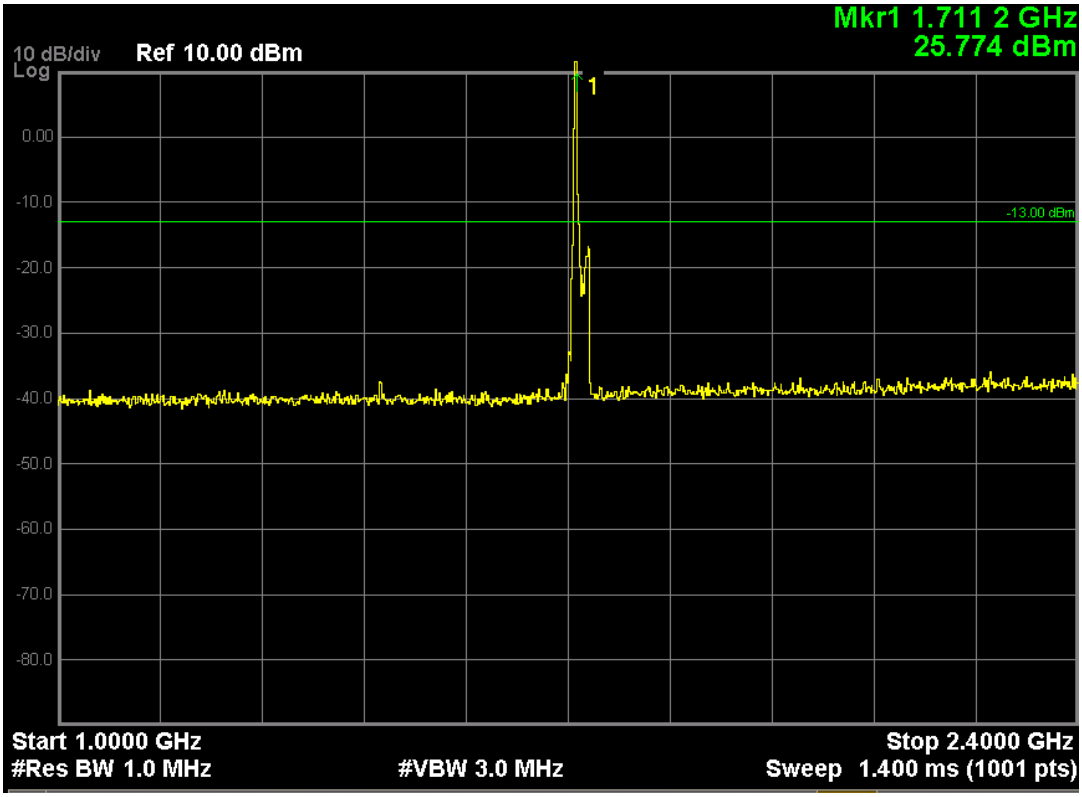
Note: The signal at point 1 is carrier



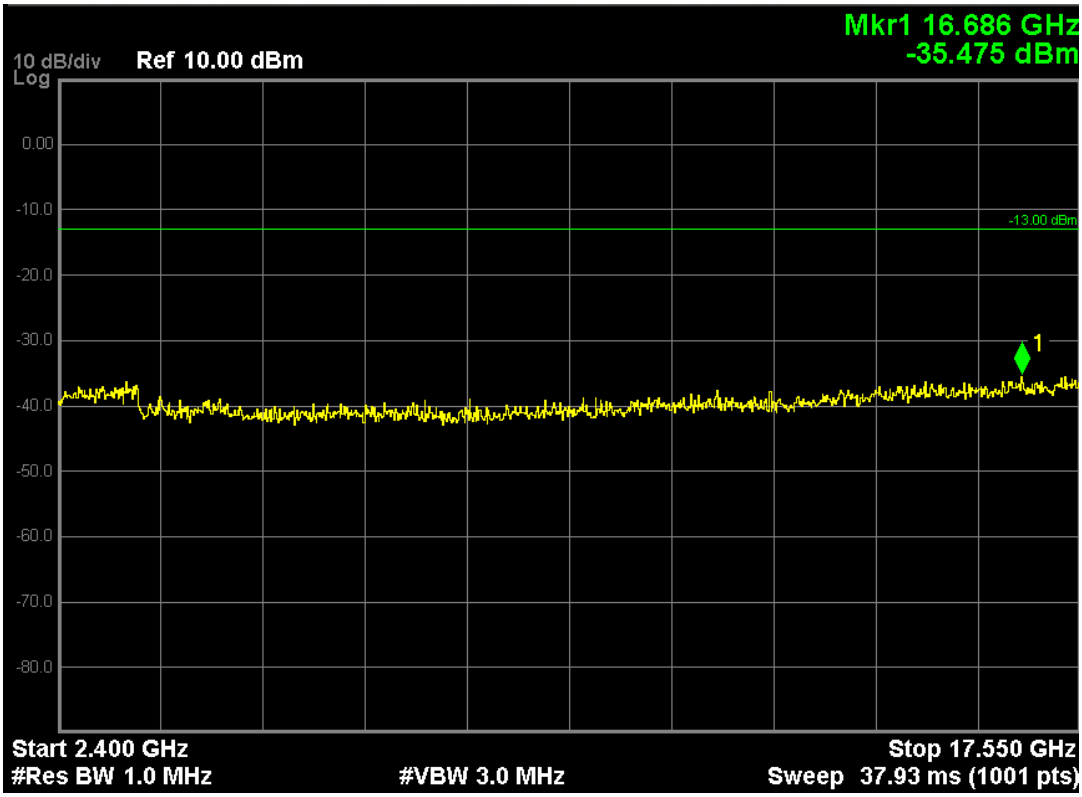
LTE Band 4 (16-QAM, Band Width 10MHz,RB Size 1,RB Offset 0,Channel 20000,Frequeny 1715.0MHz)



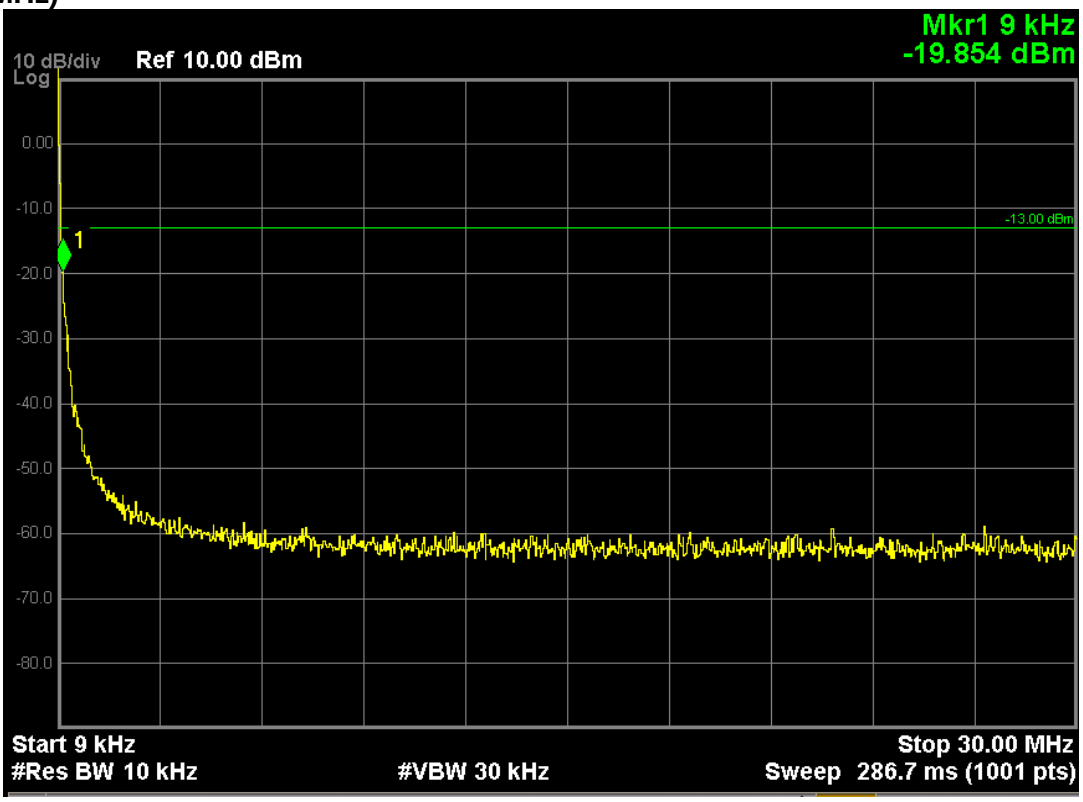


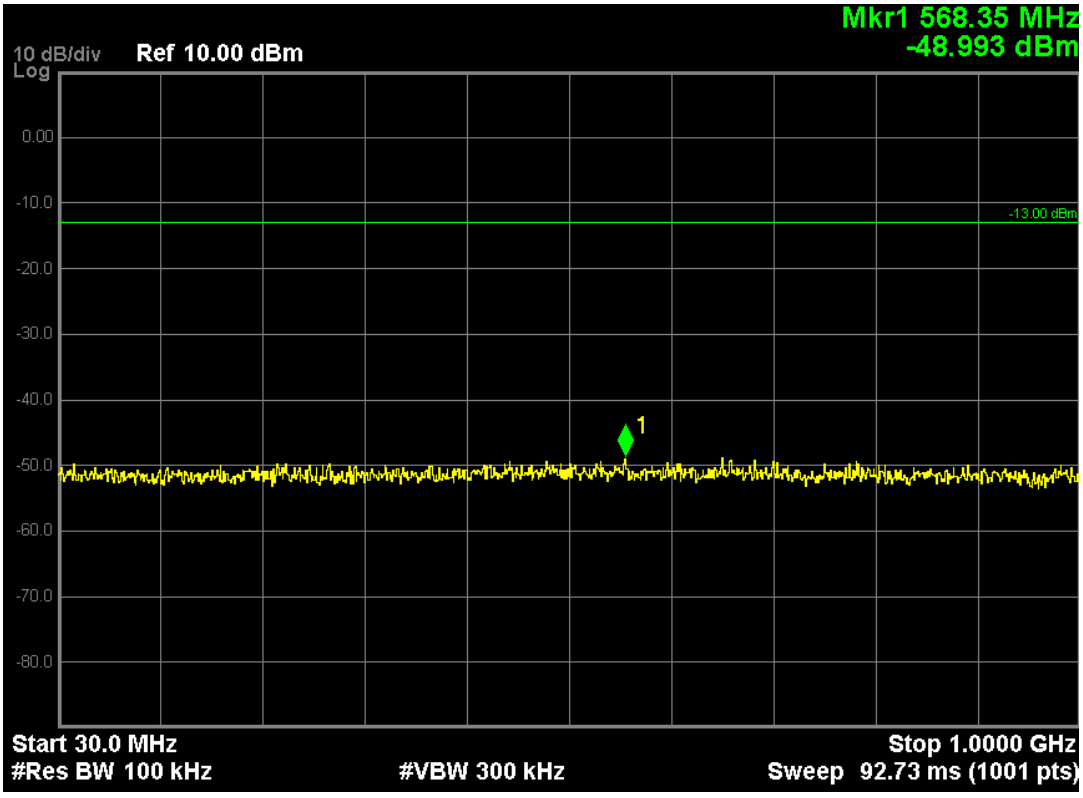


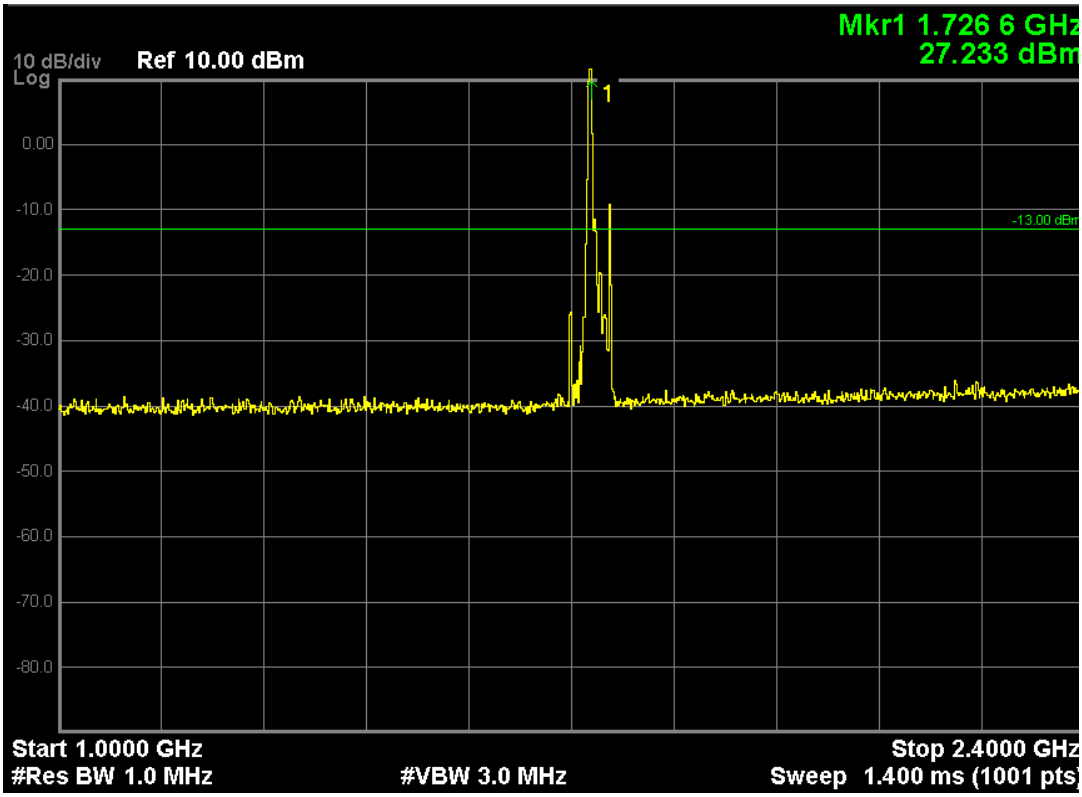
Note: The signal at point 1 is carrier



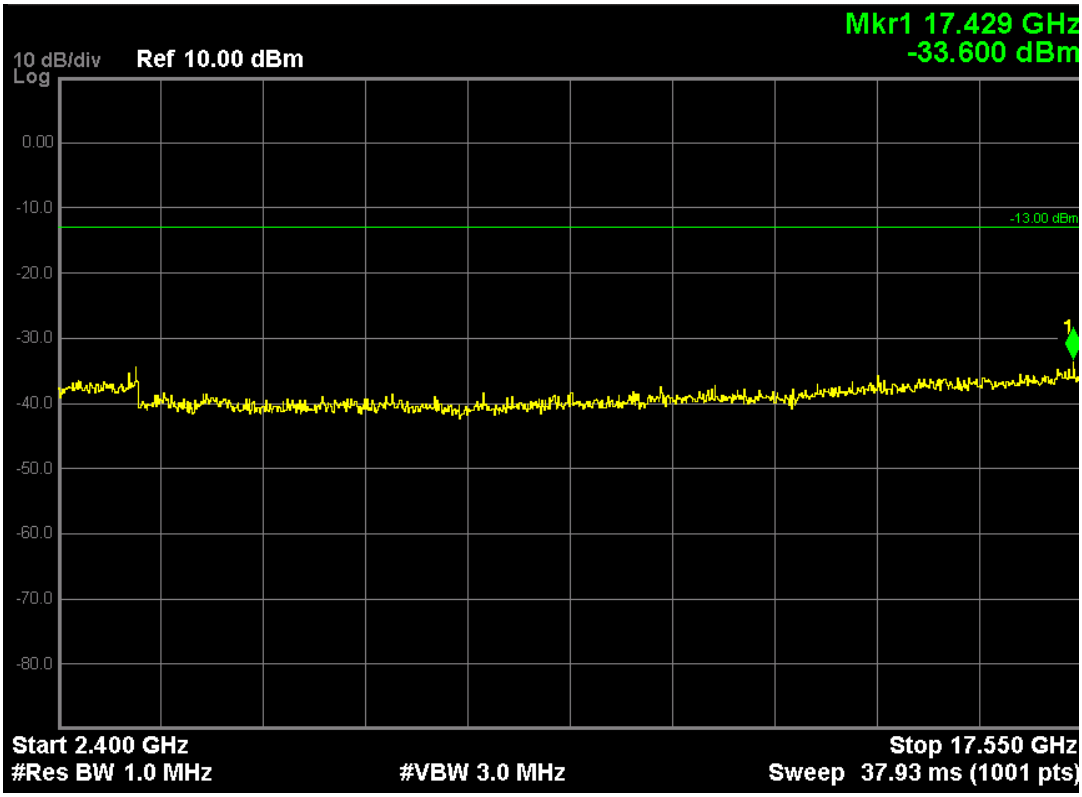
LTE Band 4 (QPSK, Band Width 15MHz,RB Size 1,RB Offset 0,Channel 20175,Frequeny 1732.5MHz)



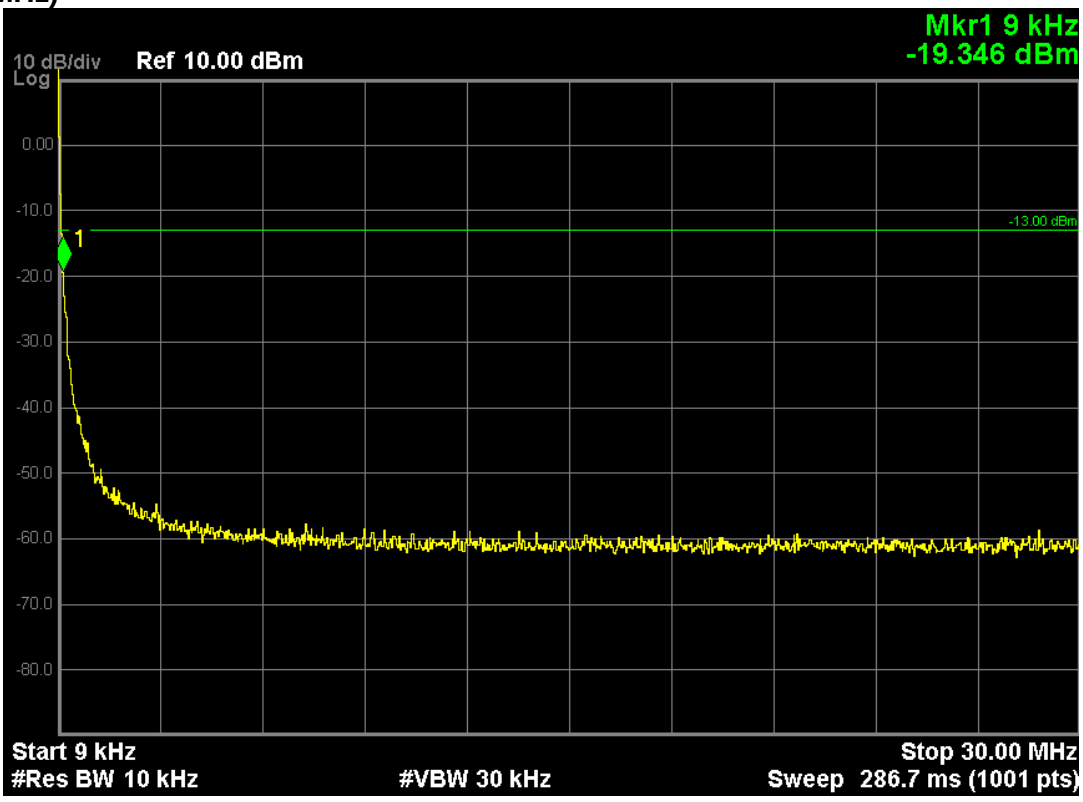


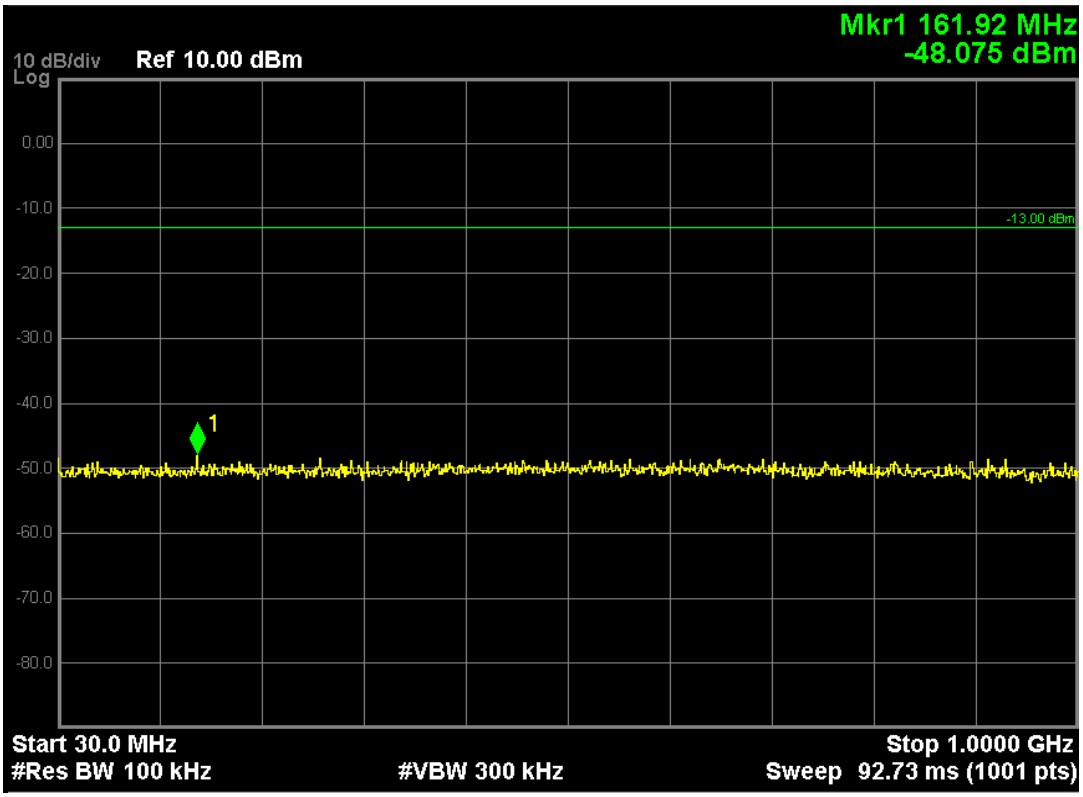


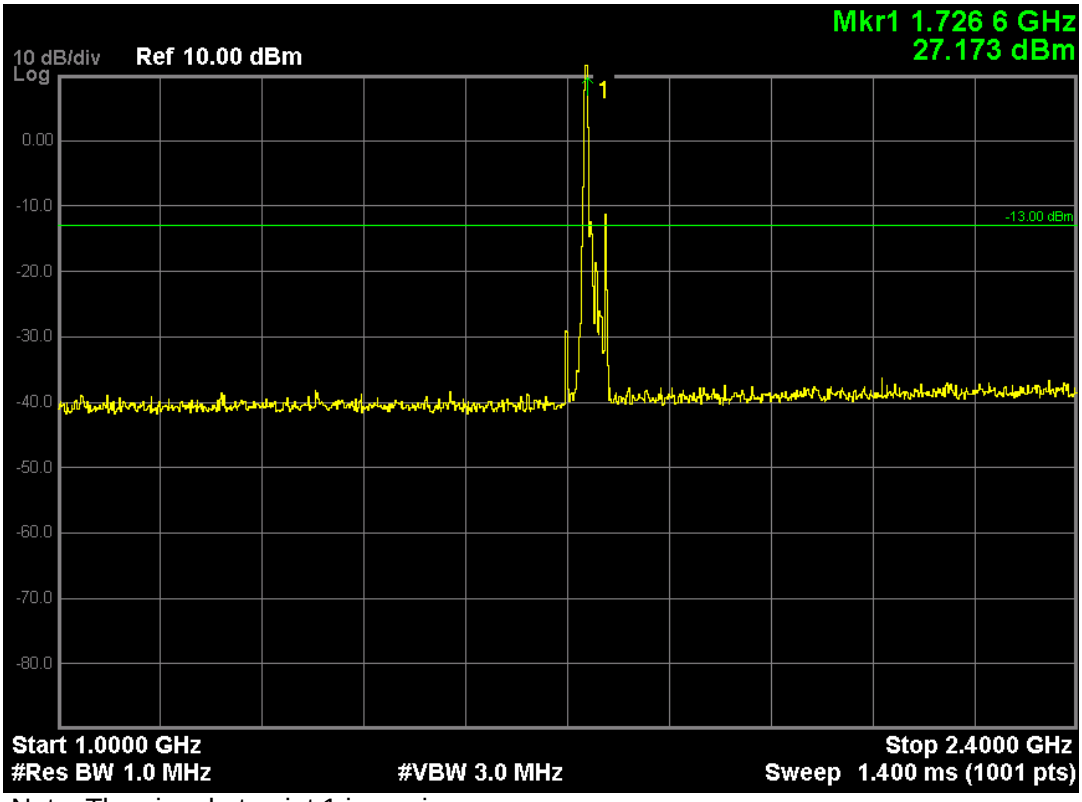
Note: The signal at point 1 is carrier



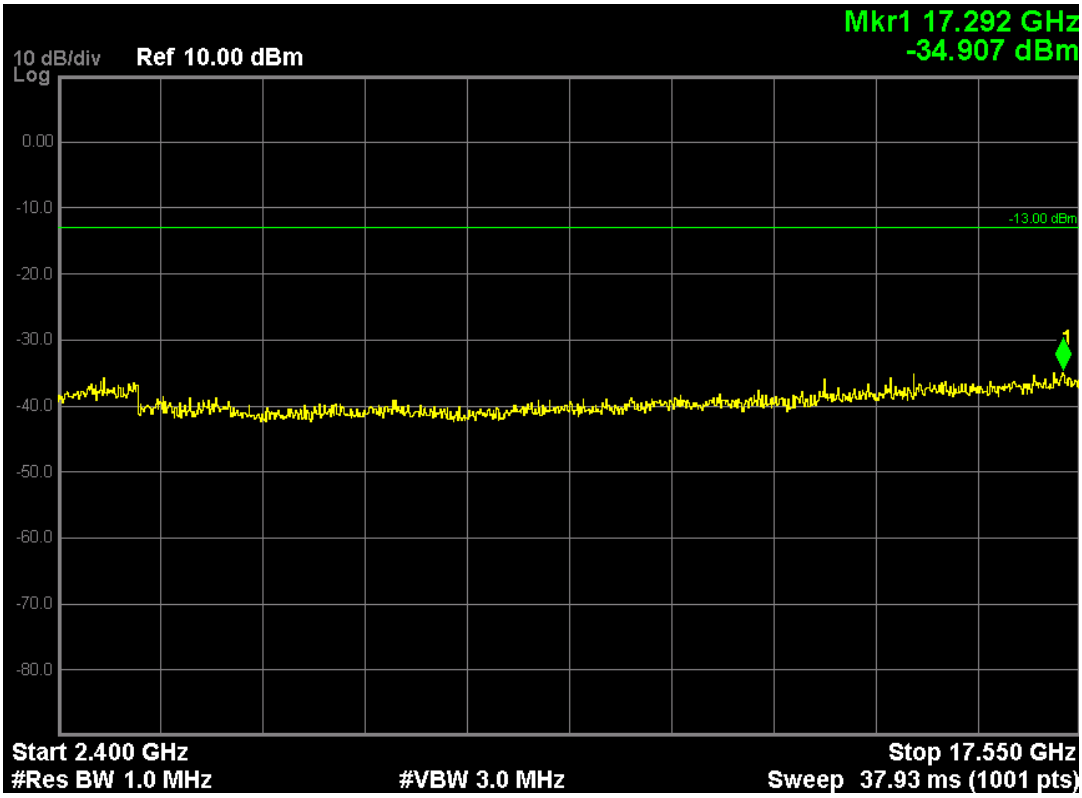
LTE Band 4 (16-QAM, Band Width 15MHz,RB Size 1,RB Offset 0,Channel 20175,Frequeny 1732.5MHz)



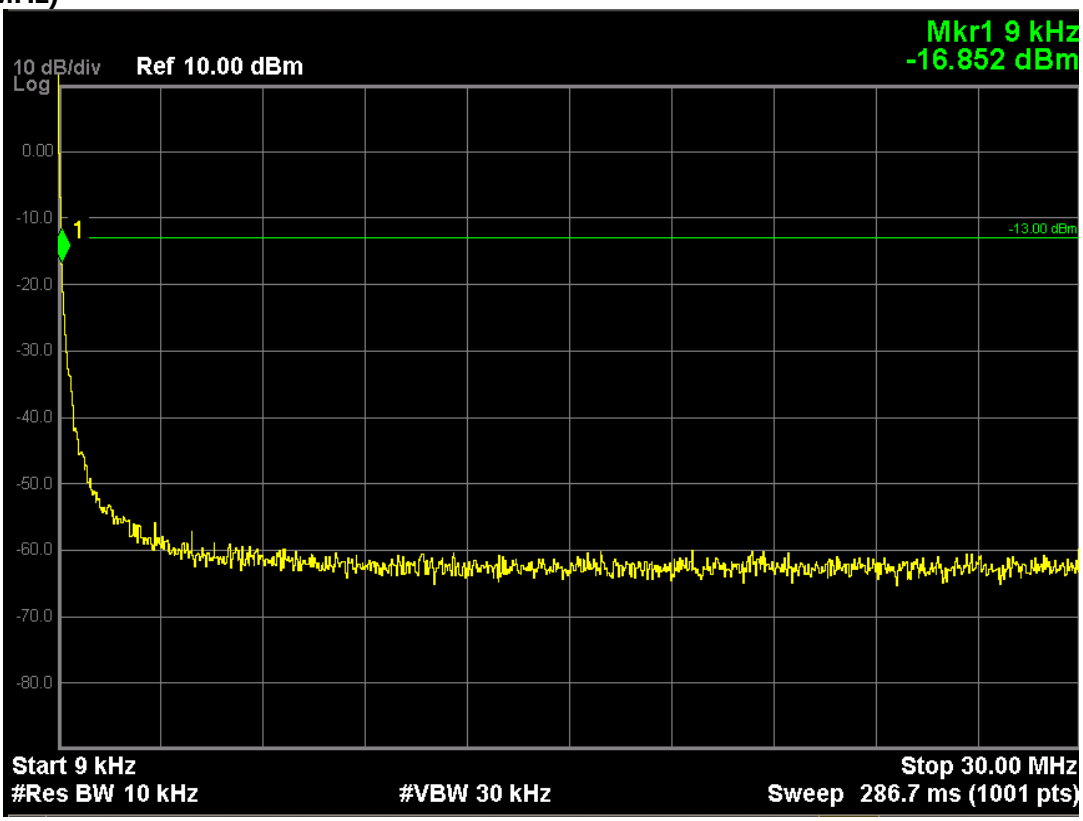


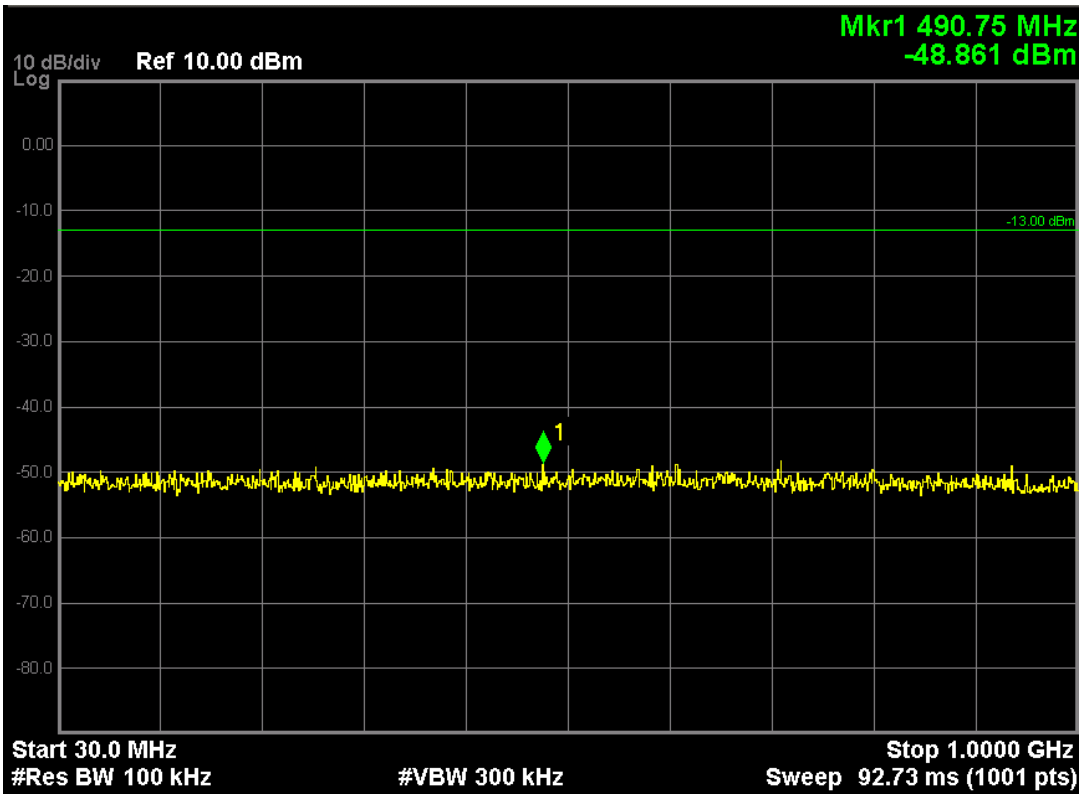


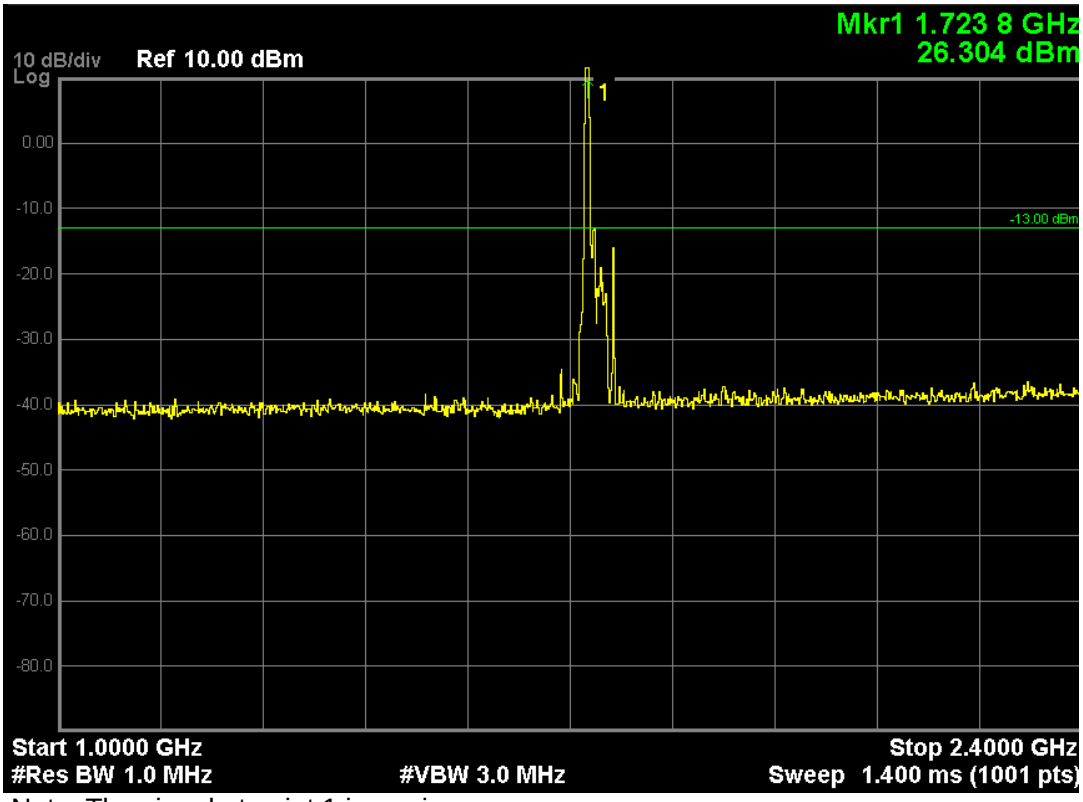
Note: The signal at point 1 is carrier



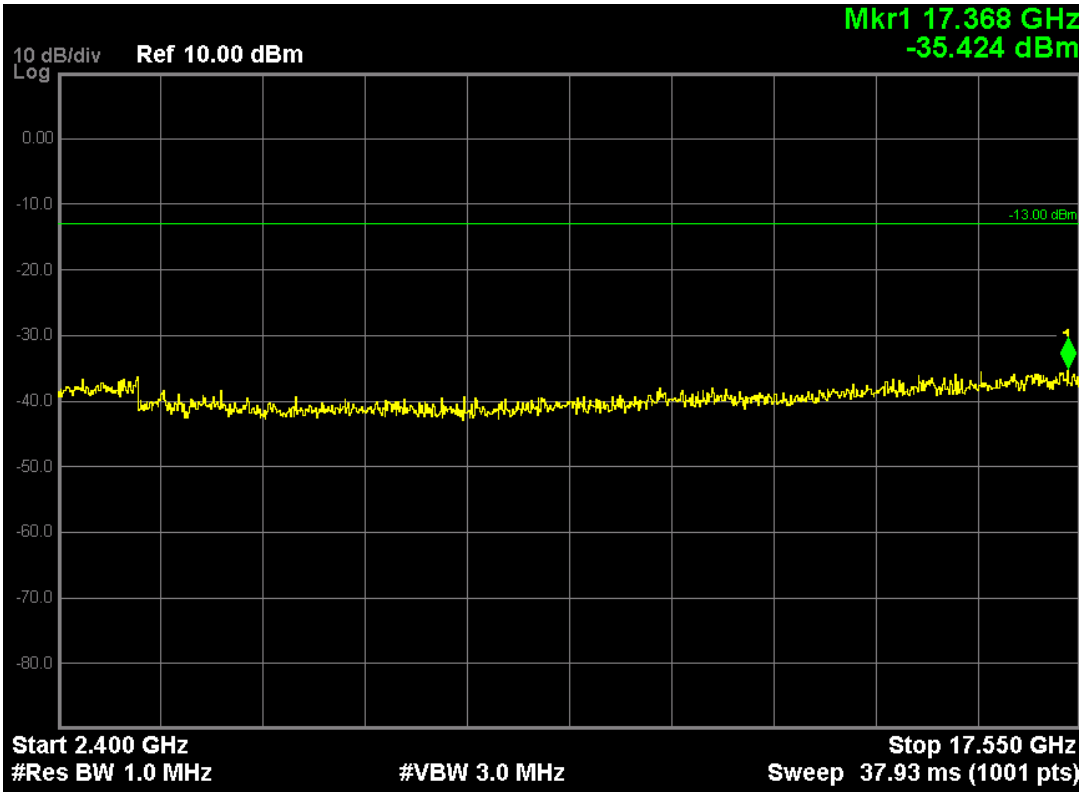
LTE Band 4 (QPSK, Band Width 20MHz,RB Size 1,RB Offset 0,Channel 20175,Frequeny 1732.5MHz)



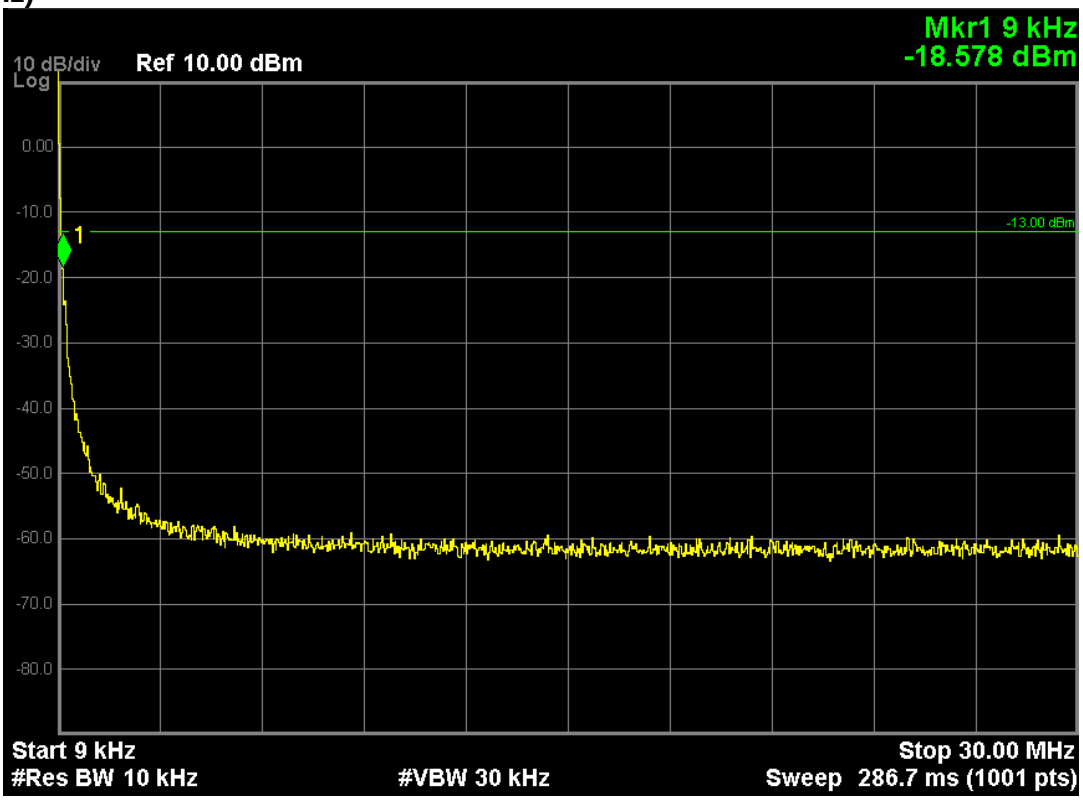


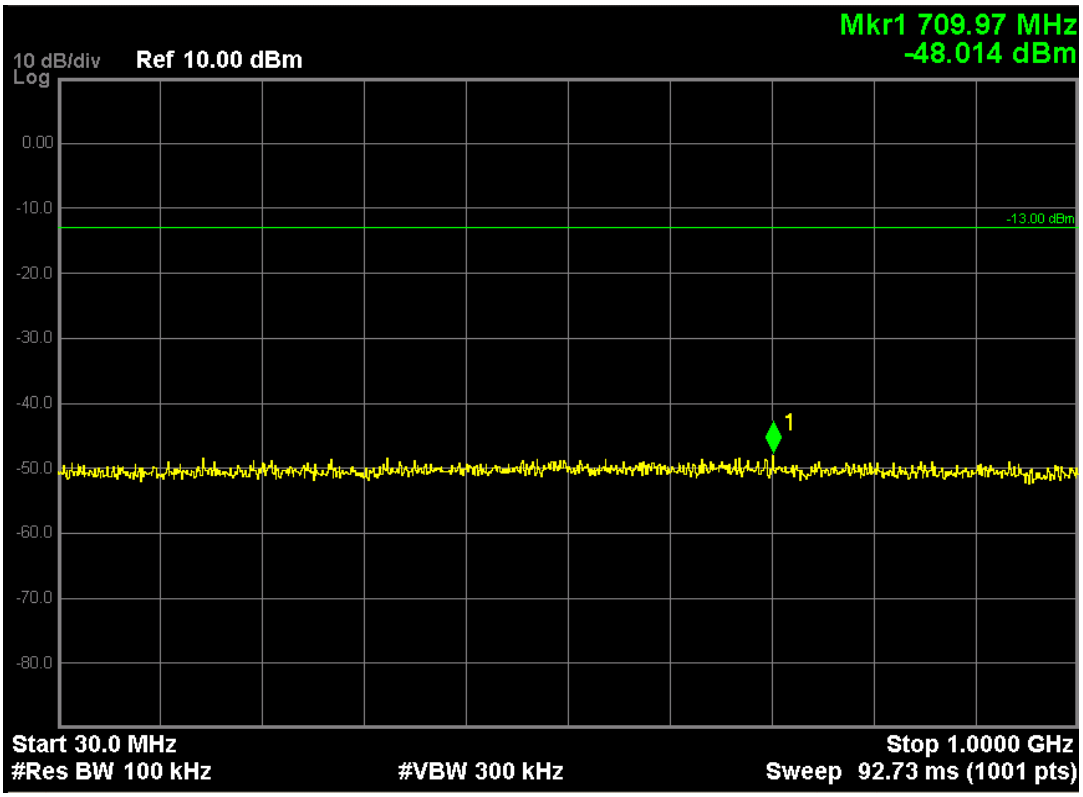


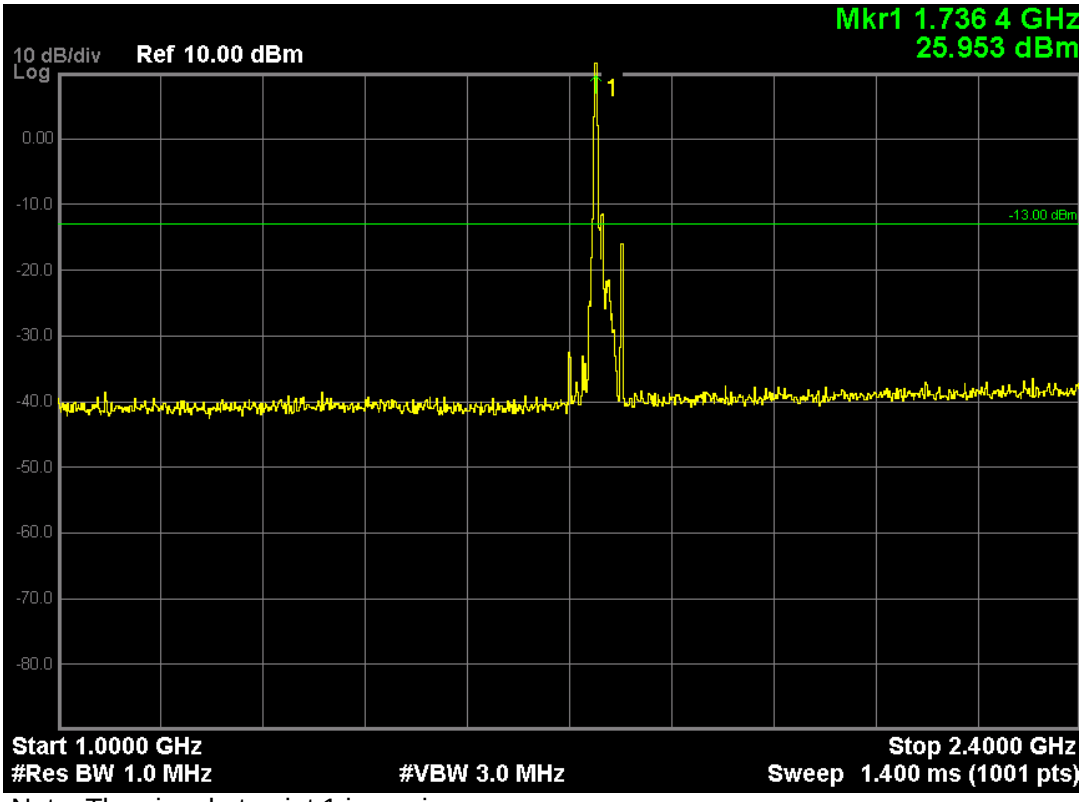
Note: The signal at point 1 is carrier



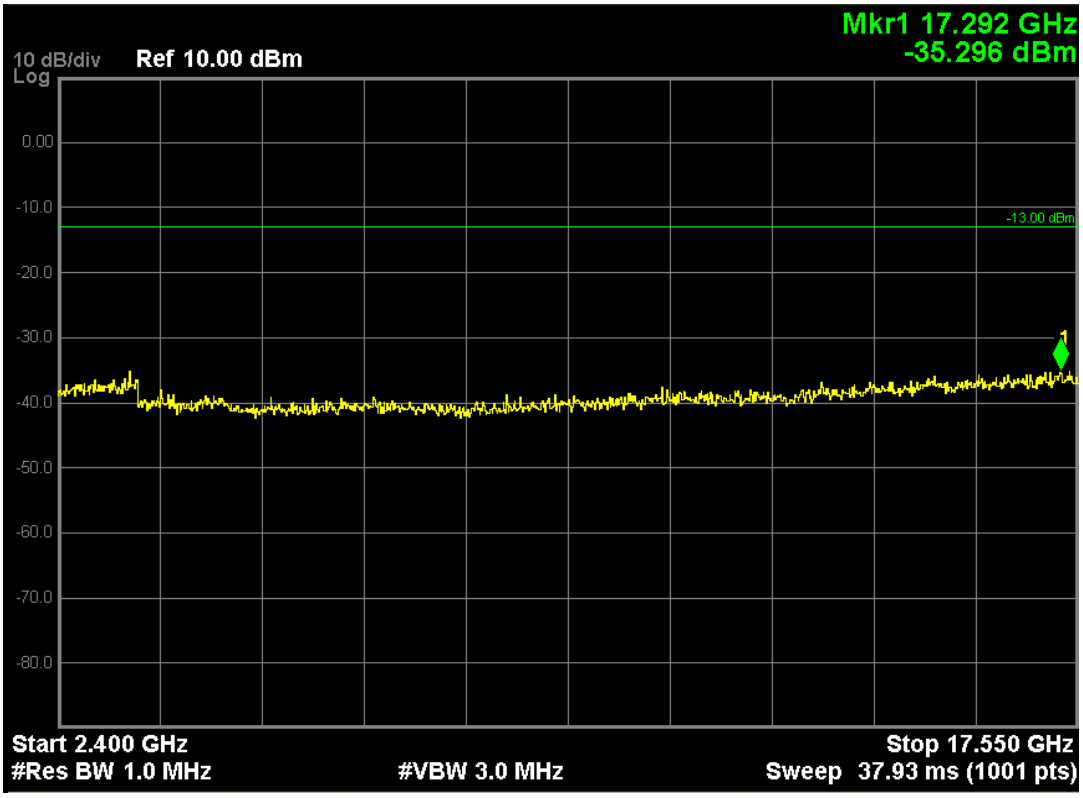
LTE Band 4 (16-QAM, Band Width 20MHz,RB Size 1,RB Offset 0,Channel 20300,Frequeny 1745MHz)



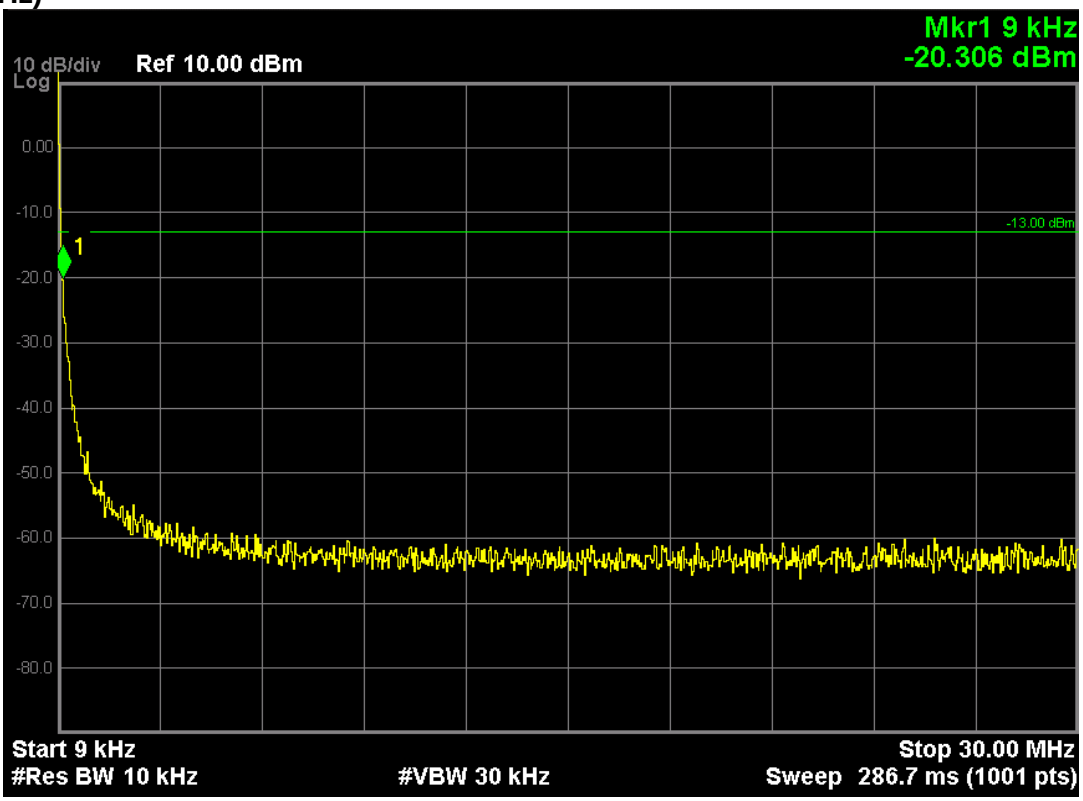


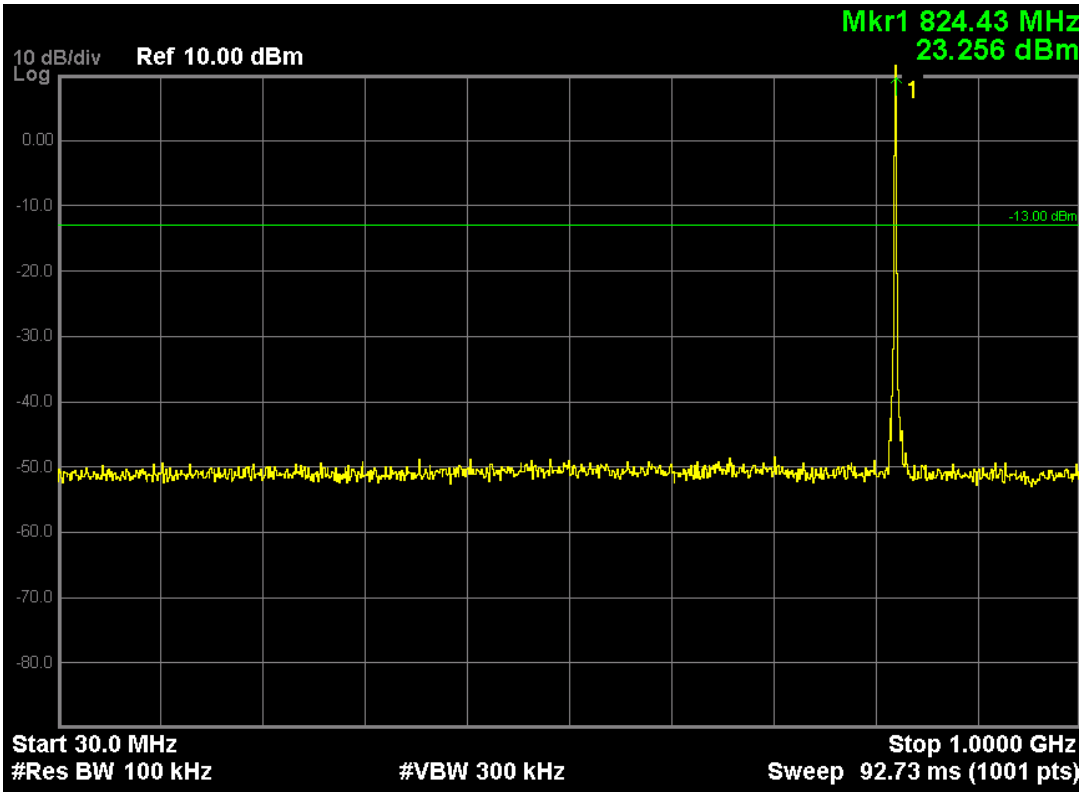


Note: The signal at point 1 is carrier

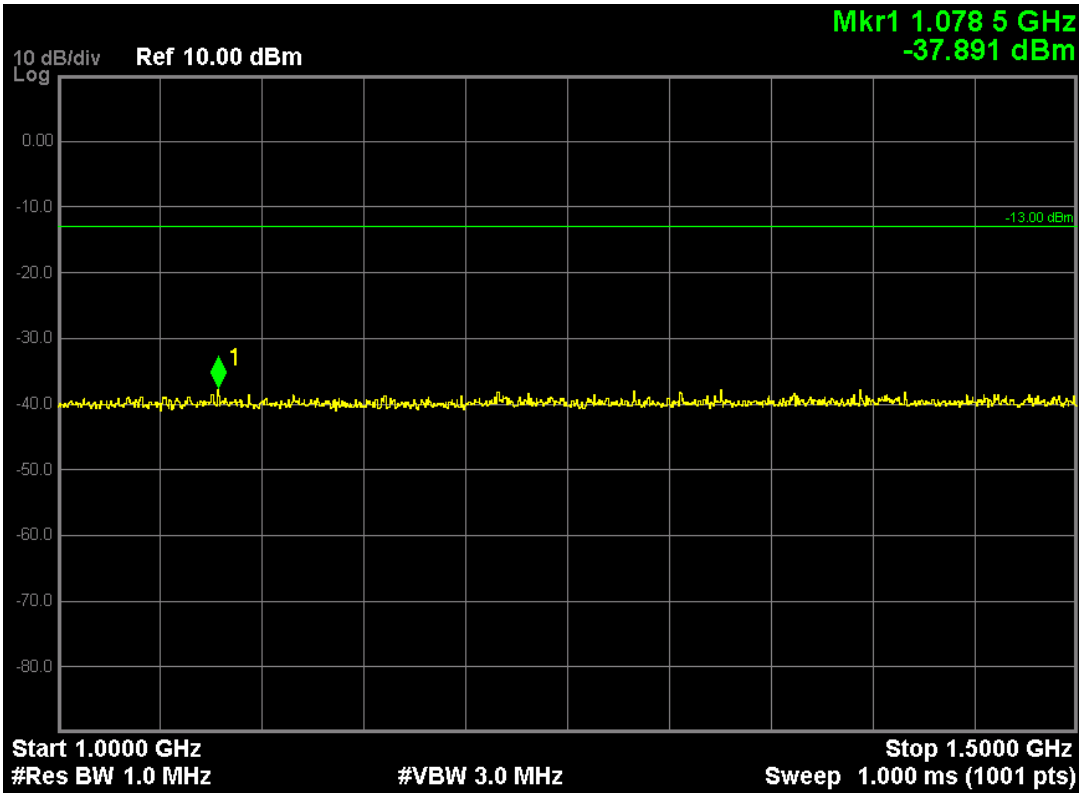


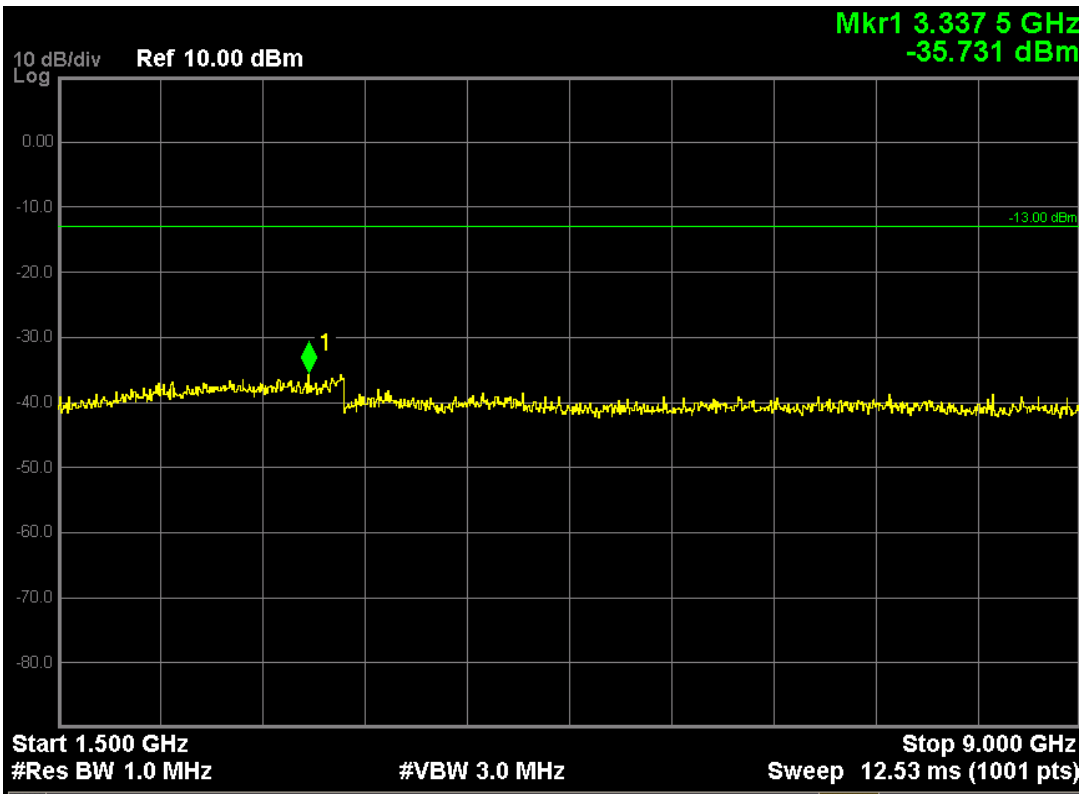
LTE Band 5 (QPSK, Band Width 1.4MHz,RB Size 1,RB Offset 0,Channel 20407,Frequeny 824.7MHz)



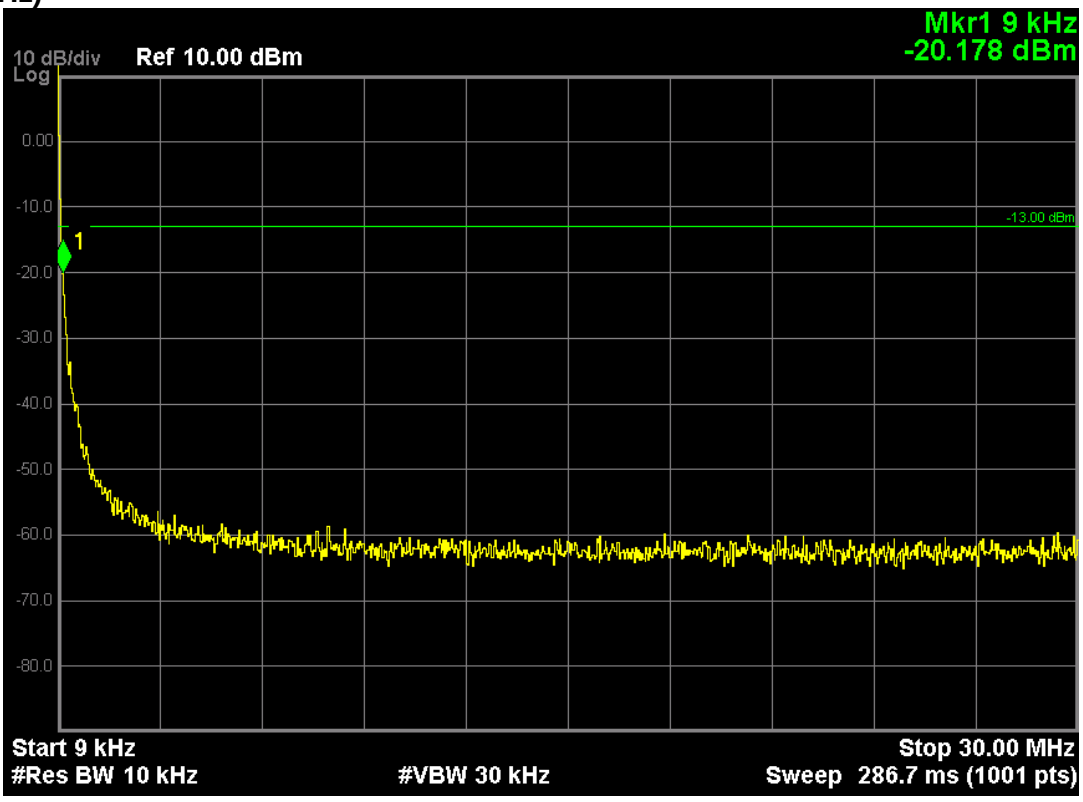


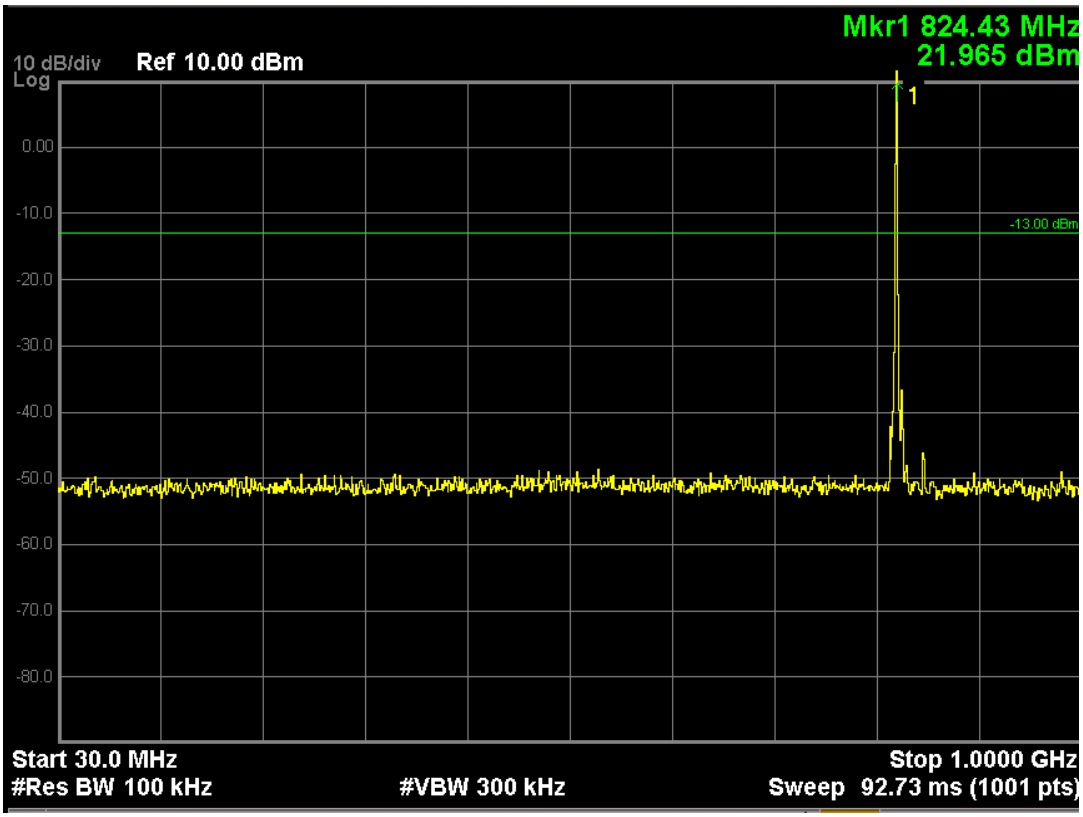
Note: The signal at point 1 is carrier


Mkr1 1.078 5 GHz
-37.891 dBm
10 dB/div
Log
Ref 10.00 dBm
0.00
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
-70.0
-80.0
-13.00 dBm
1
Start 1.0000 GHz
#Res BW 1.0 MHz
#VBW 3.0 MHz
Stop 1.5000 GHz
Sweep 1.000 ms (1001 pts)

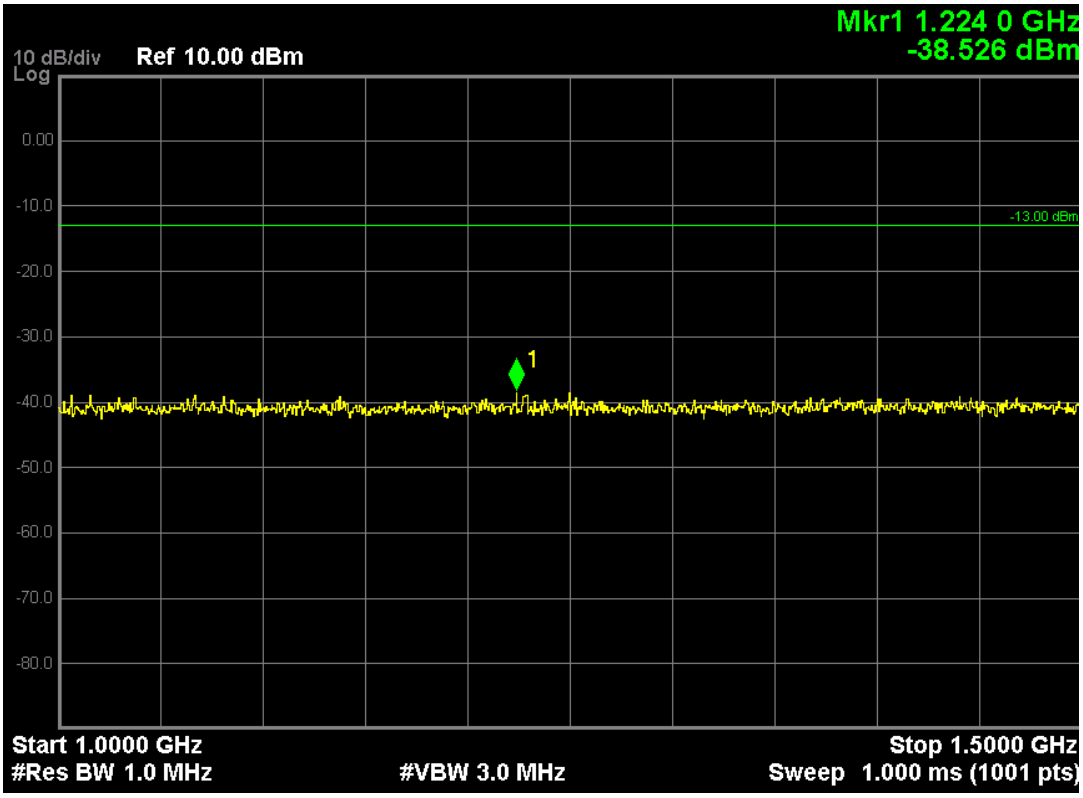

Mkr1 3.337 5 GHz
-35.731 dBm
10 dB/div
Log
Ref 10.00 dBm
0.00
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
-70.0
-80.0
-13.00 dBm
1
Start 1.500 GHz
#Res BW 1.0 MHz
#VBW 3.0 MHz
Stop 9.000 GHz
Sweep 12.53 ms (1001 pts)

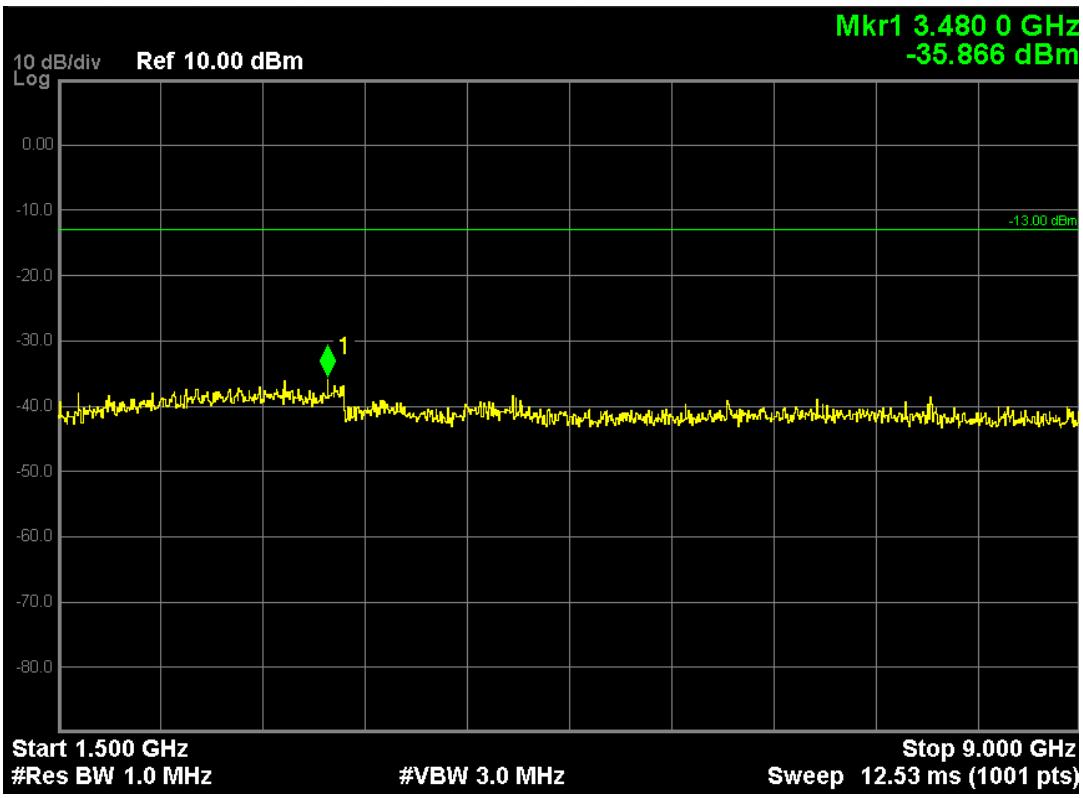
LTE Band 5 (16-QAM, Band Width 1.4MHz,RB Size 1,RB Offset 0,Channel 20407,Frequeny 824.7MHz)



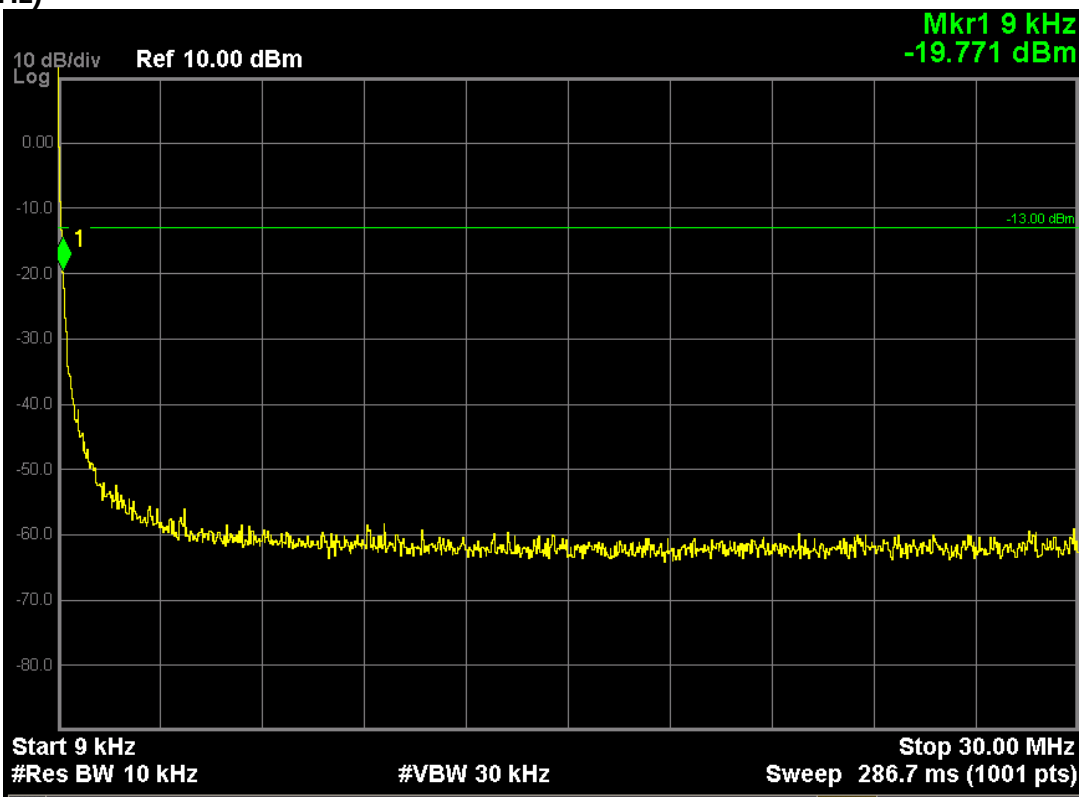


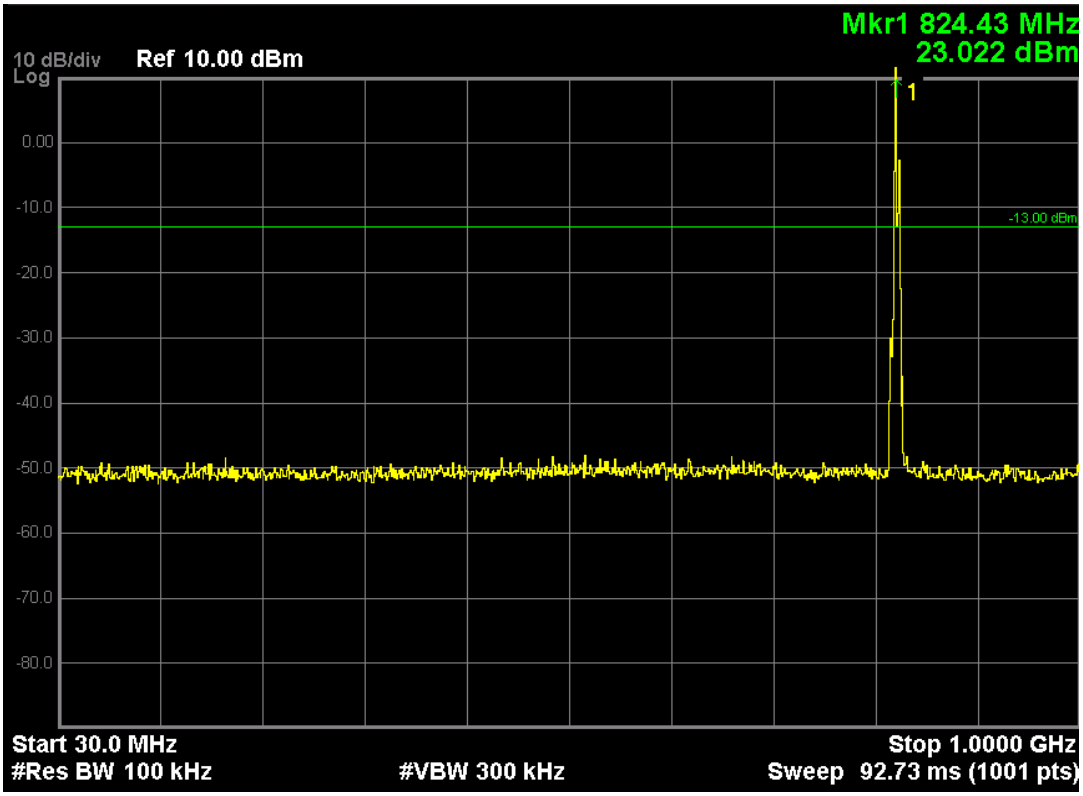
Note: The signal at point 1 is carrier


Mkr1 1.224 0 GHz
-38.526 dBm
10 dB/div
Log
Ref 10.00 dBm
0.00
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
-70.0
-80.0
-13.00 dBm
1
Start 1.0000 GHz
#Res BW 1.0 MHz
#VBW 3.0 MHz
Stop 1.5000 GHz
Sweep 1.000 ms (1001 pts)

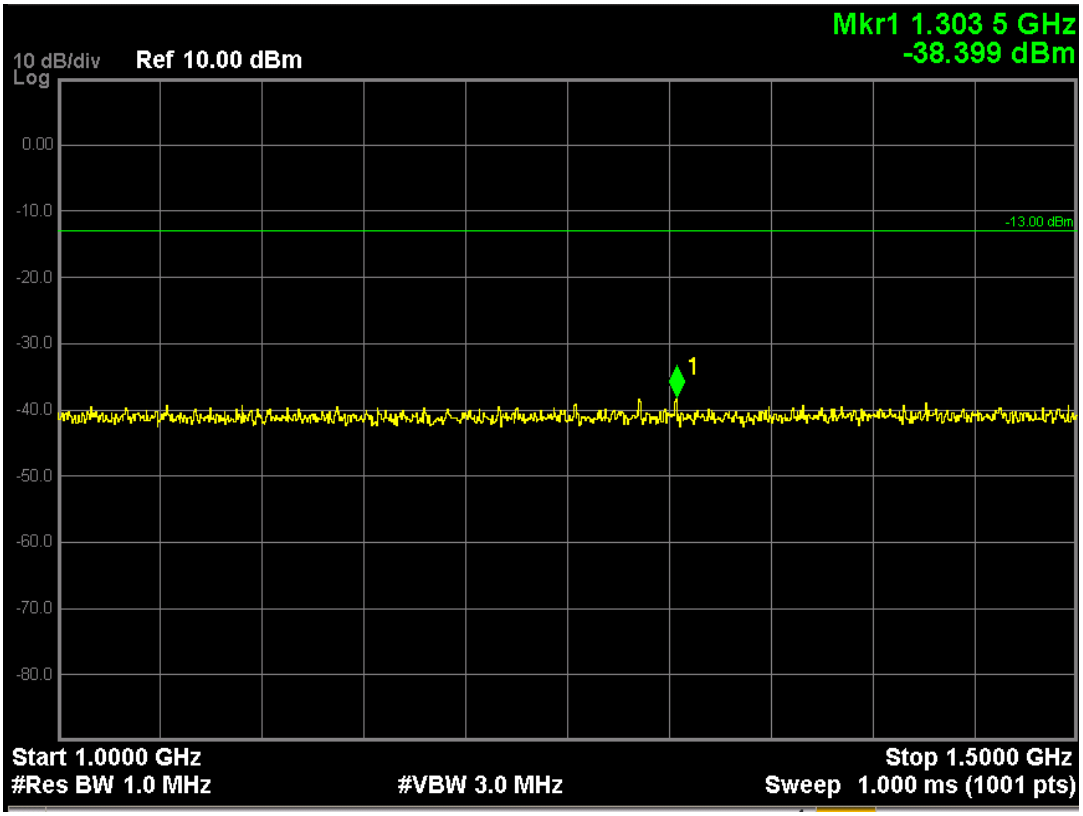

Mkr1 3.480 0 GHz
-35.866 dBm
10 dB/div
Log
Ref 10.00 dBm
0.00
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
-70.0
-80.0
-13.00 dBm
1
Start 1.500 GHz
#Res BW 1.0 MHz
#VBW 3.0 MHz
Stop 9.000 GHz
Sweep 12.53 ms (1001 pts)

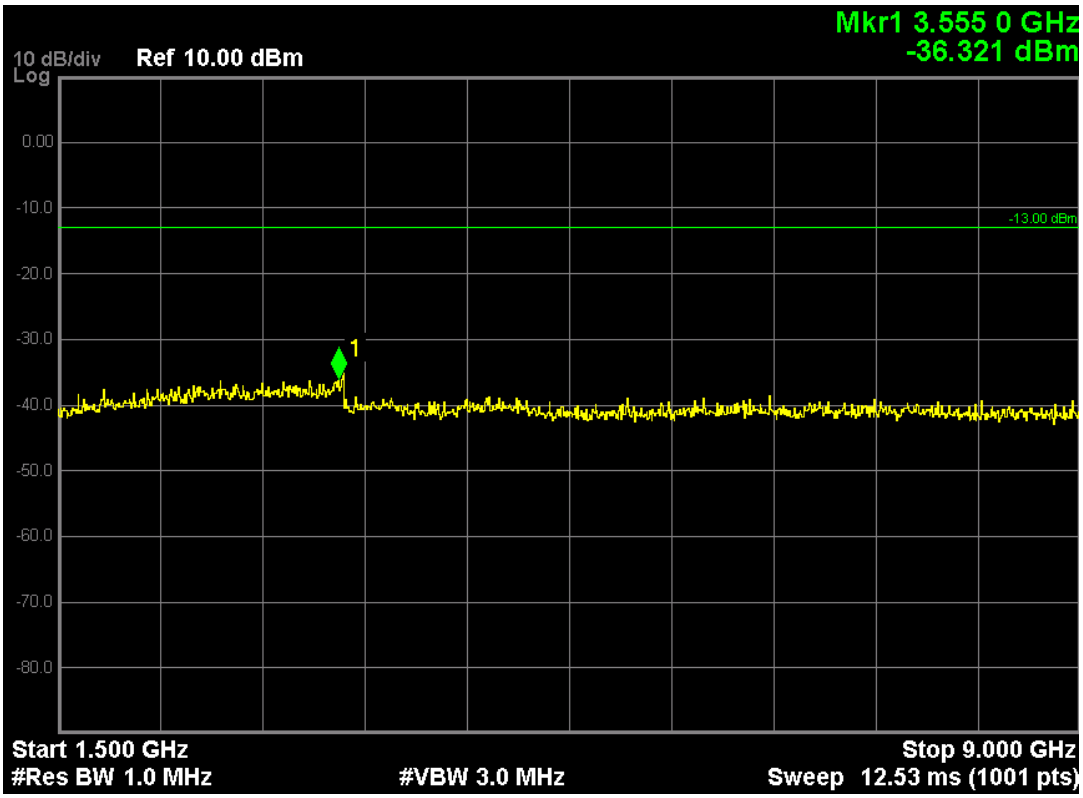
LTE Band 5 (QPSK, Band Width 3MHz,RB Size 1,RB Offset 0,Channel 20415,Frequeny 825.5MHz)



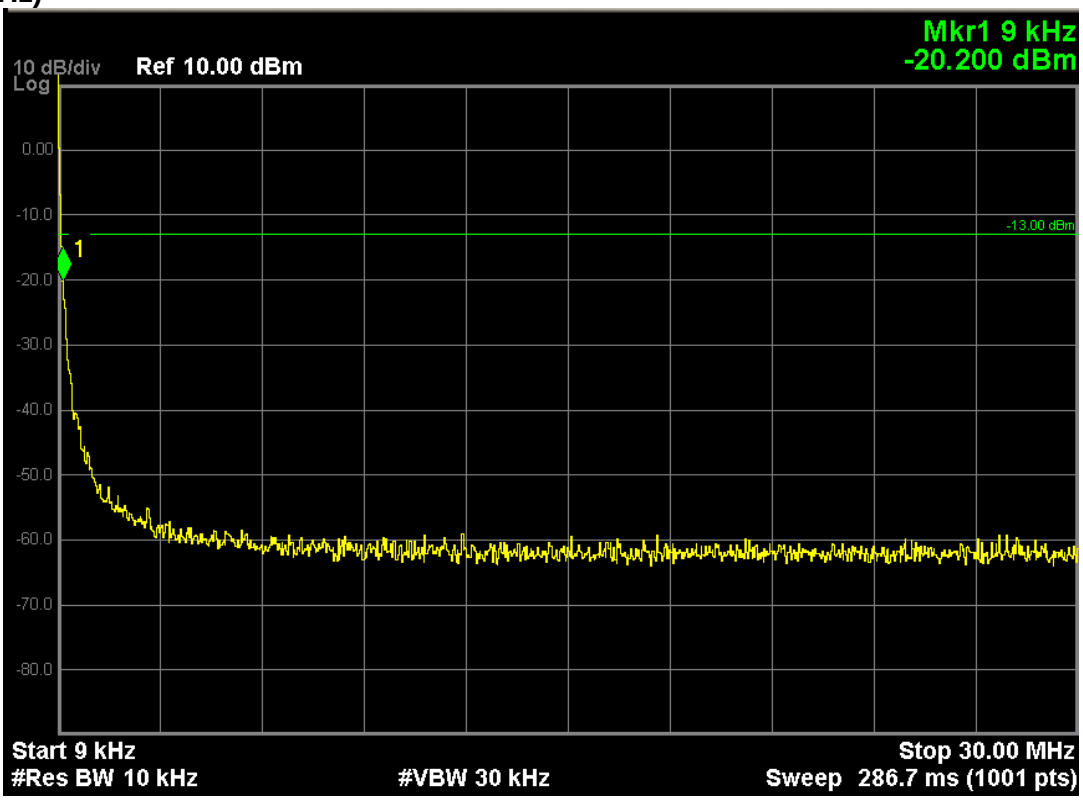


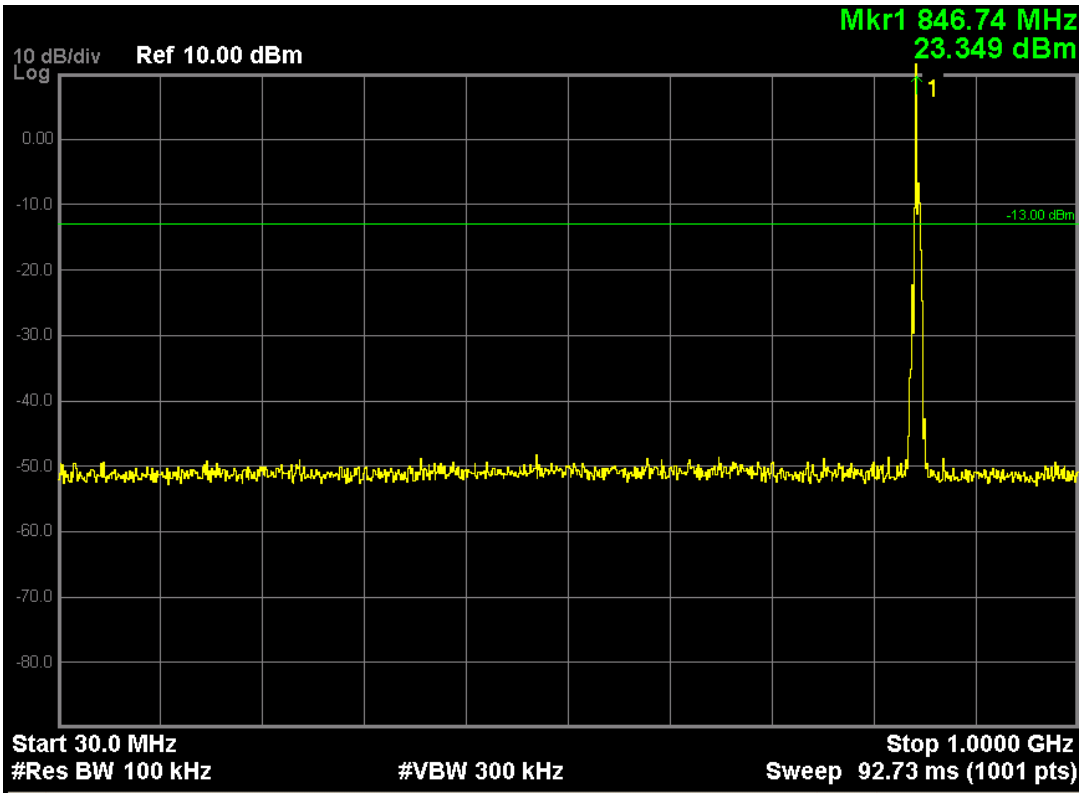
Note: The signal at point 1 is carrier


Mkr1 1.303 5 GHz
-38.399 dBm
10 dB/div
Log
Ref 10.00 dBm
0.00
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
-70.0
-80.0
-13.00 dBm
1
Start 1.0000 GHz
#Res BW 1.0 MHz
#VBW 3.0 MHz
Stop 1.5000 GHz
Sweep 1.000 ms (1001 pts)

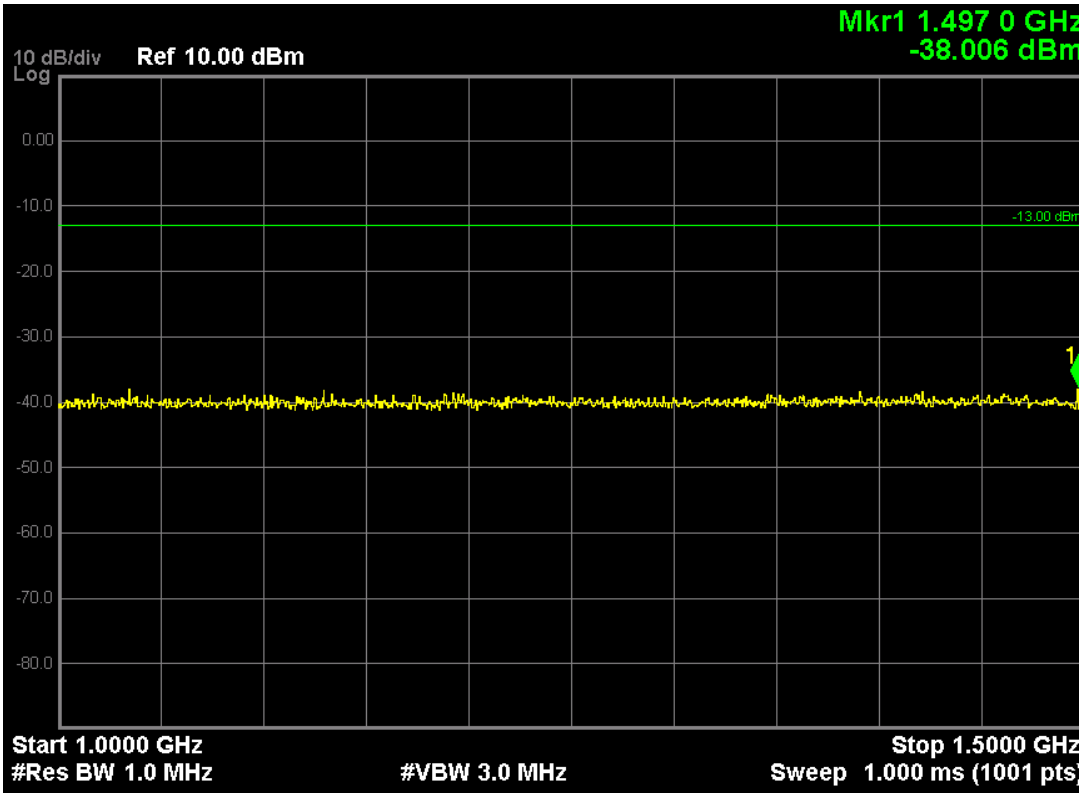

Mkr1 3.555 0 GHz
-36.321 dBm
10 dB/div
Log
Ref 10.00 dBm
0.00
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
-70.0
-80.0
-13.00 dBm
1
Start 1.500 GHz
#Res BW 1.0 MHz
#VBW 3.0 MHz
Stop 9.000 GHz
Sweep 12.53 ms (1001 pts)

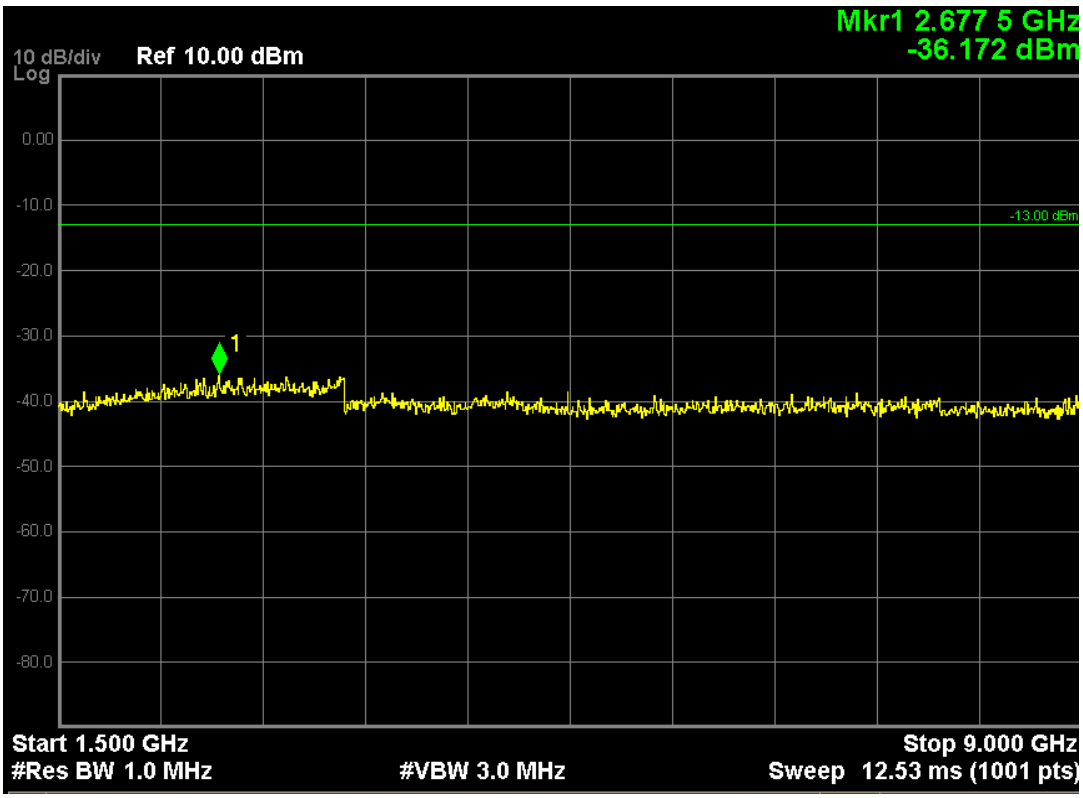
LTE Band 5 (16-QAM, Band Width 3MHz,RB Size 1,RB Offset 0,Channel 20635,Frequeny 847.5MHz)



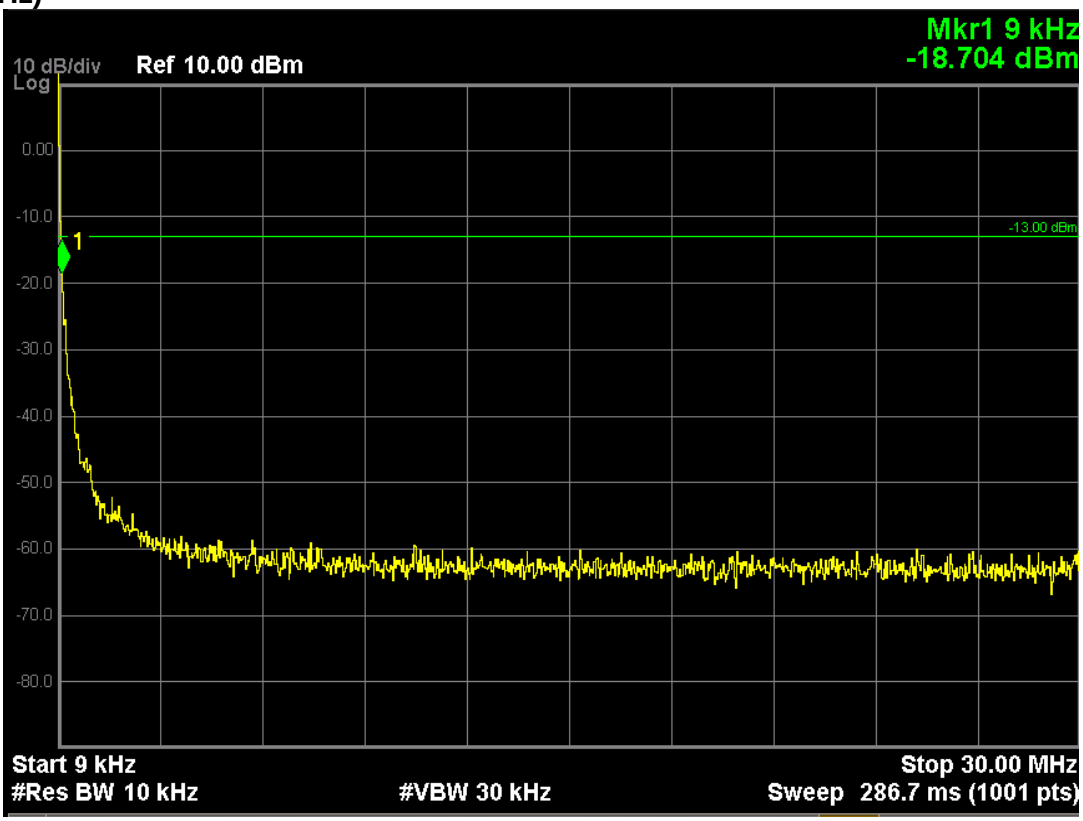


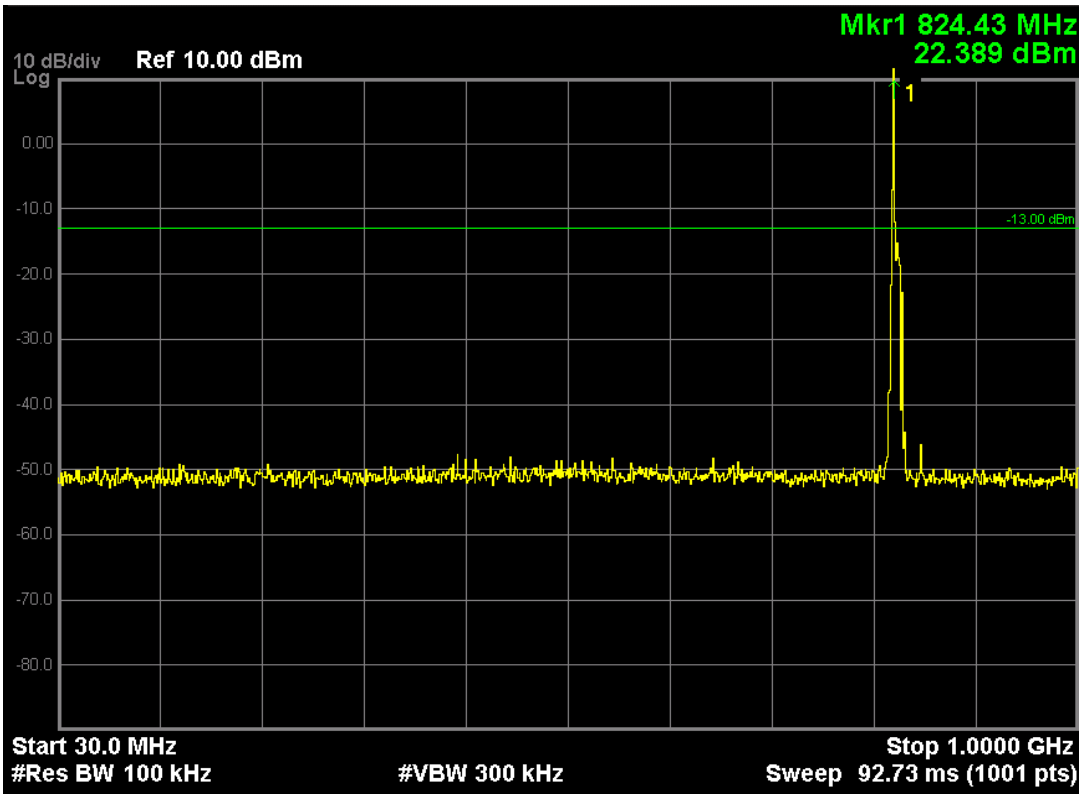
Note: The signal at point 1 is carrier


Mkr1 1.497 0 GHz
-38.006 dBm
10 dB/div
Log
Ref 10.00 dBm
0.00
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
-70.0
-80.0
-13.00 dBm
1
Start 1.0000 GHz
#Res BW 1.0 MHz
#VBW 3.0 MHz
Stop 1.5000 GHz
Sweep 1.000 ms (1001 pts)

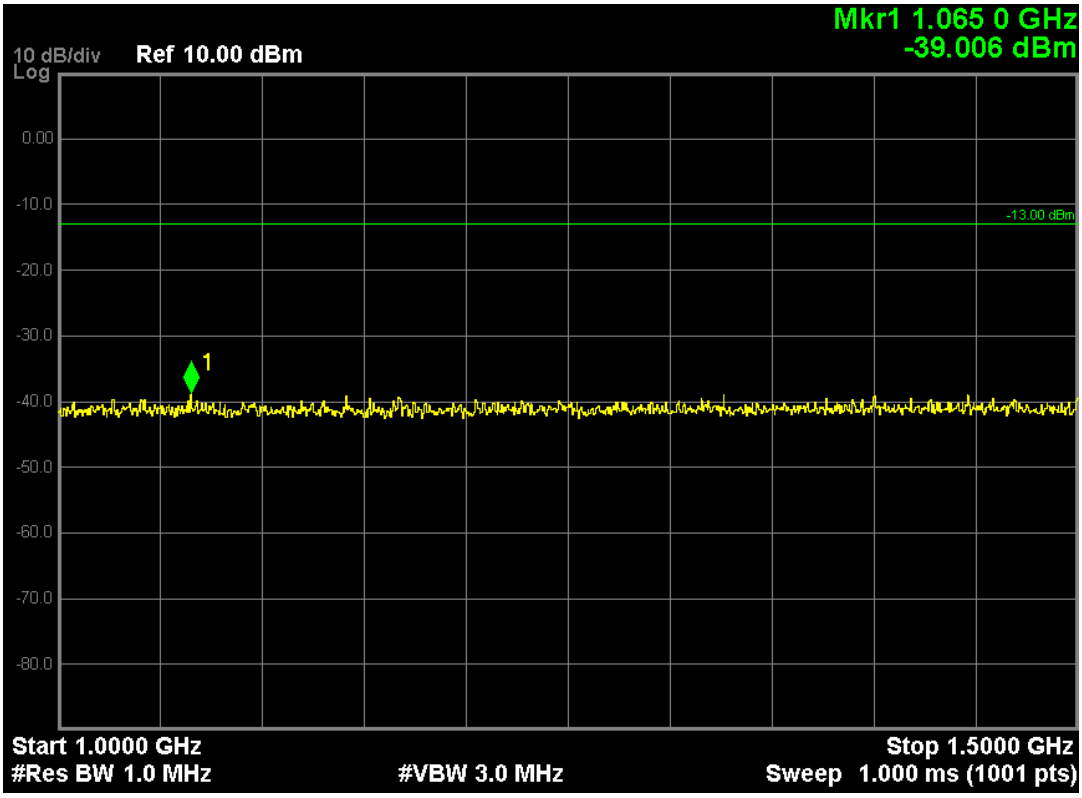

Mkr1 2.677 5 GHz
-36.172 dBm
10 dB/div
Log
Ref 10.00 dBm
0.00
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
-70.0
-80.0
-13.00 dBm
1
Start 1.500 GHz
#Res BW 1.0 MHz
#VBW 3.0 MHz
Stop 9.000 GHz
Sweep 12.53 ms (1001 pts)

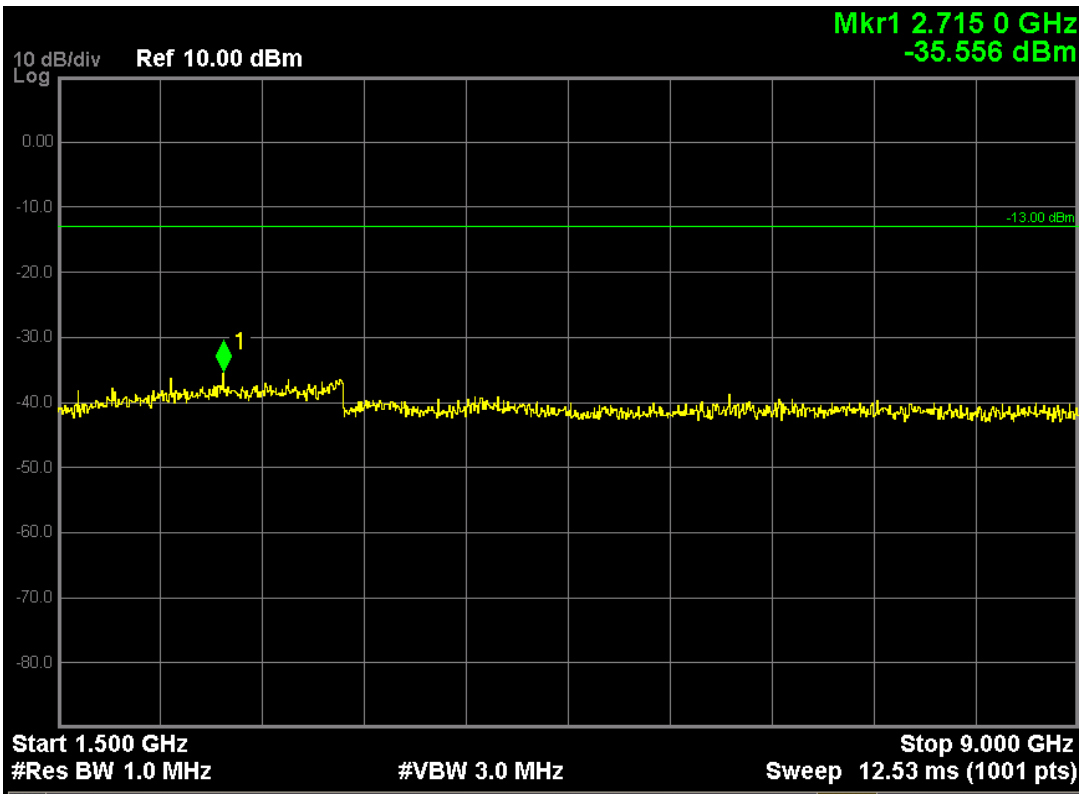
LTE Band 5 (QPSK, Band Width 5MHz,RB Size 1,RB Offset 0,Channel 20425,Frequeny 826.5MHz)



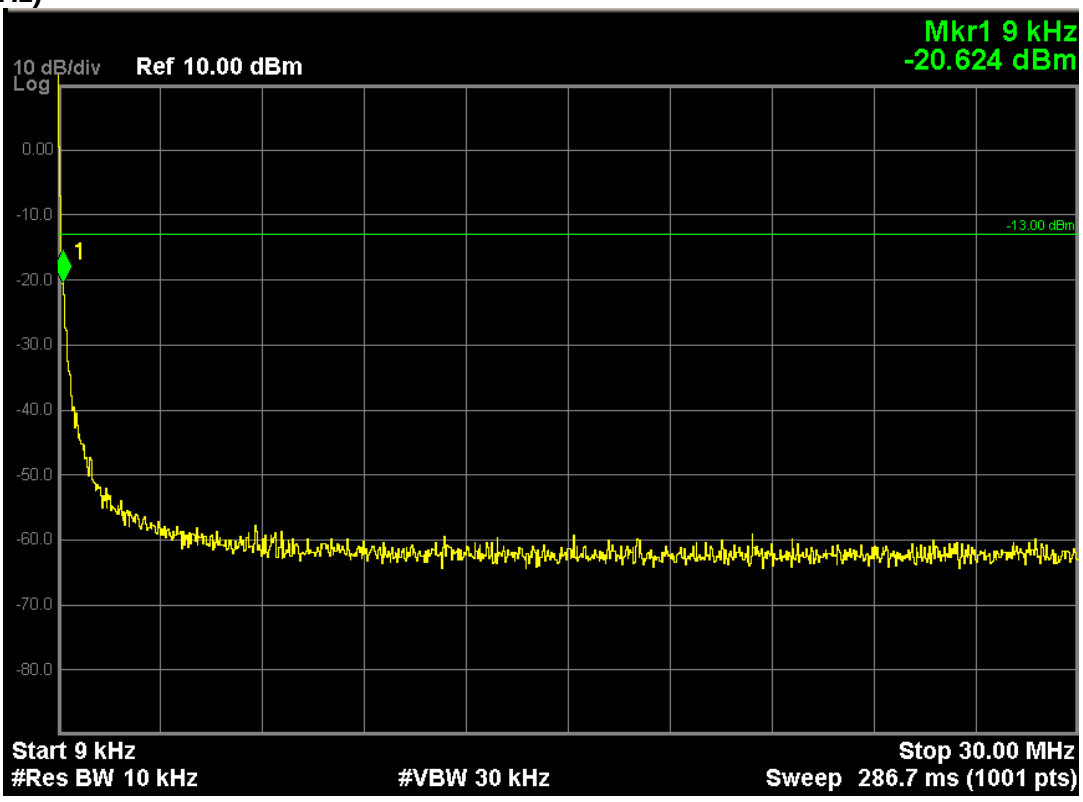


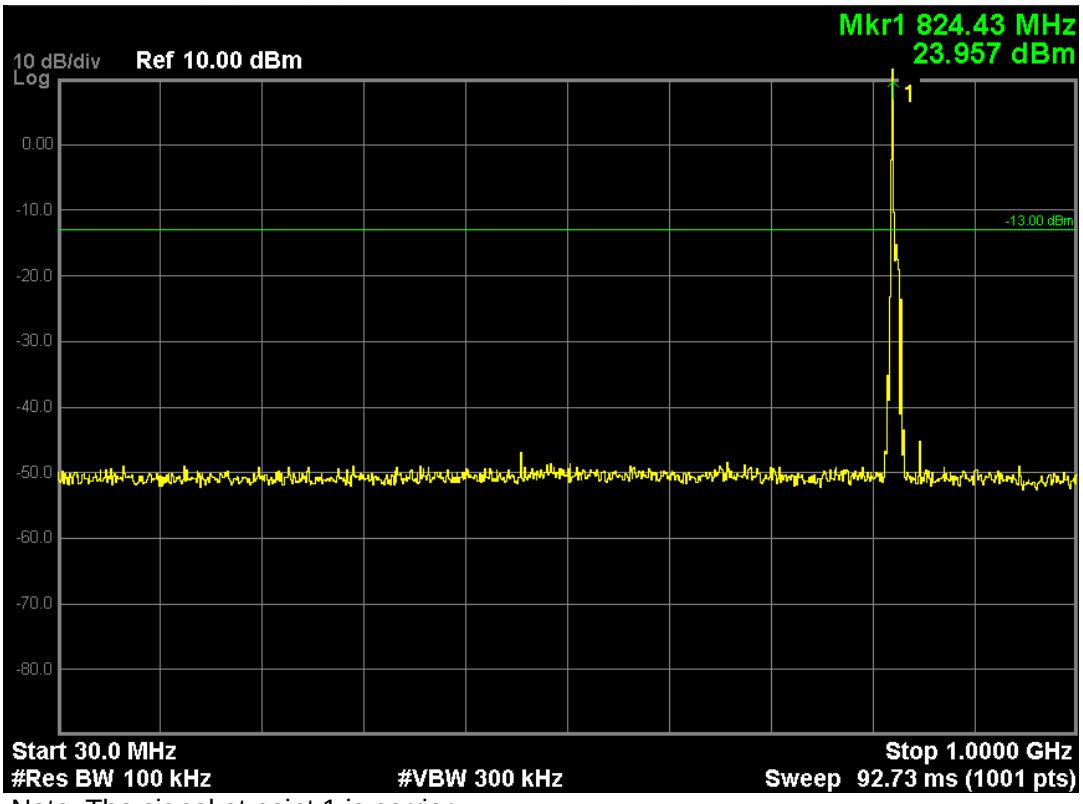
Note: The signal at point 1 is carrier


Mkr1 1.065 0 GHz
-39.006 dBm
10 dB/div
Log
Ref 10.00 dBm
0.00
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
-70.0
-80.0
-13.00 dBm
1
Start 1.0000 GHz
#Res BW 1.0 MHz
#VBW 3.0 MHz
Stop 1.5000 GHz
Sweep 1.000 ms (1001 pts)

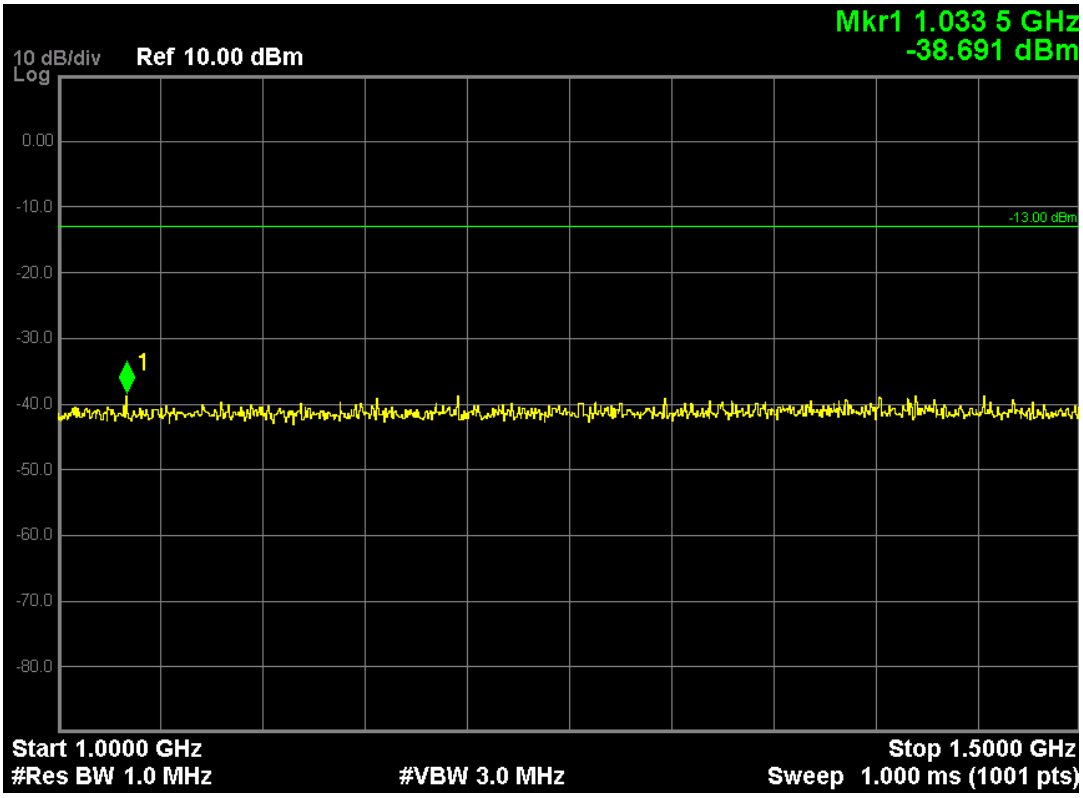

Mkr1 2.715 0 GHz
-35.556 dBm
10 dB/div
Log
Ref 10.00 dBm
0.00
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
-70.0
-80.0
-13.00 dBm
1
Start 1.500 GHz
#Res BW 1.0 MHz
#VBW 3.0 MHz
Stop 9.000 GHz
Sweep 12.53 ms (1001 pts)

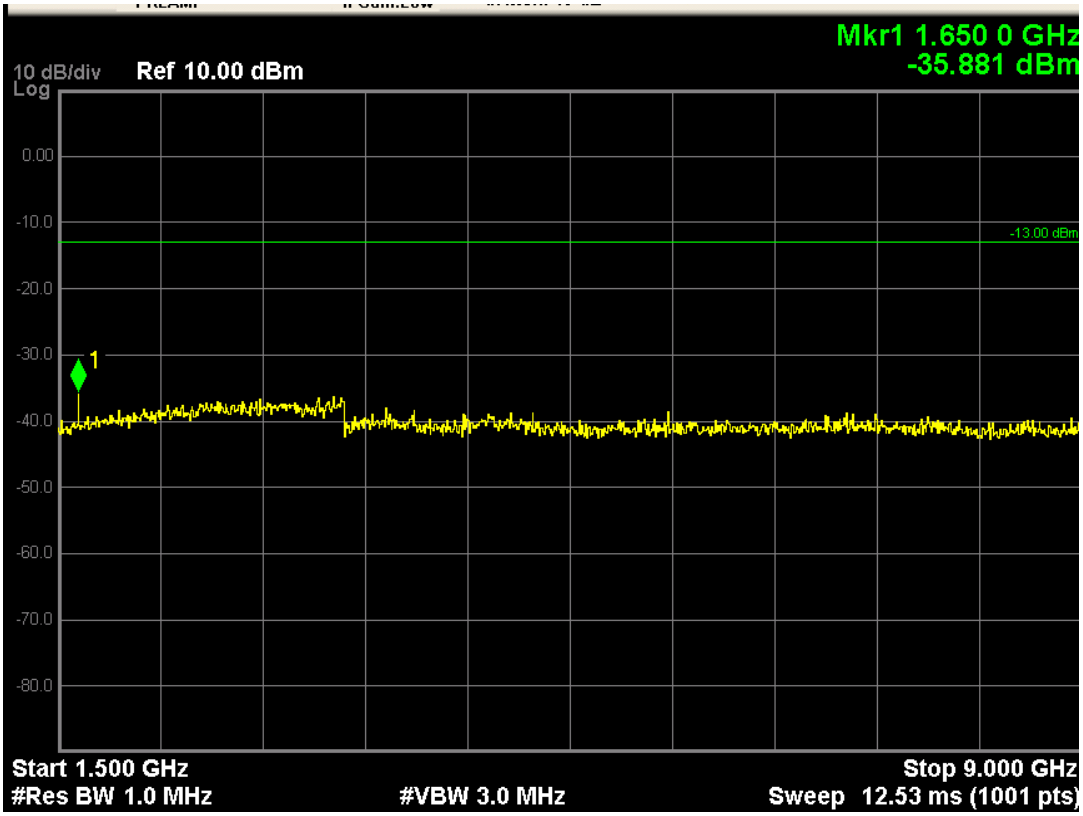
LTE Band 5 (16-QAM, Band Width 5MHz,RB Size 1,RB Offset 0,Channel 20425,Frequeny 826.5MHz)



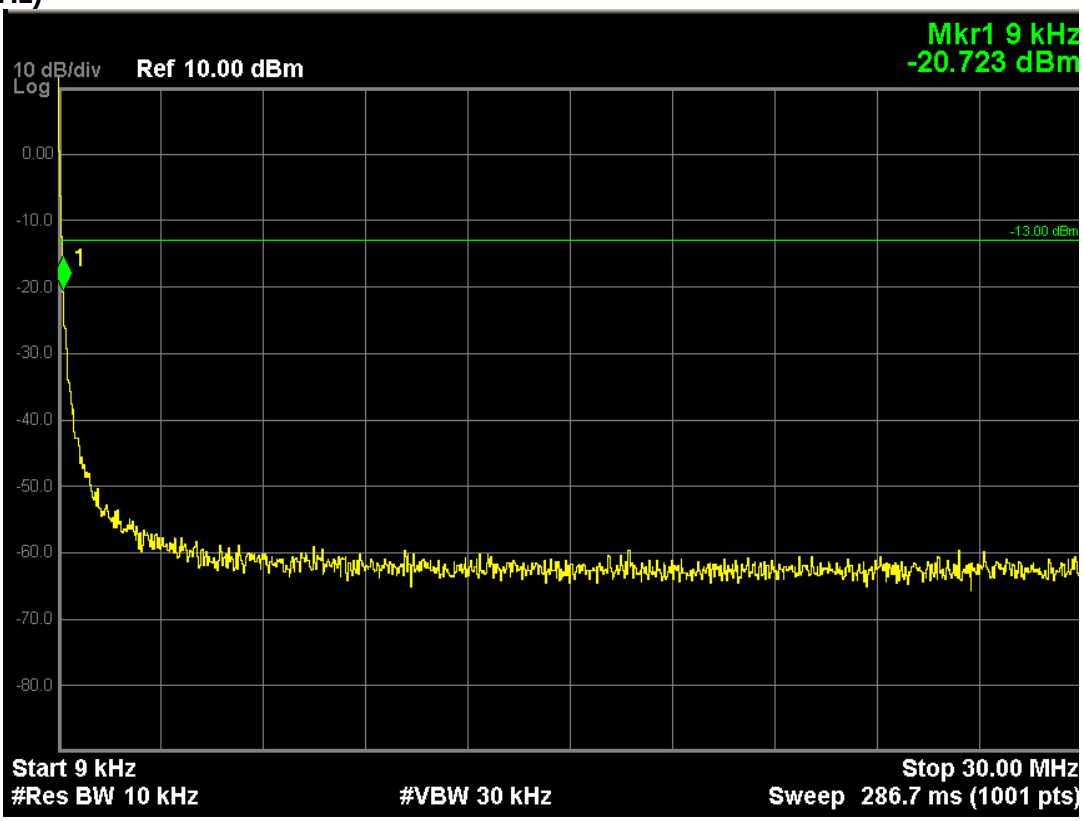


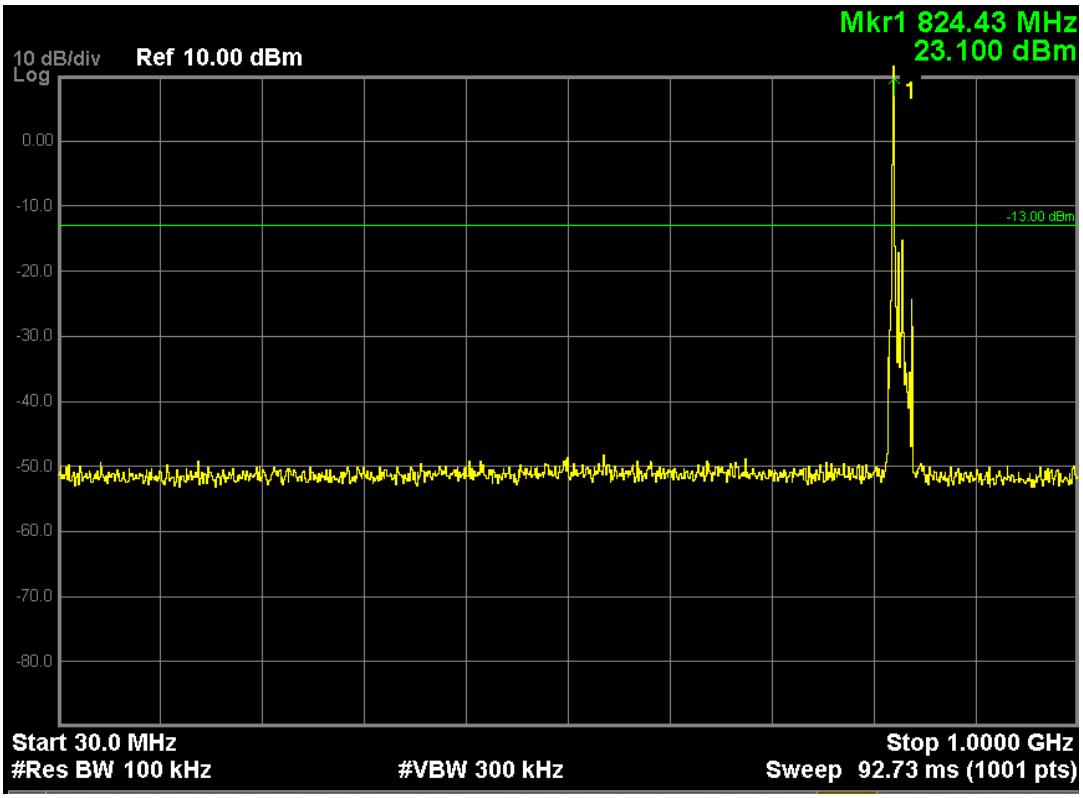
Note: The signal at point 1 is carrier


Mkr1 1.033 5 GHz
-38.691 dBm
10 dB/div
Log
Ref 10.00 dBm
0.00
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
-70.0
-80.0
-13.00 dBm
1
Start 1.0000 GHz
#Res BW 1.0 MHz
#VBW 3.0 MHz
Stop 1.5000 GHz
Sweep 1.000 ms (1001 pts)

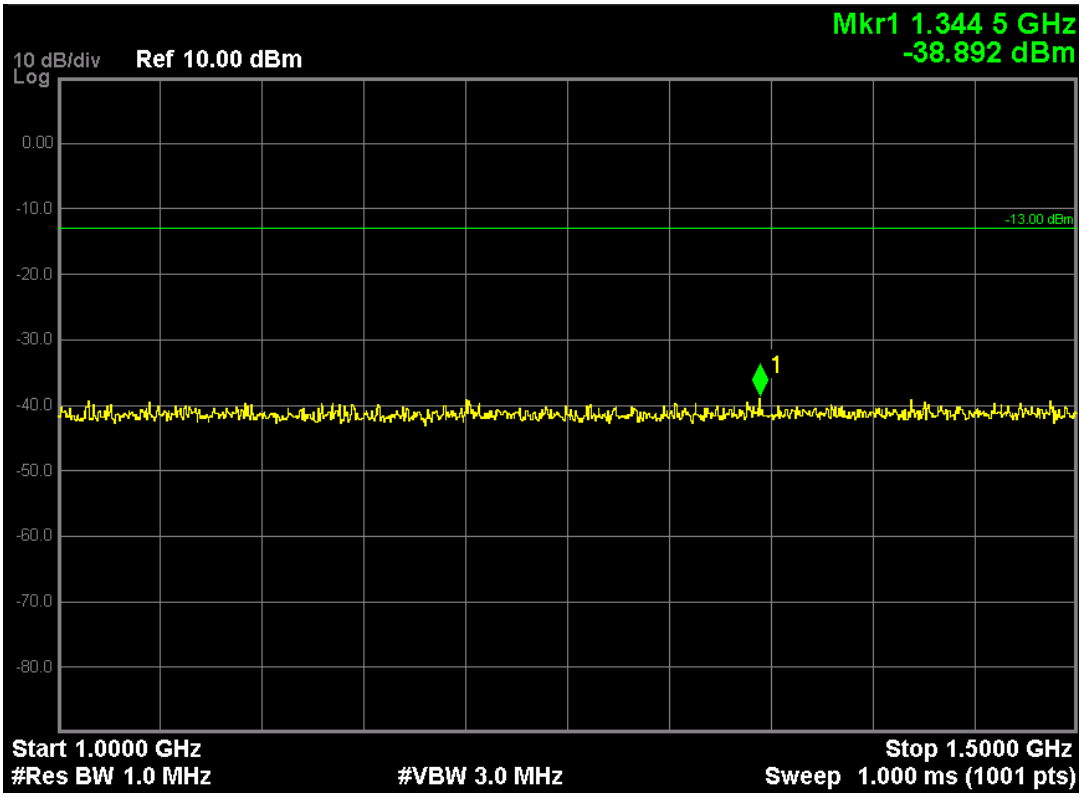

Mkr1 1.650 0 GHz
-35.881 dBm
10 dB/div
Log
Ref 10.00 dBm
0.00
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
-70.0
-80.0
-13.00 dBm
1
Start 1.500 GHz
#Res BW 1.0 MHz
#VBW 3.0 MHz
Stop 9.000 GHz
Sweep 12.53 ms (1001 pts)

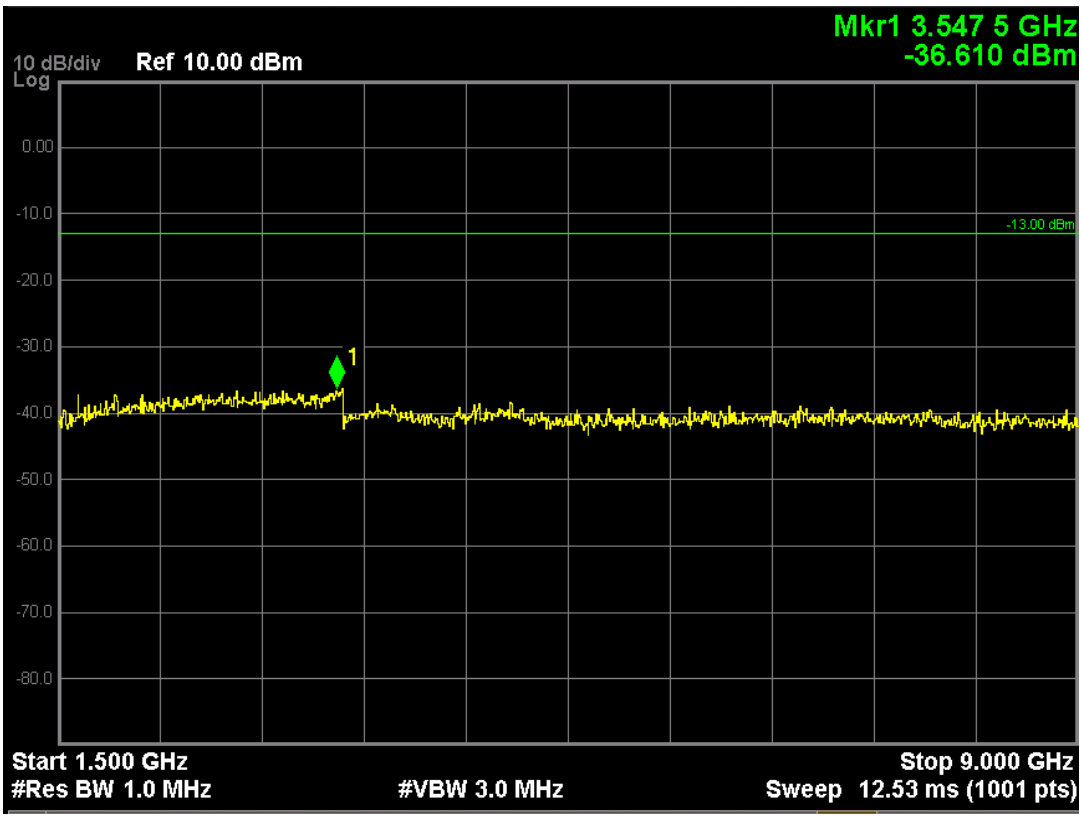
LTE Band 5 (QPSK, Band Width 10MHz,RB Size 1,RB Offset 0,Channel 20450,Frequeny 829.0MHz)



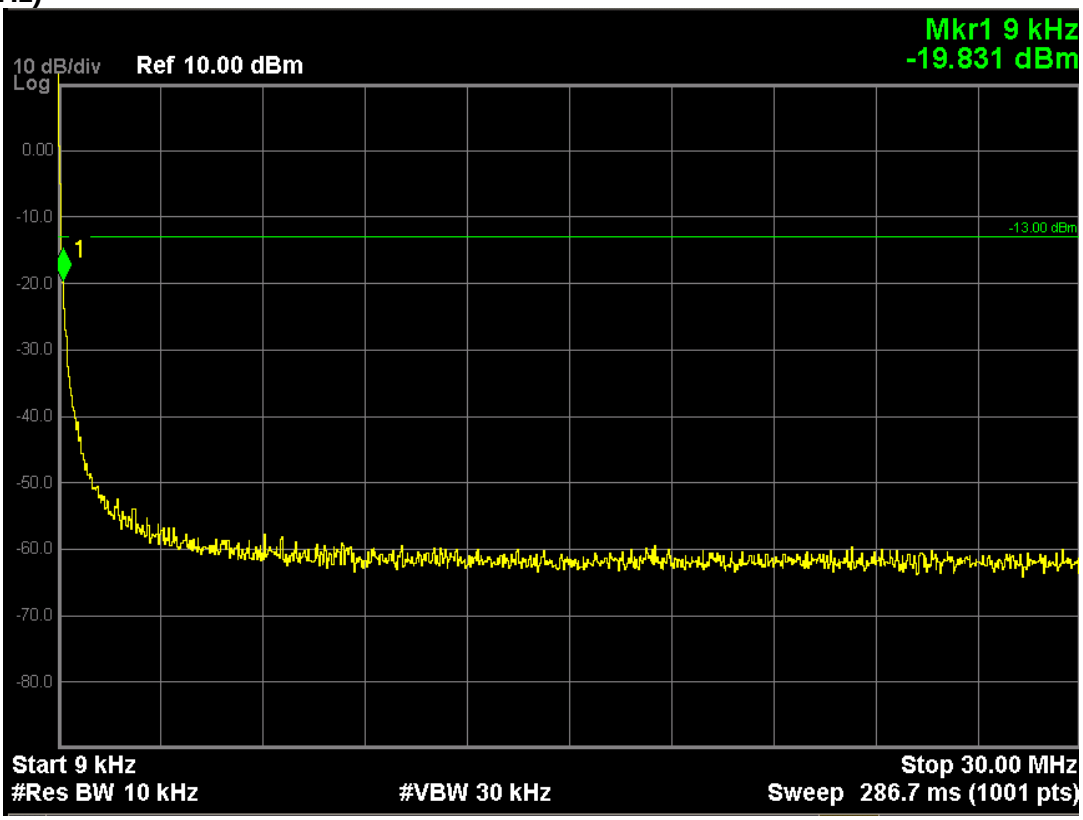


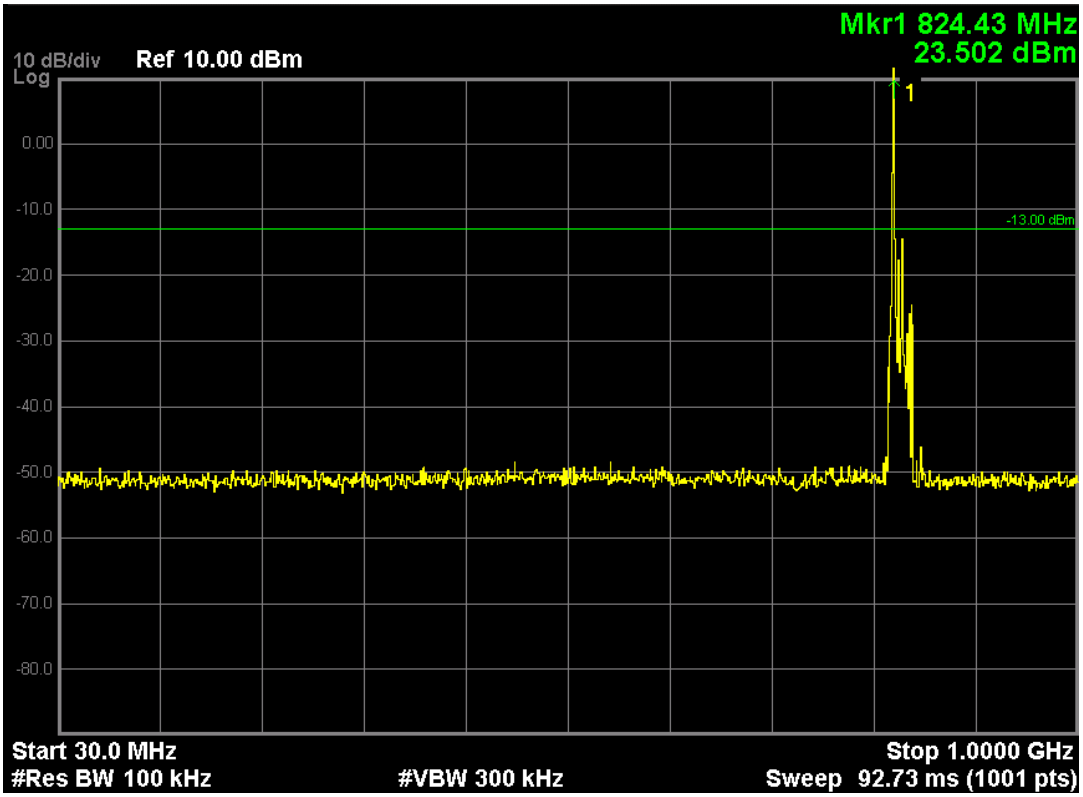
Note: The signal at point 1 is carrier


Mkr1 1.344 5 GHz
-38.892 dBm
10 dB/div
Log
Ref 10.00 dBm
0.00
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
-70.0
-80.0
-13.00 dBm
1
Start 1.0000 GHz
#Res BW 1.0 MHz
#VBW 3.0 MHz
Stop 1.5000 GHz
Sweep 1.000 ms (1001 pts)

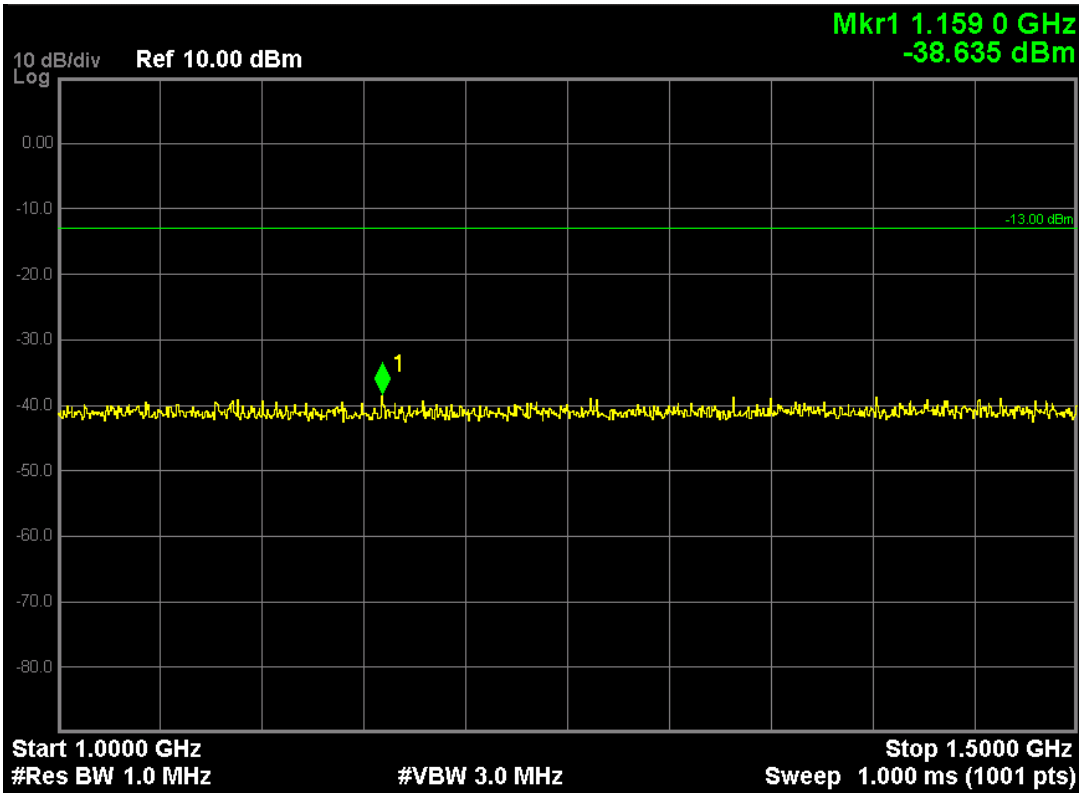

Mkr1 3.547 5 GHz
-36.610 dBm
10 dB/div
Log
Ref 10.00 dBm
0.00
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
-70.0
-80.0
-13.00 dBm
1
Start 1.500 GHz
#Res BW 1.0 MHz
#VBW 3.0 MHz
Stop 9.000 GHz
Sweep 12.53 ms (1001 pts)

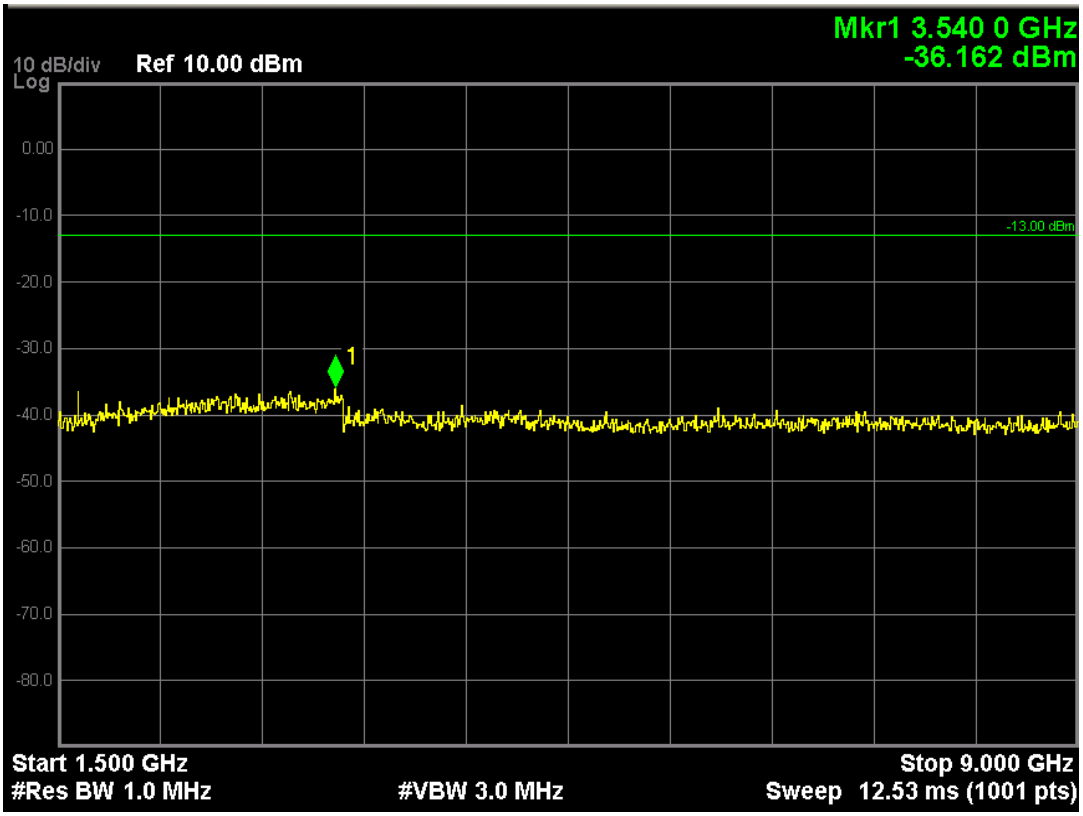
LTE Band 5 (16-QAM, Band Width 10MHz,RB Size 1,RB Offset 0,Channel 20450,Frequeny 829.0MHz)



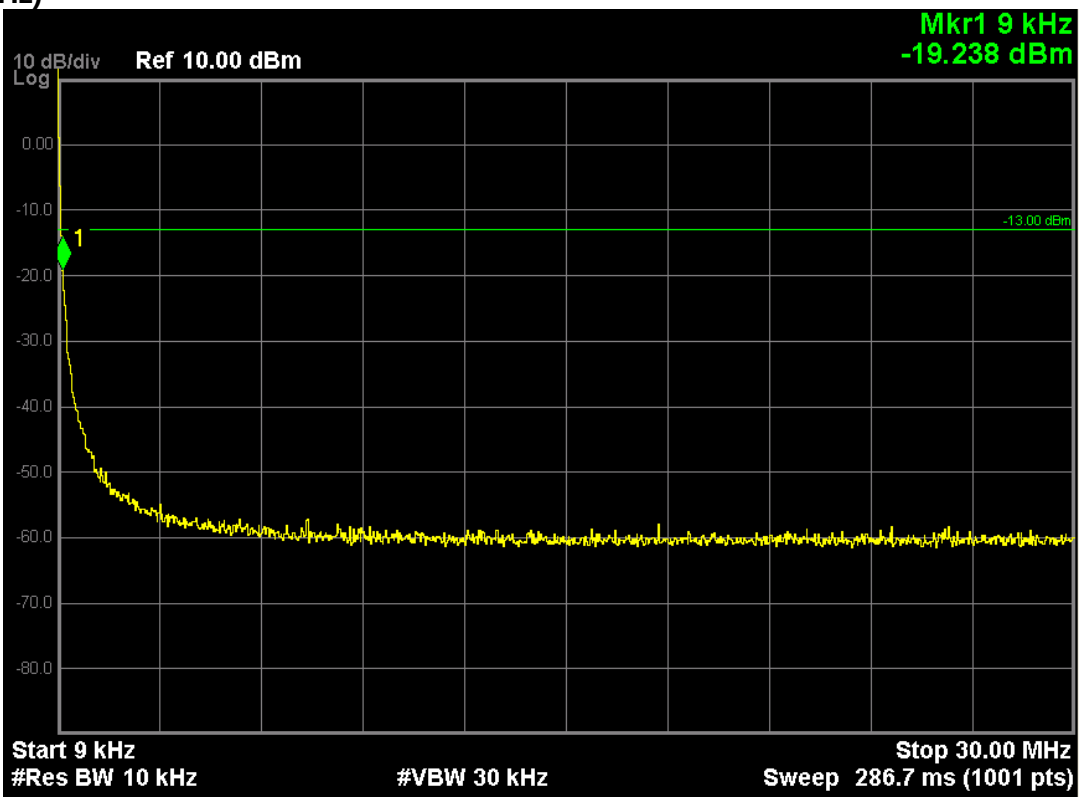


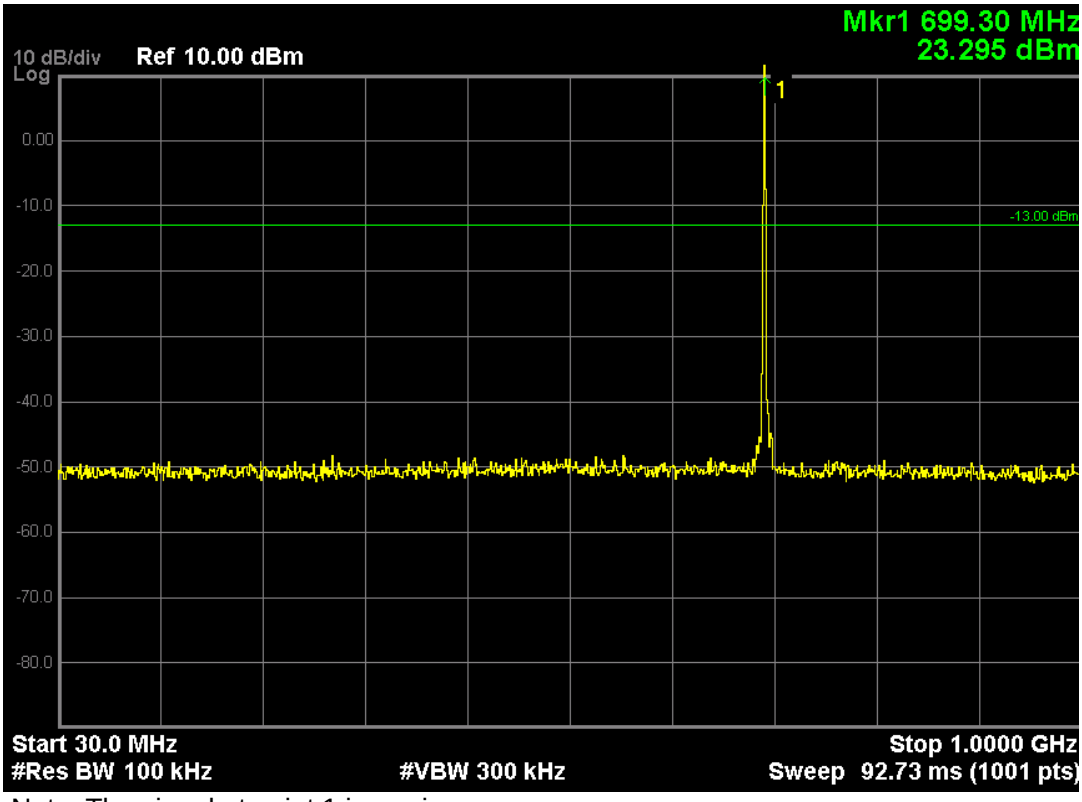
Note: The signal at point 1 is carrier


Mkr1 1.159 0 GHz
-38.635 dBm
10 dB/div
Log
Ref 10.00 dBm
0.00
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
-70.0
-80.0
-13.00 dBm
1
Start 1.0000 GHz
#Res BW 1.0 MHz
#VBW 3.0 MHz
Stop 1.5000 GHz
Sweep 1.000 ms (1001 pts)

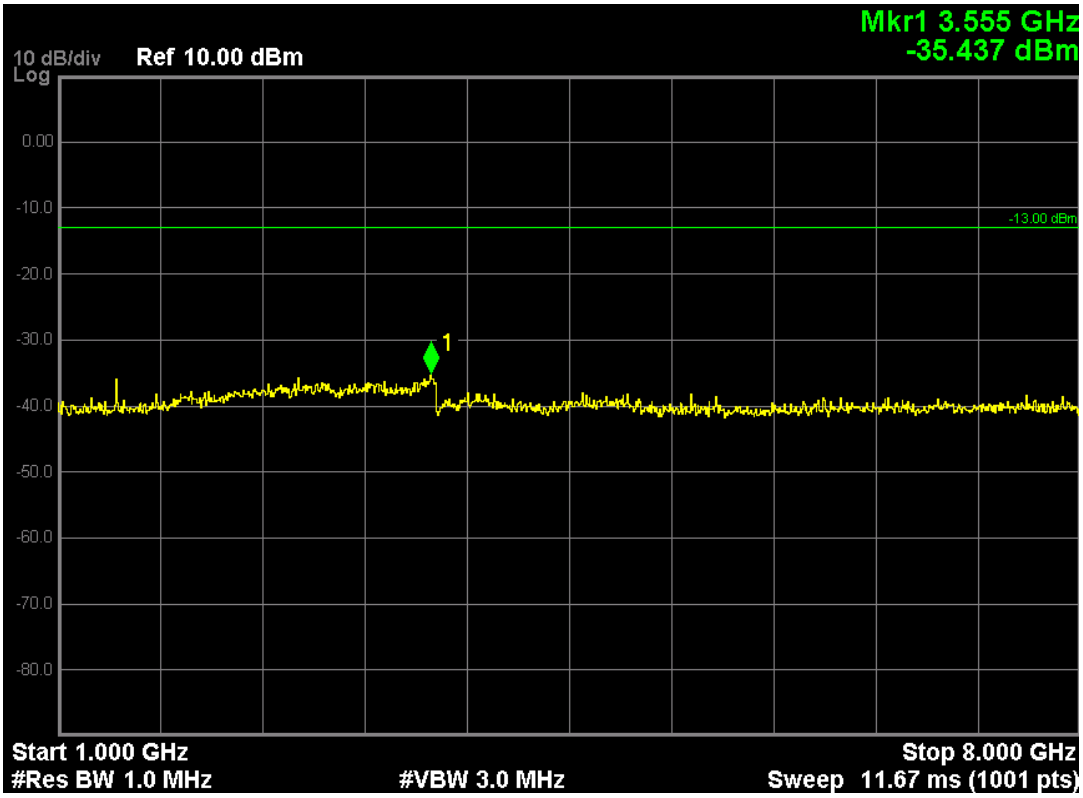

Mkr1 3.540 0 GHz
-36.162 dBm
10 dB/div
Log
Ref 10.00 dBm
0.00
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
-70.0
-80.0
-13.00 dBm
1
Start 1.500 GHz
#Res BW 1.0 MHz
#VBW 3.0 MHz
Stop 9.000 GHz
Sweep 12.53 ms (1001 pts)

LTE Band 12 (QPSK, Band Width 1.4MHz,RB Size 1,RB Offset 0,Channel 23017,Frequeny 699.7MHz)

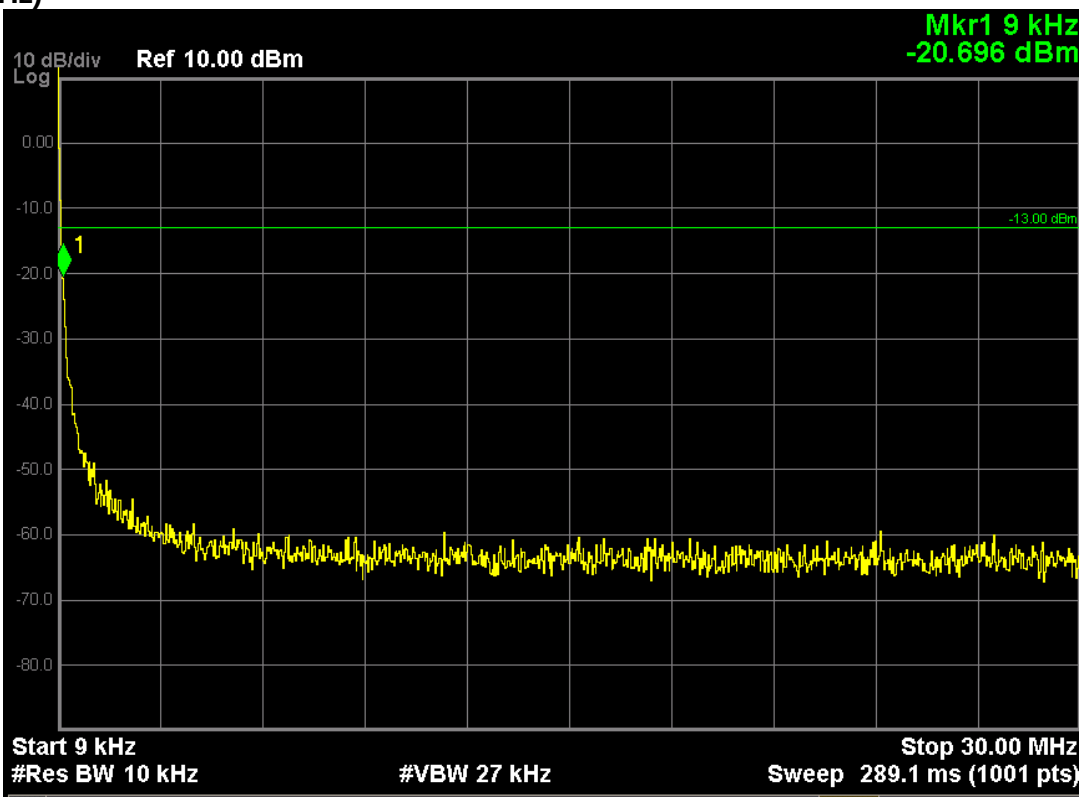


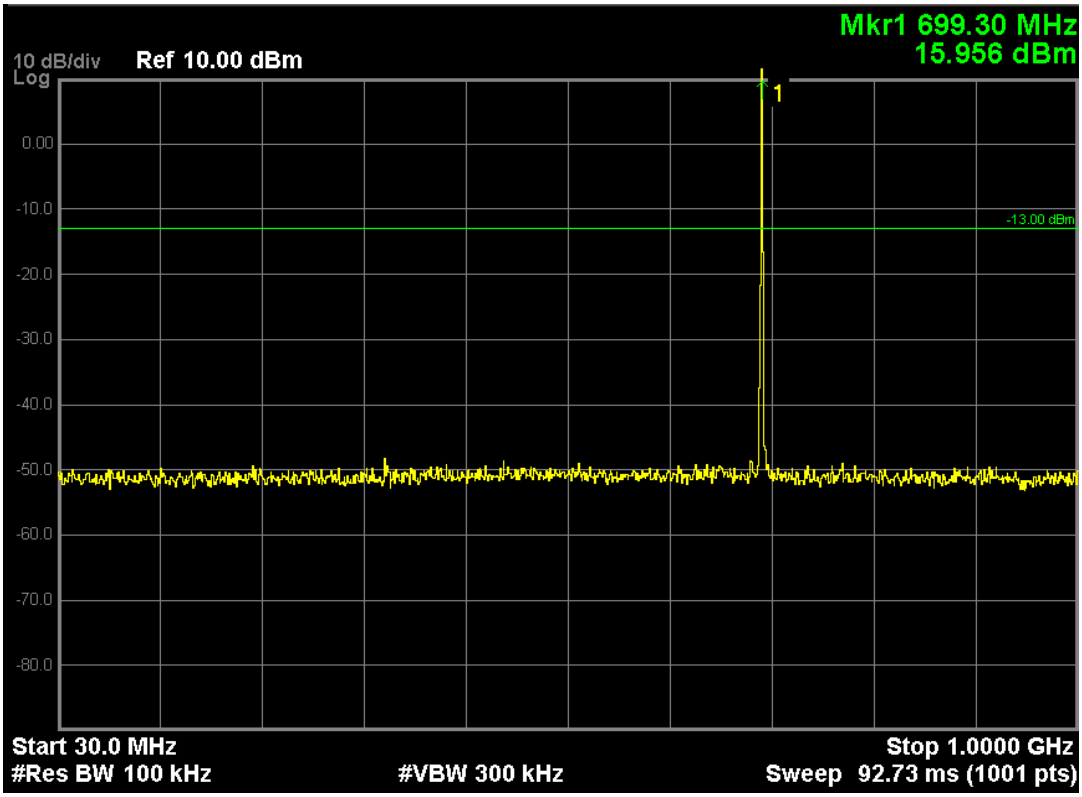


Note: The signal at point 1 is carrier

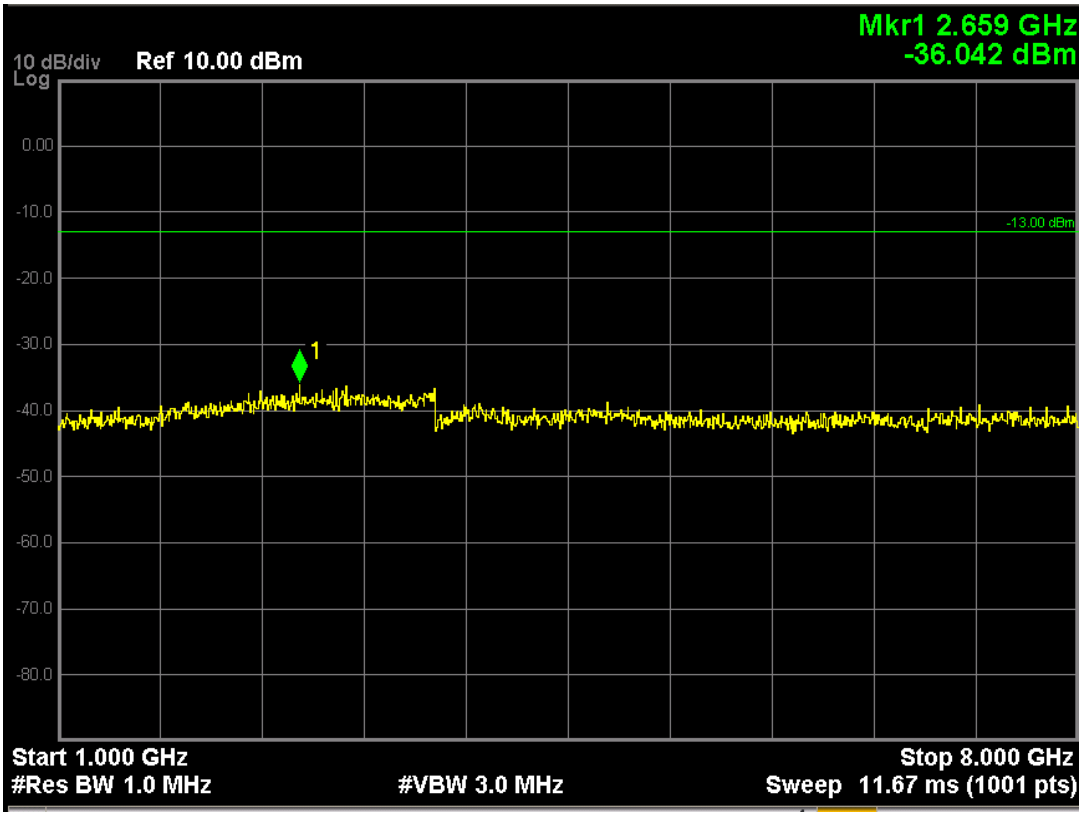


LTE Band 12 (16-QAM, Band Width 1.4MHz,RB Size 1,RB Offset 0,Channel 23017,Frequeny 699.7MHz)

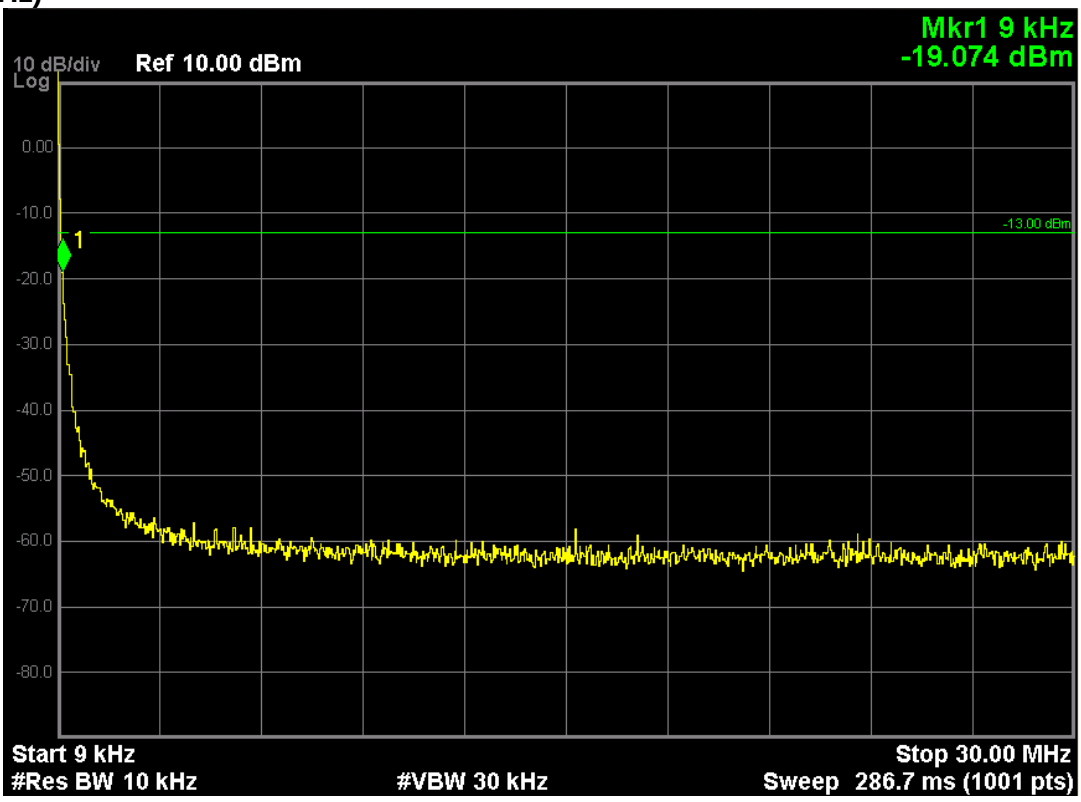


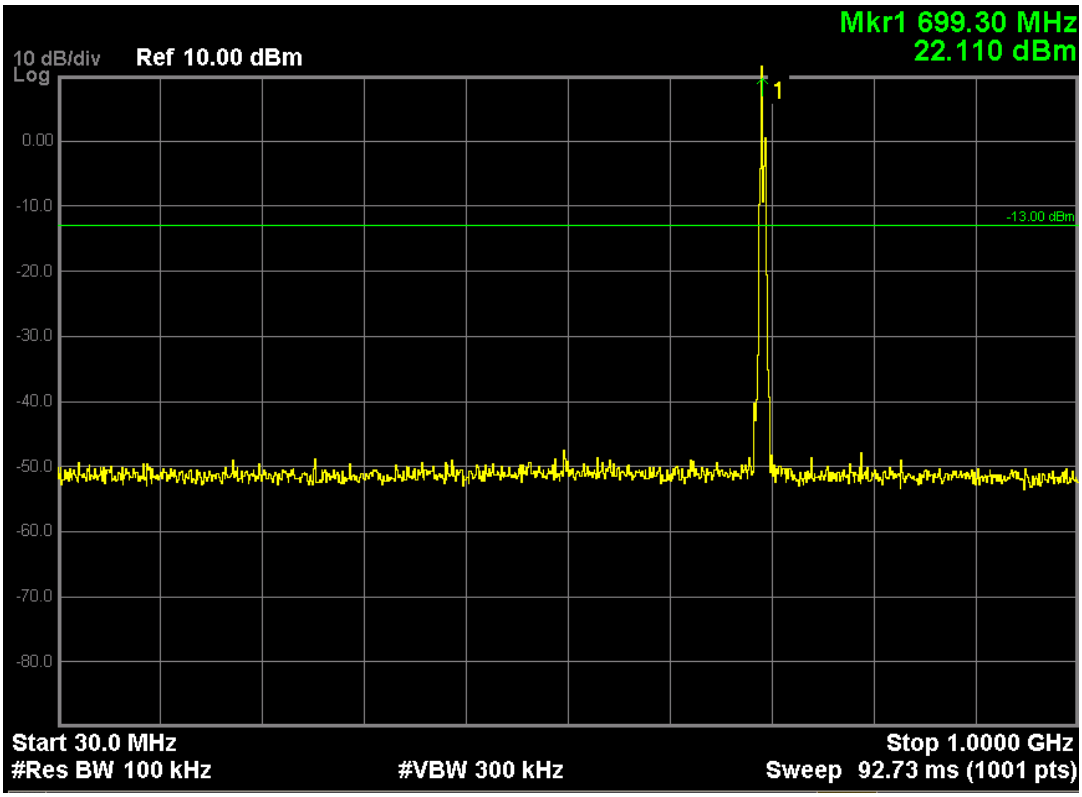


Note: The signal at point 1 is carrier

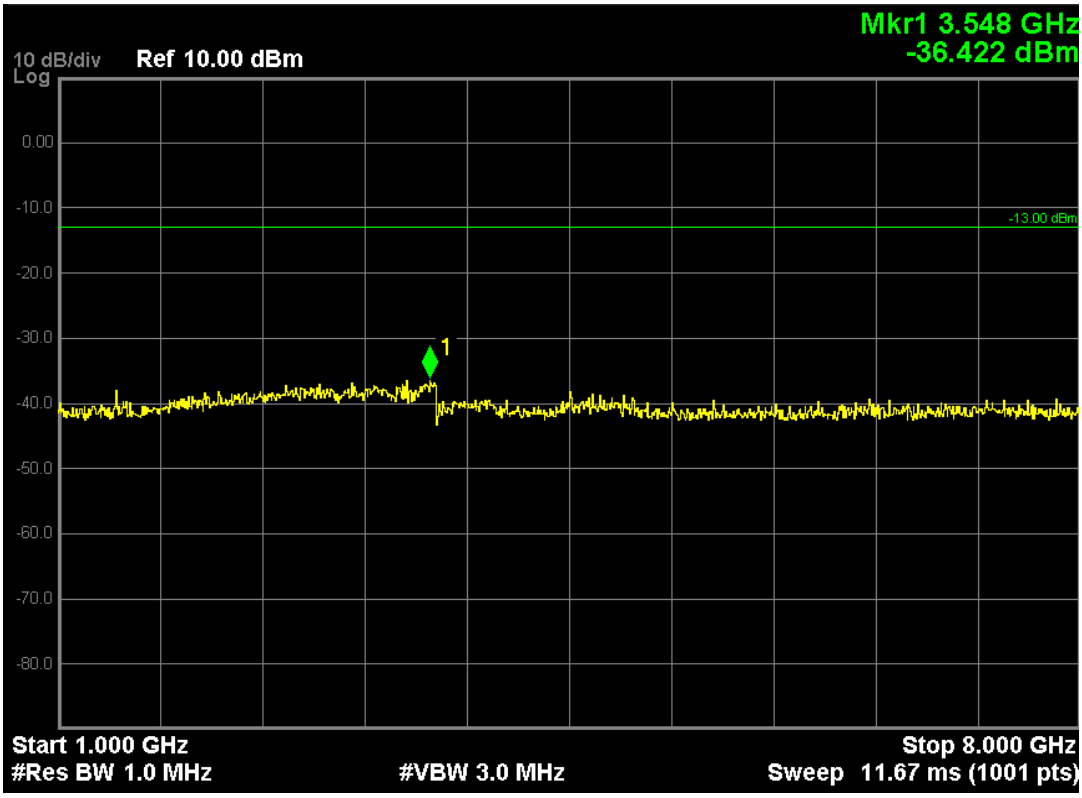


LTE Band 12 (QPSK, Band Width 3MHz,RB Size 1,RB Offset 0,Channel 23025,Frequeny 700.5MHz)

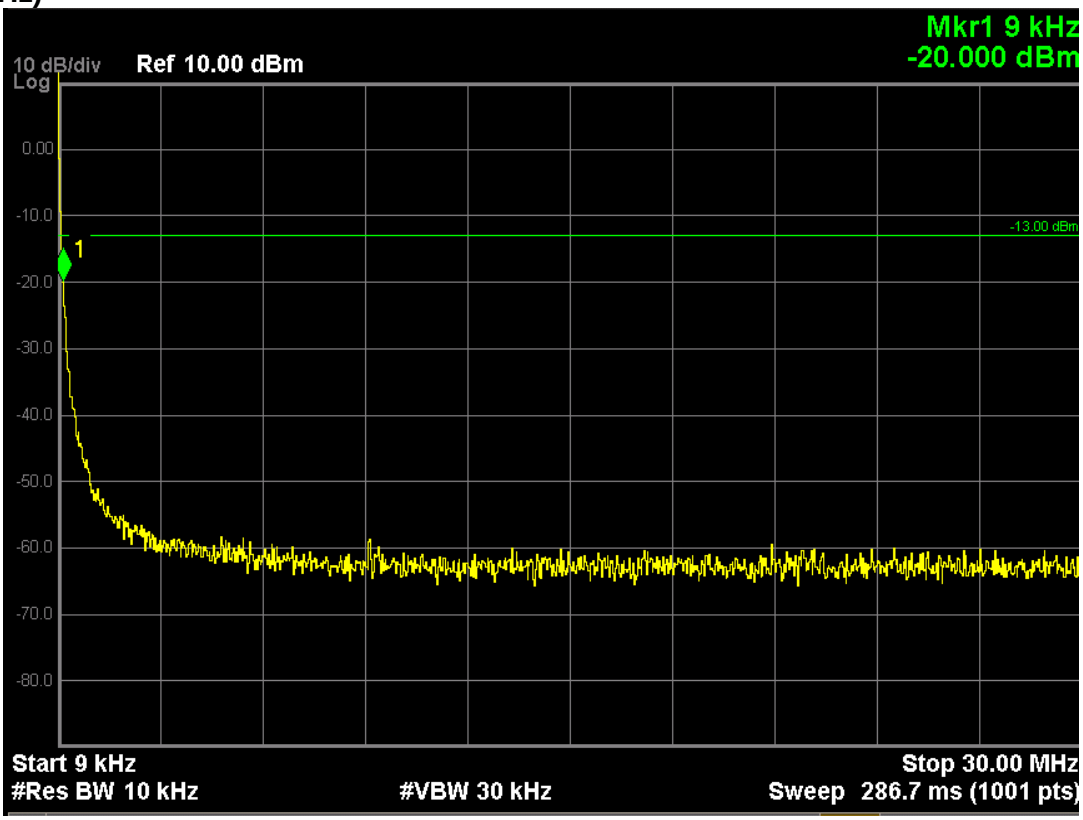


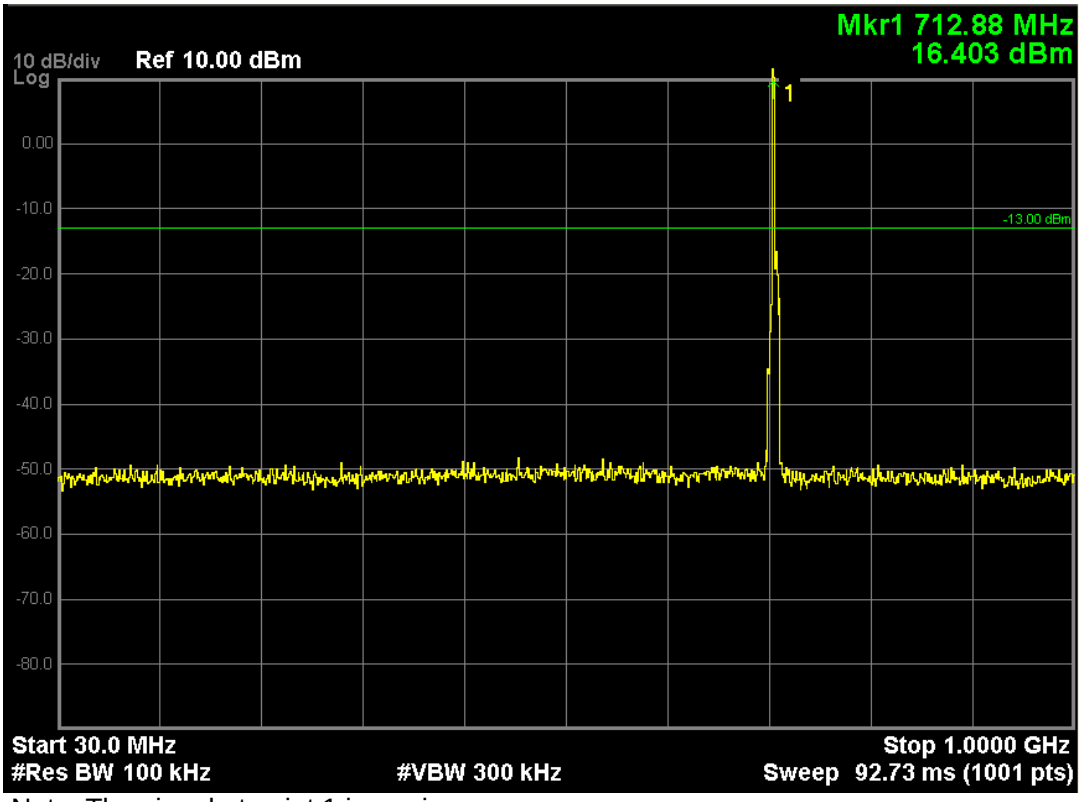


Note: The signal at point 1 is carrier

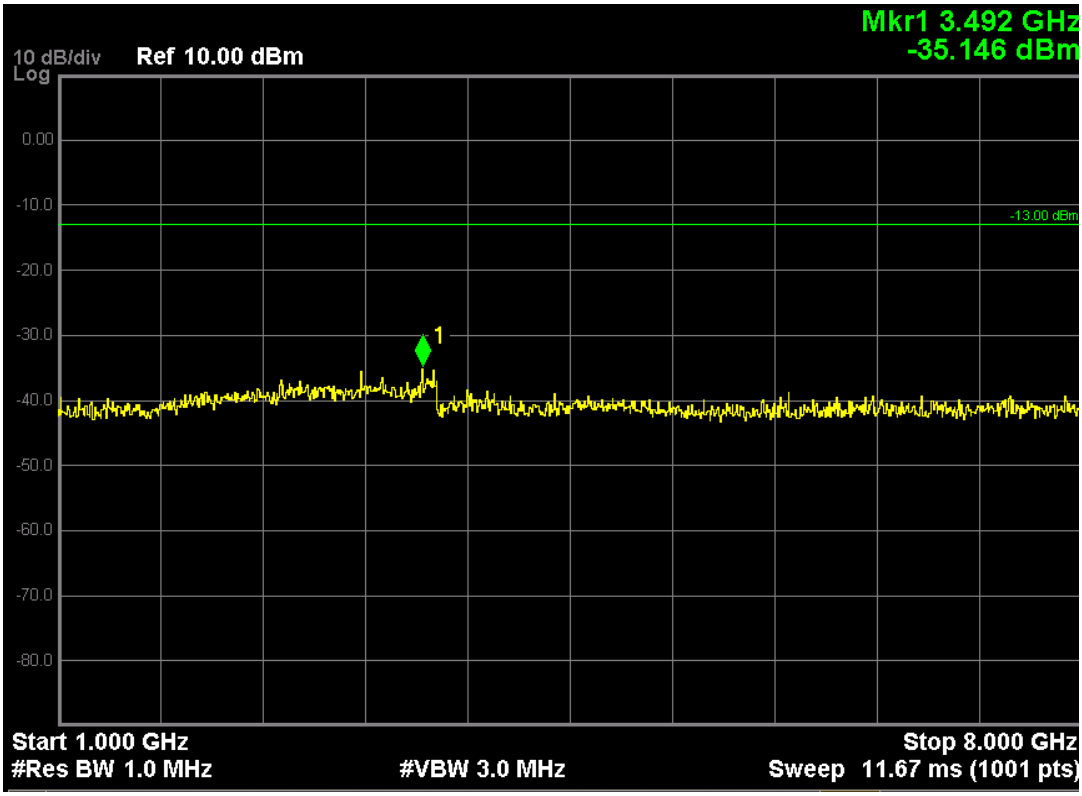


LTE Band 12 (16-QAM, Band Width 3MHz,RB Size 1,RB Offset 0,Channel 23165,Frequeny 714.5MHz)

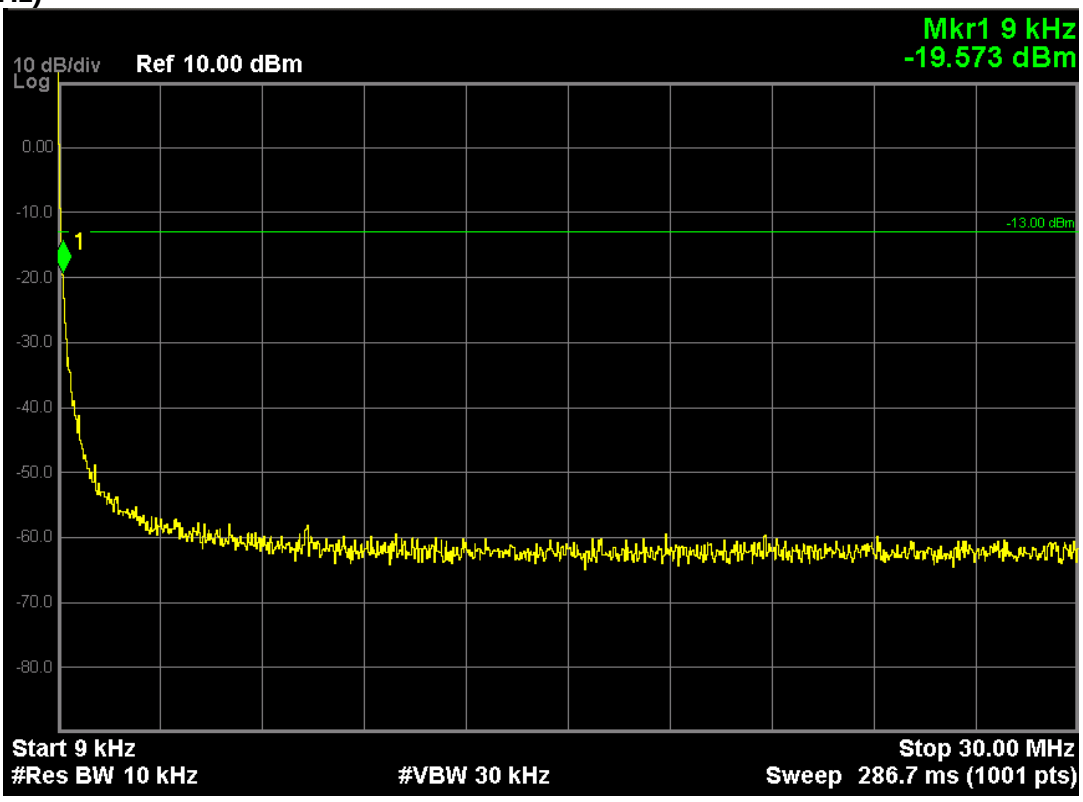


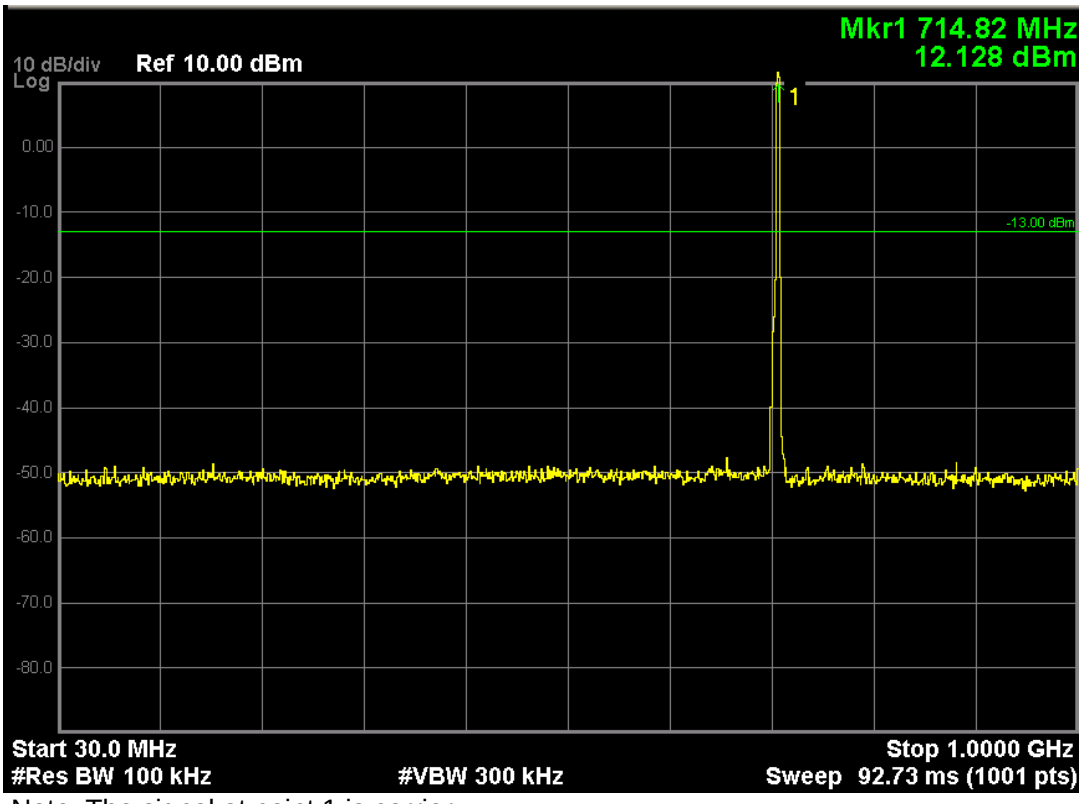


Note: The signal at point 1 is carrier

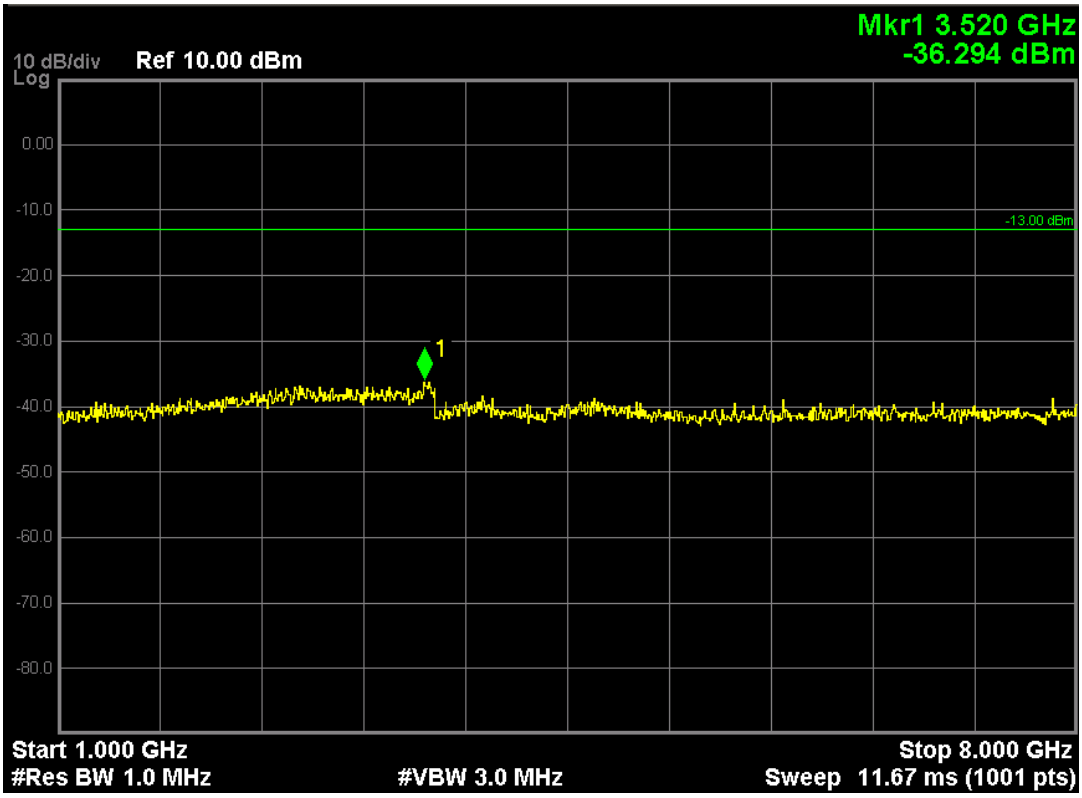


LTE Band 12 (QPSK, Band Width 5MHz,RB Size 8,RB Offset 17,Channel 23155,Frequeny 713.5MHz)

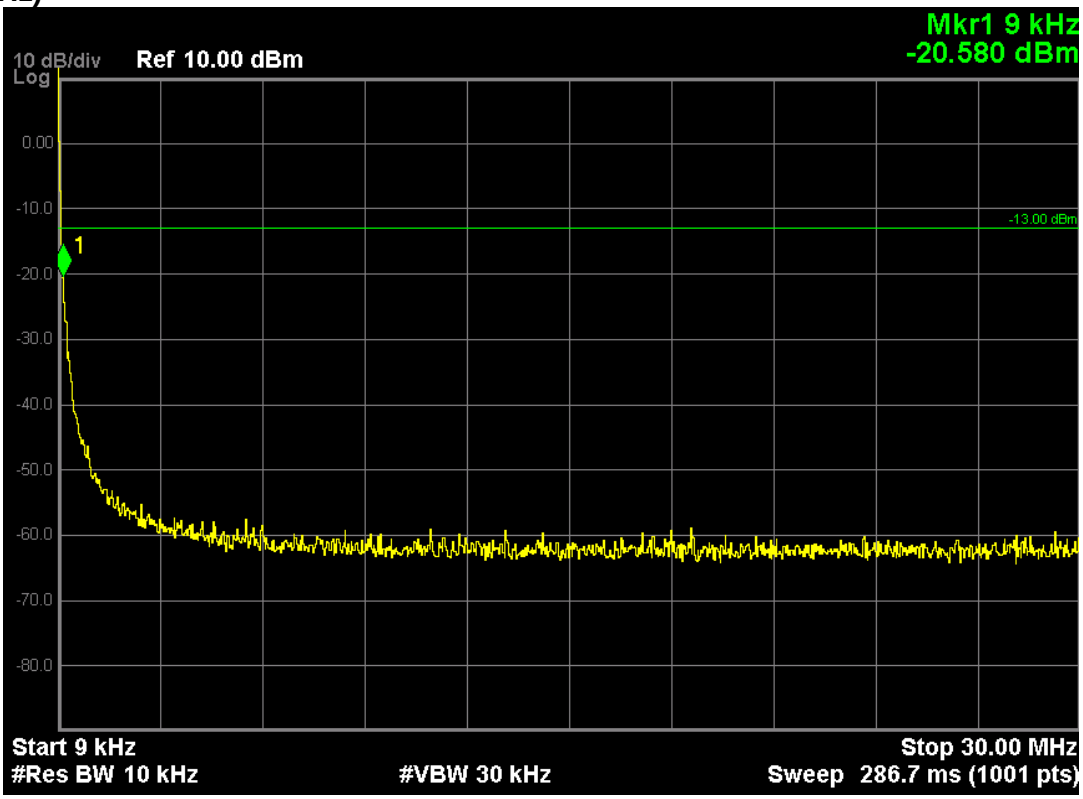


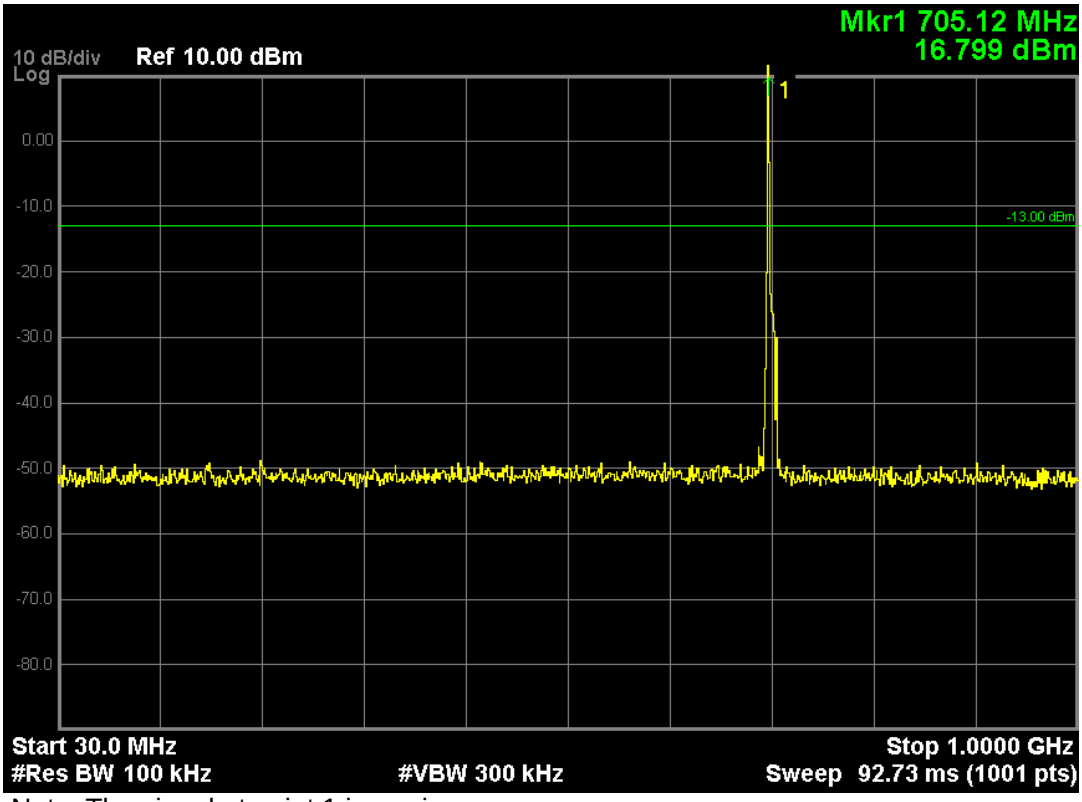


Note: The signal at point 1 is carrier

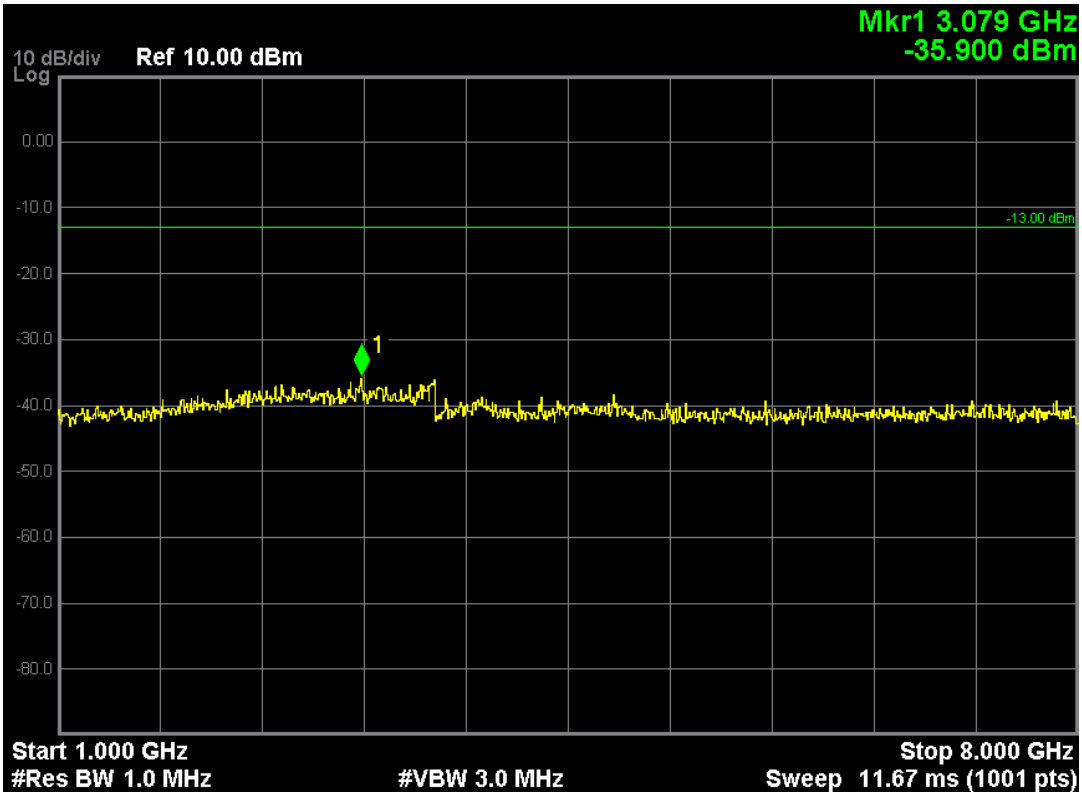


LTE Band 12 (16-QAM, Band Width 5MHz,RB Size 1,RB Offset 0,Channel 23095,Frequeny 707.5MHz)

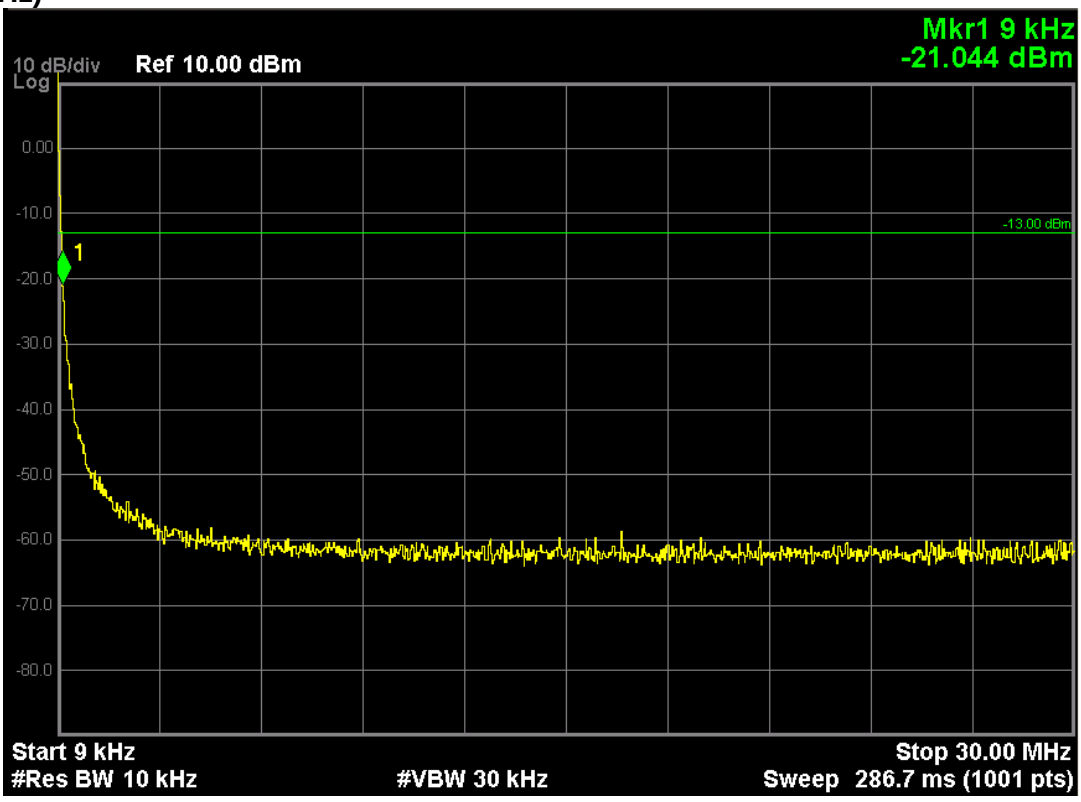


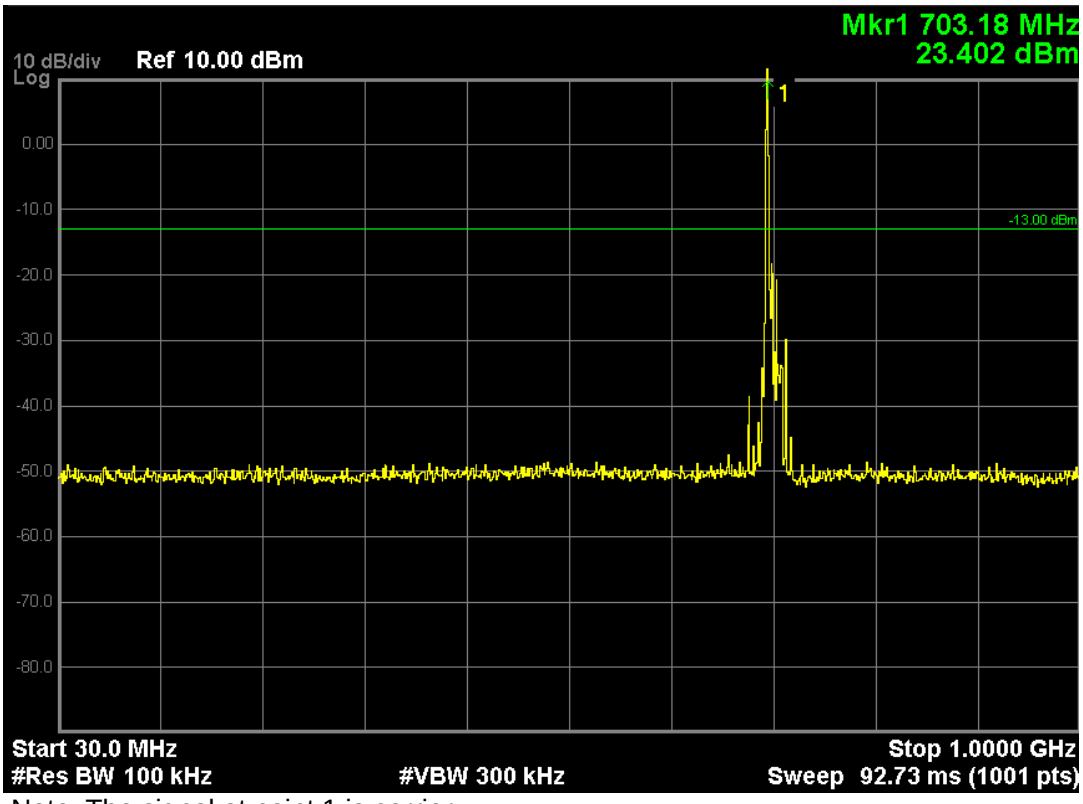


Note: The signal at point 1 is carrier

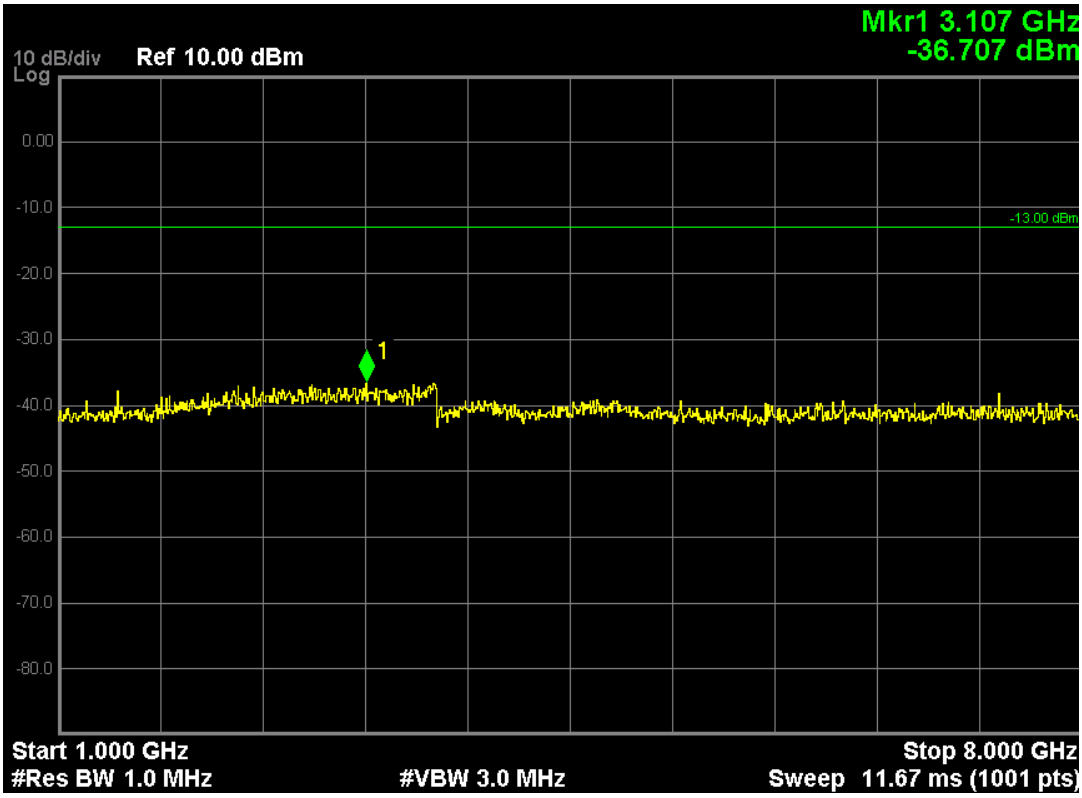


LTE Band 12 (QPSK, Band Width 10MHz,RB Size 1,RB Offset 0,Channel 23095,Frequeny 707.5MHz)

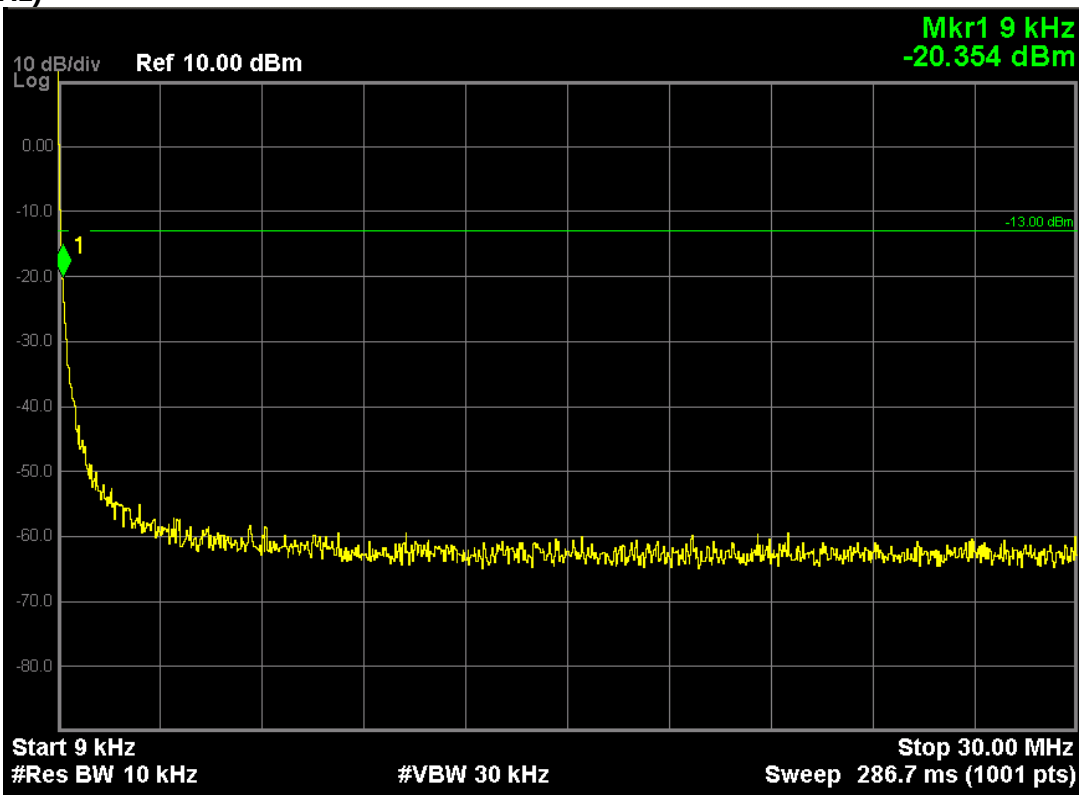


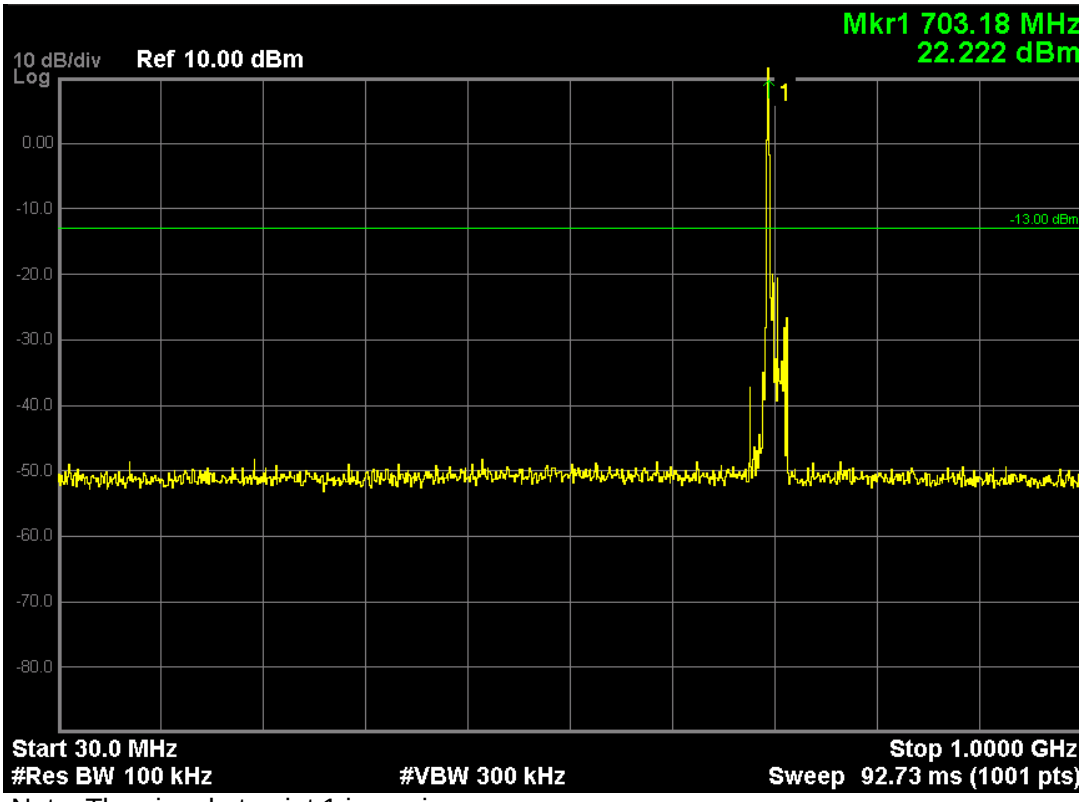


Note: The signal at point 1 is carrier

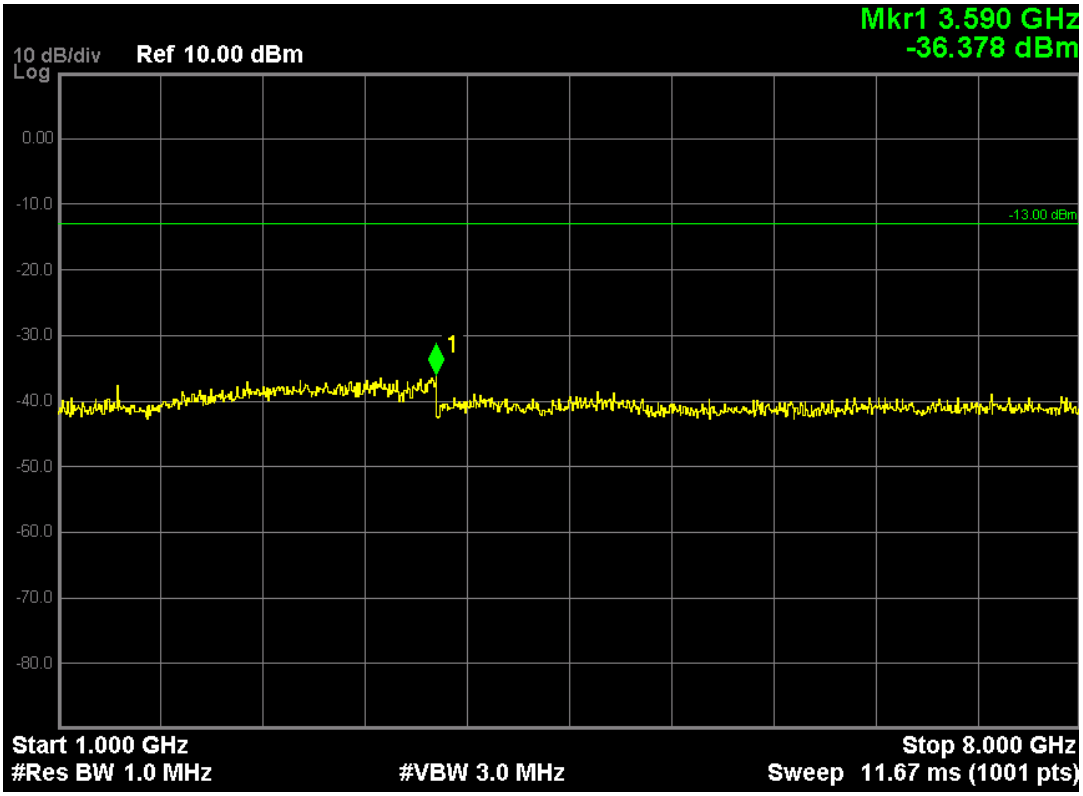


LTE Band 12 (16-QAM, Band Width 10MHz,RB Size 1,RB Offset 0,Channel 23095,Frequeny 707.5MHz)





Note: The signal at point 1 is carrier



Radiated Spurious Measurement:

LTE Band 2 (QPSK, Band Width 1.4MHz,RB Size 1,RB Offset 0,Channel 18607,Frequeny 1850.7MHz)

9KHz to 30MHz

The low frequency, which started from 9KHz to 30MHz, was pre-scanned and the result which was 20dB lower than the limit line, and that was not reported per 2.1057 (c).

30MHz to 1GHz

Frequency (MHz)	Ant. Pol. (H/V)	SG Reading (dBm)	Cable Loss (dB)	Gain (dBi)	ERP (dBm)	Limit (dBm)	Margin (dB)
Channel 18607 (1850.7MHz)							
671.4	H	-48.32	2.97	-2.16	-53.45	-13	-40.45
671.4	V	-46.33	2.97	-2.16	-51.46	-13	-38.46

Above 1GHz

Frequency (MHz)	Ant. Pol. (H/V)	SG Reading (dBm)	Cable Loss (dB)	Gain (dBi)	ERP (dBm)	Limit (dBm)	Margin (dB)
Channel 18607 (1850.7MHz)							
3701.4	H	-54.52	8.12	12.6	-50.04	-13	-37.04
3701.4	V	-52.49	8.12	12.6	-48.01	-13	-35.01
5552.1	H	-54.37	9.89	13.1	-51.16	-13	-38.16
5552.1	V	-52.18	9.89	13.1	-48.97	-13	-35.97

LTE Band 2 (QPSK, Band Width 3MHz,RB Size 1,RB Offset 0,Channel 18900,Frequeny 1880.0MHz)

9KHz to 30MHz

The low frequency, which started from 9KHz to 30MHz, was pre-scanned and the result which was 20dB lower than the limit line, and that was not reported per 2.1057 (c).

30MHz to 1GHz

Frequency (MHz)	Ant. Pol. (H/V)	SG Reading (dBm)	Cable Loss (dB)	Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin (dB)
Channel 18900 (1880MHz)							
730.2	H	-47.31	3.42	-2.56	-53.29	-13	-40.29
730.2	V	-46.11	3.42	-2.56	-52.09	-13	-39.09

Above 1GHz

Frequency (MHz)	Ant. Pol. (H/V)	SG Reading (dBm)	Cable Loss (dB)	Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin (dB)
Channel 18900 (1880MHz)							
3760	H	-52.36	8.85	12.6	-48.61	-13	-35.61
3760	V	-51.08	8.85	12.6	-47.33	-13	-34.33
5640	H	-53.02	10.79	13.1	-50.71	-13	-37.71
5640	V	-52.12	10.79	13.1	-49.81	-13	-36.81

LTE Band 2 (QPSK, Band Width 5MHz,RB Size 1,RB Offset 0,Channel 18625,Frequeny 1852.5MHz)

9KHz to 30MHz

The low frequency, which started from 9KHz to 30MHz, was pre-scanned and the result which was 20dB lower than the limit line, and that was not reported per 2.1057 (c).

30MHz to 1GHz

Frequency (MHz)	Ant. Pol. (H/V)	SG Reading (dBm)	Cable Loss (dB)	Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin (dB)
Channel 18625 (1852.5MHz)							
702.4	H	-48.66	3.52	-2.87	-55.05	-13	-42.05
702.4	V	-46.38	3.52	-2.87	-52.77	-13	-39.77

Above 1GHz

Frequency (MHz)	Ant. Pol. (H/V)	SG Reading (dBm)	Cable Loss (dB)	Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin (dB)
Channel 18625 (1852.5MHz)							
3705	H	-47.36	8.12	12.6	-42.88	-13	-29.88
3705	V	-46.47	8.12	12.6	-41.99	-13	-28.99
5557.5	H	-49.26	9.89	13.1	-46.05	-13	-33.05
5557.5	V	-47.32	9.89	13.1	-44.11	-13	-31.11

LTE Band 2 (QPSK, Band Width 10MHz,RB Size 1,RB Offset 0,Channel 18900,Frequeny 1880.0MHz)

9KHz to 30MHz

The low frequency, which started from 9KHz to 30MHz, was pre-scanned and the result which was 20dB lower than the limit line, and that was not reported per 2.1057 (c).

30MHz to 1GHz

Frequency (MHz)	Ant. Pol. (H/V)	SG Reading (dBm)	Cable Loss (dB)	Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin (dB)
Channel 18650 (1855MHz)							
715.2	H	-47.66	3.52	-2.87	-54.05	-13	-41.05
715.2	V	-46.52	3.52	-2.87	-52.91	-13	-39.91

Above 1GHz

Frequency (MHz)	Ant. Pol. (H/V)	SG Reading (dBm)	Cable Loss (dB)	Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin (dB)
Channel 18650 (1855MHz)							
3760	H	-46.63	8.85	12.6	-42.88	-13	-29.88
3760	V	-45.21	8.85	12.6	-41.46	-13	-28.46
5640	H	-52.08	10.79	13.1	-49.77	-13	-36.77
5640	V	-50.38	10.79	13.1	-48.07	-13	-35.07

LTE Band 2 (QPSK, Band Width 15MHz,RB Size 1,RB Offset 74,Channel 18675,Frequeny 1857.5MHz)

9KHz to 30MHz

The low frequency, which started from 9KHz to 30MHz, was pre-scanned and the result which was 20dB lower than the limit line, and that was not reported per 2.1057 (c).

30MHz to 1GHz

Frequency (MHz)	Ant. Pol. (H/V)	SG Reading (dBm)	Cable Loss (dB)	Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin (dB)
Channel 18675 (1857.5MHz)							
694.5	H	-48.36	3.52	-2.87	-54.75	-13	-41.75
694.5	V	-46.64	3.52	-2.87	-53.03	-13	-40.03

Above 1GHz

Frequency (MHz)	Ant. Pol. (H/V)	SG Reading (dBm)	Cable Loss (dB)	Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin (dB)
Channel 18675 (1857.5MHz)							
3715	H	-44.13	8.12	12.6	-39.65	-13	-26.65
3715	V	-43.28	8.12	12.6	-38.8	-13	-25.8
5572.5	H	-46.68	9.89	13.1	-43.47	-13	-30.47
5572.5	V	-45.32	9.89	13.1	-42.11	-13	-29.11

LTE Band 2 (QPSK, Band Width 20MHz,RB Size 1,RB Offset 0,Channel 18700,Frequeny 1860.0MHz)

9KHz to 30MHz

The low frequency, which started from 9KHz to 30MHz, was pre-scanned and the result which was 20dB lower than the limit line, and that was not reported per 2.1057 (c).

30MHz to 1GHz

Frequency (MHz)	Ant. Pol. (H/V)	SG Reading (dBm)	Cable Loss (dB)	Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin (dB)
Channel 19100 (1900.0MHz)							
708.4	H	-46.69	3.52	-2.87	-53.08	-13	-40.08
708.4	V	-44.89	3.52	-2.87	-51.28	-13	-38.28

Above 1GHz

Frequency (MHz)	Ant. Pol. (H/V)	SG Reading (dBm)	Cable Loss (dB)	Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin (dB)
Channel 19100 (1900.0MHz)							
3720	H	-48.03	9.12	12.6	-44.55	-13	-31.55
3720	V	-47.32	9.12	12.6	-43.84	-13	-30.84
5580	H	-45.98	10.98	13.1	-43.86	-13	-30.86
5580	V	-44.83	10.98	13.1	-42.71	-13	-29.71

LTE Band 4 (QPSK, Band Width 1.4MHz,RB Size 1,RB Offset 0,Channel 19957,Frequeny 1710.7MHz)

9KHz to 30MHz

The low frequency, which started from 9KHz to 30MHz, was pre-scanned and the result which was 20dB lower than the limit line, and that was not reported per 2.1057 (c).

30MHz to 1GHz

Frequency (MHz)	Ant. Pol. (H/V)	SG Reading (dBm)	Cable Loss (dB)	Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin (dB)
Channel 19957 (1710.7MHz)							
724.8	H	-47.32	3.42	-2.56	-53.3	-13	-40.3
724.8	V	-46.32	3.42	-2.56	-52.3	-13	-39.3

Above 1GHz

Frequency (MHz)	Ant. Pol. (H/V)	SG Reading (dBm)	Cable Loss (dB)	Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin (dB)
Channel 19957 (1710.7MHz)							
3421.4	H	-48.03	8.56	11.53	-45.06	-13	-32.06
3421.4	V	-47.25	8.56	11.53	-44.28	-13	-31.28
5132.1	H	-51.29	9.68	12.8	-48.17	-13	-35.17
5132.1	V	-50.25	9.68	12.8	-47.13	-13	-34.13

LTE Band 4 (QPSK, Band Width 3MHz,RB Size 1,RB Offset 0,Channel 19965,Frequeny 1711.5MHz)

9KHz to 30MHz

The low frequency, which started from 9KHz to 30MHz, was pre-scanned and the result which was 20dB lower than the limit line, and that was not reported per 2.1057 (c).

30MHz to 1GHz

Frequency (MHz)	Ant. Pol. (H/V)	SG Reading (dBm)	Cable Loss (dB)	Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin (dB)
Channel 19965 (1711.5MHz)							
720.7	H	-46.32	3.42	-2.56	-52.3	-13.0	-39.3
720.7	V	-45.32	3.42	-2.56	-51.3	-13.0	-38.3

Above 1GHz

Frequency (MHz)	Ant. Pol. (H/V)	SG Reading (dBm)	Cable Loss (dB)	Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin (dB)
Channel 19965 (1711.5MHz)							
3423	H	-48.88	8.56	11.53	-45.91	-13.0	-32.91
3423	V	-47.36	8.56	11.53	-44.39	-13.0	-31.39
5134.5	H	-50.29	9.68	12.80	-47.17	-13.0	-34.17
5134.5	V	-49.33	9.68	12.80	-46.21	-13.0	-33.21

LTE Band 4 (QPSK, Band Width 5MHz,RB Size 1,RB Offset 0,Channel 19975,Frequeny 1712.5MHz)

9KHz to 30MHz

The low frequency, which started from 9KHz to 30MHz, was pre-scanned and the result which was 20dB lower than the limit line, and that was not reported per 2.1057 (c).

30MHz to 1GHz

Frequency (MHz)	Ant. Pol. (H/V)	SG Reading (dBm)	Cable Loss (dB)	Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin (dB)
Channel 19975 (1712.5MHz)							
730.6	H	-47.88	3.42	-2.56	-53.86	-13	-40.86
730.6	V	-46.83	3.42	-2.56	-52.81	-13	-39.81

Above 1GHz

Frequency (MHz)	Ant. Pol. (H/V)	SG Reading (dBm)	Cable Loss (dB)	Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin (dB)
Channel 19975 (1712.5MHz)							
3425	H	-48.22	8.56	11.53	-45.25	-13	-32.25
3425	V	-47.23	8.56	11.53	-44.26	-13	-31.26
5137.5	H	-50.21	9.68	12.8	-47.09	-13	-34.09
5137.5	V	-49.13	9.68	12.8	-46.01	-13	-33.01

LTE Band 4 (QPSK, Band Width 10MHz,RB Size 1,RB Offset 0,Channel 20175,Frequeny 1732.5MHz)

9KHz to 30MHz

The low frequency, which started from 9KHz to 30MHz, was pre-scanned and the result which was 20dB lower than the limit line, and that was not reported per 2.1057 (c).

30MHz to 1GHz

Frequency (MHz)	Ant. Pol. (H/V)	SG Reading (dBm)	Cable Loss (dB)	Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin (dB)
Channel 20000 (1715MHz)							
727.3	H	-48.32	3.42	-2.56	-54.3	-13	-41.3
727.3	V	-47.25	3.42	-2.56	-53.23	-13	-40.23

Above 1GHz

Frequency (MHz)	Ant. Pol. (H/V)	SG Reading (dBm)	Cable Loss (dB)	Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin (dB)
Channel 20000 (1715MHz)							
3465	H	-47.68	8.56	11.53	-44.71	-13	-31.71
3465	V	-46.58	8.56	11.53	-43.61	-13	-30.61
5197.5	H	-50.44	9.68	12.8	-47.32	-13	-34.32
5197.5	V	-49.33	9.68	12.8	-46.21	-13	-33.21

LTE Band 4 (QPSK, Band Width 15MHz,RB Size 1,RB Offset 0,Channel 20175,Frequeny 1732.5MHz)

9KHz to 30MHz

The low frequency, which started from 9KHz to 30MHz, was pre-scanned and the result which was 20dB lower than the limit line, and that was not reported per 2.1057 (c).

30MHz to 1GHz

Frequency (MHz)	Ant. Pol. (H/V)	SG Reading (dBm)	Cable Loss (dB)	Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin (dB)
Channel 20325 (1747.5MHz)							
738.2	H	-48.26	3.42	-2.56	-54.24	-13	-41.24
738.2	V	-47.46	3.42	-2.56	-53.44	-13	-40.44

Above 1GHz

Frequency (MHz)	Ant. Pol. (H/V)	SG Reading (dBm)	Cable Loss (dB)	Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin (dB)
Channel 20325 (1747.5MHz)							
3465	H	-49.24	8.56	11.53	-46.27	-13	-33.27
3465	V	-48.47	8.56	11.53	-45.5	-13	-32.5
5197.5	H	-50.45	9.68	12.8	-47.33	-13	-34.33
5197.5	V	-49.28	9.68	12.8	-46.16	-13	-33.16

LTE Band 4 (QPSK, Band Width 20MHz,RB Size 1,RB Offset 0,Channel 20175,Frequeny 1732.5MHz)

9KHz to 30MHz

The low frequency, which started from 9KHz to 30MHz, was pre-scanned and the result which was 20dB lower than the limit line, and that was not reported per 2.1057 (c).

30MHz to 1GHz

Frequency (MHz)	Ant. Pol. (H/V)	SG Reading (dBm)	Cable Loss (dB)	Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin (dB)
Channel 20300 (1745MHz)							
730.2	H	-48.65	3.42	-2.56	-54.63	-13	-41.63
730.2	V	-47.32	3.42	-2.56	-53.3	-13	-40.3

Above 1GHz

Frequency (MHz)	Ant. Pol. (H/V)	SG Reading (dBm)	Cable Loss (dB)	Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin (dB)
Channel 20300 (1745MHz)							
3465	H	-48.52	8.56	11.53	-45.55	-13	-32.55
3465	V	-47.15	8.56	11.53	-44.18	-13	-31.18
5197.5	H	-50.53	9.68	12.8	-47.41	-13	-34.41
5197.5	V	-49.58	9.68	12.8	-46.46	-13	-33.46

LTE Band 5 (QPSK, Band Width 1.4MHz,RB Size 1,RB Offset 0,Channel 20407,Frequeny 824.7MHz)

9KHz to 30MHz

The low frequency, which started from 9KHz to 30MHz, was pre-scanned and the result which was 20dB lower than the limit line, and that was not reported per 2.1057 (c).

30MHz to 1GHz

Frequency (MHz)	Ant. Pol. (H/V)	SG Reading (dBm)	Cable Loss (dB)	Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin (dB)
Channel 20407 (824.7MHz)							
598.6	H	-45.41	2.86	-2.44	-50.71	-13	-37.71
598.6	V	-44.25	2.86	-2.44	-49.55	-13	-36.55

Above 1GHz

Frequency (MHz)	Ant. Pol. (H/V)	SG Reading (dBm)	Cable Loss (dB)	Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin (dB)
Channel 20407 (824.7MHz)							
1649.3	H	-42.86	6.13	9.4	-39.59	-13	-26.59
1649.3	V	-43.29	6.13	9.4	-40.02	-13	-27.02
2474.1	H	-48.77	7.32	10.5	-45.59	-13	-32.59
2474.1	V	-47.48	7.32	10.5	-44.3	-13	-31.30
3298.8	H	-50.64	8.43	11.5	-47.57	-13	-34.57
3298.8	V	-49.42	8.43	11.5	-46.35	-13	-33.35

LTE Band 5 (QPSK, Band Width 3MHz,RB Size 1,RB Offset 0,Channel 20415,Frequeny 825.5MHz)

9KHz to 30MHz

The low frequency, which started from 9KHz to 30MHz, was pre-scanned and the result which was 20dB lower than the limit line, and that was not reported per 2.1057 (c).

30MHz to 1GHz

Frequency (MHz)	Ant. Pol. (H/V)	SG Reading (dBm)	Cable Loss (dB)	Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin (dB)
Channel 20415 (825.5MHz)							
592.1	H	-43.55	2.86	-2.44	-48.85	-13	-35.85
592.1	V	-42.18	2.86	-2.44	-47.48	-13	-34.48

Above 1GHz

Frequency (MHz)	Ant. Pol. (H/V)	SG Reading (dBm)	Cable Loss (dB)	Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin (dB)
Channel 20415 (825.5MHz)							
1651	H	-41.54	6.13	9.4	-38.27	-13	-25.27
1651	V	-40.84	6.13	9.4	-37.57	-13	-24.57
2476.5	H	-46.86	7.32	10.5	-43.68	-13	-30.68
2476.5	V	-45.17	7.32	10.5	-41.99	-13	-28.99
3302	H	-48.22	8.43	11.5	-45.15	-13	-32.15
3302	V	-47.85	8.43	11.5	-44.78	-13	-31.78

LTE Band 5 (QPSK, Band Width 5MHz,RB Size 1,RB Offset 0,Channel 20425,Frequeny 826.5MHz)

9KHz to 30MHz

The low frequency, which started from 9KHz to 30MHz, was pre-scanned and the result which was 20dB lower than the limit line, and that was not reported per 2.1057 (c).

30MHz to 1GHz

Frequency (MHz)	Ant. Pol. (H/V)	SG Reading (dBm)	Cable Loss (dB)	Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin (dB)
Channel 20425 (826.5MHz)							
595.2	H	-48.68	2.86	-2.44	-53.98	-13	-40.98
595.2	V	-47.86	2.86	-2.44	-53.16	-13	-40.16

Above 1GHz

Frequency (MHz)	Ant. Pol. (H/V)	SG Reading (dBm)	Cable Loss (dB)	Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin (dB)
Channel 20425 (826.5MHz)							
1653	H	-45.16	6.13	9.4	-41.89	-13	-28.89
1653	V	-44.68	6.13	9.4	-41.41	-13	-28.41
2479.5	H	-46.87	7.32	10.5	-43.69	-13	-30.69
2479.5	V	-45.28	7.32	10.5	-42.1	-13	-29.1
3306	H	-49.63	8.43	11.5	-46.56	-13	-33.56
3306	V	-48.02	8.43	11.5	-44.95	-13	-31.95

LTE Band 5 (QPSK, Band Width 10MHz,RB Size 1,RB Offset 0,Channel 20450,Frequeny 829.0MHz)

9KHz to 30MHz

The low frequency, which started from 9KHz to 30MHz, was pre-scanned and the result which was 20dB lower than the limit line, and that was not reported per 2.1057 (c).

30MHz to 1GHz

Frequency (MHz)	Ant. Pol. (H/V)	SG Reading (dBm)	Cable Loss (dB)	Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin (dB)
Channel 20450 (829MHz)							
594.8	H	-47.28	2.86	-2.44	-52.58	-13	-39.58
594.8	V	-46.84	2.86	-2.44	-52.14	-13	-39.14

Above 1GHz

Frequency (MHz)	Ant. Pol. (H/V)	SG Reading (dBm)	Cable Loss (dB)	Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin (dB)
Channel 20450 (829MHz)							
1658	H	-45.99	6.13	9.4	-42.72	-13	-29.72
1658	V	-44.99	6.13	9.4	-41.72	-13	-28.72
2487	H	-45.82	7.32	10.5	-42.64	-13	-29.64
2487	V	-44.65	7.32	10.5	-41.47	-13	-28.47
3316	H	-49.16	8.43	11.5	-46.09	-13	-33.09
3316	V	-48.14	8.43	11.5	-45.07	-13	-32.07

LTE Band 12 (QPSK, Band Width 1.4MHz,RB Size 1,RB Offset 24,Channel 23017,Frequeny 699.7MHz)

9KHz to 30MHz

The low frequency, which started from 9KHz to 30MHz, was pre-scanned and the result which was 20dB lower than the limit line, and that was not reported per 2.1057 (c).

30MHz to 1GHz

Frequency (MHz)	Ant. Pol. (H/V)	SG Reading (dBm)	Cable Loss (dB)	Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin (dB)
Channel 23755 (706.5MHz)							
580.6	H	-47.54	2.8	-2.39	-52.73	-13	-39.73
580.6	V	-46.88	2.8	-2.39	-52.07	-13	-39.07

Above 1GHz

Frequency (MHz)	Ant. Pol. (H/V)	SG Reading (dBm)	Cable Loss (dB)	Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin (dB)
Channel 23755 (706.5MHz)							
1399.4	H	-42.58	5.26	8.08	-39.76	-13	-26.76
1399.4	V	-41.23	5.26	8.08	-38.41	-13	-25.41
2099.1	H	-45.26	6.62	10.42	-41.46	-13	-28.46
2099.1	V	-44.56	6.62	10.42	-40.76	-13	-27.76
2798.8	H	-46.38	8.02	11.15	-43.25	-13	-30.25
2798.8	V	-45.12	8.02	11.15	-41.99	-13	-28.99

LTE Band 12 (QPSK, Band Width 3MHz,RB Size 1,RB Offset 0,Channel 23025,Frequeny 700.5MHz)

9KHz to 30MHz

The low frequency, which started from 9KHz to 30MHz, was pre-scanned and the result which was 20dB lower than the limit line, and that was not reported per 2.1057 (c).

30MHz to 1GHz

Frequency (MHz)	Ant. Pol. (H/V)	SG Reading (dBm)	Cable Loss (dB)	Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin (dB)
Channel 23780 (709MHz)							
582.8	H	-44.44	2.8	-2.39	-49.63	-13	-36.63
582.8	V	-43.36	2.8	-2.39	-48.55	-13	-35.55

Above 1GHz

Frequency (MHz)	Ant. Pol. (H/V)	SG Reading (dBm)	Cable Loss (dB)	Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin (dB)
Channel 23780 (709MHz)							
1401	H	-43.85	5.26	8.08	-41.03	-13	-28.03
1401	V	-42.42	5.26	8.08	-39.6	-13	-26.60
2101.5	H	-45.26	6.62	10.42	-41.46	-13	-28.46
2101.5	V	-44.22	6.62	10.42	-40.42	-13	-27.42
2802	H	-46.12	8.02	11.15	-42.99	-13	-29.99
2802	V	-45.28	8.02	11.15	-42.15	-13	-29.15

LTE Band 12 (QPSK, Band Width 5MHz,RB Size 8,RB Offset 17,Channel 23155,Frequeny 713.5MHz)

9KHz to 30MHz

The low frequency, which started from 9KHz to 30MHz, was pre-scanned and the result which was 20dB lower than the limit line, and that was not reported per 2.1057 (c).

30MHz to 1GHz

Frequency (MHz)	Ant. Pol. (H/V)	SG Reading (dBm)	Cable Loss (dB)	Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin (dB)
Channel 23755 (706.5MHz)							
581.6	H	-47.54	2.8	-2.39	-52.73	-13	-39.73
581.6	V	-46.12	2.8	-2.39	-51.31	-13	-38.31

Above 1GHz

Frequency (MHz)	Ant. Pol. (H/V)	SG Reading (dBm)	Cable Loss (dB)	Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin (dB)
Channel 23755 (706.5MHz)							
1427	H	-42.52	5.26	8.08	-39.7	-13	-26.7
1427	V	-41.23	5.26	8.08	-38.41	-13	-25.41
2140.5	H	-40.26	6.62	10.42	-36.46	-13	-23.46
2140.5	V	-44.58	6.62	10.42	-40.78	-13	-27.78
2854	H	-46.38	8.02	11.15	-43.25	-13	-30.25
2854	V	-45.19	8.02	11.15	-42.06	-13	-29.06

LTE Band 12 (QPSK, Band Width 10MHz,RB Size 1,RB Offset 0,Channel 23095,Frequeny 707.5MHz)

9KHz to 30MHz

The low frequency, which started from 9KHz to 30MHz, was pre-scanned and the result which was 20dB lower than the limit line, and that was not reported per 2.1057 (c).

30MHz to 1GHz

Frequency (MHz)	Ant. Pol. (H/V)	SG Reading (dBm)	Cable Loss (dB)	Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin (dB)
Channel 23780 (709MHz)							
585.6	H	-45.34	2.8	-2.39	-50.53	-13	-37.53
585.6	V	-44.28	2.8	-2.39	-49.47	-13	-36.47

Above 1GHz

Frequency (MHz)	Ant. Pol. (H/V)	SG Reading (dBm)	Cable Loss (dB)	Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin (dB)
Channel 23780 (709MHz)							
1415	H	-44.84	5.26	8.08	-42.02	-13	-29.02
1415	V	-43.86	5.26	8.08	-41.04	-13	-28.04
2122.5	H	-46.58	6.62	10.42	-42.78	-13	-29.78
2122.5	V	-45.38	6.62	10.42	-41.58	-13	-28.58
2830	H	-46.16	8.02	11.15	-43.03	-13	-30.03
2830	V	-45.47	8.02	11.15	-42.34	-13	-29.34

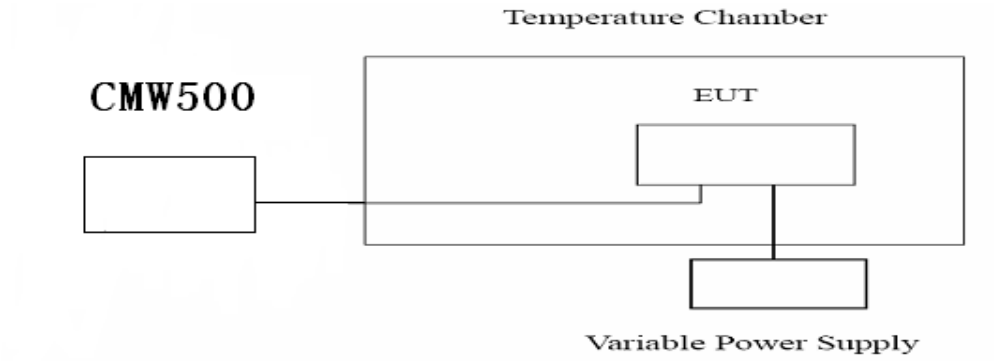
7. Frequency Stability Under Temperature & Voltage Variations

7.1. Test Equipment

Instrument	Manufacturer	Model	Serial No.	Cali. Due Date
Spectrum Analyzer	Agilent	N9038A	MY51210142	11/05/2016
Radio Communication Tester	R&S	CMW500	147483	11/08/2016
DC Power Supply	Agilent	6612C	MY43002989	03/02/2016
Temperature Chamber	WEISS	DU/20/40	58226017340050	01/04/2016

The measure equipment had been calibrated once a year.

7.2. Test Setup



7.3. Limit

The frequency stability shall be sufficient to ensure that the fundamental emission stays within the authorized frequency block.

Limit	< ±2.5 ppm

7.4. Test Procedure

1. The testing follows FCC KDB 972268 v02v02 Section 9.0;
2. Frequency Stability Under Temperature Variations:
The equipment under test was connected to an external AC or DC power supply and input rated voltage. RF output was connected to a frequency counter or CMW500. The EUT was placed inside the temperature chamber.
EUT 20℃ operating frequency as reference frequency. Turn EUT off and set the chamber temperature to -20℃. After the temperature stabilized for approximately 30 minutes recorded the frequency. Repeat step measure with 10℃ increased per stage until the highest temperature of +50℃ reached.
3. Frequency Stability Under Voltage Variations:
Set chamber temperature to 20℃. Use a variable AC power supply / DC power source to power the EUT and set the voltage to rated voltage.
Reduce the input voltage to specify extreme voltage variation (±15%) and endpoint, record the maximum frequency change.

7.5. Uncertainty

The measurement uncertainty is defined as±10 Hz.

7.6. Test Result

LTE Band 2 (QPSK, Band Width 1.4MHz,RB Size 1,RB Offset 0,Channel 18607)

Frequency Stability under Temperature

Temperature Interval (℃)	Test Frequency (MHz)	Deviation (Hz)	Limit(Hz)
-20	1850.7	-5.48	±4626.75
-10	1850.7	-9.23	±4626.75
0	1850.7	1.85	±4626.75
10	1850.7	0.67	±4626.75
20	1850.7	-12.09	±4626.75
30	1850.7	-9.85	±4626.75
40	1850.7	11.16	±4626.75
50	1850.7	10.20	±4626.75

Frequency Stability under Voltage

DC Voltage (V)	Test Frequency (MHz)	Deviation (Hz)	Limit(Hz)
3.0	1850.7	8.67	±4626.75
3.8	1850.7	6.34	±4626.75
4.5	1850.7	3.02	±4626.75

LTE Band 2 (16-QAM, Band Width 1.4MHz,RB Size 1,RB Offset 0,Channel 18607)

Frequency Stability under Temperature

Temperature Interval (℃)	Test Frequency (MHz)	Deviation (Hz)	Limit(Hz)
-20	1850.7	-12.19	±4626.75
-10	1850.7	5.03	±4626.75
0	1850.7	-2.65	±4626.75
10	1850.7	-3.23	±4626.75
20	1850.7	-11.86	±4626.75
30	1850.7	-10.10	±4626.75
40	1850.7	8.27	±4626.75
50	1850.7	5.22	±4626.75

Frequency Stability under Voltage

DC Voltage (V)	Test Frequency (MHz)	Deviation (Hz)	Limit(Hz)
3.0	1850.7	2.28	±4626.75
3.8	1850.7	3.49	±4626.75
4.5	1850.7	14.18	±4626.75

LTE Band 2 (QPSK, Band Width 3MHz,RB Size 1,RB Offset 0,Channel 18900)

Frequency Stability under Temperature

Temperature Interval (℃)	Test Frequency (MHz)	Deviation (Hz)	Limit(Hz)
-20	1880.0	3.30	±4700
-10	1880.0	4.53	±4700
0	1880.0	-10.82	±4700
10	1880.0	8.36	±4700
20	1880.0	14.94	±4700
30	1880.0	12.56	±4700
40	1880.0	-1.47	±4700
50	1880.0	5.73	±4700

Frequency Stability under Voltage

DC Voltage (V)	Test Frequency (MHz)	Deviation (Hz)	Limit(Hz)
3.0	1880.0	4.22	±4700
3.8	1880.0	7.91	±4700
4.5	1880.0	1.15	±4700

LTE Band 2 (16-QAM, Band Width 3MHz,RB Size 1,RB Offset 0,Channel 19185)

Frequency Stability under Temperature

Temperature Interval (℃)	Test Frequency (MHz)	Deviation (Hz)	Limit(Hz)
-20	1908.5	10.33	±4771.25
-10	1908.5	-12.63	±4771.25
0	1908.5	9.14	±4771.25
10	1908.5	3.79	±4771.25
20	1908.5	8.90	±4771.25
30	1908.5	-8.51	±4771.25
40	1908.5	-2.23	±4771.25
50	1908.5	3.26	±4771.25

Frequency Stability under Voltage

DC Voltage (V)	Test Frequency (MHz)	Deviation (Hz)	Limit(Hz)
3.0	1908.5	5.29	±4771.25
3.8	1908.5	9.96	±4771.25
4.5	1908.5	4.32	±4771.25

LTE Band 2 (QPSK, Band Width 5MHz,RB Size 1,RB Offset 0,Channel 18625)

Frequency Stability under Temperature

Temperature Interval (℃)	Test Frequency (MHz)	Deviation (Hz)	Limit(Hz)
-20	1852.5	-12.97	±4631.25
-10	1852.5	3.13	±4631.25
0	1852.5	1.07	±4631.25
10	1852.5	-11.42	±4631.25
20	1852.5	-10.83	±4631.25
30	1852.5	-12.11	±4631.25
40	1852.5	-7.40	±4631.25
50	1852.5	4.19	±4631.25

Frequency Stability under Voltage

DC Voltage (V)	Test Frequency (MHz)	Deviation (Hz)	Limit(Hz)
3.0	1852.5	-2.88	±4631.25
3.8	1852.5	14.31	±4631.25
4.5	1852.5	-5.97	±4631.25

LTE Band 2 (16-QAM, Band Width 5MHz,RB Size 1,RB Offset 0, Channel 18900)

Frequency Stability under Temperature

Temperature Interval (℃)	Test Frequency (MHz)	Deviation (Hz)	Limit(Hz)
-20	1880.0	14.09	±4700
-10	1880.0	10.30	±4700
0	1880.0	14.46	±4700
10	1880.0	13.00	±4700
20	1880.0	-10.63	±4700
30	1880.0	9.92	±4700
40	1880.0	-13.91	±4700
50	1880.0	0.97	±4700

Frequency Stability under Voltage

DC Voltage (V)	Test Frequency (MHz)	Deviation (Hz)	Limit(Hz)
3.0	1880.0	1.30	±4700
3.8	1880.0	9.07	±4700
4.5	1880.0	1.93	±4700

LTE Band 2 (QPSK, Band Width 10MHz,RB Size 1,RB Offset 0, Channel 18900)

Frequency Stability under Temperature

Temperature Interval (℃)	Test Frequency (MHz)	Deviation (Hz)	Limit(Hz)
-20	1880.0	-5.89	±4700
-10	1880.0	-14.54	±4700
0	1880.0	-13.70	±4700
10	1880.0	9.46	±4700
20	1880.0	-5.15	±4700
30	1880.0	-9.92	±4700
40	1880.0	2.86	±4700
50	1880.0	-14.01	±4700

Frequency Stability under Voltage

DC Voltage (V)	Test Frequency (MHz)	Deviation (Hz)	Limit(Hz)
3.0	1880.0	-4.38	±4700
3.8	1880.0	9.77	±4700
4.5	1880.0	0.17	±4700

LTE Band 2 (16-QAM, Band Width 10MHz,RB Size 1,RB Offset 0, Channel 19150)

Frequency Stability under Temperature

Temperature Interval (℃)	Test Frequency (MHz)	Deviation (Hz)	Limit(Hz)
-20	1905.0	-9.61	±4762.5
-10	1905.0	5.43	±4762.5
0	1905.0	11.42	±4762.5
10	1905.0	2.56	±4762.5
20	1905.0	12.31	±4762.5
30	1905.0	-1.59	±4762.5
40	1905.0	-5.68	±4762.5
50	1905.0	1.50	±4762.5

Frequency Stability under Voltage

DC Voltage (V)	Test Frequency (MHz)	Deviation (Hz)	Limit(Hz)
3.0	1905.0	5.60	±4762.5
3.8	1905.0	8.00	±4762.5
4.5	1905.0	-7.81	±4762.5

LTE Band 2 (QPSK, Band Width 15MHz,RB Size 1,RB Offset 0, Channel 18675)

Frequency Stability under Temperature

Temperature Interval (℃)	Test Frequency (MHz)	Deviation (Hz)	Limit(Hz)
-20	1857.5	-5.94	±4643.75
-10	1857.5	9.12	±4643.75
0	1857.5	-13.27	±4643.75
10	1857.5	-13.98	±4643.75
20	1857.5	-3.46	±4643.75
30	1857.5	-0.77	±4643.75
40	1857.5	10.23	±4643.75
50	1857.5	-0.43	±4643.75

Frequency Stability under Voltage

DC Voltage (V)	Test Frequency (MHz)	Deviation (Hz)	Limit(Hz)
3.0	1857.5	-5.06	±4643.75
3.8	1857.5	-4.05	±4643.75
4.5	1857.5	-14.49	±4643.75

LTE Band 2 (16-QAM, Band Width 15MHz,RB Size 1,RB Offset 0, Channel 18675)

Frequency Stability under Temperature

Temperature Interval (℃)	Test Frequency (MHz)	Deviation (Hz)	Limit(Hz)
-20	1857.5	-3.62	±4643.75
-10	1857.5	-6.38	±4643.75
0	1857.5	-4.17	±4643.75
10	1857.5	5.64	±4643.75
20	1857.5	11.10	±4643.75
30	1857.5	-13.92	±4643.75
40	1857.5	9.21	±4643.75
50	1857.5	-12.57	±4643.75

Frequency Stability under Voltage

DC Voltage (V)	Test Frequency (MHz)	Deviation (Hz)	Limit(Hz)
3.0	1857.5	8.73	±4643.75
3.8	1857.5	-14.59	±4643.75
4.5	1857.5	8.85	±4643.75

LTE Band 2 (QPSK, Band Width 20MHz,RB Size 1,RB Offset 0, Channel 18700)

Frequency Stability under Temperature

Temperature Interval (℃)	Test Frequency (MHz)	Deviation (Hz)	Limit(Hz)
-20	1860.0	-12.06	±4650
-10	1860.0	-8.52	±4650
0	1860.0	-0.26	±4650
10	1860.0	14.71	±4650
20	1860.0	-3.15	±4650
30	1860.0	-1.48	±4650
40	1860.0	-5.70	±4650
50	1860.0	9.90	±4650

Frequency Stability under Voltage

DC Voltage (V)	Test Frequency (MHz)	Deviation (Hz)	Limit(Hz)
3.0	1860.0	-12.17	±4650
3.8	1860.0	-4.21	±4650
4.5	1860.0	-10.06	±4650

LTE Band 2 (16-QAM, Band Width 20MHz,RB Size 1,RB Offset 99,Channel 18900)

Frequency Stability under Temperature

Temperature Interval (℃)	Test Frequency (MHz)	Deviation (Hz)	Limit(Hz)
-20	1880.0	7.28	±4700
-10	1880.0	1.10	±4700
0	1880.0	10.88	±4700
10	1880.0	10.88	±4700
20	1880.0	-12.97	±4700
30	1880.0	-10.37	±4700
40	1880.0	1.42	±4700
50	1880.0	-1.56	±4700

Frequency Stability under Voltage

DC Voltage (V)	Test Frequency (MHz)	Deviation (Hz)	Limit(Hz)
3.0	1880.0	-8.12	±4700
3.8	1880.0	9.99	±4700
4.5	1880.0	2.18	±4700

LTE Band 4 (QPSK, Band Width 1.4MHz,RB Size 1,RB Offset 0,Channel 19957)

Frequency Stability under Temperature

Temperature Interval (℃)	Test Frequency (MHz)	Deviation (Hz)	Limit(Hz)
-20	1710.7	-6.33	±4276.75
-10	1710.7	-5.24	±4276.75
0	1710.7	-12.46	±4276.75
10	1710.7	3.59	±4276.75
20	1710.7	11.37	±4276.75
30	1710.7	7.72	±4276.75
40	1710.7	-1.53	±4276.75
50	1710.7	8.62	±4276.75

Frequency Stability under Voltage

DC Voltage (V)	Test Frequency (MHz)	Deviation (Hz)	Limit(Hz)
3.0	1710.7	-3.50	±4276.75
3.8	1710.7	12.59	±4276.75
4.5	1710.7	-8.34	±4276.75

LTE Band 4 (16-QAM, Band Width 1.4MHz,RB Size 1,RB Offset 0,Channel 19957)

Frequency Stability under Temperature

Temperature Interval (℃)	Test Frequency (MHz)	Deviation (Hz)	Limit(Hz)
-20	1710.7	7.18	±4276.75
-10	1710.7	-3.21	±4276.75
0	1710.7	-9.42	±4276.75
10	1710.7	-7.04	±4276.75
20	1710.7	3.68	±4276.75
30	1710.7	2.15	±4276.75
40	1710.7	-14.80	±4276.75
50	1710.7	7.59	±4276.75

Frequency Stability under Voltage

DC Voltage (V)	Test Frequency (MHz)	Deviation (Hz)	Limit(Hz)
3.0	1710.7	9.52	±4276.75
3.8	1710.7	-7.72	±4276.75
4.5	1710.7	2.39	±4276.75

LTE Band 4 (QPSK, Band Width 3MHz,RB Size 1,RB Offset 0,Channel 19965)

Frequency Stability under Temperature

Temperature Interval (℃)	Test Frequency (MHz)	Deviation (Hz)	Limit(Hz)
-20	1711.5	9.50	±4278.75
-10	1711.5	9.69	±4278.75
0	1711.5	-10.16	±4278.75
10	1711.5	8.60	±4278.75
20	1711.5	-14.84	±4278.75
30	1711.5	-2.83	±4278.75
40	1711.5	-12.72	±4278.75
50	1711.5	-6.96	±4278.75

Frequency Stability under Voltage

DC Voltage (V)	Test Frequency (MHz)	Deviation (Hz)	Limit(Hz)
3.0	1711.5	8.12	±4278.75
3.8	1711.5	-7.56	±4278.75
4.5	1711.5	13.65	±4278.75

LTE Band 4 (16-QAM, Band Width 3MHz,RB Size 1,RB Offset 0,Channel 19965)

Frequency Stability under Temperature

Temperature Interval (℃)	Test Frequency (MHz)	Deviation (Hz)	Limit(Hz)
-20	1711.5	10.03	±4278.75
-10	1711.5	-8.16	±4278.75
0	1711.5	-3.02	±4278.75
10	1711.5	4.58	±4278.75
20	1711.5	5.92	±4278.75
30	1711.5	-14.37	±4278.75
40	1711.5	-4.57	±4278.75
50	1711.5	-2.15	±4278.75

Frequency Stability under Voltage

DC Voltage (V)	Test Frequency (MHz)	Deviation (Hz)	Limit(Hz)
3.0	1711.5	-6.00	±4278.75
3.8	1711.5	-4.61	±4278.75
4.5	1711.5	-3.36	±4278.75

LTE Band 4 (QPSK, Band Width 5MHz,RB Size 1,RB Offset 0,Channel 19975)

Frequency Stability under Temperature

Temperature Interval (℃)	Test Frequency (MHz)	Deviation (Hz)	Limit(Hz)
-20	1712.5	-3.29	±4281.25
-10	1712.5	-1.18	±4281.25
0	1712.5	-2.93	±4281.25
10	1712.5	11.10	±4281.25
20	1712.5	-6.30	±4281.25
30	1712.5	-14.26	±4281.25
40	1712.5	10.62	±4281.25
50	1712.5	-4.13	±4281.25

Frequency Stability under Voltage

DC Voltage (V)	Test Frequency (MHz)	Deviation (Hz)	Limit(Hz)
3.0	1712.5	-11.49	±4281.25
3.8	1712.5	-7.05	±4281.25
4.5	1712.5	-10.86	±4281.25

LTE Band 4 (16-QAM, Band Width 5MHz,RB Size 1,RB Offset 0,Channel 19975)

Frequency Stability under Temperature

Temperature Interval (℃)	Test Frequency (MHz)	Deviation (Hz)	Limit(Hz)
-20	1712.5	3.59	±4281.25
-10	1712.5	7.49	±4281.25
0	1712.5	6.92	±4281.25
10	1712.5	-1.25	±4281.25
20	1712.5	2.09	±4281.25
30	1712.5	-9.31	±4281.25
40	1712.5	-4.77	±4281.25
50	1712.5	12.22	±4281.25

Frequency Stability under Voltage

DC Voltage (V)	Test Frequency (MHz)	Deviation (Hz)	Limit(Hz)
3.0	1712.5	10.08	±4281.25
3.8	1712.5	9.58	±4281.25
4.5	1712.5	2.92	±4281.25

LTE Band 4 (QPSK, Band Width 10MHz,RB Size 1,RB Offset 0,Channel 20175)

Frequency Stability under Temperature

Temperature Interval (℃)	Test Frequency (MHz)	Deviation (Hz)	Limit(Hz)
-20	1732.5	-9.30	±4331.25
-10	1732.5	3.48	±4331.25
0	1732.5	-14.80	±4331.25
10	1732.5	-12.84	±4331.25
20	1732.5	2.19	±4331.25
30	1732.5	13.13	±4331.25
40	1732.5	-11.44	±4331.25
50	1732.5	-4.69	±4331.25

Frequency Stability under Voltage

DC Voltage (V)	Test Frequency (MHz)	Deviation (Hz)	Limit(Hz)
3.0	1732.5	-4.02	±4331.25
3.8	1732.5	4.42	±4331.25
4.5	1732.5	-2.14	±4331.25

LTE Band 4 (16-QAM, Band Width 10MHz,RB Size 1,RB Offset 0,Channel 20000)

Frequency Stability under Temperature

Temperature Interval (℃)	Test Frequency (MHz)	Deviation (Hz)	Limit(Hz)
-20	1715.0	-6.16	±4287.5
-10	1715.0	7.07	±4287.5
0	1715.0	11.79	±4287.5
10	1715.0	-13.91	±4287.5
20	1715.0	8.78	±4287.5
30	1715.0	5.91	±4287.5
40	1715.0	2.74	±4287.5
50	1715.0	-9.63	±4287.5

Frequency Stability under Voltage

DC Voltage (V)	Test Frequency (MHz)	Deviation (Hz)	Limit(Hz)
3.0	1715.0	11.96	±4287.5
3.8	1715.0	-1.09	±4287.5
4.5	1715.0	-14.64	±4287.5

LTE Band 4 (QPSK, Band Width 15MHz,RB Size 1,RB Offset 0,Channel 20175)

Frequency Stability under Temperature

Temperature Interval (℃)	Test Frequency (MHz)	Deviation (Hz)	Limit(Hz)
-20	1732.5	10.10	±4331.25
-10	1732.5	7.74	±4331.25
0	1732.5	-7.49	±4331.25
10	1732.5	-12.89	±4331.25
20	1732.5	13.26	±4331.25
30	1732.5	1.38	±4331.25
40	1732.5	-2.78	±4331.25
50	1732.5	-6.93	±4331.25

Frequency Stability under Voltage

DC Voltage (V)	Test Frequency (MHz)	Deviation (Hz)	Limit(Hz)
3.0	1732.5	14.86	±4331.25
3.8	1732.5	11.04	±4331.25
4.5	1732.5	-8.42	±4331.25

LTE Band 4 (16-QAM, Band Width 15MHz,RB Size 1,RB Offset 0,Channel 20175)

Frequency Stability under Temperature

Temperature Interval (℃)	Test Frequency (MHz)	Deviation (Hz)	Limit(Hz)
-20	1732.5	-9.14	±4331.25
-10	1732.5	-12.38	±4331.25
0	1732.5	-6.33	±4331.25
10	1732.5	14.31	±4331.25
20	1732.5	-10.57	±4331.25
30	1732.5	1.41	±4331.25
40	1732.5	8.46	±4331.25
50	1732.5	-12.97	±4331.25

Frequency Stability under Voltage

DC Voltage (V)	Test Frequency (MHz)	Deviation (Hz)	Limit(Hz)
3.0	1732.5	-9.41	±4331.25
3.8	1732.5	-13.09	±4331.25
4.5	1732.5	3.36	±4331.25

LTE Band 4 (QPSK, Band Width 20MHz,RB Size 1,RB Offset 0,Channel 20175)

Frequency Stability under Temperature

Temperature Interval (℃)	Test Frequency (MHz)	Deviation (Hz)	Limit(Hz)
-20	1732.5	-5.75	±4331.25
-10	1732.5	-7.88	±4331.25
0	1732.5	-13.02	±4331.25
10	1732.5	-14.86	±4331.25
20	1732.5	-2.66	±4331.25
30	1732.5	7.84	±4331.25
40	1732.5	-4.62	±4331.25
50	1732.5	1.79	±4331.25

Frequency Stability under Voltage

DC Voltage (V)	Test Frequency (MHz)	Deviation (Hz)	Limit(Hz)
3.0	1732.5	-4.26	±4331.25
3.8	1732.5	8.69	±4331.25
4.5	1732.5	1.12	±4331.25

LTE Band 4 (16-QAM, Band Width 20MHz,RB Size 1,RB Offset 0,Channel 20300)

Frequency Stability under Temperature

Temperature Interval (℃)	Test Frequency (MHz)	Deviation (Hz)	Limit(Hz)
-20	1745.0	-11.99	±4362.5
-10	1745.0	-11.29	±4362.5
0	1745.0	1.04	±4362.5
10	1745.0	14.80	±4362.5
20	1745.0	-10.02	±4362.5
30	1745.0	2.63	±4362.5
40	1745.0	10.35	±4362.5
50	1745.0	-10.37	±4362.5

Frequency Stability under Voltage

DC Voltage (V)	Test Frequency (MHz)	Deviation (Hz)	Limit(Hz)
3.0	1745.0	6.53	±4362.5
3.8	1745.0	3.93	±4362.5
4.5	1745.0	-12.44	±4362.5

LTE Band 5 (QPSK, Band Width 1.4MHz,RB Size 1,RB Offset 0,Channel 20407)

Frequency Stability under Temperature

Temperature Interval (℃)	Test Frequency (MHz)	Deviation (Hz)	Limit(Hz)
-20	824.7	7.20	±2061.75
-10	824.7	11.94	±2061.75
0	824.7	8.68	±2061.75
10	824.7	11.22	±2061.75
20	824.7	7.04	±2061.75
30	824.7	12.52	±2061.75
40	824.7	-1.15	±2061.75
50	824.7	2.20	±2061.75

Frequency Stability under Voltage

DC Voltage (V)	Test Frequency (MHz)	Deviation (Hz)	Limit(Hz)
3.0	824.7	-3.98	±2061.75
3.8	824.7	-6.48	±2061.75
4.5	824.7	12.37	±2061.75

LTE Band 5 (16-QAM, Band Width 1.4MHz,RB Size 1,RB Offset 0,Channel 20407)

Frequency Stability under Temperature

Temperature Interval (℃)	Test Frequency (MHz)	Deviation (Hz)	Limit(Hz)
-20	824.7	-5.58	±2061.75
-10	824.7	-6.10	±2061.75
0	824.7	7.11	±2061.75
10	824.7	-9.48	±2061.75
20	824.7	0.81	±2061.75
30	824.7	3.93	±2061.75
40	824.7	1.38	±2061.75
50	824.7	2.56	±2061.75

Frequency Stability under Voltage

DC Voltage (V)	Test Frequency (MHz)	Deviation (Hz)	Limit(Hz)
3.0	824.7	13.65	±2061.75
3.8	824.7	-7.95	±2061.75
4.5	824.7	-3.43	±2061.75

LTE Band 5 (QPSK, Band Width 3MHz,RB Size 1,RB Offset 0,Channel 20415)

Frequency Stability under Temperature

Temperature Interval (℃)	Test Frequency (MHz)	Deviation (Hz)	Limit(Hz)
-20	825.5	4.18	±2063.75
-10	825.5	11.33	±2063.75
0	825.5	-5.27	±2063.75
10	825.5	14.67	±2063.75
20	825.5	8.17	±2063.75
30	825.5	2.19	±2063.75
40	825.5	8.77	±2063.75
50	825.5	3.41	±2063.75

Frequency Stability under Voltage

DC Voltage (V)	Test Frequency (MHz)	Deviation (Hz)	Limit(Hz)
3.0	825.5	11.49	±2063.75
3.8	825.5	-5.05	±2063.75
4.5	825.5	9.41	±2063.75