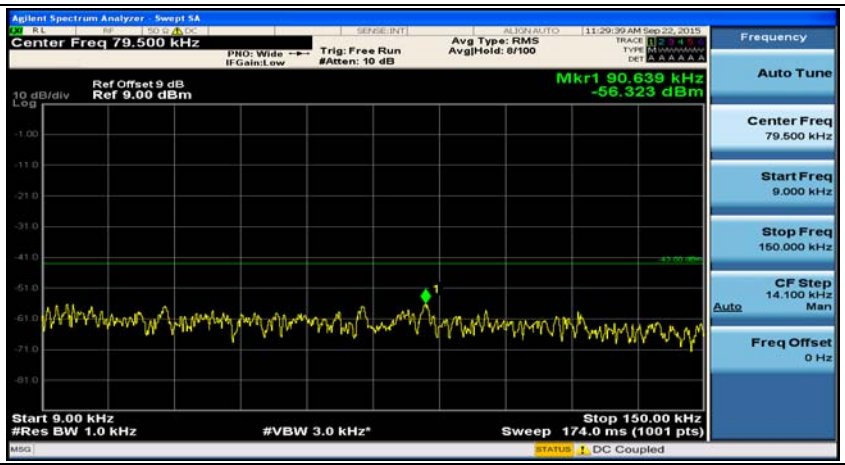
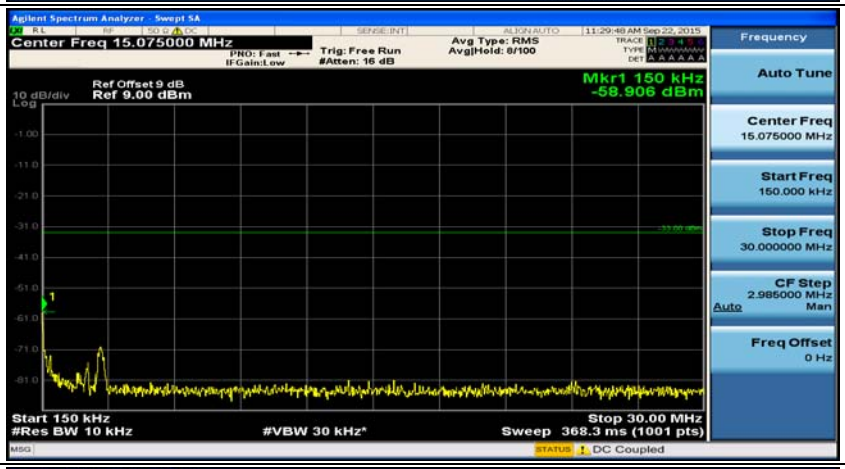
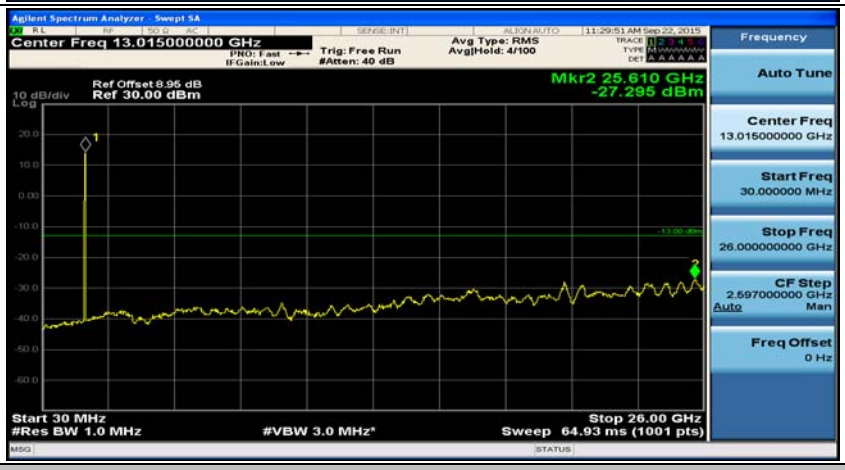
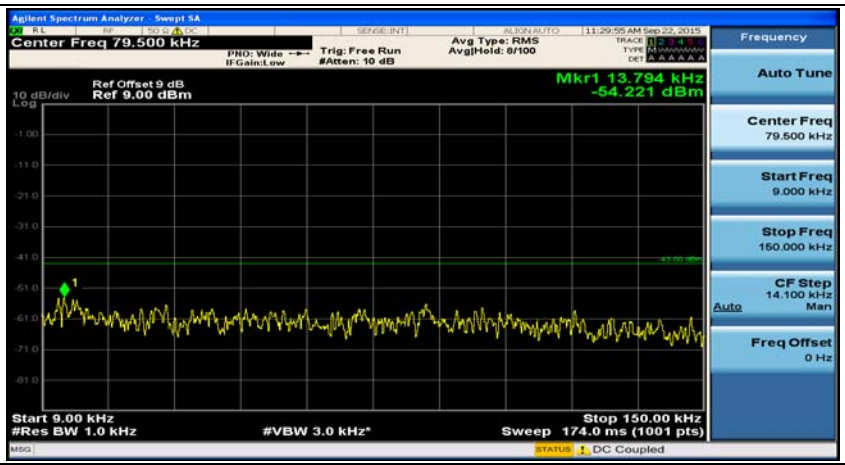
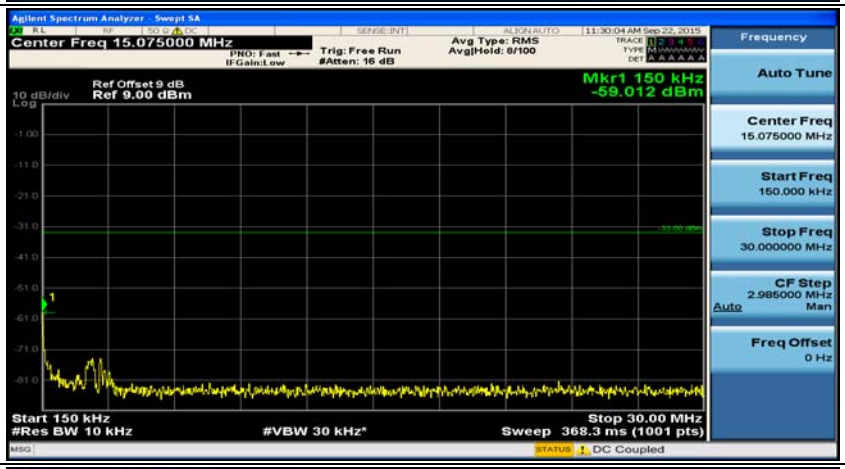


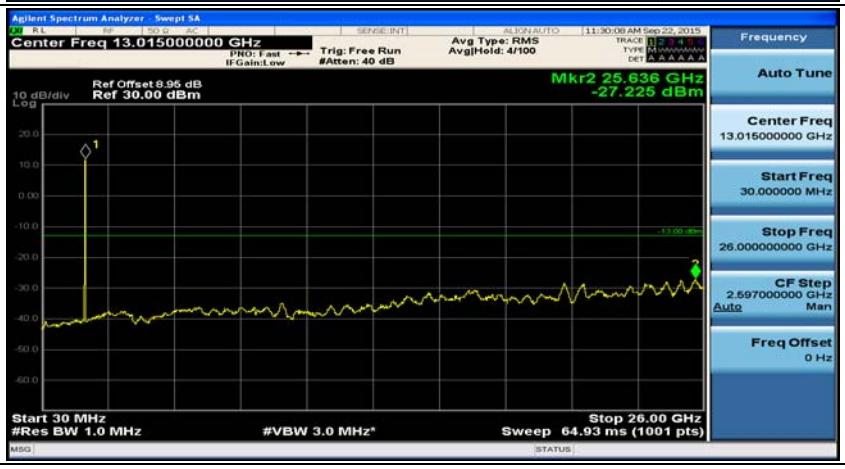


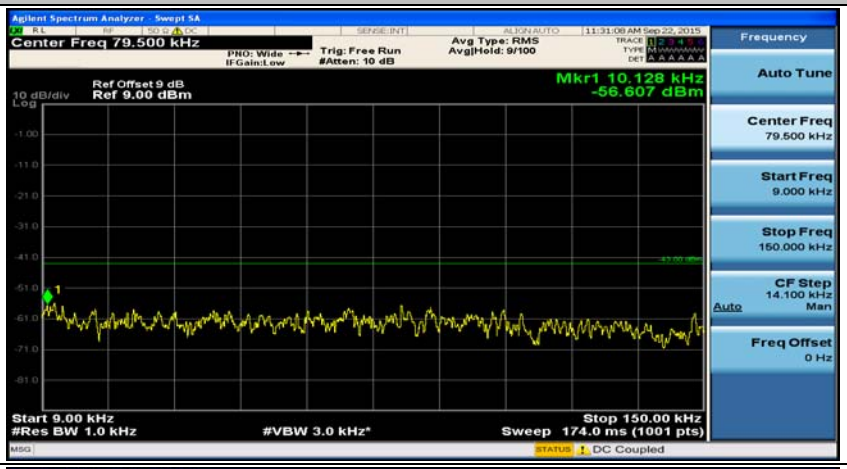
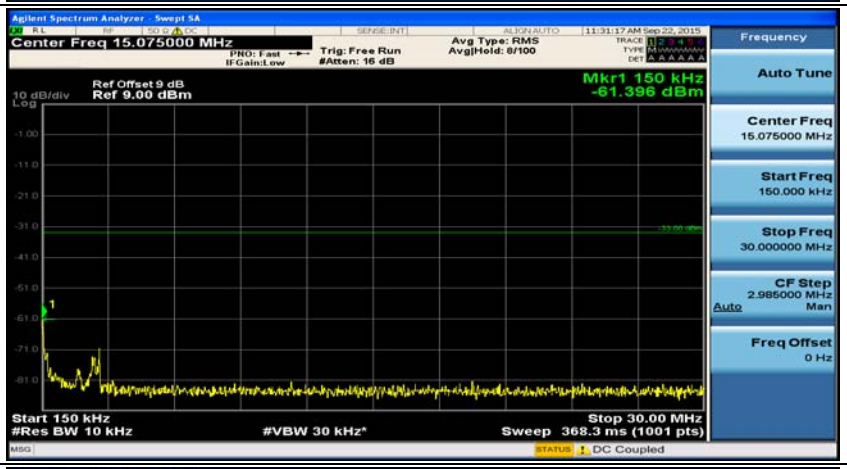
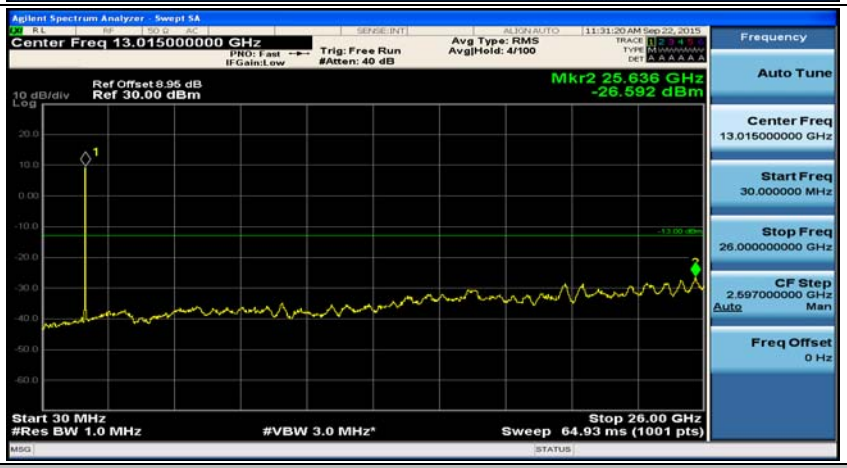


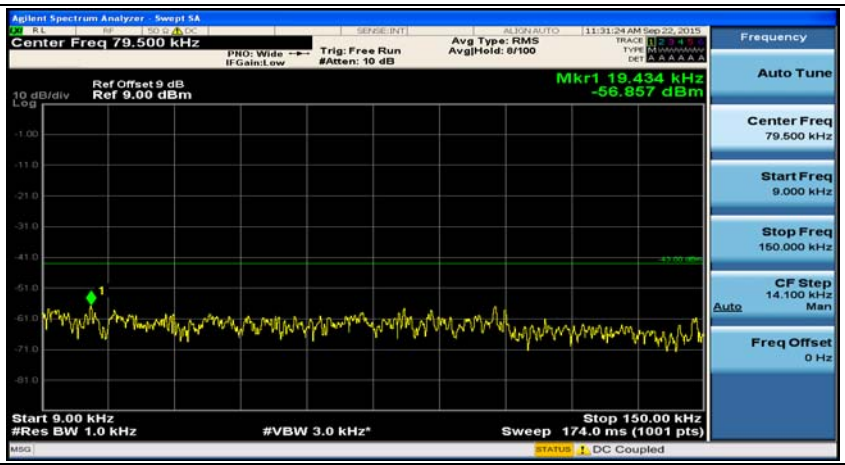
Channel Bandwidth: 10 MHz_MCH_16QAM_1RB#49

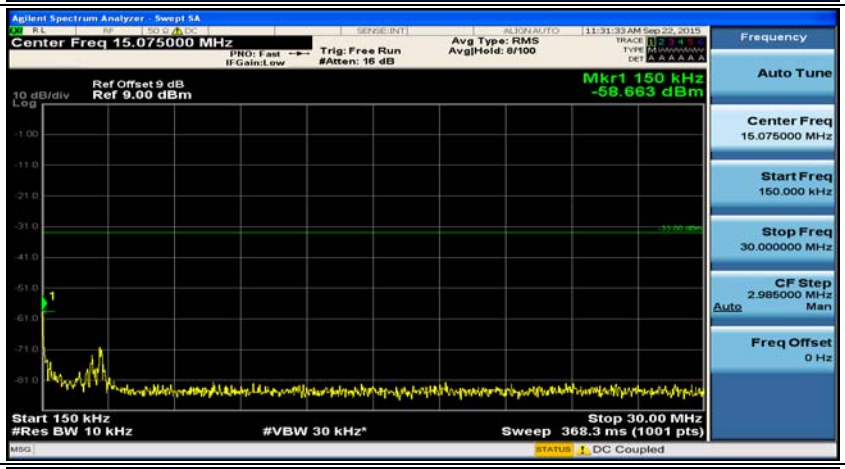

Agilent Spectrum Analyzer - Swept SA
Center Freq 79.500 kHz
PNO: Wide
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 6/100
11:29:55 AM Sep 22, 2015
Frequency
Mkr1 13.794 kHz
-54.221 dBm
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Auto Tune
Center Freq
79.500 kHz
Start Freq
9.000 kHz
Stop Freq
150.000 kHz
CF Step
14.100 kHz
Auto
Man
Freq Offset
0 Hz
Start 9.00 kHz
#Res BW 1.0 kHz
#VBW 3.0 kHz*
Stop 150.00 kHz
Sweep 174.0 ms (1001 pts)
DC Coupled

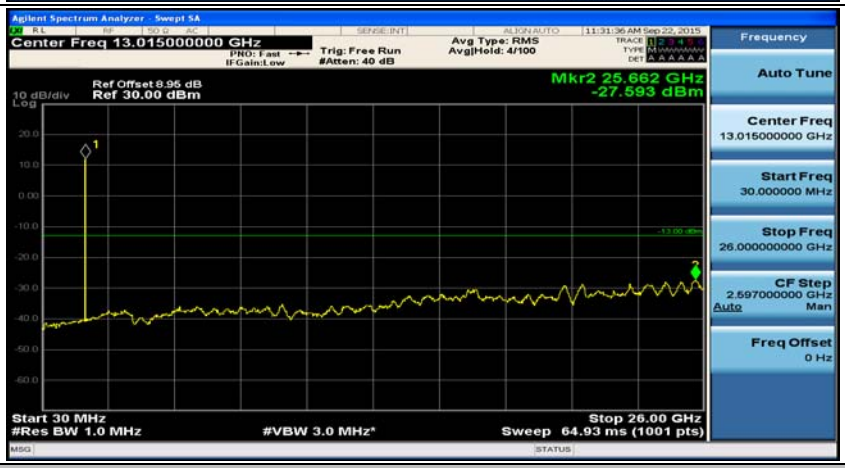

Agilent Spectrum Analyzer - Swept SA
Center Freq 15.075000 MHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 16 dB
Avg Type: RMS
Avg|Hold: 6/100
11:30:04 AM Sep 22, 2015
Frequency
Mkr1 150 kHz
-59.012 dBm
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Auto Tune
Center Freq
15.075000 MHz
Start Freq
150.000 kHz
Stop Freq
30.000000 MHz
CF Step
2.985000 MHz
Auto
Man
Freq Offset
0 Hz
Start 150 kHz
#Res BW 10 kHz
#VBW 30 kHz*
Stop 30.00 MHz
Sweep 368.3 ms (1001 pts)
DC Coupled


Agilent Spectrum Analyzer - Swept SA
Center Freq 13.015000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 40 dB
Avg Type: RMS
Avg|Hold: 4/100
11:30:08 AM Sep 22, 2015
Frequency
Mkr2 25.636 GHz
-27.225 dBm
Ref Offset 8.95 dB
10 dB/div
Log
Ref 30.00 dBm
Auto Tune
Center Freq
13.015000000 GHz
Start Freq
30.000000 MHz
Stop Freq
26.000000000 GHz
CF Step
2.597000000 GHz
Auto
Man
Freq Offset
0 Hz
Start 30 MHz
#Res BW 1.0 MHz
#VBW 3.0 MHz*
Stop 26.00 GHz
Sweep 64.93 ms (1001 pts)

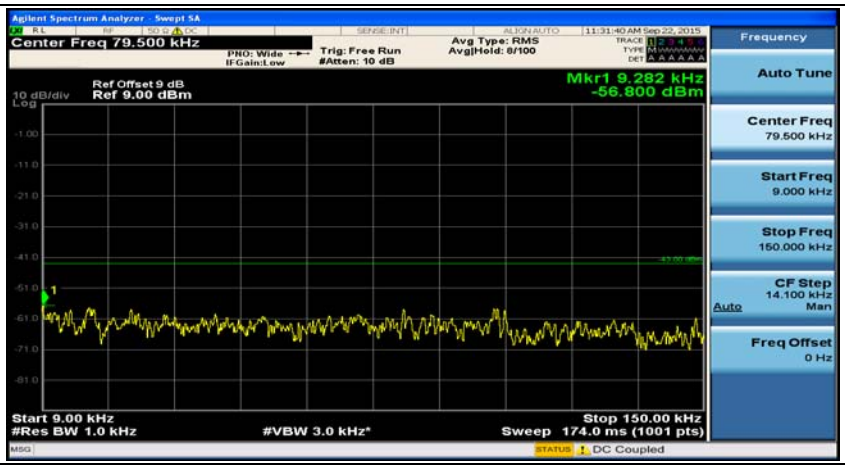
Channel Bandwidth: 10 MHz_HCH_16QAM_1RB#0



Channel Bandwidth: 10 MHz_HCH_16QAM_1RB#24

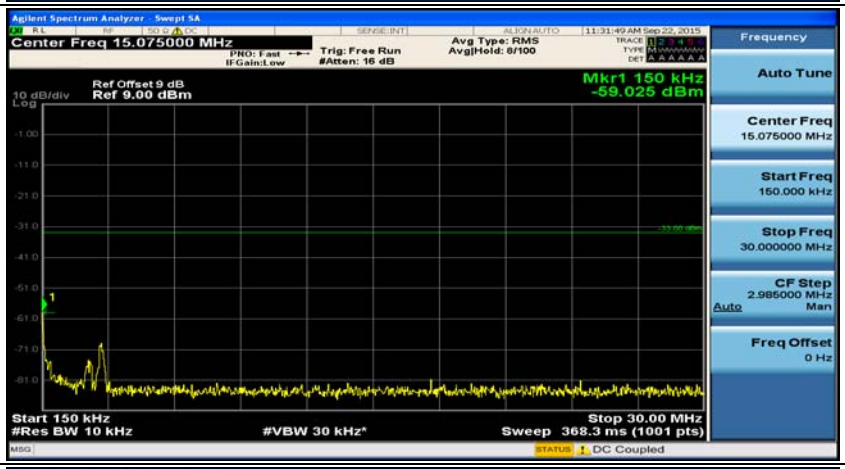


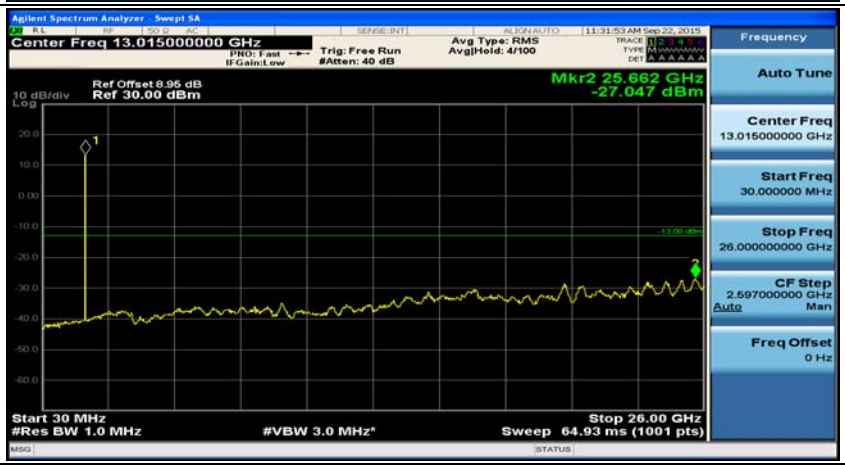




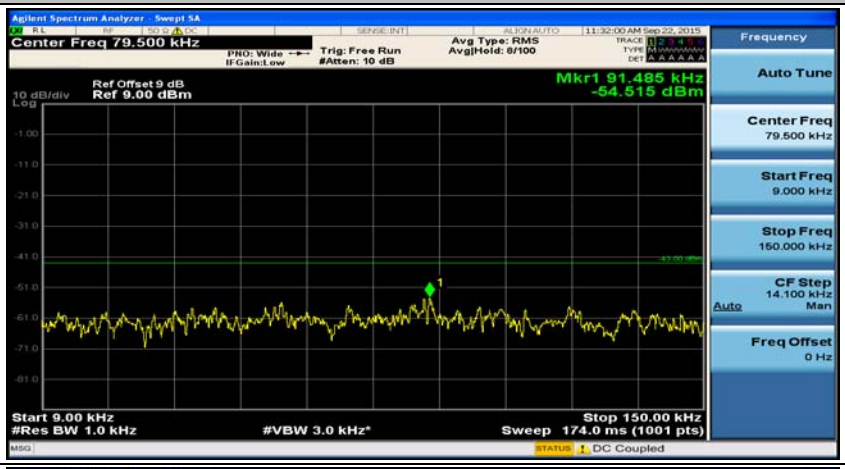
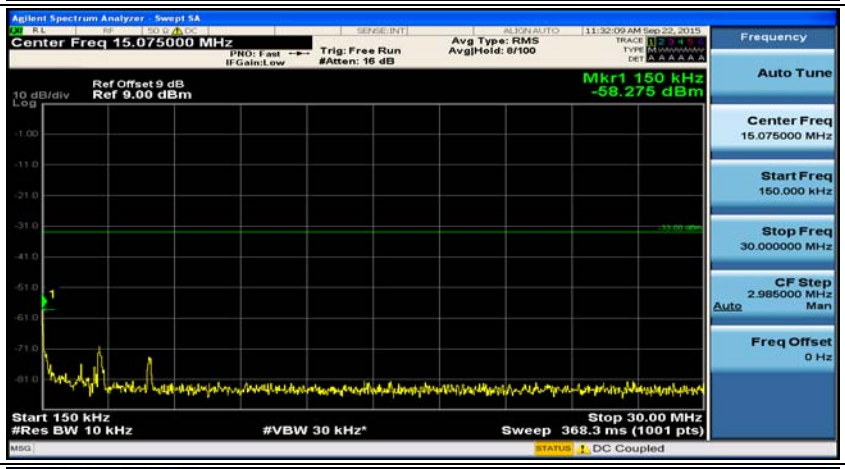
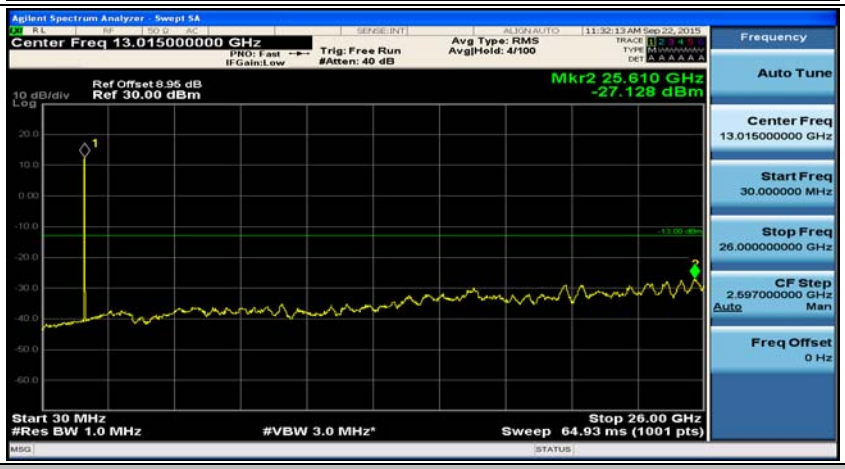
Channel Bandwidth: 10 MHz_HCH_16QAM_1RB#49

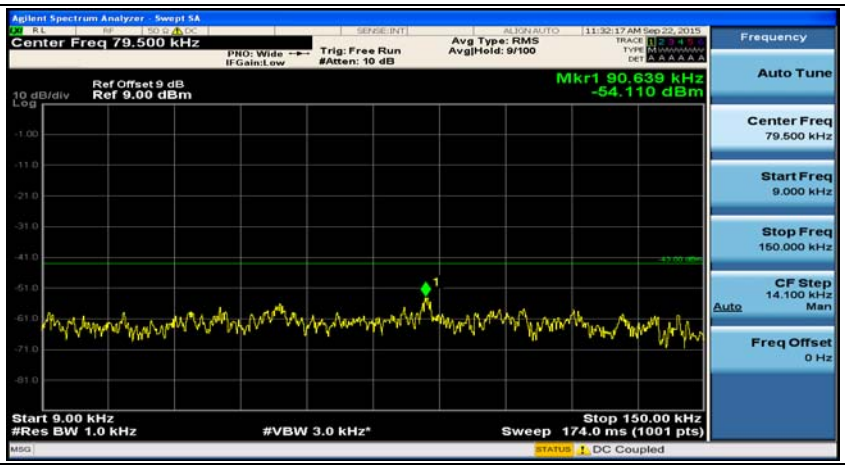

Agilent Spectrum Analyzer - Swept SA
Center Freq 79.500 kHz
PNO: Wide
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 6/100
11:31:40 AM Sep 22, 2015
Frequency
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Mkr1 9.282 kHz
-56.800 dBm
Auto Tune
Center Freq
79.500 kHz
Start Freq
9.000 kHz
Stop 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

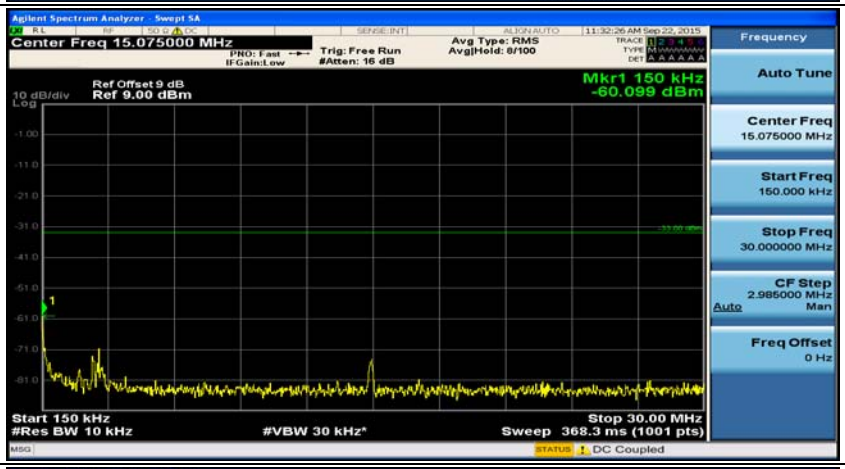

Agilent Spectrum Analyzer - Swept SA
Center Freq 15.075000 MHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 16 dB
Avg Type: RMS
Avg|Hold: 6/100
11:31:49 AM Sep 22, 2015
Frequency
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Mkr1 150 kHz
-59.025 dBm
Auto Tune
Center Freq
15.075000 MHz
Start Freq
150.000 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

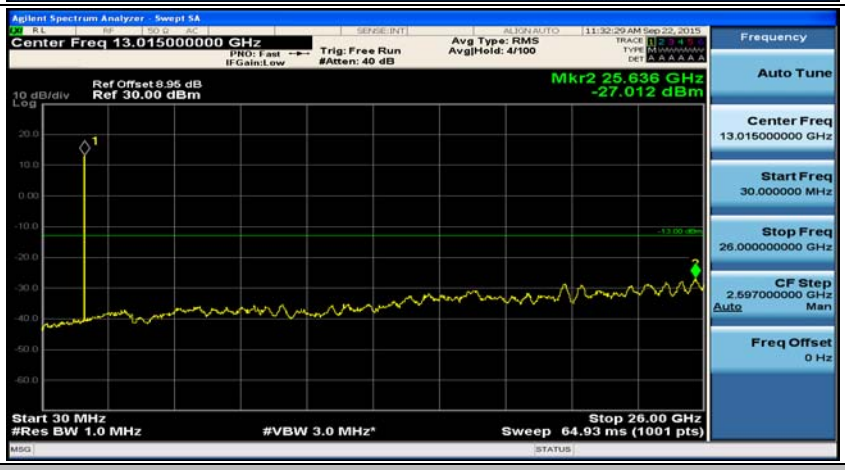

Agilent Spectrum Analyzer - Swept SA
Center Freq 13.015000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 40 dB
Avg Type: RMS
Avg|Hold: 4/100
11:31:53 AM Sep 22, 2015
Frequency
Ref Offset 8.95 dB
10 dB/div
Log
Ref 30.00 dBm
Mkr2 25.662 GHz
-27.047 dBm
Auto Tune
Center Freq
13.015000000 GHz
Start 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: 15 MHz

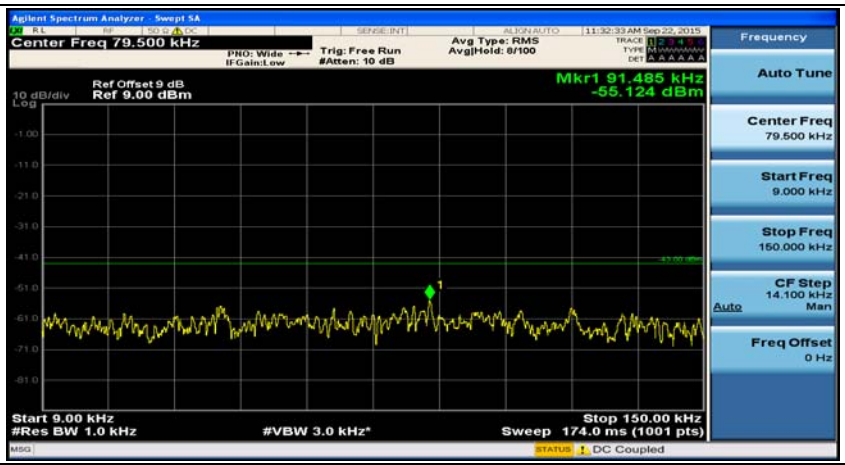
(Channel Bandwidth:15 MHz)_LCH_QPSK_1RB#0



(Channel Bandwidth:15 MHz)_LCH_QPSK_1RB#37

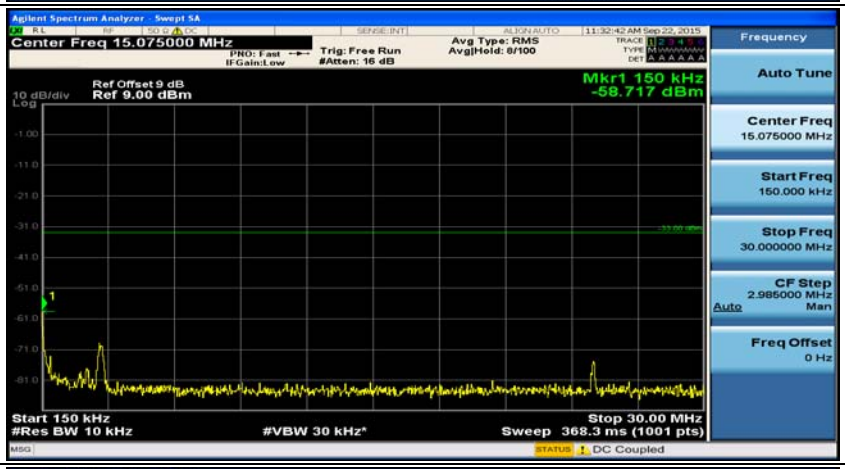


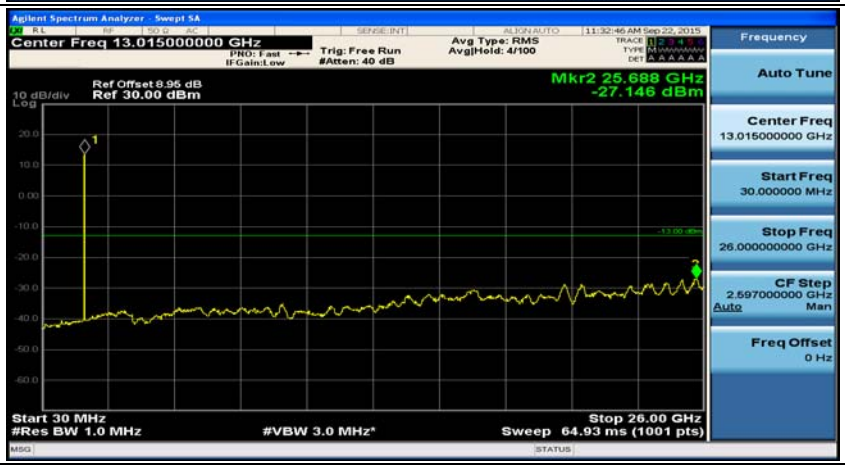




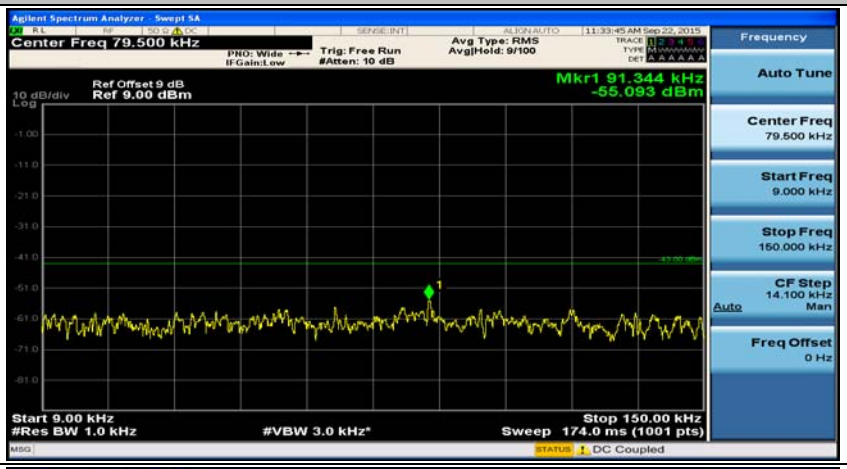
(Channel Bandwidth:15 MHz)_LCH_QPSK_1RB#74

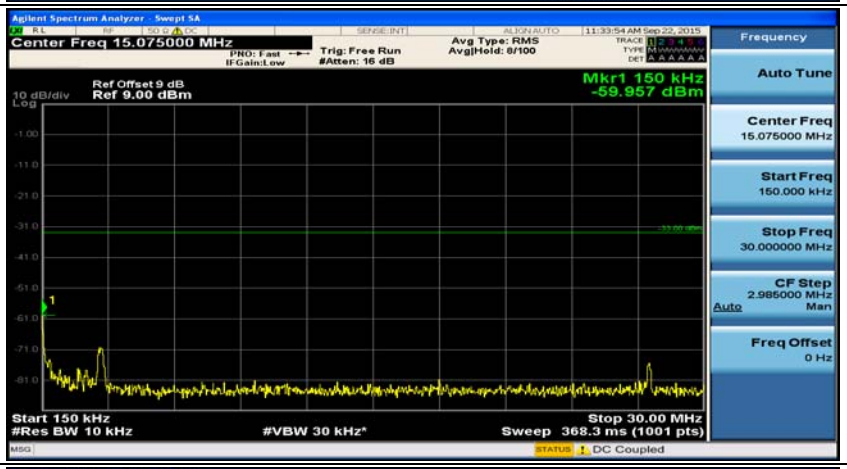

Agilent Spectrum Analyzer - Swept SA
Center Freq 79.500 kHz
PNO: Wide
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 6/100
11:32:33 AM Sep 22, 2015
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Mkr1 91.485 kHz
-55.124 dBm
Start 9.00 kHz
#Res BW 1.0 kHz
#VBW 3.0 kHz*
Stop 150.00 kHz
Sweep 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

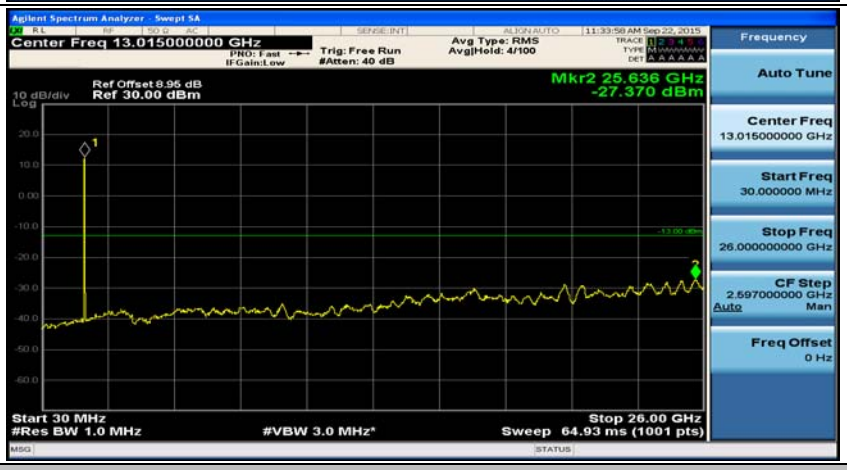

Agilent Spectrum Analyzer - Swept SA
Center Freq 15.075000 MHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 16 dB
Avg Type: RMS
Avg|Hold: 6/100
11:32:42 AM Sep 22, 2015
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Mkr1 150 kHz
-58.717 dBm
Start 150 kHz
#Res BW 10 kHz
#VBW 30 kHz*
Stop 30.00 MHz
Sweep 368.3 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
11:32:46 AM Sep 22, 2015
Ref Offset 8.95 dB
10 dB/div
Log
Ref 30.00 dBm
Mkr2 25.688 GHz
-27.146 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

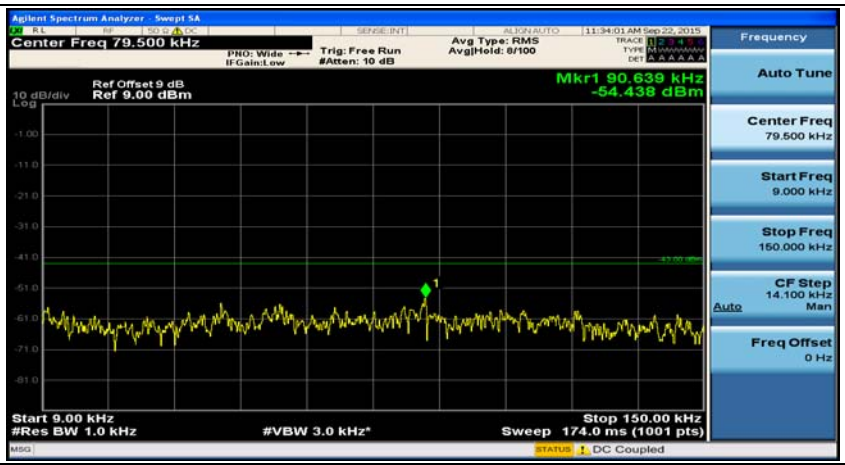
(Channel Bandwidth:15 MHz)_MCH_QPSK_1RB#0

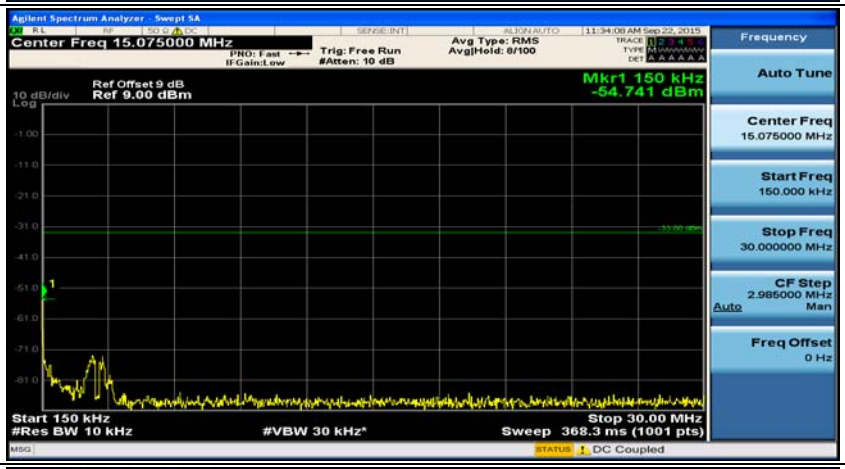


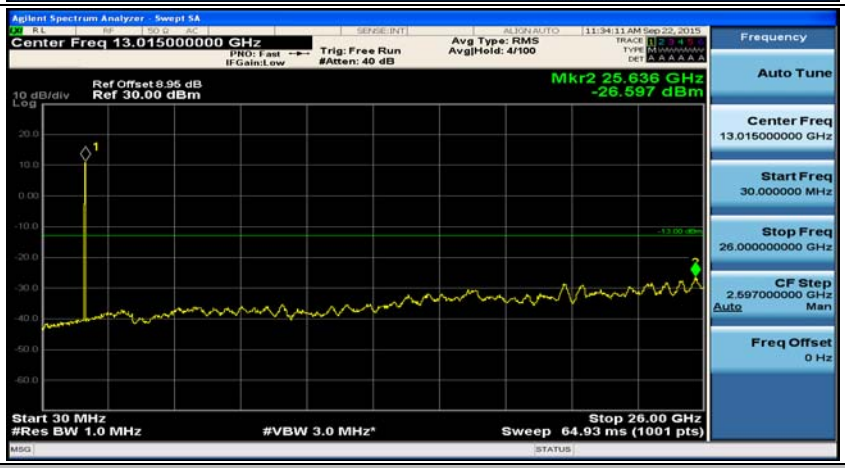




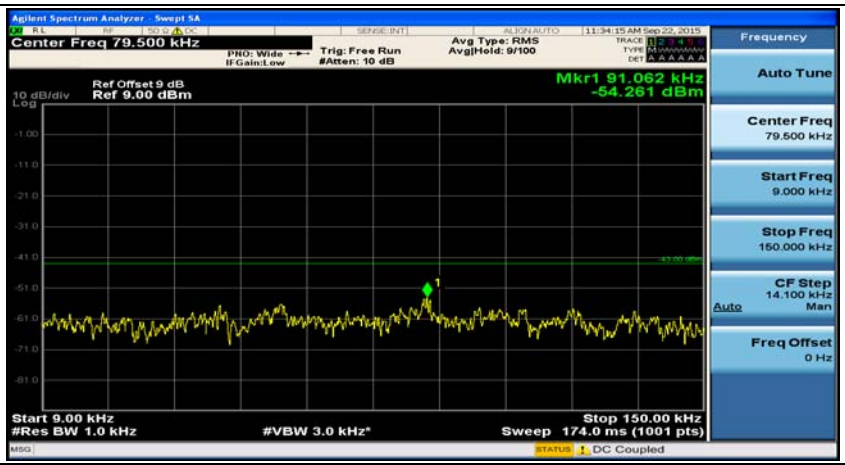
(Channel Bandwidth:15 MHz)_MCH_QPSK_1RB#37

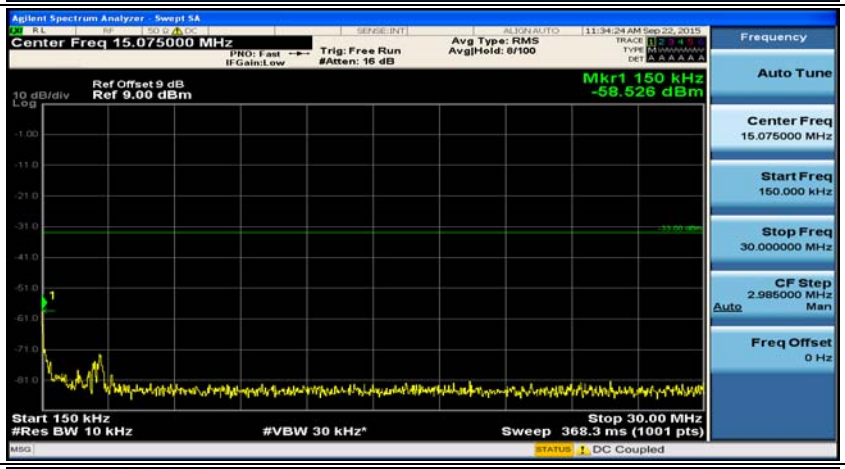


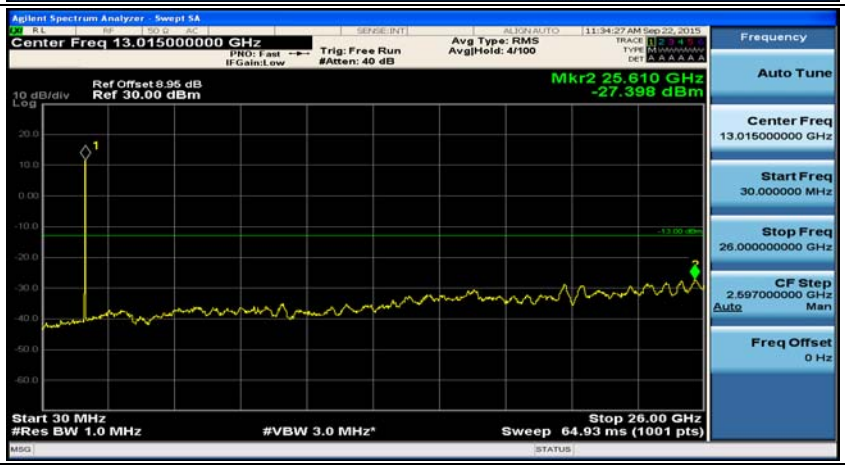


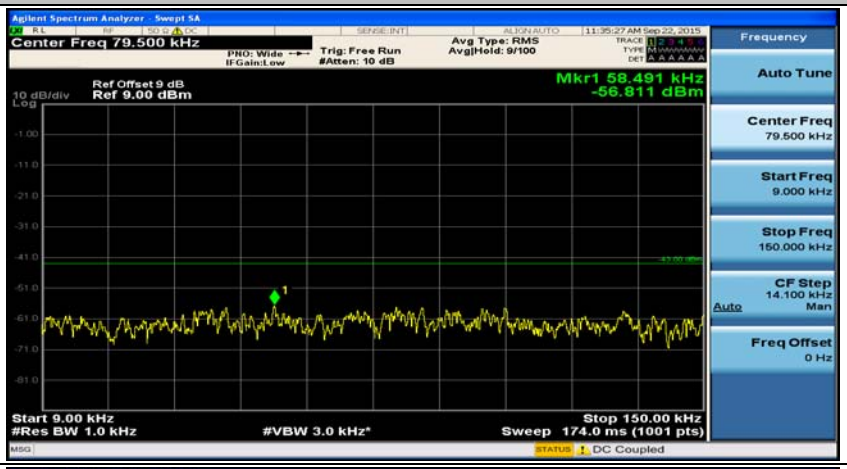
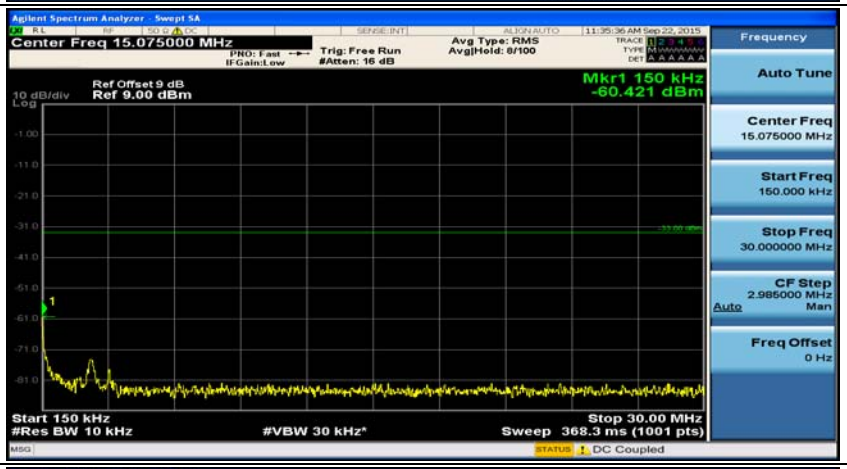
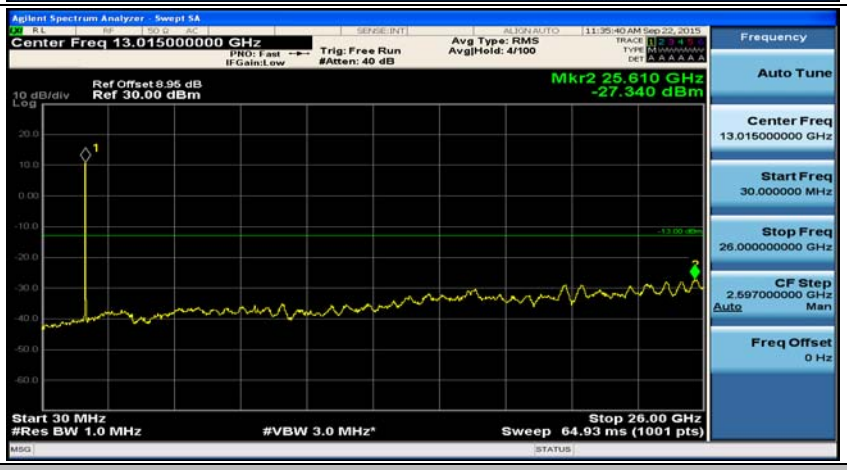


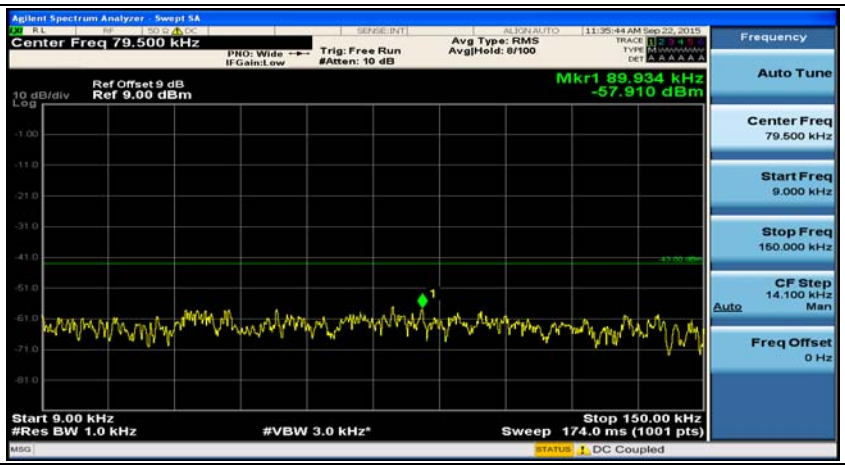
(Channel Bandwidth:15 MHz)_MCH_QPSK_1RB#74

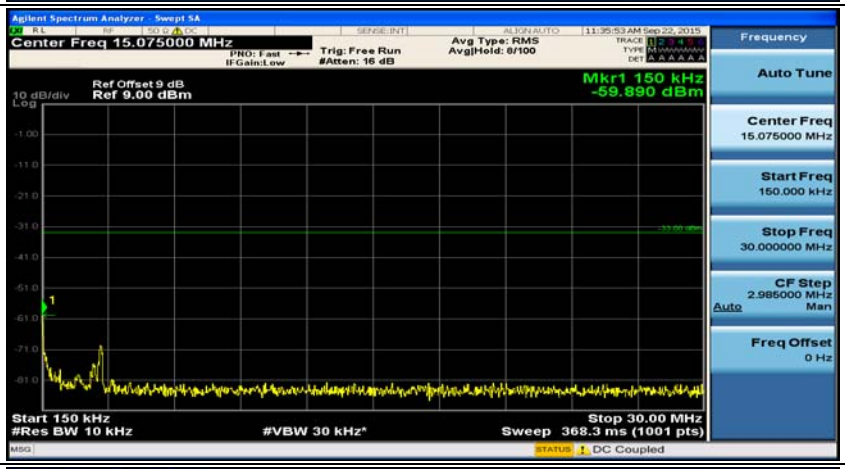

Agilent Spectrum Analyzer - Swept SA
Center Freq 79.500 kHz
PNO: Wide
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 9/100
11:34:15 AM Sep 22, 2015
Ref Offset 9 dB
10 dB/div
Ref 9.00 dBm
Log
Mkr1 91.062 kHz
-54.261 dBm
Start 9.00 kHz
#Res BW 1.0 kHz
#VBW 3.0 kHz*
Stop 150.00 kHz
Sweep 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

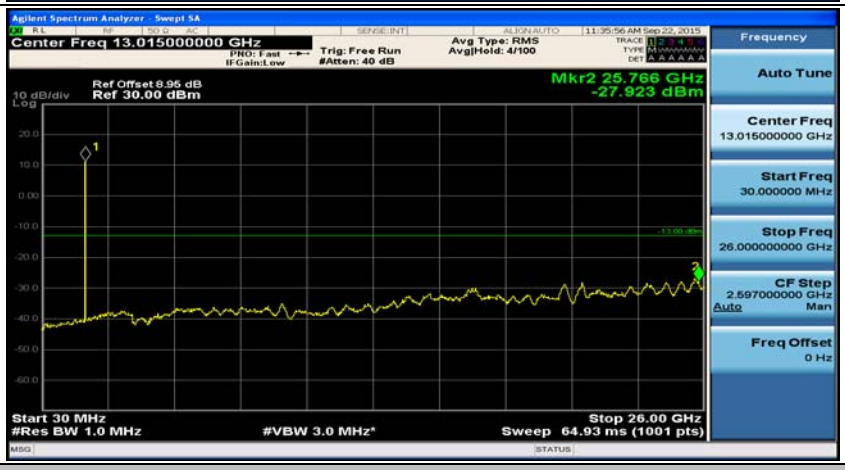

Agilent Spectrum Analyzer - Swept SA
Center Freq 15.075000 MHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 16 dB
Avg Type: RMS
Avg|Hold: 8/100
11:34:24 AM Sep 22, 2015
Ref Offset 9 dB
10 dB/div
Ref 9.00 dBm
Log
Mkr1 150 kHz
-58.526 dBm
Start 150 kHz
#Res BW 10 kHz
#VBW 30 kHz*
Stop 30.00 MHz
Sweep 368.3 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
11:34:27 AM Sep 22, 2015
Ref Offset 8.95 dB
10 dB/div
Ref 30.00 dBm
Log
Mkr2 25.610 GHz
-27.398 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

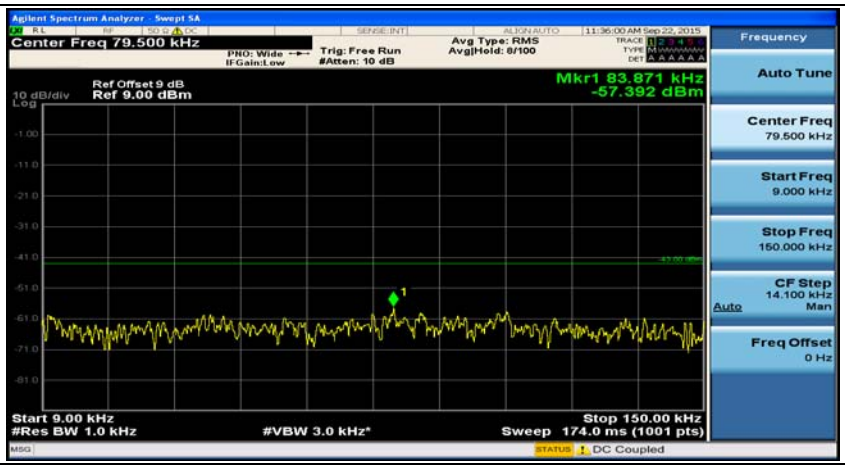
(Channel Bandwidth:15 MHz)_HCH_QPSK_1RB#0



(Channel Bandwidth:15 MHz)_HCH_QPSK_1RB#37

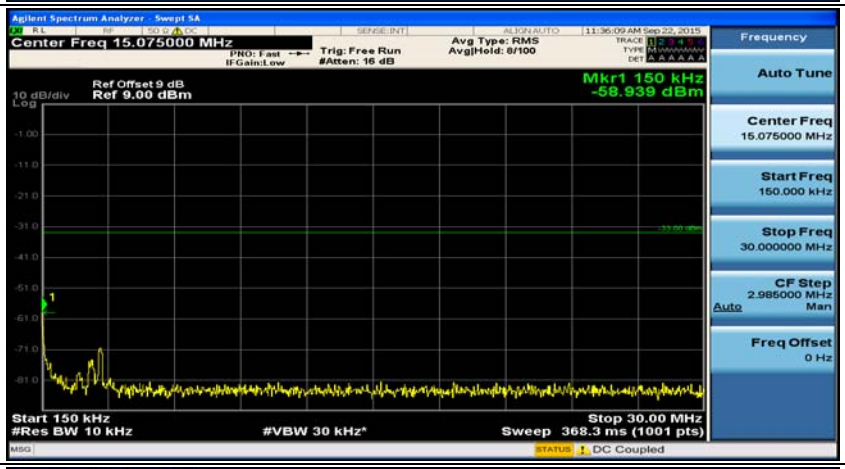


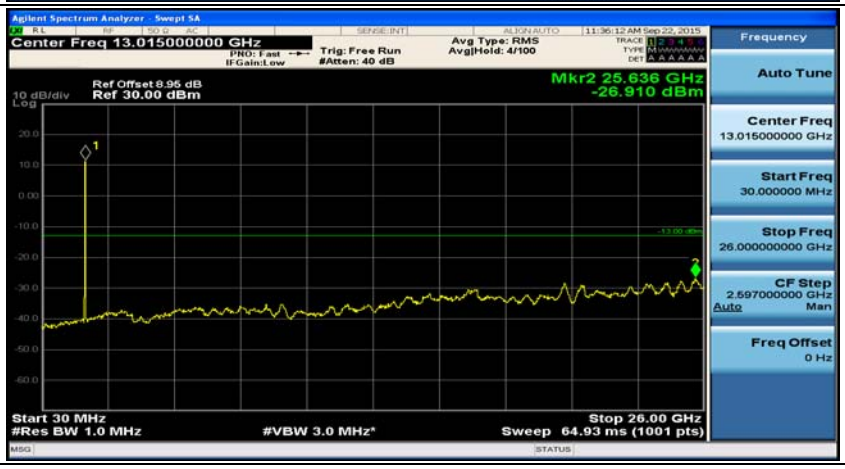


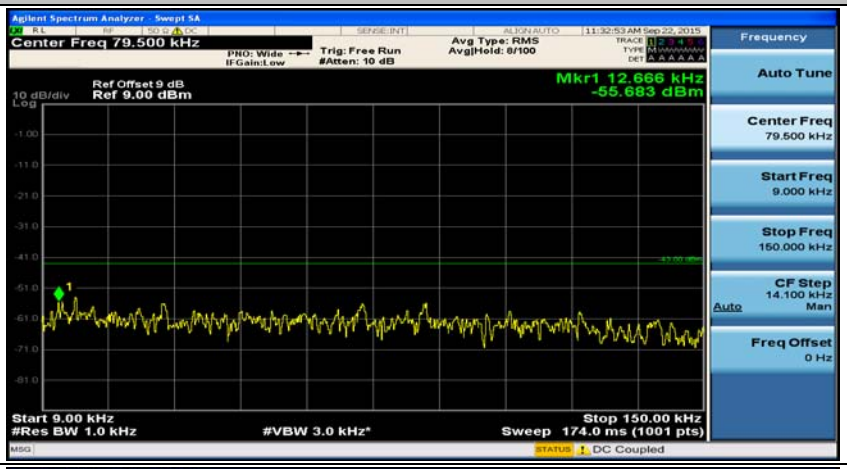
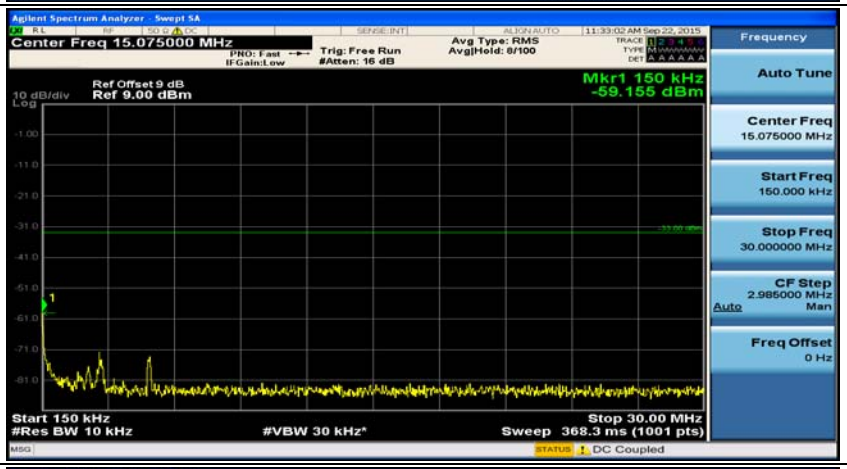
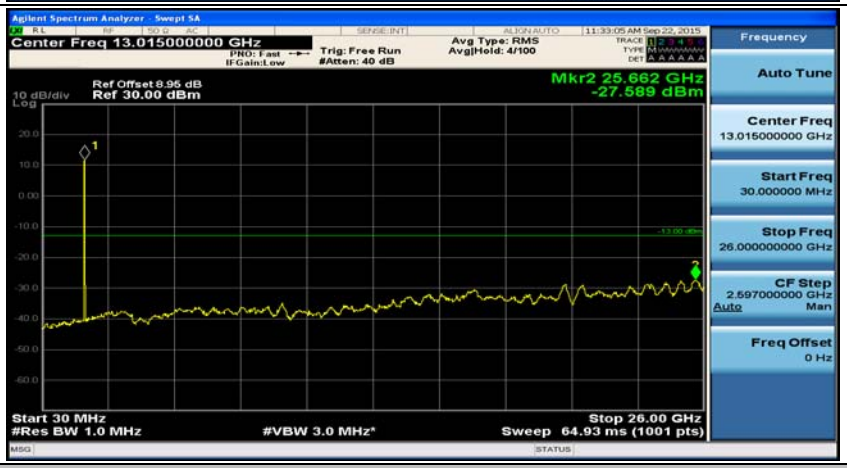


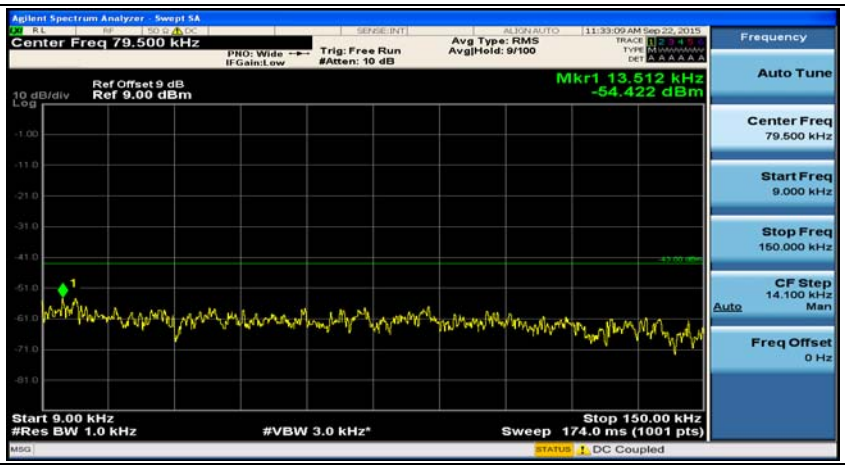
(Channel Bandwidth:15 MHz)_HCH_QPSK_1RB#74

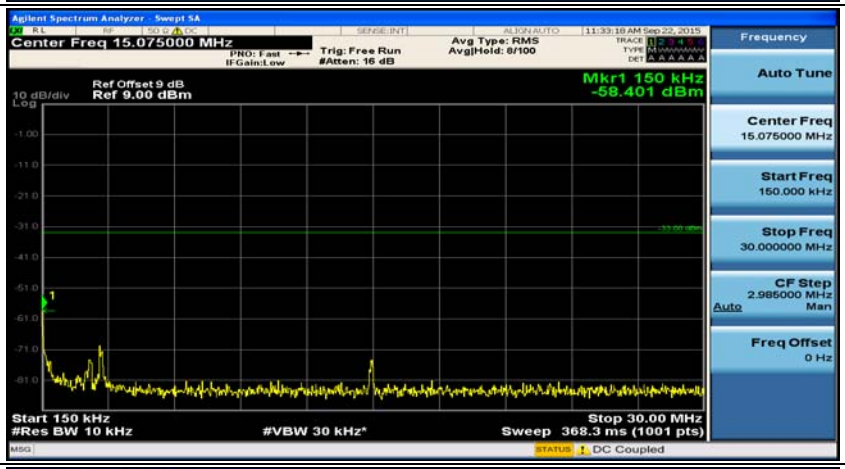

Agilent Spectrum Analyzer - Swept SA
Center Freq 79.500 kHz
PNO: Wide
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 6/100
11:36:00 AM Sep 22, 2015
Frequency
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Mkr1 83.871 kHz
-57.392 dBm
Auto Tune
Center Freq
79.500 kHz
Start Freq
9.000 kHz
Stop 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

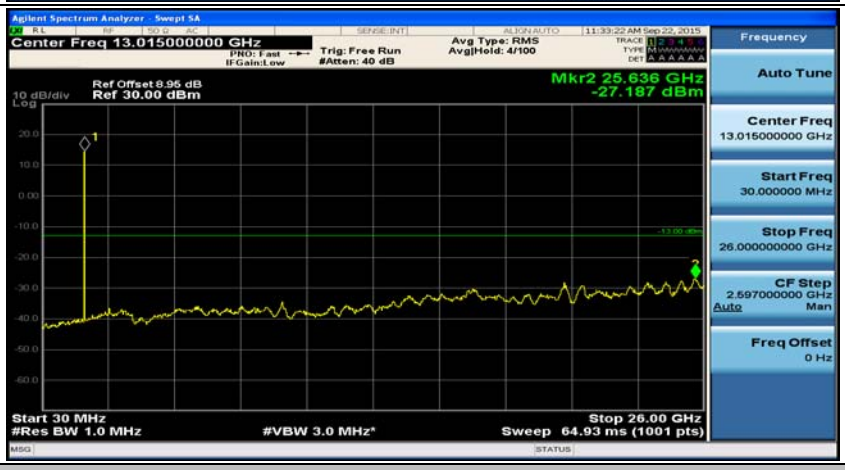

Agilent Spectrum Analyzer - Swept SA
Center Freq 15.075000 MHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 16 dB
Avg Type: RMS
Avg|Hold: 6/100
11:36:09 AM Sep 22, 2015
Frequency
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Mkr1 150 kHz
-58.939 dBm
Auto Tune
Center Freq
15.075000 MHz
Start Freq
150.000 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: 4/100
11:36:12 AM Sep 22, 2015
Frequency
Ref Offset 8.95 dB
10 dB/div
Log
Ref 30.00 dBm
Mkr2 25.636 GHz
-26.910 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)

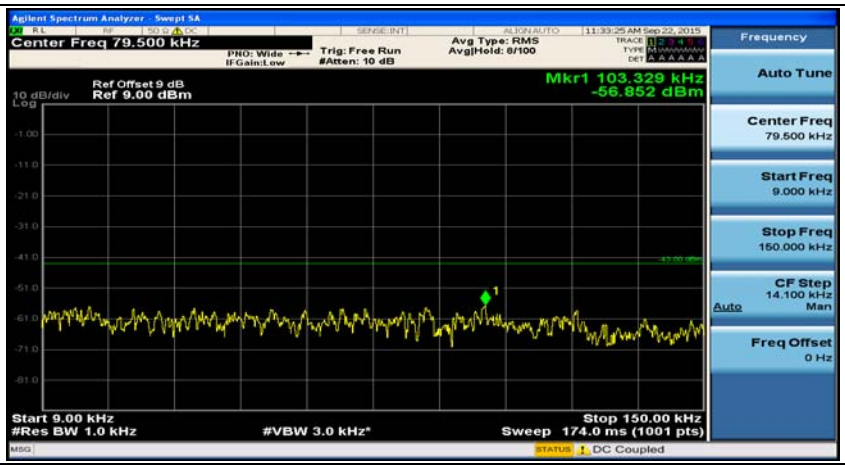
(Channel Bandwidth:15 MHz)_LCH_16QAM_1RB#0



(Channel Bandwidth:15 MHz)_LCH_16QAM_1RB#37

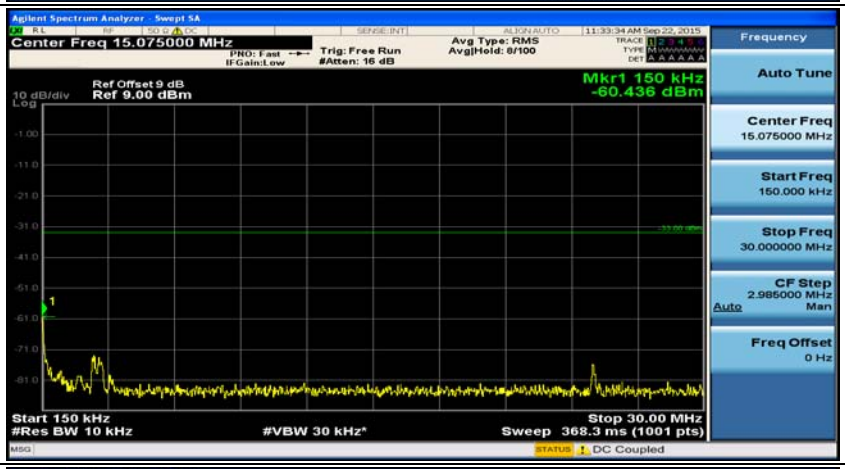


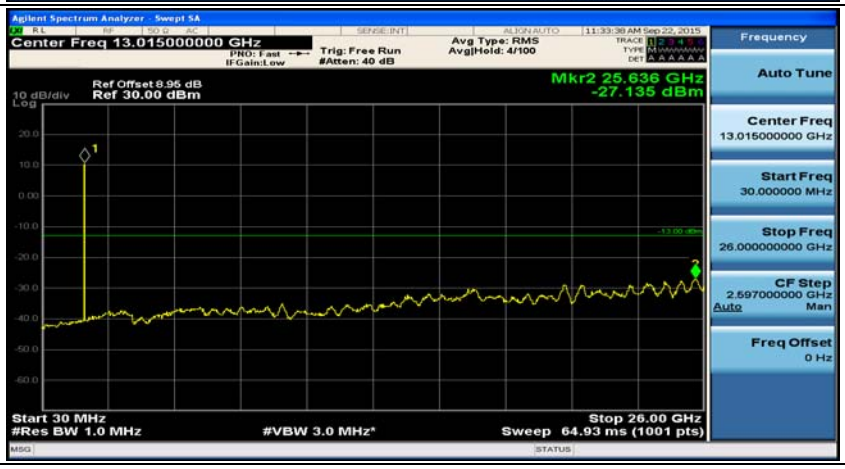


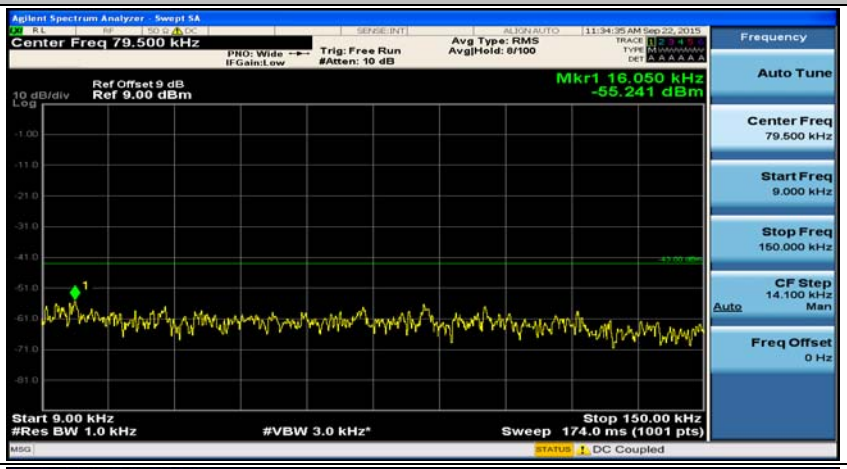
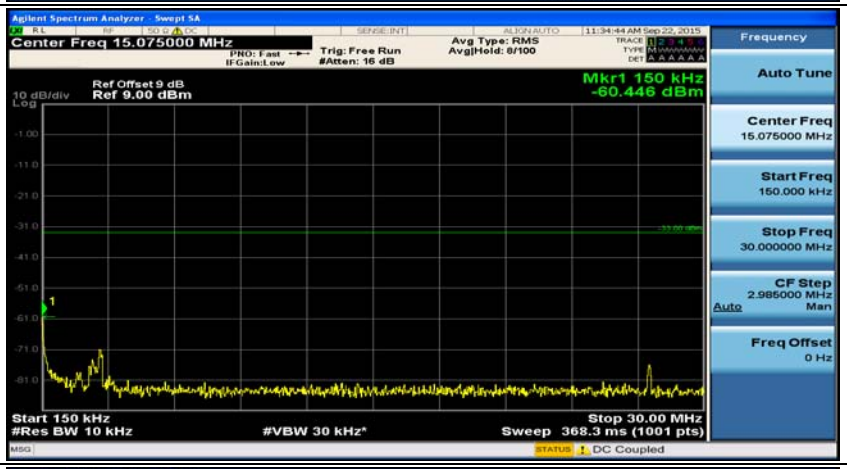


(Channel Bandwidth:15 MHz)_LCH_16QAM_1RB#74

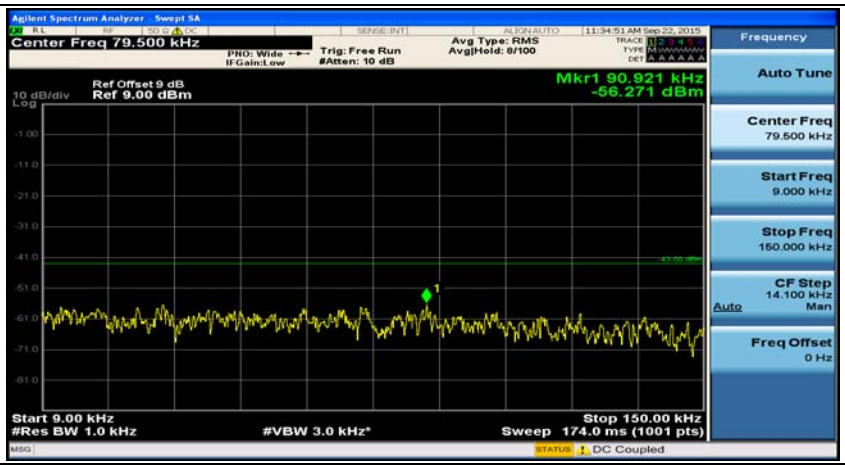

Agilent Spectrum Analyzer - Swept SA
Center Freq 79.500 kHz
PNO: Wide
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 6/100
11:33:25 AM Sep 22, 2015
Frequency
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Mkr1 103.329 kHz
-56.852 dBm
Auto Tune
Center Freq
79.500 kHz
Start Freq
9.000 kHz
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

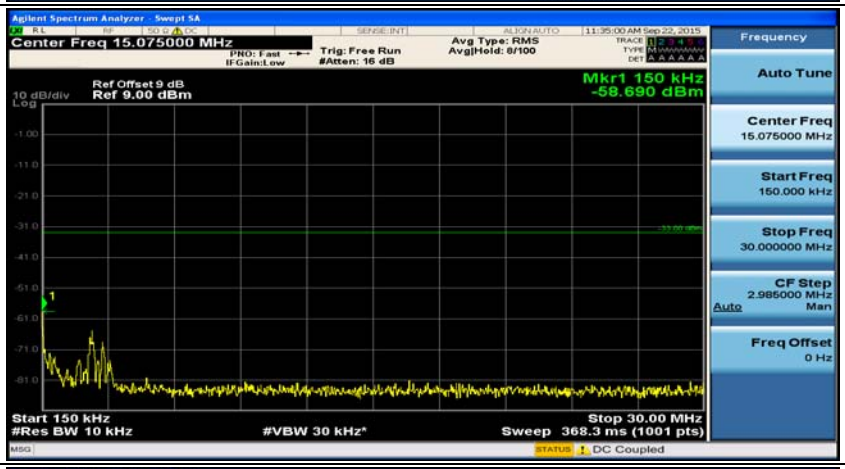

Agilent Spectrum Analyzer - Swept SA
Center Freq 15.075000 MHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 16 dB
Avg Type: RMS
Avg|Hold: 6/100
11:33:34 AM Sep 22, 2015
Frequency
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Mkr1 150 kHz
-60.436 dBm
Auto Tune
Center Freq
15.075000 MHz
Start Freq
150.000 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

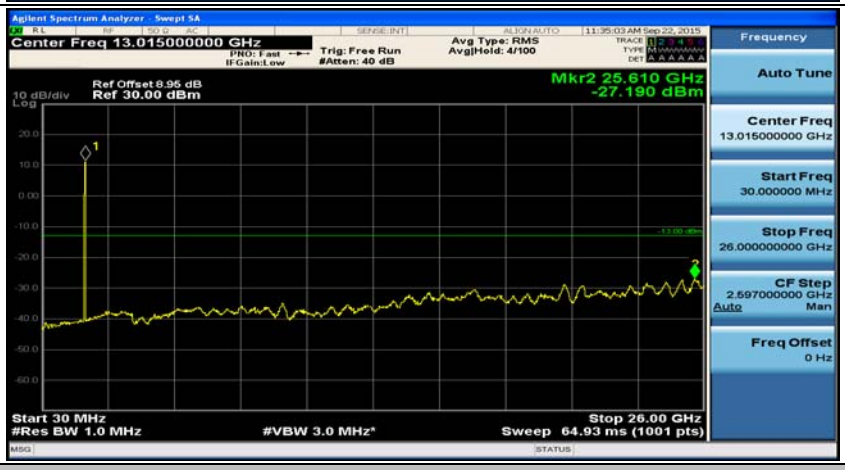

Agilent Spectrum Analyzer - Swept SA
Center Freq 13.015000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 40 dB
Avg Type: RMS
Avg|Hold: 4/100
11:33:38 AM Sep 22, 2015
Frequency
Ref Offset 8.95 dB
10 dB/div
Log
Ref 30.00 dBm
Mkr2 25.636 GHz
-27.135 dBm
Auto Tune
Center Freq
13.015000000 GHz
Start 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:15 MHz)_MCH_16QAM_1RB#0



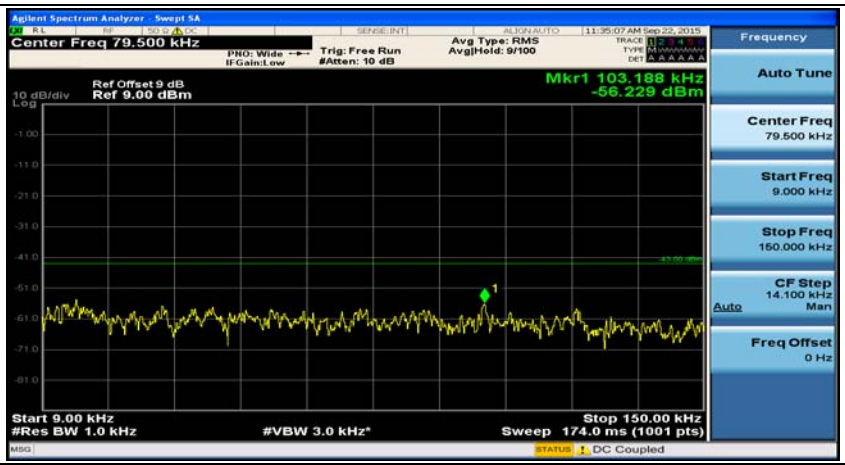
(Channel Bandwidth:15 MHz)_MCH_16QAM_1RB#37

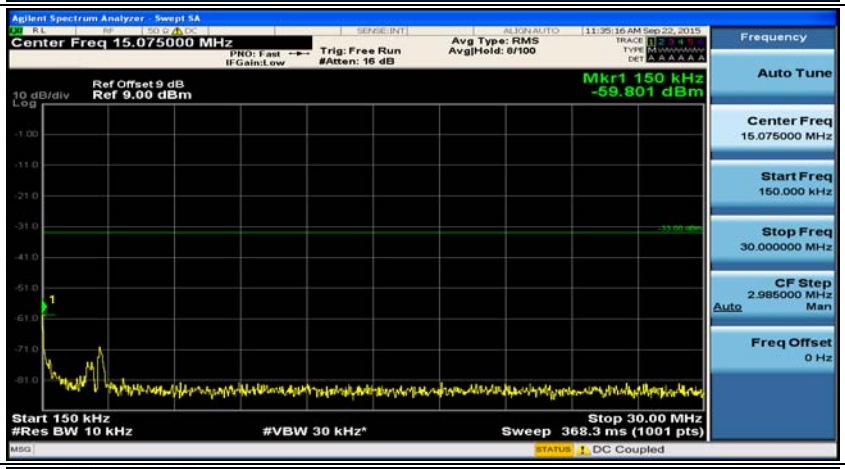


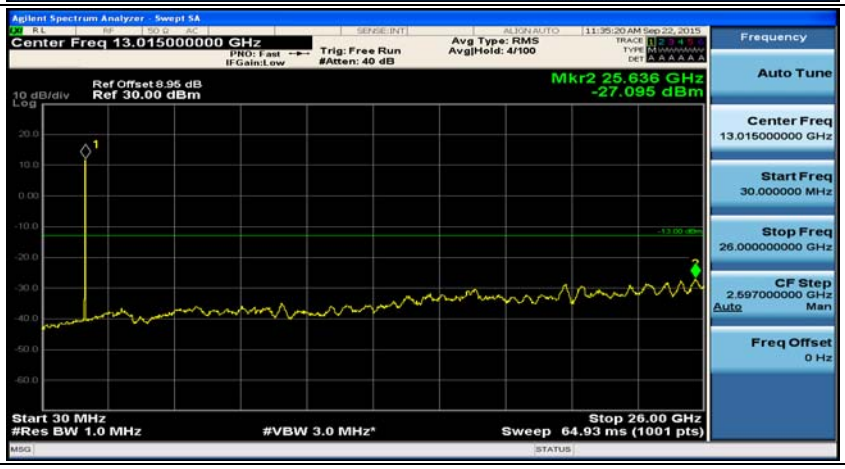


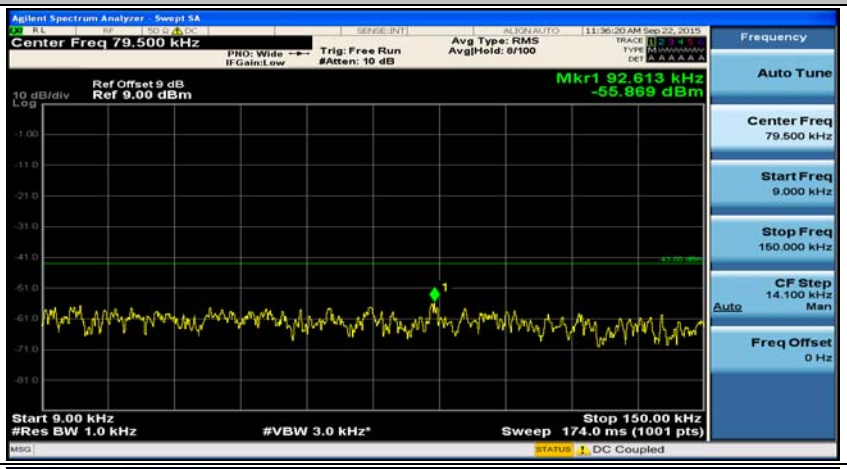
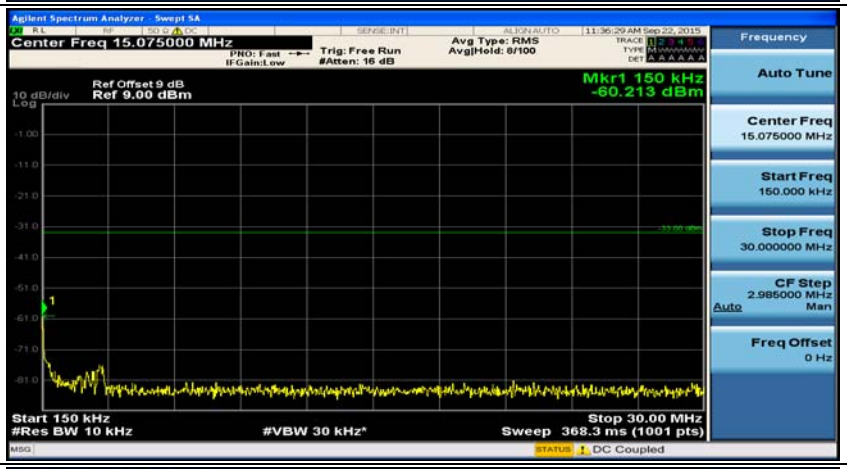
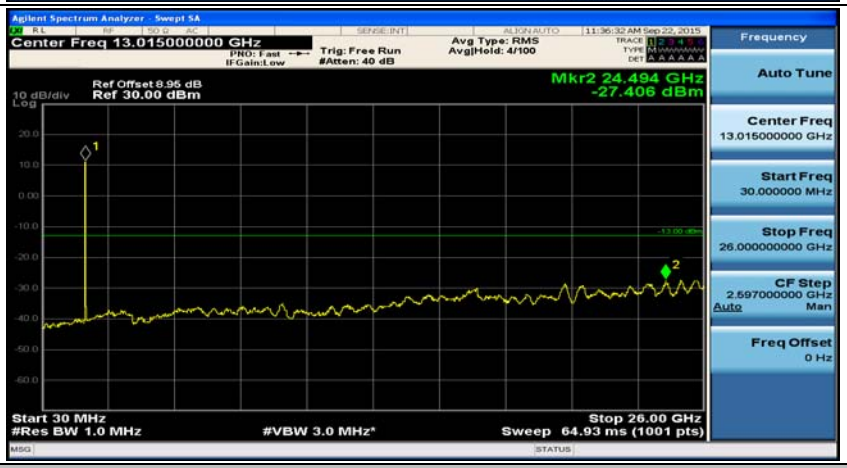


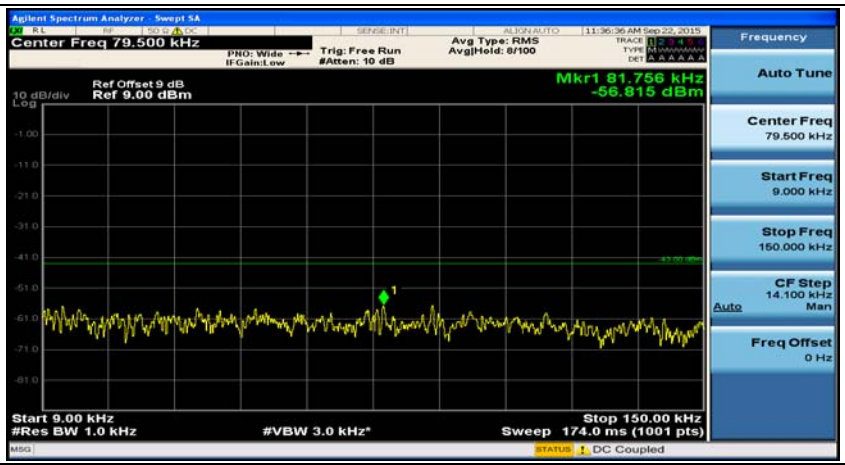
(Channel Bandwidth:15 MHz)_MCH_16QAM_1RB#74

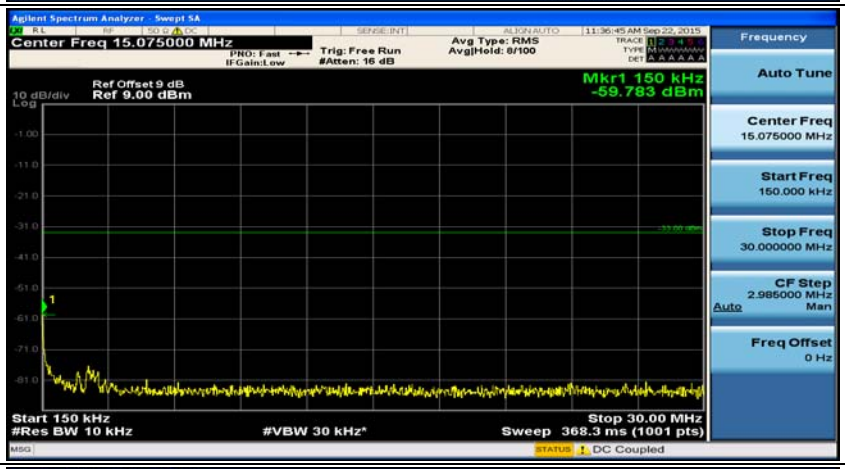

Agilent Spectrum Analyzer - Swept SA
Center Freq 79.500 kHz
PNO: Wide
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 9/100
11:35:07 AM Sep 22, 2015
Frequency
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Mkr1 103.188 kHz
-56.229 dBm
Auto Tune
Center Freq
79.500 kHz
Start Freq
9.000 kHz
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

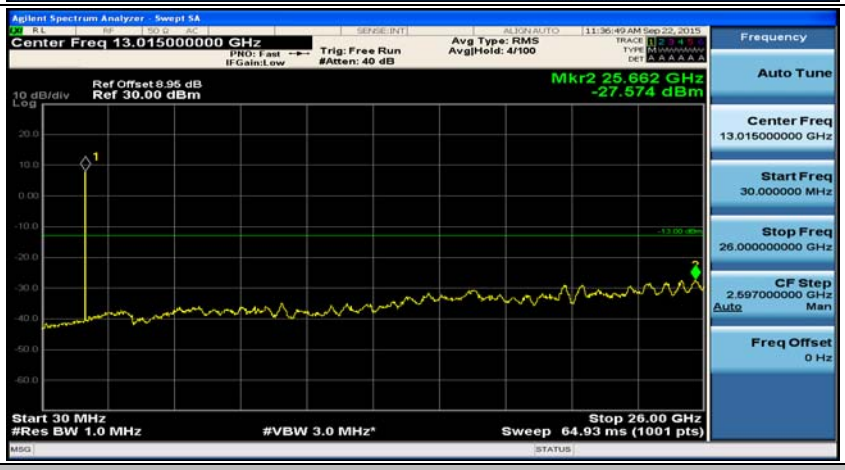

Agilent Spectrum Analyzer - Swept SA
Center Freq 15.075000 MHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 16 dB
Avg Type: RMS
Avg|Hold: 8/100
11:35:16 AM Sep 22, 2015
Frequency
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Mkr1 150 kHz
-59.801 dBm
Auto Tune
Center Freq
15.075000 MHz
Start Freq
150.000 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: 4/100
11:35:20 AM Sep 22, 2015
Frequency
Ref Offset 8.95 dB
10 dB/div
Log
Ref 30.00 dBm
Mkr2 25.636 GHz
-27.095 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)

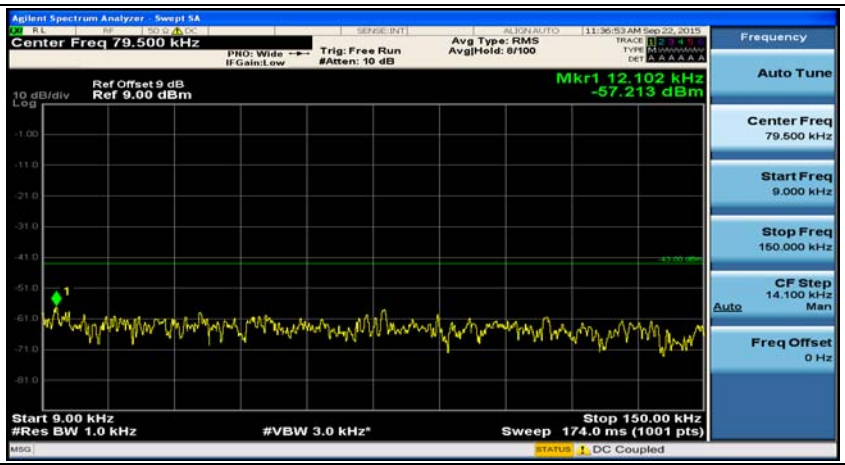
(Channel Bandwidth:15 MHz)_HCH_16QAM_1RB#0



(Channel Bandwidth:15 MHz)_HCH_16QAM_1RB#37

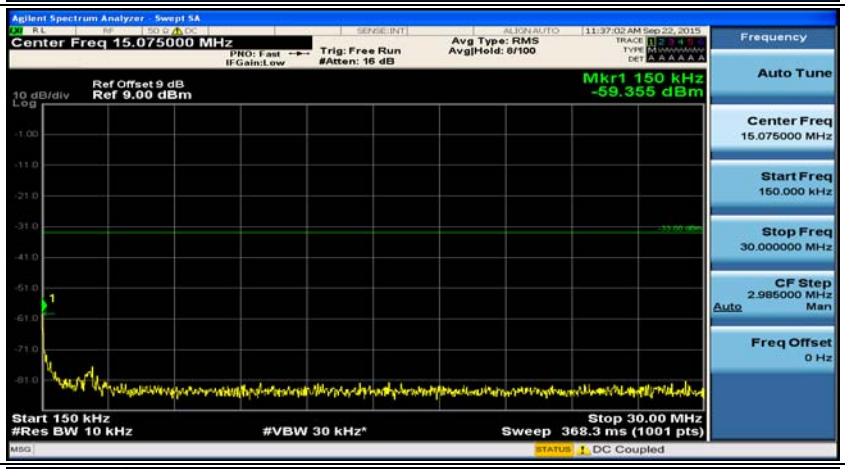


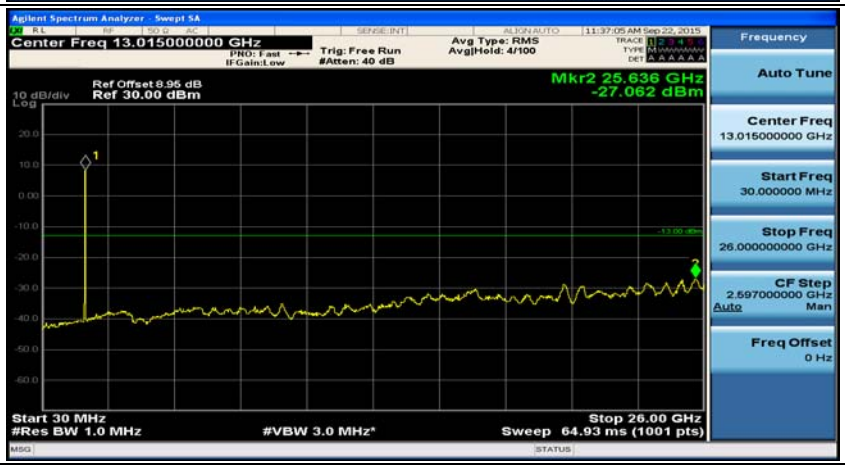




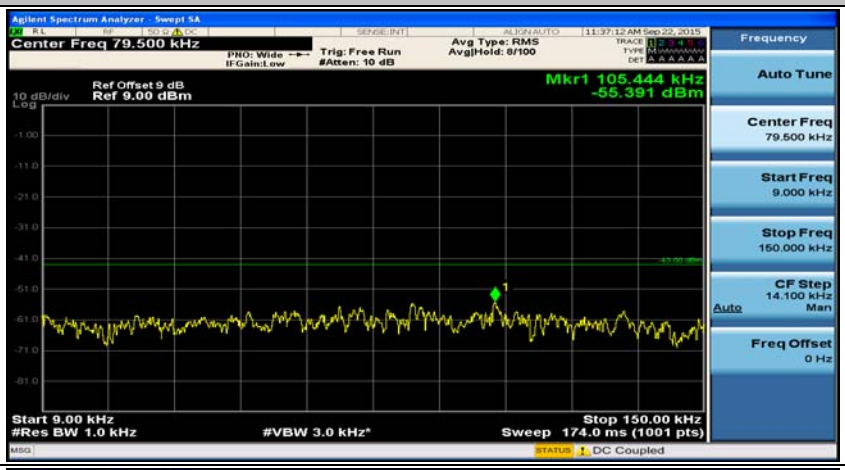
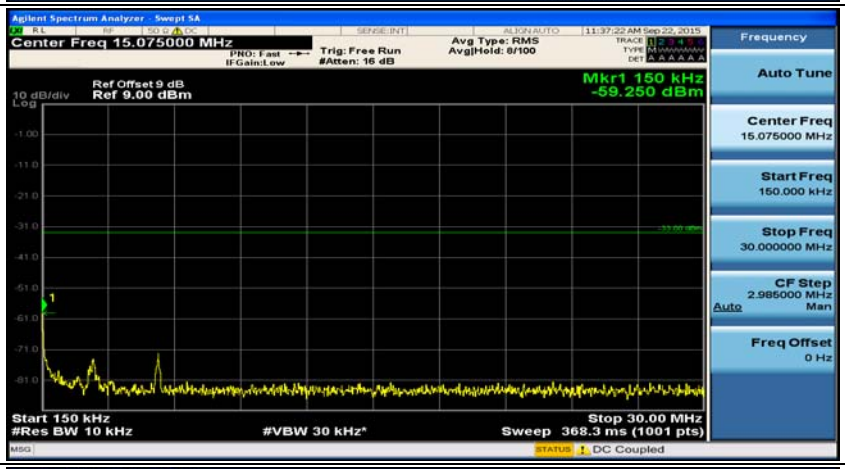
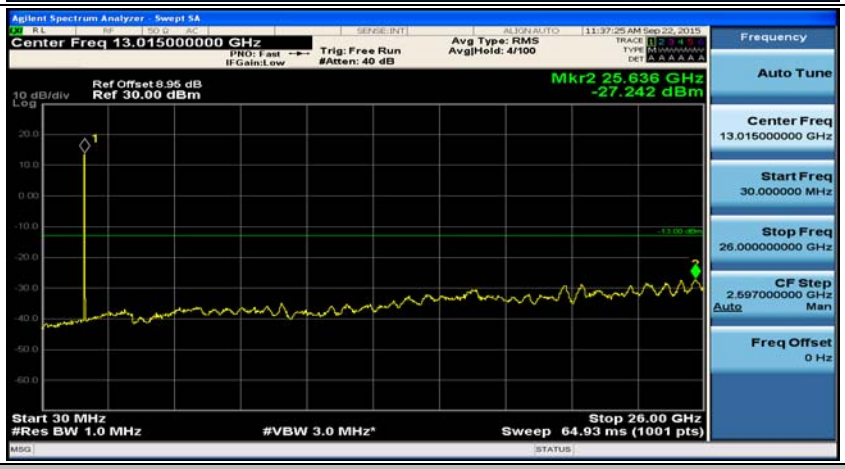
(Channel Bandwidth:15 MHz)_HCH_16QAM_1RB#74

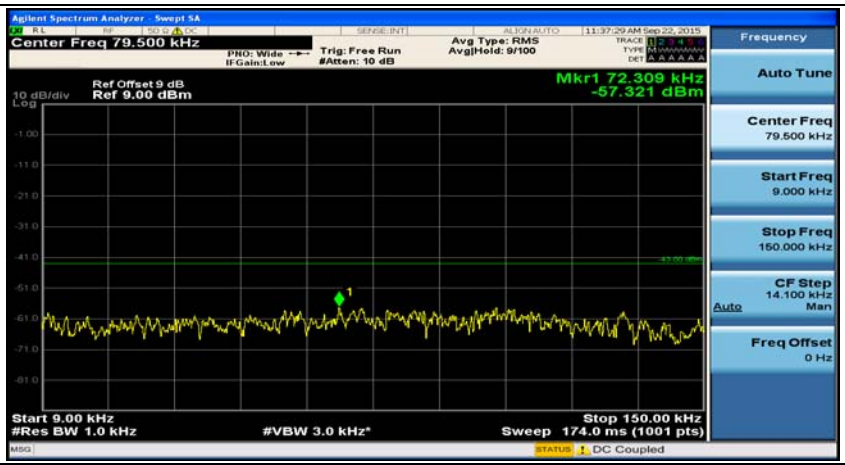

Agilent Spectrum Analyzer - Swept SA
Center Freq 79.500 kHz
PNO: Wide
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 6/100
11:36:53 AM Sep 22, 2015
Frequency
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Mkr1 12.102 kHz
-57.213 dBm
Auto Tune
Center Freq
79.500 kHz
Start Freq
9.000 kHz
Stop 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

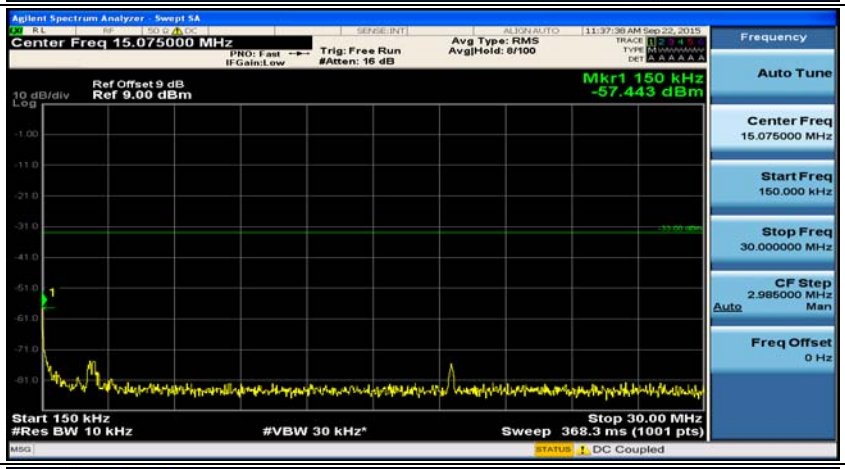

Agilent Spectrum Analyzer - Swept SA
Center Freq 15.075000 MHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 16 dB
Avg Type: RMS
Avg|Hold: 6/100
11:37:02 AM Sep 22, 2015
Frequency
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Mkr1 150 kHz
-59.355 dBm
Auto Tune
Center Freq
15.075000 MHz
Start Freq
150.000 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

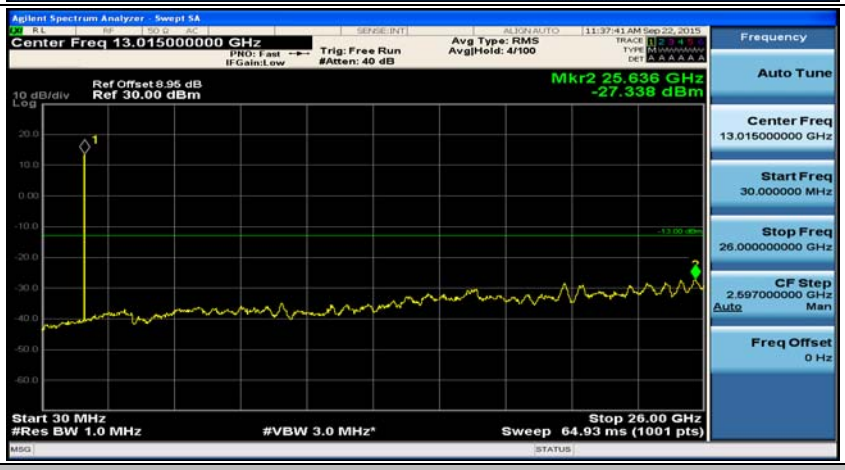

Agilent Spectrum Analyzer - Swept SA
Center Freq 13.015000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 40 dB
Avg Type: RMS
Avg|Hold: 4/100
11:37:05 AM Sep 22, 2015
Frequency
Ref Offset 8.95 dB
10 dB/div
Log
Ref 30.00 dBm
Mkr2 25.636 GHz
-27.062 dBm
Auto Tune
Center Freq
13.015000000 GHz
Start 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: 20 MHz

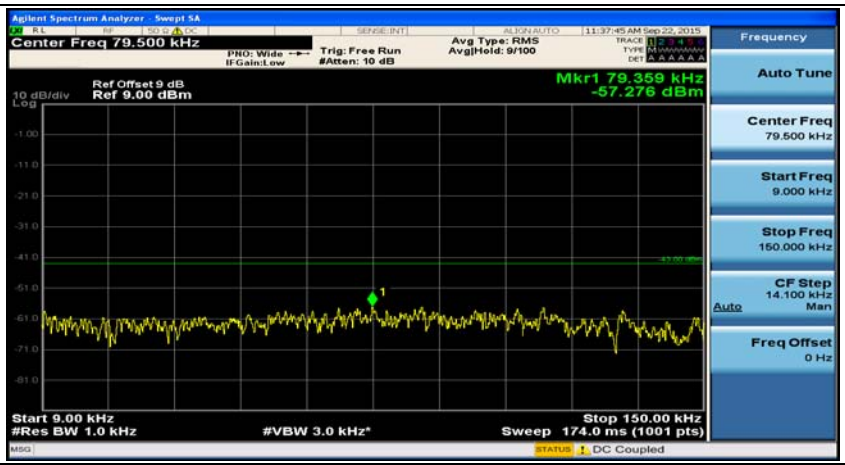
(Channel Bandwidth:20 MHz)_LCH_QPSK_1RB#0



(Channel Bandwidth:20 MHz)_LCH_QPSK_1RB#49

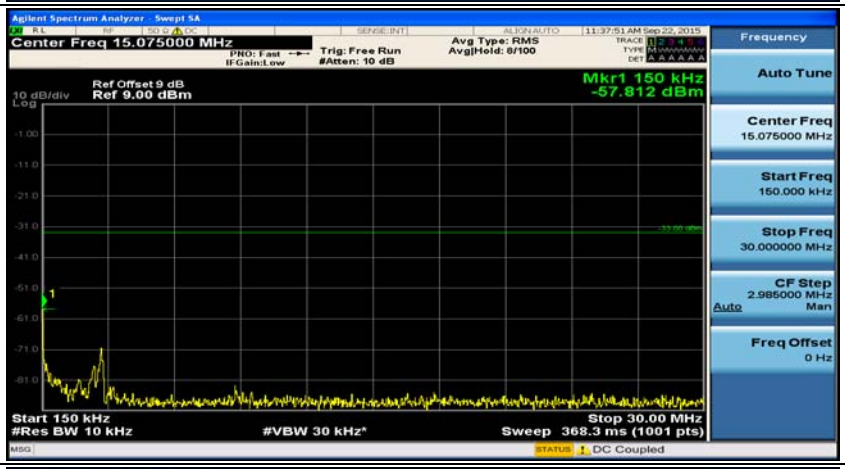


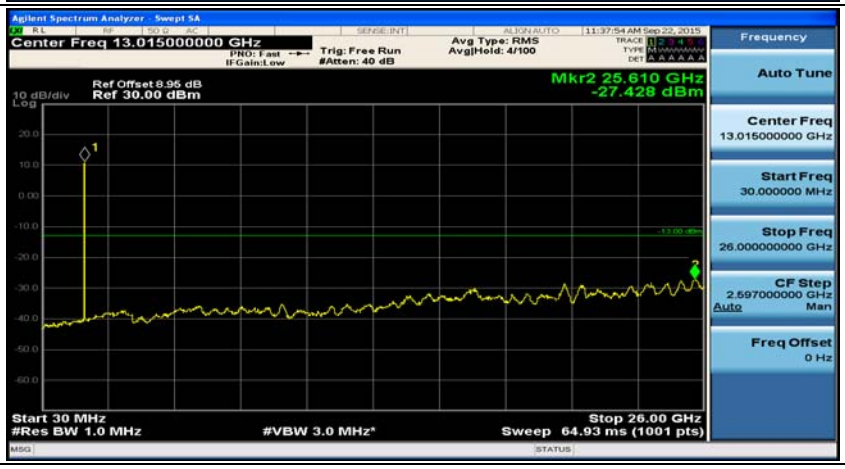


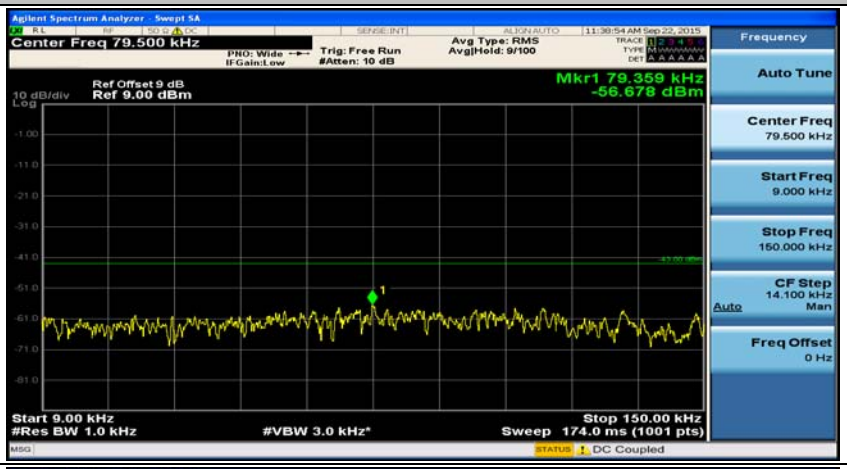
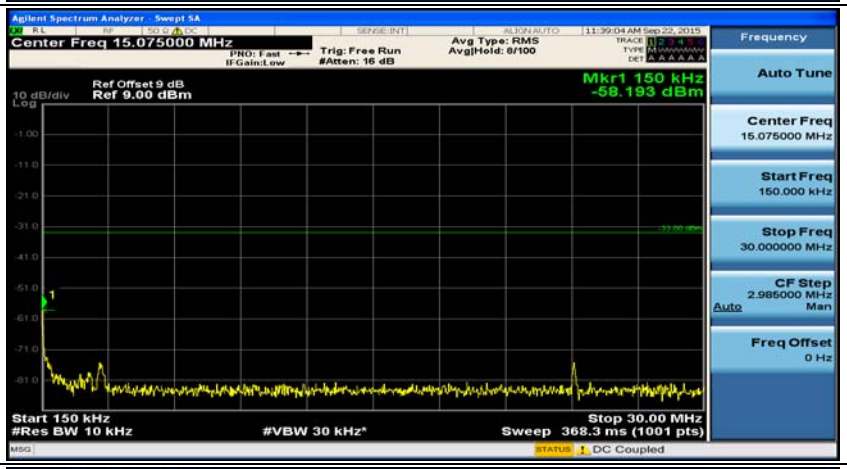
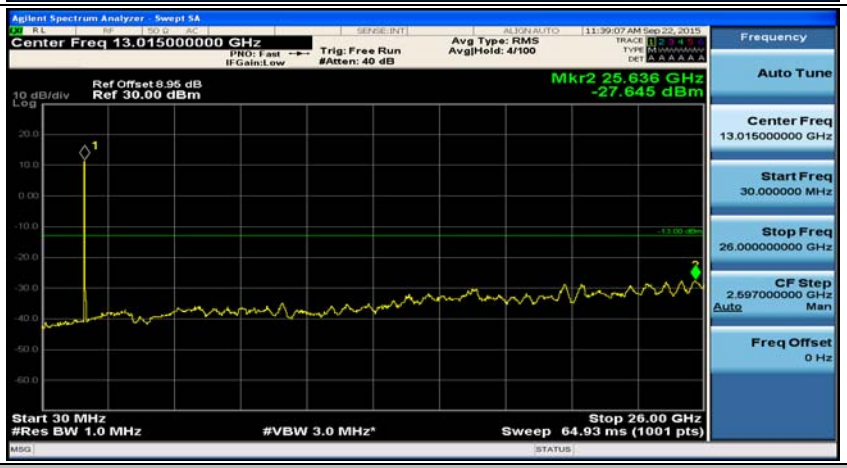


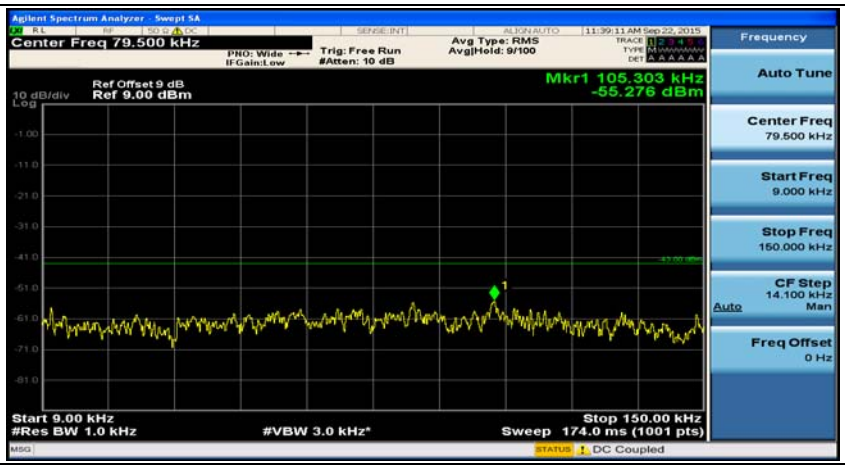
(Channel Bandwidth:20 MHz)_LCH_QPSK_1RB#99

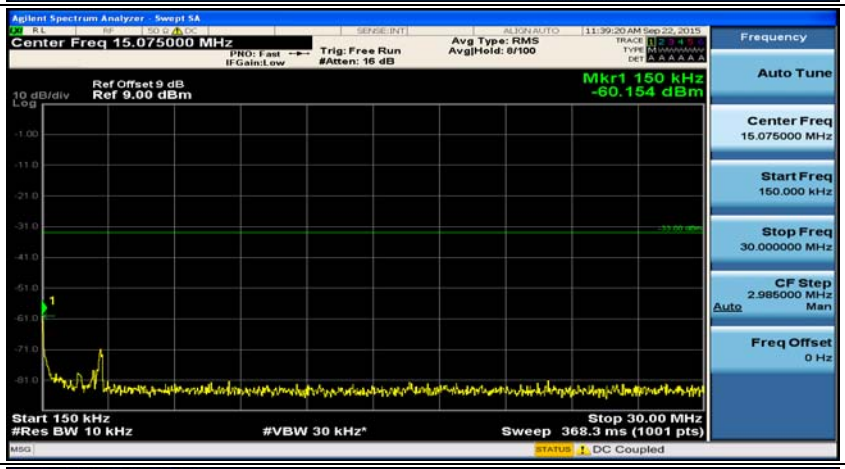

Agilent Spectrum Analyzer - Swept SA
Center Freq 79.500 kHz
PNO: Wide
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 9/100
11:37:45 AM Sep 22, 2015
Frequency
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Mkr1 79.359 kHz
-57.276 dBm
Auto Tune
Center Freq
79.500 kHz
Start Freq
9.000 kHz
Stop 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

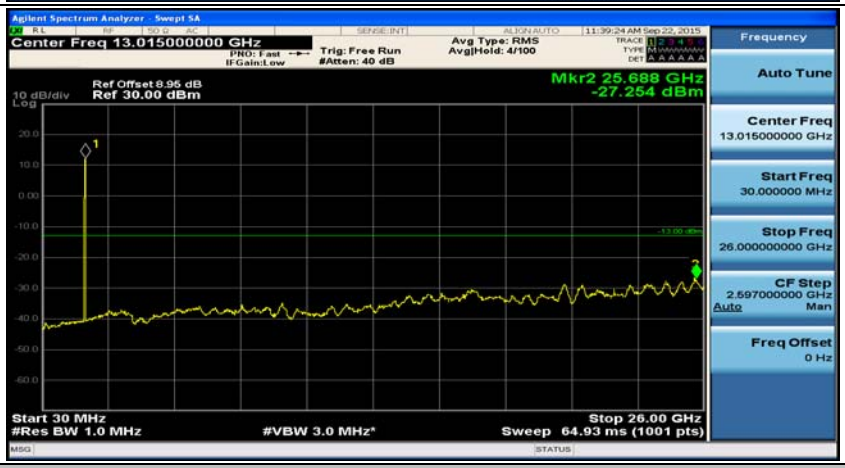

Agilent Spectrum Analyzer - Swept SA
Center Freq 15.075000 MHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 6/100
11:37:51 AM Sep 22, 2015
Frequency
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Mkr1 150 kHz
-57.812 dBm
Auto Tune
Center Freq
15.075000 MHz
Start Freq
150.000 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: 4/100
11:37:54 AM Sep 22, 2015
Frequency
Ref Offset 8.95 dB
10 dB/div
Log
Ref 30.00 dBm
Mkr2 25.610 GHz
-27.428 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)

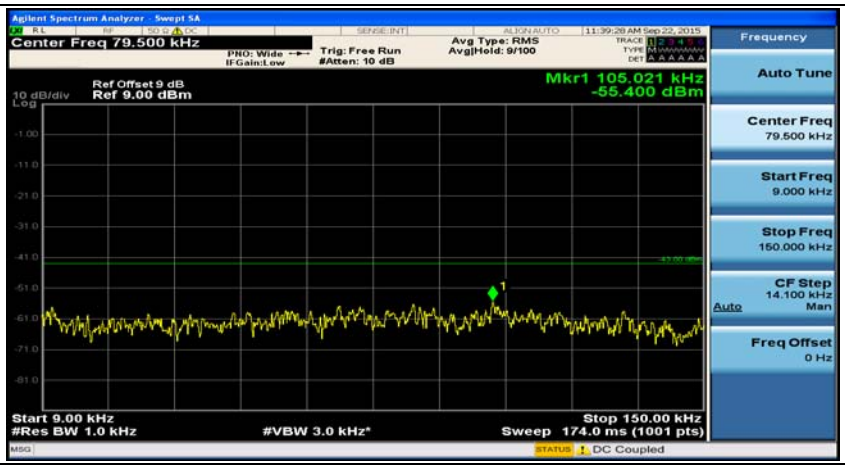
(Channel Bandwidth:20 MHz)_MCH_QPSK_1RB#0



(Channel Bandwidth:20 MHz)_MCH_QPSK_1RB#49

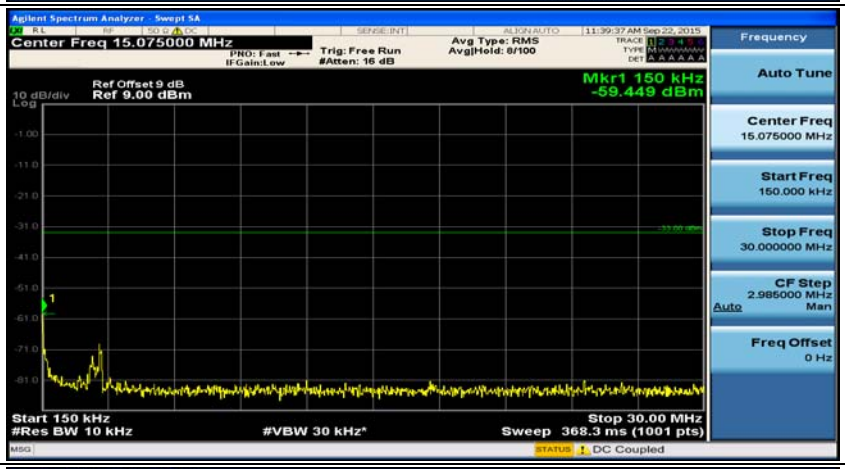


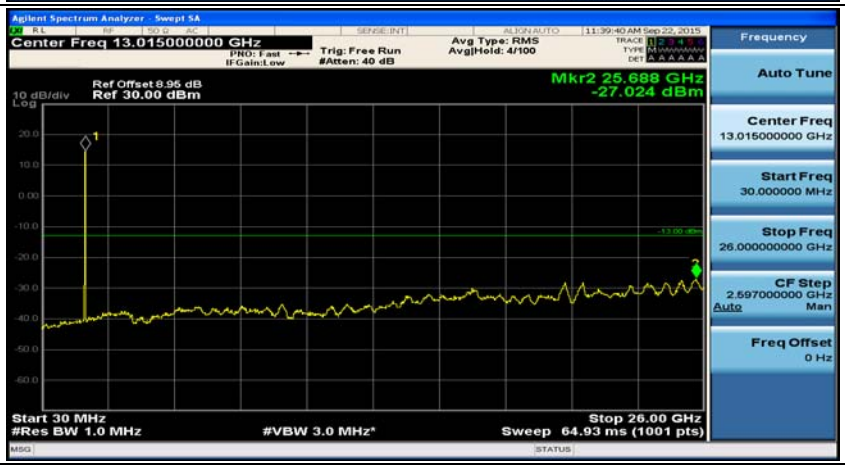


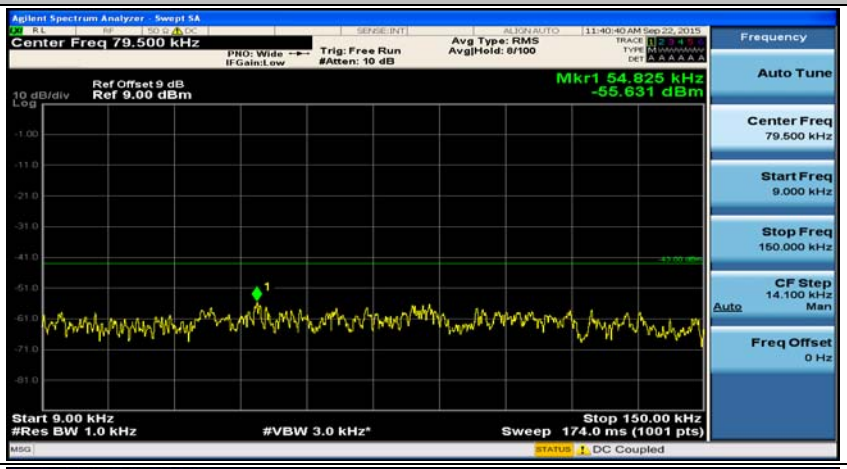
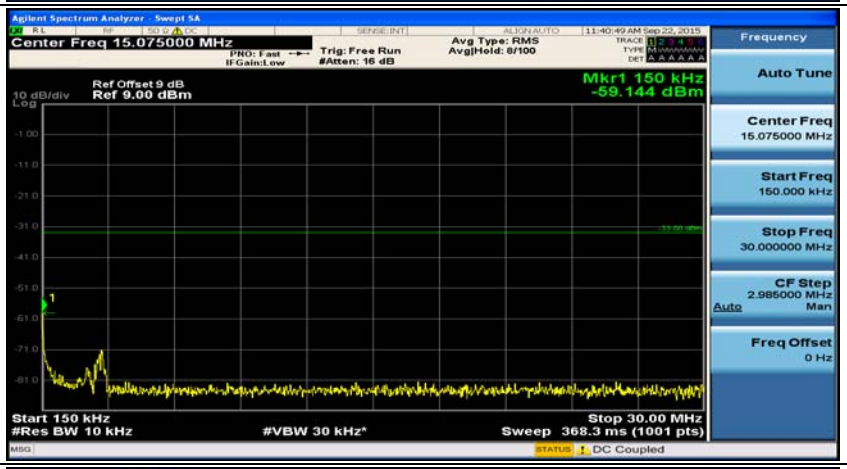
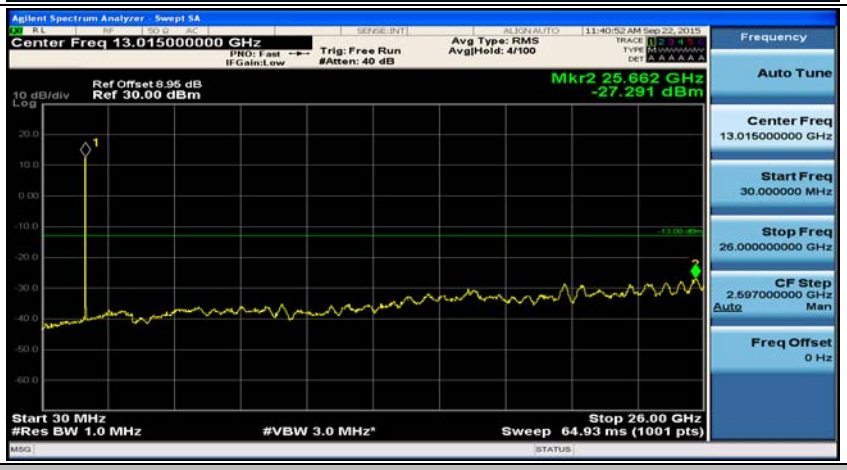


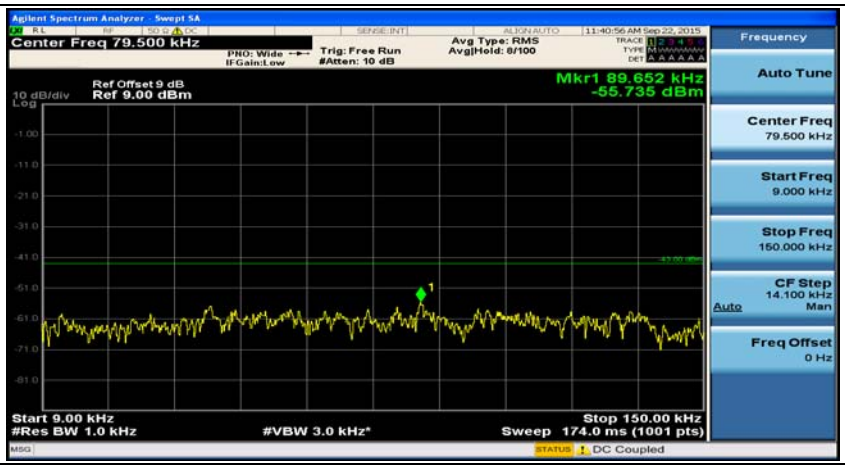
(Channel Bandwidth:20 MHz)_MCH_QPSK_1RB#99

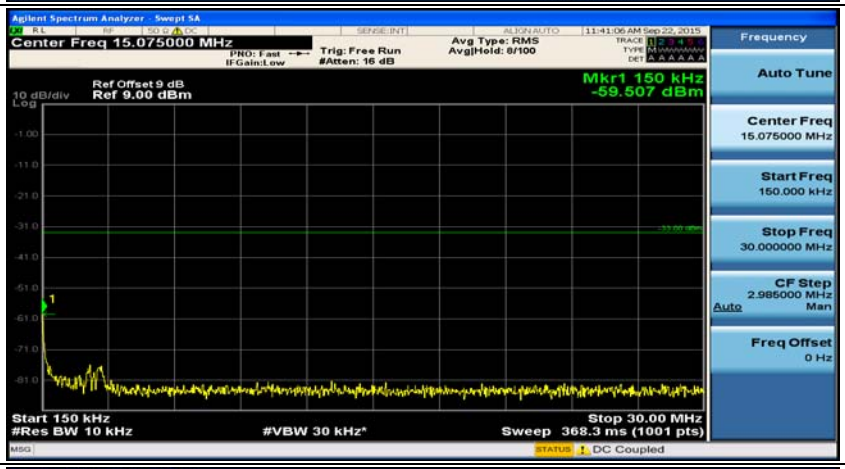

Agilent Spectrum Analyzer - Swept SA
Center Freq 79.500 kHz
PNO: Wide
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 9/100
11:39:28 AM Sep 22, 2015
Ref Offset 9 dB
10 dB/div
Ref 9.00 dBm
Mkr1 105.021 kHz
-55.400 dBm
Start 9.00 kHz
#Res BW 1.0 kHz
#VBW 3.0 kHz*
Stop 150.00 kHz
Sweep 174.0 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

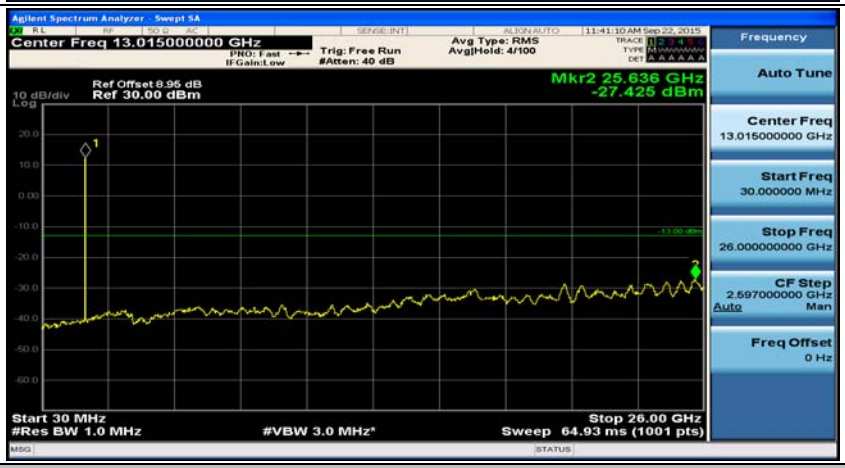

Agilent Spectrum Analyzer - Swept SA
Center Freq 15.075000 MHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 16 dB
Avg Type: RMS
Avg|Hold: 8/100
11:39:37 AM Sep 22, 2015
Ref Offset 9 dB
10 dB/div
Ref 9.00 dBm
Mkr1 150 kHz
-59.449 dBm
Start 150 kHz
#Res BW 10 kHz
#VBW 30 kHz*
Stop 30.00 MHz
Sweep 368.3 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
11:39:40 AM Sep 22, 2015
Ref Offset 8.95 dB
10 dB/div
Ref 30.00 dBm
Mkr2 25.688 GHz
-27.024 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

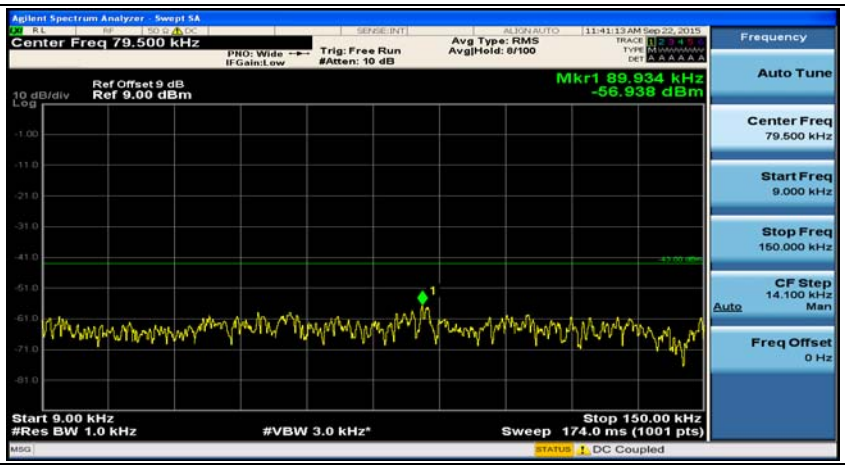
(Channel Bandwidth:20 MHz)_HCH_QPSK_1RB#0



(Channel Bandwidth:20 MHz)_HCH_QPSK_1RB#49

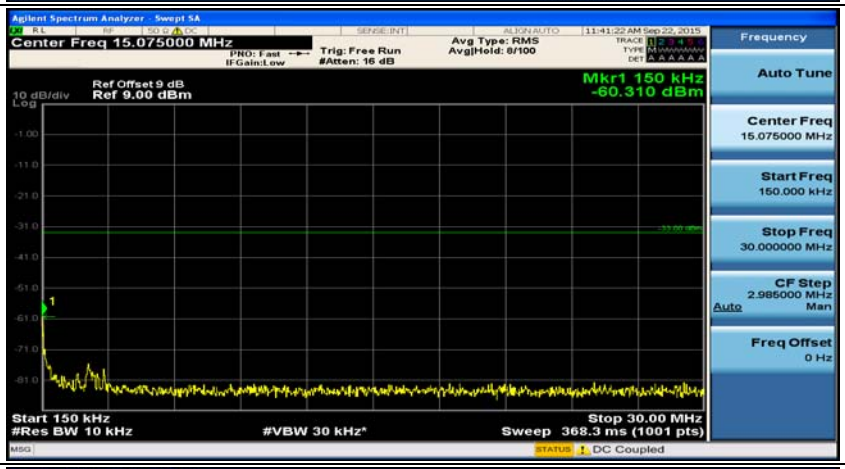


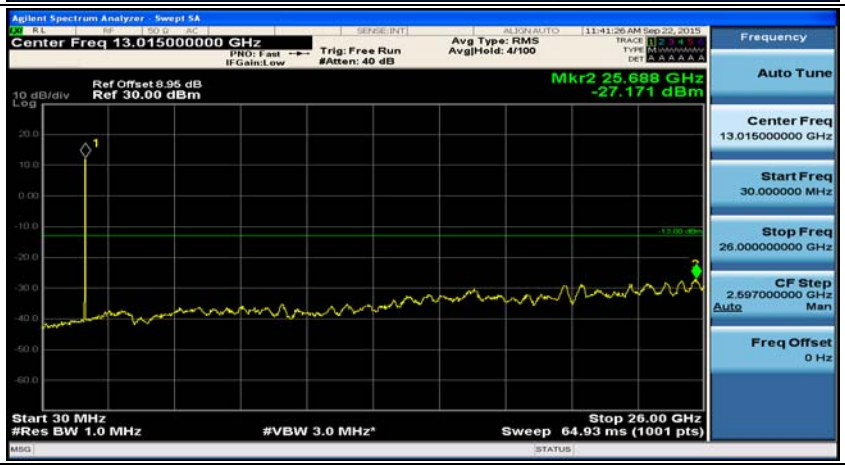


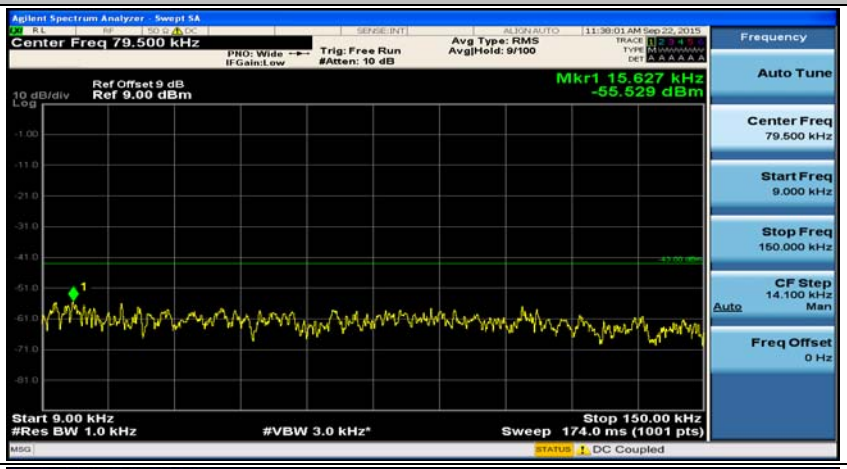
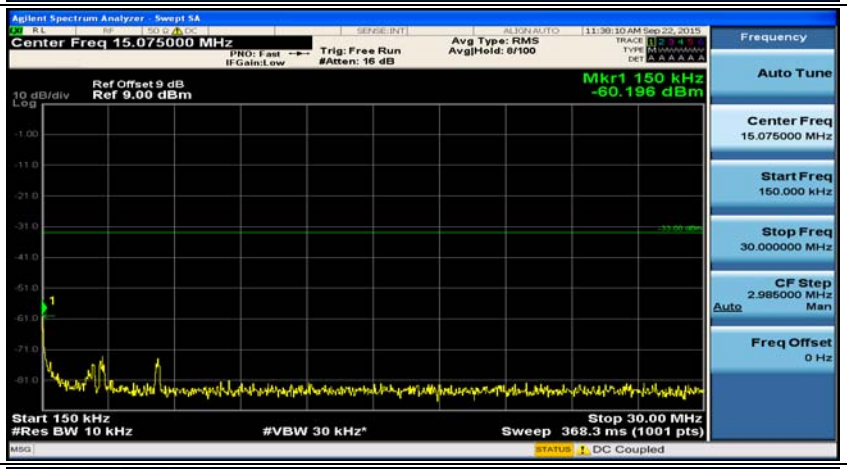
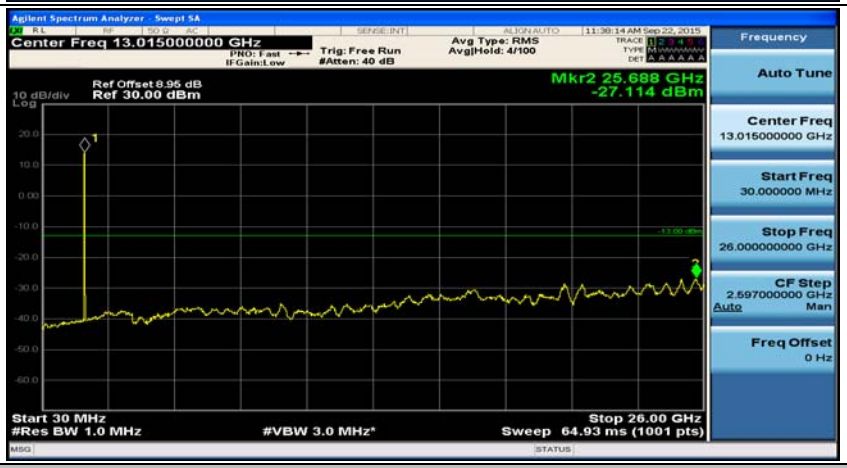


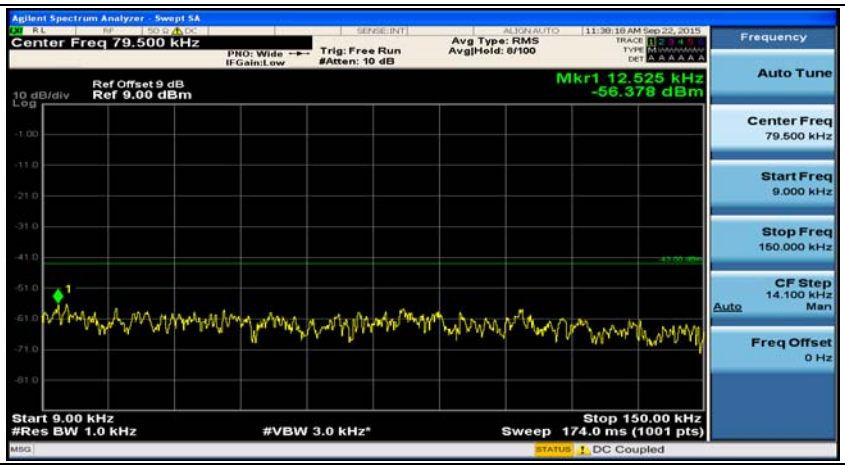
(Channel Bandwidth:20 MHz)_HCH_QPSK_1RB#99

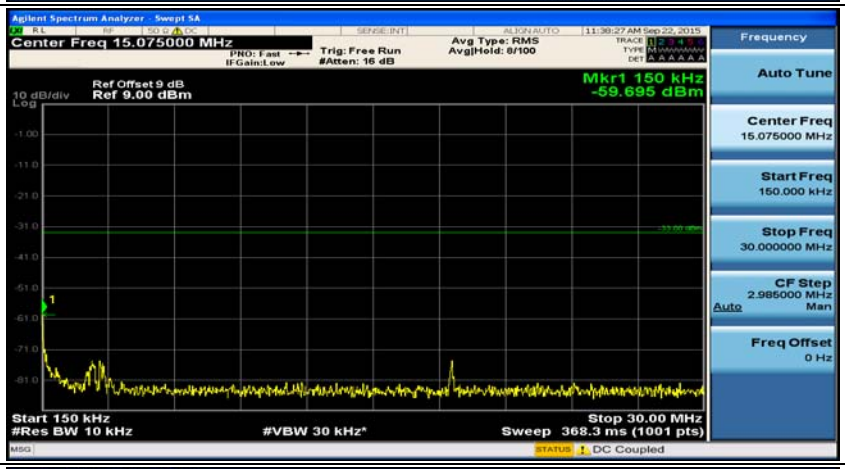

Agilent Spectrum Analyzer - Swept SA
Center Freq 79.500 kHz
PNO: Wide
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 6/100
11:41:13 AM Sep 22, 2015
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Mkr1 89.934 kHz
-56.938 dBm
Start 9.00 kHz
#Res BW 1.0 kHz
#VBW 3.0 kHz*
Stop 150.00 kHz
Sweep 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

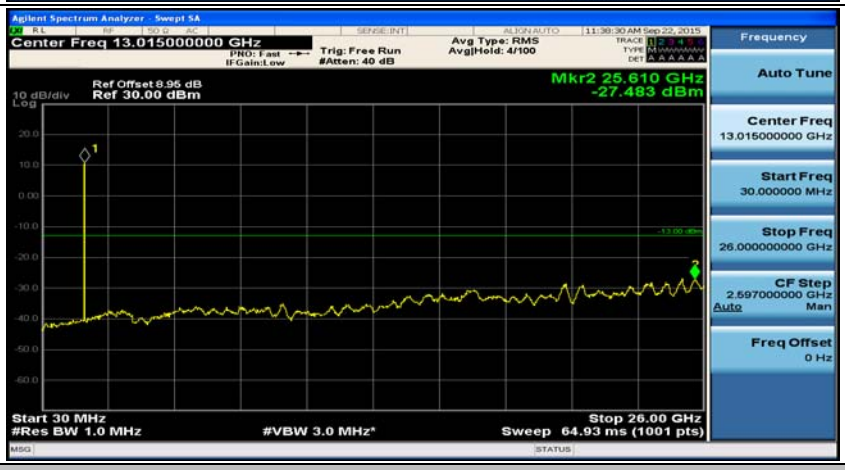

Agilent Spectrum Analyzer - Swept SA
Center Freq 15.075000 MHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 16 dB
Avg Type: RMS
Avg|Hold: 8/100
11:41:22 AM Sep 22, 2015
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Mkr1 150 kHz
-60.310 dBm
Start 150 kHz
#Res BW 10 kHz
#VBW 30 kHz*
Stop 30.00 MHz
Sweep 368.3 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
11:41:26 AM Sep 22, 2015
Ref Offset 8.95 dB
10 dB/div
Log
Ref 30.00 dBm
Mkr2 25.688 GHz
-27.171 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

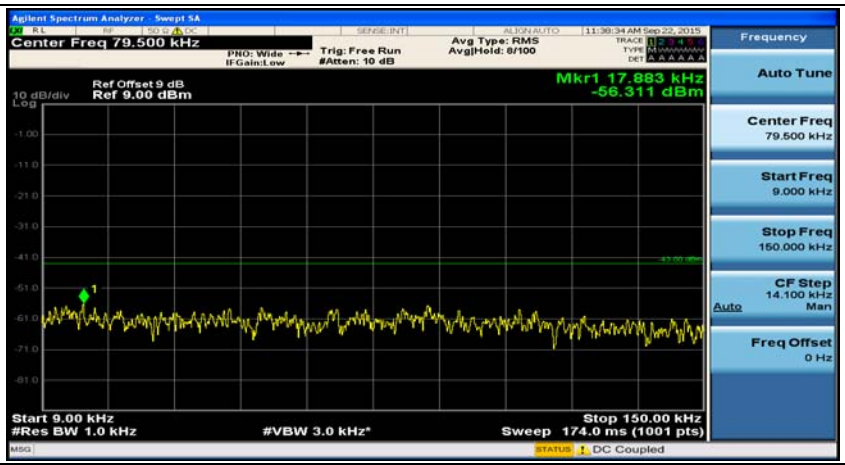
(Channel Bandwidth:20 MHz)_LCH_16QAM_1RB#0



(Channel Bandwidth:20 MHz)_LCH_16QAM_1RB#49

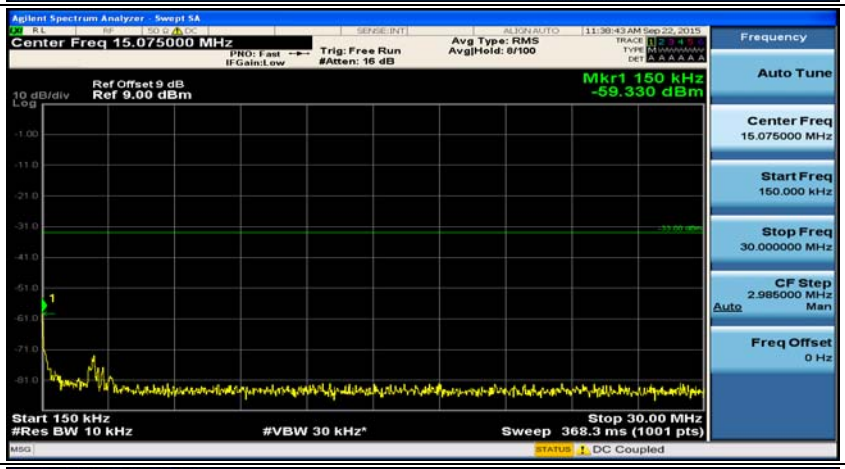


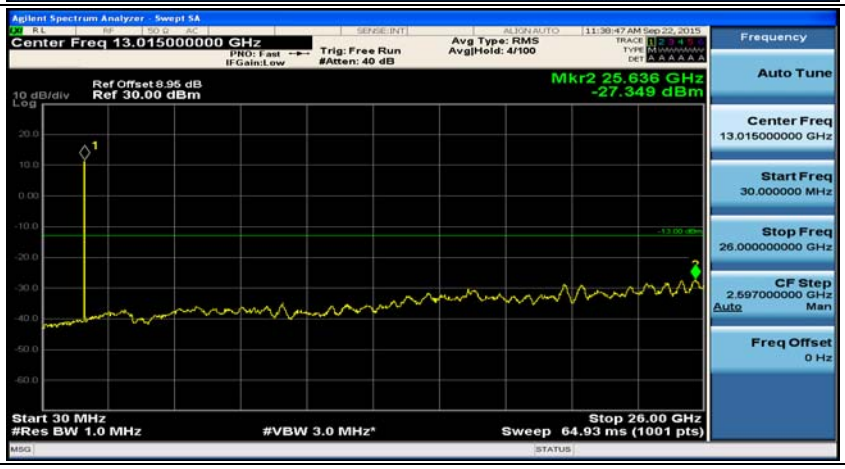


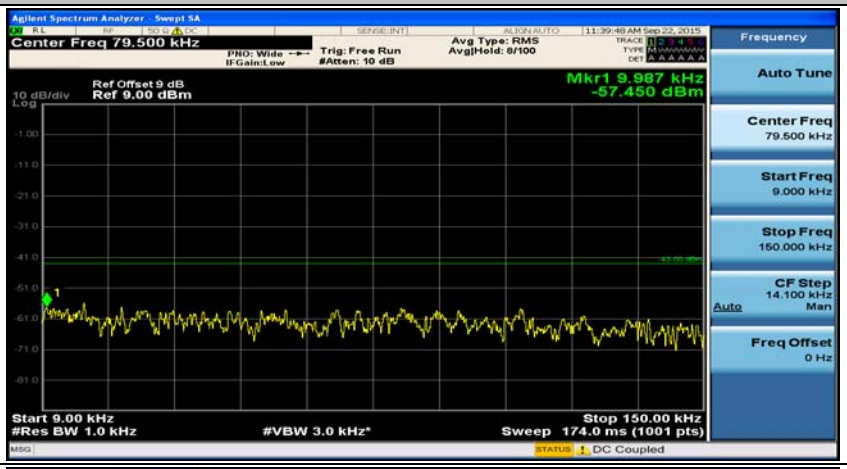
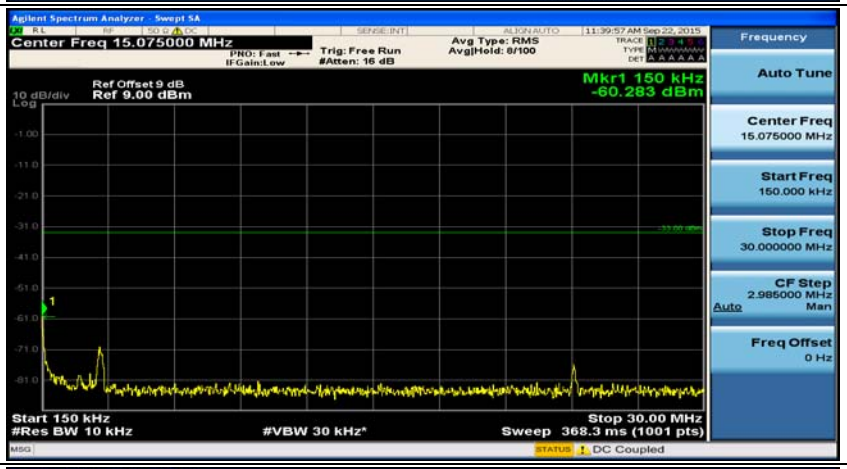
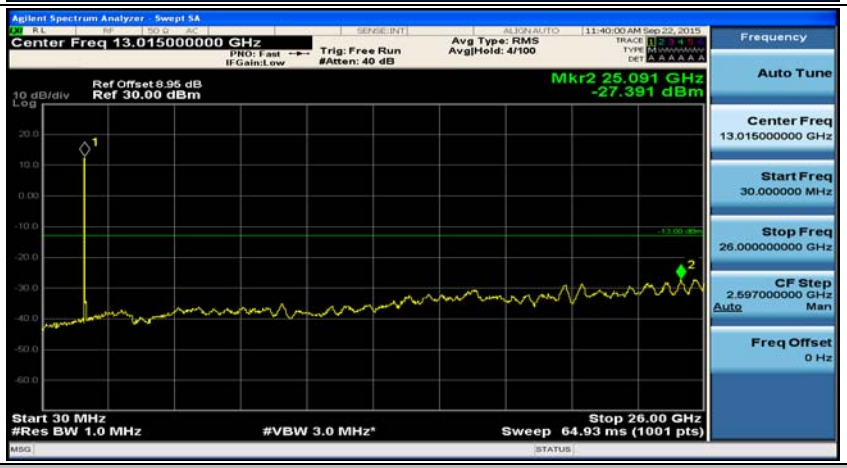


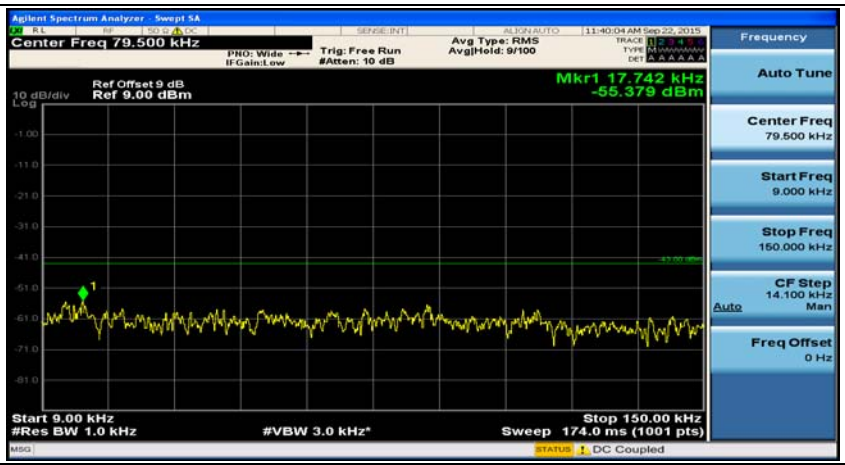
(Channel Bandwidth:20 MHz)_LCH_16QAM_1RB#99

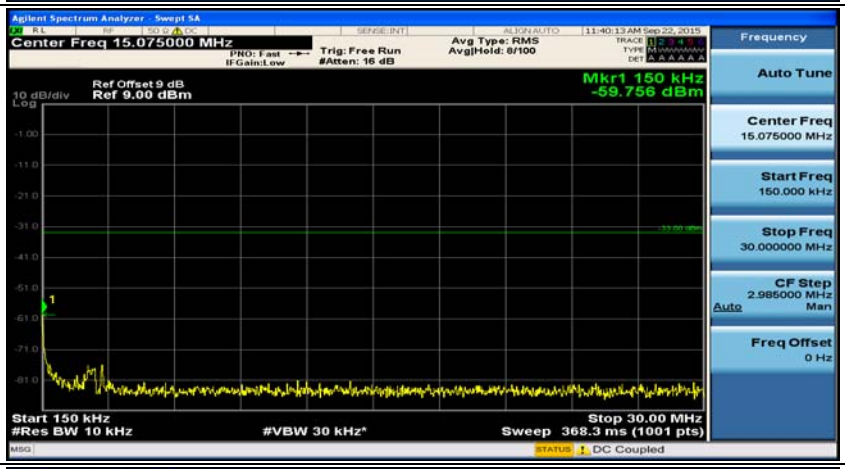

Agilent Spectrum Analyzer - Swept SA
Center Freq 79.500 kHz
PNO: Wide
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 6/100
11:38:34 AM Sep 22, 2015
Frequency
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Mkr1 17.883 kHz
-56.311 dBm
Auto Tune
Center Freq
79.500 kHz
Start Freq
9.000 kHz
Stop 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

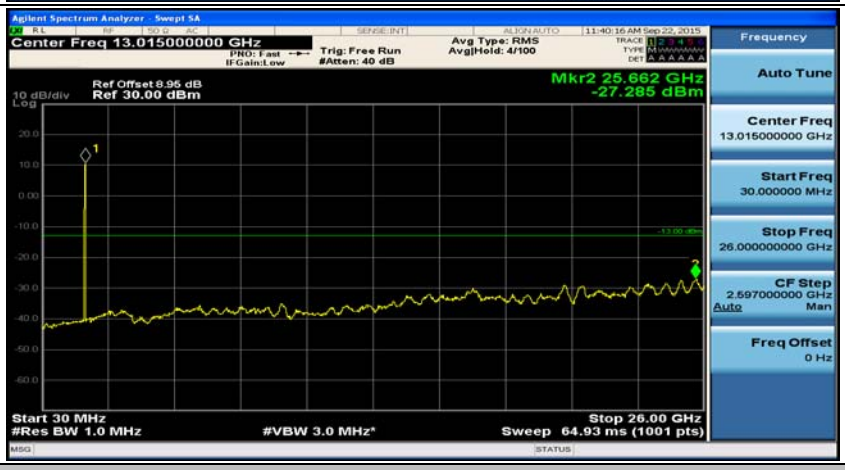

Agilent Spectrum Analyzer - Swept SA
Center Freq 15.075000 MHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 16 dB
Avg Type: RMS
Avg|Hold: 6/100
11:38:43 AM Sep 22, 2015
Frequency
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Mkr1 150 kHz
-59.330 dBm
Auto Tune
Center Freq
15.075000 MHz
Start Freq
150.000 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: 4/100
11:38:47 AM Sep 22, 2015
Frequency
Ref Offset 8.95 dB
10 dB/div
Log
Ref 30.00 dBm
Mkr2 25.636 GHz
-27.349 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)

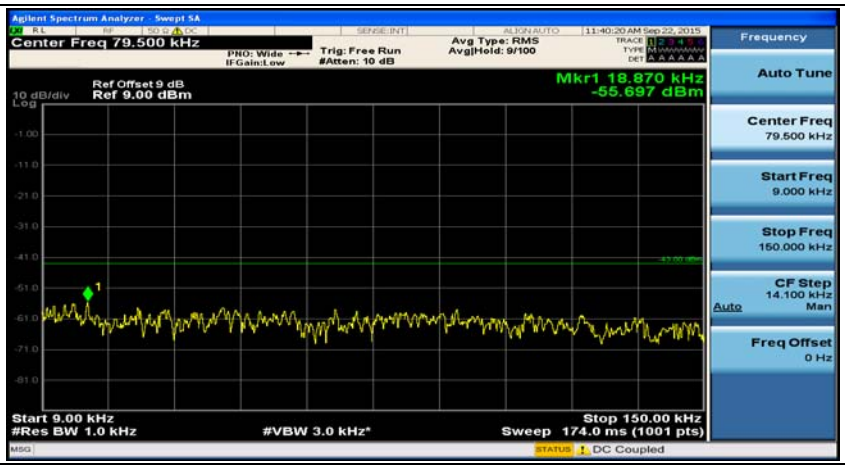
(Channel Bandwidth:20 MHz)_MCH_16QAM_1RB#0



(Channel Bandwidth:20 MHz)_MCH_16QAM_1RB#49

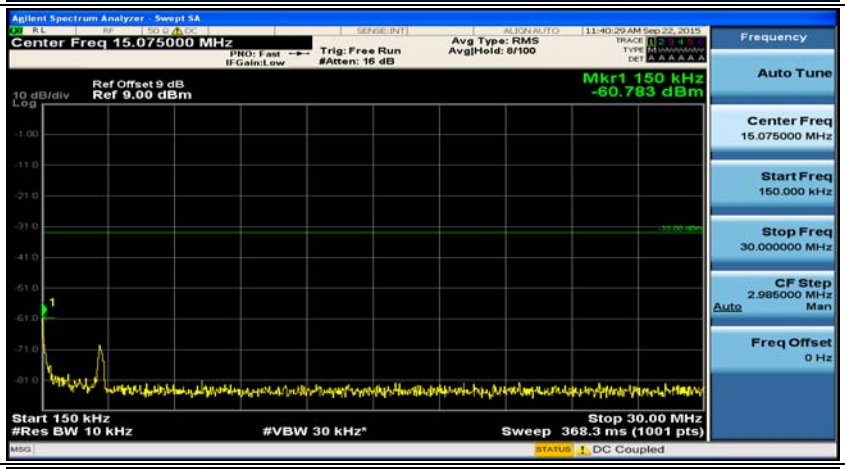


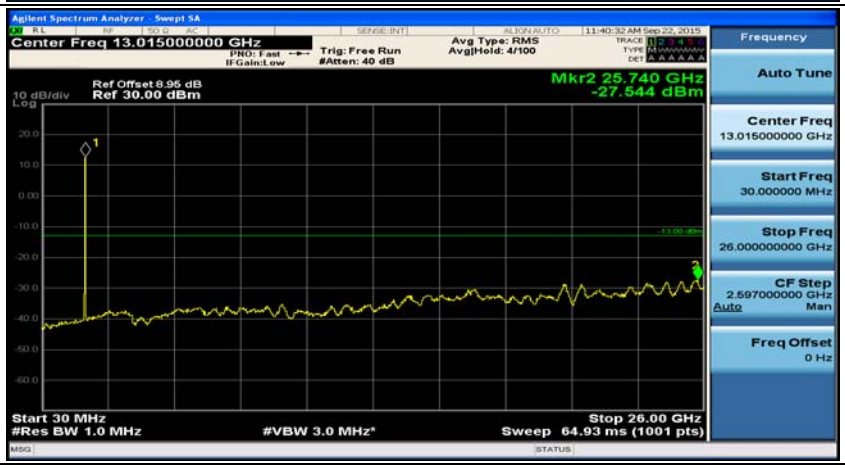


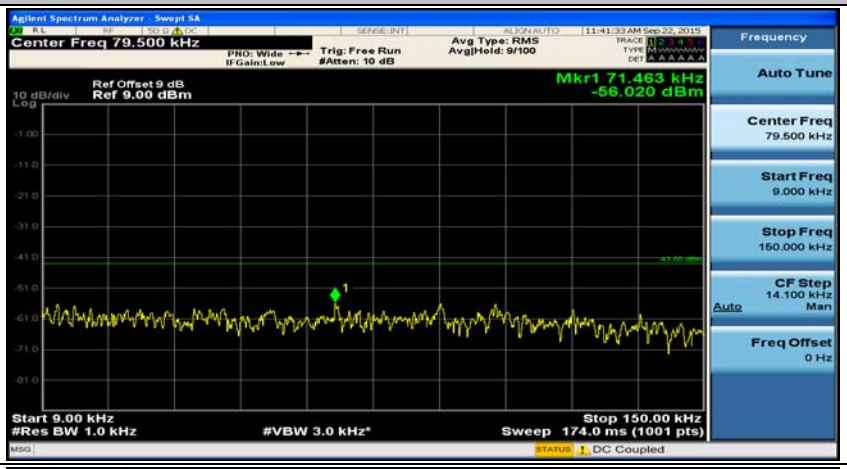
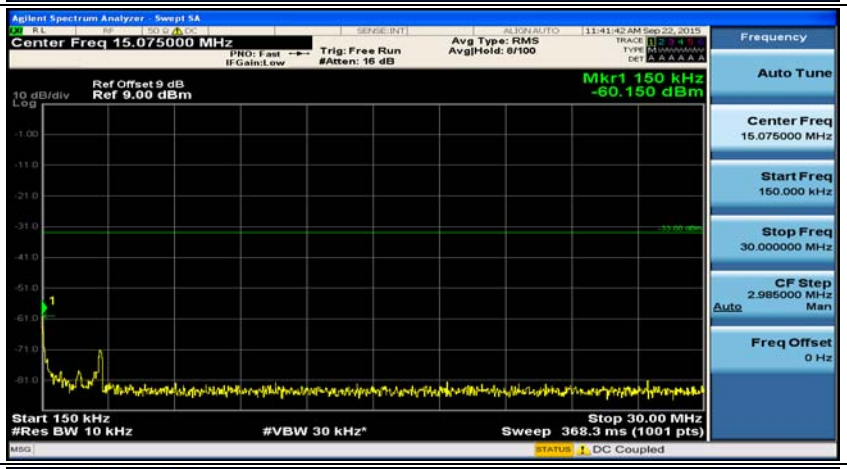
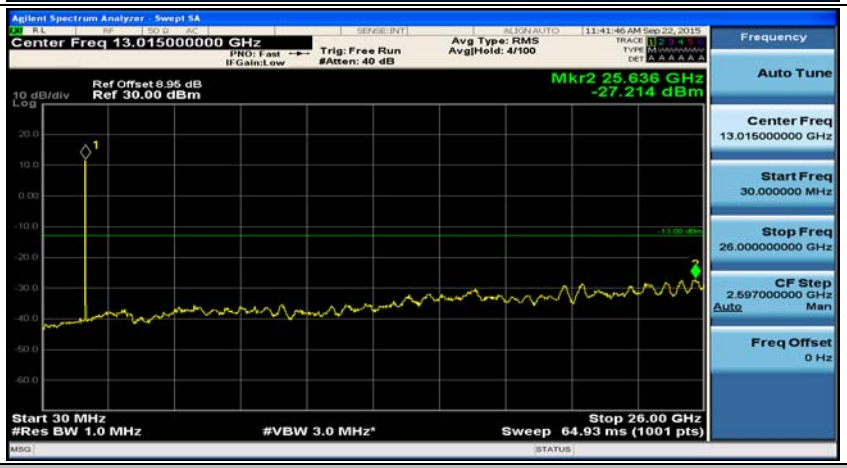


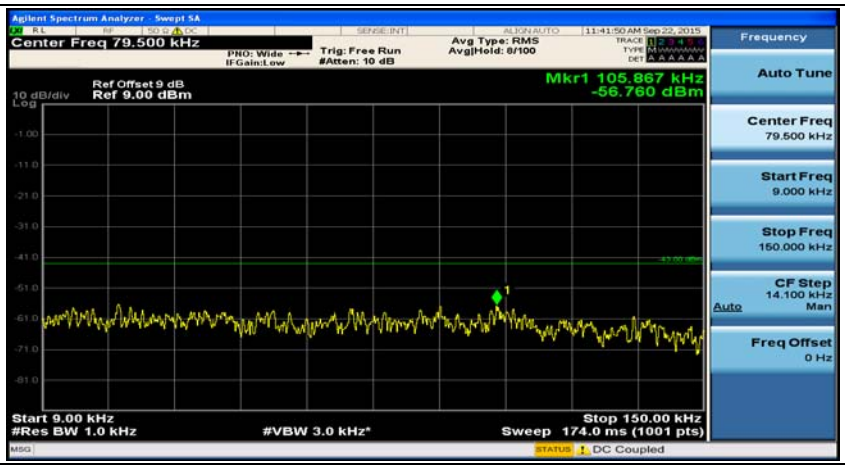
(Channel Bandwidth:20 MHz)_MCH_16QAM_1RB#99

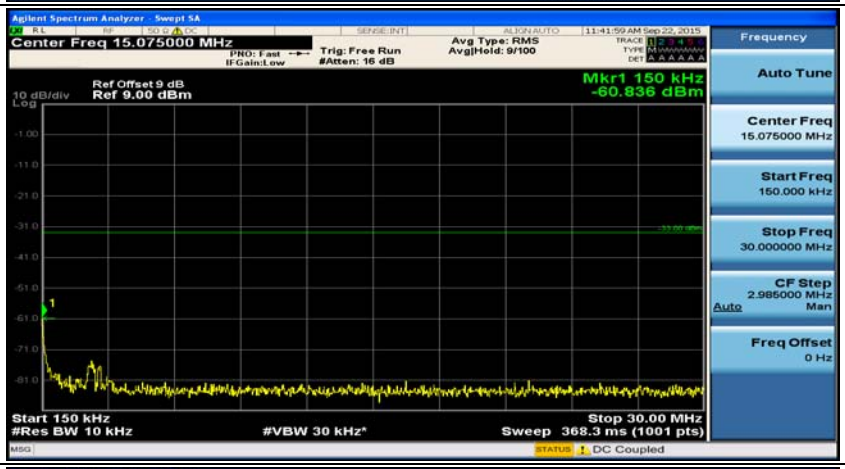

Agilent Spectrum Analyzer - Swept SA
Center Freq 79.500 kHz
PNO: Wide
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 9/100
11:40:20 AM Sep 22, 2015
Ref Offset 9 dB
10 dB/div
Ref 9.00 dBm
Log
Mkr1 18.870 kHz
-55.697 dBm
Start 9.00 kHz
#Res BW 1.0 kHz
#VBW 3.0 kHz*
Stop 150.00 kHz
Sweep 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

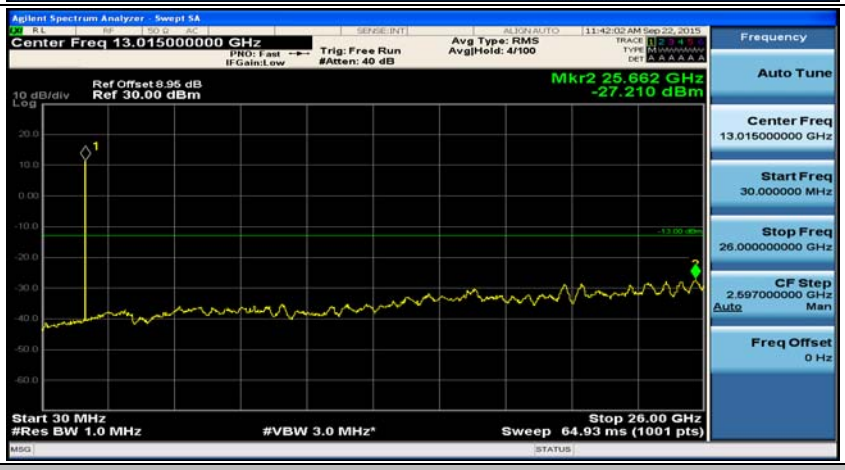

Agilent Spectrum Analyzer - Swept SA
Center Freq 15.075000 MHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 16 dB
Avg Type: RMS
Avg|Hold: 8/100
11:40:29 AM Sep 22, 2015
Ref Offset 9 dB
10 dB/div
Ref 9.00 dBm
Log
Mkr1 150 kHz
-60.783 dBm
Start 150 kHz
#Res BW 10 kHz
#VBW 30 kHz*
Stop 30.00 MHz
Sweep 368.3 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
11:40:32 AM Sep 22, 2015
Ref Offset 8.95 dB
10 dB/div
Ref 30.00 dBm
Log
Mkr2 25.740 GHz
-27.544 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

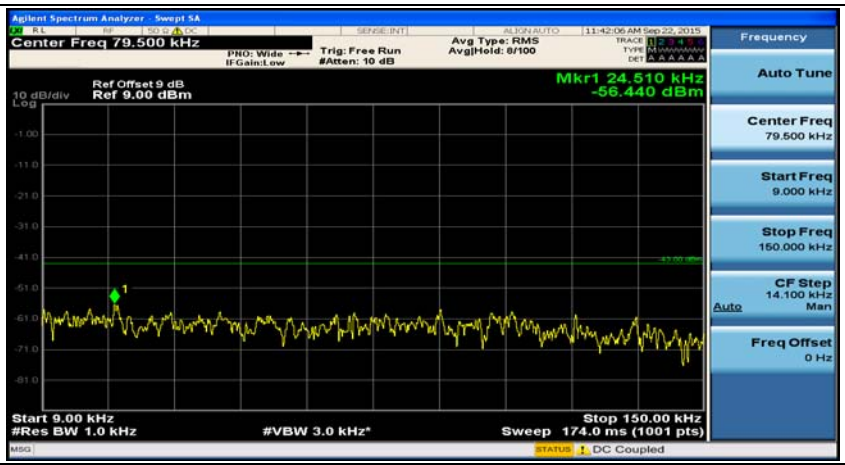
(Channel Bandwidth:20 MHz)_HCH_16QAM_1RB#0



(Channel Bandwidth:20 MHz)_HCH_16QAM_1RB#49

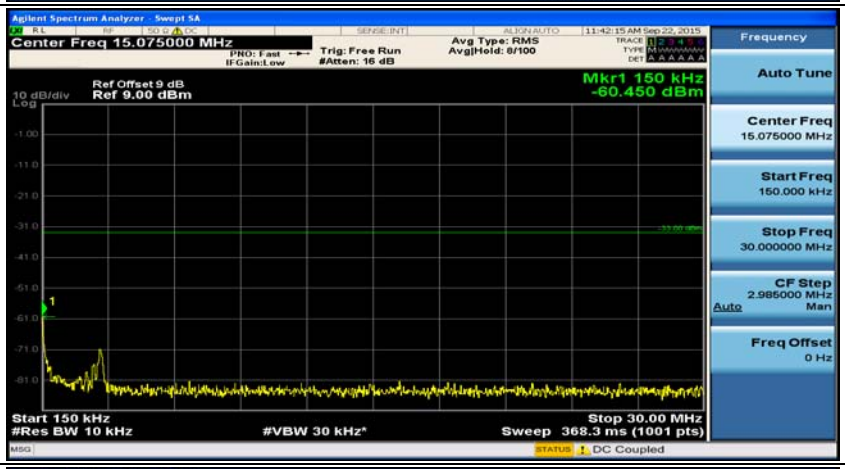


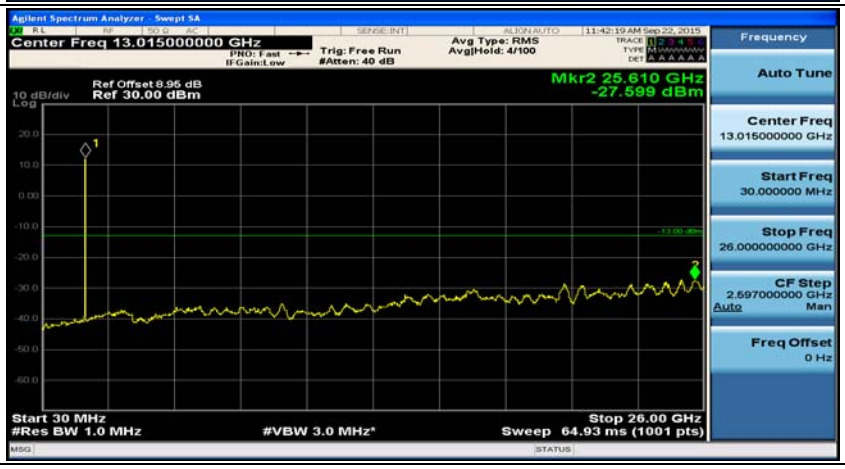




(Channel Bandwidth:20 MHz)_HCH_16QAM_1RB#99


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: 6/100
11:42:06 AM Sep 22, 2015
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Mkr1 24.510 kHz
-56.440 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
11:42:15 AM Sep 22, 2015
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Mkr1 150 kHz
-60.450 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
11:42:19 AM Sep 22, 2015
Ref Offset 8.95 dB
10 dB/div
Log
Ref 30.00 dBm
Mkr2 25.610 GHz
-27.599 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	-0.94	-0.000552	± 2.5	PASS
		VN	TN	1.47	0.000861	± 2.5	PASS
		VH	TN	0.27	0.000159	± 2.5	PASS
	MCH	VL	TN	1.99	0.001148	± 2.5	PASS
		VN	TN	1.07	0.000619	± 2.5	PASS
		VH	TN	-0.29	-0.000165	± 2.5	PASS
	HCH	VL	TN	3.58	0.002039	± 2.5	PASS
		VN	TN	-2.26	-0.001288	± 2.5	PASS
		VH	TN	3.93	0.002242	± 2.5	PASS
16QAM	LCH	VL	TN	-1.13	-0.000661	± 2.5	PASS
		VN	TN	2.09	0.001221	± 2.5	PASS
		VH	TN	-2.65	-0.001547	± 2.5	PASS
	MCH	VL	TN	-1.97	-0.001139	± 2.5	PASS
		VN	TN	1.09	0.000628	± 2.5	PASS
		VH	TN	-2.03	-0.001172	± 2.5	PASS
	HCH	VL	TN	-2.00	-0.001142	± 2.5	PASS
		VN	TN	0.26	0.000147	± 2.5	PASS
		VH	TN	-1.99	-0.001133	± 2.5	PASS
Temperature							
Modulation	Channel	Voltage [Vdc]	Temperature (℃)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
QPSK	LCH	VN	-30	-0.33	-0.000192	± 2.5	PASS
		VN	-20	-1.04	-0.000610	± 2.5	PASS
		VN	-10	-1.04	-0.000610	± 2.5	PASS
		VN	0	-0.06	-0.000033	± 2.5	PASS
		VN	10	-2.20	-0.001288	± 2.5	PASS
		VN	20	3.75	0.002191	± 2.5	PASS
		VN	30	4.85	0.002835	± 2.5	PASS
		VN	40	5.34	0.003119	± 2.5	PASS
		VN	50	1.93	0.001129	± 2.5	PASS
	MCH	VN	-30	-0.36	-0.000206	± 2.5	PASS
		VN	-20	-0.24	-0.000140	± 2.5	PASS
		VN	-10	-0.77	-0.000446	± 2.5	PASS
		VN	0	0.94	0.000545	± 2.5	PASS
		VN	10	-0.03	-0.000017	± 2.5	PASS
		VN	20	4.31	0.002485	± 2.5	PASS
		VN	30	2.05	0.001181	± 2.5	PASS

		VN	40	0.30	0.000173	± 2.5	PASS
		VN	50	2.85	0.001643	± 2.5	PASS
	HCH	VN	-30	-0.46	-0.000261	± 2.5	PASS
		VN	-20	1.22	0.000693	± 2.5	PASS
		VN	-10	2.02	0.001150	± 2.5	PASS
		VN	0	1.60	0.000913	± 2.5	PASS
		VN	10	-2.23	-0.001272	± 2.5	PASS
		VN	20	0.64	0.000367	± 2.5	PASS
		VN	30	-0.14	-0.000082	± 2.5	PASS
		VN	40	1.04	0.000595	± 2.5	PASS
		VN	50	-1.29	-0.000734	± 2.5	PASS
16QAM	LCH	VN	-30	-0.92	-0.000535	± 2.5	PASS
		VN	-20	-1.59	-0.000928	± 2.5	PASS
		VN	-10	2.23	0.001304	± 2.5	PASS
		VN	0	1.20	0.000702	± 2.5	PASS
		VN	10	0.41	0.000243	± 2.5	PASS
		VN	20	4.43	0.002592	± 2.5	PASS
		VN	30	3.48	0.002032	± 2.5	PASS
		VN	40	3.12	0.001823	± 2.5	PASS
		VN	50	1.39	0.000811	± 2.5	PASS
	MCH	VN	-30	-2.27	-0.001313	± 2.5	PASS
		VN	-20	-3.26	-0.001883	± 2.5	PASS
		VN	-10	1.69	0.000974	± 2.5	PASS
		VN	0	-0.60	-0.000347	± 2.5	PASS
		VN	10	0.37	0.000215	± 2.5	PASS
		VN	20	1.39	0.000801	± 2.5	PASS
		VN	30	1.66	0.000958	± 2.5	PASS
		VN	40	1.04	0.000603	± 2.5	PASS
		VN	50	1.43	0.000826	± 2.5	PASS
	HCH	VN	-30	-3.06	-0.001745	± 2.5	PASS
		VN	-20	0.31	0.000179	± 2.5	PASS
		VN	-10	-0.36	-0.000204	± 2.5	PASS
		VN	0	-0.36	-0.000204	± 2.5	PASS
		VN	10	0.31	0.000179	± 2.5	PASS
		VN	20	0.36	0.000204	± 2.5	PASS
		VN	30	-0.30	-0.000171	± 2.5	PASS
		VN	40	-2.57	-0.001468	± 2.5	PASS
		VN	50	-0.33	-0.000188	± 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	1.96	0.001145	± 2.5	PASS
		VN	TN	2.83	0.001655	± 2.5	PASS
		VH	TN	1.34	0.000786	± 2.5	PASS
	MCH	VL	TN	-0.37	-0.000215	± 2.5	PASS

		VN	TN	0.06	0.000033	± 2.5	PASS
		VH	TN	0.13	0.000074	± 2.5	PASS
	HCH	VL	TN	0.80	0.000457	± 2.5	PASS
		VN	TN	-0.19	-0.000106	± 2.5	PASS
		VH	TN	3.91	0.002227	± 2.5	PASS
16QAM	LCH	VL	TN	-1.93	-0.001128	± 2.5	PASS
		VN	TN	0.89	0.000518	± 2.5	PASS
		VH	TN	0.21	0.000125	± 2.5	PASS
	MCH	VL	TN	0.31	0.000182	± 2.5	PASS
		VN	TN	1.20	0.000694	± 2.5	PASS
		VH	TN	-1.10	-0.000636	± 2.5	PASS
	HCH	VL	TN	0.94	0.000538	± 2.5	PASS
		VN	TN	-1.50	-0.000857	± 2.5	PASS
		VH	TN	1.44	0.000824	± 2.5	PASS

Temperature

Modulation	Channel	Voltage [Vdc]	Temperature (℃)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
QPSK	LCH	VN	-30	2.82	0.001647	± 2.5	PASS
		VN	-20	-1.30	-0.000761	± 2.5	PASS
		VN	-10	1.34	0.000786	± 2.5	PASS
		VN	0	2.25	0.001312	± 2.5	PASS
		VN	10	2.46	0.001438	± 2.5	PASS
		VN	20	4.12	0.002407	± 2.5	PASS
		VN	30	3.86	0.002257	± 2.5	PASS
		VN	40	3.46	0.002023	± 2.5	PASS
		VN	50	0.94	0.000552	± 2.5	PASS
	MCH	VN	-30	-4.69	-0.002708	± 2.5	PASS
		VN	-20	-4.01	-0.002312	± 2.5	PASS
		VN	-10	0.47	0.000272	± 2.5	PASS
		VN	0	-0.04	-0.000025	± 2.5	PASS
		VN	10	-0.16	-0.000091	± 2.5	PASS
		VN	20	4.02	0.002320	± 2.5	PASS
		VN	30	2.75	0.001585	± 2.5	PASS
		VN	40	0.72	0.000413	± 2.5	PASS
		VN	50	3.10	0.001792	± 2.5	PASS
	HCH	VN	-30	-0.01	-0.000008	± 2.5	PASS
		VN	-20	1.47	0.000840	± 2.5	PASS
		VN	-10	-1.77	-0.001012	± 2.5	PASS
		VN	0	-1.34	-0.000767	± 2.5	PASS
		VN	10	-0.83	-0.000473	± 2.5	PASS
		VN	20	-1.54	-0.000881	± 2.5	PASS
		VN	30	0.27	0.000155	± 2.5	PASS
		VN	40	-2.10	-0.001199	± 2.5	PASS
		VN	50	-0.64	-0.000367	± 2.5	PASS
QPSK	LCH	VN	-30	0.00	0.000000	± 2.5	PASS
		VN	-20	-1.13	-0.000660	± 2.5	PASS
		VN	-10	-1.60	-0.000936	± 2.5	PASS
		VN	0	2.07	0.001212	± 2.5	PASS
		VN	10	-3.49	-0.002039	± 2.5	PASS
		VN	20	2.37	0.001387	± 2.5	PASS

		VN	30	1.29	0.000752	± 2.5	PASS
		VN	40	0.74	0.000435	± 2.5	PASS
		VN	50	3.69	0.002156	± 2.5	PASS
	MCH	VN	-30	-1.73	-0.000999	± 2.5	PASS
		VN	-20	-3.15	-0.001817	± 2.5	PASS
		VN	-10	-1.04	-0.000603	± 2.5	PASS
		VN	0	1.95	0.001123	± 2.5	PASS
		VN	10	1.59	0.000917	± 2.5	PASS
		VN	20	2.79	0.001610	± 2.5	PASS
		VN	30	2.35	0.001354	± 2.5	PASS
		VN	40	0.46	0.000264	± 2.5	PASS
		VN	50	2.05	0.001181	± 2.5	PASS
	HCH	VN	-30	0.06	0.000033	± 2.5	PASS
		VN	-20	-0.73	-0.000416	± 2.5	PASS
		VN	-10	-0.33	-0.000188	± 2.5	PASS
		VN	0	0.06	0.000033	± 2.5	PASS
		VN	10	-1.33	-0.000759	± 2.5	PASS
		VN	20	-0.49	-0.000277	± 2.5	PASS
		VN	30	-1.03	-0.000587	± 2.5	PASS
		VN	40	-2.47	-0.001411	± 2.5	PASS
		VN	50	0.09	0.000049	± 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	-1.33	-0.000777	± 2.5	PASS
		VN	TN	2.46	0.001437	± 2.5	PASS
		VH	TN	-0.94	-0.000551	± 2.5	PASS
	MCH	VL	TN	3.56	0.002056	± 2.5	PASS
		VN	TN	-0.79	-0.000454	± 2.5	PASS
		VH	TN	-0.31	-0.000182	± 2.5	PASS
	HCH	VL	TN	0.29	0.000163	± 2.5	PASS
		VN	TN	4.09	0.002335	± 2.5	PASS
		VH	TN	0.97	0.000555	± 2.5	PASS
16QAM	LCH	VL	TN	0.50	0.000292	± 2.5	PASS
		VN	TN	-3.62	-0.002113	± 2.5	PASS
		VH	TN	-0.62	-0.000359	± 2.5	PASS
	MCH	VL	TN	-0.70	-0.000405	± 2.5	PASS
		VN	TN	-0.06	-0.000033	± 2.5	PASS
		VH	TN	3.60	0.002081	± 2.5	PASS
	HCH	VL	TN	3.16	0.001804	± 2.5	PASS
		VN	TN	0.30	0.000171	± 2.5	PASS
		VH	TN	0.66	0.000375	± 2.5	PASS
Temperature							
Modulation	Channel	Voltage [Vdc]	Temperature (℃)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict

QPSK	LCH	VN	-30	0.16	0.000092	± 2.5	PASS
		VN	-20	1.87	0.001094	± 2.5	PASS
		VN	-10	1.59	0.000927	± 2.5	PASS
		VN	0	-0.69	-0.000401	± 2.5	PASS
		VN	10	-1.77	-0.001036	± 2.5	PASS
		VN	20	3.08	0.001796	± 2.5	PASS
		VN	30	4.79	0.002798	± 2.5	PASS
		VN	40	3.99	0.002331	± 2.5	PASS
		VN	50	5.06	0.002957	± 2.5	PASS
	MCH	VN	-30	0.14	0.000083	± 2.5	PASS
		VN	-20	0.03	0.000017	± 2.5	PASS
		VN	-10	0.13	0.000074	± 2.5	PASS
		VN	0	-1.22	-0.000702	± 2.5	PASS
		VN	10	-1.04	-0.000603	± 2.5	PASS
		VN	20	0.49	0.000281	± 2.5	PASS
		VN	30	1.16	0.000669	± 2.5	PASS
		VN	40	0.99	0.000570	± 2.5	PASS
		VN	50	3.59	0.002072	± 2.5	PASS
	HCH	VN	-30	-0.74	-0.000424	± 2.5	PASS
		VN	-20	-0.19	-0.000106	± 2.5	PASS
		VN	-10	-0.87	-0.000498	± 2.5	PASS
		VN	0	1.19	0.000678	± 2.5	PASS
		VN	10	2.53	0.001445	± 2.5	PASS
		VN	20	-0.86	-0.000490	± 2.5	PASS
		VN	30	-1.76	-0.001004	± 2.5	PASS
		VN	40	-1.00	-0.000571	± 2.5	PASS
		VN	50	-1.33	-0.000759	± 2.5	PASS
16QAM	LCH	VN	-30	1.56	0.000911	± 2.5	PASS
		VN	-20	0.19	0.000109	± 2.5	PASS
		VN	-10	0.23	0.000134	± 2.5	PASS
		VN	0	-0.60	-0.000351	± 2.5	PASS
		VN	10	-0.10	-0.000058	± 2.5	PASS
		VN	20	3.81	0.002222	± 2.5	PASS
		VN	30	4.32	0.002523	± 2.5	PASS
		VN	40	4.52	0.002640	± 2.5	PASS
		VN	50	3.49	0.002038	± 2.5	PASS
	MCH	VN	-30	2.27	0.001313	± 2.5	PASS
		VN	-20	-0.99	-0.000570	± 2.5	PASS
		VN	-10	-1.20	-0.000694	± 2.5	PASS
		VN	0	-2.02	-0.001164	± 2.5	PASS
		VN	10	2.85	0.001643	± 2.5	PASS
		VN	20	1.40	0.000809	± 2.5	PASS
		VN	30	-1.92	-0.001106	± 2.5	PASS
		VN	40	0.59	0.000339	± 2.5	PASS
		VN	50	0.39	0.000223	± 2.5	PASS
	HCH	VN	-30	2.43	0.001388	± 2.5	PASS
		VN	-20	-1.83	-0.001045	± 2.5	PASS
		VN	-10	2.93	0.001673	± 2.5	PASS
		VN	0	-2.79	-0.001592	± 2.5	PASS
		VN	10	-0.11	-0.000065	± 2.5	PASS

		VN	20	-0.73	-0.000416	± 2.5	PASS
		VN	30	0.82	0.000465	± 2.5	PASS
		VN	40	-0.34	-0.000196	± 2.5	PASS
		VN	50	-0.70	-0.000400	± 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	0.37	0.000217	± 2.5	PASS
		VN	TN	-0.74	-0.000434	± 2.5	PASS
		VH	TN	1.16	0.000676	± 2.5	PASS
	MCH	VL	TN	0.07	0.000041	± 2.5	PASS
		VN	TN	1.32	0.000760	± 2.5	PASS
		VH	TN	1.07	0.000619	± 2.5	PASS
	HCH	VL	TN	-0.21	-0.000123	± 2.5	PASS
		VN	TN	1.17	0.000670	± 2.5	PASS
		VH	TN	-1.06	-0.000605	± 2.5	PASS
16QAM	LCH	VL	TN	0.20	0.000117	± 2.5	PASS
		VN	TN	0.39	0.000225	± 2.5	PASS
		VH	TN	0.53	0.000309	± 2.5	PASS
	MCH	VL	TN	1.27	0.000735	± 2.5	PASS
		VN	TN	0.43	0.000248	± 2.5	PASS
		VH	TN	0.59	0.000339	± 2.5	PASS
	HCH	VL	TN	-0.50	-0.000286	± 2.5	PASS
		VN	TN	-0.06	-0.000033	± 2.5	PASS
		VH	TN	-0.19	-0.000106	± 2.5	PASS
Temperature							
Modulation	Channel	Voltage [Vdc]	Temperature (℃)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
16QAM	LCH	VN	-30	1.75	0.001018	± 2.5	PASS
		VN	-20	0.76	0.000442	± 2.5	PASS
		VN	-10	-0.04	-0.000025	± 2.5	PASS
		VN	0	-0.41	-0.000242	± 2.5	PASS
		VN	10	-0.04	-0.000025	± 2.5	PASS
		VN	20	0.79	0.000459	± 2.5	PASS
		VN	30	-0.94	-0.000551	± 2.5	PASS
		VN	40	-0.39	-0.000225	± 2.5	PASS
		VN	50	0.44	0.000259	± 2.5	PASS
	MCH	VN	-30	1.16	0.000669	± 2.5	PASS
		VN	-20	-0.50	-0.000289	± 2.5	PASS
		VN	-10	0.23	0.000132	± 2.5	PASS
		VN	0	0.10	0.000058	± 2.5	PASS
		VN	10	-0.66	-0.000380	± 2.5	PASS
		VN	20	1.73	0.000999	± 2.5	PASS
		VN	30	1.36	0.000784	± 2.5	PASS
		VN	40	1.89	0.001090	± 2.5	PASS

		VN	50	2.49	0.001437	± 2.5	PASS
	HCH	VN	-30	-0.16	-0.000090	± 2.5	PASS
		VN	-20	-0.21	-0.000123	± 2.5	PASS
		VN	-10	0.13	0.000074	± 2.5	PASS
		VN	0	0.11	0.000065	± 2.5	PASS
		VN	10	0.86	0.000490	± 2.5	PASS
		VN	20	0.74	0.000425	± 2.5	PASS
		VN	30	1.97	0.001128	± 2.5	PASS
		VN	40	0.84	0.000482	± 2.5	PASS
		VN	50	0.84	0.000482	± 2.5	PASS
QPSK	LCH	VN	-30	0.33	0.000192	± 2.5	PASS
		VN	-20	0.27	0.000158	± 2.5	PASS
		VN	-10	-0.21	-0.000125	± 2.5	PASS
		VN	0	-0.67	-0.000392	± 2.5	PASS
		VN	10	0.16	0.000092	± 2.5	PASS
		VN	20	-0.39	-0.000225	± 2.5	PASS
		VN	30	-0.50	-0.000292	± 2.5	PASS
		VN	40	-2.40	-0.001401	± 2.5	PASS
		VN	50	-0.04	-0.000025	± 2.5	PASS
	MCH	VN	-30	-0.51	-0.000297	± 2.5	PASS
		VN	-20	0.40	0.000231	± 2.5	PASS
		VN	-10	-0.54	-0.000314	± 2.5	PASS
		VN	0	0.20	0.000116	± 2.5	PASS
		VN	10	-0.50	-0.000289	± 2.5	PASS
		VN	20	1.85	0.001065	± 2.5	PASS
		VN	30	3.35	0.001932	± 2.5	PASS
		VN	40	1.57	0.000908	± 2.5	PASS
		VN	50	1.44	0.000834	± 2.5	PASS
	HCH	VN	-30	-0.23	-0.000131	± 2.5	PASS
		VN	-20	-0.39	-0.000221	± 2.5	PASS
		VN	-10	-1.00	-0.000572	± 2.5	PASS
		VN	0	1.00	0.000572	± 2.5	PASS
		VN	10	0.27	0.000155	± 2.5	PASS
		VN	20	0.77	0.000441	± 2.5	PASS
		VN	30	0.50	0.000286	± 2.5	PASS
		VN	40	1.19	0.000678	± 2.5	PASS
		VN	50	2.36	0.001349	± 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	1.53	0.000891	± 2.5	PASS
		VN	TN	-1.06	-0.000616	± 2.5	PASS
		VH	TN	0.73	0.000425	± 2.5	PASS
	MCH	VL	TN	-0.27	-0.000157	± 2.5	PASS
		VN	TN	0.07	0.000041	± 2.5	PASS

		VH	TN	-0.37	-0.000215	± 2.5	PASS
	HCH	VL	TN	0.37	0.000213	± 2.5	PASS
		VN	TN	1.65	0.000941	± 2.5	PASS
		VH	TN	-0.70	-0.000401	± 2.5	PASS
16QAM	LCH	VL	TN	-0.57	-0.000333	± 2.5	PASS
		VN	TN	0.06	0.000033	± 2.5	PASS
		VH	TN	0.39	0.000225	± 2.5	PASS
	MCH	VL	TN	0.34	0.000198	± 2.5	PASS
		VN	TN	0.23	0.000132	± 2.5	PASS
		VH	TN	-0.67	-0.000388	± 2.5	PASS
	HCH	VL	TN	0.23	0.000131	± 2.5	PASS
		VN	TN	-0.37	-0.000213	± 2.5	PASS
		VH	TN	0.26	0.000147	± 2.5	PASS
Temperature							
Modulation	Channel	Voltage [Vdc]	Temperature (℃)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
QPSK	LCH	VN	-30	1.02	0.000591	± 2.5	PASS
		VN	-20	0.43	0.000250	± 2.5	PASS
		VN	-10	-0.87	-0.000508	± 2.5	PASS
		VN	0	0.36	0.000208	± 2.5	PASS
		VN	10	-0.31	-0.000183	± 2.5	PASS
		VN	20	1.10	0.000641	± 2.5	PASS
		VN	30	0.33	0.000192	± 2.5	PASS
		VN	40	0.34	0.000200	± 2.5	PASS
		VN	50	0.90	0.000525	± 2.5	PASS
	MCH	VN	-30	-0.16	-0.000091	± 2.5	PASS
		VN	-20	-0.57	-0.000330	± 2.5	PASS
		VN	-10	0.04	0.000025	± 2.5	PASS
		VN	0	-0.17	-0.000099	± 2.5	PASS
		VN	10	-0.27	-0.000157	± 2.5	PASS
		VN	20	1.43	0.000826	± 2.5	PASS
		VN	30	0.60	0.000347	± 2.5	PASS
		VN	40	1.52	0.000875	± 2.5	PASS
		VN	50	1.33	0.000768	± 2.5	PASS
	HCH	VN	-30	0.20	0.000115	± 2.5	PASS
		VN	-20	0.63	0.000360	± 2.5	PASS
		VN	-10	0.70	0.000401	± 2.5	PASS
		VN	0	-0.47	-0.000270	± 2.5	PASS
		VN	10	1.10	0.000630	± 2.5	PASS
		VN	20	1.40	0.000802	± 2.5	PASS
		VN	30	0.62	0.000352	± 2.5	PASS
		VN	40	0.82	0.000467	± 2.5	PASS
		VN	50	0.60	0.000344	± 2.5	PASS
QPSK	LCH	VN	-30	-0.07	-0.000042	± 2.5	PASS
		VN	-20	1.23	0.000716	± 2.5	PASS
		VN	-10	1.17	0.000683	± 2.5	PASS
		VN	0	0.76	0.000441	± 2.5	PASS
		VN	10	0.62	0.000358	± 2.5	PASS
		VN	20	0.86	0.000500	± 2.5	PASS
		VN	30	0.96	0.000558	± 2.5	PASS

		VN	40	0.40	0.000233	± 2.5	PASS
		VN	50	0.54	0.000317	± 2.5	PASS
	MCH	VN	-30	1.14	0.000661	± 2.5	PASS
		VN	-20	-0.33	-0.000190	± 2.5	PASS
		VN	-10	-0.72	-0.000413	± 2.5	PASS
		VN	0	0.59	0.000339	± 2.5	PASS
		VN	10	0.72	0.000413	± 2.5	PASS
		VN	20	0.21	0.000124	± 2.5	PASS
		VN	30	1.69	0.000974	± 2.5	PASS
		VN	40	2.02	0.001164	± 2.5	PASS
		VN	50	1.75	0.001007	± 2.5	PASS
	HCH	VN	-30	-0.44	-0.000254	± 2.5	PASS
		VN	-20	0.46	0.000262	± 2.5	PASS
		VN	-10	-0.10	-0.000057	± 2.5	PASS
		VN	0	-0.30	-0.000172	± 2.5	PASS
		VN	10	-0.04	-0.000025	± 2.5	PASS
		VN	20	0.66	0.000377	± 2.5	PASS
		VN	30	1.00	0.000573	± 2.5	PASS
		VN	40	0.53	0.000303	± 2.5	PASS
		VN	50	0.94	0.000540	± 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	0.49	0.000283	± 2.5	PASS
		VN	TN	1.42	0.000823	± 2.5	PASS
		VH	TN	-0.26	-0.000150	± 2.5	PASS
	MCH	VL	TN	-1.39	-0.000801	± 2.5	PASS
		VN	TN	1.30	0.000751	± 2.5	PASS
		VH	TN	-1.60	-0.000925	± 2.5	PASS
	HCH	VL	TN	0.70	0.000402	± 2.5	PASS
		VN	TN	0.66	0.000377	± 2.5	PASS
		VH	TN	0.29	0.000164	± 2.5	PASS
16QAM	LCH	VL	TN	-0.43	-0.000250	± 2.5	PASS
		VN	TN	0.37	0.000216	± 2.5	PASS
		VH	TN	0.77	0.000449	± 2.5	PASS
	MCH	VL	TN	-0.56	-0.000322	± 2.5	PASS
		VN	TN	0.34	0.000198	± 2.5	PASS
		VH	TN	0.56	0.000322	± 2.5	PASS
	HCH	VL	TN	0.23	0.000131	± 2.5	PASS
		VN	TN	0.67	0.000385	± 2.5	PASS
		VH	TN	0.62	0.000353	± 2.5	PASS
Temperature							
Modulation	Channel	Voltage [Vdc]	Temperature (℃)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
QPSK	LCH	VN	-30	0.33	0.000191	± 2.5	PASS

		VN	-20	-0.62	-0.000358	± 2.5	PASS
		VN	-10	0.57	0.000333	± 2.5	PASS
		VN	0	0.77	0.000449	± 2.5	PASS
		VN	10	0.27	0.000158	± 2.5	PASS
		VN	20	3.00	0.001747	± 2.5	PASS
		VN	30	2.39	0.001389	± 2.5	PASS
		VN	40	2.70	0.001572	± 2.5	PASS
		VN	50	3.09	0.001796	± 2.5	PASS
	MCH	VN	-30	0.03	0.000017	± 2.5	PASS
		VN	-20	0.27	0.000157	± 2.5	PASS
		VN	-10	0.14	0.000083	± 2.5	PASS
		VN	0	-0.03	-0.000017	± 2.5	PASS
		VN	10	-1.39	-0.000801	± 2.5	PASS
		VN	20	0.84	0.000487	± 2.5	PASS
		VN	30	1.04	0.000603	± 2.5	PASS
		VN	40	1.10	0.000636	± 2.5	PASS
		VN	50	1.04	0.000603	± 2.5	PASS
	HCH	VN	-30	1.34	0.000771	± 2.5	PASS
		VN	-20	-0.26	-0.000148	± 2.5	PASS
		VN	-10	0.44	0.000254	± 2.5	PASS
		VN	0	1.23	0.000705	± 2.5	PASS
		VN	10	-0.79	-0.000451	± 2.5	PASS
		VN	20	1.60	0.000918	± 2.5	PASS
		VN	30	0.76	0.000434	± 2.5	PASS
		VN	40	2.06	0.001180	± 2.5	PASS
		VN	50	1.19	0.000680	± 2.5	PASS
QPSK	LCH	VN	-30	0.04	0.000025	± 2.5	PASS
		VN	-20	0.24	0.000141	± 2.5	PASS
		VN	-10	0.40	0.000233	± 2.5	PASS
		VN	0	0.60	0.000349	± 2.5	PASS
		VN	10	0.14	0.000083	± 2.5	PASS
		VN	20	1.73	0.001006	± 2.5	PASS
		VN	30	1.92	0.001114	± 2.5	PASS
		VN	40	2.92	0.001697	± 2.5	PASS
		VN	50	1.97	0.001148	± 2.5	PASS
	MCH	VN	-30	-0.27	-0.000157	± 2.5	PASS
		VN	-20	0.01	0.000008	± 2.5	PASS
		VN	-10	0.09	0.000050	± 2.5	PASS
		VN	0	0.36	0.000206	± 2.5	PASS
		VN	10	0.43	0.000248	± 2.5	PASS
		VN	20	0.73	0.000421	± 2.5	PASS
		VN	30	1.13	0.000652	± 2.5	PASS
		VN	40	1.43	0.000826	± 2.5	PASS
		VN	50	-0.16	-0.000091	± 2.5	PASS
	HCH	VN	-30	0.66	0.000377	± 2.5	PASS
		VN	-20	0.51	0.000295	± 2.5	PASS
		VN	-10	-0.54	-0.000312	± 2.5	PASS
		VN	0	-0.06	-0.000033	± 2.5	PASS
		VN	10	0.51	0.000295	± 2.5	PASS
		VN	20	1.73	0.000992	± 2.5	PASS

		VN	30	1.32	0.000754	± 2.5	PASS
		VN	40	2.06	0.001180	± 2.5	PASS
		VN	50	1.39	0.000795	± 2.5	PASS