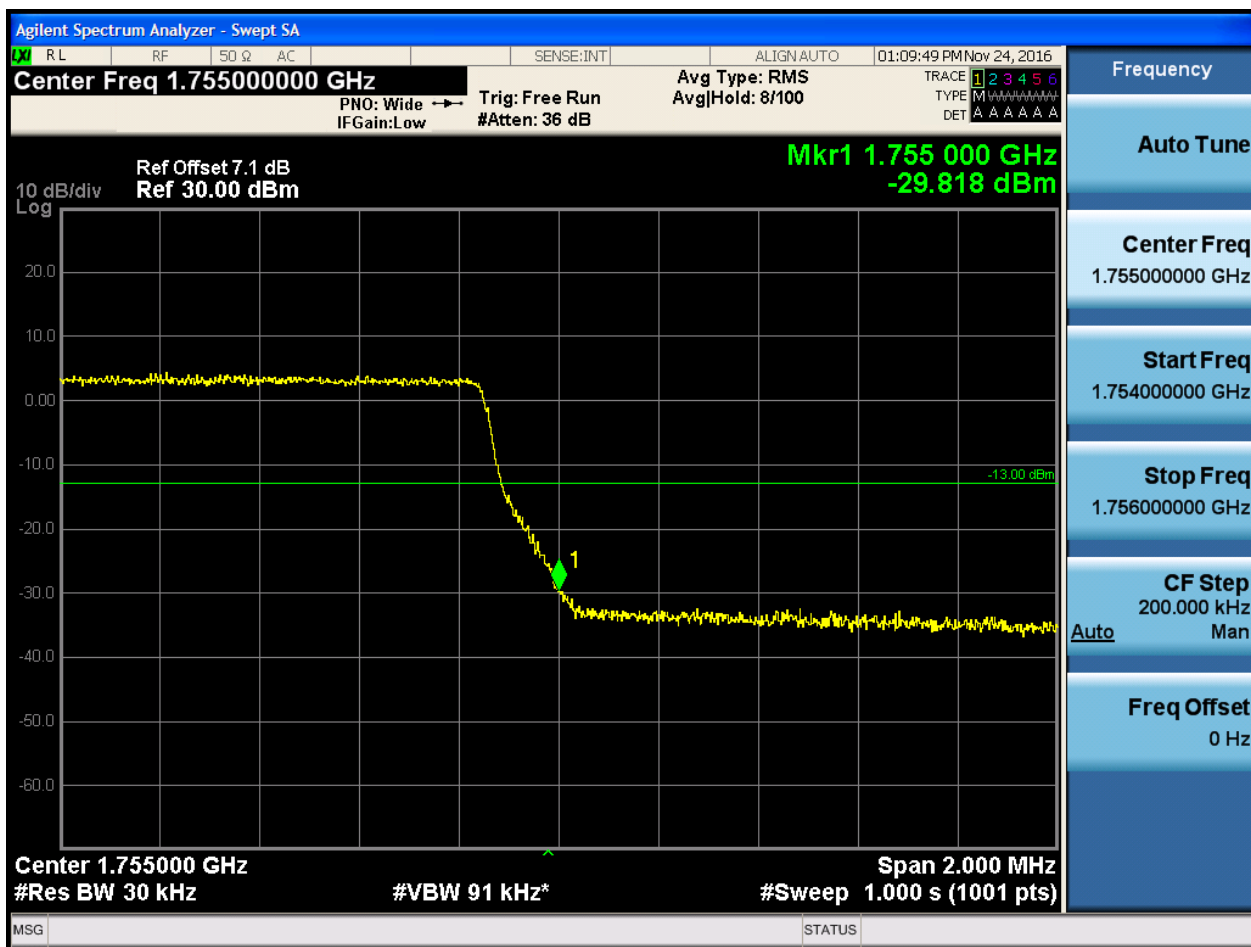




5.1.1.2.2.4 Test RB = RB15#0

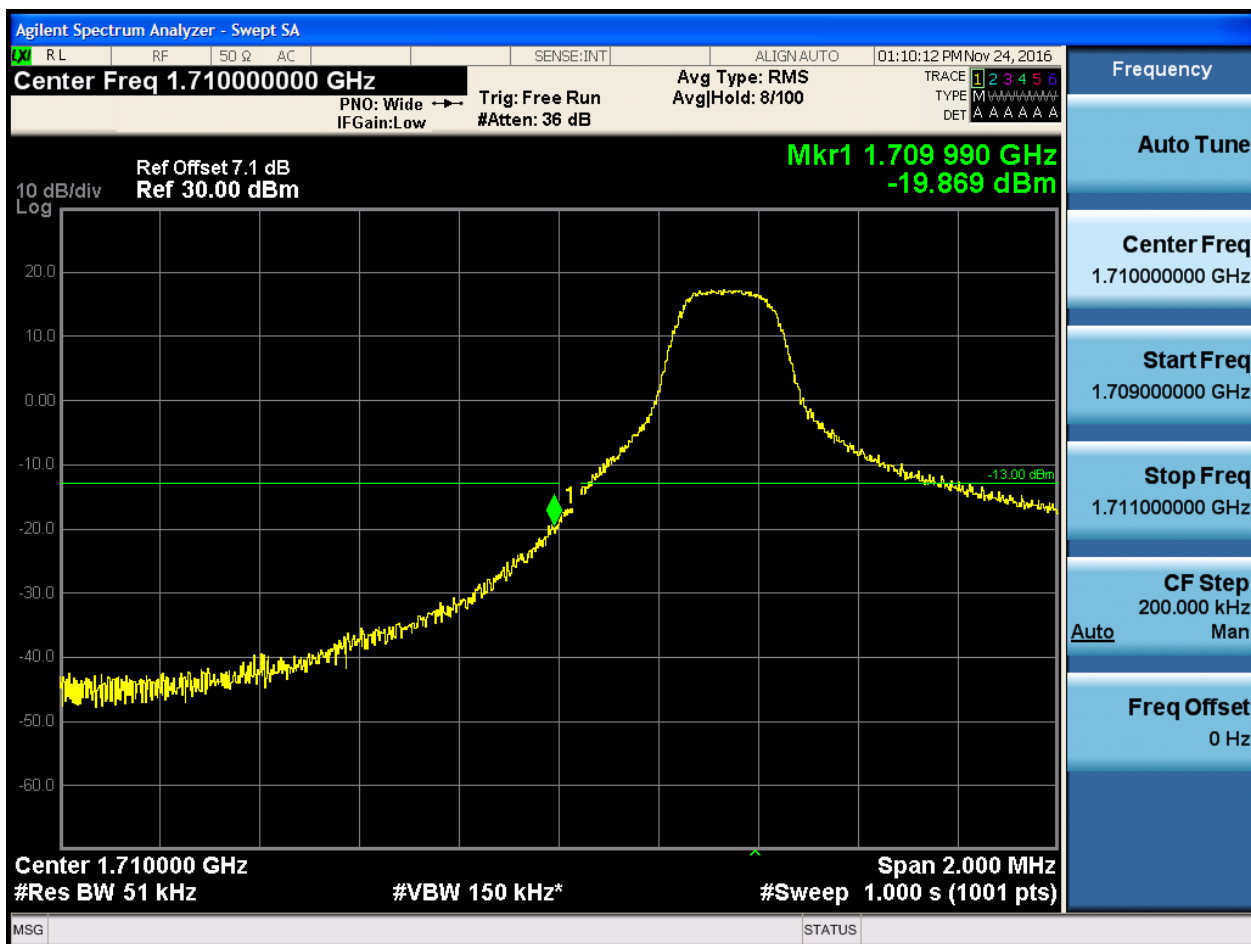




5.1.1.2.3 Test Bandwidth = 5

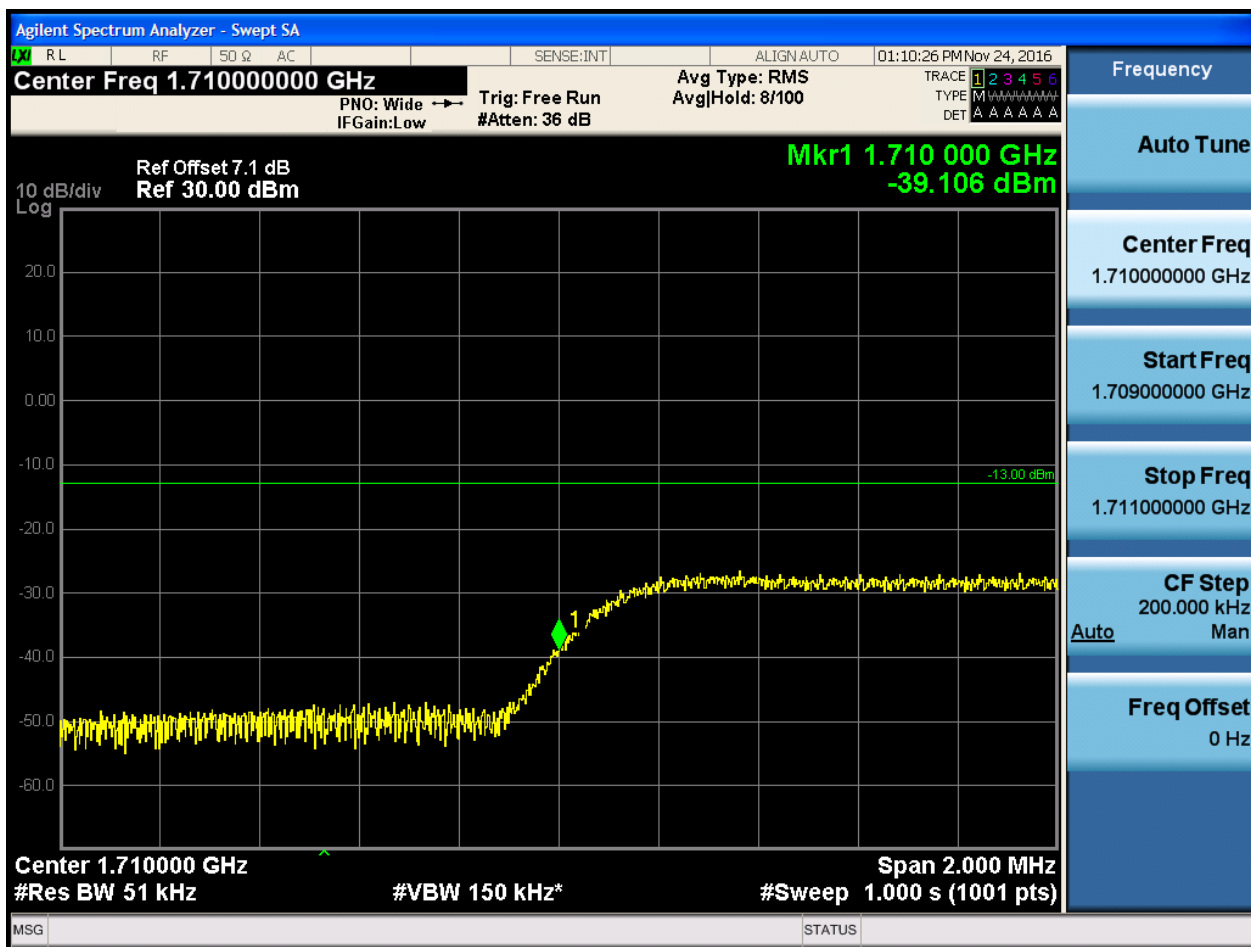
5.1.1.2.3.1 Test Channel = LCH

5.1.1.2.3.1.1 Test RB = RB1#0





5.1.1.2.3.1.2 Test RB = RB1#24





Agilent Spectrum Analyzer - Swept SA

RL RF 50 Ω AC SENSE:INT ALIGN AUTO 01:10:40 PM Nov 24, 2016

Center Freq 1.710000000 GHz Avg Type: RMS
PNO: Wide IFGain: Low Trig: Free Run AvgHold: 8/100
#Atten: 36 dB

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

Ref Offset 7.1 dB
Ref 30.00 dBm

Mkr1 1.709 990 GHz
-30.177 dBm

10 dB/div
Log

-13.00 dBm

Center 1.710000 GHz
#Res BW 51 kHz

#VBW 150 kHz*

Span 2.000 MHz
#Sweep 1.000 s (1001 pts)

MSG STATUS

Frequency

Auto Tune

Center Freq
1.710000000 GHz

Start Freq
1.709000000 GHz

Stop Freq
1.711000000 GHz

CF Step
200.000 kHz
Auto Man

Freq Offset
0 Hz



Agilent Spectrum Analyzer - Swept SA

RL RF 50 Ω AC SENSE:INT ALIGN AUTO 01:10:55 PM Nov 24, 2016

Center Freq 1.710000000 GHz Avg Type: RMS
PNO: Wide IFGain:Low Trig: Free Run AvgHold: 8/100
#Atten: 36 dB

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

Ref Offset 7.1 dB
Ref 30.00 dBm

Mkr1 1.710 000 GHz
-29.030 dBm

10 dB/div
Log

-13.00 dBm

Center 1.710000 GHz
#Res BW 51 kHz
#VBW 150 kHz*
Span 2.000 MHz
#Sweep 1.000 s (1001 pts)

MSG STATUS

Frequency

Auto Tune

Center Freq
1.710000000 GHz

Start Freq
1.709000000 GHz

Stop Freq
1.711000000 GHz

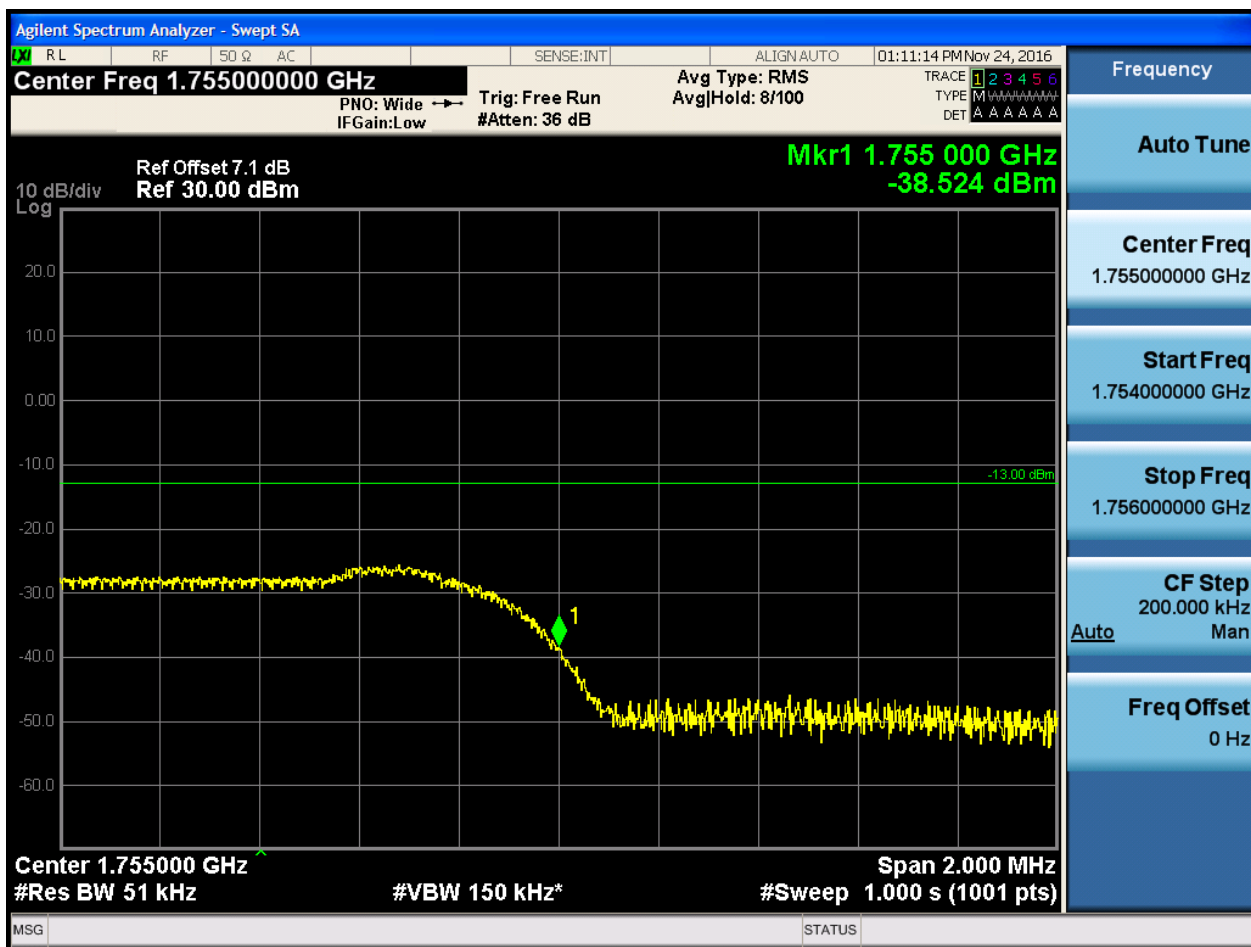
CF Step
200.000 kHz
Auto Man

Freq Offset
0 Hz



5.1.1.2.3.2 Test Channel = HCH

5.1.1.2.3.2.1 Test RB = RB1#0





Agilent Spectrum Analyzer - Swept SA

RL RF 50 Ω AC SENSE:INT ALIGN AUTO 01:11:29 PM Nov 24, 2016

Center Freq 1.755000000 GHz Avg Type: RMS
PNO: Wide IFGain:Low Trig: Free Run AvgHold: 8/100
#Atten: 36 dB

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

Ref Offset 7.1 dB
Ref 30.00 dBm

Mkr1 1.755 000 GHz
-21.603 dBm

10 dB/div
Log

Center 1.755000 GHz
#Res BW 51 kHz
#VBW 150 kHz*
Span 2.000 MHz
#Sweep 1.000 s (1001 pts)

MSG STATUS

Frequency

Auto Tune

Center Freq
1.755000000 GHz

Start Freq
1.754000000 GHz

Stop Freq
1.756000000 GHz

CF Step
200.000 kHz
Auto Man

Freq Offset
0 Hz



Agilent Spectrum Analyzer - Swept SA

RL RF 50 Ω AC SENSE:INT ALIGN AUTO 01:11:43 PM Nov 24, 2016

Center Freq 1.755000000 GHz Avg Type: RMS
PNO: Wide IFGain:Low Trig: Free Run AvgHold: 8/100
#Atten: 36 dB

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

Ref Offset 7.1 dB
Ref 30.00 dBm

Mkr1 1.755 040 GHz
-31.470 dBm

10 dB/div
Log

-13.00 dBm

Center 1.755000 GHz
#Res BW 51 kHz

#VBW 150 kHz*

Span 2.000 MHz
#Sweep 1.000 s (1001 pts)

MSG STATUS

Frequency

Auto Tune

Center Freq
1.755000000 GHz

Start Freq
1.754000000 GHz

Stop Freq
1.756000000 GHz

CF Step
200.000 kHz
Auto Man

Freq Offset
0 Hz



5.1.1.2.3.2.4 Test RB = RB25#0

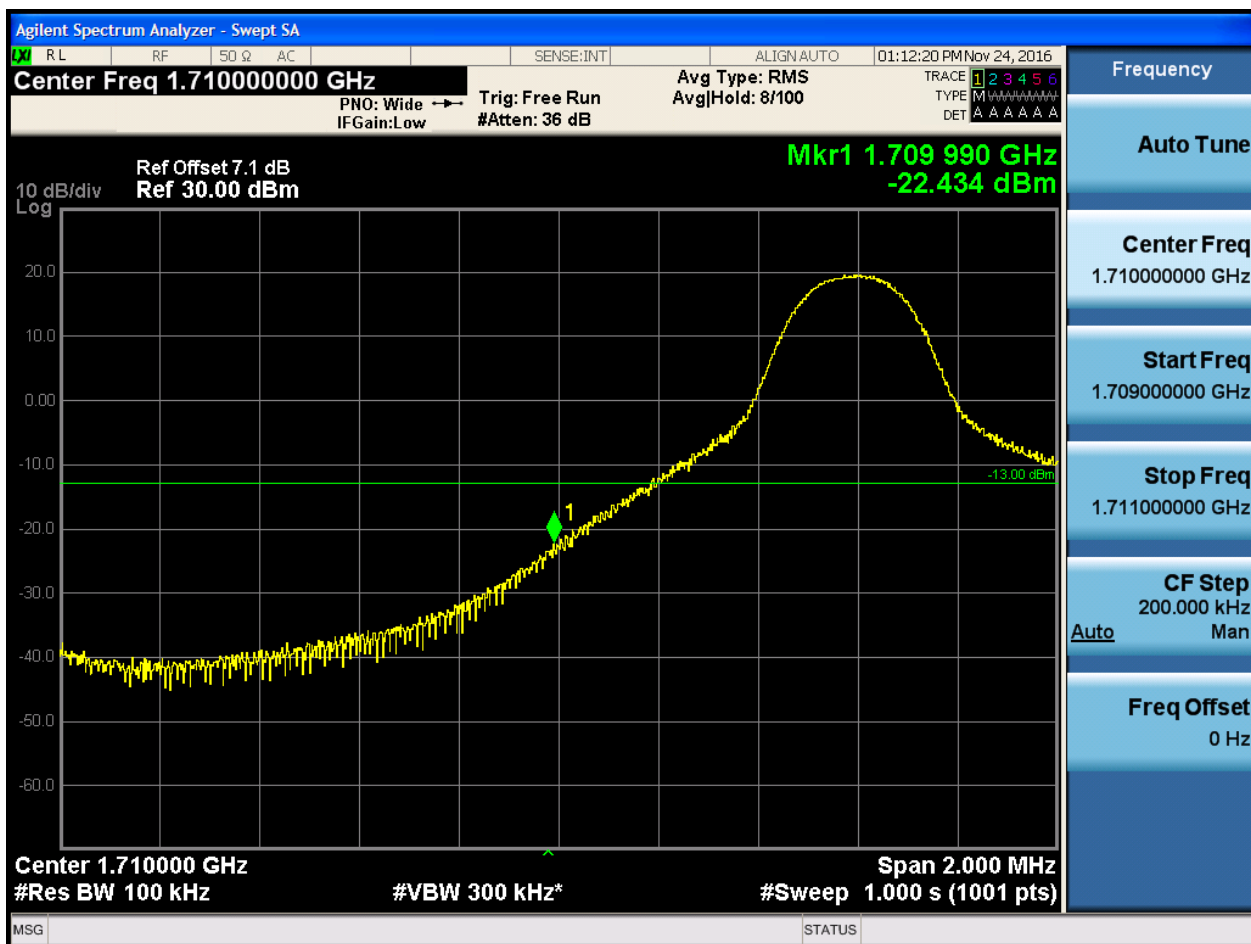




5.1.1.2.4 Test Bandwidth = 10

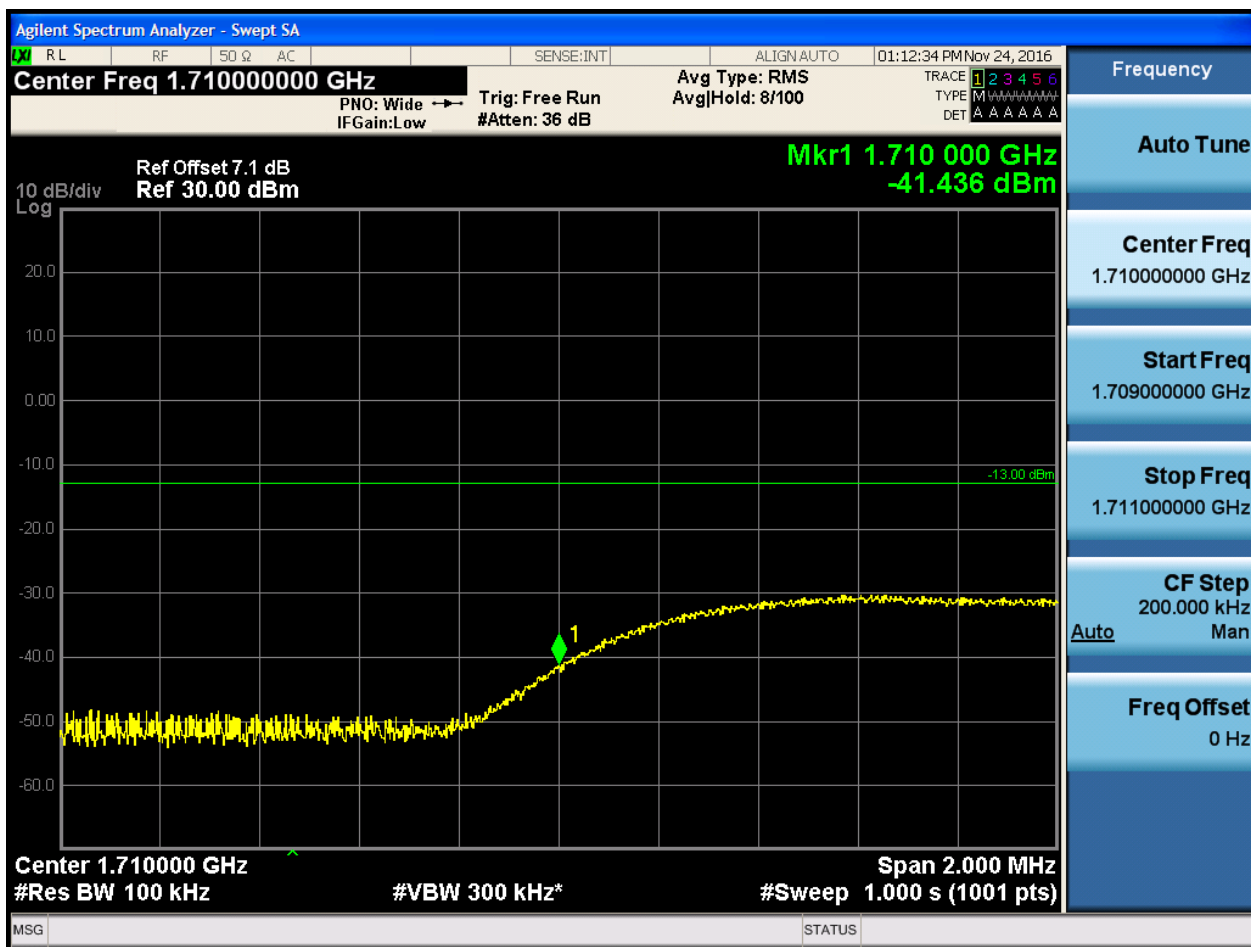
5.1.1.2.4.1 Test Channel = LCH

5.1.1.2.4.1.1 Test RB = RB1#0





5.1.1.2.4.1.2 Test RB = RB1#49





Agilent Spectrum Analyzer - Swept SA

RL RF 50 Ω AC SENSE:INT ALIGN AUTO 01:12:48 PM Nov 24, 2016

Center Freq 1.710000000 GHz Avg Type: RMS
PNO: Wide Trig: Free Run AvgHold: 8/100
IFGain:Low #Atten: 36 dB

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

Ref Offset 7.1 dB
Ref 30.00 dBm

Mkr1 1.709 990 GHz
-32.736 dBm

10 dB/div
Log

Center 1.710000 GHz
#Res BW 100 kHz
#VBW 300 kHz*
Span 2.000 MHz
#Sweep 1.000 s (1001 pts)

MSG STATUS

Frequency

Auto Tune

Center Freq
1.710000000 GHz

Start Freq
1.709000000 GHz

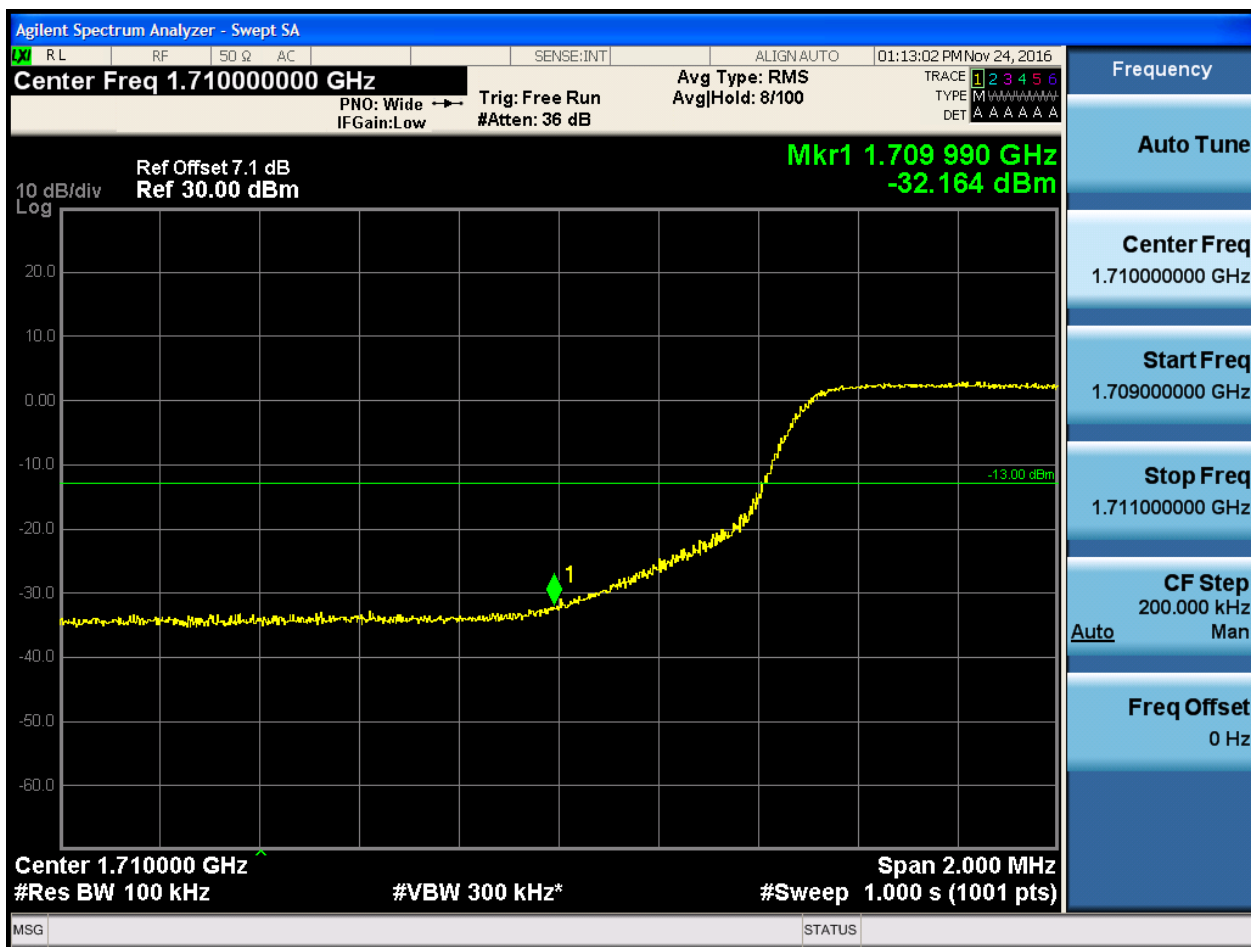
Stop Freq
1.711000000 GHz

CF Step
200.000 kHz
Auto Man

Freq Offset
0 Hz



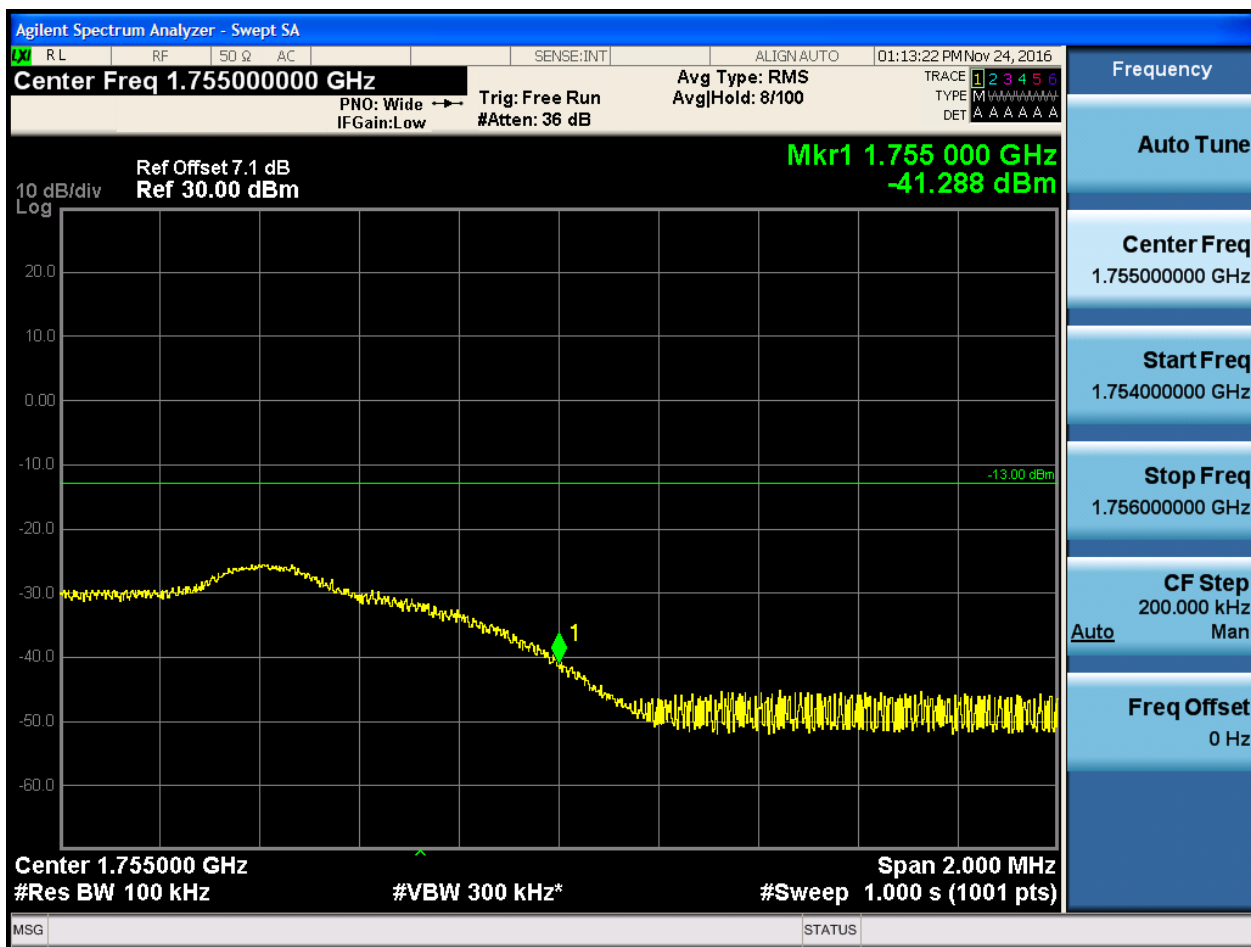
5.1.1.2.4.1.4 Test RB = RB50#0





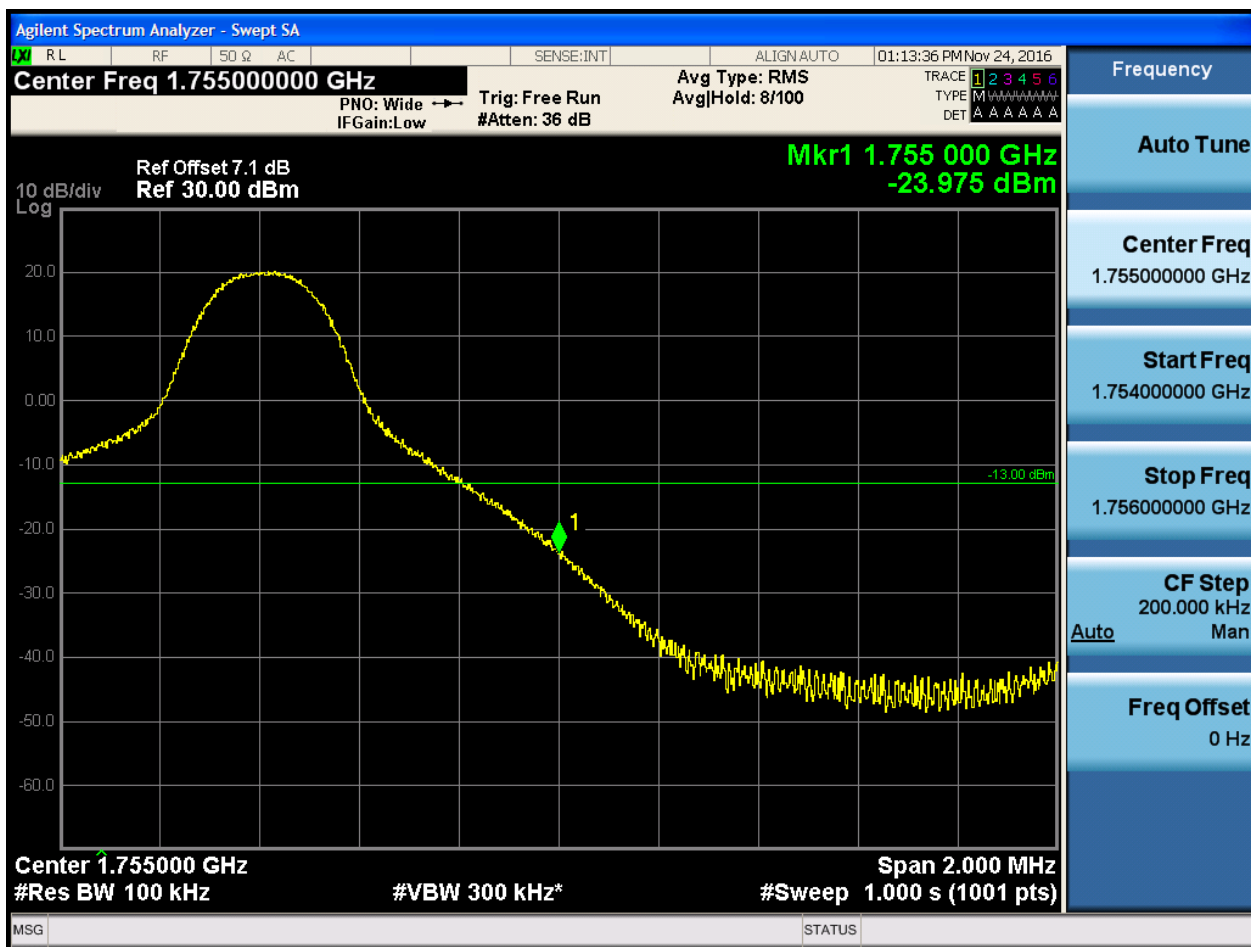
5.1.1.2.4.2 Test Channel = HCH

5.1.1.2.4.2.1 Test RB = RB1#0





5.1.1.2.4.2.2 Test RB = RB1#49





Agilent Spectrum Analyzer - Swept SA

RL RF 50 Ω AC SENSE:INT ALIGN AUTO 01:13:51 PM Nov 24, 2016

Center Freq 1.755000000 GHz Avg Type: RMS
PNO: Wide IFGain:Low Trig: Free Run AvgHold: 8/100
#Atten: 36 dB

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

Ref Offset 7.1 dB
Ref 30.00 dBm

Mkr1 1.755 000 GHz
-32.018 dBm

10 dB/div
Log

Center 1.755000 GHz
#Res BW 100 kHz
#VBW 300 kHz*
Span 2.000 MHz
#Sweep 1.000 s (1001 pts)

MSG STATUS

Frequency

Auto Tune

Center Freq
1.755000000 GHz

Start Freq
1.754000000 GHz

Stop Freq
1.756000000 GHz

CF Step
200.000 kHz
Auto Man

Freq Offset
0 Hz



5.1.1.2.4.2.4 Test RB = RB50#0

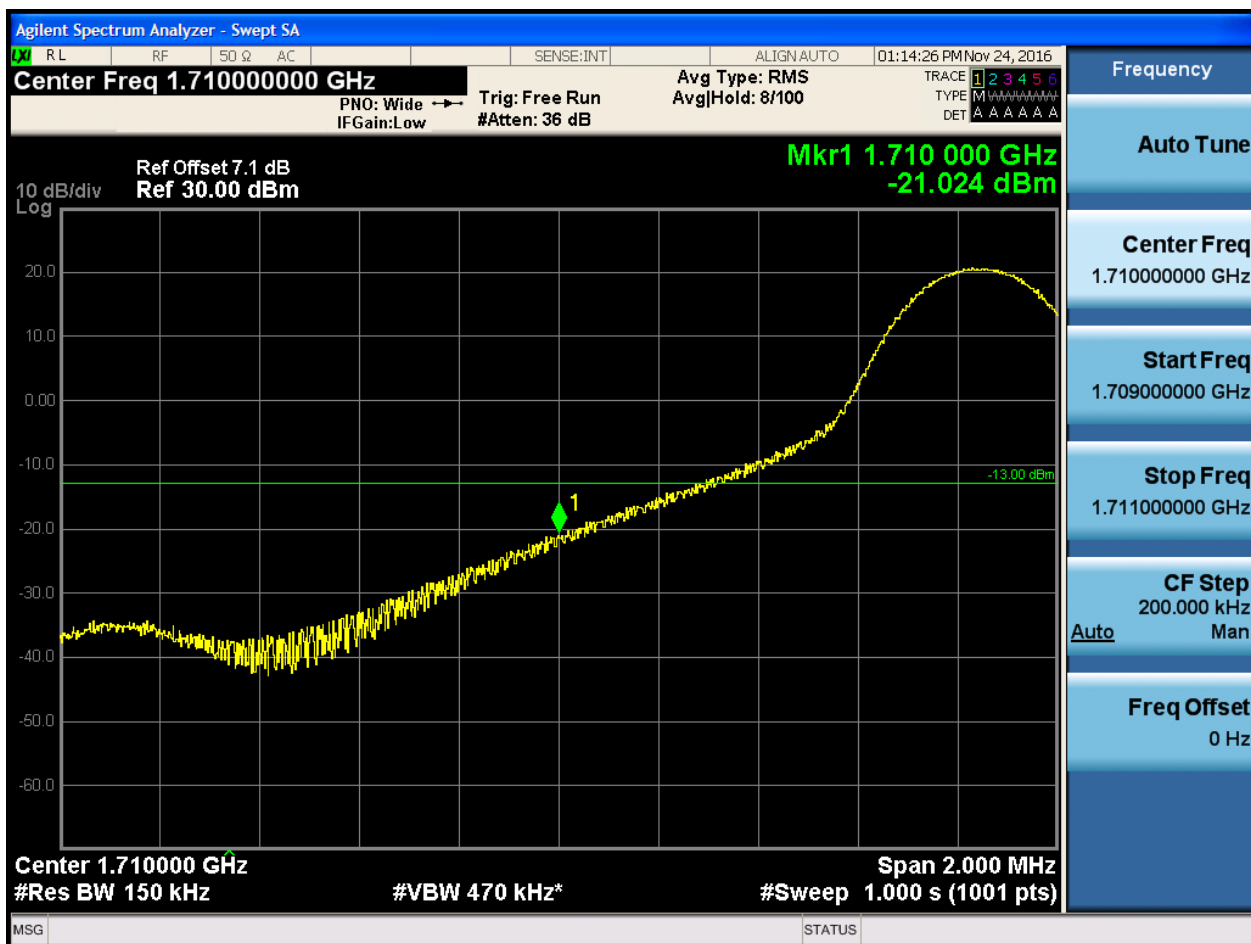




5.1.1.2.5 Test Bandwidth = 15

5.1.1.2.5.1 Test Channel = LCH

5.1.1.2.5.1.1 Test RB = RB1#0

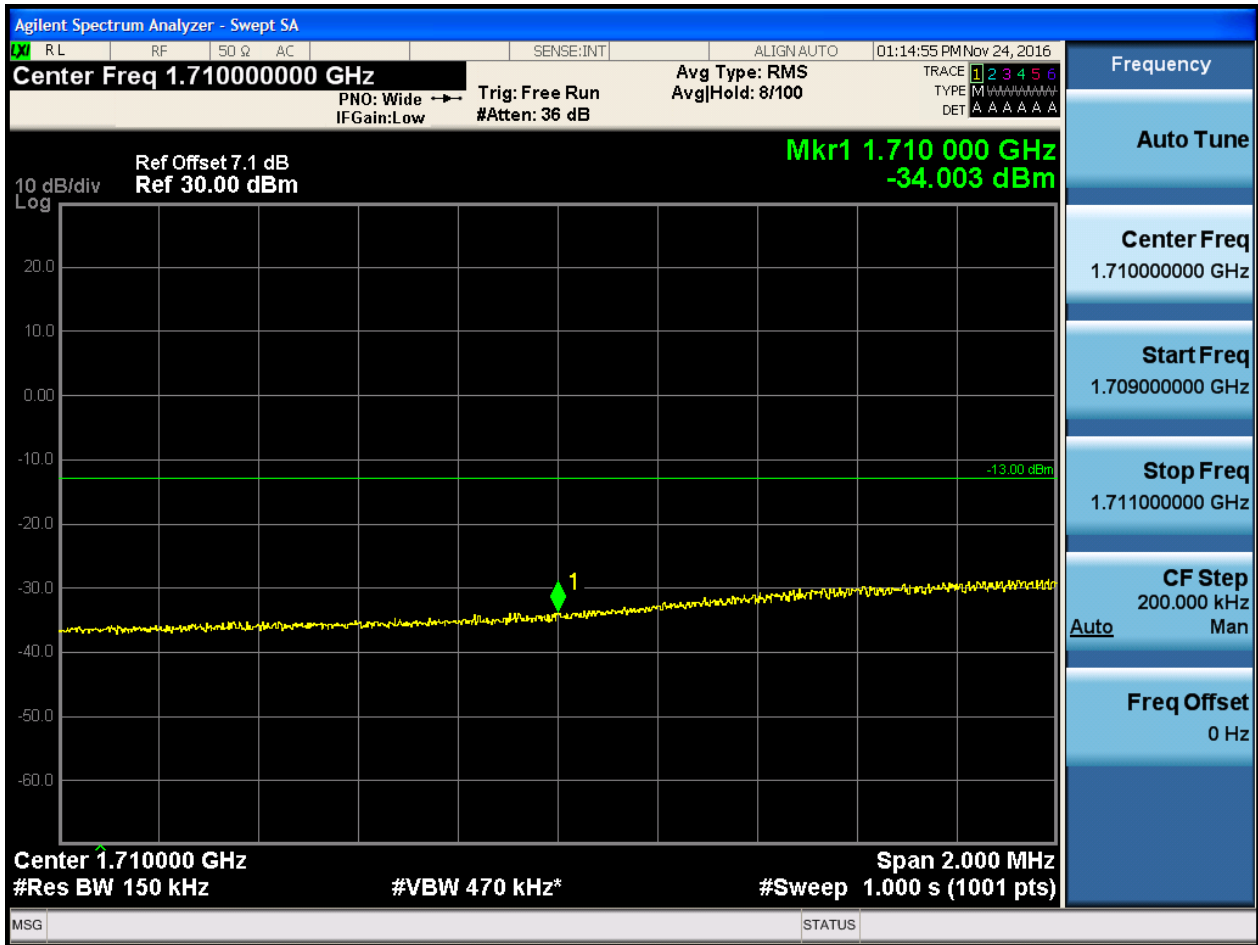




5.1.1.2.5.1.2 Test RB = RB1#74



5.1.1.2.5.1.3 Test RB = RB38#19





Agilent Spectrum Analyzer - Swept SA

RL RF 50 Ω AC SENSE:INT ALIGN AUTO 01:15:09 PM Nov 24, 2016

Center Freq 1.710000000 GHz Avg Type: RMS
PNO: Wide IFGain:Low Trig: Free Run AvgHold: 8/100
#Atten: 36 dB

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

Ref Offset 7.1 dB
Ref 30.00 dBm

Mkr1 1.709 980 GHz
-32.431 dBm

10 dB/div
Log

Center 1.710000 GHz
#Res BW 150 kHz
#VBW 470 kHz*
Span 2.000 MHz
#Sweep 1.000 s (1001 pts)

MSG STATUS

Frequency

Auto Tune

Center Freq
1.710000000 GHz

Start Freq
1.709000000 GHz

Stop Freq
1.711000000 GHz

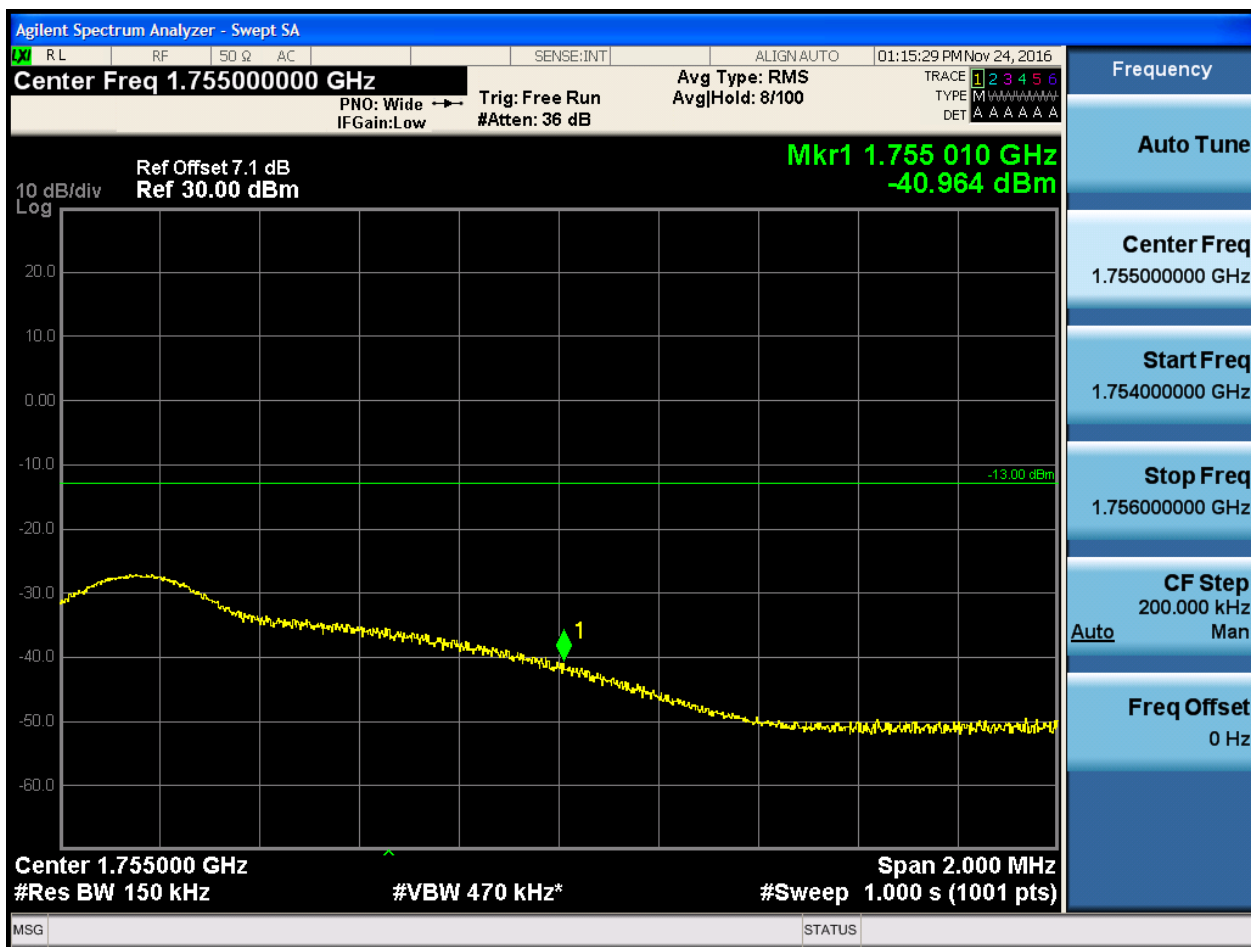
CF Step
200.000 kHz
Auto Man

Freq Offset
0 Hz



5.1.1.2.5.2 Test Channel = HCH

5.1.1.2.5.2.1 Test RB = RB1#0





Agilent Spectrum Analyzer - Swept SA

Center Freq 1.755000000 GHz

Ref Offset 7.1 dB
Ref 30.00 dBm

10 dB/div
Log

Mkr1 1.755 000 GHz
-22.452 dBm

Center 1.755000 GHz
#Res BW 150 kHz
#VBW 470 kHz*

Span 2.000 MHz
#Sweep 1.000 s (1001 pts)

Frequency

Auto Tune

Center Freq
1.755000000 GHz

Start Freq
1.754000000 GHz

Stop Freq
1.756000000 GHz

CF Step
200.000 kHz
Auto

Freq Offset
0 Hz

MSG STATUS



Agilent Spectrum Analyzer - Swept SA

Center Freq 1.755000000 GHz

Ref Offset 7.1 dB
Ref 30.00 dBm

10 dB/div
Log

Mkr1 1.755 010 GHz
-32.401 dBm

Center 1.755000 GHz
#Res BW 150 kHz
#VBW 470 kHz*

Span 2.000 MHz
#Sweep 1.000 s (1001 pts)

Auto Tune

Center Freq
1.755000000 GHz

Start Freq
1.754000000 GHz

Stop Freq
1.756000000 GHz

CF Step
200.000 kHz
Auto

Freq Offset
0 Hz

The image shows a spectrum analyzer display with a black background and a white grid. A horizontal line represents the noise floor, which is marked with a yellow diamond and the number '1'. The line is labeled 'Mkr1 1.755 010 GHz' and '-32.401 dBm'. The y-axis is labeled '10 dB/div' and 'Log'. The x-axis is labeled 'Center 1.755000 GHz' and 'Span 2.000 MHz'. The bottom of the screen shows various settings: '#Res BW 150 kHz', '#VBW 470 kHz*', and '#Sweep 1.000 s (1001 pts)'. On the right side, there is a blue sidebar with buttons for 'Auto Tune', 'Center Freq', 'Start Freq', 'Stop Freq', 'CF Step', and 'Freq Offset'. The top of the screen shows the title 'Agilent Spectrum Analyzer - Swept SA' and the date '01:15:57 PM Nov 24, 2016'.

5.1.1.2.5.2.4 Test RB = RB75#0

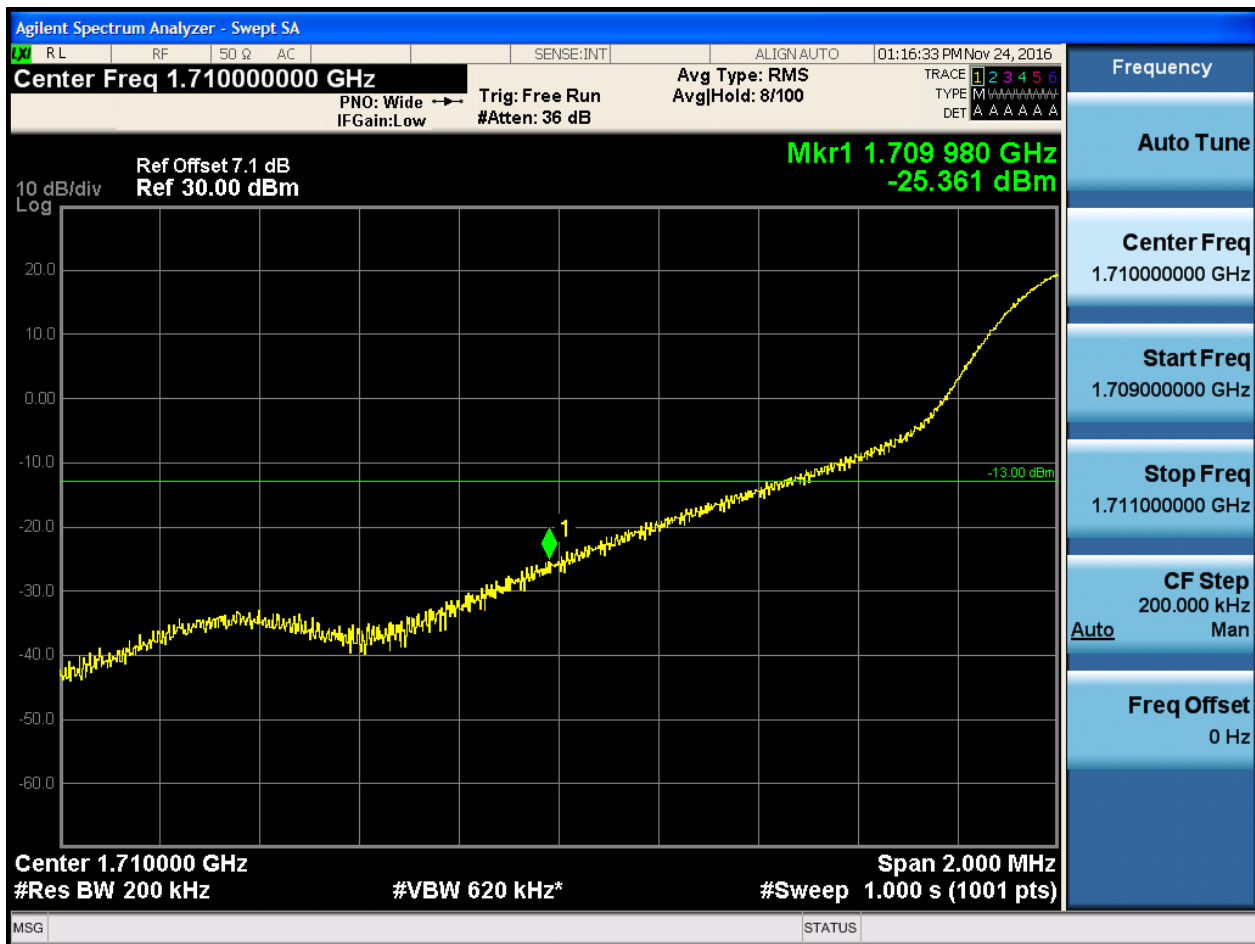




5.1.1.2.6 Test Bandwidth = 20

5.1.1.2.6.1 Test Channel = LCH

5.1.1.2.6.1.1 Test RB = RB1#0





5.1.1.2.6.1.2 Test RB = RB1#99





Agilent Spectrum Analyzer - Swept SA

Center Freq 1.710000000 GHz

Ref Offset 7.1 dB
Ref 30.00 dBm

10 dB/div
Log

Mkr1 1.709 950 GHz
-36.820 dBm

Center 1.710000 GHz
#Res BW 200 kHz
#VBW 620 kHz*

Span 2.000 MHz
#Sweep 1.000 s (1001 pts)

Auto Tune

Center Freq
1.710000000 GHz

Start Freq
1.709000000 GHz

Stop Freq
1.711000000 GHz

CF Step
200.000 kHz
Auto

Freq Offset
0 Hz



Agilent Spectrum Analyzer - Swept SA

Center Freq 1.710000000 GHz

Ref Offset 7.1 dB
Ref 30.00 dBm

10 dB/div
Log

Mkr1 1.709 990 GHz
-34.856 dBm

Trig: Free Run
#Atten: 36 dB

Avg Type: RMS
Avg/Hold: 8/100

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

Auto Tune

Center Freq
1.710000000 GHz

Start Freq
1.709000000 GHz

Stop Freq
1.711000000 GHz

CF Step
200.000 kHz
Auto Man

Freq Offset
0 Hz

Center 1.710000 GHz
#Res BW 200 kHz
#VBW 620 kHz*

Span 2.000 MHz
#Sweep 1.000 s (1001 pts)



5.1.1.2.6.2 Test Channel = HCH

5.1.1.2.6.2.1 Test RB = RB1#0





5.1.1.2.6.2.2 Test RB = RB1#99





5.1.1.2.6.2.3 Test RB = RB50#25





5.1.1.2.6.2.4 Test RB = RB100#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

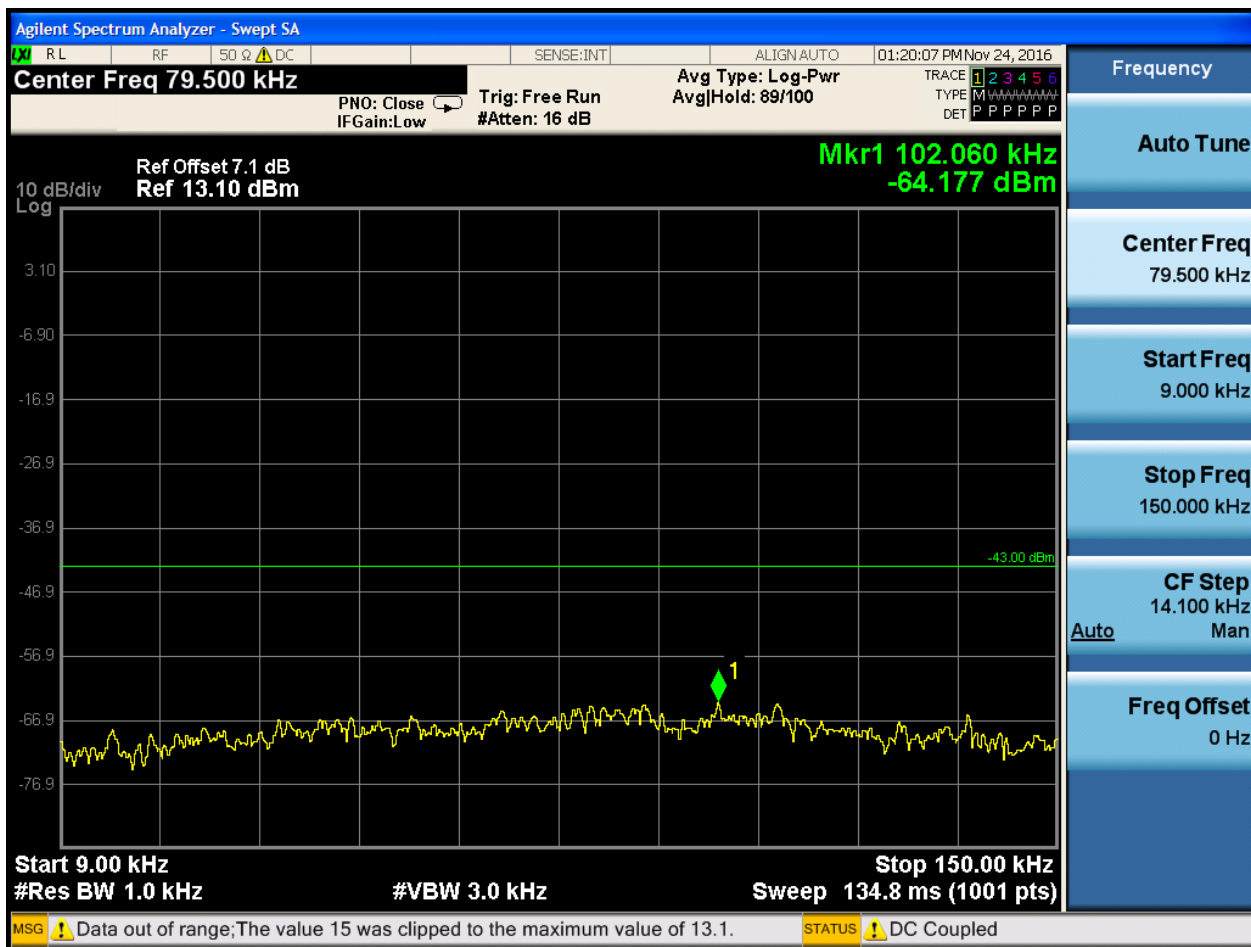
6.1.1 Test Band = BAND4

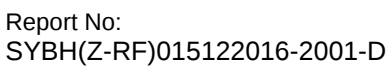
6.1.1.1 Test Mode = LTE/TM1

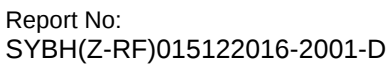
6.1.1.1.1 Test Bandwidth = 1.4

6.1.1.1.1.1 Test Channel = LCH

6.1.1.1.1.1.1 Test RB = RB1#0



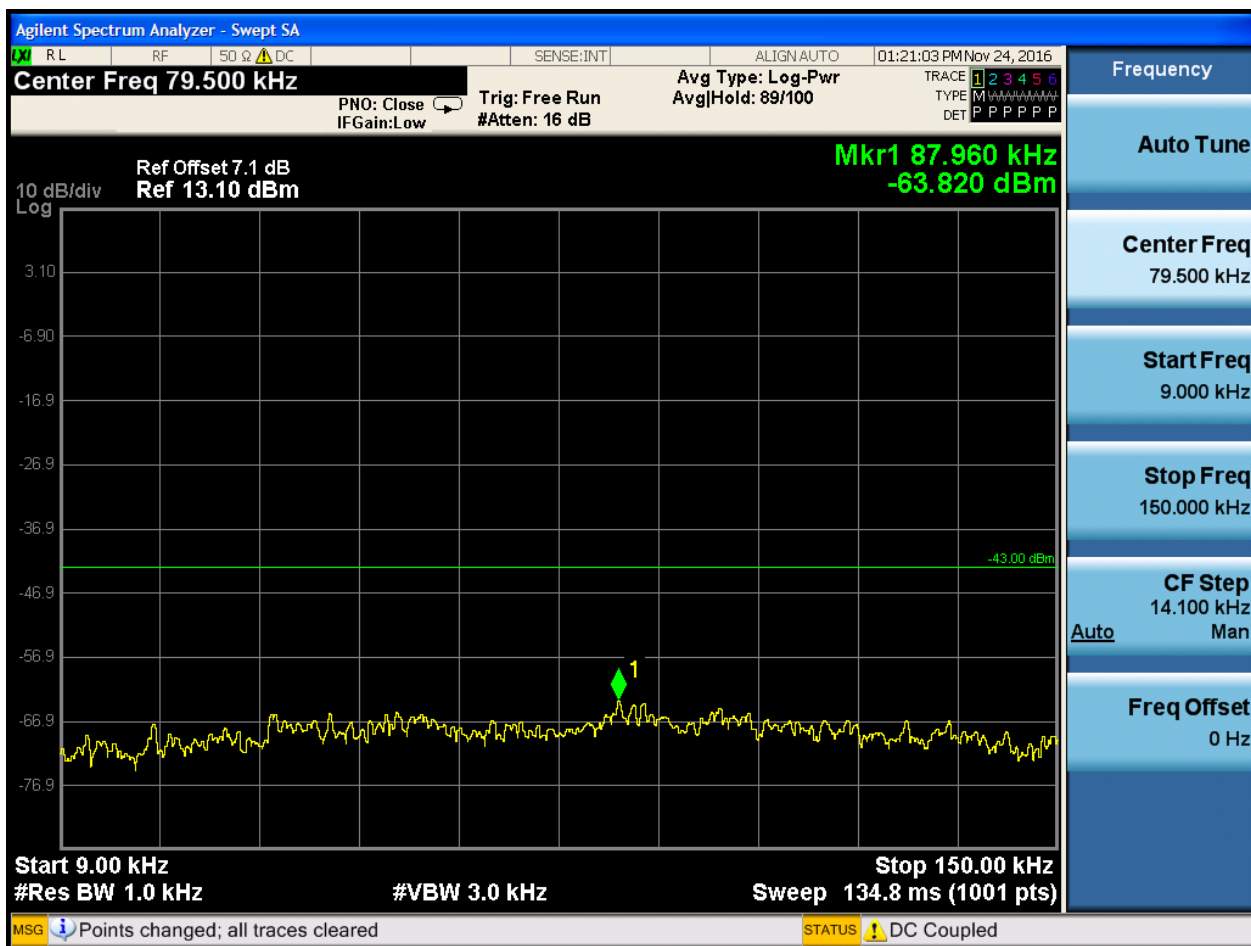


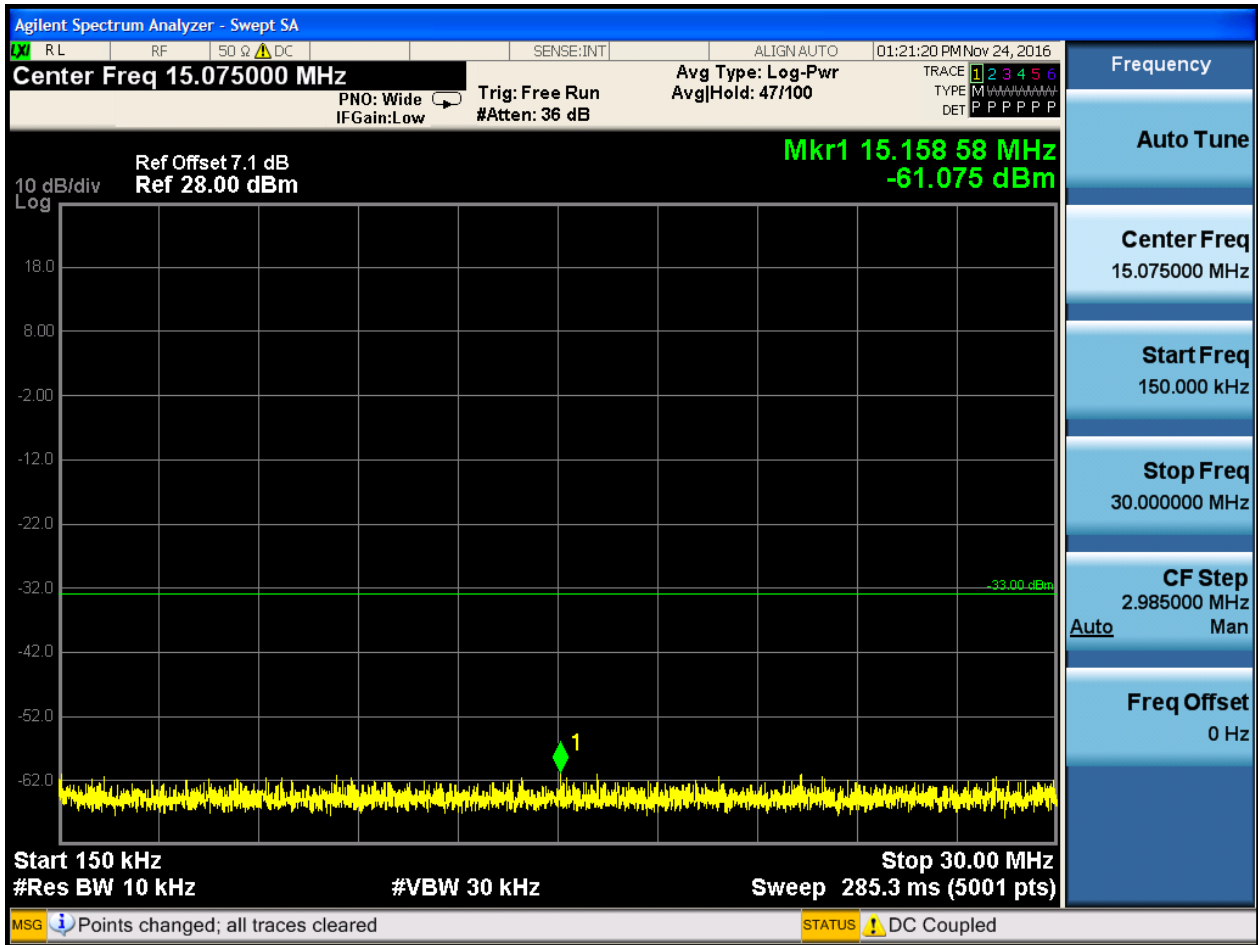


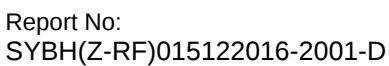


6.1.1.1.1.2 Test Channel = MCH

6.1.1.1.1.2.1 Test RB = RB1#0



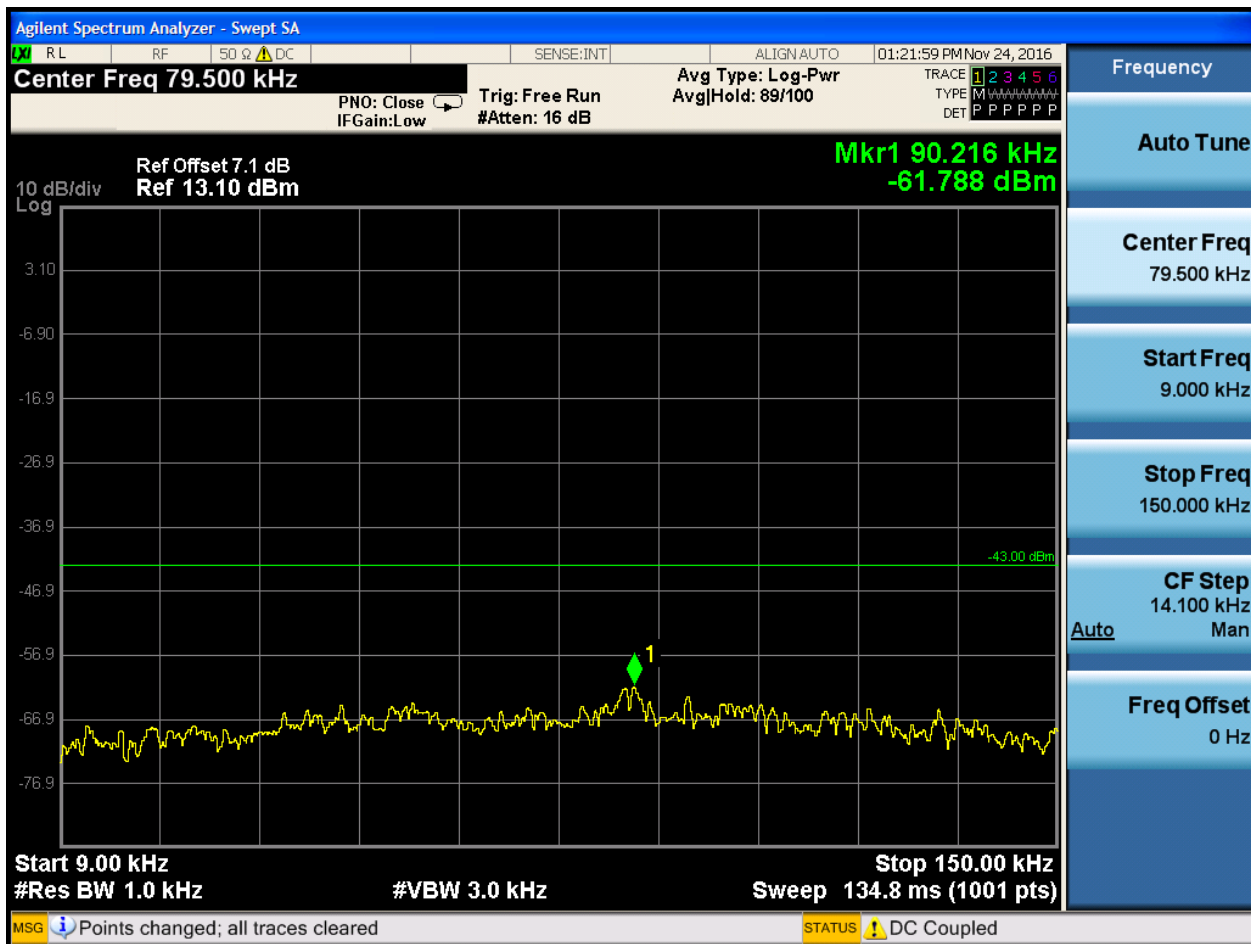


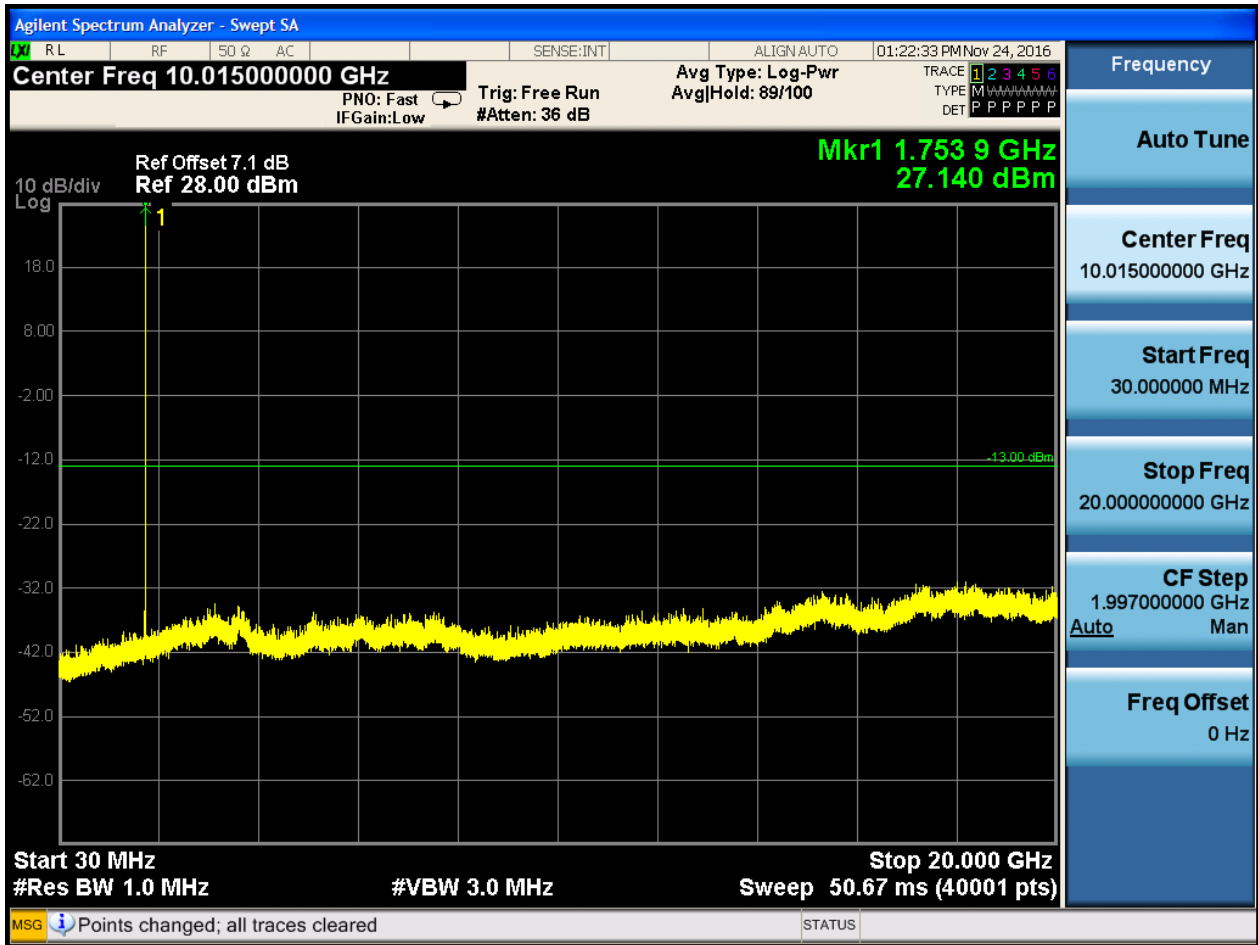




6.1.1.1.1.3 Test Channel = HCH

6.1.1.1.1.3.1 Test RB = RB1#0

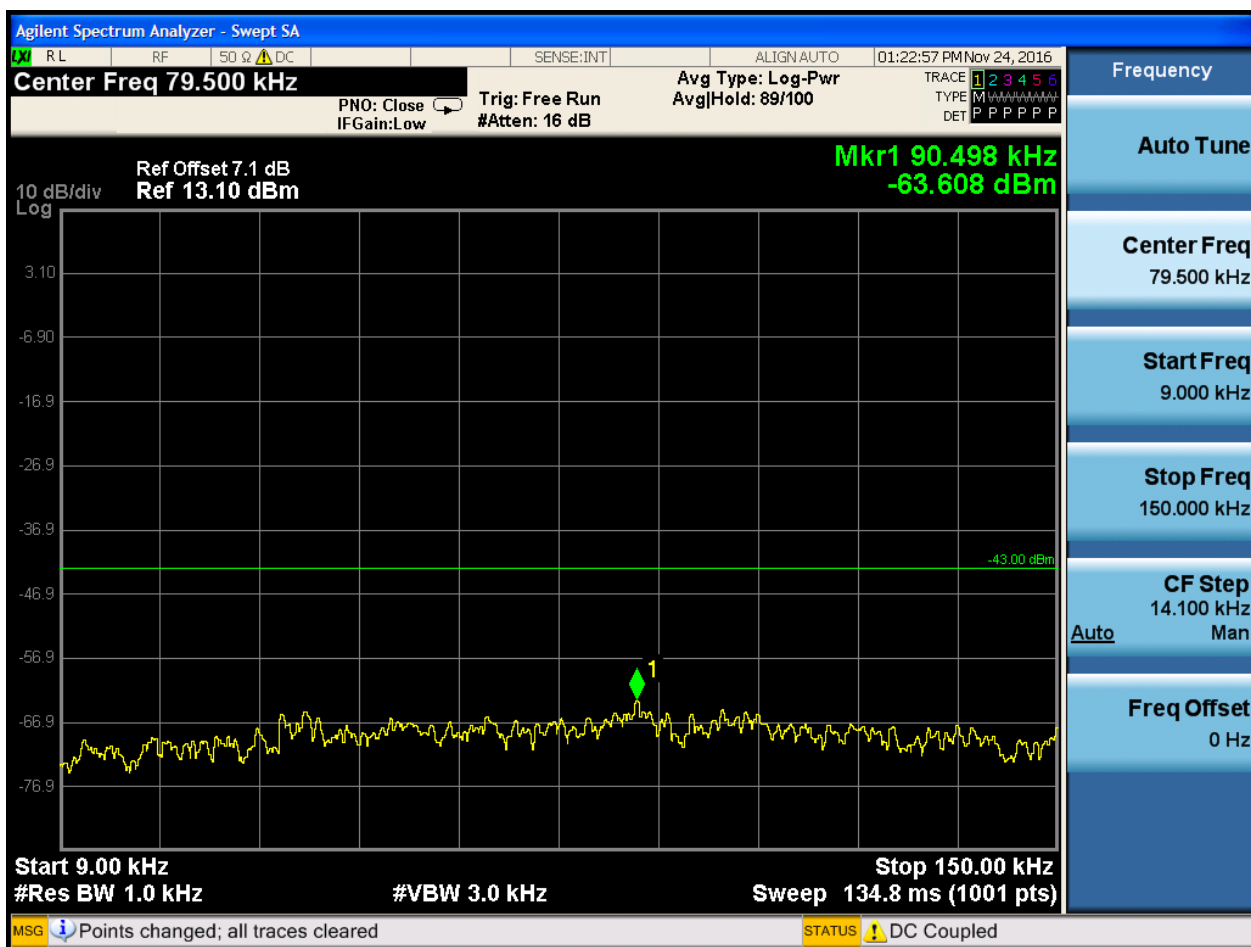


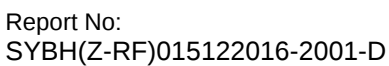


6.1.1.1.2 Test Bandwidth = 3

6.1.1.1.2.1 Test Channel = LCH

6.1.1.1.2.1.1 Test RB = RB1#0



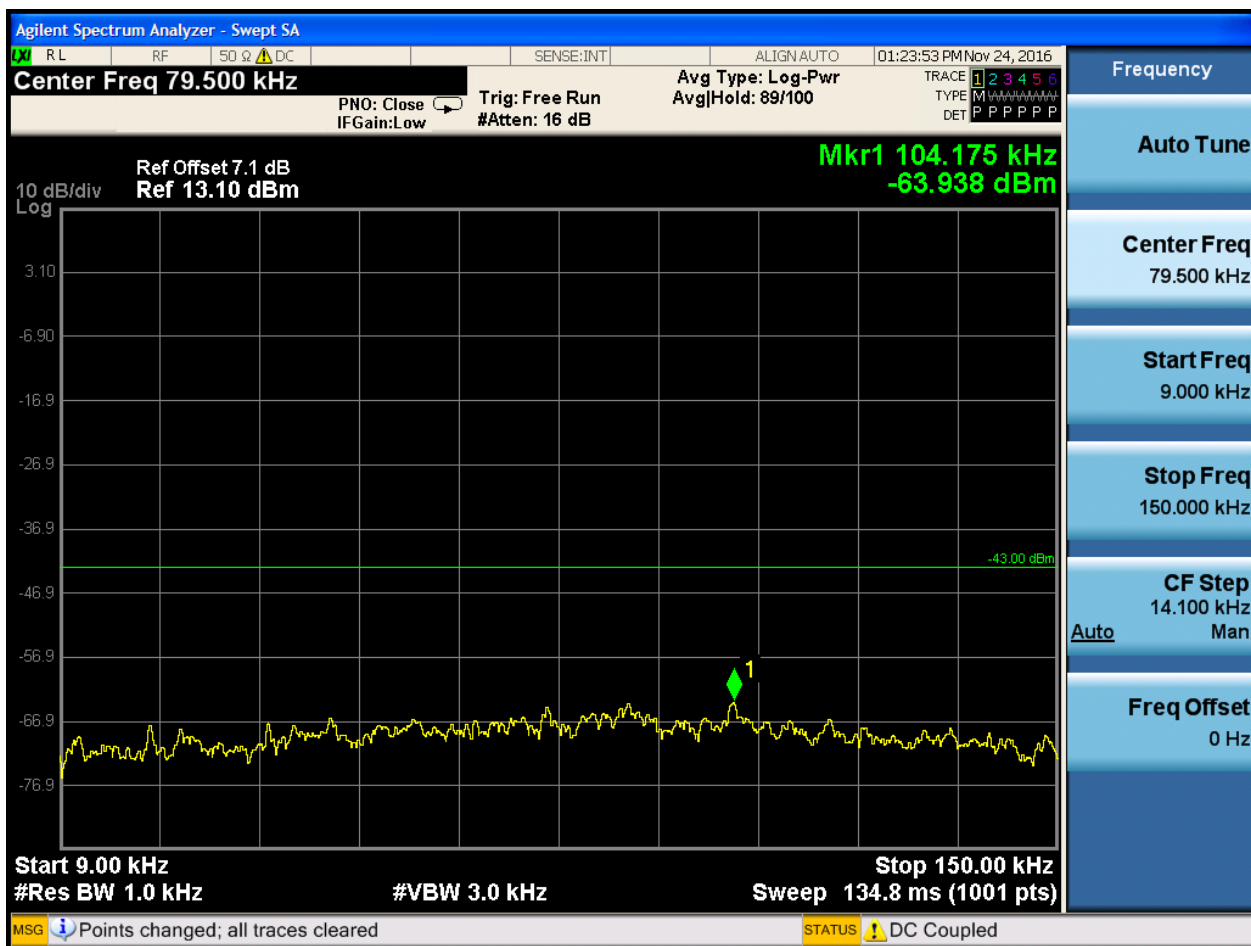


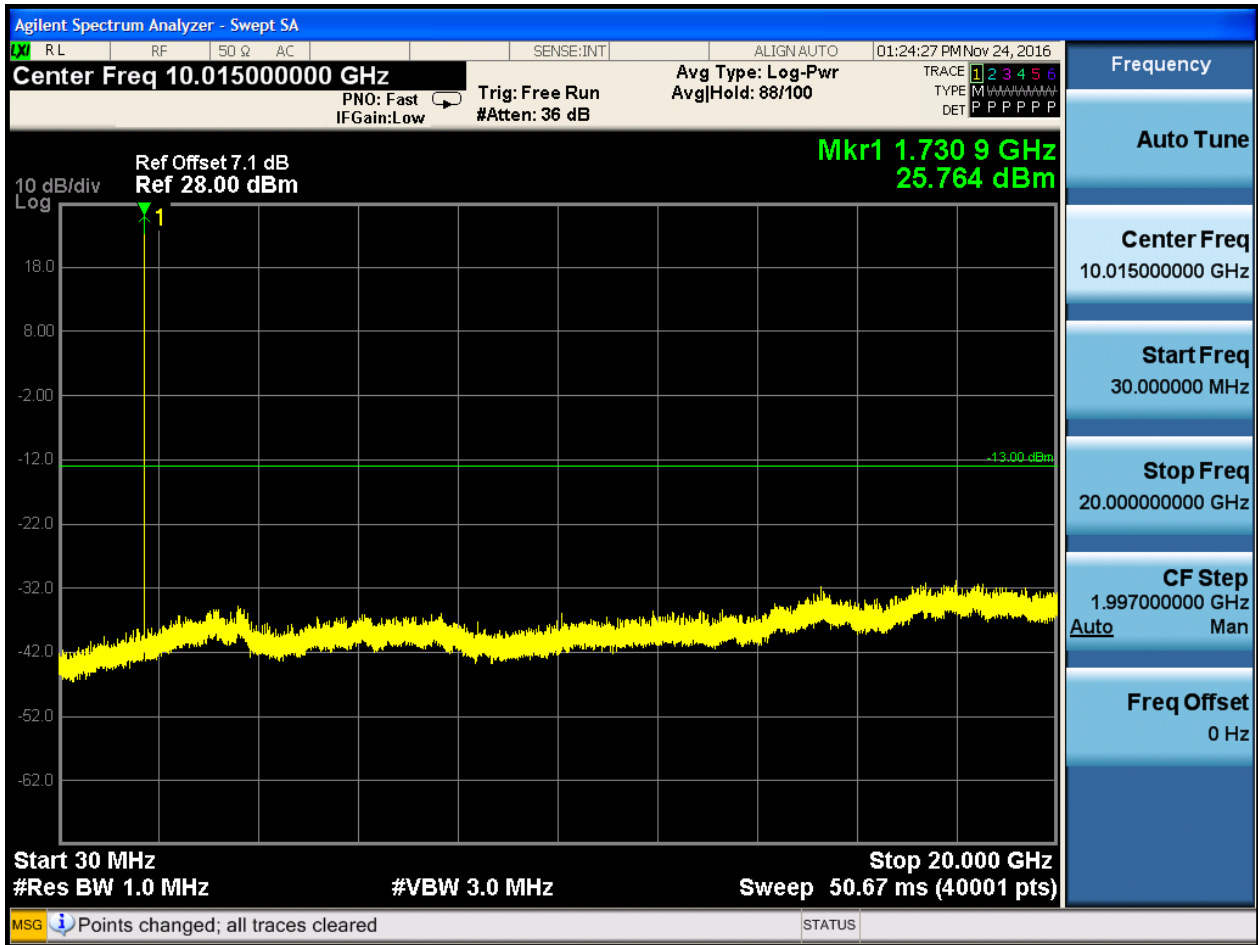




6.1.1.1.2.2 Test Channel = MCH

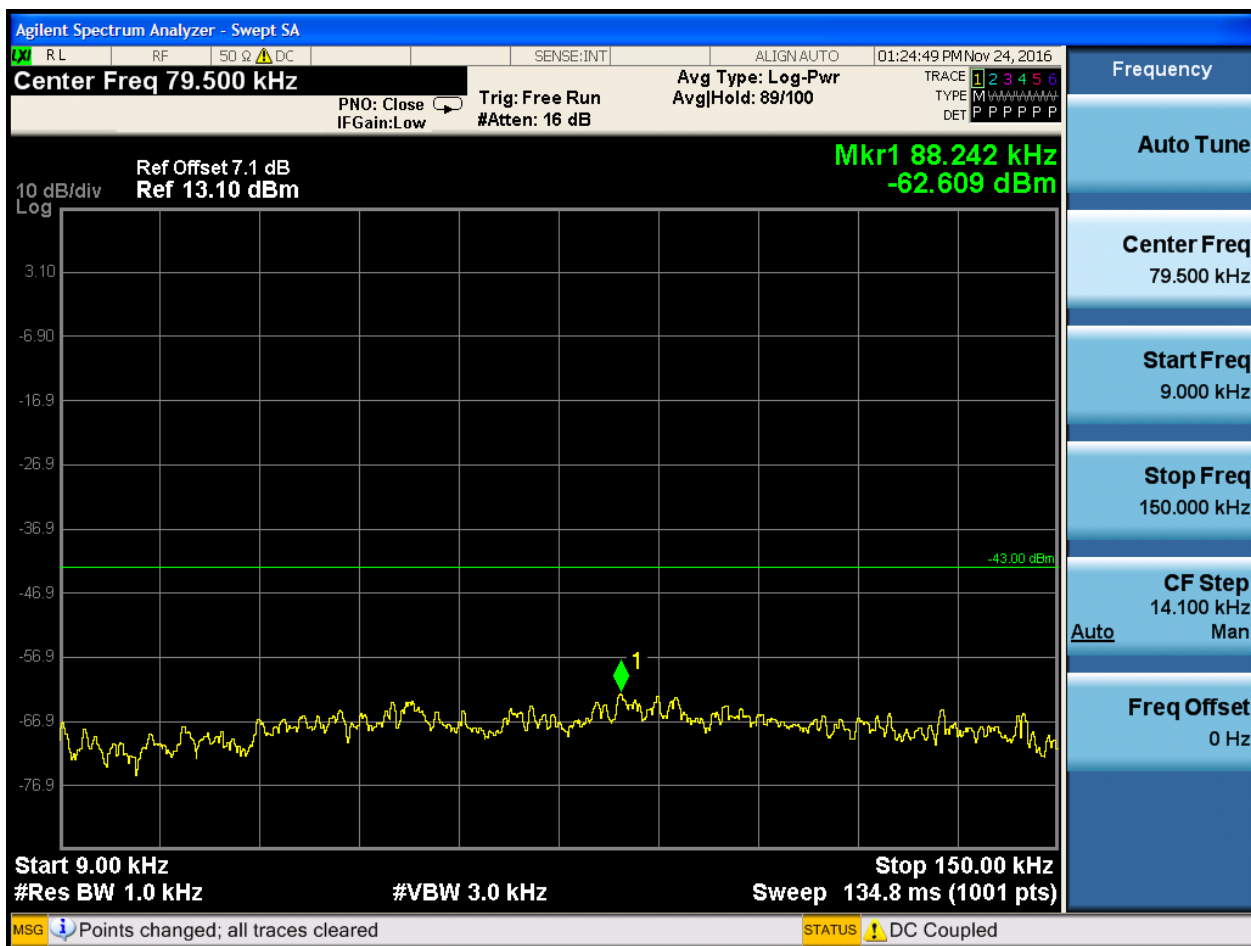
6.1.1.1.2.2.1 Test RB = RB1#0

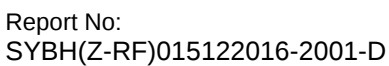


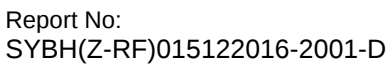


6.1.1.1.2.3 Test Channel = HCH

6.1.1.1.2.3.1 Test RB = RB1#0



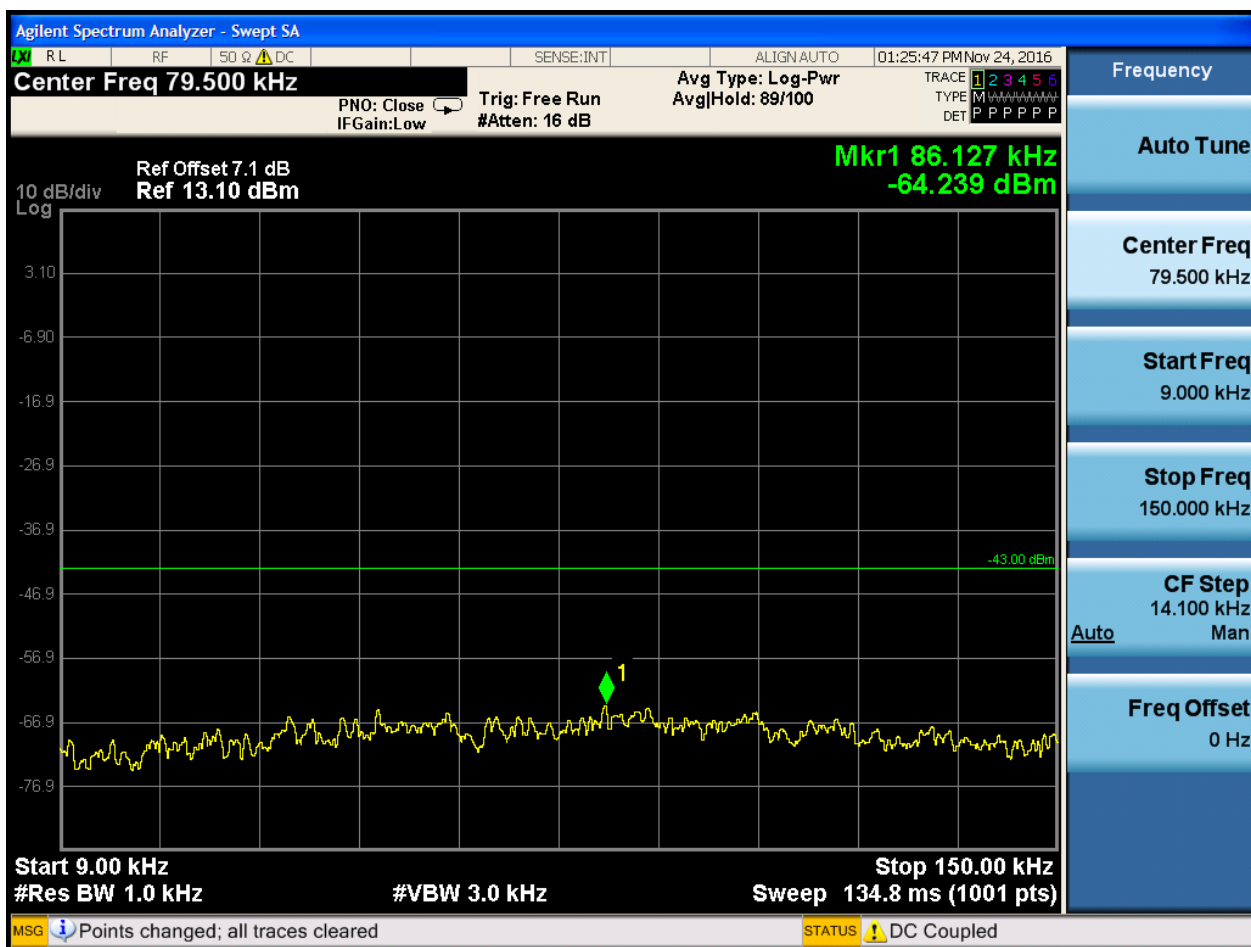


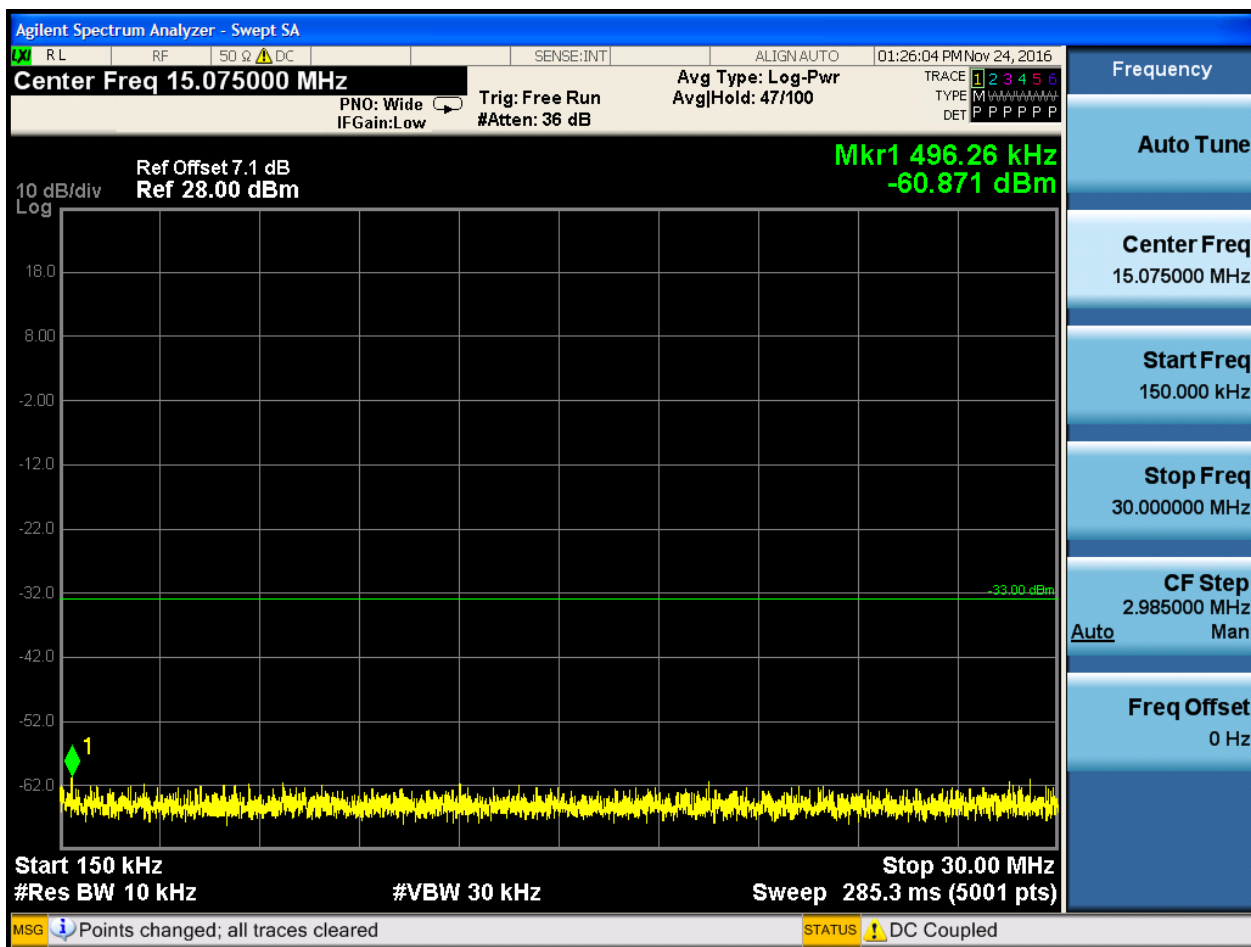


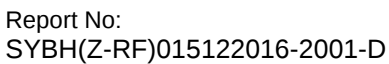
6.1.1.1.3 Test Bandwidth = 5

6.1.1.1.3.1 Test Channel = LCH

6.1.1.1.3.1.1 Test RB = RB1#0

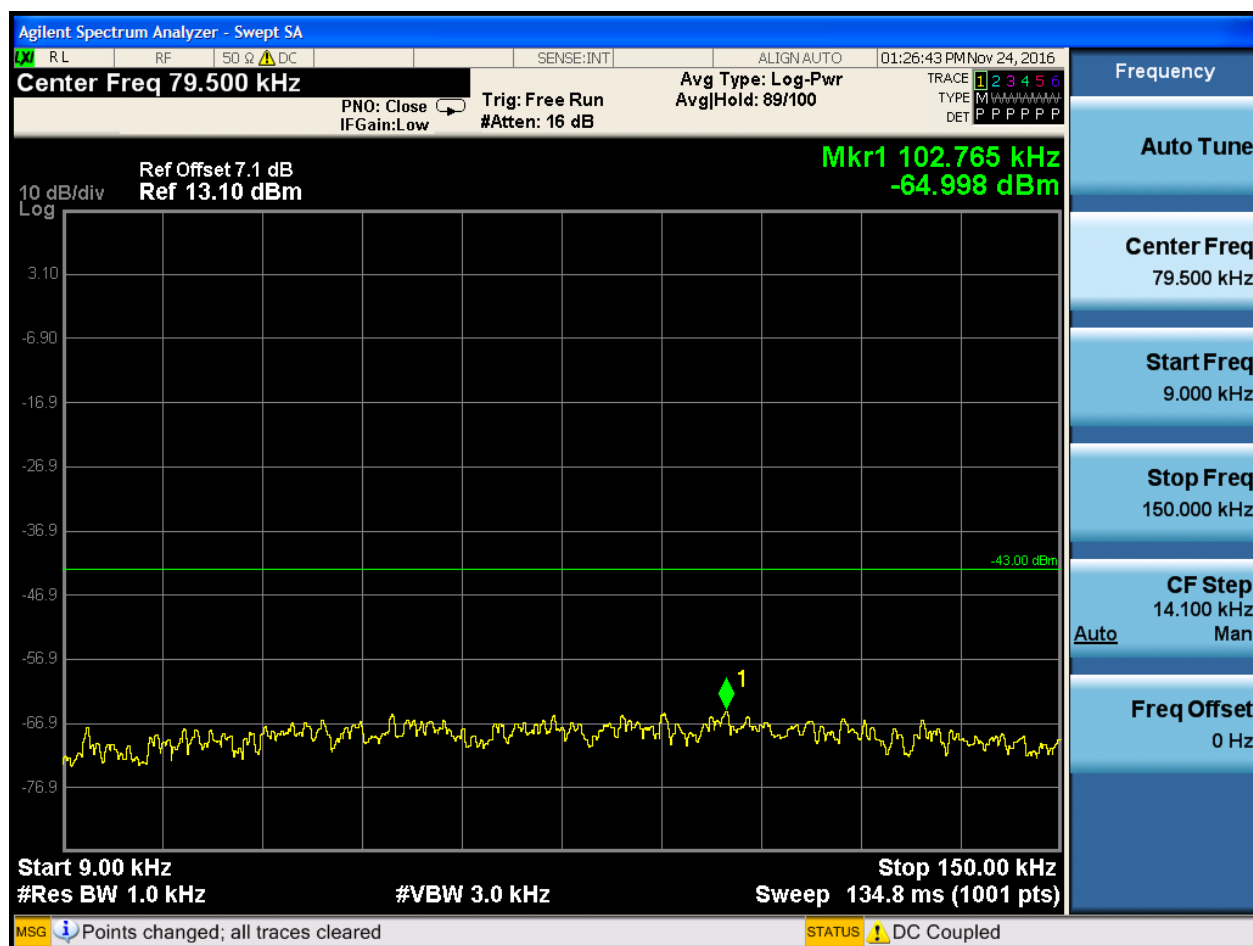


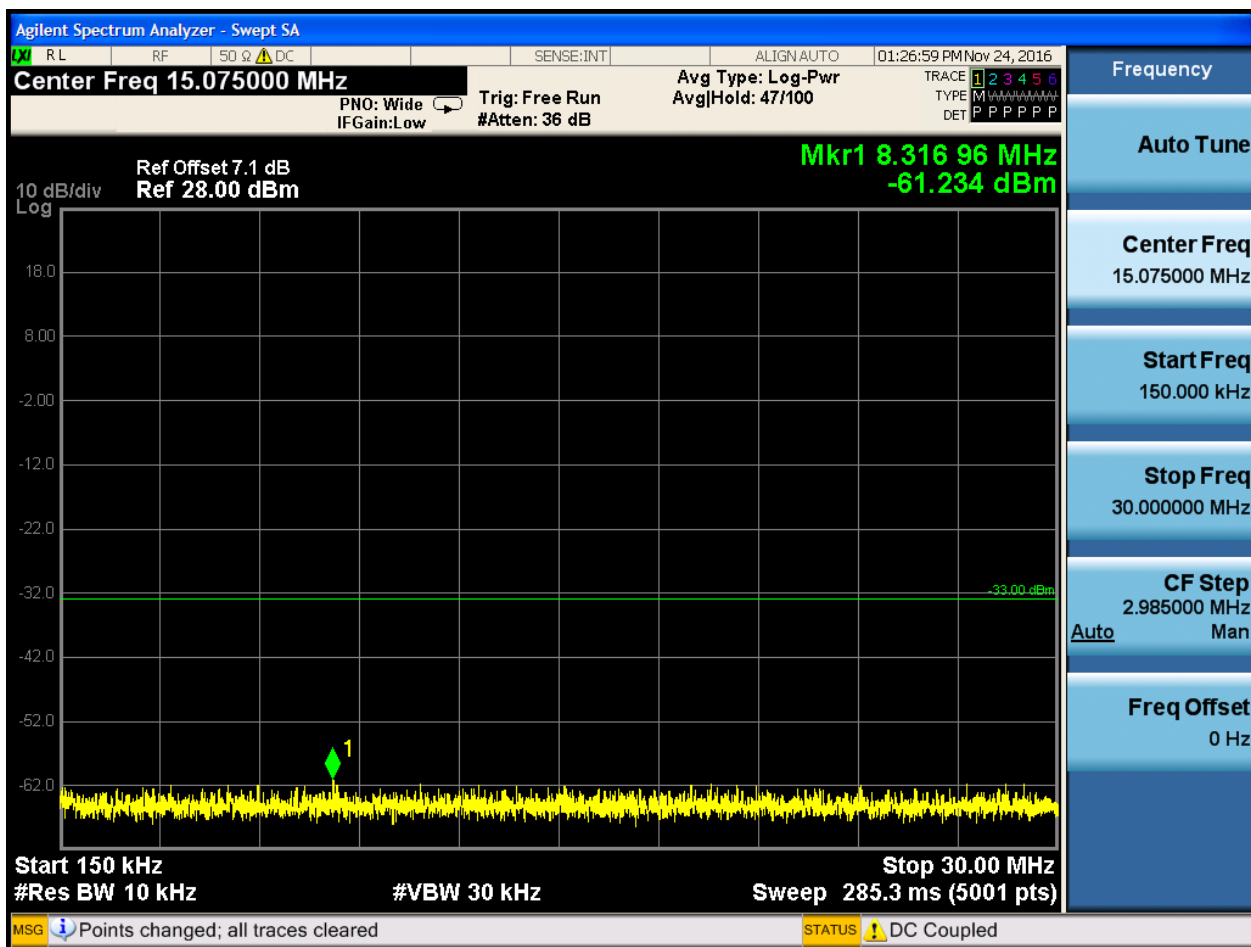


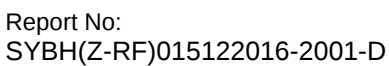


6.1.1.1.3.2 Test Channel = MCH

6.1.1.1.3.2.1 Test RB = RB1#0

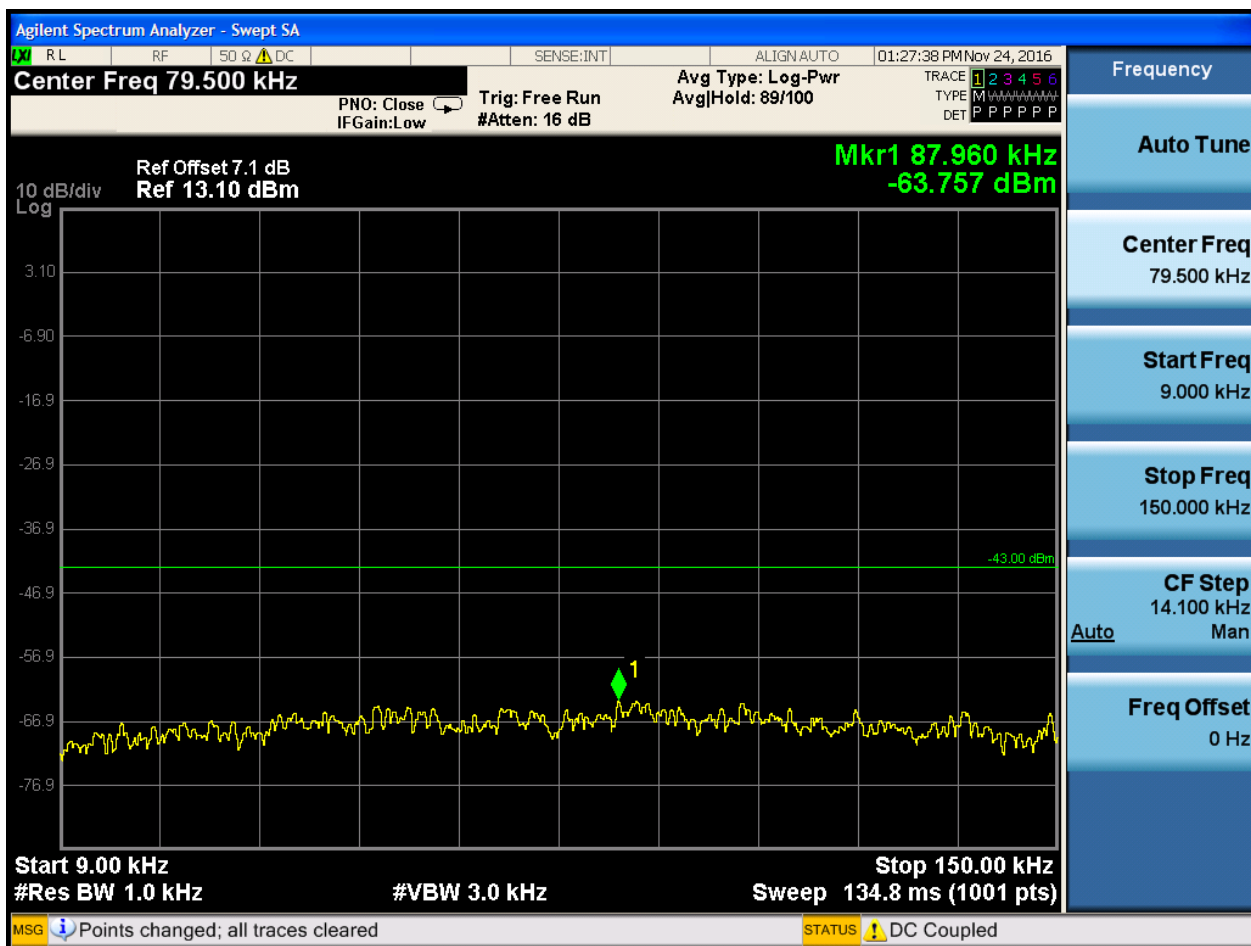


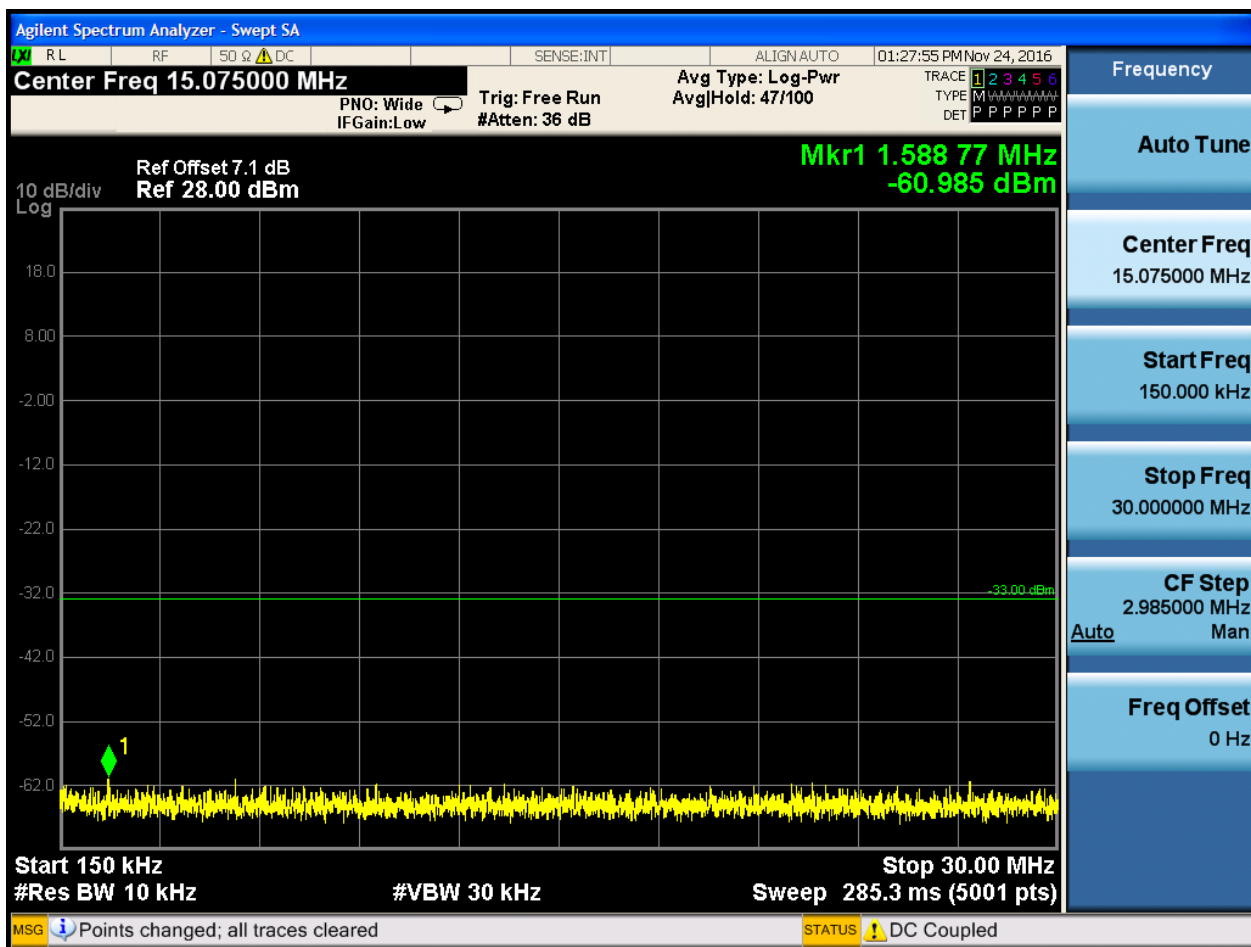


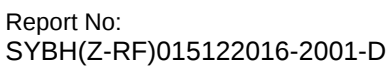


6.1.1.1.3.3 Test Channel = HCH

6.1.1.1.3.3.1 Test RB = RB1#0





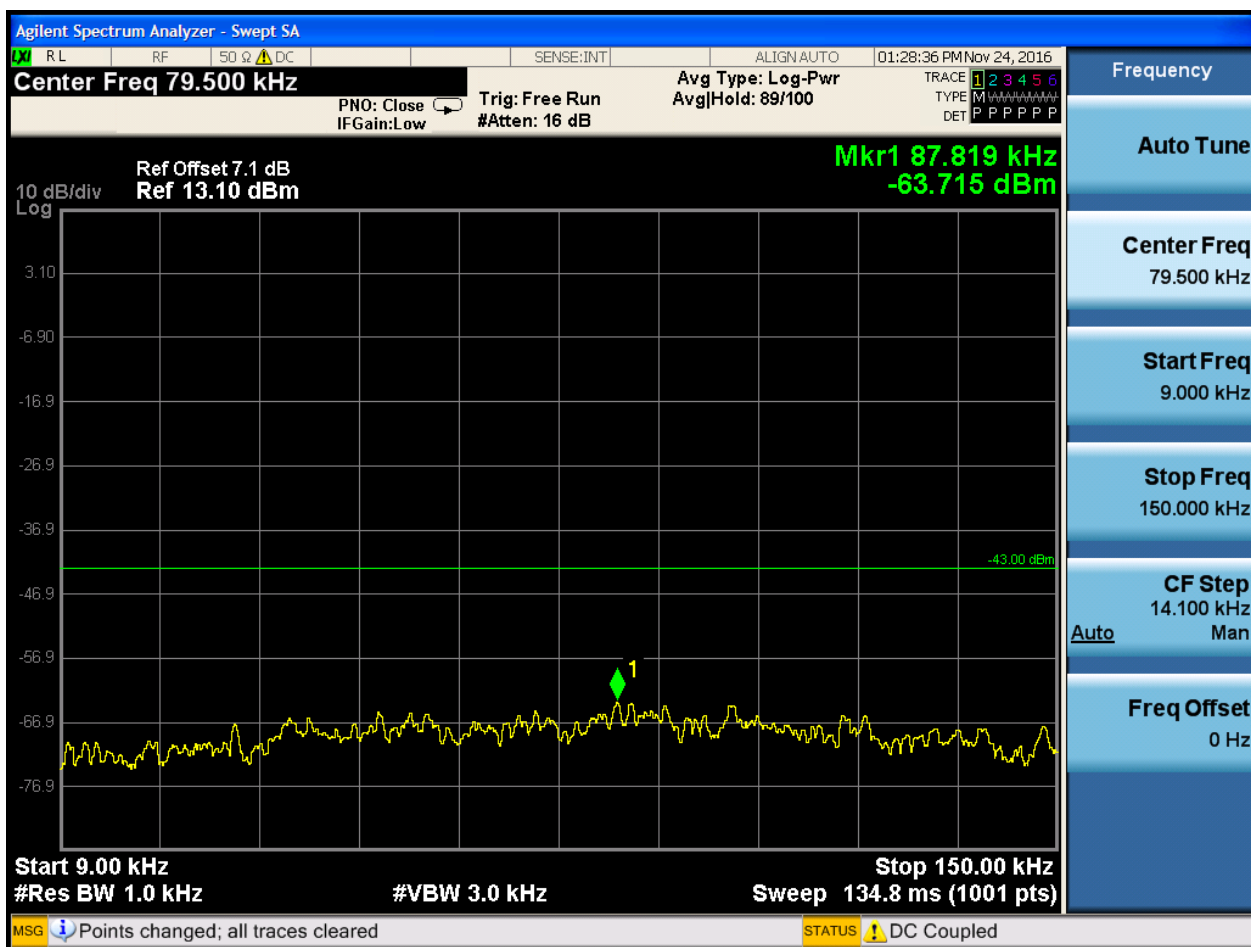


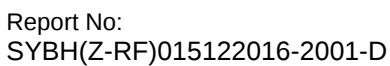


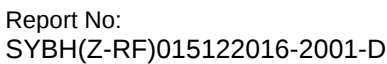
6.1.1.1.4 Test Bandwidth = 10

6.1.1.1.4.1 Test Channel = LCH

6.1.1.1.4.1.1 Test RB = RB1#0



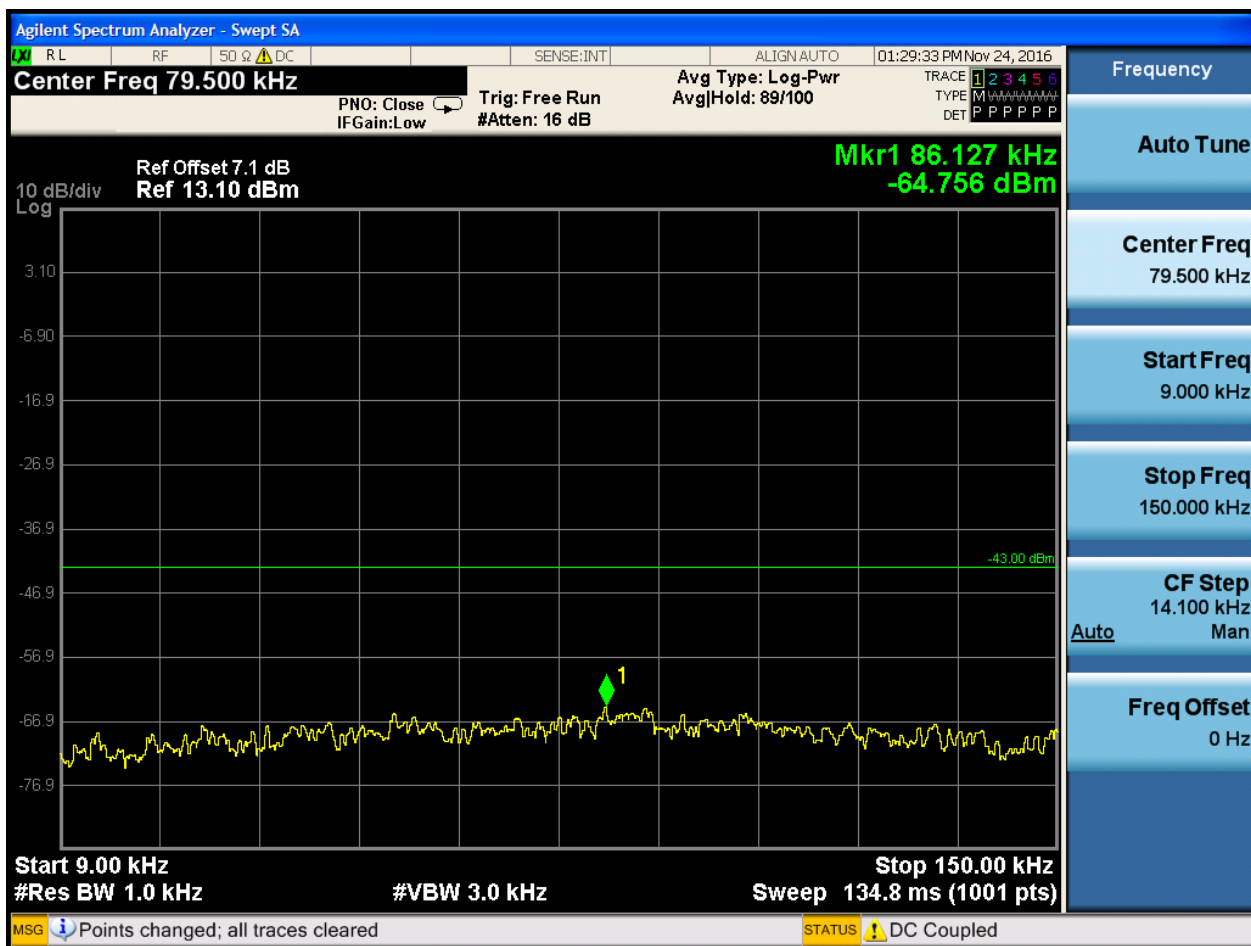


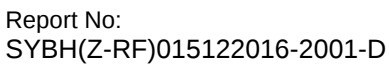


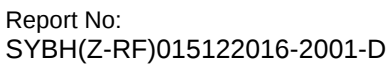


6.1.1.1.4.2 Test Channel = MCH

6.1.1.1.4.2.1 Test RB = RB1#0

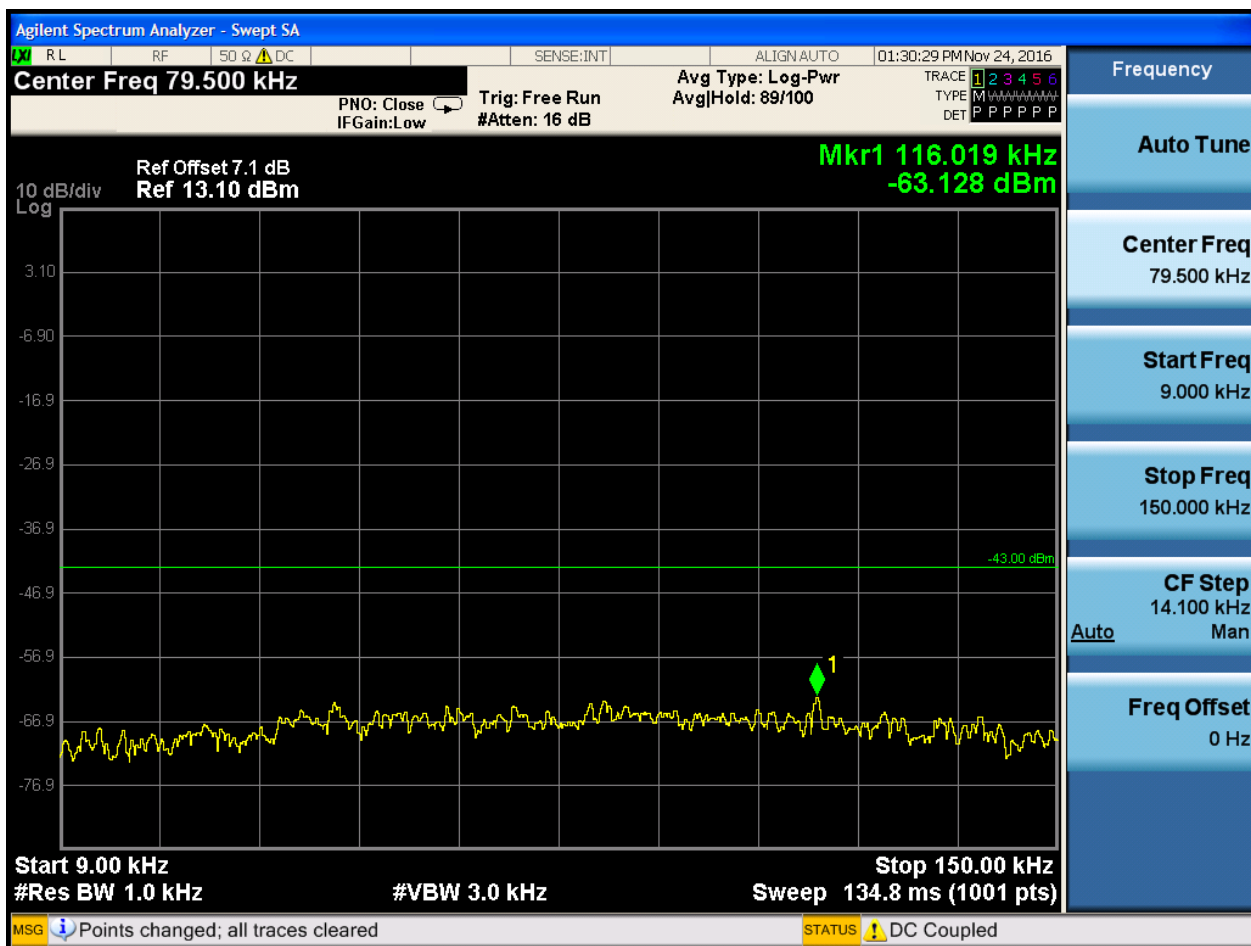


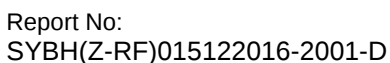


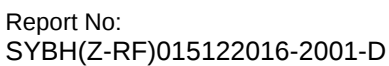


6.1.1.1.4.3 Test Channel = HCH

6.1.1.1.4.3.1 Test RB = RB1#0



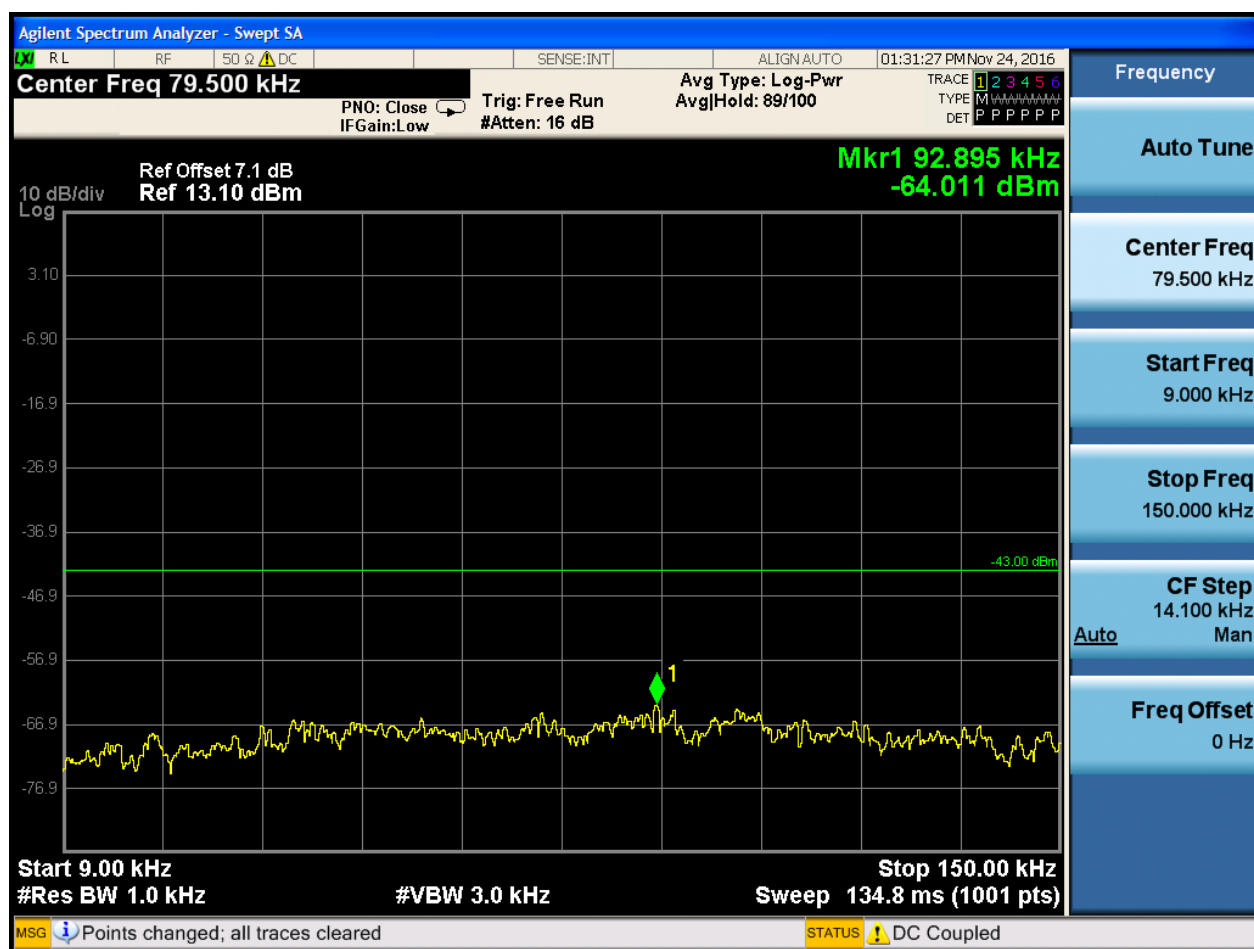


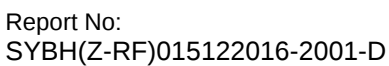


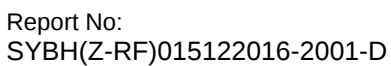
6.1.1.1.5 Test Bandwidth = 15

6.1.1.1.5.1 Test Channel = LCH

6.1.1.1.5.1.1 Test RB = RB1#0



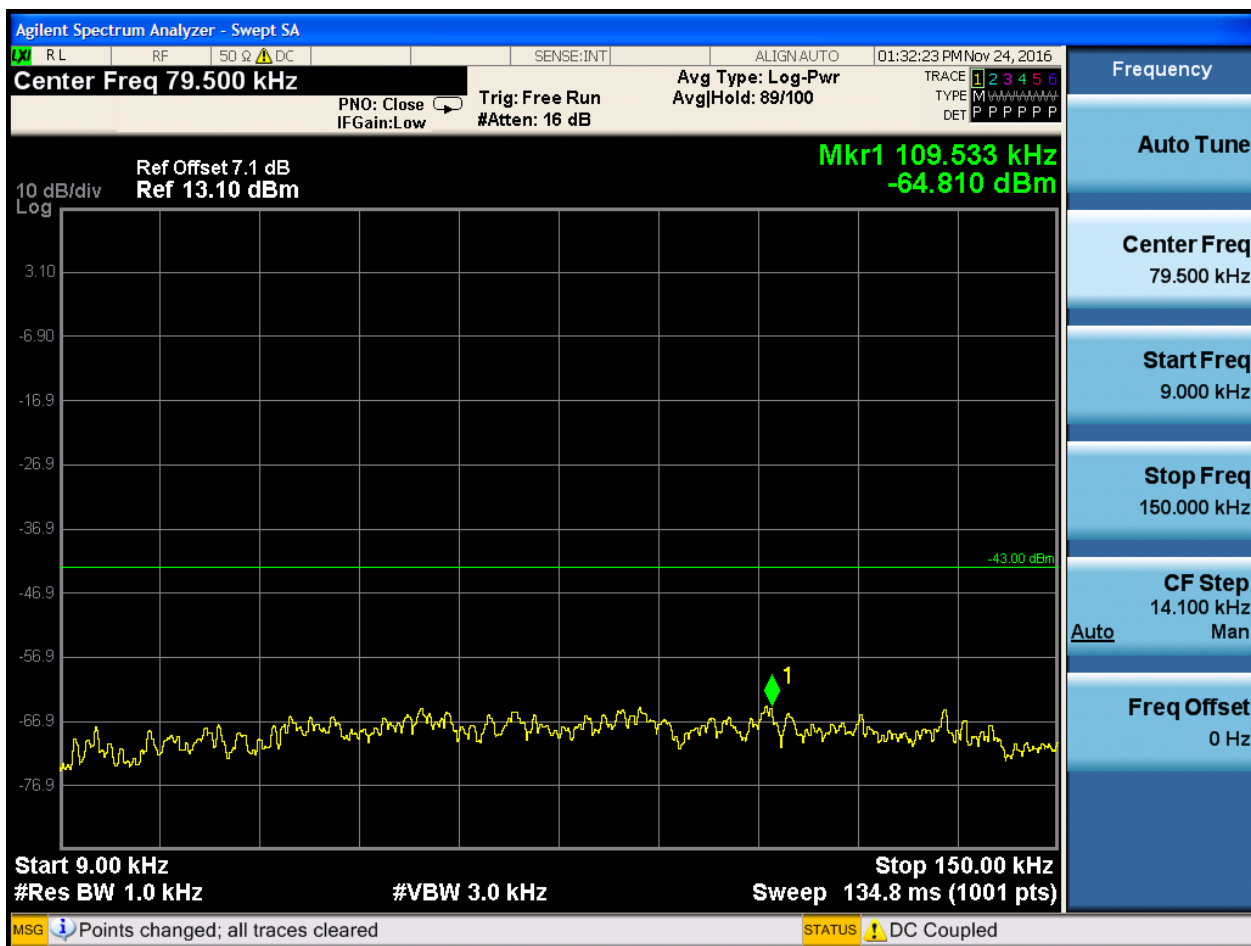


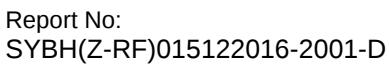


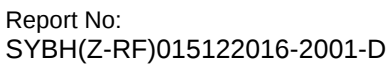


6.1.1.1.5.2 Test Channel = MCH

6.1.1.1.5.2.1 Test RB = RB1#0



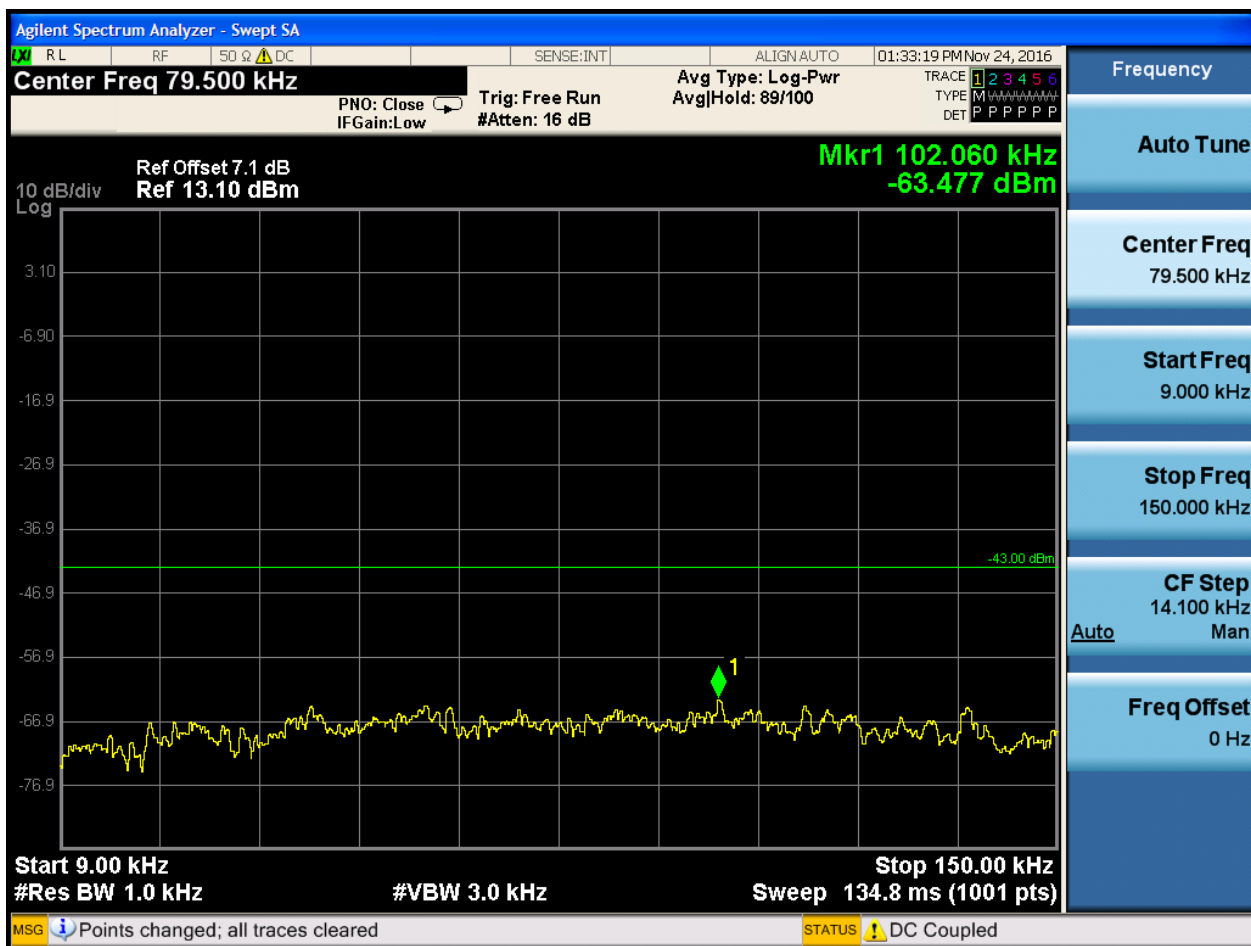


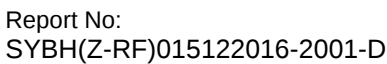


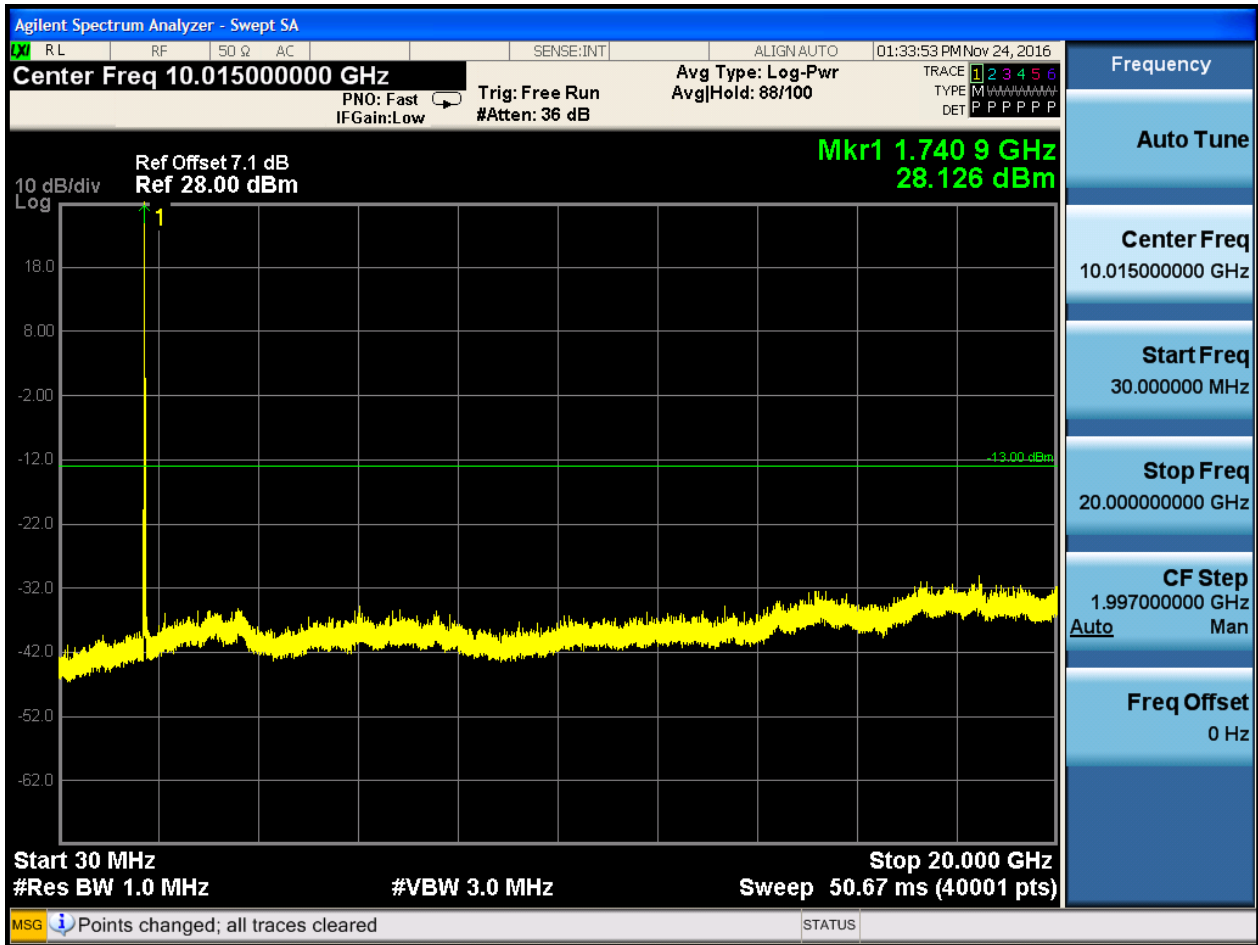


6.1.1.1.5.3 Test Channel = HCH

6.1.1.1.5.3.1 Test RB = RB1#0





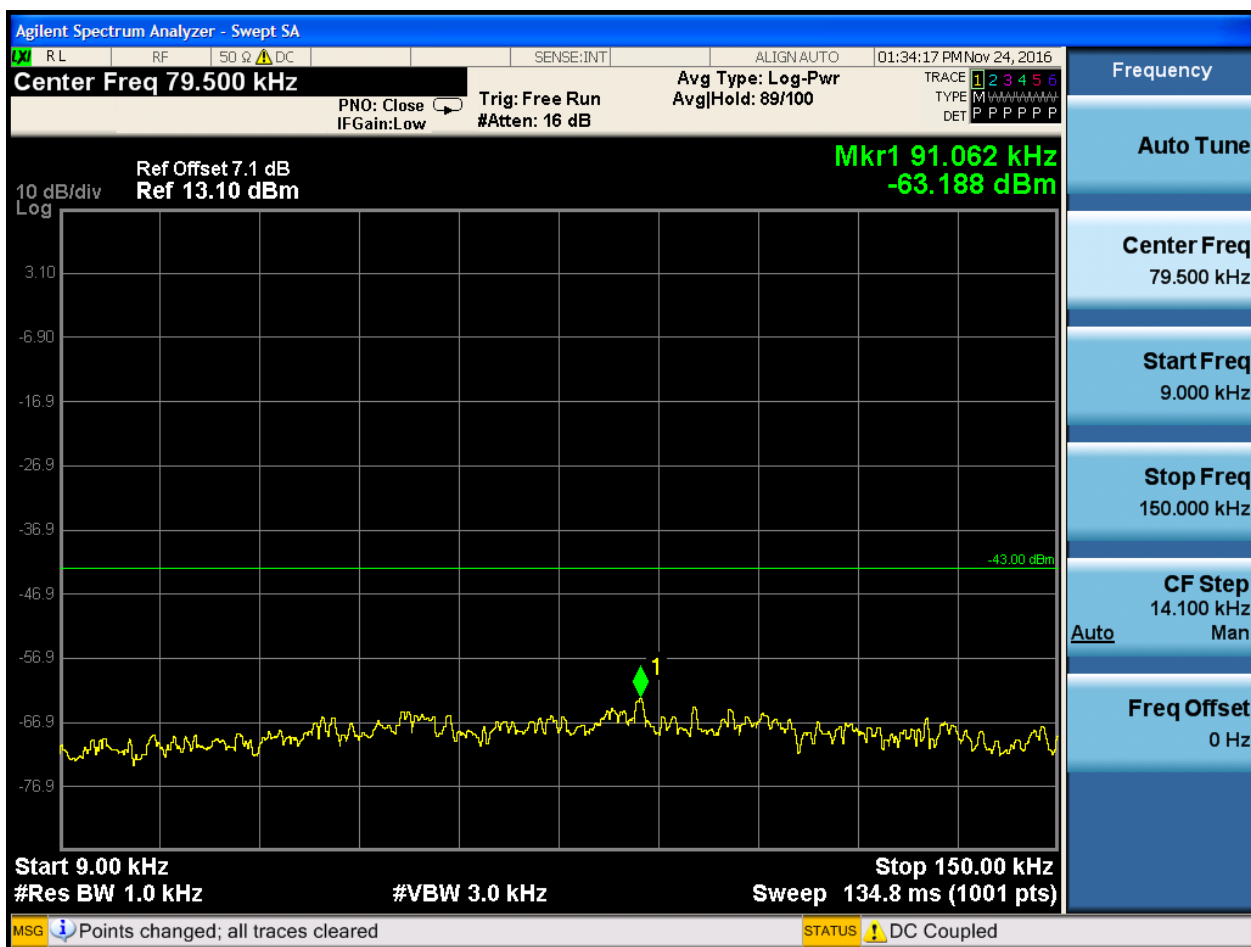


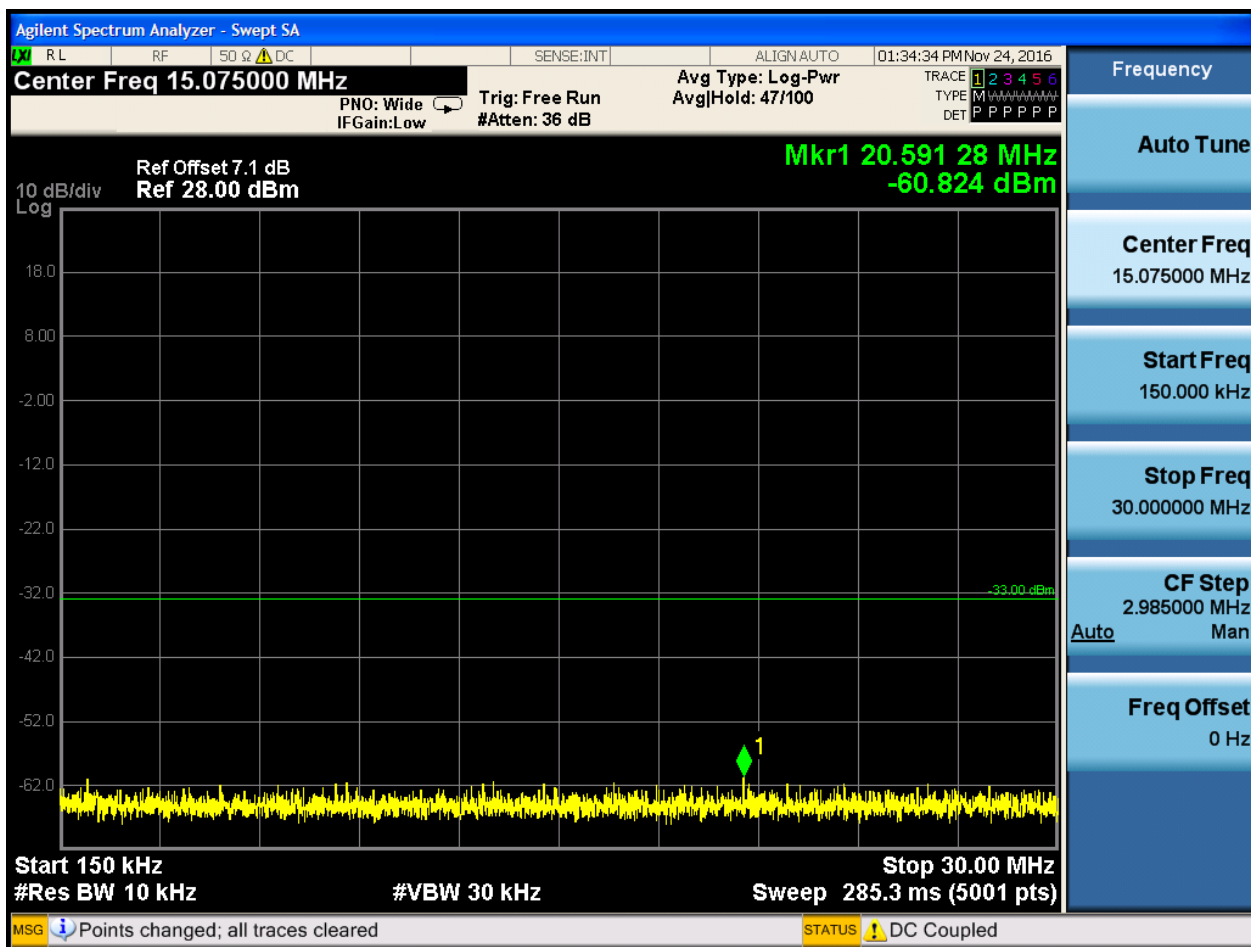


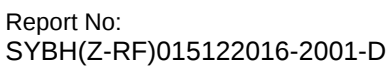
6.1.1.1.6 Test Bandwidth = 20

6.1.1.1.6.1 Test Channel = LCH

6.1.1.1.6.1.1 Test RB = RB1#0



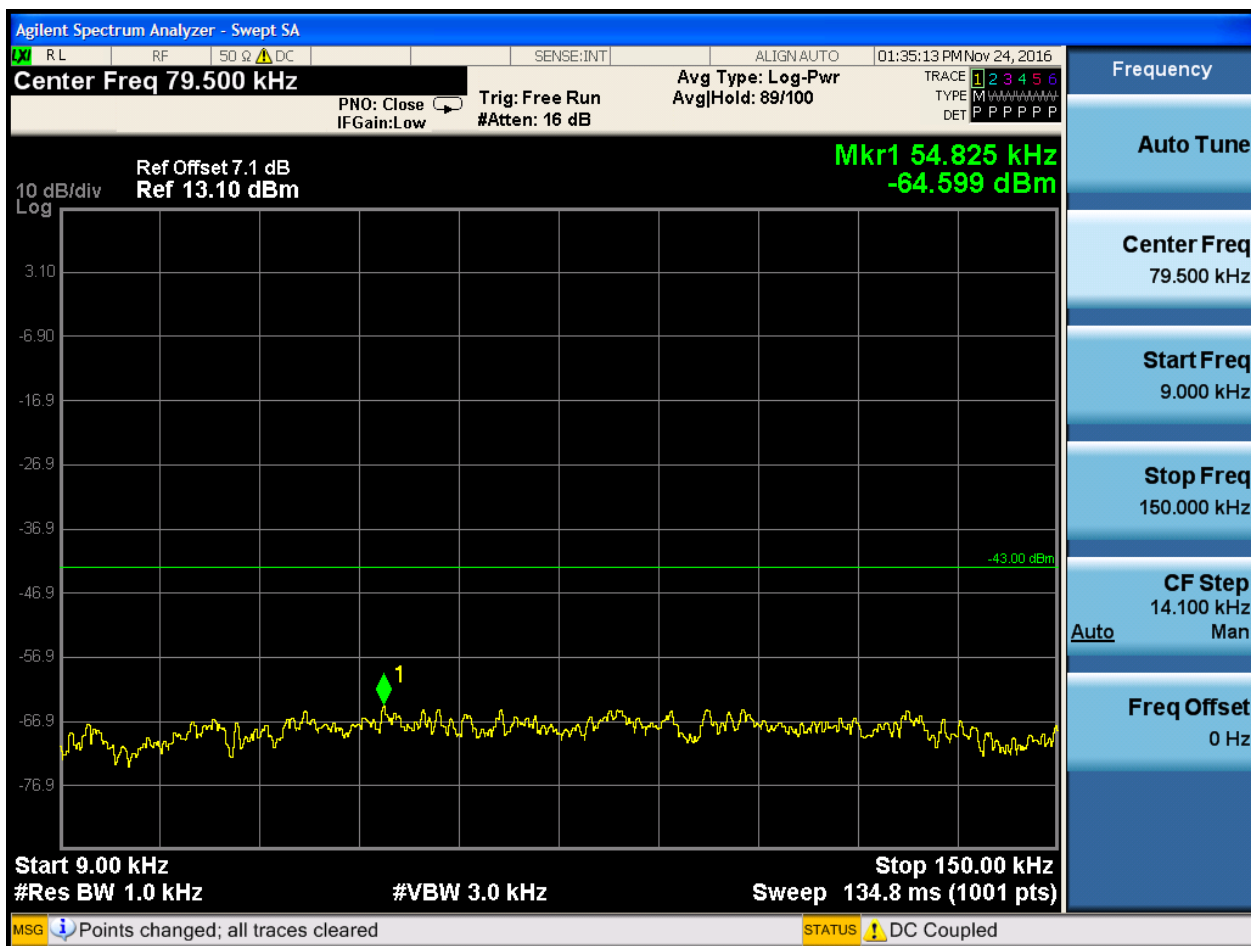


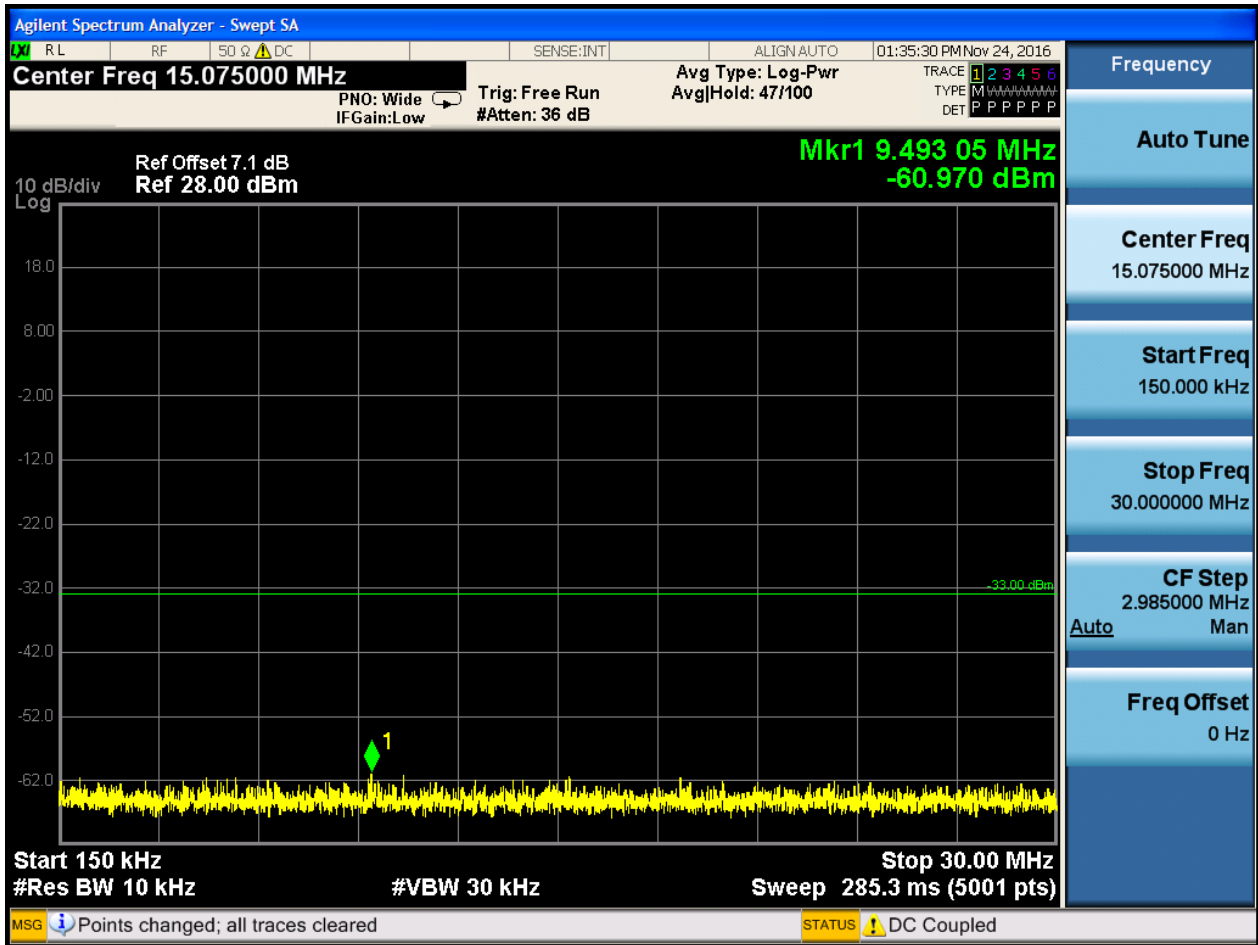


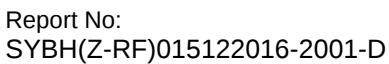


6.1.1.1.6.2 Test Channel = MCH

6.1.1.1.6.2.1 Test RB = RB1#0

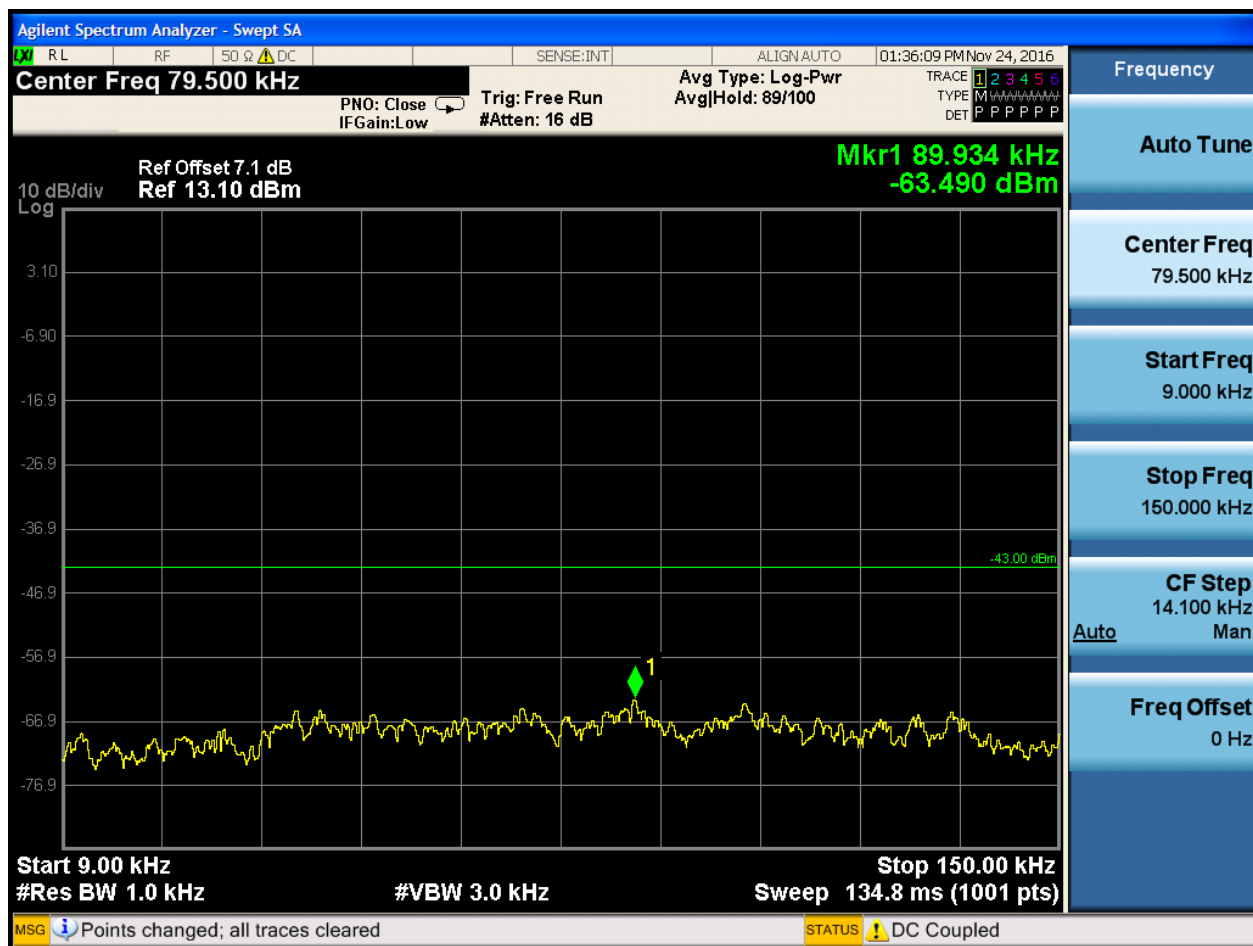


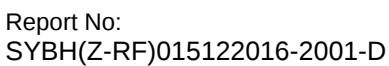


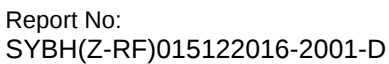


6.1.1.1.6.3 Test Channel = HCH

6.1.1.1.6.3.1 Test RB = RB1#0







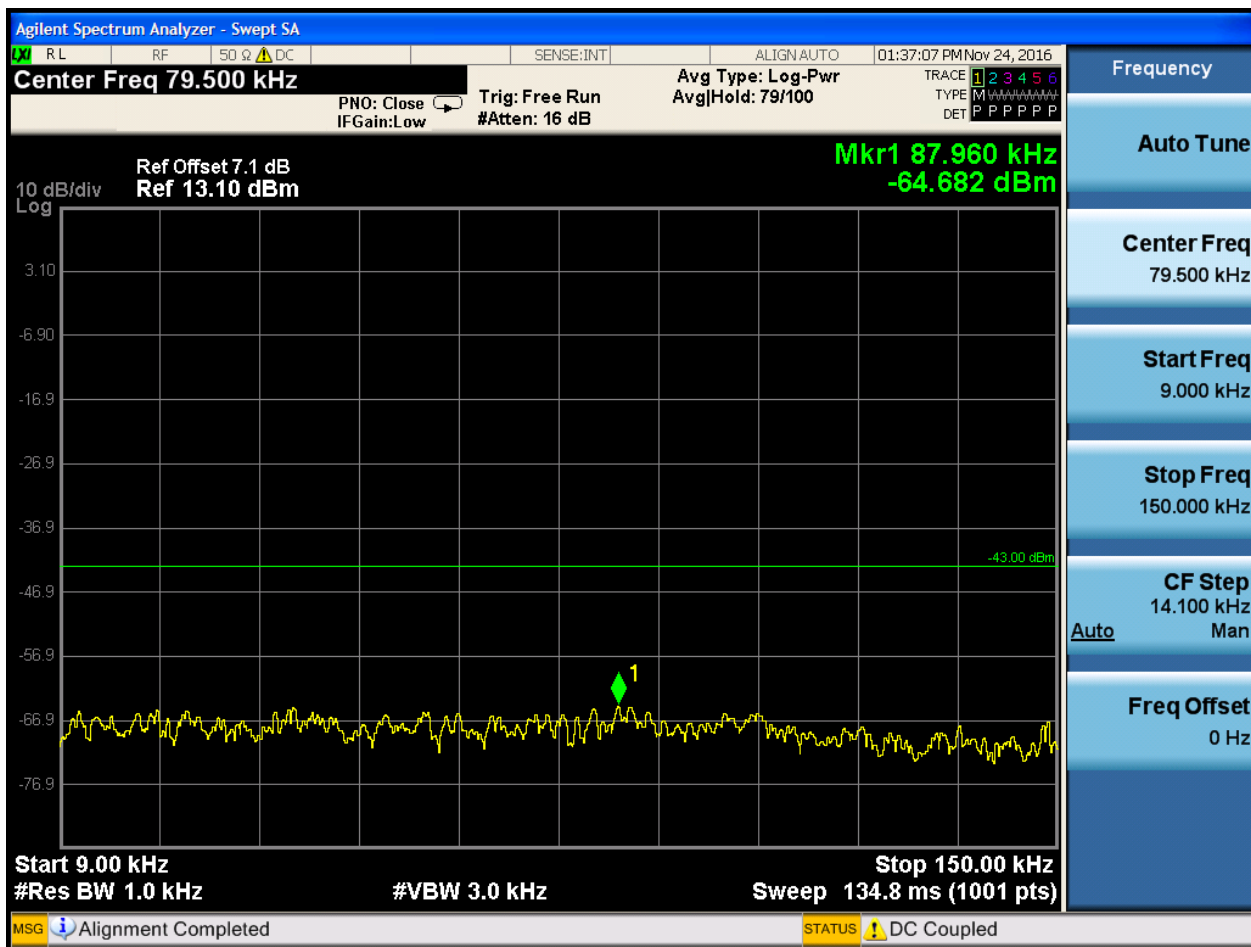


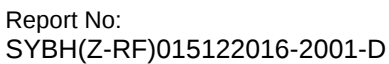
6.1.1.2 Test Mode = LTE/TM2

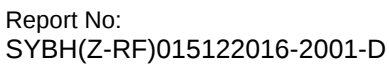
6.1.1.2.1 Test Bandwidth = 1.4

6.1.1.2.1.1 Test Channel = LCH

6.1.1.2.1.1.1 Test RB = RB1#0



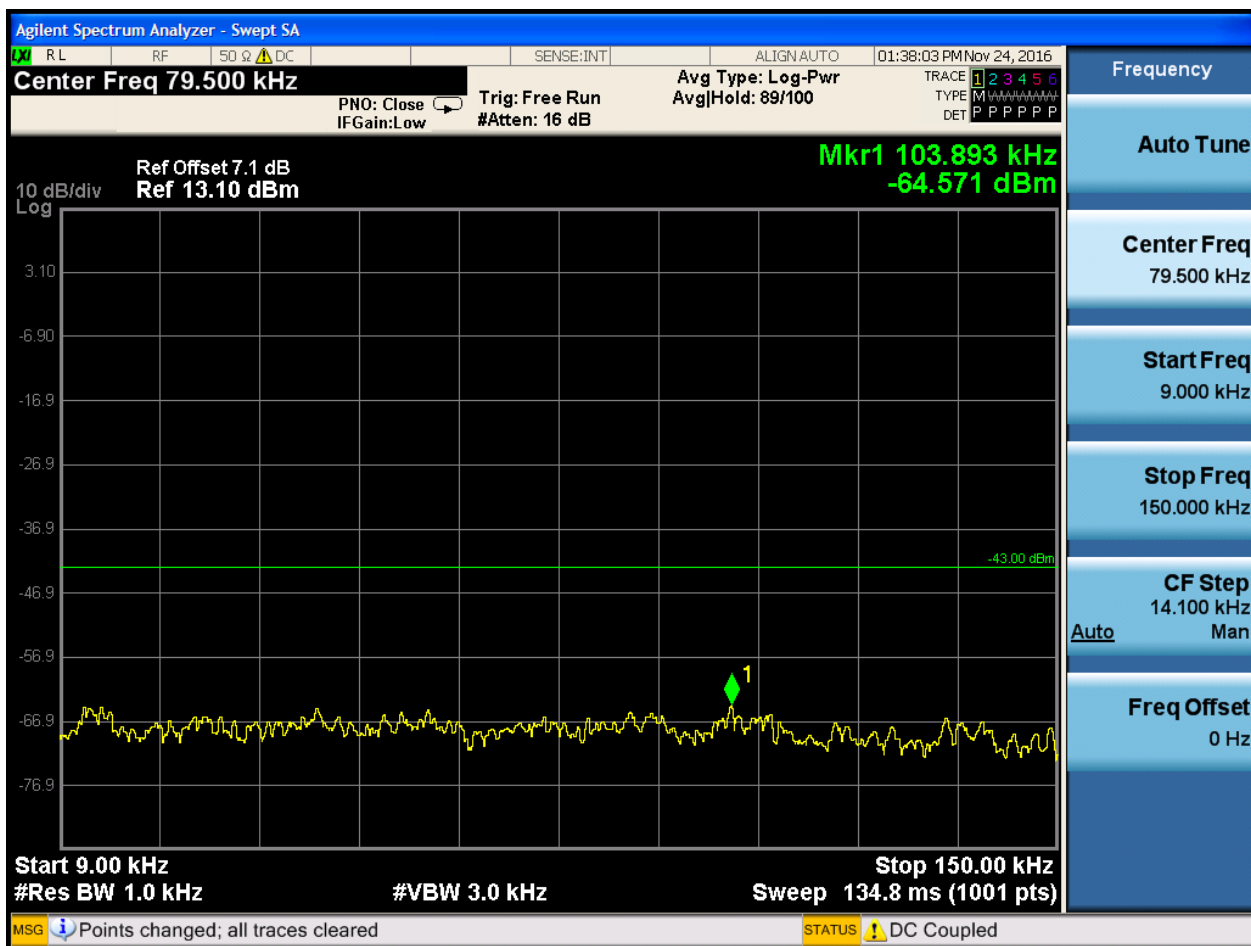


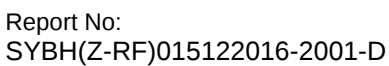




6.1.1.2.1.2 Test Channel = MCH

6.1.1.2.1.2.1 Test RB = RB1#0

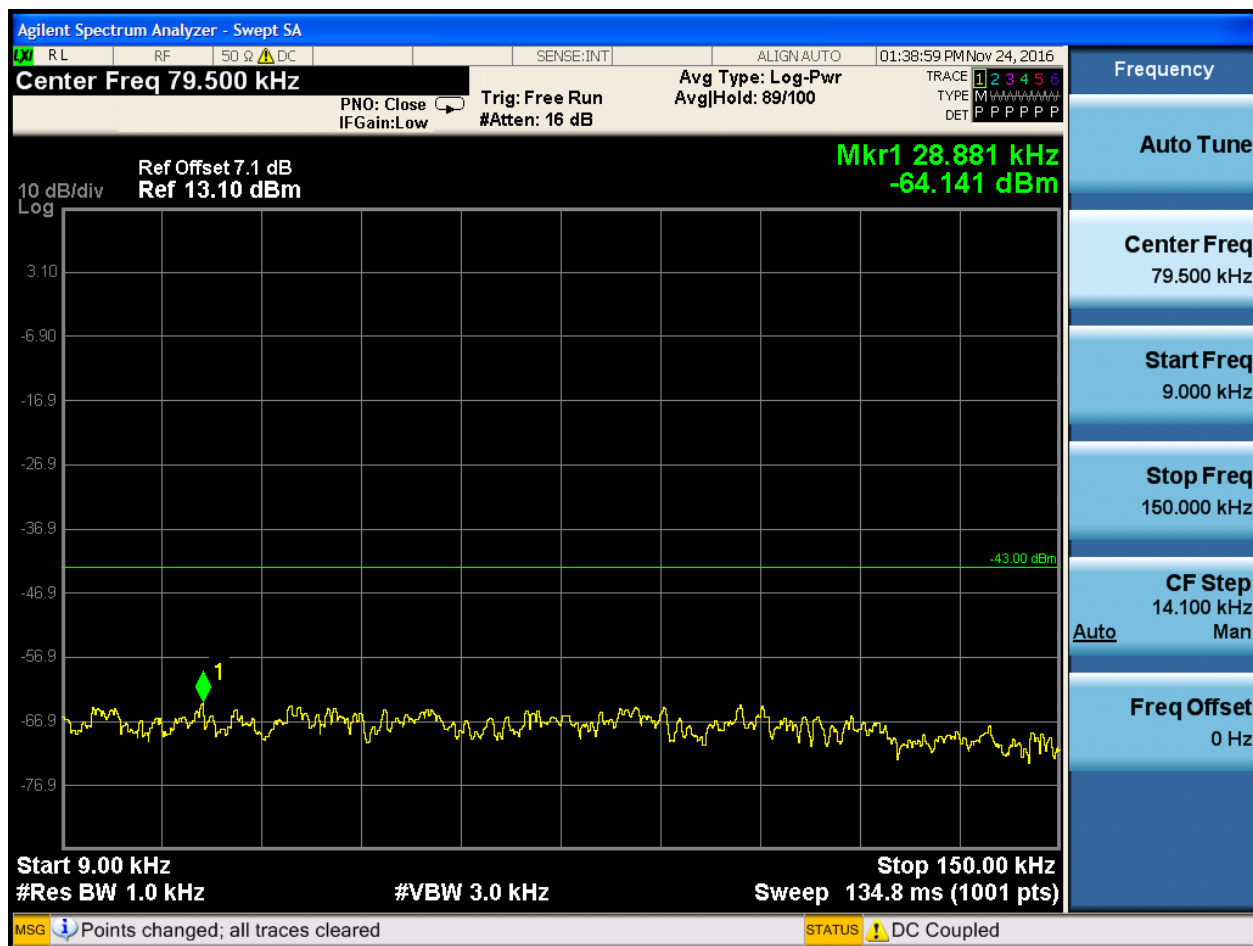


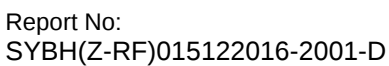


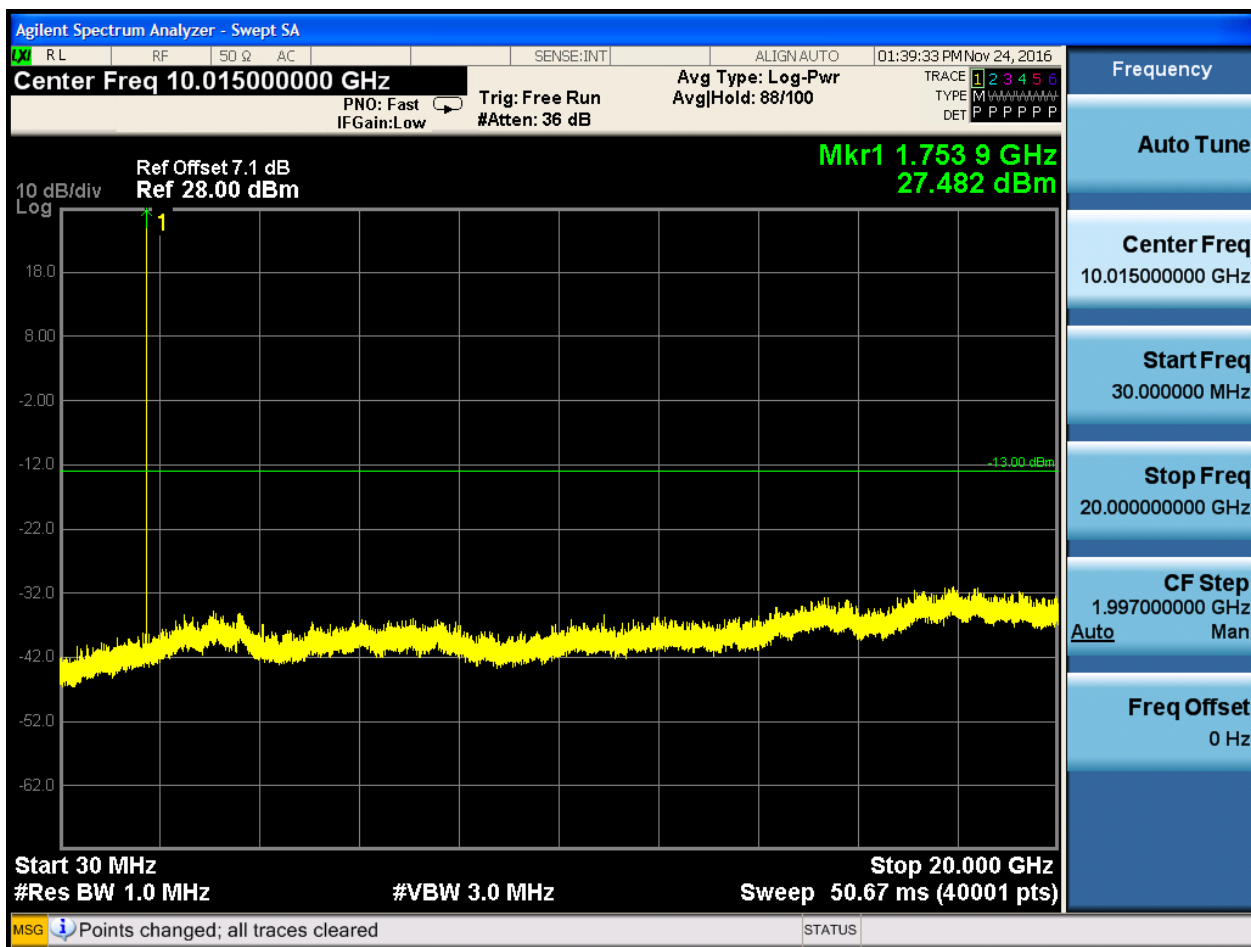


6.1.1.2.1.3 Test Channel = HCH

6.1.1.2.1.3.1 Test RB = RB1#0



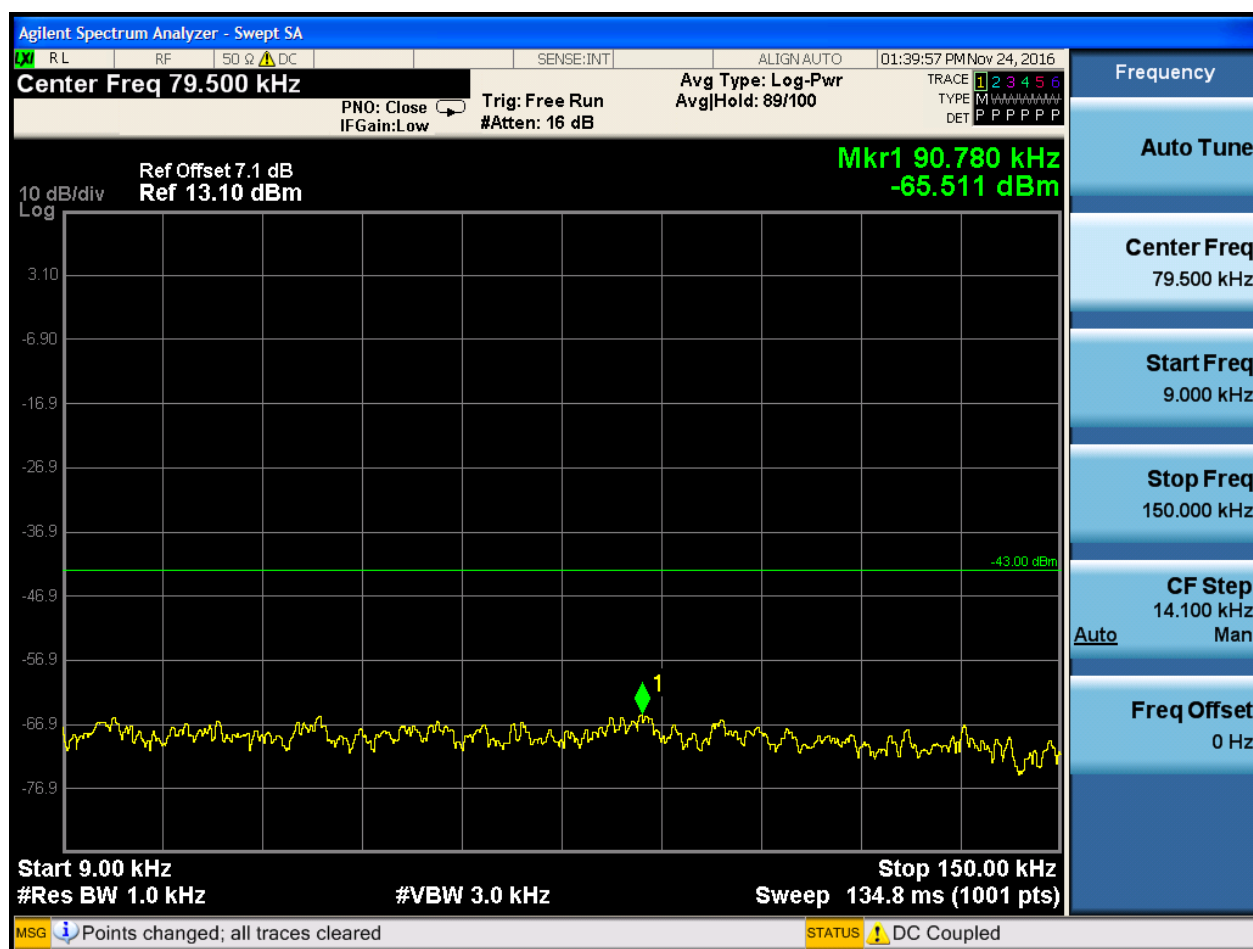


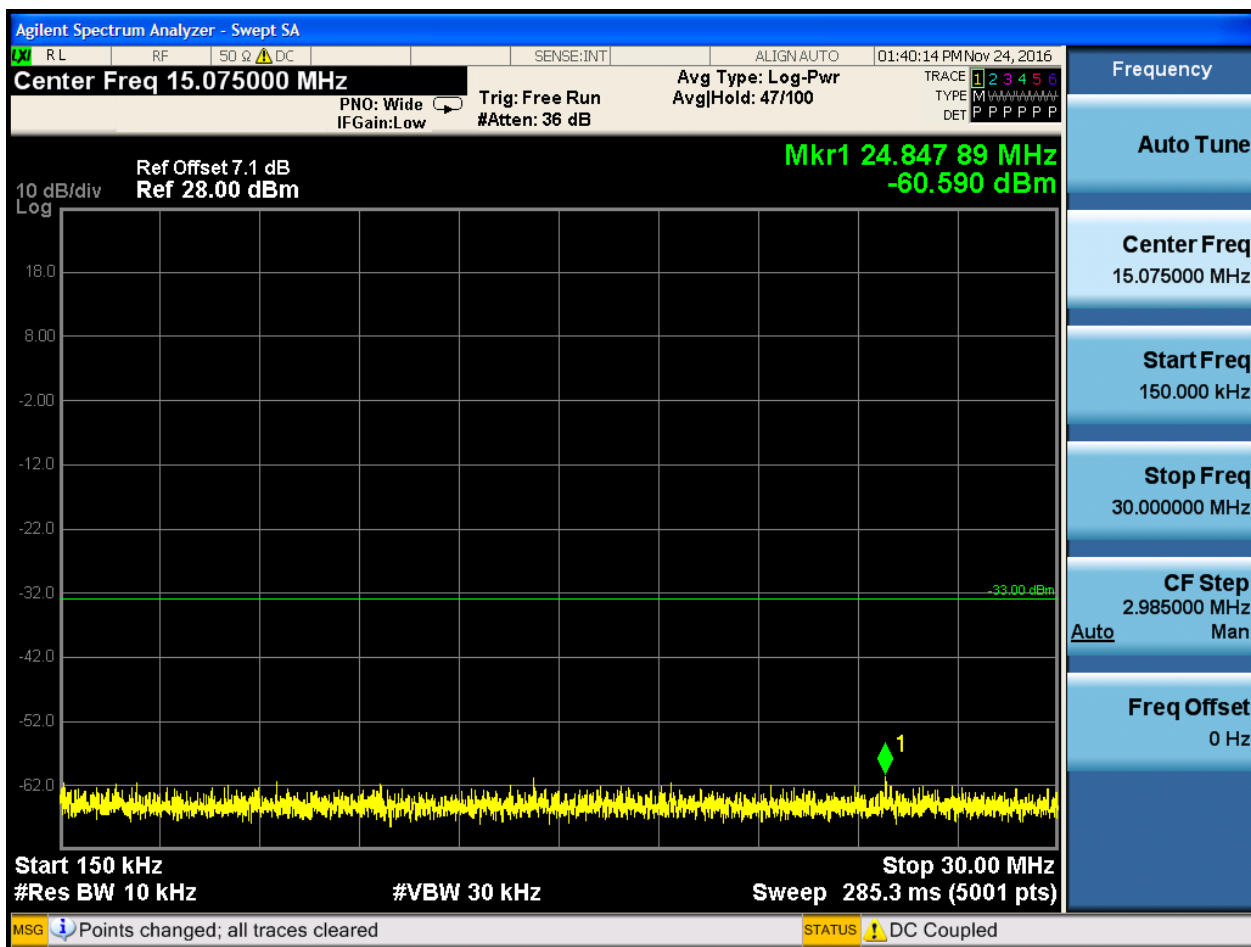


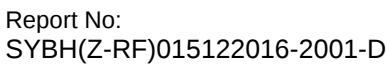
6.1.1.2.2 Test Bandwidth = 3

6.1.1.2.2.1 Test Channel = LCH

6.1.1.2.2.1.1 Test RB = RB1#0



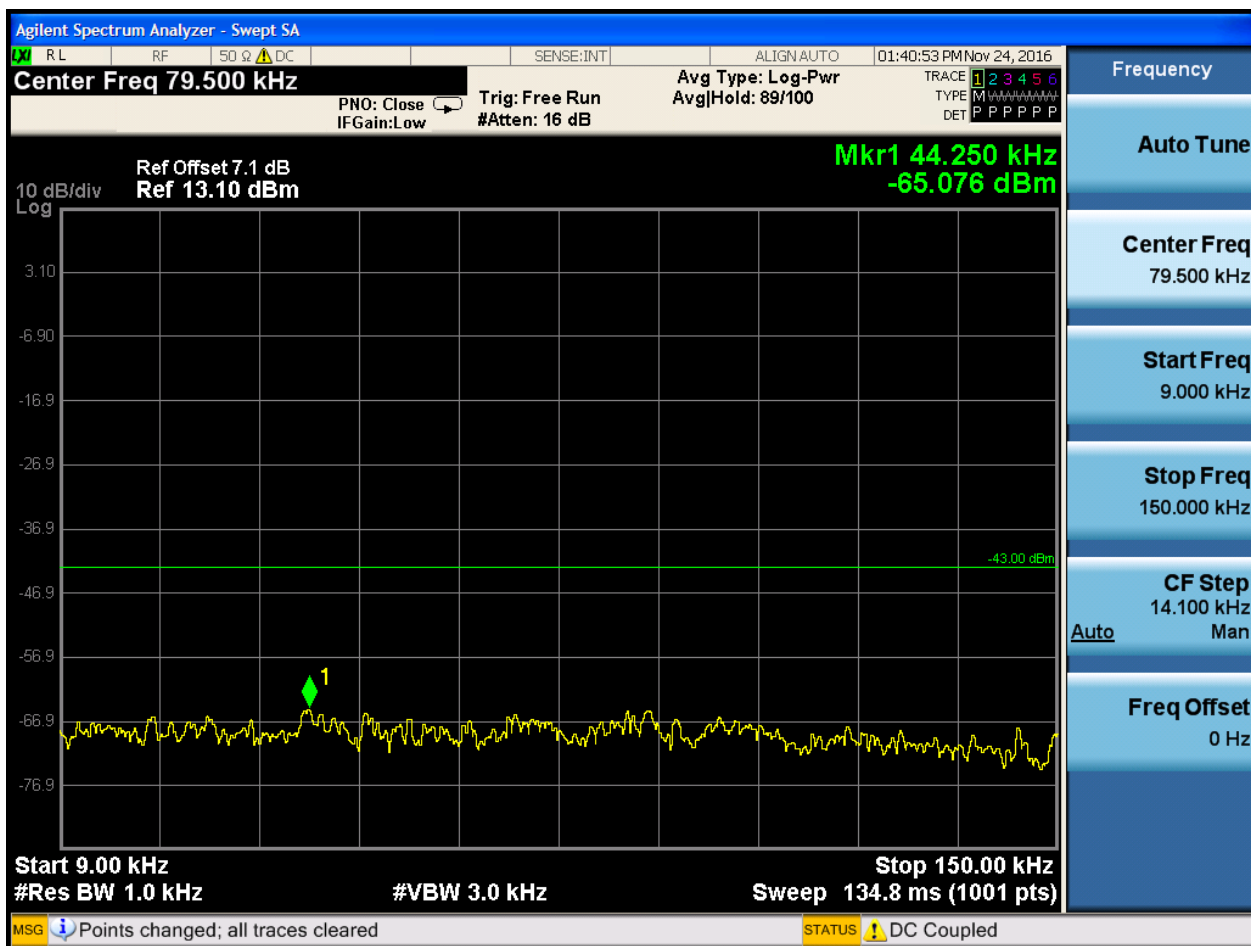


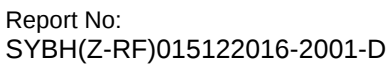


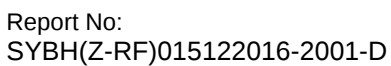


6.1.1.2.2.2 Test Channel = MCH

6.1.1.2.2.2.1 Test RB = RB1#0

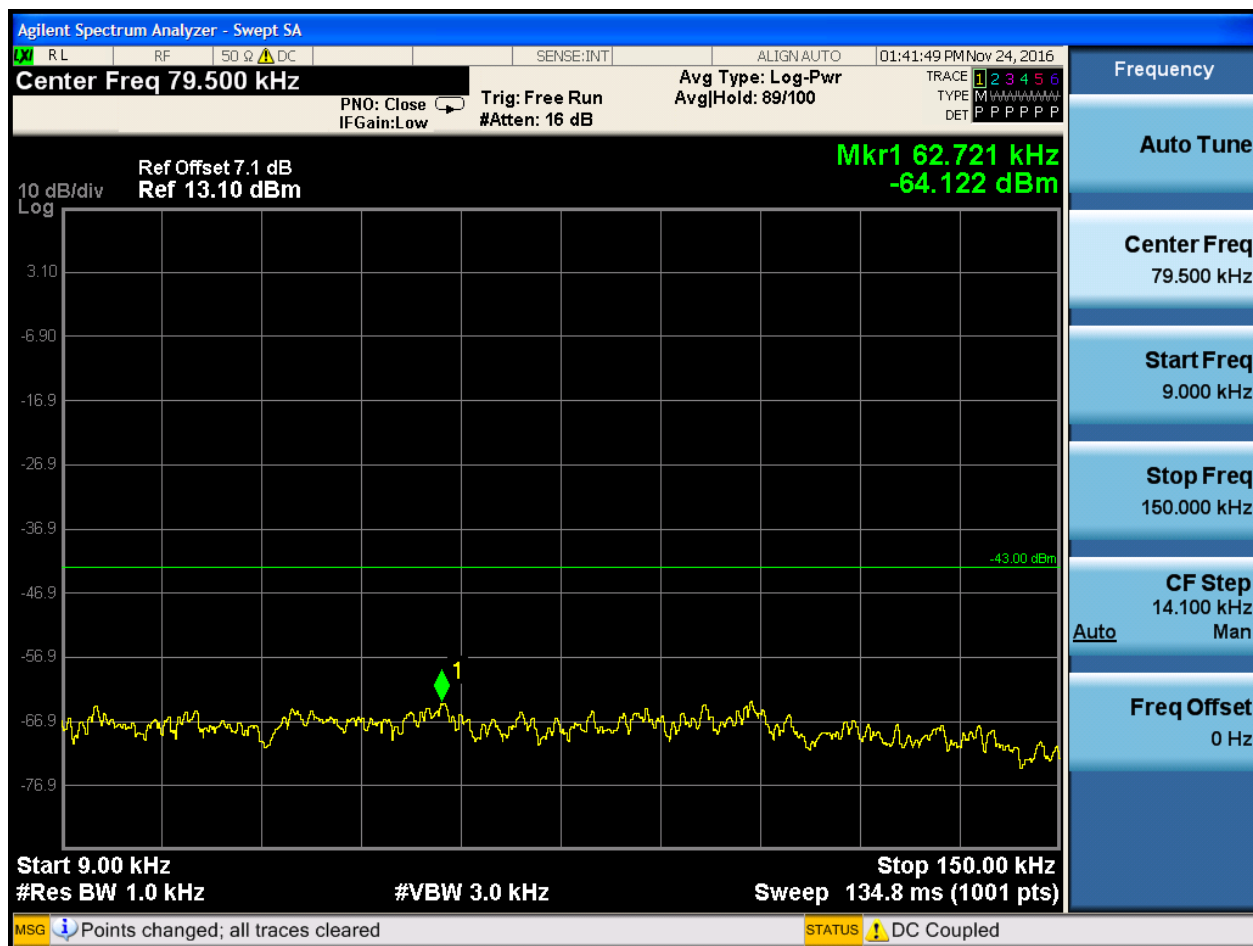


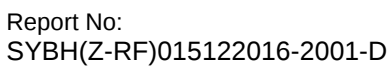


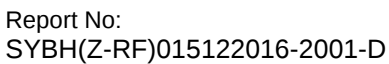


6.1.1.2.2.3 Test Channel = HCH

6.1.1.2.2.3.1 Test RB = RB1#0



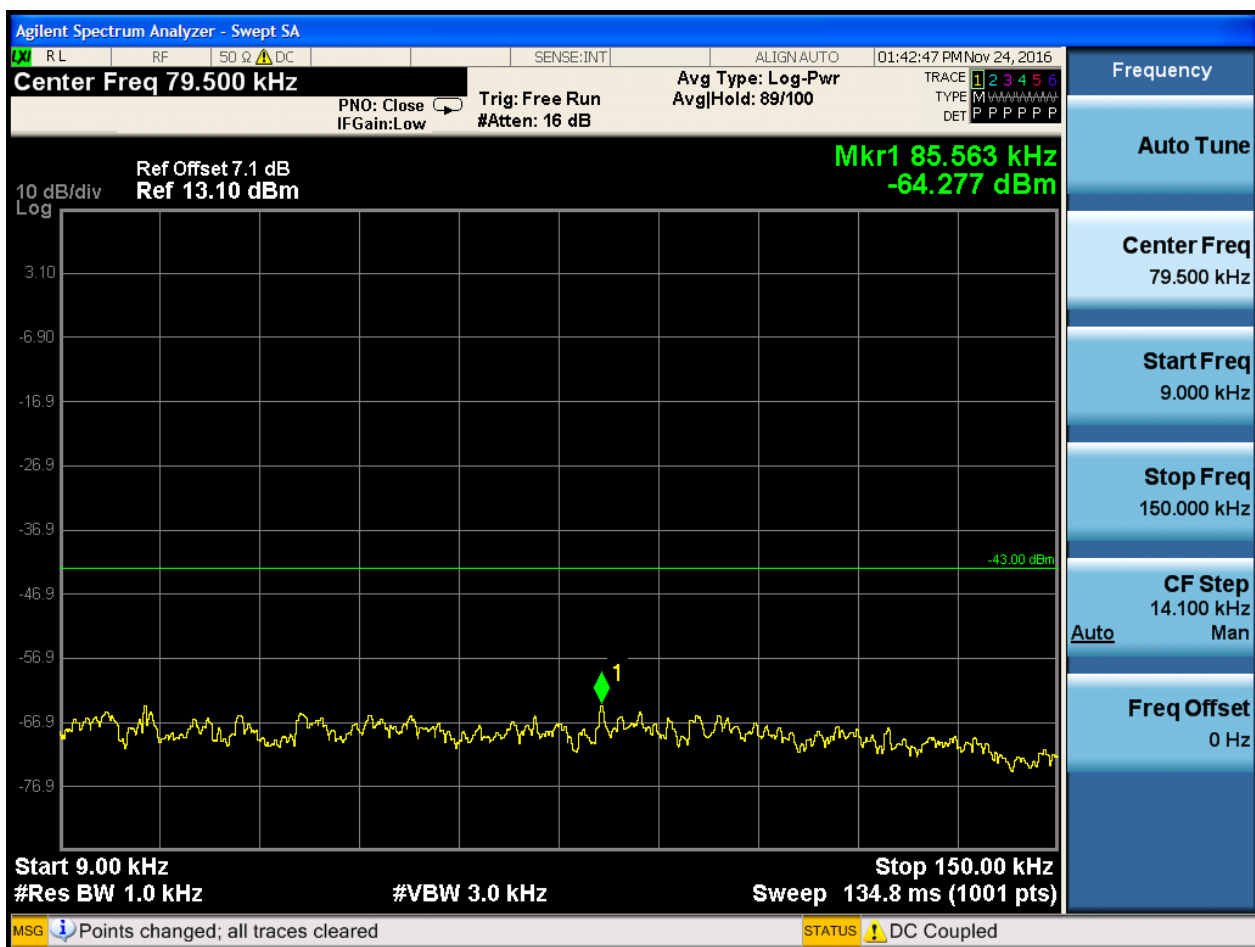


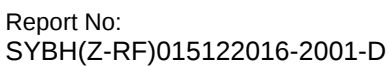


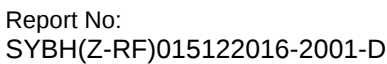
6.1.1.2.3 Test Bandwidth = 5

6.1.1.2.3.1 Test Channel = LCH

6.1.1.2.3.1.1 Test RB = RB1#0

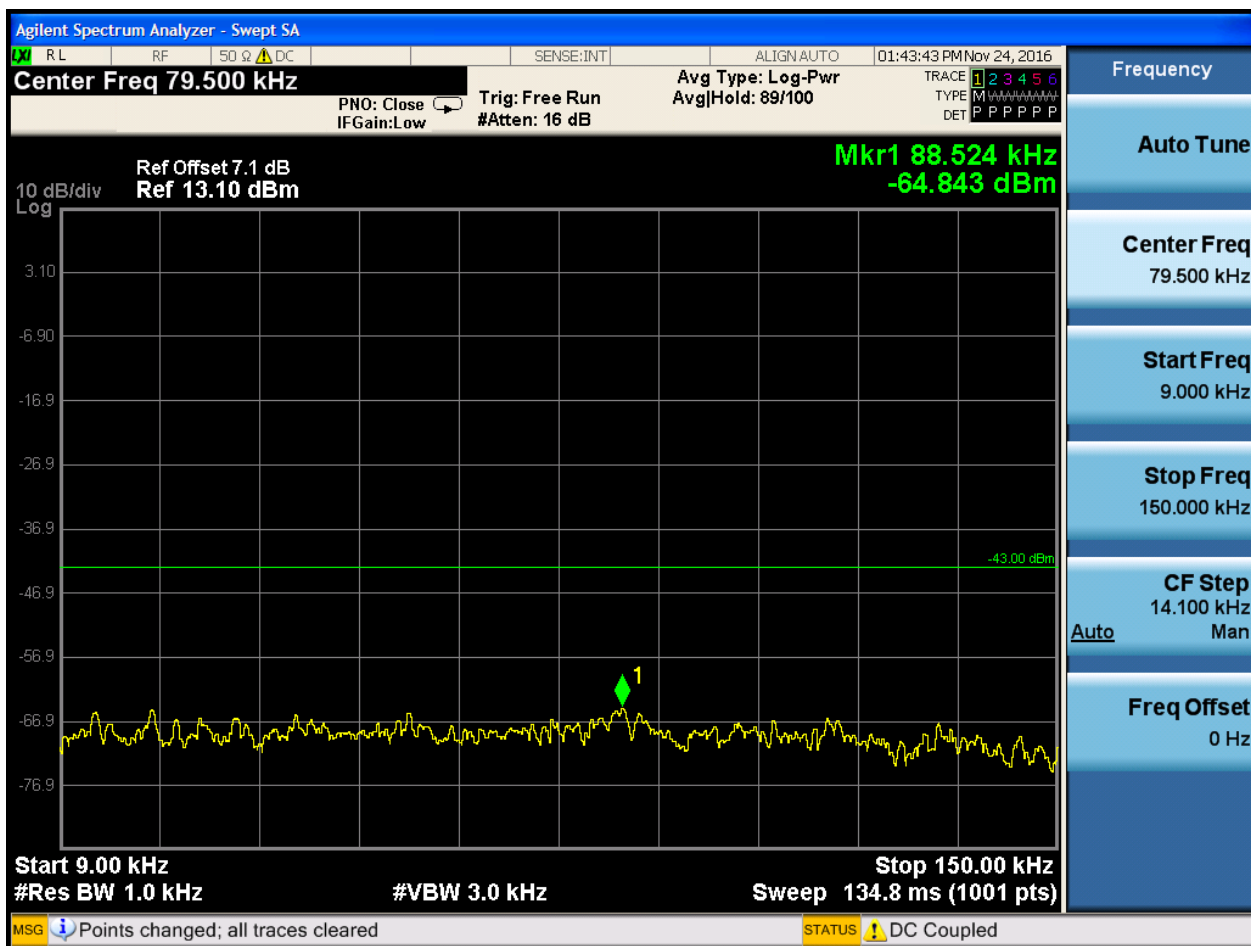


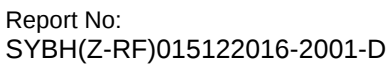


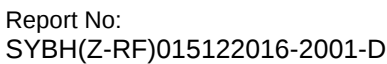


6.1.1.2.3.2 Test Channel = MCH

6.1.1.2.3.2.1 Test RB = RB1#0



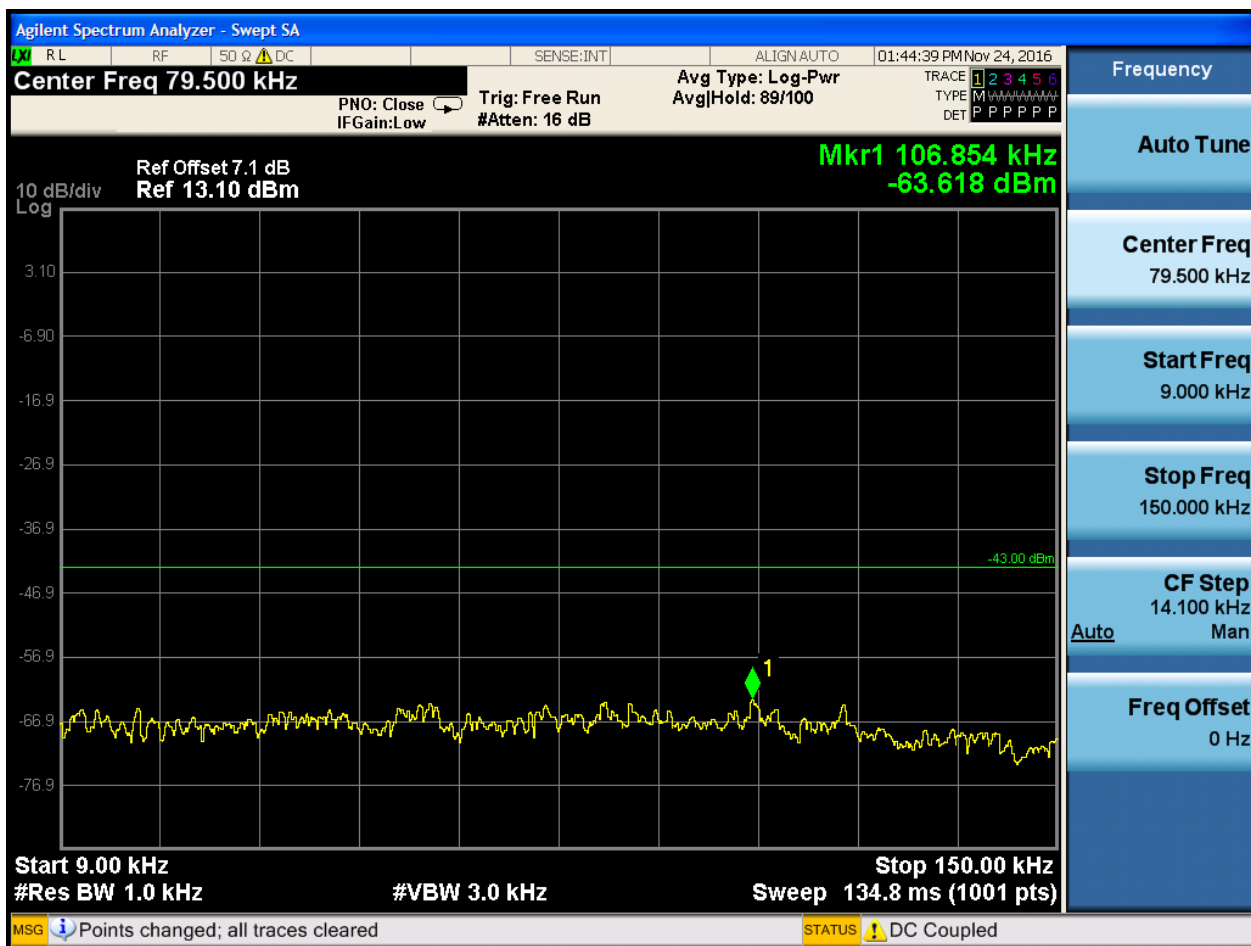


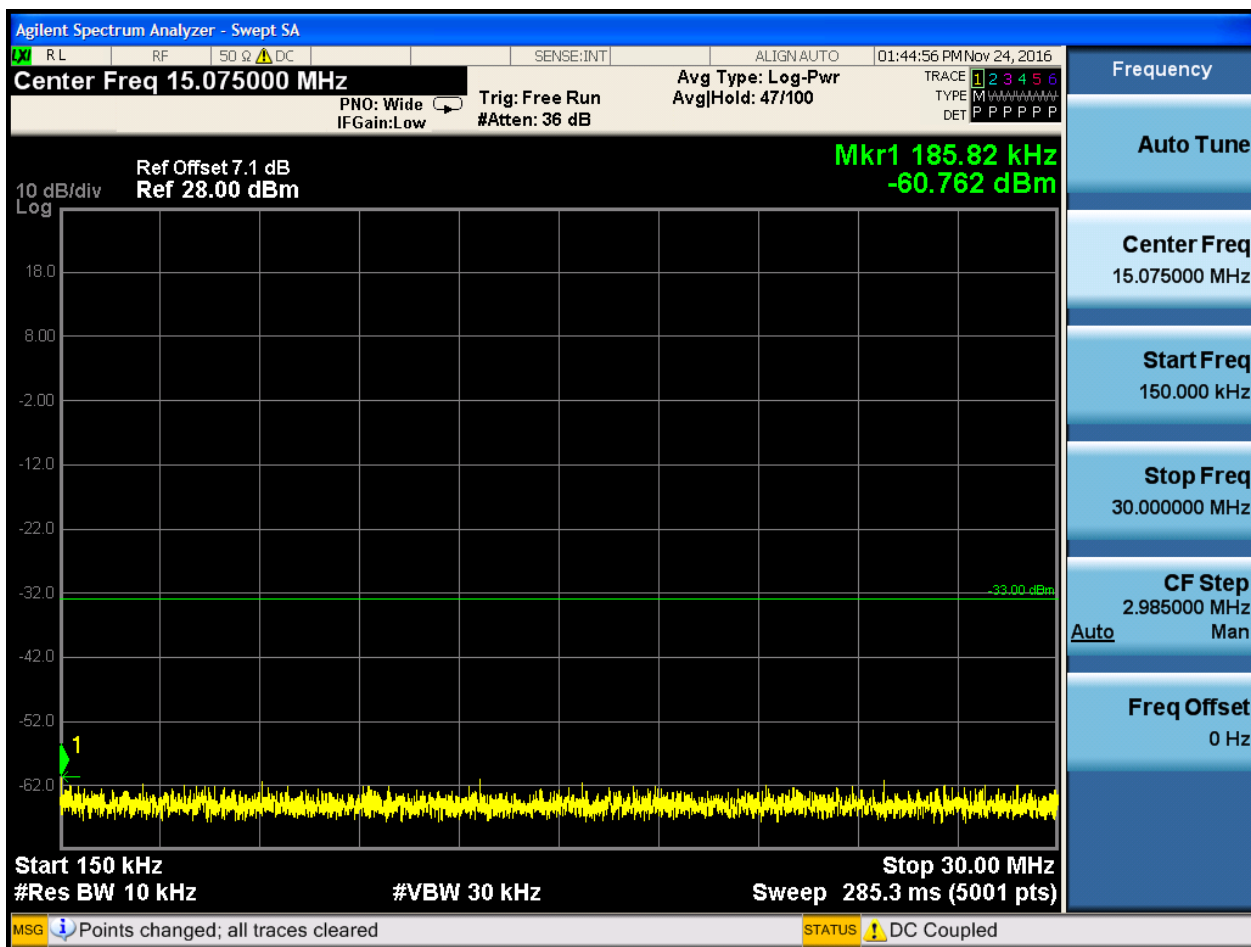




6.1.1.2.3.3 Test Channel = HCH

6.1.1.2.3.3.1 Test RB = RB1#0



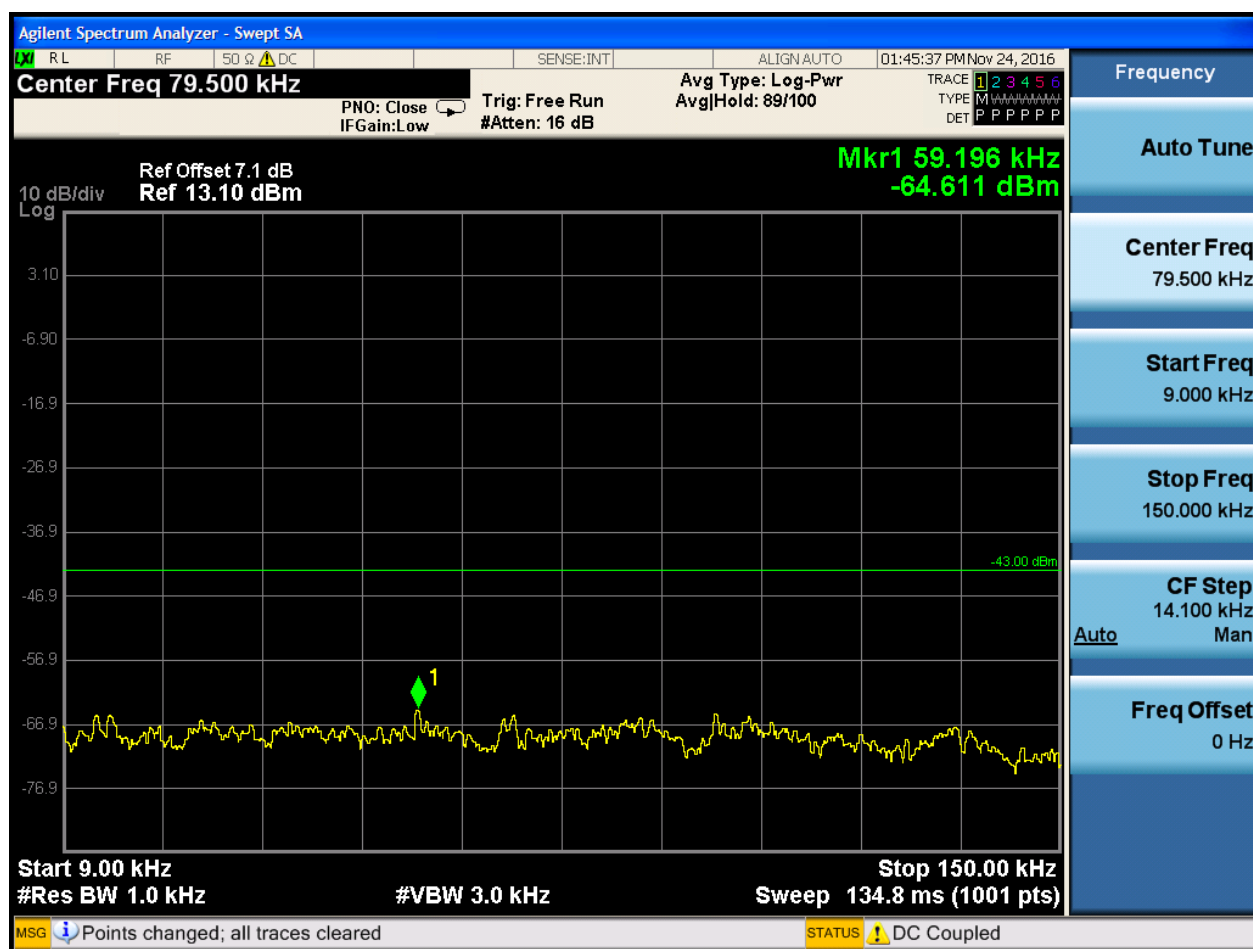


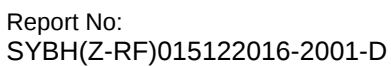


6.1.1.2.4 Test Bandwidth = 10

6.1.1.2.4.1 Test Channel = LCH

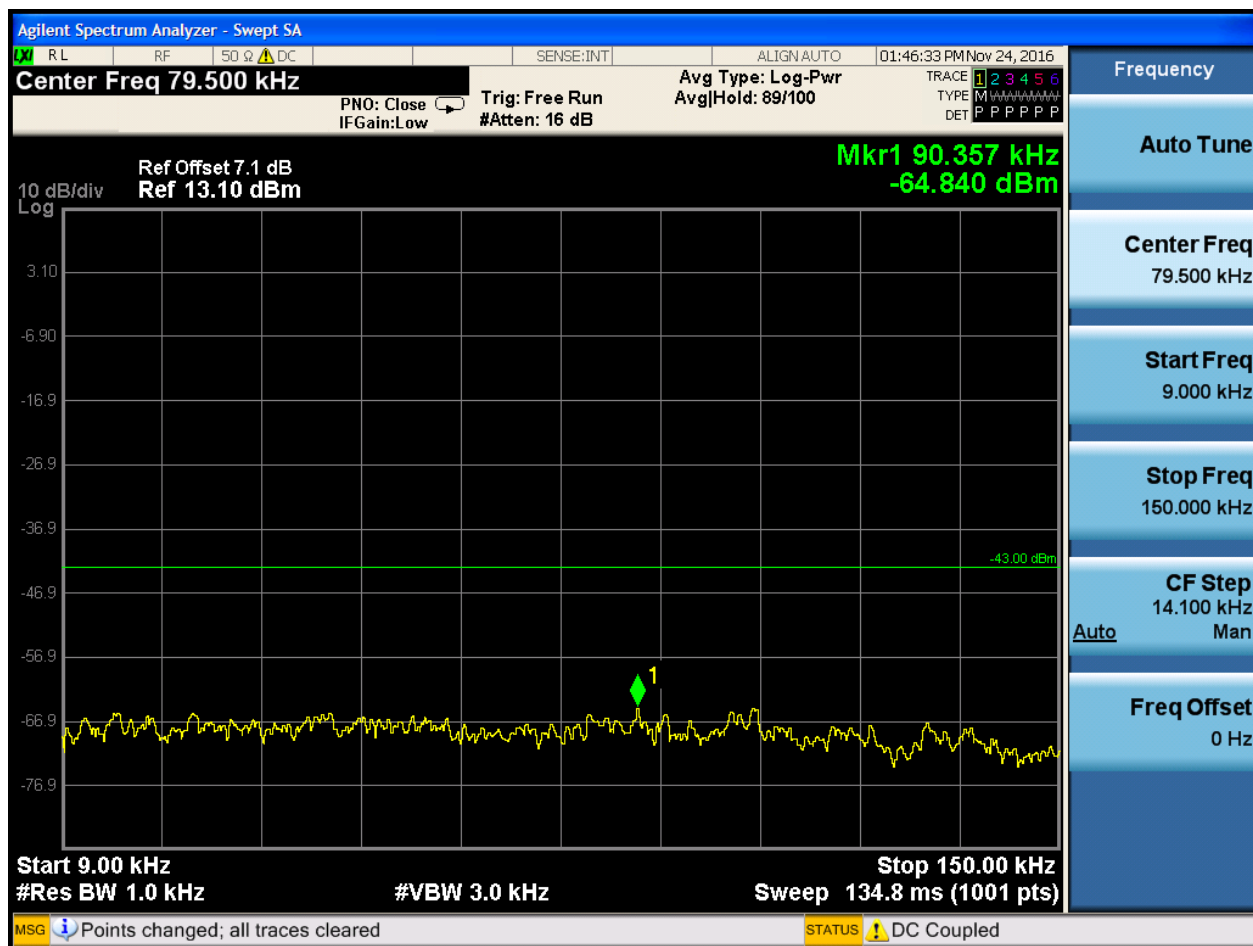
6.1.1.2.4.1.1 Test RB = RB1#0

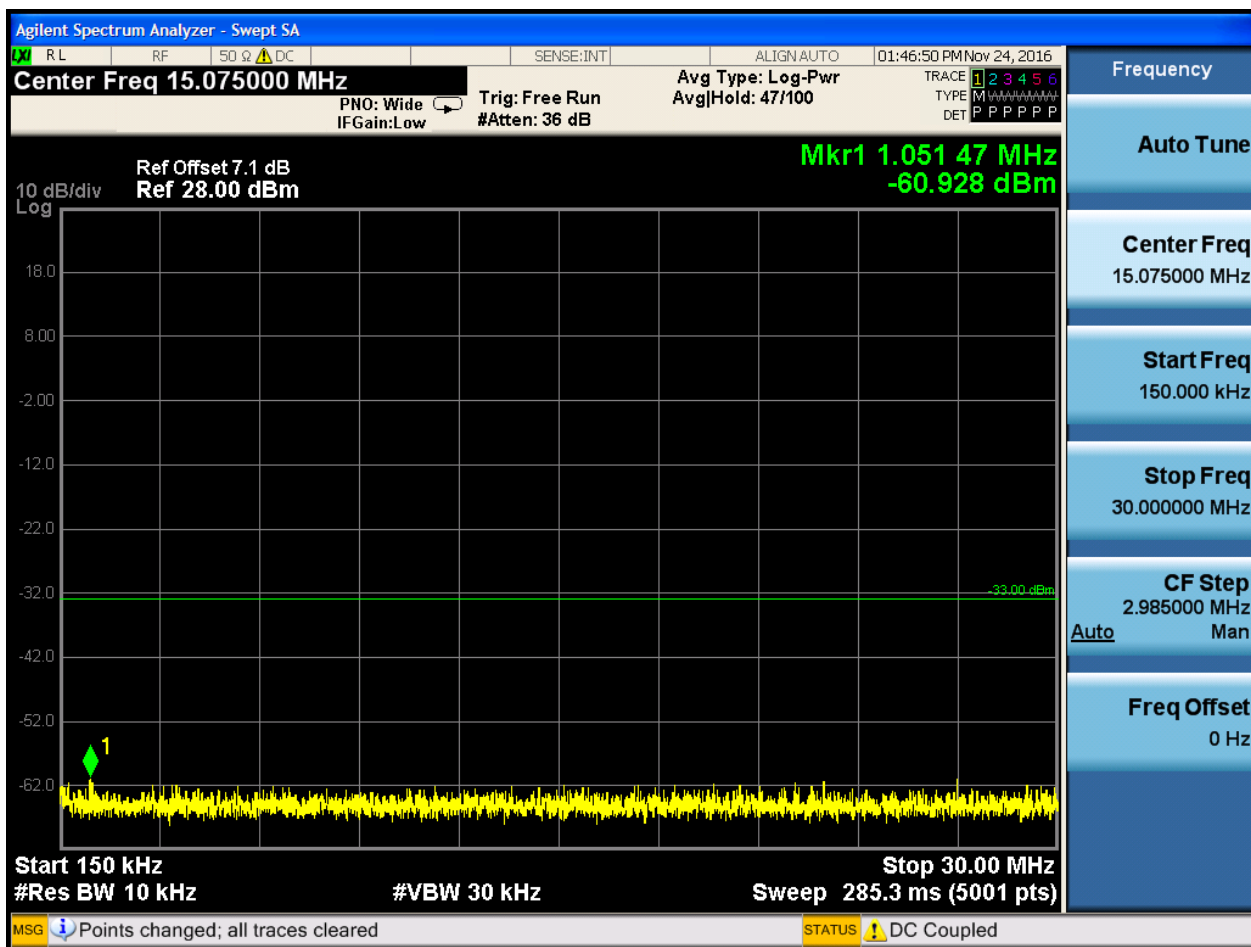


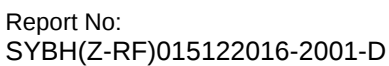


6.1.1.2.4.2 Test Channel = MCH

6.1.1.2.4.2.1 Test RB = RB1#0



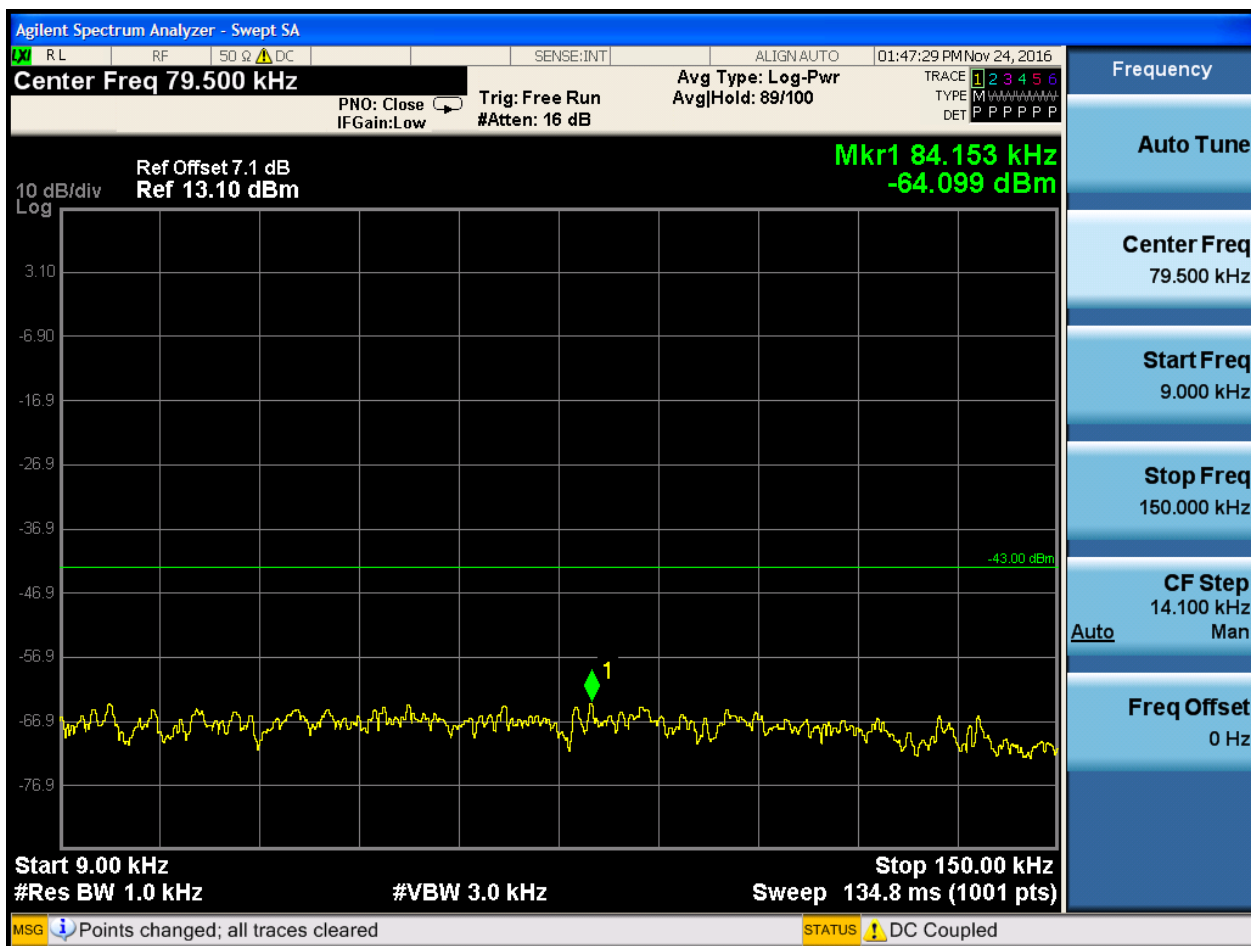


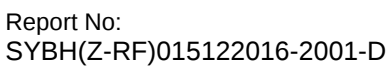




6.1.1.2.4.3 Test Channel = HCH

6.1.1.2.4.3.1 Test RB = RB1#0







6.1.1.2.5 Test Bandwidth = 15

6.1.1.2.5.1 Test Channel = LCH

6.1.1.2.5.1.1 Test RB = RB1#0

