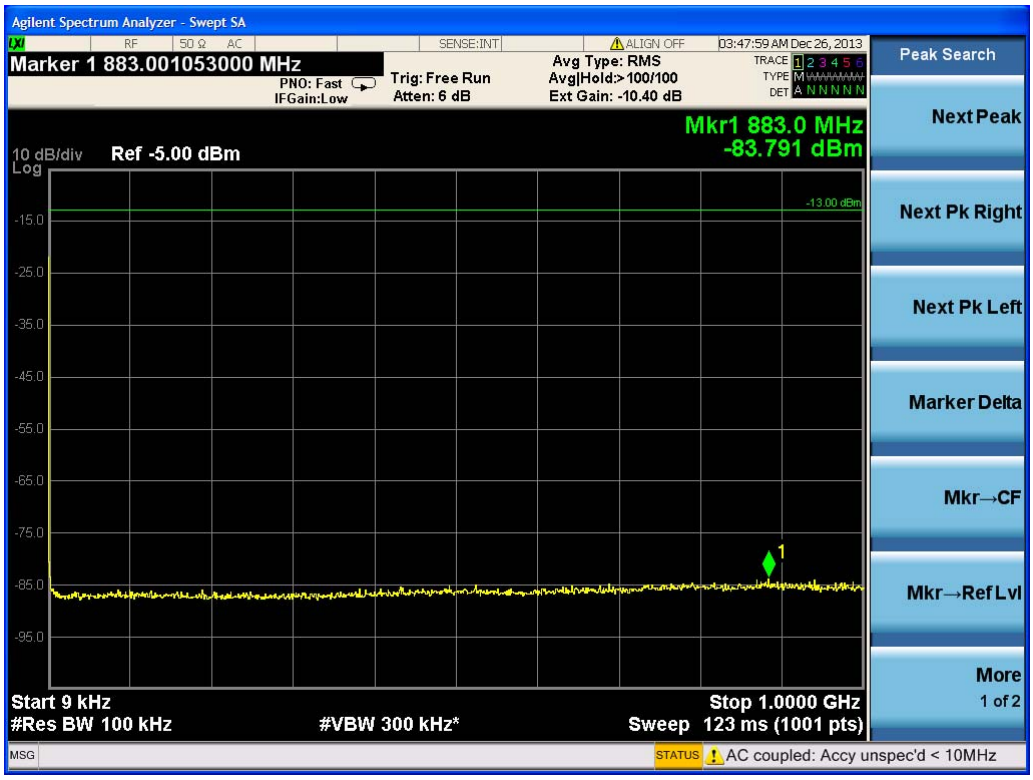
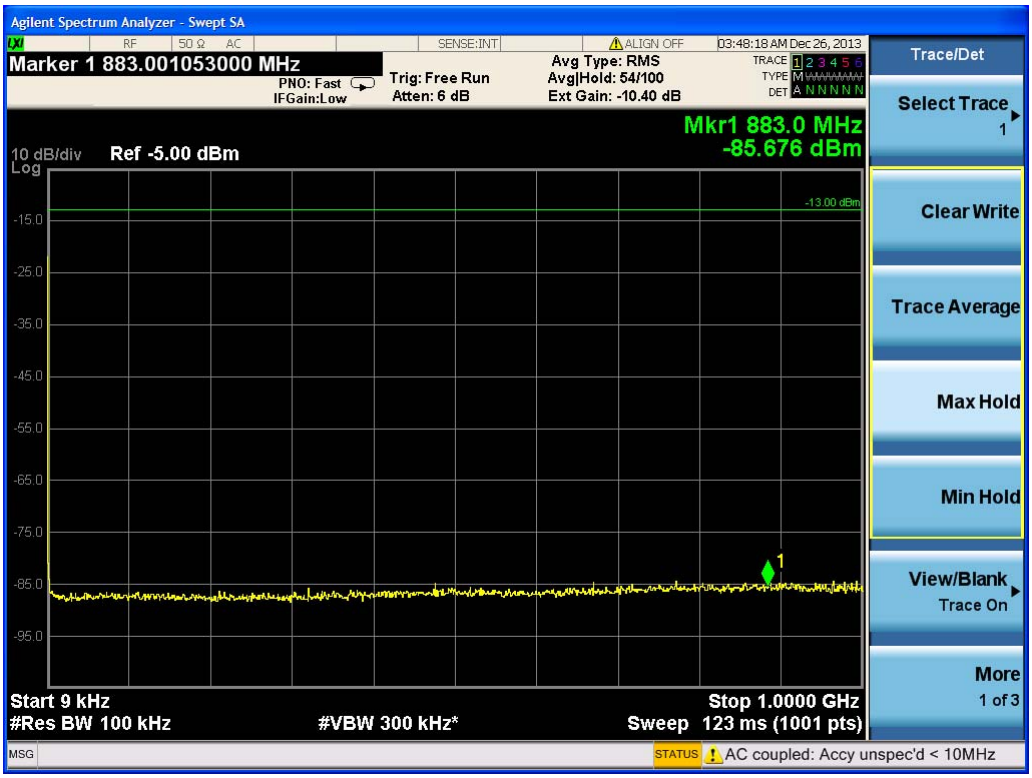
4) 1x EV-DO modulation

(a) Lowest frequency: 9 kHz to 1 GHz



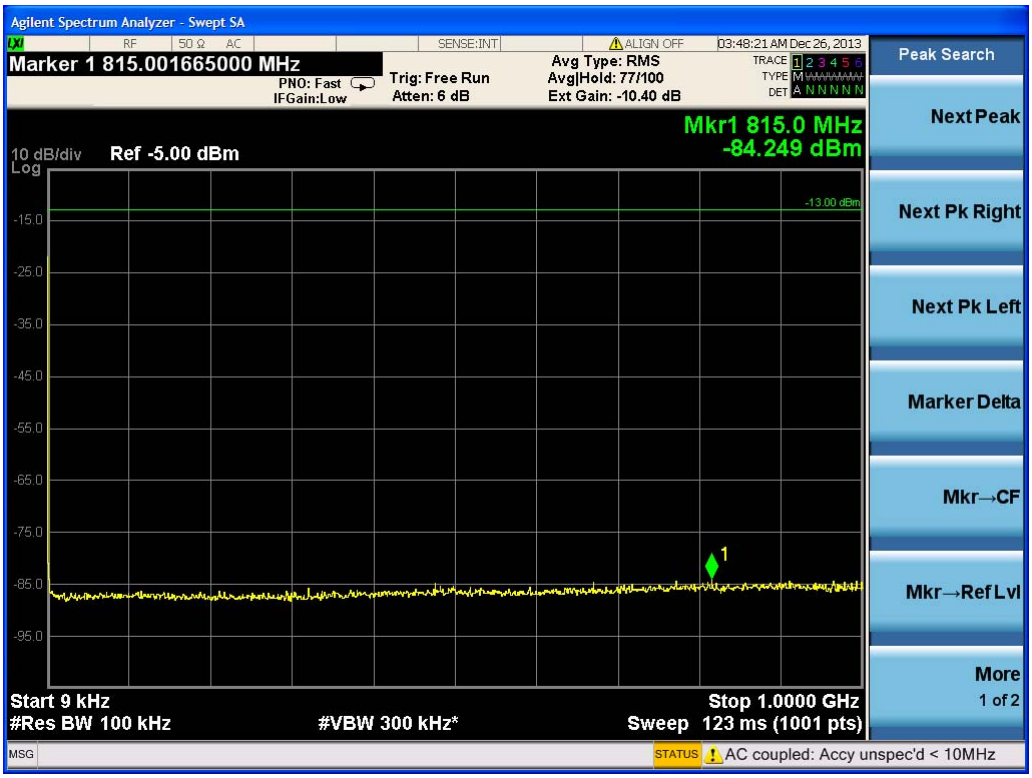
(b) Lowest frequency: 1 GHz to 26.5 GHz

(c) Middle frequency: 9 kHz to 1 GHz



(d) Middle frequency: 1 GHz to 26.5 GHz

(e) Highest frequency: 9 kHz to 1 GHz



(f) Highest frequency: 1 GHz to 26.5 GHz

5.3.3 Band Edge

Test Date:	27 Dec, 2013 to 27 Dec, 2013
Ambient Temp:	20.0℃
Humid :	67%
Atmospheric Pressure:	1005mbar
Power supply:	AC 120V 60Hz
Test Method:	FCC part 2. 1051& 935210 D02 Signal Boosters Certification v01r01
Test Requirement:	
700MHz Lower ABC Band	FCC part 27. 53 The power of any emission outside a licensee's frequency block shall be attenuated below the transmitting power (P) by at least 43 + 10 log (P) dB, or -13 dBm.
700MHz Upper C Band	FCC part 27. 53 The power of any emission outside a licensee's frequency block shall be attenuated below the transmitting power (P) by at least 43 + 10 log (P) dB, or -13 dBm.
850MHz Band	FCC part 22. 917 The power of any emission outside a licensee's frequency block shall be attenuated below the transmitting power (P) by at least 43 + 10 log (P) dB, or -13 dBm.
1900MHz Broadband PCS	FCC part 24. 238 The power of any emission outside a licensee’s frequency block shall be attenuated below the transmitter power (P) by a factor of at least 43 + 10 log (P) dB, or -13 dBm.
AWS-1 Band	FCC part 27. 53 The power of any emission outside a licensee's frequency block shall be attenuated below the transmitter power (P) by at least 43 + 10 log (P) dB, or -13 dBm.
EUT Operation:	The output power of EUT be set to maximum value, the gain of EUT be set to maximum value by software through the manufacture
Test conditions:	Normal conditions

Test configuration:

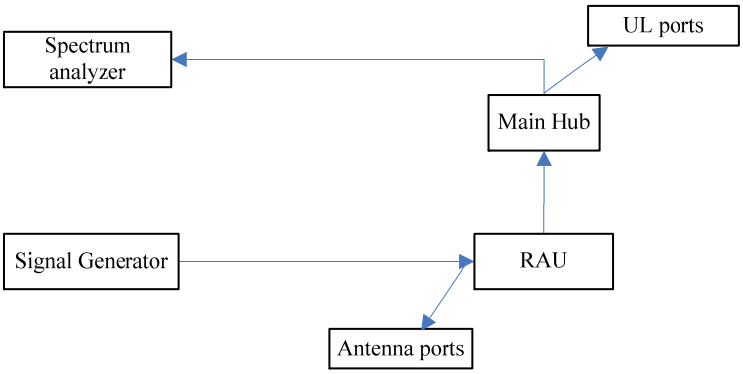
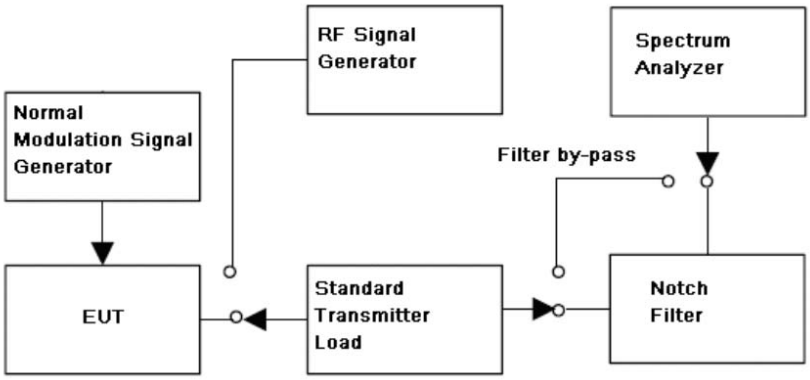


Figure 3: Uplink Band Edge Configuration



Test Procedure:

Band Edge conducted Emission test procedure:

a) Connect the equipment as illustrated, when the output power is over the max. value of the Spectrum Analyzer, add the attenuator to avoid destroying the facility.

b) Set the center frequency of the Spectrum Analyzer to assigned transmitter frequency, and set the level of the carrier to the full scale reference line.

c) Do not apply any tone to modulate the EUT

d) Adjust the Spectrum Analyzer for the following setting:

1) Resolution Bandwidth (base the standard, apply the different set), here is 100kHz for frequency band less than 1 GHz, 1 MHz for frequency over 1 GHz

2) Video Bandwidth refer to standard requirement

e) Adjust the center frequency of the spectrum analyzer for incremental coverage of the range from:

Use spectrum analyzer channel power measurement

1) the lowest radio frequency generated in the equipment, it can be 9 kHz base the test method, here select 30 MHz as lowest frequency start point;
2) the highest radio frequency shall higher than 10 times of carrier frequency;

f) Record the frequencies and levels of spurious emissions;

Remark: The notch filter is used for avoid the EUT fundamental carrier output power making the spectrum overload and the harmonic spurious brought by it.

When the EUT fundamental carrier is not enough to make the status, the notch filter could be not used.

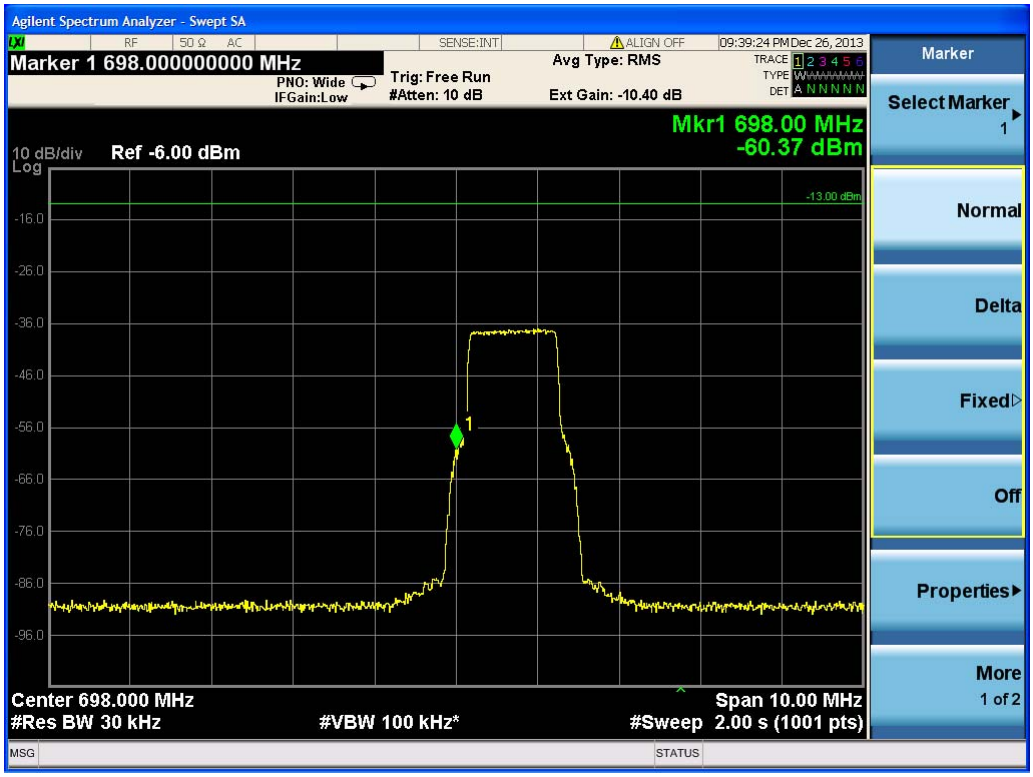
5.3.3.1 Measurement Record

5.3.3.1.1 700MHz Lower ABC Band

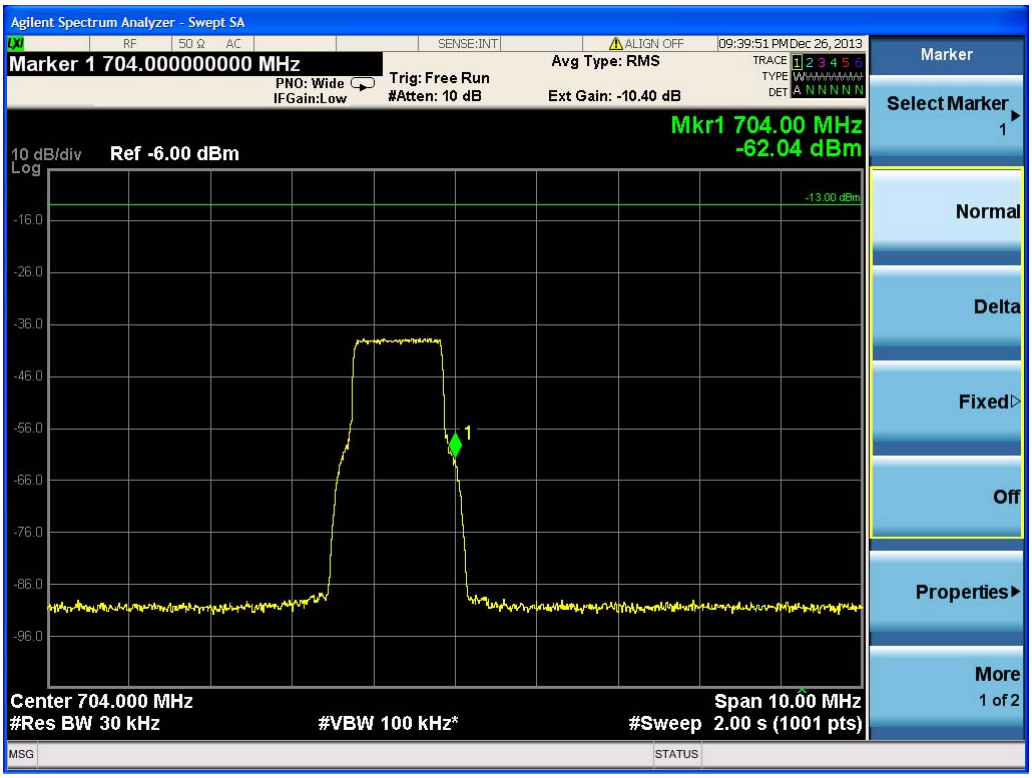
1) 700MHz Lower A LTE modulation

1.1) Test for LTE 1.4MHz/

a) Lower Edge

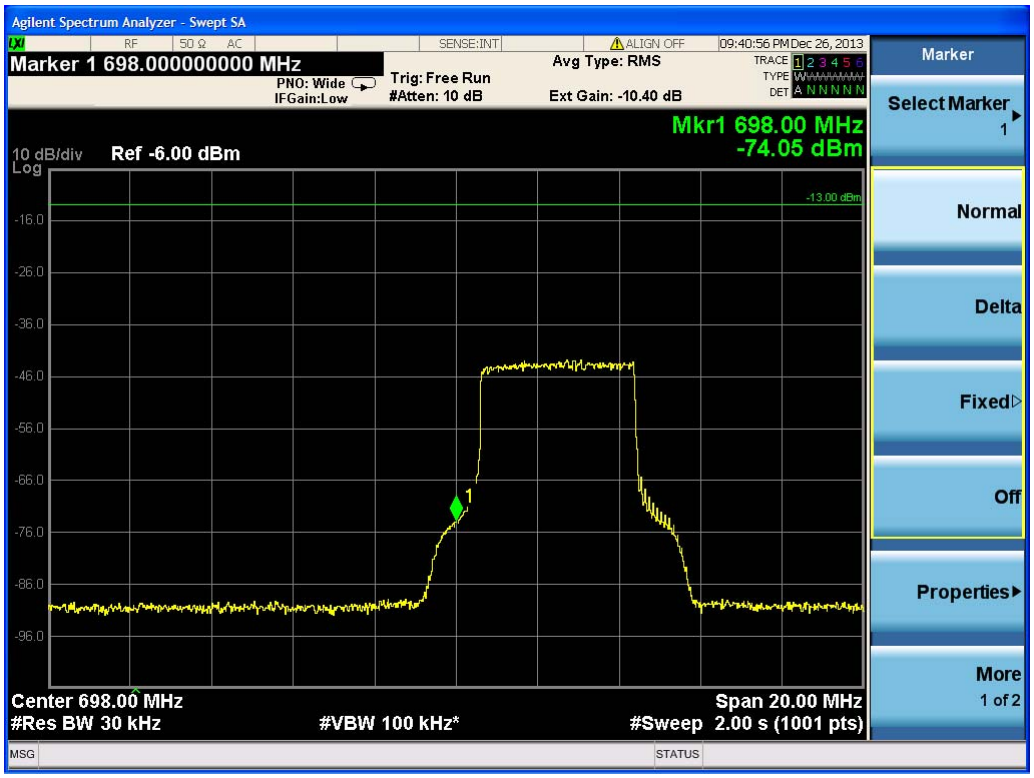


b) Upper Edge

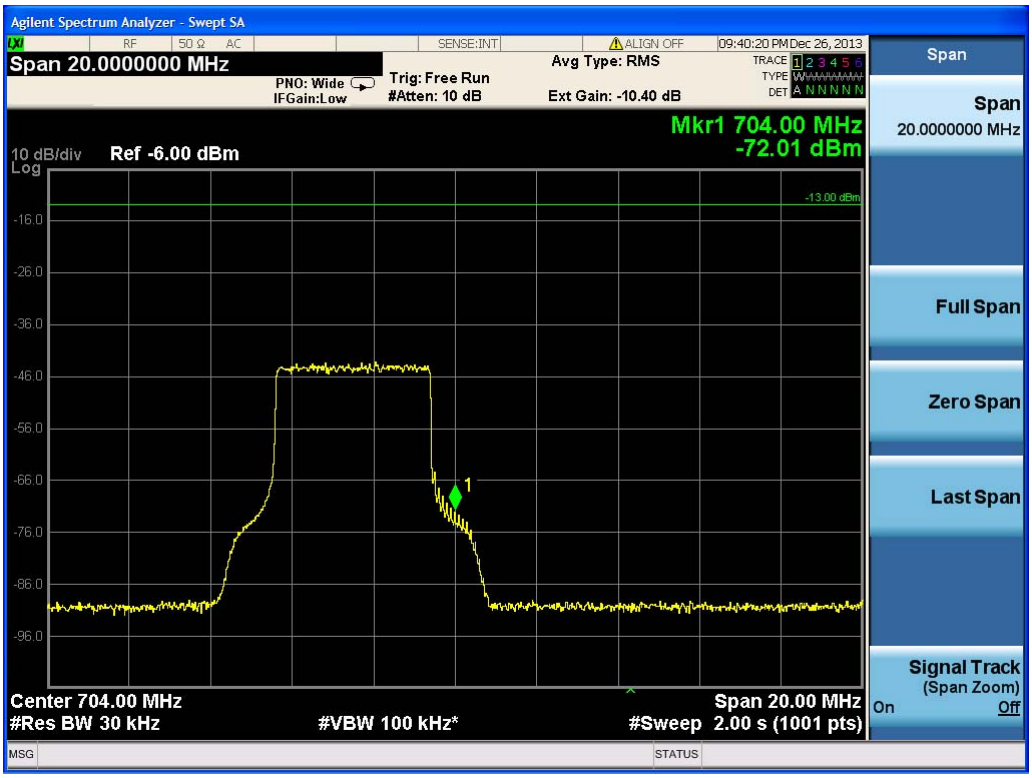


1.2) Test for LTE 5MHz

a) Lower Edge



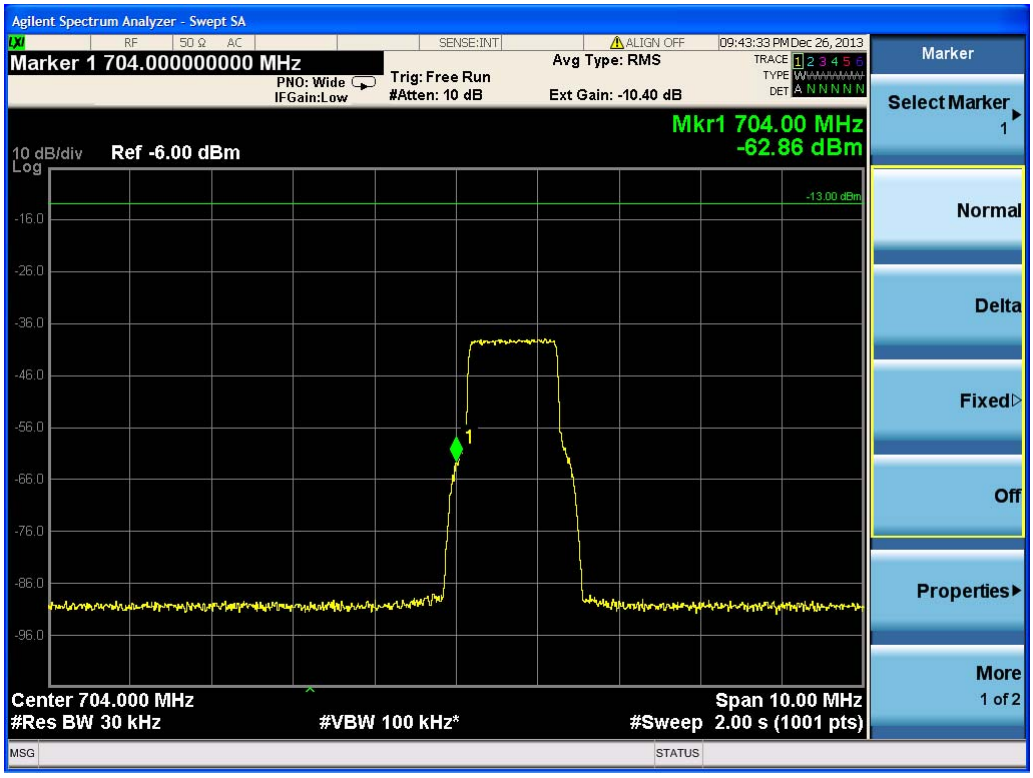
b) Upper Edge


Agilent Spectrum Analyzer - Swept SA
RF 50 Ω AC
SENSE:INT
ALIGN OFF
09:40:20 PM Dec 26, 2013
Span 20.0000000 MHz
PNO: Wide
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Ext Gain: -10.40 dB
TRACE 1 2 3 4 5 6
TYPE W
DET A N N N N N
Mkr1 704.00 MHz
-72.01 dBm
10 dB/div
Log
Ref -6.00 dBm
-13.00 dBm
-16.0
-26.0
-36.0
-46.0
-56.0
-66.0
-76.0
-86.0
-96.0
Center 704.00 MHz
#Res BW 30 kHz
#VBW 100 kHz*
Span 20.00 MHz
#Sweep 2.00 s (1001 pts)
MSG
STATUS
Span
Span
20.0000000 MHz
Full Span
Zero Span
Last Span
Signal Track
(Span Zoom)
On
Off

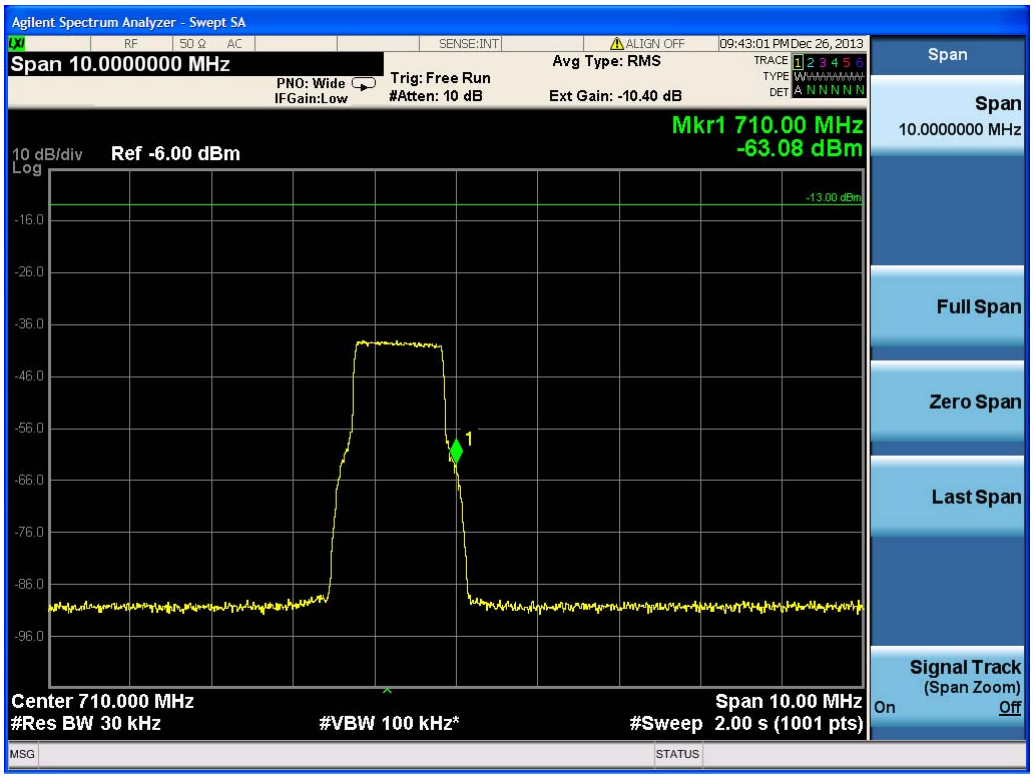
2) 700MHz Lower B LTE modulation

2.1) Test for LTE 1.4MHz

a) Lower Edge

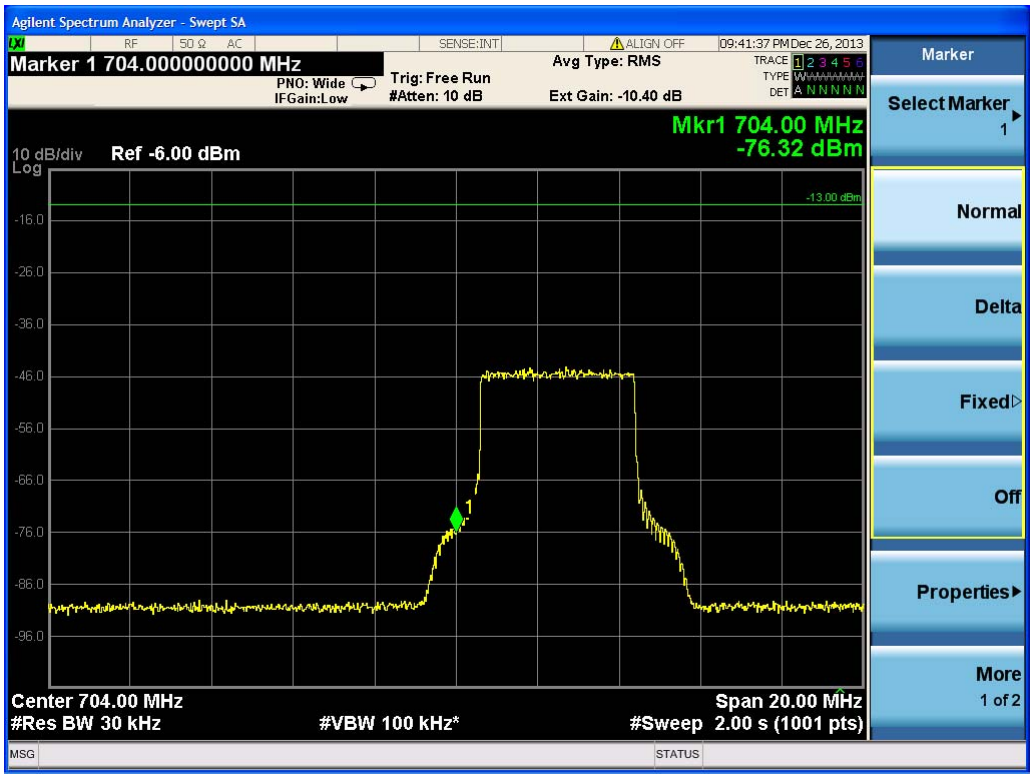


b) Upper Edge

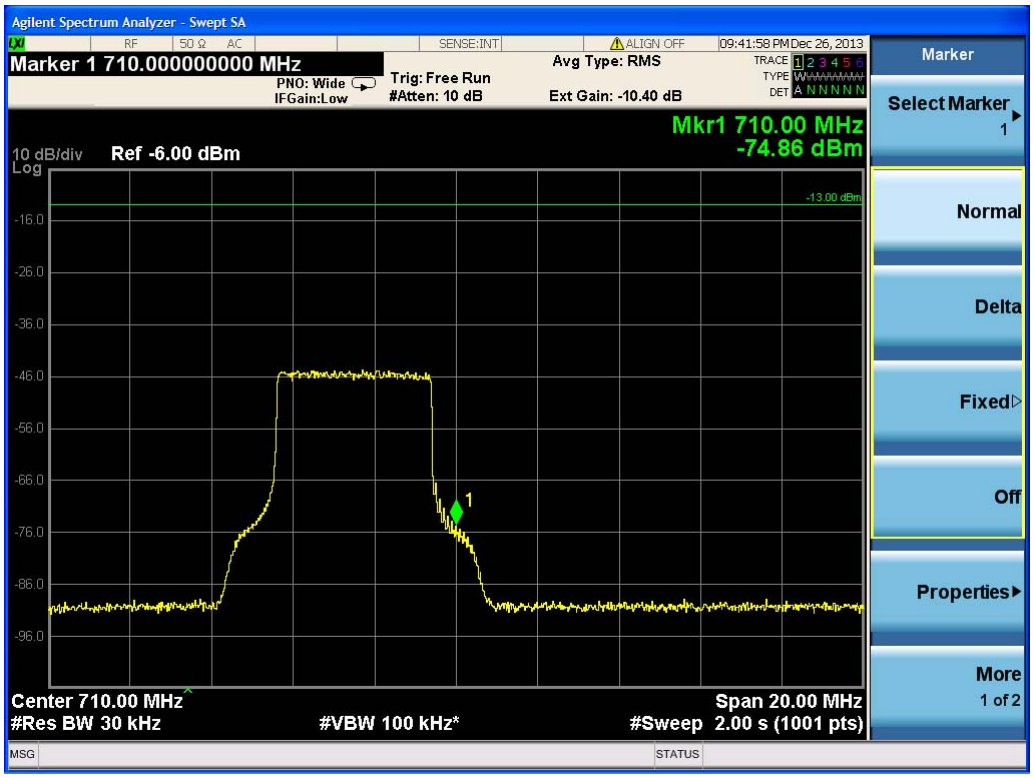


2.2) Test for LTE 5 MHz

a) Lower Edge



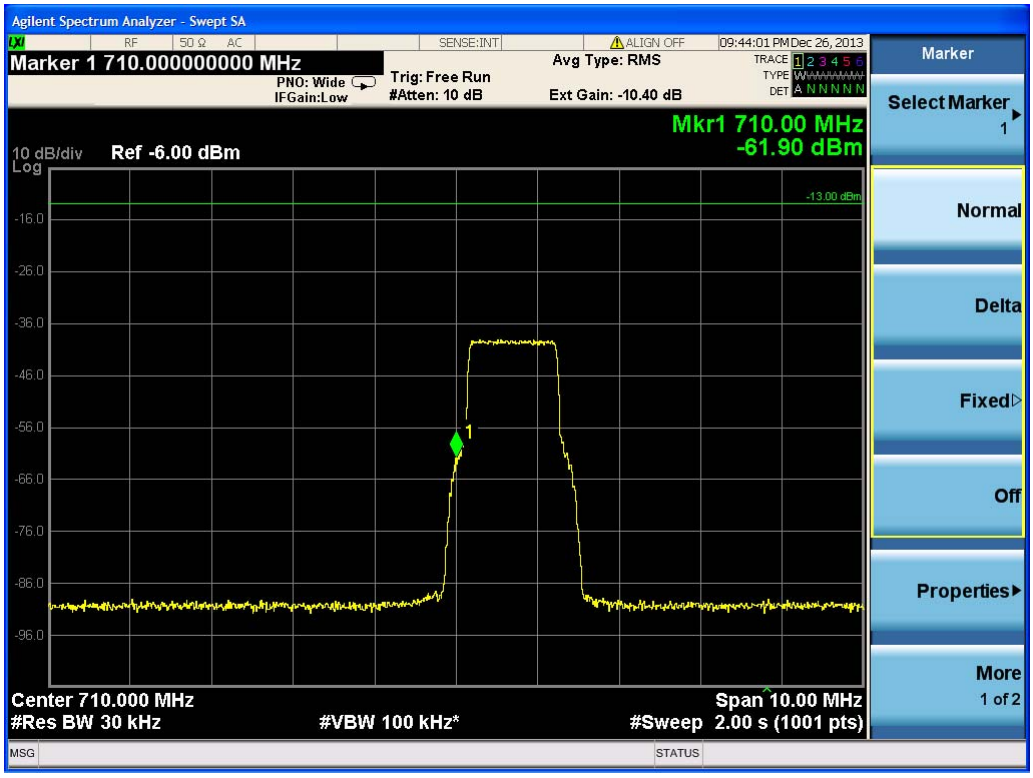
b) Upper Edge


Agilent Spectrum Analyzer - Swept SA
RF
50 Ω
AC
SENSE:INT
ALIGN OFF
09:41:58 PM Dec 26, 2013
Marker 1 710.000000000 MHz
PNO: Wide
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Ext Gain: -10.40 dB
TRACE 1 2 3 4 5 6
TYPE W
DET A N N N N N
Mkr1 710.00 MHz
-74.86 dBm
10 dB/div
Log
Ref -6.00 dBm
-13.00 dBm
-16.0
-26.0
-36.0
-46.0
-56.0
-66.0
-76.0
-86.0
-96.0
1
Center 710.00 MHz
#Res BW 30 kHz
#VBW 100 kHz*
Span 20.00 MHz
#Sweep 2.00 s (1001 pts)
MSG
STATUS
Marker
Select Marker
1
Normal
Delta
Fixed
Off
Properties
More
1 of 2

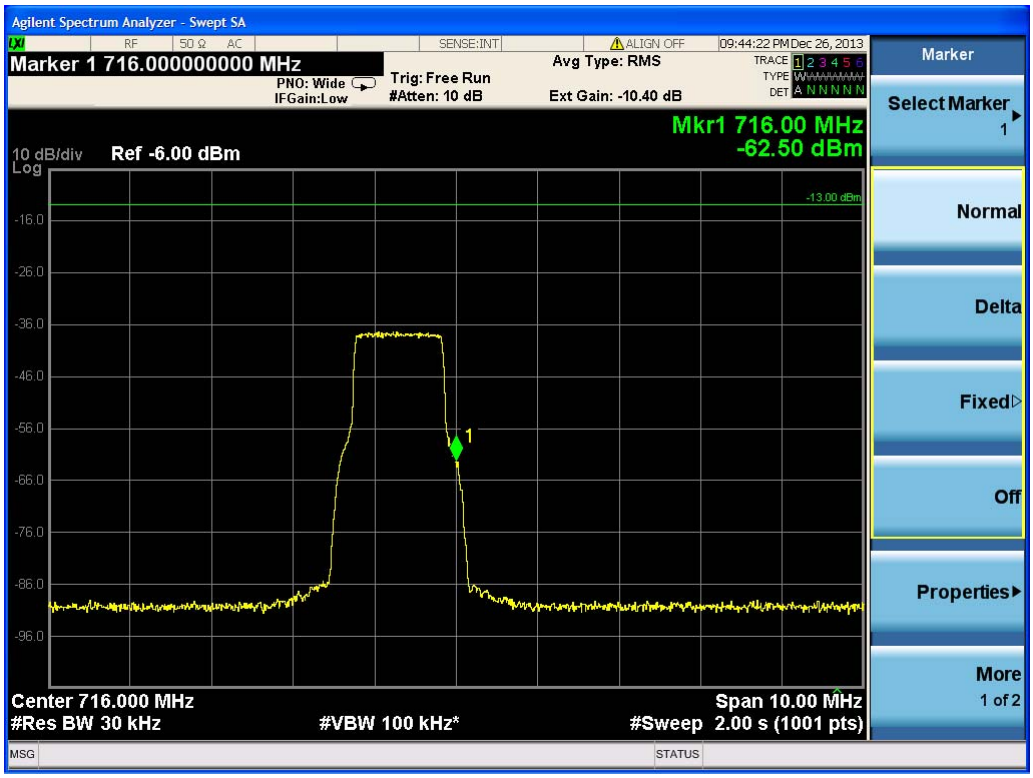
3) 700MHz Lower C LTE modulation

3.1) Test for LTE 1.4MHz

a) Lower Edge

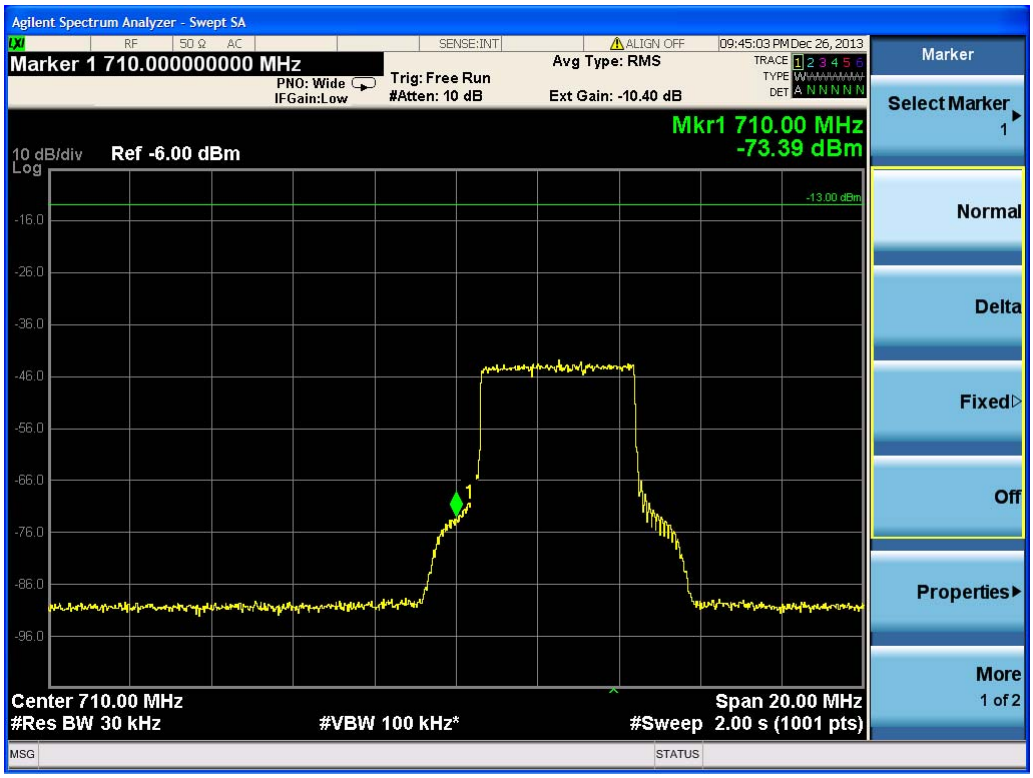


b) Upper Edge

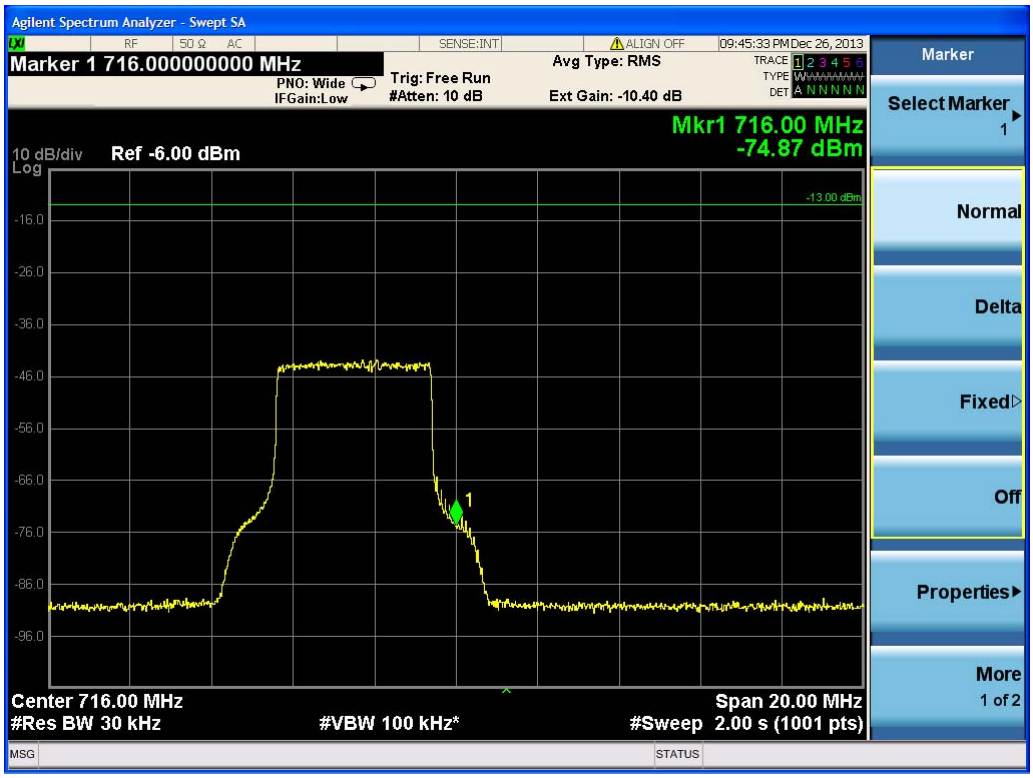


3.2) Test for LTE 5 MHz

a) Lower Edge



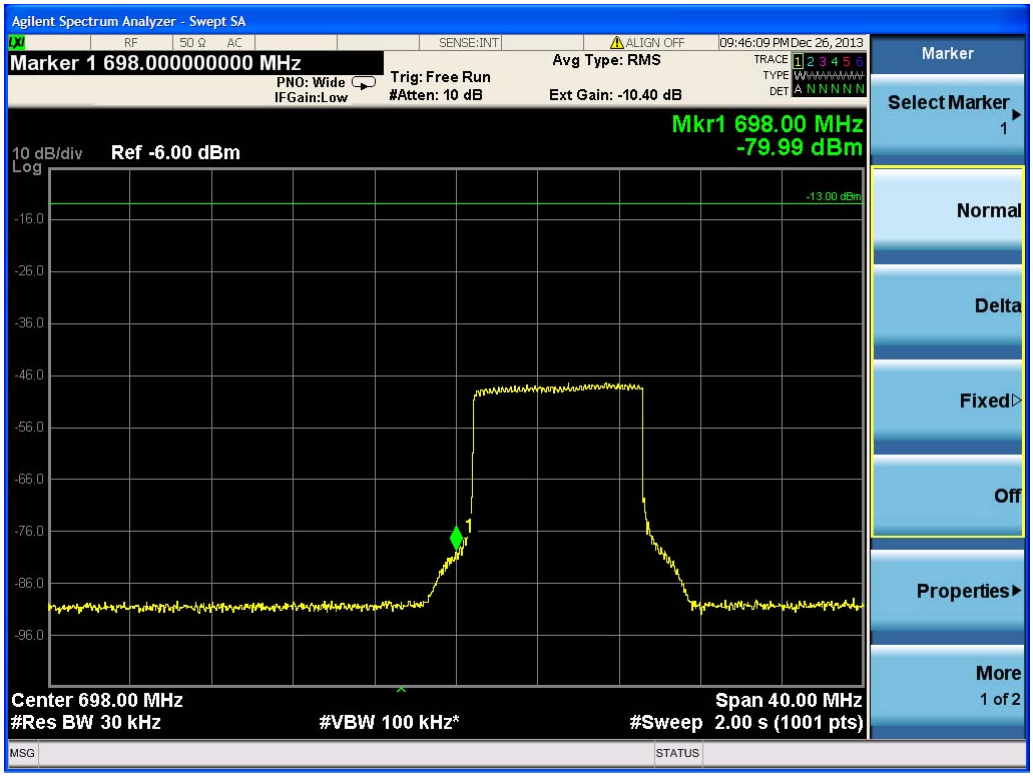
b) Upper Edge


Agilent Spectrum Analyzer - Swept SA
RF
50 Ω AC
SENSE:INT
ALIGN OFF
09:45:33 PM Dec 26, 2013
Marker 1 716.000000000 MHz
PNO: Wide
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Ext Gain: -10.40 dB
TRACE 1 2 3 4 5 6
TYPE W
DET A N N N N N
Mkr1 716.00 MHz
-74.87 dBm
10 dB/div
Log
Ref -6.00 dBm
-13.00 dBm
-16.0
-26.0
-36.0
-46.0
-56.0
-66.0
-76.0
-86.0
-96.0
Center 716.00 MHz
#Res BW 30 kHz
#VBW 100 kHz*
Span 20.00 MHz
#Sweep 2.00 s (1001 pts)
MSG
STATUS
Marker
Select Marker
1
Normal
Delta
Fixed
Off
Properties
More
1 of 2

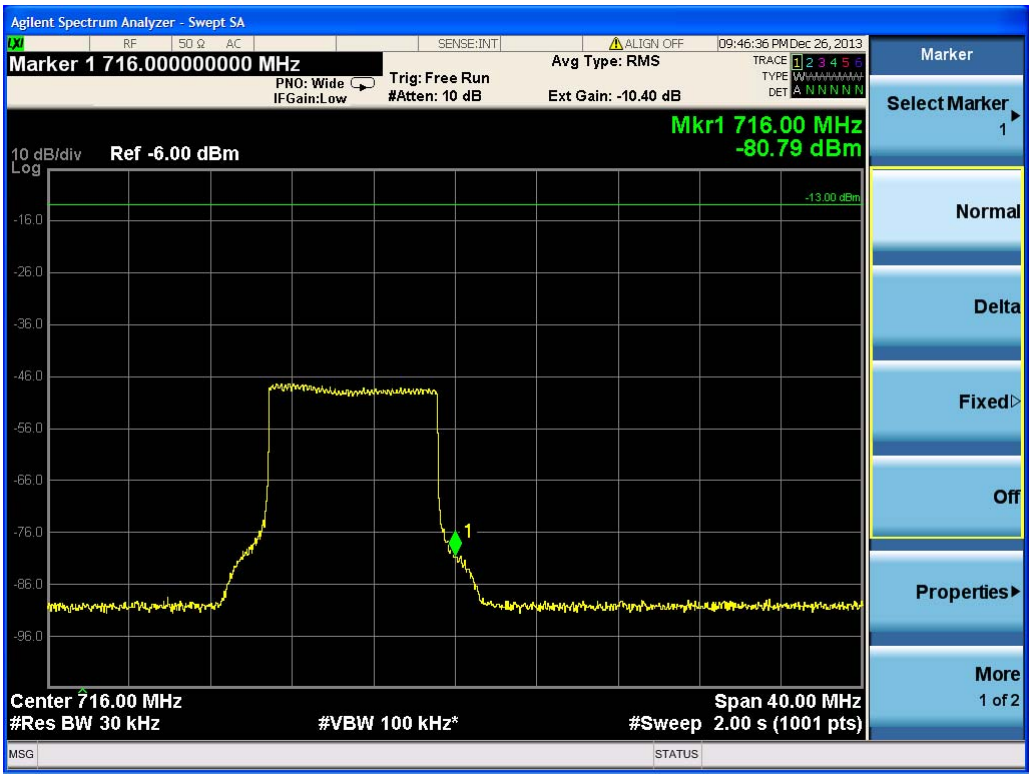
4) 700MHz Lower ABC LTE modulation

4.1) Test for LTE 10MHz

a) Lower Edge



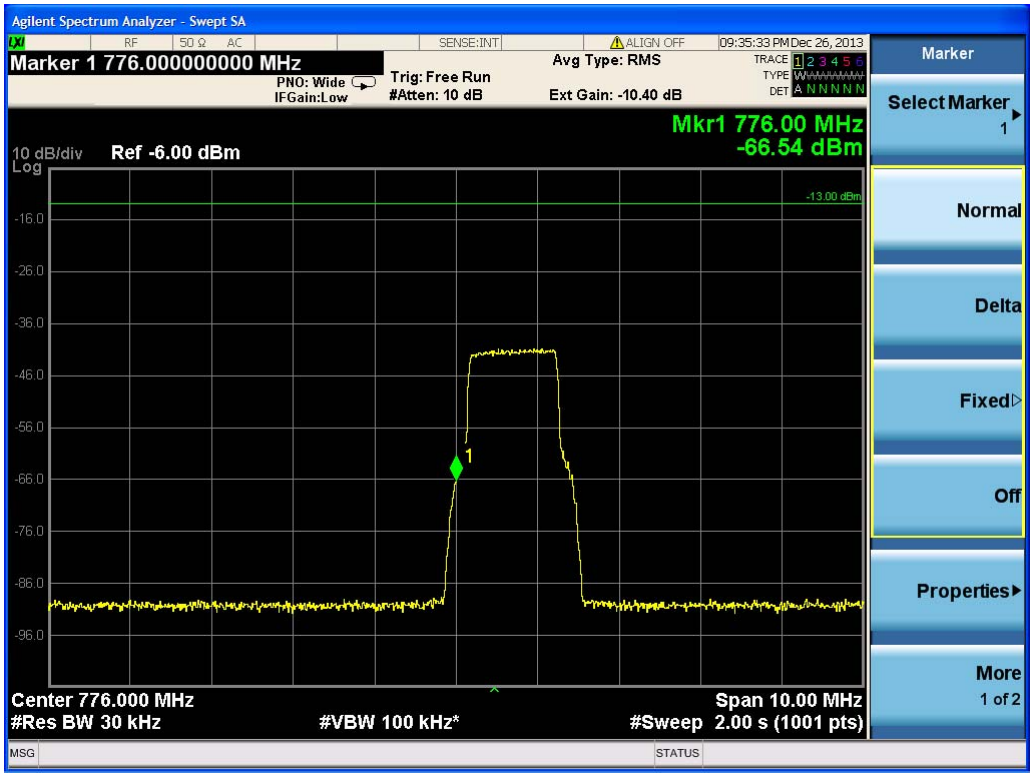
b) Upper Edge


Agilent Spectrum Analyzer - Swept SA
RF
50 Ω AC
SENSE:INT
ALIGN OFF
09:46:36 PM Dec 26, 2013
Marker 1 716.000000000 MHz
PNO: Wide
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Ext Gain: -10.40 dB
TRACE 1 2 3 4 5 6
TYPE W
DET A N N N N N
Mkr1 716.00 MHz
-80.79 dBm
10 dB/div
Log
Ref -6.00 dBm
-13.00 dBm
-16.0
-26.0
-36.0
-46.0
-56.0
-66.0
-76.0
-86.0
-96.0
1
Center 716.00 MHz
#Res BW 30 kHz
#VBW 100 kHz*
Span 40.00 MHz
#Sweep 2.00 s (1001 pts)
MSG
STATUS
Marker
Select Marker 1
Normal
Delta
Fixed
Off
Properties
More 1 of 2

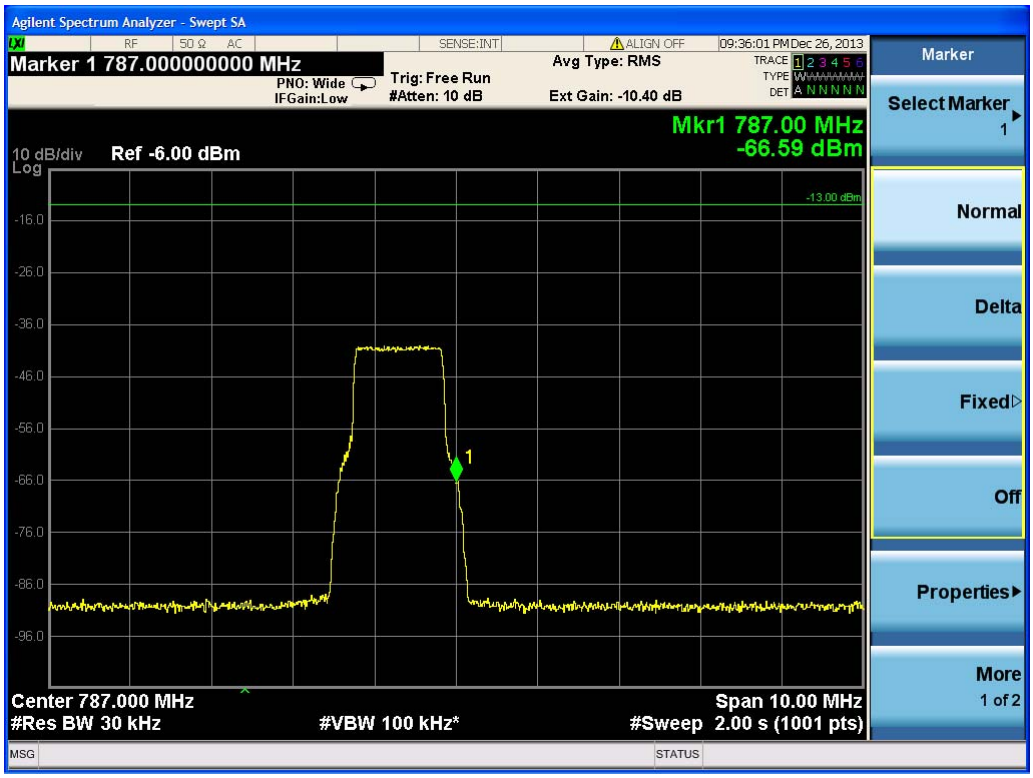
5.3.3.1.2 700MHz Upper C Band

1.1) Test for LTE 1.4MHz

a) Lower Edge

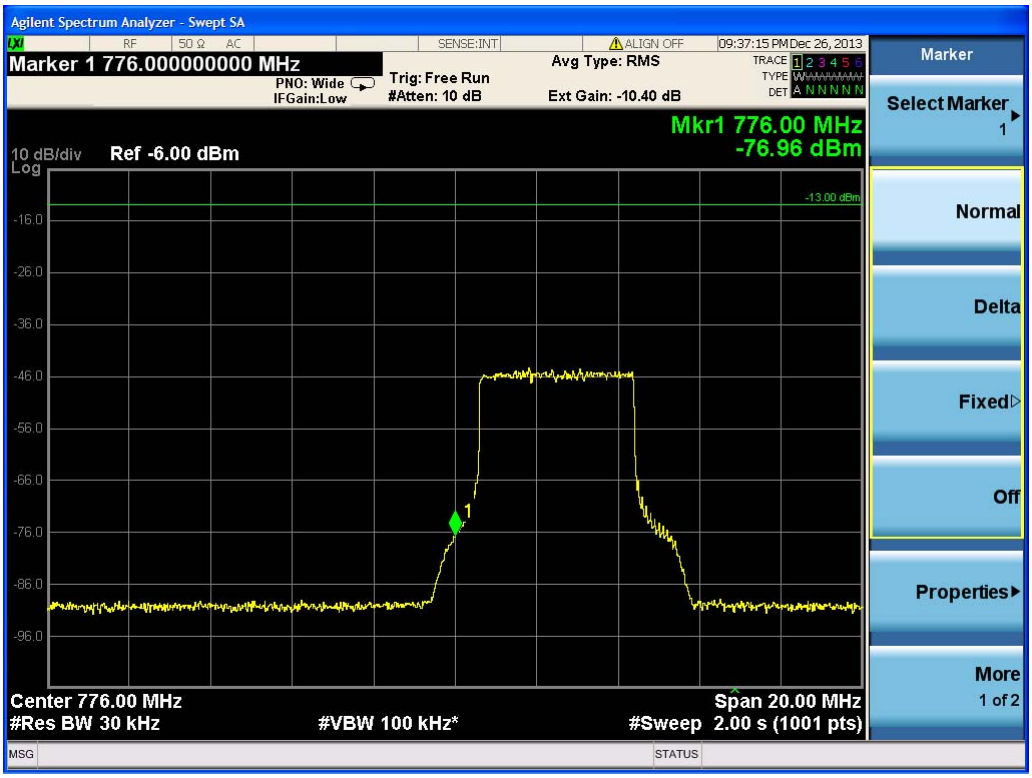


b) Upper Edge

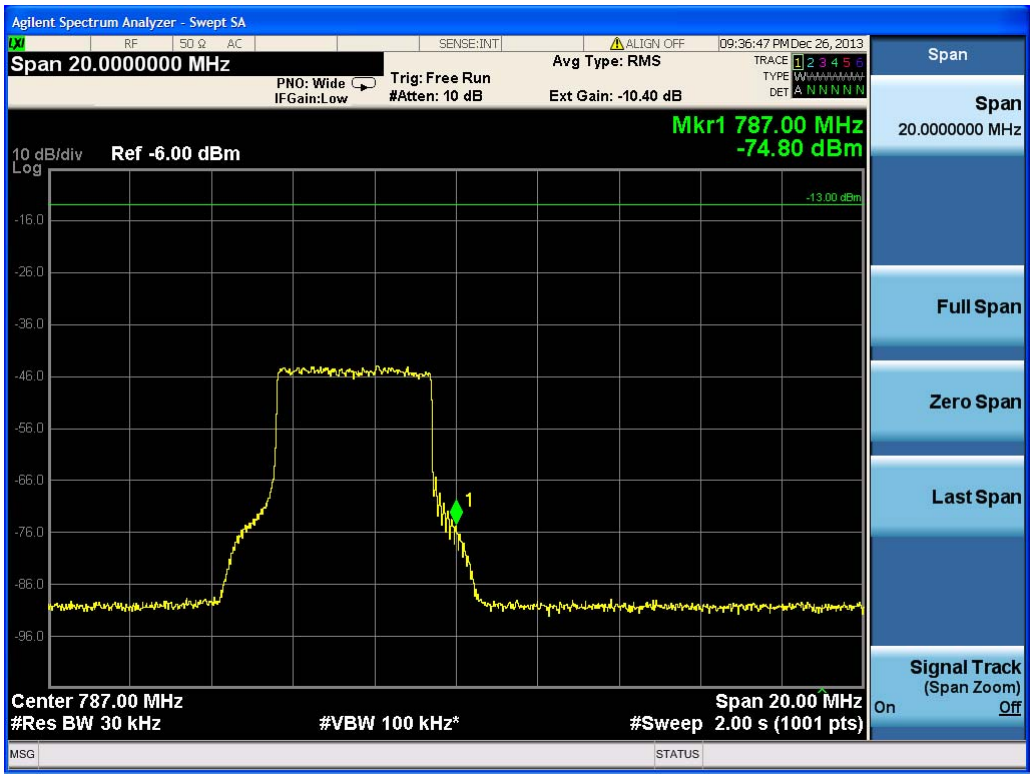


1.2) Test for LTE 5 MHz

a) Lower Edge



b) Upper Edge



1.3) Test for LTE 10 MHz

a) Lower Edge