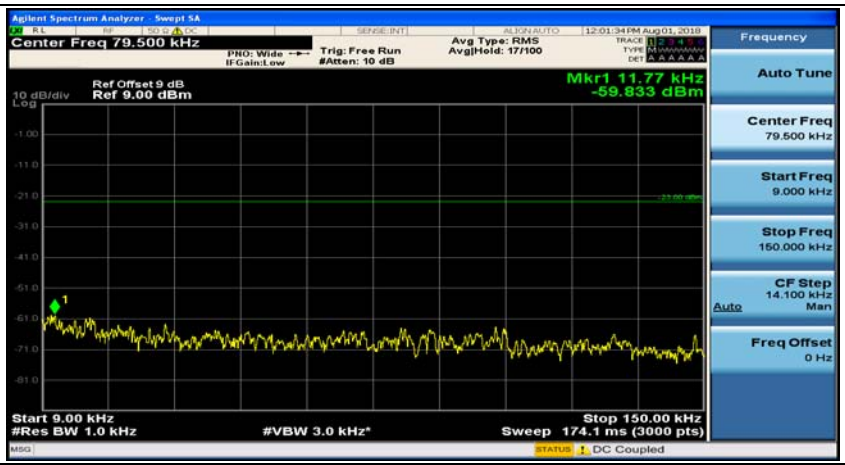
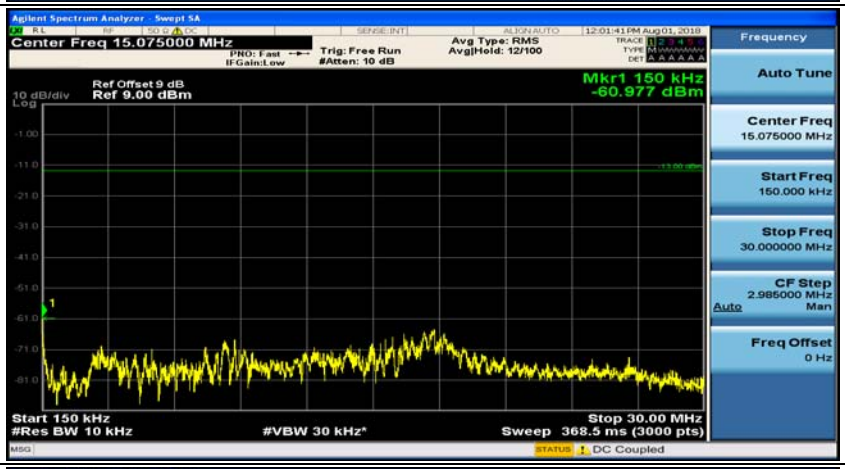
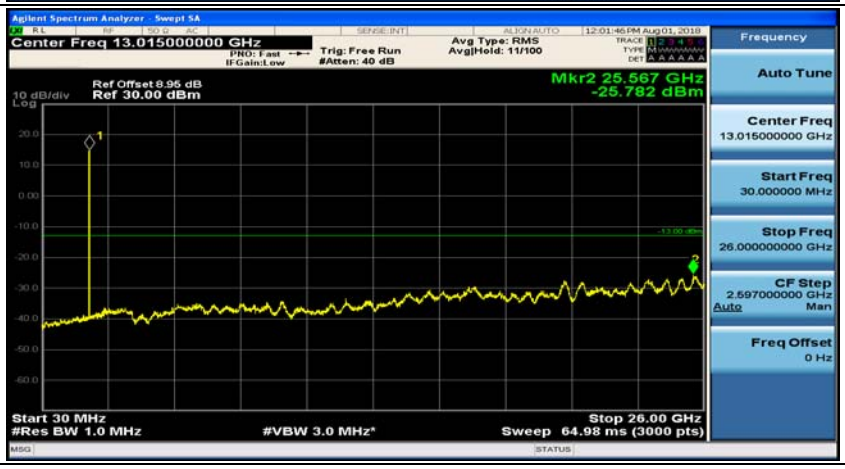
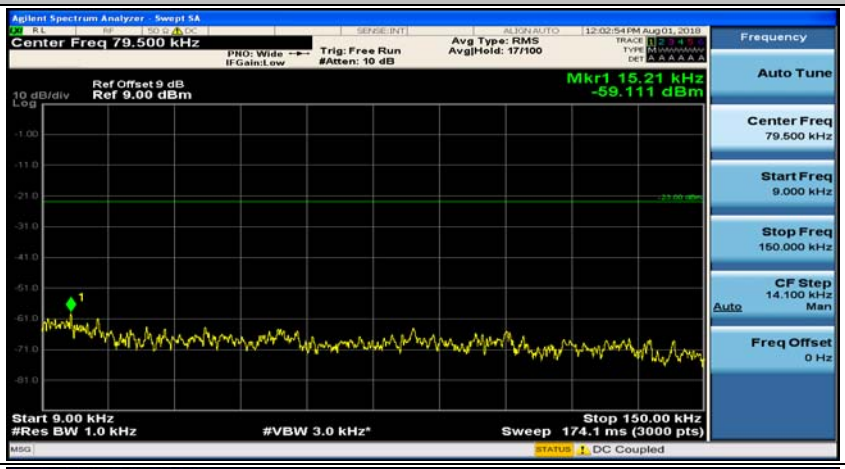
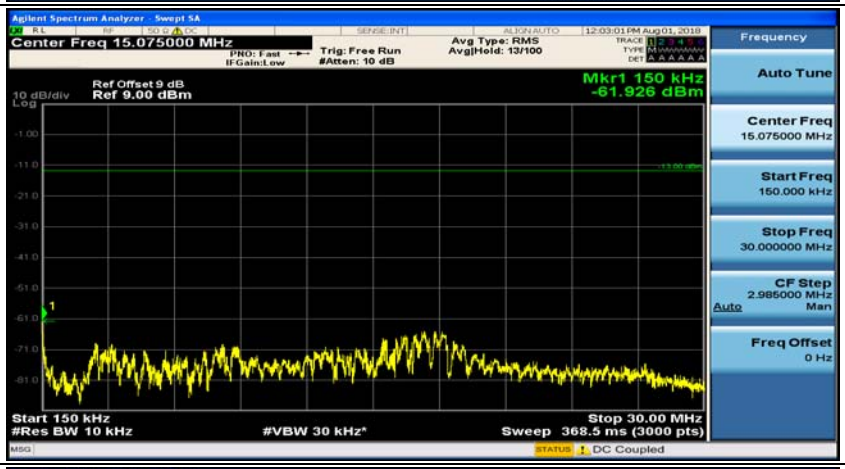
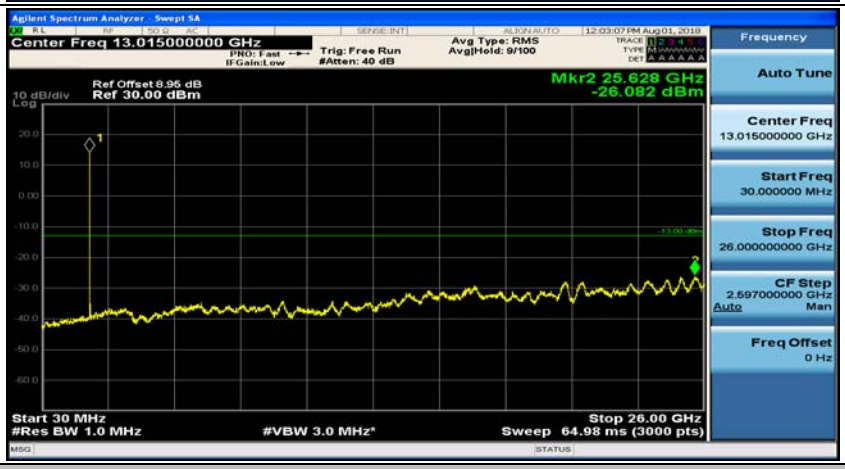
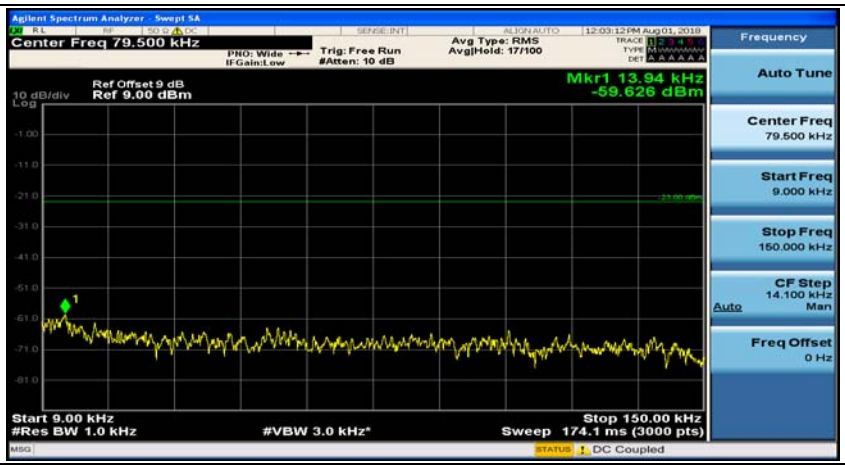
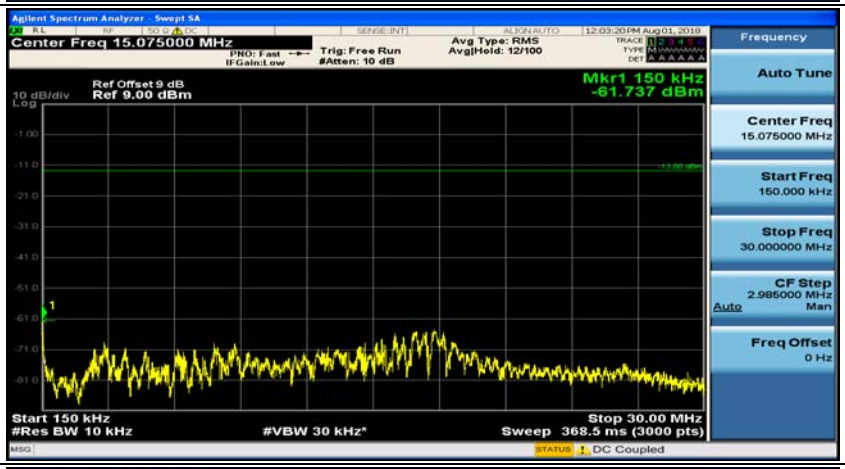

Agilent Spectrum Analyzer - Swept SA
Center Freq 79.500 kHz
PNO: Wide
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 17/100
12:01:34 PM Aug 01, 2018
Frequency
Auto Tune
Mkr1 11.77 kHz
-59.833 dBm
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Center Freq
79.500 kHz
Start Freq
9.000 kHz
Stop 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

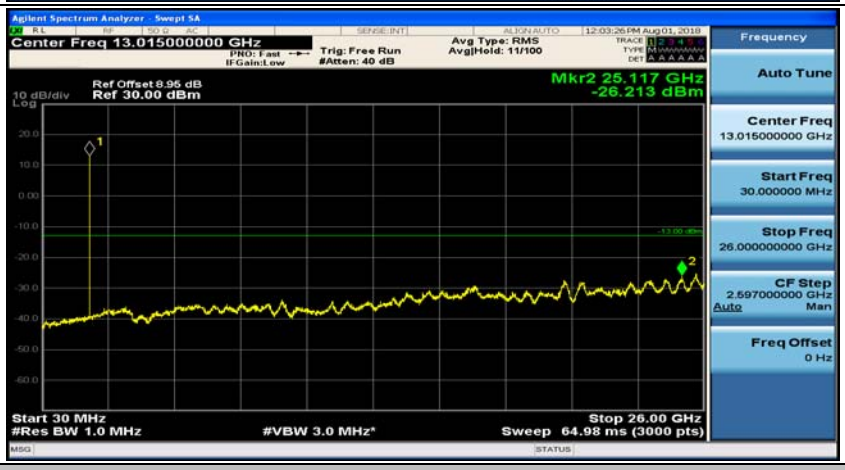

Agilent Spectrum Analyzer - Swept SA
Center Freq 15.075000 MHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 12/100
12:01:41 PM Aug 01, 2018
Frequency
Auto Tune
Mkr1 150 kHz
-60.977 dBm
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Center Freq
15.075000 MHz
Start Freq
150.000 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
12:01:46 PM Aug 01, 2018
Frequency
Auto Tune
Mkr2 25.567 GHz
-25.782 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)

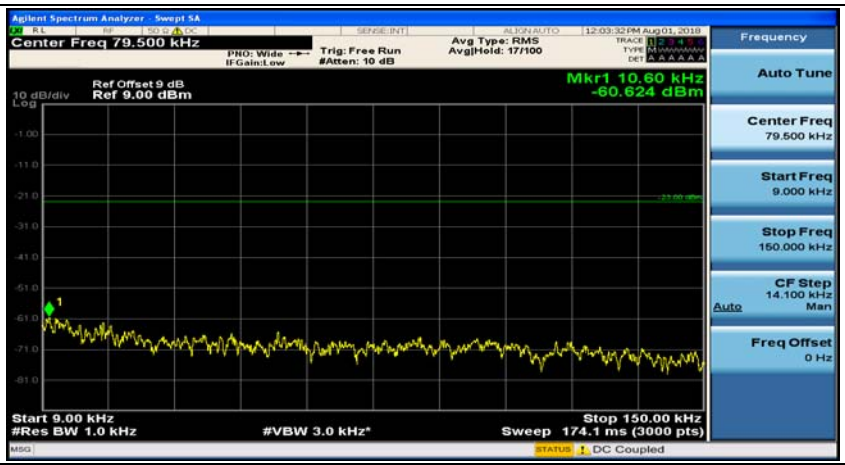
Channel Bandwidth: 10 MHz_HCH_16QAM_1RB#0



Channel Bandwidth: 10 MHz_HCH_16QAM_1RB#24

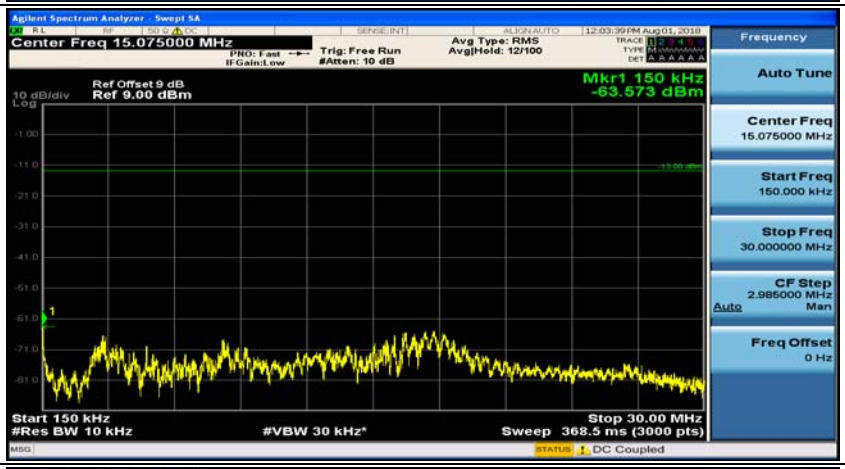


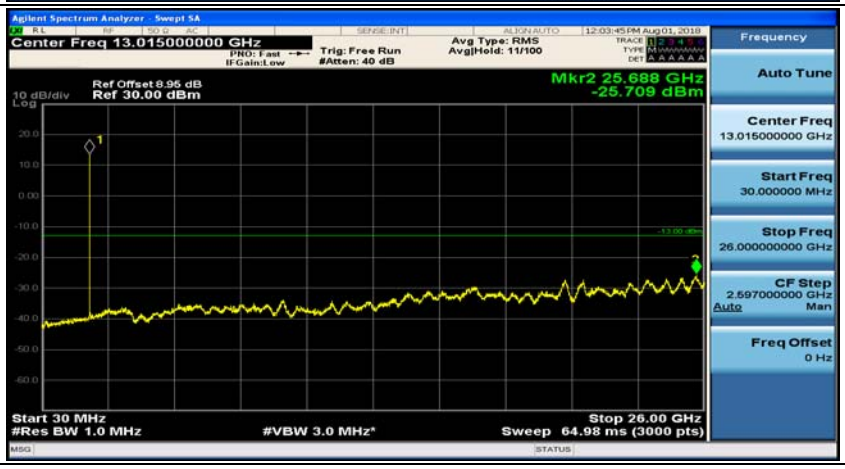




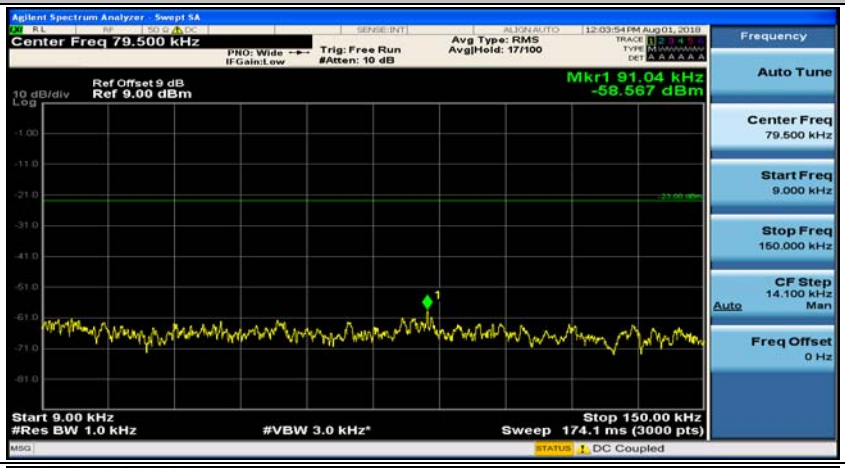
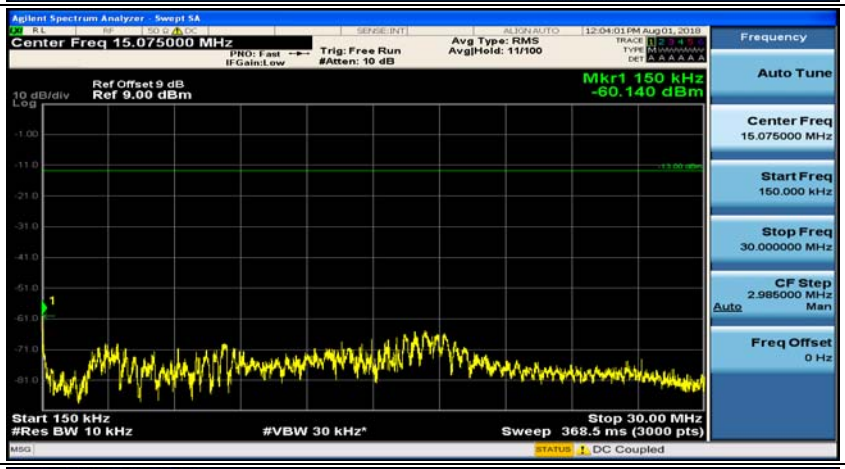
Channel Bandwidth: 10 MHz_HCH_16QAM_1RB#49

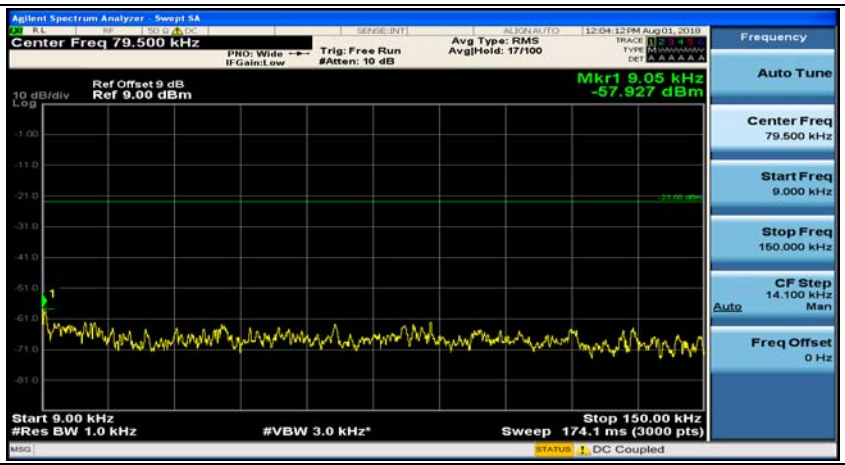

Agilent Spectrum Analyzer - Swept SA
Center Freq 79.500 kHz
PNO: Wide
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 17/100
12:03:32 PM Aug 01, 2018
Frequency
Auto Tune
Mkr1 10.60 kHz
-60.624 dBm
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Center Freq
79.500 kHz
Start Freq
9.000 kHz
Stop 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

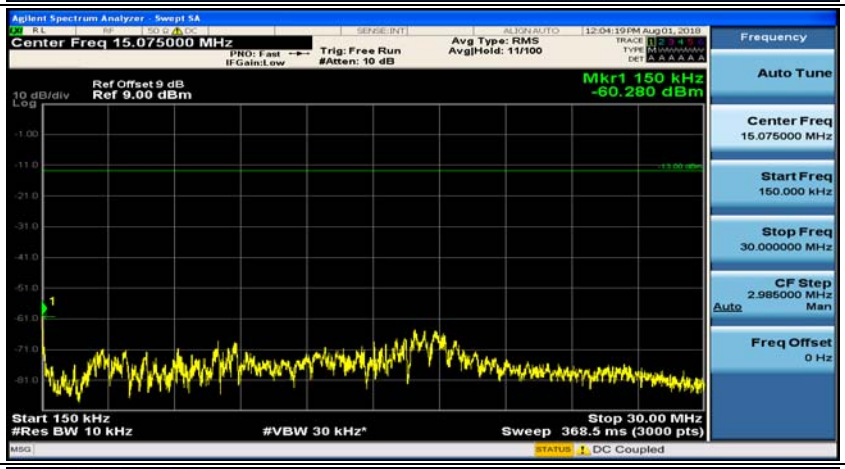

Agilent Spectrum Analyzer - Swept SA
Center Freq 15.075000 MHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 12/100
12:03:39 PM Aug 01, 2018
Frequency
Auto Tune
Mkr1 150 kHz
-63.573 dBm
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Center Freq
15.075000 MHz
Start Freq
150.000 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

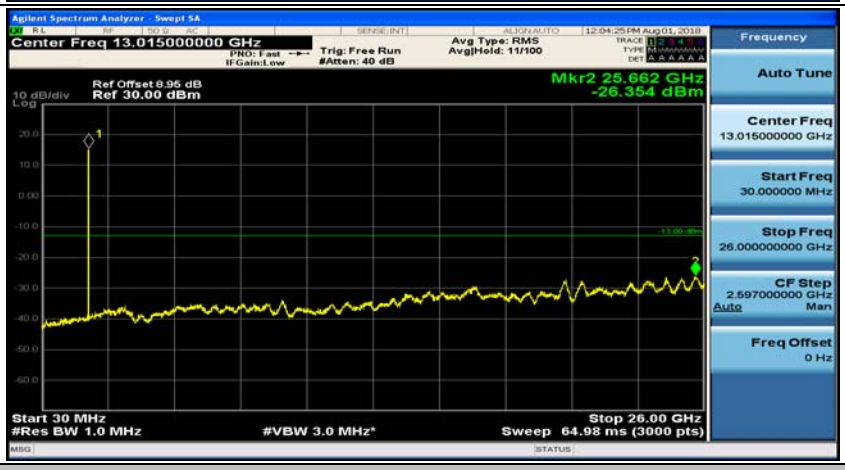

Agilent Spectrum Analyzer - Swept SA
Center Freq 13.015000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 40 dB
Avg Type: RMS
Avg|Hold: 11/100
12:03:45 PM Aug 01, 2018
Frequency
Auto Tune
Mkr2 25.688 GHz
-25.709 dBm
Ref Offset 8.95 dB
10 dB/div
Log
Ref 30.00 dBm
Center Freq
13.015000000 GHz
Start 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

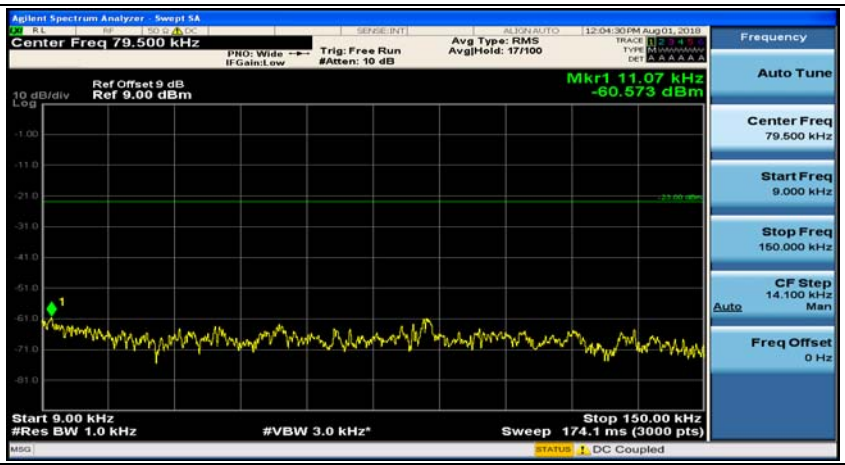
(Channel Bandwidth:15 MHz)_LCH_QPSK_1RB#0


(Channel Bandwidth:15 MHz)_LCH_QPSK_1RB#37

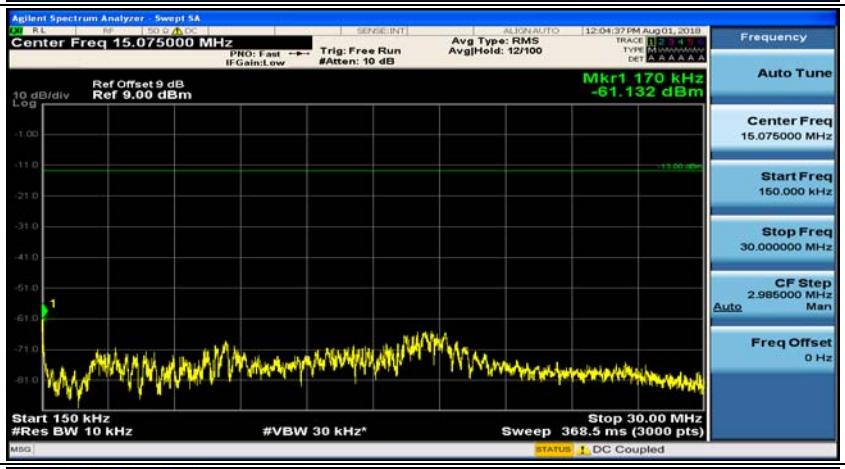


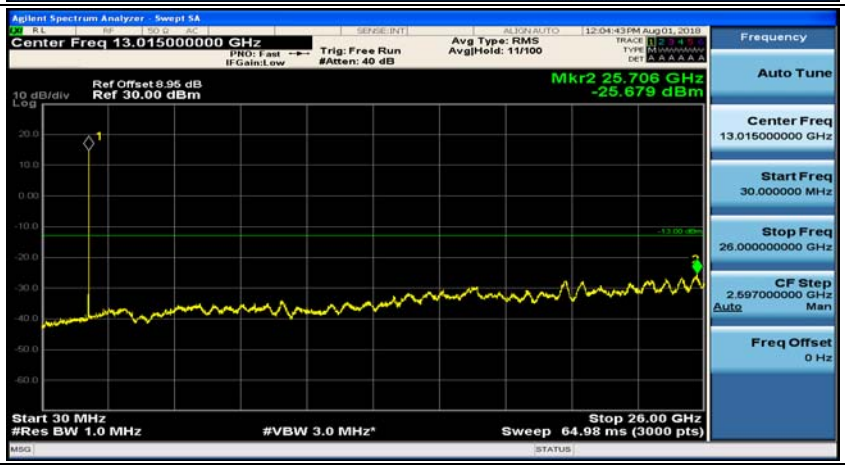


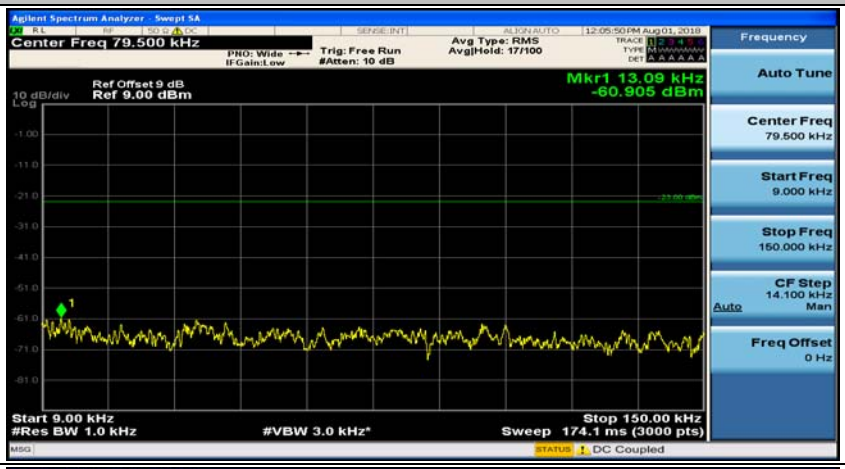
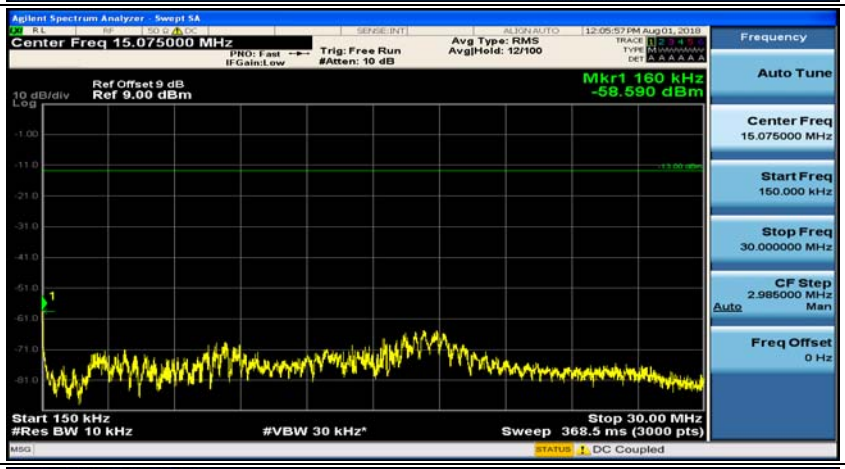
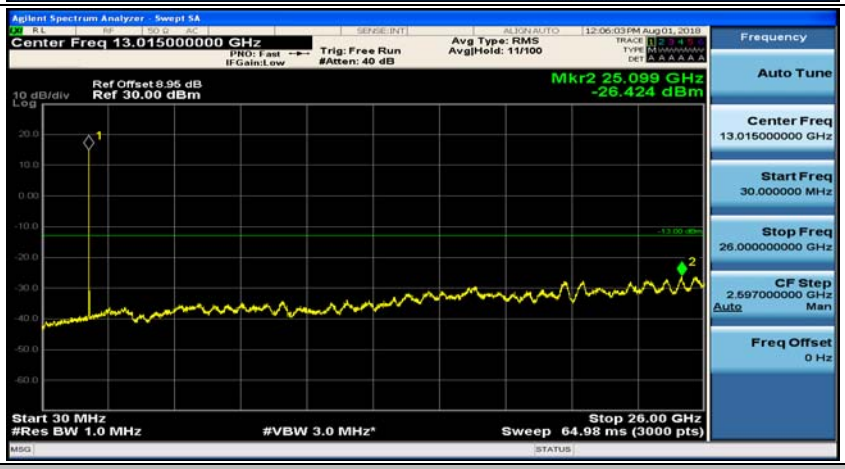


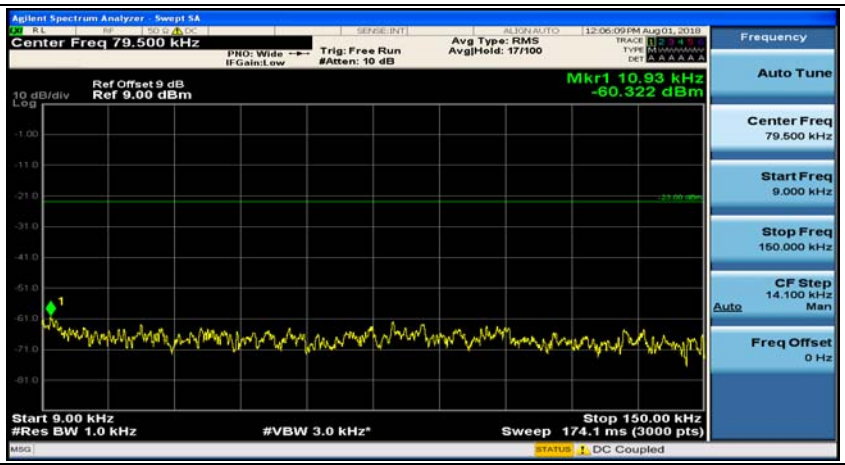
(Channel Bandwidth:15 MHz)_LCH_QPSK_1RB#74

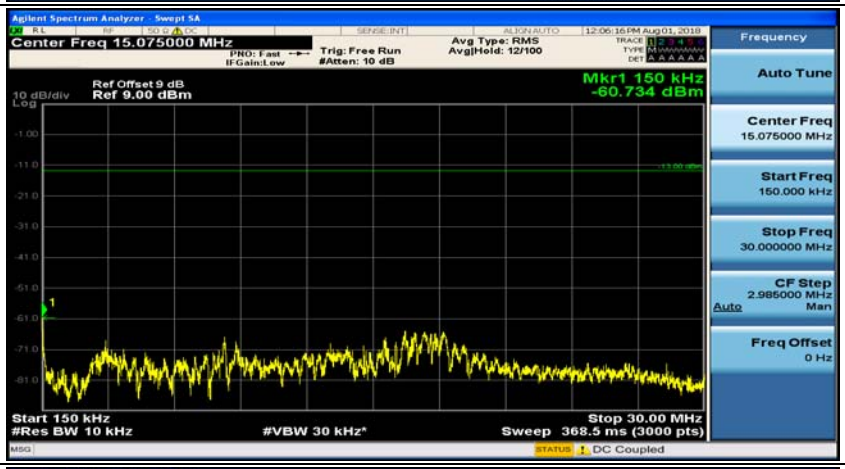

Agilent Spectrum Analyzer - Swept SA
Center Freq 79.500 kHz
PNO: Wide
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 17/100
12:04:30 PM Aug 01, 2018
Frequency
Auto Tune
Mkr1 11.07 kHz
-60.573 dBm
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Center Freq
79.500 kHz
Start Freq
9.000 kHz
Stop 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: 10 dB
Avg Type: RMS
Avg|Hold: 12/100
12:04:37 PM Aug 01, 2018
Frequency
Auto Tune
Mkr1 170 kHz
-61.132 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

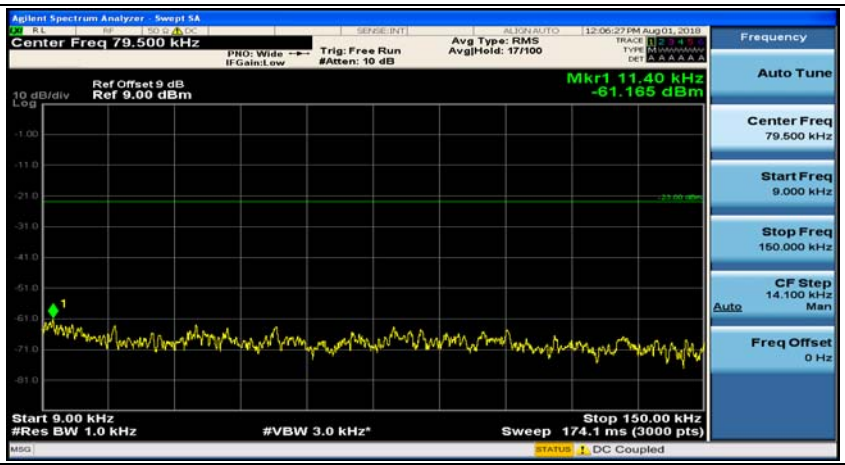

Agilent Spectrum Analyzer - Swept SA
Center Freq 13.015000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 40 dB
Avg Type: RMS
Avg|Hold: 11/100
12:04:43 PM Aug 01, 2018
Frequency
Auto Tune
Mkr2 25.706 GHz
-25.679 dBm
Ref Offset 8.95 dB
10 dB/div
Log
Ref 30.00 dBm
Center Freq
13.015000000 GHz
Start 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)

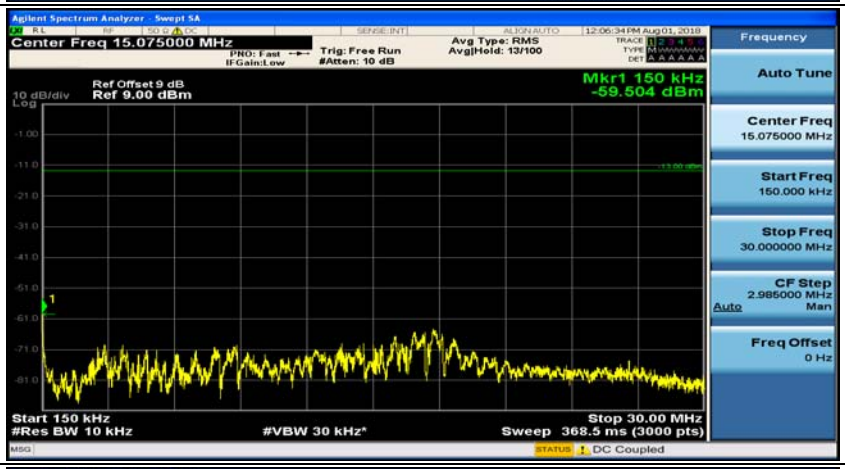
(Channel Bandwidth:15 MHz)_MCH_QPSK_1RB#0



(Channel Bandwidth:15 MHz)_MCH_QPSK_1RB#37

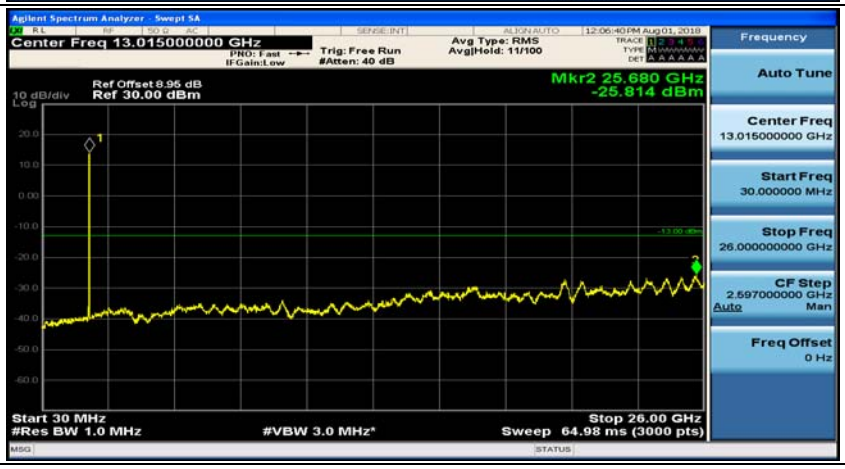


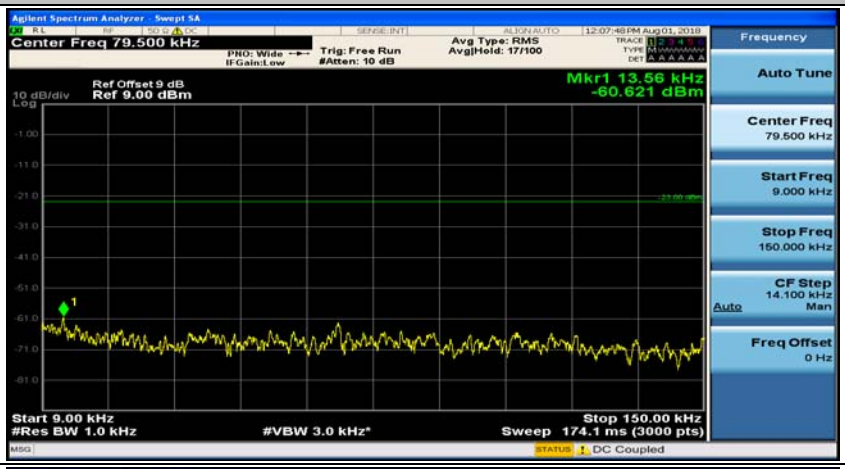
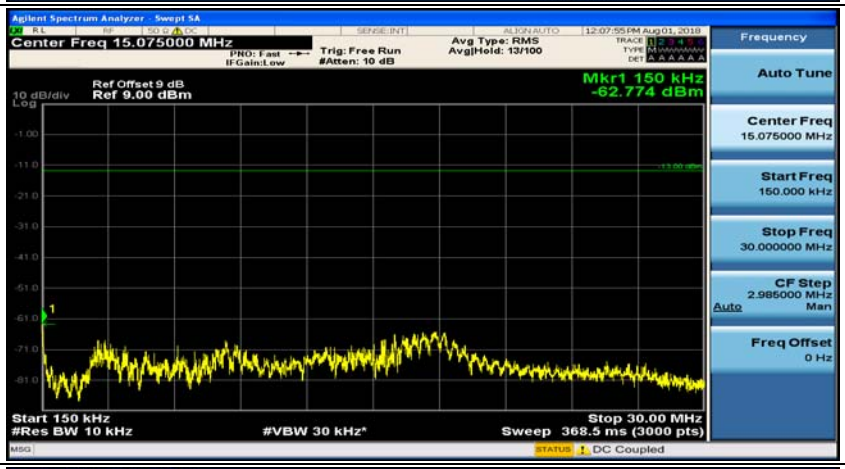
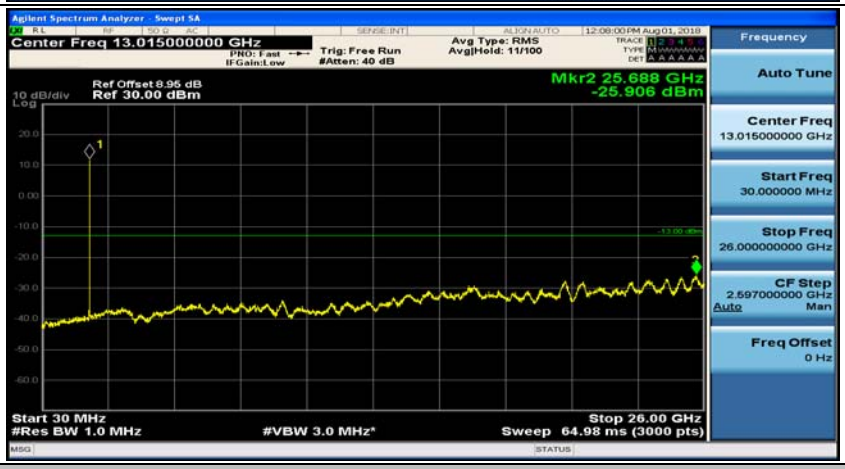


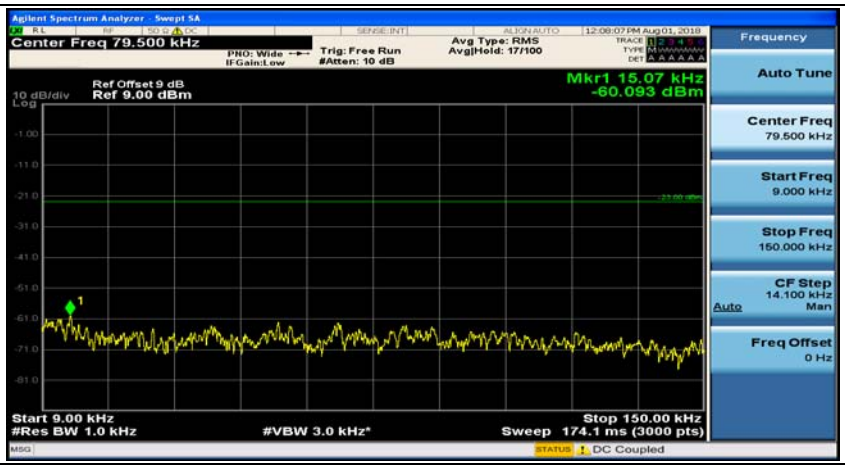
(Channel Bandwidth:15 MHz)_MCH_QPSK_1RB#74

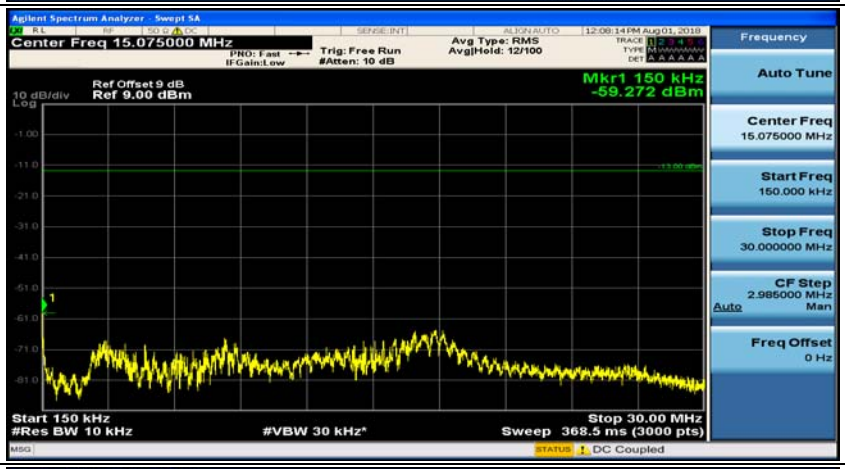

Agilent Spectrum Analyzer - Swept SA
Center Freq 79.500 kHz
PNO: Wide
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 17/100
12:06:27 PM Aug 01, 2018
Frequency
Auto Tune
Mkr1 11.40 kHz
-61.165 dBm
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Center Freq
79.500 kHz
Start Freq
9.000 kHz
Stop 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: 10 dB
Avg Type: RMS
Avg|Hold: 13/100
12:06:34 PM Aug 01, 2018
Frequency
Auto Tune
Mkr1 150 kHz
-59.504 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

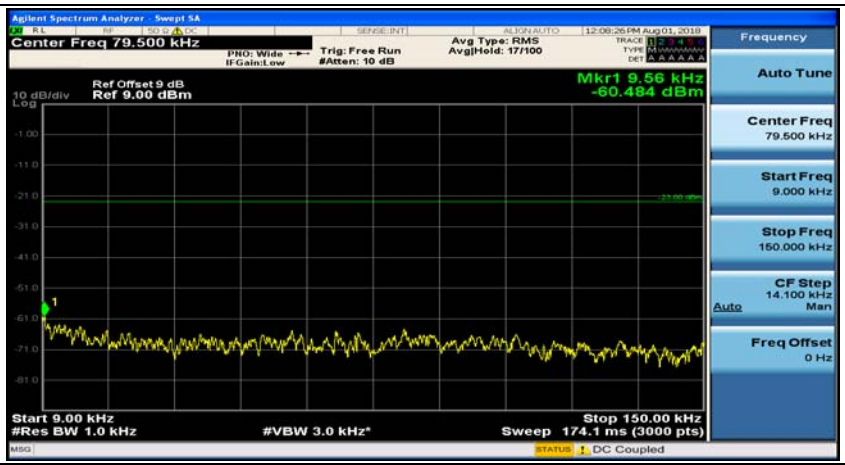

Agilent Spectrum Analyzer - Swept SA
Center Freq 13.015000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 40 dB
Avg Type: RMS
Avg|Hold: 11/100
12:06:40 PM Aug 01, 2018
Frequency
Auto Tune
Mkr2 25.680 GHz
-25.814 dBm
Ref Offset 8.95 dB
10 dB/div
Log
Ref 30.00 dBm
Center Freq
13.015000000 GHz
Start 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)

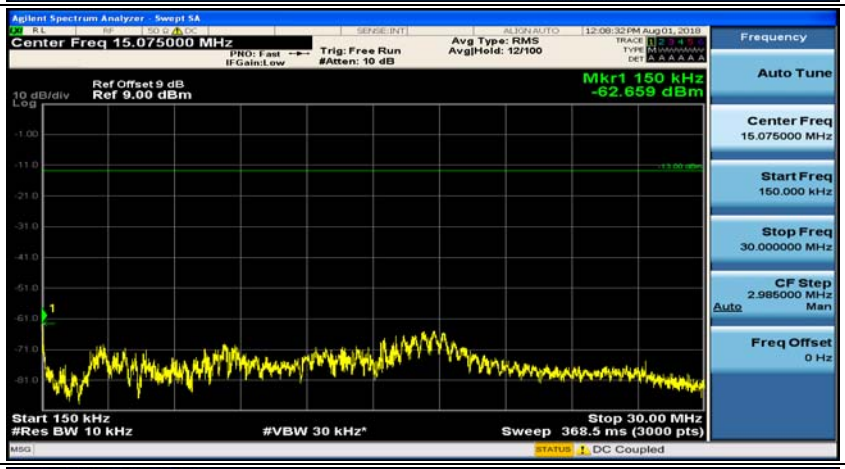
(Channel Bandwidth:15 MHz)_HCH_QPSK_1RB#0



(Channel Bandwidth:15 MHz)_HCH_QPSK_1RB#37

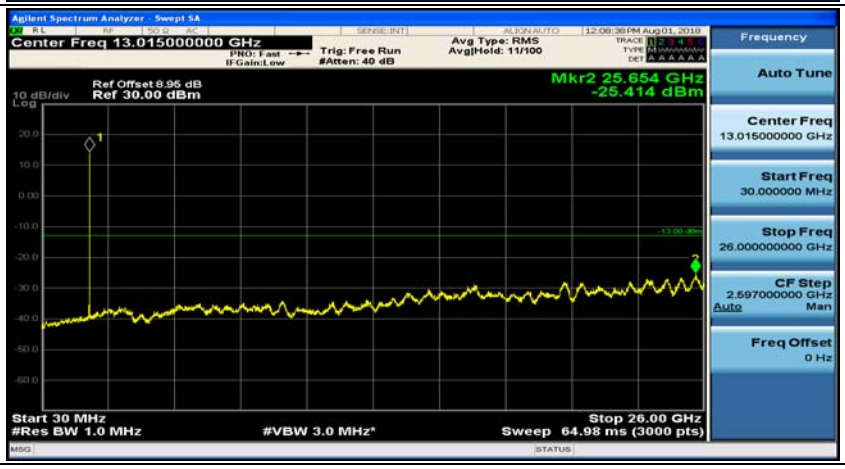


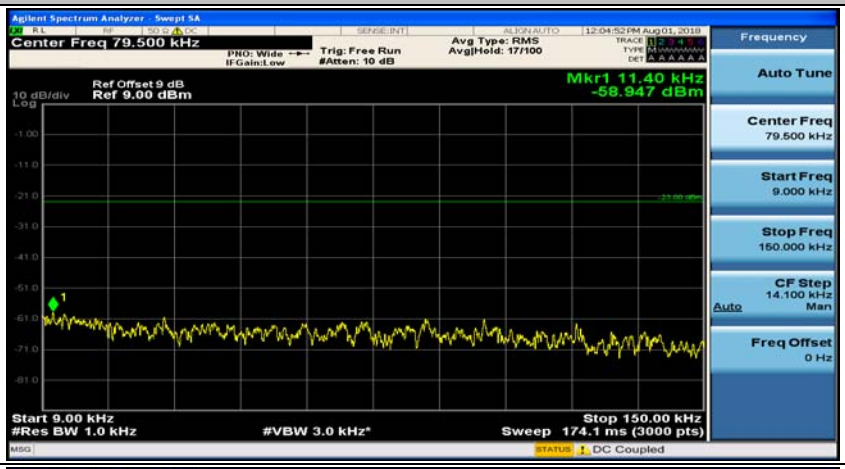
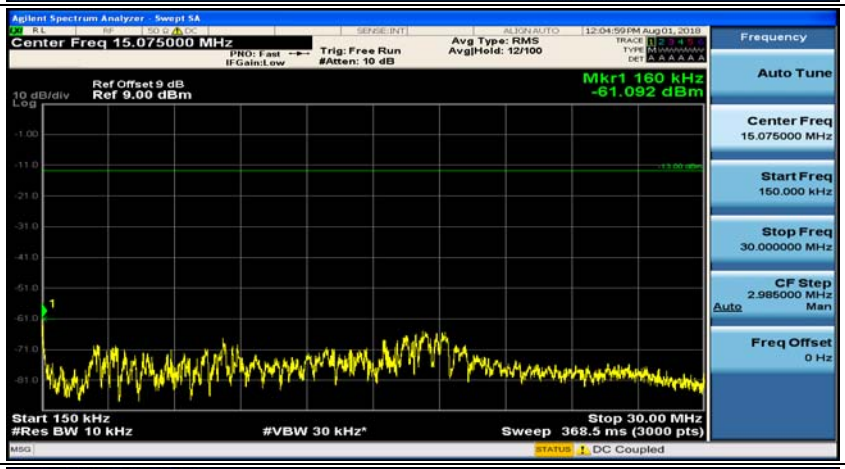
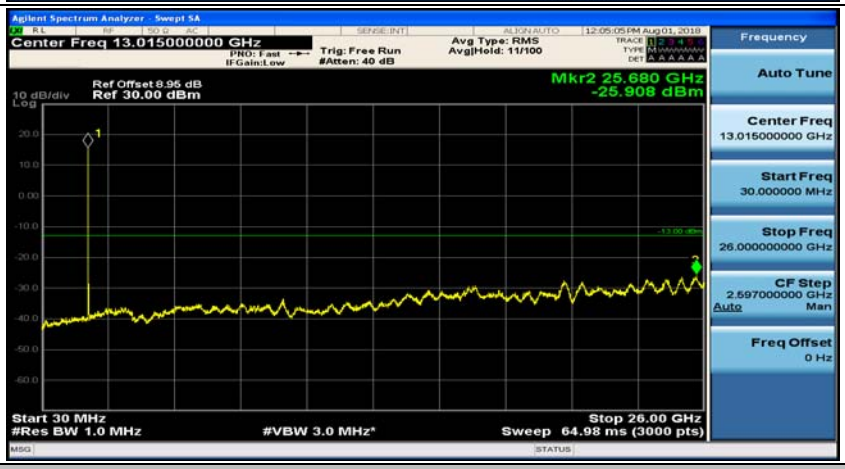


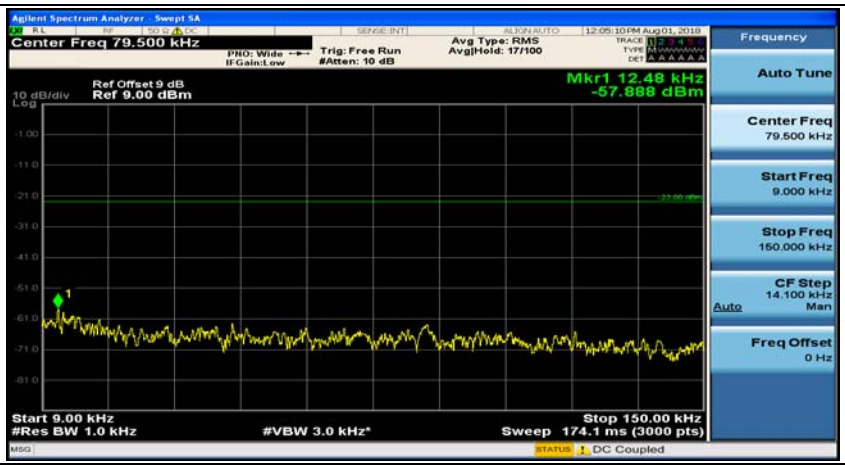
(Channel Bandwidth:15 MHz)_HCH_QPSK_1RB#74

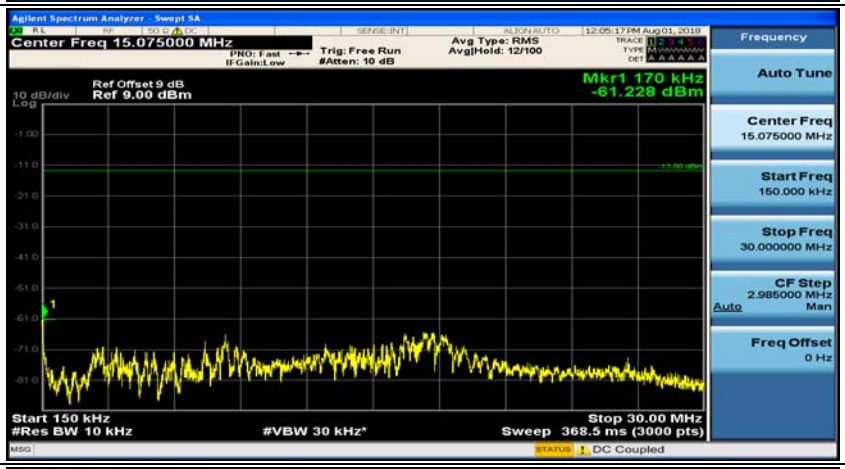

Agilent Spectrum Analyzer - Swept SA
Center Freq 79.500 kHz
PNO: Wide
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 17/100
12:08:26 PM Aug 01, 2018
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Mkr1 9.56 kHz
-60.484 dBm
Start 9.00 kHz
#Res BW 1.0 kHz
#VBW 3.0 kHz*
Stop 150.00 kHz
Sweep 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

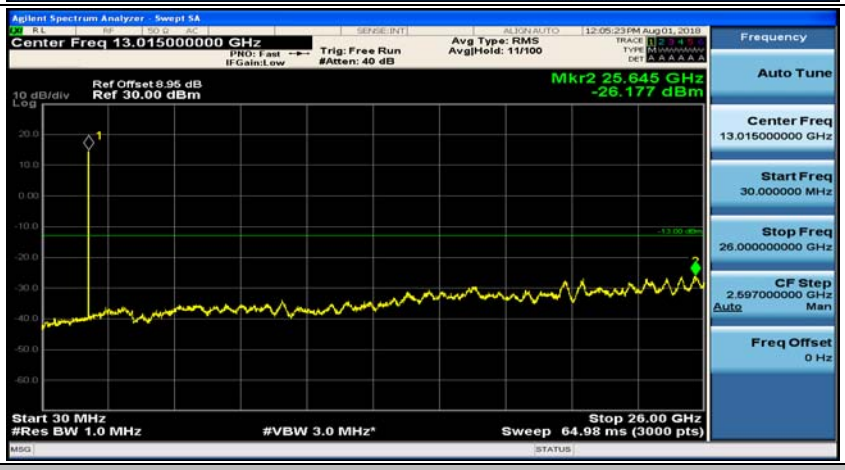

Agilent Spectrum Analyzer - Swept SA
Center Freq 15.075000 MHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 12/100
12:08:32 PM Aug 01, 2018
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Mkr1 150 kHz
-62.659 dBm
Start 150 kHz
#Res BW 10 kHz
#VBW 30 kHz*
Stop 30.00 MHz
Sweep 368.5 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
12:08:38 PM Aug 01, 2018
Ref Offset 8.95 dB
10 dB/div
Log
Ref 30.00 dBm
Mkr2 25.654 GHz
-25.414 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

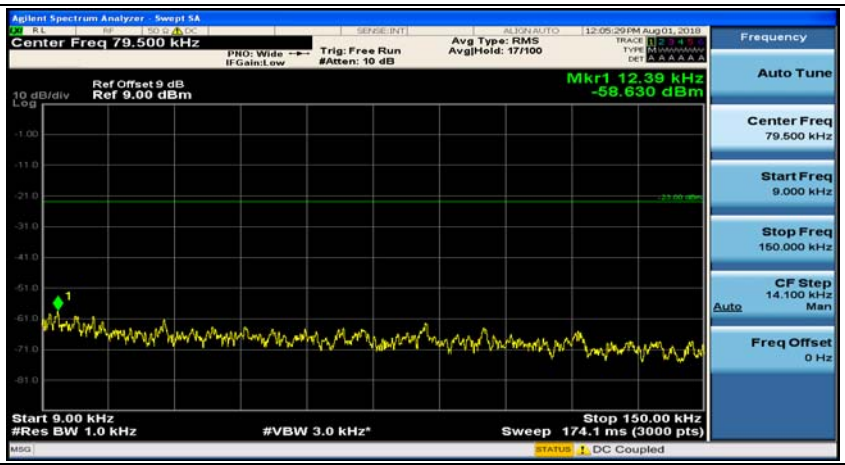
(Channel Bandwidth:15 MHz)_LCH_16QAM_1RB#0



(Channel Bandwidth:15 MHz)_LCH_16QAM_1RB#37

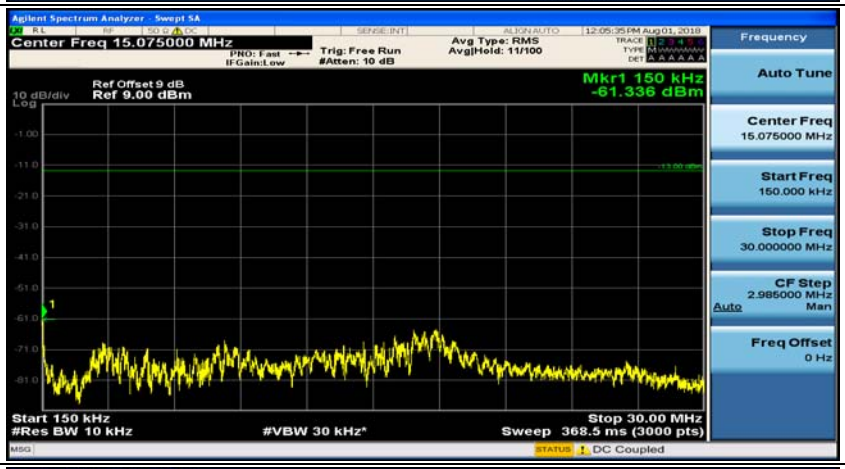


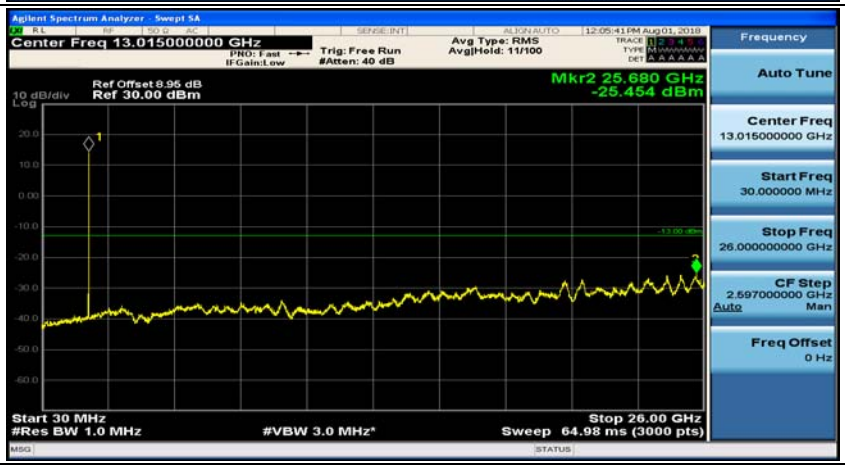


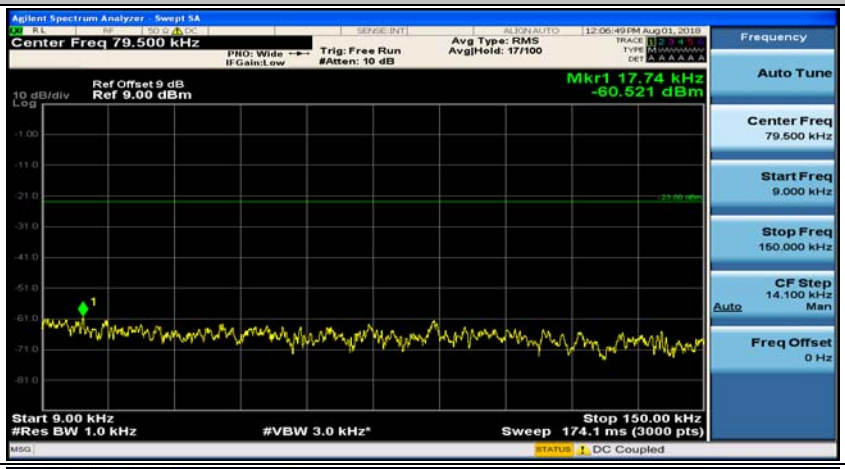
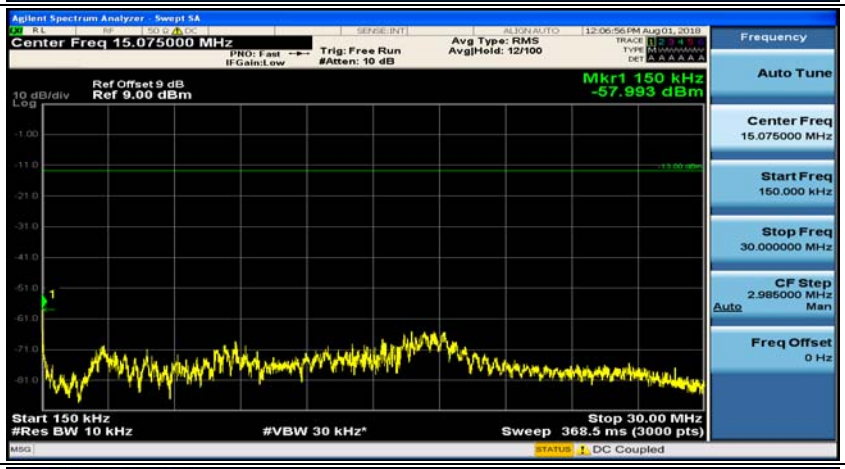
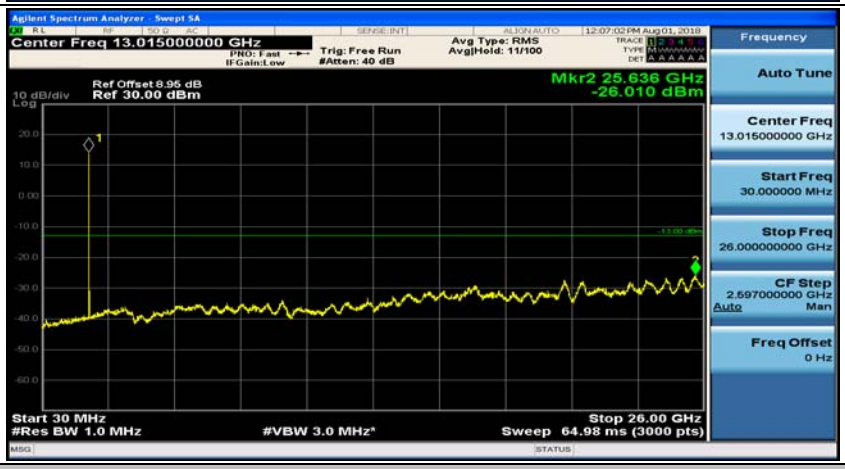


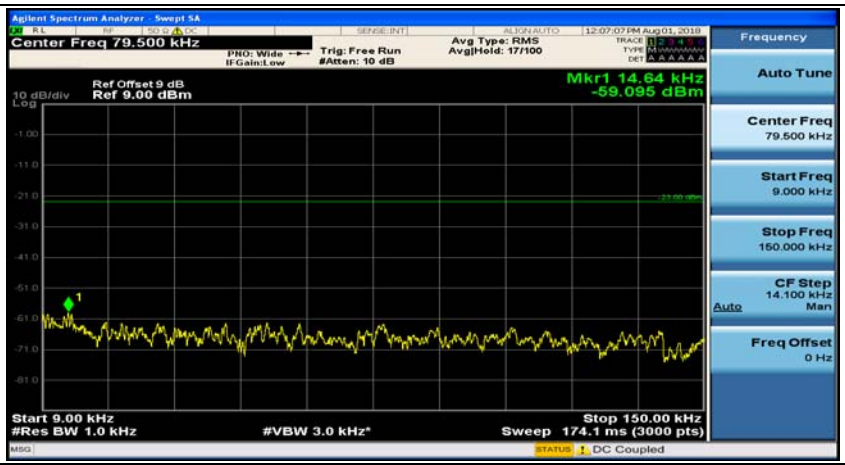
(Channel Bandwidth:15 MHz)_LCH_16QAM_1RB#74

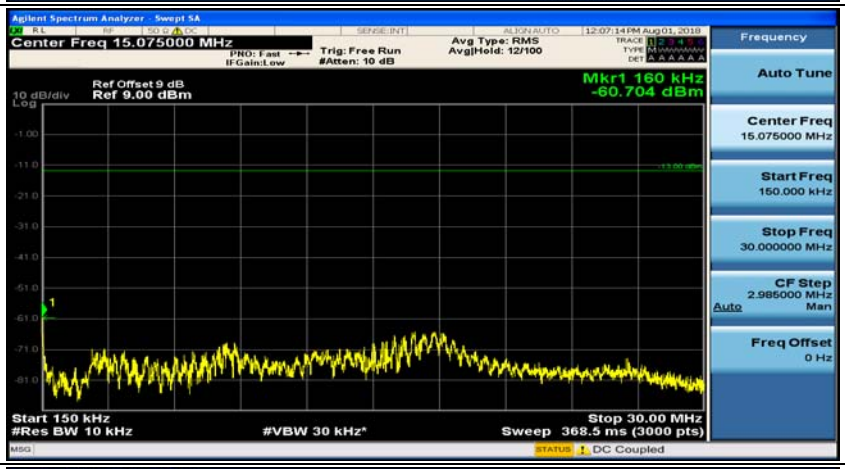

Agilent Spectrum Analyzer - Swept SA
Center Freq 79.500 kHz
PNO: Wide
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 17/100
12:05:29 PM Aug 01, 2018
Frequency
Auto Tune
Mkr1 12.39 kHz
-58.630 dBm
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Center Freq
79.500 kHz
Start Freq
9.000 kHz
Stop 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

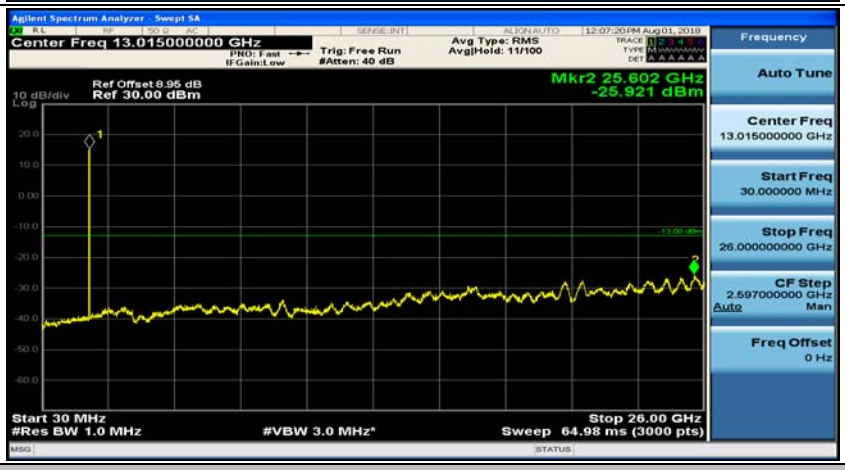

Agilent Spectrum Analyzer - Swept SA
Center Freq 15.075000 MHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 11/100
12:05:35 PM Aug 01, 2018
Frequency
Auto Tune
Mkr1 150 kHz
-61.336 dBm
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Center Freq
15.075000 MHz
Start Freq
150.000 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
12:05:41 PM Aug 01, 2018
Frequency
Auto Tune
Mkr2 25.680 GHz
-25.454 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)

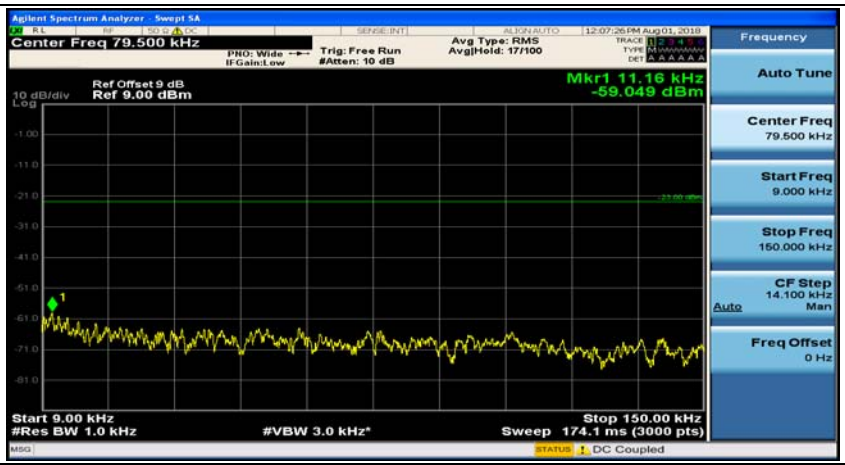
(Channel Bandwidth:15 MHz)_MCH_16QAM_1RB#0



(Channel Bandwidth:15 MHz)_MCH_16QAM_1RB#37

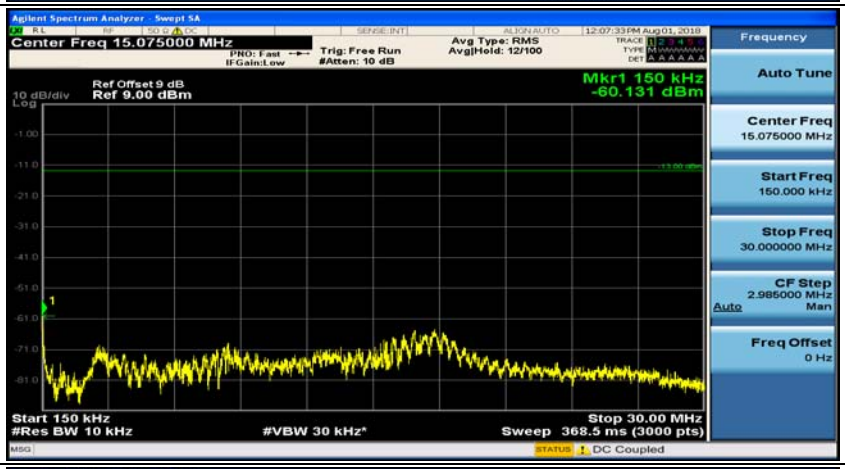


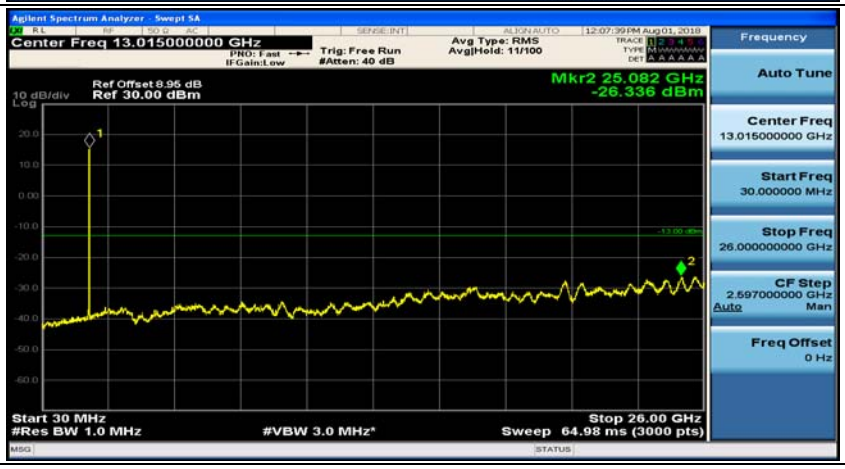


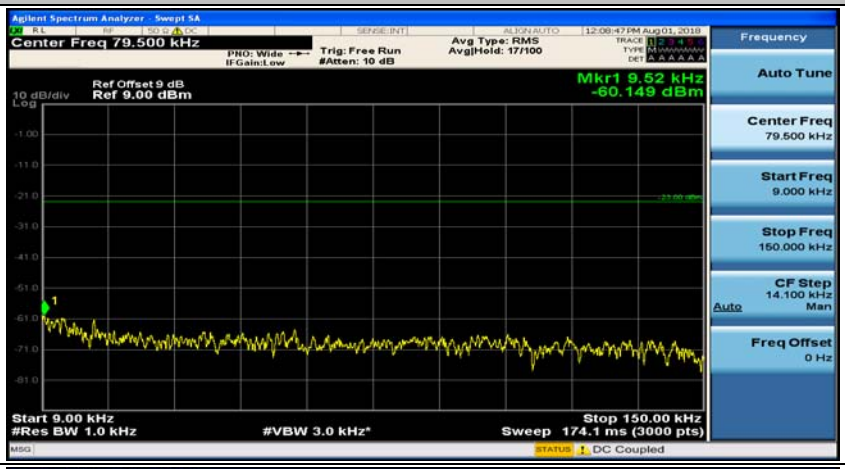
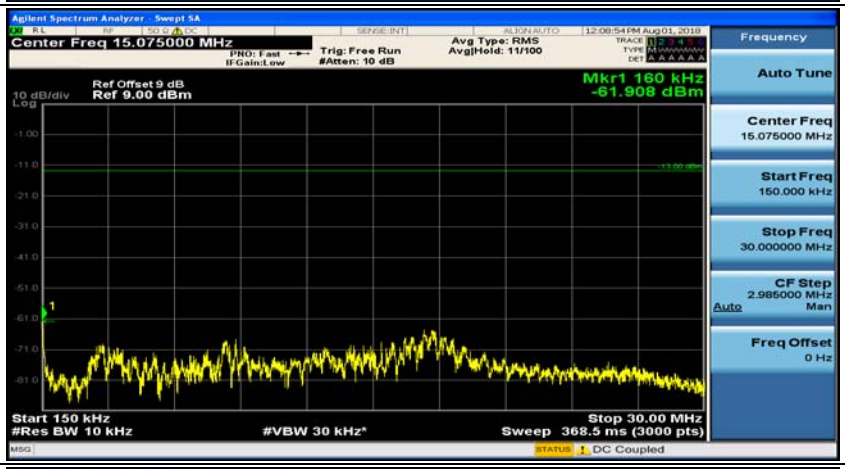
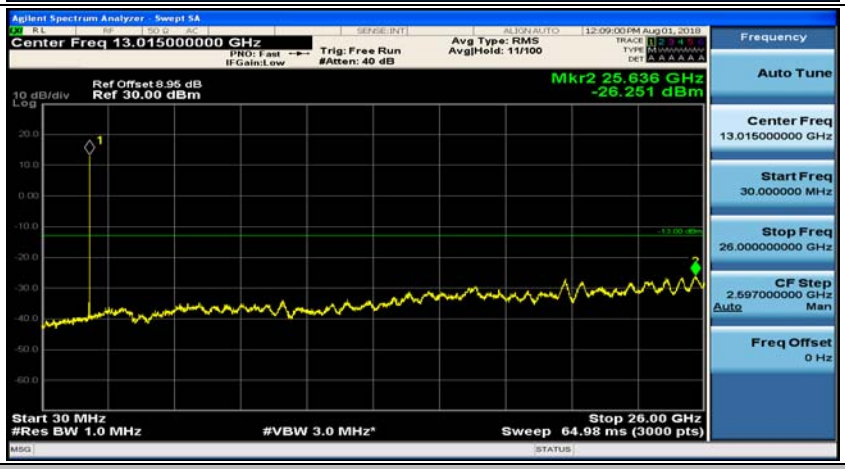


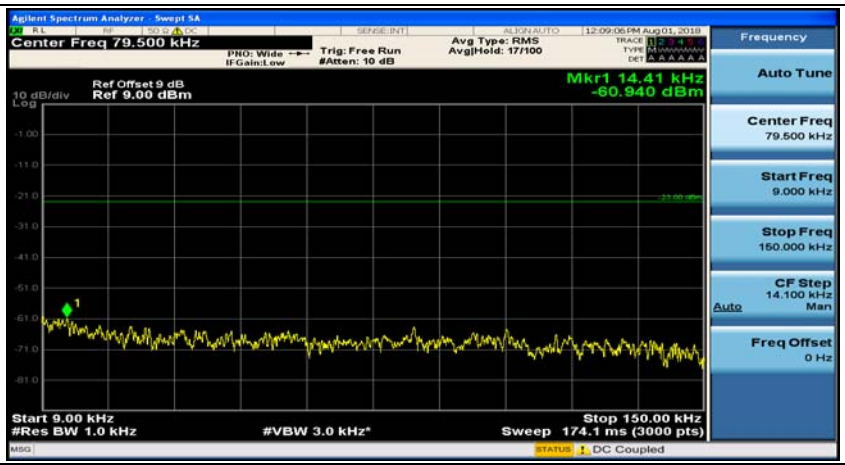
(Channel Bandwidth:15 MHz)_MCH_16QAM_1RB#74

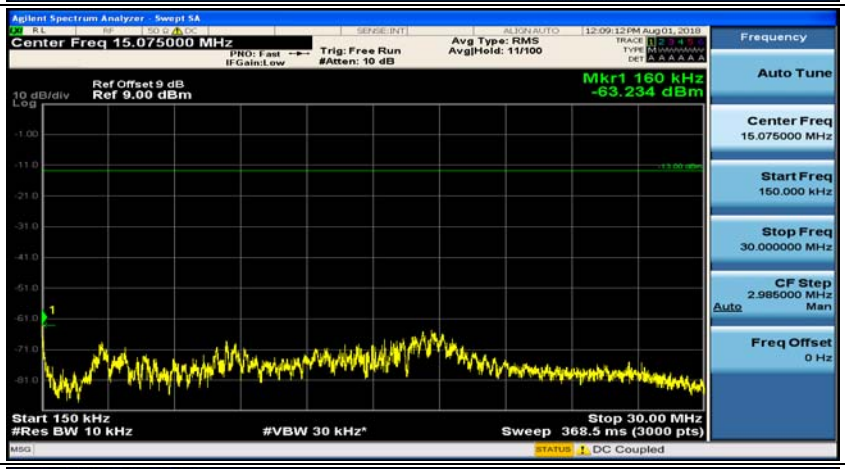

Agilent Spectrum Analyzer - Swept SA
Center Freq 79.500 kHz
PNO: Wide
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 17/100
12:07:26 PM Aug 01, 2018
Frequency
Auto Tune
Mkr1 11.16 kHz
-59.049 dBm
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Center Freq
79.500 kHz
Start Freq
9.000 kHz
Stop 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

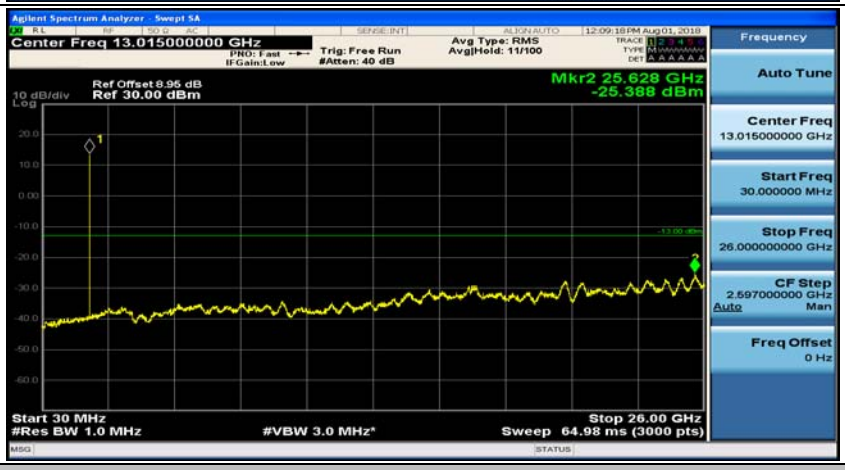

Agilent Spectrum Analyzer - Swept SA
Center Freq 15.075000 MHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 12/100
12:07:33 PM Aug 01, 2018
Frequency
Auto Tune
Mkr1 150 kHz
-60.131 dBm
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Center Freq
15.075000 MHz
Start Freq
150.000 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
12:07:39 PM Aug 01, 2018
Frequency
Auto Tune
Mkr2 25.082 GHz
-26.336 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)

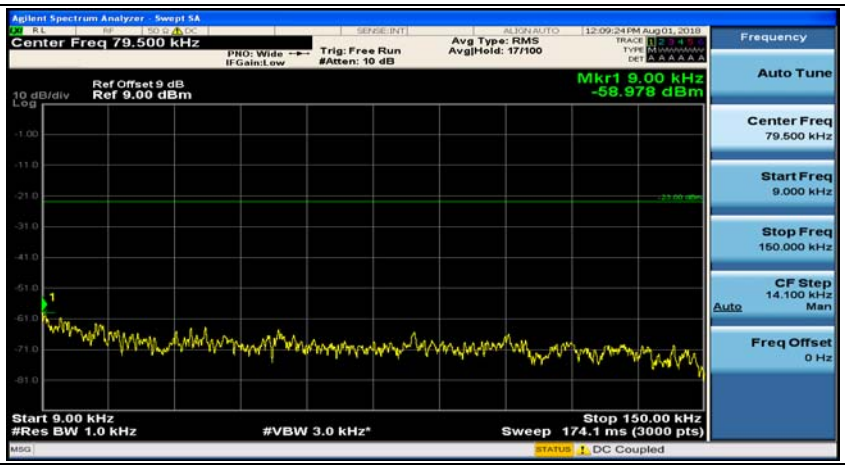
(Channel Bandwidth:15 MHz)_HCH_16QAM_1RB#0



(Channel Bandwidth:15 MHz)_HCH_16QAM_1RB#37

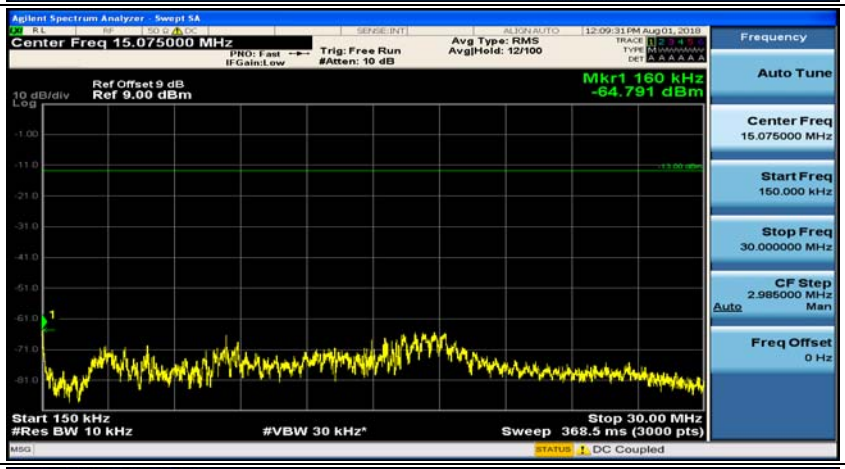


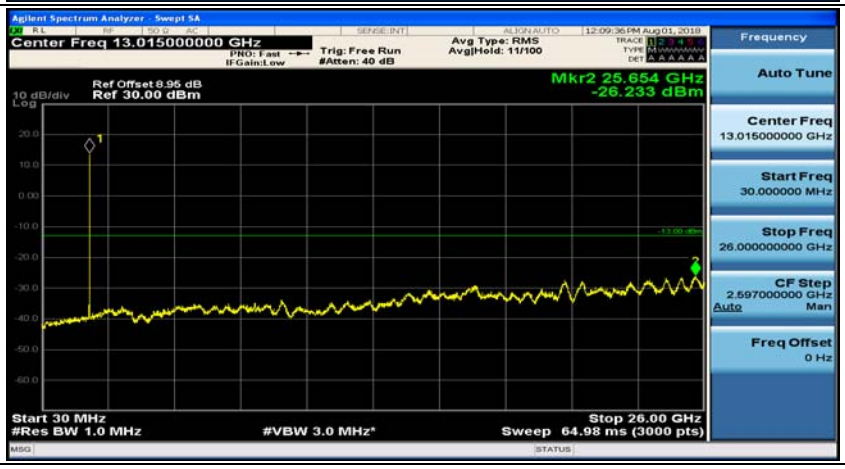




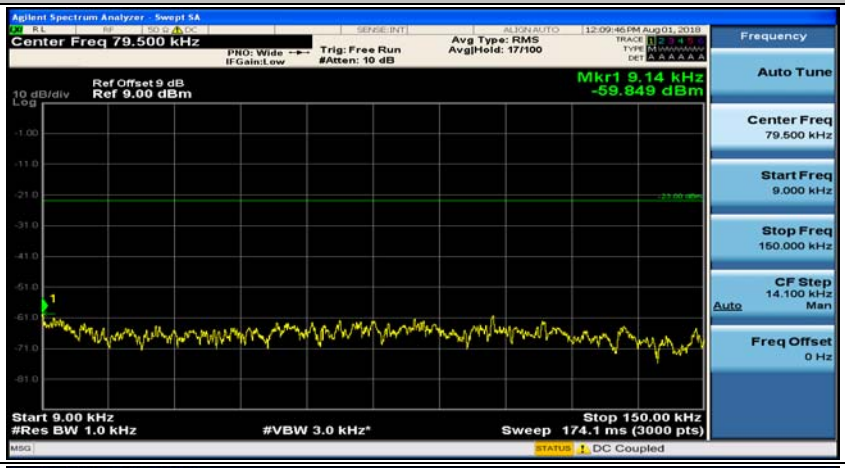
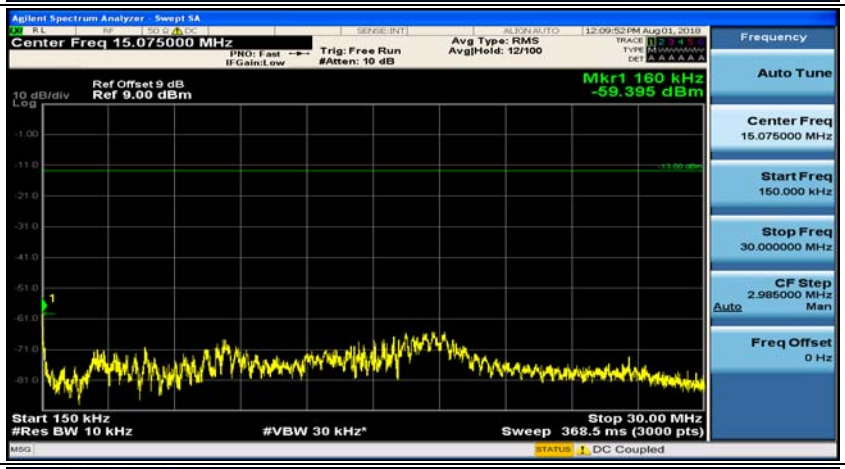
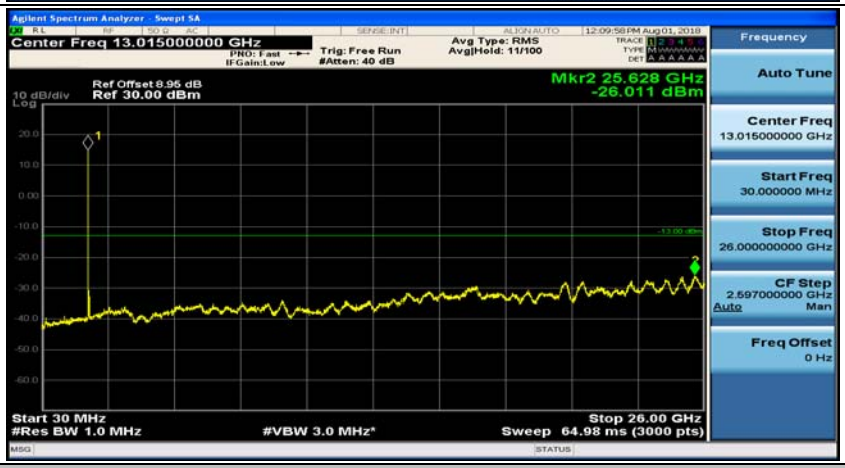
(Channel Bandwidth:15 MHz)_HCH_16QAM_1RB#74

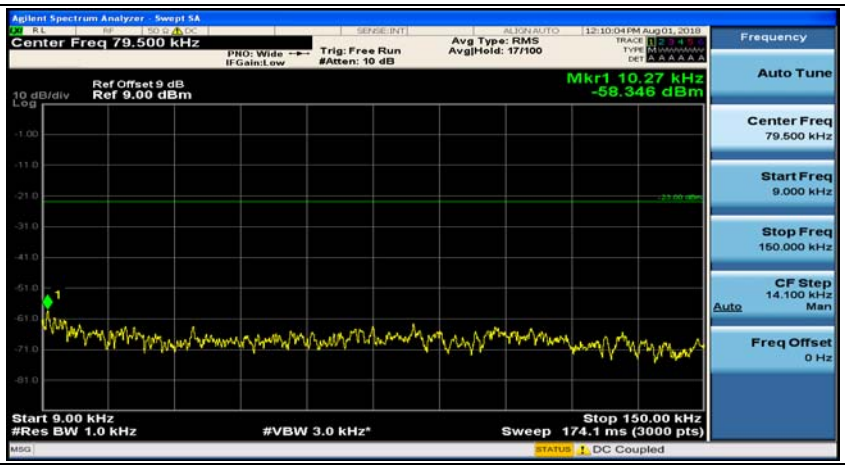

Agilent Spectrum Analyzer - Swept SA
Center Freq 79.500 kHz
PNO: Wide
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 17/100
12:09:24 PM Aug 01, 2018
Frequency
Auto Tune
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Mkr1 9.00 kHz
-58.978 dBm
Center Freq
79.500 kHz
Start Freq
9.000 kHz
Stop 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

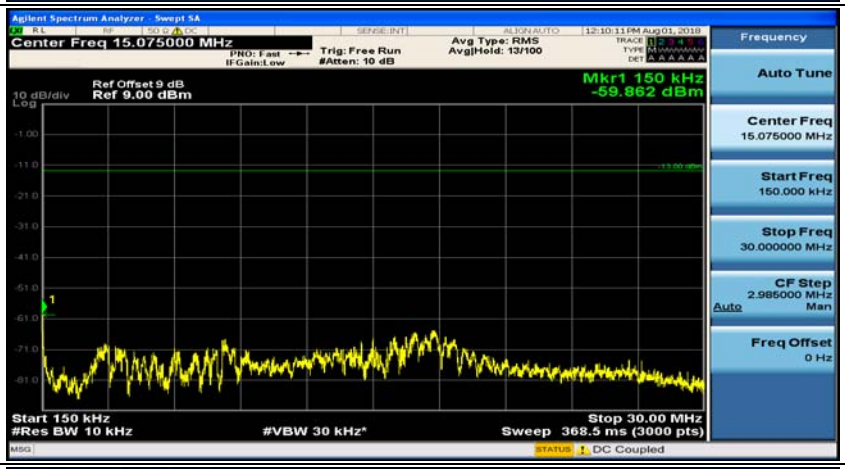

Agilent Spectrum Analyzer - Swept SA
Center Freq 15.075000 MHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 12/100
12:09:31 PM Aug 01, 2018
Frequency
Auto Tune
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Mkr1 160 kHz
-64.791 dBm
Center Freq
15.075000 MHz
Start Freq
150.000 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

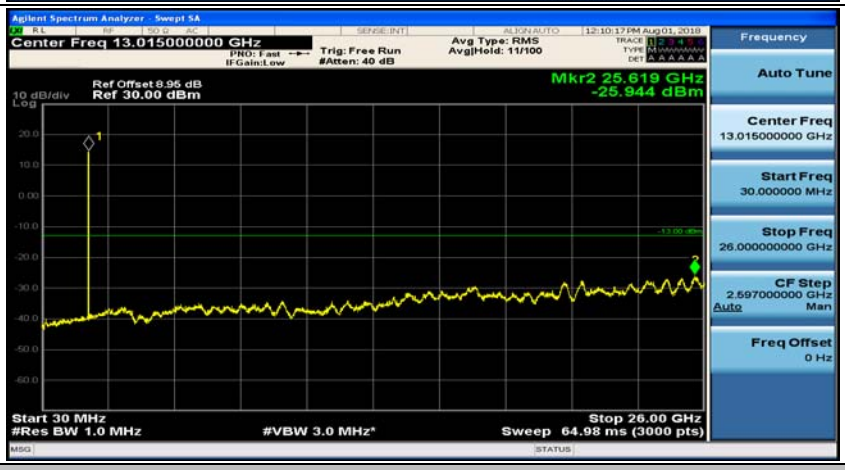

Agilent Spectrum Analyzer - Swept SA
Center Freq 13.015000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 40 dB
Avg Type: RMS
Avg|Hold: 11/100
12:09:36 PM Aug 01, 2018
Frequency
Auto Tune
Ref Offset 8.95 dB
10 dB/div
Log
Ref 30.00 dBm
Mkr2 25.654 GHz
-26.233 dBm
Center Freq
13.015000000 GHz
Start 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

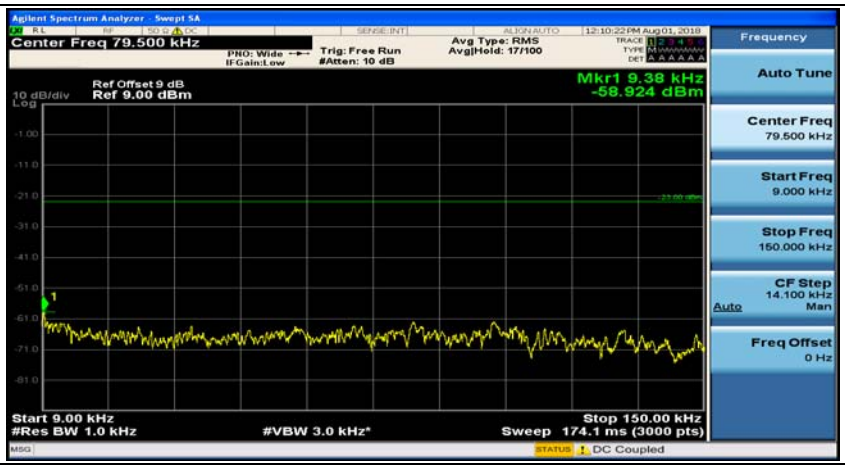
(Channel Bandwidth:20 MHz)_LCH_QPSK_1RB#0



(Channel Bandwidth:20 MHz)_LCH_QPSK_1RB#49

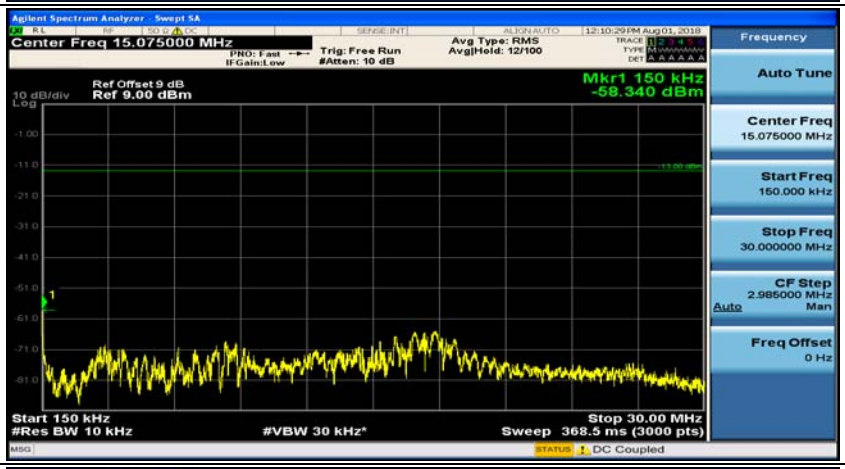


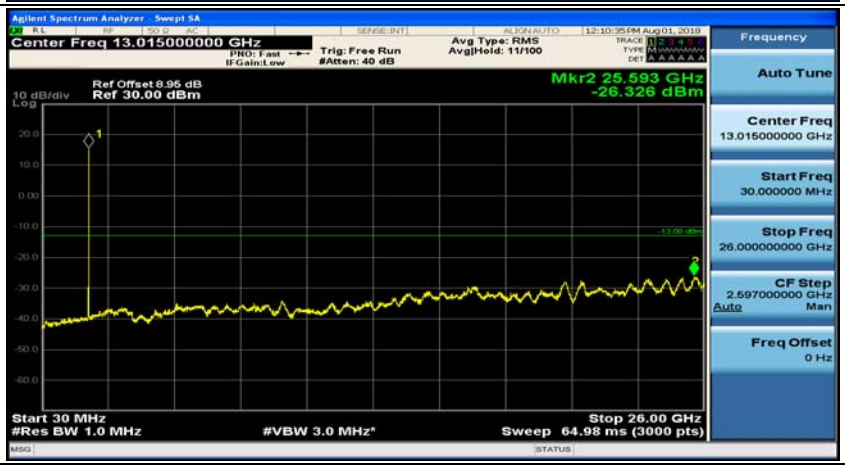


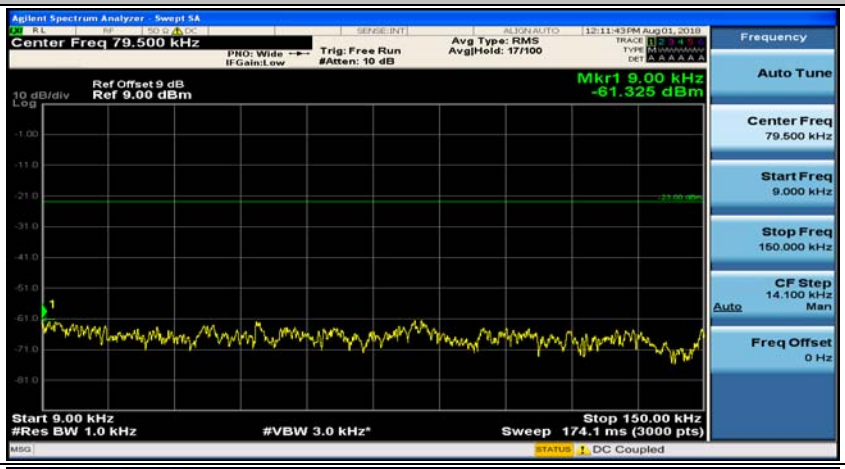
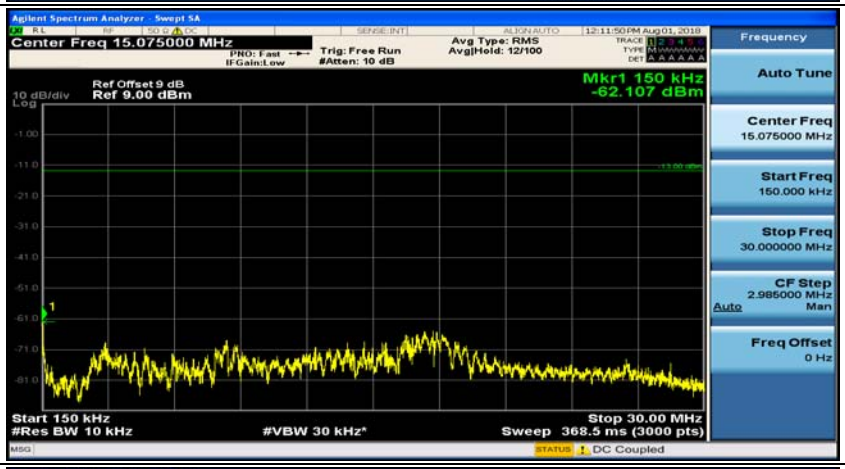
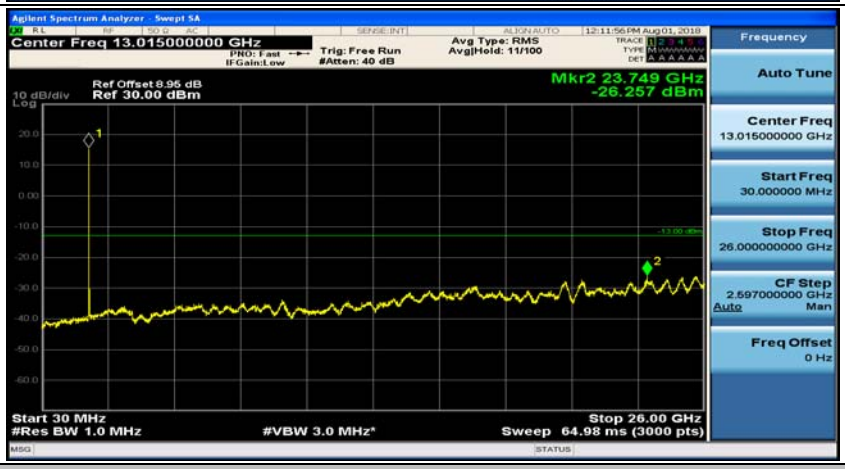


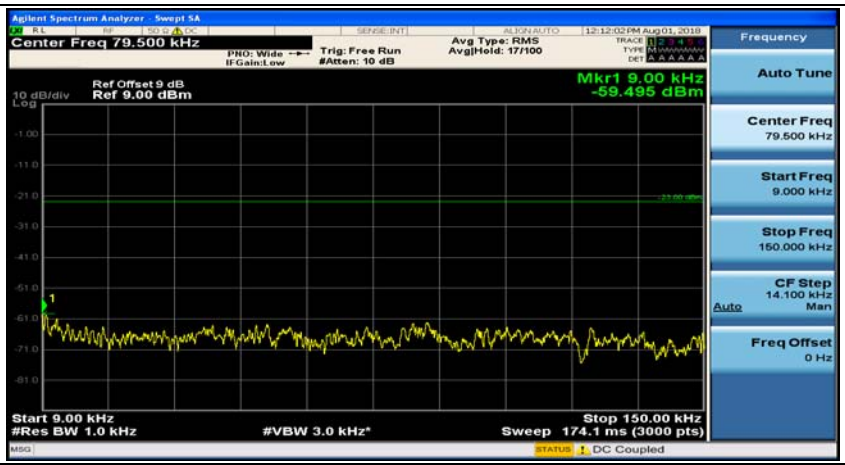
(Channel Bandwidth:20 MHz)_LCH_QPSK_1RB#99

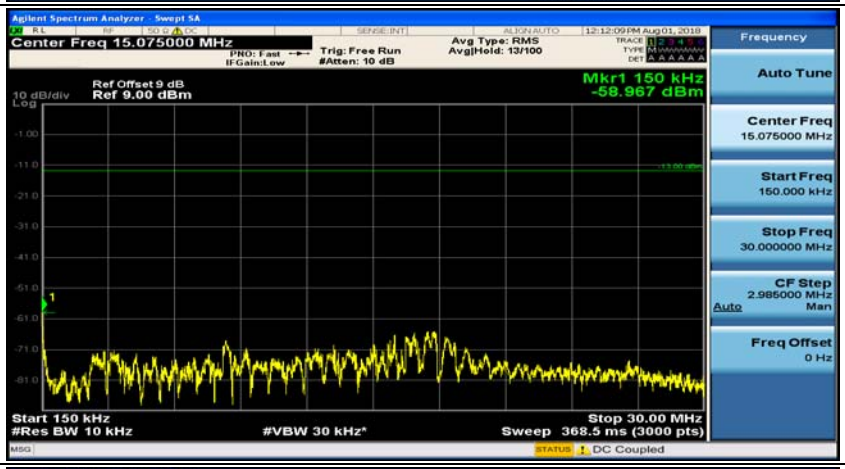

Agilent Spectrum Analyzer - Swept SA
Center Freq 79.500 kHz
PNO: Wide
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 17/100
12:10:22 PM Aug 01, 2018
Frequency
Auto Tune
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Mkr1 9.38 kHz
-58.924 dBm
Center Freq
79.500 kHz
Start Freq
9.000 kHz
Stop 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

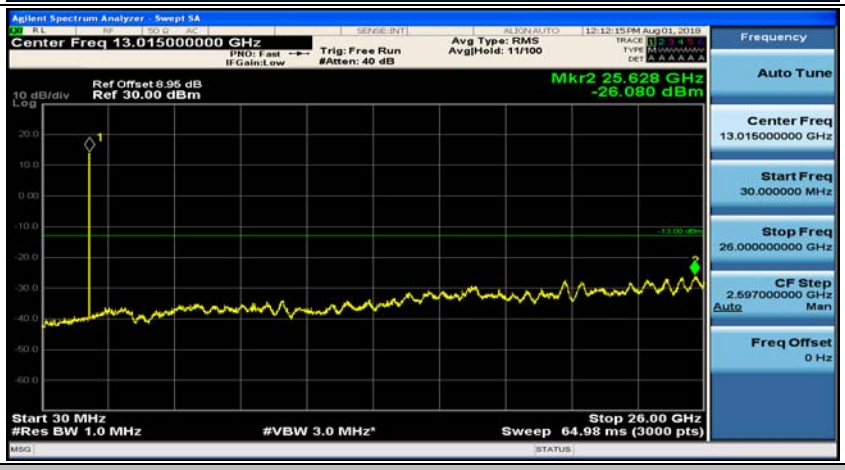

Agilent Spectrum Analyzer - Swept SA
Center Freq 15.075000 MHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 12/100
12:10:29 PM Aug 01, 2018
Frequency
Auto Tune
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Mkr1 150 kHz
-58.340 dBm
Center Freq
15.075000 MHz
Start Freq
150.000 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
12:10:35 PM Aug 01, 2018
Frequency
Auto Tune
Ref Offset 8.95 dB
10 dB/div
Log
Ref 30.00 dBm
Mkr2 25.593 GHz
-26.326 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)

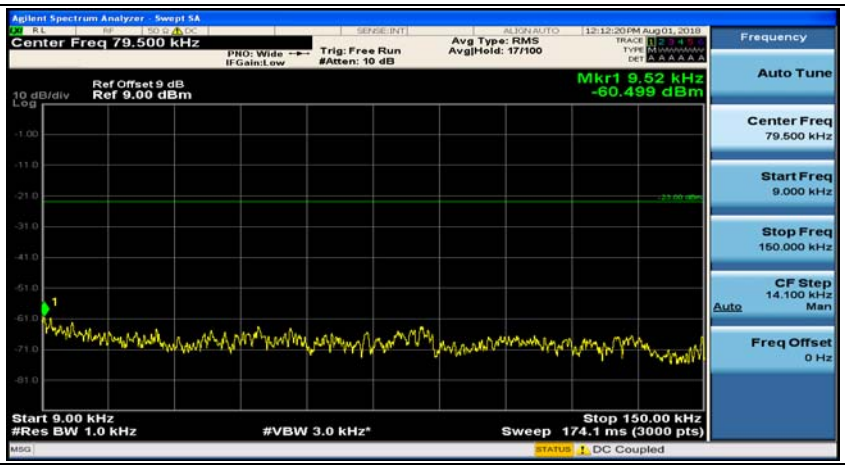
(Channel Bandwidth:20 MHz)_MCH_QPSK_1RB#0



(Channel Bandwidth:20 MHz)_MCH_QPSK_1RB#49

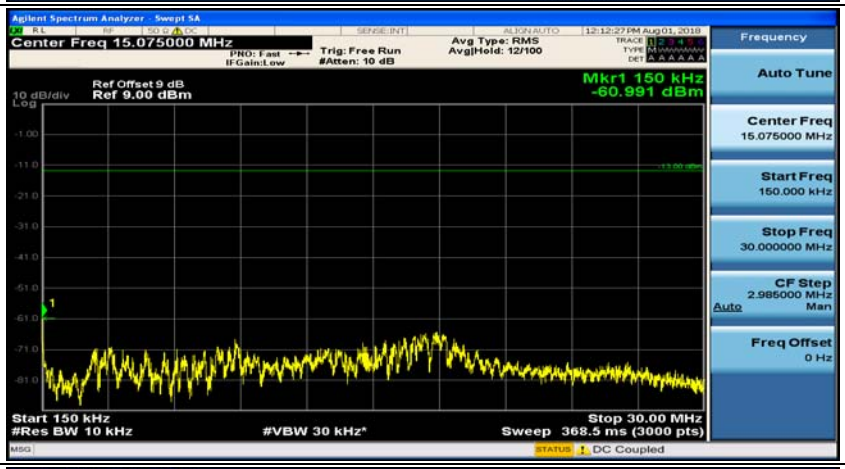


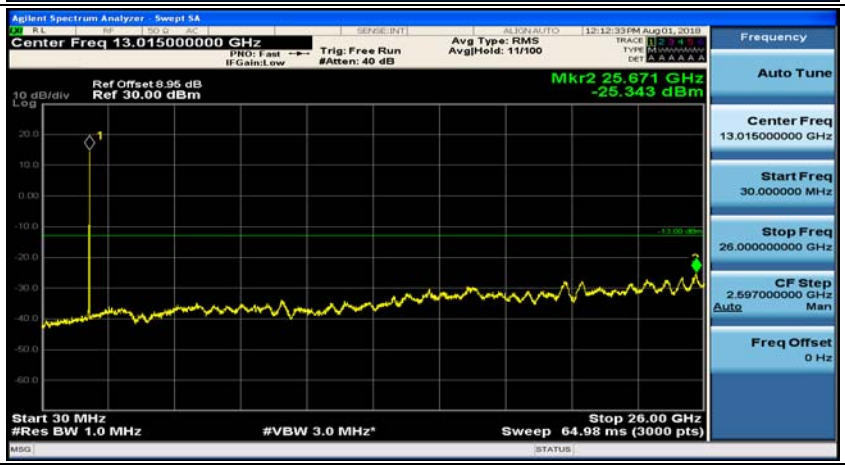


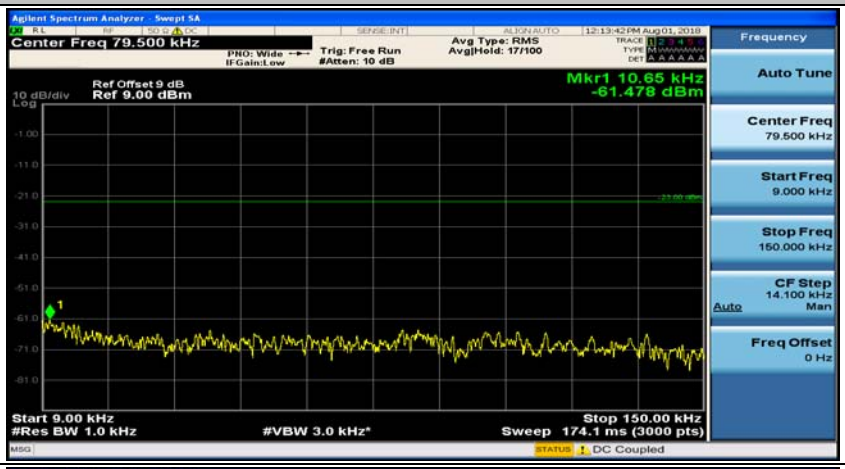
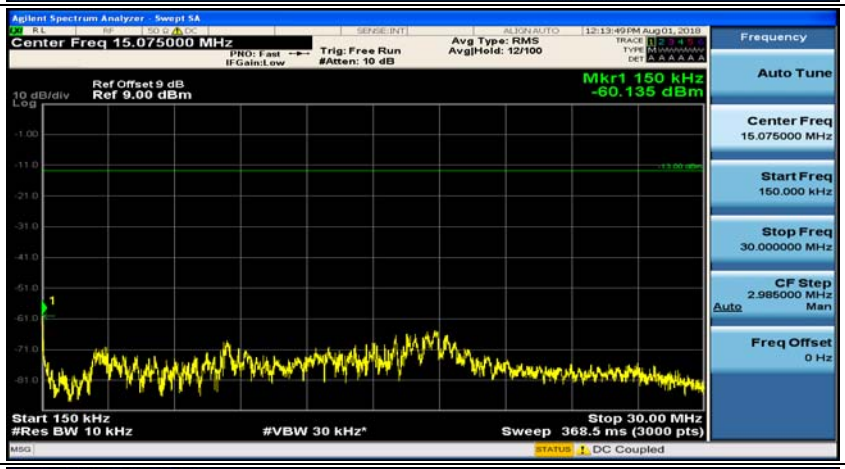
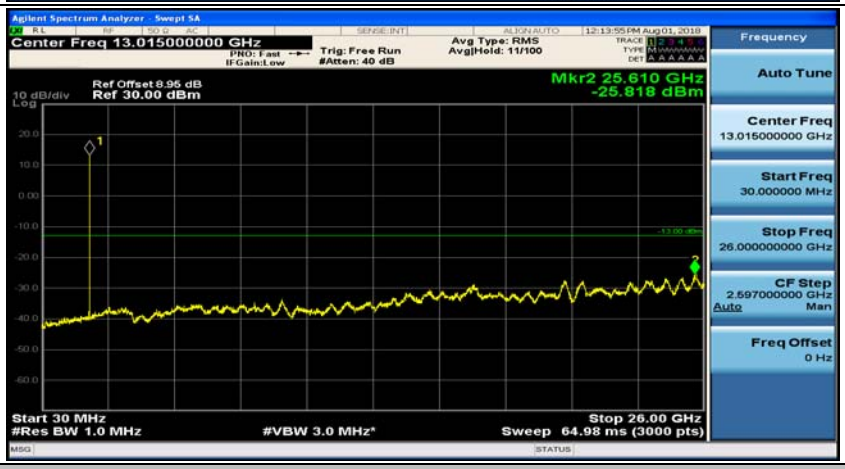


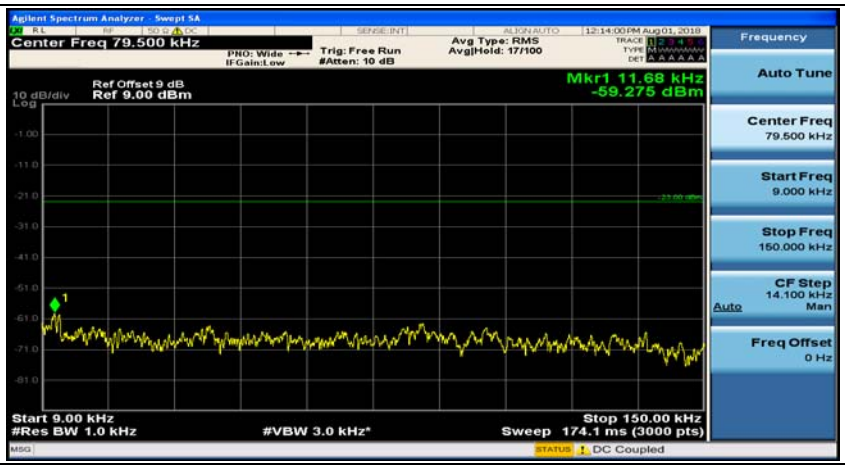
(Channel Bandwidth:20 MHz)_MCH_QPSK_1RB#99

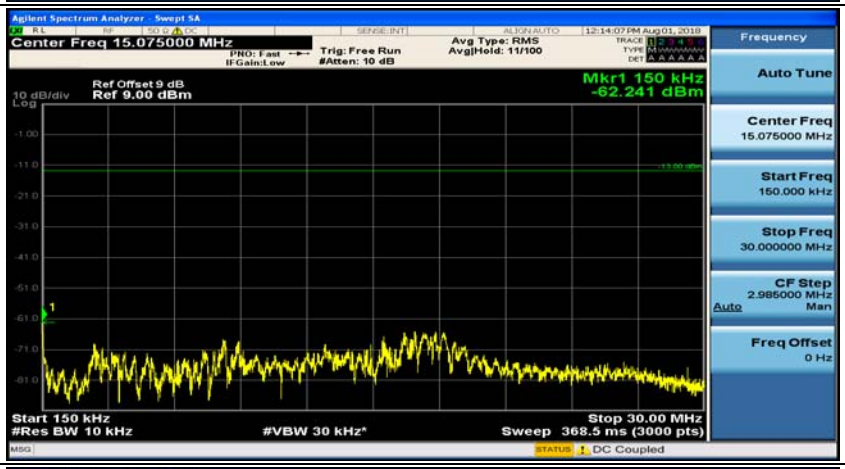

Agilent Spectrum Analyzer - Swept SA
Center Freq 79.500 kHz
PNO: Wide
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 17/100
12:12:20 PM Aug 01, 2018
Frequency
Auto Tune
Mkr1 9.52 kHz
-60.499 dBm
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Center Freq
79.500 kHz
Start Freq
9.000 kHz
Stop 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

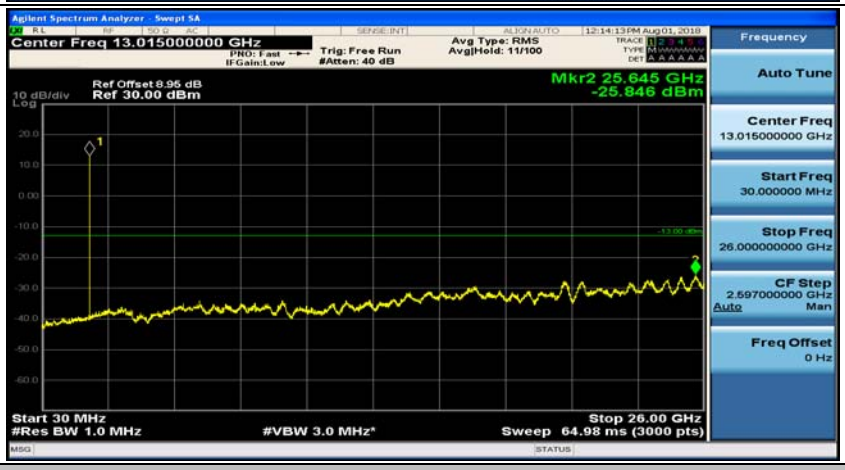

Agilent Spectrum Analyzer - Swept SA
Center Freq 15.075000 MHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 12/100
12:12:27 PM Aug 01, 2018
Frequency
Auto Tune
Mkr1 150 kHz
-60.991 dBm
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Center Freq
15.075000 MHz
Start Freq
150.000 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
12:12:33 PM Aug 01, 2018
Frequency
Auto Tune
Mkr2 25.671 GHz
-25.343 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)

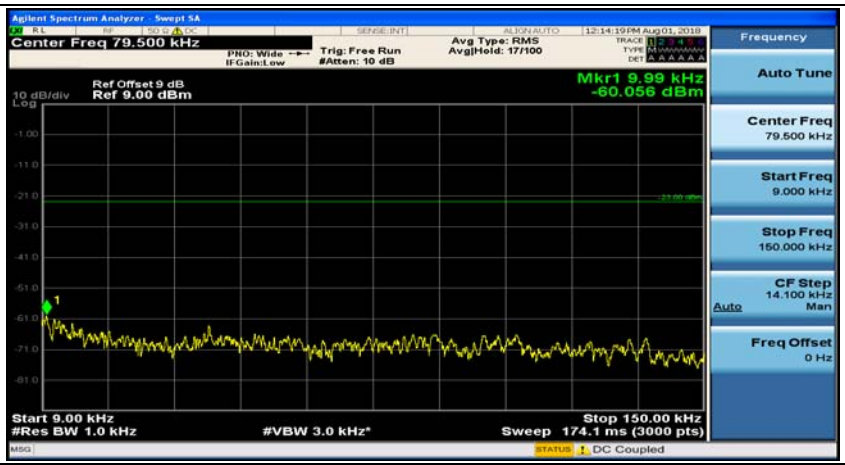
(Channel Bandwidth:20 MHz)_HCH_QPSK_1RB#0



(Channel Bandwidth:20 MHz)_HCH_QPSK_1RB#49

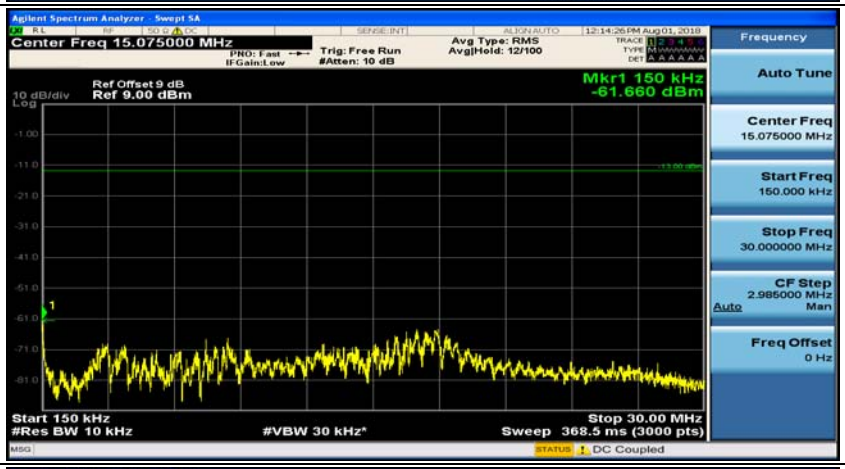


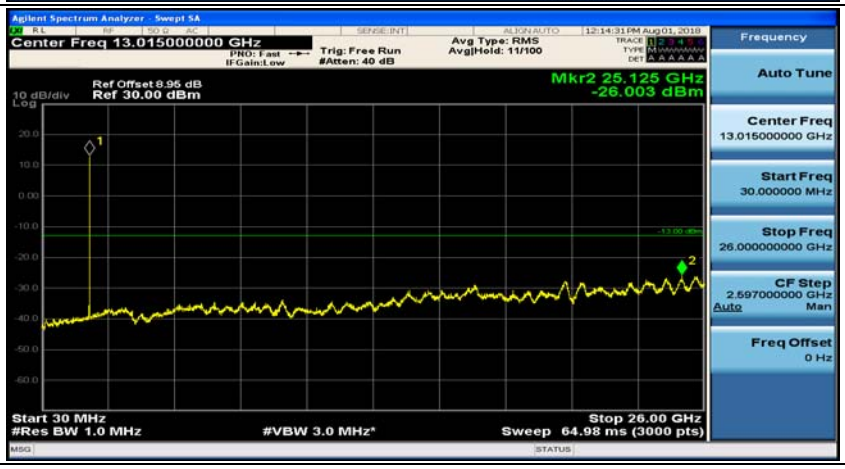


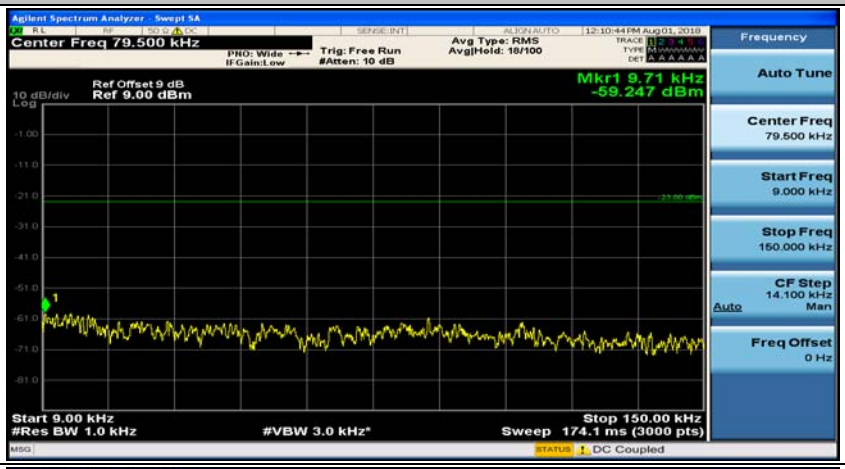
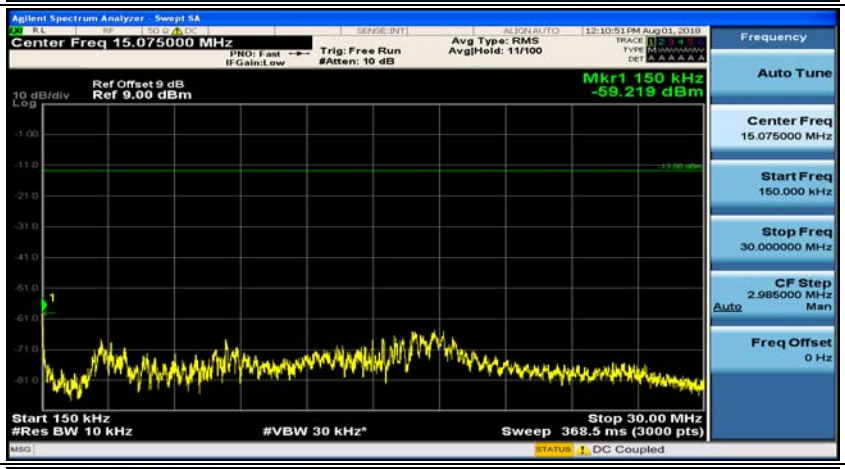
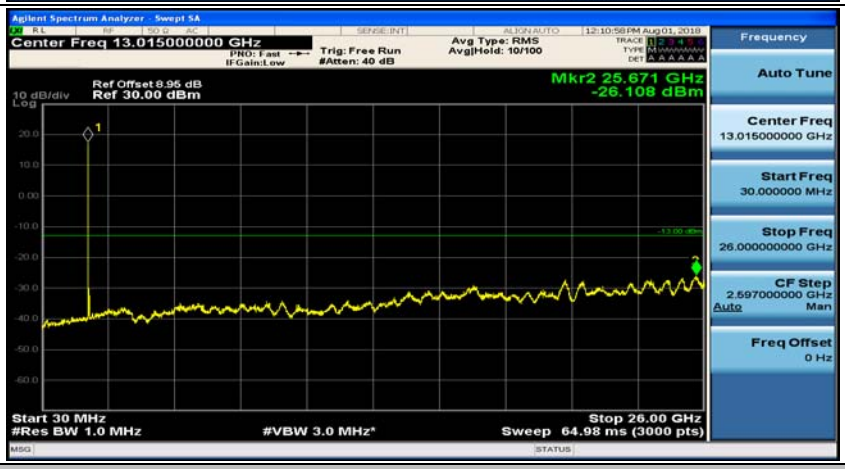


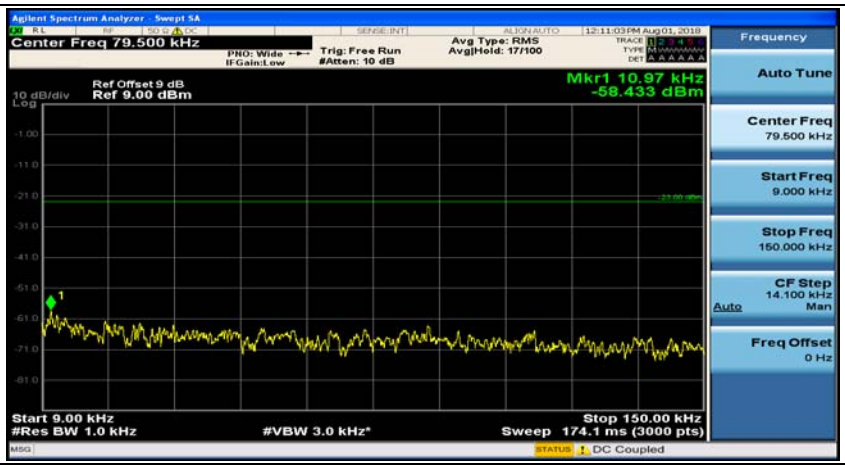
(Channel Bandwidth:20 MHz)_HCH_QPSK_1RB#99

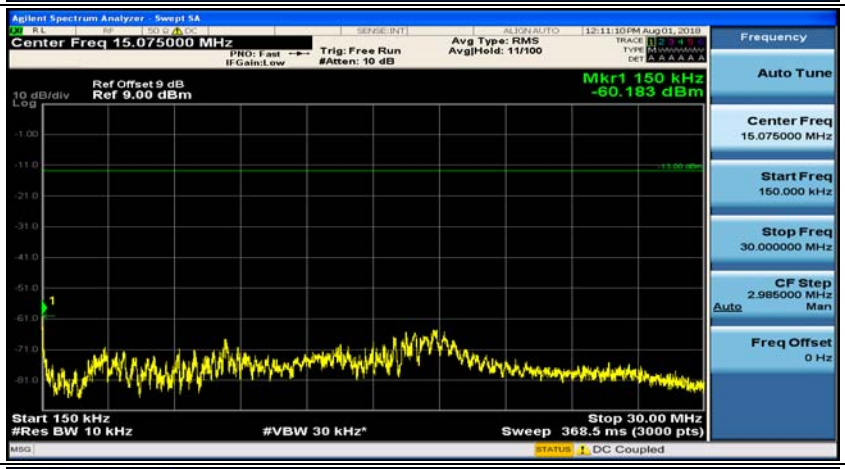

Agilent Spectrum Analyzer - Swept SA
Center Freq 79.500 kHz
PNO: Wide
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 17/100
12:14:19 PM Aug 01, 2018
Frequency
Auto Tune
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Mkr1 9.99 kHz
-60.056 dBm
Center Freq
79.500 kHz
Start Freq
9.000 kHz
Stop 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

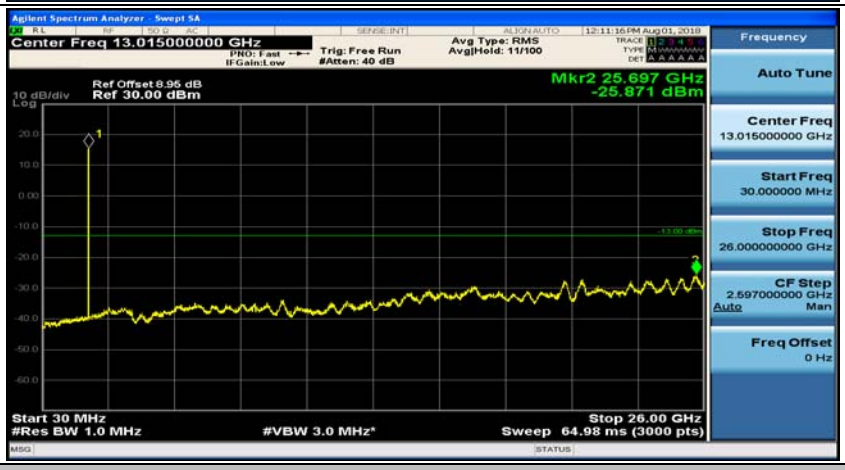

Agilent Spectrum Analyzer - Swept SA
Center Freq 15.075000 MHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 12/100
12:14:26 PM Aug 01, 2018
Frequency
Auto Tune
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Mkr1 150 kHz
-61.660 dBm
Center Freq
15.075000 MHz
Start Freq
150.000 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
12:14:31 PM Aug 01, 2018
Frequency
Auto Tune
Ref Offset 8.95 dB
10 dB/div
Log
Ref 30.00 dBm
Mkr2 25.125 GHz
-26.003 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)

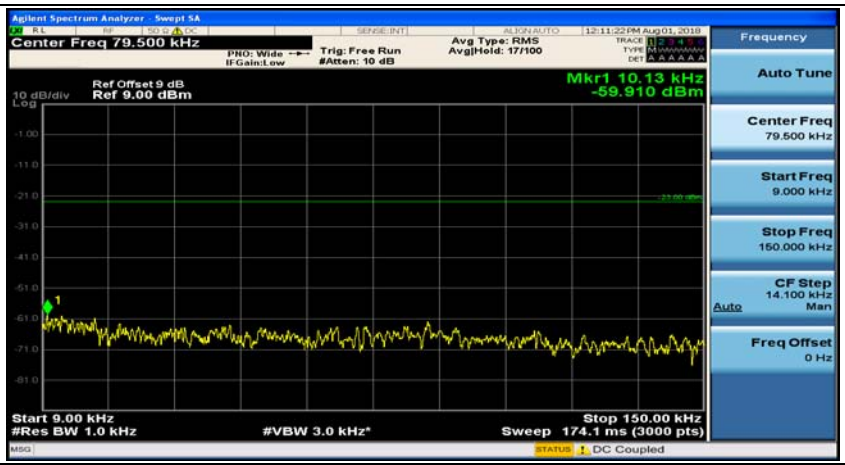
(Channel Bandwidth:20 MHz)_LCH_16QAM_1RB#0



(Channel Bandwidth:20 MHz)_LCH_16QAM_1RB#49

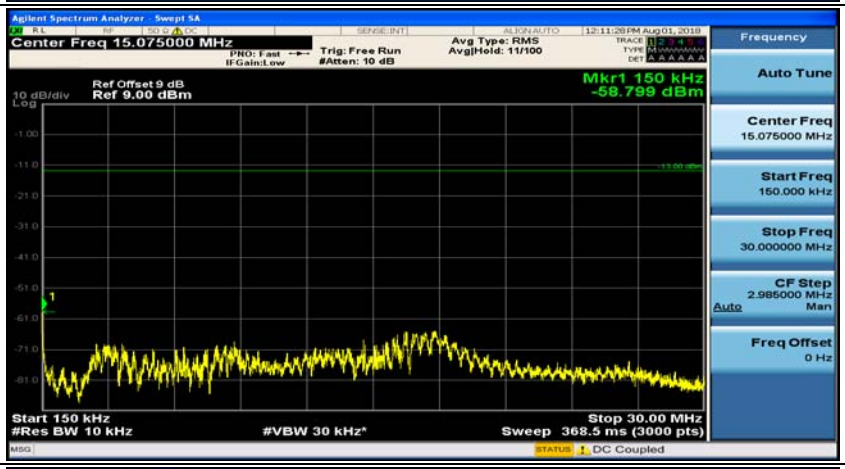


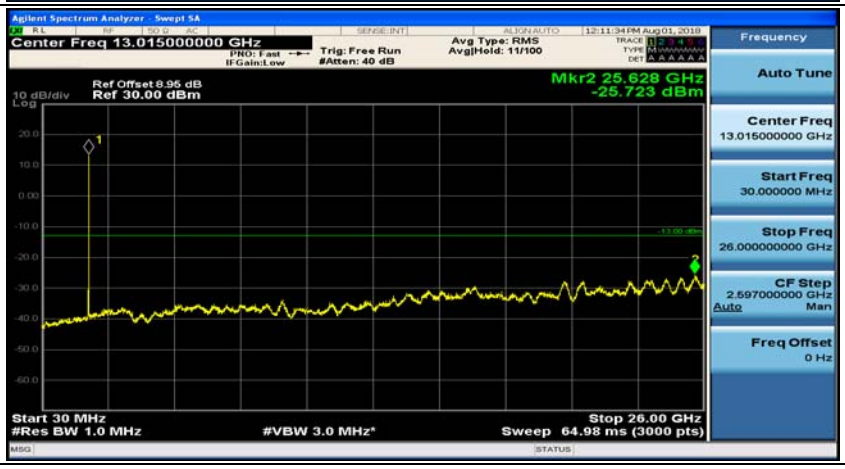


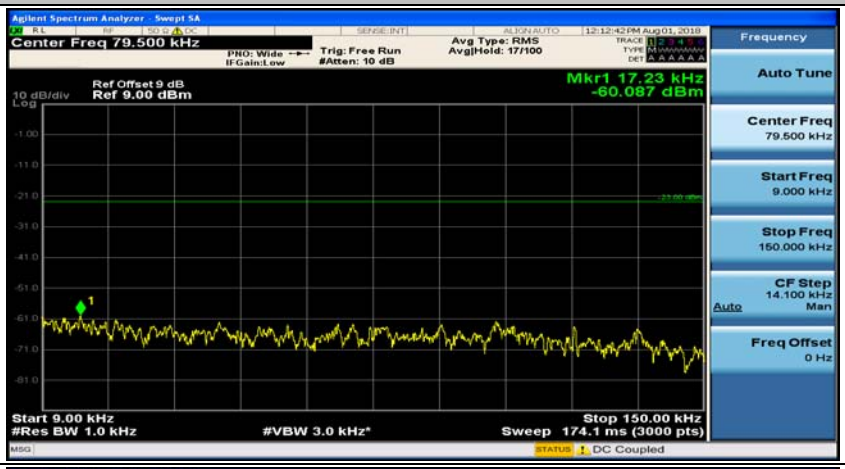
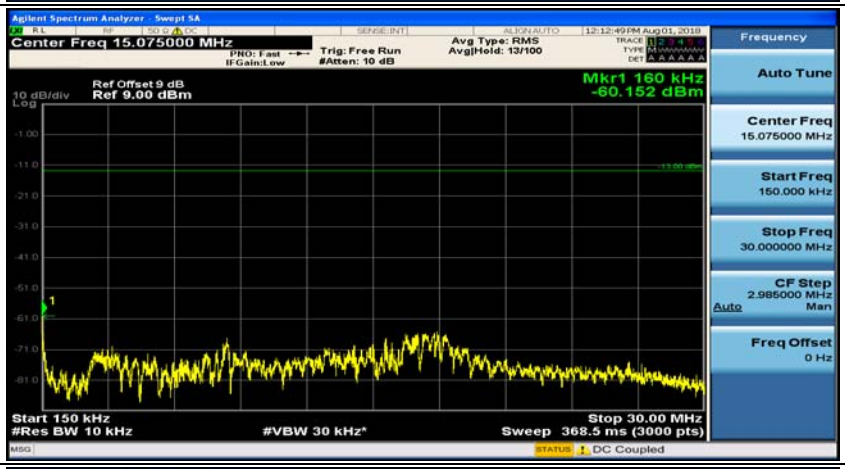
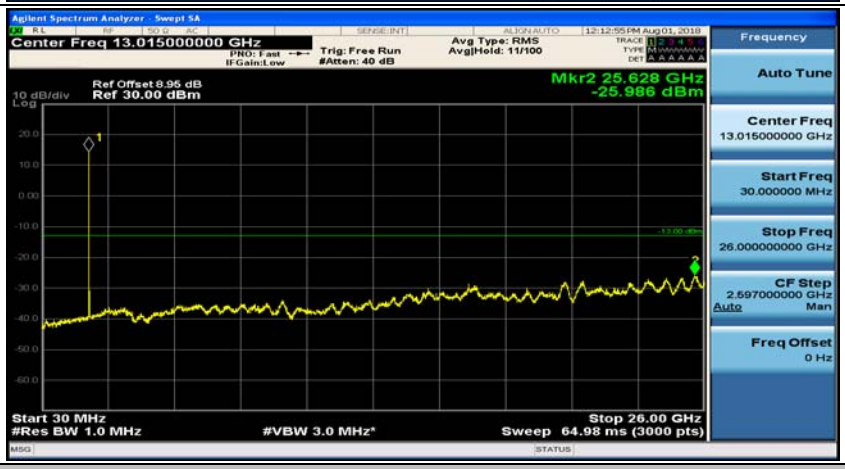


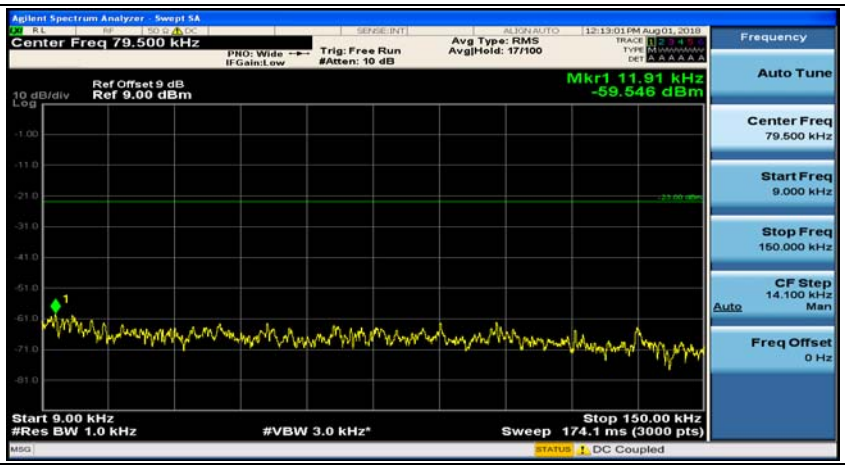
(Channel Bandwidth:20 MHz)_LCH_16QAM_1RB#99

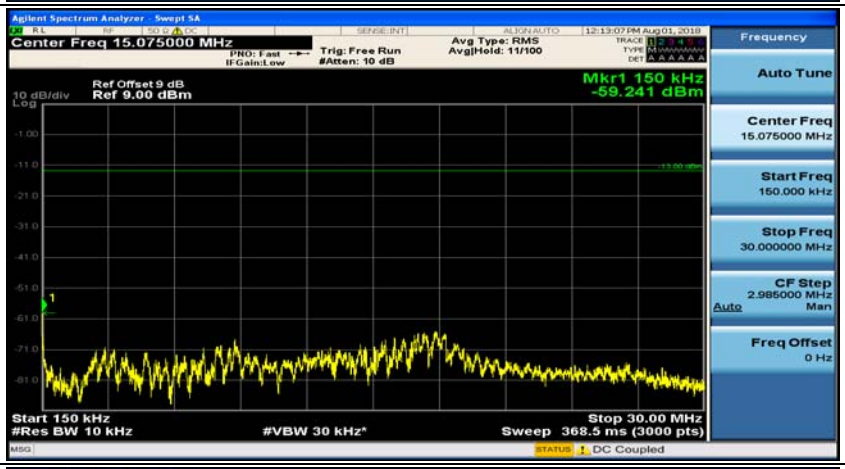

Agilent Spectrum Analyzer - Swept SA
Center Freq 79.500 kHz
PNO: Wide
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 17/100
12:11:22 PM Aug 01, 2018
Frequency
Auto Tune
Mkr1 10.13 kHz
-59.910 dBm
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Center Freq
79.500 kHz
Start Freq
9.000 kHz
Stop 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

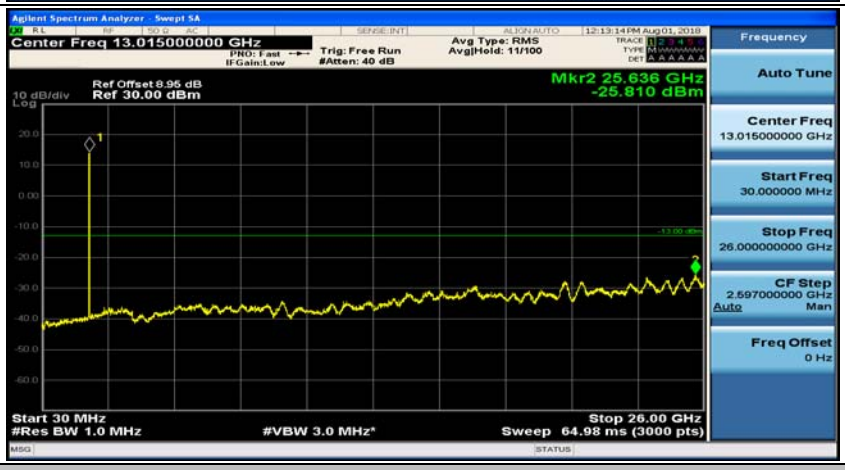

Agilent Spectrum Analyzer - Swept SA
Center Freq 15.075000 MHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 11/100
12:11:28 PM Aug 01, 2018
Frequency
Auto Tune
Mkr1 150 kHz
-58.799 dBm
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Center Freq
15.075000 MHz
Start Freq
150.000 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
12:11:34 PM Aug 01, 2018
Frequency
Auto Tune
Mkr2 25.628 GHz
-25.723 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)

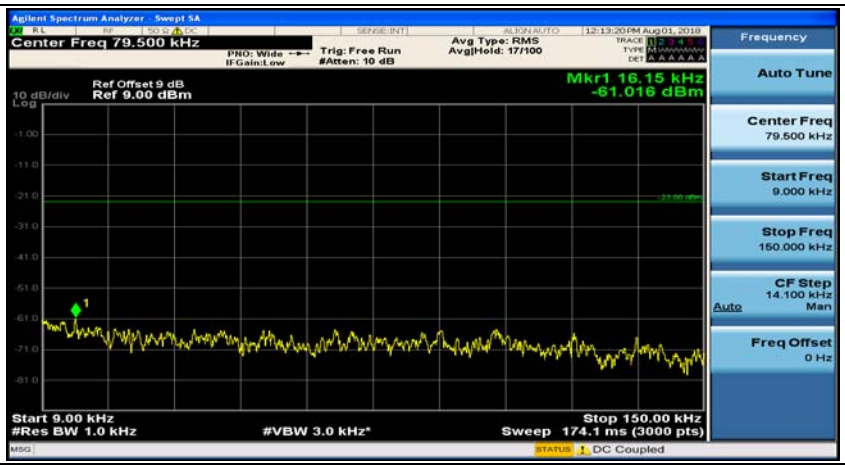
(Channel Bandwidth:20 MHz)_MCH_16QAM_1RB#0



(Channel Bandwidth:20 MHz)_MCH_16QAM_1RB#49

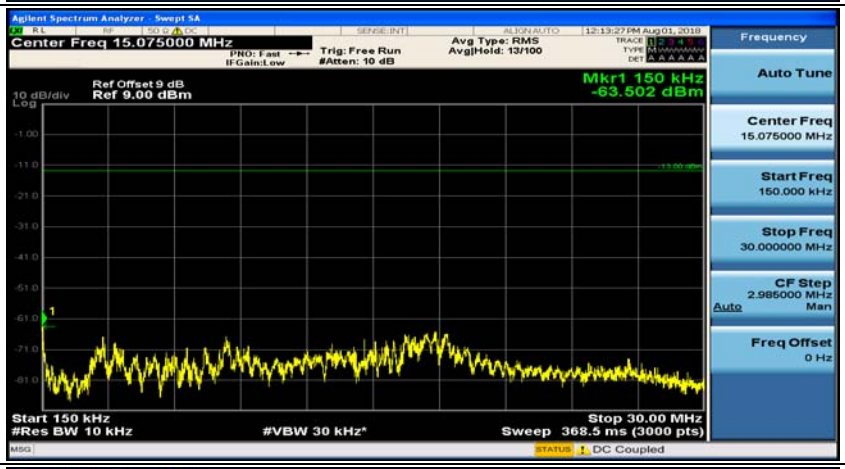


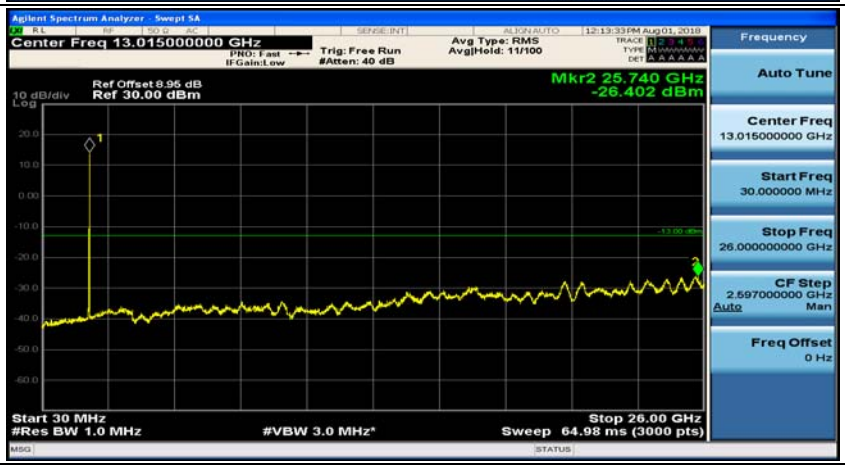


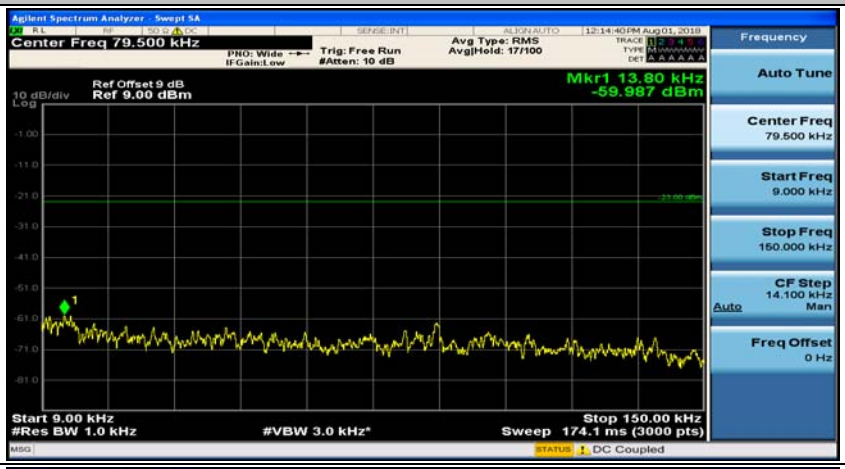
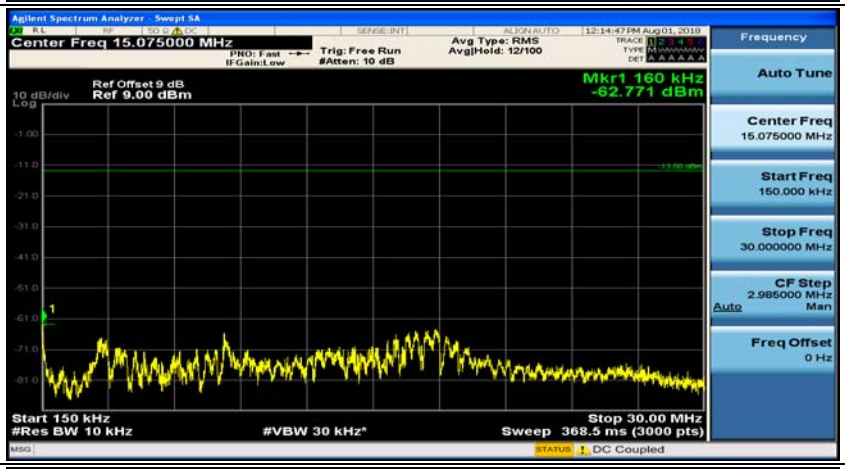
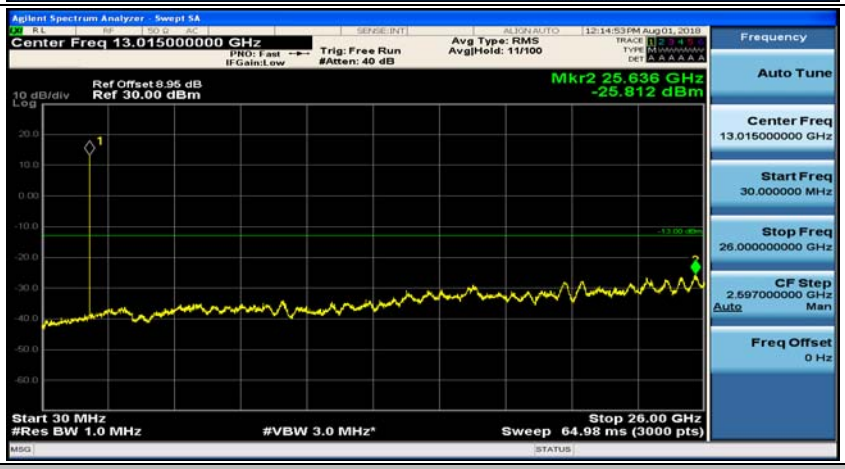


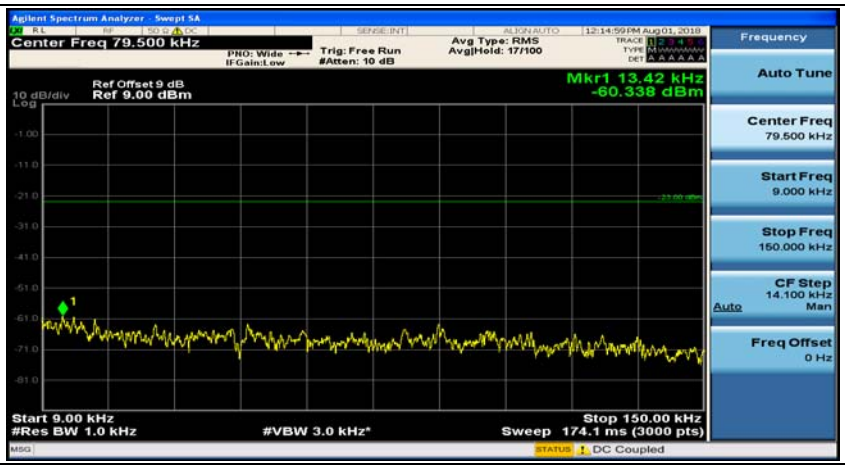
(Channel Bandwidth:20 MHz)_MCH_16QAM_1RB#99

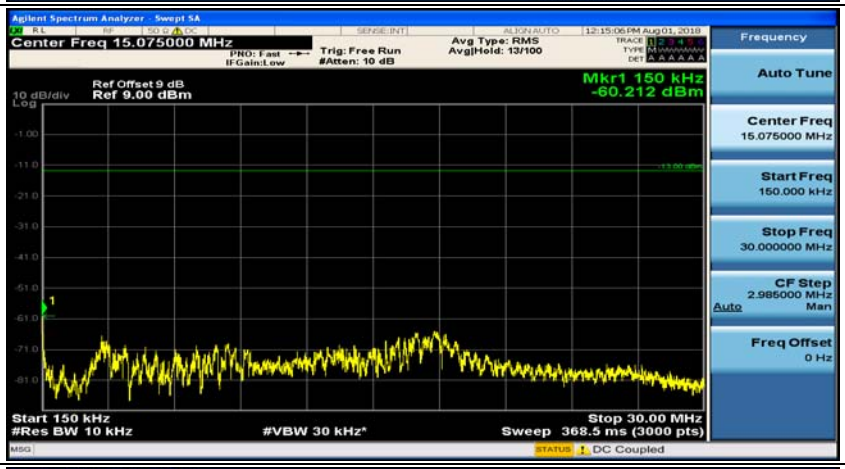

Agilent Spectrum Analyzer - Swept SA
Center Freq 79.500 kHz
PNO: Wide
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 17/100
12:13:20 PM Aug 01, 2018
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Mkr1 16.15 kHz
-61.016 dBm
Start 9.00 kHz
#Res BW 1.0 kHz
#VBW 3.0 kHz*
Stop 150.00 kHz
Sweep 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

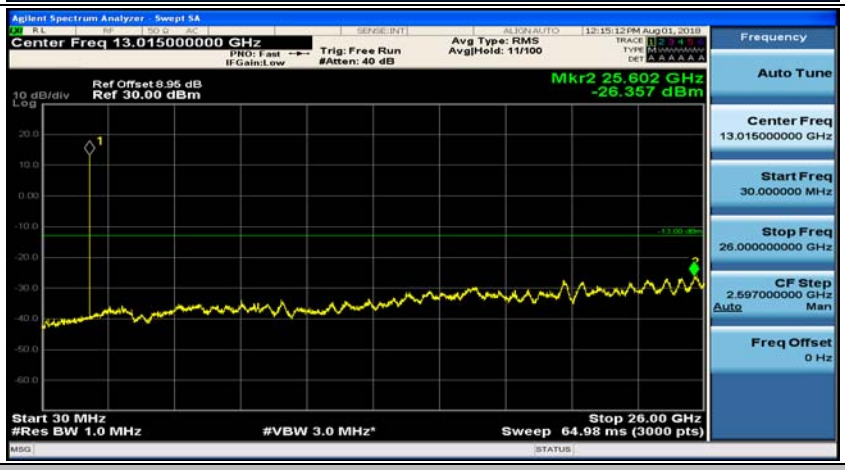

Agilent Spectrum Analyzer - Swept SA
Center Freq 15.075000 MHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 13/100
12:13:27 PM Aug 01, 2018
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Mkr1 150 kHz
-63.502 dBm
Start 150 kHz
#Res BW 10 kHz
#VBW 30 kHz*
Stop 30.00 MHz
Sweep 368.5 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
12:13:33 PM Aug 01, 2018
Ref Offset 8.95 dB
10 dB/div
Log
Ref 30.00 dBm
Mkr2 25.740 GHz
-26.402 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

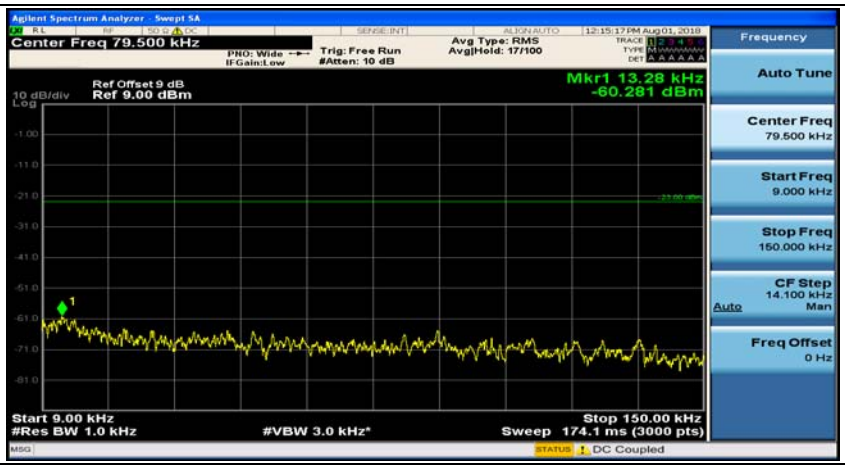
(Channel Bandwidth:20 MHz)_HCH_16QAM_1RB#0



(Channel Bandwidth:20 MHz)_HCH_16QAM_1RB#49

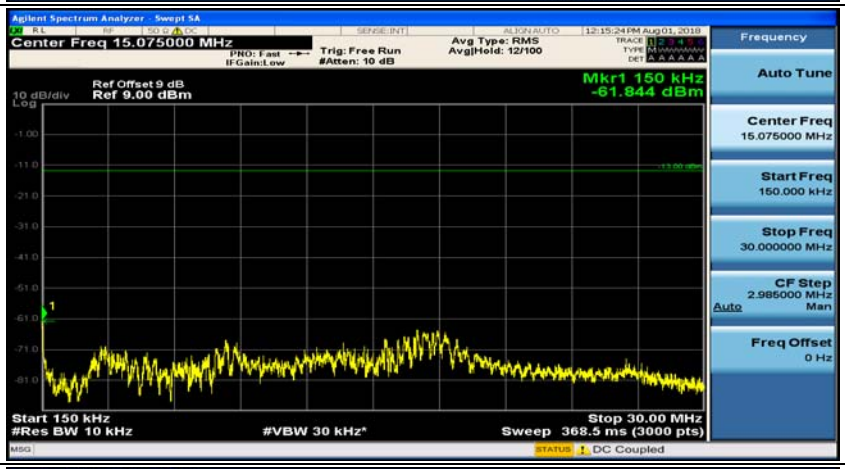


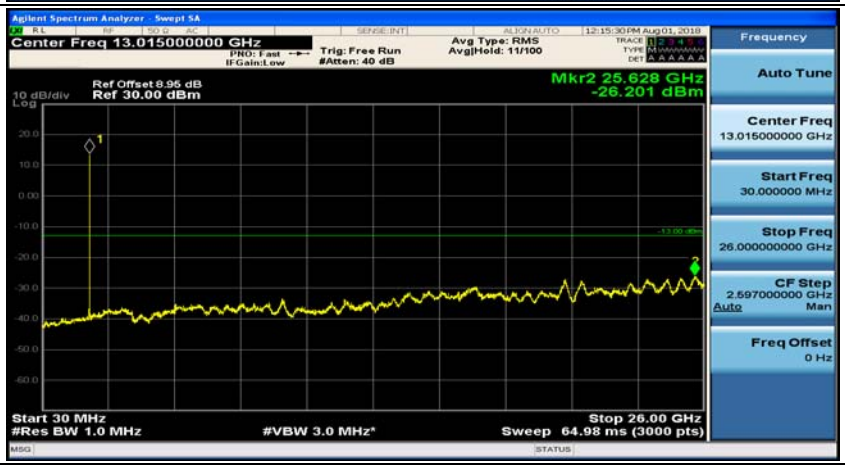




(Channel Bandwidth:20 MHz)_HCH_16QAM_1RB#99


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
12:15:17 PM Aug 01, 2018
Frequency
Auto Tune
Mkr1 13.28 kHz
-60.281 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: 10 dB
Avg Type: RMS
Avg|Hold: 12/100
12:15:24 PM Aug 01, 2018
Frequency
Auto Tune
Mkr1 150 kHz
-61.844 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
12:15:30 PM Aug 01, 2018
Frequency
Auto Tune
Mkr2 25.628 GHz
-26.201 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	-1.65	-0.000892	± 2.5	PASS
		VN	TN	4.4	0.002377	± 2.5	PASS
		VH	TN	-0.83	-0.000448	± 2.5	PASS
	MCH	VL	TN	1.79	0.000952	± 2.5	PASS
		VN	TN	-1.4	-0.000745	± 2.5	PASS
		VH	TN	-1.1	-0.000585	± 2.5	PASS
	HCH	VL	TN	3.88	0.002032	± 2.5	PASS
		VN	TN	1.96	0.001027	± 2.5	PASS
		VH	TN	4.69	0.002456	± 2.5	PASS
16QAM	LCH	VL	TN	4.54	0.002453	± 2.5	PASS
		VN	TN	0.96	0.000519	± 2.5	PASS
		VH	TN	2.59	0.001399	± 2.5	PASS
	MCH	VL	TN	-0.11	-0.000059	± 2.5	PASS
		VN	TN	2.22	0.001181	± 2.5	PASS
		VH	TN	1.94	0.001032	± 2.5	PASS
	HCH	VL	TN	1.92	0.001006	± 2.5	PASS
		VN	TN	-0.96	-0.000503	± 2.5	PASS
		VH	TN	2.5	0.001309	± 2.5	PASS
Temperature							
Modulation	Channel	Voltage [Vdc]	Temperature (℃)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
QPSK	LCH	VN	-30	1.18	0.000638	± 2.5	PASS
		VN	-20	4.7	0.002540	± 2.5	PASS
		VN	-10	3.16	0.001707	± 2.5	PASS
		VN	0	2.32	0.001254	± 2.5	PASS
		VN	10	4.44	0.002399	± 2.5	PASS
		VN	20	-0.12	-0.000065	± 2.5	PASS
		VN	30	2.11	0.001140	± 2.5	PASS
		VN	40	0.24	0.000130	± 2.5	PASS
		VN	50	2.16	0.001167	± 2.5	PASS
	MCH	VN	-30	-0.93	-0.000495	± 2.5	PASS
		VN	-20	2.02	0.001074	± 2.5	PASS

		VN	-10	-1.19	-0.000633	± 2.5	PASS
		VN	0	0.48	0.000255	± 2.5	PASS
		VN	10	3.44	0.001830	± 2.5	PASS
		VN	20	-0.11	-0.000059	± 2.5	PASS
		VN	30	3.61	0.001920	± 2.5	PASS
		VN	40	0.66	0.000351	± 2.5	PASS
		VN	50	2.17	0.001154	± 2.5	PASS
	HCH	VN	-30	-1.08	-0.000566	± 2.5	PASS
		VN	-20	4.05	0.002121	± 2.5	PASS
		VN	-10	4.87	0.002551	± 2.5	PASS
		VN	0	4.62	0.002420	± 2.5	PASS
		VN	10	0.58	0.000304	± 2.5	PASS
		VN	20	4.48	0.002346	± 2.5	PASS
		VN	30	4.83	0.002530	± 2.5	PASS
		VN	40	-0.19	-0.000100	± 2.5	PASS
		VN	50	-0.07	-0.000037	± 2.5	PASS
16QAM	LCH	VN	-30	0.06	0.000032	± 2.5	PASS
		VN	-20	3.87	0.002091	± 2.5	PASS
		VN	-10	-1.41	-0.000762	± 2.5	PASS
		VN	0	4.83	0.002610	± 2.5	PASS
		VN	10	-0.57	-0.000308	± 2.5	PASS
		VN	20	1.87	0.001010	± 2.5	PASS
		VN	30	0.93	0.000503	± 2.5	PASS
		VN	40	2	0.001081	± 2.5	PASS
		VN	50	1.35	0.000729	± 2.5	PASS
	MCH	VN	-30	-0.97	-0.000516	± 2.5	PASS
		VN	-20	-1.54	-0.000819	± 2.5	PASS
		VN	-10	4.74	0.002521	± 2.5	PASS
		VN	0	-1.66	-0.000883	± 2.5	PASS
		VN	10	0.59	0.000314	± 2.5	PASS
		VN	20	-0.88	-0.000468	± 2.5	PASS
		VN	30	3.5	0.001862	± 2.5	PASS
		VN	40	2.54	0.001351	± 2.5	PASS
		VN	50	-1.74	-0.000926	± 2.5	PASS
	HCH	VN	-30	3.13	0.001639	± 2.5	PASS
		VN	-20	1.44	0.000754	± 2.5	PASS
		VN	-10	2.79	0.001461	± 2.5	PASS
		VN	0	1.77	0.000927	± 2.5	PASS
		VN	10	-0.75	-0.000393	± 2.5	PASS
		VN	20	2.04	0.001068	± 2.5	PASS
		VN	30	3.14	0.001645	± 2.5	PASS

		VN	40	1.87	0.000979	± 2.5	PASS
		VN	50	-1.15	-0.000602	± 2.5	PASS

Channel Bandwidth: 3 MHz

Channel Bandwidth: 1.4 MHz							
Voltage							
Modulation	Channel	Voltage [Vdc]	Temperature (℃)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
QPSK	LCH	VL	TN	-1.34	-0.000724	± 2.5	PASS
		VN	TN	-1.27	-0.000686	± 2.5	PASS
		VH	TN	1.31	0.000708	± 2.5	PASS
	MCH	VL	TN	3.79	0.002016	± 2.5	PASS
		VN	TN	2.53	0.001346	± 2.5	PASS
		VH	TN	-1.35	-0.000718	± 2.5	PASS
	HCH	VL	TN	2.99	0.001567	± 2.5	PASS
		VN	TN	1.31	0.000686	± 2.5	PASS
		VH	TN	0.79	0.000414	± 2.5	PASS
16QAM	LCH	VL	TN	3.69	0.001993	± 2.5	PASS
		VN	TN	3.94	0.002128	± 2.5	PASS
		VH	TN	-0.22	-0.000119	± 2.5	PASS
	MCH	VL	TN	4.17	0.002218	± 2.5	PASS
		VN	TN	0.48	0.000255	± 2.5	PASS
		VH	TN	2.43	0.001293	± 2.5	PASS
	HCH	VL	TN	0.75	0.000393	± 2.5	PASS
		VN	TN	-0.29	-0.000152	± 2.5	PASS
		VH	TN	-0.61	-0.000320	± 2.5	PASS
Temperature							
Modulation	Channel	Voltage [Vdc]	Temperature (℃)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
QPSK	LCH	VN	-30	3.21	0.001734	± 2.5	PASS
		VN	-20	-1.52	-0.000821	± 2.5	PASS
		VN	-10	-0.83	-0.000448	± 2.5	PASS
		VN	0	-1.57	-0.000848	± 2.5	PASS
		VN	10	2.35	0.001269	± 2.5	PASS
		VN	20	0.63	0.000340	± 2.5	PASS
		VN	30	3.78	0.002042	± 2.5	PASS
		VN	40	-1.45	-0.000783	± 2.5	PASS
		VN	50	3.43	0.001853	± 2.5	PASS
	MCH	VN	-30	2.04	0.001085	± 2.5	PASS
		VN	-20	-0.69	-0.000367	± 2.5	PASS
		VN	-10	0.15	0.000080	± 2.5	PASS

		VN	0	0.24	0.000128	± 2.5	PASS
		VN	10	-0.25	-0.000133	± 2.5	PASS
		VN	20	1.54	0.000819	± 2.5	PASS
		VN	30	3.75	0.001995	± 2.5	PASS
		VN	40	0.3	0.000160	± 2.5	PASS
		VN	50	-0.09	-0.000048	± 2.5	PASS
	HCH	VN	-30	0.69	0.000362	± 2.5	PASS
		VN	-20	1.99	0.001043	± 2.5	PASS
		VN	-10	-0.89	-0.000466	± 2.5	PASS
		VN	0	4.2	0.002201	± 2.5	PASS
		VN	10	-0.44	-0.000231	± 2.5	PASS
		VN	20	1.89	0.000990	± 2.5	PASS
		VN	30	0.76	0.000398	± 2.5	PASS
		VN	40	1.86	0.000975	± 2.5	PASS
		VN	50	2.14	0.001121	± 2.5	PASS
16QAM	LCH	VN	-30	3.75	0.002025	± 2.5	PASS
		VN	-20	3.89	0.002101	± 2.5	PASS
		VN	-10	4.08	0.002204	± 2.5	PASS
		VN	0	-0.12	-0.000065	± 2.5	PASS
		VN	10	4.57	0.002468	± 2.5	PASS
		VN	20	1.85	0.000999	± 2.5	PASS
		VN	30	-1.11	-0.000600	± 2.5	PASS
		VN	40	3.82	0.002063	± 2.5	PASS
		VN	50	1.47	0.000794	± 2.5	PASS
	MCH	VN	-30	3.05	0.001622	± 2.5	PASS
		VN	-20	2.32	0.001234	± 2.5	PASS
		VN	-10	0.44	0.000234	± 2.5	PASS
		VN	0	0.85	0.000452	± 2.5	PASS
		VN	10	4.78	0.002543	± 2.5	PASS
		VN	20	3.34	0.001777	± 2.5	PASS
		VN	30	-0.54	-0.000287	± 2.5	PASS
		VN	40	-1.26	-0.000670	± 2.5	PASS
		VN	50	-1.3	-0.000691	± 2.5	PASS
	HCH	VN	-30	2.07	0.001085	± 2.5	PASS
		VN	-20	3.24	0.001698	± 2.5	PASS
		VN	-10	1.64	0.000859	± 2.5	PASS
		VN	0	-0.99	-0.000519	± 2.5	PASS
		VN	10	4.81	0.002520	± 2.5	PASS
		VN	20	4.83	0.002531	± 2.5	PASS
		VN	30	-0.38	-0.000199	± 2.5	PASS
		VN	40	2.82	0.001478	± 2.5	PASS

		VN	50	-1.45	-0.000760	± 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	-0.41	-0.000221	± 2.5	PASS
		VN	TN	1.28	0.000691	± 2.5	PASS
		VH	TN	2.64	0.001425	± 2.5	PASS
	MCH	VL	TN	-1.59	-0.000846	± 2.5	PASS
		VN	TN	4.19	0.002229	± 2.5	PASS
		VH	TN	4.72	0.002511	± 2.5	PASS
	HCH	VL	TN	3.52	0.001845	± 2.5	PASS
		VN	TN	-1.2	-0.000629	± 2.5	PASS
		VH	TN	0.66	0.000346	± 2.5	PASS
16QAM	LCH	VL	TN	-0.97	-0.000524	± 2.5	PASS
		VN	TN	3.53	0.001906	± 2.5	PASS
		VH	TN	1.92	0.001036	± 2.5	PASS
	MCH	VL	TN	4.59	0.002441	± 2.5	PASS
		VN	TN	-0.7	-0.000372	± 2.5	PASS
		VH	TN	0.15	0.000080	± 2.5	PASS
	HCH	VL	TN	2.73	0.001431	± 2.5	PASS
		VN	TN	3.31	0.001735	± 2.5	PASS
		VH	TN	-0.84	-0.000440	± 2.5	PASS
Temperature							
Modulation	Channel	Voltage [Vdc]	Temperature (℃)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
QPSK	LCH	VN	-30	3.08	0.001663	± 2.5	PASS
		VN	-20	-0.65	-0.000351	± 2.5	PASS
		VN	-10	-1.06	-0.000572	± 2.5	PASS
		VN	0	3.07	0.001657	± 2.5	PASS
		VN	10	-1.49	-0.000804	± 2.5	PASS
		VN	20	3.17	0.001711	± 2.5	PASS
		VN	30	2.27	0.001225	± 2.5	PASS
		VN	40	-0.64	-0.000345	± 2.5	PASS
		VN	50	-0.8	-0.000432	± 2.5	PASS
	MCH	VN	-30	0.32	0.000170	± 2.5	PASS
		VN	-20	0.25	0.000133	± 2.5	PASS
		VN	-10	2.39	0.001271	± 2.5	PASS
		VN	0	0.82	0.000436	± 2.5	PASS

		VN	10	4.17	0.002218	± 2.5	PASS
		VN	20	2.94	0.001564	± 2.5	PASS
		VN	30	0.23	0.000122	± 2.5	PASS
		VN	40	0.26	0.000138	± 2.5	PASS
		VN	50	2.53	0.001346	± 2.5	PASS
	HCH	VN	-30	2.94	0.001541	± 2.5	PASS
		VN	-20	2.86	0.001499	± 2.5	PASS
		VN	-10	-0.07	-0.000037	± 2.5	PASS
		VN	0	3.95	0.002071	± 2.5	PASS
		VN	10	2.5	0.001311	± 2.5	PASS
		VN	20	-1.31	-0.000687	± 2.5	PASS
		VN	30	1.7	0.000891	± 2.5	PASS
		VN	40	1.22	0.000640	± 2.5	PASS
		VN	50	3.72	0.001950	± 2.5	PASS
16QAM	LCH	VN	-30	4.11	0.002219	± 2.5	PASS
		VN	-20	-0.03	-0.000016	± 2.5	PASS
		VN	-10	0.99	0.000534	± 2.5	PASS
		VN	0	2.45	0.001323	± 2.5	PASS
		VN	10	0.16	0.000086	± 2.5	PASS
		VN	20	0.33	0.000178	± 2.5	PASS
		VN	30	1.63	0.000880	± 2.5	PASS
		VN	40	-0.82	-0.000443	± 2.5	PASS
		VN	50	0.67	0.000362	± 2.5	PASS
	MCH	VN	-30	2.26	0.001202	± 2.5	PASS
		VN	-20	0.81	0.000431	± 2.5	PASS
		VN	-10	3.42	0.001819	± 2.5	PASS
		VN	0	-0.69	-0.000367	± 2.5	PASS
		VN	10	0.76	0.000404	± 2.5	PASS
		VN	20	4.08	0.002170	± 2.5	PASS
		VN	30	2.55	0.001356	± 2.5	PASS
		VN	40	3.56	0.001894	± 2.5	PASS
		VN	50	3.38	0.001798	± 2.5	PASS
	HCH	VN	-30	4.86	0.002548	± 2.5	PASS
		VN	-20	3	0.001573	± 2.5	PASS
		VN	-10	4.29	0.002249	± 2.5	PASS
		VN	0	-0.36	-0.000189	± 2.5	PASS
		VN	10	3.63	0.001903	± 2.5	PASS
		VN	20	4.18	0.002191	± 2.5	PASS
		VN	30	0.33	0.000173	± 2.5	PASS
		VN	40	-0.13	-0.000068	± 2.5	PASS
		VN	50	4.14	0.002170	± 2.5	PASS

Channel Bandwidth: 10 MHz

Channel Bandwidth: 10 MHz							
Voltage							
Modulation	Channel	Voltage [Vdc]	Temperature (℃)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
QPSK	LCH	VL	TN	0.89	0.000480	± 2.5	PASS
		VN	TN	4.31	0.002323	± 2.5	PASS
		VH	TN	-0.29	-0.000156	± 2.5	PASS
	MCH	VL	TN	2.74	0.001457	± 2.5	PASS
		VN	TN	-1.65	-0.000878	± 2.5	PASS
		VH	TN	2.43	0.001293	± 2.5	PASS
	HCH	VL	TN	0.39	0.000205	± 2.5	PASS
		VN	TN	4.34	0.002278	± 2.5	PASS
		VH	TN	2.3	0.001207	± 2.5	PASS
16QAM	LCH	VL	TN	4.31	0.002323	± 2.5	PASS
		VN	TN	3.08	0.001660	± 2.5	PASS
		VH	TN	0.3	0.000162	± 2.5	PASS
	MCH	VL	TN	3.66	0.001947	± 2.5	PASS
		VN	TN	2.41	0.001282	± 2.5	PASS
		VH	TN	-1.15	-0.000612	± 2.5	PASS
	HCH	VL	TN	1.65	0.000866	± 2.5	PASS
		VN	TN	-0.65	-0.000341	± 2.5	PASS
		VH	TN	2.7	0.001417	± 2.5	PASS
Temperature							
Modulation	Channel	Voltage [Vdc]	Temperature (℃)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
16QAM	LCH	VN	-30	-1.98	-0.001067	± 2.5	PASS
		VN	-20	-0.09	-0.000049	± 2.5	PASS
		VN	-10	2.7	0.001456	± 2.5	PASS
		VN	0	0.49	0.000264	± 2.5	PASS
		VN	10	4.04	0.002178	± 2.5	PASS
		VN	20	2.32	0.001251	± 2.5	PASS
		VN	30	1.21	0.000652	± 2.5	PASS
		VN	40	0.94	0.000507	± 2.5	PASS
		VN	50	1.4	0.000755	± 2.5	PASS
	MCH	VN	-30	-1.69	-0.000899	± 2.5	PASS
		VN	-20	1.68	0.000894	± 2.5	PASS
		VN	-10	-0.14	-0.000074	± 2.5	PASS
		VN	0	-1.67	-0.000888	± 2.5	PASS
		VN	10	-1.42	-0.000755	± 2.5	PASS
		VN	20	2.61	0.001388	± 2.5	PASS

		VN	30	4.84	0.002574	± 2.5	PASS
		VN	40	0.72	0.000383	± 2.5	PASS
		VN	50	0.01	0.000005	± 2.5	PASS
	HCH	VN	-30	2.65	0.001391	± 2.5	PASS
		VN	-20	4.4	0.002310	± 2.5	PASS
		VN	-10	3.83	0.002010	± 2.5	PASS
		VN	0	2.26	0.001186	± 2.5	PASS
		VN	10	4.57	0.002399	± 2.5	PASS
		VN	20	3.37	0.001769	± 2.5	PASS
		VN	30	1.5	0.000787	± 2.5	PASS
		VN	40	3.38	0.001774	± 2.5	PASS
		VN	50	4.74	0.002488	± 2.5	PASS
QPSK	LCH	VN	-30	1.59	0.000857	± 2.5	PASS
		VN	-20	-0.68	-0.000367	± 2.5	PASS
		VN	-10	1.11	0.000598	± 2.5	PASS
		VN	0	1.81	0.000976	± 2.5	PASS
		VN	10	4.05	0.002183	± 2.5	PASS
		VN	20	1.64	0.000884	± 2.5	PASS
		VN	30	-1.27	-0.000685	± 2.5	PASS
		VN	40	-1.95	-0.001051	± 2.5	PASS
		VN	50	4.37	0.002356	± 2.5	PASS
	MCH	VN	-30	2.01	0.001069	± 2.5	PASS
		VN	-20	0.38	0.000202	± 2.5	PASS
		VN	-10	3.01	0.001601	± 2.5	PASS
		VN	0	1.27	0.000676	± 2.5	PASS
		VN	10	1.87	0.000995	± 2.5	PASS
		VN	20	-0.55	-0.000293	± 2.5	PASS
		VN	30	4.37	0.002324	± 2.5	PASS
		VN	40	-1.03	-0.000548	± 2.5	PASS
		VN	50	0.54	0.000287	± 2.5	PASS
	HCH	VN	-30	-0.59	-0.000310	± 2.5	PASS
		VN	-20	-1.39	-0.000730	± 2.5	PASS
		VN	-10	1.1	0.000577	± 2.5	PASS
		VN	0	3.76	0.001974	± 2.5	PASS
		VN	10	1.57	0.000824	± 2.5	PASS
		VN	20	4.67	0.002451	± 2.5	PASS
		VN	30	-0.72	-0.000378	± 2.5	PASS
		VN	40	0.93	0.000488	± 2.5	PASS
		VN	50	3.58	0.001879	± 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	3.21	0.001728	± 2.5	PASS
		VN	TN	3.67	0.001976	± 2.5	PASS
		VH	TN	-1.19	-0.000641	± 2.5	PASS
	MCH	VL	TN	-0.46	-0.000245	± 2.5	PASS
		VN	TN	0.55	0.000293	± 2.5	PASS
		VH	TN	4.77	0.002537	± 2.5	PASS
	HCH	VL	TN	-0.02	-0.000011	± 2.5	PASS
		VN	TN	4.99	0.002623	± 2.5	PASS
		VH	TN	3.02	0.001587	± 2.5	PASS
16QAM	LCH	VL	TN	2.02	0.001087	± 2.5	PASS
		VN	TN	0.66	0.000355	± 2.5	PASS
		VH	TN	-0.14	-0.000075	± 2.5	PASS
	MCH	VL	TN	3.1	0.001649	± 2.5	PASS
		VN	TN	-1.01	-0.000537	± 2.5	PASS
		VH	TN	2.93	0.001559	± 2.5	PASS
	HCH	VL	TN	-0.85	-0.000447	± 2.5	PASS
		VN	TN	-1.71	-0.000899	± 2.5	PASS
		VH	TN	-0.38	-0.000200	± 2.5	PASS
Temperature							
Modulation	Channel	Voltage [Vdc]	Temperature (℃)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
QPSK	LCH	VN	-30	2.55	0.001373	± 2.5	PASS
		VN	-20	2.73	0.001470	± 2.5	PASS
		VN	-10	2.58	0.001389	± 2.5	PASS
		VN	0	3.43	0.001847	± 2.5	PASS
		VN	10	2.77	0.001491	± 2.5	PASS
		VN	20	0.8	0.000431	± 2.5	PASS
		VN	30	4.56	0.002455	± 2.5	PASS
		VN	40	-1.05	-0.000565	± 2.5	PASS
		VN	50	-0.46	-0.000248	± 2.5	PASS
	MCH	VN	-30	4.4	0.002340	± 2.5	PASS
		VN	-20	-1.76	-0.000936	± 2.5	PASS
		VN	-10	1.82	0.000968	± 2.5	PASS
		VN	0	-0.8	-0.000426	± 2.5	PASS
		VN	10	4.43	0.002356	± 2.5	PASS
		VN	20	1.13	0.000601	± 2.5	PASS

		VN	30	1.57	0.000835	± 2.5	PASS
		VN	40	-0.05	-0.000027	± 2.5	PASS
		VN	50	0.91	0.000484	± 2.5	PASS
	HCH	VN	-30	-0.02	-0.000011	± 2.5	PASS
		VN	-20	0.94	0.000494	± 2.5	PASS
		VN	-10	1.97	0.001035	± 2.5	PASS
		VN	0	2.66	0.001398	± 2.5	PASS
		VN	10	0.31	0.000163	± 2.5	PASS
		VN	20	-1.56	-0.000820	± 2.5	PASS
		VN	30	4.52	0.002376	± 2.5	PASS
		VN	40	-0.03	-0.000016	± 2.5	PASS
		VN	50	0.58	0.000305	± 2.5	PASS
16QAM	LCH	VN	-30	2.26	0.001217	± 2.5	PASS
		VN	-20	2.82	0.001518	± 2.5	PASS
		VN	-10	-0.61	-0.000328	± 2.5	PASS
		VN	0	0.5	0.000269	± 2.5	PASS
		VN	10	-0.86	-0.000463	± 2.5	PASS
		VN	20	0.39	0.000210	± 2.5	PASS
		VN	30	3.03	0.001631	± 2.5	PASS
		VN	40	1.44	0.000775	± 2.5	PASS
		VN	50	0.31	0.000167	± 2.5	PASS
	MCH	VN	-30	-0.54	-0.000287	± 2.5	PASS
		VN	-20	3.35	0.001782	± 2.5	PASS
		VN	-10	0.82	0.000436	± 2.5	PASS
		VN	0	1.62	0.000862	± 2.5	PASS
		VN	10	0.51	0.000271	± 2.5	PASS
		VN	20	2.32	0.001234	± 2.5	PASS
		VN	30	2.34	0.001245	± 2.5	PASS
		VN	40	3.64	0.001936	± 2.5	PASS
		VN	50	4.26	0.002266	± 2.5	PASS
	HCH	VN	-30	-0.88	-0.000463	± 2.5	PASS
		VN	-20	-1.65	-0.000867	± 2.5	PASS
		VN	-10	4.26	0.002239	± 2.5	PASS
		VN	0	4	0.002102	± 2.5	PASS
		VN	10	0.71	0.000373	± 2.5	PASS
		VN	20	0.3	0.000158	± 2.5	PASS
		VN	30	4.21	0.002213	± 2.5	PASS
		VN	40	3.98	0.002092	± 2.5	PASS
		VN	50	3.69	0.001940	± 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	4.35	0.002339	± 2.5	PASS
		VN	TN	2.78	0.001495	± 2.5	PASS
		VH	TN	-0.91	-0.000489	± 2.5	PASS
	MCH	VL	TN	3.87	0.002059	± 2.5	PASS
		VN	TN	4.27	0.002271	± 2.5	PASS
		VH	TN	1.56	0.000830	± 2.5	PASS
	HCH	VL	TN	0.14	0.000074	± 2.5	PASS
		VN	TN	3.51	0.001847	± 2.5	PASS
		VH	TN	0.39	0.000205	± 2.5	PASS
16QAM	LCH	VL	TN	4.97	0.002672	± 2.5	PASS
		VN	TN	1.34	0.000720	± 2.5	PASS
		VH	TN	3.38	0.001817	± 2.5	PASS
	MCH	VL	TN	2	0.001064	± 2.5	PASS
		VN	TN	3.43	0.001824	± 2.5	PASS
		VH	TN	2.89	0.001537	± 2.5	PASS
	HCH	VL	TN	1.93	0.001016	± 2.5	PASS
		VN	TN	-1.51	-0.000795	± 2.5	PASS
		VH	TN	-1.25	-0.000658	± 2.5	PASS
Temperature							
Modulation	Channel	Voltage [Vdc]	Temperature (℃)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
QPSK	LCH	VN	-30	2.87	0.001543	± 2.5	PASS
		VN	-20	-0.3	-0.000161	± 2.5	PASS
		VN	-10	-1.75	-0.000941	± 2.5	PASS
		VN	0	2.11	0.001134	± 2.5	PASS
		VN	10	3.26	0.001753	± 2.5	PASS
		VN	20	-0.12	-0.000065	± 2.5	PASS
		VN	30	0.52	0.000280	± 2.5	PASS
		VN	40	2.31	0.001242	± 2.5	PASS
		VN	50	0.18	0.000097	± 2.5	PASS
	MCH	VN	-30	-1.09	-0.000580	± 2.5	PASS
		VN	-20	-1.27	-0.000676	± 2.5	PASS
		VN	-10	0.08	0.000043	± 2.5	PASS
		VN	0	-0.22	-0.000117	± 2.5	PASS
		VN	10	-0.2	-0.000106	± 2.5	PASS
		VN	20	0.67	0.000356	± 2.5	PASS

		VN	30	4.78	0.002543	± 2.5	PASS
		VN	40	2.42	0.001287	± 2.5	PASS
		VN	50	2.8	0.001489	± 2.5	PASS
	HCH	VN	-30	2.61	0.001374	± 2.5	PASS
		VN	-20	4.61	0.002426	± 2.5	PASS
		VN	-10	4.06	0.002137	± 2.5	PASS
		VN	0	1.98	0.001042	± 2.5	PASS
		VN	10	0.58	0.000305	± 2.5	PASS
		VN	20	2.66	0.001400	± 2.5	PASS
		VN	30	1.05	0.000553	± 2.5	PASS
		VN	40	0.49	0.000258	± 2.5	PASS
		VN	50	2.34	0.001232	± 2.5	PASS
16QAM	LCH	VN	-30	2.26	0.001215	± 2.5	PASS
		VN	-20	2.45	0.001317	± 2.5	PASS
		VN	-10	1.83	0.000984	± 2.5	PASS
		VN	0	1.39	0.000747	± 2.5	PASS
		VN	10	-1.51	-0.000812	± 2.5	PASS
		VN	20	0.29	0.000156	± 2.5	PASS
		VN	30	2.08	0.001118	± 2.5	PASS
		VN	40	-1.44	-0.000774	± 2.5	PASS
		VN	50	4.16	0.002237	± 2.5	PASS
	MCH	VN	-30	2.64	0.001404	± 2.5	PASS
		VN	-20	3.69	0.001963	± 2.5	PASS
		VN	-10	3.37	0.001793	± 2.5	PASS
		VN	0	1.81	0.000963	± 2.5	PASS
		VN	10	0	0.000000	± 2.5	PASS
		VN	20	0.79	0.000420	± 2.5	PASS
		VN	30	2.6	0.001383	± 2.5	PASS
		VN	40	3.78	0.002011	± 2.5	PASS
		VN	50	2.37	0.001261	± 2.5	PASS
	HCH	VN	-30	2.49	0.001311	± 2.5	PASS
		VN	-20	0.24	0.000126	± 2.5	PASS
		VN	-10	3.22	0.001695	± 2.5	PASS
		VN	0	1.42	0.000747	± 2.5	PASS
		VN	10	-0.46	-0.000242	± 2.5	PASS
		VN	20	4.5	0.002368	± 2.5	PASS
		VN	30	1.23	0.000647	± 2.5	PASS
		VN	40	0.06	0.000032	± 2.5	PASS
		VN	50	4.57	0.002405	± 2.5	PASS