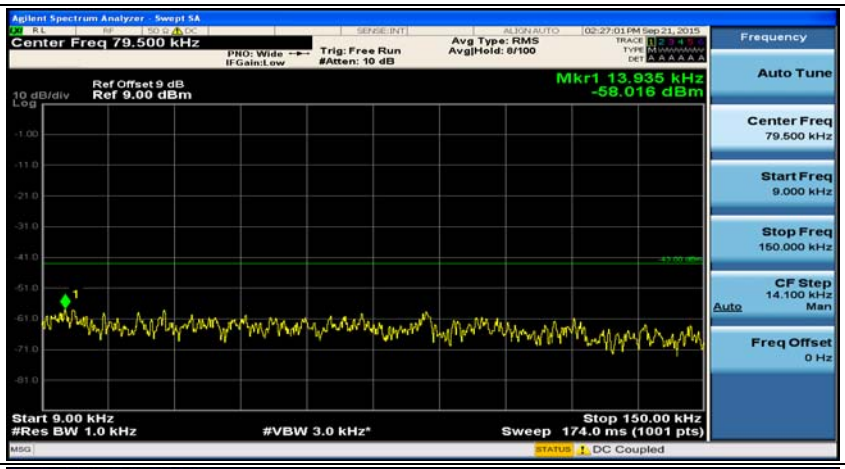
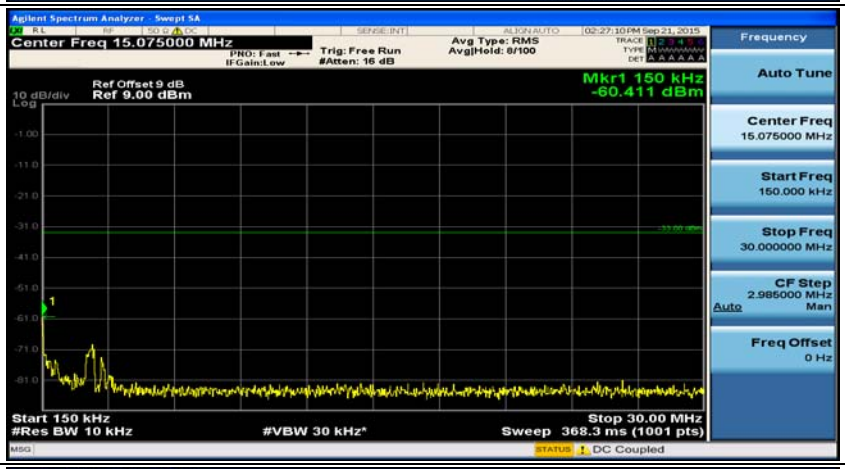
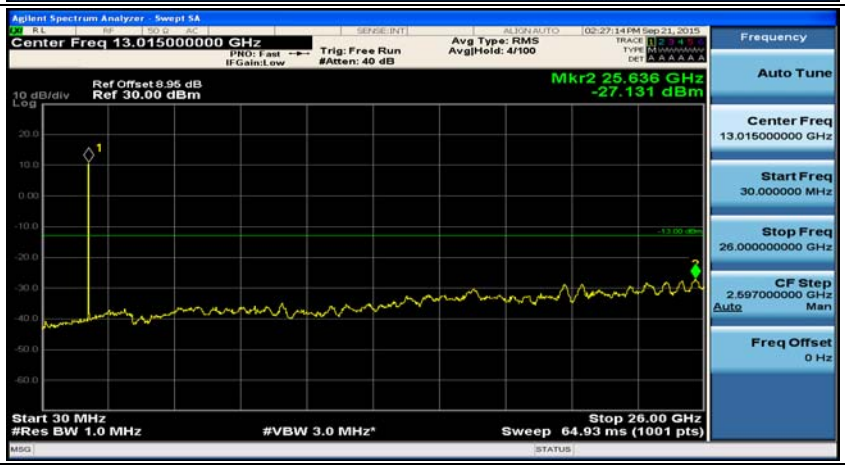
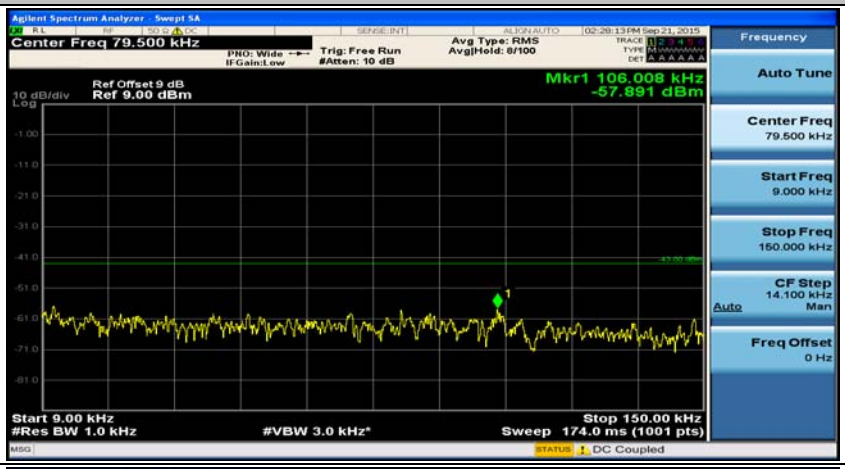
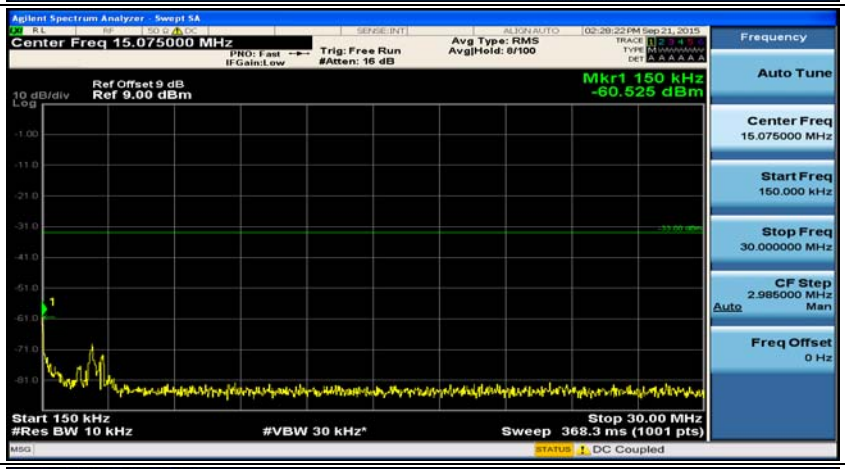
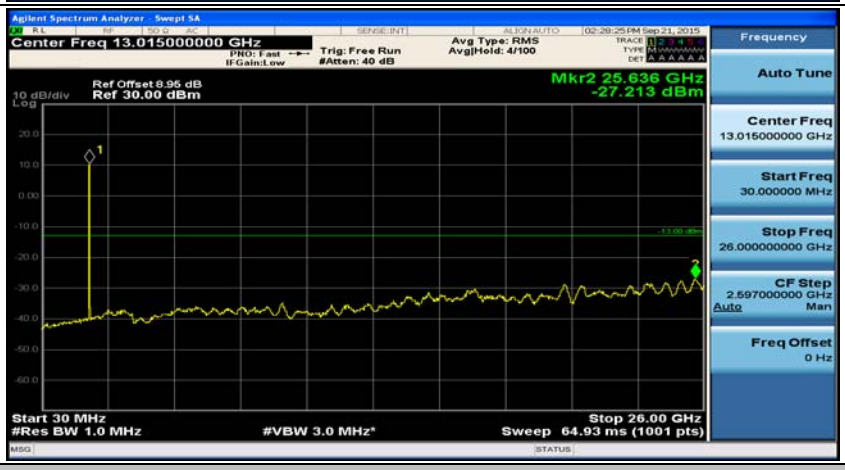
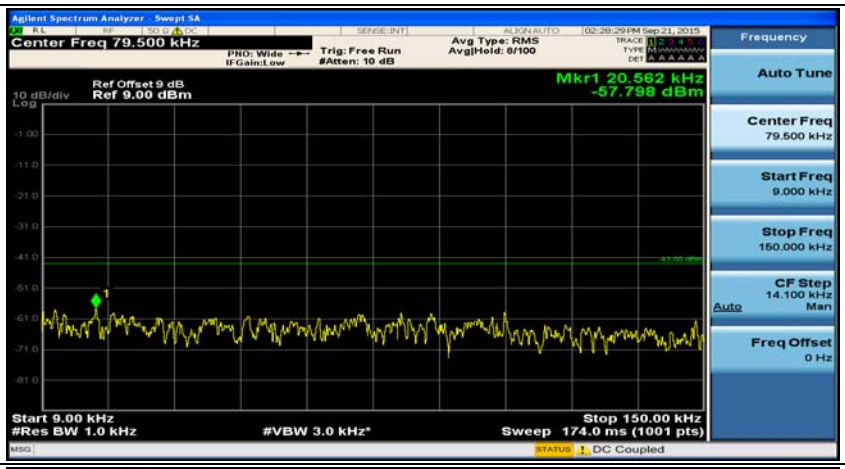
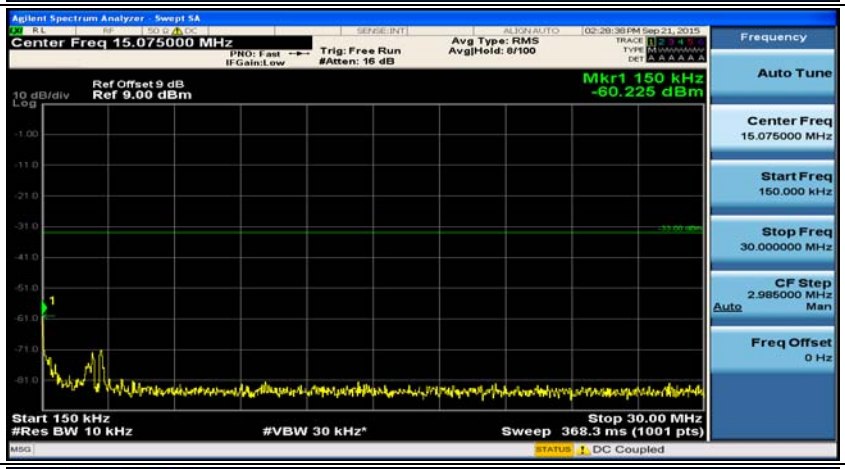

Agilent Spectrum Analyzer - Swept SA
Center Freq 79.500 kHz
PNO: Wide
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 8/100
02:27:01 PM Sep 21, 2015
Ref Offset 9 dB
10 dB/div
Ref 9.00 dBm
Mkr1 13.935 kHz
-58.016 dBm
Start 9.00 kHz
#Res BW 1.0 kHz
#VBW 3.0 kHz*
Stop 150.00 kHz
Sweep 174.0 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

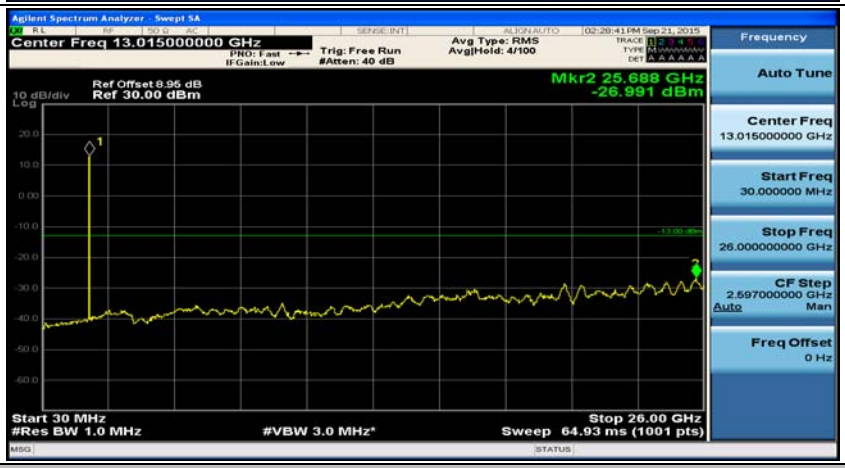

Agilent Spectrum Analyzer - Swept SA
Center Freq 15.075000 MHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 16 dB
Avg Type: RMS
Avg|Hold: 8/100
02:27:10 PM Sep 21, 2015
Ref Offset 9 dB
10 dB/div
Ref 9.00 dBm
Mkr1 150 kHz
-60.411 dBm
Start 150 kHz
#Res BW 10 kHz
#VBW 30 kHz*
Stop 30.00 MHz
Sweep 368.3 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: 4/100
02:27:14 PM Sep 21, 2015
Ref Offset 8.95 dB
10 dB/div
Ref 30.00 dBm
Mkr2 25.636 GHz
-27.131 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

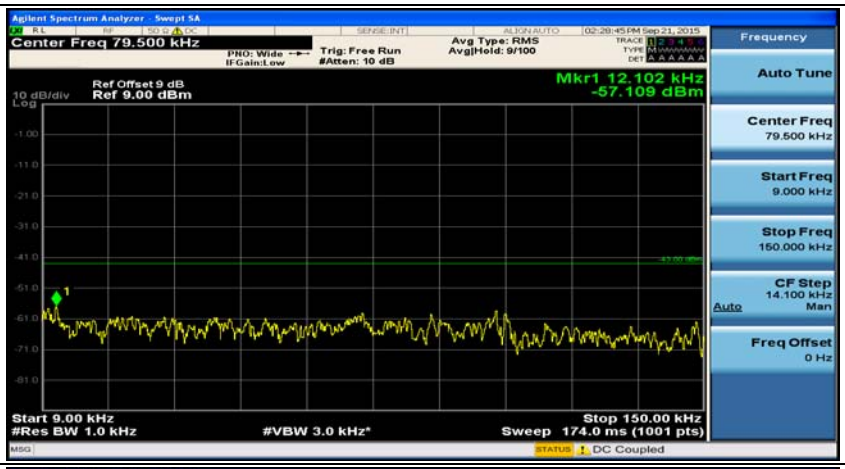
Channel Bandwidth: 10 MHz_HCH_16QAM_1RB#0



Channel Bandwidth: 10 MHz_HCH_16QAM_1RB#24

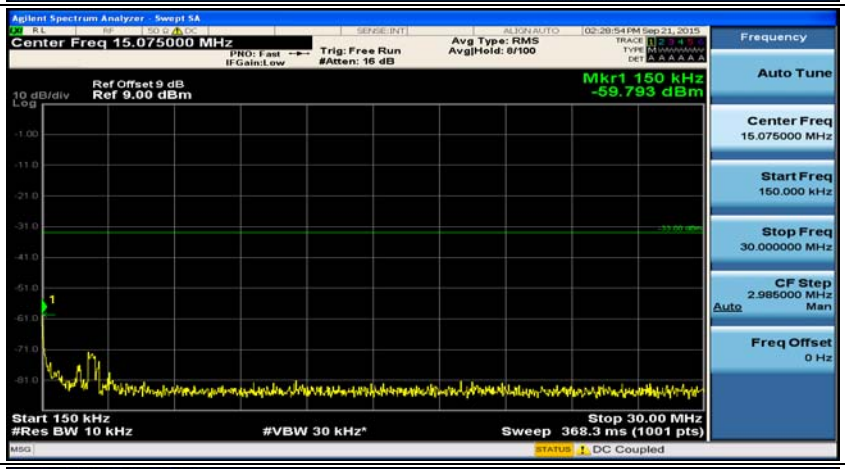


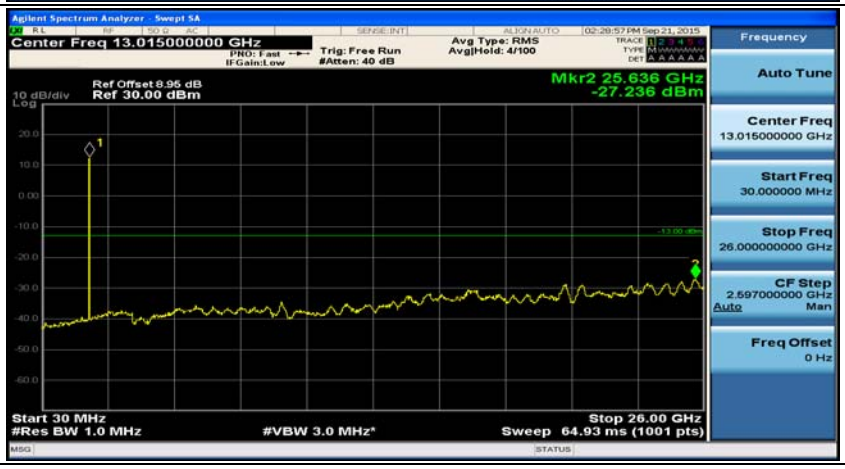




Channel Bandwidth: 10 MHz_HCH_16QAM_1RB#49

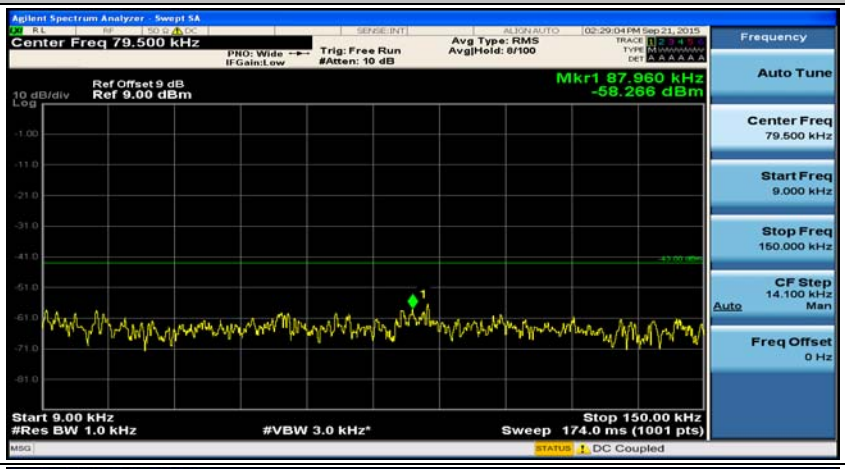

Agilent Spectrum Analyzer - Swept SA
Center Freq 79.500 kHz
PNO: Wide
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 9/100
02:28:45 PM Sep 21, 2015
Ref Offset 9 dB
10 dB/div
Ref 9.00 dBm
Mkr1 12.102 kHz
-57.109 dBm
Start 9.00 kHz
#Res BW 1.0 kHz
#VBW 3.0 kHz*
Stop 150.00 kHz
Sweep 174.0 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

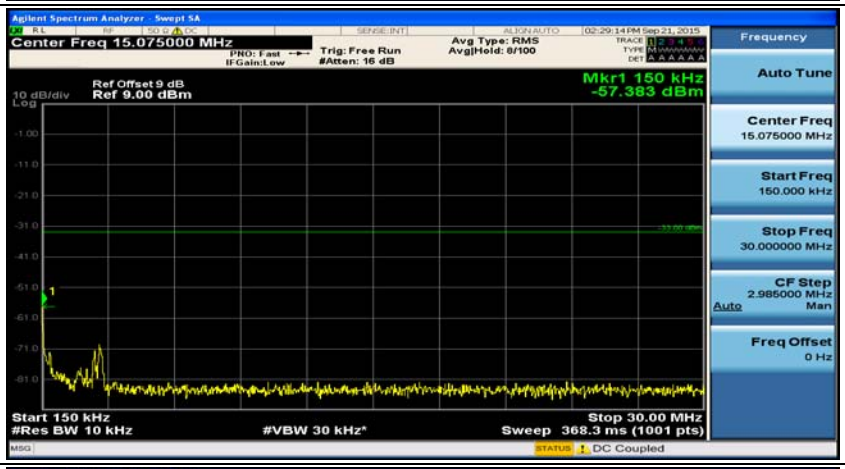

Agilent Spectrum Analyzer - Swept SA
Center Freq 15.075000 MHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 16 dB
Avg Type: RMS
Avg|Hold: 6/100
02:28:54 PM Sep 21, 2015
Ref Offset 9 dB
10 dB/div
Ref 9.00 dBm
Mkr1 150 kHz
-59.793 dBm
Start 150 kHz
#Res BW 10 kHz
#VBW 30 kHz*
Stop 30.00 MHz
Sweep 368.3 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

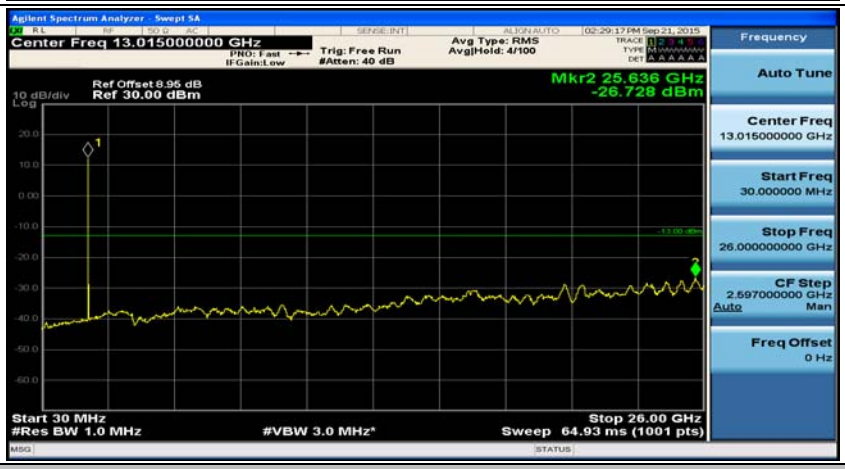

Agilent Spectrum Analyzer - Swept SA
Center Freq 13.015000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 40 dB
Avg Type: RMS
Avg|Hold: 4/100
02:28:57 PM Sep 21, 2015
Ref Offset 8.95 dB
10 dB/div
Ref 30.00 dBm
Mkr2 25.636 GHz
-27.236 dBm
Start 30 MHz
#Res BW 1.0 MHz
#VBW 3.0 MHz*
Stop 26.00 GHz
Sweep 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: 15 MHz

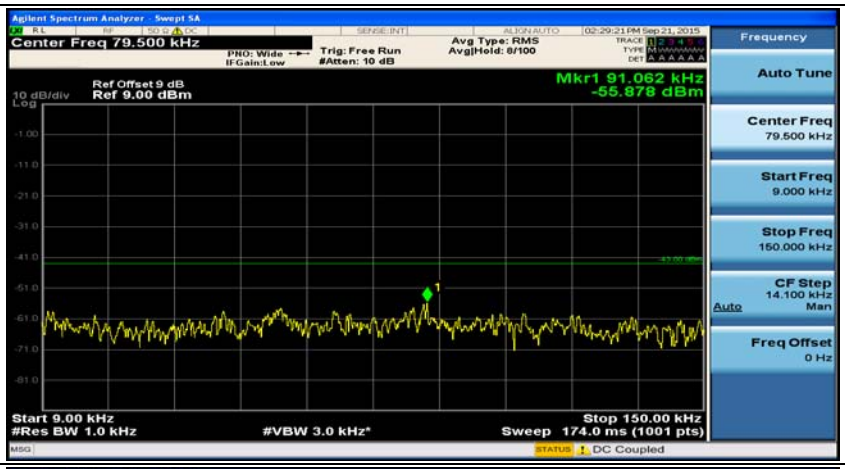
(Channel Bandwidth:15 MHz)_LCH_QPSK_1RB#0

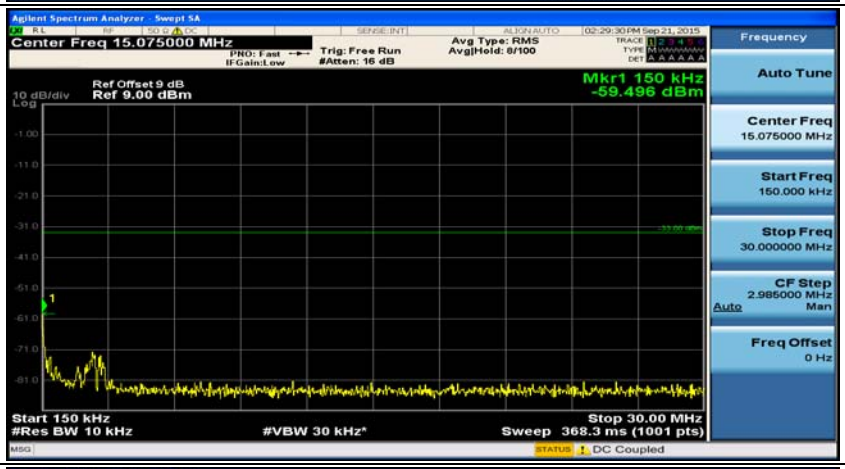


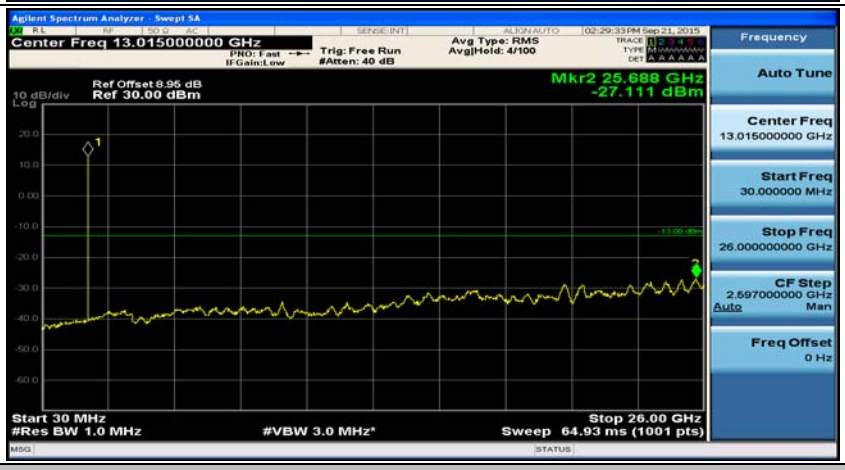




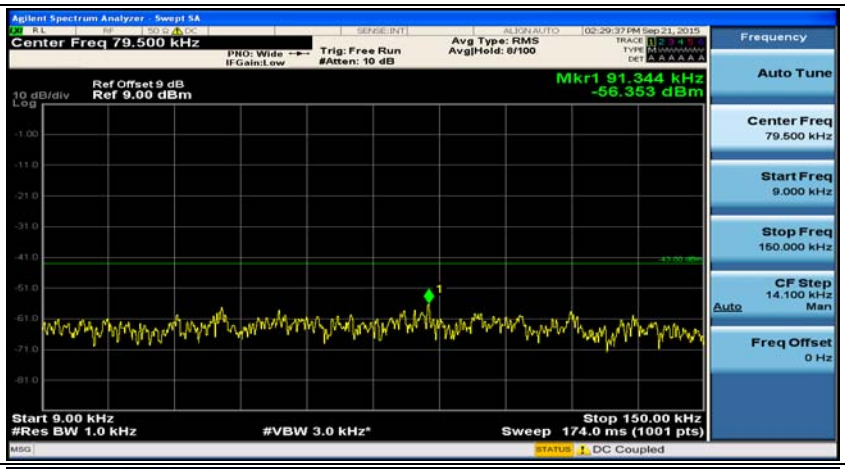
(Channel Bandwidth:15 MHz)_LCH_QPSK_1RB#37

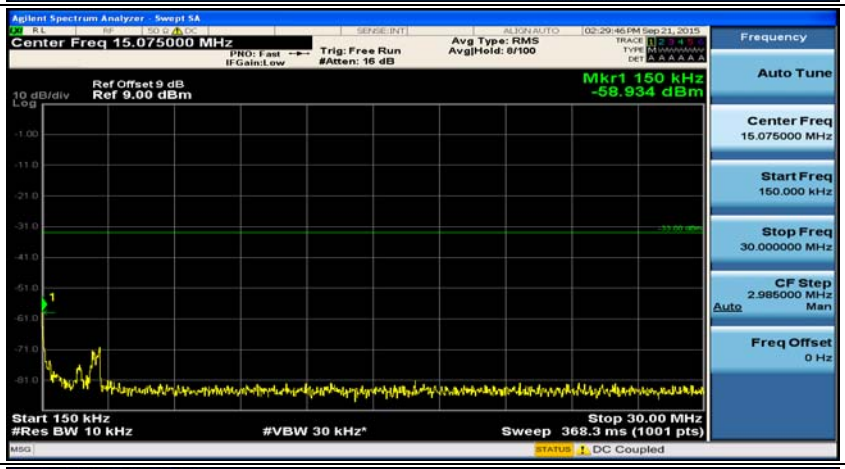


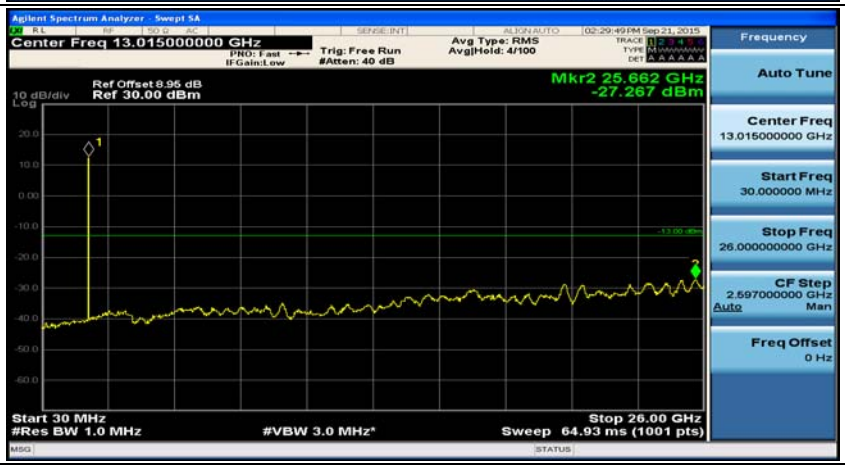




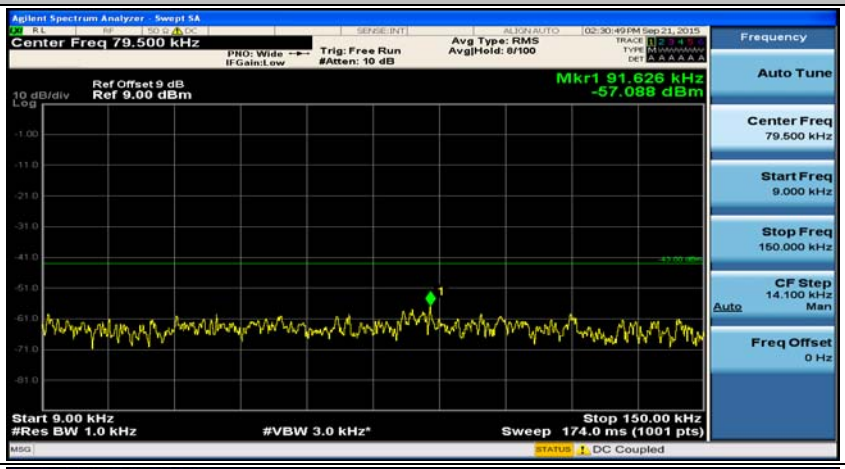
(Channel Bandwidth:15 MHz)_LCH_QPSK_1RB#74

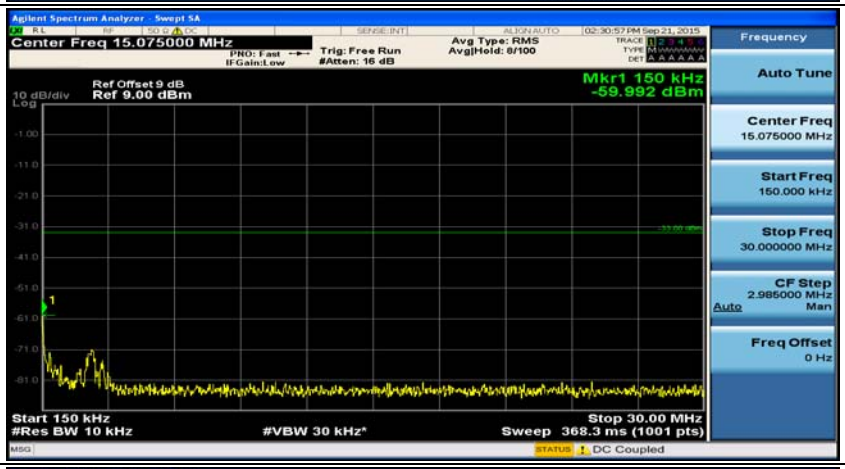

Agilent Spectrum Analyzer - Swept SA
Center Freq 79.500 kHz
PNO: Wide
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 8/100
Ref Offset 9 dB
10 dB/div
Ref 9.00 dBm
Mkr1 91.344 kHz
-56.353 dBm
Start 9.00 kHz
#Res BW 1.0 kHz
#VBW 3.0 kHz*
Stop 150.00 kHz
Sweep 174.0 ms (1001 pts)
DC Coupled
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

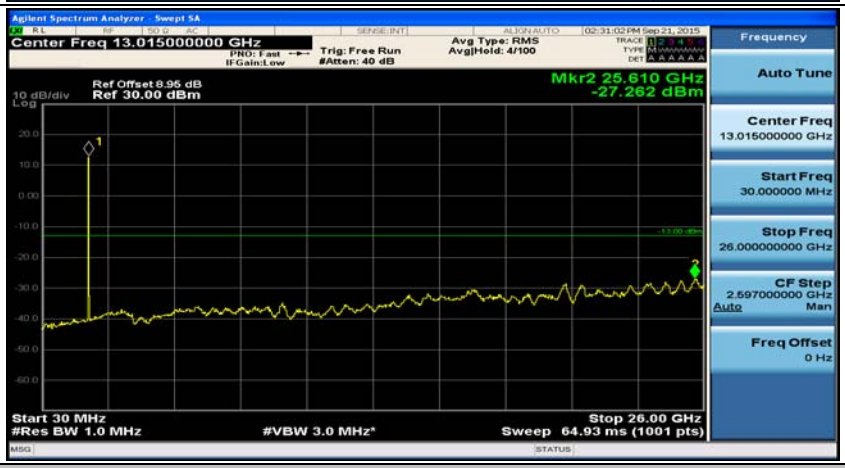

Agilent Spectrum Analyzer - Swept SA
Center Freq 15.075000 MHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 16 dB
Avg Type: RMS
Avg|Hold: 8/100
Ref Offset 9 dB
10 dB/div
Ref 9.00 dBm
Mkr1 150 kHz
-58.934 dBm
Start 150 kHz
#Res BW 10 kHz
#VBW 30 kHz*
Stop 30.00 MHz
Sweep 368.3 ms (1001 pts)
DC Coupled
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: 4/100
Ref Offset 8.95 dB
10 dB/div
Ref 30.00 dBm
Mkr2 25.662 GHz
-27.267 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

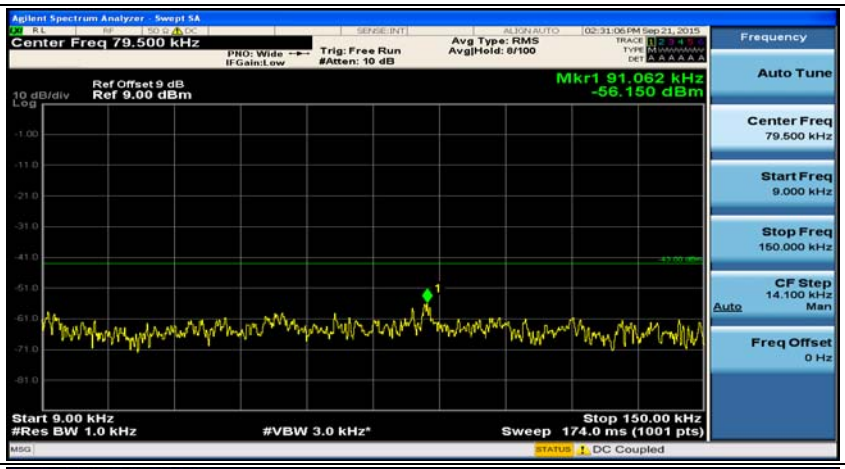
(Channel Bandwidth:15 MHz)_MCH_QPSK_1RB#0

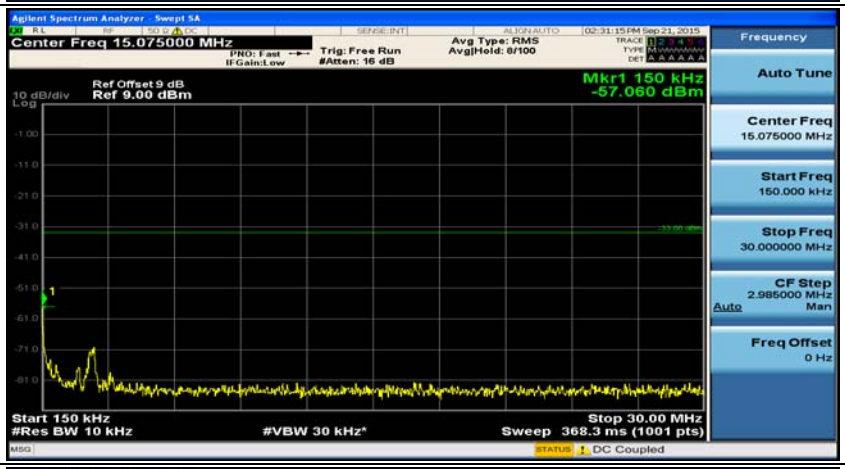


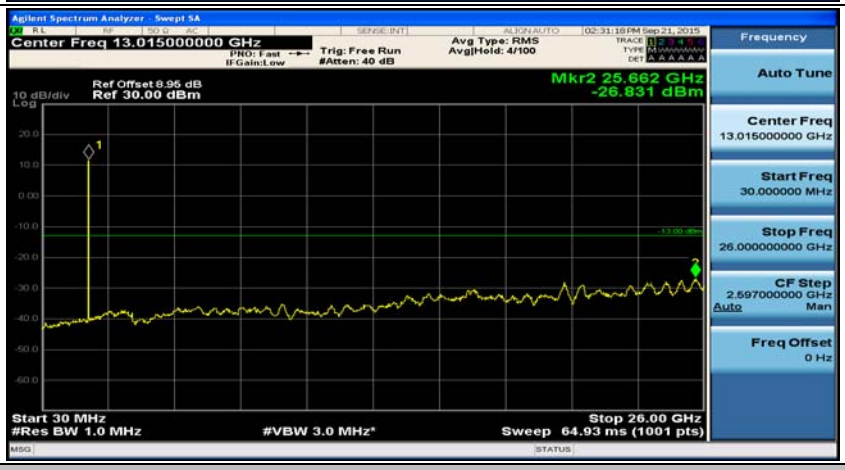




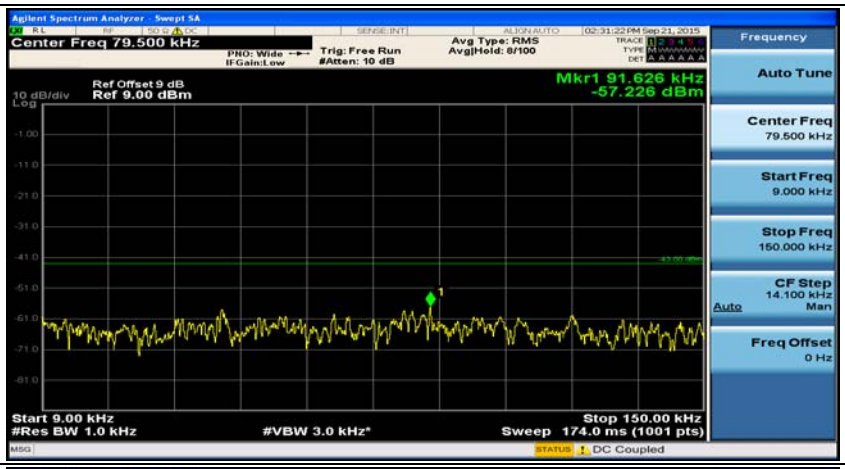
(Channel Bandwidth:15 MHz)_MCH_QPSK_1RB#37

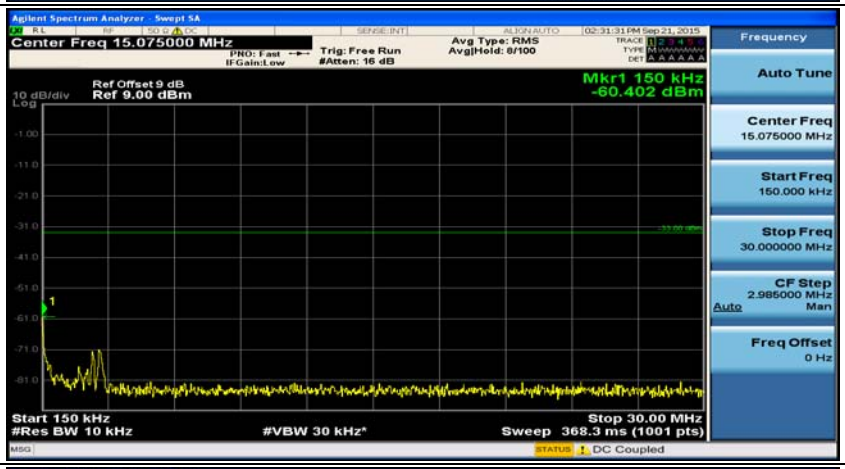


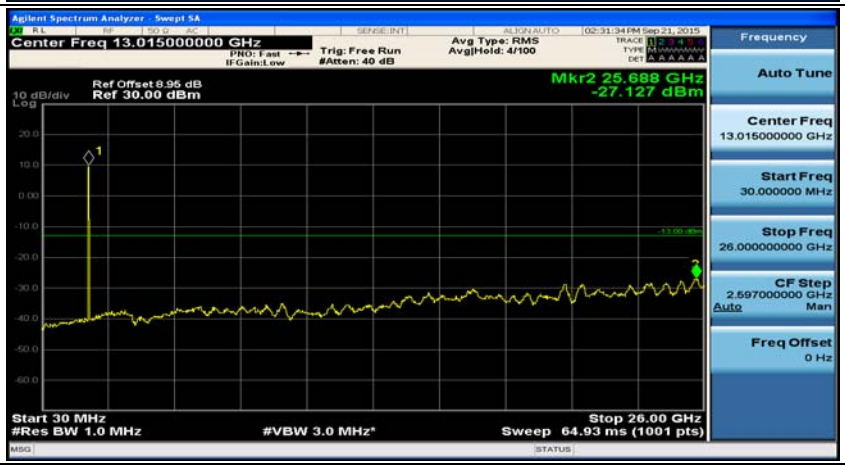




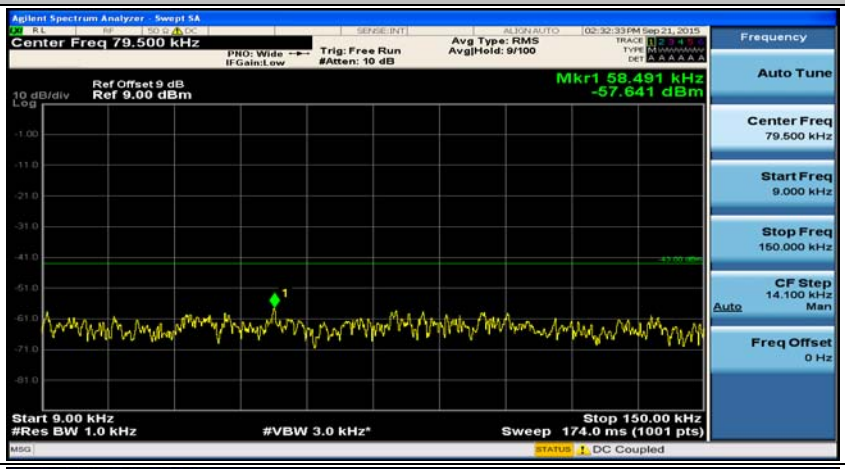
(Channel Bandwidth:15 MHz)_MCH_QPSK_1RB#74

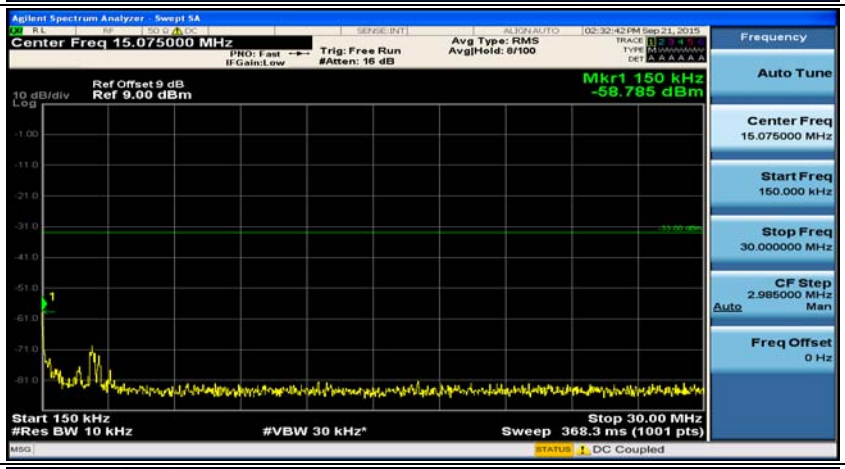

Agilent Spectrum Analyzer - Swept SA
Center Freq 79.500 kHz
PNO: Wide
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 8/100
Ref Offset 9 dB
10 dB/div
Ref 9.00 dBm
Mkr1 91.626 kHz
-57.226 dBm
Start 9.00 kHz
#Res BW 1.0 kHz
#VBW 3.0 kHz*
Stop 150.00 kHz
Sweep 174.0 ms (1001 pts)
DC Coupled
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

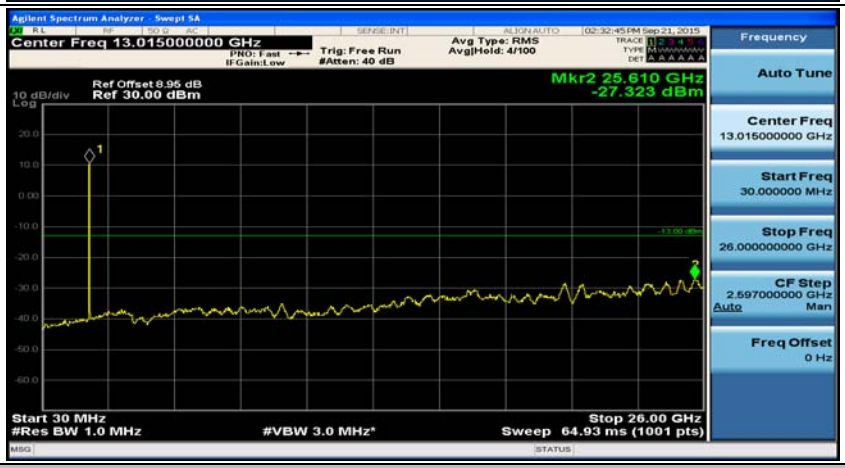

Agilent Spectrum Analyzer - Swept SA
Center Freq 15.075000 MHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 16 dB
Avg Type: RMS
Avg|Hold: 8/100
Ref Offset 9 dB
10 dB/div
Ref 9.00 dBm
Mkr1 150 kHz
-60.402 dBm
Start 150 kHz
#Res BW 10 kHz
#VBW 30 kHz*
Stop 30.00 MHz
Sweep 368.3 ms (1001 pts)
DC Coupled
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: 4/100
Ref Offset 8.95 dB
10 dB/div
Ref 30.00 dBm
Mkr2 25.688 GHz
-27.127 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

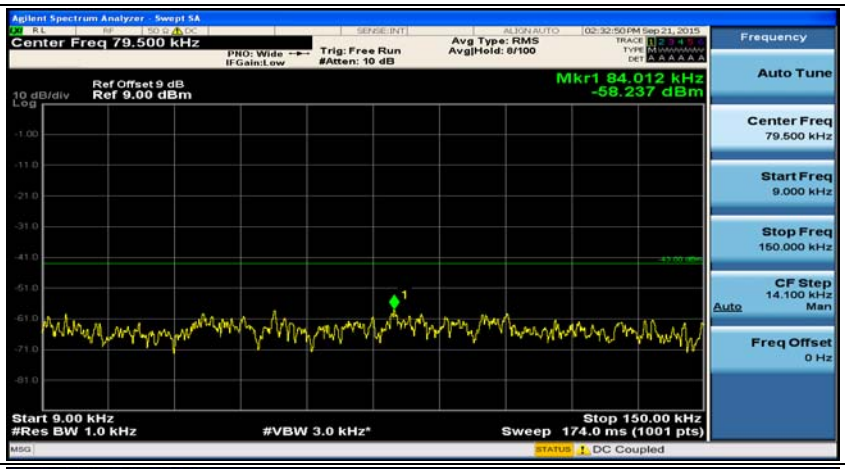
(Channel Bandwidth:15 MHz)_HCH_QPSK_1RB#0

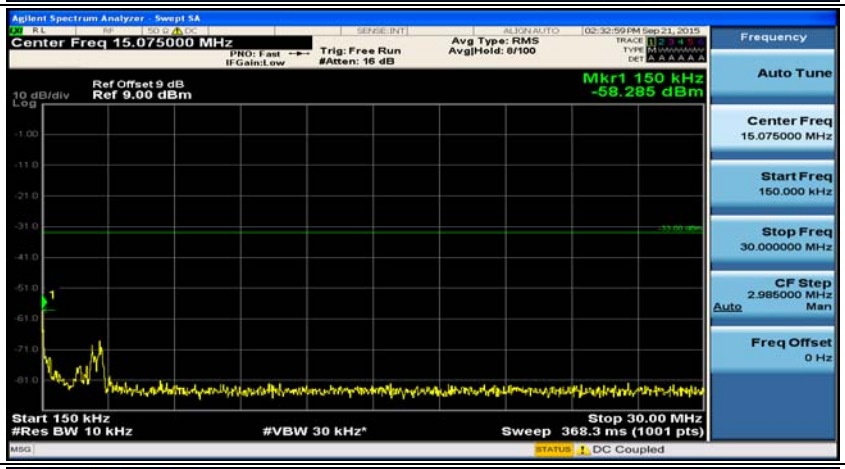


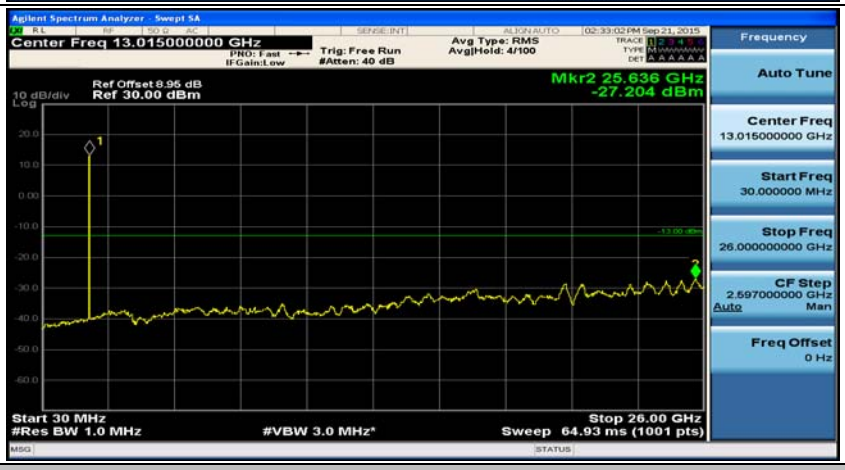




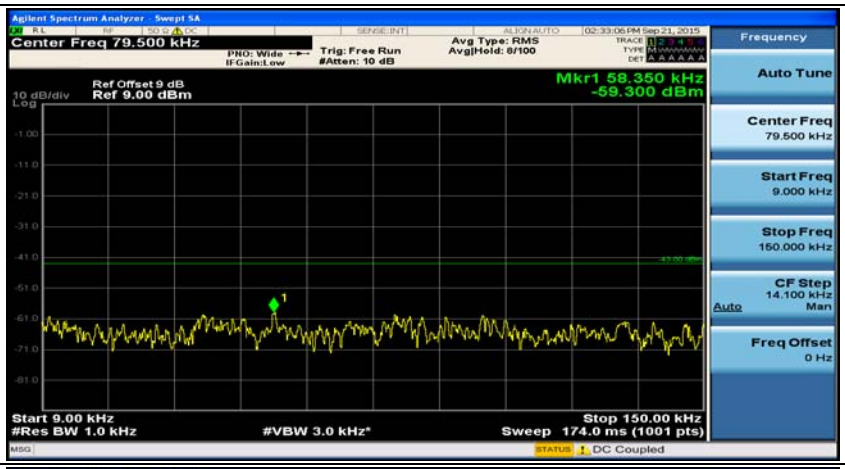
(Channel Bandwidth:15 MHz)_HCH_QPSK_1RB#37

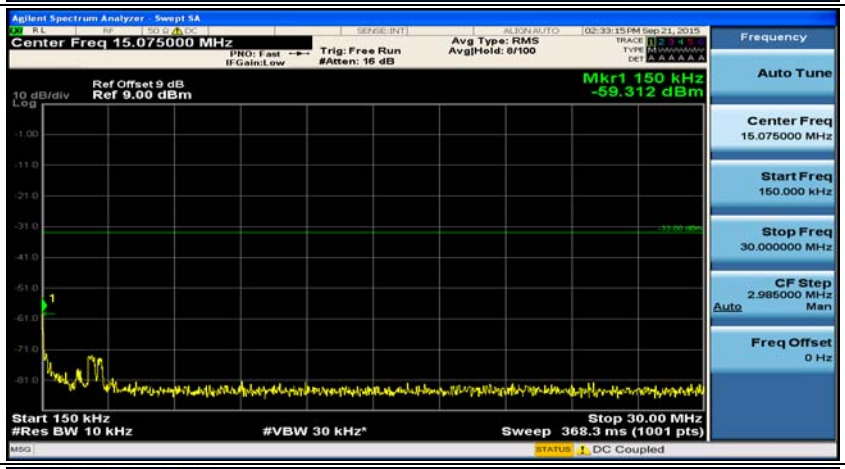


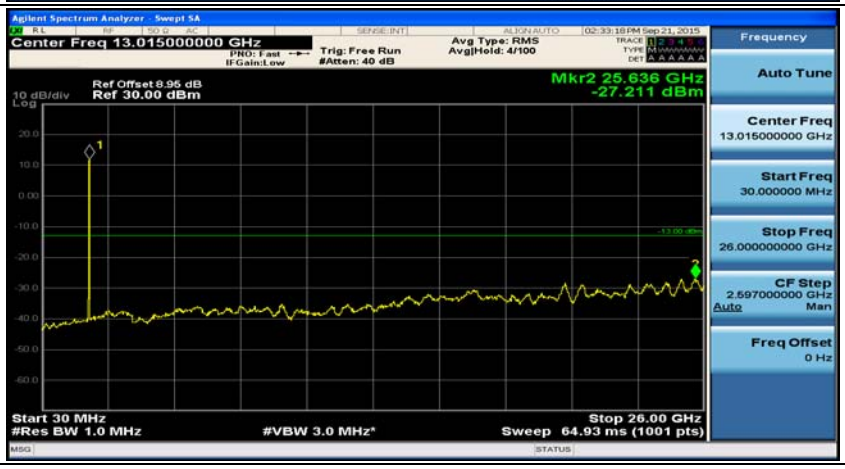




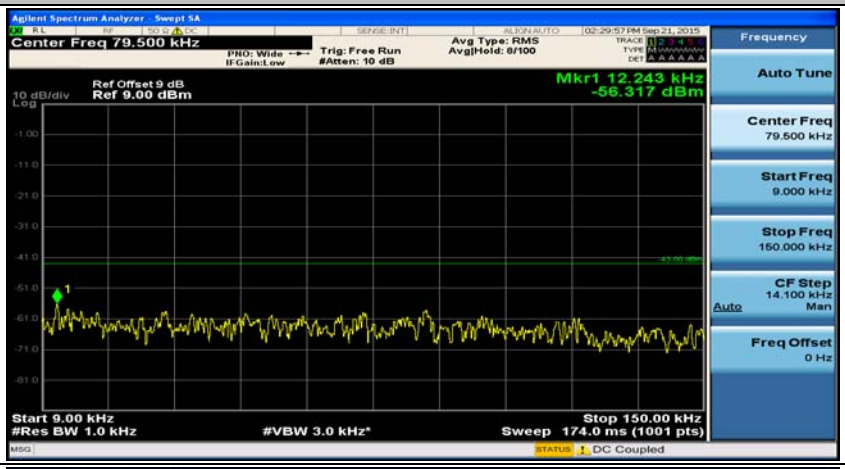
(Channel Bandwidth:15 MHz)_HCH_QPSK_1RB#74

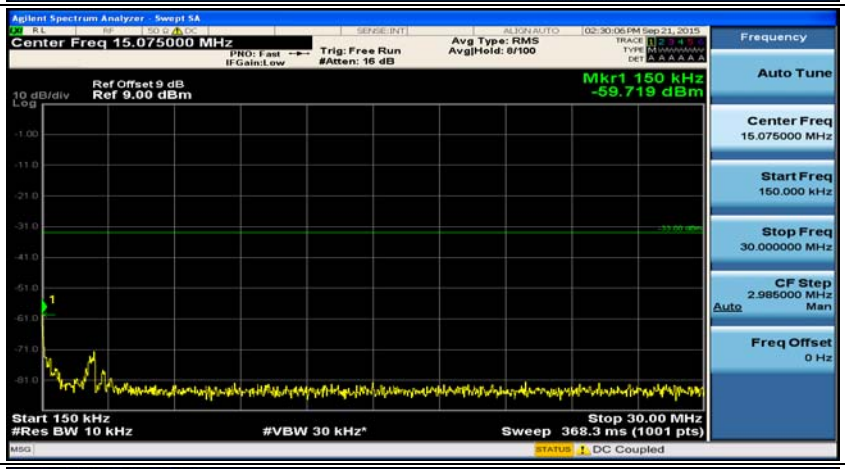

Agilent Spectrum Analyzer - Swept SA
Center Freq 79.500 kHz
PNO: Wide
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 8/100
Ref Offset 9 dB
10 dB/div
Ref 9.00 dBm
Mkr1 58.350 kHz
-59.300 dBm
Start 9.00 kHz
#Res BW 1.0 kHz
#VBW 3.0 kHz*
Stop 150.00 kHz
Sweep 174.0 ms (1001 pts)
DC Coupled
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

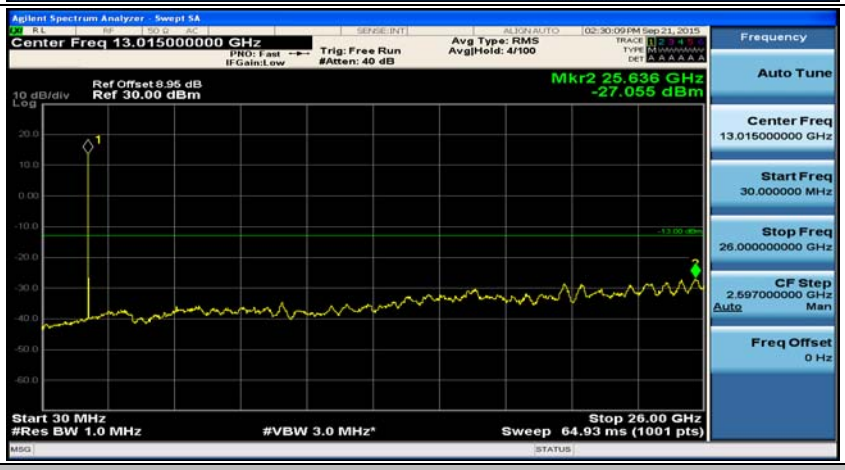

Agilent Spectrum Analyzer - Swept SA
Center Freq 15.075000 MHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 16 dB
Avg Type: RMS
Avg|Hold: 8/100
Ref Offset 9 dB
10 dB/div
Ref 9.00 dBm
Mkr1 150 kHz
-59.312 dBm
Start 150 kHz
#Res BW 10 kHz
#VBW 30 kHz*
Stop 30.00 MHz
Sweep 368.3 ms (1001 pts)
DC Coupled
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: 4/100
Ref Offset 8.95 dB
10 dB/div
Ref 30.00 dBm
Mkr2 25.636 GHz
-27.211 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

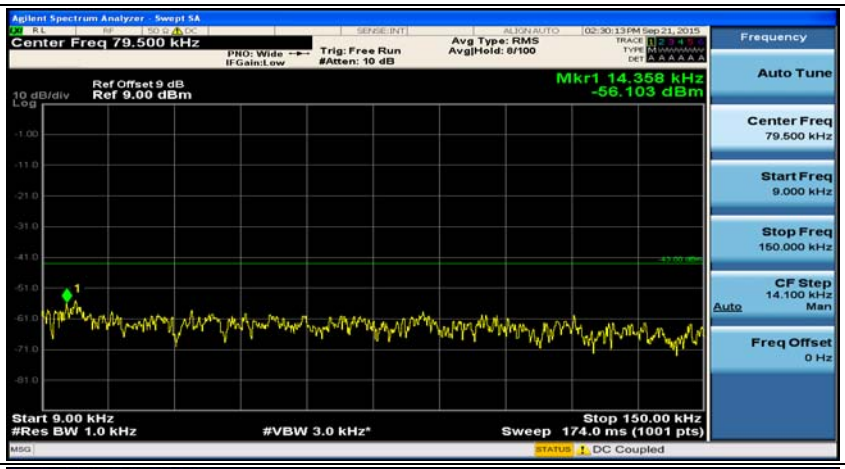
(Channel Bandwidth:15 MHz)_LCH_16QAM_1RB#0

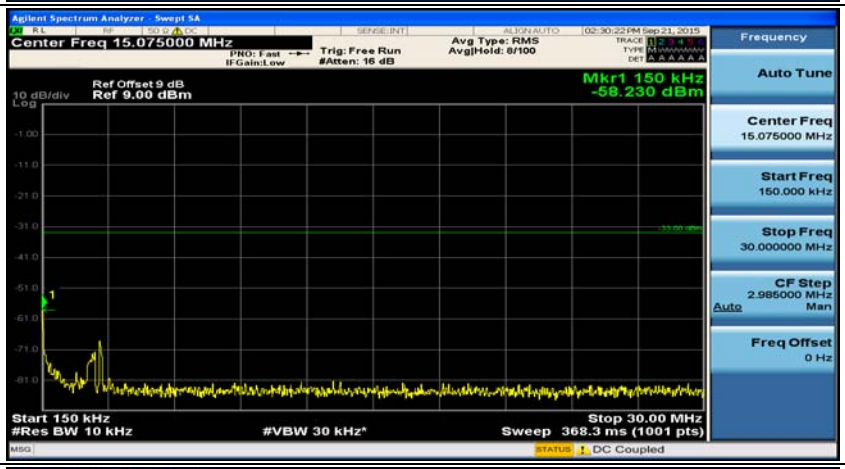


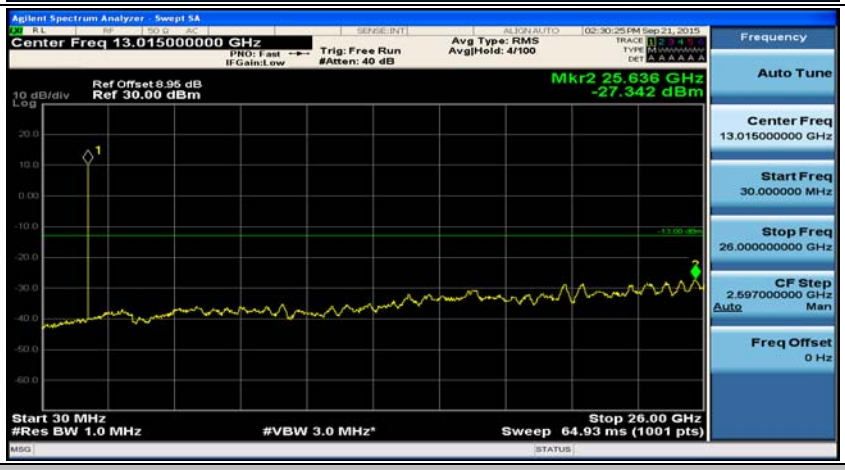




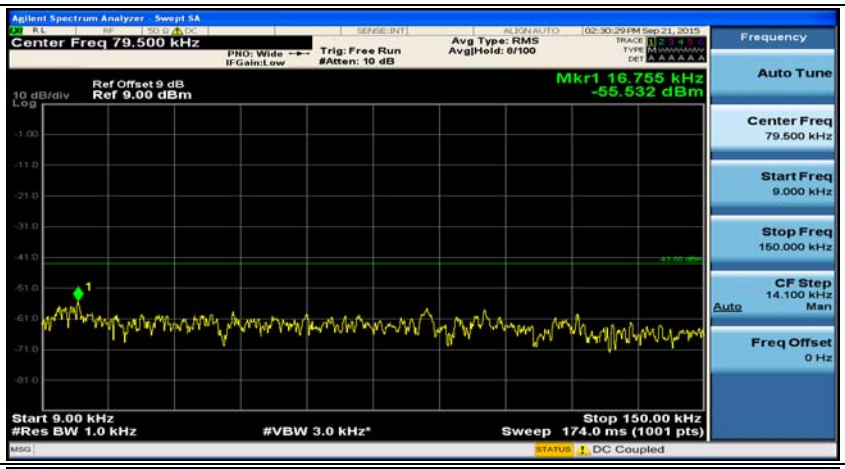
(Channel Bandwidth:15 MHz)_LCH_16QAM_1RB#37

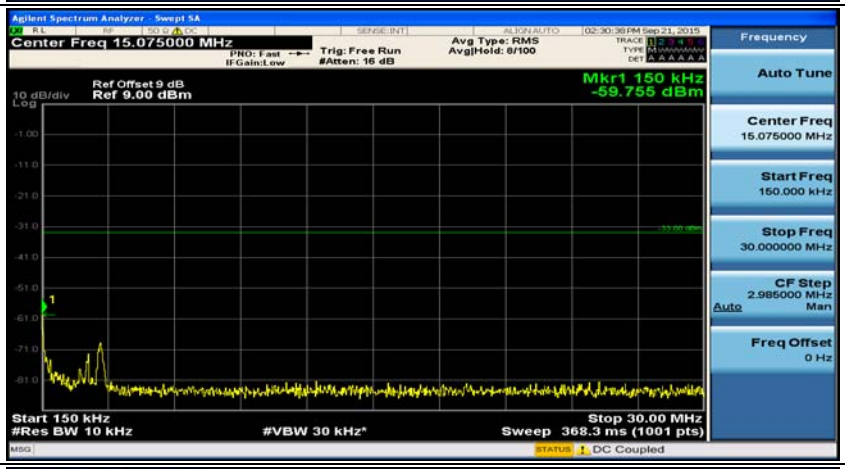


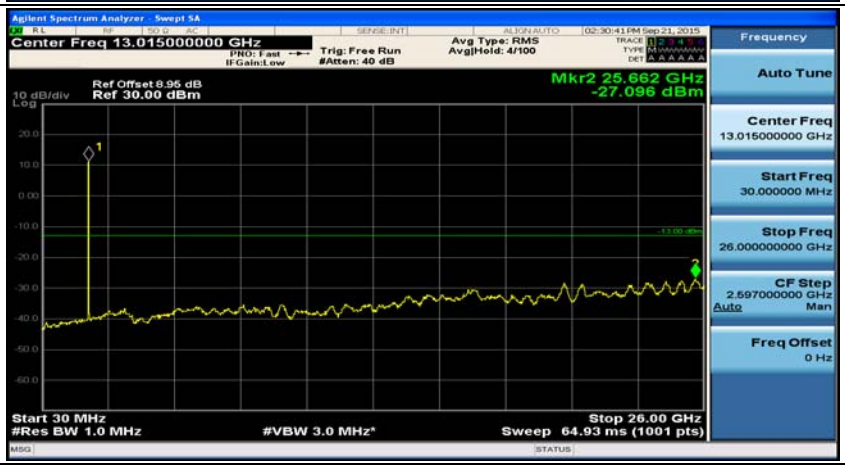




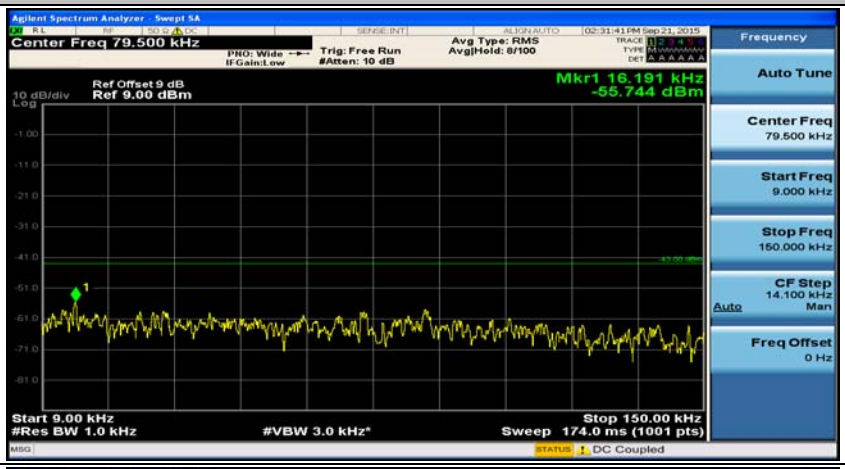
(Channel Bandwidth:15 MHz)_LCH_16QAM_1RB#74

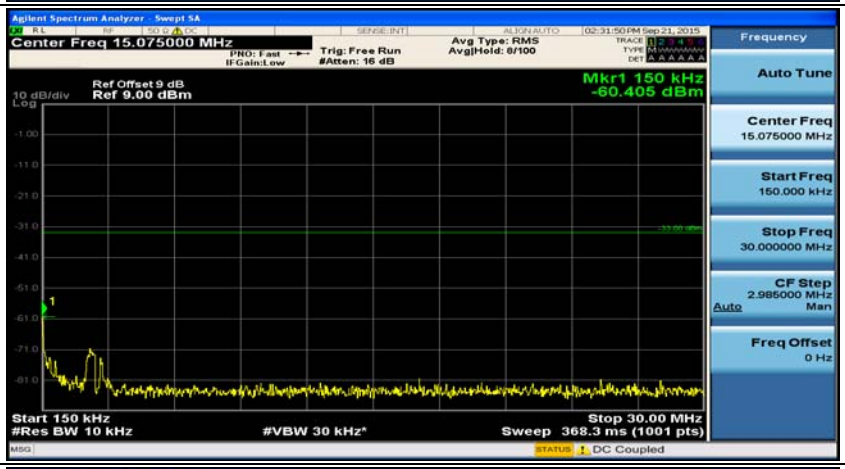

Agilent Spectrum Analyzer - Swept SA
Center Freq 79.500 kHz
PNO: Wide
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 8/100
02:30:29 PM Sep 21, 2015
Ref Offset 9 dB
10 dB/div
Ref 9.00 dBm
Mkr1 16.755 kHz
-55.532 dBm
Start 9.00 kHz
#Res BW 1.0 kHz
#VBW 3.0 kHz*
Stop 150.00 kHz
Sweep 174.0 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

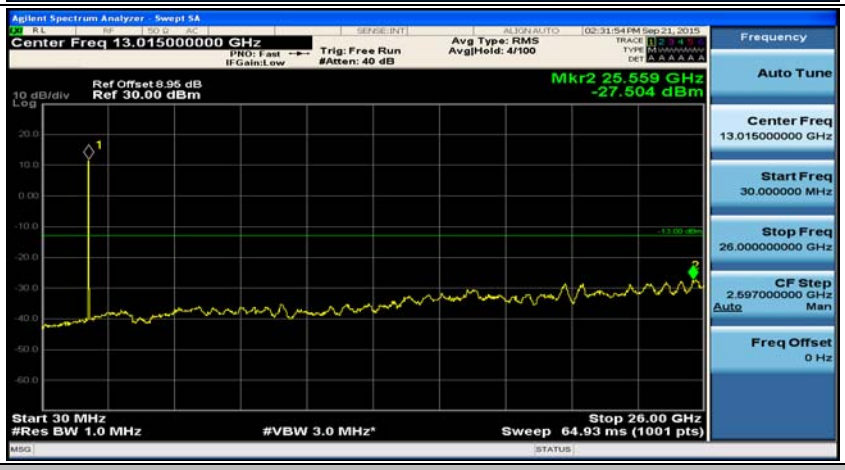

Agilent Spectrum Analyzer - Swept SA
Center Freq 15.075000 MHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 16 dB
Avg Type: RMS
Avg|Hold: 8/100
02:30:38 PM Sep 21, 2015
Ref Offset 9 dB
10 dB/div
Ref 9.00 dBm
Mkr1 150 kHz
-59.755 dBm
Start 150 kHz
#Res BW 10 kHz
#VBW 30 kHz*
Stop 30.00 MHz
Sweep 368.3 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: 4/100
02:30:41 PM Sep 21, 2015
Ref Offset 8.95 dB
10 dB/div
Ref 30.00 dBm
Mkr2 25.662 GHz
-27.096 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

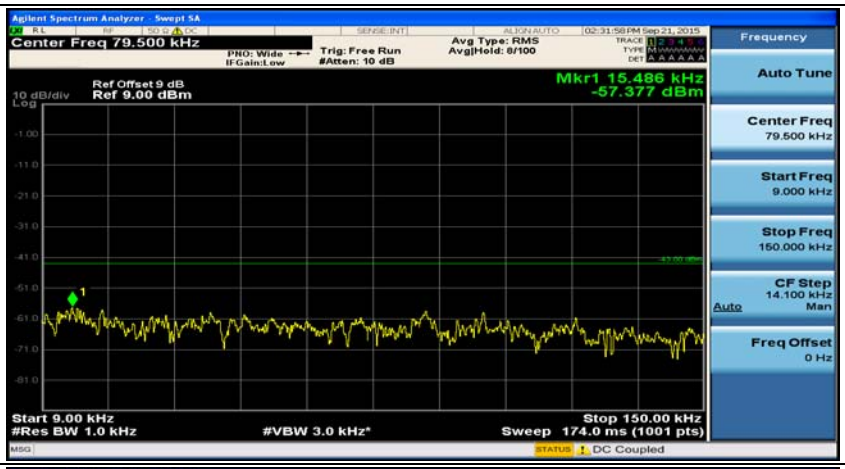
(Channel Bandwidth:15 MHz)_MCH_16QAM_1RB#0

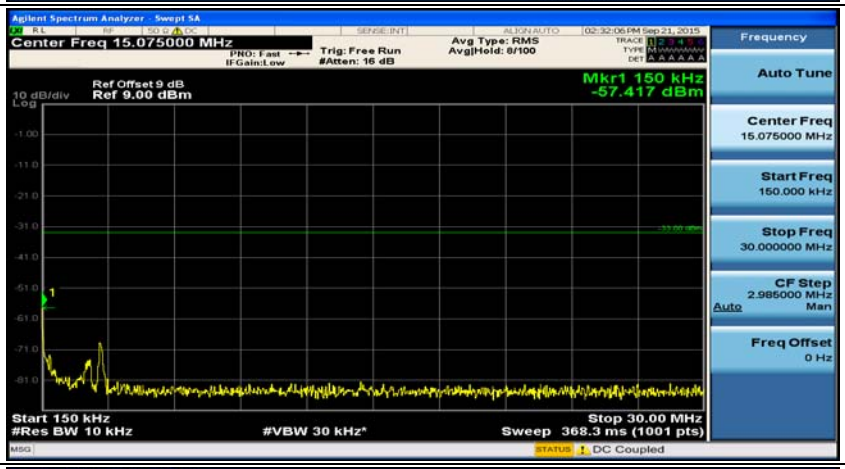


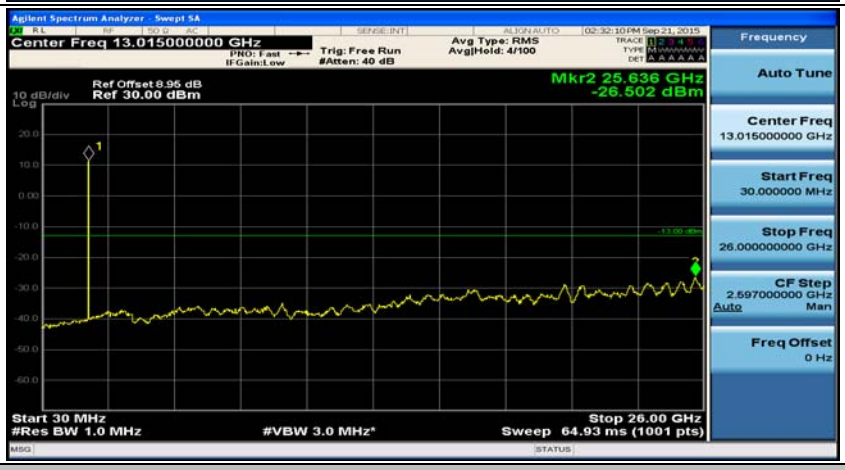




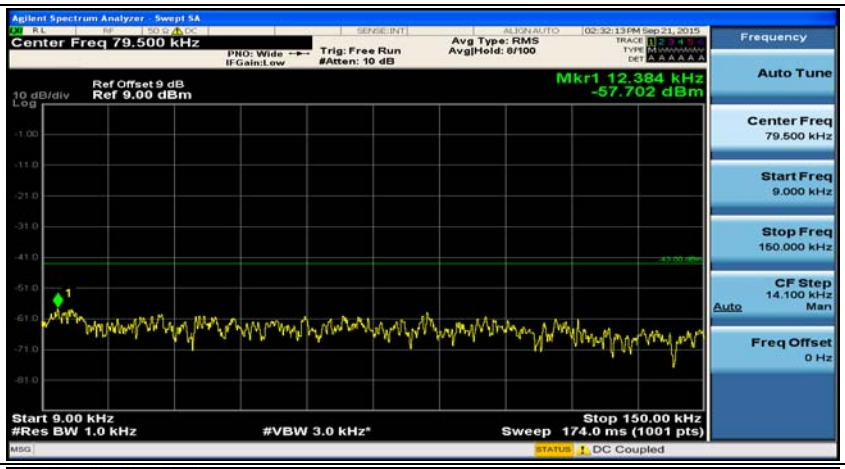
(Channel Bandwidth:15 MHz)_MCH_16QAM_1RB#37

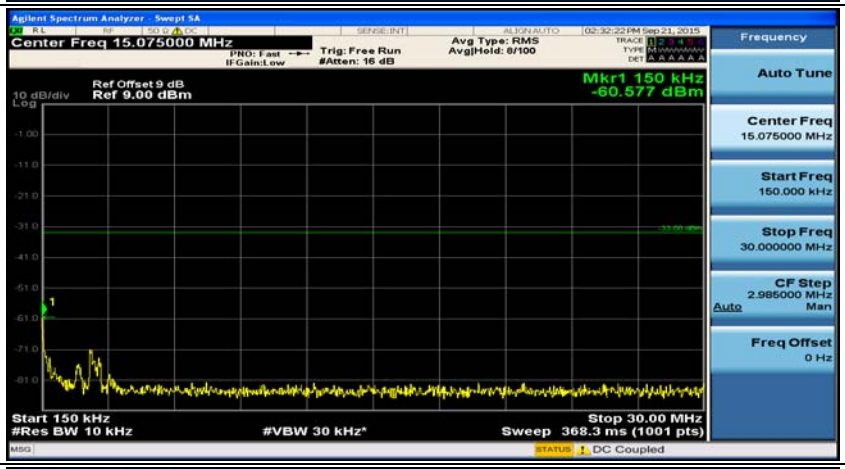


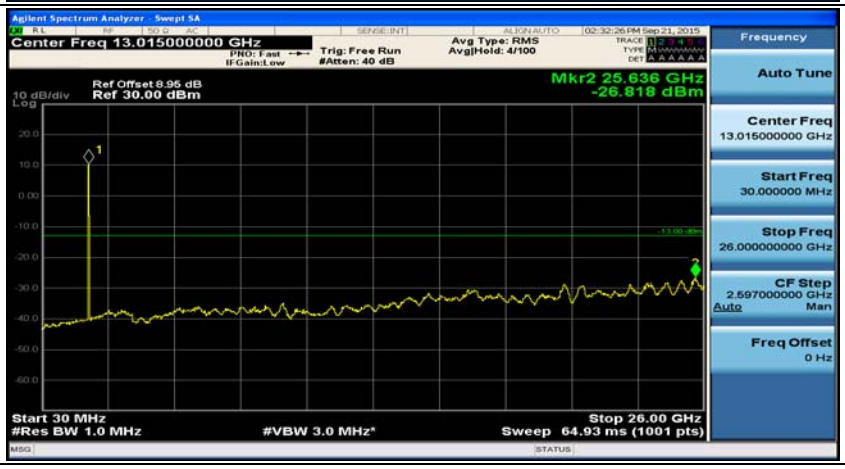




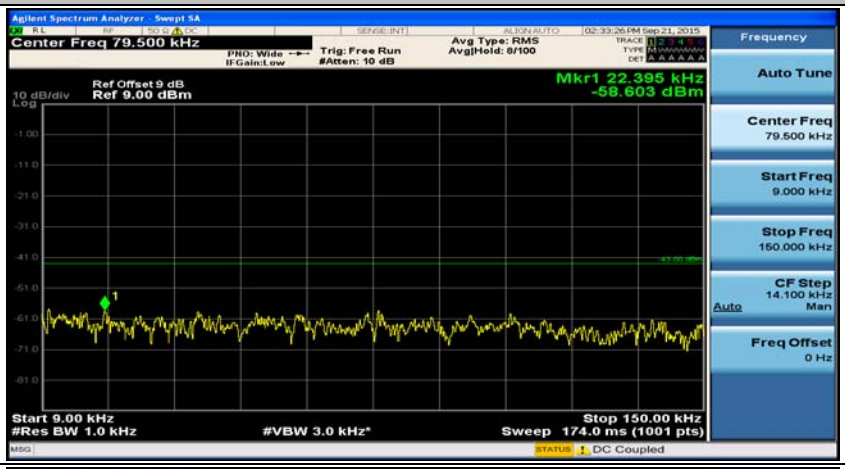
(Channel Bandwidth:15 MHz)_MCH_16QAM_1RB#74

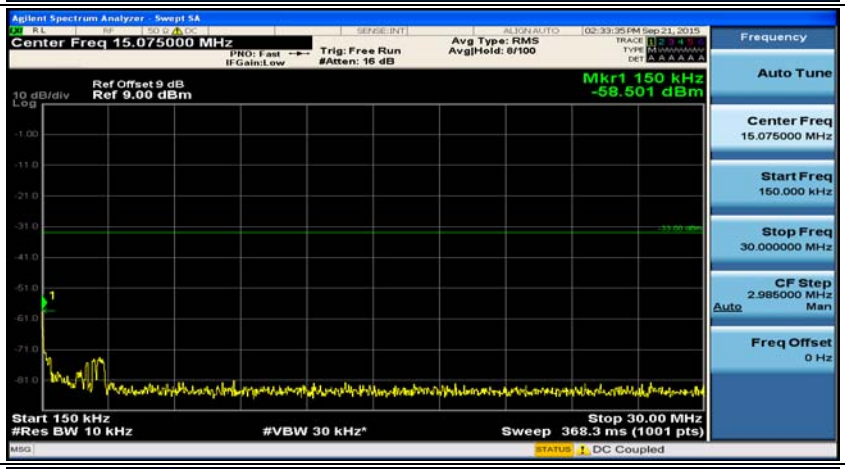

Agilent Spectrum Analyzer - Swept SA
Center Freq 79.500 kHz
PNO: Wide
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 8/100
02:32:13 PM Sep 21, 2015
Ref Offset 9 dB
10 dB/div
Ref 9.00 dBm
Mkr1 12.384 kHz
-57.702 dBm
Start 9.00 kHz
#Res BW 1.0 kHz
#VBW 3.0 kHz*
Stop 150.00 kHz
Sweep 174.0 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

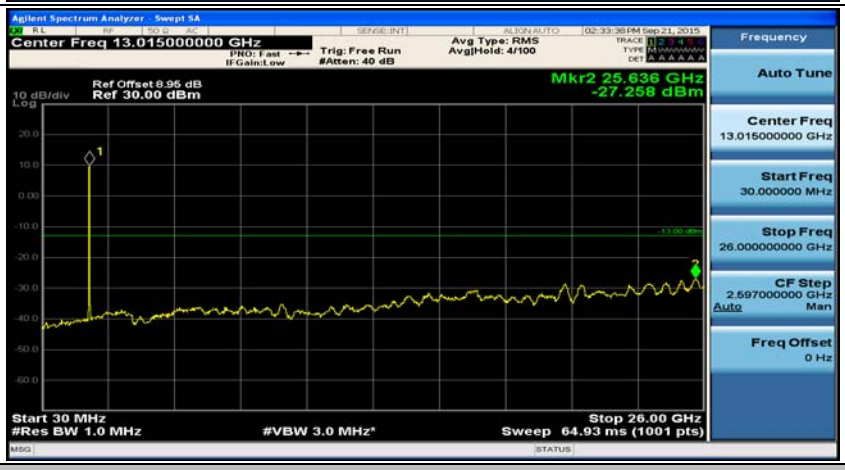

Agilent Spectrum Analyzer - Swept SA
Center Freq 15.075000 MHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 16 dB
Avg Type: RMS
Avg|Hold: 8/100
02:32:22 PM Sep 21, 2015
Ref Offset 9 dB
10 dB/div
Ref 9.00 dBm
Mkr1 150 kHz
-60.577 dBm
Start 150 kHz
#Res BW 10 kHz
#VBW 30 kHz*
Stop 30.00 MHz
Sweep 368.3 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: 4/100
02:32:26 PM Sep 21, 2015
Ref Offset 8.95 dB
10 dB/div
Ref 30.00 dBm
Mkr2 25.636 GHz
-26.818 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

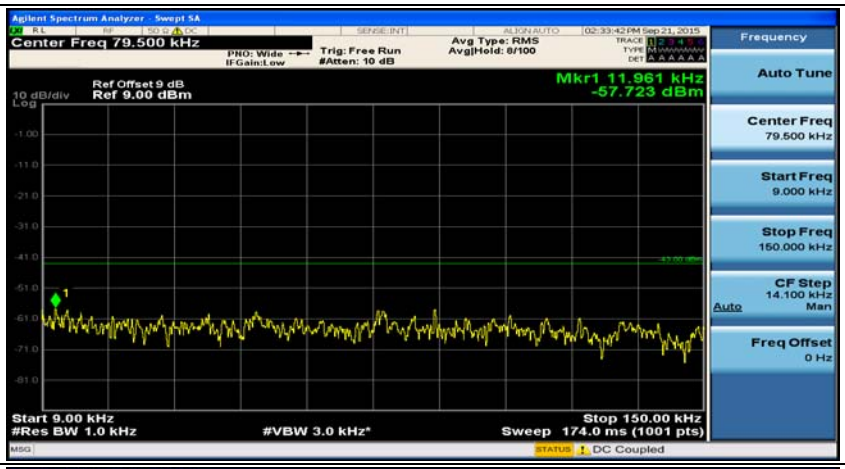
(Channel Bandwidth:15 MHz)_HCH_16QAM_1RB#0

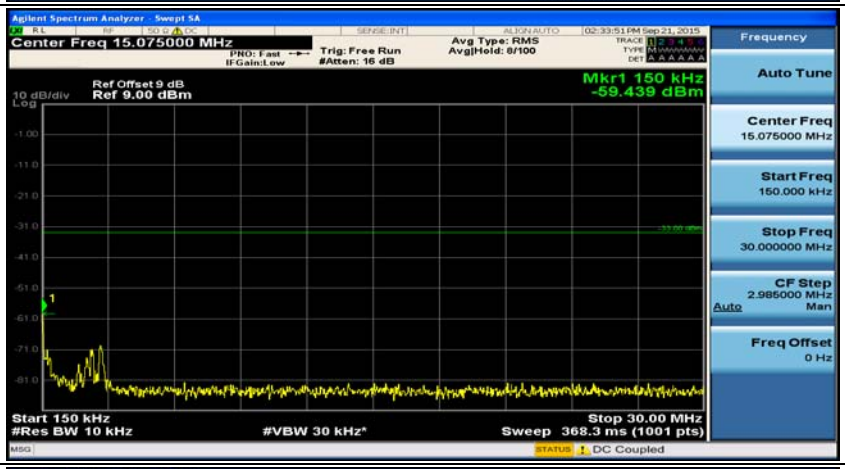


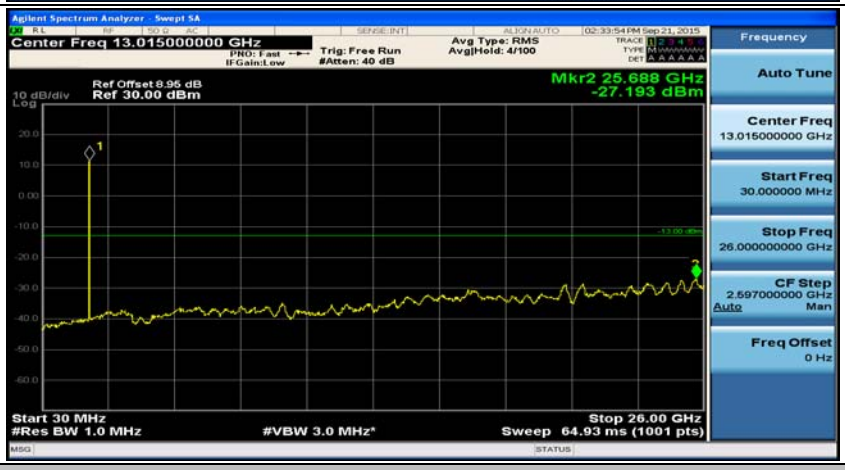




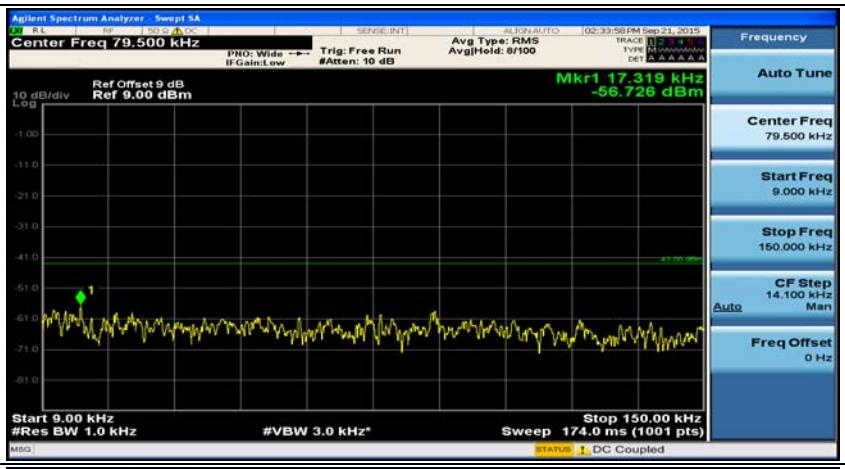
(Channel Bandwidth:15 MHz)_HCH_16QAM_1RB#37

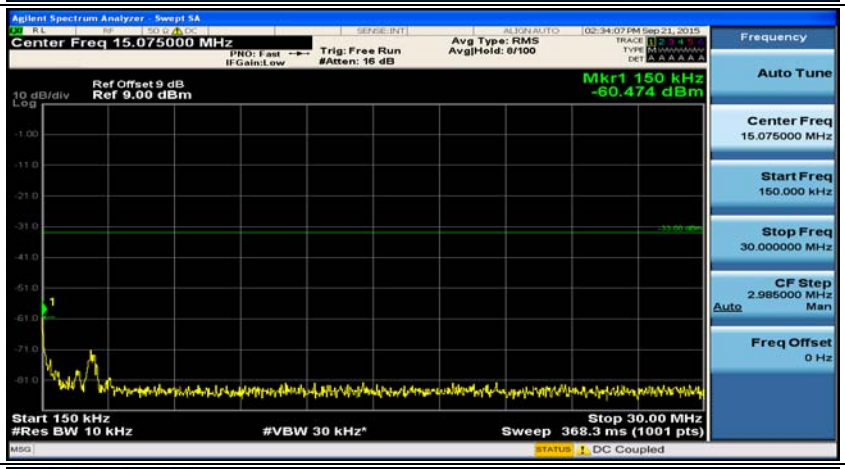


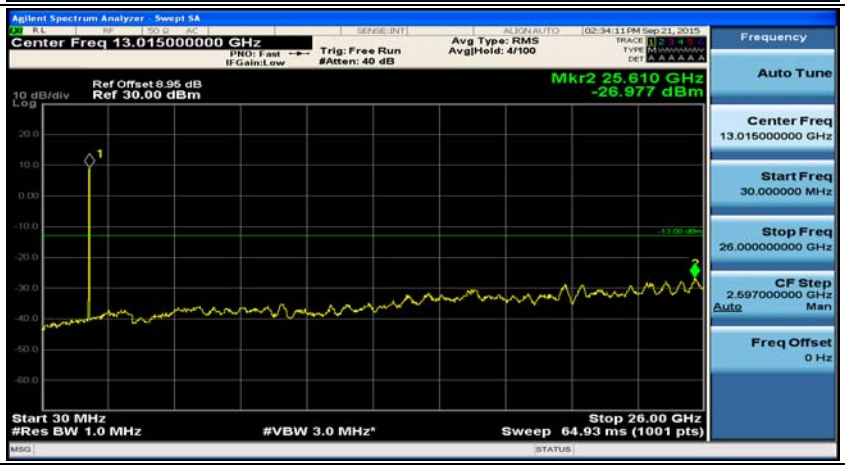




(Channel Bandwidth:15 MHz)_HCH_16QAM_1RB#74

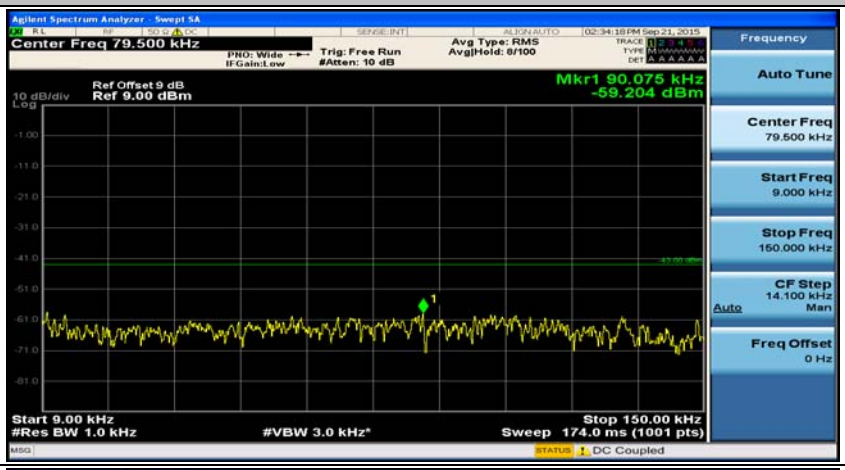

Agilent Spectrum Analyzer - Swept SA
Center Freq 79.500 kHz
PNO: Wide
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 8/100
02:33:58 PM Sep 21, 2015
Ref Offset 9 dB
10 dB/div
Ref 9.00 dBm
Mkr1 17.319 kHz
-56.726 dBm
Start 9.00 kHz
#Res BW 1.0 kHz
#VBW 3.0 kHz*
Stop 150.00 kHz
Sweep 174.0 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

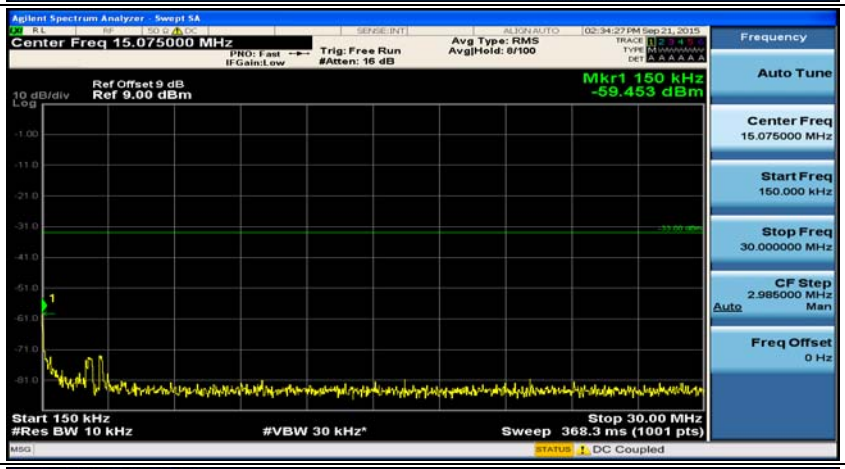

Agilent Spectrum Analyzer - Swept SA
Center Freq 15.075000 MHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 16 dB
Avg Type: RMS
Avg|Hold: 8/100
02:34:07 PM Sep 21, 2015
Ref Offset 9 dB
10 dB/div
Ref 9.00 dBm
Mkr1 150 kHz
-60.474 dBm
Start 150 kHz
#Res BW 10 kHz
#VBW 30 kHz*
Stop 30.00 MHz
Sweep 368.3 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

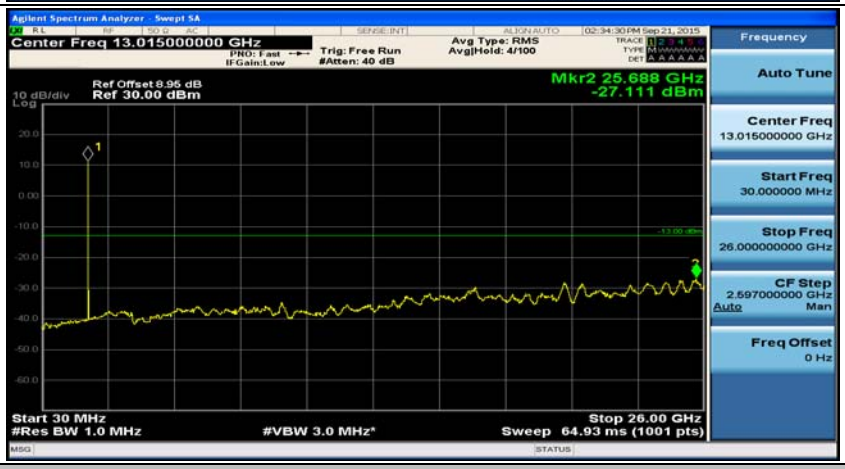

Agilent Spectrum Analyzer - Swept SA
Center Freq 13.015000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 40 dB
Avg Type: RMS
Avg|Hold: 4/100
02:34:11 PM Sep 21, 2015
Ref Offset 8.95 dB
10 dB/div
Ref 30.00 dBm
Mkr2 25.610 GHz
-26.977 dBm
Start 30 MHz
#Res BW 1.0 MHz
#VBW 3.0 MHz*
Stop 26.00 GHz
Sweep 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: 20 MHz

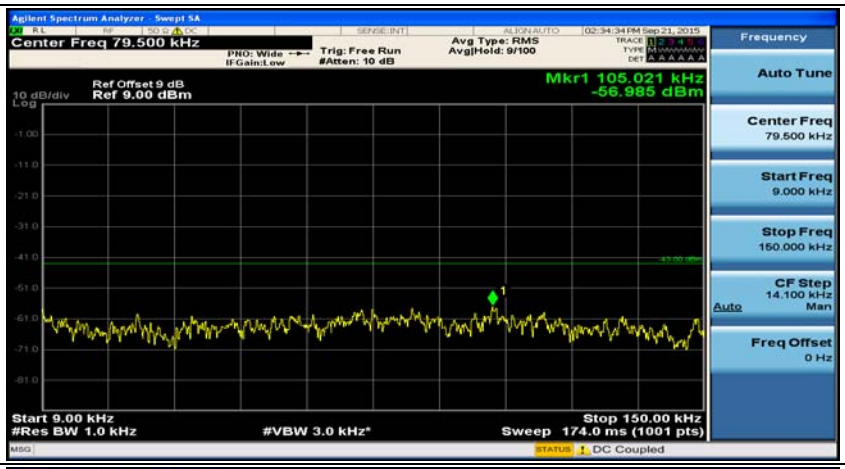
(Channel Bandwidth:20 MHz)_LCH_QPSK_1RB#0

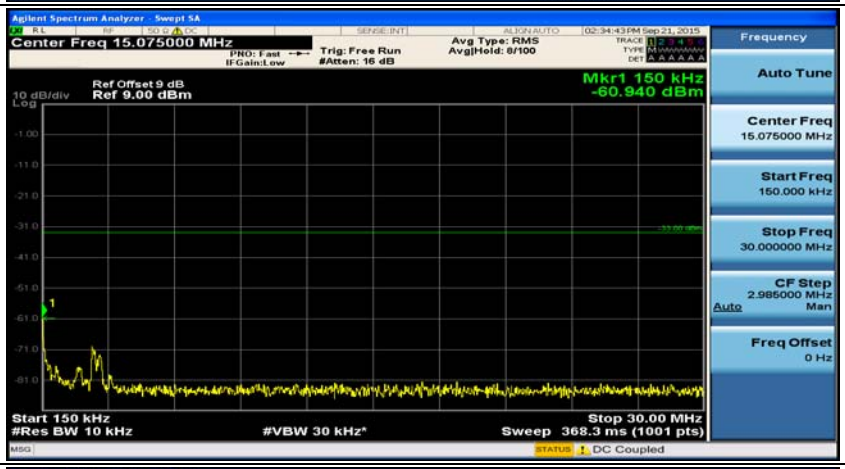


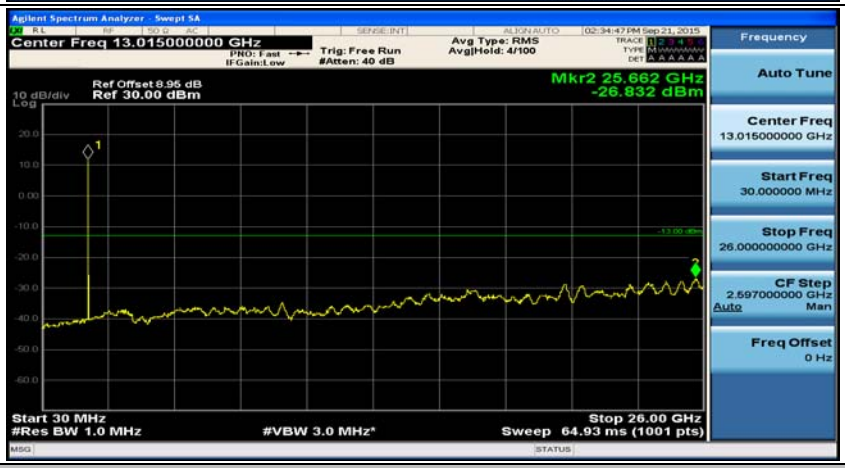




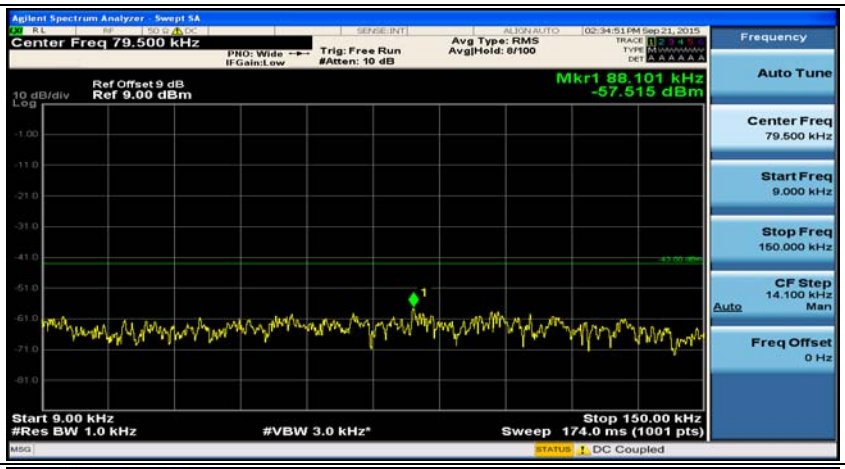
(Channel Bandwidth:20 MHz)_LCH_QPSK_1RB#49

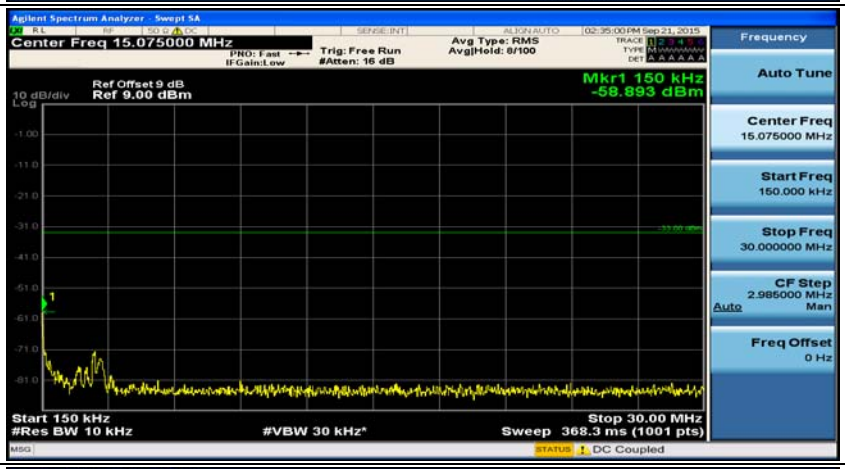


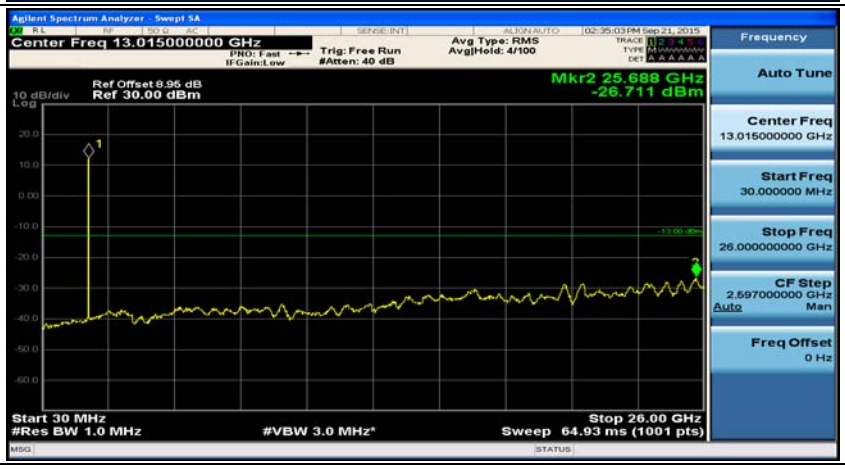




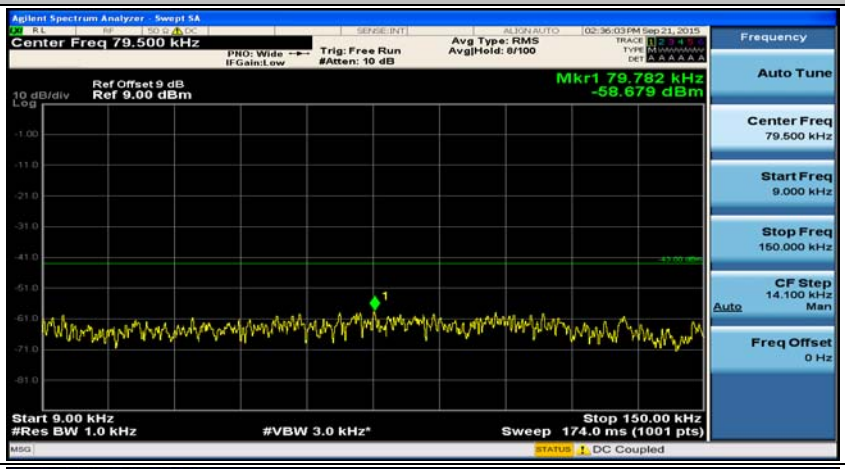
(Channel Bandwidth:20 MHz)_LCH_QPSK_1RB#99

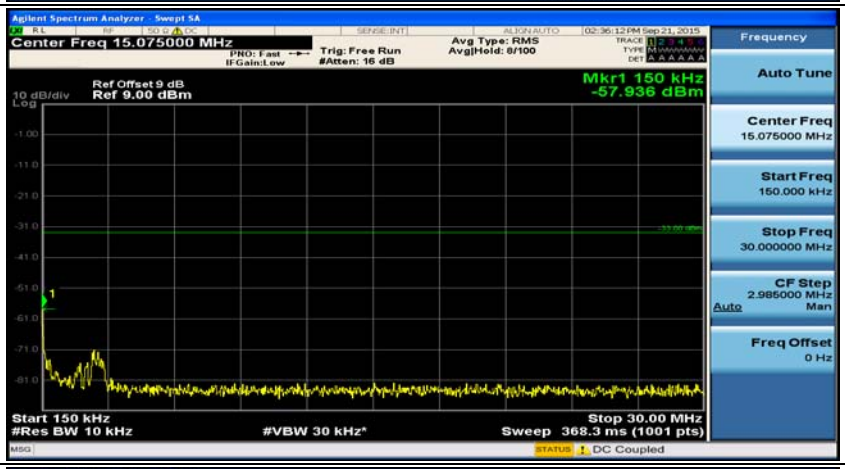

Agilent Spectrum Analyzer - Swept SA
Center Freq 79.500 kHz
PNO: Wide
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 8/100
02:34:51 PM Sep 21, 2015
Ref Offset 9 dB
10 dB/div
Ref 9.00 dBm
Mkr1 88.101 kHz
-57.515 dBm
Start 9.00 kHz
#Res BW 1.0 kHz
#VBW 3.0 kHz*
Stop 150.00 kHz
Sweep 174.0 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

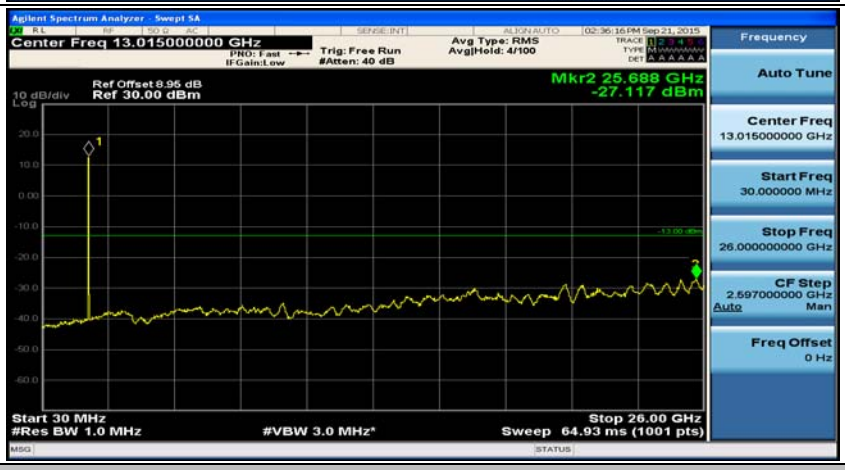

Agilent Spectrum Analyzer - Swept SA
Center Freq 15.075000 MHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 16 dB
Avg Type: RMS
Avg|Hold: 8/100
02:35:00 PM Sep 21, 2015
Ref Offset 9 dB
10 dB/div
Ref 9.00 dBm
Mkr1 150 kHz
-58.893 dBm
Start 150 kHz
#Res BW 10 kHz
#VBW 30 kHz*
Stop 30.00 MHz
Sweep 368.3 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: 4/100
02:35:03 PM Sep 21, 2015
Ref Offset 8.95 dB
10 dB/div
Ref 30.00 dBm
Mkr2 25.688 GHz
-26.711 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

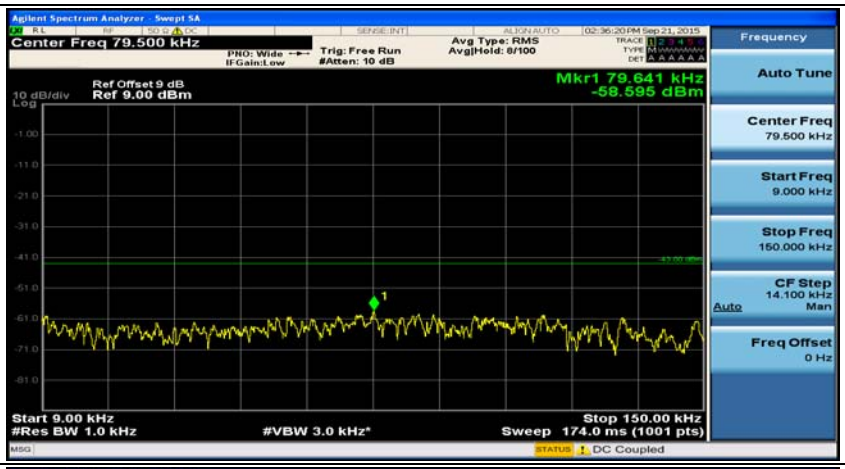
(Channel Bandwidth:20 MHz)_MCH_QPSK_1RB#0

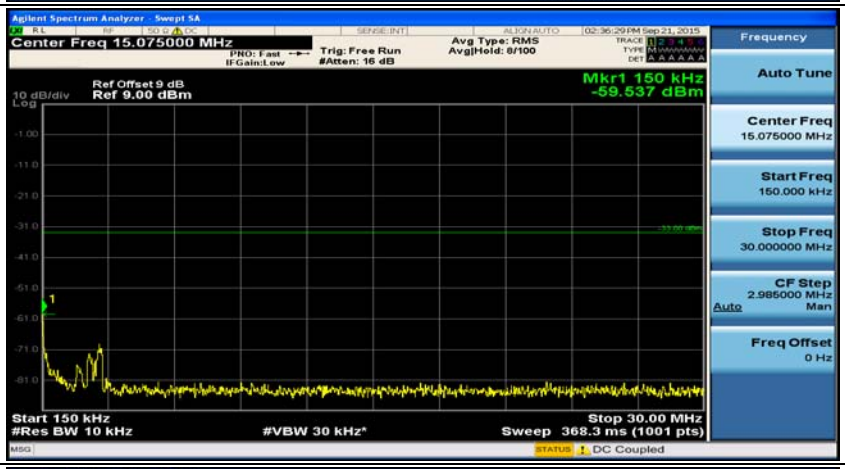


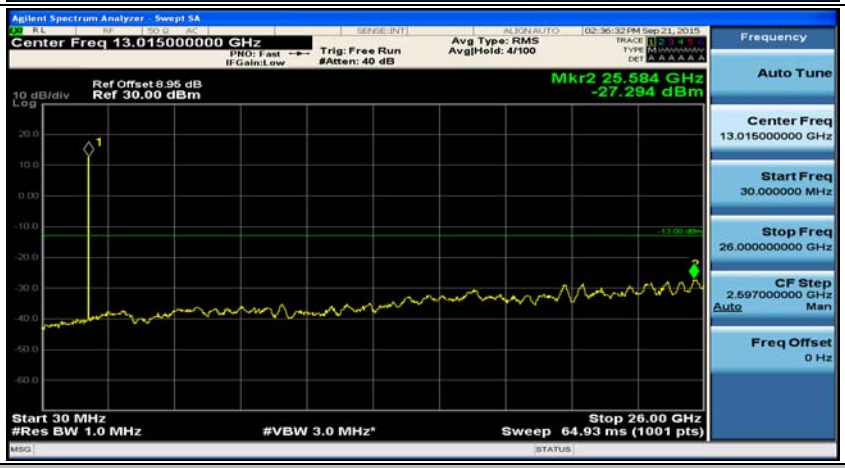




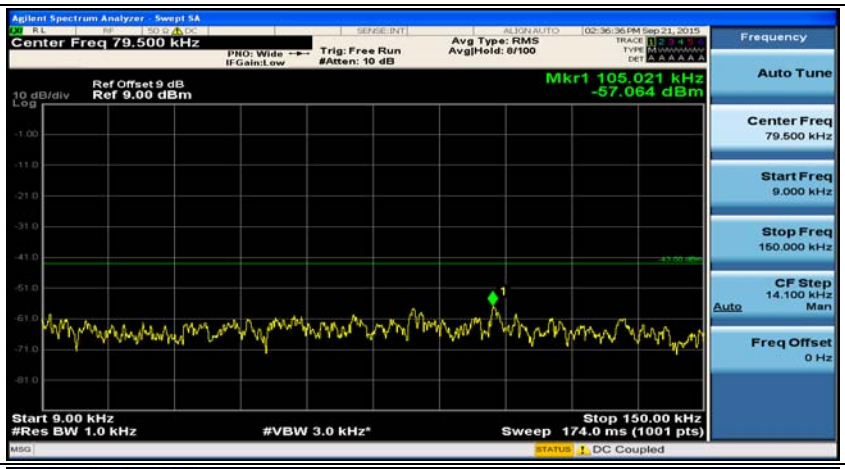
(Channel Bandwidth:20 MHz)_MCH_QPSK_1RB#49

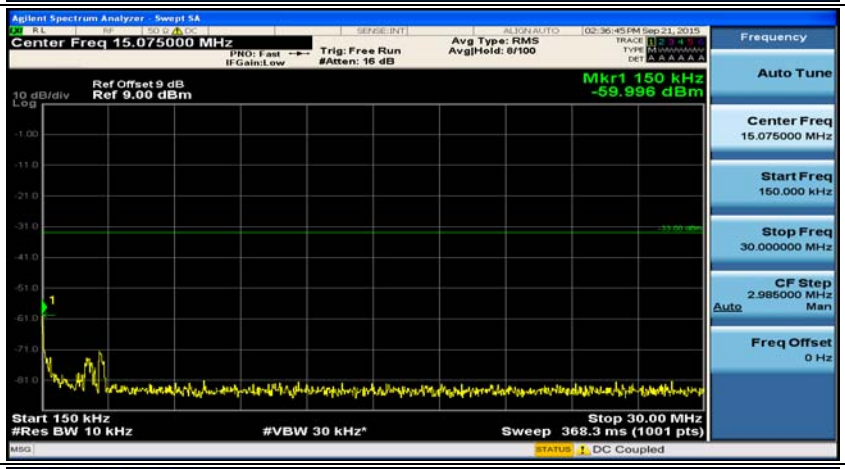


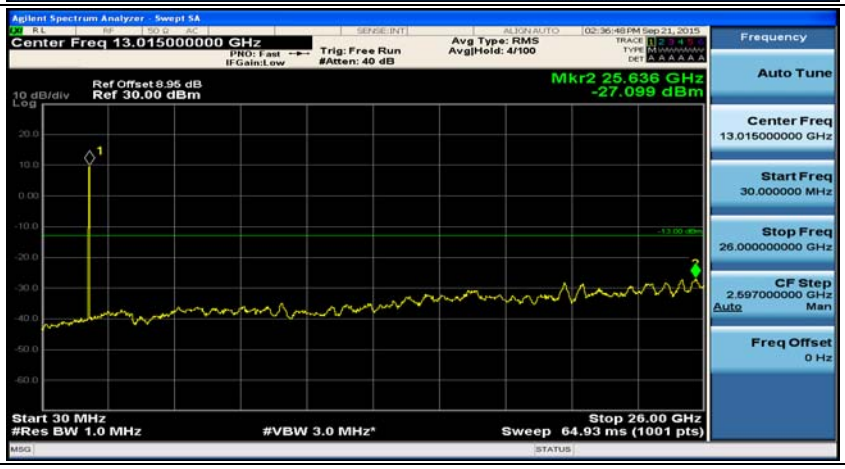




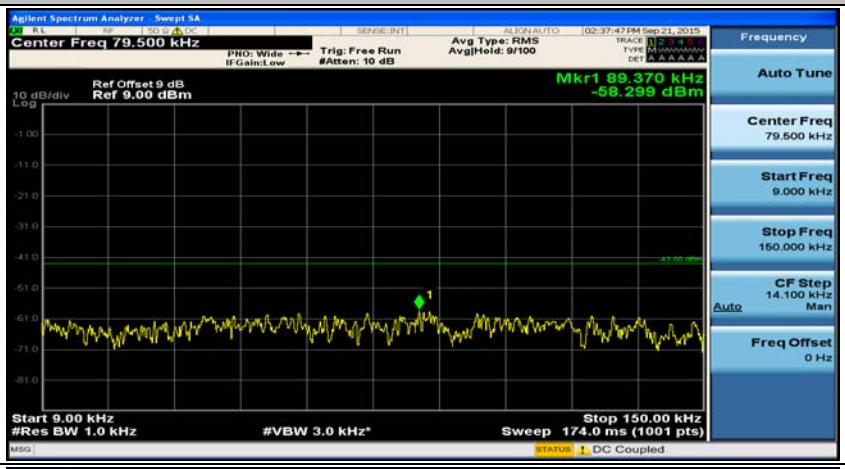
(Channel Bandwidth:20 MHz)_MCH_QPSK_1RB#99

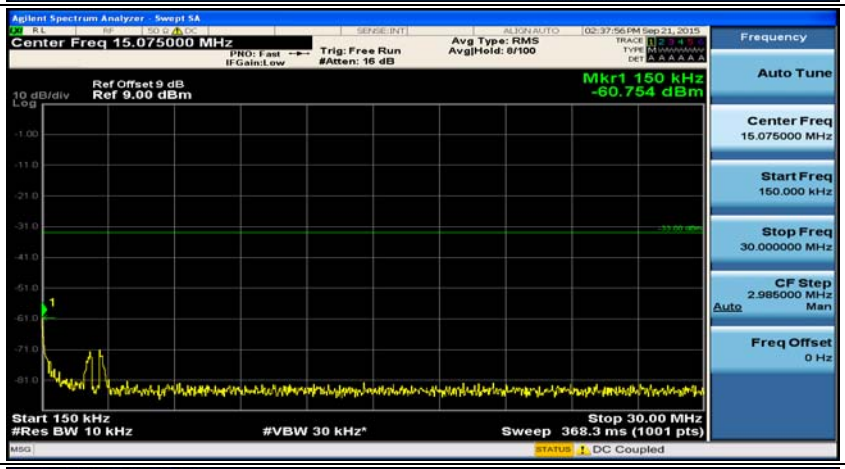

Agilent Spectrum Analyzer - Swept SA
Center Freq 79.500 kHz
PNO: Wide
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 8/100
Ref Offset 9 dB
10 dB/div
Ref 9.00 dBm
Mkr1 105.021 kHz
-57.064 dBm
Start 9.00 kHz
#Res BW 1.0 kHz
#VBW 3.0 kHz*
Stop 150.00 kHz
Sweep 174.0 ms (1001 pts)
DC Coupled
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

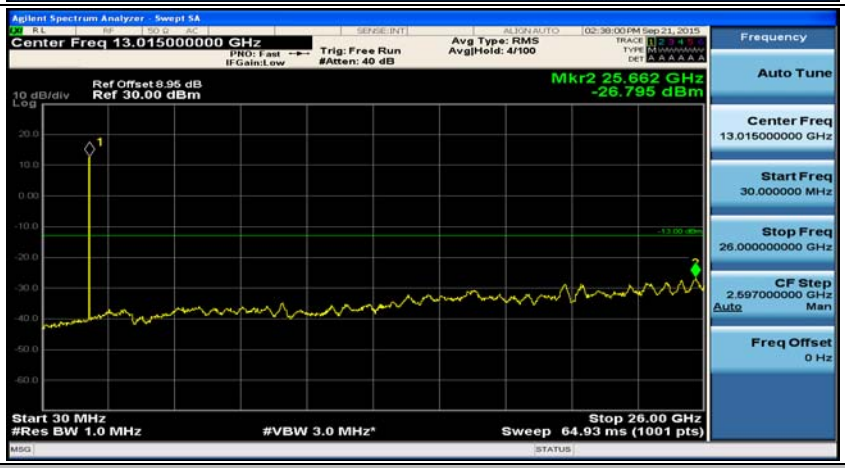

Agilent Spectrum Analyzer - Swept SA
Center Freq 15.075000 MHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 16 dB
Avg Type: RMS
Avg|Hold: 8/100
Ref Offset 9 dB
10 dB/div
Ref 9.00 dBm
Mkr1 150 kHz
-59.996 dBm
Start 150 kHz
#Res BW 10 kHz
#VBW 30 kHz*
Stop 30.00 MHz
Sweep 368.3 ms (1001 pts)
DC Coupled
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: 4/100
Ref Offset 8.95 dB
10 dB/div
Ref 30.00 dBm
Mkr2 25.636 GHz
-27.099 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

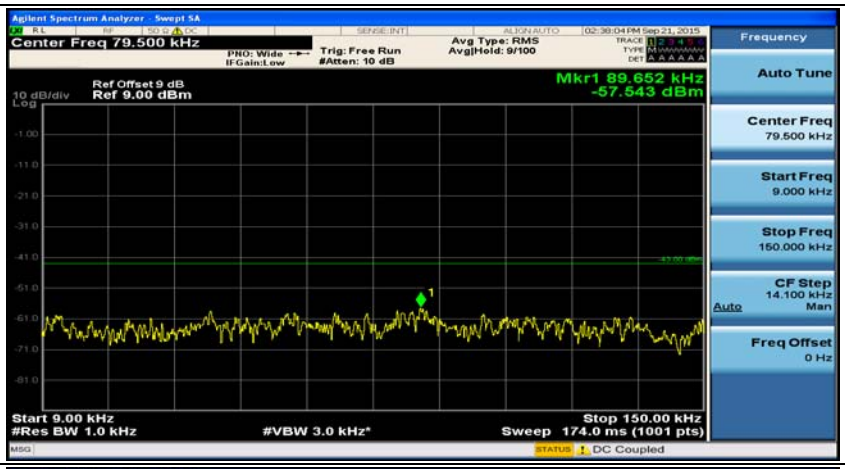
(Channel Bandwidth:20 MHz)_HCH_QPSK_1RB#0

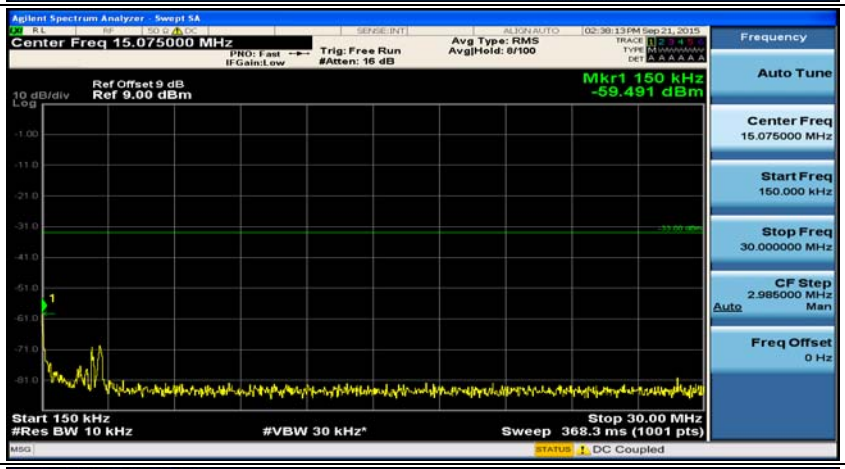


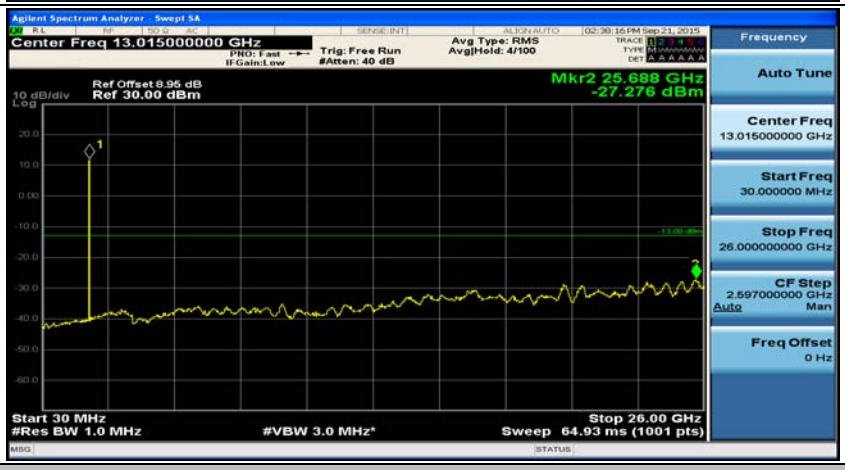




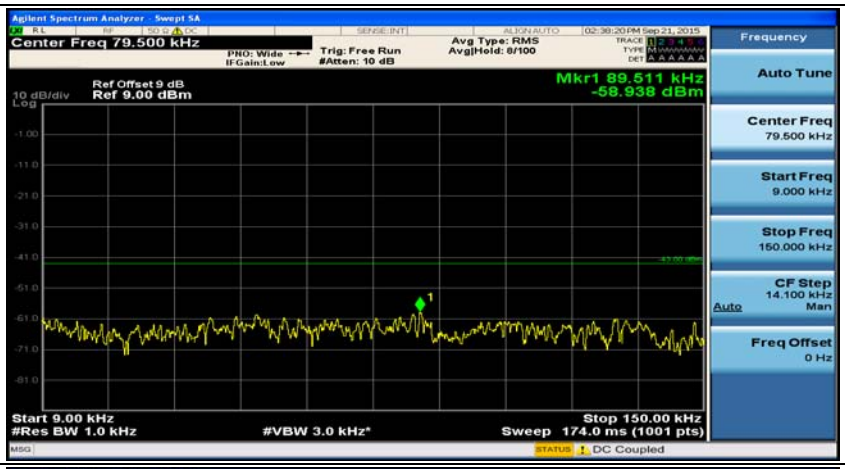
(Channel Bandwidth:20 MHz)_HCH_QPSK_1RB#49

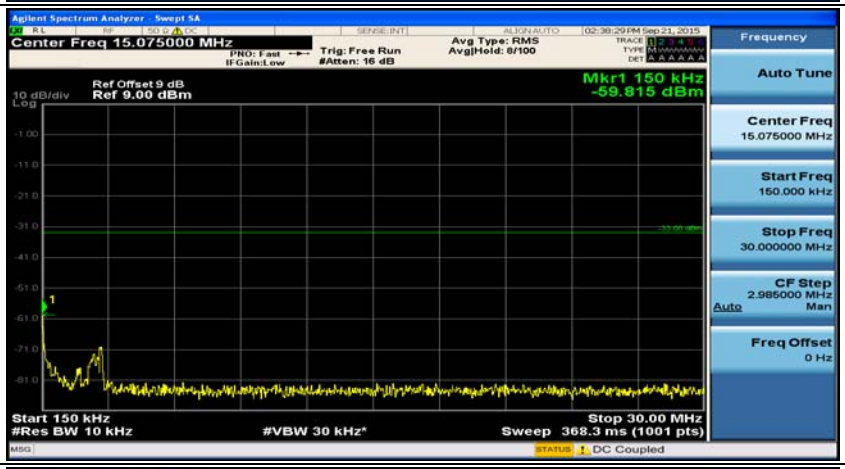


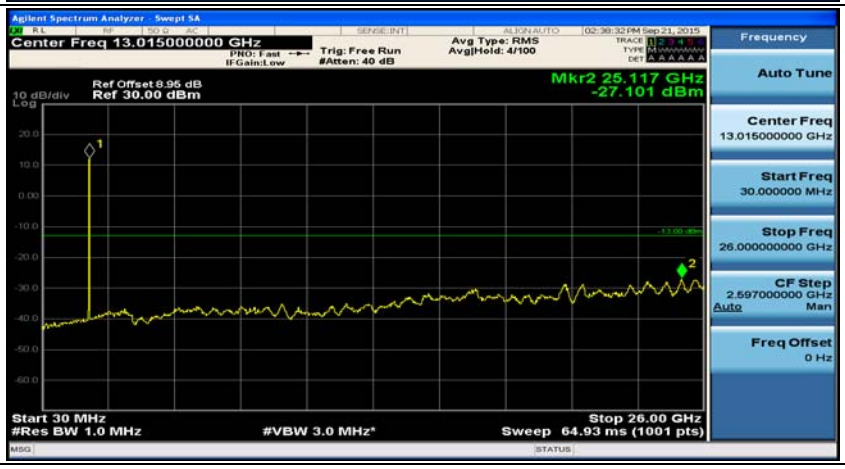




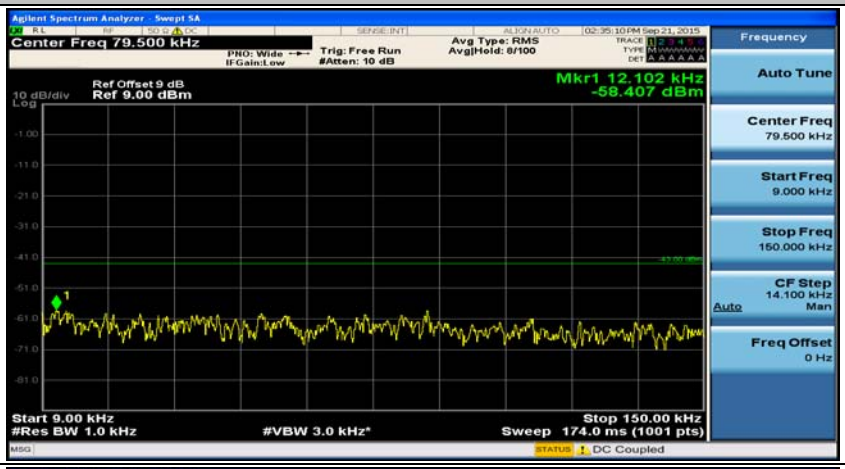
(Channel Bandwidth:20 MHz)_HCH_QPSK_1RB#99

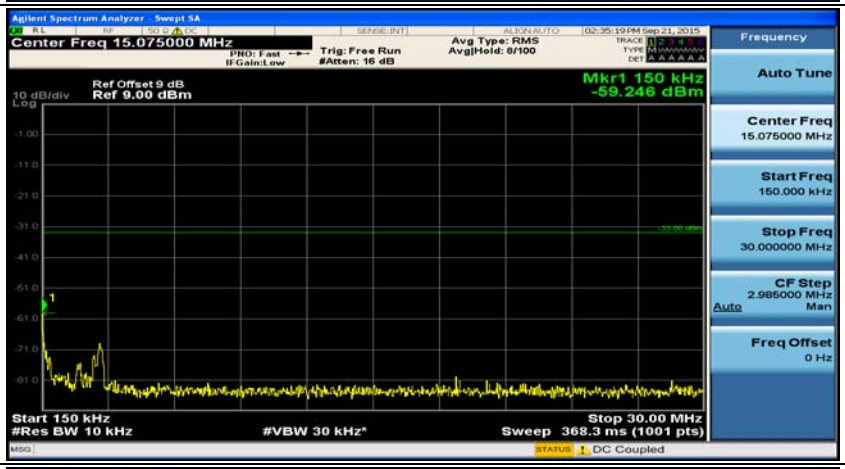

Agilent Spectrum Analyzer - Swept SA
Center Freq 79.500 kHz
PNO: Wide
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 8/100
02:39:20 PM Sep 21, 2015
Ref Offset 9 dB
10 dB/div
Ref 9.00 dBm
Mkr1 89.511 kHz
-58.938 dBm
Start 9.00 kHz
#Res BW 1.0 kHz
#VBW 3.0 kHz*
Stop 150.00 kHz
Sweep 174.0 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

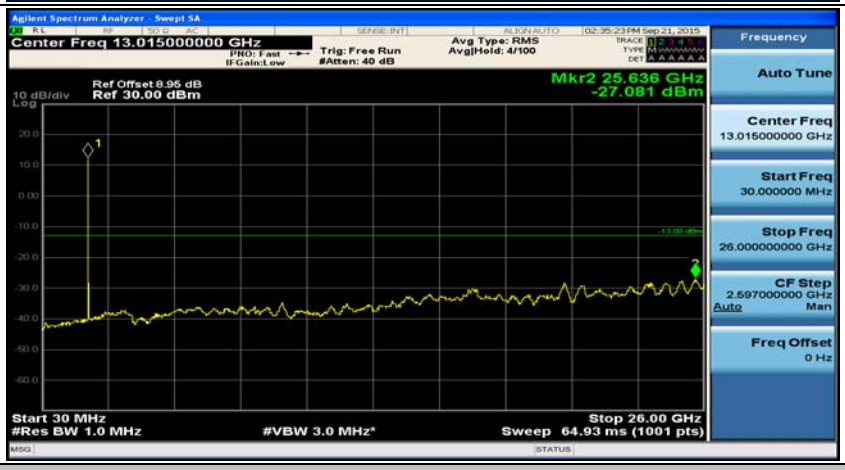

Agilent Spectrum Analyzer - Swept SA
Center Freq 15.075000 MHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 16 dB
Avg Type: RMS
Avg|Hold: 8/100
02:39:29 PM Sep 21, 2015
Ref Offset 9 dB
10 dB/div
Ref 9.00 dBm
Mkr1 150 kHz
-59.815 dBm
Start 150 kHz
#Res BW 10 kHz
#VBW 30 kHz*
Stop 30.00 MHz
Sweep 368.3 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: 4/100
02:39:32 PM Sep 21, 2015
Ref Offset 8.95 dB
10 dB/div
Ref 30.00 dBm
Mkr2 25.117 GHz
-27.101 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

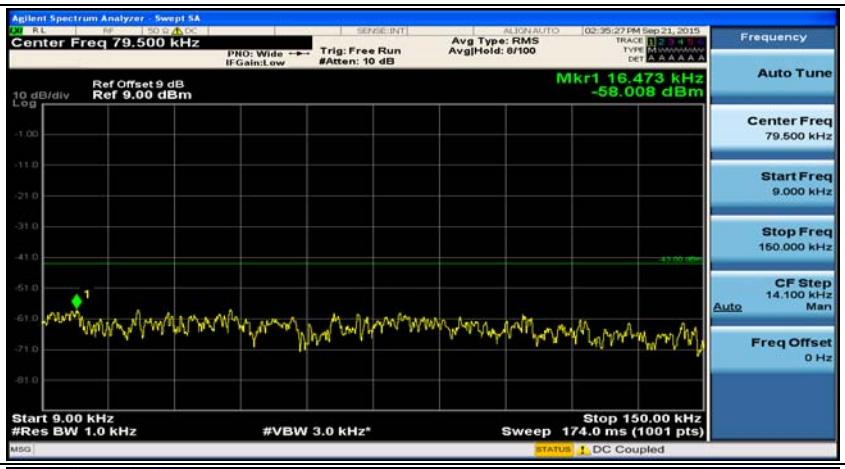
(Channel Bandwidth:20 MHz)_LCH_16QAM_1RB#0

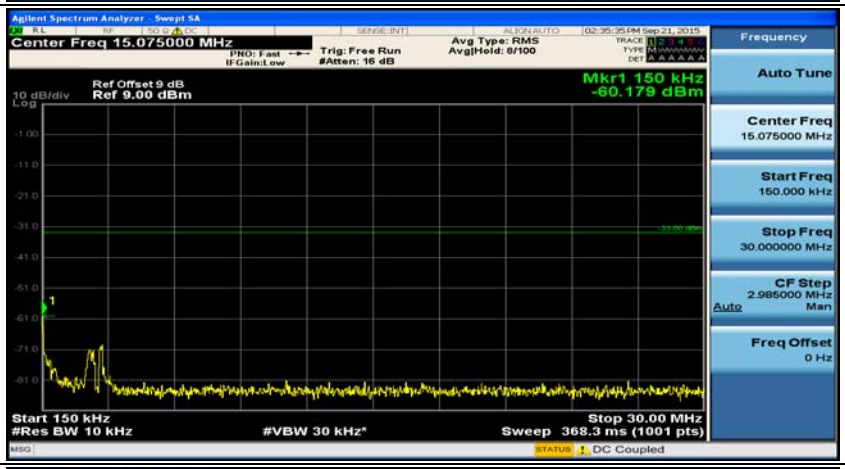


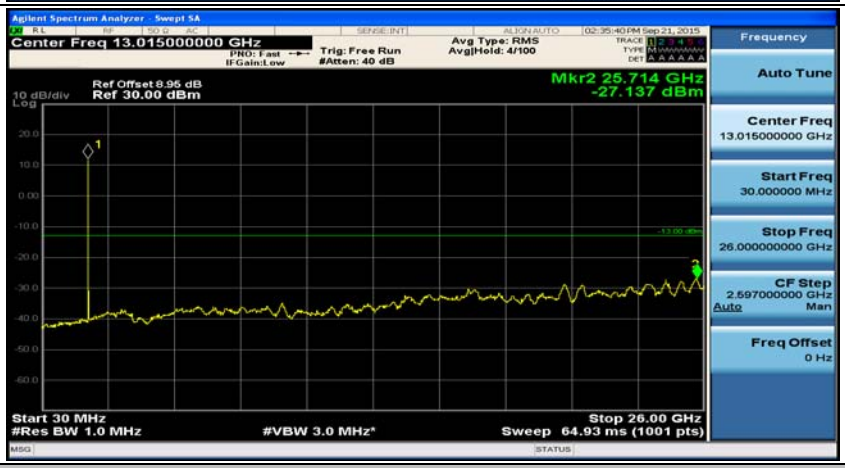




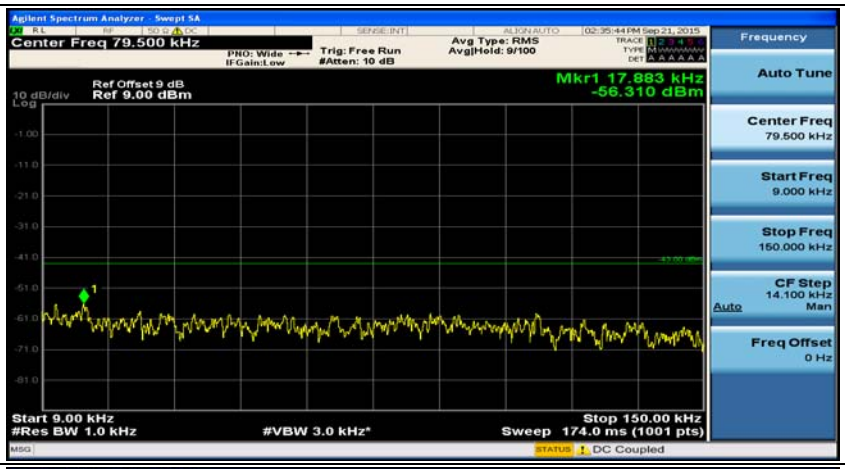
(Channel Bandwidth:20 MHz)_LCH_16QAM_1RB#49

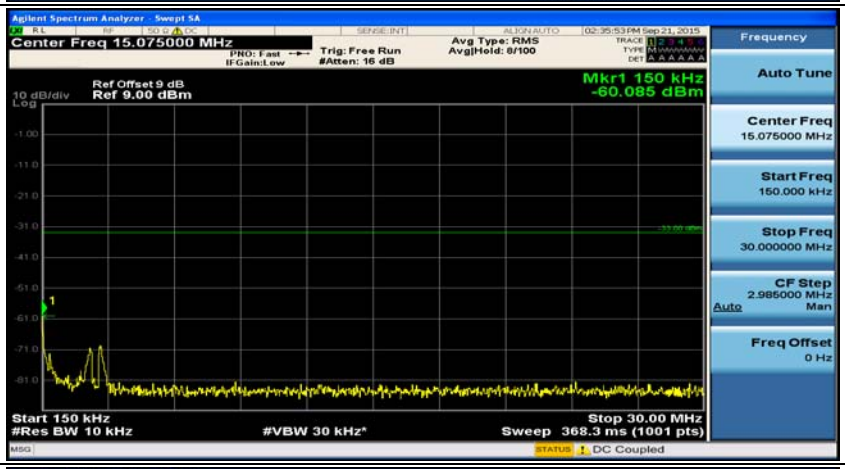


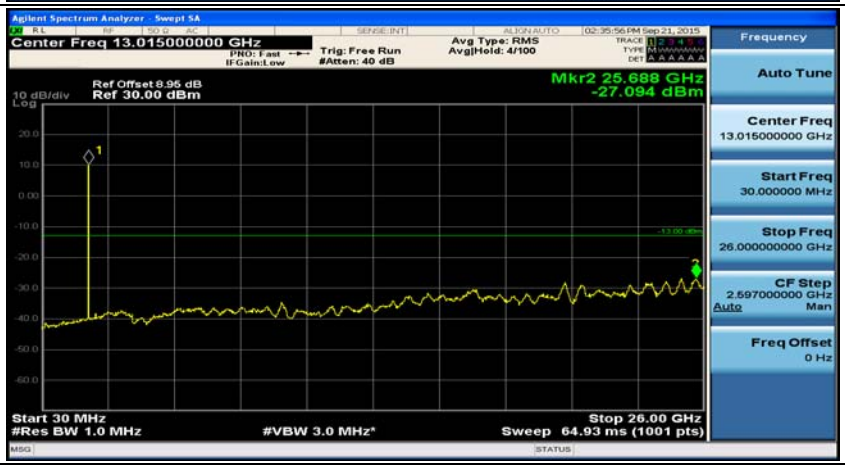




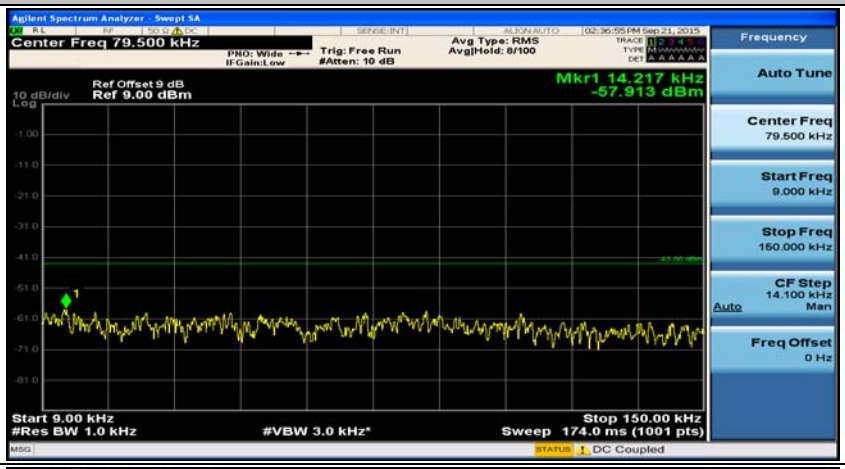
(Channel Bandwidth:20 MHz)_LCH_16QAM_1RB#99

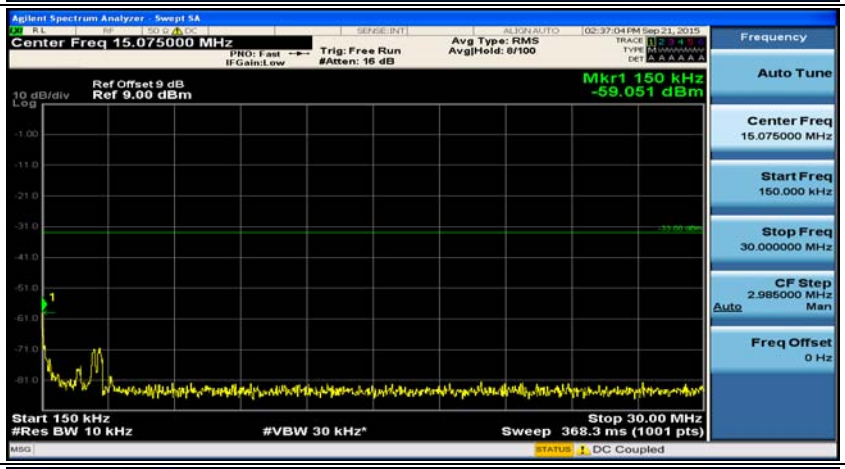

Agilent Spectrum Analyzer - Swept SA
Center Freq 79.500 kHz
PNO: Wide
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 9/100
Ref Offset 9 dB
10 dB/div
Ref 9.00 dBm
Mkr1 17.883 kHz
-56.310 dBm
Start 9.00 kHz
#Res BW 1.0 kHz
#VBW 3.0 kHz*
Stop 150.00 kHz
Sweep 174.0 ms (1001 pts)
DC Coupled
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

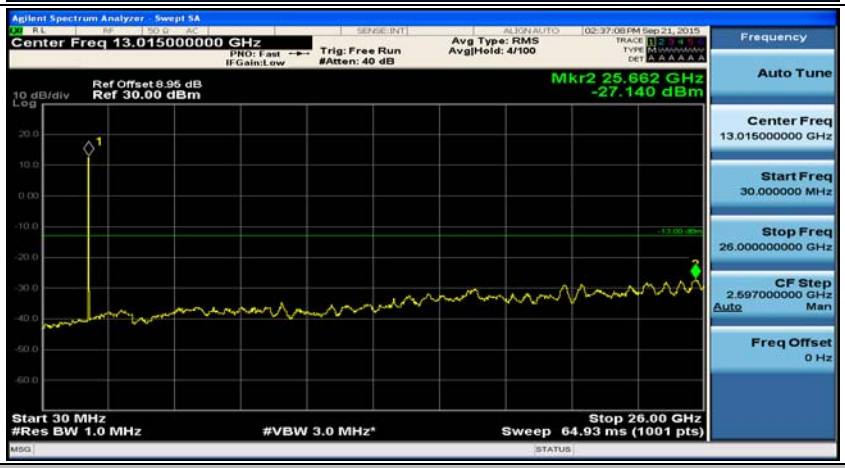

Agilent Spectrum Analyzer - Swept SA
Center Freq 15.075000 MHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 16 dB
Avg Type: RMS
Avg|Hold: 6/100
Ref Offset 9 dB
10 dB/div
Ref 9.00 dBm
Mkr1 150 kHz
-60.085 dBm
Start 150 kHz
#Res BW 10 kHz
#VBW 30 kHz*
Stop 30.00 MHz
Sweep 368.3 ms (1001 pts)
DC Coupled
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: 4/100
Ref Offset 8.95 dB
10 dB/div
Ref 30.00 dBm
Mkr2 25.688 GHz
-27.094 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

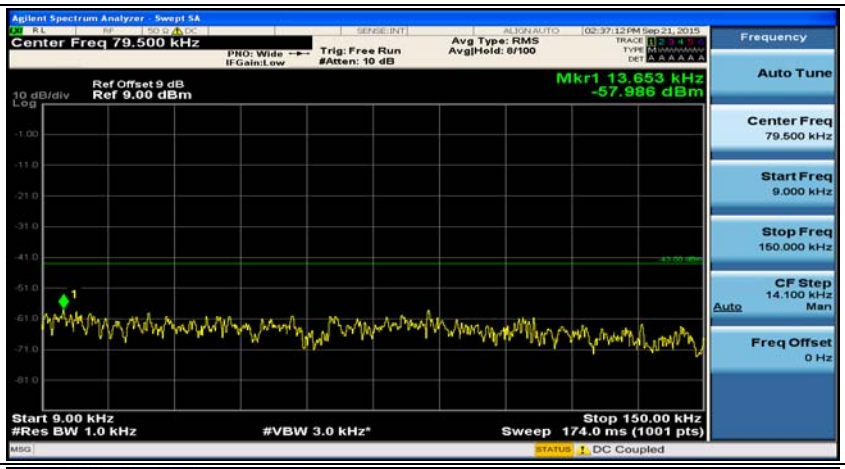
(Channel Bandwidth:20 MHz)_MCH_16QAM_1RB#0

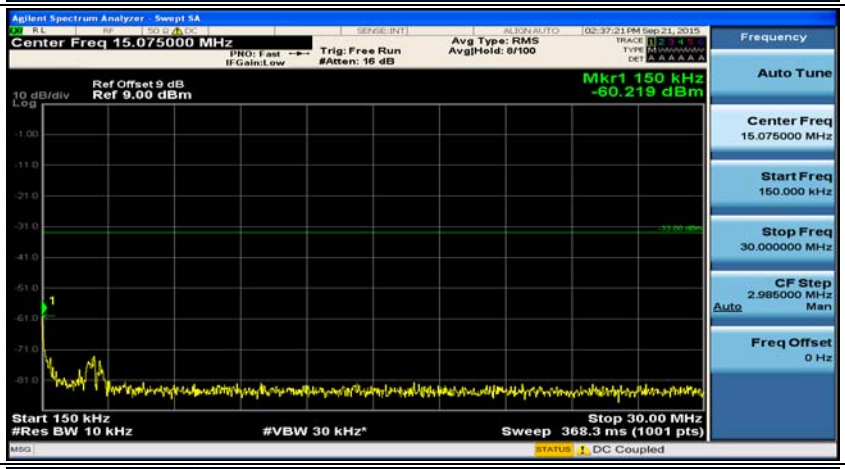


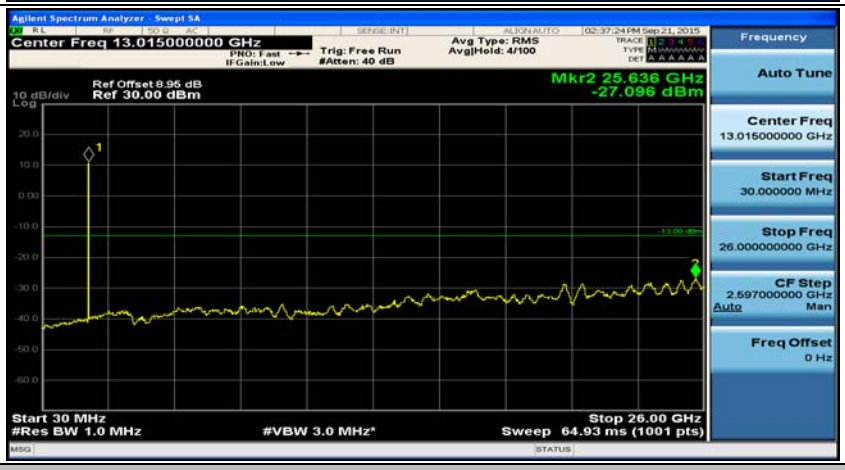




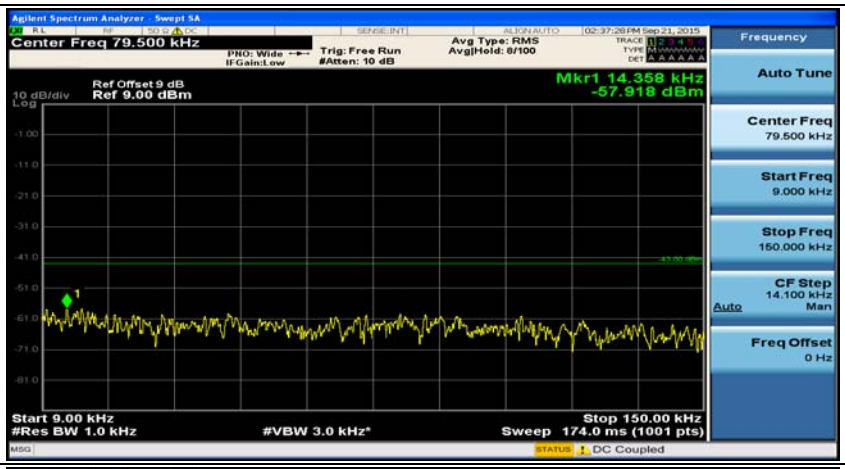
(Channel Bandwidth:20 MHz)_MCH_16QAM_1RB#49

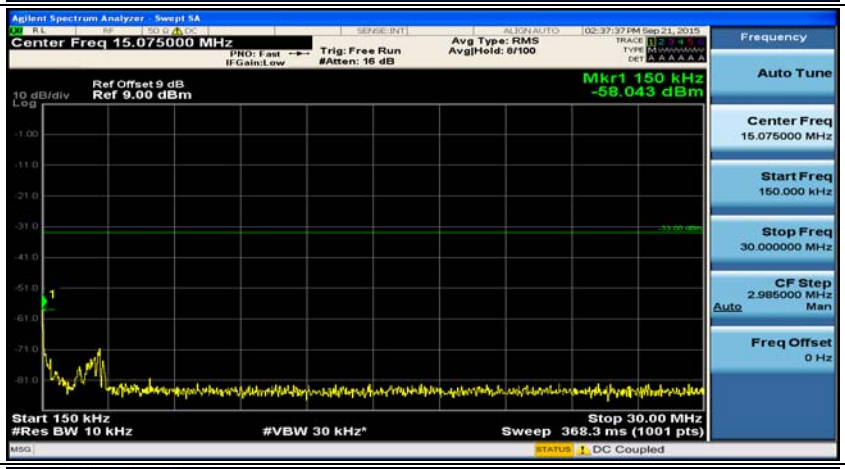


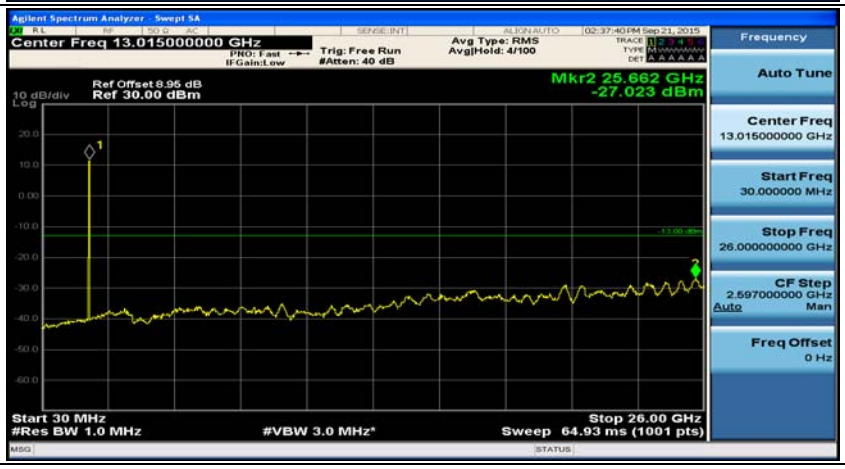




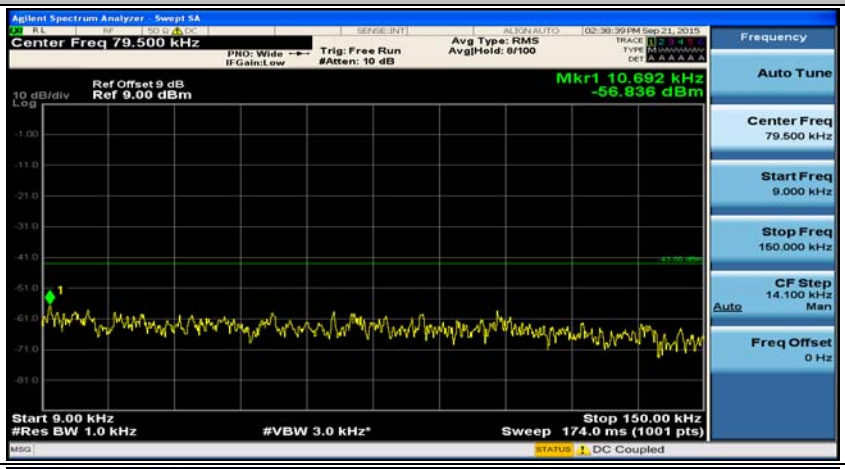
(Channel Bandwidth:20 MHz)_MCH_16QAM_1RB#99

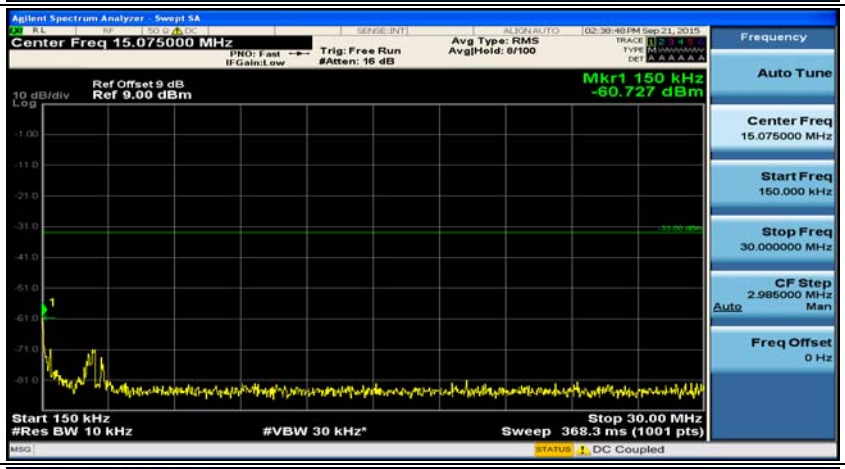

Agilent Spectrum Analyzer - Swept SA
Center Freq 79.500 kHz
PNO: Wide
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 8/100
02:37:28 PM Sep 21, 2015
Ref Offset 9 dB
10 dB/div
Ref 9.00 dBm
Mkr1 14.358 kHz
-57.918 dBm
Start 9.00 kHz
#Res BW 1.0 kHz
#VBW 3.0 kHz*
Stop 150.00 kHz
Sweep 174.0 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

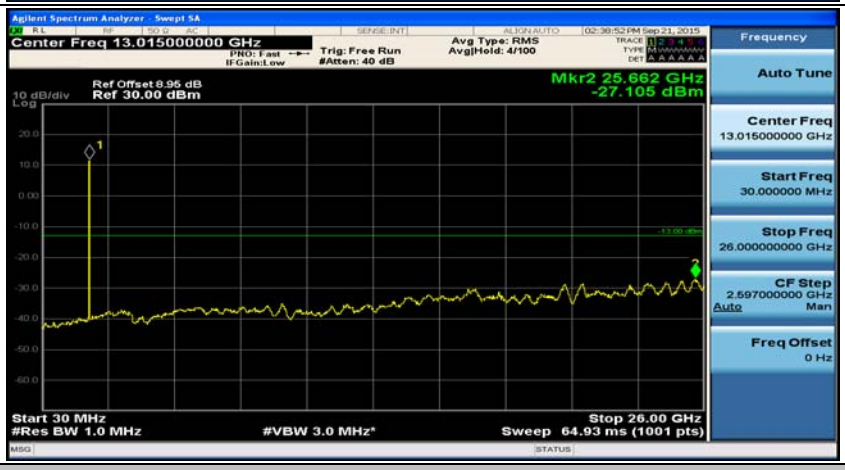

Agilent Spectrum Analyzer - Swept SA
Center Freq 15.075000 MHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 16 dB
Avg Type: RMS
Avg|Hold: 8/100
02:37:37 PM Sep 21, 2015
Ref Offset 9 dB
10 dB/div
Ref 9.00 dBm
Mkr1 150 kHz
-58.043 dBm
Start 150 kHz
#Res BW 10 kHz
#VBW 30 kHz*
Stop 30.00 MHz
Sweep 368.3 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: 4/100
02:37:40 PM Sep 21, 2015
Ref Offset 8.95 dB
10 dB/div
Ref 30.00 dBm
Mkr2 25.662 GHz
-27.023 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

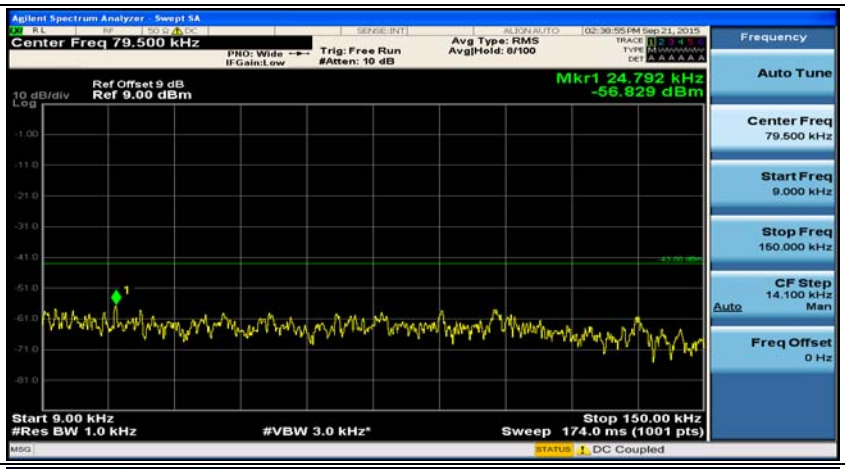
(Channel Bandwidth:20 MHz)_HCH_16QAM_1RB#0

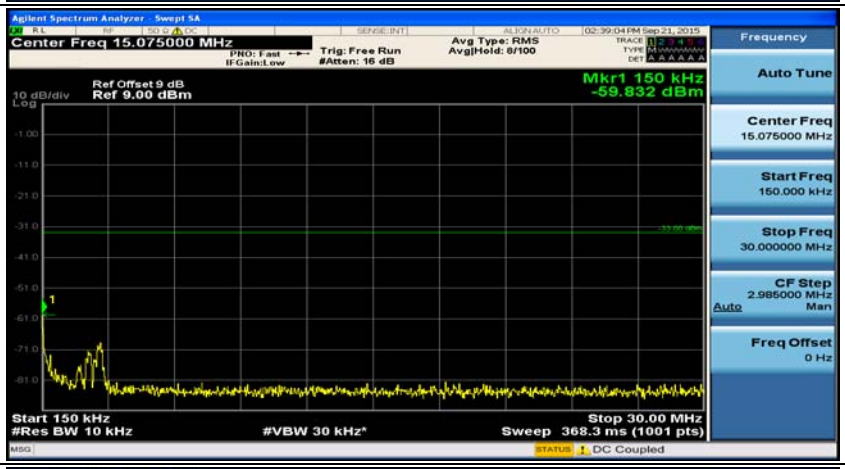


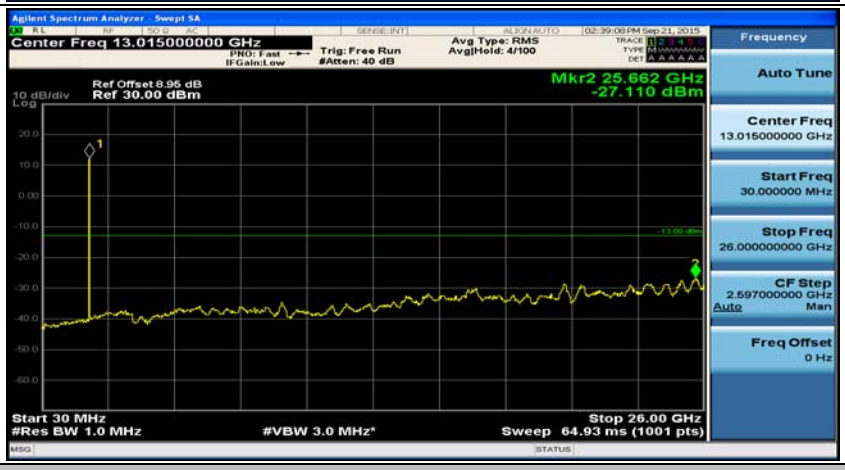




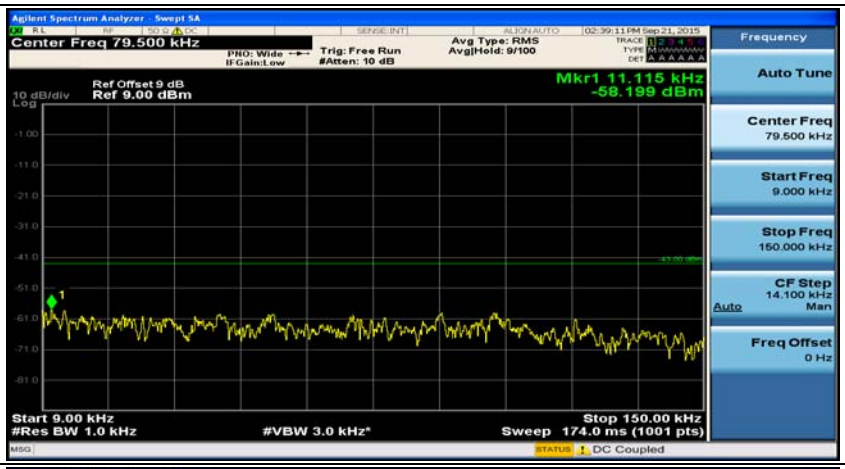
(Channel Bandwidth:20 MHz)_HCH_16QAM_1RB#49

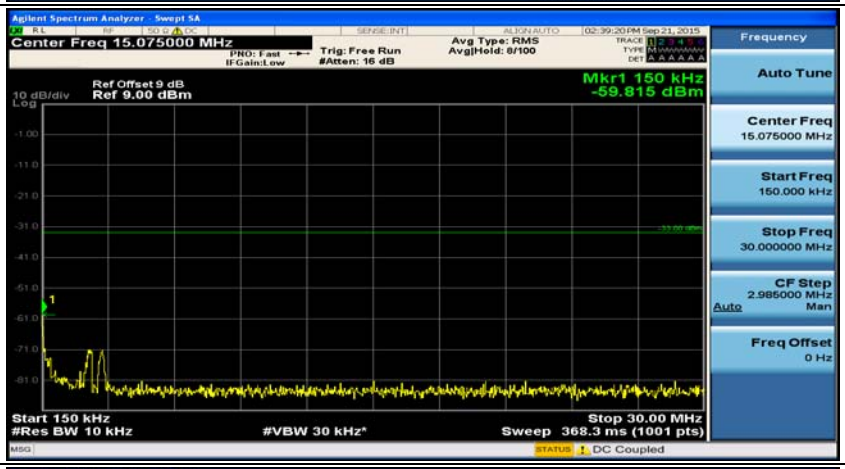


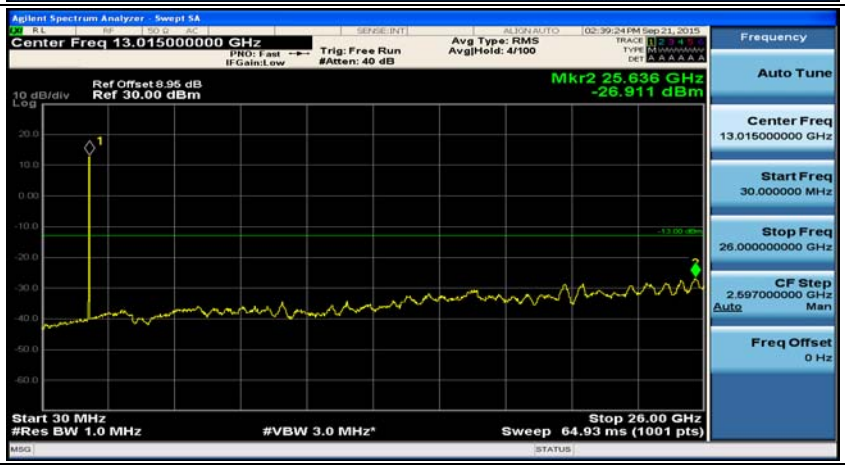




(Channel Bandwidth:20 MHz)_HCH_16QAM_1RB#99


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
02:39:11 PM Sep 21, 2015
Ref Offset 9 dB
10 dB/div
Ref 9.00 dBm
Mkr1 11.115 kHz
-58.199 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: 16 dB
Avg Type: RMS
Avg|Hold: 6/100
02:39:20 PM Sep 21, 2015
Ref Offset 9 dB
10 dB/div
Ref 9.00 dBm
Mkr1 150 kHz
-59.815 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: 4/100
02:39:24 PM Sep 21, 2015
Ref Offset 8.95 dB
10 dB/div
Ref 30.00 dBm
Mkr2 25.636 GHz
-26.911 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

Appendix F: Frequency Stability

Test Result

Channel Bandwidth: 1.4 MHz

Channel Bandwidth: 1.4 MHz							
Voltage							
Modulation	Channel	Voltage [Vdc]	Temperature (℃)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
QPSK	LCH	VL	TN	0.86	0.000464	± 2.5	PASS
		VN	TN	-0.73	-0.000394	± 2.5	PASS
		VH	TN	2.12	0.001144	± 2.5	PASS
	MCH	VL	TN	3.26	0.001735	± 2.5	PASS
		VN	TN	3.66	0.001948	± 2.5	PASS
		VH	TN	-0.04	-0.000023	± 2.5	PASS
	HCH	VL	TN	0.69	0.000360	± 2.5	PASS
		VN	TN	2.49	0.001304	± 2.5	PASS
		VH	TN	-3.59	-0.001881	± 2.5	PASS
16QAM	LCH	VL	TN	-3.16	-0.001708	± 2.5	PASS
		VN	TN	-4.63	-0.002504	± 2.5	PASS
		VH	TN	-2.03	-0.001098	± 2.5	PASS
	MCH	VL	TN	-2.90	-0.001545	± 2.5	PASS
		VN	TN	1.29	0.000685	± 2.5	PASS
		VH	TN	-1.03	-0.000548	± 2.5	PASS
	HCH	VL	TN	0.87	0.000457	± 2.5	PASS
		VN	TN	-0.84	-0.000442	± 2.5	PASS
		VH	TN	-2.53	-0.001326	± 2.5	PASS
Temperature							
Modulation	Channel	Voltage [Vdc]	Temperature (℃)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
QPSK	LCH	VN	-30	3.75	0.002025	± 2.5	PASS
		VN	-20	3.68	0.001986	± 2.5	PASS
		VN	-10	2.29	0.001237	± 2.5	PASS
		VN	0	-4.16	-0.002249	± 2.5	PASS
		VN	10	1.85	0.000997	± 2.5	PASS
		VN	20	-0.46	-0.000247	± 2.5	PASS
		VN	30	-0.09	-0.000046	± 2.5	PASS
		VN	40	0.56	0.000301	± 2.5	PASS
		VN	50	0.07	0.000039	± 2.5	PASS
	MCH	VN	-30	0.77	0.000411	± 2.5	PASS
		VN	-20	-0.23	-0.000122	± 2.5	PASS
		VN	-10	1.92	0.001020	± 2.5	PASS
		VN	0	2.72	0.001446	± 2.5	PASS
		VN	10	3.78	0.002009	± 2.5	PASS
		VN	20	3.38	0.001796	± 2.5	PASS
		VN	30	-2.80	-0.001491	± 2.5	PASS

		VN	40	2.60	0.001385	± 2.5	PASS
		VN	50	2.43	0.001294	± 2.5	PASS
	HCH	VN	-30	2.26	0.001184	± 2.5	PASS
		VN	-20	3.02	0.001581	± 2.5	PASS
		VN	-10	1.93	0.001011	± 2.5	PASS
		VN	0	0.19	0.000097	± 2.5	PASS
		VN	10	-0.59	-0.000307	± 2.5	PASS
		VN	20	3.29	0.001723	± 2.5	PASS
		VN	30	2.29	0.001199	± 2.5	PASS
		VN	40	0.23	0.000120	± 2.5	PASS
		VN	50	3.23	0.001693	± 2.5	PASS
16QAM	LCH	VN	-30	-2.39	-0.001291	± 2.5	PASS
		VN	-20	-4.99	-0.002698	± 2.5	PASS
		VN	-10	1.42	0.000765	± 2.5	PASS
		VN	0	0.29	0.000155	± 2.5	PASS
		VN	10	-0.89	-0.000479	± 2.5	PASS
		VN	20	-4.65	-0.002512	± 2.5	PASS
		VN	30	-3.02	-0.001631	± 2.5	PASS
		VN	40	-3.45	-0.001863	± 2.5	PASS
		VN	50	0.01	0.000008	± 2.5	PASS
	MCH	VN	-30	-5.45	-0.002899	± 2.5	PASS
		VN	-20	0.03	0.000015	± 2.5	PASS
		VN	-10	-0.54	-0.000289	± 2.5	PASS
		VN	0	-1.49	-0.000791	± 2.5	PASS
		VN	10	-1.47	-0.000784	± 2.5	PASS
		VN	20	3.49	0.001857	± 2.5	PASS
		VN	30	0.63	0.000335	± 2.5	PASS
		VN	40	-1.36	-0.000723	± 2.5	PASS
		VN	50	2.75	0.001461	± 2.5	PASS
	HCH	VN	-30	-3.78	-0.001978	± 2.5	PASS
		VN	-20	-3.26	-0.001708	± 2.5	PASS
		VN	-10	-2.37	-0.001244	± 2.5	PASS
		VN	0	-3.66	-0.001918	± 2.5	PASS
		VN	10	1.89	0.000989	± 2.5	PASS
		VN	20	0.69	0.000360	± 2.5	PASS
		VN	30	-1.12	-0.000584	± 2.5	PASS
		VN	40	1.52	0.000794	± 2.5	PASS
		VN	50	-1.46	-0.000764	± 2.5	PASS

Channel Bandwidth: 3 MHz

Channel Bandwidth: 3 MHz+							
Voltage							
Modulation	Channel	Voltage [Vdc]	Temperature (℃)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
QPSK	LCH	VL	TN	-0.64	-0.000348	± 2.5	PASS
		VN	TN	1.66	0.000896	± 2.5	PASS
		VH	TN	-0.93	-0.000502	± 2.5	PASS
	MCH	VL	TN	-3.58	-0.001902	± 2.5	PASS

		VN	TN	2.86	0.001522	± 2.5	PASS
		VH	TN	-1.22	-0.000647	± 2.5	PASS
	HCH	VL	TN	-0.20	-0.000105	± 2.5	PASS
		VN	TN	-0.04	-0.000022	± 2.5	PASS
		VH	TN	-2.30	-0.001207	± 2.5	PASS
16QAM	LCH	VL	TN	-0.26	-0.000139	± 2.5	PASS
		VN	TN	-2.00	-0.001082	± 2.5	PASS
		VH	TN	0.87	0.000471	± 2.5	PASS
	MCH	VL	TN	-0.23	-0.000122	± 2.5	PASS
		VN	TN	2.89	0.001537	± 2.5	PASS
		VH	TN	-2.78	-0.001476	± 2.5	PASS
	HCH	VL	TN	0.64	0.000337	± 2.5	PASS
		VN	TN	-1.99	-0.001042	± 2.5	PASS
		VH	TN	-0.36	-0.000187	± 2.5	PASS
Temperature							
Modulation	Channel	Voltage [Vdc]	Temperature (℃)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
QPSK	LCH	VN	-30	4.72	0.002550	± 2.5	PASS
		VN	-20	3.88	0.002094	± 2.5	PASS
		VN	-10	-2.10	-0.001136	± 2.5	PASS
		VN	0	-1.87	-0.001012	± 2.5	PASS
		VN	10	1.24	0.000672	± 2.5	PASS
		VN	20	1.79	0.000966	± 2.5	PASS
		VN	30	1.32	0.000711	± 2.5	PASS
		VN	40	0.44	0.000240	± 2.5	PASS
		VN	50	0.70	0.000379	± 2.5	PASS
	MCH	VN	-30	-0.83	-0.000441	± 2.5	PASS
		VN	-20	4.52	0.002404	± 2.5	PASS
		VN	-10	-1.29	-0.000685	± 2.5	PASS
		VN	0	-0.09	-0.000046	± 2.5	PASS
		VN	10	0.64	0.000342	± 2.5	PASS
		VN	20	3.63	0.001933	± 2.5	PASS
		VN	30	-0.39	-0.000205	± 2.5	PASS
		VN	40	-0.13	-0.000068	± 2.5	PASS
		VN	50	0.63	0.000335	± 2.5	PASS
	HCH	VN	-30	-1.52	-0.000795	± 2.5	PASS
		VN	-20	-0.86	-0.000450	± 2.5	PASS
		VN	-10	-0.62	-0.000322	± 2.5	PASS
		VN	0	-1.02	-0.000532	± 2.5	PASS
		VN	10	-3.93	-0.002061	± 2.5	PASS
		VN	20	2.10	0.001102	± 2.5	PASS
		VN	30	1.27	0.000667	± 2.5	PASS
		VN	40	0.89	0.000465	± 2.5	PASS
		VN	50	-2.63	-0.001379	± 2.5	PASS
QPSK	LCH	VN	-30	-3.23	-0.001746	± 2.5	PASS
		VN	-20	-0.92	-0.000494	± 2.5	PASS
		VN	-10	-0.09	-0.000046	± 2.5	PASS
		VN	0	-0.14	-0.000077	± 2.5	PASS
		VN	10	-0.27	-0.000147	± 2.5	PASS
		VN	20	-0.43	-0.000232	± 2.5	PASS

		VN	30	1.95	0.001051	± 2.5	PASS
		VN	40	0.84	0.000456	± 2.5	PASS
		VN	50	-1.56	-0.000842	± 2.5	PASS
	MCH	VN	-30	-1.29	-0.000685	± 2.5	PASS
		VN	-20	1.70	0.000905	± 2.5	PASS
		VN	-10	-3.36	-0.001788	± 2.5	PASS
		VN	0	0.40	0.000213	± 2.5	PASS
		VN	10	0.80	0.000426	± 2.5	PASS
		VN	20	1.13	0.000601	± 2.5	PASS
		VN	30	2.90	0.001545	± 2.5	PASS
		VN	40	1.27	0.000677	± 2.5	PASS
		VN	50	1.73	0.000921	± 2.5	PASS
	HCH	VN	-30	-1.93	-0.001012	± 2.5	PASS
		VN	-20	1.82	0.000952	± 2.5	PASS
		VN	-10	-3.33	-0.001746	± 2.5	PASS
		VN	0	-4.09	-0.002144	± 2.5	PASS
		VN	10	0.82	0.000427	± 2.5	PASS
		VN	20	-1.36	-0.000712	± 2.5	PASS
		VN	30	1.39	0.000727	± 2.5	PASS
		VN	40	1.39	0.000727	± 2.5	PASS
		VN	50	-0.24	-0.000127	± 2.5	PASS

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	0.54	0.000293	± 2.5	PASS
		VN	TN	1.29	0.000695	± 2.5	PASS
		VH	TN	-1.13	-0.000610	± 2.5	PASS
	MCH	VL	TN	-1.92	-0.001020	± 2.5	PASS
		VN	TN	-0.14	-0.000076	± 2.5	PASS
		VH	TN	1.69	0.000898	± 2.5	PASS
	HCH	VL	TN	-2.26	-0.001185	± 2.5	PASS
		VN	TN	3.00	0.001575	± 2.5	PASS
		VH	TN	3.20	0.001680	± 2.5	PASS
16QAM	LCH	VL	TN	-0.24	-0.000131	± 2.5	PASS
		VN	TN	1.57	0.000849	± 2.5	PASS
		VH	TN	-3.20	-0.001730	± 2.5	PASS
	MCH	VL	TN	-0.40	-0.000213	± 2.5	PASS
		VN	TN	0.31	0.000167	± 2.5	PASS
		VH	TN	0.59	0.000312	± 2.5	PASS
	HCH	VL	TN	-3.32	-0.001740	± 2.5	PASS
		VN	TN	2.57	0.001350	± 2.5	PASS
		VH	TN	0.94	0.000495	± 2.5	PASS
Temperature							
Modulation	Channel	Voltage [Vdc]	Temperature (℃)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict

QPSK	LCH	VN	-30	-0.31	-0.000170	± 2.5	PASS
		VN	-20	-0.82	-0.000440	± 2.5	PASS
		VN	-10	-1.83	-0.000988	± 2.5	PASS
		VN	0	-0.90	-0.000486	± 2.5	PASS
		VN	10	-0.23	-0.000124	± 2.5	PASS
		VN	20	0.00	0.000000	± 2.5	PASS
		VN	30	2.76	0.001490	± 2.5	PASS
		VN	40	2.13	0.001151	± 2.5	PASS
		VN	50	0.29	0.000154	± 2.5	PASS
	MCH	VN	-30	2.98	0.001583	± 2.5	PASS
		VN	-20	1.63	0.000867	± 2.5	PASS
		VN	-10	-0.83	-0.000441	± 2.5	PASS
		VN	0	-1.83	-0.000974	± 2.5	PASS
		VN	10	1.66	0.000883	± 2.5	PASS
		VN	20	0.16	0.000084	± 2.5	PASS
		VN	30	0.59	0.000312	± 2.5	PASS
		VN	40	0.73	0.000388	± 2.5	PASS
		VN	50	0.44	0.000236	± 2.5	PASS
	HCH	VN	-30	-2.78	-0.001455	± 2.5	PASS
		VN	-20	-2.62	-0.001372	± 2.5	PASS
		VN	-10	-1.89	-0.000990	± 2.5	PASS
		VN	0	3.13	0.001642	± 2.5	PASS
		VN	10	-2.65	-0.001387	± 2.5	PASS
		VN	20	4.08	0.002137	± 2.5	PASS
		VN	30	2.30	0.001207	± 2.5	PASS
		VN	40	4.78	0.002505	± 2.5	PASS
		VN	50	1.93	0.001012	± 2.5	PASS
16QAM	LCH	VN	-30	-0.24	-0.000131	± 2.5	PASS
		VN	-20	-3.23	-0.001745	± 2.5	PASS
		VN	-10	0.19	0.000100	± 2.5	PASS
		VN	0	1.04	0.000564	± 2.5	PASS
		VN	10	0.13	0.000069	± 2.5	PASS
		VN	20	0.33	0.000178	± 2.5	PASS
		VN	30	1.50	0.000811	± 2.5	PASS
		VN	40	1.53	0.000826	± 2.5	PASS
		VN	50	1.97	0.001066	± 2.5	PASS
	MCH	VN	-30	1.09	0.000578	± 2.5	PASS
		VN	-20	0.54	0.000289	± 2.5	PASS
		VN	-10	0.14	0.000076	± 2.5	PASS
		VN	0	-0.10	-0.000053	± 2.5	PASS
		VN	10	0.36	0.000190	± 2.5	PASS
		VN	20	0.56	0.000297	± 2.5	PASS
		VN	30	1.93	0.001027	± 2.5	PASS
		VN	40	0.59	0.000312	± 2.5	PASS
		VN	50	-0.94	-0.000502	± 2.5	PASS
	HCH	VN	-30	1.10	0.000577	± 2.5	PASS
		VN	-20	-0.76	-0.000397	± 2.5	PASS
		VN	-10	2.25	0.001177	± 2.5	PASS
		VN	0	-0.63	-0.000330	± 2.5	PASS
		VN	10	-0.31	-0.000165	± 2.5	PASS

		VN	20	2.98	0.001560	± 2.5	PASS
		VN	30	6.25	0.003277	± 2.5	PASS
		VN	40	1.39	0.000727	± 2.5	PASS
		VN	50	3.96	0.002077	± 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	0.30	0.000162	± 2.5	PASS
		VN	TN	-0.20	-0.000108	± 2.5	PASS
		VH	TN	0.26	0.000139	± 2.5	PASS
	MCH	VL	TN	-0.76	-0.000403	± 2.5	PASS
		VN	TN	0.21	0.000114	± 2.5	PASS
		VH	TN	0.40	0.000213	± 2.5	PASS
	HCH	VL	TN	-1.62	-0.000849	± 2.5	PASS
		VN	TN	1.36	0.000713	± 2.5	PASS
		VH	TN	-1.49	-0.000781	± 2.5	PASS
16QAM	LCH	VL	TN	-0.94	-0.000509	± 2.5	PASS
		VN	TN	-2.36	-0.001272	± 2.5	PASS
		VH	TN	0.19	0.000100	± 2.5	PASS
	MCH	VL	TN	-1.19	-0.000632	± 2.5	PASS
		VN	TN	0.14	0.000076	± 2.5	PASS
		VH	TN	1.17	0.000624	± 2.5	PASS
	HCH	VL	TN	0.74	0.000390	± 2.5	PASS
		VN	TN	0.77	0.000405	± 2.5	PASS
		VH	TN	-1.06	-0.000556	± 2.5	PASS
Temperature							
Modulation	Channel	Voltage [Vdc]	Temperature (℃)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
16QAM	LCH	VN	-30	0.40	0.000216	± 2.5	PASS
		VN	-20	-0.19	-0.000100	± 2.5	PASS
		VN	-10	-0.01	-0.000008	± 2.5	PASS
		VN	0	-1.24	-0.000671	± 2.5	PASS
		VN	10	-0.01	-0.000008	± 2.5	PASS
		VN	20	0.09	0.000046	± 2.5	PASS
		VN	30	-1.73	-0.000933	± 2.5	PASS
		VN	40	-1.24	-0.000671	± 2.5	PASS
		VN	50	0.31	0.000170	± 2.5	PASS
	MCH	VN	-30	-0.17	-0.000091	± 2.5	PASS
		VN	-20	-1.43	-0.000761	± 2.5	PASS
		VN	-10	-0.44	-0.000236	± 2.5	PASS
		VN	0	-0.17	-0.000091	± 2.5	PASS
		VN	10	-0.26	-0.000137	± 2.5	PASS
		VN	20	0.33	0.000175	± 2.5	PASS
		VN	30	0.64	0.000342	± 2.5	PASS
		VN	40	1.16	0.000616	± 2.5	PASS

		VN	50	1.43	0.000761	± 2.5	PASS
	HCH	VN	-30	0.07	0.000038	± 2.5	PASS
		VN	-20	-0.90	-0.000473	± 2.5	PASS
		VN	-10	-0.92	-0.000481	± 2.5	PASS
		VN	0	-0.23	-0.000120	± 2.5	PASS
		VN	10	0.96	0.000503	± 2.5	PASS
		VN	20	1.52	0.000796	± 2.5	PASS
		VN	30	1.26	0.000661	± 2.5	PASS
		VN	40	0.84	0.000443	± 2.5	PASS
		VN	50	1.04	0.000548	± 2.5	PASS
QPSK	LCH	VN	-30	-1.27	-0.000686	± 2.5	PASS
		VN	-20	-1.34	-0.000725	± 2.5	PASS
		VN	-10	-0.01	-0.000008	± 2.5	PASS
		VN	0	-0.70	-0.000378	± 2.5	PASS
		VN	10	-0.10	-0.000054	± 2.5	PASS
		VN	20	0.07	0.000039	± 2.5	PASS
		VN	30	0.24	0.000131	± 2.5	PASS
		VN	40	-1.19	-0.000640	± 2.5	PASS
		VN	50	-1.46	-0.000787	± 2.5	PASS
	MCH	VN	-30	0.04	0.000023	± 2.5	PASS
		VN	-20	-0.17	-0.000091	± 2.5	PASS
		VN	-10	-0.76	-0.000403	± 2.5	PASS
		VN	0	-0.46	-0.000243	± 2.5	PASS
		VN	10	-1.70	-0.000905	± 2.5	PASS
		VN	20	0.50	0.000266	± 2.5	PASS
		VN	30	-0.39	-0.000205	± 2.5	PASS
		VN	40	1.66	0.000883	± 2.5	PASS
		VN	50	0.50	0.000266	± 2.5	PASS
	HCH	VN	-30	0.96	0.000503	± 2.5	PASS
		VN	-20	-0.53	-0.000278	± 2.5	PASS
		VN	-10	-0.76	-0.000398	± 2.5	PASS
		VN	0	-0.13	-0.000068	± 2.5	PASS
		VN	10	-1.19	-0.000623	± 2.5	PASS
		VN	20	0.31	0.000165	± 2.5	PASS
		VN	30	0.29	0.000150	± 2.5	PASS
		VN	40	0.50	0.000263	± 2.5	PASS
		VN	50	1.06	0.000556	± 2.5	PASS

Channel Bandwidth: 15 MHz

Channel Bandwidth: 15 MHz							
Voltage							
Modulation	Channel	Voltage [Vdc]	Temperature (℃)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
QPSK	LCH	VL	TN	2.23	0.001201	± 2.5	PASS
		VN	TN	2.56	0.001379	± 2.5	PASS
		VH	TN	3.76	0.002025	± 2.5	PASS
	MCH	VL	TN	-0.82	-0.000434	± 2.5	PASS
		VN	TN	-2.13	-0.001134	± 2.5	PASS

		VH	TN	0.64	0.000342	± 2.5	PASS
	HCH	VL	TN	0.67	0.000353	± 2.5	PASS
		VN	TN	2.25	0.001181	± 2.5	PASS
		VH	TN	0.54	0.000286	± 2.5	PASS
16QAM	LCH	VL	TN	3.82	0.002056	± 2.5	PASS
		VN	TN	1.54	0.000832	± 2.5	PASS
		VH	TN	1.95	0.001047	± 2.5	PASS
	MCH	VL	TN	-0.46	-0.000243	± 2.5	PASS
		VN	TN	-3.16	-0.001682	± 2.5	PASS
		VH	TN	-0.37	-0.000198	± 2.5	PASS
	HCH	VL	TN	-2.06	-0.001083	± 2.5	PASS
		VN	TN	0.74	0.000391	± 2.5	PASS
		VH	TN	-0.20	-0.000105	± 2.5	PASS
Temperature							
Modulation	Channel	Voltage [Vdc]	Temperature (℃)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
QPSK	LCH	VN	-30	2.12	0.001140	± 2.5	PASS
		VN	-20	4.05	0.002179	± 2.5	PASS
		VN	-10	3.93	0.002118	± 2.5	PASS
		VN	0	1.70	0.000916	± 2.5	PASS
		VN	10	1.96	0.001055	± 2.5	PASS
		VN	20	2.39	0.001286	± 2.5	PASS
		VN	30	1.49	0.000801	± 2.5	PASS
		VN	40	2.59	0.001394	± 2.5	PASS
		VN	50	1.85	0.000993	± 2.5	PASS
	MCH	VN	-30	-0.17	-0.000091	± 2.5	PASS
		VN	-20	-0.34	-0.000183	± 2.5	PASS
		VN	-10	-0.82	-0.000434	± 2.5	PASS
		VN	0	-0.56	-0.000297	± 2.5	PASS
		VN	10	-0.49	-0.000259	± 2.5	PASS
		VN	20	-2.88	-0.001529	± 2.5	PASS
		VN	30	-2.59	-0.001377	± 2.5	PASS
		VN	40	-2.70	-0.001438	± 2.5	PASS
		VN	50	-3.06	-0.001628	± 2.5	PASS
	HCH	VN	-30	-2.46	-0.001293	± 2.5	PASS
		VN	-20	-0.33	-0.000173	± 2.5	PASS
		VN	-10	0.23	0.000120	± 2.5	PASS
		VN	0	-1.27	-0.000669	± 2.5	PASS
		VN	10	-0.43	-0.000226	± 2.5	PASS
		VN	20	2.53	0.001331	± 2.5	PASS
		VN	30	1.39	0.000729	± 2.5	PASS
		VN	40	1.54	0.000812	± 2.5	PASS
		VN	50	1.52	0.000797	± 2.5	PASS
QPSK	LCH	VN	-30	2.30	0.001240	± 2.5	PASS
		VN	-20	2.23	0.001201	± 2.5	PASS
		VN	-10	3.93	0.002118	± 2.5	PASS
		VN	0	1.30	0.000701	± 2.5	PASS
		VN	10	2.40	0.001294	± 2.5	PASS
		VN	20	2.20	0.001186	± 2.5	PASS
		VN	30	1.75	0.000940	± 2.5	PASS

		VN	40	1.83	0.000986	± 2.5	PASS
		VN	50	1.62	0.000870	± 2.5	PASS
	MCH	VN	-30	1.36	0.000723	± 2.5	PASS
		VN	-20	-1.50	-0.000799	± 2.5	PASS
		VN	-10	-0.60	-0.000320	± 2.5	PASS
		VN	0	-1.13	-0.000601	± 2.5	PASS
		VN	10	0.73	0.000388	± 2.5	PASS
		VN	20	-2.79	-0.001484	± 2.5	PASS
		VN	30	-2.78	-0.001476	± 2.5	PASS
		VN	40	-2.07	-0.001103	± 2.5	PASS
		VN	50	-1.40	-0.000746	± 2.5	PASS
	HCH	VN	-30	0.16	0.000083	± 2.5	PASS
		VN	-20	-1.06	-0.000556	± 2.5	PASS
		VN	-10	-1.50	-0.000790	± 2.5	PASS
		VN	0	0.33	0.000173	± 2.5	PASS
		VN	10	-0.73	-0.000383	± 2.5	PASS
		VN	20	1.22	0.000639	± 2.5	PASS
		VN	30	0.36	0.000188	± 2.5	PASS
		VN	40	1.07	0.000564	± 2.5	PASS
		VN	50	0.34	0.000180	± 2.5	PASS

Channel Bandwidth: 20 MHz

Channel Bandwidth: 20 MHz							
Voltage							
Modulation	Channel	Voltage [Vdc]	Temperature (℃)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
QPSK	LCH	VL	TN	0.70	0.000377	± 2.5	PASS
		VN	TN	0.29	0.000154	± 2.5	PASS
		VH	TN	-0.64	-0.000346	± 2.5	PASS
	MCH	VL	TN	-0.64	-0.000342	± 2.5	PASS
		VN	TN	0.47	0.000251	± 2.5	PASS
		VH	TN	-0.59	-0.000312	± 2.5	PASS
	HCH	VL	TN	-1.10	-0.000580	± 2.5	PASS
		VN	TN	0.84	0.000444	± 2.5	PASS
		VH	TN	-1.04	-0.000550	± 2.5	PASS
16QAM	LCH	VL	TN	-0.16	-0.000085	± 2.5	PASS
		VN	TN	-0.74	-0.000400	± 2.5	PASS
		VH	TN	0.33	0.000177	± 2.5	PASS
	MCH	VL	TN	0.23	0.000122	± 2.5	PASS
		VN	TN	-0.62	-0.000327	± 2.5	PASS
		VH	TN	0.14	0.000076	± 2.5	PASS
	HCH	VL	TN	-1.56	-0.000821	± 2.5	PASS
		VN	TN	0.33	0.000173	± 2.5	PASS
		VH	TN	0.43	0.000226	± 2.5	PASS
Temperature							
Modulation	Channel	Voltage [Vdc]	Temperature (℃)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
QPSK	LCH	VN	-30	0.06	0.000031	± 2.5	PASS

		VN	-20	0.56	0.000300	± 2.5	PASS
		VN	-10	-1.17	-0.000631	± 2.5	PASS
		VN	0	-0.80	-0.000431	± 2.5	PASS
		VN	10	-1.32	-0.000708	± 2.5	PASS
		VN	20	-0.56	-0.000300	± 2.5	PASS
		VN	30	0.34	0.000185	± 2.5	PASS
		VN	40	0.72	0.000385	± 2.5	PASS
		VN	50	-0.31	-0.000169	± 2.5	PASS
	MCH	VN	-30	-0.31	-0.000167	± 2.5	PASS
		VN	-20	-0.83	-0.000441	± 2.5	PASS
		VN	-10	-1.24	-0.000662	± 2.5	PASS
		VN	0	-0.57	-0.000304	± 2.5	PASS
		VN	10	-1.36	-0.000723	± 2.5	PASS
		VN	20	-0.43	-0.000228	± 2.5	PASS
		VN	30	0.56	0.000297	± 2.5	PASS
		VN	40	0.26	0.000137	± 2.5	PASS
		VN	50	-0.69	-0.000365	± 2.5	PASS
	HCH	VN	-30	-0.37	-0.000196	± 2.5	PASS
		VN	-20	-0.63	-0.000331	± 2.5	PASS
		VN	-10	-0.62	-0.000324	± 2.5	PASS
		VN	0	-1.34	-0.000708	± 2.5	PASS
		VN	10	-0.96	-0.000504	± 2.5	PASS
		VN	20	1.63	0.000858	± 2.5	PASS
		VN	30	2.07	0.001092	± 2.5	PASS
		VN	40	0.37	0.000196	± 2.5	PASS
		VN	50	0.80	0.000422	± 2.5	PASS
QPSK	LCH	VN	-30	-0.49	-0.000261	± 2.5	PASS
		VN	-20	0.44	0.000238	± 2.5	PASS
		VN	-10	-0.66	-0.000354	± 2.5	PASS
		VN	0	0.62	0.000331	± 2.5	PASS
		VN	10	-1.20	-0.000646	± 2.5	PASS
		VN	20	-1.09	-0.000585	± 2.5	PASS
		VN	30	-0.07	-0.000038	± 2.5	PASS
		VN	40	0.03	0.000015	± 2.5	PASS
		VN	50	0.04	0.000023	± 2.5	PASS
	MCH	VN	-30	-1.37	-0.000730	± 2.5	PASS
		VN	-20	0.54	0.000289	± 2.5	PASS
		VN	-10	-0.62	-0.000327	± 2.5	PASS
		VN	0	-0.03	-0.000015	± 2.5	PASS
		VN	10	0.14	0.000076	± 2.5	PASS
		VN	20	-0.47	-0.000251	± 2.5	PASS
		VN	30	-1.03	-0.000548	± 2.5	PASS
		VN	40	-1.20	-0.000639	± 2.5	PASS
		VN	50	0.37	0.000198	± 2.5	PASS
	HCH	VN	-30	-30	-0.23	± 2.5	PASS
		VN	-20	-20	-0.19	± 2.5	PASS
		VN	-10	-10	-1.87	± 2.5	PASS
		VN	0	0	-0.93	± 2.5	PASS
		VN	10	10	0.83	± 2.5	PASS
		VN	20	0.90	0.000474	± 2.5	PASS

		VN	30	0.66	0.000346	± 2.5	PASS
		VN	40	0.89	0.000467	± 2.5	PASS
		VN	50	0.63	0.000331	± 2.5	PASS