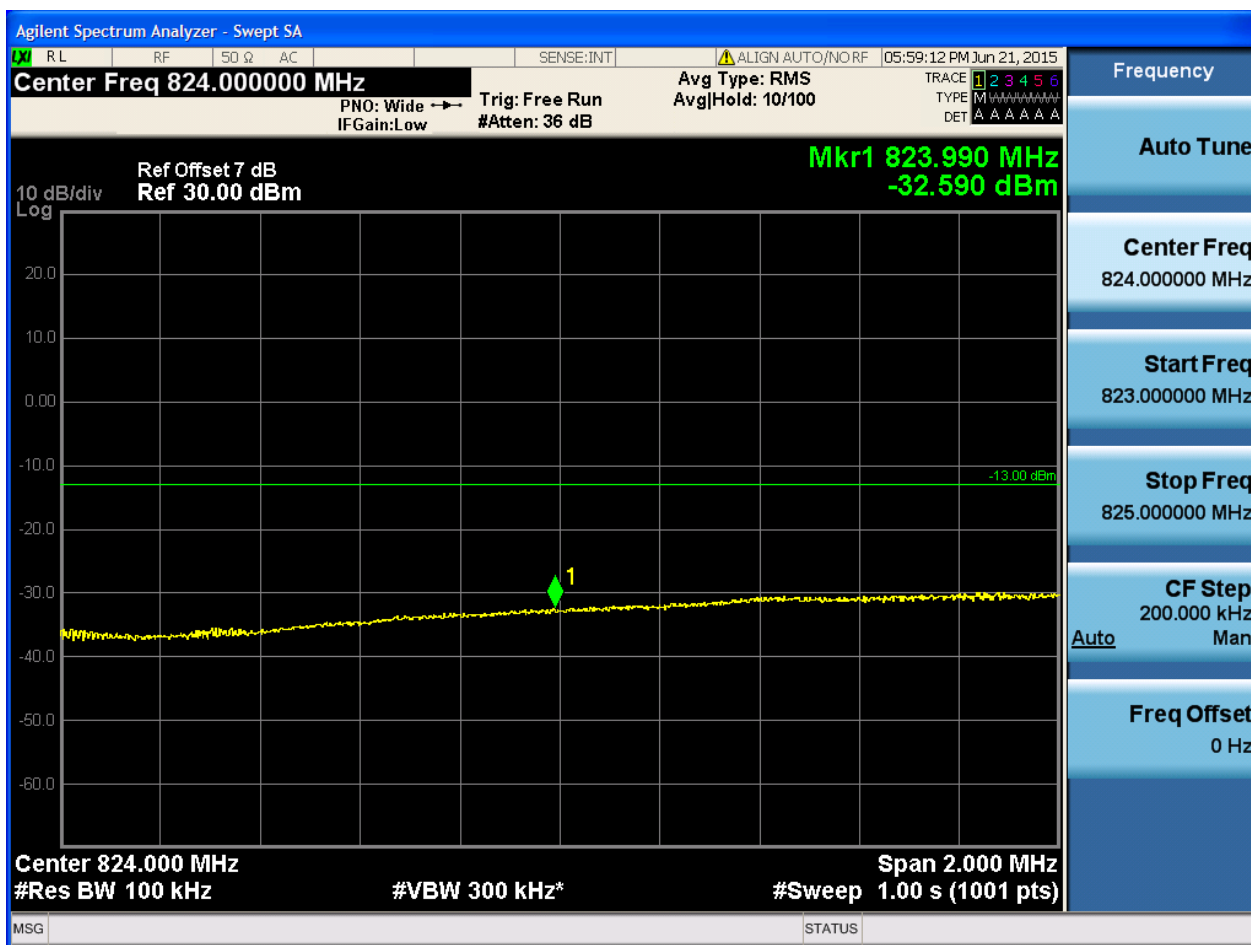




5.1.3.2.4.1.3 Test RB = RB25#13





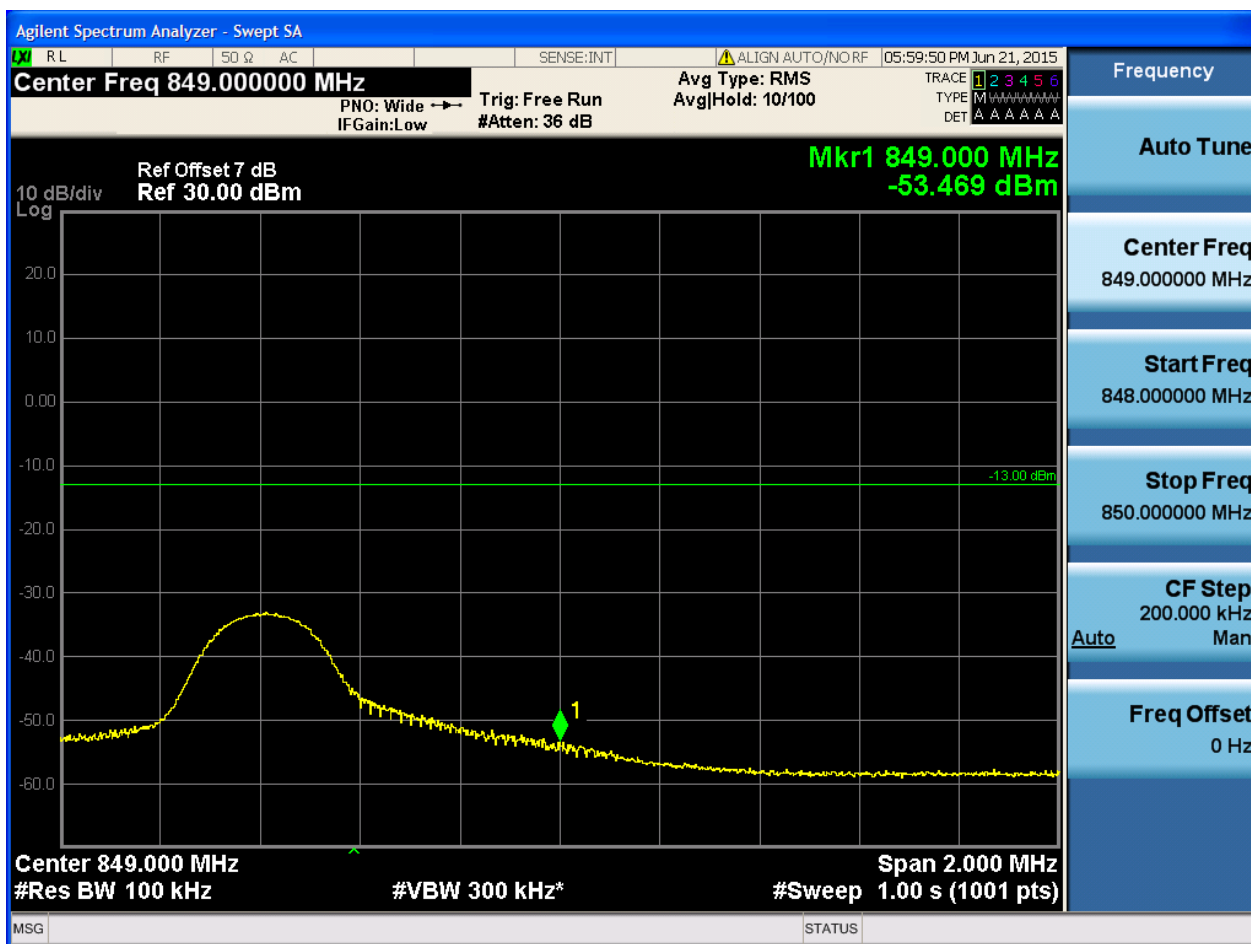
5.1.3.2.4.1.4 Test RB = RB50#0





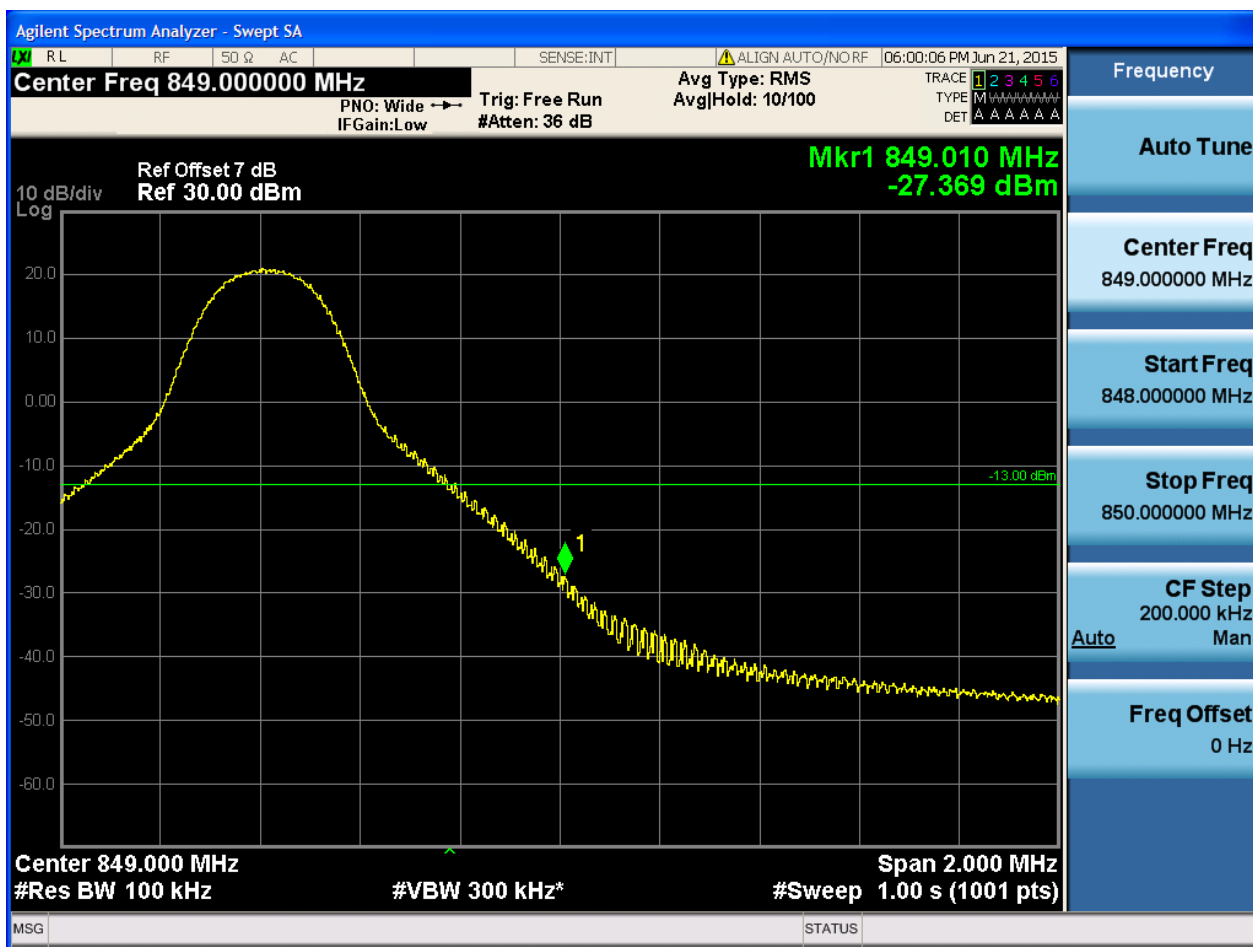
5.1.3.2.4.2 Test Channel = HCH

5.1.3.2.4.2.1 Test RB = RB1#0



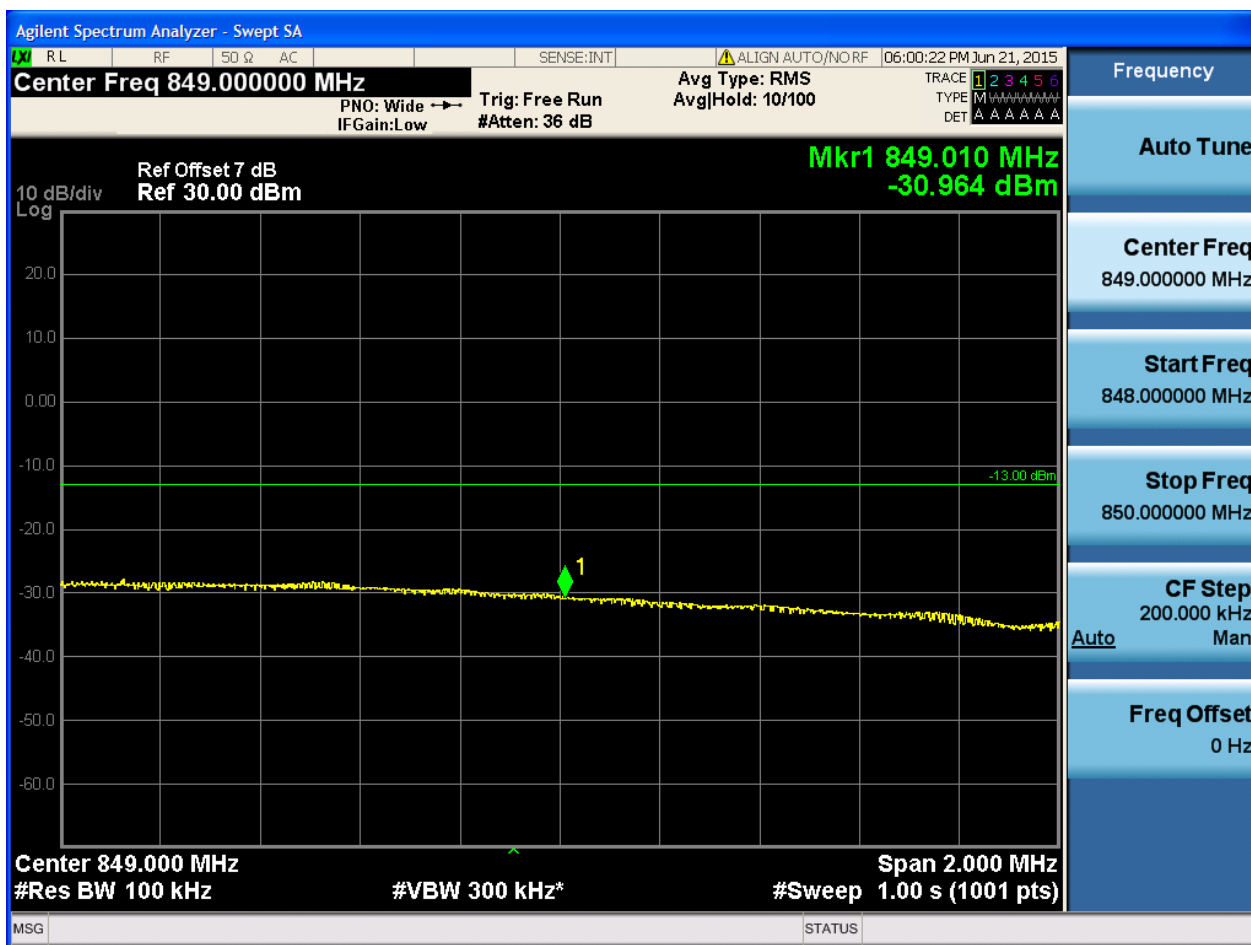


5.1.3.2.4.2.2 Test RB = RB1#49





5.1.3.2.4.2.3 Test RB = RB25#13





5.1.3.2.4.2.4 Test RB = RB50#0





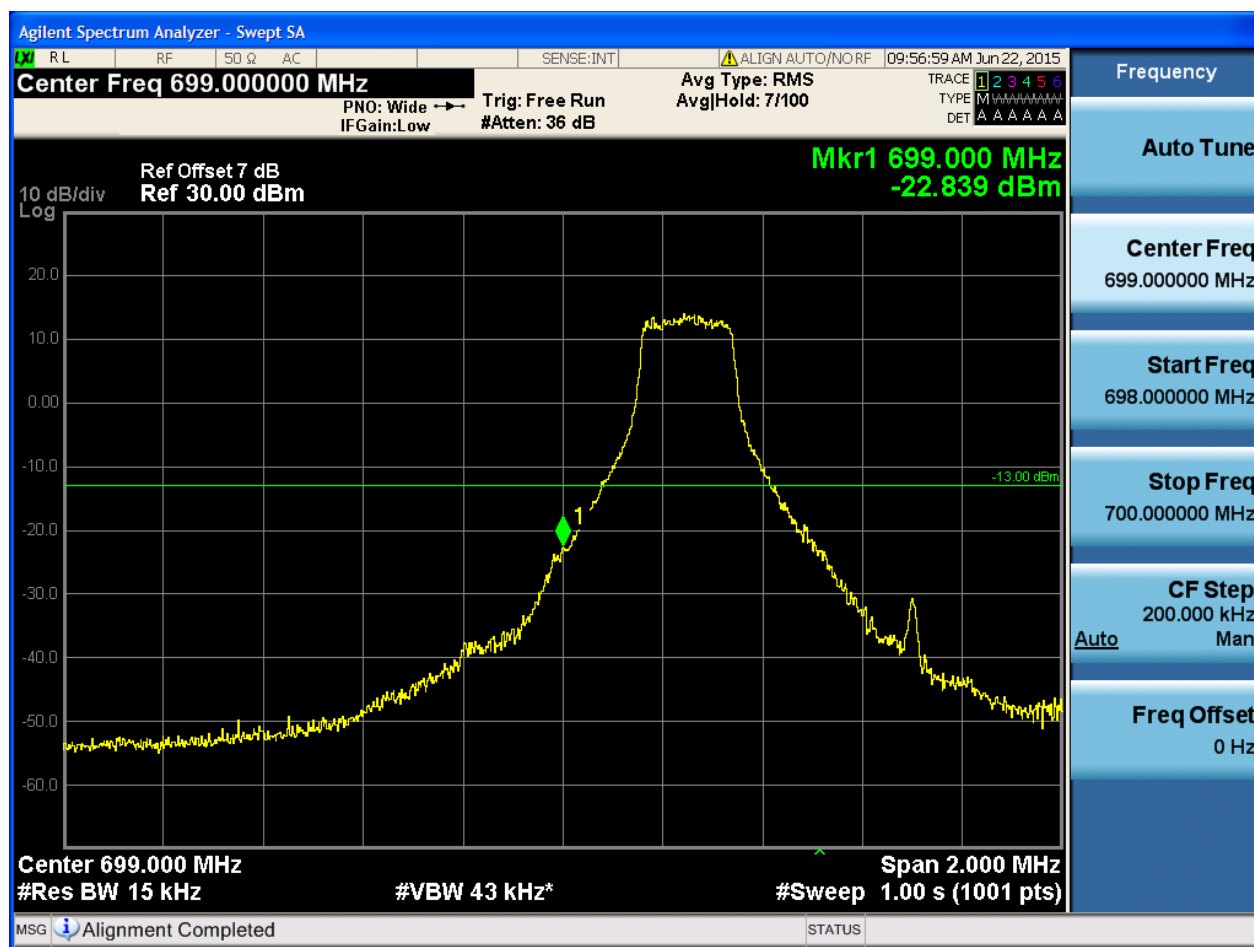
5.1.4 Test Band = BAND12

5.1.4.1 Test Mode = LTE/TM1

5.1.4.1.1 Test Bandwidth = 1.4

5.1.4.1.1.1 Test Channel = LCH

5.1.4.1.1.1.1 Test RB = RB1#0



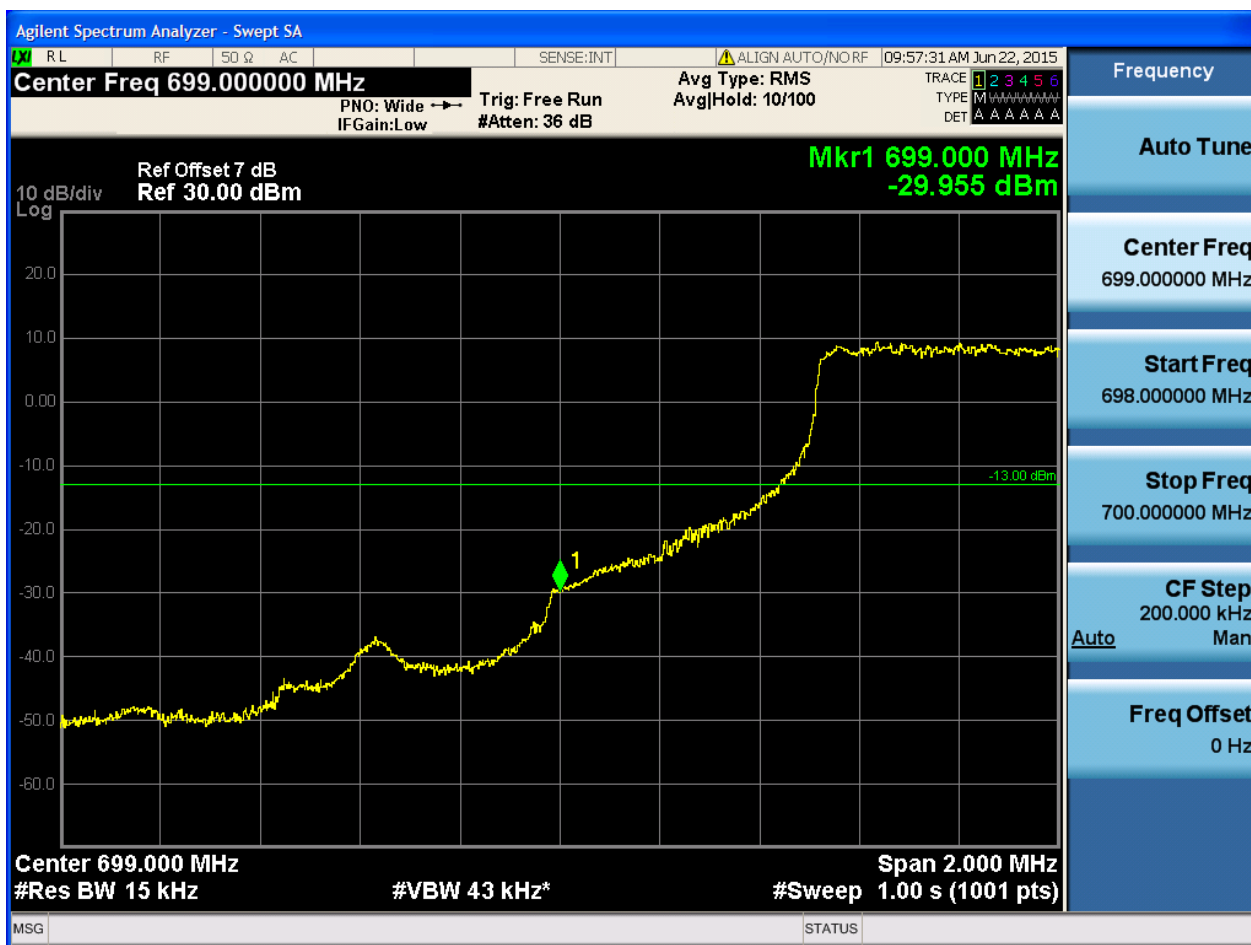


5.1.4.1.1.2 Test RB = RB1#5



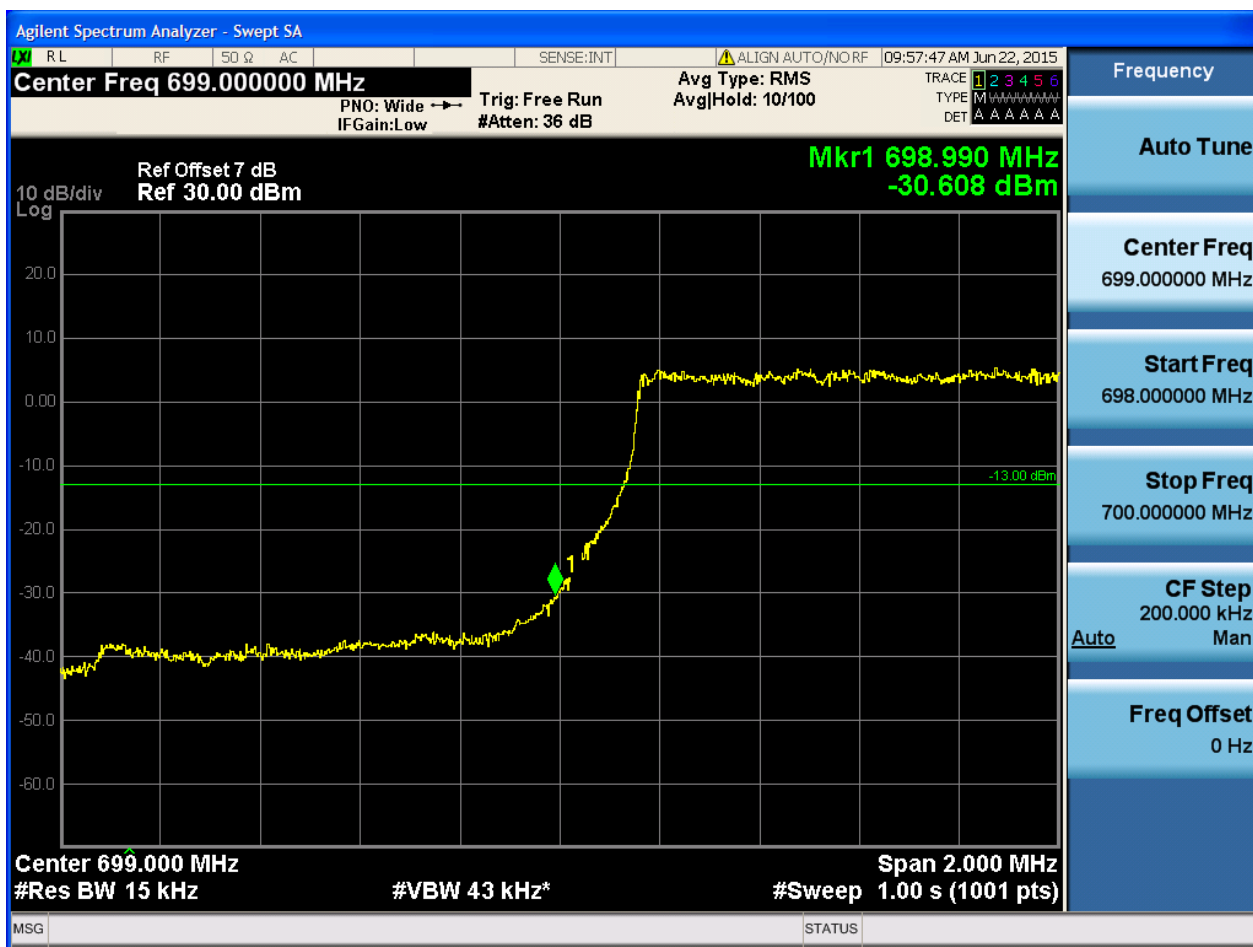


5.1.4.1.1.3 Test RB = RB3#2





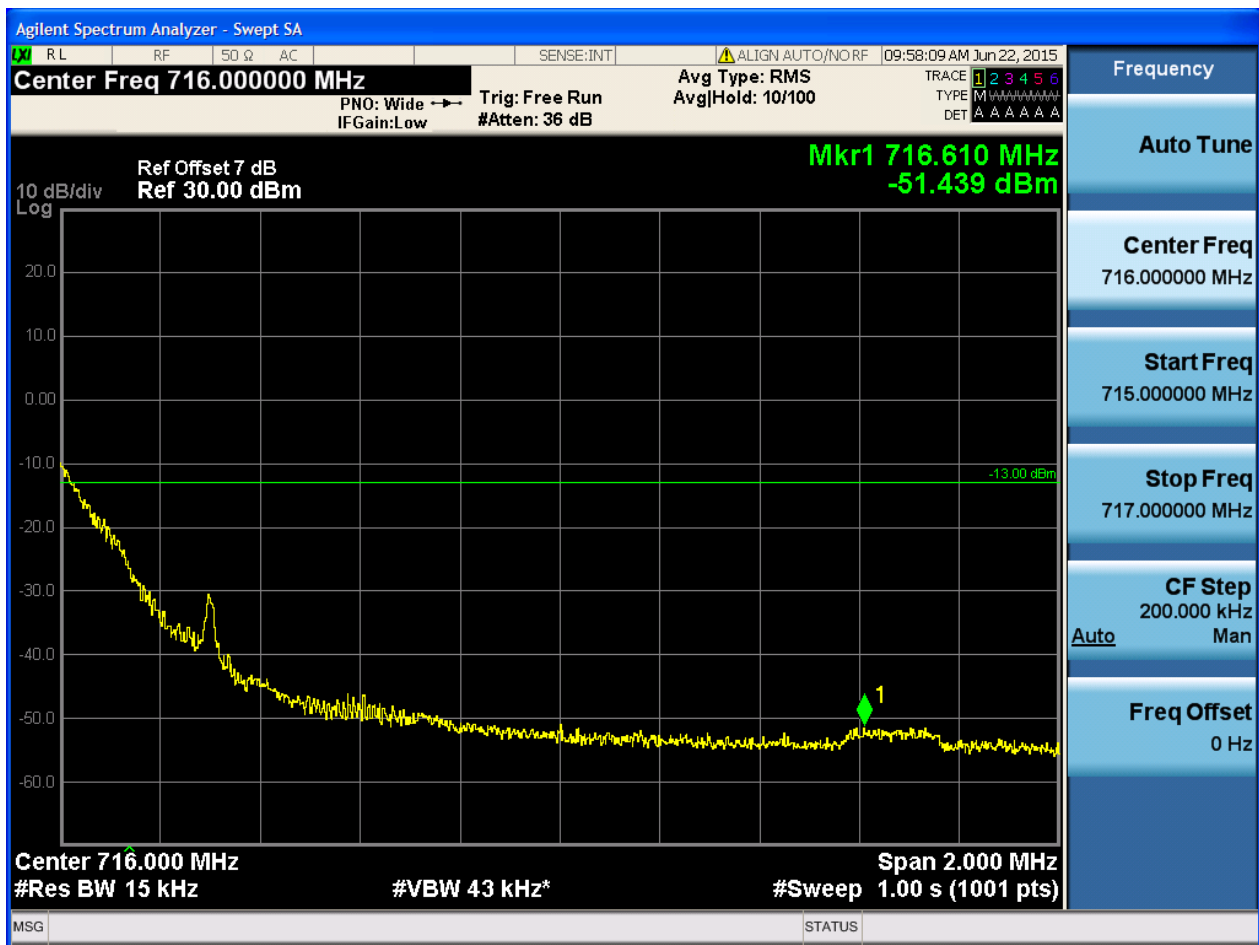
5.1.4.1.1.4 Test RB = RB6#0





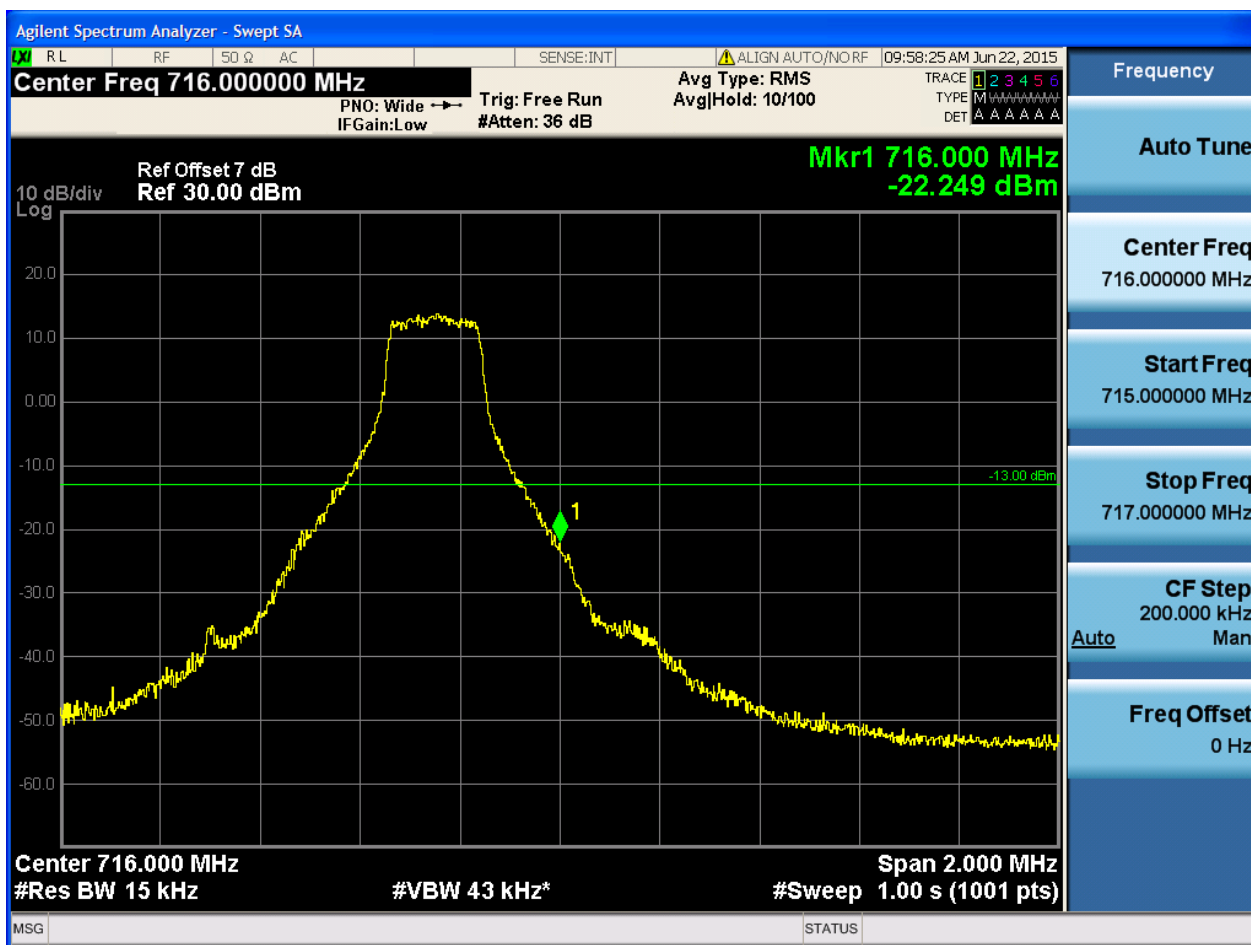
5.1.4.1.1.2 Test Channel = HCH

5.1.4.1.1.2.1 Test RB = RB1#0





5.1.4.1.1.2.2 Test RB = RB1#5





5.1.4.1.1.2.3 Test RB = RB3#2





5.1.4.1.1.2.4 Test RB = RB6#0

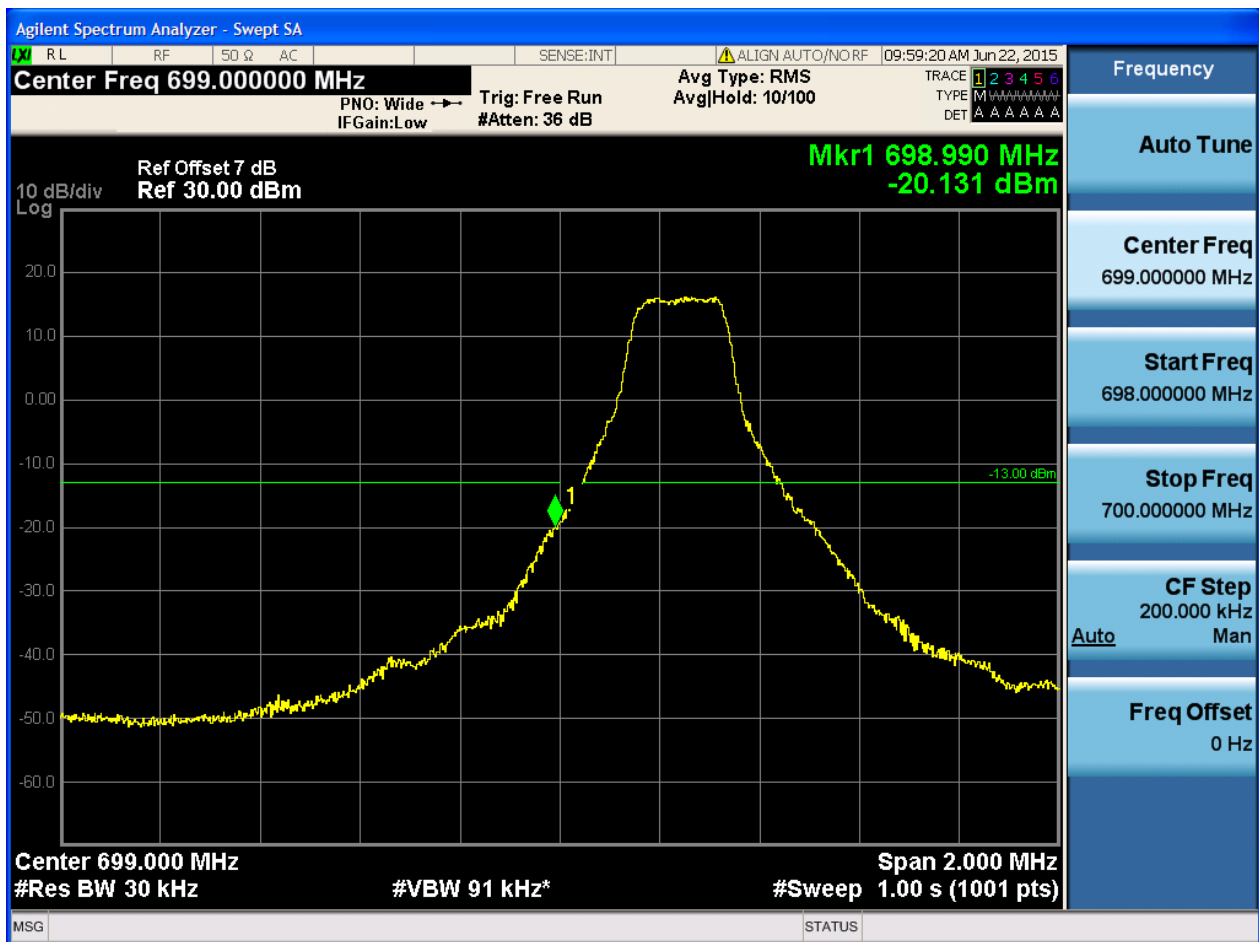




5.1.4.1.2 Test Bandwidth = 3

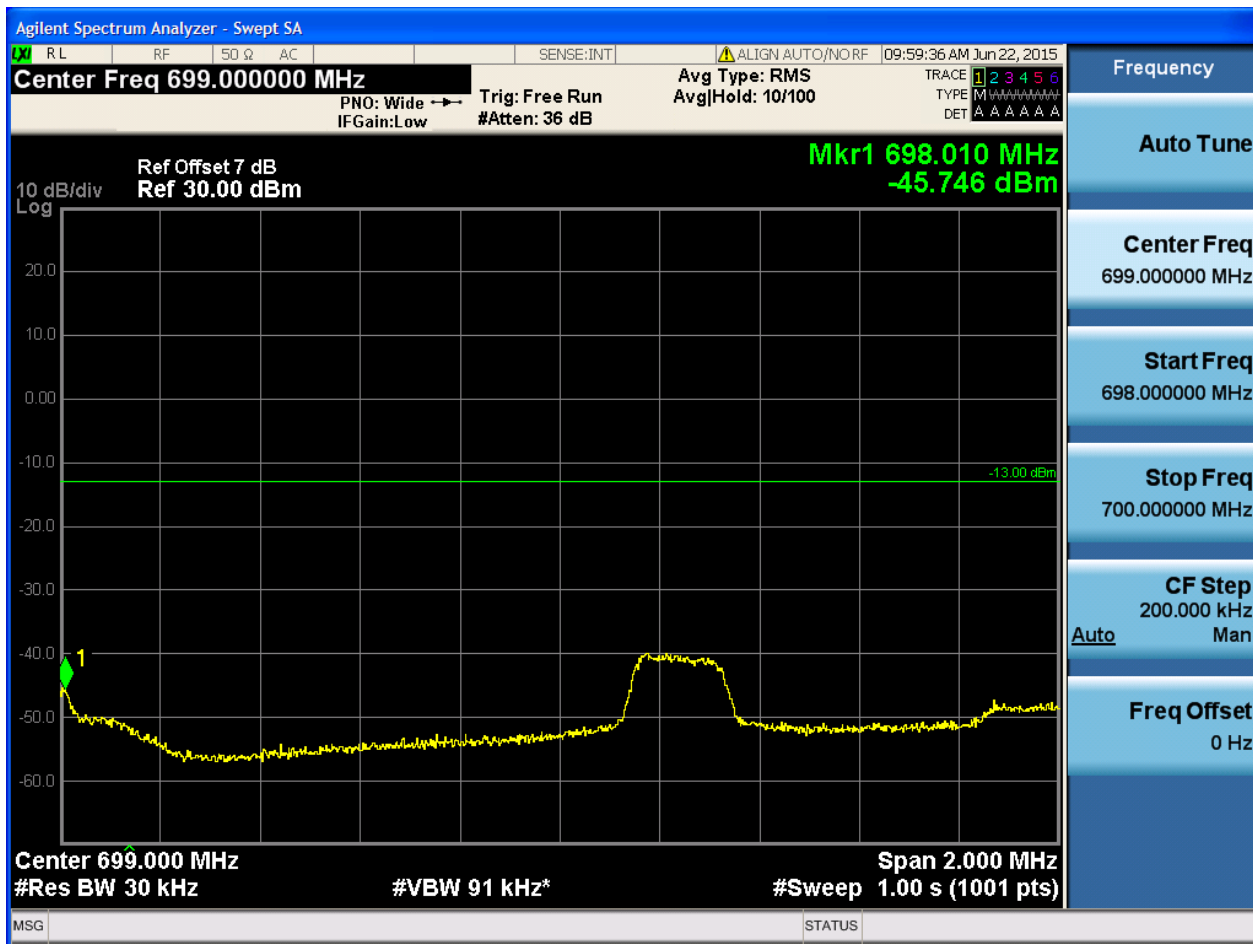
5.1.4.1.2.1 Test Channel = LCH

5.1.4.1.2.1.1 Test RB = RB1#0





5.1.4.1.2.1.2 Test RB = RB1#14





Agilent Spectrum Analyzer - Swept SA

Center Freq 699.000000 MHz

Ref Offset 7 dB
Ref 30.00 dBm

10 dB/div
Log

Mkr1 699.000 MHz
-34.175 dBm

Center 699.000 MHz
#Res BW 30 kHz

Span 2.000 MHz
#Sweep 1.00 s (1001 pts)

Auto Tune

Center Freq
699.000000 MHz

Start Freq
698.000000 MHz

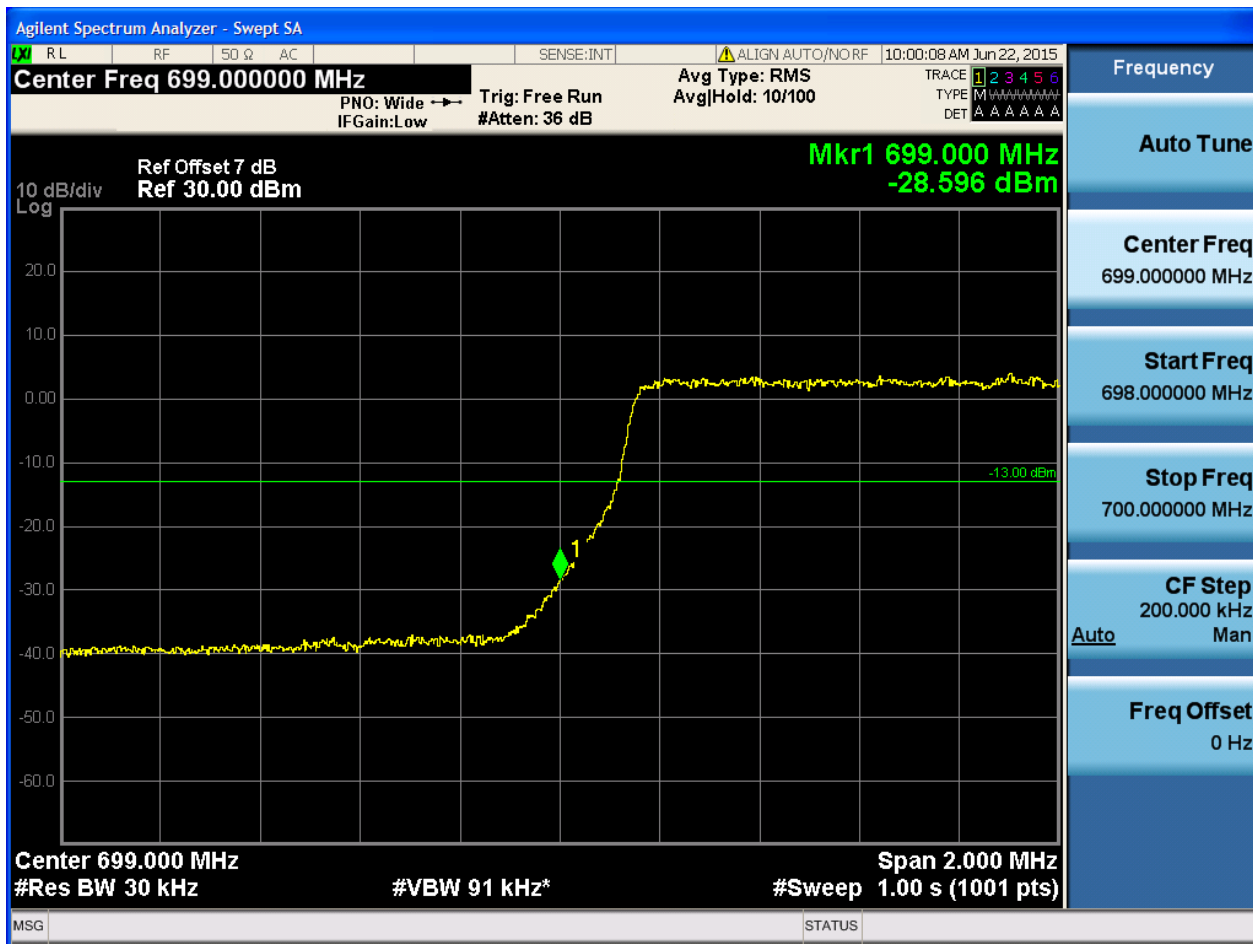
Stop Freq
700.000000 MHz

CF Step
200.000 kHz
Man

Freq Offset
0 Hz



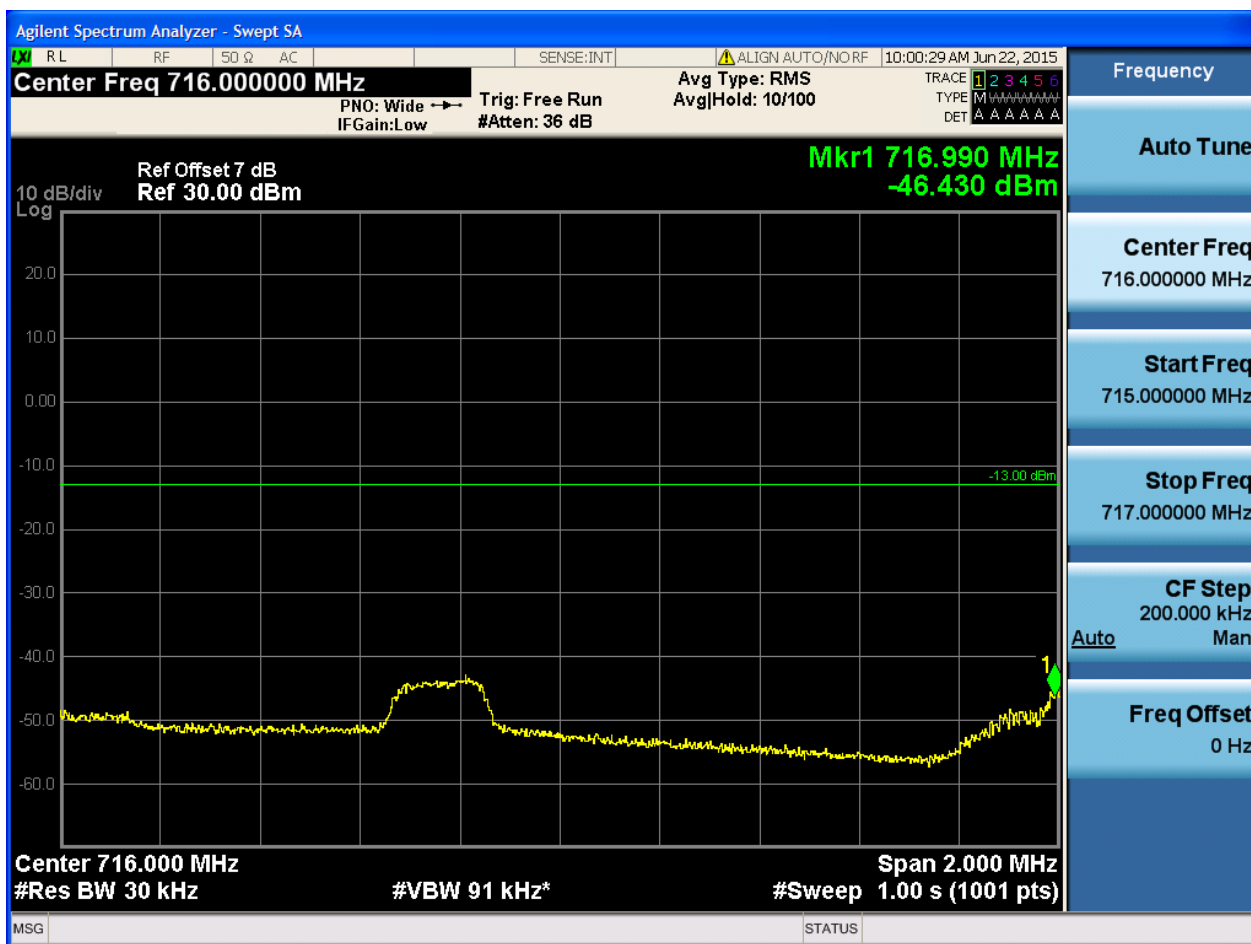
5.1.4.1.2.1.4 Test RB = RB15#0





5.1.4.1.2.2 Test Channel = HCH

5.1.4.1.2.2.1 Test RB = RB1#0





Agilent Spectrum Analyzer - Swept SA

Center Freq 716.000000 MHz

Ref Offset 7 dB
Ref 30.00 dBm

10 dB/div
Log

Mkr1 716.010 MHz
-18.784 dBm

Center 716.000 MHz
#Res BW 30 kHz

#VBW 91 kHz*

Span 2.000 MHz
#Sweep 1.00 s (1001 pts)

Frequency

Auto Tune

Center Freq
716.000000 MHz

Start Freq
715.000000 MHz

Stop Freq
717.000000 MHz

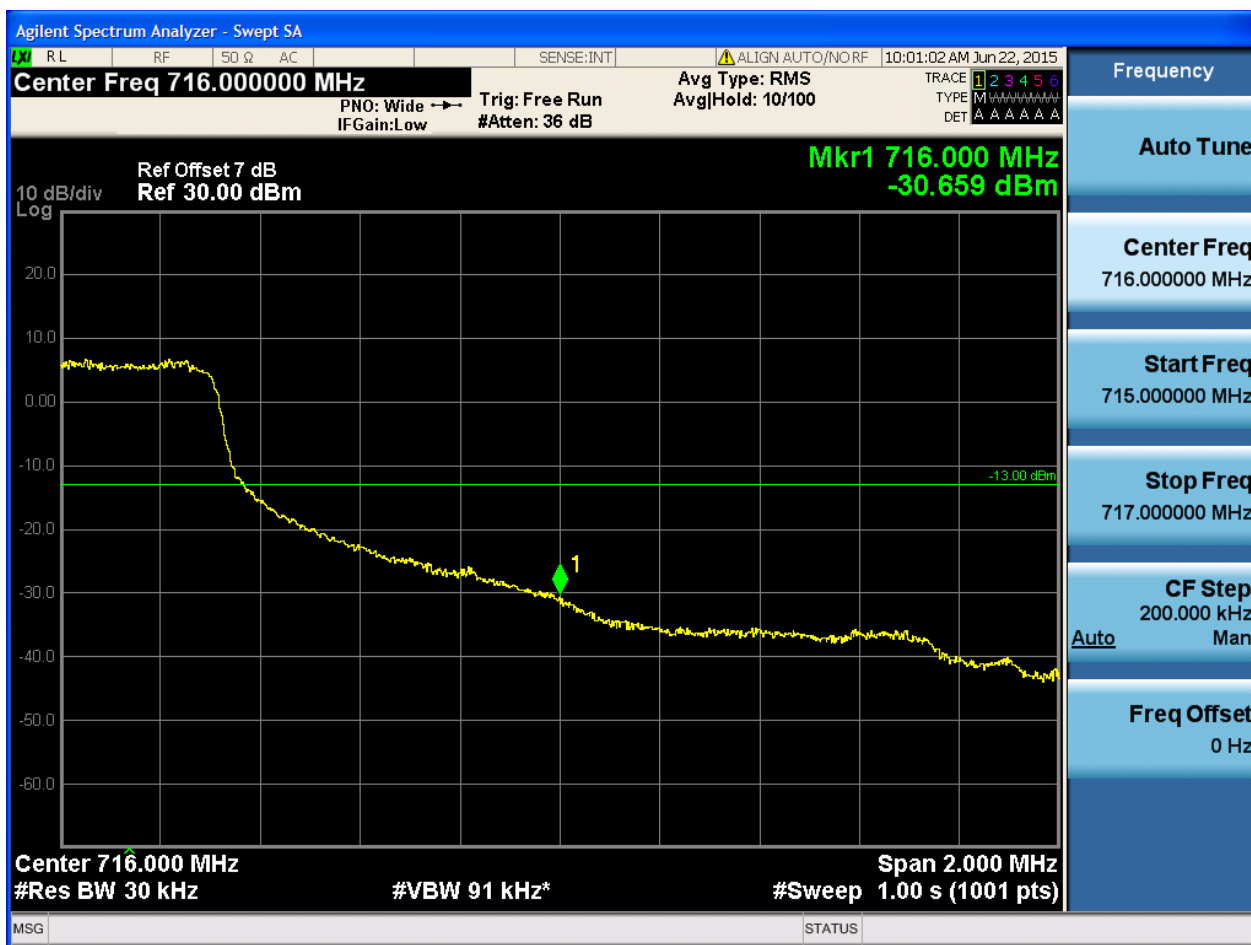
CF Step
200.000 kHz
Man

Auto

Freq Offset
0 Hz

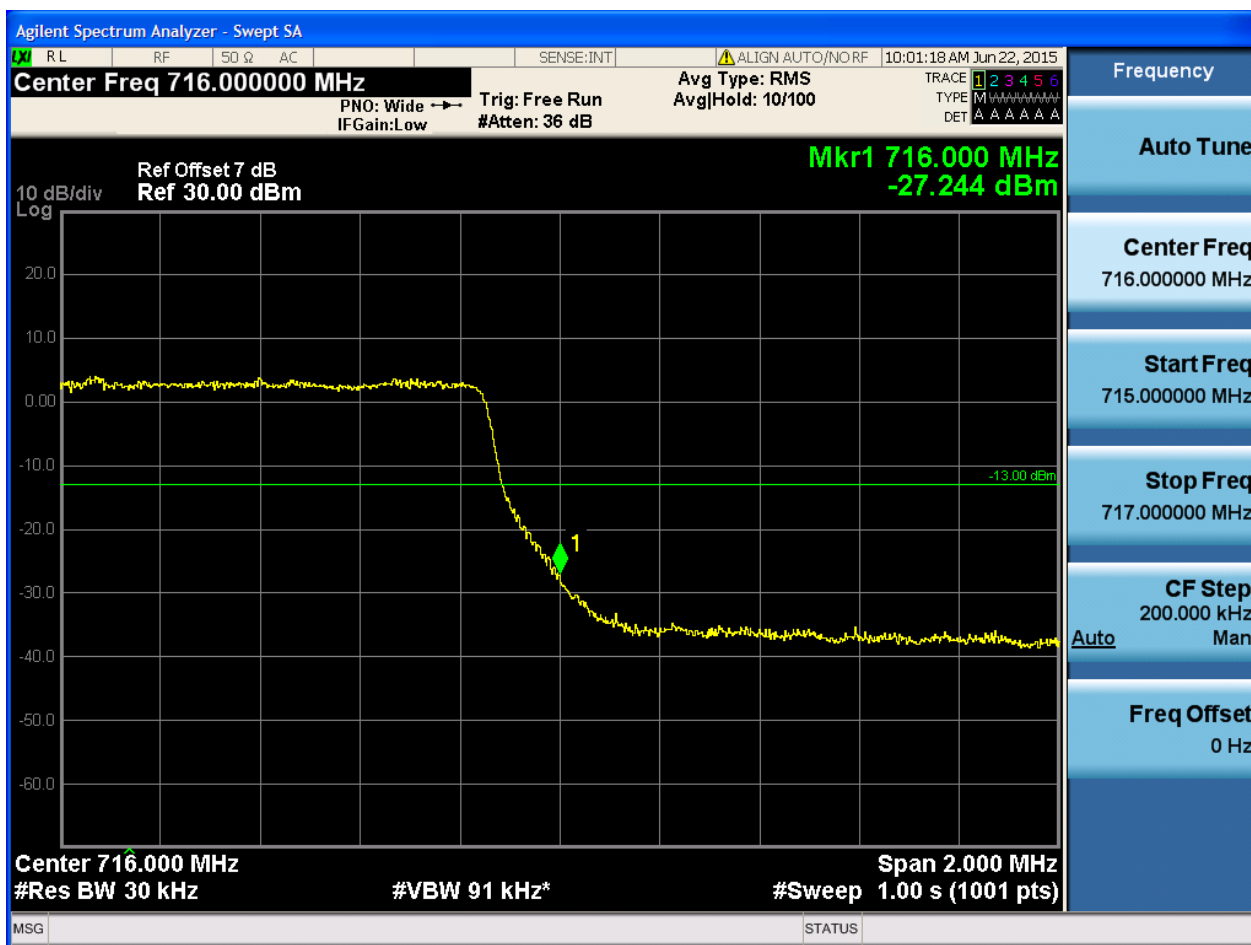


5.1.4.1.2.2.3 Test RB = RB8#4





5.1.4.1.2.2.4 Test RB = RB15#0

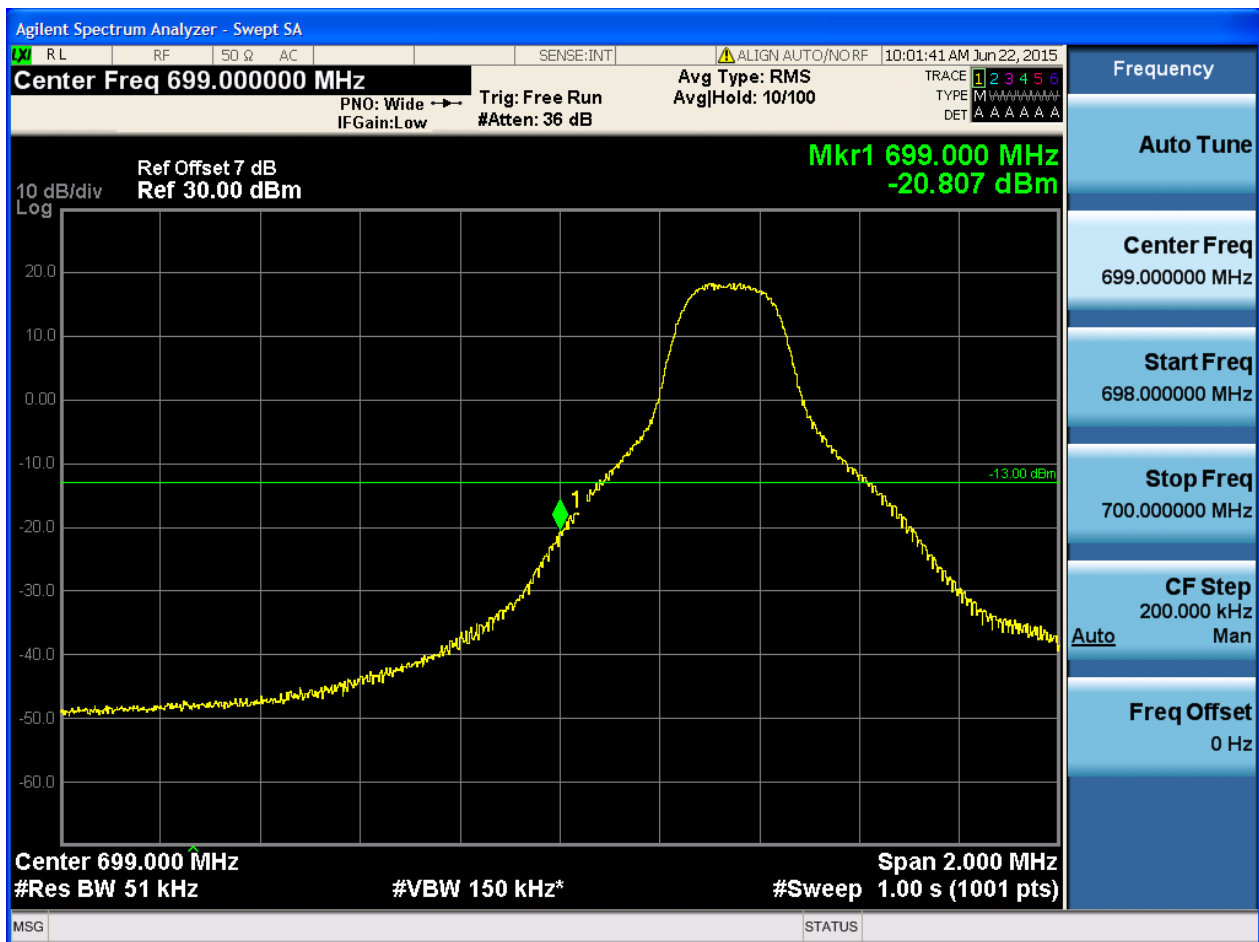




5.1.4.1.3 Test Bandwidth = 5

5.1.4.1.3.1 Test Channel = LCH

5.1.4.1.3.1.1 Test RB = RB1#0





Agilent Spectrum Analyzer - Swept SA

Center Freq 699.000000 MHz

Ref Offset 7 dB
Ref 30.00 dBm

10 dB/div
Log

Center 699.000 MHz
#Res BW 51 kHz

#VBW 150 kHz*

Span 2.000 MHz
#Sweep 1.00 s (1001 pts)

Trig: Free Run
#Atten: 36 dB

Avg Type: RMS
Avg/Hold: 10/100

Mkr1 699.000 MHz
-56.828 dBm

-13.00 dBm

Frequency

Auto Tune

Center Freq
699.000000 MHz

Start Freq
698.000000 MHz

Stop Freq
700.000000 MHz

CF Step
200.000 kHz
Man

Auto

Freq Offset
0 Hz

MSG STATUS

Detailed description: The image shows a screenshot of an Agilent Spectrum Analyzer in 'Swept SA' mode. The main display is a log-frequency plot with a yellow trace showing a signal peak. The peak is marked with a green diamond and labeled '1' with a value of -56.828 dBm. The center frequency is 699.000 MHz, and the span is 2.000 MHz. The resolution bandwidth (Res BW) is 51 kHz, and the video bandwidth (VBW) is 150 kHz. The sweep time is 1.00 s. The display also shows various settings like 'PNO: Wide', 'IF Gain: Low', 'Trig: Free Run', 'Ave Type: RMS', and 'Ave/Hold: 10/100'. The right side of the screen has a blue sidebar with controls for 'Frequency', 'Auto Tune', 'Center Freq', 'Start Freq', 'Stop Freq', 'CF Step', and 'Freq Offset'. The bottom of the screen has a status bar with 'MSG' and 'STATUS' indicators.

Parameter	Value
Center Freq	699.000000 MHz
Start Freq	698.000000 MHz
Stop Freq	700.000000 MHz
CF Step	200.000 kHz
Freq Offset	0 Hz
Center Freq	699.000 MHz
Span	2.000 MHz
Res BW	51 kHz
VBW	150 kHz
Sweep	1.00 s (1001 pts)
Marker 1	699.000 MHz, -56.828 dBm

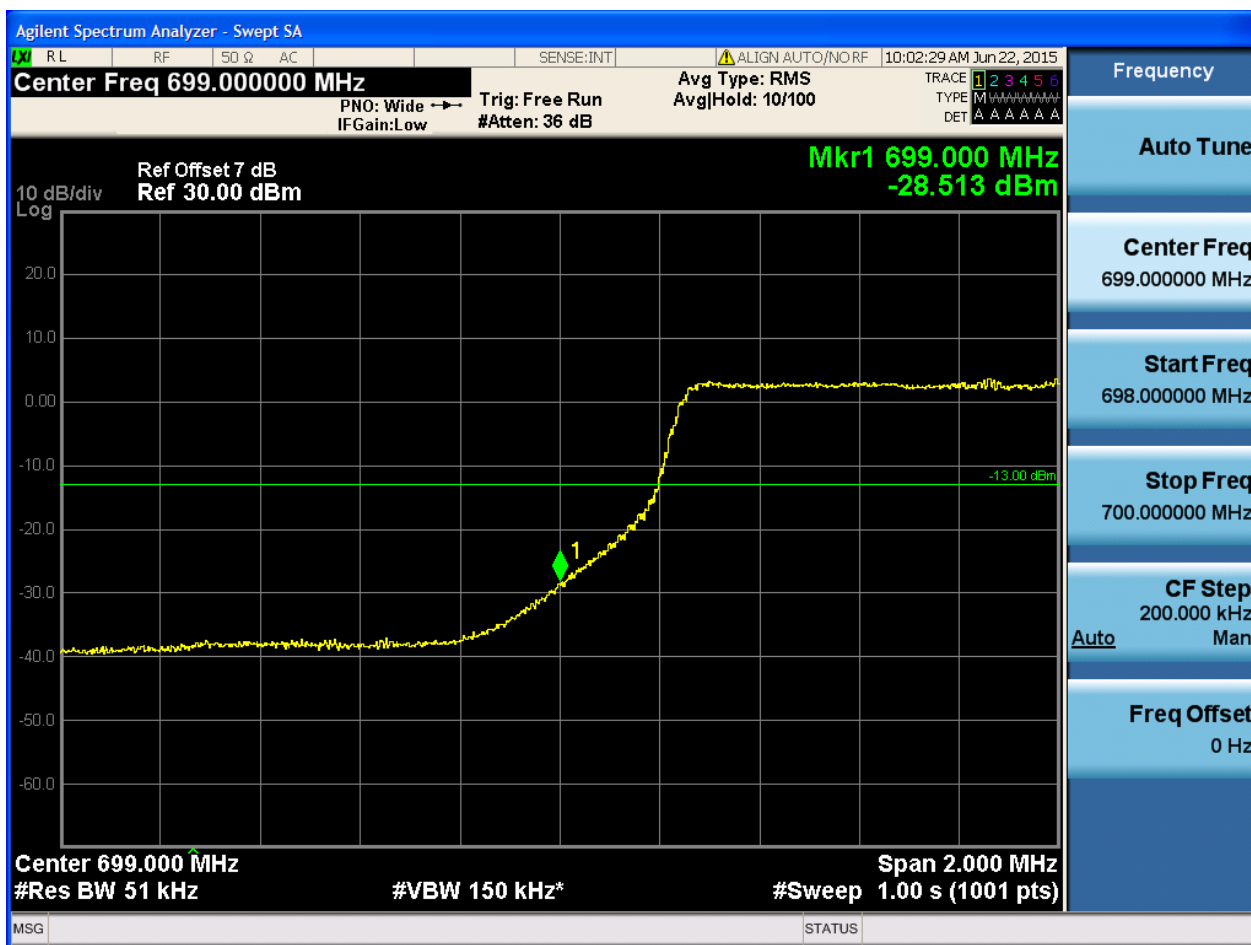


5.1.4.1.3.1.3 Test RB = RB12#6





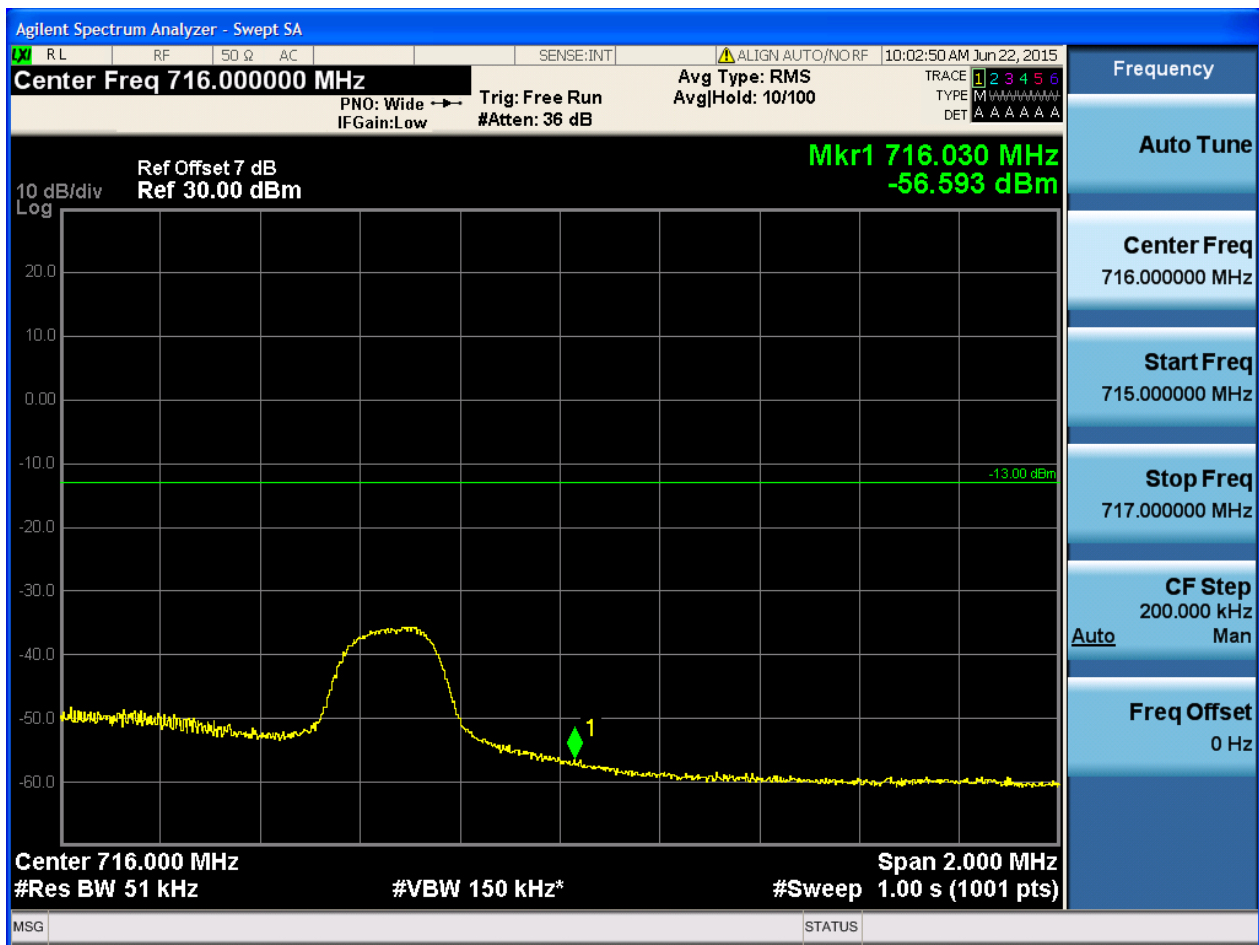
5.1.4.1.3.1.4 Test RB = RB25#0





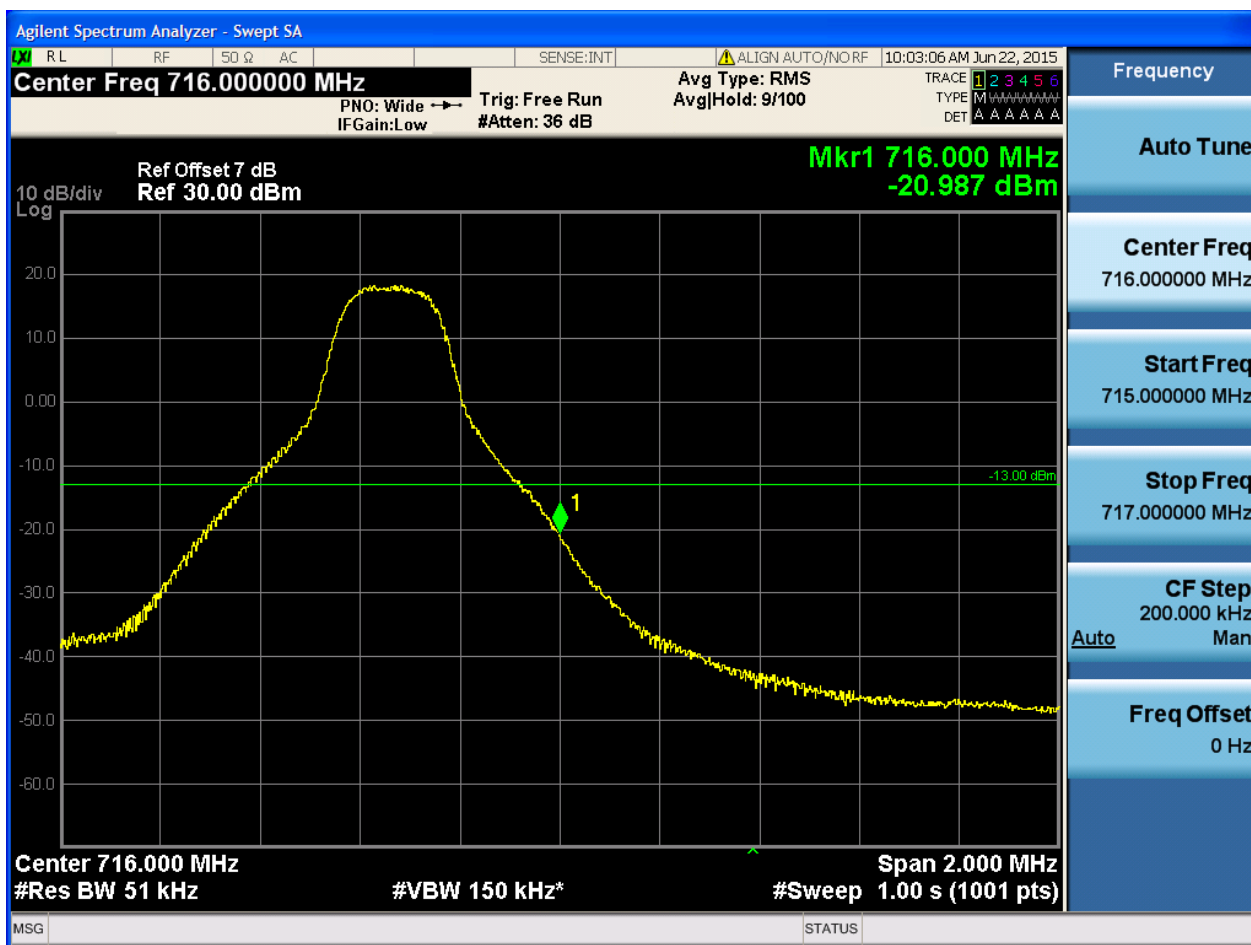
5.1.4.1.3.2 Test Channel = HCH

5.1.4.1.3.2.1 Test RB = RB1#0



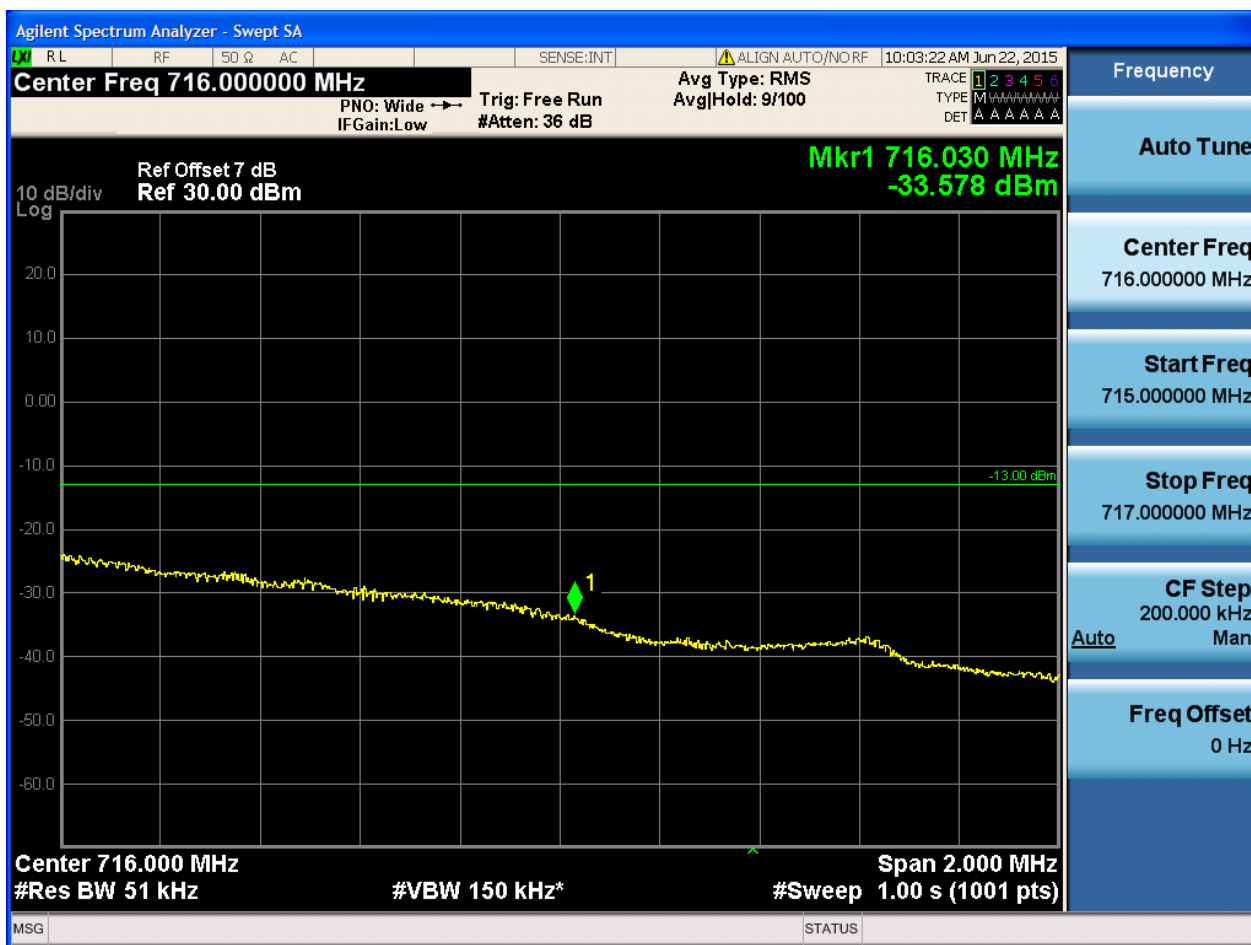


5.1.4.1.3.2.2 Test RB = RB1#24



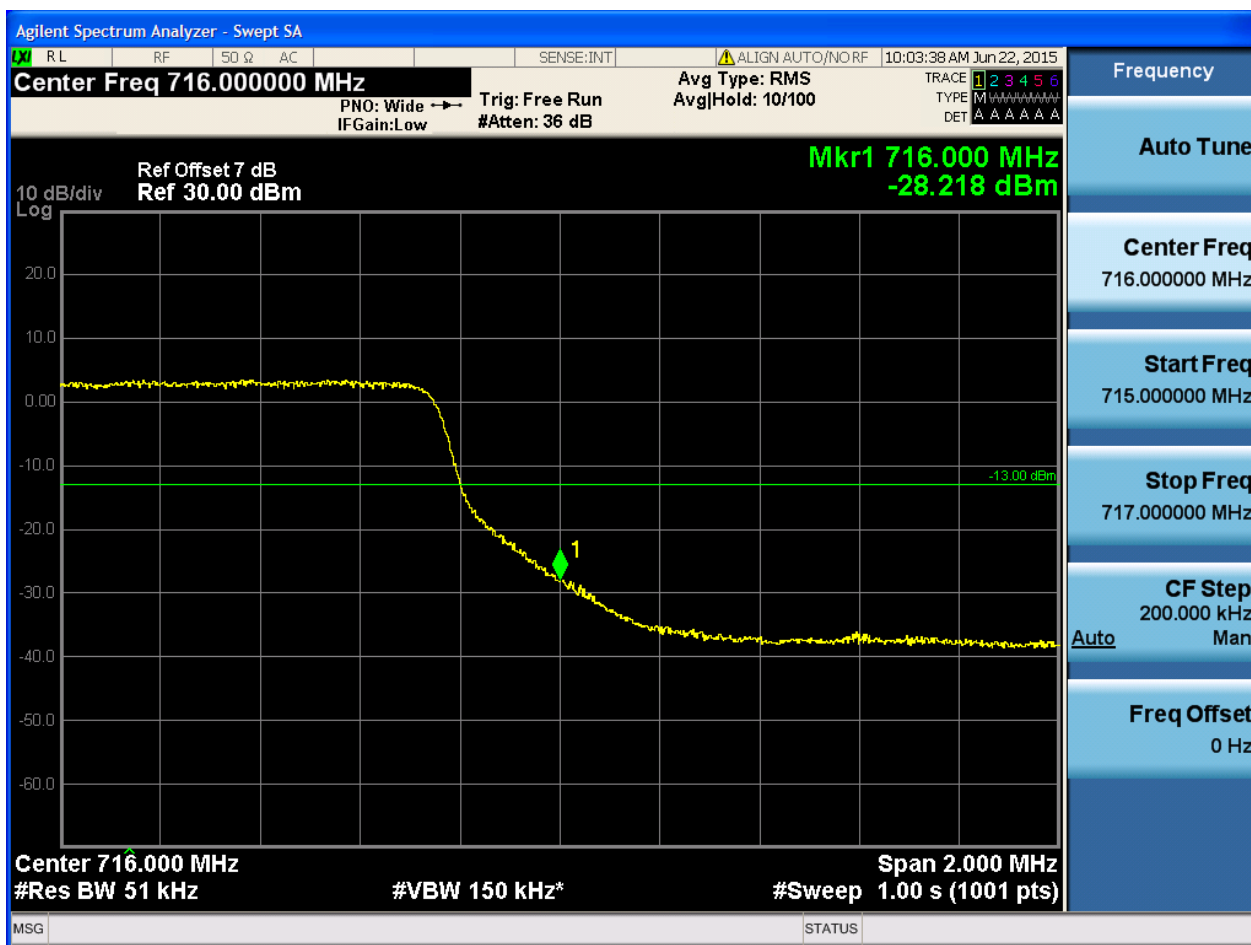


5.1.4.1.3.2.3 Test RB = RB12#6





5.1.4.1.3.2.4 Test RB = RB25#0

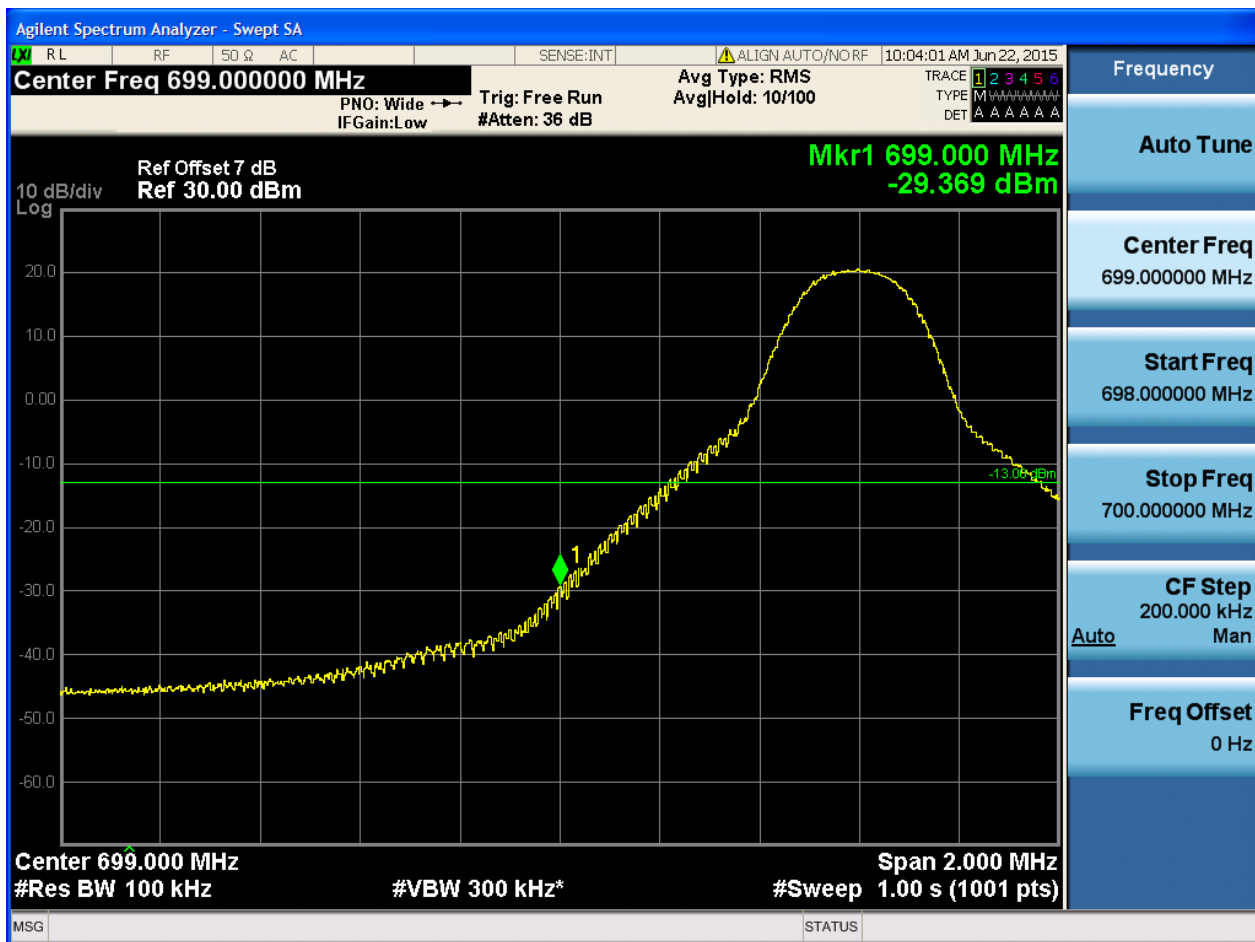




5.1.4.1.4 Test Bandwidth = 10

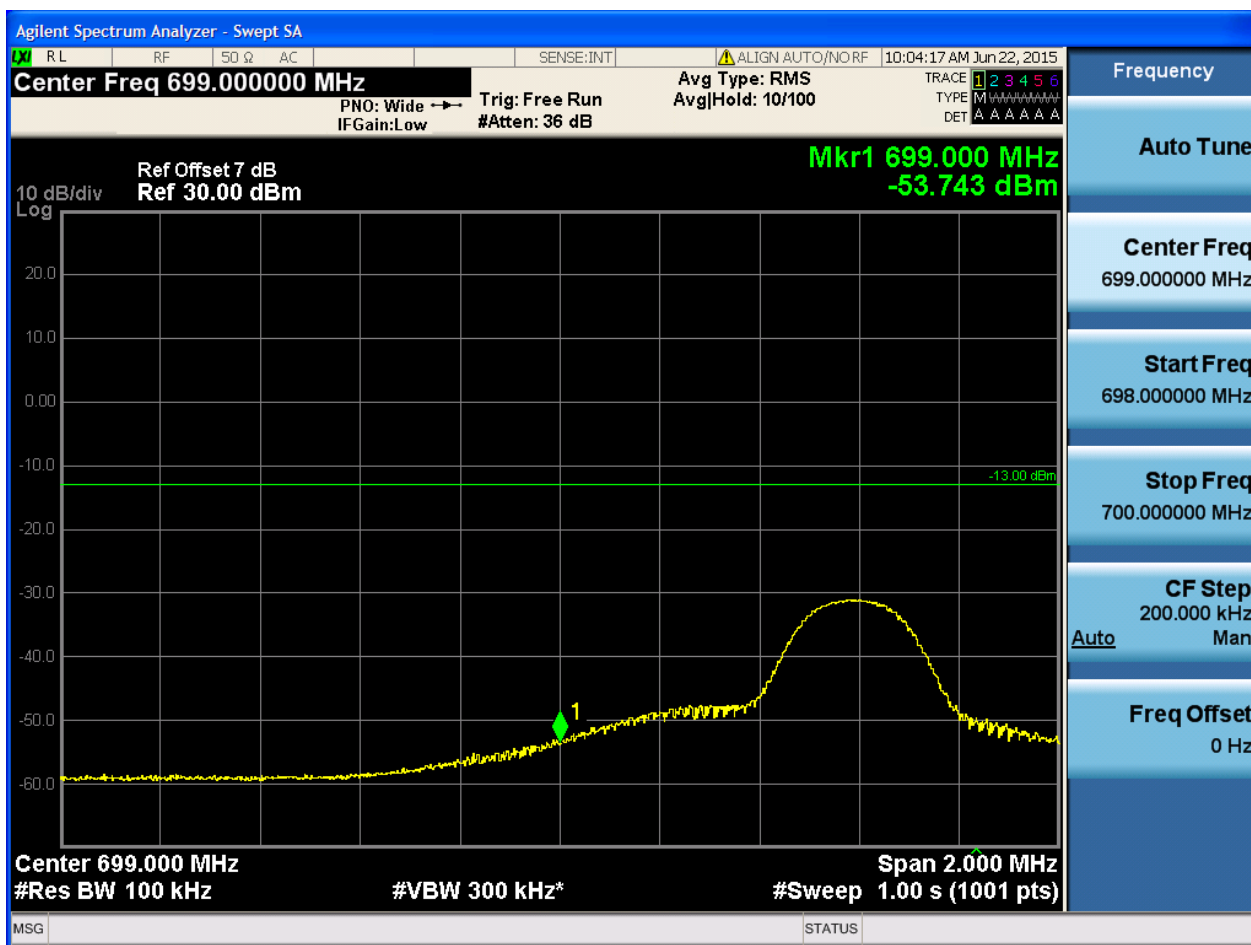
5.1.4.1.4.1 Test Channel = LCH

5.1.4.1.4.1.1 Test RB = RB1#0





5.1.4.1.4.1.2 Test RB = RB1#49





Agilent Spectrum Analyzer - Swept SA

Center Freq 699.000000 MHz

Ref Offset 7 dB
Ref 30.00 dBm

10 dB/div
Log

Trig: Free Run
#Atten: 36 dB

Avg Type: RMS
Avg/Hold: 10/100

TRACE 1 2 3 4 5 6
TYPE M W W W W W W W
DET A A A A A A

Mkr1 698.960 MHz
-35.247 dBm

-13.00 dBm

Center 699.000 MHz
#Res BW 100 kHz

#VBW 300 kHz*

Span 2.000 MHz
#Sweep 1.00 s (1001 pts)

Frequency

Auto Tune

Center Freq
699.000000 MHz

Start Freq
698.000000 MHz

Stop Freq
700.000000 MHz

CF Step
200.000 kHz
Man

Auto

Freq Offset
0 Hz

MSG STATUS



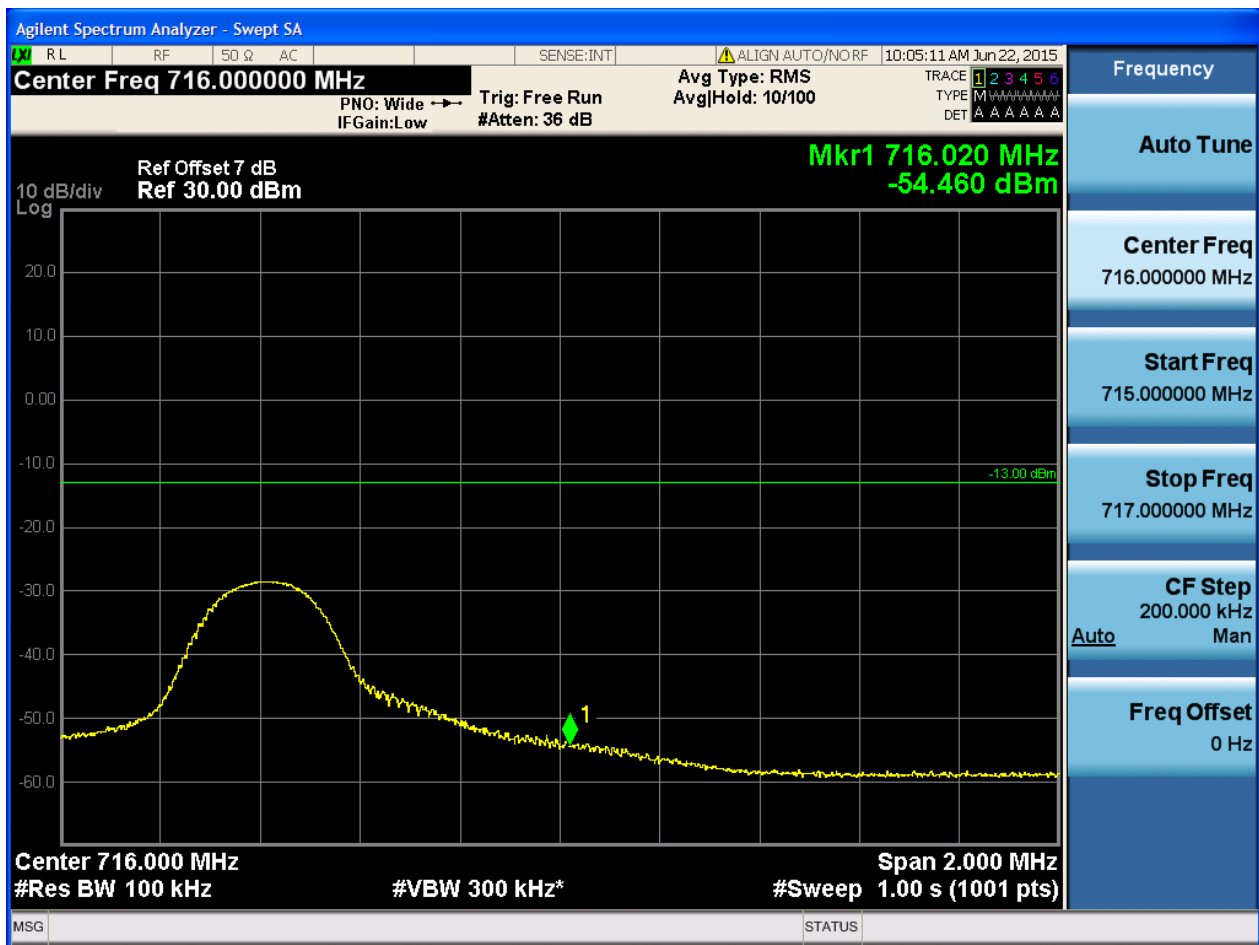
5.1.4.1.4.1.4 Test RB = RB50#0





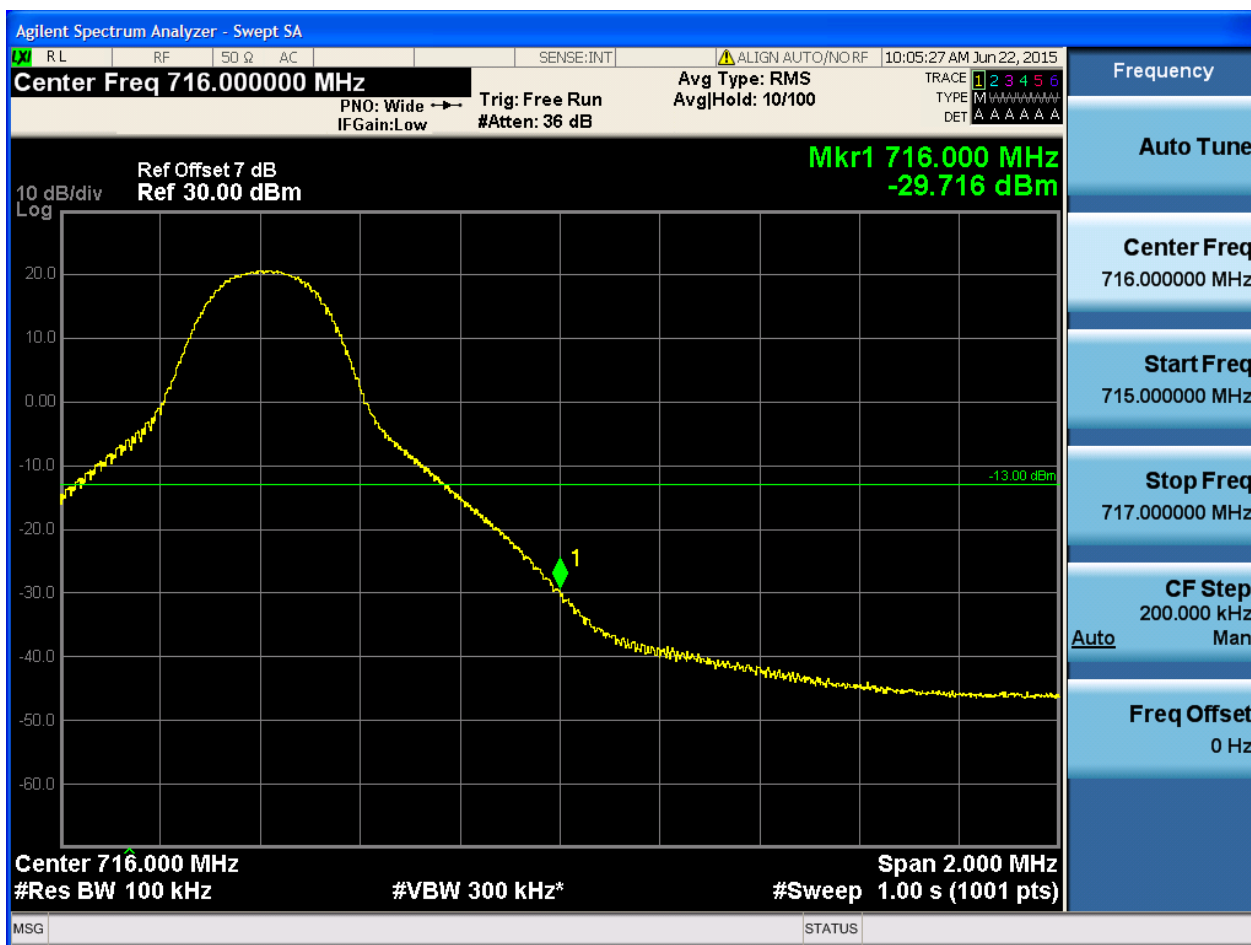
5.1.4.1.4.2 Test Channel = HCH

5.1.4.1.4.2.1 Test RB = RB1#0



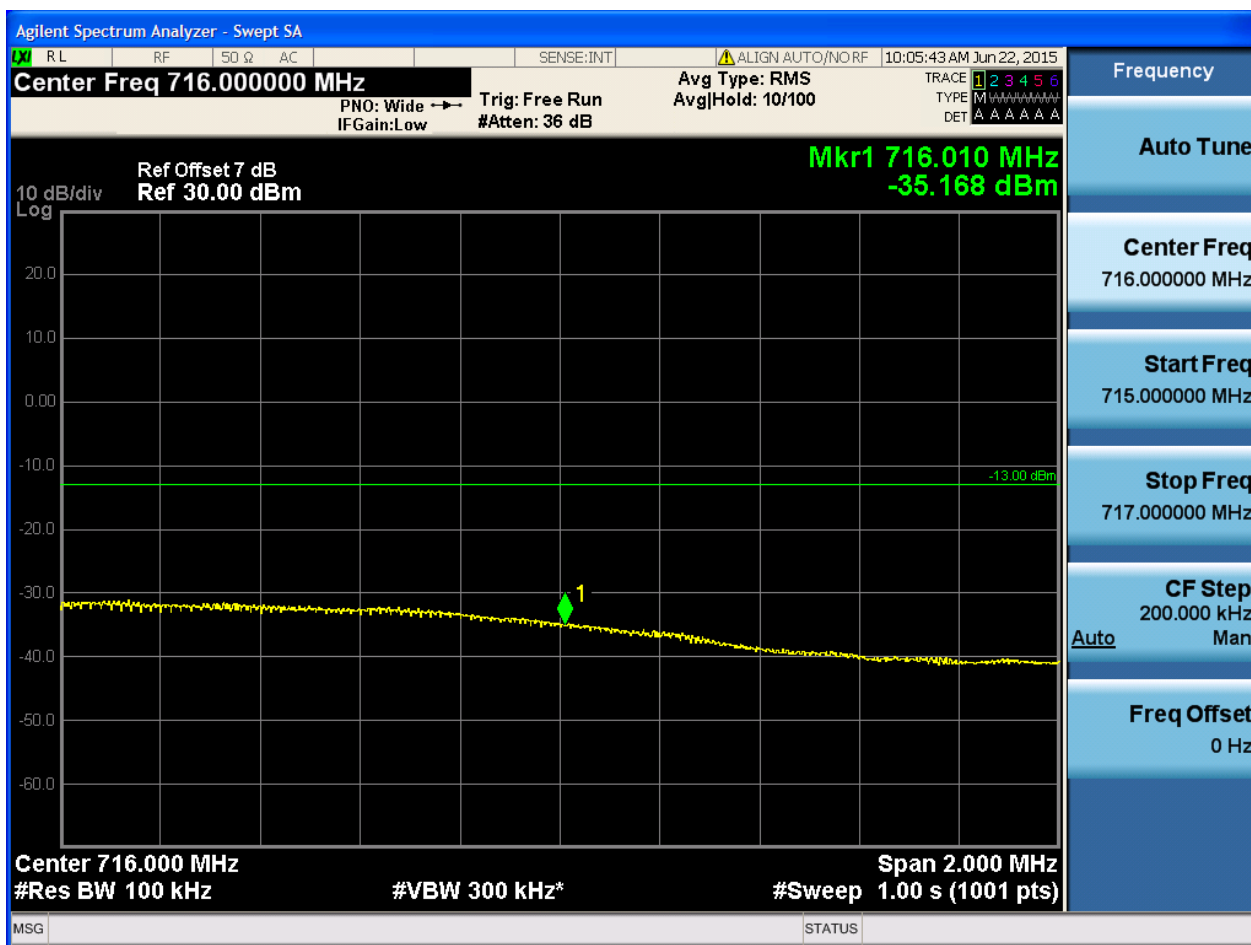


5.1.4.1.4.2.2 Test RB = RB1#49





5.1.4.1.4.2.3 Test RB = RB25#13





5.1.4.1.4.2.4 Test RB = RB50#0



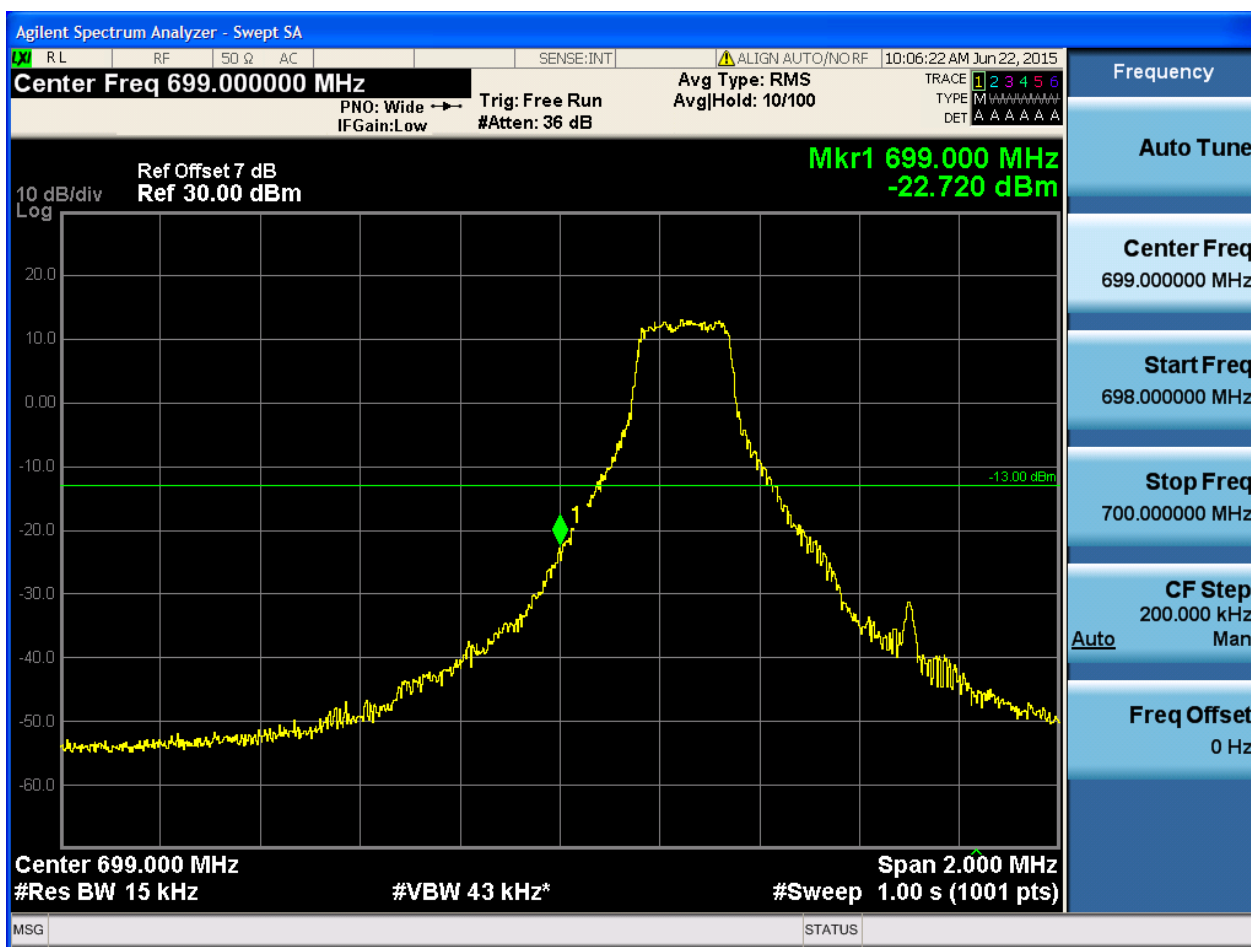


5.1.4.2 Test Mode = LTE/TM2

5.1.4.2.1 Test Bandwidth = 1.4

5.1.4.2.1.1 Test Channel = LCH

5.1.4.2.1.1.1 Test RB = RB1#0





Agilent Spectrum Analyzer - Swept SA

Center Freq 699.000000 MHz

Ref Offset 7 dB
Ref 30.00 dBm

10 dB/div
Log

Mkr1 698.320 MHz
-51.038 dBm

Center 699.000 MHz
#Res BW 15 kHz

#VBW 43 kHz*

Span 2.000 MHz
#Sweep 1.00 s (1001 pts)

Frequency

Auto Tune

Center Freq
699.000000 MHz

Start Freq
698.000000 MHz

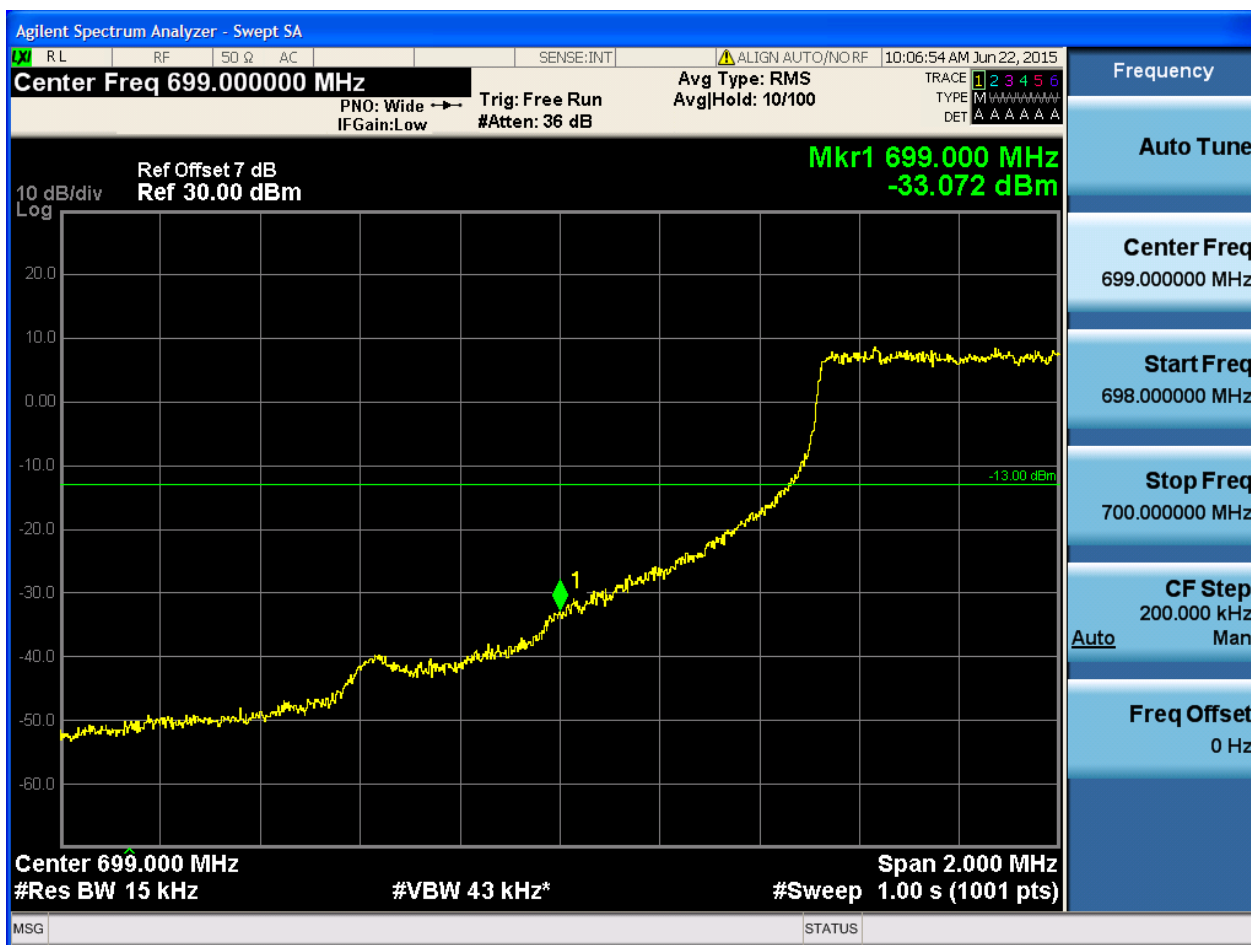
Stop Freq
700.000000 MHz

CF Step
200.000 kHz
Man

Freq Offset
0 Hz



5.1.4.2.1.1.3 Test RB = RB3#2





5.1.4.2.1.1.4 Test RB = RB6#0



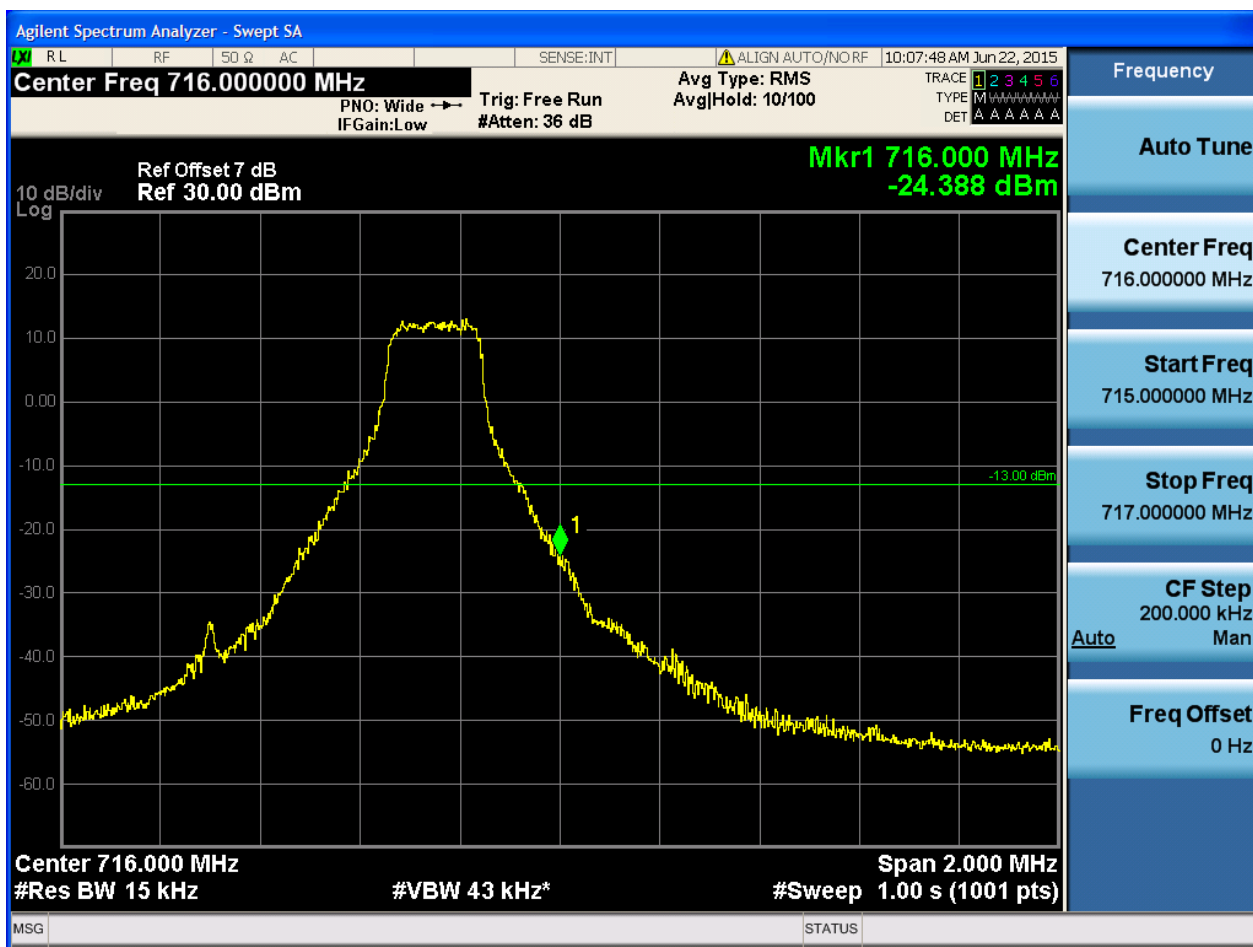


5.1.4.2.1.2.1 Test RB = RB1#0





5.1.4.2.1.2.2 Test RB = RB1#5



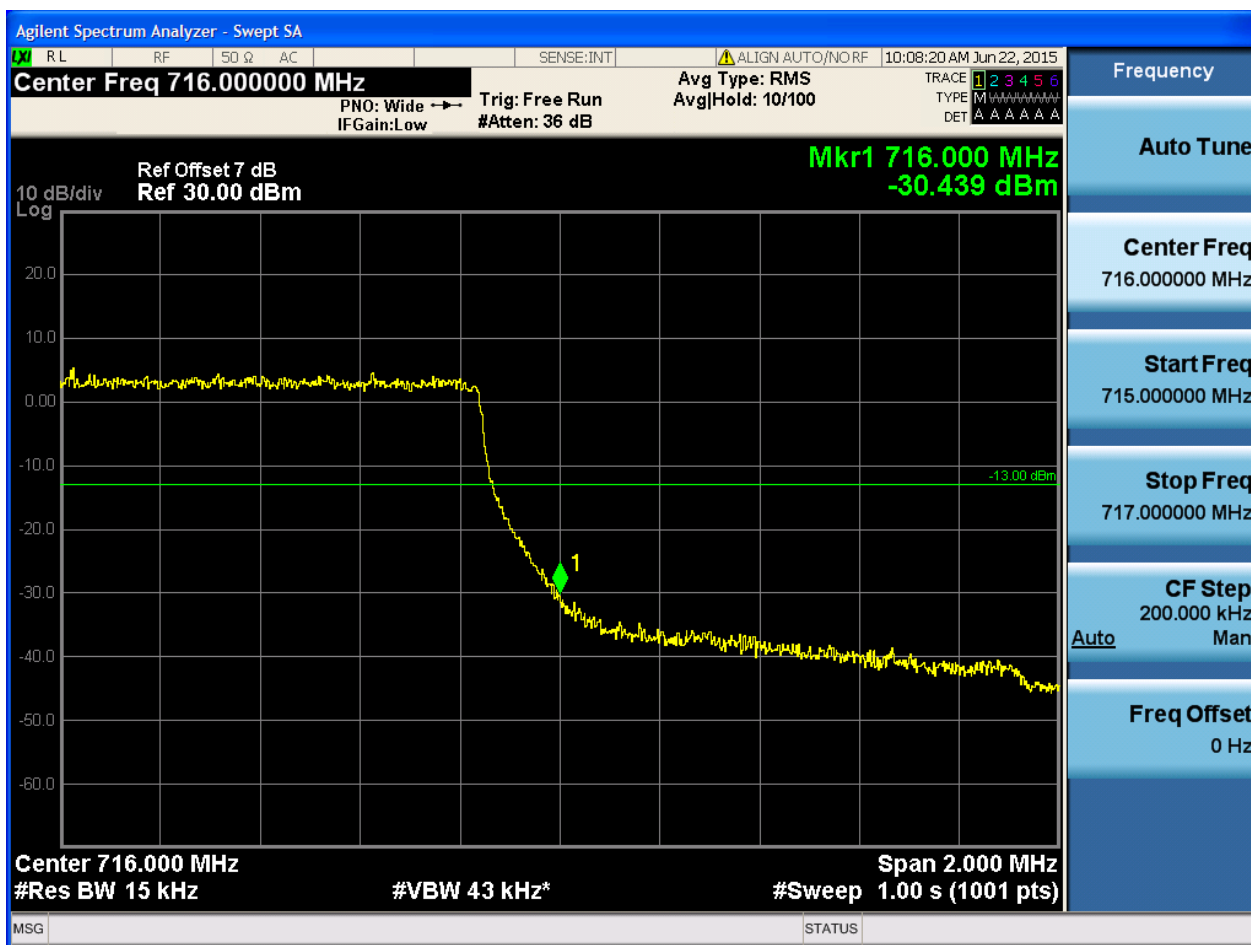


5.1.4.2.1.2.3 Test RB = RB3#2





5.1.4.2.1.2.4 Test RB = RB6#0

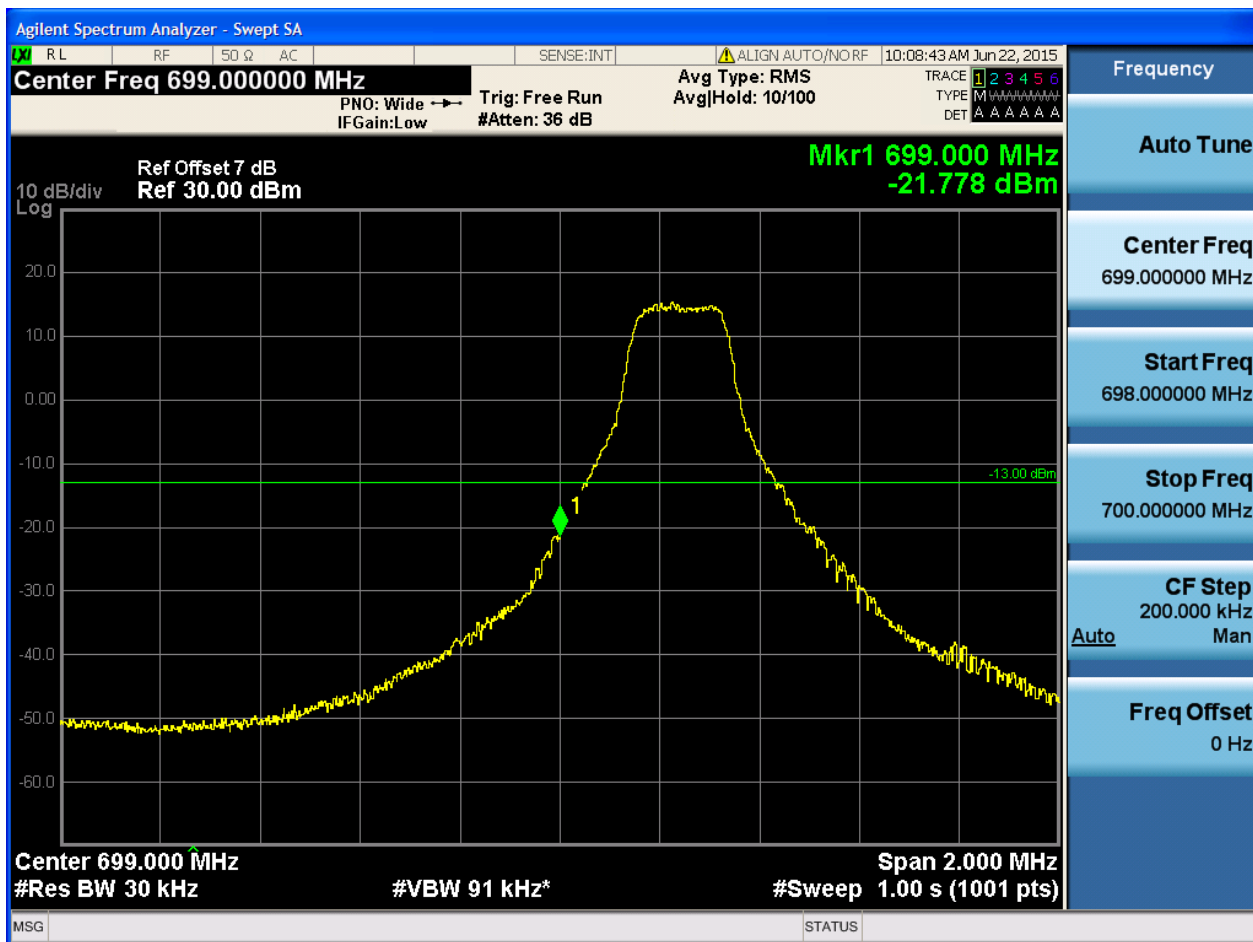




5.1.4.2.2 Test Bandwidth = 3

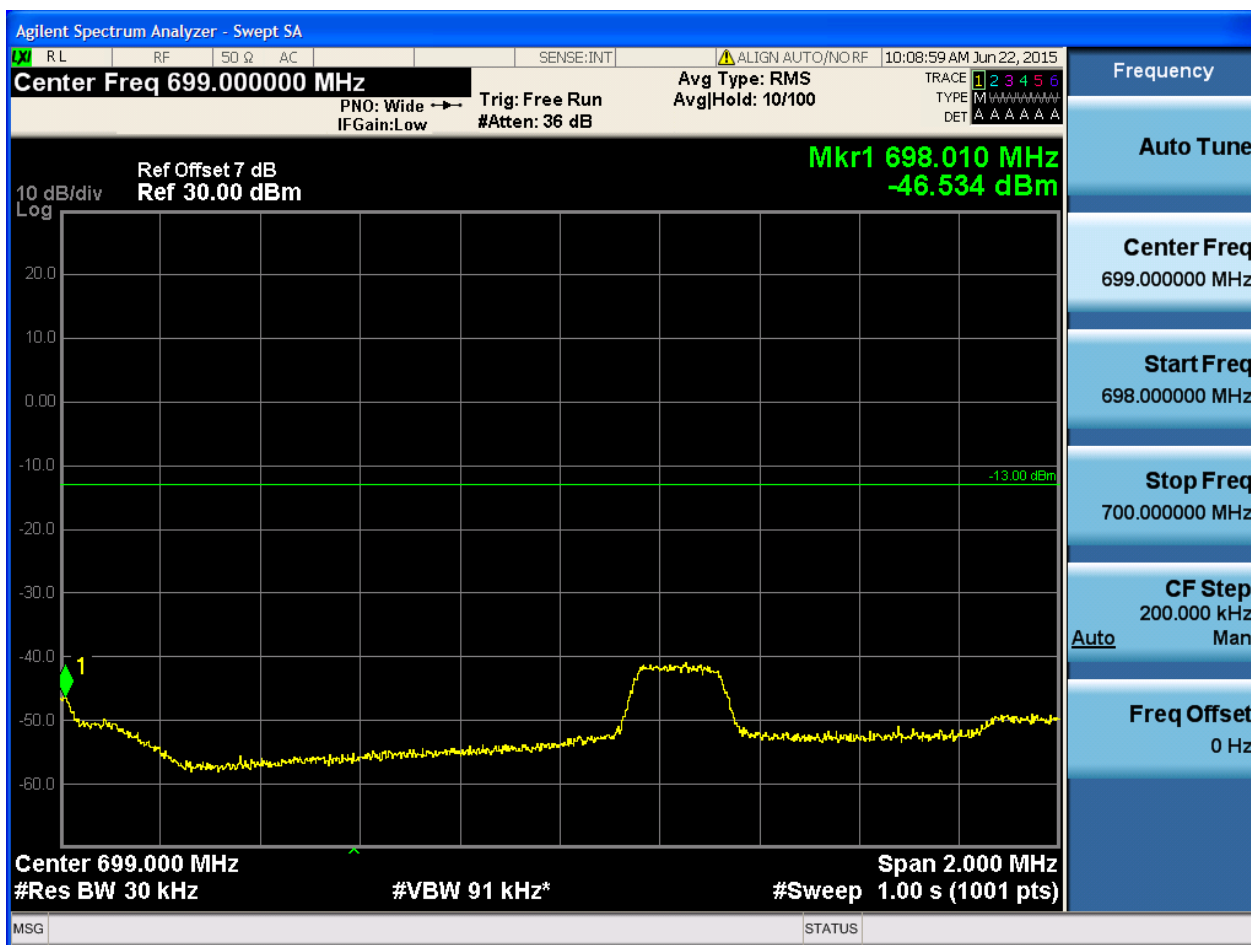
5.1.4.2.2.1 Test Channel = LCH

5.1.4.2.2.1.1 Test RB = RB1#0



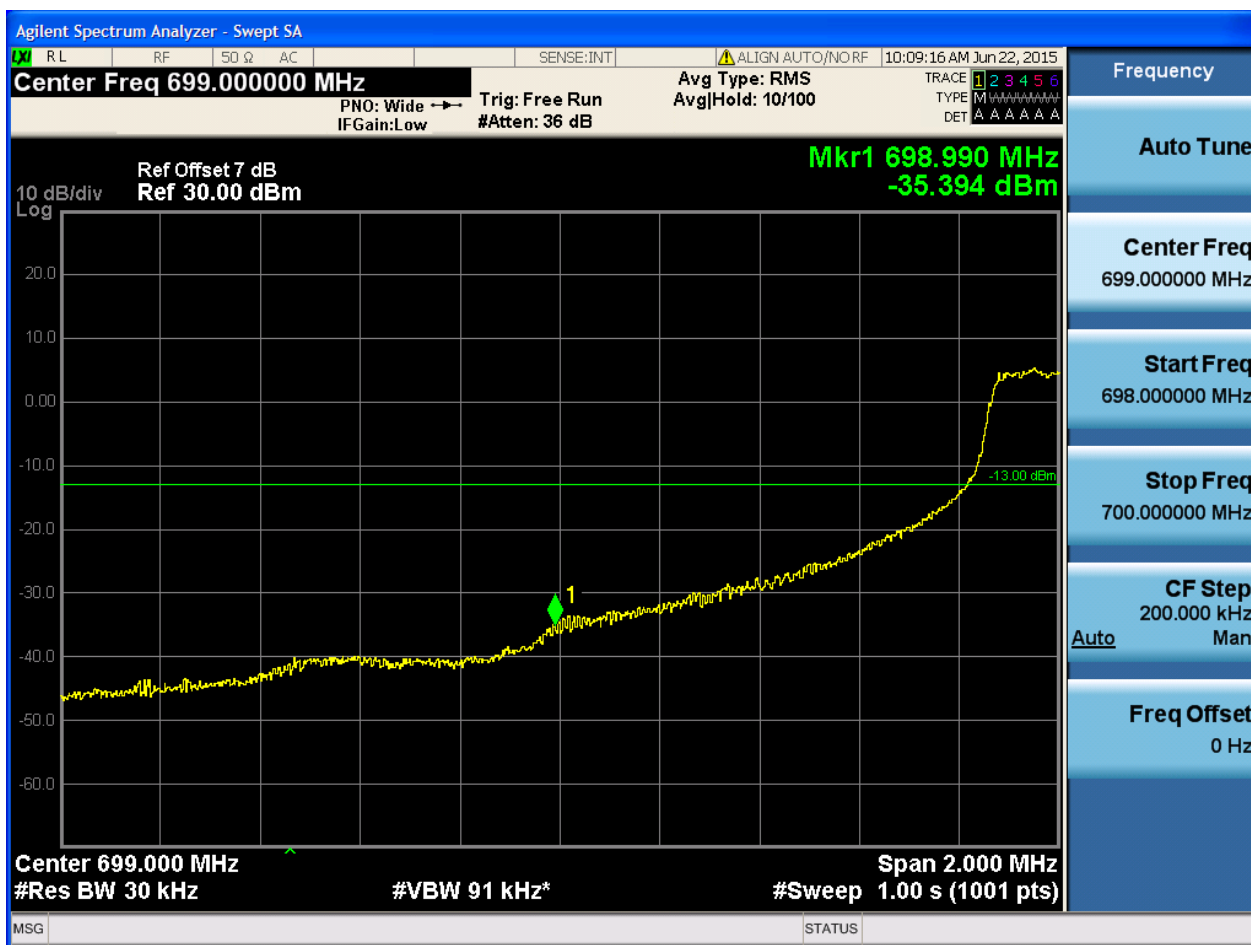


5.1.4.2.2.1.2 Test RB = RB1#14



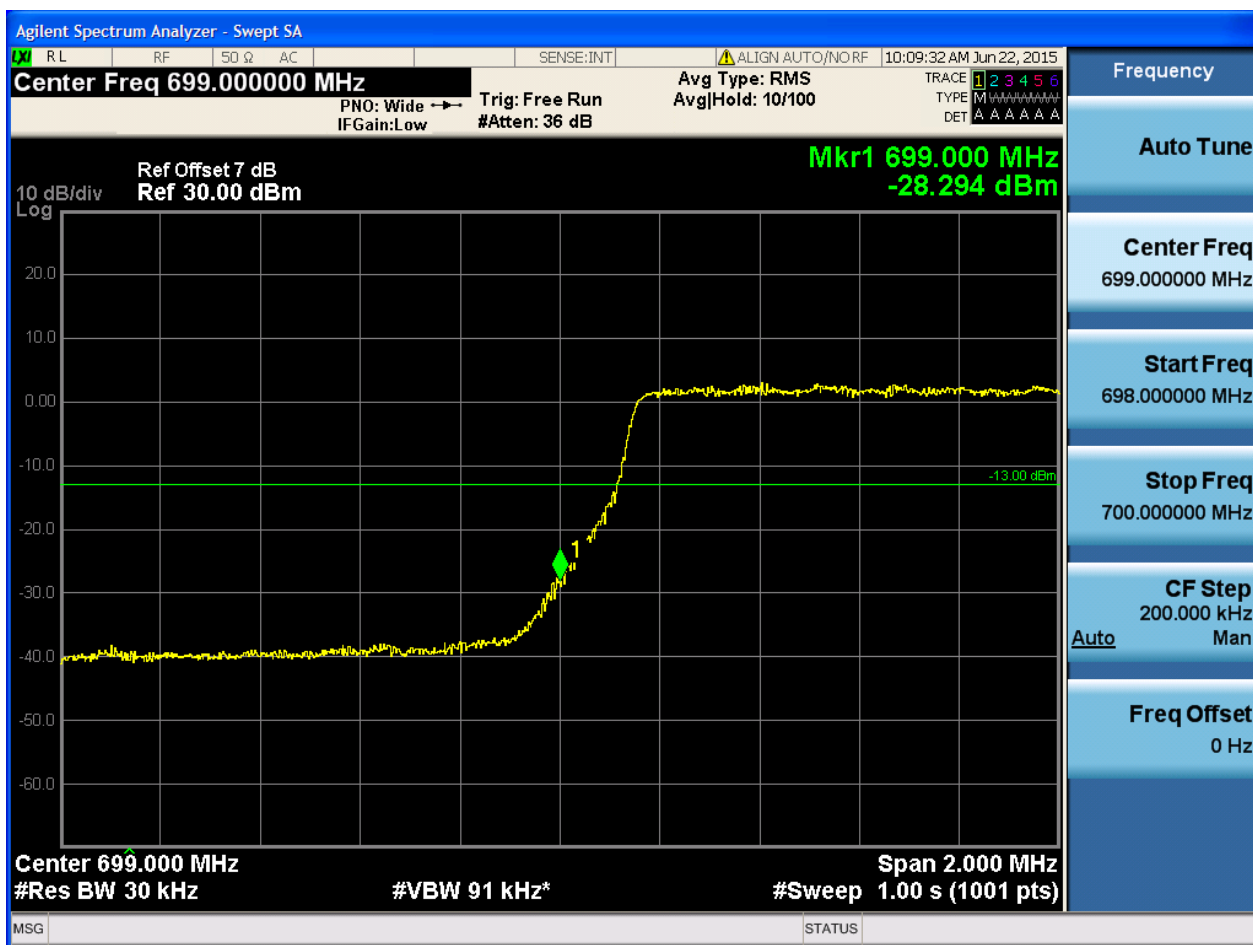


5.1.4.2.2.1.3 Test RB = RB8#4





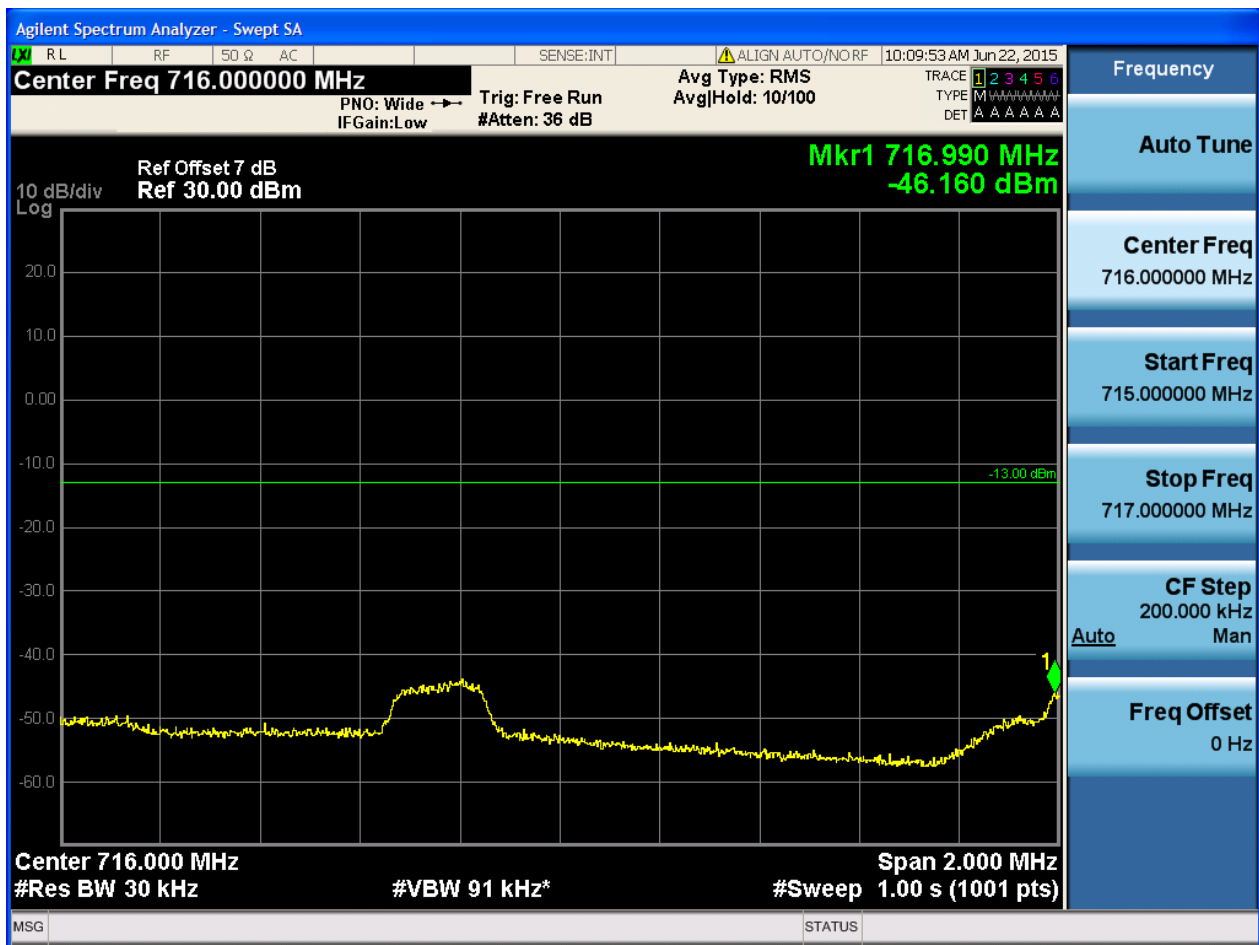
5.1.4.2.2.1.4 Test RB = RB15#0





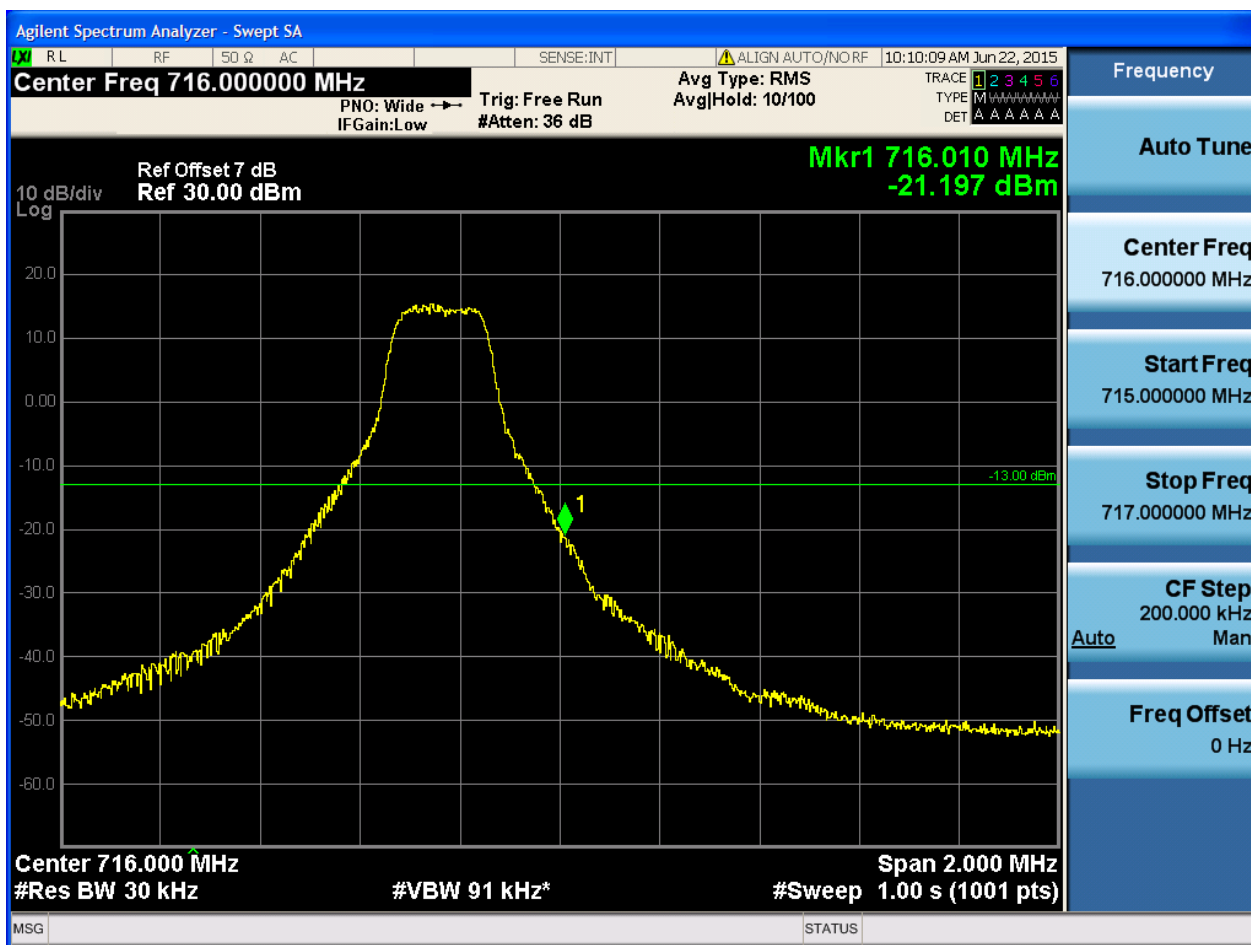
5.1.4.2.2.2 Test Channel = HCH

5.1.4.2.2.2.1 Test RB = RB1#0





5.1.4.2.2.2 Test RB = RB1#14





5.1.4.2.2.3 Test RB = RB8#4





5.1.4.2.2.4 Test RB = RB15#0

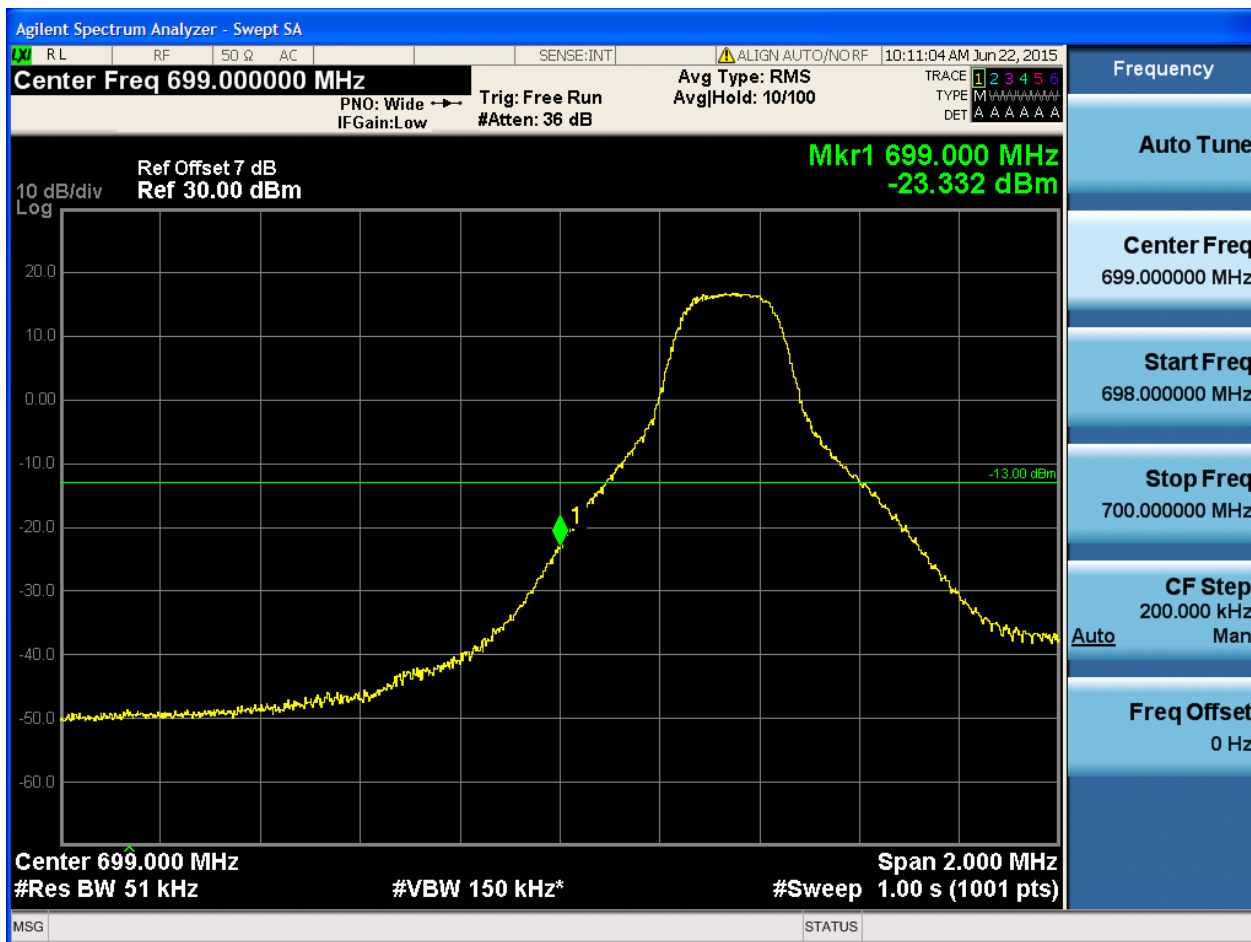




5.1.4.2.3 Test Bandwidth = 5

5.1.4.2.3.1 Test Channel = LCH

5.1.4.2.3.1.1 Test RB = RB1#0





Agilent Spectrum Analyzer - Swept SA

Center Freq 699.000000 MHz

Ref Offset 7 dB
Ref 30.00 dBm

10 dB/div
Log

Mkr1 699.000 MHz
-57.240 dBm

Center 699.000 MHz
#Res BW 51 kHz

#VBW 150 kHz*

Span 2.000 MHz
#Sweep 1.00 s (1001 pts)

Frequency

Auto Tune

Center Freq
699.000000 MHz

Start Freq
698.000000 MHz

Stop Freq
700.000000 MHz

CF Step
200.000 kHz
Man

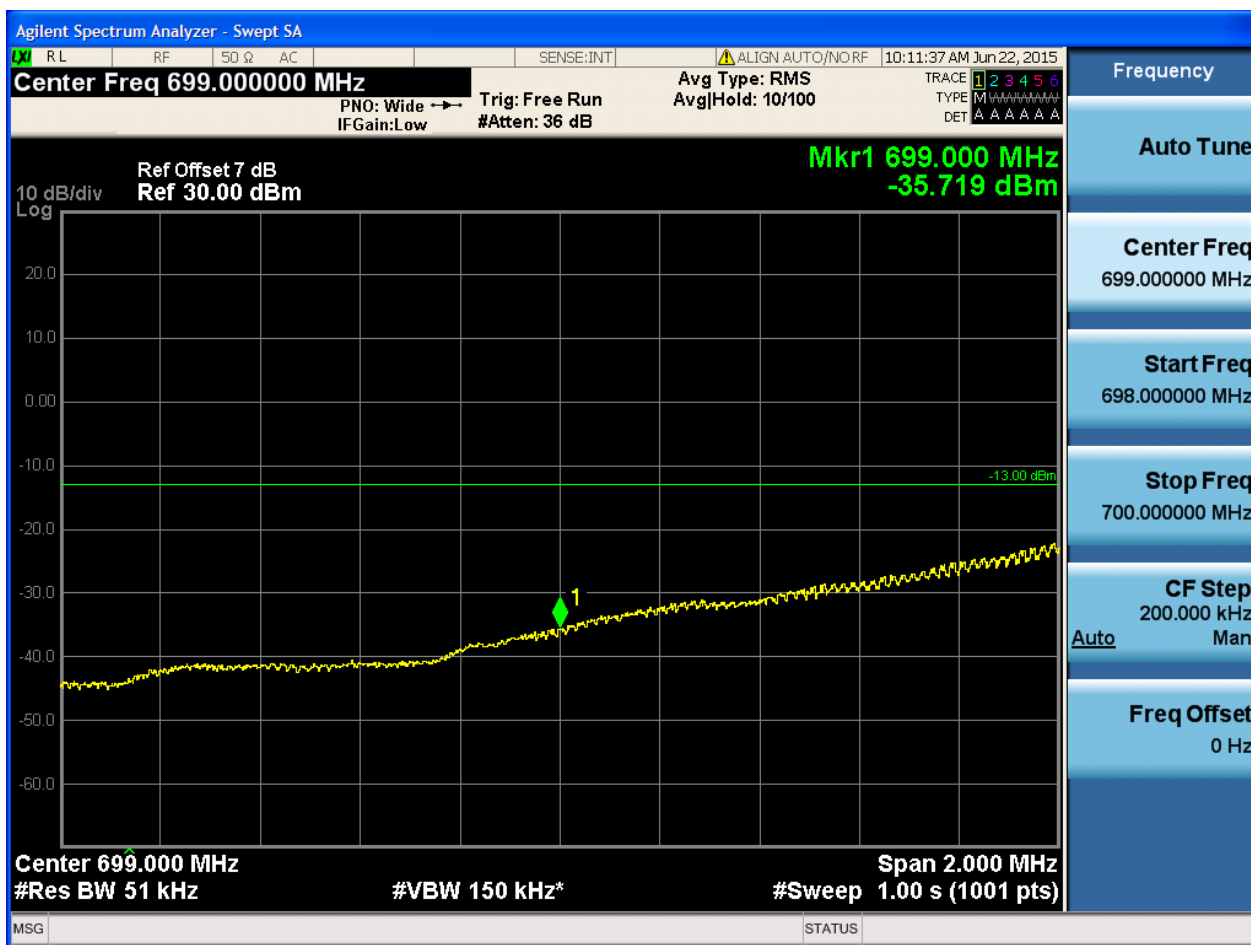
Auto

Freq Offset
0 Hz

The screenshot displays a spectrum analyzer interface. The main plot area shows a yellow trace of the signal spectrum. A horizontal green line is drawn across the plot at -13.00 dBm. A peak in the spectrum is marked with a green diamond and the number '1'. The peak is located at 699.000 MHz with a power level of -57.240 dBm. The plot has a grid with major lines every 10 dB on the vertical axis and every 100 kHz on the horizontal axis. The vertical axis is labeled '10 dB/div' and 'Log'. The horizontal axis is labeled 'Center 699.000 MHz' and 'Span 2.000 MHz'. The plot also shows 'Ref Offset 7 dB' and 'Ref 30.00 dBm'. The bottom of the plot area shows 'Center 699.000 MHz', '#Res BW 51 kHz', '#VBW 150 kHz*', and 'Span 2.000 MHz #Sweep 1.00 s (1001 pts)'. The top of the plot area shows 'Center Freq 699.000000 MHz', 'Avg Type: RMS', 'Avg/Hold: 10/100', 'PNO: Wide', 'IFGain:Low', 'Trig: Free Run', '#Atten: 36 dB', 'ALIGN AUTO/NORF', and '10:11:20 AM Jun 22, 2015'. The right side of the plot area shows 'Frequency', 'Auto Tune', 'Center Freq 699.000000 MHz', 'Start Freq 698.000000 MHz', 'Stop Freq 700.000000 MHz', 'CF Step 200.000 kHz Man', 'Auto', and 'Freq Offset 0 Hz'. The bottom of the plot area shows 'MSG' and 'STATUS'.

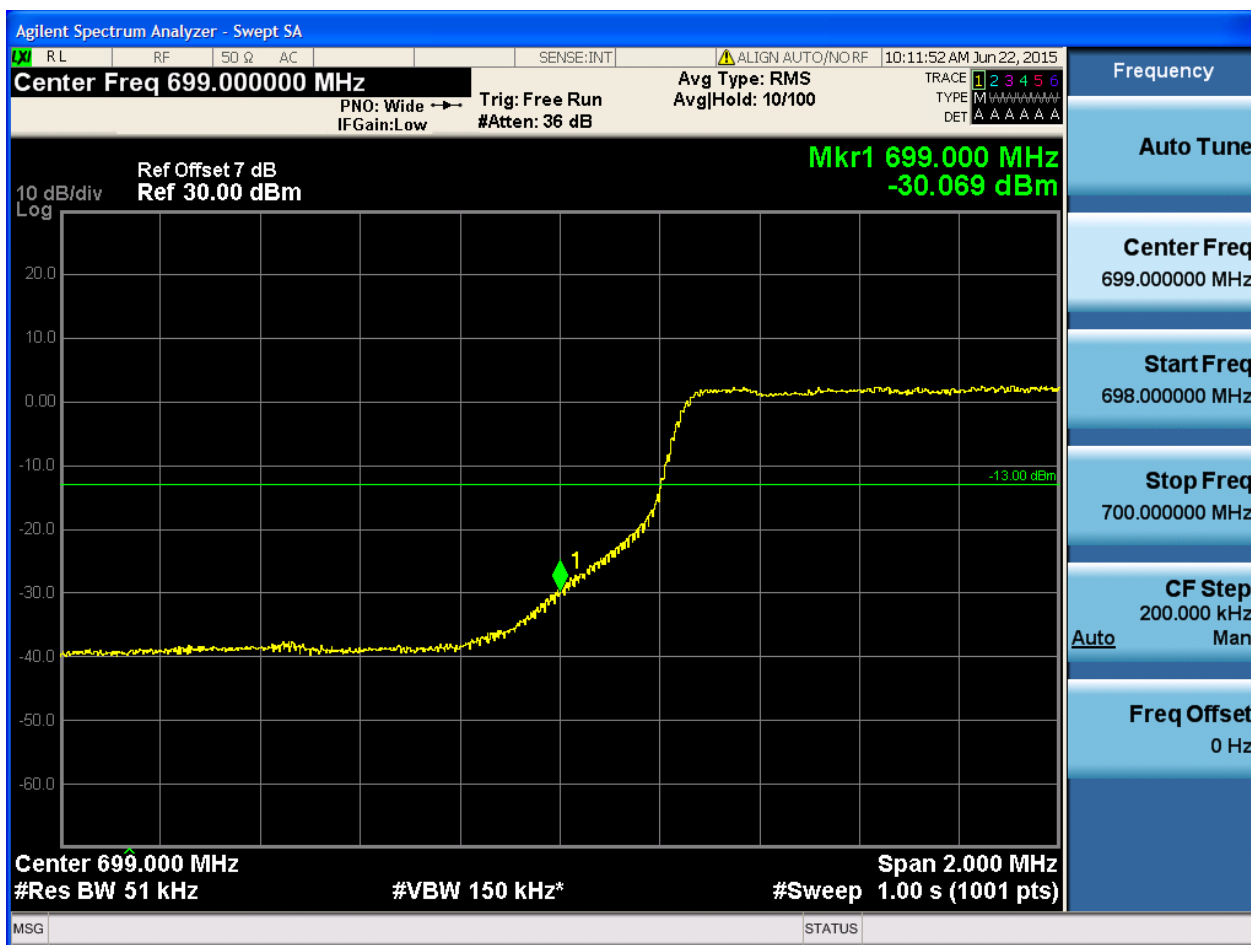


5.1.4.2.3.1.3 Test RB = RB12#6





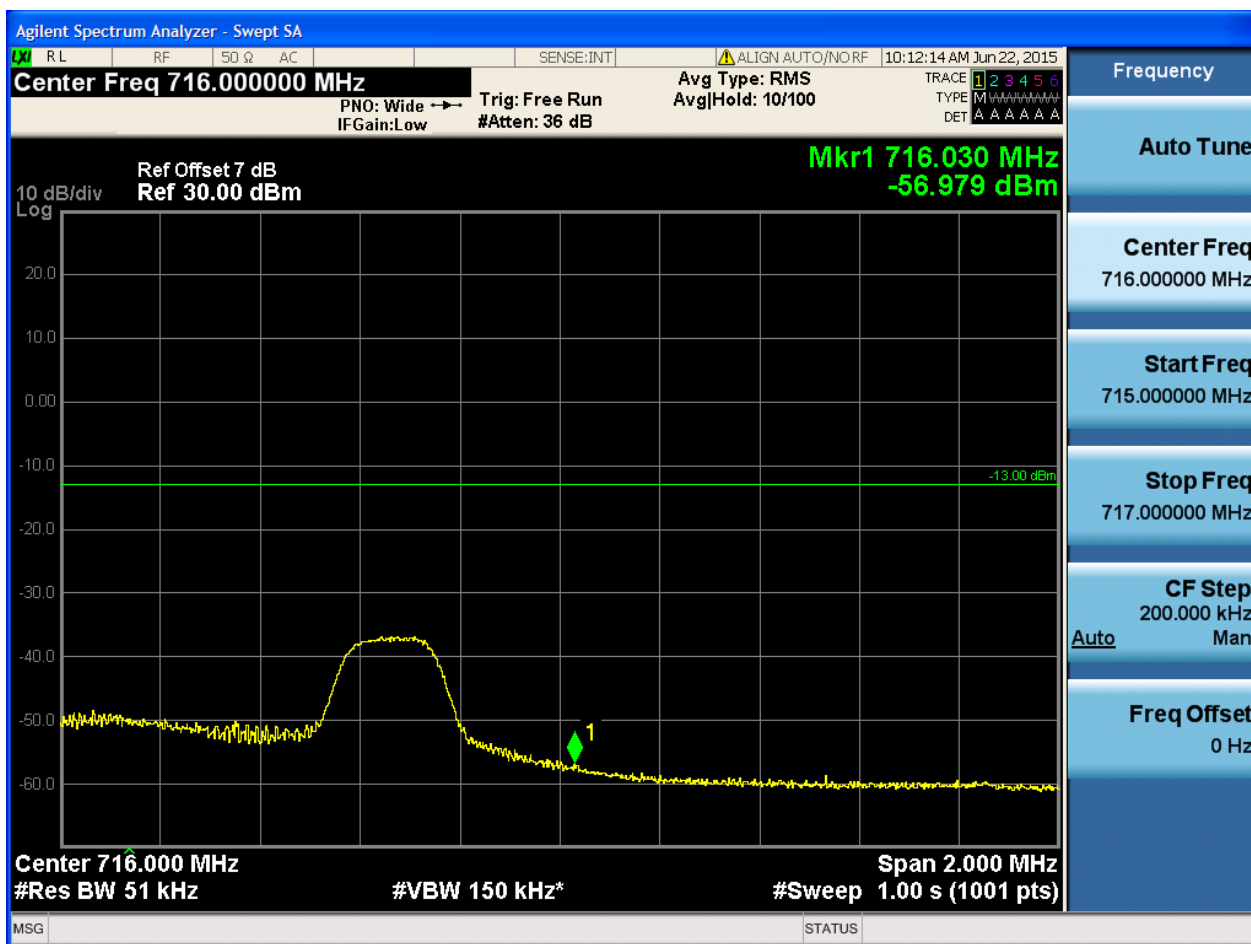
5.1.4.2.3.1.4 Test RB = RB25#0





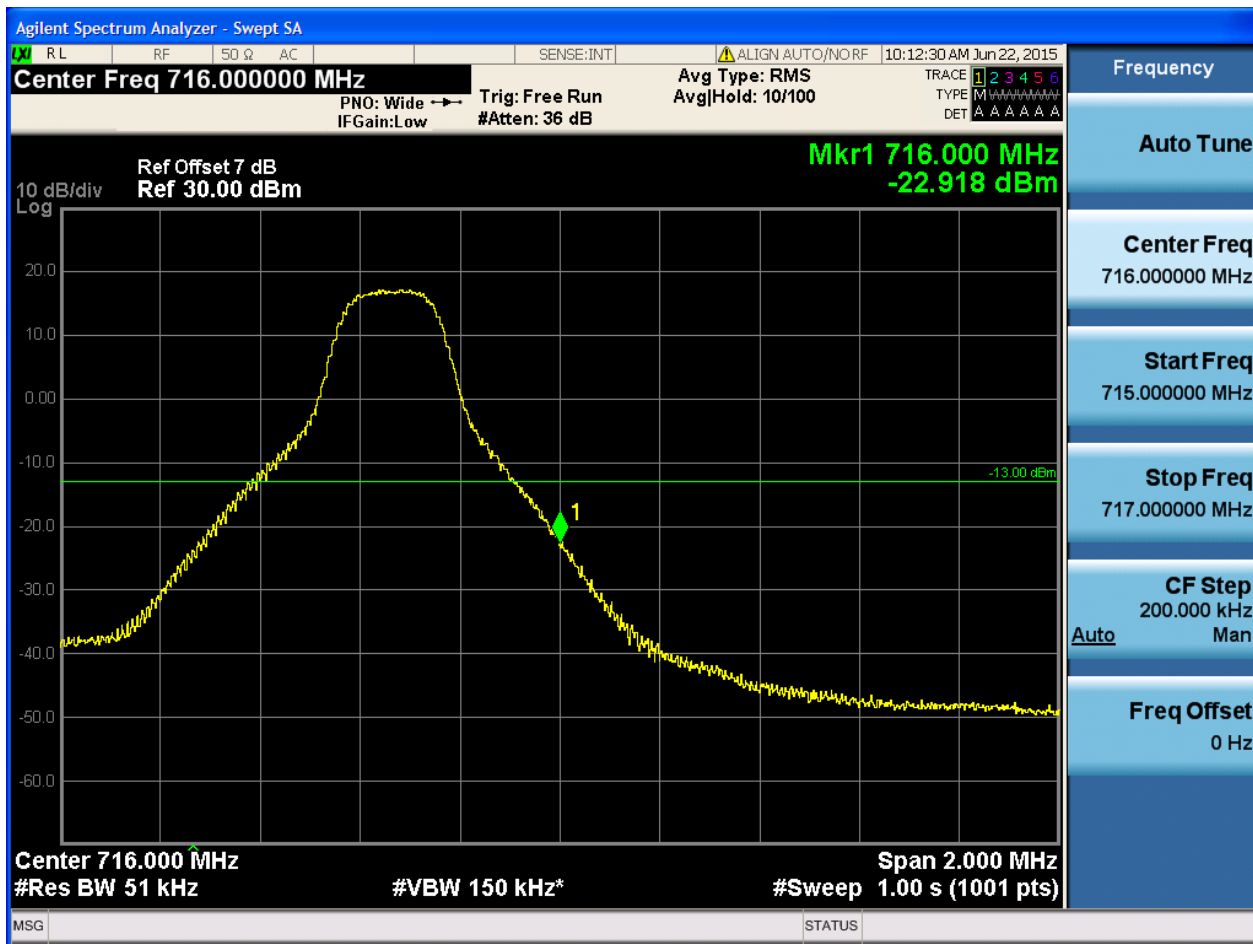
5.1.4.2.3.2 Test Channel = HCH

5.1.4.2.3.2.1 Test RB = RB1#0





5.1.4.2.3.2.2 Test RB = RB1#24





5.1.4.2.3.2.3 Test RB = RB12#6





5.1.4.2.3.2.4 Test RB = RB25#0

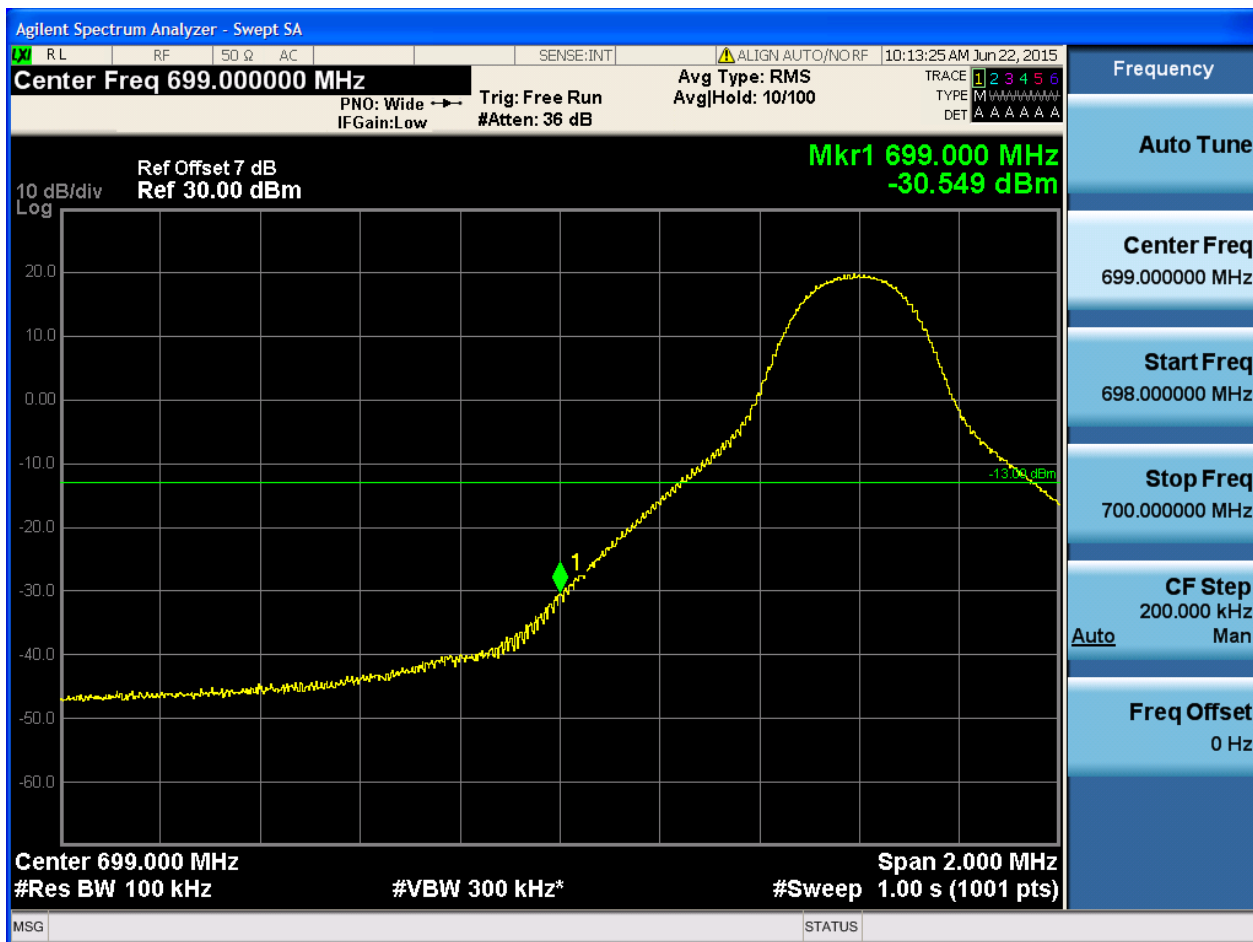




5.1.4.2.4 Test Bandwidth = 10

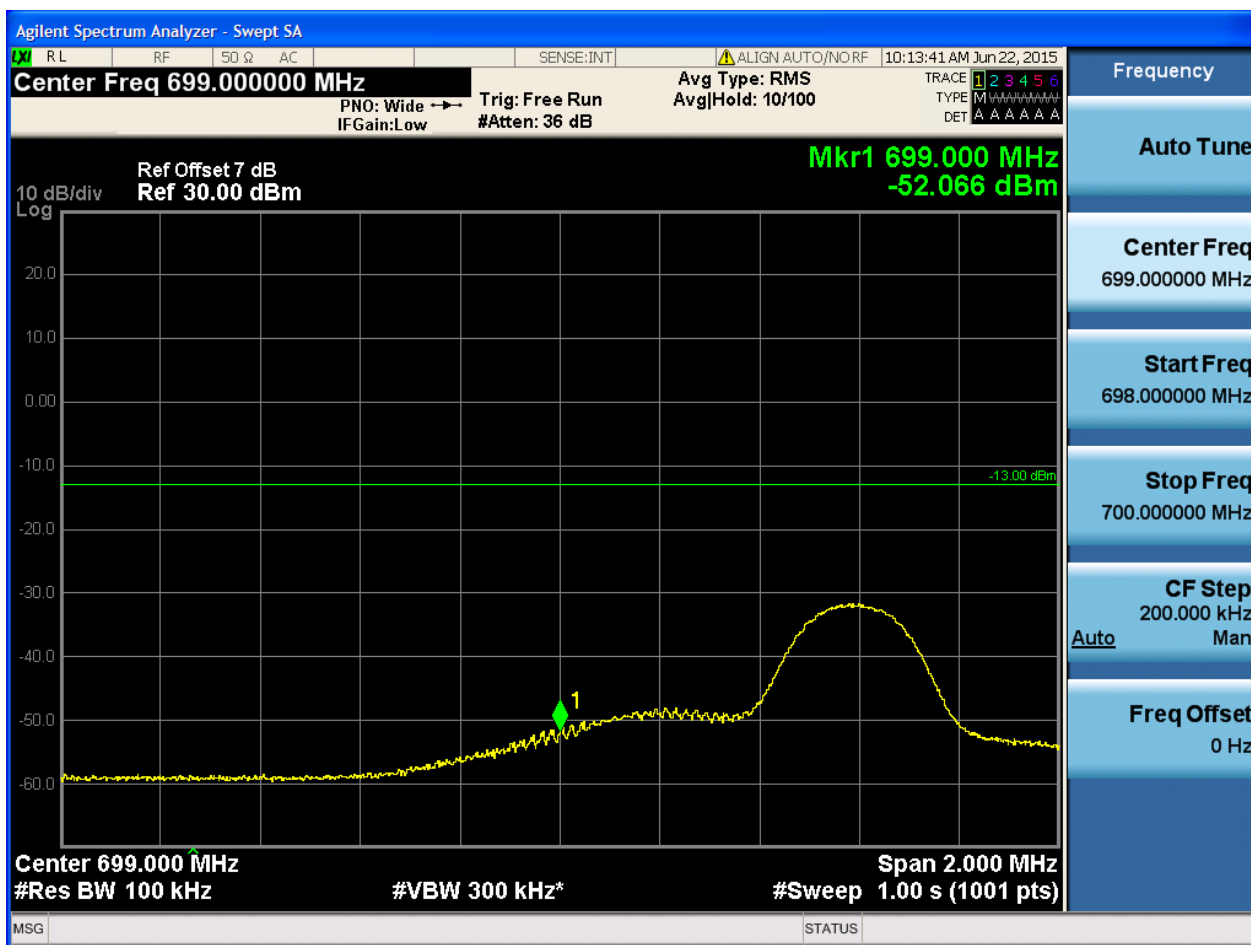
5.1.4.2.4.1 Test Channel = LCH

5.1.4.2.4.1.1 Test RB = RB1#0





5.1.4.2.4.1.2 Test RB = RB1#49





5.1.4.2.4.1.3 Test RB = RB25#13





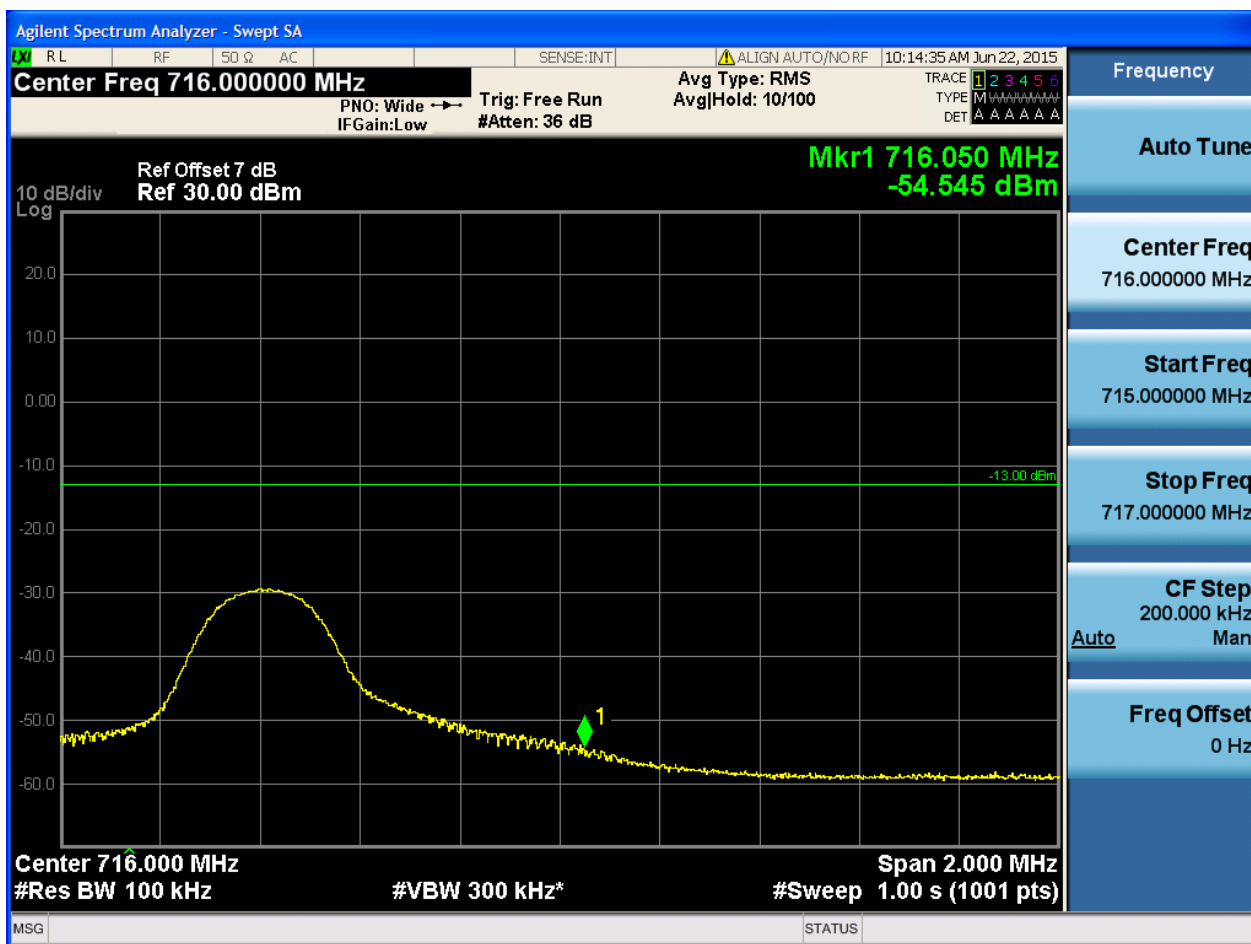
5.1.4.2.4.1.4 Test RB = RB50#0





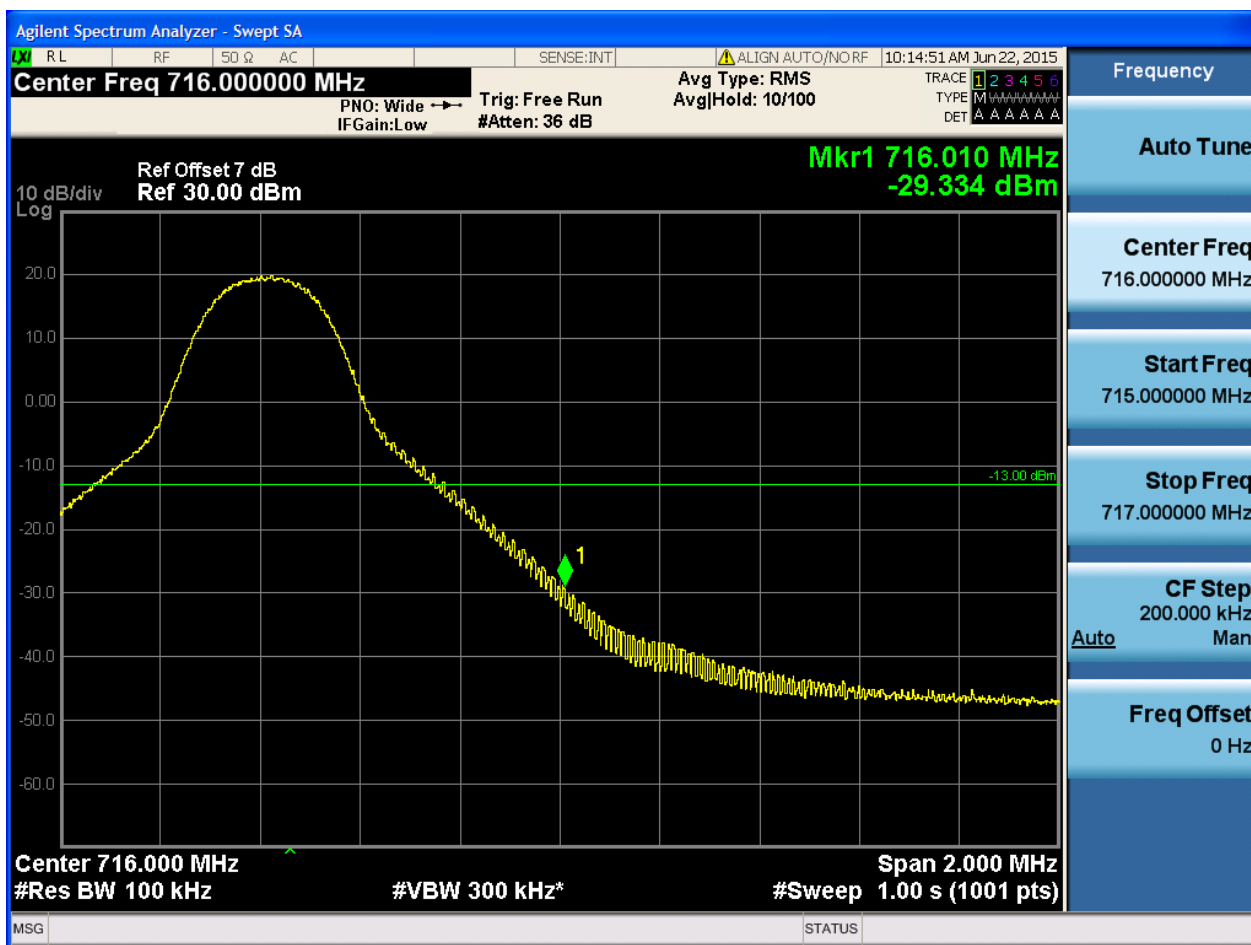
5.1.4.2.4.2 Test Channel = HCH

5.1.4.2.4.2.1 Test RB = RB1#0





5.1.4.2.4.2.2 Test RB = RB1#49





5.1.4.2.4.2.3 Test RB = RB25#13





5.1.4.2.4.2.4 Test RB = RB50#0





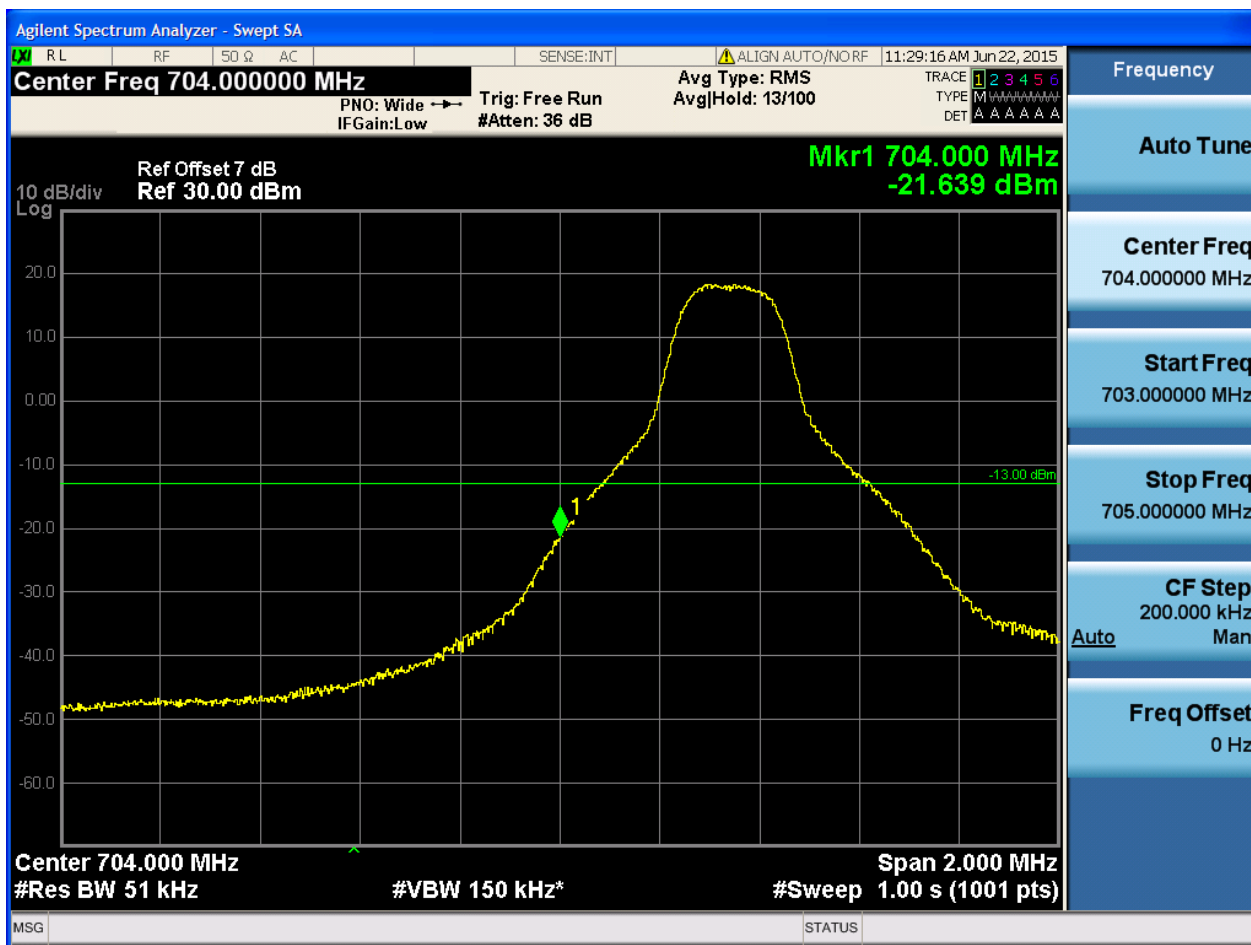
5.1.5 Test Band = BAND17

5.1.5.1 Test Mode = LTE/TM1

5.1.5.1.1 Test Bandwidth = 5

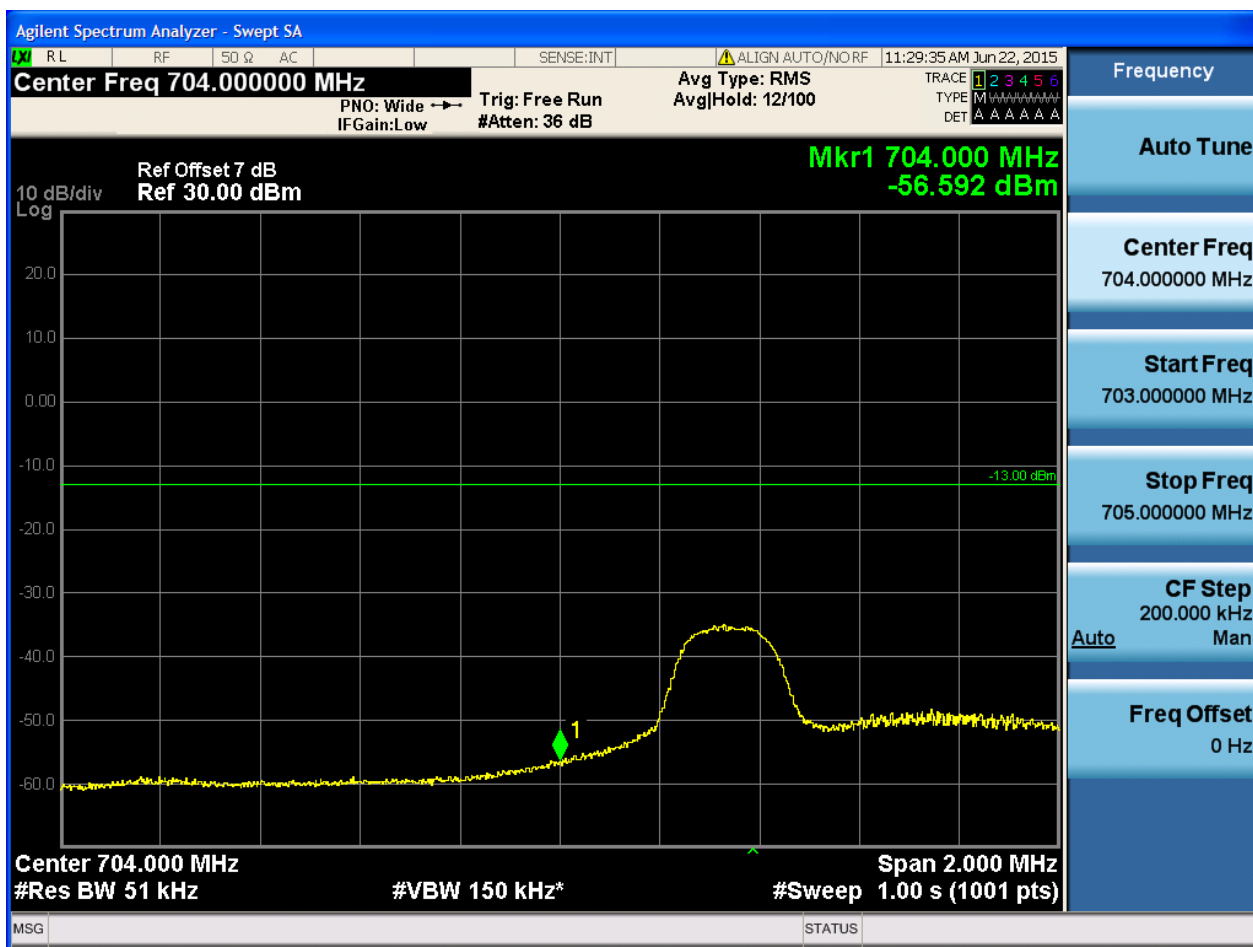
5.1.5.1.1.1 Test Channel = LCH

5.1.5.1.1.1.1 Test RB = RB1#0



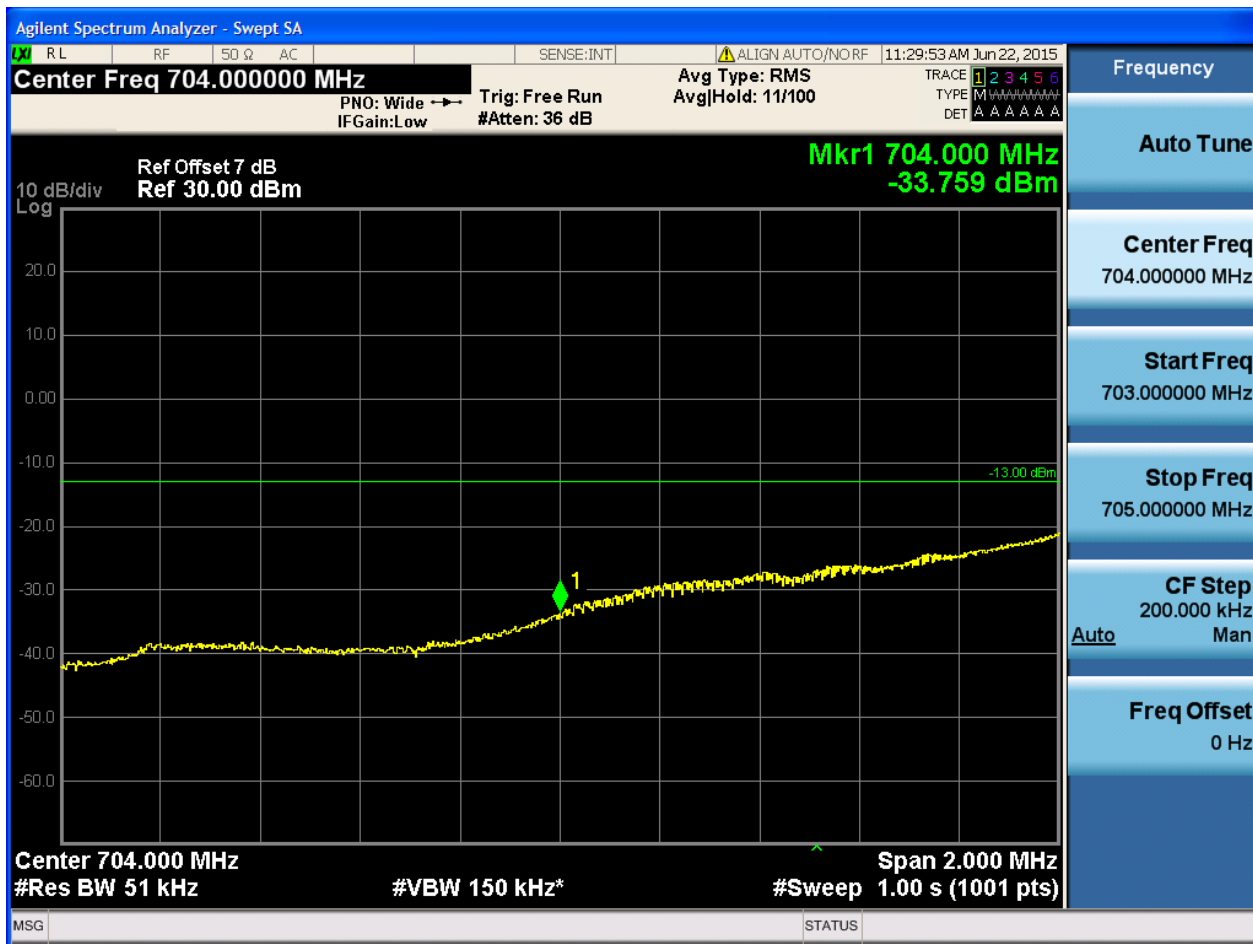


5.1.5.1.1.2 Test RB = RB1#24



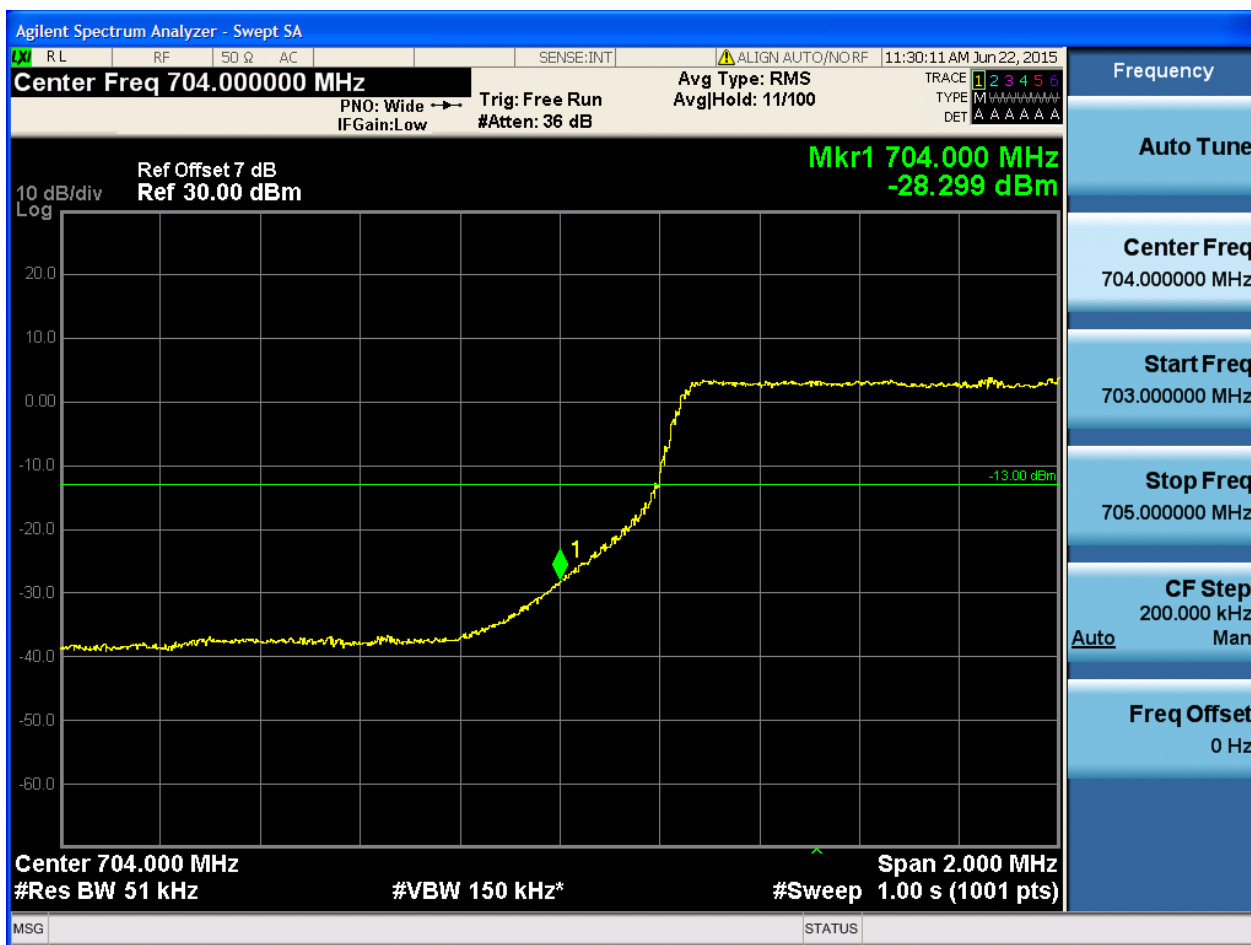


5.1.5.1.1.3 Test RB = RB12#6





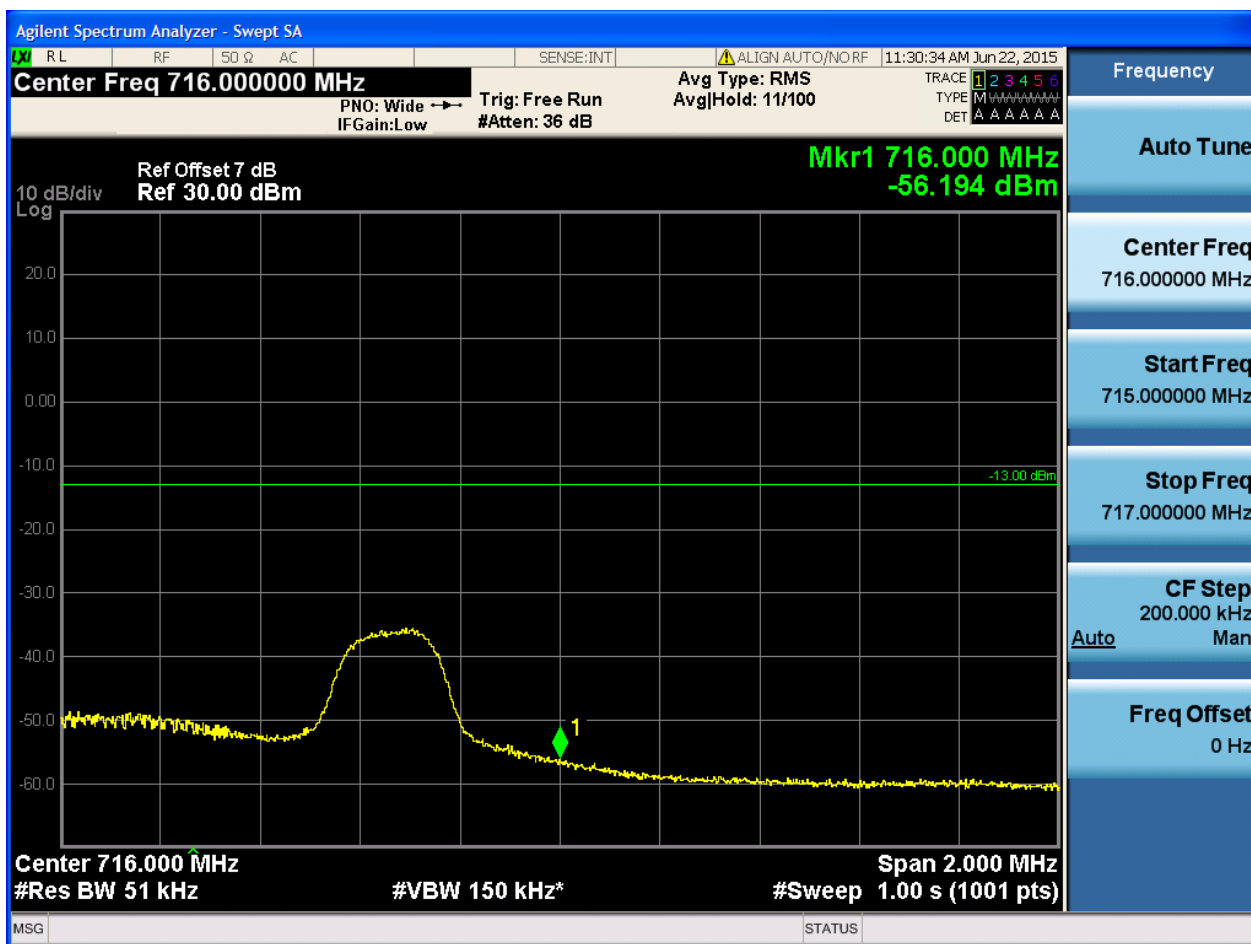
5.1.5.1.1.4 Test RB = RB25#0





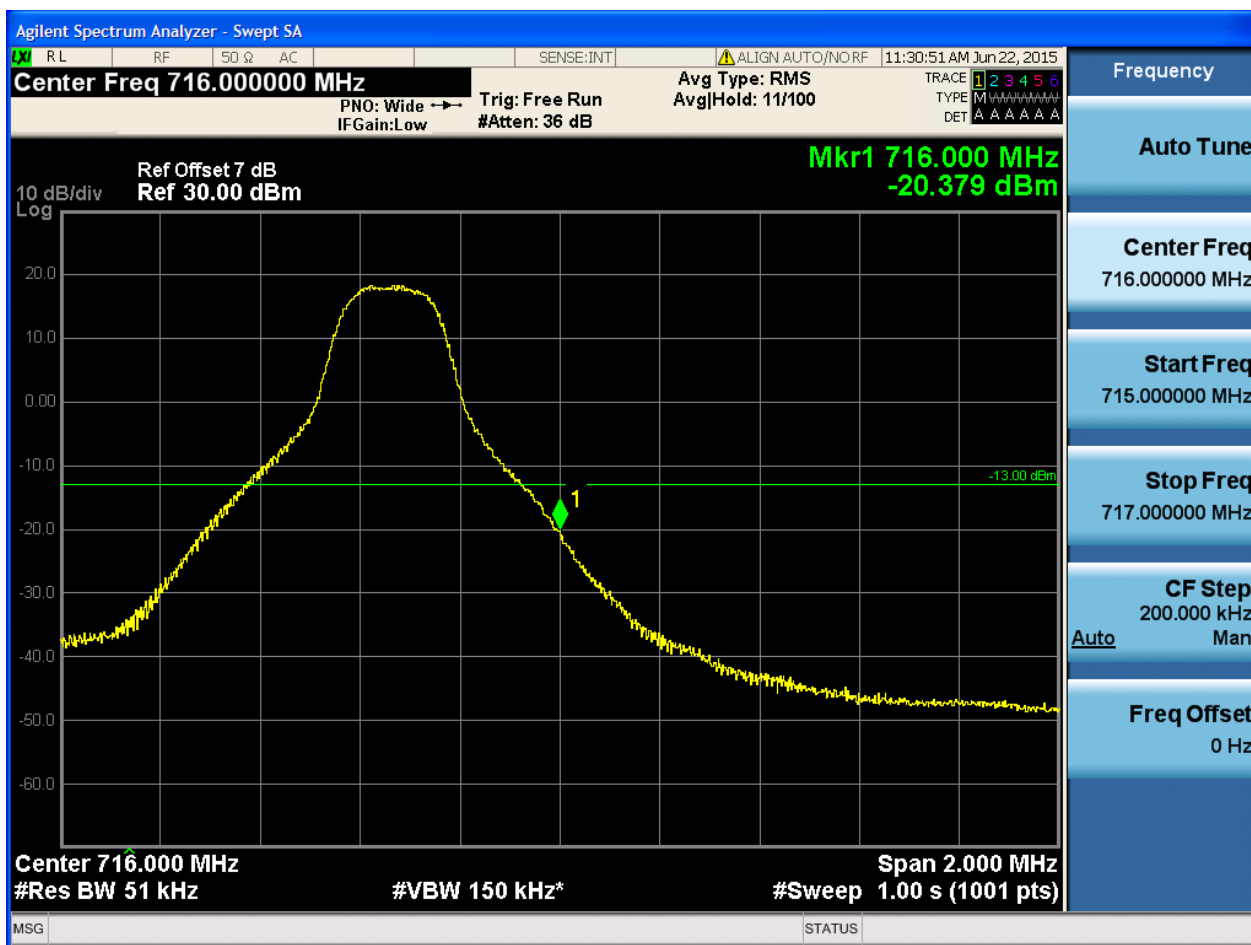
5.1.5.1.1.2 Test Channel = HCH

5.1.5.1.1.2.1 Test RB = RB1#0



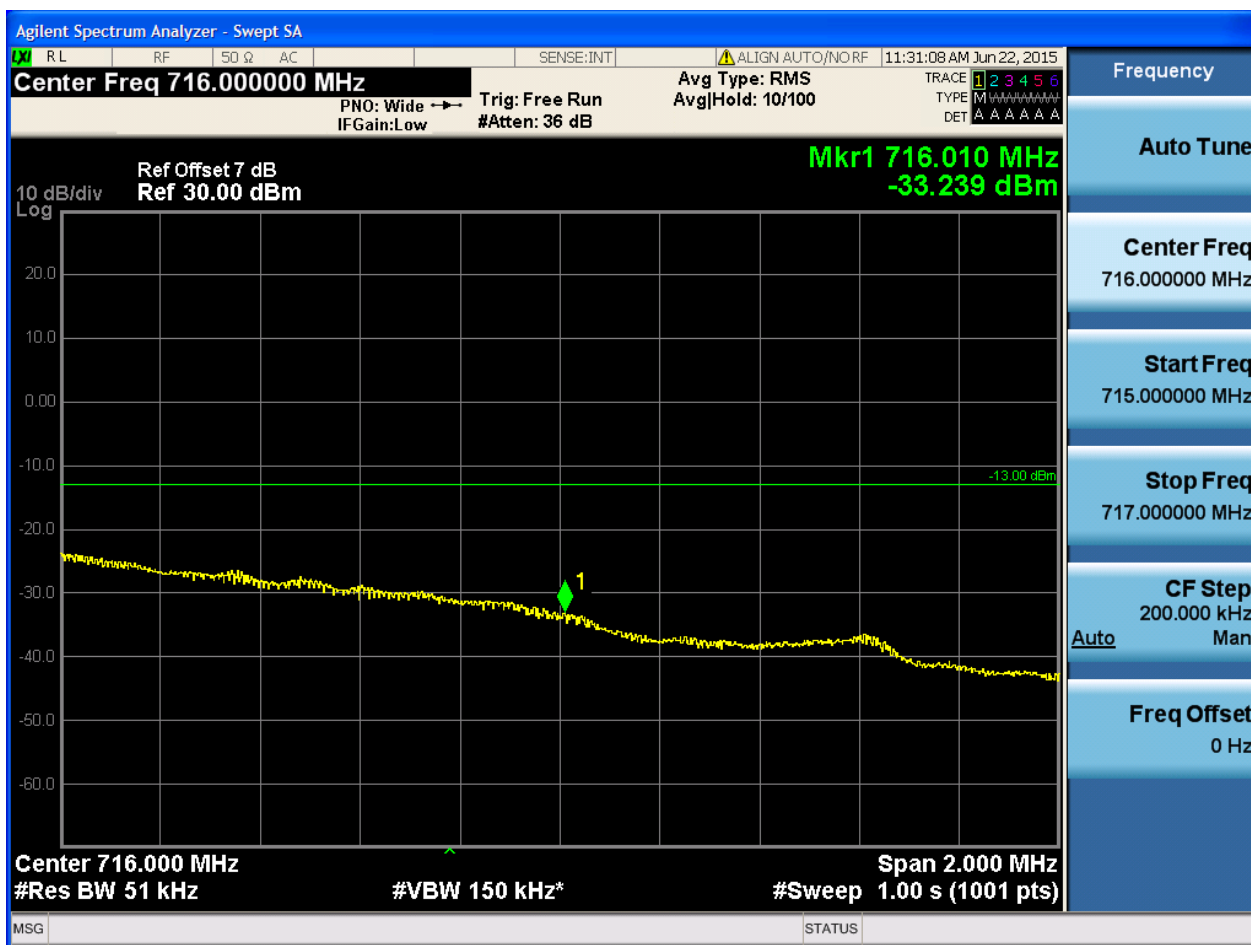


5.1.5.1.1.2.2 Test RB = RB1#24





5.1.5.1.1.2.3 Test RB = RB12#6





Agilent Spectrum Analyzer - Swept SA

Center Freq 716.000000 MHz

Ref Offset 7 dB
Ref 30.00 dBm

10 dB/div
Log

Mkr1 716.000 MHz
-27.660 dBm

Center 716.000 MHz
#Res BW 51 kHz
#VBW 150 kHz*

Span 2.000 MHz
#Sweep 1.00 s (1001 pts)

Frequency

Auto Tune

Center Freq
716.000000 MHz

Start Freq
715.000000 MHz

Stop Freq
717.000000 MHz

CF Step
200.000 kHz
Man

Freq Offset
0 Hz

The screenshot displays a spectrum analyzer interface. The main plot area shows a yellow trace on a black grid. The trace is relatively flat at approximately 0 dBm from 715 MHz to just before 716 MHz, where it drops sharply to about -30 dBm and then levels off. A green horizontal line is drawn across the plot at -13.00 dBm. A yellow marker labeled '1' is placed on the falling edge of the trace. The top of the screen shows various settings: 'Center Freq 716.000000 MHz', 'Ref Offset 7 dB', 'Ref 30.00 dBm', 'Mkr1 716.000 MHz -27.660 dBm', 'Center 716.000 MHz', '#Res BW 51 kHz', '#VBW 150 kHz*', 'Span 2.000 MHz', and '#Sweep 1.00 s (1001 pts)'. The right side of the screen features a blue sidebar with controls for 'Frequency', 'Auto Tune', 'Center Freq', 'Start Freq', 'Stop Freq', 'CF Step', and 'Freq Offset'. The bottom status bar shows 'MSG' and 'STATUS'.

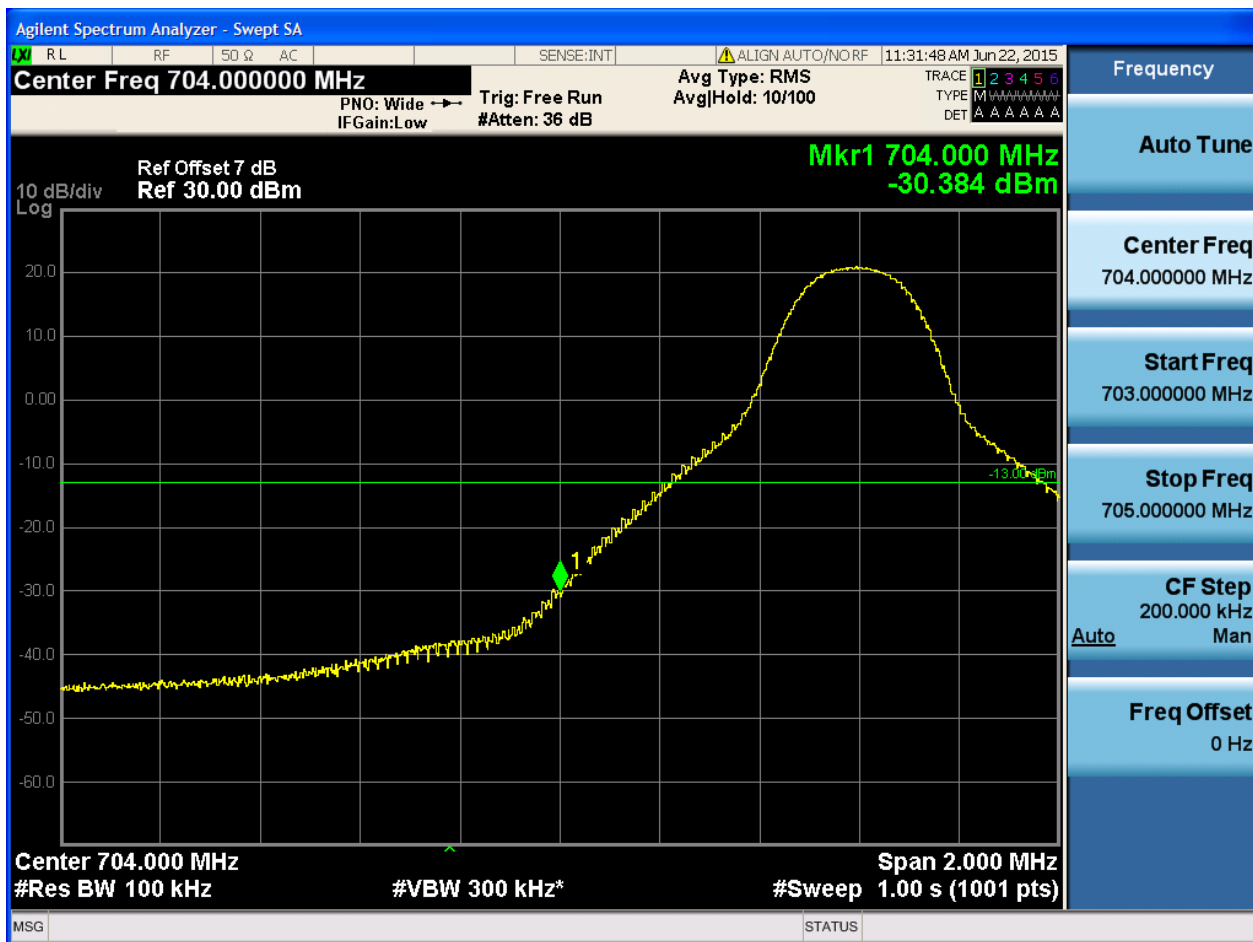
Parameter	Value
Center Freq	716.000000 MHz
Start Freq	715.000000 MHz
Stop Freq	717.000000 MHz
CF Step	200.000 kHz
Freq Offset	0 Hz



5.1.5.1.2 Test Bandwidth = 10

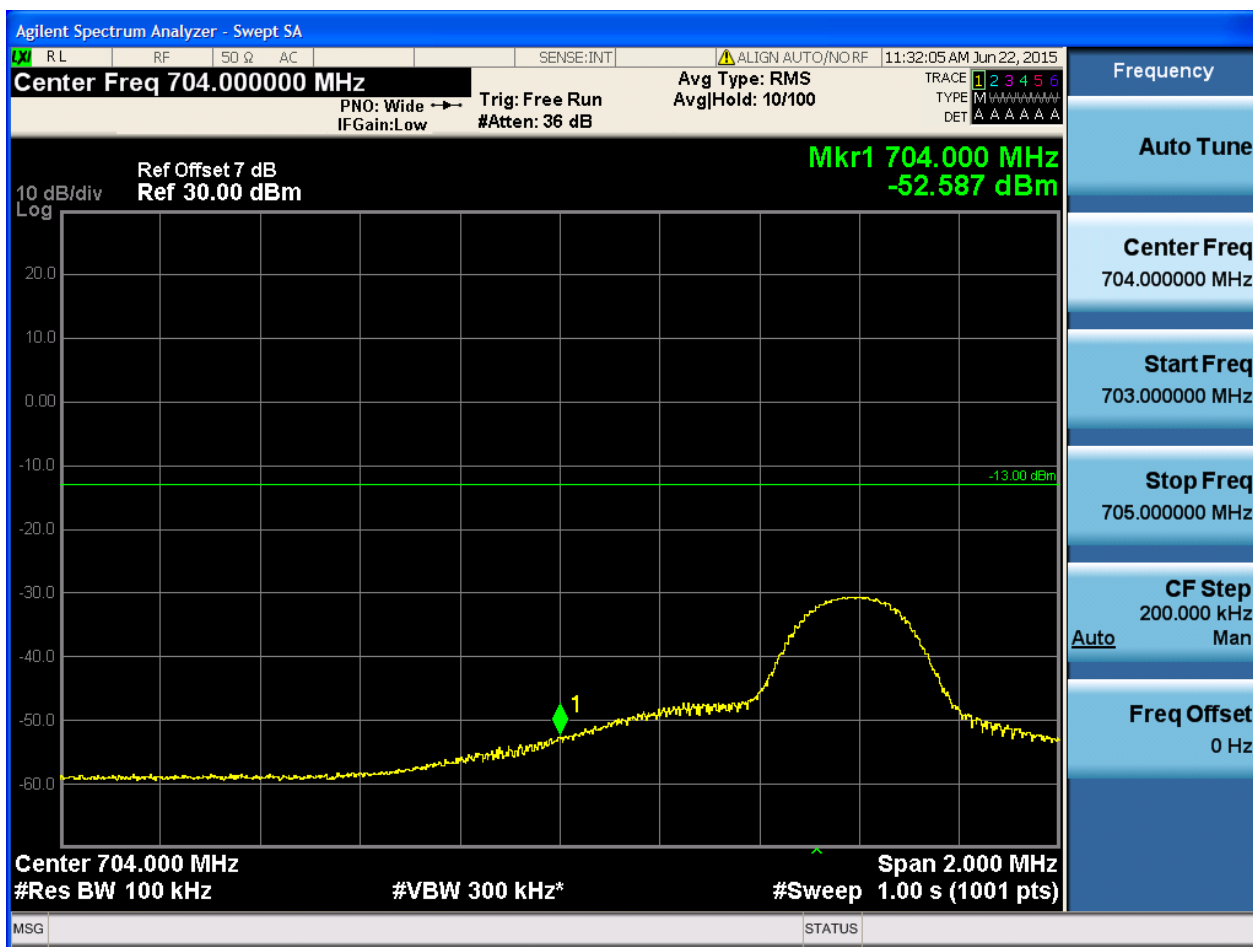
5.1.5.1.2.1 Test Channel = LCH

5.1.5.1.2.1.1 Test RB = RB1#0





5.1.5.1.2.1.2 Test RB = RB1#49



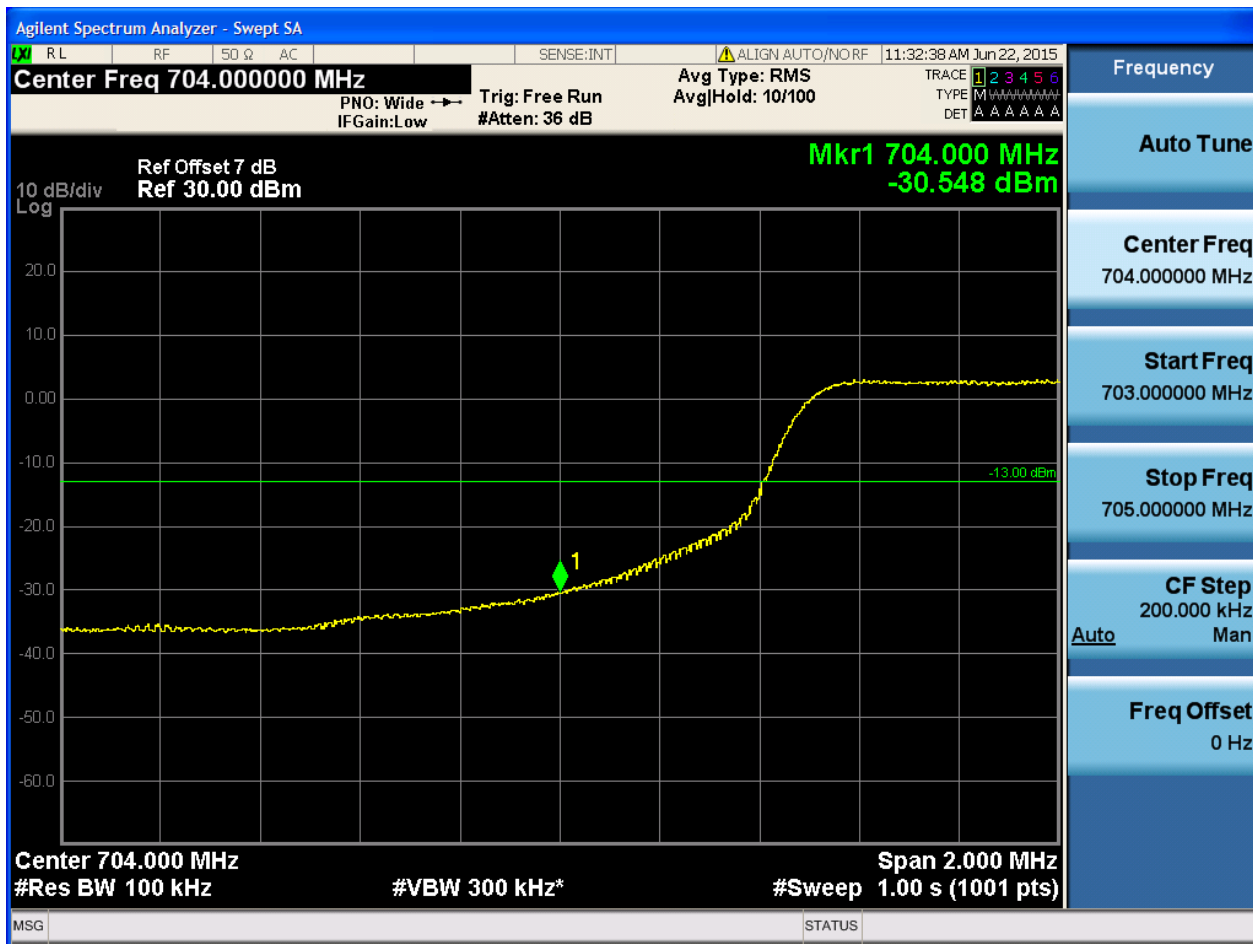


5.1.5.1.2.1.3 Test RB = RB25#13





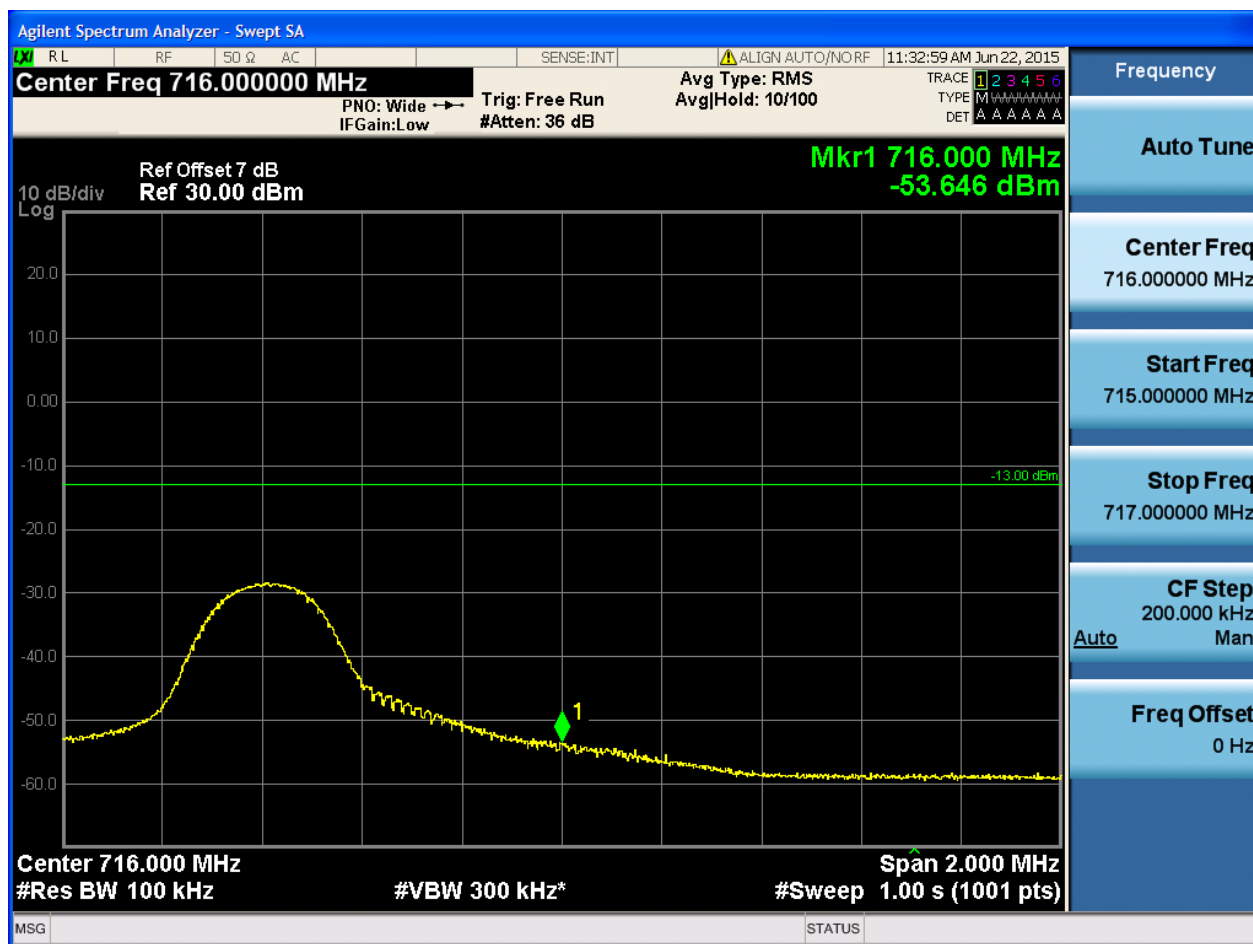
5.1.5.1.2.1.4 Test RB = RB50#0





5.1.5.1.2.2 Test Channel = HCH

5.1.5.1.2.2.1 Test RB = RB1#0





5.1.5.1.2.2.2 Test RB = RB1#49





5.1.5.1.2.2.3 Test RB = RB25#13





5.1.5.1.2.2.4 Test RB = RB50#0



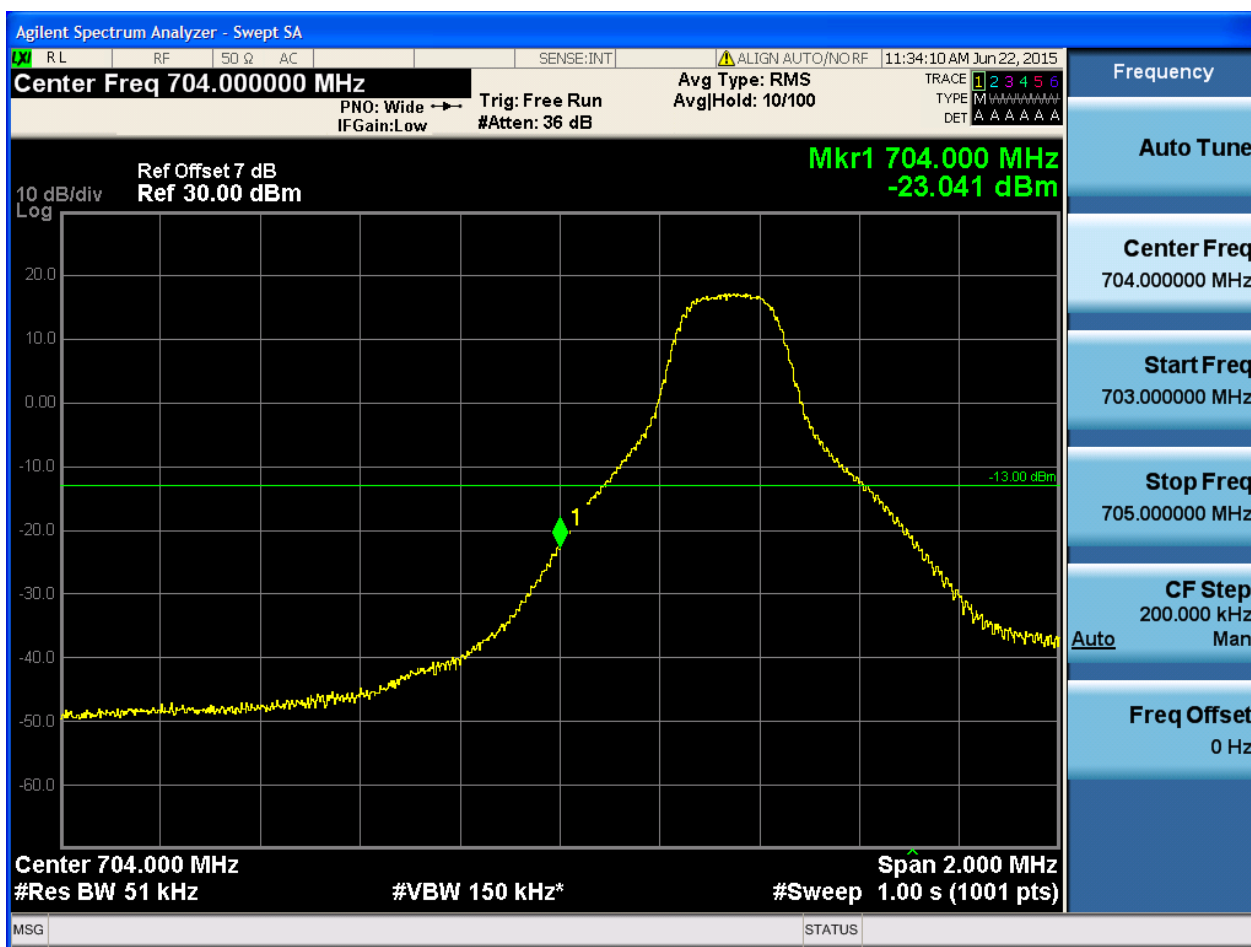


5.1.5.2 Test Mode = LTE/TM2

5.1.5.2.1 Test Bandwidth = 5

5.1.5.2.1.1 Test Channel = LCH

5.1.5.2.1.1.1 Test RB = RB1#0





Agilent Spectrum Analyzer - Swept SA

Center Freq 704.000000 MHz

Ref Offset 7 dB
Ref 30.00 dBm

10 dB/div
Log

Mkr1 704.000 MHz
-57.013 dBm

Center 704.000 MHz
#Res BW 51 kHz

#VBW 150 kHz*

Span 2.000 MHz
#Sweep 1.00 s (1001 pts)

Frequency

Auto Tune

Center Freq
704.000000 MHz

Start Freq
703.000000 MHz

Stop Freq
705.000000 MHz

CF Step
200.000 kHz
Man

Auto

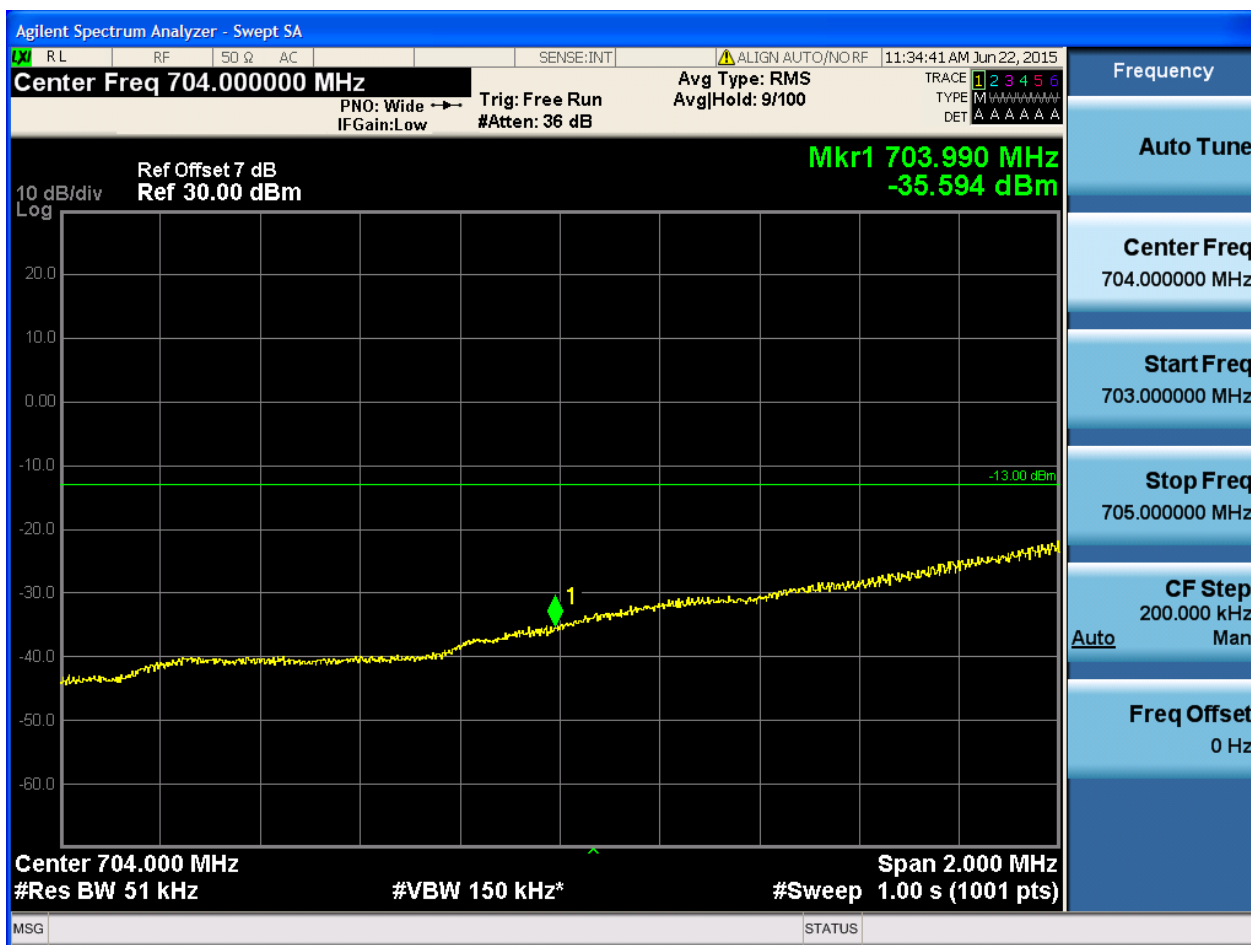
Freq Offset
0 Hz

The screenshot displays a spectrum analyzer interface. The main plot area shows a yellow trace of a signal with a prominent peak at 704.000 MHz. The y-axis is labeled '10 dB/div Log' and ranges from -60.0 to 20.0 dBm. The x-axis represents frequency, with a center frequency of 704.000 MHz and a span of 2.000 MHz. A green horizontal line is drawn at -13.00 dBm. The peak is marked with a green diamond and labeled '1'. The peak's frequency and power are displayed in green text as 'Mkr1 704.000 MHz' and '-57.013 dBm'. The interface includes various control panels on the right for frequency, auto-tune, center frequency, start/stop frequencies, CF step, and frequency offset. The bottom status bar shows 'MSG' and 'STATUS'.

Parameter	Value
Center Freq	704.000000 MHz
Start Freq	703.000000 MHz
Stop Freq	705.000000 MHz
CF Step	200.000 kHz
Freq Offset	0 Hz

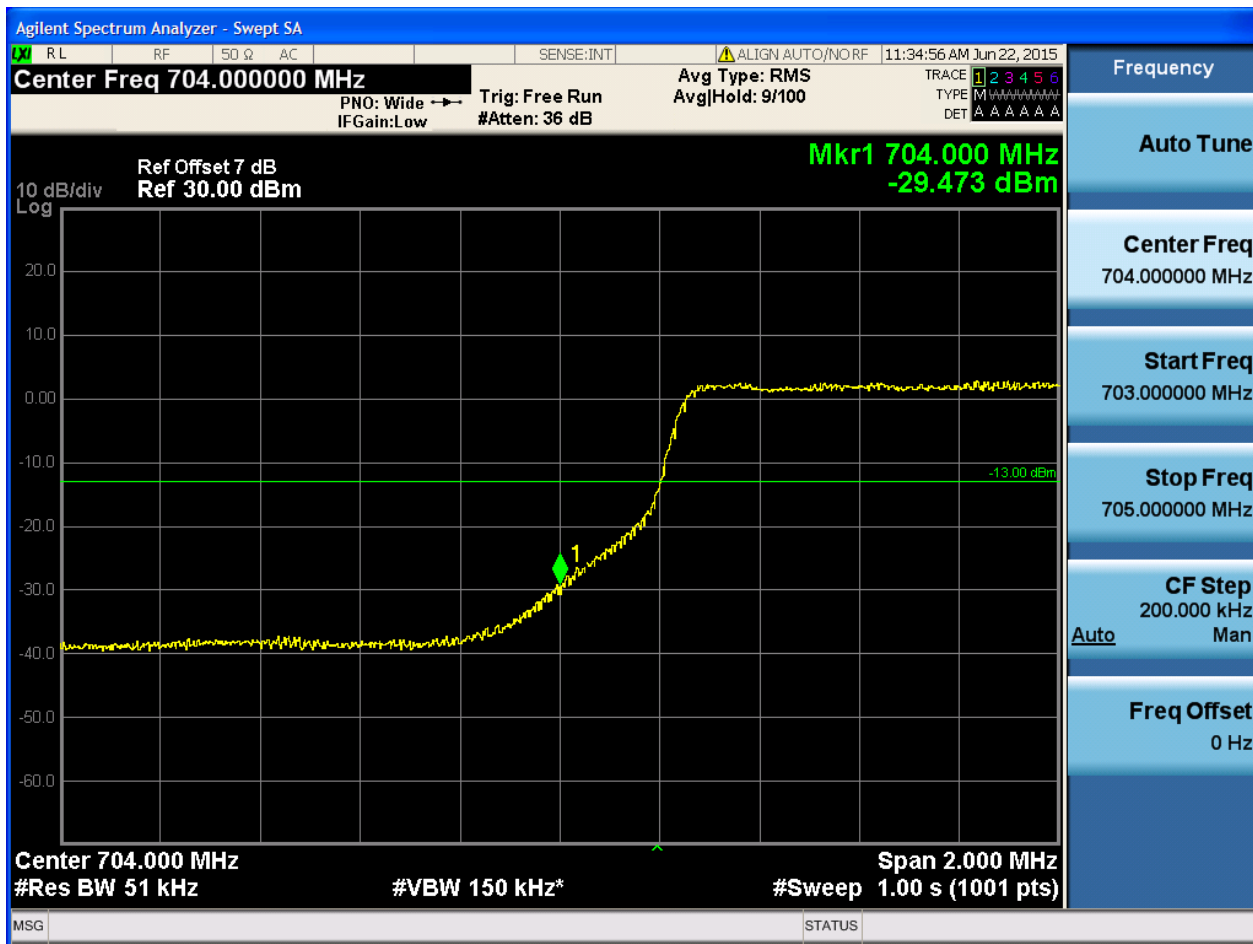


5.1.5.2.1.1.3 Test RB = RB12#6





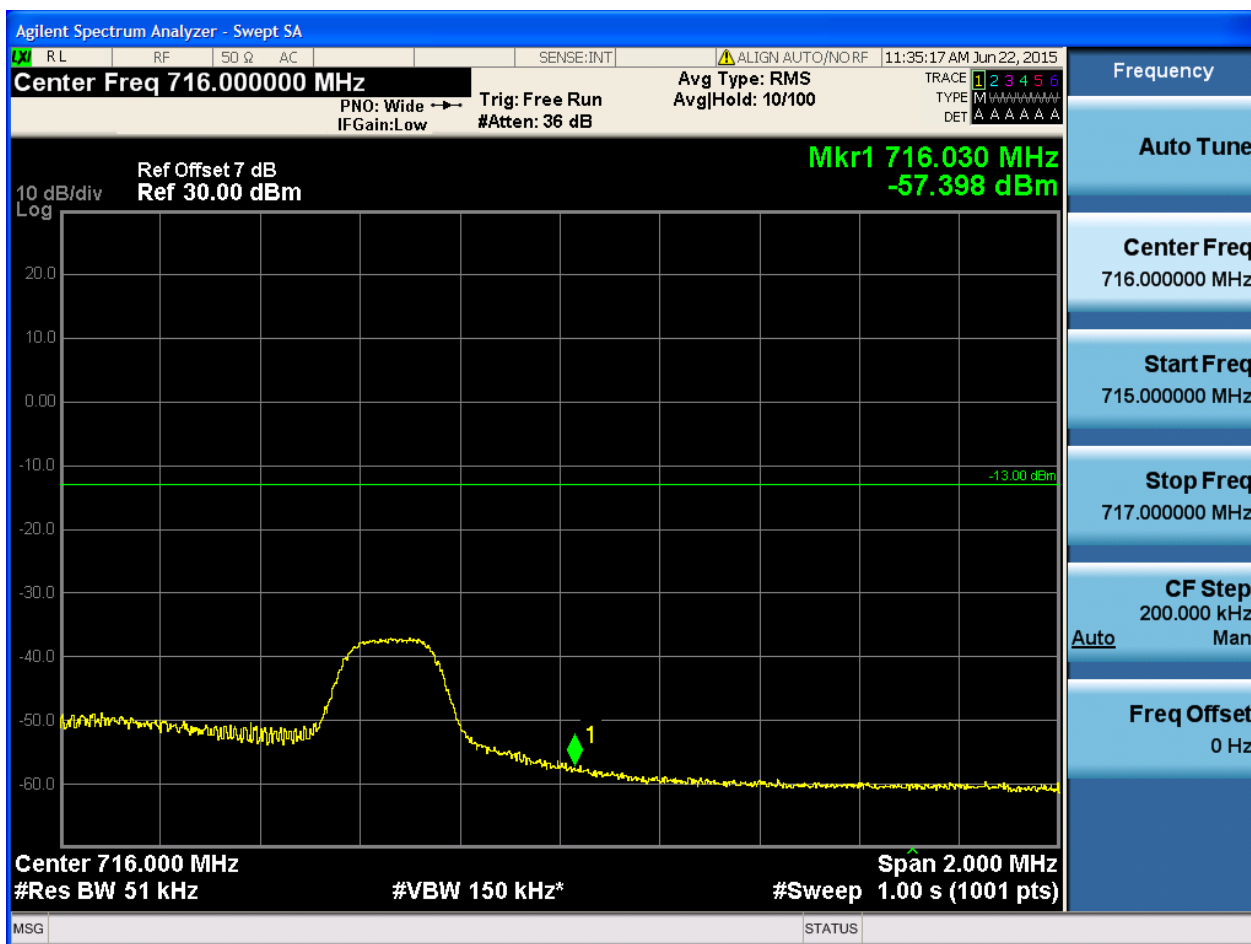
5.1.5.2.1.1.4 Test RB = RB25#0





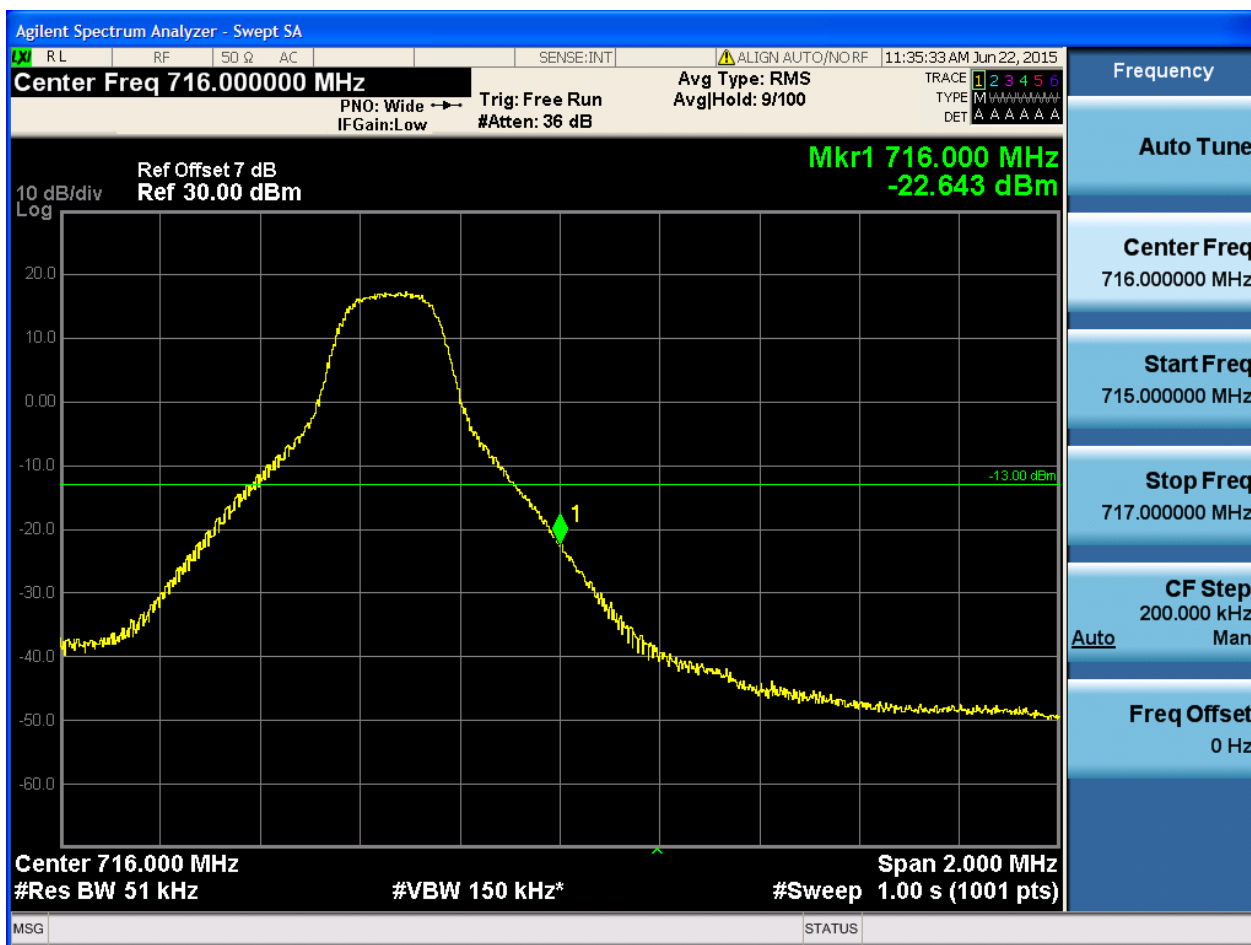
5.1.5.2.1.2 Test Channel = HCH

5.1.5.2.1.2.1 Test RB = RB1#0



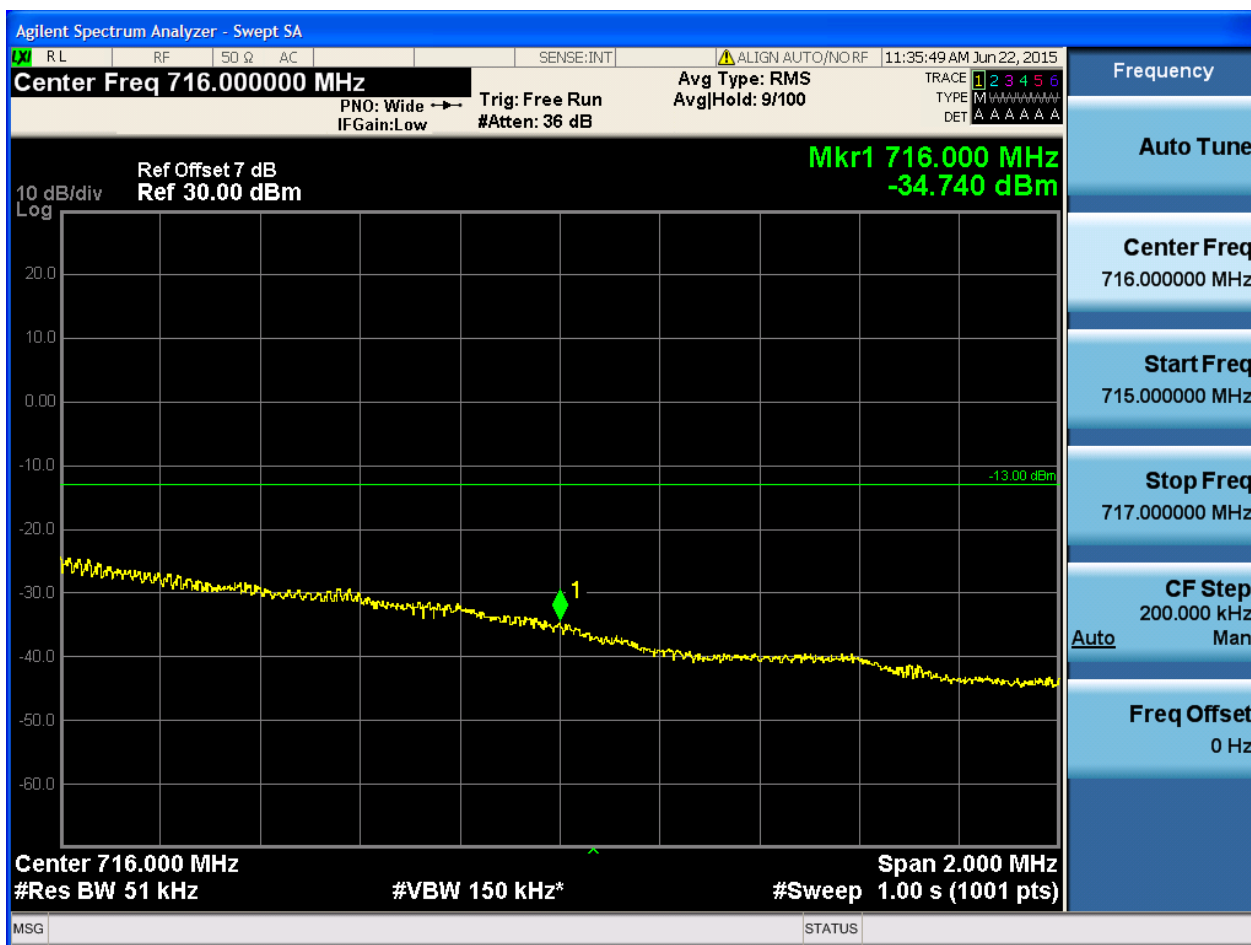


5.1.5.2.1.2.2 Test RB = RB1#24



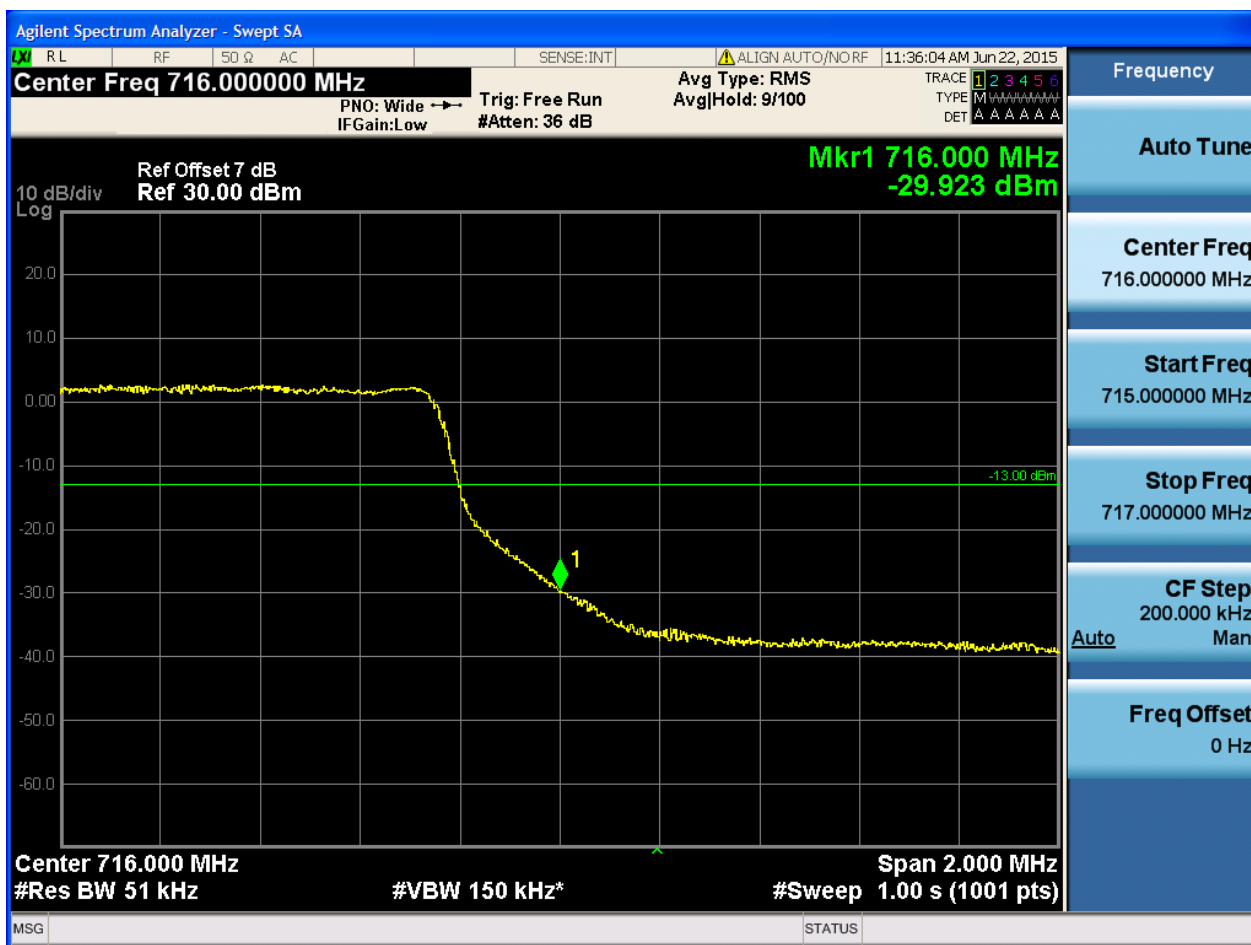


5.1.5.2.1.2.3 Test RB = RB12#6





5.1.5.2.1.2.4 Test RB = RB25#0

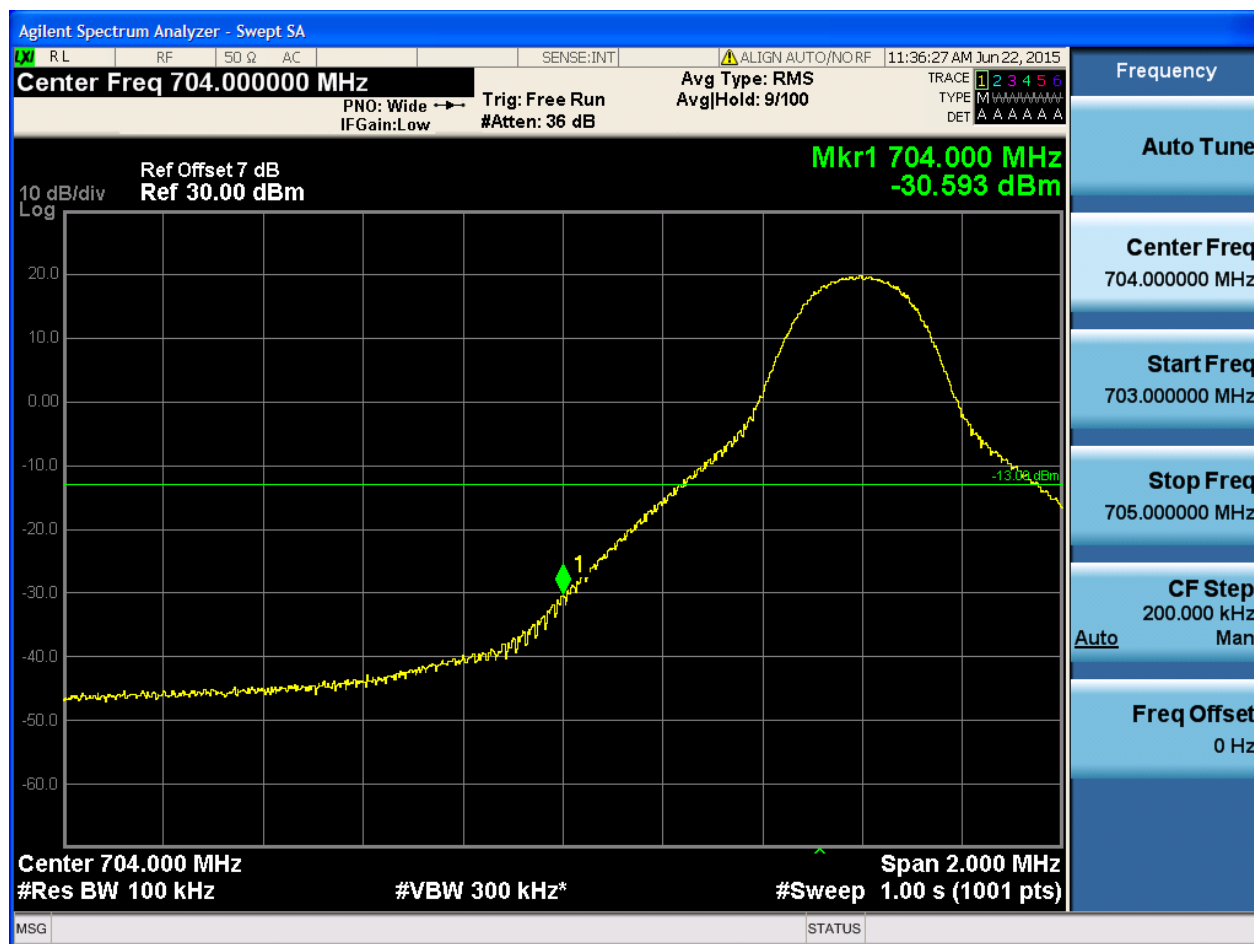




5.1.5.2.2 Test Bandwidth = 10

5.1.5.2.2.1 Test Channel = LCH

5.1.5.2.2.1.1 Test RB = RB1#0





Agilent Spectrum Analyzer - Swept SA

Center Freq 704.000000 MHz

Ref Offset 7 dB
Ref 30.00 dBm

10 dB/div
Log

Trig: Free Run
#Atten: 36 dB

Avg Type: RMS
Avg/Hold: 9/100

TRACE 1 2 3 4 5 6
TYPE M W W W W W W W
DET A A A A A A

Mkr1 703.990 MHz
-51.471 dBm

-13.00 dBm

Center 704.000 MHz
#Res BW 100 kHz
#VBW 300 kHz*

Span 2.000 MHz
#Sweep 1.00 s (1001 pts)

Frequency

Auto Tune

Center Freq
704.000000 MHz

Start Freq
703.000000 MHz

Stop Freq
705.000000 MHz

CF Step
200.000 kHz
Man

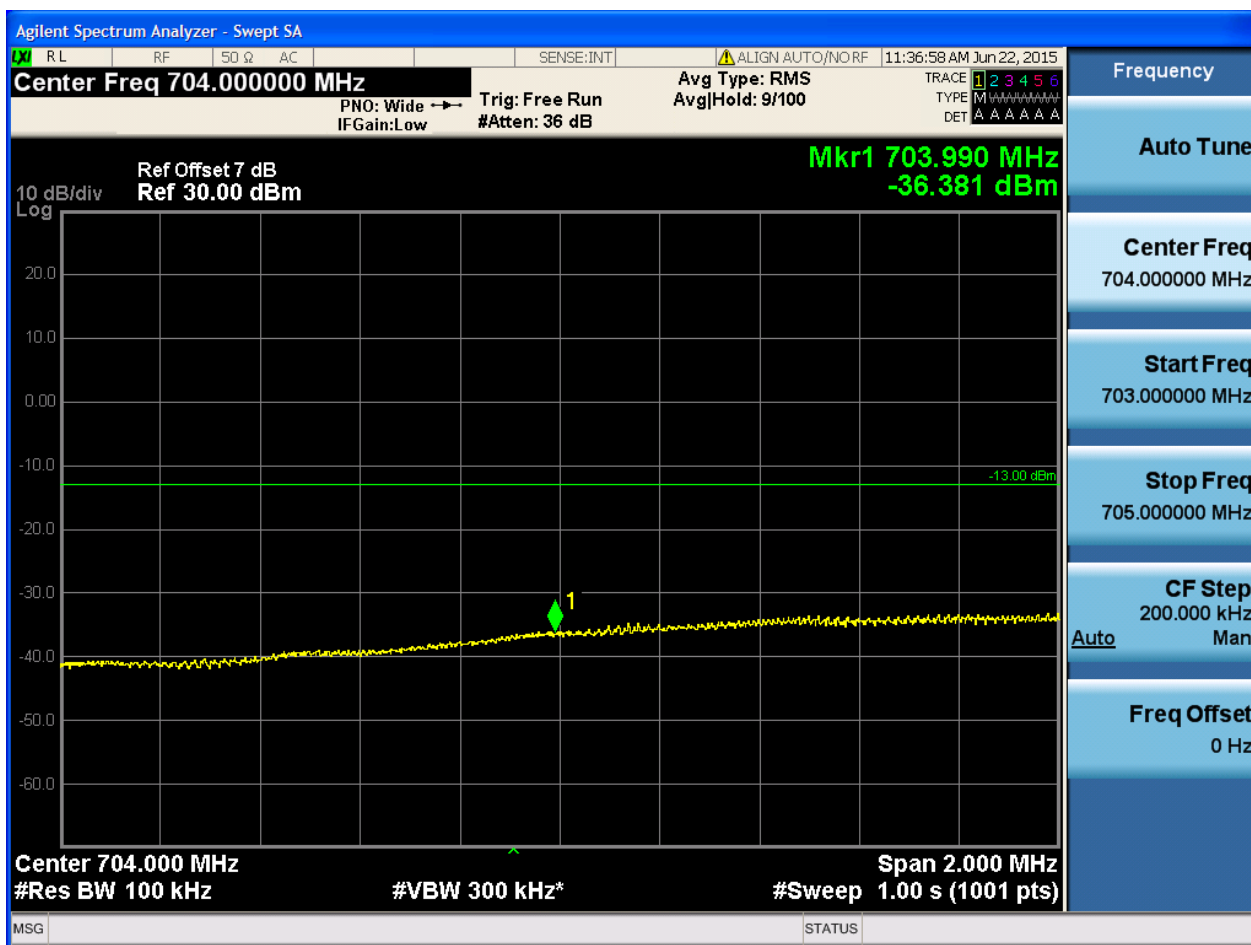
Auto

Freq Offset
0 Hz

MSG STATUS



5.1.5.2.2.1.3 Test RB = RB25#13





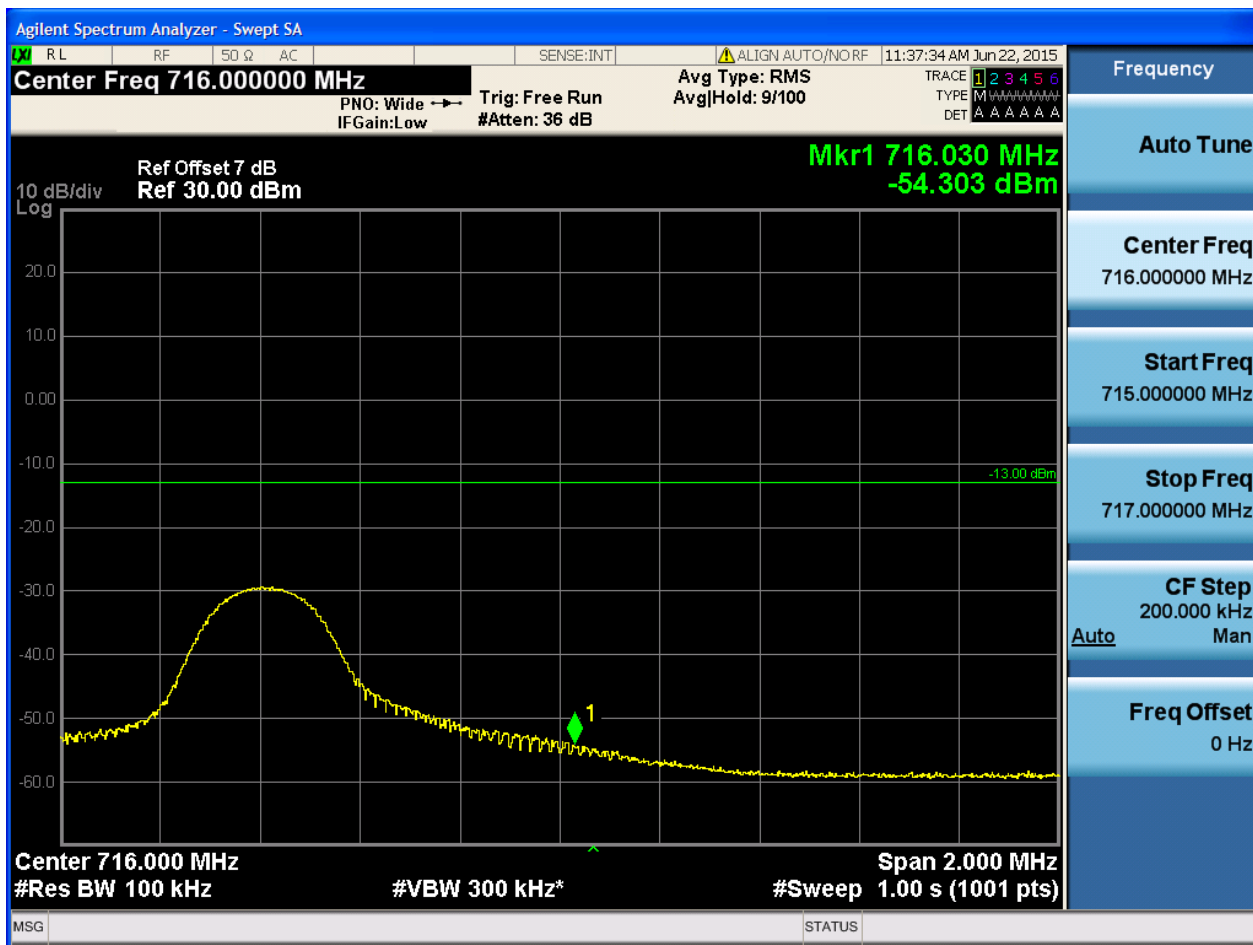
5.1.5.2.2.1.4 Test RB = RB50#0





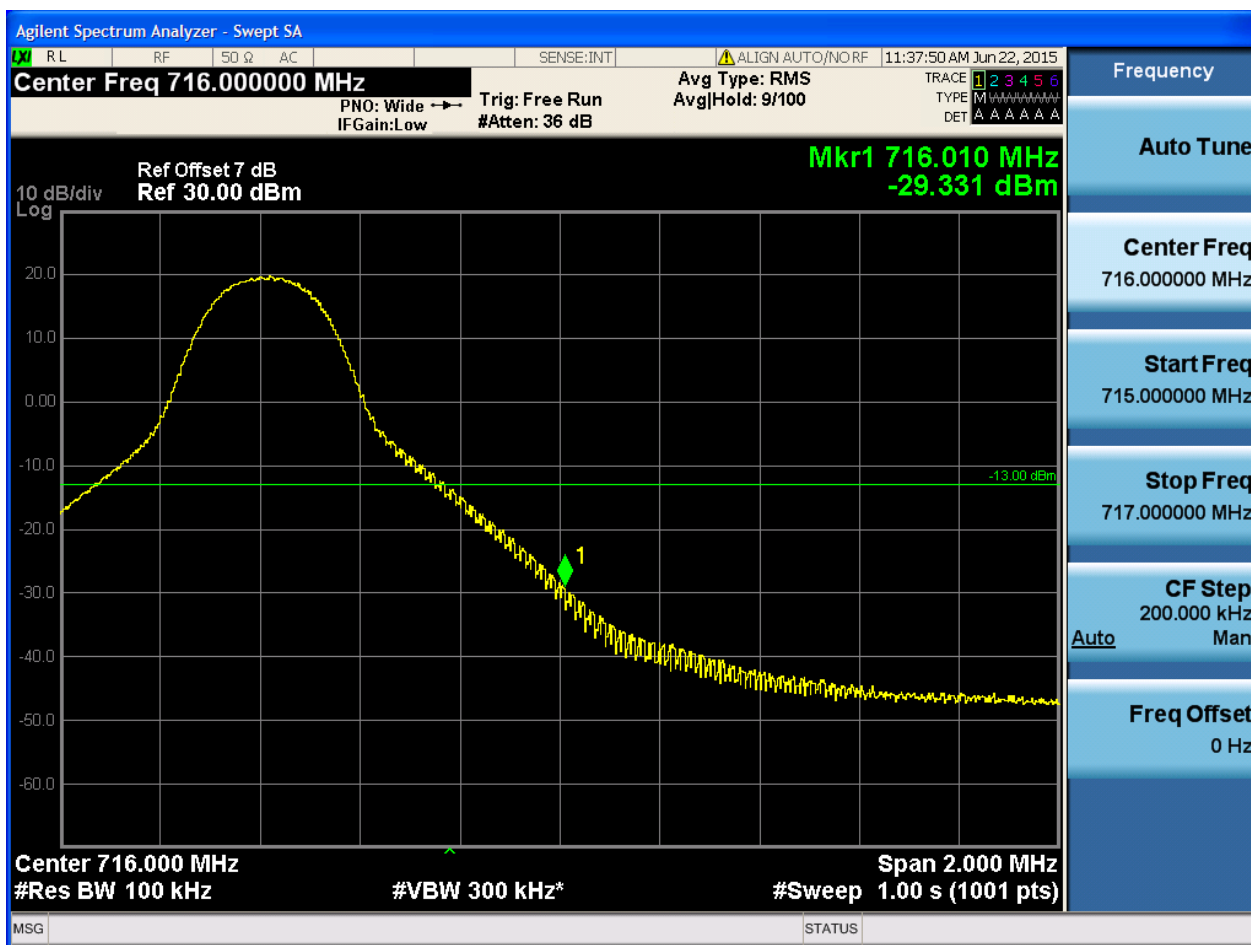
5.1.5.2.2.2 Test Channel = HCH

5.1.5.2.2.2.1 Test RB = RB1#0





5.1.5.2.2.2 Test RB = RB1#49





5.1.5.2.2.3 Test RB = RB25#13





5.1.5.2.2.4 Test RB = RB50#0





6Appendix_F: Spurious Emission at Antenna Terminal

NOTE: For the averaged unwanted emissions measurements, the measurement points in each sweep is greater than twice the Span/RBW in order to ensure bin-to-bin spacing of $< RBW/2$ so that narrowband signals are not lost between frequency bins. As to the present test item, the "Measurement Points = $k * (Span / RBW)$ " with k between 4 and 5, which results in an acceptable level error of less than 0.5 dB.

Part I - Test Plots

6.1 For LTE

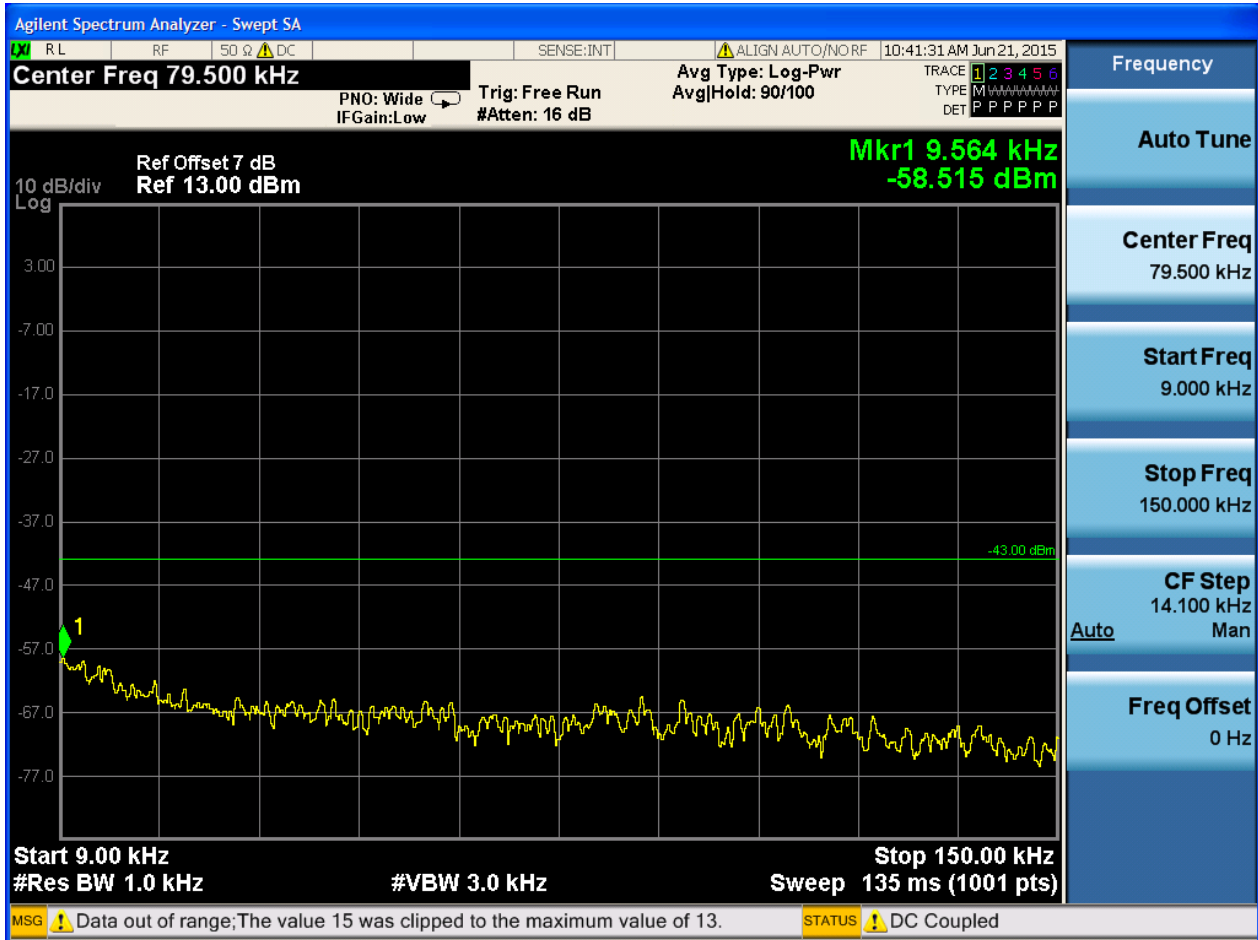
6.1.1 Test Band = BAND2

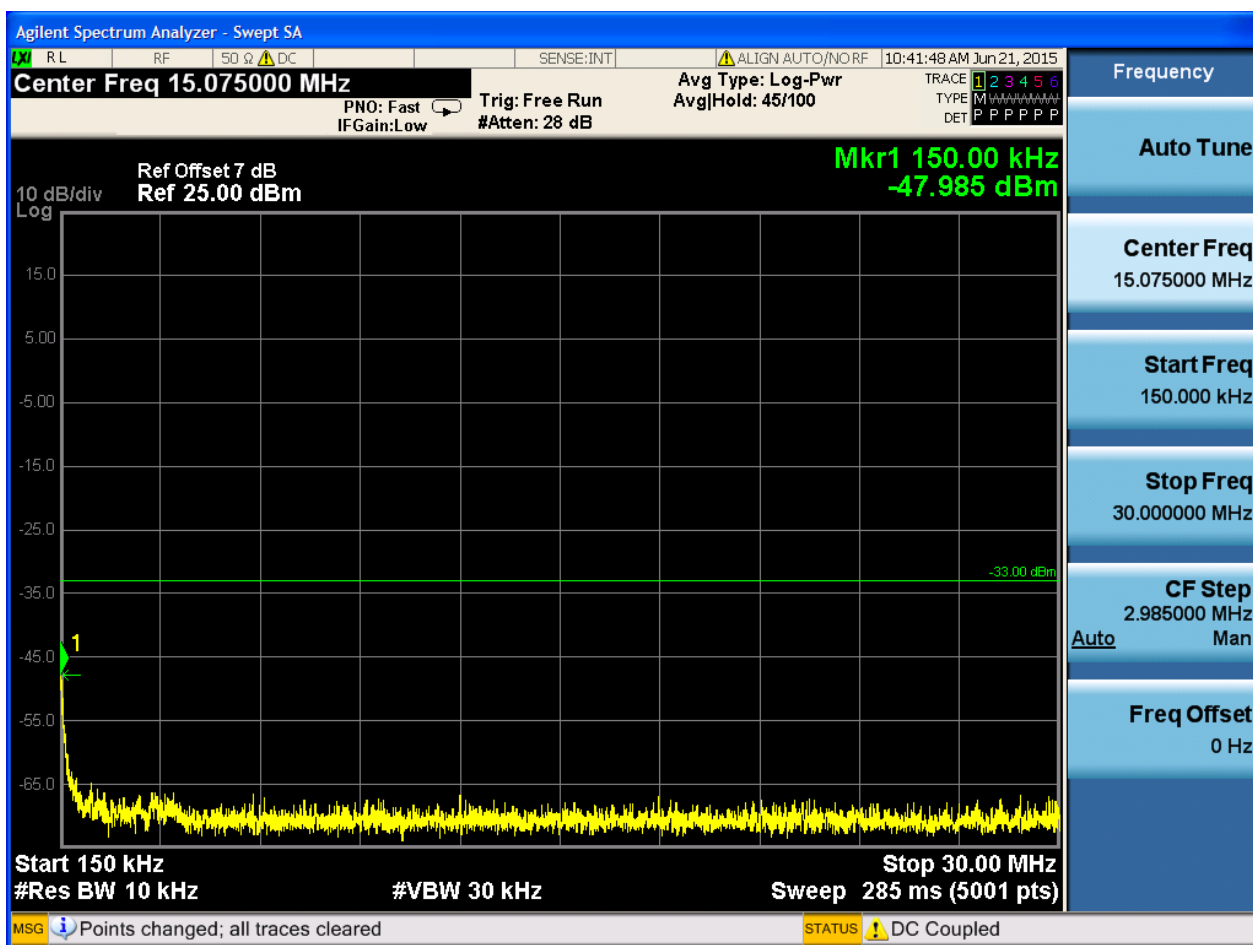
6.1.1.1 Test Mode = LTE/TM1

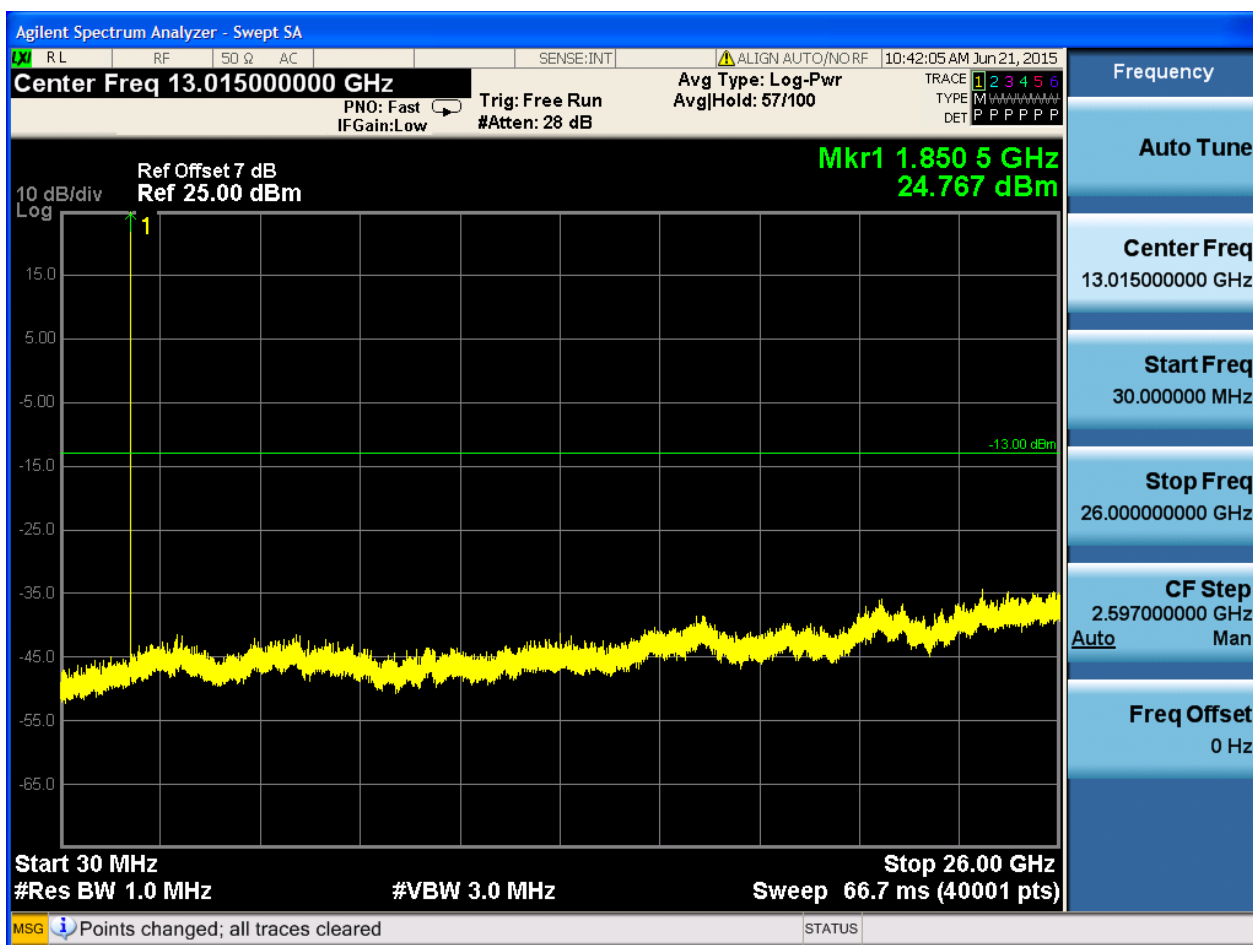
6.1.1.1.1 Test Bandwidth = 1.4

6.1.1.1.1.1 Test Channel = LCH

6.1.1.1.1.1.1 Test RB = RB1#0



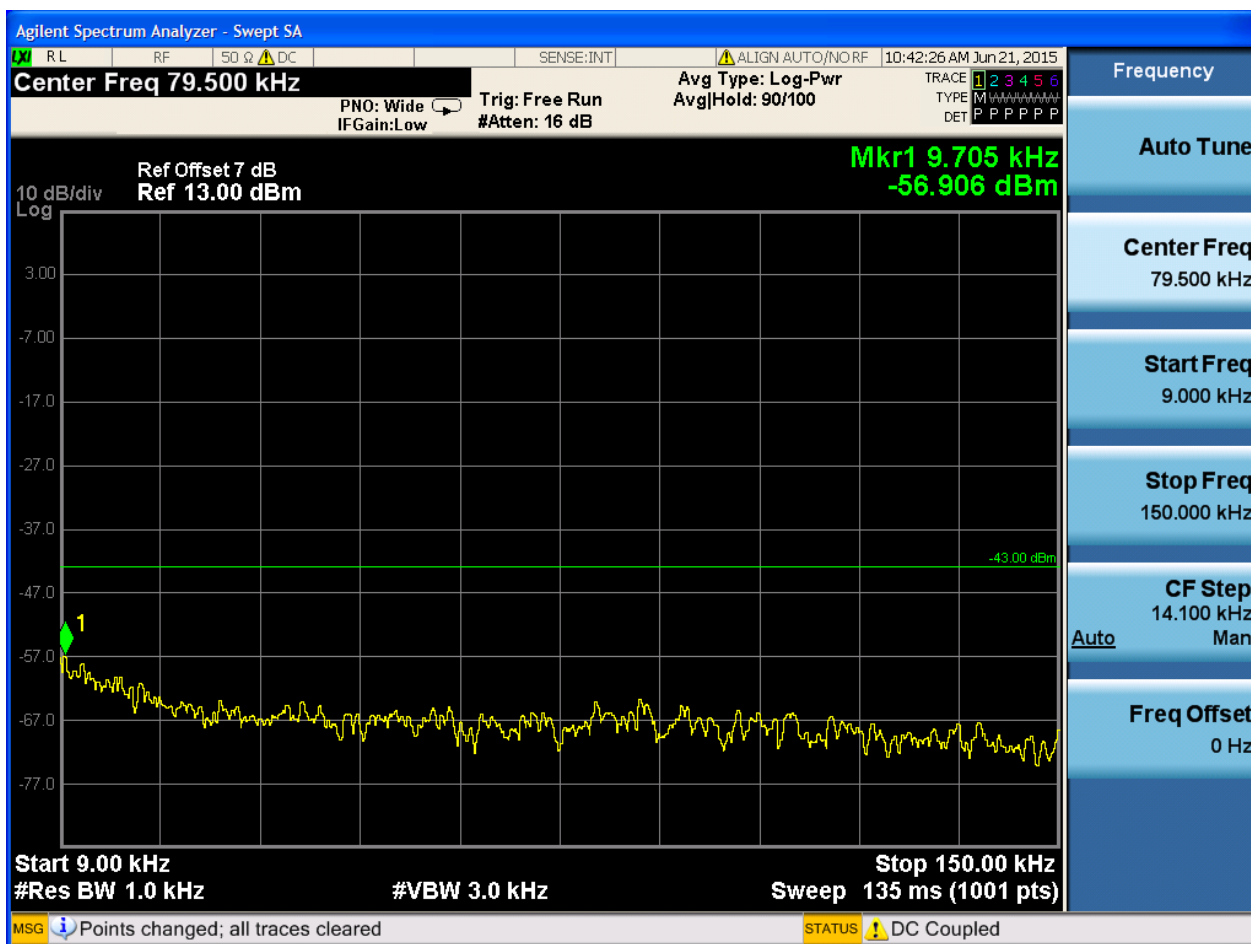


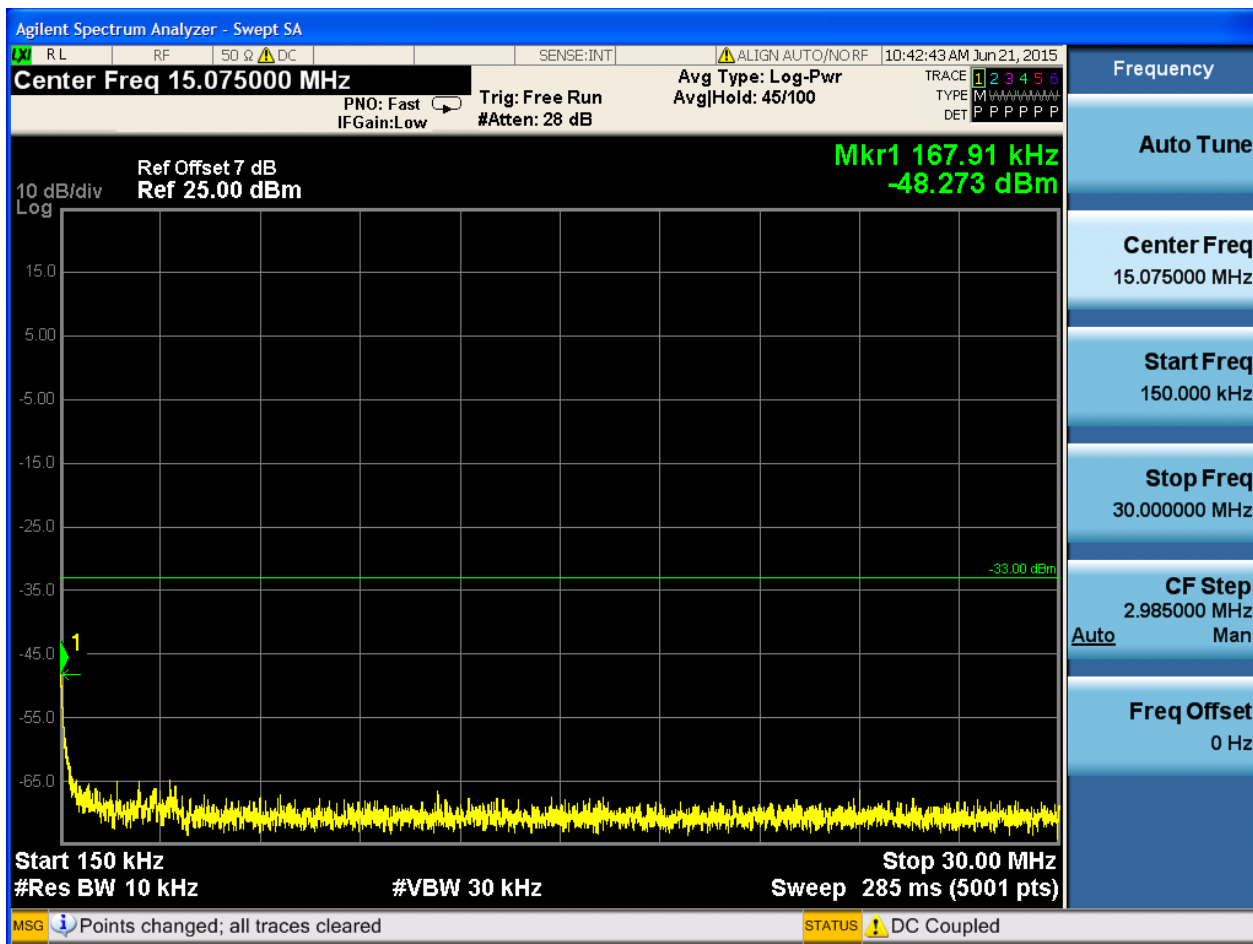


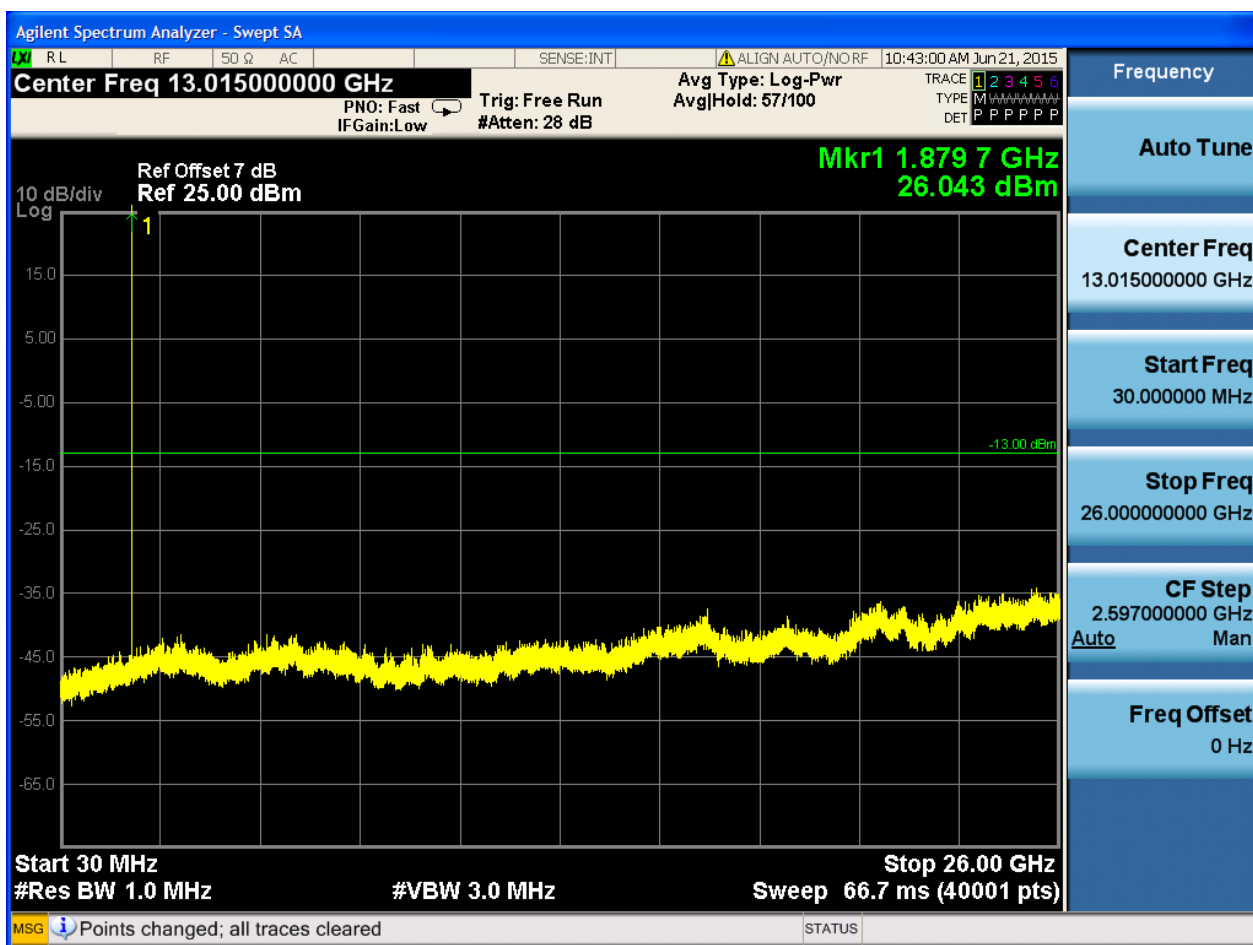


6.1.1.1.1.2 Test Channel = MCH

6.1.1.1.1.2.1 Test RB = RB1#0



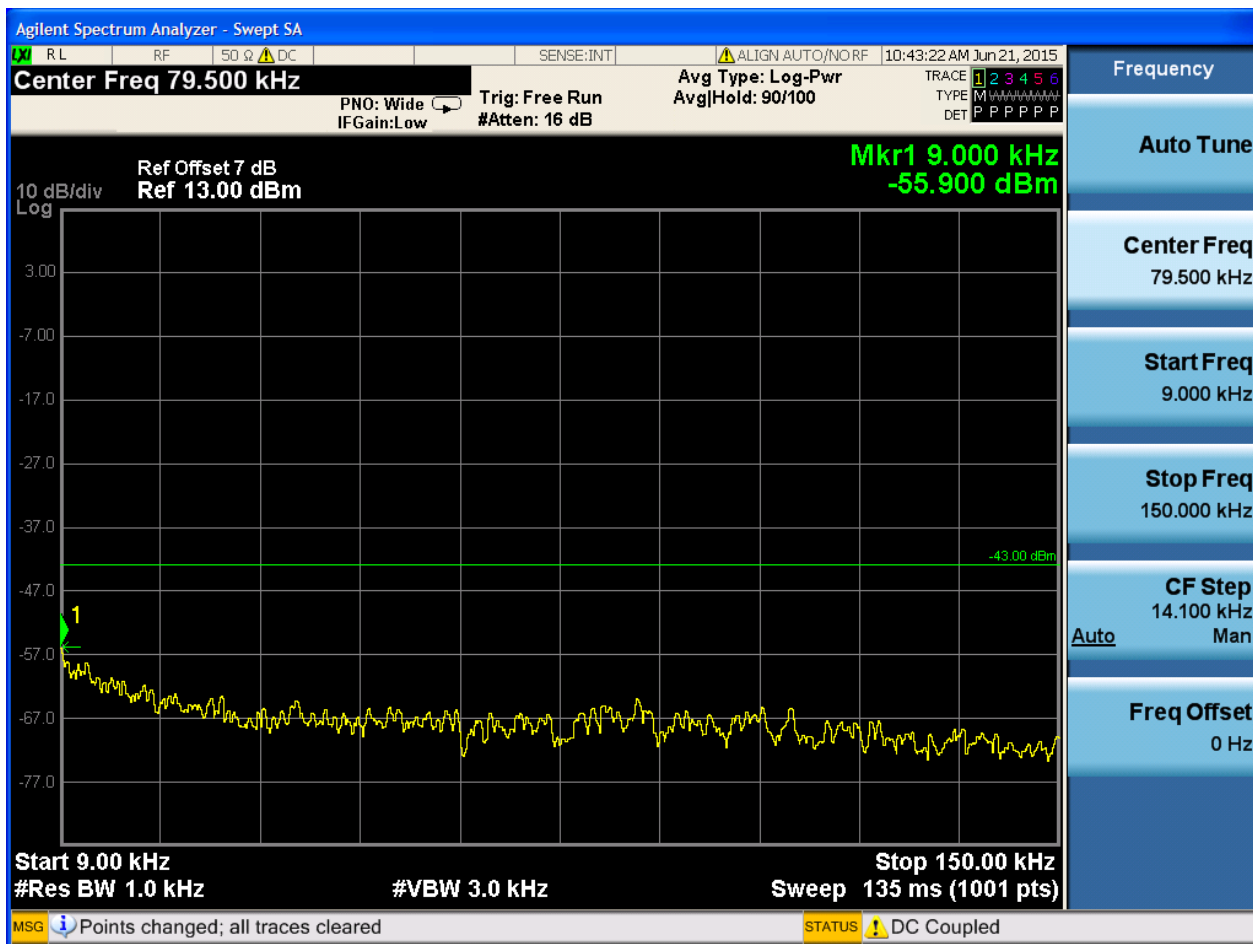


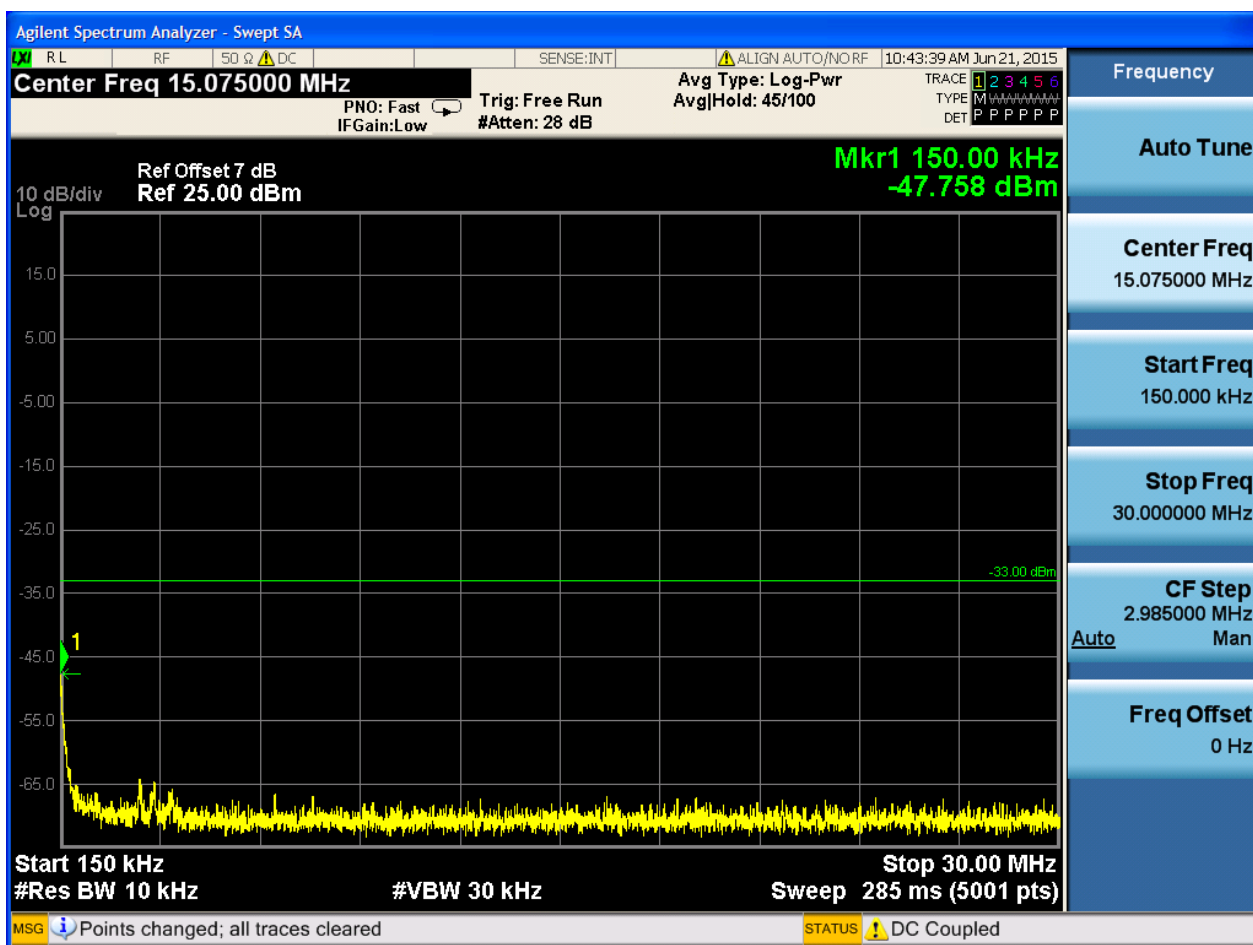


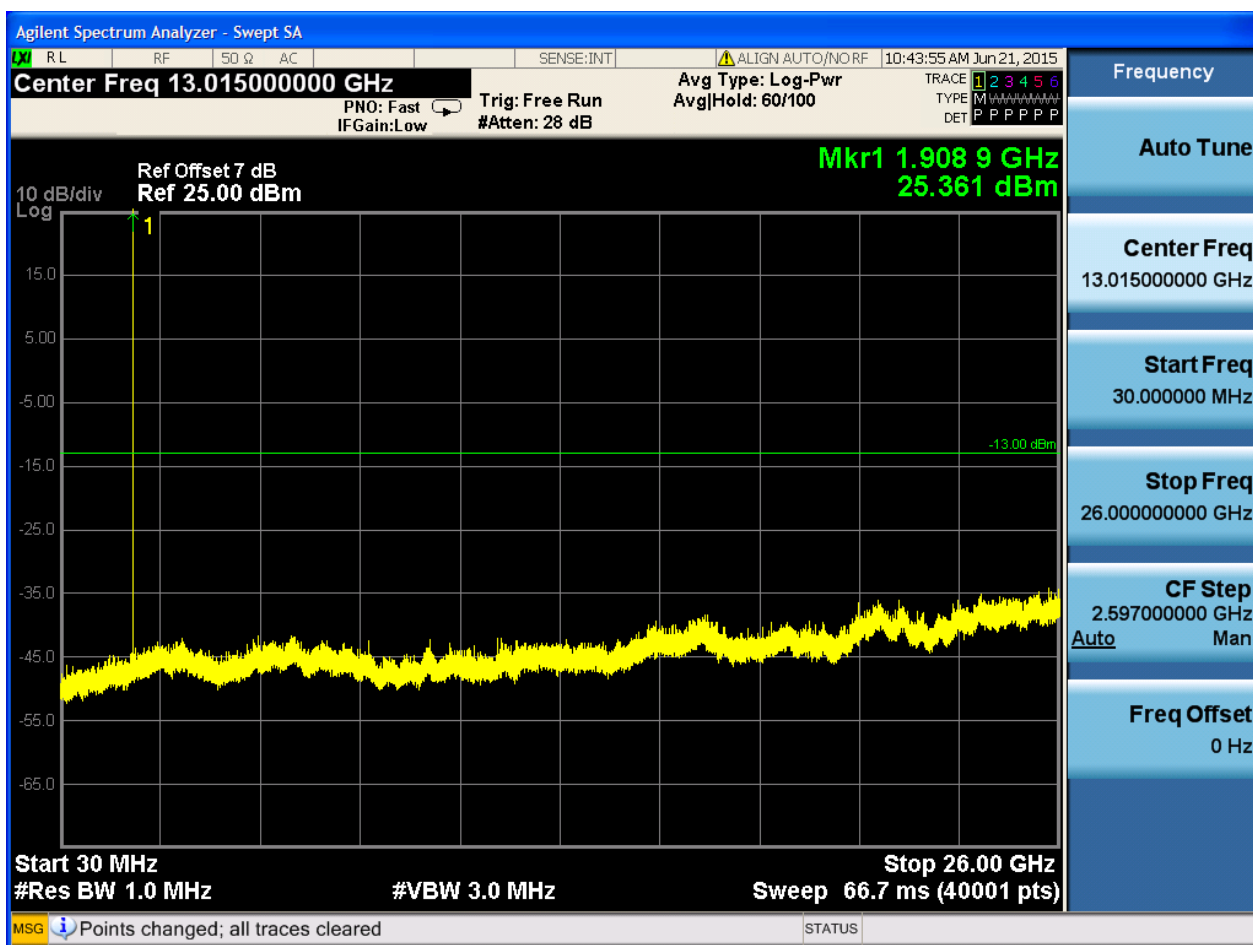


6.1.1.1.1.3 Test Channel = HCH

6.1.1.1.1.3.1 Test RB = RB1#0





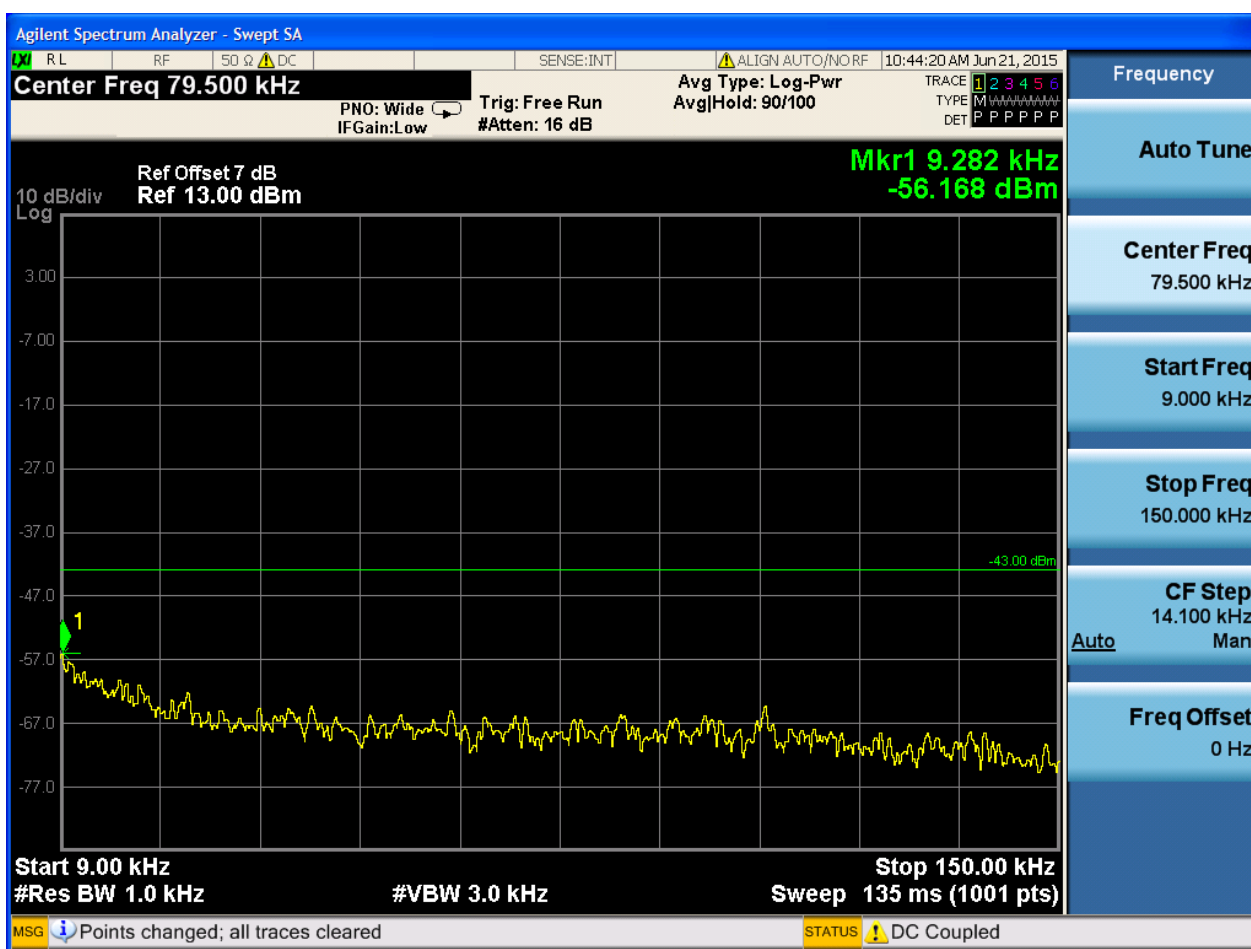


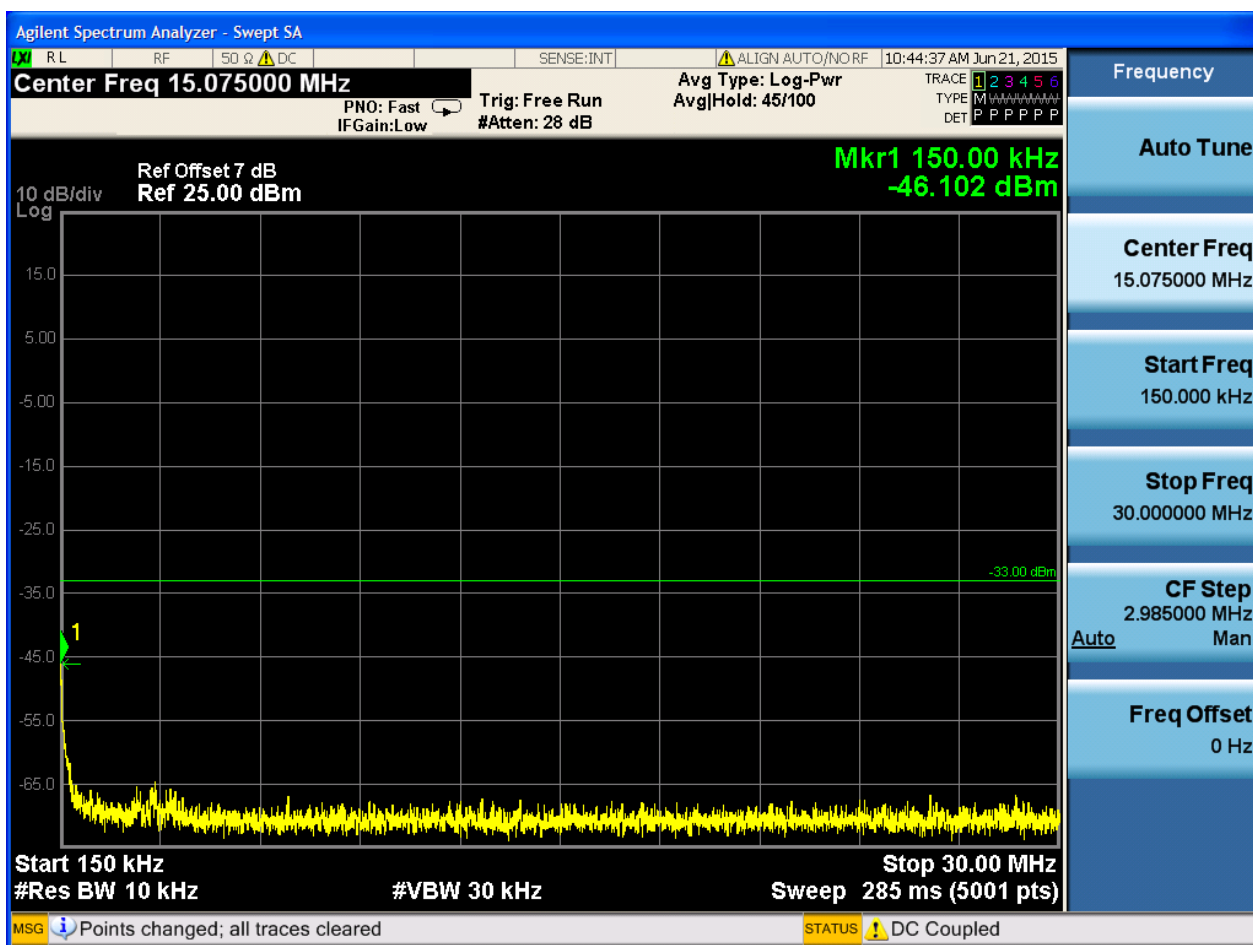


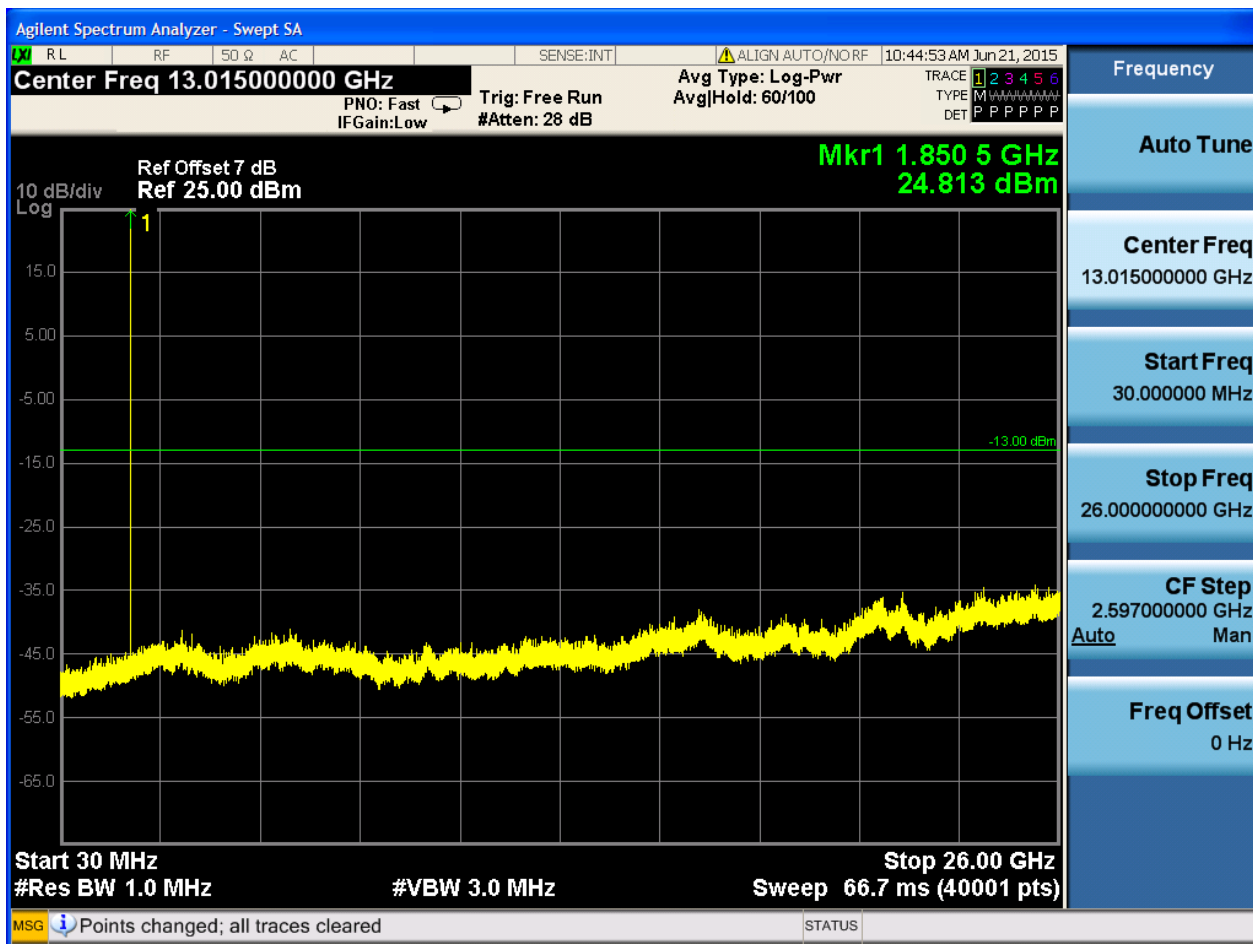
6.1.1.1.2 Test Bandwidth = 3

6.1.1.1.2.1 Test Channel = LCH

6.1.1.1.2.1.1 Test RB = RB1#0









6.1.1.1.2.2 Test Channel = MCH

6.1.1.1.2.2.1 Test RB = RB1#0

