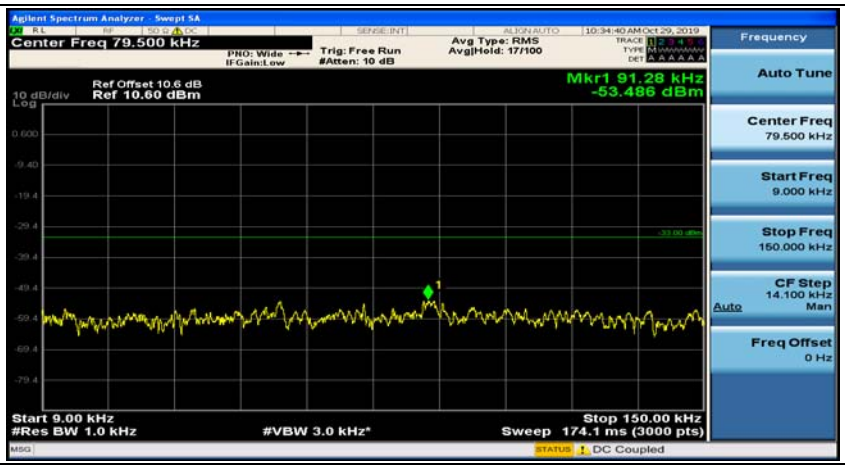
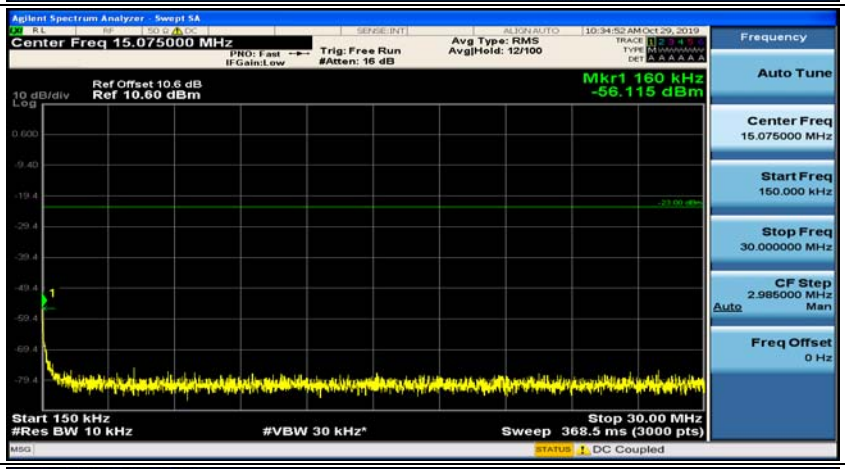
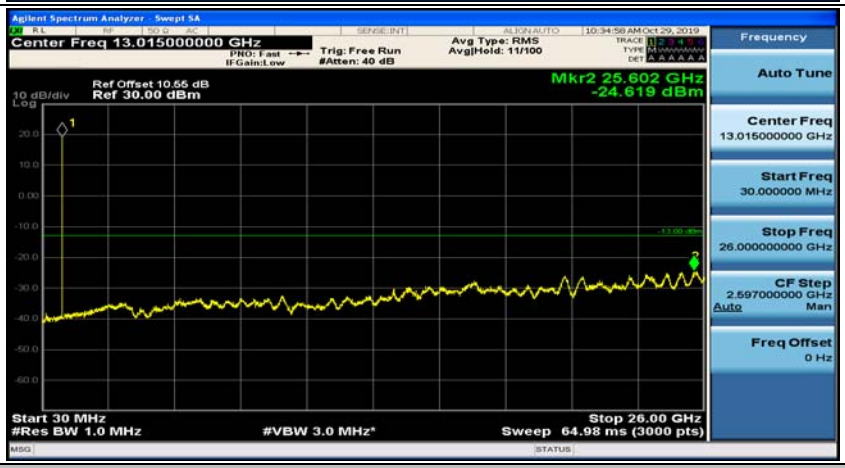
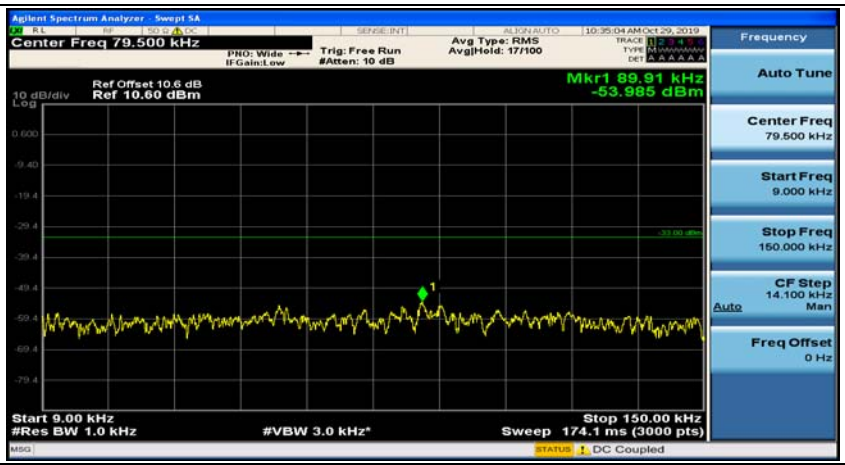
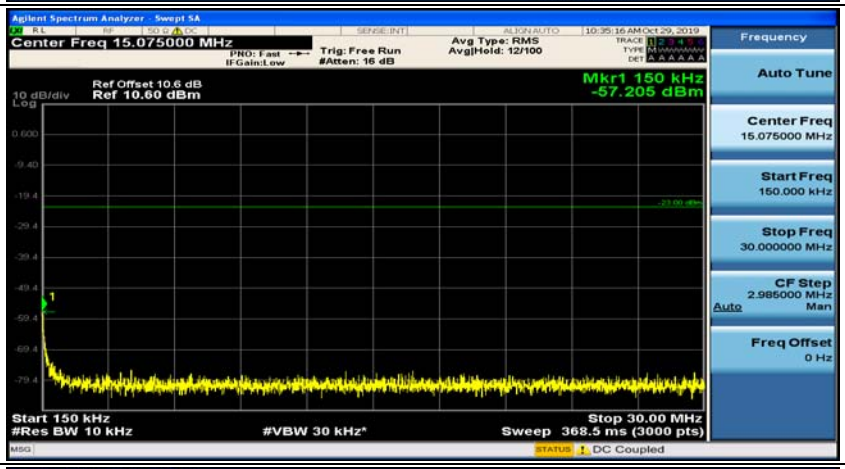


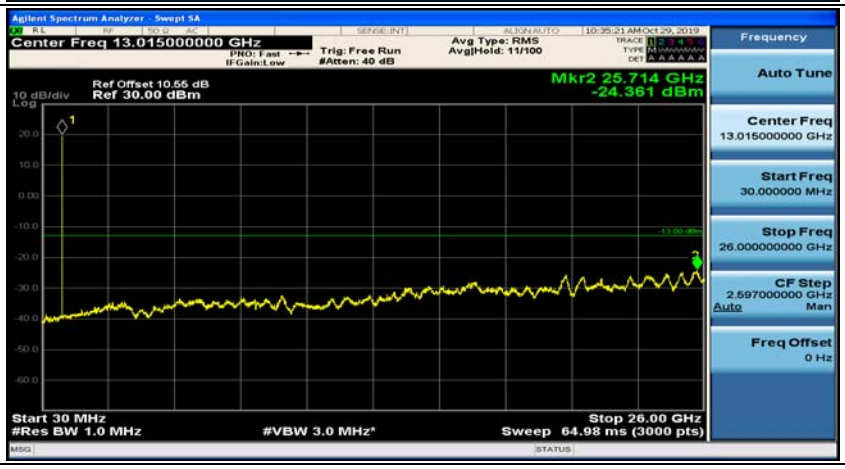


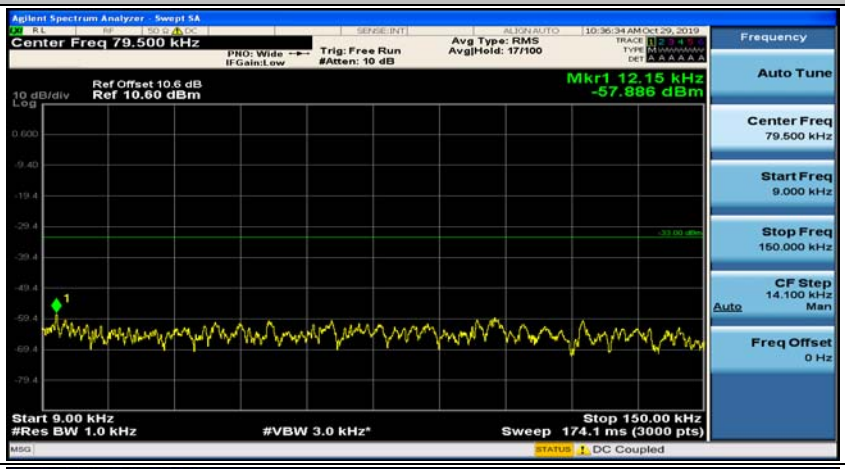
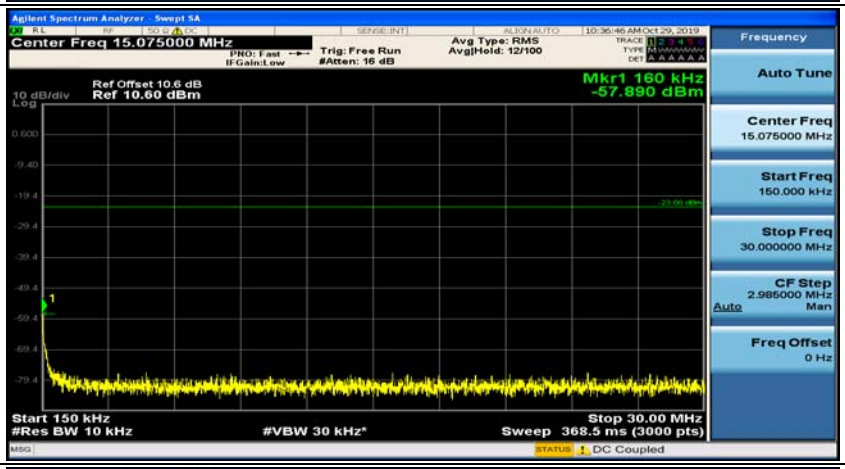
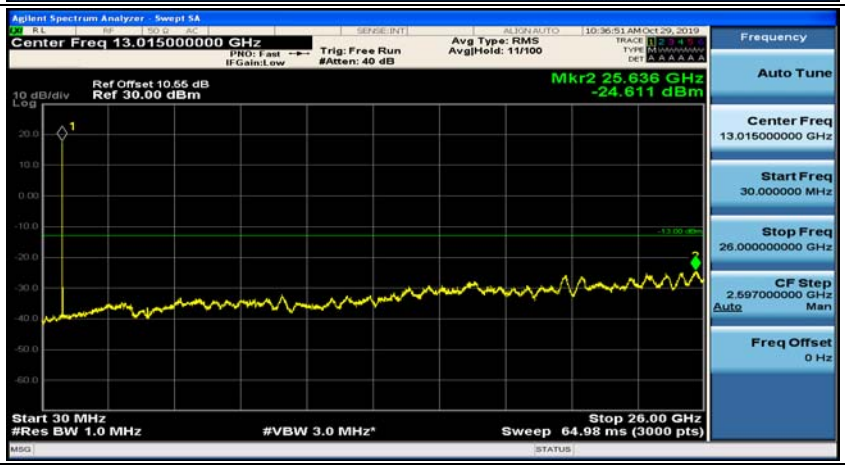


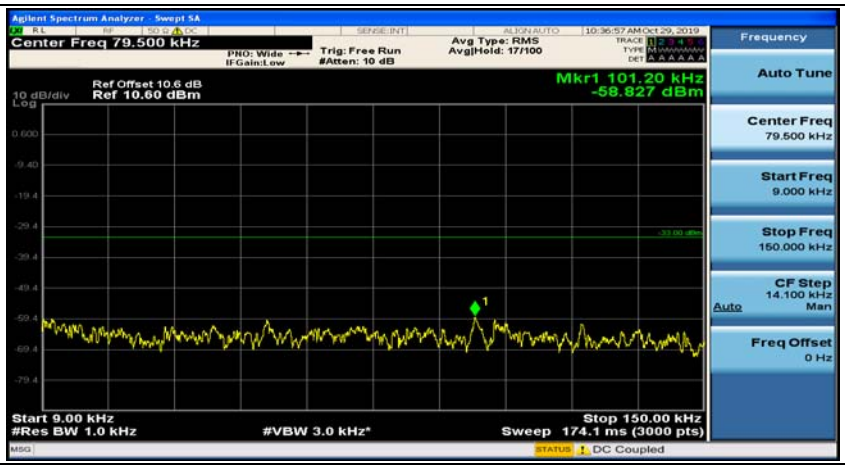
(Channel Bandwidth: 5 MHz)_LCH_QPSK_1RB#24

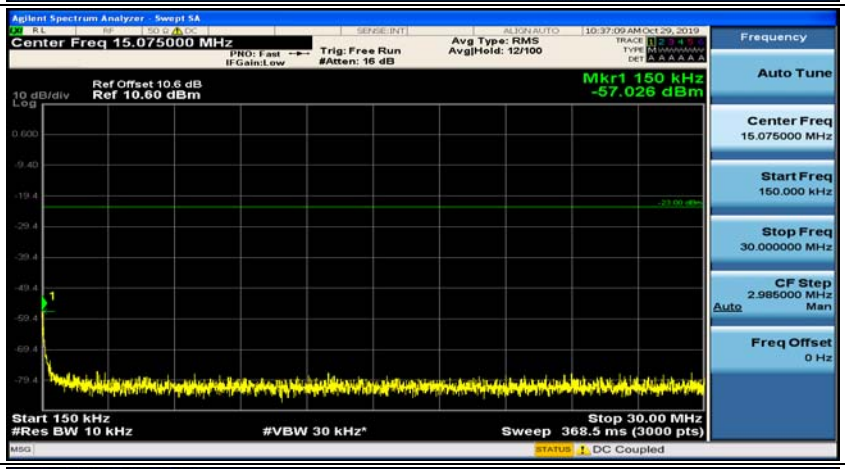

Agilent Spectrum Analyzer - Swept SA
Center Freq 79.500 kHz
PNO: Wide
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 17/100
10:35:04 AM Oct 29, 2019
Frequency
Ref Offset 10.6 dB
10 dB/div
Log
Ref 10.60 dBm
Mkr1 89.91 kHz
-53.985 dBm
Auto Tune
Center Freq
79.500 kHz
Start Freq
9.000 kHz
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
10:35:16 AM Oct 29, 2019
Frequency
Ref Offset 10.6 dB
10 dB/div
Log
Ref 10.60 dBm
Mkr1 150 kHz
-57.205 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

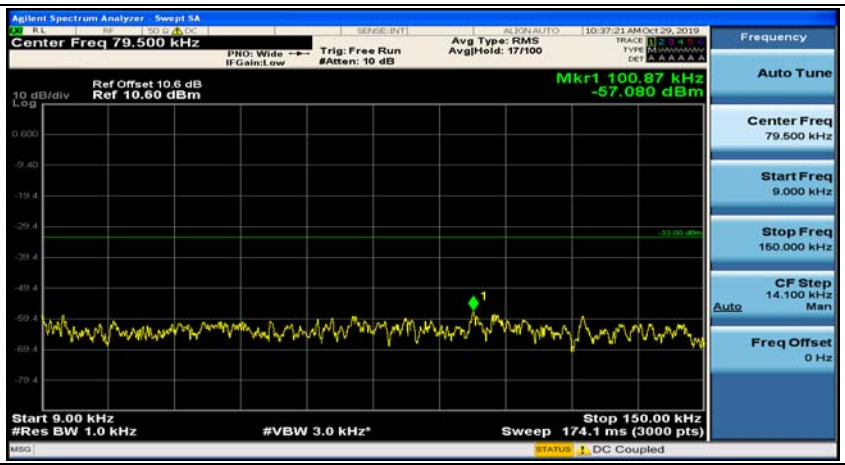

Agilent Spectrum Analyzer - Swept SA
Center Freq 13.015000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 40 dB
Avg Type: RMS
Avg|Hold: 11/100
10:35:21 AM Oct 29, 2019
Frequency
Ref Offset 10.55 dB
10 dB/div
Log
Ref 30.00 dBm
Mkr2 25.714 GHz
-24.361 dBm
Auto Tune
Center Freq
13.015000000 GHz
Start 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)

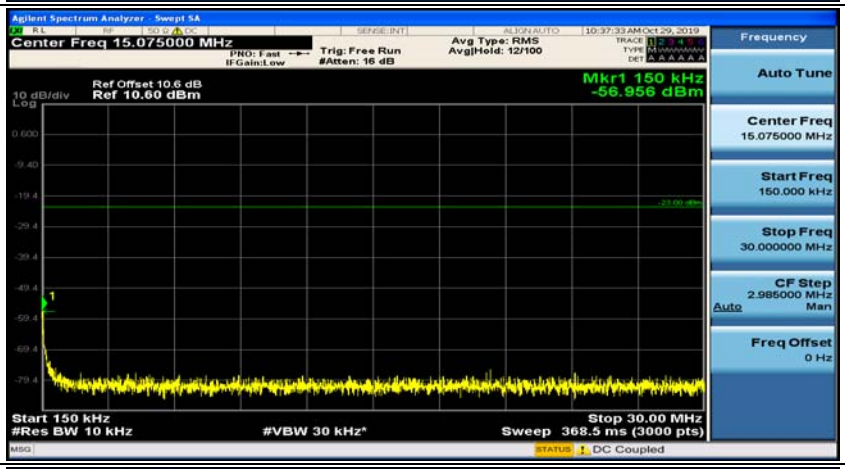
(Channel Bandwidth: 5 MHz)_MCH_QPSK_1RB#0



(Channel Bandwidth: 5 MHz)_MCH_QPSK_1RB#12

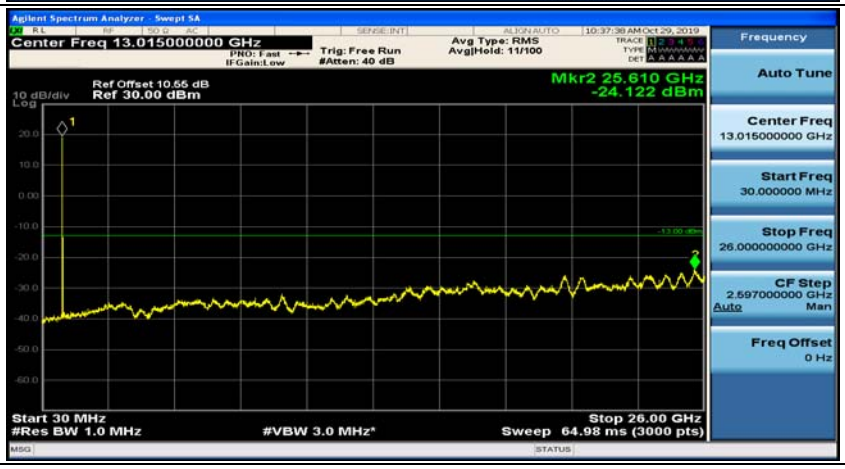


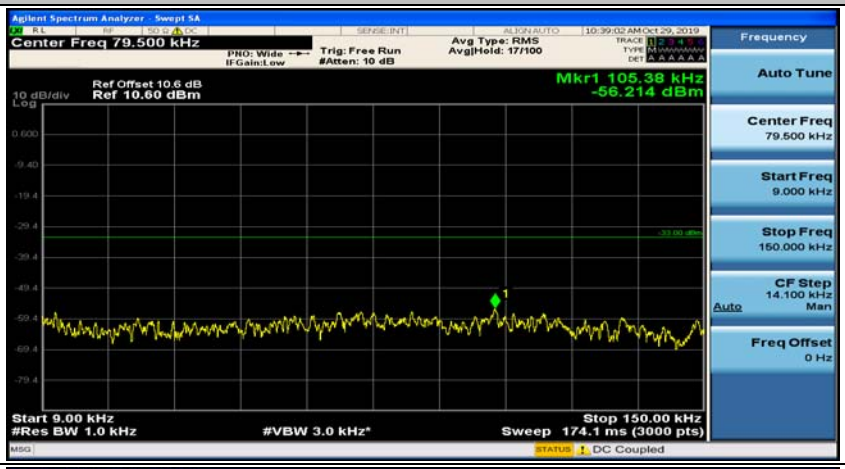
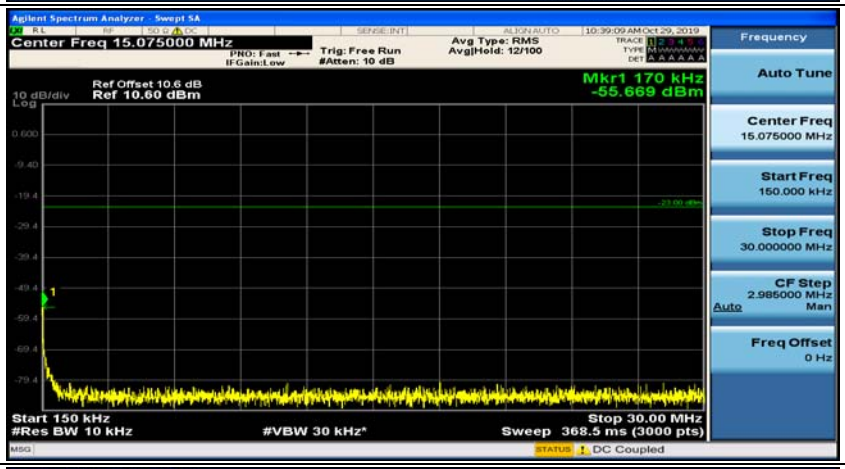
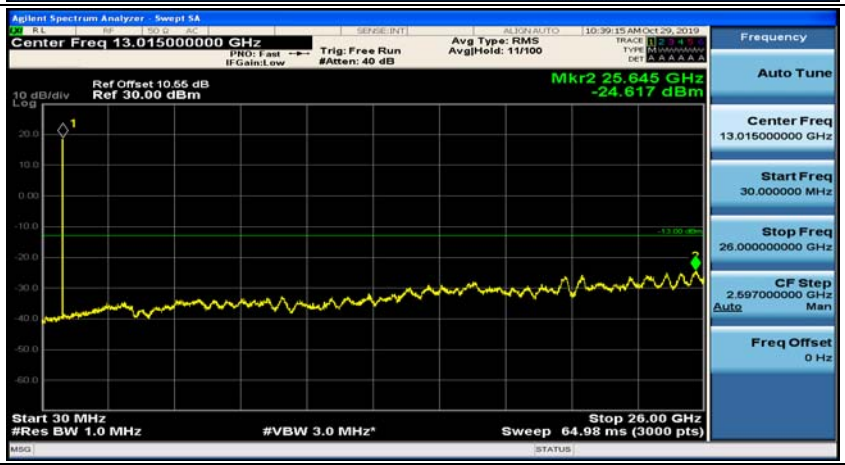


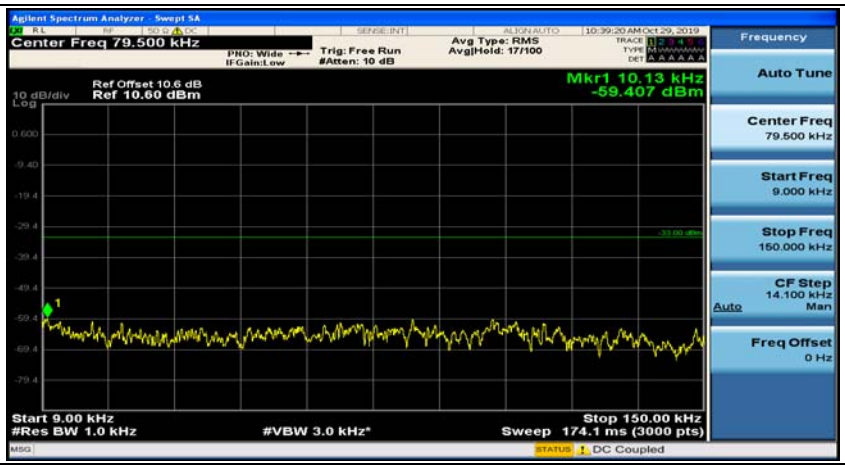
(Channel Bandwidth: 5 MHz)_MCH_QPSK_1RB#24

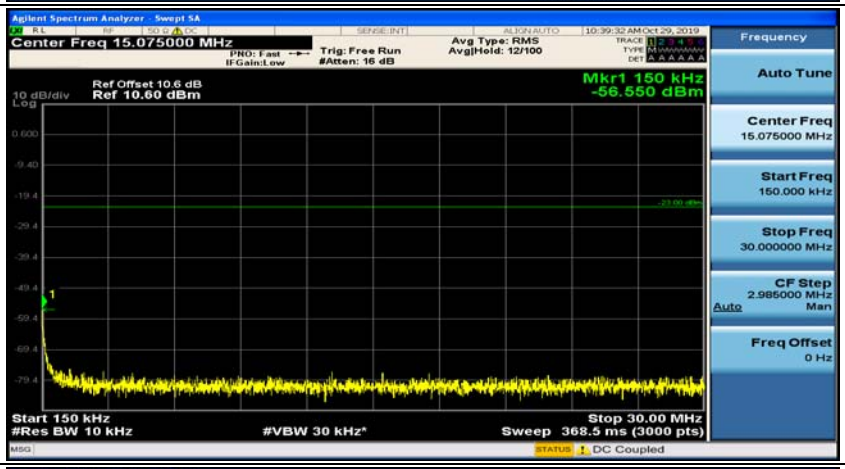

Agilent Spectrum Analyzer - Swept SA
Center Freq 79.500 kHz
PNO: Wide
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 17/100
10:37:21 AM Oct 29, 2019
Ref Offset 10.6 dB
10 dB/div
Log
Ref 10.60 dBm
Mkr1 100.87 kHz
-57.080 dBm
Start 9.00 kHz
#Res BW 1.0 kHz
#VBW 3.0 kHz*
Stop 150.00 kHz
Sweep 174.1 ms (3000 pts)
DC Coupled
Frequency
Auto Tune
Center Freq
79.500 kHz
Start Freq
9.000 kHz
Stop Freq
150.000 kHz
CF Step
14.100 kHz
Auto
Man
Freq Offset
0 Hz

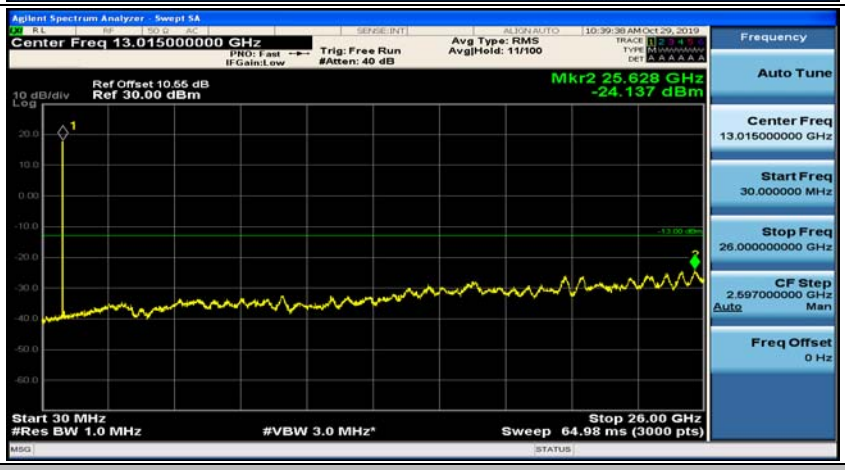

Agilent Spectrum Analyzer - Swept SA
Center Freq 15.075000 MHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 16 dB
Avg Type: RMS
Avg|Hold: 12/100
10:37:33 AM Oct 29, 2019
Ref Offset 10.6 dB
10 dB/div
Log
Ref 10.60 dBm
Mkr1 150 kHz
-56.956 dBm
Start 150 kHz
#Res BW 10 kHz
#VBW 30 kHz*
Stop 30.00 MHz
Sweep 368.5 ms (3000 pts)
DC Coupled
Frequency
Auto Tune
Center Freq
15.075000 MHz
Start Freq
150.000 kHz
Stop Freq
30.000000 MHz
CF Step
2.985000 MHz
Auto
Man
Freq Offset
0 Hz


Agilent Spectrum Analyzer - Swept SA
Center Freq 13.015000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 40 dB
Avg Type: RMS
Avg|Hold: 11/100
10:37:38 AM Oct 29, 2019
Ref Offset 10.55 dB
10 dB/div
Log
Ref 30.00 dBm
Mkr2 25.610 GHz
-24.122 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

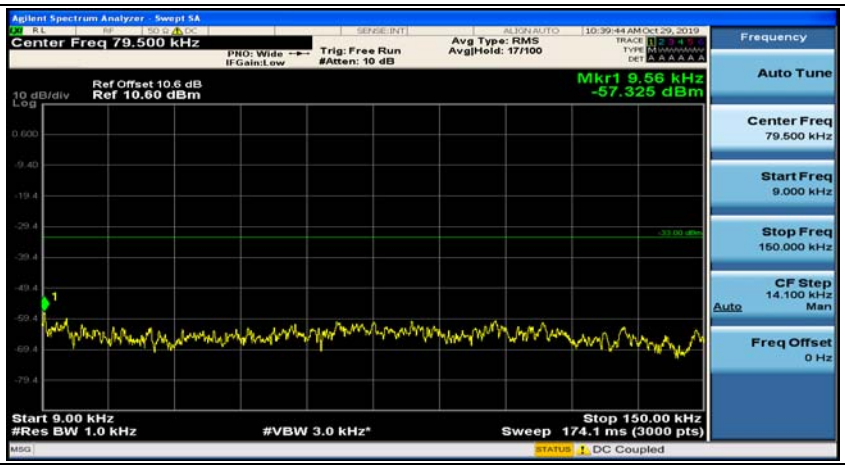
(Channel Bandwidth: 5 MHz)_HCH_QPSK_1RB#0



(Channel Bandwidth: 5 MHz)_HCH_QPSK_1RB#12

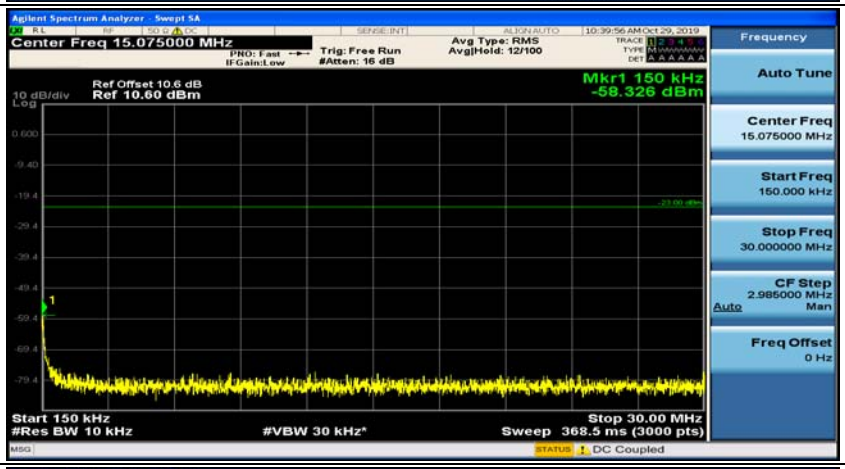


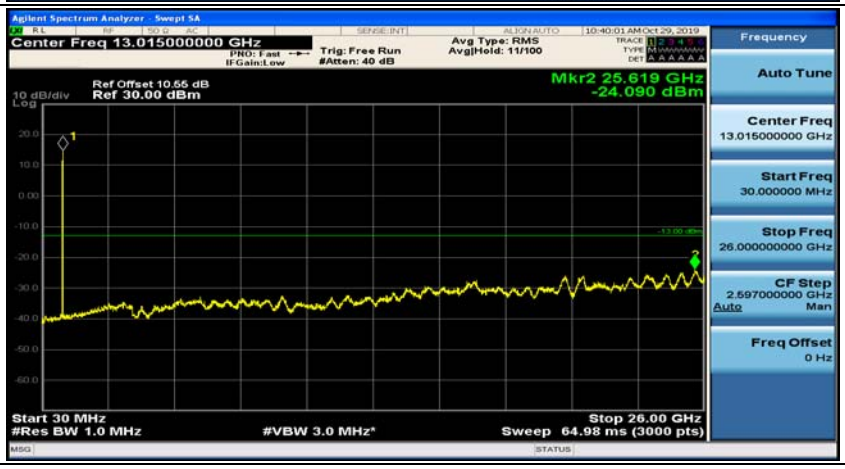


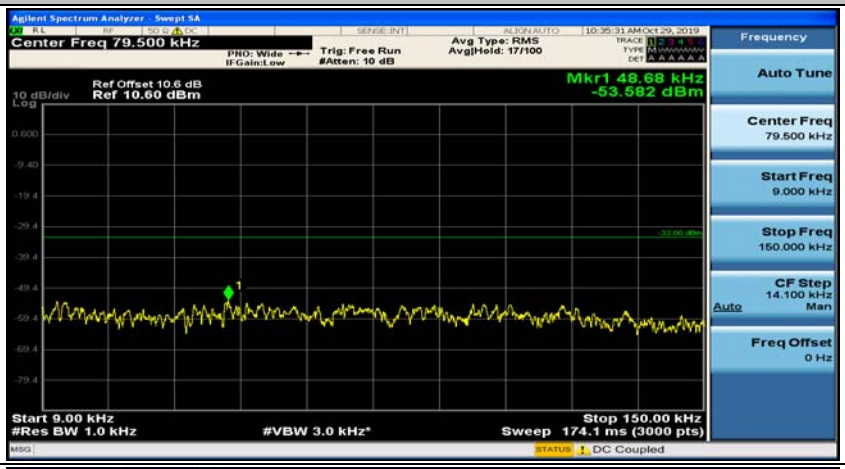
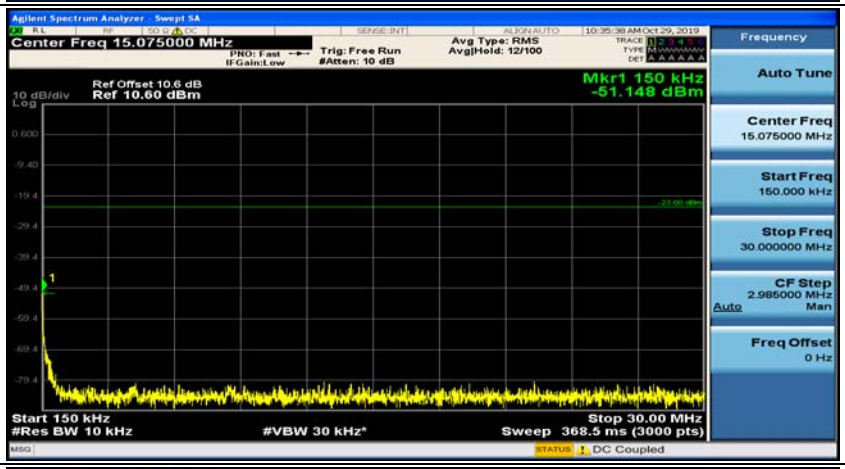
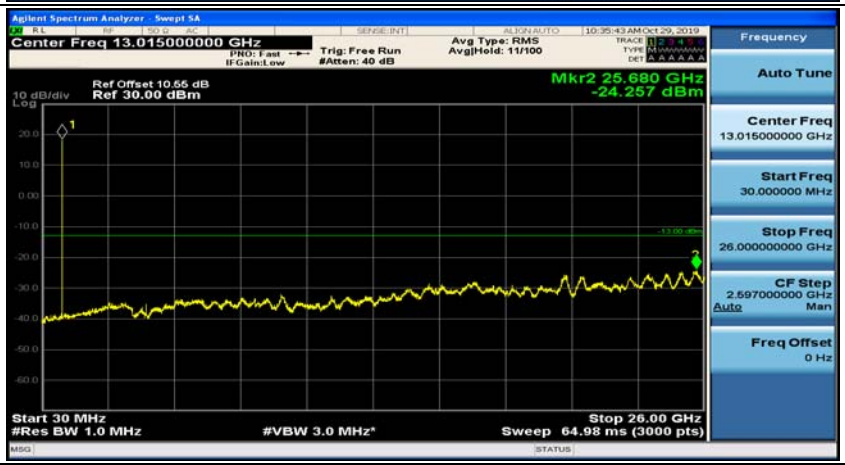


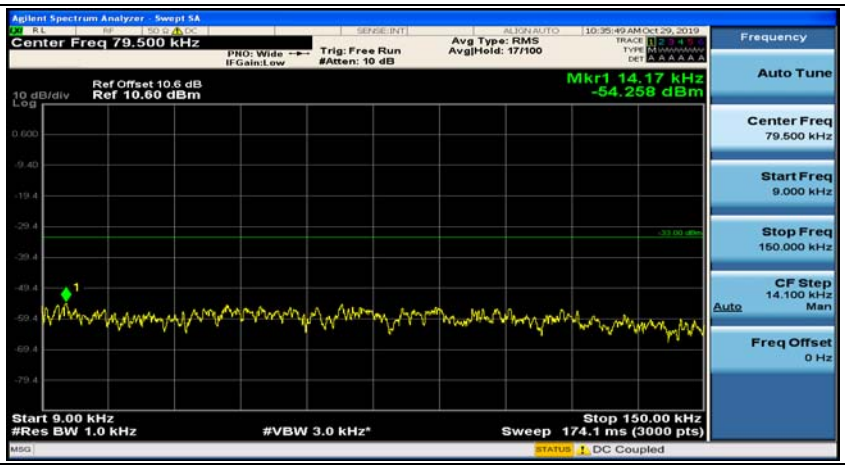
(Channel Bandwidth: 5 MHz)_HCH_QPSK_1RB#24

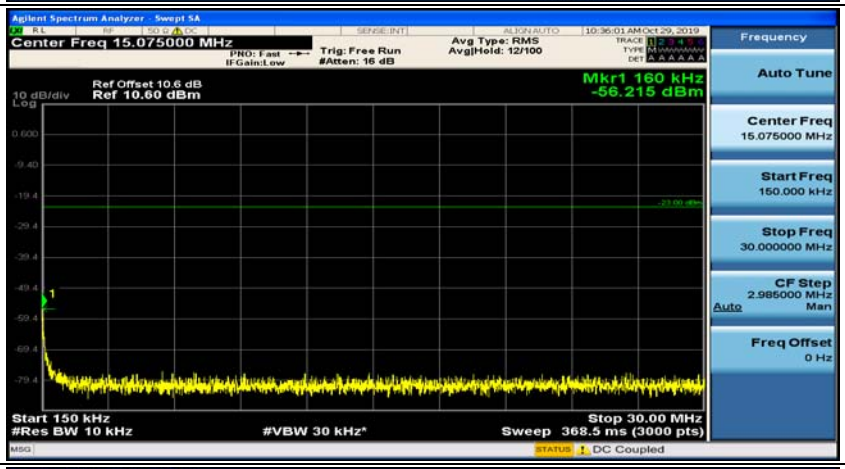

Agilent Spectrum Analyzer - Swept SA
Center Freq 79.500 kHz
PNO: Wide
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 17/100
10:39:44 AM Oct 29, 2019
Frequency
Ref Offset 10.6 dB
10 dB/div
Log
Ref 10.60 dBm
Mkr1 9.56 kHz
-57.325 dBm
Auto Tune
Center Freq
79.500 kHz
Start Freq
9.000 kHz
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

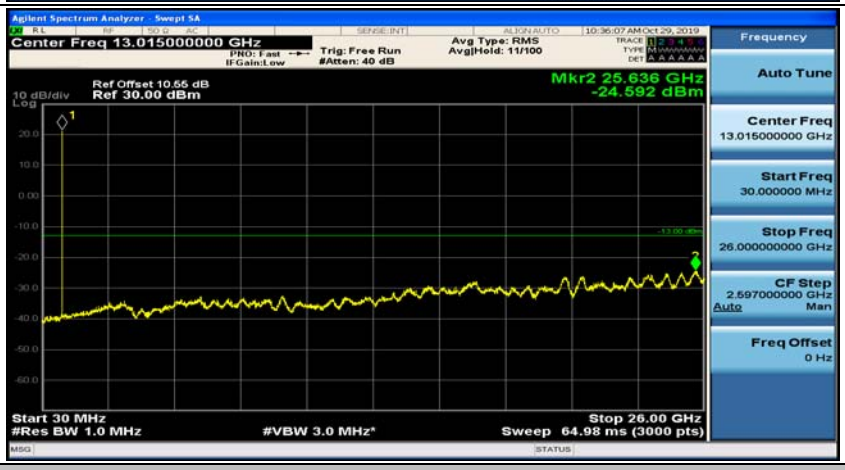

Agilent Spectrum Analyzer - Swept SA
Center Freq 15.075000 MHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 16 dB
Avg Type: RMS
Avg|Hold: 12/100
10:39:56 AM Oct 29, 2019
Frequency
Ref Offset 10.6 dB
10 dB/div
Log
Ref 10.60 dBm
Mkr1 150 kHz
-58.326 dBm
Auto Tune
Center Freq
15.075000 MHz
Start Freq
150.000 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
10:40:01 AM Oct 29, 2019
Frequency
Ref Offset 10.55 dB
10 dB/div
Log
Ref 30.00 dBm
Mkr2 25.619 GHz
-24.090 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)

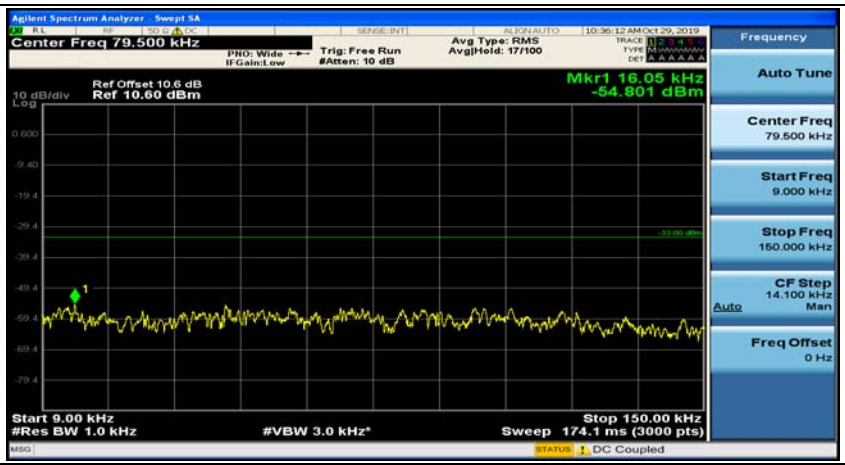
(Channel Bandwidth: 5 MHz)_LCH_16QAM_1RB#0



(Channel Bandwidth: 5 MHz)_LCH_16QAM_1RB#12

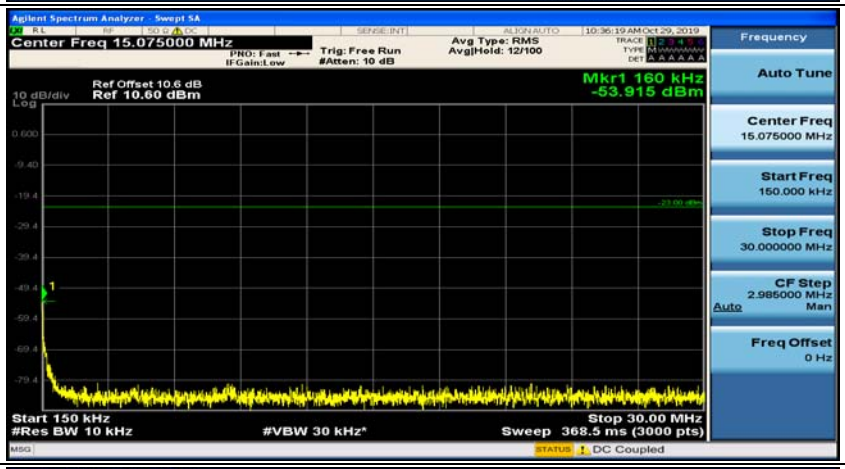


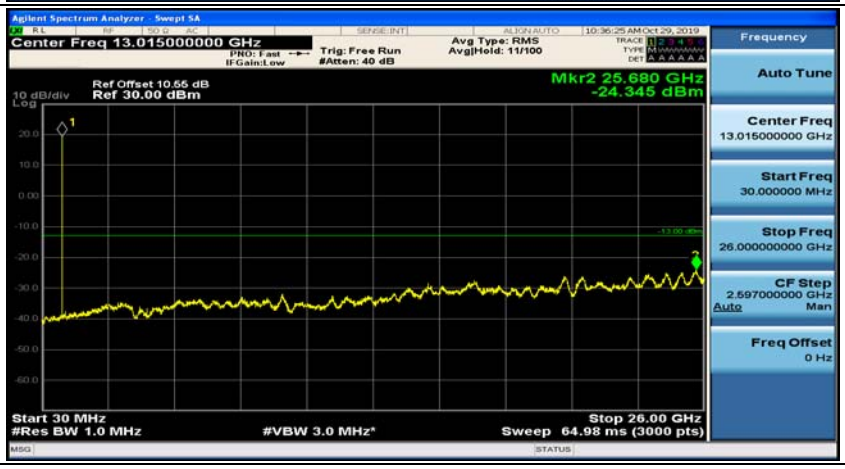


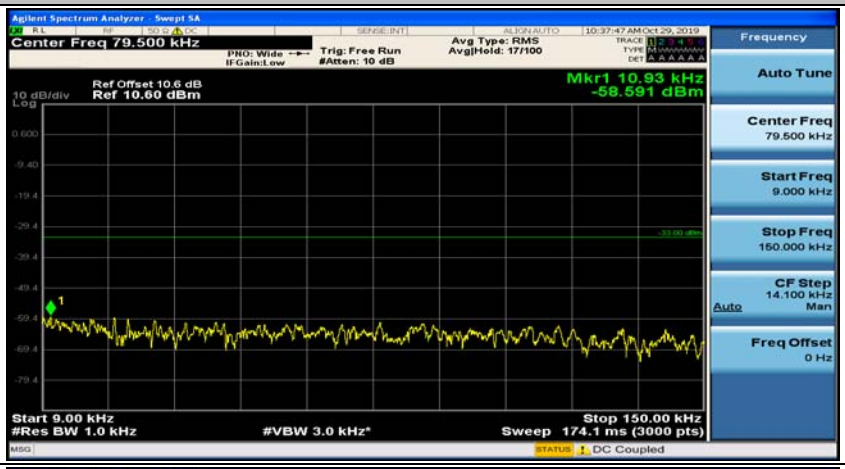
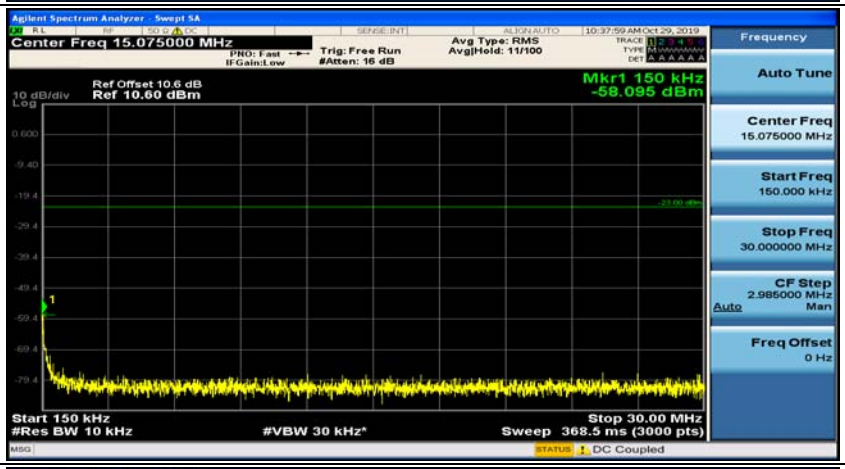
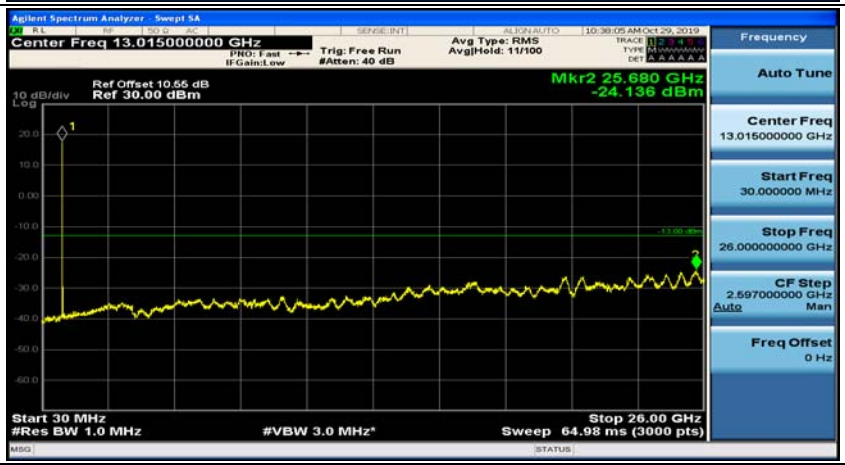


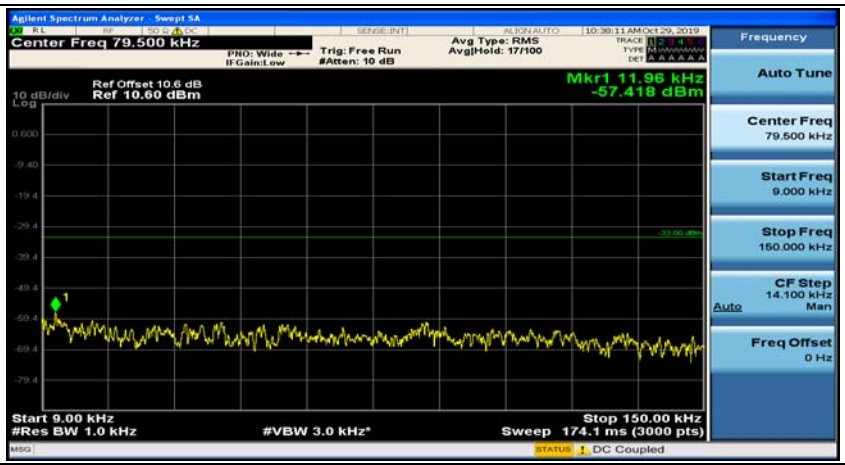
(Channel Bandwidth: 5 MHz)_LCH_16QAM_1RB#24

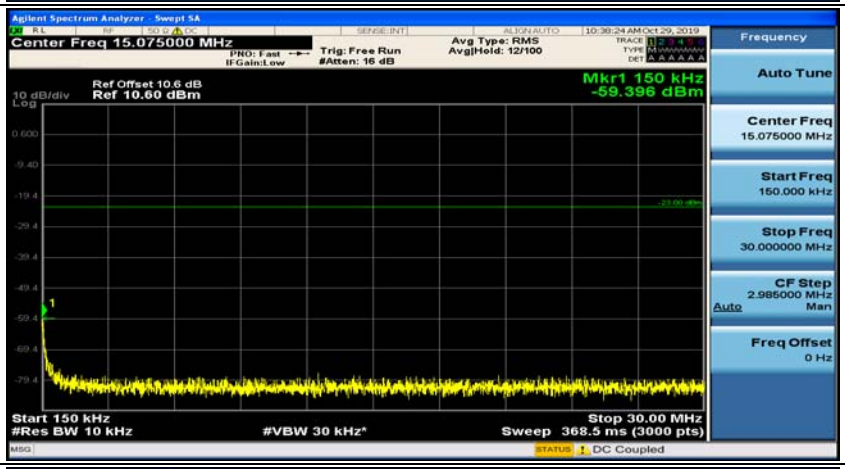

Agilent Spectrum Analyzer - Swept SA
Center Freq 79.500 kHz
PNO: Wide
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 17/100
10:36:12 AM Oct 29, 2019
Frequency
Auto Tune
Mkr1 16.05 kHz
-54.801 dBm
Ref Offset 10.6 dB
10 dB/div
Log
Ref 10.60 dBm
Center Freq
79.500 kHz
Start Freq
9.000 kHz
Stop Freq
150.000 kHz
CF Step
14.100 kHz
Auto
Man
Freq Offset
0 Hz
Start 9.00 kHz
#Res BW 1.0 kHz
#VBW 3.0 kHz*
Stop 150.00 kHz
Sweep 174.1 ms (3000 pts)
DC Coupled


Agilent Spectrum Analyzer - Swept SA
Center Freq 15.075000 MHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 12/100
10:36:19 AM Oct 29, 2019
Frequency
Auto Tune
Mkr1 160 kHz
-53.915 dBm
Ref Offset 10.6 dB
10 dB/div
Log
Ref 10.60 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

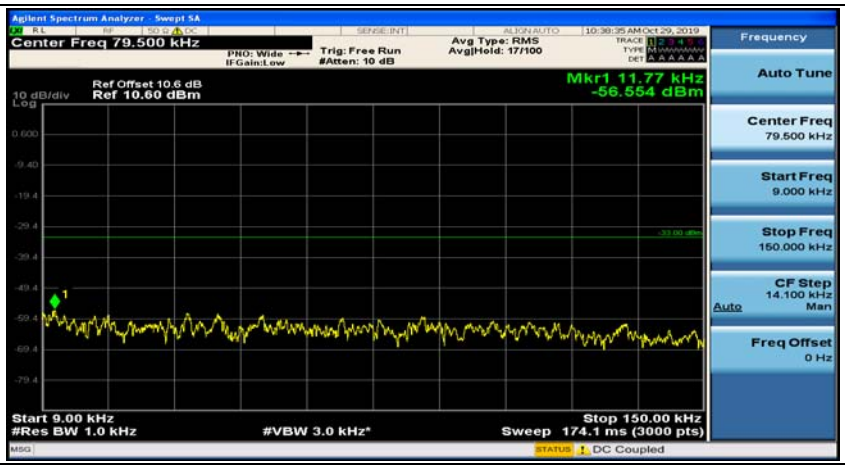

Agilent Spectrum Analyzer - Swept SA
Center Freq 13.015000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 40 dB
Avg Type: RMS
Avg|Hold: 11/100
10:36:25 AM Oct 29, 2019
Frequency
Auto Tune
Mkr2 25.680 GHz
-24.345 dBm
Ref Offset 10.55 dB
10 dB/div
Log
Ref 30.00 dBm
Center Freq
13.015000000 GHz
Start 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)

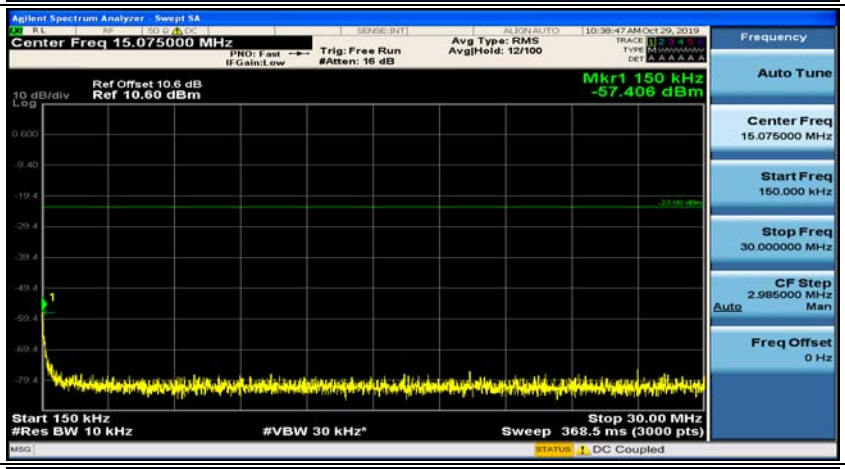
(Channel Bandwidth: 5 MHz)_MCH_16QAM_1RB#0



(Channel Bandwidth: 5 MHz)_MCH_16QAM_1RB#12

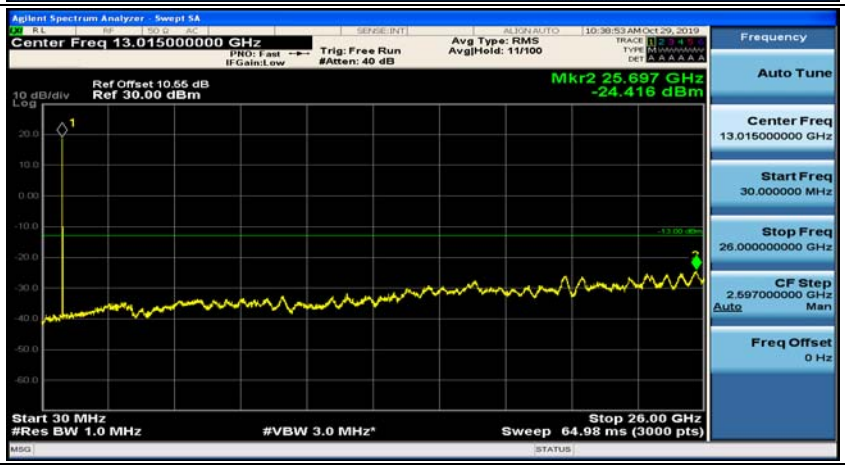


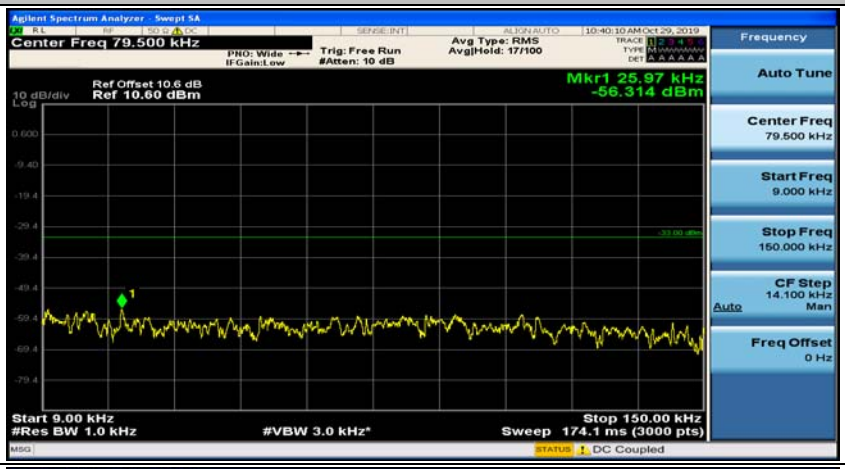
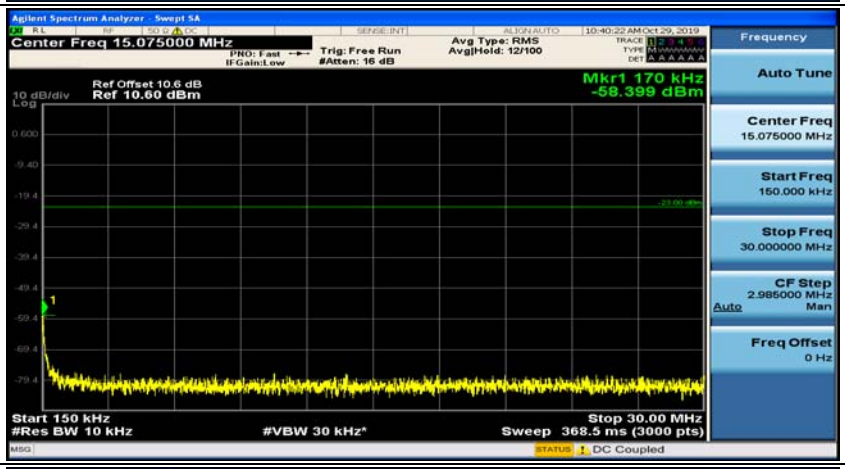
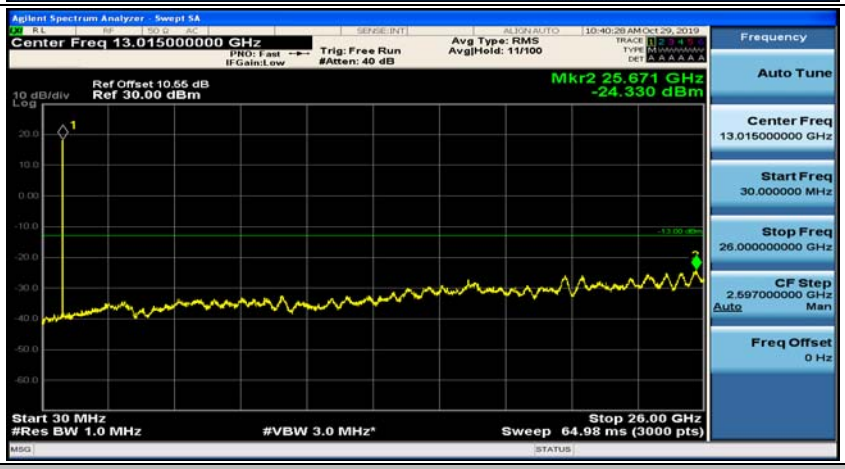


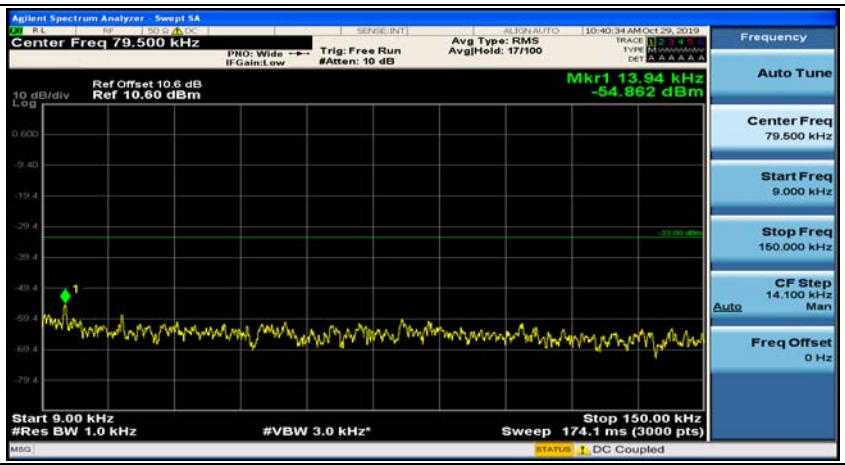
(Channel Bandwidth: 5 MHz)_MCH_16QAM_1RB#24

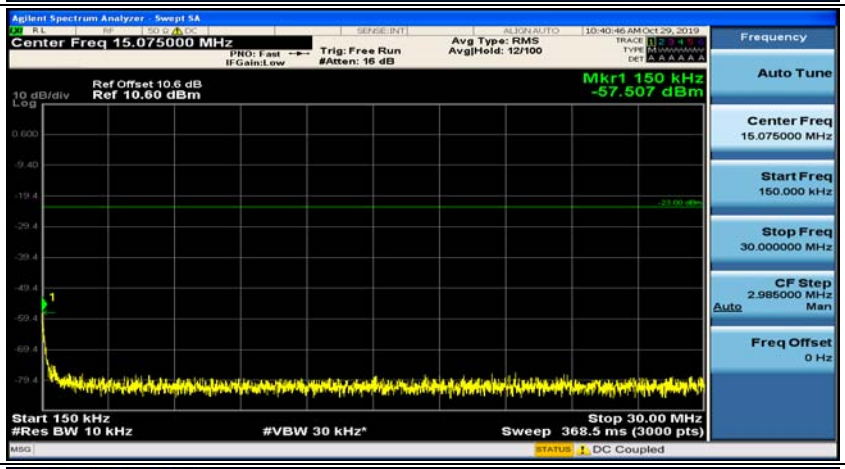

Agilent Spectrum Analyzer - Swept SA
Center Freq 79.500 kHz
PNO: Wide
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 17/100
10:38:35 AM Oct 29, 2019
Frequency
Ref Offset 10.6 dB
10 dB/div
Log
Ref 10.60 dBm
Mkr1 11.77 kHz
-56.554 dBm
Auto Tune
Center Freq
79.500 kHz
Start Freq
9.000 kHz
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

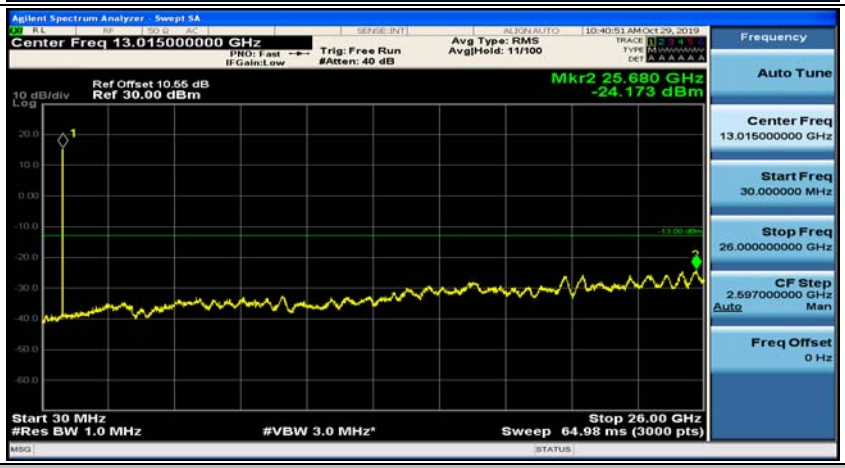

Agilent Spectrum Analyzer - Swept SA
Center Freq 15.075000 MHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 16 dB
Avg Type: RMS
Avg|Hold: 12/100
10:38:47 AM Oct 29, 2019
Frequency
Ref Offset 10.6 dB
10 dB/div
Log
Ref 10.60 dBm
Mkr1 150 kHz
-57.406 dBm
Auto Tune
Center Freq
15.075000 MHz
Start Freq
150.000 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
10:38:53 AM Oct 29, 2019
Frequency
Ref Offset 10.55 dB
10 dB/div
Log
Ref 30.00 dBm
Mkr2 25.697 GHz
-24.416 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)

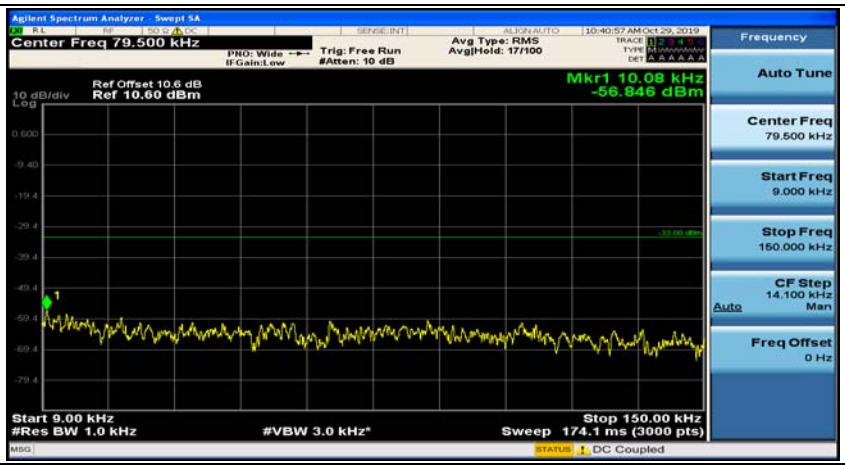
(Channel Bandwidth: 5 MHz)_HCH_16QAM_1RB#0



(Channel Bandwidth: 5 MHz)_HCH_16QAM_1RB#12

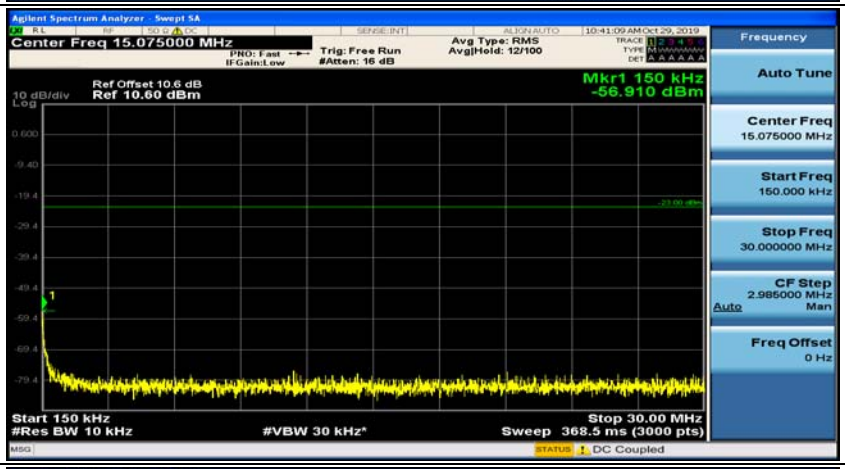


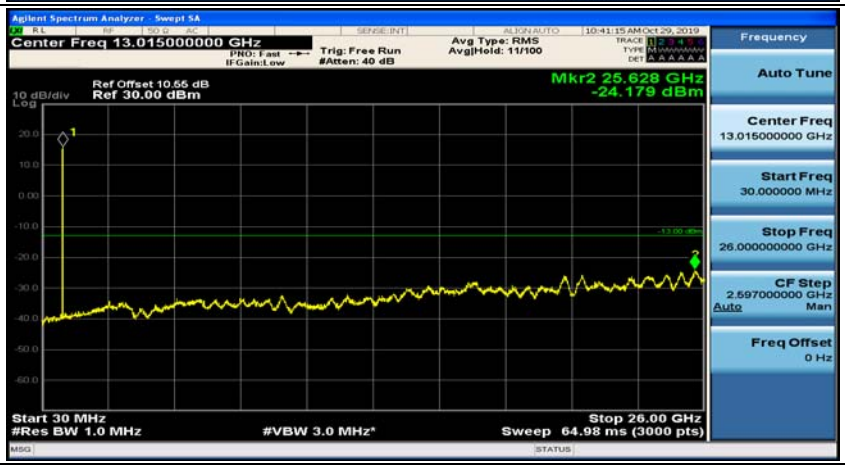




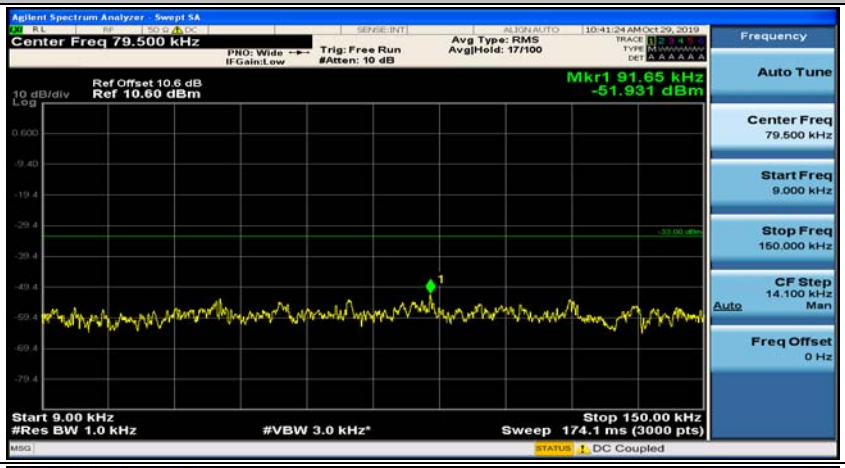
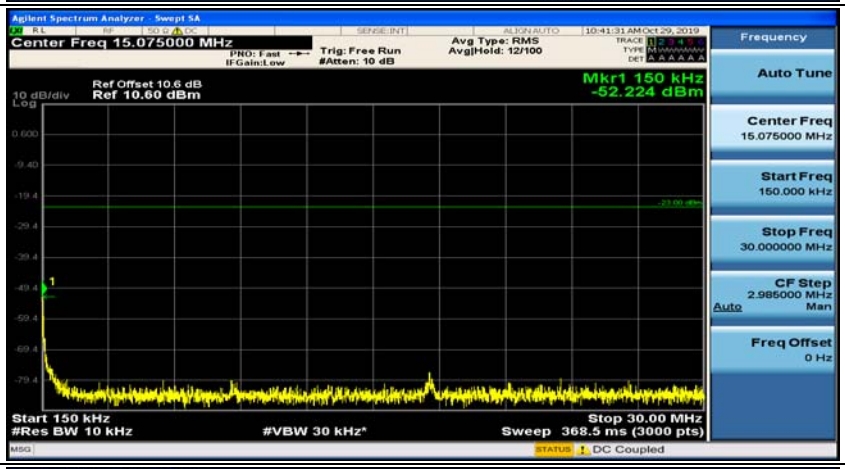
(Channel Bandwidth: 5 MHz)_HCH_16QAM_1RB#24


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
10:40:57 AM Oct 29, 2019
Frequency
Auto Tune
Mkr1 10.08 kHz
-56.846 dBm
Ref Offset 10.6 dB
10 dB/div
Log
Ref 10.60 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

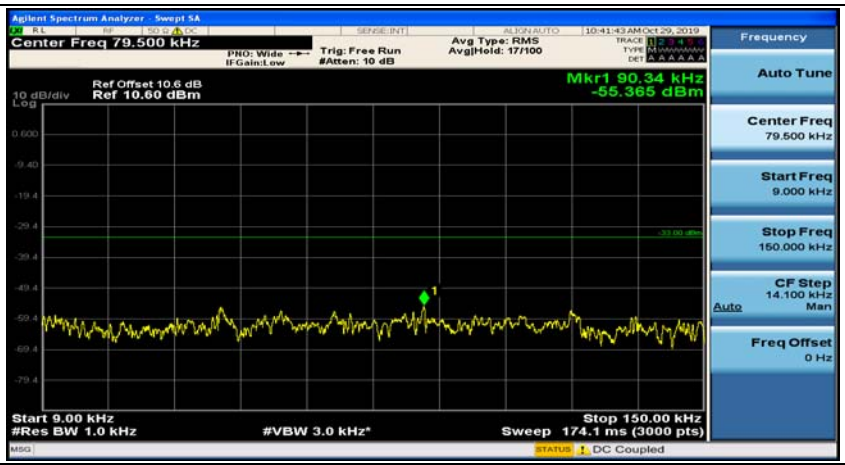

Agilent Spectrum Analyzer - Swept SA
Center Freq 15.075000 MHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 16 dB
Avg Type: RMS
Avg|Hold: 12/100
10:41:09 AM Oct 29, 2019
Frequency
Auto Tune
Mkr1 150 kHz
-56.910 dBm
Ref Offset 10.6 dB
10 dB/div
Log
Ref 10.60 dBm
Center Freq
15.075000 MHz
Start Freq
150.000 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

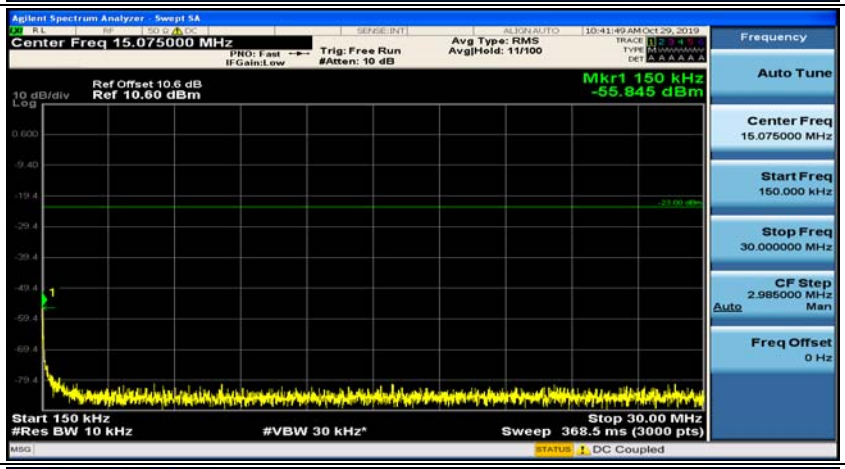

Agilent Spectrum Analyzer - Swept SA
Center Freq 13.015000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 40 dB
Avg Type: RMS
Avg|Hold: 11/100
10:41:15 AM Oct 29, 2019
Frequency
Auto Tune
Mkr2 25.628 GHz
-24.179 dBm
Ref Offset 10.55 dB
10 dB/div
Log
Ref 30.00 dBm
Center Freq
13.015000000 GHz
Start 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

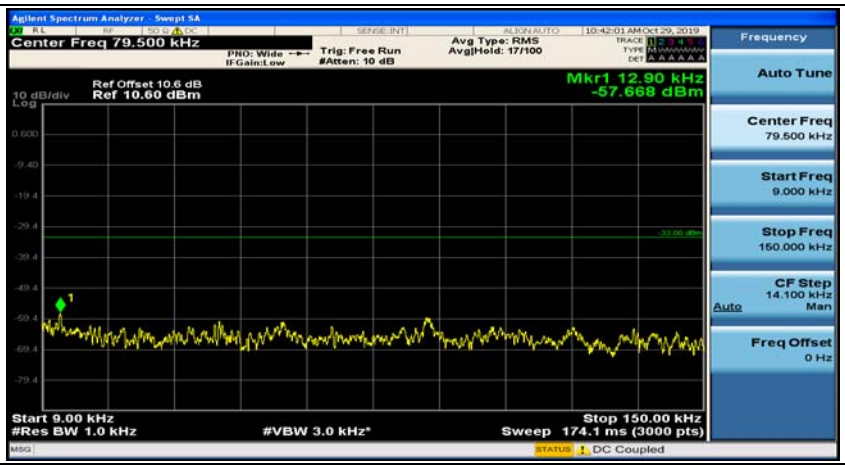
Channel Bandwidth: 10 MHz_LCH_QPSK_1RB#0



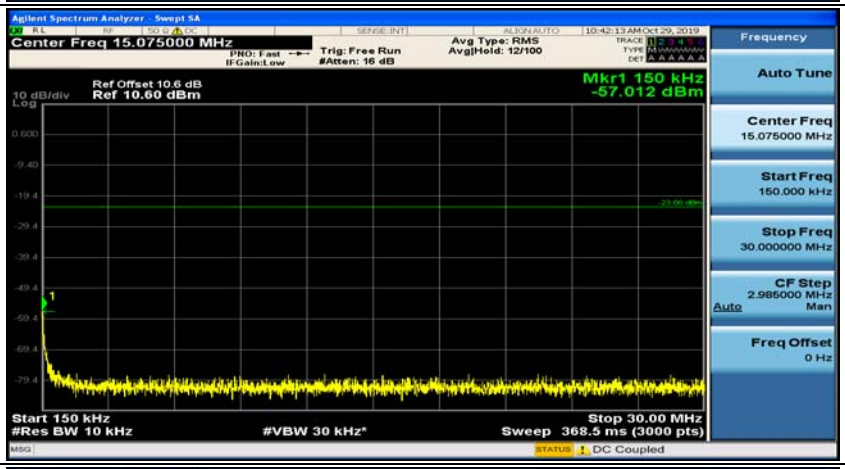
Channel Bandwidth: 10 MHz_LCH_QPSK_1RB#24

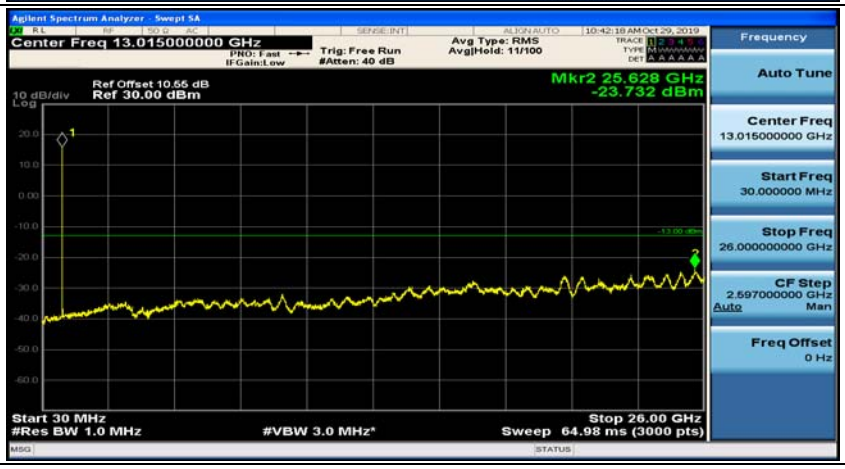


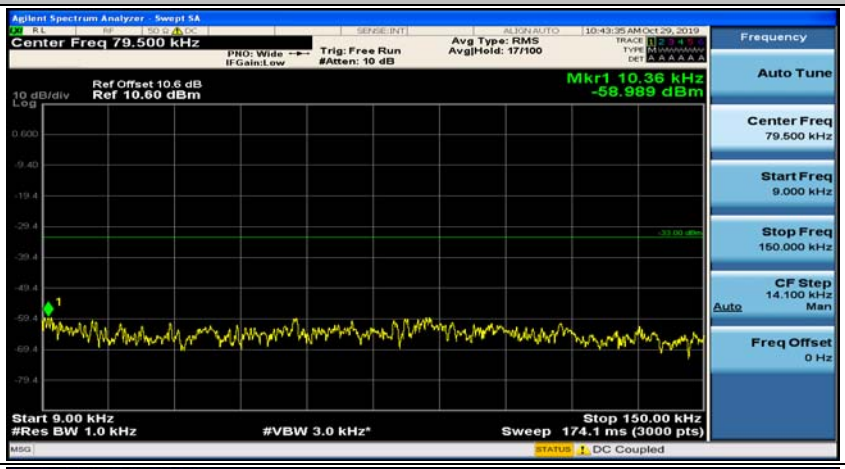
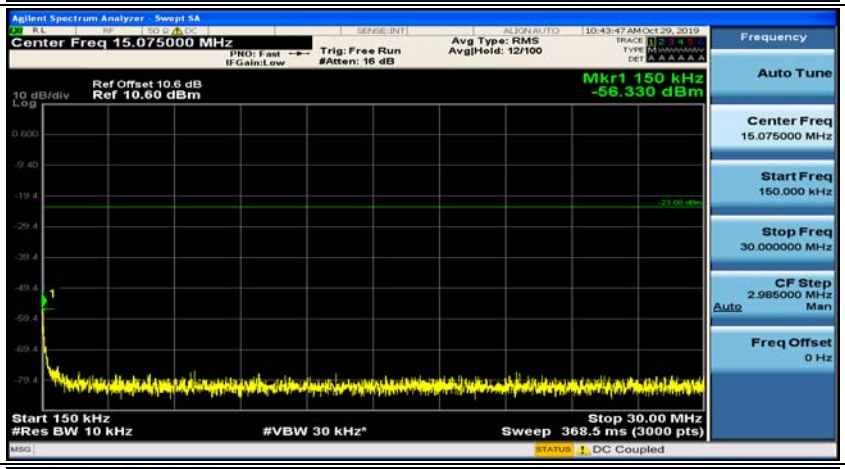
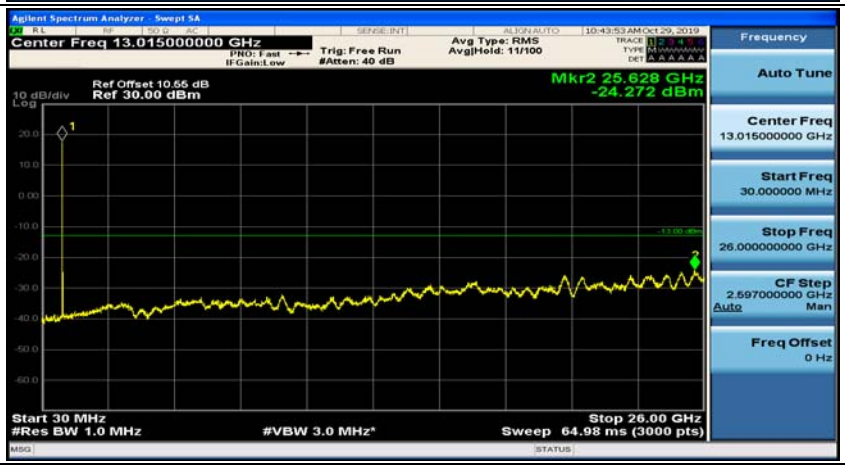


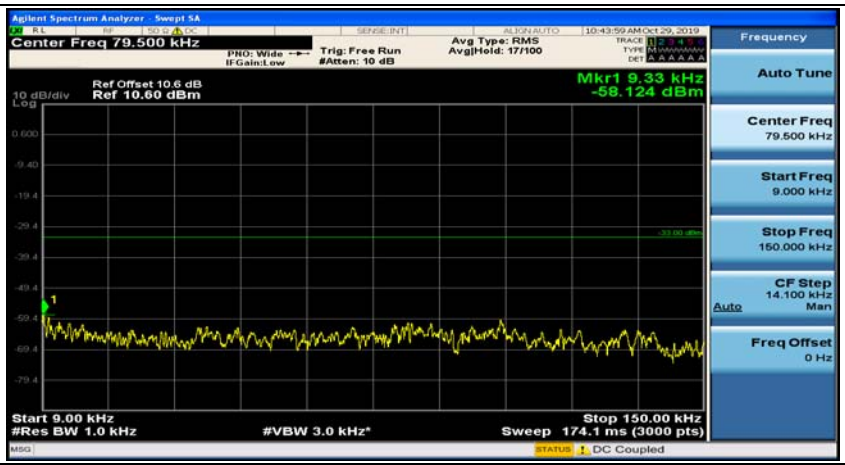
Channel Bandwidth: 10 MHz_LCH_QPSK_1RB#49

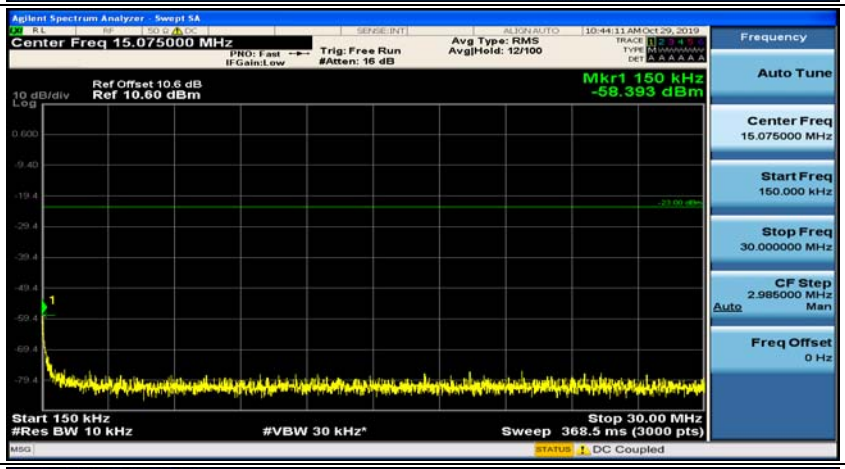

Agilent Spectrum Analyzer - Swept SA
Center Freq 79.500 kHz
PNO: Wide
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 17/100
10:42:01 AM Oct 29, 2019
Frequency
Auto Tune
Mkr1 12.90 kHz
-57.668 dBm
Ref Offset 10.6 dB
10 dB/div
Log
Ref 10.60 dBm
Center Freq
79.500 kHz
Start Freq
9.000 kHz
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
10:42:13 AM Oct 29, 2019
Frequency
Auto Tune
Mkr1 150 kHz
-57.012 dBm
Ref Offset 10.6 dB
10 dB/div
Log
Ref 10.60 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

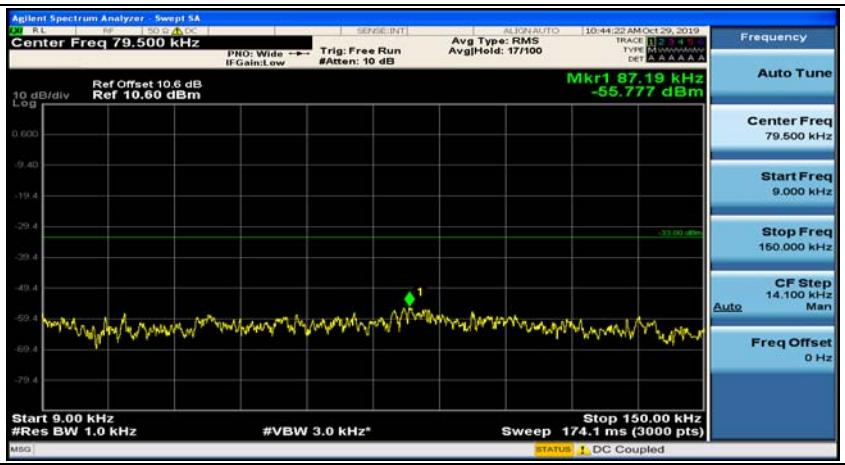

Agilent Spectrum Analyzer - Swept SA
Center Freq 13.015000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 40 dB
Avg Type: RMS
Avg|Hold: 11/100
10:42:18 AM Oct 29, 2019
Frequency
Auto Tune
Mkr2 25.628 GHz
-23.732 dBm
Ref Offset 10.55 dB
10 dB/div
Log
Ref 30.00 dBm
Center Freq
13.015000000 GHz
Start 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)

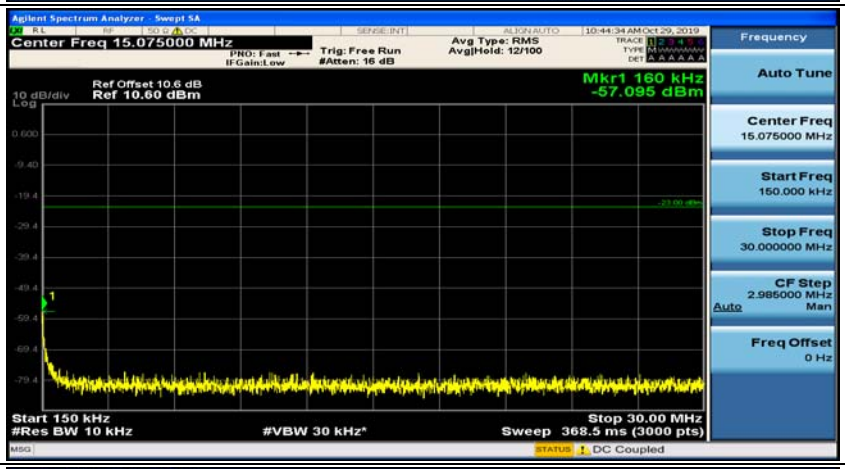
Channel Bandwidth: 10 MHz_MCH_QPSK_1RB#0



Channel Bandwidth: 10 MHz_MCH_QPSK_1RB#24

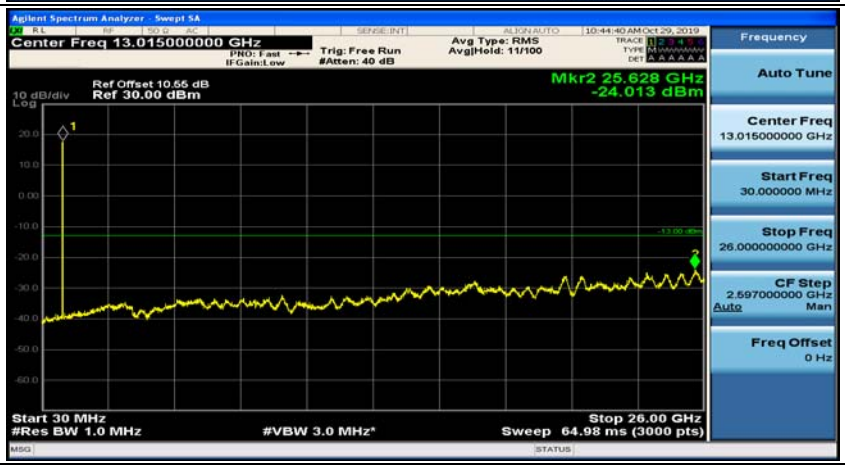


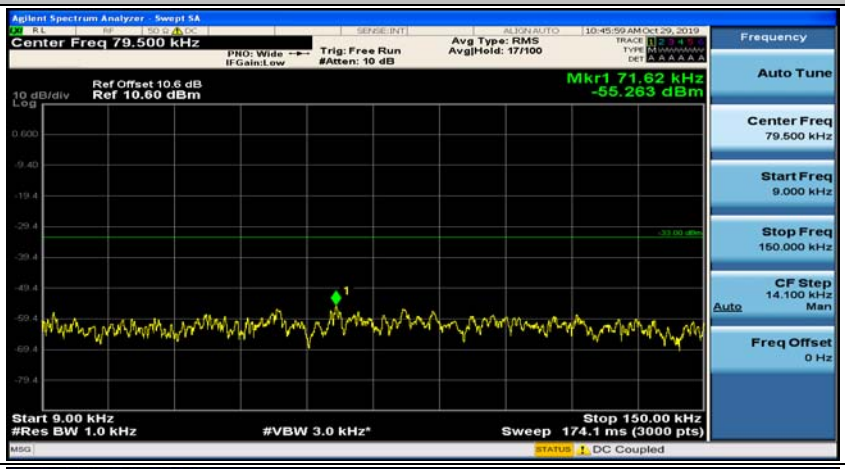
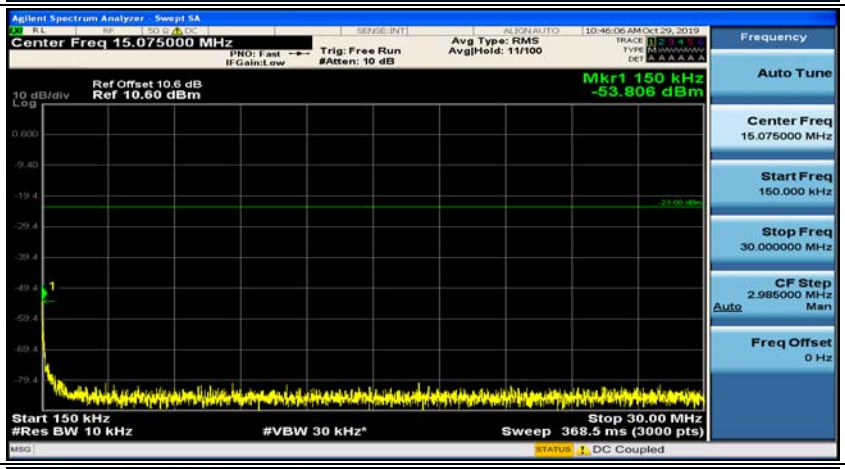
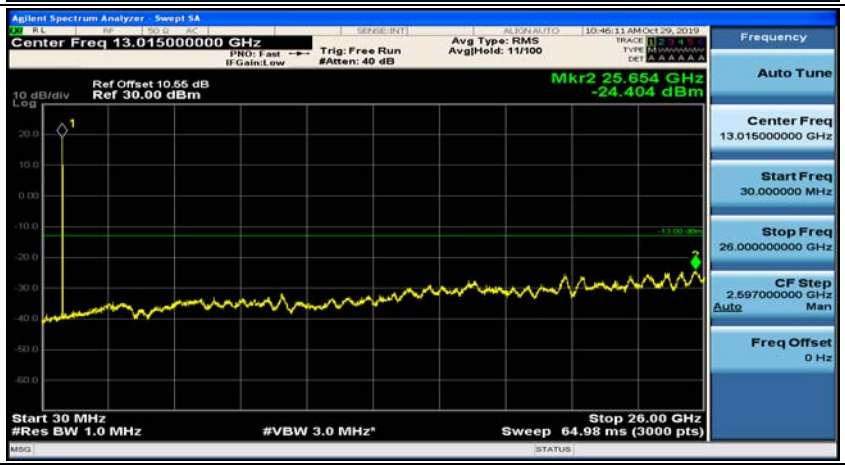


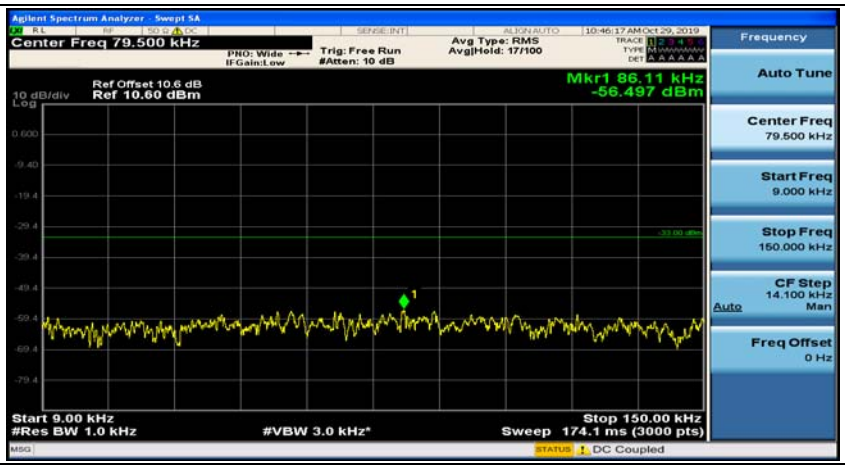
Channel Bandwidth: 10 MHz_MCH_QPSK_1RB#49

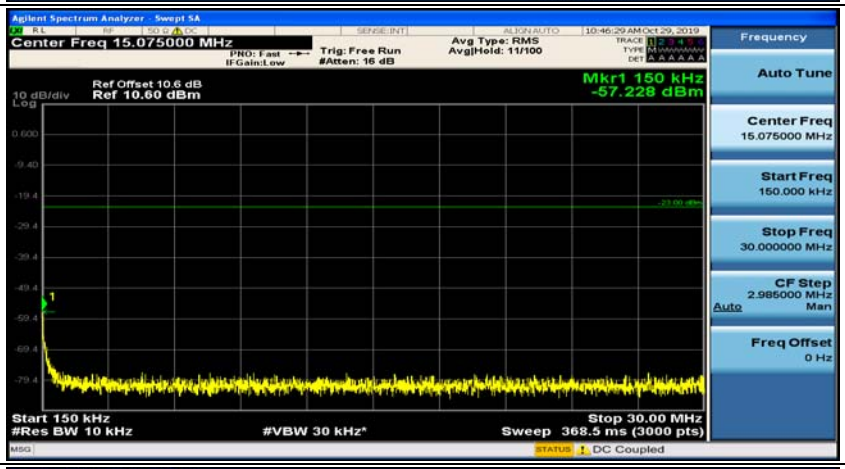

Agilent Spectrum Analyzer - Swept SA
Center Freq 79.500 kHz
PNO: Wide
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 17/100
10:44:22 AM Oct 29, 2019
Ref Offset 10.6 dB
10 dB/div
Log
Ref 10.60 dBm
Mkr1 87.19 kHz
-55.777 dBm
Start 9.00 kHz
#Res BW 1.0 kHz
#VBW 3.0 kHz*
Stop 150.00 kHz
Sweep 174.1 ms (3000 pts)
DC Coupled
Frequency
Auto Tune
Center Freq
79.500 kHz
Start Freq
9.000 kHz
Stop Freq
150.000 kHz
CF Step
14.100 kHz
Auto
Man
Freq Offset
0 Hz


Agilent Spectrum Analyzer - Swept SA
Center Freq 15.075000 MHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 16 dB
Avg Type: RMS
Avg|Hold: 12/100
10:44:34 AM Oct 29, 2019
Ref Offset 10.6 dB
10 dB/div
Log
Ref 10.60 dBm
Mkr1 160 kHz
-57.095 dBm
Start 150 kHz
#Res BW 10 kHz
#VBW 30 kHz*
Stop 30.00 MHz
Sweep 368.5 ms (3000 pts)
DC Coupled
Frequency
Auto Tune
Center Freq
15.075000 MHz
Start Freq
150.000 kHz
Stop Freq
30.000000 MHz
CF Step
2.985000 MHz
Auto
Man
Freq Offset
0 Hz

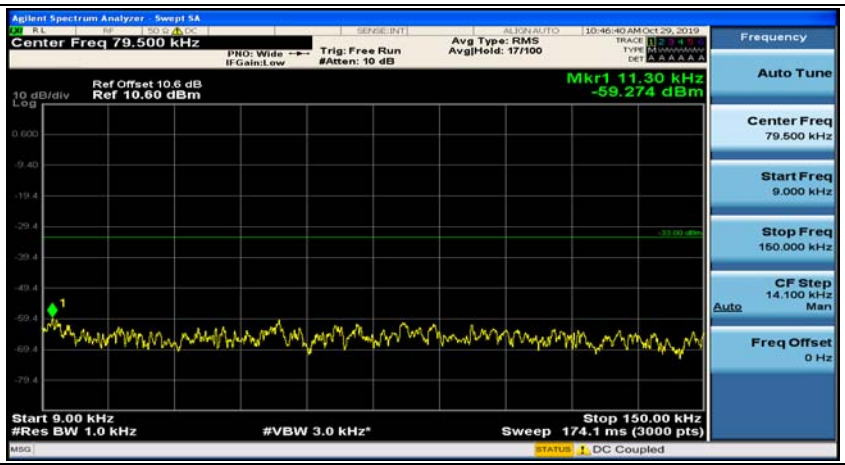

Agilent Spectrum Analyzer - Swept SA
Center Freq 13.015000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 40 dB
Avg Type: RMS
Avg|Hold: 11/100
10:44:40 AM Oct 29, 2019
Ref Offset 10.55 dB
10 dB/div
Log
Ref 30.00 dBm
Mkr2 25.628 GHz
-24.013 dBm
Start 30 MHz
#Res BW 1.0 MHz
#VBW 3.0 MHz*
Stop 26.00 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

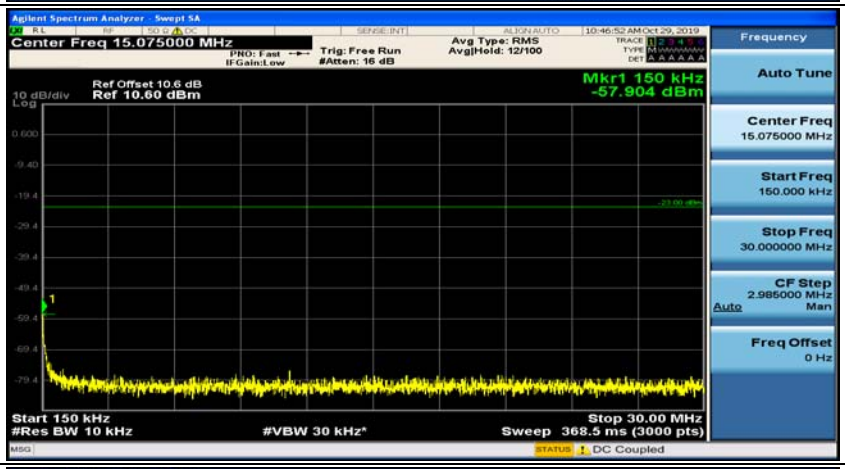
Channel Bandwidth: 10 MHz_HCH_QPSK_1RB#0



Channel Bandwidth: 10 MHz_HCH_QPSK_1RB#24

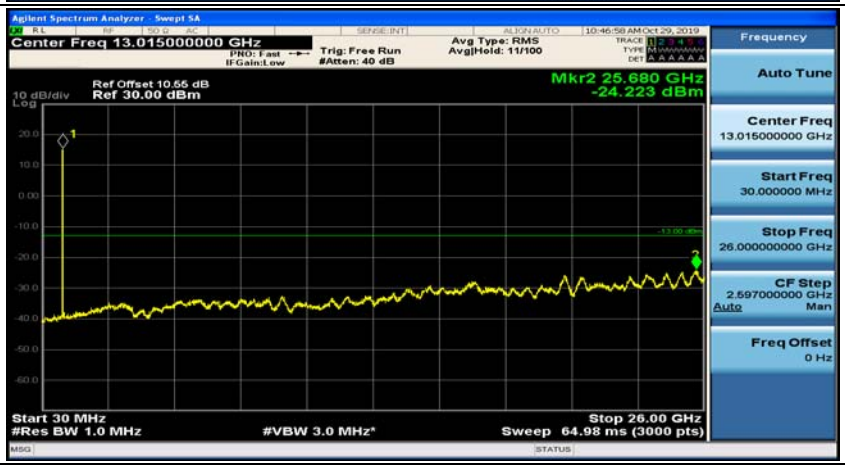


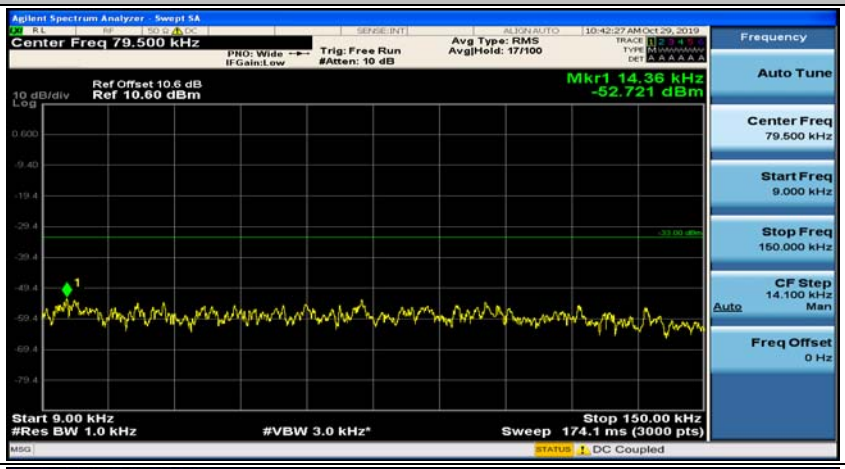
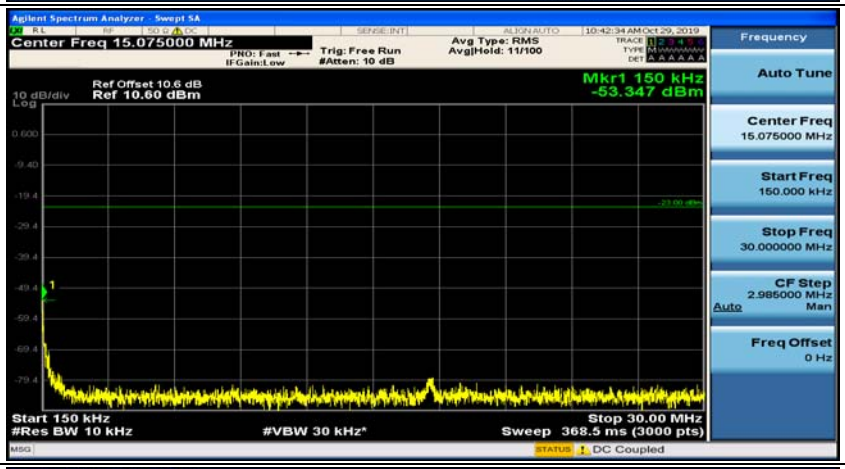
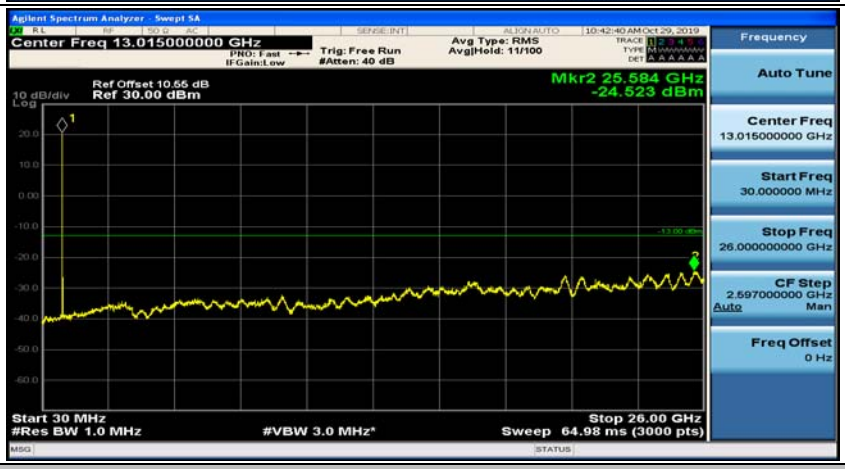


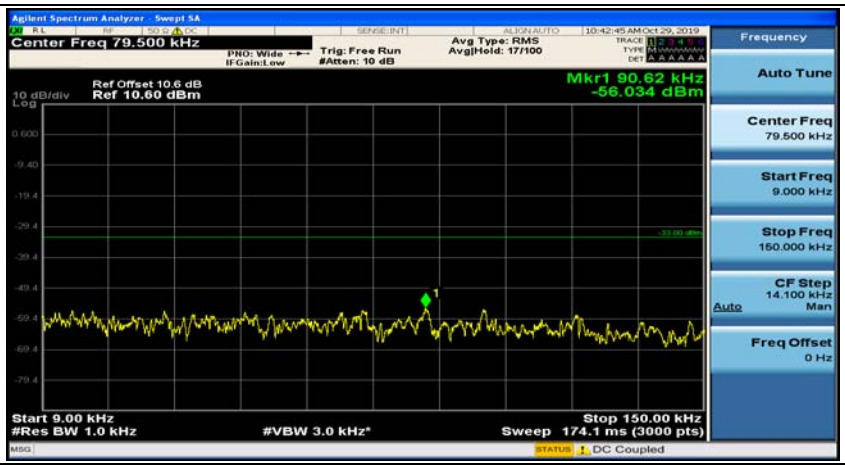
Channel Bandwidth: 10 MHz_HCH_QPSK_1RB#49

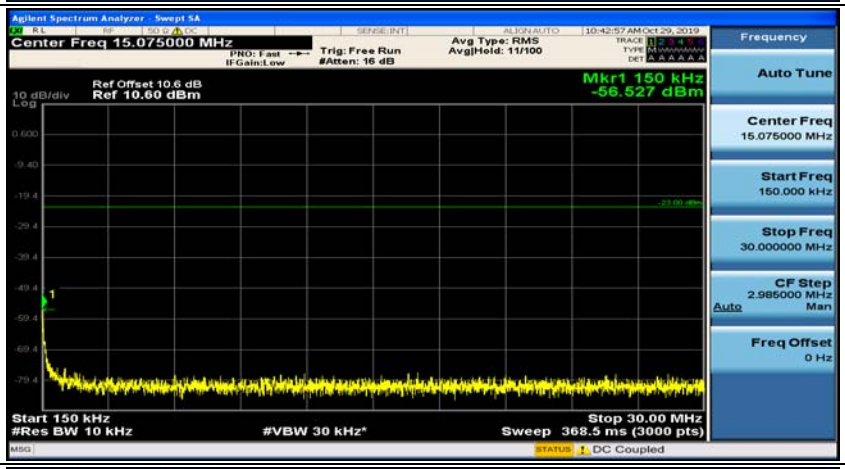

Agilent Spectrum Analyzer - Swept SA
Center Freq 79.500 kHz
PNO: Wide
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 17/100
10:46:40 AM Oct 29, 2019
Frequency
Ref Offset 10.6 dB
10 dB/div
Log
Ref 10.60 dBm
Mkr1 11.30 kHz
-59.274 dBm
Auto Tune
Center Freq
79.500 kHz
Start Freq
9.000 kHz
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
10:46:52 AM Oct 29, 2019
Frequency
Ref Offset 10.6 dB
10 dB/div
Log
Ref 10.60 dBm
Mkr1 150 kHz
-57.904 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

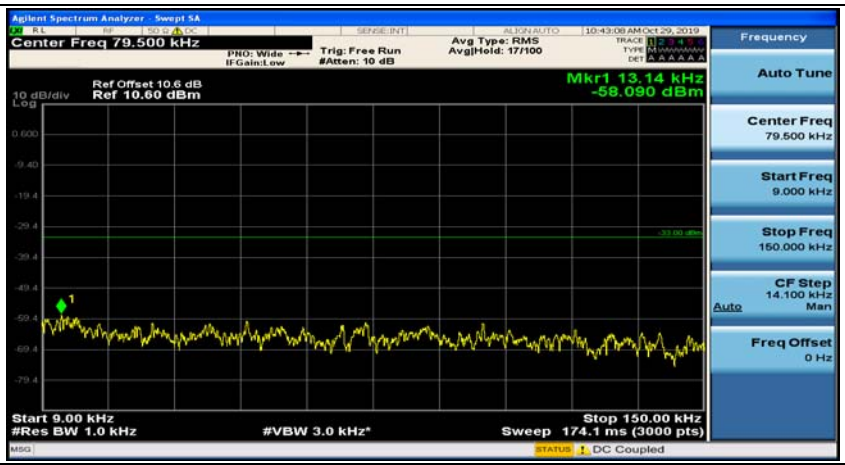

Agilent Spectrum Analyzer - Swept SA
Center Freq 13.015000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 40 dB
Avg Type: RMS
Avg|Hold: 11/100
10:46:58 AM Oct 29, 2019
Frequency
Ref Offset 10.55 dB
10 dB/div
Log
Ref 30.00 dBm
Mkr2 25.680 GHz
-24.223 dBm
Auto Tune
Center Freq
13.015000000 GHz
Start 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)

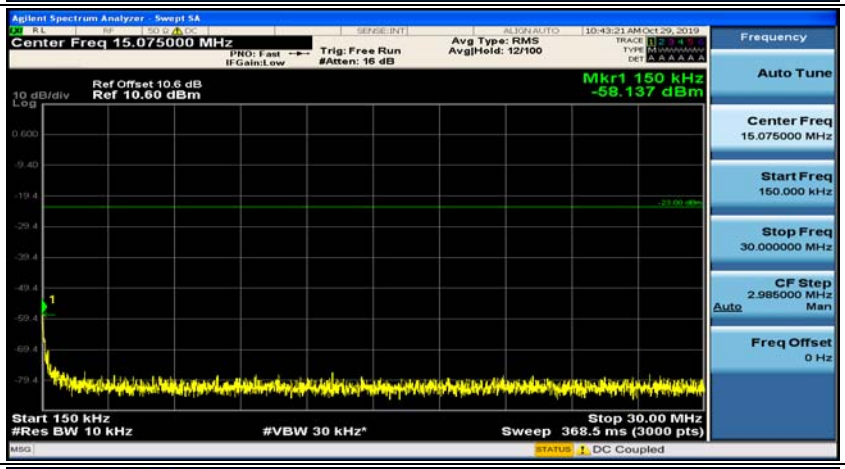
Channel Bandwidth: 10 MHz_LCH_16QAM_1RB#0



Channel Bandwidth: 10 MHz_LCH_16QAM_1RB#24

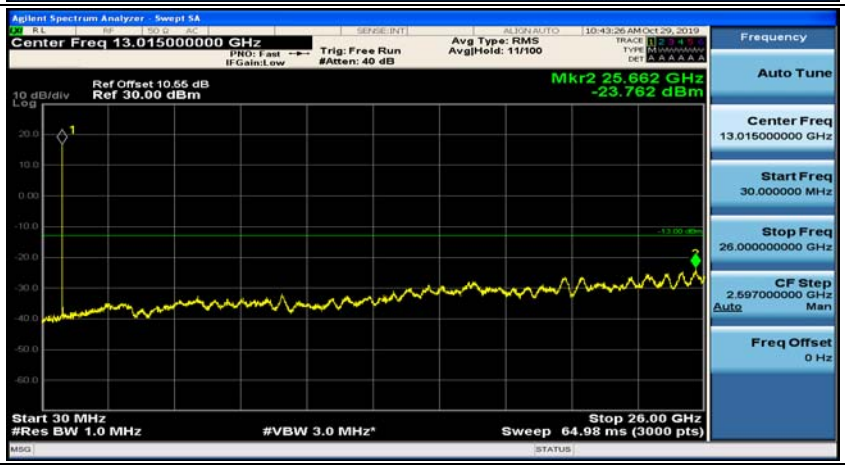


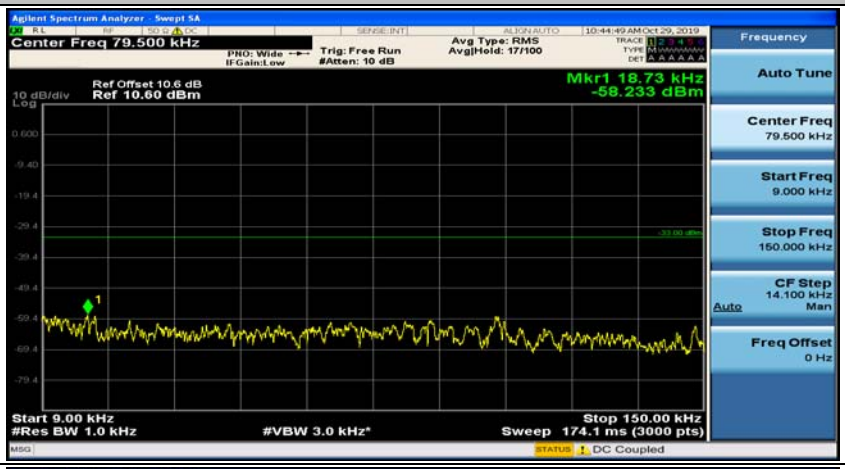
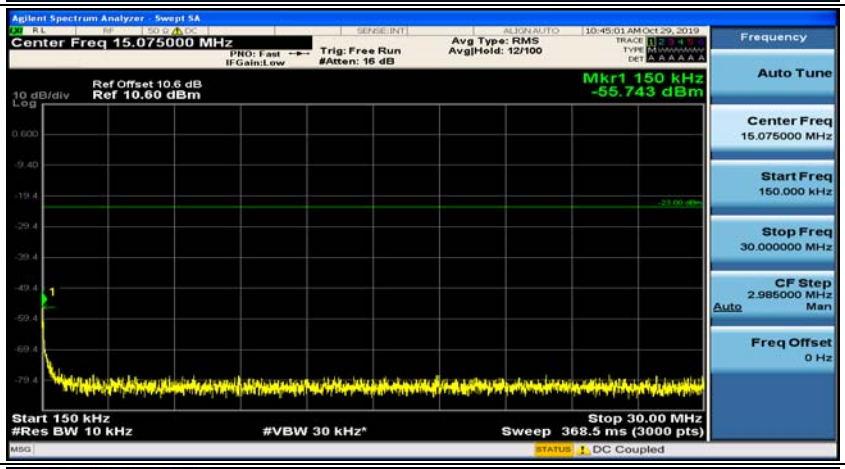
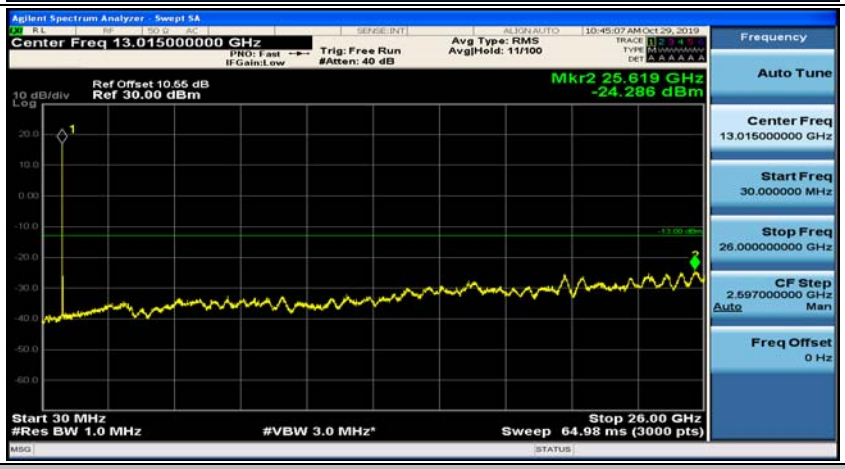


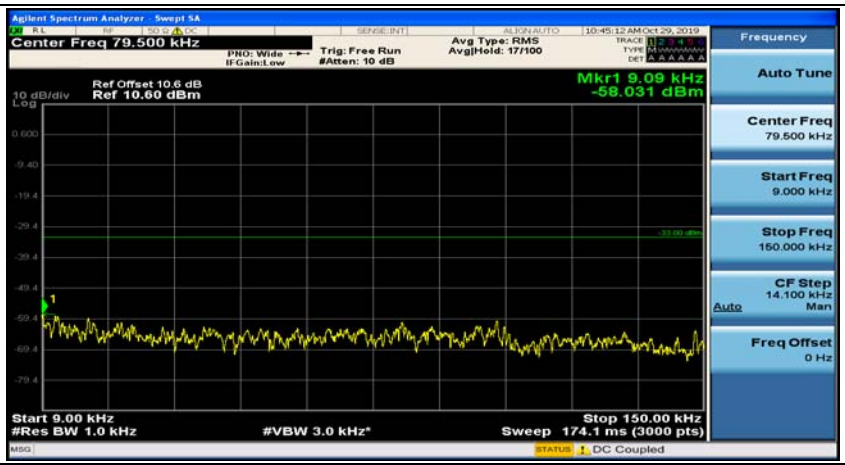
Channel Bandwidth: 10 MHz_LCH_16QAM_1RB#49

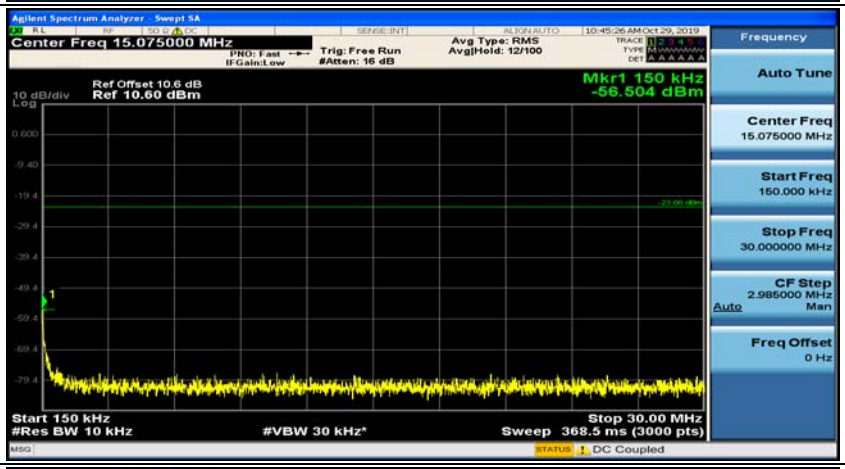

Agilent Spectrum Analyzer - Swept SA
Center Freq 79.500 kHz
PNO: Wide
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 17/100
10:43:08 AM Oct 29, 2019
Frequency
Ref Offset 10.6 dB
10 dB/div
Log
Ref 10.60 dBm
Mkr1 13.14 kHz
-58.090 dBm
Auto Tune
Center Freq
79.500 kHz
Start Freq
9.000 kHz
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
10:43:21 AM Oct 29, 2019
Frequency
Ref Offset 10.6 dB
10 dB/div
Log
Ref 10.60 dBm
Mkr1 150 kHz
-58.137 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

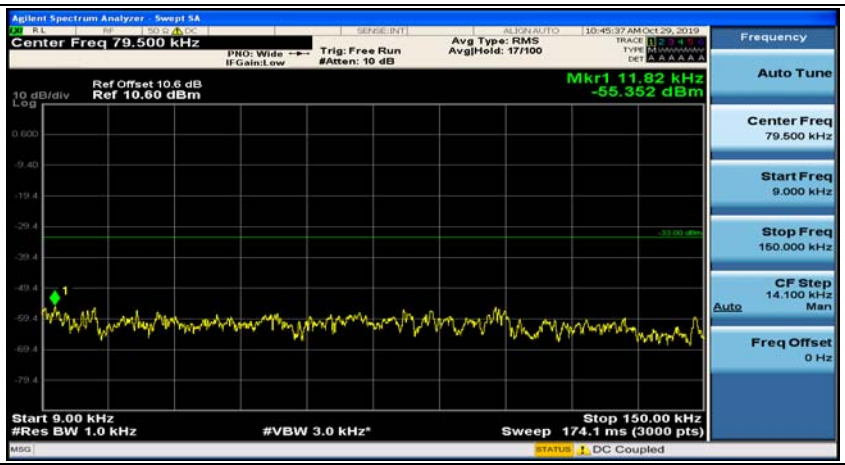

Agilent Spectrum Analyzer - Swept SA
Center Freq 13.015000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 40 dB
Avg Type: RMS
Avg|Hold: 11/100
10:43:26 AM Oct 29, 2019
Frequency
Ref Offset 10.55 dB
10 dB/div
Log
Ref 30.00 dBm
Mkr2 25.662 GHz
-23.762 dBm
Auto Tune
Center Freq
13.015000000 GHz
Start 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)

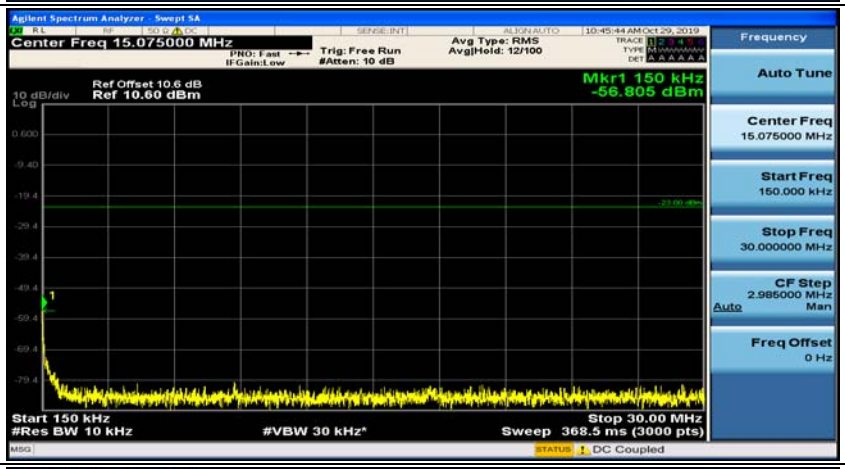
Channel Bandwidth: 10 MHz_MCH_16QAM_1RB#0



Channel Bandwidth: 10 MHz_MCH_16QAM_1RB#24

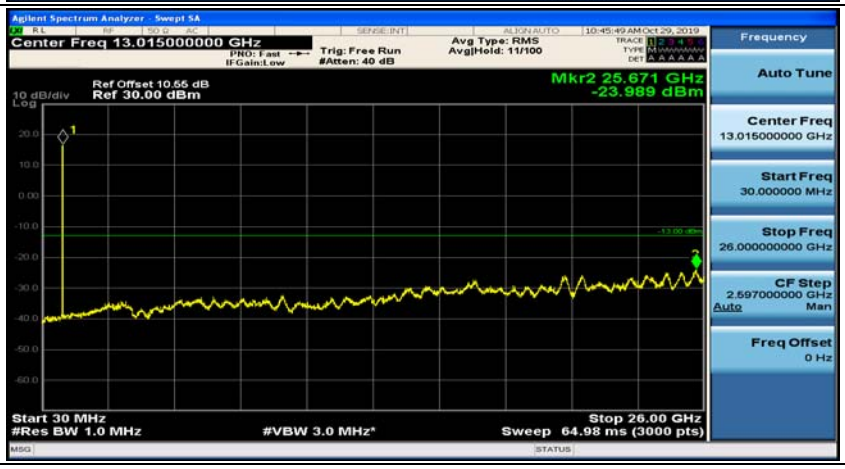


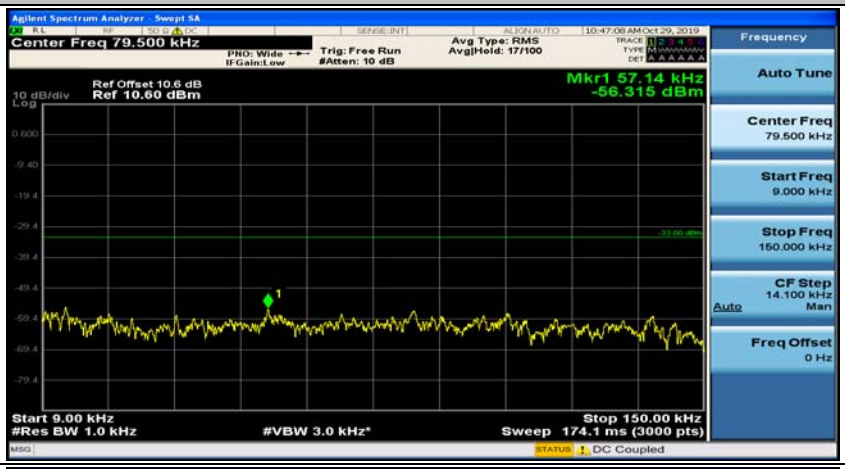
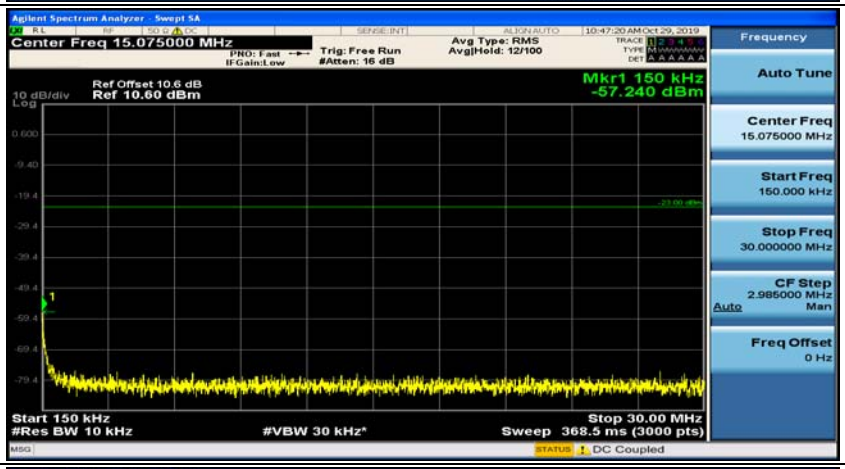
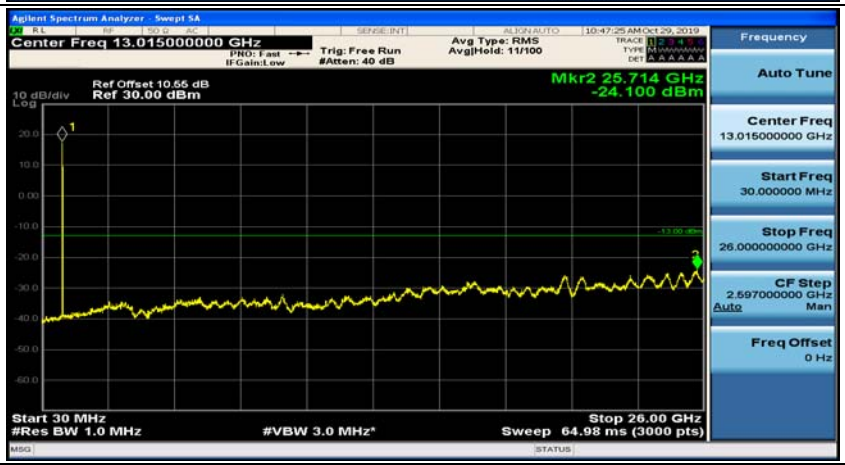


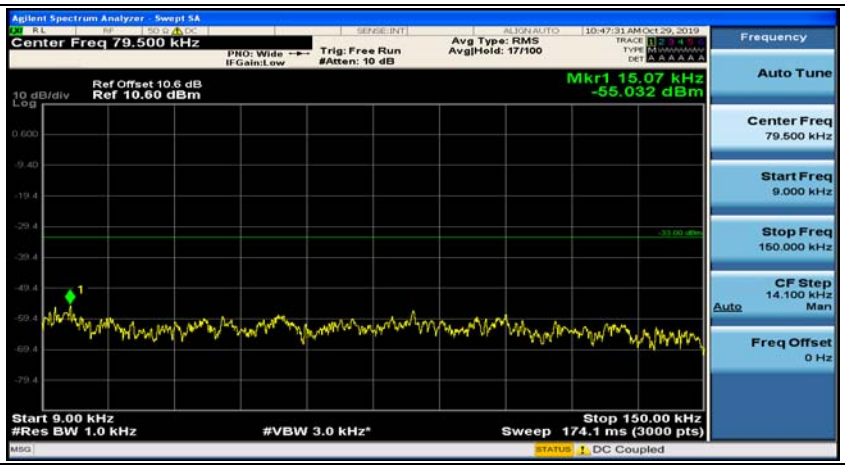
Channel Bandwidth: 10 MHz_MCH_16QAM_1RB#49

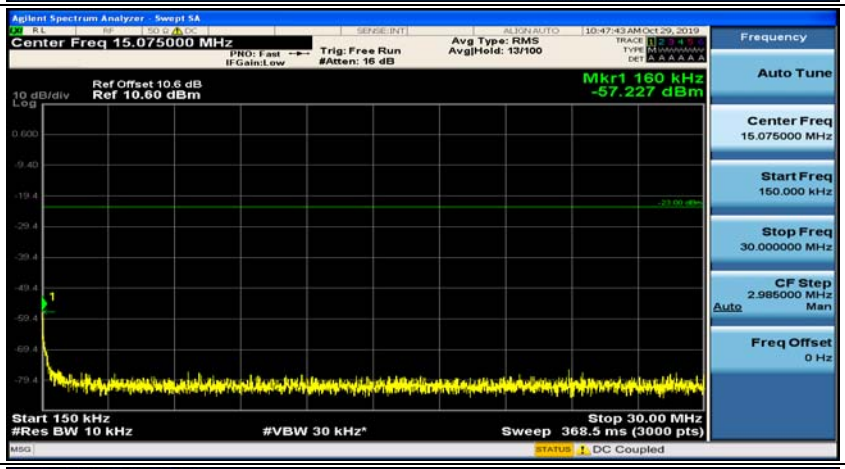

Agilent Spectrum Analyzer - Swept SA
Center Freq 79.500 kHz
PNO: Wide
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 17/100
10:45:37 AM Oct 29, 2019
Frequency
Ref Offset 10.6 dB
10 dB/div
Log
Ref 10.60 dBm
Mkr1 11.82 kHz
-55.352 dBm
Auto Tune
Center Freq
79.500 kHz
Start Freq
9.000 kHz
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: 10 dB
Avg Type: RMS
Avg|Hold: 12/100
10:45:44 AM Oct 29, 2019
Frequency
Ref Offset 10.6 dB
10 dB/div
Log
Ref 10.60 dBm
Mkr1 150 kHz
-56.805 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

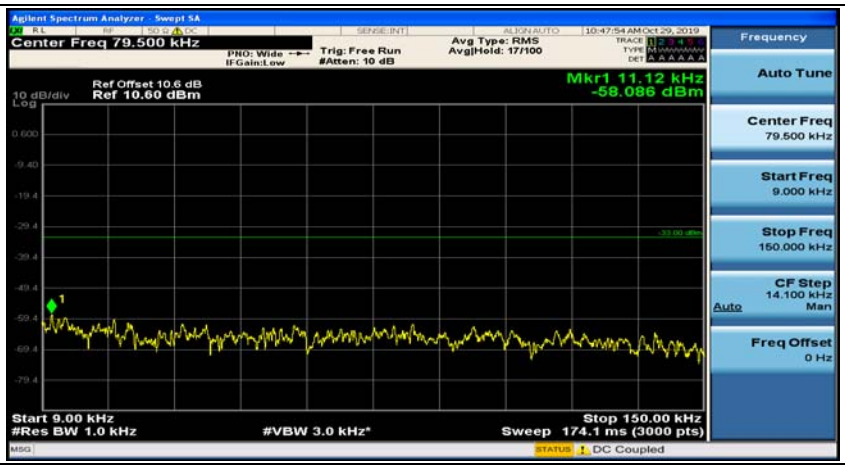

Agilent Spectrum Analyzer - Swept SA
Center Freq 13.015000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 40 dB
Avg Type: RMS
Avg|Hold: 11/100
10:45:49 AM Oct 29, 2019
Frequency
Ref Offset 10.55 dB
10 dB/div
Log
Ref 30.00 dBm
Mkr2 25.671 GHz
-23.989 dBm
Auto Tune
Center Freq
13.015000000 GHz
Start 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)

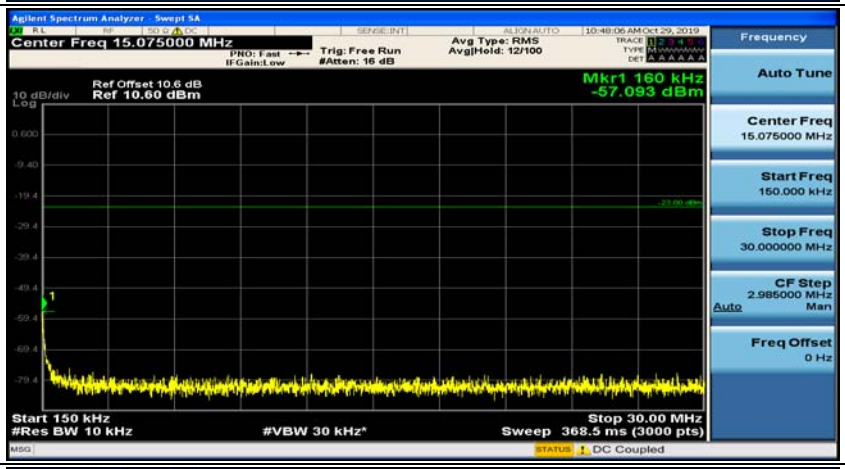
Channel Bandwidth: 10 MHz_HCH_16QAM_1RB#0



Channel Bandwidth: 10 MHz_HCH_16QAM_1RB#24

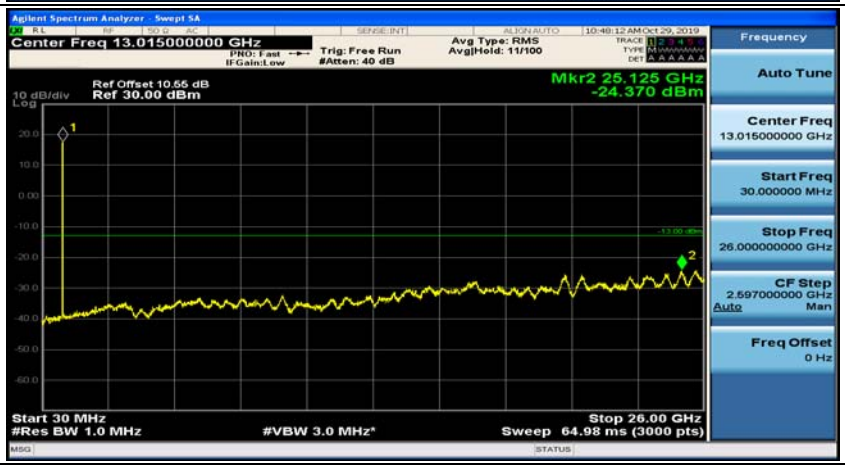




Channel Bandwidth: 10 MHz_HCH_16QAM_1RB#49


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
10:47:54 AM Oct 29, 2019
Ref Offset 10.6 dB
10 dB/div
Log
Ref 10.60 dBm
Mkr1 11.12 kHz
-58.086 dBm
Start 9.00 kHz
#Res BW 1.0 kHz
#VBW 3.0 kHz*
Stop 150.00 kHz
Sweep 174.1 ms (3000 pts)
DC Coupled
Frequency
Auto Tune
Center Freq
79.500 kHz
Start Freq
9.000 kHz
Stop Freq
150.000 kHz
CF Step
14.100 kHz
Auto
Man
Freq Offset
0 Hz


Agilent Spectrum Analyzer - Swept SA
Center Freq 15.075000 MHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 16 dB
Avg Type: RMS
Avg|Hold: 12/100
10:48:06 AM Oct 29, 2019
Ref Offset 10.6 dB
10 dB/div
Log
Ref 10.60 dBm
Mkr1 160 kHz
-57.093 dBm
Start 150 kHz
#Res BW 10 kHz
#VBW 30 kHz*
Stop 30.00 MHz
Sweep 368.5 ms (3000 pts)
DC Coupled
Frequency
Auto Tune
Center Freq
15.075000 MHz
Start Freq
150.000 kHz
Stop Freq
30.000000 MHz
CF Step
2.985000 MHz
Auto
Man
Freq Offset
0 Hz


Agilent Spectrum Analyzer - Swept SA
Center Freq 13.015000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 40 dB
Avg Type: RMS
Avg|Hold: 11/100
10:48:12 AM Oct 29, 2019
Ref Offset 10.55 dB
10 dB/div
Log
Ref 30.00 dBm
Mkr2 25.125 GHz
-24.370 dBm
Start 30 MHz
#Res BW 1.0 MHz
#VBW 3.0 MHz*
Stop 26.00 GHz
Sweep 64.98 ms (3000 pts)
Frequency
Auto Tune
Center Freq
13.015000000 GHz
Start Freq
30.000000 MHz
Stop Freq
26.000000000 GHz
CF Step
2.597000000 GHz
Auto
Man
Freq Offset
0 Hz

Appendix F: Frequency Stability

Test Result

Channel Bandwidth: 1.4 MHz

Channel Bandwidth: 1.4 MHz							
Voltage							
Modulation	Channel	Voltage [Vdc]	Temperature (℃)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
QPSK	LCH	VL	TN	0.76	0.000922	± 2.5	PASS
		VN	TN	-0.73	-0.000885	± 2.5	PASS
		VH	TN	-1.54	-0.001867	± 2.5	PASS
	MCH	VL	TN	-0.2	-0.000239	± 2.5	PASS
		VN	TN	-0.24	-0.000287	± 2.5	PASS
		VH	TN	3.73	0.004459	± 2.5	PASS
	HCH	VL	TN	1.13	0.001332	± 2.5	PASS
		VN	TN	-1.74	-0.002051	± 2.5	PASS
		VH	TN	1.05	0.001238	± 2.5	PASS
16QAM	LCH	VL	TN	2.29	0.002777	± 2.5	PASS
		VN	TN	2.82	0.003419	± 2.5	PASS
		VH	TN	-1.93	-0.002340	± 2.5	PASS
	MCH	VL	TN	1.24	0.001482	± 2.5	PASS
		VN	TN	-1.86	-0.002224	± 2.5	PASS
		VH	TN	3.64	0.004351	± 2.5	PASS
	HCH	VL	TN	2.9	0.003419	± 2.5	PASS
		VN	TN	4.61	0.005434	± 2.5	PASS
		VH	TN	-1.68	-0.001980	± 2.5	PASS
Temperature							
Modulation	Channel	Voltage [Vdc]	Temperature (℃)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
QPSK	LCH	VN	-30	-0.83	-0.001006	± 2.5	PASS
		VN	-20	1.23	0.001491	± 2.5	PASS
		VN	-10	2.06	0.002498	± 2.5	PASS
		VN	0	1.67	0.002025	± 2.5	PASS
		VN	10	-1.6	-0.001940	± 2.5	PASS
		VN	20	0.92	0.001116	± 2.5	PASS
		VN	30	4.58	0.005554	± 2.5	PASS
		VN	40	-1.15	-0.001394	± 2.5	PASS
		VN	50	4.45	0.005396	± 2.5	PASS
	MCH	VN	-30	-1.59	-0.001901	± 2.5	PASS
		VN	-20	-0.7	-0.000837	± 2.5	PASS

		VN	-10	-0.6	-0.000717	± 2.5	PASS
		VN	0	-0.48	-0.000574	± 2.5	PASS
		VN	10	-1.25	-0.001494	± 2.5	PASS
		VN	20	2.4	0.002869	± 2.5	PASS
		VN	30	1.28	0.001530	± 2.5	PASS
		VN	40	-0.58	-0.000693	± 2.5	PASS
		VN	50	2.86	0.003419	± 2.5	PASS
	HCH	VN	-30	4.02	0.004739	± 2.5	PASS
		VN	-20	2.09	0.002464	± 2.5	PASS
		VN	-10	4.77	0.005623	± 2.5	PASS
		VN	0	2.53	0.002982	± 2.5	PASS
		VN	10	3.01	0.003548	± 2.5	PASS
		VN	20	2.14	0.002523	± 2.5	PASS
		VN	30	-0.44	-0.000519	± 2.5	PASS
		VN	40	2.28	0.002688	± 2.5	PASS
		VN	50	-0.64	-0.000754	± 2.5	PASS
16QAM	LCH	VN	-30	0.07	0.000085	± 2.5	PASS
		VN	-20	3.77	0.004571	± 2.5	PASS
		VN	-10	-1.44	-0.001746	± 2.5	PASS
		VN	0	4.79	0.005808	± 2.5	PASS
		VN	10	-1.2	-0.001455	± 2.5	PASS
		VN	20	2.98	0.003613	± 2.5	PASS
		VN	30	3.36	0.004074	± 2.5	PASS
		VN	40	4.18	0.005069	± 2.5	PASS
		VN	50	-0.12	-0.000146	± 2.5	PASS
	MCH	VN	-30	1.4	0.001650	± 2.5	PASS
		VN	-20	1.94	0.002287	± 2.5	PASS
		VN	-10	4.48	0.005281	± 2.5	PASS
		VN	0	-1.93	-0.002275	± 2.5	PASS
		VN	10	-1.73	-0.002039	± 2.5	PASS
		VN	20	4.94	0.005823	± 2.5	PASS
		VN	30	2.05	0.002417	± 2.5	PASS
		VN	40	2.96	0.003489	± 2.5	PASS
		VN	50	4.78	0.005635	± 2.5	PASS
	HCH	VN	-30	4.21	0.004963	± 2.5	PASS
		VN	-20	2.97	0.003501	± 2.5	PASS
		VN	-10	4.94	0.005823	± 2.5	PASS
		VN	0	3.04	0.003584	± 2.5	PASS
		VN	10	3.31	0.003902	± 2.5	PASS
		VN	20	2.6	0.003065	± 2.5	PASS
		VN	30	1.93	0.002275	± 2.5	PASS

		VN	40	0.29	0.000342	± 2.5	PASS
		VN	50	0.31	0.000365	± 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	0.65	0.000787	± 2.5	PASS
		VN	TN	1.81	0.002193	± 2.5	PASS
		VH	TN	4.77	0.005778	± 2.5	PASS
	MCH	VL	TN	-1.54	-0.001841	± 2.5	PASS
		VN	TN	1.01	0.001207	± 2.5	PASS
		VH	TN	-0.49	-0.000586	± 2.5	PASS
	HCH	VL	TN	3.22	0.003799	± 2.5	PASS
		VN	TN	-1.83	-0.002159	± 2.5	PASS
		VH	TN	4.34	0.005121	± 2.5	PASS
16QAM	LCH	VL	TN	2.4	0.002907	± 2.5	PASS
		VN	TN	4.36	0.005282	± 2.5	PASS
		VH	TN	1.61	0.001950	± 2.5	PASS
	MCH	VL	TN	4.56	0.005451	± 2.5	PASS
		VN	TN	0.33	0.000395	± 2.5	PASS
		VH	TN	4.11	0.004913	± 2.5	PASS
	HCH	VL	TN	1.91	0.002254	± 2.5	PASS
		VN	TN	3.14	0.003705	± 2.5	PASS
		VH	TN	2.14	0.002525	± 2.5	PASS
Temperature							
Modulation	Channel	Voltage [Vdc]	Temperature (℃)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
QPSK	LCH	VN	-30	-0.44	-0.000533	± 2.5	PASS
		VN	-20	0.07	0.000085	± 2.5	PASS
		VN	-10	-0.88	-0.001066	± 2.5	PASS
		VN	0	2.8	0.003392	± 2.5	PASS
		VN	10	0.34	0.000412	± 2.5	PASS
		VN	20	3.32	0.004022	± 2.5	PASS
		VN	30	-1.43	-0.001732	± 2.5	PASS
		VN	40	-0.81	-0.000981	± 2.5	PASS
		VN	50	4.19	0.005076	± 2.5	PASS
	MCH	VN	-30	0.29	0.000347	± 2.5	PASS
		VN	-20	1.43	0.001710	± 2.5	PASS
		VN	-10	0.9	0.001076	± 2.5	PASS

		VN	0	-0.07	-0.000084	± 2.5	PASS
		VN	10	3.48	0.004160	± 2.5	PASS
		VN	20	2.55	0.003048	± 2.5	PASS
		VN	30	4.68	0.005595	± 2.5	PASS
		VN	40	3.14	0.003754	± 2.5	PASS
		VN	50	3.73	0.004459	± 2.5	PASS
	HCH	VN	-30	-0.65	-0.000767	± 2.5	PASS
		VN	-20	2.9	0.003422	± 2.5	PASS
		VN	-10	-1.12	-0.001322	± 2.5	PASS
		VN	0	0.02	0.000024	± 2.5	PASS
		VN	10	0.51	0.000602	± 2.5	PASS
		VN	20	4.69	0.005534	± 2.5	PASS
		VN	30	2.49	0.002938	± 2.5	PASS
		VN	40	2.81	0.003316	± 2.5	PASS
		VN	50	2.05	0.002419	± 2.5	PASS
16QAM	LCH	VN	-30	-1.11	-0.001327	± 2.5	PASS
		VN	-20	0.35	0.000418	± 2.5	PASS
		VN	-10	-1.76	-0.002104	± 2.5	PASS
		VN	0	-0.34	-0.000406	± 2.5	PASS
		VN	10	3.45	0.004124	± 2.5	PASS
		VN	20	0.07	0.000084	± 2.5	PASS
		VN	30	-0.43	-0.000514	± 2.5	PASS
		VN	40	-0.16	-0.000191	± 2.5	PASS
		VN	50	-0.69	-0.000825	± 2.5	PASS
	MCH	VN	-30	0.26	0.000307	± 2.5	PASS
		VN	-20	1.13	0.001333	± 2.5	PASS
		VN	-10	1.46	0.001723	± 2.5	PASS
		VN	0	3.83	0.004519	± 2.5	PASS
		VN	10	-0.53	-0.000625	± 2.5	PASS
		VN	20	-0.58	-0.000684	± 2.5	PASS
		VN	30	2.67	0.003150	± 2.5	PASS
		VN	40	-1.2	-0.001416	± 2.5	PASS
		VN	50	4.55	0.005369	± 2.5	PASS
	HCH	VN	-30	0.65	0.000767	± 2.5	PASS
		VN	-20	3.51	0.004142	± 2.5	PASS
		VN	-10	3.42	0.004035	± 2.5	PASS
		VN	0	4.5	0.005310	± 2.5	PASS
		VN	10	-1.15	-0.001357	± 2.5	PASS
		VN	20	-0.35	-0.000413	± 2.5	PASS
		VN	30	2.07	0.002442	± 2.5	PASS
		VN	40	0.98	0.001156	± 2.5	PASS

		VN	50	0.6	0.000708	± 2.5	PASS

Channel Bandwidth: 5 MHz

Channel Bandwidth: 5 MHz							
Voltage							
Modulation	Channel	Voltage [Vdc]	Temperature (℃)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
QPSK	LCH	VL	TN	0.32	0.000387	± 2.5	PASS
		VN	TN	3.16	0.003823	± 2.5	PASS
		VH	TN	0.31	0.000375	± 2.5	PASS
	MCH	VL	TN	1.05	0.001255	± 2.5	PASS
		VN	TN	-1.03	-0.001231	± 2.5	PASS
		VH	TN	-1.55	-0.001853	± 2.5	PASS
	HCH	VL	TN	3.96	0.004678	± 2.5	PASS
		VN	TN	3.31	0.003910	± 2.5	PASS
		VH	TN	4.5	0.005316	± 2.5	PASS
16QAM	LCH	VL	TN	-1.81	-0.002190	± 2.5	PASS
		VN	TN	2.46	0.002976	± 2.5	PASS
		VH	TN	0.56	0.000678	± 2.5	PASS
	MCH	VL	TN	2.35	0.002809	± 2.5	PASS
		VN	TN	0.09	0.000108	± 2.5	PASS
		VH	TN	0.63	0.000753	± 2.5	PASS
	HCH	VL	TN	-1.3	-0.001536	± 2.5	PASS
		VN	TN	1.85	0.002185	± 2.5	PASS
		VH	TN	4.52	0.005340	± 2.5	PASS
Temperature							
Modulation	Channel	Voltage [Vdc]	Temperature (℃)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
QPSK	LCH	VN	-30	4.88	0.005904	± 2.5	PASS
		VN	-20	-1.94	-0.002347	± 2.5	PASS
		VN	-10	2.67	0.003230	± 2.5	PASS
		VN	0	3.49	0.004223	± 2.5	PASS
		VN	10	-0.21	-0.000254	± 2.5	PASS
		VN	20	2.08	0.002517	± 2.5	PASS
		VN	30	-0.93	-0.001125	± 2.5	PASS
		VN	40	4.85	0.005868	± 2.5	PASS
		VN	50	-0.15	-0.000181	± 2.5	PASS
	MCH	VN	-30	3.29	0.003933	± 2.5	PASS
		VN	-20	4.66	0.005571	± 2.5	PASS
		VN	-10	1.47	0.001757	± 2.5	PASS
		VN	0	-0.03	-0.000036	± 2.5	PASS

		VN	10	0.42	0.000502	± 2.5	PASS
		VN	20	2.26	0.002702	± 2.5	PASS
		VN	30	3.55	0.004244	± 2.5	PASS
		VN	40	0.49	0.000586	± 2.5	PASS
		VN	50	-1.78	-0.002128	± 2.5	PASS
	HCH	VN	-30	-1.47	-0.001737	± 2.5	PASS
		VN	-20	2.87	0.003390	± 2.5	PASS
		VN	-10	0.51	0.000602	± 2.5	PASS
		VN	0	3.23	0.003816	± 2.5	PASS
		VN	10	2.33	0.002753	± 2.5	PASS
		VN	20	4.97	0.005871	± 2.5	PASS
		VN	30	4.36	0.005151	± 2.5	PASS
		VN	40	-1.03	-0.001217	± 2.5	PASS
		VN	50	3.91	0.004619	± 2.5	PASS
16QAM	LCH	VN	-30	4.82	0.005762	± 2.5	PASS
		VN	-20	2.14	0.002558	± 2.5	PASS
		VN	-10	-0.29	-0.000347	± 2.5	PASS
		VN	0	3.1	0.003706	± 2.5	PASS
		VN	10	0.08	0.000096	± 2.5	PASS
		VN	20	1.46	0.001745	± 2.5	PASS
		VN	30	0.72	0.000861	± 2.5	PASS
		VN	40	-0.58	-0.000693	± 2.5	PASS
		VN	50	0.15	0.000179	± 2.5	PASS
	MCH	VN	-30	0.97	0.001146	± 2.5	PASS
		VN	-20	4.37	0.005162	± 2.5	PASS
		VN	-10	4.08	0.004820	± 2.5	PASS
		VN	0	0.22	0.000260	± 2.5	PASS
		VN	10	4.73	0.005588	± 2.5	PASS
		VN	20	0.59	0.000697	± 2.5	PASS
		VN	30	2.7	0.003190	± 2.5	PASS
		VN	40	-0.32	-0.000378	± 2.5	PASS
		VN	50	3.51	0.004146	± 2.5	PASS
	HCH	VN	-30	-0.72	-0.000851	± 2.5	PASS
		VN	-20	-1.73	-0.002044	± 2.5	PASS
		VN	-10	-0.61	-0.000721	± 2.5	PASS
		VN	0	-1.68	-0.001985	± 2.5	PASS
		VN	10	-1.99	-0.002351	± 2.5	PASS
		VN	20	-0.42	-0.000496	± 2.5	PASS
		VN	30	0.01	0.000012	± 2.5	PASS
		VN	40	2.63	0.003107	± 2.5	PASS
		VN	50	4.87	0.005753	± 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	1.11	0.001339	± 2.5	PASS
		VN	TN	-1.36	-0.001641	± 2.5	PASS
		VH	TN	2.29	0.002762	± 2.5	PASS
	MCH	VL	TN	-0.74	-0.000885	± 2.5	PASS
		VN	TN	-0.14	-0.000167	± 2.5	PASS
		VH	TN	-0.43	-0.000514	± 2.5	PASS
	HCH	VL	TN	2.43	0.002879	± 2.5	PASS
		VN	TN	2.49	0.002950	± 2.5	PASS
		VH	TN	0.67	0.000794	± 2.5	PASS
16QAM	LCH	VL	TN	0.65	0.000784	± 2.5	PASS
		VN	TN	3	0.003619	± 2.5	PASS
		VH	TN	4.57	0.005513	± 2.5	PASS
	MCH	VL	TN	2.6	0.003108	± 2.5	PASS
		VN	TN	1.1	0.001315	± 2.5	PASS
		VH	TN	-1.72	-0.002056	± 2.5	PASS
	HCH	VL	TN	4.06	0.004810	± 2.5	PASS
		VN	TN	4.45	0.005273	± 2.5	PASS
		VH	TN	4.71	0.005581	± 2.5	PASS
Temperature							
Modulation	Channel	Voltage [Vdc]	Temperature (℃)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
QPSK	LCH	VN	-30	3.51	0.004234	± 2.5	PASS
		VN	-20	1.4	0.001689	± 2.5	PASS
		VN	-10	4.59	0.005537	± 2.5	PASS
		VN	0	3.38	0.004077	± 2.5	PASS
		VN	10	2.65	0.003197	± 2.5	PASS
		VN	20	-0.97	-0.001170	± 2.5	PASS
		VN	30	-1.74	-0.002099	± 2.5	PASS
		VN	40	3.86	0.004656	± 2.5	PASS
		VN	50	2.66	0.003209	± 2.5	PASS
	MCH	VN	-30	4.66	0.005571	± 2.5	PASS
		VN	-20	-1.3	-0.001554	± 2.5	PASS
		VN	-10	2.76	0.003299	± 2.5	PASS
		VN	0	3.73	0.004459	± 2.5	PASS
		VN	10	-0.21	-0.000251	± 2.5	PASS
		VN	20	2.23	0.002666	± 2.5	PASS

		VN	30	-1.69	-0.002020	± 2.5	PASS
		VN	40	-0.79	-0.000944	± 2.5	PASS
		VN	50	1.64	0.001961	± 2.5	PASS
	HCH	VN	-30	4.1	0.004858	± 2.5	PASS
		VN	-20	-0.41	-0.000486	± 2.5	PASS
		VN	-10	-0.71	-0.000841	± 2.5	PASS
		VN	0	1.95	0.002310	± 2.5	PASS
		VN	10	0.86	0.001019	± 2.5	PASS
		VN	20	4.51	0.005344	± 2.5	PASS
		VN	30	-1.26	-0.001493	± 2.5	PASS
		VN	40	-1.65	-0.001955	± 2.5	PASS
		VN	50	-0.58	-0.000687	± 2.5	PASS
16QAM	LCH	VN	-30	0.91	0.001088	± 2.5	PASS
		VN	-20	-0.02	-0.000024	± 2.5	PASS
		VN	-10	-1.96	-0.002343	± 2.5	PASS
		VN	0	3.82	0.004567	± 2.5	PASS
		VN	10	1.57	0.001877	± 2.5	PASS
		VN	20	1.13	0.001351	± 2.5	PASS
		VN	30	-0.44	-0.000526	± 2.5	PASS
		VN	40	3.64	0.004351	± 2.5	PASS
		VN	50	2.11	0.002522	± 2.5	PASS
	MCH	VN	-30	1.62	0.001919	± 2.5	PASS
		VN	-20	2.3	0.002725	± 2.5	PASS
		VN	-10	1.63	0.001931	± 2.5	PASS
		VN	0	0.86	0.001019	± 2.5	PASS
		VN	10	3.33	0.003945	± 2.5	PASS
		VN	20	4.85	0.005746	± 2.5	PASS
		VN	30	0.38	0.000450	± 2.5	PASS
		VN	40	-1.58	-0.001872	± 2.5	PASS
		VN	50	1.98	0.002346	± 2.5	PASS
	HCH	VN	-30	-1.87	-0.002216	± 2.5	PASS
		VN	-20	-0.4	-0.000474	± 2.5	PASS
		VN	-10	0.49	0.000581	± 2.5	PASS
		VN	0	-1.29	-0.001528	± 2.5	PASS
		VN	10	4.14	0.004905	± 2.5	PASS
		VN	20	3.08	0.003649	± 2.5	PASS
		VN	30	2.97	0.003519	± 2.5	PASS
		VN	40	-1.07	-0.001268	± 2.5	PASS
		VN	50	1.56	0.001848	± 2.5	PASS