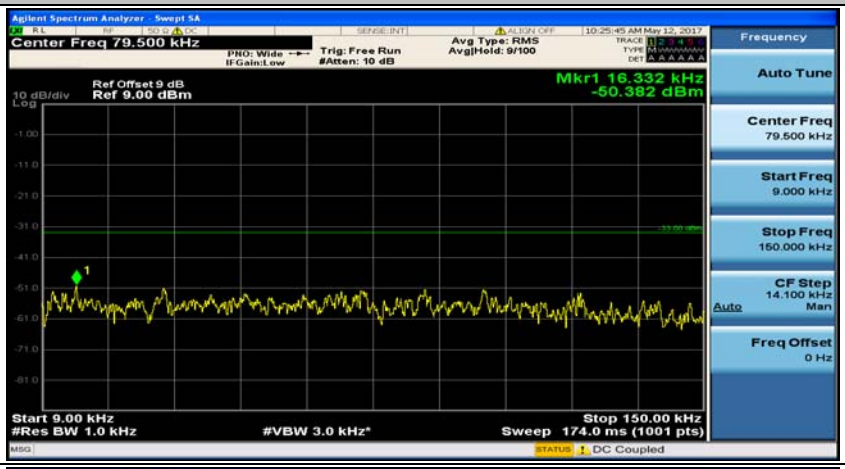
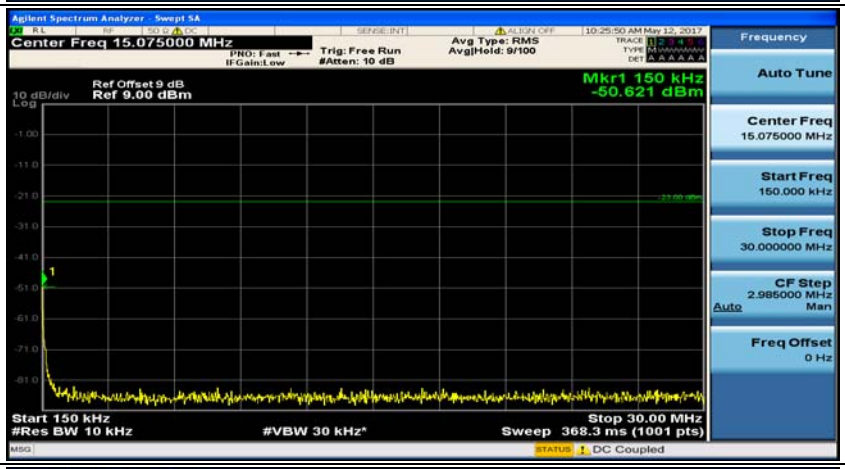
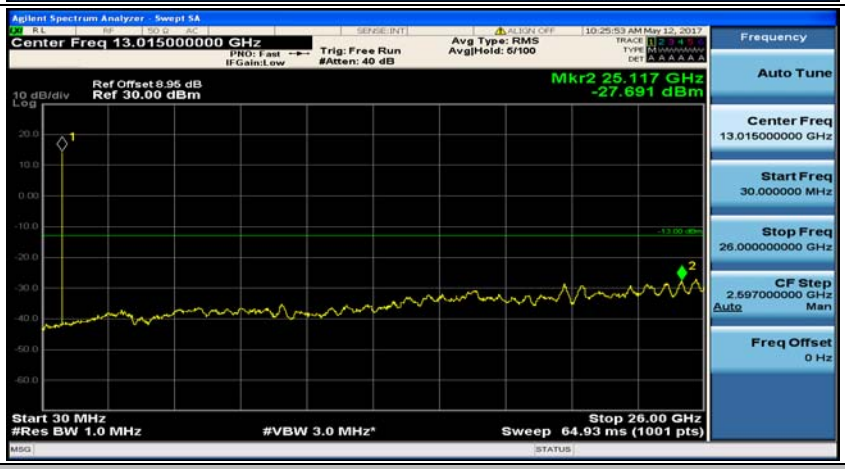
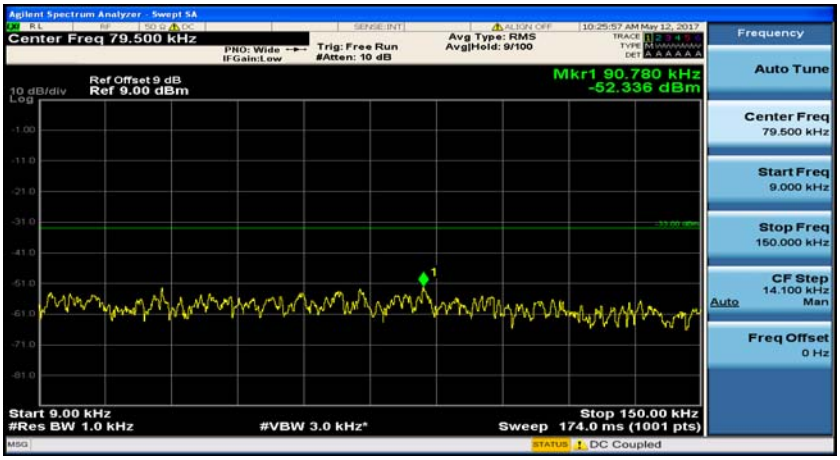
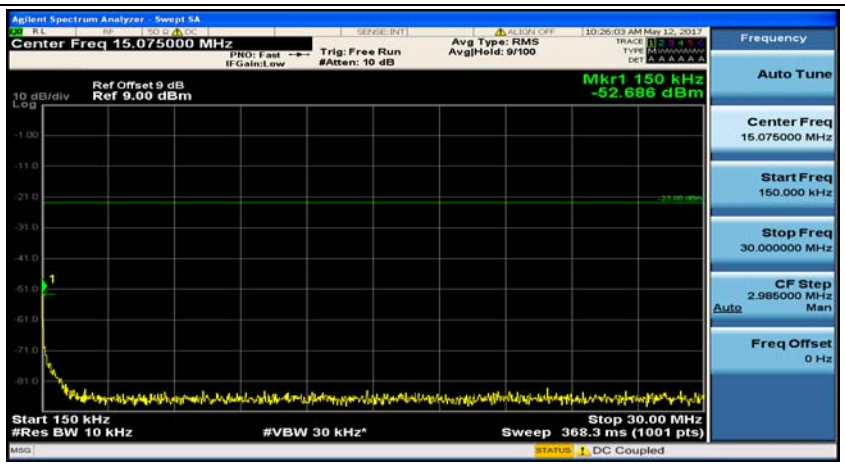
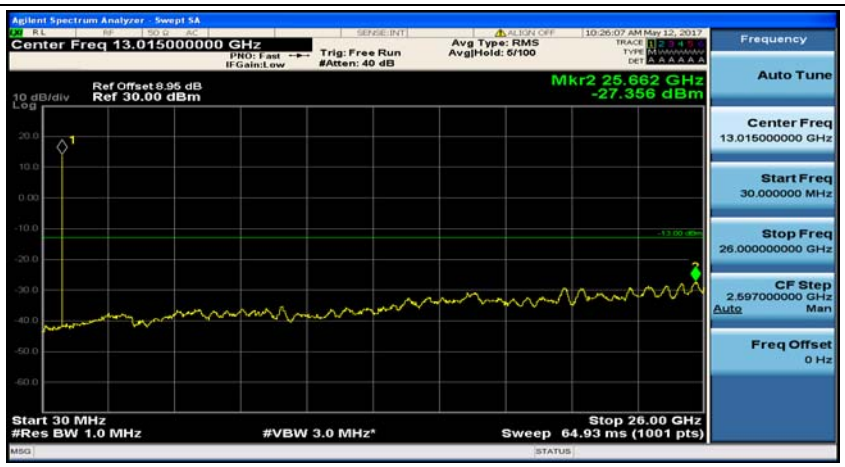
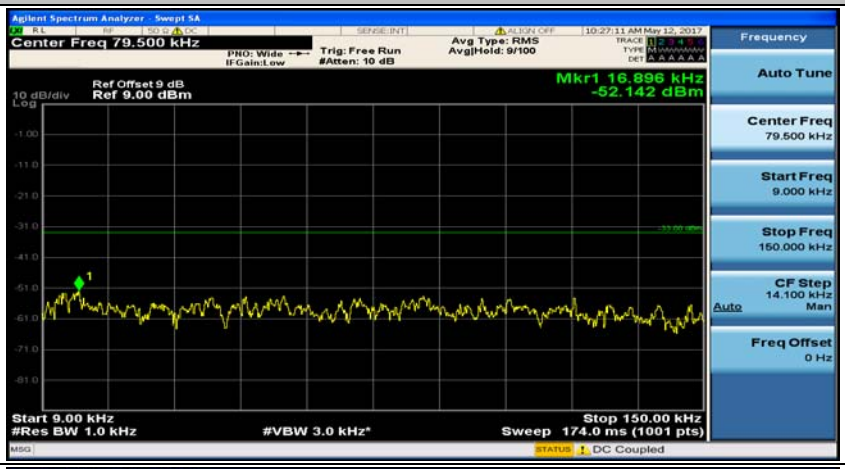
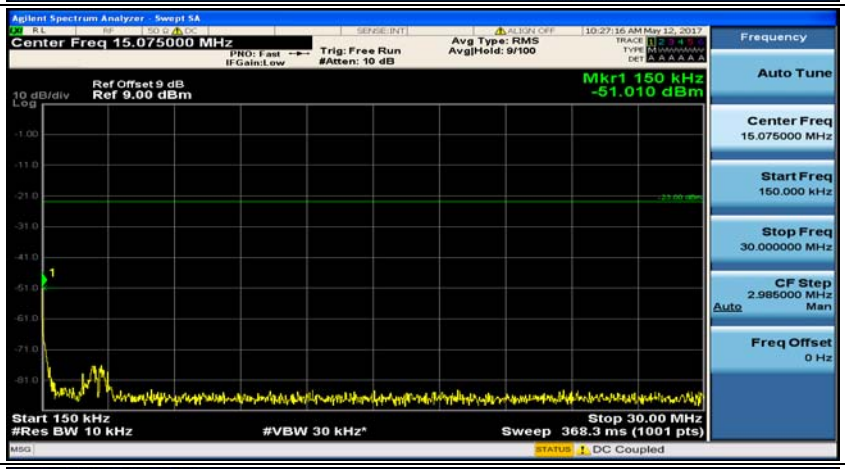
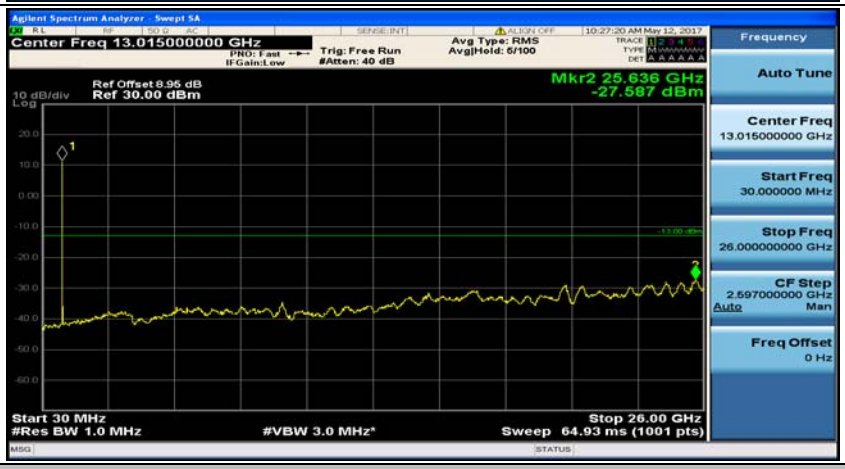
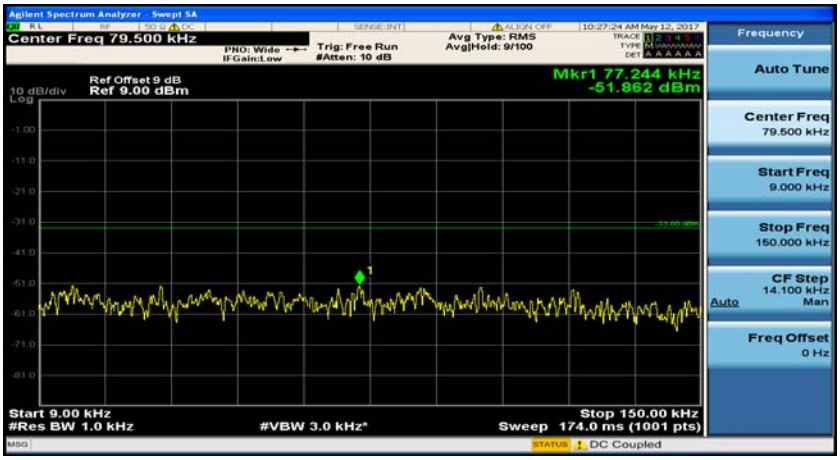
(Channel Bandwidth: 3 MHz)_MCH_16QAM_1RB#0



(Channel Bandwidth: 3 MHz)_MCH_16QAM_1RB#7

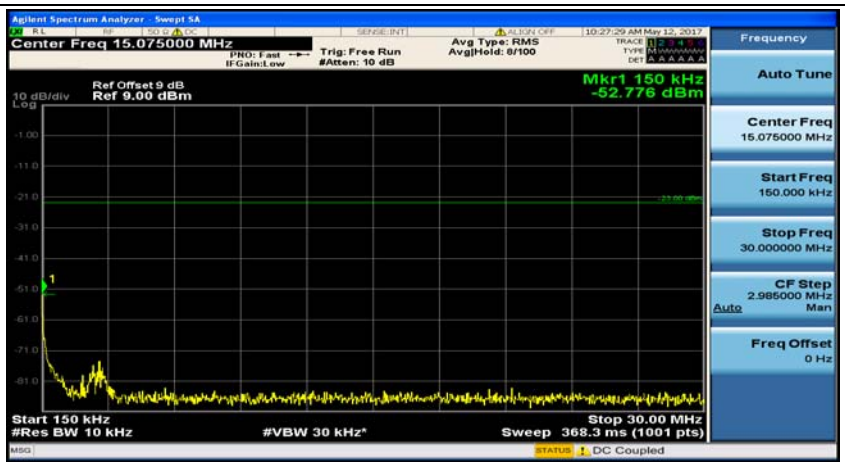

Agilent Spectrum Analyzer - Swept SA
Center Freq 79.500 kHz
PNO: Wide
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 9/100
10:25:57 AM May 12, 2017
Frequency
Auto Tune
Mkr1 90.780 kHz
-52.336 dBm
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Center Freq
79.500 kHz
Start Freq
9.000 kHz
Stop Freq
150.000 kHz
CF Step
14.100 kHz
Auto
Man
Freq Offset
0 Hz
Start 9.00 kHz
#Res BW 1.0 kHz
#VBW 3.0 kHz*
Stop 150.00 kHz
Sweep 174.0 ms (1001 pts)
DC Coupled

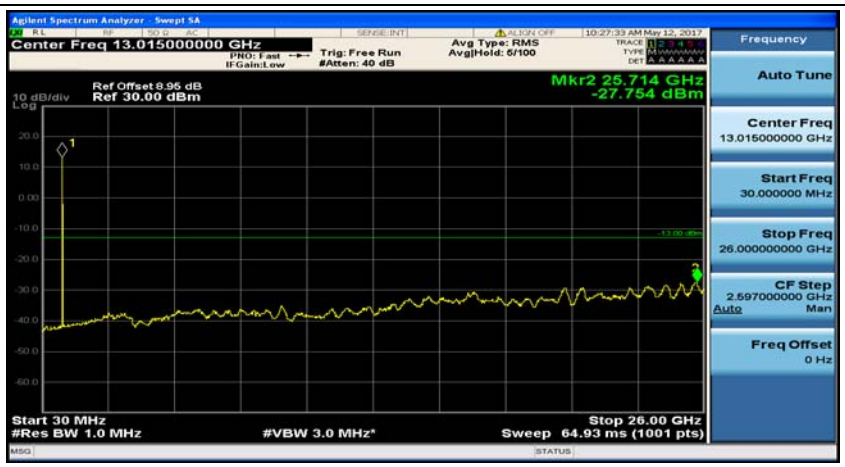

Agilent Spectrum Analyzer - Swept SA
Center Freq 15.075000 MHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 9/100
10:26:03 AM May 12, 2017
Frequency
Auto Tune
Mkr1 150 kHz
-52.686 dBm
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Center Freq
15.075000 MHz
Start Freq
150.000 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: 6/100
10:26:07 AM May 12, 2017
Frequency
Auto Tune
Mkr2 25.662 GHz
-27.356 dBm
Ref Offset 8.96 dB
10 dB/div
Log
Ref 30.00 dBm
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)

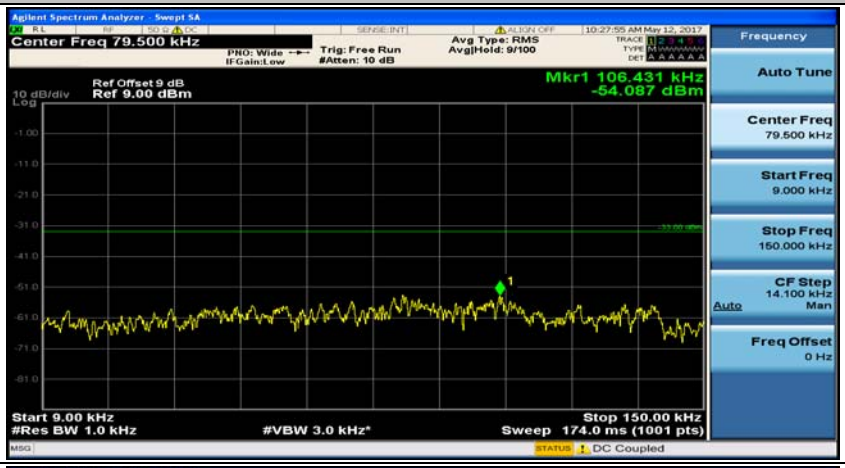
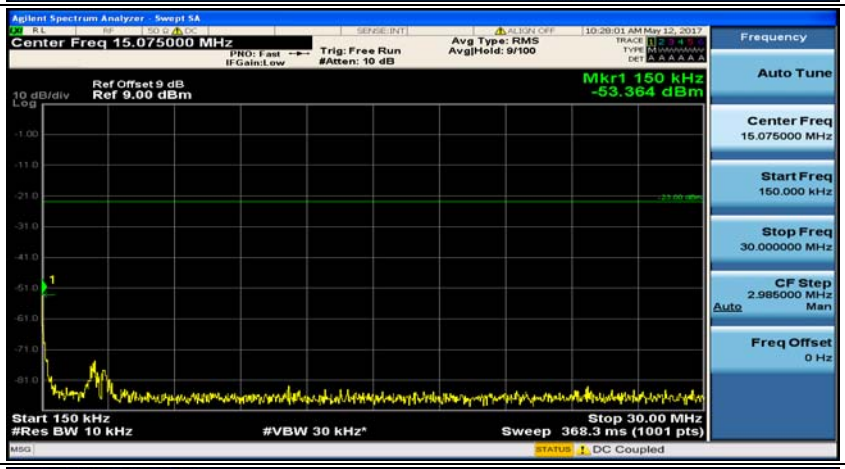
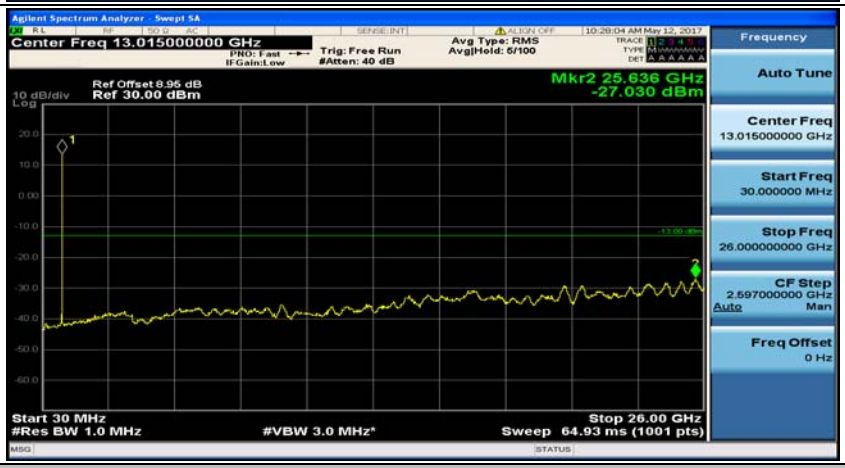
(Channel Bandwidth: 3 MHz)_HCH_16QAM_1RB#0



(Channel Bandwidth: 3 MHz)_HCH_16QAM_1RB#7

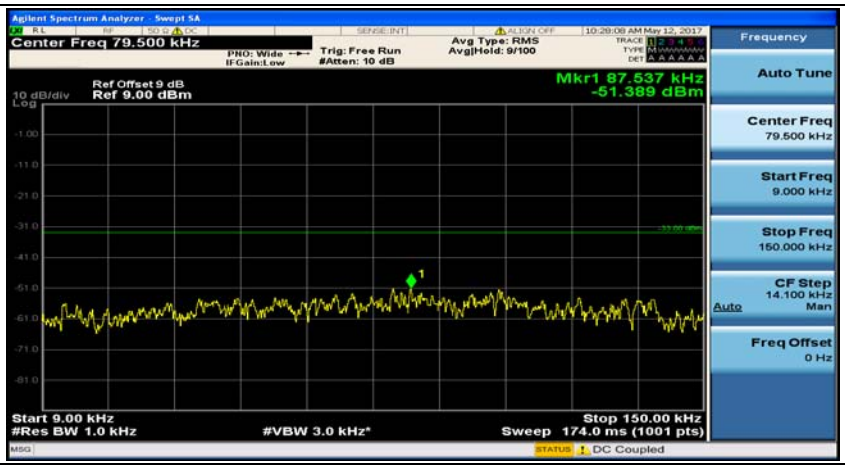

Agilent Spectrum Analyzer - Swept SA
Center Freq 79.500 kHz
PNO: Wide
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 9/100
10:27:24 AM May 12, 2017
Frequency
Auto Tune
Ref Offset 9 dB
10 dB/div
Ref 9.00 dBm
Log
Mkr1 77.244 kHz
-51.862 dBm
Center Freq
79.500 kHz
Start Freq
9.000 kHz
Stop 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

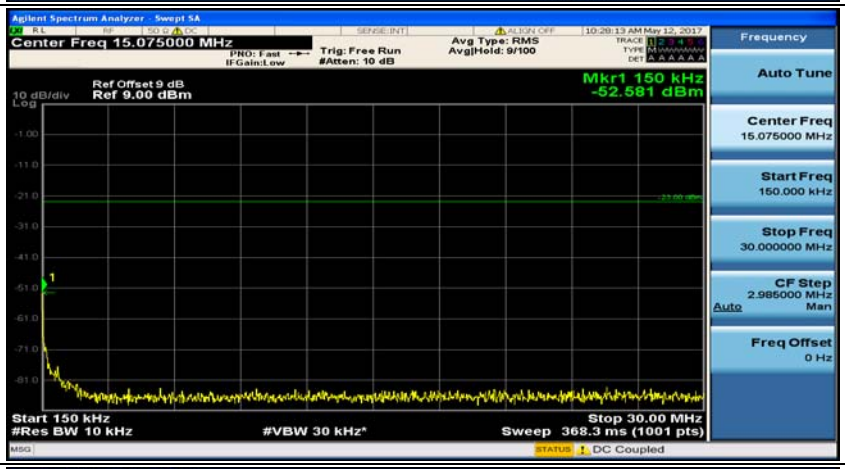

Agilent Spectrum Analyzer - Swept SA
Center Freq 15.075000 MHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 8/100
10:27:29 AM May 12, 2017
Frequency
Auto Tune
Ref Offset 9 dB
10 dB/div
Ref 9.00 dBm
Log
Mkr1 150 kHz
-52.776 dBm
Center Freq
15.075000 MHz
Start Freq
150.000 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

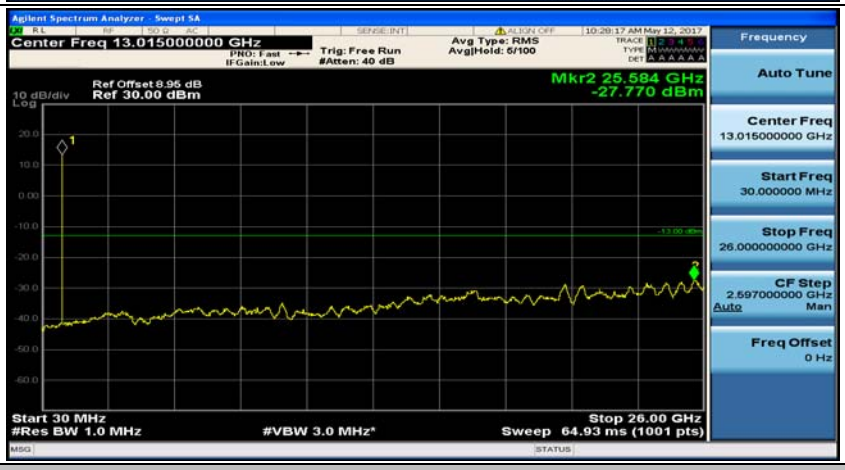

Agilent Spectrum Analyzer - Swept SA
Center Freq 13.015000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 40 dB
Avg Type: RMS
Avg|Hold: 6/100
10:27:33 AM May 12, 2017
Frequency
Auto Tune
Ref Offset 8.96 dB
10 dB/div
Ref 30.00 dBm
Log
Mkr2 25.714 GHz
-27.754 dBm
Center Freq
13.015000000 GHz
Start Freq
30.000000 MHz
Stop Freq
26.000000000 GHz
CF Step
2.597000000 GHz
Auto
Man
Freq Offset
0 Hz
Start 30 MHz
#Res BW 1.0 MHz
#VBW 3.0 MHz*
Stop 26.00 GHz
Sweep 64.93 ms (1001 pts)

Channel Bandwidth: 5 MHz

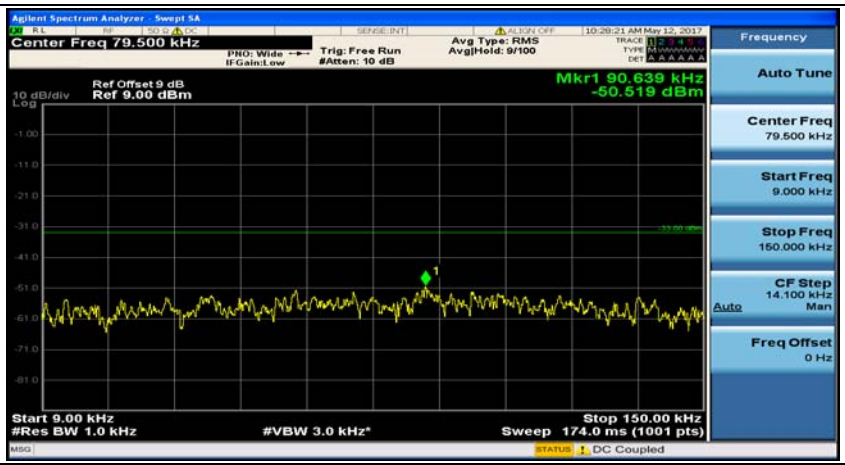
(Channel Bandwidth: 5 MHz)_LCH_QPSK_1RB#0



(Channel Bandwidth: 5 MHz)_LCH_QPSK_1RB#12

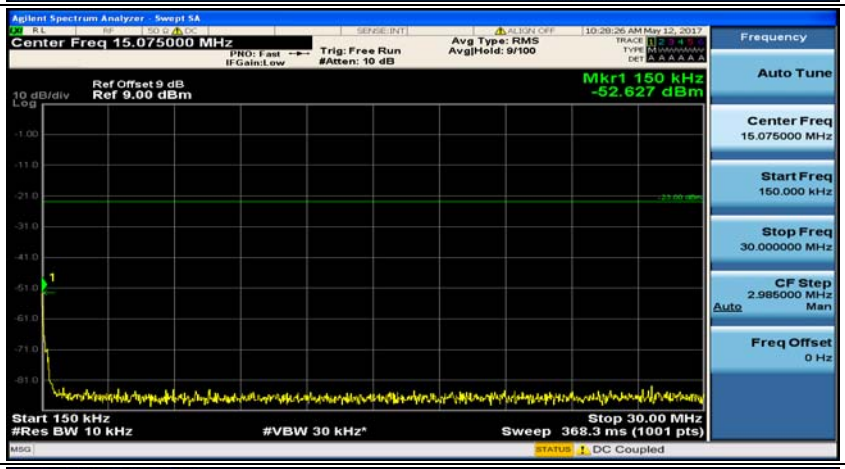


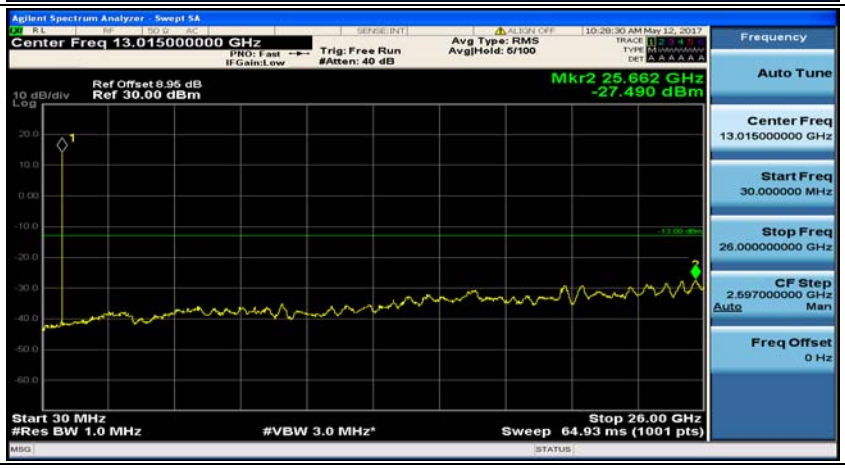


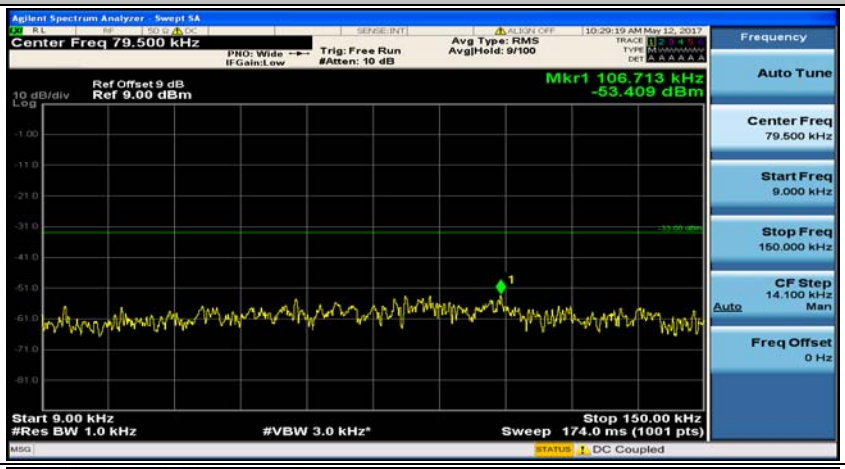
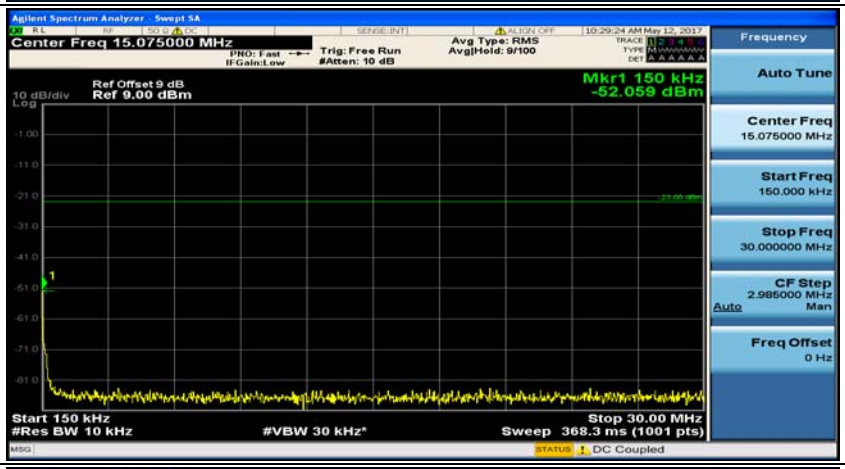
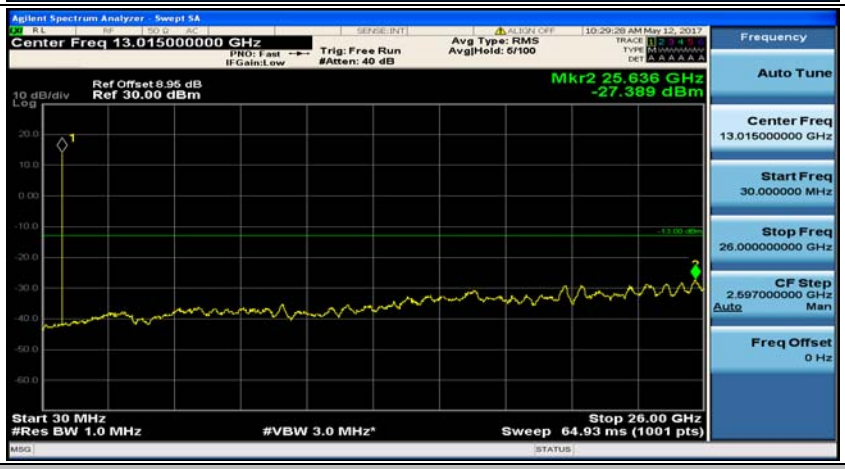


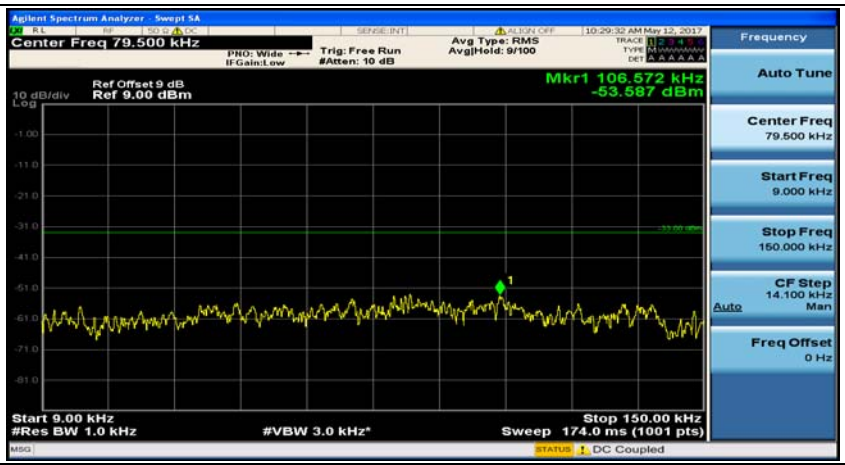
(Channel Bandwidth: 5 MHz)_LCH_QPSK_1RB#24

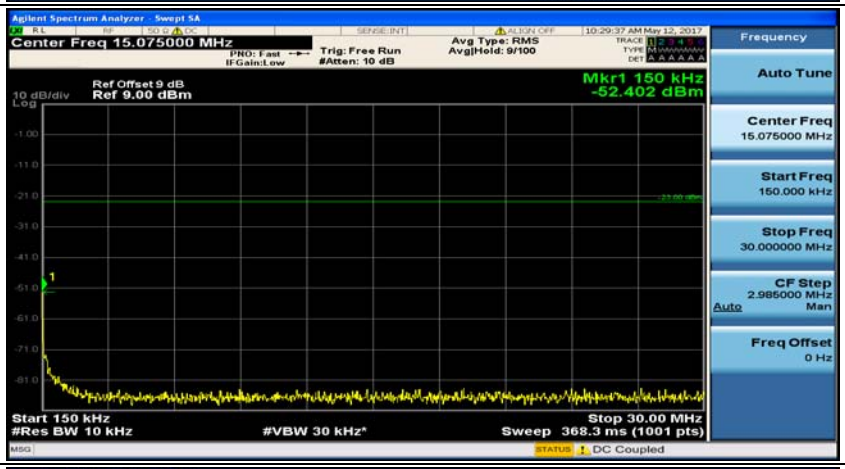

Agilent Spectrum Analyzer - Swept SA
Center Freq 79.500 kHz
PNO: Wide
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 9/100
10:28:21 AM May 12, 2017
Frequency
Mkr1 90.639 kHz
-50.519 dBm
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Auto Tune
Center Freq
79.500 kHz
Start Freq
9.000 kHz
Stop Freq
150.000 kHz
CF Step
14.100 kHz
Auto
Man
Freq Offset
0 Hz
Start 9.00 kHz
#Res BW 1.0 kHz
#VBW 3.0 kHz*
Stop 150.00 kHz
Sweep 174.0 ms (1001 pts)
DC Coupled

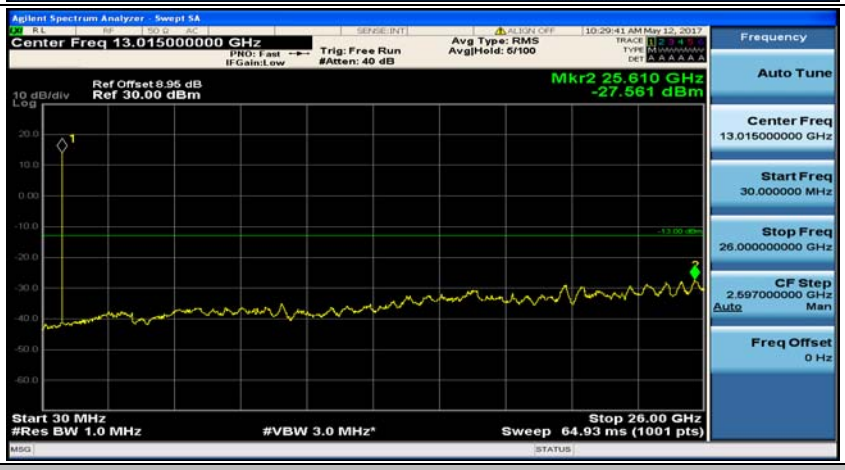

Agilent Spectrum Analyzer - Swept SA
Center Freq 15.075000 MHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 9/100
10:28:26 AM May 12, 2017
Frequency
Mkr1 150 kHz
-52.627 dBm
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Auto Tune
Center Freq
15.075000 MHz
Start Freq
150.000 kHz
Stop Freq
30.000000 MHz
CF Step
2.985000 MHz
Auto
Man
Freq Offset
0 Hz
Start 150 kHz
#Res BW 10 kHz
#VBW 30 kHz*
Stop 30.00 MHz
Sweep 368.3 ms (1001 pts)
DC Coupled


Agilent Spectrum Analyzer - Swept SA
Center Freq 13.015000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 40 dB
Avg Type: RMS
Avg|Hold: 5/100
10:28:30 AM May 12, 2017
Frequency
Mkr2 25.662 GHz
-27.490 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)

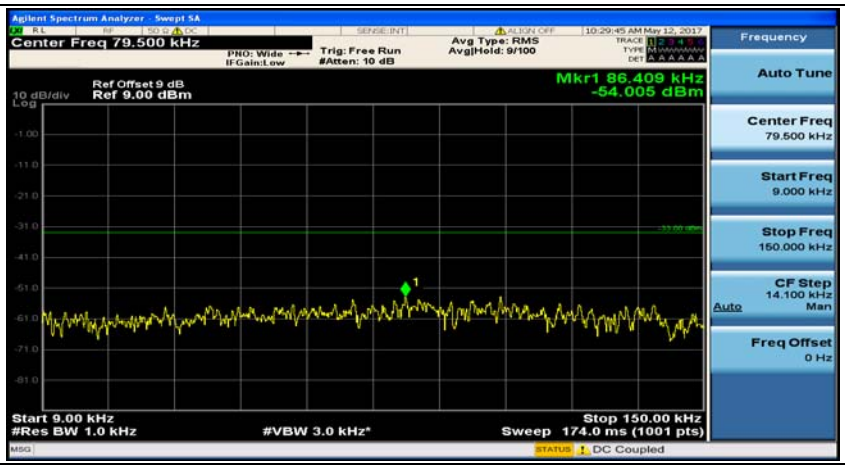
(Channel Bandwidth: 5 MHz)_MCH_QPSK_1RB#0



(Channel Bandwidth: 5 MHz)_MCH_QPSK_1RB#12

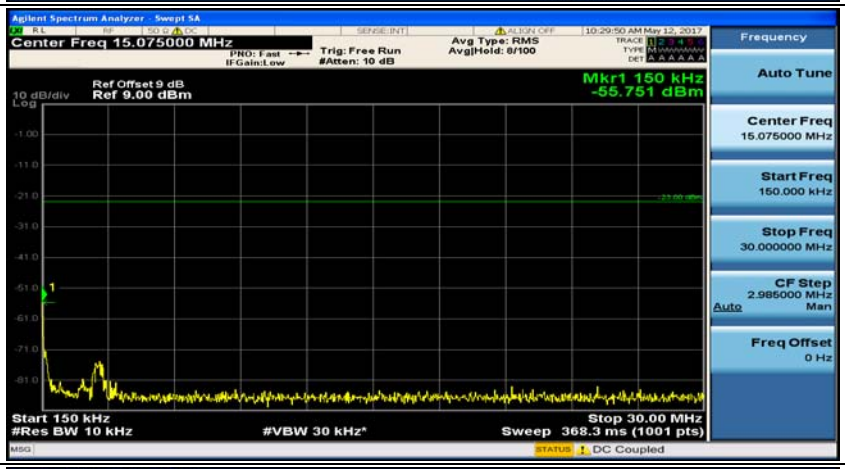


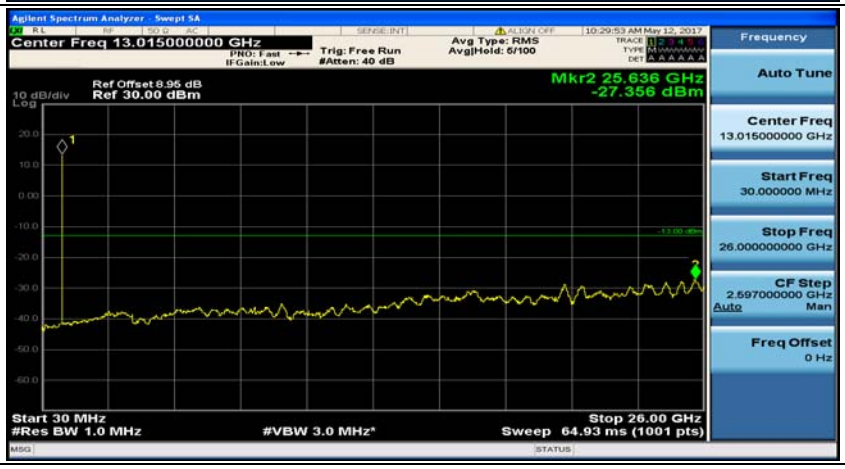


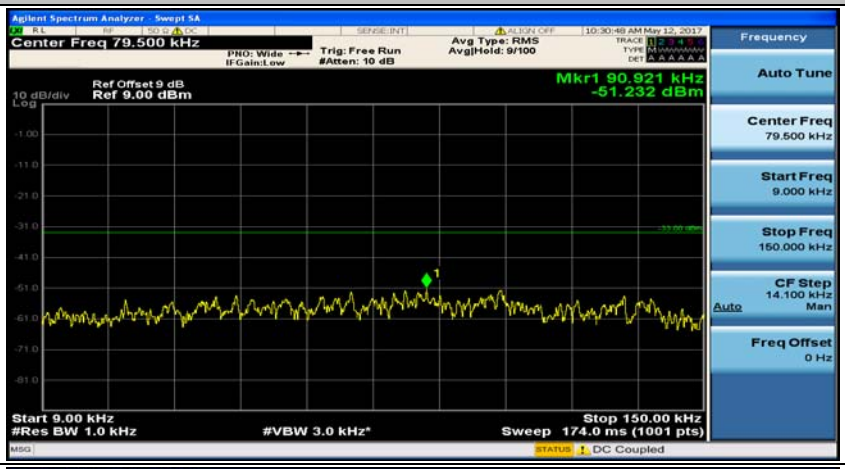
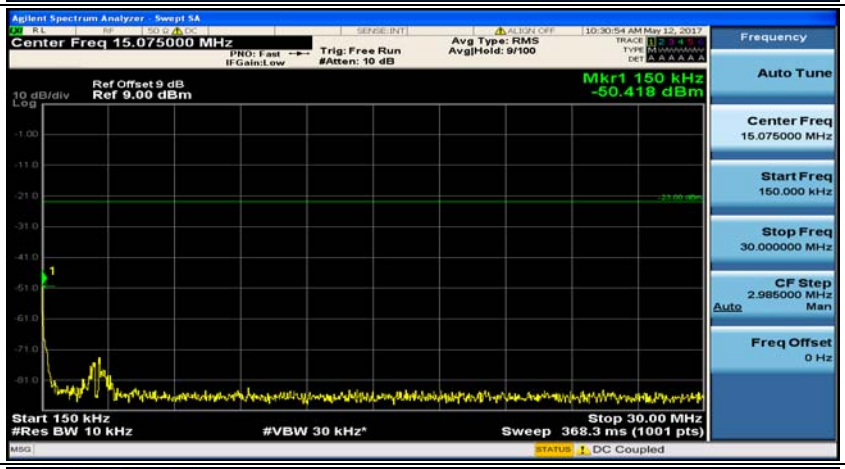
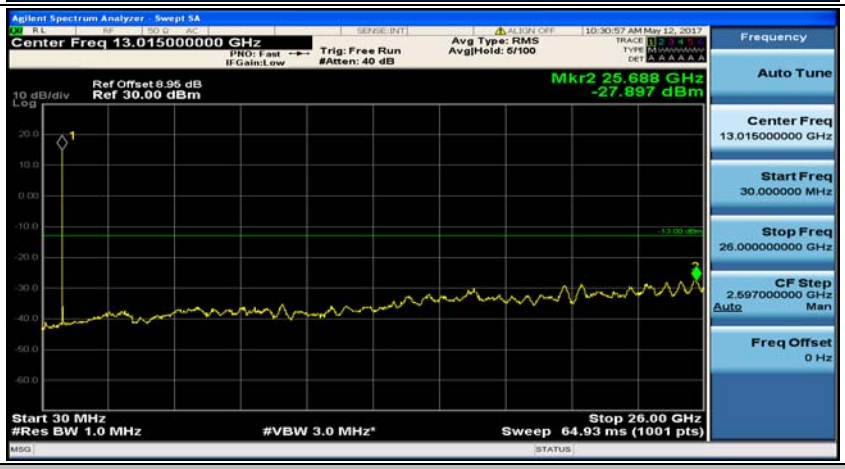


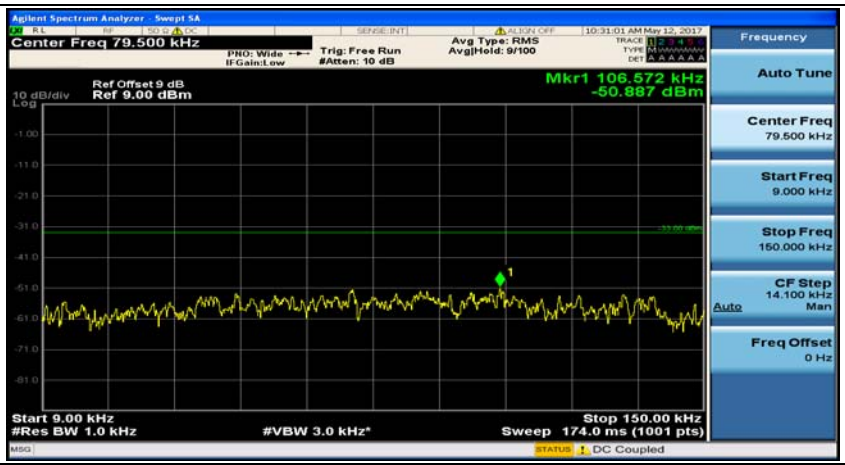
(Channel Bandwidth: 5 MHz)_MCH_QPSK_1RB#24

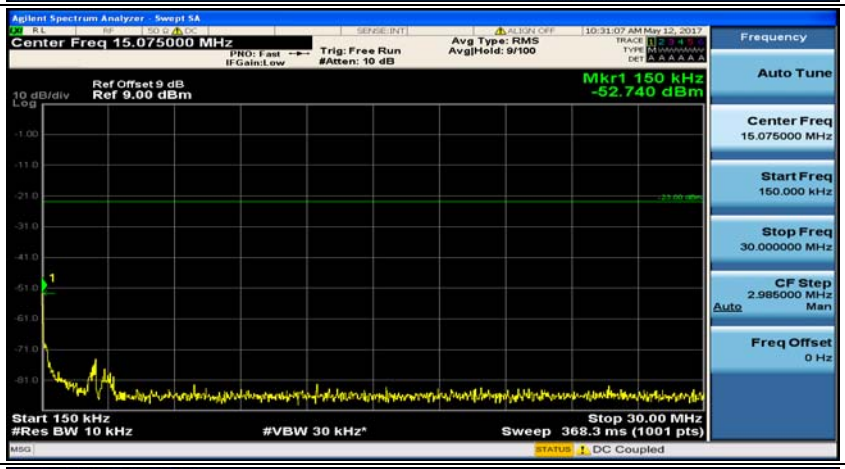

Agilent Spectrum Analyzer - Swept SA
Center Freq 79.500 kHz
PNO: Wide
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 9/100
10:29:45 AM May 12, 2017
Frequency
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Mkr1 86.409 kHz
-54.005 dBm
Auto Tune
Center Freq
79.500 kHz
Start Freq
9.000 kHz
Stop 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

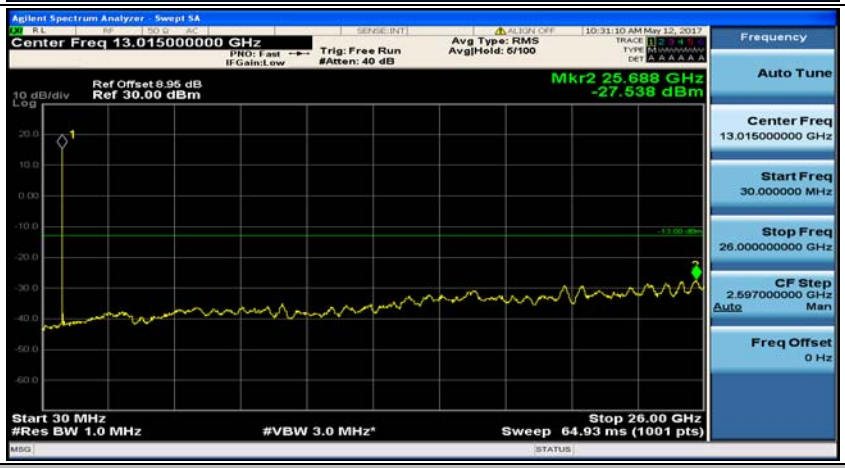

Agilent Spectrum Analyzer - Swept SA
Center Freq 15.075000 MHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 6/100
10:29:50 AM May 12, 2017
Frequency
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Mkr1 150 kHz
-55.751 dBm
Auto Tune
Center Freq
15.075000 MHz
Start Freq
150.000 kHz
Stop Freq
30.000000 MHz
CF Step
2.985000 MHz
Auto
Man
Freq Offset
0 Hz
Start 150 kHz
#Res BW 10 kHz
#VBW 30 kHz*
Stop 30.00 MHz
Sweep 368.3 ms (1001 pts)
DC Coupled


Agilent Spectrum Analyzer - Swept SA
Center Freq 13.015000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 40 dB
Avg Type: RMS
Avg|Hold: 5/100
10:29:53 AM May 12, 2017
Frequency
Ref Offset 8.95 dB
10 dB/div
Log
Ref 30.00 dBm
Mkr2 25.636 GHz
-27.356 dBm
Auto Tune
Center Freq
13.015000000 GHz
Start Freq
30.000000 MHz
Stop Freq
26.000000000 GHz
CF Step
2.597000000 GHz
Auto
Man
Freq Offset
0 Hz
Start 30 MHz
#Res BW 1.0 MHz
#VBW 3.0 MHz*
Stop 26.00 GHz
Sweep 64.93 ms (1001 pts)

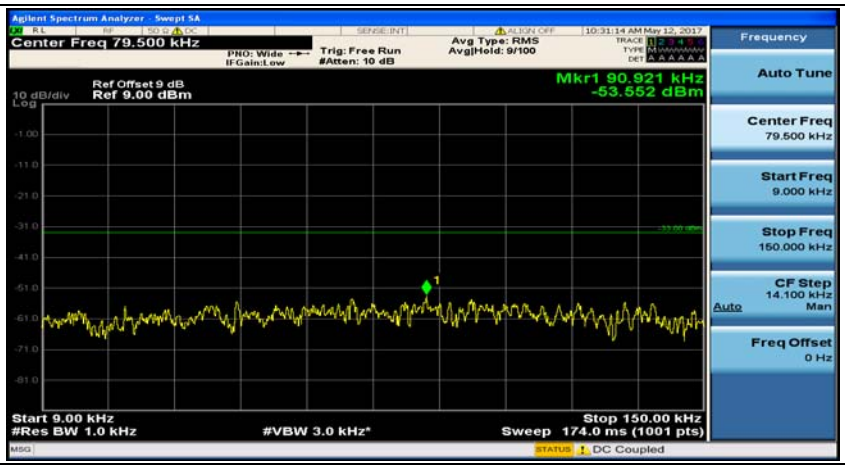
(Channel Bandwidth: 5 MHz)_HCH_QPSK_1RB#0



(Channel Bandwidth: 5 MHz)_HCH_QPSK_1RB#12

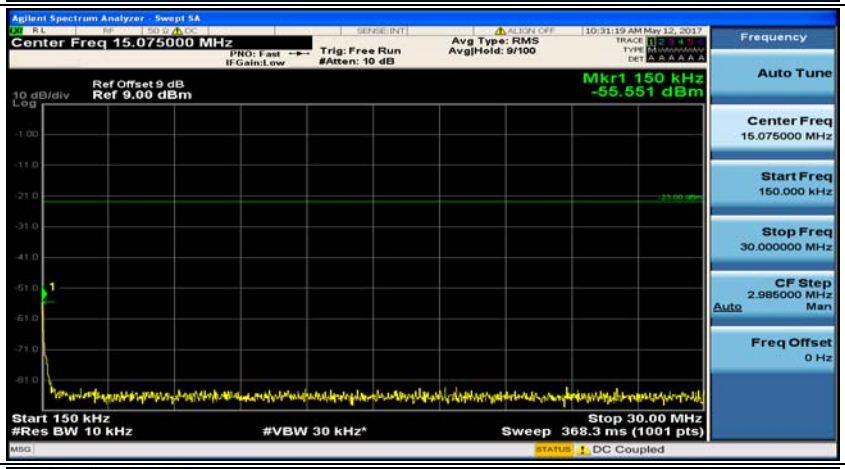


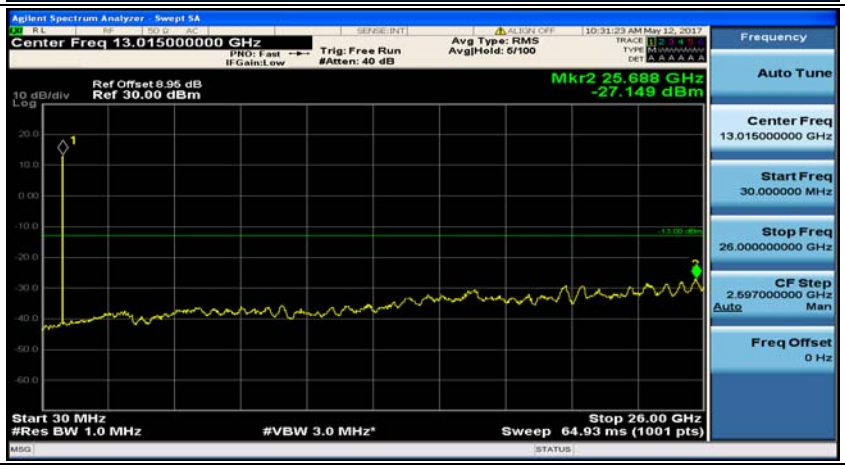


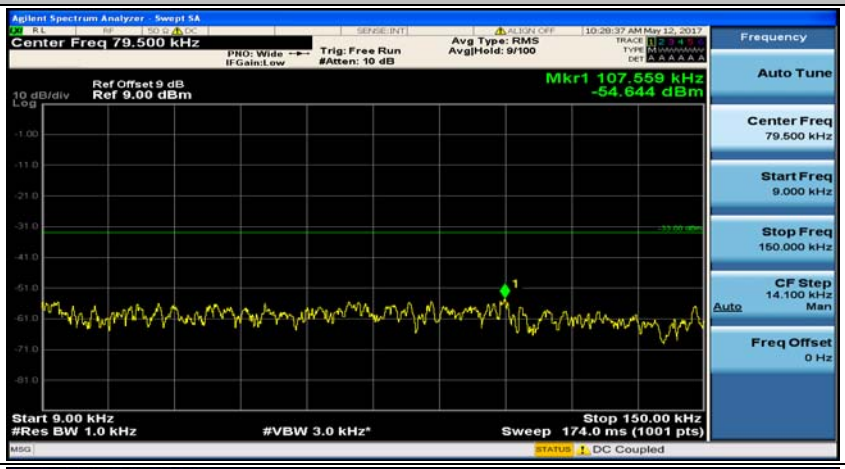
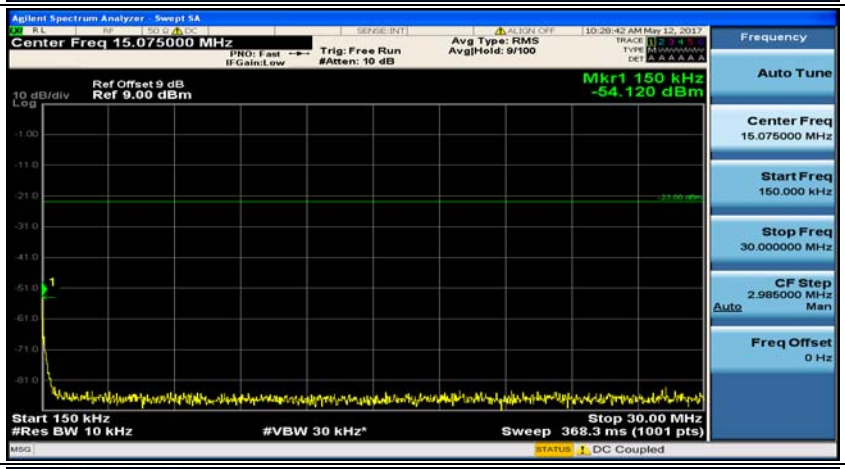
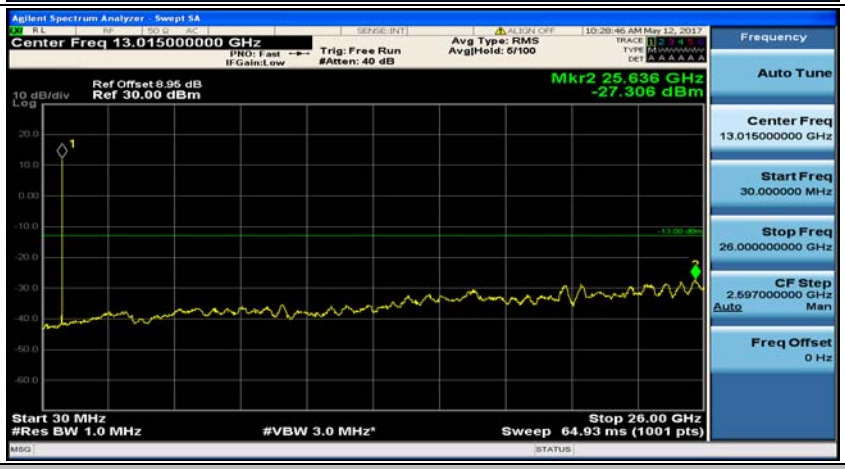


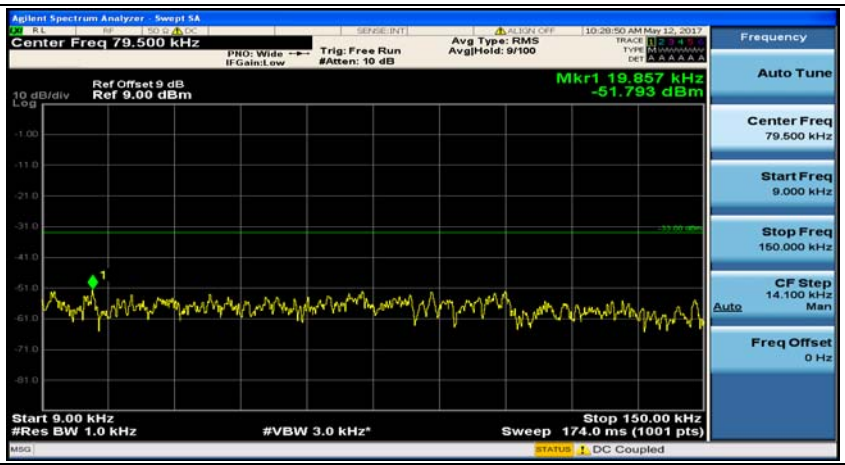
(Channel Bandwidth: 5 MHz)_HCH_QPSK_1RB#24

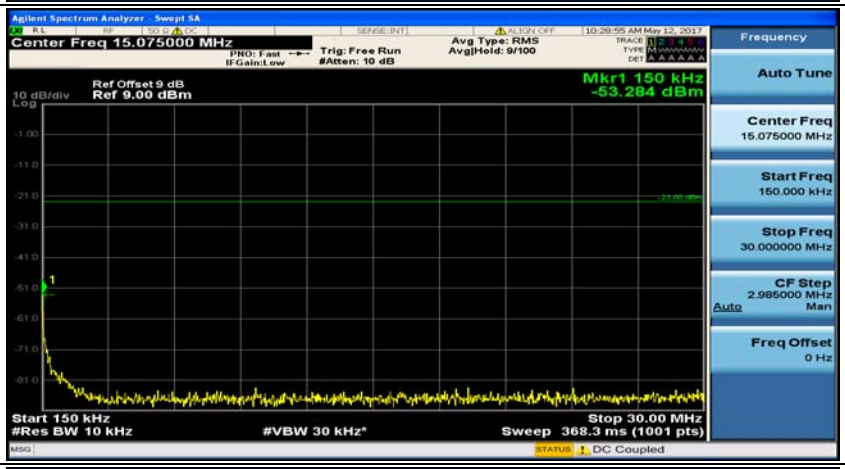

Agilent Spectrum Analyzer - Swept SA
Center Freq 79.500 kHz
PNO: Wide
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 9/100
10:31:14 AM May 12, 2017
Frequency
Auto Tune
Ref Offset 9 dB
10 dB/div
Ref 9.00 dBm
Mkr1 90.921 kHz
-53.552 dBm
Center Freq
79.500 kHz
Start Freq
9.000 kHz
Stop Freq
150.000 kHz
CF Step
14.100 kHz
Auto
Man
Freq Offset
0 Hz
Start 9.00 kHz
#Res BW 1.0 kHz
#VBW 3.0 kHz*
Stop 150.00 kHz
Sweep 174.0 ms (1001 pts)
DC Coupled

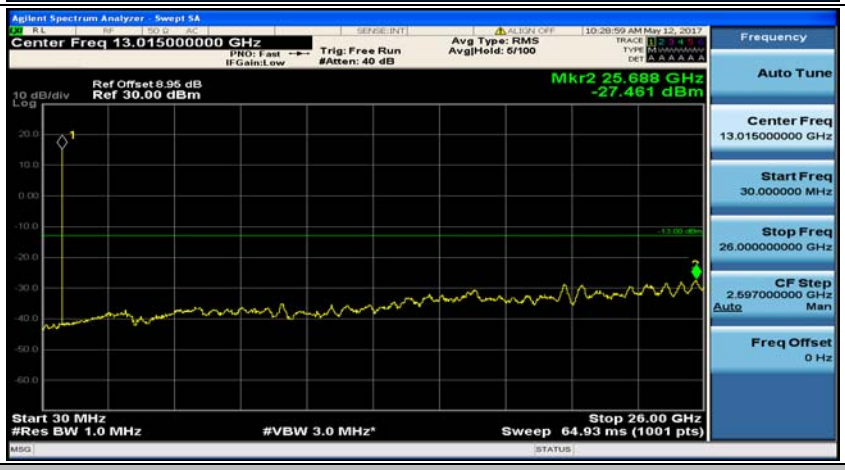

Agilent Spectrum Analyzer - Swept SA
Center Freq 15.075000 MHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 9/100
10:31:19 AM May 12, 2017
Frequency
Auto Tune
Ref Offset 9 dB
10 dB/div
Ref 9.00 dBm
Mkr1 150 kHz
-55.551 dBm
Center Freq
15.075000 MHz
Start Freq
150.000 kHz
Stop Freq
30.000000 MHz
CF Step
2.985000 MHz
Auto
Man
Freq Offset
0 Hz
Start 150 kHz
#Res BW 10 kHz
#VBW 30 kHz*
Stop 30.00 MHz
Sweep 368.3 ms (1001 pts)
DC Coupled


Agilent Spectrum Analyzer - Swept SA
Center Freq 13.015000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 40 dB
Avg Type: RMS
Avg|Hold: 5/100
10:31:23 AM May 12, 2017
Frequency
Auto Tune
Ref Offset 8.95 dB
10 dB/div
Ref 30.00 dBm
Mkr2 25.688 GHz
-27.149 dBm
Center Freq
13.015000000 GHz
Start Freq
30.000000 MHz
Stop Freq
26.000000000 GHz
CF Step
2.597000000 GHz
Auto
Man
Freq Offset
0 Hz
Start 30 MHz
#Res BW 1.0 MHz
#VBW 3.0 MHz*
Stop 26.00 GHz
Sweep 64.93 ms (1001 pts)

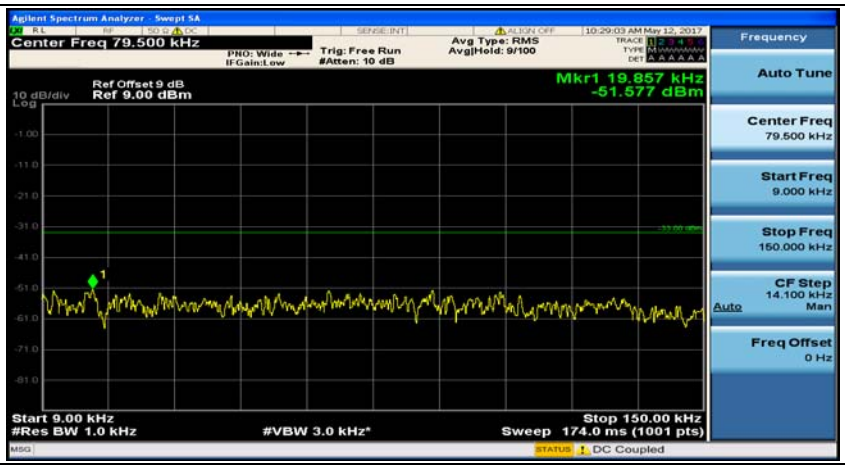
(Channel Bandwidth: 5 MHz)_LCH_16QAM_1RB#0



(Channel Bandwidth: 5 MHz)_LCH_16QAM_1RB#12

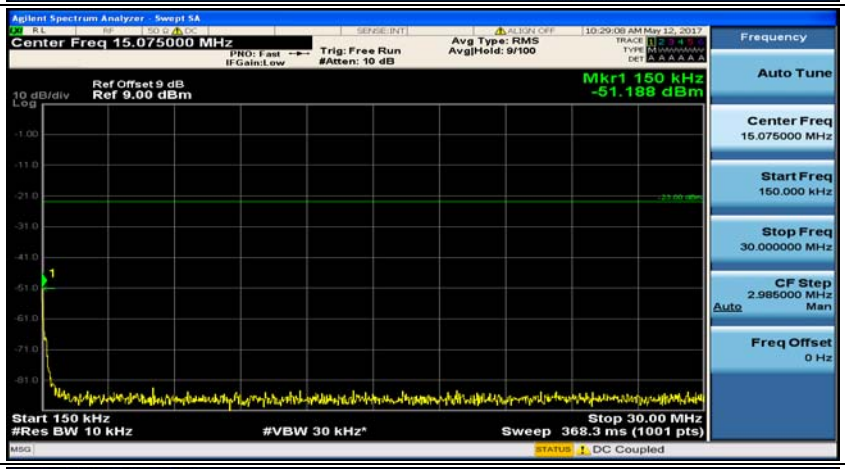


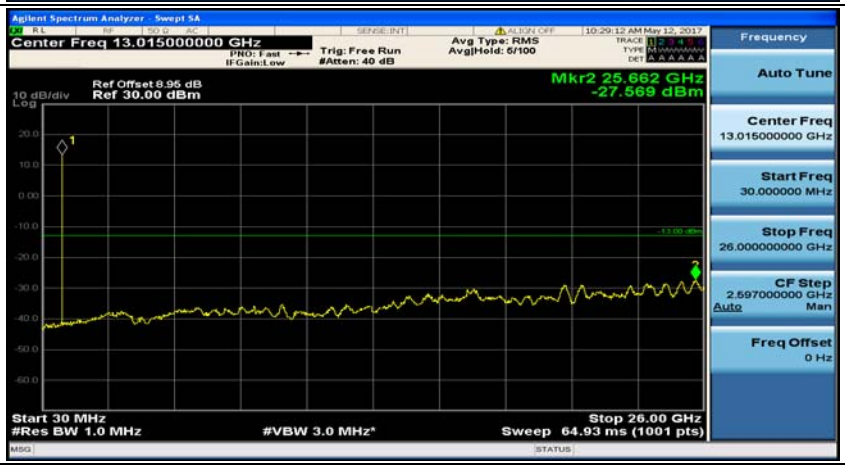


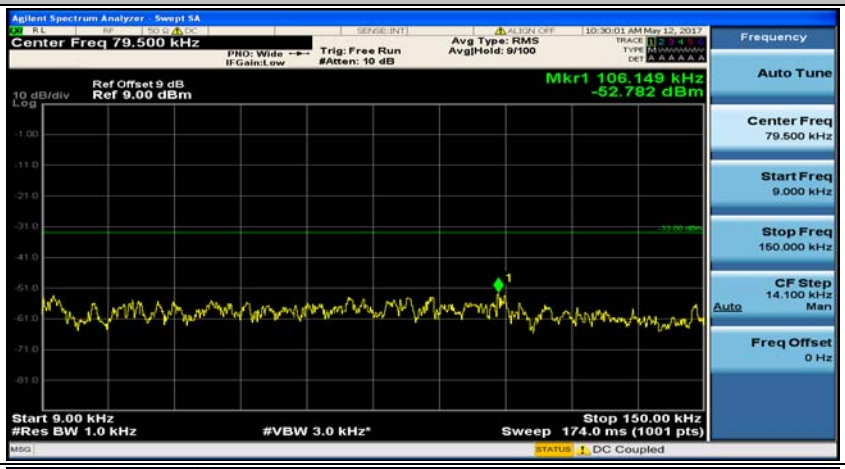
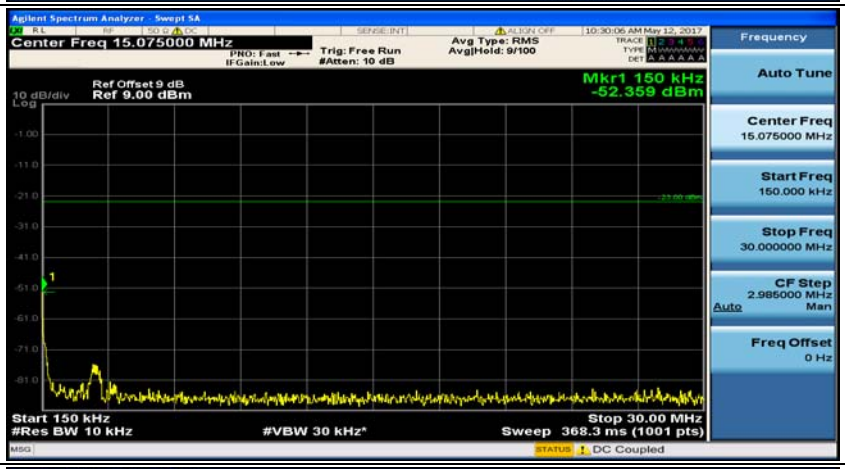
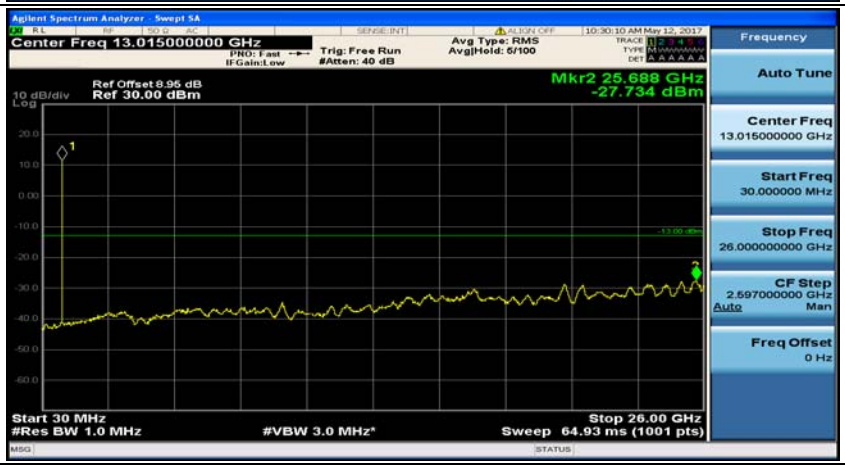


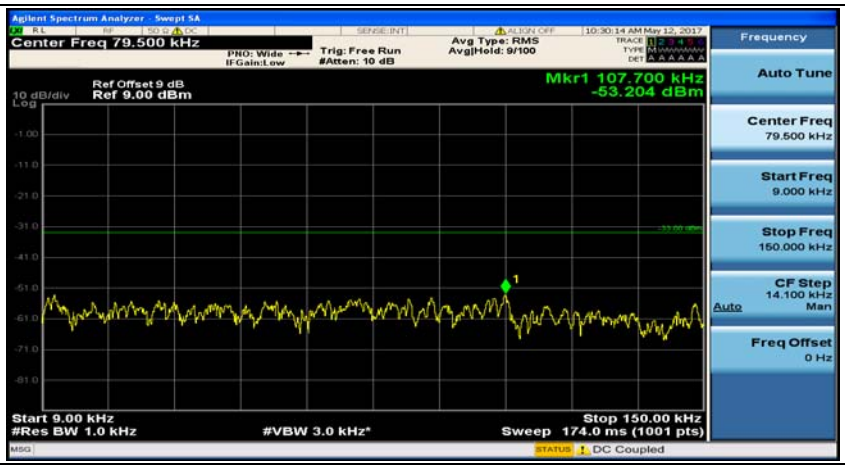
(Channel Bandwidth: 5 MHz)_LCH_16QAM_1RB#24

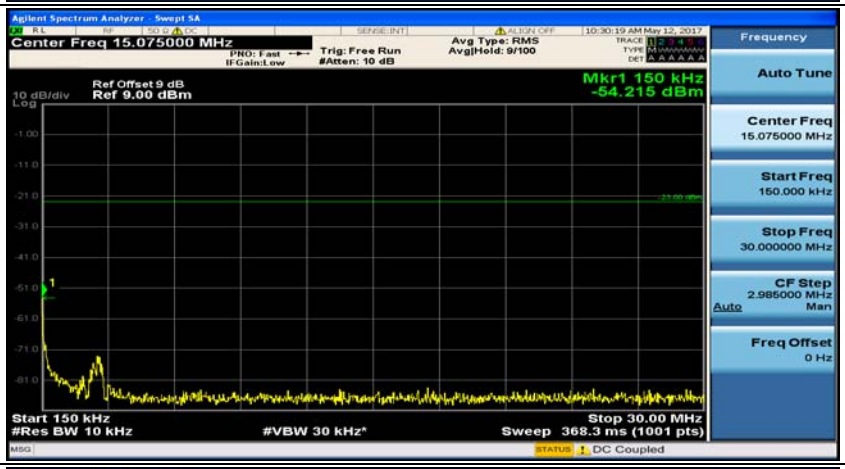

Agilent Spectrum Analyzer - Swept SA
Center Freq 79.500 kHz
PNO: Wide
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 9/100
10:29:03 AM May 12, 2017
Frequency
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Mkr1 19.857 kHz
-51.577 dBm
Auto Tune
Center Freq
79.500 kHz
Start Freq
9.000 kHz
Stop Freq
150.000 kHz
CF Step
14.100 kHz
Auto
Man
Freq Offset
0 Hz
Start 9.00 kHz
#Res BW 1.0 kHz
#VBW 3.0 kHz*
Stop 150.00 kHz
Sweep 174.0 ms (1001 pts)
DC Coupled

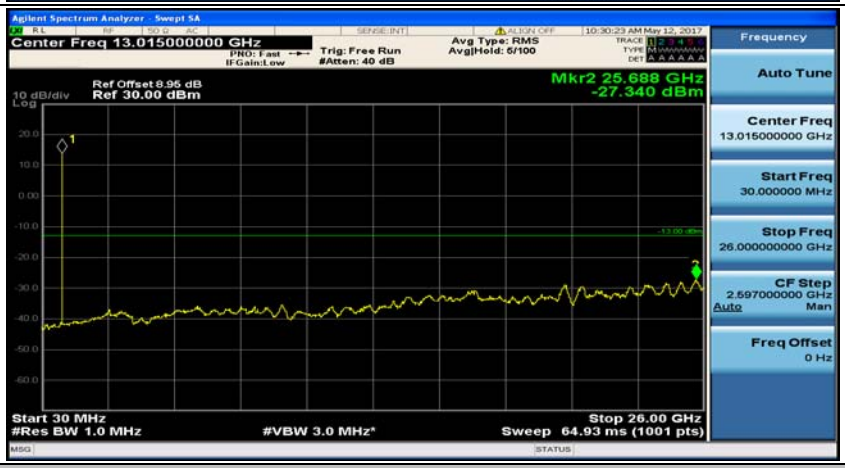

Agilent Spectrum Analyzer - Swept SA
Center Freq 15.075000 MHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 9/100
10:29:08 AM May 12, 2017
Frequency
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Mkr1 150 kHz
-51.188 dBm
Auto Tune
Center Freq
15.075000 MHz
Start Freq
150.000 kHz
Stop Freq
30.000000 MHz
CF Step
2.985000 MHz
Auto
Man
Freq Offset
0 Hz
Start 150 kHz
#Res BW 10 kHz
#VBW 30 kHz*
Stop 30.00 MHz
Sweep 368.3 ms (1001 pts)
DC Coupled


Agilent Spectrum Analyzer - Swept SA
Center Freq 13.015000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 40 dB
Avg Type: RMS
Avg|Hold: 5/100
10:29:12 AM May 12, 2017
Frequency
Ref Offset 8.95 dB
10 dB/div
Log
Ref 30.00 dBm
Mkr2 25.662 GHz
-27.569 dBm
Auto Tune
Center Freq
13.015000000 GHz
Start Freq
30.000000 MHz
Stop Freq
26.000000000 GHz
CF Step
2.597000000 GHz
Auto
Man
Freq Offset
0 Hz
Start 30 MHz
#Res BW 1.0 MHz
#VBW 3.0 MHz*
Stop 26.00 GHz
Sweep 64.93 ms (1001 pts)

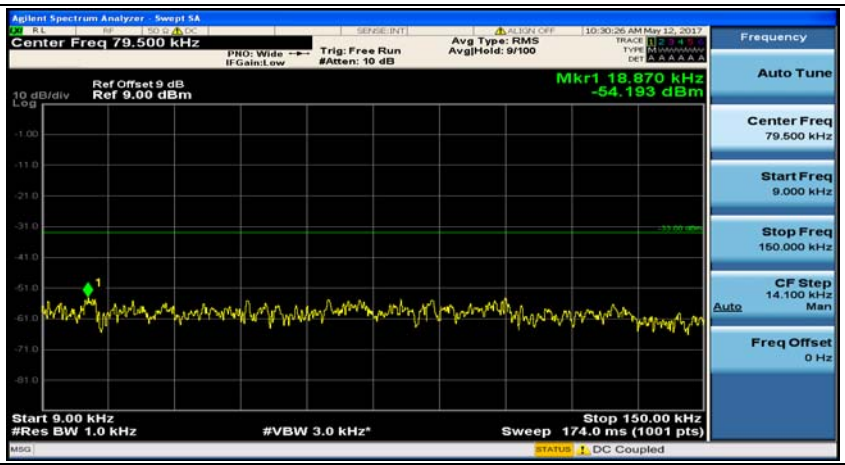
(Channel Bandwidth: 5 MHz)_MCH_16QAM_1RB#0



(Channel Bandwidth: 5 MHz)_MCH_16QAM_1RB#12

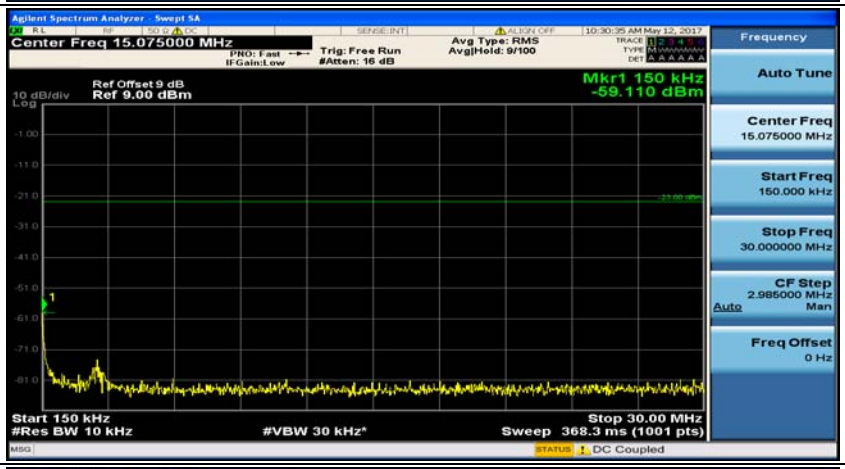


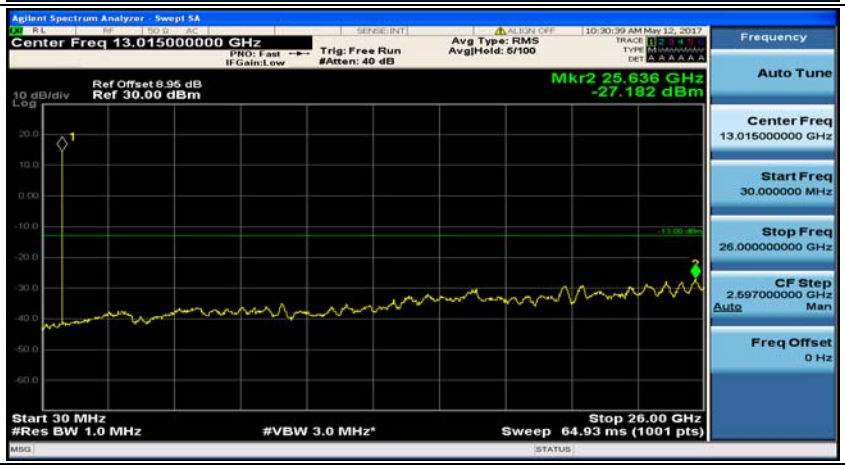


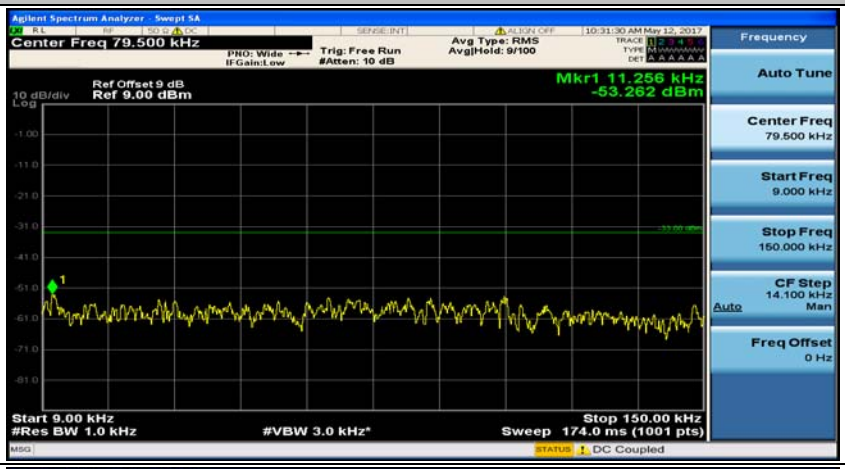
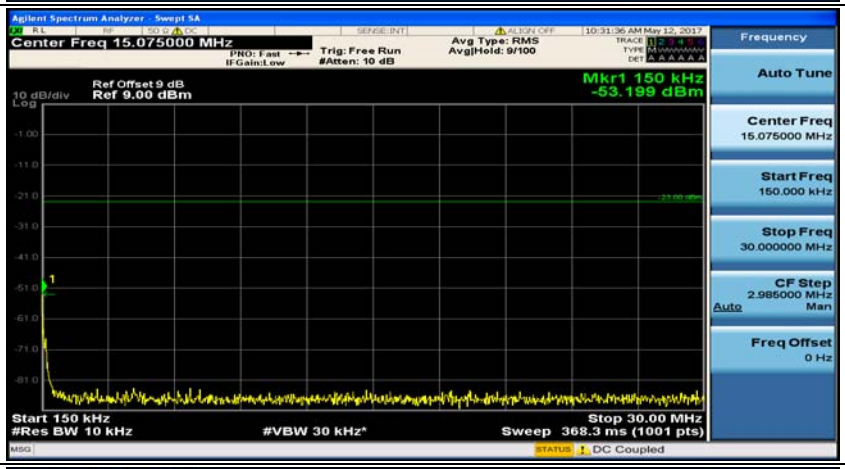
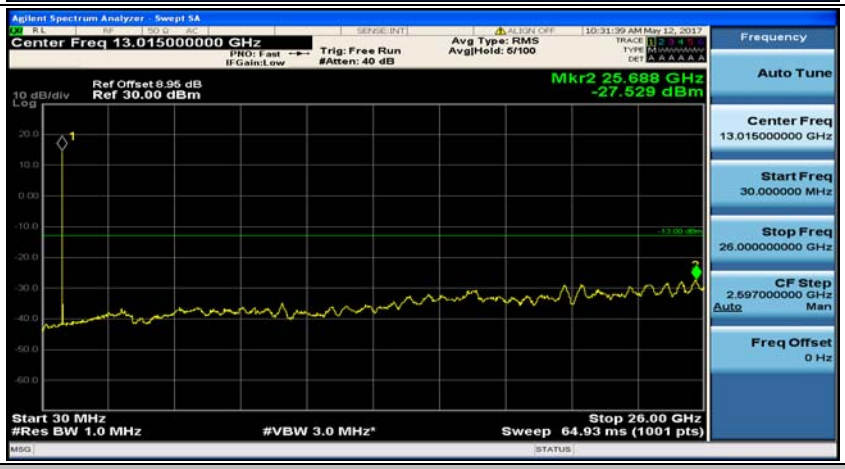


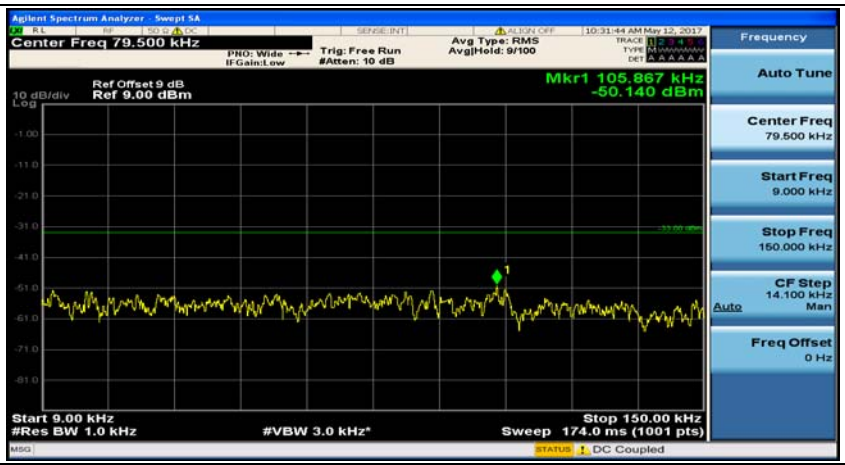
(Channel Bandwidth: 5 MHz)_MCH_16QAM_1RB#24

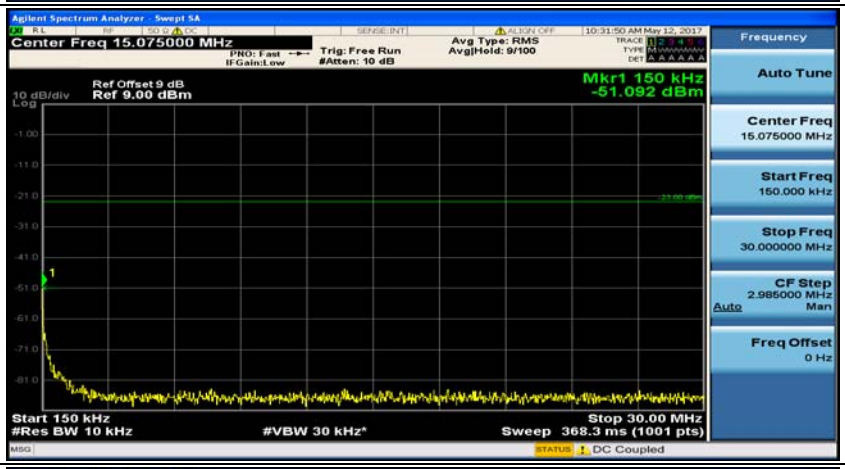

Agilent Spectrum Analyzer - Swept SA
Center Freq 79.500 kHz
PNO: Wide
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 9/100
10:30:26 AM May 12, 2017
Frequency
Auto Tune
Mkr1 18.870 kHz
-54.193 dBm
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Center Freq
79.500 kHz
Start Freq
9.000 kHz
Stop 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

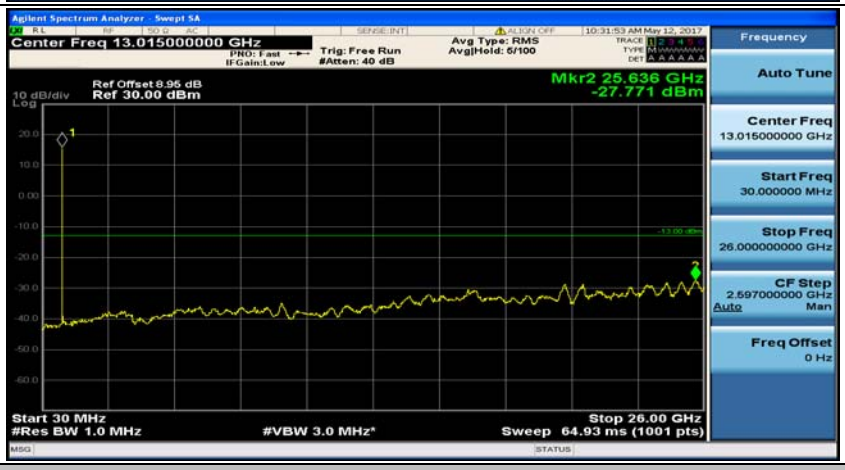

Agilent Spectrum Analyzer - Swept SA
Center Freq 15.075000 MHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 16 dB
Avg Type: RMS
Avg|Hold: 9/100
10:30:35 AM May 12, 2017
Frequency
Auto Tune
Mkr1 150 kHz
-59.110 dBm
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Center Freq
15.075000 MHz
Start Freq
150.000 kHz
Stop Freq
30.000000 MHz
CF Step
2.985000 MHz
Auto
Man
Freq Offset
0 Hz
Start 150 kHz
#Res BW 10 kHz
#VBW 30 kHz*
Stop 30.00 MHz
Sweep 368.3 ms (1001 pts)
DC Coupled


Agilent Spectrum Analyzer - Swept SA
Center Freq 13.015000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 40 dB
Avg Type: RMS
Avg|Hold: 5/100
10:30:39 AM May 12, 2017
Frequency
Auto Tune
Mkr2 25.636 GHz
-27.182 dBm
Ref Offset 8.95 dB
10 dB/div
Log
Ref 30.00 dBm
Center Freq
13.015000000 GHz
Start Freq
30.000000 MHz
Stop Freq
26.000000000 GHz
CF Step
2.597000000 GHz
Auto
Man
Freq Offset
0 Hz
Start 30 MHz
#Res BW 1.0 MHz
#VBW 3.0 MHz*
Stop 26.00 GHz
Sweep 64.93 ms (1001 pts)

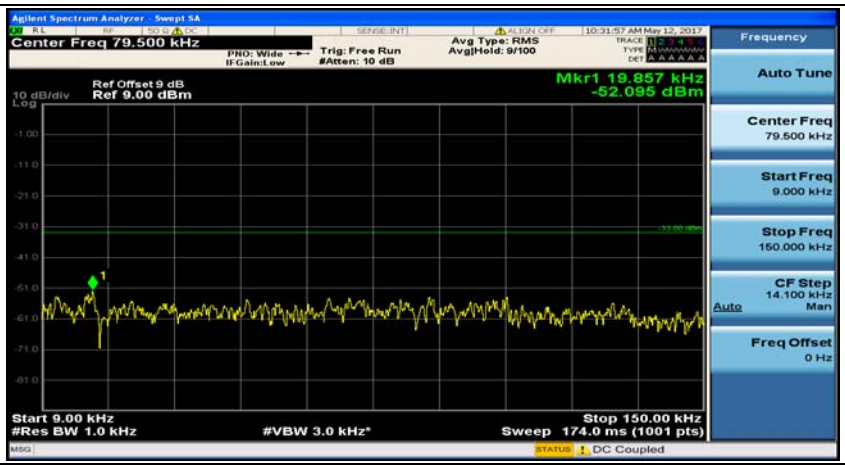
(Channel Bandwidth: 5 MHz)_HCH_16QAM_1RB#0



(Channel Bandwidth: 5 MHz)_HCH_16QAM_1RB#12

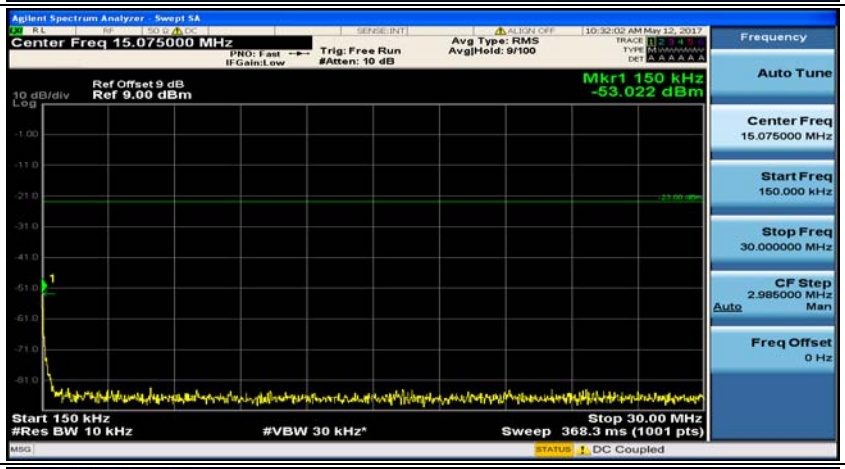


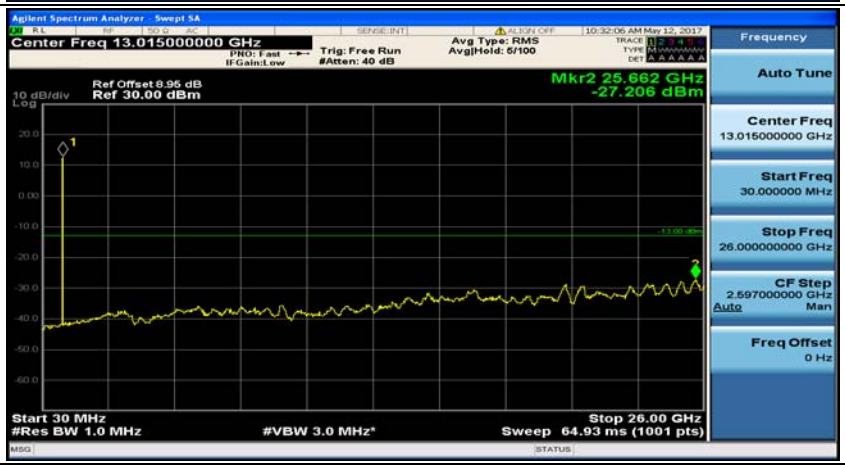




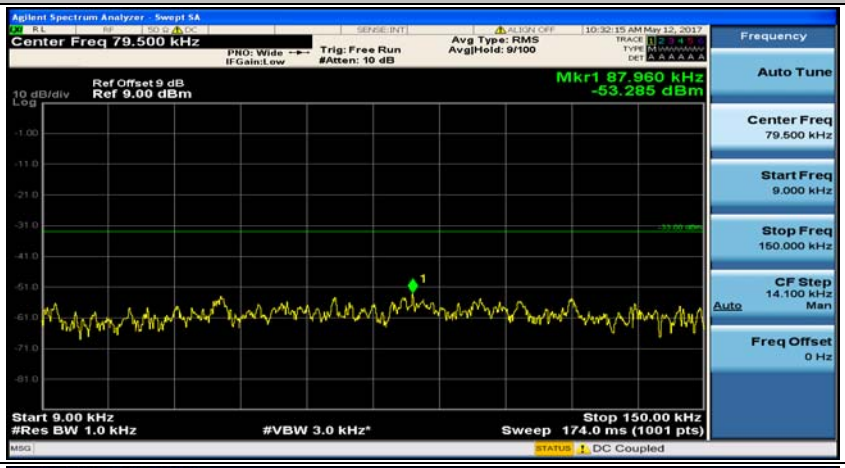
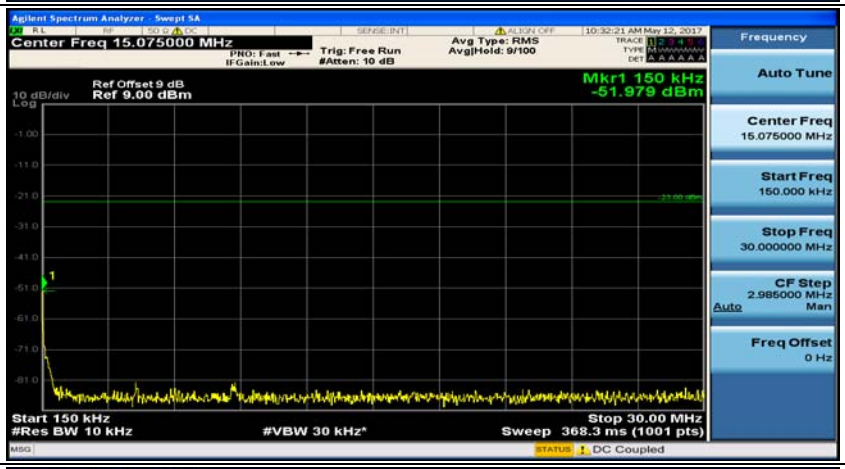
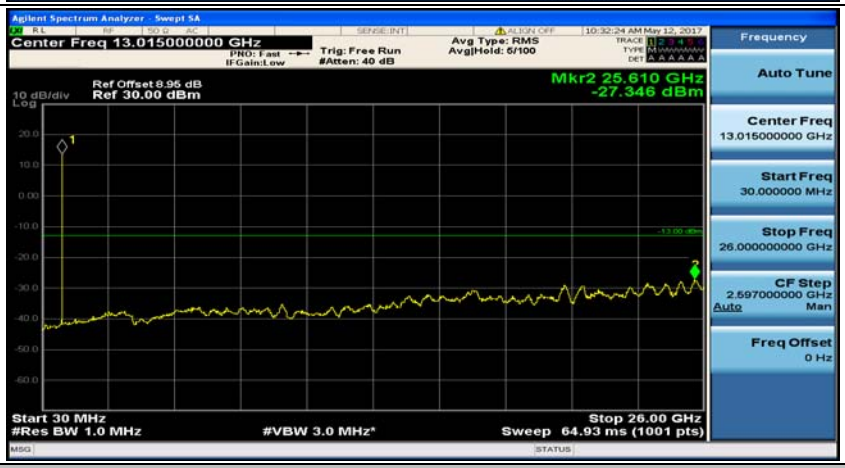
(Channel Bandwidth: 5 MHz)_HCH_16QAM_1RB#24

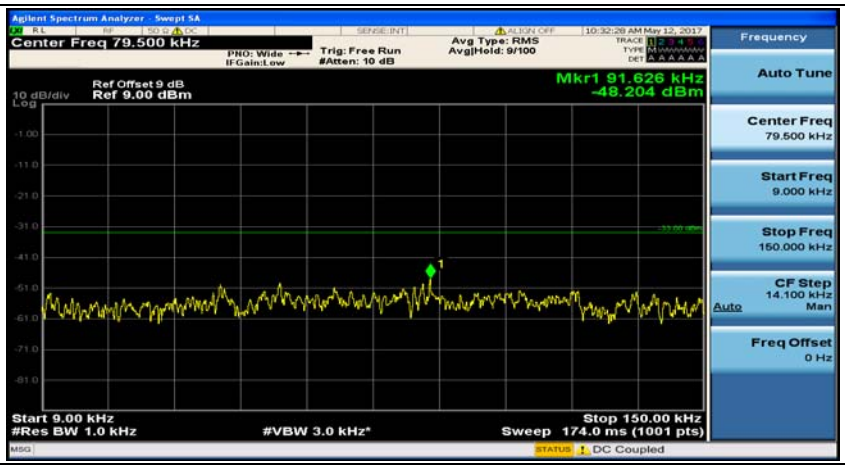

Agilent Spectrum Analyzer - Swept SA
Center Freq 79.500 kHz
PNO: Wide
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 9/100
10:31:57 AM May 12, 2017
Frequency
Mkr1 19.857 kHz
-52.095 dBm
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Auto Tune
Center Freq
79.500 kHz
Start Freq
9.000 kHz
Stop Freq
150.000 kHz
CF Step
14.100 kHz
Auto
Man
Freq Offset
0 Hz
Start 9.00 kHz
#Res BW 1.0 kHz
#VBW 3.0 kHz*
Stop 150.00 kHz
Sweep 174.0 ms (1001 pts)
DC Coupled

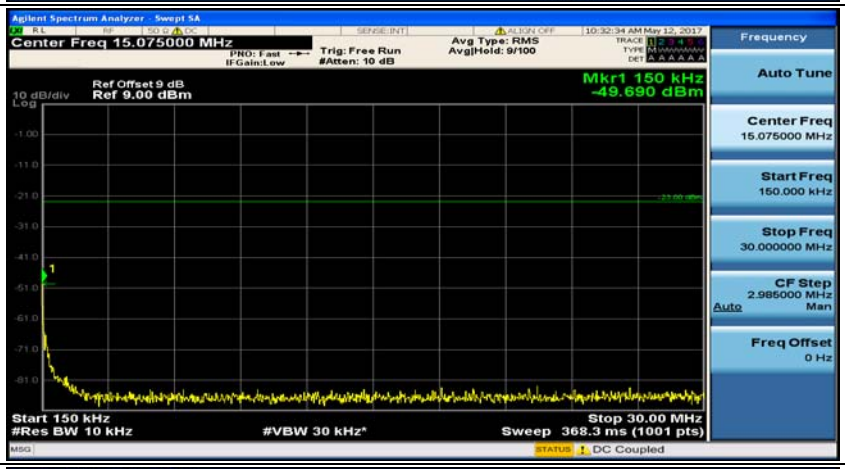

Agilent Spectrum Analyzer - Swept SA
Center Freq 15.075000 MHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 9/100
10:32:02 AM May 12, 2017
Frequency
Mkr1 150 kHz
-53.022 dBm
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Auto Tune
Center Freq
15.075000 MHz
Start Freq
150.000 kHz
Stop Freq
30.000000 MHz
CF Step
2.985000 MHz
Auto
Man
Freq Offset
0 Hz
Start 150 kHz
#Res BW 10 kHz
#VBW 30 kHz*
Stop 30.00 MHz
Sweep 368.3 ms (1001 pts)
DC Coupled

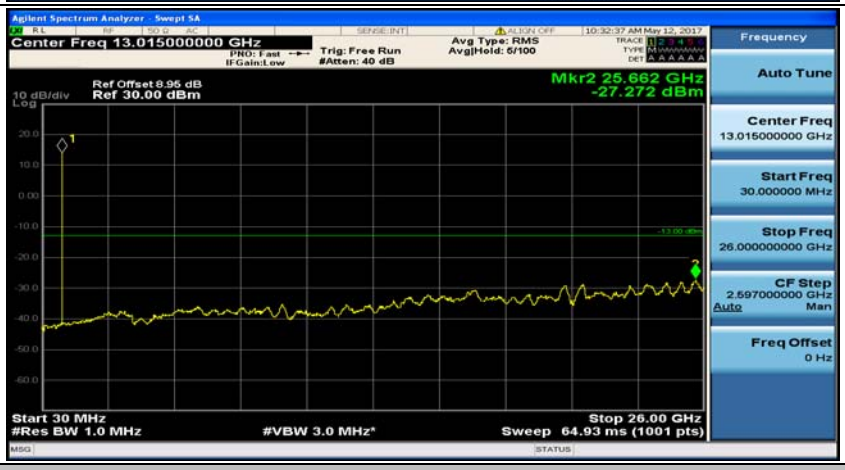

Agilent Spectrum Analyzer - Swept SA
Center Freq 13.015000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 40 dB
Avg Type: RMS
Avg|Hold: 5/100
10:32:06 AM May 12, 2017
Frequency
Mkr2 25.662 GHz
-27.206 dBm
Ref Offset 8.95 dB
10 dB/div
Log
Ref 30.00 dBm
Auto Tune
Center Freq
13.015000000 GHz
Start 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

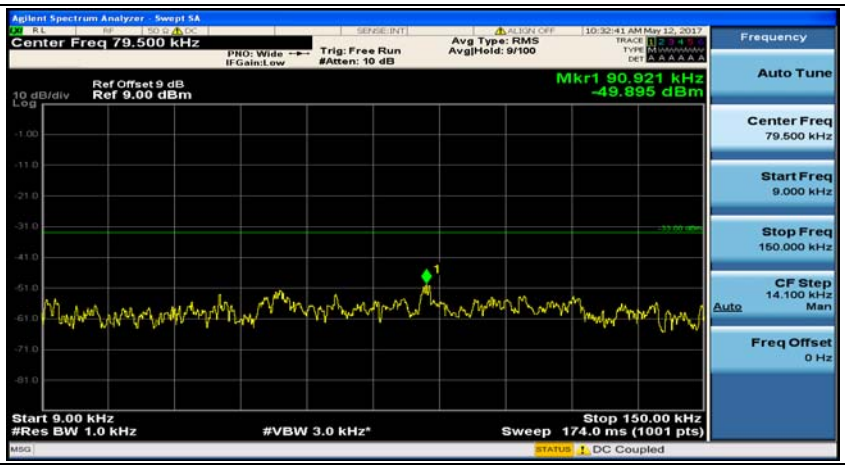
Channel Bandwidth: 10 MHz_LCH_QPSK_1RB#0



Channel Bandwidth: 10 MHz_LCH_QPSK_1RB#24

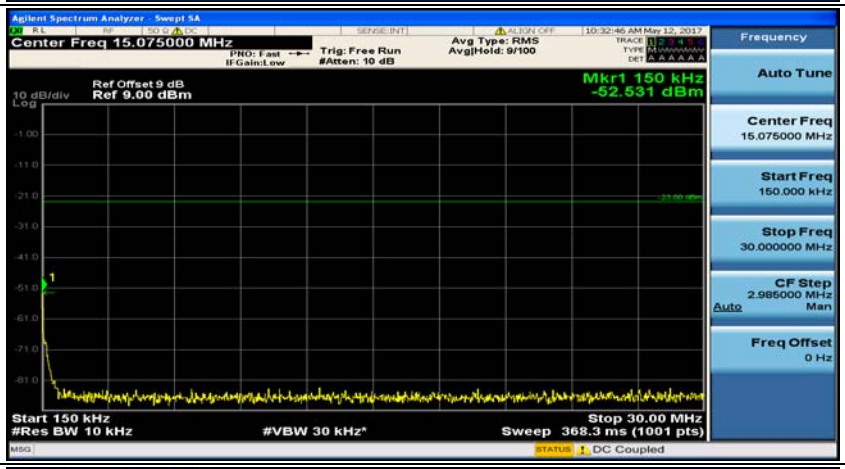


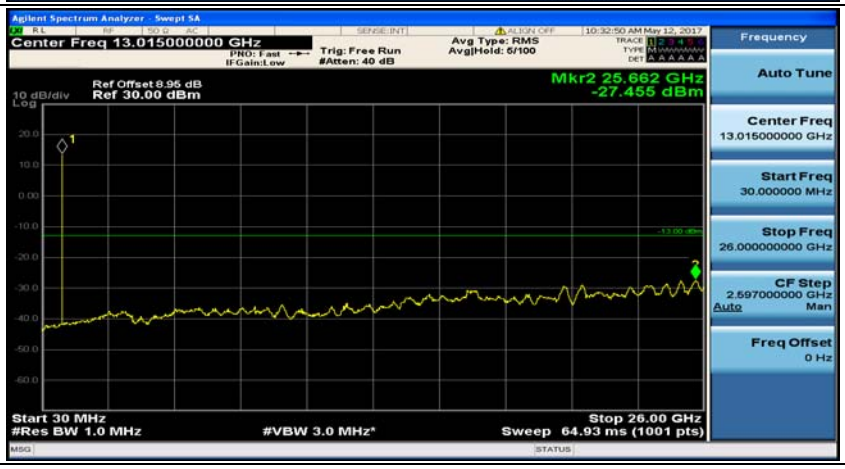


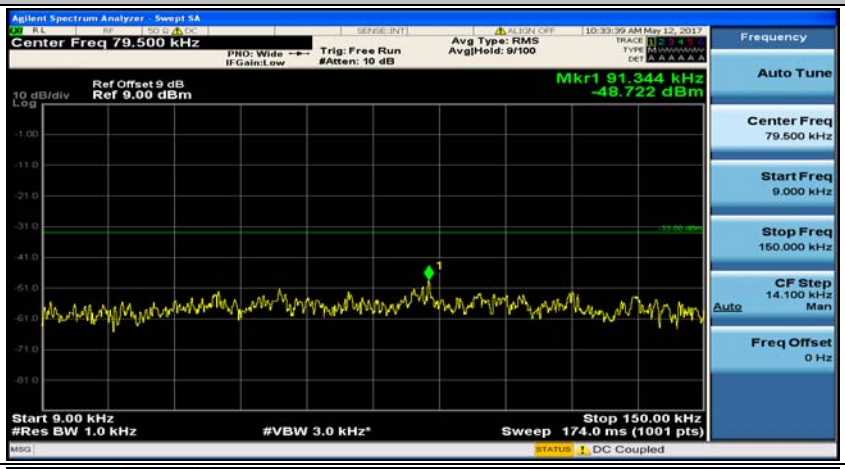
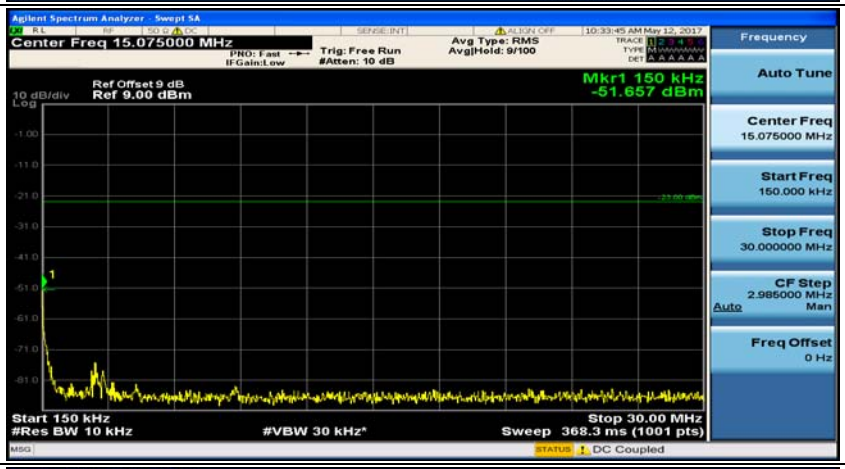
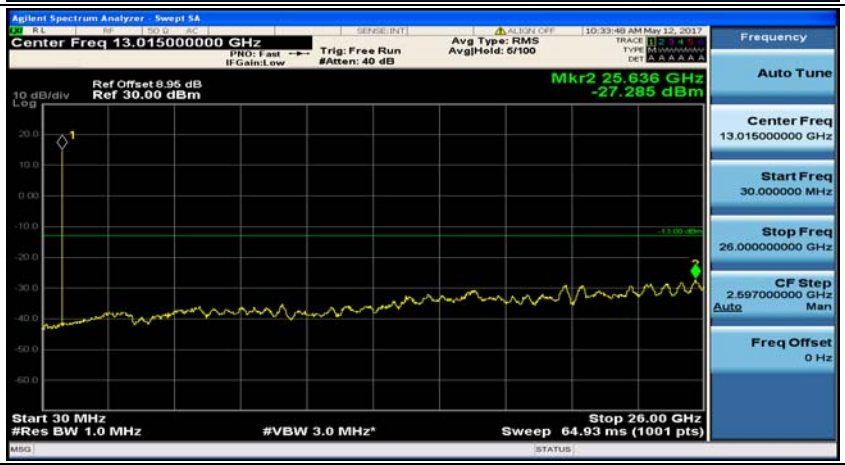


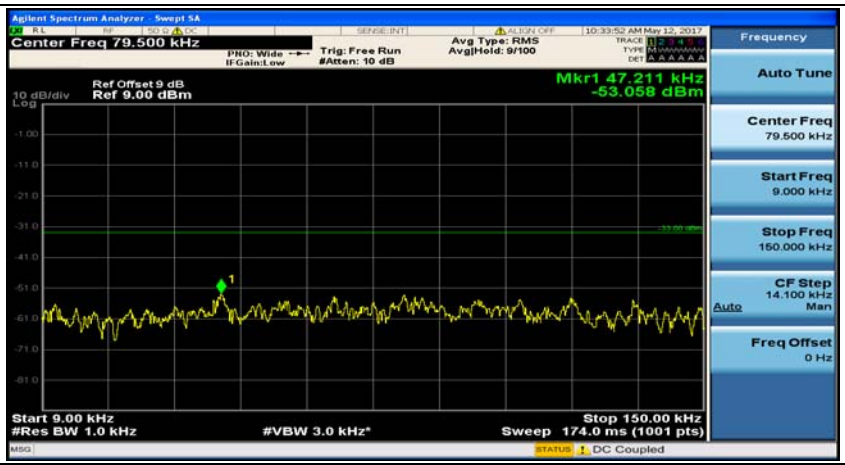
Channel Bandwidth: 10 MHz_LCH_QPSK_1RB#49

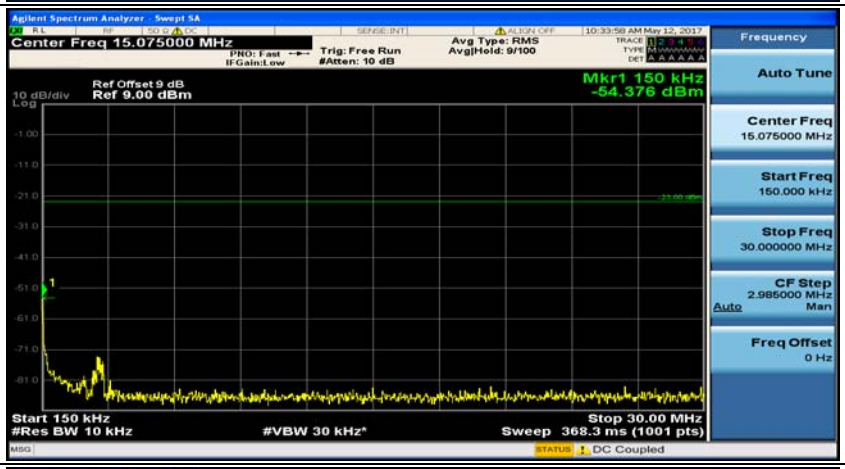

Agilent Spectrum Analyzer - Swept SA
Center Freq 79.500 kHz
PNO: Wide
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 9/100
10:32:41 AM May 12, 2017
Frequency
Auto Tune
Ref Offset 9 dB
10 dB/div
Ref 9.00 dBm
Mkr1 90.921 kHz
-49.895 dBm
Center Freq
79.500 kHz
Start Freq
9.000 kHz
Stop Freq
150.000 kHz
CF Step
14.100 kHz
Auto
Man
Freq Offset
0 Hz
Start 9.00 kHz
#Res BW 1.0 kHz
#VBW 3.0 kHz*
Stop 150.00 kHz
Sweep 174.0 ms (1001 pts)
DC Coupled


Agilent Spectrum Analyzer - Swept SA
Center Freq 15.075000 MHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 9/100
10:32:46 AM May 12, 2017
Frequency
Auto Tune
Ref Offset 9 dB
10 dB/div
Ref 9.00 dBm
Mkr1 150 kHz
-52.531 dBm
Center Freq
15.075000 MHz
Start Freq
150.000 kHz
Stop Freq
30.000000 MHz
CF Step
2.985000 MHz
Auto
Man
Freq Offset
0 Hz
Start 150 kHz
#Res BW 10 kHz
#VBW 30 kHz*
Stop 30.00 MHz
Sweep 368.3 ms (1001 pts)
DC Coupled

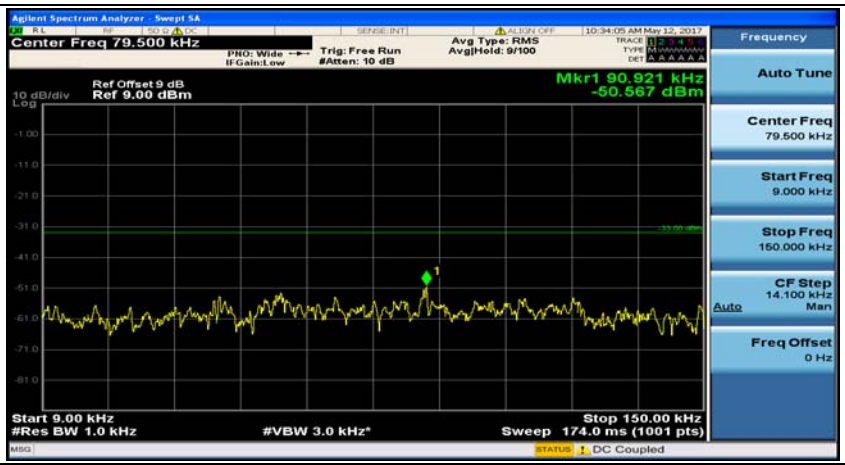

Agilent Spectrum Analyzer - Swept SA
Center Freq 13.015000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 40 dB
Avg Type: RMS
Avg|Hold: 5/100
10:32:50 AM May 12, 2017
Frequency
Auto Tune
Ref Offset 8.95 dB
10 dB/div
Ref 30.00 dBm
Mkr2 25.662 GHz
-27.455 dBm
Center Freq
13.015000000 GHz
Start Freq
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)

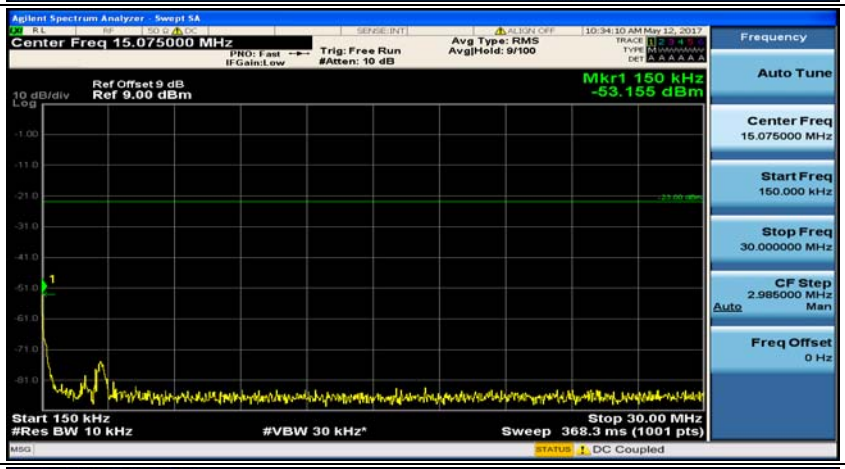
Channel Bandwidth: 10 MHz_MCH_QPSK_1RB#0



Channel Bandwidth: 10 MHz_MCH_QPSK_1RB#24

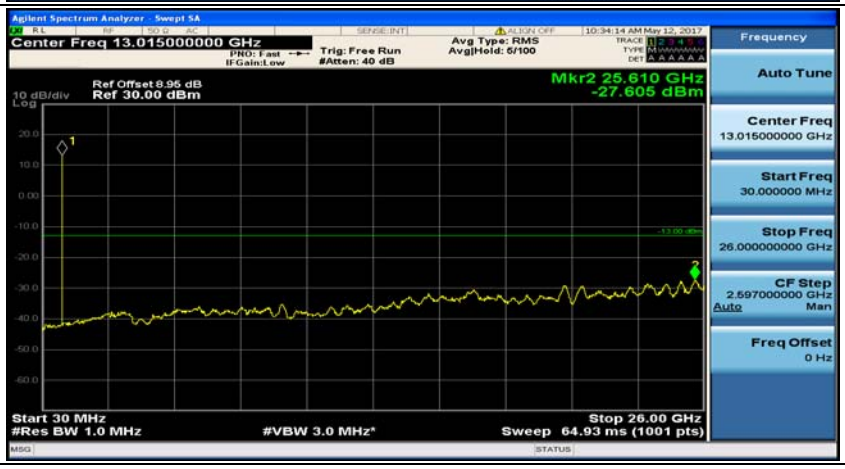


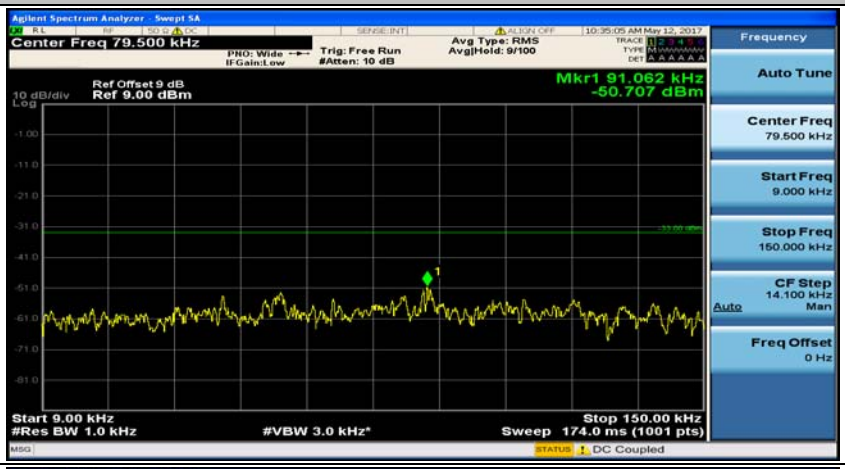
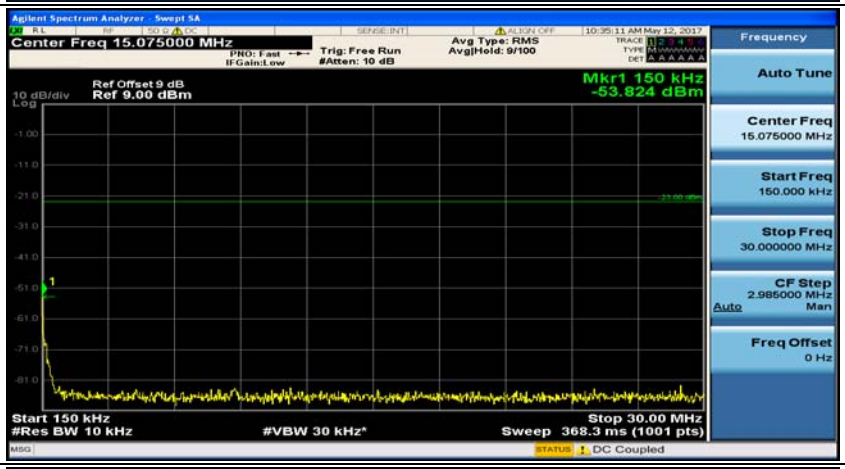
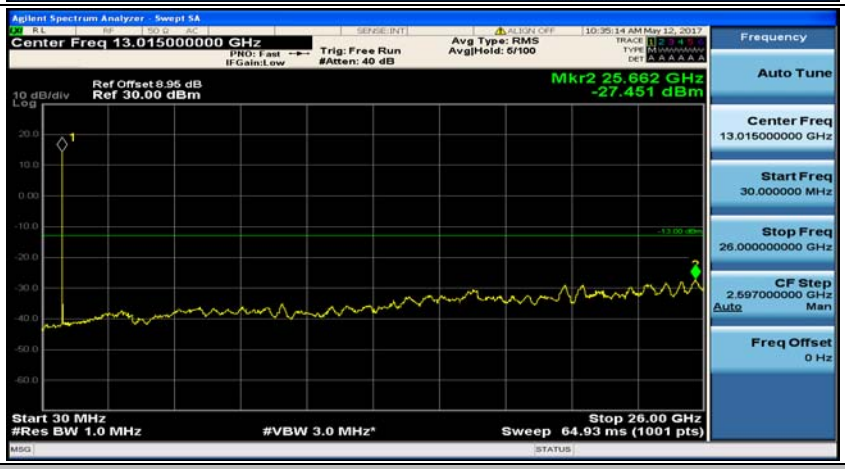


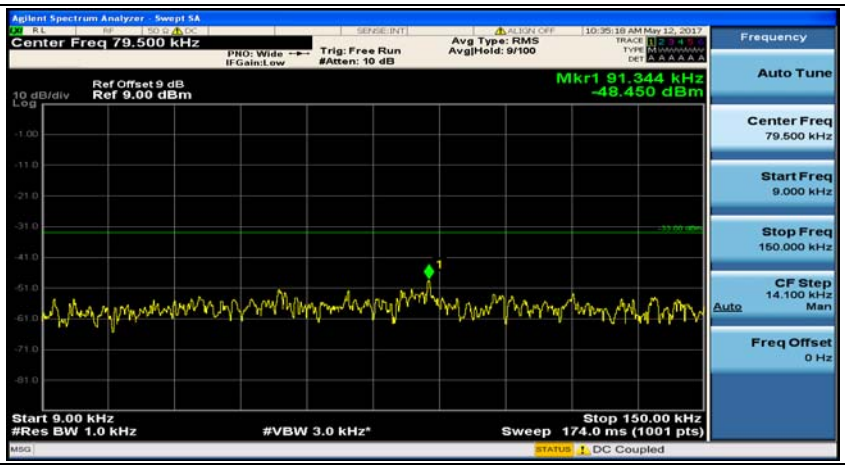
Channel Bandwidth: 10 MHz_MCH_QPSK_1RB#49

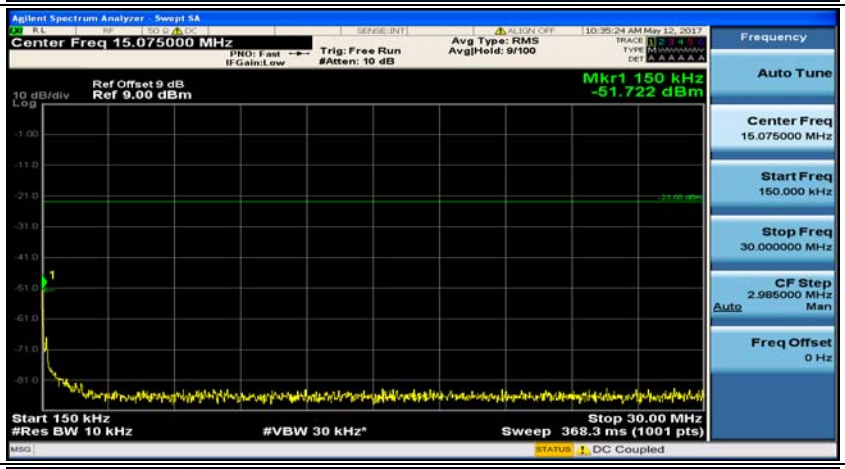

Agilent Spectrum Analyzer - Swept SA
Center Freq 79.500 kHz
PNO: Wide
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 9/100
10:34:05 AM May 12, 2017
Frequency
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Mkr1 90.921 kHz
-50.567 dBm
Auto Tune
Center Freq
79.500 kHz
Start Freq
9.000 kHz
Stop Freq
150.000 kHz
CF Step
14.100 kHz
Auto
Man
Freq Offset
0 Hz
Start 9.00 kHz
#Res BW 1.0 kHz
#VBW 3.0 kHz*
Stop 150.00 kHz
Sweep 174.0 ms (1001 pts)
DC Coupled

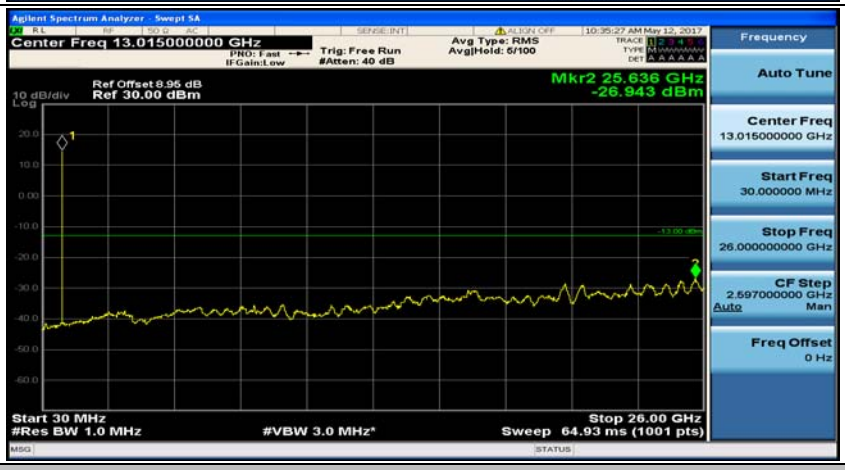

Agilent Spectrum Analyzer - Swept SA
Center Freq 15.075000 MHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 9/100
10:34:10 AM May 12, 2017
Frequency
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Mkr1 150 kHz
-53.155 dBm
Auto Tune
Center Freq
15.075000 MHz
Start Freq
150.000 kHz
Stop Freq
30.000000 MHz
CF Step
2.985000 MHz
Auto
Man
Freq Offset
0 Hz
Start 150 kHz
#Res BW 10 kHz
#VBW 30 kHz*
Stop 30.00 MHz
Sweep 368.3 ms (1001 pts)
DC Coupled


Agilent Spectrum Analyzer - Swept SA
Center Freq 13.015000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 40 dB
Avg Type: RMS
Avg|Hold: 5/100
10:34:14 AM May 12, 2017
Frequency
Ref Offset 8.95 dB
10 dB/div
Log
Ref 30.00 dBm
Mkr2 25.610 GHz
-27.605 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)

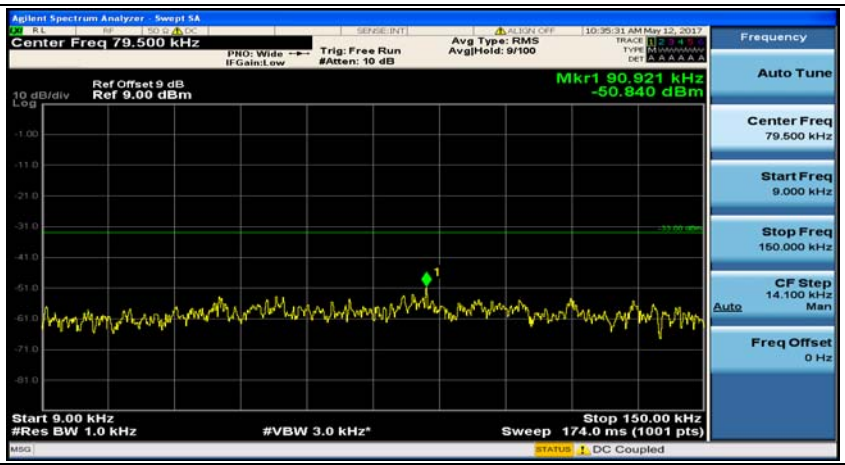
Channel Bandwidth: 10 MHz_HCH_QPSK_1RB#0



Channel Bandwidth: 10 MHz_HCH_QPSK_1RB#24

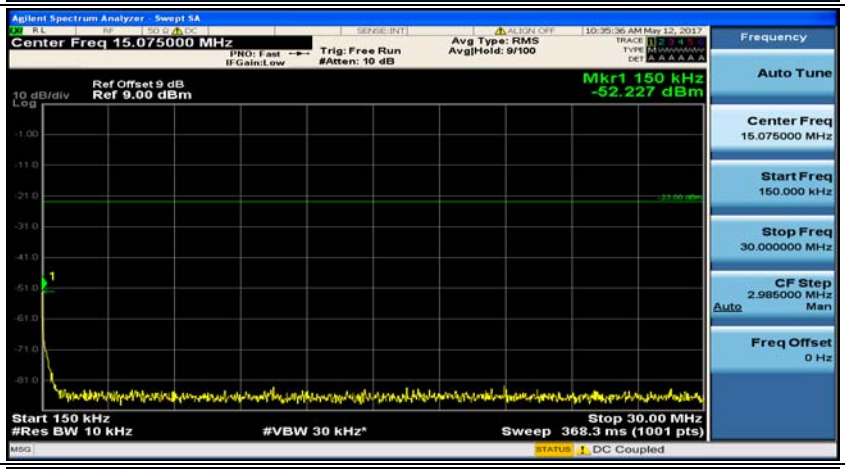


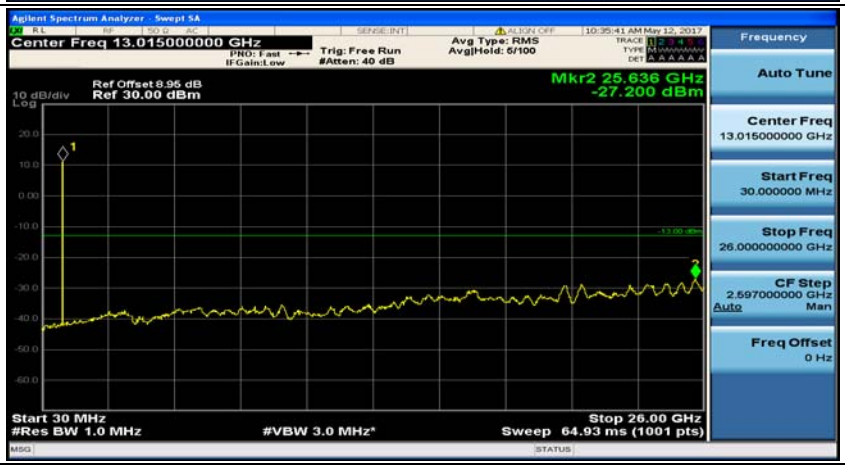


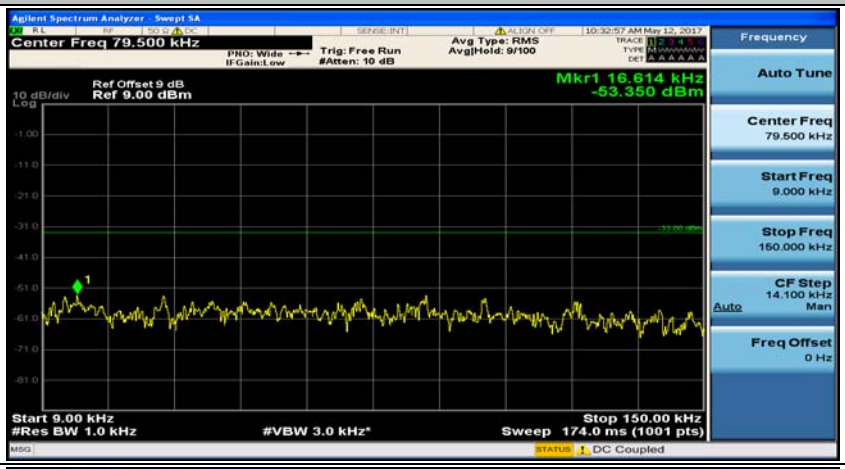
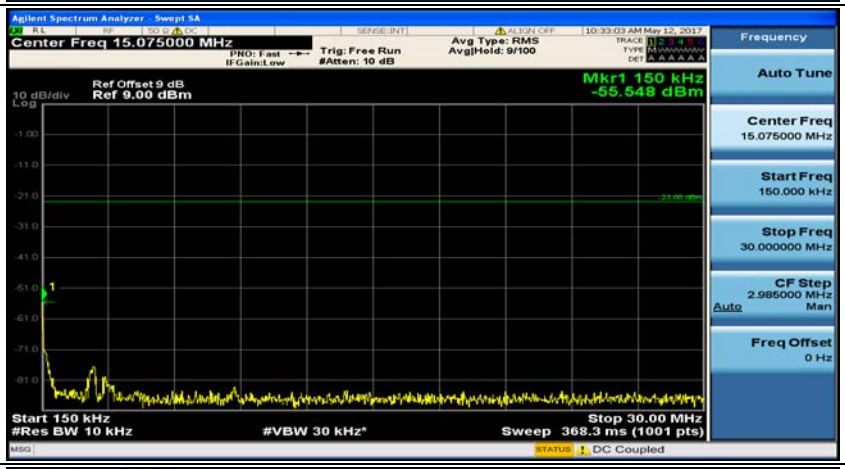
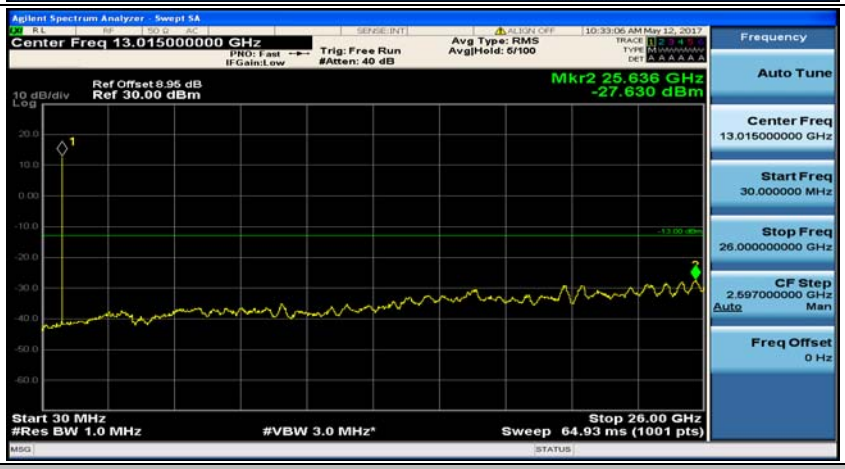


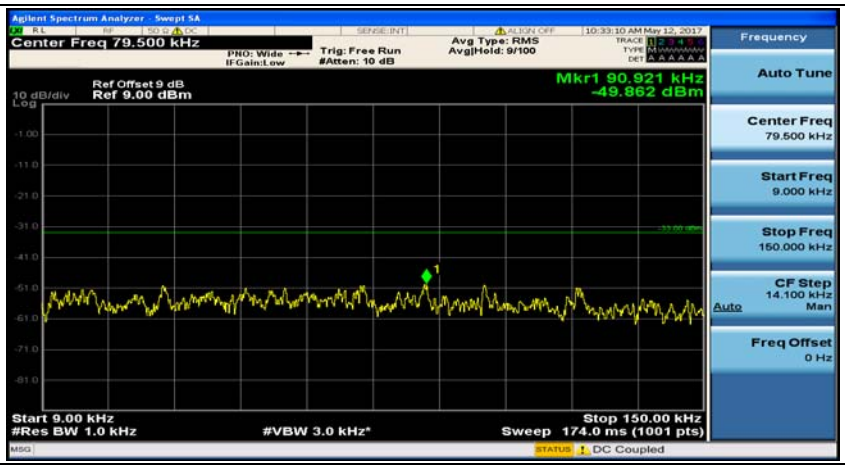
Channel Bandwidth: 10 MHz_HCH_QPSK_1RB#49

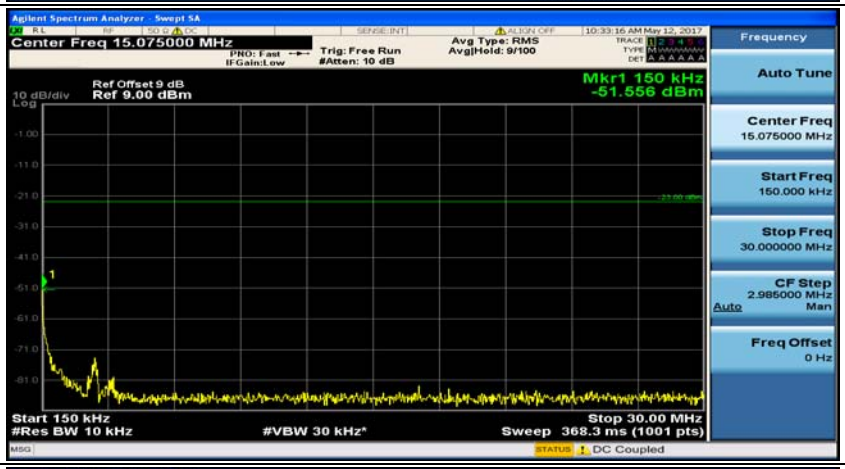

Agilent Spectrum Analyzer - Swept SA
Center Freq 79.500 kHz
PNO: Wide
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 9/100
10:35:31 AM May 12, 2017
Frequency
Auto Tune
Mkr1 90.921 kHz
-50.840 dBm
Ref Offset 9 dB
10 dB/div
Ref 9.00 dBm
Log
Center Freq
79.500 kHz
Start Freq
9.000 kHz
Stop Freq
150.000 kHz
CF Step
14.100 kHz
Auto
Man
Freq Offset
0 Hz
Start 9.00 kHz
#Res BW 1.0 kHz
#VBW 3.0 kHz*
Stop 150.00 kHz
Sweep 174.0 ms (1001 pts)
DC Coupled

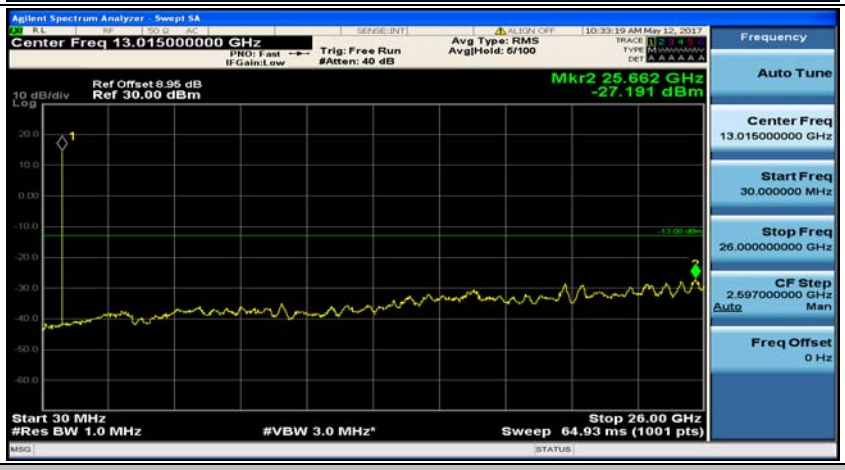

Agilent Spectrum Analyzer - Swept SA
Center Freq 15.075000 MHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 9/100
10:35:36 AM May 12, 2017
Frequency
Auto Tune
Mkr1 150 kHz
-52.227 dBm
Ref Offset 9 dB
10 dB/div
Ref 9.00 dBm
Log
Center Freq
15.075000 MHz
Start Freq
150.000 kHz
Stop Freq
30.000000 MHz
CF Step
2.985000 MHz
Auto
Man
Freq Offset
0 Hz
Start 150 kHz
#Res BW 10 kHz
#VBW 30 kHz*
Stop 30.00 MHz
Sweep 368.3 ms (1001 pts)
DC Coupled


Agilent Spectrum Analyzer - Swept SA
Center Freq 13.015000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 40 dB
Avg Type: RMS
Avg|Hold: 5/100
10:35:41 AM May 12, 2017
Frequency
Auto Tune
Mkr2 25.636 GHz
-27.200 dBm
Ref Offset 8.95 dB
10 dB/div
Ref 30.00 dBm
Log
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)

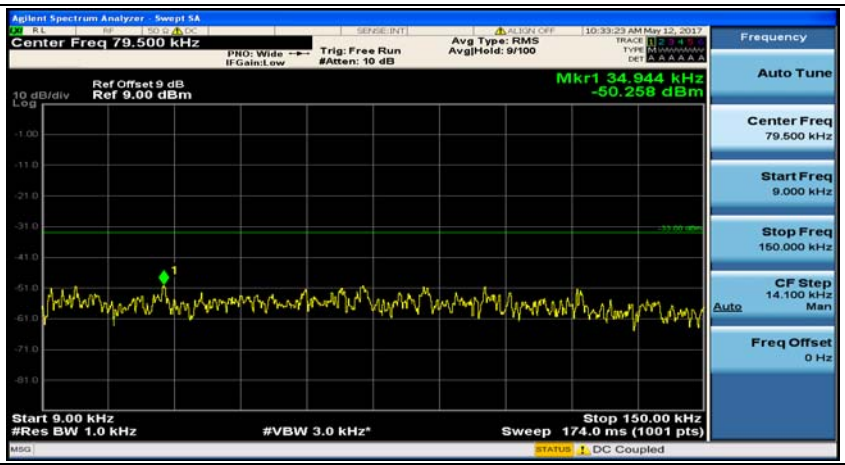
Channel Bandwidth: 10 MHz_LCH_16QAM_1RB#0



Channel Bandwidth: 10 MHz_LCH_16QAM_1RB#24

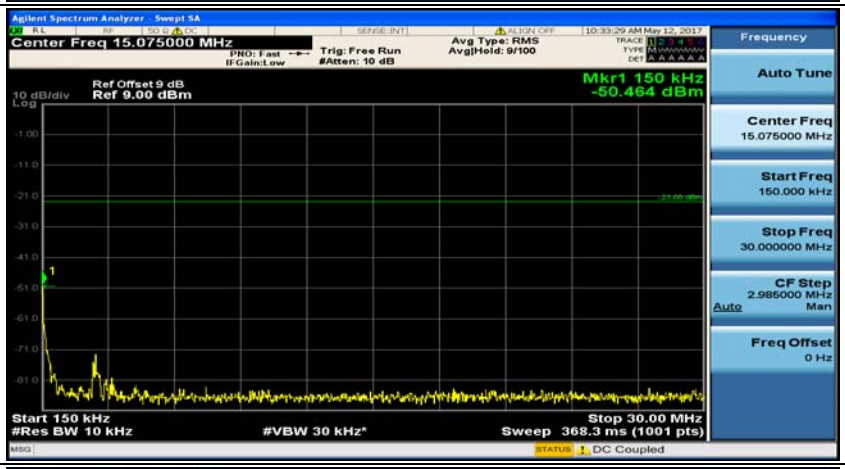


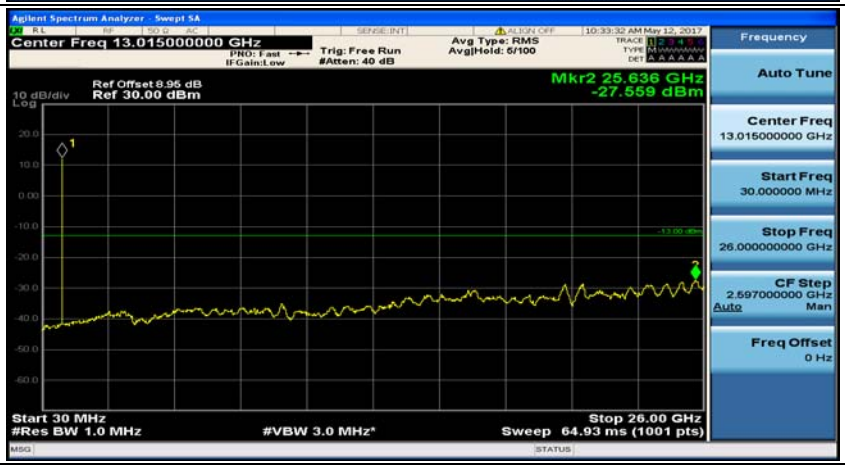


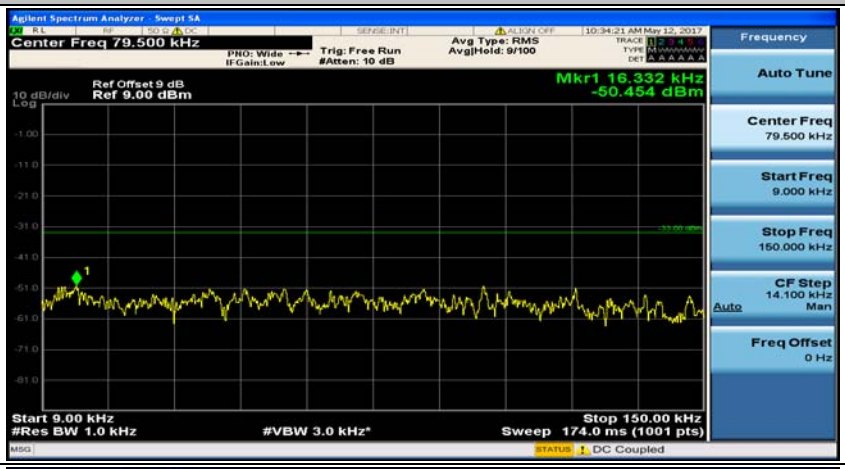
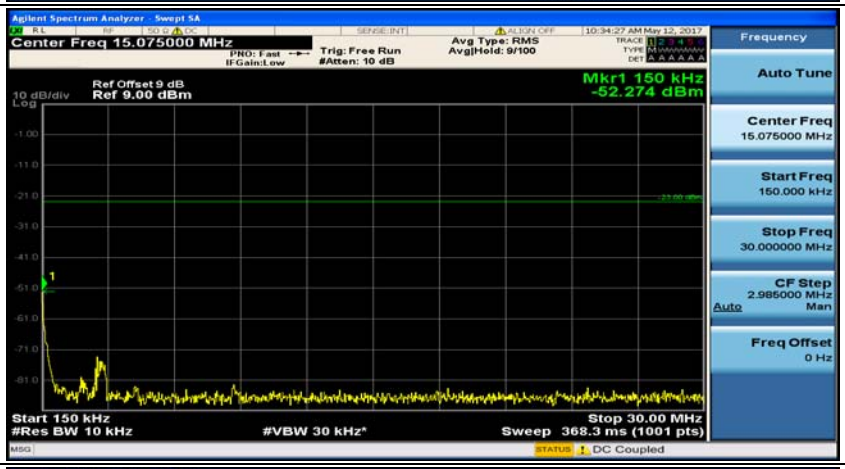
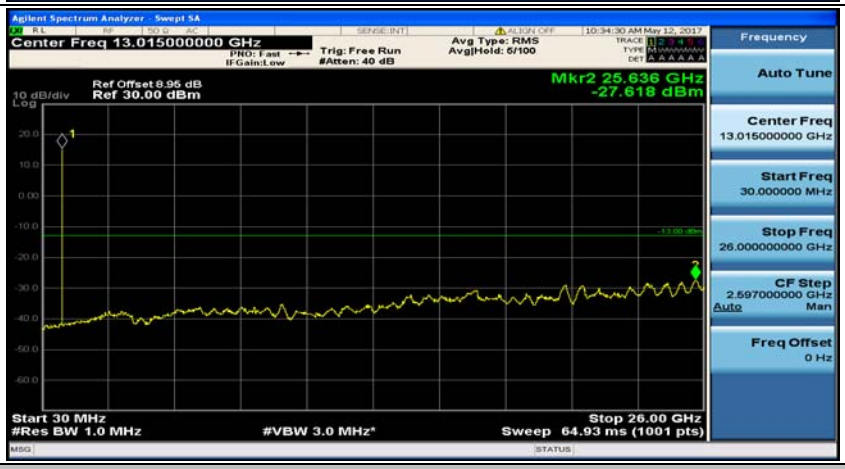


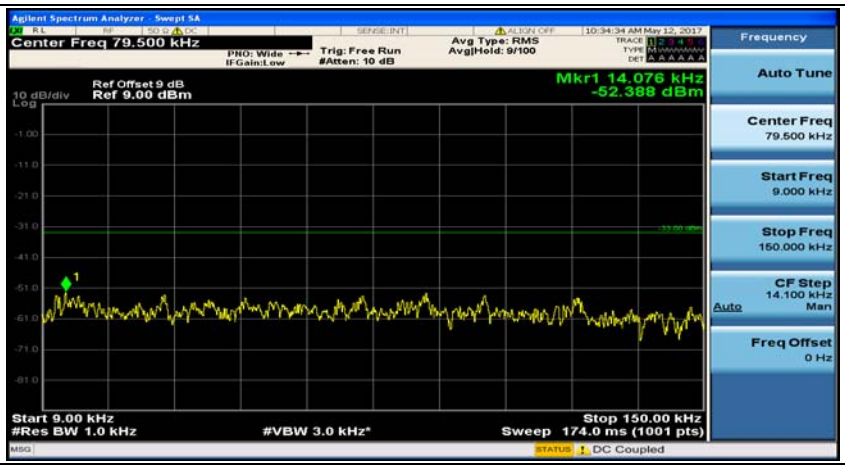
Channel Bandwidth: 10 MHz_LCH_16QAM_1RB#49

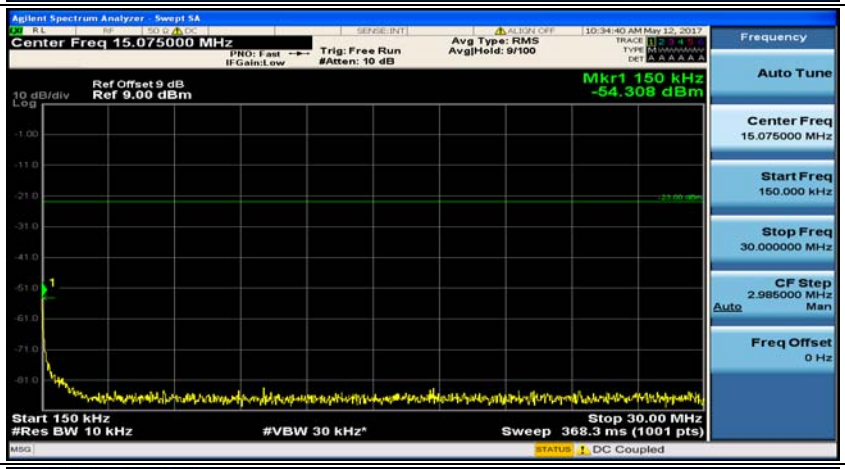

Agilent Spectrum Analyzer - Swept SA
Center Freq 79.500 kHz
PNO: Wide
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 9/100
10:33:23 AM May 12, 2017
Frequency
Auto Tune
Ref Offset 9 dB
10 dB/div
Ref 9.00 dBm
Mkr1 34.944 kHz
-50.258 dBm
Center Freq
79.500 kHz
Start Freq
9.000 kHz
Stop Freq
150.000 kHz
CF Step
14.100 kHz
Auto
Man
Freq Offset
0 Hz
Start 9.00 kHz
#Res BW 1.0 kHz
#VBW 3.0 kHz*
Stop 150.00 kHz
Sweep 174.0 ms (1001 pts)
DC Coupled


Agilent Spectrum Analyzer - Swept SA
Center Freq 15.075000 MHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 9/100
10:33:29 AM May 12, 2017
Frequency
Auto Tune
Ref Offset 9 dB
10 dB/div
Ref 9.00 dBm
Mkr1 150 kHz
-50.464 dBm
Center Freq
15.075000 MHz
Start Freq
150.000 kHz
Stop Freq
30.000000 MHz
CF Step
2.985000 MHz
Auto
Man
Freq Offset
0 Hz
Start 150 kHz
#Res BW 10 kHz
#VBW 30 kHz*
Stop 30.00 MHz
Sweep 368.3 ms (1001 pts)
DC Coupled

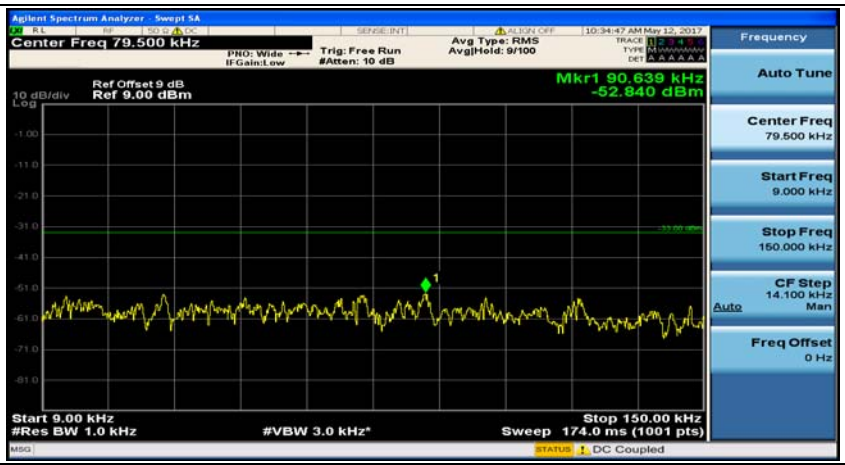

Agilent Spectrum Analyzer - Swept SA
Center Freq 13.015000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 40 dB
Avg Type: RMS
Avg|Hold: 5/100
10:33:32 AM May 12, 2017
Frequency
Auto Tune
Ref Offset 8.95 dB
10 dB/div
Ref 30.00 dBm
Mkr2 25.636 GHz
-27.559 dBm
Center Freq
13.015000000 GHz
Start Freq
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)

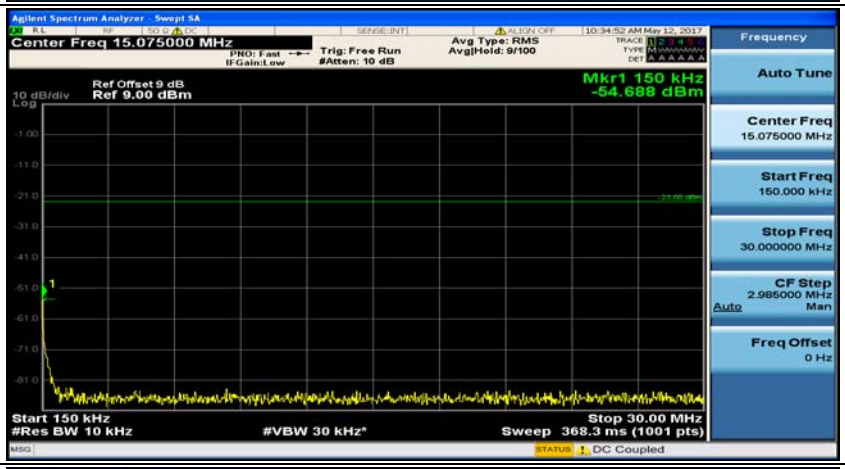
Channel Bandwidth: 10 MHz_MCH_16QAM_1RB#0



Channel Bandwidth: 10 MHz_MCH_16QAM_1RB#24

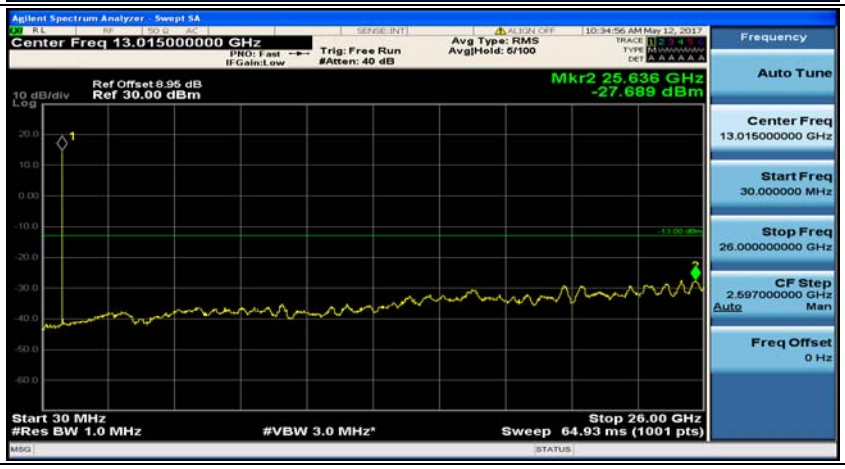


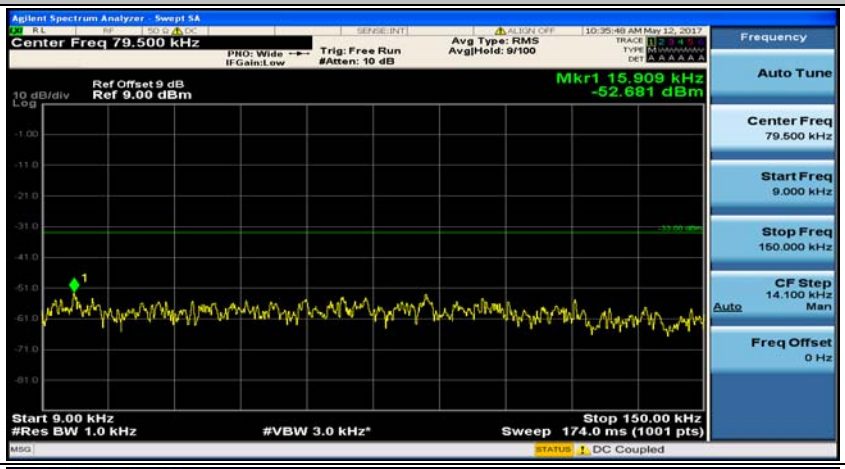
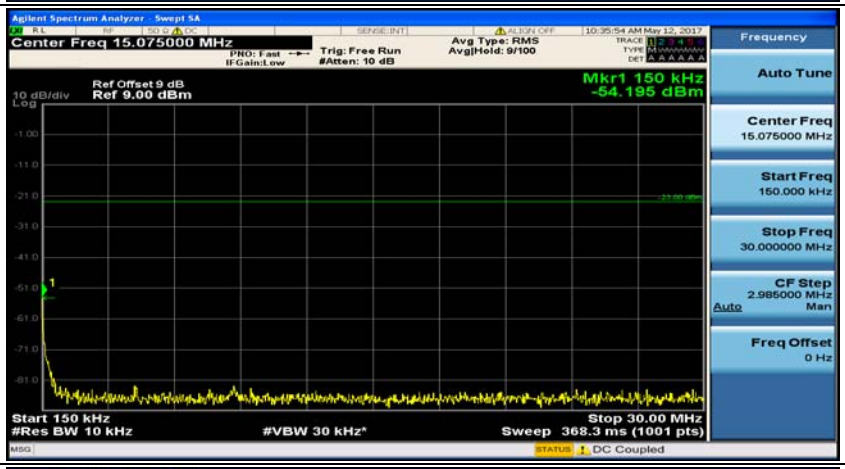
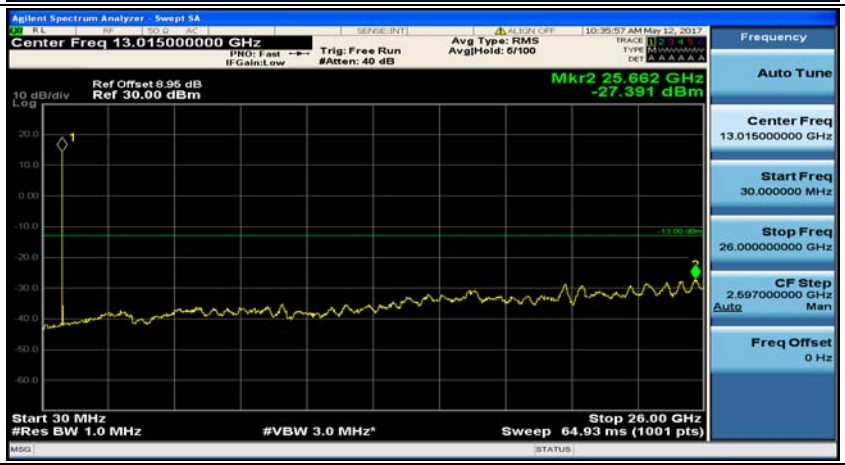


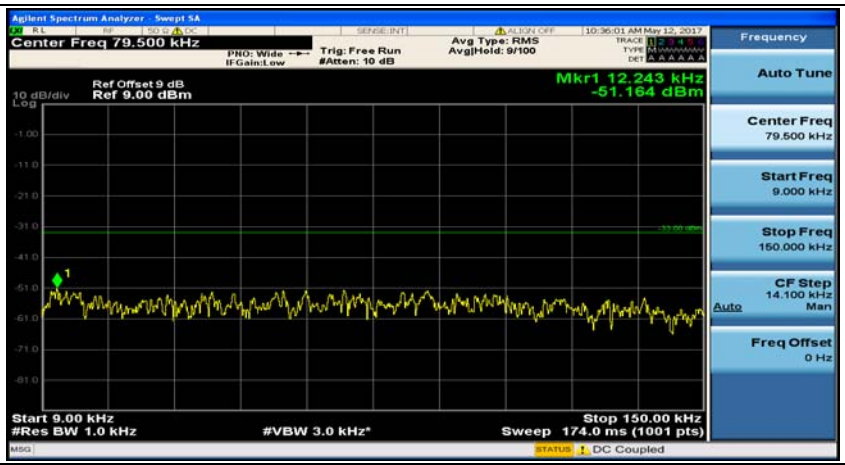
Channel Bandwidth: 10 MHz_MCH_16QAM_1RB#49

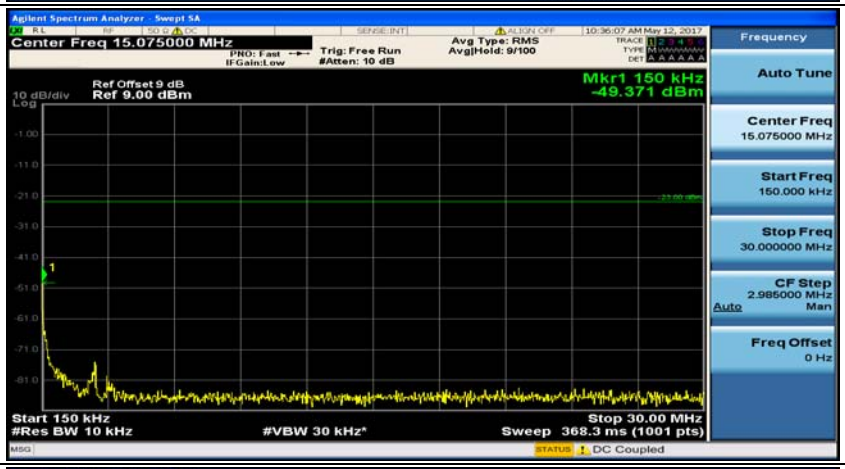

Agilent Spectrum Analyzer - Swept SA
Center Freq 79.500 kHz
PNO: Wide
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 9/100
10:34:47 AM May 12, 2017
Frequency
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Mkr1 90.639 kHz
-52.840 dBm
Auto Tune
Center Freq
79.500 kHz
Start Freq
9.000 kHz
Stop Freq
150.000 kHz
CF Step
14.100 kHz
Auto
Man
Freq Offset
0 Hz
Start 9.00 kHz
#Res BW 1.0 kHz
#VBW 3.0 kHz*
Stop 150.00 kHz
Sweep 174.0 ms (1001 pts)
DC Coupled

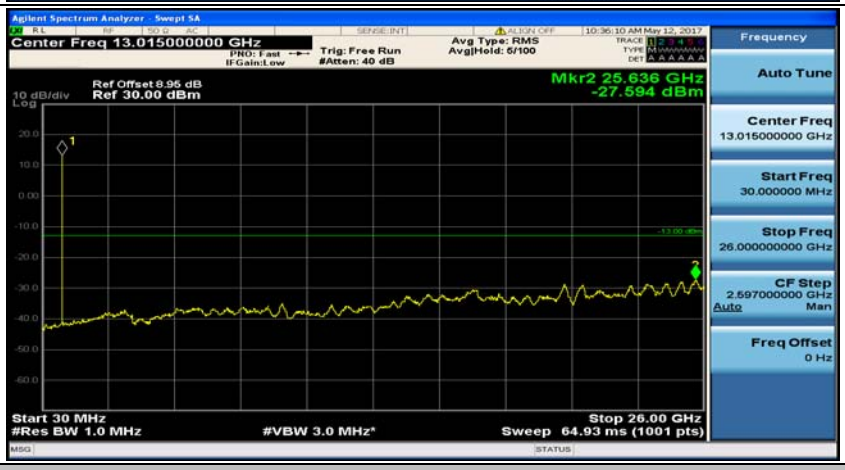

Agilent Spectrum Analyzer - Swept SA
Center Freq 15.075000 MHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 9/100
10:34:52 AM May 12, 2017
Frequency
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Mkr1 150 kHz
-54.688 dBm
Auto Tune
Center Freq
15.075000 MHz
Start Freq
150.000 kHz
Stop Freq
30.000000 MHz
CF Step
2.985000 MHz
Auto
Man
Freq Offset
0 Hz
Start 150 kHz
#Res BW 10 kHz
#VBW 30 kHz*
Stop 30.00 MHz
Sweep 368.3 ms (1001 pts)
DC Coupled


Agilent Spectrum Analyzer - Swept SA
Center Freq 13.015000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 40 dB
Avg Type: RMS
Avg|Hold: 5/100
10:34:56 AM May 12, 2017
Frequency
Ref Offset 8.95 dB
10 dB/div
Log
Ref 30.00 dBm
Mkr2 25.636 GHz
-27.689 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)

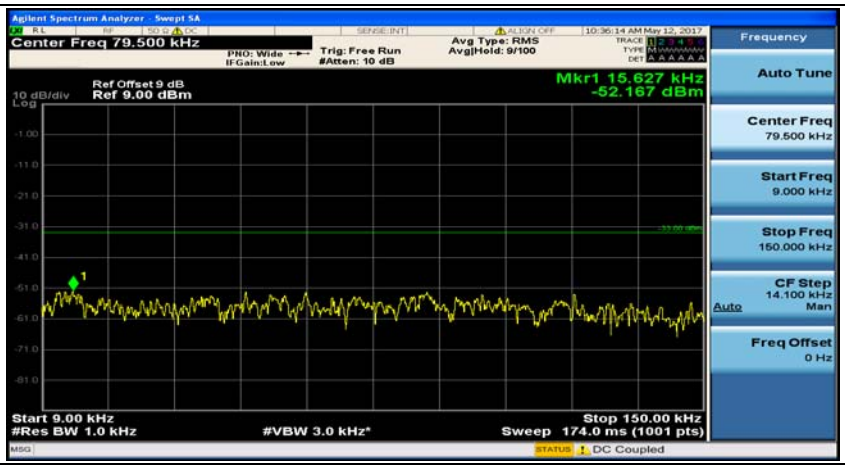
Channel Bandwidth: 10 MHz_HCH_16QAM_1RB#0



Channel Bandwidth: 10 MHz_HCH_16QAM_1RB#24

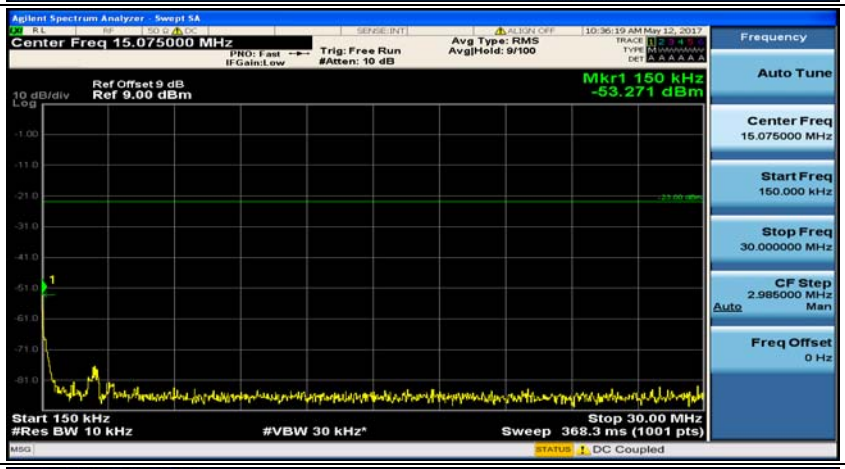


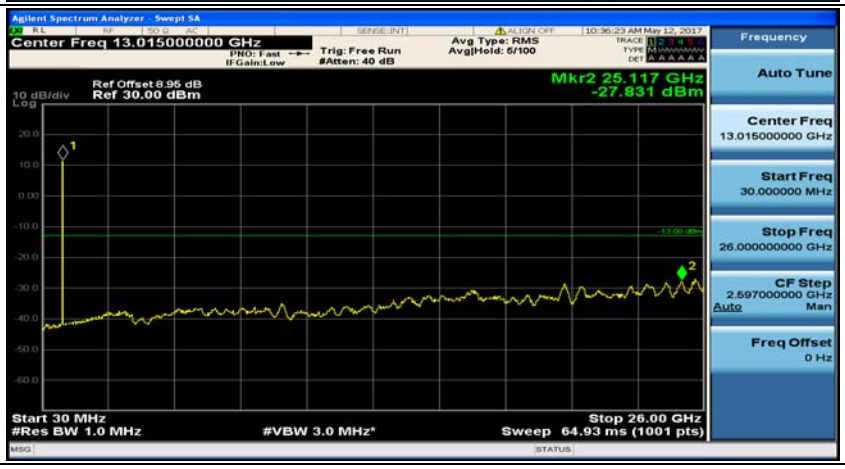




Channel Bandwidth: 10 MHz_HCH_16QAM_1RB#49


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: 9/100
10:36:14 AM May 12, 2017
Frequency
Auto Tune
Ref Offset 9 dB
10 dB/div
Ref 9.00 dBm
Mkr1 15.627 kHz
-52.167 dBm
Center Freq
79.500 kHz
Start Freq
9.000 kHz
Stop Freq
150.000 kHz
CF Step
14.100 kHz
Auto
Man
Freq Offset
0 Hz
Start 9.00 kHz
#Res BW 1.0 kHz
#VBW 3.0 kHz*
Stop 150.00 kHz
Sweep 174.0 ms (1001 pts)
DC Coupled


Agilent Spectrum Analyzer - Swept SA
Center Freq 15.075000 MHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 9/100
10:36:19 AM May 12, 2017
Frequency
Auto Tune
Ref Offset 9 dB
10 dB/div
Ref 9.00 dBm
Mkr1 150 kHz
-53.271 dBm
Center Freq
15.075000 MHz
Start Freq
150.000 kHz
Stop Freq
30.000000 MHz
CF Step
2.985000 MHz
Auto
Man
Freq Offset
0 Hz
Start 150 kHz
#Res BW 10 kHz
#VBW 30 kHz*
Stop 30.00 MHz
Sweep 368.3 ms (1001 pts)
DC Coupled


Agilent Spectrum Analyzer - Swept SA
Center Freq 13.015000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 40 dB
Avg Type: RMS
Avg|Hold: 5/100
10:36:23 AM May 12, 2017
Frequency
Auto Tune
Ref Offset 8.95 dB
10 dB/div
Ref 30.00 dBm
Mkr2 25.117 GHz
-27.831 dBm
Center Freq
13.015000000 GHz
Start Freq
30.000000 MHz
Stop Freq
26.000000000 GHz
CF Step
2.597000000 GHz
Auto
Man
Freq Offset
0 Hz
Start 30 MHz
#Res BW 1.0 MHz
#VBW 3.0 MHz*
Stop 26.00 GHz
Sweep 64.93 ms (1001 pts)

Appendix F: Frequency Stability

Test Result

Channel Bandwidth: 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	3.89	0.004717	± 2.5	PASS
		VN	TN	2.75	0.003335	± 2.5	PASS
		VH	TN	4.05	0.004911	± 2.5	PASS
	MCH	VL	TN	-1.51	-0.001805	± 2.5	PASS
		VN	TN	-1.46	-0.001745	± 2.5	PASS
		VH	TN	0.68	0.000813	± 2.5	PASS
	HCH	VL	TN	0.3	0.000354	± 2.5	PASS
		VN	TN	-1.23	-0.001450	± 2.5	PASS
		VH	TN	0.45	0.000530	± 2.5	PASS
16QAM	LCH	VL	TN	0.17	0.000206	± 2.5	PASS
		VN	TN	-0.75	-0.000909	± 2.5	PASS
		VH	TN	-1.48	-0.001795	± 2.5	PASS
	MCH	VL	TN	2.04	0.002439	± 2.5	PASS
		VN	TN	3.47	0.004148	± 2.5	PASS
		VH	TN	-0.28	-0.000335	± 2.5	PASS
	HCH	VL	TN	2.86	0.003371	± 2.5	PASS
		VN	TN	-0.28	-0.000330	± 2.5	PASS
		VH	TN	-1.9	-0.002240	± 2.5	PASS
Temperature							
Modulation	Channel	Voltage [Vdc]	Temperature (℃)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
QPSK	LCH	VN	-30	-0.43	-0.000521	± 2.5	PASS
		VN	-20	3.27	0.003965	± 2.5	PASS
		VN	-10	1.23	0.001491	± 2.5	PASS
		VN	0	1.7	0.002061	± 2.5	PASS
		VN	10	1.36	0.001649	± 2.5	PASS
		VN	20	4.81	0.005832	± 2.5	PASS
		VN	30	2.73	0.003310	± 2.5	PASS
		VN	40	2.71	0.003286	± 2.5	PASS
		VN	50	0.12	0.000146	± 2.5	PASS
	MCH	VN	-30	2.96	0.003539	± 2.5	PASS

		VN	-20	-0.49	-0.000586	± 2.5	PASS
		VN	-10	-0.15	-0.000179	± 2.5	PASS
		VN	0	-0.06	-0.000072	± 2.5	PASS
		VN	10	3.01	0.003598	± 2.5	PASS
		VN	20	2.12	0.002534	± 2.5	PASS
		VN	30	2.34	0.002797	± 2.5	PASS
		VN	40	1.91	0.002283	± 2.5	PASS
		VN	50	4.83	0.005774	± 2.5	PASS
	HCH	VN	-30	4.11	0.004845	± 2.5	PASS
		VN	-20	4.78	0.005635	± 2.5	PASS
		VN	-10	4.13	0.004869	± 2.5	PASS
		VN	0	4.67	0.005505	± 2.5	PASS
		VN	10	-0.44	-0.000519	± 2.5	PASS
		VN	20	-0.18	-0.000212	± 2.5	PASS
		VN	30	1.48	0.001745	± 2.5	PASS
		VN	40	3.1	0.003654	± 2.5	PASS
		VN	50	2.08	0.002452	± 2.5	PASS
16QAM	LCH	VN	-30	0.3	0.000364	± 2.5	PASS
		VN	-20	2.23	0.002704	± 2.5	PASS
		VN	-10	3.14	0.003807	± 2.5	PASS
		VN	0	-0.06	-0.000073	± 2.5	PASS
		VN	10	4.72	0.005723	± 2.5	PASS
		VN	20	1.71	0.002073	± 2.5	PASS
		VN	30	0.17	0.000206	± 2.5	PASS
		VN	40	-1.24	-0.001504	± 2.5	PASS
		VN	50	1.81	0.002195	± 2.5	PASS
	MCH	VN	-30	2.61	0.003077	± 2.5	PASS
		VN	-20	-1.25	-0.001474	± 2.5	PASS
		VN	-10	3.74	0.004409	± 2.5	PASS
		VN	0	1.73	0.002039	± 2.5	PASS
		VN	10	4.25	0.005010	± 2.5	PASS
		VN	20	4.96	0.005847	± 2.5	PASS
		VN	30	2.12	0.002499	± 2.5	PASS
		VN	40	2.2	0.002593	± 2.5	PASS
		VN	50	-1.5	-0.001768	± 2.5	PASS
	HCH	VN	-30	3.88	0.004574	± 2.5	PASS
		VN	-20	2.38	0.002806	± 2.5	PASS
		VN	-10	0.31	0.000365	± 2.5	PASS
		VN	0	3.79	0.004468	± 2.5	PASS
		VN	10	2.97	0.003501	± 2.5	PASS
		VN	20	3.71	0.004373	± 2.5	PASS

		VN	30	-0.15	-0.000177	± 2.5	PASS
		VN	40	2.35	0.002770	± 2.5	PASS
		VN	50	2.07	0.002440	± 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	-1.86	-0.002253	± 2.5	PASS
		VN	TN	2.42	0.002932	± 2.5	PASS
		VH	TN	2.83	0.003428	± 2.5	PASS
	MCH	VL	TN	4.95	0.005918	± 2.5	PASS
		VN	TN	-1.94	-0.002319	± 2.5	PASS
		VH	TN	4.22	0.005045	± 2.5	PASS
	HCH	VL	TN	1.36	0.001605	± 2.5	PASS
		VN	TN	-0.01	-0.000012	± 2.5	PASS
		VH	TN	4.32	0.005097	± 2.5	PASS
16QAM	LCH	VL	TN	-0.08	-0.000097	± 2.5	PASS
		VN	TN	1.18	0.001429	± 2.5	PASS
		VH	TN	3.34	0.004046	± 2.5	PASS
	MCH	VL	TN	1.11	0.001327	± 2.5	PASS
		VN	TN	-0.11	-0.000132	± 2.5	PASS
		VH	TN	4.27	0.005105	± 2.5	PASS
	HCH	VL	TN	3.86	0.004555	± 2.5	PASS
		VN	TN	1.16	0.001369	± 2.5	PASS
		VH	TN	-0.4	-0.000472	± 2.5	PASS
Temperature							
Modulation	Channel	Voltage [Vdc]	Temperature (℃)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
QPSK	LCH	VN	-30	-1.25	-0.001514	± 2.5	PASS
		VN	-20	1.61	0.001950	± 2.5	PASS
		VN	-10	-0.67	-0.000812	± 2.5	PASS
		VN	0	-1.64	-0.001987	± 2.5	PASS
		VN	10	-0.64	-0.000775	± 2.5	PASS
		VN	20	3.48	0.004216	± 2.5	PASS
		VN	30	-1.16	-0.001405	± 2.5	PASS
		VN	40	4.01	0.004858	± 2.5	PASS
		VN	50	0.33	0.000400	± 2.5	PASS
	MCH	VN	-30	-0.39	-0.000466	± 2.5	PASS
		VN	-20	-1.86	-0.002224	± 2.5	PASS

		VN	-10	-0.52	-0.000622	± 2.5	PASS
		VN	0	0.23	0.000275	± 2.5	PASS
		VN	10	4.06	0.004854	± 2.5	PASS
		VN	20	-0.75	-0.000897	± 2.5	PASS
		VN	30	2.33	0.002785	± 2.5	PASS
		VN	40	3.73	0.004459	± 2.5	PASS
		VN	50	-1.08	-0.001291	± 2.5	PASS
	HCH	VN	-30	4.55	0.005369	± 2.5	PASS
		VN	-20	2.32	0.002737	± 2.5	PASS
		VN	-10	3.3	0.003894	± 2.5	PASS
		VN	0	3.62	0.004271	± 2.5	PASS
		VN	10	3.15	0.003717	± 2.5	PASS
		VN	20	3.42	0.004035	± 2.5	PASS
		VN	30	2.17	0.002560	± 2.5	PASS
		VN	40	0.47	0.000555	± 2.5	PASS
		VN	50	2.15	0.002537	± 2.5	PASS
16QAM	LCH	VN	-30	4.91	0.005870	± 2.5	PASS
		VN	-20	1.96	0.002343	± 2.5	PASS
		VN	-10	4.36	0.005212	± 2.5	PASS
		VN	0	4.32	0.005164	± 2.5	PASS
		VN	10	4.52	0.005403	± 2.5	PASS
		VN	20	0.62	0.000741	± 2.5	PASS
		VN	30	-1.42	-0.001698	± 2.5	PASS
		VN	40	0.99	0.001184	± 2.5	PASS
		VN	50	0.4	0.000478	± 2.5	PASS
	MCH	VN	-30	3.35	0.003953	± 2.5	PASS
		VN	-20	-1.18	-0.001392	± 2.5	PASS
		VN	-10	-0.57	-0.000673	± 2.5	PASS
		VN	0	2.14	0.002525	± 2.5	PASS
		VN	10	1.73	0.002041	± 2.5	PASS
		VN	20	1.12	0.001322	± 2.5	PASS
		VN	30	1.36	0.001605	± 2.5	PASS
		VN	40	-0.16	-0.000189	± 2.5	PASS
		VN	50	2.84	0.003351	± 2.5	PASS
	HCH	VN	-30	4.96	0.005853	± 2.5	PASS
		VN	-20	-0.51	-0.000602	± 2.5	PASS
		VN	-10	2.14	0.002525	± 2.5	PASS
		VN	0	4.91	0.005794	± 2.5	PASS
		VN	10	3.53	0.004165	± 2.5	PASS
		VN	20	1.73	0.002041	± 2.5	PASS
		VN	30	2.18	0.002572	± 2.5	PASS

		VN	40	-0.65	-0.000767	± 2.5	PASS
		VN	50	-1.02	-0.001204	± 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	-1.83	-0.002214	± 2.5	PASS
		VN	TN	2.39	0.002892	± 2.5	PASS
		VH	TN	3.18	0.003848	± 2.5	PASS
	MCH	VL	TN	3.16	0.003778	± 2.5	PASS
		VN	TN	-0.27	-0.000323	± 2.5	PASS
		VH	TN	-0.46	-0.000550	± 2.5	PASS
	HCH	VL	TN	3.77	0.004454	± 2.5	PASS
		VN	TN	0.18	0.000213	± 2.5	PASS
		VH	TN	0.9	0.001063	± 2.5	PASS
16QAM	LCH	VL	TN	3.19	0.003860	± 2.5	PASS
		VN	TN	-0.12	-0.000145	± 2.5	PASS
		VH	TN	-0.66	-0.000799	± 2.5	PASS
	MCH	VL	TN	2.52	0.003013	± 2.5	PASS
		VN	TN	0.54	0.000646	± 2.5	PASS
		VH	TN	1.13	0.001351	± 2.5	PASS
	HCH	VL	TN	-1.5	-0.001772	± 2.5	PASS
		VN	TN	-1.13	-0.001335	± 2.5	PASS
		VH	TN	3.71	0.004383	± 2.5	PASS
Temperature							
Modulation	Channel	Voltage [Vdc]	Temperature (℃)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
QPSK	LCH	VN	-30	0.5	0.000605	± 2.5	PASS
		VN	-20	-1.12	-0.001355	± 2.5	PASS
		VN	-10	0.81	0.000980	± 2.5	PASS
		VN	0	4.15	0.005021	± 2.5	PASS
		VN	10	1.59	0.001924	± 2.5	PASS
		VN	20	1.75	0.002117	± 2.5	PASS
		VN	30	3.46	0.004186	± 2.5	PASS
		VN	40	4.09	0.004949	± 2.5	PASS
		VN	50	-0.54	-0.000653	± 2.5	PASS
	MCH	VN	-30	3.17	0.003790	± 2.5	PASS
		VN	-20	4.4	0.005260	± 2.5	PASS
		VN	-10	1.52	0.001817	± 2.5	PASS

		VN	0	0.01	0.000012	± 2.5	PASS
		VN	10	2.3	0.002750	± 2.5	PASS
		VN	20	1.9	0.002271	± 2.5	PASS
		VN	30	-1.01	-0.001207	± 2.5	PASS
		VN	40	-1.43	-0.001710	± 2.5	PASS
		VN	50	-0.4	-0.000478	± 2.5	PASS
	HCH	VN	-30	1.85	0.002185	± 2.5	PASS
		VN	-20	3.24	0.003828	± 2.5	PASS
		VN	-10	2.93	0.003461	± 2.5	PASS
		VN	0	-1.74	-0.002056	± 2.5	PASS
		VN	10	0.47	0.000555	± 2.5	PASS
		VN	20	3.06	0.003615	± 2.5	PASS
		VN	30	1.15	0.001359	± 2.5	PASS
		VN	40	4.49	0.005304	± 2.5	PASS
		VN	50	1.51	0.001784	± 2.5	PASS
16QAM	LCH	VN	-30	2.08	0.002487	± 2.5	PASS
		VN	-20	2.24	0.002678	± 2.5	PASS
		VN	-10	0.77	0.000921	± 2.5	PASS
		VN	0	0.44	0.000526	± 2.5	PASS
		VN	10	2.73	0.003264	± 2.5	PASS
		VN	20	2.25	0.002690	± 2.5	PASS
		VN	30	-0.62	-0.000741	± 2.5	PASS
		VN	40	-1.66	-0.001984	± 2.5	PASS
		VN	50	2.17	0.002594	± 2.5	PASS
	MCH	VN	-30	-1.66	-0.001961	± 2.5	PASS
		VN	-20	-0.34	-0.000402	± 2.5	PASS
		VN	-10	2.35	0.002776	± 2.5	PASS
		VN	0	-0.45	-0.000532	± 2.5	PASS
		VN	10	0.53	0.000626	± 2.5	PASS
		VN	20	3.3	0.003898	± 2.5	PASS
		VN	30	-1.72	-0.002032	± 2.5	PASS
		VN	40	1.74	0.002056	± 2.5	PASS
		VN	50	2.54	0.003001	± 2.5	PASS
	HCH	VN	-30	4.25	0.005021	± 2.5	PASS
		VN	-20	0.88	0.001040	± 2.5	PASS
		VN	-10	-1.34	-0.001583	± 2.5	PASS
		VN	0	1.76	0.002079	± 2.5	PASS
		VN	10	0.55	0.000650	± 2.5	PASS
		VN	20	0.57	0.000673	± 2.5	PASS
		VN	30	-1.72	-0.002032	± 2.5	PASS
		VN	40	4.77	0.005635	± 2.5	PASS

		VN	50	0.95	0.001122	± 2.5	PASS

Channel Bandwidth: 10 MHz

Channel Bandwidth: 10 MHz							
Voltage							
Modulation	Channel	Voltage [Vdc]	Temperature (℃)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
QPSK	LCH	VL	TN	1.45	0.001749	± 2.5	PASS
		VN	TN	3.2	0.003860	± 2.5	PASS
		VH	TN	2.25	0.002714	± 2.5	PASS
	MCH	VL	TN	4.14	0.004949	± 2.5	PASS
		VN	TN	0.19	0.000227	± 2.5	PASS
		VH	TN	-1.99	-0.002379	± 2.5	PASS
	HCH	VL	TN	2.16	0.002559	± 2.5	PASS
		VN	TN	2.53	0.002998	± 2.5	PASS
		VH	TN	3.33	0.003945	± 2.5	PASS
16QAM	LCH	VL	TN	2.2	0.002654	± 2.5	PASS
		VN	TN	-0.8	-0.000965	± 2.5	PASS
		VH	TN	4.6	0.005549	± 2.5	PASS
	MCH	VL	TN	3.59	0.004292	± 2.5	PASS
		VN	TN	-0.8	-0.000956	± 2.5	PASS
		VH	TN	4.25	0.005081	± 2.5	PASS
	HCH	VL	TN	4.63	0.005486	± 2.5	PASS
		VN	TN	0.87	0.001031	± 2.5	PASS
		VH	TN	2.18	0.002583	± 2.5	PASS
Temperature							
Modulation	Channel	Voltage [Vdc]	Temperature (℃)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
16QAM	LCH	VN	-30	3.51	0.004234	± 2.5	PASS
		VN	-20	4.06	0.004897	± 2.5	PASS
		VN	-10	2.21	0.002666	± 2.5	PASS
		VN	0	-0.78	-0.000941	± 2.5	PASS
		VN	10	4.89	0.005899	± 2.5	PASS
		VN	20	-0.92	-0.001110	± 2.5	PASS
		VN	30	-0.2	-0.000241	± 2.5	PASS
		VN	40	0.76	0.000917	± 2.5	PASS
		VN	50	2.27	0.002738	± 2.5	PASS
	MCH	VN	-30	4.9	0.005858	± 2.5	PASS
		VN	-20	-1.28	-0.001530	± 2.5	PASS
		VN	-10	-1.64	-0.001961	± 2.5	PASS
		VN	0	4.14	0.004949	± 2.5	PASS

		VN	10	2.02	0.002415	± 2.5	PASS
		VN	20	3.44	0.004112	± 2.5	PASS
		VN	30	1.26	0.001506	± 2.5	PASS
		VN	40	2.02	0.002415	± 2.5	PASS
		VN	50	1.43	0.001710	± 2.5	PASS
	HCH	VN	-30	0.92	0.001090	± 2.5	PASS
		VN	-20	-1.93	-0.002287	± 2.5	PASS
		VN	-10	-0.68	-0.000806	± 2.5	PASS
		VN	0	-1.87	-0.002216	± 2.5	PASS
		VN	10	-0.87	-0.001031	± 2.5	PASS
		VN	20	4.03	0.004775	± 2.5	PASS
		VN	30	-1.78	-0.002109	± 2.5	PASS
		VN	40	-0.56	-0.000664	± 2.5	PASS
		VN	50	-1.49	-0.001765	± 2.5	PASS
QPSK	LCH	VN	-30	1.25	0.001494	± 2.5	PASS
		VN	-20	0.32	0.000383	± 2.5	PASS
		VN	-10	2.38	0.002845	± 2.5	PASS
		VN	0	1.02	0.001219	± 2.5	PASS
		VN	10	1.03	0.001231	± 2.5	PASS
		VN	20	0.59	0.000705	± 2.5	PASS
		VN	30	3.93	0.004698	± 2.5	PASS
		VN	40	2.48	0.002965	± 2.5	PASS
		VN	50	-0.23	-0.000275	± 2.5	PASS
	MCH	VN	-30	1.54	0.001825	± 2.5	PASS
		VN	-20	2.55	0.003021	± 2.5	PASS
		VN	-10	-1.28	-0.001517	± 2.5	PASS
		VN	0	3.55	0.004206	± 2.5	PASS
		VN	10	-1.46	-0.001730	± 2.5	PASS
		VN	20	2.18	0.002583	± 2.5	PASS
		VN	30	-1.81	-0.002145	± 2.5	PASS
		VN	40	0.8	0.000948	± 2.5	PASS
		VN	50	1.47	0.001742	± 2.5	PASS
	HCH	VN	-30	2.14	0.002536	± 2.5	PASS
		VN	-20	3.54	0.004194	± 2.5	PASS
		VN	-10	0.27	0.000320	± 2.5	PASS
		VN	0	3.35	0.003969	± 2.5	PASS
		VN	10	4.02	0.004763	± 2.5	PASS
		VN	20	4.94	0.005853	± 2.5	PASS
		VN	30	0.25	0.000296	± 2.5	PASS
		VN	40	3.73	0.004419	± 2.5	PASS
		VN	50	3.43	0.004064	± 2.5	PASS