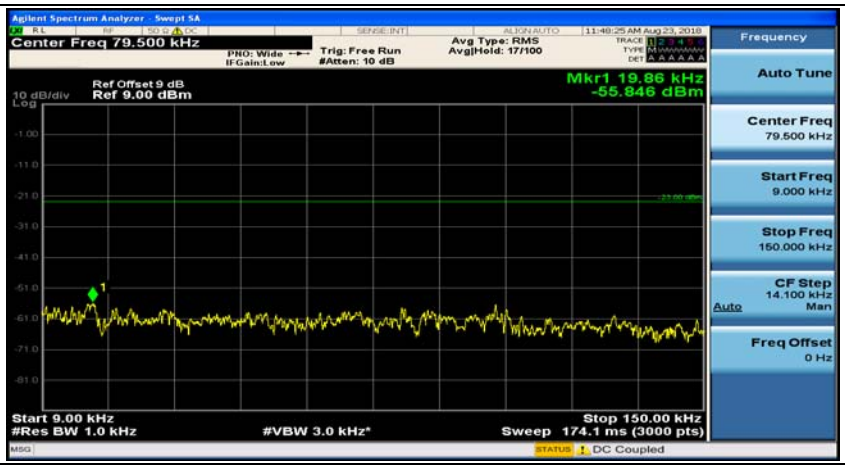
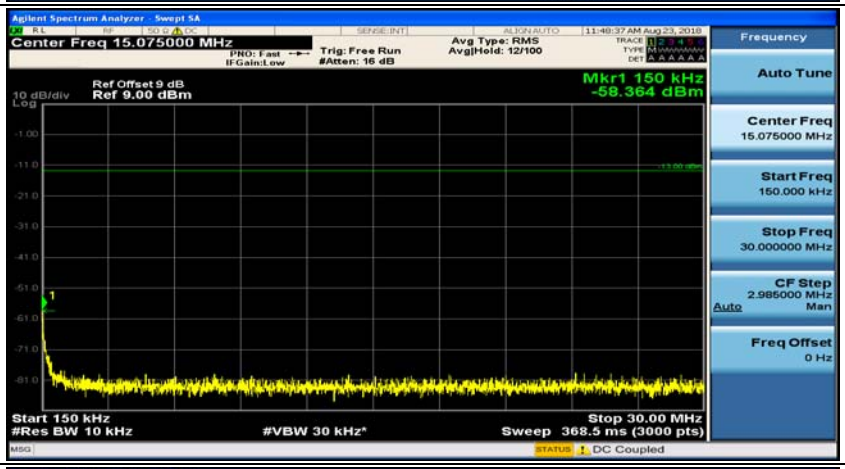
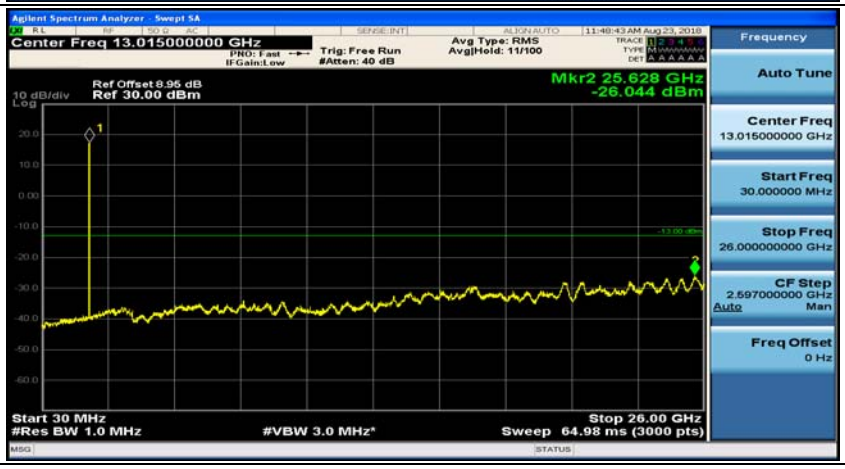
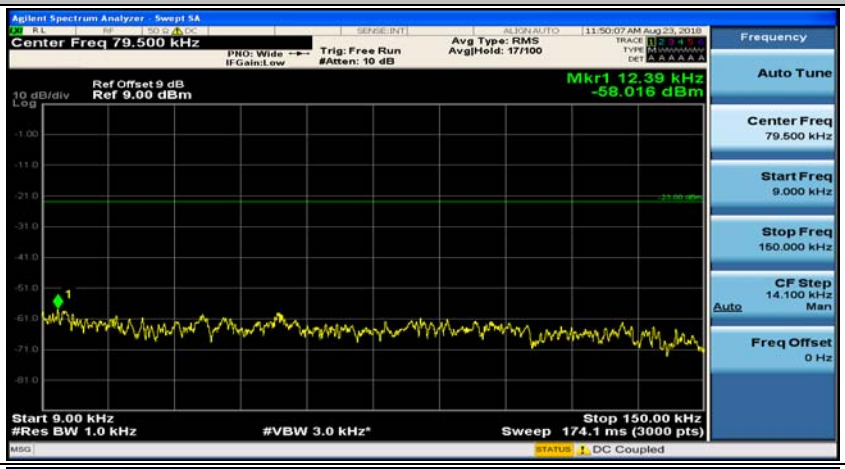
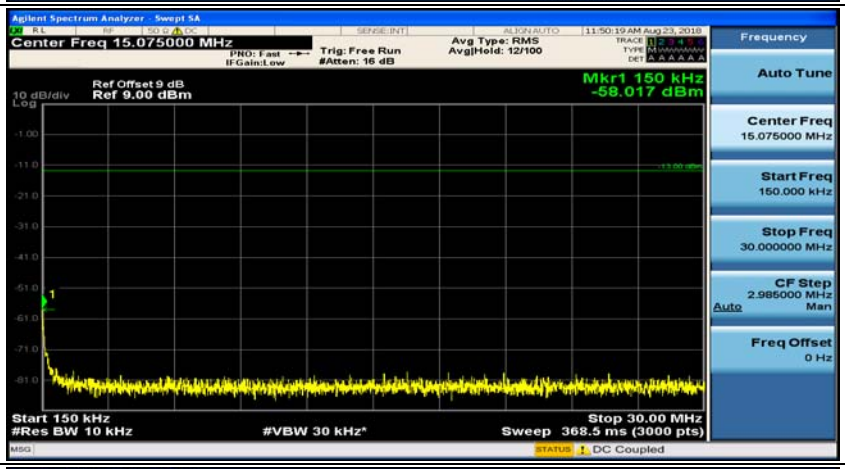
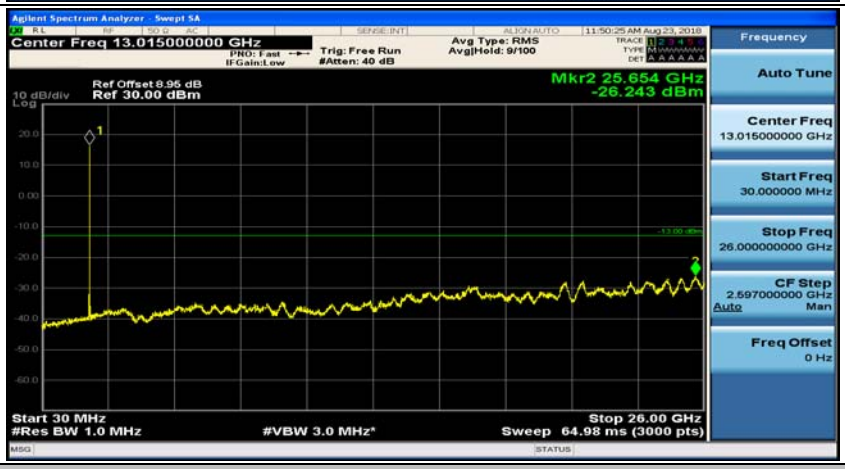
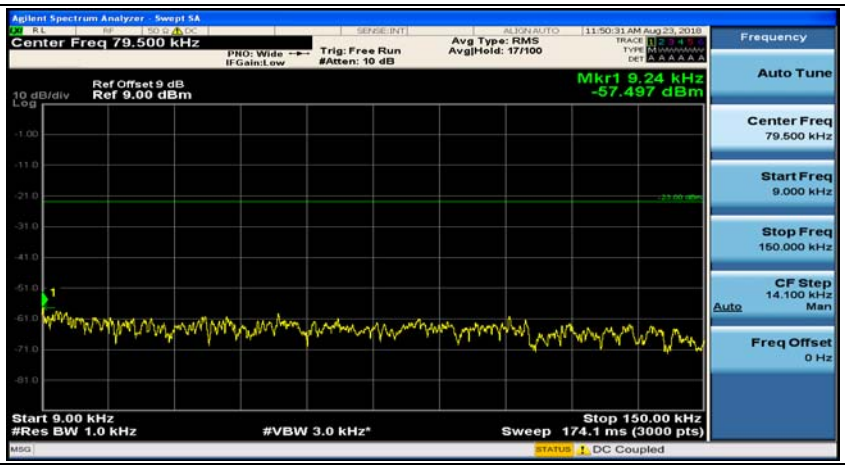
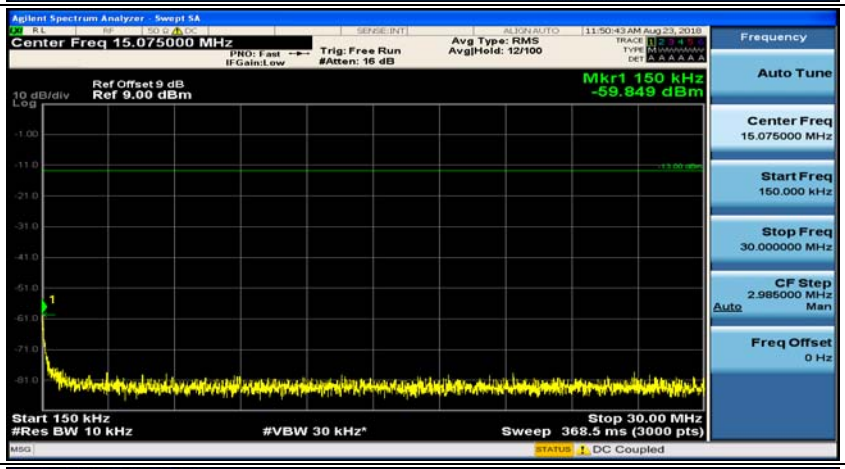

Agilent Spectrum Analyzer - Swept SA
Center Freq 79.500 kHz
PNO: Wide
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 17/100
11:48:25 AM Aug 23, 2018
Frequency
Auto Tune
Mkr1 19.86 kHz
-55.846 dBm
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Center Freq
79.500 kHz
Start Freq
9.000 kHz
Stop Freq
150.000 kHz
CF Step
14.100 kHz
Auto
Man
Freq Offset
0 Hz
Start 9.00 kHz
#Res BW 1.0 kHz
#VBW 3.0 kHz*
Stop 150.00 kHz
Sweep 174.1 ms (3000 pts)
DC Coupled


Agilent Spectrum Analyzer - Swept SA
Center Freq 15.075000 MHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 16 dB
Avg Type: RMS
Avg|Hold: 12/100
11:48:37 AM Aug 23, 2018
Frequency
Auto Tune
Mkr1 150 kHz
-58.364 dBm
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Center Freq
15.075000 MHz
Start Freq
150.000 kHz
Stop Freq
30.000000 MHz
CF Step
2.985000 MHz
Auto
Man
Freq Offset
0 Hz
Start 150 kHz
#Res BW 10 kHz
#VBW 30 kHz*
Stop 30.00 MHz
Sweep 368.5 ms (3000 pts)
DC Coupled

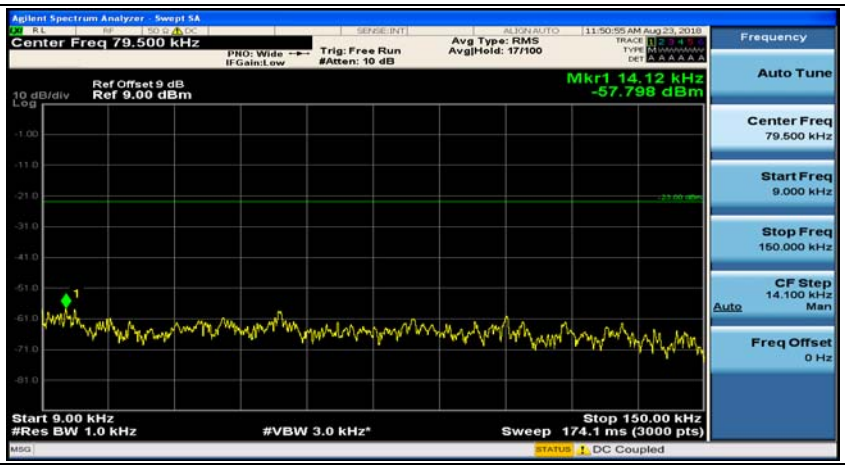

Agilent Spectrum Analyzer - Swept SA
Center Freq 13.015000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 40 dB
Avg Type: RMS
Avg|Hold: 11/100
11:48:43 AM Aug 23, 2018
Frequency
Auto Tune
Mkr2 25.628 GHz
-26.044 dBm
Ref Offset 8.95 dB
10 dB/div
Log
Ref 30.00 dBm
Center Freq
13.015000000 GHz
Start Freq
30.000000 MHz
Stop Freq
26.000000000 GHz
CF Step
2.597000000 GHz
Auto
Man
Freq Offset
0 Hz
Start 30 MHz
#Res BW 1.0 MHz
#VBW 3.0 MHz*
Stop 26.00 GHz
Sweep 64.98 ms (3000 pts)

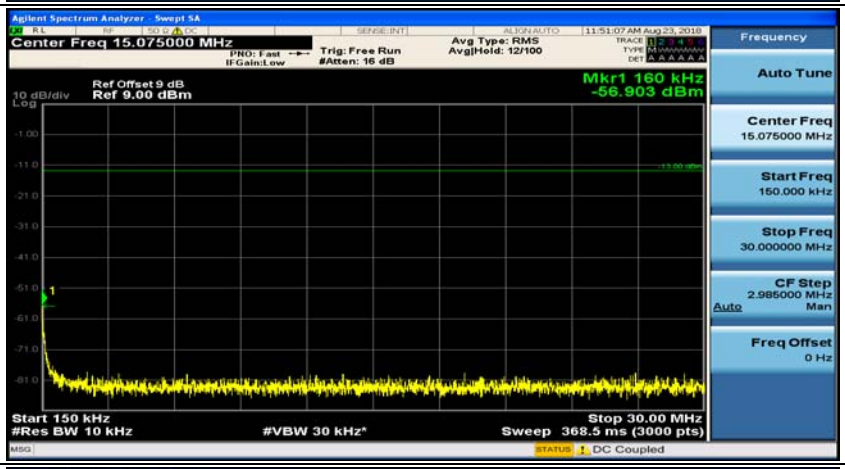
Channel Bandwidth: 10 MHz_HCH_16QAM_1RB#0



Channel Bandwidth: 10 MHz_HCH_16QAM_1RB#24

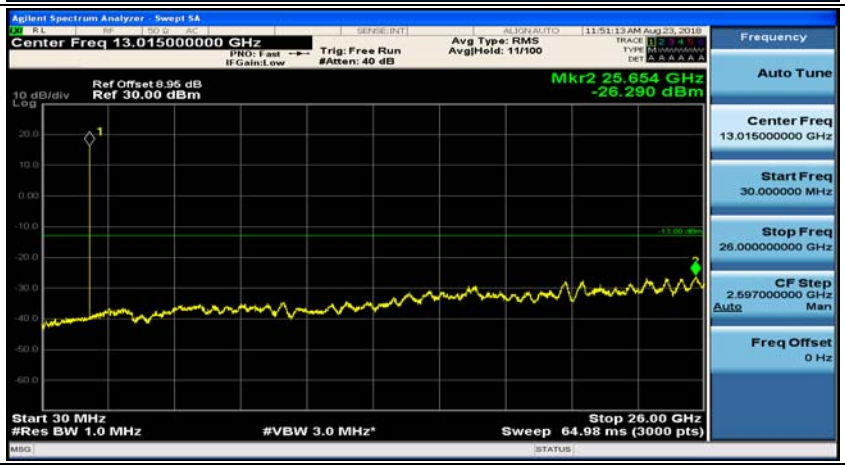




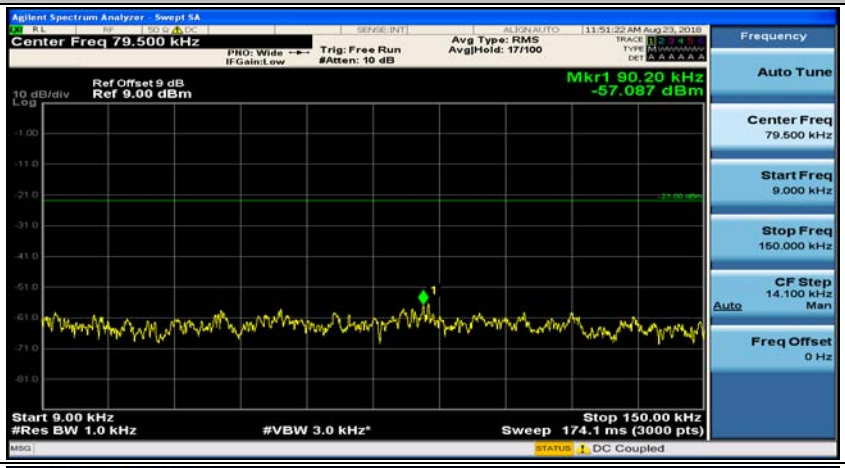
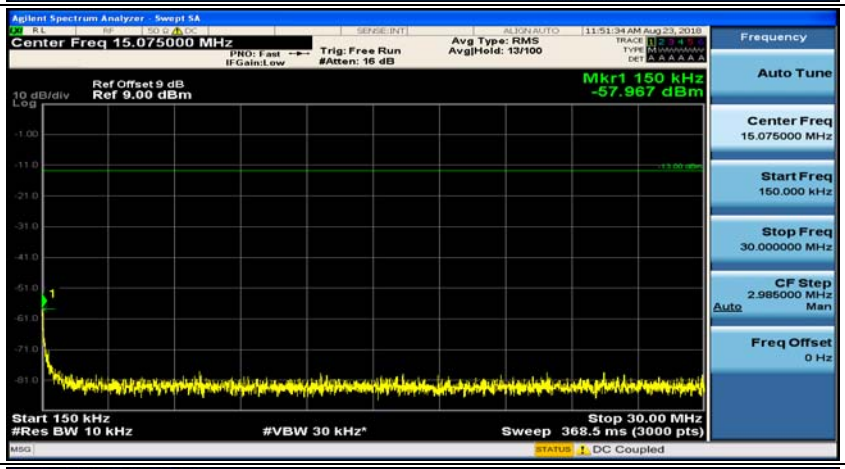
Channel Bandwidth: 10 MHz_HCH_16QAM_1RB#49


Agilent Spectrum Analyzer - Swept SA
Center Freq 79.500 kHz
PNO: Wide
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 17/100
11:50:55 AM Aug 23, 2018
Frequency
Auto Tune
Mkr1 14.12 kHz
-57.798 dBm
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Center Freq
79.500 kHz
Start Freq
9.000 kHz
Stop Freq
150.000 kHz
CF Step
14.100 kHz
Auto
Man
Freq Offset
0 Hz
Start 9.00 kHz
#Res BW 1.0 kHz
#VBW 3.0 kHz*
Stop 150.00 kHz
Sweep 174.1 ms (3000 pts)
DC Coupled

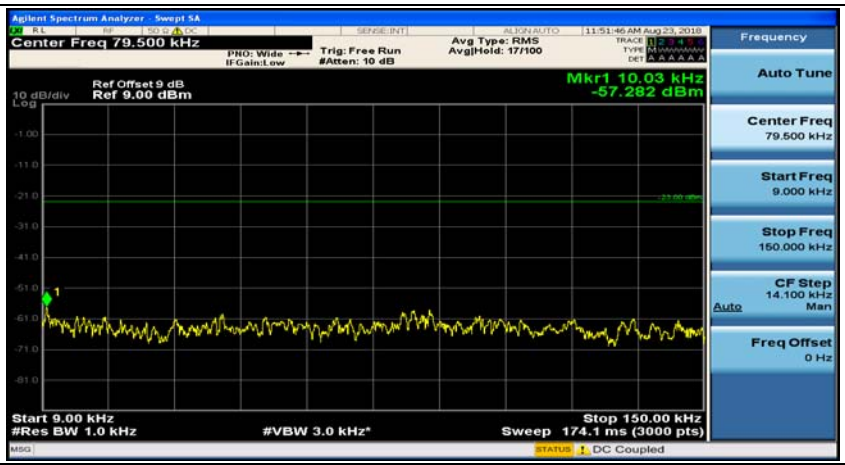

Agilent Spectrum Analyzer - Swept SA
Center Freq 15.075000 MHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 16 dB
Avg Type: RMS
Avg|Hold: 12/100
11:51:07 AM Aug 23, 2018
Frequency
Auto Tune
Mkr1 160 kHz
-56.903 dBm
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Center Freq
15.075000 MHz
Start Freq
150.000 kHz
Stop Freq
30.000000 MHz
CF Step
2.985000 MHz
Auto
Man
Freq Offset
0 Hz
Start 150 kHz
#Res BW 10 kHz
#VBW 30 kHz*
Stop 30.00 MHz
Sweep 368.5 ms (3000 pts)
DC Coupled

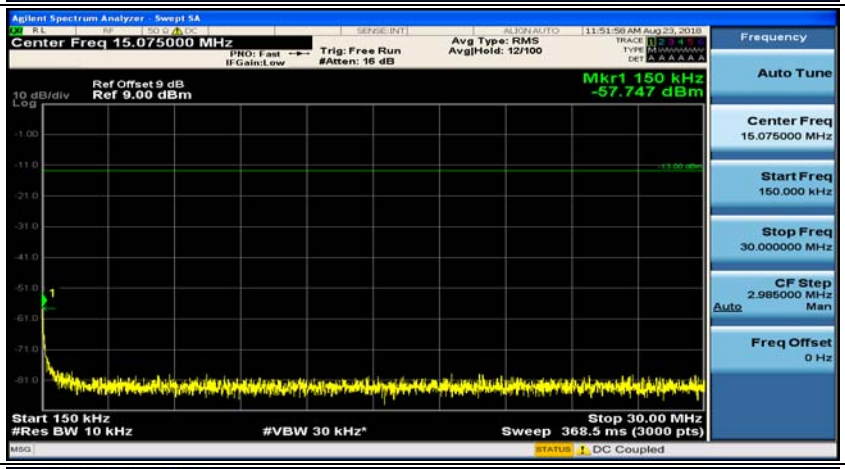

Agilent Spectrum Analyzer - Swept SA
Center Freq 13.015000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 40 dB
Avg Type: RMS
Avg|Hold: 11/100
11:51:13 AM Aug 23, 2018
Frequency
Auto Tune
Mkr2 25.654 GHz
-26.290 dBm
Ref Offset 8.95 dB
10 dB/div
Log
Ref 30.00 dBm
Center Freq
13.015000000 GHz
Start Freq
30.000000 MHz
Stop Freq
26.000000000 GHz
CF Step
2.597000000 GHz
Auto
Man
Freq Offset
0 Hz
Start 30 MHz
#Res BW 1.0 MHz
#VBW 3.0 MHz*
Stop 26.00 GHz
Sweep 64.98 ms (3000 pts)

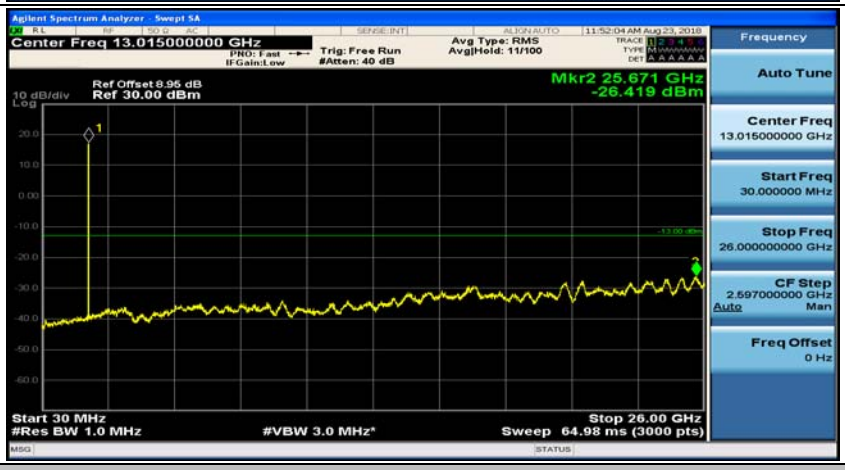
Channel Bandwidth: 15 MHz

(Channel Bandwidth:15 MHz)_LCH_QPSK_1RB#0



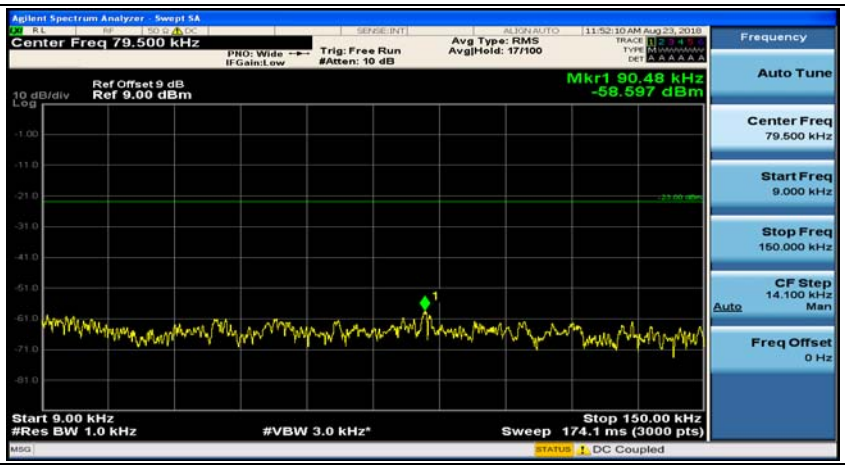
(Channel Bandwidth:15 MHz)_LCH_QPSK_1RB#37

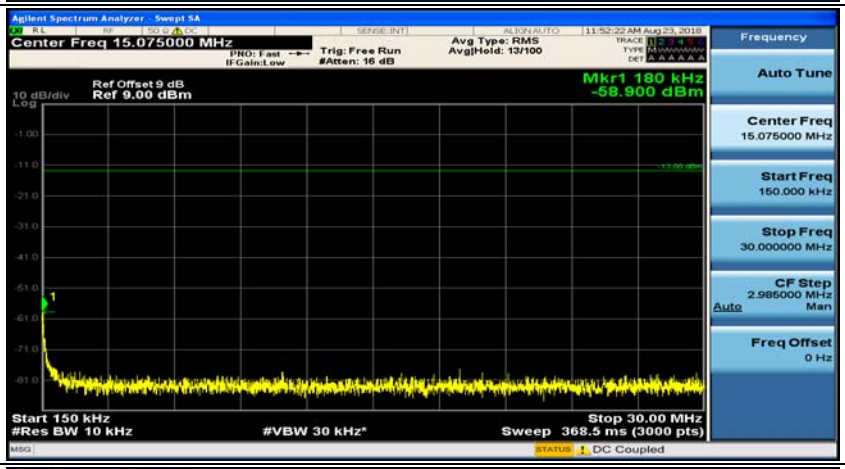


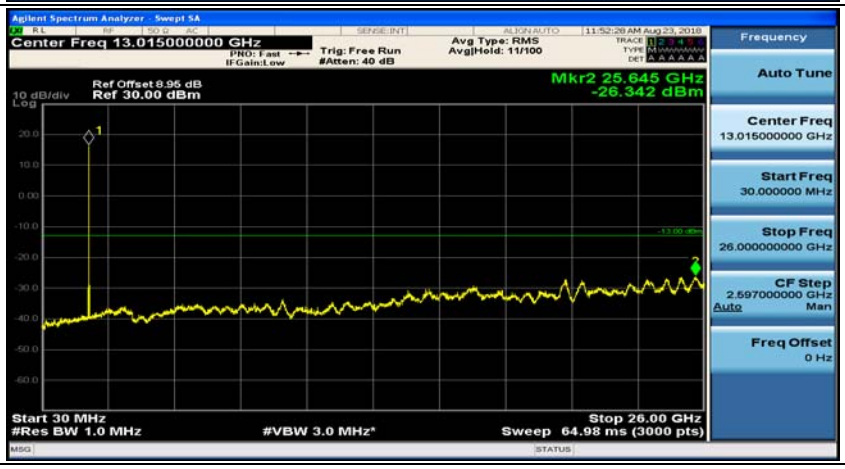


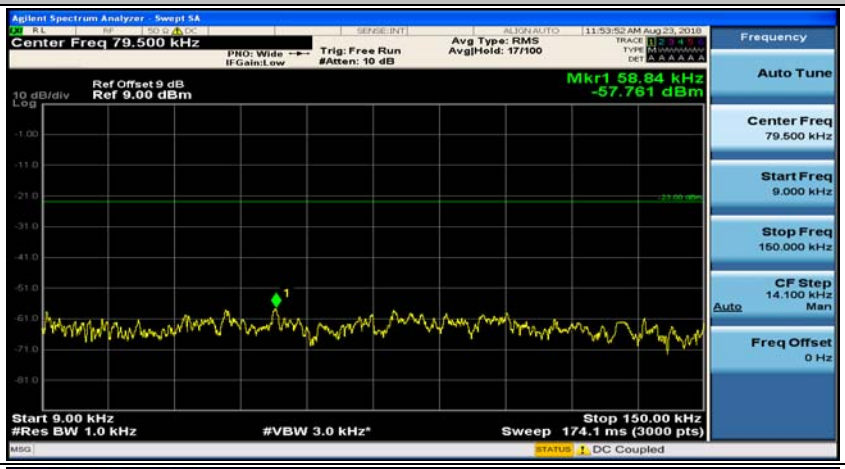
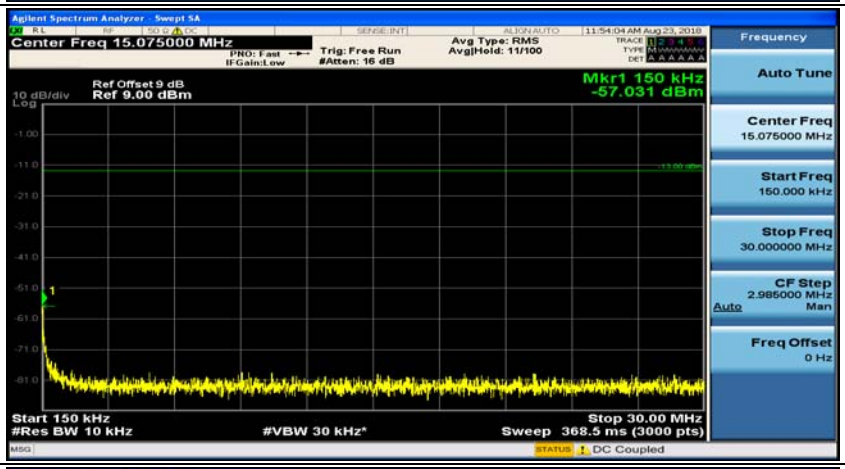
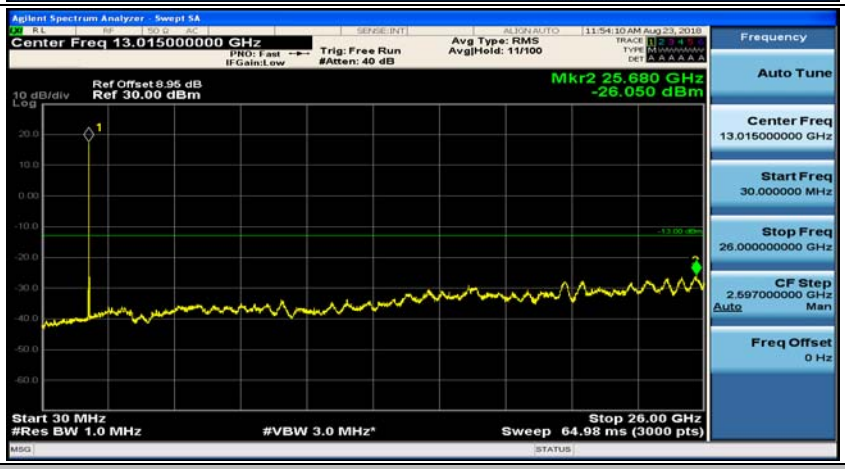


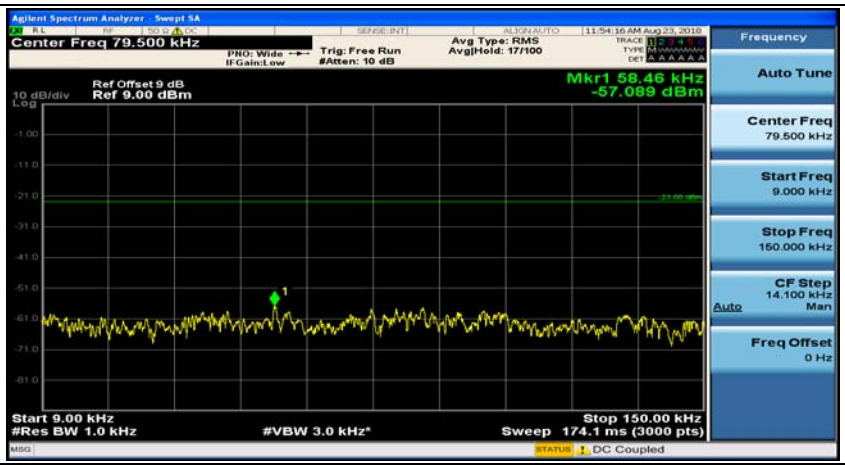
(Channel Bandwidth:15 MHz)_LCH_QPSK_1RB#74

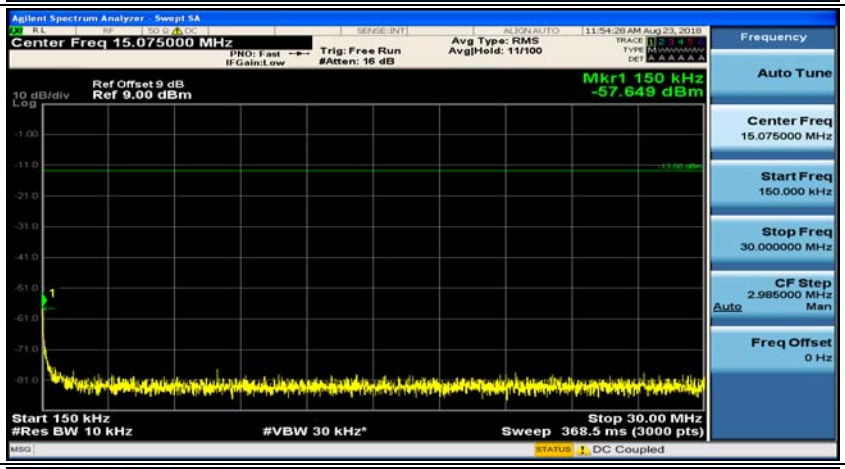

Agilent Spectrum Analyzer - Swept SA
Center Freq 79.500 kHz
PNO: Wide
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 17/100
11:52:10 AM Aug 23, 2018
Frequency
Auto Tune
Mkr1 90.48 kHz
-58.597 dBm
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Center Freq
79.500 kHz
Start Freq
9.000 kHz
Stop Freq
150.000 kHz
CF Step
14.100 kHz
Auto
Man
Freq Offset
0 Hz
Start 9.00 kHz
#Res BW 1.0 kHz
#VBW 3.0 kHz*
Stop 150.00 kHz
Sweep 174.1 ms (3000 pts)
DC Coupled

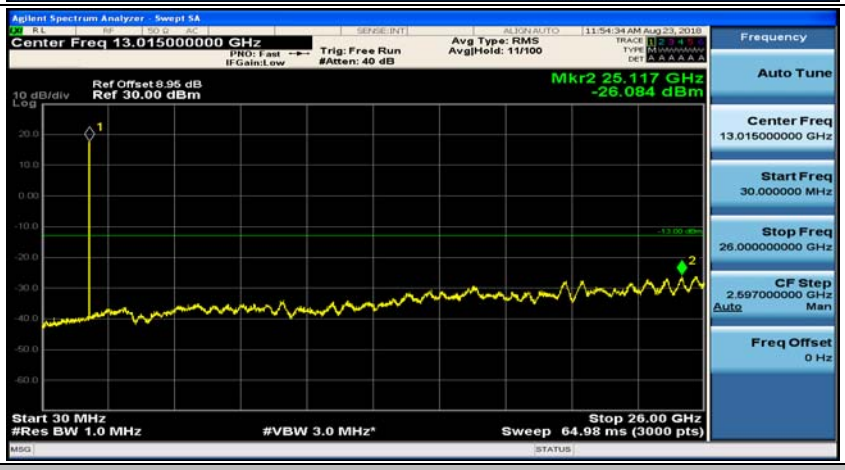

Agilent Spectrum Analyzer - Swept SA
Center Freq 15.075000 MHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 16 dB
Avg Type: RMS
Avg|Hold: 13/100
11:52:22 AM Aug 23, 2018
Frequency
Auto Tune
Mkr1 180 kHz
-58.900 dBm
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Center Freq
15.075000 MHz
Start Freq
150.000 kHz
Stop Freq
30.000000 MHz
CF Step
2.985000 MHz
Auto
Man
Freq Offset
0 Hz
Start 150 kHz
#Res BW 10 kHz
#VBW 30 kHz*
Stop 30.00 MHz
Sweep 368.5 ms (3000 pts)
DC Coupled


Agilent Spectrum Analyzer - Swept SA
Center Freq 13.015000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 40 dB
Avg Type: RMS
Avg|Hold: 11/100
11:52:28 AM Aug 23, 2018
Frequency
Auto Tune
Mkr2 25.645 GHz
-26.342 dBm
Ref Offset 8.95 dB
10 dB/div
Log
Ref 30.00 dBm
Center Freq
13.015000000 GHz
Start Freq
30.000000 MHz
Stop Freq
26.000000000 GHz
CF Step
2.597000000 GHz
Auto
Man
Freq Offset
0 Hz
Start 30 MHz
#Res BW 1.0 MHz
#VBW 3.0 MHz*
Stop 26.00 GHz
Sweep 64.98 ms (3000 pts)

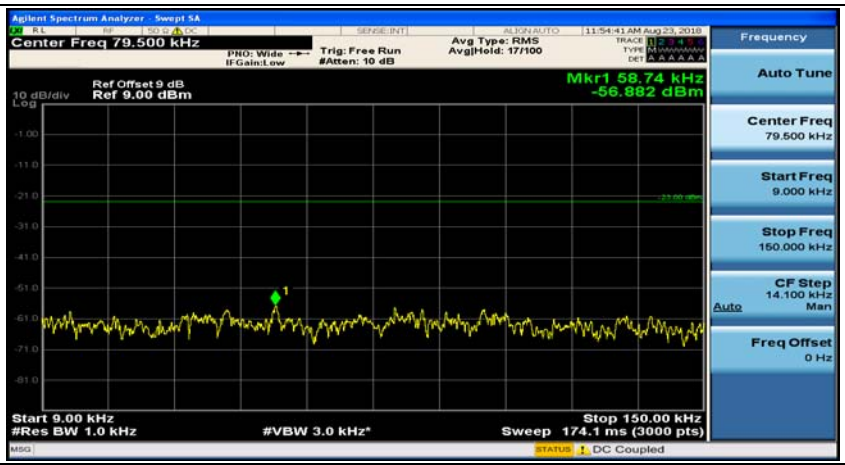
(Channel Bandwidth:15 MHz)_MCH_QPSK_1RB#0



(Channel Bandwidth:15 MHz)_MCH_QPSK_1RB#37

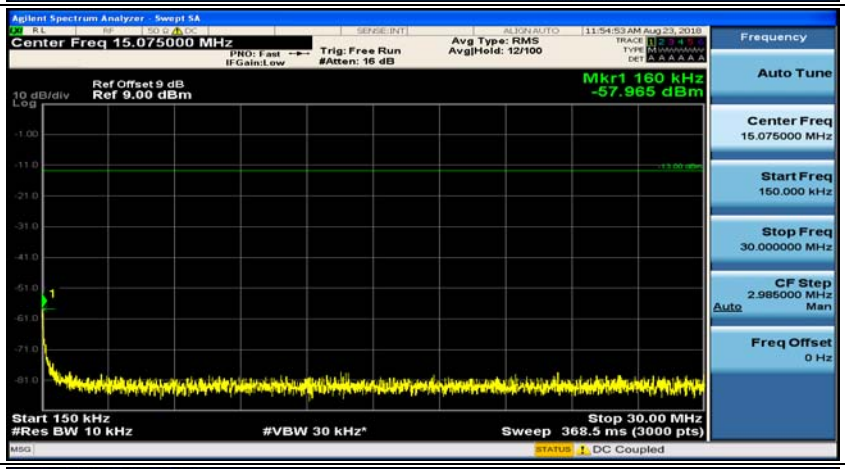


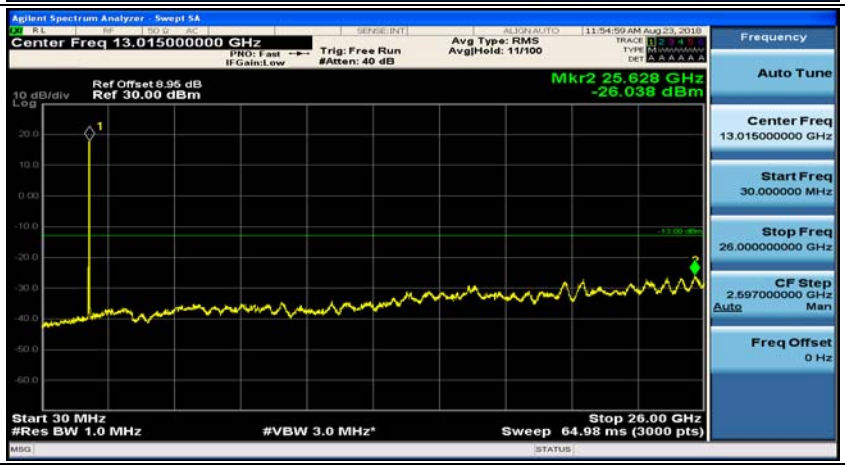


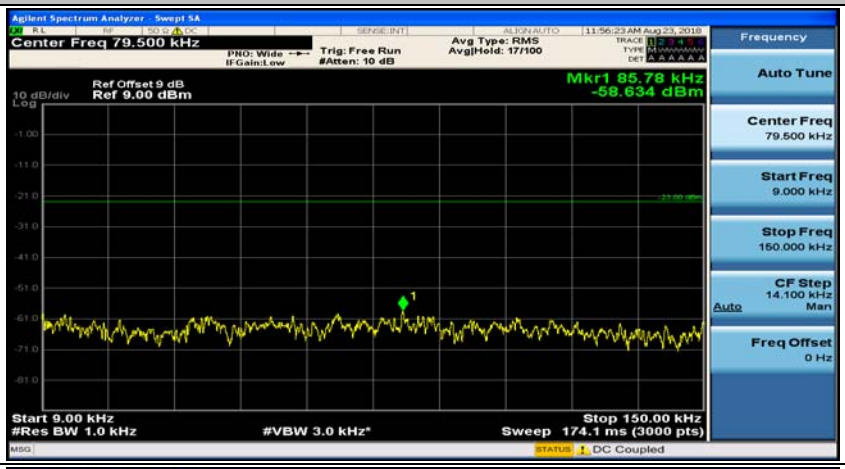
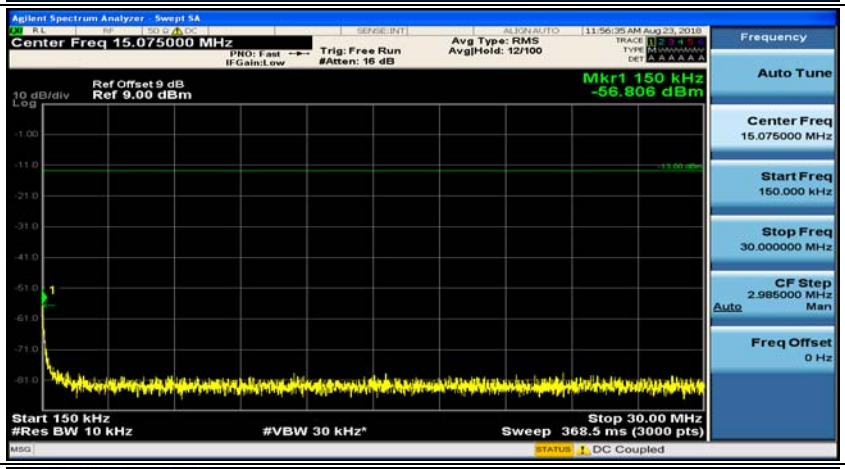
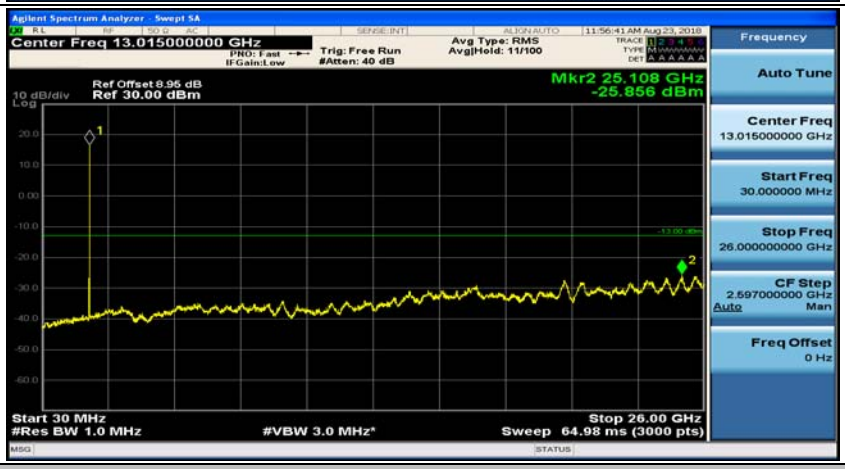


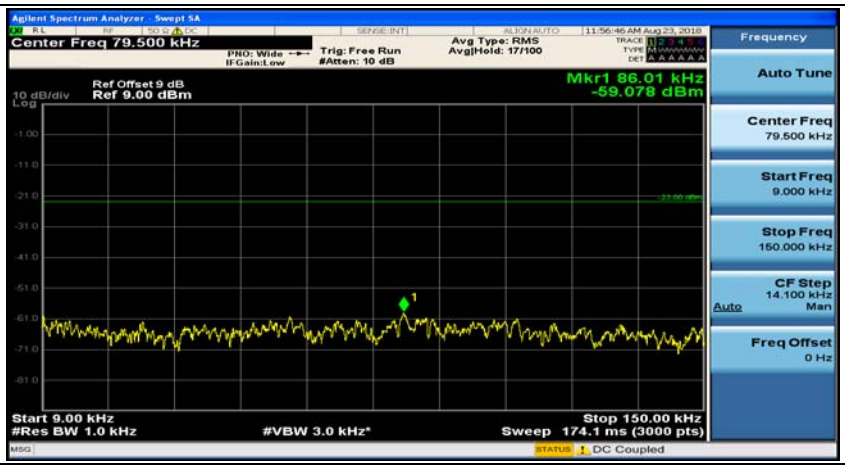
(Channel Bandwidth:15 MHz)_MCH_QPSK_1RB#74

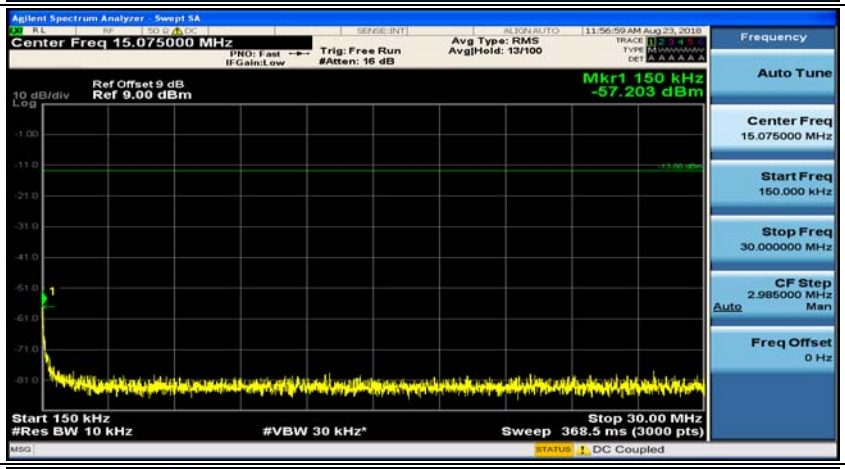

Agilent Spectrum Analyzer - Swept SA
Center Freq 79.500 kHz
PNO: Wide
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 17/100
11:54:41 AM Aug 23, 2018
Frequency
Auto Tune
Mkr1 58.74 kHz
-56.882 dBm
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Center Freq
79.500 kHz
Start Freq
9.000 kHz
Stop Freq
150.000 kHz
CF Step
14.100 kHz
Auto
Man
Freq Offset
0 Hz
Start 9.00 kHz
#Res BW 1.0 kHz
#VBW 3.0 kHz*
Stop 150.00 kHz
Sweep 174.1 ms (3000 pts)
DC Coupled

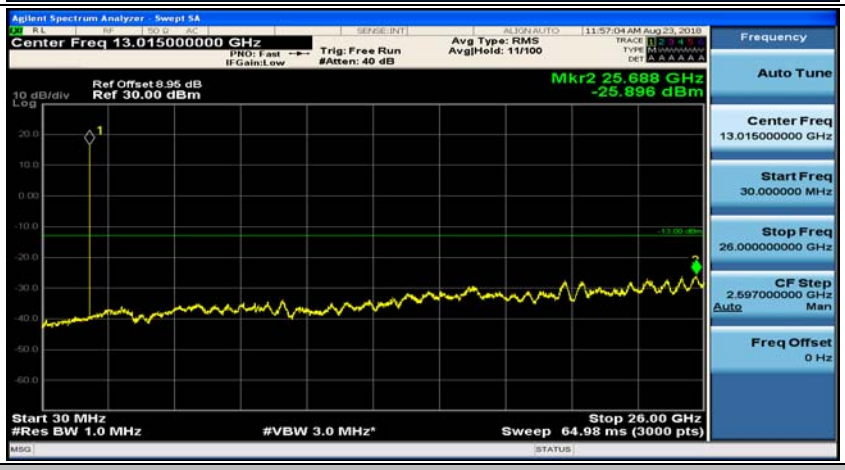

Agilent Spectrum Analyzer - Swept SA
Center Freq 15.075000 MHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 16 dB
Avg Type: RMS
Avg|Hold: 12/100
11:54:53 AM Aug 23, 2018
Frequency
Auto Tune
Mkr1 160 kHz
-57.965 dBm
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Center Freq
15.075000 MHz
Start Freq
150.000 kHz
Stop Freq
30.000000 MHz
CF Step
2.985000 MHz
Auto
Man
Freq Offset
0 Hz
Start 150 kHz
#Res BW 10 kHz
#VBW 30 kHz*
Stop 30.00 MHz
Sweep 368.5 ms (3000 pts)
DC Coupled


Agilent Spectrum Analyzer - Swept SA
Center Freq 13.015000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 40 dB
Avg Type: RMS
Avg|Hold: 11/100
11:54:59 AM Aug 23, 2018
Frequency
Auto Tune
Mkr2 25.628 GHz
-26.038 dBm
Ref Offset 8.95 dB
10 dB/div
Log
Ref 30.00 dBm
Center Freq
13.015000000 GHz
Start Freq
30.000000 MHz
Stop Freq
26.000000000 GHz
CF Step
2.597000000 GHz
Auto
Man
Freq Offset
0 Hz
Start 30 MHz
#Res BW 1.0 MHz
#VBW 3.0 MHz*
Stop 26.00 GHz
Sweep 64.98 ms (3000 pts)

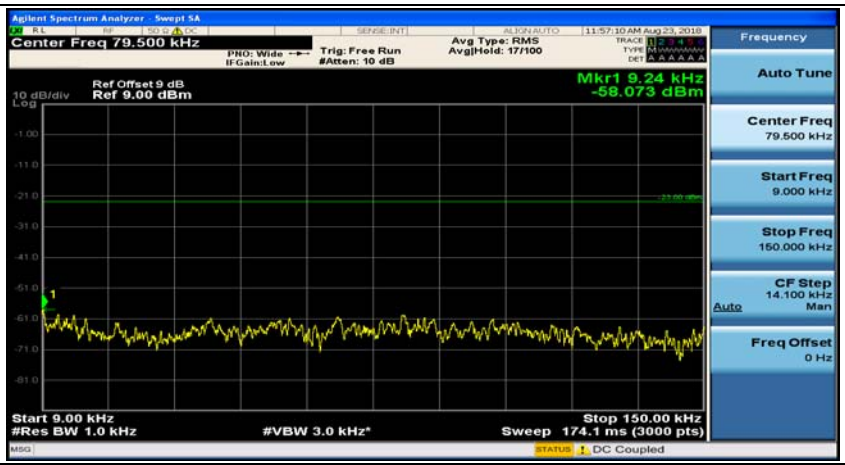
(Channel Bandwidth:15 MHz)_HCH_QPSK_1RB#0



(Channel Bandwidth:15 MHz)_HCH_QPSK_1RB#37

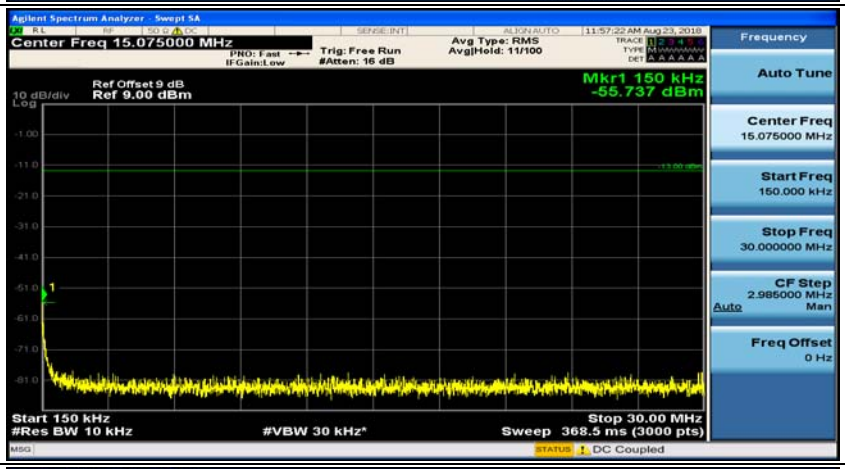


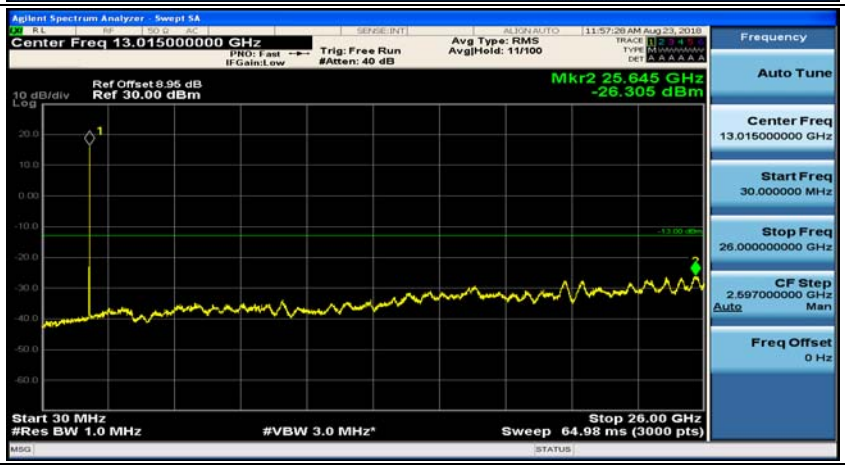


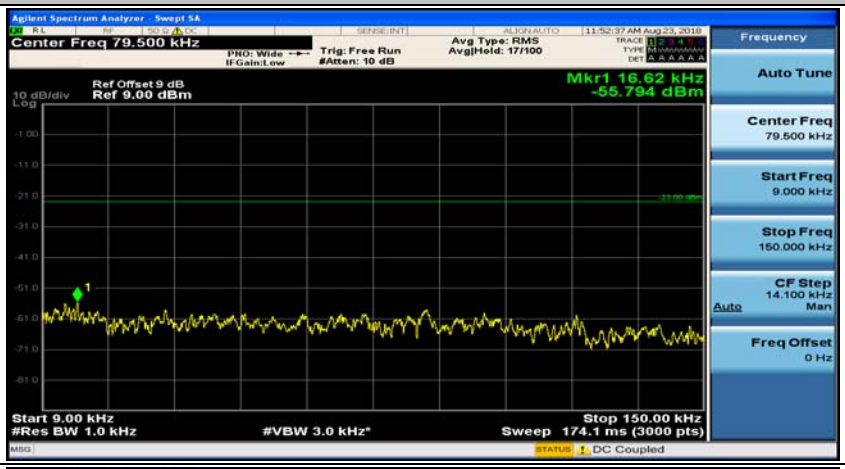
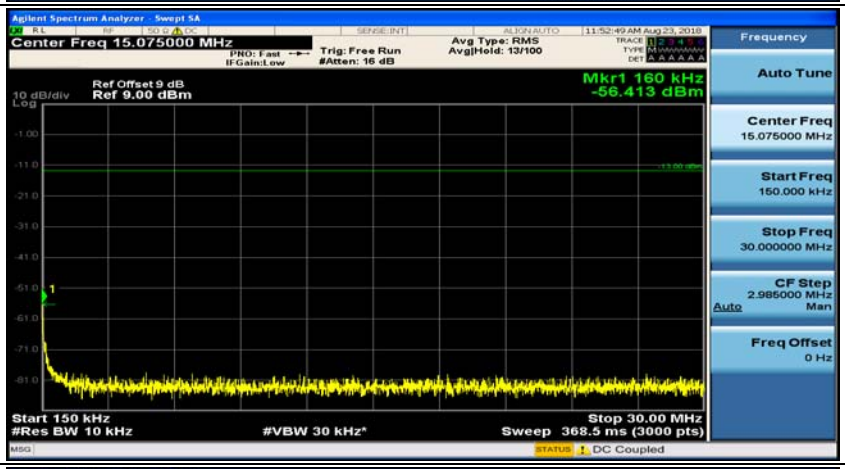
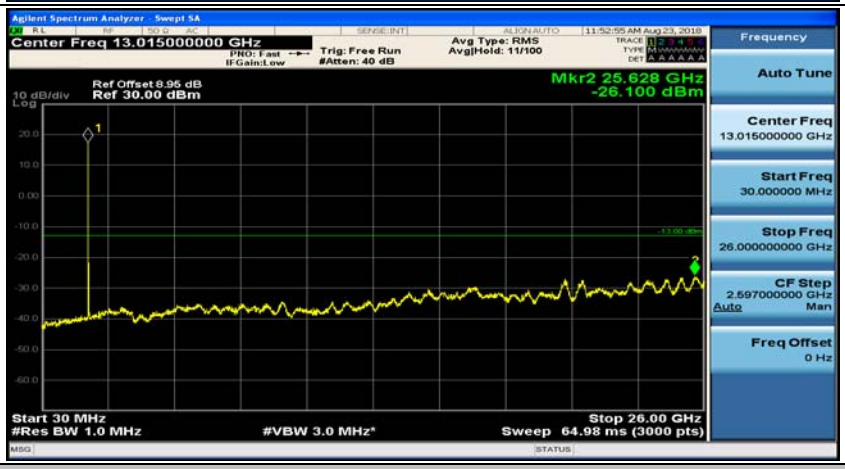


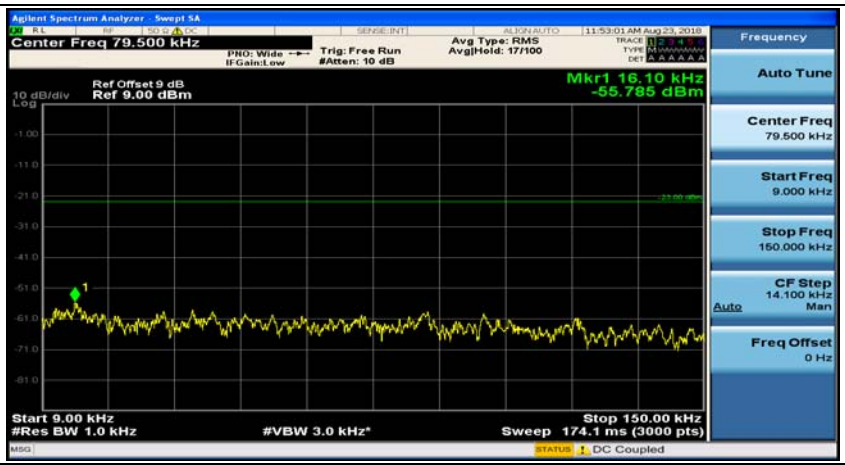
(Channel Bandwidth:15 MHz)_HCH_QPSK_1RB#74

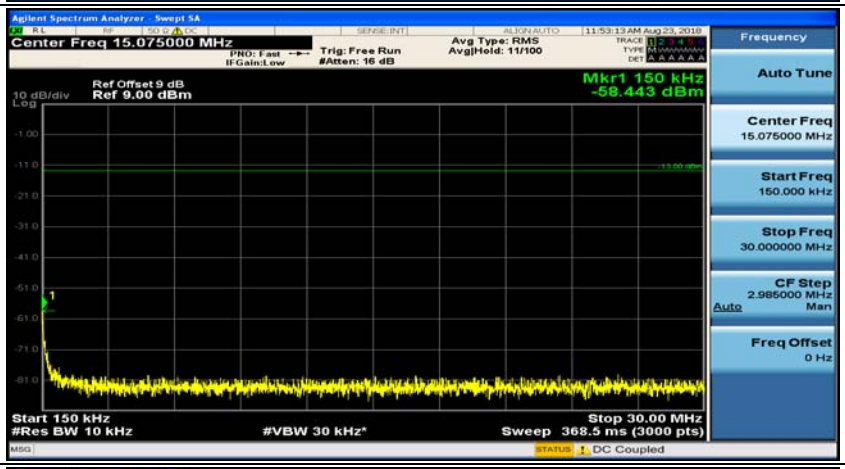

Agilent Spectrum Analyzer - Swept SA
Center Freq 79.500 kHz
PNO: Wide
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 17/100
11:57:10 AM Aug 23, 2018
Frequency
Auto Tune
Mkr1 9.24 kHz
-58.073 dBm
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Center Freq
79.500 kHz
Start Freq
9.000 kHz
Stop Freq
150.000 kHz
CF Step
14.100 kHz
Auto
Man
Freq Offset
0 Hz
Start 9.00 kHz
#Res BW 1.0 kHz
#VBW 3.0 kHz*
Stop 150.00 kHz
Sweep 174.1 ms (3000 pts)
DC Coupled

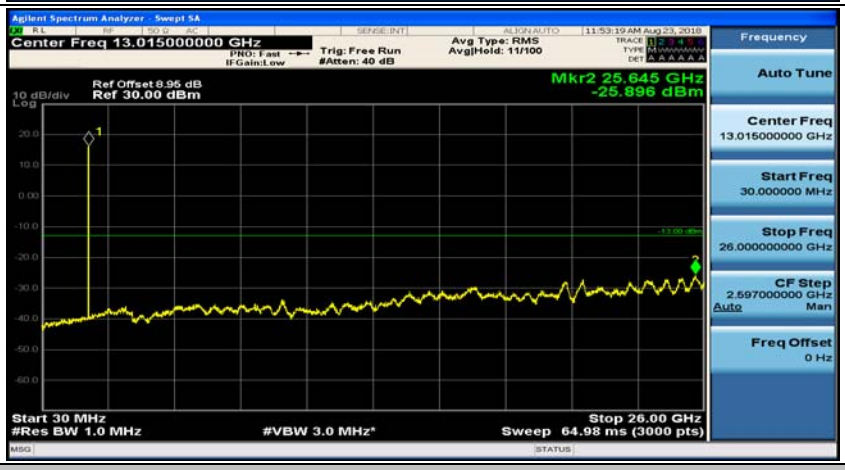

Agilent Spectrum Analyzer - Swept SA
Center Freq 15.075000 MHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 16 dB
Avg Type: RMS
Avg|Hold: 11/100
11:57:22 AM Aug 23, 2018
Frequency
Auto Tune
Mkr1 150 kHz
-55.737 dBm
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Center Freq
15.075000 MHz
Start Freq
150.000 kHz
Stop Freq
30.000000 MHz
CF Step
2.985000 MHz
Auto
Man
Freq Offset
0 Hz
Start 150 kHz
#Res BW 10 kHz
#VBW 30 kHz*
Stop 30.00 MHz
Sweep 368.5 ms (3000 pts)
DC Coupled


Agilent Spectrum Analyzer - Swept SA
Center Freq 13.015000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 40 dB
Avg Type: RMS
Avg|Hold: 11/100
11:57:28 AM Aug 23, 2018
Frequency
Auto Tune
Mkr2 25.645 GHz
-26.305 dBm
Ref Offset 8.95 dB
10 dB/div
Log
Ref 30.00 dBm
Center Freq
13.015000000 GHz
Start Freq
30.000000 MHz
Stop Freq
26.000000000 GHz
CF Step
2.597000000 GHz
Auto
Man
Freq Offset
0 Hz
Start 30 MHz
#Res BW 1.0 MHz
#VBW 3.0 MHz*
Stop 26.00 GHz
Sweep 64.98 ms (3000 pts)

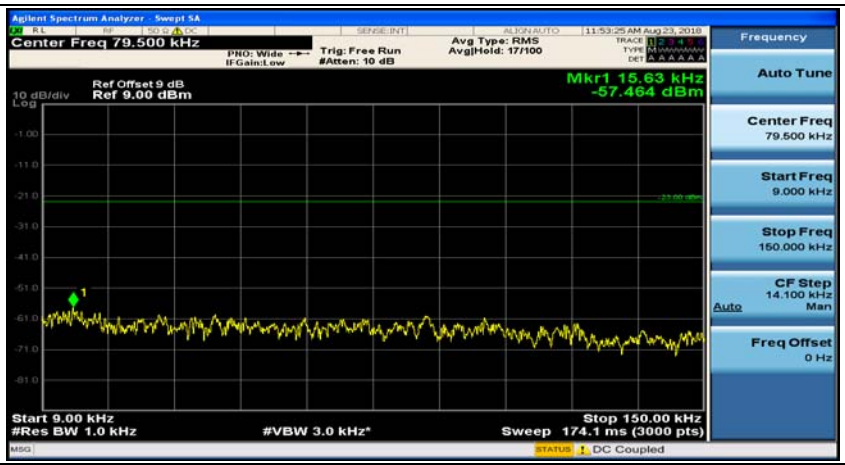
(Channel Bandwidth:15 MHz)_LCH_16QAM_1RB#0



(Channel Bandwidth:15 MHz)_LCH_16QAM_1RB#37

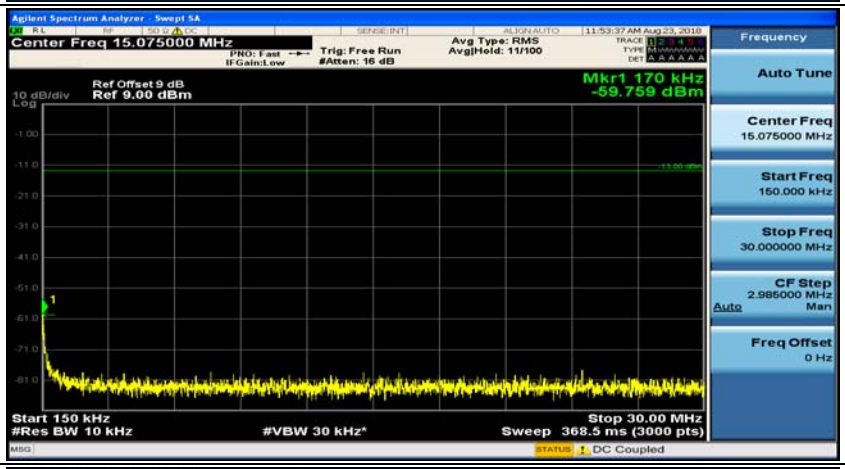


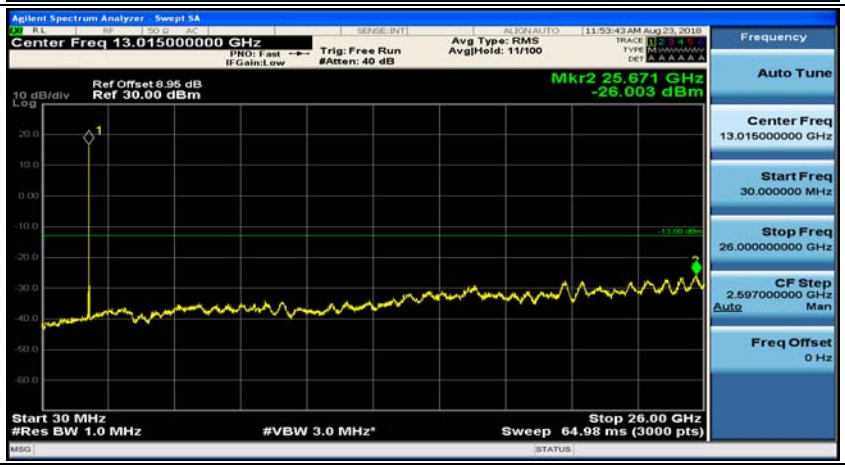


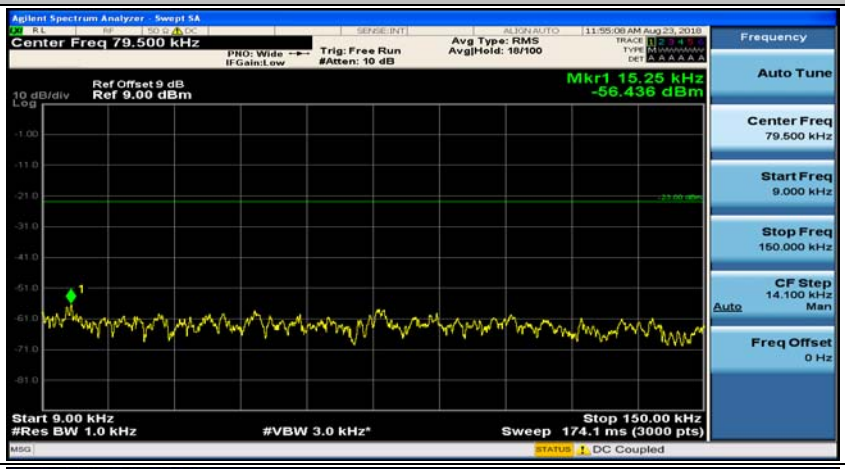
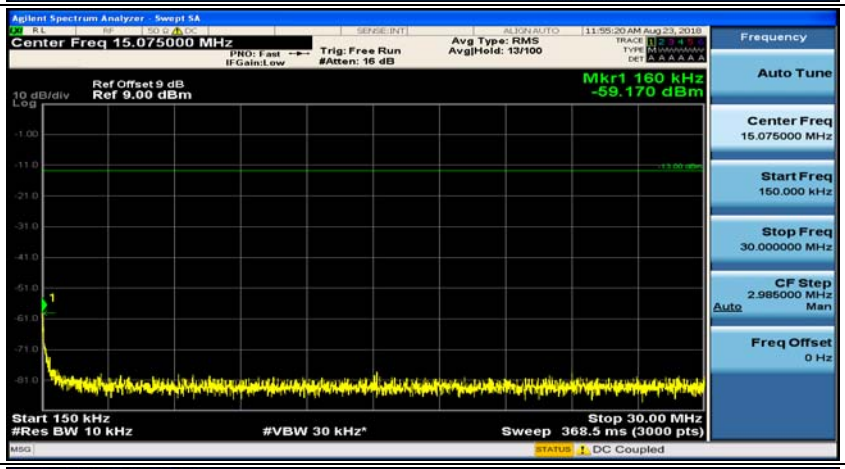
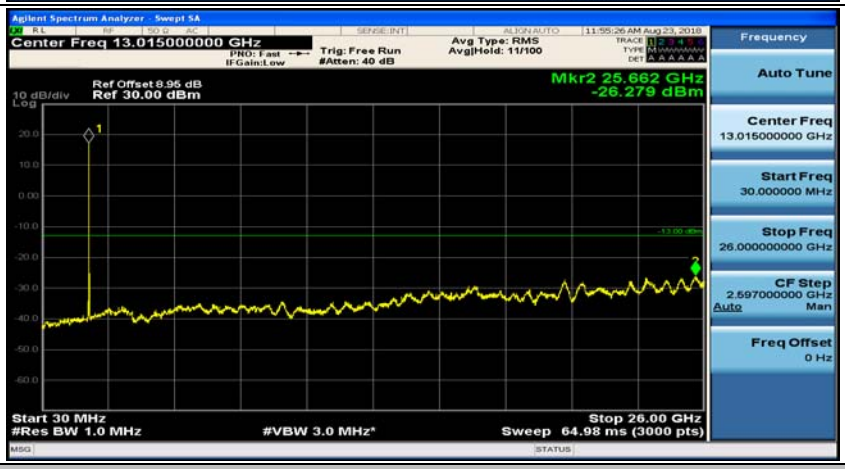


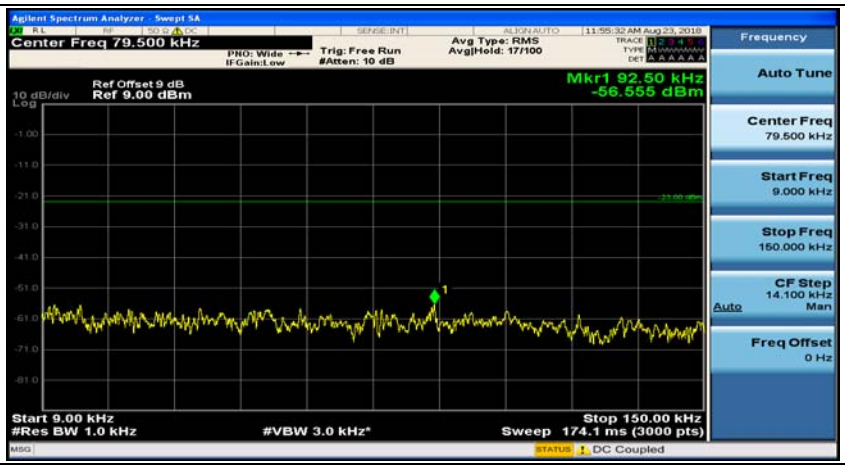
(Channel Bandwidth:15 MHz)_LCH_16QAM_1RB#74

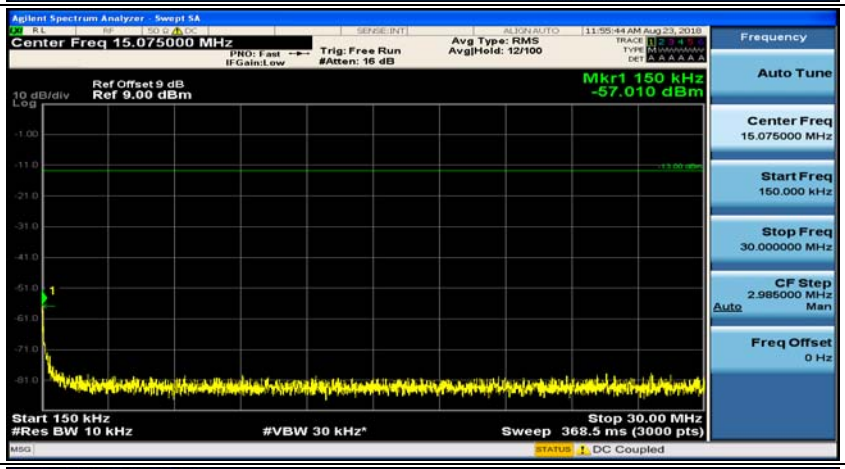

Agilent Spectrum Analyzer - Swept SA
Center Freq 79.500 kHz
PNO: Wide
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 17/100
11:53:25 AM Aug 23, 2018
Mkr1 15.63 kHz
-57.464 dBm
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Start 9.00 kHz
#Res BW 1.0 kHz
#VBW 3.0 kHz*
Stop 150.00 kHz
Sweep 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
11:53:37 AM Aug 23, 2018
Mkr1 170 kHz
-59.759 dBm
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 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

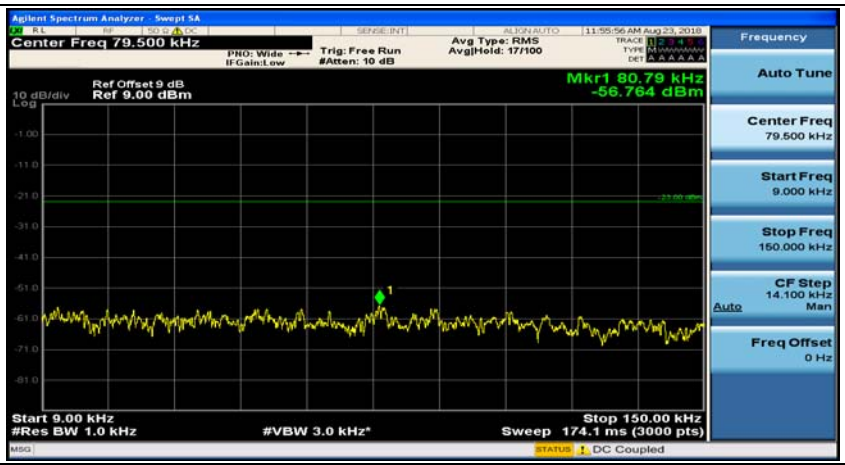

Agilent Spectrum Analyzer - Swept SA
Center Freq 13.015000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 40 dB
Avg Type: RMS
Avg|Hold: 11/100
11:53:43 AM Aug 23, 2018
Mkr2 25.671 GHz
-26.003 dBm
Ref Offset 8.95 dB
10 dB/div
Log
Ref 30.00 dBm
Start 30 MHz
#Res BW 1.0 MHz
#VBW 3.0 MHz*
Stop 26.00 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

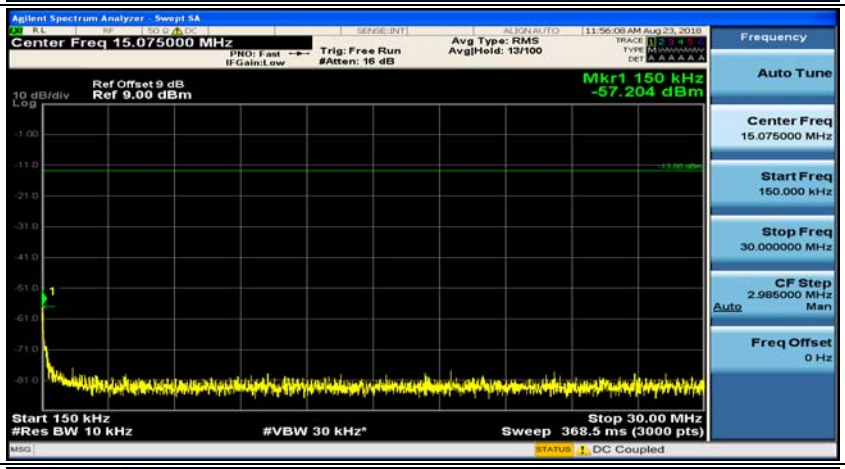
(Channel Bandwidth:15 MHz)_MCH_16QAM_1RB#0



(Channel Bandwidth:15 MHz)_MCH_16QAM_1RB#37

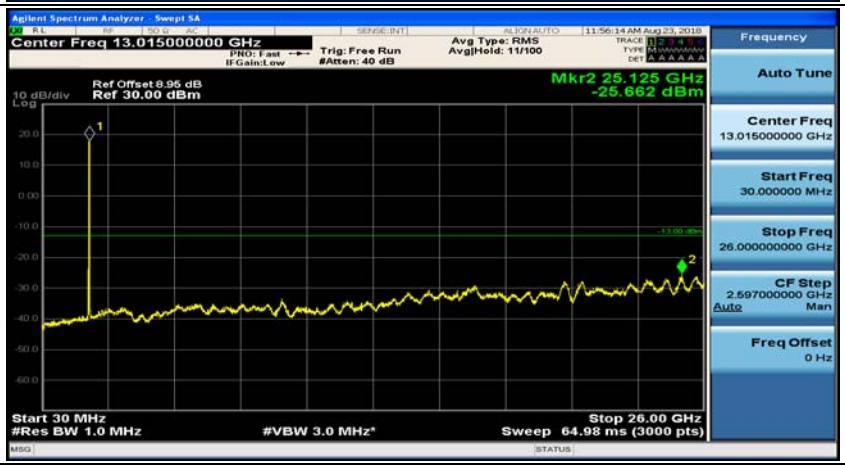


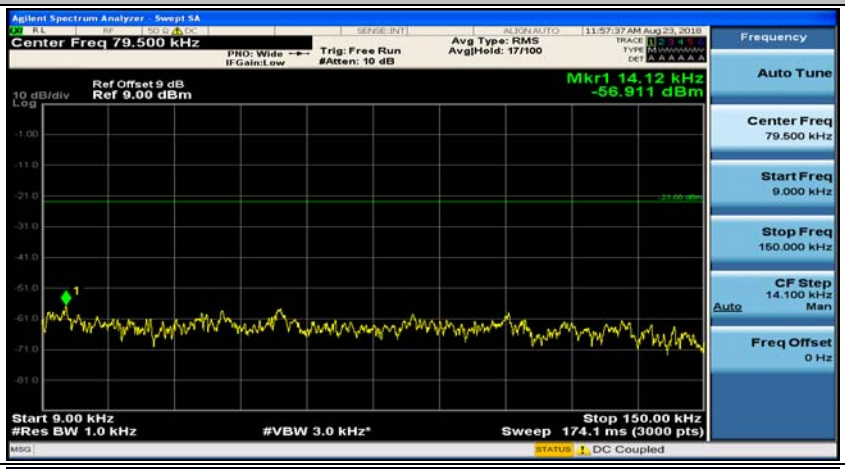
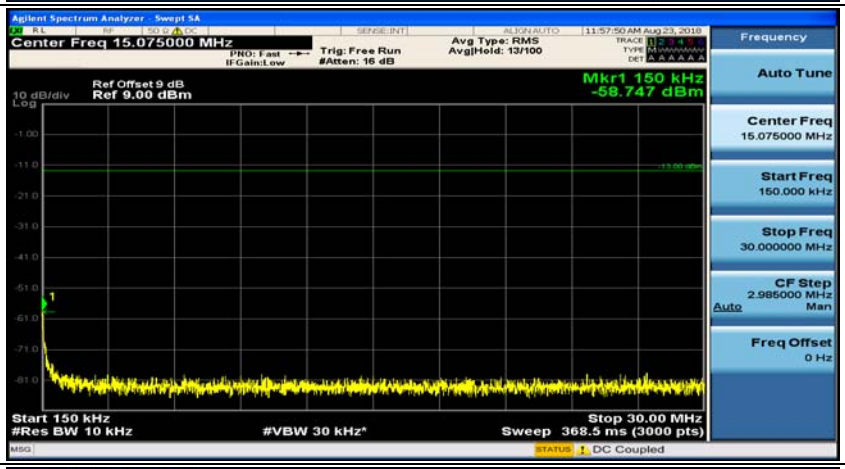
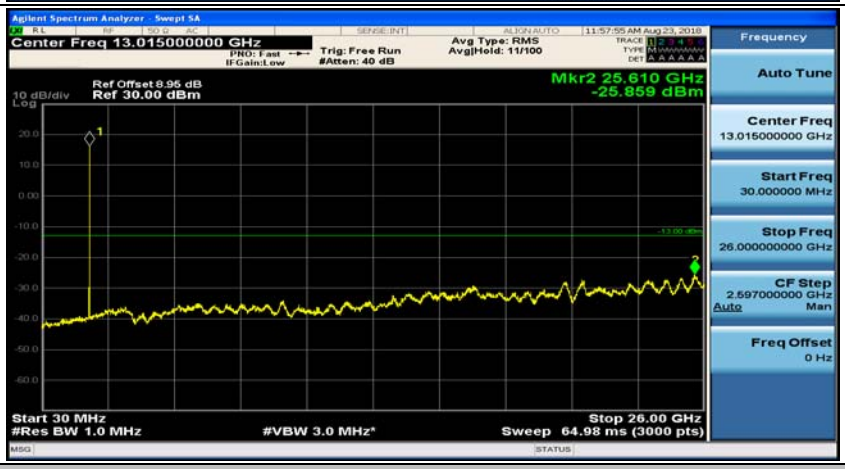


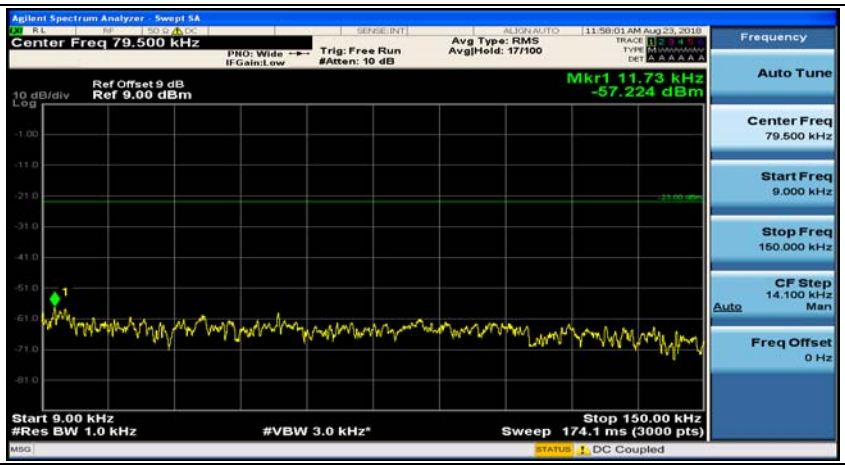
(Channel Bandwidth:15 MHz)_MCH_16QAM_1RB#74

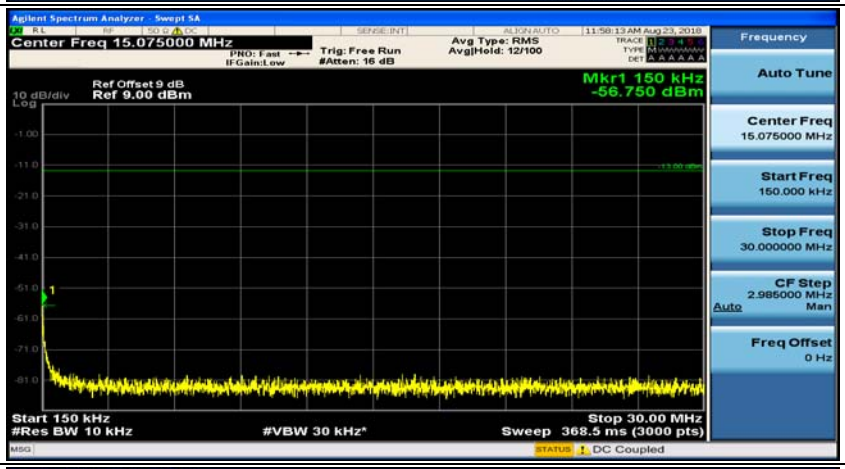

Agilent Spectrum Analyzer - Swept SA
Center Freq 79.500 kHz
PNO: Wide
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 17/100
11:55:56 AM Aug 23, 2018
Frequency
Auto Tune
Mkr1 80.79 kHz
-56.764 dBm
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Center Freq
79.500 kHz
Start Freq
9.000 kHz
Stop Freq
150.000 kHz
CF Step
14.100 kHz
Auto
Man
Freq Offset
0 Hz
Start 9.00 kHz
#Res BW 1.0 kHz
#VBW 3.0 kHz*
Stop 150.00 kHz
Sweep 174.1 ms (3000 pts)
DC Coupled


Agilent Spectrum Analyzer - Swept SA
Center Freq 15.075000 MHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 16 dB
Avg Type: RMS
Avg|Hold: 13/100
11:56:08 AM Aug 23, 2018
Frequency
Auto Tune
Mkr1 150 kHz
-57.204 dBm
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Center Freq
15.075000 MHz
Start Freq
150.000 kHz
Stop Freq
30.000000 MHz
CF Step
2.985000 MHz
Auto
Man
Freq Offset
0 Hz
Start 150 kHz
#Res BW 10 kHz
#VBW 30 kHz*
Stop 30.00 MHz
Sweep 368.5 ms (3000 pts)
DC Coupled

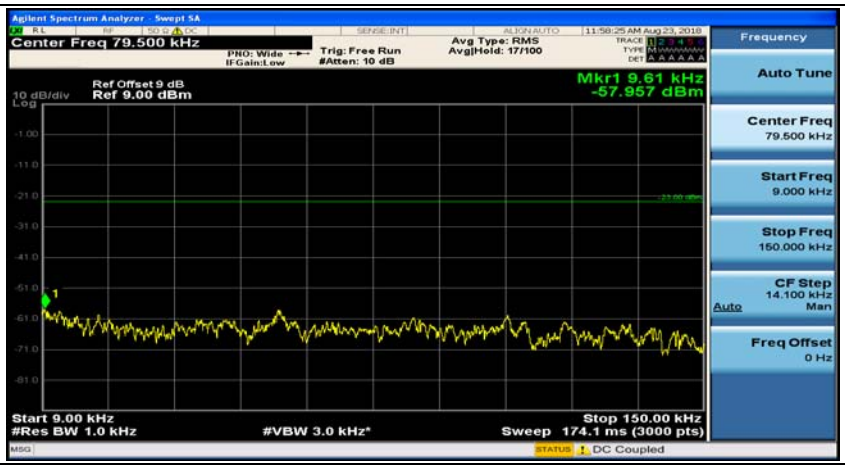

Agilent Spectrum Analyzer - Swept SA
Center Freq 13.015000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 40 dB
Avg Type: RMS
Avg|Hold: 11/100
11:56:14 AM Aug 23, 2018
Frequency
Auto Tune
Mkr2 25.125 GHz
-25.662 dBm
Ref Offset 8.95 dB
10 dB/div
Log
Ref 30.00 dBm
Center Freq
13.015000000 GHz
Start Freq
30.000000 MHz
Stop Freq
26.000000000 GHz
CF Step
2.597000000 GHz
Auto
Man
Freq Offset
0 Hz
Start 30 MHz
#Res BW 1.0 MHz
#VBW 3.0 MHz*
Stop 26.00 GHz
Sweep 64.98 ms (3000 pts)

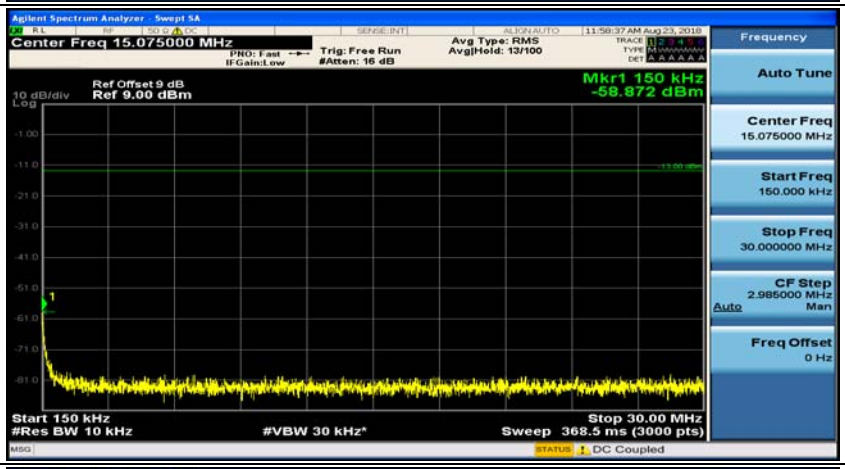
(Channel Bandwidth:15 MHz)_HCH_16QAM_1RB#0



(Channel Bandwidth:15 MHz)_HCH_16QAM_1RB#37

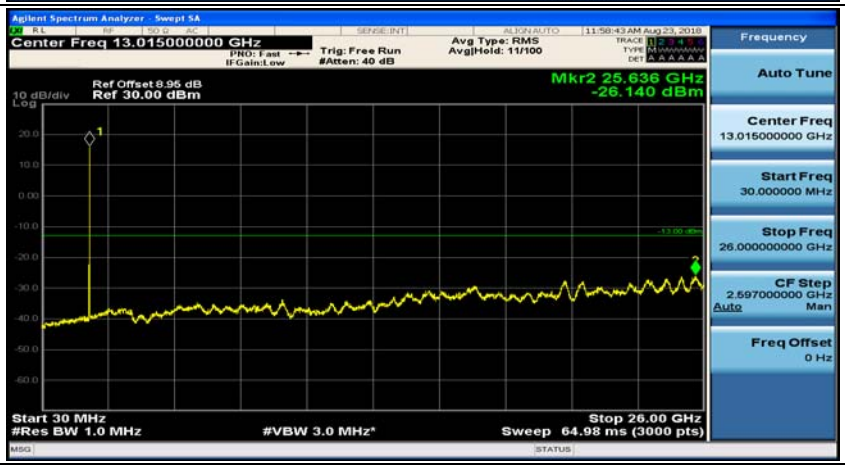




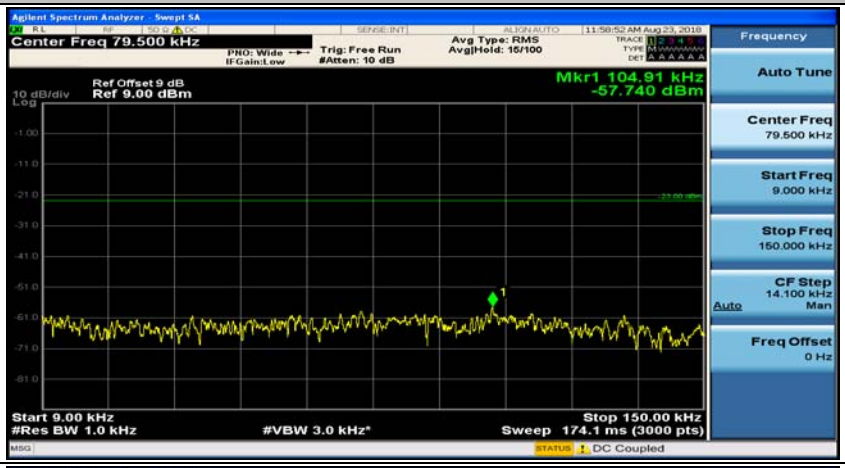
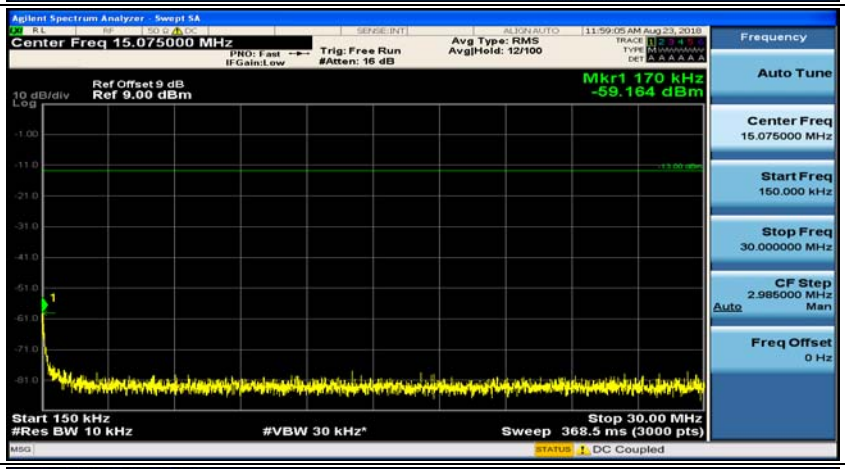
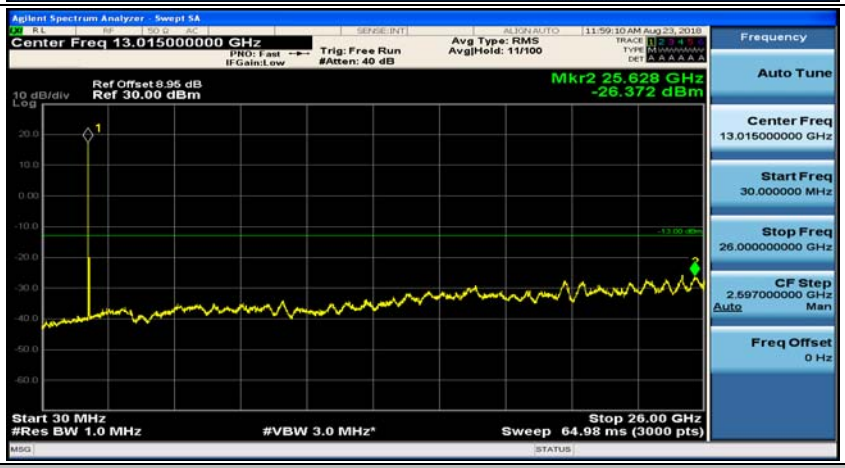
(Channel Bandwidth:15 MHz)_HCH_16QAM_1RB#74

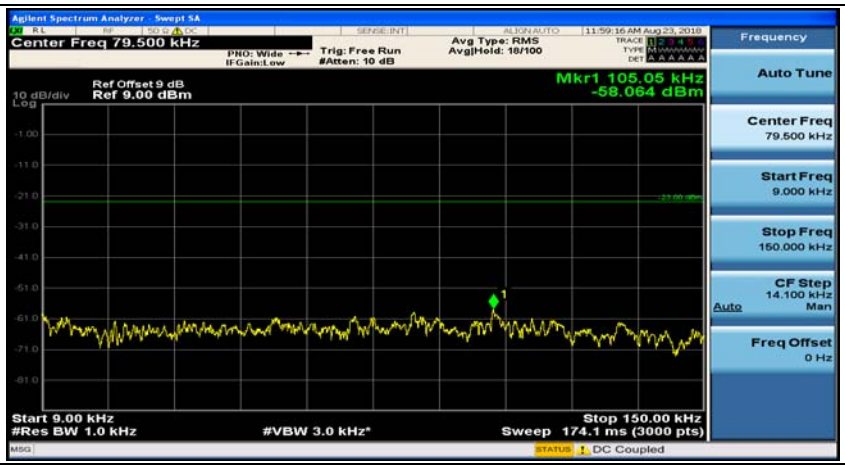

Agilent Spectrum Analyzer - Swept SA
Center Freq 79.500 kHz
PNO: Wide
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 17/100
11:58:25 AM Aug 23, 2018
Frequency
Auto Tune
Mkr1 9.61 kHz
-57.957 dBm
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Center Freq
79.500 kHz
Start Freq
9.000 kHz
Stop Freq
150.000 kHz
CF Step
14.100 kHz
Auto
Man
Freq Offset
0 Hz
Start 9.00 kHz
#Res BW 1.0 kHz
#VBW 3.0 kHz*
Stop 150.00 kHz
Sweep 174.1 ms (3000 pts)
DC Coupled

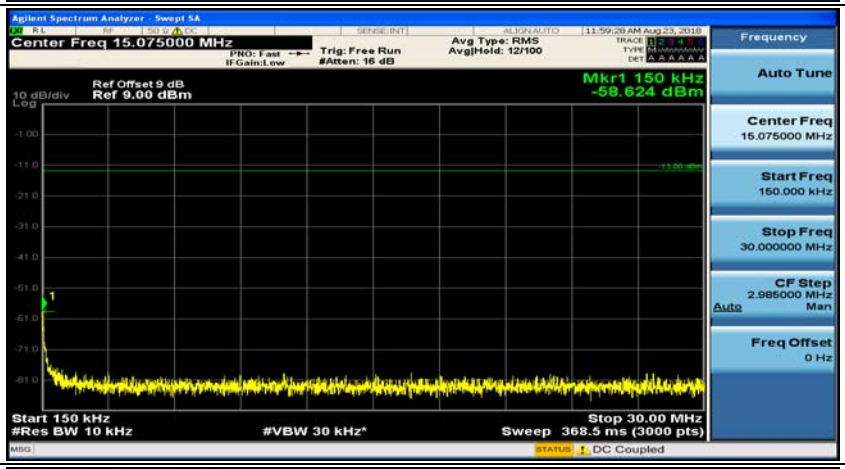

Agilent Spectrum Analyzer - Swept SA
Center Freq 15.075000 MHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 16 dB
Avg Type: RMS
Avg|Hold: 13/100
11:58:37 AM Aug 23, 2018
Frequency
Auto Tune
Mkr1 150 kHz
-58.872 dBm
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Center Freq
15.075000 MHz
Start Freq
150.000 kHz
Stop Freq
30.000000 MHz
CF Step
2.985000 MHz
Auto
Man
Freq Offset
0 Hz
Start 150 kHz
#Res BW 10 kHz
#VBW 30 kHz*
Stop 30.00 MHz
Sweep 368.5 ms (3000 pts)
DC Coupled


Agilent Spectrum Analyzer - Swept SA
Center Freq 13.015000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 40 dB
Avg Type: RMS
Avg|Hold: 11/100
11:58:43 AM Aug 23, 2018
Frequency
Auto Tune
Mkr2 25.636 GHz
-26.140 dBm
Ref Offset 8.95 dB
10 dB/div
Log
Ref 30.00 dBm
Center Freq
13.015000000 GHz
Start Freq
30.000000 MHz
Stop Freq
26.000000000 GHz
CF Step
2.597000000 GHz
Auto
Man
Freq Offset
0 Hz
Start 30 MHz
#Res BW 1.0 MHz
#VBW 3.0 MHz*
Stop 26.00 GHz
Sweep 64.98 ms (3000 pts)

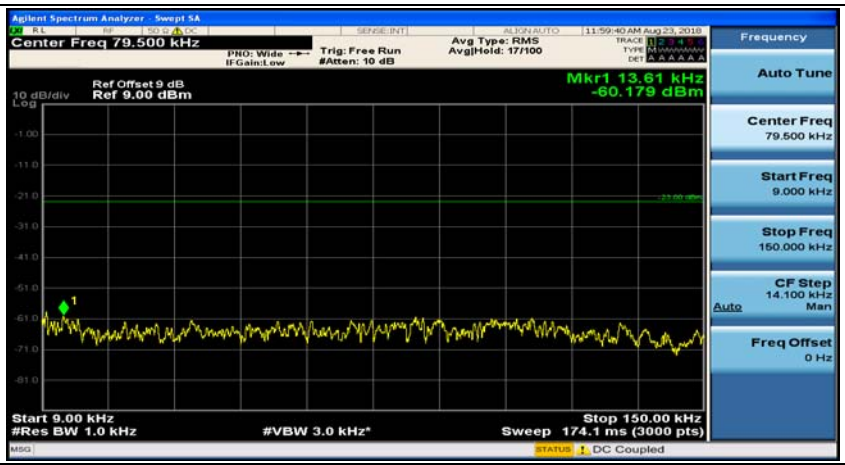
Channel Bandwidth: 20 MHz

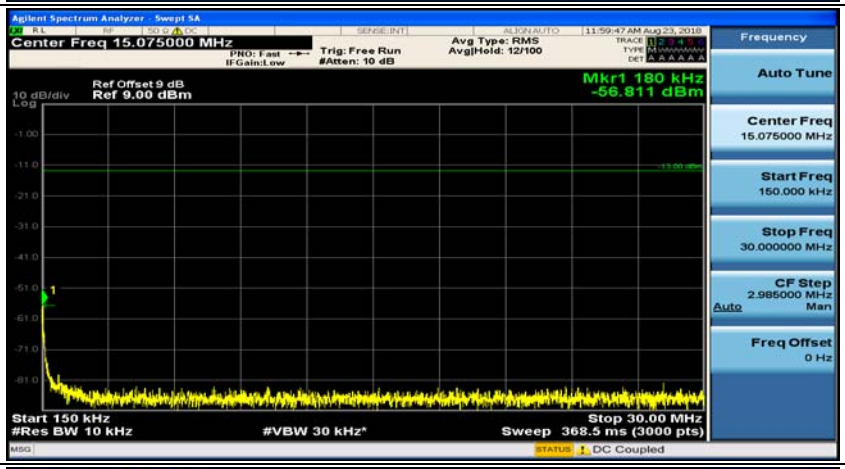
(Channel Bandwidth:20 MHz)_LCH_QPSK_1RB#0



(Channel Bandwidth:20 MHz)_LCH_QPSK_1RB#49

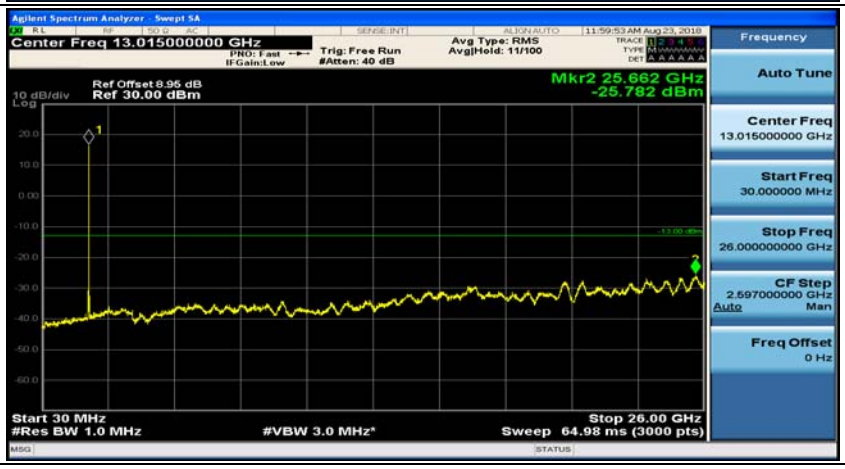


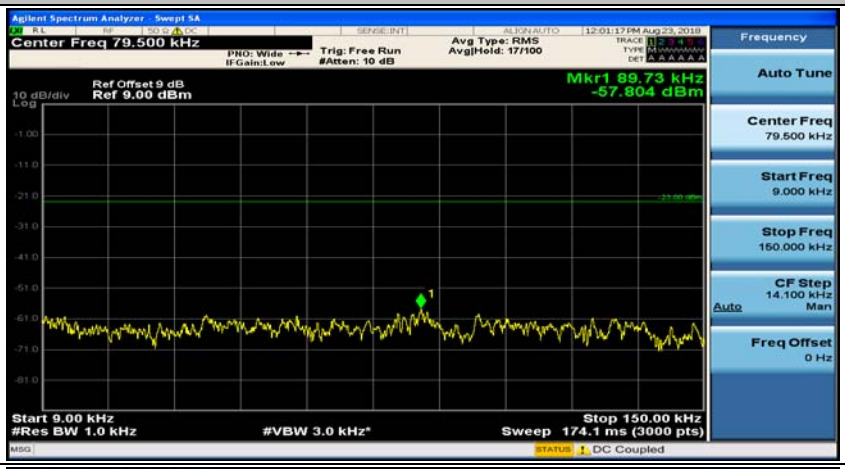
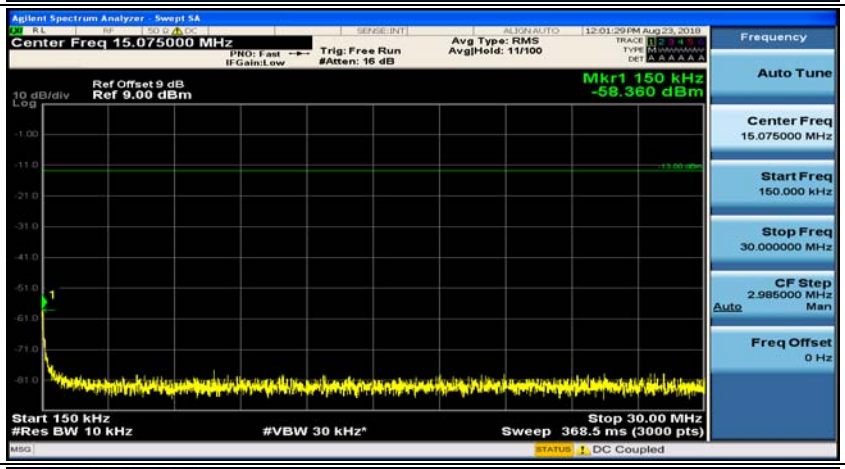
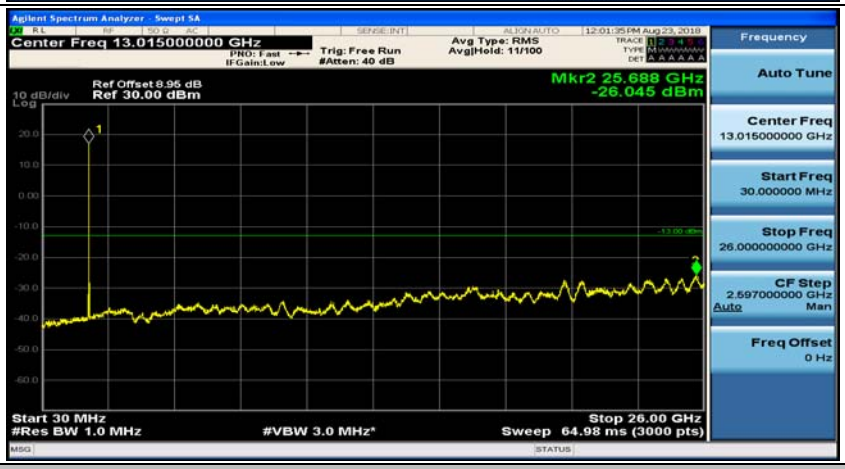


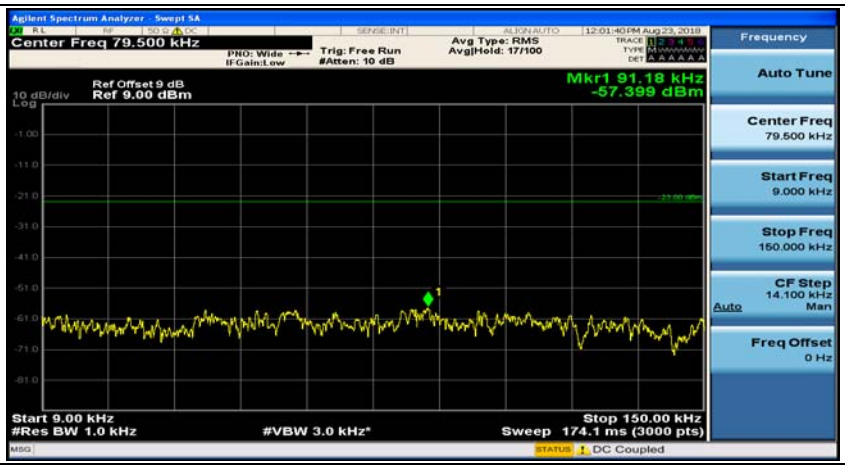
(Channel Bandwidth:20 MHz)_LCH_QPSK_1RB#99

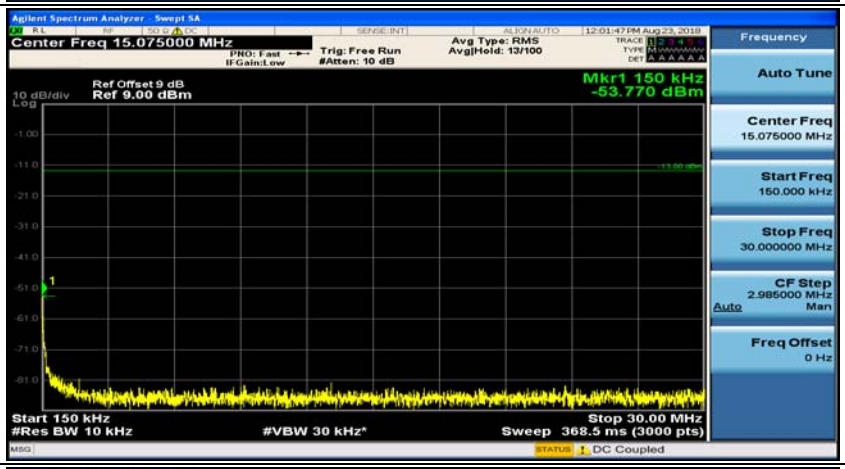

Agilent Spectrum Analyzer - Swept SA
Center Freq 79.500 kHz
PNO: Wide
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 17/100
11:59:40 AM Aug 23, 2018
Frequency
Auto Tune
Mkr1 13.61 kHz
-60.179 dBm
Ref Offset 9 dB
10 dB/div
Ref 9.00 dBm
Log
Center Freq
79.500 kHz
Start Freq
9.000 kHz
Stop Freq
150.000 kHz
CF Step
14.100 kHz
Auto
Man
Freq Offset
0 Hz
Start 9.00 kHz
#Res BW 1.0 kHz
#VBW 3.0 kHz*
Stop 150.00 kHz
Sweep 174.1 ms (3000 pts)
DC Coupled


Agilent Spectrum Analyzer - Swept SA
Center Freq 15.075000 MHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 12/100
11:59:47 AM Aug 23, 2018
Frequency
Auto Tune
Mkr1 180 kHz
-56.811 dBm
Ref Offset 9 dB
10 dB/div
Ref 9.00 dBm
Log
Center Freq
15.075000 MHz
Start Freq
150.000 kHz
Stop Freq
30.000000 MHz
CF Step
2.985000 MHz
Auto
Man
Freq Offset
0 Hz
Start 150 kHz
#Res BW 10 kHz
#VBW 30 kHz*
Stop 30.00 MHz
Sweep 368.5 ms (3000 pts)
DC Coupled

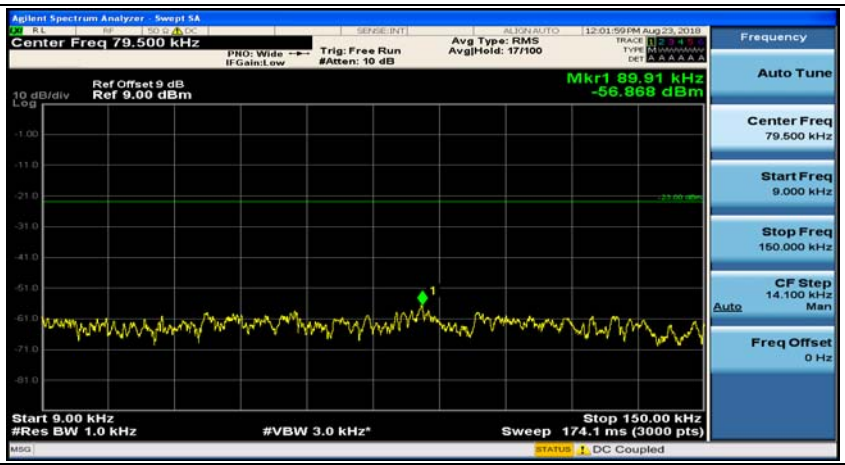

Agilent Spectrum Analyzer - Swept SA
Center Freq 13.015000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 40 dB
Avg Type: RMS
Avg|Hold: 11/100
11:59:53 AM Aug 23, 2018
Frequency
Auto Tune
Mkr2 25.662 GHz
-25.782 dBm
Ref Offset 8.95 dB
10 dB/div
Ref 30.00 dBm
Log
Center Freq
13.015000000 GHz
Start Freq
30.000000 MHz
Stop Freq
26.000000000 GHz
CF Step
2.597000000 GHz
Auto
Man
Freq Offset
0 Hz
Start 30 MHz
#Res BW 1.0 MHz
#VBW 3.0 MHz*
Stop 26.00 GHz
Sweep 64.98 ms (3000 pts)

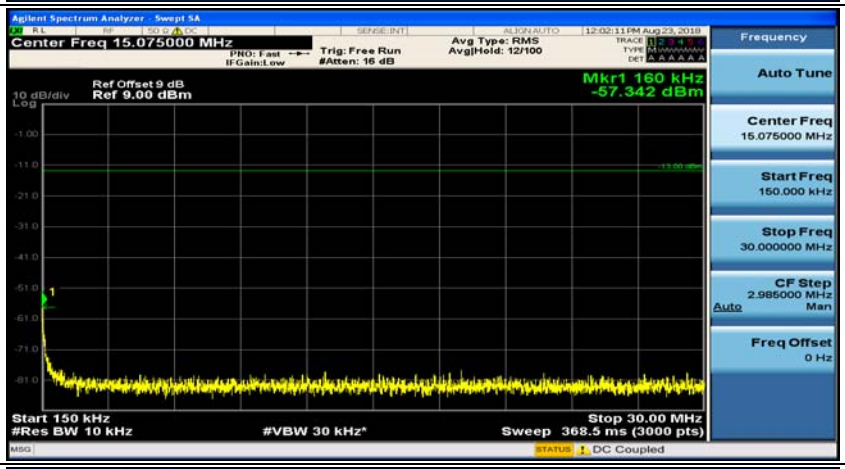
(Channel Bandwidth:20 MHz)_MCH_QPSK_1RB#0



(Channel Bandwidth:20 MHz)_MCH_QPSK_1RB#49

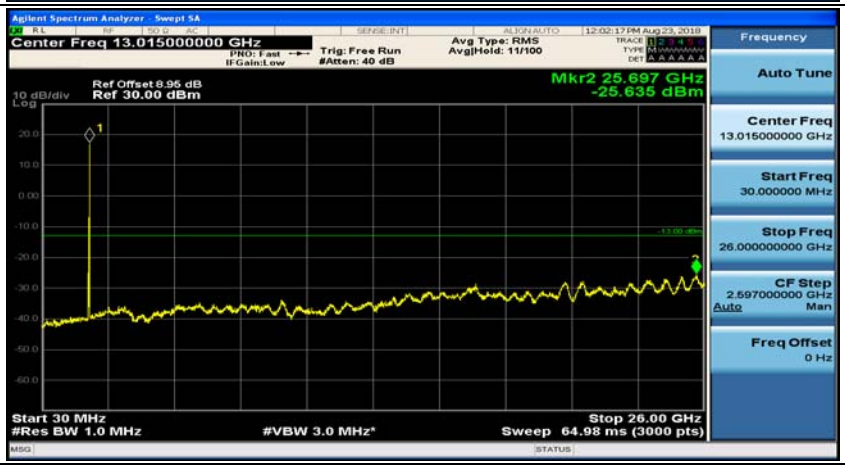


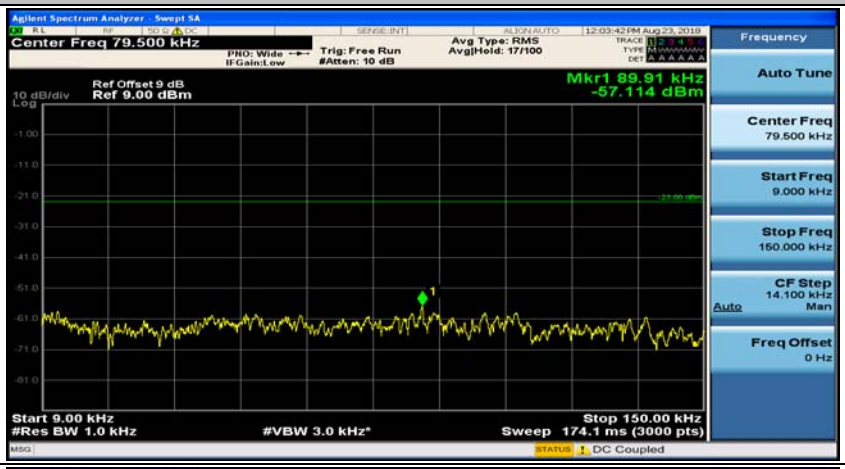
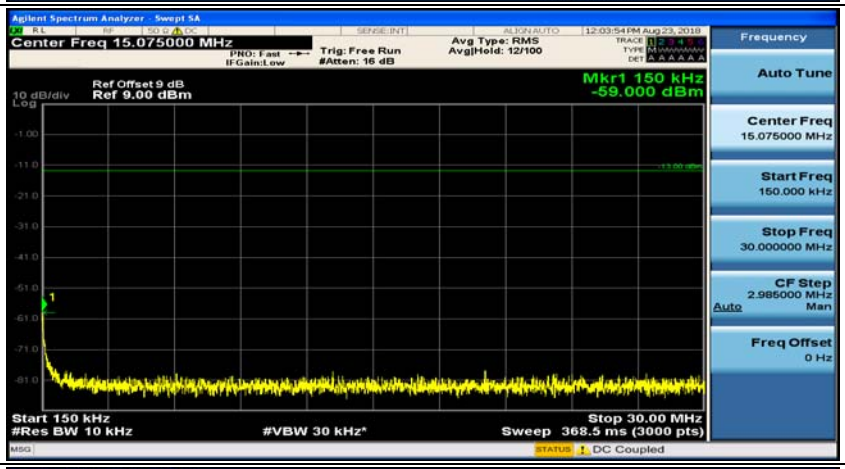
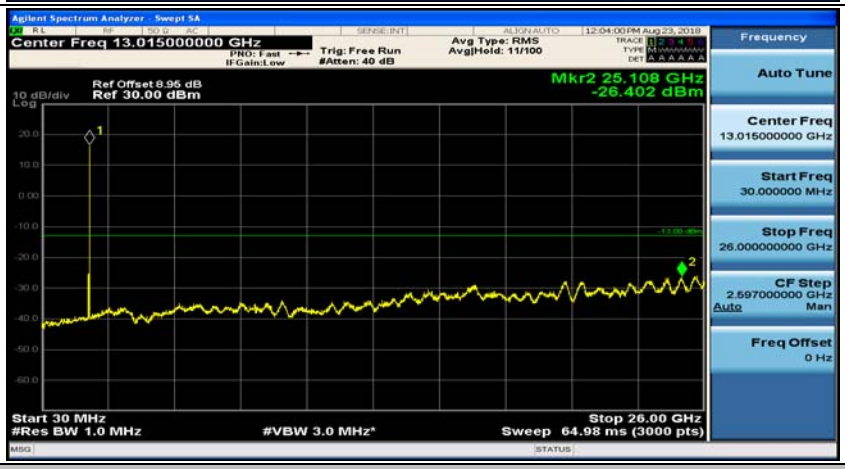


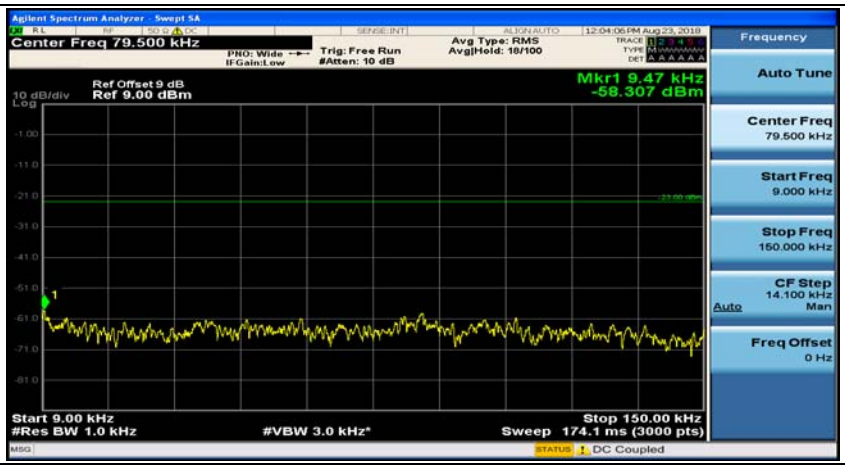
(Channel Bandwidth:20 MHz)_MCH_QPSK_1RB#99

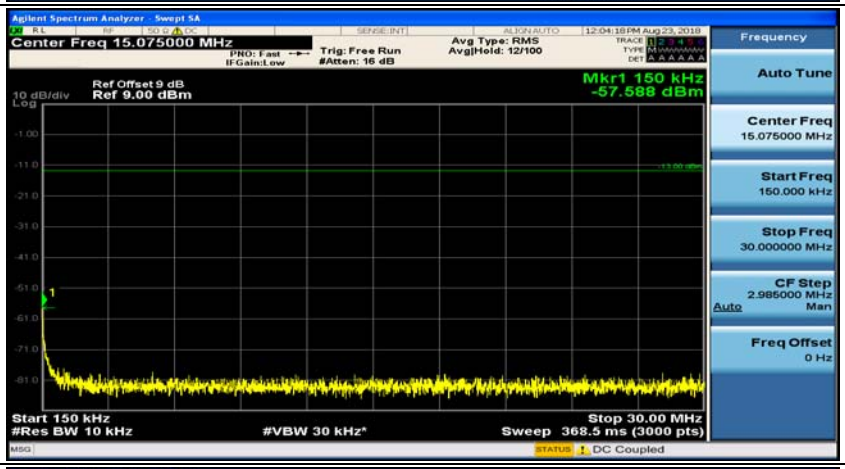

Agilent Spectrum Analyzer - Swept SA
Center Freq 79.500 kHz
PNO: Wide
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 17/100
12:01:59 PM Aug 23, 2018
Frequency
Auto Tune
Mkr1 89.91 kHz
-56.868 dBm
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Center Freq
79.500 kHz
Start Freq
9.000 kHz
Stop Freq
150.000 kHz
CF Step
14.100 kHz
Auto
Man
Freq Offset
0 Hz
Start 9.00 kHz
#Res BW 1.0 kHz
#VBW 3.0 kHz*
Stop 150.00 kHz
Sweep 174.1 ms (3000 pts)
DC Coupled

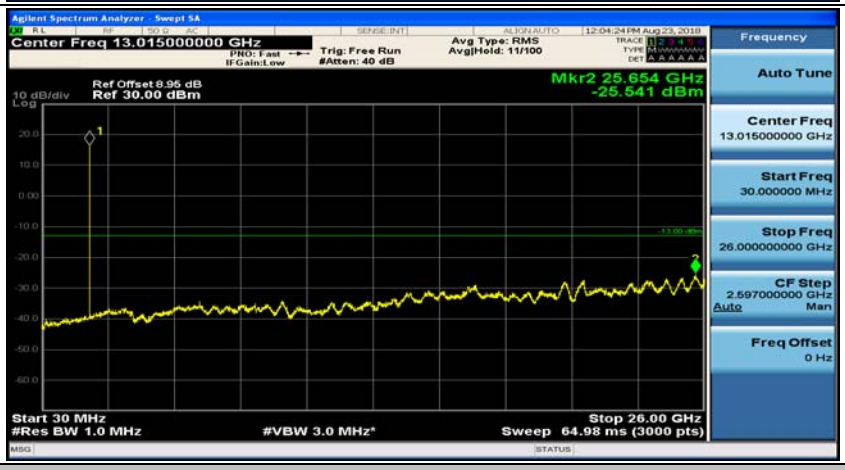

Agilent Spectrum Analyzer - Swept SA
Center Freq 15.075000 MHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 16 dB
Avg Type: RMS
Avg|Hold: 12/100
12:02:11 PM Aug 23, 2018
Frequency
Auto Tune
Mkr1 160 kHz
-57.342 dBm
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Center Freq
15.075000 MHz
Start Freq
150.000 kHz
Stop Freq
30.000000 MHz
CF Step
2.985000 MHz
Auto
Man
Freq Offset
0 Hz
Start 150 kHz
#Res BW 10 kHz
#VBW 30 kHz*
Stop 30.00 MHz
Sweep 368.5 ms (3000 pts)
DC Coupled


Agilent Spectrum Analyzer - Swept SA
Center Freq 13.015000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 40 dB
Avg Type: RMS
Avg|Hold: 11/100
12:02:17 PM Aug 23, 2018
Frequency
Auto Tune
Mkr2 25.697 GHz
-25.635 dBm
Ref Offset 8.95 dB
10 dB/div
Log
Ref 30.00 dBm
Center Freq
13.015000000 GHz
Start Freq
30.000000 MHz
Stop Freq
26.000000000 GHz
CF Step
2.597000000 GHz
Auto
Man
Freq Offset
0 Hz
Start 30 MHz
#Res BW 1.0 MHz
#VBW 3.0 MHz*
Stop 26.00 GHz
Sweep 64.98 ms (3000 pts)

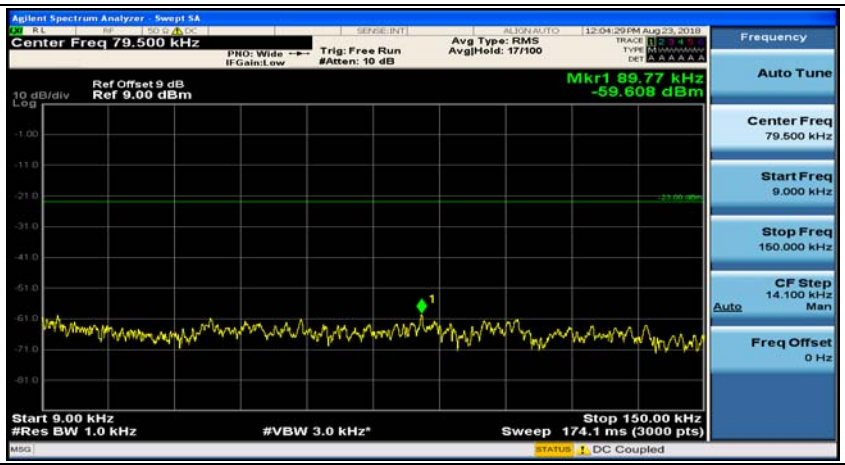
(Channel Bandwidth:20 MHz)_HCH_QPSK_1RB#0



(Channel Bandwidth:20 MHz)_HCH_QPSK_1RB#49

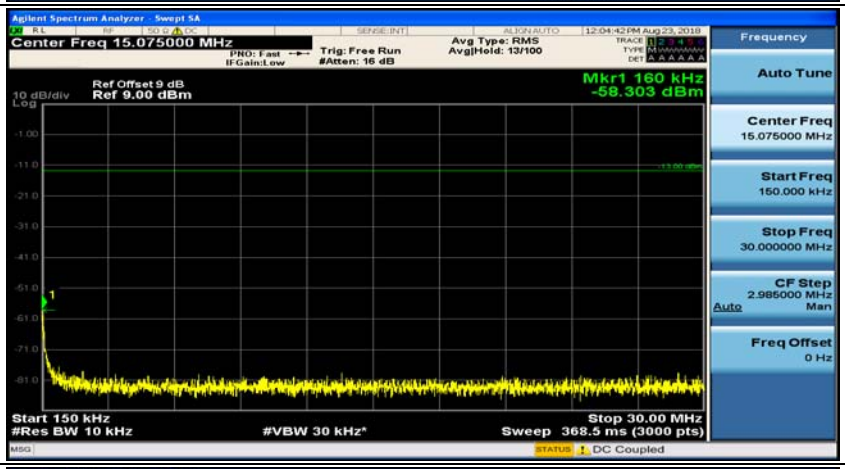


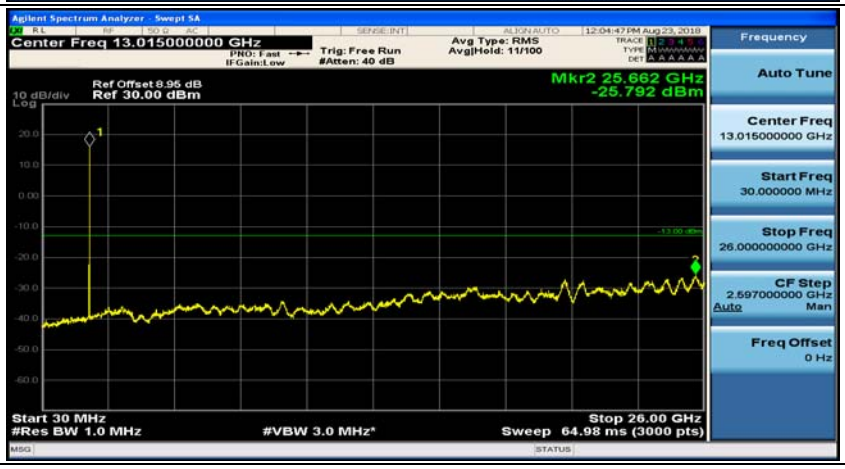


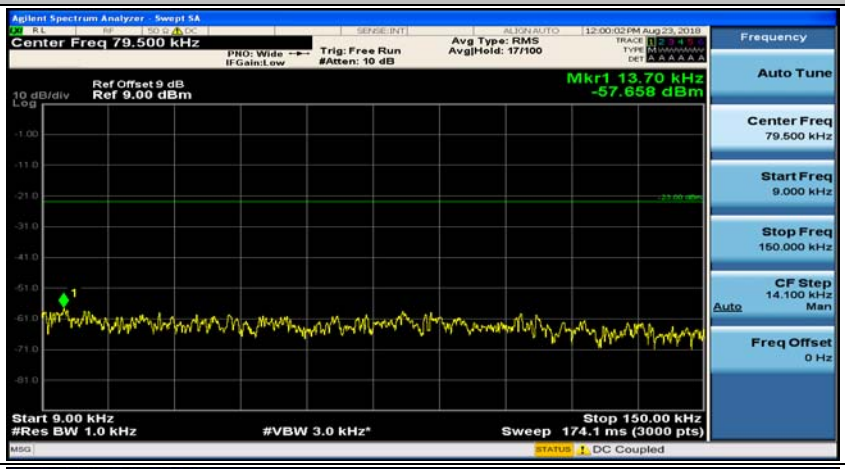
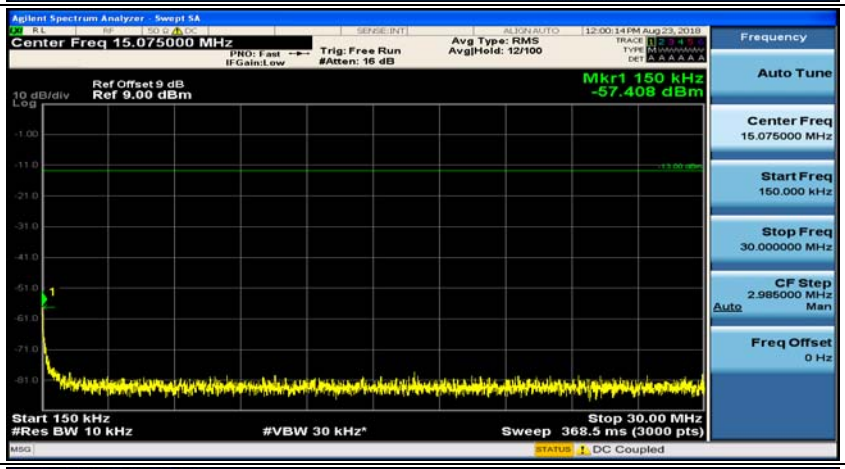
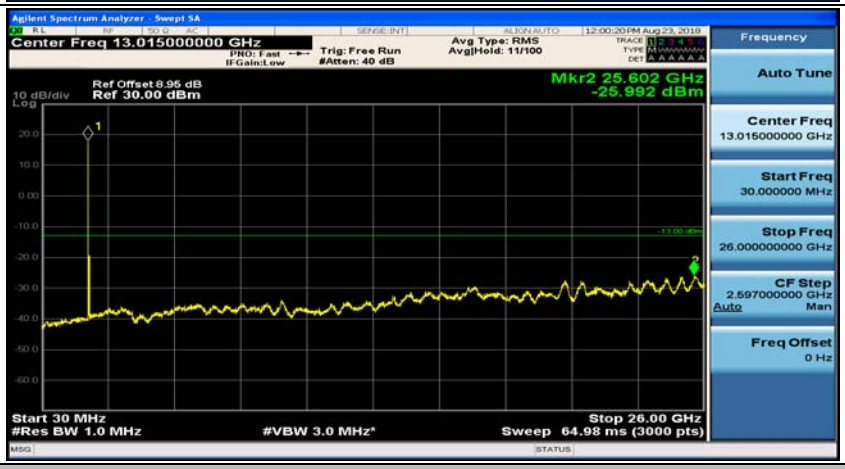


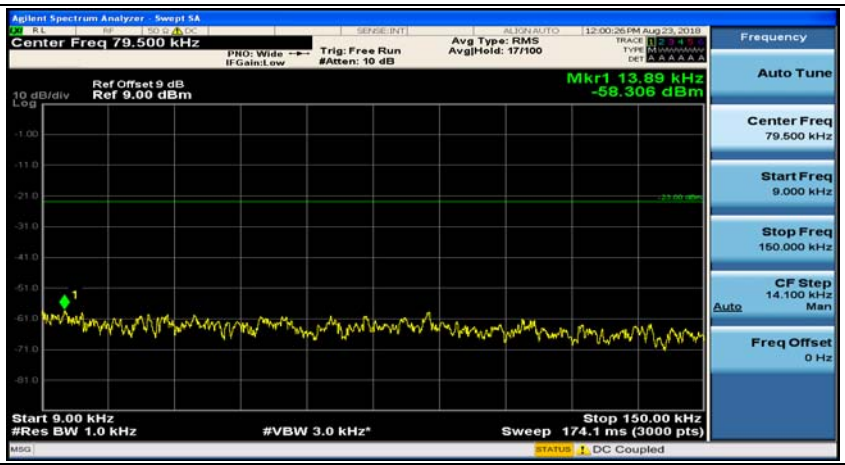
(Channel Bandwidth:20 MHz)_HCH_QPSK_1RB#99

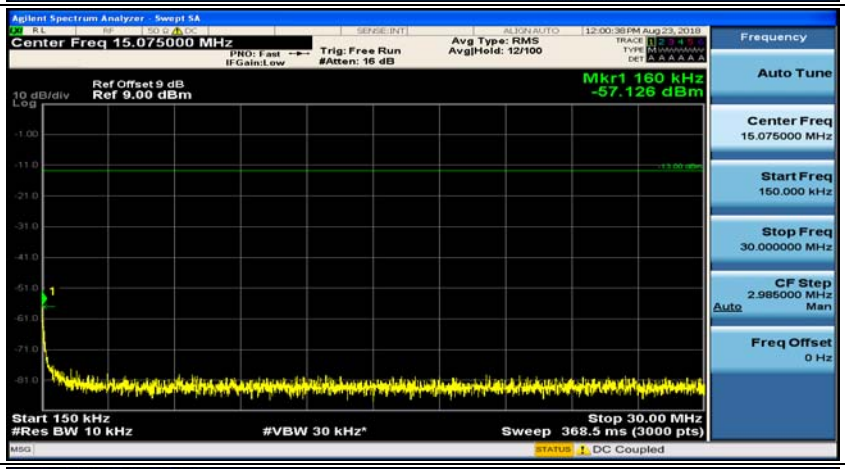

Agilent Spectrum Analyzer - Swept SA
Center Freq 79.500 kHz
PNO: Wide
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 17/100
12:04:29 PM Aug 23, 2018
Frequency
Auto Tune
Mkr1 89.77 kHz
-59.608 dBm
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Center Freq
79.500 kHz
Start Freq
9.000 kHz
Stop Freq
150.000 kHz
CF Step
14.100 kHz
Auto
Man
Freq Offset
0 Hz
Start 9.00 kHz
#Res BW 1.0 kHz
#VBW 3.0 kHz*
Stop 150.00 kHz
Sweep 174.1 ms (3000 pts)
DC Coupled


Agilent Spectrum Analyzer - Swept SA
Center Freq 15.075000 MHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 16 dB
Avg Type: RMS
Avg|Hold: 13/100
12:04:42 PM Aug 23, 2018
Frequency
Auto Tune
Mkr1 160 kHz
-58.303 dBm
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Center Freq
15.075000 MHz
Start Freq
150.000 kHz
Stop Freq
30.000000 MHz
CF Step
2.985000 MHz
Auto
Man
Freq Offset
0 Hz
Start 150 kHz
#Res BW 10 kHz
#VBW 30 kHz*
Stop 30.00 MHz
Sweep 368.5 ms (3000 pts)
DC Coupled

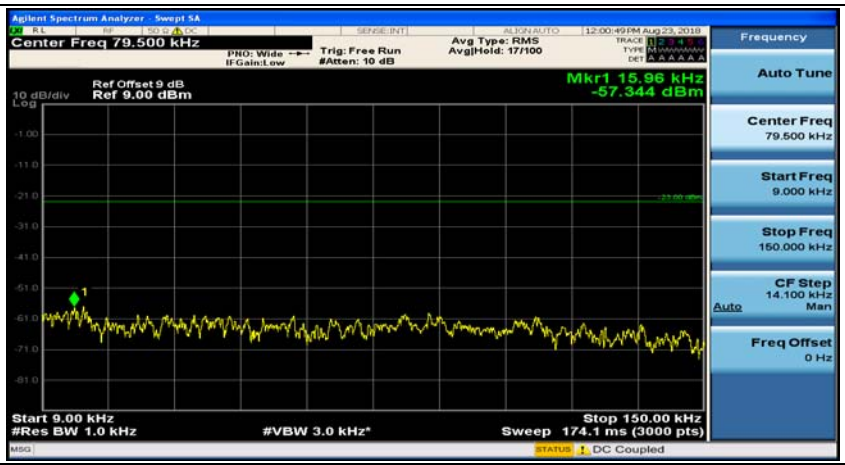

Agilent Spectrum Analyzer - Swept SA
Center Freq 13.015000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 40 dB
Avg Type: RMS
Avg|Hold: 11/100
12:04:47 PM Aug 23, 2018
Frequency
Auto Tune
Mkr2 25.662 GHz
-25.792 dBm
Ref Offset 8.95 dB
10 dB/div
Log
Ref 30.00 dBm
Center Freq
13.015000000 GHz
Start Freq
30.000000 MHz
Stop Freq
26.000000000 GHz
CF Step
2.597000000 GHz
Auto
Man
Freq Offset
0 Hz
Start 30 MHz
#Res BW 1.0 MHz
#VBW 3.0 MHz*
Stop 26.00 GHz
Sweep 64.98 ms (3000 pts)

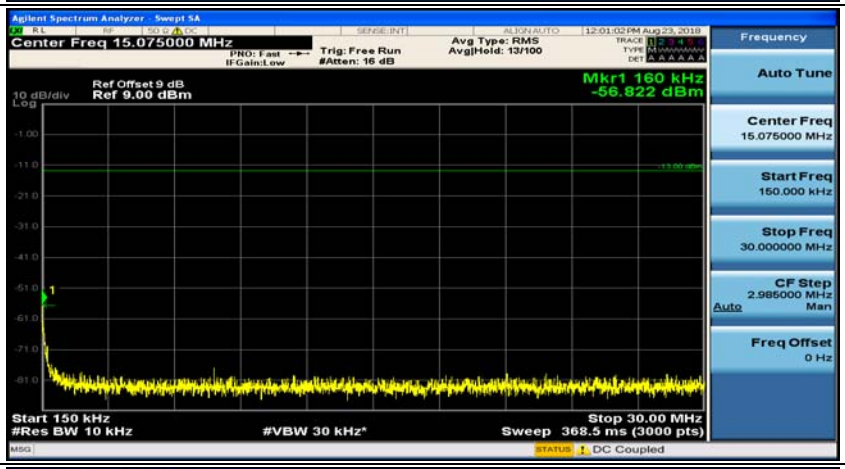
(Channel Bandwidth:20 MHz)_LCH_16QAM_1RB#0



(Channel Bandwidth:20 MHz)_LCH_16QAM_1RB#49

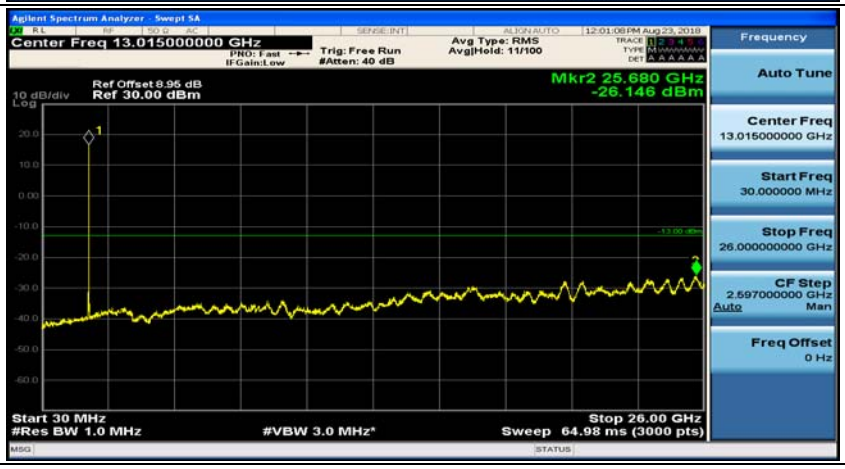


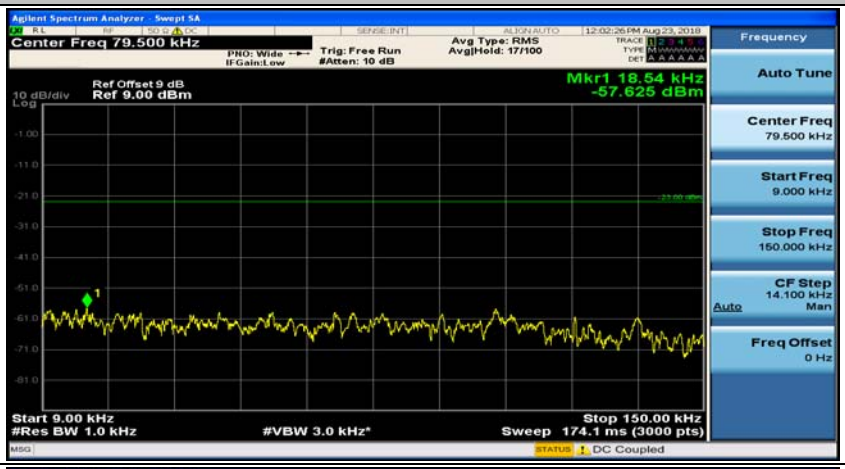
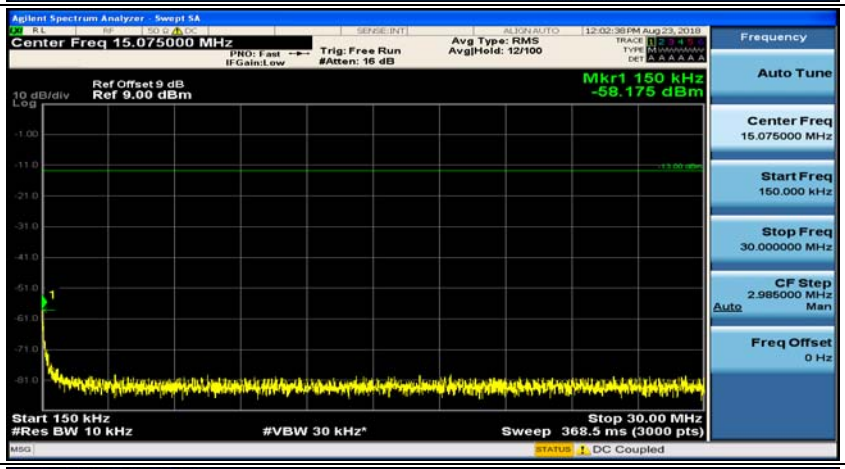
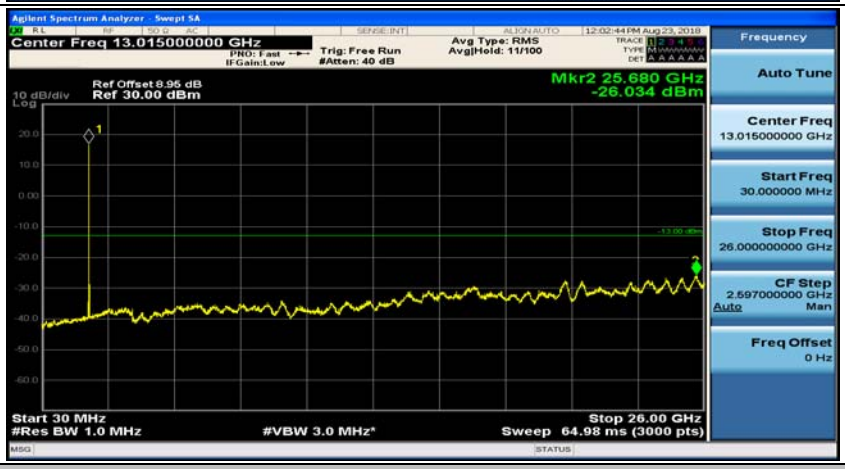


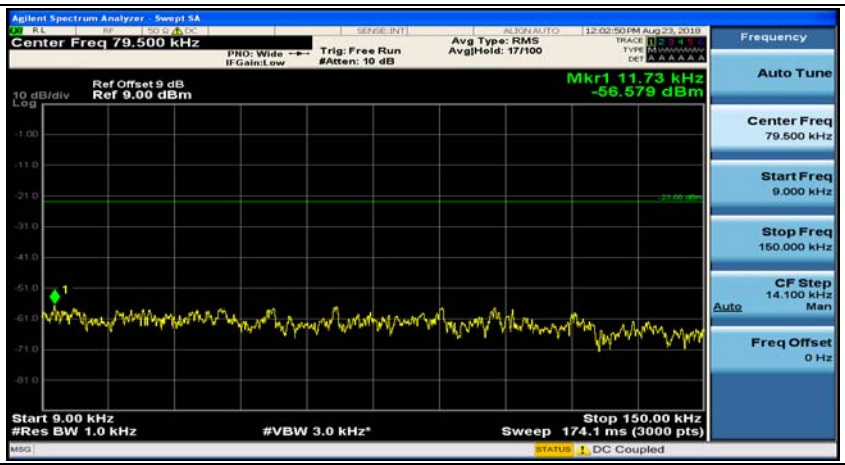
(Channel Bandwidth:20 MHz)_LCH_16QAM_1RB#99

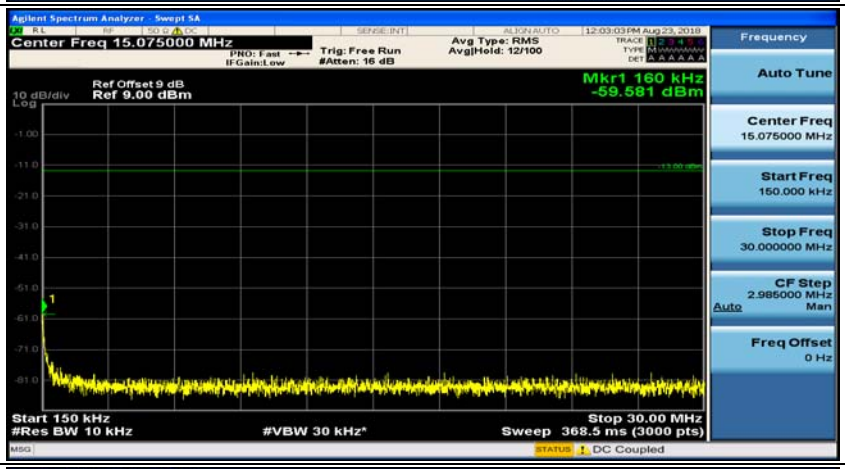

Agilent Spectrum Analyzer - Swept SA
Center Freq 79.500 kHz
PNO: Wide
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 17/100
12:00:49 PM Aug 23, 2018
Frequency
Auto Tune
Mkr1 15.96 kHz
-57.344 dBm
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Center Freq
79.500 kHz
Start Freq
9.000 kHz
Stop Freq
150.000 kHz
CF Step
14.100 kHz
Auto
Man
Freq Offset
0 Hz
Start 9.00 kHz
#Res BW 1.0 kHz
#VBW 3.0 kHz*
Stop 150.00 kHz
Sweep 174.1 ms (3000 pts)
DC Coupled

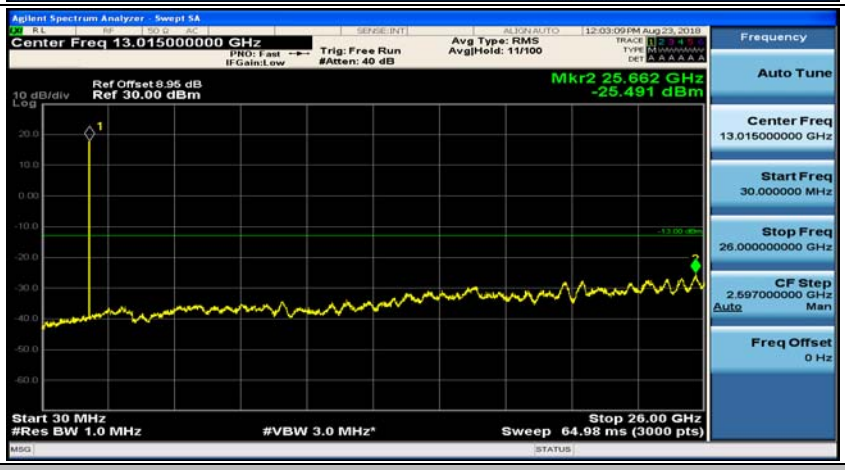

Agilent Spectrum Analyzer - Swept SA
Center Freq 15.075000 MHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 16 dB
Avg Type: RMS
Avg|Hold: 13/100
12:01:02 PM Aug 23, 2018
Frequency
Auto Tune
Mkr1 160 kHz
-56.822 dBm
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Center Freq
15.075000 MHz
Start Freq
150.000 kHz
Stop Freq
30.000000 MHz
CF Step
2.985000 MHz
Auto
Man
Freq Offset
0 Hz
Start 150 kHz
#Res BW 10 kHz
#VBW 30 kHz*
Stop 30.00 MHz
Sweep 368.5 ms (3000 pts)
DC Coupled


Agilent Spectrum Analyzer - Swept SA
Center Freq 13.015000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 40 dB
Avg Type: RMS
Avg|Hold: 11/100
12:01:08 PM Aug 23, 2018
Frequency
Auto Tune
Mkr2 25.680 GHz
-26.146 dBm
Ref Offset 8.95 dB
10 dB/div
Log
Ref 30.00 dBm
Center Freq
13.015000000 GHz
Start Freq
30.000000 MHz
Stop Freq
26.000000000 GHz
CF Step
2.597000000 GHz
Auto
Man
Freq Offset
0 Hz
Start 30 MHz
#Res BW 1.0 MHz
#VBW 3.0 MHz*
Stop 26.00 GHz
Sweep 64.98 ms (3000 pts)

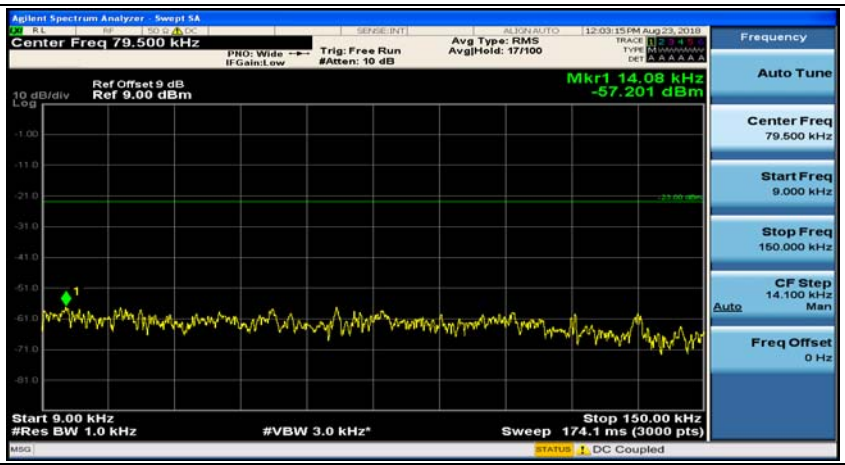
(Channel Bandwidth:20 MHz)_MCH_16QAM_1RB#0



(Channel Bandwidth:20 MHz)_MCH_16QAM_1RB#49

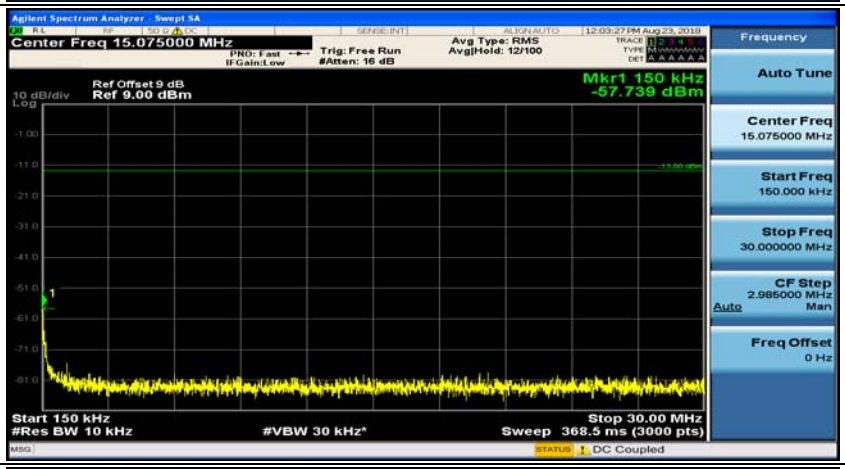


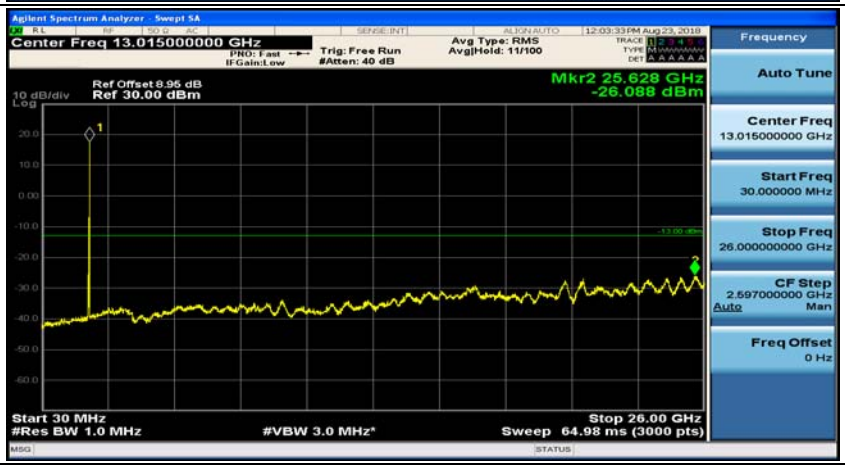


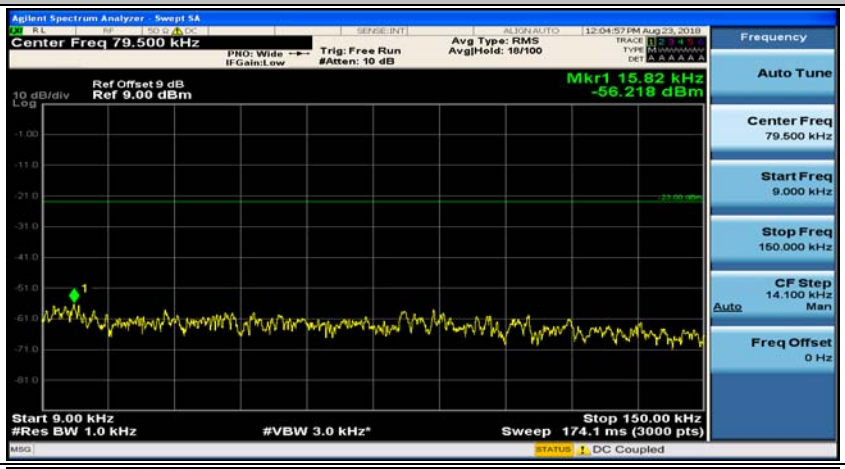
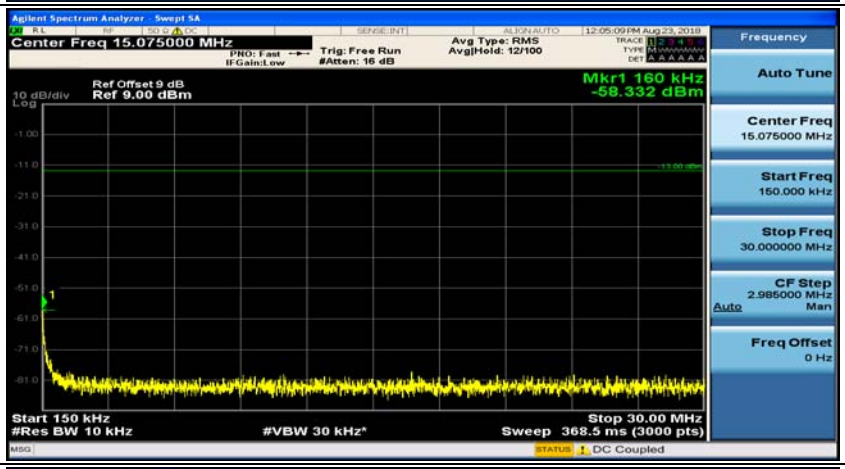
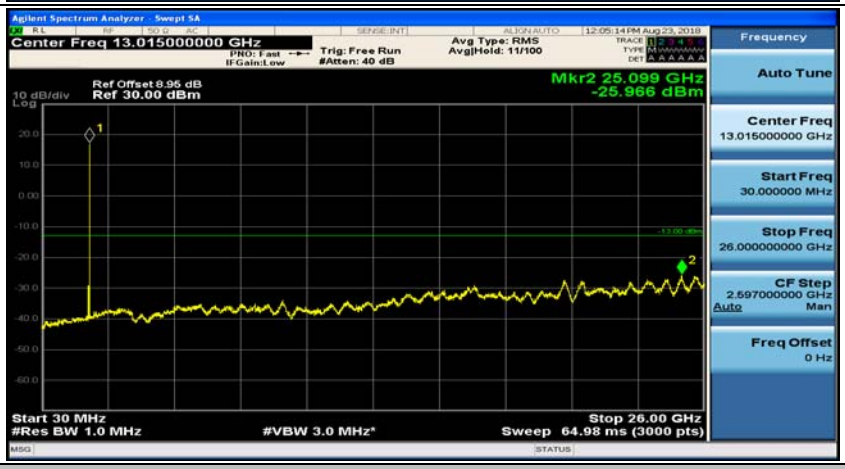


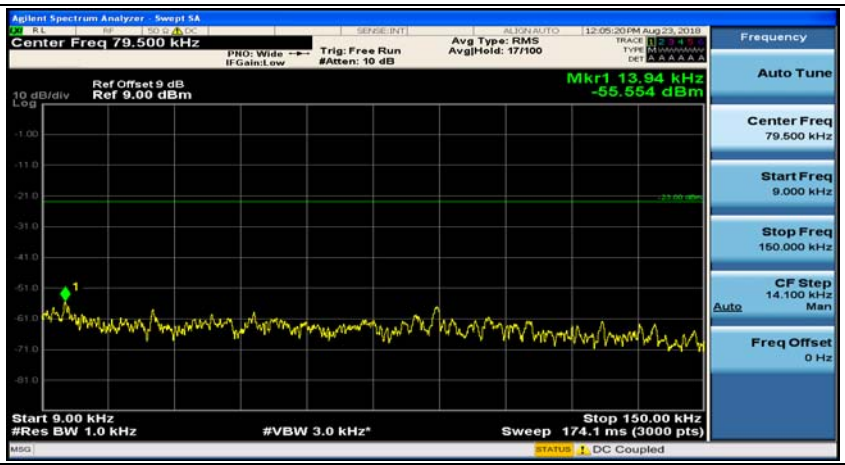
(Channel Bandwidth:20 MHz)_MCH_16QAM_1RB#99

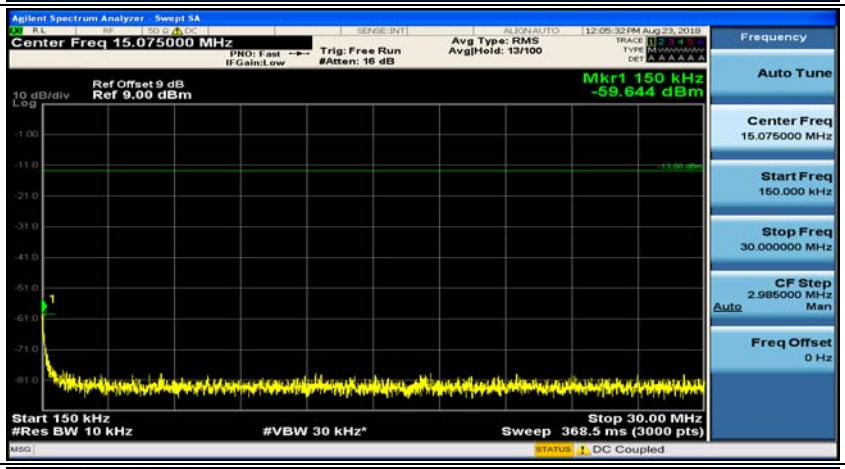

Agilent Spectrum Analyzer - Swept SA
Center Freq 79.500 kHz
PNO: Wide
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 17/100
12:03:15 PM Aug 23, 2018
Frequency
Auto Tune
Mkr1 14.08 kHz
-57.201 dBm
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Center Freq
79.500 kHz
Start Freq
9.000 kHz
Stop Freq
150.000 kHz
CF Step
14.100 kHz
Auto
Man
Freq Offset
0 Hz
Start 9.00 kHz
#Res BW 1.0 kHz
#VBW 3.0 kHz*
Stop 150.00 kHz
Sweep 174.1 ms (3000 pts)
DC Coupled


Agilent Spectrum Analyzer - Swept SA
Center Freq 15.075000 MHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 16 dB
Avg Type: RMS
Avg|Hold: 12/100
12:03:27 PM Aug 23, 2018
Frequency
Auto Tune
Mkr1 150 kHz
-57.739 dBm
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Center Freq
15.075000 MHz
Start Freq
150.000 kHz
Stop Freq
30.000000 MHz
CF Step
2.985000 MHz
Auto
Man
Freq Offset
0 Hz
Start 150 kHz
#Res BW 10 kHz
#VBW 30 kHz*
Stop 30.00 MHz
Sweep 368.5 ms (3000 pts)
DC Coupled

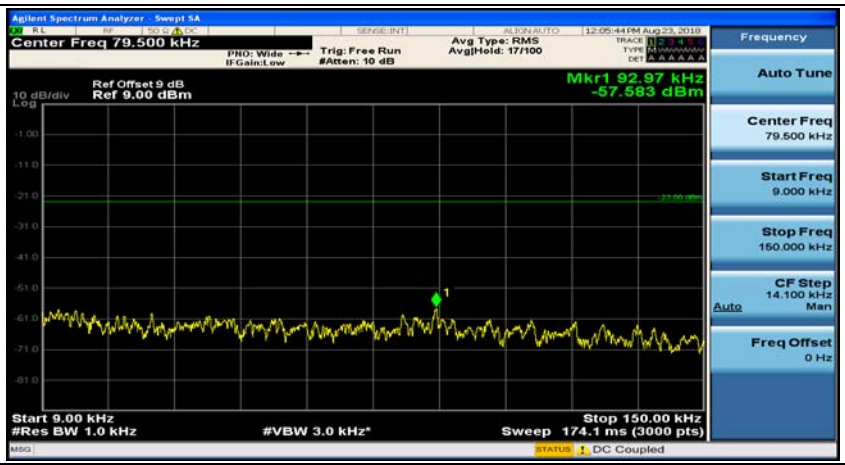

Agilent Spectrum Analyzer - Swept SA
Center Freq 13.015000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 40 dB
Avg Type: RMS
Avg|Hold: 11/100
12:03:33 PM Aug 23, 2018
Frequency
Auto Tune
Mkr2 25.628 GHz
-26.088 dBm
Ref Offset 8.95 dB
10 dB/div
Log
Ref 30.00 dBm
Center Freq
13.015000000 GHz
Start Freq
30.000000 MHz
Stop Freq
26.000000000 GHz
CF Step
2.597000000 GHz
Auto
Man
Freq Offset
0 Hz
Start 30 MHz
#Res BW 1.0 MHz
#VBW 3.0 MHz*
Stop 26.00 GHz
Sweep 64.98 ms (3000 pts)

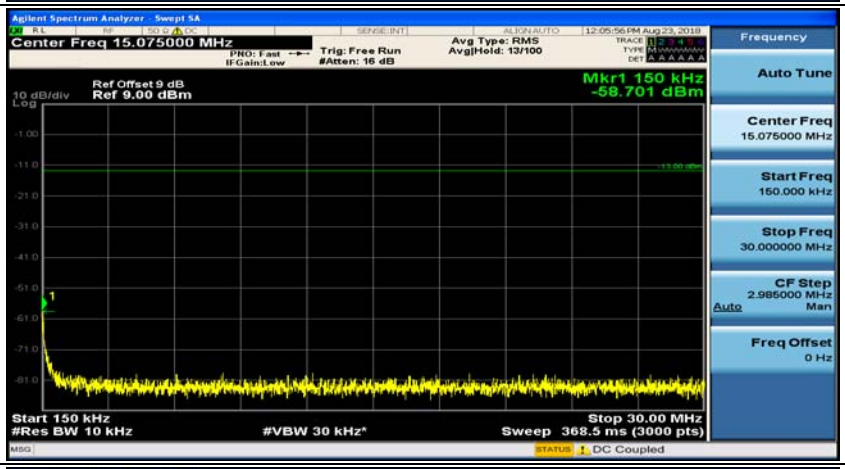
(Channel Bandwidth:20 MHz)_HCH_16QAM_1RB#0



(Channel Bandwidth:20 MHz)_HCH_16QAM_1RB#49

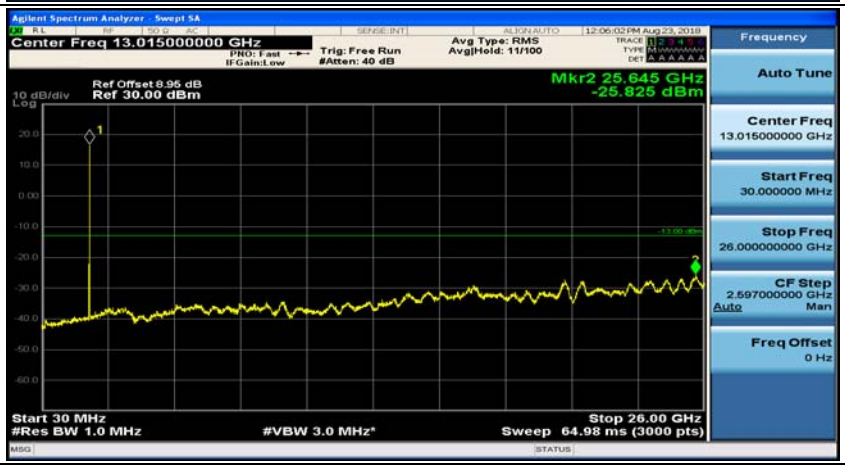




(Channel Bandwidth:20 MHz)_HCH_16QAM_1RB#99


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
12:05:44 PM Aug 23, 2018
Frequency
Auto Tune
Mkr1 92.97 kHz
-57.583 dBm
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Center Freq
79.500 kHz
Start Freq
9.000 kHz
Stop Freq
150.000 kHz
CF Step
14.100 kHz
Auto
Man
Freq Offset
0 Hz
Start 9.00 kHz
#Res BW 1.0 kHz
#VBW 3.0 kHz*
Stop 150.00 kHz
Sweep 174.1 ms (3000 pts)
DC Coupled


Agilent Spectrum Analyzer - Swept SA
Center Freq 15.075000 MHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 16 dB
Avg Type: RMS
Avg|Hold: 13/100
12:05:56 PM Aug 23, 2018
Frequency
Auto Tune
Mkr1 150 kHz
-58.701 dBm
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Center Freq
15.075000 MHz
Start Freq
150.000 kHz
Stop Freq
30.000000 MHz
CF Step
2.985000 MHz
Auto
Man
Freq Offset
0 Hz
Start 150 kHz
#Res BW 10 kHz
#VBW 30 kHz*
Stop 30.00 MHz
Sweep 368.5 ms (3000 pts)
DC Coupled


Agilent Spectrum Analyzer - Swept SA
Center Freq 13.015000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 40 dB
Avg Type: RMS
Avg|Hold: 11/100
12:06:02 PM Aug 23, 2018
Frequency
Auto Tune
Mkr2 25.645 GHz
-25.825 dBm
Ref Offset 8.95 dB
10 dB/div
Log
Ref 30.00 dBm
Center Freq
13.015000000 GHz
Start Freq
30.000000 MHz
Stop Freq
26.000000000 GHz
CF Step
2.597000000 GHz
Auto
Man
Freq Offset
0 Hz
Start 30 MHz
#Res BW 1.0 MHz
#VBW 3.0 MHz*
Stop 26.00 GHz
Sweep 64.98 ms (3000 pts)

Appendix F: Frequency Stability

Test Result

Channel Bandwidth: 1.4 MHz

Channel Bandwidth: 1.4 MHz							
Voltage							
Modulation	Channel	Voltage [Vdc]	Temperature (℃)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
QPSK	LCH	VL	TN	2.51	0.001356	± 2.5	PASS
		VN	TN	4.74	0.002561	± 2.5	PASS
		VH	TN	1.59	0.000859	± 2.5	PASS
	MCH	VL	TN	-0.63	-0.000335	± 2.5	PASS
		VN	TN	3.46	0.001838	± 2.5	PASS
		VH	TN	3.09	0.001641	± 2.5	PASS
	HCH	VL	TN	-1.8	-0.000940	± 2.5	PASS
		VN	TN	-0.93	-0.000486	± 2.5	PASS
		VH	TN	0.55	0.000287	± 2.5	PASS
16QAM	LCH	VL	TN	3.37	0.001821	± 2.5	PASS
		VN	TN	0.61	0.000330	± 2.5	PASS
		VH	TN	3.04	0.001643	± 2.5	PASS
	MCH	VL	TN	0.29	0.000154	± 2.5	PASS
		VN	TN	4.61	0.002449	± 2.5	PASS
		VH	TN	3.08	0.001636	± 2.5	PASS
	HCH	VL	TN	1.44	0.000754	± 2.5	PASS
		VN	TN	2.55	0.001336	± 2.5	PASS
		VH	TN	-0.88	-0.000461	± 2.5	PASS
Temperature							
Modulation	Channel	Voltage [Vdc]	Temperature (℃)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
QPSK	LCH	VN	-30	-0.19	-0.000103	± 2.5	PASS
		VN	-20	4.01	0.002167	± 2.5	PASS
		VN	-10	-1.84	-0.000994	± 2.5	PASS
		VN	0	4.66	0.002518	± 2.5	PASS
		VN	10	4.14	0.002237	± 2.5	PASS
		VN	20	1.91	0.001032	± 2.5	PASS
		VN	30	2.47	0.001335	± 2.5	PASS
		VN	40	2.74	0.001481	± 2.5	PASS
		VN	50	0.65	0.000351	± 2.5	PASS
	MCH	VN	-30	3.75	0.001992	± 2.5	PASS

		VN	-20	-0.13	-0.000069	± 2.5	PASS
		VN	-10	1.89	0.001004	± 2.5	PASS
		VN	0	4.52	0.002401	± 2.5	PASS
		VN	10	-1.49	-0.000792	± 2.5	PASS
		VN	20	4.42	0.002348	± 2.5	PASS
		VN	30	1.21	0.000643	± 2.5	PASS
		VN	40	4.79	0.002544	± 2.5	PASS
		VN	50	3.05	0.001620	± 2.5	PASS
	HCH	VN	-30	1.13	0.000590	± 2.5	PASS
		VN	-20	4.16	0.002173	± 2.5	PASS
		VN	-10	-1.19	-0.000622	± 2.5	PASS
		VN	0	-0.84	-0.000439	± 2.5	PASS
		VN	10	-1.26	-0.000658	± 2.5	PASS
		VN	20	-1.84	-0.000961	± 2.5	PASS
		VN	30	3.74	0.001954	± 2.5	PASS
		VN	40	-1.78	-0.000930	± 2.5	PASS
		VN	50	-1.21	-0.000632	± 2.5	PASS
16QAM	LCH	VN	-30	0.62	0.000335	± 2.5	PASS
		VN	-20	3.27	0.001767	± 2.5	PASS
		VN	-10	3.04	0.001643	± 2.5	PASS
		VN	0	3.08	0.001664	± 2.5	PASS
		VN	10	0.51	0.000276	± 2.5	PASS
		VN	20	-0.21	-0.000113	± 2.5	PASS
		VN	30	2.99	0.001616	± 2.5	PASS
		VN	40	1.11	0.000600	± 2.5	PASS
		VN	50	4.46	0.002410	± 2.5	PASS
	MCH	VN	-30	3.36	0.001785	± 2.5	PASS
		VN	-20	1.65	0.000876	± 2.5	PASS
		VN	-10	-1.5	-0.000797	± 2.5	PASS
		VN	0	1.67	0.000887	± 2.5	PASS
		VN	10	2.38	0.001264	± 2.5	PASS
		VN	20	0.14	0.000074	± 2.5	PASS
		VN	30	4.79	0.002544	± 2.5	PASS
		VN	40	0.83	0.000441	± 2.5	PASS
		VN	50	3.64	0.001934	± 2.5	PASS
	HCH	VN	-30	2.12	0.001107	± 2.5	PASS
		VN	-20	1.91	0.000998	± 2.5	PASS
		VN	-10	1.61	0.000841	± 2.5	PASS
		VN	0	-0.49	-0.000256	± 2.5	PASS
		VN	10	3.08	0.001609	± 2.5	PASS
		VN	20	4.24	0.002215	± 2.5	PASS

		VN	30	0.23	0.000120	± 2.5	PASS
		VN	40	4.86	0.002539	± 2.5	PASS
		VN	50	4.8	0.002507	± 2.5	PASS

Channel Bandwidth: 3 MHz

Channel Bandwidth: 3 MHz+							
Voltage							
Modulation	Channel	Voltage [Vdc]	Temperature (℃)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
QPSK	LCH	VL	TN	0.27	0.000146	± 2.5	PASS
		VN	TN	0.83	0.000448	± 2.5	PASS
		VH	TN	1	0.000540	± 2.5	PASS
	MCH	VL	TN	4.38	0.002327	± 2.5	PASS
		VN	TN	4.85	0.002576	± 2.5	PASS
		VH	TN	1.16	0.000616	± 2.5	PASS
	HCH	VL	TN	-1.62	-0.000847	± 2.5	PASS
		VN	TN	0.02	0.000010	± 2.5	PASS
		VH	TN	1.66	0.000868	± 2.5	PASS
16QAM	LCH	VL	TN	2.48	0.001339	± 2.5	PASS
		VN	TN	0.71	0.000383	± 2.5	PASS
		VH	TN	3.23	0.001745	± 2.5	PASS
	MCH	VL	TN	2.78	0.001477	± 2.5	PASS
		VN	TN	1.46	0.000776	± 2.5	PASS
		VH	TN	3.62	0.001923	± 2.5	PASS
	HCH	VL	TN	4.58	0.002394	± 2.5	PASS
		VN	TN	-1.85	-0.000967	± 2.5	PASS
		VH	TN	4.23	0.002211	± 2.5	PASS
Temperature							
Modulation	Channel	Voltage [Vdc]	Temperature (℃)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
QPSK	LCH	VN	-30	2.57	0.001388	± 2.5	PASS
		VN	-20	1.94	0.001048	± 2.5	PASS
		VN	-10	1.85	0.000999	± 2.5	PASS
		VN	0	4.52	0.002441	± 2.5	PASS
		VN	10	0.8	0.000432	± 2.5	PASS
		VN	20	0.54	0.000292	± 2.5	PASS
		VN	30	2.84	0.001534	± 2.5	PASS
		VN	40	3.71	0.002004	± 2.5	PASS
		VN	50	2.05	0.001107	± 2.5	PASS
	MCH	VN	-30	1.75	0.000930	± 2.5	PASS
		VN	-20	-0.66	-0.000351	± 2.5	PASS

		VN	-10	4.45	0.002364	± 2.5	PASS
		VN	0	4.3	0.002284	± 2.5	PASS
		VN	10	0.86	0.000457	± 2.5	PASS
		VN	20	2.1	0.001116	± 2.5	PASS
		VN	30	-1.85	-0.000983	± 2.5	PASS
		VN	40	3.91	0.002077	± 2.5	PASS
		VN	50	1.89	0.001004	± 2.5	PASS
	HCH	VN	-30	2.57	0.001343	± 2.5	PASS
		VN	-20	-1.69	-0.000883	± 2.5	PASS
		VN	-10	-1.77	-0.000925	± 2.5	PASS
		VN	0	1.98	0.001035	± 2.5	PASS
		VN	10	3.98	0.002080	± 2.5	PASS
		VN	20	2.73	0.001427	± 2.5	PASS
		VN	30	3.77	0.001970	± 2.5	PASS
		VN	40	1.82	0.000951	± 2.5	PASS
		VN	50	3.89	0.002033	± 2.5	PASS
16QAM	LCH	VN	-30	3.97	0.002144	± 2.5	PASS
		VN	-20	1.09	0.000589	± 2.5	PASS
		VN	-10	3.44	0.001858	± 2.5	PASS
		VN	0	2.81	0.001518	± 2.5	PASS
		VN	10	1.88	0.001015	± 2.5	PASS
		VN	20	-0.44	-0.000238	± 2.5	PASS
		VN	30	4.51	0.002436	± 2.5	PASS
		VN	40	4.47	0.002414	± 2.5	PASS
		VN	50	4.46	0.002409	± 2.5	PASS
	MCH	VN	-30	1.09	0.000579	± 2.5	PASS
		VN	-20	2.44	0.001296	± 2.5	PASS
		VN	-10	3.89	0.002066	± 2.5	PASS
		VN	0	-1.69	-0.000898	± 2.5	PASS
		VN	10	3.83	0.002035	± 2.5	PASS
		VN	20	0.45	0.000239	± 2.5	PASS
		VN	30	3.92	0.002082	± 2.5	PASS
		VN	40	1.62	0.000861	± 2.5	PASS
		VN	50	4.24	0.002252	± 2.5	PASS
	HCH	VN	-30	2.76	0.001442	± 2.5	PASS
		VN	-20	4.79	0.002503	± 2.5	PASS
		VN	-10	-1.19	-0.000622	± 2.5	PASS
		VN	0	2.97	0.001552	± 2.5	PASS
		VN	10	2.81	0.001469	± 2.5	PASS
		VN	20	-0.18	-0.000094	± 2.5	PASS
		VN	30	-0.41	-0.000214	± 2.5	PASS

		VN	40	-0.91	-0.000476	± 2.5	PASS
		VN	50	-0.21	-0.000110	± 2.5	PASS

Channel Bandwidth: 5 MHz

Channel Bandwidth: 5 MHz							
Voltage							
Modulation	Channel	Voltage [Vdc]	Temperature (℃)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
QPSK	LCH	VL	TN	1.49	0.000804	± 2.5	PASS
		VN	TN	0.25	0.000135	± 2.5	PASS
		VH	TN	1.57	0.000848	± 2.5	PASS
	MCH	VL	TN	4.79	0.002544	± 2.5	PASS
		VN	TN	4.01	0.002130	± 2.5	PASS
		VH	TN	0.44	0.000234	± 2.5	PASS
	HCH	VL	TN	2.62	0.001370	± 2.5	PASS
		VN	TN	3.12	0.001631	± 2.5	PASS
		VH	TN	1.13	0.000591	± 2.5	PASS
16QAM	LCH	VL	TN	3.67	0.001981	± 2.5	PASS
		VN	TN	-1.64	-0.000885	± 2.5	PASS
		VH	TN	3.92	0.002116	± 2.5	PASS
	MCH	VL	TN	2.45	0.001301	± 2.5	PASS
		VN	TN	2.63	0.001397	± 2.5	PASS
		VH	TN	-0.3	-0.000159	± 2.5	PASS
	HCH	VL	TN	3.13	0.001637	± 2.5	PASS
		VN	TN	4.64	0.002426	± 2.5	PASS
		VH	TN	4.73	0.002473	± 2.5	PASS
Temperature							
Modulation	Channel	Voltage [Vdc]	Temperature (℃)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
QPSK	LCH	VN	-30	2.73	0.001474	± 2.5	PASS
		VN	-20	1.18	0.000637	± 2.5	PASS
		VN	-10	-1.28	-0.000691	± 2.5	PASS
		VN	0	-1.59	-0.000858	± 2.5	PASS
		VN	10	2.4	0.001296	± 2.5	PASS
		VN	20	2.55	0.001377	± 2.5	PASS
		VN	30	-0.65	-0.000351	± 2.5	PASS
		VN	40	2.31	0.001247	± 2.5	PASS
		VN	50	2.91	0.001571	± 2.5	PASS
	MCH	VN	-30	0.36	0.000191	± 2.5	PASS
		VN	-20	3.02	0.001604	± 2.5	PASS
		VN	-10	0	0.000000	± 2.5	PASS

		VN	0	1.33	0.000707	± 2.5	PASS
		VN	10	0.09	0.000048	± 2.5	PASS
		VN	20	1.36	0.000722	± 2.5	PASS
		VN	30	0.31	0.000165	± 2.5	PASS
		VN	40	4.91	0.002608	± 2.5	PASS
		VN	50	3.64	0.001934	± 2.5	PASS
	HCH	VN	-30	1.75	0.000915	± 2.5	PASS
		VN	-20	3.9	0.002039	± 2.5	PASS
		VN	-10	3.18	0.001663	± 2.5	PASS
		VN	0	0.06	0.000031	± 2.5	PASS
		VN	10	-0.53	-0.000277	± 2.5	PASS
		VN	20	-1.03	-0.000539	± 2.5	PASS
		VN	30	1.75	0.000915	± 2.5	PASS
		VN	40	-0.1	-0.000052	± 2.5	PASS
		VN	50	2.32	0.001213	± 2.5	PASS
16QAM	LCH	VN	-30	4.34	0.002343	± 2.5	PASS
		VN	-20	-1.67	-0.000901	± 2.5	PASS
		VN	-10	4.37	0.002359	± 2.5	PASS
		VN	0	0.6	0.000324	± 2.5	PASS
		VN	10	4.07	0.002197	± 2.5	PASS
		VN	20	1.25	0.000675	± 2.5	PASS
		VN	30	0.9	0.000486	± 2.5	PASS
		VN	40	3.5	0.001889	± 2.5	PASS
		VN	50	-1.19	-0.000642	± 2.5	PASS
	MCH	VN	-30	4.07	0.002162	± 2.5	PASS
		VN	-20	1.55	0.000823	± 2.5	PASS
		VN	-10	2.27	0.001206	± 2.5	PASS
		VN	0	-0.18	-0.000096	± 2.5	PASS
		VN	10	-0.41	-0.000218	± 2.5	PASS
		VN	20	3.67	0.001950	± 2.5	PASS
		VN	30	0.59	0.000313	± 2.5	PASS
		VN	40	0.94	0.000499	± 2.5	PASS
		VN	50	0	0.000000	± 2.5	PASS
	HCH	VN	-30	-1.16	-0.000607	± 2.5	PASS
		VN	-20	-1.86	-0.000973	± 2.5	PASS
		VN	-10	-1.53	-0.000800	± 2.5	PASS
		VN	0	3.39	0.001773	± 2.5	PASS
		VN	10	3.02	0.001579	± 2.5	PASS
		VN	20	-0.04	-0.000021	± 2.5	PASS
		VN	30	-0.09	-0.000047	± 2.5	PASS
		VN	40	-0.33	-0.000173	± 2.5	PASS

		VN	50	4.99	0.002609	± 2.5	PASS

Channel Bandwidth: 10 MHz

Channel Bandwidth: 10 MHz							
Voltage							
Modulation	Channel	Voltage [Vdc]	Temperature (℃)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
QPSK	LCH	VL	TN	-1.18	-0.000636	± 2.5	PASS
		VN	TN	-0.56	-0.000302	± 2.5	PASS
		VH	TN	2.82	0.001520	± 2.5	PASS
	MCH	VL	TN	1.01	0.000537	± 2.5	PASS
		VN	TN	-0.9	-0.000478	± 2.5	PASS
		VH	TN	-1.7	-0.000903	± 2.5	PASS
	HCH	VL	TN	0.25	0.000131	± 2.5	PASS
		VN	TN	2.22	0.001162	± 2.5	PASS
		VH	TN	1.44	0.000754	± 2.5	PASS
16QAM	LCH	VL	TN	-1.11	-0.000598	± 2.5	PASS
		VN	TN	3.37	0.001817	± 2.5	PASS
		VH	TN	2.74	0.001477	± 2.5	PASS
	MCH	VL	TN	-1.8	-0.000956	± 2.5	PASS
		VN	TN	0.04	0.000021	± 2.5	PASS
		VH	TN	-0.58	-0.000308	± 2.5	PASS
	HCH	VL	TN	3.1	0.001623	± 2.5	PASS
		VN	TN	-0.96	-0.000503	± 2.5	PASS
		VH	TN	4.36	0.002283	± 2.5	PASS
Temperature							
Modulation	Channel	Voltage [Vdc]	Temperature (℃)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
16QAM	LCH	VN	-30	-1.42	-0.000765	± 2.5	PASS
		VN	-20	-1.72	-0.000927	± 2.5	PASS
		VN	-10	2.81	0.001515	± 2.5	PASS
		VN	0	-0.22	-0.000119	± 2.5	PASS
		VN	10	0.65	0.000350	± 2.5	PASS
		VN	20	-0.59	-0.000318	± 2.5	PASS
		VN	30	-1.64	-0.000884	± 2.5	PASS
		VN	40	2.23	0.001202	± 2.5	PASS
		VN	50	2.48	0.001337	± 2.5	PASS
	MCH	VN	-30	-0.11	-0.000058	± 2.5	PASS
		VN	-20	4.23	0.002247	± 2.5	PASS
		VN	-10	3.59	0.001907	± 2.5	PASS
		VN	0	3.97	0.002109	± 2.5	PASS

		VN	10	-1.63	-0.000866	± 2.5	PASS
		VN	20	4.88	0.002592	± 2.5	PASS
		VN	30	0.71	0.000377	± 2.5	PASS
		VN	40	-1.36	-0.000722	± 2.5	PASS
		VN	50	1.51	0.000802	± 2.5	PASS
	HCH	VN	-30	0.32	0.000168	± 2.5	PASS
		VN	-20	2.52	0.001319	± 2.5	PASS
		VN	-10	-1.1	-0.000576	± 2.5	PASS
		VN	0	4.56	0.002387	± 2.5	PASS
		VN	10	2.44	0.001277	± 2.5	PASS
		VN	20	-0.27	-0.000141	± 2.5	PASS
		VN	30	-1.68	-0.000880	± 2.5	PASS
		VN	40	4.6	0.002408	± 2.5	PASS
		VN	50	0.28	0.000147	± 2.5	PASS
QPSK	LCH	VN	-30	-1.94	-0.001046	± 2.5	PASS
		VN	-20	-1.85	-0.000997	± 2.5	PASS
		VN	-10	2.2	0.001186	± 2.5	PASS
		VN	0	1.69	0.000911	± 2.5	PASS
		VN	10	1.77	0.000954	± 2.5	PASS
		VN	20	4.98	0.002685	± 2.5	PASS
		VN	30	0.8	0.000431	± 2.5	PASS
		VN	40	4.39	0.002367	± 2.5	PASS
		VN	50	-1.22	-0.000658	± 2.5	PASS
	MCH	VN	-30	1.33	0.000707	± 2.5	PASS
		VN	-20	-1.42	-0.000754	± 2.5	PASS
		VN	-10	-1.47	-0.000781	± 2.5	PASS
		VN	0	2.41	0.001280	± 2.5	PASS
		VN	10	-0.87	-0.000462	± 2.5	PASS
		VN	20	4.84	0.002571	± 2.5	PASS
		VN	30	3.35	0.001780	± 2.5	PASS
		VN	40	1.2	0.000637	± 2.5	PASS
		VN	50	4.66	0.002475	± 2.5	PASS
	HCH	VN	-30	4.98	0.002607	± 2.5	PASS
		VN	-20	-1.88	-0.000984	± 2.5	PASS
		VN	-10	1.25	0.000654	± 2.5	PASS
		VN	0	4.79	0.002508	± 2.5	PASS
		VN	10	1.23	0.000644	± 2.5	PASS
		VN	20	-1.8	-0.000942	± 2.5	PASS
		VN	30	2.76	0.001445	± 2.5	PASS
		VN	40	-0.22	-0.000115	± 2.5	PASS
		VN	50	-1.1	-0.000576	± 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	1.13	0.000608	± 2.5	PASS
		VN	TN	-1.28	-0.000689	± 2.5	PASS
		VH	TN	3.7	0.001992	± 2.5	PASS
	MCH	VL	TN	4.7	0.002497	± 2.5	PASS
		VN	TN	2.5	0.001328	± 2.5	PASS
		VH	TN	4.39	0.002332	± 2.5	PASS
	HCH	VL	TN	-1.31	-0.000687	± 2.5	PASS
		VN	TN	1.58	0.000828	± 2.5	PASS
		VH	TN	2.6	0.001363	± 2.5	PASS
16QAM	LCH	VL	TN	2.94	0.001583	± 2.5	PASS
		VN	TN	3.91	0.002105	± 2.5	PASS
		VH	TN	-1.59	-0.000856	± 2.5	PASS
	MCH	VL	TN	-0.66	-0.000351	± 2.5	PASS
		VN	TN	0.92	0.000489	± 2.5	PASS
		VH	TN	-1.46	-0.000776	± 2.5	PASS
	HCH	VL	TN	0.71	0.000372	± 2.5	PASS
		VN	TN	3.62	0.001898	± 2.5	PASS
		VH	TN	-1.65	-0.000865	± 2.5	PASS
Temperature							
Modulation	Channel	Voltage [Vdc]	Temperature (℃)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
QPSK	LCH	VN	-30	0.81	0.000436	± 2.5	PASS
		VN	-20	0.85	0.000458	± 2.5	PASS
		VN	-10	3.34	0.001798	± 2.5	PASS
		VN	0	-0.39	-0.000210	± 2.5	PASS
		VN	10	0.87	0.000468	± 2.5	PASS
		VN	20	3.87	0.002083	± 2.5	PASS
		VN	30	0.78	0.000420	± 2.5	PASS
		VN	40	3.35	0.001803	± 2.5	PASS
		VN	50	-1.34	-0.000721	± 2.5	PASS
	MCH	VN	-30	4.02	0.002135	± 2.5	PASS
		VN	-20	-1.32	-0.000701	± 2.5	PASS
		VN	-10	1.25	0.000664	± 2.5	PASS
		VN	0	2.52	0.001339	± 2.5	PASS
		VN	10	3.25	0.001726	± 2.5	PASS
		VN	20	4.15	0.002205	± 2.5	PASS

		VN	30	-0.85	-0.000452	± 2.5	PASS
		VN	40	2.01	0.001068	± 2.5	PASS
		VN	50	3.94	0.002093	± 2.5	PASS
	HCH	VN	-30	1.14	0.000598	± 2.5	PASS
		VN	-20	3.7	0.001940	± 2.5	PASS
		VN	-10	1.34	0.000702	± 2.5	PASS
		VN	0	0.77	0.000404	± 2.5	PASS
		VN	10	4.99	0.002616	± 2.5	PASS
		VN	20	2.23	0.001169	± 2.5	PASS
		VN	30	-1.55	-0.000813	± 2.5	PASS
		VN	40	-1.62	-0.000849	± 2.5	PASS
		VN	50	2.53	0.001326	± 2.5	PASS
16QAM	LCH	VN	-30	-1.08	-0.000581	± 2.5	PASS
		VN	-20	0.59	0.000318	± 2.5	PASS
		VN	-10	1.09	0.000587	± 2.5	PASS
		VN	0	2.43	0.001308	± 2.5	PASS
		VN	10	0.77	0.000415	± 2.5	PASS
		VN	20	-1.4	-0.000754	± 2.5	PASS
		VN	30	2.01	0.001082	± 2.5	PASS
		VN	40	-1.81	-0.000974	± 2.5	PASS
		VN	50	0.53	0.000285	± 2.5	PASS
	MCH	VN	-30	2.99	0.001588	± 2.5	PASS
		VN	-20	4.31	0.002290	± 2.5	PASS
		VN	-10	0.44	0.000234	± 2.5	PASS
		VN	0	2.13	0.001131	± 2.5	PASS
		VN	10	3.23	0.001716	± 2.5	PASS
		VN	20	0.44	0.000234	± 2.5	PASS
		VN	30	4.46	0.002369	± 2.5	PASS
		VN	40	-1.58	-0.000839	± 2.5	PASS
		VN	50	2.07	0.001100	± 2.5	PASS
	HCH	VN	-30	-1.96	-0.001028	± 2.5	PASS
		VN	-20	4.33	0.002270	± 2.5	PASS
		VN	-10	1.74	0.000912	± 2.5	PASS
		VN	0	-1.15	-0.000603	± 2.5	PASS
		VN	10	1.28	0.000671	± 2.5	PASS
		VN	20	3.81	0.001997	± 2.5	PASS
		VN	30	4.87	0.002553	± 2.5	PASS
		VN	40	4.17	0.002186	± 2.5	PASS
		VN	50	3.79	0.001987	± 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	0.4	0.000215	± 2.5	PASS
		VN	TN	-1.37	-0.000737	± 2.5	PASS
		VH	TN	-1.07	-0.000575	± 2.5	PASS
	MCH	VL	TN	4.98	0.002645	± 2.5	PASS
		VN	TN	2.18	0.001158	± 2.5	PASS
		VH	TN	2.75	0.001461	± 2.5	PASS
	HCH	VL	TN	-1.68	-0.000882	± 2.5	PASS
		VN	TN	4.27	0.002241	± 2.5	PASS
		VH	TN	1.28	0.000672	± 2.5	PASS
16QAM	LCH	VL	TN	3.52	0.001892	± 2.5	PASS
		VN	TN	3.44	0.001849	± 2.5	PASS
		VH	TN	4.68	0.002516	± 2.5	PASS
	MCH	VL	TN	0.78	0.000414	± 2.5	PASS
		VN	TN	-0.78	-0.000414	± 2.5	PASS
		VH	TN	4.98	0.002645	± 2.5	PASS
	HCH	VL	TN	-0.99	-0.000520	± 2.5	PASS
		VN	TN	4.15	0.002178	± 2.5	PASS
		VH	TN	2.45	0.001286	± 2.5	PASS
Temperature							
Modulation	Channel	Voltage [Vdc]	Temperature (℃)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
QPSK	LCH	VN	-30	1.42	0.000763	± 2.5	PASS
		VN	-20	3.5	0.001882	± 2.5	PASS
		VN	-10	-0.01	-0.000005	± 2.5	PASS
		VN	0	-0.48	-0.000258	± 2.5	PASS
		VN	10	-0.99	-0.000532	± 2.5	PASS
		VN	20	2.6	0.001398	± 2.5	PASS
		VN	30	3.03	0.001629	± 2.5	PASS
		VN	40	3.32	0.001785	± 2.5	PASS
		VN	50	2.69	0.001446	± 2.5	PASS
	MCH	VN	-30	-1.26	-0.000670	± 2.5	PASS
		VN	-20	3.68	0.001957	± 2.5	PASS
		VN	-10	1.71	0.000910	± 2.5	PASS
		VN	0	2.29	0.001218	± 2.5	PASS
		VN	10	0.82	0.000436	± 2.5	PASS
		VN	20	-0.78	-0.000415	± 2.5	PASS

		VN	30	-1.56	-0.000830	± 2.5	PASS
		VN	40	1.37	0.000729	± 2.5	PASS
		VN	50	-0.82	-0.000436	± 2.5	PASS
	HCH	VN	-30	1.72	0.000903	± 2.5	PASS
		VN	-20	2.9	0.001522	± 2.5	PASS
		VN	-10	3.23	0.001696	± 2.5	PASS
		VN	0	4.38	0.002299	± 2.5	PASS
		VN	10	0.31	0.000163	± 2.5	PASS
		VN	20	-0.27	-0.000142	± 2.5	PASS
		VN	30	-0.79	-0.000415	± 2.5	PASS
		VN	40	-0.73	-0.000383	± 2.5	PASS
		VN	50	2.15	0.001129	± 2.5	PASS
16QAM	LCH	VN	-30	3.83	0.002059	± 2.5	PASS
		VN	-20	-1.75	-0.000941	± 2.5	PASS
		VN	-10	0.65	0.000349	± 2.5	PASS
		VN	0	2.31	0.001242	± 2.5	PASS
		VN	10	0.96	0.000516	± 2.5	PASS
		VN	20	3.69	0.001984	± 2.5	PASS
		VN	30	-0.92	-0.000495	± 2.5	PASS
		VN	40	-1.56	-0.000839	± 2.5	PASS
		VN	50	1.64	0.000882	± 2.5	PASS
	MCH	VN	-30	-1.19	-0.000632	± 2.5	PASS
		VN	-20	1.6	0.000850	± 2.5	PASS
		VN	-10	-0.78	-0.000414	± 2.5	PASS
		VN	0	-2	-0.001062	± 2.5	PASS
		VN	10	-0.81	-0.000430	± 2.5	PASS
		VN	20	1.52	0.000807	± 2.5	PASS
		VN	30	-0.45	-0.000239	± 2.5	PASS
		VN	40	0.93	0.000494	± 2.5	PASS
		VN	50	4.61	0.002449	± 2.5	PASS
	HCH	VN	-30	1.21	0.000635	± 2.5	PASS
		VN	-20	2.16	0.001134	± 2.5	PASS
		VN	-10	4.62	0.002425	± 2.5	PASS
		VN	0	1.95	0.001024	± 2.5	PASS
		VN	10	0.41	0.000215	± 2.5	PASS
		VN	20	-0.47	-0.000247	± 2.5	PASS
		VN	30	4.81	0.002525	± 2.5	PASS
		VN	40	3.43	0.001801	± 2.5	PASS
		VN	50	4.81	0.002525	± 2.5	PASS