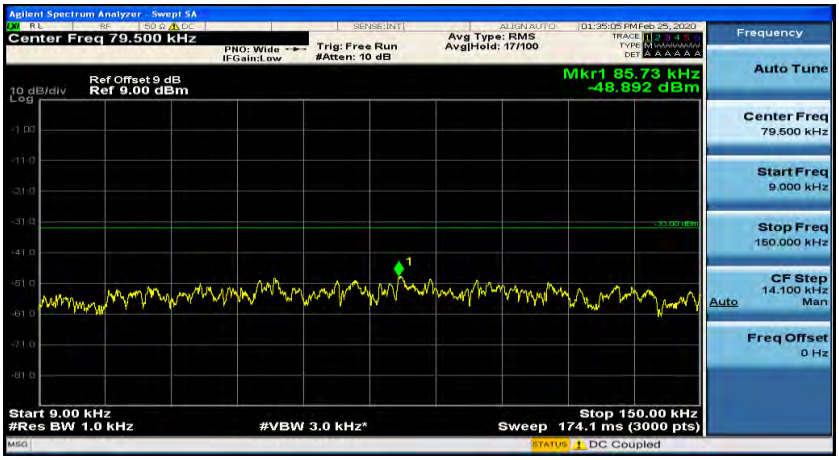
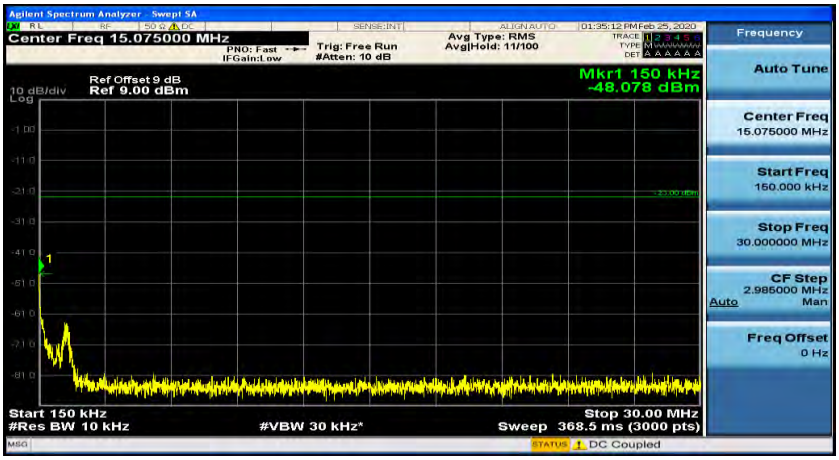
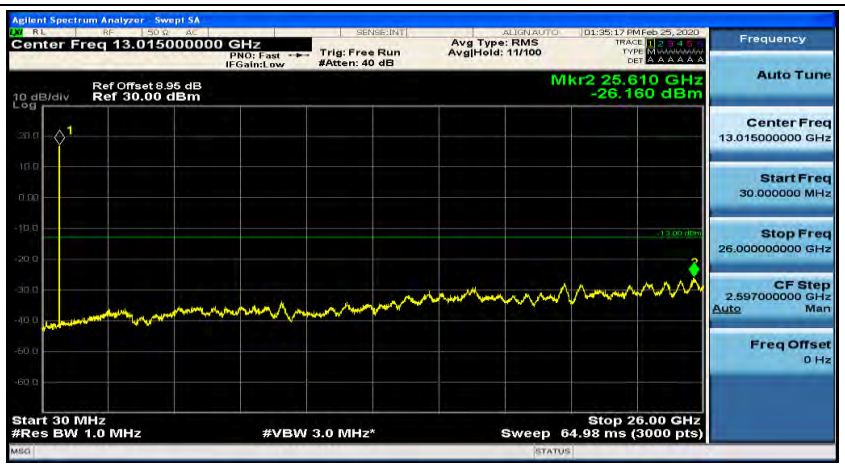
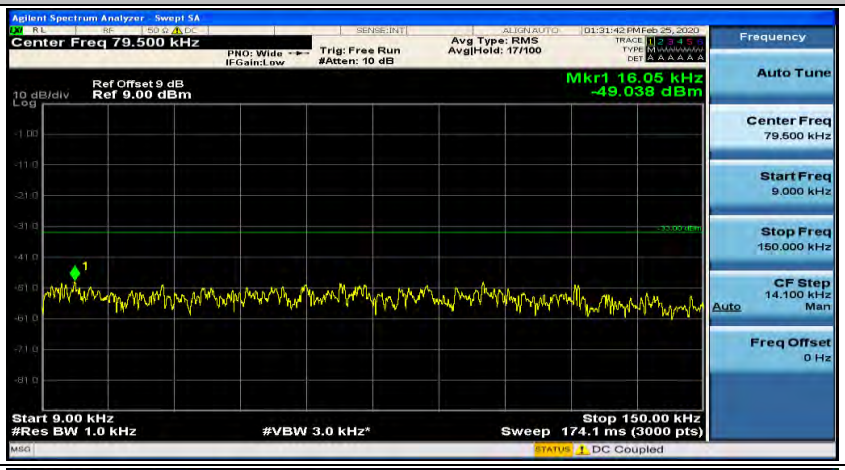
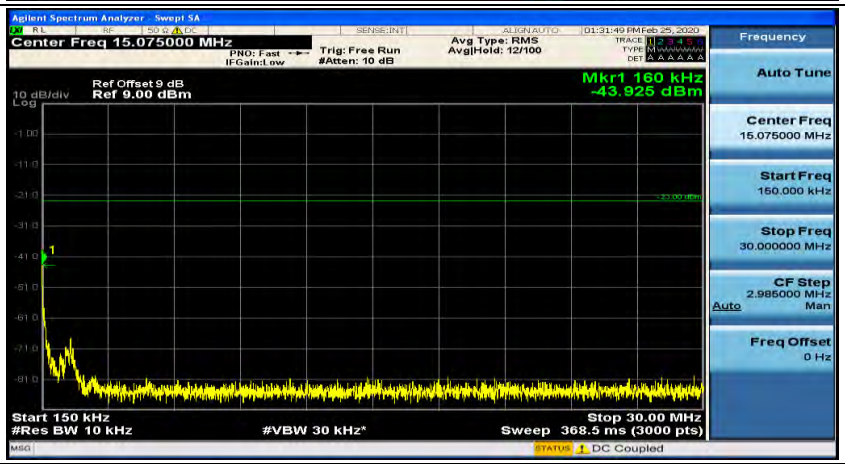
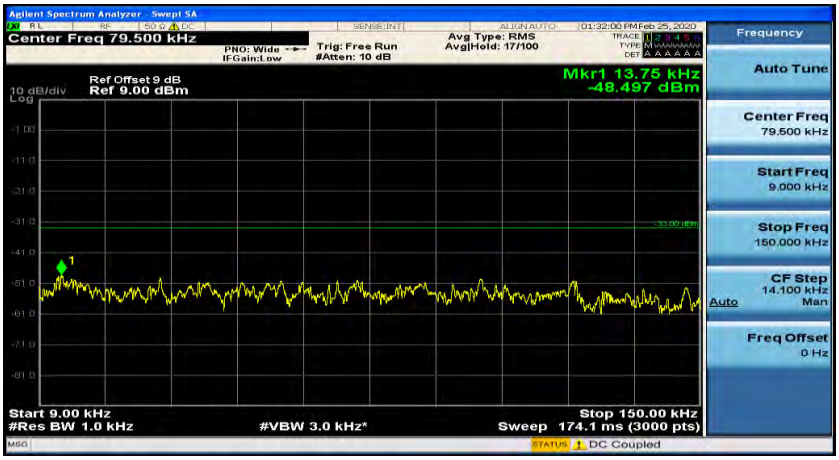

Agilent Spectrum Analyzer - Swept SA
Center Freq 79.500 kHz
PNO: Wide
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 17/100
01:35:05 PM Feb 25, 2020
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Mkr1 85.73 kHz
-48.892 dBm
Start 9.00 kHz
#Res BW 1.0 kHz
#VBW 3.0 kHz*
Stop 150.00 kHz
Sweep 174.1 ms (3000 pts)
1 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

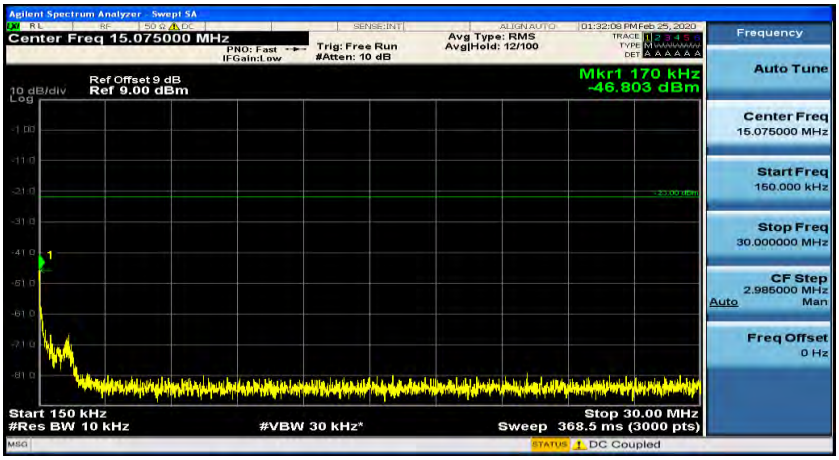

Agilent Spectrum Analyzer - Swept SA
Center Freq 15.075000 MHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 11/100
01:35:12 PM Feb 25, 2020
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Mkr1 150 kHz
-48.078 dBm
Start 150 kHz
#Res BW 10 kHz
#VBW 30 kHz*
Stop 30.00 MHz
Sweep 368.5 ms (3000 pts)
1 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

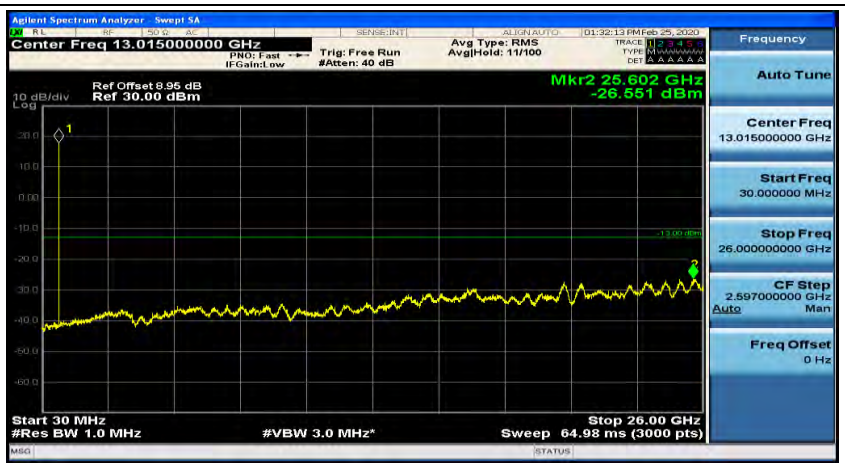

Agilent Spectrum Analyzer - Swept SA
Center Freq 13.015000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 40 dB
Avg Type: RMS
Avg|Hold: 11/100
01:35:17 PM Feb 25, 2020
Ref Offset 8.95 dB
10 dB/div
Log
Ref 30.00 dBm
Mkr2 25.610 GHz
-26.160 dBm
Start 30 MHz
#Res BW 1.0 MHz
#VBW 3.0 MHz*
Stop 26.00 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

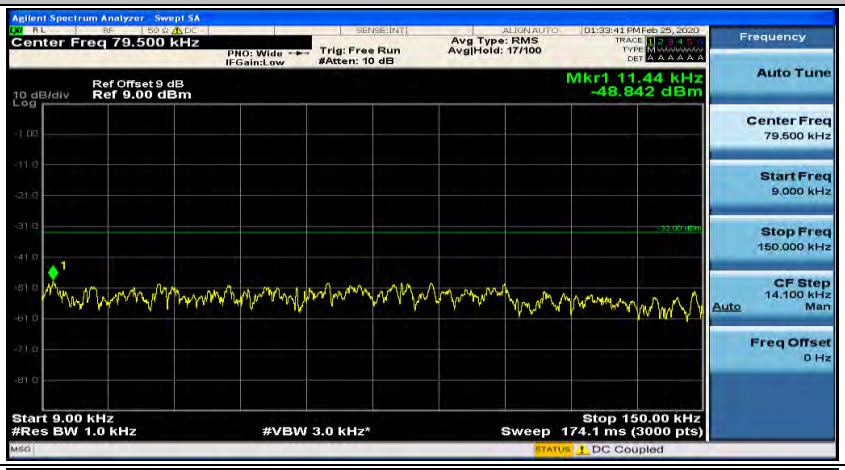
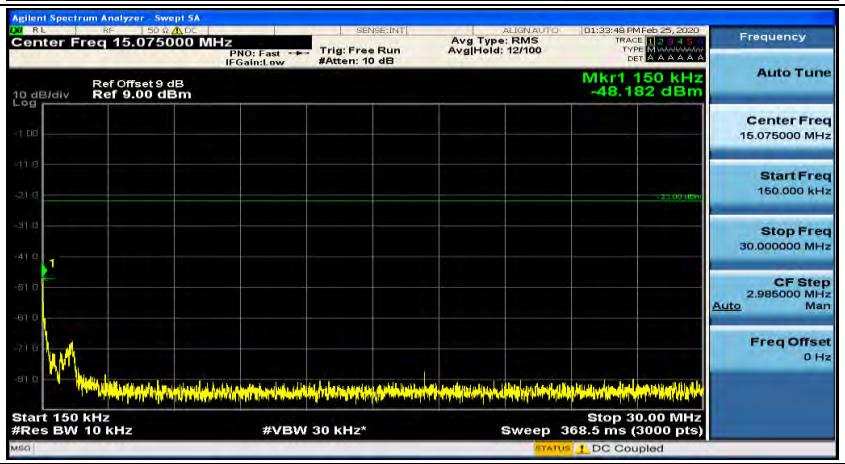
(Channel Bandwidth: 3 MHz)_LCH_16QAM_1RB#0



(Channel Bandwidth: 3 MHz)_LCH_16QAM_1RB#7

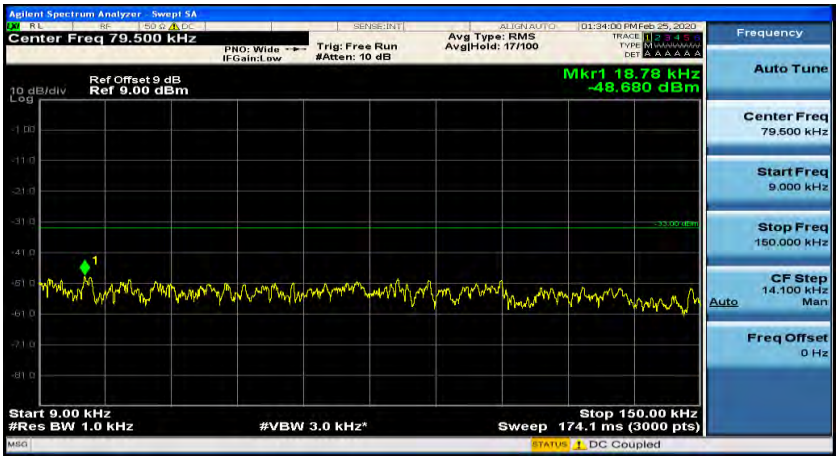

Agilent Spectrum Analyzer - Swept SA
Center Freq 79.500 kHz
PNO: Wide
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 17/100
01:32:00 PM Feb 25, 2020
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Mkr1 13.75 kHz
-48.497 dBm
Start 9.00 kHz
#Res BW 1.0 kHz
#VBW 3.0 kHz*
Stop 150.00 kHz
Sweep 174.1 ms (3000 pts)
1 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

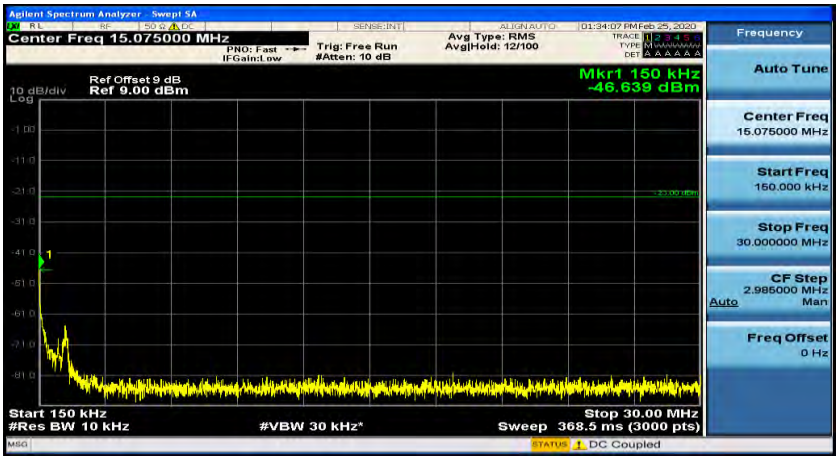

Agilent Spectrum Analyzer - Swept SA
Center Freq 15.075000 MHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 12/100
01:32:08 PM Feb 25, 2020
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Mkr1 170 kHz
-46.803 dBm
Start 150 kHz
#Res BW 10 kHz
#VBW 30 kHz*
Stop 30.00 MHz
Sweep 368.5 ms (3000 pts)
1 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
01:32:13 PM Feb 25, 2020
Ref Offset 8.95 dB
10 dB/div
Log
Ref 30.00 dBm
Mkr2 25.602 GHz
-26.551 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

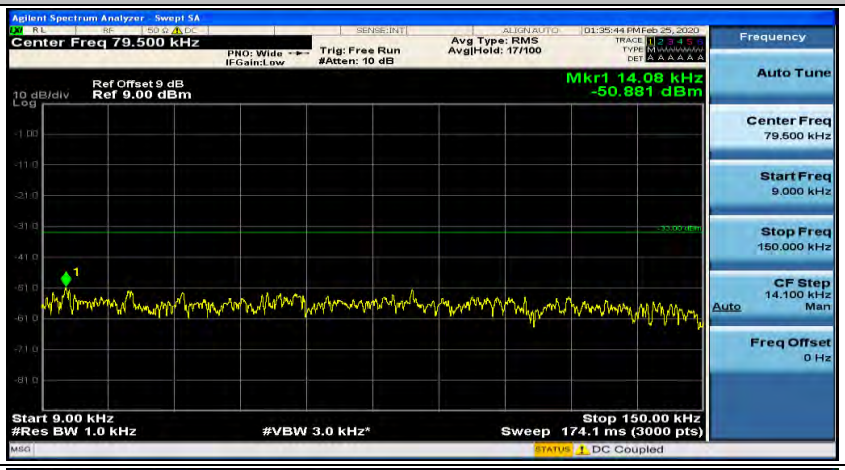
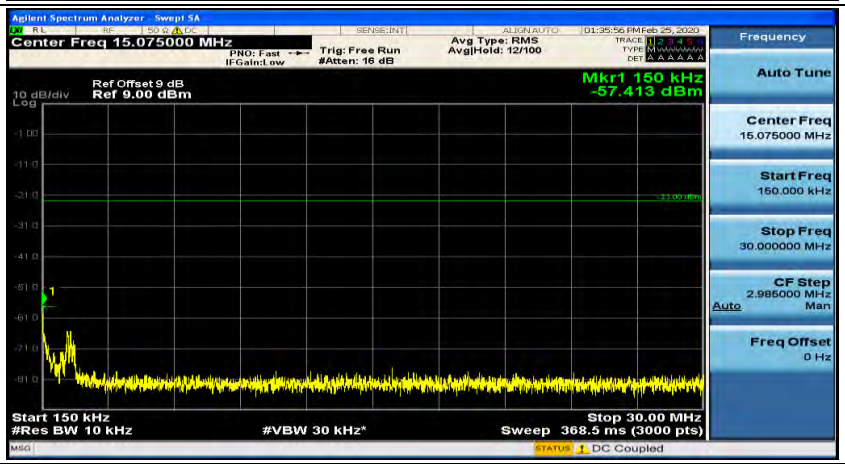
(Channel Bandwidth: 3 MHz)_MCH_16QAM_1RB#0



(Channel Bandwidth: 3 MHz)_MCH_16QAM_1RB#7

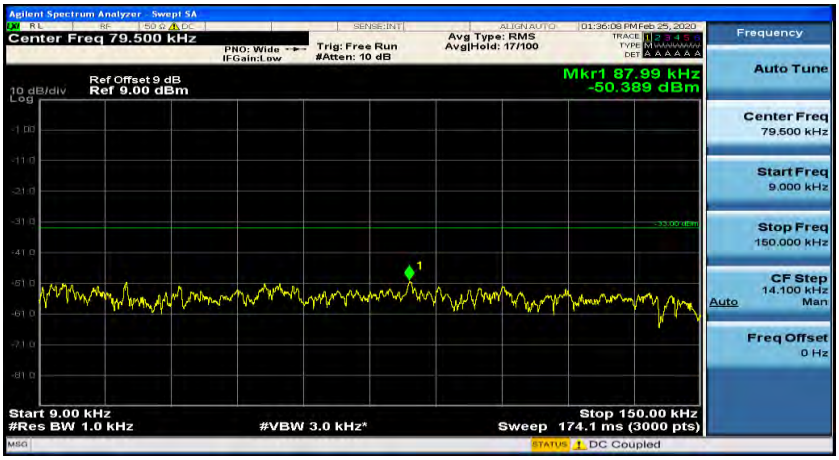

Agilent Spectrum Analyzer - Swept SA
Center Freq 79.500 kHz
PNO: Wide
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 17/100
01:34:00 PM Feb 25, 2020
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Mkr1 18.78 kHz
-48.680 dBm
Start 9.00 kHz
#Res BW 1.0 kHz
#VBW 3.0 kHz*
Stop 150.00 kHz
Sweep 174.1 ms (3000 pts)
1 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

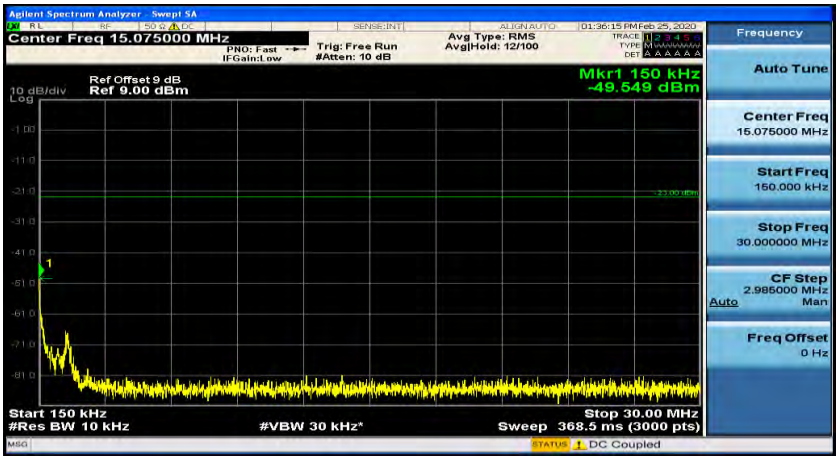

Agilent Spectrum Analyzer - Swept SA
Center Freq 15.075000 MHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 12/100
01:34:07 PM Feb 25, 2020
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Mkr1 150 kHz
-46.639 dBm
Start 150 kHz
#Res BW 10 kHz
#VBW 30 kHz*
Stop 30.00 MHz
Sweep 368.5 ms (3000 pts)
1 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

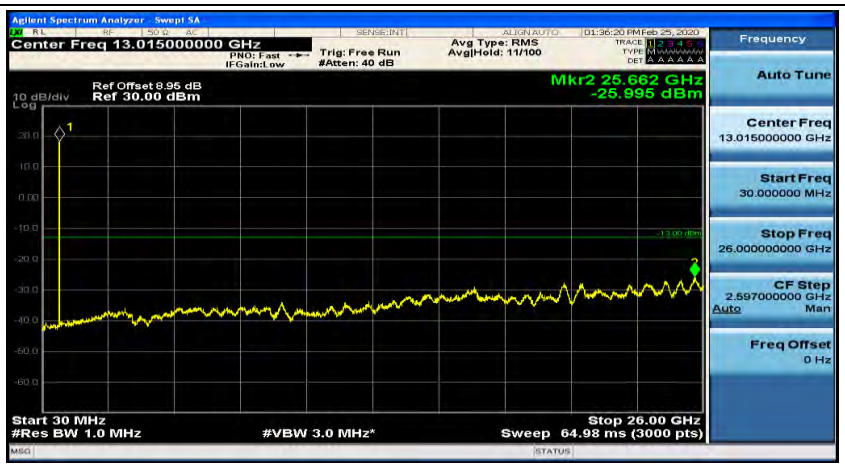

Agilent Spectrum Analyzer - Swept SA
Center Freq 13.015000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 40 dB
Avg Type: RMS
Avg|Hold: 11/100
01:34:13 PM Feb 25, 2020
Ref Offset 8.95 dB
10 dB/div
Log
Ref 30.00 dBm
Mkr2 25.654 GHz
-26.154 dBm
Start 30 MHz
#Res BW 1.0 MHz
#VBW 3.0 MHz*
Stop 26.00 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



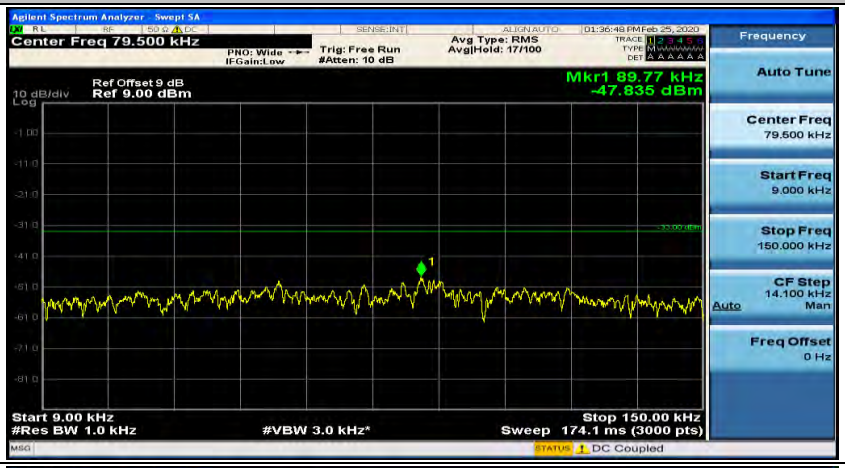
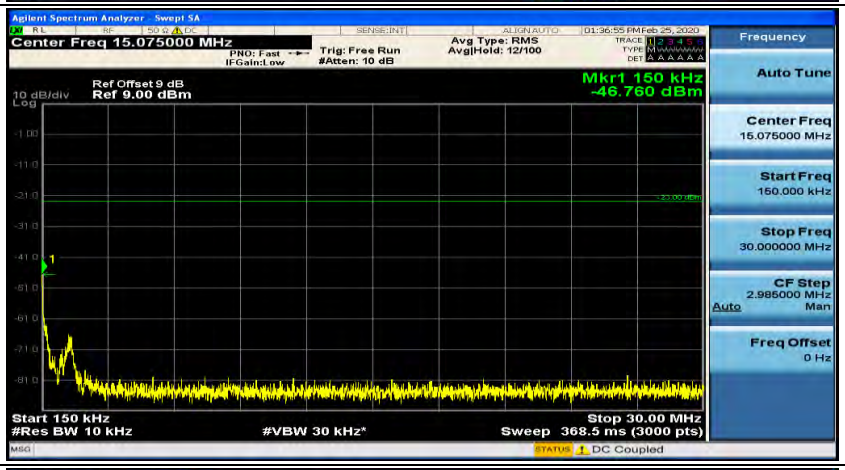
(Channel Bandwidth: 3 MHz)_HCH_16QAM_1RB#7


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
01:36:08 PM Feb 25, 2020
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Mkr1 87.99 kHz
-50.389 dBm
Start 9.00 kHz
#Res BW 1.0 kHz
#VBW 3.0 kHz*
Stop 150.00 kHz
Sweep 174.1 ms (3000 pts)
1 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

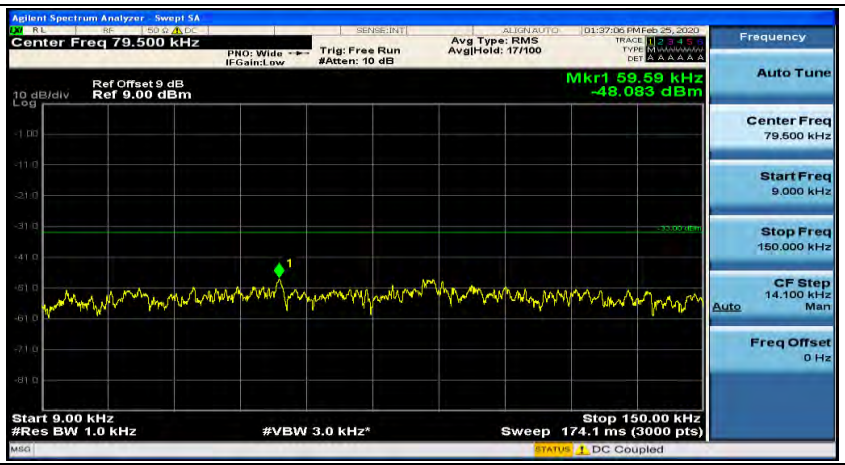

Agilent Spectrum Analyzer - Swept SA
Center Freq 15.075000 MHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 12/100
01:36:15 PM Feb 25, 2020
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Mkr1 150 kHz
-49.549 dBm
Start 150 kHz
#Res BW 10 kHz
#VBW 30 kHz*
Stop 30.00 MHz
Sweep 368.5 ms (3000 pts)
1 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

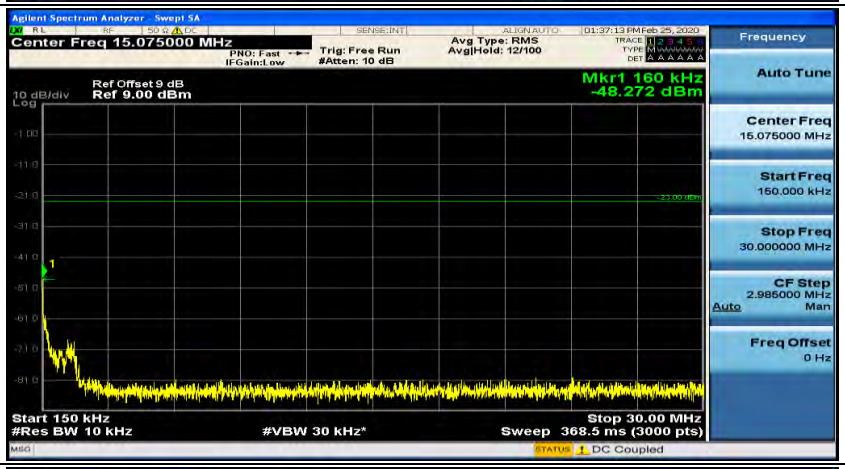

Agilent Spectrum Analyzer - Swept SA
Center Freq 13.015000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 40 dB
Avg Type: RMS
Avg|Hold: 11/100
01:36:20 PM Feb 25, 2020
Ref Offset 8.95 dB
10 dB/div
Log
Ref 30.00 dBm
Mkr2 25.662 GHz
-25.995 dBm
Start 30 MHz
#Res BW 1.0 MHz
#VBW 3.0 MHz*
Stop 26.00 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

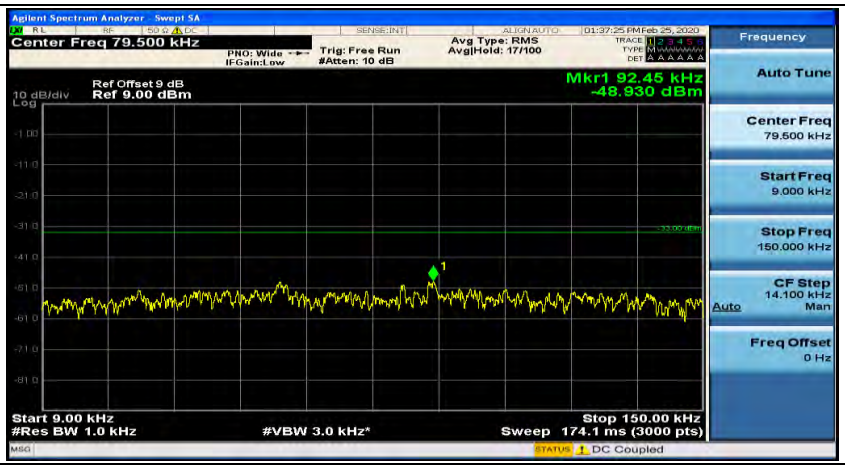
(Channel Bandwidth: 5 MHz)_LCH_QPSK_1RB#0



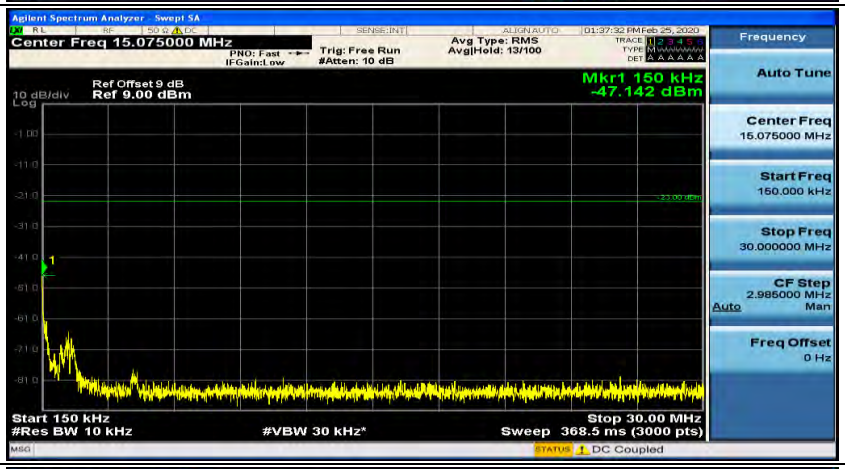
(Channel Bandwidth: 5 MHz)_LCH_QPSK_1RB#12



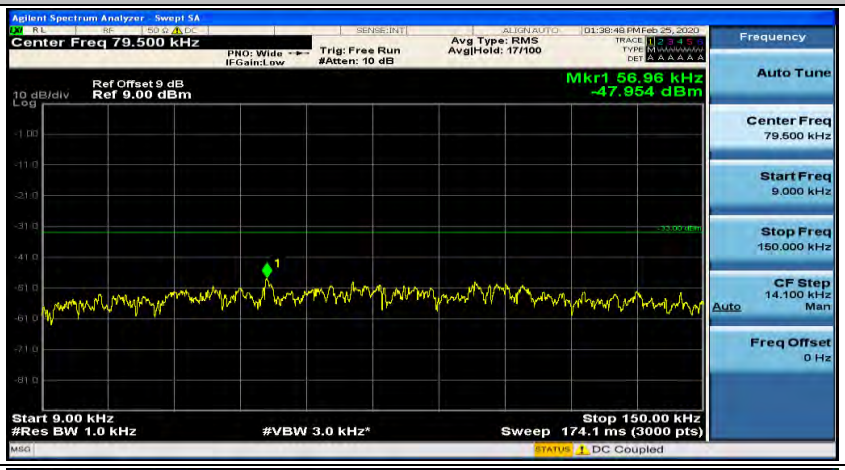
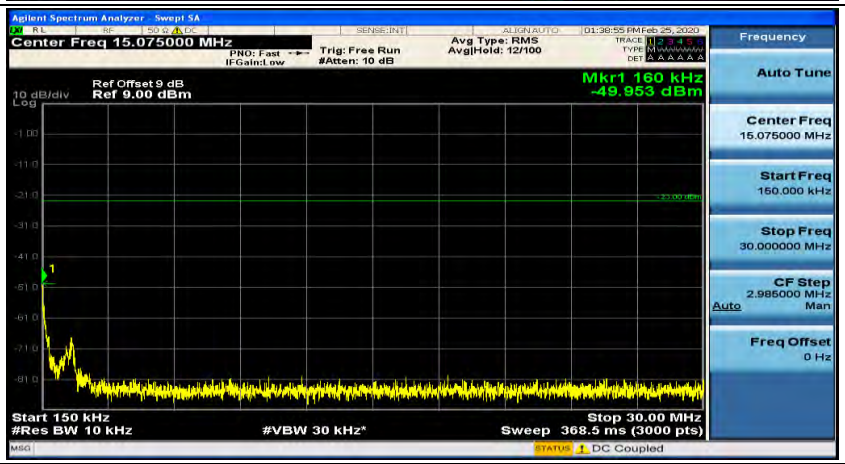


(Channel Bandwidth: 5 MHz)_LCH_QPSK_1RB#24

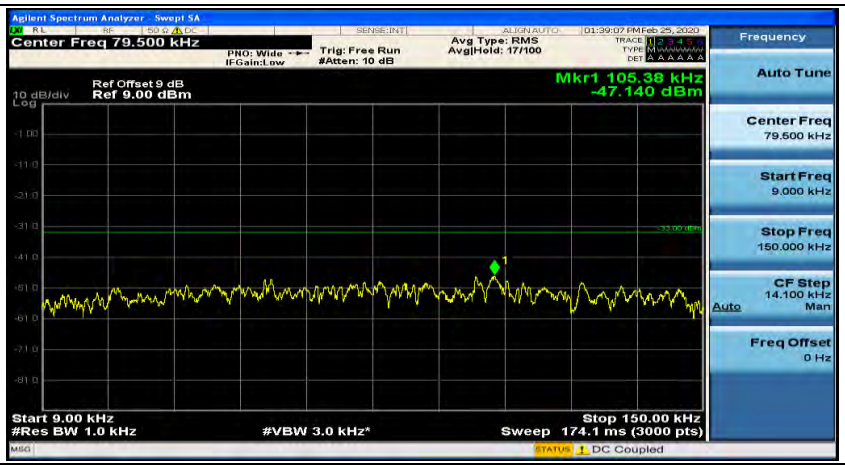

Agilent Spectrum Analyzer - Swept SA
Center Freq 79.500 kHz
PNO: Wide
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 17/100
01:37:25 PM Feb 25, 2020
Frequency
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Mkr1 92.45 kHz
-48.930 dBm
Auto Tune
Center Freq
79.500 kHz
Start Freq
9.000 kHz
Stop 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

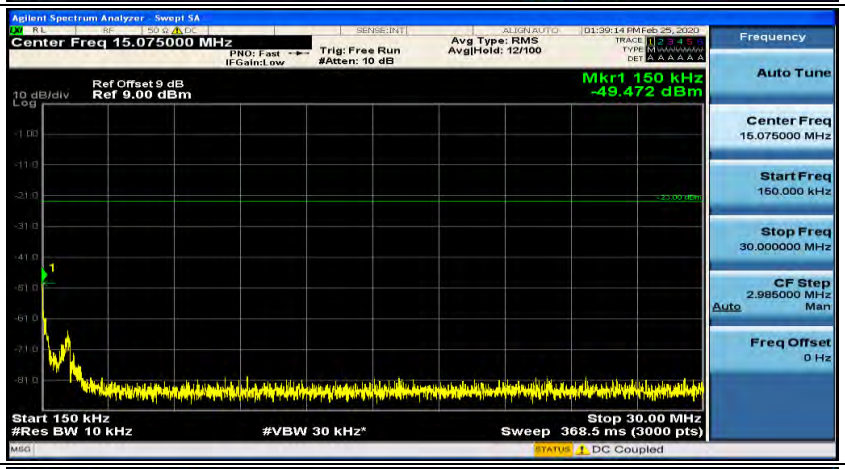

Agilent Spectrum Analyzer - Swept SA
Center Freq 15.075000 MHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 13/100
01:37:32 PM Feb 25, 2020
Frequency
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Mkr1 150 kHz
-47.142 dBm
Auto Tune
Center Freq
15.075000 MHz
Start Freq
150.000 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
01:37:38 PM Feb 25, 2020
Frequency
Ref Offset 8.95 dB
10 dB/div
Log
Ref 30.00 dBm
Mkr2 25.628 GHz
-26.208 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)

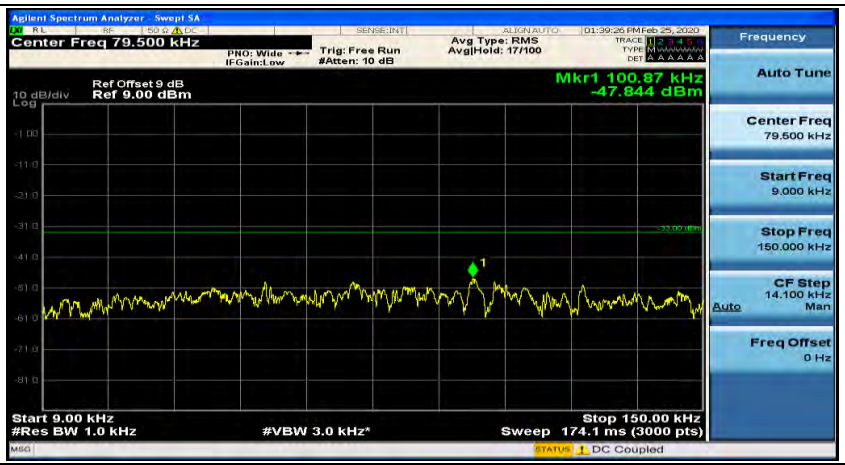
(Channel Bandwidth: 5 MHz)_MCH_QPSK_1RB#0



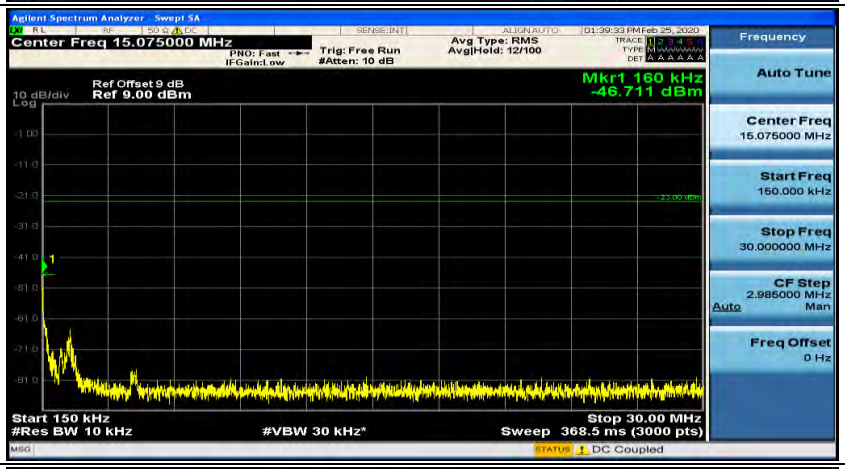
(Channel Bandwidth: 5 MHz)_MCH_QPSK_1RB#12



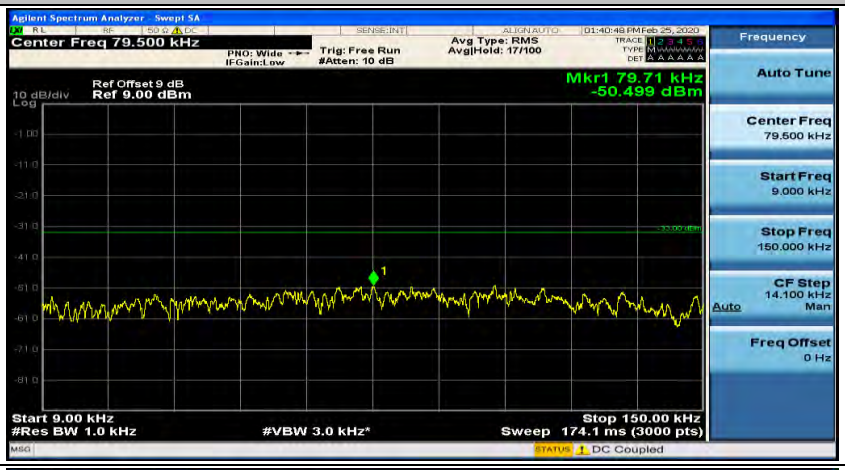
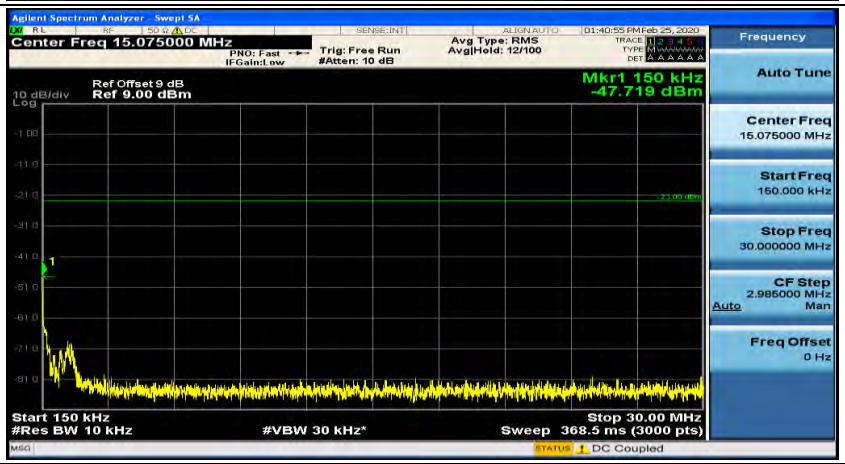


(Channel Bandwidth: 5 MHz)_MCH_QPSK_1RB#24

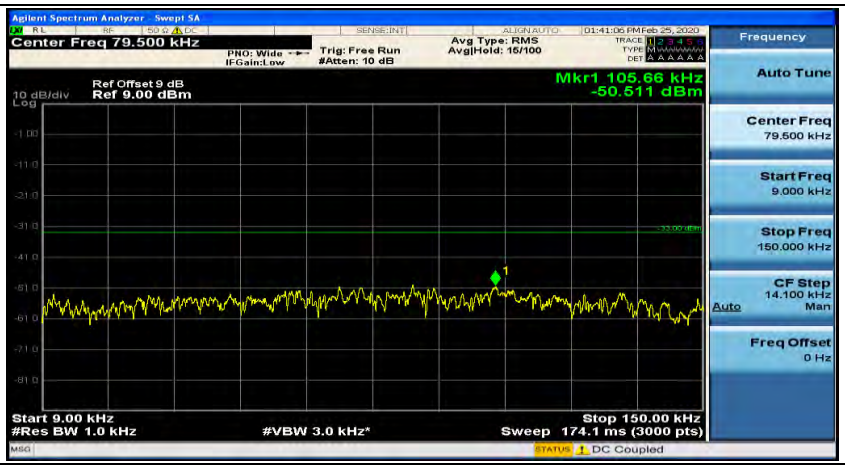

Agilent Spectrum Analyzer - Swept SA
Center Freq 79.500 kHz
PNO: Wide
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 17/100
01:39:26 PM Feb 25, 2020
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Mkr1 100.87 kHz
-47.844 dBm
Start 9.00 kHz
#Res BW 1.0 kHz
#VBW 3.0 kHz*
Stop 150.00 kHz
Sweep 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

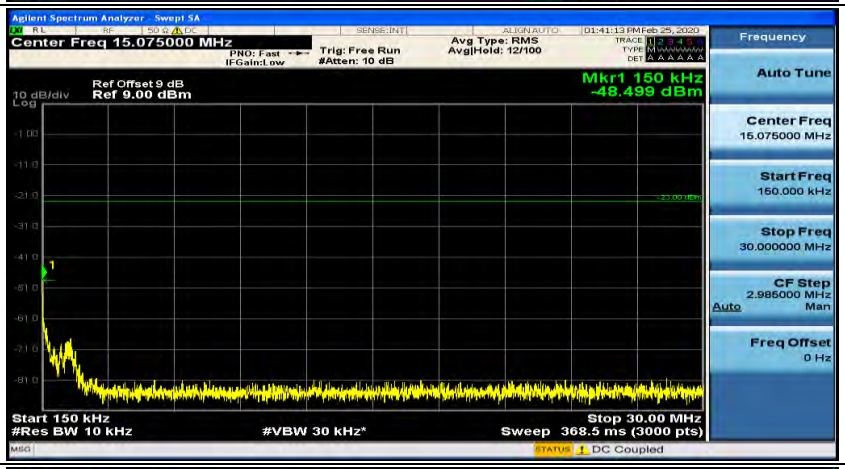

Agilent Spectrum Analyzer - Swept SA
Center Freq 15.075000 MHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 12/100
01:39:33 PM Feb 25, 2020
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Mkr1 160 kHz
-46.711 dBm
Start 150 kHz
#Res BW 10 kHz
#VBW 30 kHz*
Stop 30.00 MHz
Sweep 368.5 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
01:39:39 PM Feb 25, 2020
Ref Offset 8.95 dB
10 dB/div
Log
Ref 30.00 dBm
Mkr2 25.628 GHz
-26.237 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

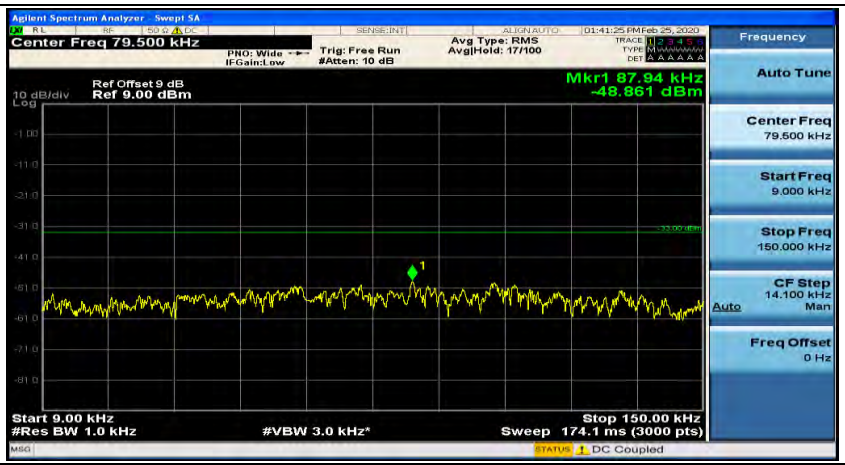
(Channel Bandwidth: 5 MHz)_HCH_QPSK_1RB#0



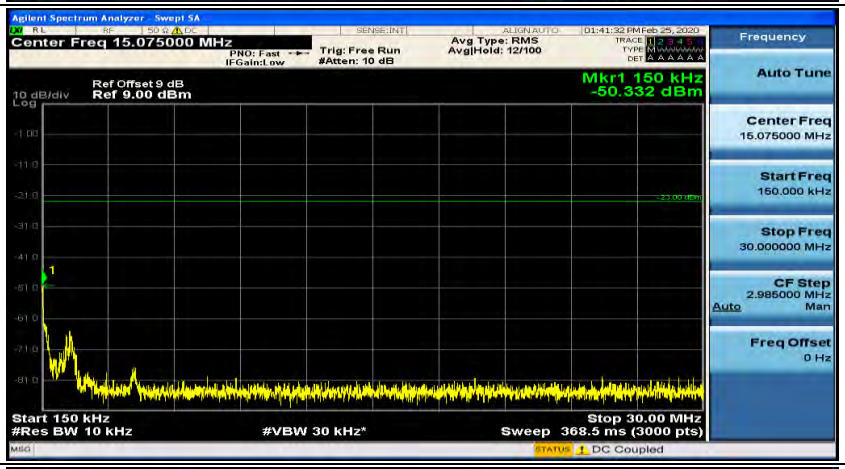
(Channel Bandwidth: 5 MHz)_HCH_QPSK_1RB#12



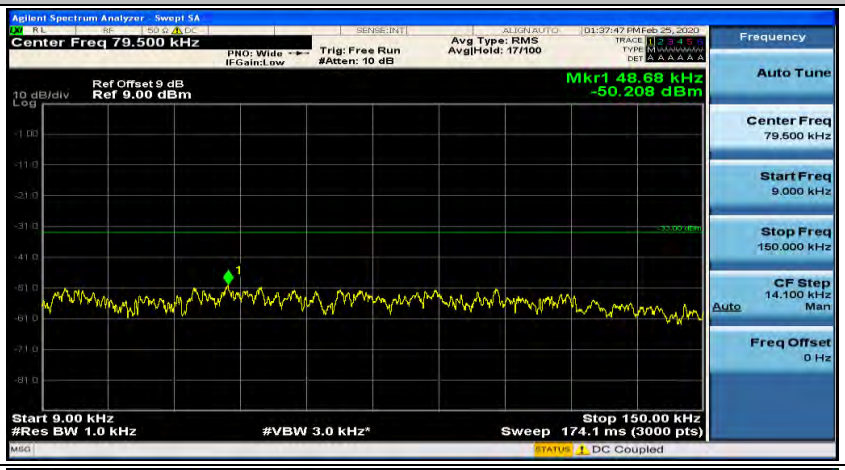
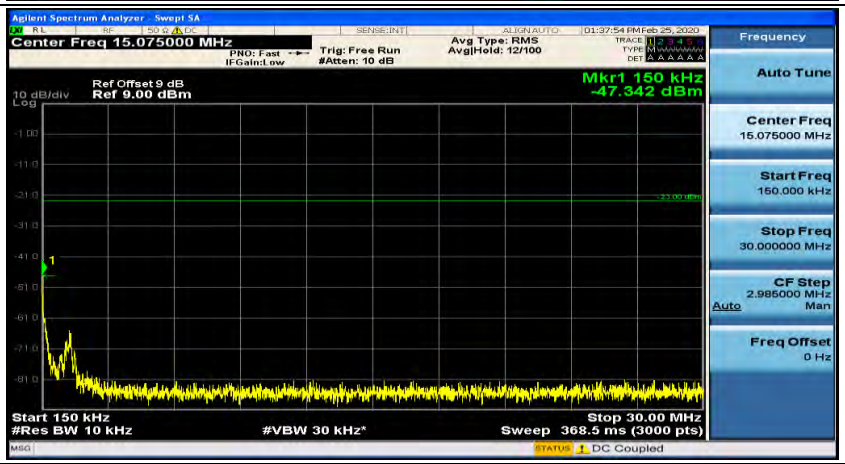


(Channel Bandwidth: 5 MHz)_HCH_QPSK_1RB#24

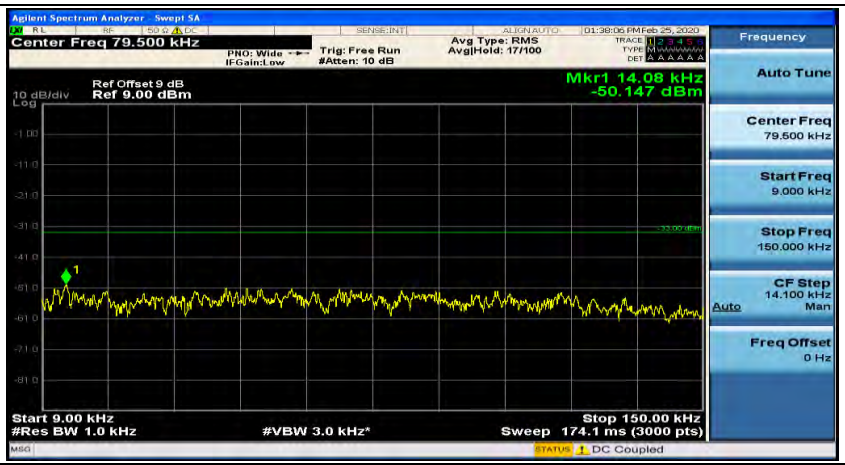

Agilent Spectrum Analyzer - Swept SA
Center Freq 79.500 kHz
PNO: Wide
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 17/100
01:41:25 PM Feb 25, 2020
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Mkr1 87.94 kHz
-48.861 dBm
Start 9.00 kHz
#Res BW 1.0 kHz
#VBW 3.0 kHz*
Stop 150.00 kHz
Sweep 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

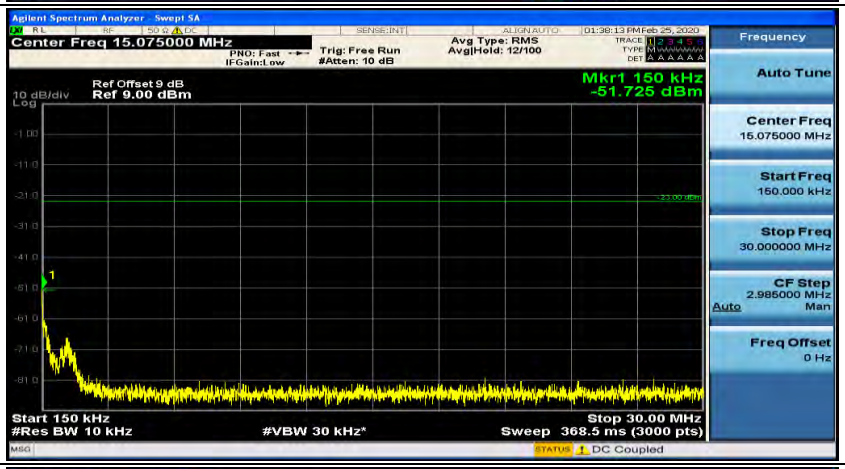

Agilent Spectrum Analyzer - Swept SA
Center Freq 15.075000 MHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 12/100
01:41:32 PM Feb 25, 2020
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Mkr1 150 kHz
-50.332 dBm
Start 150 kHz
#Res BW 10 kHz
#VBW 30 kHz*
Stop 30.00 MHz
Sweep 368.5 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
01:41:38 PM Feb 25, 2020
Ref Offset 8.95 dB
10 dB/div
Log
Ref 30.00 dBm
Mkr2 25.680 GHz
-26.561 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

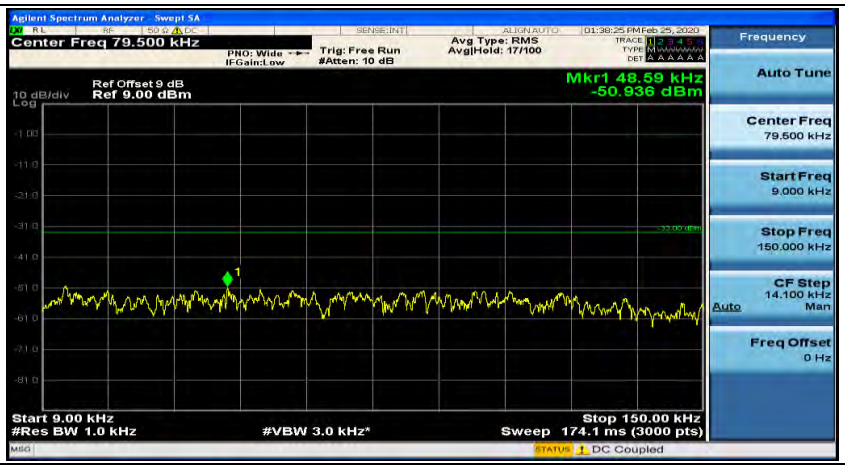
(Channel Bandwidth: 5 MHz)_LCH_16QAM_1RB#0



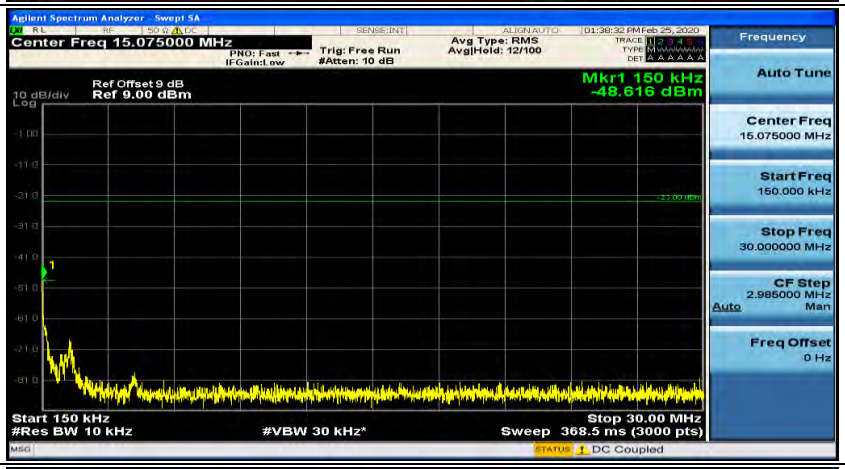
(Channel Bandwidth: 5 MHz)_LCH_16QAM_1RB#12



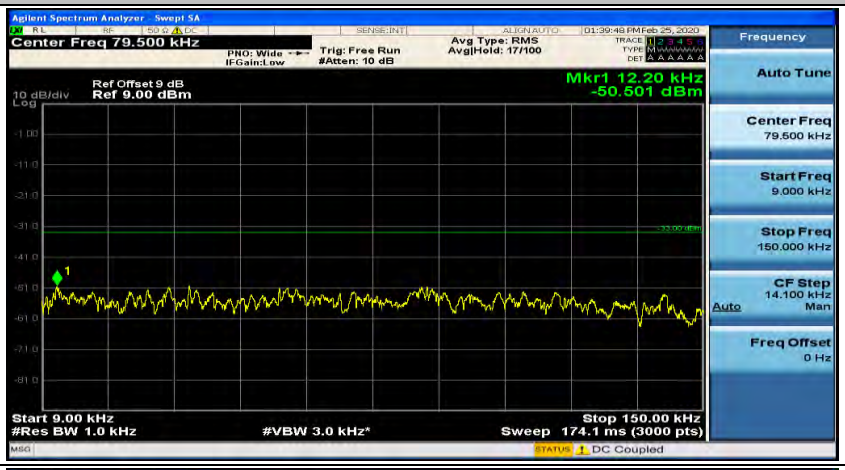
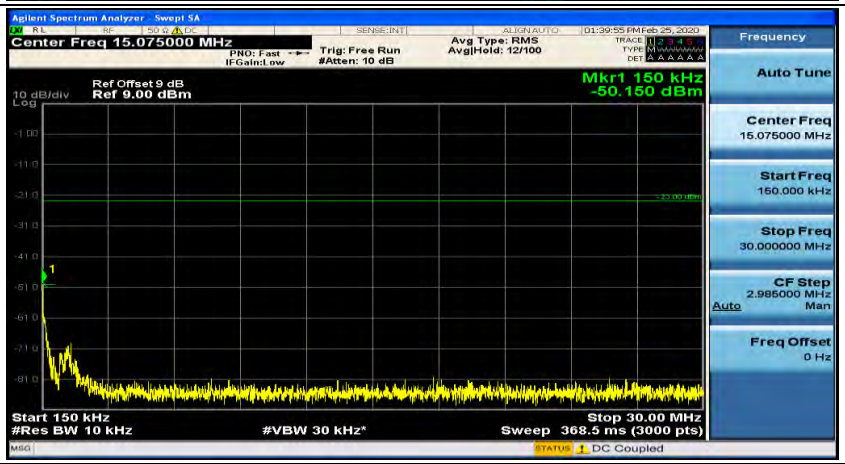
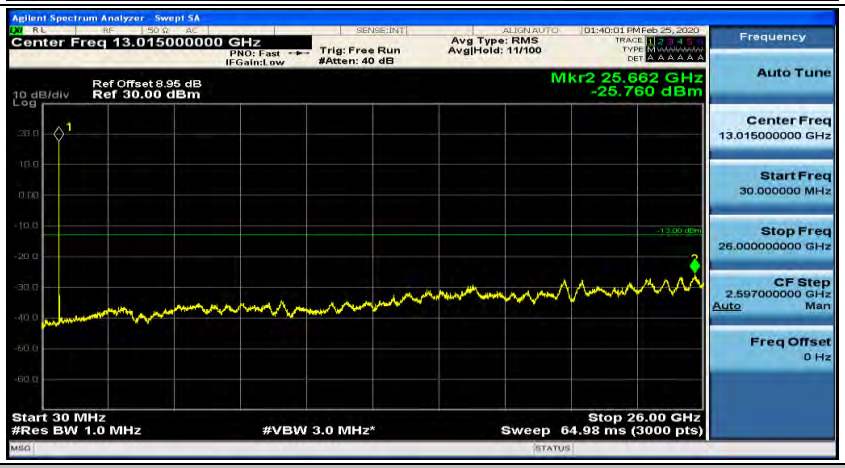


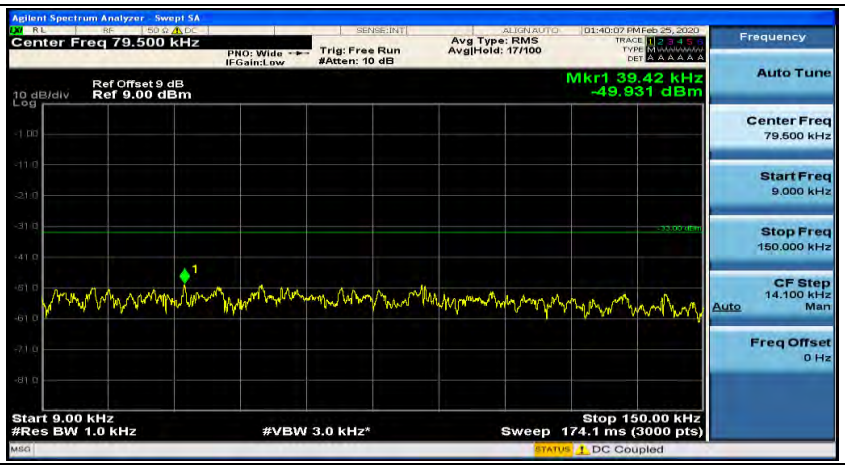
(Channel Bandwidth: 5 MHz)_LCH_16QAM_1RB#24

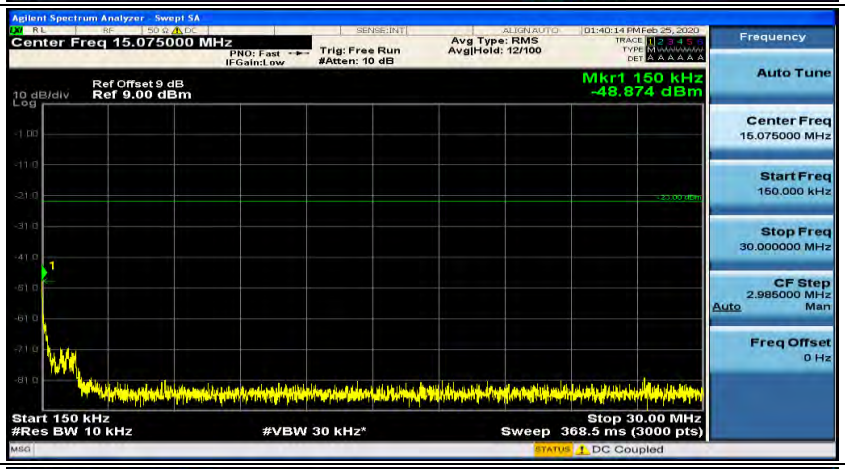

Agilent Spectrum Analyzer - Swept SA
Center Freq 79.500 kHz
PNO: Wide
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 17/100
01:38:25 PM Feb 25, 2020
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Mkr1 48.59 kHz
-50.936 dBm
Start 9.00 kHz
#Res BW 1.0 kHz
#VBW 3.0 kHz*
Stop 150.00 kHz
Sweep 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
01:38:32 PM Feb 25, 2020
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Mkr1 150 kHz
-48.616 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

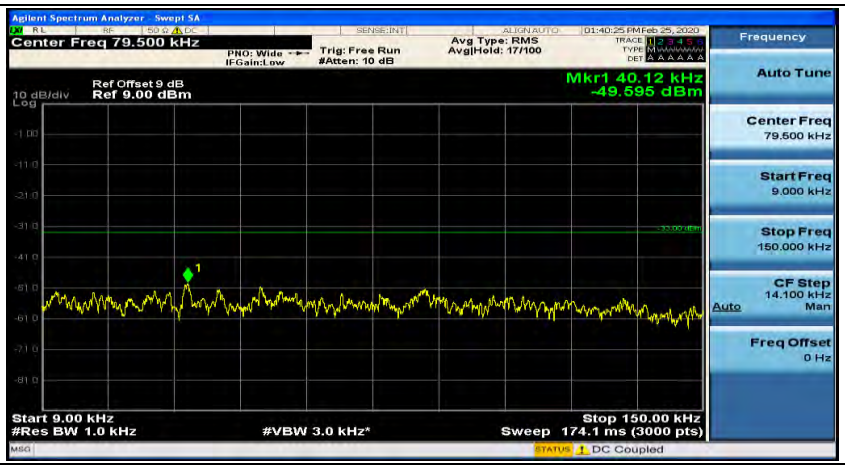

Agilent Spectrum Analyzer - Swept SA
Center Freq 13.015000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 40 dB
Avg Type: RMS
Avg|Hold: 11/100
01:38:39 PM Feb 25, 2020
Ref Offset 8.95 dB
10 dB/div
Log
Ref 30.00 dBm
Mkr2 25.688 GHz
-25.794 dBm
Start 30 MHz
#Res BW 1.0 MHz
#VBW 3.0 MHz*
Stop 26.00 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

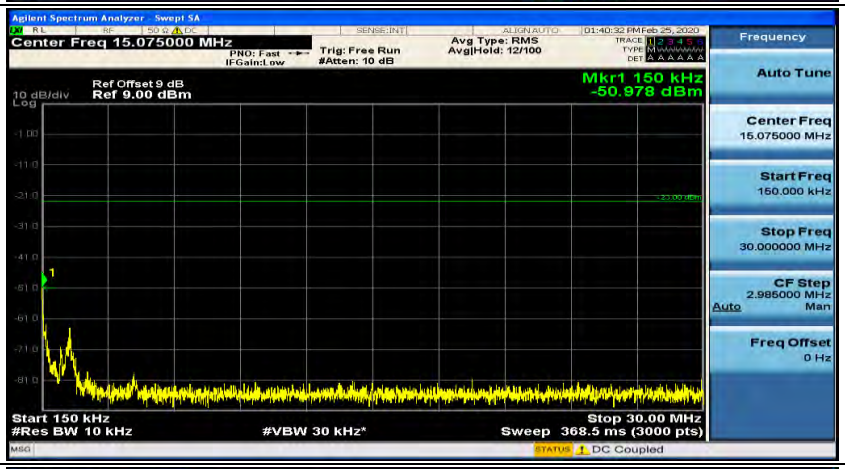
(Channel Bandwidth: 5 MHz)_MCH_16QAM_1RB#0



(Channel Bandwidth: 5 MHz)_MCH_16QAM_1RB#12



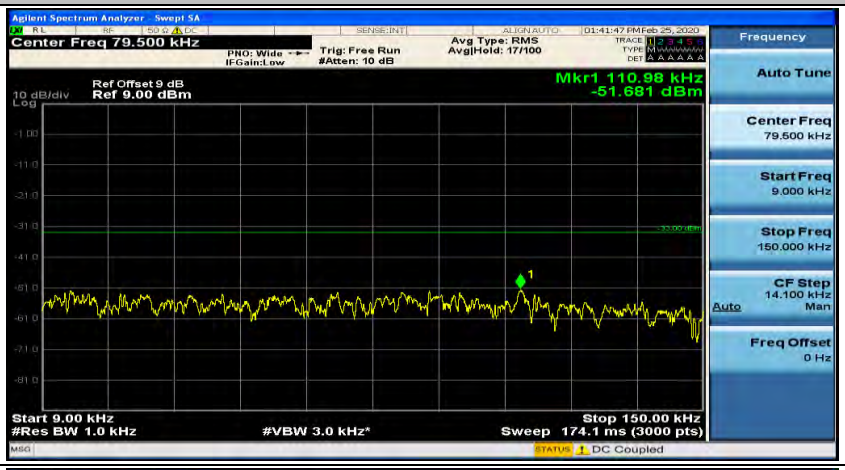
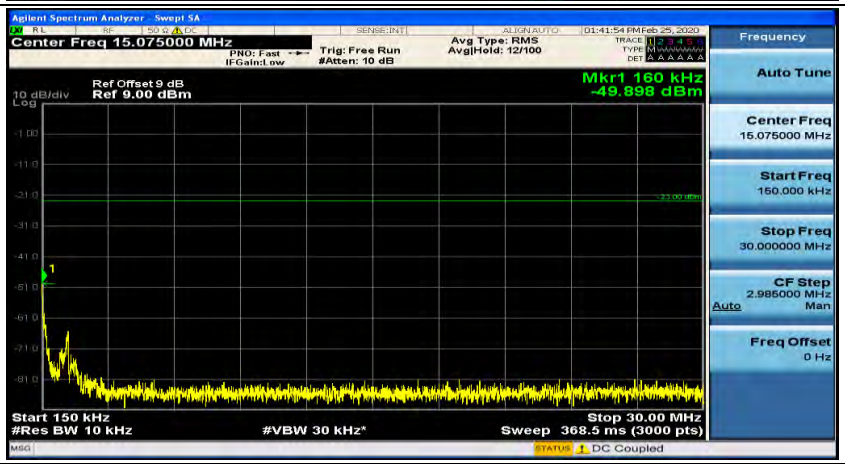


(Channel Bandwidth: 5 MHz)_MCH_16QAM_1RB#24

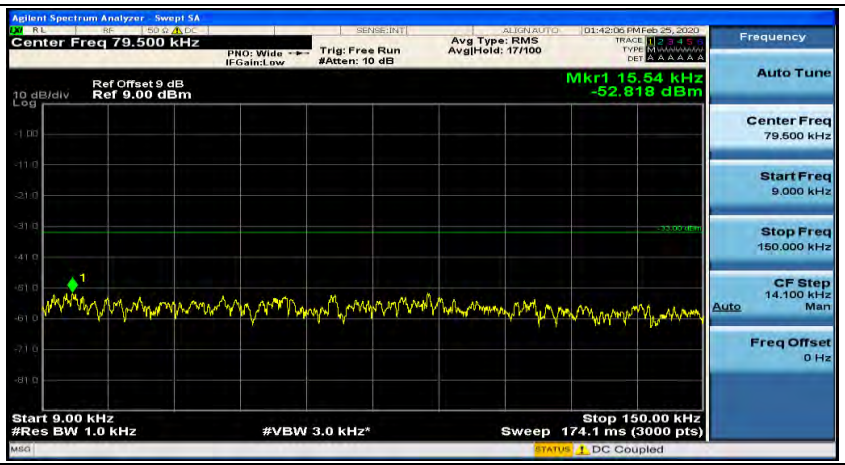

Agilent Spectrum Analyzer - Swept SA
Center Freq 79.500 kHz
PNO: Wide
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 17/100
01:40:25 PM Feb 25, 2020
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Mkr1 40.12 kHz
-49.595 dBm
Start 9.00 kHz
#Res BW 1.0 kHz
#VBW 3.0 kHz*
Stop 150.00 kHz
Sweep 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

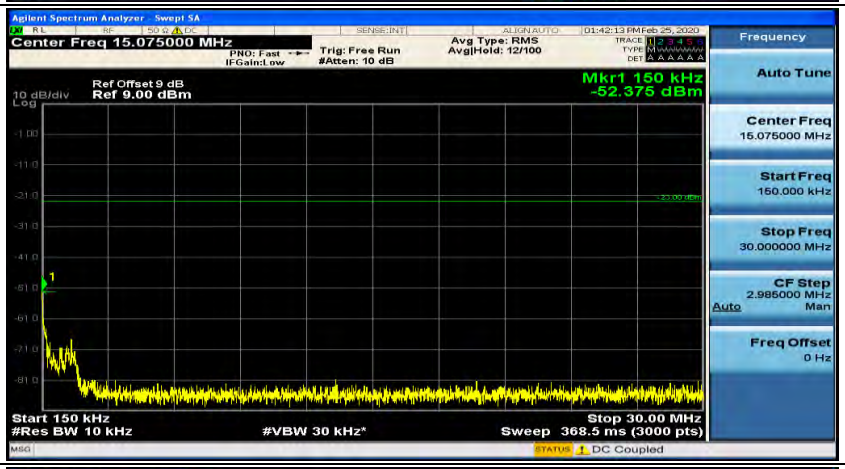

Agilent Spectrum Analyzer - Swept SA
Center Freq 15.075000 MHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 12/100
01:40:32 PM Feb 25, 2020
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Mkr1 150 kHz
-50.978 dBm
Start 150 kHz
#Res BW 10 kHz
#VBW 30 kHz*
Stop 30.00 MHz
Sweep 368.5 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
01:40:39 PM Feb 25, 2020
Ref Offset 8.95 dB
10 dB/div
Log
Ref 30.00 dBm
Mkr2 25.645 GHz
-26.294 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

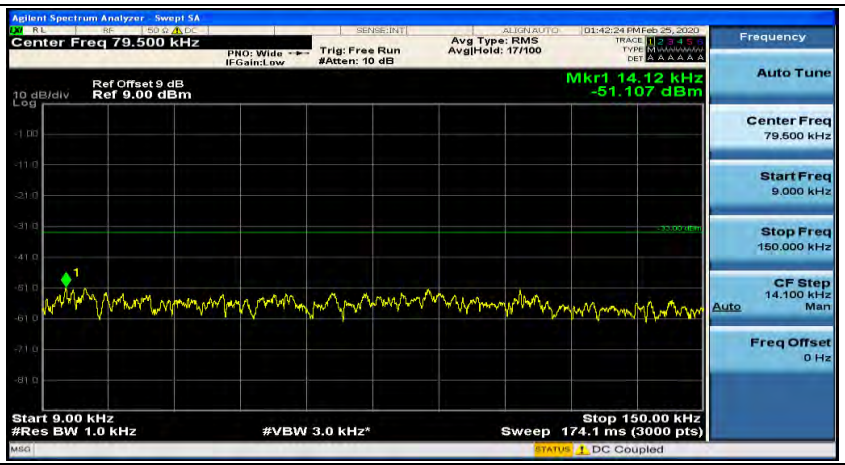
(Channel Bandwidth: 5 MHz)_HCH_16QAM_1RB#0



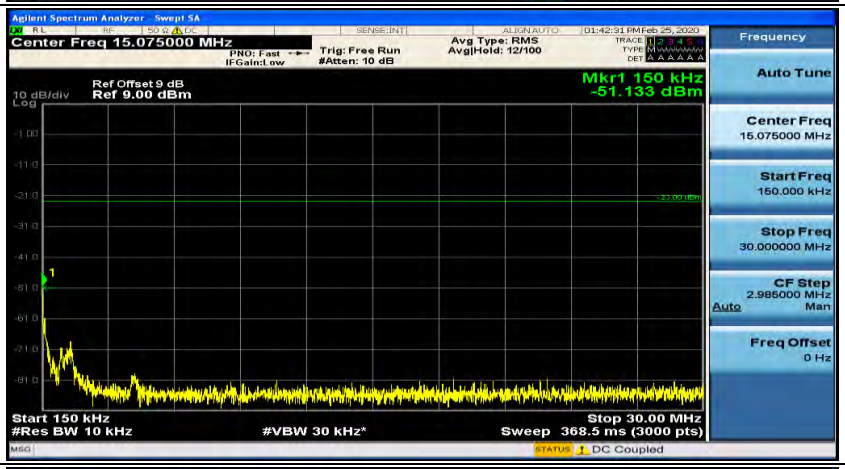
(Channel Bandwidth: 5 MHz)_HCH_16QAM_1RB#12





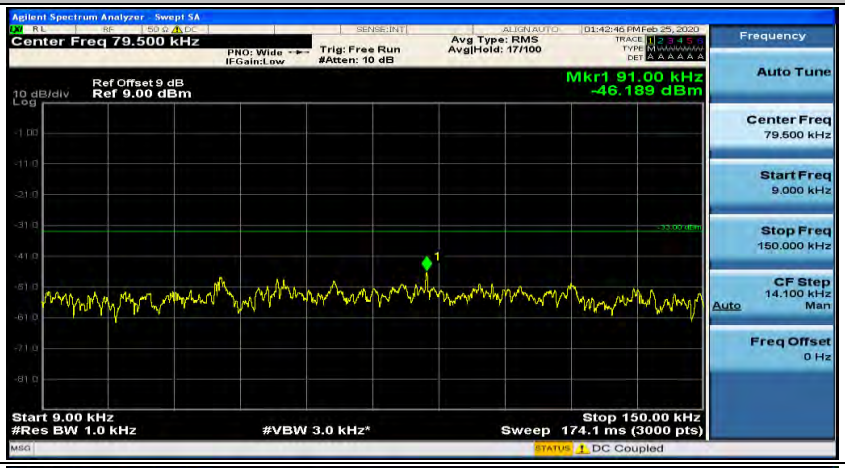
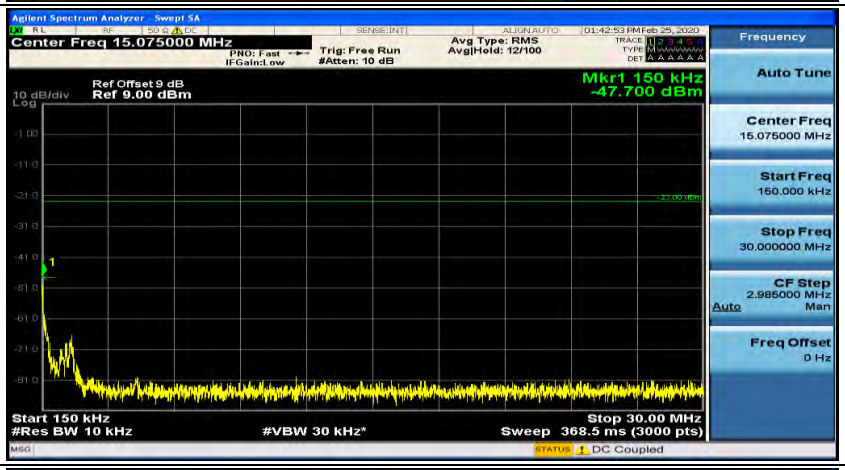
(Channel Bandwidth: 5 MHz)_HCH_16QAM_1RB#24


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
01:42:24 PM Feb 25, 2020
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Mkr1 14.12 kHz
-51.107 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

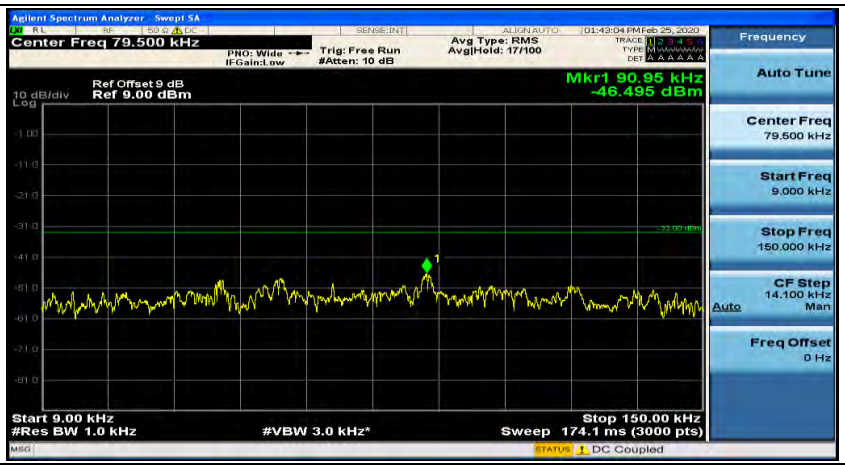

Agilent Spectrum Analyzer - Swept SA
Center Freq 15.075000 MHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 12/100
01:42:31 PM Feb 25, 2020
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Mkr1 150 kHz
-51.133 dBm
Start 150 kHz
#Res BW 10 kHz
#VBW 30 kHz*
Stop 30.00 MHz
Sweep 368.5 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

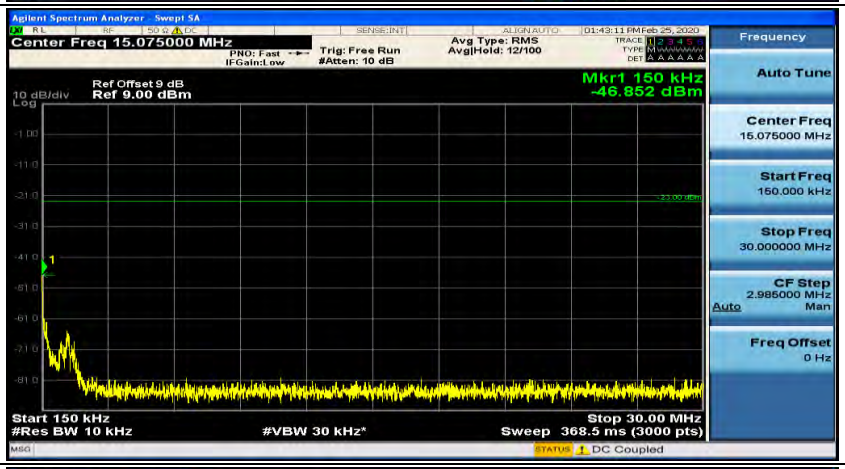

Agilent Spectrum Analyzer - Swept SA
Center Freq 13.015000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 40 dB
Avg Type: RMS
Avg|Hold: 11/100
01:42:37 PM Feb 25, 2020
Ref Offset 8.95 dB
10 dB/div
Log
Ref 30.00 dBm
Mkr2 25.619 GHz
-26.328 dBm
Start 30 MHz
#Res BW 1.0 MHz
#VBW 3.0 MHz*
Stop 26.00 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

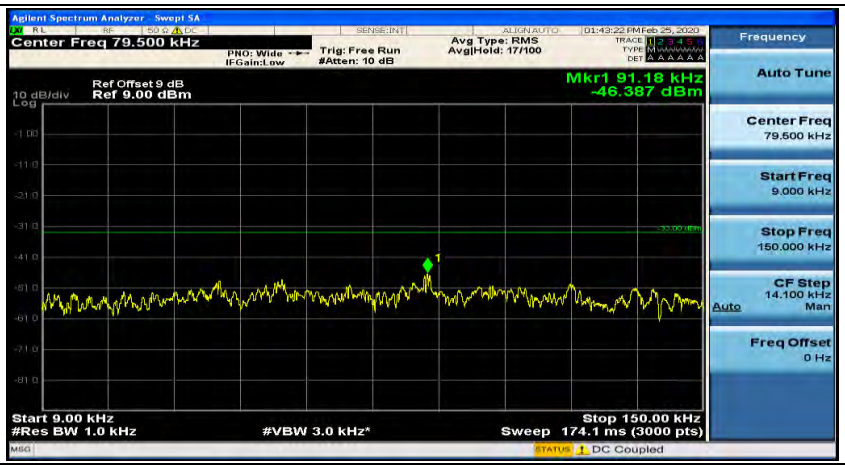
Channel Bandwidth: 10 MHz_LCH_QPSK_1RB#0



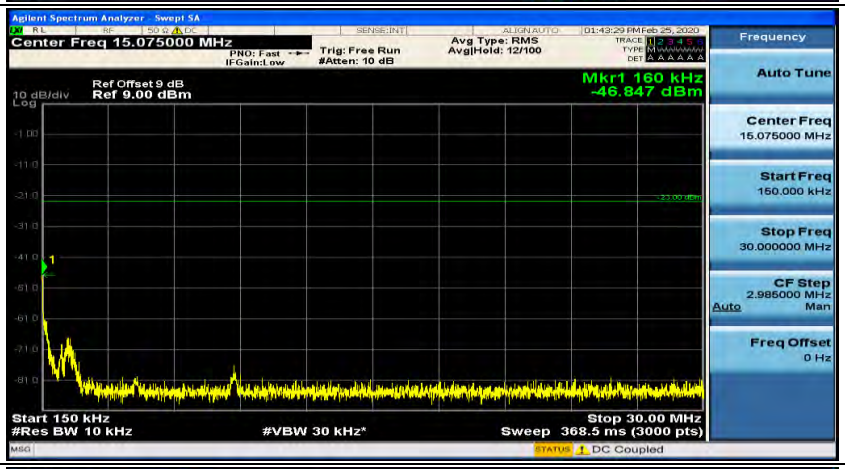
Channel Bandwidth: 10 MHz_LCH_QPSK_1RB#24



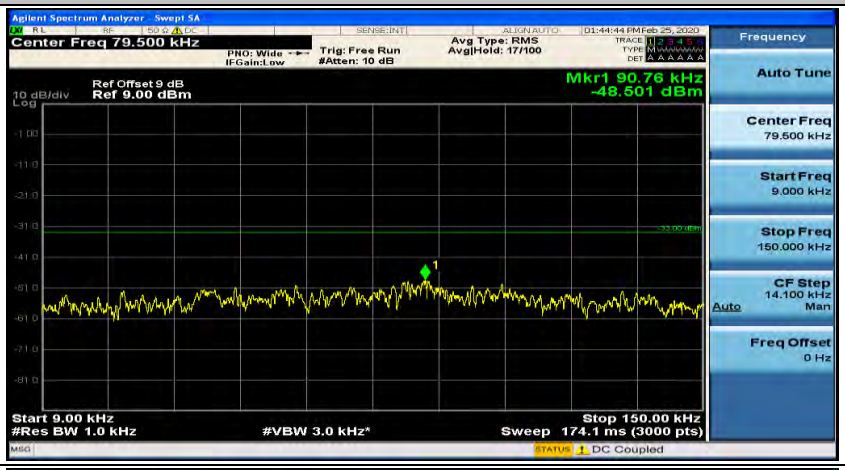
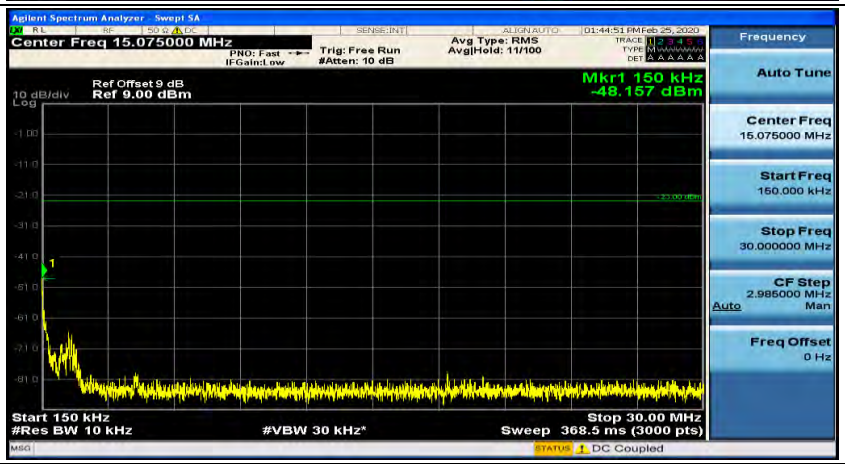


Channel Bandwidth: 10 MHz_LCH_QPSK_1RB#49

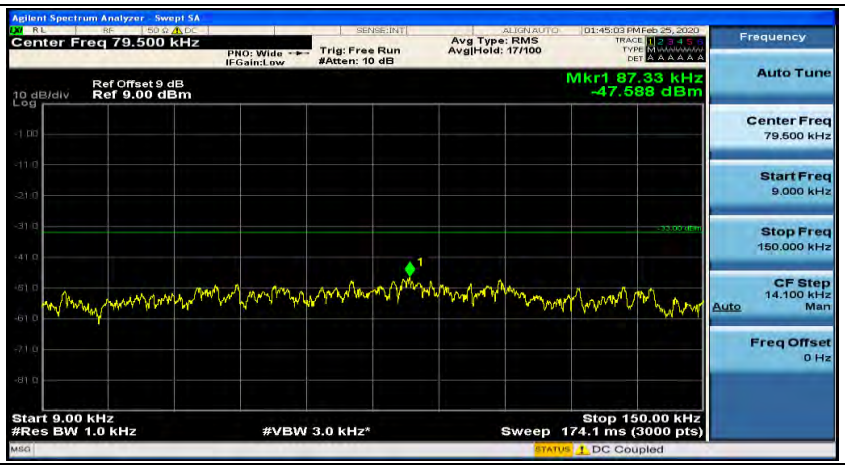

Agilent Spectrum Analyzer - Swept SA
Center Freq 79.500 kHz
PNO: Wide
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 17/100
01:43:22 PM Feb 25, 2020
Mkr1 91.18 kHz
-46.387 dBm
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Start 9.00 kHz
#Res BW 1.0 kHz
#VBW 3.0 kHz*
Stop 150.00 kHz
Sweep 174.1 ms (3000 pts)
DC Coupled
Frequency
Auto Tune
Center Freq
79.500 kHz
Start Freq
9.000 kHz
Stop Freq
150.000 kHz
CF Step
14.100 kHz
Auto
Man
Freq Offset
0 Hz

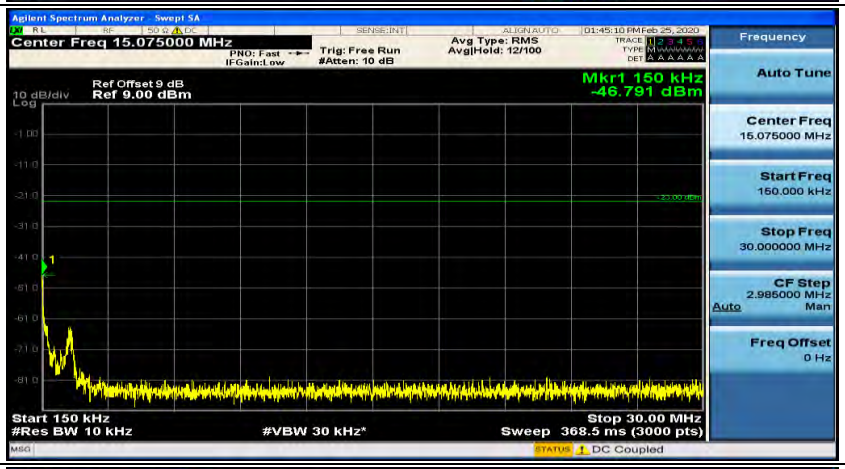

Agilent Spectrum Analyzer - Swept SA
Center Freq 15.075000 MHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 12/100
01:43:29 PM Feb 25, 2020
Mkr1 160 kHz
-46.847 dBm
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Start 150 kHz
#Res BW 10 kHz
#VBW 30 kHz*
Stop 30.00 MHz
Sweep 368.5 ms (3000 pts)
DC Coupled
Frequency
Auto Tune
Center Freq
15.075000 MHz
Start Freq
150.000 kHz
Stop Freq
30.000000 MHz
CF Step
2.985000 MHz
Auto
Man
Freq Offset
0 Hz


Agilent Spectrum Analyzer - Swept SA
Center Freq 13.015000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 40 dB
Avg Type: RMS
Avg|Hold: 11/100
01:43:35 PM Feb 25, 2020
Mkr2 25.654 GHz
-25.960 dBm
Ref Offset 8.95 dB
10 dB/div
Log
Ref 30.00 dBm
Start 30 MHz
#Res BW 1.0 MHz
#VBW 3.0 MHz*
Stop 26.00 GHz
Sweep 64.98 ms (3000 pts)
Frequency
Auto Tune
Center Freq
13.015000000 GHz
Start Freq
30.000000 MHz
Stop Freq
26.000000000 GHz
CF Step
2.597000000 GHz
Auto
Man
Freq Offset
0 Hz

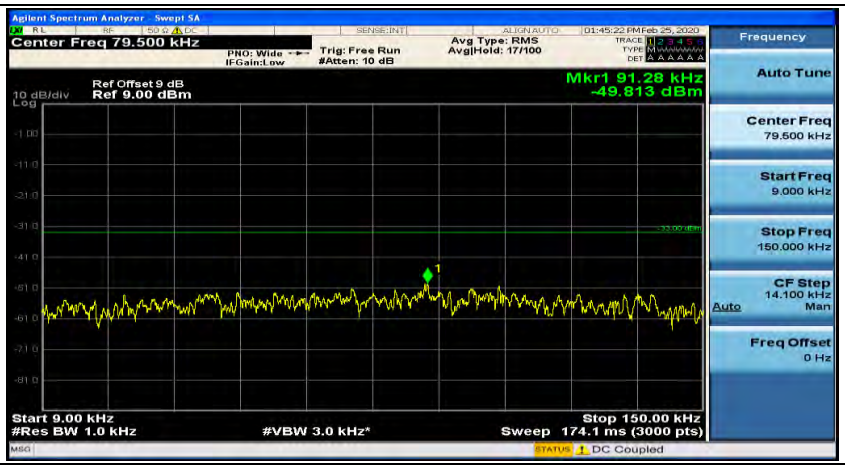
Channel Bandwidth: 10 MHz_MCH_QPSK_1RB#0



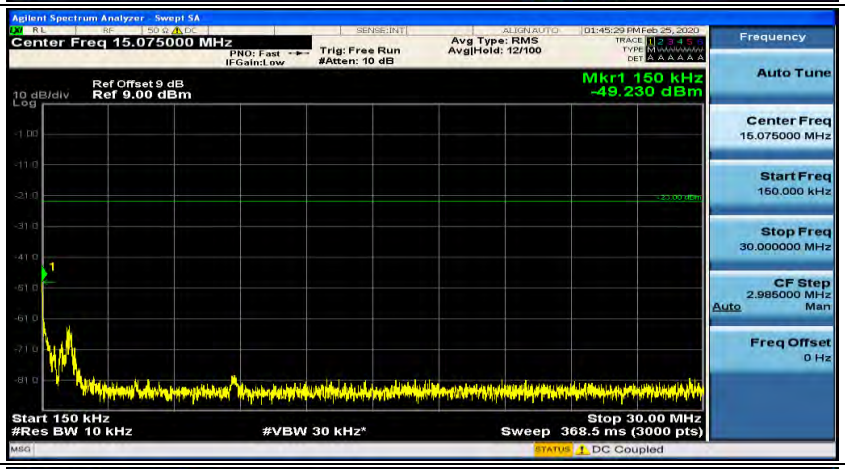
Channel Bandwidth: 10 MHz_MCH_QPSK_1RB#24



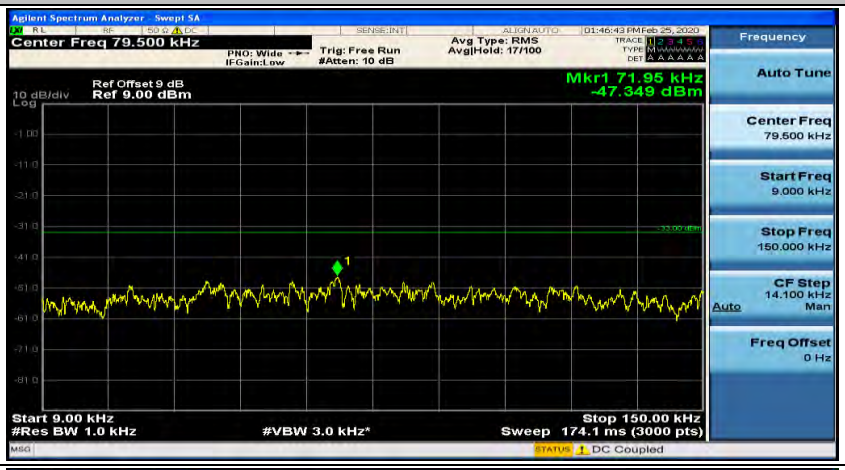
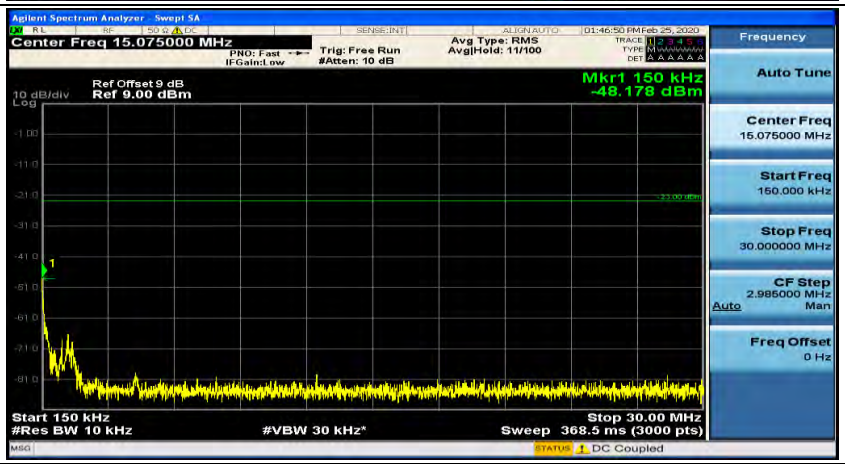


Channel Bandwidth: 10 MHz_MCH_QPSK_1RB#49

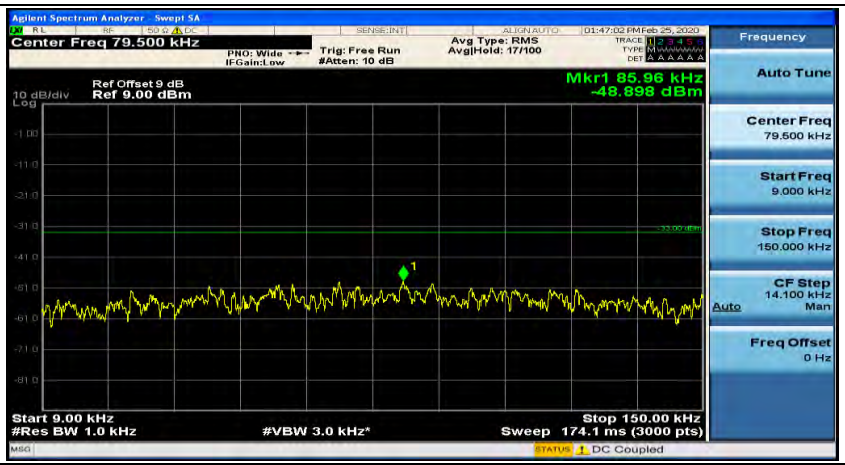

Agilent Spectrum Analyzer - Swept SA
Center Freq 79.500 kHz
PNO: Wide
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 17/100
01:45:22 PM Feb 25, 2020
Frequency
Auto Tune
Mkr1 91.28 kHz
-49.813 dBm
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Center Freq
79.500 kHz
Start Freq
9.000 kHz
Stop Freq
150.000 kHz
CF Step
14.100 kHz
Auto
Man
Freq Offset
0 Hz
Start 9.00 kHz
#Res BW 1.0 kHz
#VBW 3.0 kHz*
Stop 150.00 kHz
Sweep 174.1 ms (3000 pts)
DC Coupled

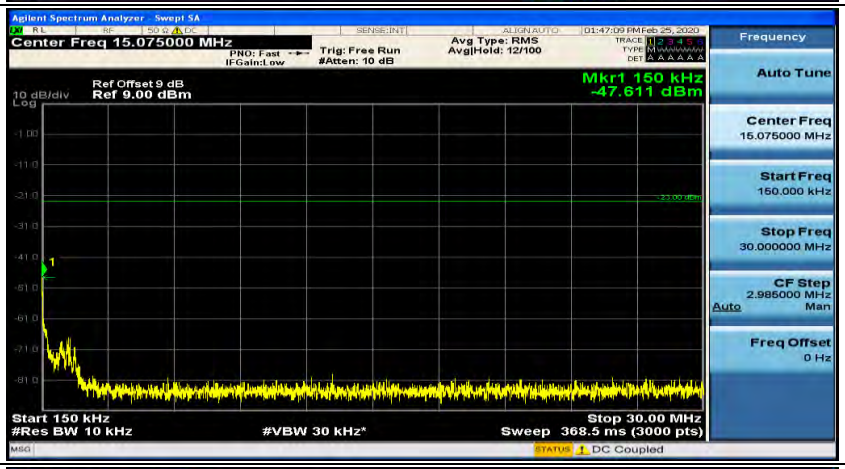

Agilent Spectrum Analyzer - Swept SA
Center Freq 15.075000 MHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 12/100
01:45:29 PM Feb 25, 2020
Frequency
Auto Tune
Mkr1 150 kHz
-49.230 dBm
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Center Freq
15.075000 MHz
Start Freq
150.000 kHz
Stop Freq
30.000000 MHz
CF Step
2.985000 MHz
Auto
Man
Freq Offset
0 Hz
Start 150 kHz
#Res BW 10 kHz
#VBW 30 kHz*
Stop 30.00 MHz
Sweep 368.5 ms (3000 pts)
DC Coupled


Agilent Spectrum Analyzer - Swept SA
Center Freq 13.015000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 40 dB
Avg Type: RMS
Avg|Hold: 11/100
01:45:35 PM Feb 25, 2020
Frequency
Auto Tune
Mkr2 25.680 GHz
-26.045 dBm
Ref Offset 8.95 dB
10 dB/div
Log
Ref 30.00 dBm
Center Freq
13.015000000 GHz
Start Freq
30.000000 MHz
Stop Freq
26.000000000 GHz
CF Step
2.597000000 GHz
Auto
Man
Freq Offset
0 Hz
Start 30 MHz
#Res BW 1.0 MHz
#VBW 3.0 MHz*
Stop 26.00 GHz
Sweep 64.98 ms (3000 pts)

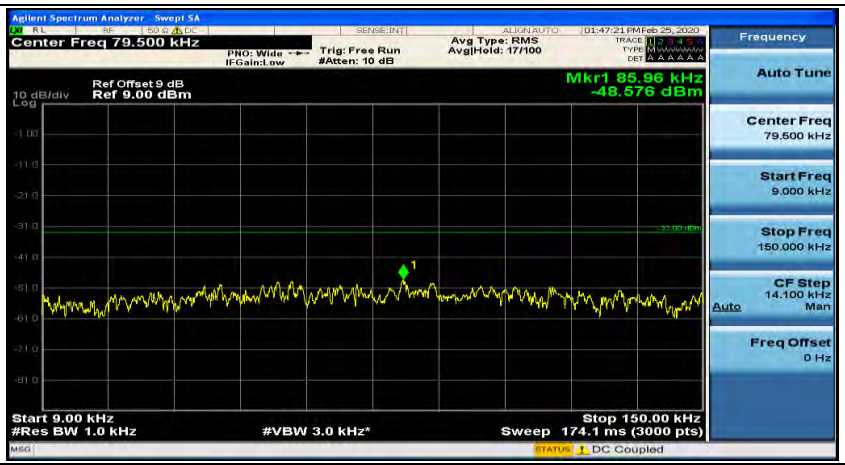
Channel Bandwidth: 10 MHz_HCH_QPSK_1RB#0



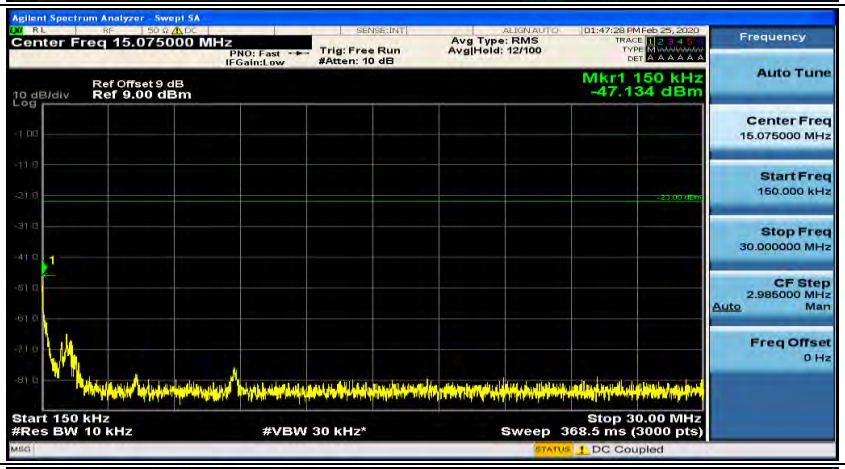
Channel Bandwidth: 10 MHz_HCH_QPSK_1RB#24



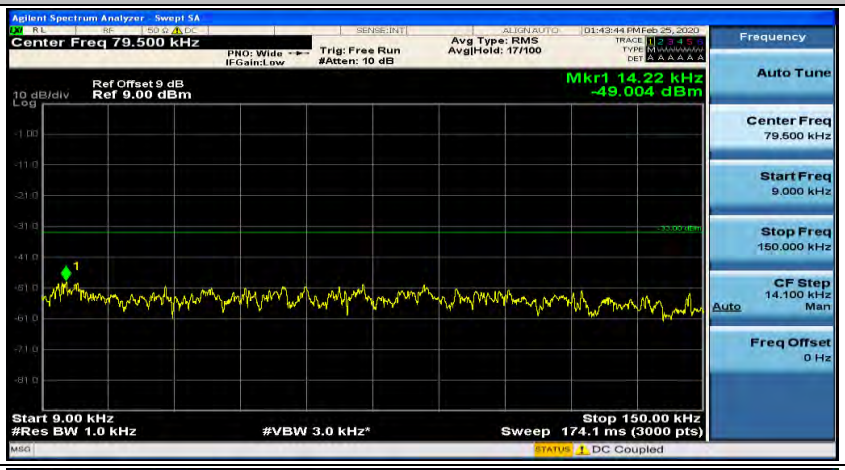
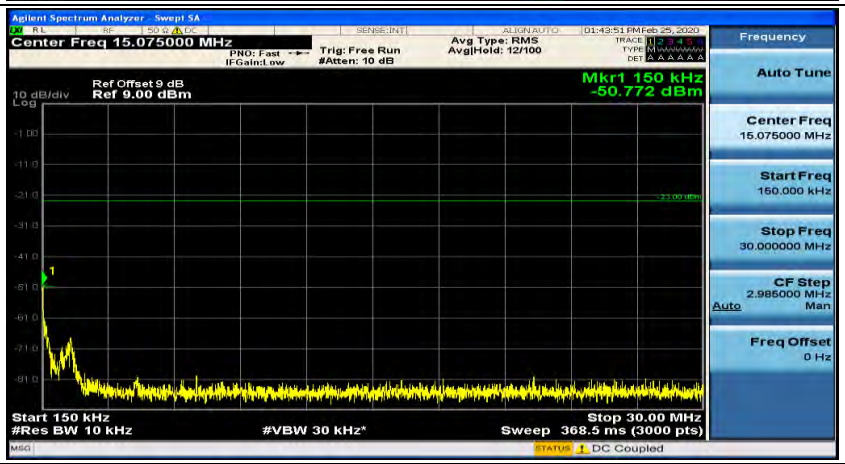


Channel Bandwidth: 10 MHz_HCH_QPSK_1RB#49

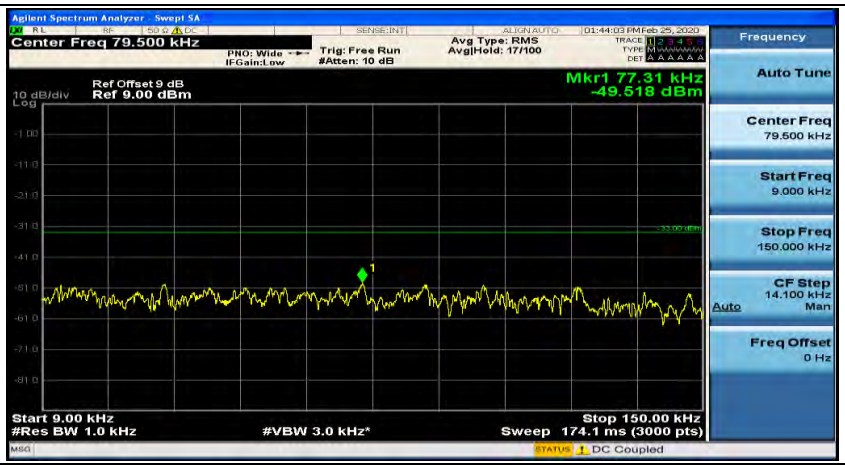

Agilent Spectrum Analyzer - Swept SA
Center Freq 79.500 kHz
PNO: Wide
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 17/100
01:47:21 PM Feb 25, 2020
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Mkr1 85.96 kHz
-48.576 dBm
Start 9.00 kHz
#Res BW 1.0 kHz
#VBW 3.0 kHz*
Stop 150.00 kHz
Sweep 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

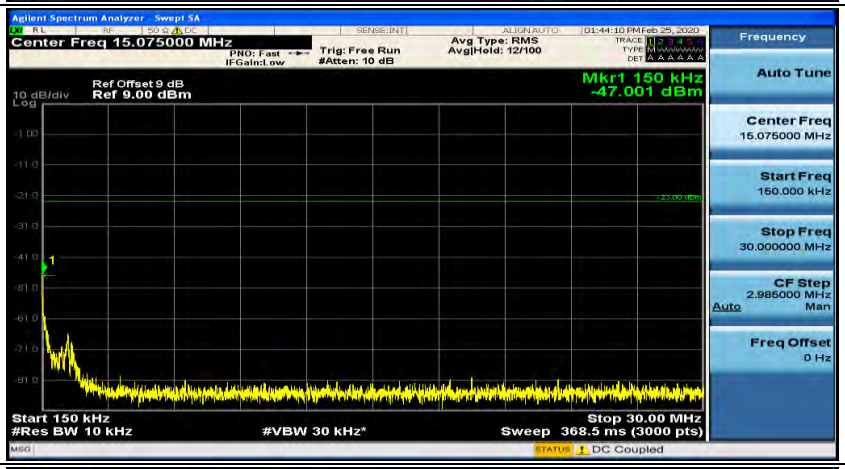

Agilent Spectrum Analyzer - Swept SA
Center Freq 15.075000 MHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 12/100
01:47:28 PM Feb 25, 2020
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Mkr1 150 kHz
-47.134 dBm
Start 150 kHz
#Res BW 10 kHz
#VBW 30 kHz*
Stop 30.00 MHz
Sweep 368.5 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
01:47:34 PM Feb 25, 2020
Ref Offset 8.95 dB
10 dB/div
Log
Ref 30.00 dBm
Mkr2 25.662 GHz
-26.212 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

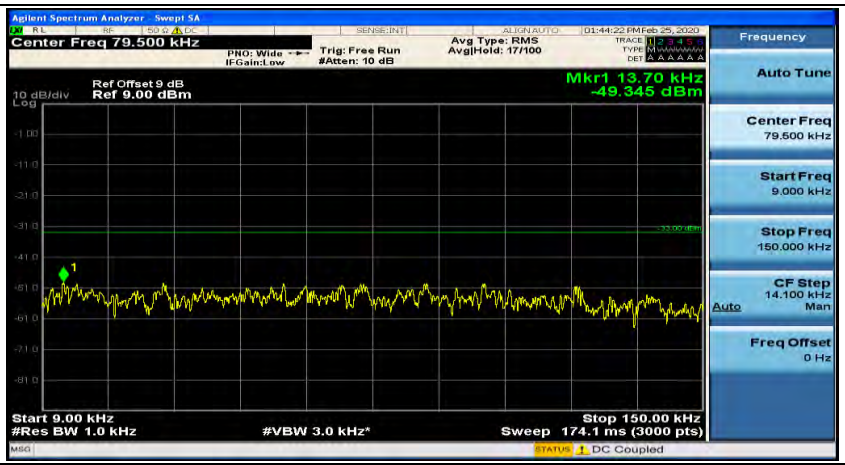
Channel Bandwidth: 10 MHz_LCH_16QAM_1RB#0



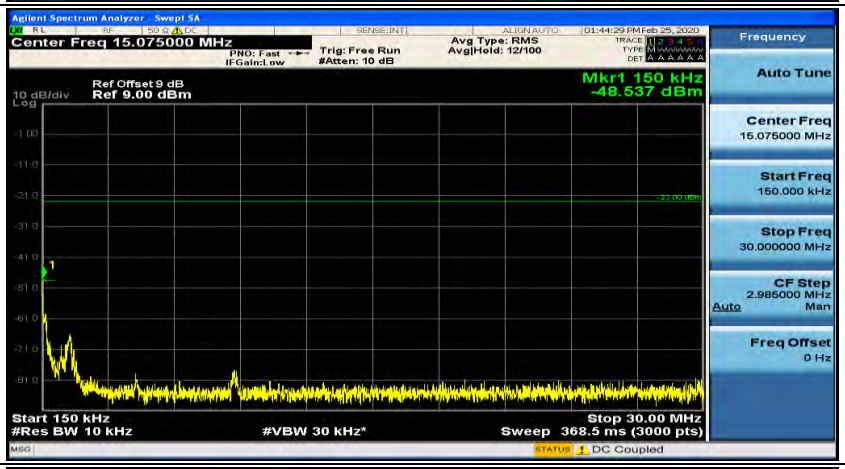
Channel Bandwidth: 10 MHz_LCH_16QAM_1RB#24



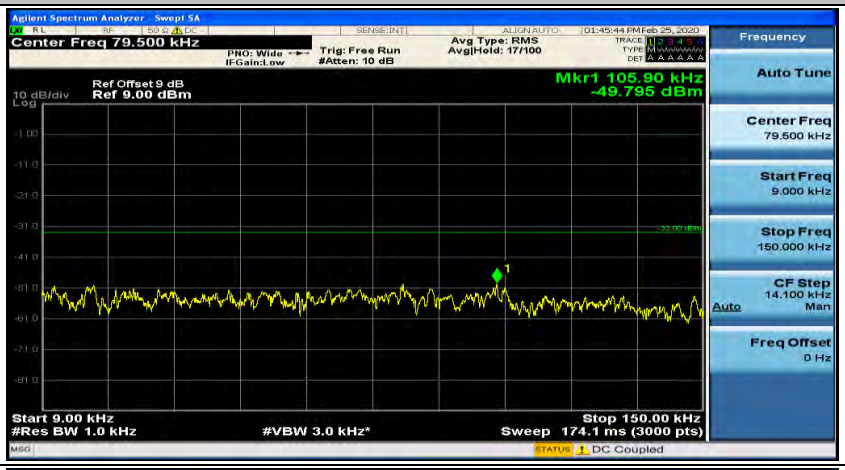
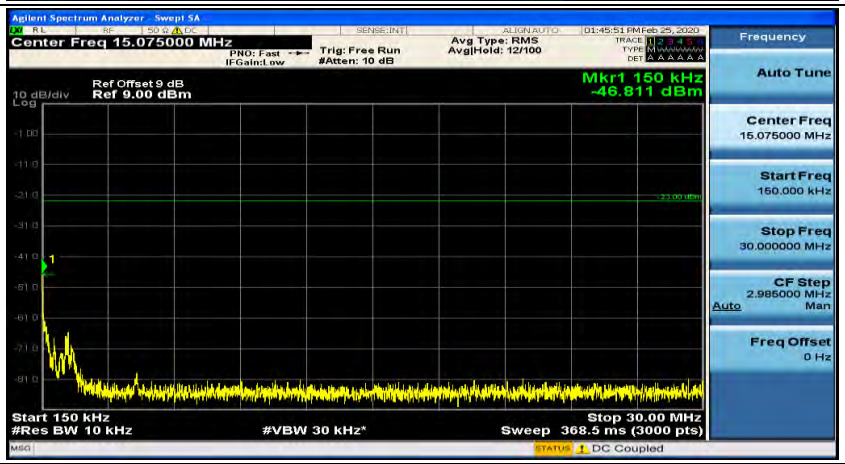


Channel Bandwidth: 10 MHz_LCH_16QAM_1RB#49

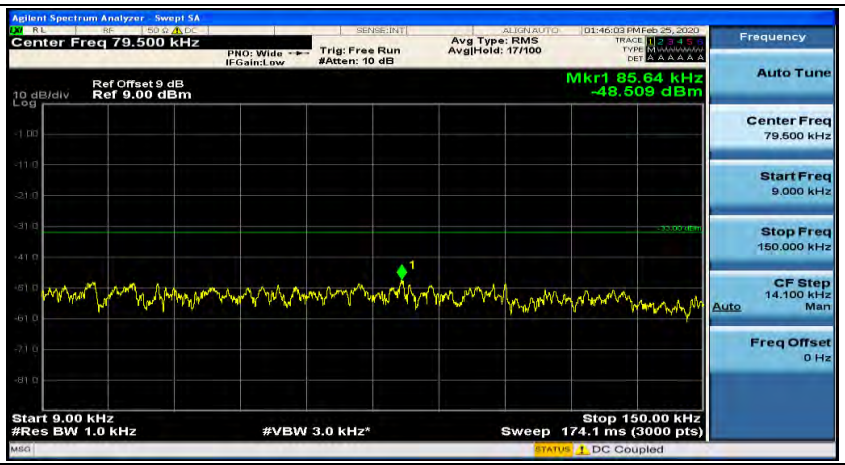

Agilent Spectrum Analyzer - Swept SA
Center Freq 79.500 kHz
PNO: Wide
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 17/100
01:44:22 PM Feb 25, 2020
Frequency
Auto Tune
Mkr1 13.70 kHz
-49.345 dBm
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Center Freq
79.500 kHz
Start Freq
9.000 kHz
Stop Freq
150.000 kHz
CF Step
14.100 kHz
Auto
Man
Freq Offset
0 Hz
Start 9.00 kHz
#Res BW 1.0 kHz
#VBW 3.0 kHz*
Stop 150.00 kHz
Sweep 174.1 ms (3000 pts)
DC Coupled

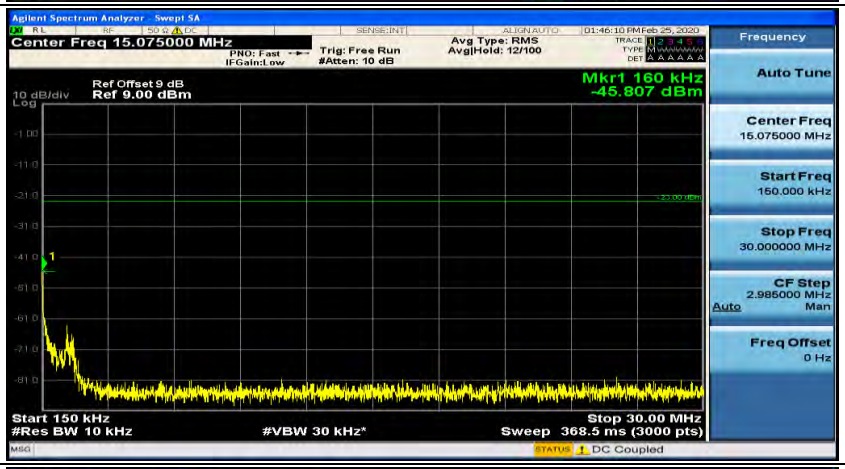

Agilent Spectrum Analyzer - Swept SA
Center Freq 15.075000 MHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 12/100
01:44:29 PM Feb 25, 2020
Frequency
Auto Tune
Mkr1 150 kHz
-48.537 dBm
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Center Freq
15.075000 MHz
Start Freq
150.000 kHz
Stop Freq
30.000000 MHz
CF Step
2.985000 MHz
Auto
Man
Freq Offset
0 Hz
Start 150 kHz
#Res BW 10 kHz
#VBW 30 kHz*
Stop 30.00 MHz
Sweep 368.5 ms (3000 pts)
DC Coupled


Agilent Spectrum Analyzer - Swept SA
Center Freq 13.015000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 40 dB
Avg Type: RMS
Avg|Hold: 11/100
01:44:35 PM Feb 25, 2020
Frequency
Auto Tune
Mkr2 25.610 GHz
-26.346 dBm
Ref Offset 8.95 dB
10 dB/div
Log
Ref 30.00 dBm
Center Freq
13.015000000 GHz
Start Freq
30.000000 MHz
Stop Freq
26.000000000 GHz
CF Step
2.597000000 GHz
Auto
Man
Freq Offset
0 Hz
Start 30 MHz
#Res BW 1.0 MHz
#VBW 3.0 MHz*
Stop 26.00 GHz
Sweep 64.98 ms (3000 pts)

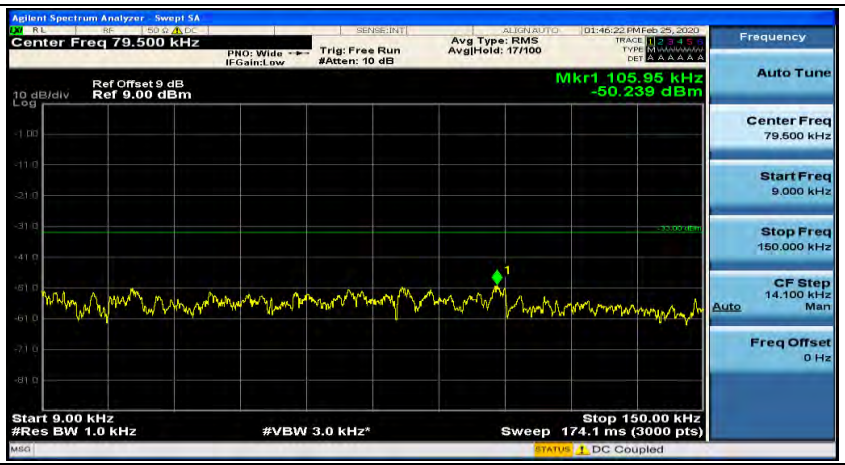
Channel Bandwidth: 10 MHz_MCH_16QAM_1RB#0



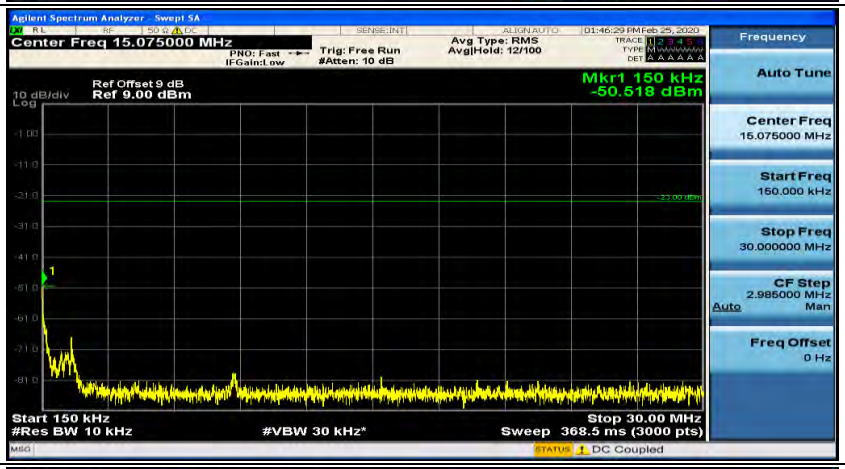
Channel Bandwidth: 10 MHz_MCH_16QAM_1RB#24



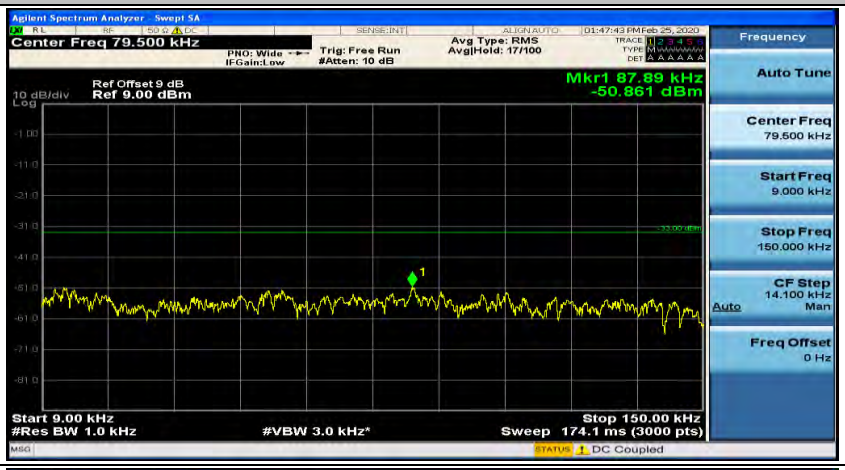
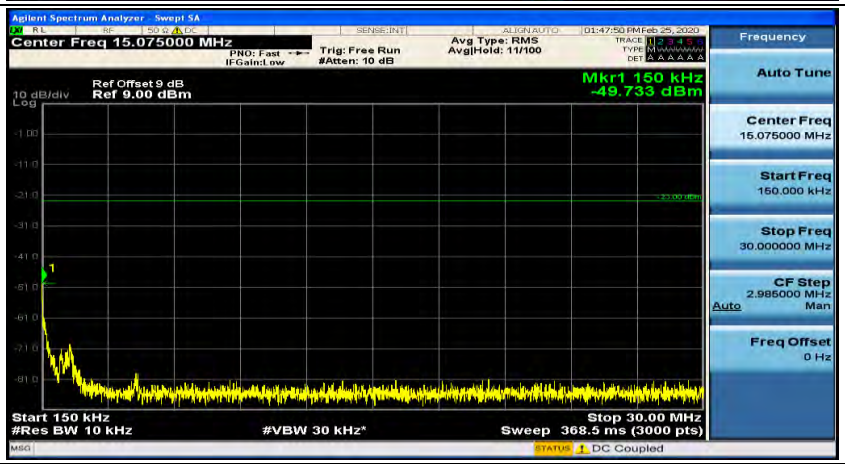


Channel Bandwidth: 10 MHz_MCH_16QAM_1RB#49

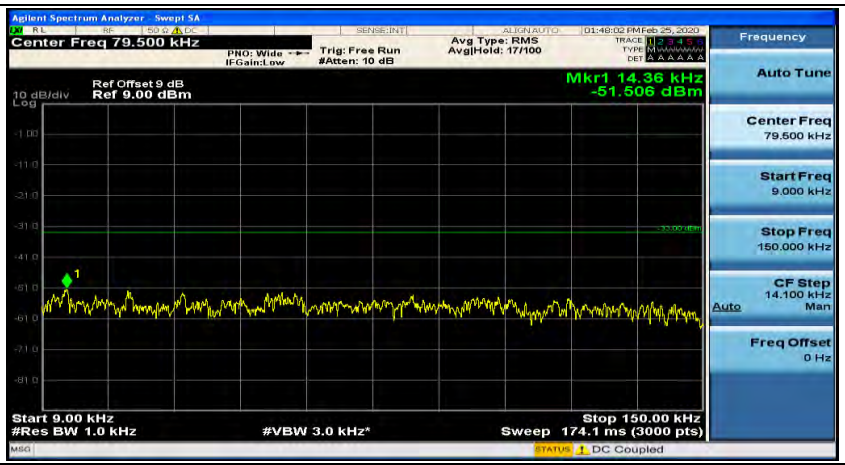

Agilent Spectrum Analyzer - Swept SA
Center Freq 79.500 kHz
PNO: Wide
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 17/100
01:46:22 PM Feb 25, 2020
Frequency
Auto Tune
Mkr1 105.95 kHz
-50.239 dBm
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Center Freq
79.500 kHz
Start Freq
9.000 kHz
Stop Freq
150.000 kHz
CF Step
14.100 kHz
Auto
Man
Freq Offset
0 Hz
Start 9.00 kHz
#Res BW 1.0 kHz
#VBW 3.0 kHz*
Stop 150.00 kHz
Sweep 174.1 ms (3000 pts)
DC Coupled

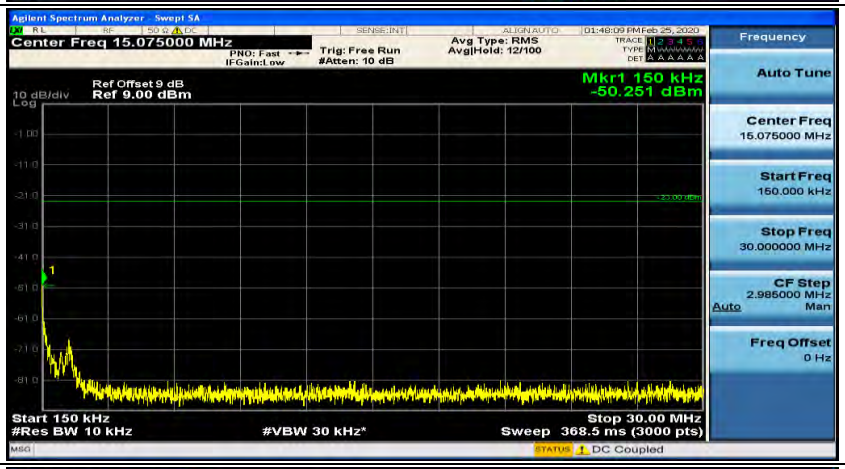

Agilent Spectrum Analyzer - Swept SA
Center Freq 15.075000 MHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 12/100
01:46:29 PM Feb 25, 2020
Frequency
Auto Tune
Mkr1 150 kHz
-50.518 dBm
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Center Freq
15.075000 MHz
Start Freq
150.000 kHz
Stop Freq
30.000000 MHz
CF Step
2.985000 MHz
Auto
Man
Freq Offset
0 Hz
Start 150 kHz
#Res BW 10 kHz
#VBW 30 kHz*
Stop 30.00 MHz
Sweep 368.5 ms (3000 pts)
DC Coupled


Agilent Spectrum Analyzer - Swept SA
Center Freq 13.015000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 40 dB
Avg Type: RMS
Avg|Hold: 11/100
01:46:34 PM Feb 25, 2020
Frequency
Auto Tune
Mkr2 25.628 GHz
-26.243 dBm
Ref Offset 8.95 dB
10 dB/div
Log
Ref 30.00 dBm
Center Freq
13.015000000 GHz
Start Freq
30.000000 MHz
Stop Freq
26.000000000 GHz
CF Step
2.597000000 GHz
Auto
Man
Freq Offset
0 Hz
Start 30 MHz
#Res BW 1.0 MHz
#VBW 3.0 MHz*
Stop 26.00 GHz
Sweep 64.98 ms (3000 pts)

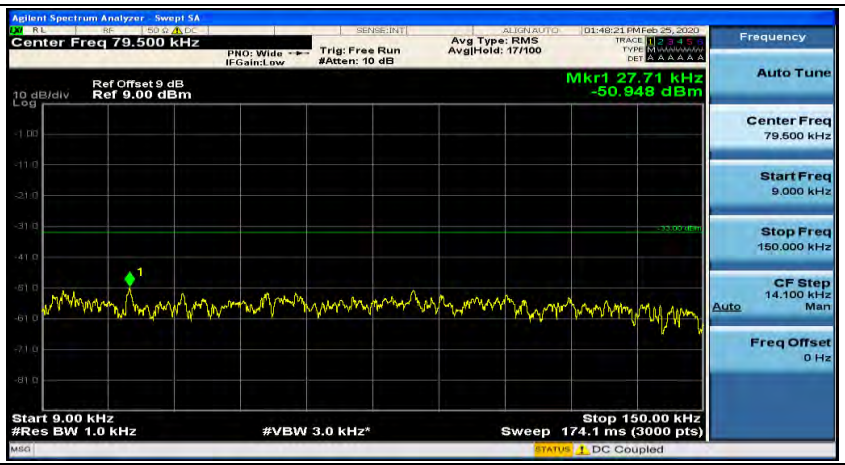
Channel Bandwidth: 10 MHz_HCH_16QAM_1RB#0



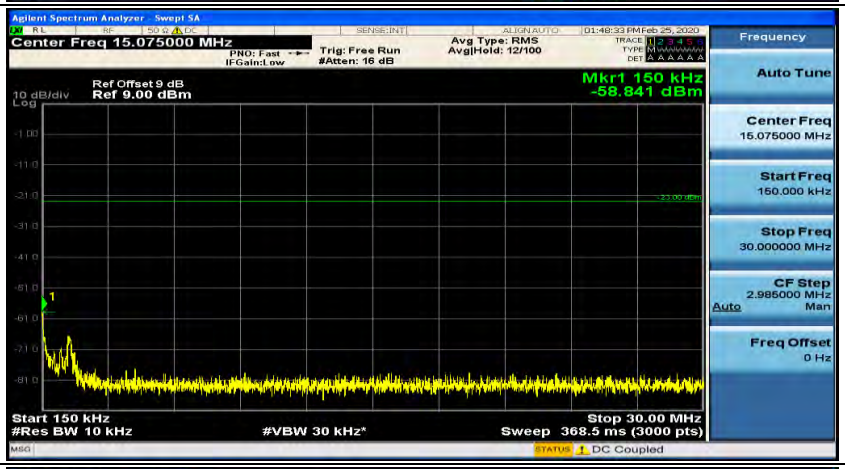
Channel Bandwidth: 10 MHz_HCH_16QAM_1RB#24





Channel Bandwidth: 10 MHz_HCH_16QAM_1RB#49


Agilent Spectrum Analyzer - Swept SA
Center Freq 79.500 kHz
PNO: Wide
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 17/100
01:48:21 PM Feb 25, 2020
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Mkr1 27.71 kHz
-50.948 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
01:48:33 PM Feb 25, 2020
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Mkr1 150 kHz
-58.841 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
01:48:39 PM Feb 25, 2020
Ref Offset 8.95 dB
10 dB/div
Log
Ref 30.00 dBm
Mkr2 25.619 GHz
-26.582 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	2.86	0.004087	± 2.5	PASS
		VN	TN	3.64	0.005202	± 2.5	PASS
		VH	TN	0.34	0.000486	± 2.5	PASS
	MCH	VL	TN	2.74	0.003873	± 2.5	PASS
		VN	TN	2.47	0.003491	± 2.5	PASS
		VH	TN	2.39	0.003378	± 2.5	PASS
	HCH	VL	TN	-0.67	-0.000937	± 2.5	PASS
		VN	TN	0.44	0.000615	± 2.5	PASS
		VH	TN	3.95	0.005522	± 2.5	PASS
16QAM	LCH	VL	TN	3.63	0.005188	± 2.5	PASS
		VN	TN	1.42	0.002029	± 2.5	PASS
		VH	TN	4.77	0.006817	± 2.5	PASS
	MCH	VL	TN	0.95	0.001343	± 2.5	PASS
		VN	TN	-0.8	-0.001131	± 2.5	PASS
		VH	TN	-1.21	-0.001710	± 2.5	PASS
	HCH	VL	TN	1.68	0.002349	± 2.5	PASS
		VN	TN	-0.48	-0.000671	± 2.5	PASS
		VH	TN	2.56	0.003579	± 2.5	PASS
Temperature							
Modulation	Channel	Voltage [Vdc]	Temperature (℃)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
QPSK	LCH	VN	-30	-1.88	-0.002687	± 2.5	PASS
		VN	-20	-1.06	-0.001515	± 2.5	PASS
		VN	-10	-1.38	-0.001972	± 2.5	PASS
		VN	0	-0.56	-0.000800	± 2.5	PASS
		VN	10	-1.13	-0.001615	± 2.5	PASS
		VN	20	-1.43	-0.002044	± 2.5	PASS
		VN	30	2.68	0.003830	± 2.5	PASS
		VN	40	0.14	0.000200	± 2.5	PASS
		VN	50	-1.85	-0.002644	± 2.5	PASS
	MCH	VN	-30	-0.08	-0.000113	± 2.5	PASS

		VN	-20	3.98	0.005625	± 2.5	PASS
		VN	-10	-1.51	-0.002134	± 2.5	PASS
		VN	0	3.24	0.004580	± 2.5	PASS
		VN	10	-0.53	-0.000749	± 2.5	PASS
		VN	20	1.22	0.001724	± 2.5	PASS
		VN	30	4.56	0.006445	± 2.5	PASS
		VN	40	1.71	0.002417	± 2.5	PASS
		VN	50	0.79	0.001117	± 2.5	PASS
	HCH	VN	-30	2.26	0.003160	± 2.5	PASS
		VN	-20	3.11	0.004348	± 2.5	PASS
		VN	-10	4.12	0.005760	± 2.5	PASS
		VN	0	-0.09	-0.000126	± 2.5	PASS
		VN	10	2.47	0.003453	± 2.5	PASS
		VN	20	4.04	0.005648	± 2.5	PASS
		VN	30	3.81	0.005326	± 2.5	PASS
		VN	40	-1.99	-0.002782	± 2.5	PASS
		VN	50	-1.92	-0.002684	± 2.5	PASS
16QAM	LCH	VN	-30	-1.96	-0.002801	± 2.5	PASS
		VN	-20	0.92	0.001315	± 2.5	PASS
		VN	-10	2.05	0.002930	± 2.5	PASS
		VN	0	-0.23	-0.000329	± 2.5	PASS
		VN	10	4.86	0.006946	± 2.5	PASS
		VN	20	1.57	0.002244	± 2.5	PASS
		VN	30	-1.97	-0.002815	± 2.5	PASS
		VN	40	-1.57	-0.002244	± 2.5	PASS
		VN	50	0.12	0.000172	± 2.5	PASS
	MCH	VN	-30	2.12	0.002996	± 2.5	PASS
		VN	-20	4.93	0.006968	± 2.5	PASS
		VN	-10	2.92	0.004127	± 2.5	PASS
		VN	0	0.87	0.001230	± 2.5	PASS
		VN	10	1.24	0.001753	± 2.5	PASS
		VN	20	4.56	0.006445	± 2.5	PASS
		VN	30	-1.47	-0.002078	± 2.5	PASS
		VN	40	-1.05	-0.001484	± 2.5	PASS
		VN	50	3.84	0.005428	± 2.5	PASS
	HCH	VN	-30	2.59	0.003621	± 2.5	PASS
		VN	-20	4.84	0.006766	± 2.5	PASS
		VN	-10	0.93	0.001300	± 2.5	PASS
		VN	0	-0.89	-0.001244	± 2.5	PASS
		VN	10	-0.38	-0.000531	± 2.5	PASS
		VN	20	4.14	0.005788	± 2.5	PASS

		VN	30	-1.38	-0.001929	± 2.5	PASS
		VN	40	3.71	0.005187	± 2.5	PASS
		VN	50	-1.32	-0.001845	± 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	2.78	0.003969	± 2.5	PASS
		VN	TN	-1	-0.001428	± 2.5	PASS
		VH	TN	4.09	0.005839	± 2.5	PASS
	MCH	VL	TN	2.38	0.003364	± 2.5	PASS
		VN	TN	4.13	0.005837	± 2.5	PASS
		VH	TN	-0.75	-0.001060	± 2.5	PASS
	HCH	VL	TN	1.35	0.001889	± 2.5	PASS
		VN	TN	2.11	0.002953	± 2.5	PASS
		VH	TN	-0.18	-0.000252	± 2.5	PASS
16QAM	LCH	VL	TN	0.83	0.001185	± 2.5	PASS
		VN	TN	0.14	0.000200	± 2.5	PASS
		VH	TN	2.05	0.002926	± 2.5	PASS
	MCH	VL	TN	-1.43	-0.002021	± 2.5	PASS
		VN	TN	1.27	0.001795	± 2.5	PASS
		VH	TN	-0.24	-0.000339	± 2.5	PASS
	HCH	VL	TN	2.24	0.003135	± 2.5	PASS
		VN	TN	4.73	0.006620	± 2.5	PASS
		VH	TN	1.66	0.002323	± 2.5	PASS
Temperature							
Modulation	Channel	Voltage [Vdc]	Temperature (℃)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
QPSK	LCH	VN	-30	4.57	0.006524	± 2.5	PASS
		VN	-20	3.44	0.004911	± 2.5	PASS
		VN	-10	-1.42	-0.002027	± 2.5	PASS
		VN	0	-1.12	-0.001599	± 2.5	PASS
		VN	10	2.97	0.004240	± 2.5	PASS
		VN	20	-1.02	-0.001456	± 2.5	PASS
		VN	30	2.76	0.003940	± 2.5	PASS
		VN	40	3.89	0.005553	± 2.5	PASS
		VN	50	3.66	0.005225	± 2.5	PASS
	MCH	VN	-30	0.61	0.000862	± 2.5	PASS
		VN	-20	1.85	0.002615	± 2.5	PASS

		VN	-10	-1.26	-0.001781	± 2.5	PASS
		VN	0	4.7	0.006643	± 2.5	PASS
		VN	10	2.28	0.003223	± 2.5	PASS
		VN	20	4.52	0.006389	± 2.5	PASS
		VN	30	2.77	0.003915	± 2.5	PASS
		VN	40	0.41	0.000580	± 2.5	PASS
		VN	50	4.26	0.006021	± 2.5	PASS
	HCH	VN	-30	1.85	0.002589	± 2.5	PASS
		VN	-20	2.79	0.003905	± 2.5	PASS
		VN	-10	4.69	0.006564	± 2.5	PASS
		VN	0	3.18	0.004451	± 2.5	PASS
		VN	10	2.08	0.002911	± 2.5	PASS
		VN	20	-0.13	-0.000182	± 2.5	PASS
		VN	30	3.91	0.005472	± 2.5	PASS
		VN	40	0.31	0.000434	± 2.5	PASS
		VN	50	-1.08	-0.001512	± 2.5	PASS
16QAM	LCH	VN	-30	0.2	0.000286	± 2.5	PASS
		VN	-20	1.68	0.002398	± 2.5	PASS
		VN	-10	2.8	0.003997	± 2.5	PASS
		VN	0	0.89	0.001271	± 2.5	PASS
		VN	10	3.36	0.004797	± 2.5	PASS
		VN	20	3.81	0.005439	± 2.5	PASS
		VN	30	0.46	0.000657	± 2.5	PASS
		VN	40	4.28	0.006110	± 2.5	PASS
		VN	50	4.5	0.006424	± 2.5	PASS
	MCH	VN	-30	-0.97	-0.001371	± 2.5	PASS
		VN	-20	-1.76	-0.002488	± 2.5	PASS
		VN	-10	-1.25	-0.001767	± 2.5	PASS
		VN	0	0.72	0.001018	± 2.5	PASS
		VN	10	4.52	0.006389	± 2.5	PASS
		VN	20	-1.93	-0.002728	± 2.5	PASS
		VN	30	1.94	0.002742	± 2.5	PASS
		VN	40	1.17	0.001654	± 2.5	PASS
		VN	50	-1.11	-0.001569	± 2.5	PASS
	HCH	VN	-30	2.12	0.002967	± 2.5	PASS
		VN	-20	4.48	0.006270	± 2.5	PASS
		VN	-10	2.2	0.003079	± 2.5	PASS
		VN	0	4.14	0.005794	± 2.5	PASS
		VN	10	-0.67	-0.000938	± 2.5	PASS
		VN	20	-0.73	-0.001022	± 2.5	PASS
		VN	30	-1.01	-0.001414	± 2.5	PASS

		VN	40	-0.85	-0.001190	± 2.5	PASS
		VN	50	-0.37	-0.000518	± 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	4.57	0.006515	± 2.5	PASS
		VN	TN	0.39	0.000556	± 2.5	PASS
		VH	TN	4.69	0.006686	± 2.5	PASS
	MCH	VL	TN	3.36	0.004749	± 2.5	PASS
		VN	TN	3.3	0.004664	± 2.5	PASS
		VH	TN	-0.02	-0.000028	± 2.5	PASS
	HCH	VL	TN	3.37	0.004723	± 2.5	PASS
		VN	TN	1.71	0.002397	± 2.5	PASS
		VH	TN	2.04	0.002859	± 2.5	PASS
16QAM	LCH	VL	TN	0.92	0.001311	± 2.5	PASS
		VN	TN	2.19	0.003122	± 2.5	PASS
		VH	TN	3.32	0.004733	± 2.5	PASS
	MCH	VL	TN	4.12	0.005823	± 2.5	PASS
		VN	TN	2.93	0.004141	± 2.5	PASS
		VH	TN	2.43	0.003435	± 2.5	PASS
	HCH	VL	TN	2.92	0.004093	± 2.5	PASS
		VN	TN	-1.56	-0.002186	± 2.5	PASS
		VH	TN	-0.47	-0.000659	± 2.5	PASS
Temperature							
Modulation	Channel	Voltage [Vdc]	Temperature (℃)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
QPSK	LCH	VN	-30	4.65	0.006629	± 2.5	PASS
		VN	-20	-1.4	-0.001996	± 2.5	PASS
		VN	-10	-0.94	-0.001340	± 2.5	PASS
		VN	0	2.51	0.003578	± 2.5	PASS
		VN	10	0.46	0.000656	± 2.5	PASS
		VN	20	2.76	0.003934	± 2.5	PASS
		VN	30	1.33	0.001896	± 2.5	PASS
		VN	40	1.05	0.001497	± 2.5	PASS
		VN	50	1.68	0.002395	± 2.5	PASS
	MCH	VN	-30	0.72	0.001018	± 2.5	PASS
		VN	-20	4.74	0.006700	± 2.5	PASS
		VN	-10	0.95	0.001343	± 2.5	PASS

		VN	0	0.21	0.000297	± 2.5	PASS
		VN	10	0.72	0.001018	± 2.5	PASS
		VN	20	2.86	0.004042	± 2.5	PASS
		VN	30	-1.19	-0.001682	± 2.5	PASS
		VN	40	0.33	0.000466	± 2.5	PASS
		VN	50	2.72	0.003845	± 2.5	PASS
	HCH	VN	-30	2.18	0.003055	± 2.5	PASS
		VN	-20	2.36	0.003308	± 2.5	PASS
		VN	-10	4.99	0.006994	± 2.5	PASS
		VN	0	-0.3	-0.000420	± 2.5	PASS
		VN	10	-0.92	-0.001289	± 2.5	PASS
		VN	20	3.25	0.004555	± 2.5	PASS
		VN	30	-0.48	-0.000673	± 2.5	PASS
		VN	40	2.02	0.002831	± 2.5	PASS
		VN	50	2.34	0.003280	± 2.5	PASS
16QAM	LCH	VN	-30	1.41	0.002010	± 2.5	PASS
		VN	-20	2.44	0.003478	± 2.5	PASS
		VN	-10	0.82	0.001169	± 2.5	PASS
		VN	0	4.27	0.006087	± 2.5	PASS
		VN	10	2.01	0.002865	± 2.5	PASS
		VN	20	0.91	0.001297	± 2.5	PASS
		VN	30	0.56	0.000798	± 2.5	PASS
		VN	40	-0.69	-0.000984	± 2.5	PASS
		VN	50	0.13	0.000185	± 2.5	PASS
	MCH	VN	-30	4.33	0.006120	± 2.5	PASS
		VN	-20	2.45	0.003463	± 2.5	PASS
		VN	-10	3.74	0.005286	± 2.5	PASS
		VN	0	-1.46	-0.002064	± 2.5	PASS
		VN	10	1.02	0.001442	± 2.5	PASS
		VN	20	-0.26	-0.000367	± 2.5	PASS
		VN	30	3.16	0.004466	± 2.5	PASS
		VN	40	-0.46	-0.000650	± 2.5	PASS
		VN	50	0.8	0.001131	± 2.5	PASS
	HCH	VN	-30	1.27	0.001780	± 2.5	PASS
		VN	-20	0.69	0.000967	± 2.5	PASS
		VN	-10	1.08	0.001514	± 2.5	PASS
		VN	0	-0.05	-0.000070	± 2.5	PASS
		VN	10	4.55	0.006377	± 2.5	PASS
		VN	20	-1.67	-0.002341	± 2.5	PASS
		VN	30	1.01	0.001416	± 2.5	PASS
		VN	40	3.29	0.004611	± 2.5	PASS

		VN	50	2.74	0.003840	± 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	2.54	0.003608	± 2.5	PASS
		VN	TN	3.87	0.005497	± 2.5	PASS
		VH	TN	2.75	0.003906	± 2.5	PASS
	MCH	VL	TN	2.98	0.004212	± 2.5	PASS
		VN	TN	4.92	0.006954	± 2.5	PASS
		VH	TN	1.37	0.001936	± 2.5	PASS
	HCH	VL	TN	2.96	0.004163	± 2.5	PASS
		VN	TN	2.6	0.003657	± 2.5	PASS
		VH	TN	1.54	0.002166	± 2.5	PASS
16QAM	LCH	VL	TN	3.81	0.005412	± 2.5	PASS
		VN	TN	1.23	0.001747	± 2.5	PASS
		VH	TN	4.46	0.006335	± 2.5	PASS
	MCH	VL	TN	-0.44	-0.000622	± 2.5	PASS
		VN	TN	0.57	0.000806	± 2.5	PASS
		VH	TN	0.91	0.001286	± 2.5	PASS
	HCH	VL	TN	4.14	0.005823	± 2.5	PASS
		VN	TN	-1.18	-0.001660	± 2.5	PASS
		VH	TN	-0.51	-0.000717	± 2.5	PASS
Temperature							
Modulation	Channel	Voltage [Vdc]	Temperature (℃)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
QPSK	LCH	VN	-30	0.74	0.001051	± 2.5	PASS
		VN	-20	-0.09	-0.000128	± 2.5	PASS
		VN	-10	3.42	0.004858	± 2.5	PASS
		VN	0	4.27	0.006065	± 2.5	PASS
		VN	10	-1.77	-0.002514	± 2.5	PASS
		VN	20	-0.79	-0.001122	± 2.5	PASS
		VN	30	-1.32	-0.001875	± 2.5	PASS
		VN	40	3.56	0.005057	± 2.5	PASS
		VN	50	1.24	0.001761	± 2.5	PASS
	MCH	VN	-30	3.49	0.004933	± 2.5	PASS
		VN	-20	3.75	0.005300	± 2.5	PASS
		VN	-10	3.89	0.005498	± 2.5	PASS
		VN	0	-0.08	-0.000113	± 2.5	PASS

		VN	10	4.07	0.005753	± 2.5	PASS
		VN	20	1.14	0.001611	± 2.5	PASS
		VN	30	0.07	0.000099	± 2.5	PASS
		VN	40	2.35	0.003322	± 2.5	PASS
		VN	50	0.49	0.000693	± 2.5	PASS
	HCH	VN	-30	1.09	0.001533	± 2.5	PASS
		VN	-20	3.96	0.005570	± 2.5	PASS
		VN	-10	4.79	0.006737	± 2.5	PASS
		VN	0	3.51	0.004937	± 2.5	PASS
		VN	10	1.49	0.002096	± 2.5	PASS
		VN	20	-1.39	-0.001955	± 2.5	PASS
		VN	30	4.68	0.006582	± 2.5	PASS
		VN	40	1.36	0.001913	± 2.5	PASS
		VN	50	2.58	0.003629	± 2.5	PASS
QPSK	LCH	VN	-30	3.97	0.005639	± 2.5	PASS
		VN	-20	1.03	0.001463	± 2.5	PASS
		VN	-10	2.29	0.003253	± 2.5	PASS
		VN	0	-1	-0.001420	± 2.5	PASS
		VN	10	3.14	0.004460	± 2.5	PASS
		VN	20	3.13	0.004446	± 2.5	PASS
		VN	30	3.14	0.004460	± 2.5	PASS
		VN	40	2.81	0.003991	± 2.5	PASS
		VN	50	4.37	0.006207	± 2.5	PASS
	MCH	VN	-30	2.44	0.003449	± 2.5	PASS
		VN	-20	1.52	0.002148	± 2.5	PASS
		VN	-10	4.55	0.006431	± 2.5	PASS
		VN	0	-0.79	-0.001117	± 2.5	PASS
		VN	10	2.93	0.004141	± 2.5	PASS
		VN	20	2.04	0.002883	± 2.5	PASS
		VN	30	-0.1	-0.000141	± 2.5	PASS
		VN	40	3.23	0.004565	± 2.5	PASS
		VN	50	4.43	0.006261	± 2.5	PASS
	HCH	VN	-30	4.69	0.006596	± 2.5	PASS
		VN	-20	4.05	0.005696	± 2.5	PASS
		VN	-10	4.39	0.006174	± 2.5	PASS
		VN	0	-1.55	-0.002180	± 2.5	PASS
		VN	10	3.1	0.004360	± 2.5	PASS
		VN	20	-1.43	-0.002011	± 2.5	PASS
		VN	30	4.38	0.006160	± 2.5	PASS
		VN	40	4.56	0.006414	± 2.5	PASS
		VN	50	-1.2	-0.001688	± 2.5	PASS