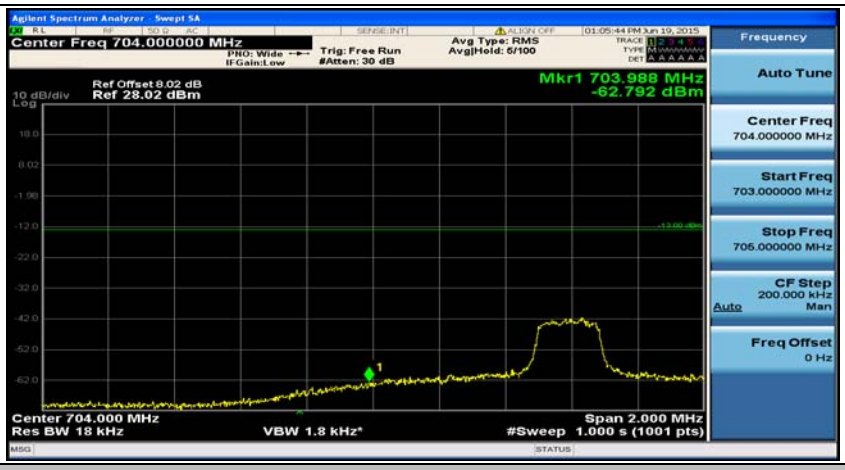
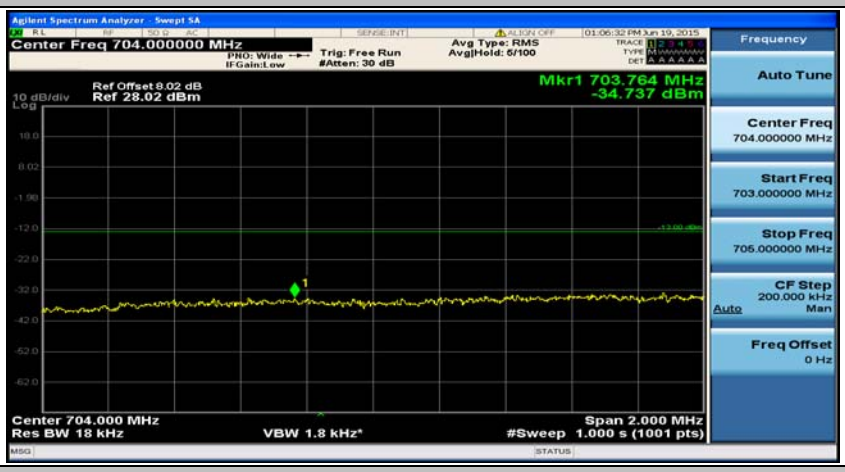


Channel Bandwidth: 10 MHz_LCH_QPSK_25RB#0

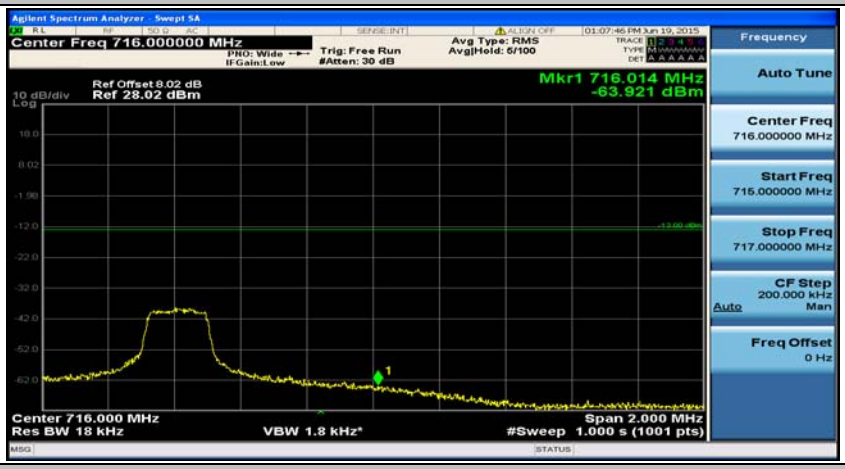
Channel Bandwidth: 10 MHz_LCH_QPSK_25RB#12



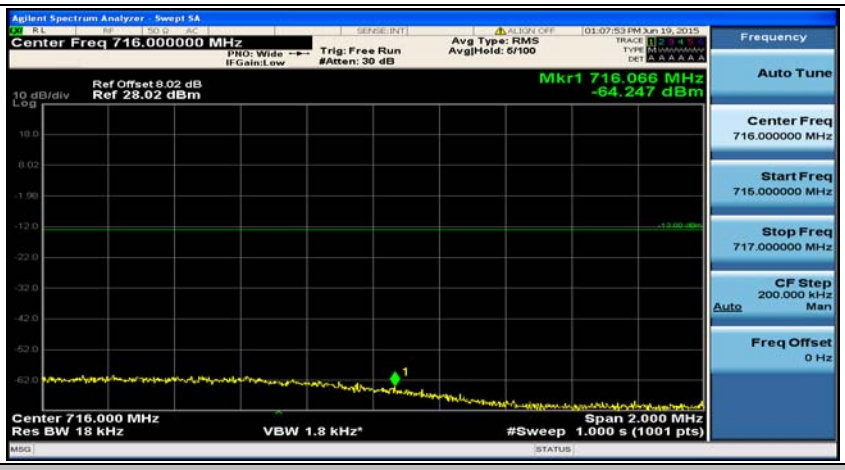
Channel Bandwidth: 10 MHz_LCH_QPSK_25RB#25

Channel Bandwidth: 10 MHz_LCH_QPSK_50RB#0

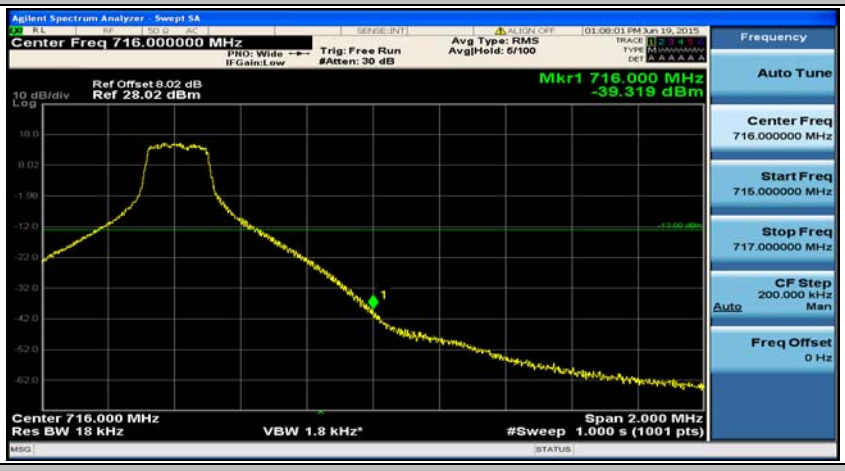
Channel Bandwidth: 10 MHz_HCH_QPSK_1RB#0



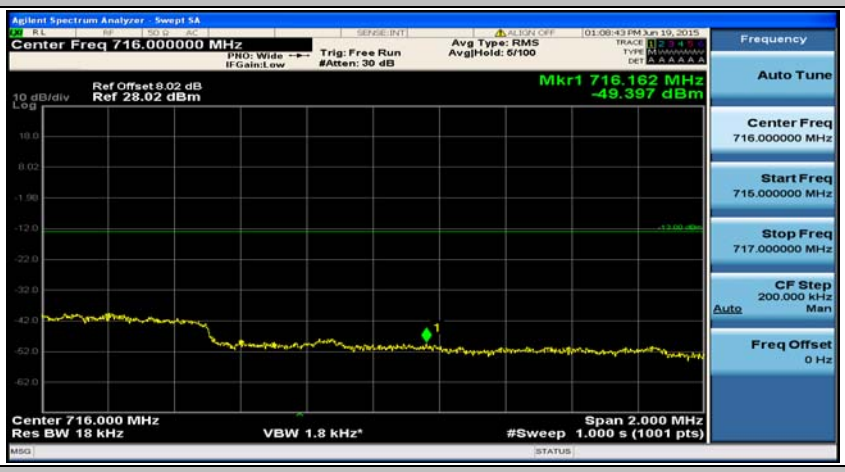
Channel Bandwidth: 10 MHz_HCH_QPSK_1RB#24



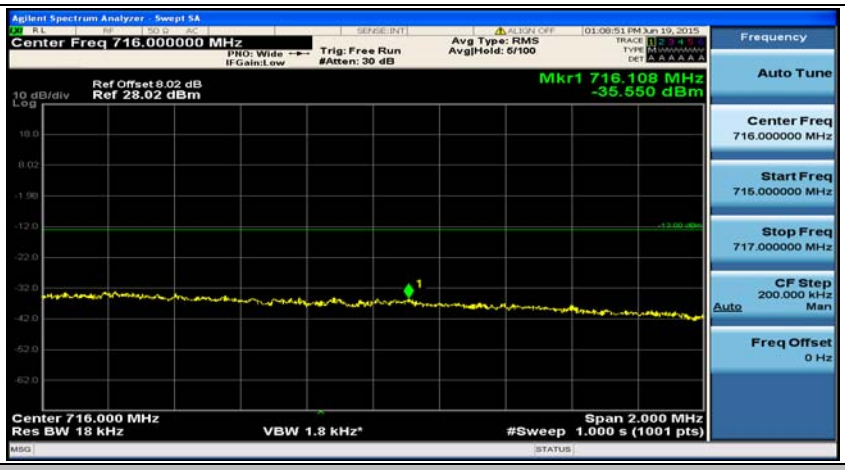
Channel Bandwidth: 10 MHz_HCH_QPSK_1RB#49



Channel Bandwidth: 10 MHz_HCH_QPSK_25RB#0

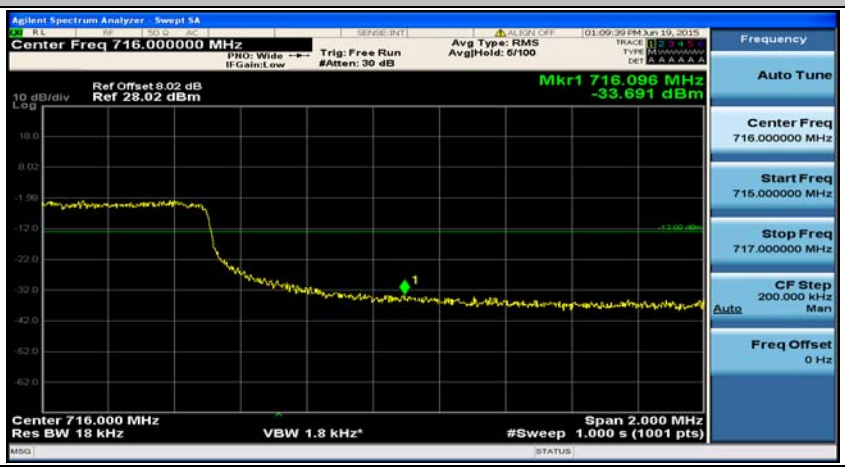


Channel Bandwidth: 10 MHz_HCH_QPSK_25RB#12

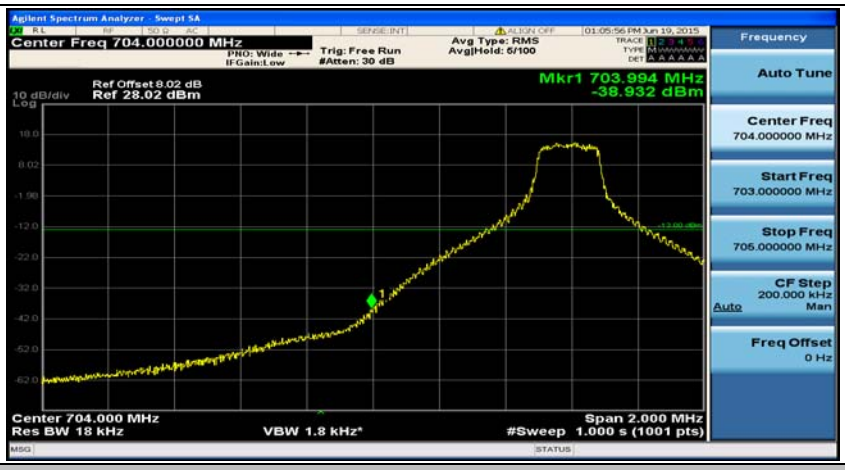


Channel Bandwidth: 10 MHz_HCH_QPSK_25RB#25

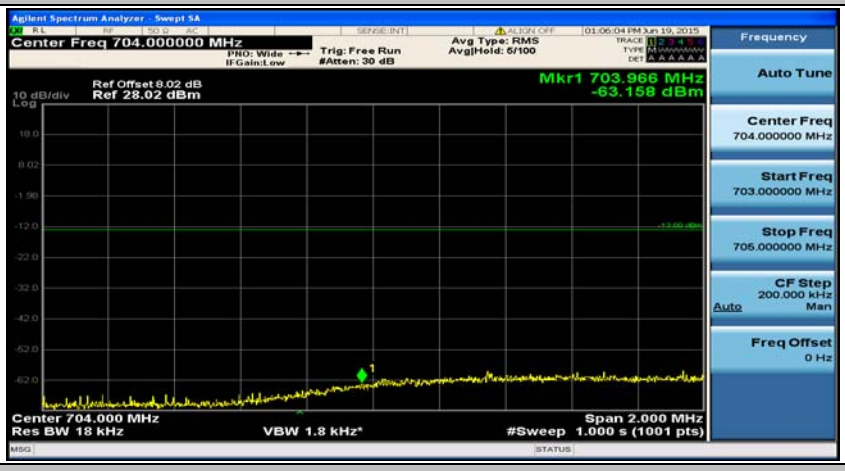
Channel Bandwidth: 10 MHz_HCH_QPSK_50RB#0



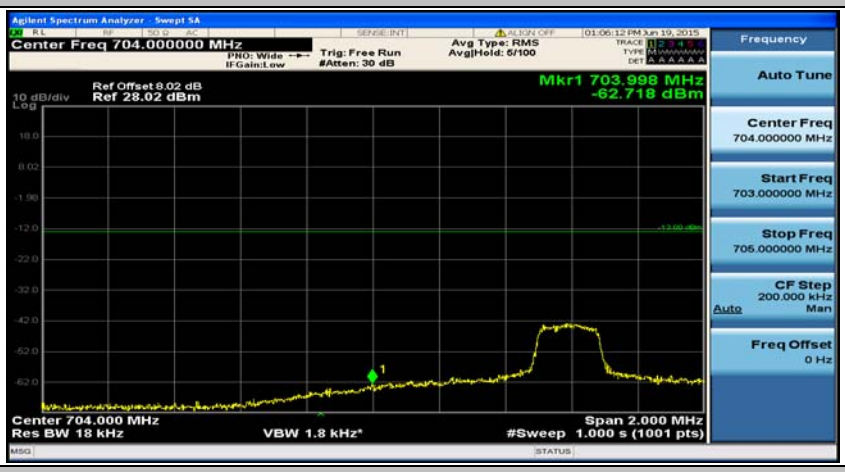
Channel Bandwidth: 10 MHz_LCH_16QAM_1RB#0



Channel Bandwidth: 10 MHz_LCH_16QAM_1RB#24

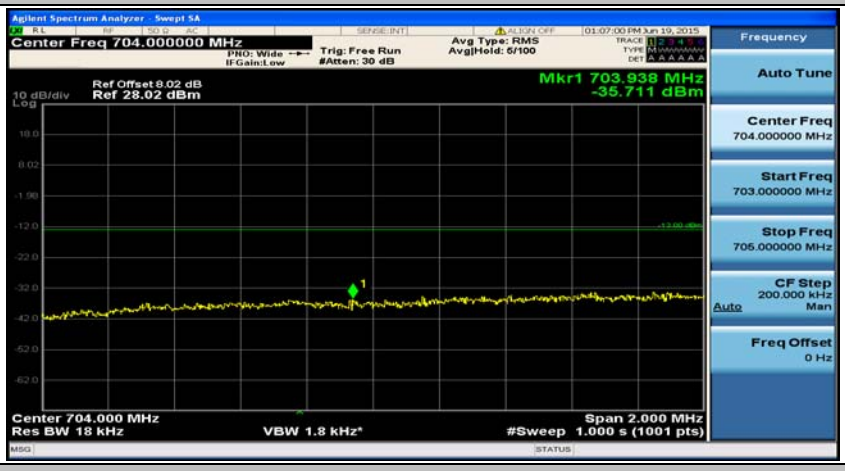


Channel Bandwidth: 10 MHz_LCH_16QAM_1RB#49



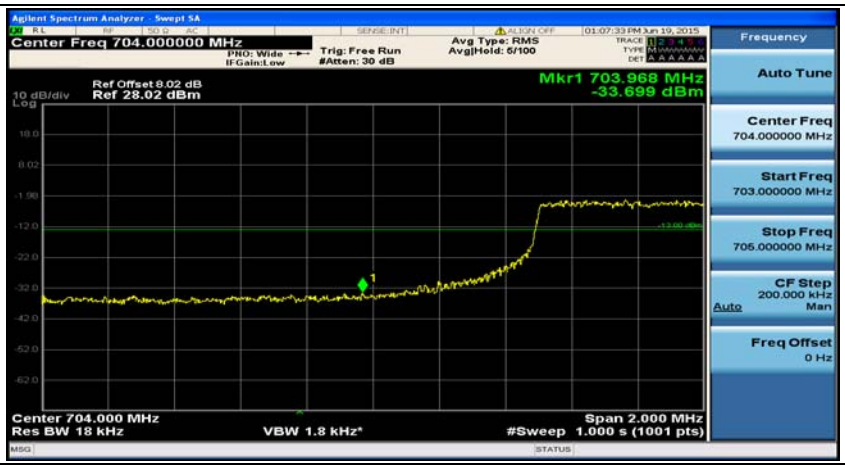
Channel Bandwidth: 10 MHz_LCH_16QAM_25RB#0

Channel Bandwidth: 10 MHz_LCH_16QAM_25RB#12

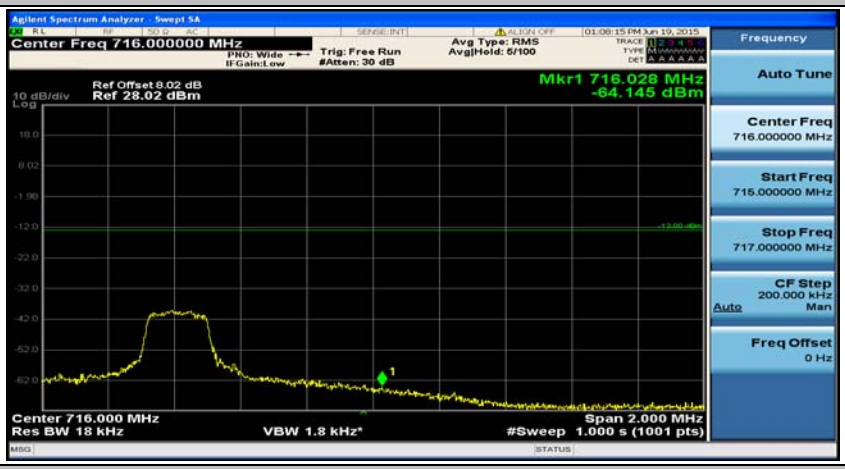


Channel Bandwidth: 10 MHz_LCH_16QAM_25RB#25

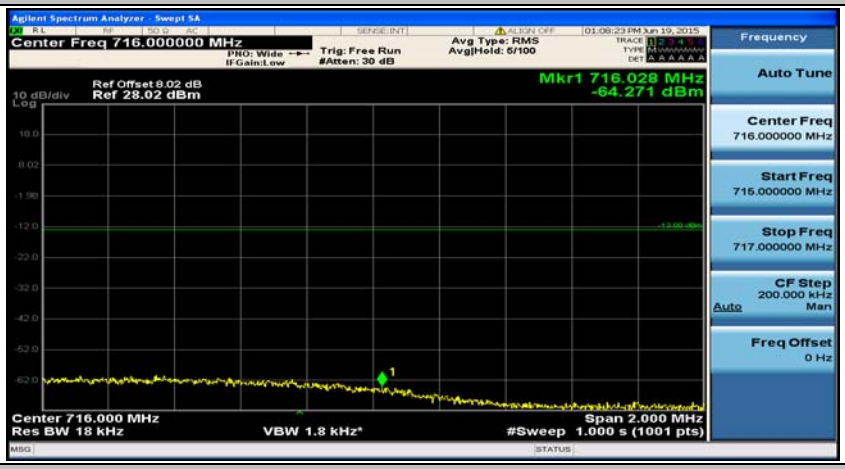
Channel Bandwidth: 10 MHz_LCH_16QAM_50RB#0



Channel Bandwidth: 10 MHz_HCH_16QAM_1RB#0

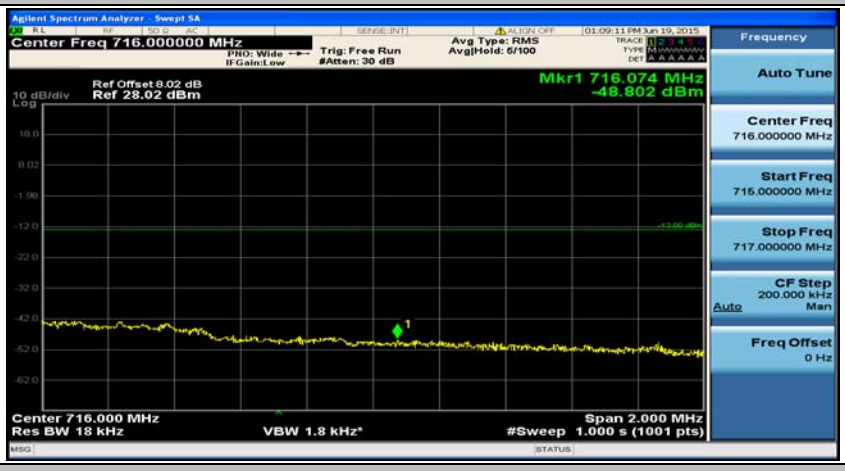


Channel Bandwidth: 10 MHz_HCH_16QAM_1RB#24

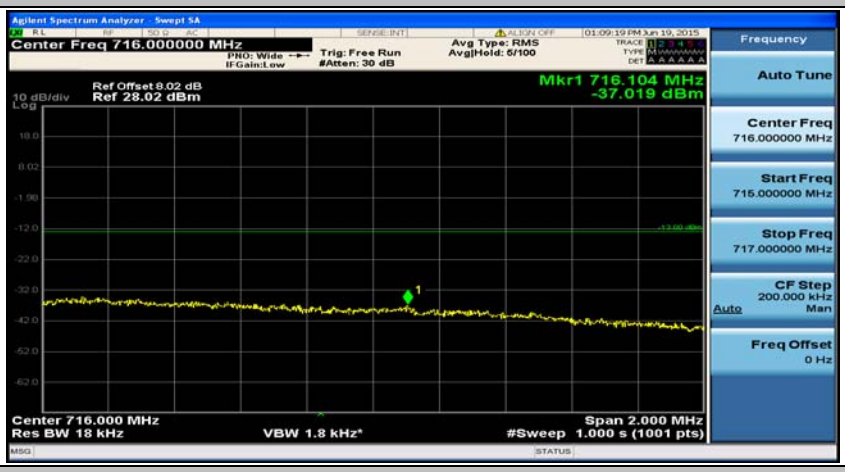


Channel Bandwidth: 10 MHz_HCH_16QAM_1RB#49

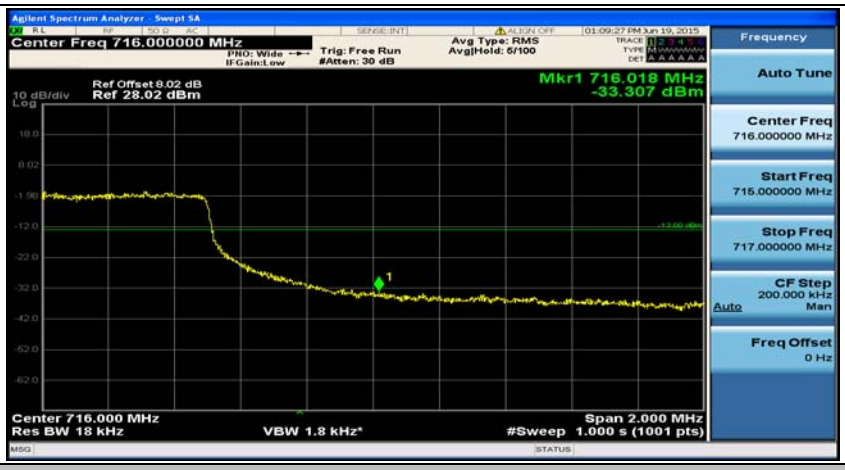
Channel Bandwidth: 10 MHz_HCH_16QAM_25RB#0



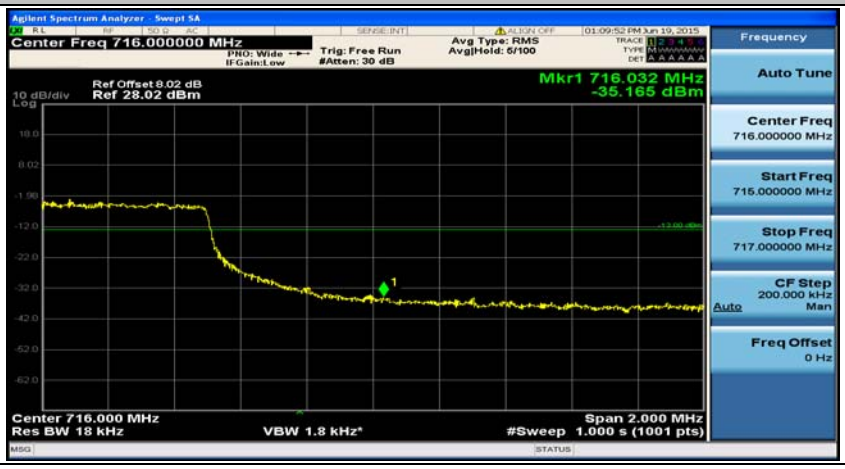
Channel Bandwidth: 10 MHz_HCH_16QAM_25RB#12



Channel Bandwidth: 10 MHz_HCH_16QAM_25RB#25



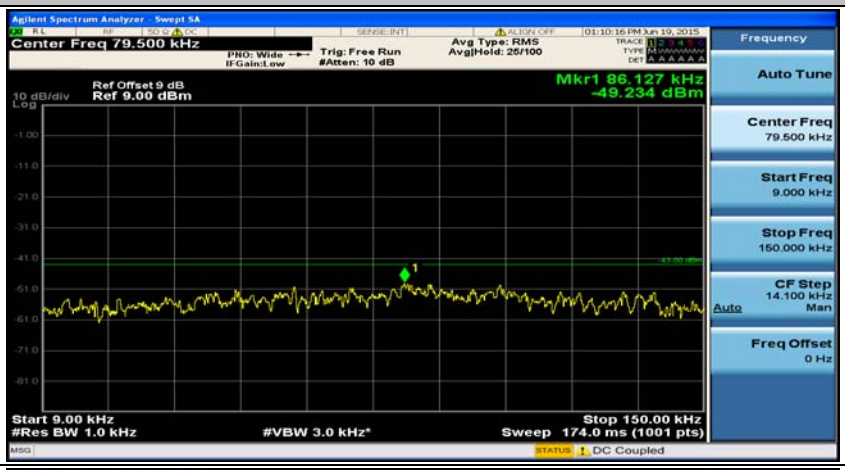
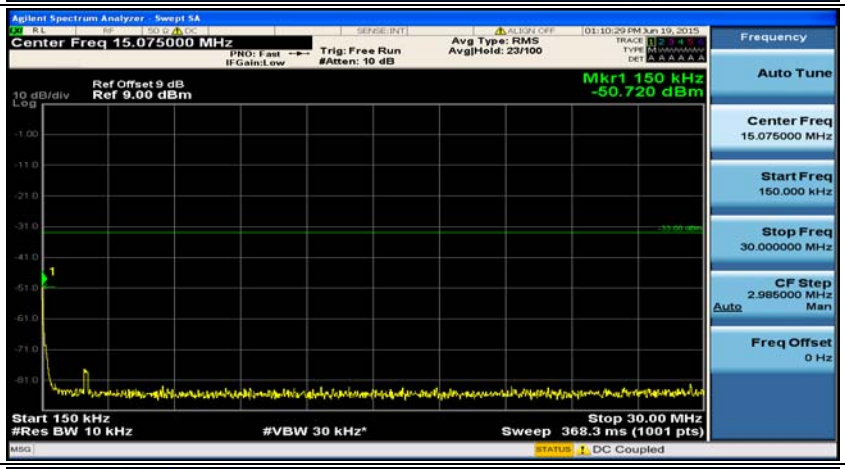
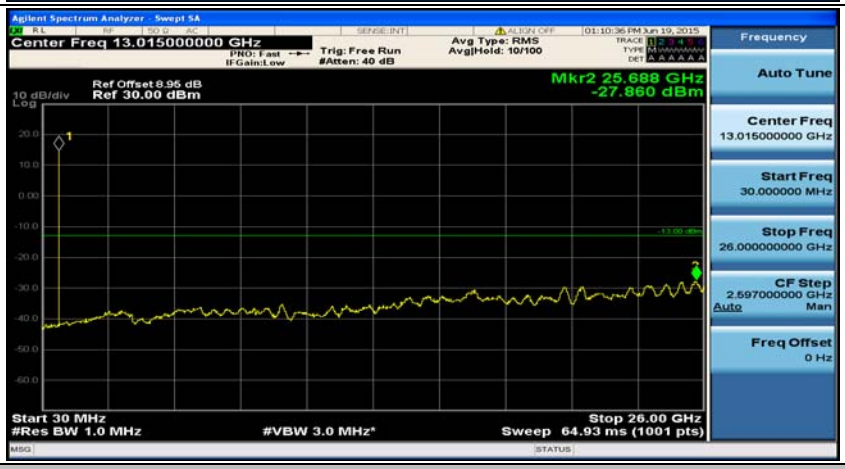
Channel Bandwidth: 10 MHz_HCH_16QAM_50RB#0

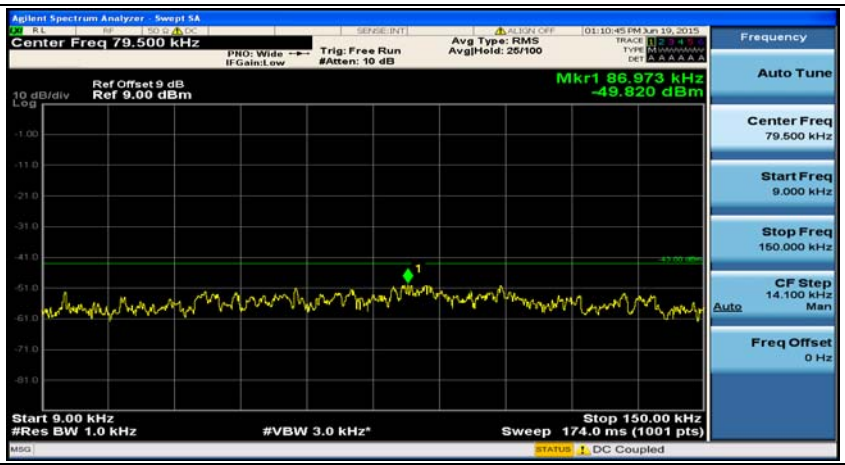


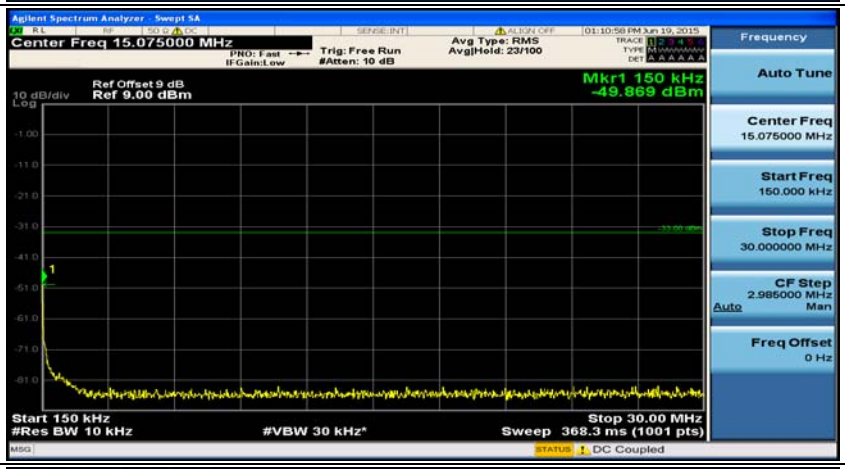
Appendix E: Conducted Spurious Emission

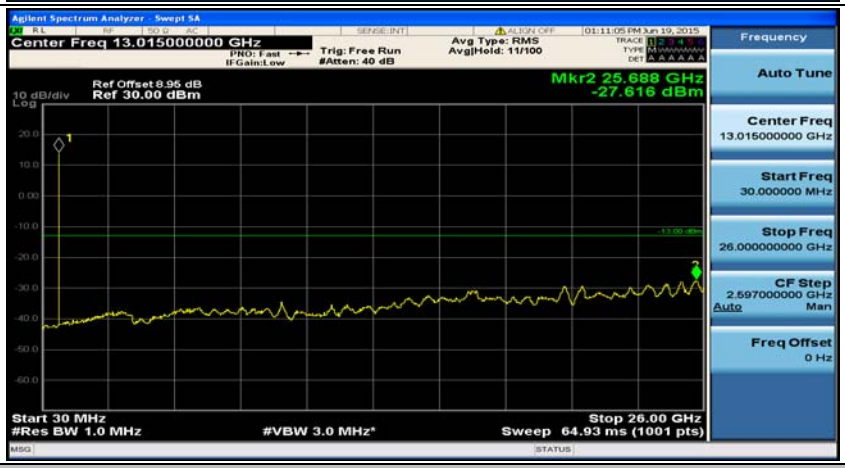
Test Graphs

Channel Bandwidth: 5 MHz

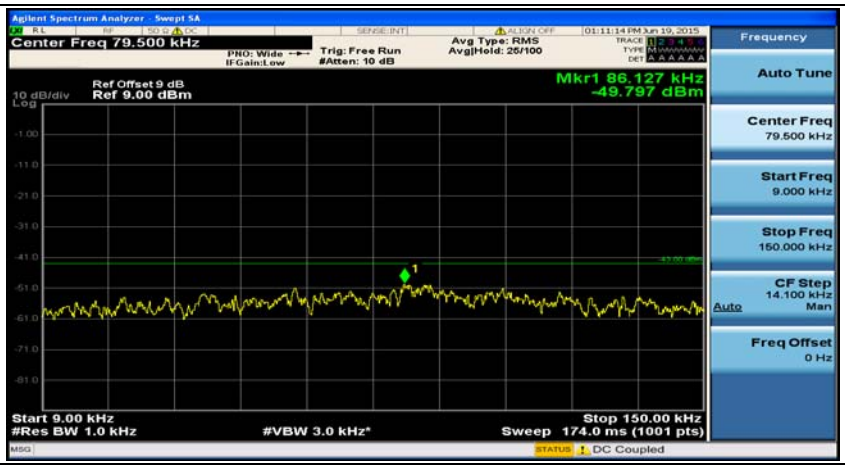
(Channel Bandwidth: 5 MHz)_LCH_QPSK_1RB#0



(Channel Bandwidth: 5 MHz)_LCH_QPSK_1RB#12

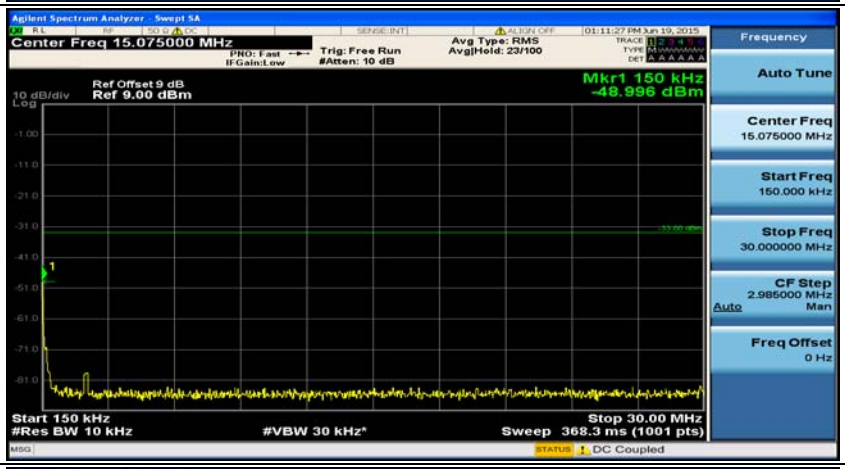


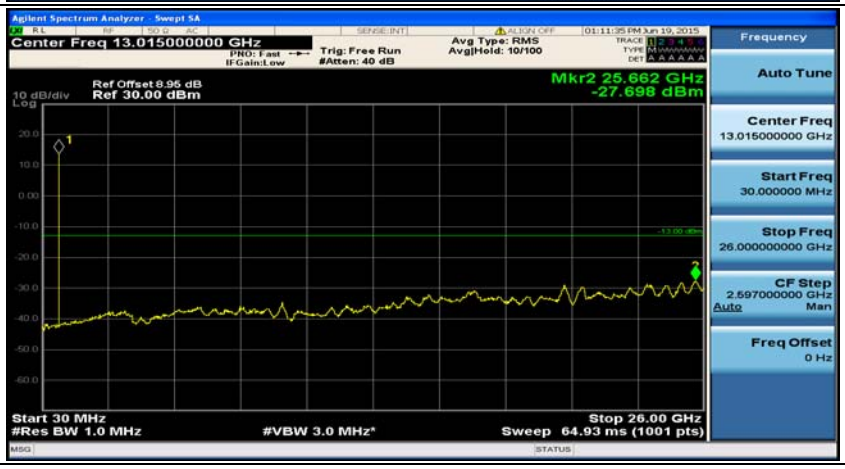


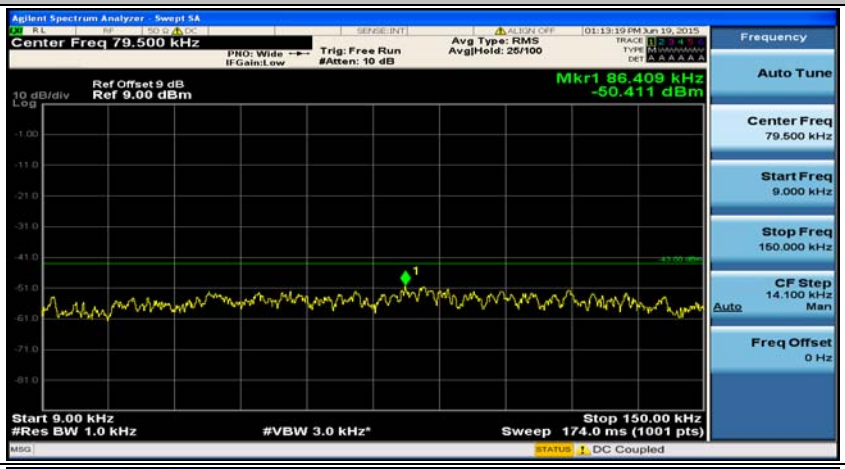
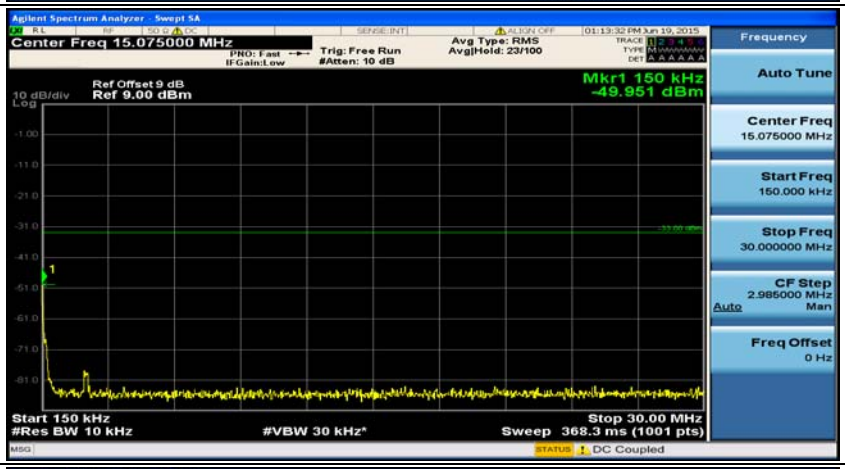
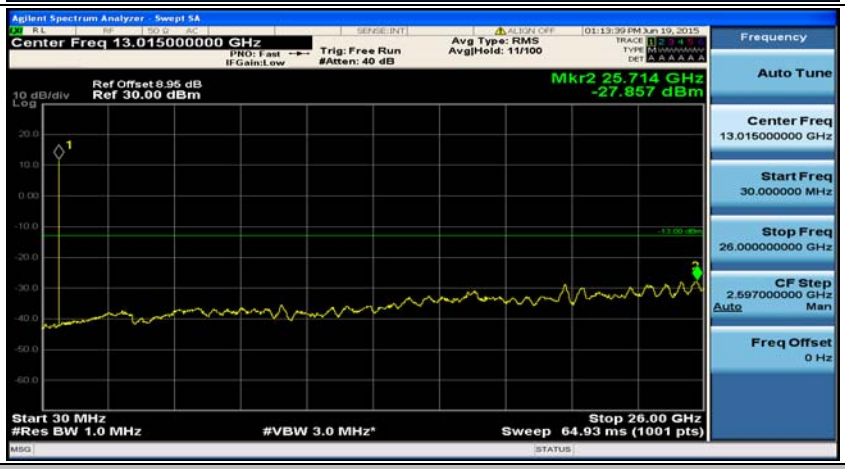


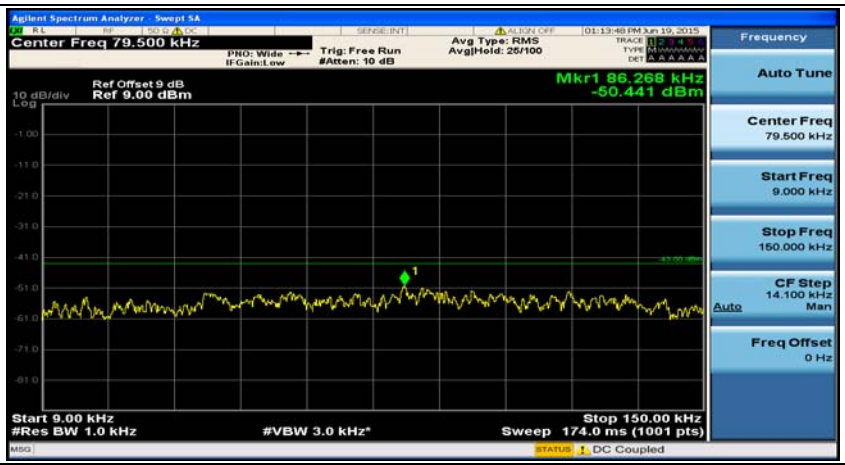
(Channel Bandwidth: 5 MHz)_LCH_QPSK_1RB#24

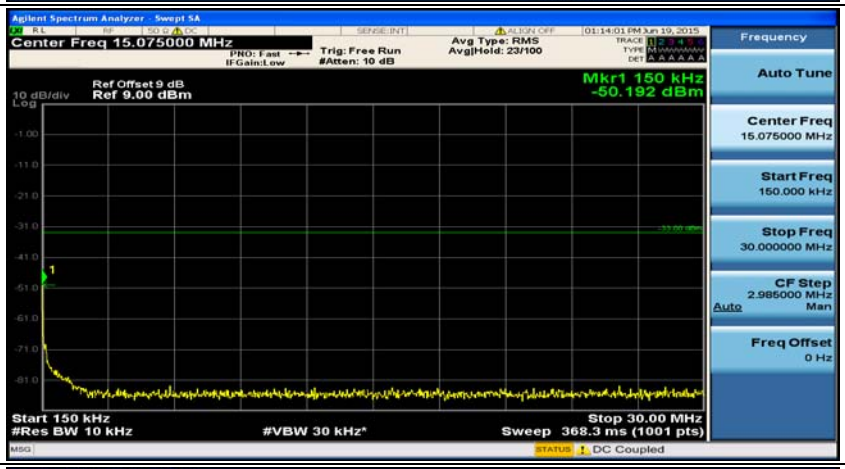

Agilent Spectrum Analyzer - Swept SA
Center Freq 79.500 kHz
PNO: Wide
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 25/100
01:11:14 PM Jun 19, 2015
Frequency
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Mkr1 86.127 kHz
-49.797 dBm
Auto Tune
Center Freq
79.500 kHz
Start Freq
9.000 kHz
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

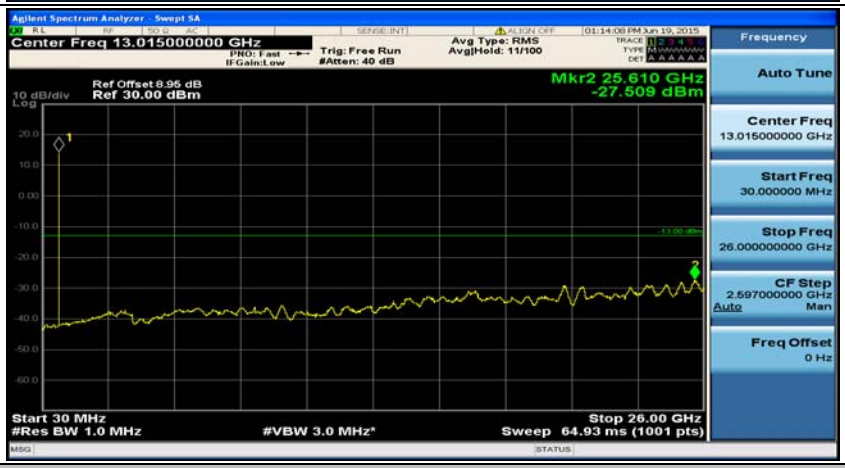

Agilent Spectrum Analyzer - Swept SA
Center Freq 15.075000 MHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 23/100
01:11:27 PM Jun 19, 2015
Frequency
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Mkr1 150 kHz
-48.996 dBm
Auto Tune
Center Freq
15.075000 MHz
Start Freq
150.000 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: 10/100
01:11:35 PM Jun 19, 2015
Frequency
Ref Offset 8.95 dB
10 dB/div
Log
Ref 30.00 dBm
Mkr2 25.662 GHz
-27.698 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)

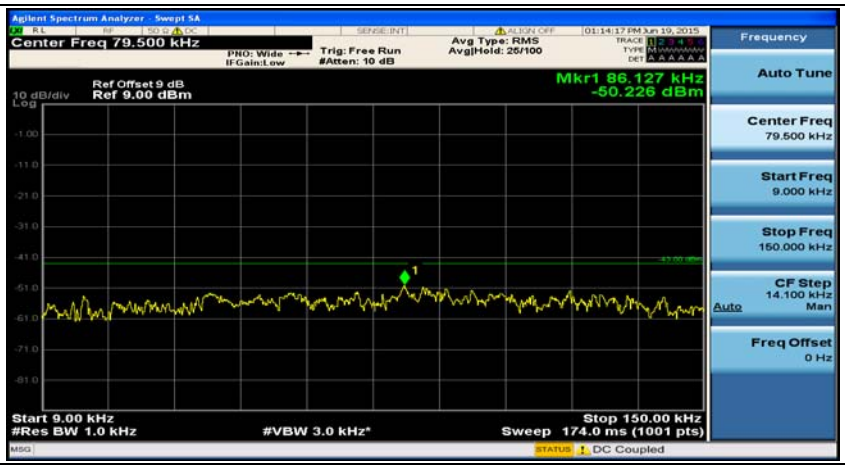
(Channel Bandwidth: 5 MHz)_MCH_QPSK_1RB#0



(Channel Bandwidth: 5 MHz)_MCH_QPSK_1RB#12

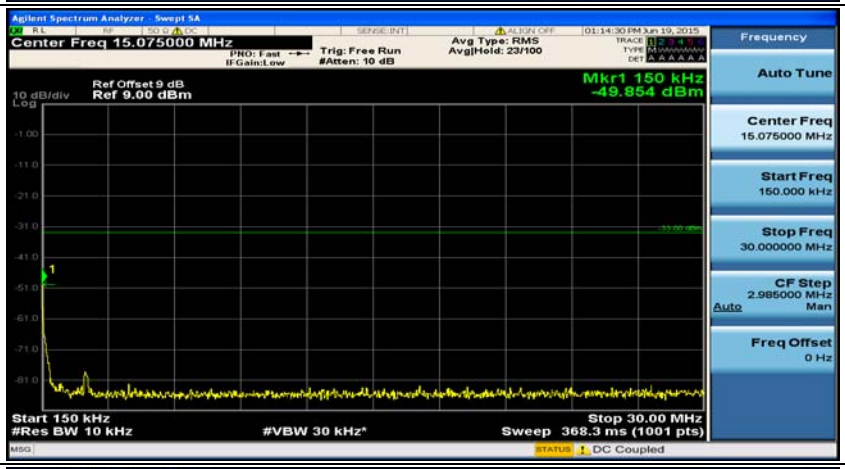


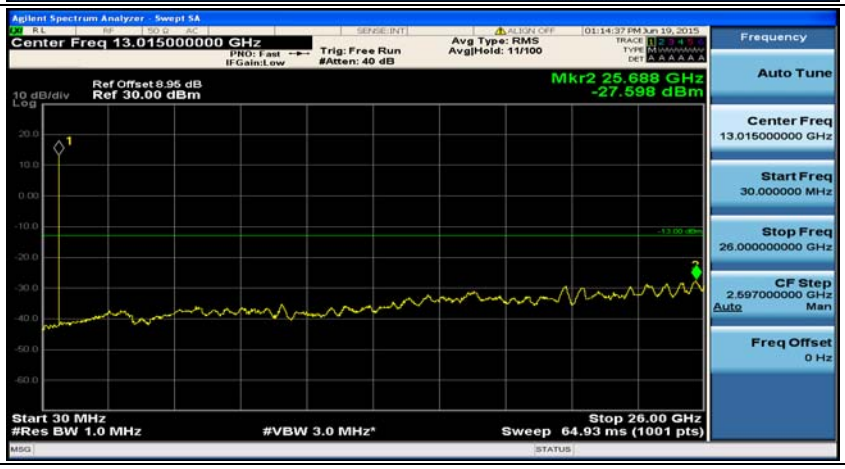


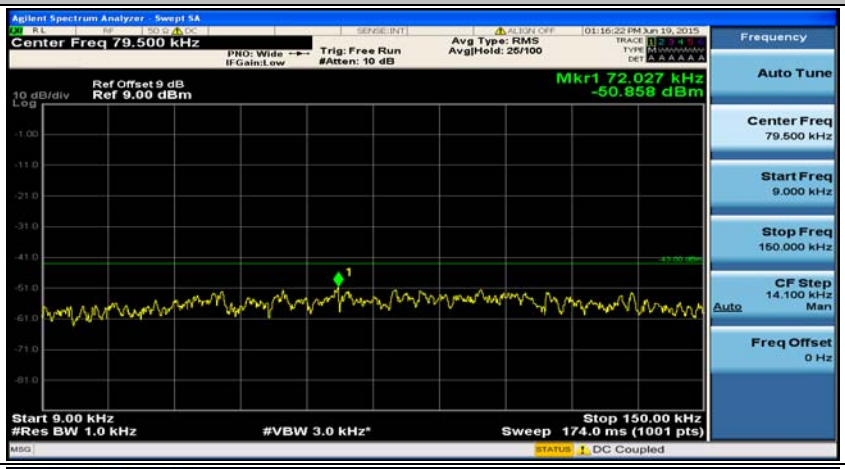
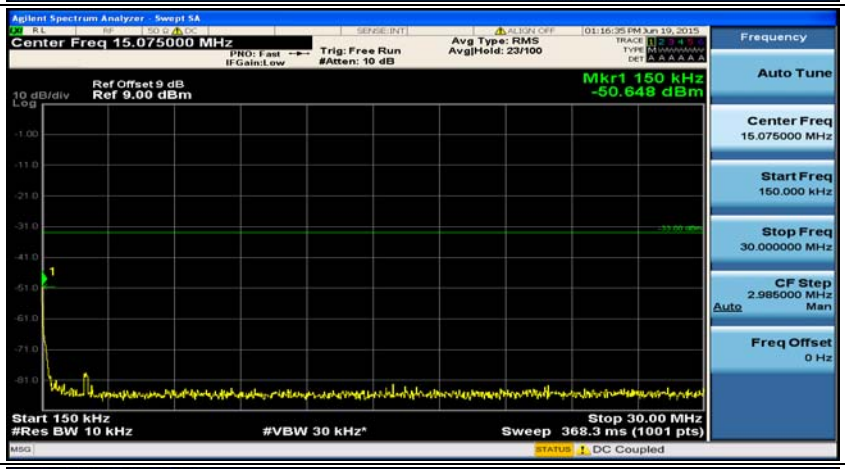
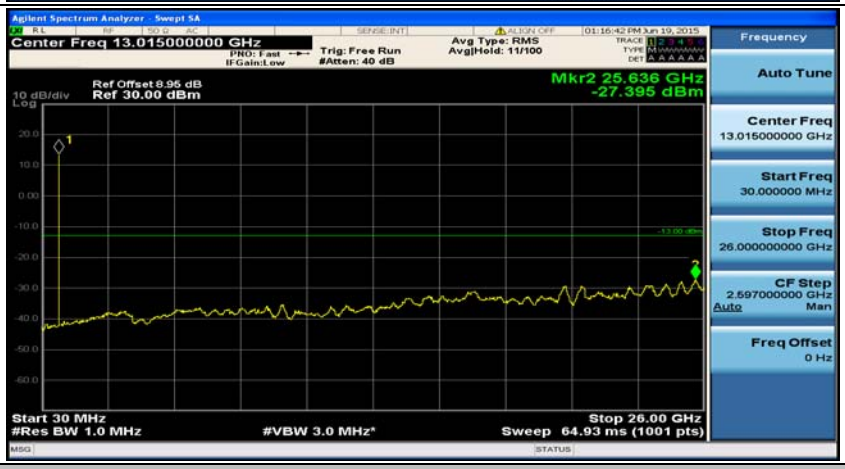


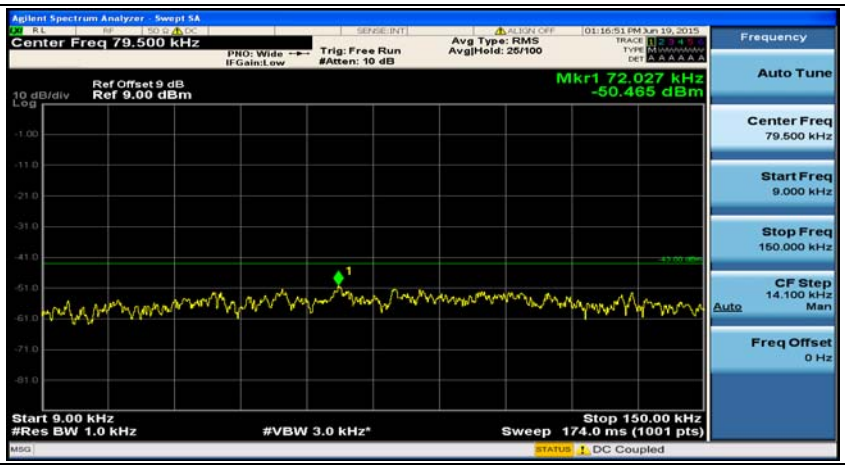
(Channel Bandwidth: 5 MHz)_MCH_QPSK_1RB#24

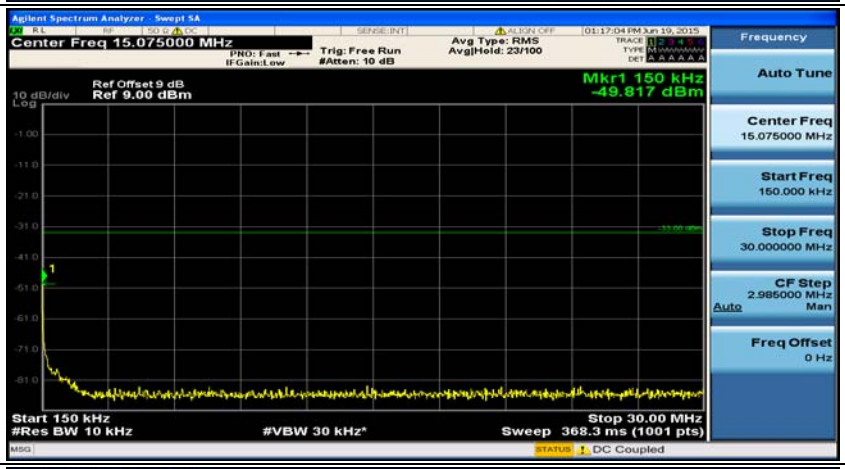

Agilent Spectrum Analyzer - Swept SA
Center Freq 79.500 kHz
PNO: Wide
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 25/100
01:14:17 PM Jun 19, 2015
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Mkr1 86.127 kHz
-50.226 dBm
Start 9.00 kHz
#Res BW 1.0 kHz
#VBW 3.0 kHz*
Stop 150.00 kHz
Sweep 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

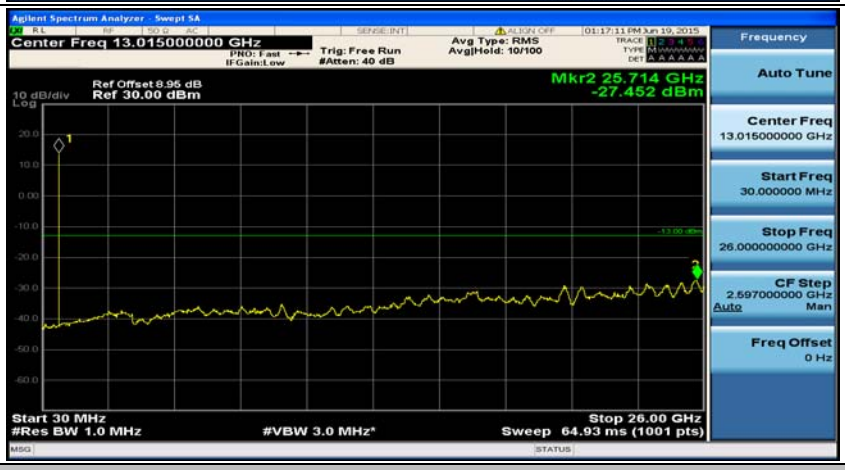

Agilent Spectrum Analyzer - Swept SA
Center Freq 15.075000 MHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 23/100
01:14:30 PM Jun 19, 2015
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Mkr1 150 kHz
-49.854 dBm
Start 150 kHz
#Res BW 10 kHz
#VBW 30 kHz*
Stop 30.00 MHz
Sweep 368.3 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: 11/100
01:14:37 PM Jun 19, 2015
Ref Offset 8.95 dB
10 dB/div
Log
Ref 30.00 dBm
Mkr2 25.688 GHz
-27.598 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

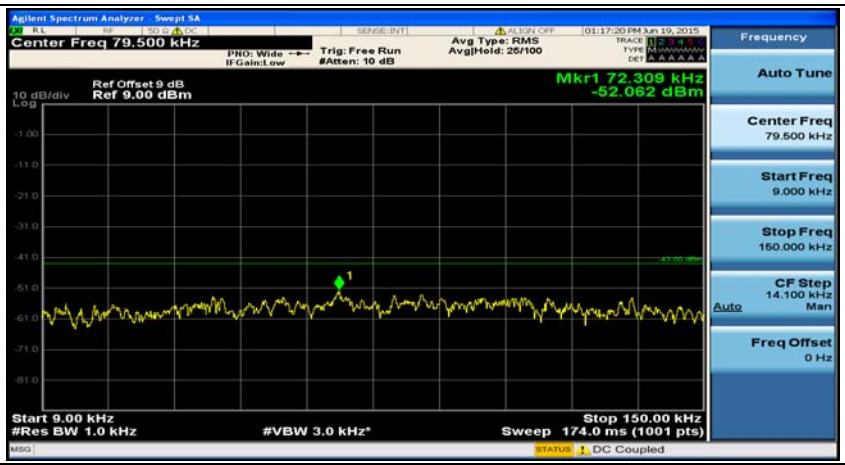
(Channel Bandwidth: 5 MHz)_HCH_QPSK_1RB#0



(Channel Bandwidth: 5 MHz)_HCH_QPSK_1RB#12

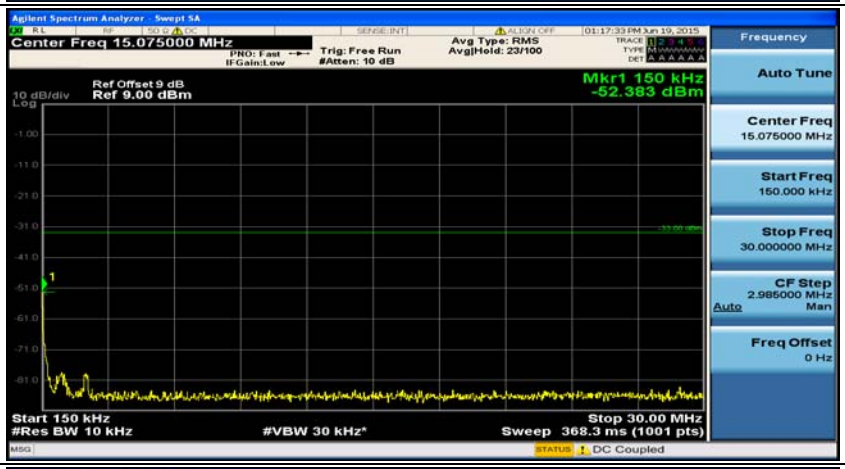


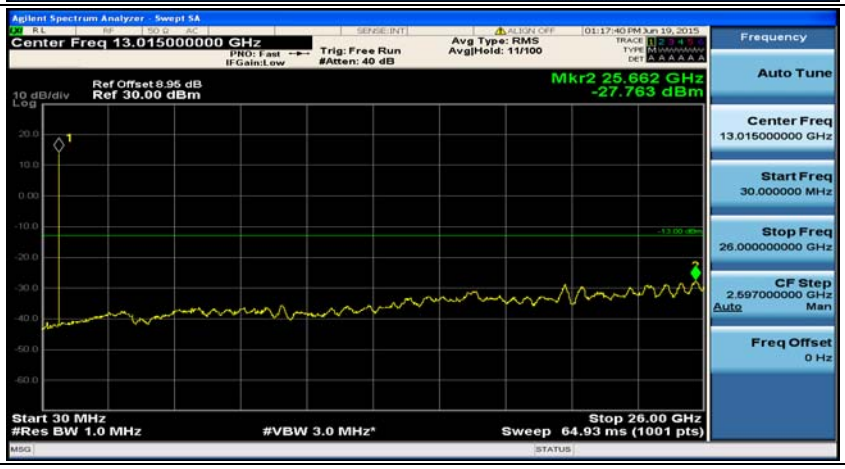


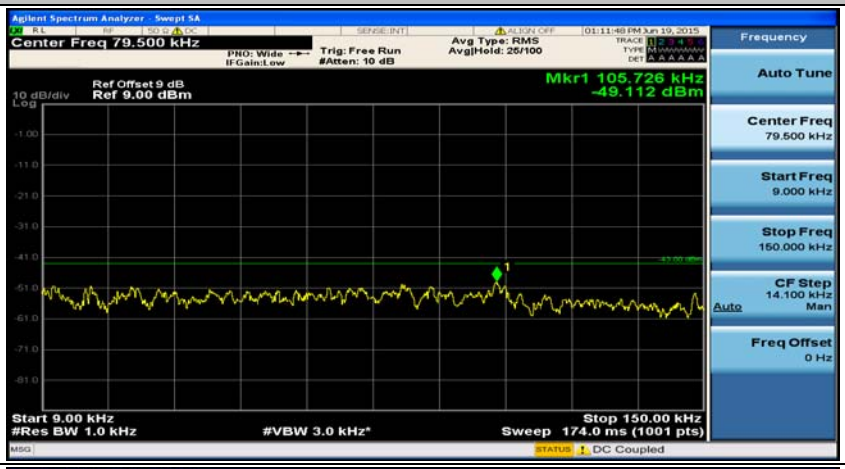
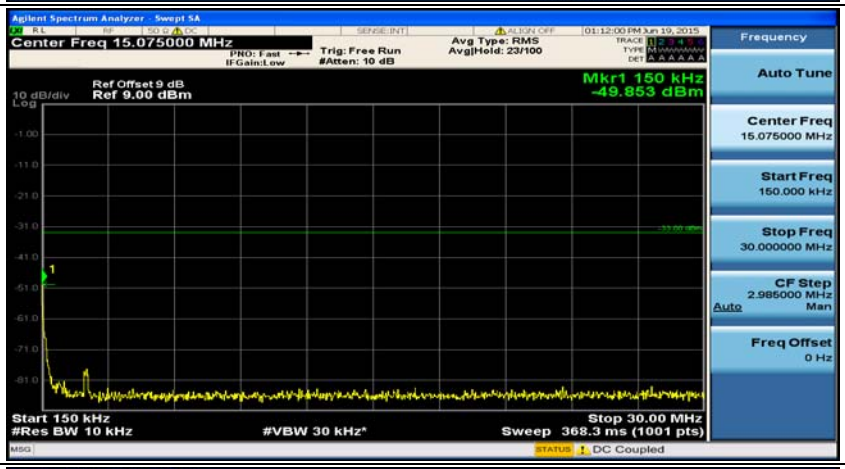
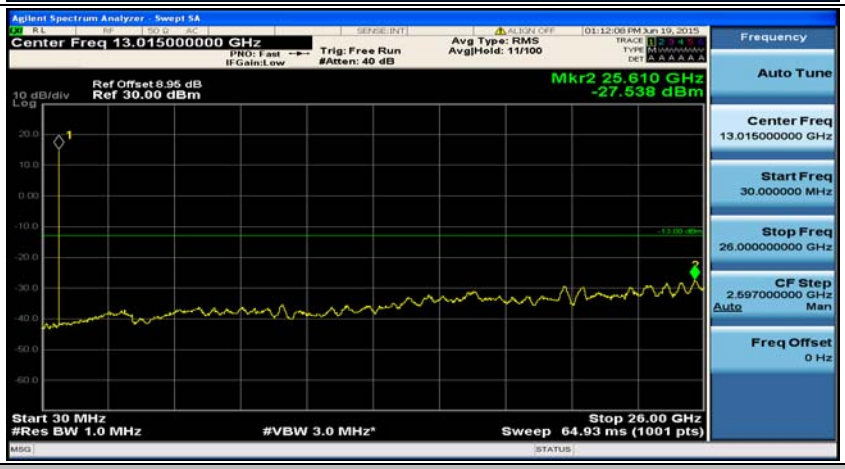


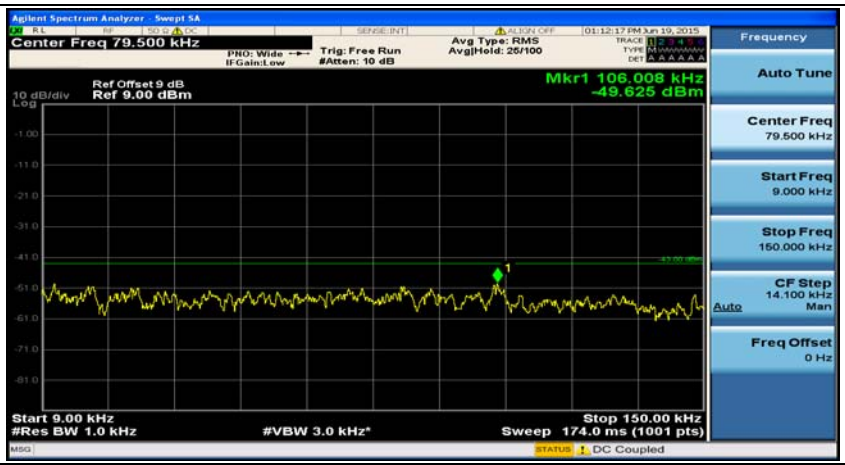
(Channel Bandwidth: 5 MHz)_HCH_QPSK_1RB#24

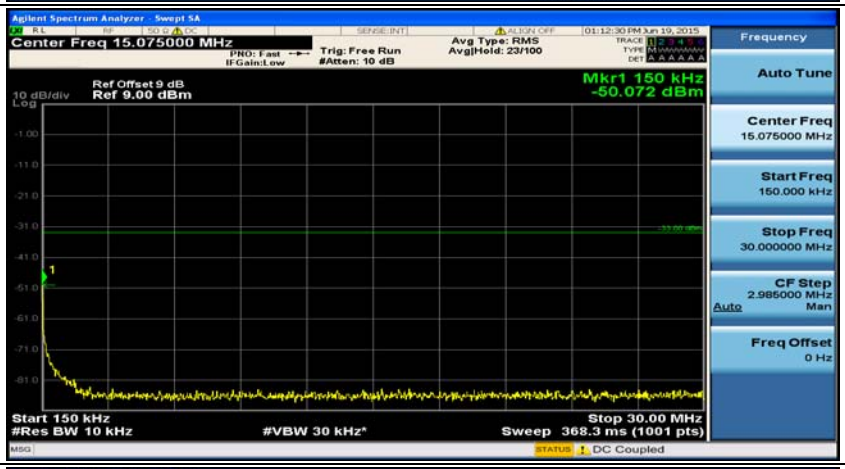

Agilent Spectrum Analyzer - Swept SA
Center Freq 79.500 kHz
PNO: Wide
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 25/100
01:17:20 PM Jun 19, 2015
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Mkr1 72.309 kHz
-52.062 dBm
Start 9.00 kHz
#Res BW 1.0 kHz
#VBW 3.0 kHz*
Stop 150.00 kHz
Sweep 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

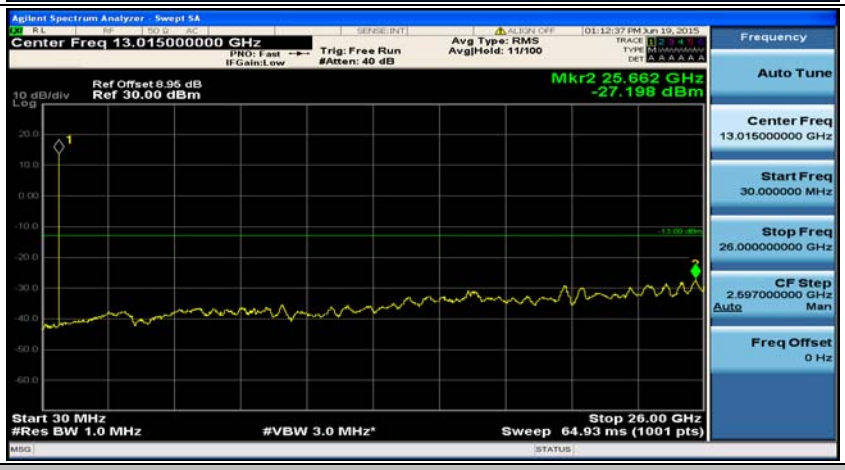

Agilent Spectrum Analyzer - Swept SA
Center Freq 15.075000 MHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 23/100
01:17:33 PM Jun 19, 2015
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Mkr1 150 kHz
-52.383 dBm
Start 150 kHz
#Res BW 10 kHz
#VBW 30 kHz*
Stop 30.00 MHz
Sweep 368.3 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: 11/100
01:17:40 PM Jun 19, 2015
Ref Offset 8.95 dB
10 dB/div
Log
Ref 30.00 dBm
Mkr2 25.662 GHz
-27.763 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

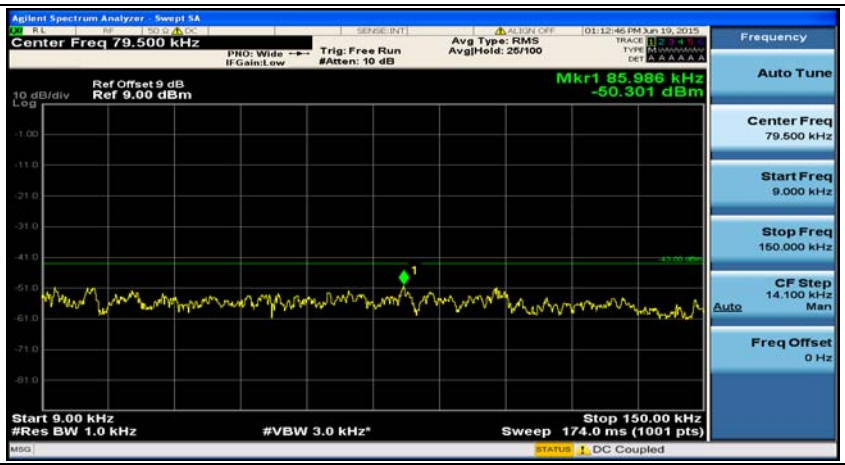
(Channel Bandwidth: 5 MHz)_LCH_16QAM_1RB#0



(Channel Bandwidth: 5 MHz)_LCH_16QAM_1RB#12

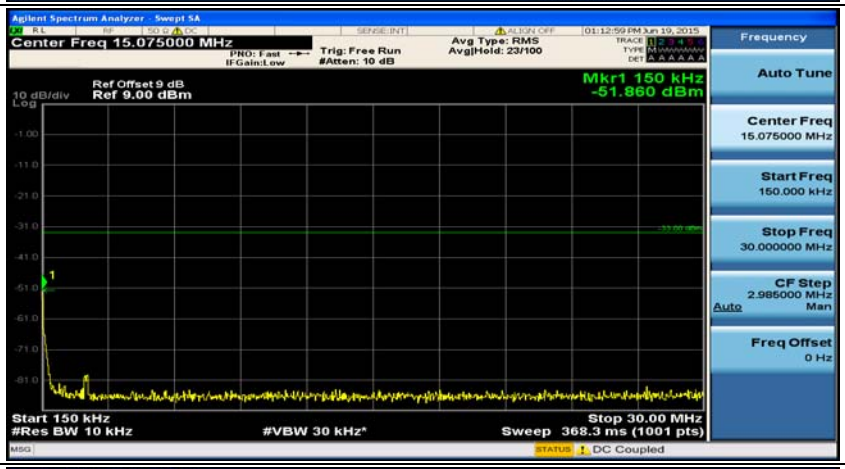


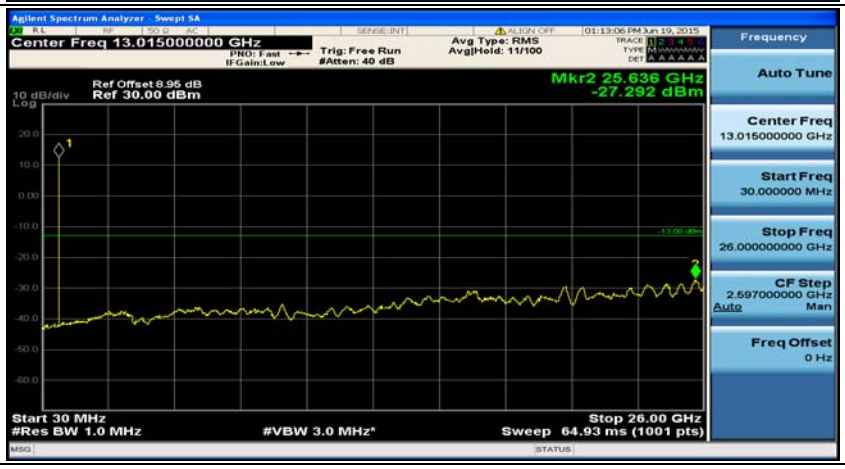


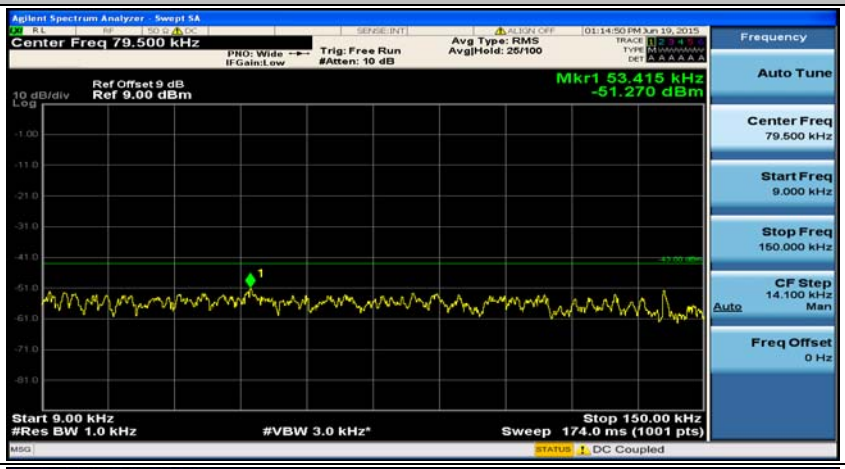
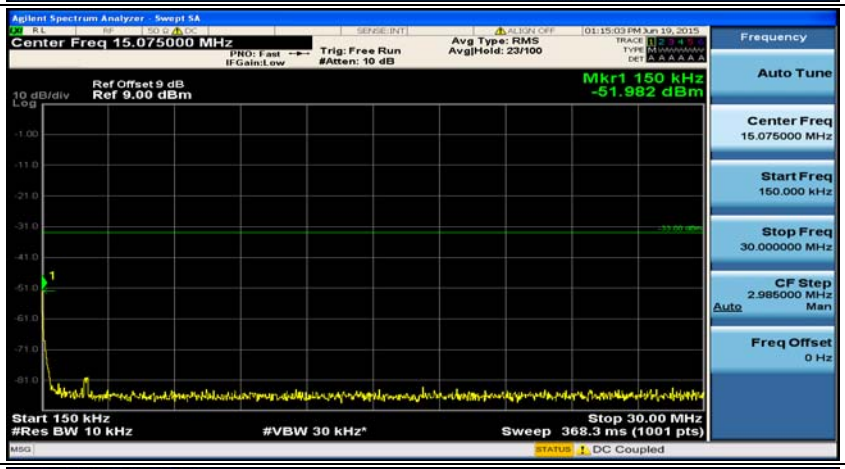
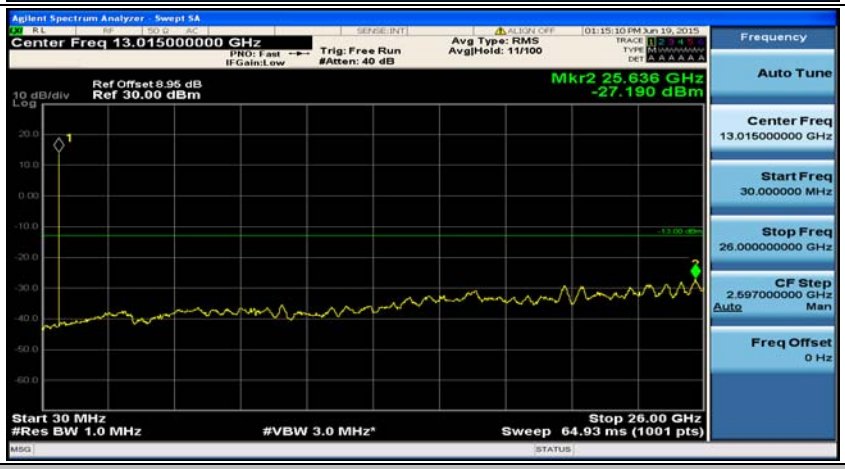


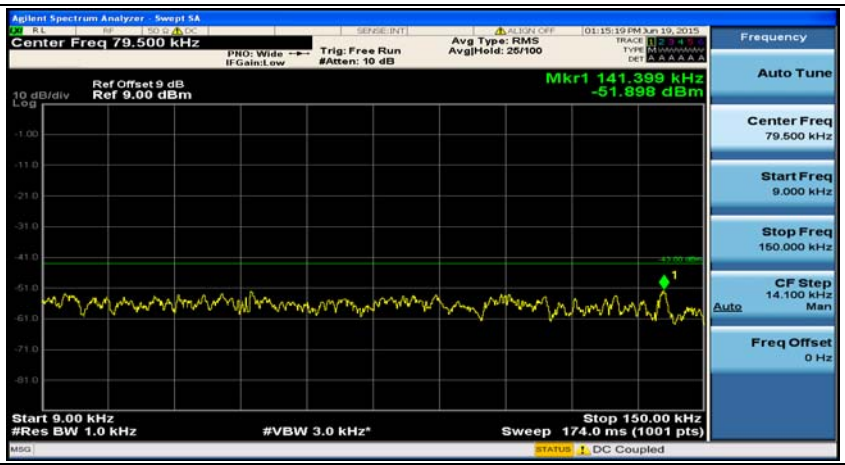
(Channel Bandwidth: 5 MHz)_LCH_16QAM_1RB#24

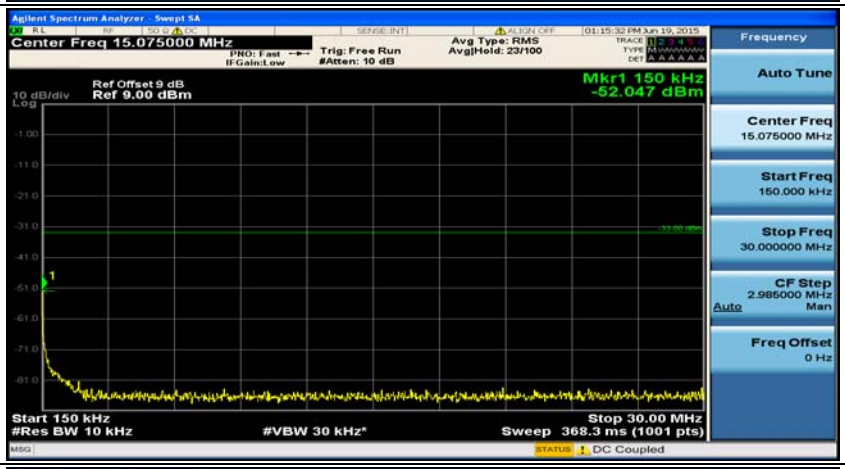

Agilent Spectrum Analyzer - Swept SA
Center Freq 79.500 kHz
PNO: Wide
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 25/100
01:12:46 PM Jun 19, 2015
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Mkr1 85.986 kHz
-50.301 dBm
Start 9.00 kHz
#Res BW 1.0 kHz
#VBW 3.0 kHz*
Stop 150.00 kHz
Sweep 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

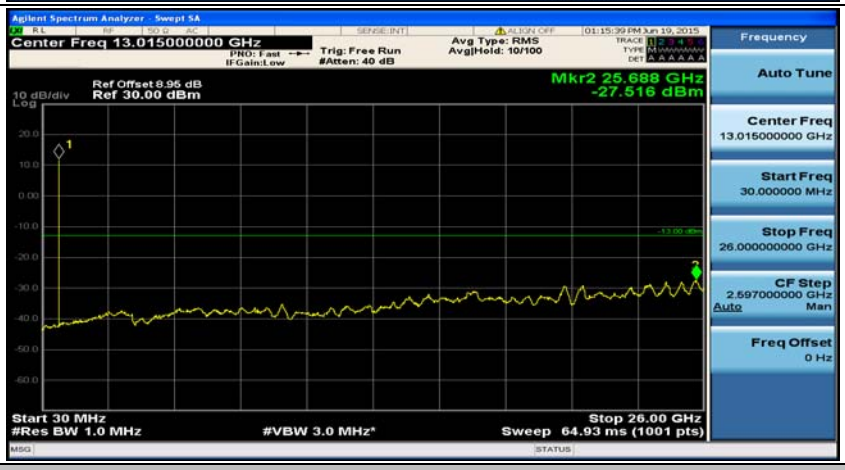

Agilent Spectrum Analyzer - Swept SA
Center Freq 15.075000 MHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 23/100
01:12:59 PM Jun 19, 2015
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Mkr1 150 kHz
-51.860 dBm
Start 150 kHz
#Res BW 10 kHz
#VBW 30 kHz*
Stop 30.00 MHz
Sweep 368.3 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: 11/100
01:13:06 PM Jun 19, 2015
Ref Offset 8.95 dB
10 dB/div
Log
Ref 30.00 dBm
Mkr2 25.636 GHz
-27.292 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

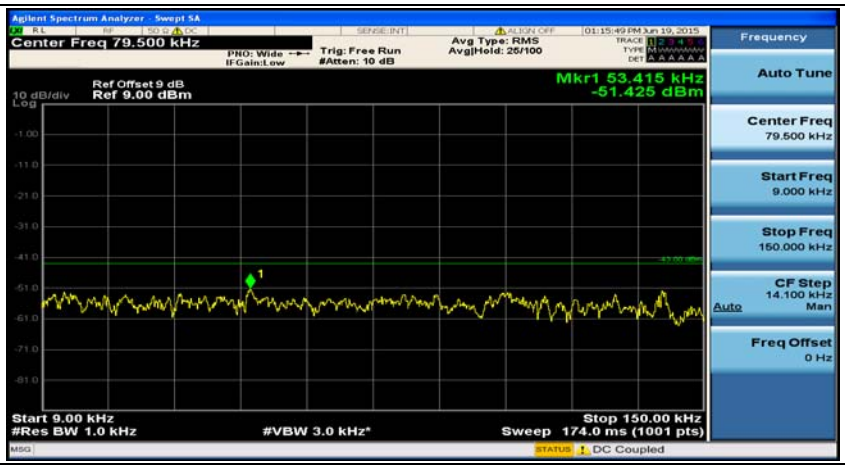
(Channel Bandwidth: 5 MHz)_MCH_16QAM_1RB#0



(Channel Bandwidth: 5 MHz)_MCH_16QAM_1RB#12

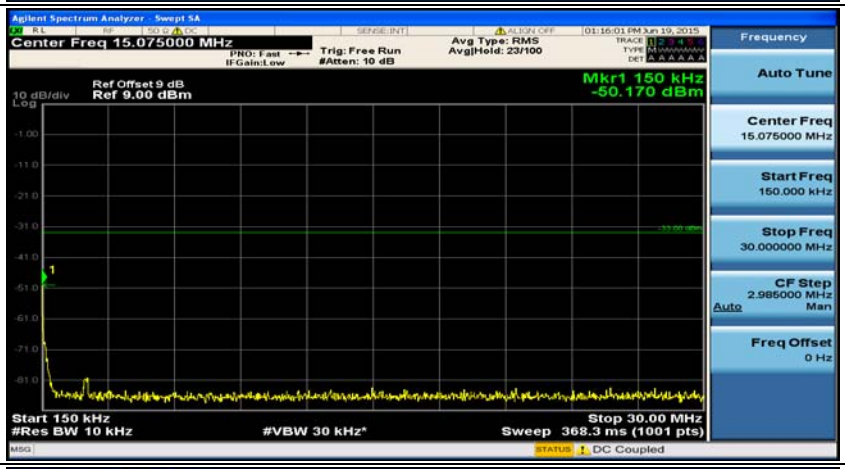


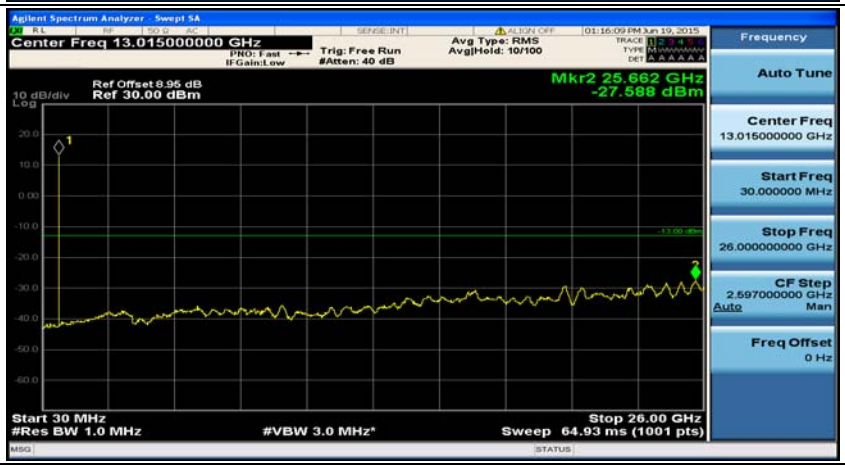


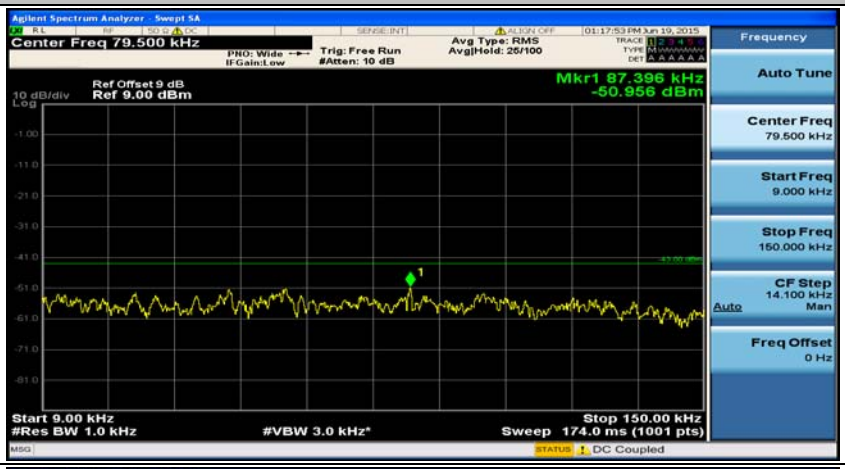
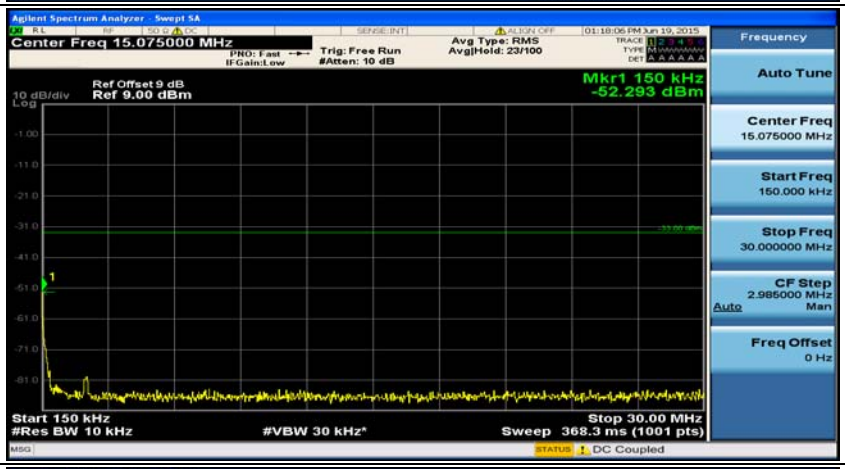
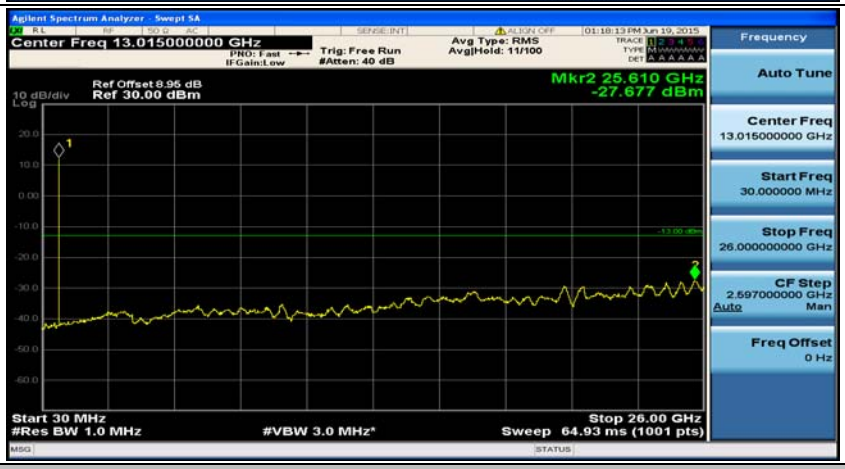


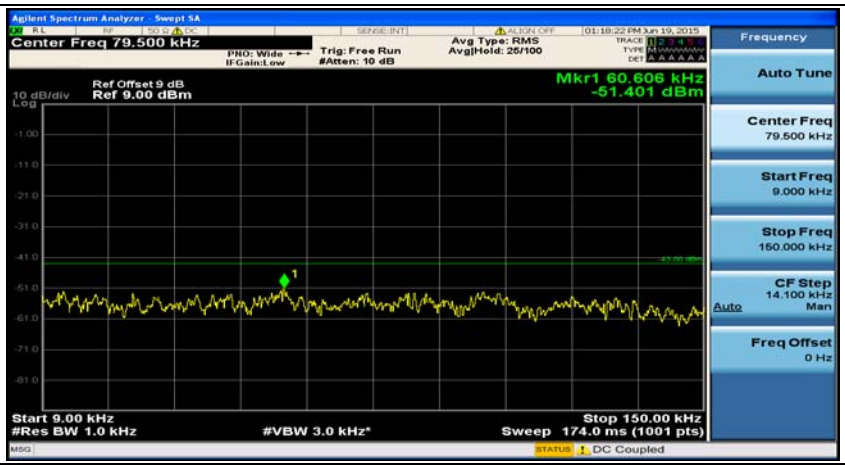
(Channel Bandwidth: 5 MHz)_MCH_16QAM_1RB#24

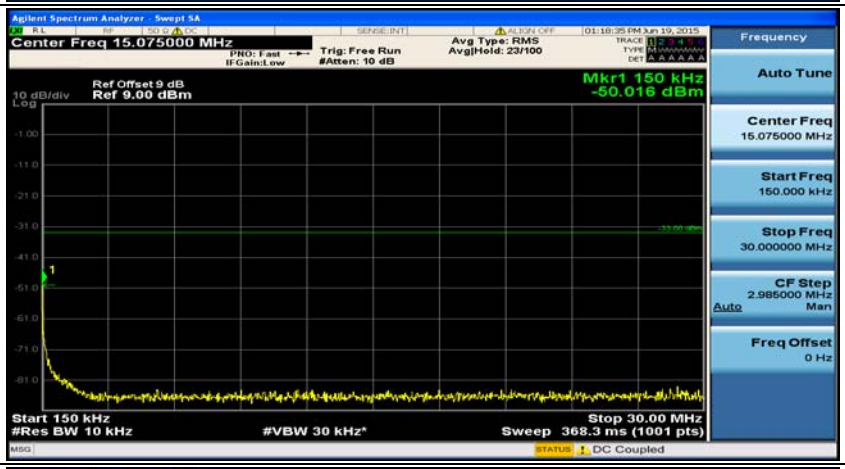

Agilent Spectrum Analyzer - Swept SA
Center Freq 79.500 kHz
PNO: Wide
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 25/100
01:15:49 PM Jun 19, 2015
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Mkr1 53.415 kHz
-51.425 dBm
Start 9.00 kHz
#Res BW 1.0 kHz
#VBW 3.0 kHz*
Stop 150.00 kHz
Sweep 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

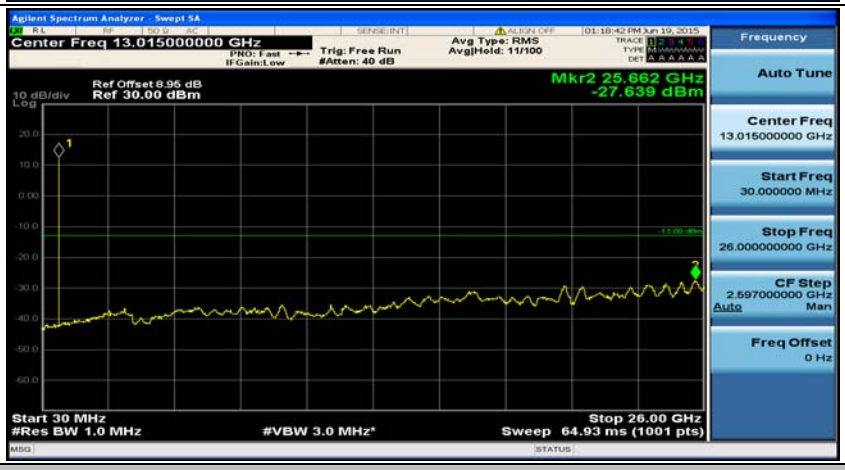

Agilent Spectrum Analyzer - Swept SA
Center Freq 15.075000 MHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 23/100
01:16:01 PM Jun 19, 2015
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Mkr1 150 kHz
-50.170 dBm
Start 150 kHz
#Res BW 10 kHz
#VBW 30 kHz*
Stop 30.00 MHz
Sweep 368.3 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: 10/100
01:16:09 PM Jun 19, 2015
Ref Offset 8.95 dB
10 dB/div
Log
Ref 30.00 dBm
Mkr2 25.662 GHz
-27.588 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

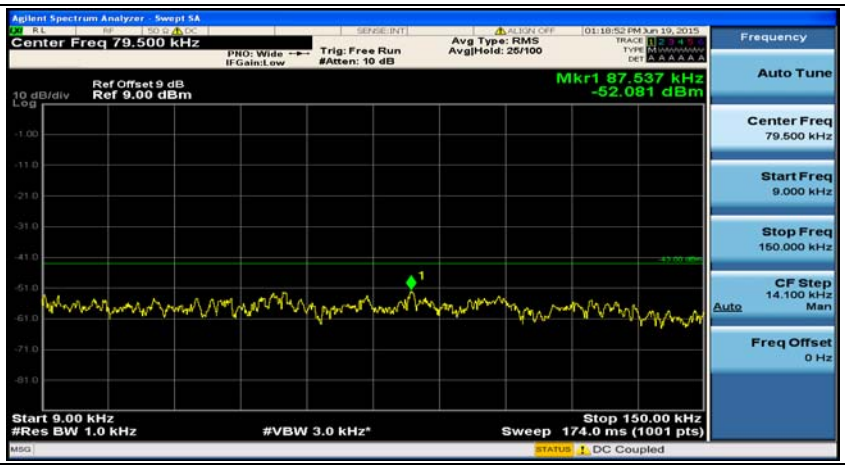
(Channel Bandwidth: 5 MHz)_HCH_16QAM_1RB#0



(Channel Bandwidth: 5 MHz)_HCH_16QAM_1RB#12

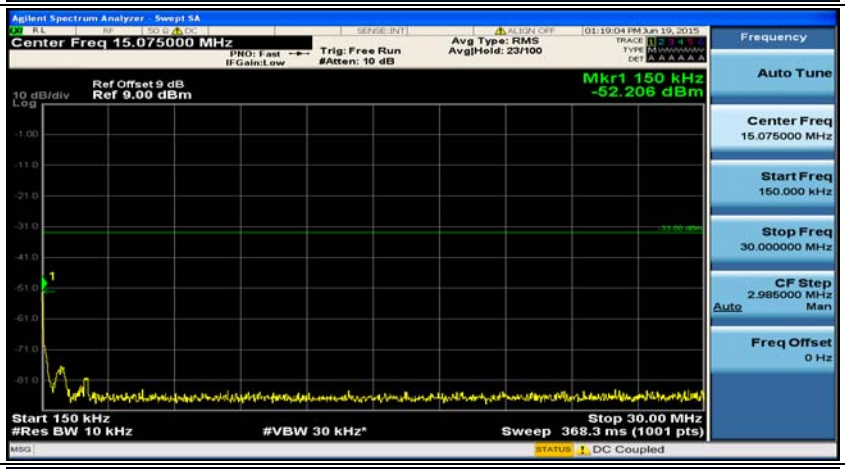


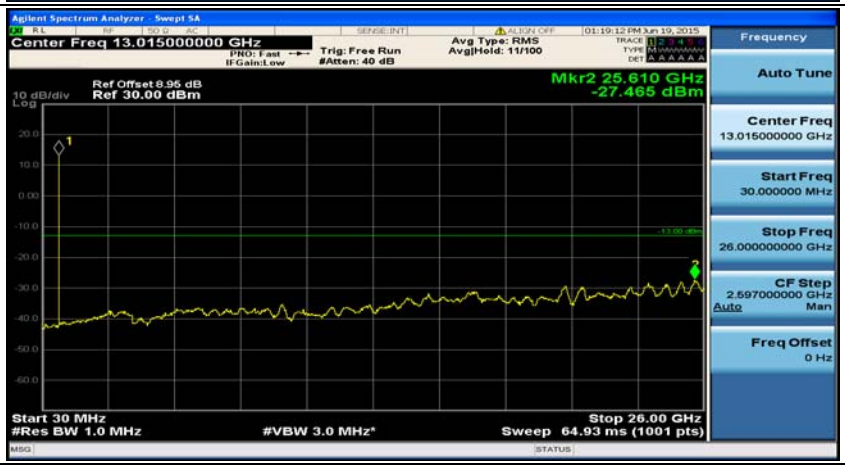




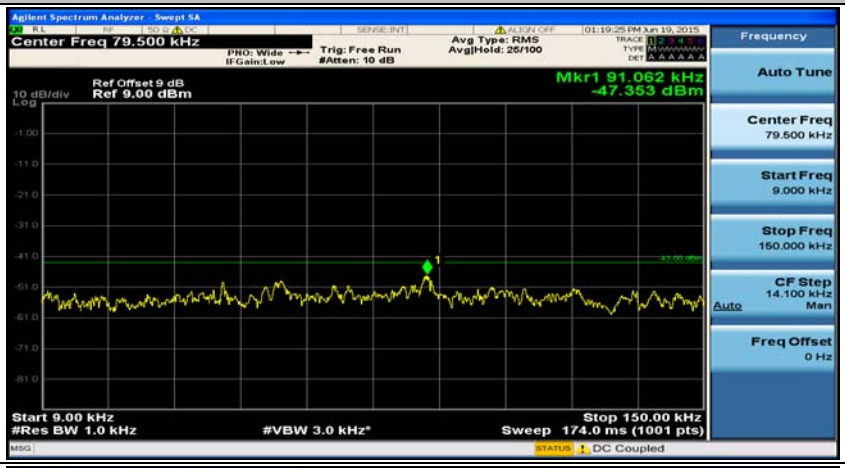
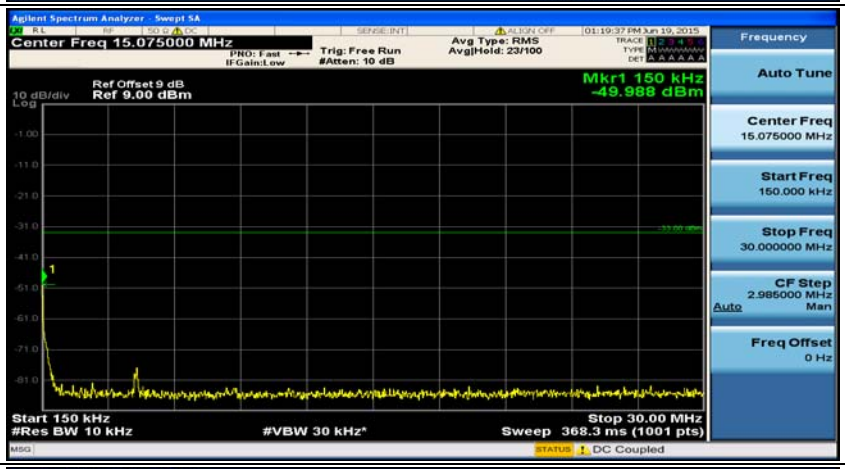
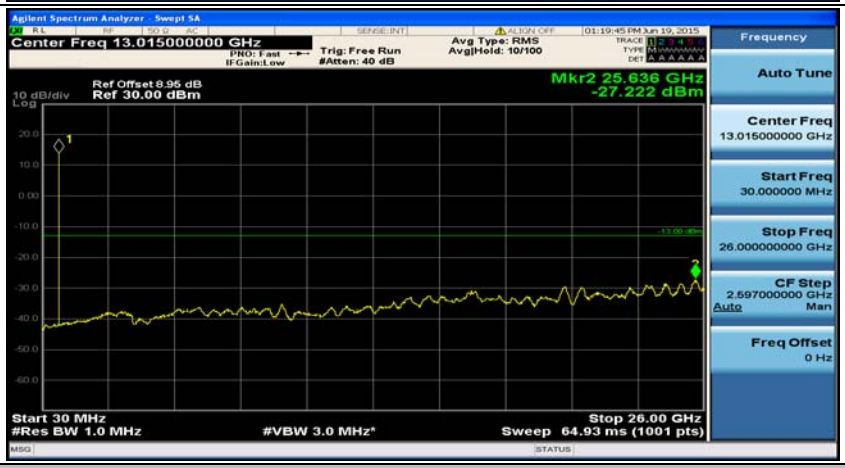
(Channel Bandwidth: 5 MHz)_HCH_16QAM_1RB#24

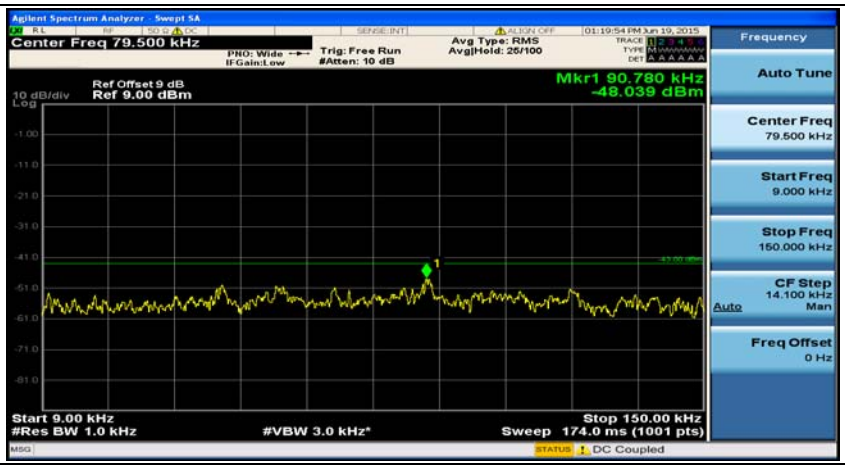

Agilent Spectrum Analyzer - Swept SA
Center Freq 79.500 kHz
PNO: Wide
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 25/100
01:18:52 PM Jun 19, 2015
Ref Offset 9 dB
10 dB/div
Ref 9.00 dBm
Log
Mkr1 87.537 kHz
-52.081 dBm
Start 9.00 kHz
#Res BW 1.0 kHz
#VBW 3.0 kHz*
Stop 150.00 kHz
Sweep 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

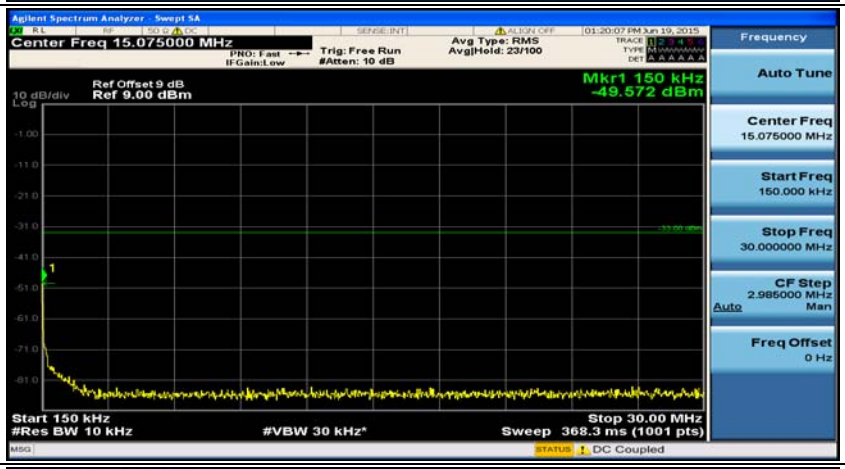

Agilent Spectrum Analyzer - Swept SA
Center Freq 15.075000 MHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 23/100
01:19:04 PM Jun 19, 2015
Ref Offset 9 dB
10 dB/div
Ref 9.00 dBm
Log
Mkr1 150 kHz
-52.206 dBm
Start 150 kHz
#Res BW 10 kHz
#VBW 30 kHz*
Stop 30.00 MHz
Sweep 368.3 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

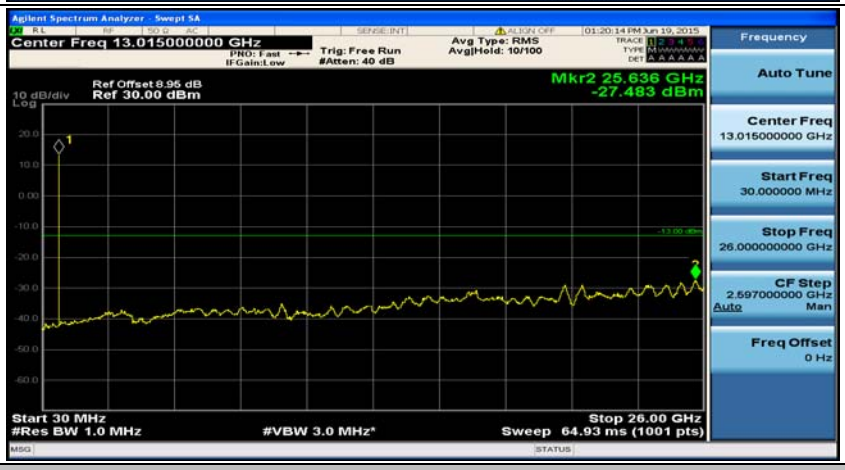

Agilent Spectrum Analyzer - Swept SA
Center Freq 13.015000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 40 dB
Avg Type: RMS
Avg|Hold: 11/100
01:19:12 PM Jun 19, 2015
Ref Offset 8.95 dB
10 dB/div
Ref 30.00 dBm
Log
Mkr2 25.610 GHz
-27.465 dBm
Start 30 MHz
#Res BW 1.0 MHz
#VBW 3.0 MHz*
Stop 26.00 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

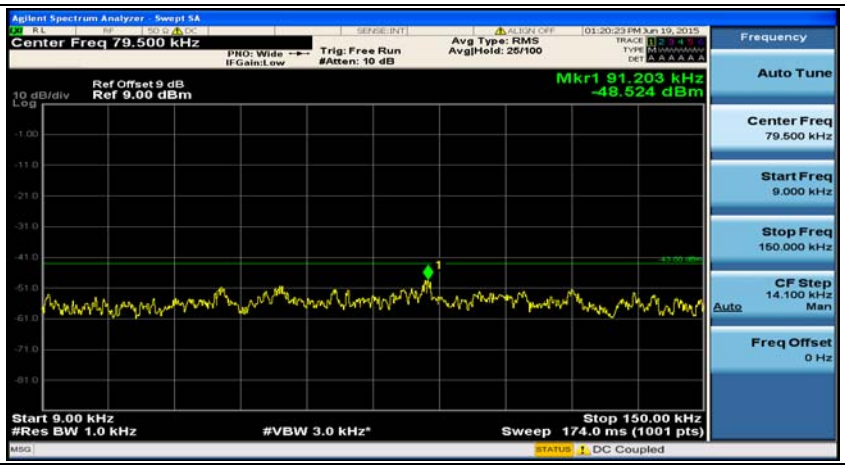
Channel Bandwidth: 10 MHz_LCH_QPSK_1RB#0



Channel Bandwidth: 10 MHz_LCH_QPSK_1RB#24

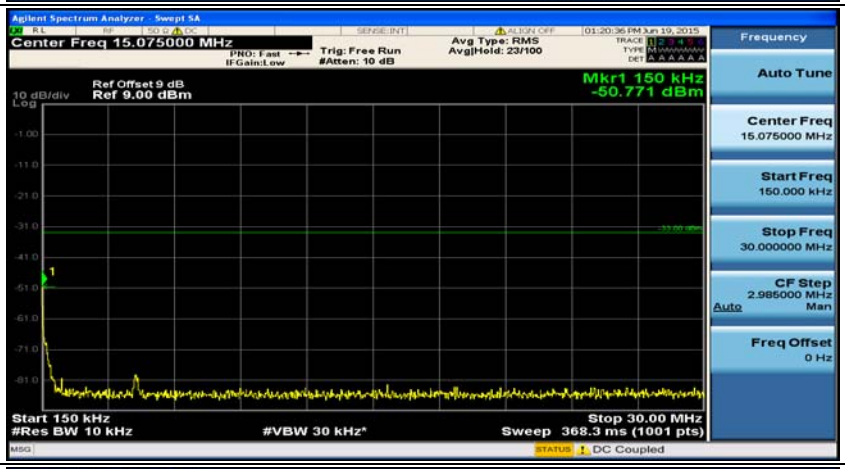


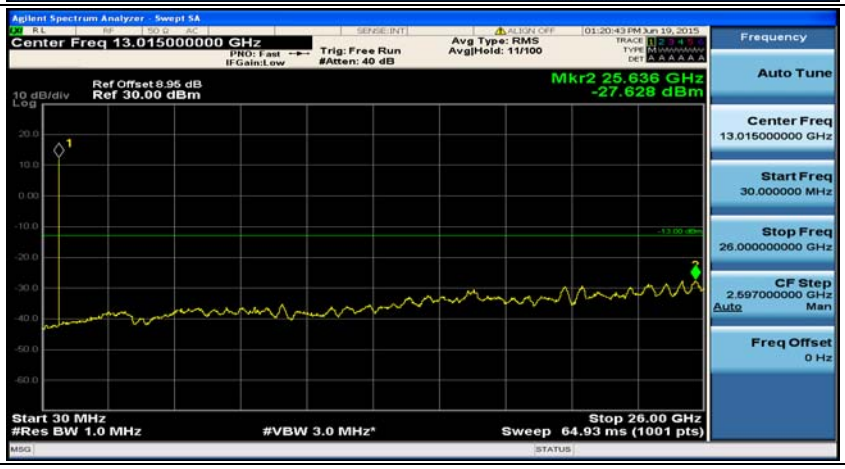


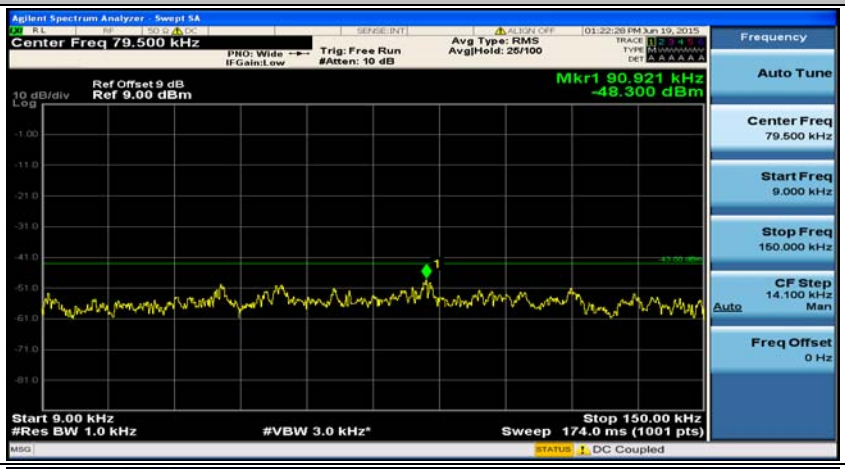
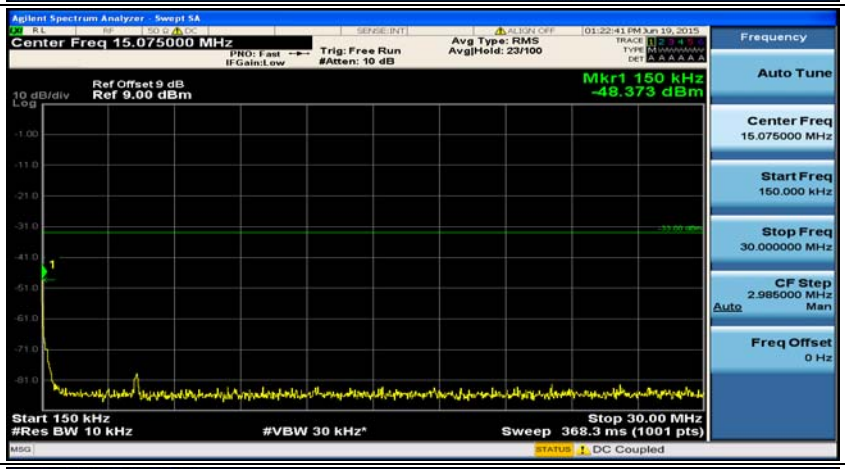
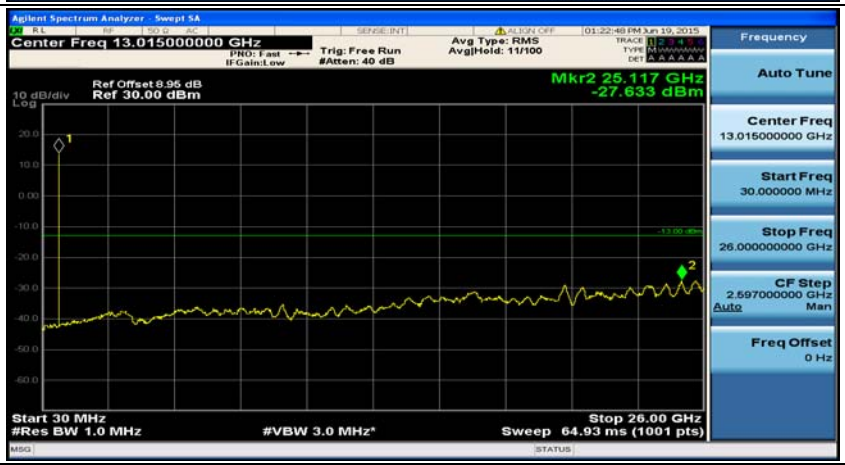


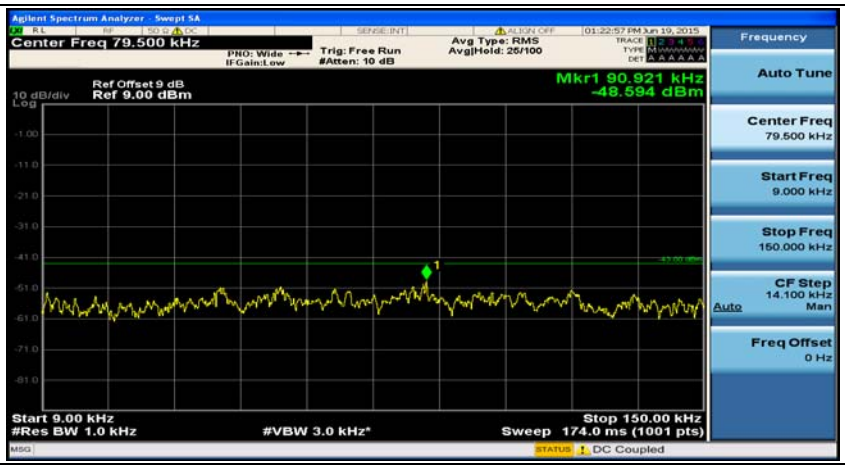
Channel Bandwidth: 10 MHz_LCH_QPSK_1RB#49

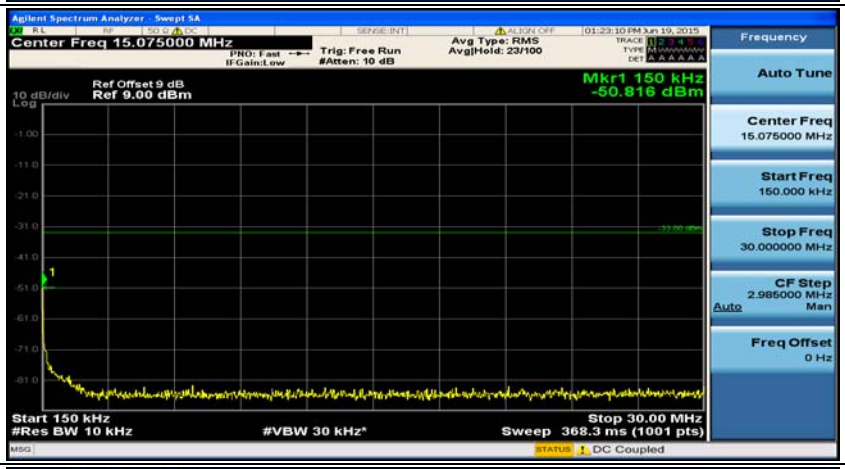

Agilent Spectrum Analyzer - Swept SA
Center Freq 79.500 kHz
PNO: Wide
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 25/100
01:20:23 PM Jun 19, 2015
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Mkr1 91.203 kHz
-48.524 dBm
Start 9.00 kHz
#Res BW 1.0 kHz
#VBW 3.0 kHz*
Stop 150.00 kHz
Sweep 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

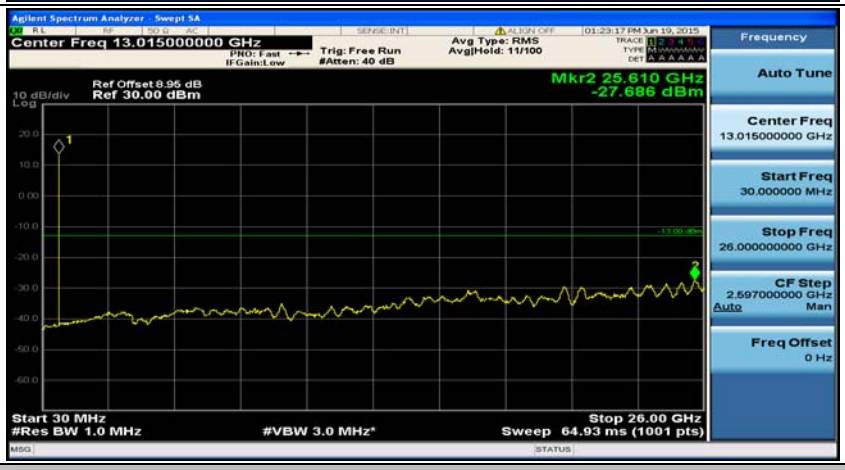

Agilent Spectrum Analyzer - Swept SA
Center Freq 15.075000 MHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 23/100
01:20:36 PM Jun 19, 2015
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Mkr1 150 kHz
-50.771 dBm
Start 150 kHz
#Res BW 10 kHz
#VBW 30 kHz*
Stop 30.00 MHz
Sweep 368.3 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: 11/100
01:20:43 PM Jun 19, 2015
Ref Offset 8.95 dB
10 dB/div
Log
Ref 30.00 dBm
Mkr2 25.636 GHz
-27.628 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

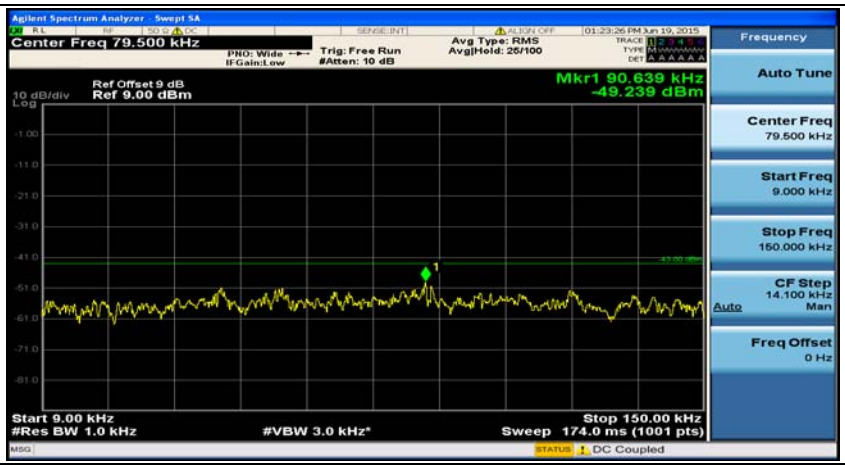
Channel Bandwidth: 10 MHz_MCH_QPSK_1RB#0



Channel Bandwidth: 10 MHz_MCH_QPSK_1RB#24

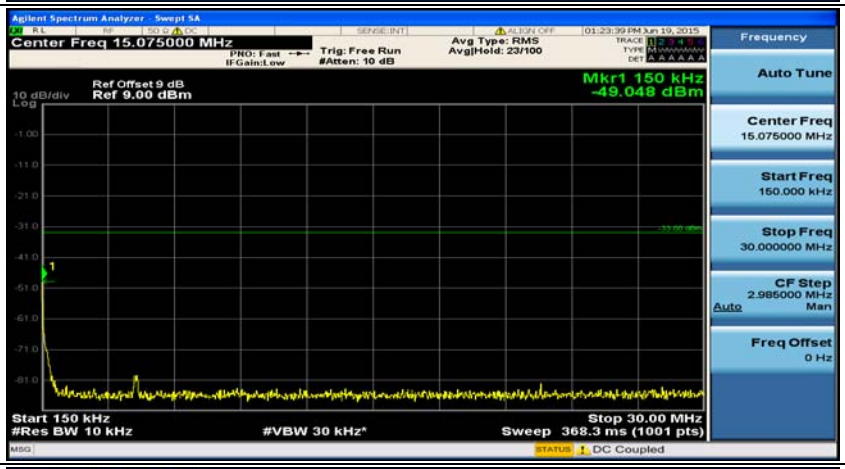


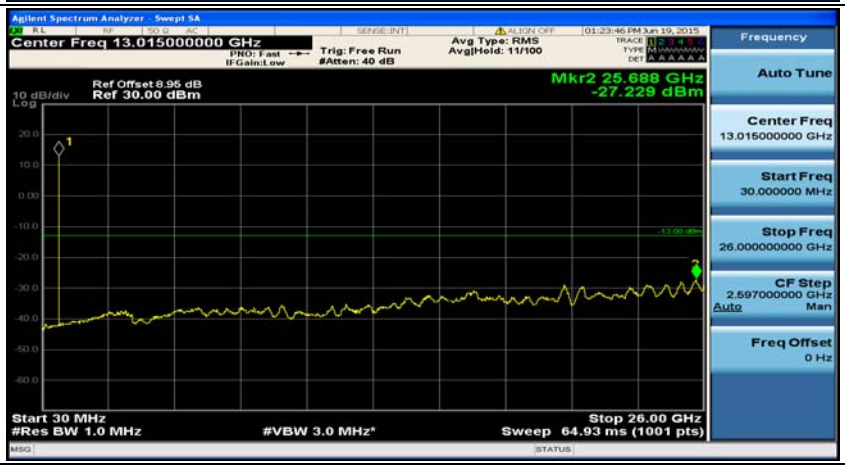


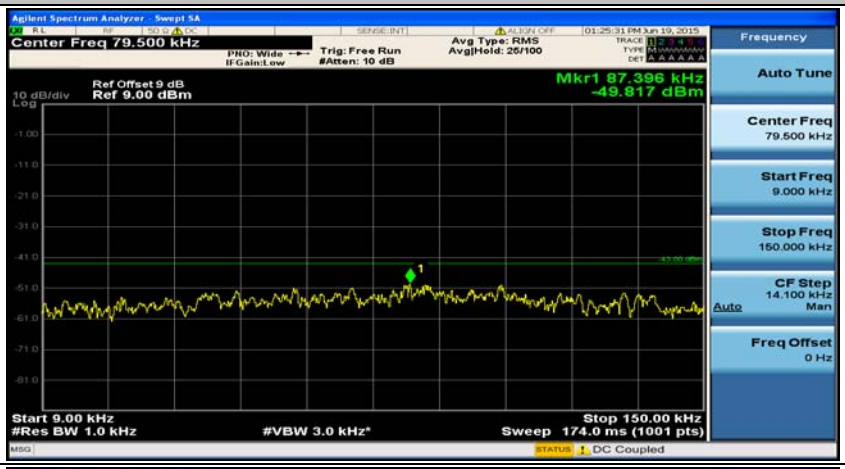
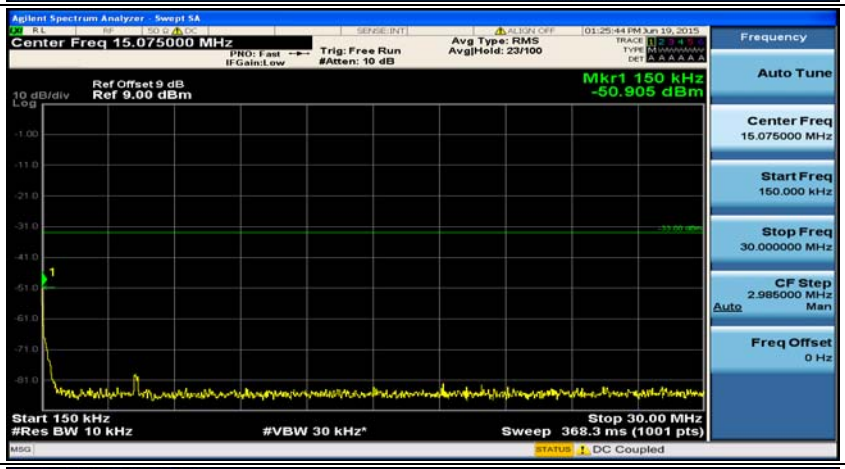
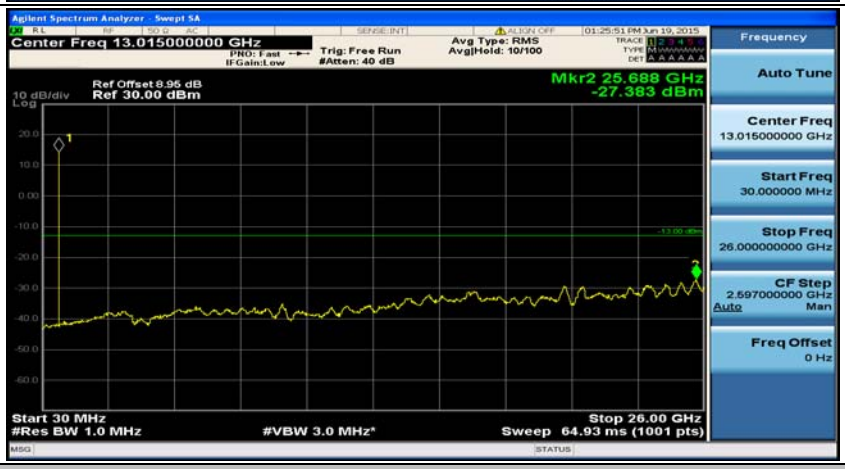


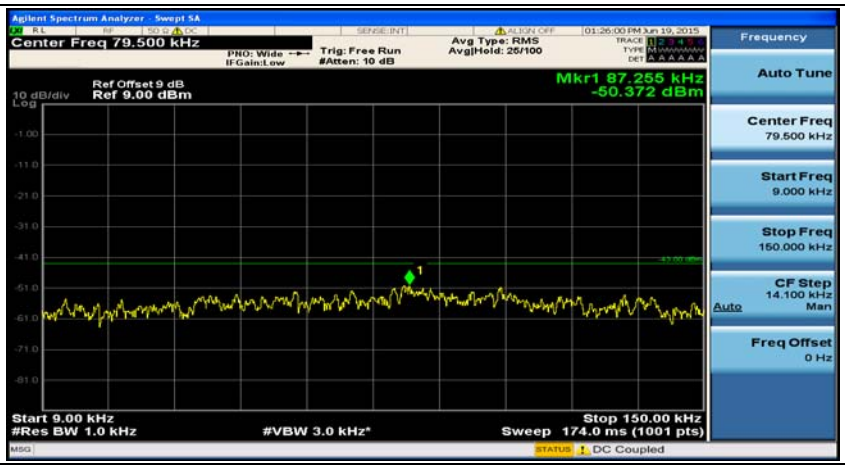
Channel Bandwidth: 10 MHz_MCH_QPSK_1RB#49

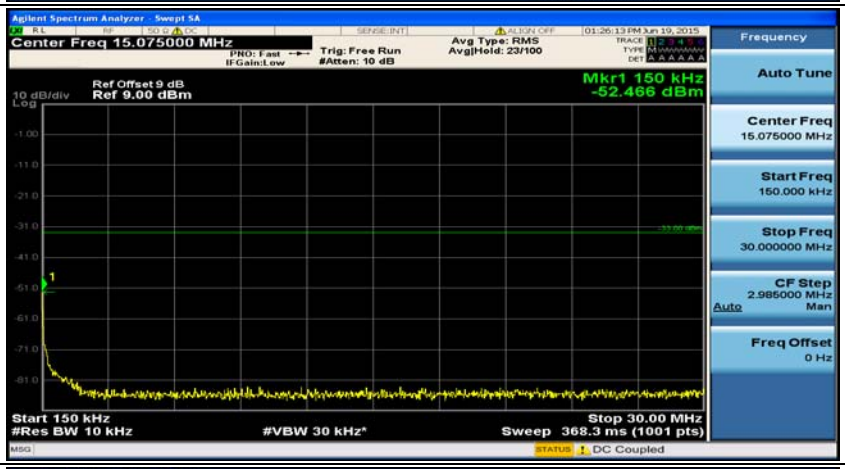

Agilent Spectrum Analyzer - Swept SA
Center Freq 79.500 kHz
PNO: Wide
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 25/100
01:23:26 PM Jun 19, 2015
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Mkr1 90.639 kHz
-49.239 dBm
Start 9.00 kHz
#Res BW 1.0 kHz
#VBW 3.0 kHz*
Stop 150.00 kHz
Sweep 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

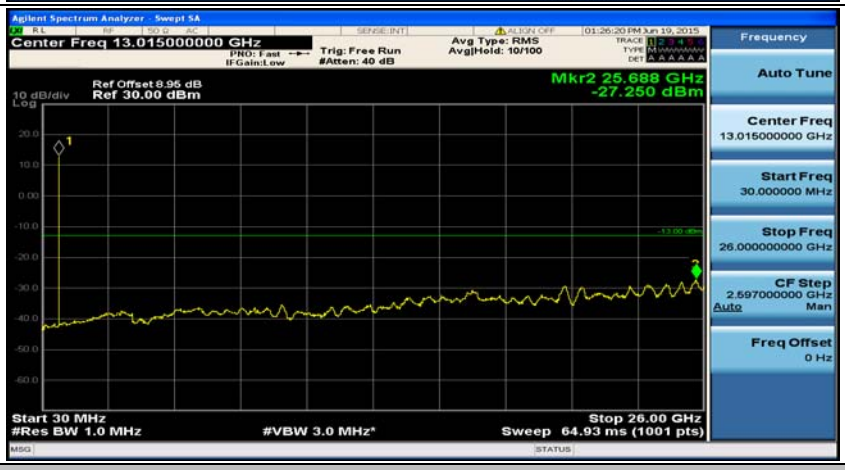

Agilent Spectrum Analyzer - Swept SA
Center Freq 15.075000 MHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 23/100
01:23:39 PM Jun 19, 2015
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Mkr1 150 kHz
-49.048 dBm
Start 150 kHz
#Res BW 10 kHz
#VBW 30 kHz*
Stop 30.00 MHz
Sweep 368.3 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: 11/100
01:23:46 PM Jun 19, 2015
Ref Offset 8.95 dB
10 dB/div
Log
Ref 30.00 dBm
Mkr2 25.688 GHz
-27.229 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

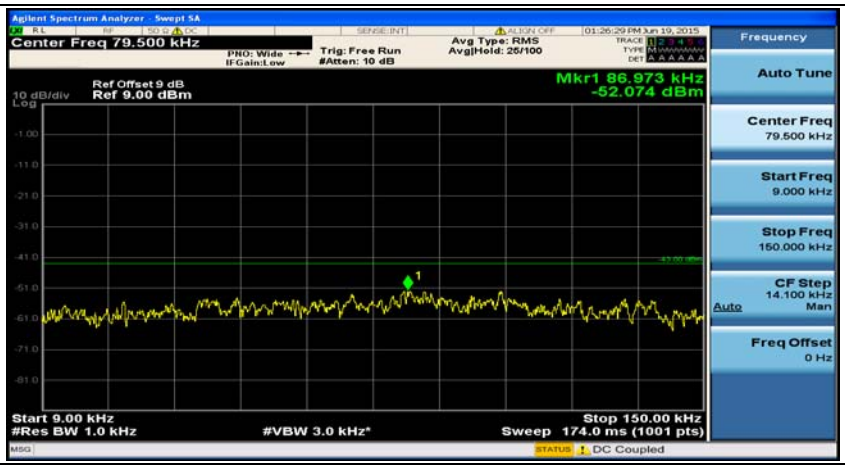
Channel Bandwidth: 10 MHz_HCH_QPSK_1RB#0



Channel Bandwidth: 10 MHz_HCH_QPSK_1RB#24

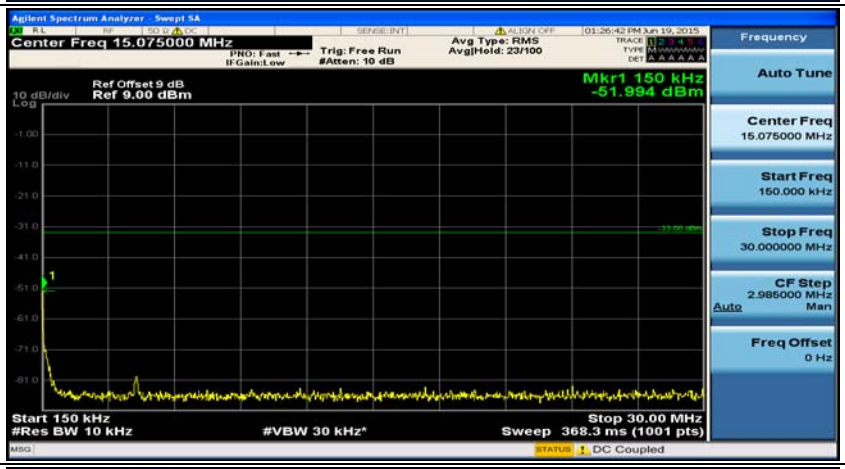


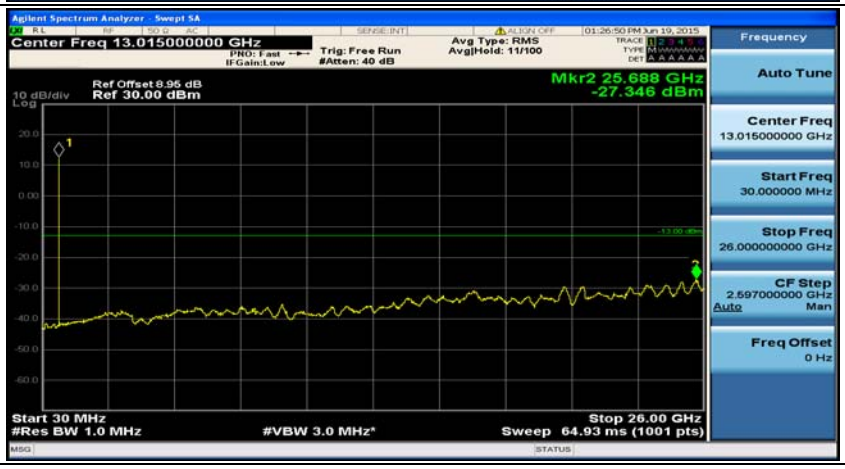


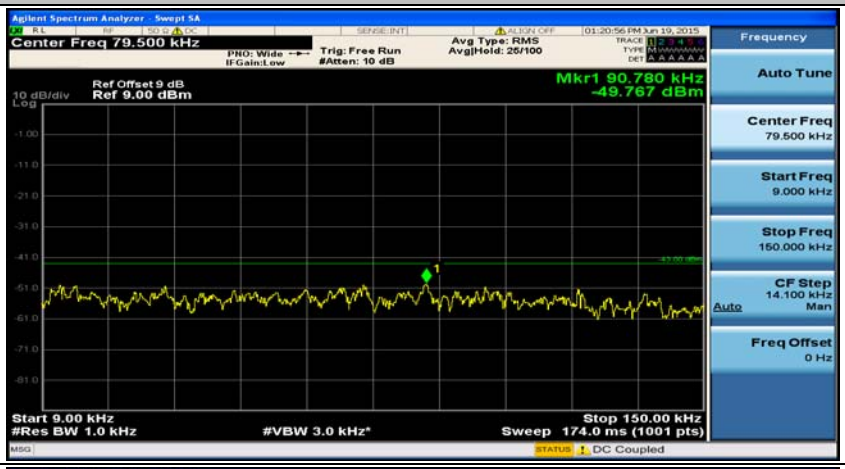
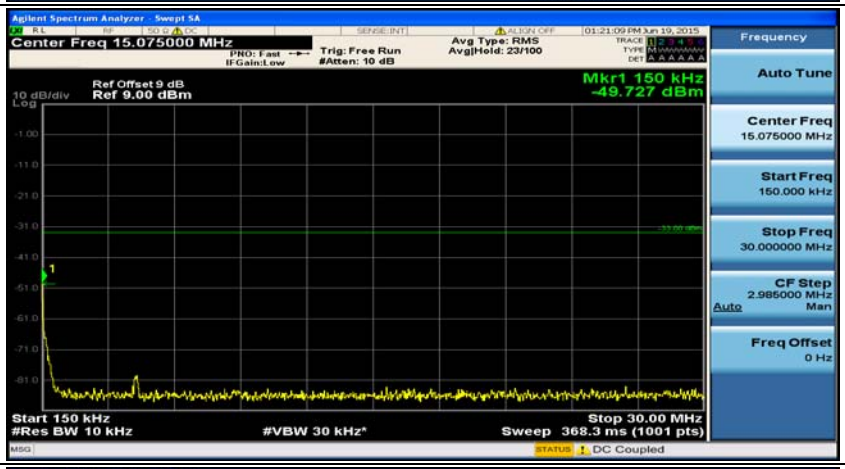
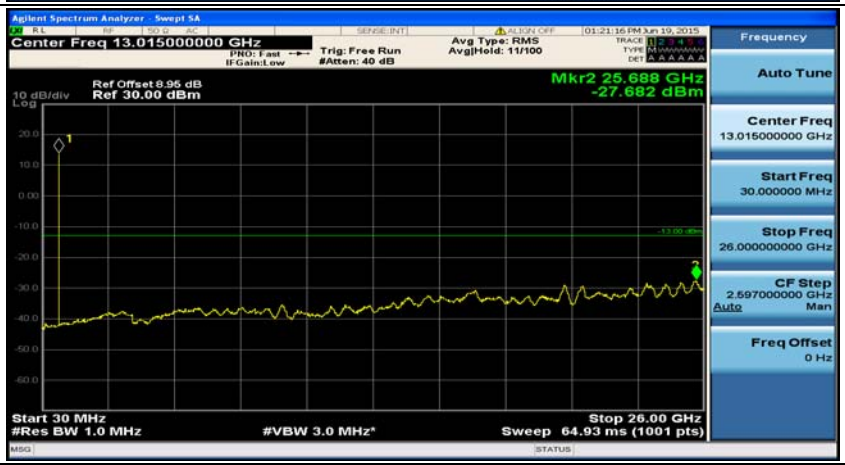


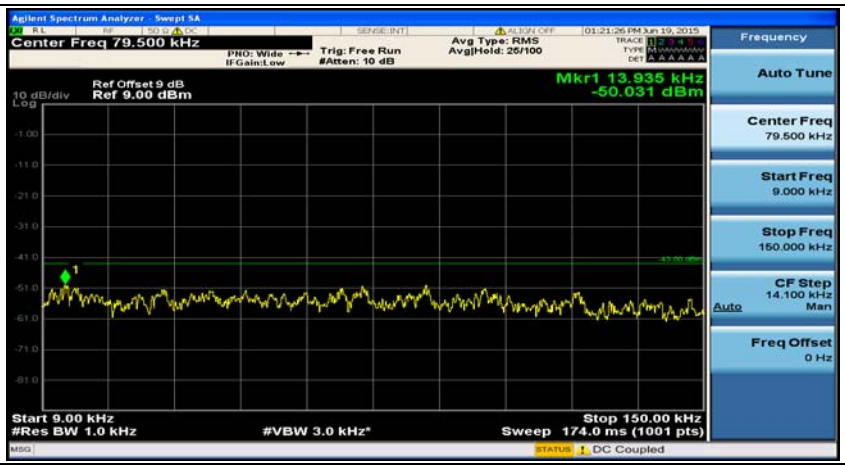
Channel Bandwidth: 10 MHz_HCH_QPSK_1RB#49

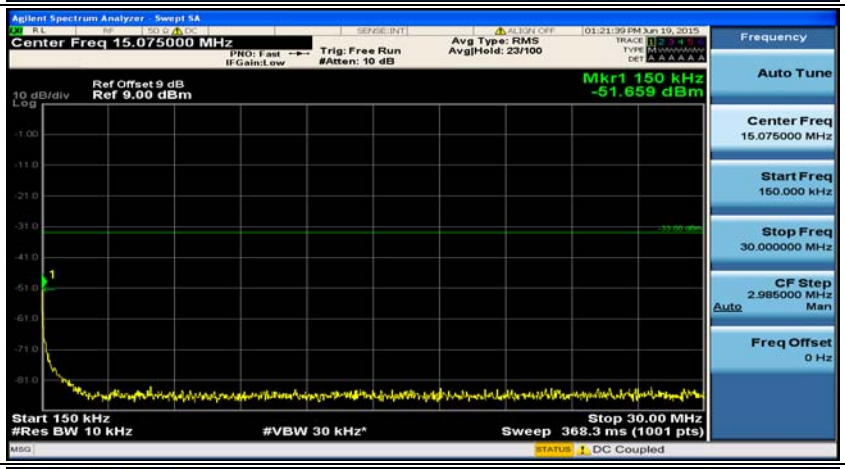

Agilent Spectrum Analyzer - Swept SA
Center Freq 79.500 kHz
PNO: Wide
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 25/100
01:26:29 PM Jun 19, 2015
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Mkr1 86.973 kHz
-52.074 dBm
Start 9.00 kHz
#Res BW 1.0 kHz
#VBW 3.0 kHz*
Stop 150.00 kHz
Sweep 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

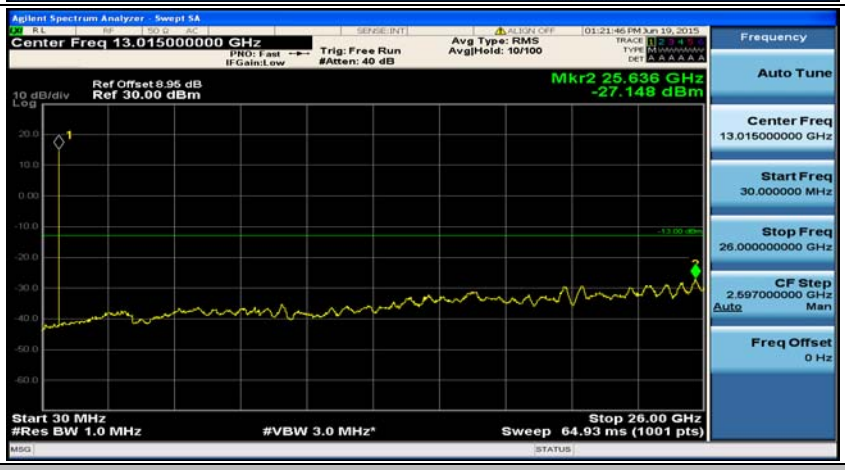

Agilent Spectrum Analyzer - Swept SA
Center Freq 15.075000 MHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 23/100
01:26:42 PM Jun 19, 2015
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Mkr1 150 kHz
-51.994 dBm
Start 150 kHz
#Res BW 10 kHz
#VBW 30 kHz*
Stop 30.00 MHz
Sweep 368.3 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: 11/100
01:26:50 PM Jun 19, 2015
Ref Offset 8.95 dB
10 dB/div
Log
Ref 30.00 dBm
Mkr2 25.688 GHz
-27.346 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

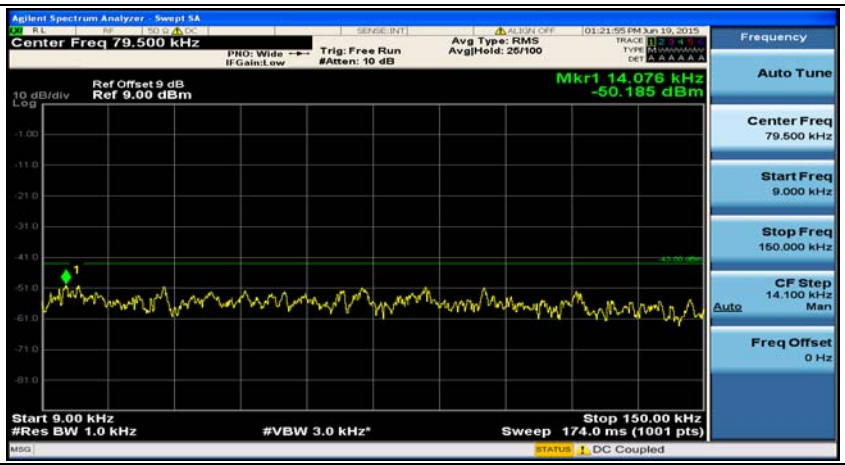
Channel Bandwidth: 10 MHz_LCH_16QAM_1RB#0



Channel Bandwidth: 10 MHz_LCH_16QAM_1RB#24

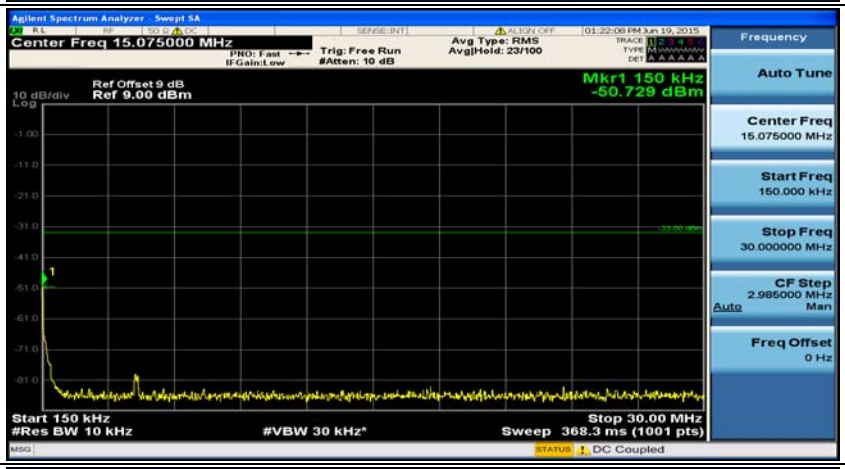


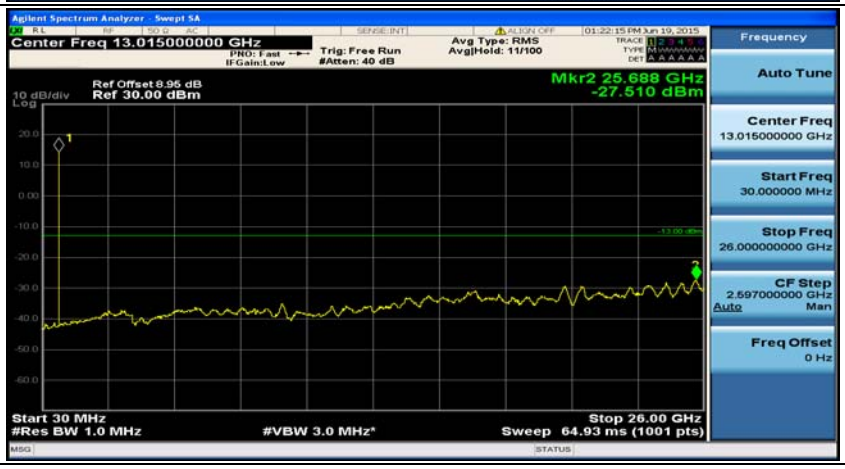


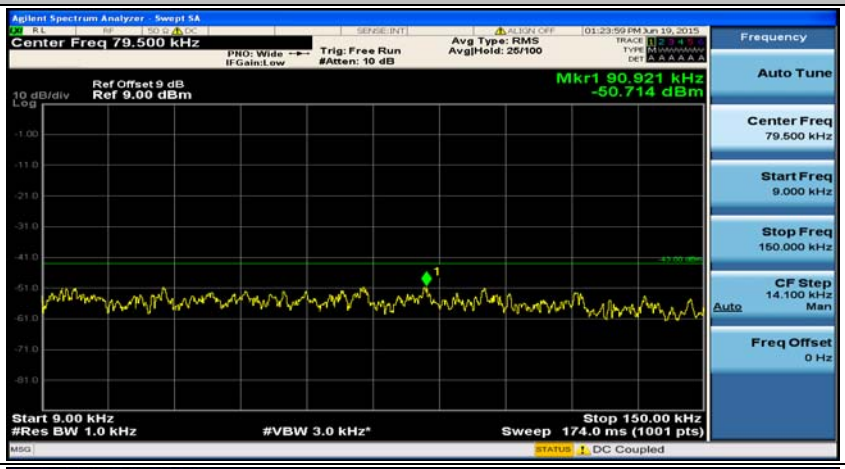
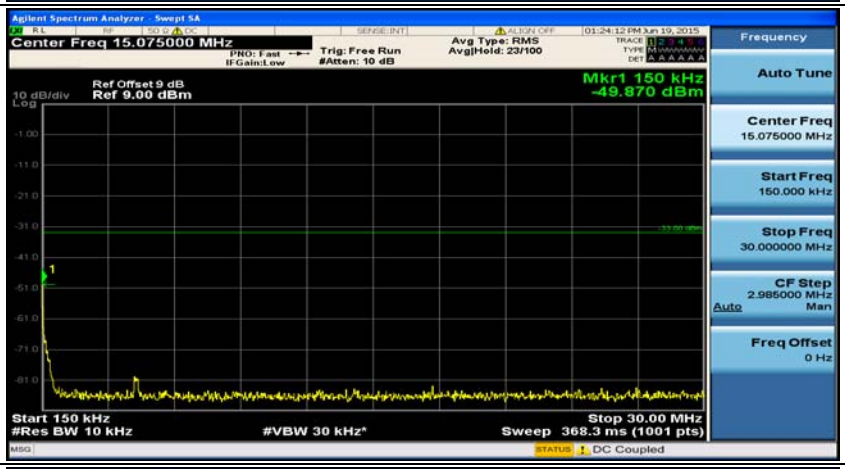
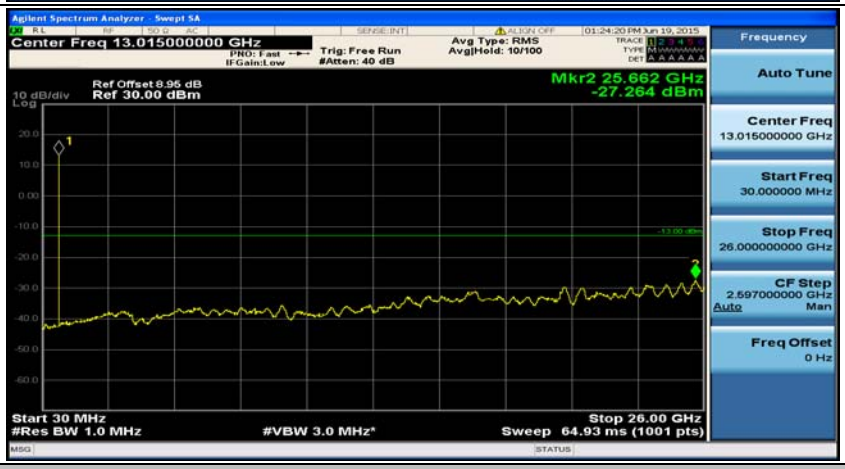


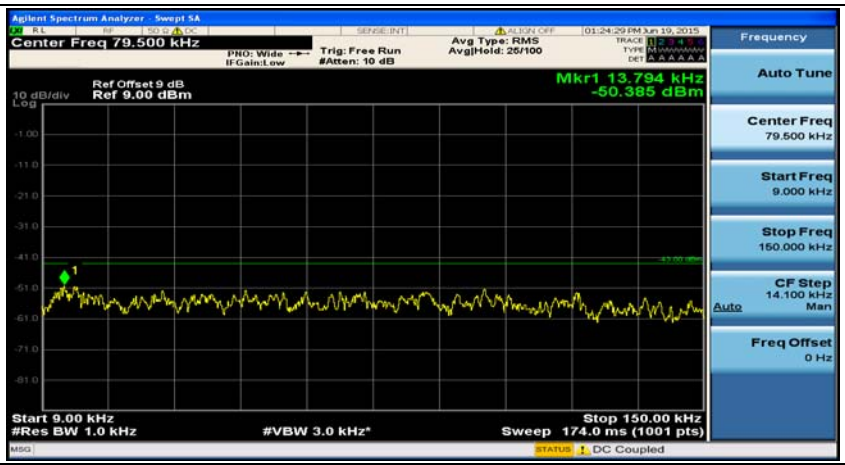
Channel Bandwidth: 10 MHz_LCH_16QAM_1RB#49

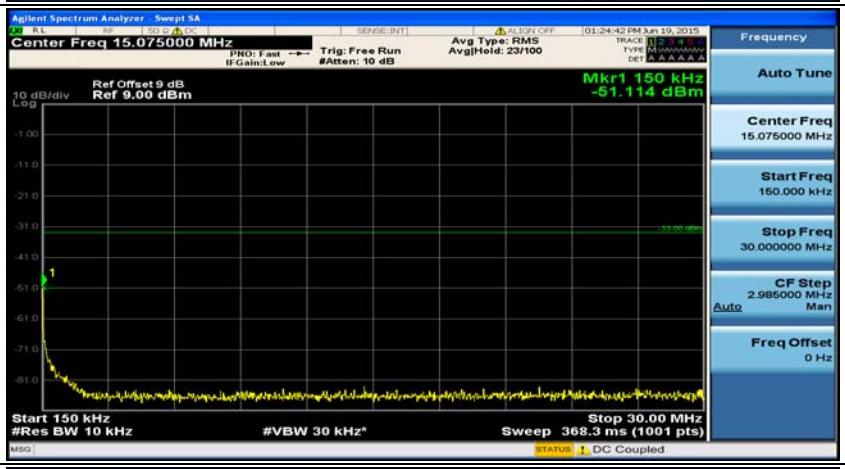

Agilent Spectrum Analyzer - Swept SA
Center Freq 79.500 kHz
PNO: Wide
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 25/100
01:21:55 PM Jun 19, 2015
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Mkr1 14.076 kHz
-50.185 dBm
Start 9.00 kHz
#Res BW 1.0 kHz
#VBW 3.0 kHz*
Stop 150.00 kHz
Sweep 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

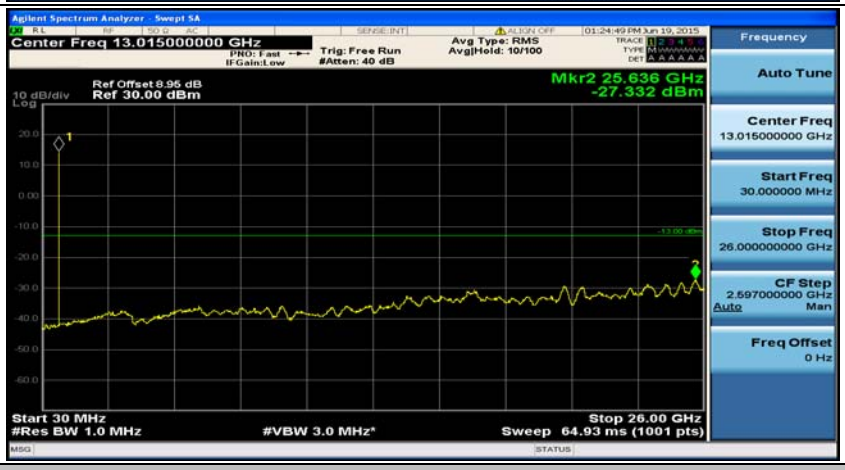

Agilent Spectrum Analyzer - Swept SA
Center Freq 15.075000 MHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 23/100
01:22:08 PM Jun 19, 2015
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Mkr1 150 kHz
-50.729 dBm
Start 150 kHz
#Res BW 10 kHz
#VBW 30 kHz*
Stop 30.00 MHz
Sweep 368.3 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: 11/100
01:22:15 PM Jun 19, 2015
Ref Offset 8.95 dB
10 dB/div
Log
Ref 30.00 dBm
Mkr2 25.688 GHz
-27.510 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

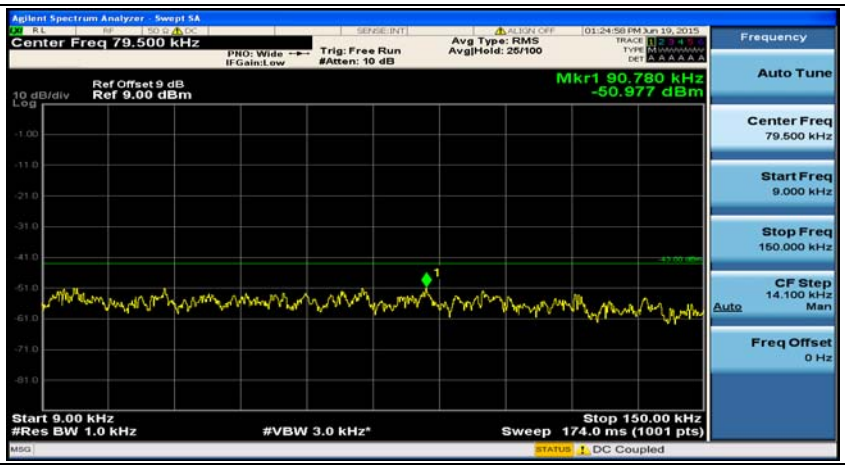
Channel Bandwidth: 10 MHz_MCH_16QAM_1RB#0



Channel Bandwidth: 10 MHz_MCH_16QAM_1RB#24

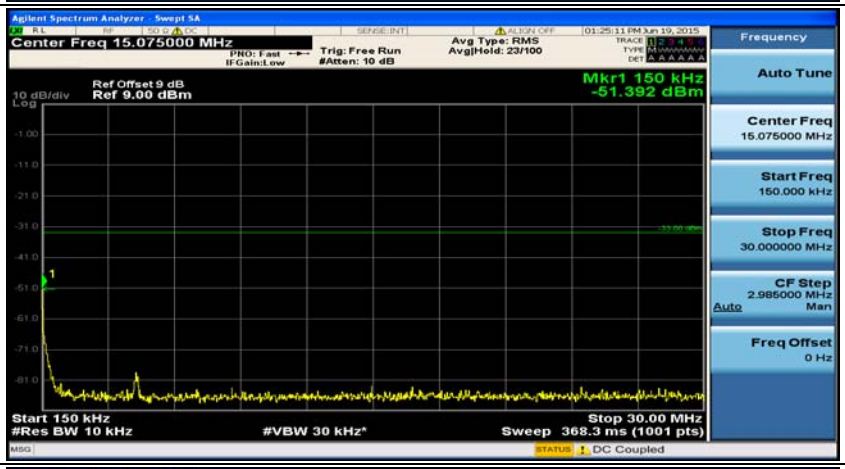


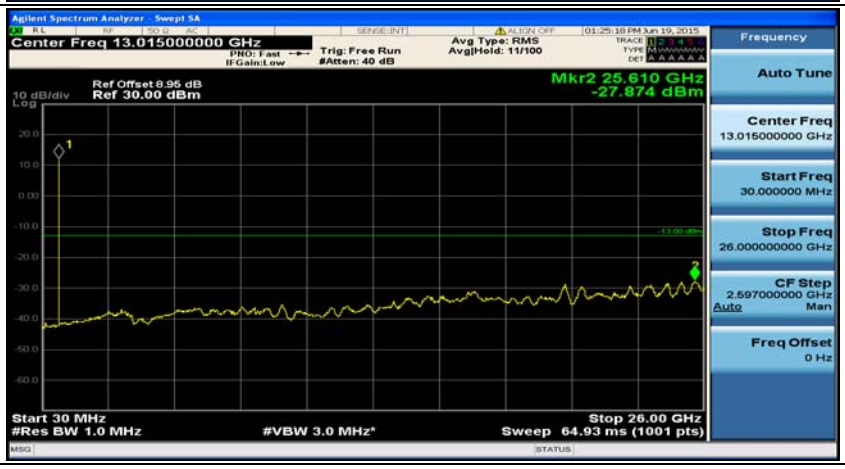


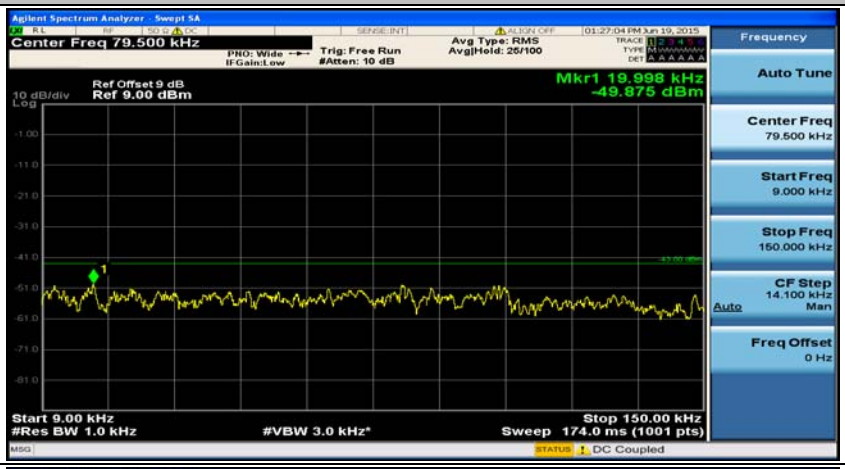
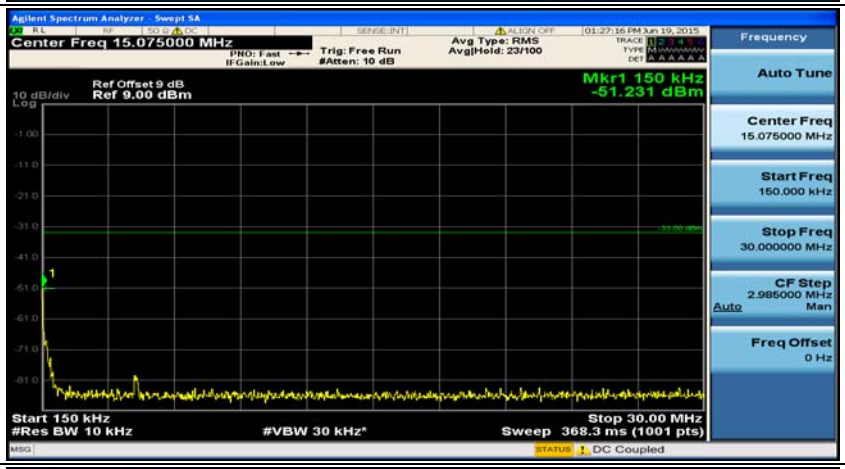
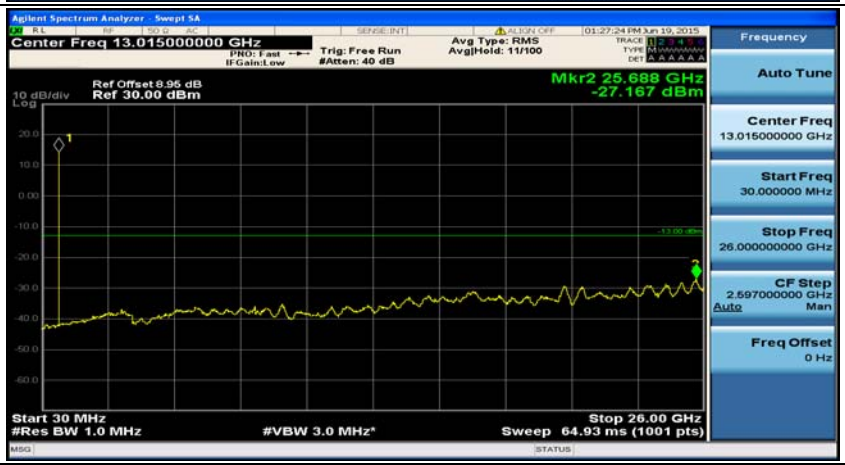


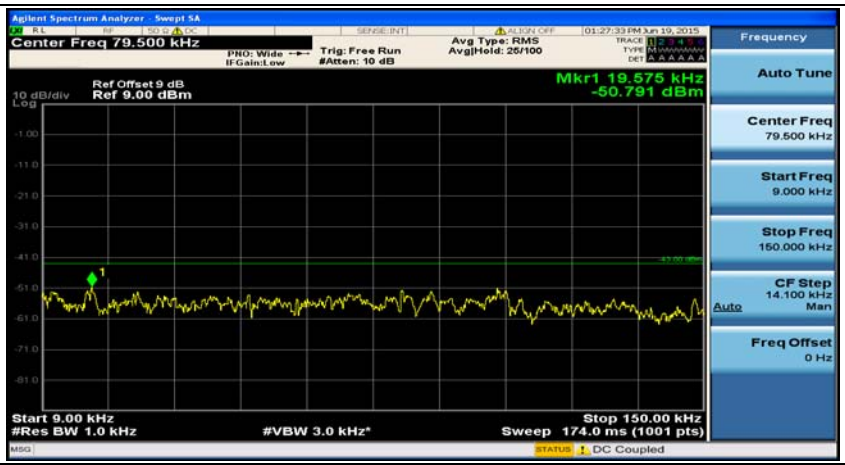
Channel Bandwidth: 10 MHz_MCH_16QAM_1RB#49

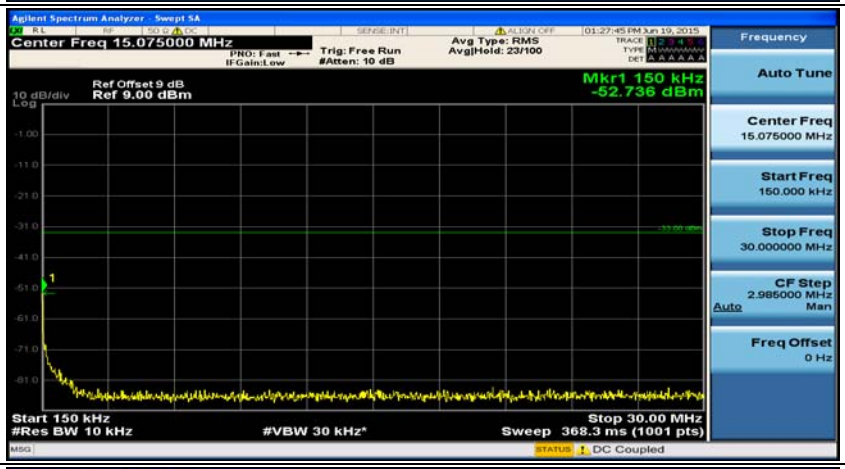

Agilent Spectrum Analyzer - Swept SA
Center Freq 79.500 kHz
PNO: Wide
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 25/100
01:24:58 PM Jun 19, 2015
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Mkr1 90.780 kHz
-50.977 dBm
Start 9.00 kHz
#Res BW 1.0 kHz
#VBW 3.0 kHz*
Stop 150.00 kHz
Sweep 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

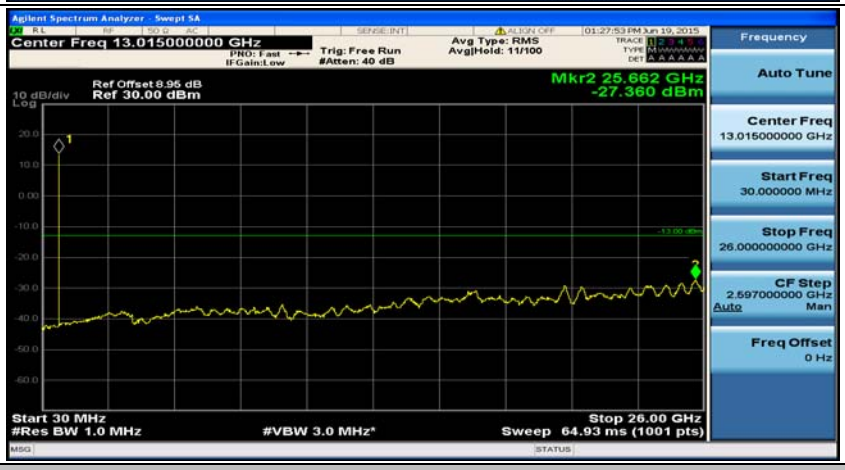

Agilent Spectrum Analyzer - Swept SA
Center Freq 15.075000 MHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 23/100
01:25:11 PM Jun 19, 2015
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Mkr1 150 kHz
-51.392 dBm
Start 150 kHz
#Res BW 10 kHz
#VBW 30 kHz*
Stop 30.00 MHz
Sweep 368.3 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: 11/100
01:25:18 PM Jun 19, 2015
Ref Offset 8.95 dB
10 dB/div
Log
Ref 30.00 dBm
Mkr2 25.610 GHz
-27.874 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

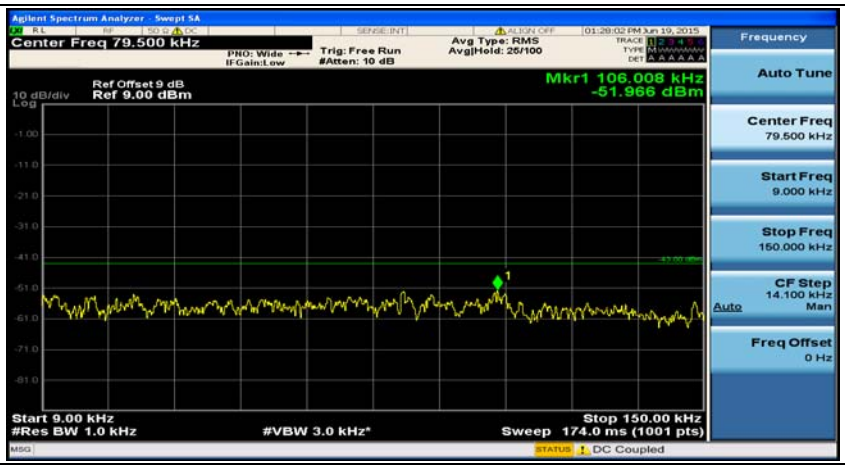
Channel Bandwidth: 10 MHz_HCH_16QAM_1RB#0



Channel Bandwidth: 10 MHz_HCH_16QAM_1RB#24

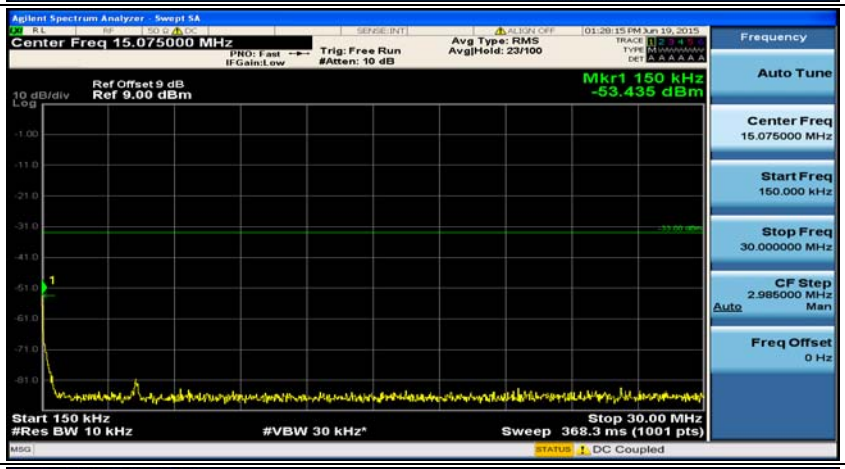


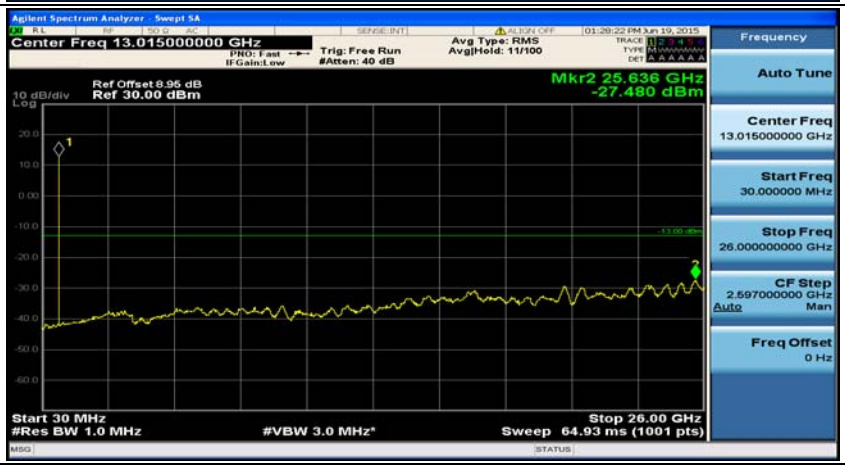




Channel Bandwidth: 10 MHz_HCH_16QAM_1RB#49


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: 25/100
01:28:02 PM Jun 19, 2015
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Mkr1 106.008 kHz
-51.966 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: 23/100
01:28:15 PM Jun 19, 2015
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Mkr1 150 kHz
-53.435 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: 11/100
01:28:22 PM Jun 19, 2015
Ref Offset 8.95 dB
10 dB/div
Log
Ref 30.00 dBm
Mkr2 25.636 GHz
-27.480 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

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	-1.42	-0.002005	± 2.5	PASS
		VN	TN	-1.32	-0.001863	± 2.5	PASS
		VH	TN	-1.43	-0.002025	± 2.5	PASS
	MCH	VL	TN	1.49	0.002095	± 2.5	PASS
		VN	TN	1.23	0.001733	± 2.5	PASS
		VH	TN	-0.90	-0.001269	± 2.5	PASS
	HCH	VL	TN	-2.27	-0.003188	± 2.5	PASS
		VN	TN	-0.94	-0.001323	± 2.5	PASS
		VH	TN	-1.65	-0.002306	± 2.5	PASS
16QAM	LCH	VL	TN	-0.70	-0.000992	± 2.5	PASS
		VN	TN	-0.94	-0.001336	± 2.5	PASS
		VH	TN	-1.27	-0.001802	± 2.5	PASS
	MCH	VL	TN	-0.77	-0.001088	± 2.5	PASS
		VN	TN	-0.63	-0.000887	± 2.5	PASS
		VH	TN	-0.26	-0.000363	± 2.5	PASS
	HCH	VL	TN	-2.72	-0.003809	± 2.5	PASS
		VN	TN	-2.13	-0.002987	± 2.5	PASS
		VH	TN	-2.12	-0.002967	± 2.5	PASS
Temperature							
Modulation	Channel	Voltage [Vdc]	Temperature (℃)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
QPSK	LCH	VN	-30	-0.87	-0.001235	± 2.5	PASS
		VN	-20	-2.23	-0.003159	± 2.5	PASS
		VN	-10	-0.87	-0.001235	± 2.5	PASS
		VN	0	-1.34	-0.001903	± 2.5	PASS
		VN	10	-1.04	-0.001478	± 2.5	PASS
		VN	20	-0.10	-0.000142	± 2.5	PASS
		VN	30	-0.92	-0.001296	± 2.5	PASS
		VN	40	-1.36	-0.001924	± 2.5	PASS
		VN	50	-0.16	-0.000223	± 2.5	PASS
	MCH	VN	-30	-0.30	-0.000423	± 2.5	PASS
		VN	-20	0.60	0.000846	± 2.5	PASS
		VN	-10	0.21	0.000302	± 2.5	PASS

		VN	0	-0.26	-0.000363	± 2.5	PASS
		VN	10	-1.30	-0.001833	± 2.5	PASS
		VN	20	-0.51	-0.000725	± 2.5	PASS
		VN	30	0.37	0.000524	± 2.5	PASS
		VN	40	-0.46	-0.000645	± 2.5	PASS
		VN	50	-0.16	-0.000222	± 2.5	PASS
	HCH	VN	-30	-2.05	-0.002867	± 2.5	PASS
		VN	-20	-1.60	-0.002246	± 2.5	PASS
		VN	-10	-2.26	-0.003168	± 2.5	PASS
		VN	0	-2.69	-0.003769	± 2.5	PASS
		VN	10	-2.10	-0.002947	± 2.5	PASS
		VN	20	-0.97	-0.001363	± 2.5	PASS
		VN	30	-1.69	-0.002366	± 2.5	PASS
		VN	40	-2.59	-0.003629	± 2.5	PASS
		VN	50	-1.70	-0.002386	± 2.5	PASS
16QAM	LCH	VN	-30	-2.98	-0.004212	± 2.5	PASS
		VN	-20	-2.10	-0.002976	± 2.5	PASS
		VN	-10	-1.59	-0.002248	± 2.5	PASS
		VN	0	-0.34	-0.000486	± 2.5	PASS
		VN	10	-1.83	-0.002592	± 2.5	PASS
		VN	20	-1.95	-0.002754	± 2.5	PASS
		VN	30	-1.89	-0.002673	± 2.5	PASS
		VN	40	-1.40	-0.001984	± 2.5	PASS
		VN	50	-2.56	-0.003624	± 2.5	PASS
	MCH	VN	-30	-0.26	-0.000363	± 2.5	PASS
		VN	-20	-0.19	-0.000262	± 2.5	PASS
		VN	-10	-0.94	-0.001330	± 2.5	PASS
		VN	0	-0.19	-0.000262	± 2.5	PASS
		VN	10	-1.43	-0.002015	± 2.5	PASS
		VN	20	-0.70	-0.000987	± 2.5	PASS
		VN	30	-0.53	-0.000745	± 2.5	PASS
		VN	40	-1.27	-0.001793	± 2.5	PASS
		VN	50	0.06	0.000081	± 2.5	PASS
	HCH	VN	-30	-2.47	-0.003469	± 2.5	PASS
		VN	-20	-2.26	-0.003168	± 2.5	PASS
		VN	-10	-2.49	-0.003489	± 2.5	PASS
		VN	0	-3.52	-0.004932	± 2.5	PASS
		VN	10	-2.02	-0.002827	± 2.5	PASS
		VN	20	-2.92	-0.004090	± 2.5	PASS
		VN	30	-2.78	-0.003890	± 2.5	PASS
		VN	40	-2.65	-0.003709	± 2.5	PASS
		VN	50	-2.72	-0.003809	± 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	-1.19	-0.001675	± 2.5	PASS
		VN	TN	-1.02	-0.001433	± 2.5	PASS
		VH	TN	-2.05	-0.002885	± 2.5	PASS
	MCH	VL	TN	-1.10	-0.001551	± 2.5	PASS
		VN	TN	0.30	0.000423	± 2.5	PASS
		VH	TN	0.86	0.001209	± 2.5	PASS
	HCH	VL	TN	-0.57	-0.000805	± 2.5	PASS
		VN	TN	-1.14	-0.001610	± 2.5	PASS
		VH	TN	-0.67	-0.000946	± 2.5	PASS
16QAM	LCH	VL	TN	-1.14	-0.001614	± 2.5	PASS
		VN	TN	-1.90	-0.002683	± 2.5	PASS
		VH	TN	-3.30	-0.004661	± 2.5	PASS
	MCH	VL	TN	-0.49	-0.000685	± 2.5	PASS
		VN	TN	-1.67	-0.002357	± 2.5	PASS
		VH	TN	-1.07	-0.001511	± 2.5	PASS
	HCH	VL	TN	0.10	0.000141	± 2.5	PASS
		VN	TN	-1.34	-0.001891	± 2.5	PASS
		VH	TN	-0.21	-0.000302	± 2.5	PASS

Temperature

Modulation	Channel	Voltage [Vdc]	Temperature (℃)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
16QAM	LCH	VN	-30	-2.68	-0.003773	± 2.5	PASS
		VN	-20	-3.33	-0.004701	± 2.5	PASS
		VN	-10	-2.33	-0.003289	± 2.5	PASS
		VN	0	-0.77	-0.001090	± 2.5	PASS
		VN	10	-2.12	-0.002986	± 2.5	PASS
		VN	20	-1.54	-0.002179	± 2.5	PASS
		VN	30	-2.06	-0.002905	± 2.5	PASS
		VN	40	-1.93	-0.002724	± 2.5	PASS
		VN	50	-2.20	-0.003107	± 2.5	PASS
	MCH	VN	-30	-0.44	-0.000625	± 2.5	PASS
		VN	-20	1.00	0.001410	± 2.5	PASS
		VN	-10	-0.10	-0.000141	± 2.5	PASS
		VN	0	1.42	0.001995	± 2.5	PASS
		VN	10	-0.36	-0.000504	± 2.5	PASS
		VN	20	-0.09	-0.000121	± 2.5	PASS
		VN	30	0.63	0.000887	± 2.5	PASS
		VN	40	-0.29	-0.000403	± 2.5	PASS
		VN	50	-0.54	-0.000766	± 2.5	PASS
	HCH	VN	-30	-0.89	-0.001247	± 2.5	PASS
		VN	-20	-0.27	-0.000382	± 2.5	PASS
		VN	-10	-0.17	-0.000241	± 2.5	PASS
		VN	0	-0.29	-0.000402	± 2.5	PASS
		VN	10	-0.84	-0.001187	± 2.5	PASS
		VN	20	-1.39	-0.001952	± 2.5	PASS
		VN	30	-0.84	-0.001187	± 2.5	PASS
		VN	40	-0.27	-0.000382	± 2.5	PASS
		VN	50	-1.79	-0.002515	± 2.5	PASS
QPSK	LCH	VN	-30	-1.77	-0.002502	± 2.5	PASS
		VN	-20	-2.06	-0.002905	± 2.5	PASS

		VN	-10	-2.75	-0.003874	± 2.5	PASS
		VN	0	-2.65	-0.003733	± 2.5	PASS
		VN	10	-1.04	-0.001473	± 2.5	PASS
		VN	20	-2.49	-0.003511	± 2.5	PASS
		VN	30	-3.38	-0.004762	± 2.5	PASS
		VN	40	-2.76	-0.003894	± 2.5	PASS
		VN	50	-1.87	-0.002643	± 2.5	PASS
	MCH	VN	-30	-0.54	-0.000766	± 2.5	PASS
		VN	-20	-2.42	-0.003405	± 2.5	PASS
		VN	-10	-1.06	-0.001491	± 2.5	PASS
		VN	0	-0.93	-0.001310	± 2.5	PASS
		VN	10	-2.02	-0.002841	± 2.5	PASS
		VN	20	-1.20	-0.001692	± 2.5	PASS
		VN	30	-0.50	-0.000705	± 2.5	PASS
		VN	40	-0.99	-0.001390	± 2.5	PASS
		VN	50	0.16	0.000222	± 2.5	PASS
	HCH	VN	-30	-1.37	-0.001931	± 2.5	PASS
		VN	-20	0.40	0.000563	± 2.5	PASS
		VN	-10	0.60	0.000845	± 2.5	PASS
		VN	0	-1.42	-0.001992	± 2.5	PASS
		VN	10	0.63	0.000885	± 2.5	PASS
		VN	20	-0.80	-0.001127	± 2.5	PASS
		VN	30	-0.93	-0.001308	± 2.5	PASS
		VN	40	-0.87	-0.001227	± 2.5	PASS
		VN	50	-0.17	-0.000241	± 2.5	PASS