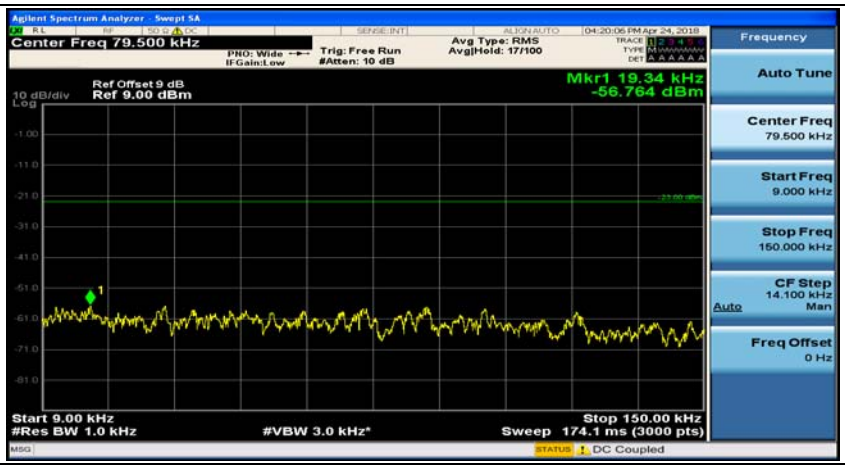
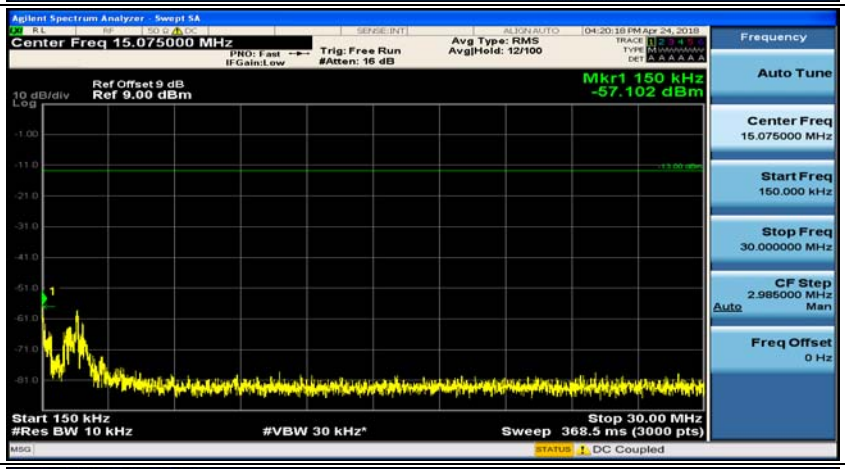
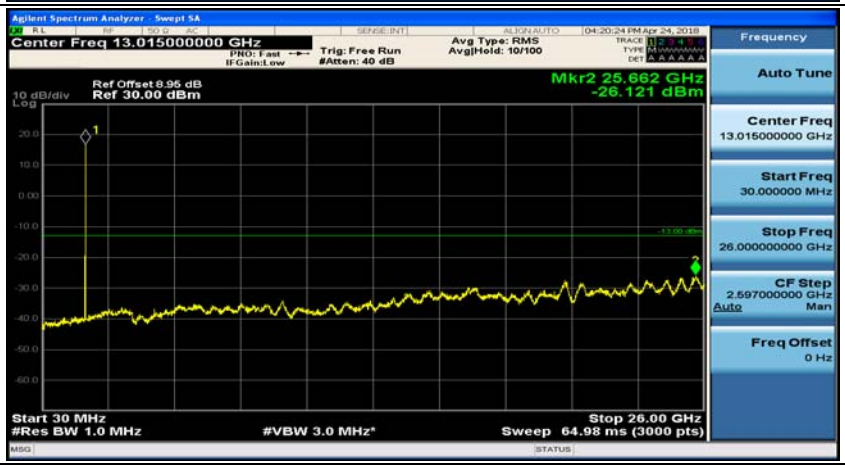
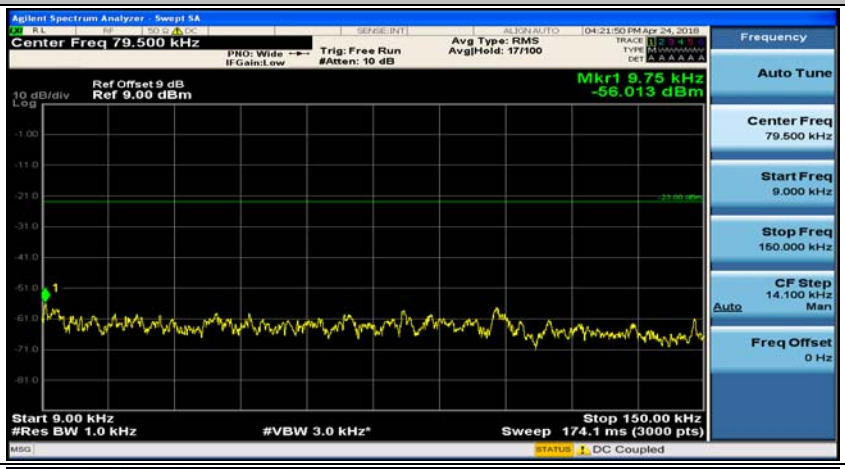
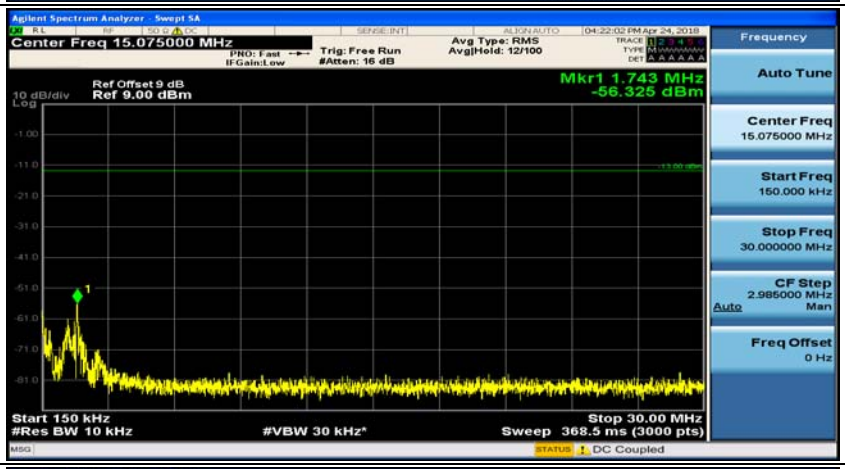
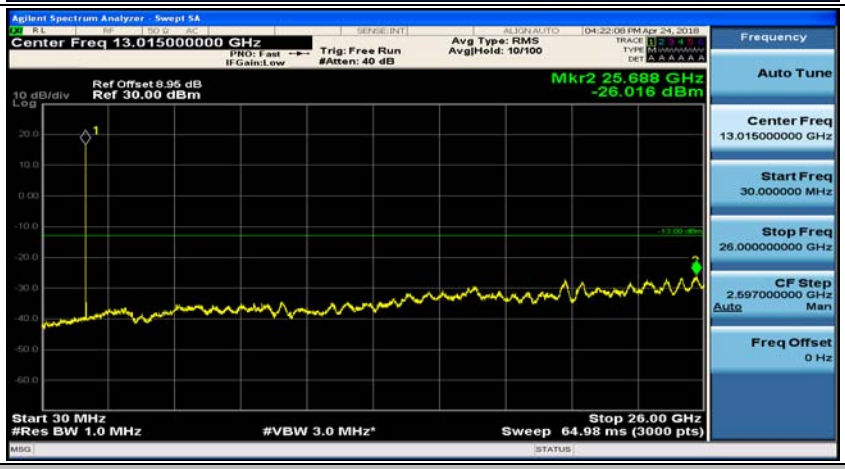
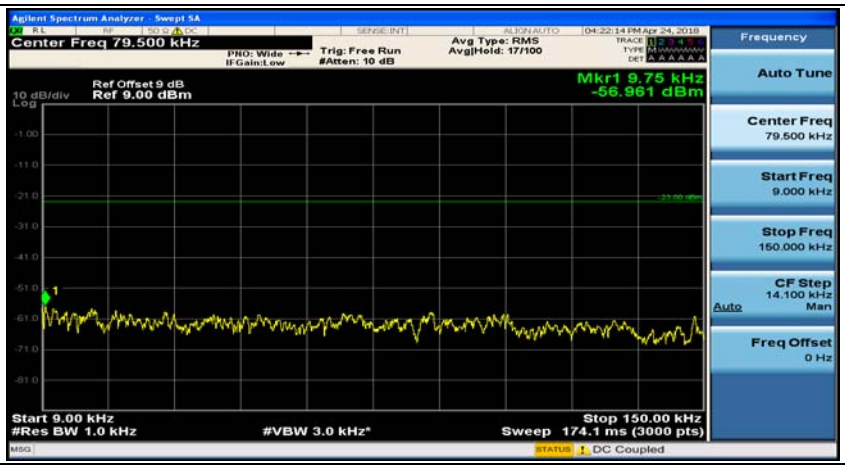
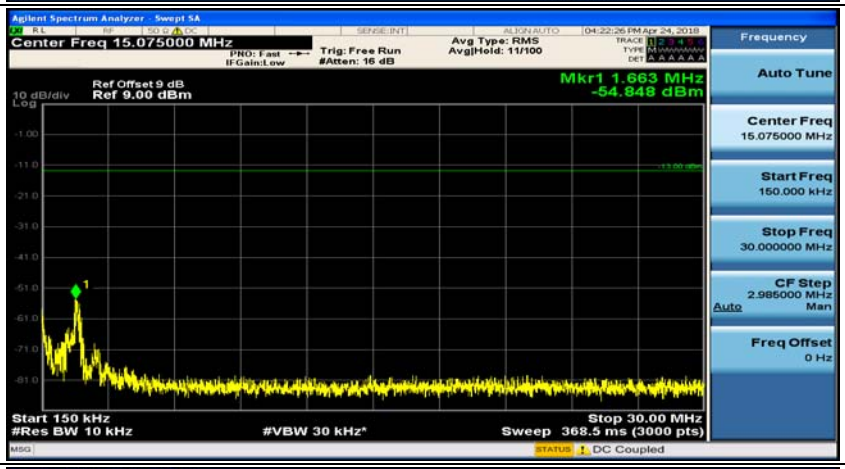

Agilent Spectrum Analyzer - Swept SA
Center Freq 79.500 kHz
PNO: Wide
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 17/100
04:20:06 PM Apr 24, 2018
Frequency
Auto Tune
Mkr1 19.34 kHz
-56.764 dBm
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Center Freq
79.500 kHz
Start Freq
9.000 kHz
Stop 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: 12/100
04:20:18 PM Apr 24, 2018
Frequency
Auto Tune
Mkr1 150 kHz
-57.102 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

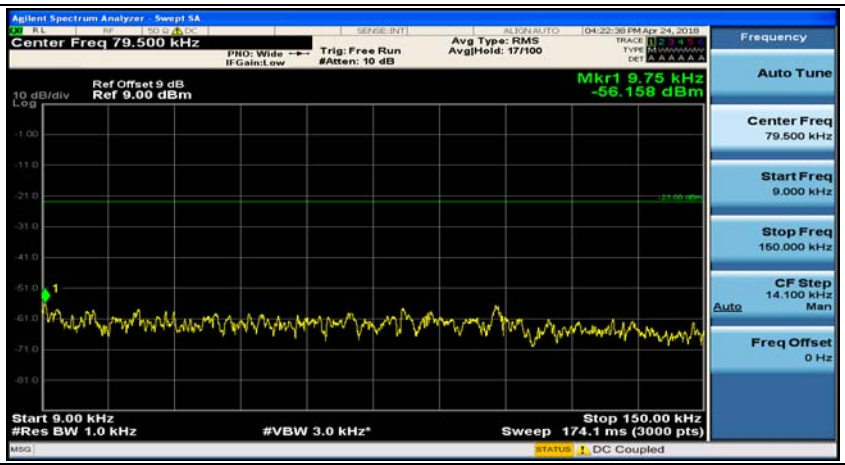

Agilent Spectrum Analyzer - Swept SA
Center Freq 13.015000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 40 dB
Avg Type: RMS
Avg|Hold: 10/100
04:20:24 PM Apr 24, 2018
Frequency
Auto Tune
Mkr2 25.662 GHz
-26.121 dBm
Ref Offset 8.95 dB
10 dB/div
Log
Ref 30.00 dBm
Center Freq
13.015000000 GHz
Start 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)

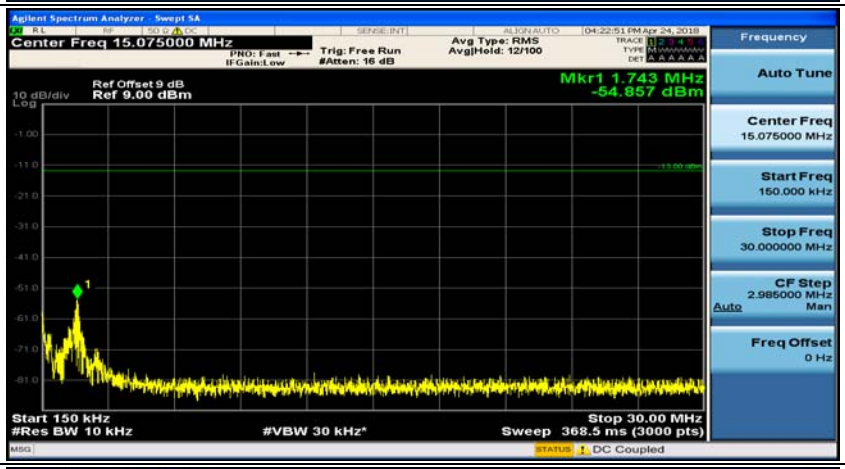
Channel Bandwidth: 10 MHz_HCH_16QAM_1RB#0



Channel Bandwidth: 10 MHz_HCH_16QAM_1RB#24

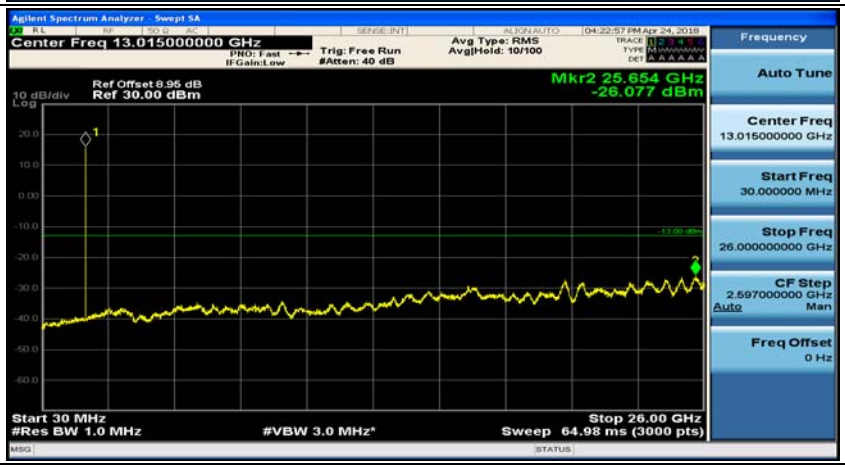




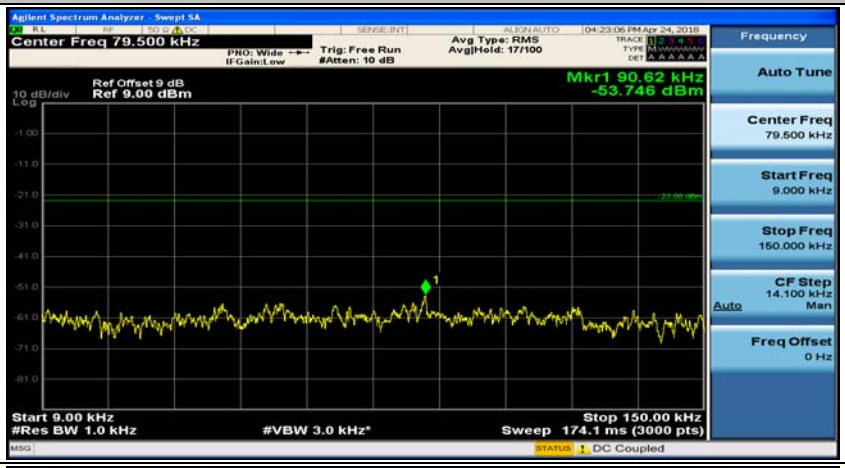
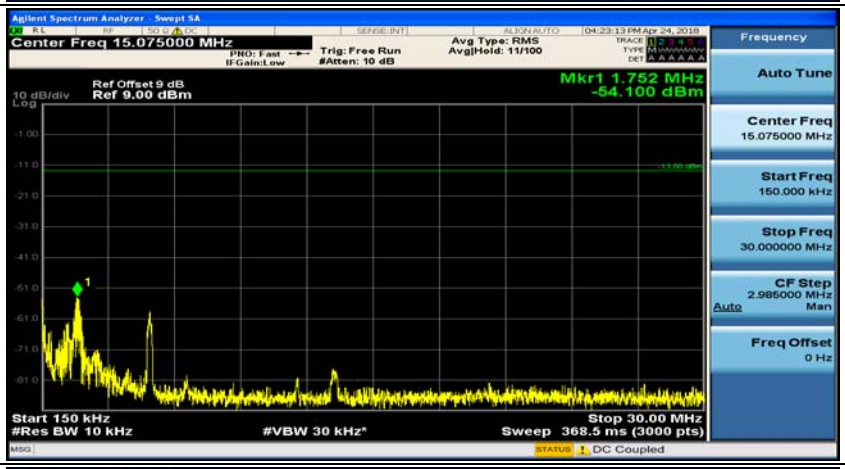
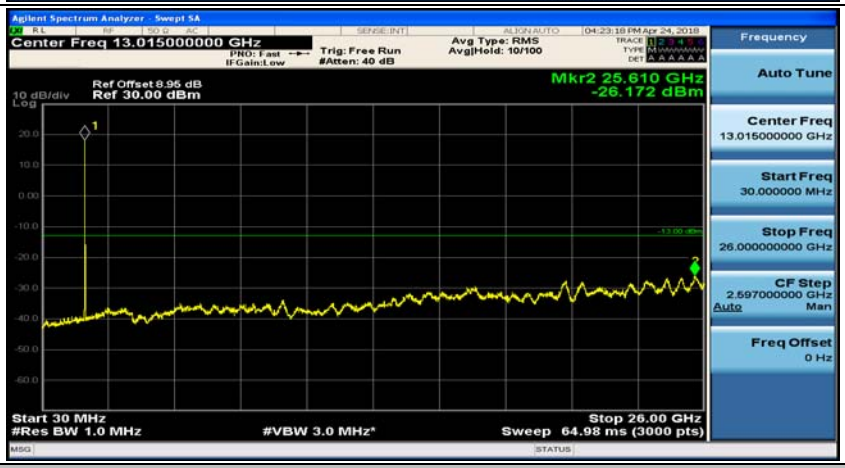
Channel Bandwidth: 10 MHz_HCH_16QAM_1RB#49

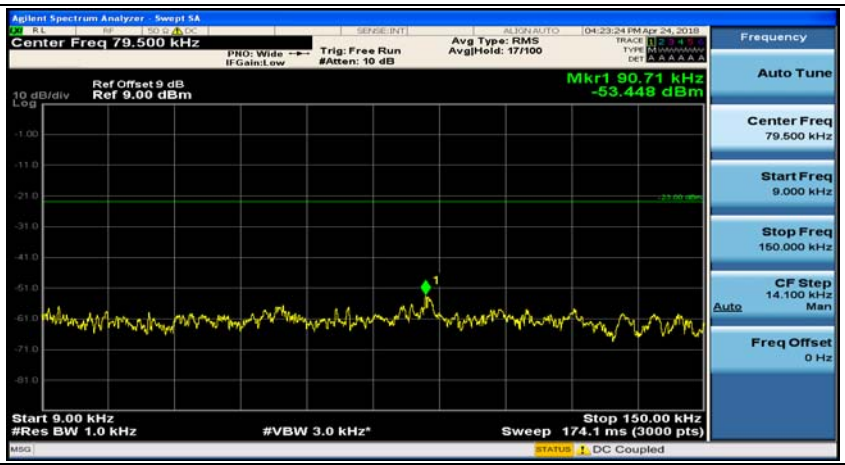

Agilent Spectrum Analyzer - Swept SA
Center Freq 79.500 kHz
PNO: Wide
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 17/100
04:22:36 PM Apr 24, 2018
Frequency
Auto Tune
Mkr1 9.75 kHz
-56.158 dBm
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Center Freq
79.500 kHz
Start Freq
9.000 kHz
Stop 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

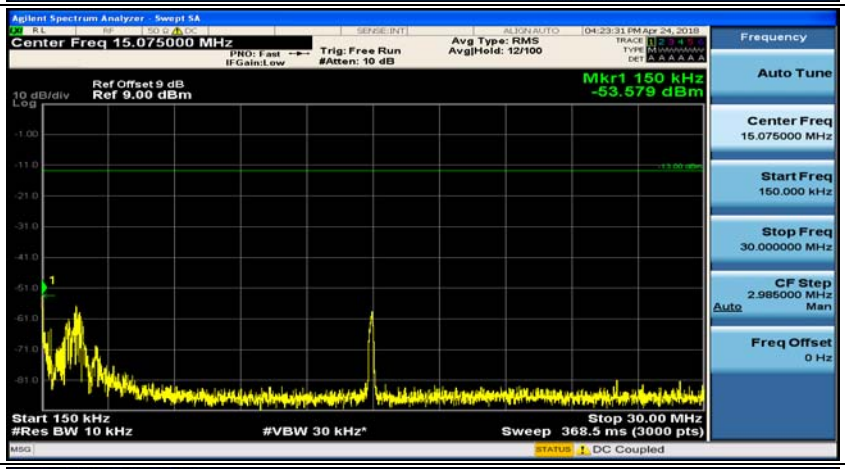

Agilent Spectrum Analyzer - Swept SA
Center Freq 15.075000 MHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 16 dB
Avg Type: RMS
Avg|Hold: 12/100
04:22:51 PM Apr 24, 2018
Frequency
Auto Tune
Mkr1 1.743 MHz
-54.857 dBm
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Center Freq
15.075000 MHz
Start Freq
150.000 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

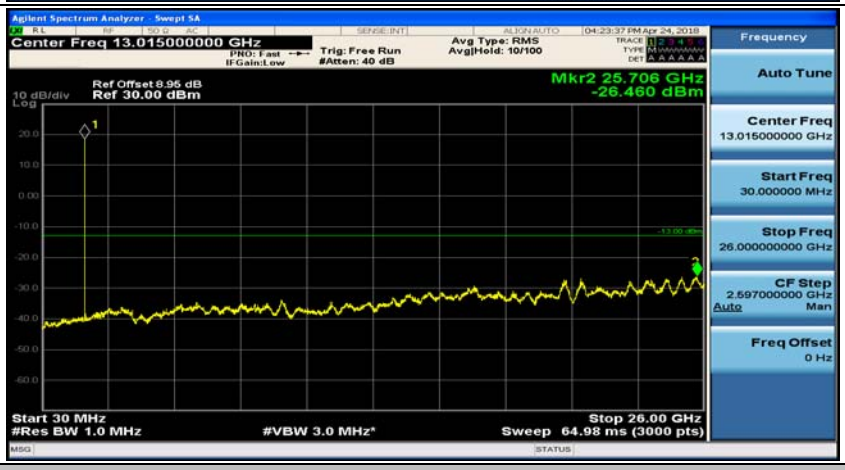

Agilent Spectrum Analyzer - Swept SA
Center Freq 13.015000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 40 dB
Avg Type: RMS
Avg|Hold: 10/100
04:22:57 PM Apr 24, 2018
Frequency
Auto Tune
Mkr2 25.654 GHz
-26.077 dBm
Ref Offset 8.95 dB
10 dB/div
Log
Ref 30.00 dBm
Center Freq
13.015000000 GHz
Start 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

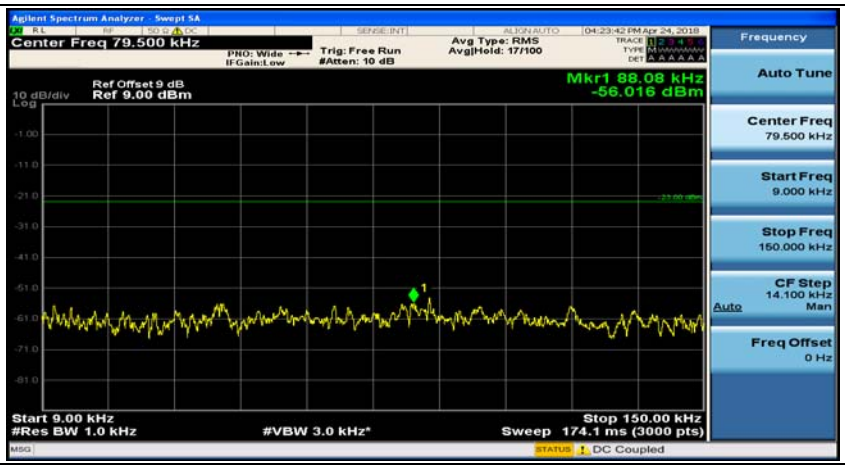
(Channel Bandwidth:15 MHz)_LCH_QPSK_1RB#0



(Channel Bandwidth:15 MHz)_LCH_QPSK_1RB#37

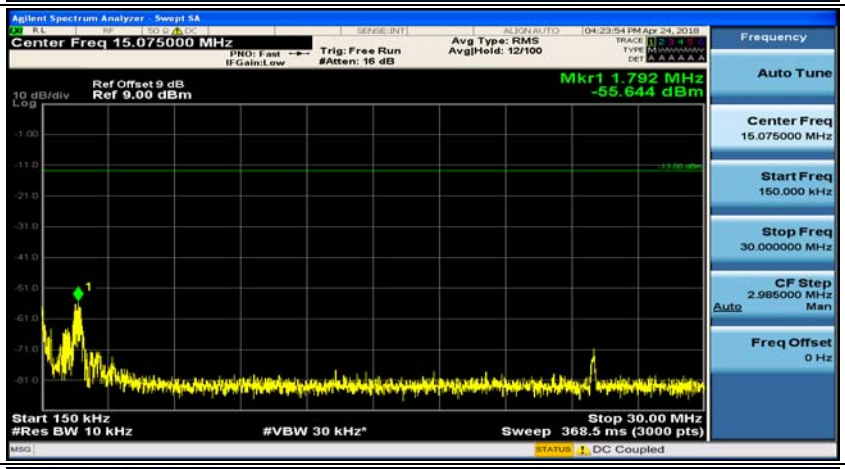


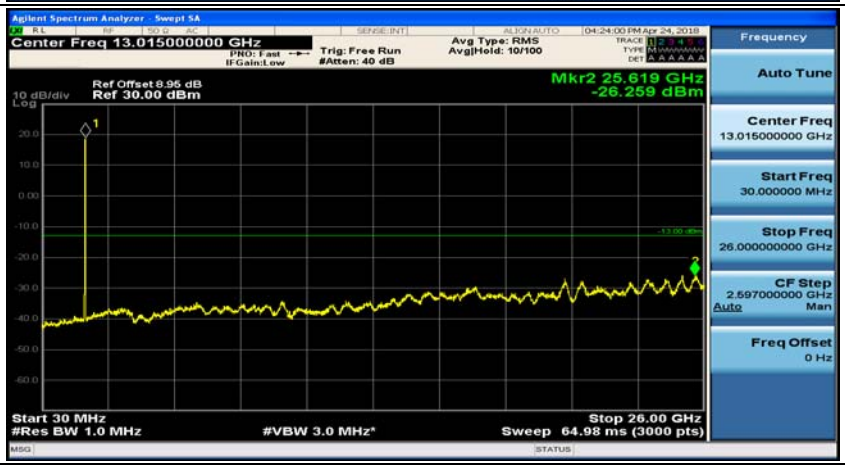


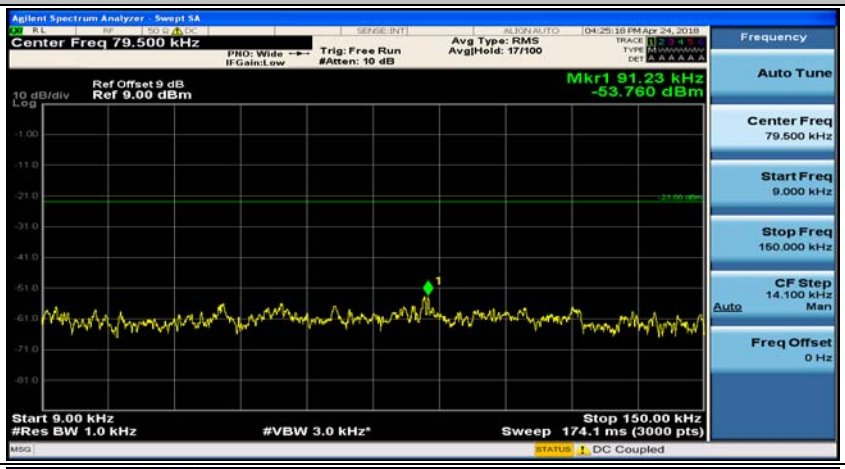
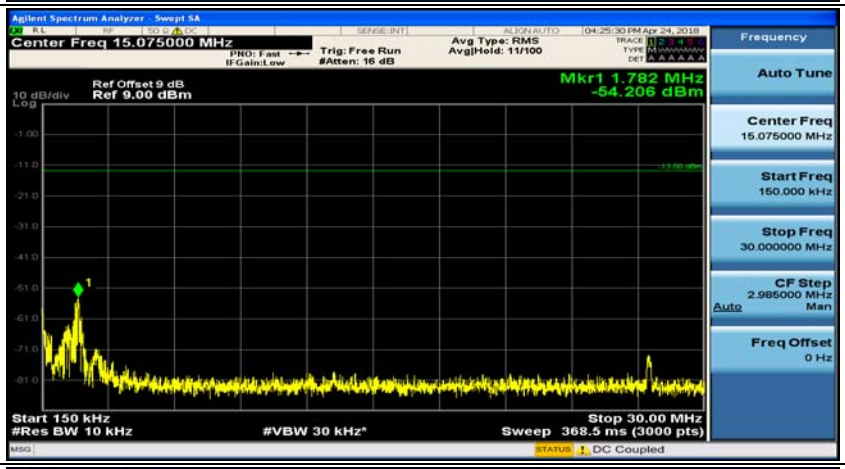
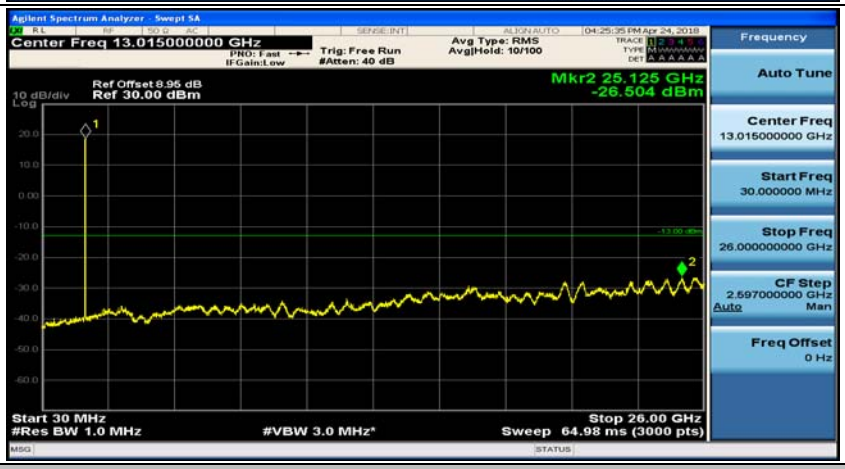


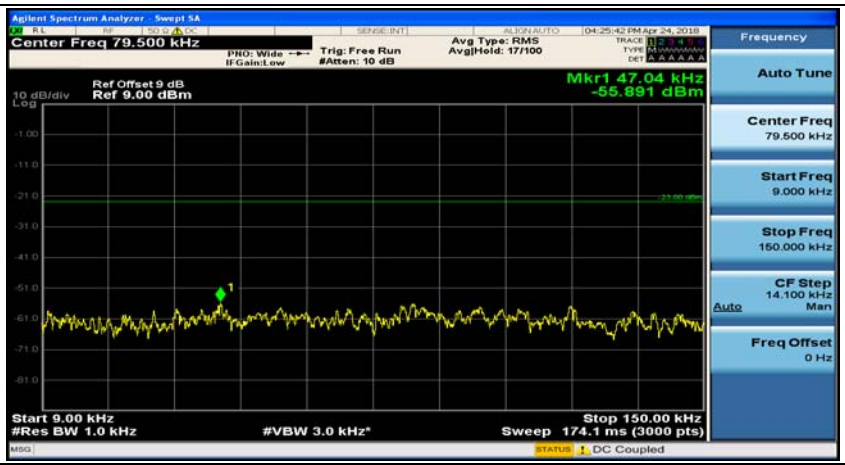
(Channel Bandwidth:15 MHz)_LCH_QPSK_1RB#74

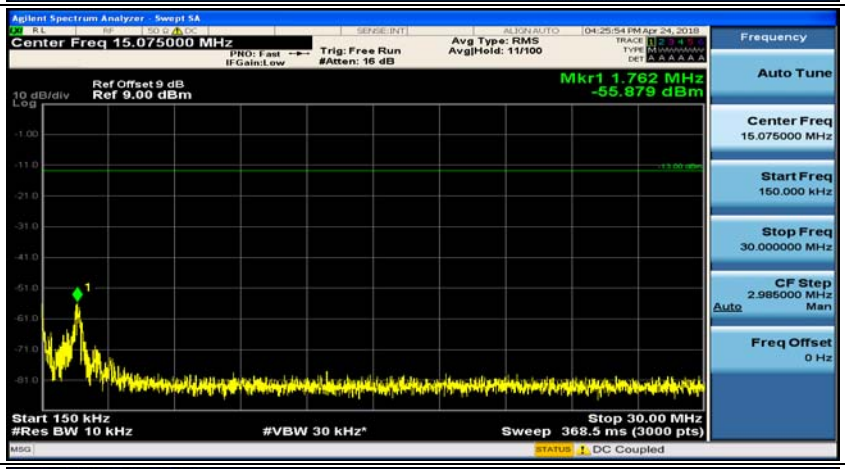

Agilent Spectrum Analyzer - Swept SA
Center Freq 79.500 kHz
PNO: Wide
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 17/100
04:23:42 PM Apr 24, 2018
Frequency
Auto Tune
Mkr1 88.08 kHz
-56.016 dBm
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Center Freq
79.500 kHz
Start Freq
9.000 kHz
Stop 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
04:23:54 PM Apr 24, 2018
Frequency
Auto Tune
Mkr1 1.792 MHz
-55.644 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

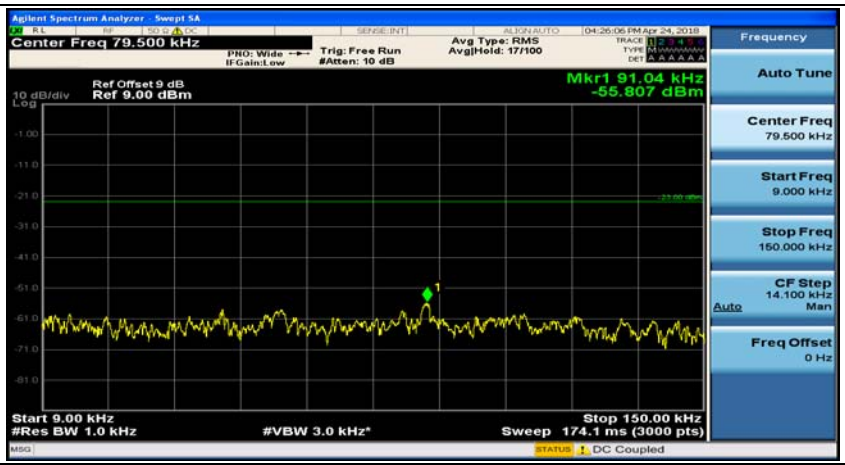

Agilent Spectrum Analyzer - Swept SA
Center Freq 13.015000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 40 dB
Avg Type: RMS
Avg|Hold: 10/100
04:24:00 PM Apr 24, 2018
Frequency
Auto Tune
Mkr2 25.619 GHz
-26.259 dBm
Ref Offset 8.95 dB
10 dB/div
Log
Ref 30.00 dBm
Center Freq
13.015000000 GHz
Start 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)

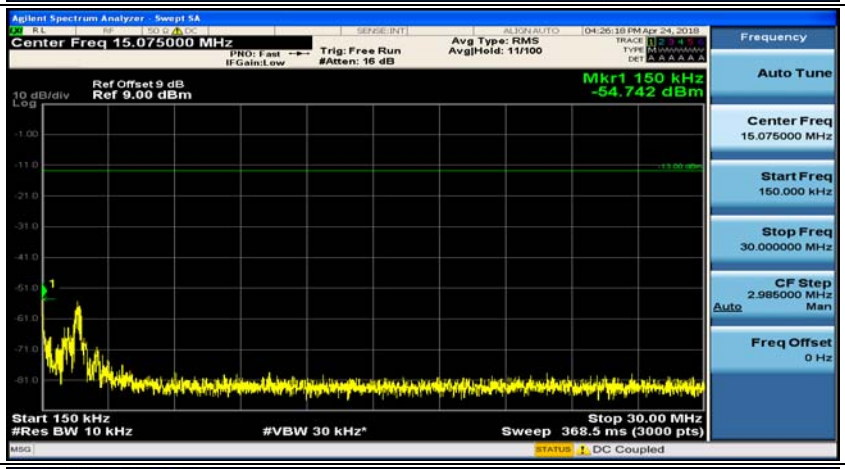
(Channel Bandwidth:15 MHz)_MCH_QPSK_1RB#0



(Channel Bandwidth:15 MHz)_MCH_QPSK_1RB#37

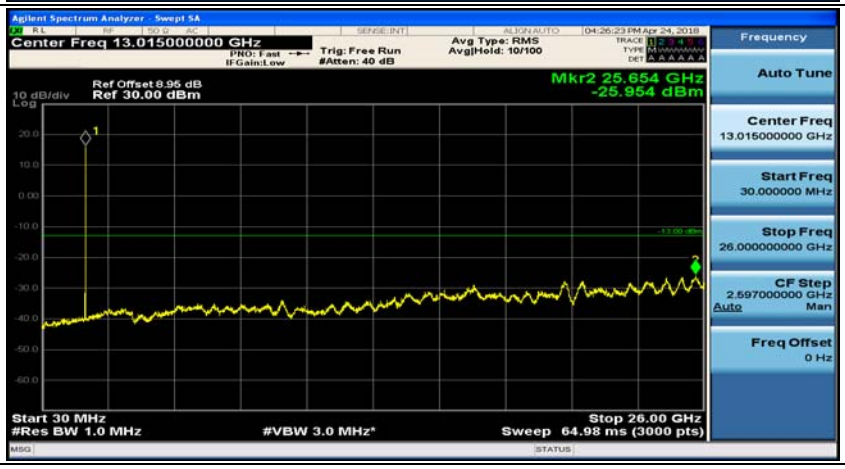


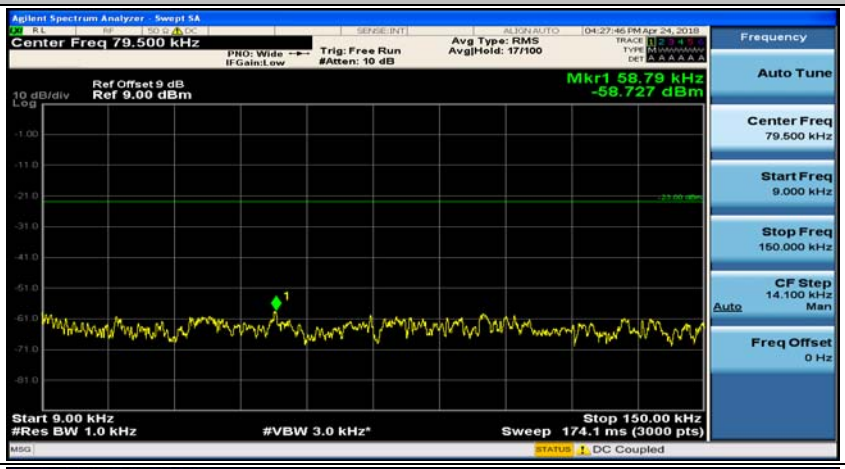
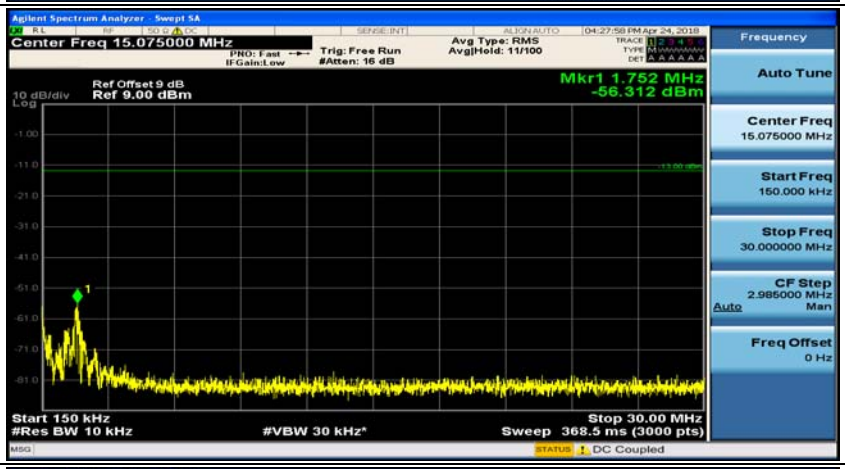
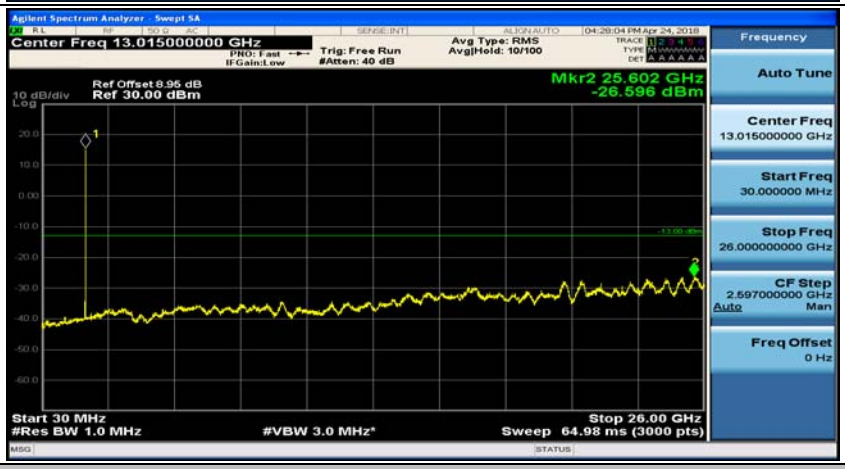


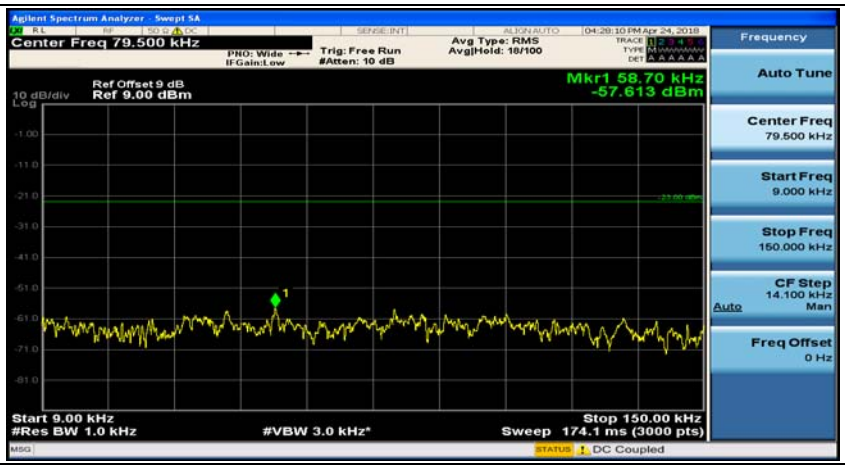
(Channel Bandwidth:15 MHz)_MCH_QPSK_1RB#74

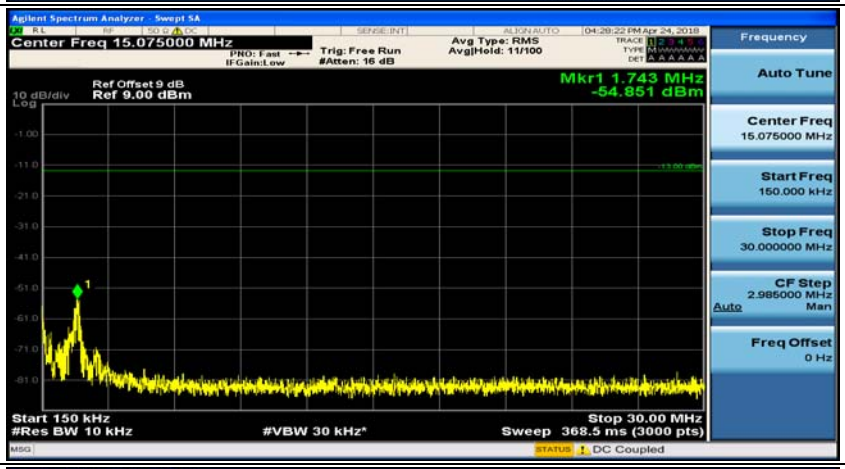

Agilent Spectrum Analyzer - Swept SA
Center Freq 79.500 kHz
PNO: Wide
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 17/100
04:26:06 PM Apr 24, 2018
Frequency
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Mkr1 91.04 kHz
-55.807 dBm
Auto Tune
Center Freq
79.500 kHz
Start Freq
9.000 kHz
Stop Freq
150.000 kHz
CF Step
14.100 kHz
Auto
Man
Freq Offset
0 Hz
Start 9.00 kHz
#Res BW 1.0 kHz
#VBW 3.0 kHz*
Stop 150.00 kHz
Sweep 174.1 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
04:26:18 PM Apr 24, 2018
Frequency
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Mkr1 150 kHz
-54.742 dBm
Auto Tune
Center Freq
15.075000 MHz
Start Freq
150.000 kHz
Stop Freq
30.000000 MHz
CF Step
2.985000 MHz
Auto
Man
Freq Offset
0 Hz
Start 150 kHz
#Res BW 10 kHz
#VBW 30 kHz*
Stop 30.00 MHz
Sweep 368.5 ms (3000 pts)
DC Coupled

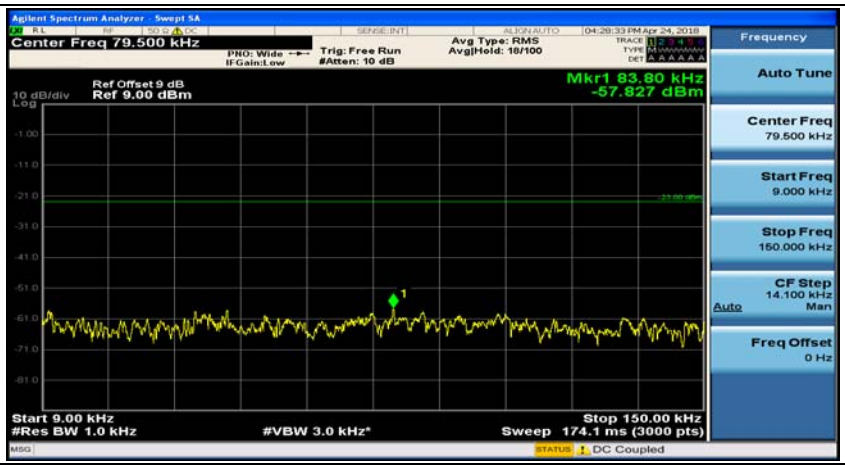

Agilent Spectrum Analyzer - Swept SA
Center Freq 13.015000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 40 dB
Avg Type: RMS
Avg|Hold: 10/100
04:26:23 PM Apr 24, 2018
Frequency
Ref Offset 8.95 dB
10 dB/div
Log
Ref 30.00 dBm
Mkr2 25.654 GHz
-25.954 dBm
Auto Tune
Center Freq
13.015000000 GHz
Start Freq
30.000000 MHz
Stop Freq
26.000000000 GHz
CF Step
2.597000000 GHz
Auto
Man
Freq Offset
0 Hz
Start 30 MHz
#Res BW 1.0 MHz
#VBW 3.0 MHz*
Stop 26.00 GHz
Sweep 64.98 ms (3000 pts)

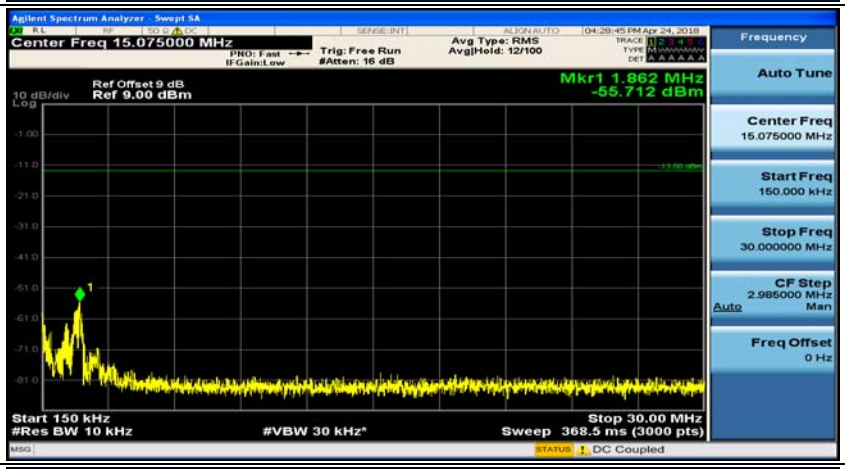
(Channel Bandwidth:15 MHz)_HCH_QPSK_1RB#0



(Channel Bandwidth:15 MHz)_HCH_QPSK_1RB#37

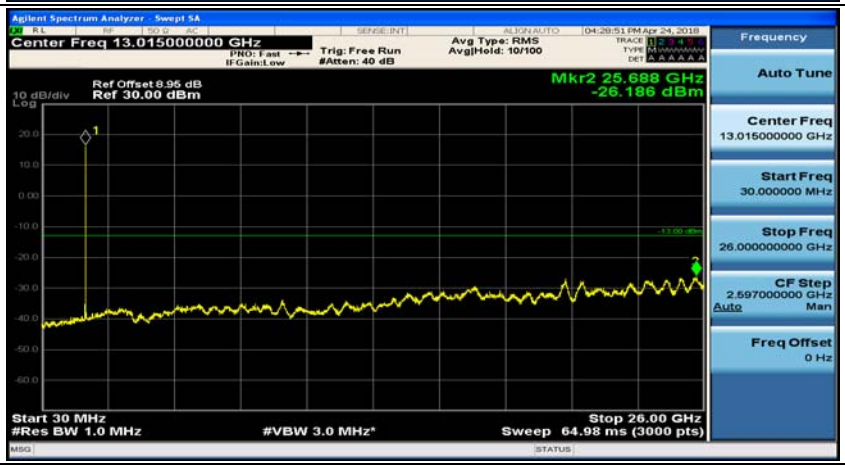


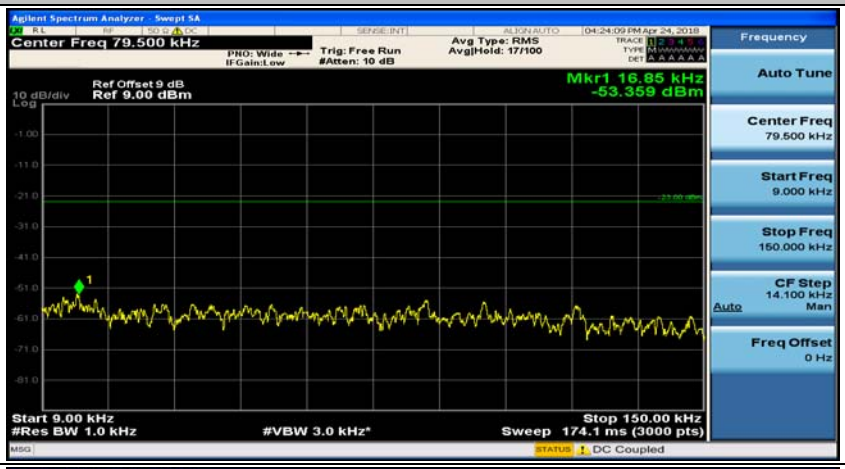
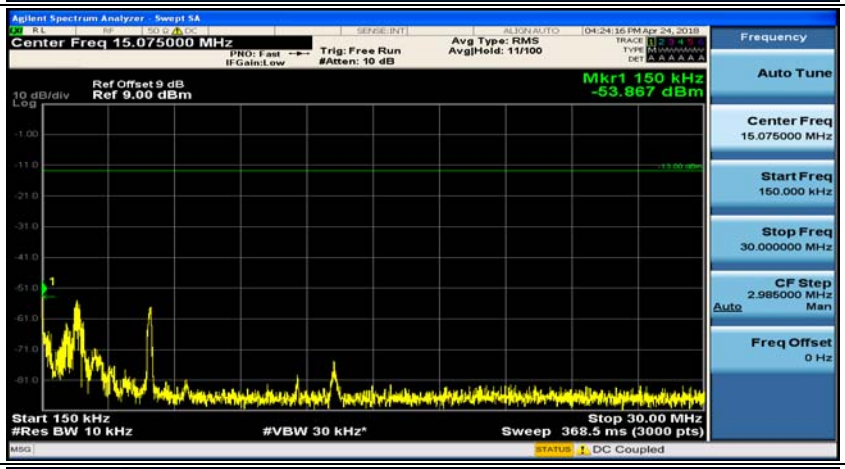
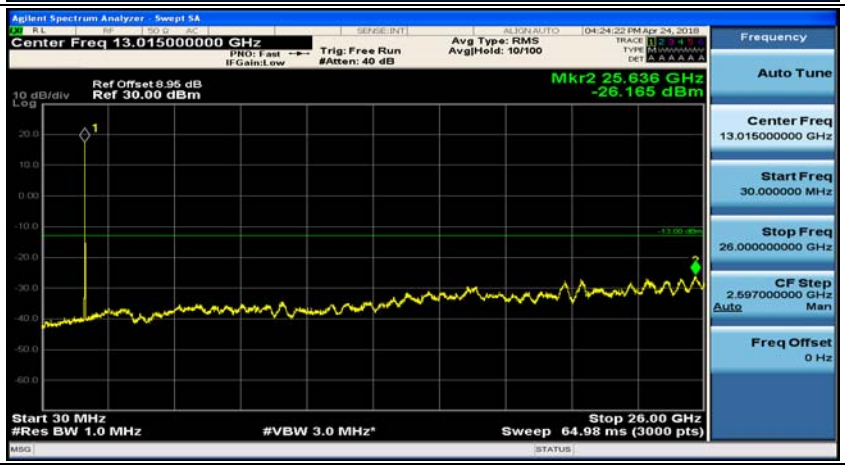


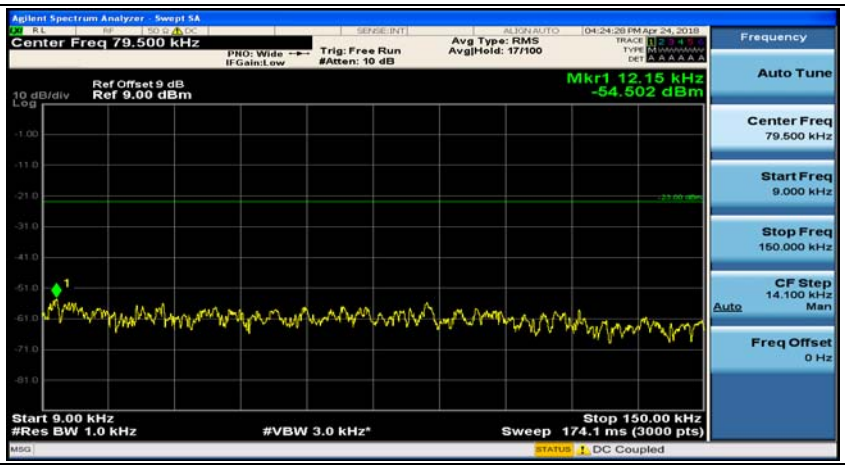
(Channel Bandwidth:15 MHz)_HCH_QPSK_1RB#74

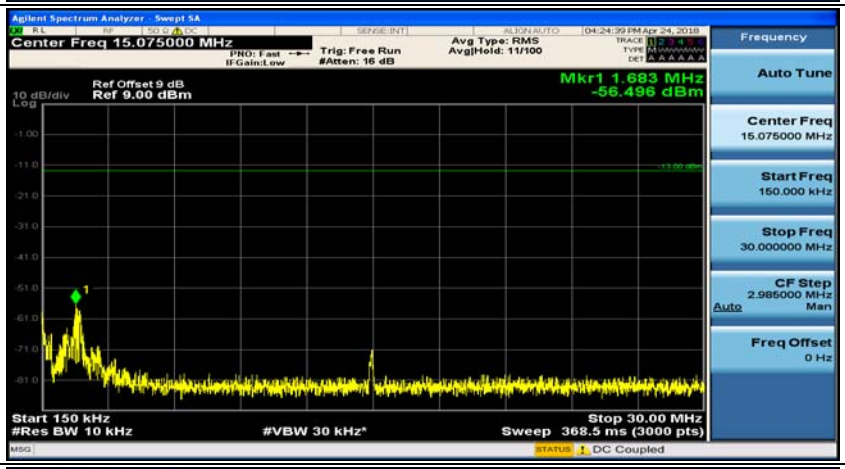

Agilent Spectrum Analyzer - Swept SA
Center Freq 79.500 kHz
PNO: Wide
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 18/100
04:28:33 PM Apr 24, 2018
Frequency
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Mkr1 83.80 kHz
-57.827 dBm
Auto Tune
Center Freq
79.500 kHz
Start Freq
9.000 kHz
Stop Freq
150.000 kHz
CF Step
14.100 kHz
Auto
Man
Freq Offset
0 Hz
Start 9.00 kHz
#Res BW 1.0 kHz
#VBW 3.0 kHz*
Stop 150.00 kHz
Sweep 174.1 ms (3000 pts)
DC Coupled

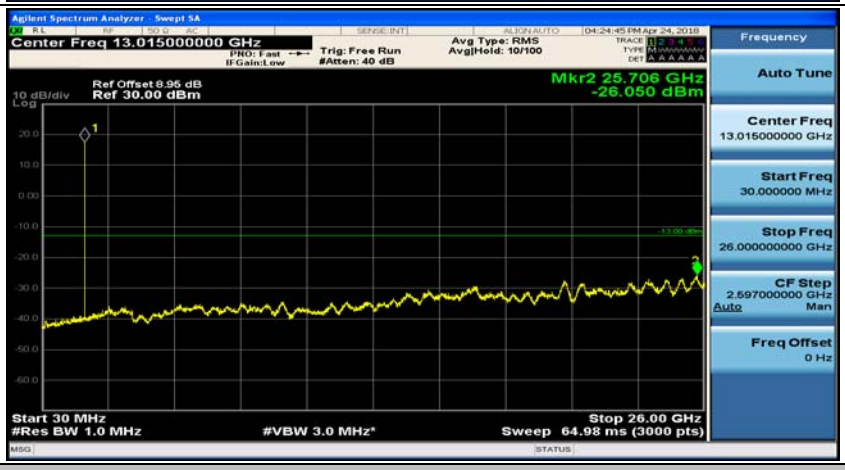

Agilent Spectrum Analyzer - Swept SA
Center Freq 15.075000 MHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 16 dB
Avg Type: RMS
Avg|Hold: 12/100
04:28:45 PM Apr 24, 2018
Frequency
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Mkr1 1.862 MHz
-55.712 dBm
Auto Tune
Center Freq
15.075000 MHz
Start Freq
150.000 kHz
Stop Freq
30.000000 MHz
CF Step
2.985000 MHz
Auto
Man
Freq Offset
0 Hz
Start 150 kHz
#Res BW 10 kHz
#VBW 30 kHz*
Stop 30.00 MHz
Sweep 368.5 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: 10/100
04:28:51 PM Apr 24, 2018
Frequency
Ref Offset 8.95 dB
10 dB/div
Log
Ref 30.00 dBm
Mkr2 25.688 GHz
-26.186 dBm
Auto Tune
Center Freq
13.015000000 GHz
Start Freq
30.000000 MHz
Stop Freq
26.000000000 GHz
CF Step
2.597000000 GHz
Auto
Man
Freq Offset
0 Hz
Start 30 MHz
#Res BW 1.0 MHz
#VBW 3.0 MHz*
Stop 26.00 GHz
Sweep 64.98 ms (3000 pts)

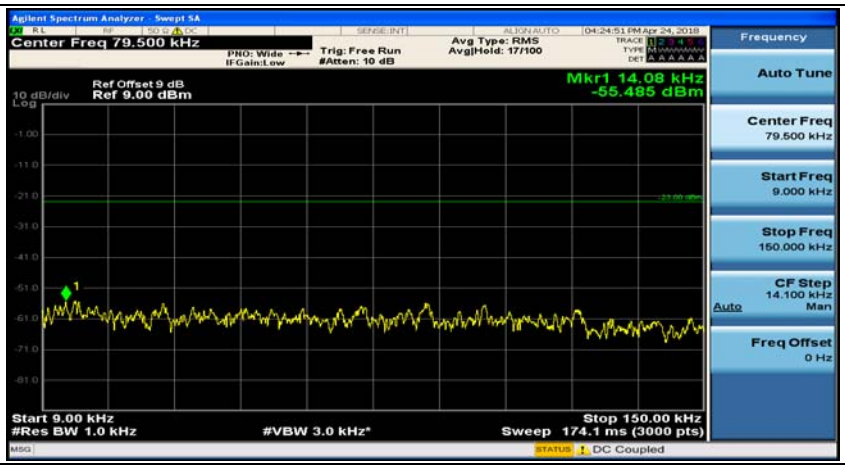
(Channel Bandwidth:15 MHz)_LCH_16QAM_1RB#0



(Channel Bandwidth:15 MHz)_LCH_16QAM_1RB#37

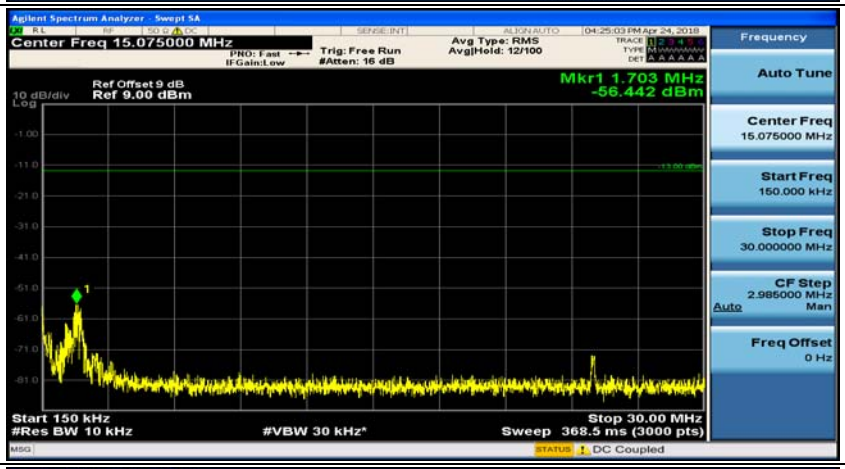


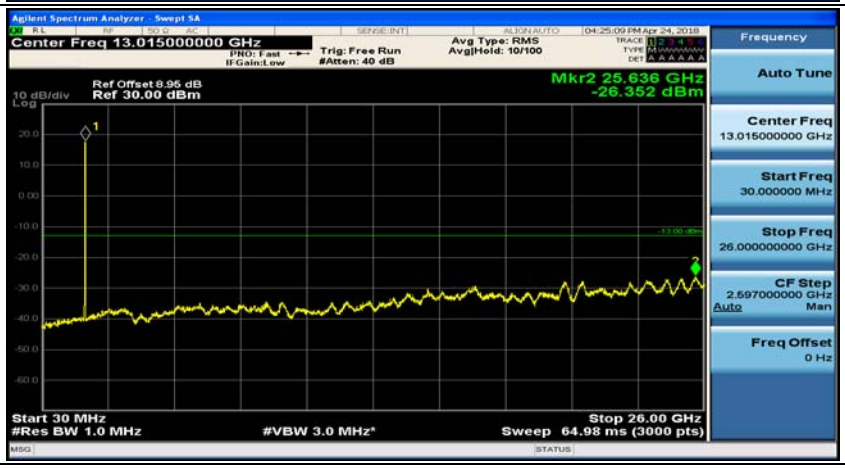


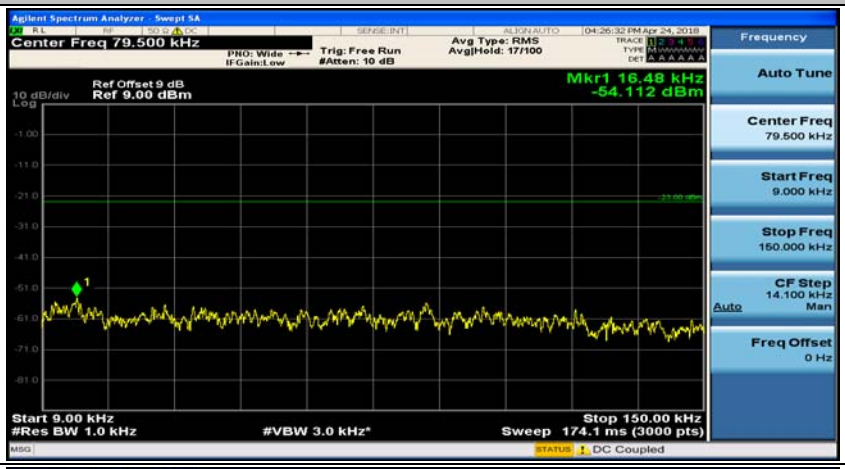
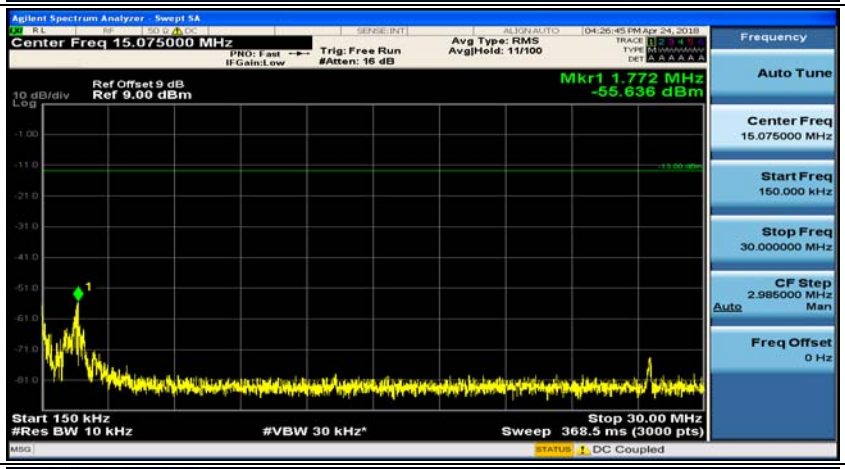
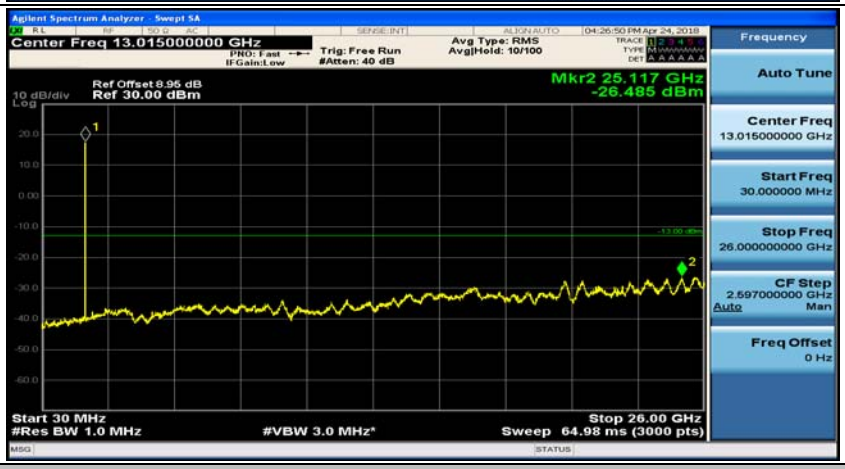


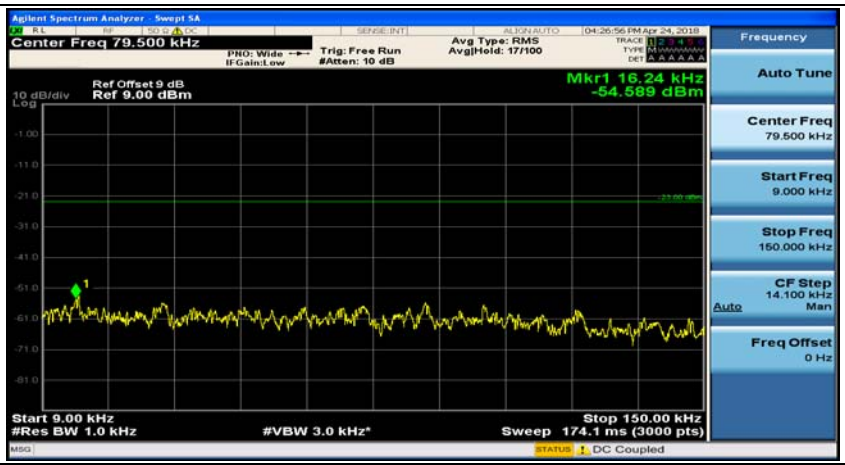
(Channel Bandwidth:15 MHz)_LCH_16QAM_1RB#74

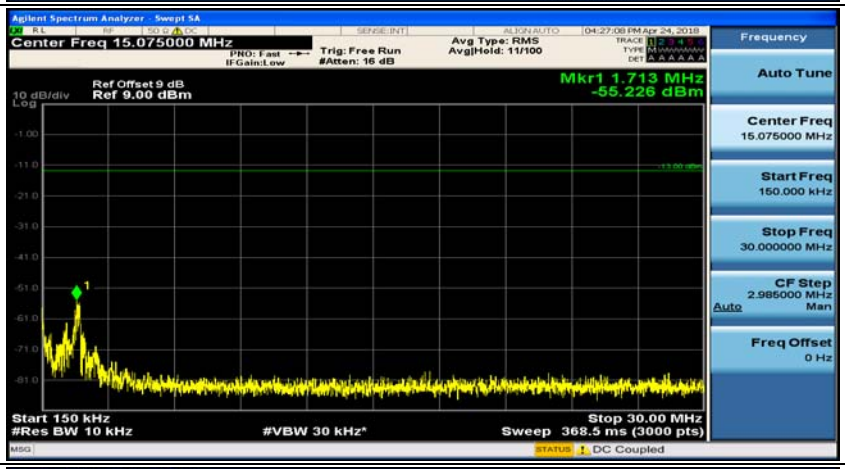

Agilent Spectrum Analyzer - Swept SA
Center Freq 79.500 kHz
PNO: Wide
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 17/100
04:24:51 PM Apr 24, 2018
Frequency
Auto Tune
Mkr1 14.08 kHz
-55.485 dBm
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Center Freq
79.500 kHz
Start Freq
9.000 kHz
Stop 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

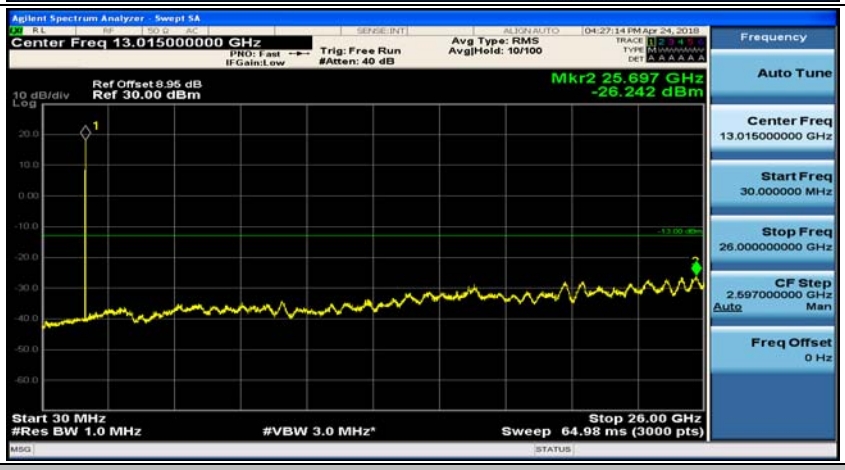

Agilent Spectrum Analyzer - Swept SA
Center Freq 15.075000 MHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 16 dB
Avg Type: RMS
Avg|Hold: 12/100
04:25:03 PM Apr 24, 2018
Frequency
Auto Tune
Mkr1 1.703 MHz
-56.442 dBm
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Center Freq
15.075000 MHz
Start Freq
150.000 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: 10/100
04:25:09 PM Apr 24, 2018
Frequency
Auto Tune
Mkr2 25.636 GHz
-26.352 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)

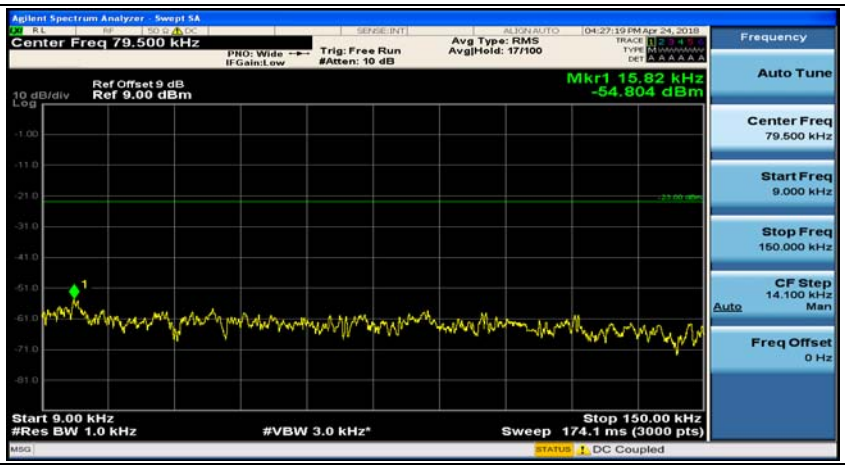
(Channel Bandwidth:15 MHz)_MCH_16QAM_1RB#0



(Channel Bandwidth:15 MHz)_MCH_16QAM_1RB#37

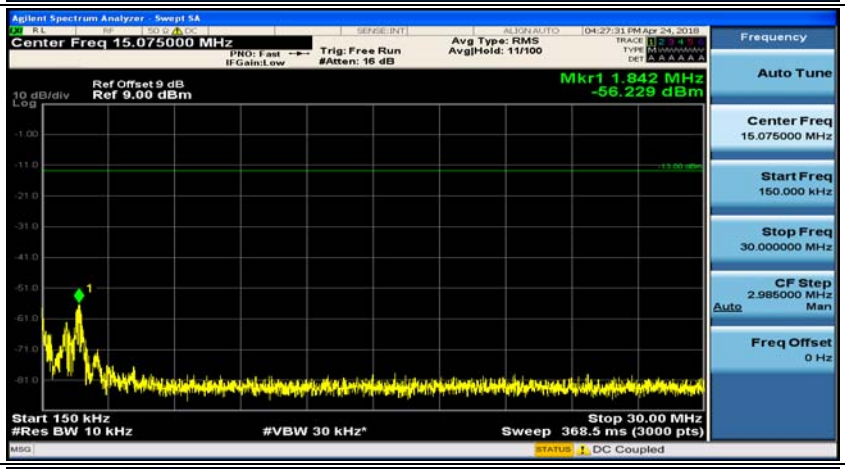


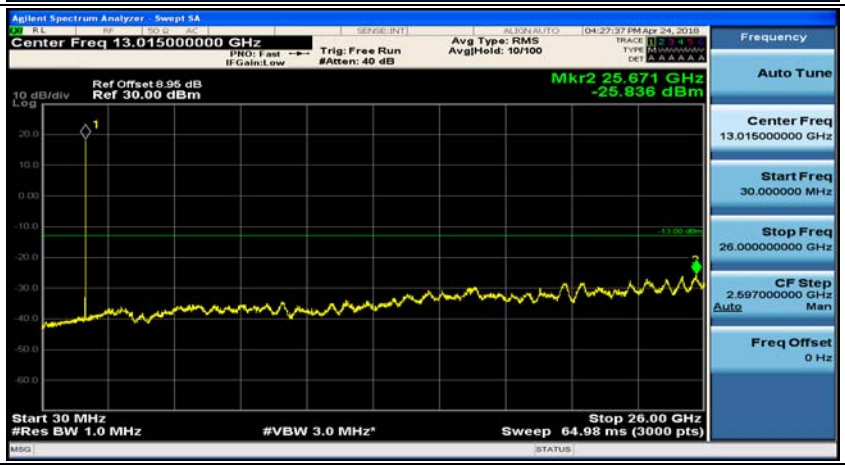


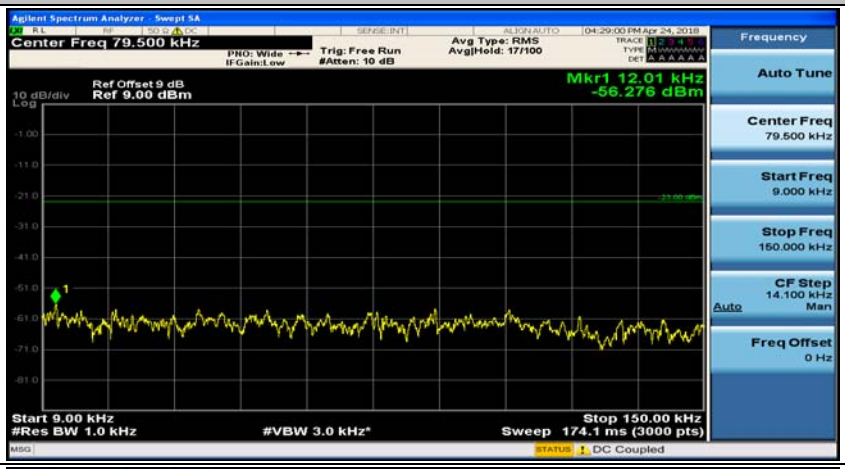
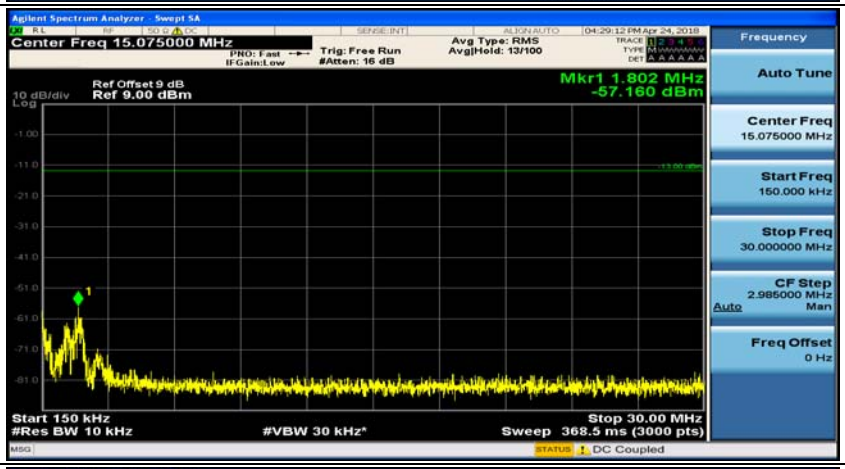
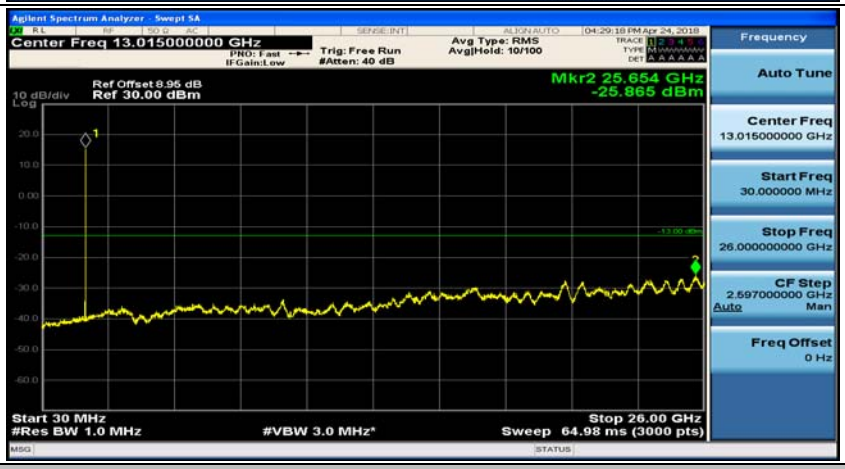


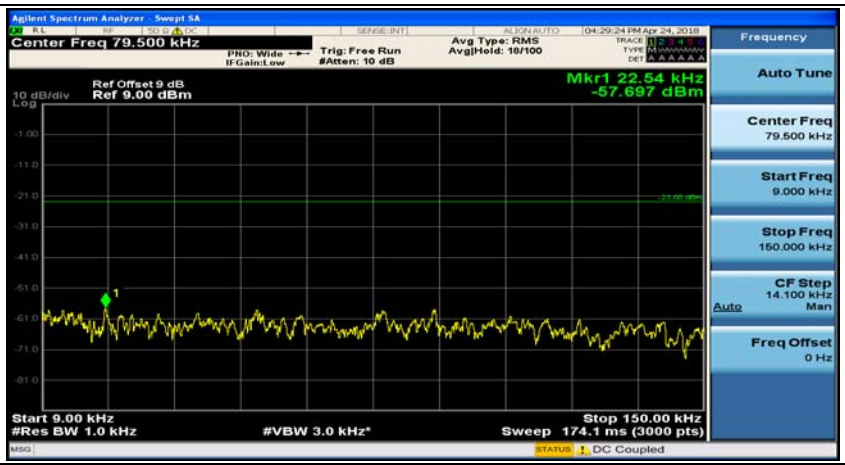
(Channel Bandwidth:15 MHz)_MCH_16QAM_1RB#74

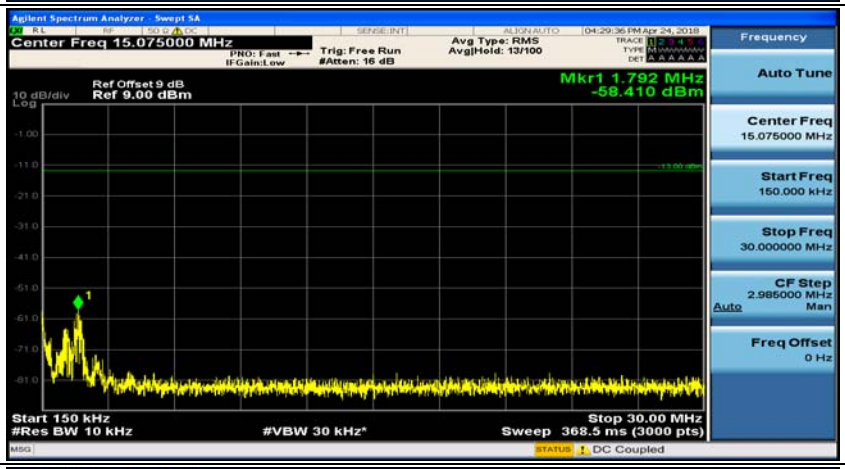

Agilent Spectrum Analyzer - Swept SA
Center Freq 79.500 kHz
PNO: Wide
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 17/100
04:27:19 PM Apr 24, 2018
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Mkr1 15.82 kHz
-54.804 dBm
Start 9.00 kHz
#Res BW 1.0 kHz
#VBW 3.0 kHz*
Stop 150.00 kHz
Sweep 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

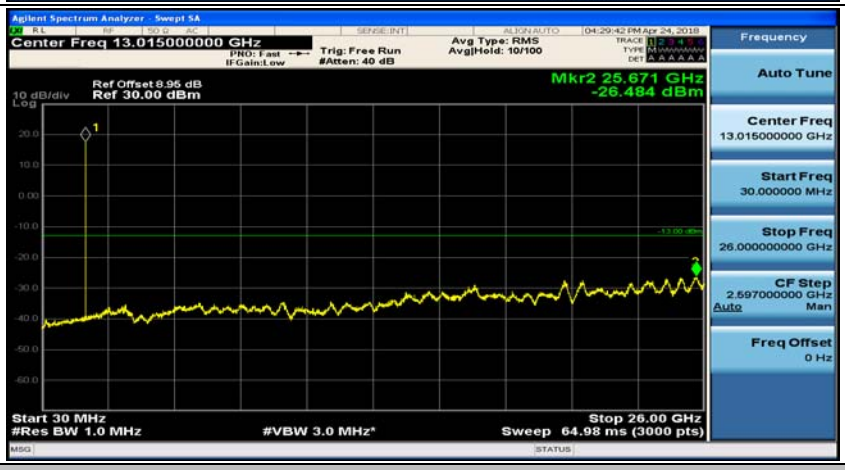

Agilent Spectrum Analyzer - Swept SA
Center Freq 15.075000 MHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 16 dB
Avg Type: RMS
Avg|Hold: 11/100
04:27:31 PM Apr 24, 2018
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Mkr1 1.842 MHz
-56.229 dBm
Start 150 kHz
#Res BW 10 kHz
#VBW 30 kHz*
Stop 30.00 MHz
Sweep 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: 10/100
04:27:37 PM Apr 24, 2018
Ref Offset 8.95 dB
10 dB/div
Log
Ref 30.00 dBm
Mkr2 25.671 GHz
-25.836 dBm
Start 30 MHz
#Res BW 1.0 MHz
#VBW 3.0 MHz*
Stop 26.00 GHz
Sweep 64.98 ms (3000 pts)
Frequency
Auto Tune
Center Freq
13.015000000 GHz
Start Freq
30.000000 MHz
Stop Freq
26.000000000 GHz
CF Step
2.597000000 GHz
Auto
Man
Freq Offset
0 Hz

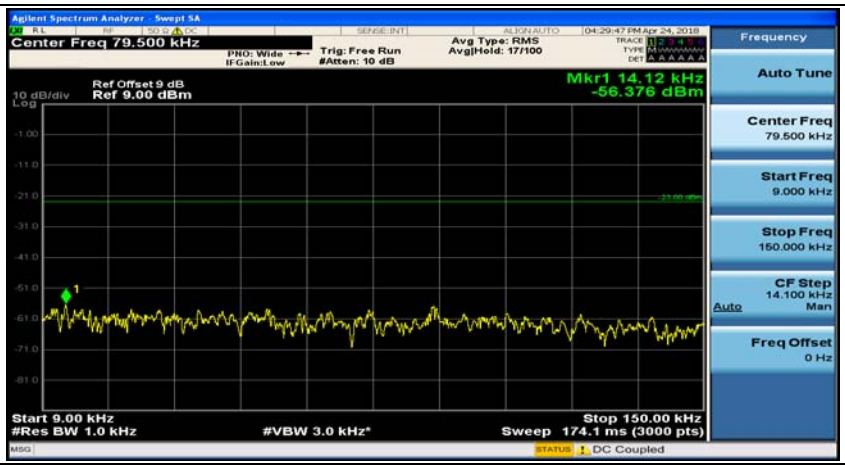
(Channel Bandwidth:15 MHz)_HCH_16QAM_1RB#0



(Channel Bandwidth:15 MHz)_HCH_16QAM_1RB#37

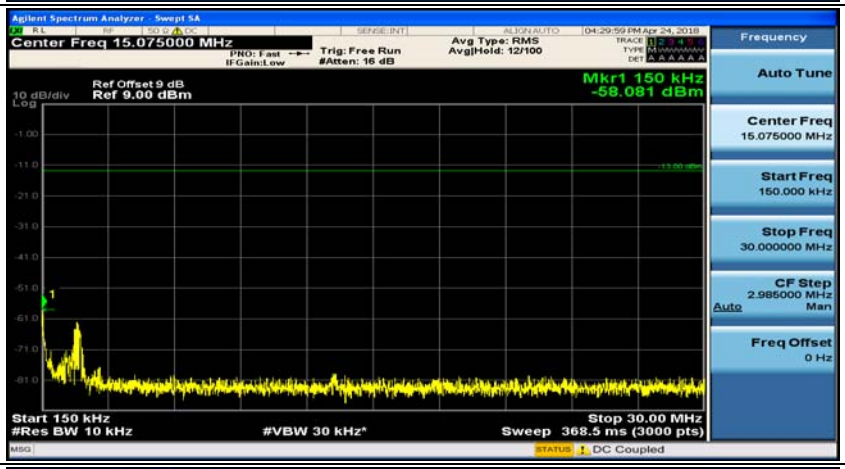


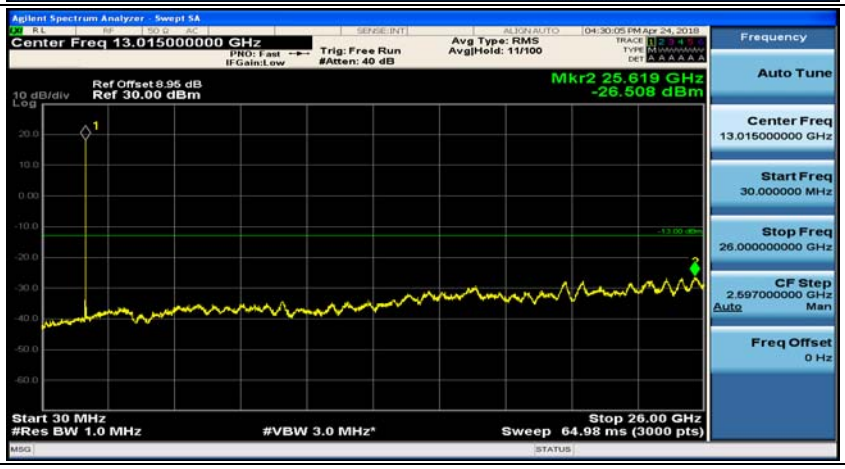




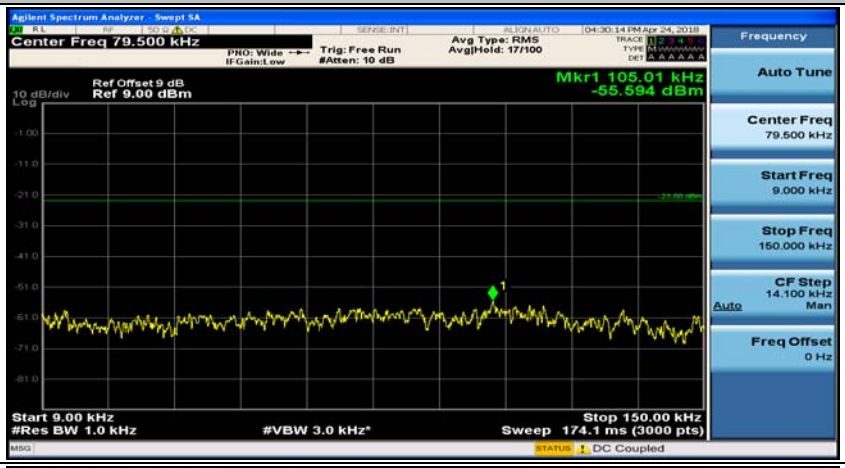
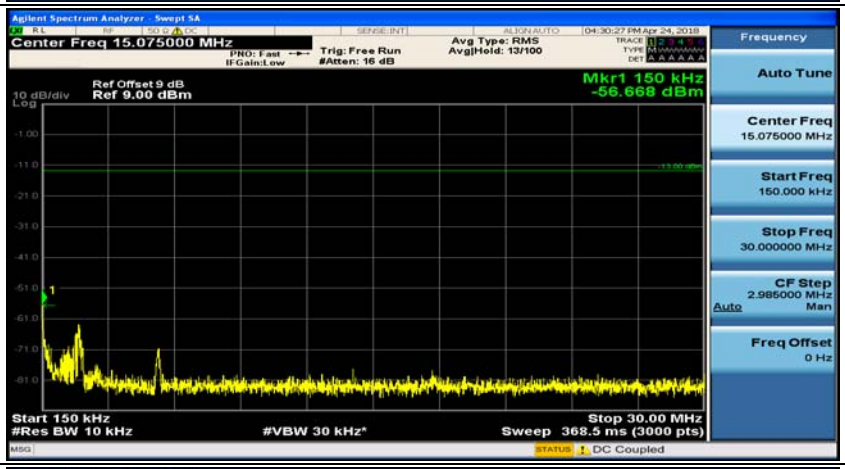
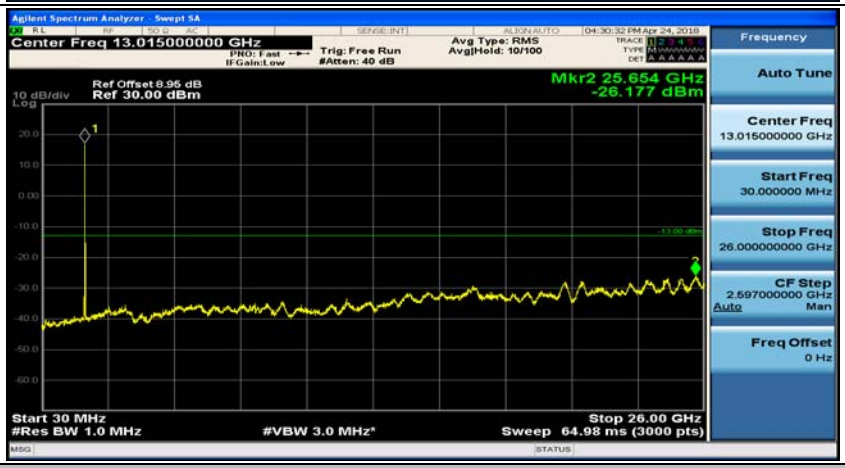
(Channel Bandwidth:15 MHz)_HCH_16QAM_1RB#74

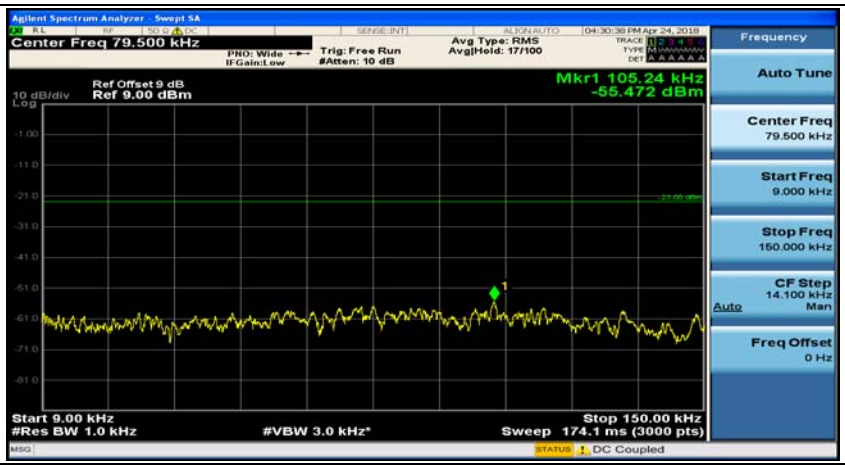

Agilent Spectrum Analyzer - Swept SA
Center Freq 79.500 kHz
PNO: Wide
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 17/100
04:29:47 PM Apr 24, 2018
Frequency
Auto Tune
Mkr1 14.12 kHz
-56.376 dBm
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Center Freq
79.500 kHz
Start Freq
9.000 kHz
Stop 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

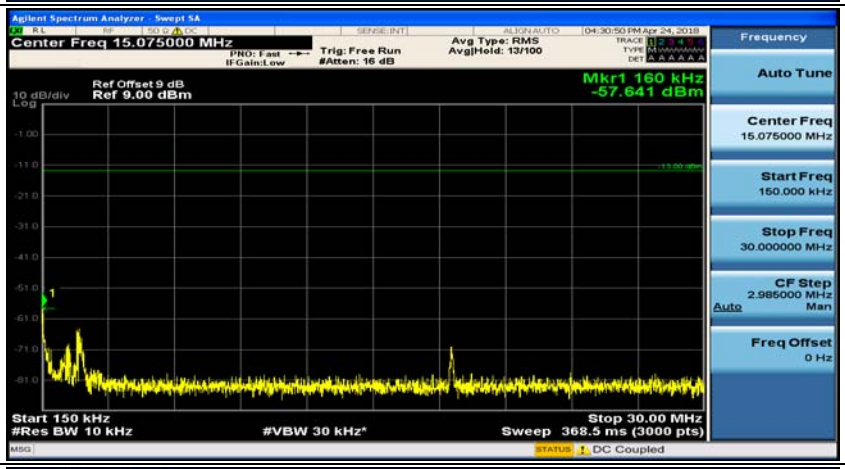

Agilent Spectrum Analyzer - Swept SA
Center Freq 15.075000 MHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 16 dB
Avg Type: RMS
Avg|Hold: 12/100
04:29:59 PM Apr 24, 2018
Frequency
Auto Tune
Mkr1 150 kHz
-58.081 dBm
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Center Freq
15.075000 MHz
Start Freq
150.000 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
04:30:05 PM Apr 24, 2018
Frequency
Auto Tune
Mkr2 25.619 GHz
-26.508 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)

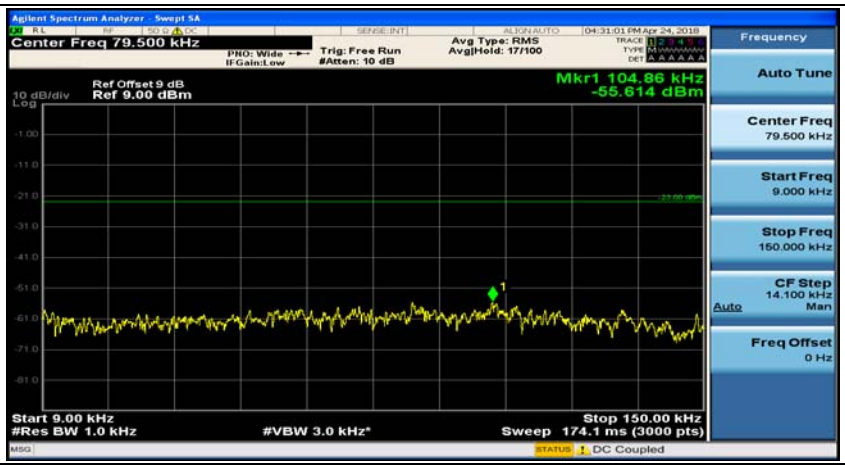
Channel Bandwidth: 20 MHz

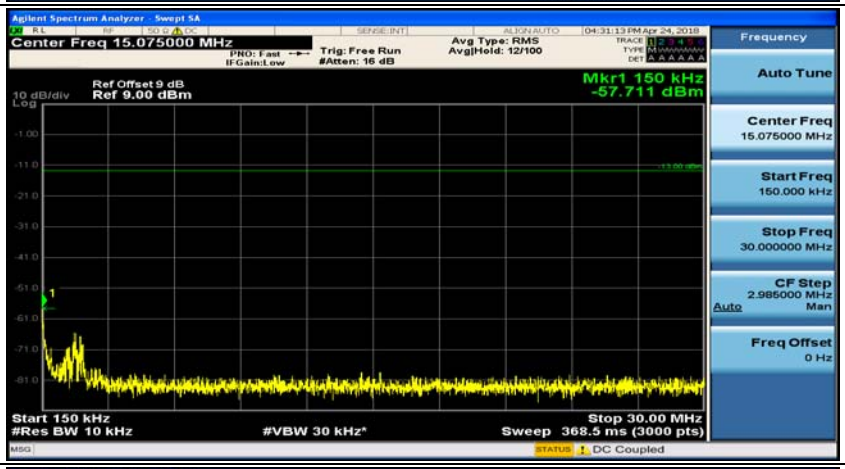
(Channel Bandwidth:20 MHz)_LCH_QPSK_1RB#0



(Channel Bandwidth:20 MHz)_LCH_QPSK_1RB#49

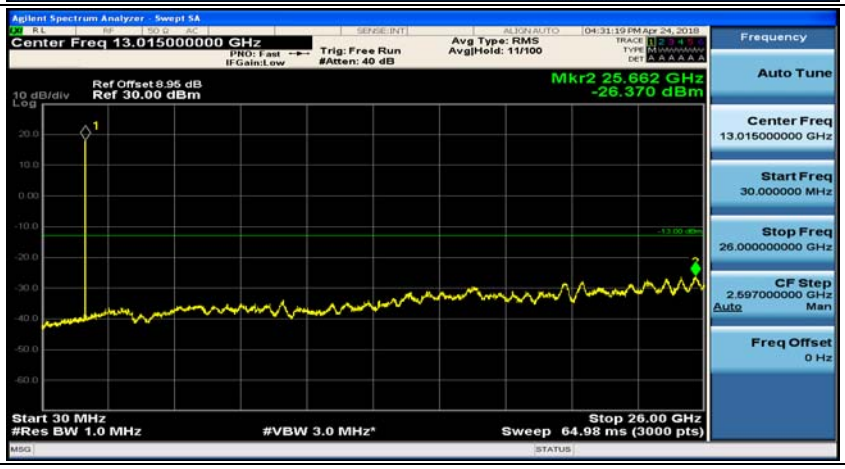


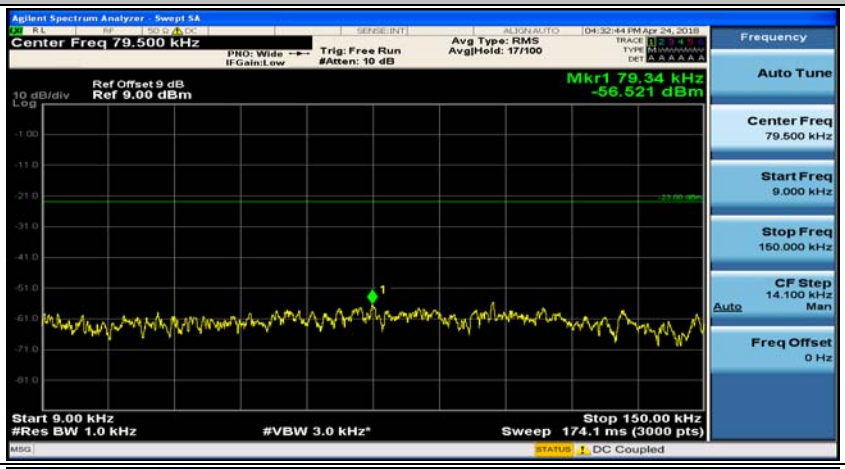
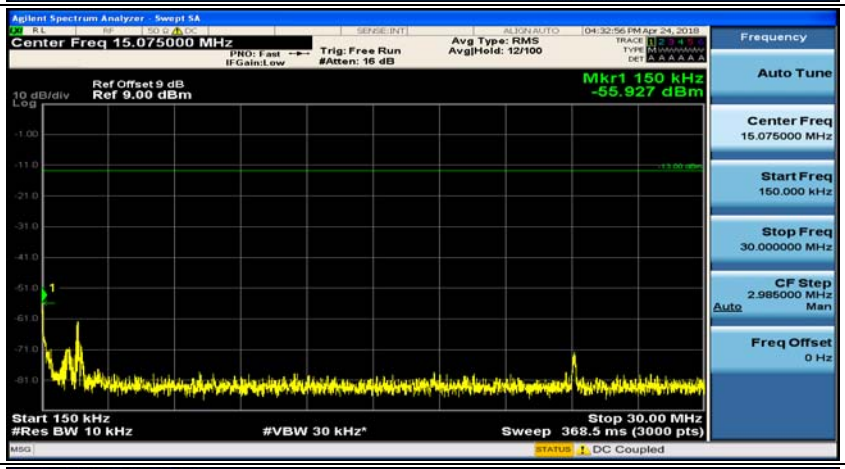


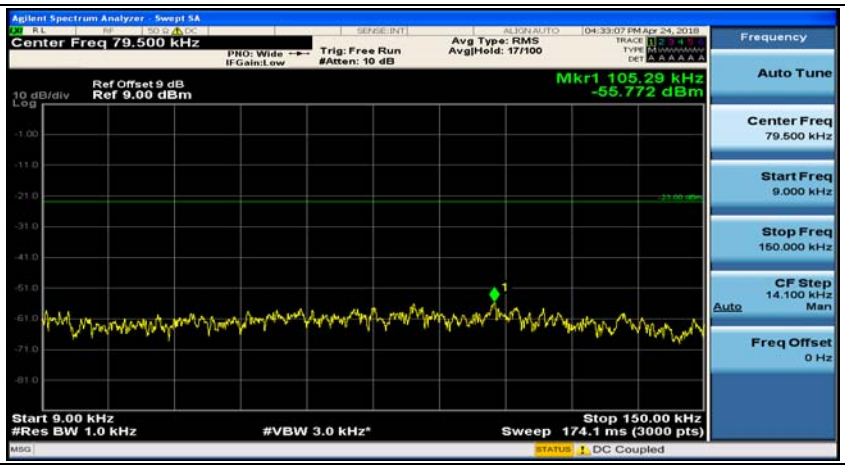
(Channel Bandwidth:20 MHz)_LCH_QPSK_1RB#99

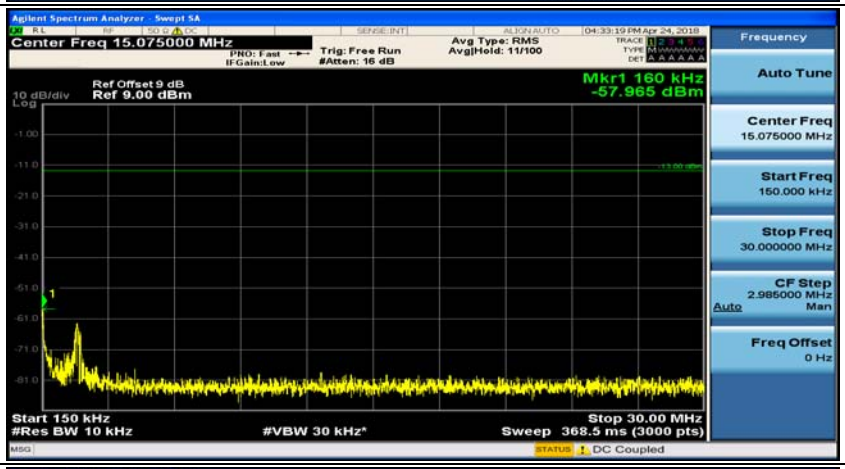

Agilent Spectrum Analyzer - Swept SA
Center Freq 79.500 kHz
PNO: Wide
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 17/100
04:31:01 PM Apr 24, 2018
Frequency
Auto Tune
Mkr1 104.86 kHz
-55.614 dBm
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Center Freq
79.500 kHz
Start Freq
9.000 kHz
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

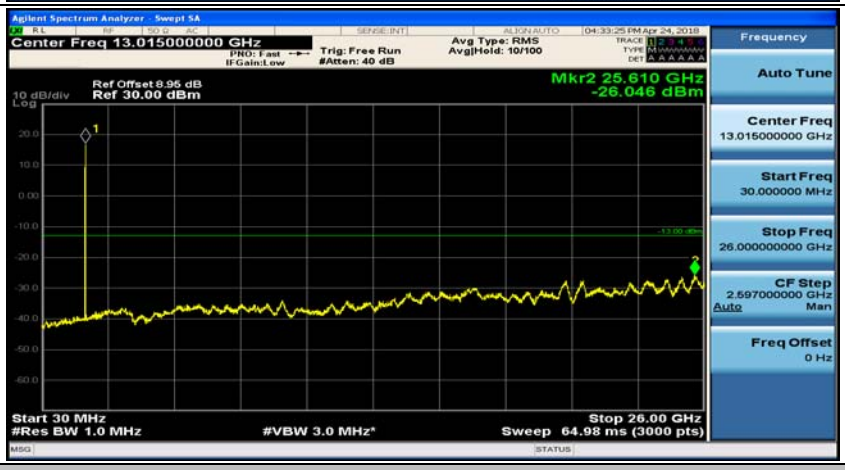

Agilent Spectrum Analyzer - Swept SA
Center Freq 15.075000 MHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 16 dB
Avg Type: RMS
Avg|Hold: 12/100
04:31:13 PM Apr 24, 2018
Frequency
Auto Tune
Mkr1 150 kHz
-57.711 dBm
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Center Freq
15.075000 MHz
Start Freq
150.000 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
04:31:19 PM Apr 24, 2018
Frequency
Auto Tune
Mkr2 25.662 GHz
-26.370 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)

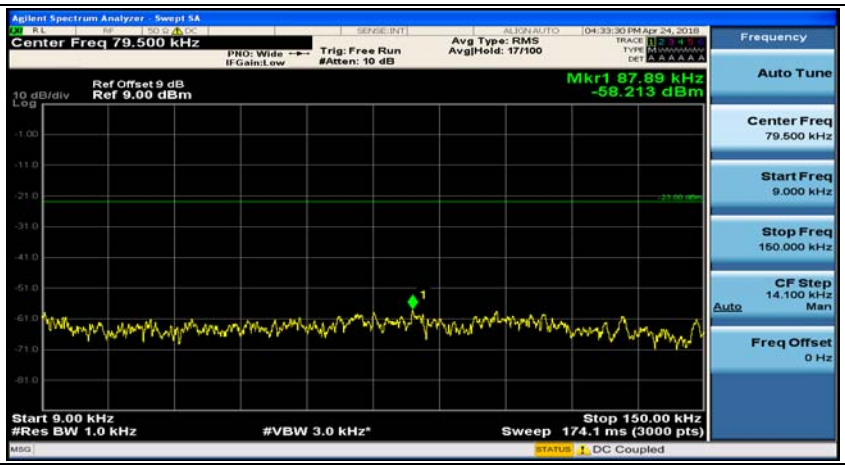
(Channel Bandwidth:20 MHz)_MCH_QPSK_1RB#0


(Channel Bandwidth:20 MHz)_MCH_QPSK_1RB#49

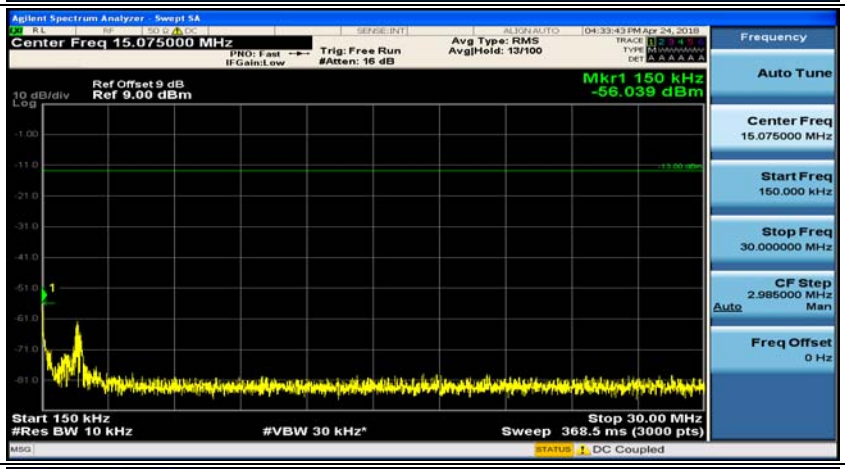


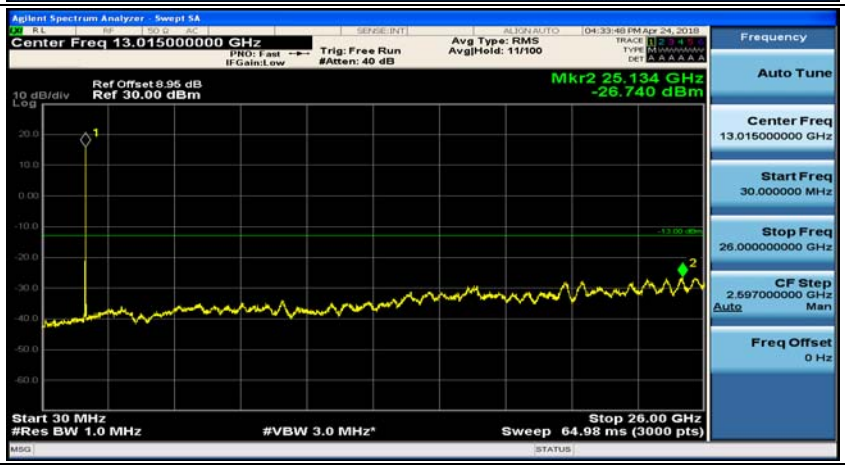


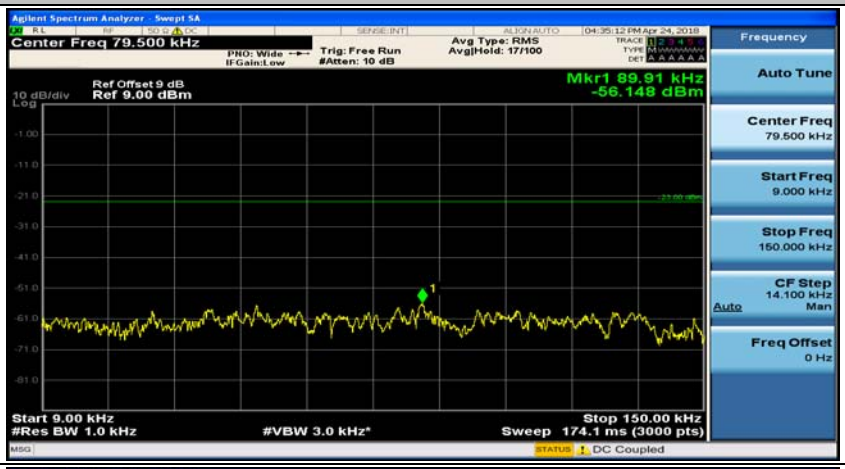
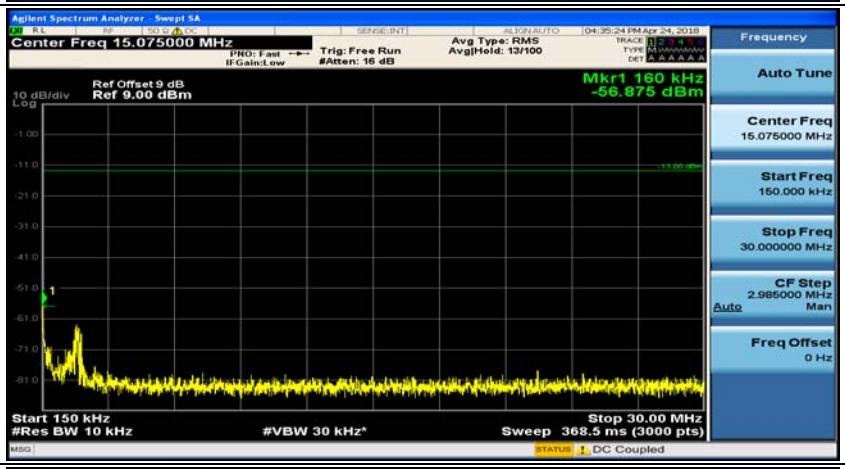
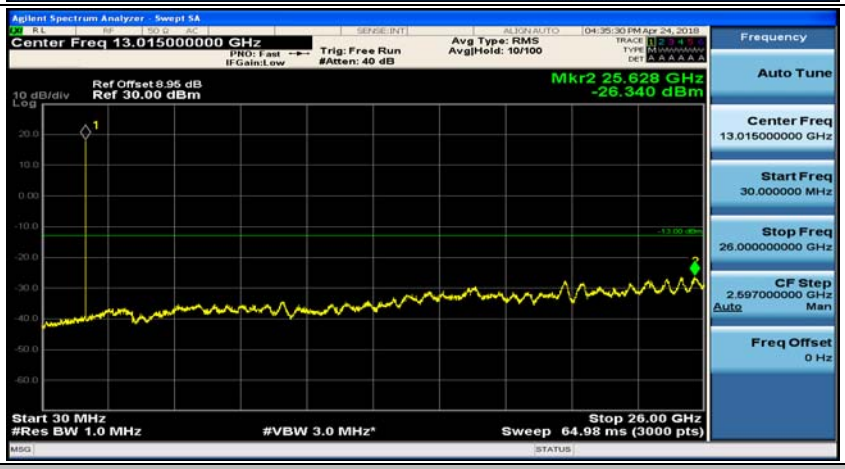


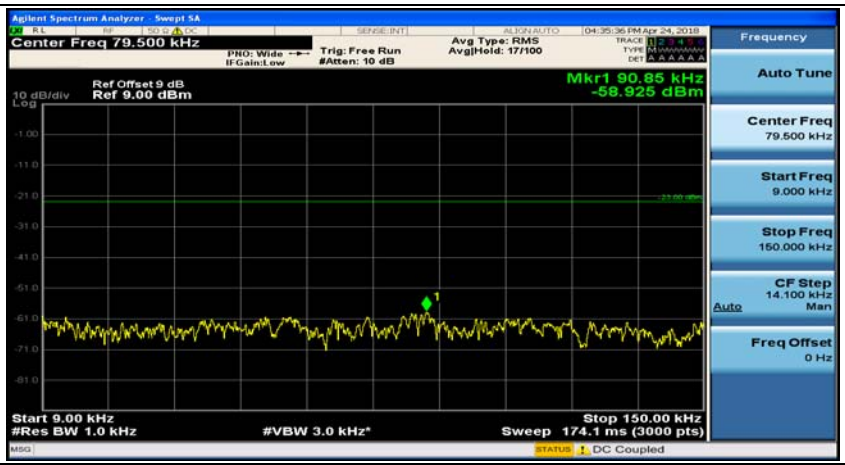
(Channel Bandwidth:20 MHz)_MCH_QPSK_1RB#99

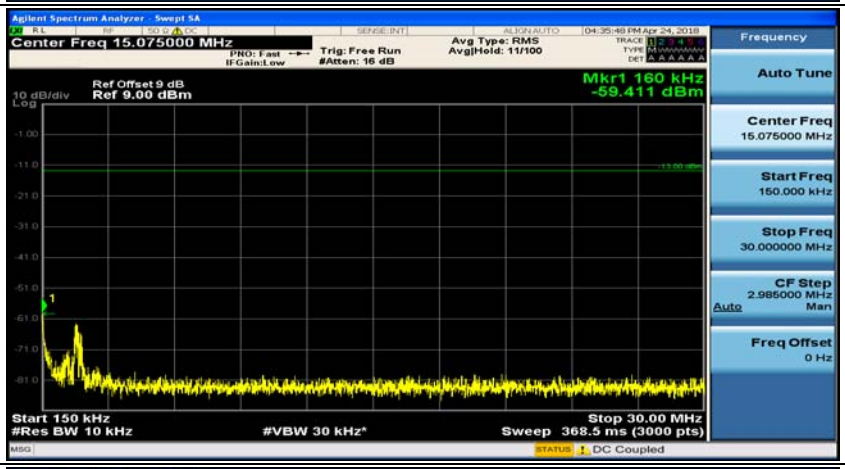

Agilent Spectrum Analyzer - Swept SA
Center Freq 79.500 kHz
PNO: Wide
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 17/100
04:33:30 PM Apr 24, 2018
Frequency
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Mkr1 87.89 kHz
-58.213 dBm
Auto Tune
Center Freq
79.500 kHz
Start Freq
9.000 kHz
Stop Freq
150.000 kHz
CF Step
14.100 kHz
Auto
Man
Freq Offset
0 Hz
Start 9.00 kHz
#Res BW 1.0 kHz
#VBW 3.0 kHz*
Stop 150.00 kHz
Sweep 174.1 ms (3000 pts)
DC Coupled

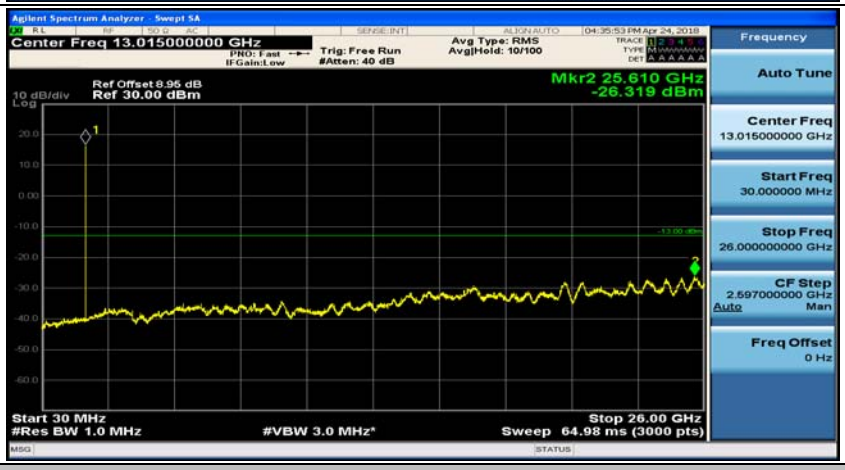

Agilent Spectrum Analyzer - Swept SA
Center Freq 15.075000 MHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 16 dB
Avg Type: RMS
Avg|Hold: 13/100
04:33:43 PM Apr 24, 2018
Frequency
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Mkr1 150 kHz
-56.039 dBm
Auto Tune
Center Freq
15.075000 MHz
Start Freq
150.000 kHz
Stop Freq
30.000000 MHz
CF Step
2.985000 MHz
Auto
Man
Freq Offset
0 Hz
Start 150 kHz
#Res BW 10 kHz
#VBW 30 kHz*
Stop 30.00 MHz
Sweep 368.5 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
04:33:48 PM Apr 24, 2018
Frequency
Ref Offset 8.95 dB
10 dB/div
Log
Ref 30.00 dBm
Mkr2 25.134 GHz
-26.740 dBm
Auto Tune
Center Freq
13.015000000 GHz
Start Freq
30.000000 MHz
Stop Freq
26.000000000 GHz
CF Step
2.597000000 GHz
Auto
Man
Freq Offset
0 Hz
Start 30 MHz
#Res BW 1.0 MHz
#VBW 3.0 MHz*
Stop 26.00 GHz
Sweep 64.98 ms (3000 pts)

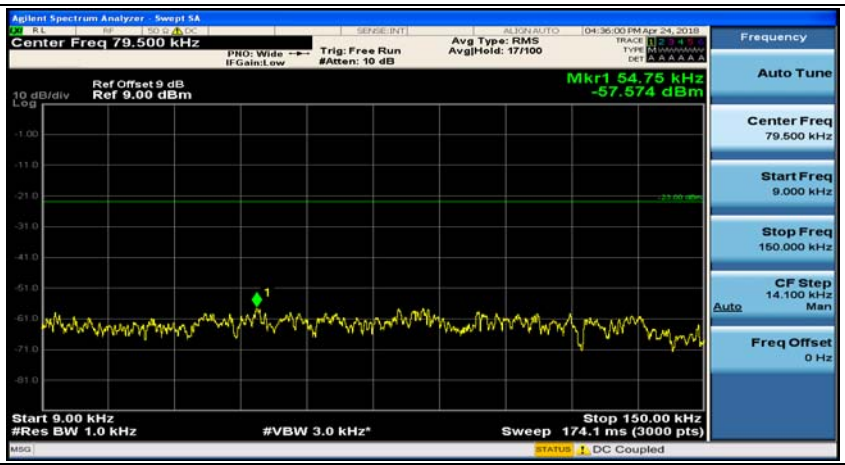
(Channel Bandwidth:20 MHz)_HCH_QPSK_1RB#0



(Channel Bandwidth:20 MHz)_HCH_QPSK_1RB#49

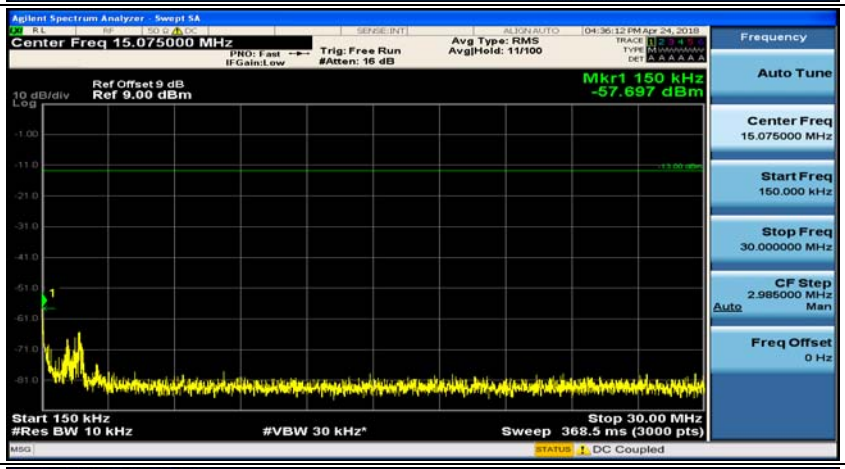


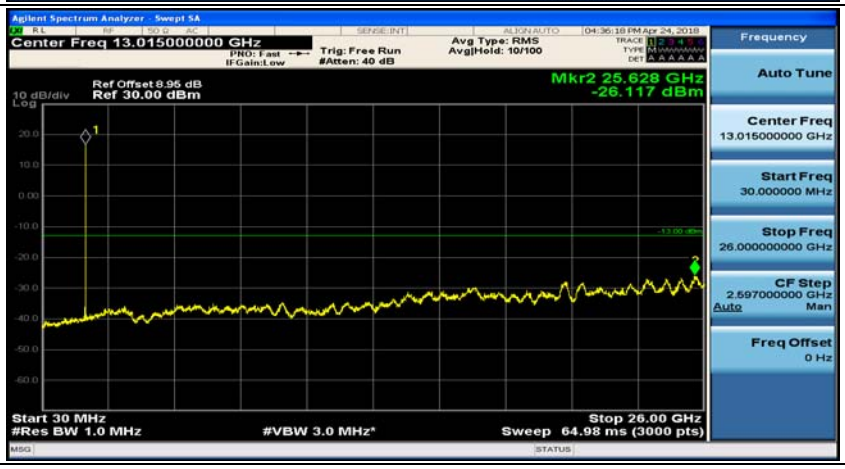


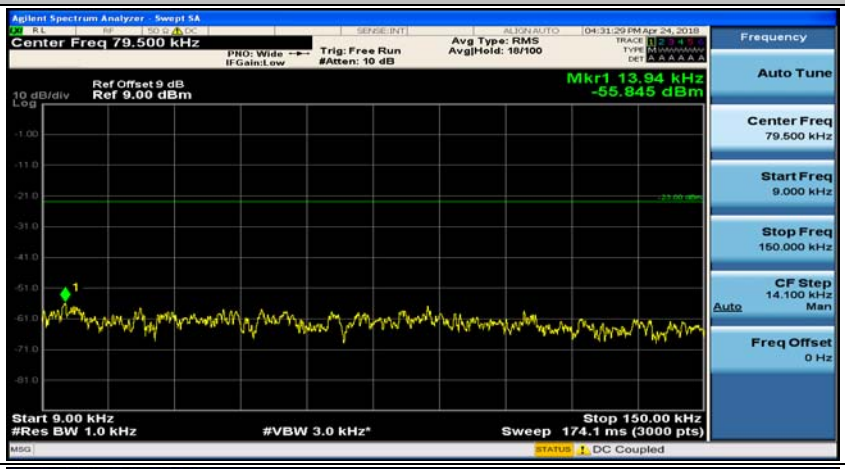
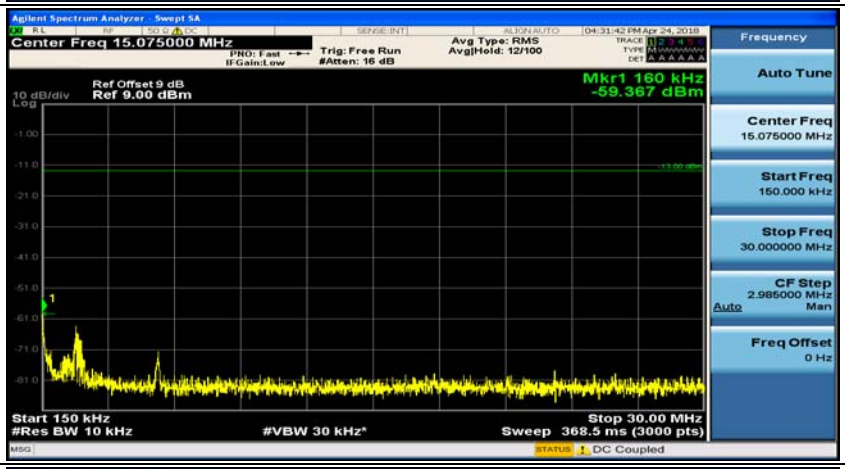
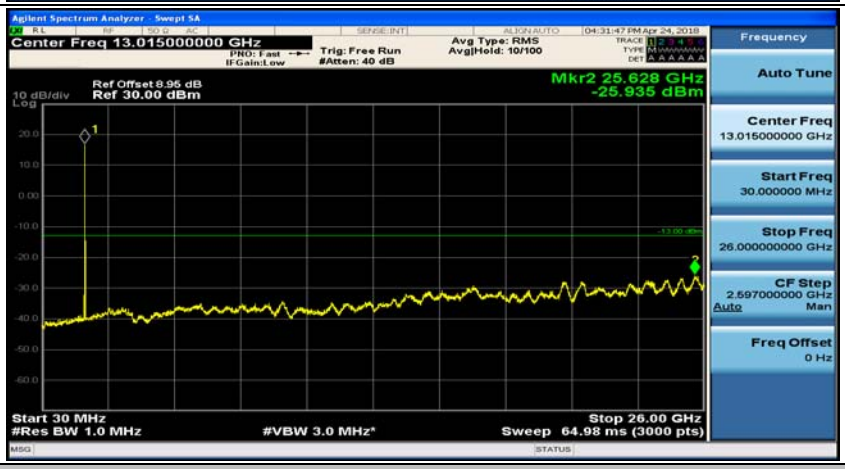


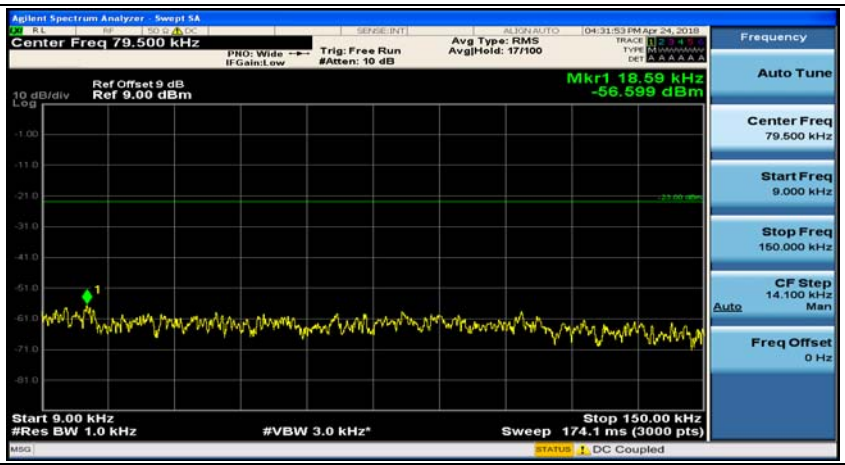
(Channel Bandwidth:20 MHz)_HCH_QPSK_1RB#99

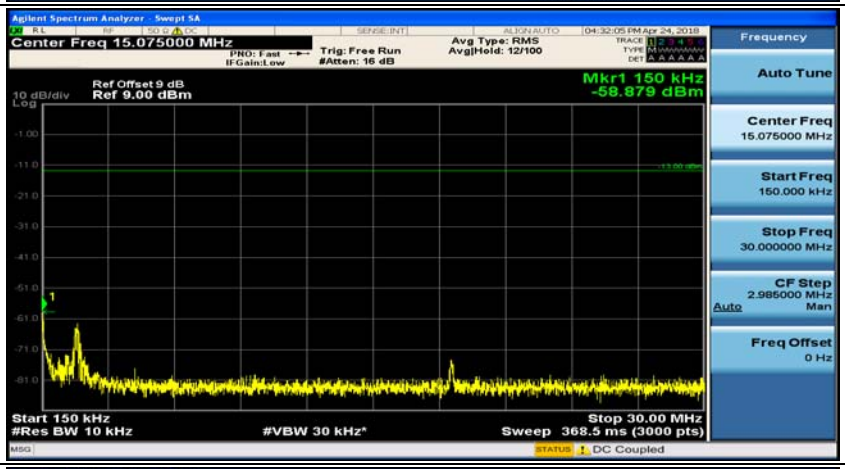

Agilent Spectrum Analyzer - Swept SA
Center Freq 79.500 kHz
PNO: Wide
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 17/100
04:36:00 PM Apr 24, 2018
Ref Offset 9 dB
10 dB/div
Ref 9.00 dBm
Mkr1 54.75 kHz
-57.574 dBm
Start 9.00 kHz
#Res BW 1.0 kHz
#VBW 3.0 kHz*
Stop 150.00 kHz
Sweep 174.1 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

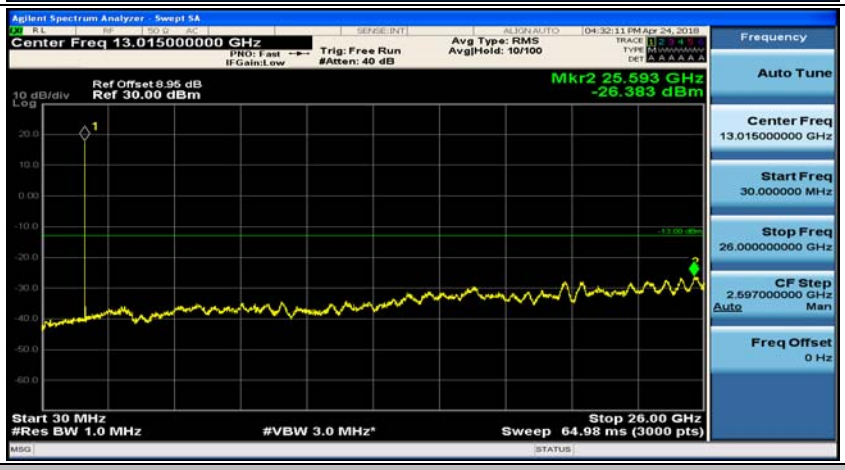

Agilent Spectrum Analyzer - Swept SA
Center Freq 15.075000 MHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 16 dB
Avg Type: RMS
Avg|Hold: 11/100
04:36:12 PM Apr 24, 2018
Ref Offset 9 dB
10 dB/div
Ref 9.00 dBm
Mkr1 150 kHz
-57.697 dBm
Start 150 kHz
#Res BW 10 kHz
#VBW 30 kHz*
Stop 30.00 MHz
Sweep 368.5 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: 10/100
04:36:18 PM Apr 24, 2018
Ref Offset 8.95 dB
10 dB/div
Ref 30.00 dBm
Mkr2 25.628 GHz
-26.117 dBm
Start 30 MHz
#Res BW 1.0 MHz
#VBW 3.0 MHz*
Stop 26.00 GHz
Sweep 64.98 ms (3000 pts)
Frequency
Auto Tune
Center Freq
13.015000000 GHz
Start Freq
30.000000 MHz
Stop Freq
26.000000000 GHz
CF Step
2.597000000 GHz
Auto
Man
Freq Offset
0 Hz

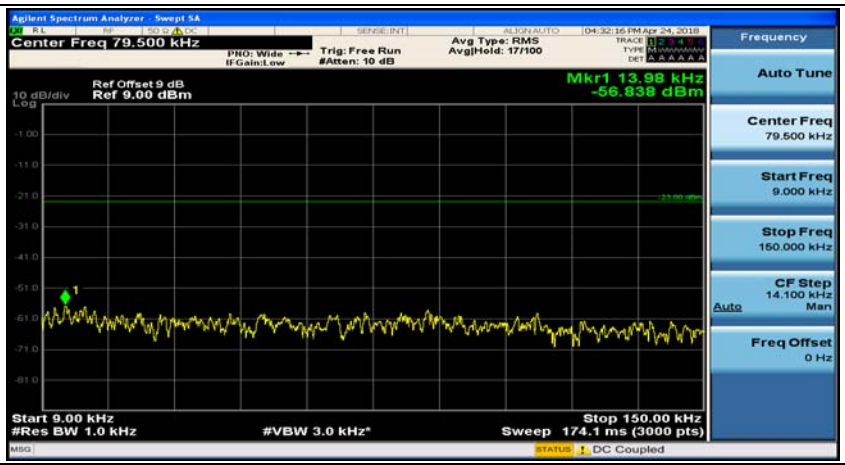
(Channel Bandwidth:20 MHz)_LCH_16QAM_1RB#0



(Channel Bandwidth:20 MHz)_LCH_16QAM_1RB#49

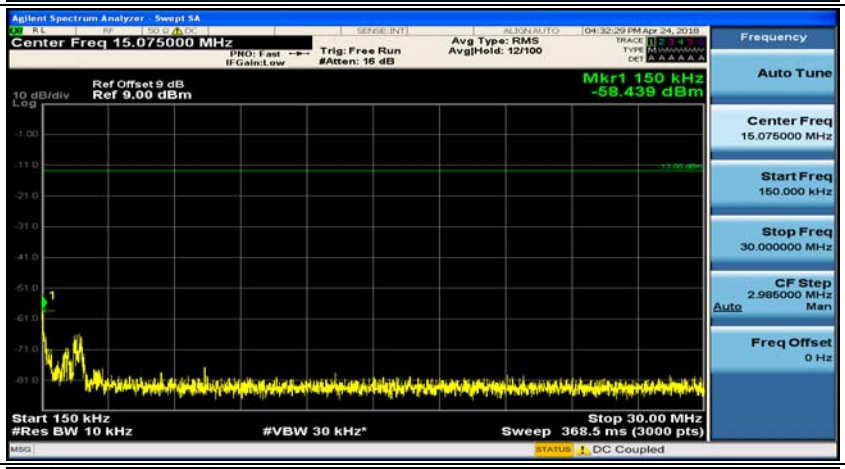


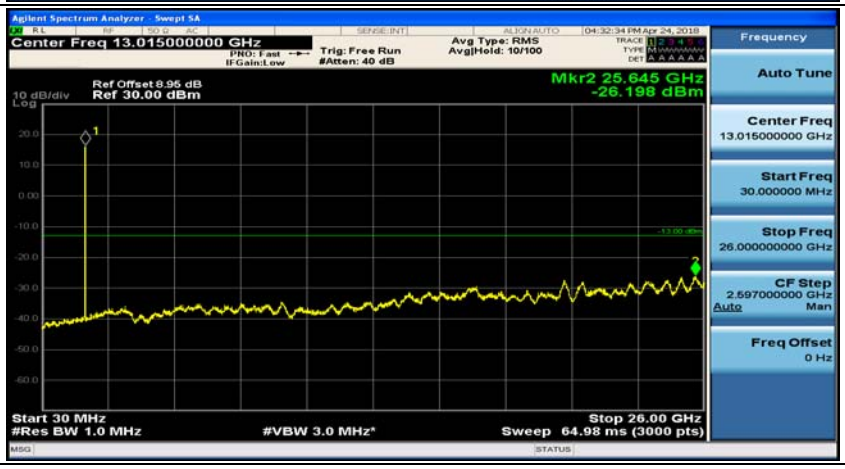


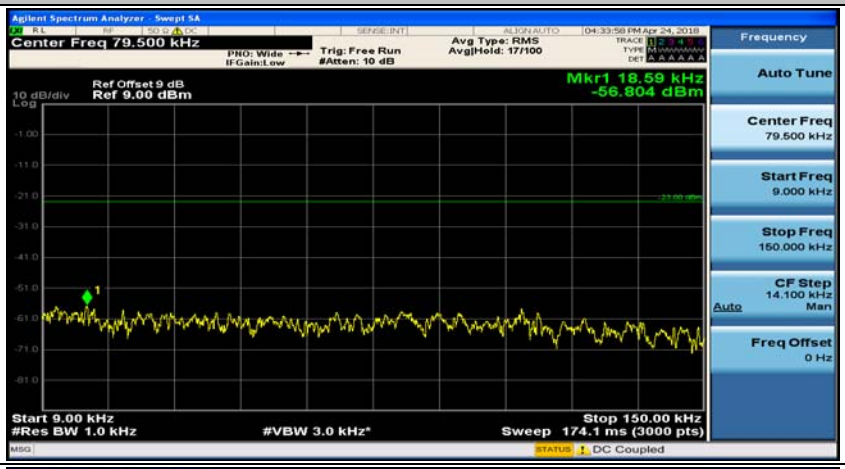
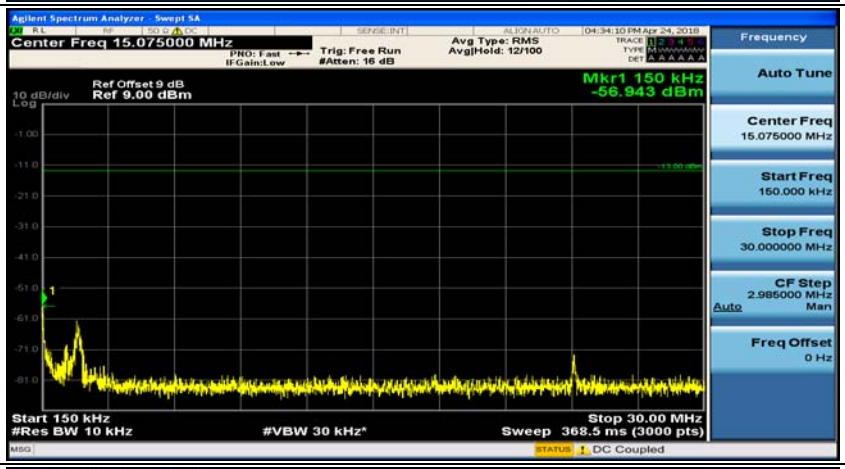
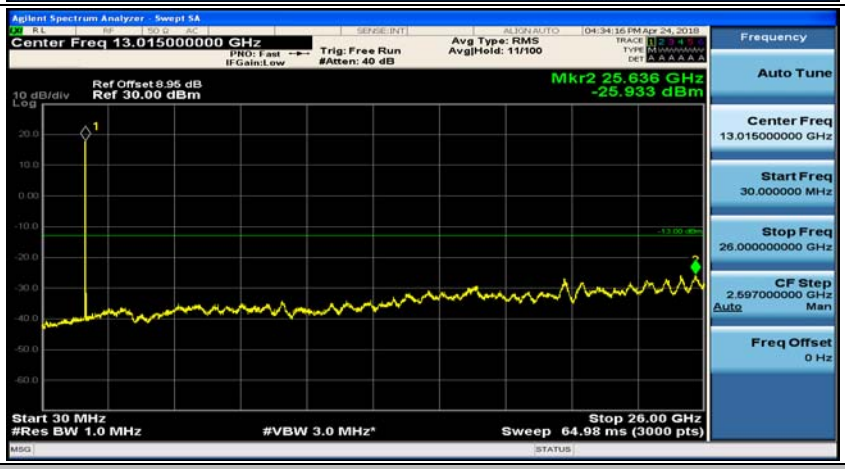


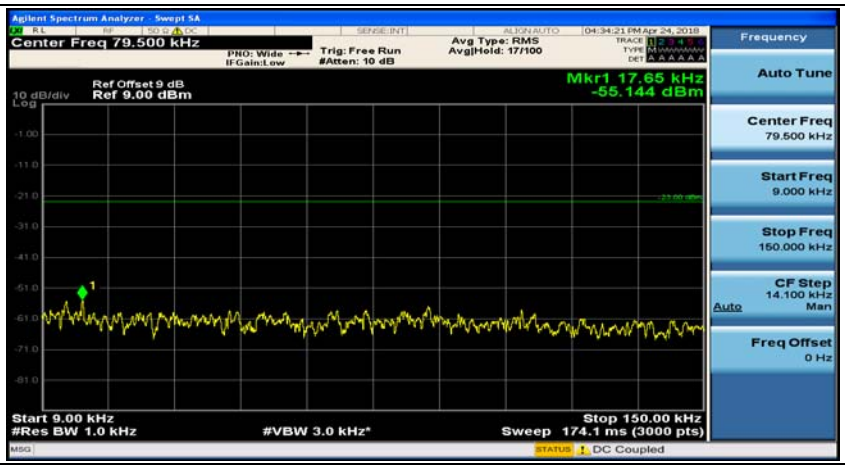
(Channel Bandwidth:20 MHz)_LCH_16QAM_1RB#99

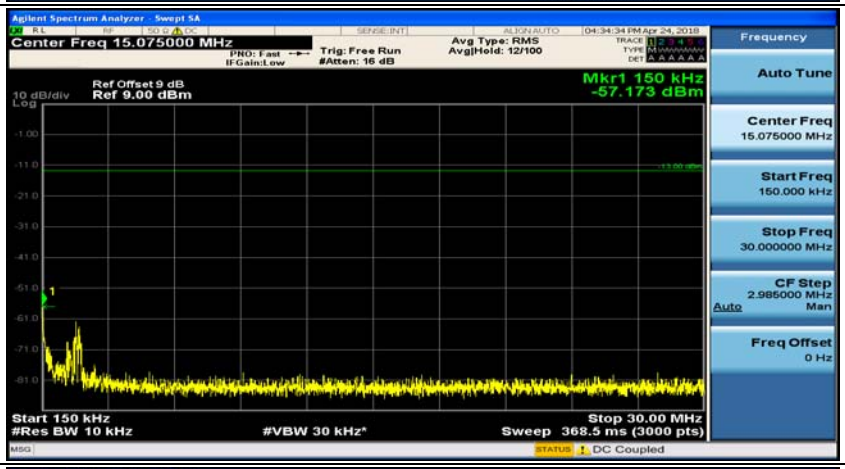

Agilent Spectrum Analyzer - Swept SA
Center Freq 79.500 kHz
PNO: Wide
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 17/100
04:32:16 PM Apr 24, 2018
Frequency
Auto Tune
Mkr1 13.98 kHz
-56.838 dBm
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Center Freq
79.500 kHz
Start Freq
9.000 kHz
Stop 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

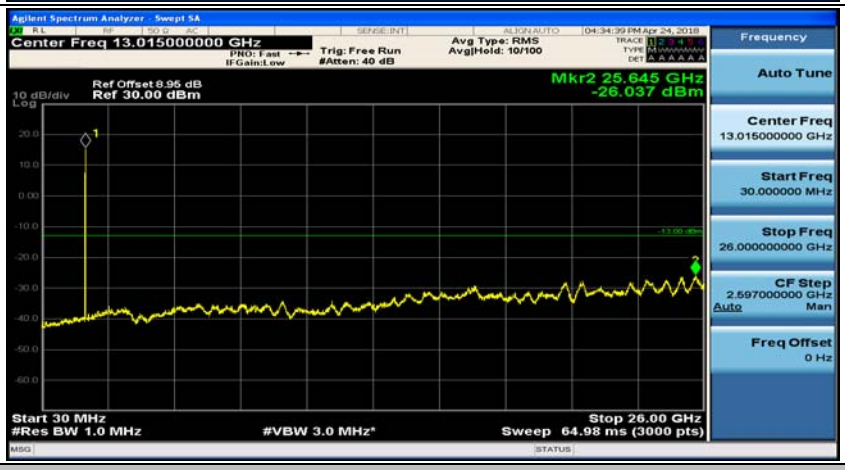

Agilent Spectrum Analyzer - Swept SA
Center Freq 15.075000 MHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 16 dB
Avg Type: RMS
Avg|Hold: 12/100
04:32:29 PM Apr 24, 2018
Frequency
Auto Tune
Mkr1 150 kHz
-58.439 dBm
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Center Freq
15.075000 MHz
Start Freq
150.000 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: 10/100
04:32:34 PM Apr 24, 2018
Frequency
Auto Tune
Mkr2 25.645 GHz
-26.198 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)

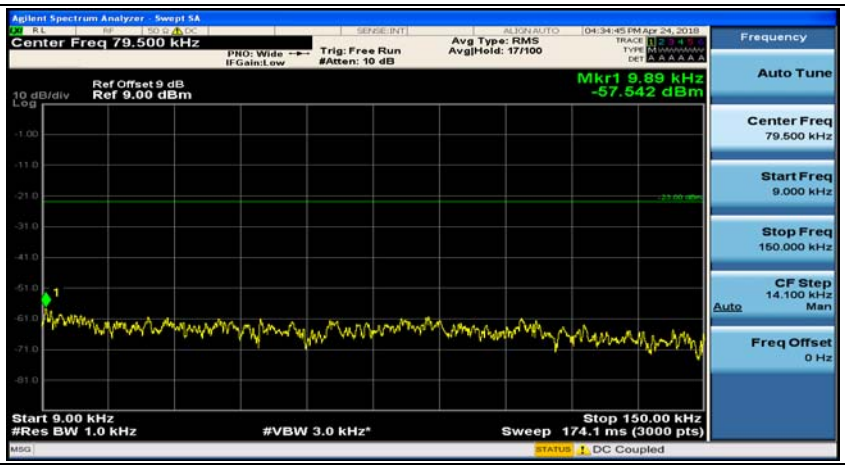
(Channel Bandwidth:20 MHz)_MCH_16QAM_1RB#0



(Channel Bandwidth:20 MHz)_MCH_16QAM_1RB#49

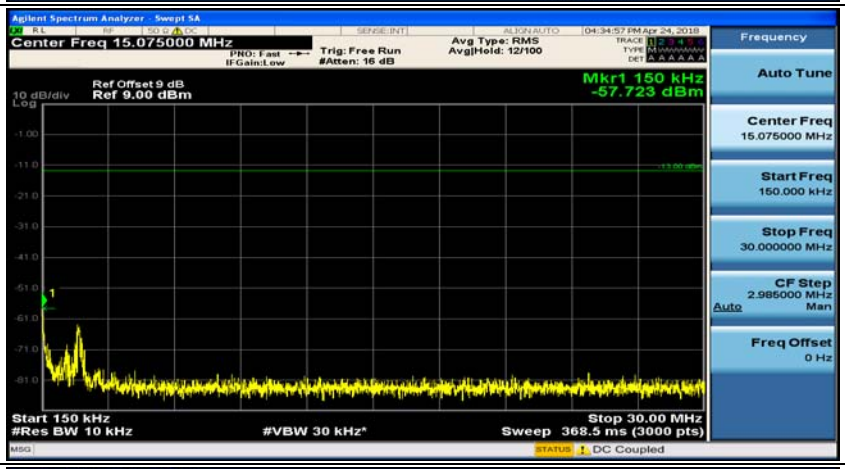


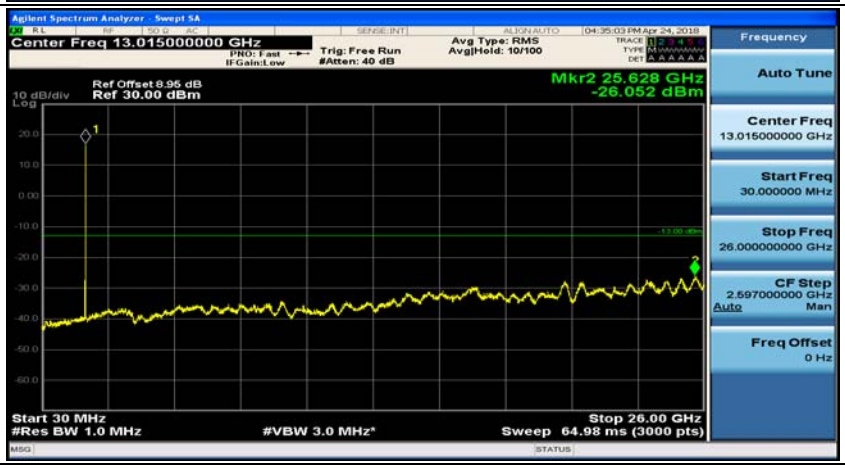


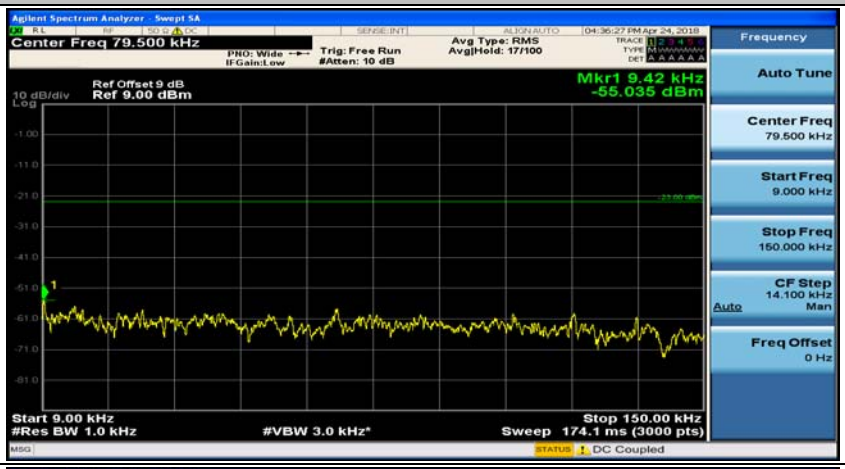
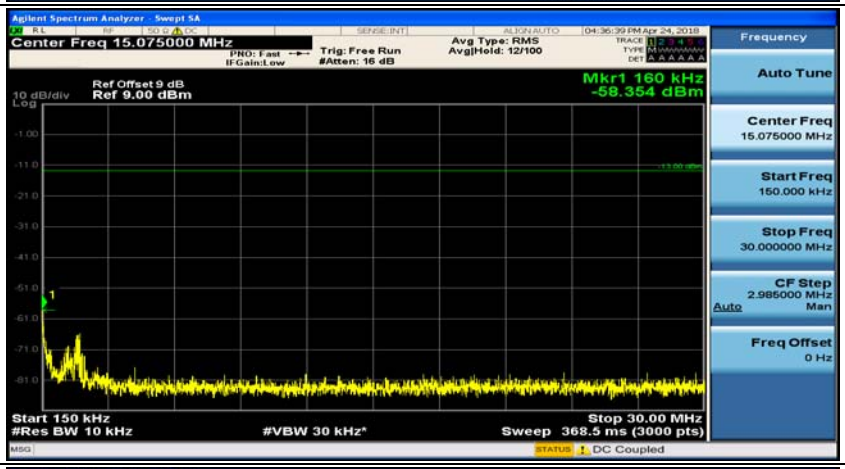
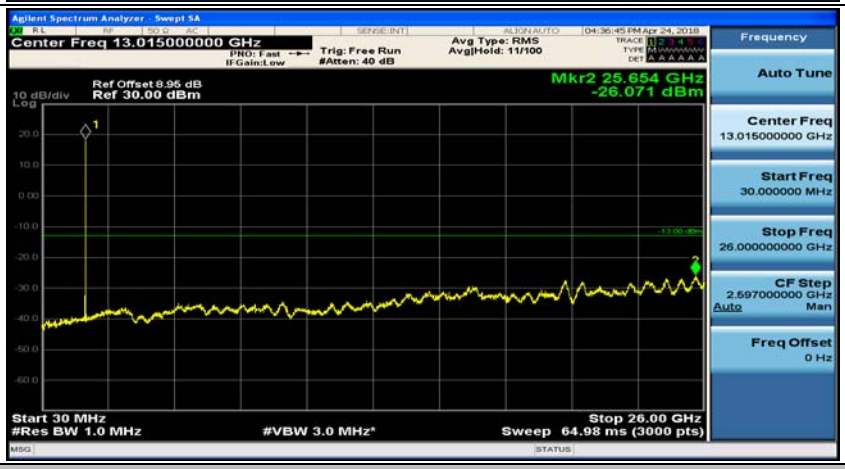


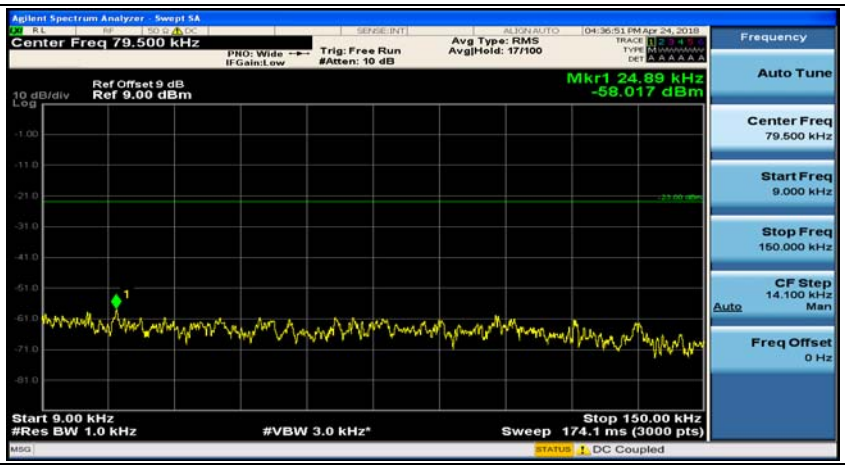
(Channel Bandwidth:20 MHz)_MCH_16QAM_1RB#99

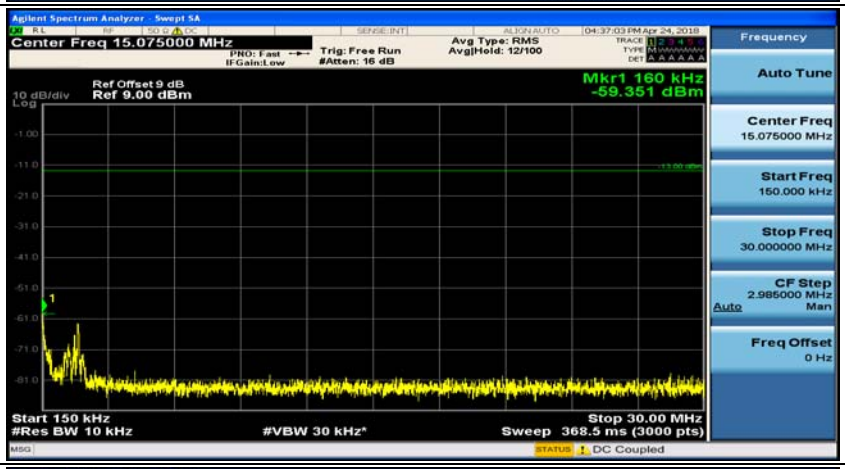

Agilent Spectrum Analyzer - Swept SA
Center Freq 79.500 kHz
PNO: Wide
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 17/100
04:34:45 PM Apr 24, 2018
Frequency
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Mkr1 9.89 kHz
-57.542 dBm
Auto Tune
Center Freq
79.500 kHz
Start Freq
9.000 kHz
Stop Freq
150.000 kHz
CF Step
14.100 kHz
Auto
Man
Freq Offset
0 Hz
Start 9.00 kHz
#Res BW 1.0 kHz
#VBW 3.0 kHz*
Stop 150.00 kHz
Sweep 174.1 ms (3000 pts)
DC Coupled

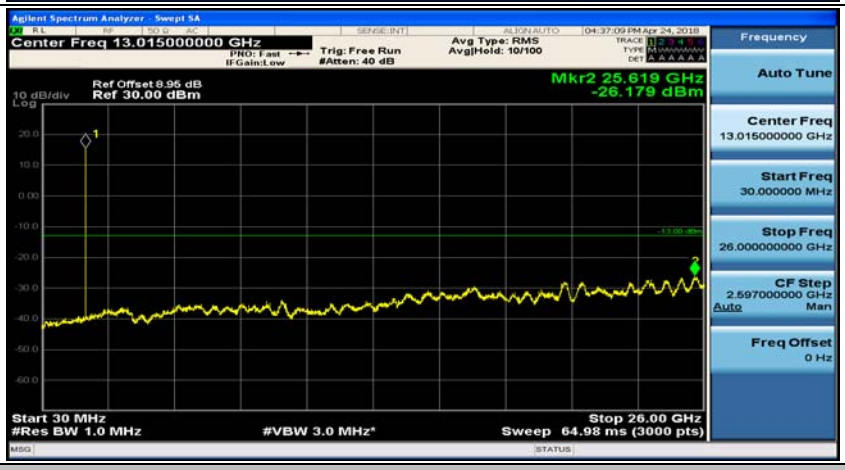

Agilent Spectrum Analyzer - Swept SA
Center Freq 15.075000 MHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 16 dB
Avg Type: RMS
Avg|Hold: 12/100
04:34:57 PM Apr 24, 2018
Frequency
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Mkr1 150 kHz
-57.723 dBm
Auto Tune
Center Freq
15.075000 MHz
Start Freq
150.000 kHz
Stop Freq
30.000000 MHz
CF Step
2.985000 MHz
Auto
Man
Freq Offset
0 Hz
Start 150 kHz
#Res BW 10 kHz
#VBW 30 kHz*
Stop 30.00 MHz
Sweep 368.5 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: 10/100
04:35:03 PM Apr 24, 2018
Frequency
Ref Offset 8.95 dB
10 dB/div
Log
Ref 30.00 dBm
Mkr2 25.628 GHz
-26.052 dBm
Auto Tune
Center Freq
13.015000000 GHz
Start Freq
30.000000 MHz
Stop Freq
26.000000000 GHz
CF Step
2.597000000 GHz
Auto
Man
Freq Offset
0 Hz
Start 30 MHz
#Res BW 1.0 MHz
#VBW 3.0 MHz*
Stop 26.00 GHz
Sweep 64.98 ms (3000 pts)

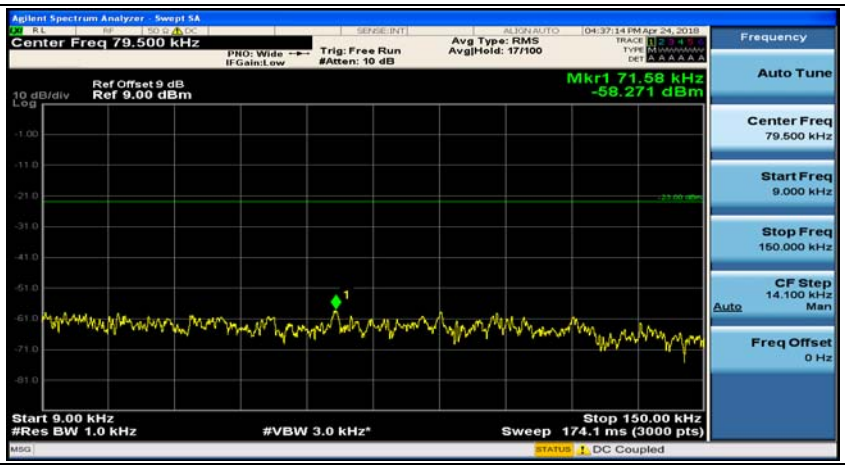
(Channel Bandwidth:20 MHz)_HCH_16QAM_1RB#0



(Channel Bandwidth:20 MHz)_HCH_16QAM_1RB#49

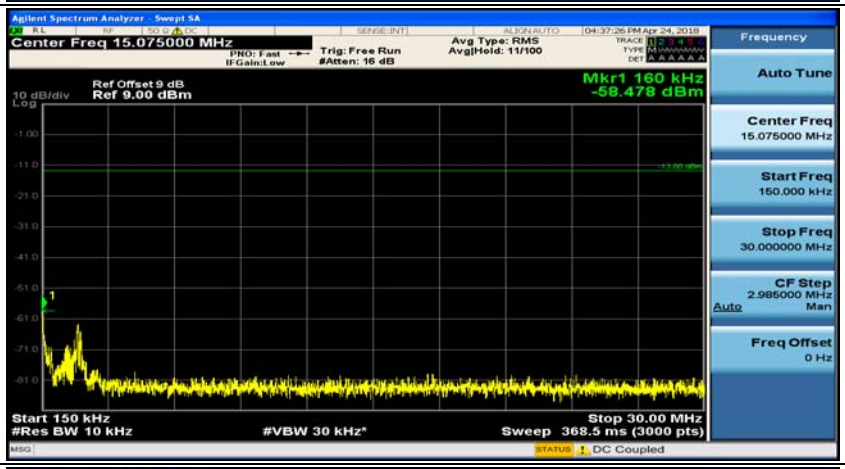


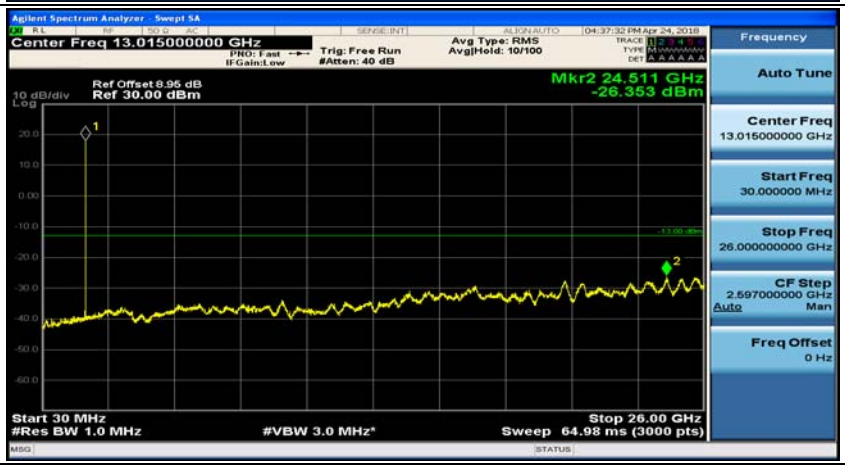




(Channel Bandwidth:20 MHz)_HCH_16QAM_1RB#99


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
04:37:14 PM Apr 24, 2018
Frequency
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Mkr1 71.58 kHz
-58.271 dBm
Auto Tune
Center Freq
79.500 kHz
Start Freq
9.000 kHz
Stop Freq
150.000 kHz
CF Step
14.100 kHz
Auto
Man
Freq Offset
0 Hz
Start 9.00 kHz
#Res BW 1.0 kHz
#VBW 3.0 kHz*
Stop 150.00 kHz
Sweep 174.1 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
04:37:26 PM Apr 24, 2018
Frequency
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Mkr1 160 kHz
-58.478 dBm
Auto Tune
Center Freq
15.075000 MHz
Start Freq
150.000 kHz
Stop Freq
30.000000 MHz
CF Step
2.985000 MHz
Auto
Man
Freq Offset
0 Hz
Start 150 kHz
#Res BW 10 kHz
#VBW 30 kHz*
Stop 30.00 MHz
Sweep 368.5 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: 10/100
04:37:32 PM Apr 24, 2018
Frequency
Ref Offset 8.95 dB
10 dB/div
Log
Ref 30.00 dBm
Mkr2 24.511 GHz
-26.353 dBm
Auto Tune
Center Freq
13.015000000 GHz
Start Freq
30.000000 MHz
Stop Freq
26.000000000 GHz
CF Step
2.597000000 GHz
Auto
Man
Freq Offset
0 Hz
Start 30 MHz
#Res BW 1.0 MHz
#VBW 3.0 MHz*
Stop 26.00 GHz
Sweep 64.98 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	-1.42	-0.000830	± 2.5	PASS
		VN	TN	-1.19	-0.000696	± 2.5	PASS
		VH	TN	3.67	0.002145	± 2.5	PASS
	MCH	VL	TN	-1.26	-0.000727	± 2.5	PASS
		VN	TN	1.68	0.000970	± 2.5	PASS
		VH	TN	1.62	0.000935	± 2.5	PASS
	HCH	VL	TN	2.29	0.001305	± 2.5	PASS
		VN	TN	4.93	0.002810	± 2.5	PASS
		VH	TN	1.49	0.000849	± 2.5	PASS
16QAM	LCH	VL	TN	0.22	0.000129	± 2.5	PASS
		VN	TN	4.37	0.002555	± 2.5	PASS
		VH	TN	0.01	0.000006	± 2.5	PASS
	MCH	VL	TN	4.67	0.002696	± 2.5	PASS
		VN	TN	2.8	0.001616	± 2.5	PASS
		VH	TN	3.12	0.001801	± 2.5	PASS
	HCH	VL	TN	-0.23	-0.000131	± 2.5	PASS
		VN	TN	-0.68	-0.000388	± 2.5	PASS
		VH	TN	0.77	0.000439	± 2.5	PASS
Temperature							
Modulation	Channel	Voltage [Vdc]	Temperature (℃)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
QPSK	LCH	VN	-30	3.55	0.002075	± 2.5	PASS
		VN	-20	4.41	0.002578	± 2.5	PASS
		VN	-10	-1.62	-0.000947	± 2.5	PASS
		VN	0	3.36	0.001964	± 2.5	PASS
		VN	10	4.19	0.002449	± 2.5	PASS
		VN	20	3.18	0.001859	± 2.5	PASS
		VN	30	3.86	0.002256	± 2.5	PASS
		VN	40	-0.99	-0.000579	± 2.5	PASS
		VN	50	-1.85	-0.001081	± 2.5	PASS
	MCH	VN	-30	4.42	0.002551	± 2.5	PASS
		VN	-20	3.14	0.001812	± 2.5	PASS

		VN	-10	3.77	0.002176	± 2.5	PASS
		VN	0	-0.37	-0.000214	± 2.5	PASS
		VN	10	-1.22	-0.000704	± 2.5	PASS
		VN	20	2.12	0.001224	± 2.5	PASS
		VN	30	4.41	0.002545	± 2.5	PASS
		VN	40	4.57	0.002638	± 2.5	PASS
		VN	50	2.03	0.001172	± 2.5	PASS
	HCH	VN	-30	-1.01	-0.000576	± 2.5	PASS
		VN	-20	1.61	0.000918	± 2.5	PASS
		VN	-10	4.3	0.002451	± 2.5	PASS
		VN	0	-1.85	-0.001055	± 2.5	PASS
		VN	10	4.49	0.002559	± 2.5	PASS
		VN	20	2.12	0.001208	± 2.5	PASS
		VN	30	2.45	0.001397	± 2.5	PASS
		VN	40	-0.71	-0.000405	± 2.5	PASS
		VN	50	4.92	0.002805	± 2.5	PASS
16QAM	LCH	VN	-30	1.47	0.000859	± 2.5	PASS
		VN	-20	-1.48	-0.000865	± 2.5	PASS
		VN	-10	-1.56	-0.000912	± 2.5	PASS
		VN	0	0.16	0.000094	± 2.5	PASS
		VN	10	2.86	0.001672	± 2.5	PASS
		VN	20	-0.19	-0.000111	± 2.5	PASS
		VN	30	-0.6	-0.000351	± 2.5	PASS
		VN	40	4.76	0.002782	± 2.5	PASS
		VN	50	-0.95	-0.000555	± 2.5	PASS
	MCH	VN	-30	1.88	0.001072	± 2.5	PASS
		VN	-20	-0.93	-0.000530	± 2.5	PASS
		VN	-10	3.63	0.002069	± 2.5	PASS
		VN	0	2.06	0.001174	± 2.5	PASS
		VN	10	2.83	0.001613	± 2.5	PASS
		VN	20	4.58	0.002611	± 2.5	PASS
		VN	30	-1.61	-0.000918	± 2.5	PASS
		VN	40	2.68	0.001528	± 2.5	PASS
		VN	50	-0.18	-0.000103	± 2.5	PASS
	HCH	VN	-30	0.76	0.000433	± 2.5	PASS
		VN	-20	3.25	0.001853	± 2.5	PASS
		VN	-10	-1.58	-0.000901	± 2.5	PASS
		VN	0	1.6	0.000912	± 2.5	PASS
		VN	10	1.56	0.000889	± 2.5	PASS
		VN	20	3.11	0.001773	± 2.5	PASS
		VN	30	0.87	0.000496	± 2.5	PASS

		VN	40	-0.99	-0.000564	± 2.5	PASS
		VN	50	-1.86	-0.001060	± 2.5	PASS

Channel Bandwidth: 3 MHz

Channel Bandwidth: 3 MHz+							
Voltage							
Modulation	Channel	Voltage [Vdc]	Temperature (℃)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
QPSK	LCH	VL	TN	1.95	0.001139	± 2.5	PASS
		VN	TN	4.68	0.002734	± 2.5	PASS
		VH	TN	4.77	0.002787	± 2.5	PASS
	MCH	VL	TN	3.65	0.002107	± 2.5	PASS
		VN	TN	4.29	0.002476	± 2.5	PASS
		VH	TN	-0.8	-0.000462	± 2.5	PASS
	HCH	VL	TN	1.19	0.000679	± 2.5	PASS
		VN	TN	2.02	0.001152	± 2.5	PASS
		VH	TN	-0.17	-0.000097	± 2.5	PASS
16QAM	LCH	VL	TN	0.05	0.000029	± 2.5	PASS
		VN	TN	0.61	0.000356	± 2.5	PASS
		VH	TN	1.89	0.001104	± 2.5	PASS
	MCH	VL	TN	2.12	0.001224	± 2.5	PASS
		VN	TN	1.61	0.000929	± 2.5	PASS
		VH	TN	2.74	0.001582	± 2.5	PASS
	HCH	VL	TN	4.44	0.002532	± 2.5	PASS
		VN	TN	3.85	0.002196	± 2.5	PASS
		VH	TN	4.93	0.002812	± 2.5	PASS
Temperature							
Modulation	Channel	Voltage [Vdc]	Temperature (℃)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
QPSK	LCH	VN	-30	1.64	0.000958	± 2.5	PASS
		VN	-20	-1.86	-0.001087	± 2.5	PASS
		VN	-10	1.68	0.000982	± 2.5	PASS
		VN	0	1.42	0.000830	± 2.5	PASS
		VN	10	2.21	0.001291	± 2.5	PASS
		VN	20	-0.76	-0.000444	± 2.5	PASS
		VN	30	0.21	0.000123	± 2.5	PASS
		VN	40	4.3	0.002512	± 2.5	PASS
		VN	50	3.16	0.001846	± 2.5	PASS
	MCH	VN	-30	0.11	0.000063	± 2.5	PASS
		VN	-20	1.03	0.000595	± 2.5	PASS
		VN	-10	-1.68	-0.000970	± 2.5	PASS

		VN	0	4.72	0.002724	± 2.5	PASS
		VN	10	4.55	0.002626	± 2.5	PASS
		VN	20	-1.7	-0.000981	± 2.5	PASS
		VN	30	2.43	0.001403	± 2.5	PASS
		VN	40	-0.61	-0.000352	± 2.5	PASS
		VN	50	1.84	0.001062	± 2.5	PASS
	HCH	VN	-30	0.31	0.000177	± 2.5	PASS
		VN	-20	0.59	0.000336	± 2.5	PASS
		VN	-10	3.04	0.001734	± 2.5	PASS
		VN	0	3.24	0.001848	± 2.5	PASS
		VN	10	1.78	0.001015	± 2.5	PASS
		VN	20	-1.14	-0.000650	± 2.5	PASS
		VN	30	4.05	0.002310	± 2.5	PASS
		VN	40	1.46	0.000833	± 2.5	PASS
		VN	50	2.16	0.001232	± 2.5	PASS
16QAM	LCH	VN	-30	0.32	0.000185	± 2.5	PASS
		VN	-20	-0.61	-0.000352	± 2.5	PASS
		VN	-10	-0.68	-0.000392	± 2.5	PASS
		VN	0	1.73	0.000999	± 2.5	PASS
		VN	10	1.27	0.000733	± 2.5	PASS
		VN	20	1.65	0.000952	± 2.5	PASS
		VN	30	-0.4	-0.000231	± 2.5	PASS
		VN	40	2.97	0.001714	± 2.5	PASS
		VN	50	3.22	0.001859	± 2.5	PASS
	MCH	VN	-30	0.05	0.000029	± 2.5	PASS
		VN	-20	0.49	0.000279	± 2.5	PASS
		VN	-10	-0.8	-0.000456	± 2.5	PASS
		VN	0	1.74	0.000992	± 2.5	PASS
		VN	10	1.33	0.000758	± 2.5	PASS
		VN	20	4.37	0.002492	± 2.5	PASS
		VN	30	4.3	0.002452	± 2.5	PASS
		VN	40	-0.96	-0.000547	± 2.5	PASS
		VN	50	-0.46	-0.000262	± 2.5	PASS
	HCH	VN	-30	-0.1	-0.000057	± 2.5	PASS
		VN	-20	0.12	0.000068	± 2.5	PASS
		VN	-10	3.89	0.002218	± 2.5	PASS
		VN	0	3.68	0.002099	± 2.5	PASS
		VN	10	1.3	0.000741	± 2.5	PASS
		VN	20	-1.28	-0.000730	± 2.5	PASS
		VN	30	3.6	0.002053	± 2.5	PASS
		VN	40	1.31	0.000747	± 2.5	PASS

		VN	50	-0.76	-0.000433	± 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	1.29	0.000753	± 2.5	PASS
		VN	TN	1.48	0.000864	± 2.5	PASS
		VH	TN	0.12	0.000070	± 2.5	PASS
	MCH	VL	TN	1.04	0.000600	± 2.5	PASS
		VN	TN	-1.48	-0.000854	± 2.5	PASS
		VH	TN	0.47	0.000271	± 2.5	PASS
	HCH	VL	TN	0.43	0.000245	± 2.5	PASS
		VN	TN	3.41	0.001946	± 2.5	PASS
		VH	TN	4.41	0.002516	± 2.5	PASS
16QAM	LCH	VL	TN	1.93	0.001127	± 2.5	PASS
		VN	TN	-1.97	-0.001150	± 2.5	PASS
		VH	TN	-0.82	-0.000479	± 2.5	PASS
	MCH	VL	TN	3.2	0.001847	± 2.5	PASS
		VN	TN	0.97	0.000560	± 2.5	PASS
		VH	TN	-1.91	-0.001102	± 2.5	PASS
	HCH	VL	TN	4.17	0.002379	± 2.5	PASS
		VN	TN	-0.65	-0.000371	± 2.5	PASS
		VH	TN	2.33	0.001330	± 2.5	PASS
Temperature							
Modulation	Channel	Voltage [Vdc]	Temperature (℃)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
QPSK	LCH	VN	-30	2.01	0.001174	± 2.5	PASS
		VN	-20	2.79	0.001629	± 2.5	PASS
		VN	-10	2.29	0.001337	± 2.5	PASS
		VN	0	0.1	0.000058	± 2.5	PASS
		VN	10	4.48	0.002616	± 2.5	PASS
		VN	20	4.5	0.002628	± 2.5	PASS
		VN	30	-0.4	-0.000234	± 2.5	PASS
		VN	40	1.19	0.000695	± 2.5	PASS
		VN	50	-0.1	-0.000058	± 2.5	PASS
	MCH	VN	-30	-0.71	-0.000410	± 2.5	PASS
		VN	-20	2.51	0.001449	± 2.5	PASS
		VN	-10	-1.59	-0.000918	± 2.5	PASS
		VN	0	4.13	0.002384	± 2.5	PASS

		VN	10	0.56	0.000323	± 2.5	PASS
		VN	20	4.87	0.002811	± 2.5	PASS
		VN	30	2.07	0.001195	± 2.5	PASS
		VN	40	-0.01	-0.000006	± 2.5	PASS
		VN	50	0.72	0.000416	± 2.5	PASS
	HCH	VN	-30	-1.13	-0.000645	± 2.5	PASS
		VN	-20	3.79	0.001987	± 2.5	PASS
		VN	-10	0.32	0.000168	± 2.5	PASS
		VN	0	1.95	0.001022	± 2.5	PASS
		VN	10	-0.36	-0.000189	± 2.5	PASS
		VN	20	4	0.002097	± 2.5	PASS
		VN	30	0.02	0.000010	± 2.5	PASS
		VN	40	-1.11	-0.000582	± 2.5	PASS
		VN	50	1.55	0.000813	± 2.5	PASS
	LCH	VN	-30	-1.11	-0.000641	± 2.5	PASS
		VN	-20	2.93	0.001691	± 2.5	PASS
		VN	-10	-0.94	-0.000543	± 2.5	PASS
		VN	0	-0.81	-0.000468	± 2.5	PASS
		VN	10	2.14	0.001235	± 2.5	PASS
		VN	20	-1.37	-0.000791	± 2.5	PASS
		VN	30	3.35	0.001934	± 2.5	PASS
		VN	40	4.12	0.002378	± 2.5	PASS
		VN	50	-0.06	-0.000035	± 2.5	PASS
	MCH	VN	-30	-1.46	-0.000833	± 2.5	PASS
		VN	-20	0.94	0.000536	± 2.5	PASS
		VN	-10	2.76	0.001575	± 2.5	PASS
		VN	0	4.45	0.002539	± 2.5	PASS
16QAM		VN	10	3.8	0.002168	± 2.5	PASS
		VN	20	0.03	0.000017	± 2.5	PASS
		VN	30	0.77	0.000439	± 2.5	PASS
		VN	40	2.71	0.001546	± 2.5	PASS
		VN	50	3.44	0.001963	± 2.5	PASS
	HCH	VN	-30	-1.04	-0.000545	± 2.5	PASS
		VN	-20	-1.23	-0.000645	± 2.5	PASS
		VN	-10	3.67	0.001924	± 2.5	PASS
		VN	0	3.26	0.001709	± 2.5	PASS
		VN	10	-1.07	-0.000561	± 2.5	PASS
		VN	20	-1.9	-0.000996	± 2.5	PASS
		VN	30	3.6	0.001887	± 2.5	PASS
		VN	40	2.57	0.001347	± 2.5	PASS
		VN	50	-1.27	-0.000666	± 2.5	PASS

Channel Bandwidth: 10 MHz

Channel Bandwidth: 10 MHz							
Voltage							
Modulation	Channel	Voltage [Vdc]	Temperature (℃)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
QPSK	LCH	VL	TN	4.44	0.002589	± 2.5	PASS
		VN	TN	0.2	0.000117	± 2.5	PASS
		VH	TN	1.75	0.001020	± 2.5	PASS
	MCH	VL	TN	4.48	0.002586	± 2.5	PASS
		VN	TN	4.49	0.002592	± 2.5	PASS
		VH	TN	-1.58	-0.000912	± 2.5	PASS
	HCH	VL	TN	-1.64	-0.000937	± 2.5	PASS
		VN	TN	1.19	0.000680	± 2.5	PASS
		VH	TN	3.92	0.002240	± 2.5	PASS
16QAM	LCH	VL	TN	2.95	0.001720	± 2.5	PASS
		VN	TN	3.02	0.001761	± 2.5	PASS
		VH	TN	2.65	0.001545	± 2.5	PASS
	MCH	VL	TN	2.36	0.001362	± 2.5	PASS
		VN	TN	2.37	0.001368	± 2.5	PASS
		VH	TN	-0.8	-0.000462	± 2.5	PASS
	HCH	VL	TN	4.33	0.002474	± 2.5	PASS
		VN	TN	0.37	0.000211	± 2.5	PASS
		VH	TN	0.01	0.000006	± 2.5	PASS
Temperature							
Modulation	Channel	Voltage [Vdc]	Temperature (℃)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
16QAM	LCH	VN	-30	3.34	0.001948	± 2.5	PASS
		VN	-20	1.64	0.000956	± 2.5	PASS
		VN	-10	2.27	0.001324	± 2.5	PASS
		VN	0	2.84	0.001656	± 2.5	PASS
		VN	10	1.2	0.000700	± 2.5	PASS
		VN	20	3.49	0.002035	± 2.5	PASS
		VN	30	4.21	0.002455	± 2.5	PASS
		VN	40	3.59	0.002093	± 2.5	PASS
		VN	50	3.8	0.002216	± 2.5	PASS
	MCH	VN	-30	-0.35	-0.000202	± 2.5	PASS
		VN	-20	1.22	0.000704	± 2.5	PASS
		VN	-10	0.29	0.000167	± 2.5	PASS
		VN	0	1.4	0.000808	± 2.5	PASS
		VN	10	1.86	0.001074	± 2.5	PASS
		VN	20	1.42	0.000820	± 2.5	PASS

		VN	30	4.22	0.002436	± 2.5	PASS
		VN	40	2.12	0.001224	± 2.5	PASS
		VN	50	-1.73	-0.000999	± 2.5	PASS
	HCH	VN	-30	0.25	0.000143	± 2.5	PASS
		VN	-20	2.94	0.001680	± 2.5	PASS
		VN	-10	2.85	0.001629	± 2.5	PASS
		VN	0	4.95	0.002829	± 2.5	PASS
		VN	10	1.32	0.000754	± 2.5	PASS
		VN	20	0.4	0.000229	± 2.5	PASS
		VN	30	2.76	0.001577	± 2.5	PASS
		VN	40	2.52	0.001440	± 2.5	PASS
		VN	50	-0.55	-0.000314	± 2.5	PASS
QPSK	LCH	VN	-30	2.4	0.001385	± 2.5	PASS
		VN	-20	4.06	0.002343	± 2.5	PASS
		VN	-10	2.42	0.001397	± 2.5	PASS
		VN	0	1.84	0.001062	± 2.5	PASS
		VN	10	-0.37	-0.000214	± 2.5	PASS
		VN	20	-1.8	-0.001039	± 2.5	PASS
		VN	30	4.97	0.002869	± 2.5	PASS
		VN	40	0.07	0.000040	± 2.5	PASS
		VN	50	4.34	0.002505	± 2.5	PASS
	MCH	VN	-30	0.76	0.000434	± 2.5	PASS
		VN	-20	-0.66	-0.000377	± 2.5	PASS
		VN	-10	-0.82	-0.000469	± 2.5	PASS
		VN	0	3.95	0.002257	± 2.5	PASS
		VN	10	4.48	0.002560	± 2.5	PASS
		VN	20	4.26	0.002434	± 2.5	PASS
		VN	30	1.41	0.000806	± 2.5	PASS
		VN	40	1.5	0.000857	± 2.5	PASS
		VN	50	-0.96	-0.000549	± 2.5	PASS
	HCH	VN	-30	-0.5	-0.000286	± 2.5	PASS
		VN	-20	-1.03	-0.000589	± 2.5	PASS
		VN	-10	-1.47	-0.000840	± 2.5	PASS
		VN	0	-0.98	-0.000560	± 2.5	PASS
		VN	10	2.61	0.001491	± 2.5	PASS
		VN	20	2.02	0.001154	± 2.5	PASS
		VN	30	-0.87	-0.000497	± 2.5	PASS
		VN	40	-0.6	-0.000343	± 2.5	PASS
		VN	50	-0.37	-0.000211	± 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	-1.19	-0.000693	± 2.5	PASS
		VN	TN	-1.52	-0.000885	± 2.5	PASS
		VH	TN	3.73	0.002172	± 2.5	PASS
	MCH	VL	TN	1.39	0.000802	± 2.5	PASS
		VN	TN	2.18	0.001258	± 2.5	PASS
		VH	TN	4.32	0.002494	± 2.5	PASS
	HCH	VL	TN	2.88	0.001648	± 2.5	PASS
		VN	TN	3.25	0.001860	± 2.5	PASS
		VH	TN	4.72	0.002701	± 2.5	PASS
16QAM	LCH	VL	TN	0.4	0.000233	± 2.5	PASS
		VN	TN	-1.28	-0.000745	± 2.5	PASS
		VH	TN	3.02	0.001758	± 2.5	PASS
	MCH	VL	TN	-1.65	-0.000952	± 2.5	PASS
		VN	TN	1.99	0.001149	± 2.5	PASS
		VH	TN	0.67	0.000387	± 2.5	PASS
	HCH	VL	TN	4.97	0.002844	± 2.5	PASS
		VN	TN	0.43	0.000246	± 2.5	PASS
		VH	TN	0.86	0.000492	± 2.5	PASS
Temperature							
Modulation	Channel	Voltage [Vdc]	Temperature (℃)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
QPSK	LCH	VN	-30	1.55	0.000902	± 2.5	PASS
		VN	-20	4.14	0.002410	± 2.5	PASS
		VN	-10	0.76	0.000443	± 2.5	PASS
		VN	0	3.7	0.002154	± 2.5	PASS
		VN	10	1.25	0.000728	± 2.5	PASS
		VN	20	1.5	0.000873	± 2.5	PASS
		VN	30	1.09	0.000635	± 2.5	PASS
		VN	40	1.75	0.001019	± 2.5	PASS
		VN	50	2.14	0.001246	± 2.5	PASS
	MCH	VN	-30	-1.43	-0.000825	± 2.5	PASS
		VN	-20	-1.03	-0.000595	± 2.5	PASS
		VN	-10	-0.8	-0.000462	± 2.5	PASS
		VN	0	3.08	0.001778	± 2.5	PASS
		VN	10	-1.57	-0.000906	± 2.5	PASS
		VN	20	1.28	0.000739	± 2.5	PASS

		VN	30	3.94	0.002274	± 2.5	PASS
		VN	40	4.25	0.002453	± 2.5	PASS
		VN	50	1.38	0.000797	± 2.5	PASS
	HCH	VN	-30	4.54	0.002598	± 2.5	PASS
		VN	-20	1.54	0.000881	± 2.5	PASS
		VN	-10	4.15	0.002375	± 2.5	PASS
		VN	0	-0.29	-0.000166	± 2.5	PASS
		VN	10	-0.75	-0.000429	± 2.5	PASS
		VN	20	0.32	0.000183	± 2.5	PASS
		VN	30	0.51	0.000292	± 2.5	PASS
		VN	40	-0.04	-0.000023	± 2.5	PASS
		VN	50	0.68	0.000389	± 2.5	PASS
16QAM	LCH	VN	-30	1.54	0.000889	± 2.5	PASS
		VN	-20	0.82	0.000473	± 2.5	PASS
		VN	-10	0.25	0.000144	± 2.5	PASS
		VN	0	1.65	0.000952	± 2.5	PASS
		VN	10	-0.39	-0.000225	± 2.5	PASS
		VN	20	2.18	0.001258	± 2.5	PASS
		VN	30	2.93	0.001691	± 2.5	PASS
		VN	40	-1.71	-0.000987	± 2.5	PASS
		VN	50	-1.36	-0.000785	± 2.5	PASS
	MCH	VN	-30	3.1	0.001774	± 2.5	PASS
		VN	-20	0.45	0.000258	± 2.5	PASS
		VN	-10	-1.97	-0.001127	± 2.5	PASS
		VN	0	0.95	0.000544	± 2.5	PASS
		VN	10	3.73	0.002134	± 2.5	PASS
		VN	20	4.12	0.002358	± 2.5	PASS
		VN	30	-0.66	-0.000378	± 2.5	PASS
		VN	40	-0.08	-0.000046	± 2.5	PASS
		VN	50	4.19	0.002398	± 2.5	PASS
	HCH	VN	-30	3.06	0.001751	± 2.5	PASS
		VN	-20	4.4	0.002518	± 2.5	PASS
		VN	-10	1.53	0.000876	± 2.5	PASS
		VN	0	0.69	0.000395	± 2.5	PASS
		VN	10	-0.73	-0.000418	± 2.5	PASS
		VN	20	2.76	0.001579	± 2.5	PASS
		VN	30	0.84	0.000481	± 2.5	PASS
		VN	40	4.09	0.002340	± 2.5	PASS
		VN	50	-0.14	-0.000080	± 2.5	PASS