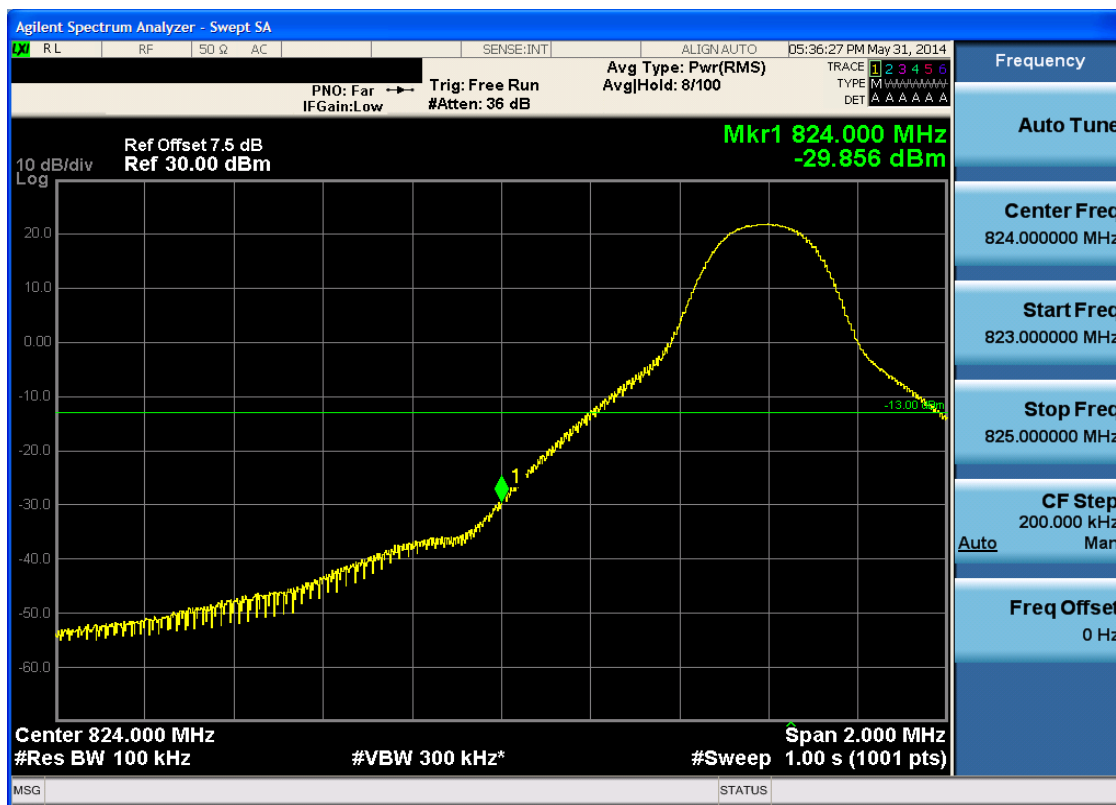
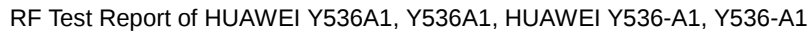


5.3.3.1.4 Test Bandwidth = 10

5.3.3.1.4.1 Test Channel = LCH

5.3.3.1.4.1.1 Test RB = RB1#0





Agilent Spectrum Analyzer - Swept SA

RL RF 50 Ω AC SENSE:INT ALIGN:AUTO 05:36:42 PM May 31, 2014

PNO: Far → Trig: Free Run Avg Type: Pwr(RMS) TYPE M DET A
IFGain:Low #Atten: 36 dB Avg|Hold: 8/100

Ref Offset 7.5 dB Mkr1 823.990 MHz
Ref 30.00 dBm -55.382 dBm

10 dB/div Log

Center 824.000 MHz Span 2.000 MHz
#Res BW 100 kHz #VBW 300 kHz* #Sweep 1.00 s (1001 pts)

Auto Tune

Center Freq 824.000000 MHz

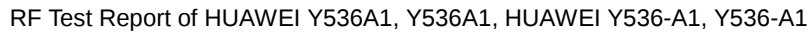
Start Freq 823.000000 MHz

Stop Freq 825.000000 MHz

CF Step 200.000 kHz Man

Freq Offset 0 Hz

MSG STATUS



Agilent Spectrum Analyzer - Swept SA

RL RF 50 Ω AC SENSE:INT ALIGN:AUTO 05:36:57 PM May 31, 2014

PNO: Far Trig: Free Run Avg Type: Pwr(RMS) TRACE 1 2 3 4 5 6
 IF Gain: Low #Atten: 36 dB Avg/Hold: 8/100 TYPE M W W W W W W W W W
 DET A A A A A A A

Ref Offset 7.5 dB Mkr1 823.680 MHz
 Ref 30.00 dBm -35.568 dBm

10 dB/div
 Log

Center 824.000 MHz
 #Res BW 100 kHz #VBW 300 kHz* Span 2.000 MHz
 #Sweep 1.00 s (1001 pts)

MSG STATUS

Frequency

Auto Tune

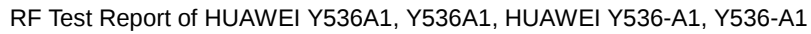
Center Freq
 824.000000 MHz

Start Freq
 823.000000 MHz

Stop Freq
 825.000000 MHz

CF Step
 200.000 kHz
 Auto Man

Freq Offset
 0 Hz



Agilent Spectrum Analyzer - Swept SA

R L RF 50 Ω AC SENSE:INT ALIGN:AUTO 05:37:11 PM May 31, 2014

PNO: Far → Trg: Free Run Avg Type: Pwr(RMS) TRACe 1 2 3 4 5 6
IFGain:Low #Atten: 36 dB Avg|Hold: 8/100 TYPE M W A V I N E TET A A A A A A

Ref Offset 7.5 dB Mkr1 824.000 MHz
Ref 30.00 dBm -30.507 dBm

10 dB/div Log

The spectrum analyzer displays a frequency sweep from approximately 822 MHz to 826 MHz. The y-axis shows power density in dBm/dBHz, ranging from -60.0 to 20.0. A green horizontal reference line is set at -13.00 dBm. A yellow trace shows a flat noise floor around -35 dBm until about 823.5 MHz, where it begins to rise sharply, reaching a plateau near 0 dBm by 825.5 MHz. A red marker labeled '1' is placed on the rising portion of the curve.

Center 824.000 MHz Span 2.000 MHz
#Res BW 100 kHz #VBW 300 kHz* #Sweep 1.0 s (1001 pts)

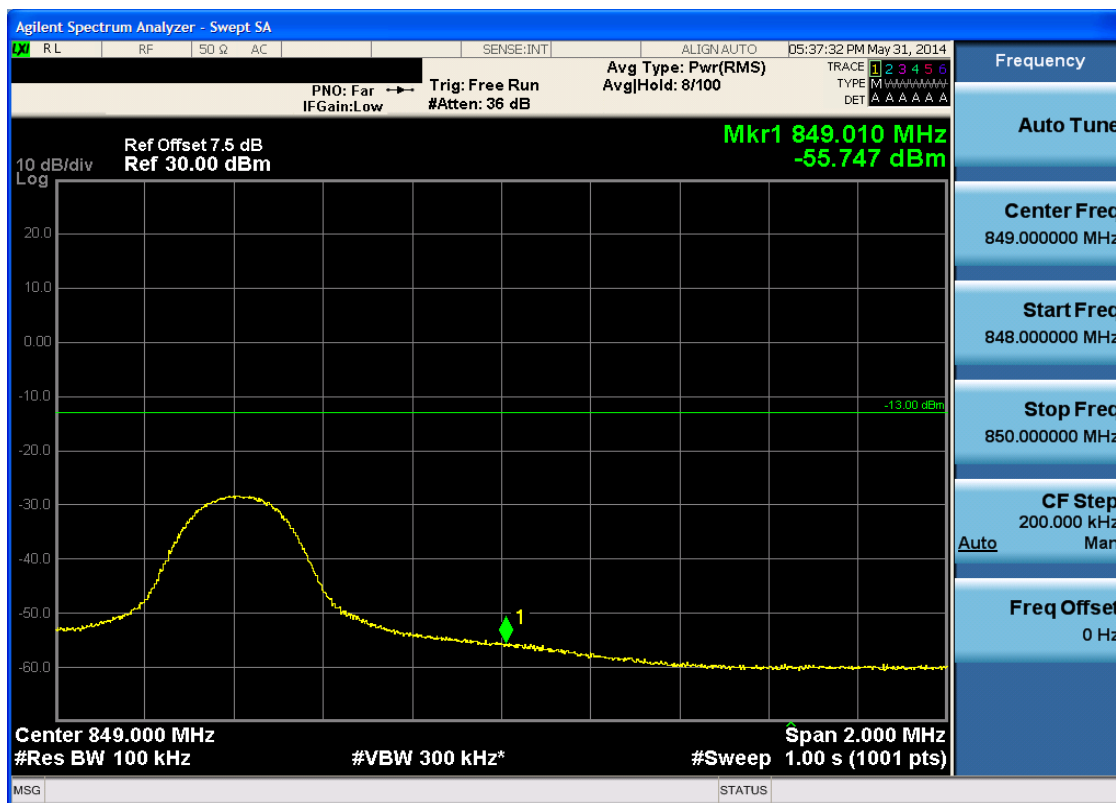
MSG STATUS

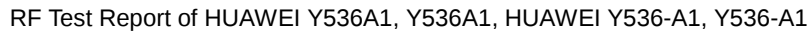
Frequency Auto Tune Center Freq 824.000000 MHz Start Freq 823.000000 MHz Stop Freq 825.000000 MHz CF Step 200.000 kHz Man Auto Freq Offset 0 Hz



5.3.3.1.4.2 Test Channel = HCH

5.3.3.1.4.2.1 Test RB = RB1#0





Agilent Spectrum Analyzer - Swept SA

R L RF 50 Ω AC SENSE:INT ALIGN:AUTO 05:37:46 PM May 31, 2014

PNO: Far → Trig: Free Run Avg Type: Pwr(RMS) TRAC 1 2 3 4 5 6
IFGain:Low #Atten: 36 dB Avg|Hold: 8/100 TYPE M W W W W W W W W W
DET A A A A A A

Ref Offset 7.5 dB Mkr1 849.010 MHz
Ref 30.00 dBm -30.452 dBm

10 dB/div Log

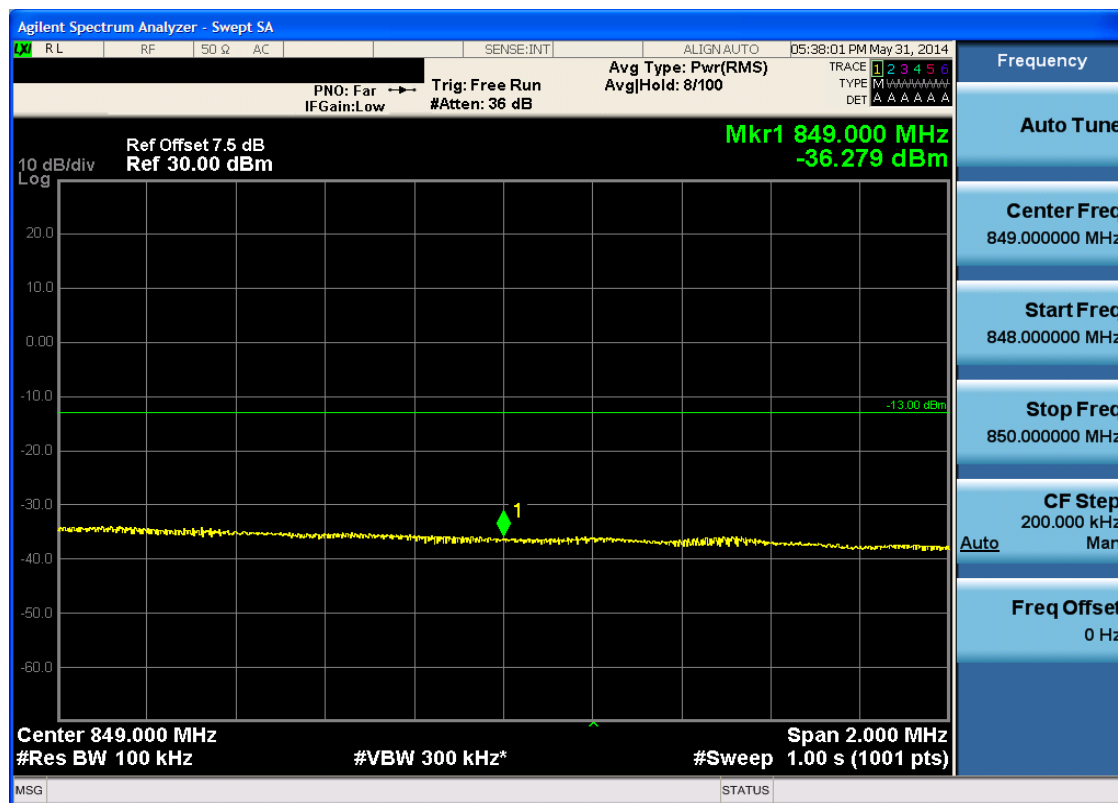
Center Freq 849.000000 MHz
Start Freq 848.000000 MHz
Stop Freq 850.000000 MHz
CF Step 200.000 kHz Man
Auto
Freq Offset 0 Hz

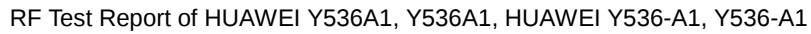
Center 849.000 MHz Span 2.000 MHz
#Res BW 100 kHz #VBW 300 kHz* #Sweep 1.00 s (1001 pts)

MSG STATUS



5.3.3.1.4.2.3 Test RB = RB25#13





Agilent Spectrum Analyzer - Swept SA

RL RF 50 Ω AC SENSE:INT ALIGN: AUTO D5:38:16 PM May 31, 2014

PNO: Far → Trig: Free Run Avg Type: Pwr(RMS) TRACE 1 2 3 4 5 6
 IFGain:Low #Atten: 36 dB AvgHld: 8/100 TYPE M A A A A A A A
 DET A A A A A A A A

Ref Offset 7.5 dB Mkr1 849.000 MHz
 Ref 30.00 dBm -31.034 dBm

10 dB/div Log

20.0
10.0
0.0
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0

-13.00 dBm

Center 849.000 MHz Span 2.000 MHz
 #Res BW 100 kHz #VBW 300 kHz* #Sweep 1.00 s (1001 pts)

MSG STATUS

Frequency

Auto Tune

Center Freq
849.000000 MHz

Start Freq
848.000000 MHz

Stop Freq
850.000000 MHz

CF Step
200.000 kHz
Auto Man

Freq Offset
0 Hz

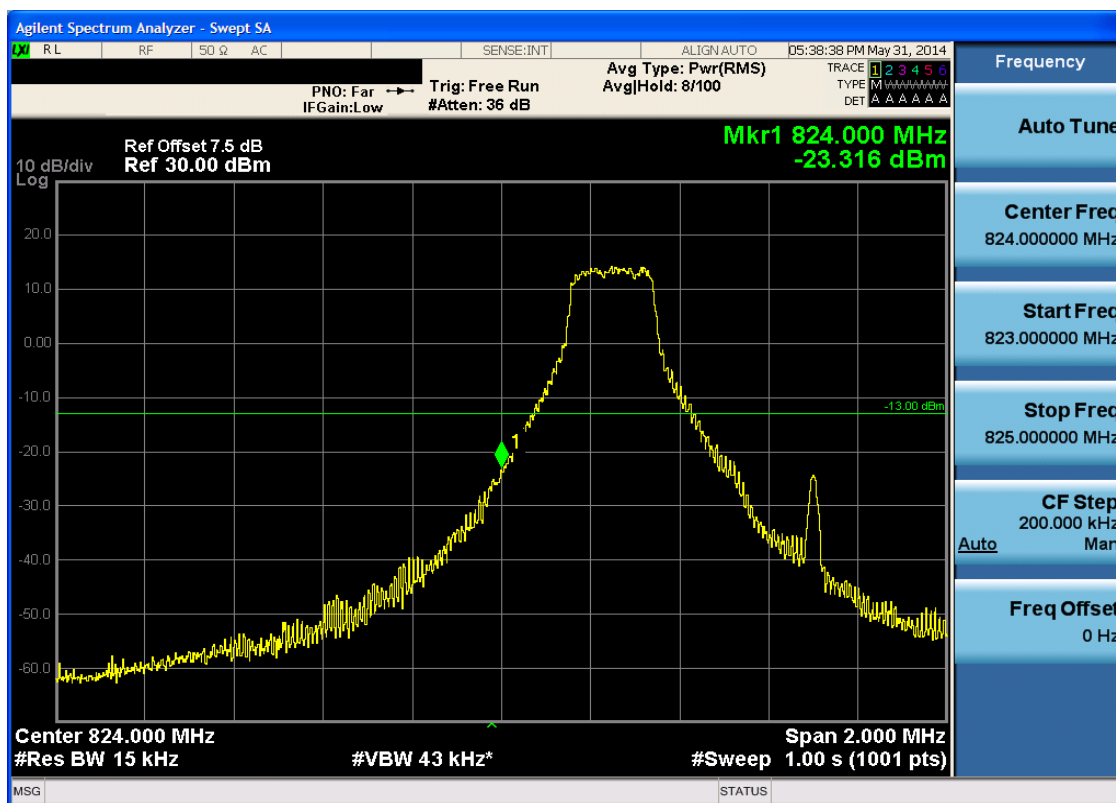


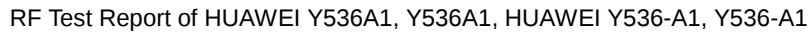
5.3.3.2 Test Mode = LTE/TM2

5.3.3.2.1 Test Bandwidth = 1.4

5.3.3.2.1.1 Test Channel = LCH

5.3.3.2.1.1.1 Test RB = RB1#0





Agilent Spectrum Analyzer - Swept SA

RL RF 50 Ω AC SENSE:INT ALIGN: AUTO D5:38:53 PM May 31, 2014

PNO: Far → Trig: Free Run Avg Type: Pwr(RMS) TRACE 1 2 3 4 5 6
IFGain:Low #Atten: 36 dB Avg/Hold: 8/100 TYPE M A A A A A A A
DET A A A A A A

Ref Offset 7.5 dB Mkr1 823.360 MHz
Ref 30.00 dBm -54.702 dBm

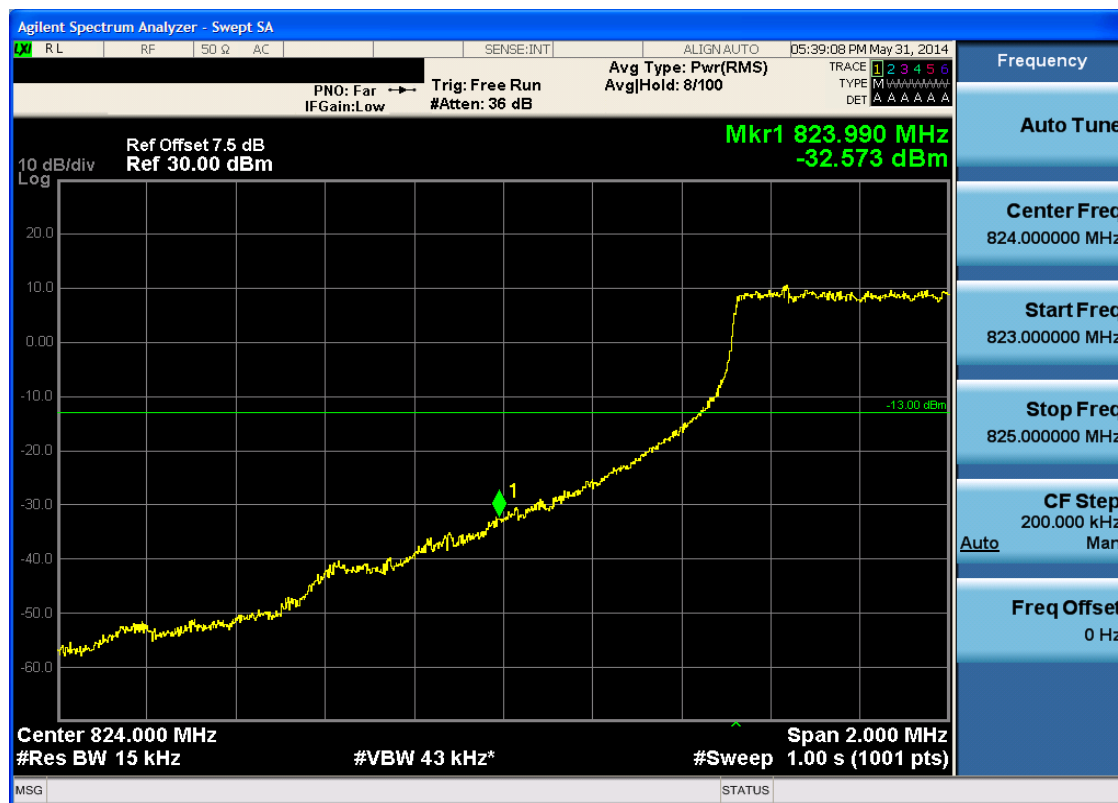
10 dB/div
Log

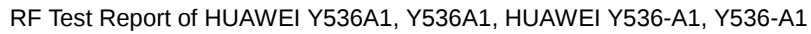
Center 824.000 MHz Span 2.000 MHz
#Res BW 15 kHz #VBW 43 kHz* #Sweep 1.00 s (1001 pts)

MSG STATUS



5.3.3.2.1.1.3 Test RB = RB3#2



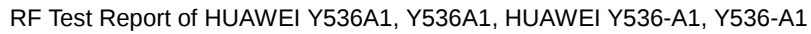
[illegible]



5.3.3.2.1.2 Test Channel = HCH

5.3.3.2.1.2.1 Test RB = RB1#0





Agilent Spectrum Analyzer - Swept SA

R L RF 50 Ω AC SENSE:INT ALIGN:AUTO 05:39:57 PM May 31, 2014

PNO: Far → Trig: Free Run Avg Type: Pwr(RMS) TRACE 1
IFGain:Low #Atten: 36 dB Avg|Hold: 8/100 TYPE M DET A

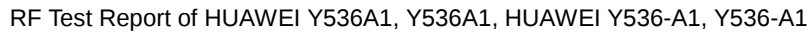
Ref Offset 7.5 dB Mkr1 849.000 MHz
Ref 30.00 dBm -22.764 dBm

10 dB/div Log

The spectrum analyzer displays a power spectral density plot. The vertical axis is labeled "Log" and ranges from -60.0 to 20.0 dBm. The horizontal axis represents frequency, centered at 849.000 MHz. A prominent peak is visible at approximately 849.000 MHz, reaching about 15 dBm. A green cursor points to a marker at -13.00 dBm. The trace shows some noise floor around -60 dBm.

Center 849.000 MHz Span 2.000 MHz
#Res BW 15 kHz #VBW 43 kHz* #Sweep 1.00 s (1001 pts)

MSG STATUS



Agilent Spectrum Analyzer - Swept SA

R/L	RF	50 Ω	AC		SENSE:INT	ALIGN:AUTO	05:40:12 PM May 31, 2014
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PNO: Far → Trig: Free Run
IFGain: Low #Atten: 36 dB

Avg Type: Pwr(RMS) Avg/Hold: 8/100

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 7.5 dB
Ref 30.00 dBm

Mkr1 849.020 MHz
-25.949 dBm

10 dB/div
Log

-13.00 dBm

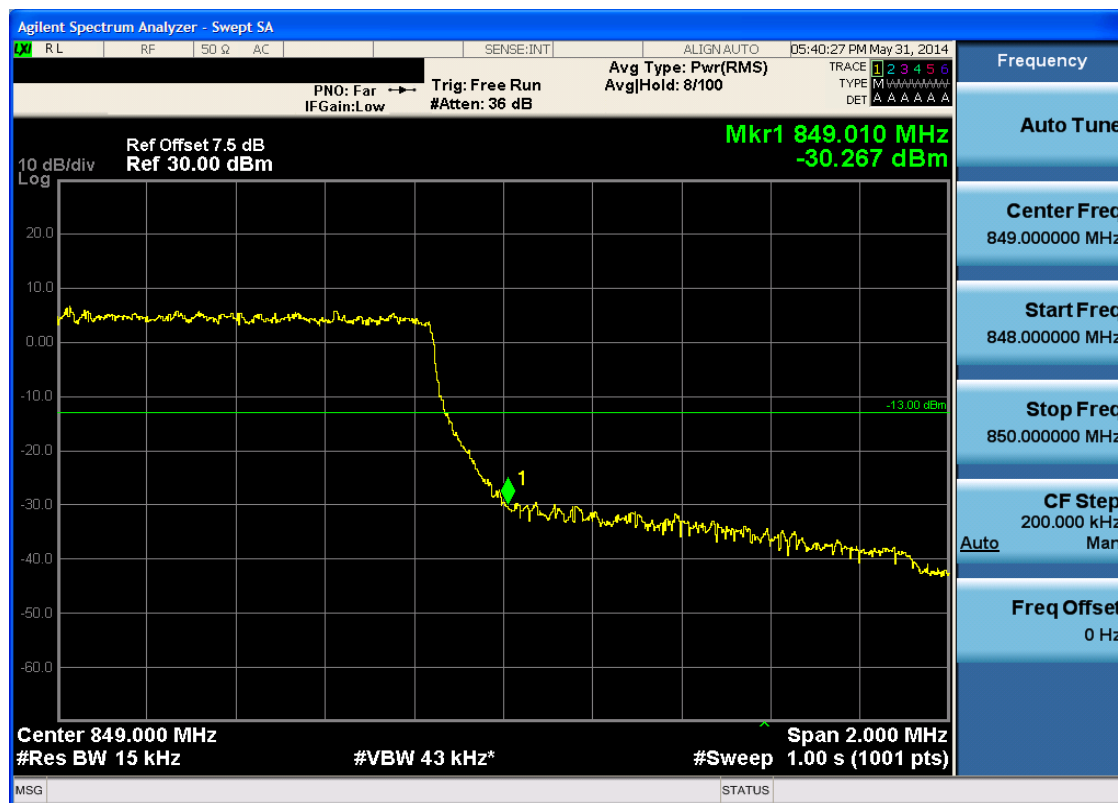
Center 849.000 MHz
#Res BW 15 kHz
#VBW 43 kHz*

Span 2.000 MHz
#Sweep 1.00 s (1001 pts)

MSG STATUS



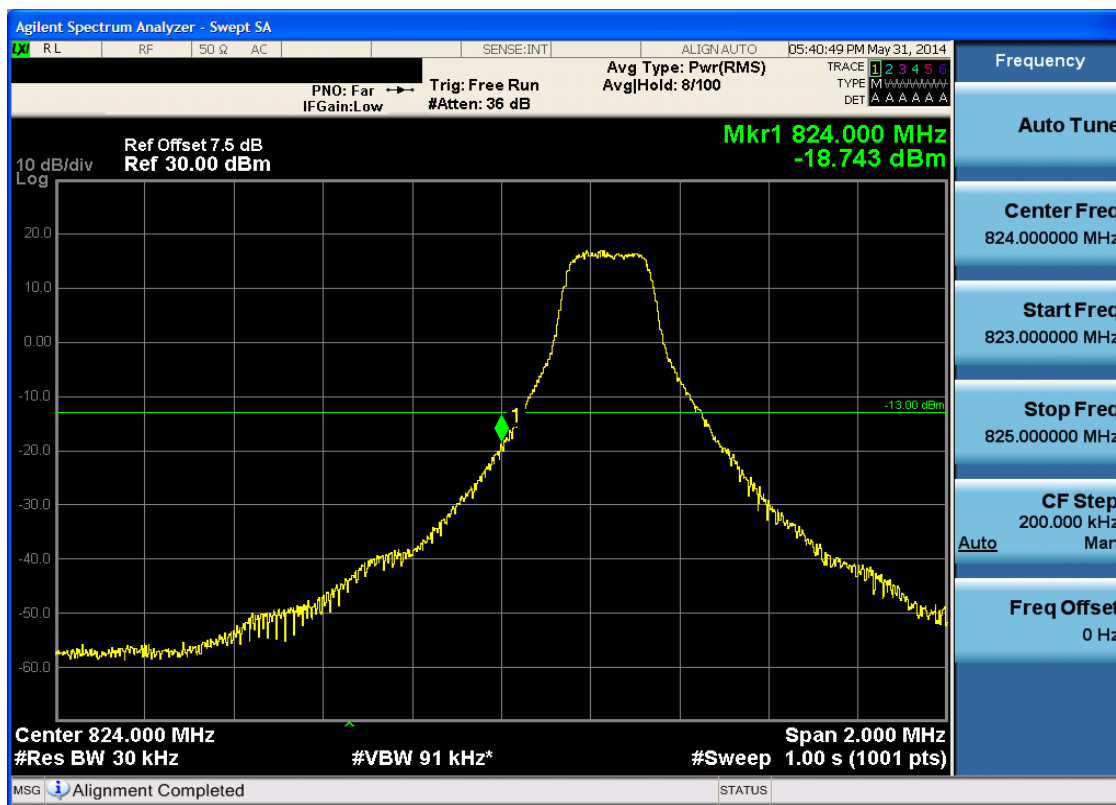
5.3.3.2.1.2.4 Test RB = RB6#0

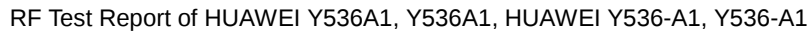


5.3.3.2.2 Test Bandwidth = 3

5.3.3.2.2.1 Test Channel = LCH

5.3.3.2.2.1.1 Test RB = RB1#0





Agilent Spectrum Analyzer - Swept SA

R L	RF	50 Ω	AC		SENSE:INT	ALIGN:AUTO	05:41:03 PM May 31, 2014
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PNO: Far → Trig: Free Run
IFGain:Low #Atten: 36 dB

Avg Type: Pwr(RMS) Avg/Hold: 8/100

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 7.5 dB
Ref 30.00 dBm

Mkr1 823.010 MHz
-45.429 dBm

Center 824.000 MHz
#Res BW 30 kHz
#VBW 91 kHz*

Span 2.000 MHz
#Sweep 1.00 s (1001 pts)

Auto Tune

Center Freq
824.000000 MHz

Start Freq
823.000000 MHz

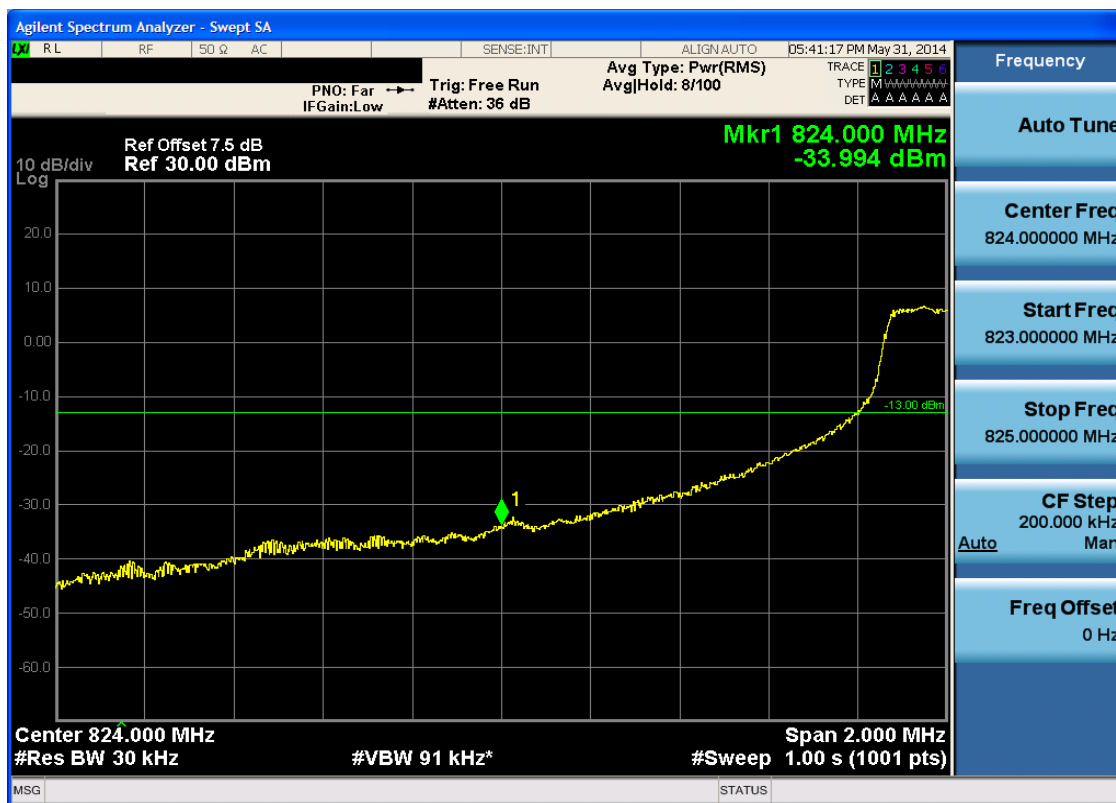
Stop Freq
825.000000 MHz

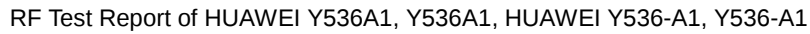
CF Step
200.000 kHz
Man

Freq Offset
0 Hz



5.3.3.2.2.1.3 Test RB = RB8#4

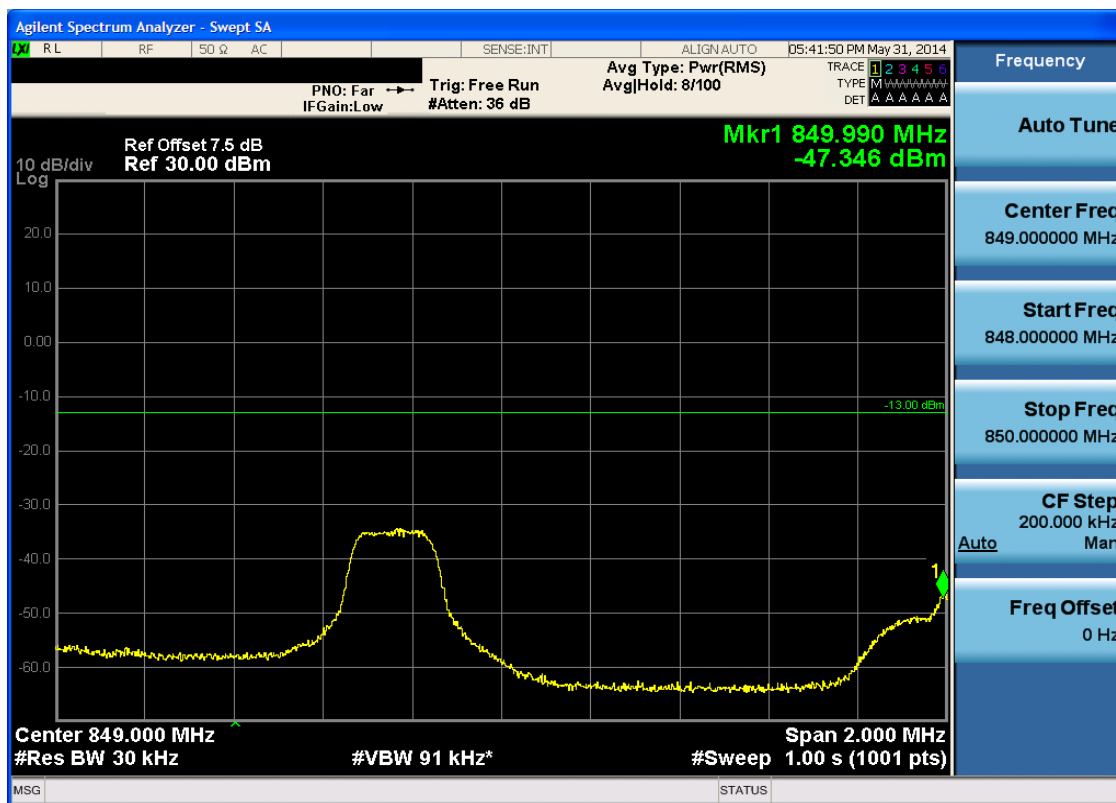


[illegible]

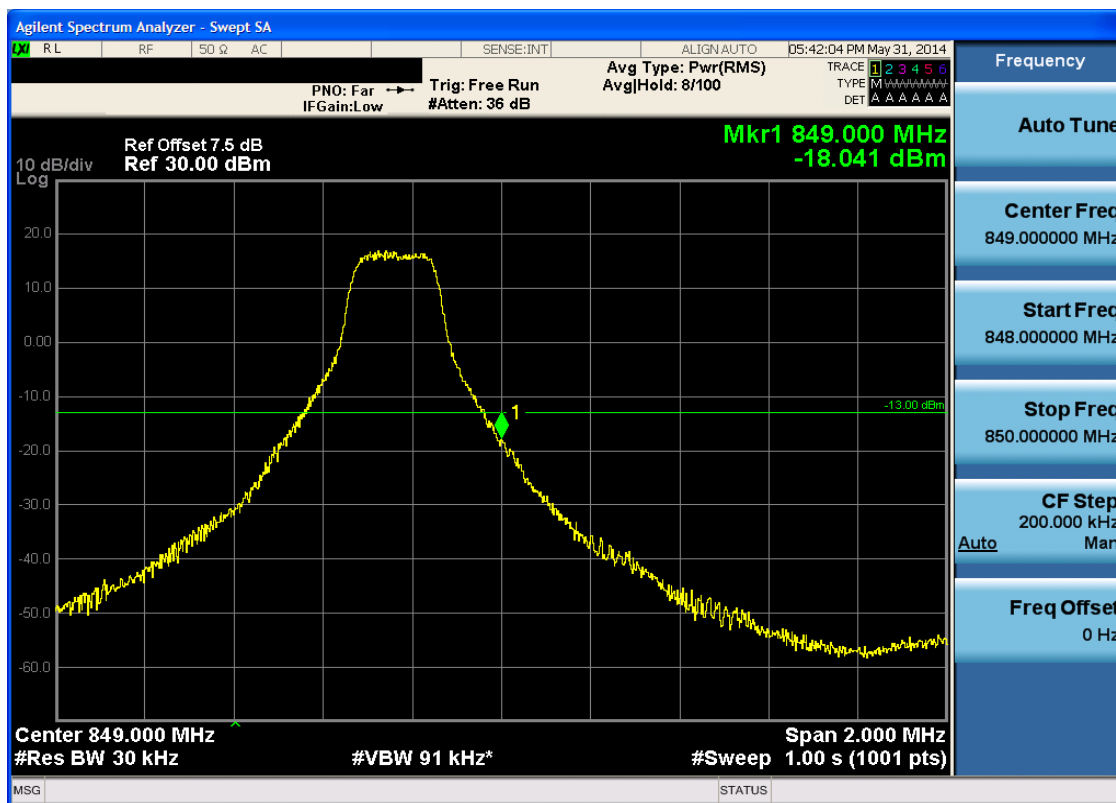


5.3.3.2.2 Test Channel = HCH

5.3.3.2.2.1 Test RB = RB1#0

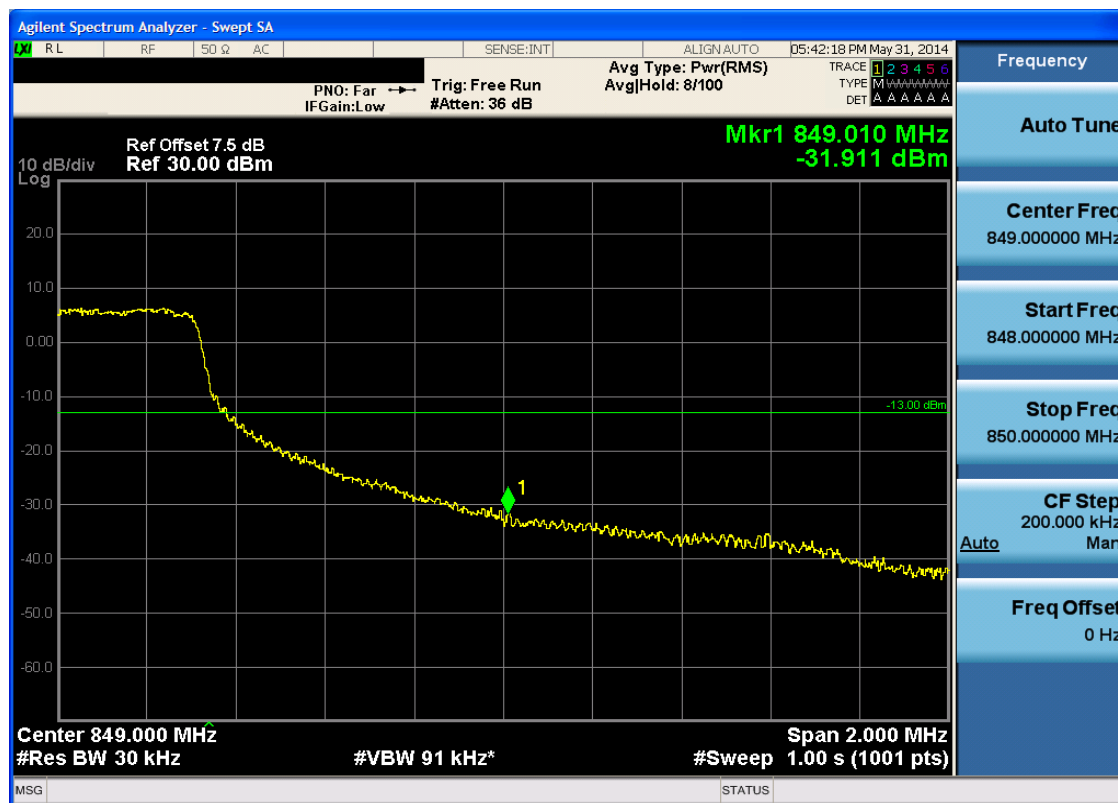


5.3.3.2.2.2 Test RB = RB1#14



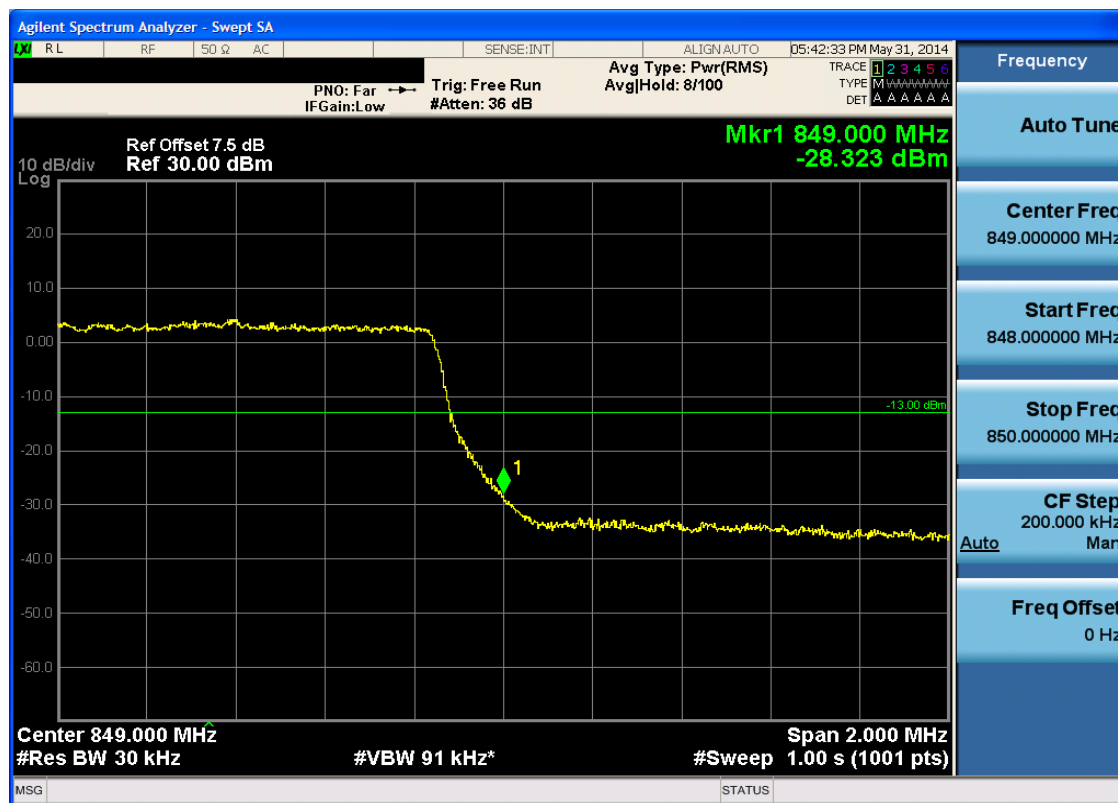


5.3.3.2.2.3 Test RB = RB8#4





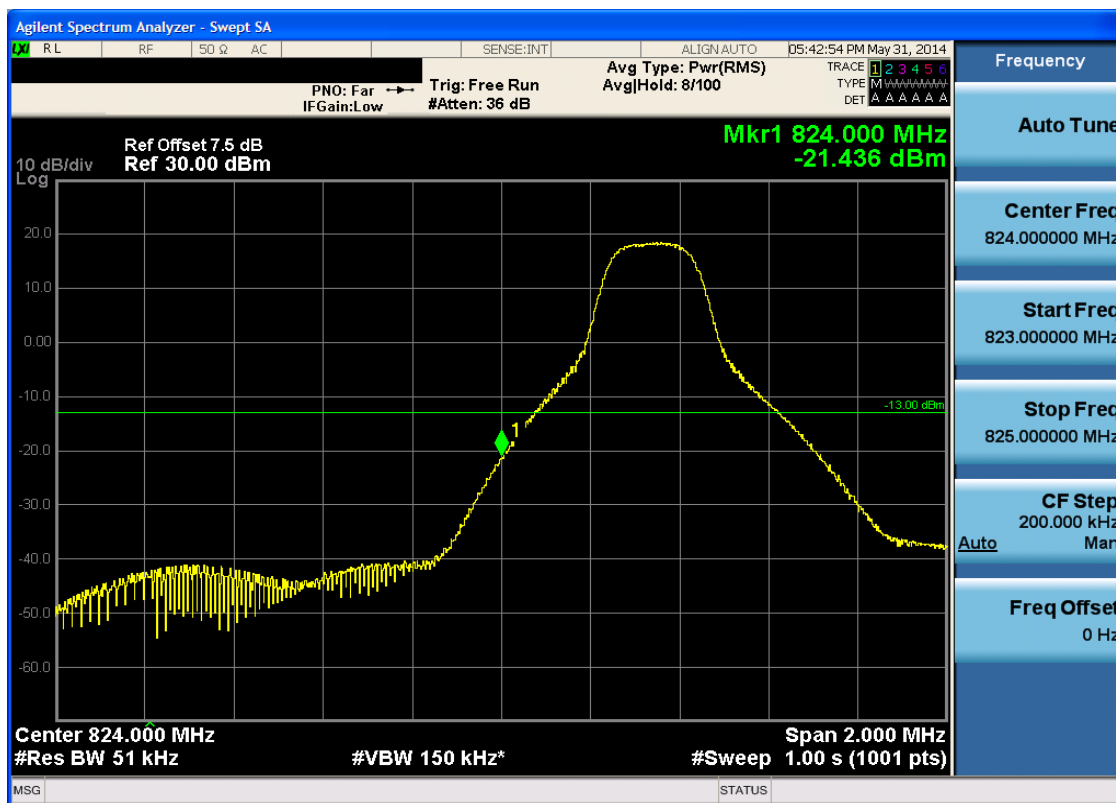
5.3.3.2.2.4 Test RB = RB15#0



5.3.3.2.3 Test Bandwidth = 5

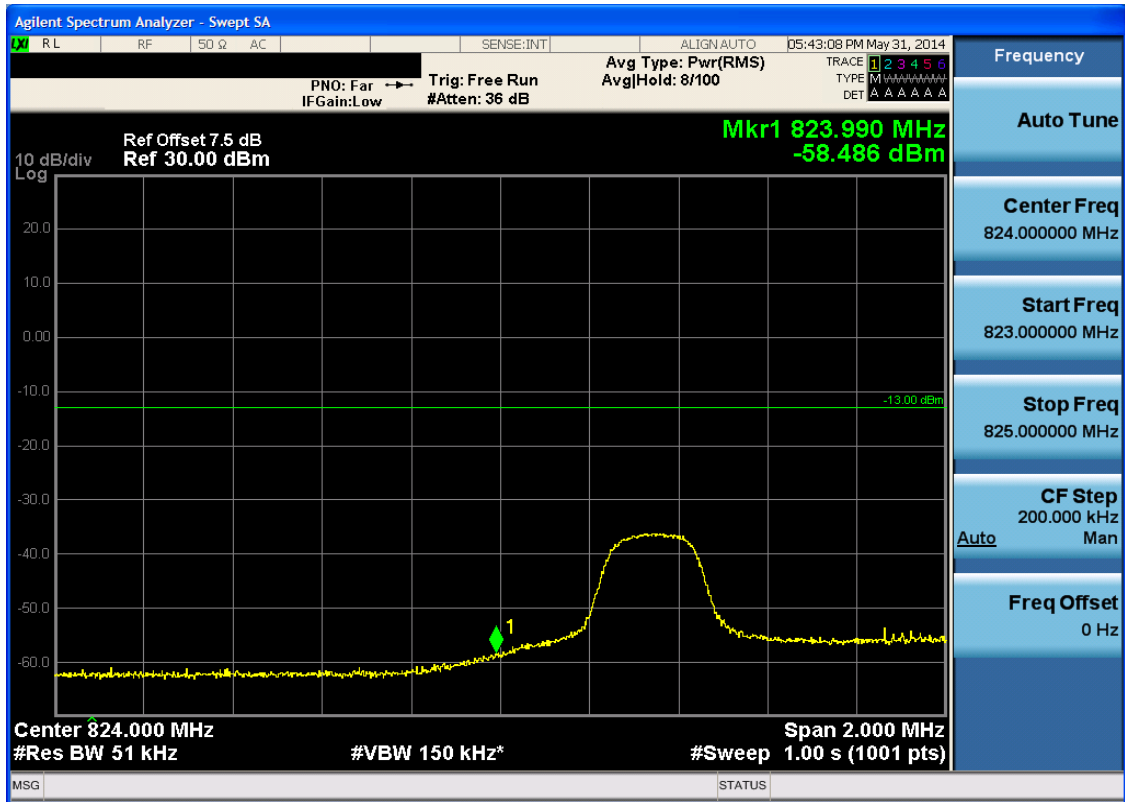
5.3.3.2.3.1 Test Channel = LCH

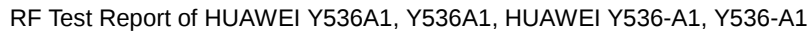
5.3.3.2.3.1.1 Test RB = RB1#0





5.3.3.2.3.1.2 Test RB = RB1#24





Agilent Spectrum Analyzer - Swept SA

RL RF 50 Ω AC SENSE:INT ALIGN:AUTO 05:43:22 PM May 31, 2014

PNO: Far → Trig: Free Run Avg Type: Pwr(RMS) TYPE M DET A
IFGain:Low #Atten: 36 dB Avg|Hold: 8/100

Ref Offset 7.5 dB Mkr1 823.890 MHz
Ref 30.00 dBm -33.472 dBm

10 dB/div Log

-13.00 dBm

Center 824.000 MHz Span 2.000 MHz
#Res BW 51 kHz #VBW 150 kHz* #Sweep 1.00 s (1001 pts)

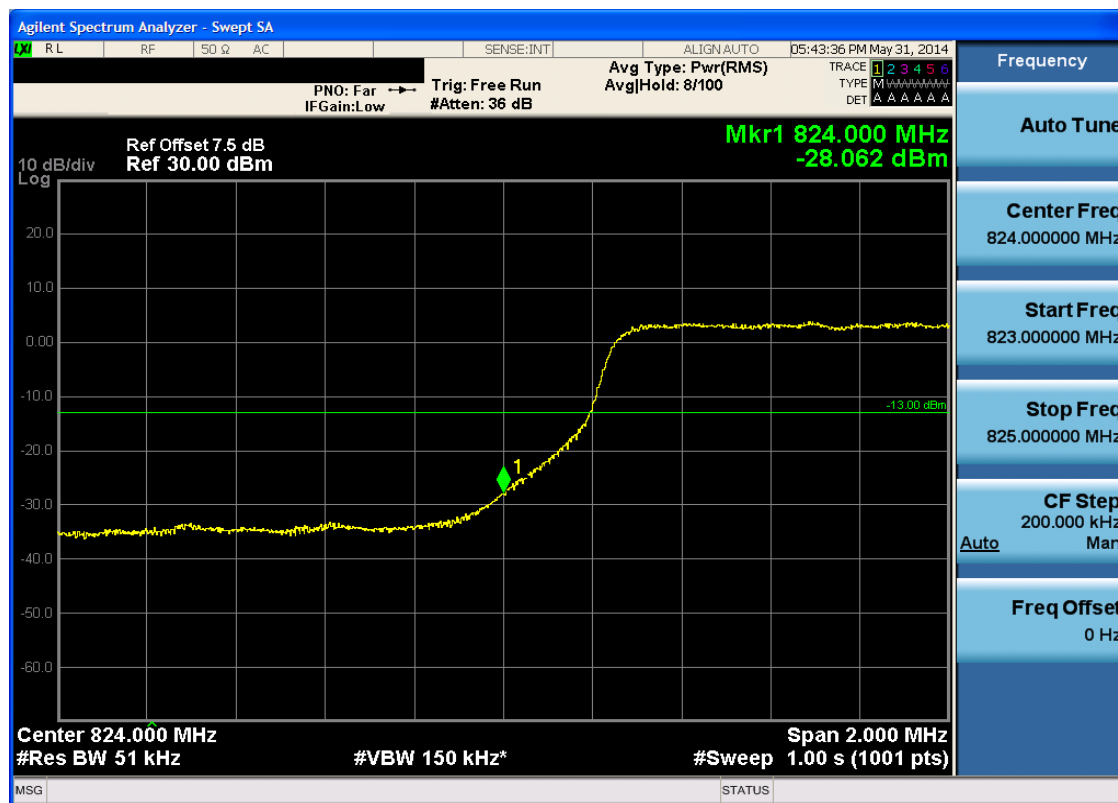
MSG STATUS

Frequency

- Auto Tune
- Center Freq 824.000000 MHz
- Start Freq 823.000000 MHz
- Stop Freq 825.000000 MHz
- CF Step 200.000 kHz Man
- Freq Offset 0 Hz



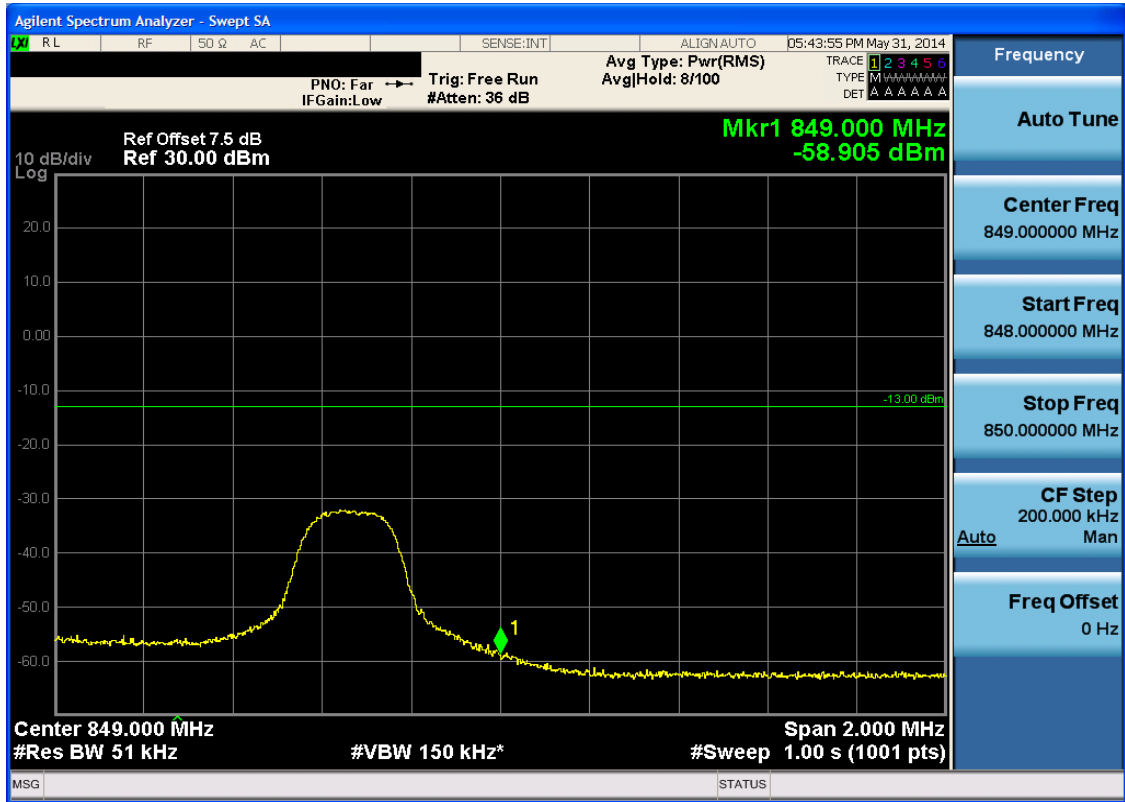
5.3.3.2.3.1.4 Test RB = RB25#0





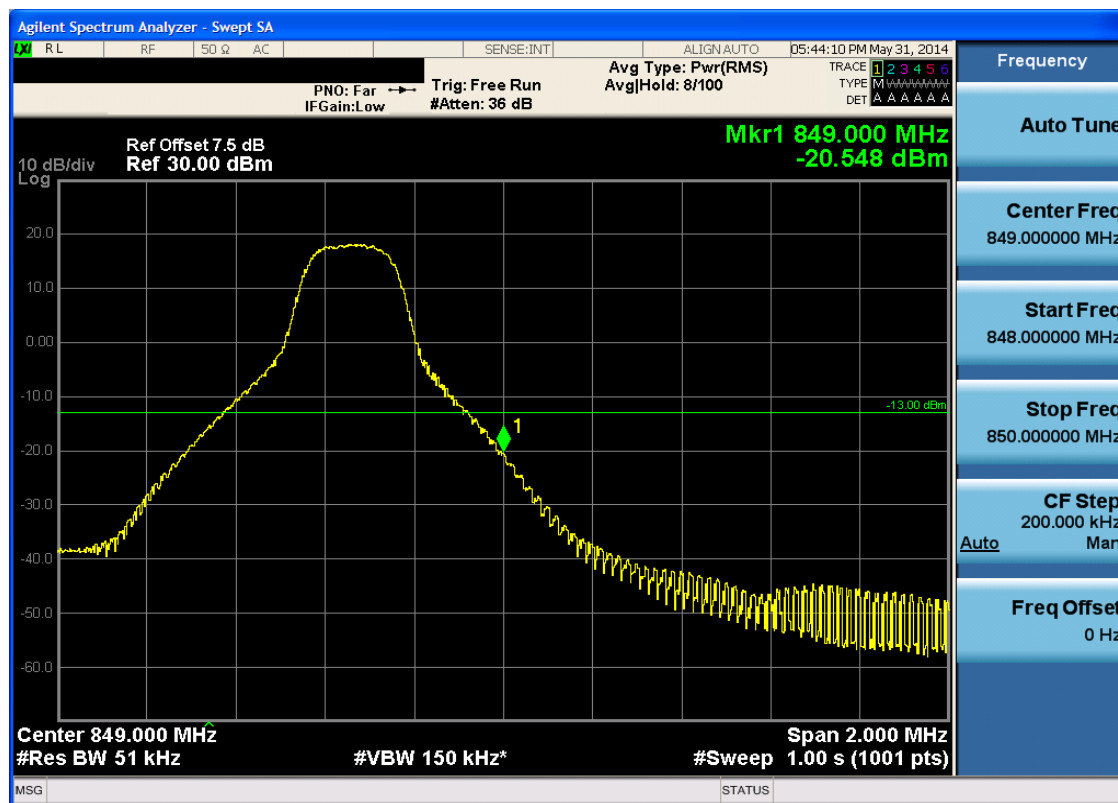
5.3.3.2.3.2 Test Channel = HCH

5.3.3.2.3.2.1 Test RB = RB1#0





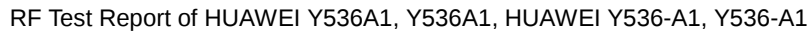
5.3.3.2.3.2 Test RB = RB1#24





5.3.3.2.3.2.3 Test RB = RB12#6





Agilent Spectrum Analyzer - Swept SA

R L	RF	50 Ω	AC		SENSE:INT	ALIGN:AUTO	05:44:38 PM May 31, 2014
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PNO: Far → Trig: Free Run
IFGain: Low #Atten: 36 dB

Avg Type: Pwr(RMS)
Avg/Hold: 8/100

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 7.5 dB
Ref 30.00 dBm

Mkr1 849.000 MHz
-29.618 dBm

Center 849.000 MHz
#Res BW 51 kHz
#VBW 150 kHz*

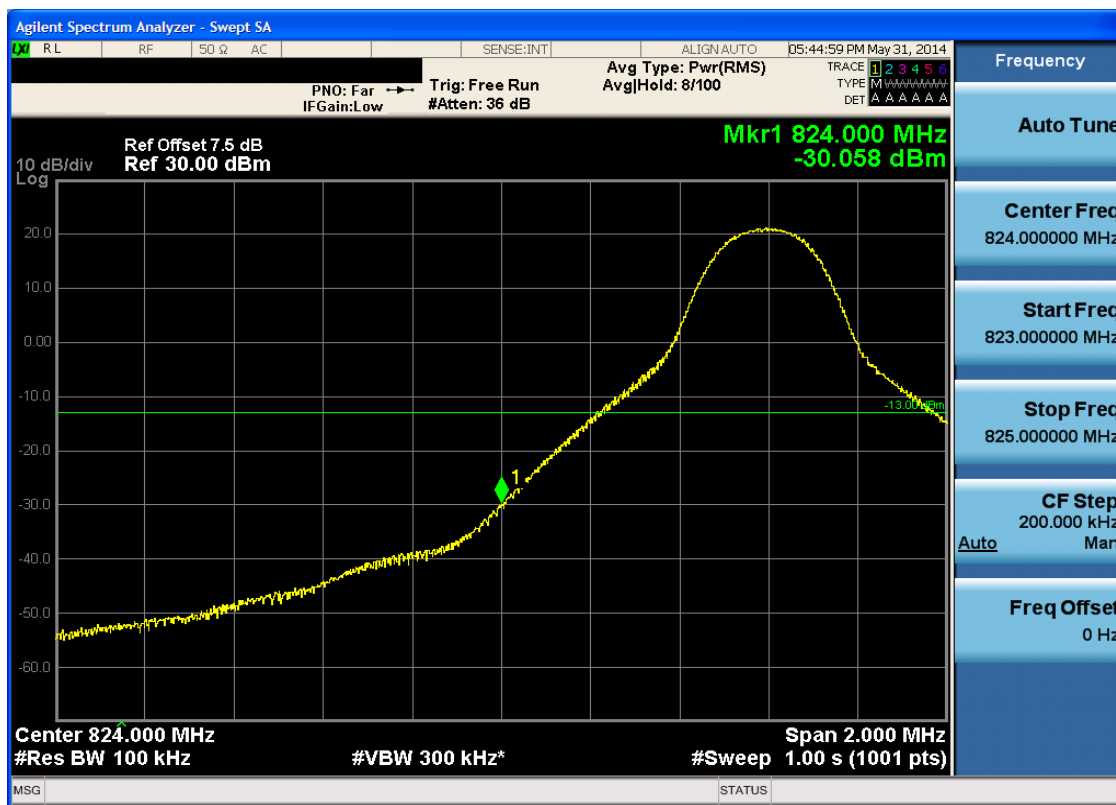
Span 2.000 MHz
#Sweep 1.00 s (1001 pts)

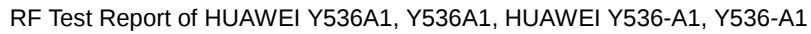
MSG STATUS

5.3.3.2.4 Test Bandwidth = 10

5.3.3.2.4.1 Test Channel = LCH

5.3.3.2.4.1.1 Test RB = RB1#0





Agilent Spectrum Analyzer - Swept SA

RL RF 50 Ω AC SENSE:INT ALIGN: AUTO D5:45:13 PM May 31, 2014

PNO: Far Trig: Free Run Avg Type: Pwr(RMS) TRACE 1 2 3 4 5 6
 IFGain:Low #Atten: 36 dB AvgHld: 8/100 TYPE MAAAAAA
 DET A A A A A A

Ref Offset 7.5 dB Mkr1 824.000 MHz
 Ref 30.00 dBm -55.819 dBm

10 dB/div
 Log

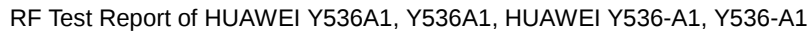
20.0
 10.0
 0.00
 -10.0
 -20.0
 -30.0
 -40.0
 -50.0
 -60.0

-13.00 dBm

Center 824.000 MHz Span 2.000 MHz
 #Res BW 100 kHz #VBW 300 kHz* #Sweep 1.00 s (1001 pts)

MSG STATUS

Frequency
 Auto Tune
 Center Freq 824.000000 MHz
 Start Freq 823.000000 MHz
 Stop Freq 825.000000 MHz
 CF Step 200.000 kHz
 Auto Man
 Freq Offset 0 Hz



Agilent Spectrum Analyzer - Swept SA

☒ R L RF 50 Ω AC SENSE:INT ALIGN:AUTO D5:45:27 PM May 31, 2014

PNO: Far → Trig: Free Run Avg Type: Pwr(RMS) TRACE 1 2 3 4 5 6
 IFGain:Low #Atten: 36 dB Avg/Hold: 8/100 TYPE M A A A A A A
 DET A A A A A A

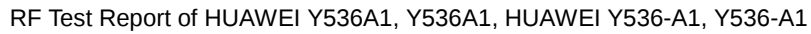
Ref Offset 7.5 dB Mkr1 823.940 MHz
 Ref 30.00 dBm -36.135 dBm

10 dB/div
Log

Center 824.000 MHz Span 2.000 MHz
 #Res BW 100 kHz #VBW 300 kHz* #Sweep 1.00 s (1001 pts)

MSG STATUS

Frequency
 Auto Tune
 Center Freq 824.000000 MHz
 Start Freq 823.000000 MHz
 Stop Freq 825.000000 MHz
 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 D5:45:41 PM May 31, 2014

PNO: Far → Trig: Free Run Avg Type: Pwr(RMS) TRACE 1 2 3 4 5 6
 IFGain:Low #Atten: 36 dB Avg/Hold: 8/100 TYPE M A A A A A A
 DET A A A A A A

Ref Offset 7.5 dB Mkr1 824.000 MHz
 Ref 30.00 dBm -32.389 dBm

10 dB/div Log

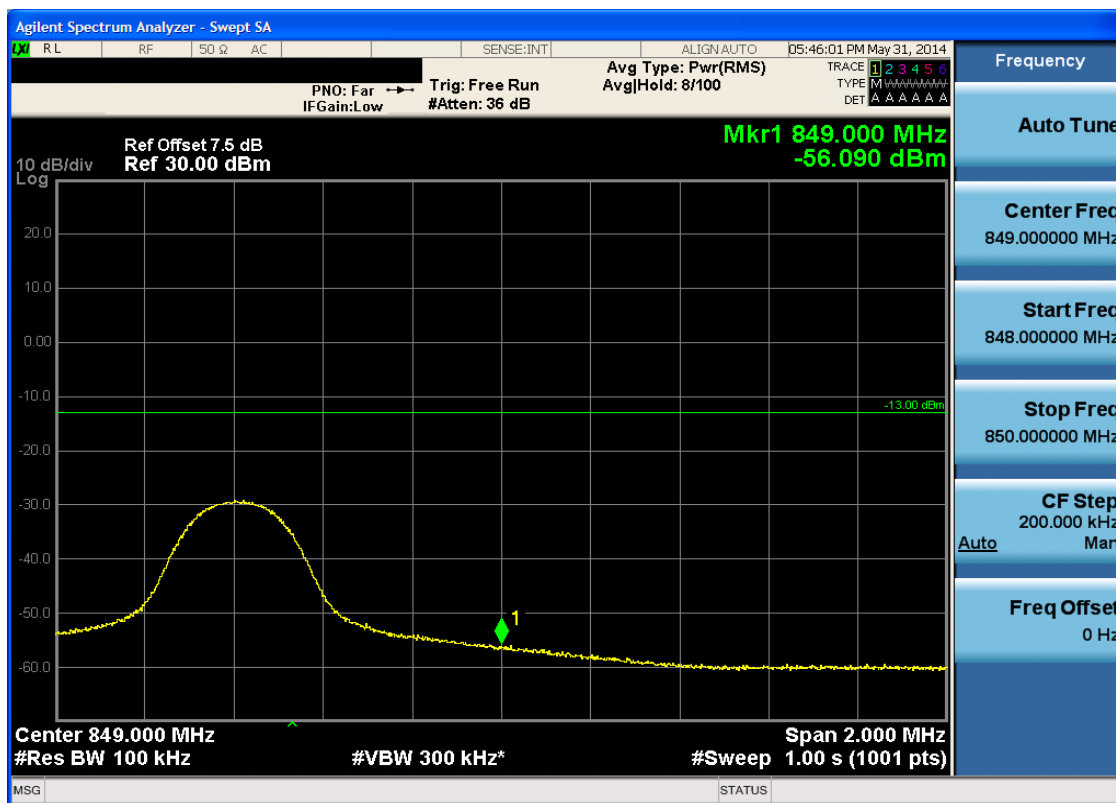
Center 824.000 MHz Span 2.000 MHz
 #Res BW 100 kHz #VBW 300 kHz* #Sweep 1.00 s (1001 pts)

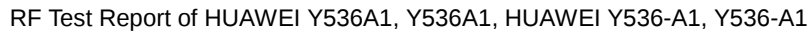
MSG STATUS



5.3.3.2.4.2 Test Channel = HCH

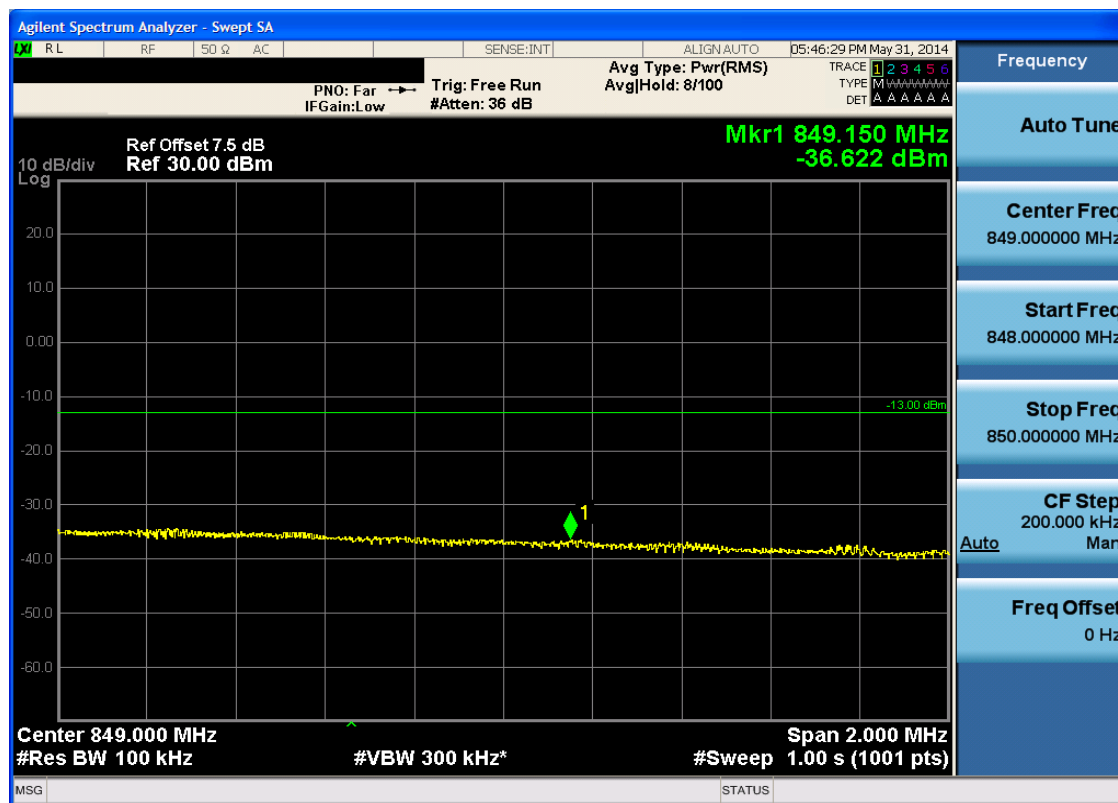
5.3.3.2.4.2.1 Test RB = RB1#0



[illegible]

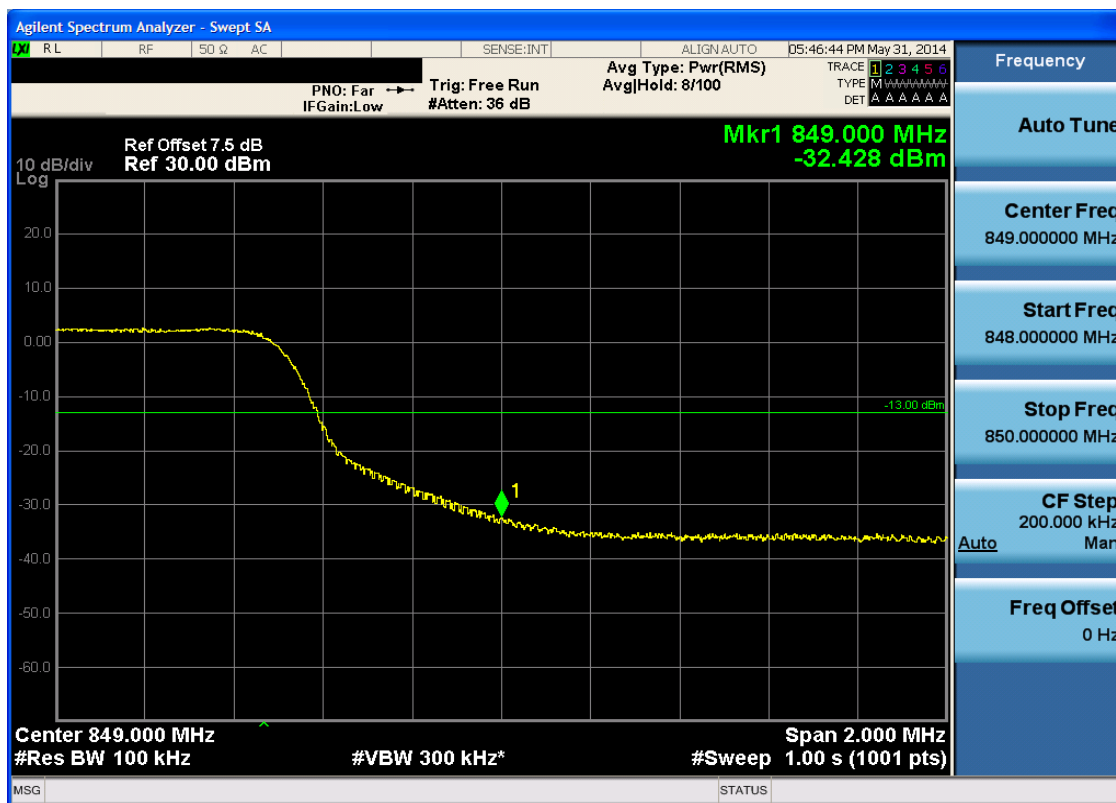


5.3.3.2.4.2.3 Test RB = RB25#13





5.3.3.2.4.2.4 Test RB = RB50#0





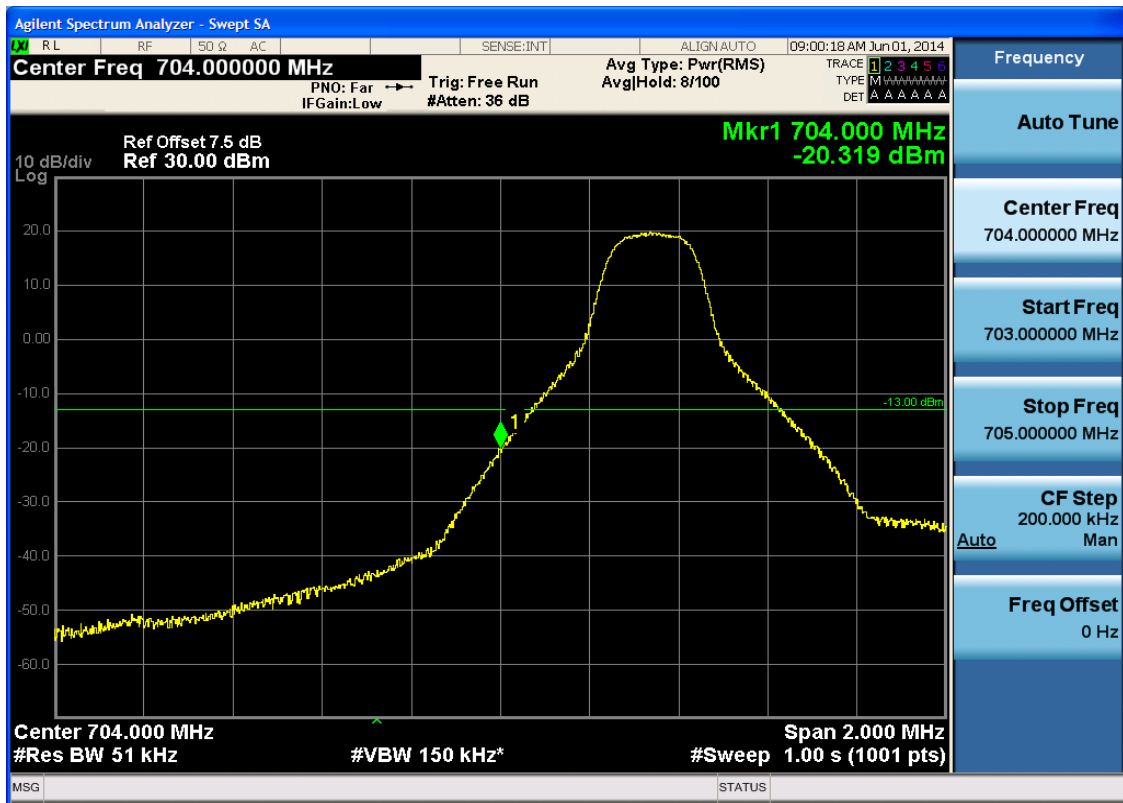
5.3.4 Test Band = BAND17

5.3.4.1 Test Mode = LTE/TM1

5.3.4.1.1 Test Bandwidth = 5

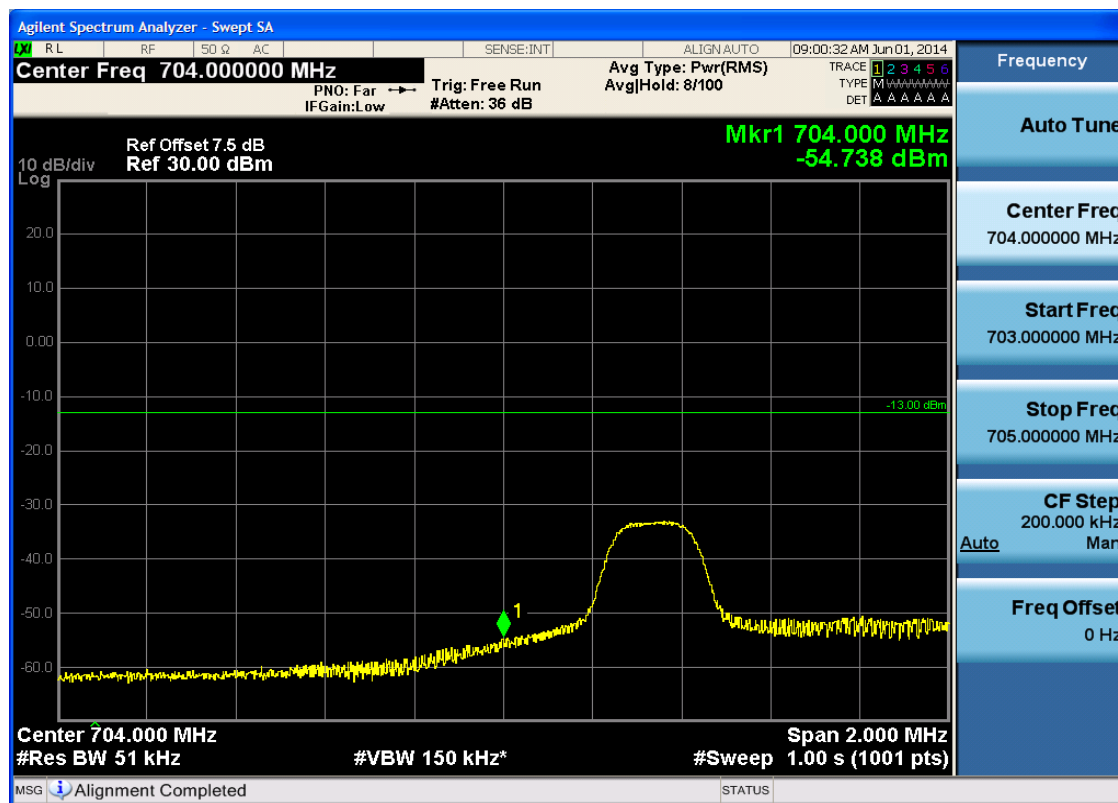
5.3.4.1.1.1 Test Channel = LCH

5.3.4.1.1.1.1 Test RB = RB1#0



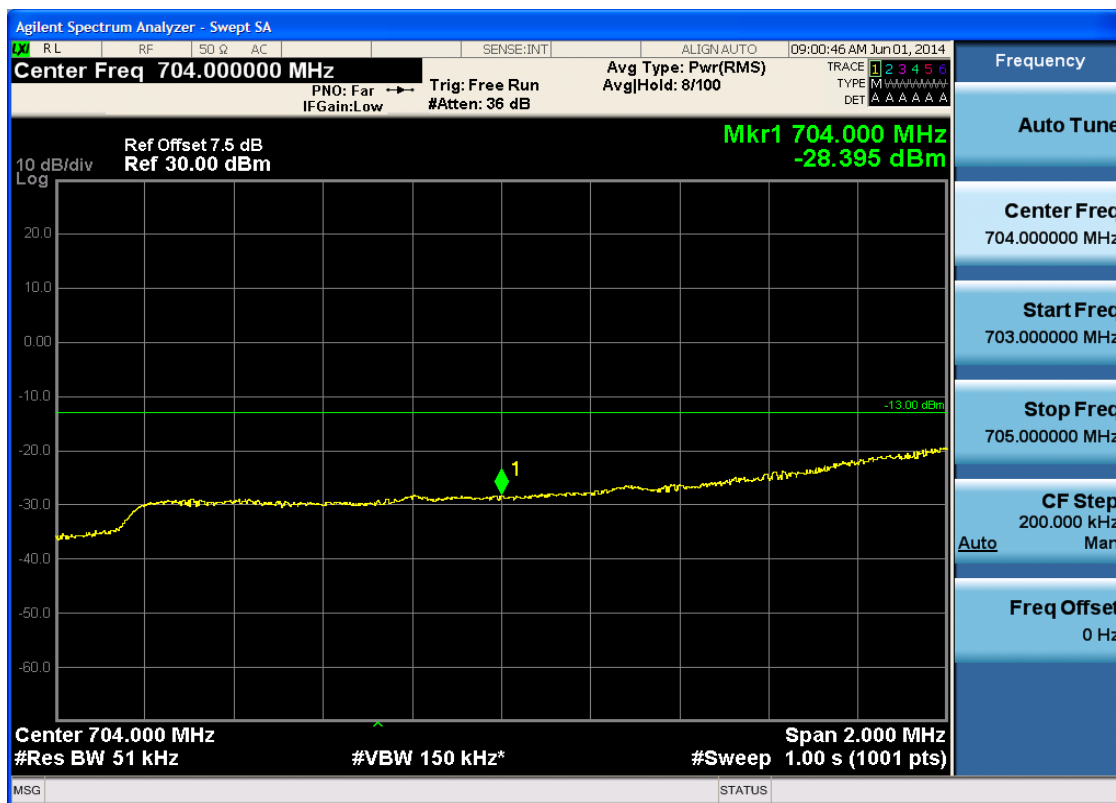


5.3.4.1.1.1.2 Test RB = RB1#24





5.3.4.1.1.1.3 Test RB = RB12#6





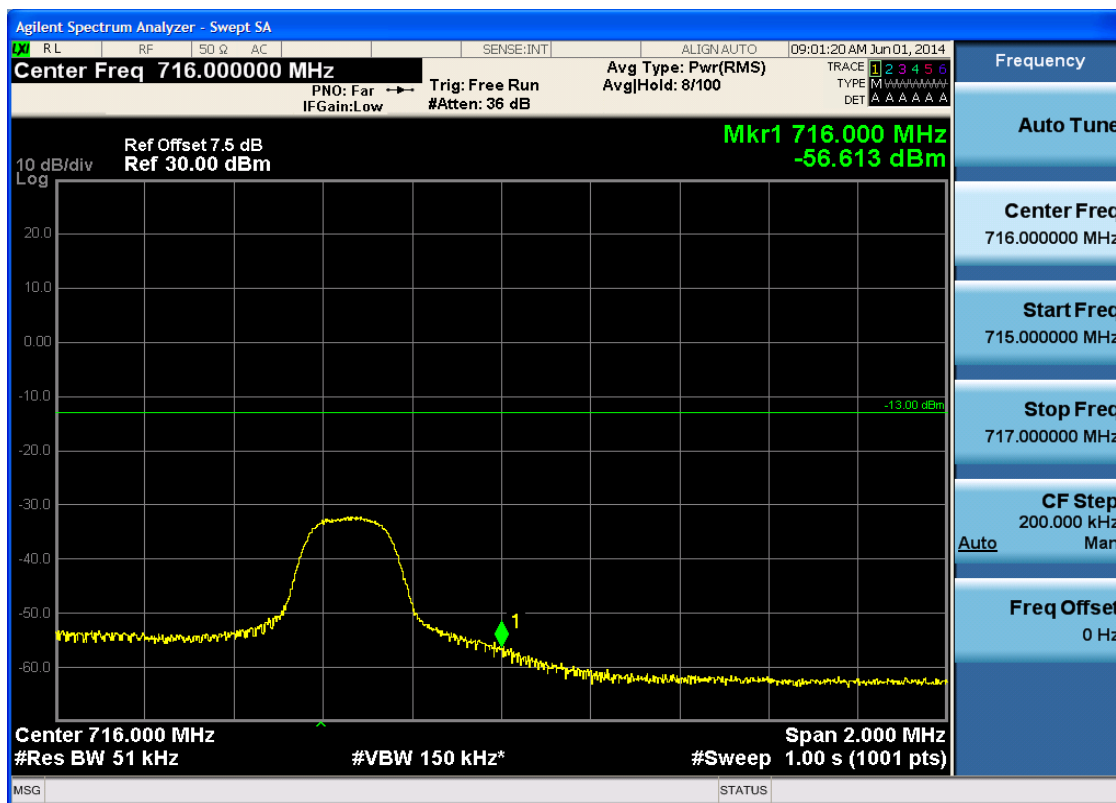
5.3.4.1.1.1.4 Test RB = RB25#0





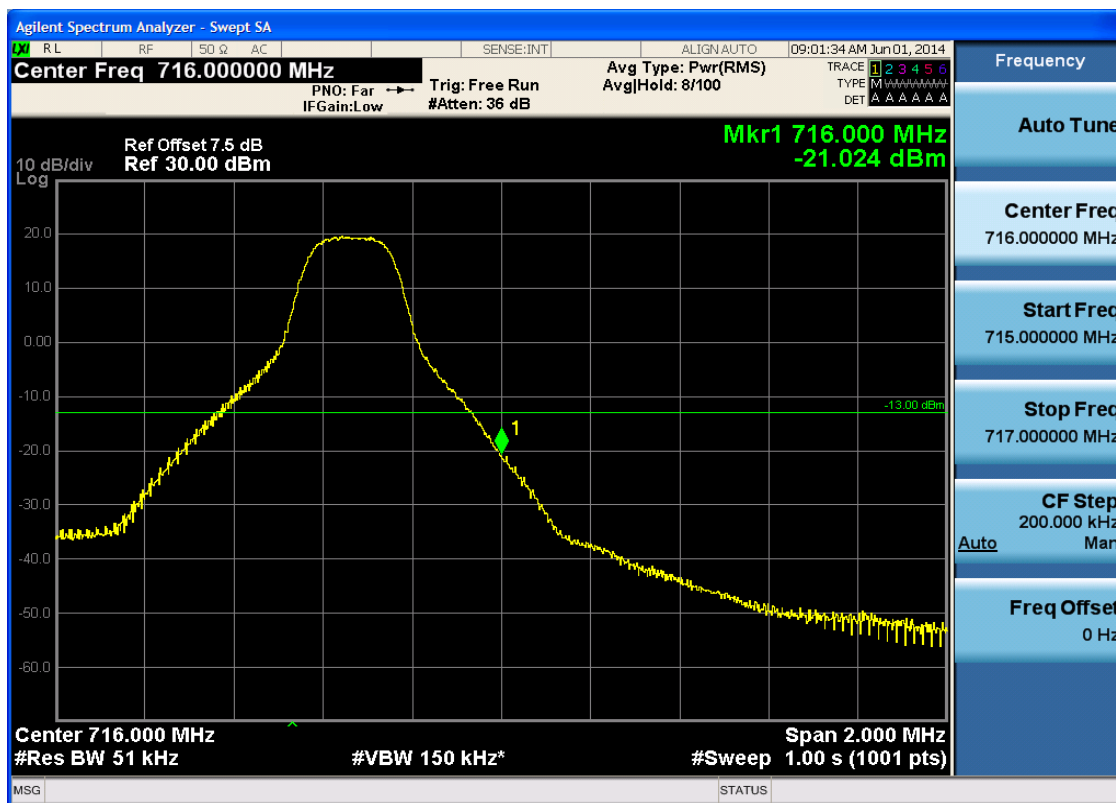
5.3.4.1.1.2 Test Channel = HCH

5.3.4.1.1.2.1 Test RB = RB1#0





5.3.4.1.1.2.2 Test RB = RB1#24





5.3.4.1.1.2.3 Test RB = RB12#6





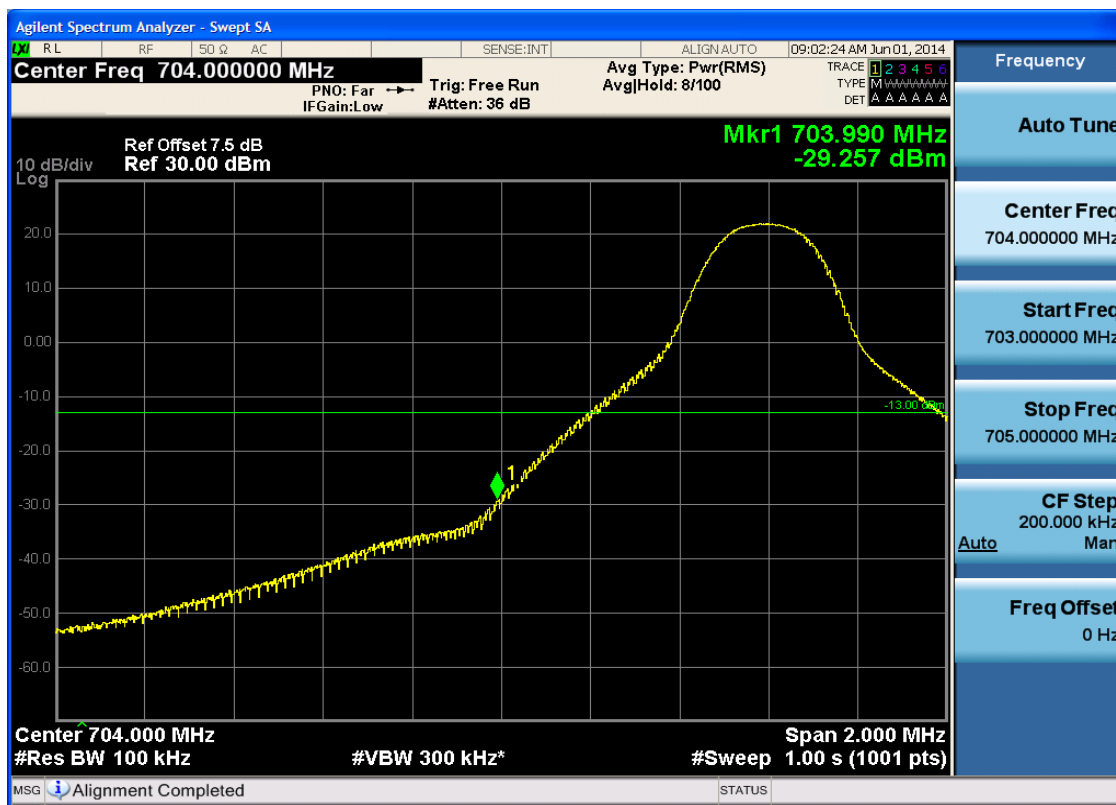
5.3.4.1.1.2.4 Test RB = RB25#0



5.3.4.1.2 Test Bandwidth = 10

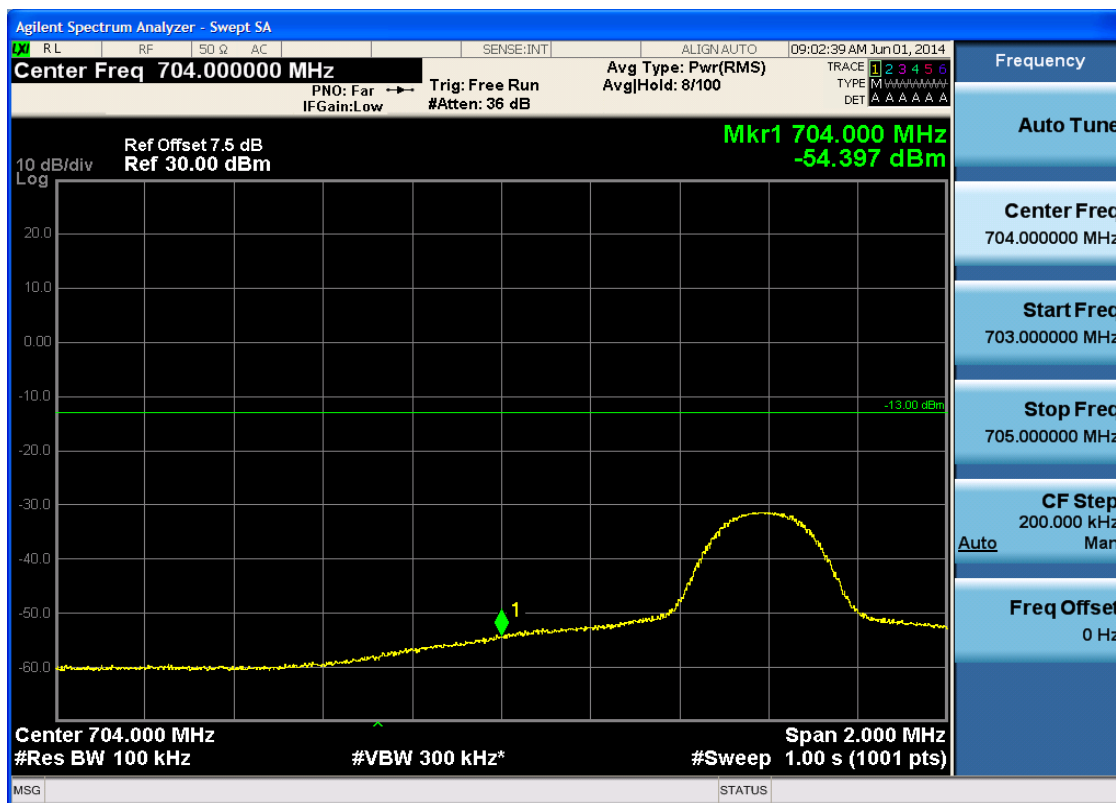
5.3.4.1.2.1 Test Channel = LCH

5.3.4.1.2.1.1 Test RB = RB1#0



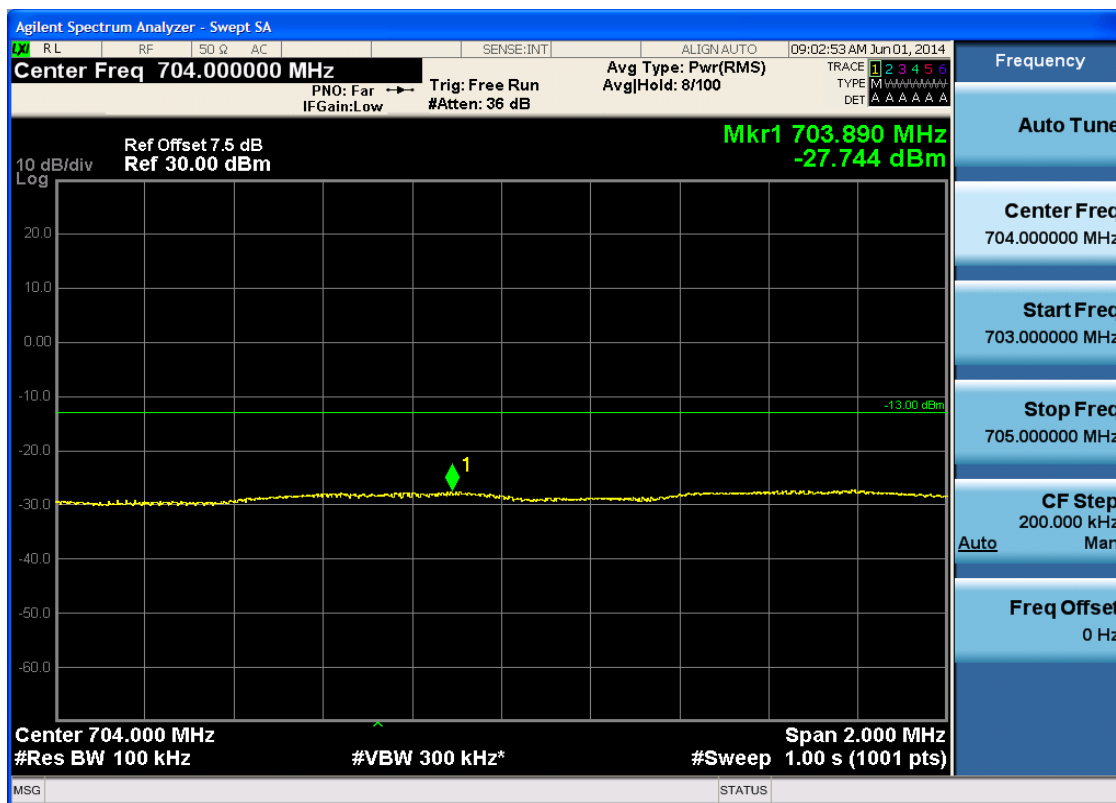


5.3.4.1.2.1.2 Test RB = RB1#49



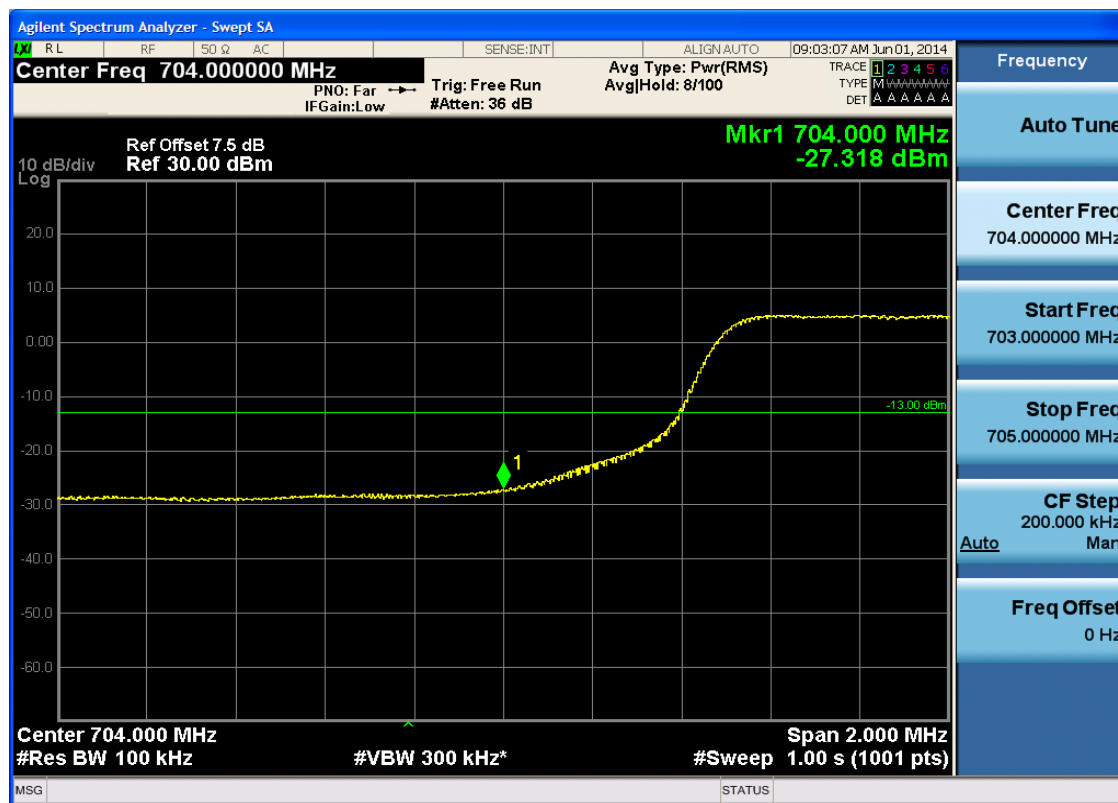


5.3.4.1.2.1.3 Test RB = RB25#13





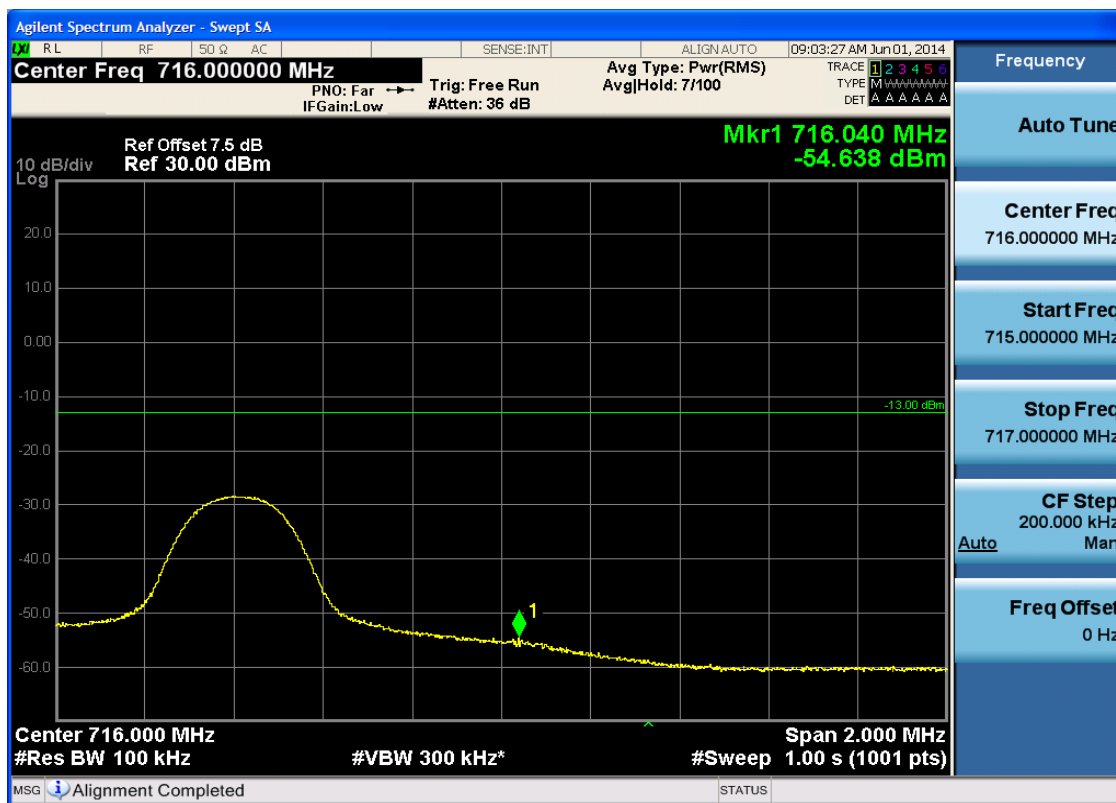
5.3.4.1.2.1.4 Test RB = RB50#0





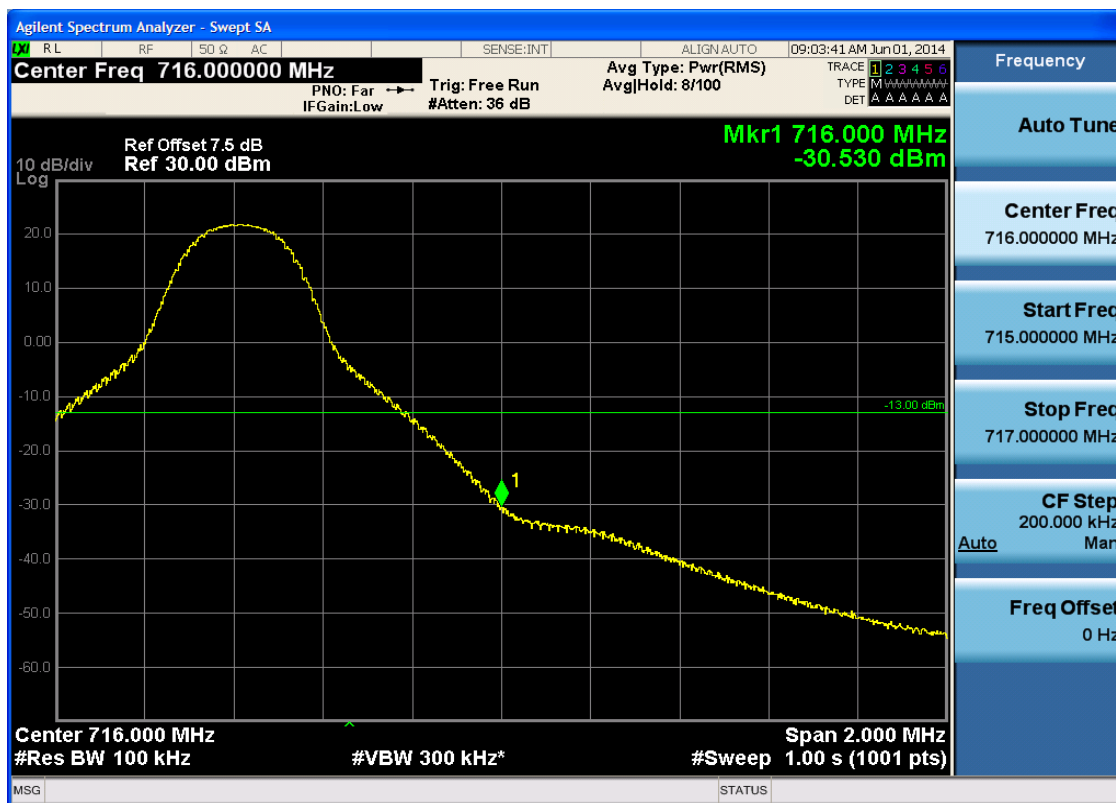
5.3.4.1.2.2 Test Channel = HCH

5.3.4.1.2.2.1 Test RB = RB1#0



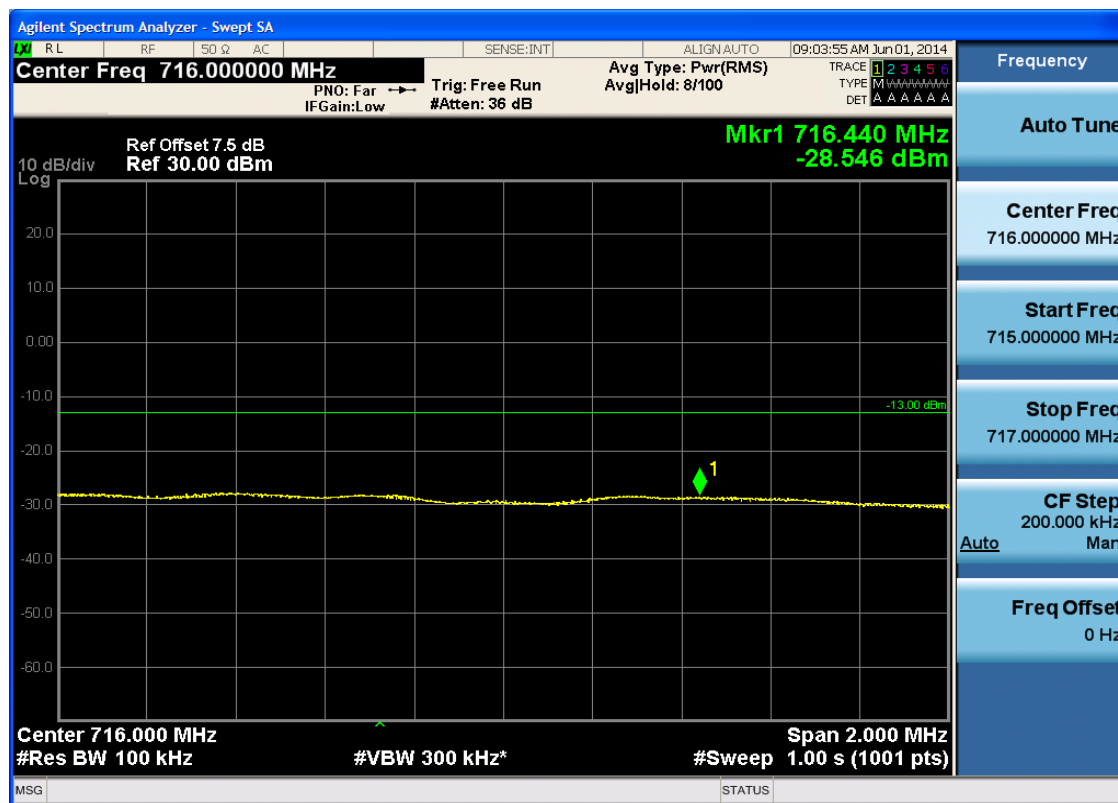


5.3.4.1.2.2.2 Test RB = RB1#49





5.3.4.1.2.2.3 Test RB = RB25#13





5.3.4.1.2.2.4 Test RB = RB50#0



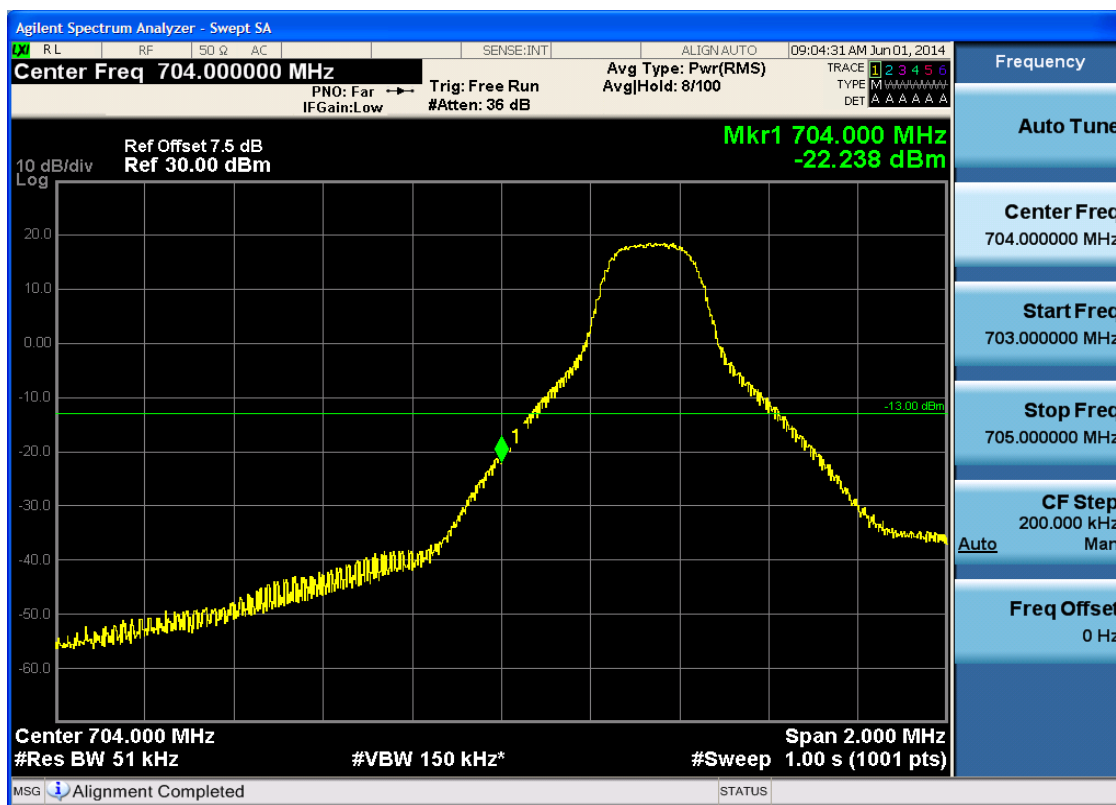


5.3.4.2 Test Mode = LTE/TM2

5.3.4.2.1 Test Bandwidth = 5

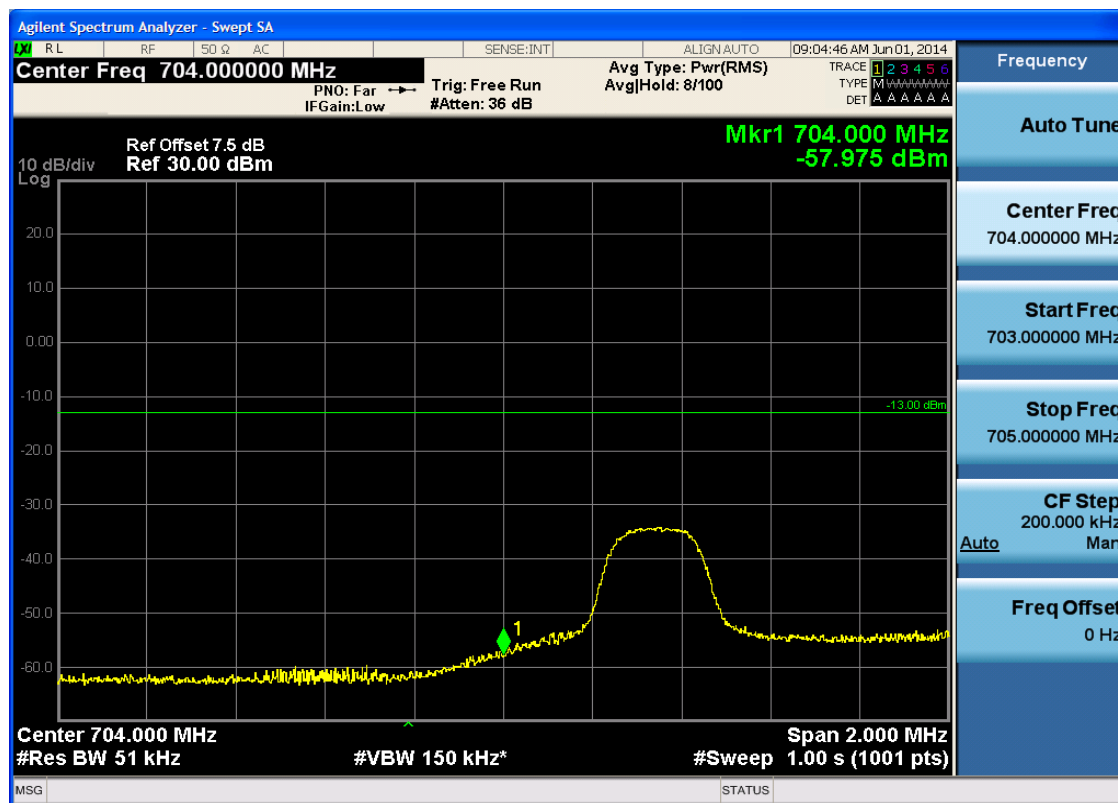
5.3.4.2.1.1 Test Channel = LCH

5.3.4.2.1.1.1 Test RB = RB1#0





5.3.4.2.1.1.2 Test RB = RB1#24



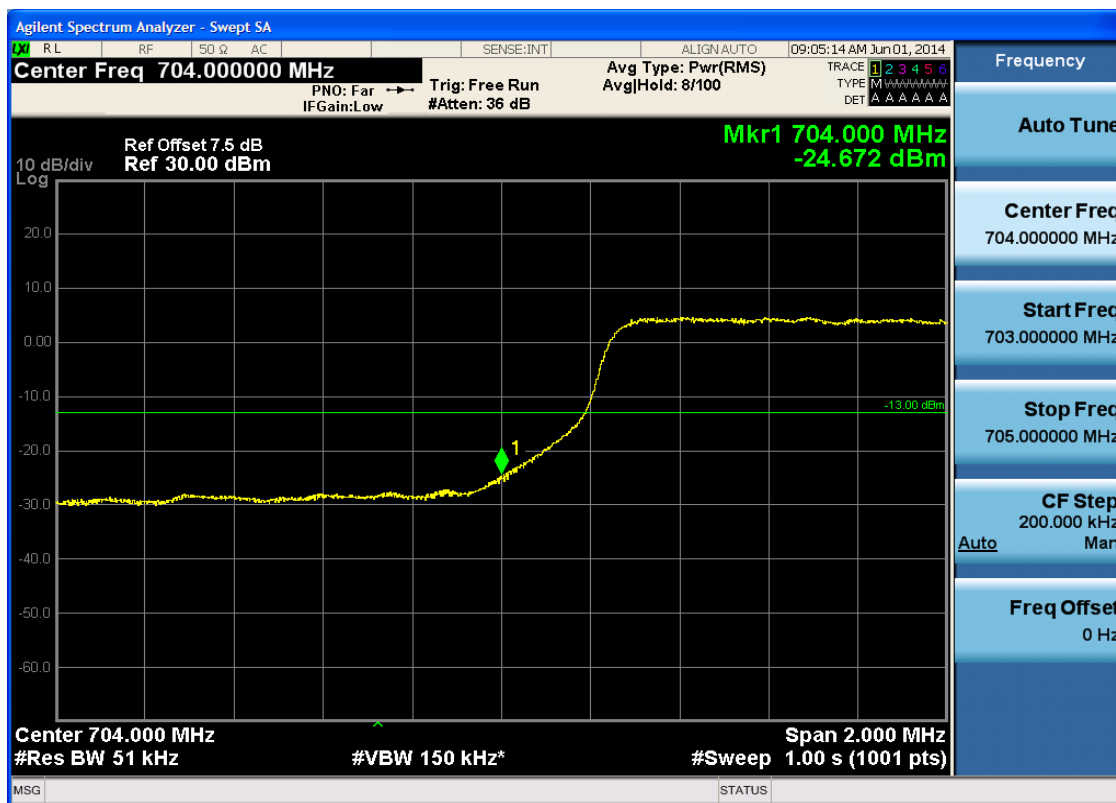


5.3.4.2.1.1.3 Test RB = RB12#6





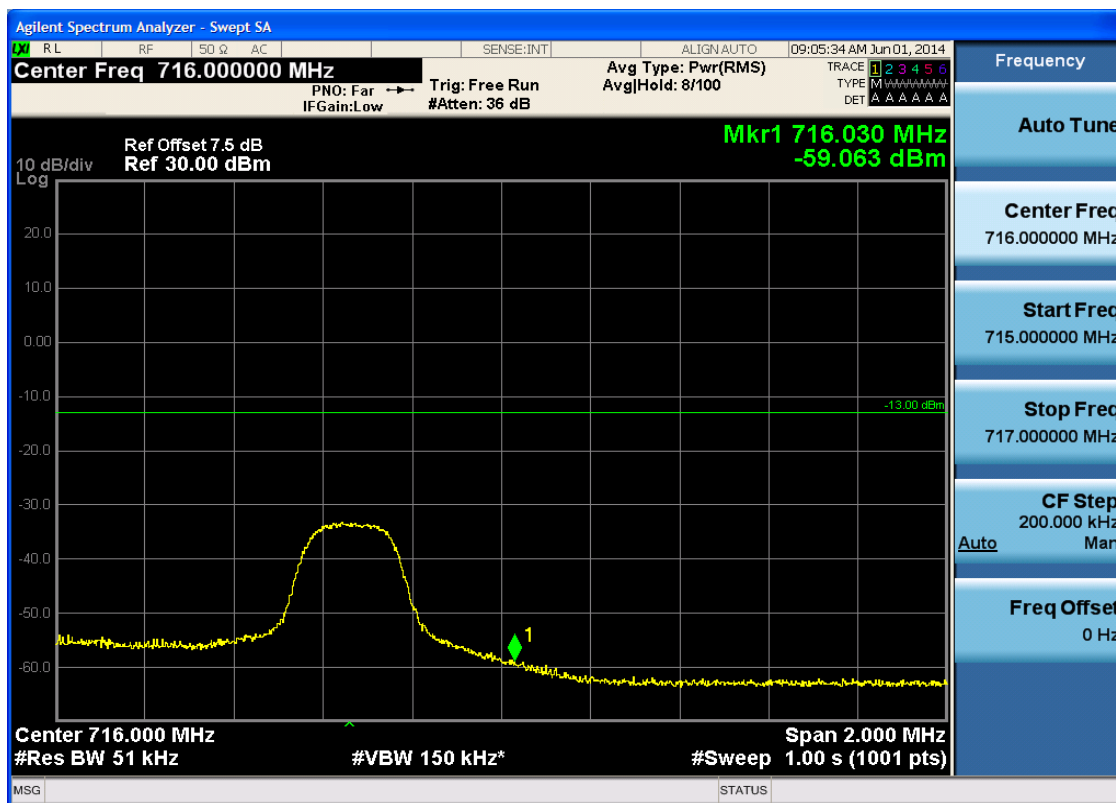
5.3.4.2.1.1.4 Test RB = RB25#0





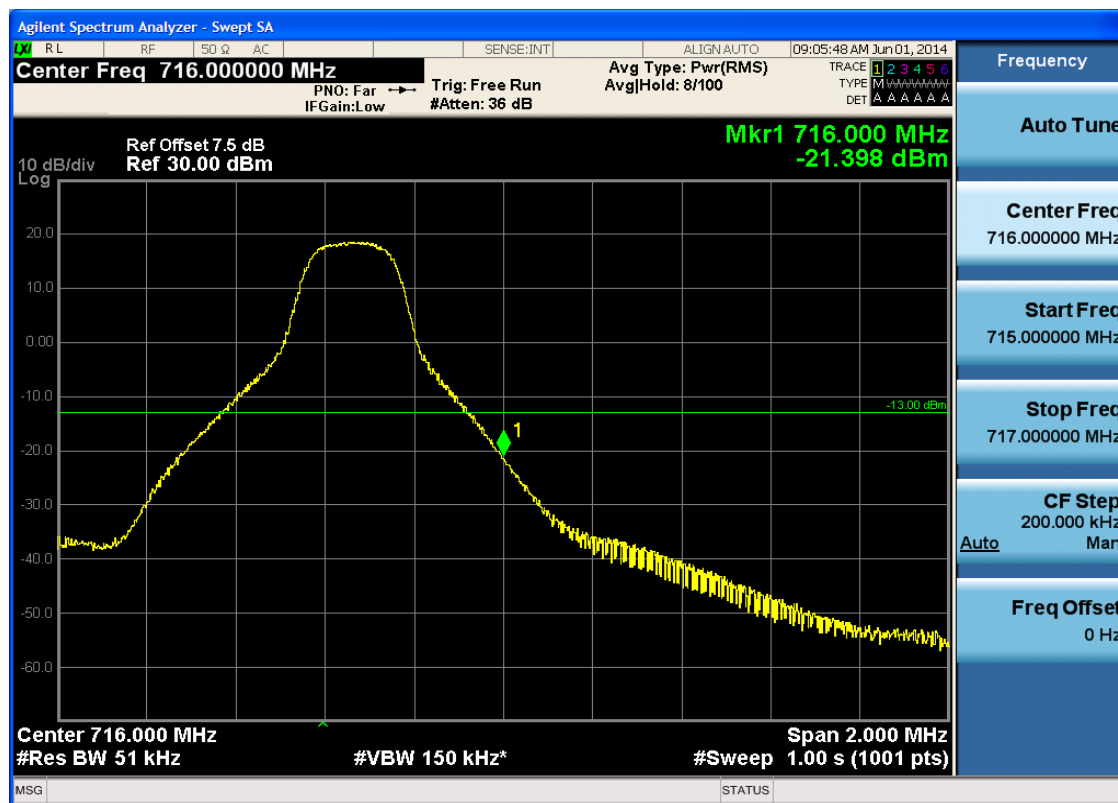
5.3.4.2.1.2 Test Channel = HCH

5.3.4.2.1.2.1 Test RB = RB1#0



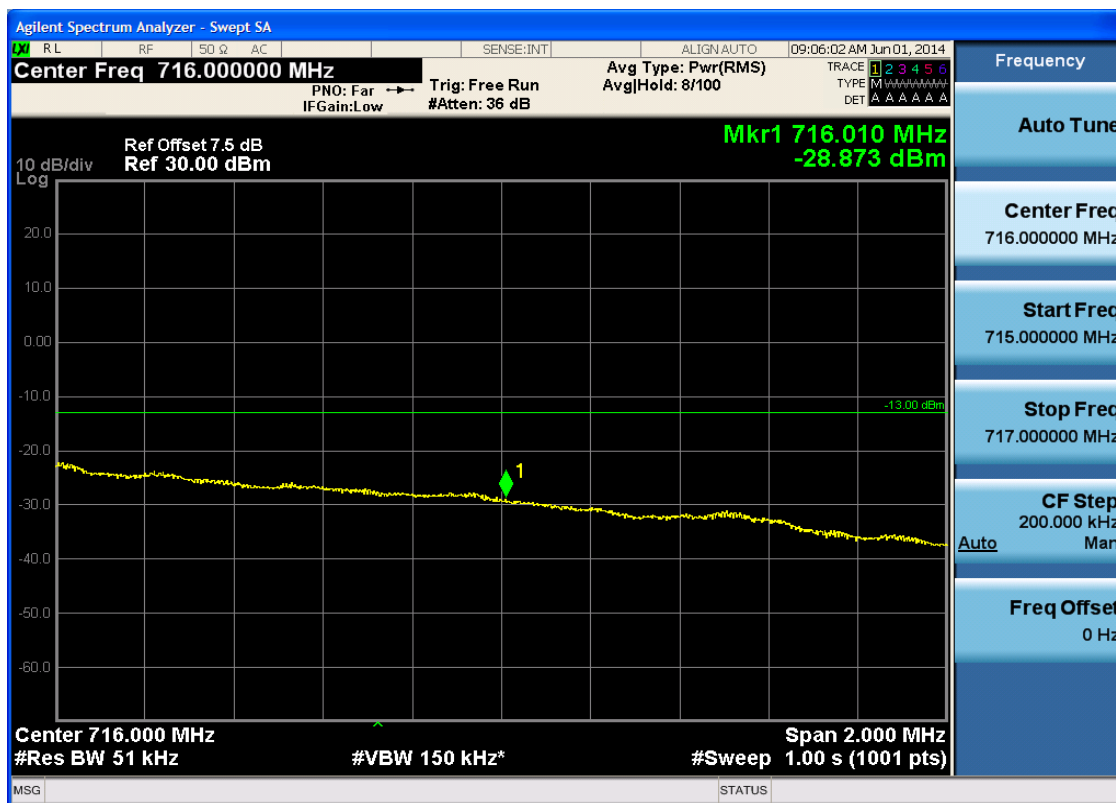


5.3.4.2.1.2.2 Test RB = RB1#24





5.3.4.2.1.2.3 Test RB = RB12#6





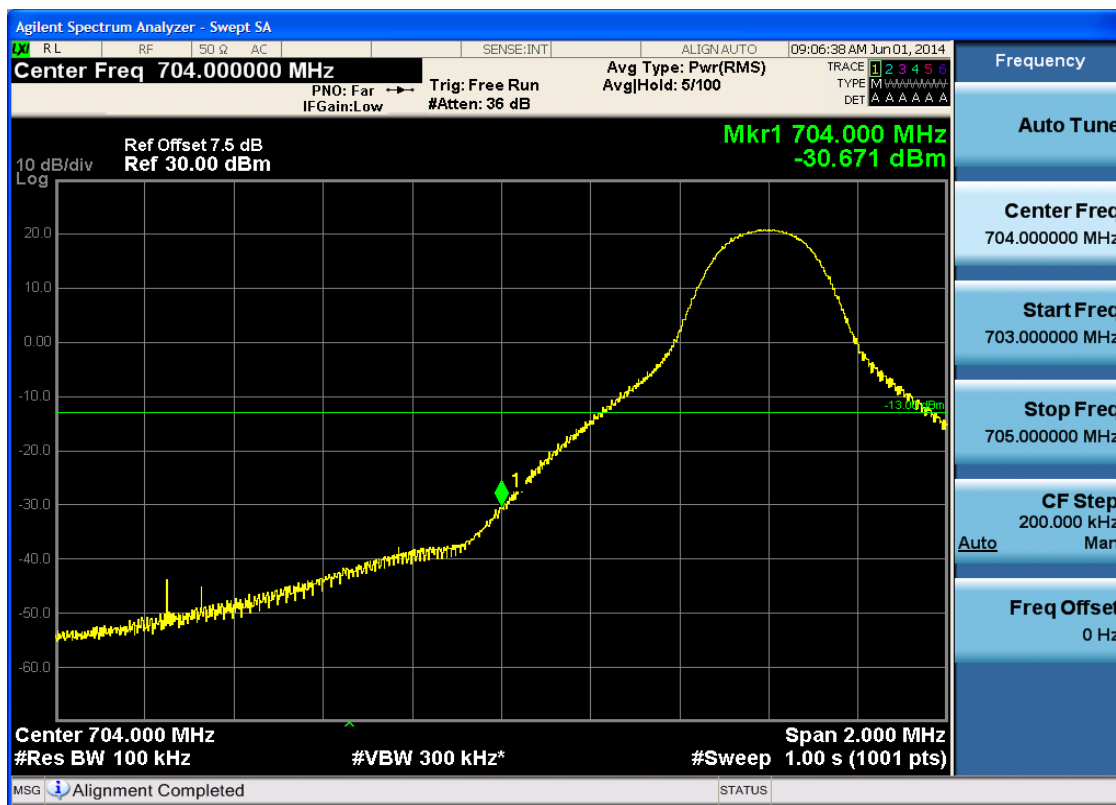
5.3.4.2.1.2.4 Test RB = RB25#0



5.3.4.2.2 Test Bandwidth = 10

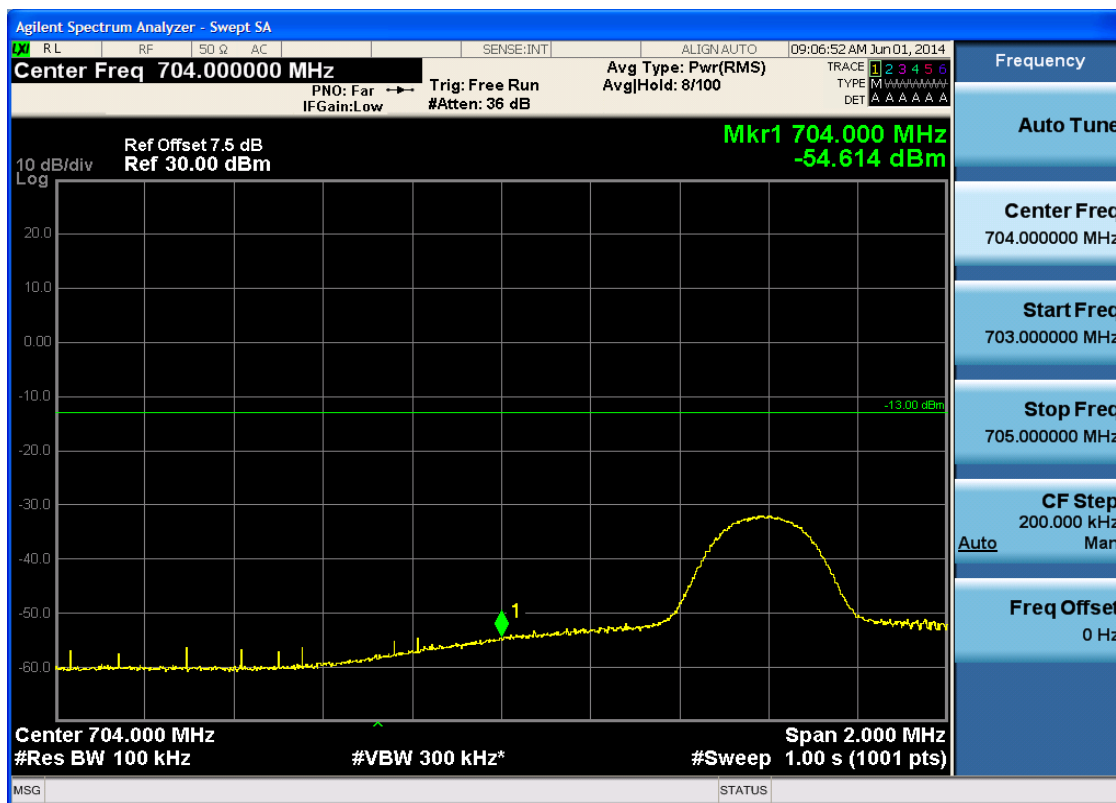
5.3.4.2.2.1 Test Channel = LCH

5.3.4.2.2.1.1 Test RB = RB1#0



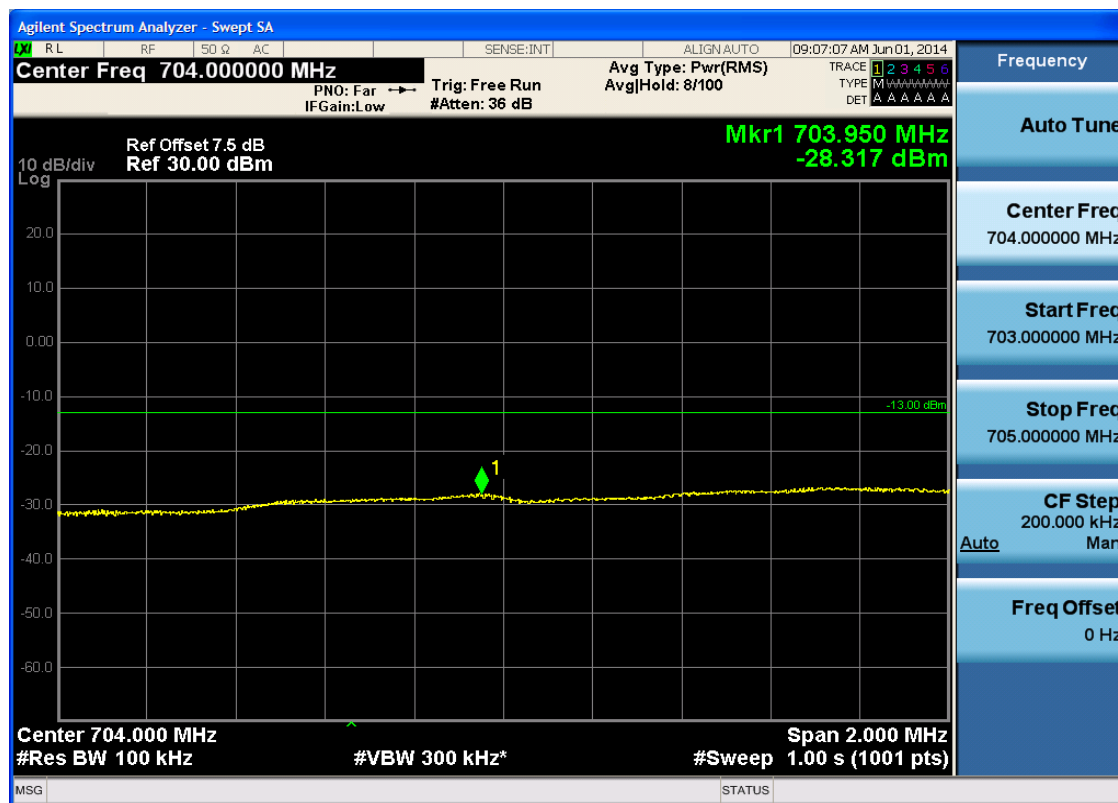


5.3.4.2.2.1.2 Test RB = RB1#49



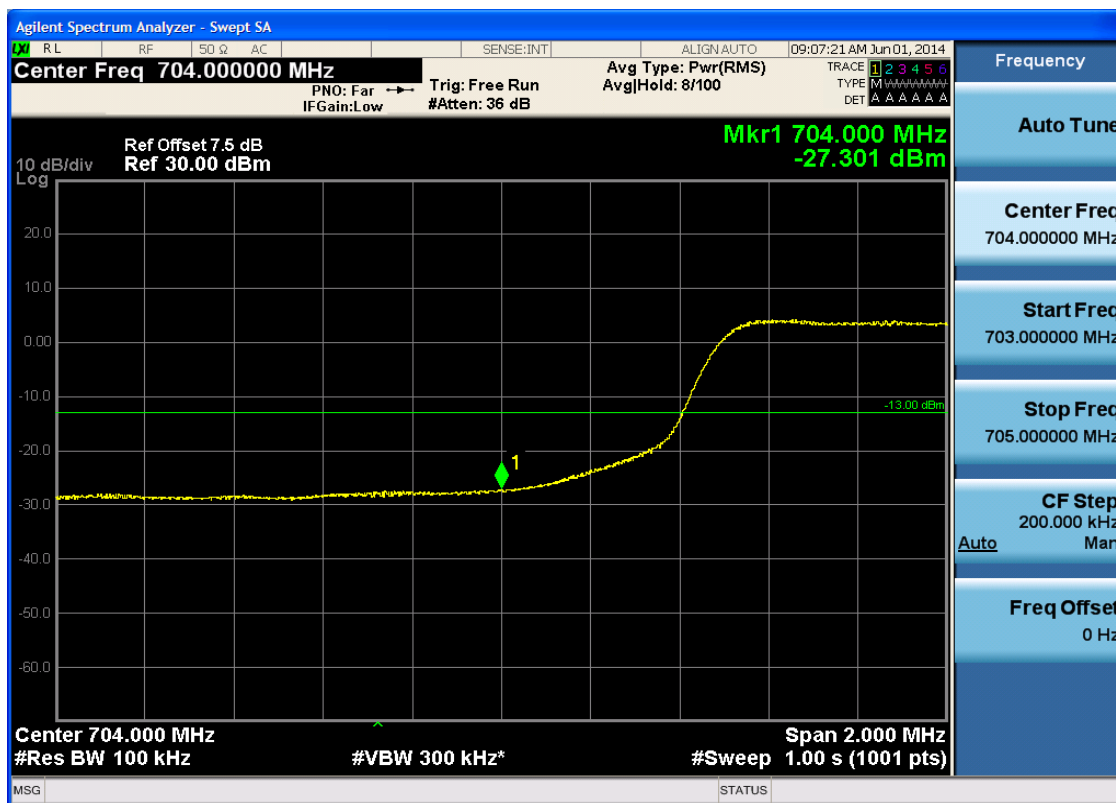


5.3.4.2.2.1.3 Test RB = RB25#13





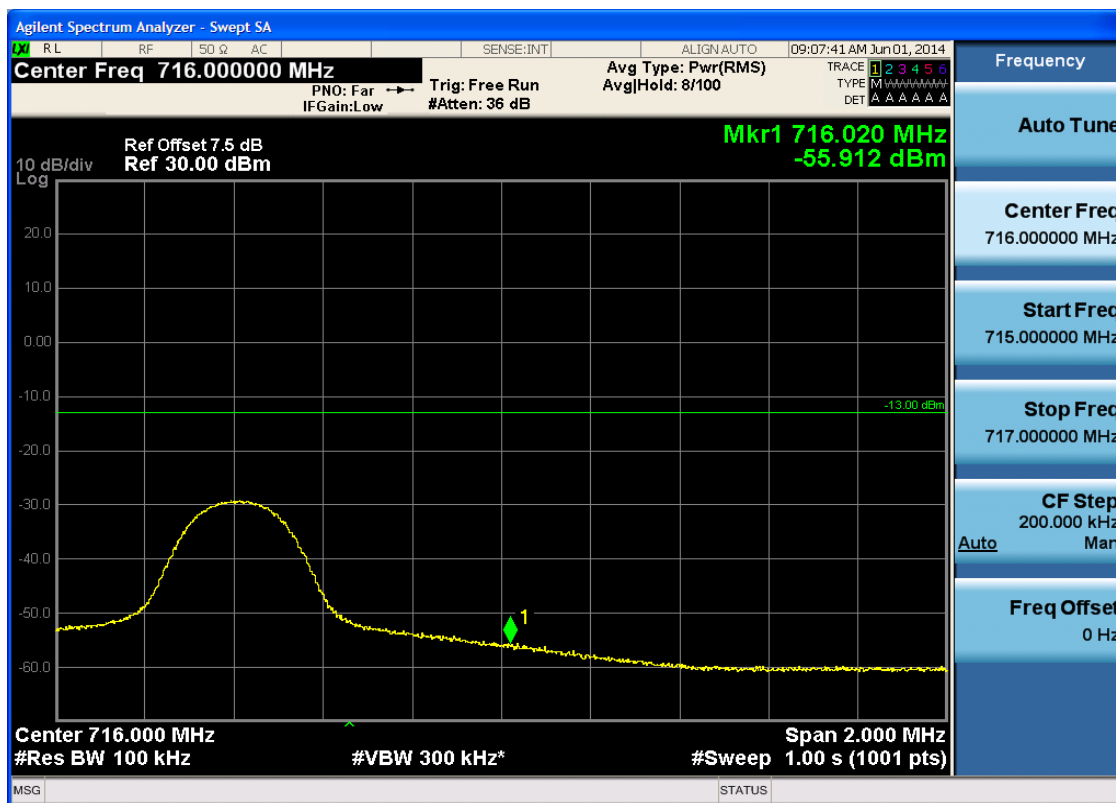
5.3.4.2.2.1.4 Test RB = RB50#0





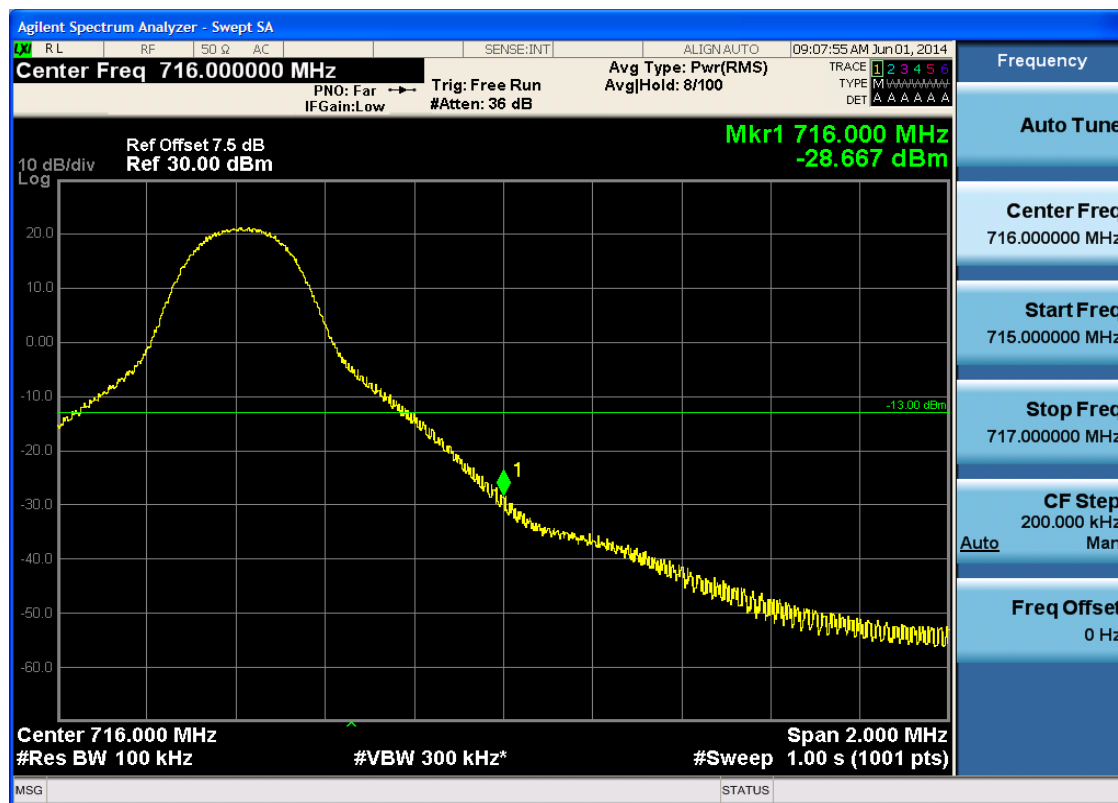
5.3.4.2.2.2 Test Channel = HCH

5.3.4.2.2.2.1 Test RB = RB1#0





5.3.4.2.2.2 Test RB = RB1#49





5.3.4.2.2.3 Test RB = RB25#13





5.3.4.2.2.4 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.

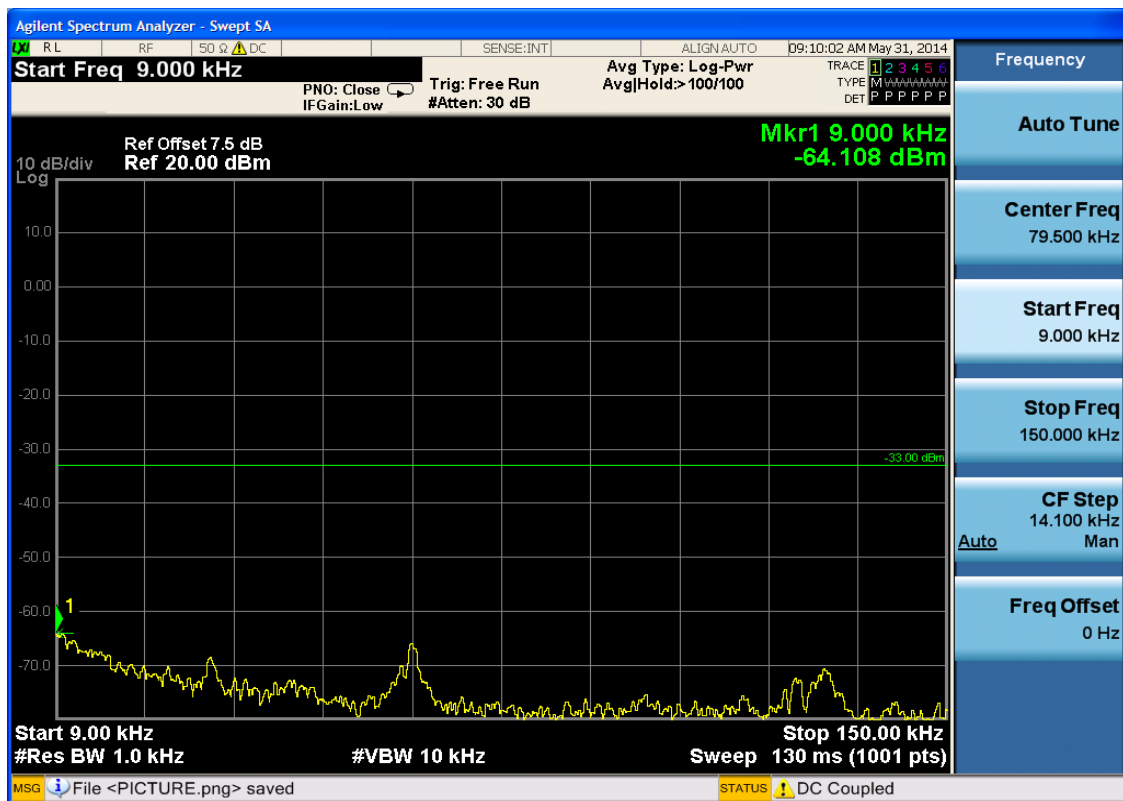
Part I - Test Plots

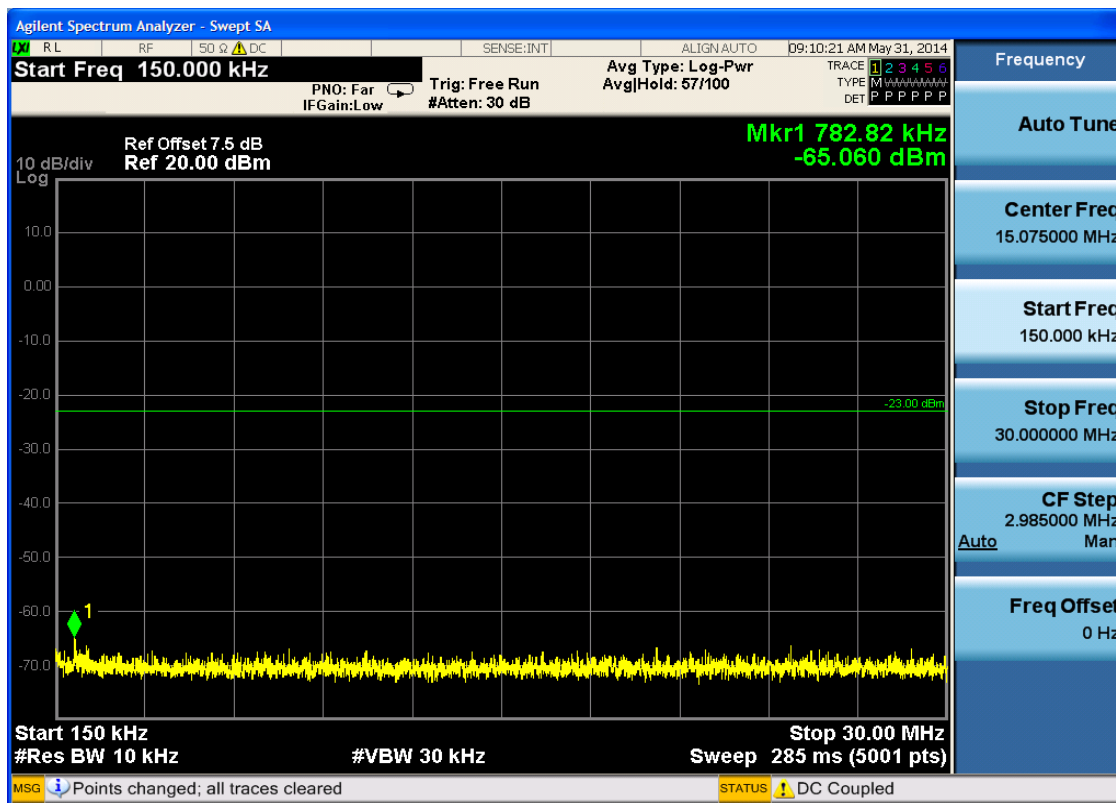
6.1 For GSM

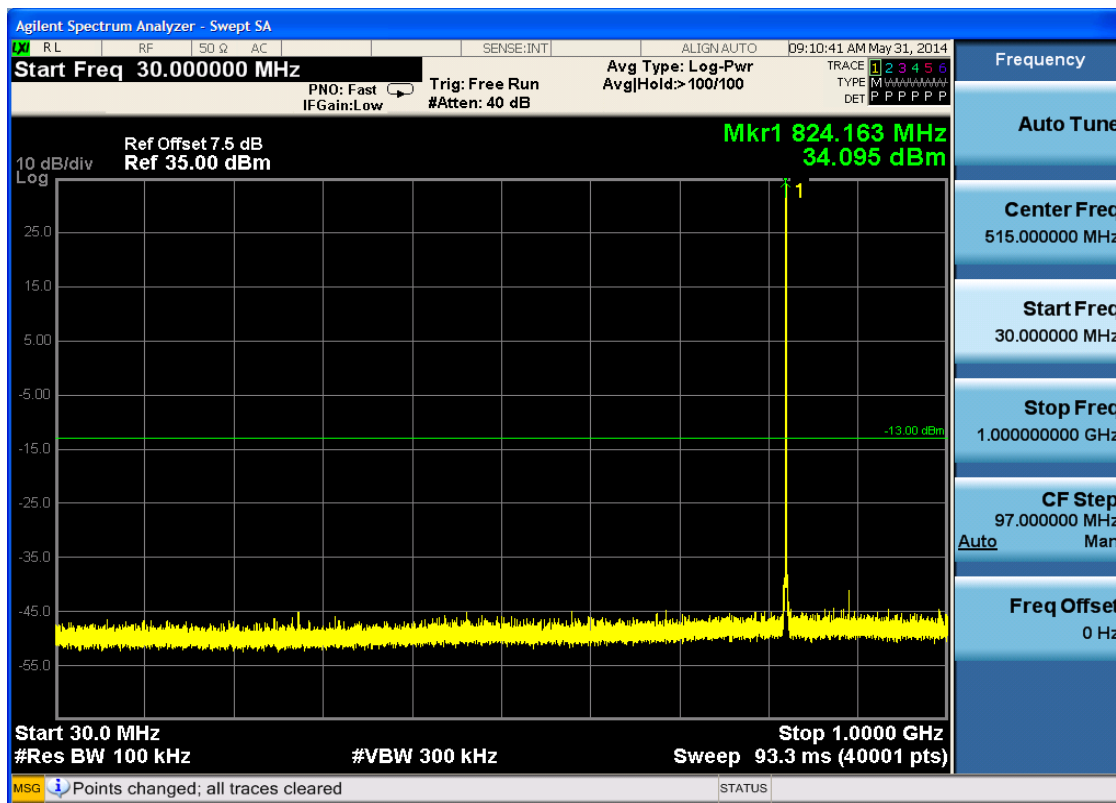
6.1.1 Test Band = GSM850

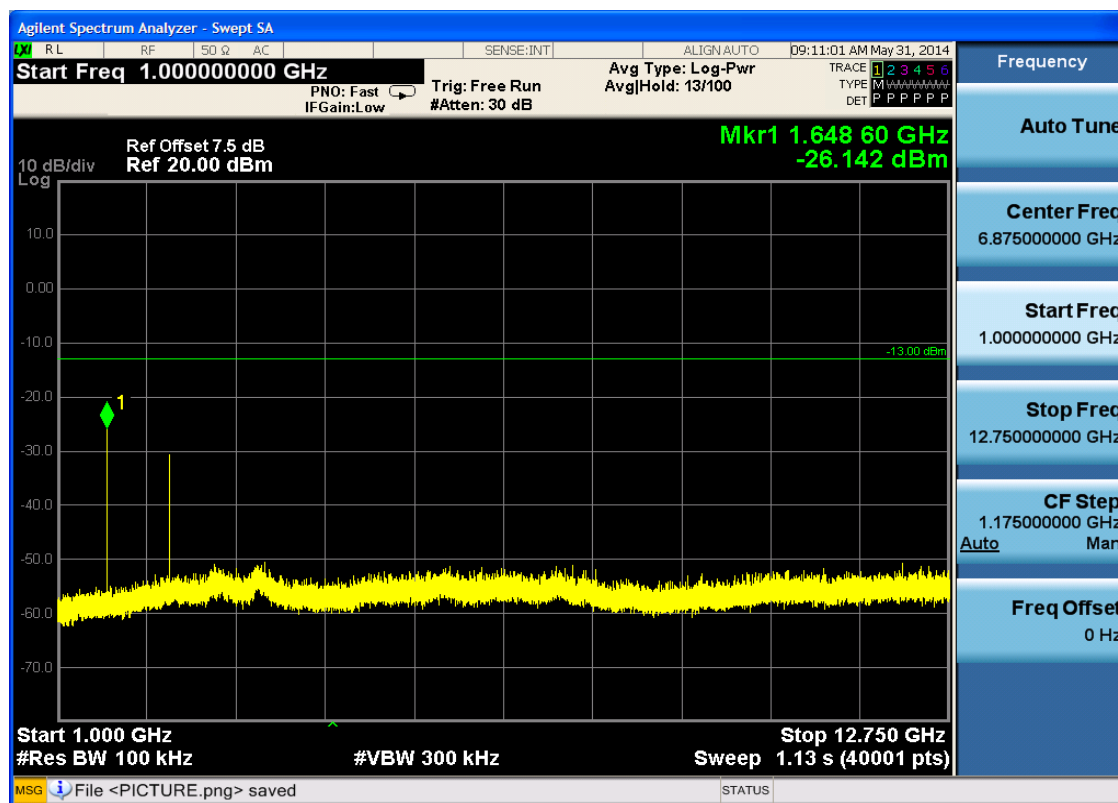
6.1.1.1 Test Mode = GSM/TM1

6.1.1.1.1 Test Channel = LCH



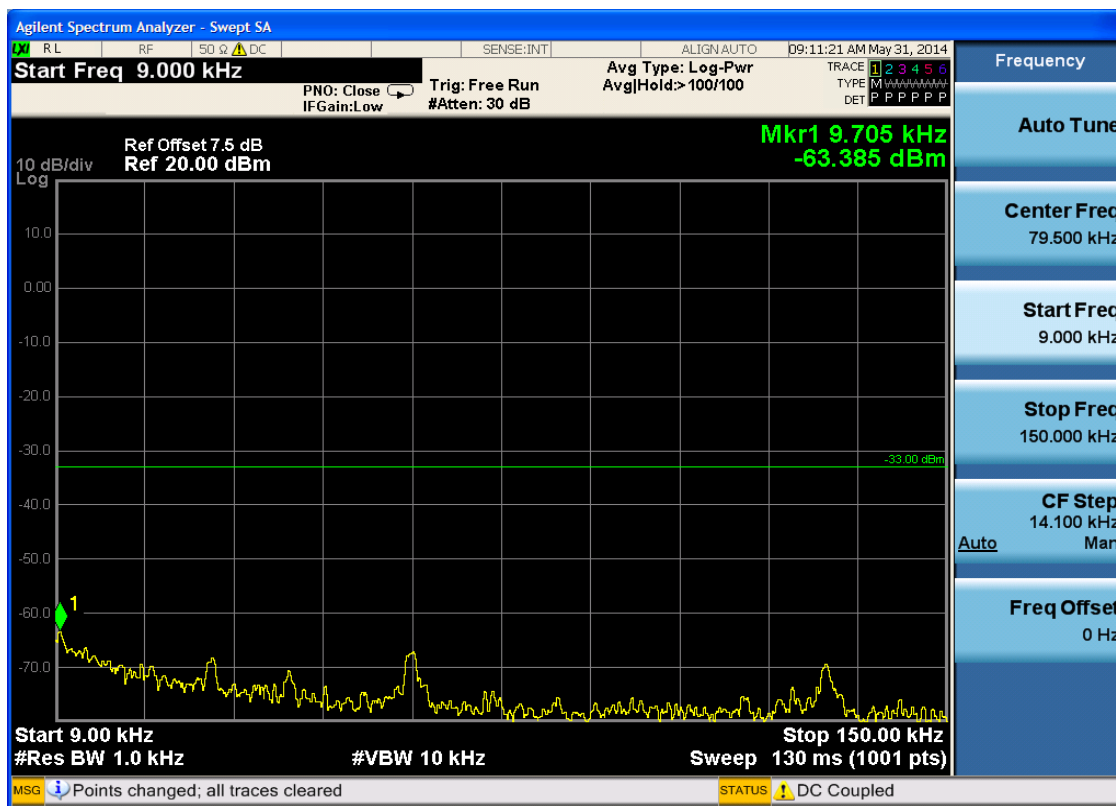


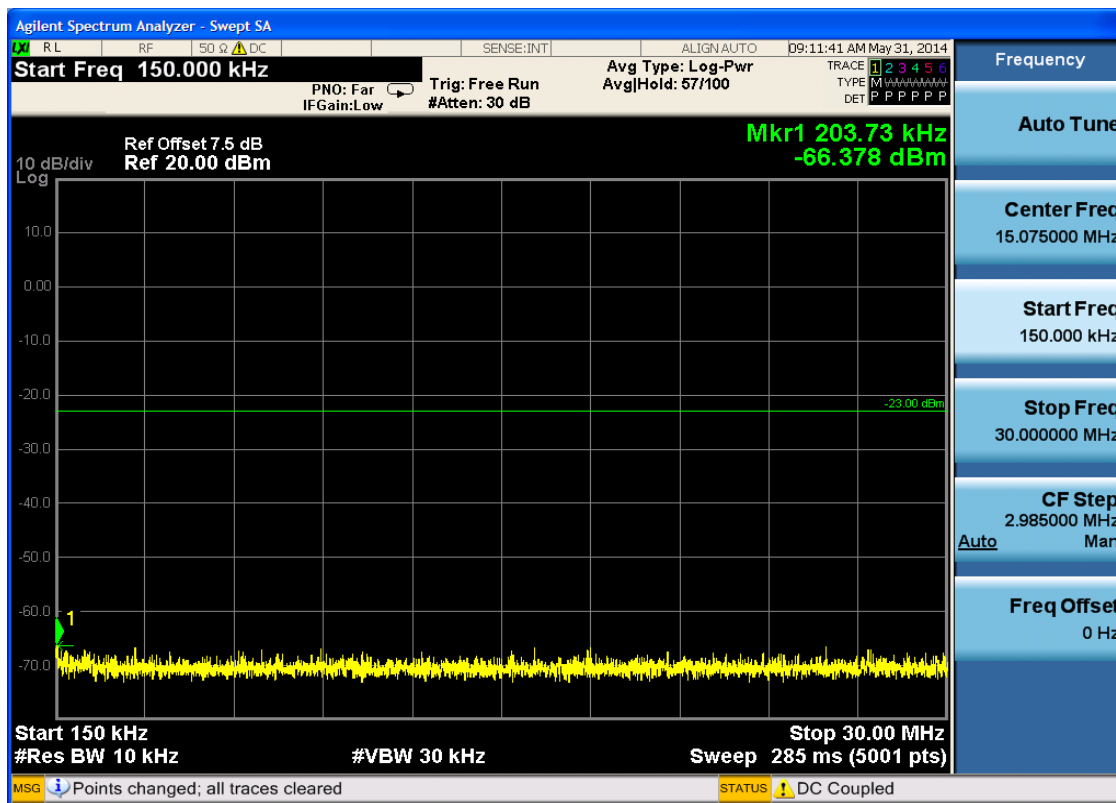


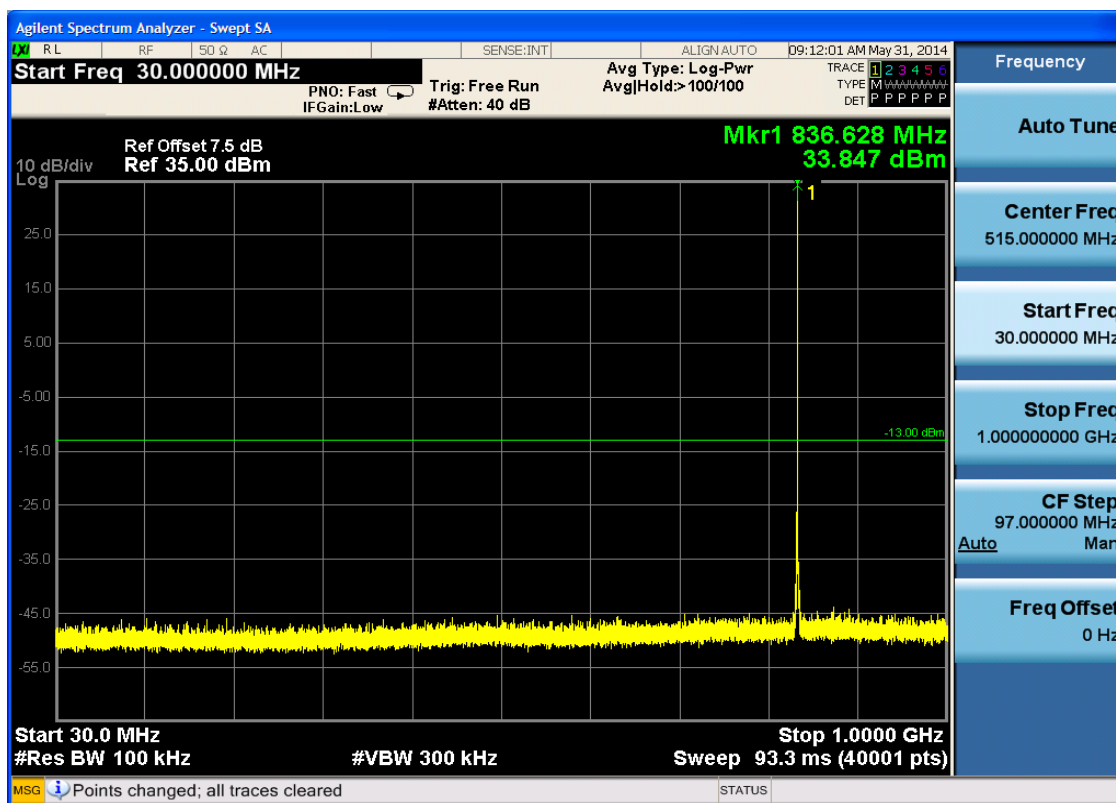


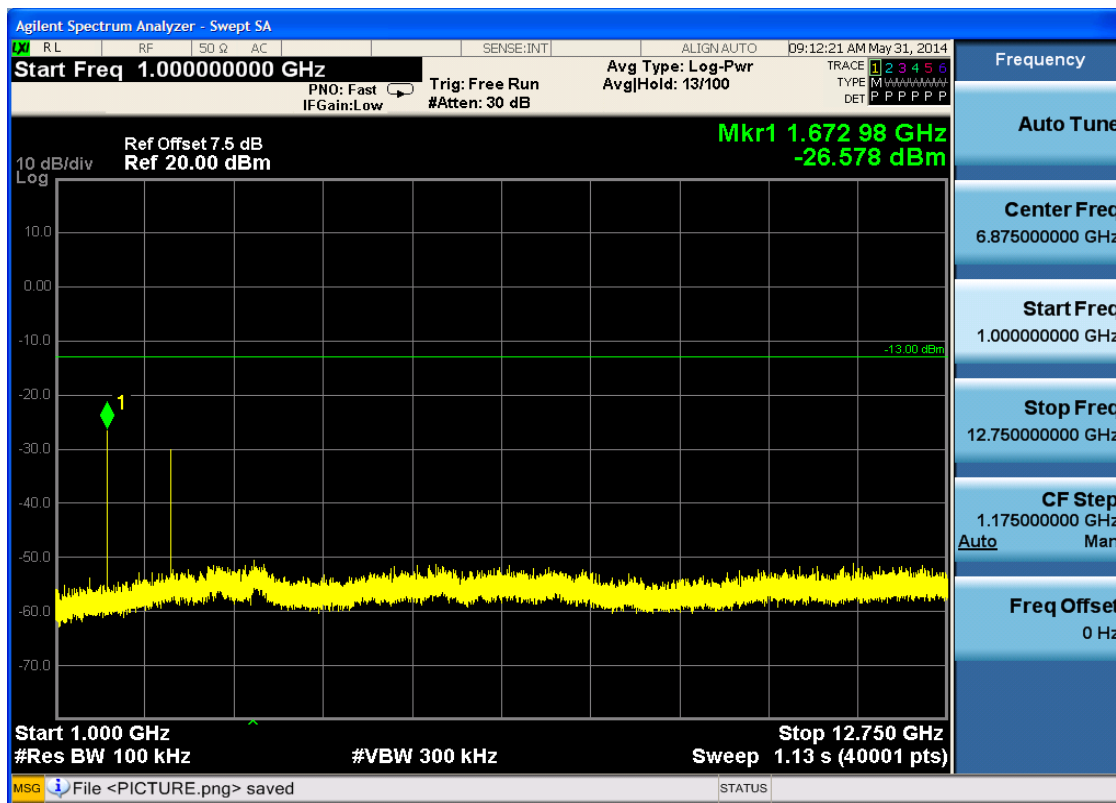


6.1.1.1.2 Test Channel = MCH

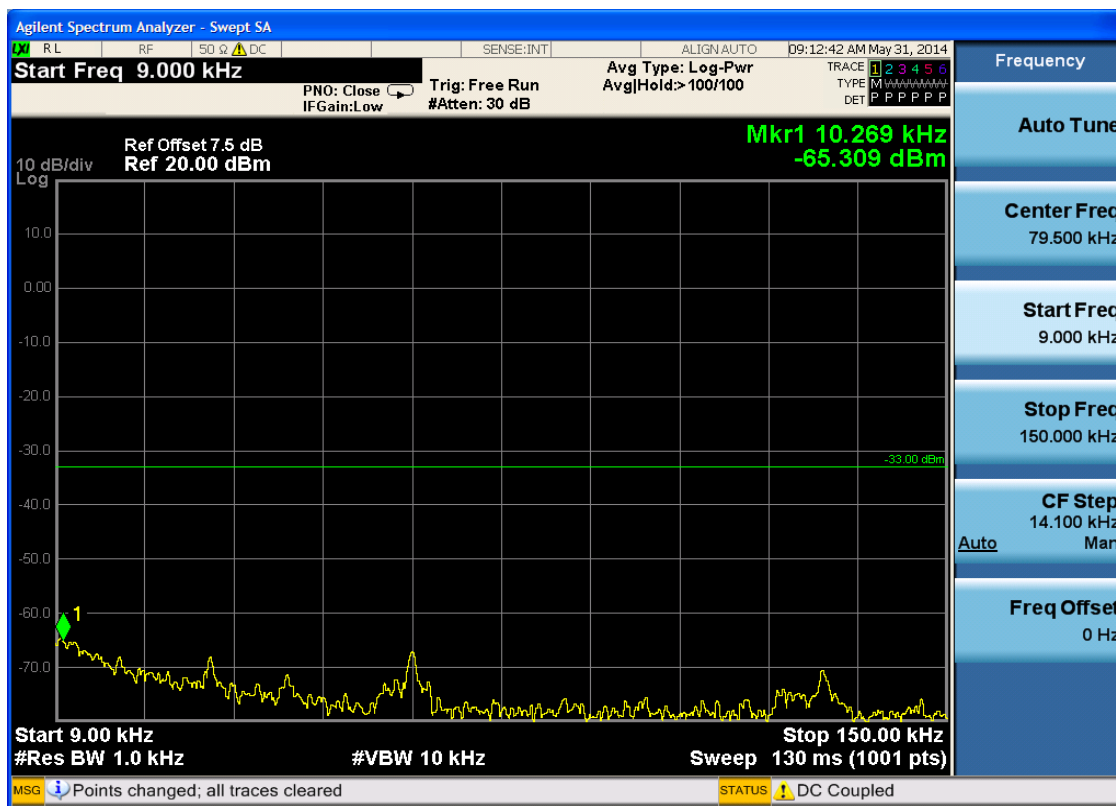


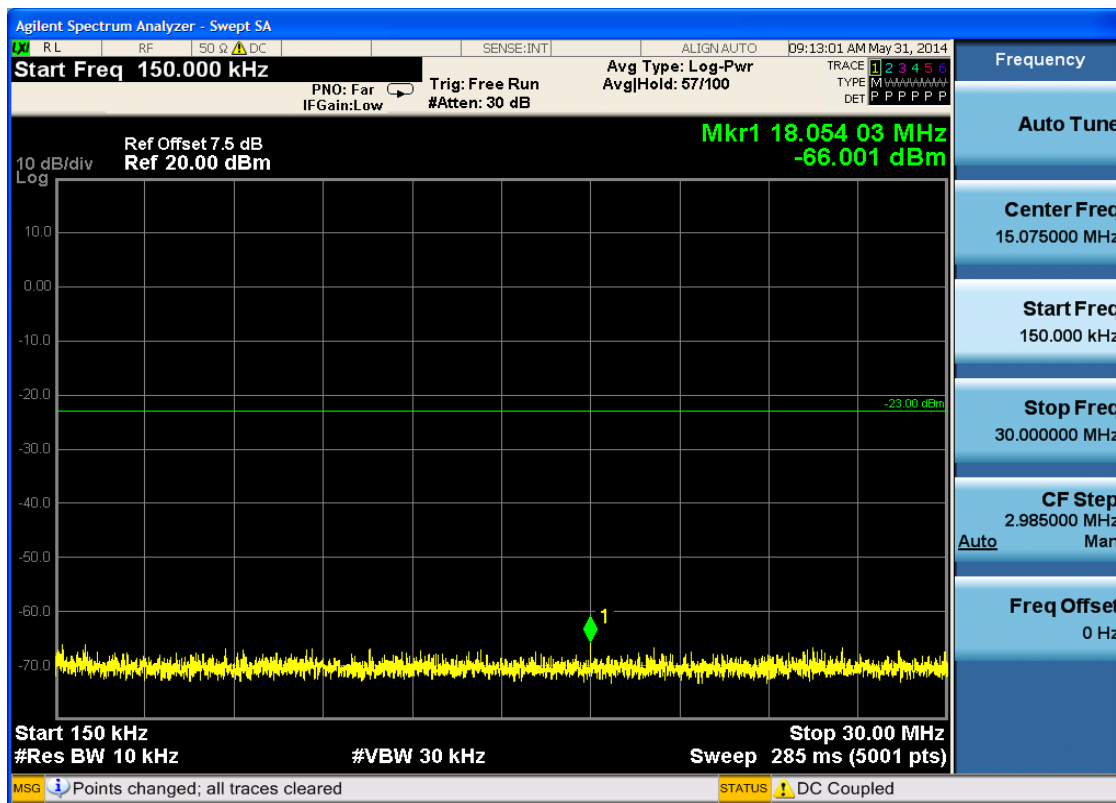


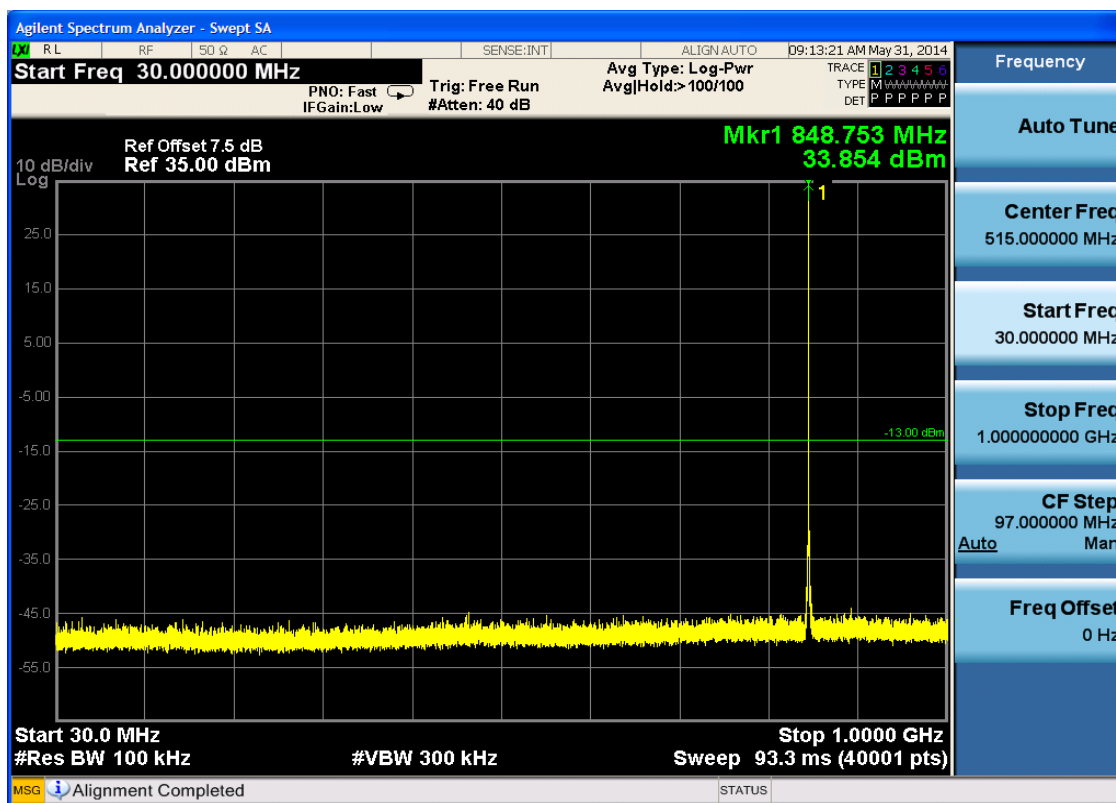


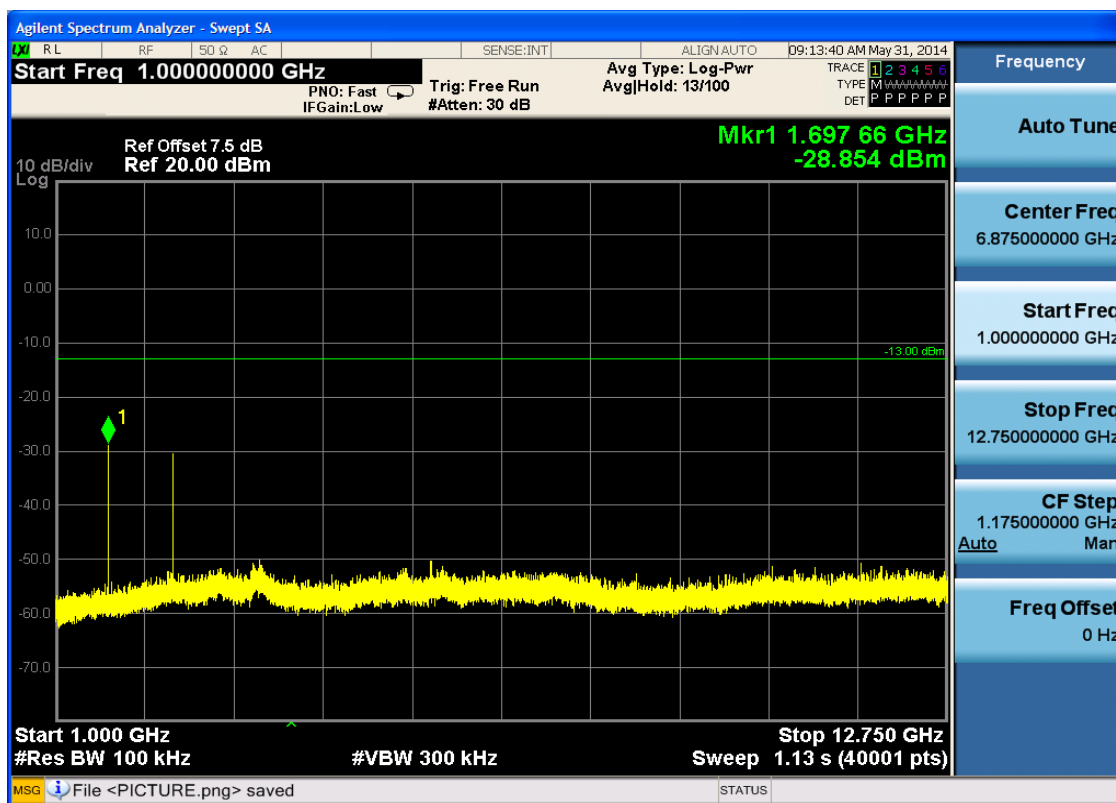


6.1.1.1.3 Test Channel = HCH



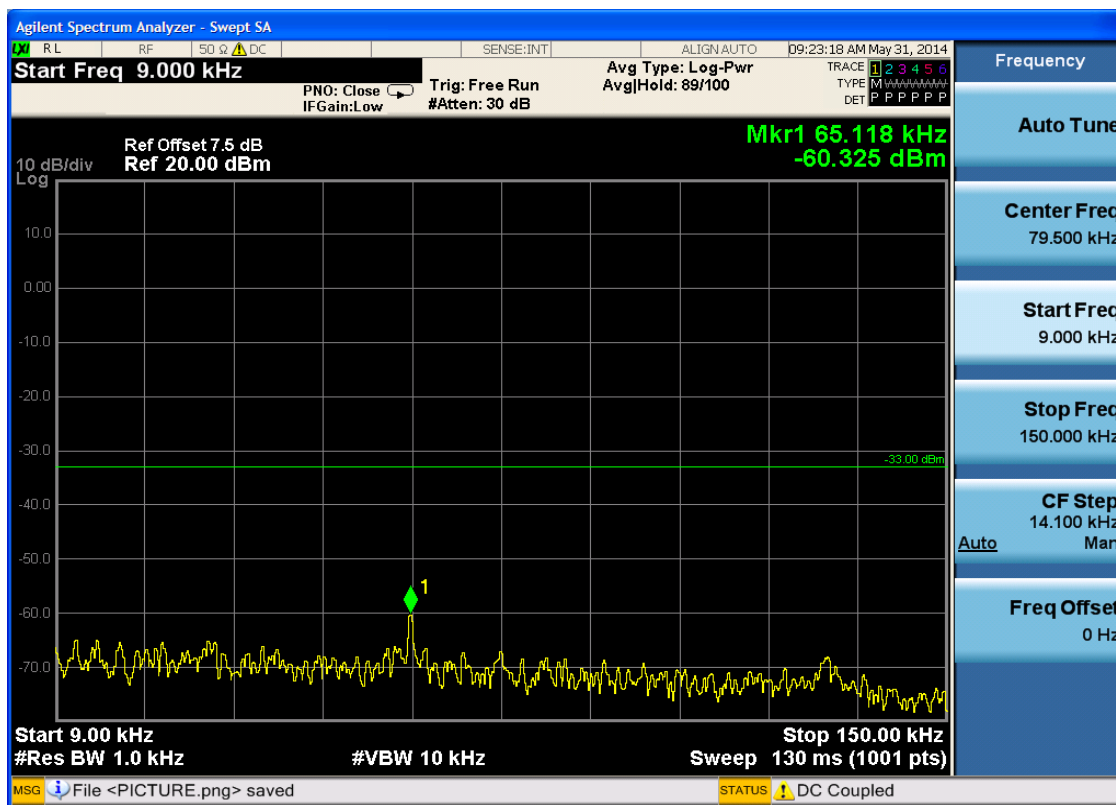


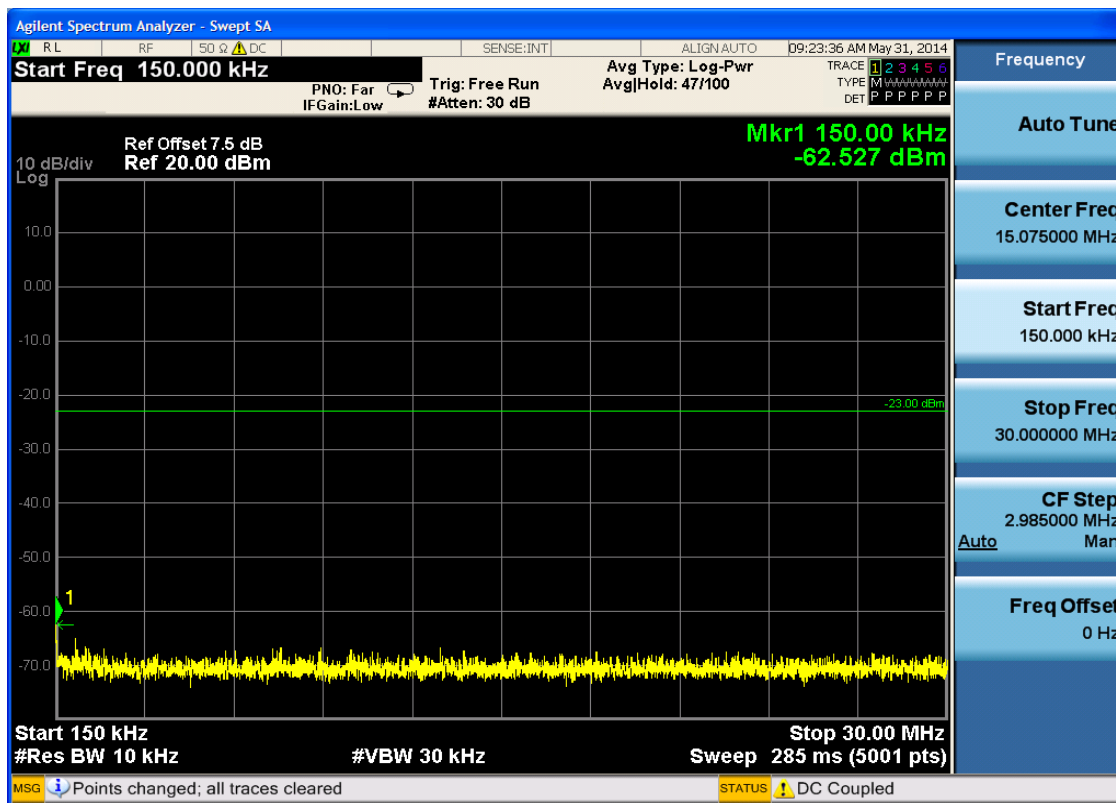


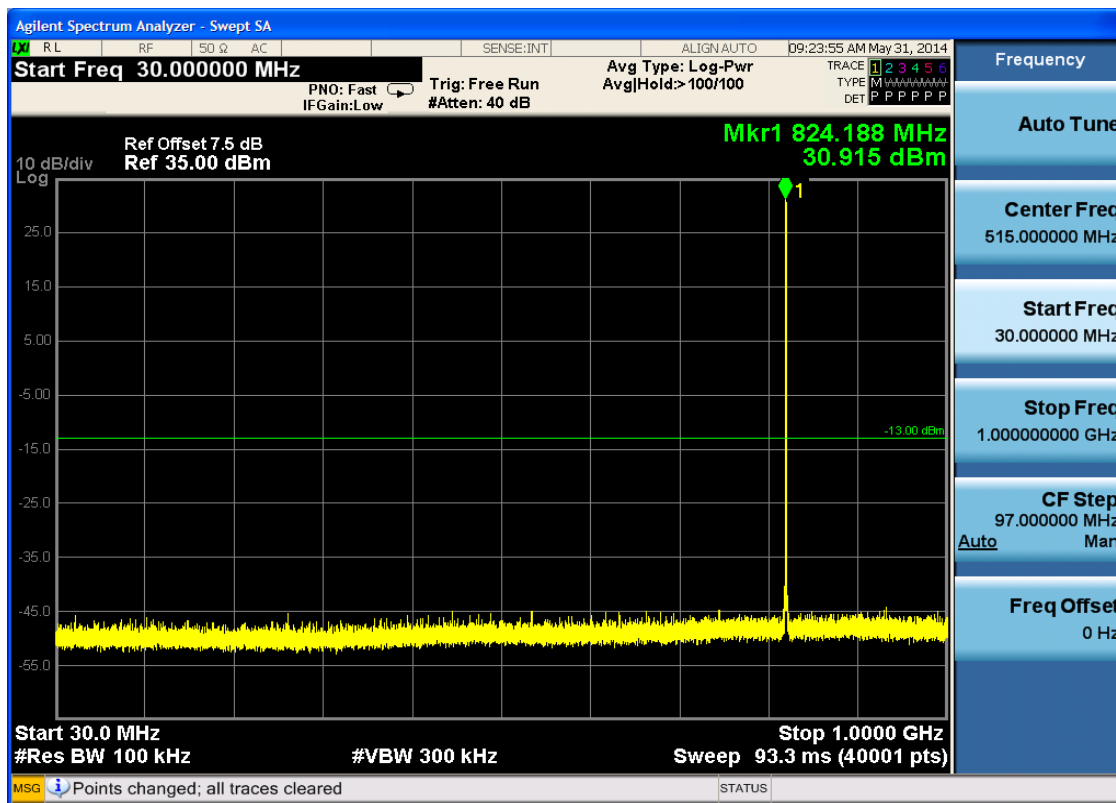


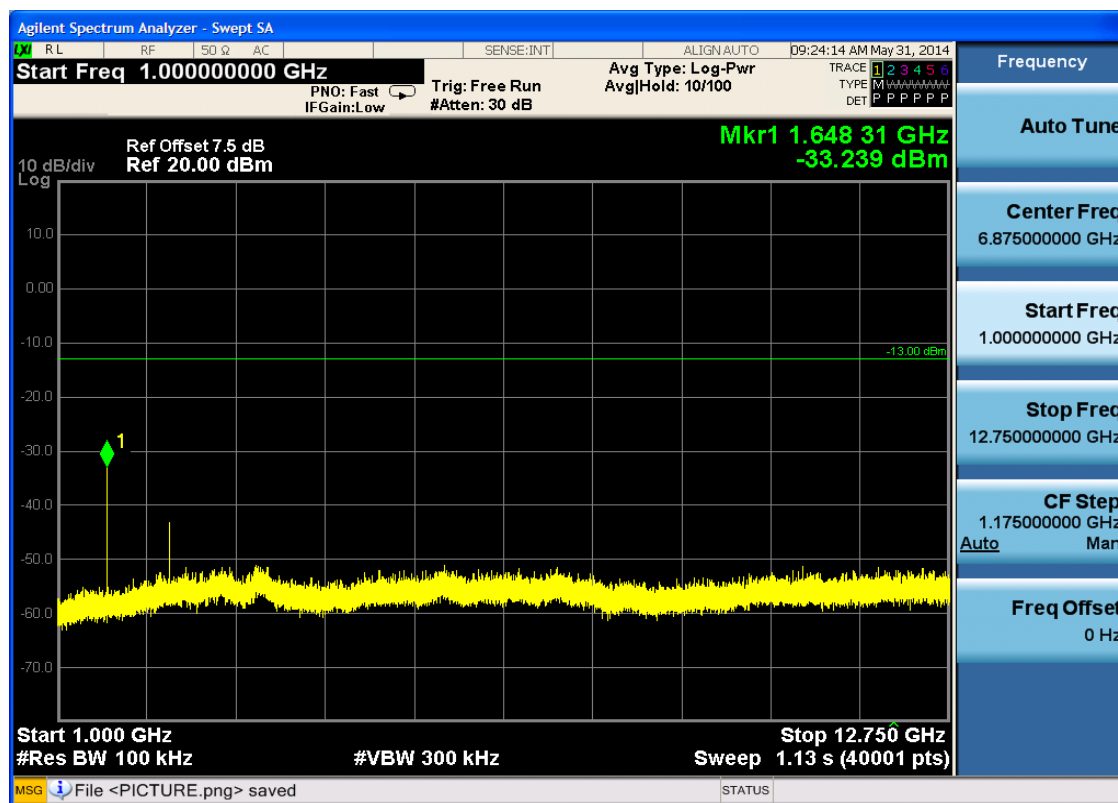
6.1.1.2 Test Mode = GSM/TM2

6.1.1.2.1 Test Channel = LCH



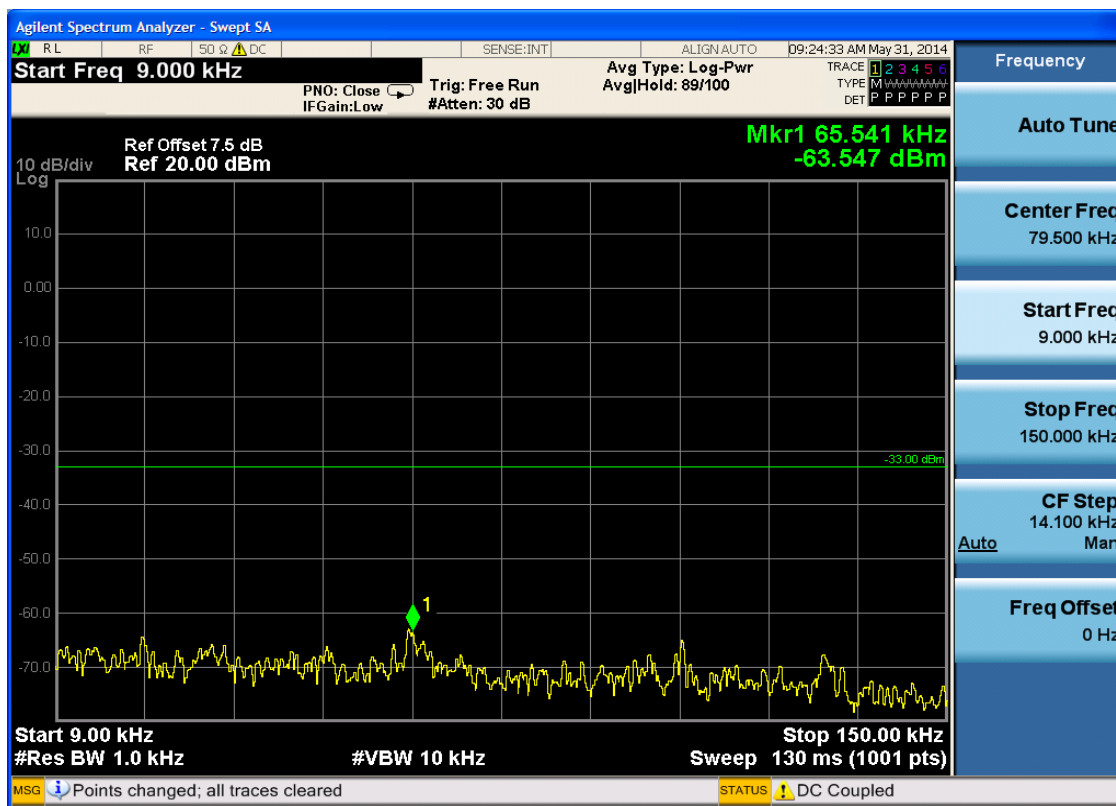


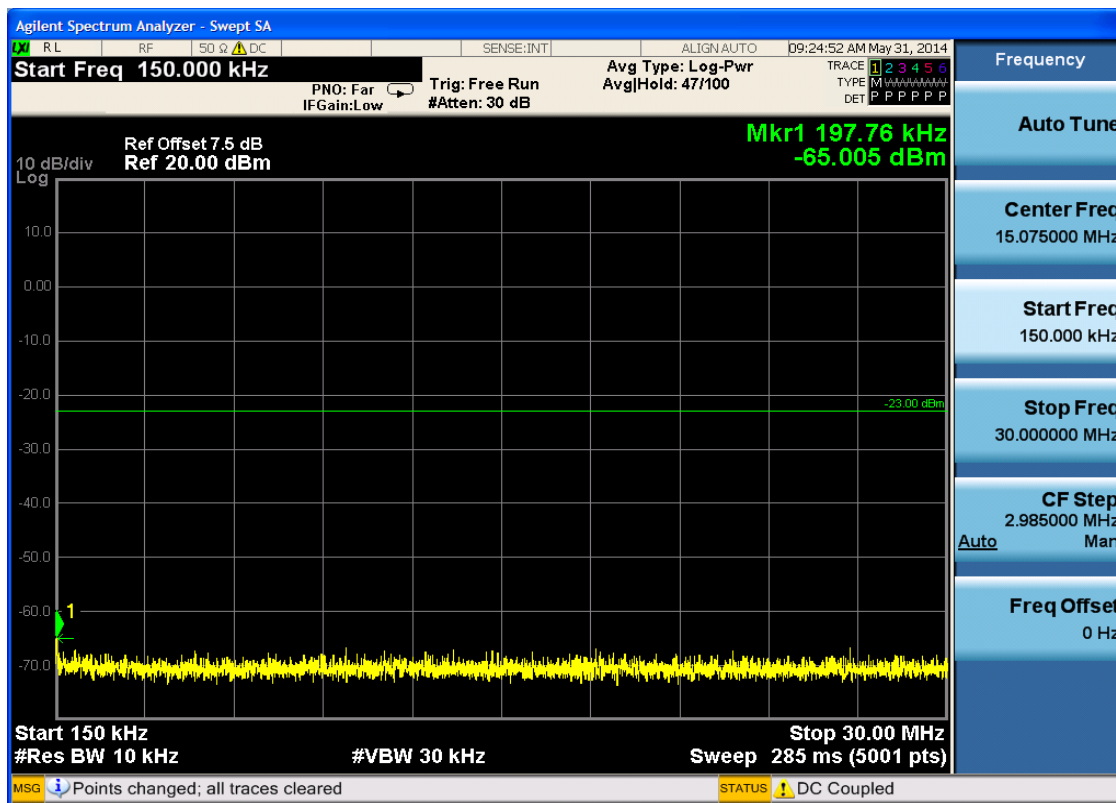


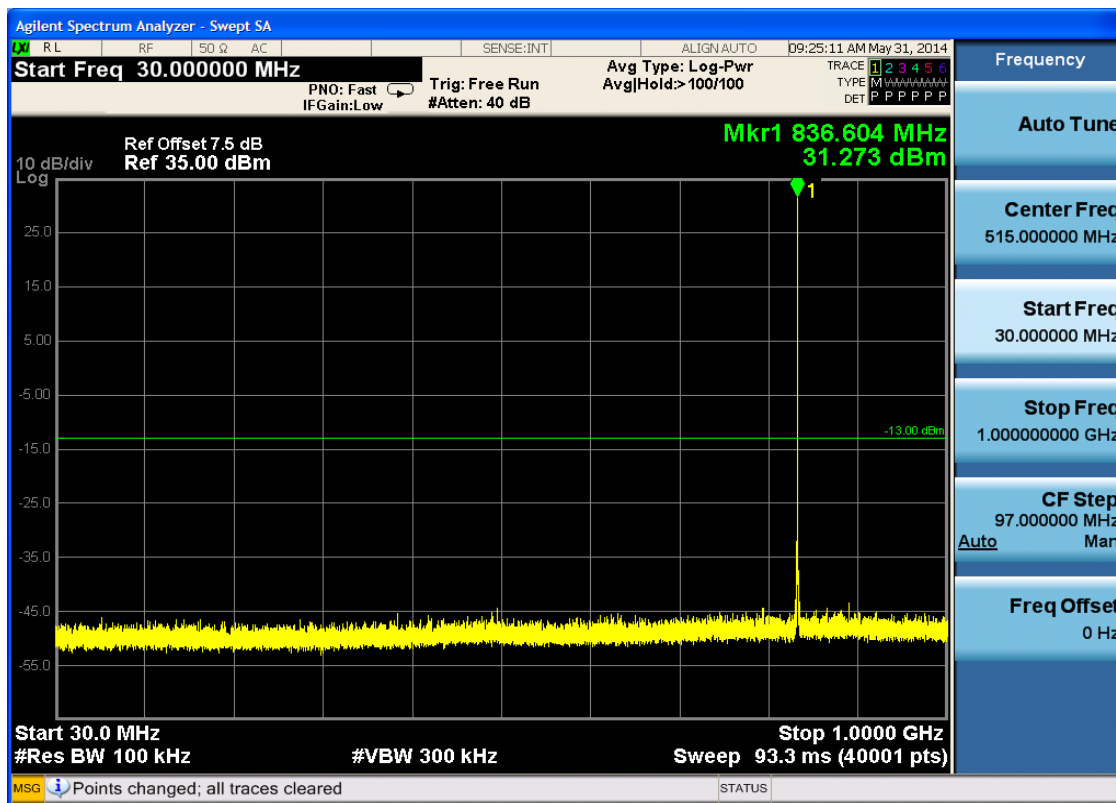


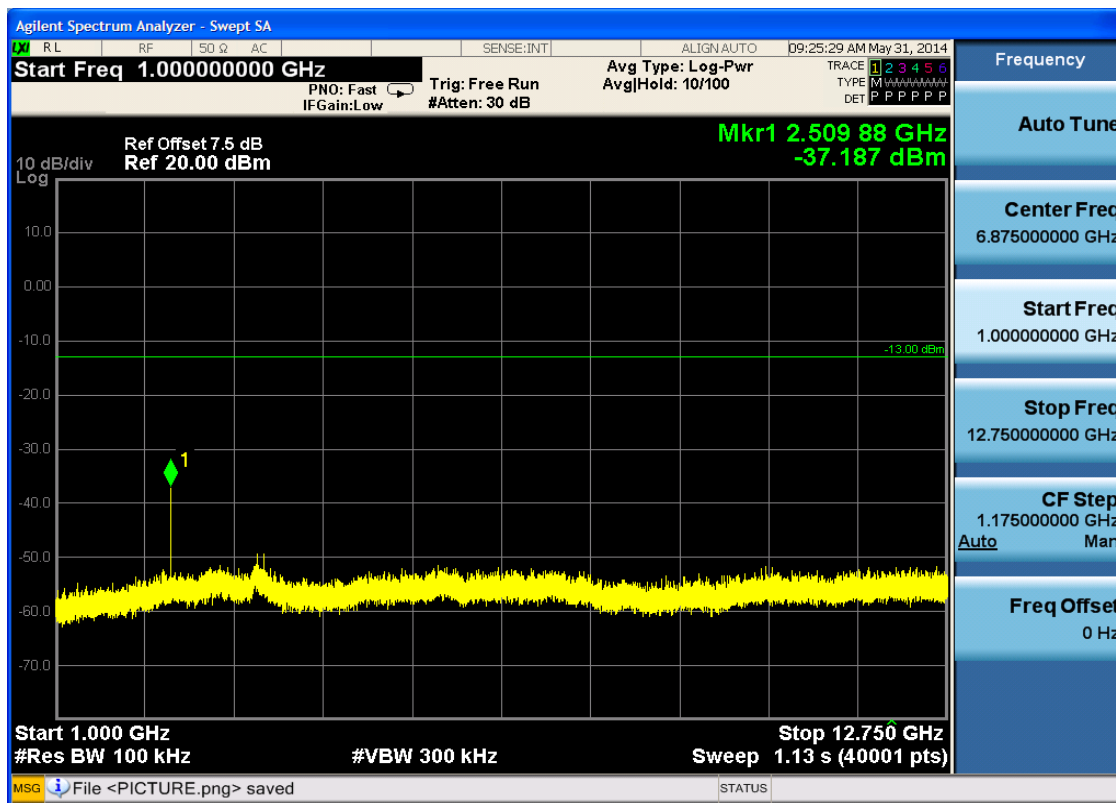


6.1.1.2.2 Test Channel = MCH

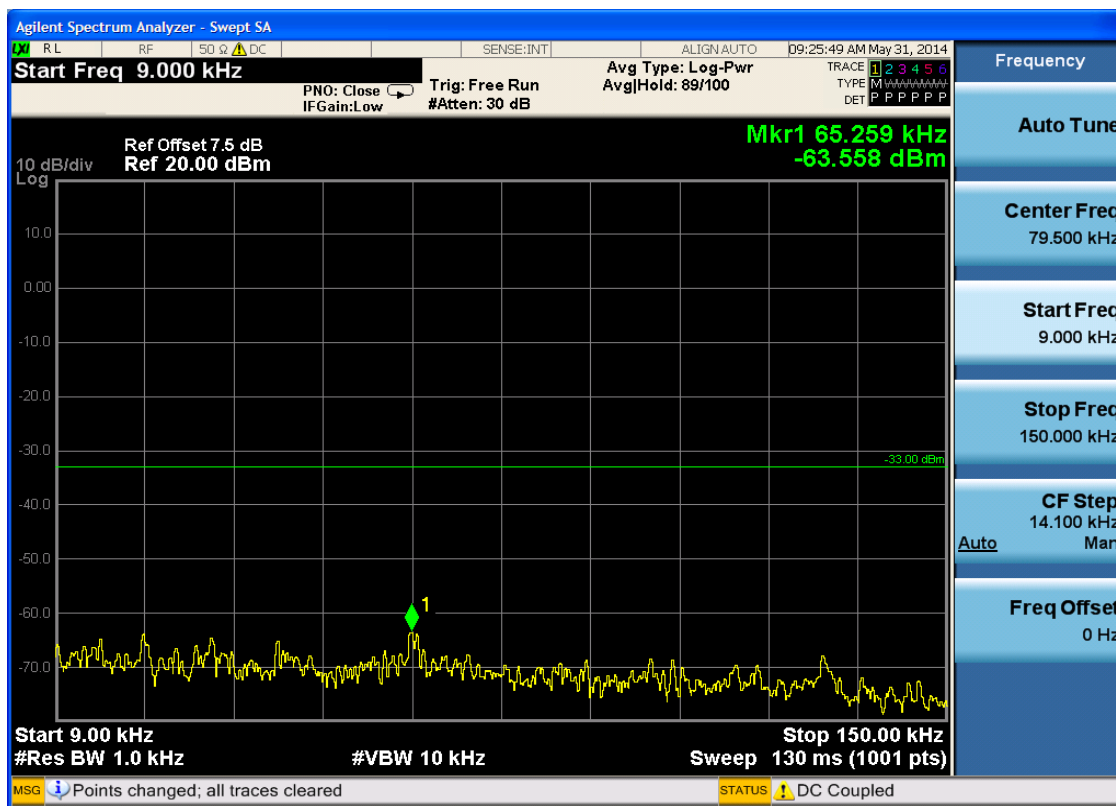


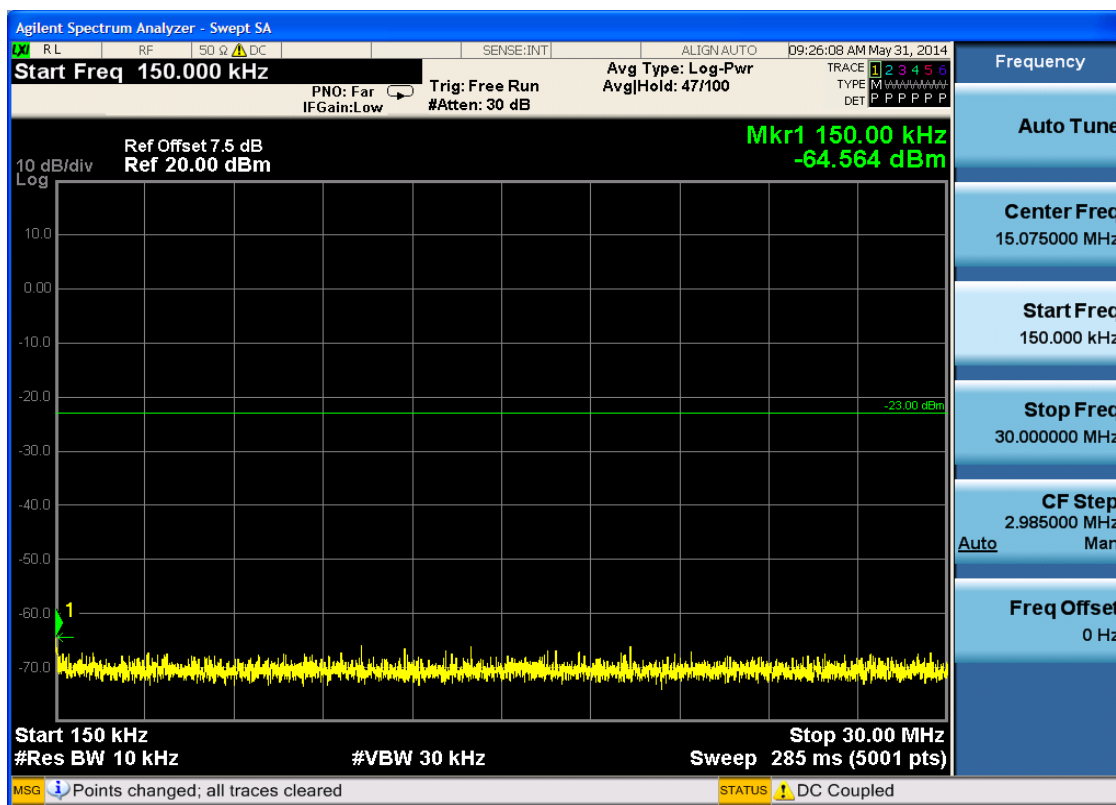


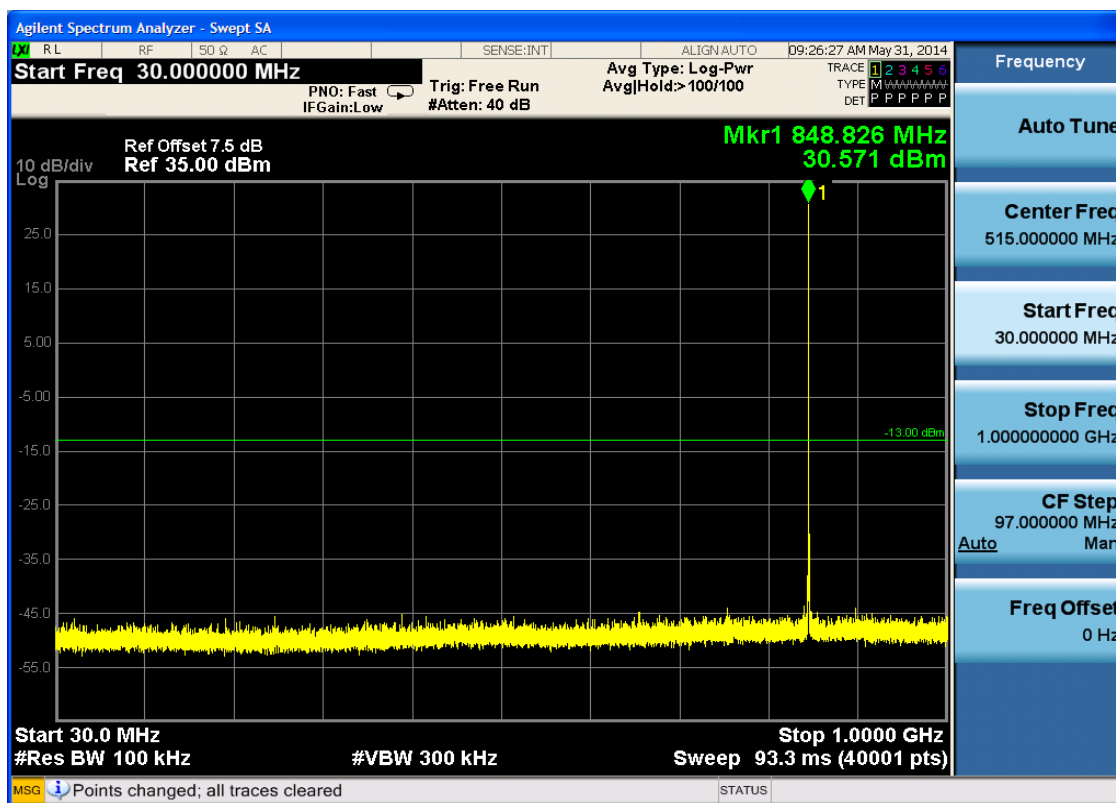


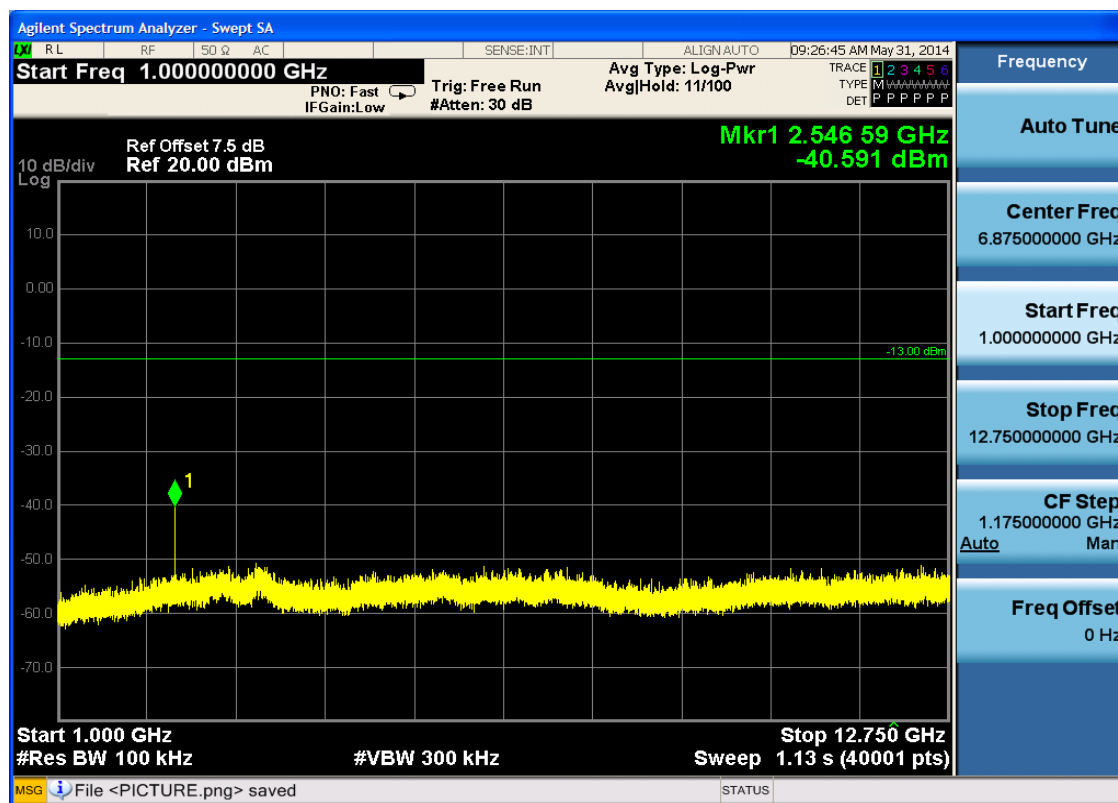


6.1.1.2.3 Test Channel = HCH







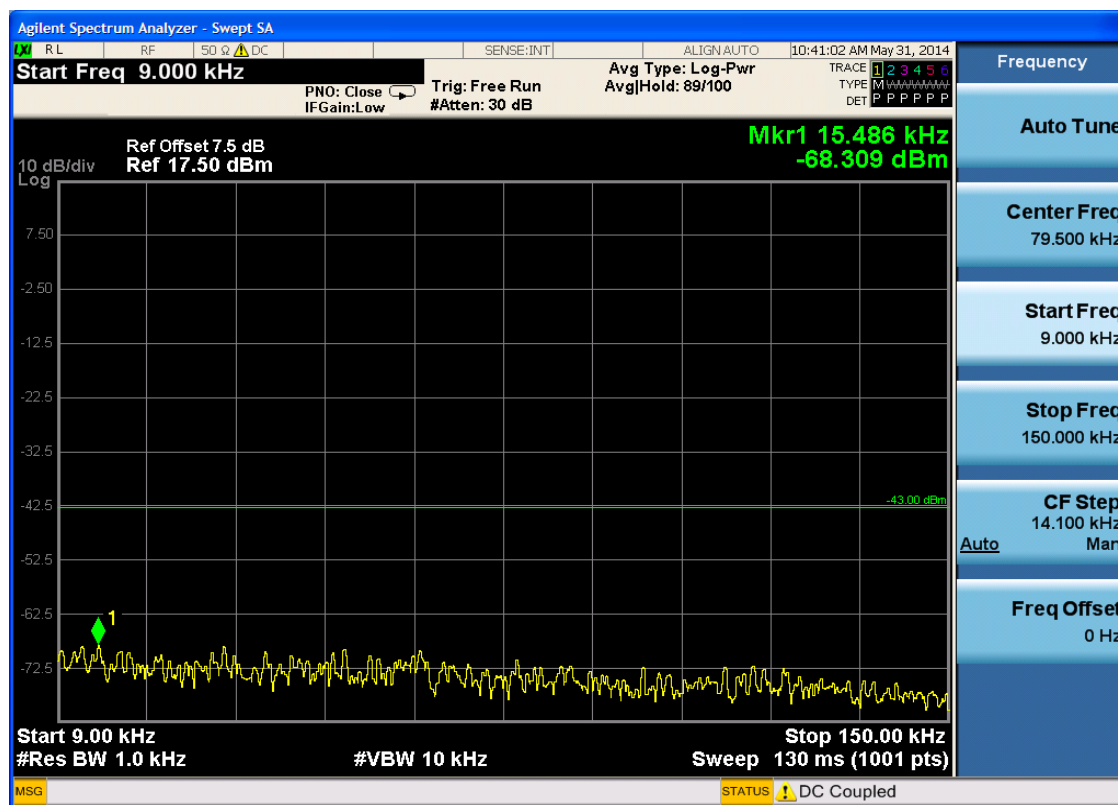


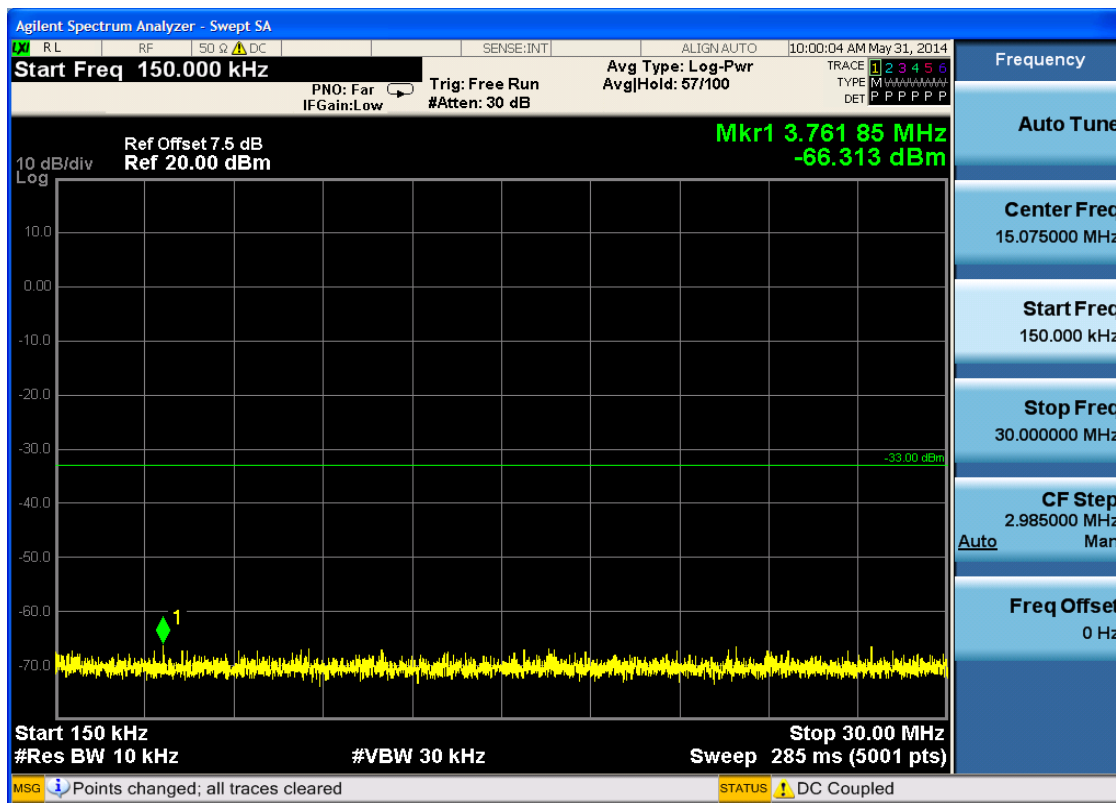


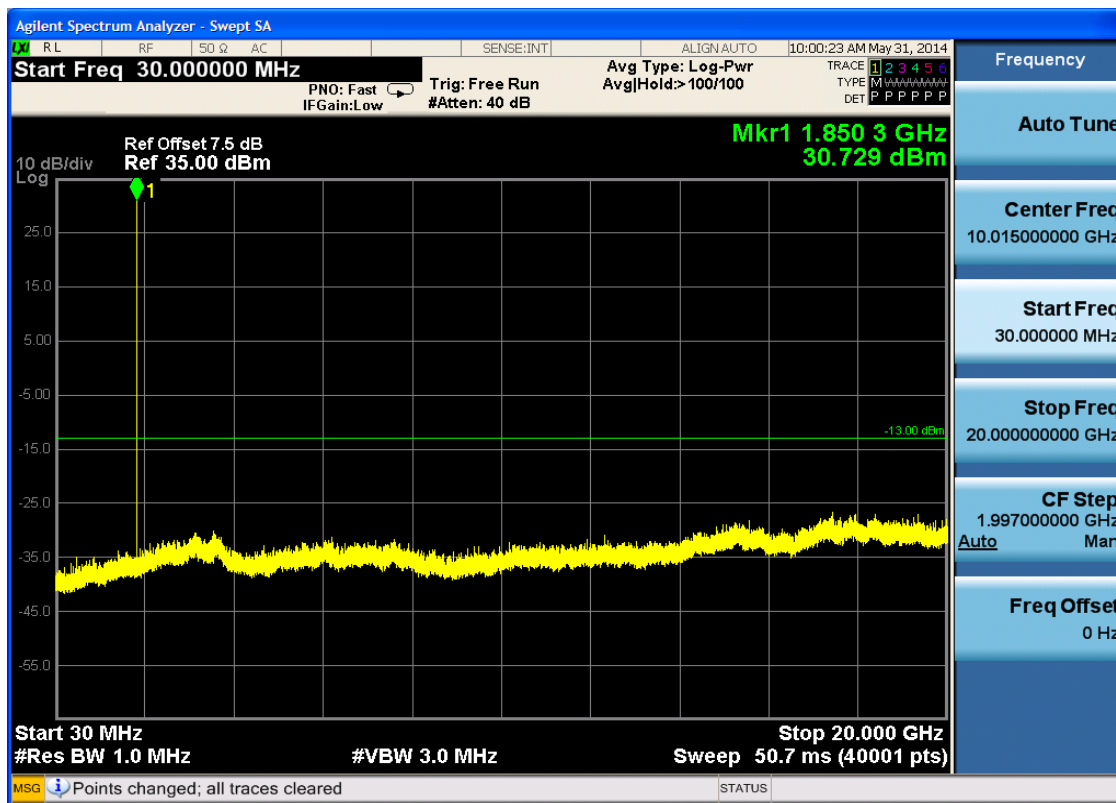
6.1.2 Test Band = GSM1900

6.1.2.1 Test Mode = GSM/TM1

6.1.2.1.1 Test Channel = LCH

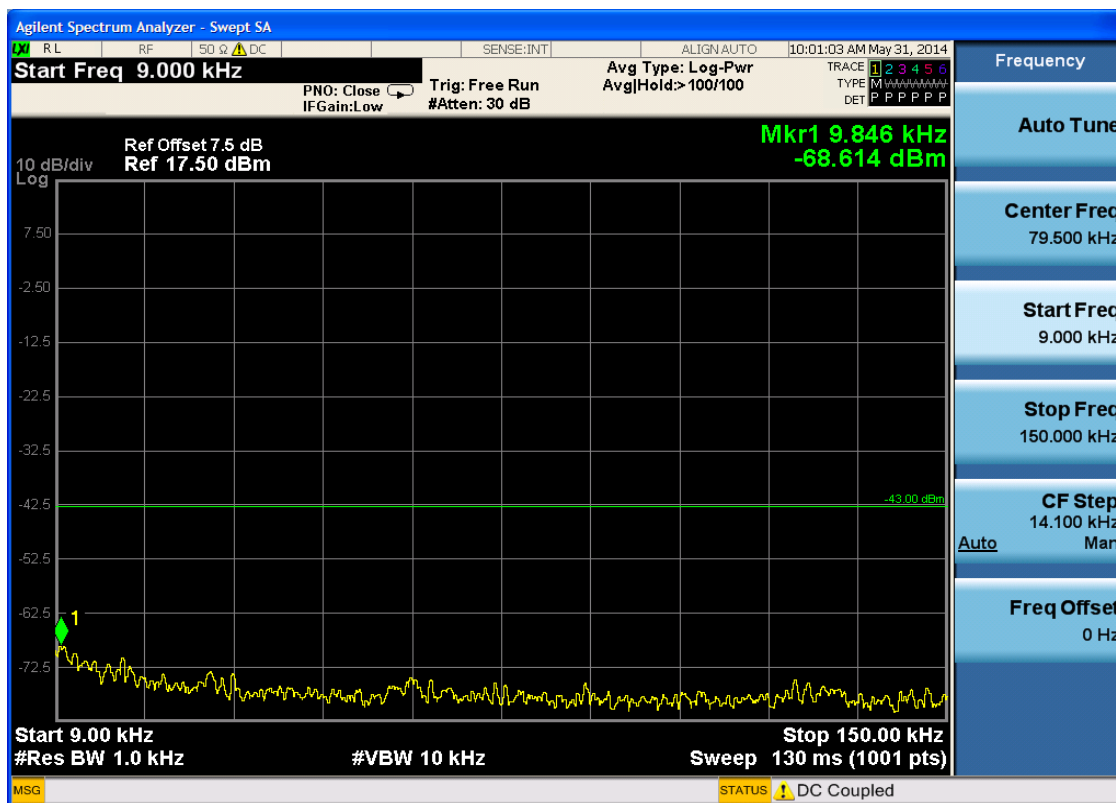


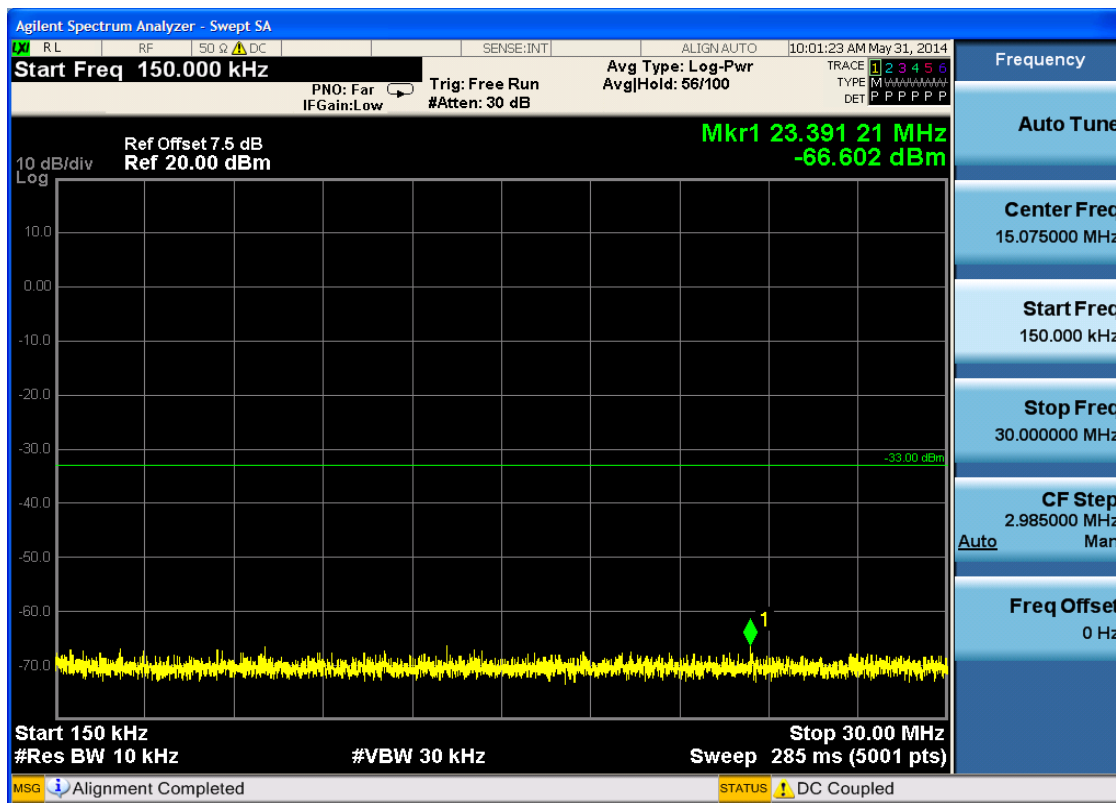


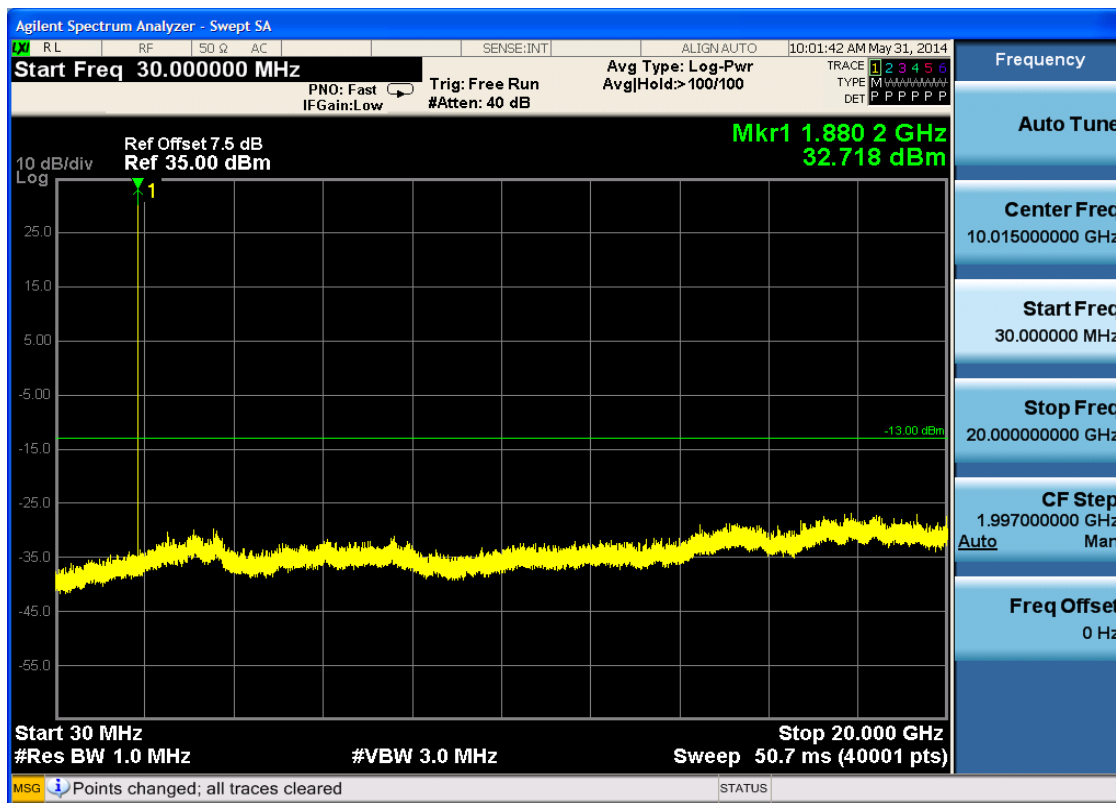




6.1.2.1.2 Test Channel = MCH









6.1.2.1.3 Test Channel = HCH

