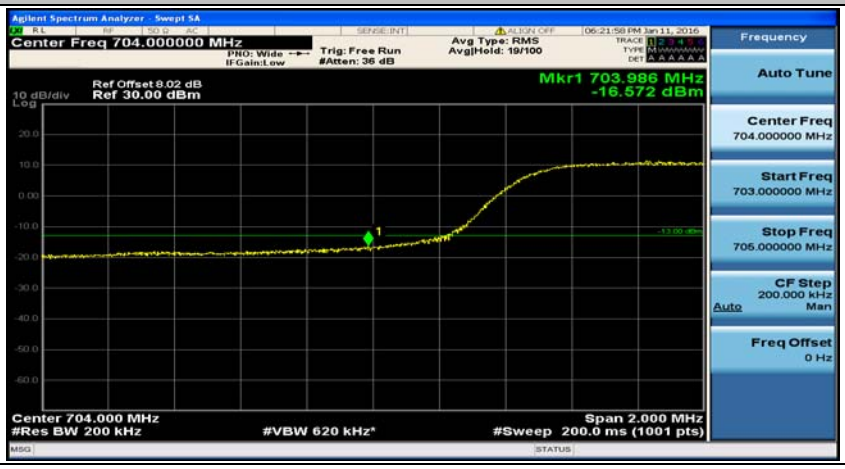
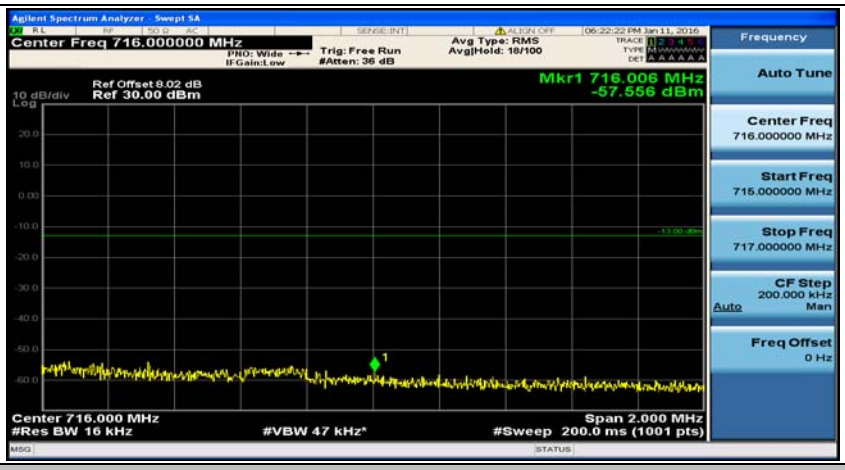
Channel Bandwidth: 10 MHz_LCH_QPSK_50RB#0



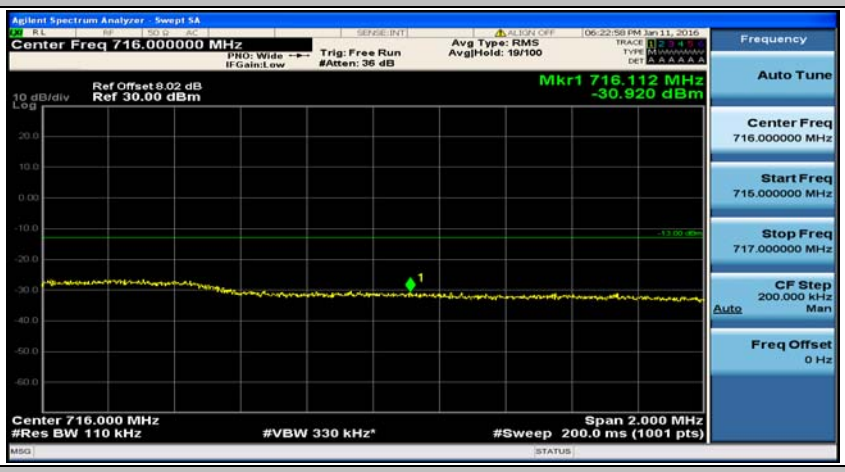
Channel Bandwidth: 10 MHz_HCH_QPSK_1RB#0

Channel Bandwidth: 10 MHz_HCH_QPSK_1RB#24



Channel Bandwidth: 10 MHz_HCH_QPSK_1RB#49

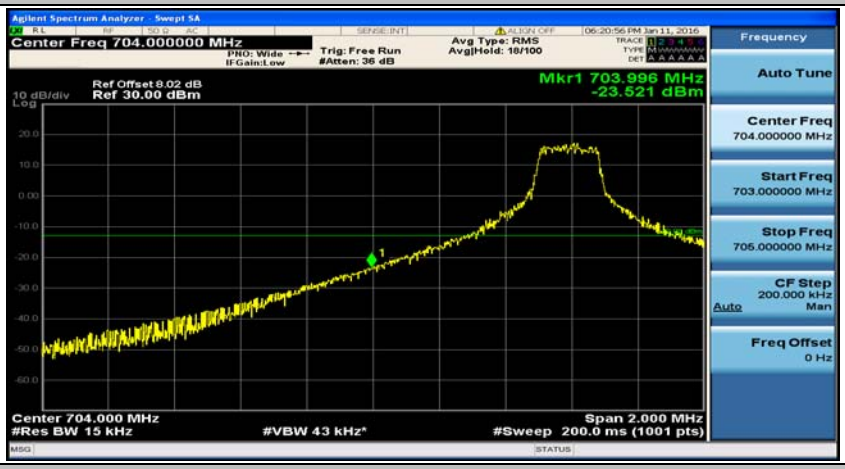
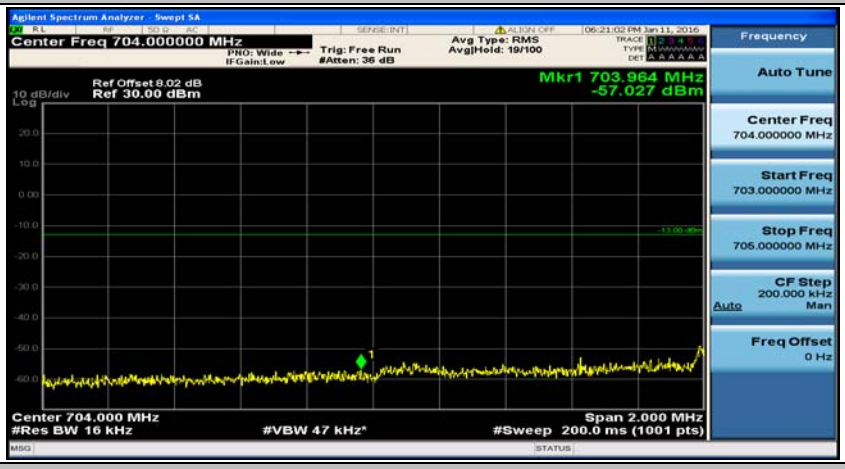
Channel Bandwidth: 10 MHz_HCH_QPSK_25RB#0



Channel Bandwidth: 10 MHz_HCH_QPSK_25RB#12

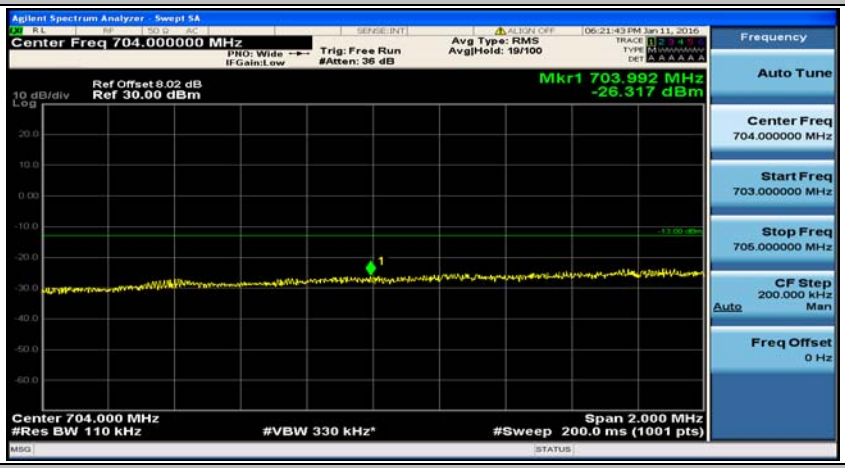
Channel Bandwidth: 10 MHz_HCH_QPSK_25RB#25

Channel Bandwidth: 10 MHz_HCH_QPSK_50RB#0

Channel Bandwidth: 10 MHz_LCH_16QAM_1RB#0

Channel Bandwidth: 10 MHz_LCH_16QAM_1RB#24

Channel Bandwidth: 10 MHz_LCH_16QAM_1RB#49

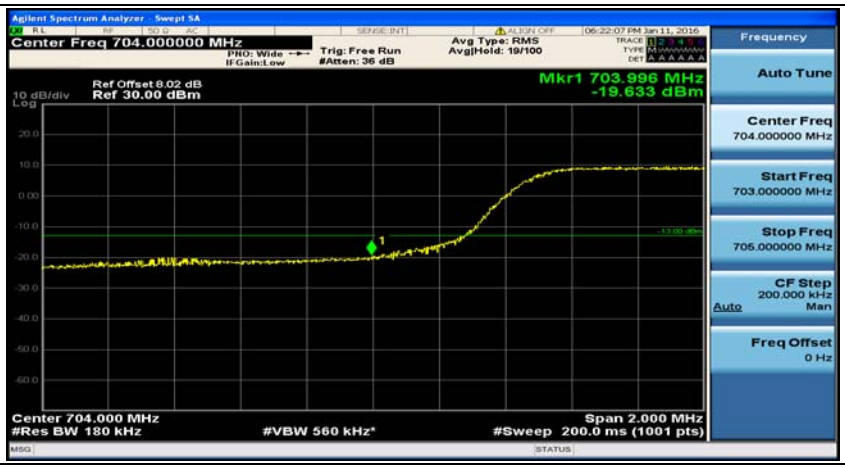
Channel Bandwidth: 10 MHz_LCH_16QAM_25RB#0

Channel Bandwidth: 10 MHz_LCH_16QAM_25RB#12



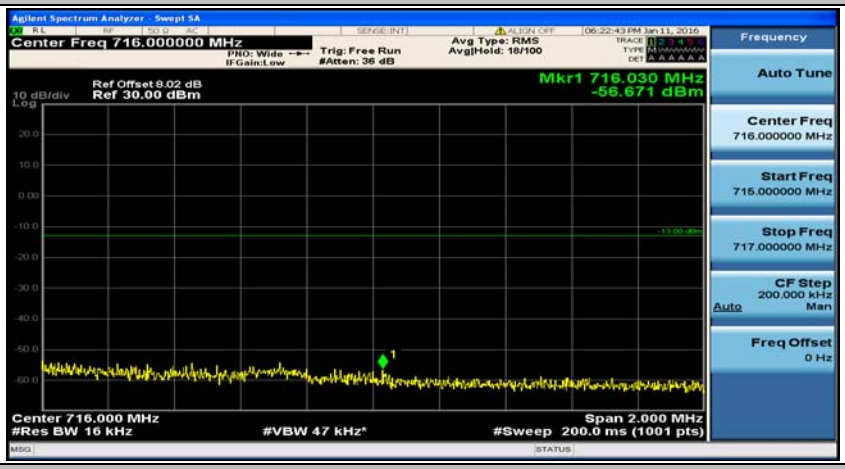
Channel Bandwidth: 10 MHz_LCH_16QAM_25RB#25

Channel Bandwidth: 10 MHz_LCH_16QAM_50RB#0



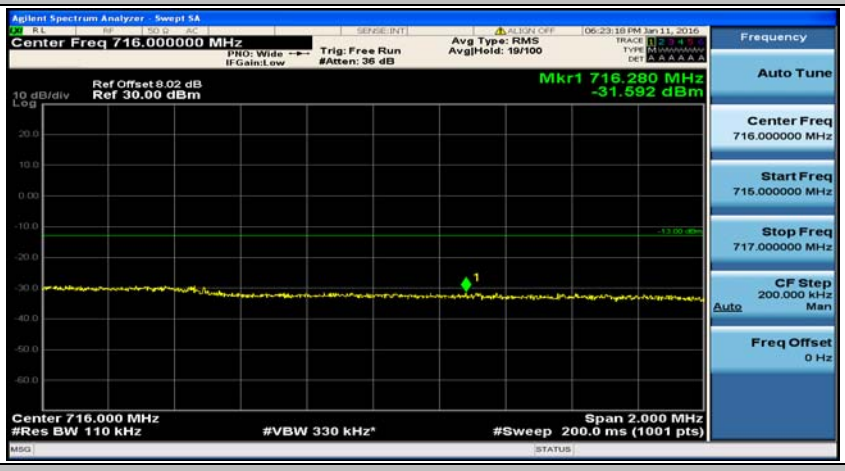
Channel Bandwidth: 10 MHz_HCH_16QAM_1RB#0

Channel Bandwidth: 10 MHz_HCH_16QAM_1RB#24



Channel Bandwidth: 10 MHz_HCH_16QAM_1RB#49

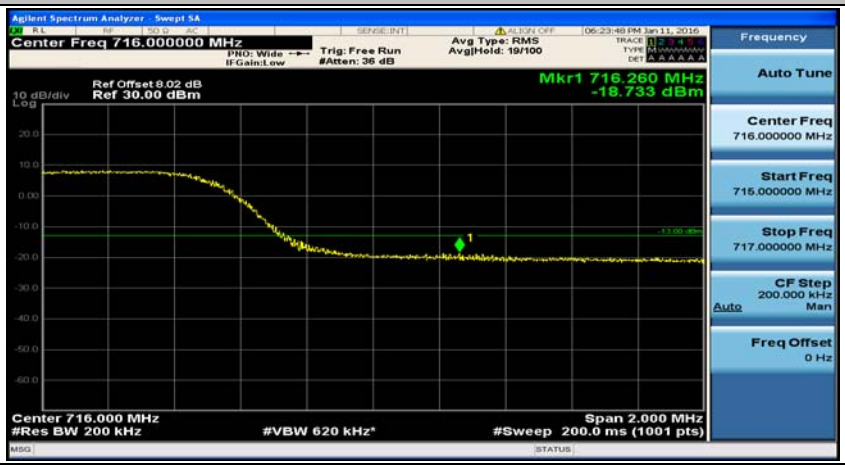
Channel Bandwidth: 10 MHz_HCH_16QAM_25RB#0



Channel Bandwidth: 10 MHz_HCH_16QAM_25RB#12

Channel Bandwidth: 10 MHz_HCH_16QAM_25RB#25

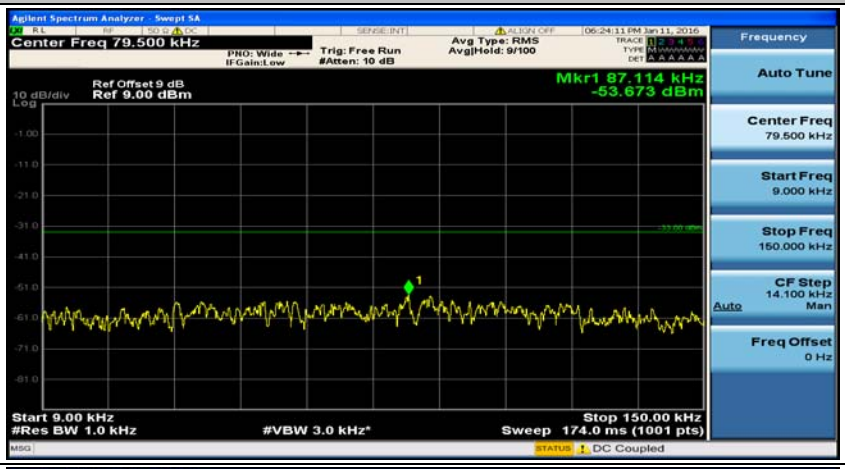
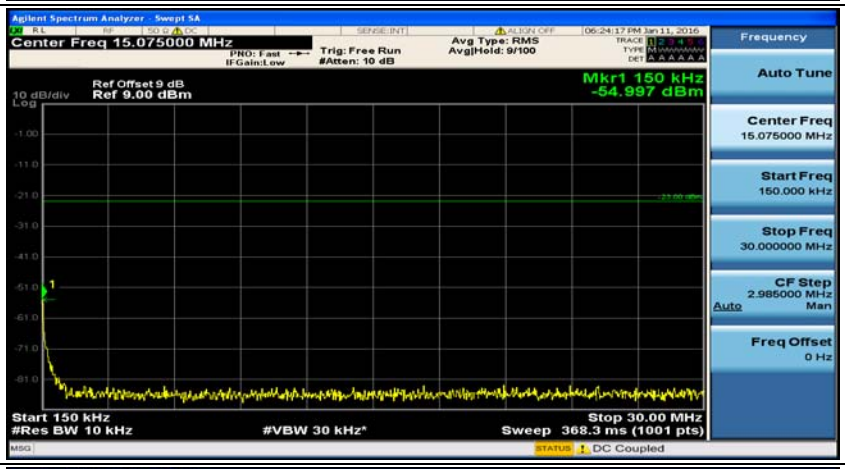
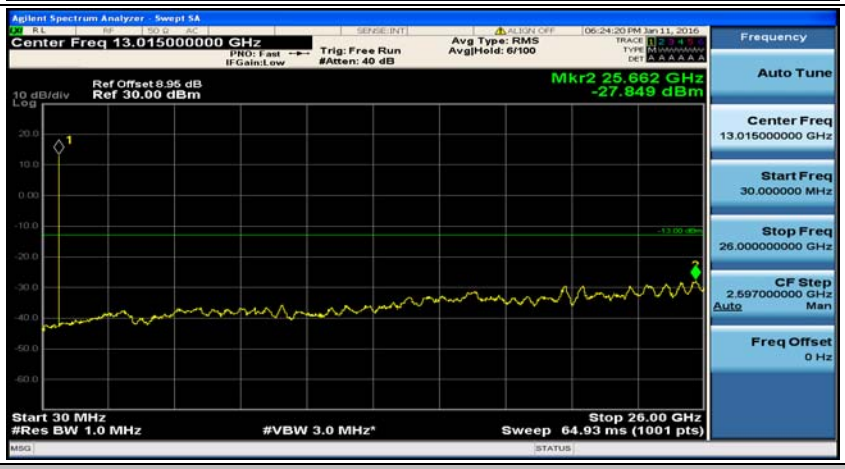
Channel Bandwidth: 10 MHz_HCH_16QAM_50RB#0

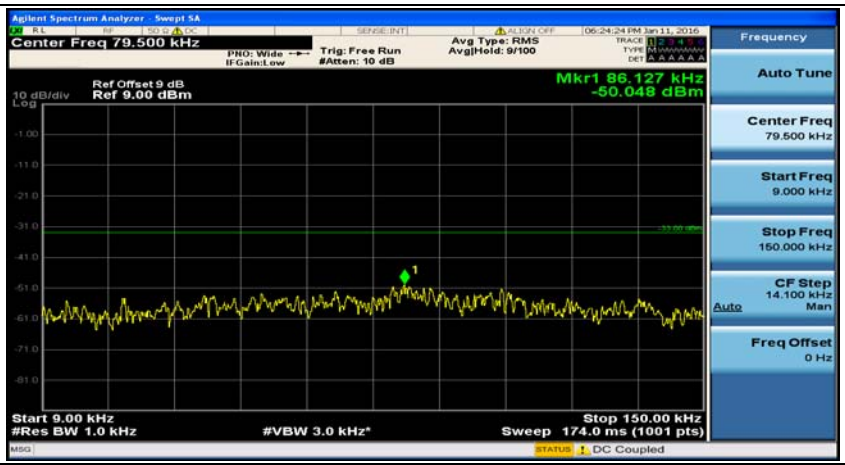


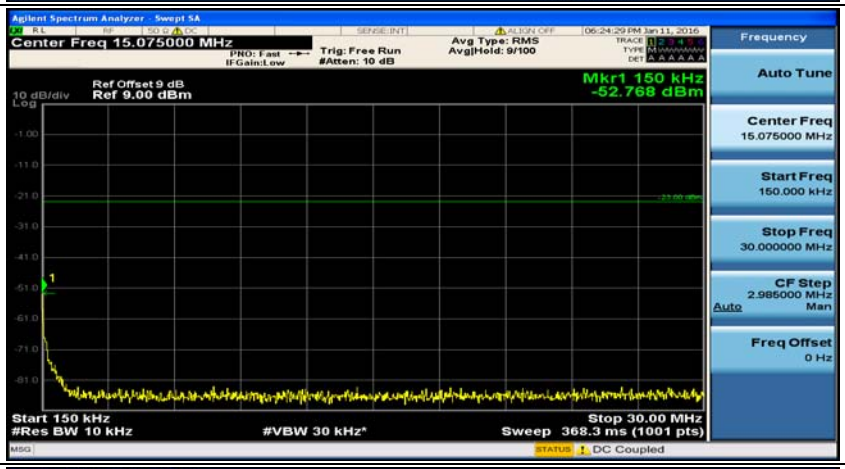
Appendix E: Conducted Spurious Emission

Test Graphs

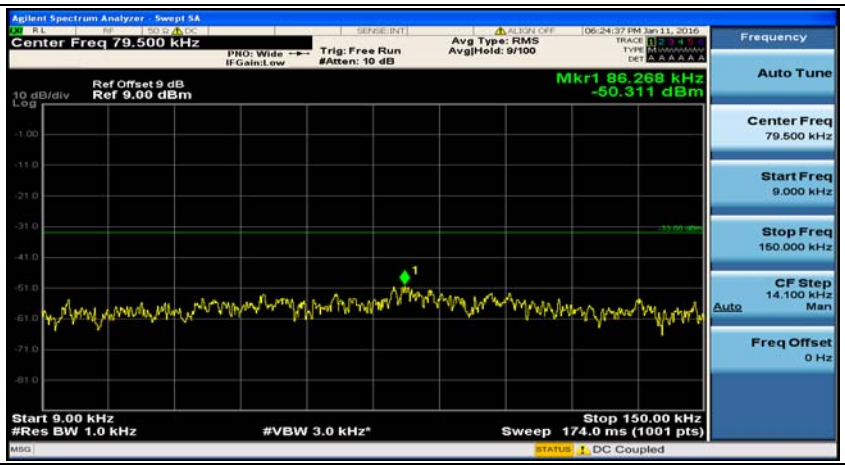
Channel Bandwidth: 5 MHz

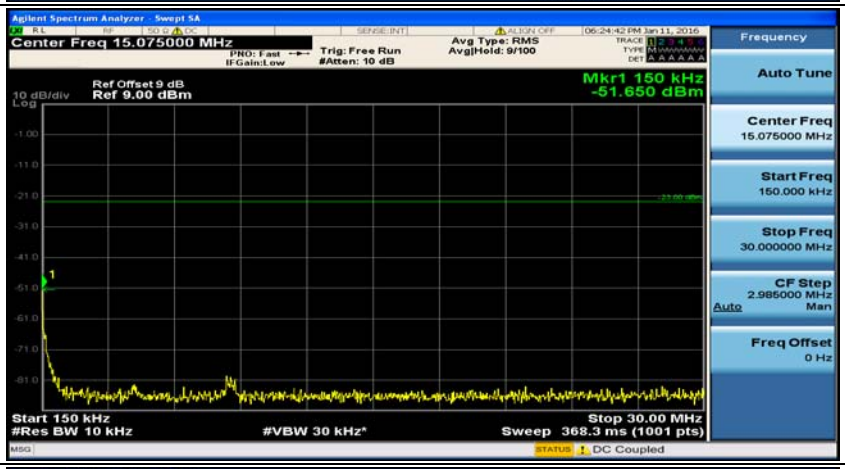
(Channel Bandwidth: 5 MHz)_LCH_QPSK_1RB#0



(Channel Bandwidth: 5 MHz)_LCH_QPSK_1RB#12

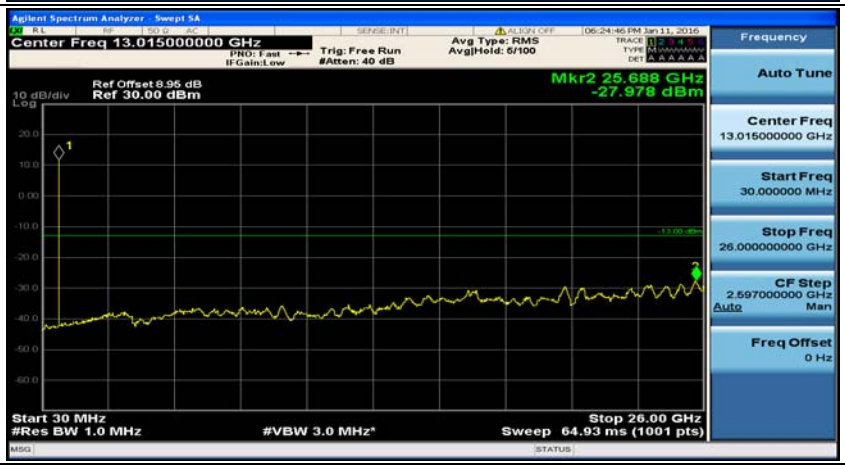


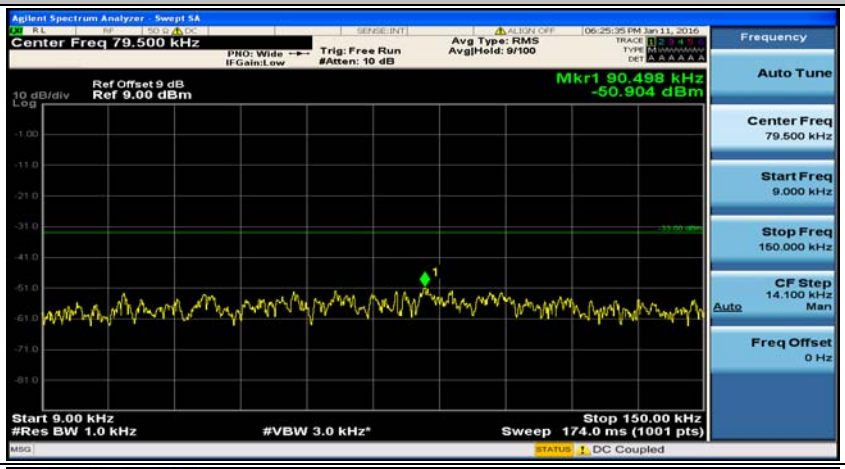
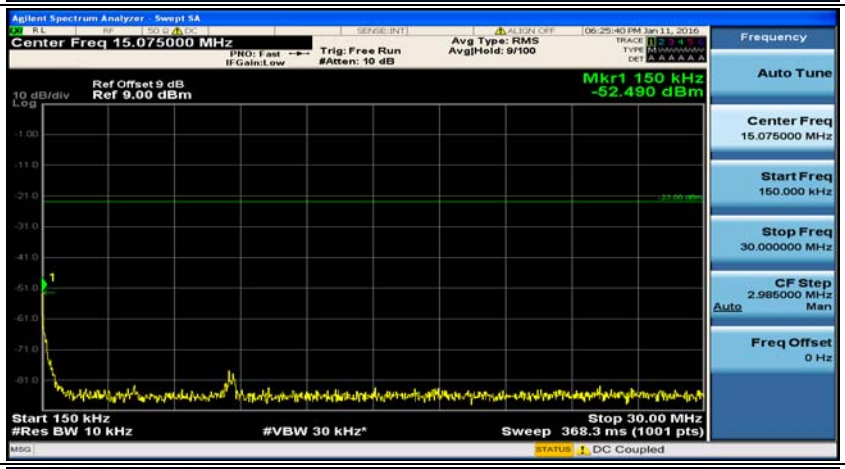
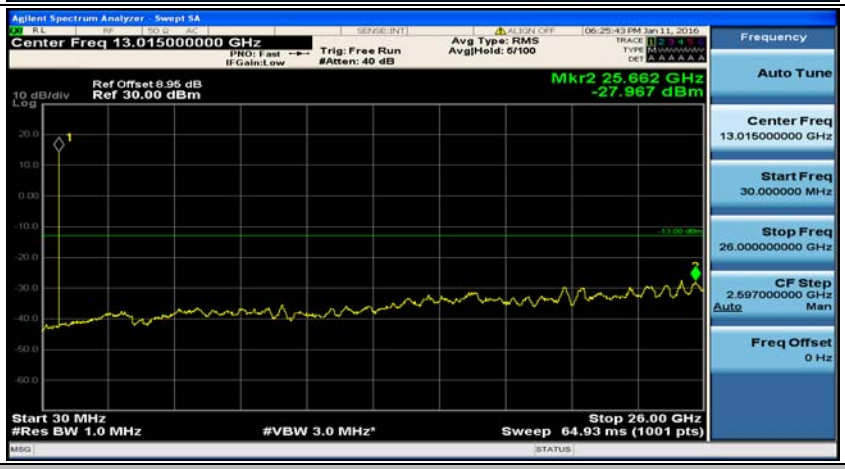


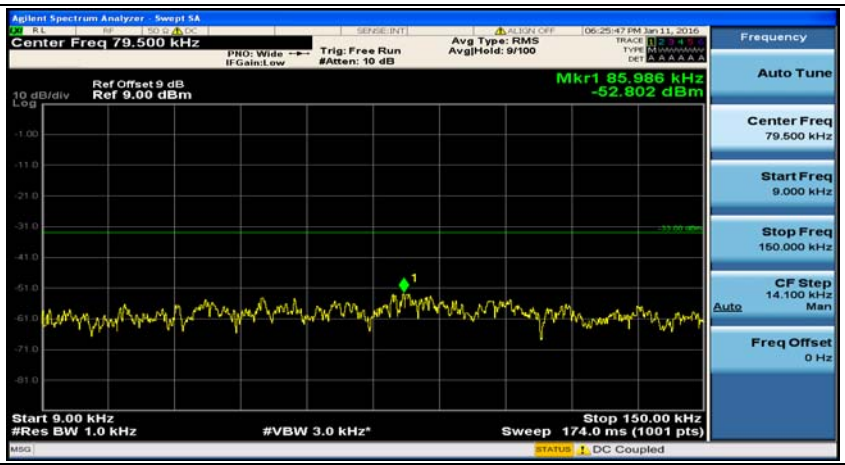
(Channel Bandwidth: 5 MHz)_LCH_QPSK_1RB#24

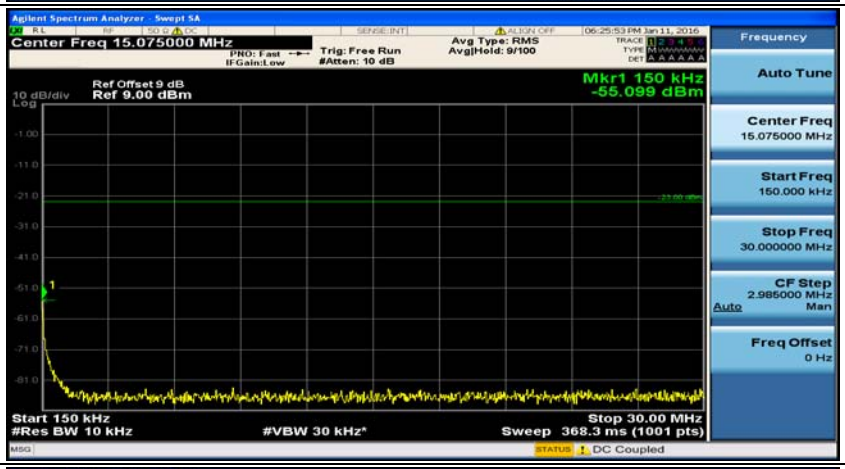

Agilent Spectrum Analyzer - Swept SA
Center Freq 79.500 kHz
PNO: Wide
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 9/100
06:24:37 PM Jan 11, 2016
Ref Offset 9 dB
10 dB/div
Ref 9.00 dBm
Log
Mkr1 86.268 kHz
-50.311 dBm
Start 9.00 kHz
#Res BW 1.0 kHz
#VBW 3.0 kHz*
Stop 150.00 kHz
Sweep 174.0 ms (1001 pts)
DC Coupled
Frequency
Auto Tune
Center Freq
79.500 kHz
Start Freq
9.000 kHz
Stop Freq
150.000 kHz
CF Step
14.100 kHz
Auto
Man
Freq Offset
0 Hz

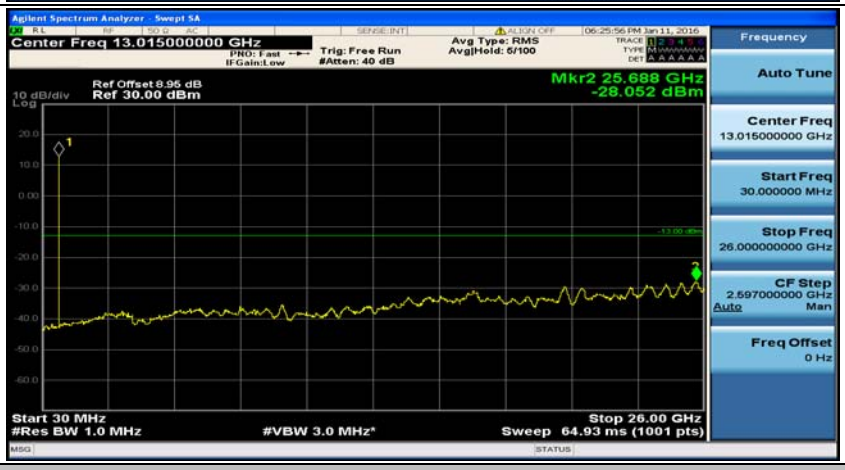

Agilent Spectrum Analyzer - Swept SA
Center Freq 15.075000 MHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 9/100
06:24:42 PM Jan 11, 2016
Ref Offset 9 dB
10 dB/div
Ref 9.00 dBm
Log
Mkr1 150 kHz
-51.650 dBm
Start 150 kHz
#Res BW 10 kHz
#VBW 30 kHz*
Stop 30.00 MHz
Sweep 368.3 ms (1001 pts)
DC Coupled
Frequency
Auto Tune
Center Freq
15.075000 MHz
Start Freq
150.000 kHz
Stop Freq
30.000000 MHz
CF Step
2.985000 MHz
Auto
Man
Freq Offset
0 Hz


Agilent Spectrum Analyzer - Swept SA
Center Freq 13.015000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 40 dB
Avg Type: RMS
Avg|Hold: 5/100
06:24:46 PM Jan 11, 2016
Ref Offset 8.95 dB
10 dB/div
Ref 30.00 dBm
Log
Mkr2 25.688 GHz
-27.978 dBm
Start 30 MHz
#Res BW 1.0 MHz
#VBW 3.0 MHz*
Stop 26.00 GHz
Sweep 64.93 ms (1001 pts)
Frequency
Auto Tune
Center Freq
13.015000000 GHz
Start Freq
30.000000 MHz
Stop Freq
26.000000000 GHz
CF Step
2.597000000 GHz
Auto
Man
Freq Offset
0 Hz

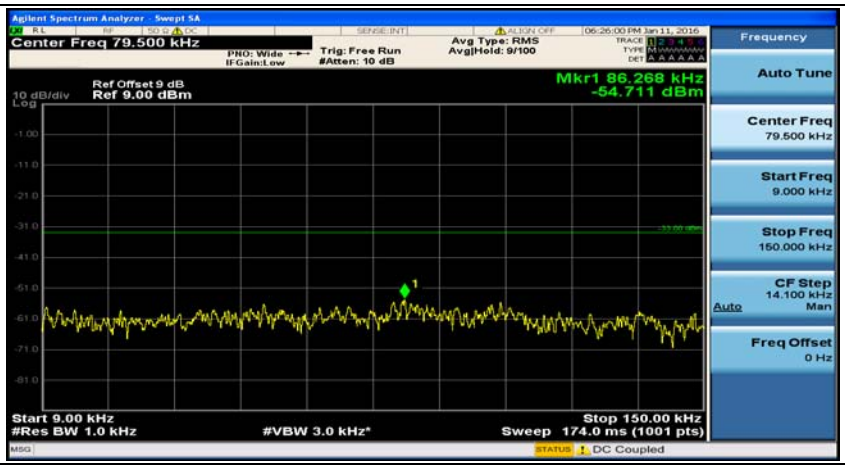
(Channel Bandwidth: 5 MHz)_MCH_QPSK_1RB#0



(Channel Bandwidth: 5 MHz)_MCH_QPSK_1RB#12

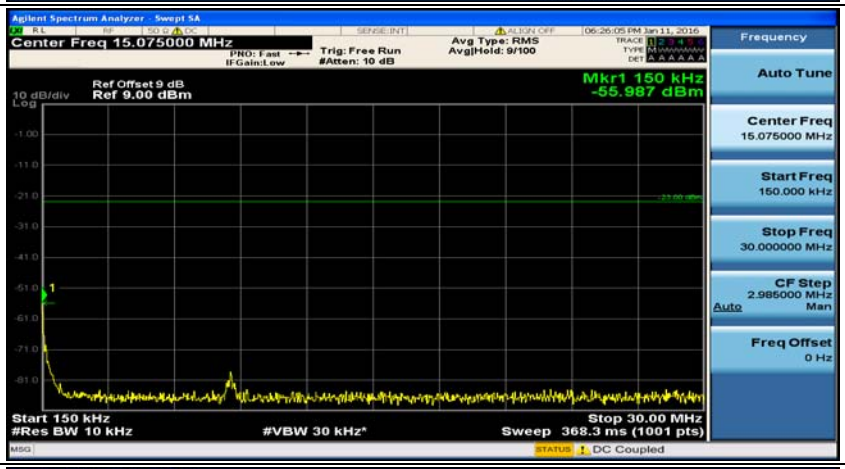


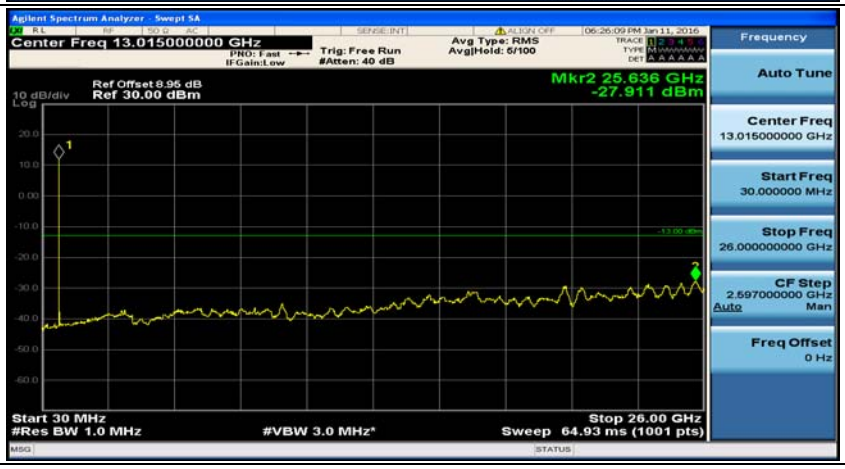


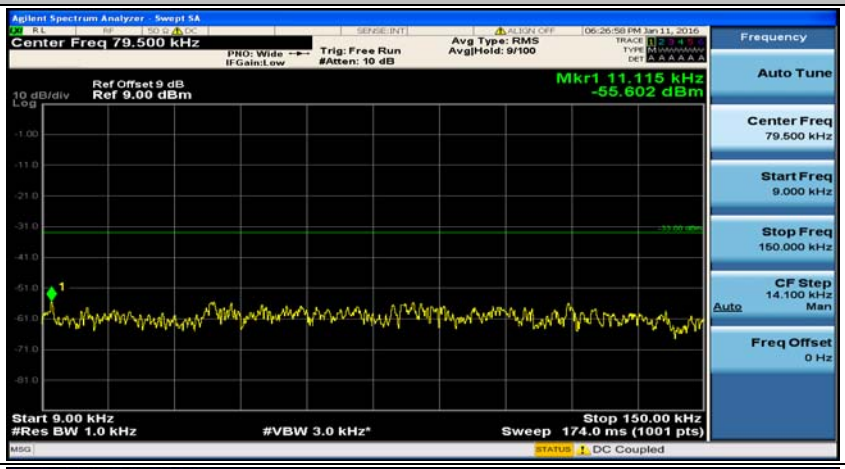
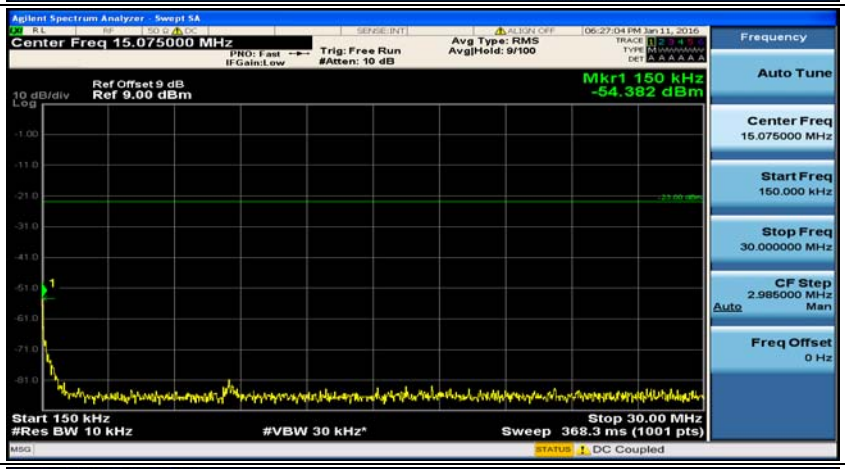
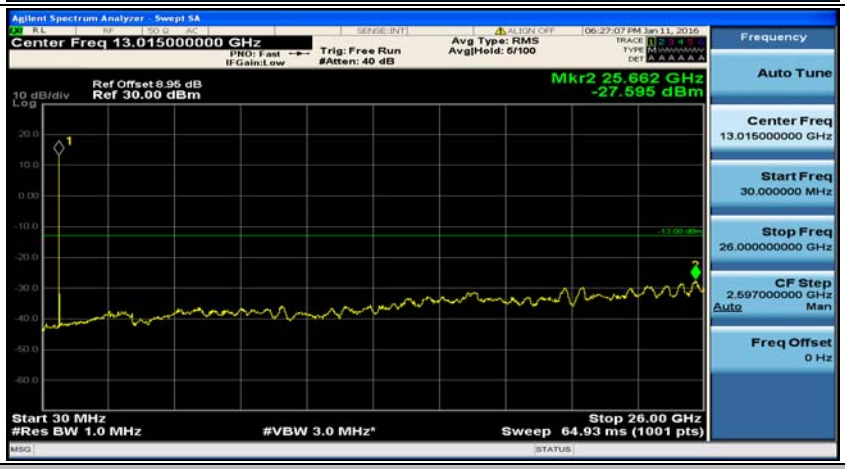


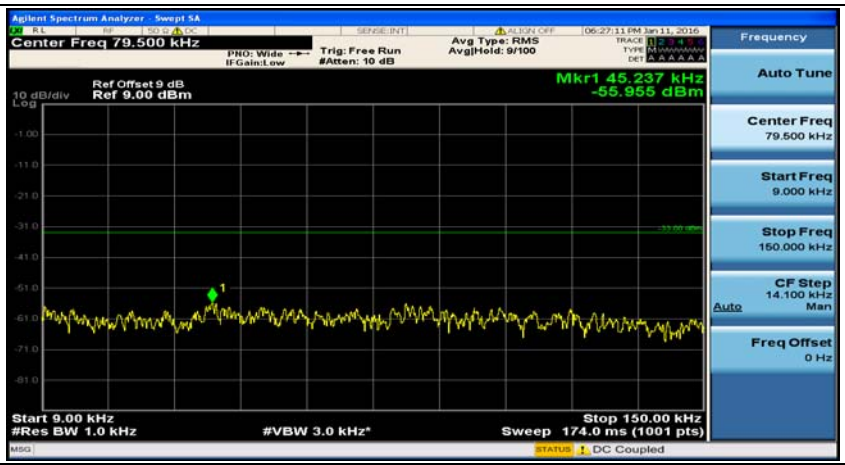
(Channel Bandwidth: 5 MHz)_MCH_QPSK_1RB#24

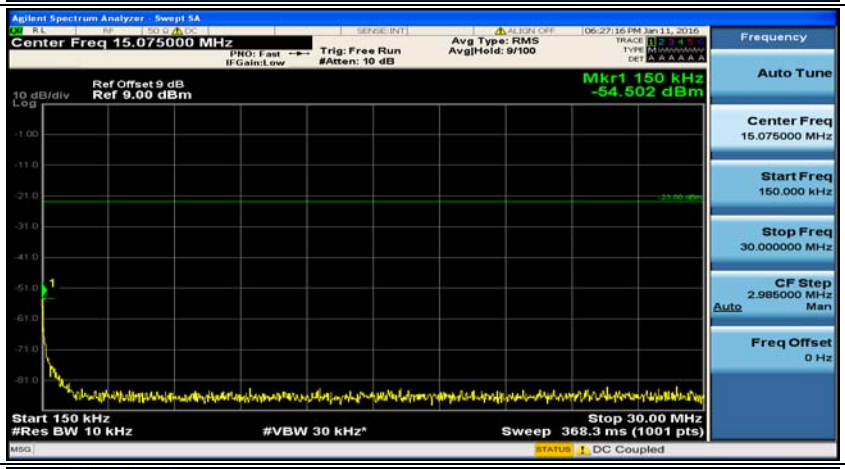

Agilent Spectrum Analyzer - Swept SA
Center Freq 79.500 kHz
PNO: Wide
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 9/100
06:26:00 PM Jan 11, 2016
Ref Offset 9 dB
10 dB/div
Ref 9.00 dBm
Mkr1 86.268 kHz
-54.711 dBm
Start 9.00 kHz
#Res BW 1.0 kHz
#VBW 3.0 kHz*
Stop 150.00 kHz
Sweep 174.0 ms (1001 pts)
DC Coupled
Frequency
Auto Tune
Center Freq
79.500 kHz
Start Freq
9.000 kHz
Stop Freq
150.000 kHz
CF Step
14.100 kHz
Auto
Man
Freq Offset
0 Hz

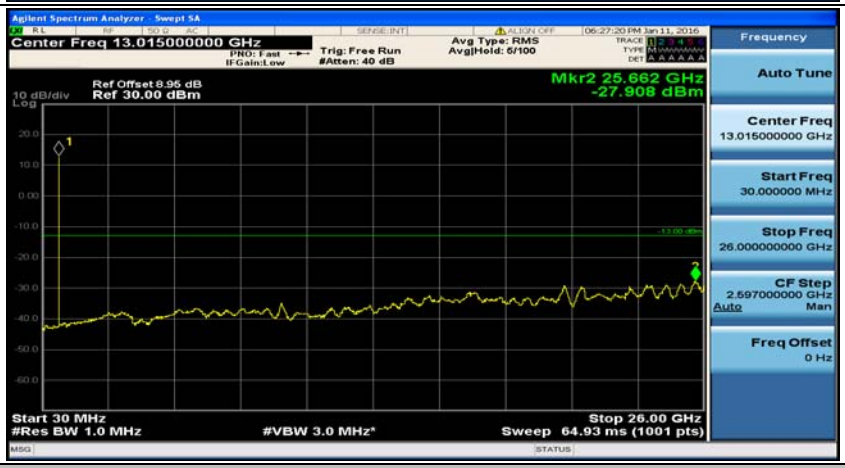

Agilent Spectrum Analyzer - Swept SA
Center Freq 15.075000 MHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 9/100
06:26:05 PM Jan 11, 2016
Ref Offset 9 dB
10 dB/div
Ref 9.00 dBm
Mkr1 150 kHz
-55.987 dBm
Start 150 kHz
#Res BW 10 kHz
#VBW 30 kHz*
Stop 30.00 MHz
Sweep 368.3 ms (1001 pts)
DC Coupled
Frequency
Auto Tune
Center Freq
15.075000 MHz
Start Freq
150.000 kHz
Stop Freq
30.000000 MHz
CF Step
2.985000 MHz
Auto
Man
Freq Offset
0 Hz


Agilent Spectrum Analyzer - Swept SA
Center Freq 13.015000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 40 dB
Avg Type: RMS
Avg|Hold: 5/100
06:26:09 PM Jan 11, 2016
Ref Offset 8.95 dB
10 dB/div
Ref 30.00 dBm
Mkr2 25.636 GHz
-27.911 dBm
Start 30 MHz
#Res BW 1.0 MHz
#VBW 3.0 MHz*
Stop 26.00 GHz
Sweep 64.93 ms (1001 pts)
Frequency
Auto Tune
Center Freq
13.015000000 GHz
Start Freq
30.000000 MHz
Stop Freq
26.000000000 GHz
CF Step
2.597000000 GHz
Auto
Man
Freq Offset
0 Hz

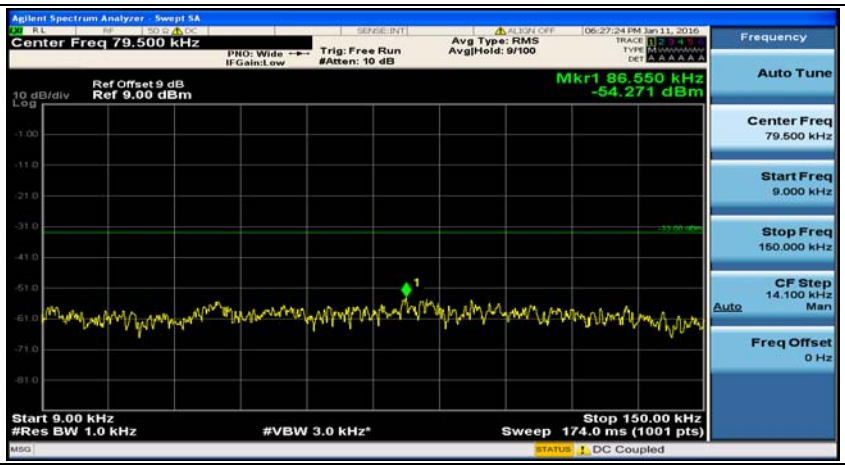
(Channel Bandwidth: 5 MHz)_HCH_QPSK_1RB#0



(Channel Bandwidth: 5 MHz)_HCH_QPSK_1RB#12

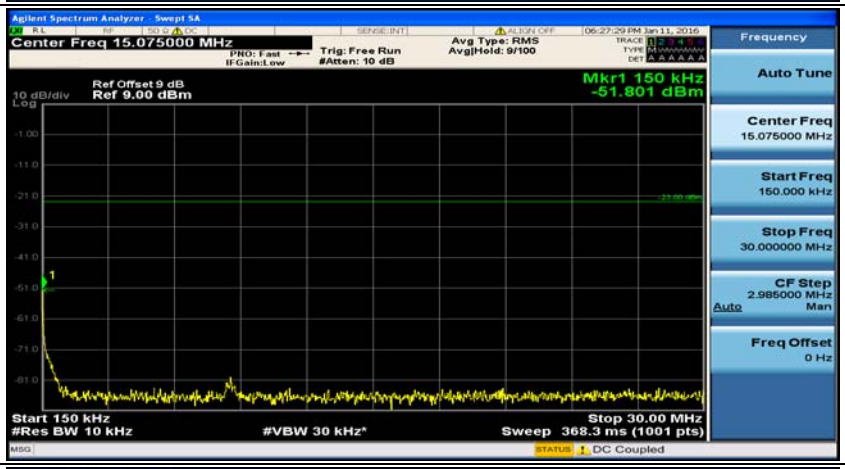


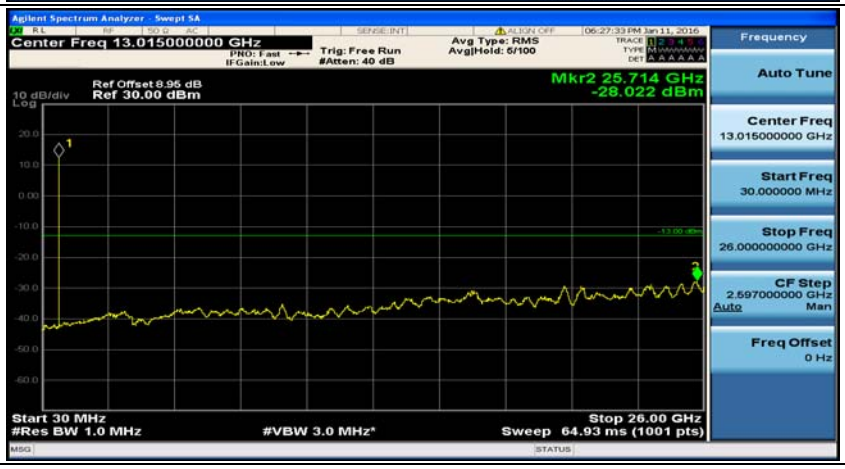


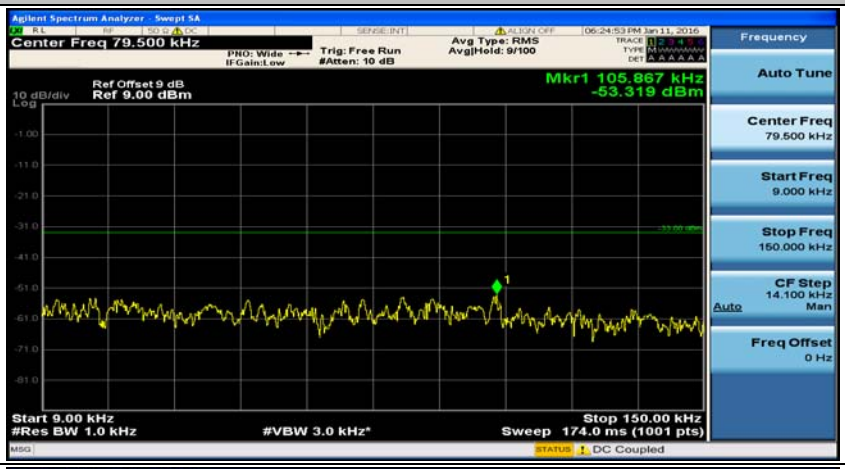
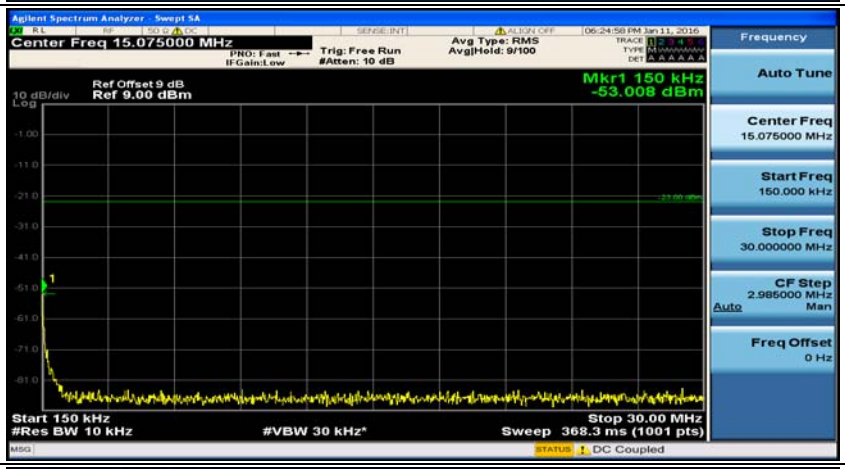
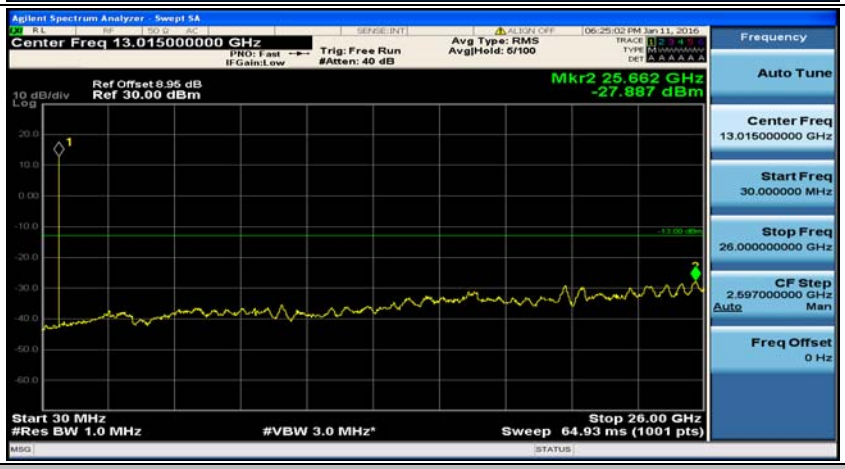


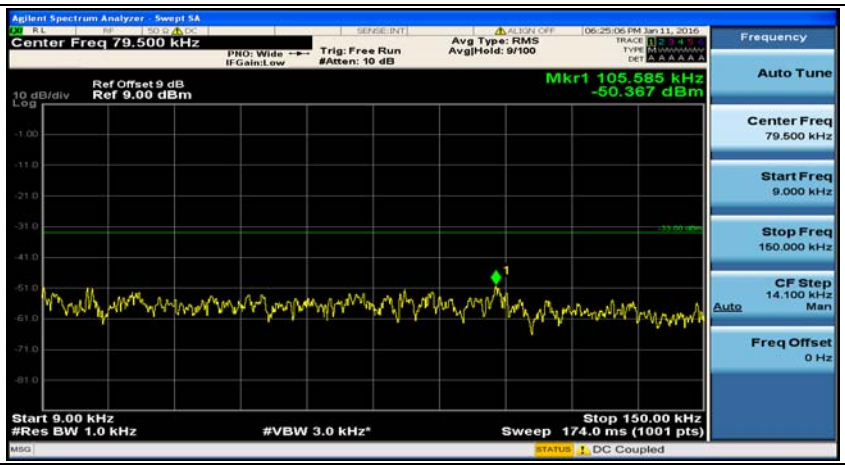
(Channel Bandwidth: 5 MHz)_HCH_QPSK_1RB#24

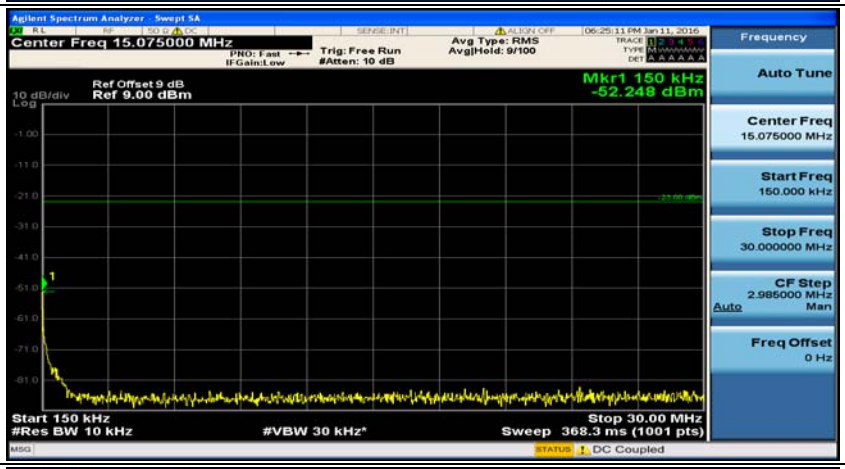

Agilent Spectrum Analyzer - Swept SA
Center Freq 79.500 kHz
PNO: Wide
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 9/100
06:27:24 PM Jan 11, 2016
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Mkr1 86.550 kHz
-54.271 dBm
Start 9.00 kHz
#Res BW 1.0 kHz
#VBW 3.0 kHz*
Stop 150.00 kHz
Sweep 174.0 ms (1001 pts)
DC Coupled
Frequency
Auto Tune
Center Freq
79.500 kHz
Start Freq
9.000 kHz
Stop Freq
150.000 kHz
CF Step
14.100 kHz
Auto
Man
Freq Offset
0 Hz

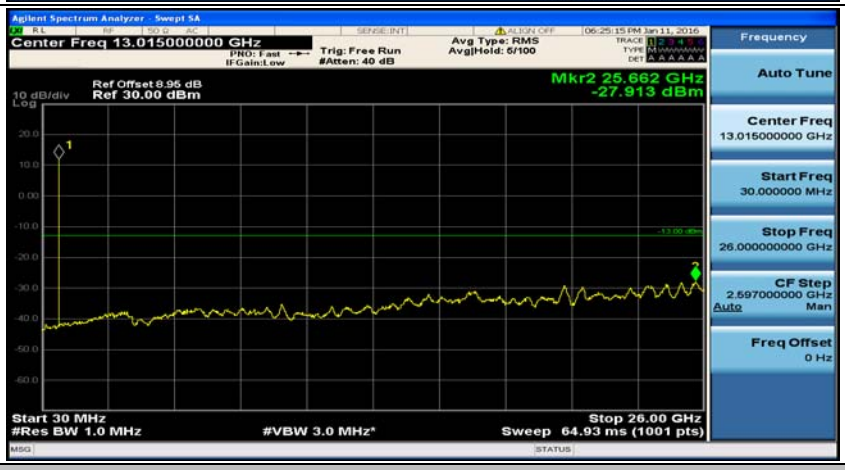

Agilent Spectrum Analyzer - Swept SA
Center Freq 15.075000 MHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 9/100
06:27:29 PM Jan 11, 2016
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Mkr1 150 kHz
-51.801 dBm
Start 150 kHz
#Res BW 10 kHz
#VBW 30 kHz*
Stop 30.00 MHz
Sweep 368.3 ms (1001 pts)
DC Coupled
Frequency
Auto Tune
Center Freq
15.075000 MHz
Start Freq
150.000 kHz
Stop Freq
30.000000 MHz
CF Step
2.985000 MHz
Auto
Man
Freq Offset
0 Hz


Agilent Spectrum Analyzer - Swept SA
Center Freq 13.015000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 40 dB
Avg Type: RMS
Avg|Hold: 5/100
06:27:33 PM Jan 11, 2016
Ref Offset 8.95 dB
10 dB/div
Log
Ref 30.00 dBm
Mkr2 25.714 GHz
-28.022 dBm
Start 30 MHz
#Res BW 1.0 MHz
#VBW 3.0 MHz*
Stop 26.00 GHz
Sweep 64.93 ms (1001 pts)
Frequency
Auto Tune
Center Freq
13.015000000 GHz
Start Freq
30.000000 MHz
Stop Freq
26.000000000 GHz
CF Step
2.597000000 GHz
Auto
Man
Freq Offset
0 Hz

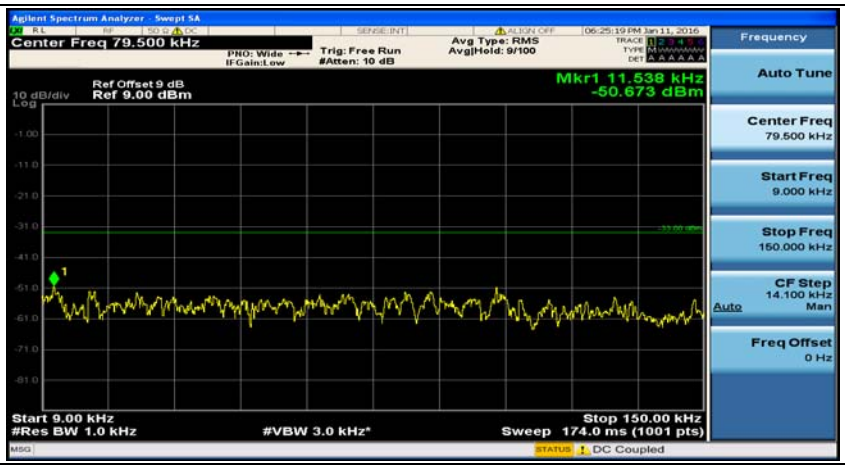
(Channel Bandwidth: 5 MHz)_LCH_16QAM_1RB#0



(Channel Bandwidth: 5 MHz)_LCH_16QAM_1RB#12

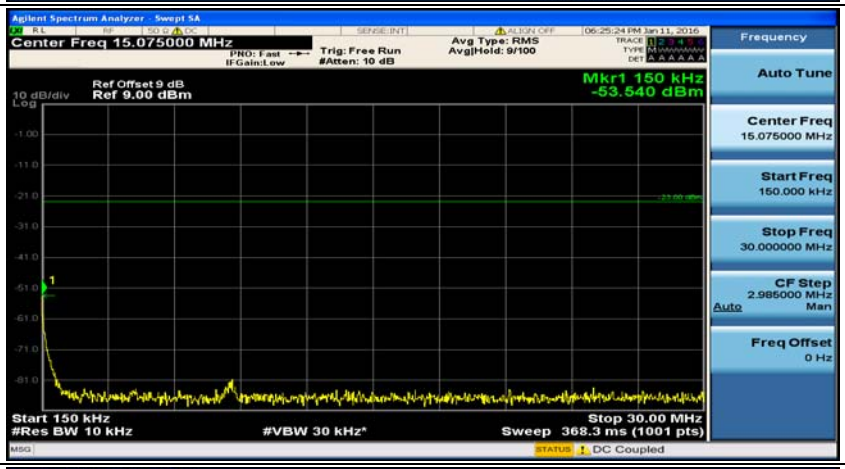


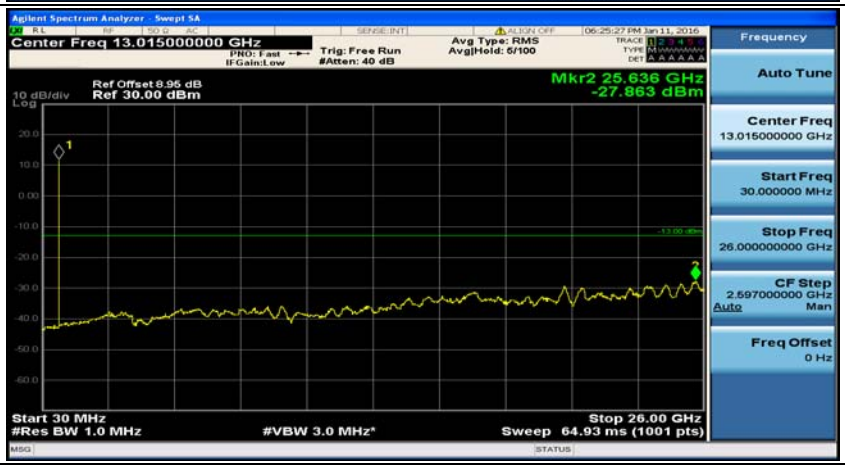


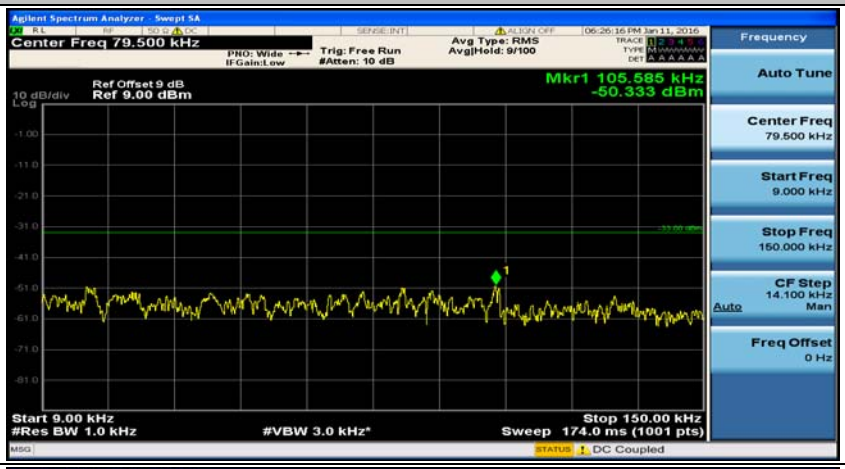
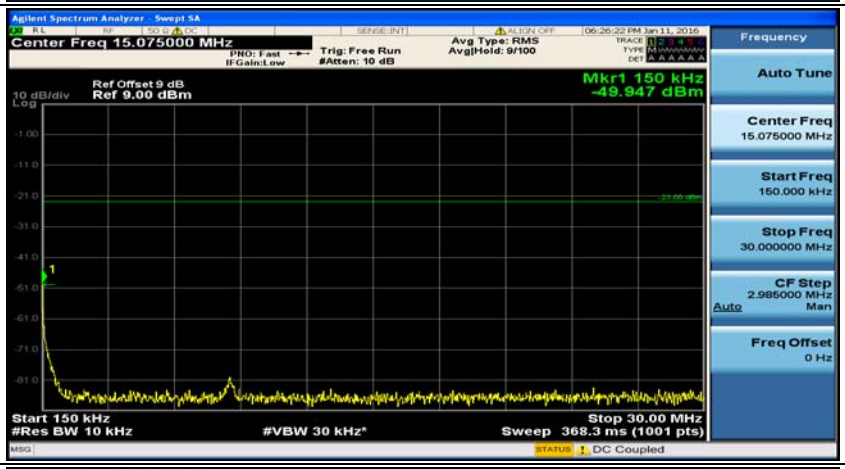
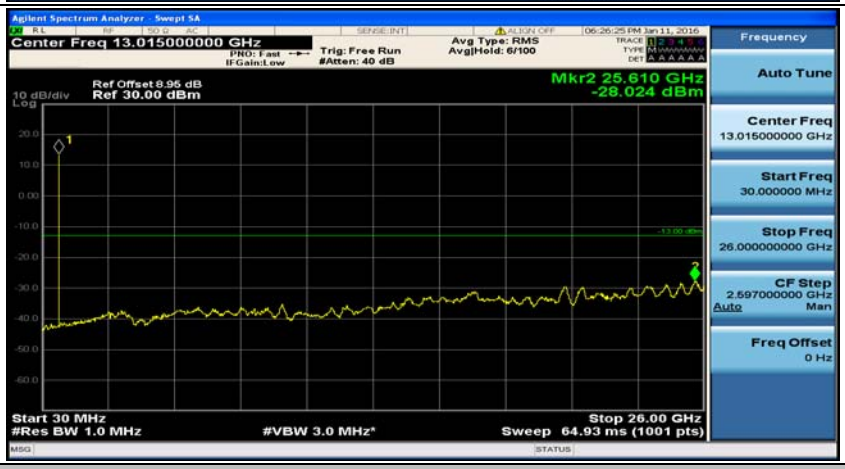


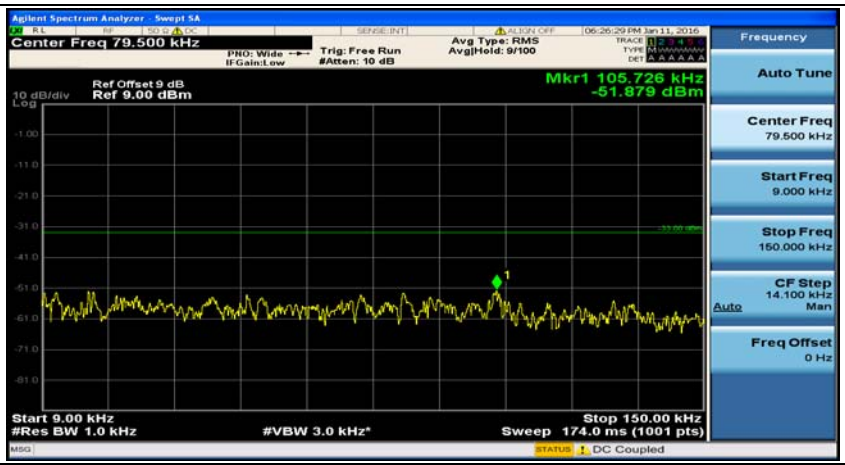
(Channel Bandwidth: 5 MHz)_LCH_16QAM_1RB#24

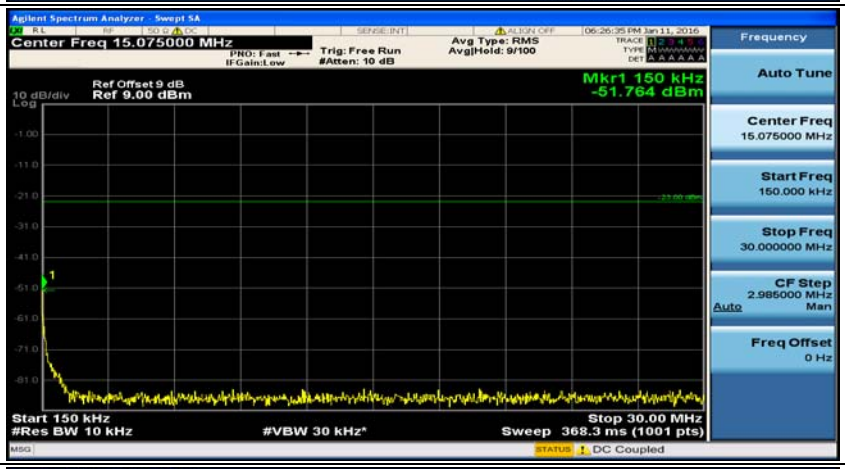

Agilent Spectrum Analyzer - Swept SA
Center Freq 79.500 kHz
PNO: Wide
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 9/100
06:25:19 PM Jan 11, 2016
Ref Offset 9 dB
10 dB/div
Ref 9.00 dBm
Mkr1 11.538 kHz
-50.673 dBm
Start 9.00 kHz
#Res BW 1.0 kHz
#VBW 3.0 kHz*
Stop 150.00 kHz
Sweep 174.0 ms (1001 pts)
DC Coupled
Frequency
Auto Tune
Center Freq
79.500 kHz
Start Freq
9.000 kHz
Stop Freq
150.000 kHz
CF Step
14.100 kHz
Auto
Man
Freq Offset
0 Hz

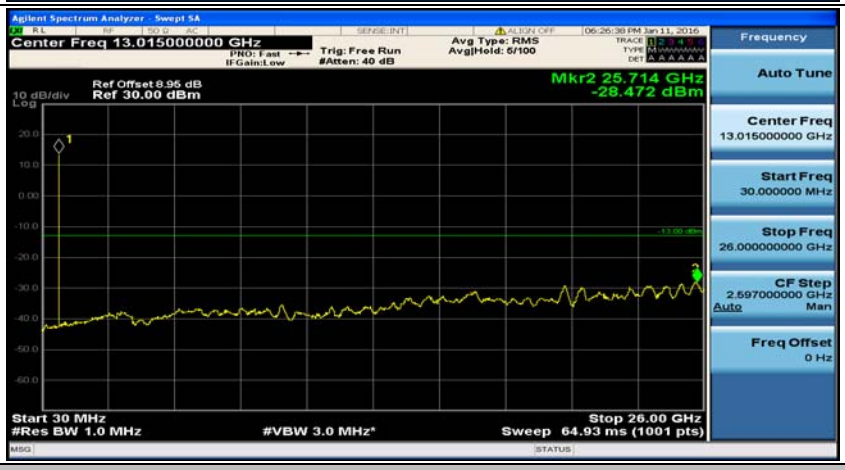

Agilent Spectrum Analyzer - Swept SA
Center Freq 15.075000 MHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 9/100
06:25:24 PM Jan 11, 2016
Ref Offset 9 dB
10 dB/div
Ref 9.00 dBm
Mkr1 150 kHz
-53.540 dBm
Start 150 kHz
#Res BW 10 kHz
#VBW 30 kHz*
Stop 30.00 MHz
Sweep 368.3 ms (1001 pts)
DC Coupled
Frequency
Auto Tune
Center Freq
15.075000 MHz
Start Freq
150.000 kHz
Stop Freq
30.000000 MHz
CF Step
2.985000 MHz
Auto
Man
Freq Offset
0 Hz


Agilent Spectrum Analyzer - Swept SA
Center Freq 13.015000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 40 dB
Avg Type: RMS
Avg|Hold: 5/100
06:25:27 PM Jan 11, 2016
Ref Offset 8.95 dB
10 dB/div
Ref 30.00 dBm
Mkr2 25.636 GHz
-27.863 dBm
Start 30 MHz
#Res BW 1.0 MHz
#VBW 3.0 MHz*
Stop 26.00 GHz
Sweep 64.93 ms (1001 pts)
Frequency
Auto Tune
Center Freq
13.015000000 GHz
Start Freq
30.000000 MHz
Stop Freq
26.000000000 GHz
CF Step
2.597000000 GHz
Auto
Man
Freq Offset
0 Hz

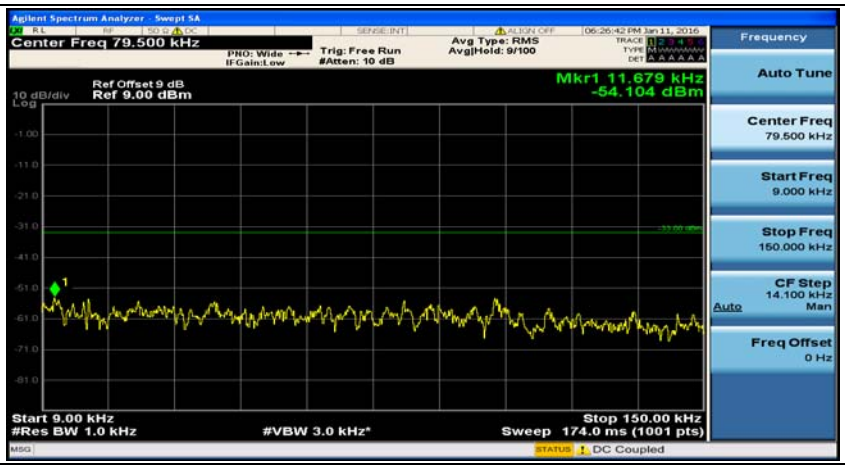
(Channel Bandwidth: 5 MHz)_MCH_16QAM_1RB#0



(Channel Bandwidth: 5 MHz)_MCH_16QAM_1RB#12

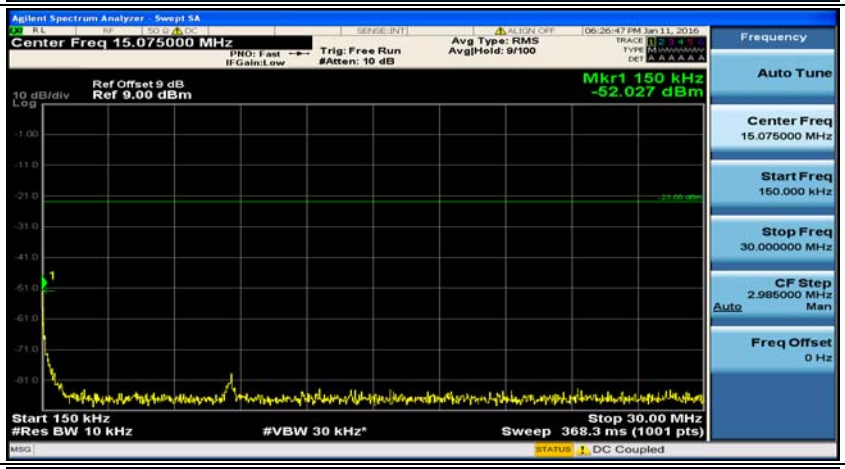


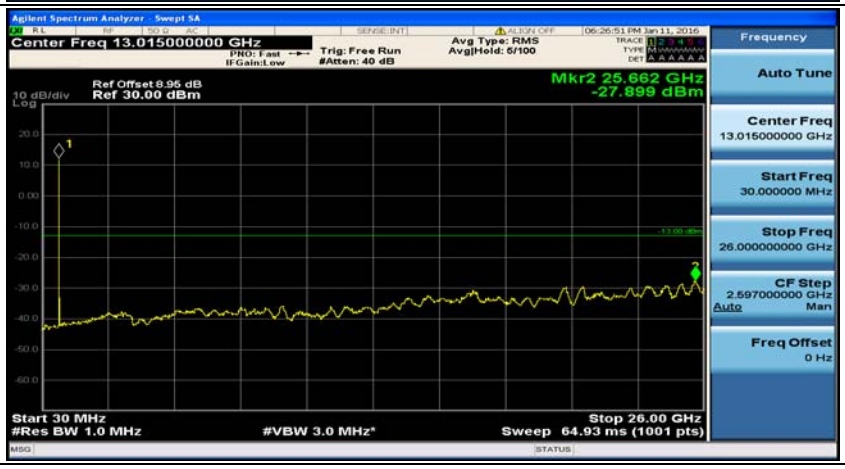


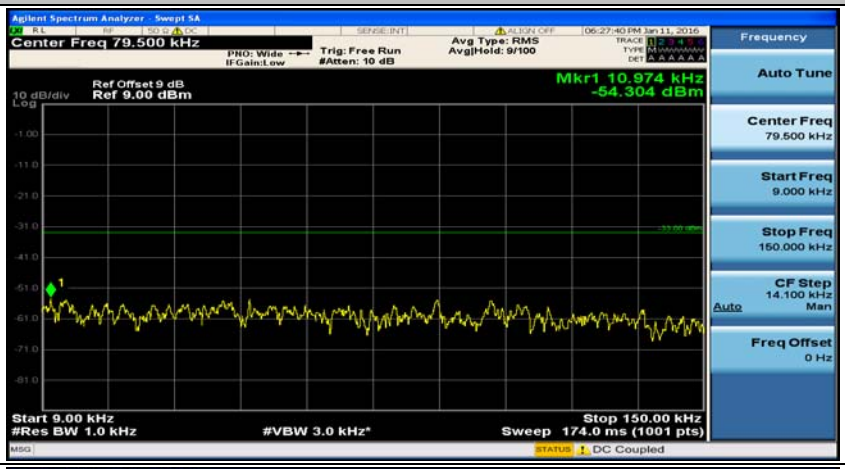
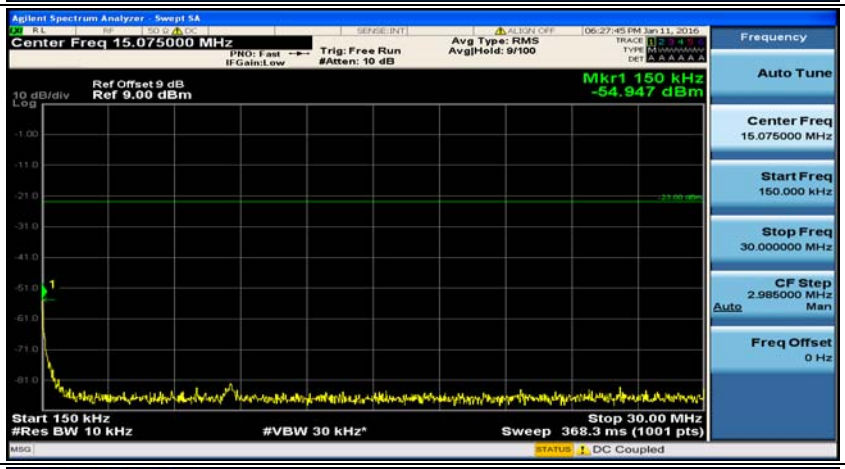
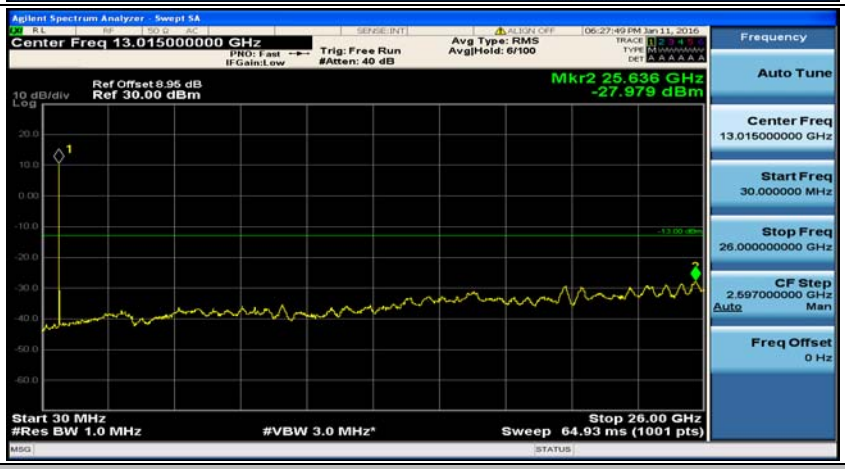


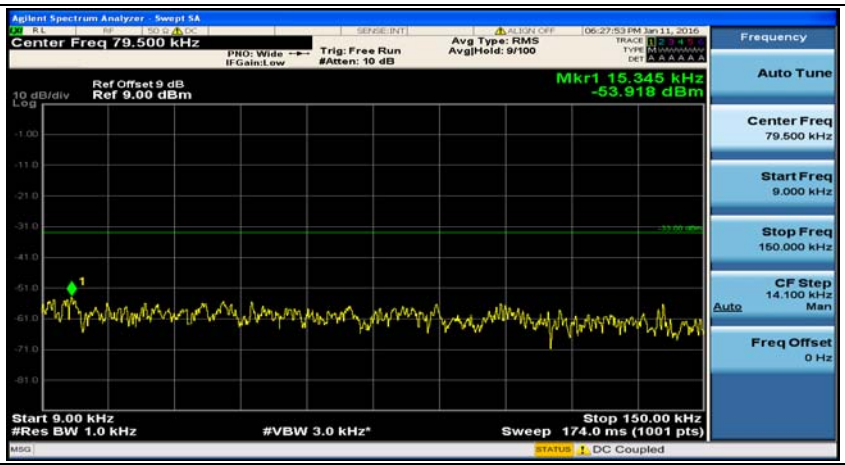
(Channel Bandwidth: 5 MHz)_MCH_16QAM_1RB#24

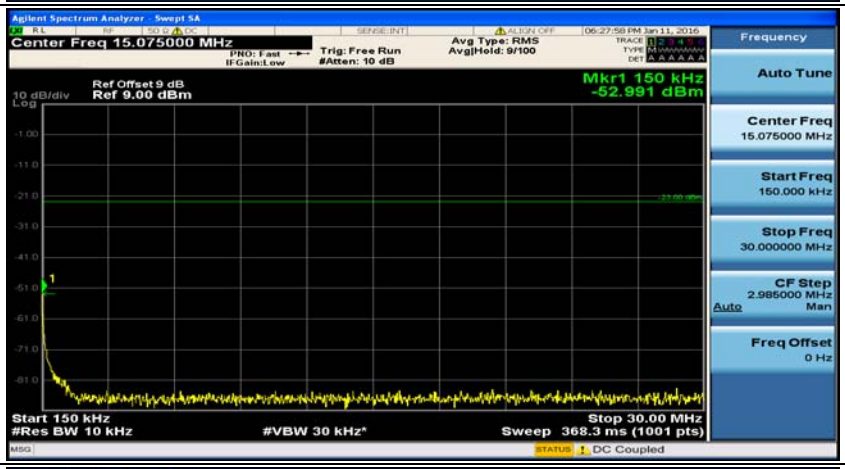

Agilent Spectrum Analyzer - Swept SA
Center Freq 79.500 kHz
PNO: Wide
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 9/100
06:26:42 PM Jan 11, 2016
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Mkr1 11.679 kHz
-54.104 dBm
Start 9.00 kHz
#Res BW 1.0 kHz
#VBW 3.0 kHz*
Stop 150.00 kHz
Sweep 174.0 ms (1001 pts)
DC Coupled
Frequency
Auto Tune
Center Freq
79.500 kHz
Start Freq
9.000 kHz
Stop Freq
150.000 kHz
CF Step
14.100 kHz
Auto
Man
Freq Offset
0 Hz

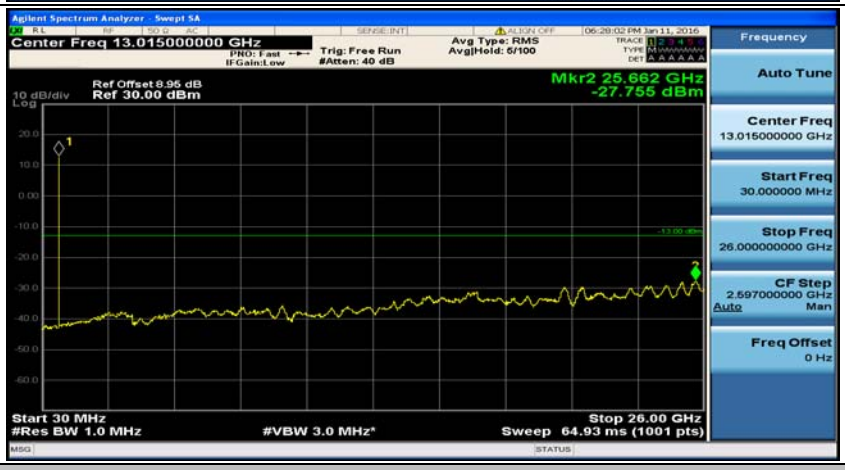

Agilent Spectrum Analyzer - Swept SA
Center Freq 15.075000 MHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 9/100
06:26:47 PM Jan 11, 2016
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Mkr1 150 kHz
-52.027 dBm
Start 150 kHz
#Res BW 10 kHz
#VBW 30 kHz*
Stop 30.00 MHz
Sweep 368.3 ms (1001 pts)
DC Coupled
Frequency
Auto Tune
Center Freq
15.075000 MHz
Start Freq
150.000 kHz
Stop Freq
30.000000 MHz
CF Step
2.985000 MHz
Auto
Man
Freq Offset
0 Hz


Agilent Spectrum Analyzer - Swept SA
Center Freq 13.015000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 40 dB
Avg Type: RMS
Avg|Hold: 5/100
06:26:51 PM Jan 11, 2016
Ref Offset 8.95 dB
10 dB/div
Log
Ref 30.00 dBm
Mkr2 25.662 GHz
-27.899 dBm
Start 30 MHz
#Res BW 1.0 MHz
#VBW 3.0 MHz*
Stop 26.00 GHz
Sweep 64.93 ms (1001 pts)
Frequency
Auto Tune
Center Freq
13.015000000 GHz
Start Freq
30.000000 MHz
Stop Freq
26.000000000 GHz
CF Step
2.597000000 GHz
Auto
Man
Freq Offset
0 Hz

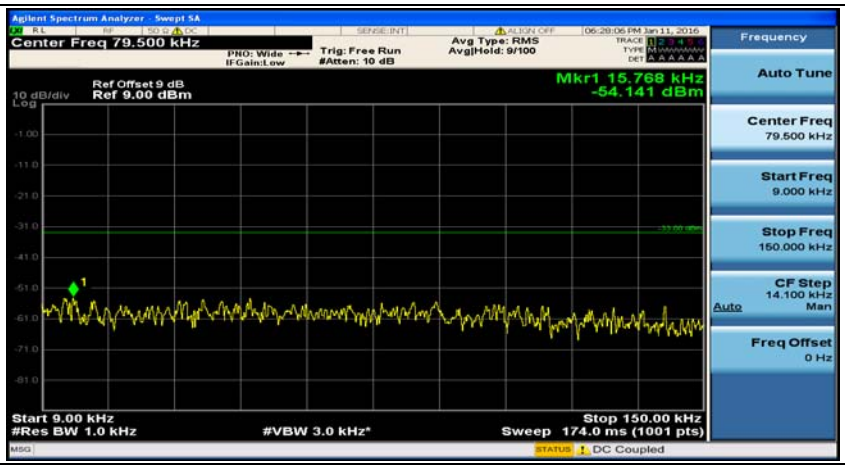
(Channel Bandwidth: 5 MHz)_HCH_16QAM_1RB#0



(Channel Bandwidth: 5 MHz)_HCH_16QAM_1RB#12

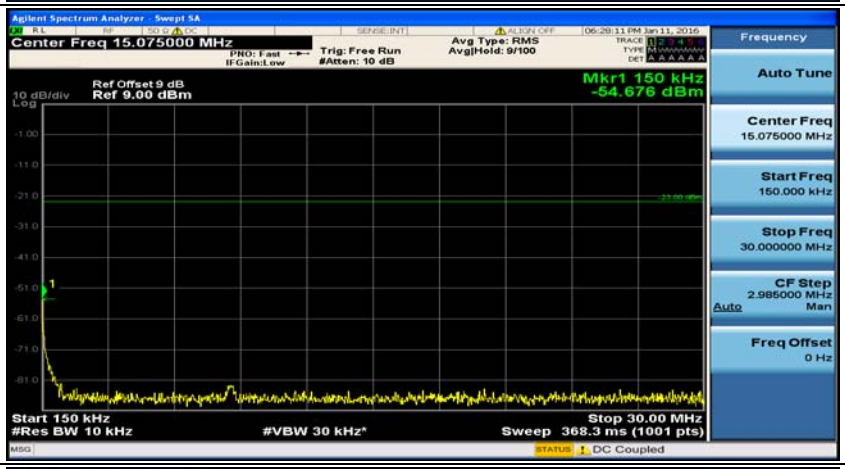


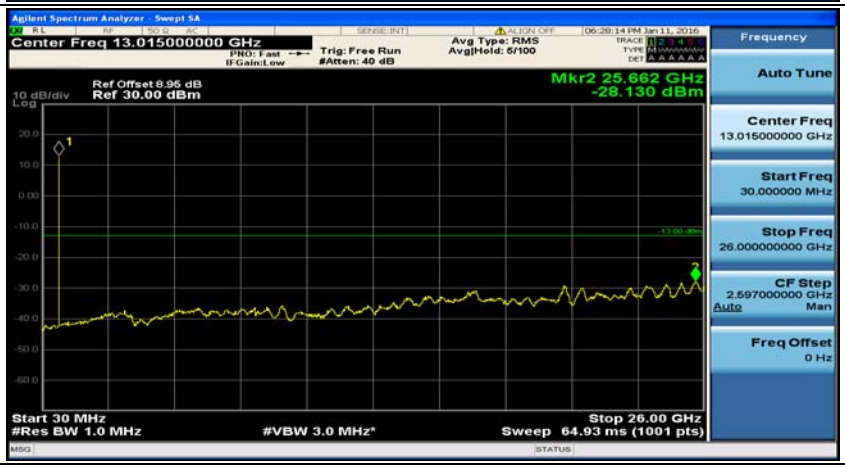




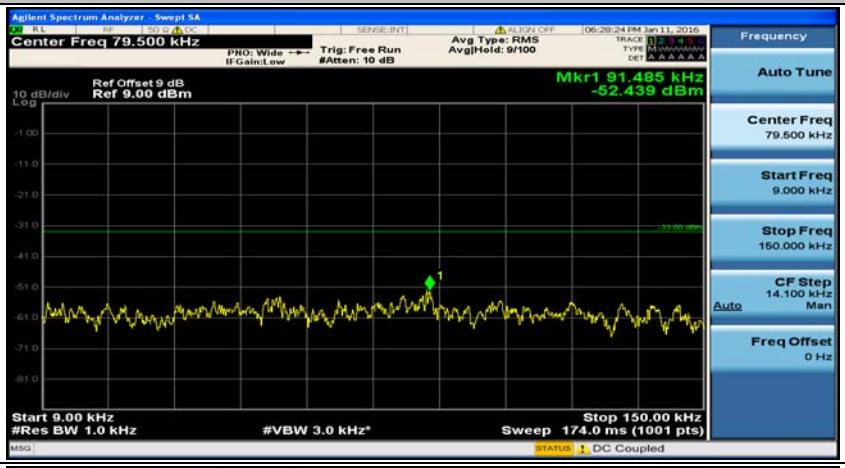
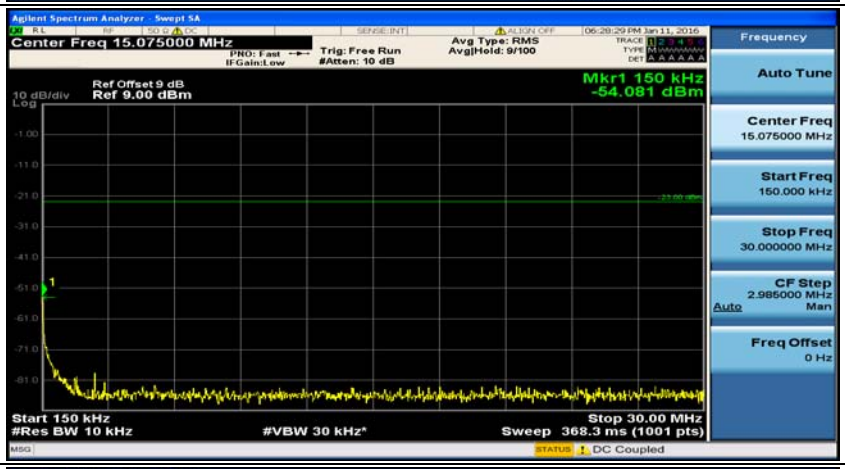
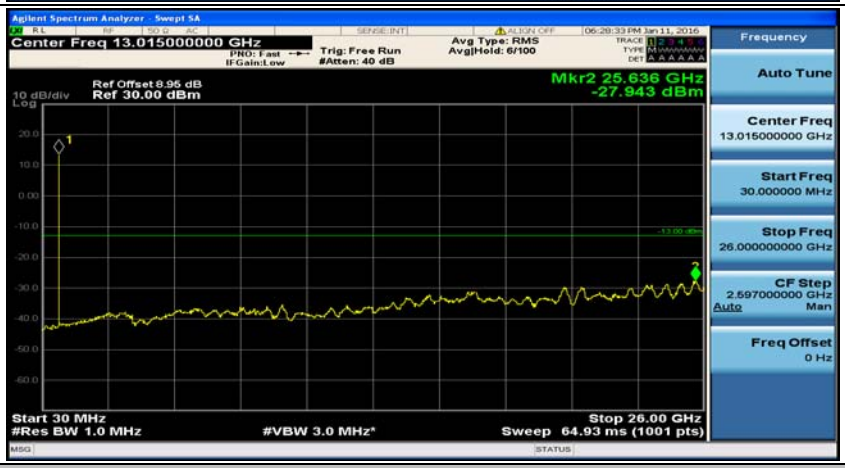
(Channel Bandwidth: 5 MHz)_HCH_16QAM_1RB#24

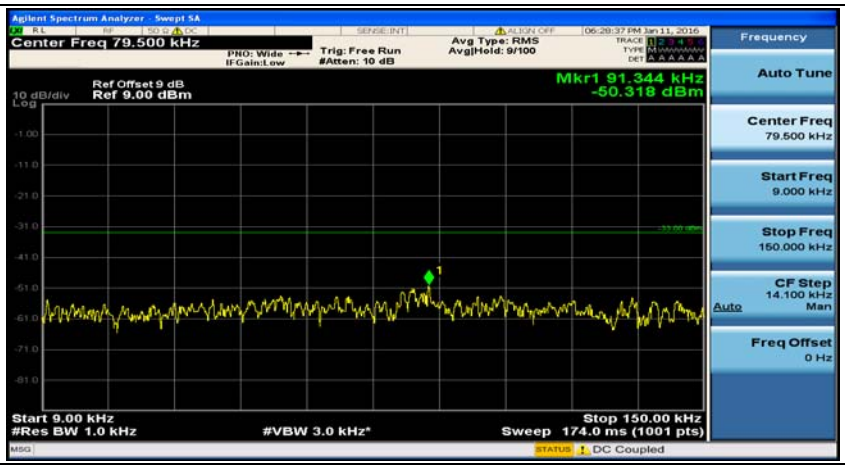

Agilent Spectrum Analyzer - Swept SA
Center Freq 79.500 kHz
PNO: Wide
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 9/100
06:28:06 PM Jan 11, 2016
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Mkr1 15.768 kHz
-54.141 dBm
Start 9.00 kHz
#Res BW 1.0 kHz
#VBW 3.0 kHz*
Stop 150.00 kHz
Sweep 174.0 ms (1001 pts)
DC Coupled
Frequency
Auto Tune
Center Freq
79.500 kHz
Start Freq
9.000 kHz
Stop Freq
150.000 kHz
CF Step
14.100 kHz
Auto
Man
Freq Offset
0 Hz

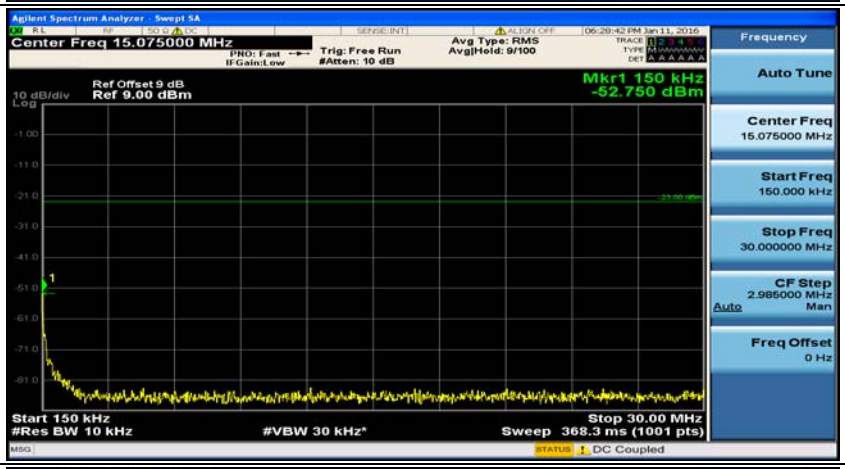

Agilent Spectrum Analyzer - Swept SA
Center Freq 15.075000 MHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 9/100
06:28:11 PM Jan 11, 2016
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Mkr1 150 kHz
-54.676 dBm
Start 150 kHz
#Res BW 10 kHz
#VBW 30 kHz*
Stop 30.00 MHz
Sweep 368.3 ms (1001 pts)
DC Coupled
Frequency
Auto Tune
Center Freq
15.075000 MHz
Start Freq
150.000 kHz
Stop Freq
30.000000 MHz
CF Step
2.985000 MHz
Auto
Man
Freq Offset
0 Hz

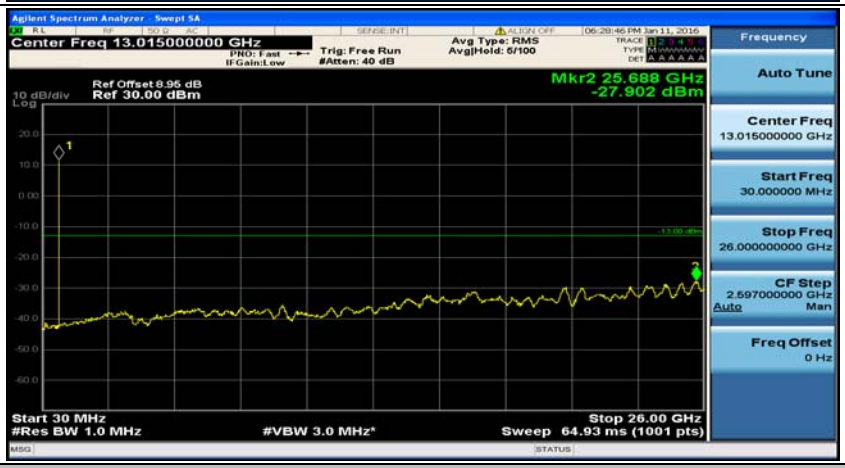

Agilent Spectrum Analyzer - Swept SA
Center Freq 13.015000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 40 dB
Avg Type: RMS
Avg|Hold: 5/100
06:28:14 PM Jan 11, 2016
Ref Offset 8.95 dB
10 dB/div
Log
Ref 30.00 dBm
Mkr2 25.662 GHz
-28.130 dBm
Start 30 MHz
#Res BW 1.0 MHz
#VBW 3.0 MHz*
Stop 26.00 GHz
Sweep 64.93 ms (1001 pts)
Frequency
Auto Tune
Center Freq
13.015000000 GHz
Start Freq
30.000000 MHz
Stop Freq
26.000000000 GHz
CF Step
2.597000000 GHz
Auto
Man
Freq Offset
0 Hz

Channel Bandwidth: 10 MHz

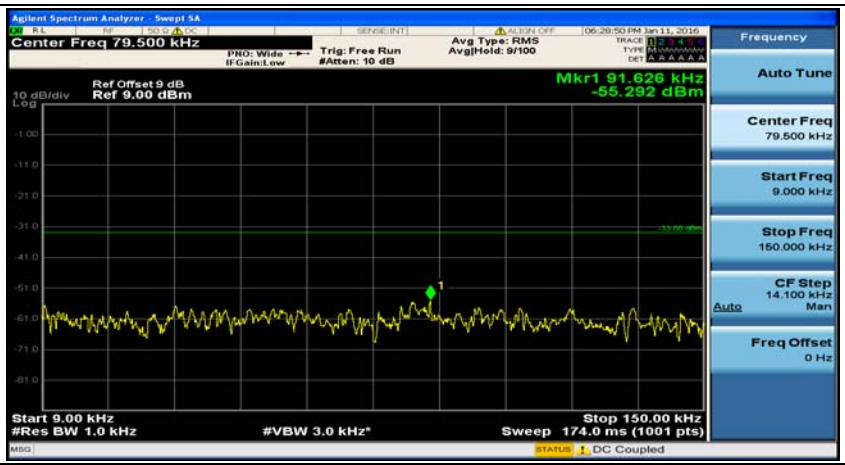
Channel Bandwidth: 10 MHz_LCH_QPSK_1RB#0



Channel Bandwidth: 10 MHz_LCH_QPSK_1RB#24

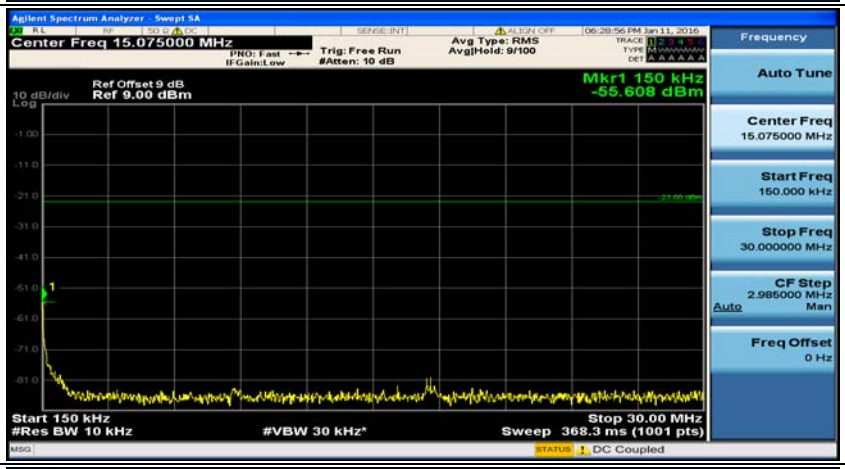


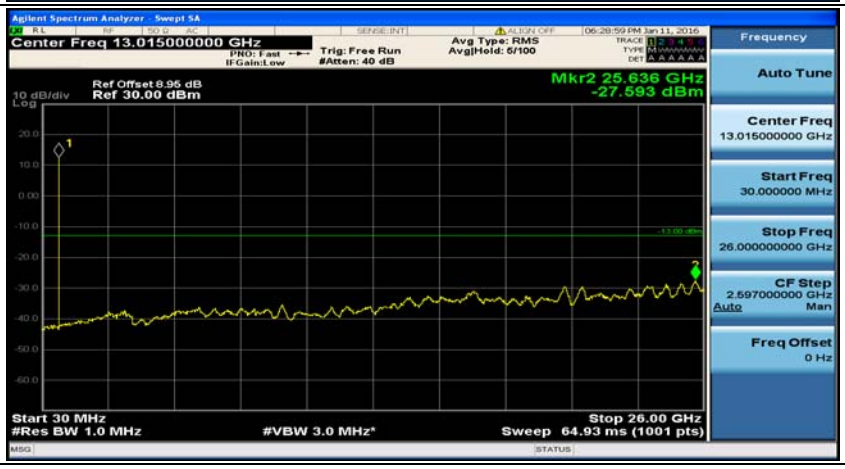


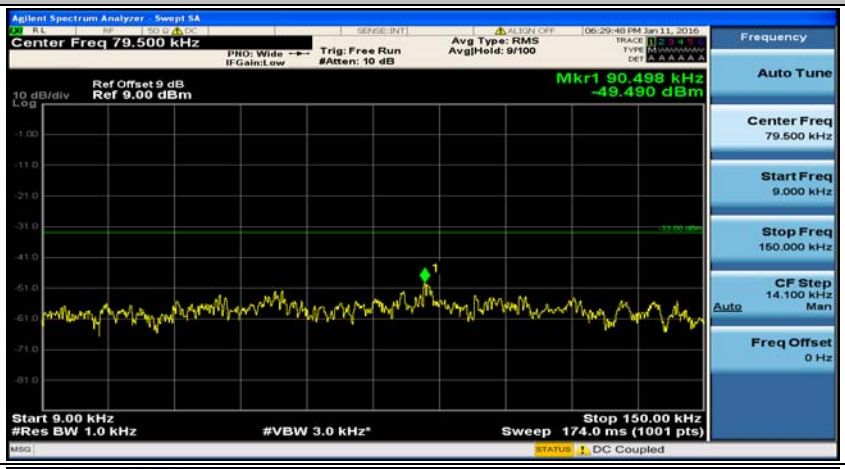
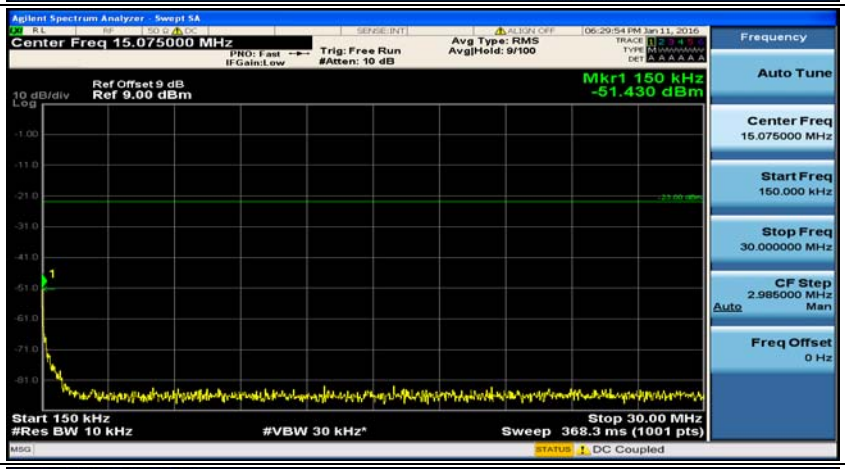
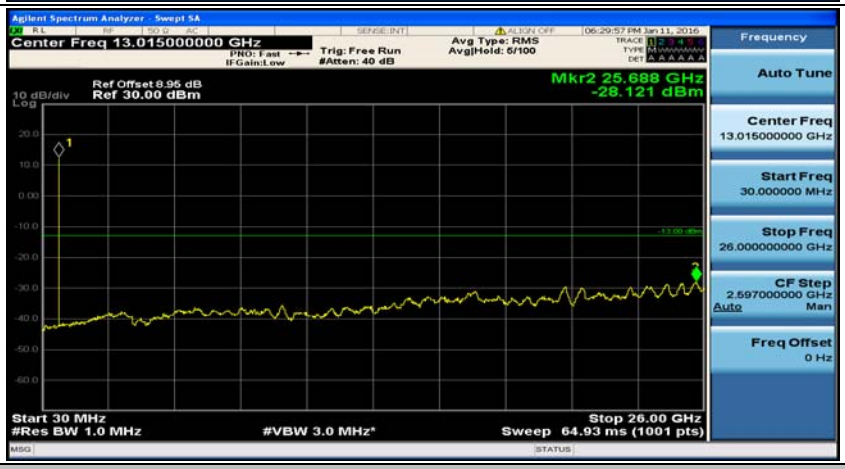


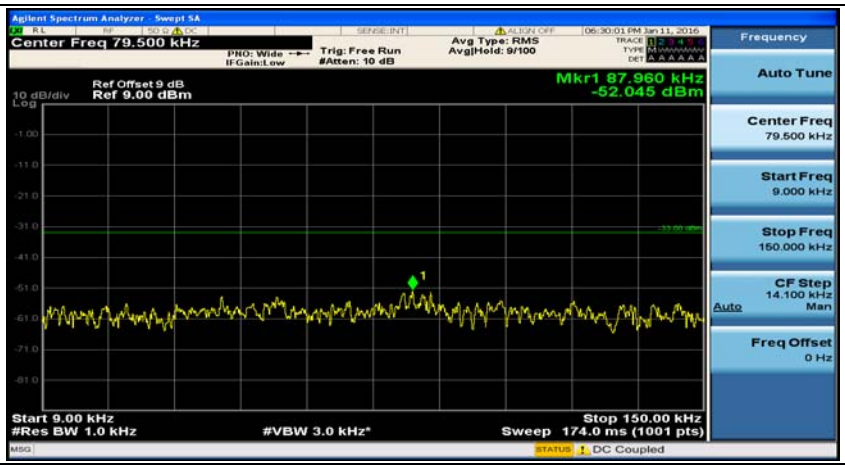
Channel Bandwidth: 10 MHz_LCH_QPSK_1RB#49

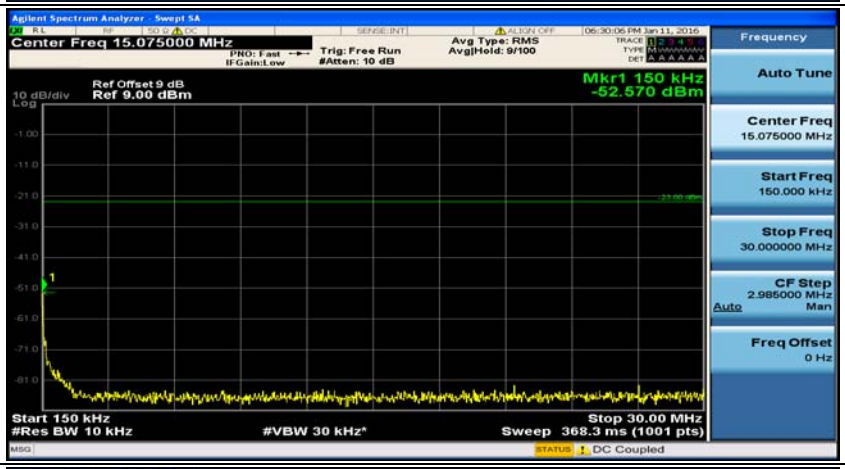

Agilent Spectrum Analyzer - Swept SA
Center Freq 79.500 kHz
PNO: Wide
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 9/100
06:28:50 PM Jan 11, 2016
Ref Offset 9 dB
10 dB/div
Ref 9.00 dBm
Mkr1 91.626 kHz
-55.292 dBm
Start 9.00 kHz
#Res BW 1.0 kHz
#VBW 3.0 kHz*
Stop 150.00 kHz
Sweep 174.0 ms (1001 pts)
DC Coupled
Frequency
Auto Tune
Center Freq
79.500 kHz
Start Freq
9.000 kHz
Stop Freq
150.000 kHz
CF Step
14.100 kHz
Auto
Man
Freq Offset
0 Hz

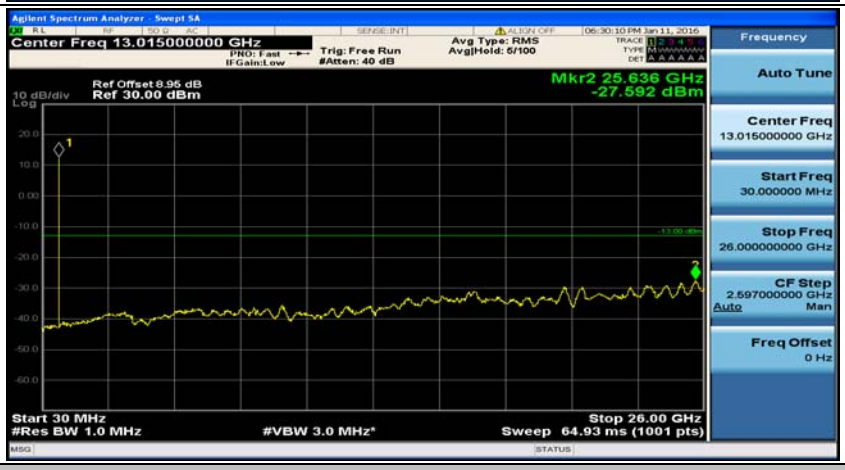

Agilent Spectrum Analyzer - Swept SA
Center Freq 15.075000 MHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 9/100
06:28:56 PM Jan 11, 2016
Ref Offset 9 dB
10 dB/div
Ref 9.00 dBm
Mkr1 150 kHz
-55.608 dBm
Start 150 kHz
#Res BW 10 kHz
#VBW 30 kHz*
Stop 30.00 MHz
Sweep 368.3 ms (1001 pts)
DC Coupled
Frequency
Auto Tune
Center Freq
15.075000 MHz
Start Freq
150.000 kHz
Stop Freq
30.000000 MHz
CF Step
2.985000 MHz
Auto
Man
Freq Offset
0 Hz


Agilent Spectrum Analyzer - Swept SA
Center Freq 13.015000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 40 dB
Avg Type: RMS
Avg|Hold: 5/100
06:28:59 PM Jan 11, 2016
Ref Offset 8.95 dB
10 dB/div
Ref 30.00 dBm
Mkr2 25.636 GHz
-27.593 dBm
Start 30 MHz
#Res BW 1.0 MHz
#VBW 3.0 MHz*
Stop 26.00 GHz
Sweep 64.93 ms (1001 pts)
Frequency
Auto Tune
Center Freq
13.015000000 GHz
Start Freq
30.000000 MHz
Stop Freq
26.000000000 GHz
CF Step
2.597000000 GHz
Auto
Man
Freq Offset
0 Hz

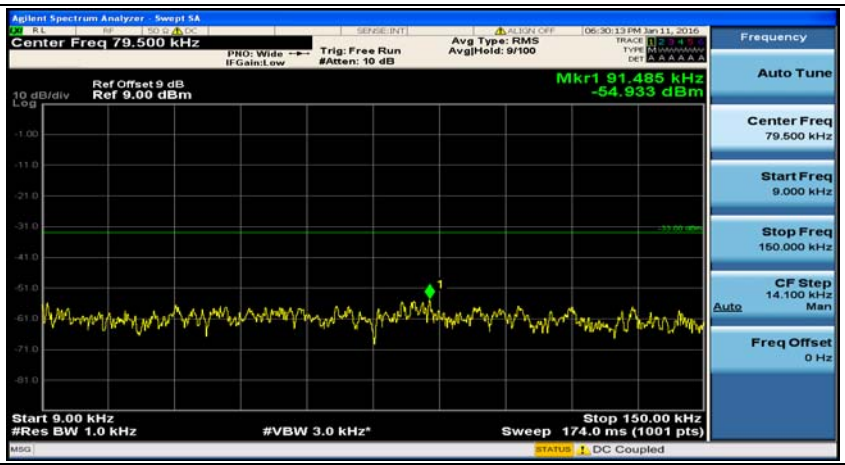
Channel Bandwidth: 10 MHz_MCH_QPSK_1RB#0



Channel Bandwidth: 10 MHz_MCH_QPSK_1RB#24

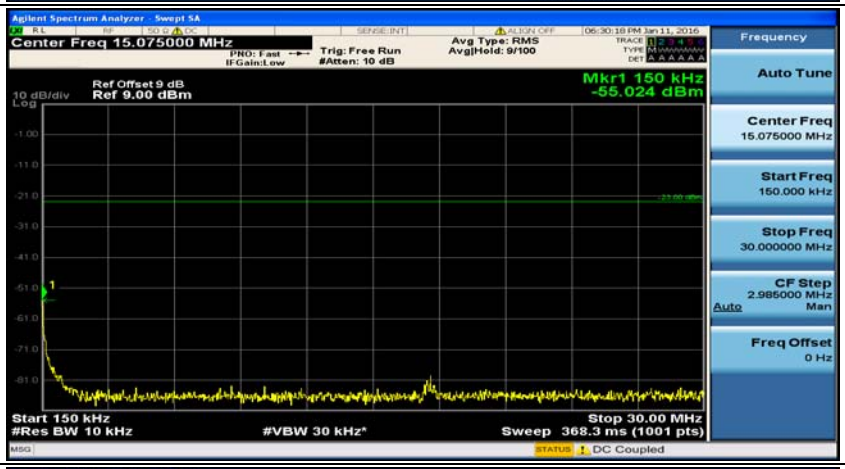


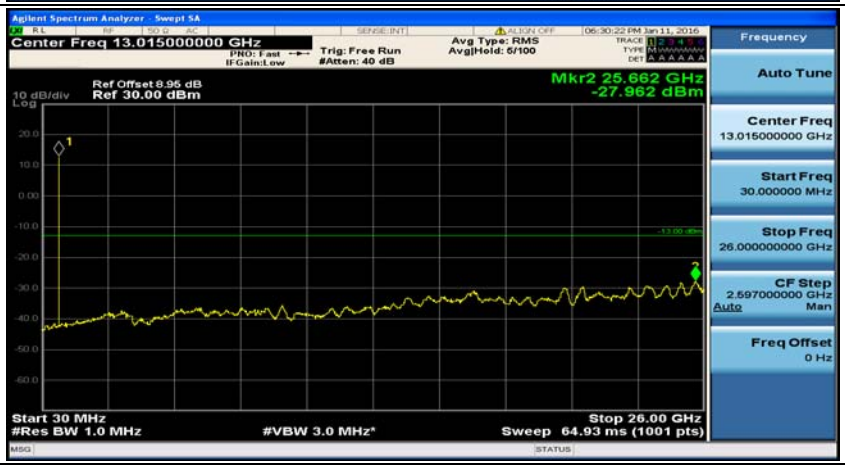


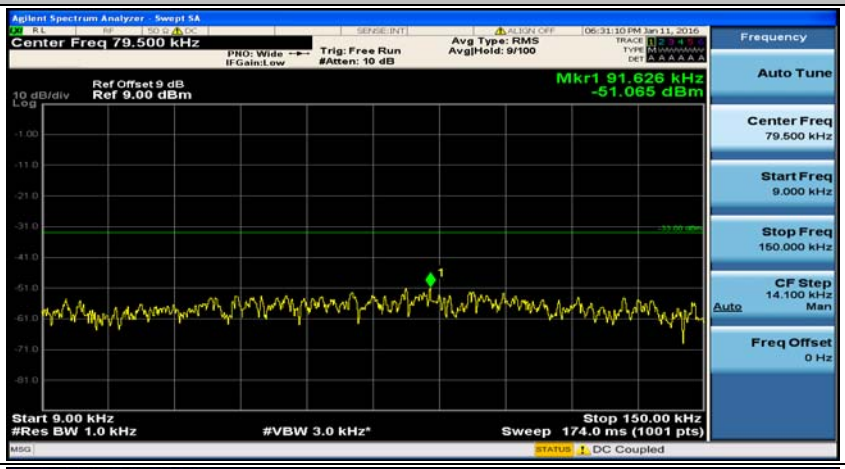
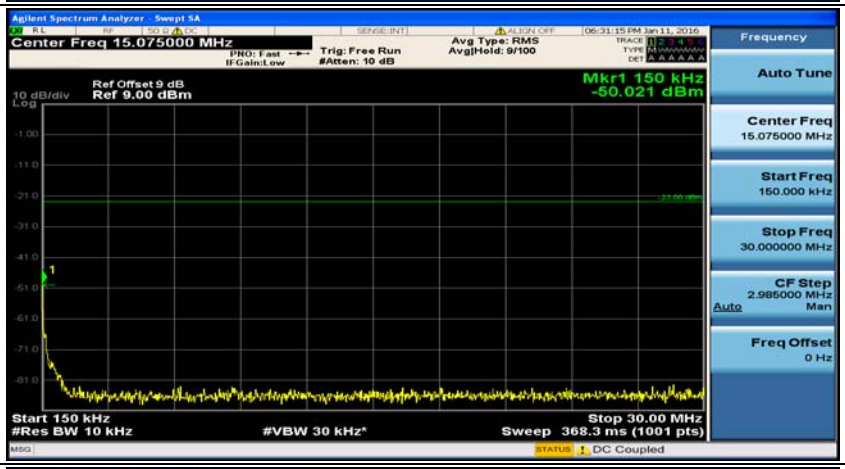
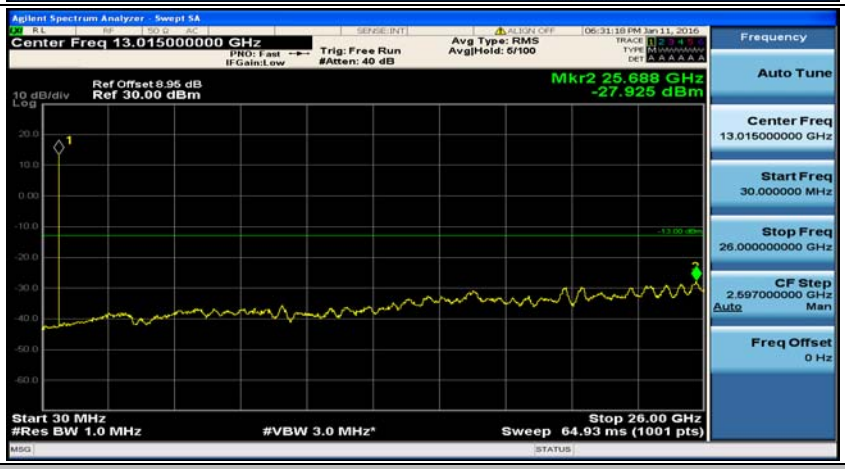


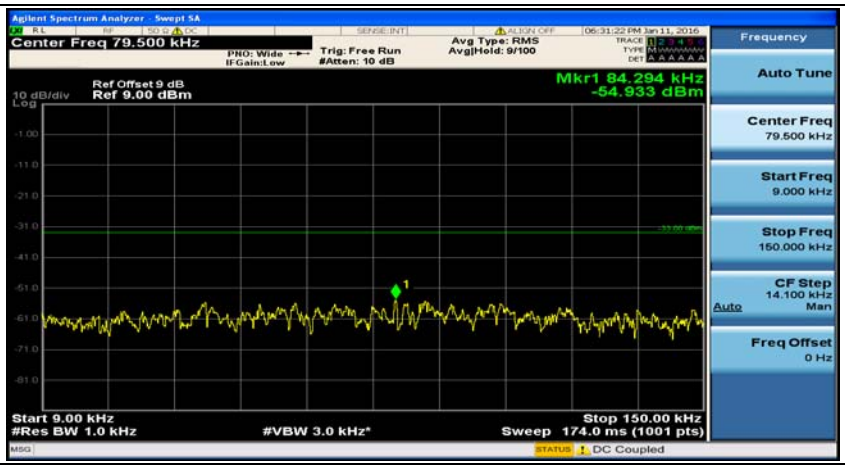
Channel Bandwidth: 10 MHz_MCH_QPSK_1RB#49

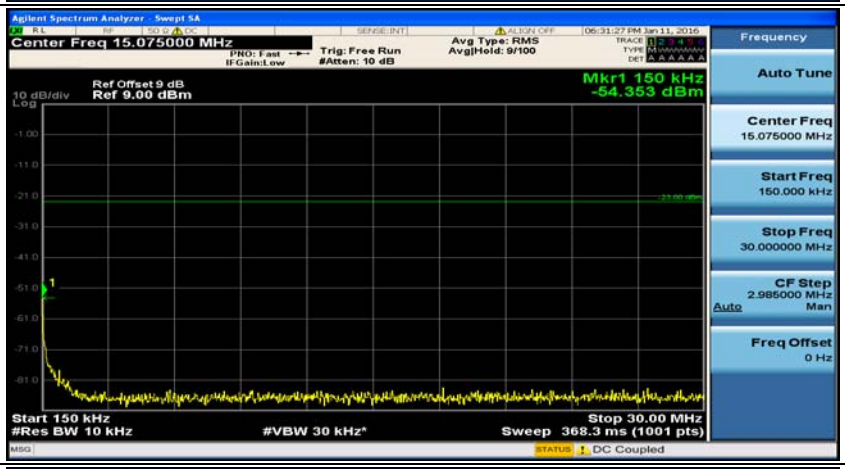

Agilent Spectrum Analyzer - Swept SA
Center Freq 79.500 kHz
PNO: Wide
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 9/100
06:30:13 PM Jan 11, 2016
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Mkr1 91.485 kHz
-54.933 dBm
Start 9.00 kHz
#Res BW 1.0 kHz
#VBW 3.0 kHz*
Stop 150.00 kHz
Sweep 174.0 ms (1001 pts)
DC Coupled
Frequency
Auto Tune
Center Freq
79.500 kHz
Start Freq
9.000 kHz
Stop Freq
150.000 kHz
CF Step
14.100 kHz
Auto
Man
Freq Offset
0 Hz

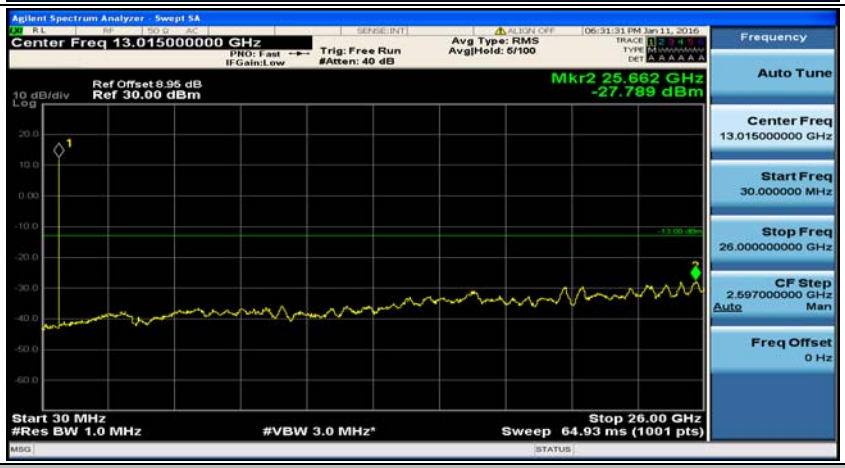

Agilent Spectrum Analyzer - Swept SA
Center Freq 15.075000 MHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 9/100
06:30:18 PM Jan 11, 2016
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Mkr1 150 kHz
-55.024 dBm
Start 150 kHz
#Res BW 10 kHz
#VBW 30 kHz*
Stop 30.00 MHz
Sweep 368.3 ms (1001 pts)
DC Coupled
Frequency
Auto Tune
Center Freq
15.075000 MHz
Start Freq
150.000 kHz
Stop Freq
30.000000 MHz
CF Step
2.985000 MHz
Auto
Man
Freq Offset
0 Hz


Agilent Spectrum Analyzer - Swept SA
Center Freq 13.015000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 40 dB
Avg Type: RMS
Avg|Hold: 5/100
06:30:22 PM Jan 11, 2016
Ref Offset 8.95 dB
10 dB/div
Log
Ref 30.00 dBm
Mkr2 25.662 GHz
-27.962 dBm
Start 30 MHz
#Res BW 1.0 MHz
#VBW 3.0 MHz*
Stop 26.00 GHz
Sweep 64.93 ms (1001 pts)
Frequency
Auto Tune
Center Freq
13.015000000 GHz
Start Freq
30.000000 MHz
Stop Freq
26.000000000 GHz
CF Step
2.597000000 GHz
Auto
Man
Freq Offset
0 Hz

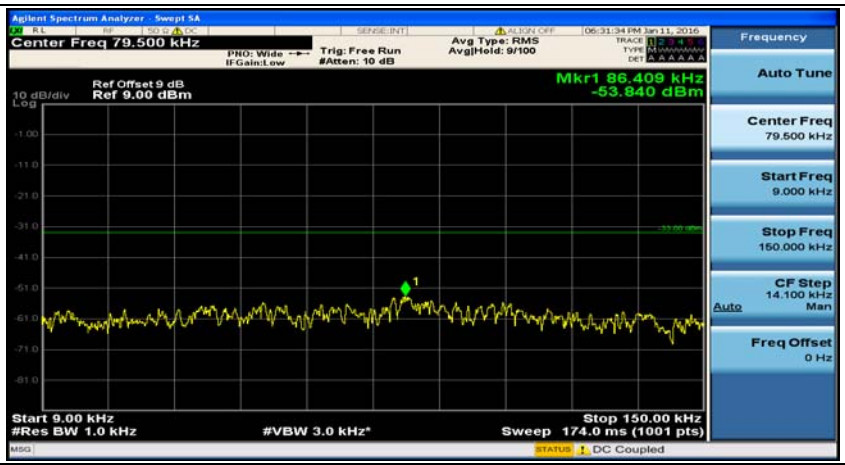
Channel Bandwidth: 10 MHz_HCH_QPSK_1RB#0



Channel Bandwidth: 10 MHz_HCH_QPSK_1RB#24

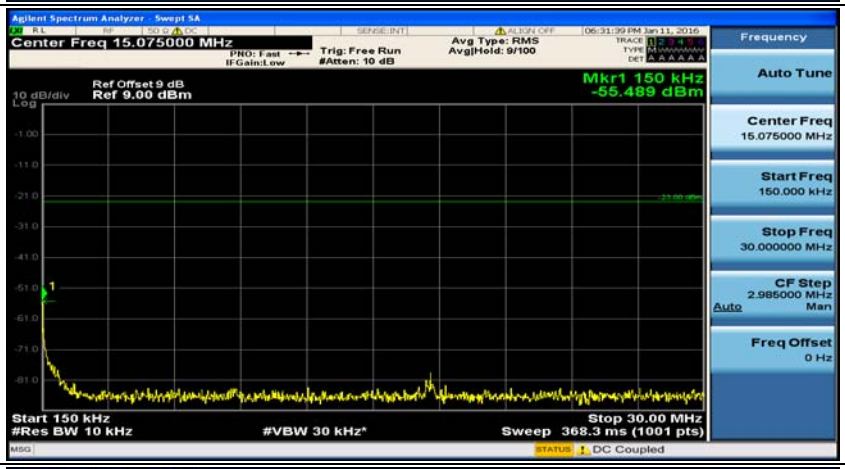


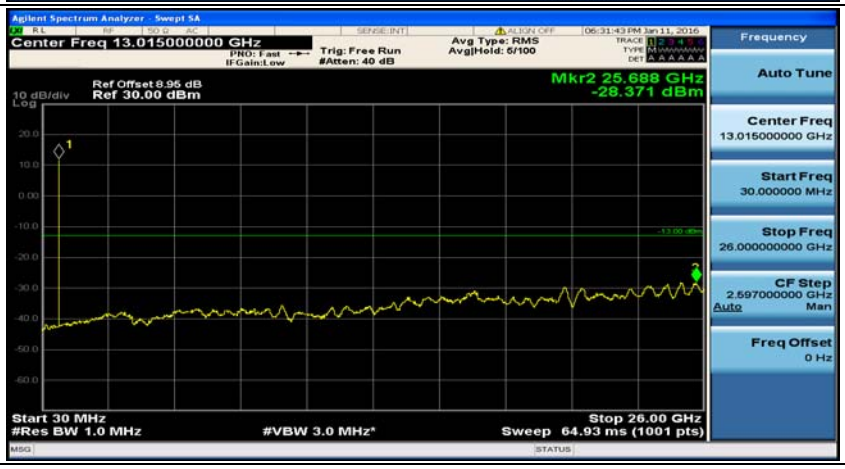


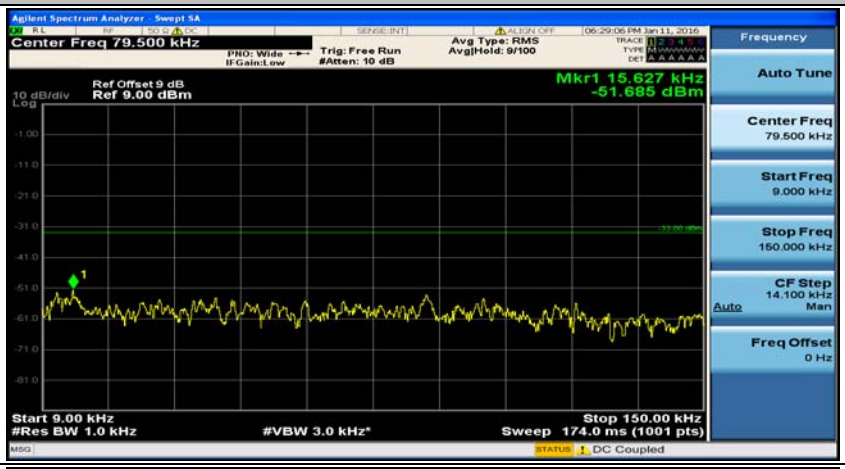
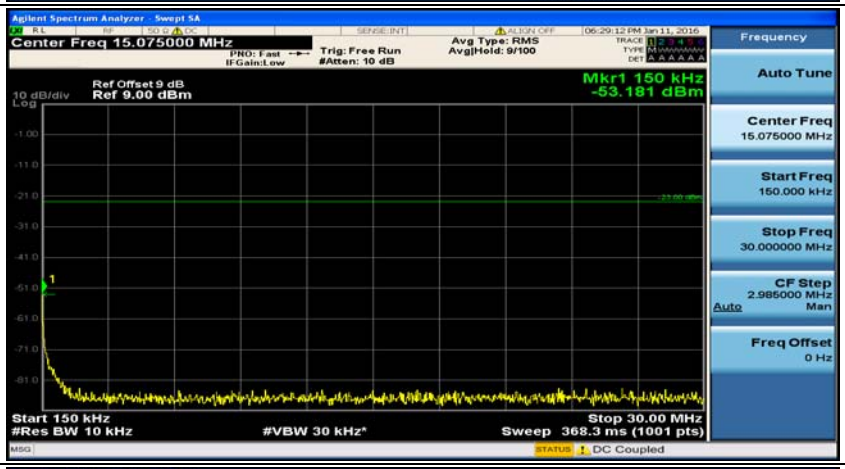


Channel Bandwidth: 10 MHz_HCH_QPSK_1RB#49

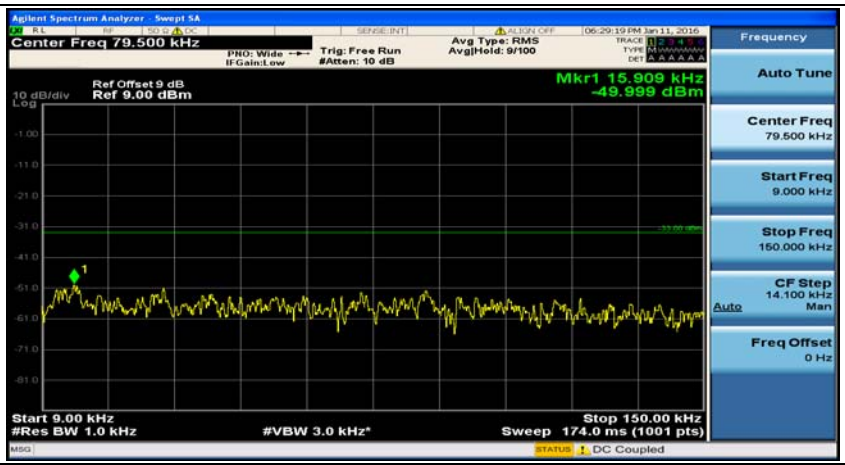

Agilent Spectrum Analyzer - Swept SA
Center Freq 79.500 kHz
PNO: Wide
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 9/100
06:31:34 PM Jan 11, 2016
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Mkr1 86.409 kHz
-53.840 dBm
Start 9.00 kHz
#Res BW 1.0 kHz
#VBW 3.0 kHz*
Stop 150.00 kHz
Sweep 174.0 ms (1001 pts)
DC Coupled
Frequency
Auto Tune
Center Freq
79.500 kHz
Start Freq
9.000 kHz
Stop Freq
150.000 kHz
CF Step
14.100 kHz
Auto
Man
Freq Offset
0 Hz

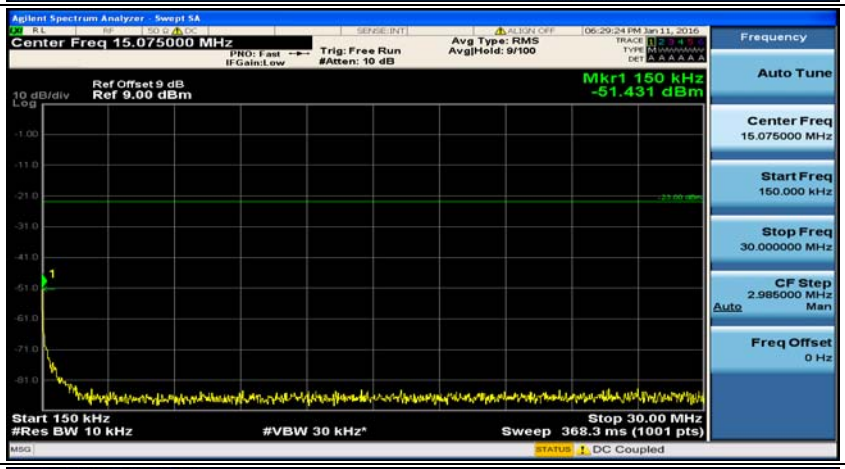

Agilent Spectrum Analyzer - Swept SA
Center Freq 15.075000 MHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 9/100
06:31:39 PM Jan 11, 2016
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Mkr1 150 kHz
-55.489 dBm
Start 150 kHz
#Res BW 10 kHz
#VBW 30 kHz*
Stop 30.00 MHz
Sweep 368.3 ms (1001 pts)
DC Coupled
Frequency
Auto Tune
Center Freq
15.075000 MHz
Start Freq
150.000 kHz
Stop Freq
30.000000 MHz
CF Step
2.985000 MHz
Auto
Man
Freq Offset
0 Hz

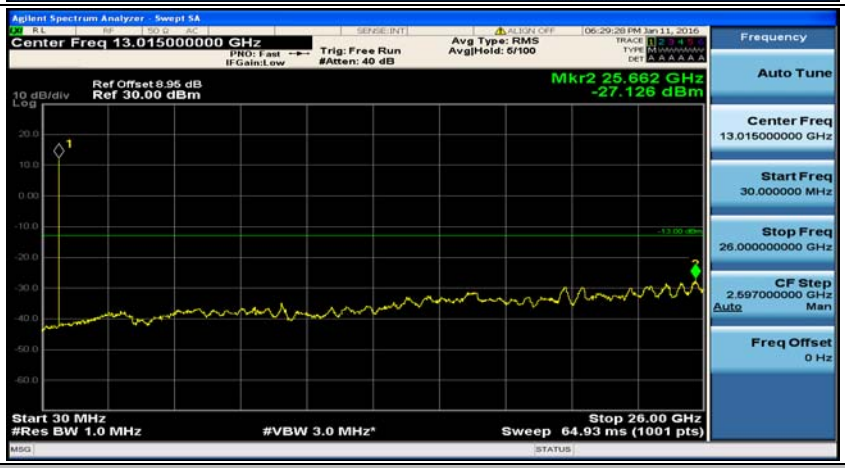

Agilent Spectrum Analyzer - Swept SA
Center Freq 13.015000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 40 dB
Avg Type: RMS
Avg|Hold: 5/100
06:31:43 PM Jan 11, 2016
Ref Offset 8.95 dB
10 dB/div
Log
Ref 30.00 dBm
Mkr2 25.688 GHz
-28.371 dBm
Start 30 MHz
#Res BW 1.0 MHz
#VBW 3.0 MHz*
Stop 26.00 GHz
Sweep 64.93 ms (1001 pts)
Frequency
Auto Tune
Center Freq
13.015000000 GHz
Start Freq
30.000000 MHz
Stop Freq
26.000000000 GHz
CF Step
2.597000000 GHz
Auto
Man
Freq Offset
0 Hz

Channel Bandwidth: 10 MHz_LCH_16QAM_1RB#0



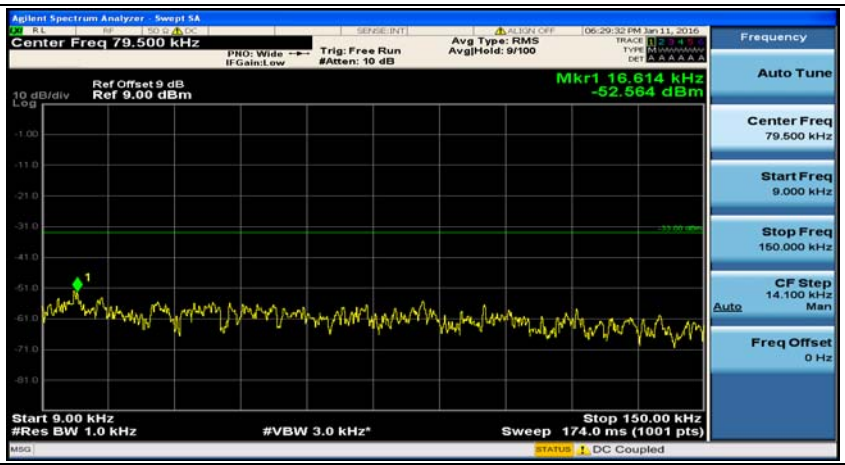
Channel Bandwidth: 10 MHz_LCH_16QAM_1RB#24

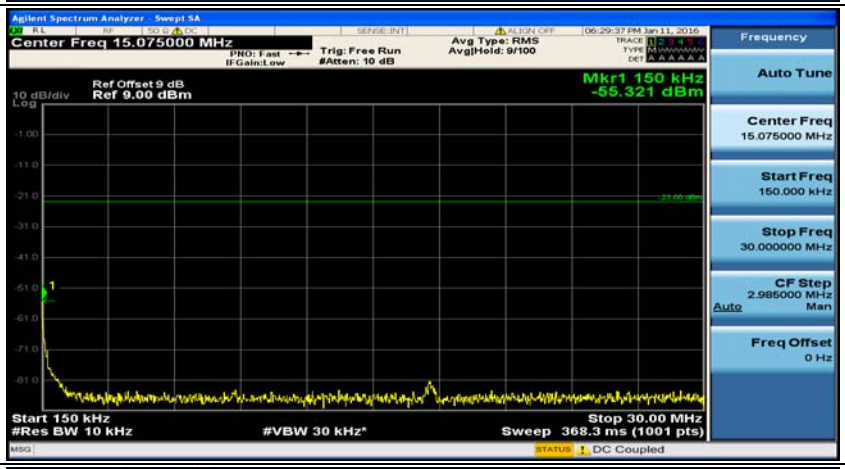


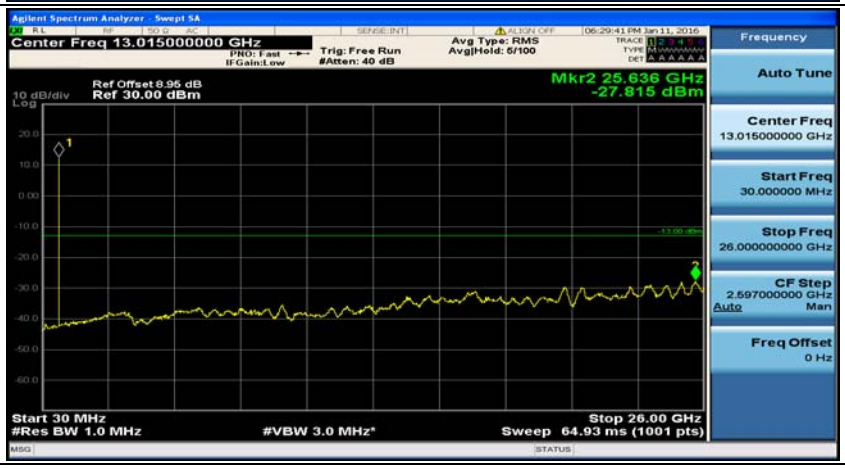


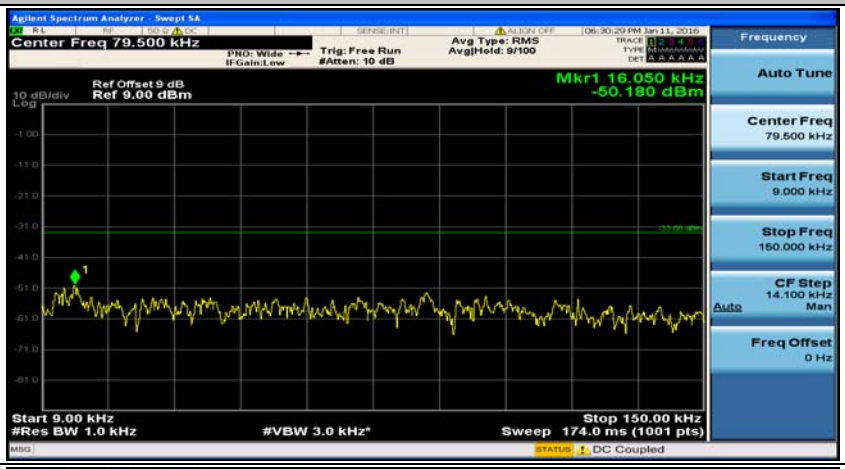
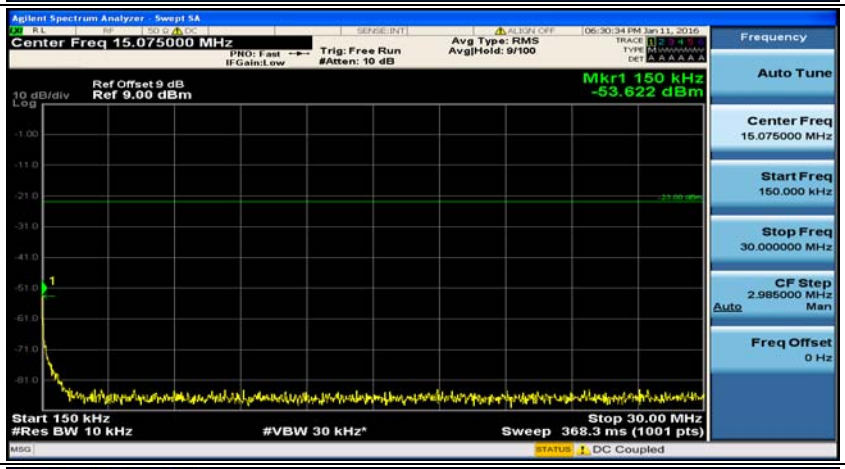
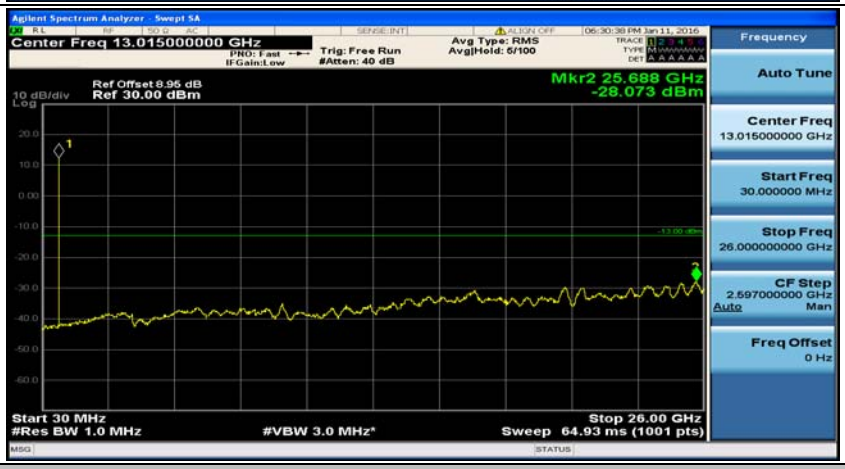


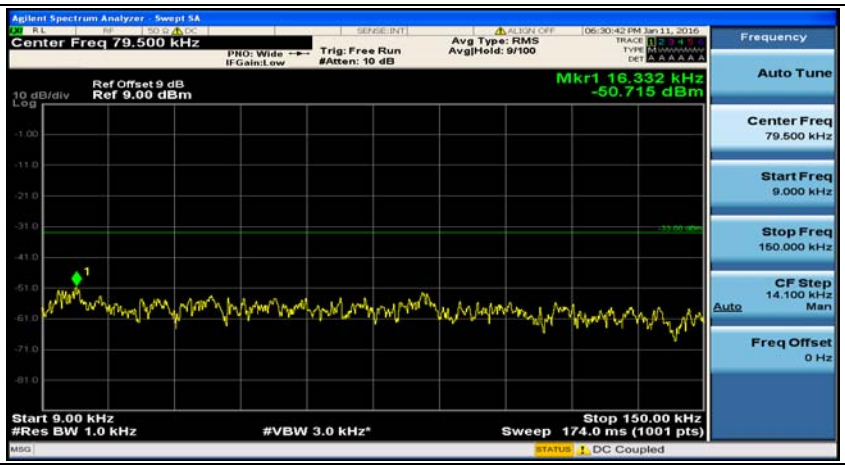
Channel Bandwidth: 10 MHz_LCH_16QAM_1RB#49

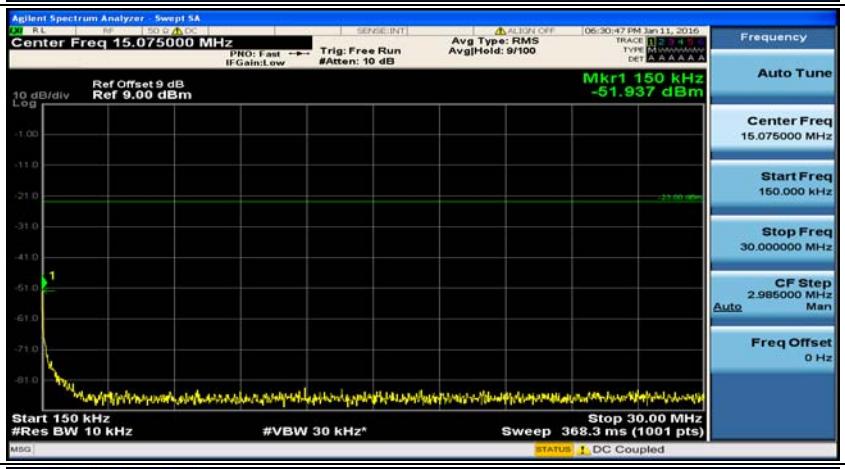

Agilent Spectrum Analyzer - Swept SA
Center Freq 79.500 kHz
PNO: Wide
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 9/100
06:29:32 PM Jan 11, 2016
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Mkr1 16.614 kHz
-52.564 dBm
Start 9.00 kHz
#Res BW 1.0 kHz
#VBW 3.0 kHz*
Stop 150.00 kHz
Sweep 174.0 ms (1001 pts)
DC Coupled
Frequency
Auto Tune
Center Freq
79.500 kHz
Start Freq
9.000 kHz
Stop Freq
150.000 kHz
CF Step
14.100 kHz
Auto
Man
Freq Offset
0 Hz

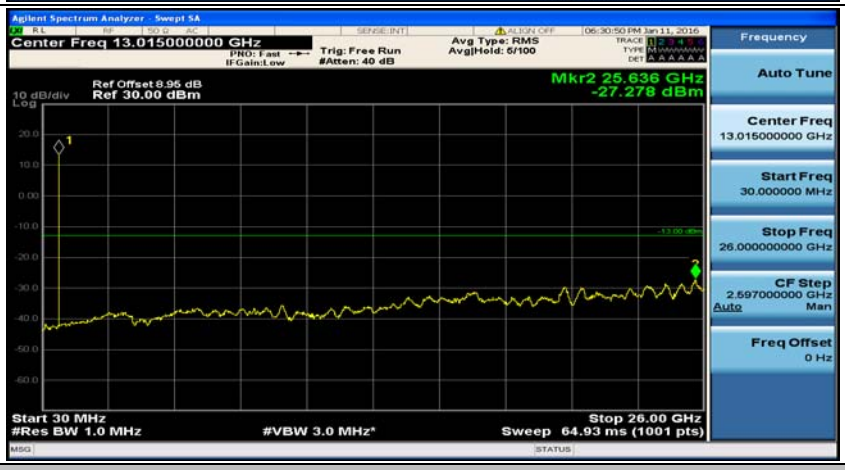

Agilent Spectrum Analyzer - Swept SA
Center Freq 15.075000 MHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 9/100
06:29:37 PM Jan 11, 2016
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Mkr1 150 kHz
-55.321 dBm
Start 150 kHz
#Res BW 10 kHz
#VBW 30 kHz*
Stop 30.00 MHz
Sweep 368.3 ms (1001 pts)
DC Coupled
Frequency
Auto Tune
Center Freq
15.075000 MHz
Start Freq
150.000 kHz
Stop Freq
30.000000 MHz
CF Step
2.985000 MHz
Auto
Man
Freq Offset
0 Hz


Agilent Spectrum Analyzer - Swept SA
Center Freq 13.015000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 40 dB
Avg Type: RMS
Avg|Hold: 5/100
06:29:41 PM Jan 11, 2016
Ref Offset 8.95 dB
10 dB/div
Log
Ref 30.00 dBm
Mkr2 25.636 GHz
-27.815 dBm
Start 30 MHz
#Res BW 1.0 MHz
#VBW 3.0 MHz*
Stop 26.00 GHz
Sweep 64.93 ms (1001 pts)
Frequency
Auto Tune
Center Freq
13.015000000 GHz
Start Freq
30.000000 MHz
Stop Freq
26.000000000 GHz
CF Step
2.597000000 GHz
Auto
Man
Freq Offset
0 Hz

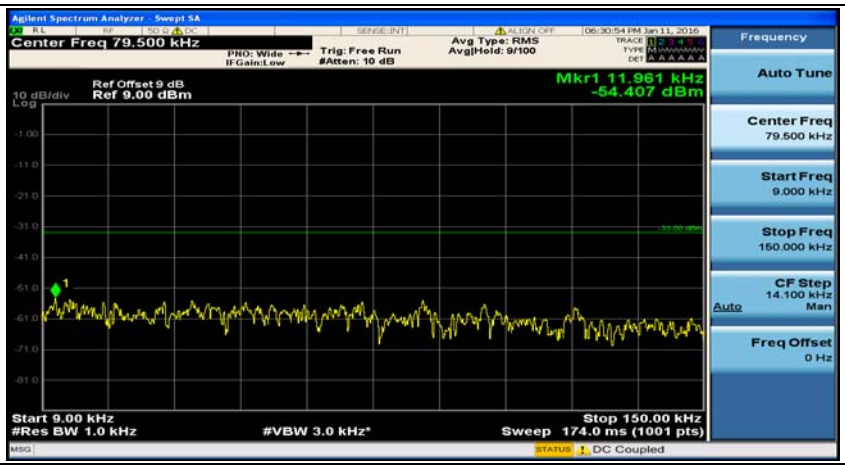
Channel Bandwidth: 10 MHz_MCH_16QAM_1RB#0



Channel Bandwidth: 10 MHz_MCH_16QAM_1RB#24

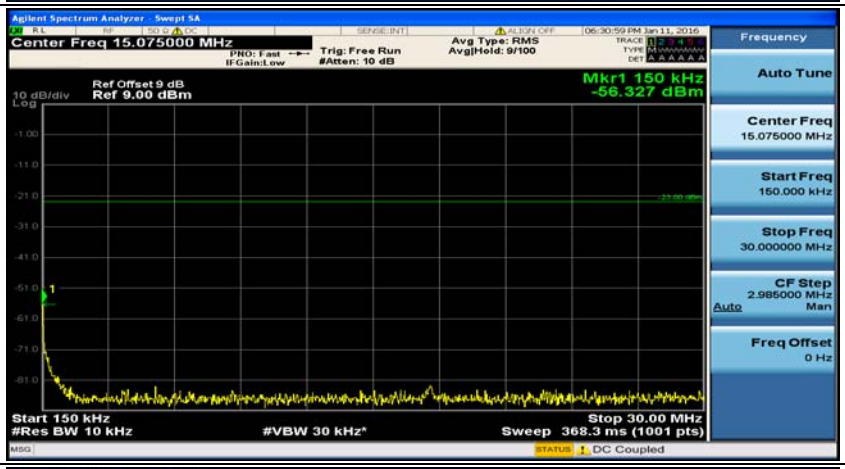


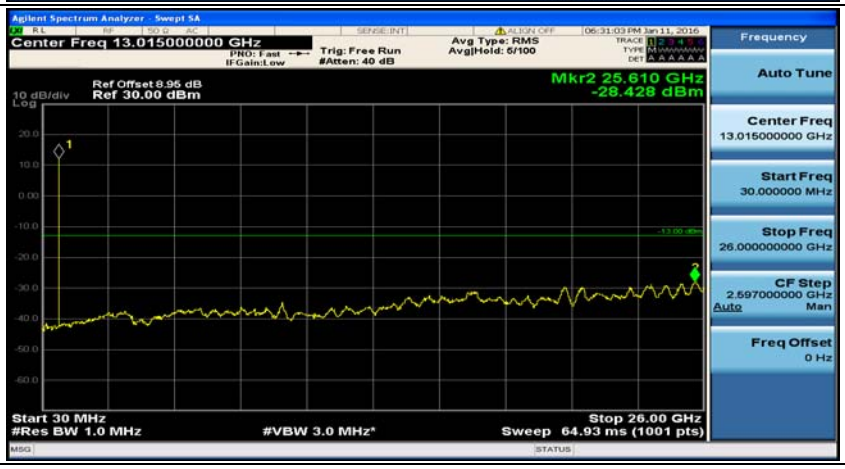


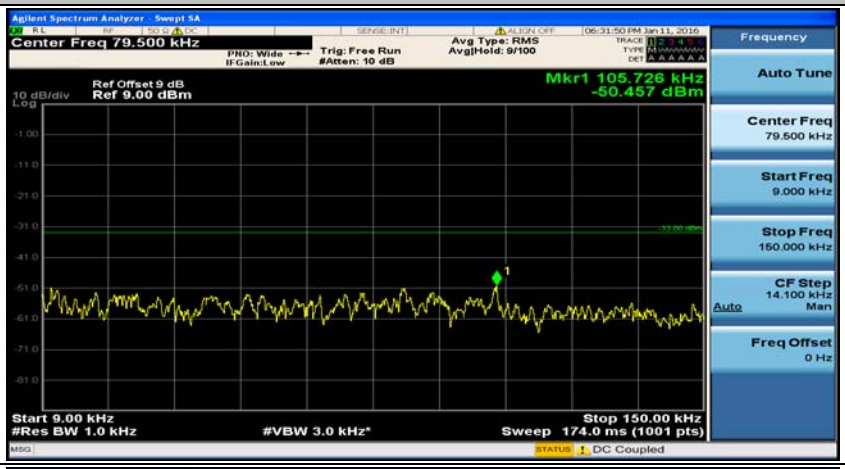
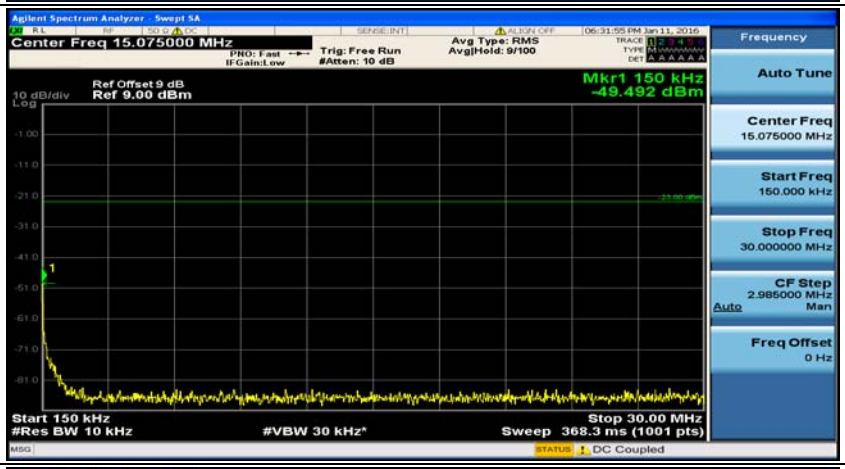
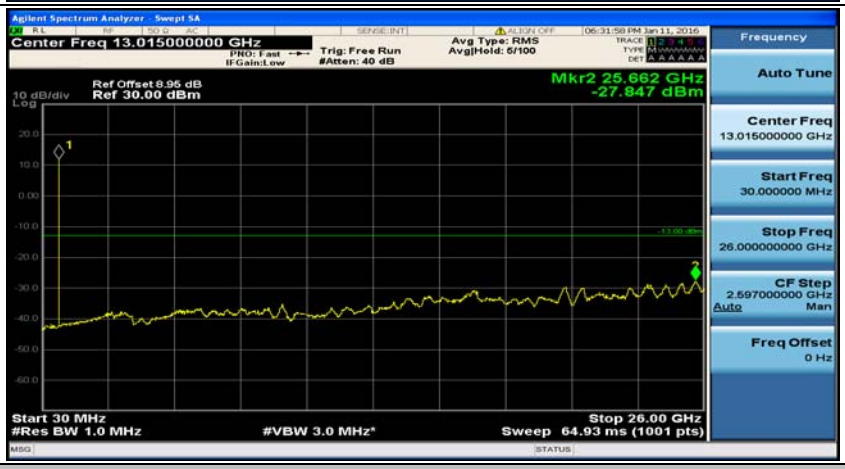


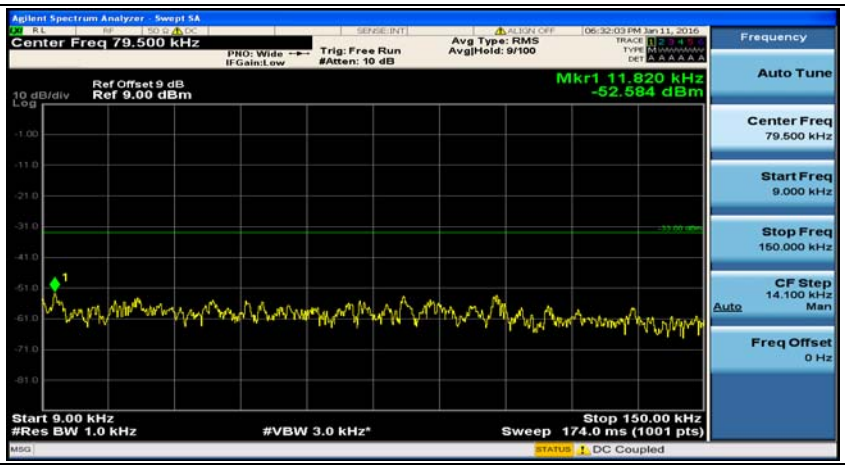
Channel Bandwidth: 10 MHz_MCH_16QAM_1RB#49

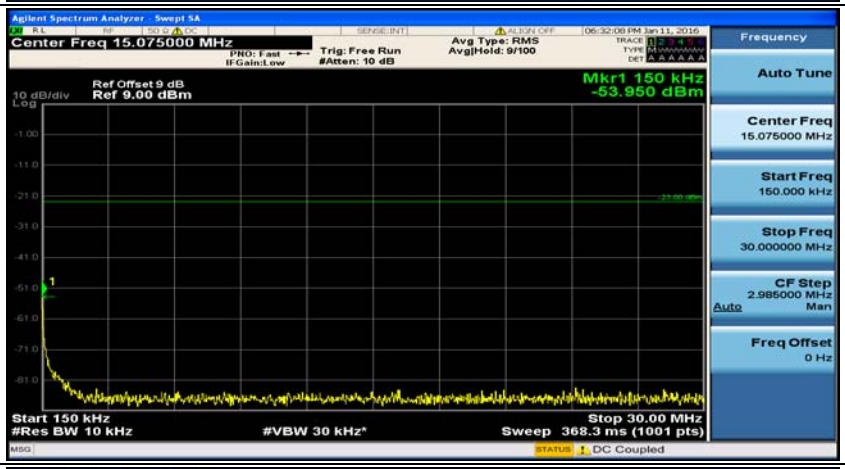

Agilent Spectrum Analyzer - Swept SA
Center Freq 79.500 kHz
PNO: Wide
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 9/100
06:30:54 PM Jan 11, 2016
Ref Offset 9 dB
10 dB/div
Ref 9.00 dBm
Log
Mkr1 11.961 kHz
-54.407 dBm
Start 9.00 kHz
#Res BW 1.0 kHz
#VBW 3.0 kHz*
Stop 150.00 kHz
Sweep 174.0 ms (1001 pts)
DC Coupled
Frequency
Auto Tune
Center Freq
79.500 kHz
Start Freq
9.000 kHz
Stop Freq
150.000 kHz
CF Step
14.100 kHz
Auto
Man
Freq Offset
0 Hz

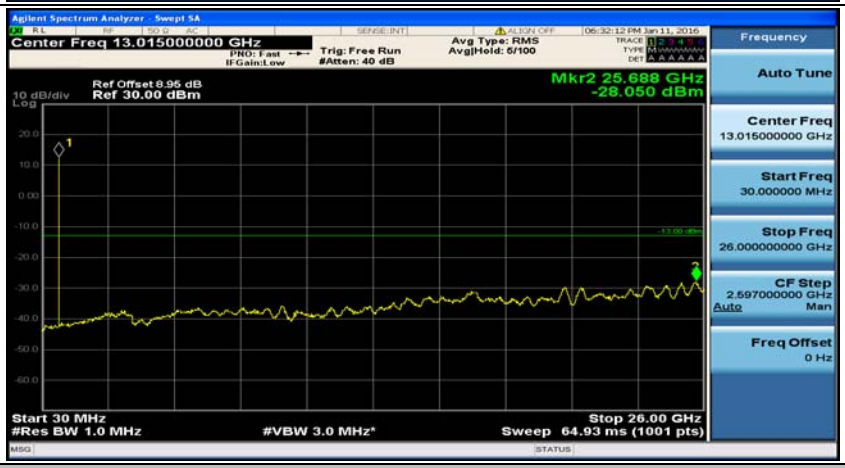

Agilent Spectrum Analyzer - Swept SA
Center Freq 15.075000 MHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 9/100
06:30:59 PM Jan 11, 2016
Ref Offset 9 dB
10 dB/div
Ref 9.00 dBm
Log
Mkr1 150 kHz
-56.327 dBm
Start 150 kHz
#Res BW 10 kHz
#VBW 30 kHz*
Stop 30.00 MHz
Sweep 368.3 ms (1001 pts)
DC Coupled
Frequency
Auto Tune
Center Freq
15.075000 MHz
Start Freq
150.000 kHz
Stop Freq
30.000000 MHz
CF Step
2.985000 MHz
Auto
Man
Freq Offset
0 Hz


Agilent Spectrum Analyzer - Swept SA
Center Freq 13.015000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 40 dB
Avg Type: RMS
Avg|Hold: 5/100
06:31:03 PM Jan 11, 2016
Ref Offset 8.95 dB
10 dB/div
Ref 30.00 dBm
Log
Mkr2 25.610 GHz
-28.428 dBm
Start 30 MHz
#Res BW 1.0 MHz
#VBW 3.0 MHz*
Stop 26.00 GHz
Sweep 64.93 ms (1001 pts)
Frequency
Auto Tune
Center Freq
13.015000000 GHz
Start Freq
30.000000 MHz
Stop Freq
26.000000000 GHz
CF Step
2.597000000 GHz
Auto
Man
Freq Offset
0 Hz

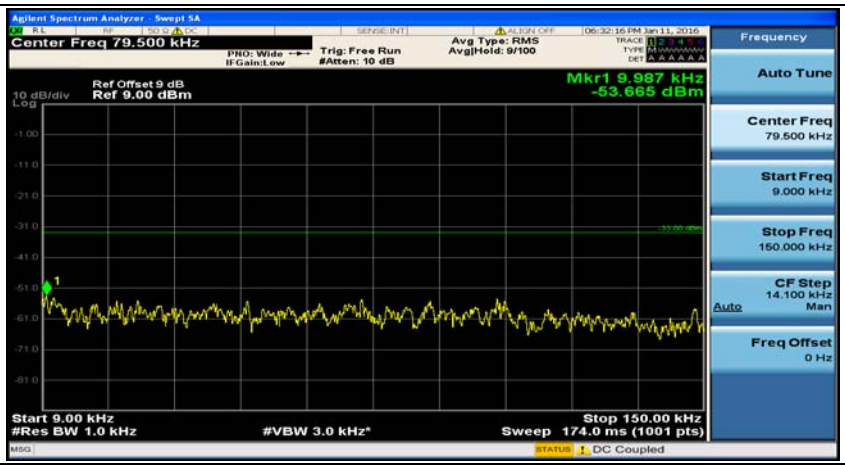
Channel Bandwidth: 10 MHz_HCH_16QAM_1RB#0



Channel Bandwidth: 10 MHz_HCH_16QAM_1RB#24

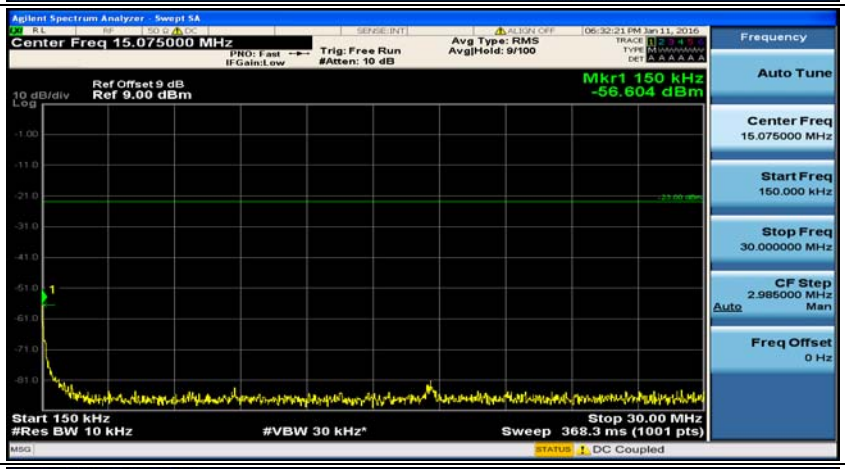


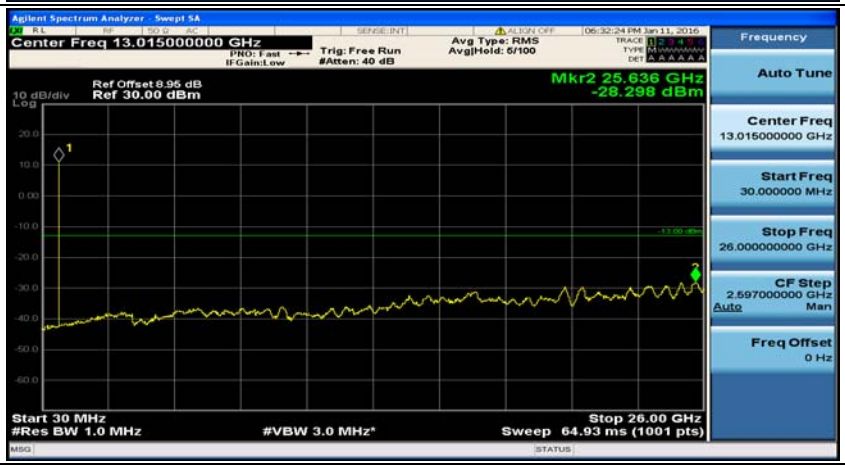




Channel Bandwidth: 10 MHz_HCH_16QAM_1RB#49


Agilent Spectrum Analyzer - Swept SA
Center Freq 79.500 kHz
PNO: Wide
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 9/100
06:32:16 PM Jan 11, 2016
Frequency
Mkr1 9.987 kHz
-53.665 dBm
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Auto Tune
Center Freq
79.500 kHz
Start Freq
9.000 kHz
Stop Freq
150.000 kHz
CF Step
14.100 kHz
Auto
Man
Freq Offset
0 Hz
Start 9.00 kHz
#Res BW 1.0 kHz
#VBW 3.0 kHz*
Stop 150.00 kHz
Sweep 174.0 ms (1001 pts)
DC Coupled


Agilent Spectrum Analyzer - Swept SA
Center Freq 15.075000 MHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 9/100
06:32:21 PM Jan 11, 2016
Frequency
Mkr1 150 kHz
-56.604 dBm
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Auto Tune
Center Freq
15.075000 MHz
Start Freq
150.000 kHz
Stop Freq
30.000000 MHz
CF Step
2.985000 MHz
Auto
Man
Freq Offset
0 Hz
Start 150 kHz
#Res BW 10 kHz
#VBW 30 kHz*
Stop 30.00 MHz
Sweep 368.3 ms (1001 pts)
DC Coupled


Agilent Spectrum Analyzer - Swept SA
Center Freq 13.015000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 40 dB
Avg Type: RMS
Avg|Hold: 5/100
06:32:24 PM Jan 11, 2016
Frequency
Mkr2 25.636 GHz
-28.298 dBm
Ref Offset 8.95 dB
10 dB/div
Log
Ref 30.00 dBm
Auto Tune
Center Freq
13.015000000 GHz
Start Freq
30.000000 MHz
Stop Freq
26.000000000 GHz
CF Step
2.597000000 GHz
Auto
Man
Freq Offset
0 Hz
Start 30 MHz
#Res BW 1.0 MHz
#VBW 3.0 MHz*
Stop 26.00 GHz
Sweep 64.93 ms (1001 pts)

Appendix F: Frequency Stability

Test Result

Channel Bandwidth: 5 MHz

Channel Bandwidth: 5 MHz							
Voltage							
Modulation	Channel	Voltage [Vdc]	Temperature (℃)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
QPSK	LCH	VL	TN	0.8	0.001132	± 2.5	PASS
		VN	TN	0.03	0.000042	± 2.5	PASS
		VH	TN	4.44	0.006285	± 2.5	PASS
	MCH	VL	TN	-0.32	-0.000451	± 2.5	PASS
		VN	TN	1.17	0.001648	± 2.5	PASS
		VH	TN	-1.2	-0.001690	± 2.5	PASS
	HCH	VL	TN	2.47	0.003462	± 2.5	PASS
		VN	TN	-1.24	-0.001738	± 2.5	PASS
		VH	TN	2.91	0.004078	± 2.5	PASS
16QAM	LCH	VL	TN	3.64	0.005152	± 2.5	PASS
		VN	TN	-1.35	-0.001911	± 2.5	PASS
		VH	TN	0.01	0.000014	± 2.5	PASS
	MCH	VL	TN	0.7	0.000986	± 2.5	PASS
		VN	TN	3.63	0.005113	± 2.5	PASS
		VH	TN	-1.48	-0.002085	± 2.5	PASS
	HCH	VL	TN	-0.51	-0.000715	± 2.5	PASS
		VN	TN	3.6	0.005046	± 2.5	PASS
		VH	TN	3.04	0.004261	± 2.5	PASS
Temperature							
Modulation	Channel	Voltage [Vdc]	Temperature (℃)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
QPSK	LCH	VN	-30	1.82	0.002576	± 2.5	PASS
		VN	-20	1.17	0.001656	± 2.5	PASS
		VN	-10	-1.5	-0.002123	± 2.5	PASS
		VN	0	3.39	0.004798	± 2.5	PASS
		VN	10	1.31	0.001854	± 2.5	PASS
		VN	20	1.39	0.001967	± 2.5	PASS
		VN	30	-0.02	-0.000028	± 2.5	PASS
		VN	40	3.18	0.004501	± 2.5	PASS
		VN	50	2.68	0.003793	± 2.5	PASS
	MCH	VN	-30	-0.44	-0.000620	± 2.5	PASS
		VN	-20	0.98	0.001380	± 2.5	PASS

		VN	-10	-0.36	-0.000507	± 2.5	PASS
		VN	0	1.34	0.001887	± 2.5	PASS
		VN	10	-0.76	-0.001070	± 2.5	PASS
		VN	20	-0.02	-0.000028	± 2.5	PASS
		VN	30	1.71	0.002408	± 2.5	PASS
		VN	40	2.93	0.004127	± 2.5	PASS
		VN	50	1.04	0.001465	± 2.5	PASS
	HCH	VN	-30	2.2	0.003083	± 2.5	PASS
		VN	-20	3.88	0.005438	± 2.5	PASS
		VN	-10	2.37	0.003322	± 2.5	PASS
		VN	0	2.65	0.003714	± 2.5	PASS
		VN	10	0.66	0.000925	± 2.5	PASS
		VN	20	4.4	0.006167	± 2.5	PASS
		VN	30	4.01	0.005620	± 2.5	PASS
		VN	40	3.43	0.004807	± 2.5	PASS
		VN	50	3.03	0.004247	± 2.5	PASS
16QAM	LCH	VN	-30	-1.47	-0.002081	± 2.5	PASS
		VN	-20	2.43	0.003439	± 2.5	PASS
		VN	-10	2.43	0.003439	± 2.5	PASS
		VN	0	4.34	0.006143	± 2.5	PASS
		VN	10	-1.29	-0.001826	± 2.5	PASS
		VN	20	0.94	0.001331	± 2.5	PASS
		VN	30	1.32	0.001868	± 2.5	PASS
		VN	40	-0.49	-0.000694	± 2.5	PASS
		VN	50	2.28	0.003227	± 2.5	PASS
	MCH	VN	-30	4.23	0.005929	± 2.5	PASS
		VN	-20	1.23	0.001724	± 2.5	PASS
		VN	-10	1.15	0.001612	± 2.5	PASS
		VN	0	1.27	0.001780	± 2.5	PASS
		VN	10	1.85	0.002593	± 2.5	PASS
		VN	20	-1.93	-0.002705	± 2.5	PASS
		VN	30	-0.15	-0.000210	± 2.5	PASS
		VN	40	0.39	0.000547	± 2.5	PASS
		VN	50	-1.43	-0.002004	± 2.5	PASS
	HCH	VN	-30	3.39	0.004751	± 2.5	PASS
		VN	-20	3.34	0.004681	± 2.5	PASS
		VN	-10	-1.62	-0.002270	± 2.5	PASS
		VN	0	-0.24	-0.000336	± 2.5	PASS
		VN	10	1.03	0.001444	± 2.5	PASS
		VN	20	4.69	0.006573	± 2.5	PASS
		VN	30	0.66	0.000925	± 2.5	PASS

		VN	40	0.51	0.000715	± 2.5	PASS
		VN	50	3.62	0.005074	± 2.5	PASS

Channel Bandwidth: 10 MHz

Channel Bandwidth: 10 MHz							
Voltage							
Modulation	Channel	Voltage [Vdc]	Temperature (℃)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
QPSK	LCH	VL	TN	0.87	0.001227	± 2.5	PASS
		VN	TN	-0.41	-0.000578	± 2.5	PASS
		VH	TN	4.95	0.006982	± 2.5	PASS
	MCH	VL	TN	-1.7	-0.002394	± 2.5	PASS
		VN	TN	0.03	0.000042	± 2.5	PASS
		VH	TN	-0.24	-0.000338	± 2.5	PASS
	HCH	VL	TN	4.19	0.005893	± 2.5	PASS
		VN	TN	4.36	0.006132	± 2.5	PASS
		VH	TN	4.79	0.006737	± 2.5	PASS
16QAM	LCH	VL	TN	3.55	0.005007	± 2.5	PASS
		VN	TN	3.21	0.004528	± 2.5	PASS
		VH	TN	0.18	0.000254	± 2.5	PASS
	MCH	VL	TN	4.17	0.005873	± 2.5	PASS
		VN	TN	0.59	0.000831	± 2.5	PASS
		VH	TN	1.42	0.002000	± 2.5	PASS
	HCH	VL	TN	4.36	0.006132	± 2.5	PASS
		VN	TN	-0.89	-0.001252	± 2.5	PASS
		VH	TN	4.74	0.006667	± 2.5	PASS
Temperature							
Modulation	Channel	Voltage [Vdc]	Temperature (℃)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
16QAM	LCH	VN	-30	0.99	0.001396	± 2.5	PASS
		VN	-20	-0.64	-0.000903	± 2.5	PASS
		VN	-10	4.2	0.005924	± 2.5	PASS
		VN	0	3.96	0.005585	± 2.5	PASS
		VN	10	0.06	0.000085	± 2.5	PASS
		VN	20	1.92	0.002708	± 2.5	PASS
		VN	30	0.42	0.000592	± 2.5	PASS
		VN	40	0.45	0.000635	± 2.5	PASS
		VN	50	4.28	0.006037	± 2.5	PASS
	MCH	VN	-30	-0.46	-0.000648	± 2.5	PASS
		VN	-20	0.07	0.000099	± 2.5	PASS
		VN	-10	-0.18	-0.000254	± 2.5	PASS

		VN	0	-1.07	-0.001507	± 2.5	PASS
		VN	10	-1.89	-0.002662	± 2.5	PASS
		VN	20	0.01	0.000014	± 2.5	PASS
		VN	30	3.35	0.004718	± 2.5	PASS
		VN	40	-1.94	-0.002732	± 2.5	PASS
		VN	50	0.13	0.000183	± 2.5	PASS
	HCH	VN	-30	3.99	0.005612	± 2.5	PASS
		VN	-20	-0.01	-0.000014	± 2.5	PASS
		VN	-10	2.01	0.002827	± 2.5	PASS
		VN	0	0.7	0.000985	± 2.5	PASS
		VN	10	-1.11	-0.001561	± 2.5	PASS
		VN	20	3.34	0.004698	± 2.5	PASS
		VN	30	-1.67	-0.002349	± 2.5	PASS
		VN	40	-0.49	-0.000689	± 2.5	PASS
		VN	50	1.58	0.002222	± 2.5	PASS
QPSK	LCH	VN	-30	-1.98	-0.002789	± 2.5	PASS
		VN	-20	1.15	0.001620	± 2.5	PASS
		VN	-10	0.98	0.001380	± 2.5	PASS
		VN	0	2.51	0.003535	± 2.5	PASS
		VN	10	-0.96	-0.001352	± 2.5	PASS
		VN	20	0.35	0.000493	± 2.5	PASS
		VN	30	4.27	0.006014	± 2.5	PASS
		VN	40	1.24	0.001746	± 2.5	PASS
		VN	50	1.48	0.002085	± 2.5	PASS
	MCH	VN	-30	3.8	0.005345	± 2.5	PASS
		VN	-20	3.36	0.004726	± 2.5	PASS
		VN	-10	-0.36	-0.000506	± 2.5	PASS
		VN	0	-0.4	-0.000563	± 2.5	PASS
		VN	10	1.7	0.002391	± 2.5	PASS
		VN	20	2.23	0.003136	± 2.5	PASS
		VN	30	1.25	0.001758	± 2.5	PASS
		VN	40	3.24	0.004557	± 2.5	PASS
		VN	50	4.45	0.006259	± 2.5	PASS
	HCH	VN	-30	1.6	0.002250	± 2.5	PASS
		VN	-20	3.96	0.005570	± 2.5	PASS
		VN	-10	1.42	0.001997	± 2.5	PASS
		VN	0	1.35	0.001899	± 2.5	PASS
		VN	10	0.2	0.000281	± 2.5	PASS
		VN	20	0.48	0.000675	± 2.5	PASS
		VN	30	0.65	0.000914	± 2.5	PASS
		VN	40	-1.38	-0.001941	± 2.5	PASS

		VN	50	1.94	0.002729	± 2.5	PASS