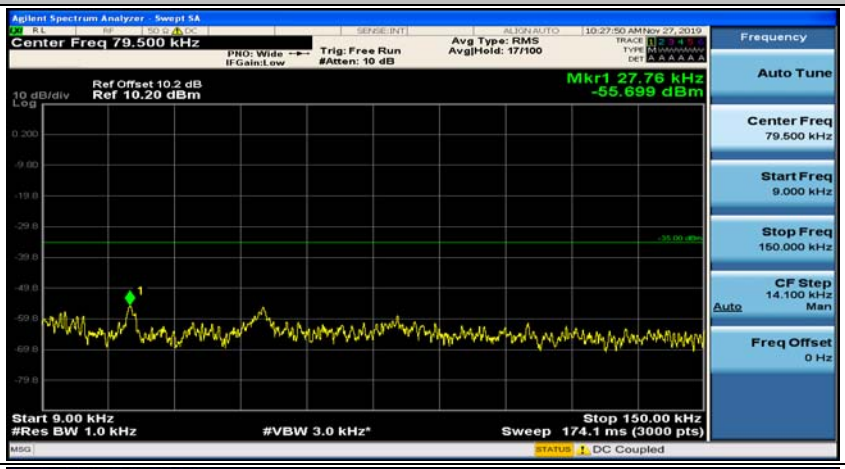
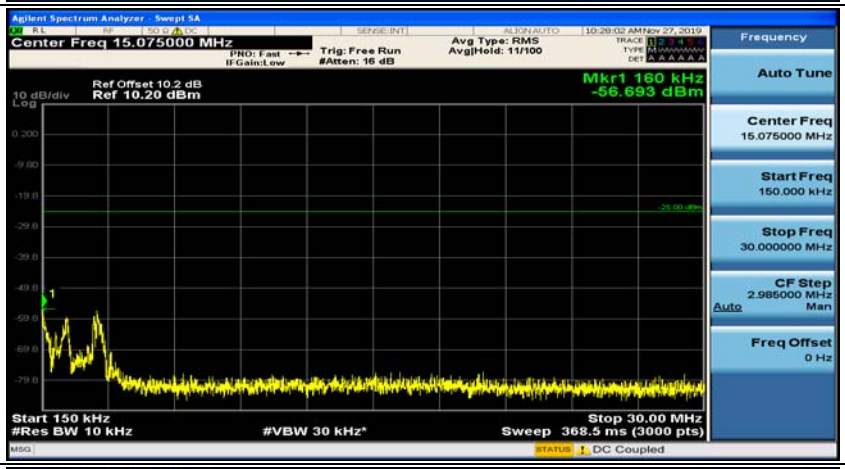
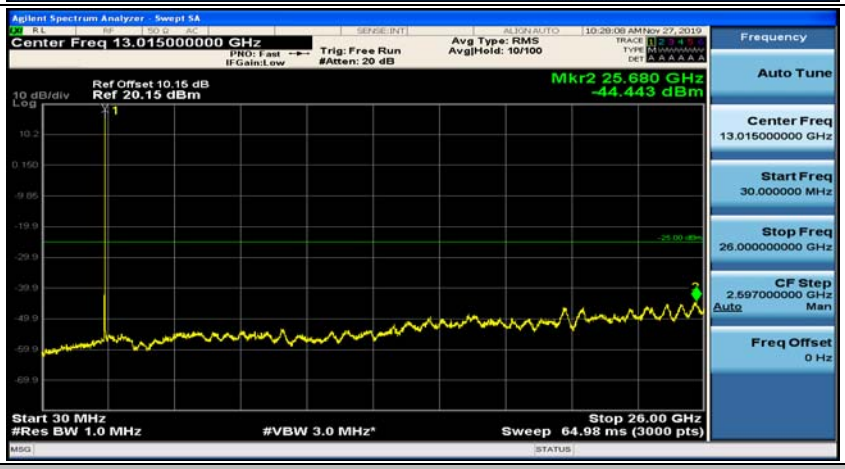
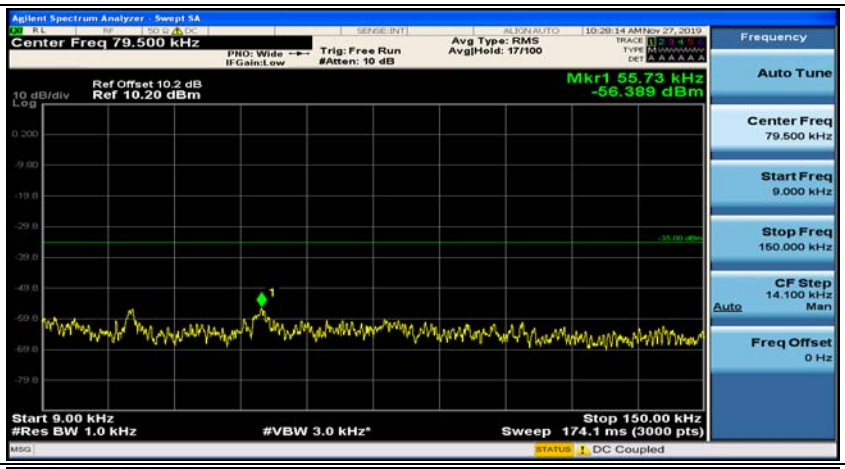
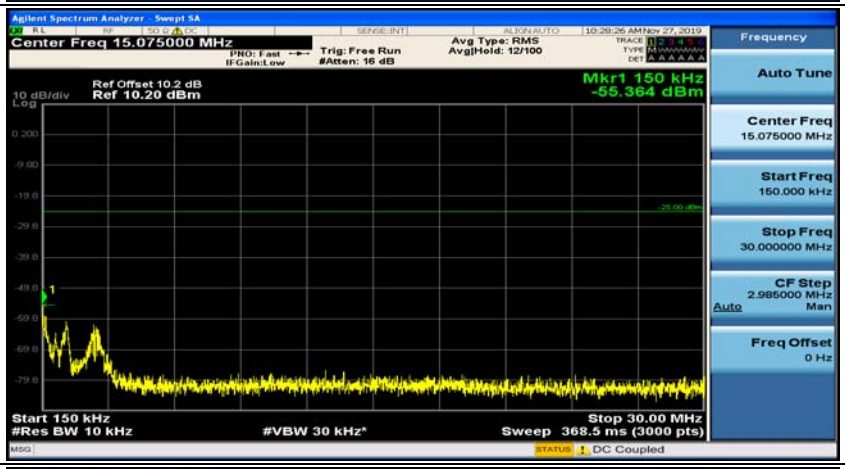
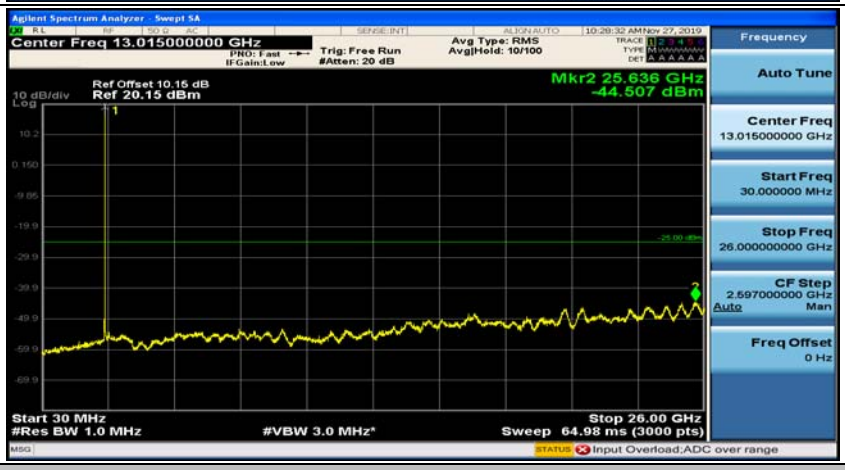
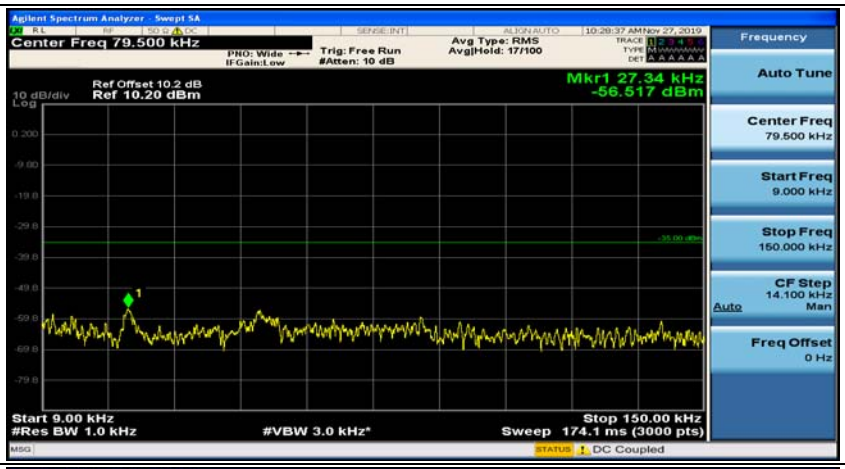
Channel Bandwidth: 10 MHz_LCH_16QAM_1RB#0



Channel Bandwidth: 10 MHz_LCH_16QAM_1RB#24

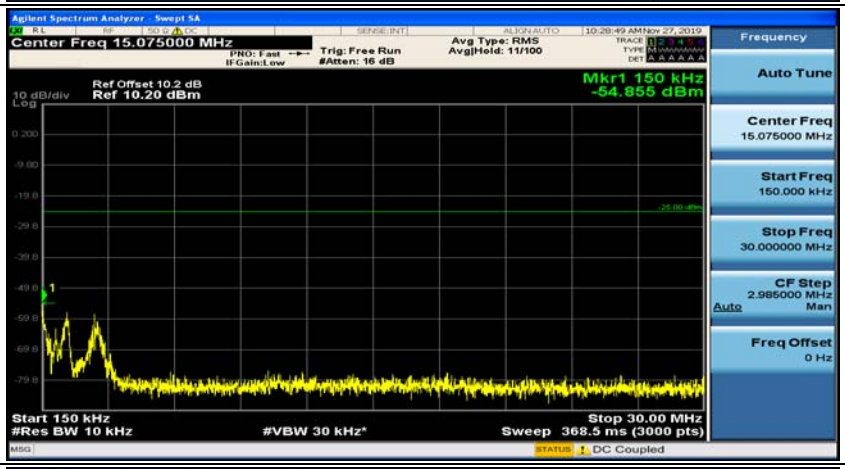


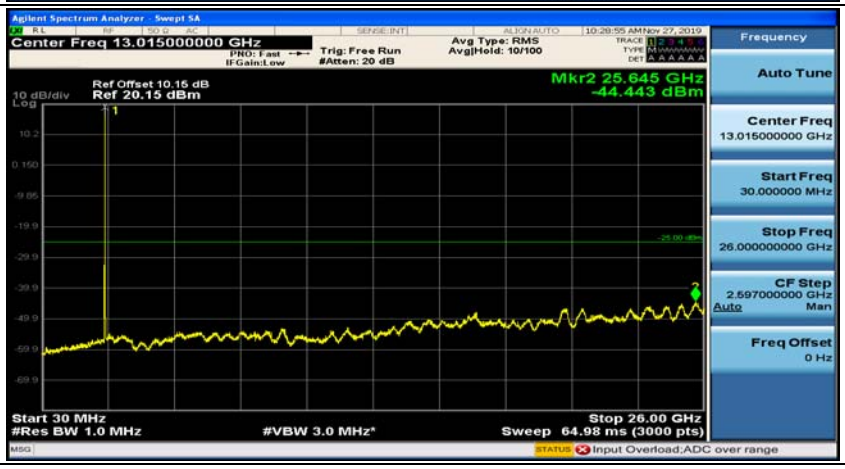


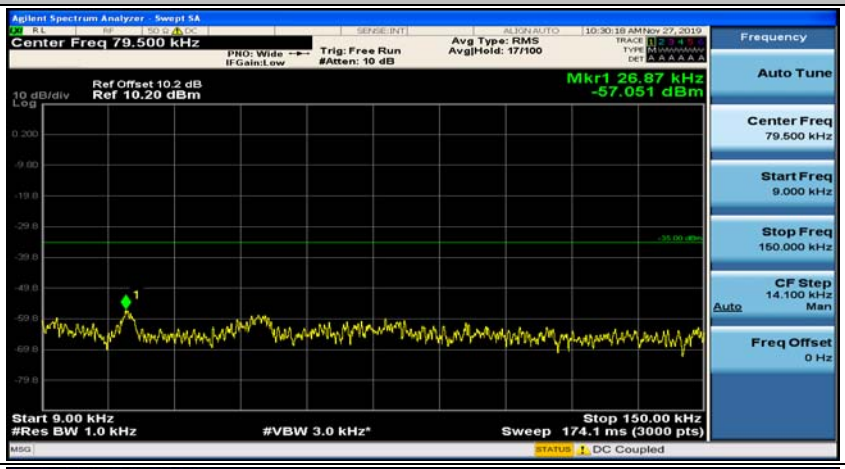
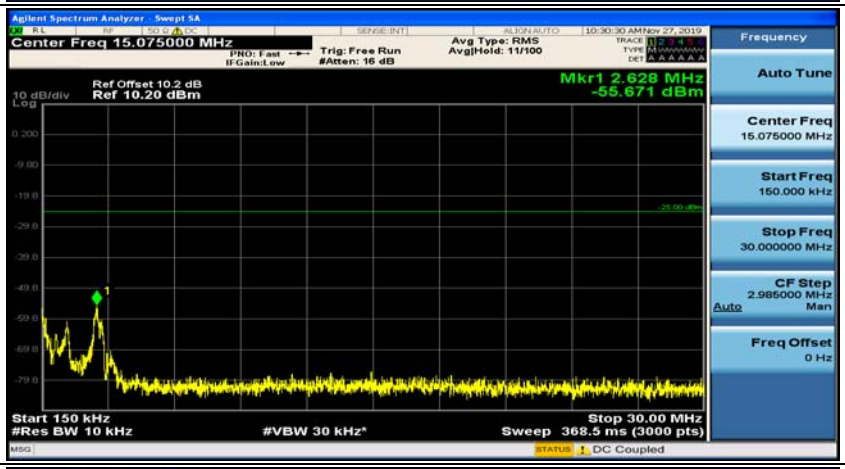
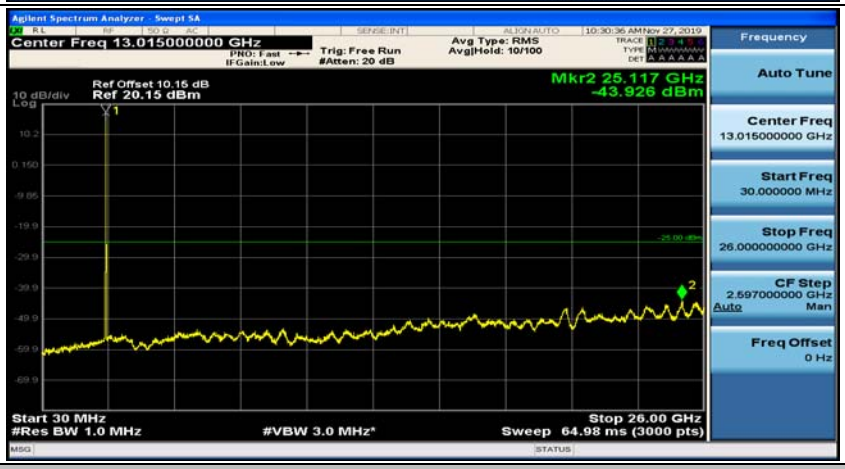


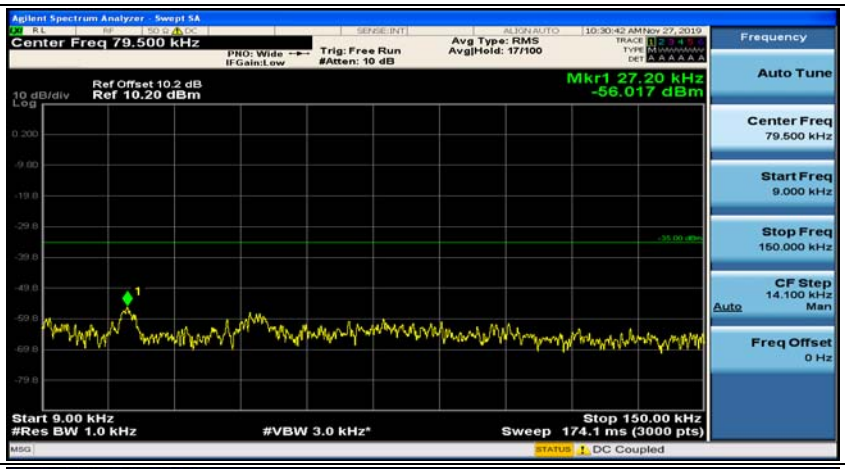
Channel Bandwidth: 10 MHz_LCH_16QAM_1RB#49

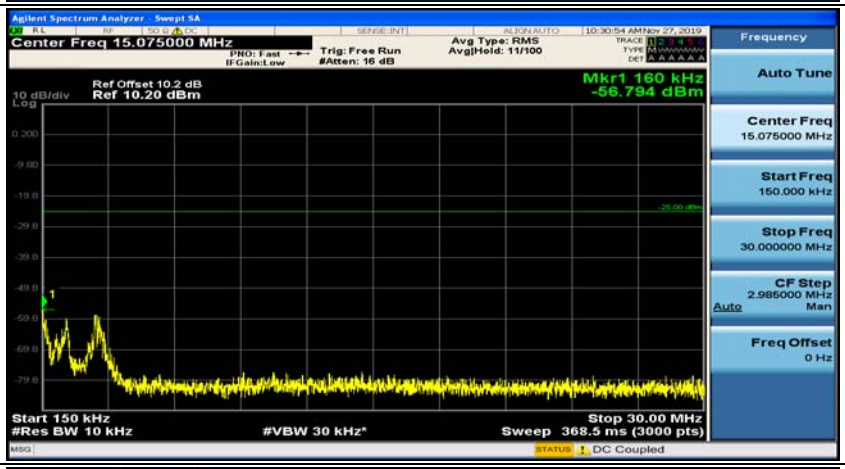

Agilent Spectrum Analyzer - Swept SA
Center Freq 79.500 kHz
PNO: Wide
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 17/100
10:28:37 AM Nov 27, 2019
Ref Offset 10.2 dB
10 dB/div
Ref 10.20 dBm
Mkr1 27.34 kHz
-56.517 dBm
Start 9.00 kHz
#Res BW 1.0 kHz
#VBW 3.0 kHz*
Stop 150.00 kHz
Sweep 174.1 ms (3000 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

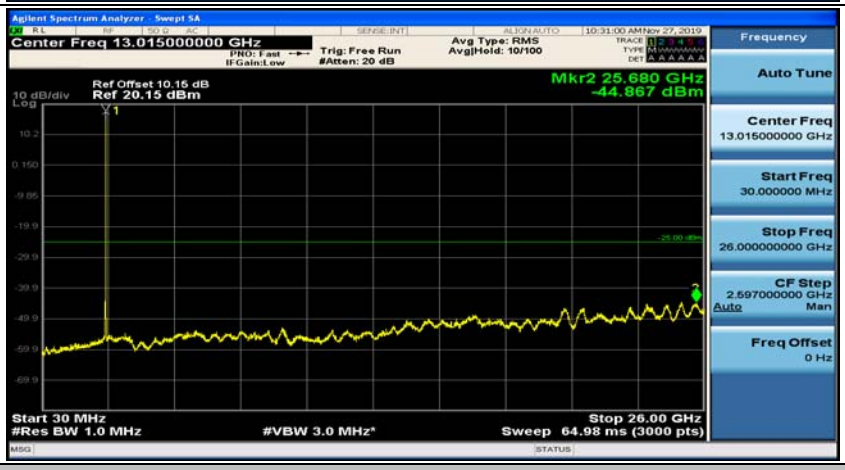

Agilent Spectrum Analyzer - Swept SA
Center Freq 15.075000 MHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 16 dB
Avg Type: RMS
Avg|Hold: 11/100
10:28:49 AM Nov 27, 2019
Ref Offset 10.2 dB
10 dB/div
Ref 10.20 dBm
Mkr1 150 kHz
-54.855 dBm
Start 150 kHz
#Res BW 10 kHz
#VBW 30 kHz*
Stop 30.00 MHz
Sweep 368.5 ms (3000 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: 20 dB
Avg Type: RMS
Avg|Hold: 10/100
10:28:55 AM Nov 27, 2019
Ref Offset 10.15 dB
10 dB/div
Ref 20.15 dBm
Mkr2 25.645 GHz
-44.443 dBm
Start 30 MHz
#Res BW 1.0 MHz
#VBW 3.0 MHz*
Stop 26.00 GHz
Sweep 64.98 ms (3000 pts)
Input Overload;ADC over range
Frequency
Auto Tune
Center Freq
13.015000000 GHz
Start Freq
30.000000 MHz
Stop Freq
26.000000000 GHz
CF Step
2.597000000 GHz
Auto
Man
Freq Offset
0 Hz

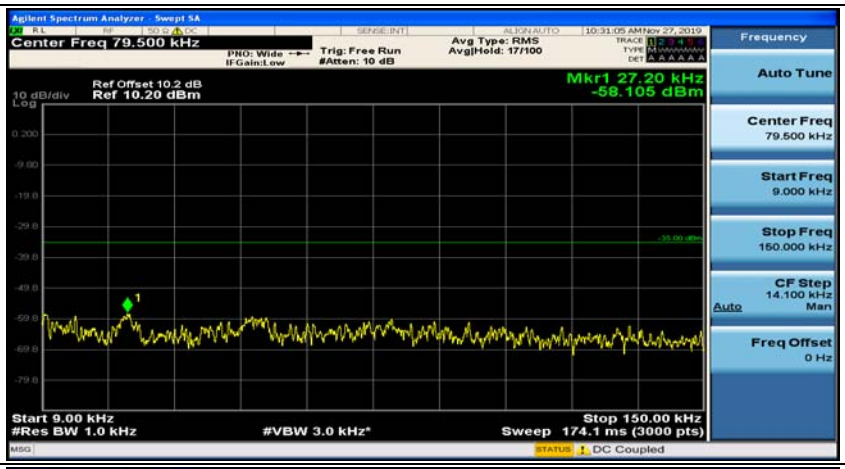
Channel Bandwidth: 10 MHz_MCH_16QAM_1RB#0



Channel Bandwidth: 10 MHz_MCH_16QAM_1RB#24

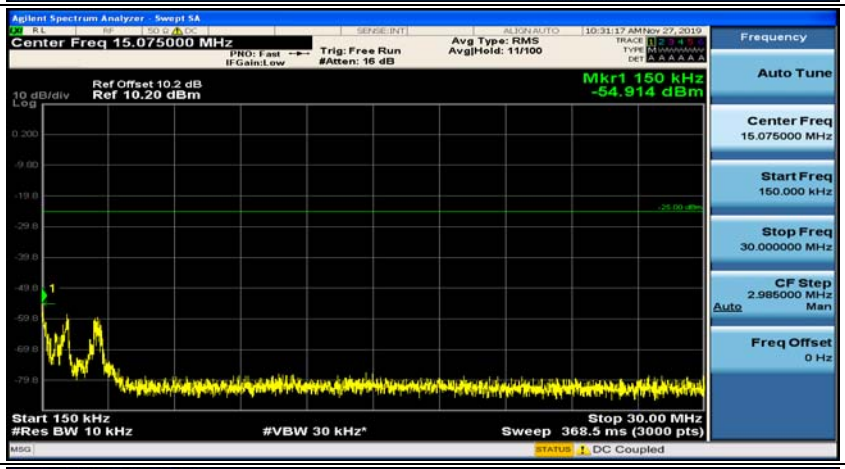


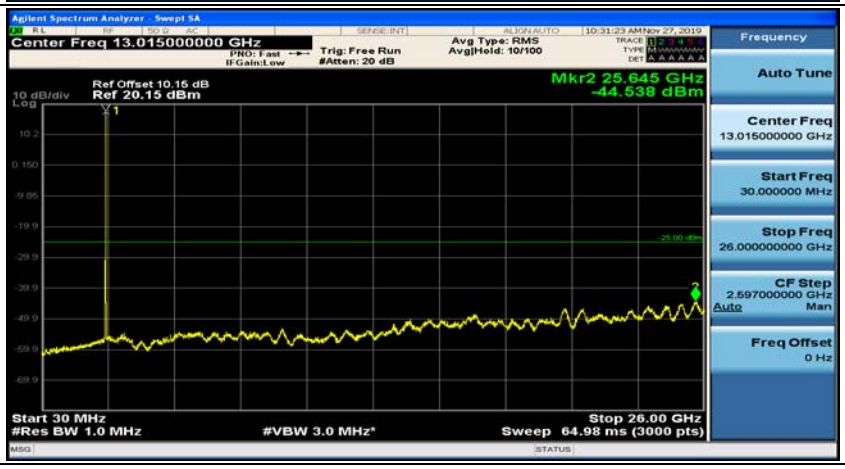


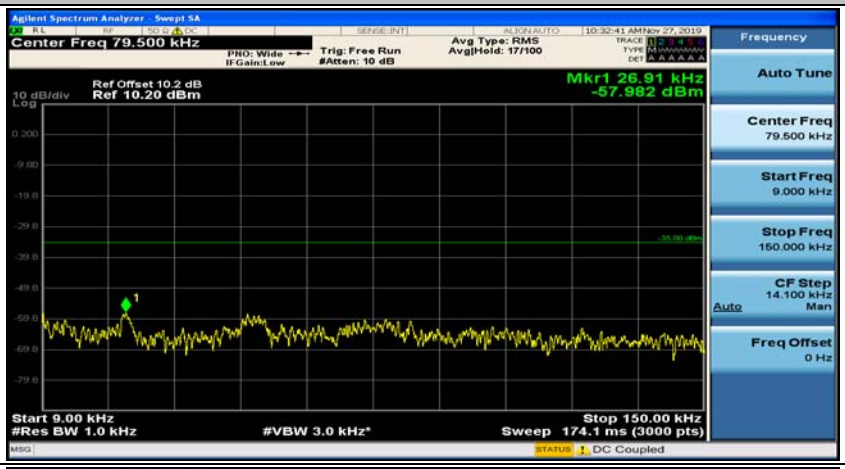
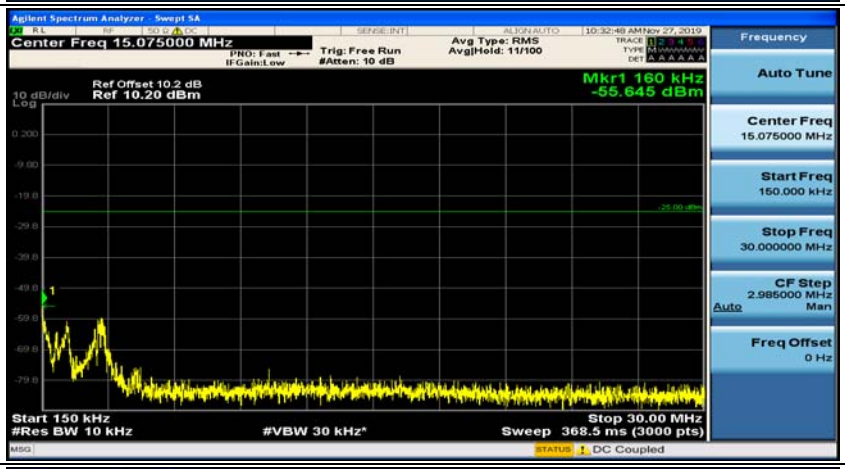
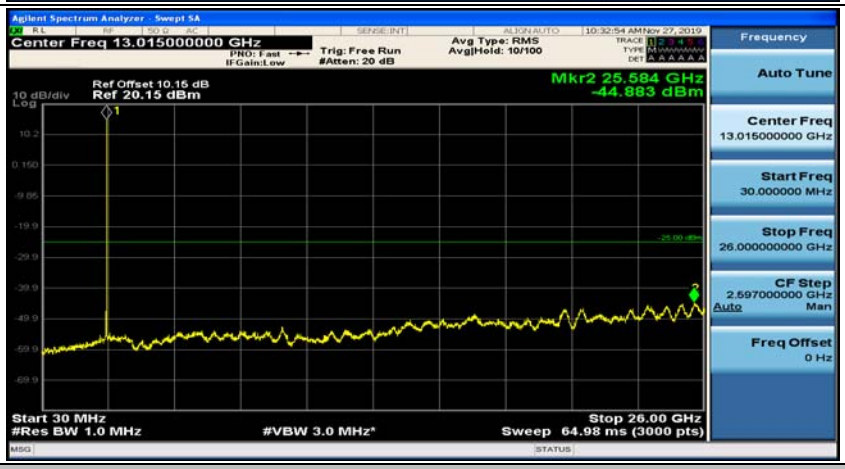


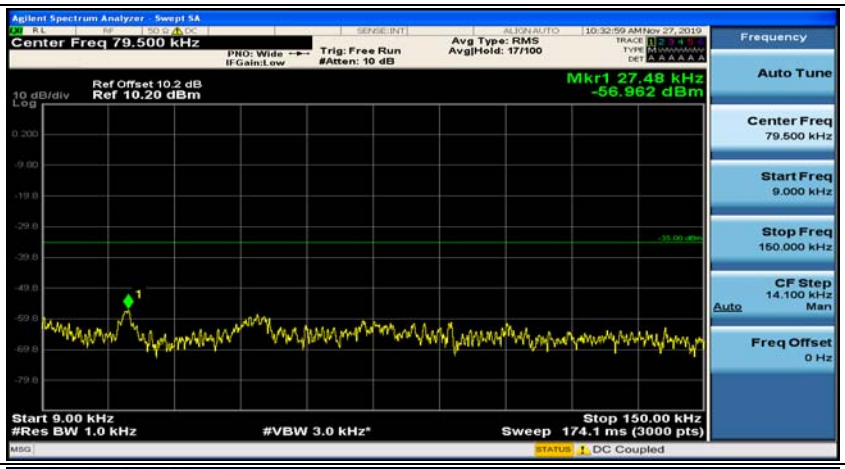
Channel Bandwidth: 10 MHz_MCH_16QAM_1RB#49

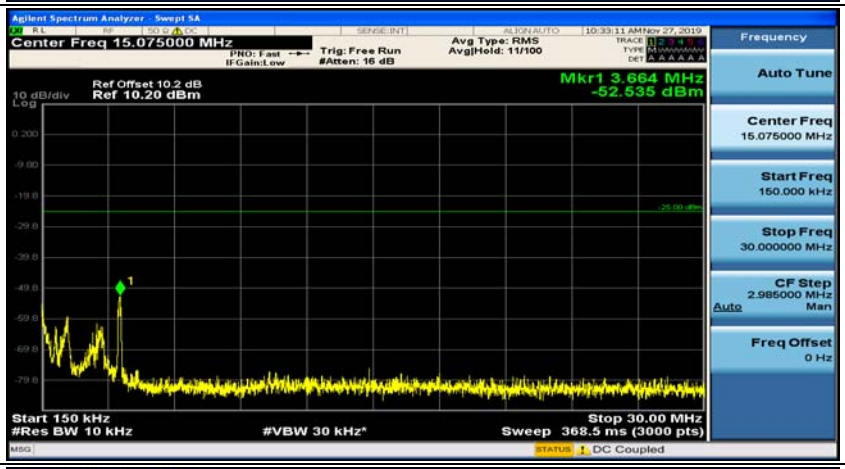

Agilent Spectrum Analyzer - Swept SA
Center Freq 79.500 kHz
PNO: Wide
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 17/100
10:31:05 AM Nov 27, 2019
Ref Offset 10.2 dB
10 dB/div
Ref 10.20 dBm
Mkr1 27.20 kHz
-58.105 dBm
Start 9.00 kHz
#Res BW 1.0 kHz
#VBW 3.0 kHz*
Stop 150.00 kHz
Sweep 174.1 ms (3000 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

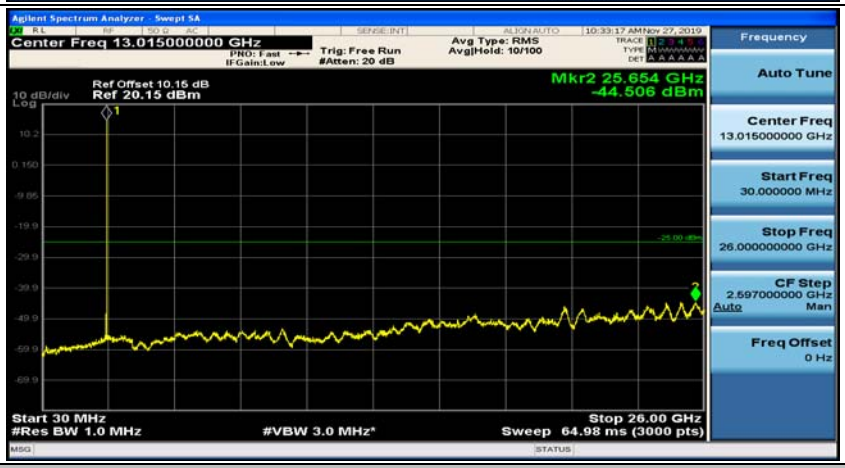

Agilent Spectrum Analyzer - Swept SA
Center Freq 15.075000 MHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 16 dB
Avg Type: RMS
Avg|Hold: 11/100
10:31:17 AM Nov 27, 2019
Ref Offset 10.2 dB
10 dB/div
Ref 10.20 dBm
Mkr1 150 kHz
-54.914 dBm
Start 150 kHz
#Res BW 10 kHz
#VBW 30 kHz*
Stop 30.00 MHz
Sweep 368.5 ms (3000 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: 20 dB
Avg Type: RMS
Avg|Hold: 10/100
10:31:23 AM Nov 27, 2019
Ref Offset 10.15 dB
10 dB/div
Ref 20.15 dBm
Mkr2 25.645 GHz
-44.538 dBm
Start 30 MHz
#Res BW 1.0 MHz
#VBW 3.0 MHz*
Stop 26.00 GHz
Sweep 64.98 ms (3000 pts)
Frequency
Auto Tune
Center Freq
13.015000000 GHz
Start Freq
30.000000 MHz
Stop Freq
26.000000000 GHz
CF Step
2.597000000 GHz
Auto
Man
Freq Offset
0 Hz

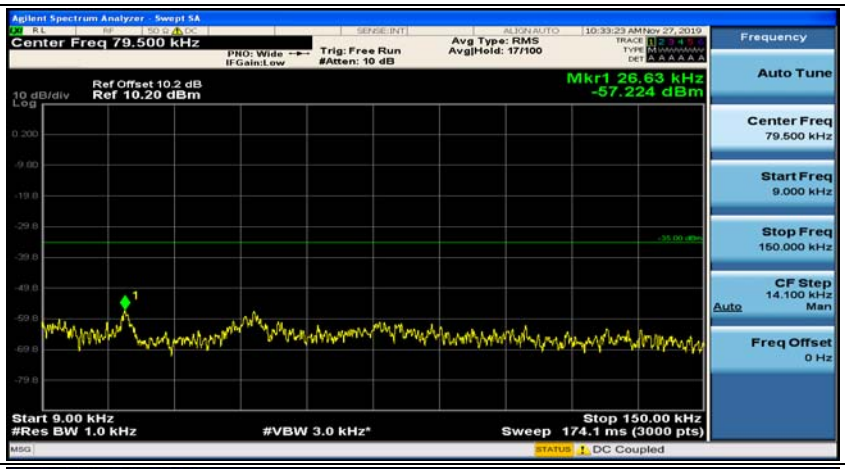
Channel Bandwidth: 10 MHz_HCH_16QAM_1RB#0



Channel Bandwidth: 10 MHz_HCH_16QAM_1RB#24

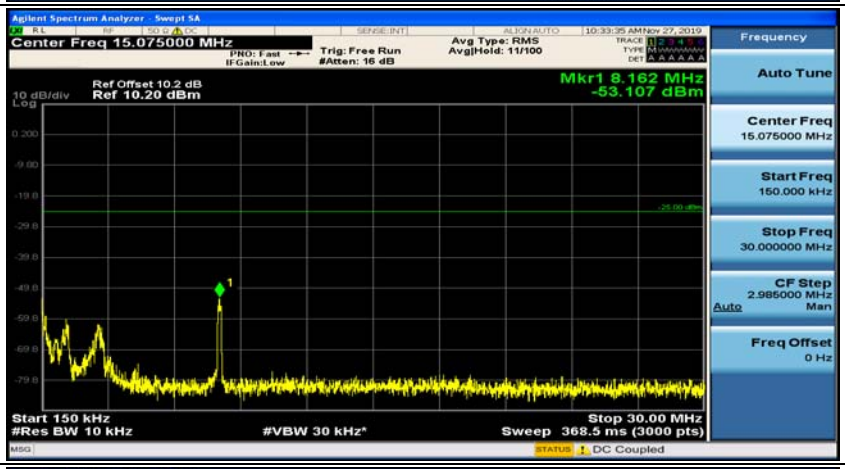


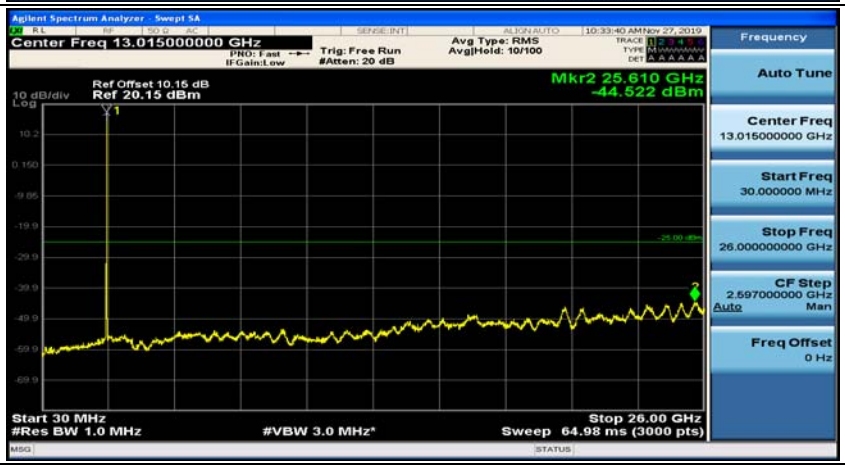




Channel Bandwidth: 10 MHz_HCH_16QAM_1RB#49

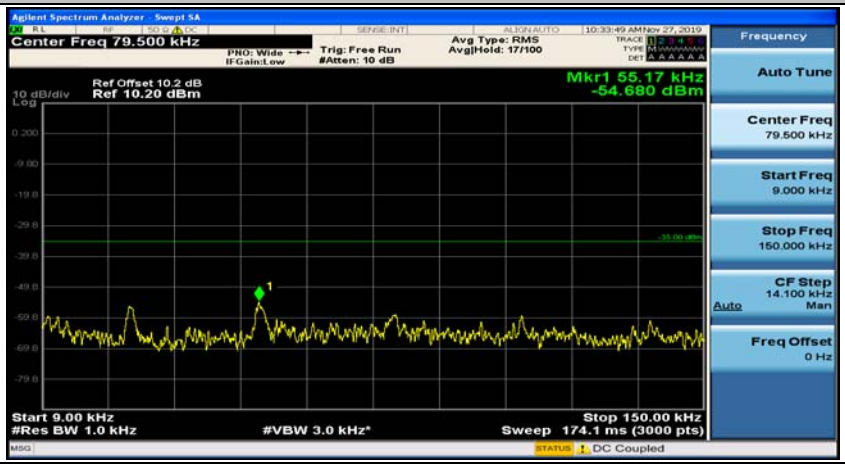

Agilent Spectrum Analyzer - Swept SA
Center Freq 79.500 kHz
PNO: Wide
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 17/100
10:33:23 AM Nov 27, 2019
Ref Offset 10.2 dB
10 dB/div Ref 10.20 dBm
Log
Mkr1 26.63 kHz
-57.224 dBm
Start 9.00 kHz
#Res BW 1.0 kHz
#VBW 3.0 kHz*
Stop 150.00 kHz
Sweep 174.1 ms (3000 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

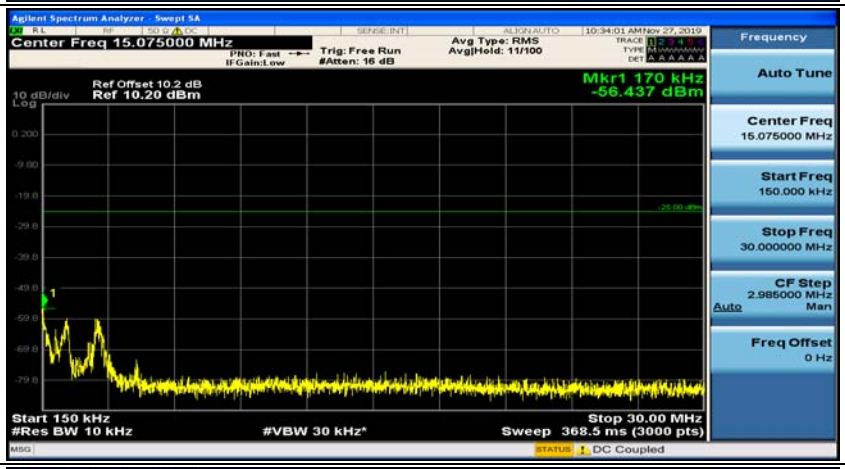

Agilent Spectrum Analyzer - Swept SA
Center Freq 15.075000 MHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 16 dB
Avg Type: RMS
Avg|Hold: 11/100
10:33:35 AM Nov 27, 2019
Ref Offset 10.2 dB
10 dB/div Ref 10.20 dBm
Log
Mkr1 8.162 MHz
-53.107 dBm
Start 150 kHz
#Res BW 10 kHz
#VBW 30 kHz*
Stop 30.00 MHz
Sweep 368.5 ms (3000 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

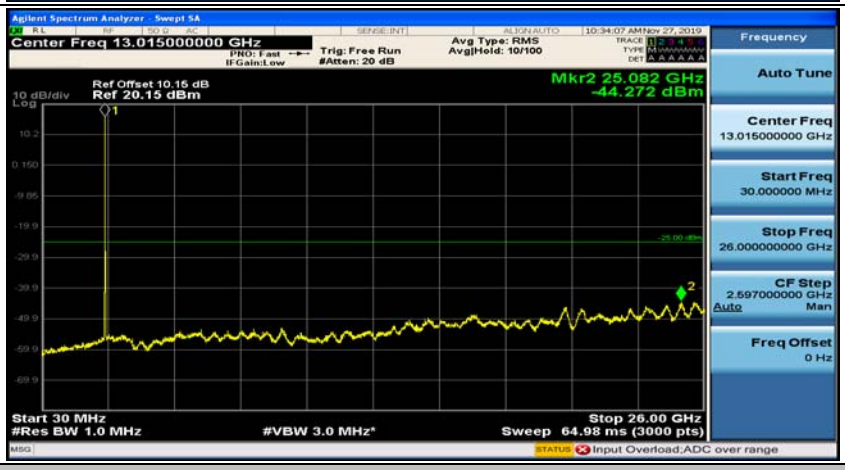

Agilent Spectrum Analyzer - Swept SA
Center Freq 13.015000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 20 dB
Avg Type: RMS
Avg|Hold: 10/100
10:33:40 AM Nov 27, 2019
Ref Offset 10.15 dB
10 dB/div Ref 20.15 dBm
Log
Mkr2 25.610 GHz
-44.522 dBm
Start 30 MHz
#Res BW 1.0 MHz
#VBW 3.0 MHz*
Stop 26.00 GHz
Sweep 64.98 ms (3000 pts)
Frequency
Auto Tune
Center Freq 13.015000000 GHz
Start Freq 30.000000 MHz
Stop Freq 26.000000000 GHz
CF Step 2.597000000 GHz
Auto Man
Freq Offset 0 Hz

Channel Bandwidth: 15 MHz

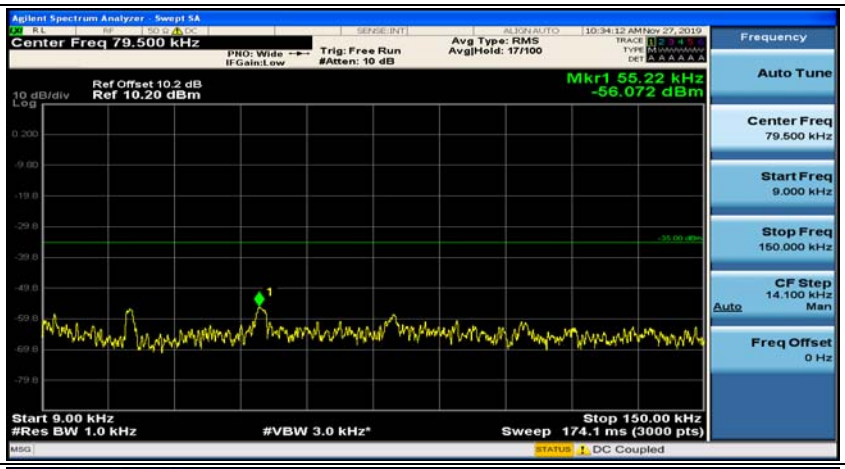
(Channel Bandwidth:15 MHz)_LCH_QPSK_1RB#0

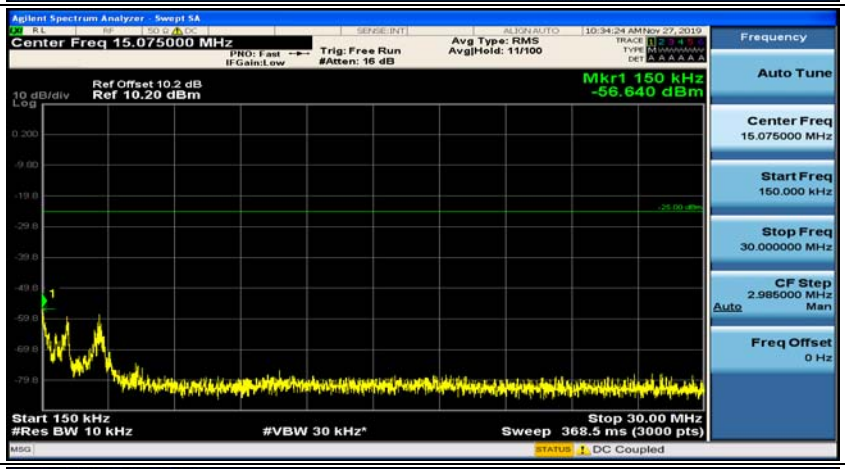


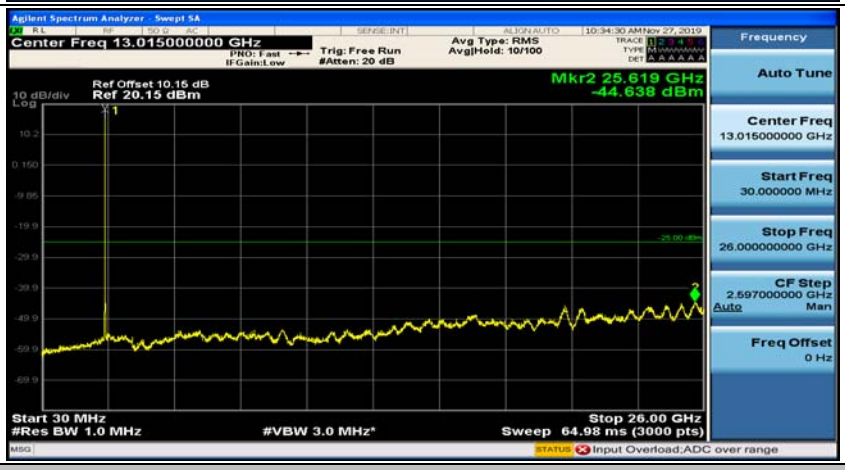




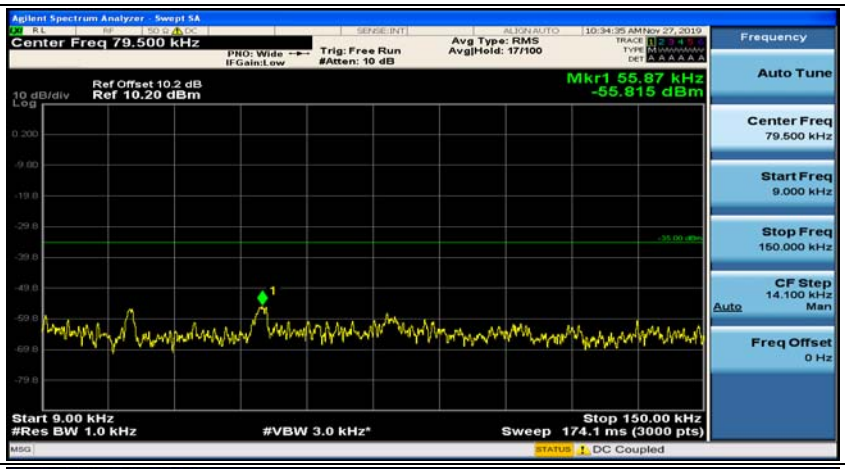
(Channel Bandwidth:15 MHz)_LCH_QPSK_1RB#37

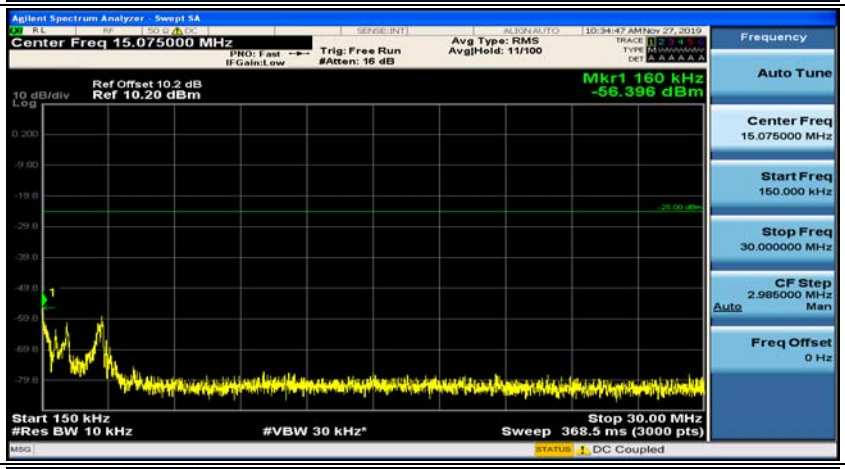


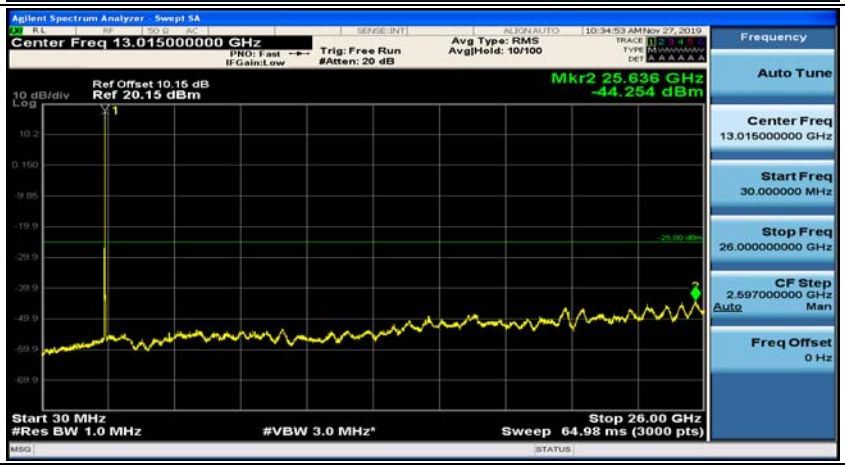




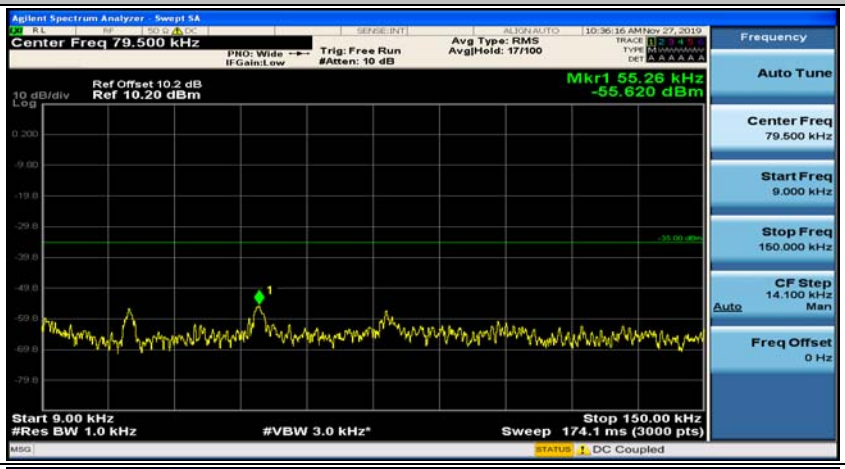
(Channel Bandwidth:15 MHz)_LCH_QPSK_1RB#74

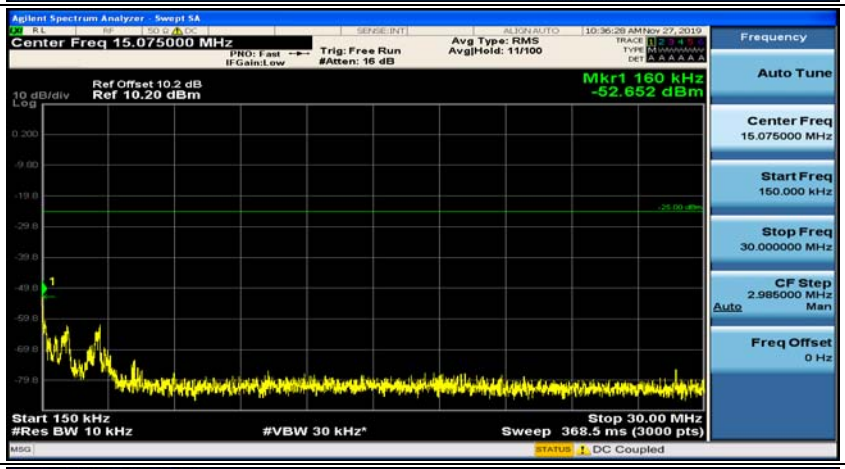

Agilent Spectrum Analyzer - Swept SA
Center Freq 79.500 kHz
PNO: Wide
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 17/100
10:34:35 AM Nov 27, 2019
Ref Offset 10.2 dB
10 dB/div
Ref 10.20 dBm
Mkr1 55.87 kHz
-55.815 dBm
Start 9.00 kHz
#Res BW 1.0 kHz
#VBW 3.0 kHz*
Stop 150.00 kHz
Sweep 174.1 ms (3000 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

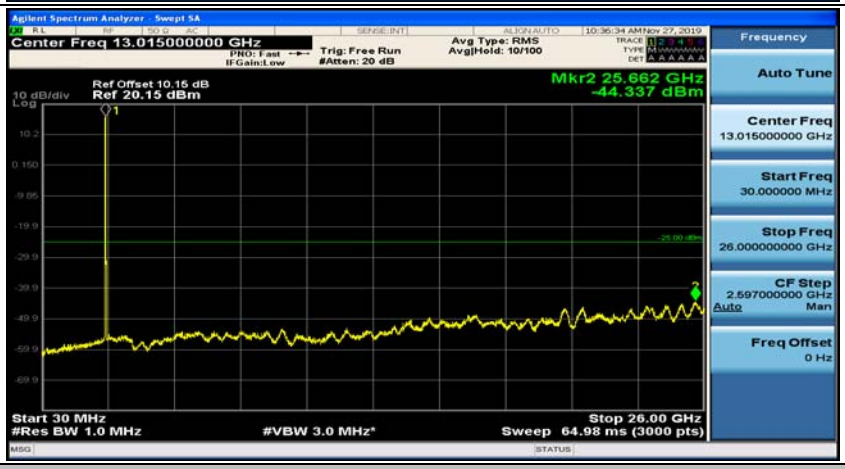

Agilent Spectrum Analyzer - Swept SA
Center Freq 15.075000 MHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 16 dB
Avg Type: RMS
Avg|Hold: 11/100
10:34:47 AM Nov 27, 2019
Ref Offset 10.2 dB
10 dB/div
Ref 10.20 dBm
Mkr1 160 kHz
-56.396 dBm
Start 150 kHz
#Res BW 10 kHz
#VBW 30 kHz*
Stop 30.00 MHz
Sweep 368.5 ms (3000 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: 20 dB
Avg Type: RMS
Avg|Hold: 10/100
10:34:53 AM Nov 27, 2019
Ref Offset 10.15 dB
10 dB/div
Ref 20.15 dBm
Mkr2 25.636 GHz
-44.254 dBm
Start 30 MHz
#Res BW 1.0 MHz
#VBW 3.0 MHz*
Stop 26.00 GHz
Sweep 64.98 ms (3000 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

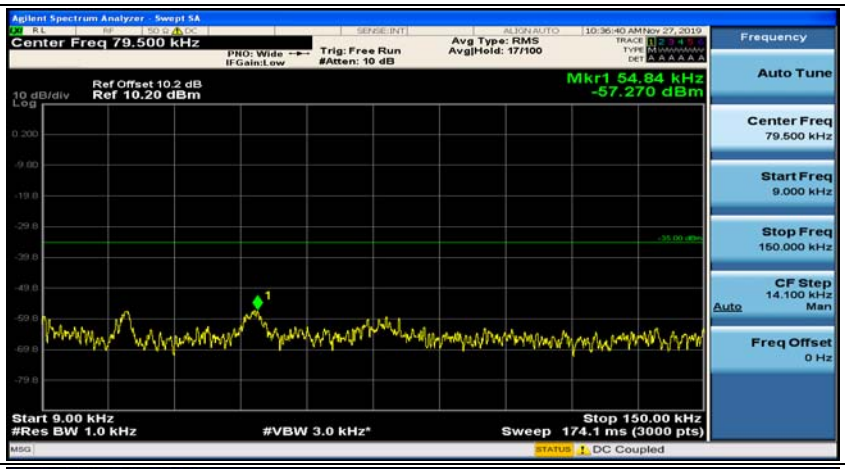
(Channel Bandwidth:15 MHz)_MCH_QPSK_1RB#0

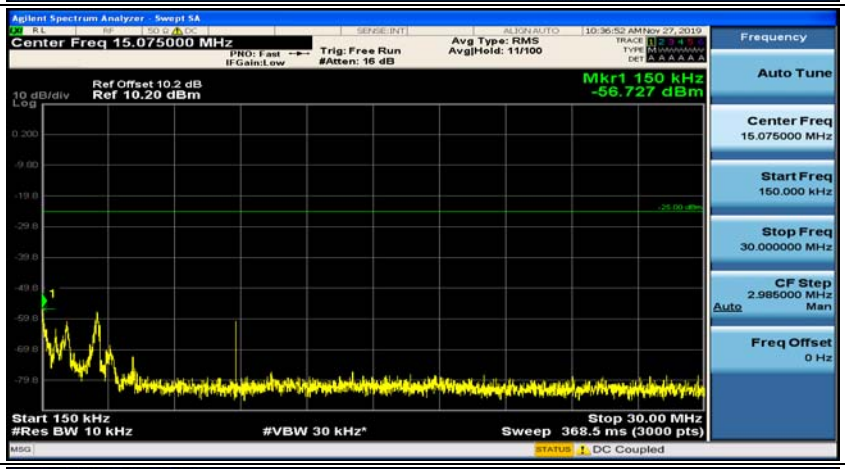


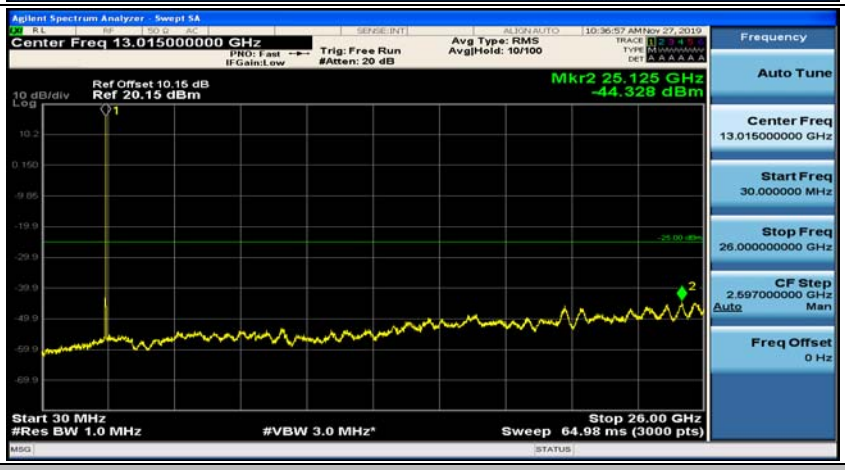




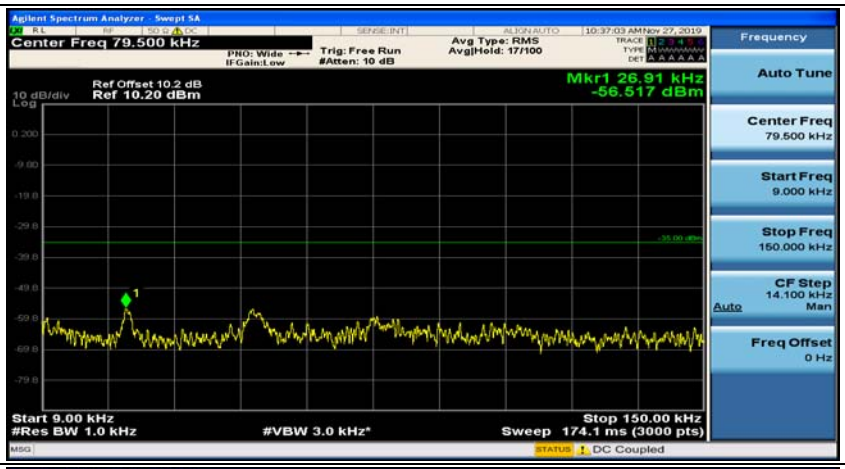
(Channel Bandwidth:15 MHz)_MCH_QPSK_1RB#37

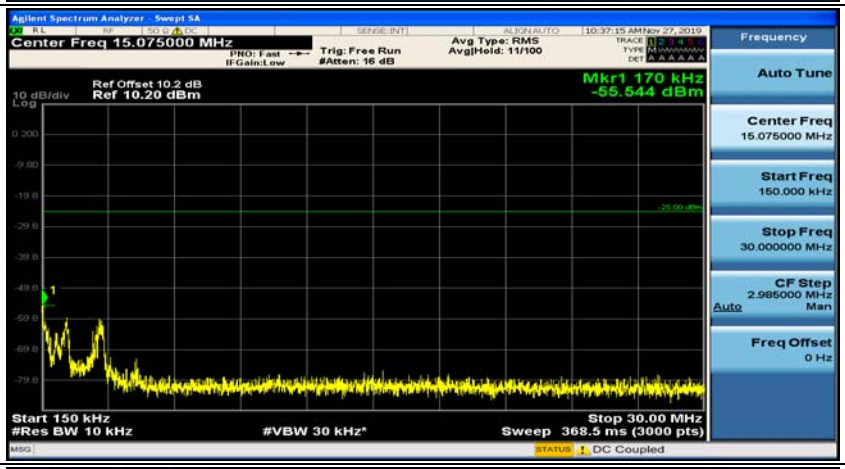


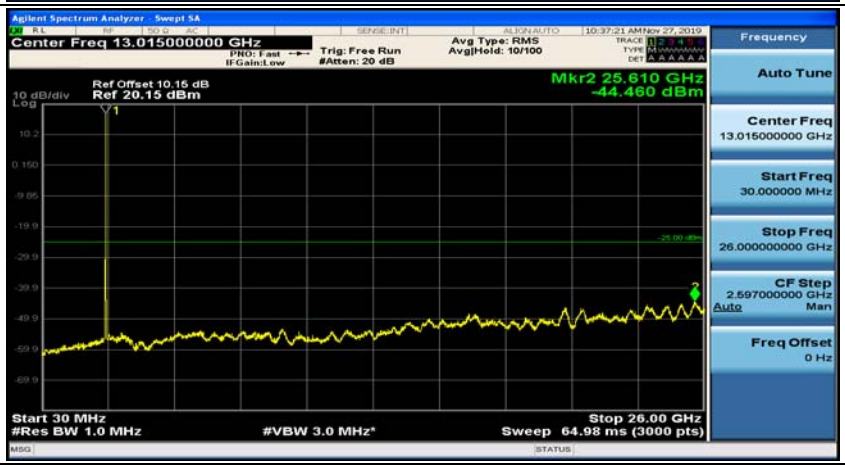




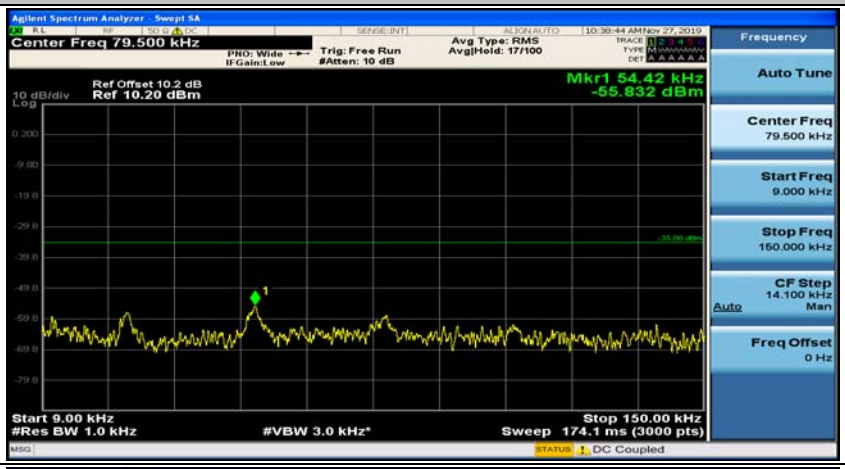
(Channel Bandwidth:15 MHz)_MCH_QPSK_1RB#74

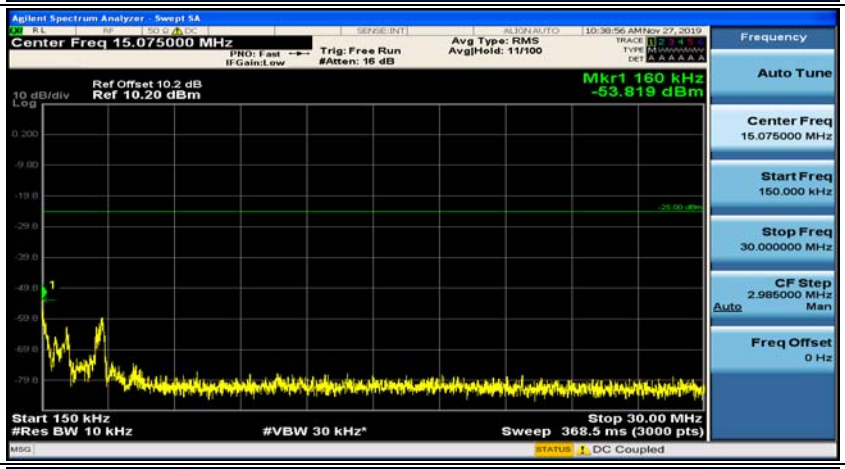

Agilent Spectrum Analyzer - Swept SA
Center Freq 79.500 kHz
PNO: Wide
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 17/100
10:37:03 AM Nov 27, 2019
Ref Offset 10.2 dB
10 dB/div
Ref 10.20 dBm
Mkr1 26.91 kHz
-56.517 dBm
Start 9.00 kHz
#Res BW 1.0 kHz
#VBW 3.0 kHz*
Stop 150.00 kHz
Sweep 174.1 ms (3000 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

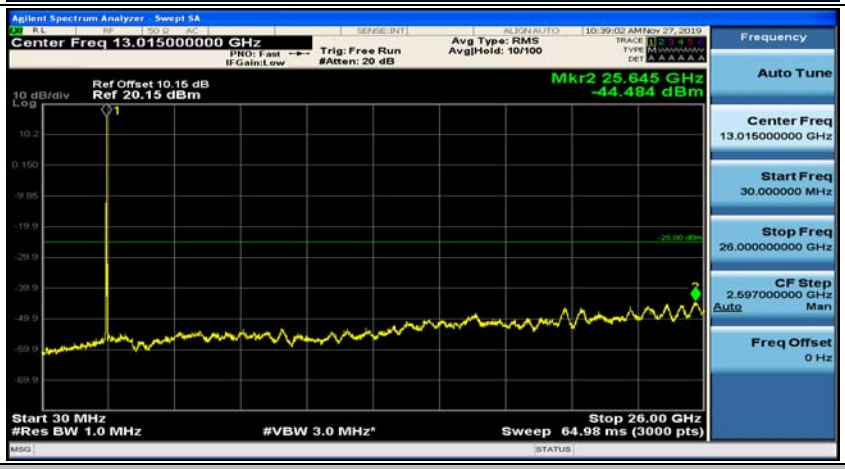

Agilent Spectrum Analyzer - Swept SA
Center Freq 15.075000 MHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 16 dB
Avg Type: RMS
Avg|Hold: 11/100
10:37:15 AM Nov 27, 2019
Ref Offset 10.2 dB
10 dB/div
Ref 10.20 dBm
Mkr1 170 kHz
-55.544 dBm
Start 150 kHz
#Res BW 10 kHz
#VBW 30 kHz*
Stop 30.00 MHz
Sweep 368.5 ms (3000 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: 20 dB
Avg Type: RMS
Avg|Hold: 10/100
10:37:21 AM Nov 27, 2019
Ref Offset 10.15 dB
10 dB/div
Ref 20.15 dBm
Mkr2 25.610 GHz
-44.460 dBm
Start 30 MHz
#Res BW 1.0 MHz
#VBW 3.0 MHz*
Stop 26.00 GHz
Sweep 64.98 ms (3000 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

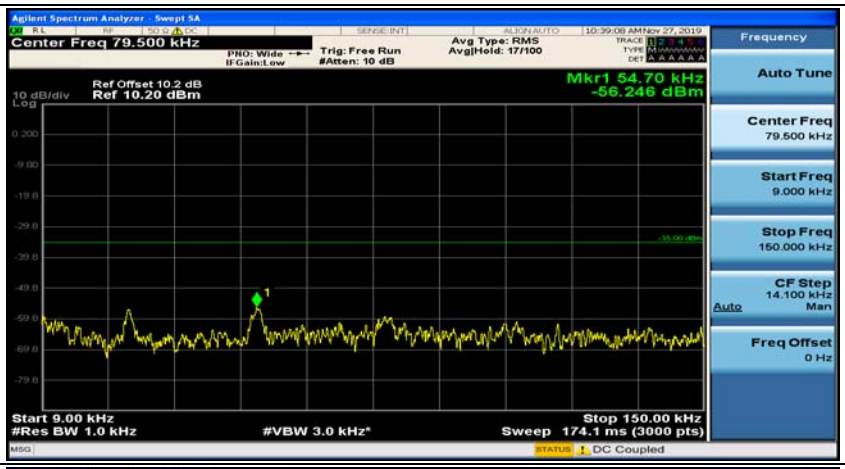
(Channel Bandwidth:15 MHz)_HCH_QPSK_1RB#0

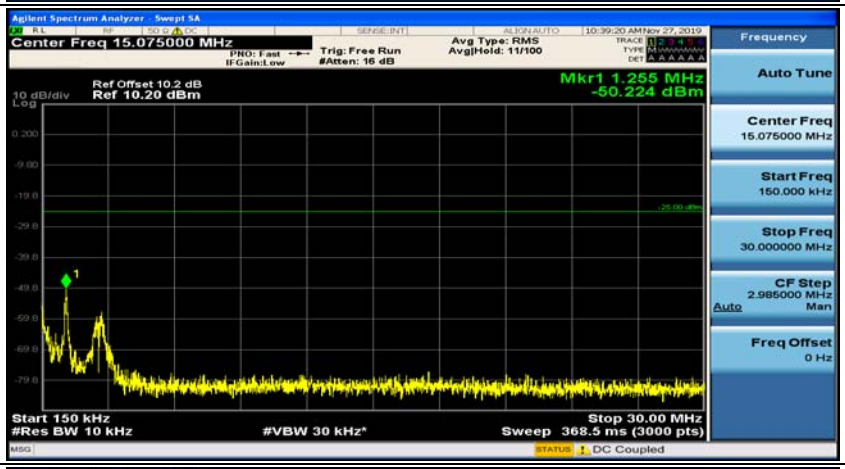


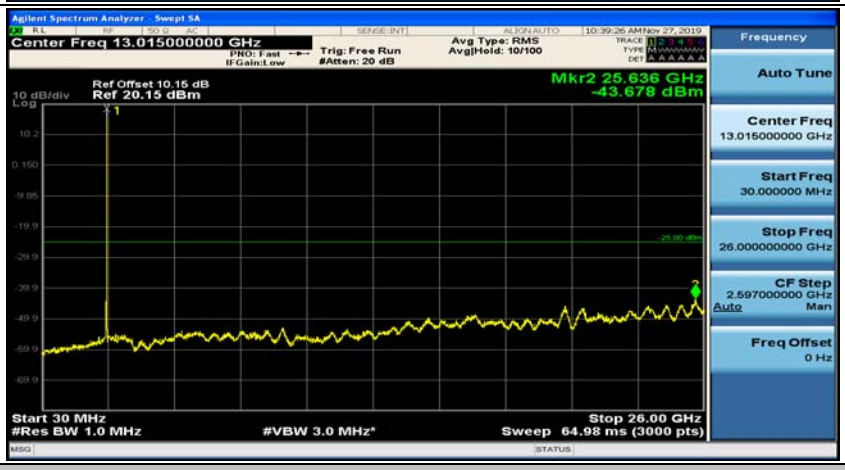




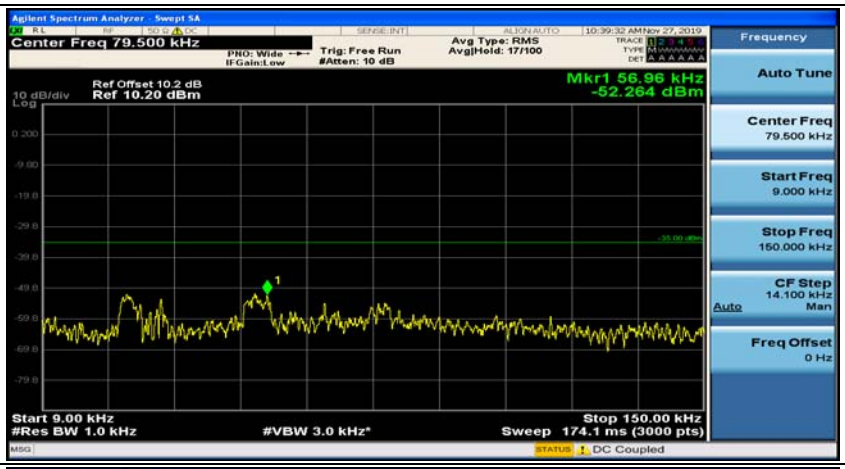
(Channel Bandwidth:15 MHz)_HCH_QPSK_1RB#37

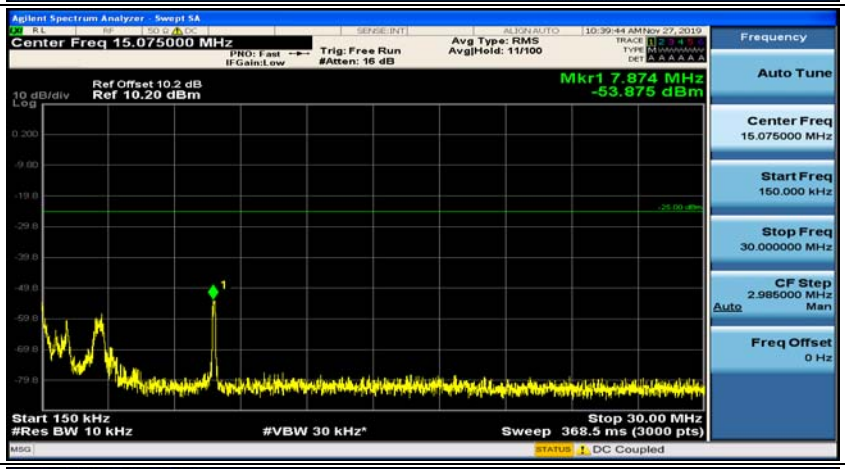


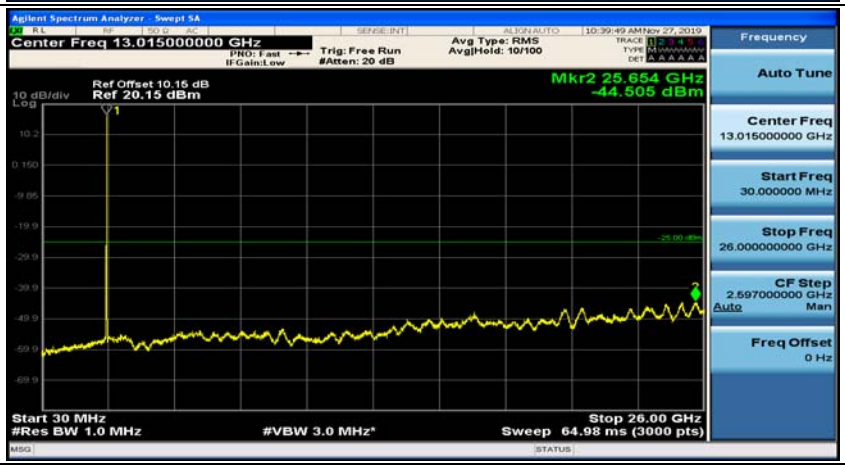




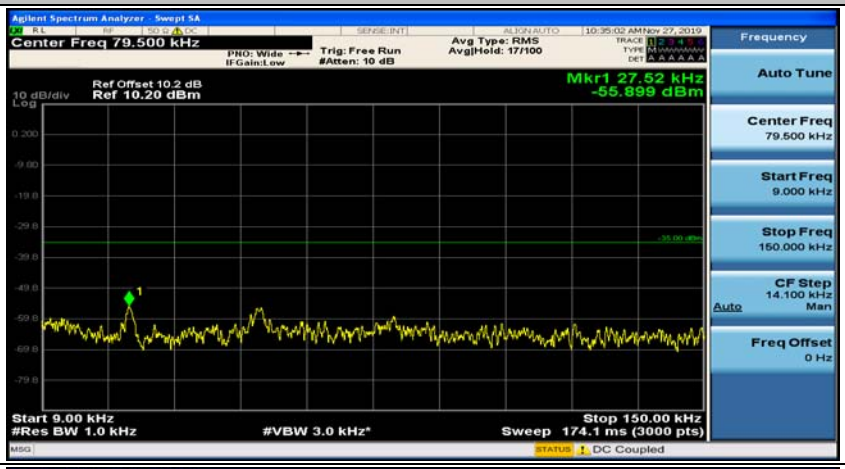
(Channel Bandwidth:15 MHz)_HCH_QPSK_1RB#74

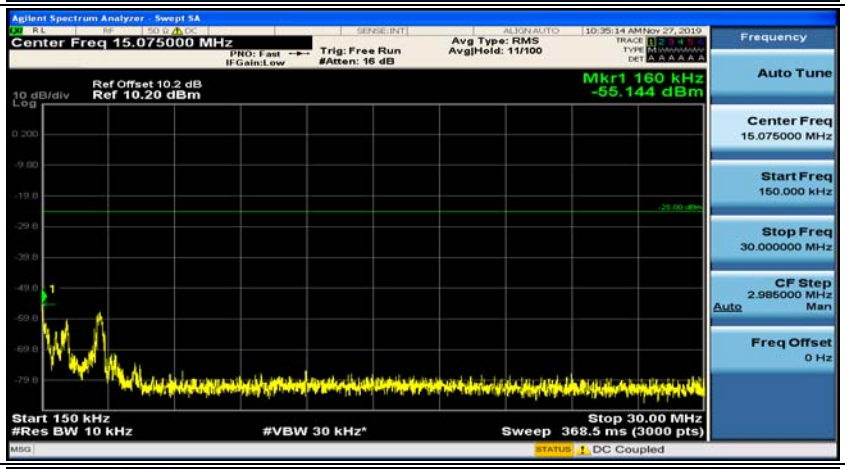

Agilent Spectrum Analyzer - Swept SA
Center Freq 79.500 kHz
PNO: Wide
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 17/100
10:39:32 AM Nov 27, 2019
Ref Offset 10.2 dB
10 dB/div
Ref 10.20 dBm
Mkr1 56.96 kHz
-52.264 dBm
Start 9.00 kHz
#Res BW 1.0 kHz
#VBW 3.0 kHz*
Stop 150.00 kHz
Sweep 174.1 ms (3000 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

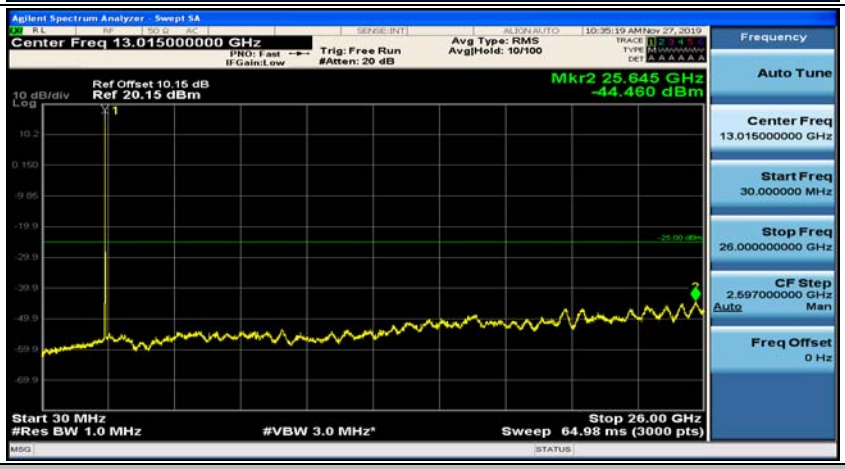

Agilent Spectrum Analyzer - Swept SA
Center Freq 15.075000 MHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 16 dB
Avg Type: RMS
Avg|Hold: 11/100
10:39:44 AM Nov 27, 2019
Ref Offset 10.2 dB
10 dB/div
Ref 10.20 dBm
Mkr1 7.874 MHz
-53.875 dBm
Start 150 kHz
#Res BW 10 kHz
#VBW 30 kHz*
Stop 30.00 MHz
Sweep 368.5 ms (3000 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: 20 dB
Avg Type: RMS
Avg|Hold: 10/100
10:39:49 AM Nov 27, 2019
Ref Offset 10.15 dB
10 dB/div
Ref 20.15 dBm
Mkr2 25.654 GHz
-44.505 dBm
Start 30 MHz
#Res BW 1.0 MHz
#VBW 3.0 MHz*
Stop 26.00 GHz
Sweep 64.98 ms (3000 pts)
Frequency
Auto Tune
Center Freq
13.015000000 GHz
Start Freq
30.000000 MHz
Stop Freq
26.000000000 GHz
CF Step
2.597000000 GHz
Auto
Man
Freq Offset
0 Hz

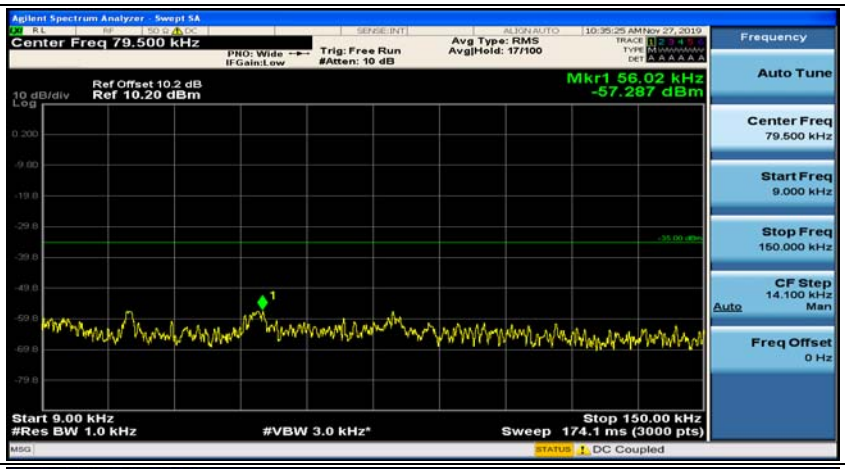
(Channel Bandwidth:15 MHz)_LCH_16QAM_1RB#0

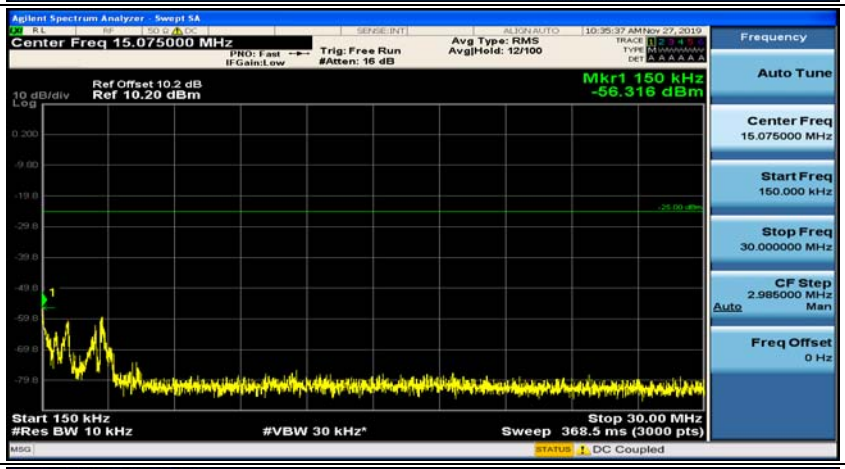


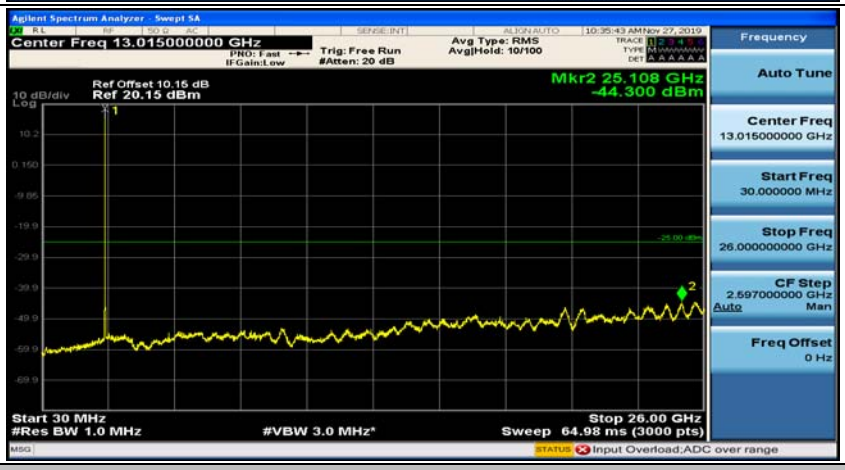




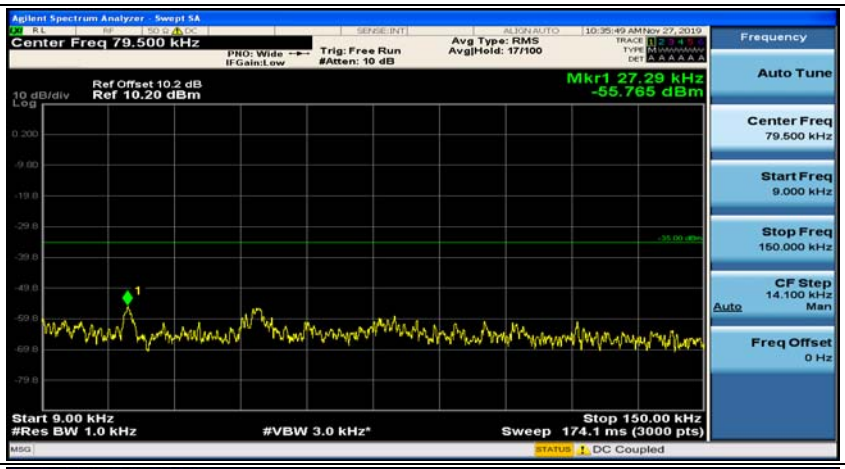
(Channel Bandwidth:15 MHz)_LCH_16QAM_1RB#37

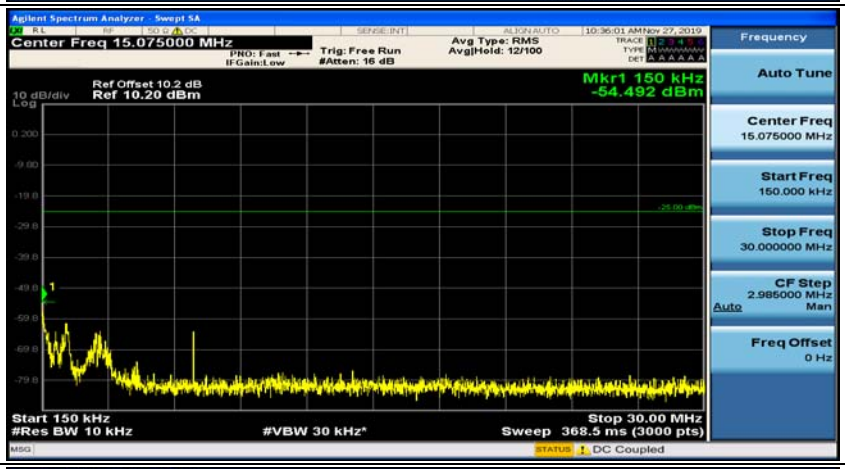


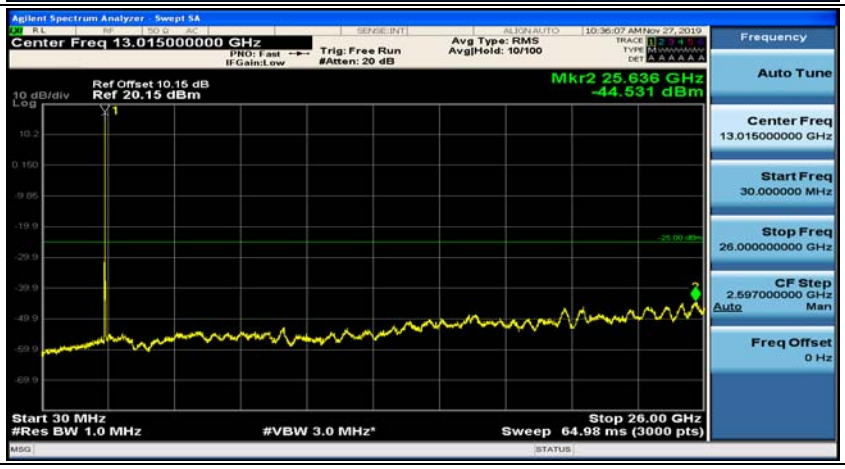




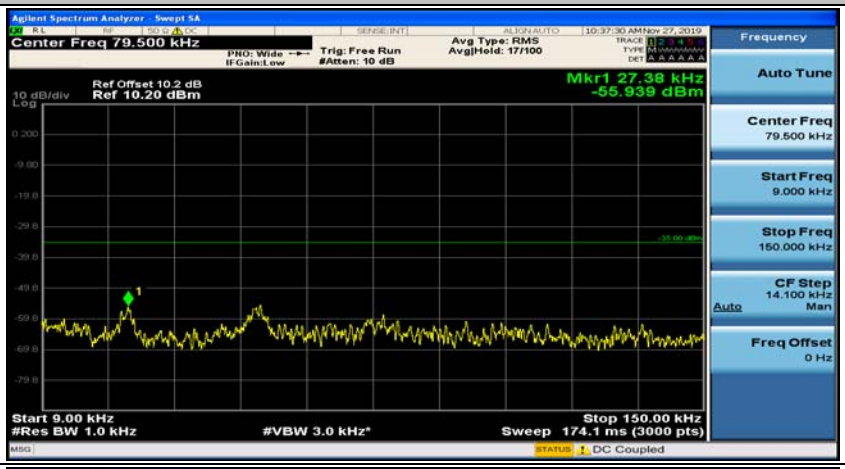
(Channel Bandwidth:15 MHz)_LCH_16QAM_1RB#74

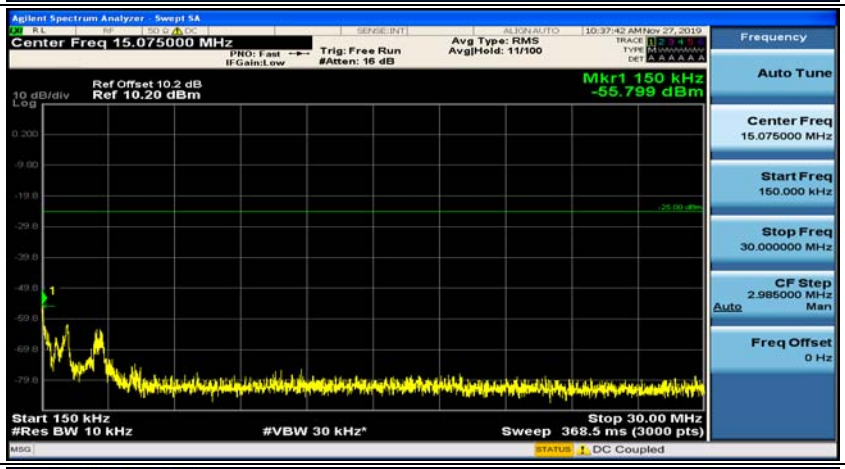

Agilent Spectrum Analyzer - Swept SA
Center Freq 79.500 kHz
PNO: Wide
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 17/100
10:35:49 AM Nov 27, 2019
Ref Offset 10.2 dB
10 dB/div
Ref 10.20 dBm
Mkr1 27.29 kHz
-55.765 dBm
Start 9.00 kHz
#Res BW 1.0 kHz
#VBW 3.0 kHz*
Stop 150.00 kHz
Sweep 174.1 ms (3000 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

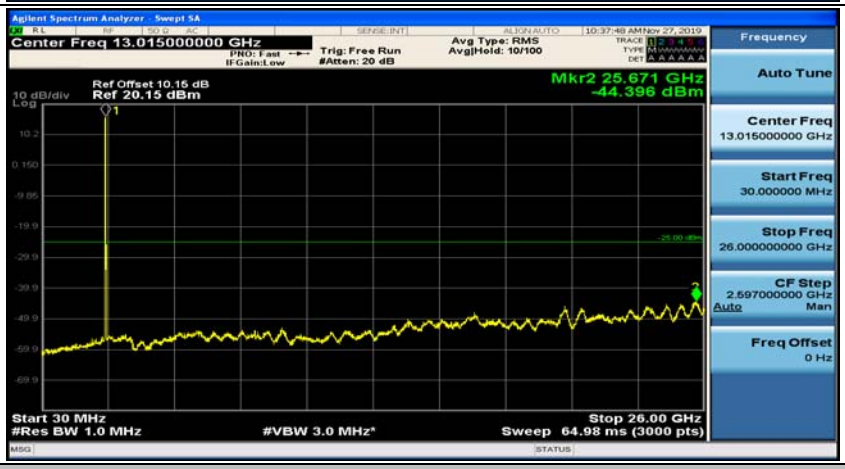

Agilent Spectrum Analyzer - Swept SA
Center Freq 15.075000 MHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 16 dB
Avg Type: RMS
Avg|Hold: 12/100
10:36:01 AM Nov 27, 2019
Ref Offset 10.2 dB
10 dB/div
Ref 10.20 dBm
Mkr1 150 kHz
-54.492 dBm
Start 150 kHz
#Res BW 10 kHz
#VBW 30 kHz*
Stop 30.00 MHz
Sweep 368.5 ms (3000 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: 20 dB
Avg Type: RMS
Avg|Hold: 10/100
10:36:07 AM Nov 27, 2019
Ref Offset 10.15 dB
10 dB/div
Ref 20.15 dBm
Mkr2 25.636 GHz
-44.531 dBm
Start 30 MHz
#Res BW 1.0 MHz
#VBW 3.0 MHz*
Stop 26.00 GHz
Sweep 64.98 ms (3000 pts)
Frequency
Auto Tune
Center Freq
13.015000000 GHz
Start Freq
30.000000 MHz
Stop Freq
26.000000000 GHz
CF Step
2.597000000 GHz
Auto
Man
Freq Offset
0 Hz

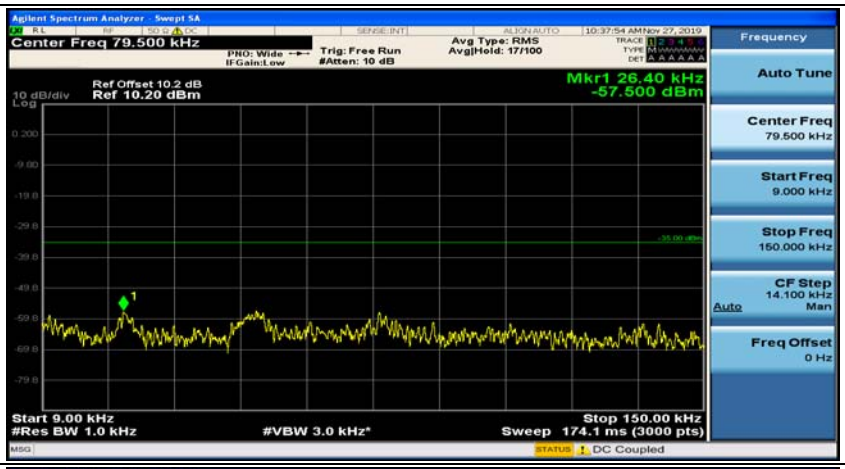
(Channel Bandwidth:15 MHz)_MCH_16QAM_1RB#0

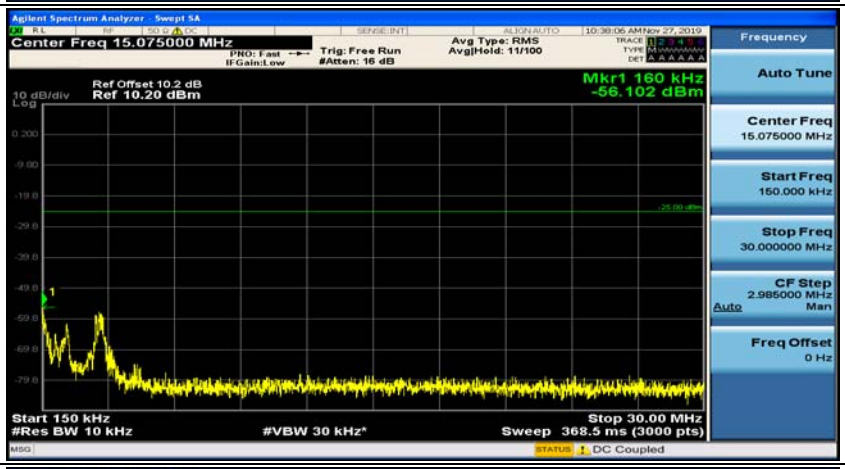


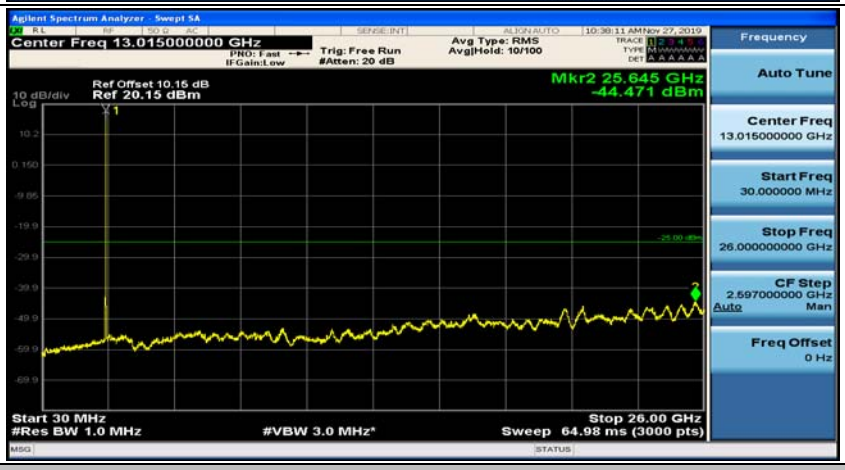




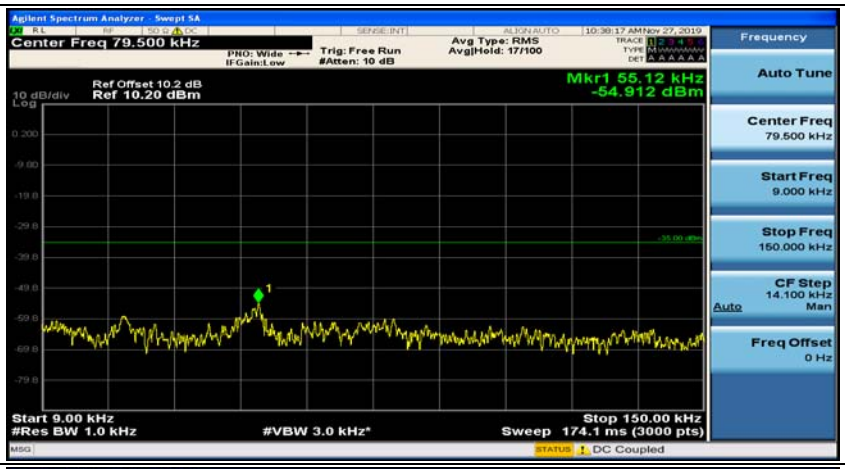
(Channel Bandwidth:15 MHz)_MCH_16QAM_1RB#37

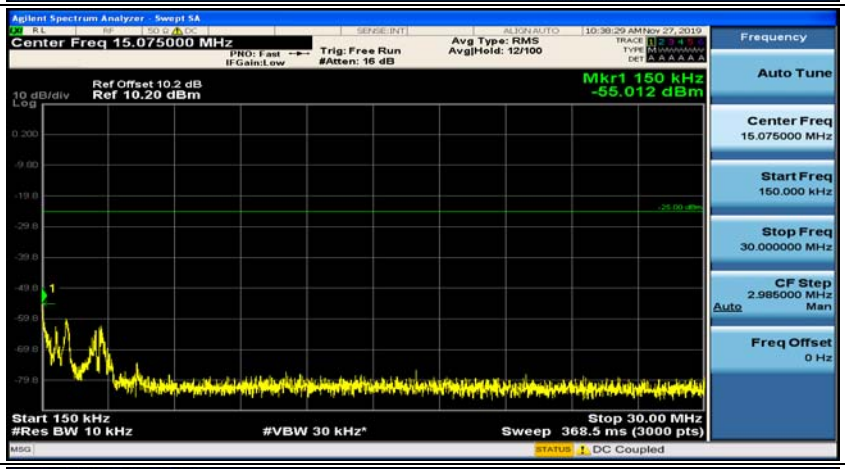


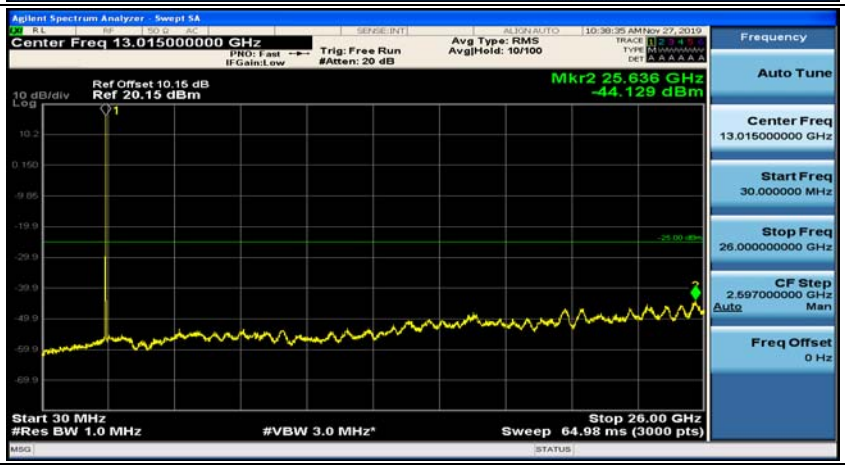




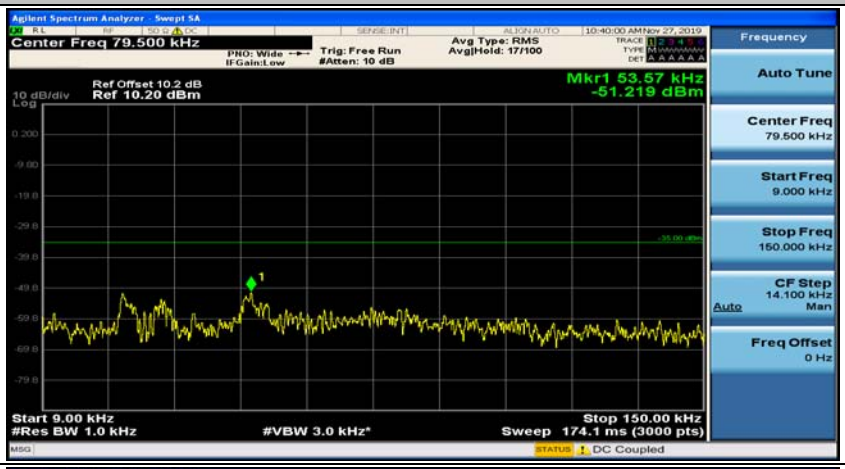
(Channel Bandwidth:15 MHz)_MCH_16QAM_1RB#74

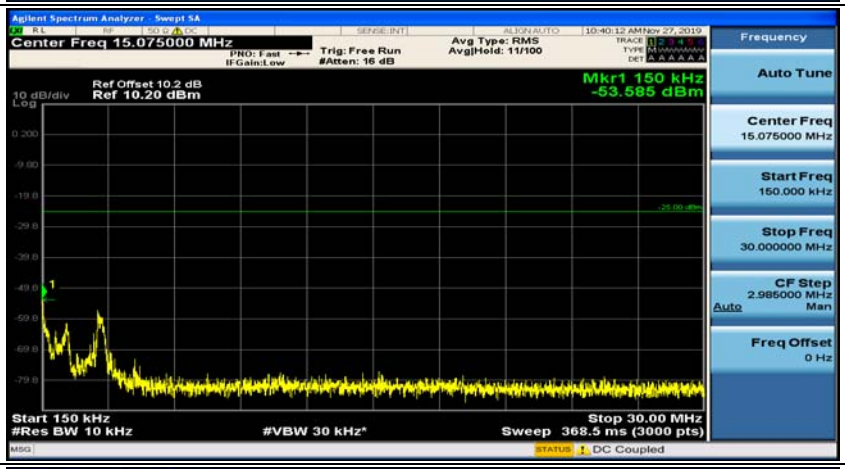

Agilent Spectrum Analyzer - Swept SA
Center Freq 79.500 kHz
PNO: Wide
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 17/100
10:39:17 AM Nov 27, 2019
Ref Offset 10.2 dB
10 dB/div
Ref 10.20 dBm
Mkr1 55.12 kHz
-54.912 dBm
Start 9.00 kHz
#Res BW 1.0 kHz
#VBW 3.0 kHz*
Stop 150.00 kHz
Sweep 174.1 ms (3000 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

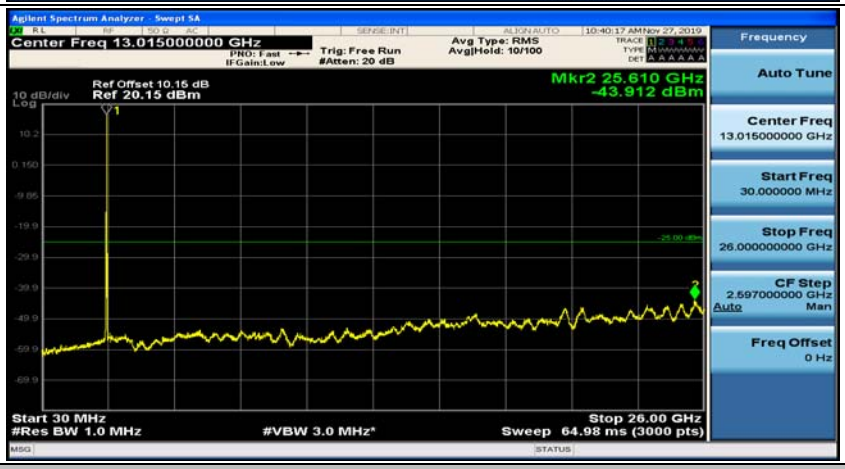

Agilent Spectrum Analyzer - Swept SA
Center Freq 15.075000 MHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 16 dB
Avg Type: RMS
Avg|Hold: 12/100
10:38:29 AM Nov 27, 2019
Ref Offset 10.2 dB
10 dB/div
Ref 10.20 dBm
Mkr1 150 kHz
-55.012 dBm
Start 150 kHz
#Res BW 10 kHz
#VBW 30 kHz*
Stop 30.00 MHz
Sweep 368.5 ms (3000 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: 20 dB
Avg Type: RMS
Avg|Hold: 10/100
10:38:35 AM Nov 27, 2019
Ref Offset 10.15 dB
10 dB/div
Ref 20.15 dBm
Mkr2 25.636 GHz
-44.129 dBm
Start 30 MHz
#Res BW 1.0 MHz
#VBW 3.0 MHz*
Stop 26.00 GHz
Sweep 64.98 ms (3000 pts)
Frequency
Auto Tune
Center Freq
13.015000000 GHz
Start Freq
30.000000 MHz
Stop Freq
26.000000000 GHz
CF Step
2.597000000 GHz
Auto
Man
Freq Offset
0 Hz

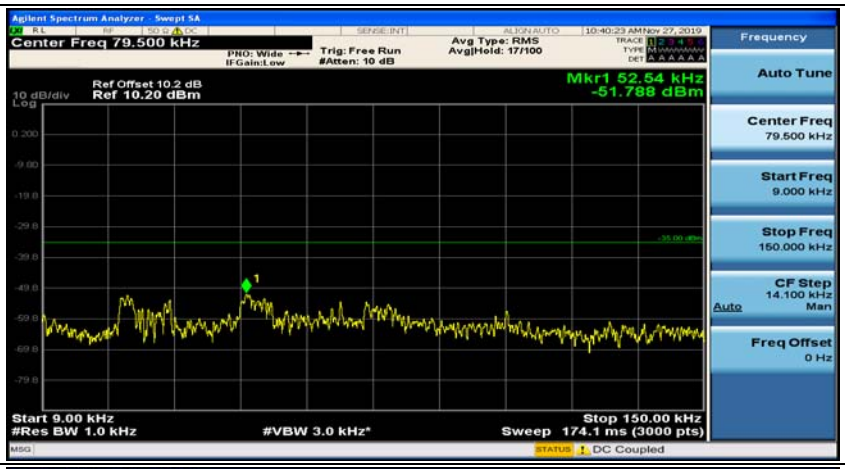
(Channel Bandwidth:15 MHz)_HCH_16QAM_1RB#0

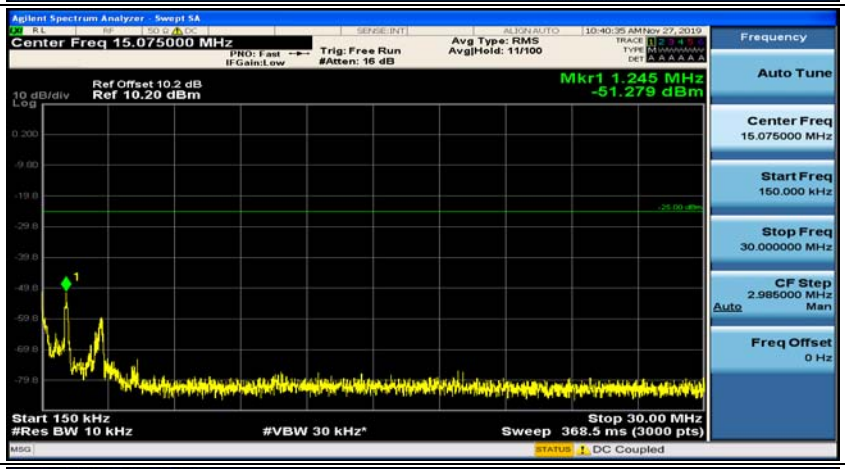


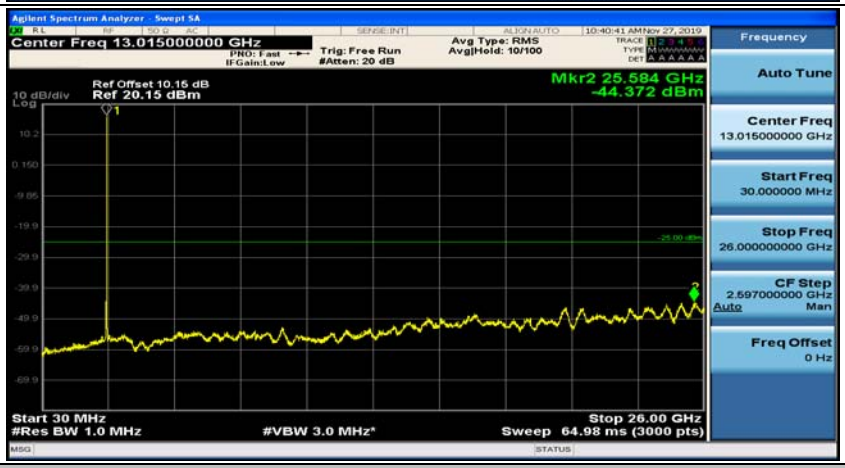




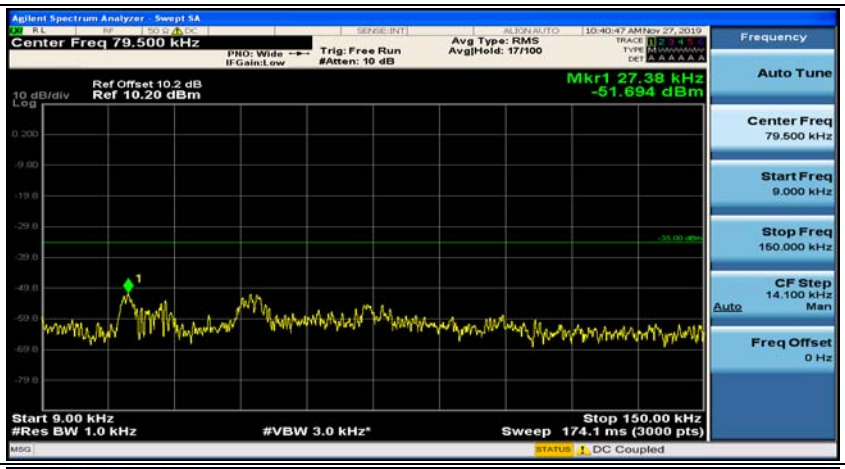
(Channel Bandwidth:15 MHz)_HCH_16QAM_1RB#37

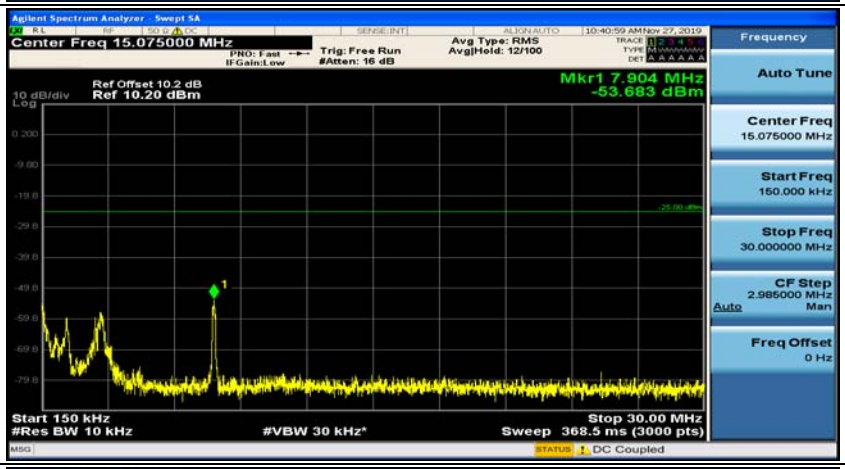


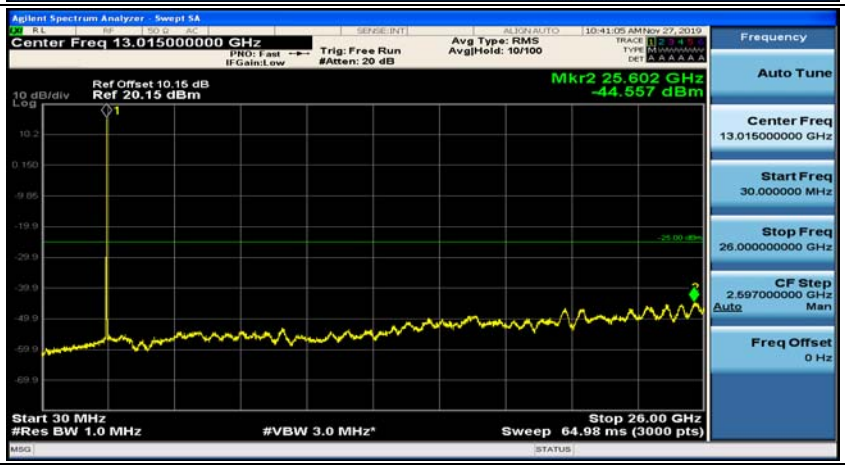




(Channel Bandwidth:15 MHz)_HCH_16QAM_1RB#74

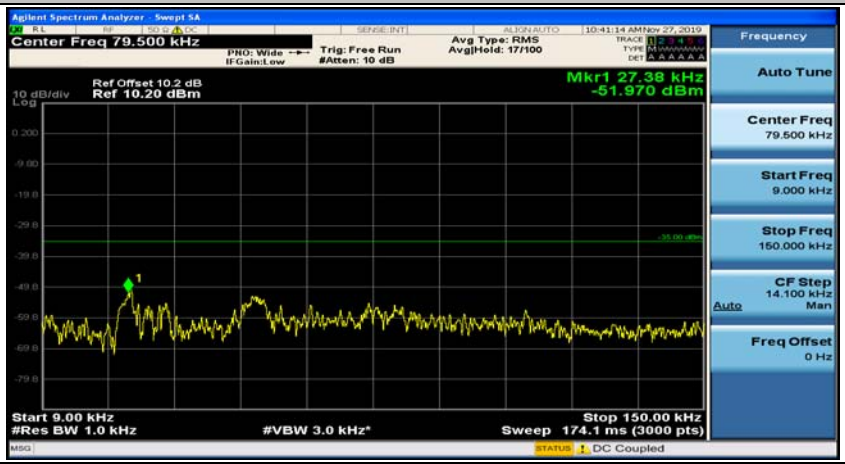

Agilent Spectrum Analyzer - Swept SA
Center Freq 79.500 kHz
PNO: Wide
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 17/100
10:40:47 AM Nov 27, 2019
Ref Offset 10.2 dB
10 dB/div Ref 10.20 dBm
Mkr1 27.38 kHz
-51.694 dBm
Start 9.00 kHz
#Res BW 1.0 kHz
#VBW 3.0 kHz*
Stop 150.00 kHz
Sweep 174.1 ms (3000 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

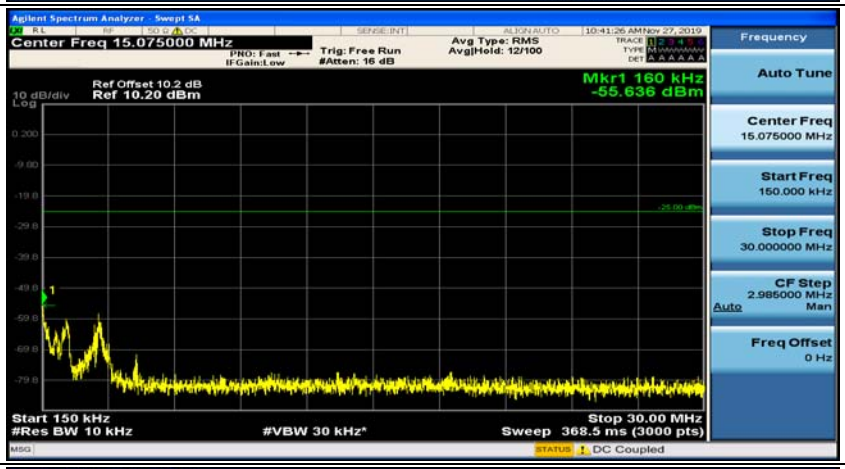

Agilent Spectrum Analyzer - Swept SA
Center Freq 15.075000 MHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 16 dB
Avg Type: RMS
Avg|Hold: 12/100
10:40:59 AM Nov 27, 2019
Ref Offset 10.2 dB
10 dB/div Ref 10.20 dBm
Mkr1 7.904 MHz
-53.683 dBm
Start 150 kHz
#Res BW 10 kHz
#VBW 30 kHz*
Stop 30.00 MHz
Sweep 368.5 ms (3000 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

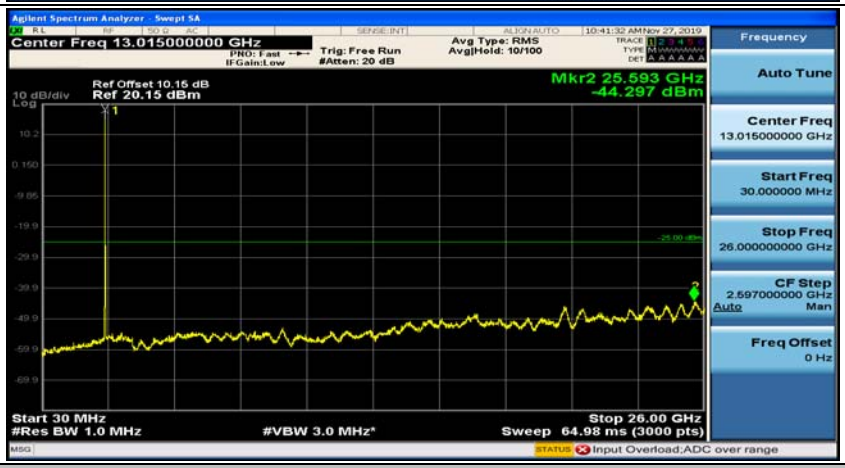

Agilent Spectrum Analyzer - Swept SA
Center Freq 13.015000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 20 dB
Avg Type: RMS
Avg|Hold: 10/100
10:41:05 AM Nov 27, 2019
Ref Offset 10.15 dB
10 dB/div Ref 20.15 dBm
Mkr2 25.602 GHz
-44.557 dBm
Start 30 MHz
#Res BW 1.0 MHz
#VBW 3.0 MHz*
Stop 26.00 GHz
Sweep 64.98 ms (3000 pts)
Frequency
Auto Tune
Center Freq 13.015000000 GHz
Start Freq 30.000000 MHz
Stop Freq 26.000000000 GHz
CF Step 2.597000000 GHz
Auto Man
Freq Offset 0 Hz

Channel Bandwidth: 20 MHz

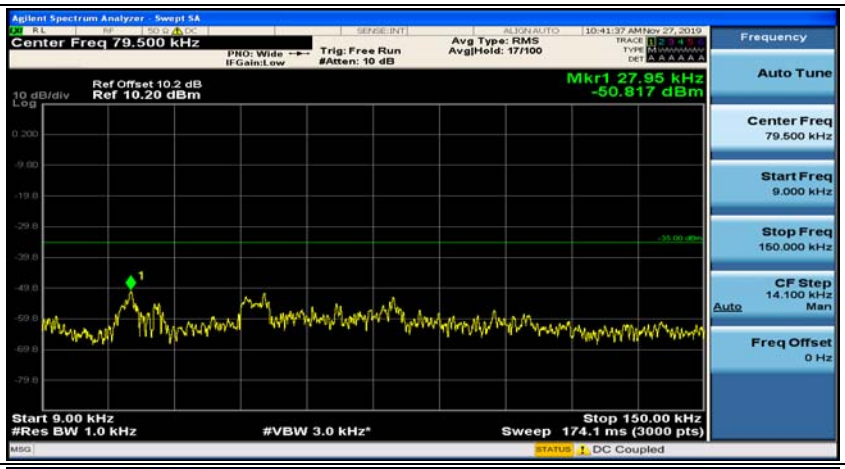
(Channel Bandwidth:20 MHz)_LCH_QPSK_1RB#0

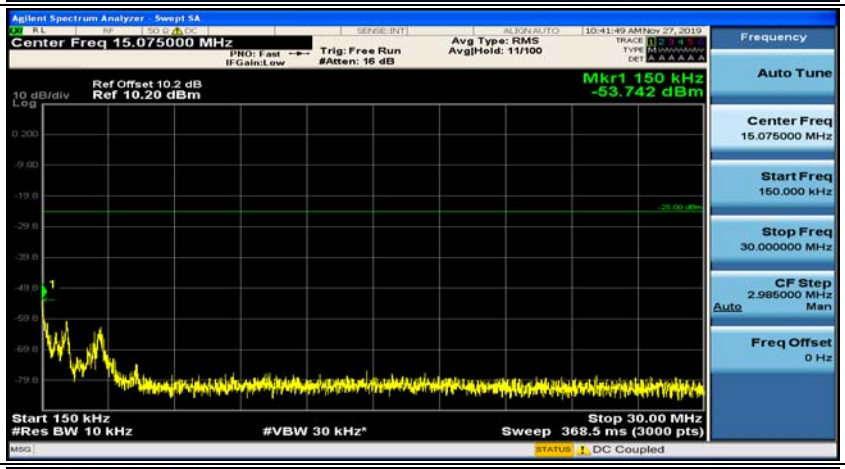


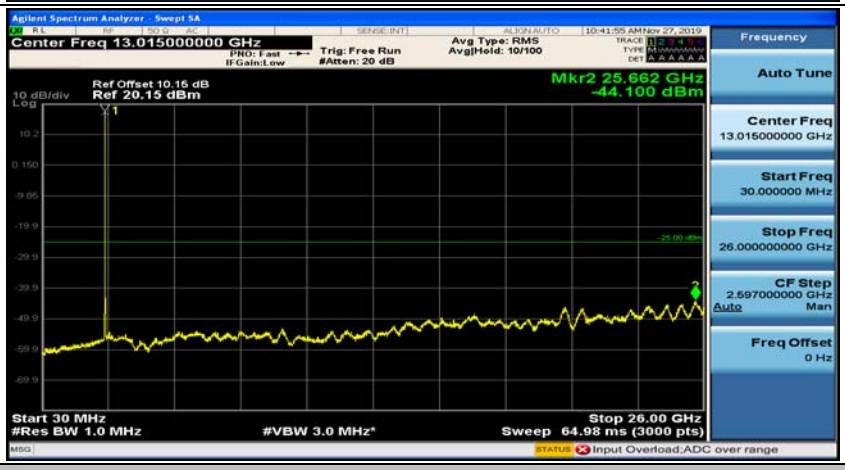




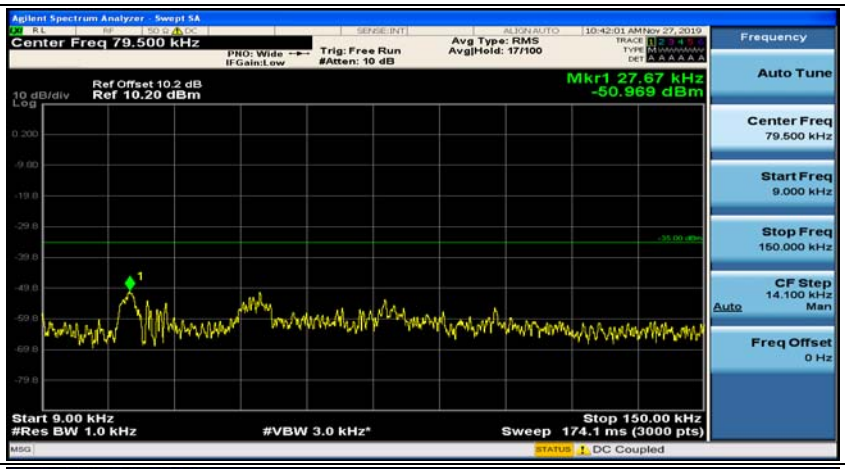
(Channel Bandwidth:20 MHz)_LCH_QPSK_1RB#49

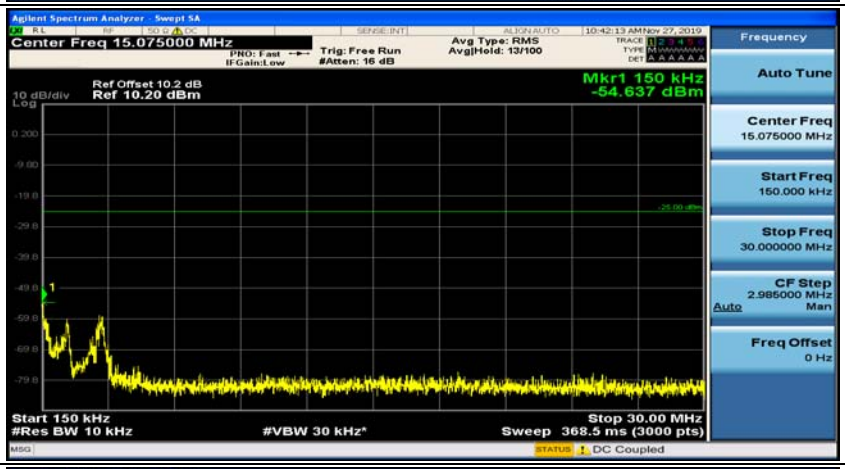


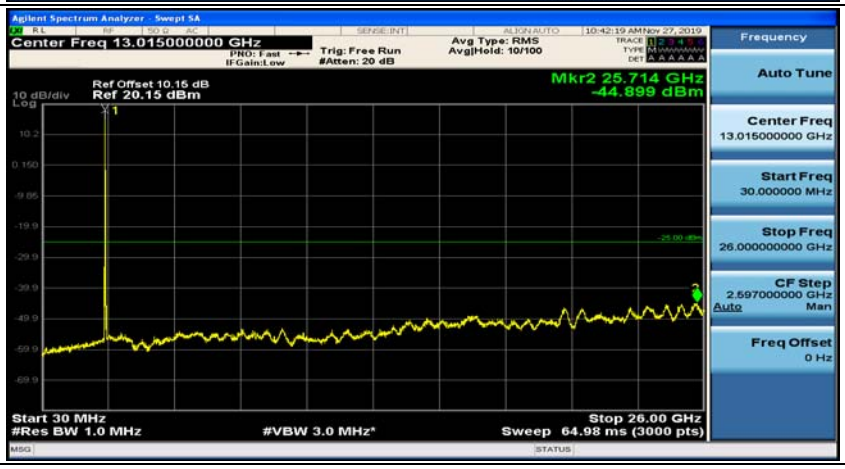




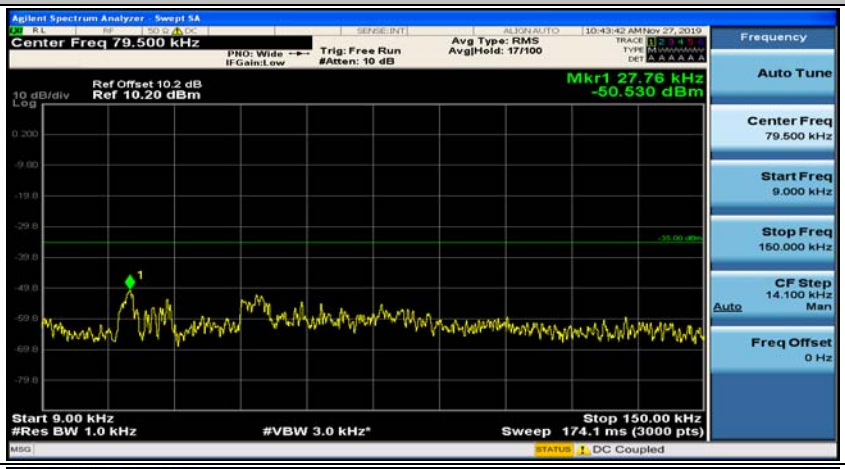
(Channel Bandwidth:20 MHz)_LCH_QPSK_1RB#99

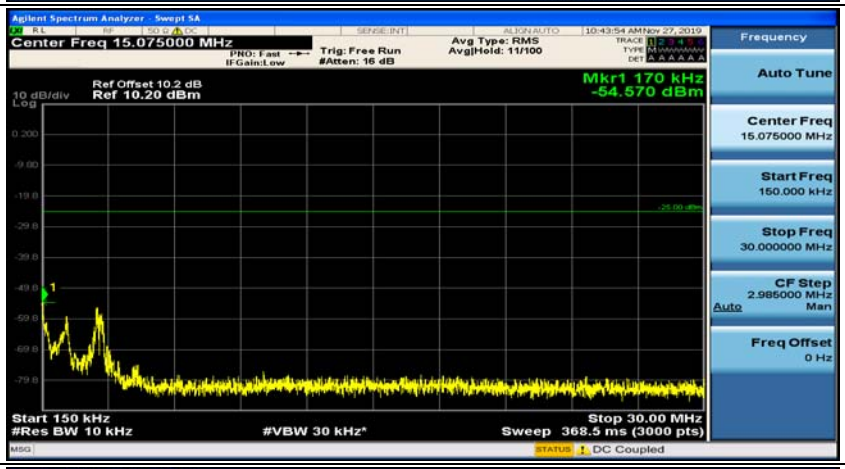

Agilent Spectrum Analyzer - Swept SA
Center Freq 79.500 kHz
PNO: Wide
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 17/100
10:42:01 AM Nov 27, 2019
Ref Offset 10.2 dB
10 dB/div
Ref 10.20 dBm
Mkr1 27.67 kHz
-50.969 dBm
Start 9.00 kHz
#Res BW 1.0 kHz
#VBW 3.0 kHz*
Stop 150.00 kHz
Sweep 174.1 ms (3000 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

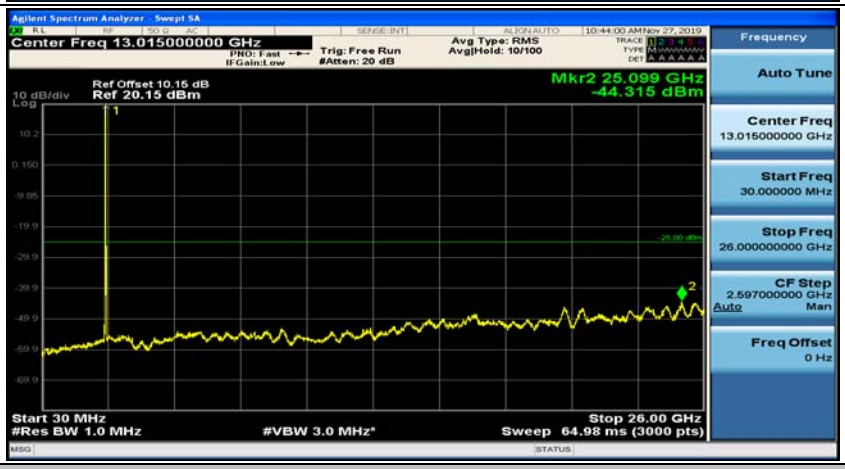

Agilent Spectrum Analyzer - Swept SA
Center Freq 15.075000 MHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 16 dB
Avg Type: RMS
Avg|Hold: 13/100
10:42:13 AM Nov 27, 2019
Ref Offset 10.2 dB
10 dB/div
Ref 10.20 dBm
Mkr1 150 kHz
-54.637 dBm
Start 150 kHz
#Res BW 10 kHz
#VBW 30 kHz*
Stop 30.00 MHz
Sweep 368.5 ms (3000 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: 20 dB
Avg Type: RMS
Avg|Hold: 10/100
10:42:19 AM Nov 27, 2019
Ref Offset 10.15 dB
10 dB/div
Ref 20.15 dBm
Mkr2 25.714 GHz
-44.899 dBm
Start 30 MHz
#Res BW 1.0 MHz
#VBW 3.0 MHz*
Stop 26.00 GHz
Sweep 64.98 ms (3000 pts)
Frequency
Auto Tune
Center Freq
13.015000000 GHz
Start Freq
30.000000 MHz
Stop Freq
26.000000000 GHz
CF Step
2.597000000 GHz
Auto
Man
Freq Offset
0 Hz

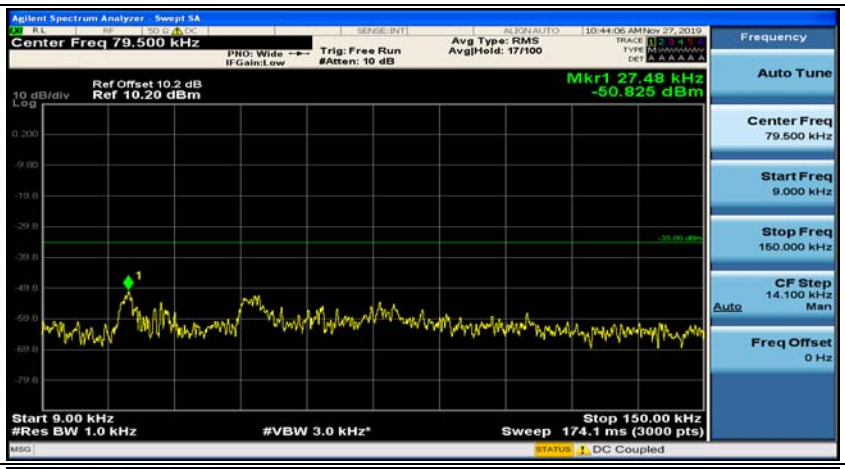
(Channel Bandwidth:20 MHz)_MCH_QPSK_1RB#0

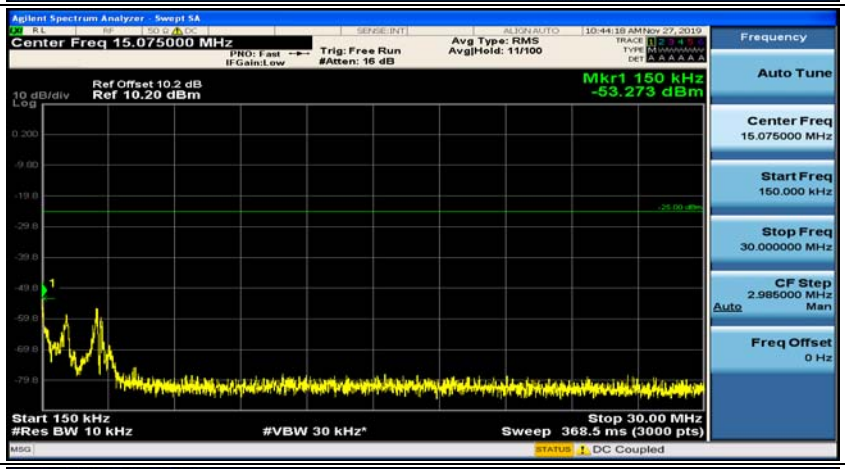


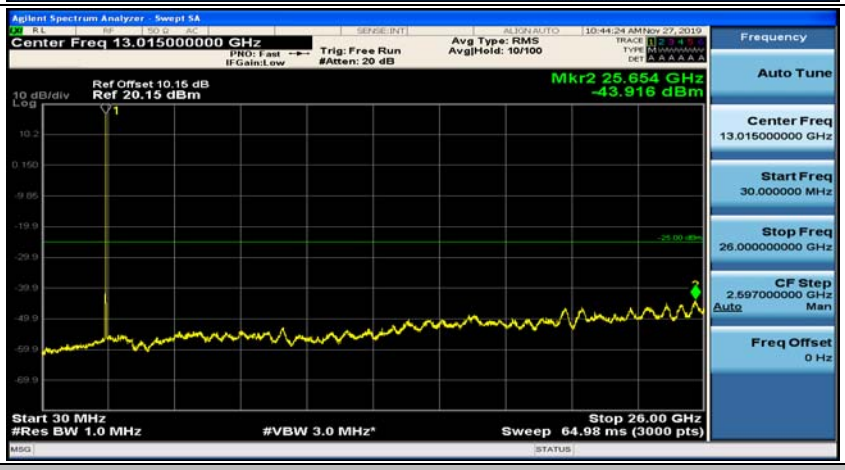




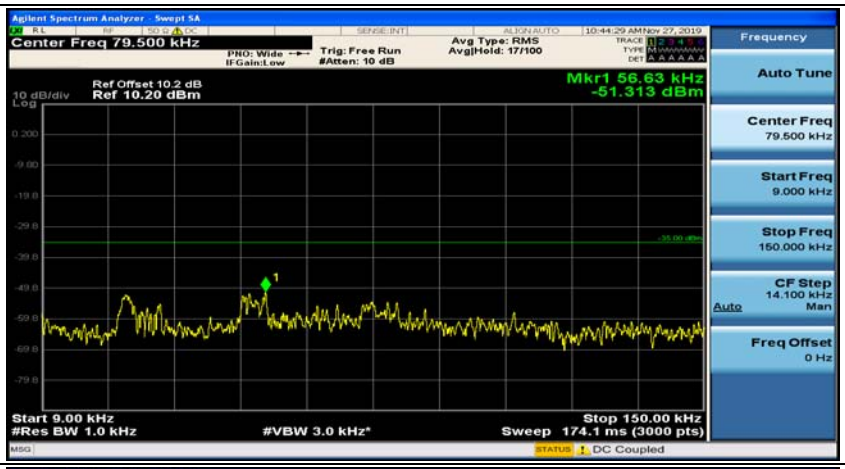
(Channel Bandwidth:20 MHz)_MCH_QPSK_1RB#49

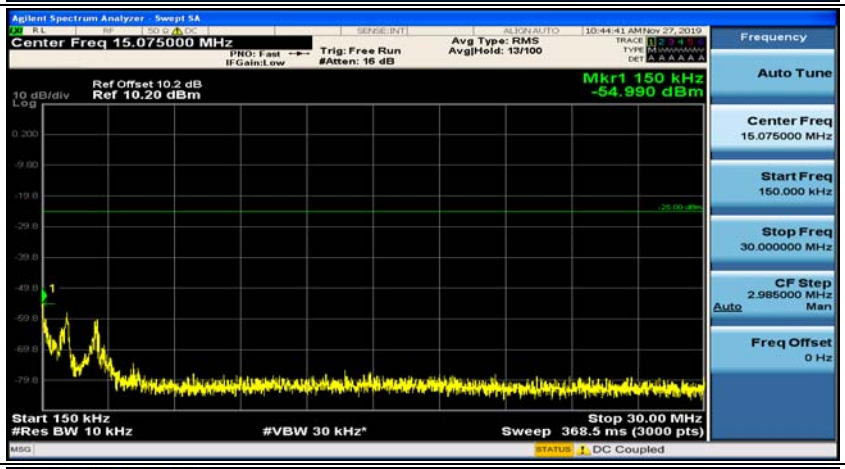


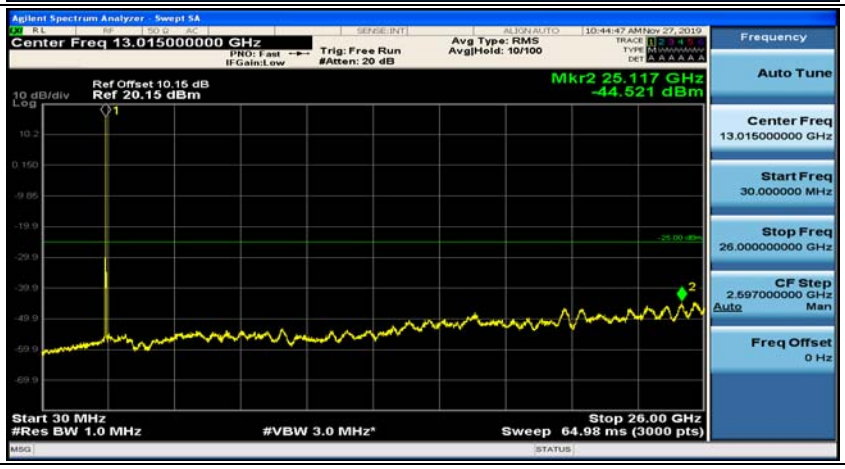




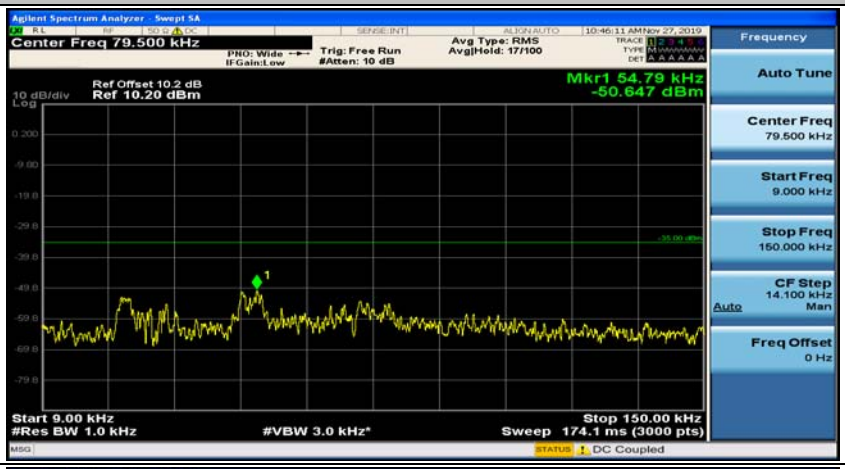
(Channel Bandwidth:20 MHz)_MCH_QPSK_1RB#99

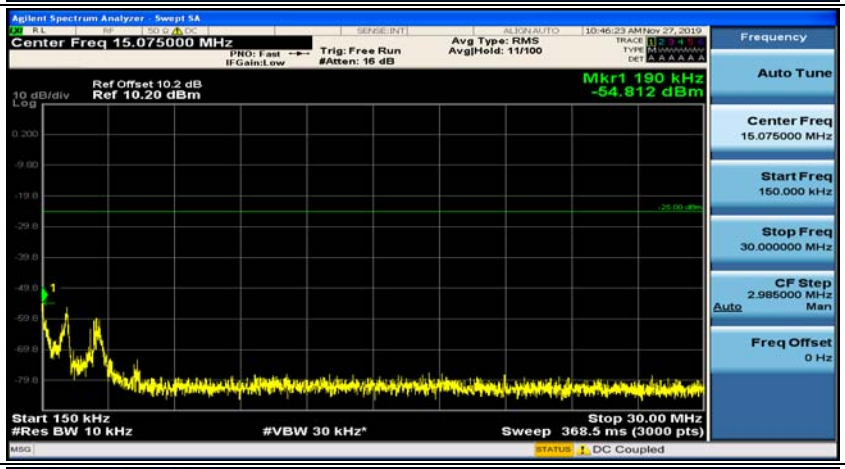

Agilent Spectrum Analyzer - Swept SA
Center Freq 79.500 kHz
PNO: Wide
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 17/100
10:44:29 AM Nov 27, 2019
Ref Offset 10.2 dB
10 dB/div
Ref 10.20 dBm
Mkr1 56.63 kHz
-51.313 dBm
Start 9.00 kHz
#Res BW 1.0 kHz
#VBW 3.0 kHz*
Stop 150.00 kHz
Sweep 174.1 ms (3000 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

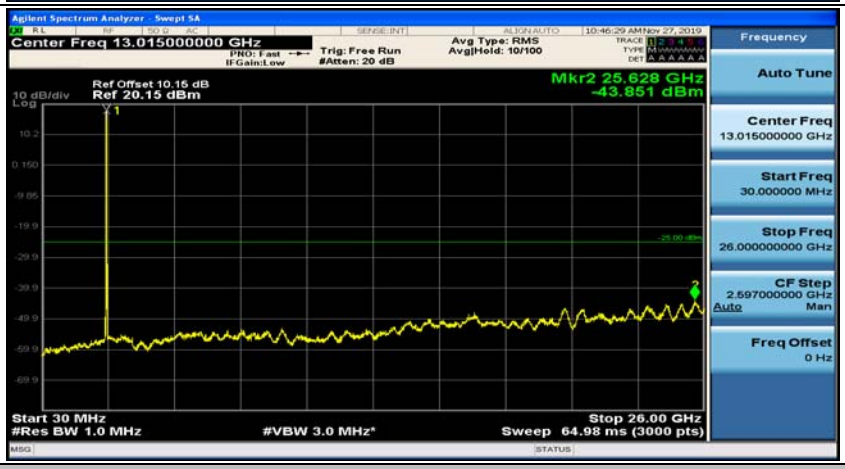

Agilent Spectrum Analyzer - Swept SA
Center Freq 15.075000 MHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 16 dB
Avg Type: RMS
Avg|Hold: 13/100
10:44:41 AM Nov 27, 2019
Ref Offset 10.2 dB
10 dB/div
Ref 10.20 dBm
Mkr1 150 kHz
-54.990 dBm
Start 150 kHz
#Res BW 10 kHz
#VBW 30 kHz*
Stop 30.00 MHz
Sweep 368.5 ms (3000 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: 20 dB
Avg Type: RMS
Avg|Hold: 10/100
10:44:47 AM Nov 27, 2019
Ref Offset 10.15 dB
10 dB/div
Ref 20.15 dBm
Mkr2 25.117 GHz
-44.521 dBm
Start 30 MHz
#Res BW 1.0 MHz
#VBW 3.0 MHz*
Stop 26.00 GHz
Sweep 64.98 ms (3000 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

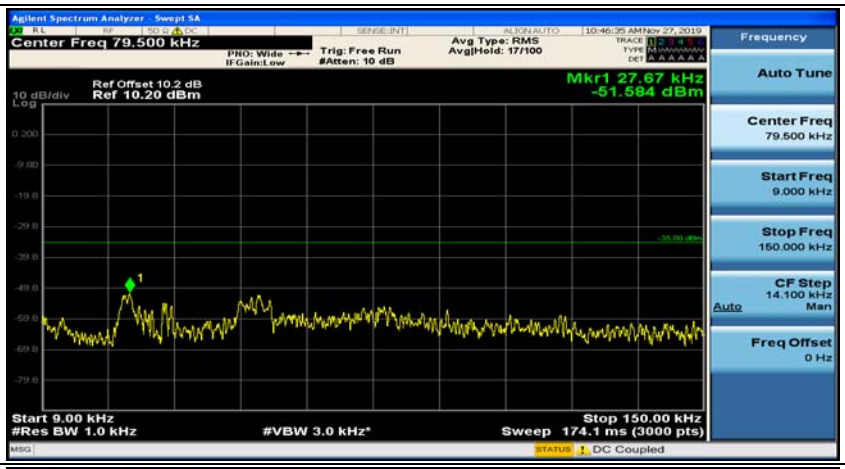
(Channel Bandwidth:20 MHz)_HCH_QPSK_1RB#0

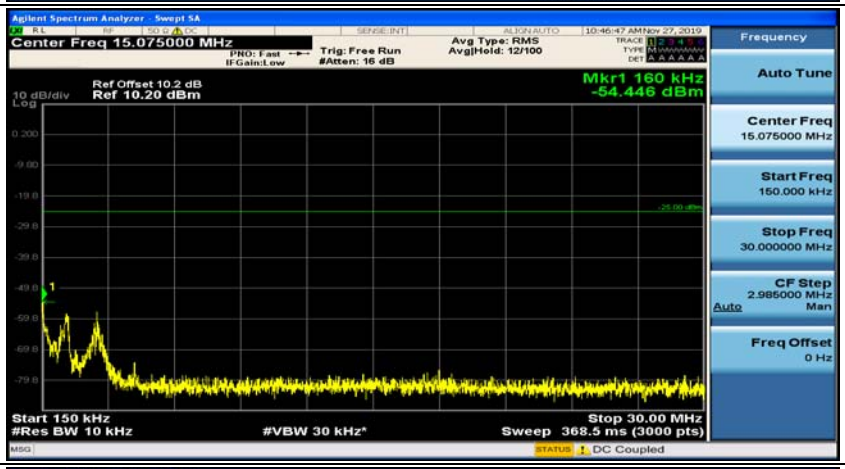


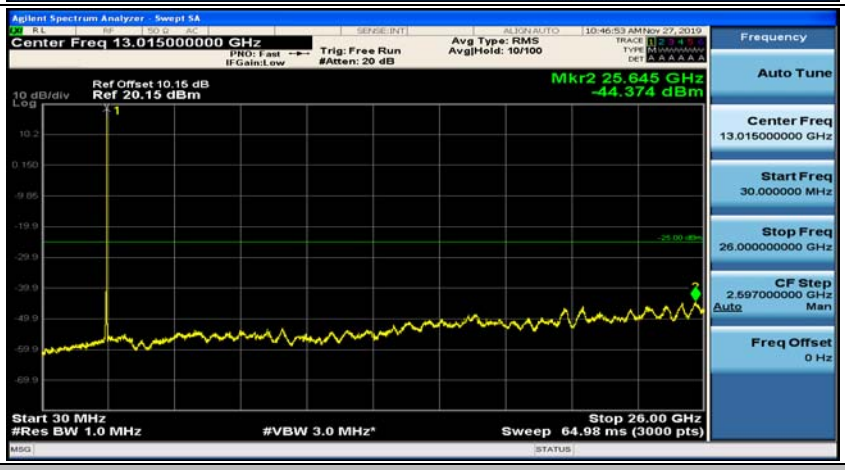




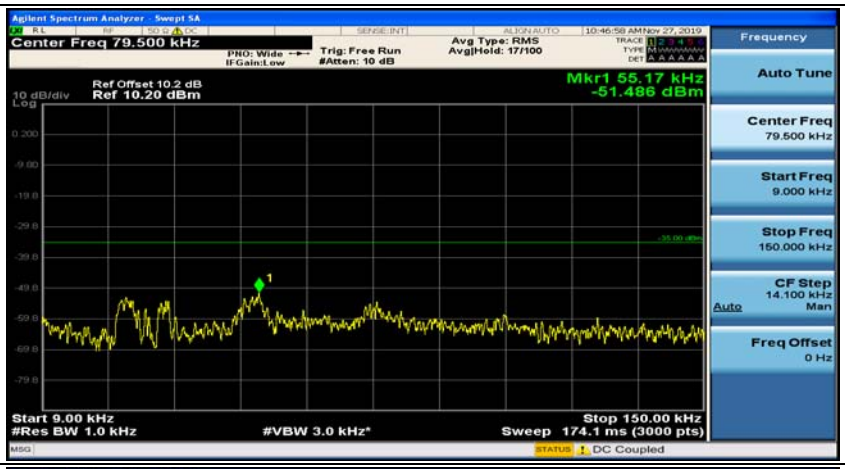
(Channel Bandwidth:20 MHz)_HCH_QPSK_1RB#49

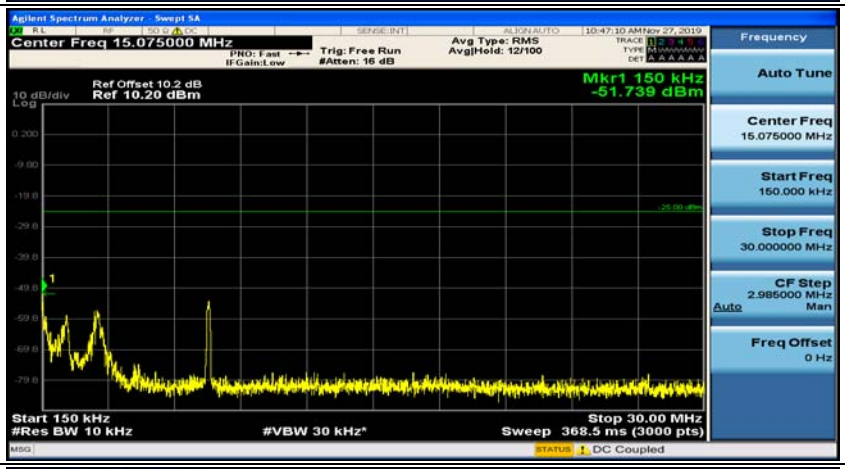


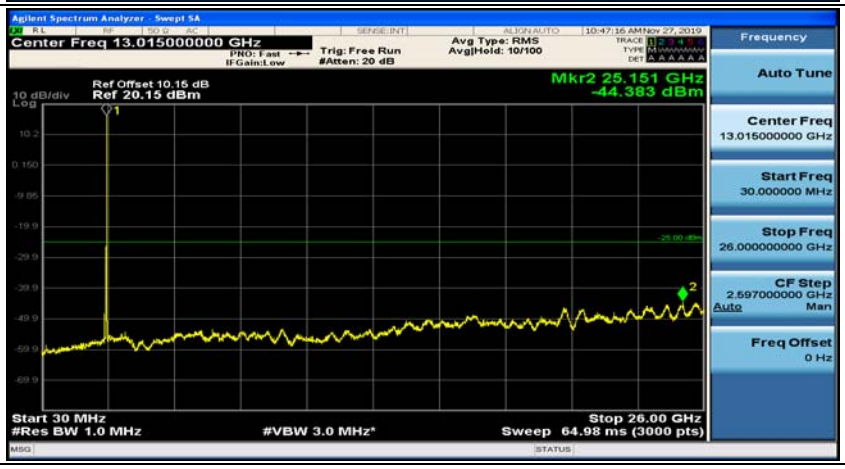




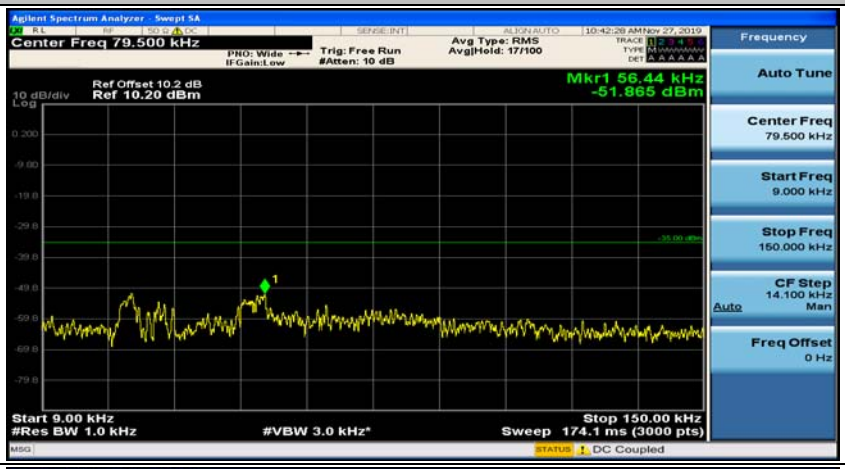
(Channel Bandwidth:20 MHz)_HCH_QPSK_1RB#99

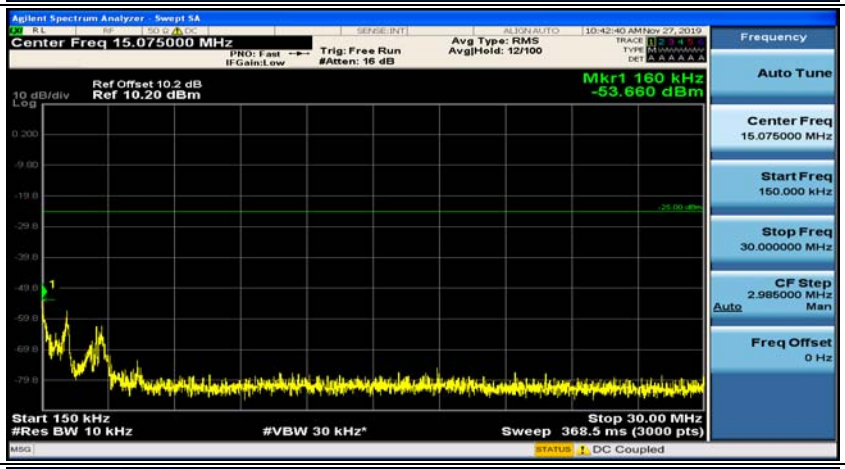

Agilent Spectrum Analyzer - Swept SA
Center Freq 79.500 kHz
PNO: Wide
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 17/100
10:46:58 AM Nov 27, 2019
Ref Offset 10.2 dB
10 dB/div
Ref 10.20 dBm
Mkr1 55.17 kHz
-51.486 dBm
Start 9.00 kHz
#Res BW 1.0 kHz
#VBW 3.0 kHz*
Stop 150.00 kHz
Sweep 174.1 ms (3000 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

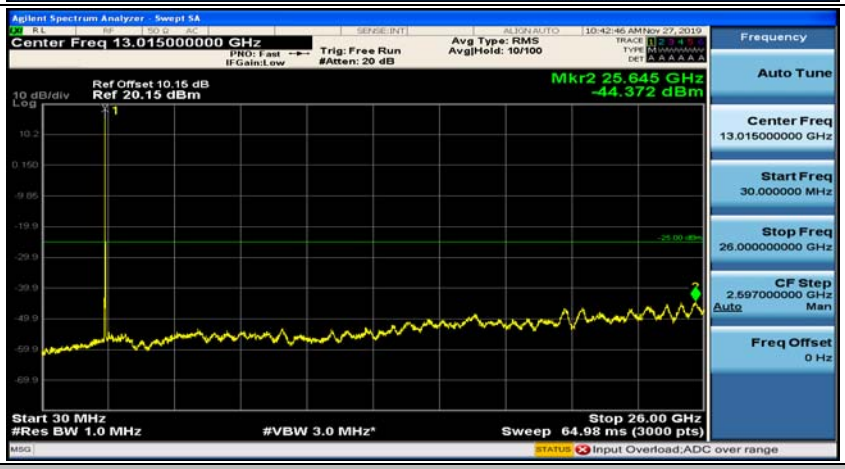

Agilent Spectrum Analyzer - Swept SA
Center Freq 15.075000 MHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 16 dB
Avg Type: RMS
Avg|Hold: 12/100
10:47:10 AM Nov 27, 2019
Ref Offset 10.2 dB
10 dB/div
Ref 10.20 dBm
Mkr1 150 kHz
-51.739 dBm
Start 150 kHz
#Res BW 10 kHz
#VBW 30 kHz*
Stop 30.00 MHz
Sweep 368.5 ms (3000 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: 20 dB
Avg Type: RMS
Avg|Hold: 10/100
10:47:16 AM Nov 27, 2019
Ref Offset 10.15 dB
10 dB/div
Ref 20.15 dBm
Mkr2 25.151 GHz
-44.383 dBm
Start 30 MHz
#Res BW 1.0 MHz
#VBW 3.0 MHz*
Stop 26.00 GHz
Sweep 64.98 ms (3000 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

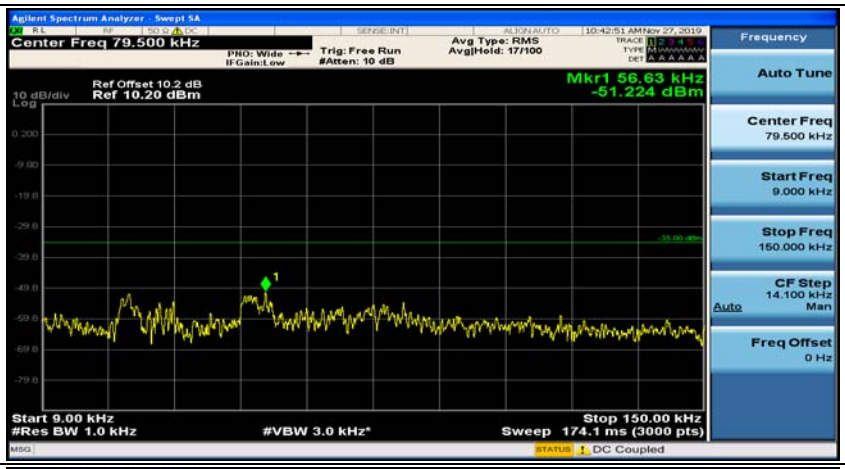
(Channel Bandwidth:20 MHz)_LCH_16QAM_1RB#0

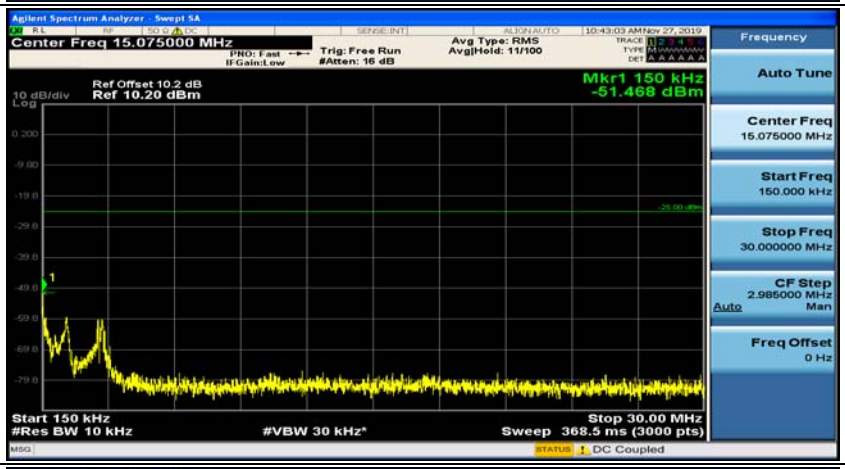


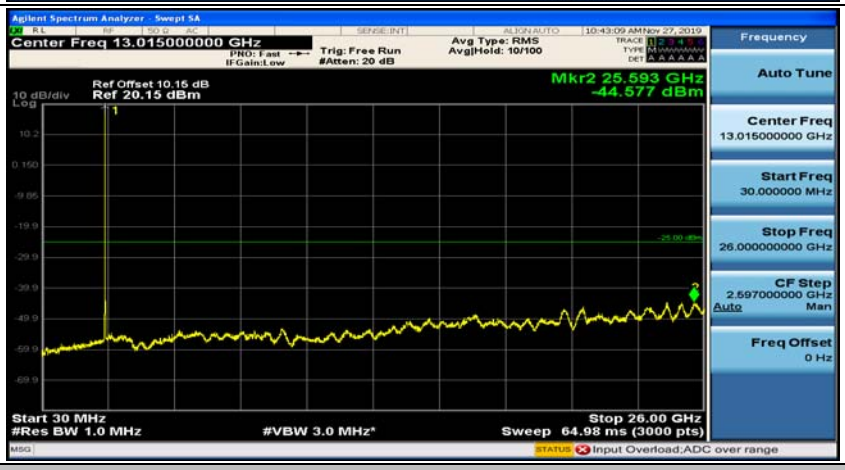




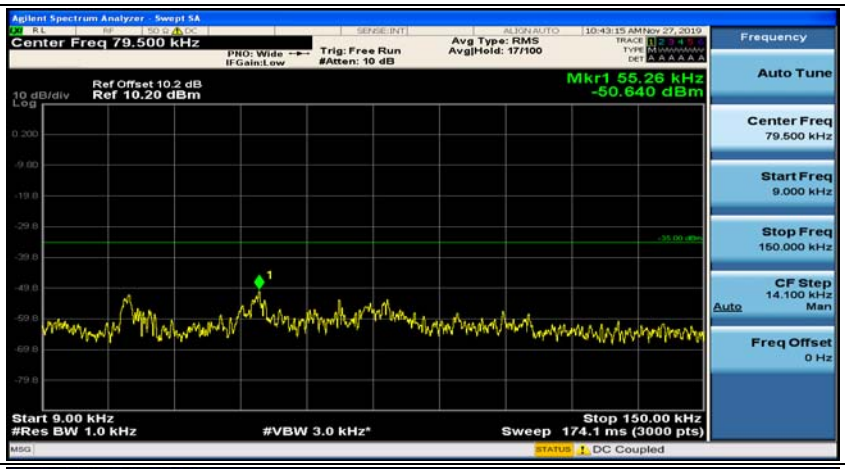
(Channel Bandwidth:20 MHz)_LCH_16QAM_1RB#49

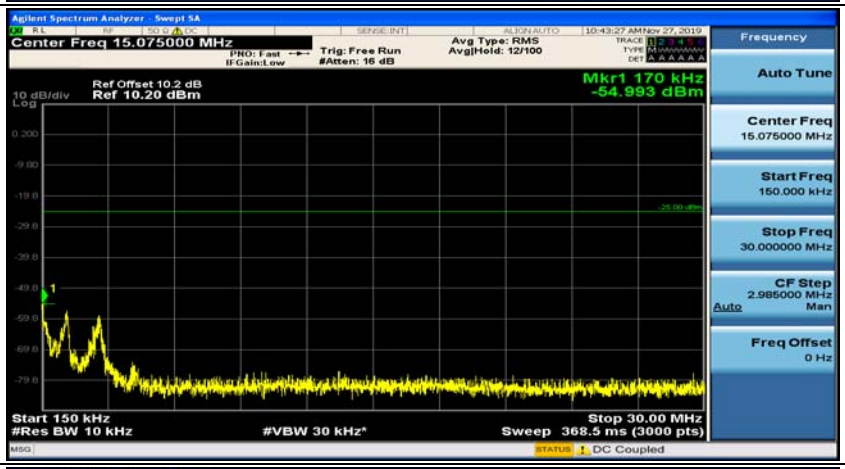


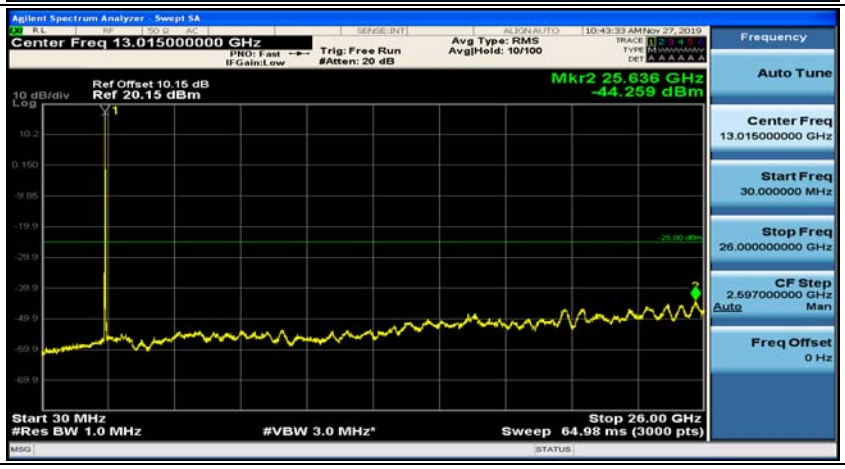




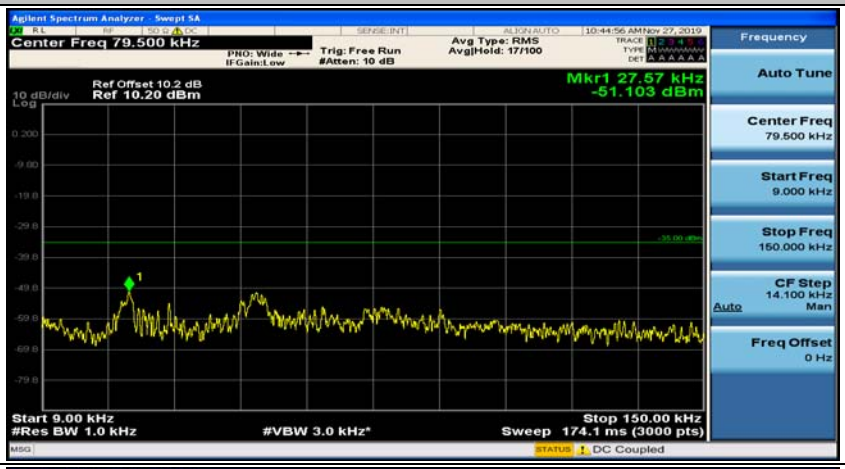
(Channel Bandwidth:20 MHz)_LCH_16QAM_1RB#99

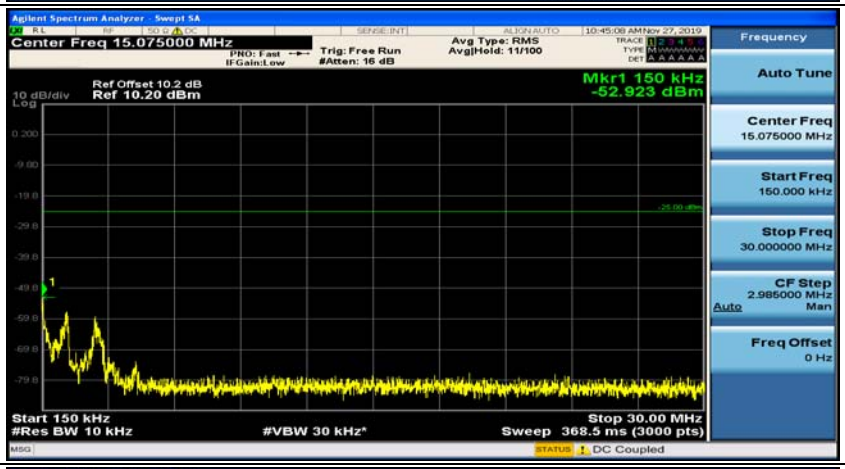

Agilent Spectrum Analyzer - Swept SA
Center Freq 79.500 kHz
PNO: Wide
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 17/100
10:43:15 AM Nov 27, 2019
Ref Offset 10.2 dB
10 dB/div
Ref 10.20 dBm
Mkr1 55.26 kHz
-50.640 dBm
Start 9.00 kHz
#Res BW 1.0 kHz
#VBW 3.0 kHz*
Stop 150.00 kHz
Sweep 174.1 ms (3000 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

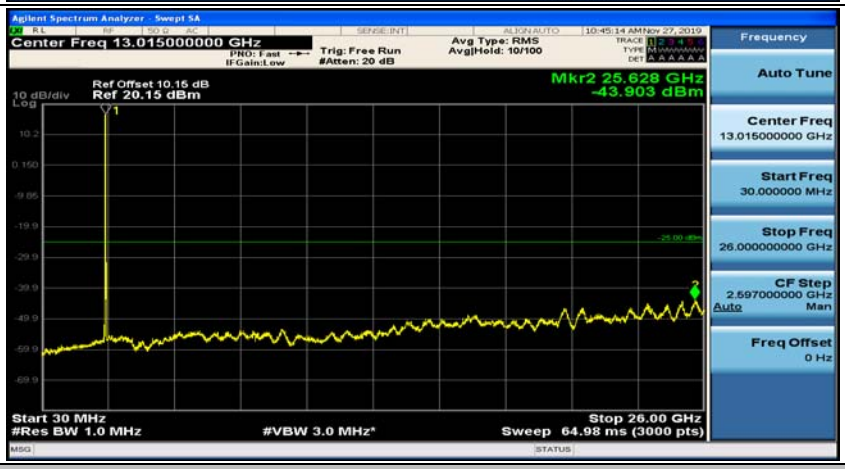

Agilent Spectrum Analyzer - Swept SA
Center Freq 15.075000 MHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 16 dB
Avg Type: RMS
Avg|Hold: 12/100
10:43:27 AM Nov 27, 2019
Ref Offset 10.2 dB
10 dB/div
Ref 10.20 dBm
Mkr1 170 kHz
-54.993 dBm
Start 150 kHz
#Res BW 10 kHz
#VBW 30 kHz*
Stop 30.00 MHz
Sweep 368.5 ms (3000 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: 20 dB
Avg Type: RMS
Avg|Hold: 10/100
10:43:33 AM Nov 27, 2019
Ref Offset 10.15 dB
10 dB/div
Ref 20.15 dBm
Mkr2 25.636 GHz
-44.259 dBm
Start 30 MHz
#Res BW 1.0 MHz
#VBW 3.0 MHz*
Stop 26.00 GHz
Sweep 64.98 ms (3000 pts)
Frequency
Auto Tune
Center Freq
13.015000000 GHz
Start Freq
30.000000 MHz
Stop Freq
26.000000000 GHz
CF Step
2.597000000 GHz
Auto
Man
Freq Offset
0 Hz

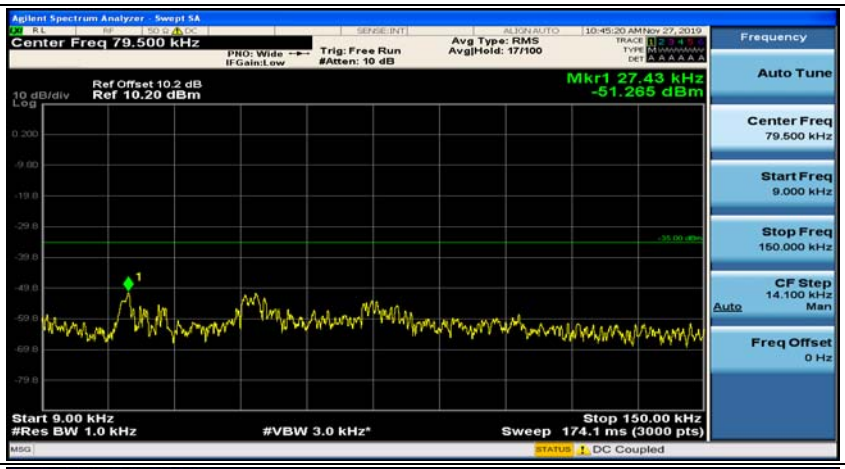
(Channel Bandwidth:20 MHz)_MCH_16QAM_1RB#0

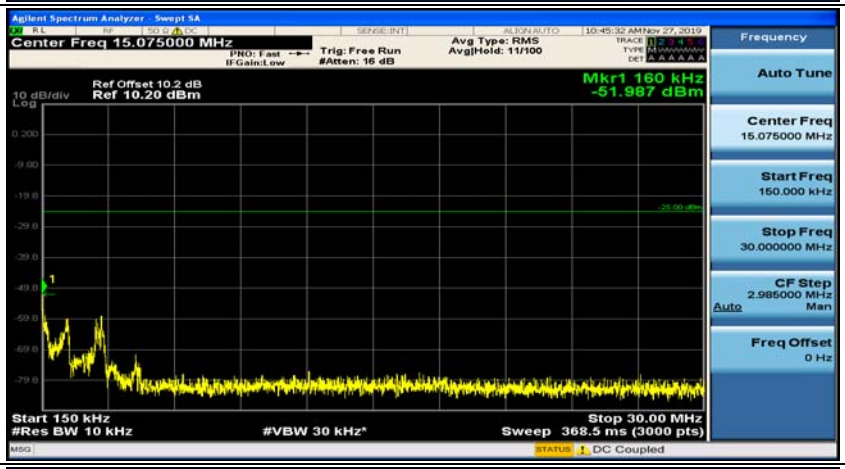


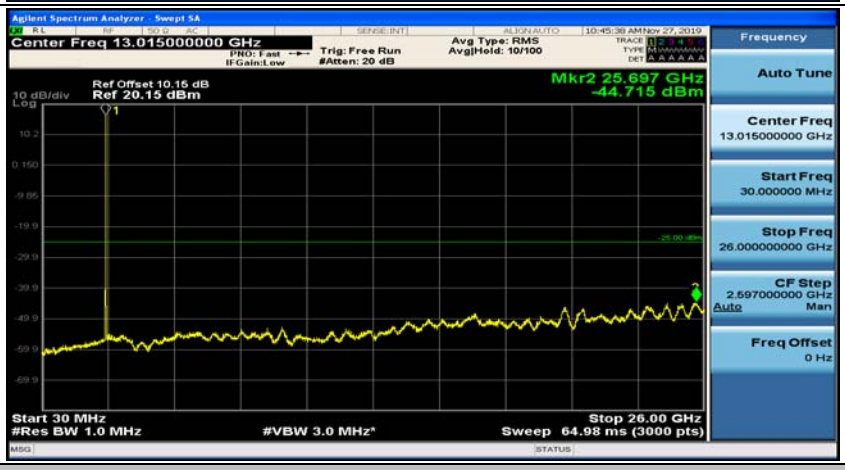




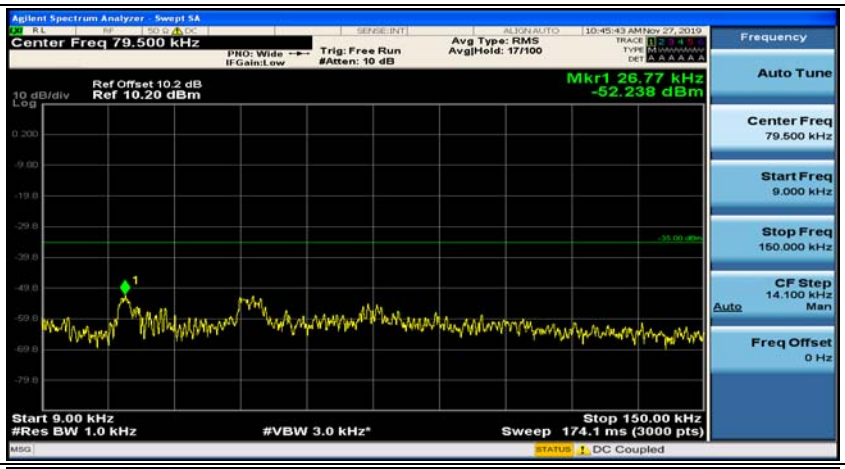
(Channel Bandwidth:20 MHz)_MCH_16QAM_1RB#49

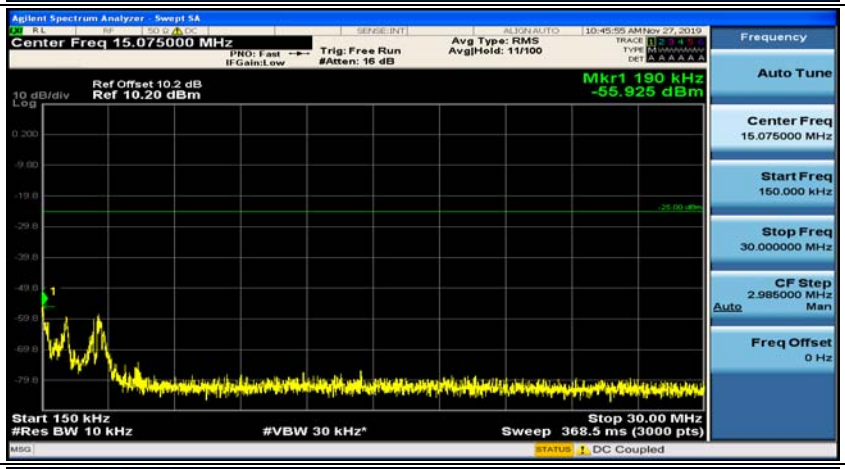


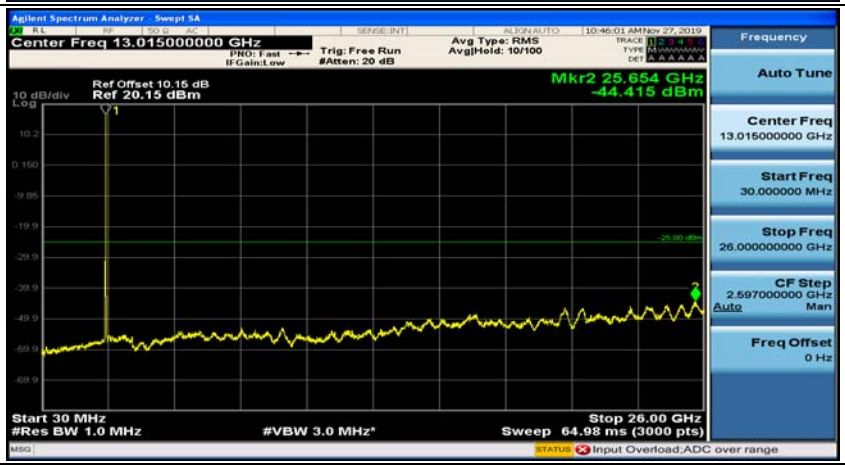




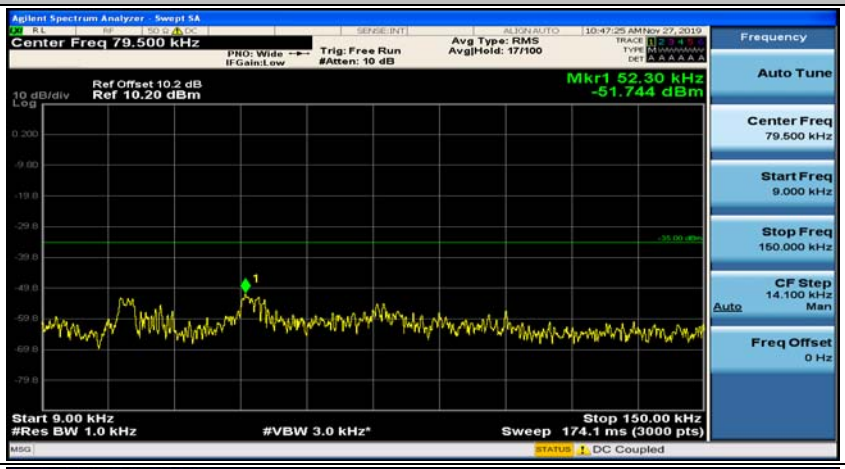
(Channel Bandwidth:20 MHz)_MCH_16QAM_1RB#99

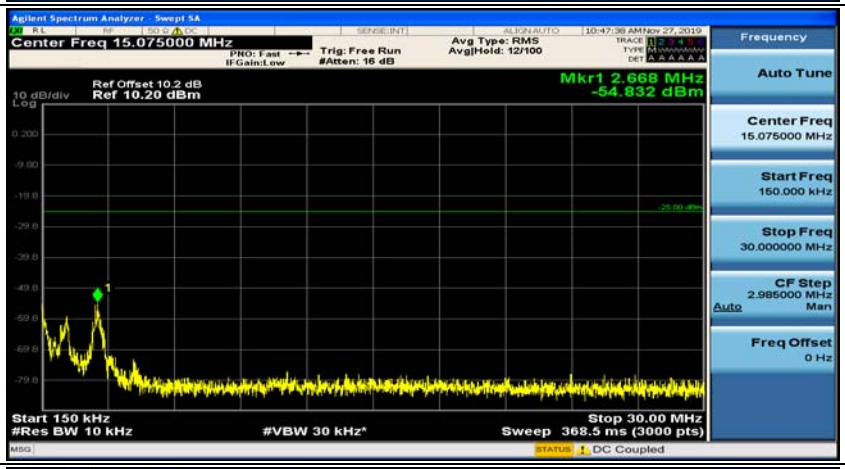

Agilent Spectrum Analyzer - Swept SA
Center Freq 79.500 kHz
PNO: Wide
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 17/100
10:45:43 AM Nov 27, 2019
Ref Offset 10.2 dB
10 dB/div
Ref 10.20 dBm
Mkr1 26.77 kHz
-52.238 dBm
Start 9.00 kHz
#Res BW 1.0 kHz
#VBW 3.0 kHz*
Stop 150.00 kHz
Sweep 174.1 ms (3000 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

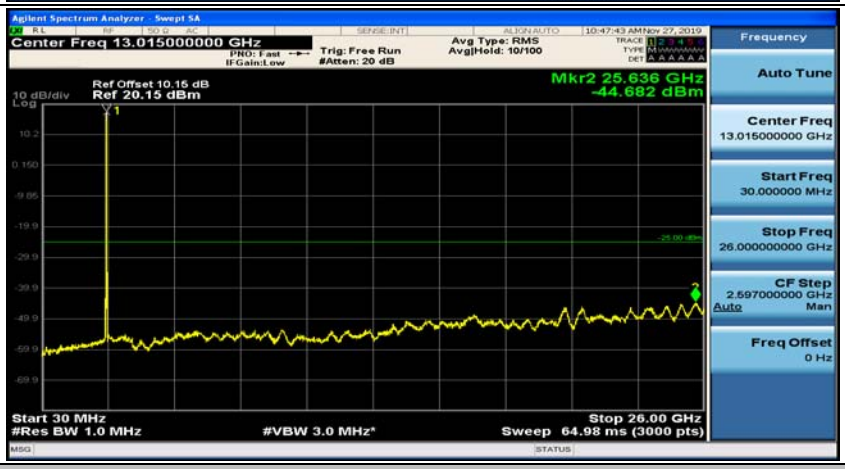

Agilent Spectrum Analyzer - Swept SA
Center Freq 15.075000 MHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 16 dB
Avg Type: RMS
Avg|Hold: 11/100
10:45:55 AM Nov 27, 2019
Ref Offset 10.2 dB
10 dB/div
Ref 10.20 dBm
Mkr1 190 kHz
-55.925 dBm
Start 150 kHz
#Res BW 10 kHz
#VBW 30 kHz*
Stop 30.00 MHz
Sweep 368.5 ms (3000 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: 20 dB
Avg Type: RMS
Avg|Hold: 10/100
10:46:01 AM Nov 27, 2019
Ref Offset 10.15 dB
10 dB/div
Ref 20.15 dBm
Mkr2 25.654 GHz
-44.415 dBm
Start 30 MHz
#Res BW 1.0 MHz
#VBW 3.0 MHz*
Stop 26.00 GHz
Sweep 64.98 ms (3000 pts)
Input Overload;ADC over range
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

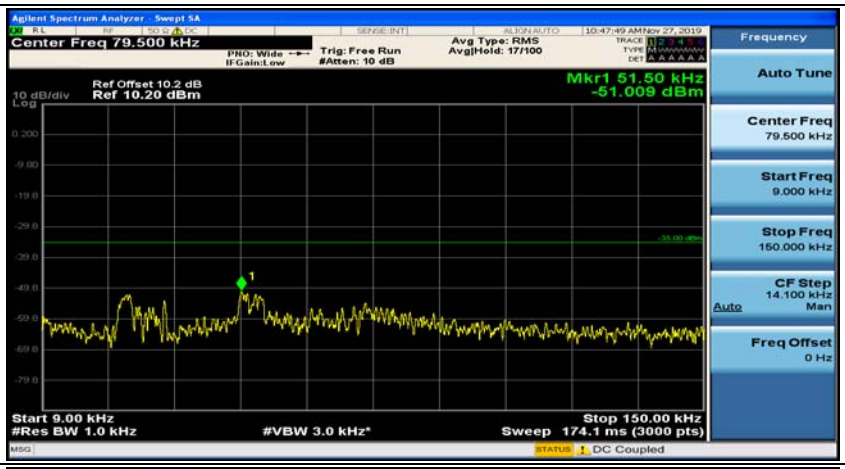
(Channel Bandwidth:20 MHz)_HCH_16QAM_1RB#0

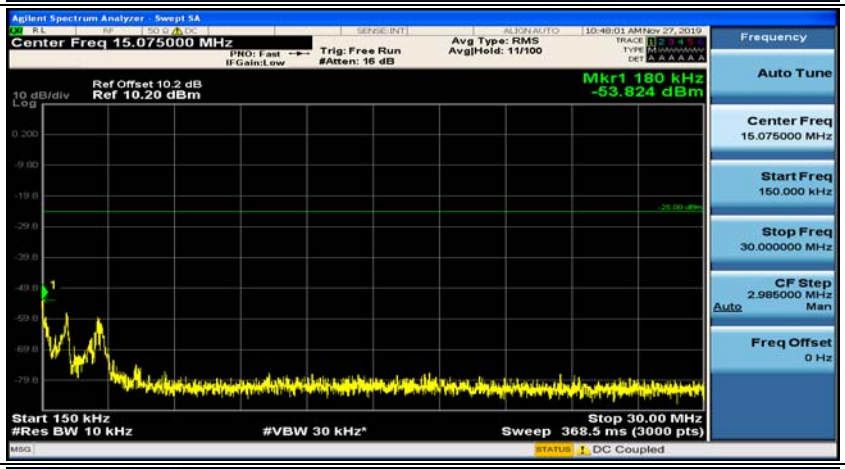


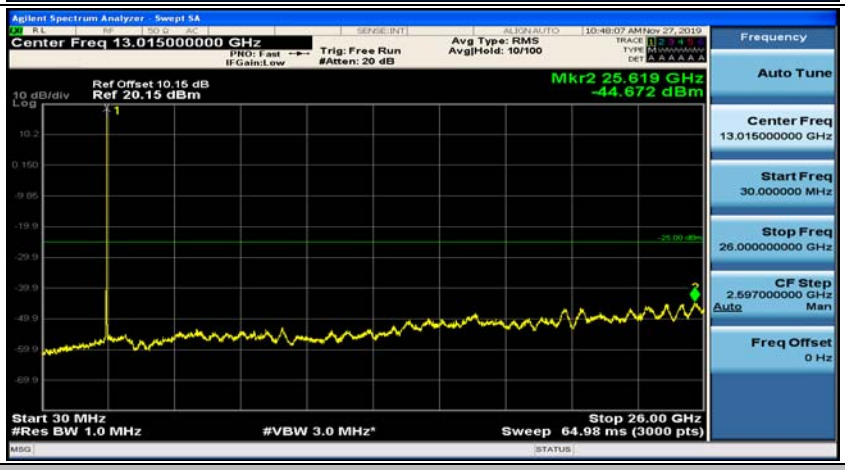




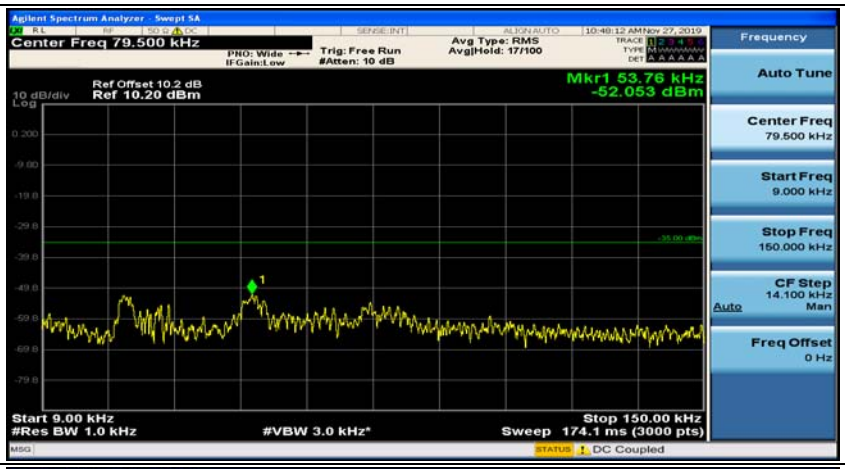
(Channel Bandwidth:20 MHz)_HCH_16QAM_1RB#49

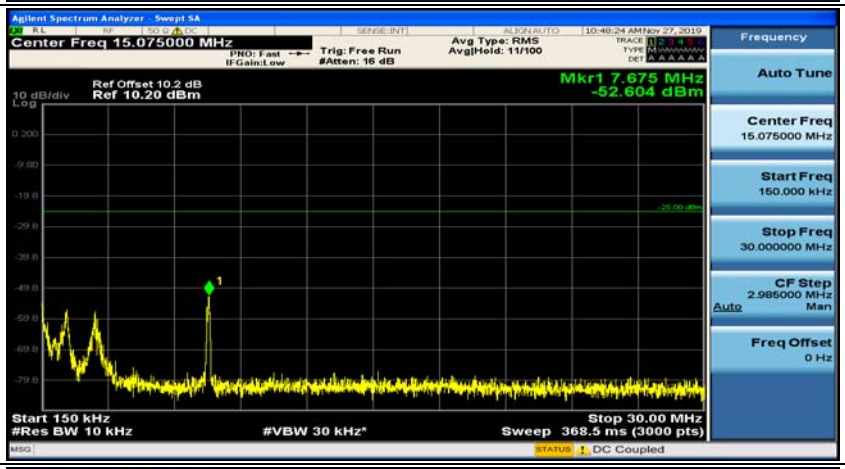


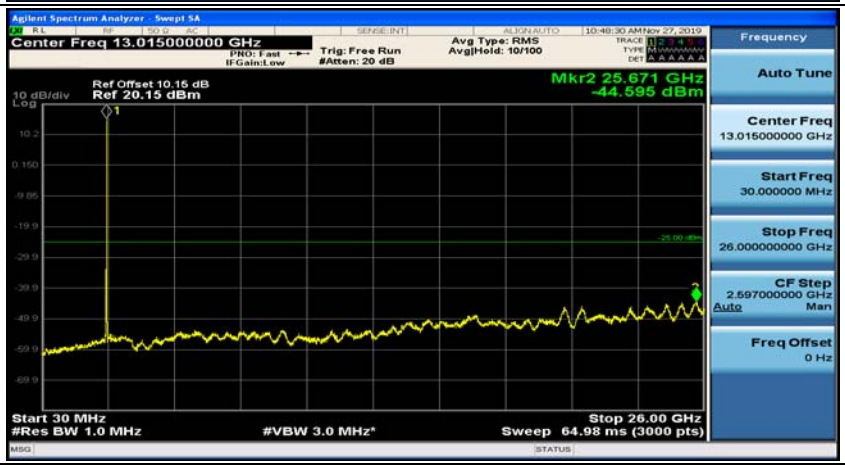




(Channel Bandwidth:20 MHz)_HCH_16QAM_1RB#99


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: 17/100
10:48:12 AM Nov 27, 2019
Ref Offset 10.2 dB
10 dB/div
Ref 10.20 dBm
Mkr1 53.76 kHz
-52.053 dBm
Start 9.00 kHz
#Res BW 1.0 kHz
#VBW 3.0 kHz*
Stop 150.00 kHz
Sweep 174.1 ms (3000 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: 11/100
10:48:24 AM Nov 27, 2019
Ref Offset 10.2 dB
10 dB/div
Ref 10.20 dBm
Mkr1 7.675 MHz
-52.604 dBm
Start 150 kHz
#Res BW 10 kHz
#VBW 30 kHz*
Stop 30.00 MHz
Sweep 368.5 ms (3000 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: 20 dB
Avg Type: RMS
Avg|Hold: 10/100
10:48:30 AM Nov 27, 2019
Ref Offset 10.15 dB
10 dB/div
Ref 20.15 dBm
Mkr2 25.671 GHz
-44.595 dBm
Start 30 MHz
#Res BW 1.0 MHz
#VBW 3.0 MHz*
Stop 26.00 GHz
Sweep 64.98 ms (3000 pts)
Frequency
Auto Tune
Center Freq
13.015000000 GHz
Start Freq
30.000000 MHz
Stop Freq
26.000000000 GHz
CF Step
2.597000000 GHz
Auto
Man
Freq Offset
0 Hz

Appendix F: Frequency Stability

Test Result

Channel Bandwidth: 5 MHz

Channel Bandwidth: 5 MHz							
Voltage							
Modulation	Channel	Voltage [Vdc]	Temperature (℃)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
QPSK	LCH	VL	TN	2.31	0.000923	± 2.5	PASS
		VN	TN	4.27	0.001706	± 2.5	PASS
		VH	TN	0.55	0.000220	± 2.5	PASS
	MCH	VL	TN	-0.81	-0.000320	± 2.5	PASS
		VN	TN	2.47	0.000974	± 2.5	PASS
		VH	TN	2.63	0.001037	± 2.5	PASS
	HCH	VL	TN	0.39	0.000152	± 2.5	PASS
		VN	TN	3.69	0.001437	± 2.5	PASS
		VH	TN	-1.66	-0.000647	± 2.5	PASS
16QAM	LCH	VL	TN	4.97	0.001986	± 2.5	PASS
		VN	TN	3.13	0.001251	± 2.5	PASS
		VH	TN	2.11	0.000843	± 2.5	PASS
	MCH	VL	TN	0	0.000000	± 2.5	PASS
		VN	TN	0.82	0.000323	± 2.5	PASS
		VH	TN	-0.44	-0.000174	± 2.5	PASS
	HCH	VL	TN	-1.58	-0.000615	± 2.5	PASS
		VN	TN	-1.86	-0.000724	± 2.5	PASS
		VH	TN	2.71	0.001056	± 2.5	PASS
Temperature							
Modulation	Channel	Voltage [Vdc]	Temperature (℃)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
QPSK	LCH	VN	-30	4.03	0.001610	± 2.5	PASS
		VN	-20	4.6	0.001838	± 2.5	PASS
		VN	-10	4.15	0.001658	± 2.5	PASS
		VN	0	1.7	0.000679	± 2.5	PASS
		VN	10	2.4	0.000959	± 2.5	PASS
		VN	20	-0.07	-0.000028	± 2.5	PASS
		VN	30	-0.58	-0.000232	± 2.5	PASS
		VN	40	3.1	0.001239	± 2.5	PASS
		VN	50	1.36	0.000543	± 2.5	PASS
	MCH	VN	-30	-0.15	-0.000059	± 2.5	PASS

		VN	-20	-1.42	-0.000560	± 2.5	PASS
		VN	-10	4.16	0.001641	± 2.5	PASS
		VN	0	0.29	0.000114	± 2.5	PASS
		VN	10	-0.75	-0.000296	± 2.5	PASS
		VN	20	0.48	0.000189	± 2.5	PASS
		VN	30	-0.85	-0.000335	± 2.5	PASS
		VN	40	2.1	0.000828	± 2.5	PASS
		VN	50	-1.01	-0.000398	± 2.5	PASS
	HCH	VN	-30	0.08	0.000031	± 2.5	PASS
		VN	-20	-0.94	-0.000366	± 2.5	PASS
		VN	-10	-0.16	-0.000062	± 2.5	PASS
		VN	0	0.9	0.000351	± 2.5	PASS
		VN	10	0.54	0.000210	± 2.5	PASS
		VN	20	3.83	0.001492	± 2.5	PASS
		VN	30	2.98	0.001161	± 2.5	PASS
		VN	40	3.3	0.001285	± 2.5	PASS
		VN	50	3.79	0.001476	± 2.5	PASS
16QAM	LCH	VN	-30	-0.93	-0.000372	± 2.5	PASS
		VN	-20	4.82	0.001926	± 2.5	PASS
		VN	-10	-1.77	-0.000707	± 2.5	PASS
		VN	0	-1.41	-0.000563	± 2.5	PASS
		VN	10	3.25	0.001299	± 2.5	PASS
		VN	20	0.58	0.000232	± 2.5	PASS
		VN	30	-0.22	-0.000088	± 2.5	PASS
		VN	40	0.12	0.000048	± 2.5	PASS
		VN	50	-1.61	-0.000643	± 2.5	PASS
	MCH	VN	-30	1.28	0.000505	± 2.5	PASS
		VN	-20	1.05	0.000414	± 2.5	PASS
		VN	-10	-1.05	-0.000414	± 2.5	PASS
		VN	0	3.26	0.001286	± 2.5	PASS
		VN	10	1.34	0.000529	± 2.5	PASS
		VN	20	-0.29	-0.000114	± 2.5	PASS
		VN	30	1.11	0.000438	± 2.5	PASS
		VN	40	0.69	0.000272	± 2.5	PASS
		VN	50	2.24	0.000884	± 2.5	PASS
	HCH	VN	-30	2.92	0.001137	± 2.5	PASS
		VN	-20	-1.34	-0.000522	± 2.5	PASS
		VN	-10	3.68	0.001433	± 2.5	PASS
		VN	0	3.3	0.001285	± 2.5	PASS
		VN	10	2.14	0.000833	± 2.5	PASS
		VN	20	1.87	0.000728	± 2.5	PASS

		VN	30	4.31	0.001679	± 2.5	PASS
		VN	40	0.84	0.000327	± 2.5	PASS
		VN	50	2.04	0.000795	± 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	4.52	0.001804	± 2.5	PASS
		VN	TN	2.63	0.001050	± 2.5	PASS
		VH	TN	3.55	0.001417	± 2.5	PASS
	MCH	VL	TN	-0.9	-0.000355	± 2.5	PASS
		VN	TN	-0.06	-0.000024	± 2.5	PASS
		VH	TN	0.5	0.000197	± 2.5	PASS
	HCH	VL	TN	4.09	0.001595	± 2.5	PASS
		VN	TN	4.07	0.001587	± 2.5	PASS
		VH	TN	1.93	0.000752	± 2.5	PASS
16QAM	LCH	VL	TN	-1.89	-0.000754	± 2.5	PASS
		VN	TN	1.42	0.000567	± 2.5	PASS
		VH	TN	4.1	0.001637	± 2.5	PASS
	MCH	VL	TN	-1.4	-0.000552	± 2.5	PASS
		VN	TN	-0.49	-0.000193	± 2.5	PASS
		VH	TN	-0.62	-0.000245	± 2.5	PASS
	HCH	VL	TN	2.77	0.001080	± 2.5	PASS
		VN	TN	-1.44	-0.000561	± 2.5	PASS
		VH	TN	4.59	0.001789	± 2.5	PASS
Temperature							
Modulation	Channel	Voltage [Vdc]	Temperature (℃)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
QPSK	LCH	VN	-30	1.45	0.000579	± 2.5	PASS
		VN	-20	4.7	0.001876	± 2.5	PASS
		VN	-10	0.3	0.000120	± 2.5	PASS
		VN	0	3.74	0.001493	± 2.5	PASS
		VN	10	1.76	0.000703	± 2.5	PASS
		VN	20	0.02	0.000008	± 2.5	PASS
		VN	30	0.71	0.000283	± 2.5	PASS
		VN	40	2	0.000798	± 2.5	PASS
		VN	50	-1.38	-0.000551	± 2.5	PASS
	MCH	VN	-30	0.9	0.000355	± 2.5	PASS
		VN	-20	1.63	0.000643	± 2.5	PASS

		VN	-10	0.94	0.000371	± 2.5	PASS
		VN	0	1.67	0.000659	± 2.5	PASS
		VN	10	3.52	0.001389	± 2.5	PASS
		VN	20	3.74	0.001475	± 2.5	PASS
		VN	30	1.79	0.000706	± 2.5	PASS
		VN	40	1.87	0.000738	± 2.5	PASS
		VN	50	2.33	0.000919	± 2.5	PASS
	HCH	VN	-30	1.4	0.000546	± 2.5	PASS
		VN	-20	3.65	0.001423	± 2.5	PASS
		VN	-10	1.33	0.000519	± 2.5	PASS
		VN	0	-1.3	-0.000507	± 2.5	PASS
		VN	10	1.65	0.000643	± 2.5	PASS
		VN	20	-0.67	-0.000261	± 2.5	PASS
		VN	30	1.76	0.000686	± 2.5	PASS
		VN	40	0.21	0.000082	± 2.5	PASS
		VN	50	-1.16	-0.000452	± 2.5	PASS
QPSK	LCH	VN	-30	0.27	0.000108	± 2.5	PASS
		VN	-20	2.3	0.000918	± 2.5	PASS
		VN	-10	-0.51	-0.000204	± 2.5	PASS
		VN	0	3.76	0.001501	± 2.5	PASS
		VN	10	4.28	0.001709	± 2.5	PASS
		VN	20	2.43	0.000970	± 2.5	PASS
		VN	30	3.51	0.001401	± 2.5	PASS
		VN	40	3.35	0.001337	± 2.5	PASS
		VN	50	2.1	0.000838	± 2.5	PASS
	MCH	VN	-30	1.02	0.000402	± 2.5	PASS
		VN	-20	-1.33	-0.000525	± 2.5	PASS
		VN	-10	4.48	0.001767	± 2.5	PASS
		VN	0	0.18	0.000071	± 2.5	PASS
		VN	10	-1.26	-0.000497	± 2.5	PASS
		VN	20	0.21	0.000083	± 2.5	PASS
		VN	30	2.81	0.001108	± 2.5	PASS
		VN	40	-1.06	-0.000418	± 2.5	PASS
		VN	50	4.21	0.001661	± 2.5	PASS
	HCH	VN	-30	-1.04	-0.000405	± 2.5	PASS
		VN	-20	2.57	0.001002	± 2.5	PASS
		VN	-10	-0.87	-0.000339	± 2.5	PASS
		VN	0	4.6	0.001793	± 2.5	PASS
		VN	10	4.73	0.001844	± 2.5	PASS
		VN	20	2.02	0.000788	± 2.5	PASS
		VN	30	-0.1	-0.000039	± 2.5	PASS

		VN	40	-1.05	-0.000409	± 2.5	PASS
		VN	50	0.99	0.000386	± 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	-1.76	-0.000702	± 2.5	PASS
		VN	TN	-1.12	-0.000447	± 2.5	PASS
		VH	TN	-0.73	-0.000291	± 2.5	PASS
	MCH	VL	TN	4.18	0.001649	± 2.5	PASS
		VN	TN	0.9	0.000355	± 2.5	PASS
		VH	TN	2.51	0.000990	± 2.5	PASS
	HCH	VL	TN	4.05	0.001580	± 2.5	PASS
		VN	TN	3.66	0.001428	± 2.5	PASS
		VH	TN	0.69	0.000269	± 2.5	PASS
16QAM	LCH	VL	TN	3.21	0.001280	± 2.5	PASS
		VN	TN	3.34	0.001332	± 2.5	PASS
		VH	TN	0.05	0.000020	± 2.5	PASS
	MCH	VL	TN	3.39	0.001337	± 2.5	PASS
		VN	TN	0.45	0.000178	± 2.5	PASS
		VH	TN	2.78	0.001097	± 2.5	PASS
	HCH	VL	TN	2.73	0.001065	± 2.5	PASS
		VN	TN	4.22	0.001647	± 2.5	PASS
		VH	TN	-1.88	-0.000734	± 2.5	PASS
Temperature							
Modulation	Channel	Voltage [Vdc]	Temperature (℃)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
QPSK	LCH	VN	-30	-1.28	-0.000510	± 2.5	PASS
		VN	-20	1.39	0.000554	± 2.5	PASS
		VN	-10	2.16	0.000861	± 2.5	PASS
		VN	0	1.25	0.000499	± 2.5	PASS
		VN	10	-1.71	-0.000682	± 2.5	PASS
		VN	20	2.59	0.001033	± 2.5	PASS
		VN	30	3.23	0.001288	± 2.5	PASS
		VN	40	3.94	0.001571	± 2.5	PASS
		VN	50	2.25	0.000897	± 2.5	PASS
	MCH	VN	-30	1.8	0.000710	± 2.5	PASS
		VN	-20	0.25	0.000099	± 2.5	PASS
		VN	-10	1.47	0.000580	± 2.5	PASS

		VN	0	4.03	0.001590	± 2.5	PASS
		VN	10	2.57	0.001014	± 2.5	PASS
		VN	20	-0.54	-0.000213	± 2.5	PASS
		VN	30	0.52	0.000205	± 2.5	PASS
		VN	40	-1.26	-0.000497	± 2.5	PASS
		VN	50	0.3	0.000118	± 2.5	PASS
	HCH	VN	-30	4.75	0.001854	± 2.5	PASS
		VN	-20	2.71	0.001058	± 2.5	PASS
		VN	-10	1.88	0.000734	± 2.5	PASS
		VN	0	0.17	0.000066	± 2.5	PASS
		VN	10	-1.25	-0.000488	± 2.5	PASS
		VN	20	3.2	0.001249	± 2.5	PASS
		VN	30	-1.84	-0.000718	± 2.5	PASS
		VN	40	4.43	0.001729	± 2.5	PASS
		VN	50	-1.62	-0.000632	± 2.5	PASS
16QAM	LCH	VN	-30	1.85	0.000738	± 2.5	PASS
		VN	-20	-0.91	-0.000363	± 2.5	PASS
		VN	-10	-1.25	-0.000499	± 2.5	PASS
		VN	0	1.17	0.000467	± 2.5	PASS
		VN	10	-0.25	-0.000100	± 2.5	PASS
		VN	20	-0.94	-0.000375	± 2.5	PASS
		VN	30	3.86	0.001539	± 2.5	PASS
		VN	40	1.46	0.000582	± 2.5	PASS
		VN	50	2.91	0.001161	± 2.5	PASS
	MCH	VN	-30	0.62	0.000245	± 2.5	PASS
		VN	-20	2.95	0.001164	± 2.5	PASS
		VN	-10	2.66	0.001049	± 2.5	PASS
		VN	0	4.02	0.001586	± 2.5	PASS
		VN	10	-1.16	-0.000458	± 2.5	PASS
		VN	20	4.22	0.001665	± 2.5	PASS
		VN	30	3.78	0.001491	± 2.5	PASS
		VN	40	1.91	0.000753	± 2.5	PASS
		VN	50	1.26	0.000497	± 2.5	PASS
	HCH	VN	-30	2.98	0.001163	± 2.5	PASS
		VN	-20	1.69	0.000660	± 2.5	PASS
		VN	-10	1.76	0.000687	± 2.5	PASS
		VN	0	2.74	0.001069	± 2.5	PASS
		VN	10	3.7	0.001444	± 2.5	PASS
		VN	20	3.27	0.001276	± 2.5	PASS
		VN	30	3.43	0.001339	± 2.5	PASS
		VN	40	-1.72	-0.000671	± 2.5	PASS

		VN	50	2.93	0.001143	± 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	-0.26	-0.000104	± 2.5	PASS
		VN	TN	3.59	0.001430	± 2.5	PASS
		VH	TN	1.46	0.000582	± 2.5	PASS
	MCH	VL	TN	2.74	0.001081	± 2.5	PASS
		VN	TN	-1.6	-0.000631	± 2.5	PASS
		VH	TN	2.12	0.000836	± 2.5	PASS
	HCH	VL	TN	4.87	0.001902	± 2.5	PASS
		VN	TN	1.29	0.000504	± 2.5	PASS
		VH	TN	0.74	0.000289	± 2.5	PASS
16QAM	LCH	VL	TN	1.75	0.000697	± 2.5	PASS
		VN	TN	-0.05	-0.000020	± 2.5	PASS
		VH	TN	-0.93	-0.000371	± 2.5	PASS
	MCH	VL	TN	3.38	0.001333	± 2.5	PASS
		VN	TN	0.48	0.000189	± 2.5	PASS
		VH	TN	4.41	0.001740	± 2.5	PASS
	HCH	VL	TN	2.81	0.001098	± 2.5	PASS
		VN	TN	-0.16	-0.000063	± 2.5	PASS
		VH	TN	-1.71	-0.000668	± 2.5	PASS
Temperature							
Modulation	Channel	Voltage [Vdc]	Temperature (℃)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
QPSK	LCH	VN	-30	-1.18	-0.000470	± 2.5	PASS
		VN	-20	0.07	0.000028	± 2.5	PASS
		VN	-10	-1.22	-0.000486	± 2.5	PASS
		VN	0	3.26	0.001299	± 2.5	PASS
		VN	10	3.12	0.001243	± 2.5	PASS
		VN	20	1.45	0.000578	± 2.5	PASS
		VN	30	0.29	0.000116	± 2.5	PASS
		VN	40	-0.21	-0.000084	± 2.5	PASS
		VN	50	-1.55	-0.000618	± 2.5	PASS
	MCH	VN	-30	1.23	0.000485	± 2.5	PASS
		VN	-20	3.4	0.001341	± 2.5	PASS
		VN	-10	2.19	0.000864	± 2.5	PASS
		VN	0	3.01	0.001187	± 2.5	PASS

		VN	10	4.21	0.001661	± 2.5	PASS
		VN	20	-0.22	-0.000087	± 2.5	PASS
		VN	30	2.34	0.000923	± 2.5	PASS
		VN	40	0.35	0.000138	± 2.5	PASS
		VN	50	1.57	0.000619	± 2.5	PASS
	HCH	VN	-30	1.06	0.000414	± 2.5	PASS
		VN	-20	3.21	0.001254	± 2.5	PASS
		VN	-10	-0.55	-0.000215	± 2.5	PASS
		VN	0	2.59	0.001012	± 2.5	PASS
		VN	10	-0.12	-0.000047	± 2.5	PASS
		VN	20	-1.53	-0.000598	± 2.5	PASS
		VN	30	4.81	0.001879	± 2.5	PASS
		VN	40	3.96	0.001547	± 2.5	PASS
		VN	50	0.34	0.000133	± 2.5	PASS
16QAM	LCH	VN	-30	-0.84	-0.000335	± 2.5	PASS
		VN	-20	2.66	0.001060	± 2.5	PASS
		VN	-10	4.51	0.001797	± 2.5	PASS
		VN	0	3.84	0.001530	± 2.5	PASS
		VN	10	0.78	0.000311	± 2.5	PASS
		VN	20	3.32	0.001323	± 2.5	PASS
		VN	30	4.9	0.001952	± 2.5	PASS
		VN	40	2.45	0.000976	± 2.5	PASS
		VN	50	3.49	0.001390	± 2.5	PASS
	MCH	VN	-30	-0.35	-0.000138	± 2.5	PASS
		VN	-20	3.21	0.001266	± 2.5	PASS
		VN	-10	3.27	0.001290	± 2.5	PASS
		VN	0	1.46	0.000576	± 2.5	PASS
		VN	10	2.68	0.001057	± 2.5	PASS
		VN	20	-1.52	-0.000600	± 2.5	PASS
		VN	30	-1.21	-0.000477	± 2.5	PASS
		VN	40	0.44	0.000174	± 2.5	PASS
		VN	50	0.34	0.000134	± 2.5	PASS
	HCH	VN	-30	0.36	0.000141	± 2.5	PASS
		VN	-20	0.8	0.000313	± 2.5	PASS
		VN	-10	1.7	0.000664	± 2.5	PASS
		VN	0	-0.45	-0.000176	± 2.5	PASS
		VN	10	4.83	0.001887	± 2.5	PASS
		VN	20	0.7	0.000273	± 2.5	PASS
		VN	30	-0.74	-0.000289	± 2.5	PASS
		VN	40	4.44	0.001734	± 2.5	PASS
		VN	50	0.73	0.000285	± 2.5	PASS