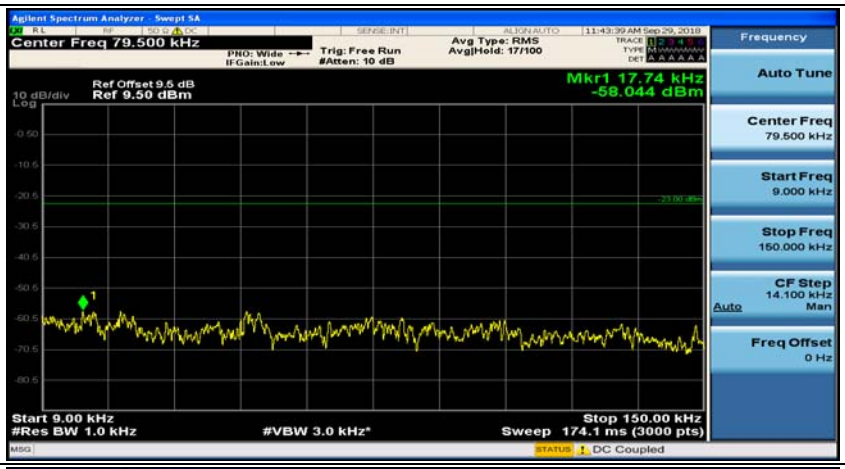
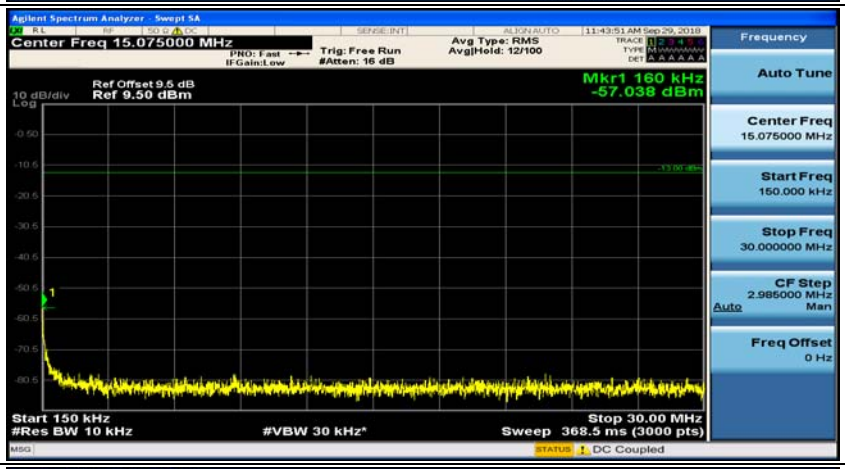
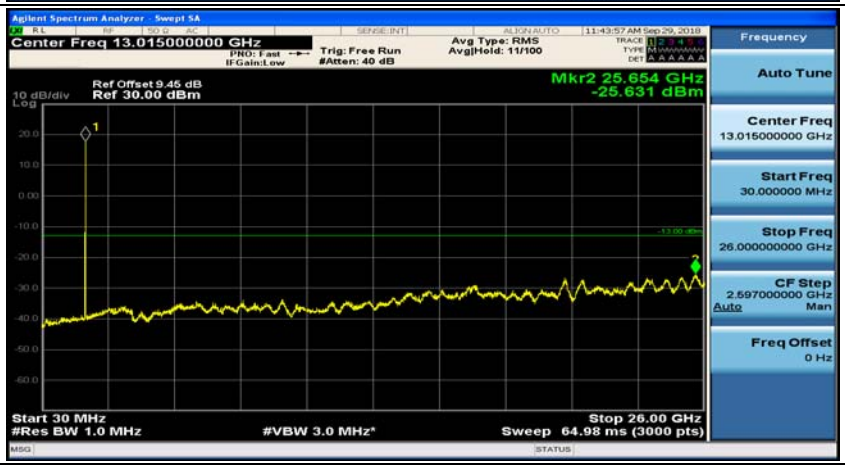
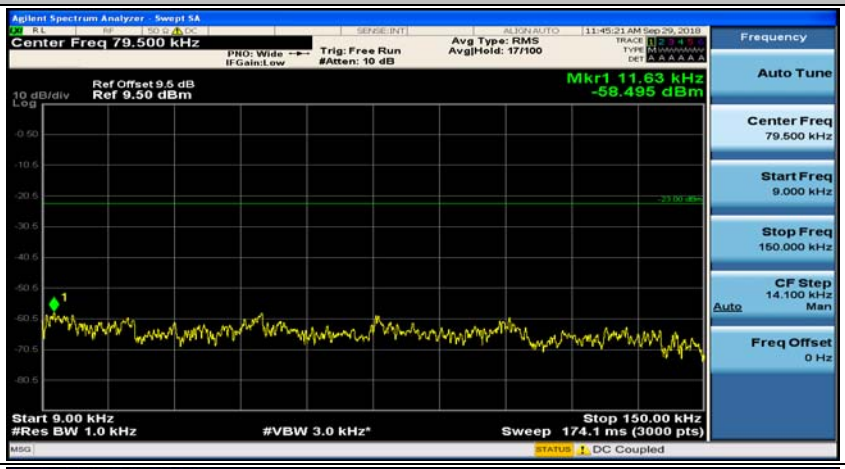
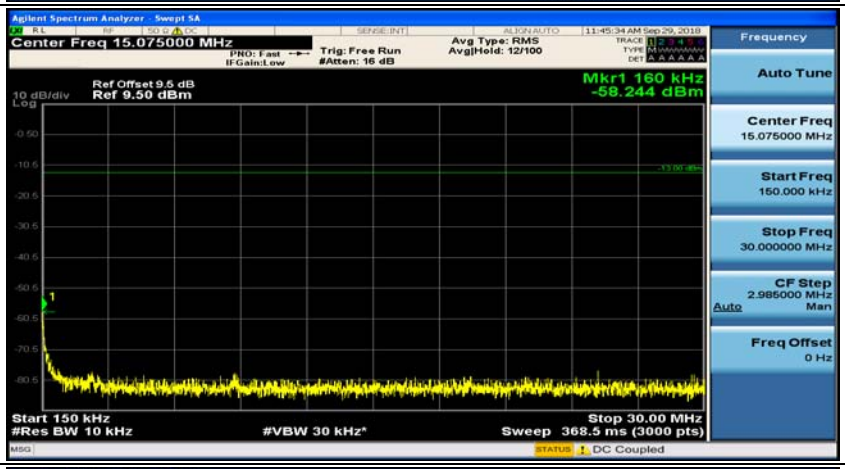
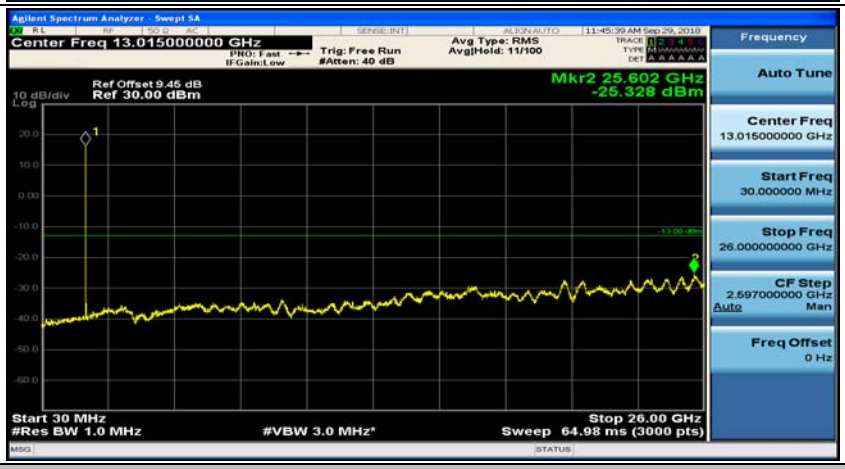
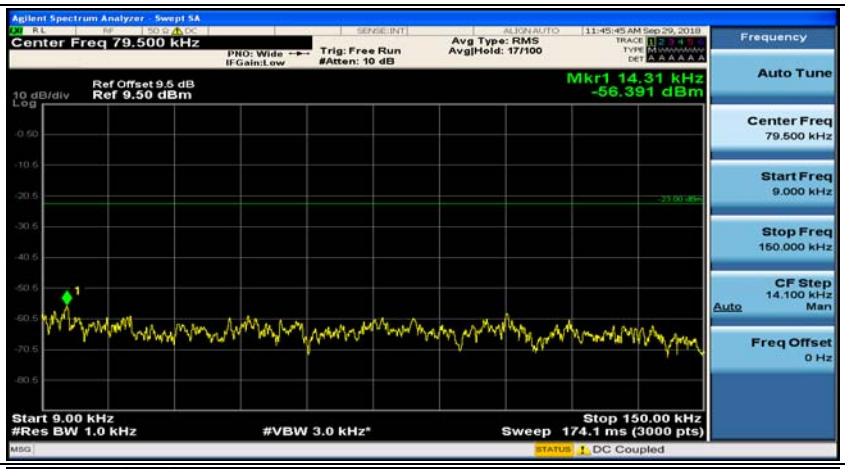
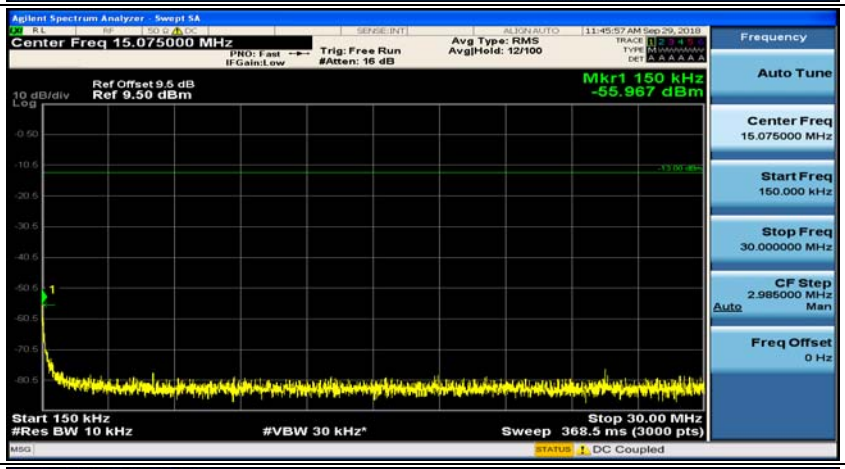

Agilent Spectrum Analyzer - Swept SA
Center Freq 79.500 kHz
PNO: Wide
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 17/100
11:43:39 AM Sep 29, 2018
Ref Offset 9.5 dB
10 dB/div
Ref 9.50 dBm
Mkr1 17.74 kHz
-58.044 dBm
Start 9.00 kHz
#Res BW 1.0 kHz
#VBW 3.0 kHz*
Stop 150.00 kHz
Sweep 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

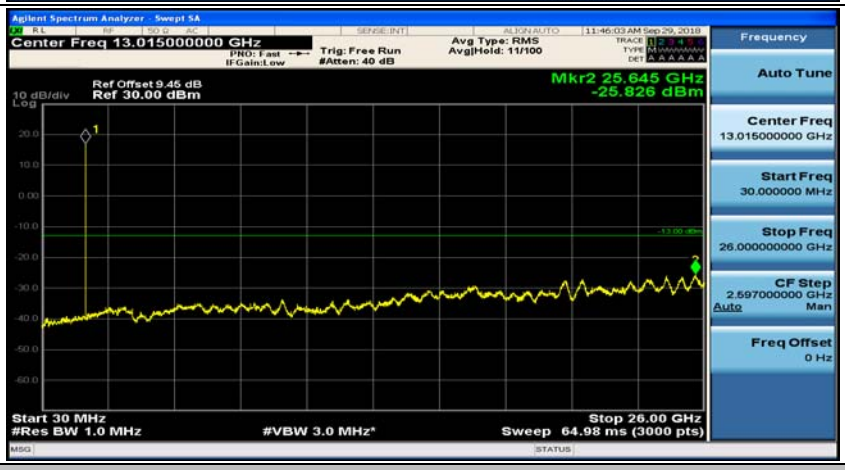

Agilent Spectrum Analyzer - Swept SA
Center Freq 15.075000 MHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 16 dB
Avg Type: RMS
Avg|Hold: 12/100
11:43:51 AM Sep 29, 2018
Ref Offset 9.5 dB
10 dB/div
Ref 9.50 dBm
Mkr1 160 kHz
-57.038 dBm
Start 150 kHz
#Res BW 10 kHz
#VBW 30 kHz*
Stop 30.00 MHz
Sweep 368.5 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: 40 dB
Avg Type: RMS
Avg|Hold: 11/100
11:43:57 AM Sep 29, 2018
Ref Offset 9.45 dB
10 dB/div
Ref 30.00 dBm
Mkr2 25.654 GHz
-25.631 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

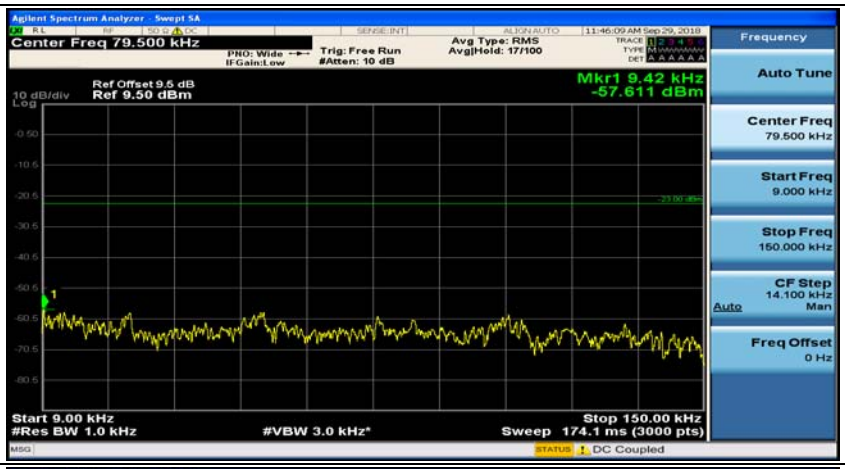
Channel Bandwidth: 10 MHz_HCH_16QAM_1RB#0



Channel Bandwidth: 10 MHz_HCH_16QAM_1RB#24

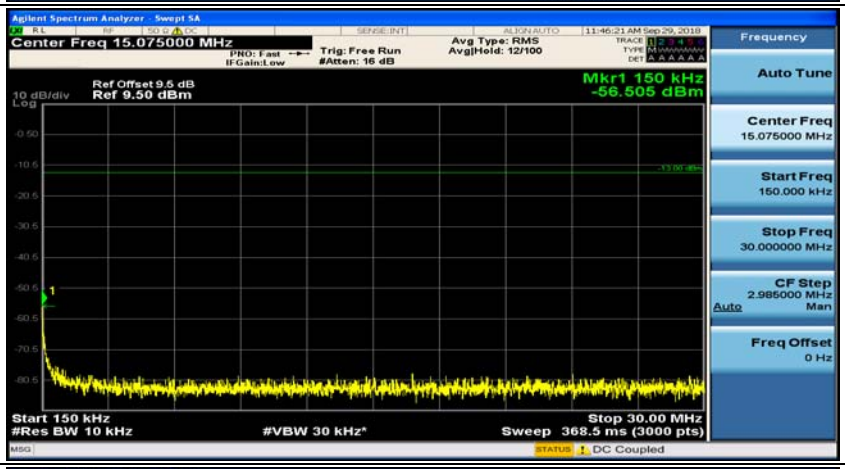


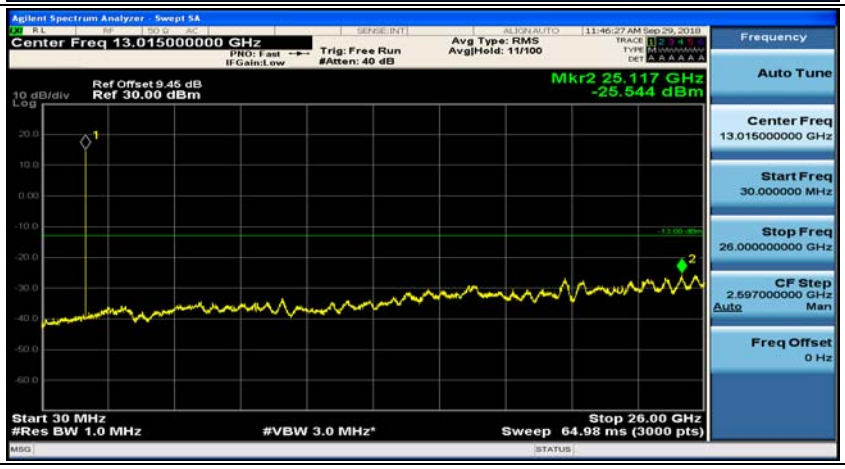




Channel Bandwidth: 10 MHz_HCH_16QAM_1RB#49

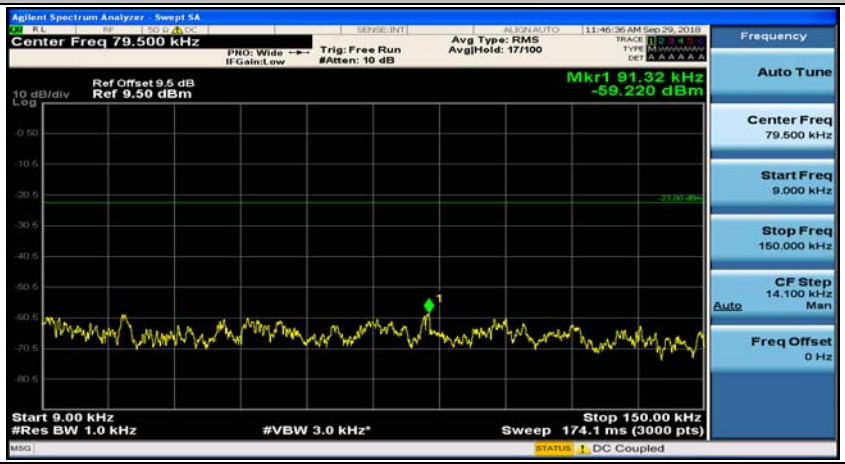

Agilent Spectrum Analyzer - Swept SA
Center Freq 79.500 kHz
PNO: Wide
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 17/100
11:46:09 AM Sep 29, 2018
Ref Offset 9.5 dB
10 dB/div
Ref 9.50 dBm
Mkr1 9.42 kHz
-57.611 dBm
Start 9.00 kHz
#Res BW 1.0 kHz
#VBW 3.0 kHz*
Stop 150.00 kHz
Sweep 174.1 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

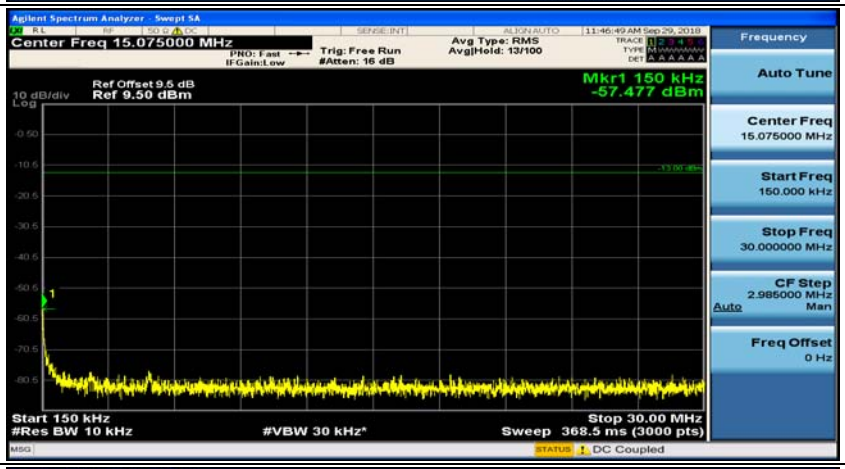

Agilent Spectrum Analyzer - Swept SA
Center Freq 15.075000 MHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 16 dB
Avg Type: RMS
Avg|Hold: 12/100
11:46:21 AM Sep 29, 2018
Ref Offset 9.5 dB
10 dB/div
Ref 9.50 dBm
Mkr1 150 kHz
-56.505 dBm
Start 150 kHz
#Res BW 10 kHz
#VBW 30 kHz*
Stop 30.00 MHz
Sweep 368.5 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

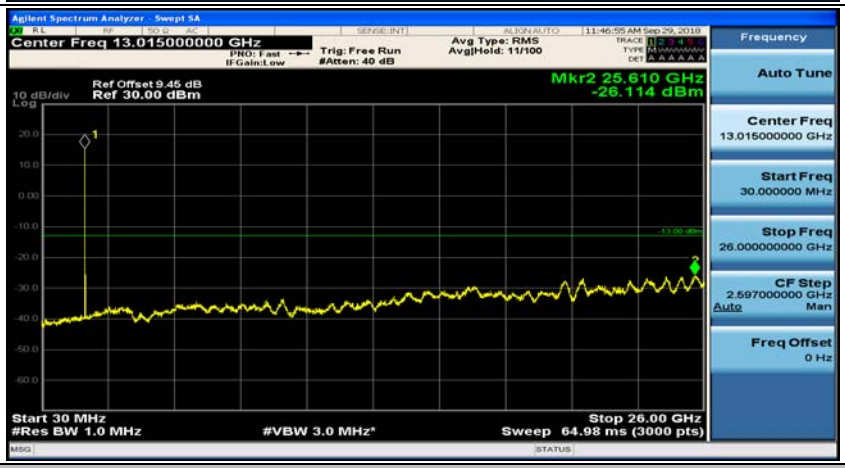

Agilent Spectrum Analyzer - Swept SA
Center Freq 13.015000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 40 dB
Avg Type: RMS
Avg|Hold: 11/100
11:46:27 AM Sep 29, 2018
Ref Offset 9.45 dB
10 dB/div
Ref 30.00 dBm
Mkr2 25.117 GHz
-25.544 dBm
Start 30 MHz
#Res BW 1.0 MHz
#VBW 3.0 MHz*
Stop 26.00 GHz
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

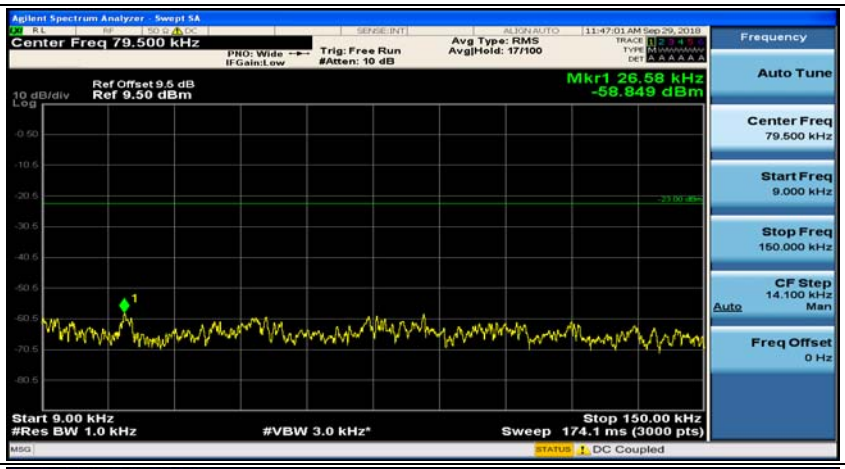
(Channel Bandwidth:15 MHz)_LCH_QPSK_1RB#0

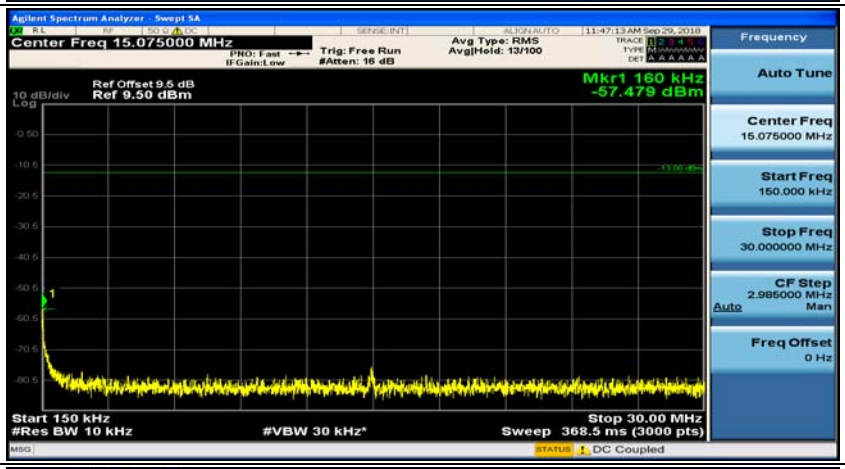


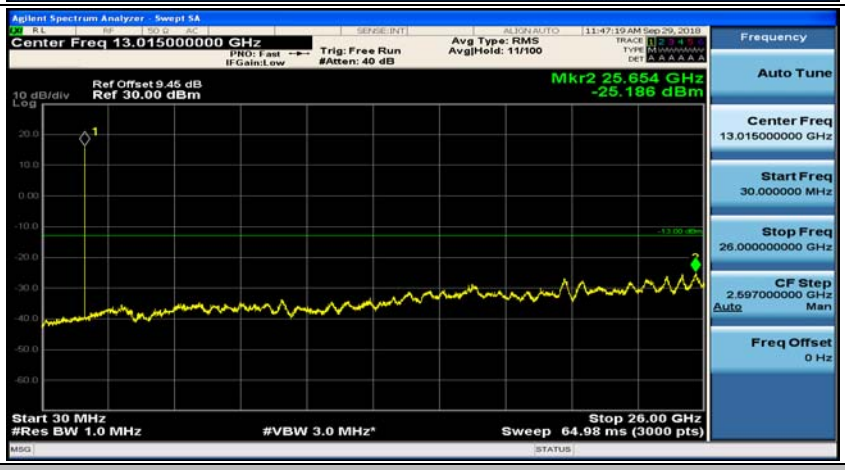




(Channel Bandwidth:15 MHz)_LCH_QPSK_1RB#37

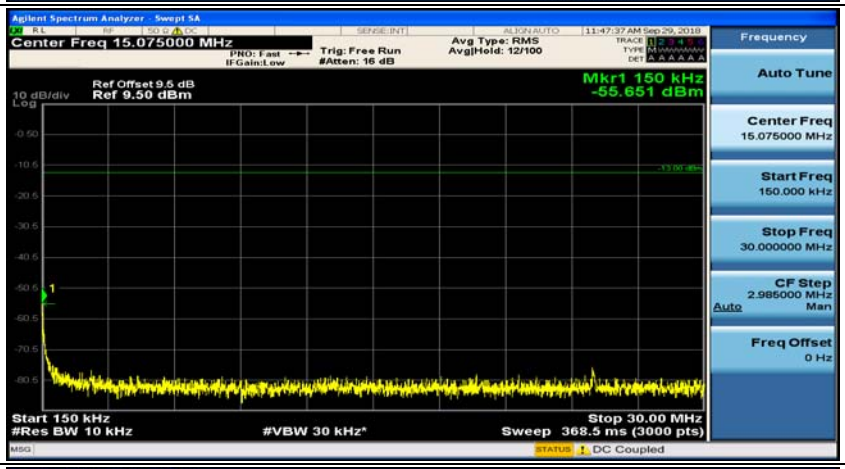


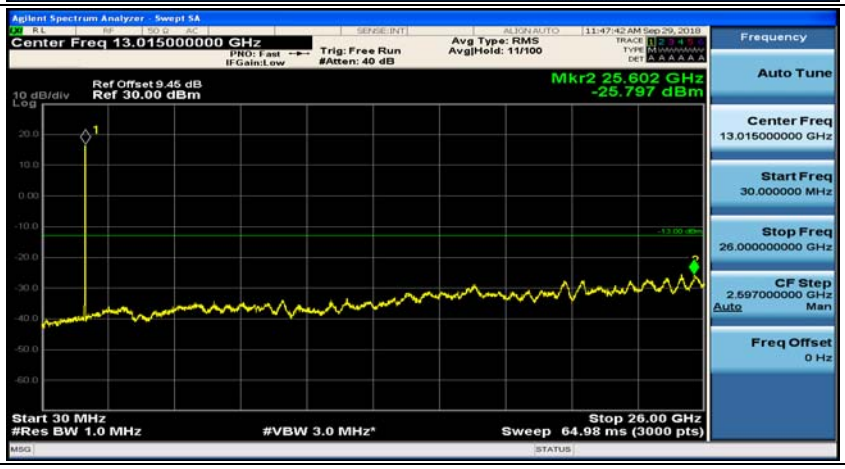




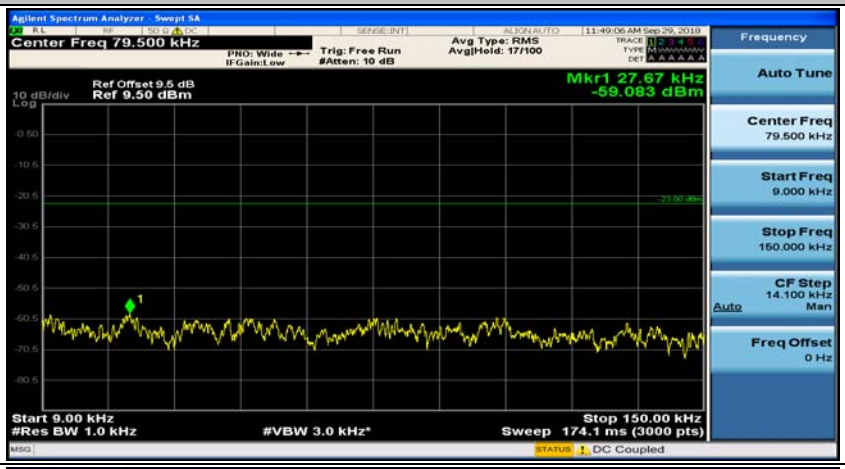
(Channel Bandwidth:15 MHz)_LCH_QPSK_1RB#74

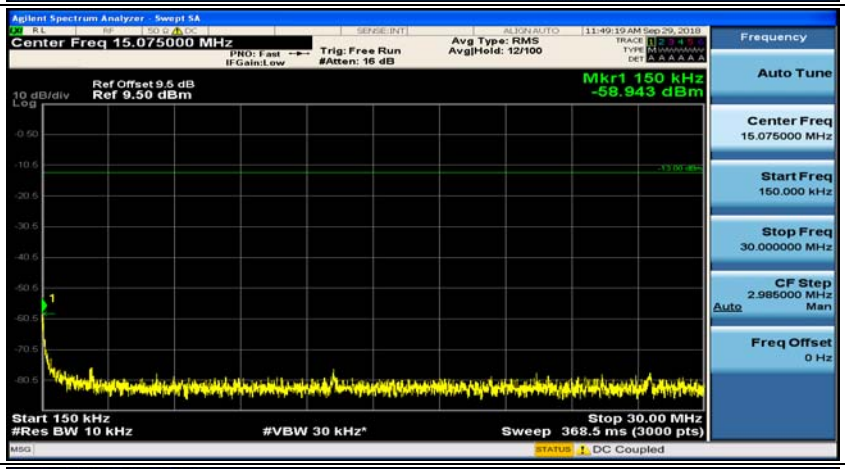
Agilent Spectrum Analyzer - Swept SA
Center Freq 79.500 kHz
PNO: Wide
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 17/100
11:47:24 AM Sep 29, 2018
Ref Offset 9.5 dB
10 dB/div
Ref 9.50 dBm
Mkr1 90.85 kHz
-57.785 dBm
Start 9.00 kHz
#Res BW 1.0 kHz
#VBW 3.0 kHz*
Stop 150.00 kHz
Sweep 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

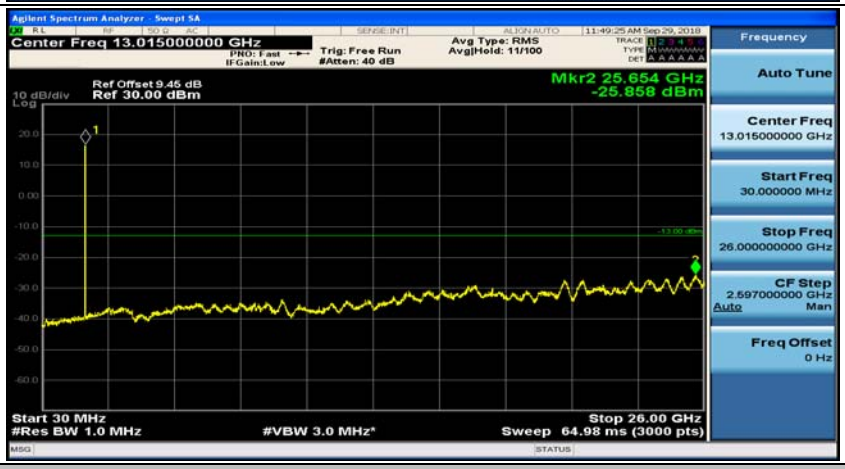

Agilent Spectrum Analyzer - Swept SA
Center Freq 15.075000 MHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 16 dB
Avg Type: RMS
Avg|Hold: 12/100
11:47:37 AM Sep 29, 2018
Ref Offset 9.5 dB
10 dB/div
Ref 9.50 dBm
Mkr1 150 kHz
-55.651 dBm
Start 150 kHz
#Res BW 10 kHz
#VBW 30 kHz*
Stop 30.00 MHz
Sweep 368.5 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: 40 dB
Avg Type: RMS
Avg|Hold: 11/100
11:47:42 AM Sep 29, 2018
Ref Offset 9.45 dB
10 dB/div
Ref 30.00 dBm
Mkr2 25.602 GHz
-25.797 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

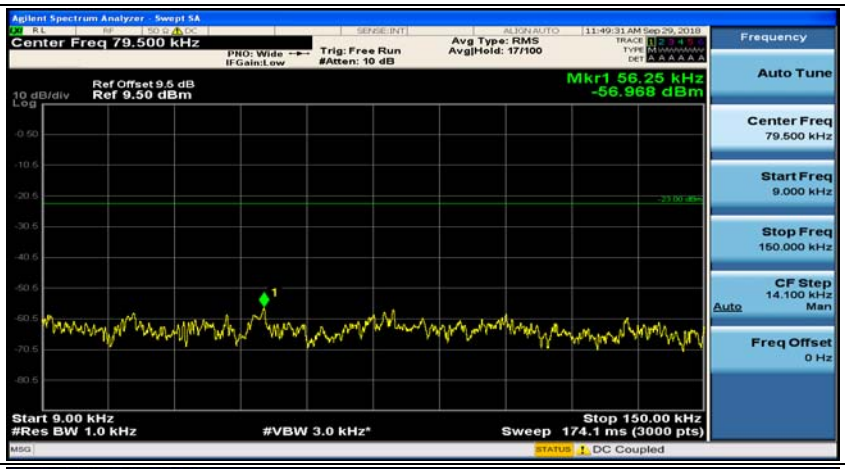
(Channel Bandwidth:15 MHz)_MCH_QPSK_1RB#0

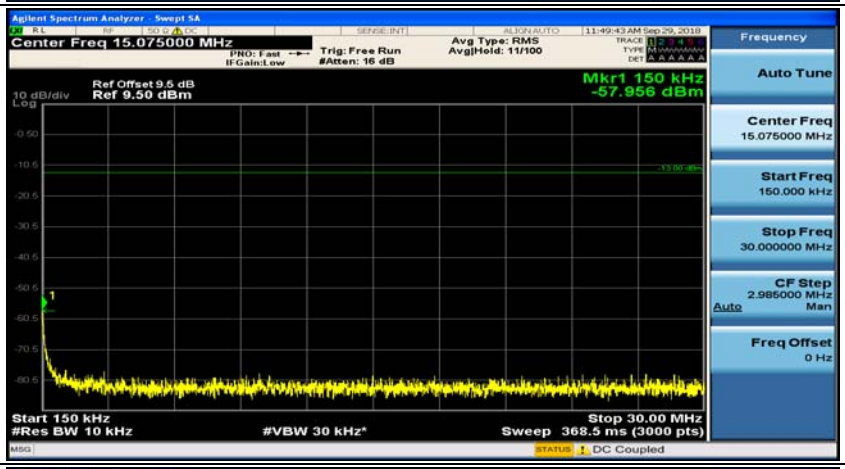


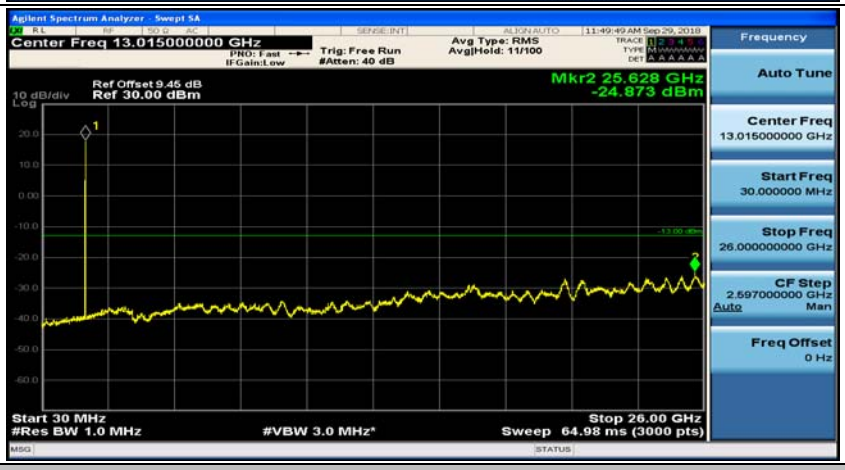




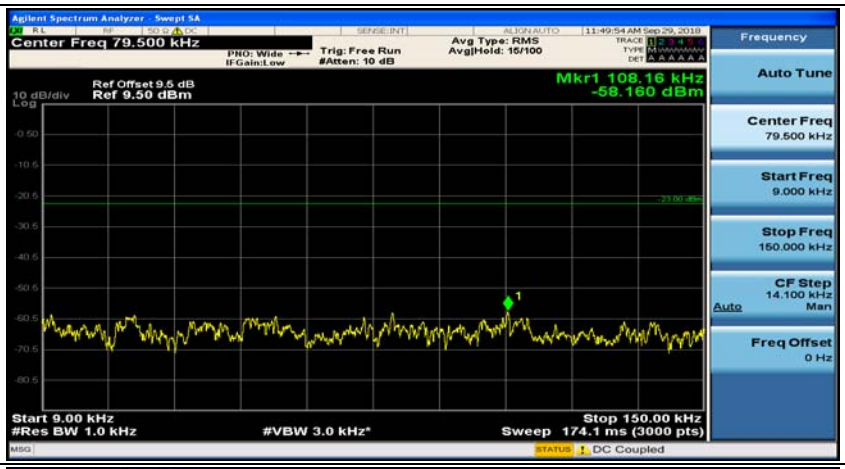
(Channel Bandwidth:15 MHz)_MCH_QPSK_1RB#37

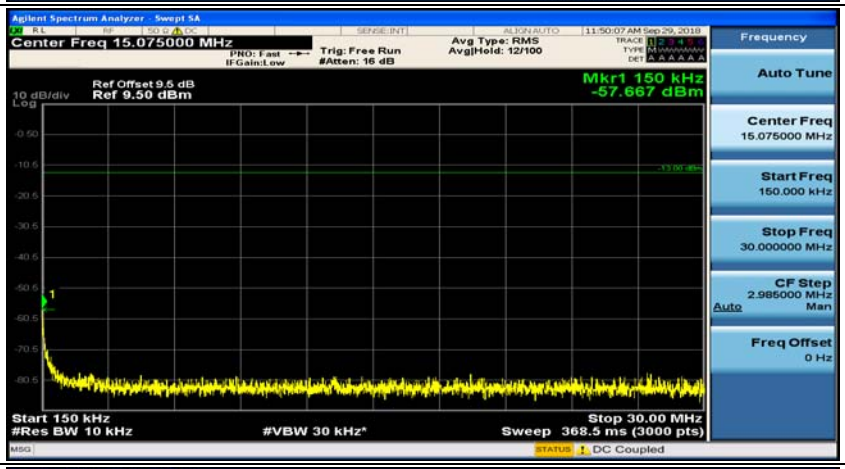


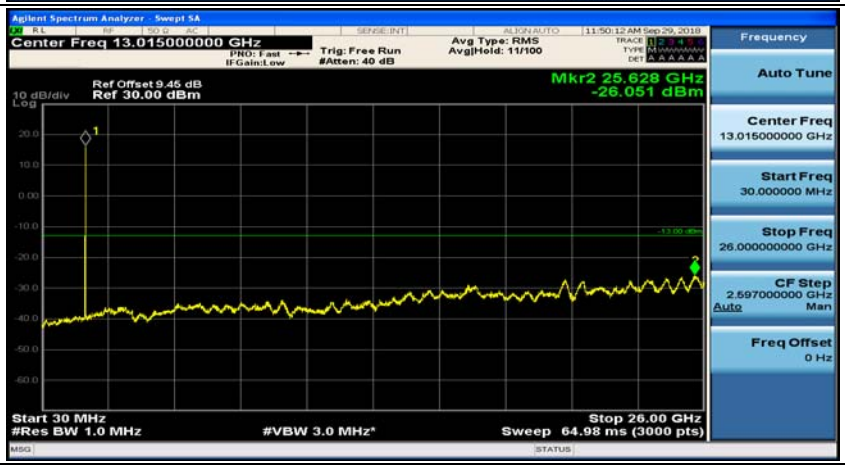




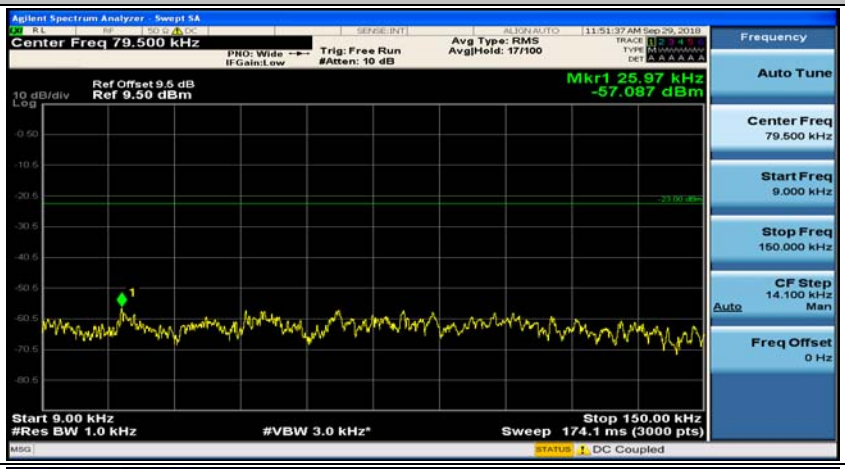
(Channel Bandwidth:15 MHz)_MCH_QPSK_1RB#74

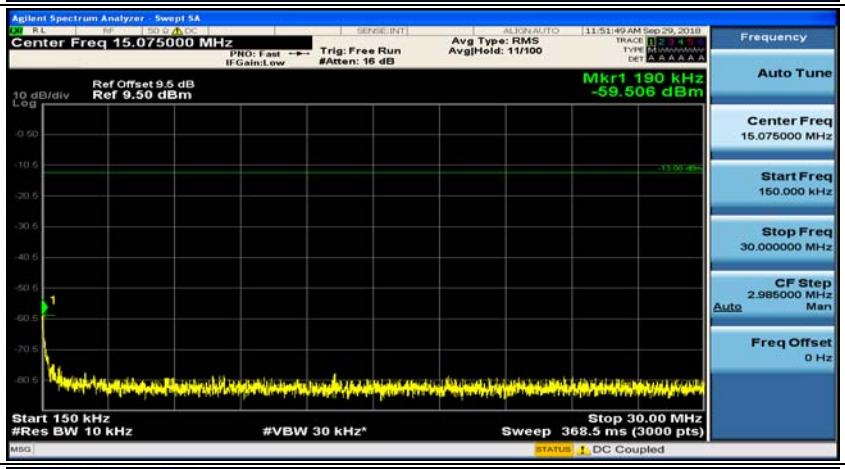

Agilent Spectrum Analyzer - Swept SA
Center Freq 79.500 kHz
PNO: Wide
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 15/100
11:49:54 AM Sep 29, 2018
Ref Offset 9.5 dB
10 dB/div
Ref 9.50 dBm
Mkr1 108.16 kHz
-58.160 dBm
Start 9.00 kHz
#Res BW 1.0 kHz
#VBW 3.0 kHz*
Stop 150.00 kHz
Sweep 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

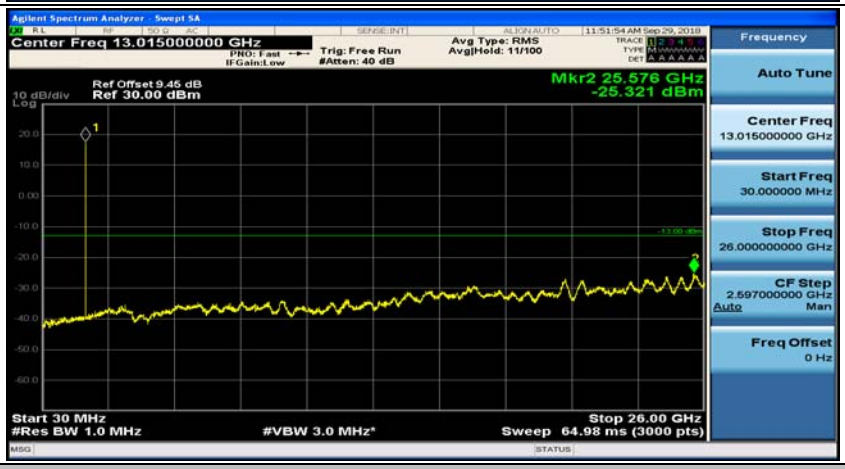

Agilent Spectrum Analyzer - Swept SA
Center Freq 15.075000 MHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 16 dB
Avg Type: RMS
Avg|Hold: 12/100
11:50:07 AM Sep 29, 2018
Ref Offset 9.5 dB
10 dB/div
Ref 9.50 dBm
Mkr1 150 kHz
-57.667 dBm
Start 150 kHz
#Res BW 10 kHz
#VBW 30 kHz*
Stop 30.00 MHz
Sweep 368.5 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: 40 dB
Avg Type: RMS
Avg|Hold: 11/100
11:50:12 AM Sep 29, 2018
Ref Offset 9.45 dB
10 dB/div
Ref 30.00 dBm
Mkr2 25.628 GHz
-26.051 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

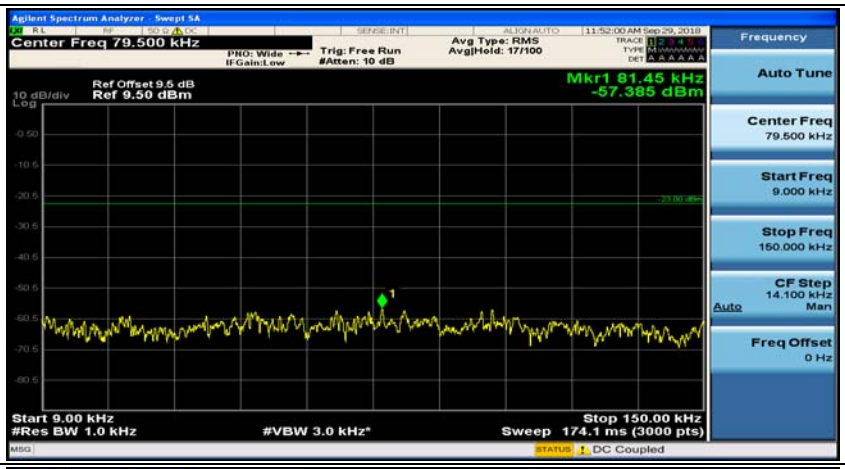
(Channel Bandwidth:15 MHz)_HCH_QPSK_1RB#0

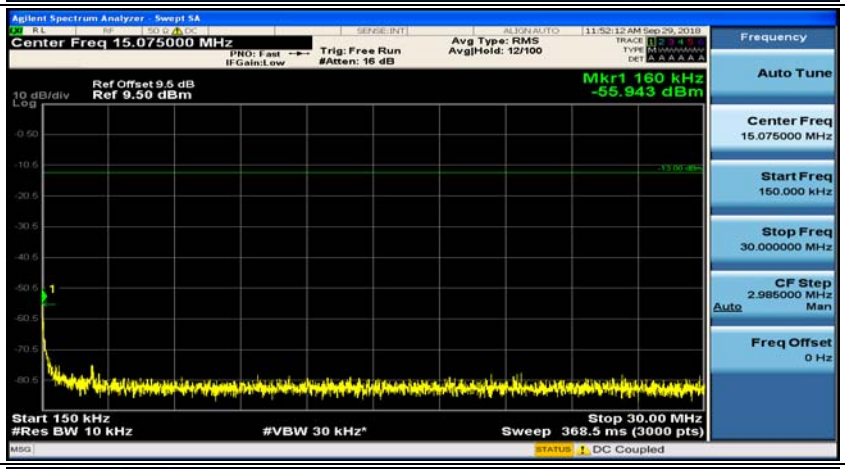




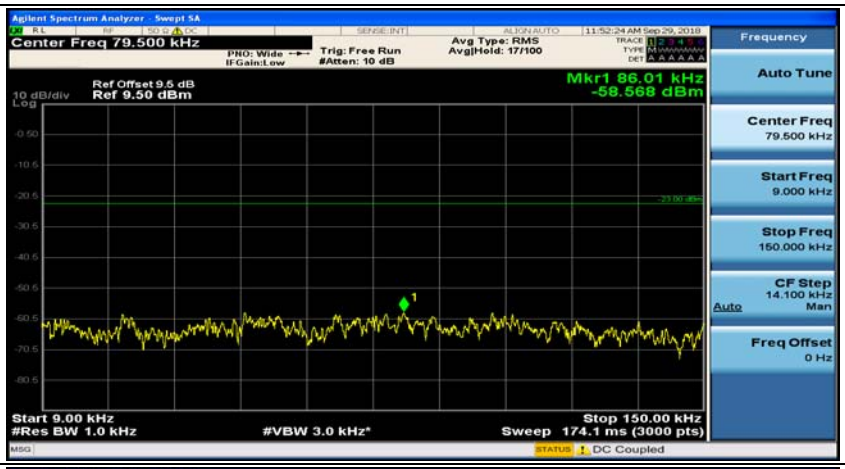


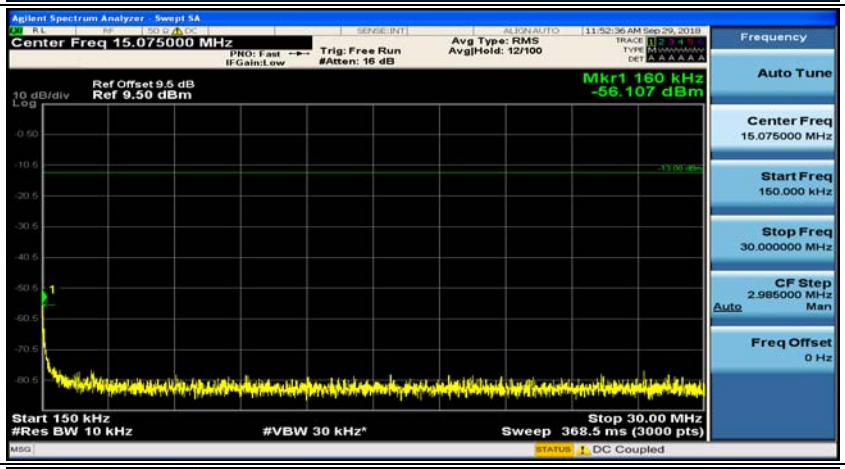
(Channel Bandwidth:15 MHz)_HCH_QPSK_1RB#37

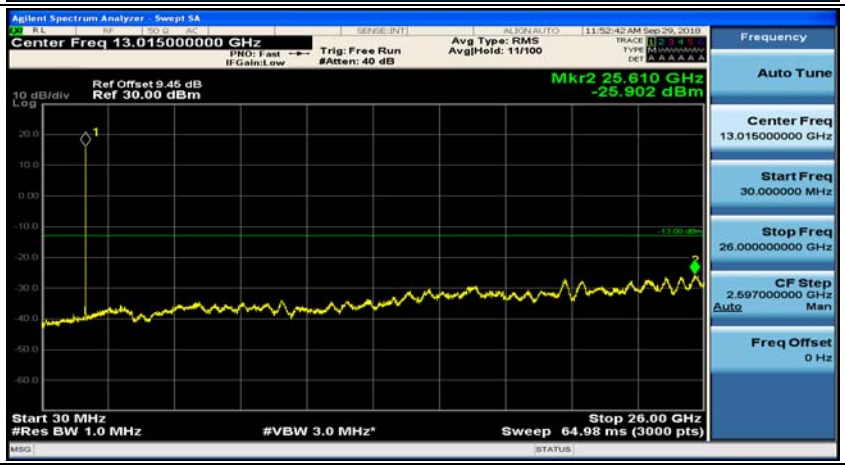




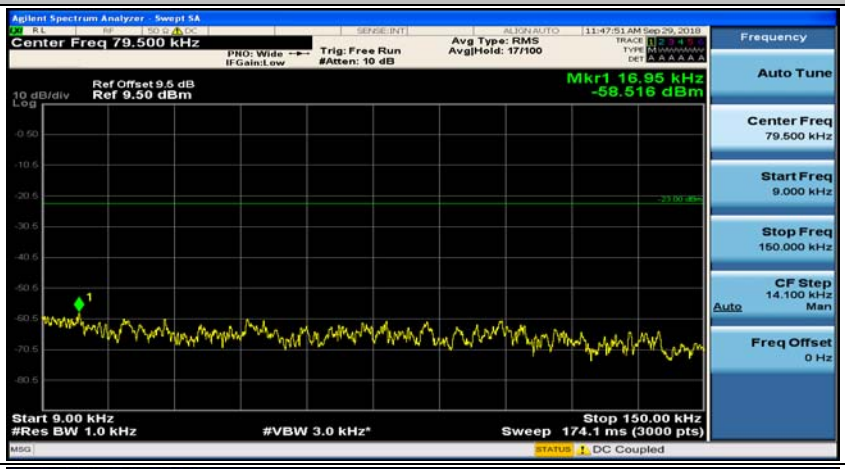
(Channel Bandwidth:15 MHz)_HCH_QPSK_1RB#74

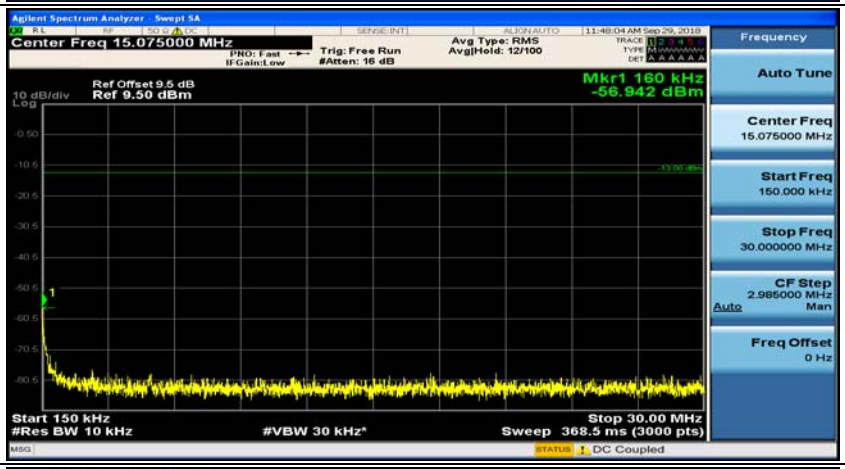

Agilent Spectrum Analyzer - Swept SA
Center Freq 79.500 kHz
PNO: Wide
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 17/100
11:52:24 AM Sep 29, 2018
Ref Offset 9.5 dB
10 dB/div
Ref 9.50 dBm
Mkr1 86.01 kHz
-58.568 dBm
Start 9.00 kHz
#Res BW 1.0 kHz
#VBW 3.0 kHz*
Stop 150.00 kHz
Sweep 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

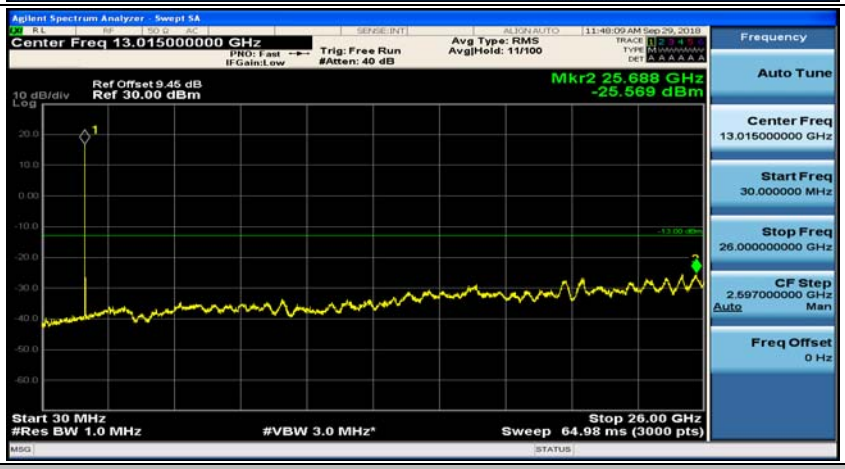

Agilent Spectrum Analyzer - Swept SA
Center Freq 15.075000 MHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 16 dB
Avg Type: RMS
Avg|Hold: 12/100
11:52:36 AM Sep 29, 2018
Ref Offset 9.5 dB
10 dB/div
Ref 9.50 dBm
Mkr1 160 kHz
-56.107 dBm
Start 150 kHz
#Res BW 10 kHz
#VBW 30 kHz*
Stop 30.00 MHz
Sweep 368.5 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: 40 dB
Avg Type: RMS
Avg|Hold: 11/100
11:52:42 AM Sep 29, 2018
Ref Offset 9.45 dB
10 dB/div
Ref 30.00 dBm
Mkr2 25.610 GHz
-25.902 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

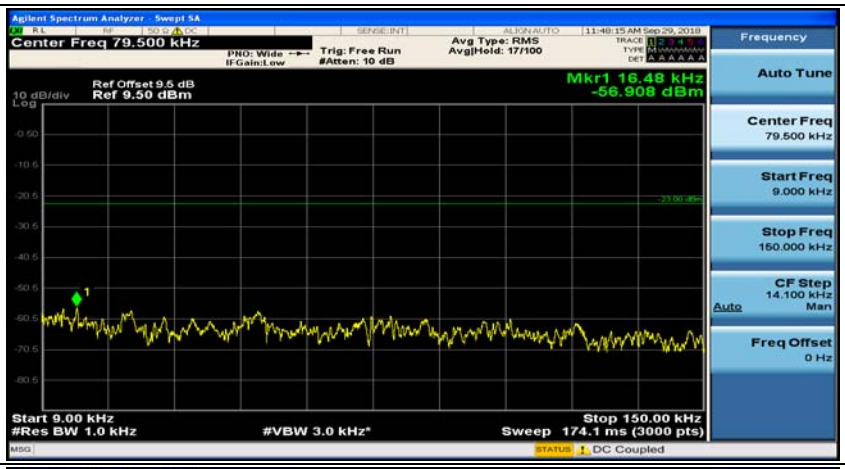
(Channel Bandwidth:15 MHz)_LCH_16QAM_1RB#0

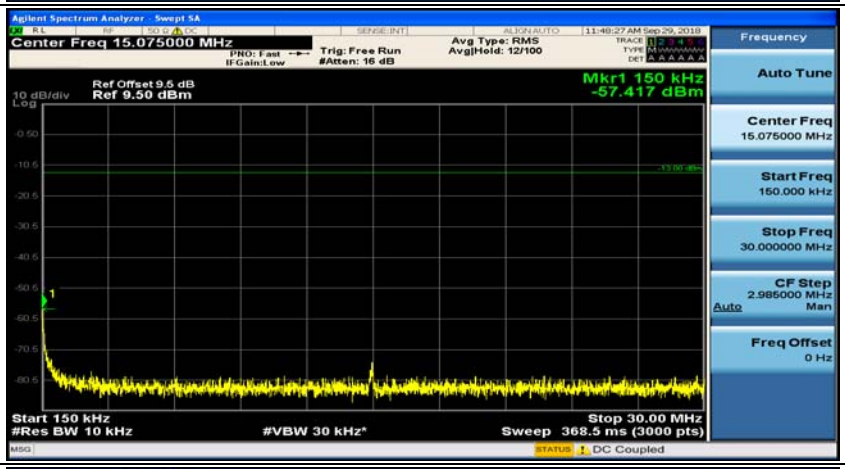


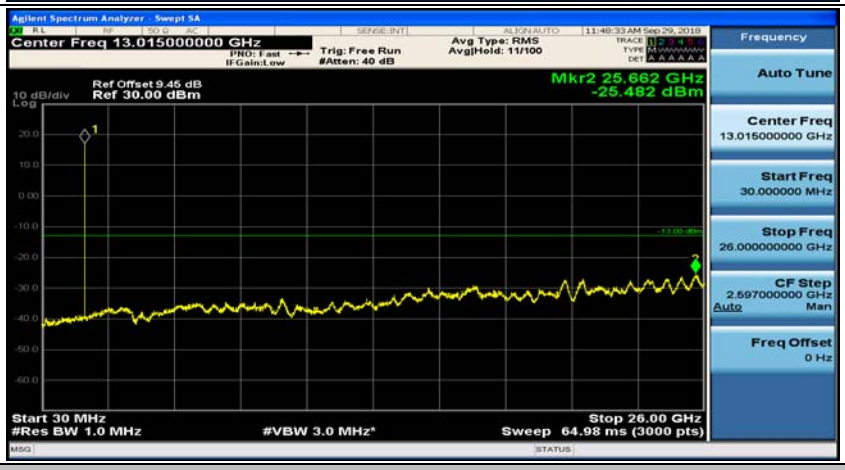




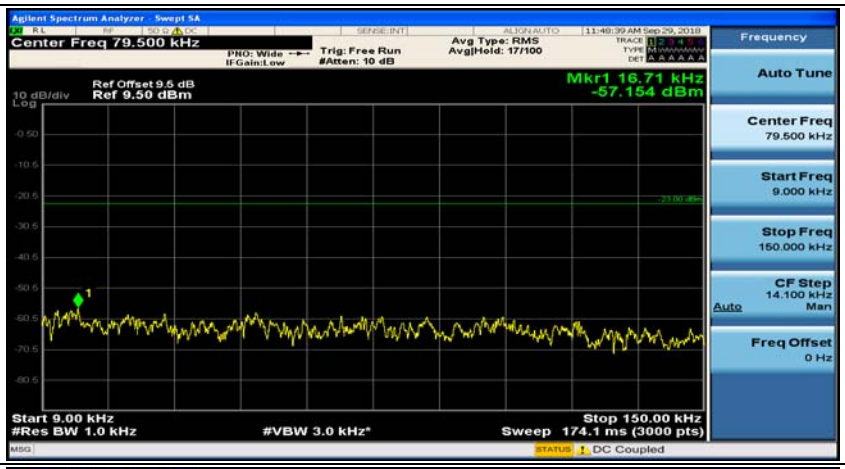
(Channel Bandwidth:15 MHz)_LCH_16QAM_1RB#37

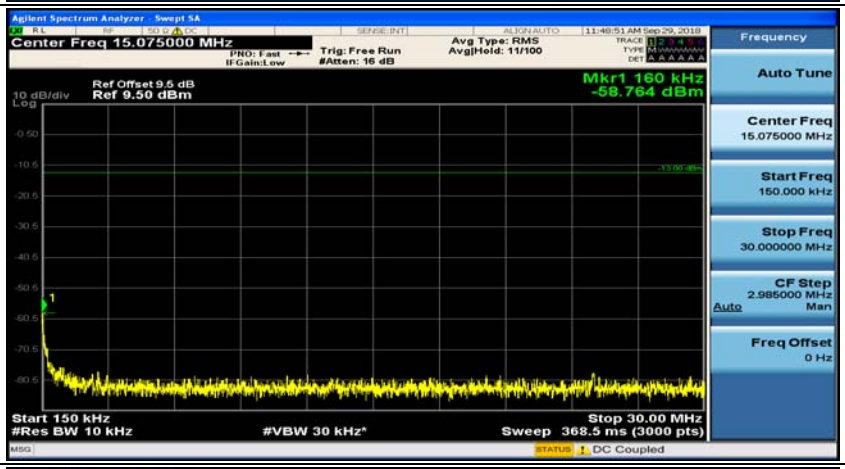


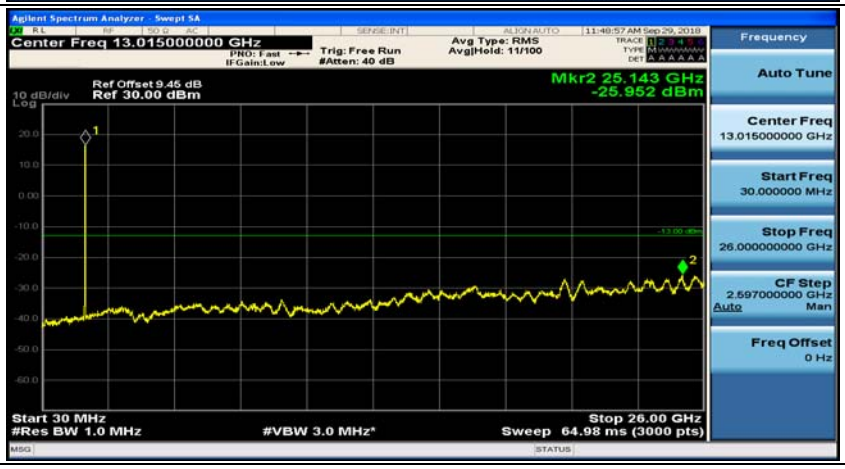




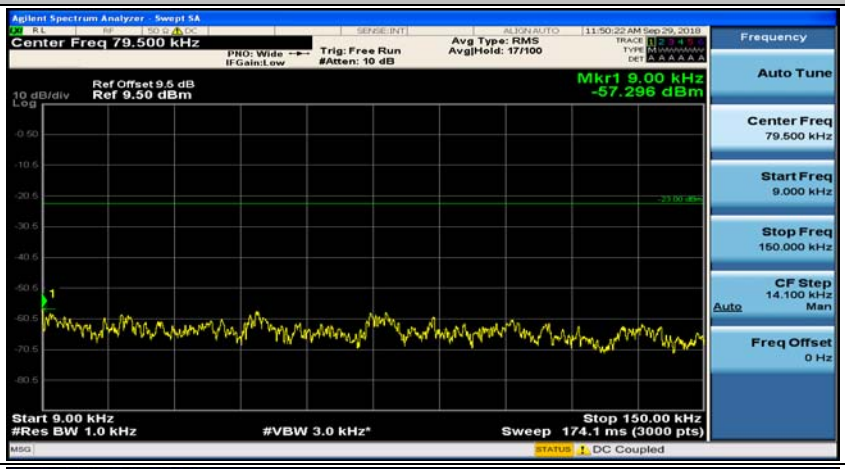
(Channel Bandwidth:15 MHz)_LCH_16QAM_1RB#74

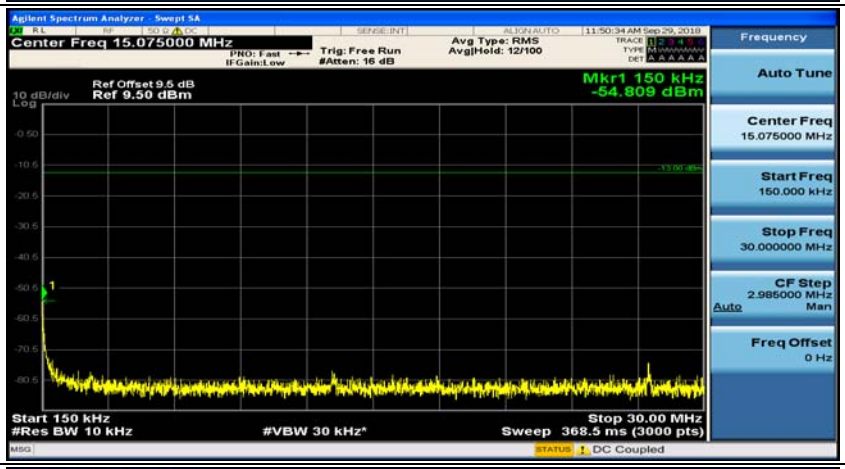

Agilent Spectrum Analyzer - Swept SA
Center Freq 79.500 kHz
PNO: Wide
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 17/100
11:48:39 AM Sep 29, 2018
Ref Offset 9.5 dB
10 dB/div
Ref 9.50 dBm
Mkr1 16.71 kHz
-57.154 dBm
Start 9.00 kHz
#Res BW 1.0 kHz
#VBW 3.0 kHz*
Stop 150.00 kHz
Sweep 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

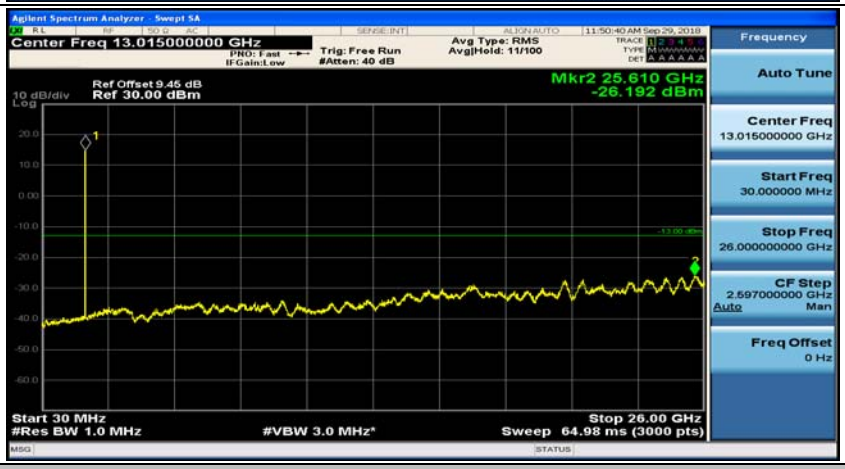

Agilent Spectrum Analyzer - Swept SA
Center Freq 15.075000 MHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 16 dB
Avg Type: RMS
Avg|Hold: 11/100
11:48:51 AM Sep 29, 2018
Ref Offset 9.5 dB
10 dB/div
Ref 9.50 dBm
Mkr1 160 kHz
-58.764 dBm
Start 150 kHz
#Res BW 10 kHz
#VBW 30 kHz*
Stop 30.00 MHz
Sweep 368.5 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: 40 dB
Avg Type: RMS
Avg|Hold: 11/100
11:48:57 AM Sep 29, 2018
Ref Offset 9.45 dB
10 dB/div
Ref 30.00 dBm
Mkr2 25.143 GHz
-25.952 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

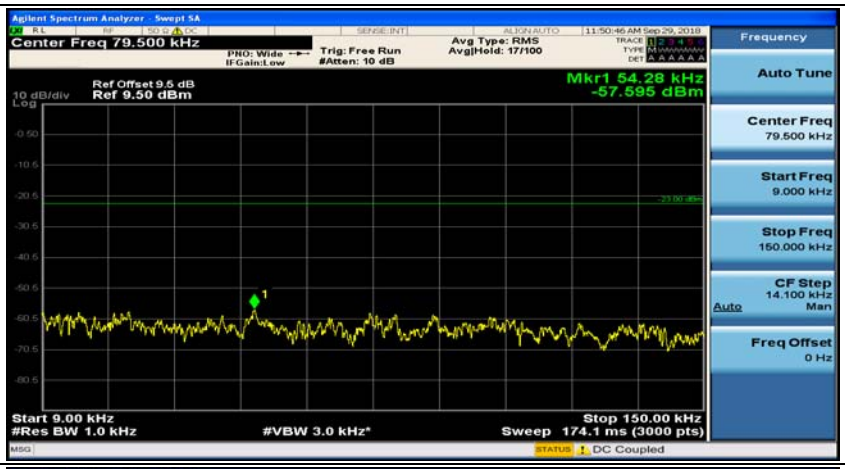
(Channel Bandwidth:15 MHz)_MCH_16QAM_1RB#0

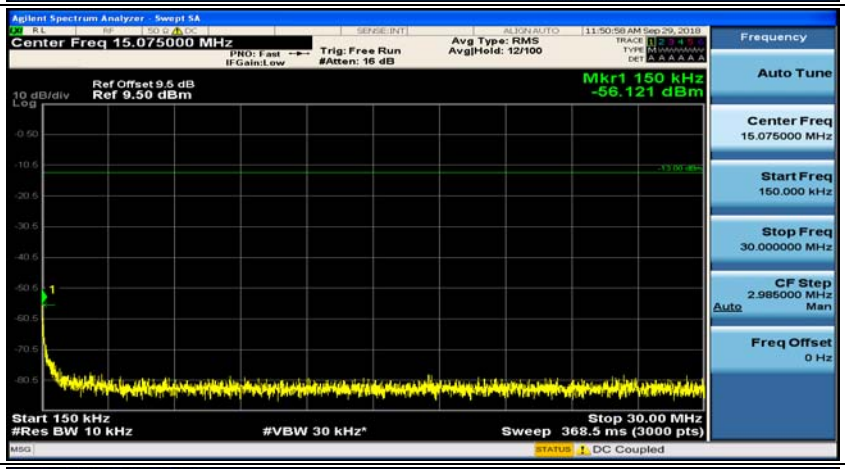


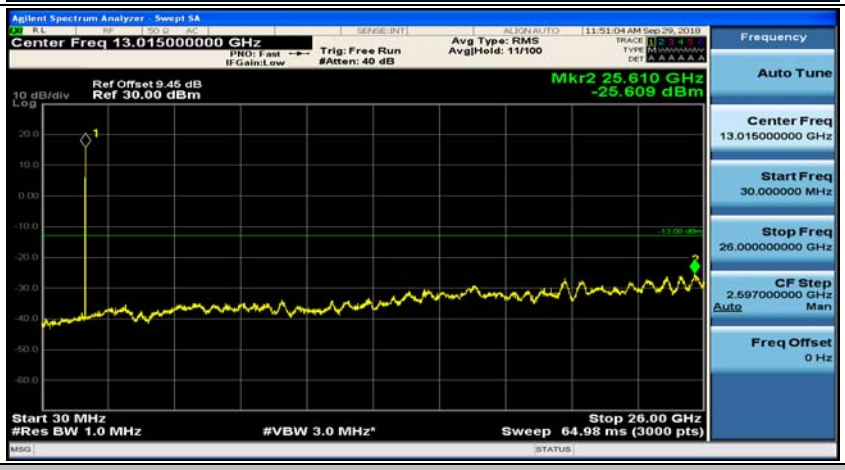




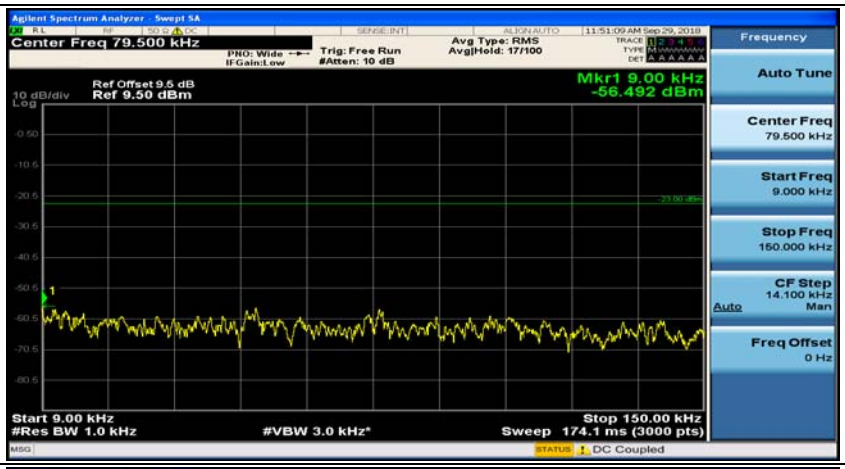
(Channel Bandwidth:15 MHz)_MCH_16QAM_1RB#37

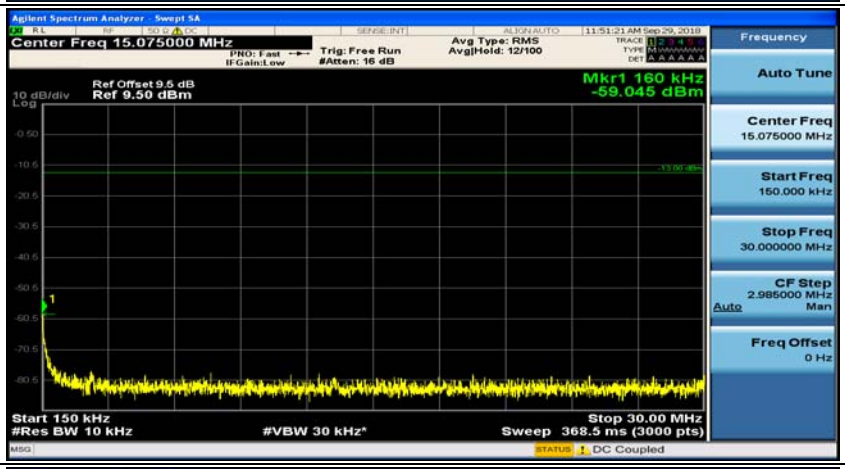


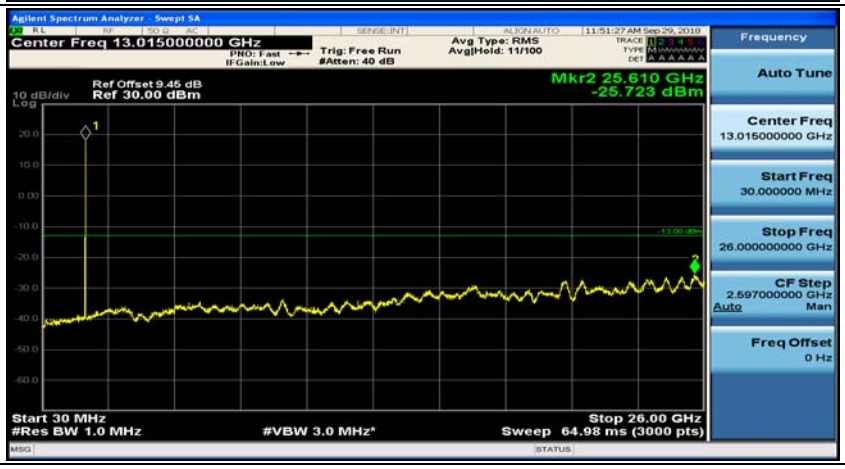




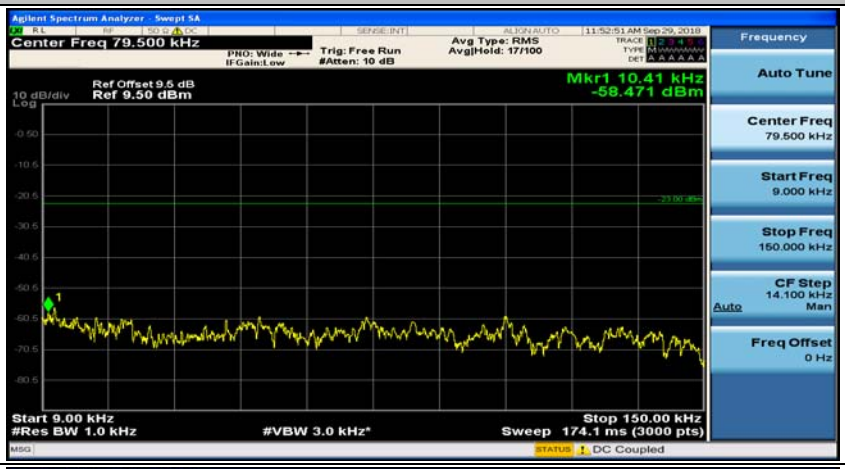
(Channel Bandwidth:15 MHz)_MCH_16QAM_1RB#74

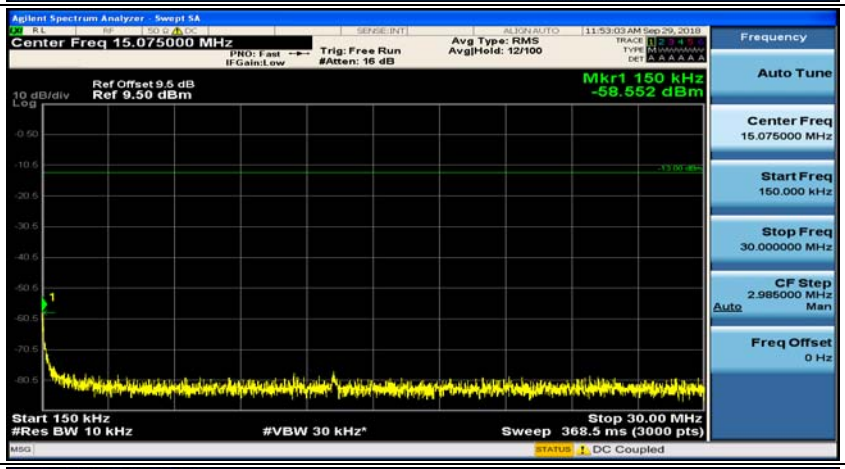

Agilent Spectrum Analyzer - Swept SA
Center Freq 79.500 kHz
PNO: Wide
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 17/100
11:51:09 AM Sep 29, 2018
Ref Offset 9.5 dB
10 dB/div
Ref 9.50 dBm
Mkr1 9.00 kHz
-56.492 dBm
Start 9.00 kHz
#Res BW 1.0 kHz
#VBW 3.0 kHz*
Stop 150.00 kHz
Sweep 174.1 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

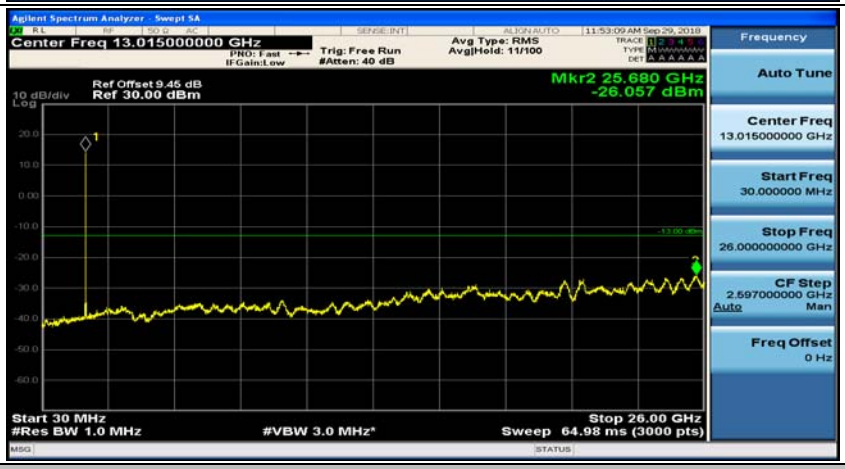

Agilent Spectrum Analyzer - Swept SA
Center Freq 15.075000 MHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 16 dB
Avg Type: RMS
Avg|Hold: 12/100
11:51:21 AM Sep 29, 2018
Ref Offset 9.5 dB
10 dB/div
Ref 9.50 dBm
Mkr1 160 kHz
-59.045 dBm
Start 150 kHz
#Res BW 10 kHz
#VBW 30 kHz*
Stop 30.00 MHz
Sweep 368.5 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: 40 dB
Avg Type: RMS
Avg|Hold: 11/100
11:51:27 AM Sep 29, 2018
Ref Offset 9.45 dB
10 dB/div
Ref 30.00 dBm
Mkr2 25.610 GHz
-25.723 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

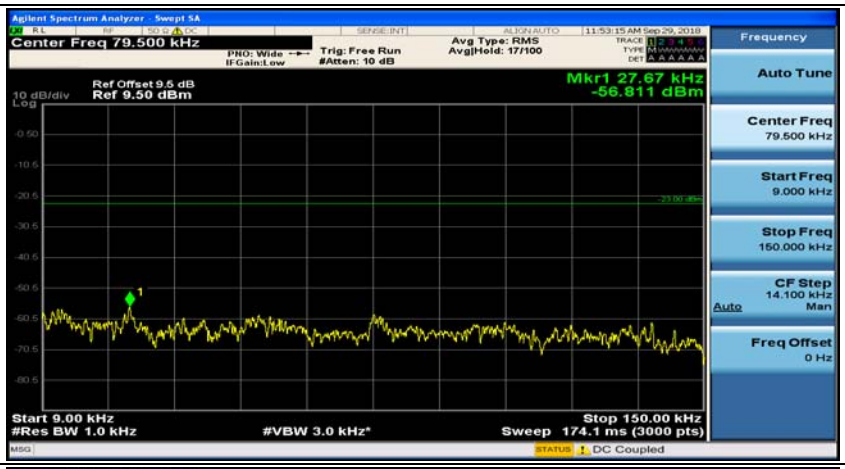
(Channel Bandwidth:15 MHz)_HCH_16QAM_1RB#0

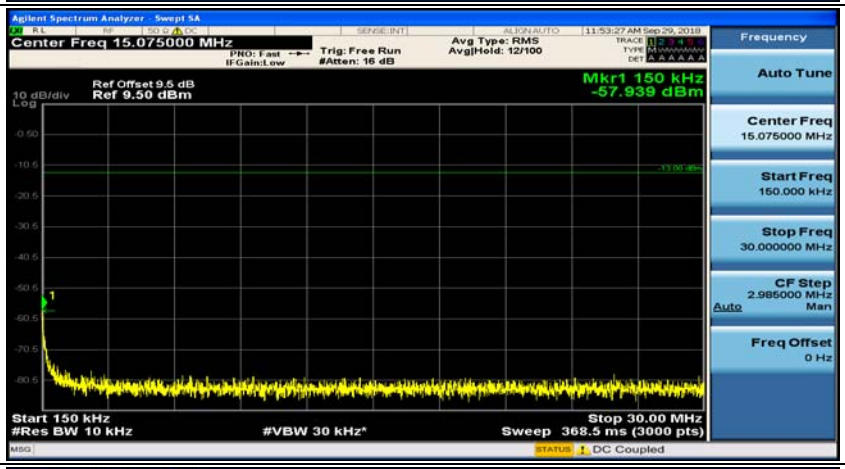


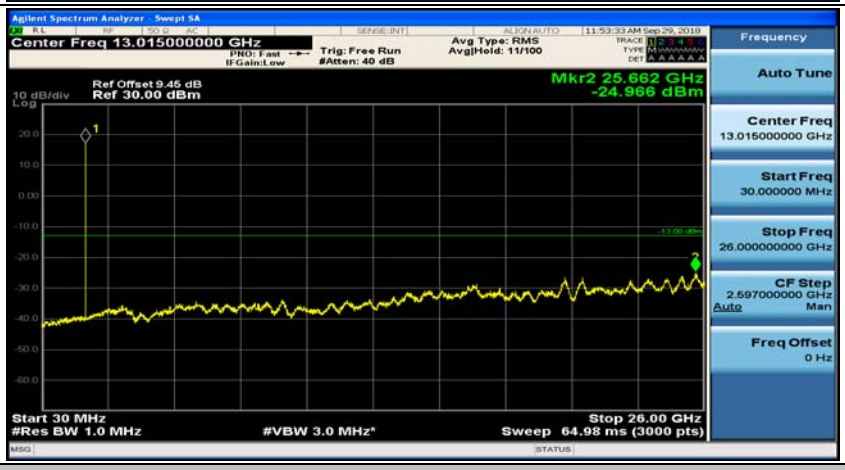




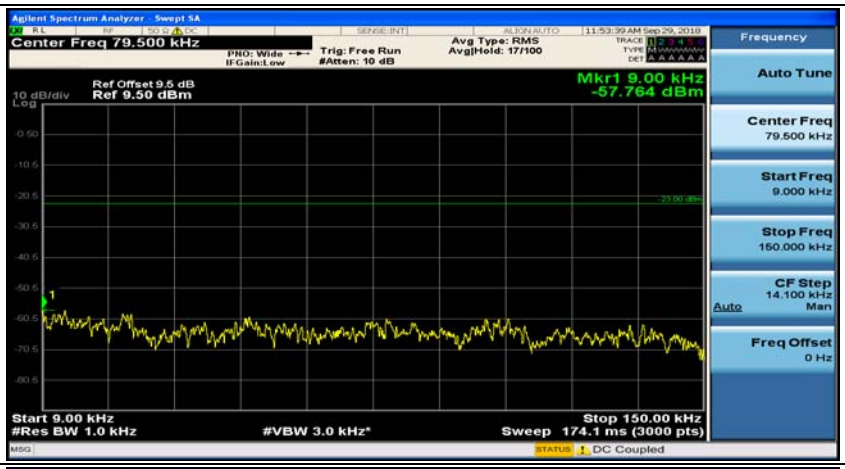
(Channel Bandwidth:15 MHz)_HCH_16QAM_1RB#37

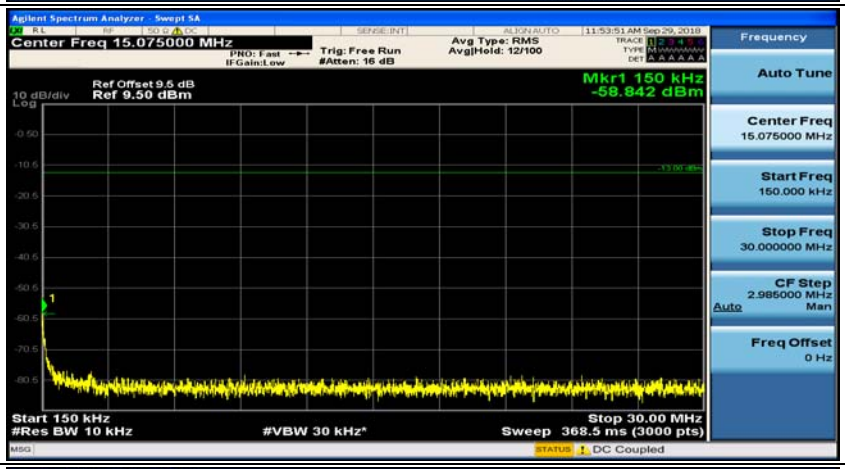


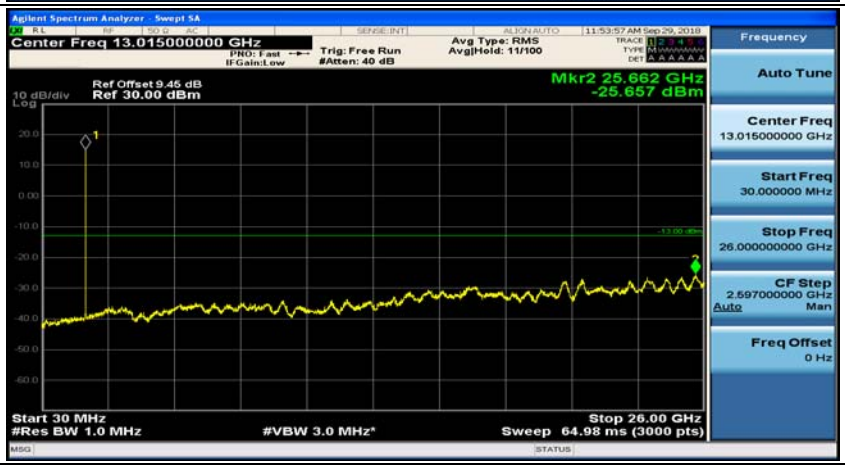




(Channel Bandwidth:15 MHz)_HCH_16QAM_1RB#74

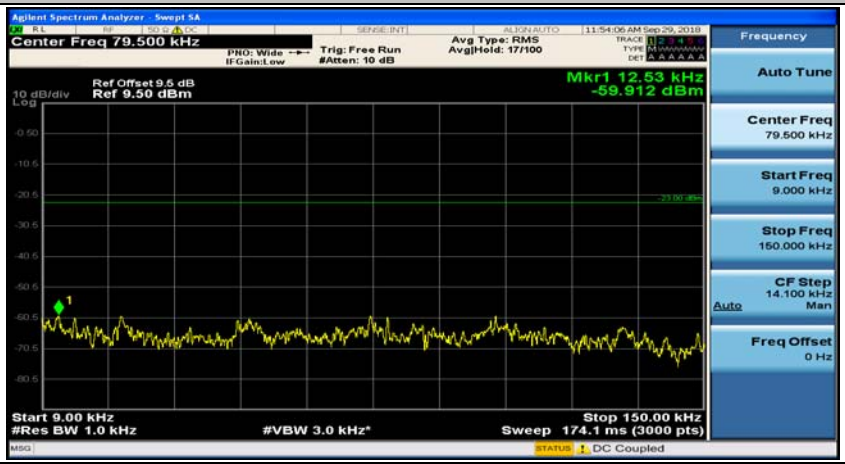

Agilent Spectrum Analyzer - Swept SA
Center Freq 79.500 kHz
PNO: Wide
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 17/100
11:53:39 AM Sep 29, 2018
Ref Offset 9.5 dB
10 dB/div
Ref 9.50 dBm
Mkr1 9.00 kHz
-57.764 dBm
Start 9.00 kHz
#Res BW 1.0 kHz
#VBW 3.0 kHz*
Stop 150.00 kHz
Sweep 174.1 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

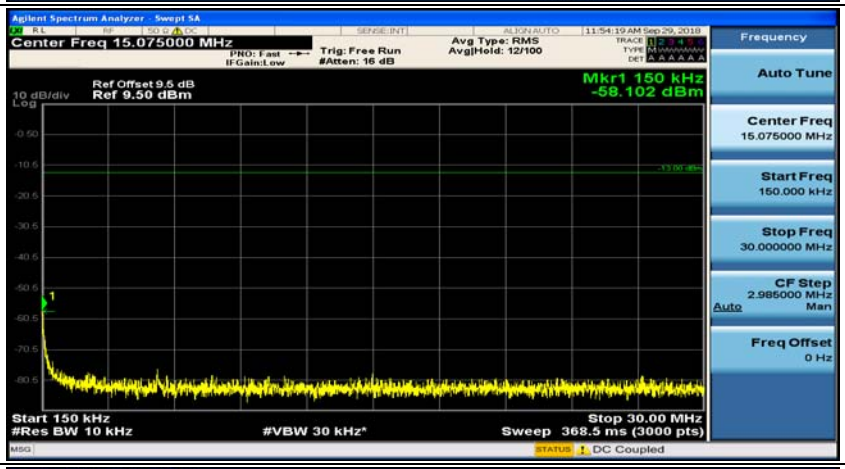

Agilent Spectrum Analyzer - Swept SA
Center Freq 15.075000 MHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 16 dB
Avg Type: RMS
Avg|Hold: 12/100
11:53:51 AM Sep 29, 2018
Ref Offset 9.5 dB
10 dB/div
Ref 9.50 dBm
Mkr1 150 kHz
-58.842 dBm
Start 150 kHz
#Res BW 10 kHz
#VBW 30 kHz*
Stop 30.00 MHz
Sweep 368.5 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

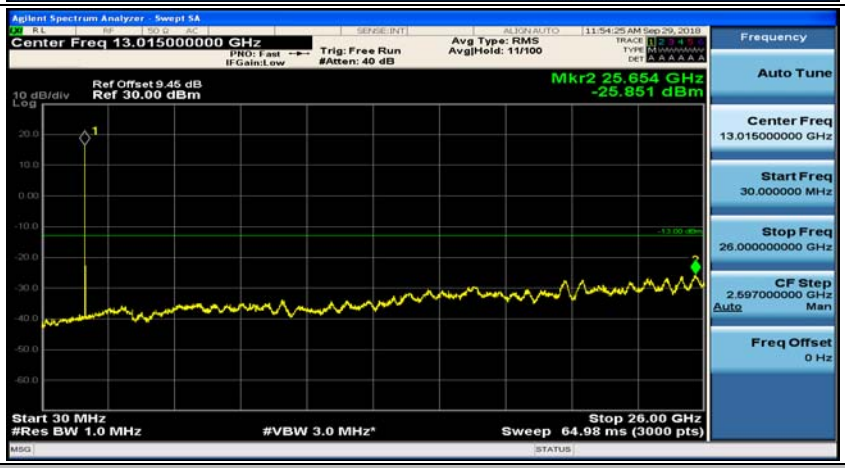

Agilent Spectrum Analyzer - Swept SA
Center Freq 13.015000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 40 dB
Avg Type: RMS
Avg|Hold: 11/100
11:53:57 AM Sep 29, 2018
Ref Offset 9.45 dB
10 dB/div
Ref 30.00 dBm
Mkr2 25.662 GHz
-25.657 dBm
Start 30 MHz
#Res BW 1.0 MHz
#VBW 3.0 MHz*
Stop 26.00 GHz
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

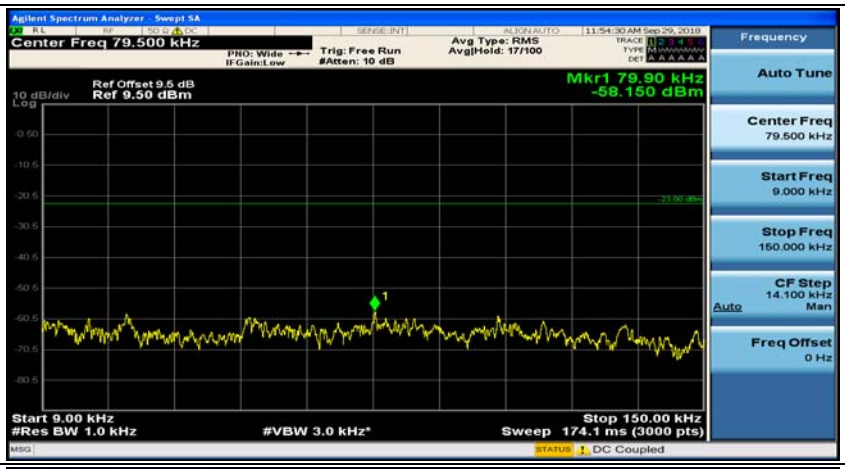
(Channel Bandwidth:20 MHz)_LCH_QPSK_1RB#0

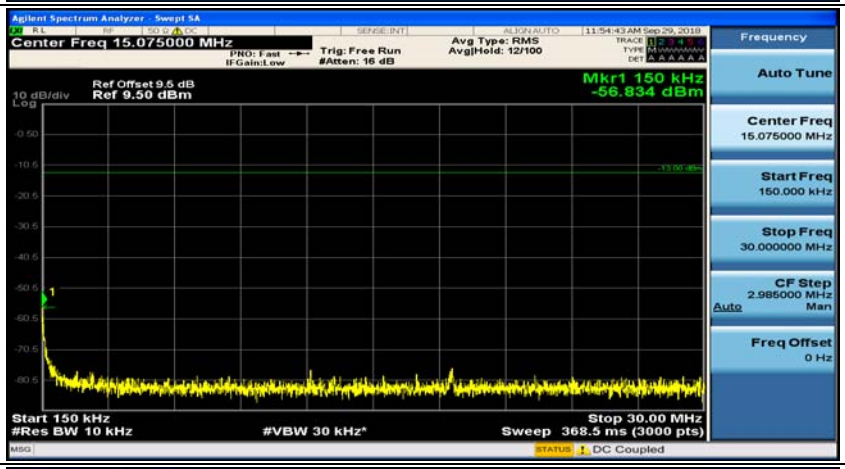




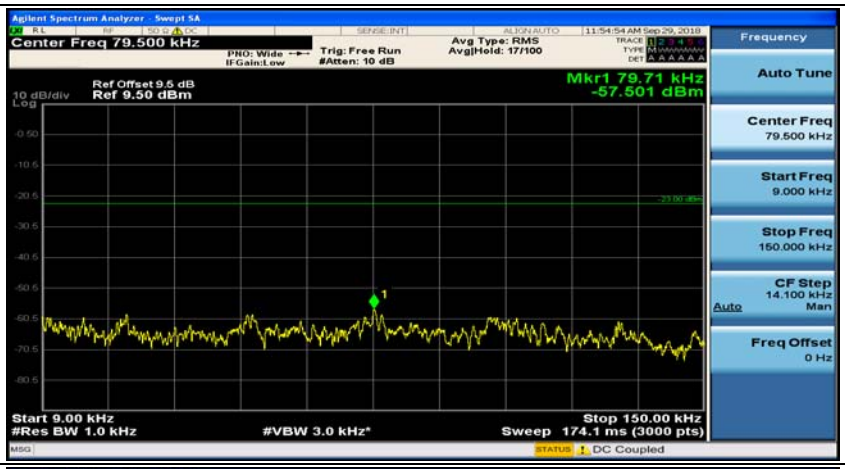


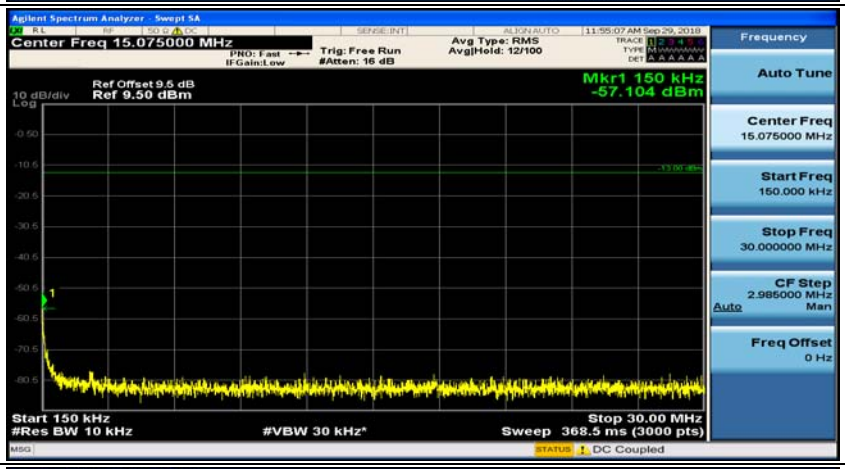
(Channel Bandwidth:20 MHz)_LCH_QPSK_1RB#49

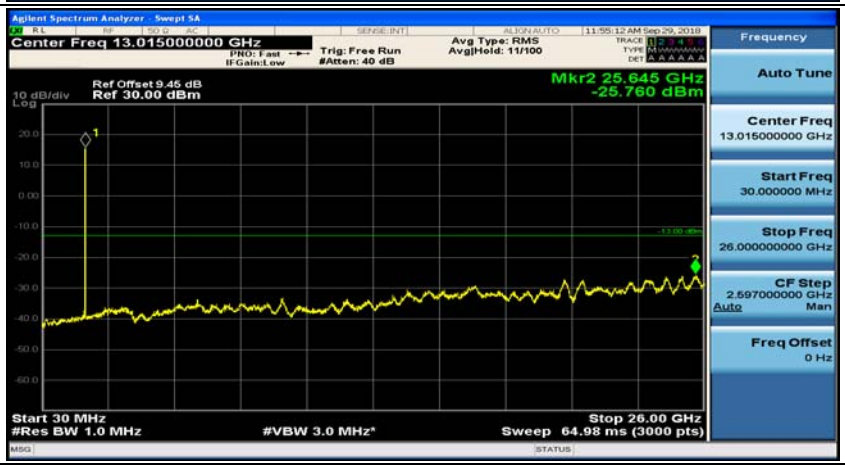




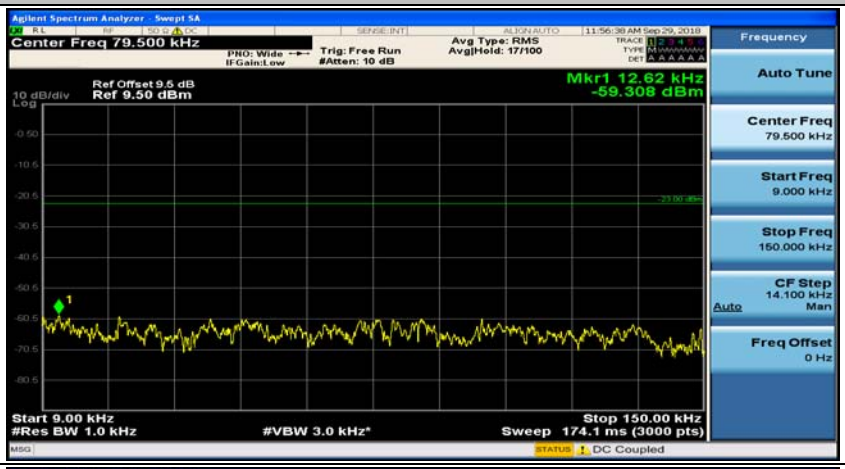
(Channel Bandwidth:20 MHz)_LCH_QPSK_1RB#99

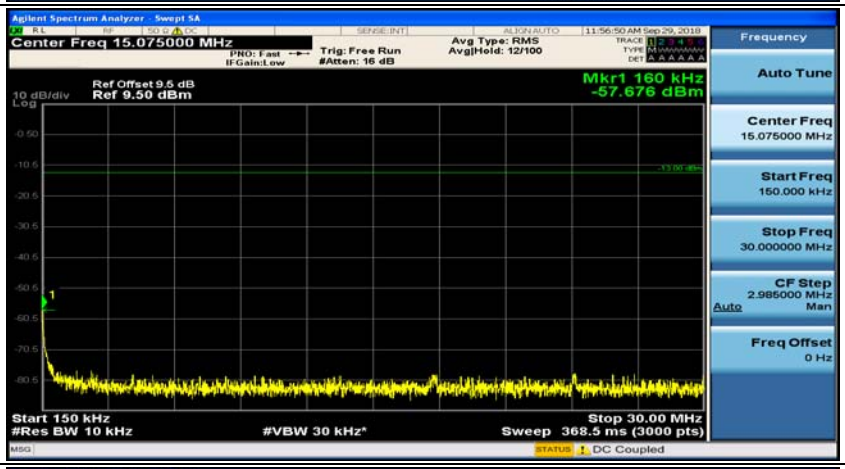

Agilent Spectrum Analyzer - Swept SA
Center Freq 79.500 kHz
PNO: Wide
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 17/100
11:54:54 AM Sep 29, 2018
Ref Offset 9.5 dB
10 dB/div
Ref 9.50 dBm
Mkr1 79.71 kHz
-57.501 dBm
Start 9.00 kHz
#Res BW 1.0 kHz
#VBW 3.0 kHz*
Stop 150.00 kHz
Sweep 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

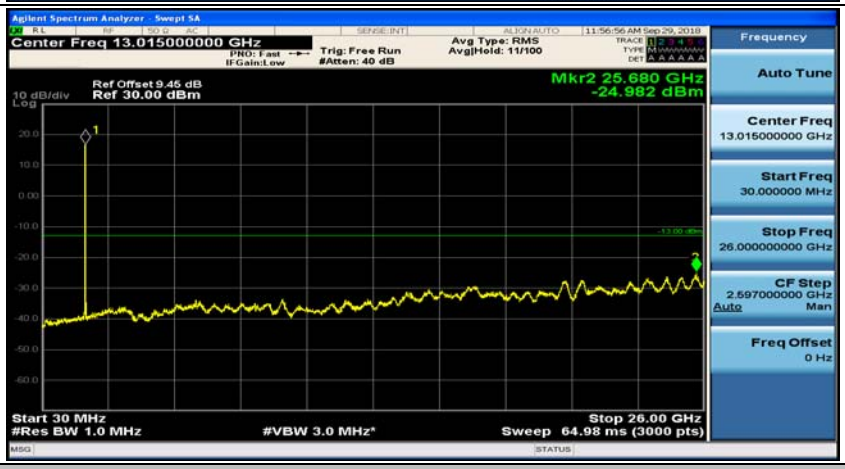

Agilent Spectrum Analyzer - Swept SA
Center Freq 15.075000 MHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 16 dB
Avg Type: RMS
Avg|Hold: 12/100
11:55:07 AM Sep 29, 2018
Ref Offset 9.5 dB
10 dB/div
Ref 9.50 dBm
Mkr1 150 kHz
-57.104 dBm
Start 150 kHz
#Res BW 10 kHz
#VBW 30 kHz*
Stop 30.00 MHz
Sweep 368.5 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: 40 dB
Avg Type: RMS
Avg|Hold: 11/100
11:55:12 AM Sep 29, 2018
Ref Offset 9.45 dB
10 dB/div
Ref 30.00 dBm
Mkr2 25.645 GHz
-25.760 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

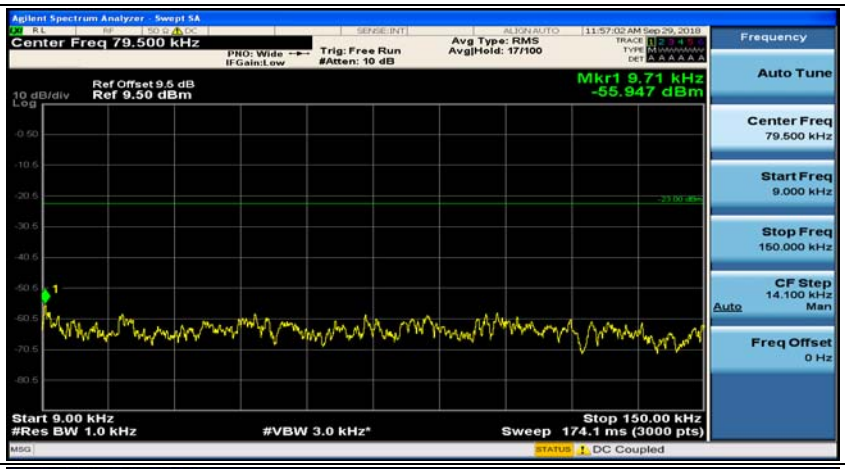
(Channel Bandwidth:20 MHz)_MCH_QPSK_1RB#0

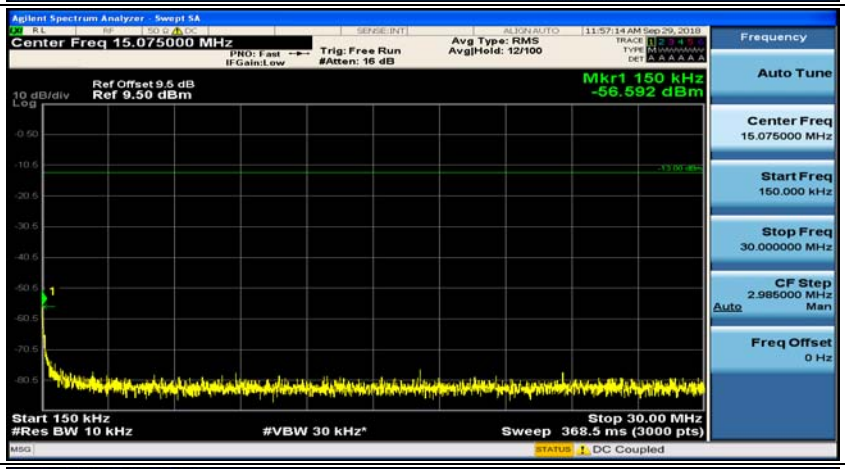




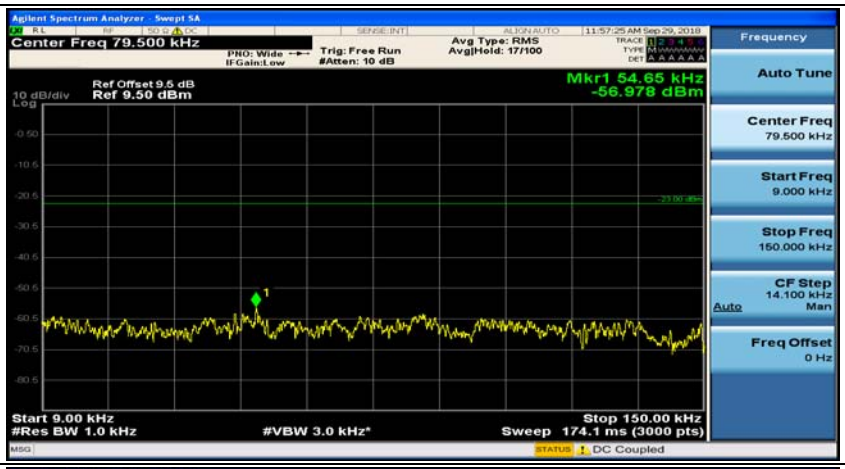


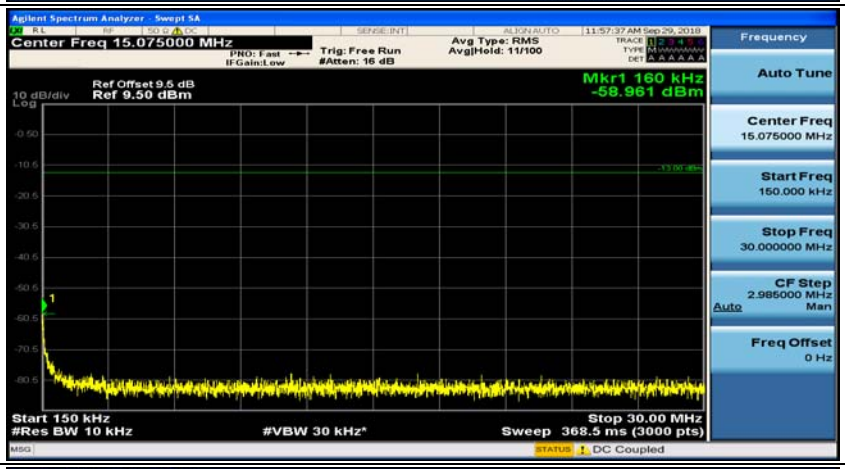
(Channel Bandwidth:20 MHz)_MCH_QPSK_1RB#49

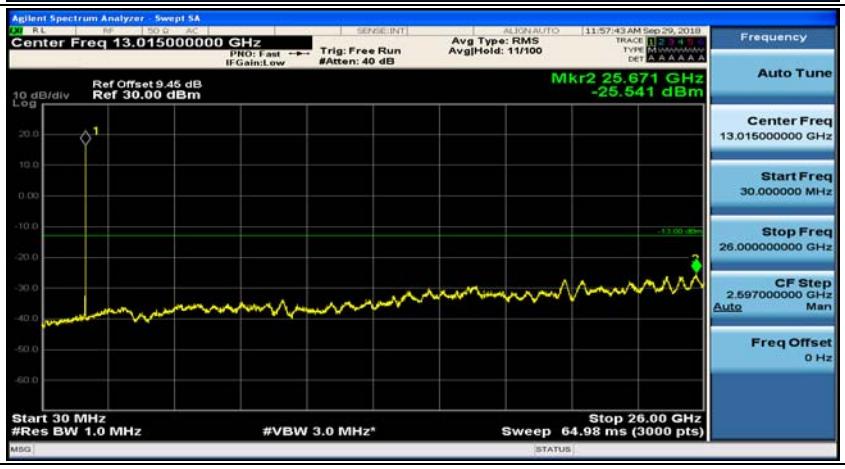




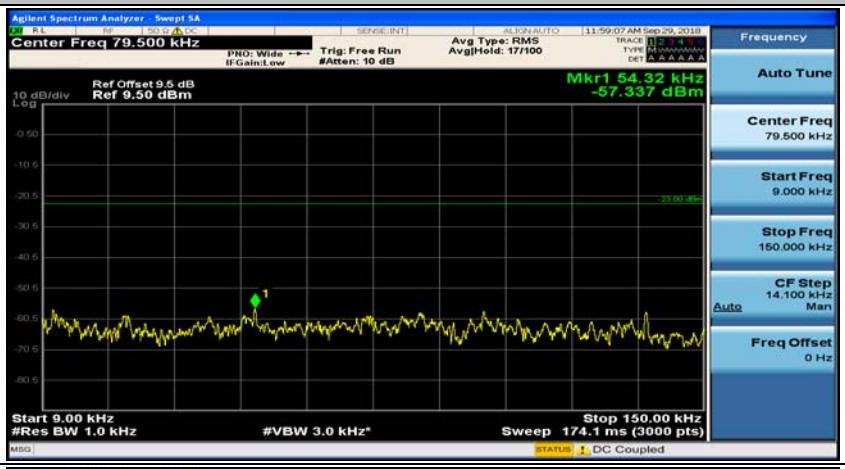
(Channel Bandwidth:20 MHz)_MCH_QPSK_1RB#99

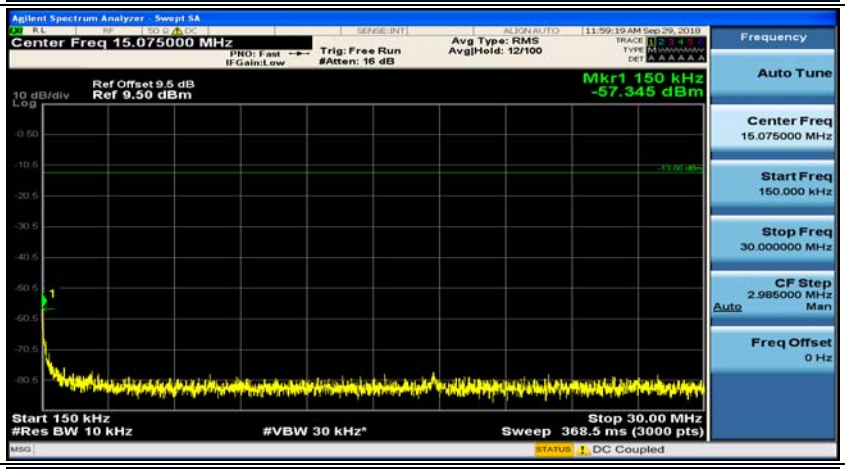

Agilent Spectrum Analyzer - Swept SA
Center Freq 79.500 kHz
PNO: Wide
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 17/100
11:57:25 AM Sep 29, 2018
Ref Offset 9.5 dB
10 dB/div
Ref 9.50 dBm
Mkr1 54.65 kHz
-56.978 dBm
Start 9.00 kHz
#Res BW 1.0 kHz
#VBW 3.0 kHz*
Stop 150.00 kHz
Sweep 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

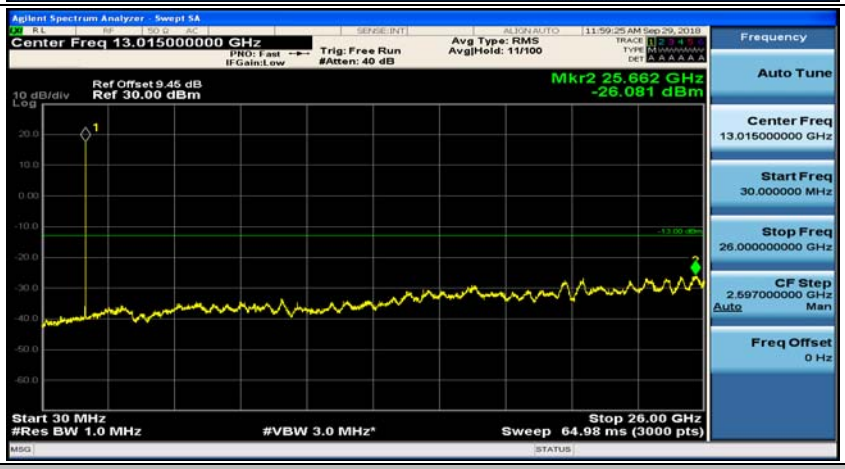

Agilent Spectrum Analyzer - Swept SA
Center Freq 15.075000 MHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 16 dB
Avg Type: RMS
Avg|Hold: 11/100
11:57:37 AM Sep 29, 2018
Ref Offset 9.5 dB
10 dB/div
Ref 9.50 dBm
Mkr1 160 kHz
-58.961 dBm
Start 150 kHz
#Res BW 10 kHz
#VBW 30 kHz*
Stop 30.00 MHz
Sweep 368.5 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: 40 dB
Avg Type: RMS
Avg|Hold: 11/100
11:57:43 AM Sep 29, 2018
Ref Offset 9.45 dB
10 dB/div
Ref 30.00 dBm
Mkr2 25.671 GHz
-25.541 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

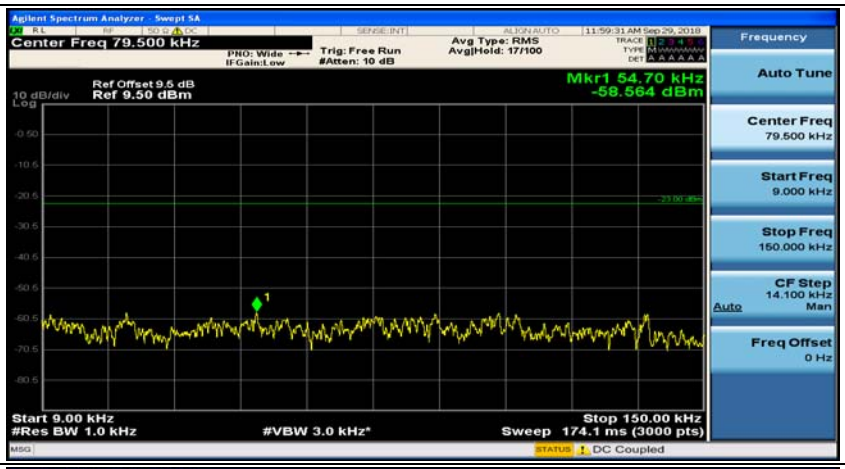
(Channel Bandwidth:20 MHz)_HCH_QPSK_1RB#0

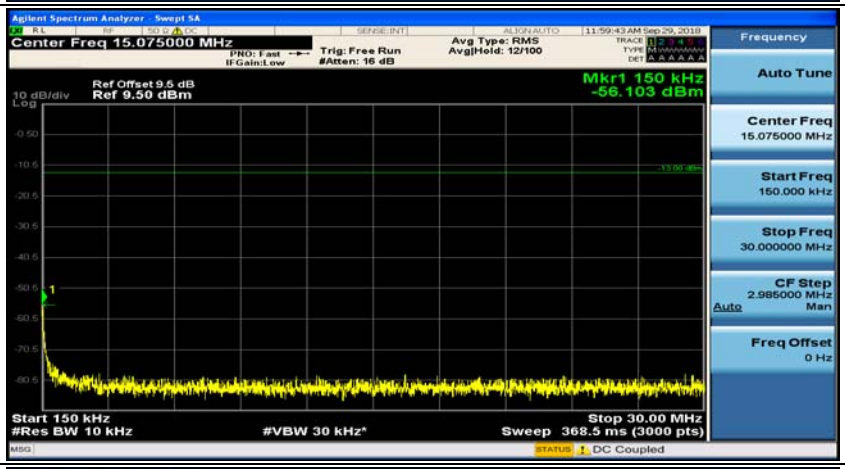


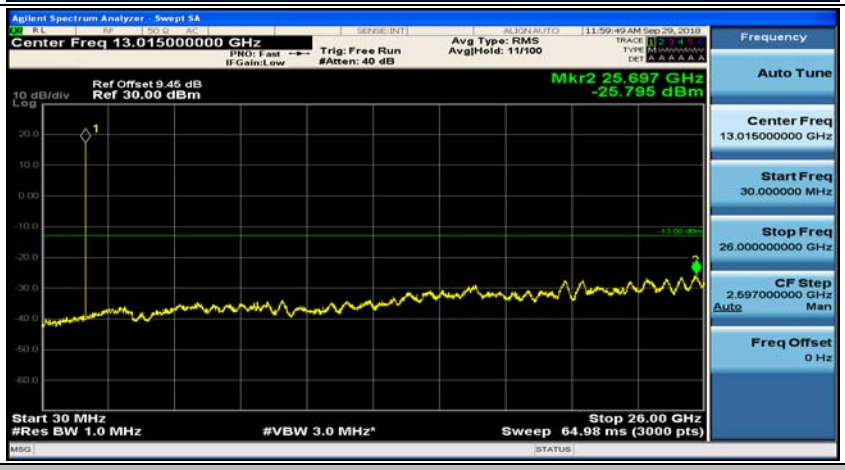




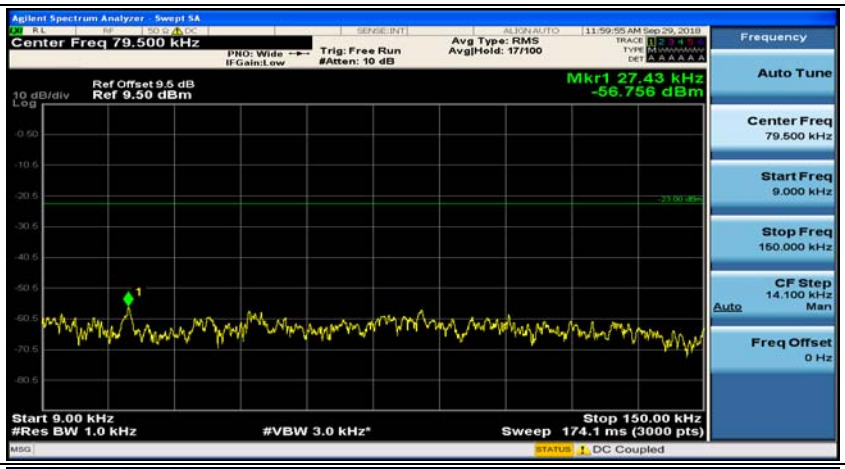
(Channel Bandwidth:20 MHz)_HCH_QPSK_1RB#49

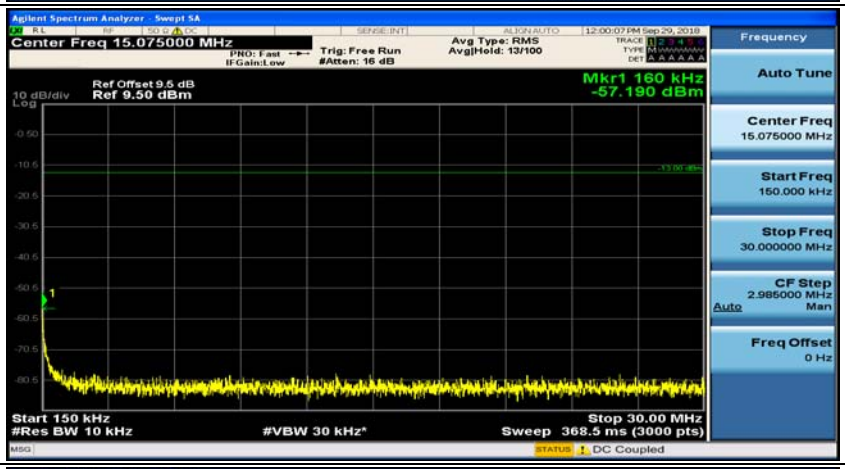


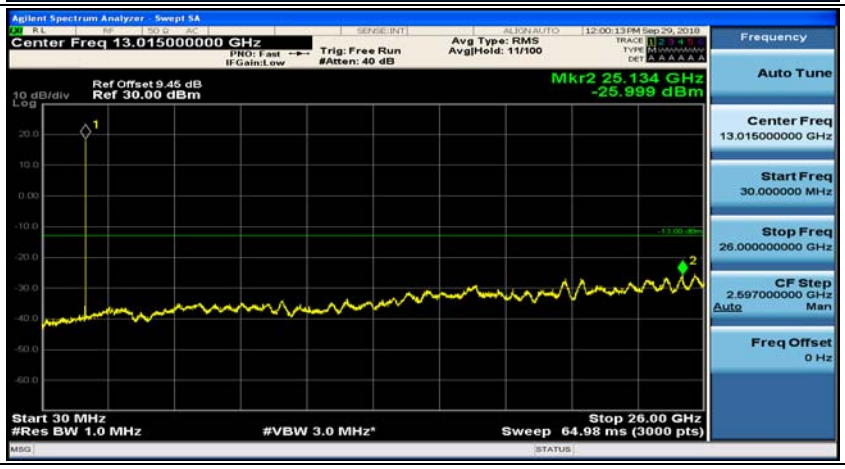




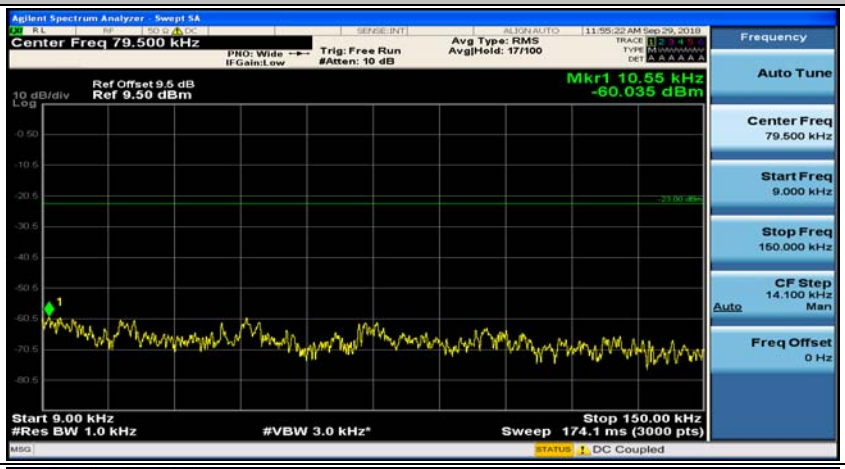
(Channel Bandwidth:20 MHz)_HCH_QPSK_1RB#99

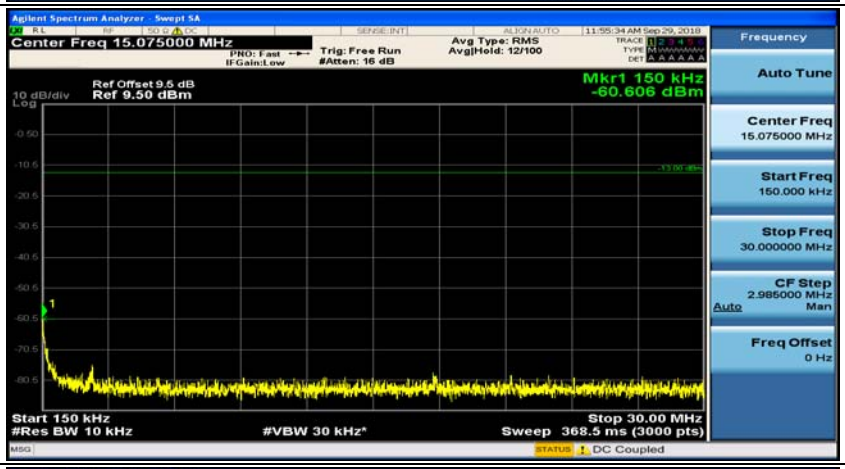

Agilent Spectrum Analyzer - Swept SA
Center Freq 79.500 kHz
PNO: Wide
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 17/100
11:59:55 AM Sep 29, 2018
Ref Offset 9.5 dB
10 dB/div
Ref 9.50 dBm
Mkr1 27.43 kHz
-56.756 dBm
Start 9.00 kHz
#Res BW 1.0 kHz
#VBW 3.0 kHz*
Stop 150.00 kHz
Sweep 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

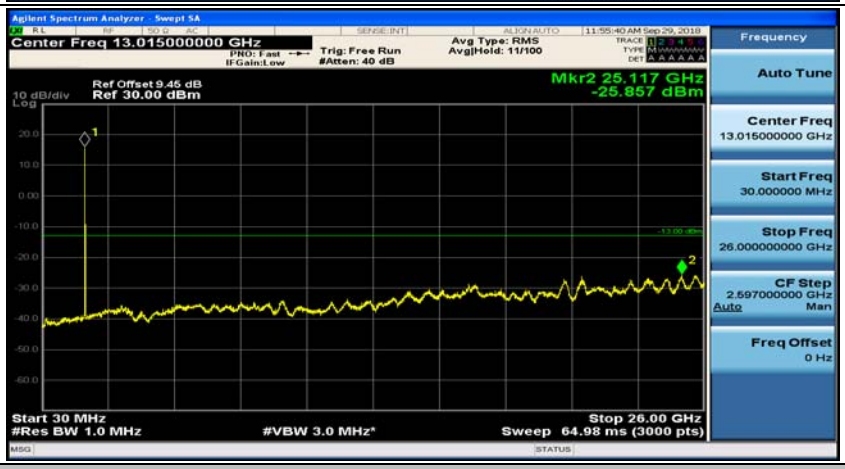

Agilent Spectrum Analyzer - Swept SA
Center Freq 15.075000 MHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 16 dB
Avg Type: RMS
Avg|Hold: 13/100
12:00:07 PM Sep 29, 2018
Ref Offset 9.5 dB
10 dB/div
Ref 9.50 dBm
Mkr1 160 kHz
-57.190 dBm
Start 150 kHz
#Res BW 10 kHz
#VBW 30 kHz*
Stop 30.00 MHz
Sweep 368.5 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: 40 dB
Avg Type: RMS
Avg|Hold: 11/100
12:00:13 PM Sep 29, 2018
Ref Offset 9.45 dB
10 dB/div
Ref 30.00 dBm
Mkr2 25.134 GHz
-25.999 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

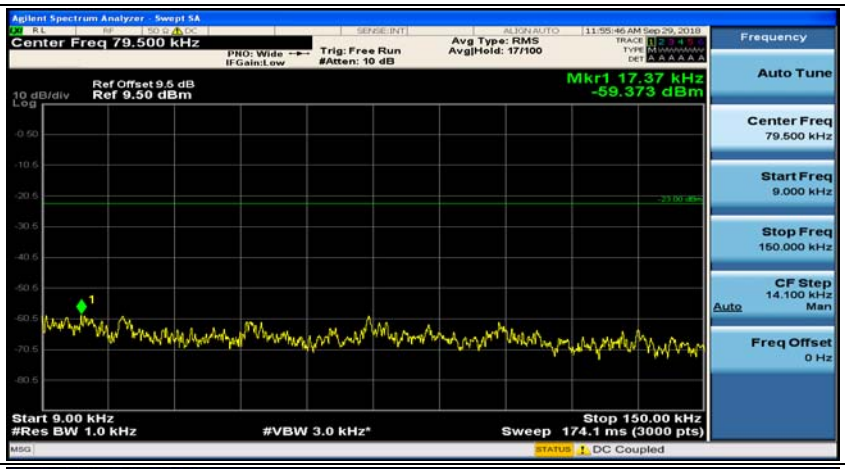
(Channel Bandwidth:20 MHz)_LCH_16QAM_1RB#0

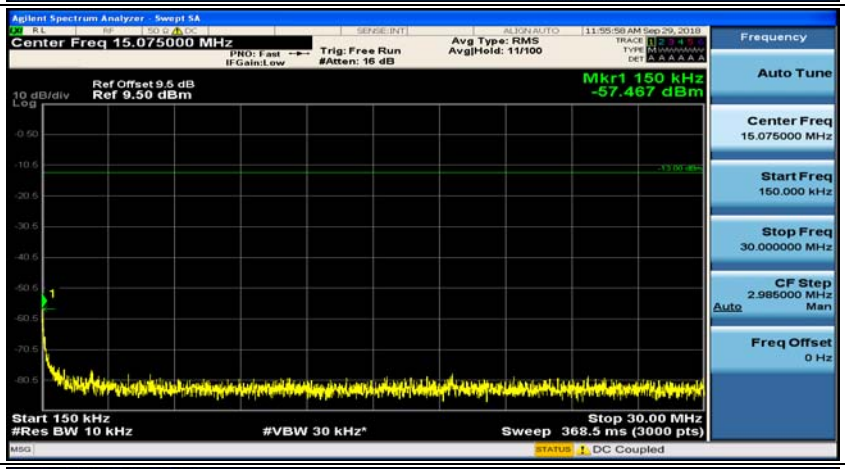


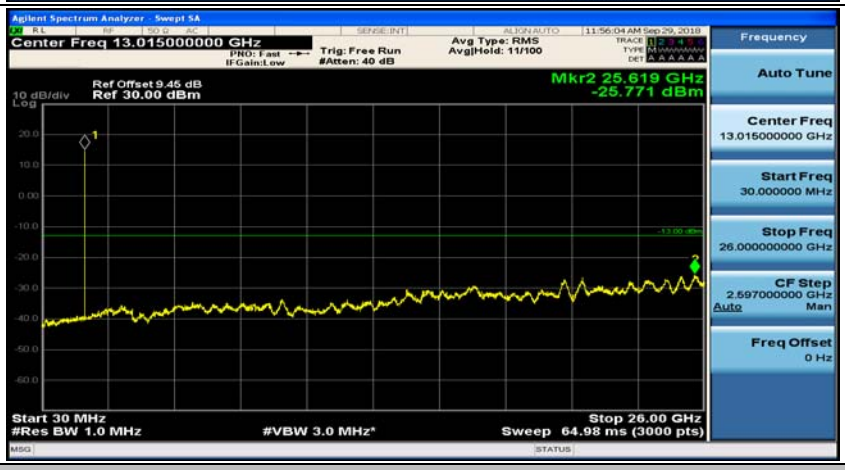




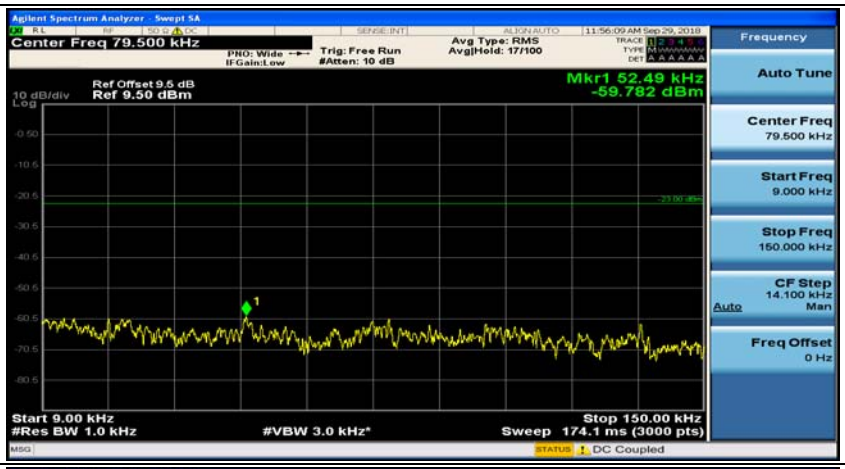
(Channel Bandwidth:20 MHz)_LCH_16QAM_1RB#49

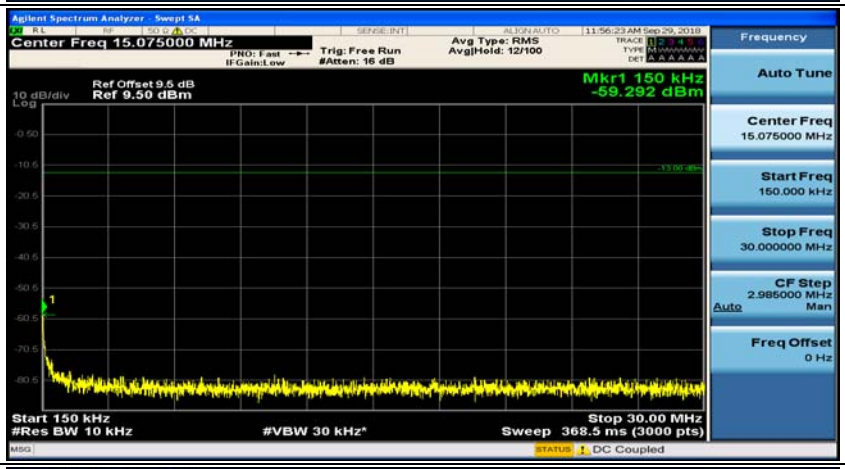


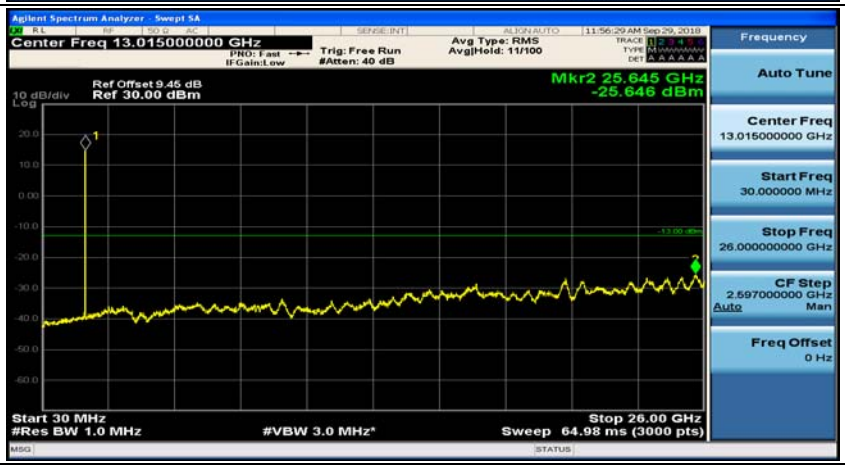




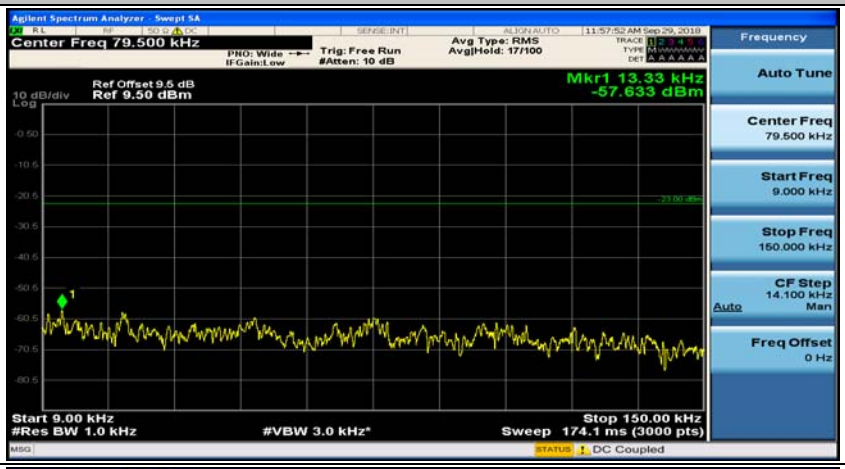
(Channel Bandwidth:20 MHz)_LCH_16QAM_1RB#99

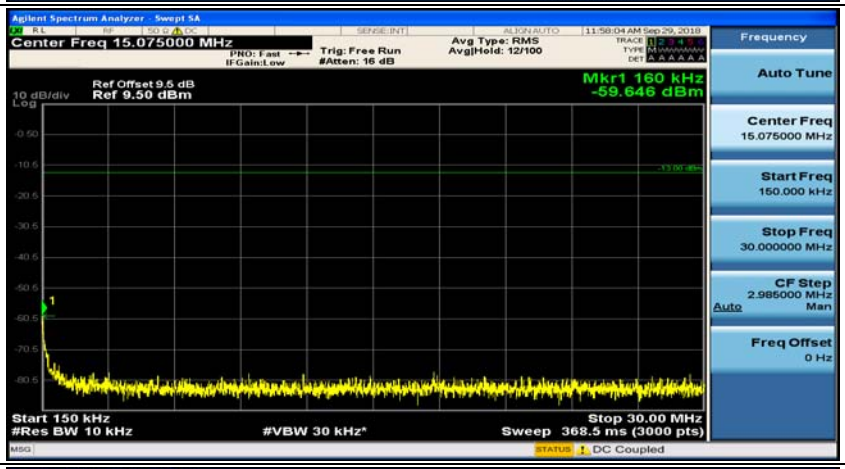

Agilent Spectrum Analyzer - Swept SA
Center Freq 79.500 kHz
PNO: Wide
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 17/100
11:56:09 AM Sep 29, 2018
Ref Offset 9.5 dB
10 dB/div
Ref 9.50 dBm
Mkr1 52.49 kHz
-59.782 dBm
Start 9.00 kHz
#Res BW 1.0 kHz
#VBW 3.0 kHz*
Stop 150.00 kHz
Sweep 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

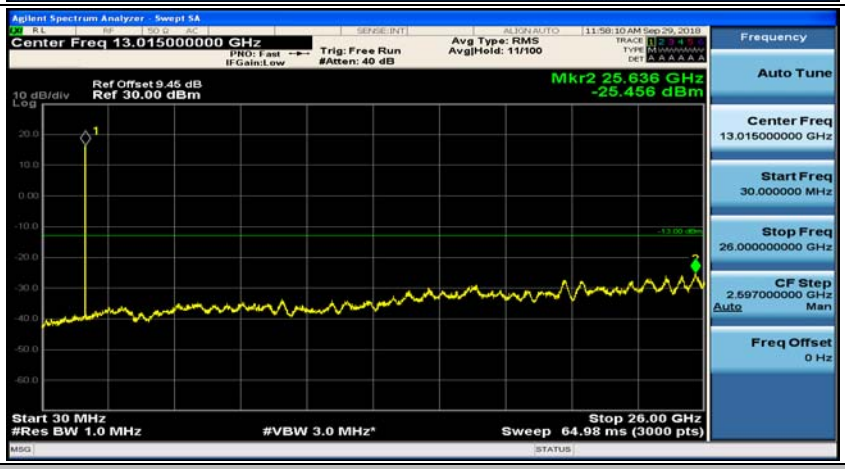

Agilent Spectrum Analyzer - Swept SA
Center Freq 15.075000 MHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 16 dB
Avg Type: RMS
Avg|Hold: 12/100
11:56:23 AM Sep 29, 2018
Ref Offset 9.5 dB
10 dB/div
Ref 9.50 dBm
Mkr1 150 kHz
-59.292 dBm
Start 150 kHz
#Res BW 10 kHz
#VBW 30 kHz*
Stop 30.00 MHz
Sweep 368.5 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: 40 dB
Avg Type: RMS
Avg|Hold: 11/100
11:56:29 AM Sep 29, 2018
Ref Offset 9.45 dB
10 dB/div
Ref 30.00 dBm
Mkr2 25.645 GHz
-25.646 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

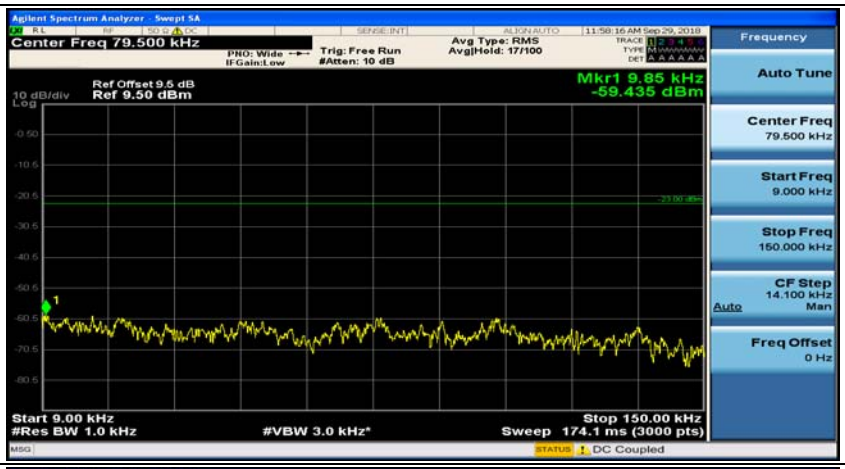
(Channel Bandwidth:20 MHz)_MCH_16QAM_1RB#0

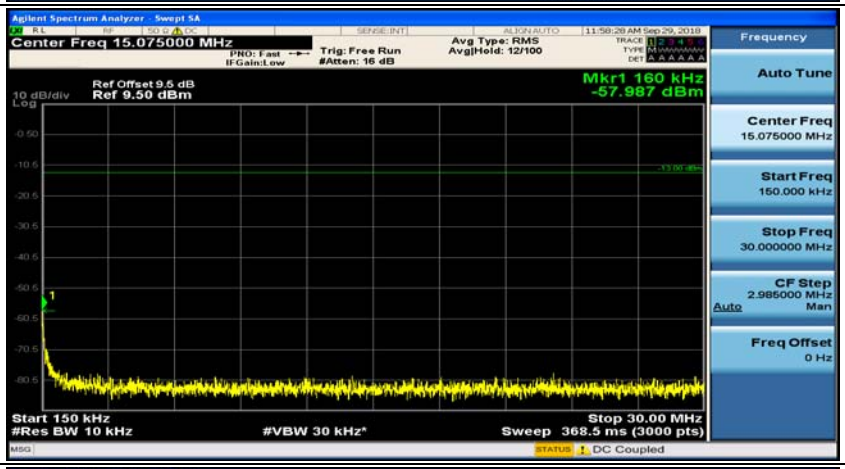


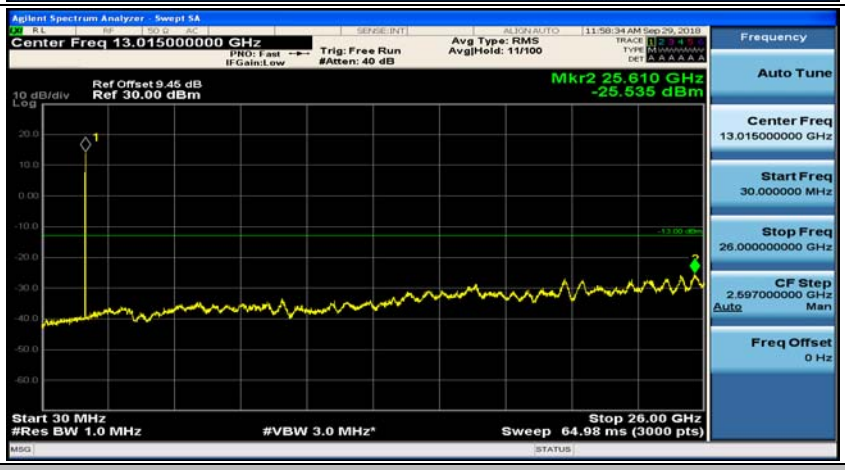




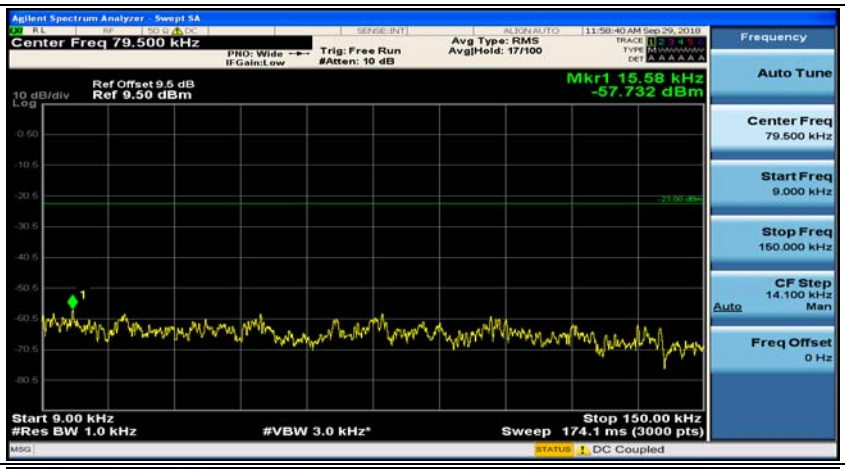
(Channel Bandwidth:20 MHz)_MCH_16QAM_1RB#49

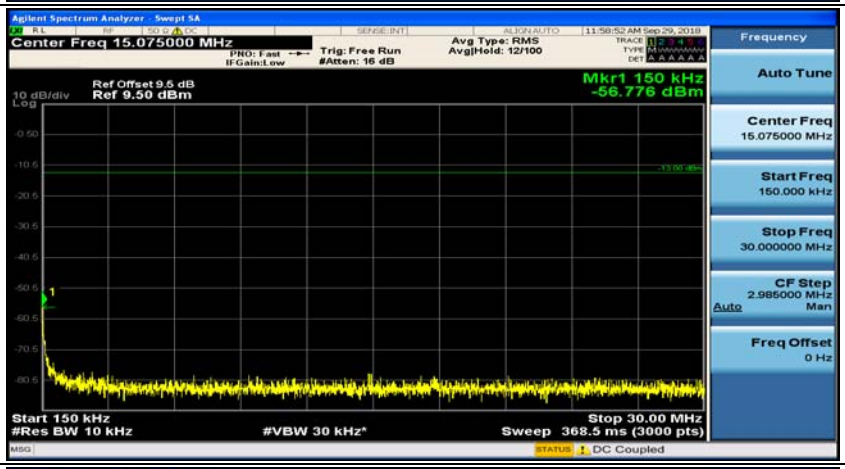


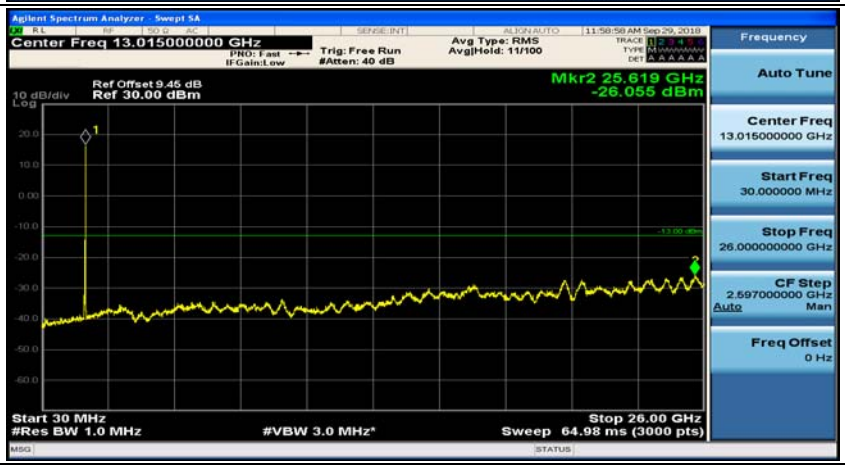


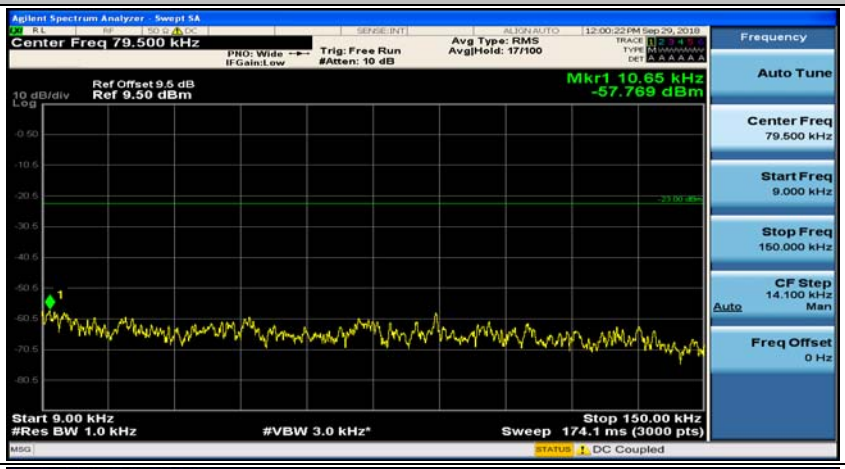
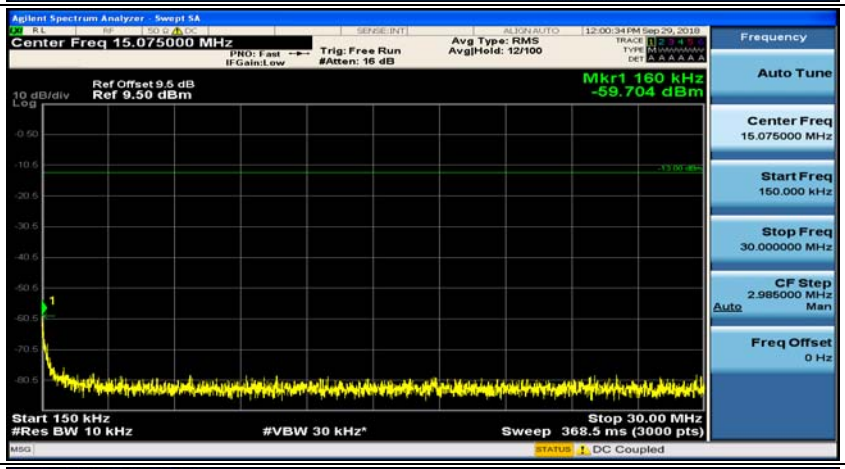
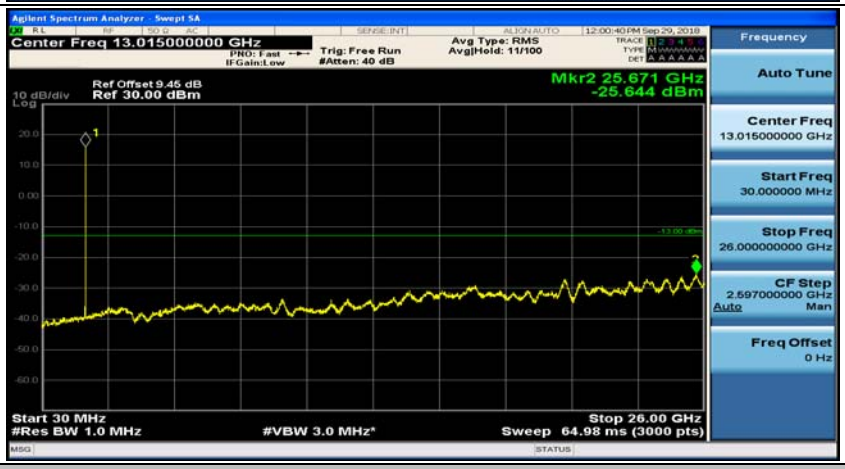


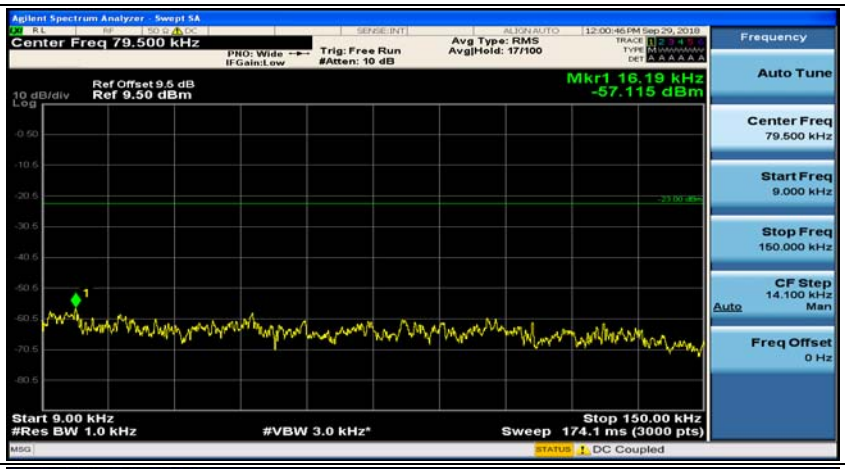
(Channel Bandwidth:20 MHz)_MCH_16QAM_1RB#99

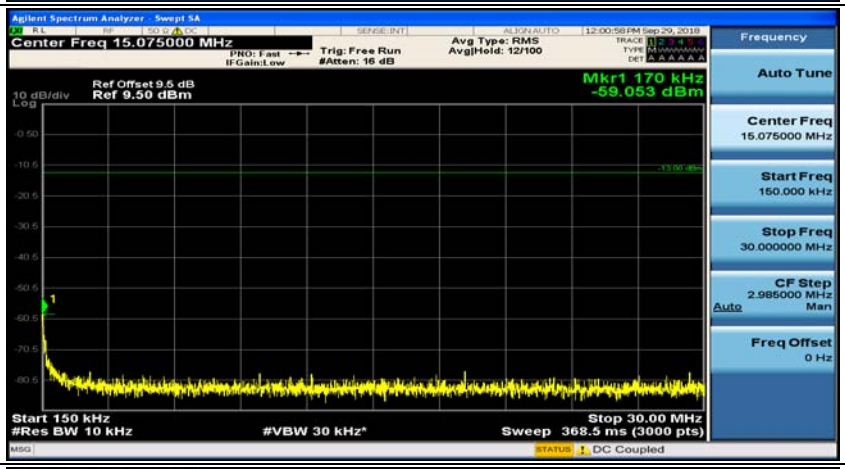

Agilent Spectrum Analyzer - Swept SA
Center Freq 79.500 kHz
PNO: Wide
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 17/100
11:58:40 AM Sep 29, 2018
Ref Offset 9.5 dB
10 dB/div
Ref 9.50 dBm
Mkr1 15.58 kHz
-57.732 dBm
Start 9.00 kHz
#Res BW 1.0 kHz
#VBW 3.0 kHz*
Stop 150.00 kHz
Sweep 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

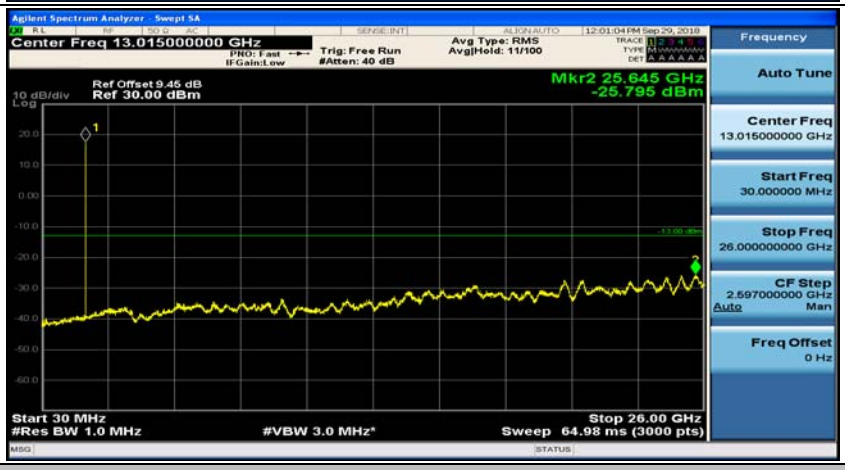

Agilent Spectrum Analyzer - Swept SA
Center Freq 15.075000 MHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 16 dB
Avg Type: RMS
Avg|Hold: 12/100
11:58:52 AM Sep 29, 2018
Ref Offset 9.5 dB
10 dB/div
Ref 9.50 dBm
Mkr1 150 kHz
-56.776 dBm
Start 150 kHz
#Res BW 10 kHz
#VBW 30 kHz*
Stop 30.00 MHz
Sweep 368.5 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: 40 dB
Avg Type: RMS
Avg|Hold: 11/100
11:58:58 AM Sep 29, 2018
Ref Offset 9.45 dB
10 dB/div
Ref 30.00 dBm
Mkr2 25.619 GHz
-26.055 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

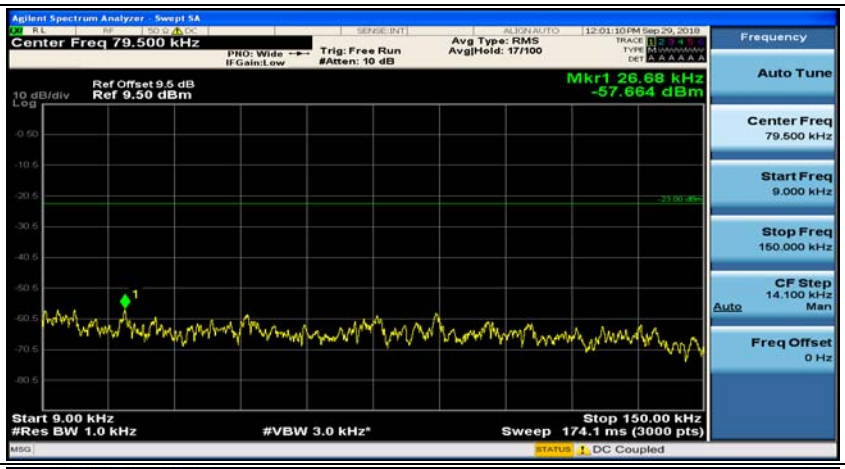
(Channel Bandwidth:20 MHz)_HCH_16QAM_1RB#0



(Channel Bandwidth:20 MHz)_HCH_16QAM_1RB#49

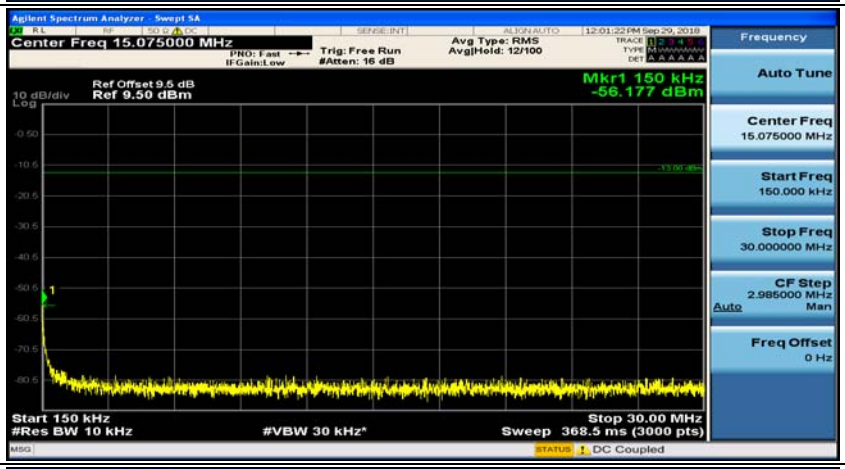


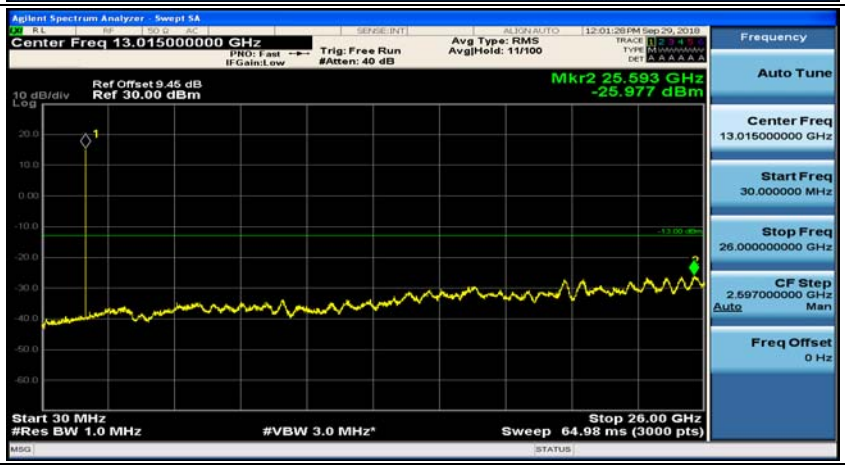




(Channel Bandwidth:20 MHz)_HCH_16QAM_1RB#99


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
12:01:10 PM Sep 29, 2018
Ref Offset 9.5 dB
10 dB/div
Ref 9.50 dBm
Mkr1 26.68 kHz
-57.664 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
12:01:22 PM Sep 29, 2018
Ref Offset 9.5 dB
10 dB/div
Ref 9.50 dBm
Mkr1 150 kHz
-56.177 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: 40 dB
Avg Type: RMS
Avg|Hold: 11/100
12:01:28 PM Sep 29, 2018
Ref Offset 9.45 dB
10 dB/div
Ref 30.00 dBm
Mkr2 25.593 GHz
-25.977 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: 1.4 MHz

Channel Bandwidth: 1.4 MHz							
Voltage							
Modulation	Channel	Voltage [Vdc]	Temperature (℃)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
QPSK	LCH	VL	TN	0.53	0.000310	± 2.5	PASS
		VN	TN	-0.91	-0.000532	± 2.5	PASS
		VH	TN	1.74	0.001017	± 2.5	PASS
	MCH	VL	TN	4.21	0.002430	± 2.5	PASS
		VN	TN	-1.1	-0.000635	± 2.5	PASS
		VH	TN	1.52	0.000877	± 2.5	PASS
	HCH	VL	TN	4.84	0.002759	± 2.5	PASS
		VN	TN	2.69	0.001533	± 2.5	PASS
		VH	TN	-1.25	-0.000713	± 2.5	PASS
16QAM	LCH	VL	TN	-1.08	-0.000631	± 2.5	PASS
		VN	TN	-0.11	-0.000064	± 2.5	PASS
		VH	TN	0.75	0.000438	± 2.5	PASS
	MCH	VL	TN	2.05	0.001183	± 2.5	PASS
		VN	TN	-0.27	-0.000156	± 2.5	PASS
		VH	TN	1.78	0.001027	± 2.5	PASS
	HCH	VL	TN	4.52	0.002577	± 2.5	PASS
		VN	TN	-1.32	-0.000752	± 2.5	PASS
		VH	TN	0.03	0.000017	± 2.5	PASS
Temperature							
Modulation	Channel	Voltage [Vdc]	Temperature (℃)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
QPSK	LCH	VN	-30	0.27	0.000158	± 2.5	PASS
		VN	-20	-1.68	-0.000982	± 2.5	PASS
		VN	-10	3.77	0.002204	± 2.5	PASS
		VN	0	4.89	0.002858	± 2.5	PASS
		VN	10	-0.14	-0.000082	± 2.5	PASS
		VN	20	-1.94	-0.001134	± 2.5	PASS
		VN	30	1.37	0.000801	± 2.5	PASS
		VN	40	-1.21	-0.000707	± 2.5	PASS
		VN	50	-1.7	-0.000994	± 2.5	PASS
	MCH	VN	-30	0.3	0.000173	± 2.5	PASS
		VN	-20	-0.14	-0.000081	± 2.5	PASS

		VN	-10	-1.11	-0.000641	± 2.5	PASS
		VN	0	0.82	0.000473	± 2.5	PASS
		VN	10	-1.76	-0.001016	± 2.5	PASS
		VN	20	-1.82	-0.001051	± 2.5	PASS
		VN	30	0.23	0.000133	± 2.5	PASS
		VN	40	-1.05	-0.000606	± 2.5	PASS
		VN	50	2.25	0.001299	± 2.5	PASS
	HCH	VN	-30	2.02	0.001151	± 2.5	PASS
		VN	-20	-1.17	-0.000667	± 2.5	PASS
		VN	-10	3.86	0.002200	± 2.5	PASS
		VN	0	3.65	0.002081	± 2.5	PASS
		VN	10	2.03	0.001157	± 2.5	PASS
		VN	20	1.23	0.000701	± 2.5	PASS
		VN	30	-0.02	-0.000011	± 2.5	PASS
		VN	40	3.2	0.001824	± 2.5	PASS
		VN	50	0.38	0.000217	± 2.5	PASS
16QAM	LCH	VN	-30	1.89	0.001105	± 2.5	PASS
		VN	-20	-1.76	-0.001029	± 2.5	PASS
		VN	-10	-1.54	-0.000900	± 2.5	PASS
		VN	0	0.92	0.000538	± 2.5	PASS
		VN	10	2.18	0.001274	± 2.5	PASS
		VN	20	-1.98	-0.001157	± 2.5	PASS
		VN	30	-1.53	-0.000894	± 2.5	PASS
		VN	40	2.56	0.001496	± 2.5	PASS
		VN	50	2.4	0.001403	± 2.5	PASS
	MCH	VN	-30	-0.66	-0.000376	± 2.5	PASS
		VN	-20	0.69	0.000393	± 2.5	PASS
		VN	-10	0.42	0.000239	± 2.5	PASS
		VN	0	4.37	0.002491	± 2.5	PASS
		VN	10	-1.73	-0.000986	± 2.5	PASS
		VN	20	1.51	0.000861	± 2.5	PASS
		VN	30	-0.66	-0.000376	± 2.5	PASS
		VN	40	-1.58	-0.000901	± 2.5	PASS
		VN	50	-0.36	-0.000205	± 2.5	PASS
	HCH	VN	-30	0.94	0.000536	± 2.5	PASS
		VN	-20	-1.46	-0.000832	± 2.5	PASS
		VN	-10	1.66	0.000946	± 2.5	PASS
		VN	0	4.68	0.002668	± 2.5	PASS
		VN	10	0.67	0.000382	± 2.5	PASS
		VN	20	0.59	0.000336	± 2.5	PASS
		VN	30	-0.63	-0.000359	± 2.5	PASS

		VN	40	-0.78	-0.000445	± 2.5	PASS
		VN	50	3.46	0.001972	± 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	-1.54	-0.000900	± 2.5	PASS
		VN	TN	0.81	0.000473	± 2.5	PASS
		VH	TN	-0.19	-0.000111	± 2.5	PASS
	MCH	VL	TN	-1.1	-0.000635	± 2.5	PASS
		VN	TN	2.33	0.001345	± 2.5	PASS
		VH	TN	-1.2	-0.000693	± 2.5	PASS
	HCH	VL	TN	2.61	0.001488	± 2.5	PASS
		VN	TN	-1.12	-0.000639	± 2.5	PASS
		VH	TN	4.18	0.002384	± 2.5	PASS
16QAM	LCH	VL	TN	0.56	0.000327	± 2.5	PASS
		VN	TN	-1.8	-0.001052	± 2.5	PASS
		VH	TN	2.82	0.001648	± 2.5	PASS
	MCH	VL	TN	-1.81	-0.001045	± 2.5	PASS
		VN	TN	3.16	0.001824	± 2.5	PASS
		VH	TN	4.99	0.002880	± 2.5	PASS
	HCH	VL	TN	1.1	0.000627	± 2.5	PASS
		VN	TN	4.98	0.002840	± 2.5	PASS
		VH	TN	-0.06	-0.000034	± 2.5	PASS
Temperature							
Modulation	Channel	Voltage [Vdc]	Temperature (℃)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
QPSK	LCH	VN	-30	2.65	0.001548	± 2.5	PASS
		VN	-20	3.7	0.002162	± 2.5	PASS
		VN	-10	3.12	0.001823	± 2.5	PASS
		VN	0	-1.73	-0.001011	± 2.5	PASS
		VN	10	4.88	0.002851	± 2.5	PASS
		VN	20	1.11	0.000649	± 2.5	PASS
		VN	30	-0.64	-0.000374	± 2.5	PASS
		VN	40	1.89	0.001104	± 2.5	PASS
		VN	50	2.49	0.001455	± 2.5	PASS
	MCH	VN	-30	1.21	0.000698	± 2.5	PASS
		VN	-20	-0.46	-0.000266	± 2.5	PASS
		VN	-10	-0.99	-0.000571	± 2.5	PASS

		VN	0	1.01	0.000583	± 2.5	PASS
		VN	10	4.58	0.002644	± 2.5	PASS
		VN	20	0.2	0.000115	± 2.5	PASS
		VN	30	-1.35	-0.000779	± 2.5	PASS
		VN	40	2.97	0.001714	± 2.5	PASS
		VN	50	1.41	0.000814	± 2.5	PASS
	HCH	VN	-30	-0.54	-0.000308	± 2.5	PASS
		VN	-20	1.01	0.000576	± 2.5	PASS
		VN	-10	-1.56	-0.000890	± 2.5	PASS
		VN	0	-1.1	-0.000627	± 2.5	PASS
		VN	10	4.93	0.002812	± 2.5	PASS
		VN	20	-0.94	-0.000536	± 2.5	PASS
		VN	30	1.93	0.001101	± 2.5	PASS
		VN	40	1.61	0.000918	± 2.5	PASS
		VN	50	2.35	0.001340	± 2.5	PASS
16QAM	LCH	VN	-30	-1.82	-0.001051	± 2.5	PASS
		VN	-20	-0.48	-0.000277	± 2.5	PASS
		VN	-10	0.96	0.000554	± 2.5	PASS
		VN	0	-0.44	-0.000254	± 2.5	PASS
		VN	10	2.34	0.001351	± 2.5	PASS
		VN	20	2.41	0.001391	± 2.5	PASS
		VN	30	-0.12	-0.000069	± 2.5	PASS
		VN	40	0.11	0.000063	± 2.5	PASS
		VN	50	-0.85	-0.000491	± 2.5	PASS
	MCH	VN	-30	1.01	0.000576	± 2.5	PASS
		VN	-20	4.02	0.002293	± 2.5	PASS
		VN	-10	-0.07	-0.000040	± 2.5	PASS
		VN	0	4.29	0.002447	± 2.5	PASS
		VN	10	4.7	0.002680	± 2.5	PASS
		VN	20	0.43	0.000245	± 2.5	PASS
		VN	30	4.14	0.002361	± 2.5	PASS
		VN	40	2.41	0.001374	± 2.5	PASS
		VN	50	-1.99	-0.001135	± 2.5	PASS
	HCH	VN	-30	-0.16	-0.000091	± 2.5	PASS
		VN	-20	-1.02	-0.000582	± 2.5	PASS
		VN	-10	-0.18	-0.000103	± 2.5	PASS
		VN	0	2.02	0.001152	± 2.5	PASS
		VN	10	-1.64	-0.000935	± 2.5	PASS
		VN	20	0.68	0.000388	± 2.5	PASS
		VN	30	-0.61	-0.000348	± 2.5	PASS
		VN	40	3.09	0.001762	± 2.5	PASS

		VN	50	-1.6	-0.000912	± 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	2.47	0.001442	± 2.5	PASS
		VN	TN	-1.76	-0.001028	± 2.5	PASS
		VH	TN	0.55	0.000321	± 2.5	PASS
	MCH	VL	TN	-1.81	-0.001045	± 2.5	PASS
		VN	TN	3.27	0.001887	± 2.5	PASS
		VH	TN	1.25	0.000722	± 2.5	PASS
	HCH	VL	TN	2.04	0.001164	± 2.5	PASS
		VN	TN	-1.28	-0.000730	± 2.5	PASS
		VH	TN	4.84	0.002762	± 2.5	PASS
16QAM	LCH	VL	TN	-1.43	-0.000835	± 2.5	PASS
		VN	TN	0.32	0.000187	± 2.5	PASS
		VH	TN	3.63	0.002120	± 2.5	PASS
	MCH	VL	TN	2.16	0.001247	± 2.5	PASS
		VN	TN	2.21	0.001276	± 2.5	PASS
		VH	TN	3.07	0.001772	± 2.5	PASS
	HCH	VL	TN	-0.22	-0.000126	± 2.5	PASS
		VN	TN	-0.54	-0.000308	± 2.5	PASS
		VH	TN	1.47	0.000839	± 2.5	PASS
Temperature							
Modulation	Channel	Voltage [Vdc]	Temperature (℃)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
QPSK	LCH	VN	-30	2.87	0.001676	± 2.5	PASS
		VN	-20	3.09	0.001804	± 2.5	PASS
		VN	-10	0.24	0.000140	± 2.5	PASS
		VN	0	1.84	0.001074	± 2.5	PASS
		VN	10	2.75	0.001606	± 2.5	PASS
		VN	20	2.33	0.001361	± 2.5	PASS
		VN	30	-0.32	-0.000187	± 2.5	PASS
		VN	40	-1.79	-0.001045	± 2.5	PASS
		VN	50	2.92	0.001705	± 2.5	PASS
	MCH	VN	-30	-1.92	-0.001108	± 2.5	PASS
		VN	-20	1.8	0.001039	± 2.5	PASS
		VN	-10	-0.26	-0.000150	± 2.5	PASS
		VN	0	-0.88	-0.000508	± 2.5	PASS

		VN	10	3.85	0.002222	± 2.5	PASS
		VN	20	3.53	0.002038	± 2.5	PASS
		VN	30	0.47	0.000271	± 2.5	PASS
		VN	40	-1.63	-0.000941	± 2.5	PASS
		VN	50	1.32	0.000762	± 2.5	PASS
	HCH	VN	-30	-0.95	-0.000542	± 2.5	PASS
		VN	-20	2.92	0.001531	± 2.5	PASS
		VN	-10	4.91	0.002574	± 2.5	PASS
		VN	0	-0.05	-0.000026	± 2.5	PASS
		VN	10	-1.28	-0.000671	± 2.5	PASS
		VN	20	-0.68	-0.000356	± 2.5	PASS
		VN	30	2.98	0.001562	± 2.5	PASS
		VN	40	2.06	0.001080	± 2.5	PASS
		VN	50	4.82	0.002527	± 2.5	PASS
16QAM	LCH	VN	-30	3.22	0.001859	± 2.5	PASS
		VN	-20	2.22	0.001281	± 2.5	PASS
		VN	-10	3.48	0.002009	± 2.5	PASS
		VN	0	2.16	0.001247	± 2.5	PASS
		VN	10	-0.29	-0.000167	± 2.5	PASS
		VN	20	2.42	0.001397	± 2.5	PASS
		VN	30	-1.54	-0.000889	± 2.5	PASS
		VN	40	1.28	0.000739	± 2.5	PASS
		VN	50	-1	-0.000577	± 2.5	PASS
	MCH	VN	-30	4.75	0.002710	± 2.5	PASS
		VN	-20	-0.63	-0.000359	± 2.5	PASS
		VN	-10	-0.24	-0.000137	± 2.5	PASS
		VN	0	2.36	0.001347	± 2.5	PASS
		VN	10	3.15	0.001797	± 2.5	PASS
		VN	20	3.67	0.002094	± 2.5	PASS
		VN	30	4	0.002282	± 2.5	PASS
		VN	40	-1.36	-0.000776	± 2.5	PASS
		VN	50	0.99	0.000565	± 2.5	PASS
	HCH	VN	-30	2.49	0.001305	± 2.5	PASS
		VN	-20	1.45	0.000760	± 2.5	PASS
		VN	-10	4.67	0.002448	± 2.5	PASS
		VN	0	0.68	0.000356	± 2.5	PASS
		VN	10	2.68	0.001405	± 2.5	PASS
		VN	20	-0.66	-0.000346	± 2.5	PASS
		VN	30	-1.77	-0.000928	± 2.5	PASS
		VN	40	-1.37	-0.000718	± 2.5	PASS
		VN	50	1.02	0.000535	± 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	3.95	0.002303	± 2.5	PASS
		VN	TN	2.96	0.001726	± 2.5	PASS
		VH	TN	-0.92	-0.000536	± 2.5	PASS
	MCH	VL	TN	2.06	0.001189	± 2.5	PASS
		VN	TN	4.9	0.002828	± 2.5	PASS
		VH	TN	0.85	0.000491	± 2.5	PASS
	HCH	VL	TN	4.68	0.002674	± 2.5	PASS
		VN	TN	0.46	0.000263	± 2.5	PASS
		VH	TN	1.39	0.000794	± 2.5	PASS
16QAM	LCH	VL	TN	4.49	0.002618	± 2.5	PASS
		VN	TN	2.16	0.001259	± 2.5	PASS
		VH	TN	-1.52	-0.000886	± 2.5	PASS
	MCH	VL	TN	1.34	0.000773	± 2.5	PASS
		VN	TN	-1.1	-0.000635	± 2.5	PASS
		VH	TN	-0.87	-0.000502	± 2.5	PASS
	HCH	VL	TN	2.02	0.001154	± 2.5	PASS
		VN	TN	2.84	0.001623	± 2.5	PASS
		VH	TN	3.55	0.002029	± 2.5	PASS
Temperature							
Modulation	Channel	Voltage [Vdc]	Temperature (℃)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
16QAM	LCH	VN	-30	4.88	0.002845	± 2.5	PASS
		VN	-20	3.78	0.002204	± 2.5	PASS
		VN	-10	-1.25	-0.000729	± 2.5	PASS
		VN	0	2.96	0.001726	± 2.5	PASS
		VN	10	0.8	0.000466	± 2.5	PASS
		VN	20	2.63	0.001534	± 2.5	PASS
		VN	30	0.33	0.000192	± 2.5	PASS
		VN	40	0	0.000000	± 2.5	PASS
		VN	50	4.42	0.002577	± 2.5	PASS
	MCH	VN	-30	2.95	0.001703	± 2.5	PASS
		VN	-20	3.82	0.002205	± 2.5	PASS
		VN	-10	3.57	0.002061	± 2.5	PASS
		VN	0	1.1	0.000635	± 2.5	PASS
		VN	10	0.73	0.000421	± 2.5	PASS
		VN	20	-0.03	-0.000017	± 2.5	PASS

		VN	30	2.08	0.001201	± 2.5	PASS
		VN	40	-1.66	-0.000958	± 2.5	PASS
		VN	50	0.68	0.000392	± 2.5	PASS
	HCH	VN	-30	0.89	0.000509	± 2.5	PASS
		VN	-20	1.71	0.000977	± 2.5	PASS
		VN	-10	-1.6	-0.000914	± 2.5	PASS
		VN	0	4.29	0.002451	± 2.5	PASS
		VN	10	-1.78	-0.001017	± 2.5	PASS
		VN	20	0.79	0.000451	± 2.5	PASS
		VN	30	4.87	0.002783	± 2.5	PASS
		VN	40	1.8	0.001029	± 2.5	PASS
		VN	50	-1.63	-0.000931	± 2.5	PASS
QPSK	LCH	VN	-30	-0.21	-0.000121	± 2.5	PASS
		VN	-20	0.58	0.000335	± 2.5	PASS
		VN	-10	2.13	0.001229	± 2.5	PASS
		VN	0	4.95	0.002857	± 2.5	PASS
		VN	10	4.98	0.002874	± 2.5	PASS
		VN	20	2.89	0.001668	± 2.5	PASS
		VN	30	2.3	0.001328	± 2.5	PASS
		VN	40	4.09	0.002361	± 2.5	PASS
		VN	50	2.72	0.001570	± 2.5	PASS
	MCH	VN	-30	4.56	0.002606	± 2.5	PASS
		VN	-20	3.52	0.002011	± 2.5	PASS
		VN	-10	3.17	0.001811	± 2.5	PASS
		VN	0	1.97	0.001126	± 2.5	PASS
		VN	10	-1.5	-0.000857	± 2.5	PASS
		VN	20	2.49	0.001423	± 2.5	PASS
		VN	30	0.71	0.000406	± 2.5	PASS
		VN	40	2.52	0.001440	± 2.5	PASS
		VN	50	2.71	0.001549	± 2.5	PASS
	HCH	VN	-30	2.13	0.001217	± 2.5	PASS
		VN	-20	4.68	0.002674	± 2.5	PASS
		VN	-10	3.64	0.002080	± 2.5	PASS
		VN	0	1.22	0.000697	± 2.5	PASS
		VN	10	1.08	0.000617	± 2.5	PASS
		VN	20	0.27	0.000154	± 2.5	PASS
		VN	30	4.44	0.002537	± 2.5	PASS
		VN	40	2.05	0.001171	± 2.5	PASS
		VN	50	-1.4	-0.000800	± 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	3.37	0.001962	± 2.5	PASS
		VN	TN	0.83	0.000483	± 2.5	PASS
		VH	TN	2.61	0.001520	± 2.5	PASS
	MCH	VL	TN	-1.94	-0.001120	± 2.5	PASS
		VN	TN	3.31	0.001911	± 2.5	PASS
		VH	TN	2.11	0.001218	± 2.5	PASS
	HCH	VL	TN	4.4	0.002518	± 2.5	PASS
		VN	TN	-1.55	-0.000887	± 2.5	PASS
		VH	TN	1.75	0.001001	± 2.5	PASS
16QAM	LCH	VL	TN	1.85	0.001077	± 2.5	PASS
		VN	TN	2.03	0.001182	± 2.5	PASS
		VH	TN	4.48	0.002608	± 2.5	PASS
	MCH	VL	TN	-1.24	-0.000716	± 2.5	PASS
		VN	TN	1.94	0.001120	± 2.5	PASS
		VH	TN	4.73	0.002730	± 2.5	PASS
	HCH	VL	TN	1.46	0.000835	± 2.5	PASS
		VN	TN	4.78	0.002735	± 2.5	PASS
		VH	TN	2.86	0.001637	± 2.5	PASS
Temperature							
Modulation	Channel	Voltage [Vdc]	Temperature (℃)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
QPSK	LCH	VN	-30	3.13	0.001822	± 2.5	PASS
		VN	-20	3.8	0.002213	± 2.5	PASS
		VN	-10	1.6	0.000932	± 2.5	PASS
		VN	0	3.74	0.002178	± 2.5	PASS
		VN	10	2.96	0.001723	± 2.5	PASS
		VN	20	3.96	0.002306	± 2.5	PASS
		VN	30	0.84	0.000489	± 2.5	PASS
		VN	40	-1.66	-0.000967	± 2.5	PASS
		VN	50	4.83	0.002812	± 2.5	PASS
	MCH	VN	-30	1.44	0.000831	± 2.5	PASS
		VN	-20	1.11	0.000641	± 2.5	PASS
		VN	-10	3.51	0.002026	± 2.5	PASS
		VN	0	4.51	0.002603	± 2.5	PASS
		VN	10	0.12	0.000069	± 2.5	PASS
		VN	20	2.64	0.001524	± 2.5	PASS

		VN	30	2.61	0.001506	± 2.5	PASS
		VN	40	2.33	0.001345	± 2.5	PASS
		VN	50	-1.59	-0.000918	± 2.5	PASS
	HCH	VN	-30	0.43	0.000246	± 2.5	PASS
		VN	-20	3.51	0.002009	± 2.5	PASS
		VN	-10	1.97	0.001127	± 2.5	PASS
		VN	0	2.9	0.001660	± 2.5	PASS
		VN	10	4.9	0.002804	± 2.5	PASS
		VN	20	0.2	0.000114	± 2.5	PASS
		VN	30	2.47	0.001413	± 2.5	PASS
		VN	40	3.87	0.002215	± 2.5	PASS
		VN	50	-1.38	-0.000790	± 2.5	PASS
16QAM	LCH	VN	-30	0.48	0.000277	± 2.5	PASS
		VN	-20	4.65	0.002684	± 2.5	PASS
		VN	-10	-0.99	-0.000571	± 2.5	PASS
		VN	0	-0.5	-0.000289	± 2.5	PASS
		VN	10	2.01	0.001160	± 2.5	PASS
		VN	20	4.09	0.002361	± 2.5	PASS
		VN	30	1.68	0.000970	± 2.5	PASS
		VN	40	-1.69	-0.000975	± 2.5	PASS
		VN	50	0.1	0.000058	± 2.5	PASS
	MCH	VN	-30	3.05	0.001745	± 2.5	PASS
		VN	-20	3.93	0.002249	± 2.5	PASS
		VN	-10	-0.38	-0.000217	± 2.5	PASS
		VN	0	3.14	0.001797	± 2.5	PASS
		VN	10	0.89	0.000509	± 2.5	PASS
		VN	20	-1.25	-0.000715	± 2.5	PASS
		VN	30	0.58	0.000332	± 2.5	PASS
		VN	40	-0.37	-0.000212	± 2.5	PASS
		VN	50	2.07	0.001185	± 2.5	PASS
	HCH	VN	-30	-1.74	-0.000996	± 2.5	PASS
		VN	-20	2.31	0.001322	± 2.5	PASS
		VN	-10	4.4	0.002518	± 2.5	PASS
		VN	0	-1.76	-0.001007	± 2.5	PASS
		VN	10	1.91	0.001093	± 2.5	PASS
		VN	20	1.07	0.000612	± 2.5	PASS
		VN	30	3.79	0.002169	± 2.5	PASS
		VN	40	0.36	0.000206	± 2.5	PASS
		VN	50	3.83	0.002192	± 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	0.93	0.000541	± 2.5	PASS
		VN	TN	2.96	0.001721	± 2.5	PASS
		VH	TN	-1.91	-0.001110	± 2.5	PASS
	MCH	VL	TN	-1.89	-0.001091	± 2.5	PASS
		VN	TN	2.96	0.001709	± 2.5	PASS
		VH	TN	0.92	0.000531	± 2.5	PASS
	HCH	VL	TN	-1.53	-0.000877	± 2.5	PASS
		VN	TN	-1.02	-0.000585	± 2.5	PASS
		VH	TN	3.81	0.002183	± 2.5	PASS
16QAM	LCH	VL	TN	4.42	0.002570	± 2.5	PASS
		VN	TN	-1.95	-0.001134	± 2.5	PASS
		VH	TN	1.56	0.000907	± 2.5	PASS
	MCH	VL	TN	0.17	0.000098	± 2.5	PASS
		VN	TN	3.04	0.001755	± 2.5	PASS
		VH	TN	4.45	0.002569	± 2.5	PASS
	HCH	VL	TN	2.98	0.001708	± 2.5	PASS
		VN	TN	4.92	0.002819	± 2.5	PASS
		VH	TN	3.08	0.001765	± 2.5	PASS
Temperature							
Modulation	Channel	Voltage [Vdc]	Temperature (℃)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
QPSK	LCH	VN	-30	0.82	0.000477	± 2.5	PASS
		VN	-20	-1.88	-0.001093	± 2.5	PASS
		VN	-10	4.27	0.002483	± 2.5	PASS
		VN	0	-1.73	-0.001006	± 2.5	PASS
		VN	10	0.6	0.000349	± 2.5	PASS
		VN	20	2.62	0.001523	± 2.5	PASS
		VN	30	-1.15	-0.000669	± 2.5	PASS
		VN	40	-0.39	-0.000227	± 2.5	PASS
		VN	50	2.66	0.001547	± 2.5	PASS
	MCH	VN	-30	3.03	0.001749	± 2.5	PASS
		VN	-20	-0.2	-0.000115	± 2.5	PASS
		VN	-10	0.73	0.000421	± 2.5	PASS
		VN	0	3.82	0.002205	± 2.5	PASS
		VN	10	2.28	0.001316	± 2.5	PASS
		VN	20	0.04	0.000023	± 2.5	PASS

		VN	30	1.55	0.000895	± 2.5	PASS
		VN	40	2.17	0.001253	± 2.5	PASS
		VN	50	4.61	0.002661	± 2.5	PASS
	HCH	VN	-30	3.36	0.001926	± 2.5	PASS
		VN	-20	0.88	0.000504	± 2.5	PASS
		VN	-10	-1.26	-0.000722	± 2.5	PASS
		VN	0	-0.43	-0.000246	± 2.5	PASS
		VN	10	1.12	0.000642	± 2.5	PASS
		VN	20	4.65	0.002665	± 2.5	PASS
		VN	30	3.3	0.001891	± 2.5	PASS
		VN	40	-1.86	-0.001066	± 2.5	PASS
		VN	50	-1.99	-0.001140	± 2.5	PASS
16QAM	LCH	VN	-30	1.89	0.001091	± 2.5	PASS
		VN	-20	0.37	0.000214	± 2.5	PASS
		VN	-10	2.67	0.001541	± 2.5	PASS
		VN	0	2.26	0.001304	± 2.5	PASS
		VN	10	3.49	0.002014	± 2.5	PASS
		VN	20	4.83	0.002788	± 2.5	PASS
		VN	30	-1.55	-0.000895	± 2.5	PASS
		VN	40	-0.84	-0.000485	± 2.5	PASS
		VN	50	3.05	0.001760	± 2.5	PASS
	MCH	VN	-30	-1.87	-0.001072	± 2.5	PASS
		VN	-20	1.37	0.000785	± 2.5	PASS
		VN	-10	-1.73	-0.000991	± 2.5	PASS
		VN	0	1.57	0.000900	± 2.5	PASS
		VN	10	4.04	0.002315	± 2.5	PASS
		VN	20	4.83	0.002768	± 2.5	PASS
		VN	30	2.07	0.001186	± 2.5	PASS
		VN	40	4.28	0.002453	± 2.5	PASS
		VN	50	-0.93	-0.000533	± 2.5	PASS
	HCH	VN	-30	4.01	0.002298	± 2.5	PASS
		VN	-20	-1.6	-0.000917	± 2.5	PASS
		VN	-10	-1.05	-0.000602	± 2.5	PASS
		VN	0	4.16	0.002384	± 2.5	PASS
		VN	10	0.77	0.000441	± 2.5	PASS
		VN	20	4.61	0.002642	± 2.5	PASS
		VN	30	2.1	0.001203	± 2.5	PASS
		VN	40	2.77	0.001587	± 2.5	PASS
		VN	50	2.41	0.001381	± 2.5	PASS