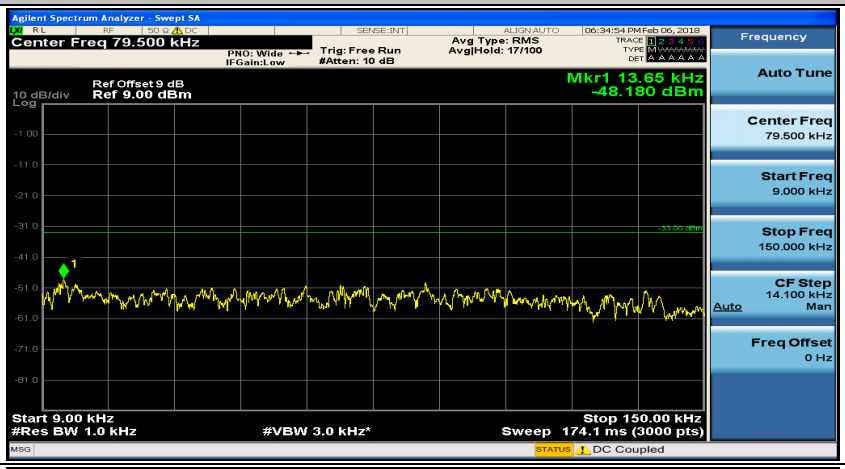
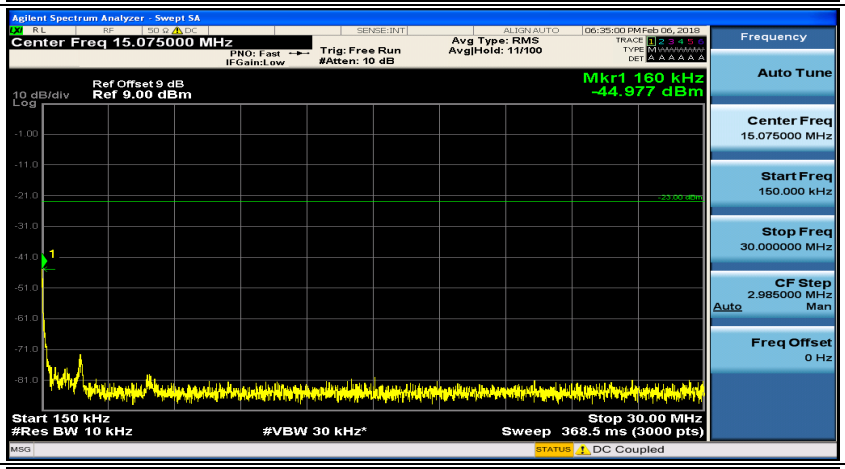
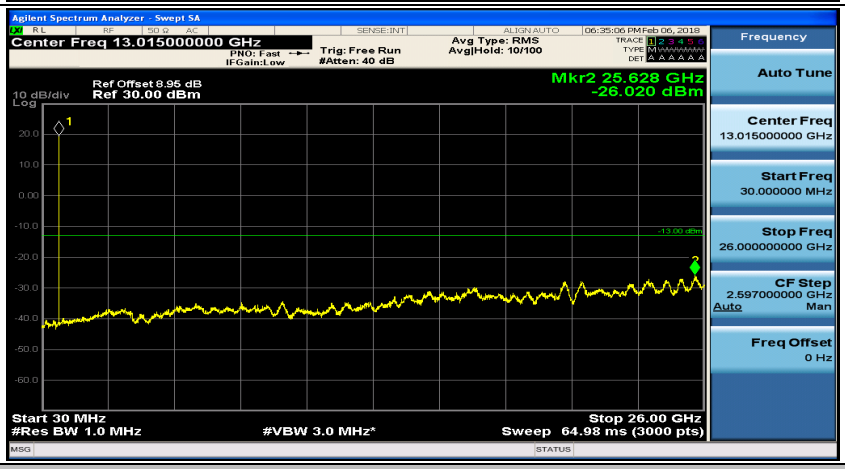
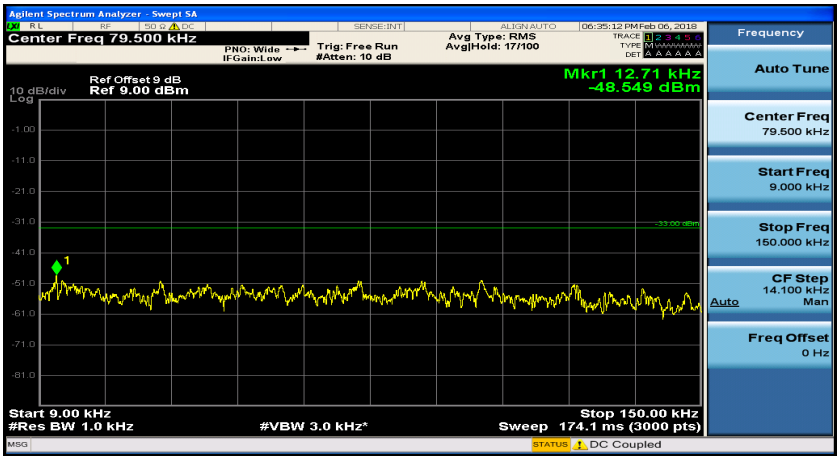
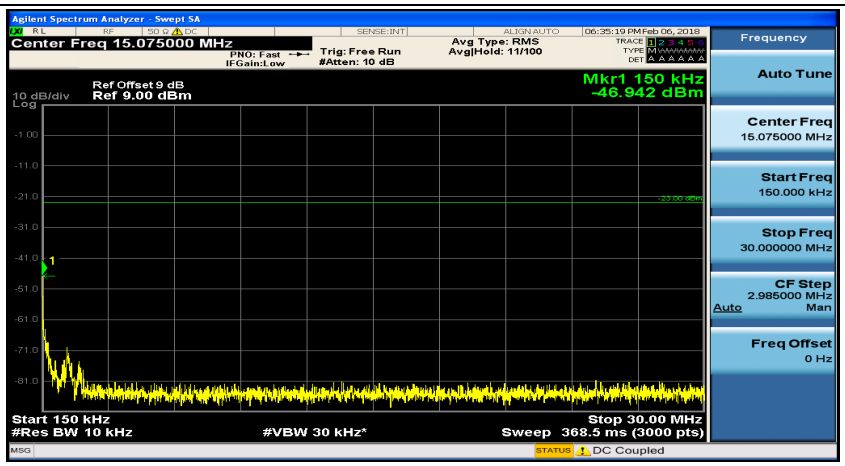
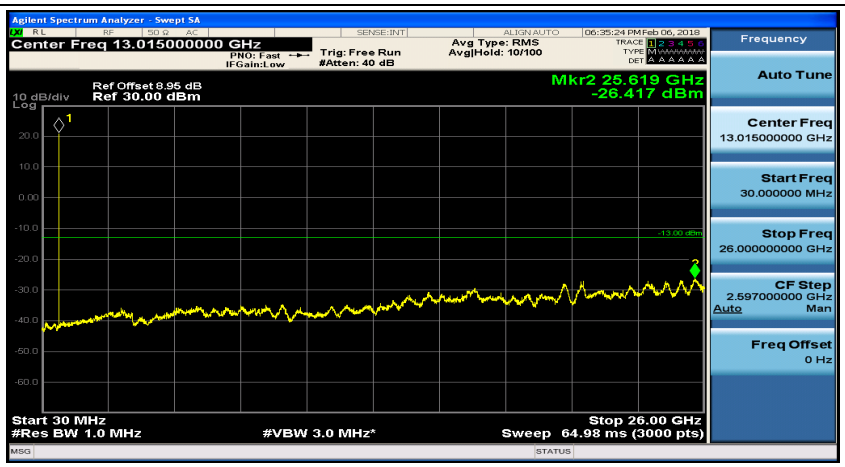
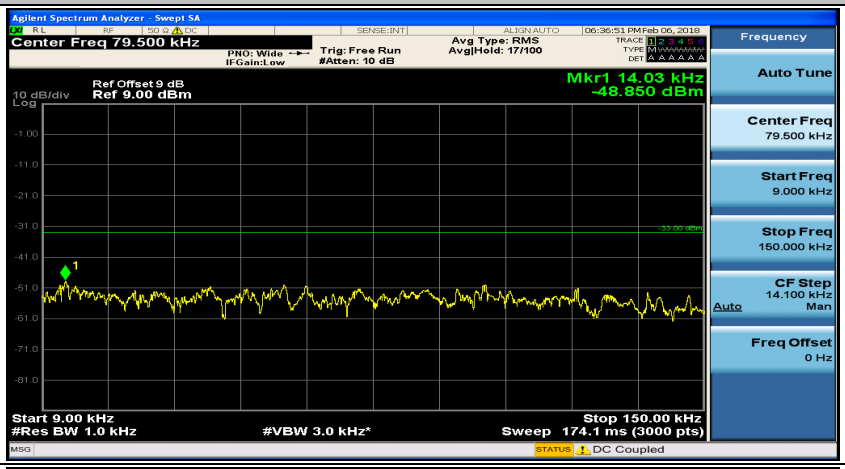
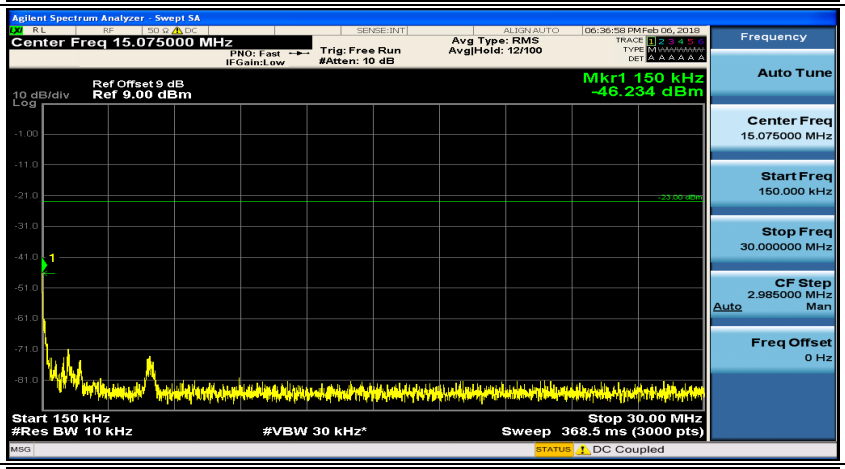
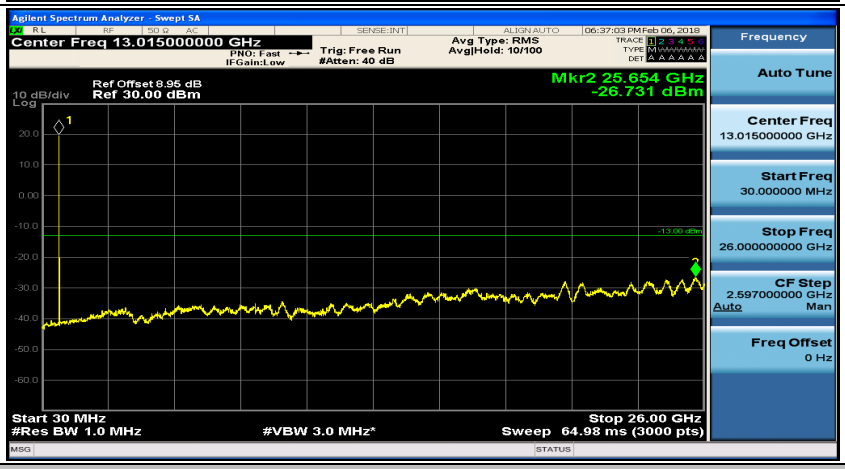
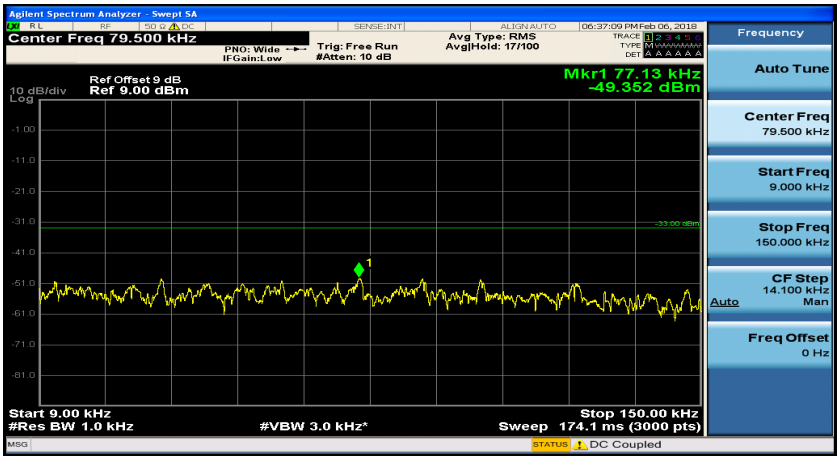
(Channel Bandwidth: 3 MHz)_LCH_16QAM_1RB#0



(Channel Bandwidth: 3 MHz)_LCH_16QAM_1RB#7

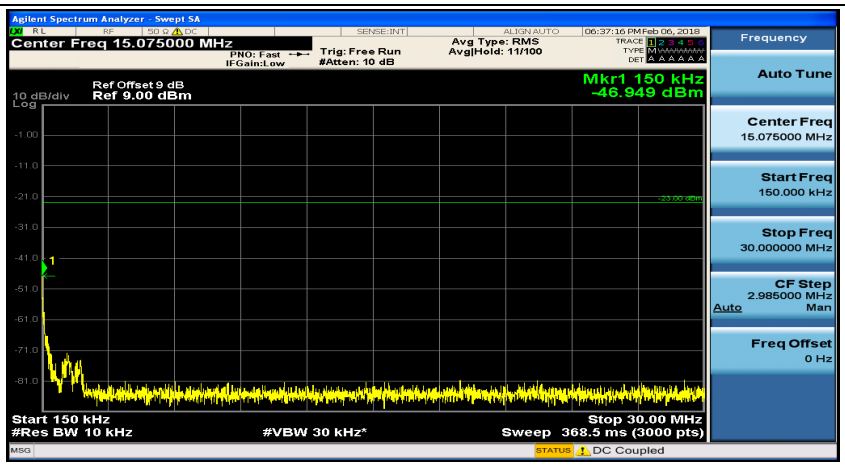

Agilent Spectrum Analyzer - Swept SA
Center Freq 79.500 kHz
PNO: Wide
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 17/100
06:35:12 PM Feb 06, 2018
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Mkr1 12.71 kHz
-48.549 dBm
Start 9.00 kHz
#Res BW 1.0 kHz
#VBW 3.0 kHz*
Stop 150.00 kHz
Sweep 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

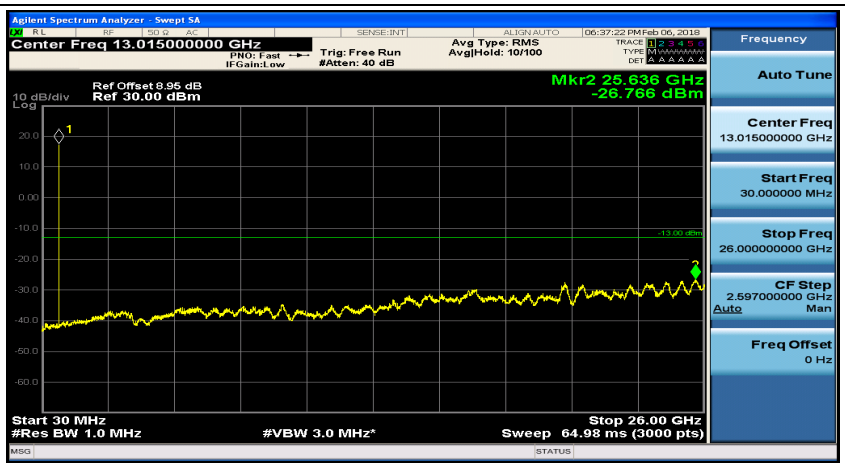

Agilent Spectrum Analyzer - Swept SA
Center Freq 15.075000 MHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 11/100
06:35:19 PM Feb 06, 2018
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Mkr1 150 kHz
-46.942 dBm
Start 150 kHz
#Res BW 10 kHz
#VBW 30 kHz*
Stop 30.00 MHz
Sweep 368.5 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
06:35:24 PM Feb 06, 2018
Ref Offset 8.95 dB
10 dB/div
Log
Ref 30.00 dBm
Mkr2 25.619 GHz
-26.417 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

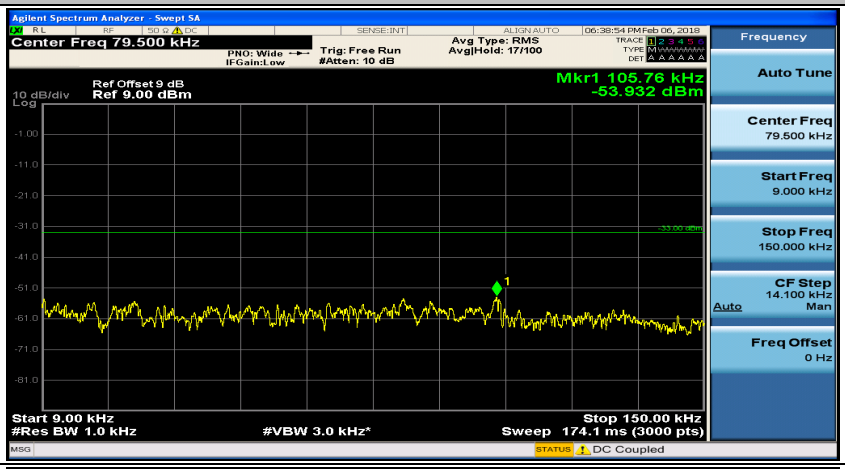
(Channel Bandwidth: 3 MHz)_MCH_16QAM_1RB#0



(Channel Bandwidth: 3 MHz)_MCH_16QAM_1RB#7

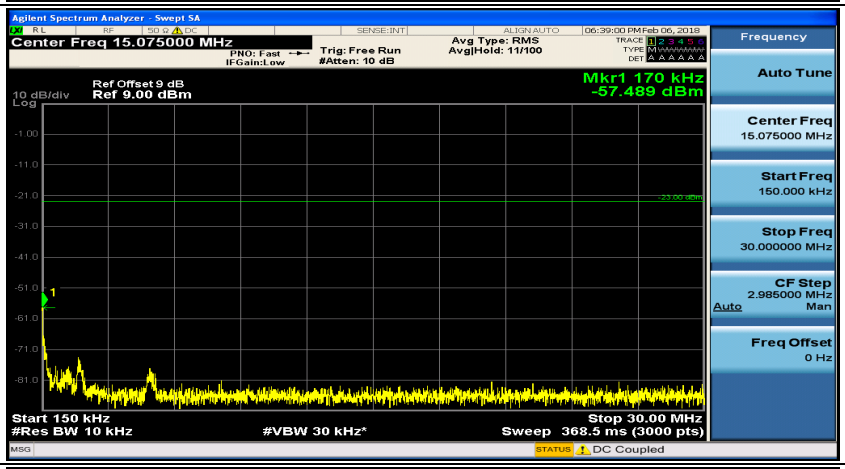

Agilent Spectrum Analyzer - Swept SA
Center Freq 79.500 kHz
PNO: Wide
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 17/100
06:37:09 PM Feb 06, 2018
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Mkr1 77.13 kHz
-49.352 dBm
Start 9.00 kHz
#Res BW 1.0 kHz
#VBW 3.0 kHz*
Stop 150.00 kHz
Sweep 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

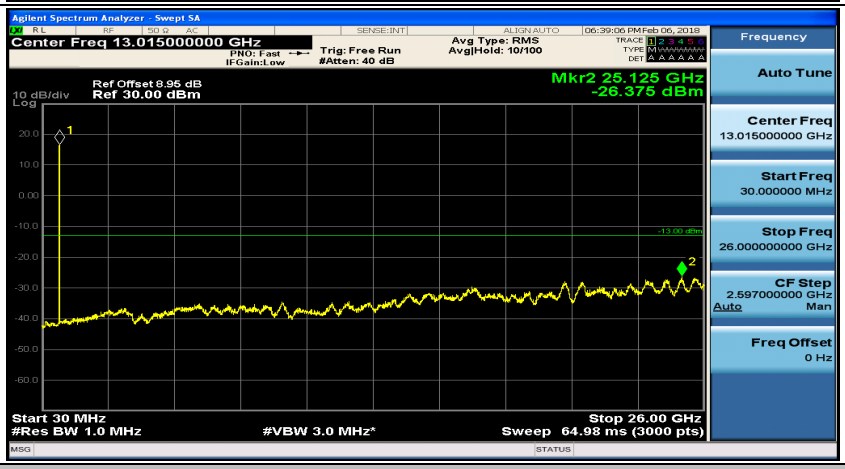

Agilent Spectrum Analyzer - Swept SA
Center Freq 15.075000 MHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 11/100
06:37:16 PM Feb 06, 2018
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Mkr1 150 kHz
-46.949 dBm
Start 150 kHz
#Res BW 10 kHz
#VBW 30 kHz*
Stop 30.00 MHz
Sweep 368.5 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
06:37:22 PM Feb 06, 2018
Ref Offset 8.95 dB
10 dB/div
Log
Ref 30.00 dBm
Mkr2 25.636 GHz
-26.766 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

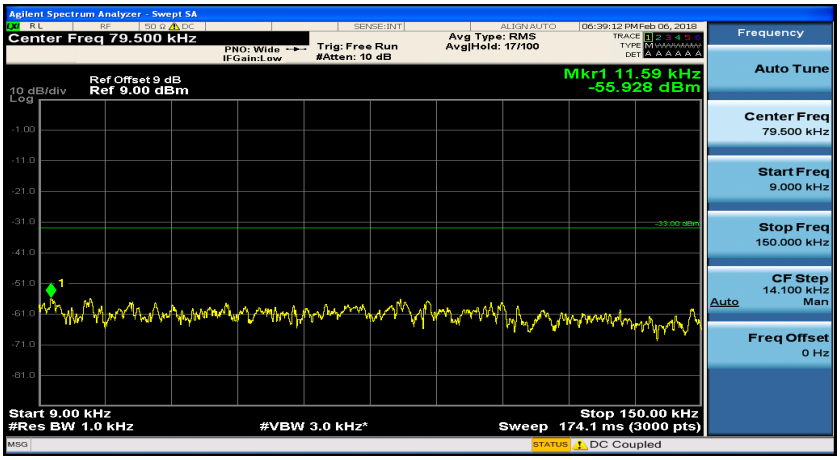
(Channel Bandwidth: 3 MHz)_HCH_16QAM_1RB#0

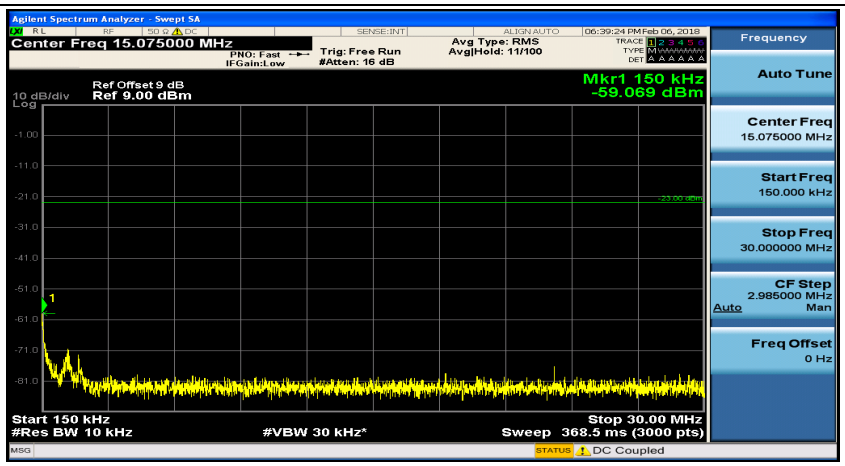


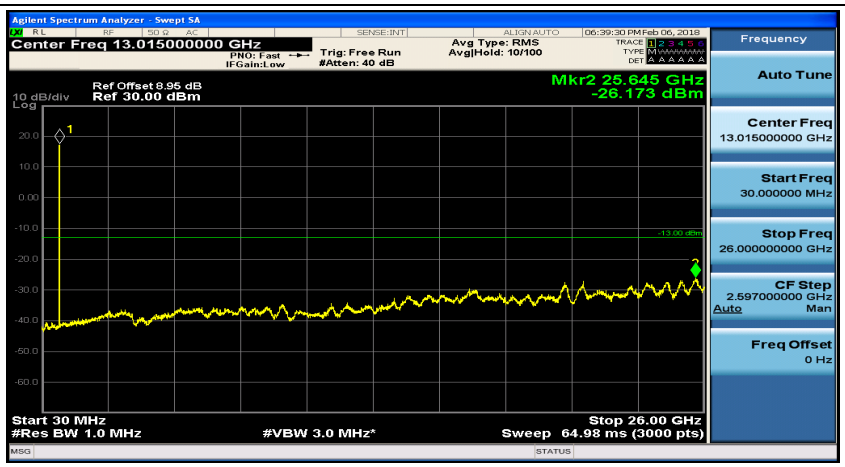




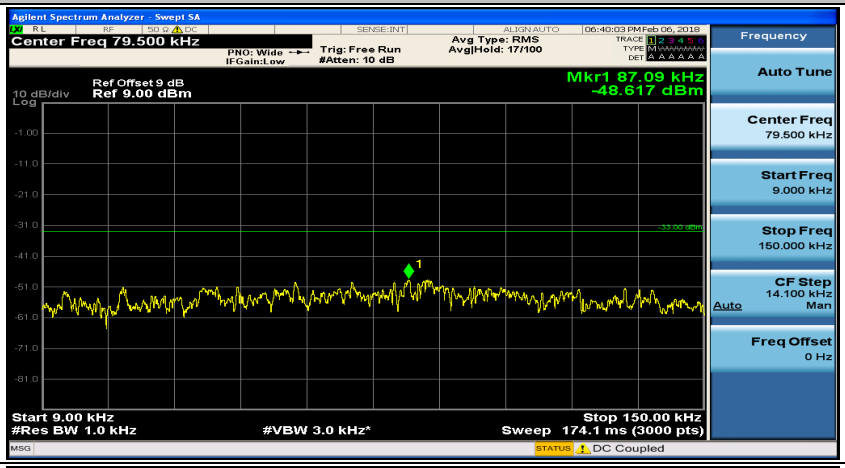
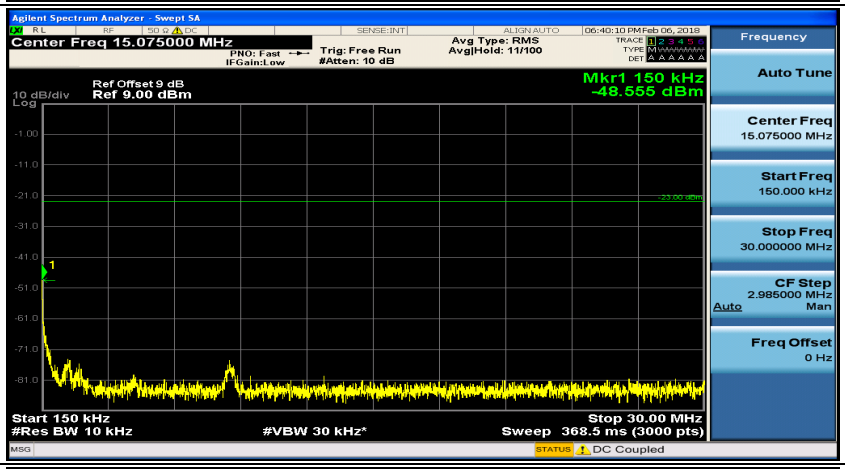
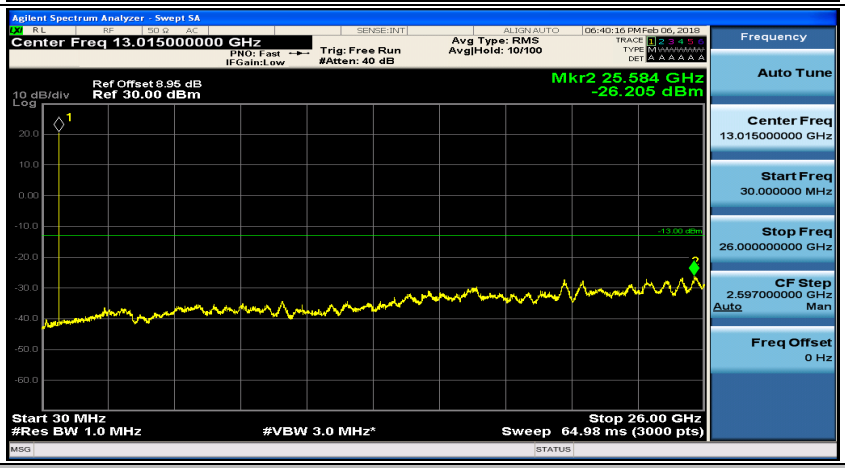
(Channel Bandwidth: 3 MHz)_HCH_16QAM_1RB#7

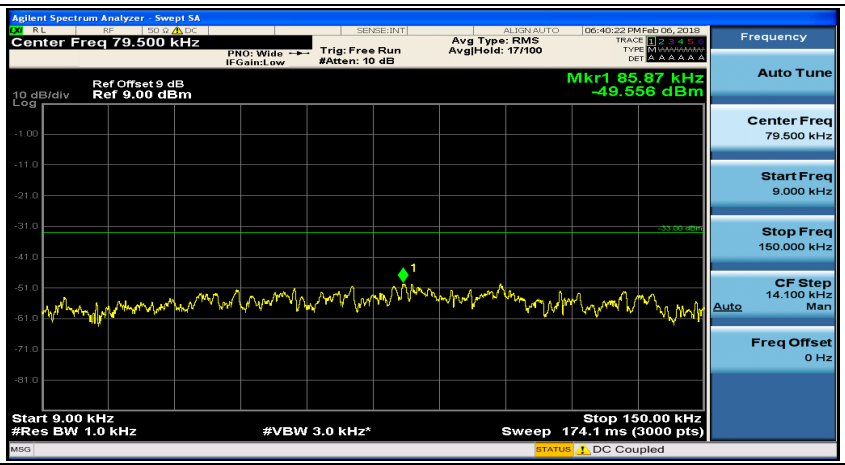

Agilent Spectrum Analyzer - Swept SA
Center Freq 79.500 kHz
PNO: Wide
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 17/100
06:39:12 PM Feb 06, 2018
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Mkr1 11.59 kHz
-55.928 dBm
Start 9.00 kHz
#Res BW 1.0 kHz
#VBW 3.0 kHz*
Stop 150.00 kHz
Sweep 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

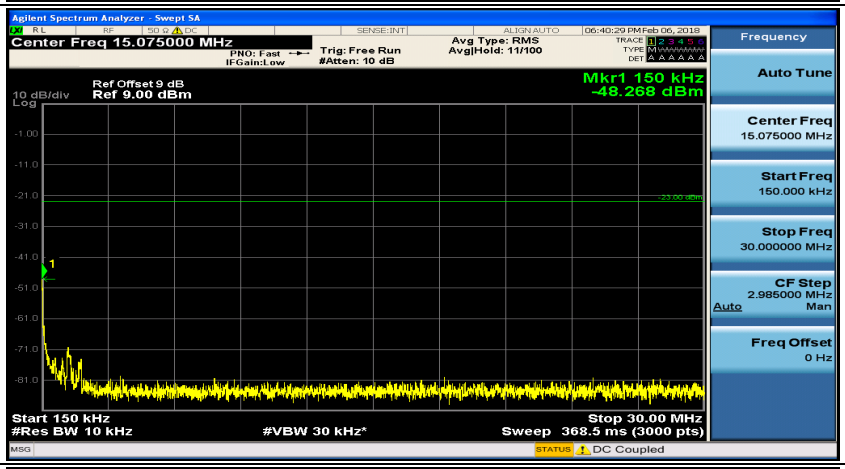

Agilent Spectrum Analyzer - Swept SA
Center Freq 15.075000 MHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 16 dB
Avg Type: RMS
Avg|Hold: 11/100
06:39:24 PM Feb 06, 2018
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Mkr1 150 kHz
-59.069 dBm
Start 150 kHz
#Res BW 10 kHz
#VBW 30 kHz*
Stop 30.00 MHz
Sweep 368.5 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

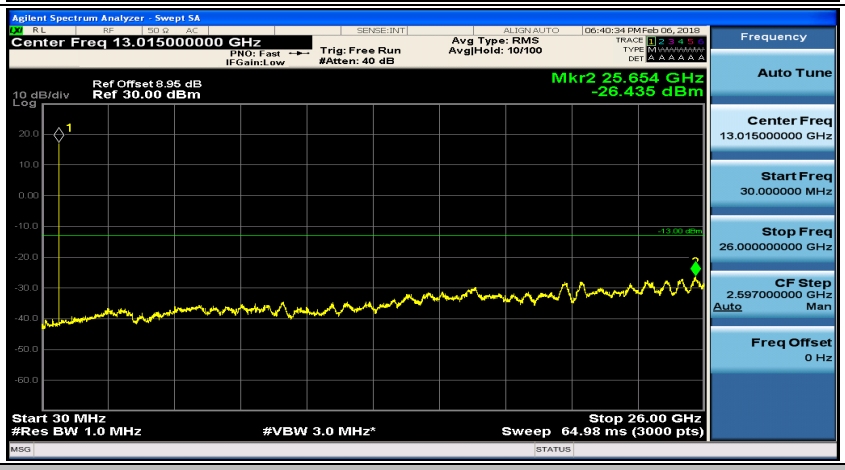

Agilent Spectrum Analyzer - Swept SA
Center Freq 13.015000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 40 dB
Avg Type: RMS
Avg|Hold: 10/100
06:39:30 PM Feb 06, 2018
Ref Offset 8.95 dB
10 dB/div
Log
Ref 30.00 dBm
Mkr2 25.645 GHz
-26.173 dBm
Start 30 MHz
#Res BW 1.0 MHz
#VBW 3.0 MHz*
Stop 26.00 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: 5 MHz

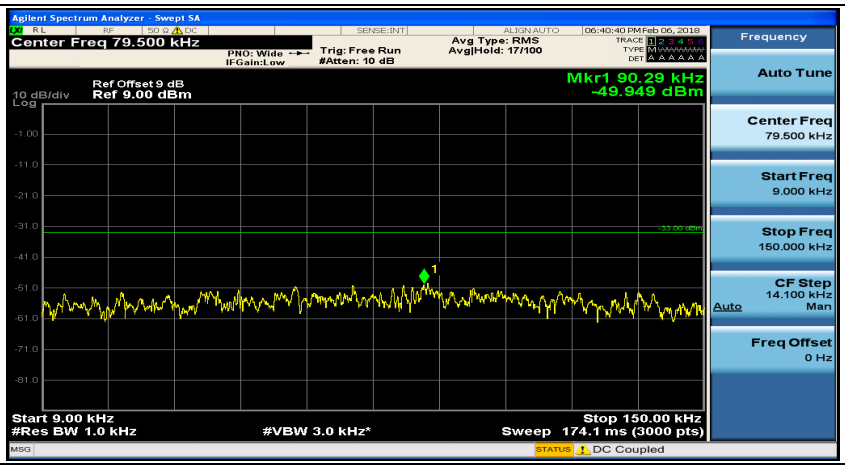
(Channel Bandwidth: 5 MHz)_LCH_QPSK_1RB#0



(Channel Bandwidth: 5 MHz)_LCH_QPSK_1RB#12

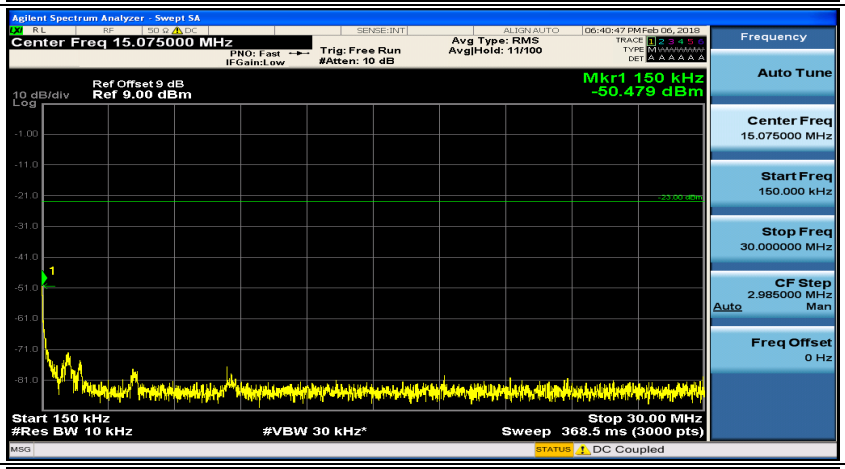


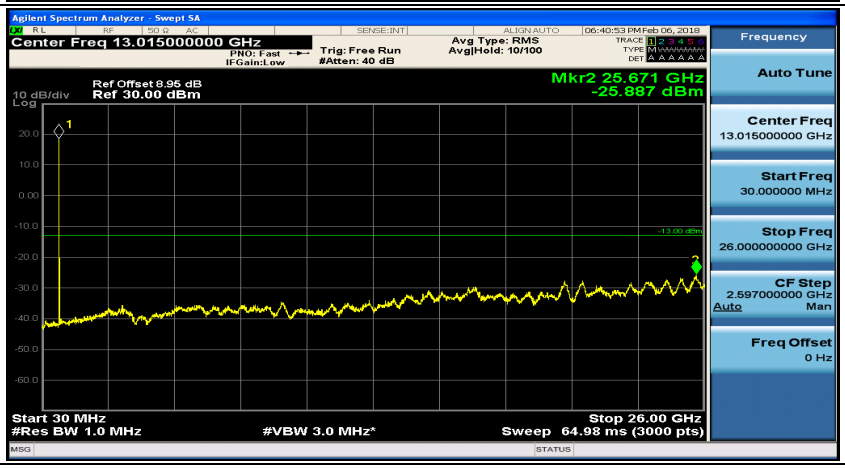


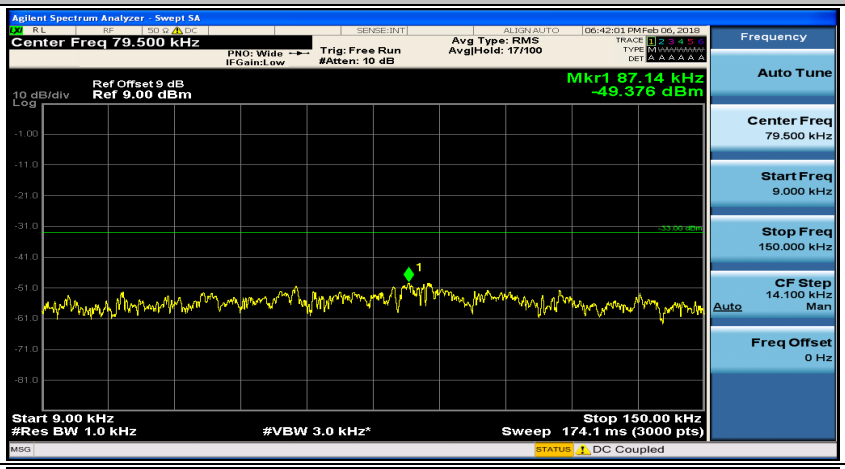
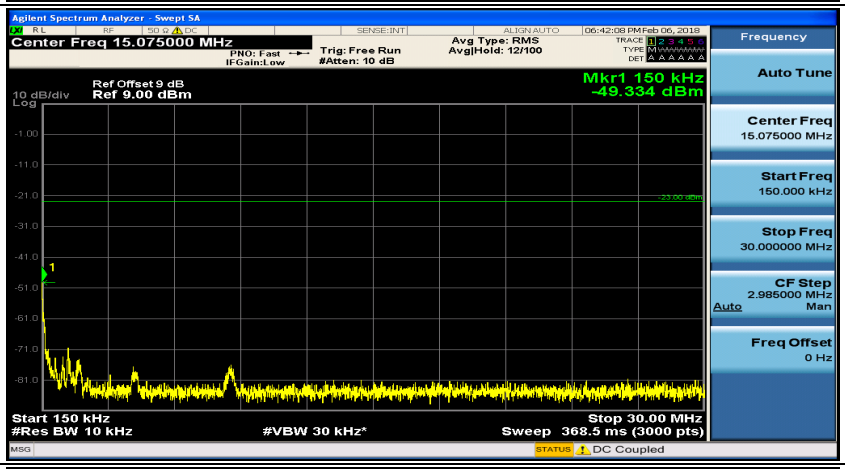
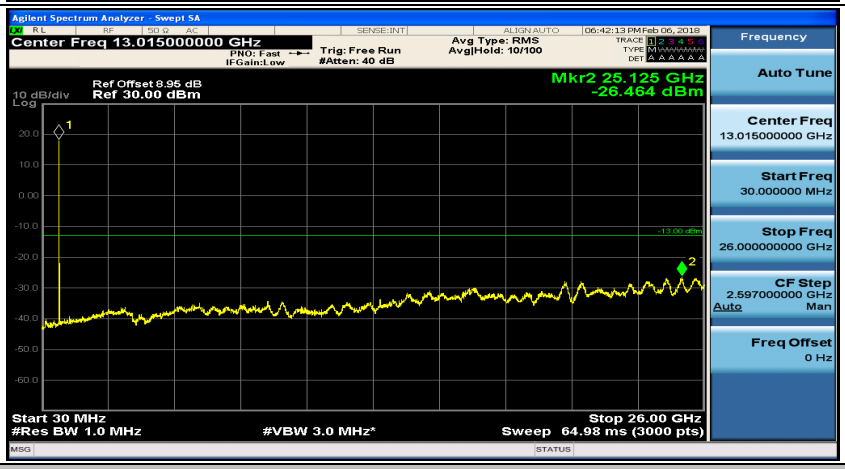


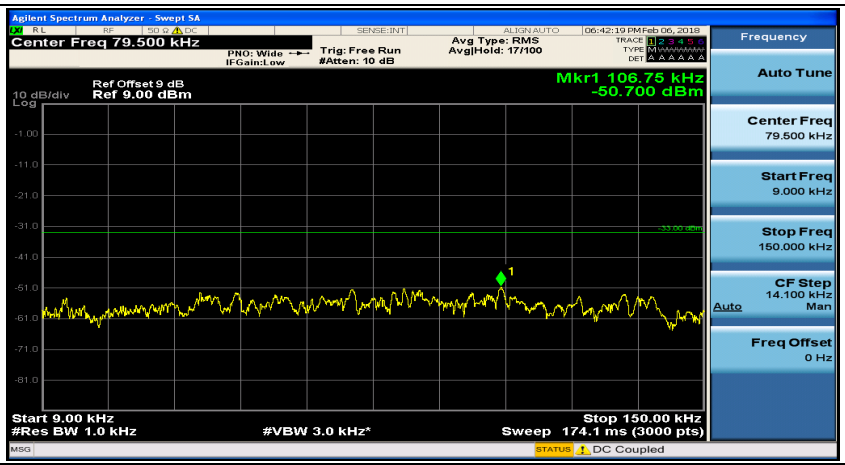
(Channel Bandwidth: 5 MHz)_LCH_QPSK_1RB#24

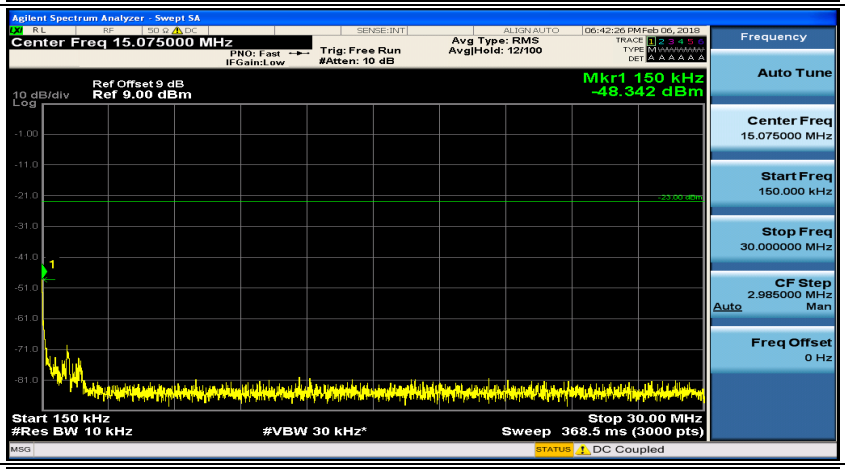

Agilent Spectrum Analyzer - Swept SA
Center Freq 79.500 kHz
PNO: Wide
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 17/100
06:40:40 PM Feb 06, 2018
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Mkr1 90.29 kHz
-49.949 dBm
Start 9.00 kHz
#Res BW 1.0 kHz
#VBW 3.0 kHz*
Stop 150.00 kHz
Sweep 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

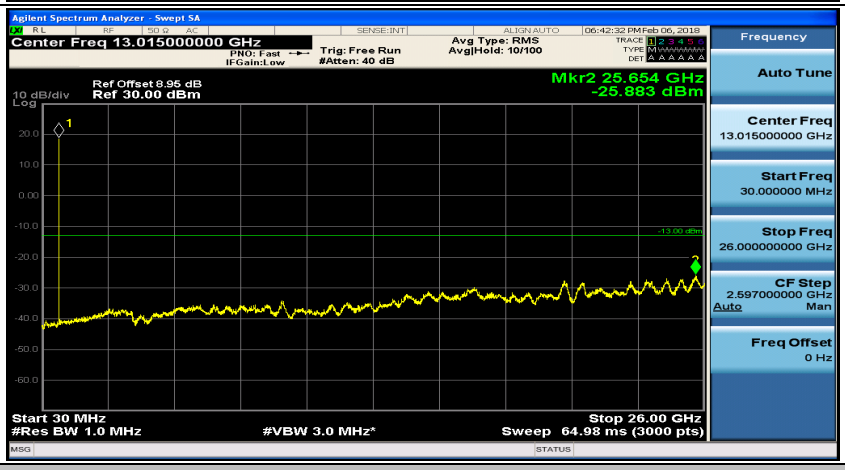

Agilent Spectrum Analyzer - Swept SA
Center Freq 15.075000 MHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 11/100
06:40:47 PM Feb 06, 2018
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Mkr1 150 kHz
-50.479 dBm
Start 150 kHz
#Res BW 10 kHz
#VBW 30 kHz*
Stop 30.00 MHz
Sweep 368.5 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
06:40:53 PM Feb 06, 2018
Ref Offset 8.95 dB
10 dB/div
Log
Ref 30.00 dBm
Mkr2 25.671 GHz
-25.887 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

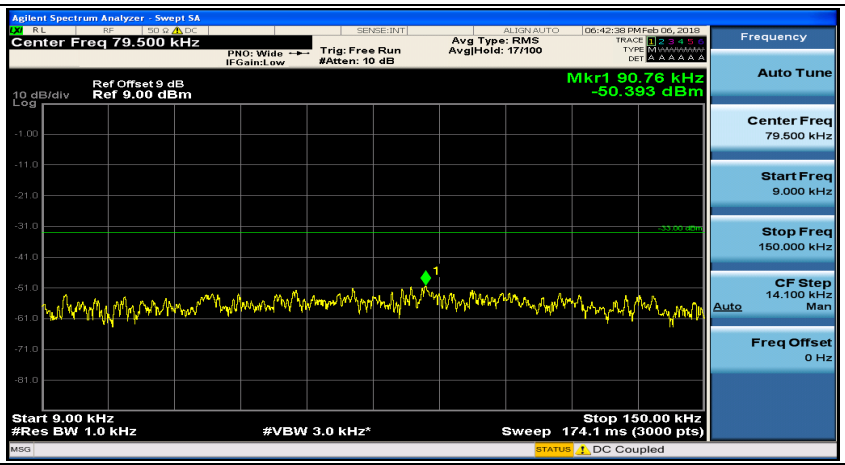
(Channel Bandwidth: 5 MHz)_MCH_QPSK_1RB#0



(Channel Bandwidth: 5 MHz)_MCH_QPSK_1RB#12

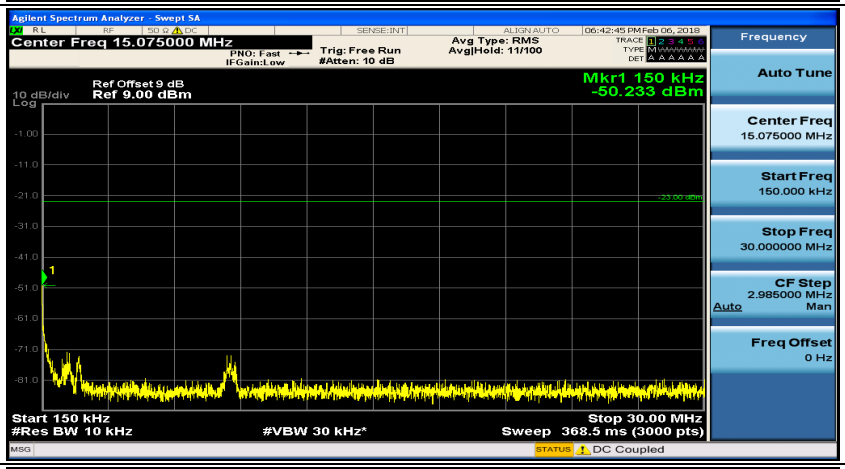


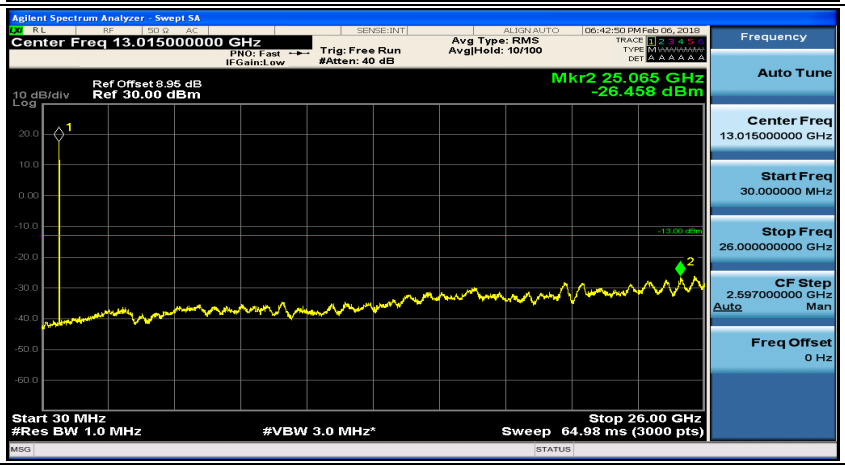


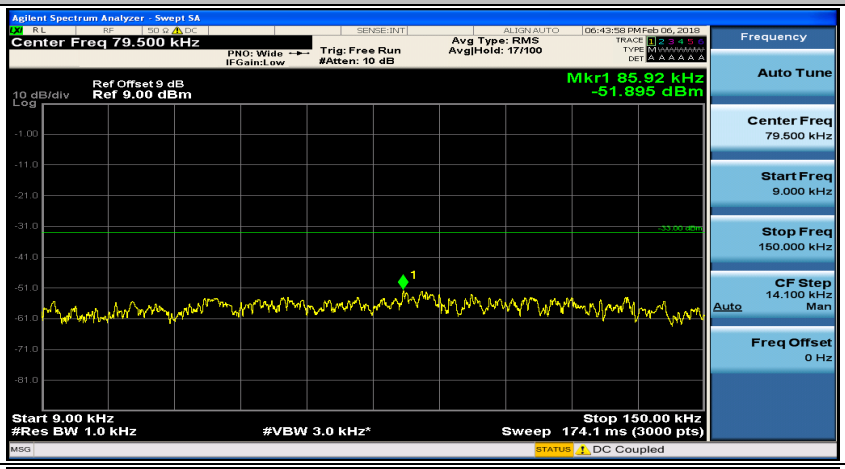
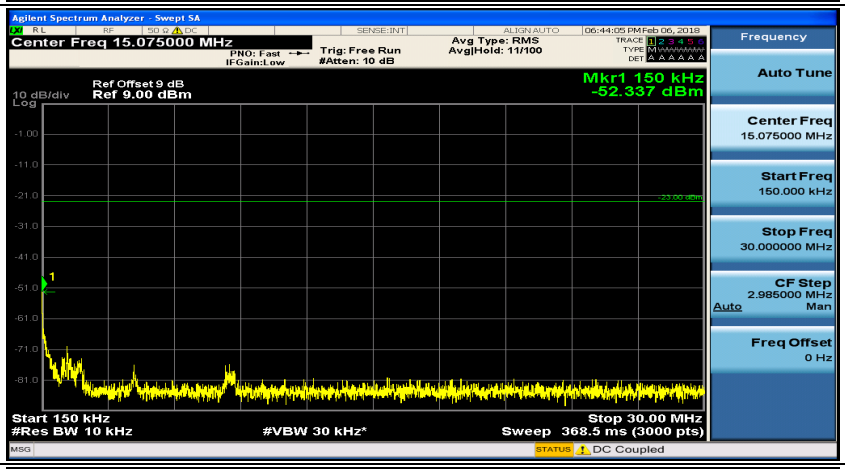
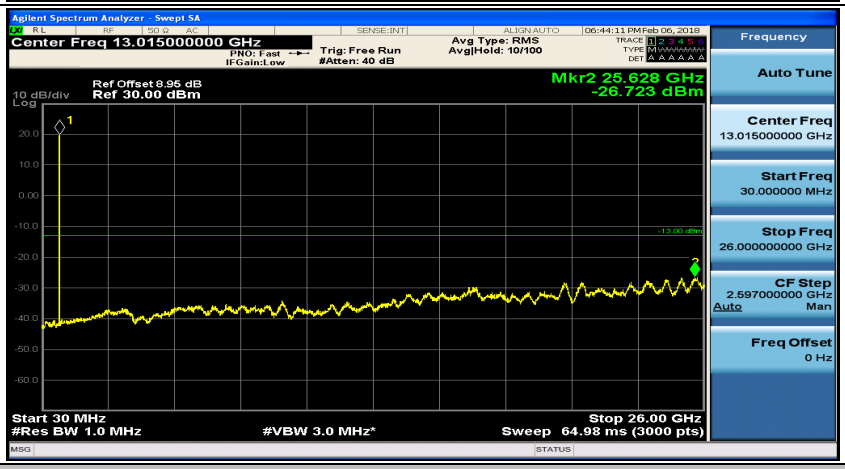


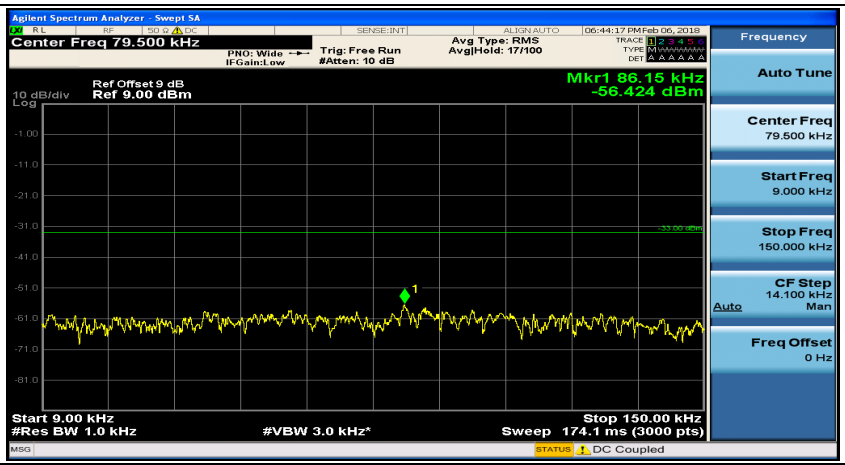
(Channel Bandwidth: 5 MHz)_MCH_QPSK_1RB#24

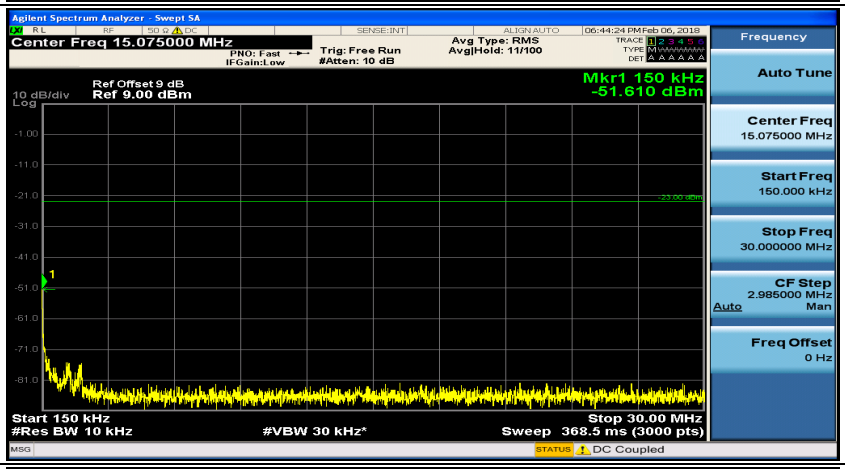

Agilent Spectrum Analyzer - Swept SA
Center Freq 79.500 kHz
PNO: Wide
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 17/100
06:42:38 PM Feb 06, 2018
Ref Offset 9 dB
10 dB/div
Ref 9.00 dBm
Mkr1 90.76 kHz
-50.393 dBm
Start 9.00 kHz
#Res BW 1.0 kHz
#VBW 3.0 kHz*
Stop 150.00 kHz
Sweep 174.1 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

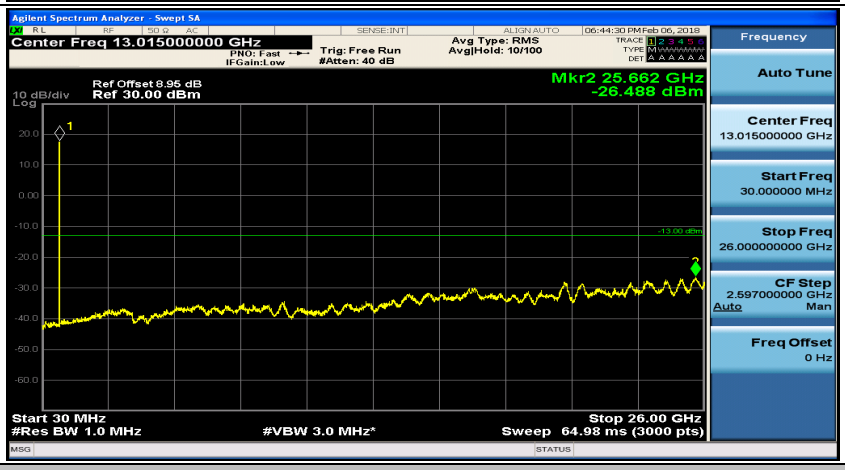

Agilent Spectrum Analyzer - Swept SA
Center Freq 15.075000 MHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 11/100
06:42:45 PM Feb 06, 2018
Ref Offset 9 dB
10 dB/div
Ref 9.00 dBm
Mkr1 150 kHz
-50.233 dBm
Start 150 kHz
#Res BW 10 kHz
#VBW 30 kHz*
Stop 30.00 MHz
Sweep 368.5 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
06:42:50 PM Feb 06, 2018
Ref Offset 8.95 dB
10 dB/div
Ref 30.00 dBm
Mkr2 25.065 GHz
-26.458 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

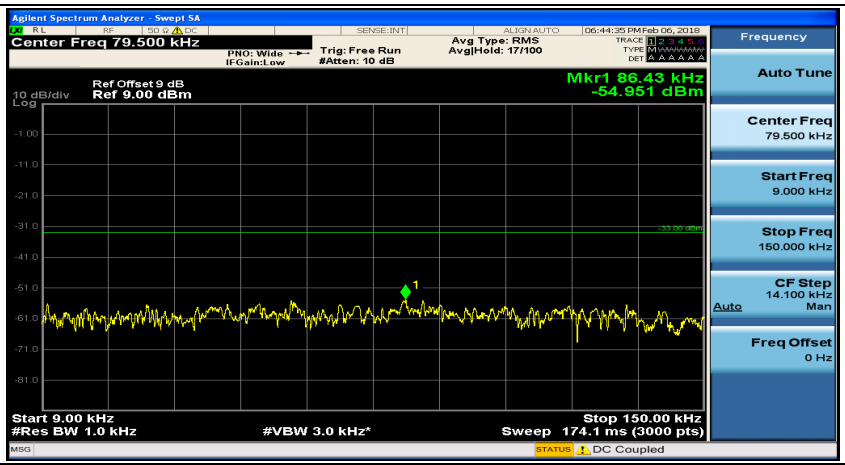
(Channel Bandwidth: 5 MHz)_HCH_QPSK_1RB#0



(Channel Bandwidth: 5 MHz)_HCH_QPSK_1RB#12

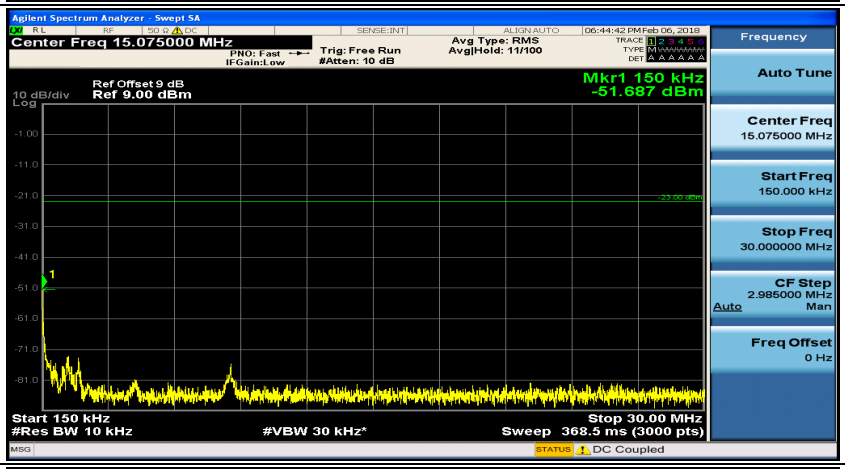


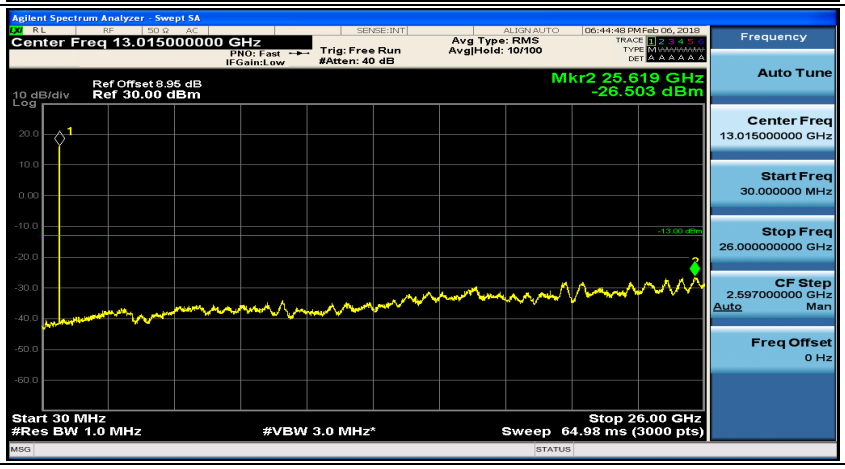


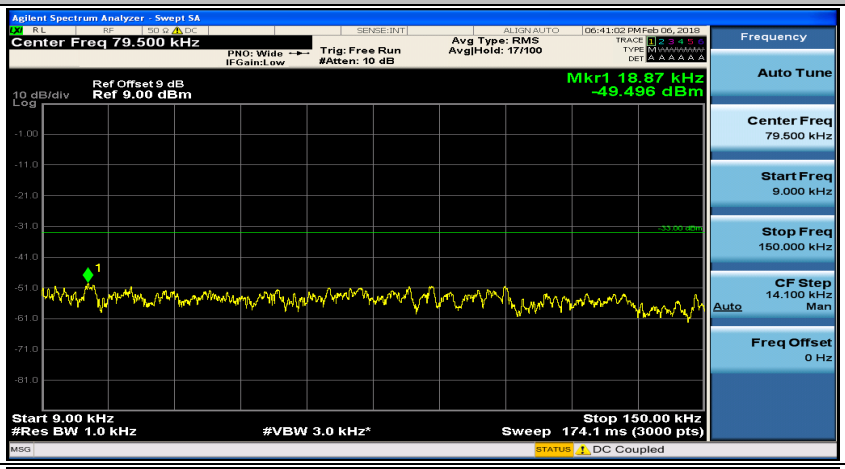
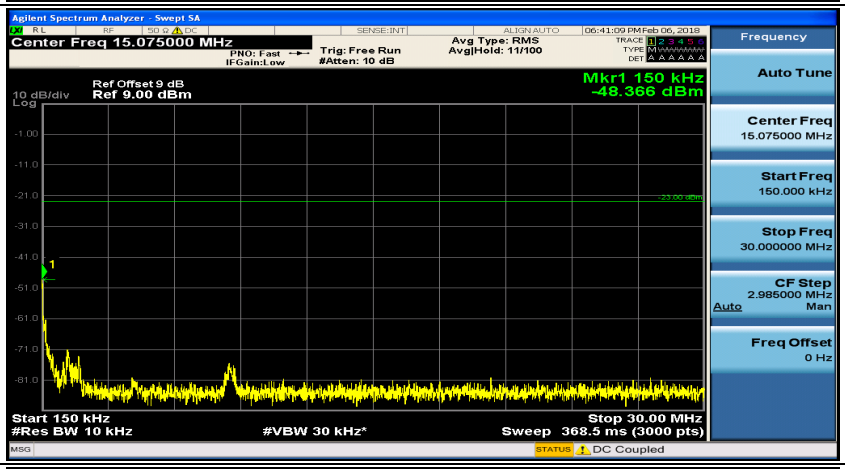
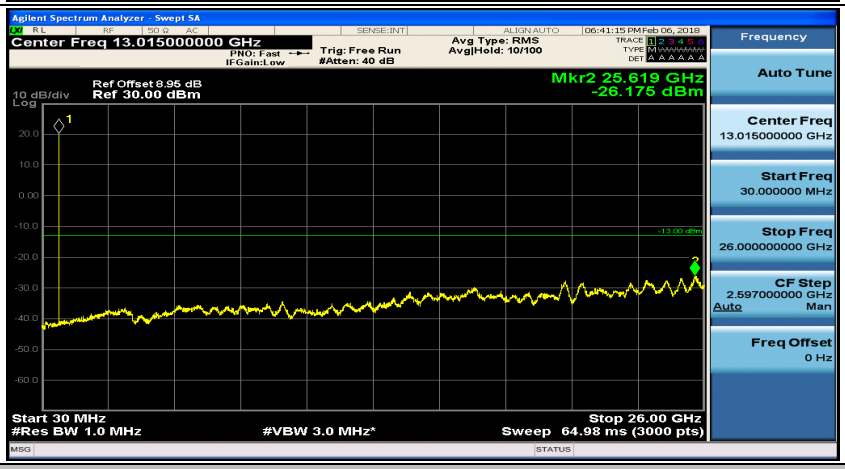


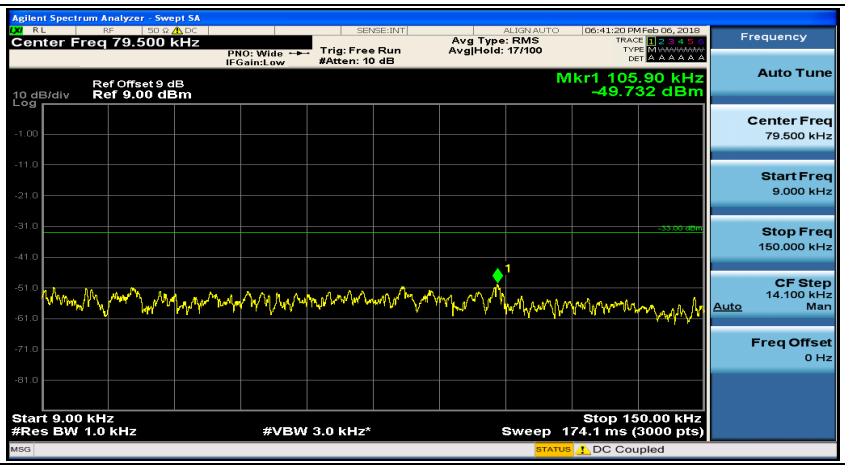
(Channel Bandwidth: 5 MHz)_HCH_QPSK_1RB#24

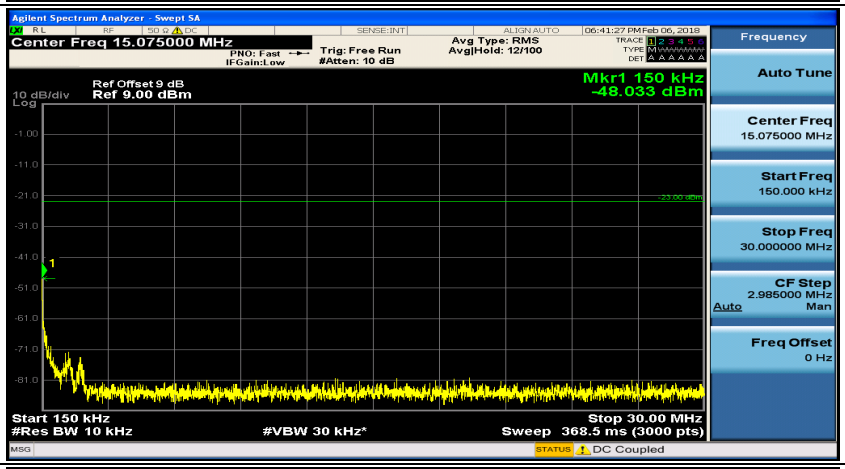

Agilent Spectrum Analyzer - Swept SA
Center Freq 79.500 kHz
PNO: Wide
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 17/100
06:44:35 PM Feb 06, 2018
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Mkr1 86.43 kHz
-54.951 dBm
Start 9.00 kHz
#Res BW 1.0 kHz
#VBW 3.0 kHz*
Stop 150.00 kHz
Sweep 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

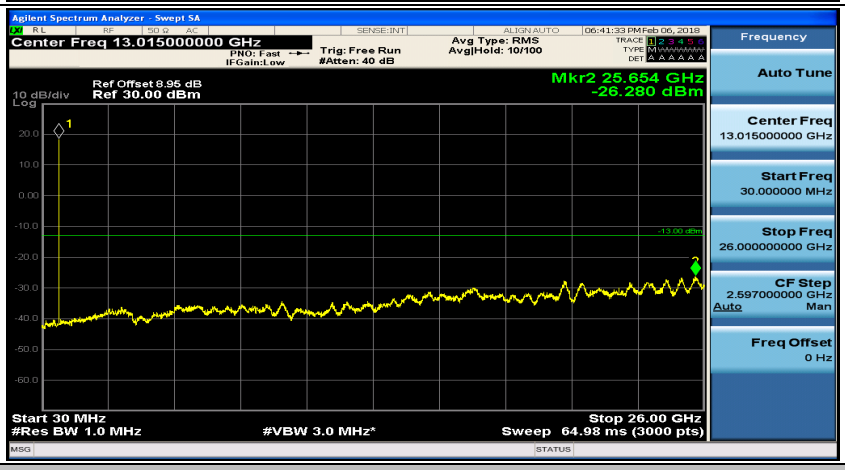

Agilent Spectrum Analyzer - Swept SA
Center Freq 15.075000 MHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 11/100
06:44:42 PM Feb 06, 2018
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Mkr1 150 kHz
-51.687 dBm
Start 150 kHz
#Res BW 10 kHz
#VBW 30 kHz*
Stop 30.00 MHz
Sweep 368.5 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
06:44:48 PM Feb 06, 2018
Ref Offset 8.95 dB
10 dB/div
Log
Ref 30.00 dBm
Mkr2 25.619 GHz
-26.503 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

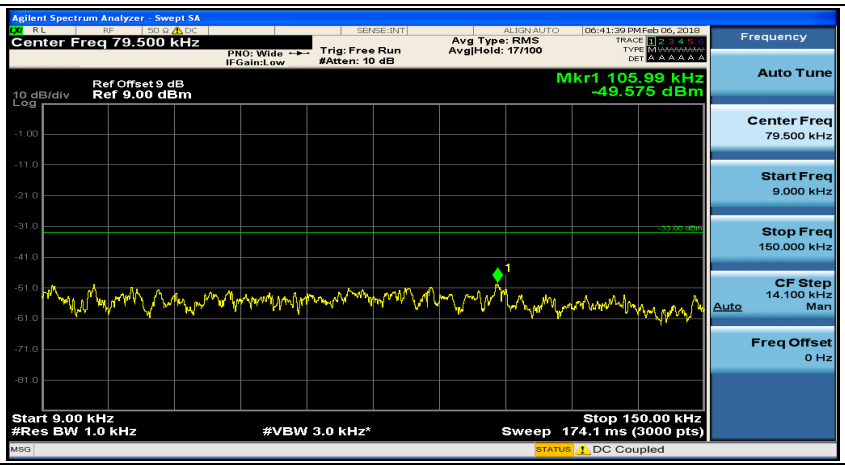
(Channel Bandwidth: 5 MHz)_LCH_16QAM_1RB#0



(Channel Bandwidth: 5 MHz)_LCH_16QAM_1RB#12

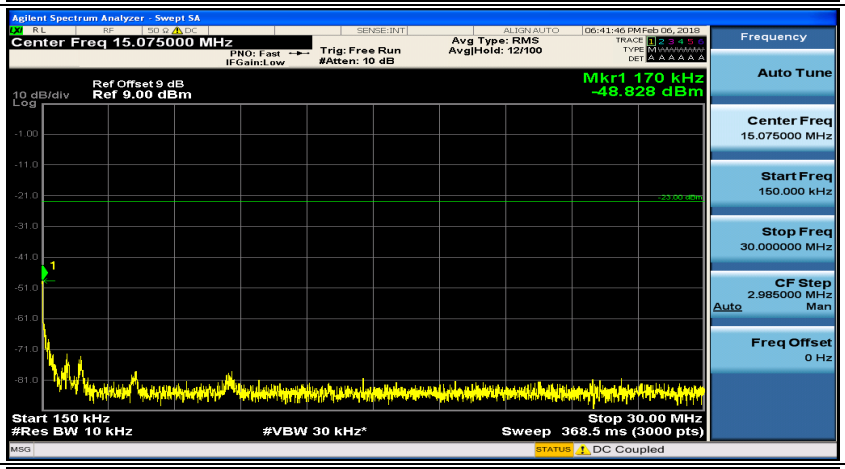


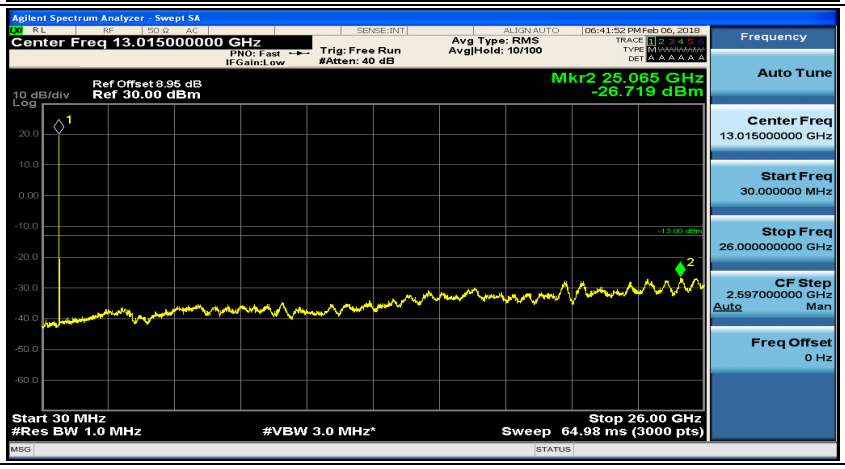


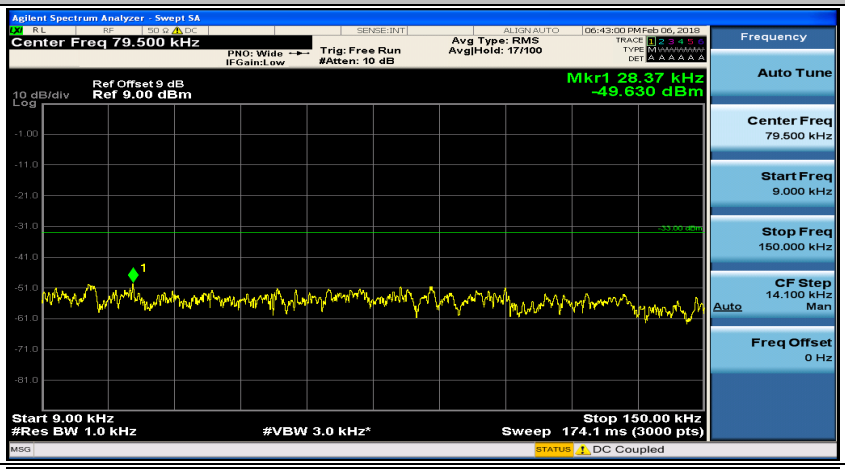
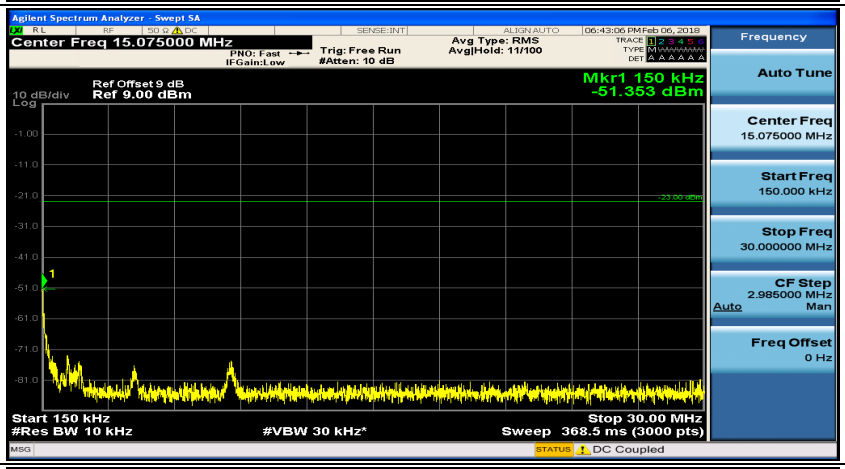
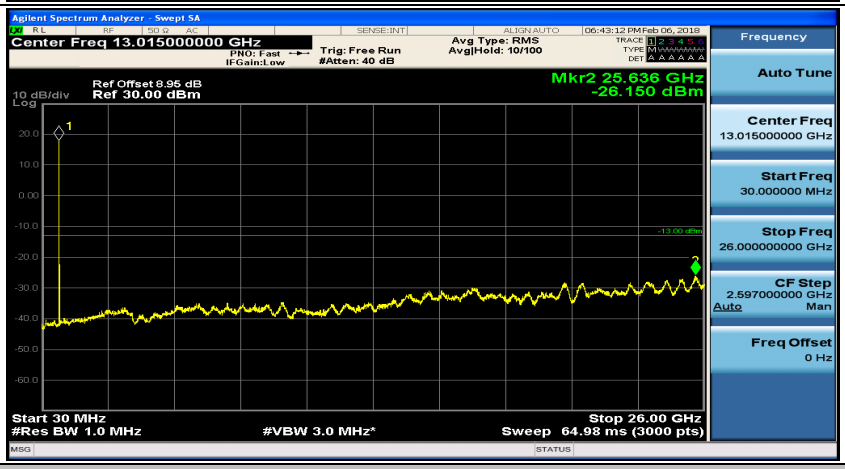


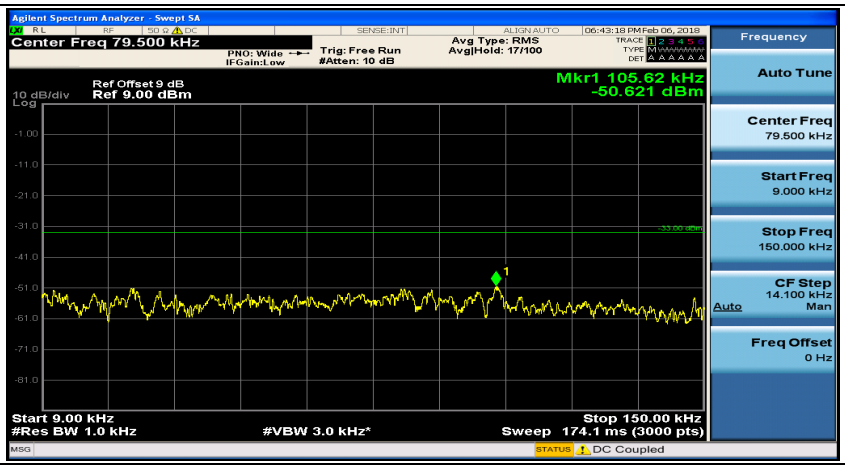
(Channel Bandwidth: 5 MHz)_LCH_16QAM_1RB#24

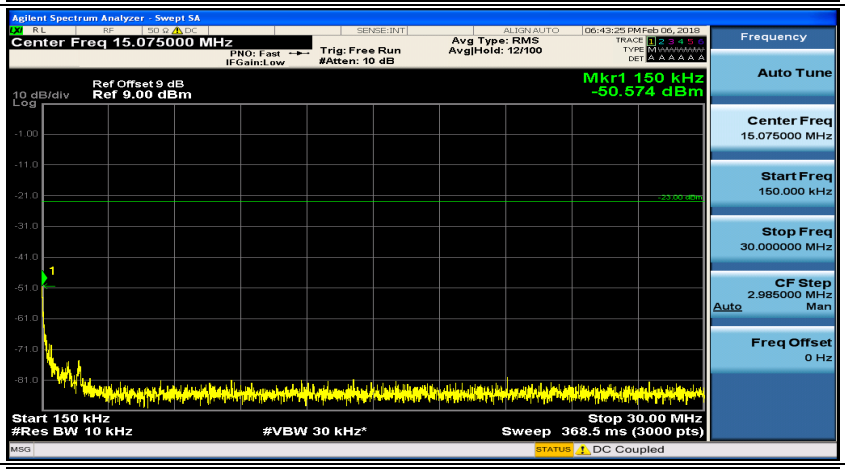

Agilent Spectrum Analyzer - Swept SA
Center Freq 79.500 kHz
PNO: Wide
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 17/100
06:41:39 PM Feb 06, 2018
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Mkr1 105.99 kHz
-49.575 dBm
Start 9.00 kHz
#Res BW 1.0 kHz
#VBW 3.0 kHz*
Stop 150.00 kHz
Sweep 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

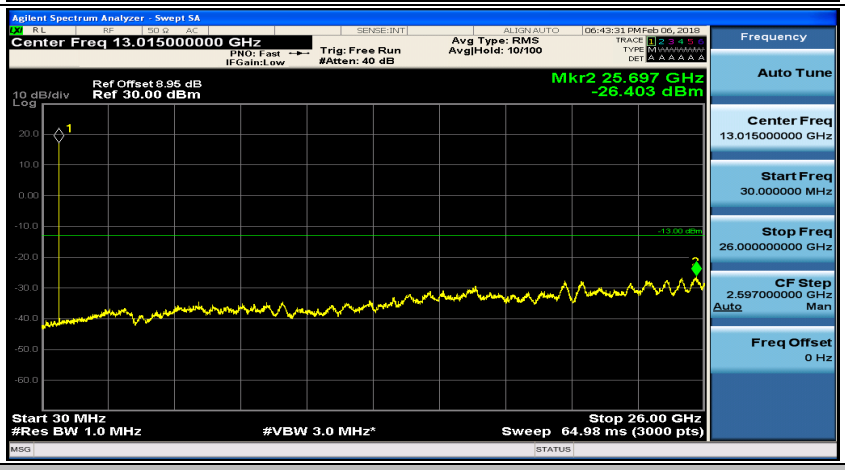

Agilent Spectrum Analyzer - Swept SA
Center Freq 15.075000 MHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 12/100
06:41:46 PM Feb 06, 2018
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Mkr1 170 kHz
-48.828 dBm
Start 150 kHz
#Res BW 10 kHz
#VBW 30 kHz*
Stop 30.00 MHz
Sweep 368.5 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
06:41:52 PM Feb 06, 2018
Ref Offset 8.95 dB
10 dB/div
Log
Ref 30.00 dBm
Mkr2 25.065 GHz
-26.719 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

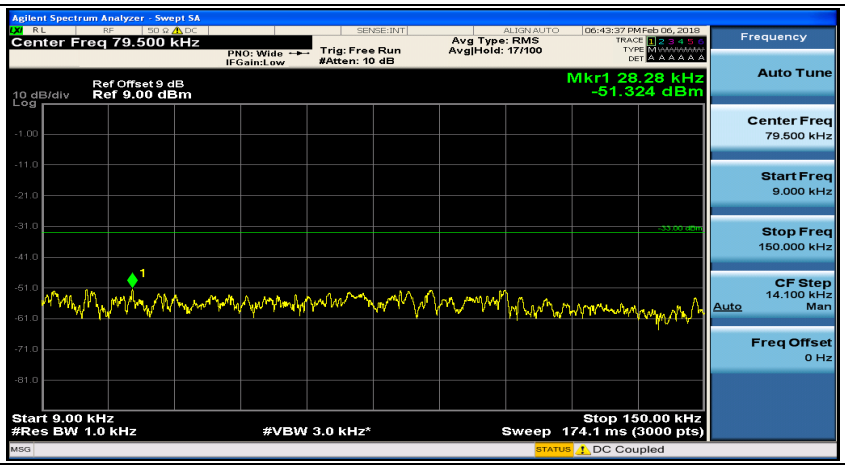
(Channel Bandwidth: 5 MHz)_MCH_16QAM_1RB#0



(Channel Bandwidth: 5 MHz)_MCH_16QAM_1RB#12

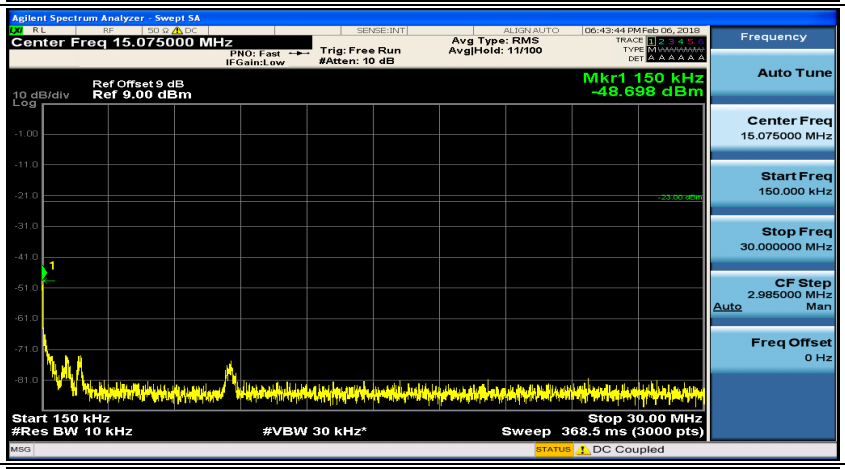


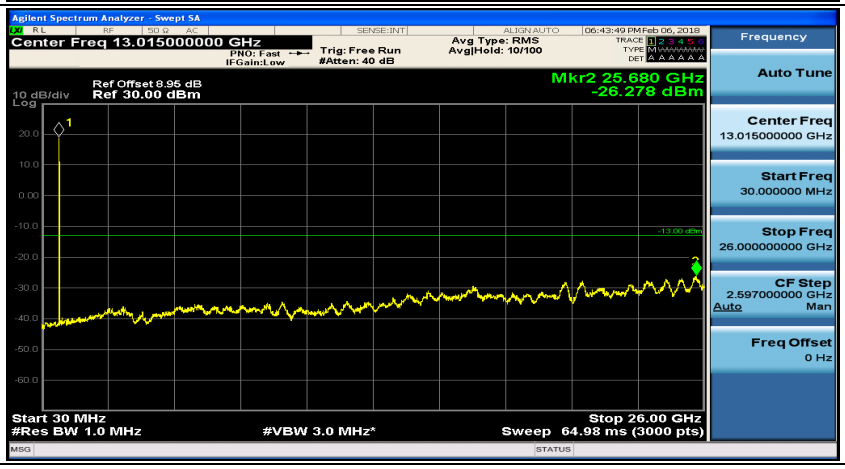




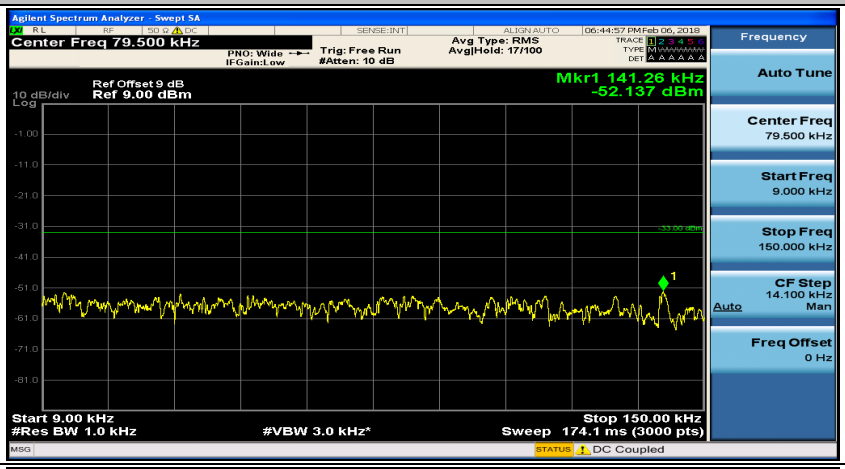
(Channel Bandwidth: 5 MHz)_MCH_16QAM_1RB#24

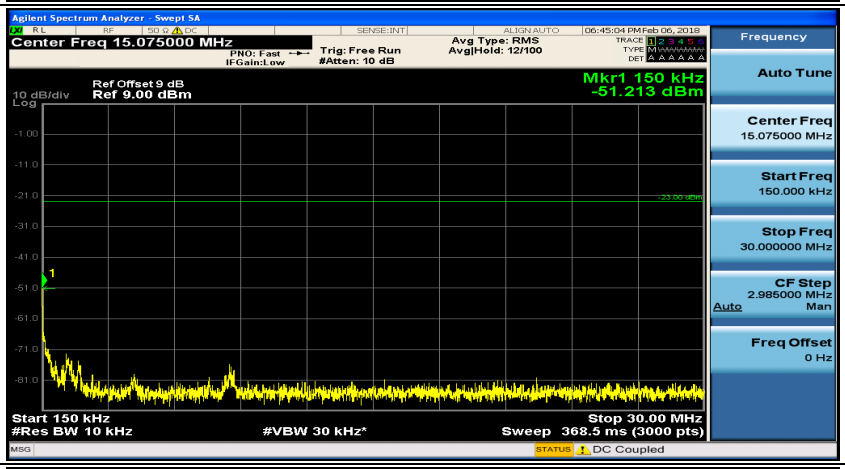

Agilent Spectrum Analyzer - Swept SA
Center Freq 79.500 kHz
PNO: Wide
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 17/100
06:43:37 PM Feb 06, 2018
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Mkr1 28.28 kHz
-51.324 dBm
Start 9.00 kHz
#Res BW 1.0 kHz
#VBW 3.0 kHz*
Stop 150.00 kHz
Sweep 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

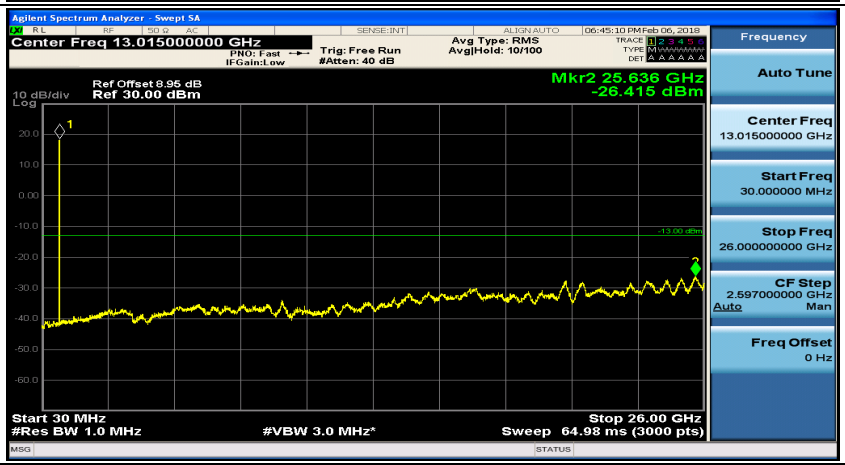

Agilent Spectrum Analyzer - Swept SA
Center Freq 15.075000 MHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 11/100
06:43:44 PM Feb 06, 2018
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Mkr1 150 kHz
-48.698 dBm
Start 150 kHz
#Res BW 10 kHz
#VBW 30 kHz*
Stop 30.00 MHz
Sweep 368.5 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
06:43:49 PM Feb 06, 2018
Ref Offset 8.95 dB
10 dB/div
Log
Ref 30.00 dBm
Mkr2 25.680 GHz
-26.278 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

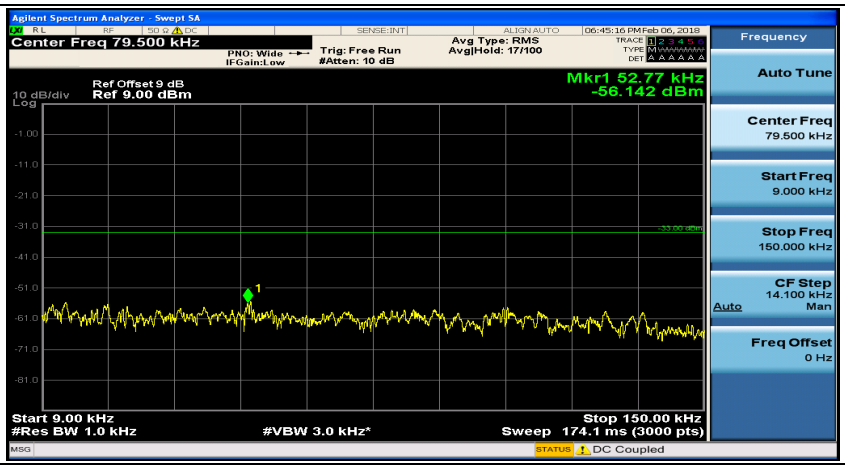
(Channel Bandwidth: 5 MHz)_HCH_16QAM_1RB#0

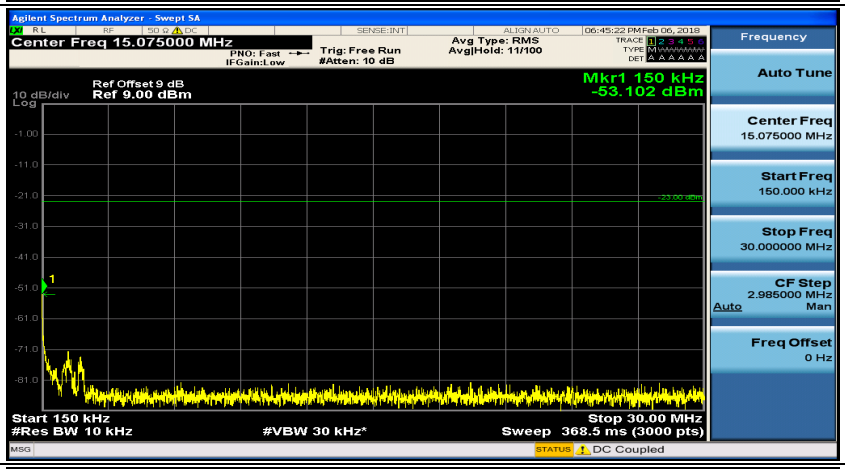


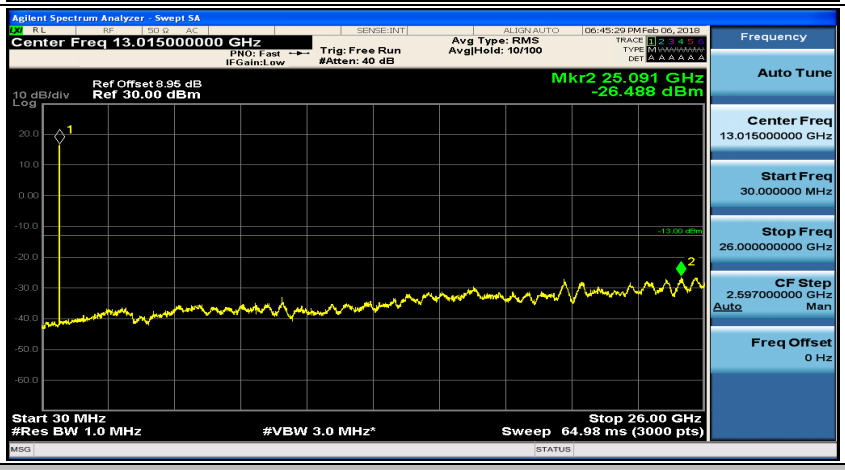




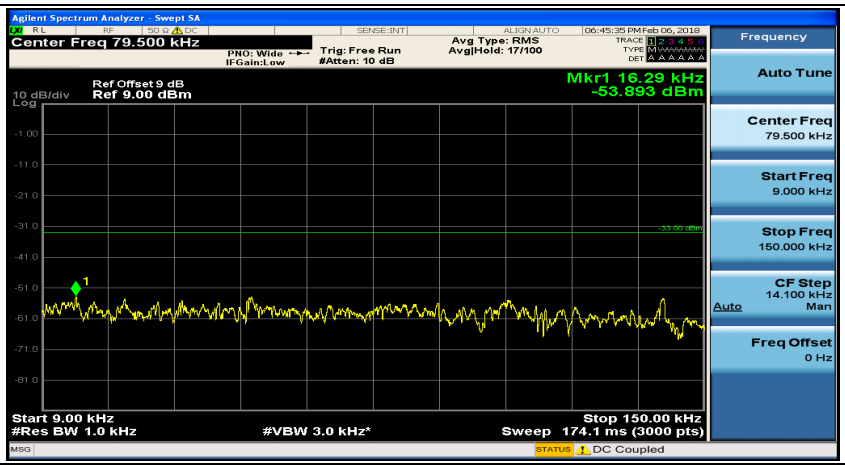
(Channel Bandwidth: 5 MHz)_HCH_16QAM_1RB#12

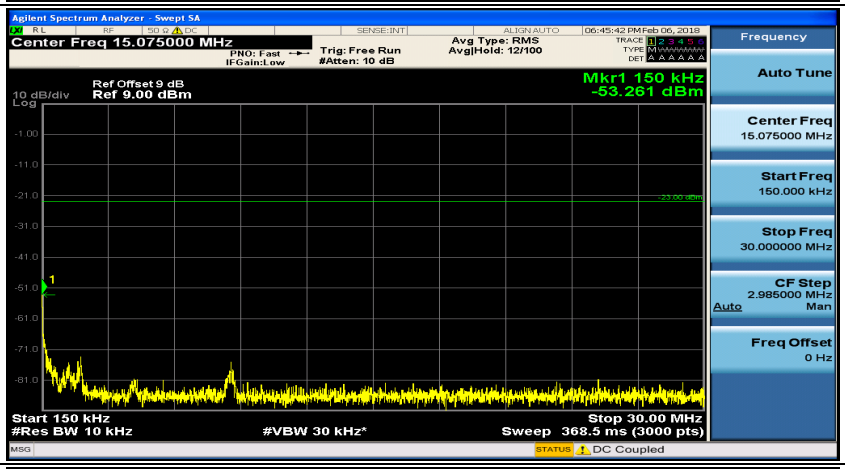


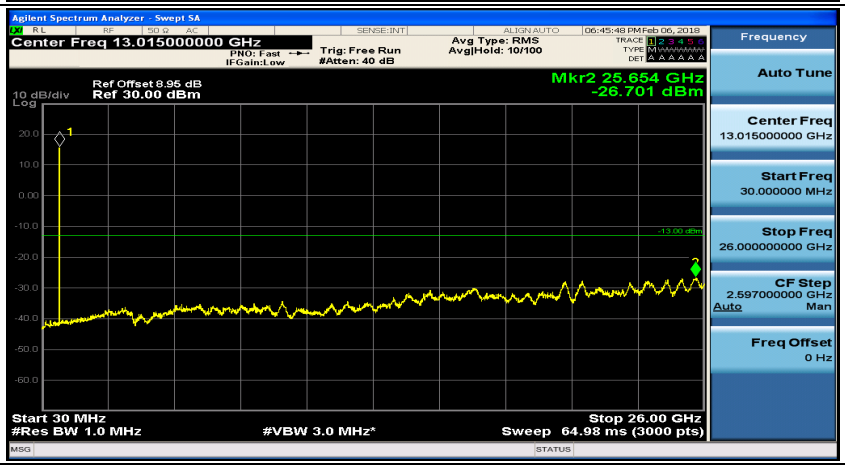




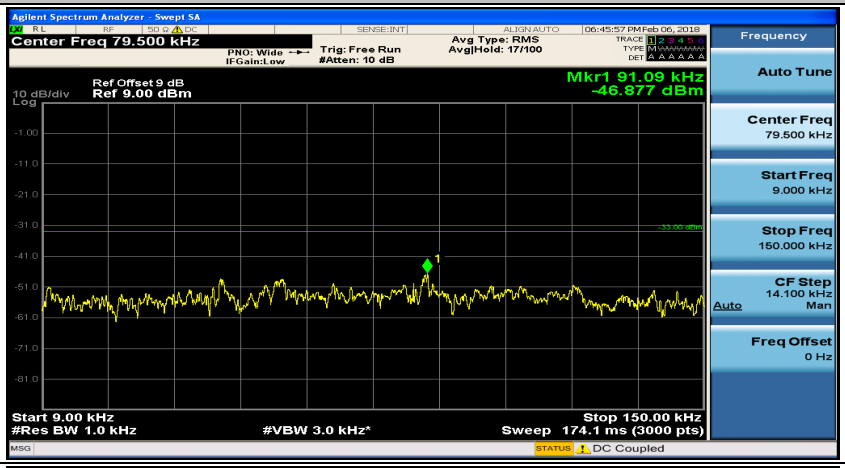
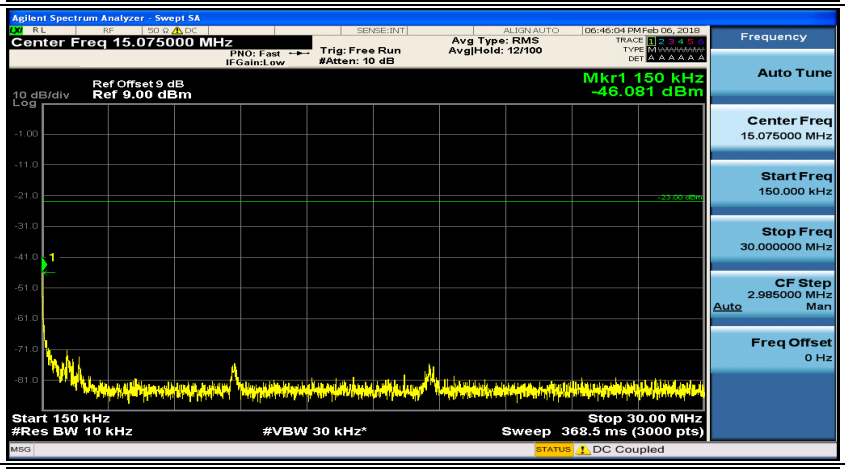
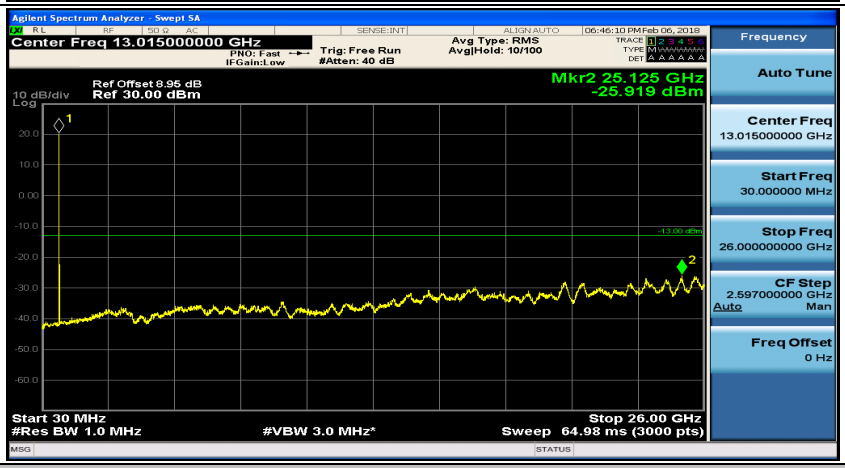
(Channel Bandwidth: 5 MHz)_HCH_16QAM_1RB#24

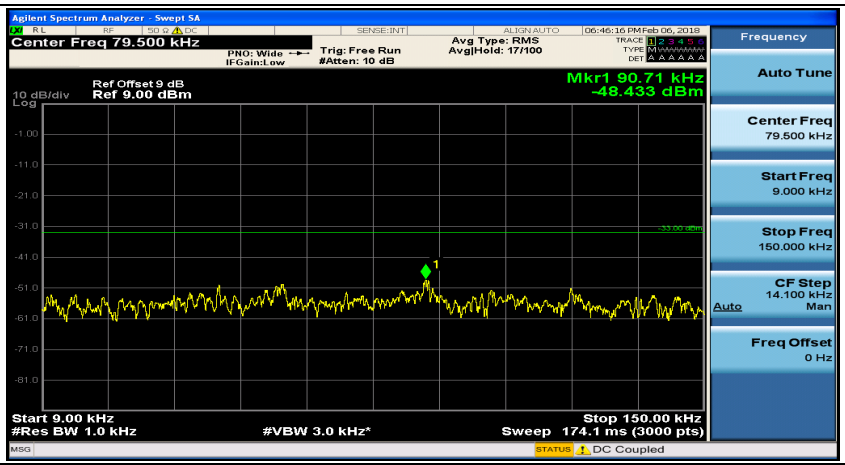

Agilent Spectrum Analyzer - Swept SA
Center Freq 79.500 kHz
PNO: Wide
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 17/100
06:45:35 PM Feb 06, 2018
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Mkr1 16.29 kHz
-53.893 dBm
Start 9.00 kHz
#Res BW 1.0 kHz
#VBW 3.0 kHz*
Stop 150.00 kHz
Sweep 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

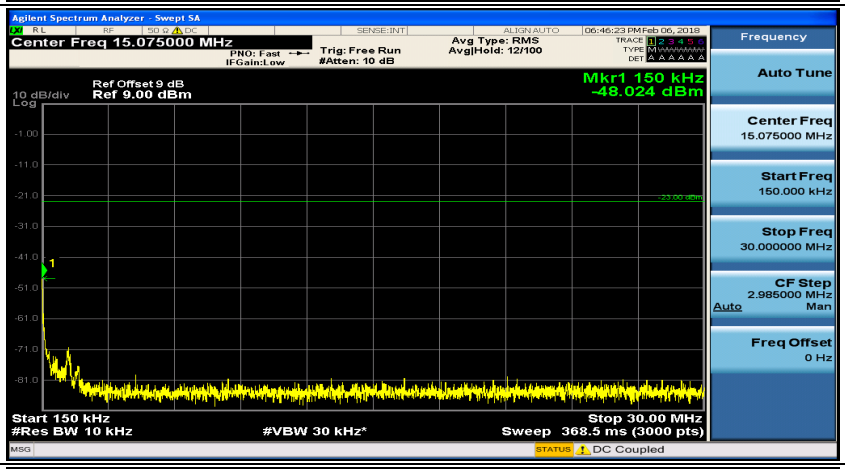

Agilent Spectrum Analyzer - Swept SA
Center Freq 15.075000 MHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 12/100
06:45:42 PM Feb 06, 2018
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Mkr1 150 kHz
-53.261 dBm
Start 150 kHz
#Res BW 10 kHz
#VBW 30 kHz*
Stop 30.00 MHz
Sweep 368.5 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

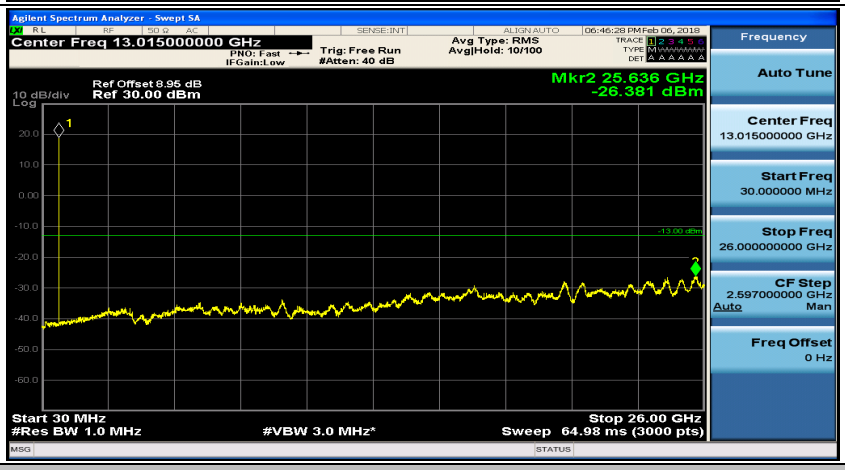

Agilent Spectrum Analyzer - Swept SA
Center Freq 13.015000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 40 dB
Avg Type: RMS
Avg|Hold: 10/100
06:45:48 PM Feb 06, 2018
Ref Offset 8.95 dB
10 dB/div
Log
Ref 30.00 dBm
Mkr2 25.654 GHz
-26.701 dBm
Start 30 MHz
#Res BW 1.0 MHz
#VBW 3.0 MHz*
Stop 26.00 GHz
Sweep 64.98 ms (3000 pts)
Frequency
Auto Tune
Center Freq
13.015000000 GHz
Start Freq
30.000000 MHz
Stop Freq
26.000000000 GHz
CF Step
2.597000000 GHz
Auto
Man
Freq Offset
0 Hz

Channel Bandwidth: 10 MHz

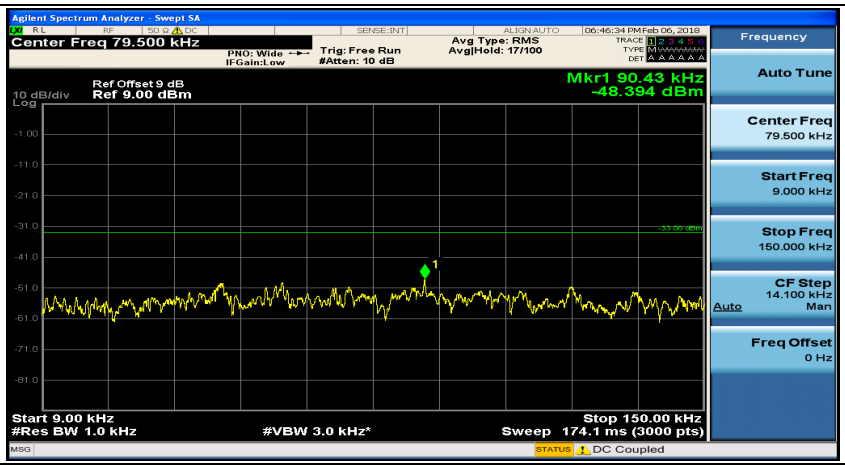
Channel Bandwidth: 10 MHz_LCH_QPSK_1RB#0



Channel Bandwidth: 10 MHz_LCH_QPSK_1RB#24

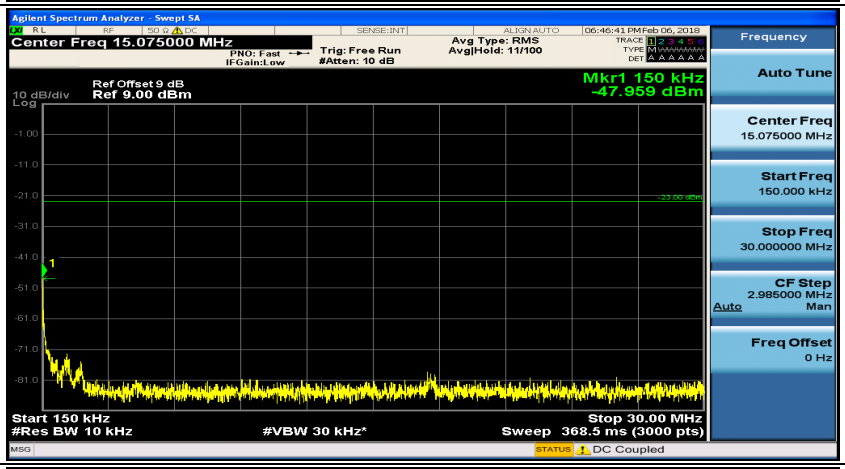


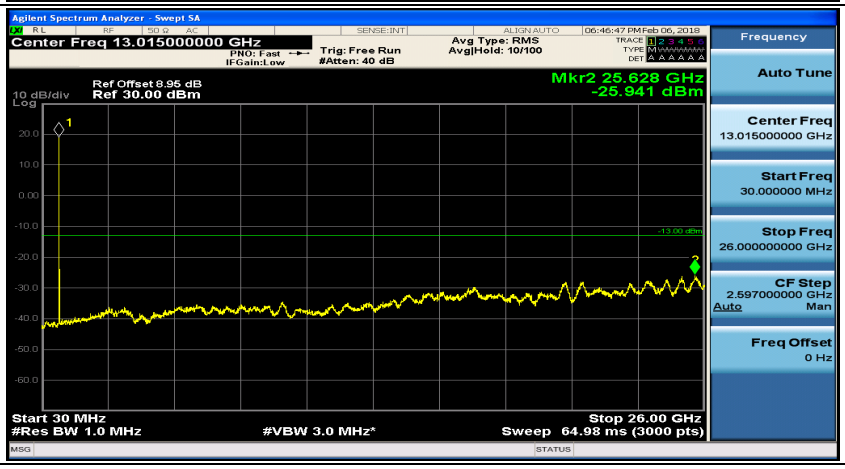


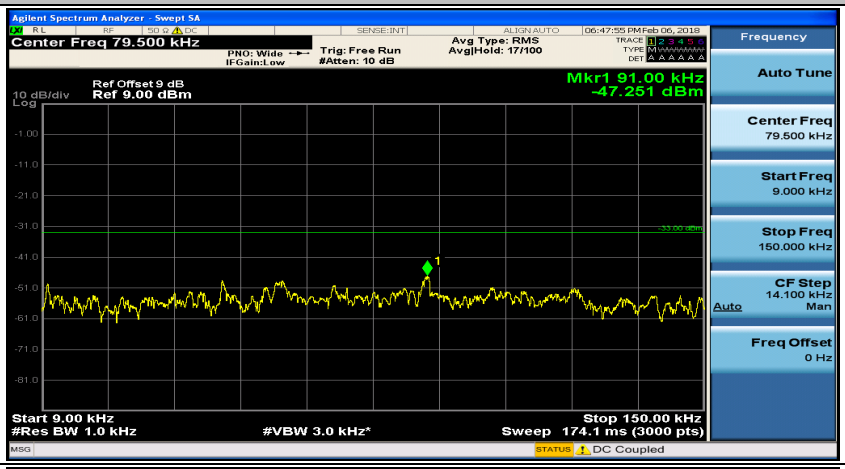
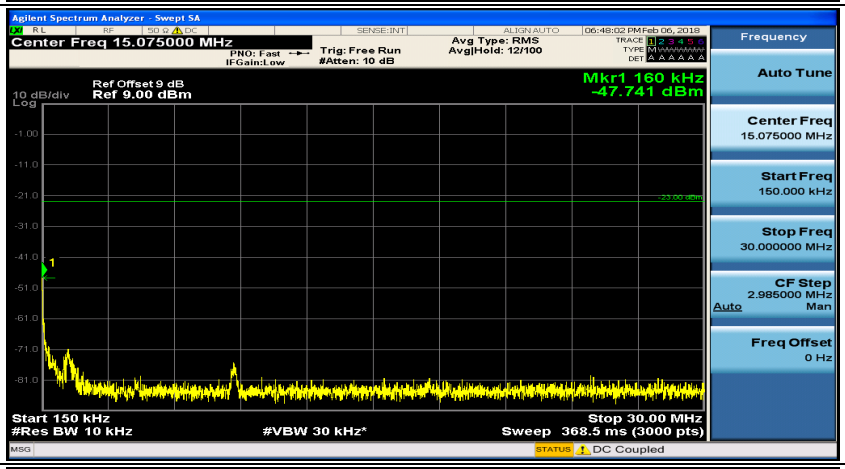
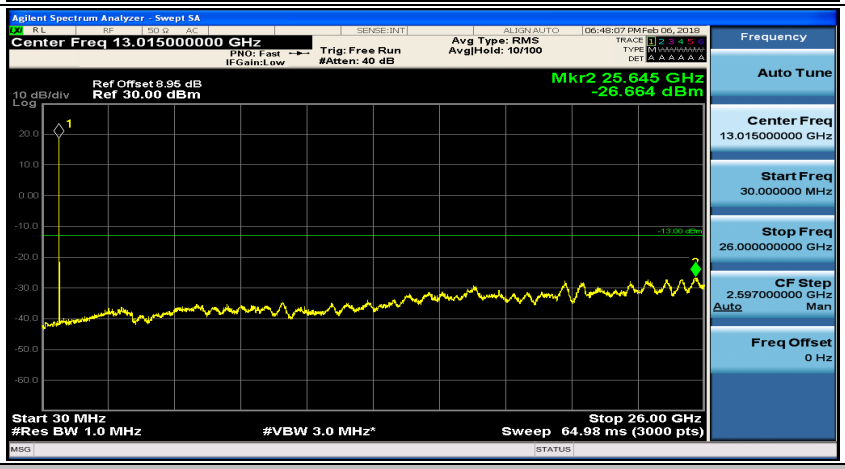


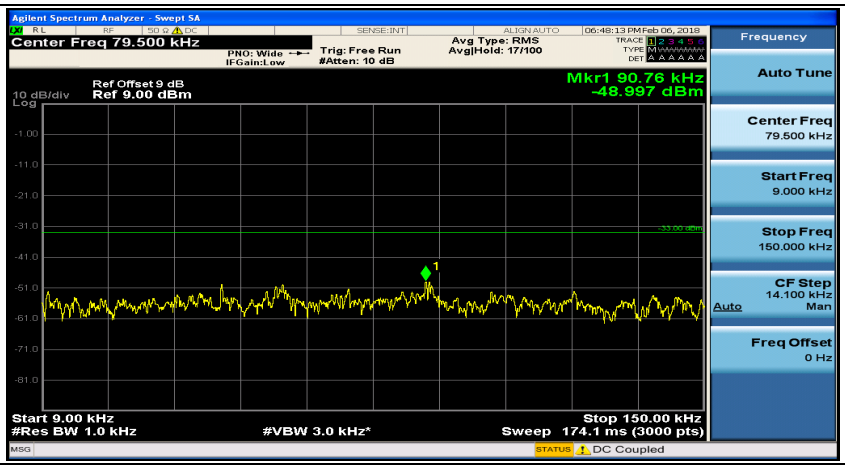
Channel Bandwidth: 10 MHz_LCH_QPSK_1RB#49

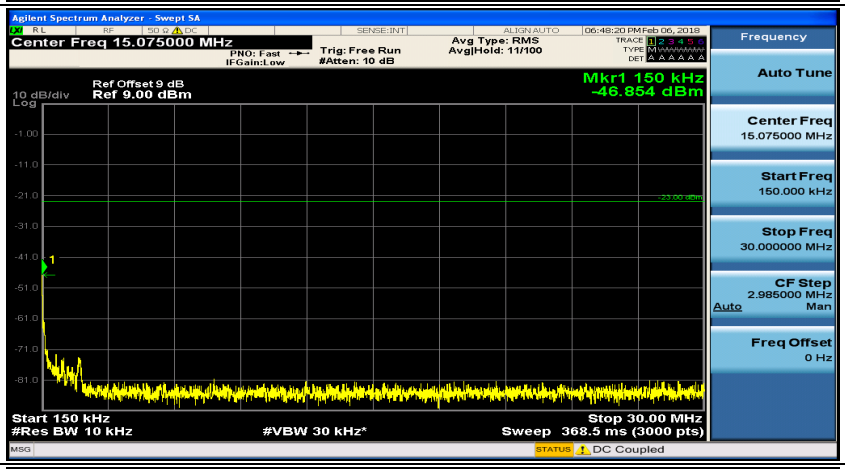

Agilent Spectrum Analyzer - Swept SA
Center Freq 79.500 kHz
PNO: Wide
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 17/100
06:46:34 PM Feb 06, 2018
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Mkr1 90.43 kHz
-48.394 dBm
Start 9.00 kHz
#Res BW 1.0 kHz
#VBW 3.0 kHz*
Stop 150.00 kHz
Sweep 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

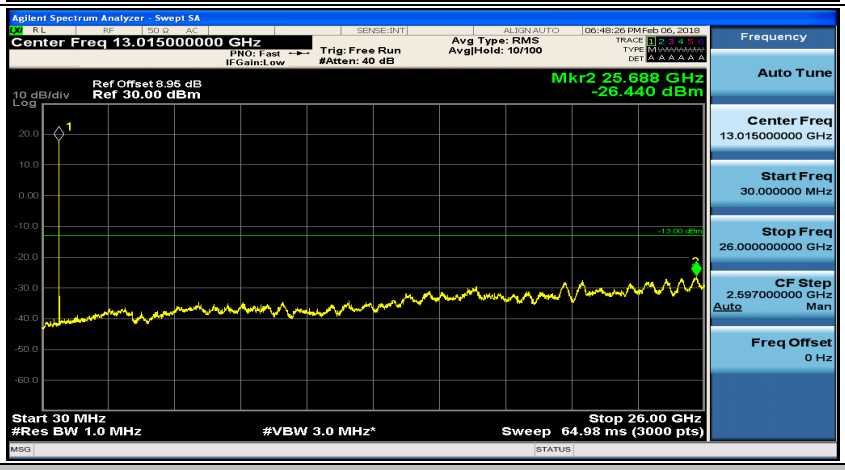

Agilent Spectrum Analyzer - Swept SA
Center Freq 15.075000 MHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 11/100
06:46:41 PM Feb 06, 2018
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Mkr1 150 kHz
-47.959 dBm
Start 150 kHz
#Res BW 10 kHz
#VBW 30 kHz*
Stop 30.00 MHz
Sweep 368.5 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
06:46:47 PM Feb 06, 2018
Ref Offset 8.95 dB
10 dB/div
Log
Ref 30.00 dBm
Mkr2 25.628 GHz
-25.941 dBm
Start 30 MHz
#Res BW 1.0 MHz
#VBW 3.0 MHz*
Stop 26.00 GHz
Sweep 64.98 ms (3000 pts)
Frequency
Auto Tune
Center Freq
13.015000000 GHz
Start Freq
30.000000 MHz
Stop Freq
26.000000000 GHz
CF Step
2.597000000 GHz
Auto
Man
Freq Offset
0 Hz

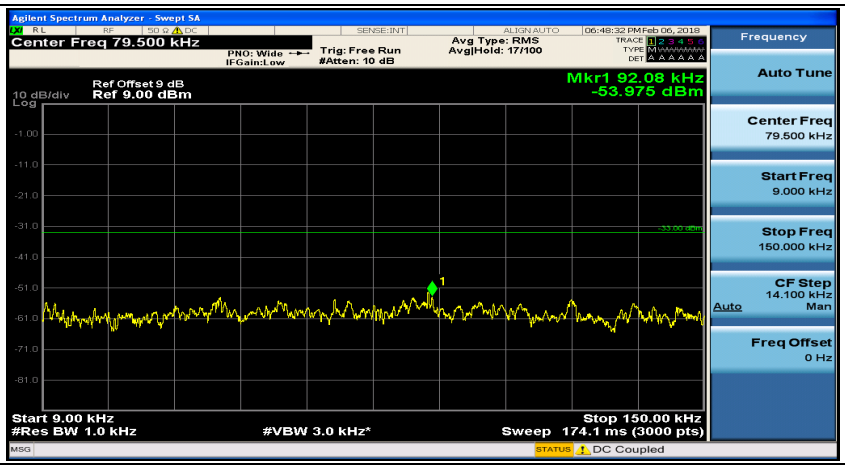
Channel Bandwidth: 10 MHz_MCH_QPSK_1RB#0



Channel Bandwidth: 10 MHz_MCH_QPSK_1RB#24

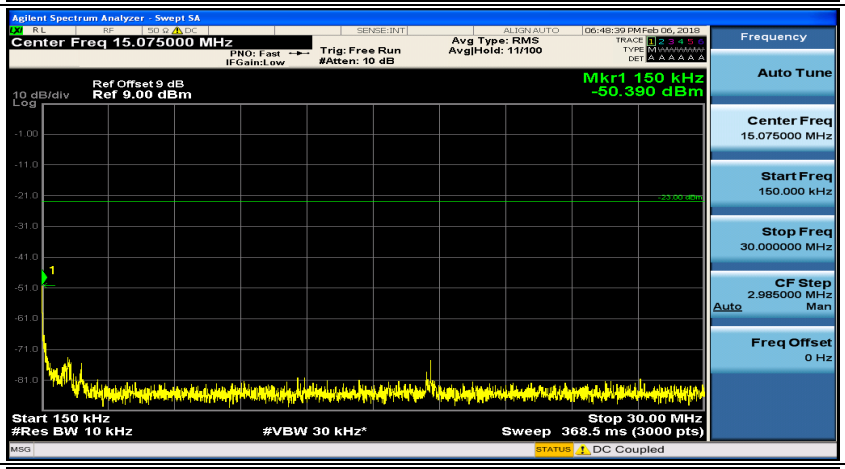


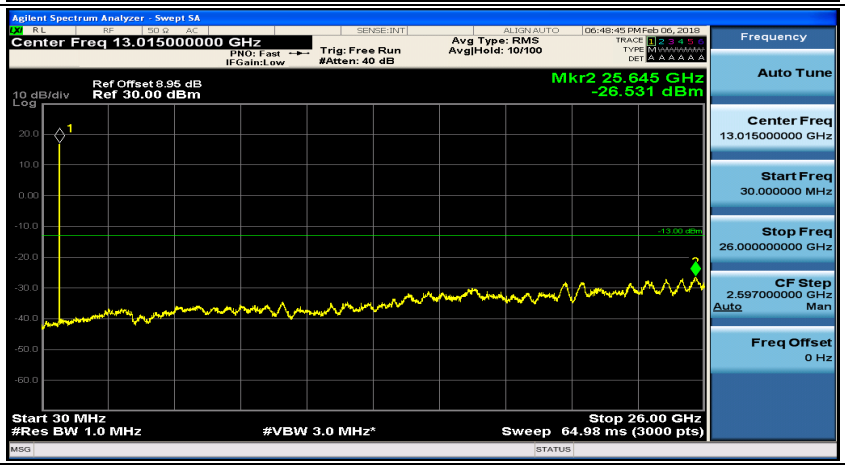


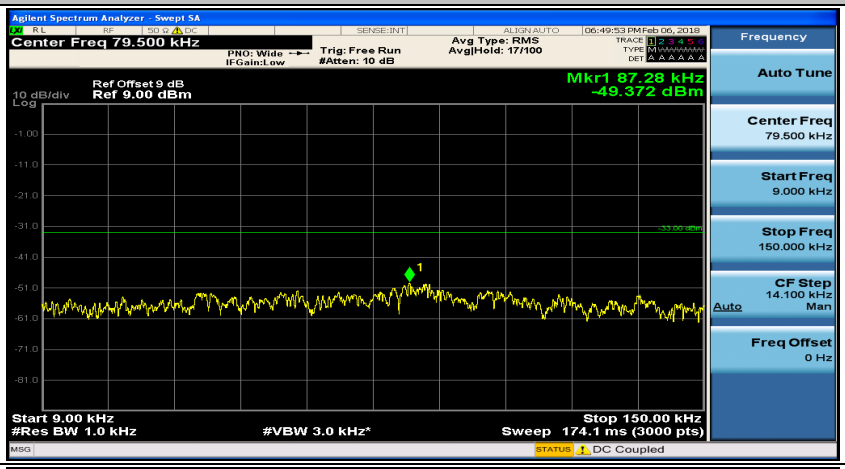
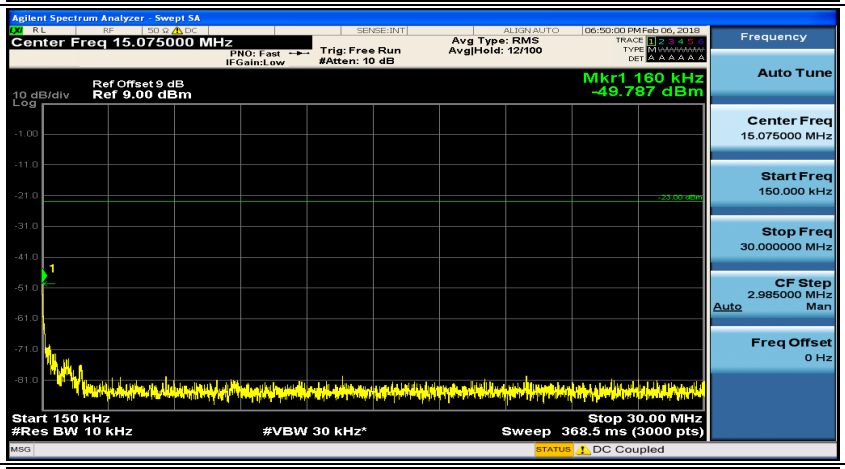
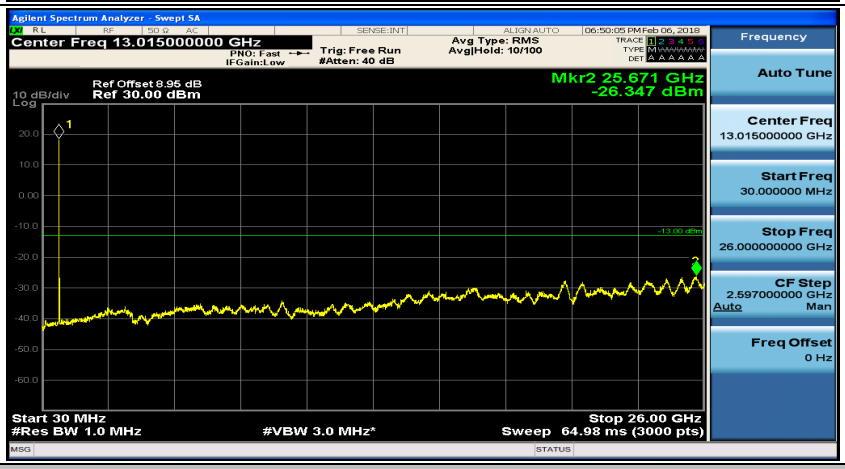


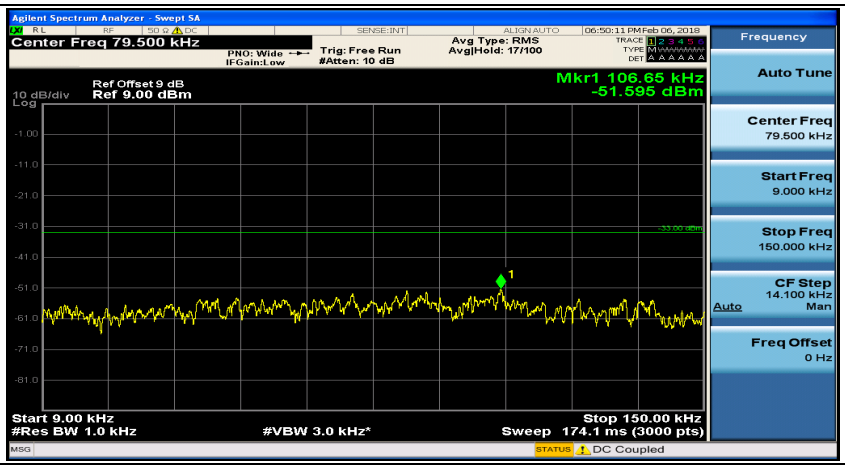
Channel Bandwidth: 10 MHz_MCH_QPSK_1RB#49

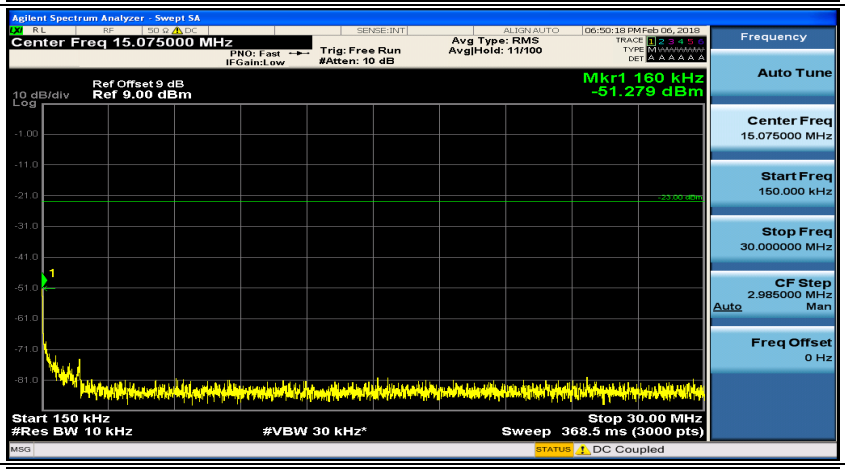

Agilent Spectrum Analyzer - Swept SA
Center Freq 79.500 kHz
PNO: Wide
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 17/100
06:48:32 PM Feb 06, 2018
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Mkr1 92.08 kHz
-53.975 dBm
Start 9.00 kHz
#Res BW 1.0 kHz
#VBW 3.0 kHz*
Stop 150.00 kHz
Sweep 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

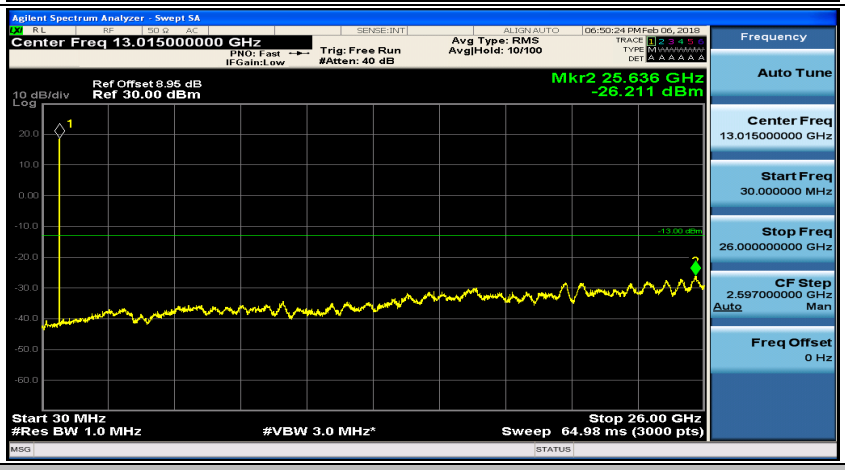

Agilent Spectrum Analyzer - Swept SA
Center Freq 15.075000 MHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 11/100
06:48:39 PM Feb 06, 2018
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Mkr1 150 kHz
-50.390 dBm
Start 150 kHz
#Res BW 10 kHz
#VBW 30 kHz*
Stop 30.00 MHz
Sweep 368.5 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
06:48:45 PM Feb 06, 2018
Ref Offset 8.95 dB
10 dB/div
Log
Ref 30.00 dBm
Mkr2 25.645 GHz
-26.531 dBm
Start 30 MHz
#Res BW 1.0 MHz
#VBW 3.0 MHz*
Stop 26.00 GHz
Sweep 64.98 ms (3000 pts)
Frequency
Auto Tune
Center Freq
13.015000000 GHz
Start Freq
30.000000 MHz
Stop Freq
26.000000000 GHz
CF Step
2.597000000 GHz
Auto
Man
Freq Offset
0 Hz

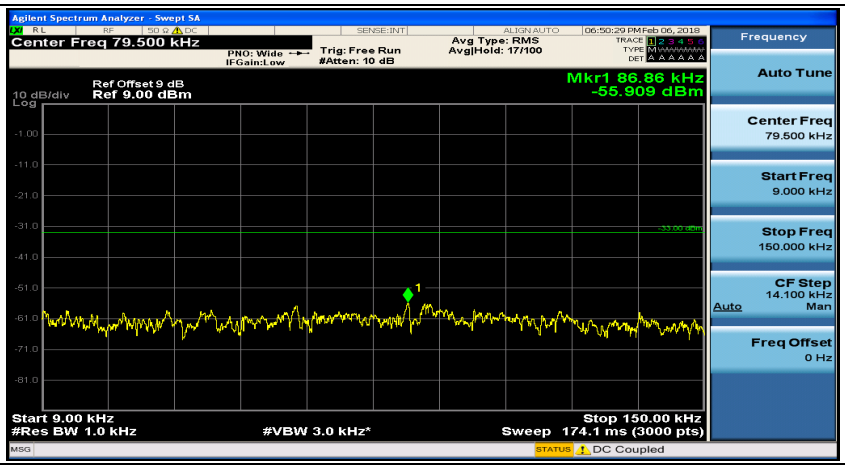
Channel Bandwidth: 10 MHz_HCH_QPSK_1RB#0



Channel Bandwidth: 10 MHz_HCH_QPSK_1RB#24

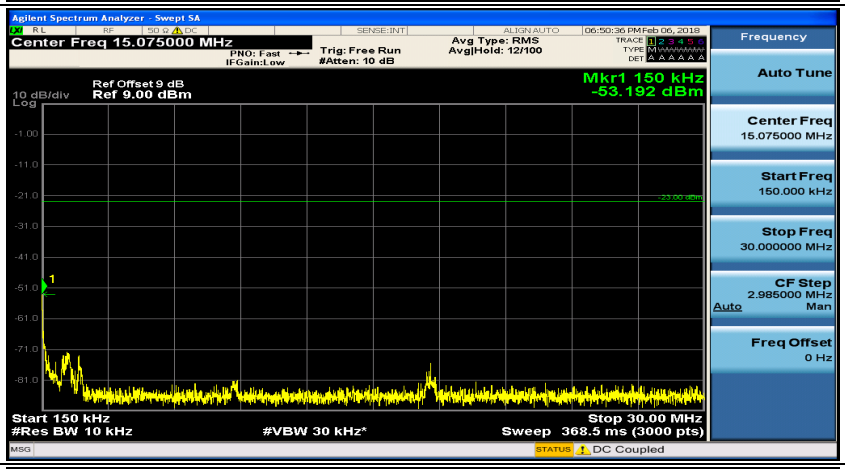


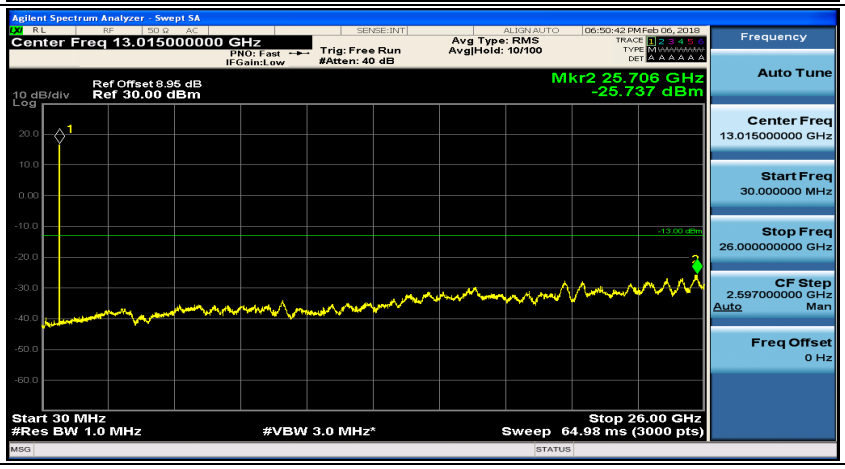


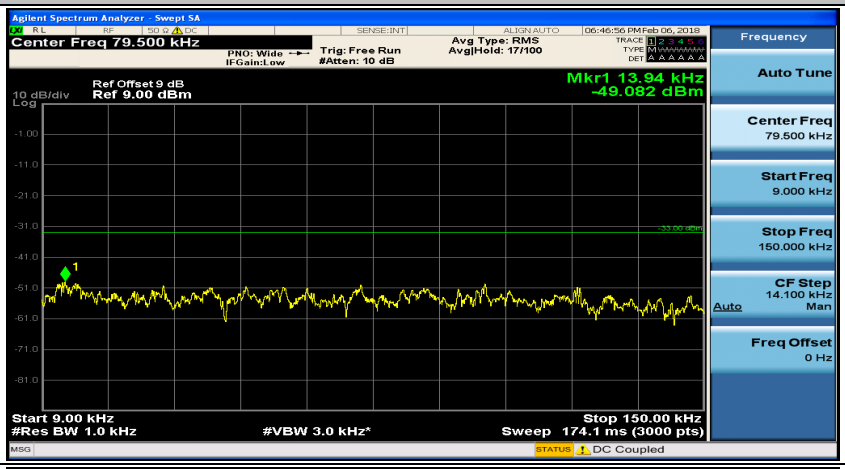
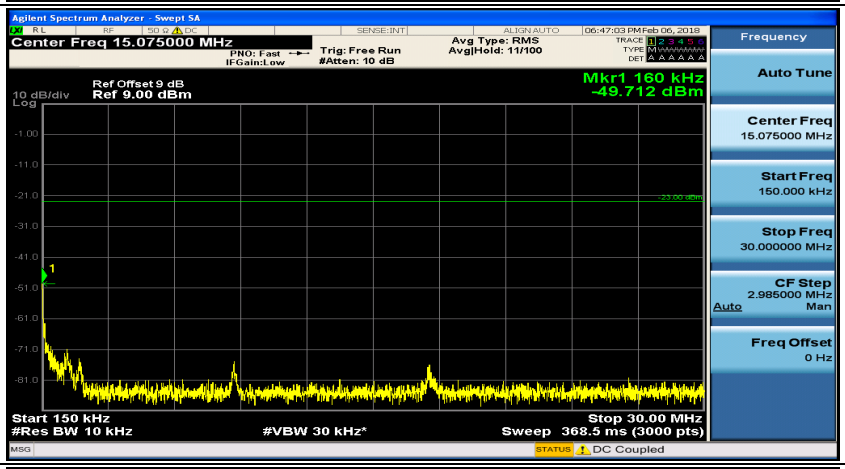
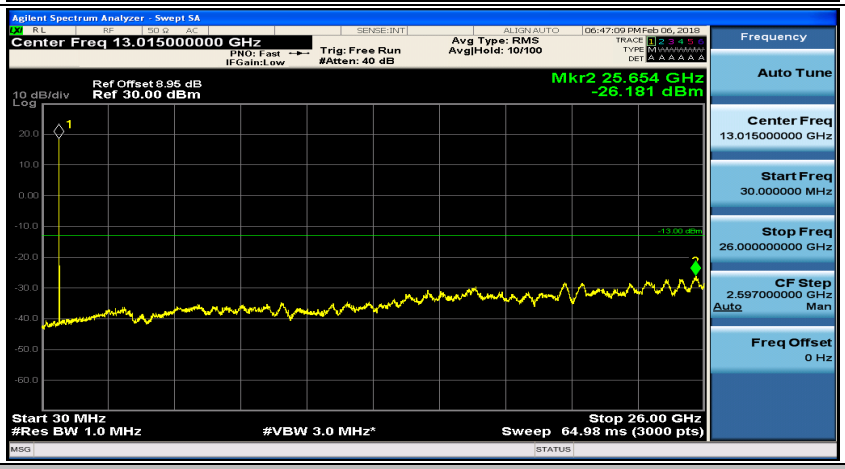


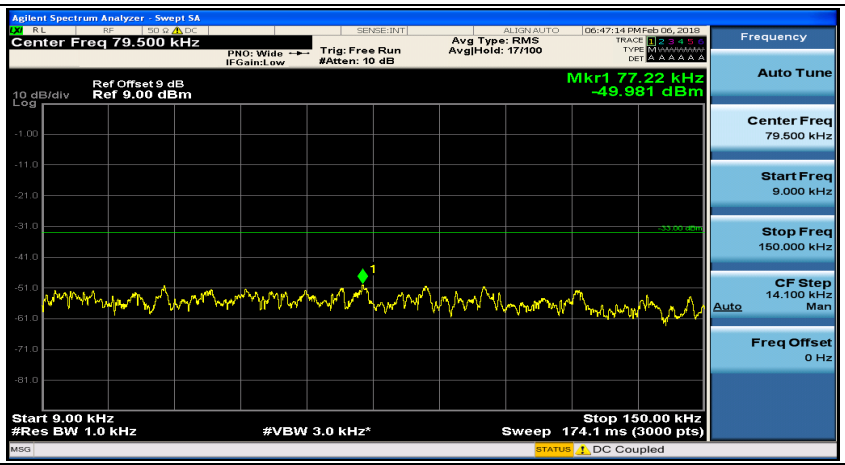
Channel Bandwidth: 10 MHz_HCH_QPSK_1RB#49

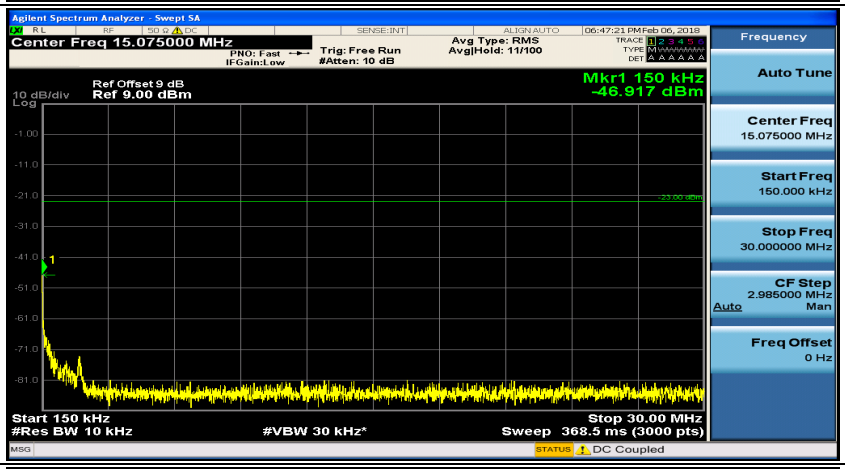

Agilent Spectrum Analyzer - Swept SA
Center Freq 79.500 kHz
PNO: Wide
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 17/100
06:50:29 PM Feb 06, 2018
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Mkr1 86.86 kHz
-55.909 dBm
Start 9.00 kHz
#Res BW 1.0 kHz
#VBW 3.0 kHz*
Stop 150.00 kHz
Sweep 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

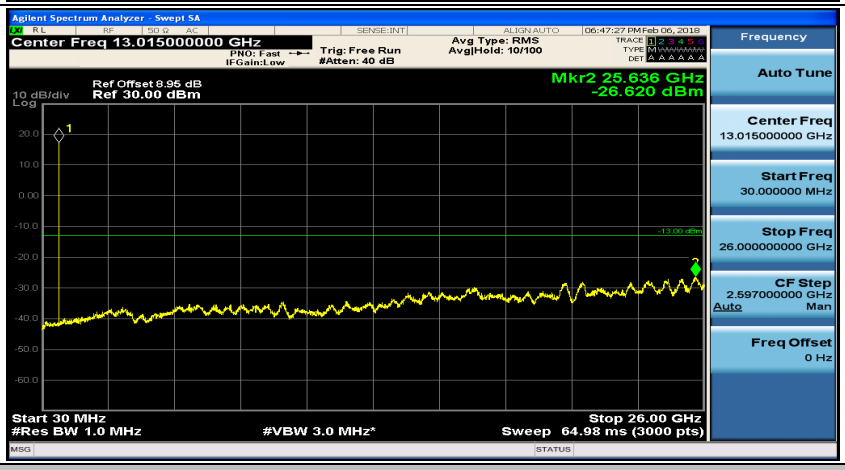

Agilent Spectrum Analyzer - Swept SA
Center Freq 15.075000 MHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 12/100
06:50:36 PM Feb 06, 2018
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Mkr1 150 kHz
-53.192 dBm
Start 150 kHz
#Res BW 10 kHz
#VBW 30 kHz*
Stop 30.00 MHz
Sweep 368.5 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
06:50:42 PM Feb 06, 2018
Ref Offset 8.95 dB
10 dB/div
Log
Ref 30.00 dBm
Mkr2 25.706 GHz
-25.737 dBm
Start 30 MHz
#Res BW 1.0 MHz
#VBW 3.0 MHz*
Stop 26.00 GHz
Sweep 64.98 ms (3000 pts)
Frequency
Auto Tune
Center Freq
13.015000000 GHz
Start Freq
30.000000 MHz
Stop Freq
26.000000000 GHz
CF Step
2.597000000 GHz
Auto
Man
Freq Offset
0 Hz

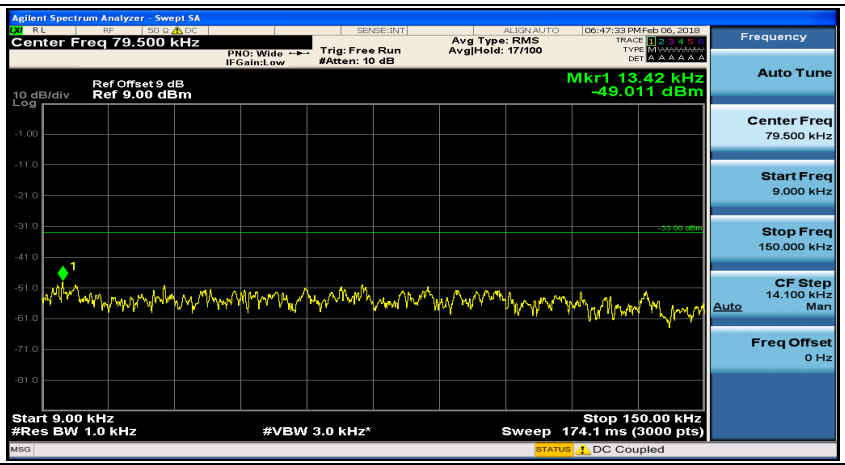
Channel Bandwidth: 10 MHz_LCH_16QAM_1RB#0



Channel Bandwidth: 10 MHz_LCH_16QAM_1RB#24

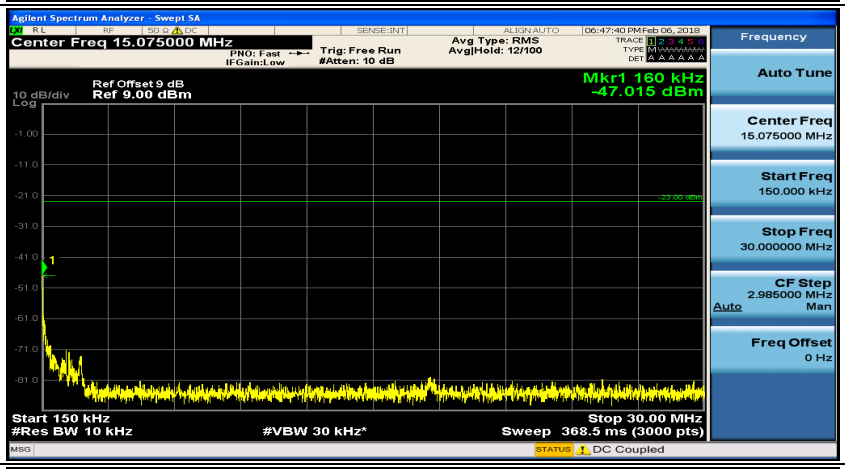


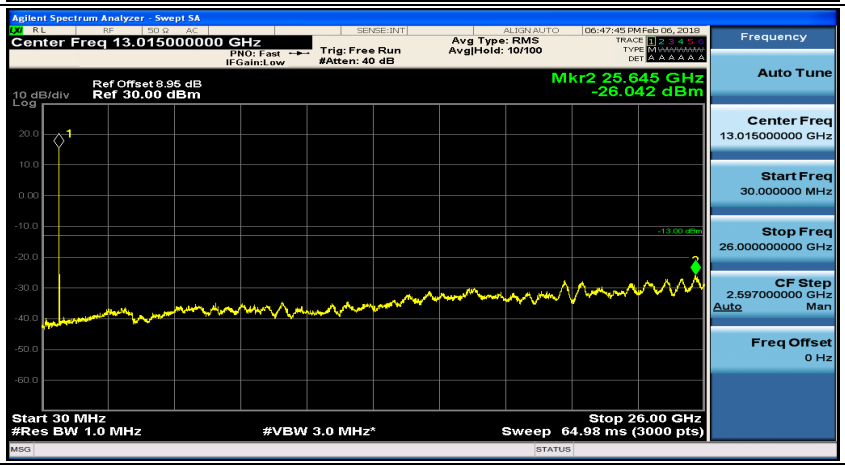


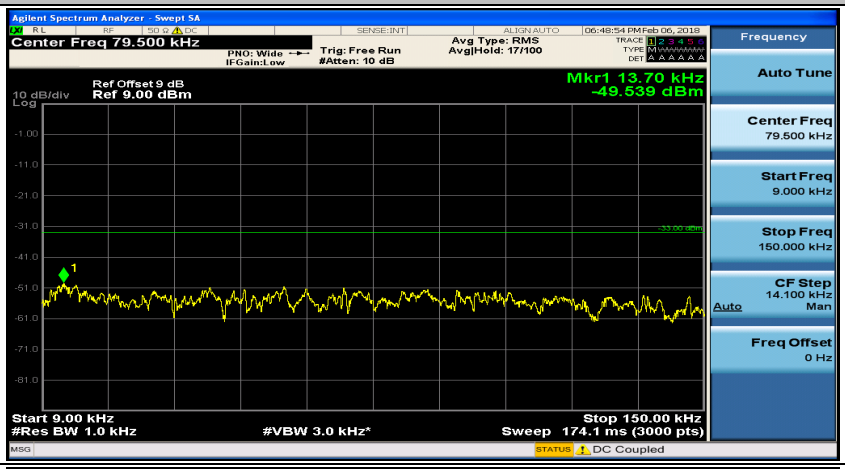
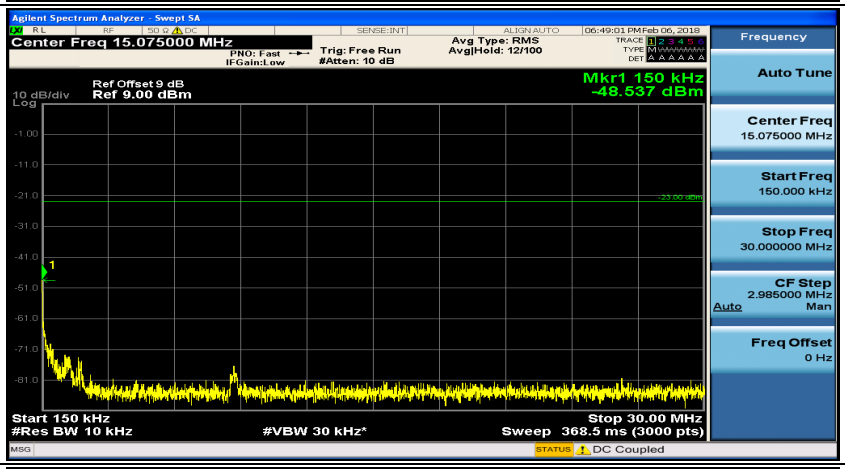
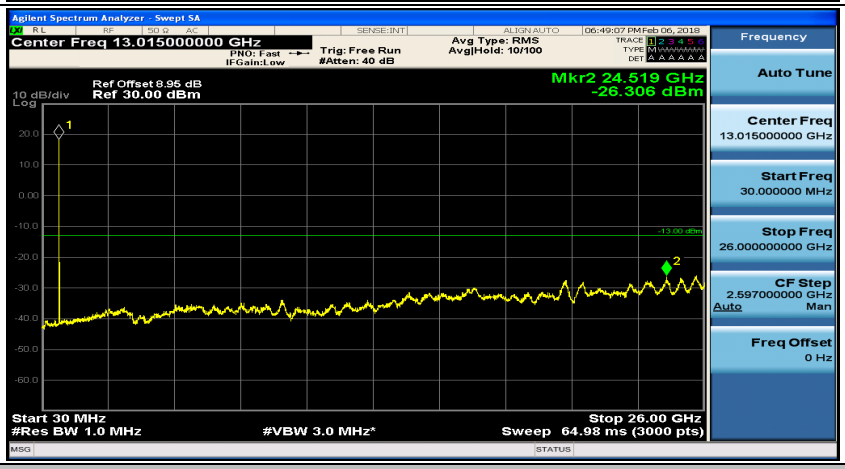


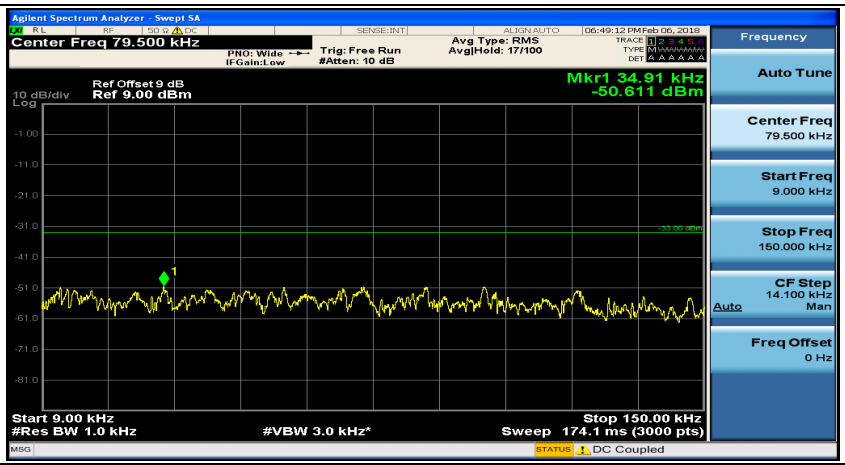
Channel Bandwidth: 10 MHz_LCH_16QAM_1RB#49

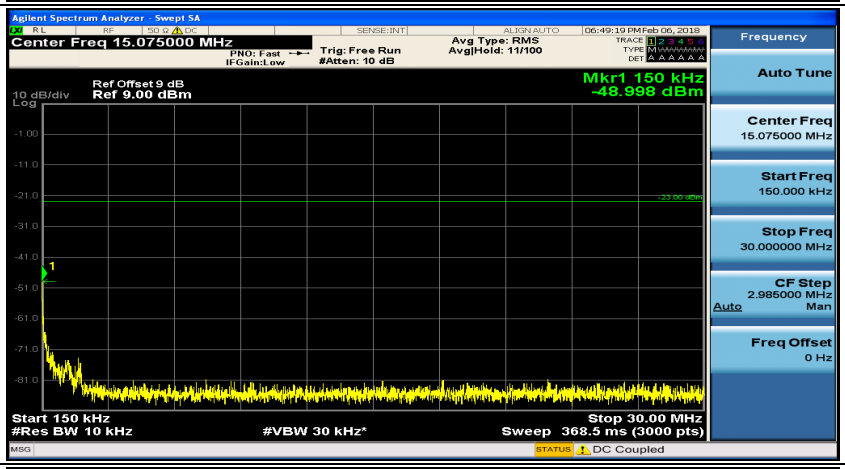

Agilent Spectrum Analyzer - Swept SA
Center Freq 79.500 kHz
PNO: Wide
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 17/100
06:47:33 PM Feb 06, 2018
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Mkr1 13.42 kHz
-49.011 dBm
Start 9.00 kHz
#Res BW 1.0 kHz
#VBW 3.0 kHz*
Stop 150.00 kHz
Sweep 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

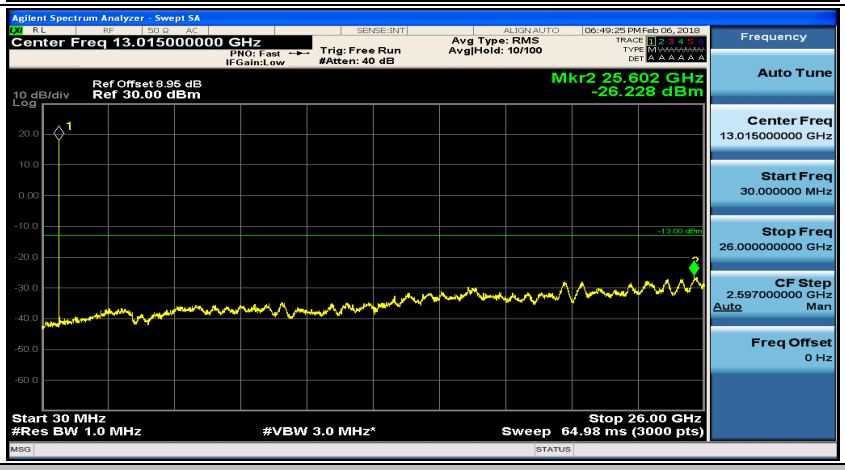

Agilent Spectrum Analyzer - Swept SA
Center Freq 15.075000 MHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 12/100
06:47:40 PM Feb 06, 2018
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Mkr1 160 kHz
-47.015 dBm
Start 150 kHz
#Res BW 10 kHz
#VBW 30 kHz*
Stop 30.00 MHz
Sweep 368.5 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
06:47:45 PM Feb 06, 2018
Ref Offset 8.95 dB
10 dB/div
Log
Ref 30.00 dBm
Mkr2 25.645 GHz
-26.042 dBm
Start 30 MHz
#Res BW 1.0 MHz
#VBW 3.0 MHz*
Stop 26.00 GHz
Sweep 64.98 ms (3000 pts)
Frequency
Auto Tune
Center Freq
13.015000000 GHz
Start Freq
30.000000 MHz
Stop Freq
26.000000000 GHz
CF Step
2.597000000 GHz
Auto
Man
Freq Offset
0 Hz

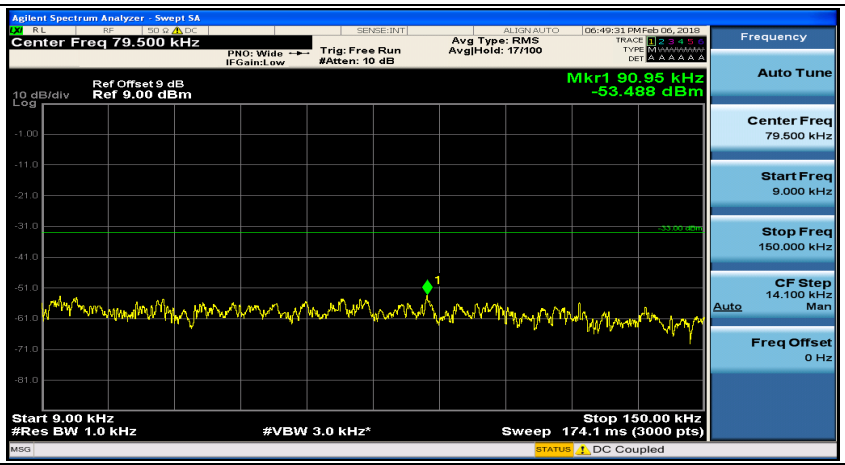
Channel Bandwidth: 10 MHz_MCH_16QAM_1RB#0



Channel Bandwidth: 10 MHz_MCH_16QAM_1RB#24

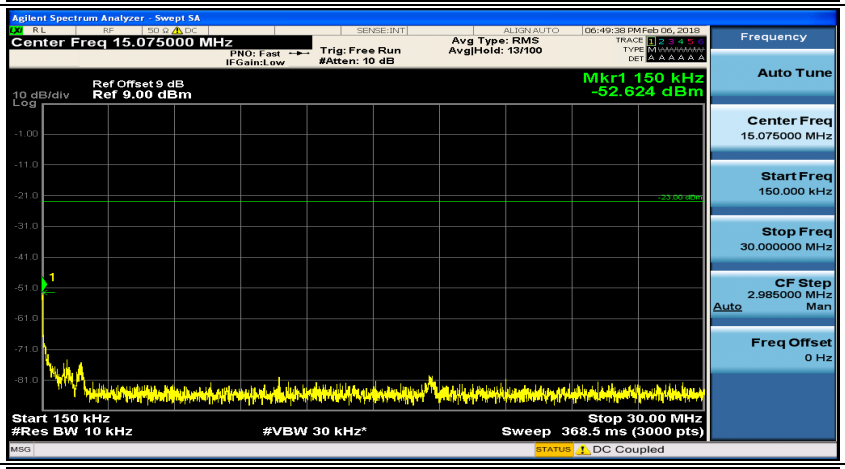


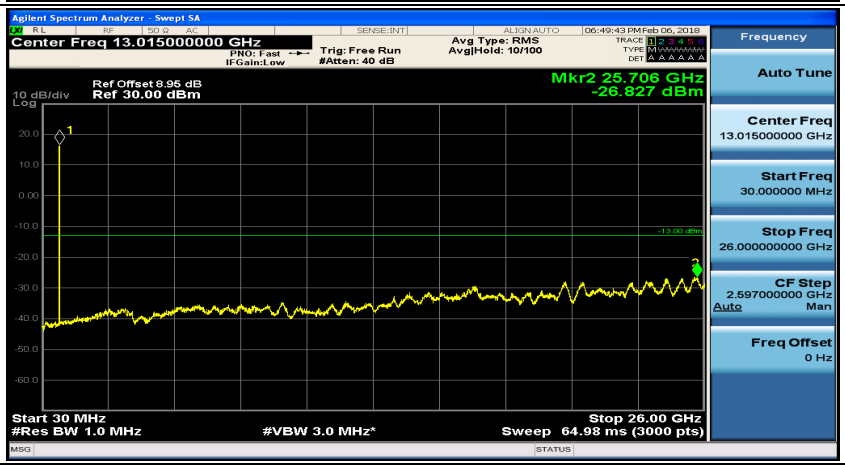


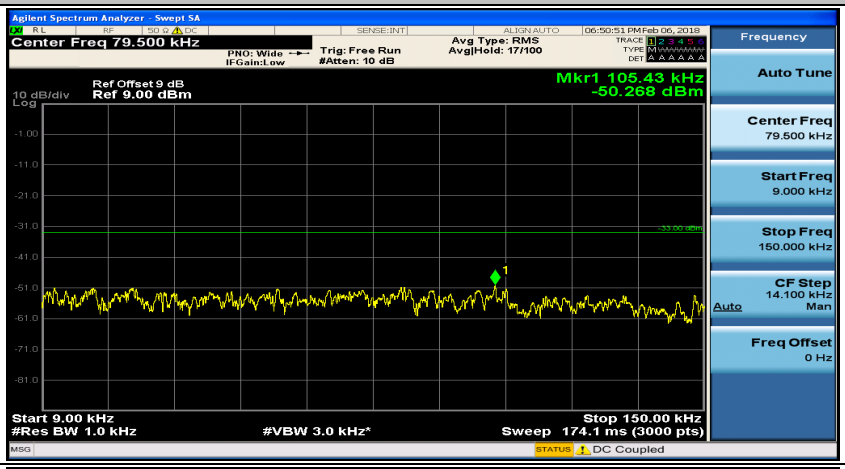
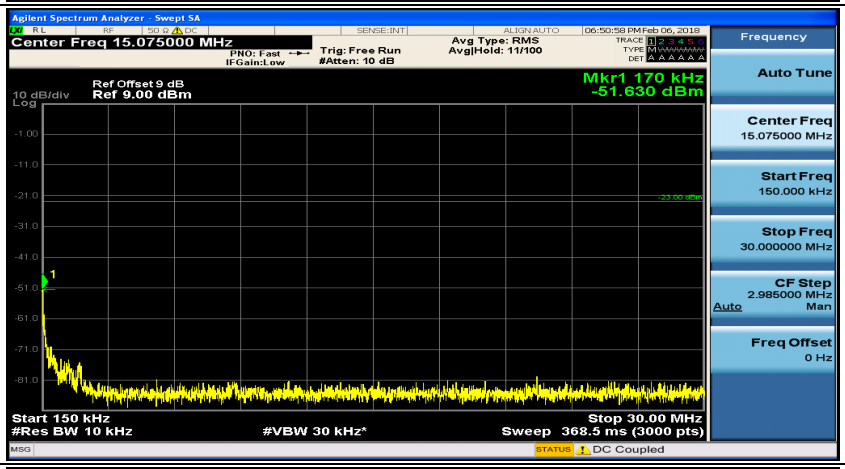
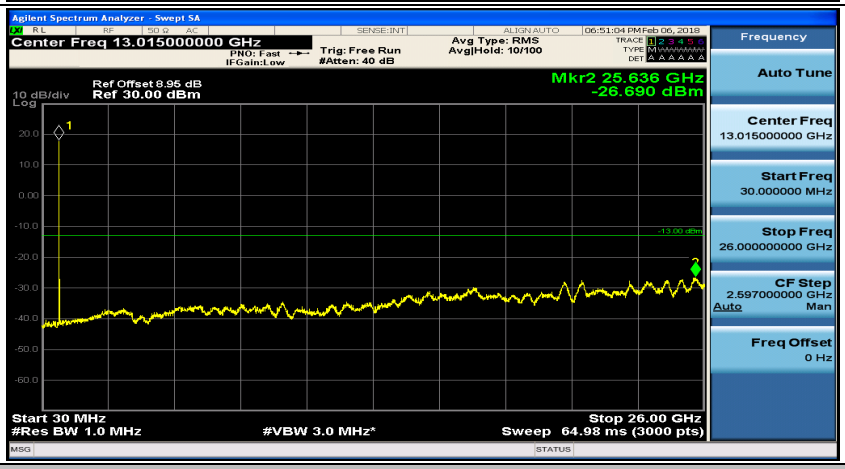


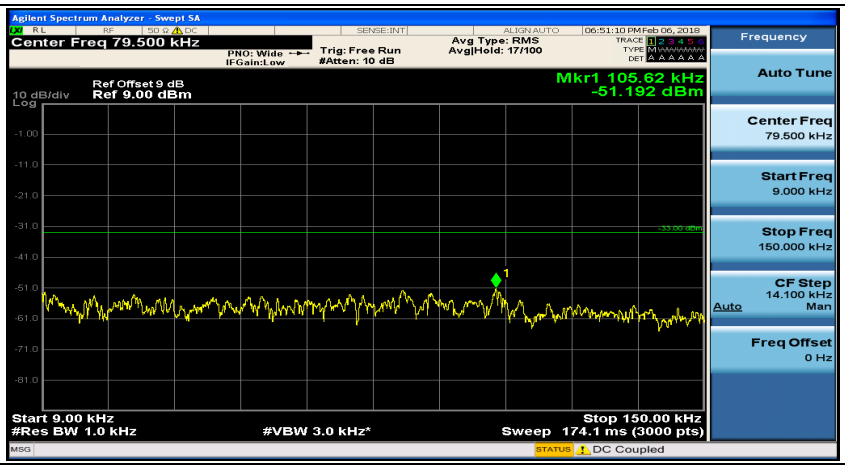
Channel Bandwidth: 10 MHz_MCH_16QAM_1RB#49

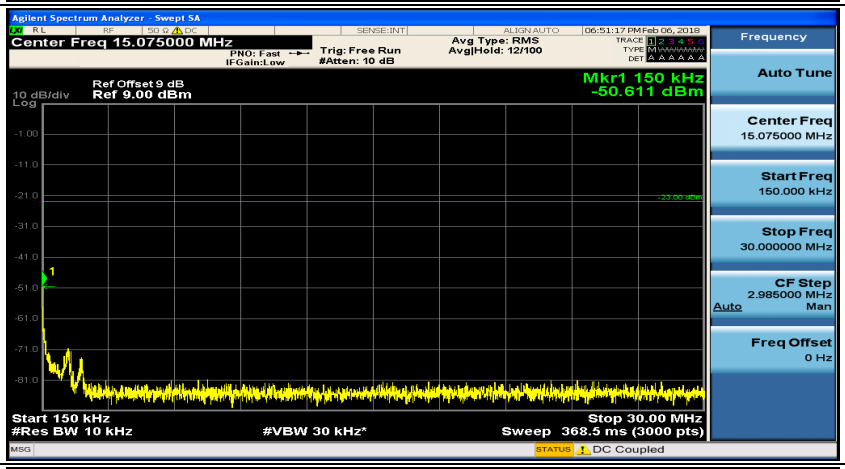

Agilent Spectrum Analyzer - Swept SA
Center Freq 79.500 kHz
PNO: Wide
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 17/100
06:49:31 PM Feb 06, 2018
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Mkr1 90.95 kHz
-53.488 dBm
Start 9.00 kHz
#Res BW 1.0 kHz
#VBW 3.0 kHz*
Stop 150.00 kHz
Sweep 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

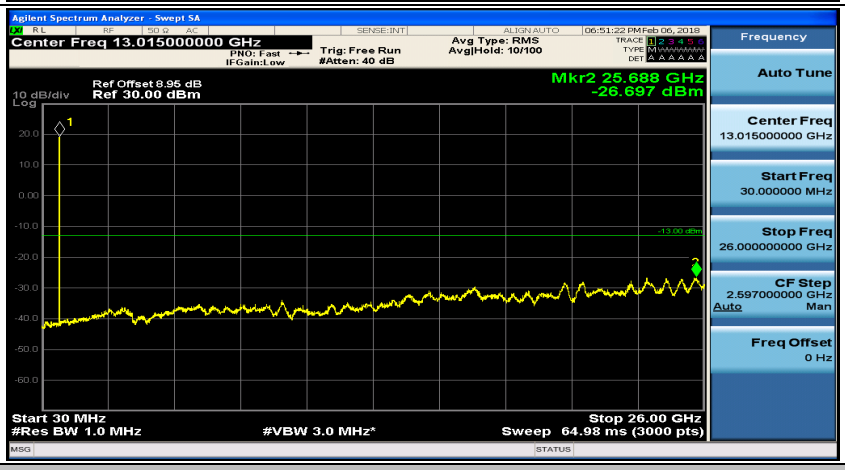

Agilent Spectrum Analyzer - Swept SA
Center Freq 15.075000 MHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 13/100
06:49:38 PM Feb 06, 2018
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Mkr1 150 kHz
-52.624 dBm
Start 150 kHz
#Res BW 10 kHz
#VBW 30 kHz*
Stop 30.00 MHz
Sweep 368.5 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
06:49:43 PM Feb 06, 2018
Ref Offset 8.95 dB
10 dB/div
Log
Ref 30.00 dBm
Mkr2 25.706 GHz
-26.827 dBm
Start 30 MHz
#Res BW 1.0 MHz
#VBW 3.0 MHz*
Stop 26.00 GHz
Sweep 64.98 ms (3000 pts)
Frequency
Auto Tune
Center Freq
13.015000000 GHz
Start Freq
30.000000 MHz
Stop Freq
26.000000000 GHz
CF Step
2.597000000 GHz
Auto
Man
Freq Offset
0 Hz

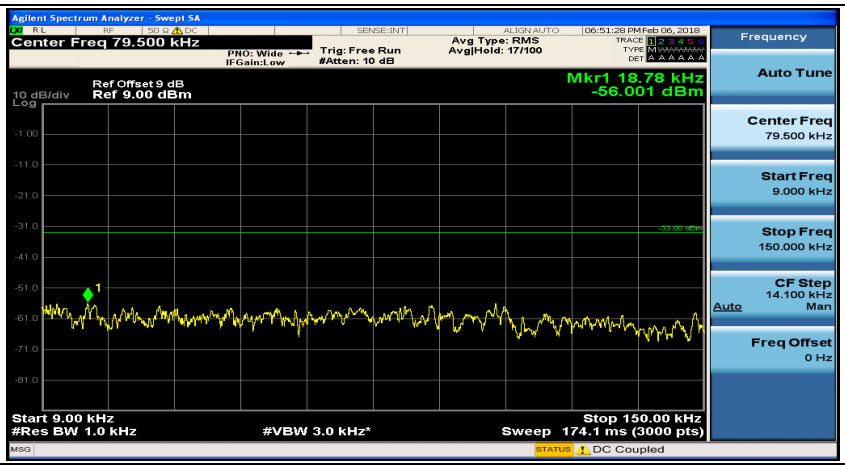
Channel Bandwidth: 10 MHz_HCH_16QAM_1RB#0



Channel Bandwidth: 10 MHz_HCH_16QAM_1RB#24

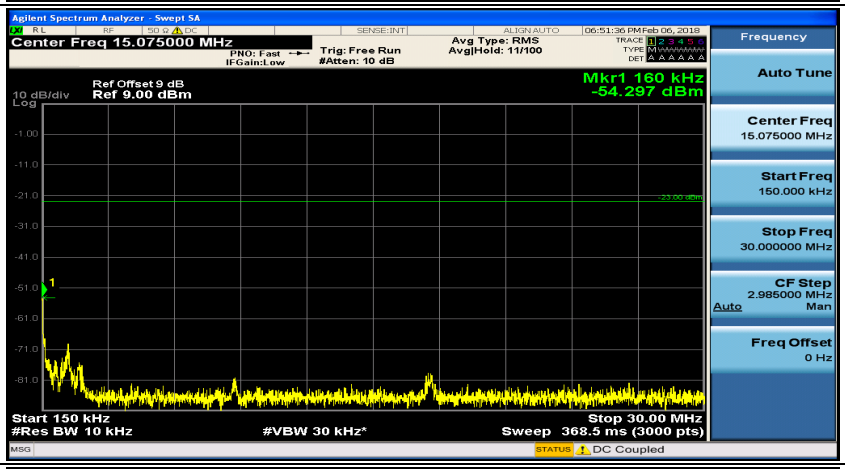


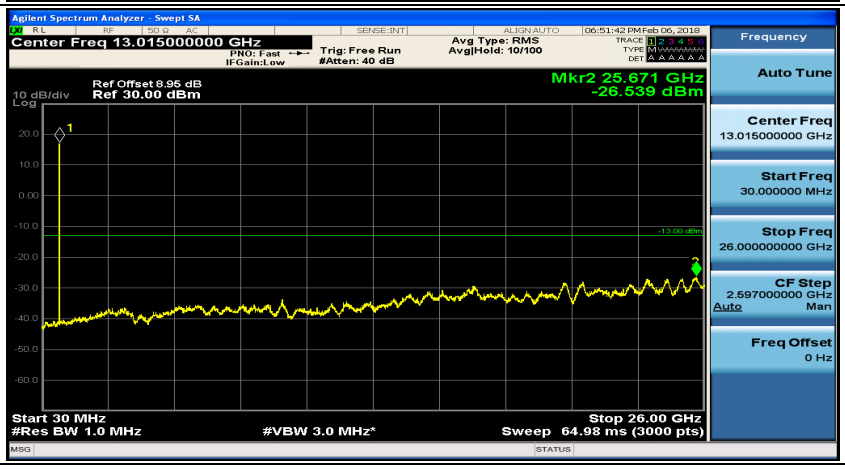




Channel Bandwidth: 10 MHz_HCH_16QAM_1RB#49


Agilent Spectrum Analyzer - Swept SA
Center Freq 79.500 kHz
PNO: Wide
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 17/100
06:51:28 PM Feb 06, 2018
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Mkr1 18.78 kHz
-56.001 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: 11/100
06:51:36 PM Feb 06, 2018
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Mkr1 160 kHz
-54.297 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
06:51:42 PM Feb 06, 2018
Ref Offset 8.95 dB
10 dB/div
Log
Ref 30.00 dBm
Mkr2 25.671 GHz
-26.539 dBm
Start 30 MHz
#Res BW 1.0 MHz
#VBW 3.0 MHz*
Stop 26.00 GHz
Sweep 64.98 ms (3000 pts)
Frequency
Auto Tune
Center Freq
13.015000000 GHz
Start Freq
30.000000 MHz
Stop Freq
26.000000000 GHz
CF Step
2.597000000 GHz
Auto
Man
Freq Offset
0 Hz

Appendix F: Frequency Stability

Test Result

Channel Bandwidth: 1.4 MHz

Channel Bandwidth: 1.4 MHz							
Voltage							
Modulation	Channel	Voltage [Vdc]	Temperature (℃)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
QPSK	LCH	VL	TN	-1.14	-0.001629	± 2.5	PASS
		VN	TN	1.45	0.002072	± 2.5	PASS
		VH	TN	3.17	0.004531	± 2.5	PASS
	MCH	VL	TN	0.46	0.000650	± 2.5	PASS
		VN	TN	1.66	0.002346	± 2.5	PASS
		VH	TN	1.3	0.001837	± 2.5	PASS
	HCH	VL	TN	4.34	0.006067	± 2.5	PASS
		VN	TN	0.96	0.001342	± 2.5	PASS
		VH	TN	2.76	0.003859	± 2.5	PASS
16QAM	LCH	VL	TN	-0.58	-0.000829	± 2.5	PASS
		VN	TN	3.02	0.004316	± 2.5	PASS
		VH	TN	3.13	0.004473	± 2.5	PASS
	MCH	VL	TN	1.78	0.002516	± 2.5	PASS
		VN	TN	3.94	0.005569	± 2.5	PASS
		VH	TN	0.25	0.000353	± 2.5	PASS
	HCH	VL	TN	4.55	0.006361	± 2.5	PASS
		VN	TN	3.93	0.005494	± 2.5	PASS
		VH	TN	4.93	0.006892	± 2.5	PASS
Temperature							
Modulation	Channel	Voltage [Vdc]	Temperature (℃)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
QPSK	LCH	VN	-30	-1.6	-0.002287	± 2.5	PASS
		VN	-20	-0.54	-0.000772	± 2.5	PASS
		VN	-10	2.29	0.003273	± 2.5	PASS
		VN	0	-1.93	-0.002758	± 2.5	PASS
		VN	10	0.47	0.000672	± 2.5	PASS
		VN	20	4.19	0.005988	± 2.5	PASS
		VN	30	4.7	0.006717	± 2.5	PASS
		VN	40	3.3	0.004716	± 2.5	PASS
		VN	50	1.98	0.002830	± 2.5	PASS
	MCH	VN	-30	4.02	0.005682	± 2.5	PASS
		VN	-20	4.2	0.005936	± 2.5	PASS
		VN	-10	-0.3	-0.000424	± 2.5	PASS

		VN	0	0.61	0.000862	± 2.5	PASS
		VN	10	2.2	0.003110	± 2.5	PASS
		VN	20	1.2	0.001696	± 2.5	PASS
		VN	30	1.16	0.001640	± 2.5	PASS
		VN	40	-0.02	-0.000028	± 2.5	PASS
		VN	50	0.74	0.001046	± 2.5	PASS
	HCH	VN	-30	2.47	0.003453	± 2.5	PASS
		VN	-20	-0.38	-0.000531	± 2.5	PASS
		VN	-10	4.89	0.006836	± 2.5	PASS
		VN	0	-0.34	-0.000475	± 2.5	PASS
		VN	10	-0.16	-0.000224	± 2.5	PASS
		VN	20	3.96	0.005536	± 2.5	PASS
		VN	30	-1.79	-0.002502	± 2.5	PASS
		VN	40	-0.79	-0.001104	± 2.5	PASS
		VN	50	-1.18	-0.001650	± 2.5	PASS
16QAM	LCH	VN	-30	0.33	0.000472	± 2.5	PASS
		VN	-20	2.81	0.004016	± 2.5	PASS
		VN	-10	4.77	0.006817	± 2.5	PASS
		VN	0	2.09	0.002987	± 2.5	PASS
		VN	10	4.56	0.006517	± 2.5	PASS
		VN	20	3.73	0.005331	± 2.5	PASS
		VN	30	0.87	0.001243	± 2.5	PASS
		VN	40	-0.39	-0.000557	± 2.5	PASS
		VN	50	-1.53	-0.002187	± 2.5	PASS
	MCH	VN	-30	0.79	0.001117	± 2.5	PASS
		VN	-20	2.32	0.003279	± 2.5	PASS
		VN	-10	-0.07	-0.000099	± 2.5	PASS
		VN	0	0.09	0.000127	± 2.5	PASS
		VN	10	-1.55	-0.002191	± 2.5	PASS
		VN	20	3.37	0.004763	± 2.5	PASS
		VN	30	-1	-0.001413	± 2.5	PASS
		VN	40	2.61	0.003689	± 2.5	PASS
		VN	50	-1.59	-0.002247	± 2.5	PASS
	HCH	VN	-30	3.55	0.004963	± 2.5	PASS
		VN	-20	0.42	0.000587	± 2.5	PASS
		VN	-10	-1.77	-0.002474	± 2.5	PASS
		VN	0	0.43	0.000601	± 2.5	PASS
		VN	10	-1.64	-0.002293	± 2.5	PASS
		VN	20	1.7	0.002377	± 2.5	PASS
		VN	30	4.06	0.005676	± 2.5	PASS
		VN	40	-1.23	-0.001720	± 2.5	PASS

		VN	50	0.86	0.001202	± 2.5	PASS

Channel Bandwidth: 3 MHz

Channel Bandwidth: 3 MHz+							
Voltage							
Modulation	Channel	Voltage [Vdc]	Temperature (℃)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
QPSK	LCH	VL	TN	-0.2	-0.000286	± 2.5	PASS
		VN	TN	-0.91	-0.001299	± 2.5	PASS
		VH	TN	-0.42	-0.000600	± 2.5	PASS
	MCH	VL	TN	1.17	0.001654	± 2.5	PASS
		VN	TN	2.28	0.003223	± 2.5	PASS
		VH	TN	3.35	0.004735	± 2.5	PASS
	HCH	VL	TN	1.71	0.002393	± 2.5	PASS
		VN	TN	3.99	0.005584	± 2.5	PASS
		VH	TN	-0.46	-0.000644	± 2.5	PASS
16QAM	LCH	VL	TN	0.45	0.000642	± 2.5	PASS
		VN	TN	4.14	0.005910	± 2.5	PASS
		VH	TN	1.1	0.001570	± 2.5	PASS
	MCH	VL	TN	2.23	0.003152	± 2.5	PASS
		VN	TN	-1.51	-0.002134	± 2.5	PASS
		VH	TN	1.64	0.002318	± 2.5	PASS
	HCH	VL	TN	1.02	0.001428	± 2.5	PASS
		VN	TN	0.31	0.000434	± 2.5	PASS
		VH	TN	2.84	0.003975	± 2.5	PASS
Temperature							
Modulation	Channel	Voltage [Vdc]	Temperature (℃)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
QPSK	LCH	VN	-30	3.28	0.004682	± 2.5	PASS
		VN	-20	0.62	0.000885	± 2.5	PASS
		VN	-10	1.78	0.002541	± 2.5	PASS
		VN	0	-0.23	-0.000328	± 2.5	PASS
		VN	10	-1.91	-0.002727	± 2.5	PASS
		VN	20	-0.25	-0.000357	± 2.5	PASS
		VN	30	1.82	0.002598	± 2.5	PASS
		VN	40	1	0.001428	± 2.5	PASS
		VN	50	2.73	0.003897	± 2.5	PASS
	MCH	VN	-30	-1.32	-0.001866	± 2.5	PASS
		VN	-20	-0.13	-0.000184	± 2.5	PASS
		VN	-10	3.68	0.005201	± 2.5	PASS
		VN	0	0.37	0.000523	± 2.5	PASS
		VN	10	-0.32	-0.000452	± 2.5	PASS

		VN	20	0.38	0.000537	± 2.5	PASS
		VN	30	4.54	0.006417	± 2.5	PASS
		VN	40	4.41	0.006233	± 2.5	PASS
		VN	50	-1.31	-0.001852	± 2.5	PASS
	HCH	VN	-30	-1.66	-0.002323	± 2.5	PASS
		VN	-20	-1.65	-0.002309	± 2.5	PASS
		VN	-10	1.19	0.001666	± 2.5	PASS
		VN	0	-0.85	-0.001190	± 2.5	PASS
		VN	10	-1.21	-0.001693	± 2.5	PASS
		VN	20	0.24	0.000336	± 2.5	PASS
		VN	30	4.64	0.006494	± 2.5	PASS
		VN	40	-0.57	-0.000798	± 2.5	PASS
		VN	50	0.44	0.000616	± 2.5	PASS
16QAM	LCH	VN	-30	3.68	0.005253	± 2.5	PASS
		VN	-20	3.45	0.004925	± 2.5	PASS
		VN	-10	0.03	0.000043	± 2.5	PASS
		VN	0	-1.07	-0.001527	± 2.5	PASS
		VN	10	3.7	0.005282	± 2.5	PASS
		VN	20	3.03	0.004325	± 2.5	PASS
		VN	30	-1.05	-0.001499	± 2.5	PASS
		VN	40	-1.63	-0.002327	± 2.5	PASS
		VN	50	0.64	0.000914	± 2.5	PASS
	MCH	VN	-30	3.39	0.004792	± 2.5	PASS
		VN	-20	3.48	0.004919	± 2.5	PASS
		VN	-10	3.21	0.004537	± 2.5	PASS
		VN	0	4.09	0.005781	± 2.5	PASS
		VN	10	1.71	0.002417	± 2.5	PASS
		VN	20	1.71	0.002417	± 2.5	PASS
		VN	30	0.67	0.000947	± 2.5	PASS
		VN	40	-0.2	-0.000283	± 2.5	PASS
		VN	50	-1.74	-0.002459	± 2.5	PASS
	HCH	VN	-30	-0.72	-0.001008	± 2.5	PASS
		VN	-20	3.13	0.004381	± 2.5	PASS
		VN	-10	-0.15	-0.000210	± 2.5	PASS
		VN	0	-1.63	-0.002281	± 2.5	PASS
		VN	10	3.46	0.004843	± 2.5	PASS
		VN	20	-1.21	-0.001693	± 2.5	PASS
		VN	30	4.84	0.006774	± 2.5	PASS
		VN	40	2.69	0.003765	± 2.5	PASS
		VN	50	-0.97	-0.001358	± 2.5	PASS

Channel Bandwidth: 5 MHz

Channel Bandwidth: 5 MHz							
Voltage							
Modulation	Channel	Voltage [Vdc]	Temperature (℃)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
QPSK	LCH	VL	TN	2.24	0.003193	± 2.5	PASS
		VN	TN	3.12	0.004448	± 2.5	PASS
		VH	TN	4.08	0.005816	± 2.5	PASS
	MCH	VL	TN	-0.75	-0.001060	± 2.5	PASS
		VN	TN	3.72	0.005258	± 2.5	PASS
		VH	TN	-1.97	-0.002784	± 2.5	PASS
	HCH	VL	TN	-0.04	-0.000056	± 2.5	PASS
		VN	TN	0.58	0.000813	± 2.5	PASS
		VH	TN	3.03	0.004247	± 2.5	PASS
16QAM	LCH	VL	TN	-1	-0.001426	± 2.5	PASS
		VN	TN	-1.94	-0.002766	± 2.5	PASS
		VH	TN	2.9	0.004134	± 2.5	PASS
	MCH	VL	TN	2.8	0.003958	± 2.5	PASS
		VN	TN	0.82	0.001159	± 2.5	PASS
		VH	TN	0.74	0.001046	± 2.5	PASS
	HCH	VL	TN	4.63	0.006489	± 2.5	PASS
		VN	TN	-0.84	-0.001177	± 2.5	PASS
		VH	TN	0.66	0.000925	± 2.5	PASS
Temperature							
Modulation	Channel	Voltage [Vdc]	Temperature (℃)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
QPSK	LCH	VN	-30	-1.59	-0.002267	± 2.5	PASS
		VN	-20	3.48	0.004961	± 2.5	PASS
		VN	-10	0.43	0.000613	± 2.5	PASS
		VN	0	2.48	0.003535	± 2.5	PASS
		VN	10	-0.88	-0.001254	± 2.5	PASS
		VN	20	1.09	0.001554	± 2.5	PASS
		VN	30	4.94	0.007042	± 2.5	PASS
		VN	40	1.94	0.002766	± 2.5	PASS
		VN	50	2.53	0.003607	± 2.5	PASS
	MCH	VN	-30	-0.48	-0.000678	± 2.5	PASS
		VN	-20	1.78	0.002516	± 2.5	PASS
		VN	-10	-1.45	-0.002049	± 2.5	PASS
		VN	0	-1.12	-0.001583	± 2.5	PASS
		VN	10	2.39	0.003378	± 2.5	PASS
		VN	20	2.69	0.003802	± 2.5	PASS
		VN	30	4.69	0.006629	± 2.5	PASS

		VN	40	3.65	0.005159	± 2.5	PASS
		VN	50	-1.7	-0.002403	± 2.5	PASS
	HCH	VN	-30	1.75	0.002453	± 2.5	PASS
		VN	-20	1.5	0.002102	± 2.5	PASS
		VN	-10	1.4	0.001962	± 2.5	PASS
		VN	0	-1.2	-0.001682	± 2.5	PASS
		VN	10	-1.74	-0.002439	± 2.5	PASS
		VN	20	4.2	0.005886	± 2.5	PASS
		VN	30	2.11	0.002957	± 2.5	PASS
		VN	40	2.27	0.003181	± 2.5	PASS
		VN	50	4.87	0.006826	± 2.5	PASS
16QAM	LCH	VN	-30	2.72	0.003877	± 2.5	PASS
		VN	-20	-0.33	-0.000470	± 2.5	PASS
		VN	-10	0.16	0.000228	± 2.5	PASS
		VN	0	0.3	0.000428	± 2.5	PASS
		VN	10	3.86	0.005502	± 2.5	PASS
		VN	20	-1.57	-0.002238	± 2.5	PASS
		VN	30	4.74	0.006757	± 2.5	PASS
		VN	40	1.73	0.002466	± 2.5	PASS
		VN	50	4.34	0.006187	± 2.5	PASS
	MCH	VN	-30	0.48	0.000678	± 2.5	PASS
		VN	-20	2.93	0.004141	± 2.5	PASS
		VN	-10	1.94	0.002742	± 2.5	PASS
		VN	0	-1.47	-0.002078	± 2.5	PASS
		VN	10	1.42	0.002007	± 2.5	PASS
		VN	20	0.92	0.001300	± 2.5	PASS
		VN	30	0.03	0.000042	± 2.5	PASS
		VN	40	2.44	0.003449	± 2.5	PASS
		VN	50	3.32	0.004693	± 2.5	PASS
	HCH	VN	-30	0.43	0.000603	± 2.5	PASS
		VN	-20	1.91	0.002677	± 2.5	PASS
		VN	-10	1.07	0.001500	± 2.5	PASS
		VN	0	-0.97	-0.001359	± 2.5	PASS
		VN	10	-1.15	-0.001612	± 2.5	PASS
		VN	20	-1.5	-0.002102	± 2.5	PASS
		VN	30	2.74	0.003840	± 2.5	PASS
		VN	40	0.52	0.000729	± 2.5	PASS
		VN	50	-0.54	-0.000757	± 2.5	PASS

Channel Bandwidth: 10 MHz

Channel Bandwidth: 10 MHz

Voltage							
Modulation	Channel	Voltage [Vdc]	Temperature (℃)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
QPSK	LCH	VL	TN	1.8	0.002557	± 2.5	PASS
		VN	TN	2.29	0.003253	± 2.5	PASS
		VH	TN	0.9	0.001278	± 2.5	PASS
	MCH	VL	TN	2.01	0.002841	± 2.5	PASS
		VN	TN	-0.3	-0.000424	± 2.5	PASS
		VH	TN	0.68	0.000961	± 2.5	PASS
	HCH	VL	TN	-1.76	-0.002475	± 2.5	PASS
		VN	TN	2.52	0.003544	± 2.5	PASS
		VH	TN	3.19	0.004487	± 2.5	PASS
16QAM	LCH	VL	TN	1.24	0.001761	± 2.5	PASS
		VN	TN	0.13	0.000185	± 2.5	PASS
		VH	TN	2.99	0.004247	± 2.5	PASS
	MCH	VL	TN	1.67	0.002360	± 2.5	PASS
		VN	TN	1.29	0.001823	± 2.5	PASS
		VH	TN	-1.15	-0.001625	± 2.5	PASS
	HCH	VL	TN	-1.25	-0.001758	± 2.5	PASS
		VN	TN	-0.98	-0.001378	± 2.5	PASS
		VH	TN	4.4	0.006188	± 2.5	PASS
Temperature							
Modulation	Channel	Voltage [Vdc]	Temperature (℃)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
16QAM	LCH	VN	-30	3.67	0.005213	± 2.5	PASS
		VN	-20	-1.71	-0.002429	± 2.5	PASS
		VN	-10	2.31	0.003281	± 2.5	PASS
		VN	0	-1.55	-0.002202	± 2.5	PASS
		VN	10	0.54	0.000767	± 2.5	PASS
		VN	20	-1.69	-0.002401	± 2.5	PASS
		VN	30	4.63	0.006577	± 2.5	PASS
		VN	40	-1.59	-0.002259	± 2.5	PASS
		VN	50	3.71	0.005270	± 2.5	PASS
	MCH	VN	-30	3.78	0.005343	± 2.5	PASS
		VN	-20	-0.43	-0.000608	± 2.5	PASS
		VN	-10	-0.12	-0.000170	± 2.5	PASS
		VN	0	2.22	0.003138	± 2.5	PASS
		VN	10	-1.03	-0.001456	± 2.5	PASS
		VN	20	-1.48	-0.002092	± 2.5	PASS
		VN	30	-0.07	-0.000099	± 2.5	PASS
		VN	40	4.34	0.006134	± 2.5	PASS
		VN	50	2.7	0.003816	± 2.5	PASS

	HCH	VN	-30	-0.1	-0.000141	± 2.5	PASS
		VN	-20	3.62	0.005091	± 2.5	PASS
		VN	-10	1.57	0.002208	± 2.5	PASS
		VN	0	-1.53	-0.002152	± 2.5	PASS
		VN	10	2.96	0.004163	± 2.5	PASS
		VN	20	-0.63	-0.000886	± 2.5	PASS
		VN	30	3.17	0.004459	± 2.5	PASS
		VN	40	1.81	0.002546	± 2.5	PASS
		VN	50	4.28	0.006020	± 2.5	PASS
QPSK	LCH	VN	-30	4.73	0.006719	± 2.5	PASS
		VN	-20	3.42	0.004858	± 2.5	PASS
		VN	-10	2.13	0.003026	± 2.5	PASS
		VN	0	3.97	0.005639	± 2.5	PASS
		VN	10	4.05	0.005753	± 2.5	PASS
		VN	20	4.21	0.005980	± 2.5	PASS
		VN	30	2.37	0.003366	± 2.5	PASS
		VN	40	0.52	0.000739	± 2.5	PASS
		VN	50	-1.85	-0.002628	± 2.5	PASS
	MCH	VN	-30	-1.46	-0.002064	± 2.5	PASS
		VN	-20	3.85	0.005442	± 2.5	PASS
		VN	-10	-0.19	-0.000269	± 2.5	PASS
		VN	0	-0.87	-0.001230	± 2.5	PASS
		VN	10	2.32	0.003279	± 2.5	PASS
		VN	20	-0.22	-0.000311	± 2.5	PASS
		VN	30	1.63	0.002304	± 2.5	PASS
		VN	40	-1.84	-0.002601	± 2.5	PASS
		VN	50	4.91	0.006940	± 2.5	PASS
	HCH	VN	-30	-0.13	-0.000183	± 2.5	PASS
		VN	-20	-0.44	-0.000619	± 2.5	PASS
		VN	-10	4.07	0.005724	± 2.5	PASS
		VN	0	-1.92	-0.002700	± 2.5	PASS
		VN	10	-0.73	-0.001027	± 2.5	PASS
		VN	20	-1.05	-0.001477	± 2.5	PASS
		VN	30	0.33	0.000464	± 2.5	PASS
		VN	40	-1.84	-0.002588	± 2.5	PASS
		VN	50	2.44	0.003432	± 2.5	PASS