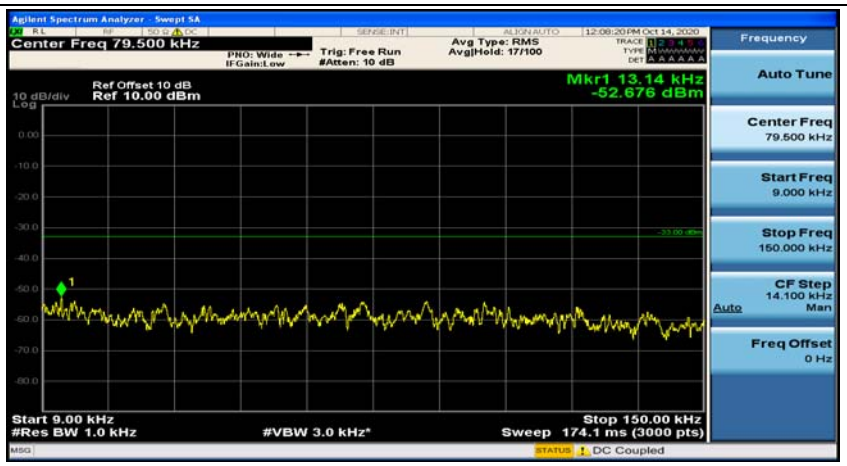
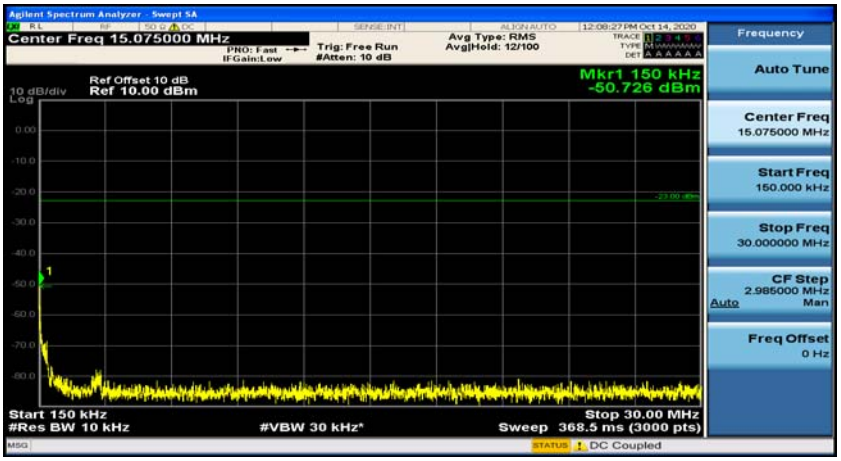
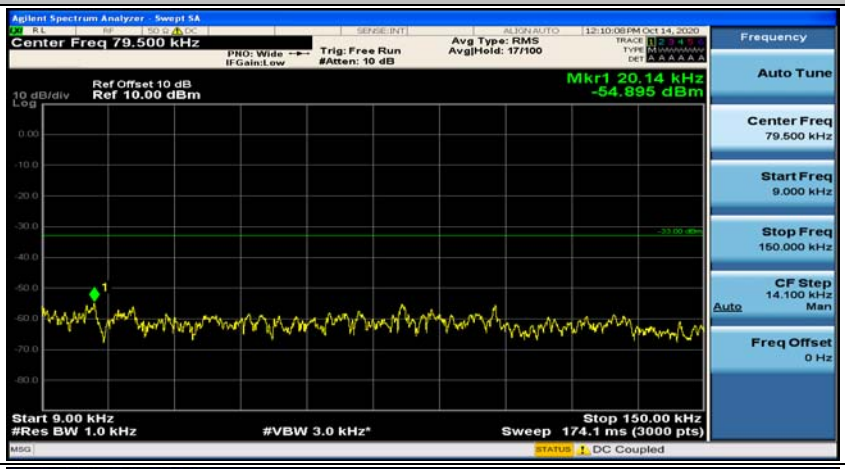
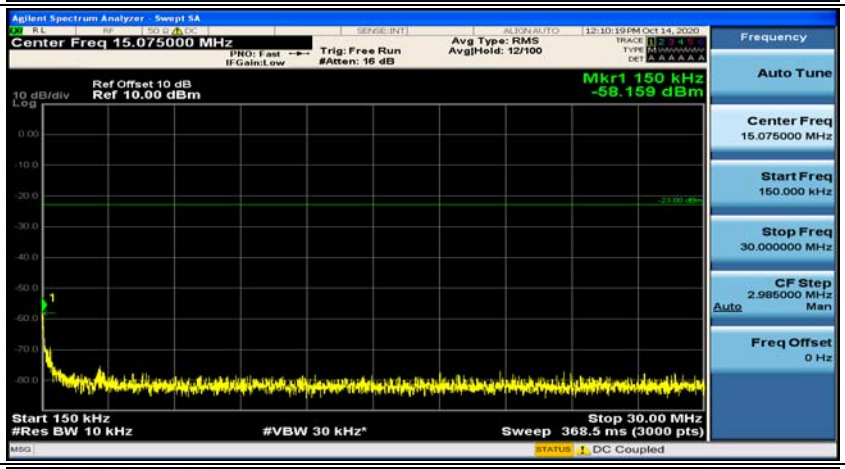

Agilent Spectrum Analyzer - Swept SA
Center Freq 79.500 kHz
PNO: Wide
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 17/100
12:08:20 PM Oct 14, 2020
Ref Offset 10 dB
10 dB/div Ref 10.00 dBm
Log
Mkr1 13.14 kHz
-52.676 dBm
Start 9.00 kHz
#Res BW 1.0 kHz
#VBW 3.0 kHz*
Stop 150.00 kHz
Sweep 174.1 ms (3000 pts)
DC Coupled
Frequency
Auto Tune
Center Freq 79.500 kHz
Start Freq 9.000 kHz
Stop Freq 150.000 kHz
CF Step 14.100 kHz
Auto Man
Freq Offset 0 Hz


Agilent Spectrum Analyzer - Swept SA
Center Freq 15.075000 MHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 12/100
12:08:27 PM Oct 14, 2020
Ref Offset 10 dB
10 dB/div Ref 10.00 dBm
Log
Mkr1 150 kHz
-50.726 dBm
Start 150 kHz
#Res BW 10 kHz
#VBW 30 kHz*
Stop 30.00 MHz
Sweep 368.5 ms (3000 pts)
DC Coupled
Frequency
Auto Tune
Center Freq 15.075000 MHz
Start Freq 150.000 kHz
Stop Freq 30.000000 MHz
CF Step 2.985000 MHz
Auto Man
Freq Offset 0 Hz

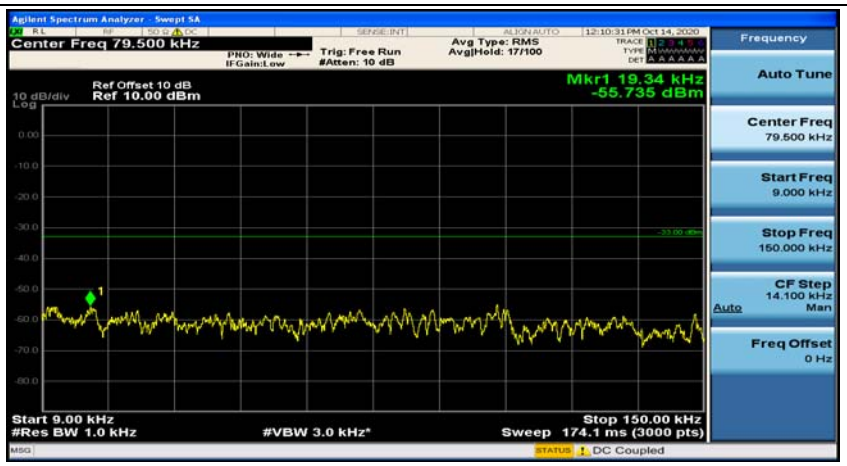
Agilent Spectrum Analyzer - Swept SA
Center Freq 13.015000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 40 dB
Avg Type: RMS
Avg|Hold: 11/100
12:08:33 PM Oct 14, 2020
Ref Offset 9.95 dB
10 dB/div Ref 30.00 dBm
Log
Mkr2 26.000 GHz
-29.106 dBm
Start 30 MHz
#Res BW 1.0 MHz
#VBW 3.0 MHz*
Stop 26.00 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

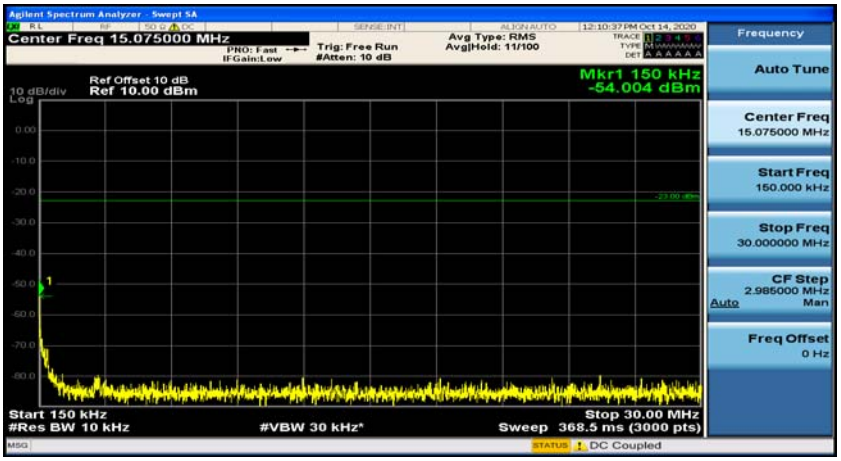
(Channel Bandwidth: 3 MHz)_MCH_16QAM_1RB#0



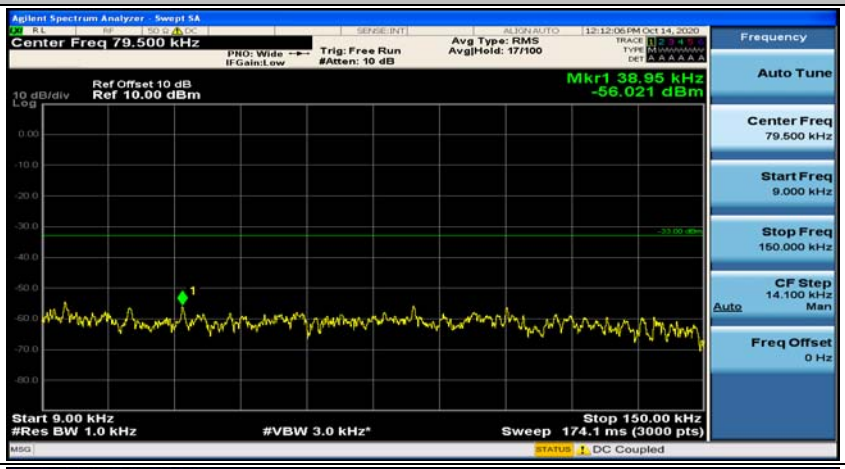
(Channel Bandwidth: 3 MHz)_MCH_16QAM_1RB#7

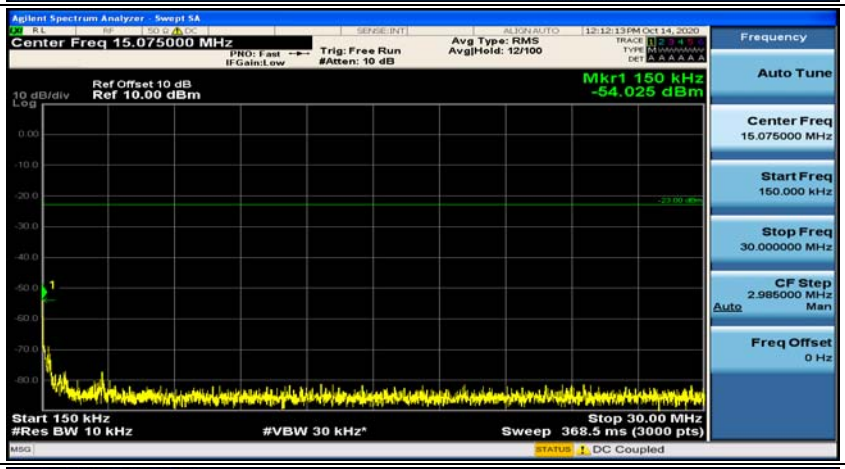

Agilent Spectrum Analyzer - Swept SA
Center Freq 79.500 kHz
PNO: Wide
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 17/100
12:10:31 PM Oct 14, 2020
Ref Offset 10 dB
10 dB/div Ref 10.00 dBm
Log
Mkr1 19.34 kHz
-55.735 dBm
Start 9.00 kHz
#Res BW 1.0 kHz
#VBW 3.0 kHz*
Stop 150.00 kHz
Sweep 174.1 ms (3000 pts)
DC Coupled
Frequency
Auto Tune
Center Freq 79.500 kHz
Start Freq 9.000 kHz
Stop Freq 150.000 kHz
CF Step 14.100 kHz
Auto Man
Freq Offset 0 Hz


Agilent Spectrum Analyzer - Swept SA
Center Freq 15.075000 MHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 11/100
12:10:37 PM Oct 14, 2020
Ref Offset 10 dB
10 dB/div Ref 10.00 dBm
Log
Mkr1 150 kHz
-54.004 dBm
Start 150 kHz
#Res BW 10 kHz
#VBW 30 kHz*
Stop 30.00 MHz
Sweep 368.5 ms (3000 pts)
DC Coupled
Frequency
Auto Tune
Center Freq 15.075000 MHz
Start Freq 150.000 kHz
Stop Freq 30.000000 MHz
CF Step 2.985000 MHz
Auto Man
Freq Offset 0 Hz

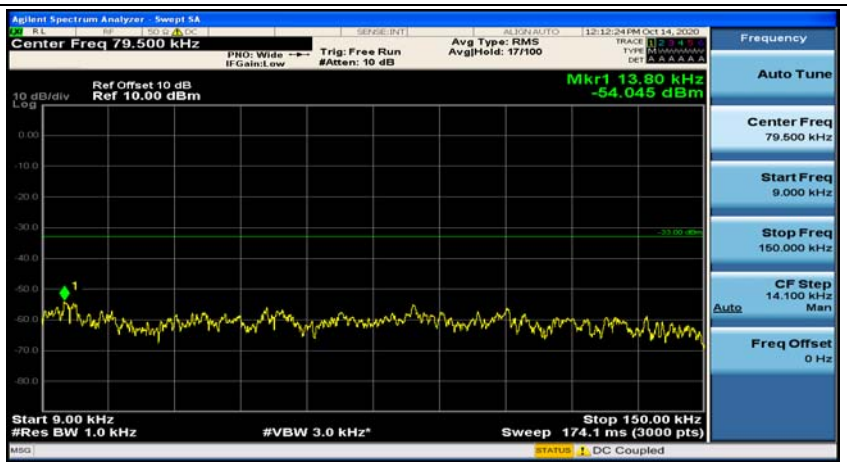
Agilent Spectrum Analyzer - Swept SA
Center Freq 13.015000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 40 dB
Avg Type: RMS
Avg|Hold: 11/100
12:10:43 PM Oct 14, 2020
Ref Offset 9.95 dB
10 dB/div Ref 30.00 dBm
Log
Mkr2 25.991 GHz
-28.851 dBm
Start 30 MHz
#Res BW 1.0 MHz
#VBW 3.0 MHz*
Stop 26.00 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

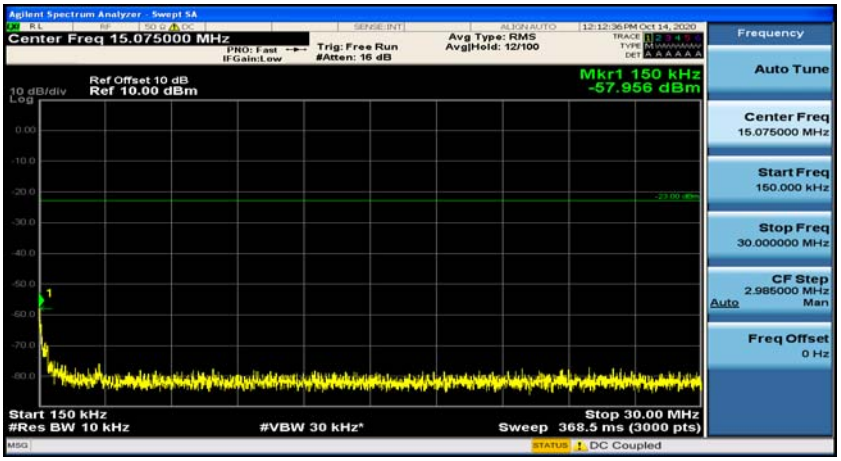
(Channel Bandwidth: 3 MHz)_HCH_16QAM_1RB#0



(Channel Bandwidth: 3 MHz)_HCH_16QAM_1RB#7

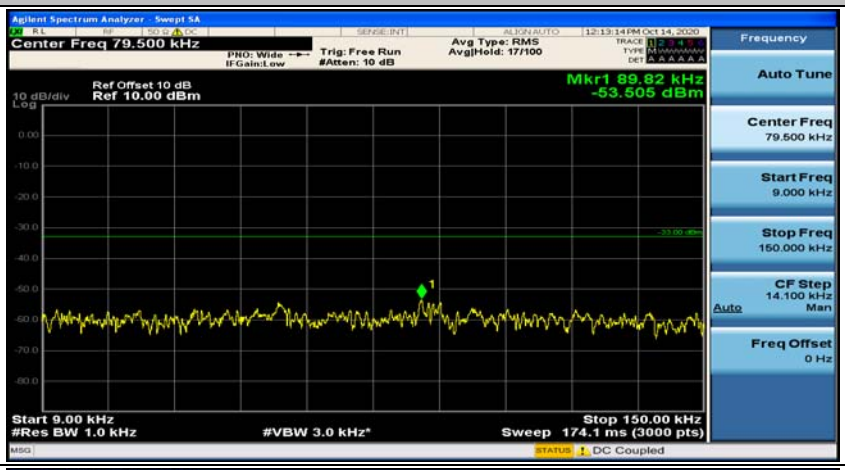

Agilent Spectrum Analyzer - Swept SA
Center Freq 79.500 kHz
PNO: Wide
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 17/100
12:12:24 PM Oct 14, 2020
Ref Offset 10 dB
10 dB/div Ref 10.00 dBm
Log
Mkr1 13.80 kHz
-54.045 dBm
Start 9.00 kHz
#Res BW 1.0 kHz
#VBW 3.0 kHz*
Stop 150.00 kHz
Sweep 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

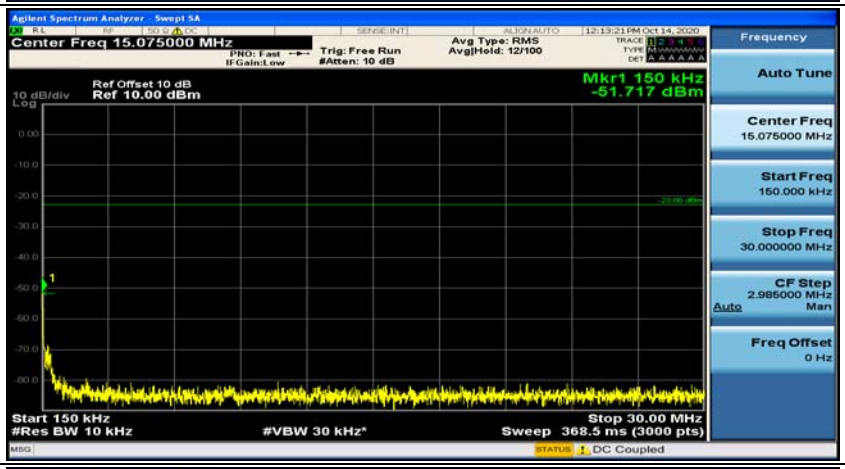

Agilent Spectrum Analyzer - Swept SA
Center Freq 15.075000 MHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 16 dB
Avg Type: RMS
Avg|Hold: 12/100
12:12:36 PM Oct 14, 2020
Ref Offset 10 dB
10 dB/div Ref 10.00 dBm
Log
Mkr1 150 kHz
-57.956 dBm
Start 150 kHz
#Res BW 10 kHz
#VBW 30 kHz*
Stop 30.00 MHz
Sweep 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: 10/100
12:12:42 PM Oct 14, 2020
Ref Offset 9.95 dB
10 dB/div Ref 30.00 dBm
Log
Mkr2 25.160 GHz
-29.156 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

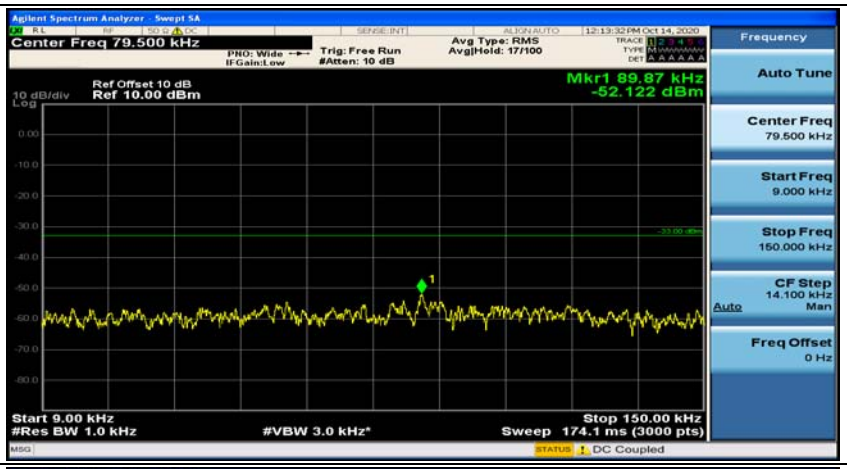
## Channel Bandwidth: 5 MHz

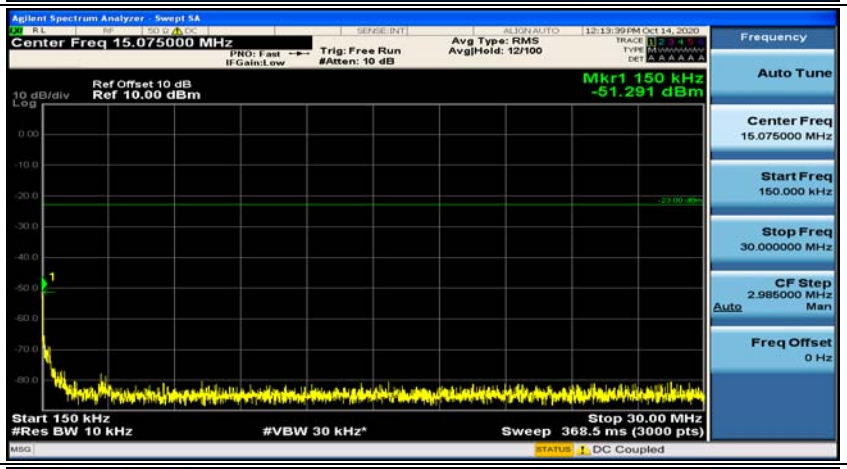
(Channel Bandwidth: 5 MHz)_LCH_QPSK_1RB#0



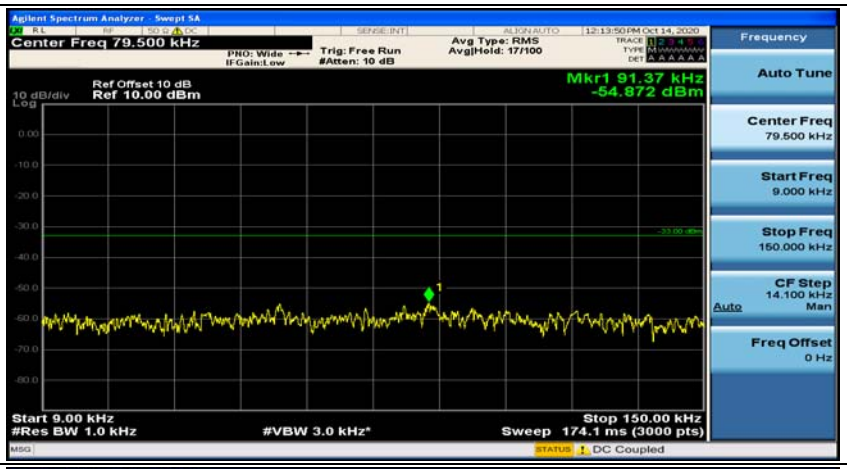



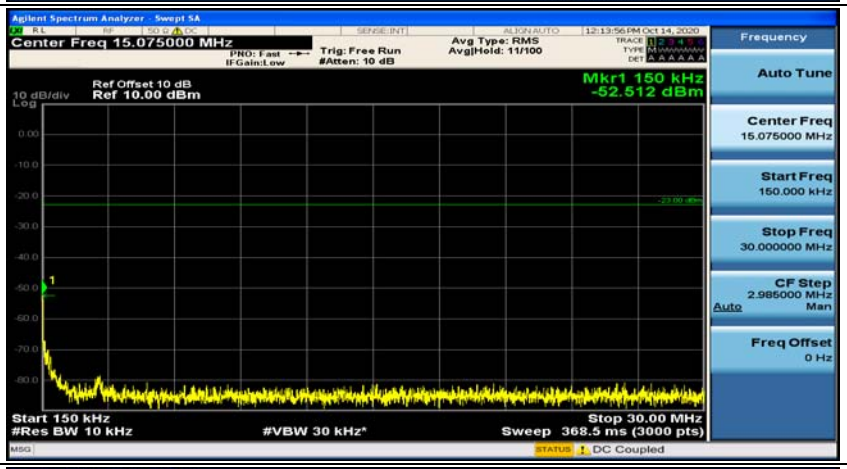
(Channel Bandwidth: 5 MHz)_LCH_QPSK_1RB#12



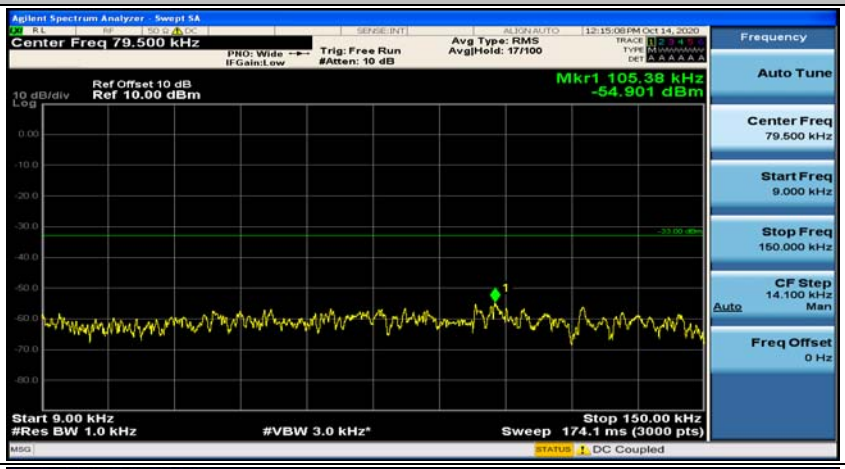
(Channel Bandwidth: 5 MHz)_LCH_QPSK_1RB#24

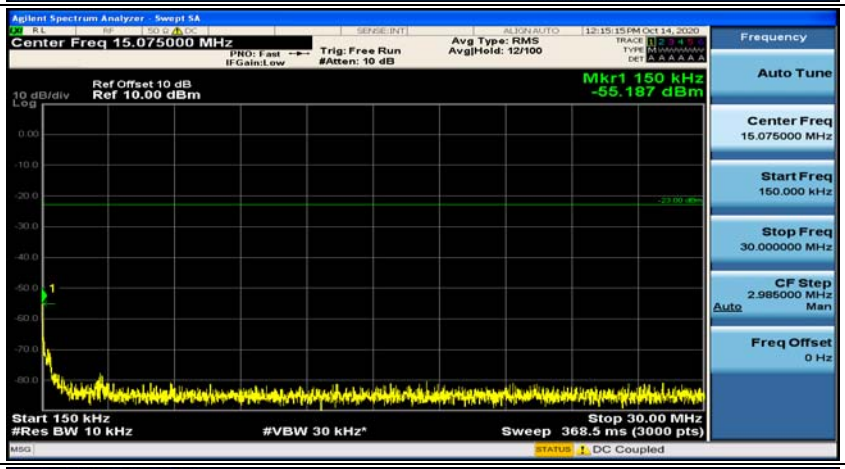

Agilent Spectrum Analyzer - Swept SA
Center Freq 79.500 kHz
PNO: Wide
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 17/100
12:13:50 PM Oct 14, 2020
Ref Offset 10 dB
10 dB/div Ref 10.00 dBm
Log
Mkr1 91.37 kHz
-54.872 dBm
Start 9.00 kHz
#Res BW 1.0 kHz
#VBW 3.0 kHz*
Stop 150.00 kHz
Sweep 174.1 ms (3000 pts)
DC Coupled
Frequency
Auto Tune
Center Freq 79.500 kHz
Start Freq 9.000 kHz
Stop Freq 150.000 kHz
CF Step 14.100 kHz
Auto Man
Freq Offset 0 Hz


Agilent Spectrum Analyzer - Swept SA
Center Freq 15.075000 MHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 11/100
12:13:56 PM Oct 14, 2020
Ref Offset 10 dB
10 dB/div Ref 10.00 dBm
Log
Mkr1 150 kHz
-52.512 dBm
Start 150 kHz
#Res BW 10 kHz
#VBW 30 kHz*
Stop 30.00 MHz
Sweep 368.5 ms (3000 pts)
DC Coupled
Frequency
Auto Tune
Center Freq 15.075000 MHz
Start Freq 150.000 kHz
Stop Freq 30.000000 MHz
CF Step 2.985000 MHz
Auto Man
Freq Offset 0 Hz

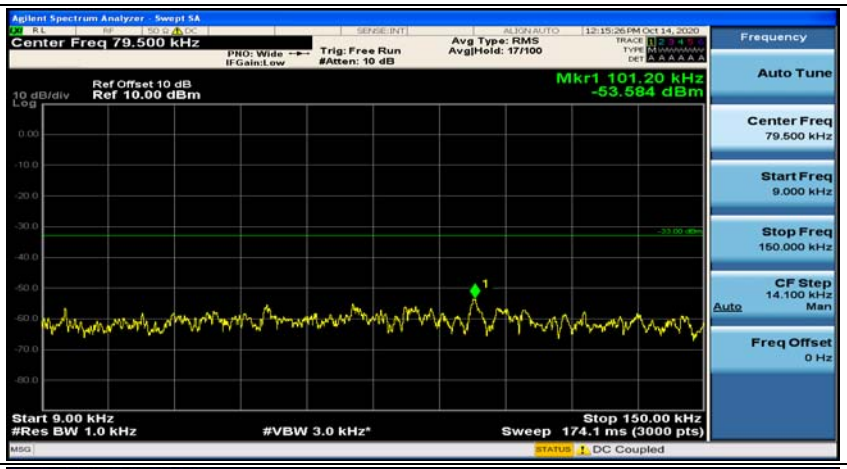
Agilent Spectrum Analyzer - Swept SA
Center Freq 13.015000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 40 dB
Avg Type: RMS
Avg|Hold: 11/100
12:14:02 PM Oct 14, 2020
Ref Offset 9.96 dB
10 dB/div Ref 30.00 dBm
Log
Mkr2 25.377 GHz
-29.061 dBm
Start 30 MHz
#Res BW 1.0 MHz
#VBW 3.0 MHz*
Stop 26.00 GHz
Sweep 64.98 ms (3000 pts)
Frequency
Auto Tune
Center Freq 13.015000000 GHz
Start Freq 30.000000 MHz
Stop Freq 26.000000000 GHz
CF Step 2.597000000 GHz
Auto Man
Freq Offset 0 Hz

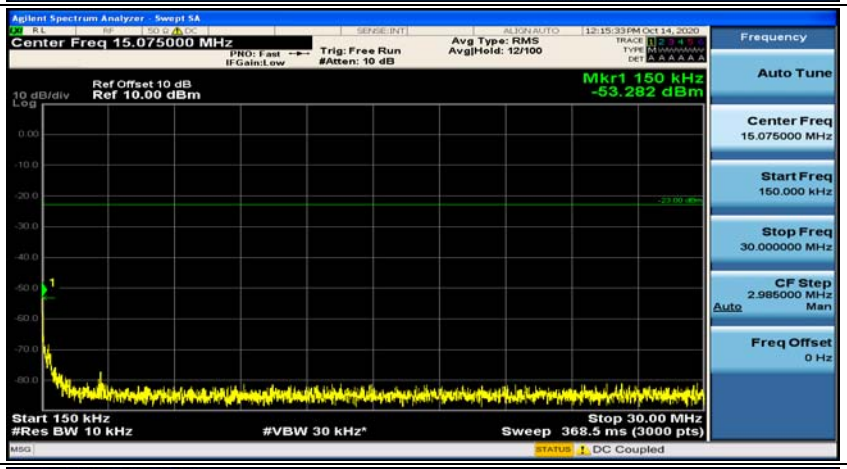
(Channel Bandwidth: 5 MHz)_MCH_QPSK_1RB#0



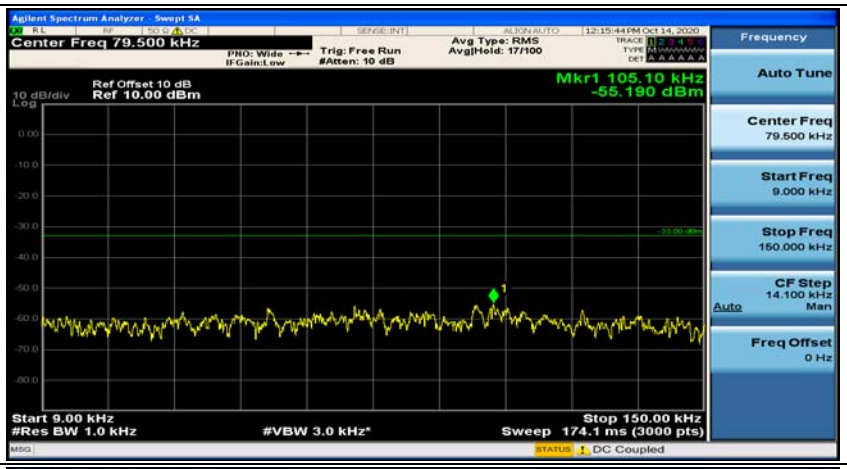



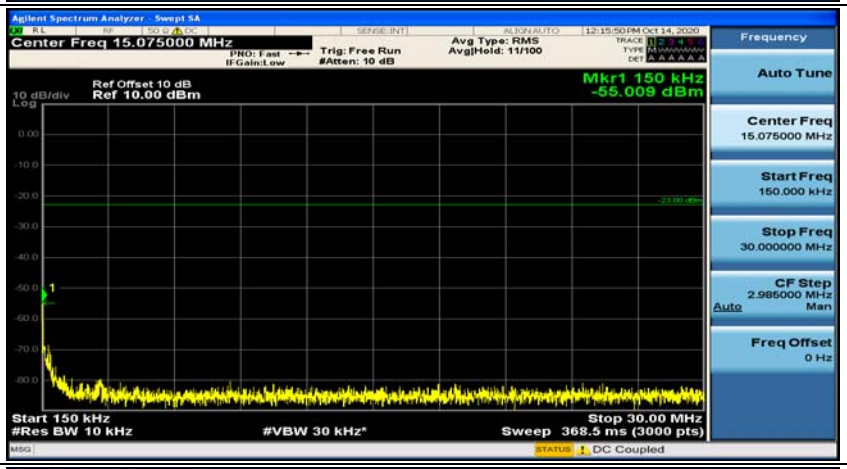
(Channel Bandwidth: 5 MHz)_MCH_QPSK_1RB#12



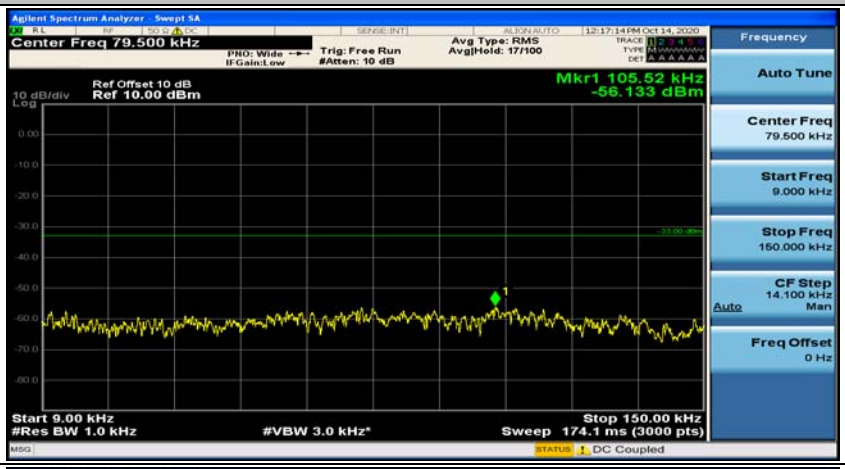
(Channel Bandwidth: 5 MHz)_MCH_QPSK_1RB#24

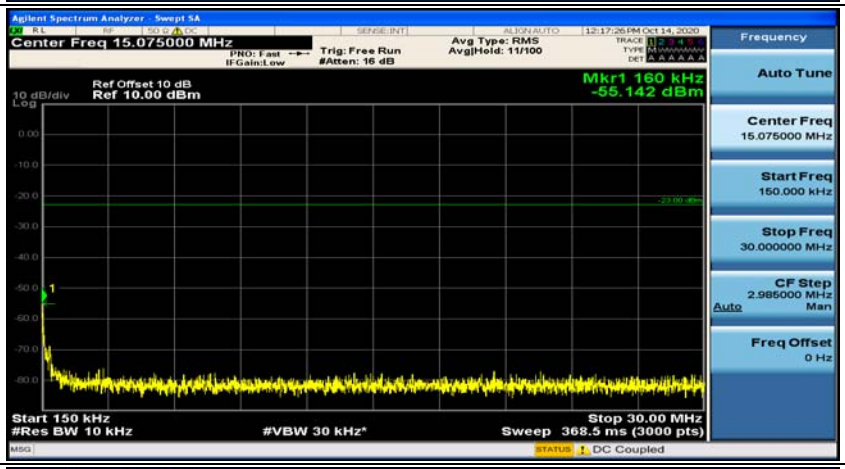

Agilent Spectrum Analyzer - Swept SA
Center Freq 79.500 kHz
PNO: Wide
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 17/100
12:15:44 PM Oct 14, 2020
Ref Offset 10 dB
10 dB/div Ref 10.00 dBm
Log
Mkr1 105.10 kHz
-55.190 dBm
Start 9.00 kHz
#Res BW 1.0 kHz
#VBW 3.0 kHz*
Stop 150.00 kHz
Sweep 174.1 ms (3000 pts)
DC Coupled
Frequency
Auto Tune
Center Freq 79.500 kHz
Start Freq 9.000 kHz
Stop Freq 150.000 kHz
CF Step 14.100 kHz
Auto Man
Freq Offset 0 Hz


Agilent Spectrum Analyzer - Swept SA
Center Freq 15.075000 MHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 11/100
12:15:50 PM Oct 14, 2020
Ref Offset 10 dB
10 dB/div Ref 10.00 dBm
Log
Mkr1 150 kHz
-55.009 dBm
Start 150 kHz
#Res BW 10 kHz
#VBW 30 kHz*
Stop 30.00 MHz
Sweep 368.5 ms (3000 pts)
DC Coupled
Frequency
Auto Tune
Center Freq 15.075000 MHz
Start Freq 150.000 kHz
Stop Freq 30.000000 MHz
CF Step 2.985000 MHz
Auto Man
Freq Offset 0 Hz

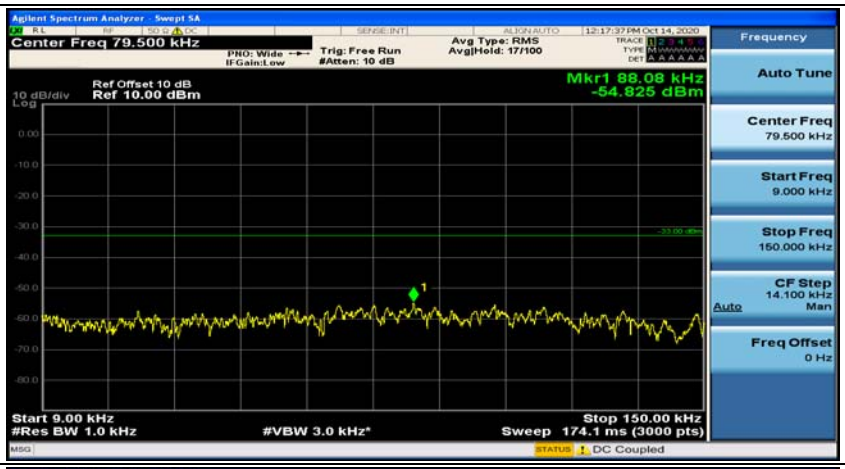
Agilent Spectrum Analyzer - Swept SA
Center Freq 13.015000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 40 dB
Avg Type: RMS
Avg|Hold: 11/100
12:15:57 PM Oct 14, 2020
Ref Offset 9.96 dB
10 dB/div Ref 30.00 dBm
Log
Mkr2 25.489 GHz
-29.130 dBm
Start 30 MHz
#Res BW 1.0 MHz
#VBW 3.0 MHz*
Stop 26.00 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

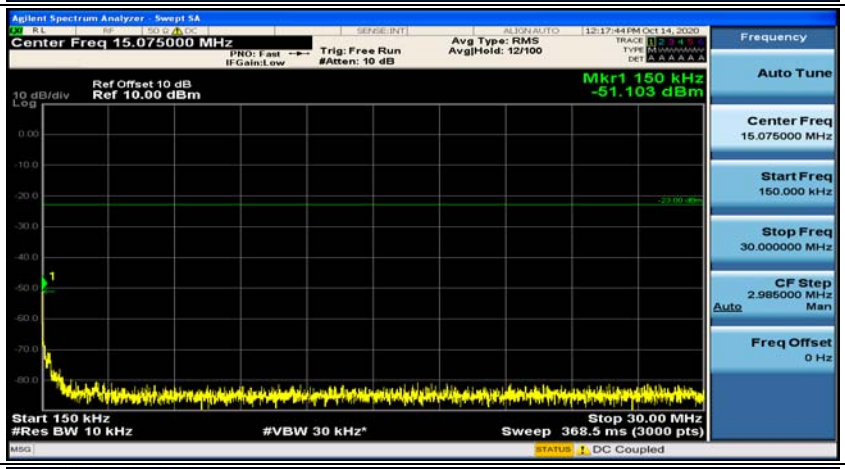
(Channel Bandwidth: 5 MHz)_HCH_QPSK_1RB#0



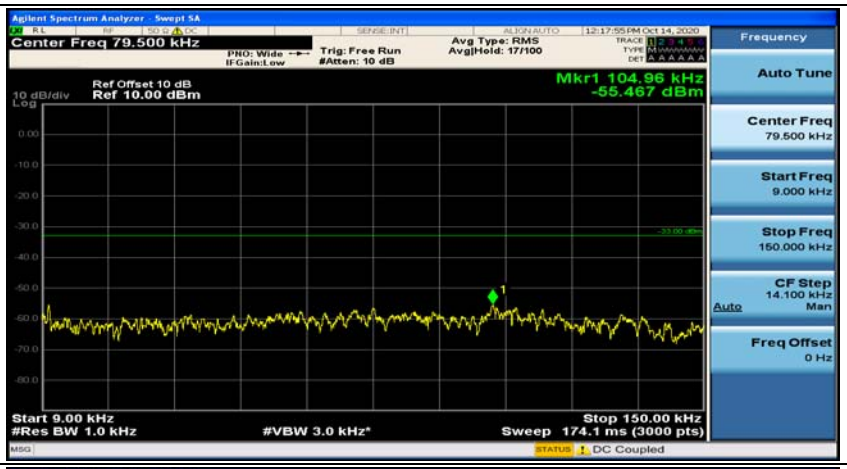



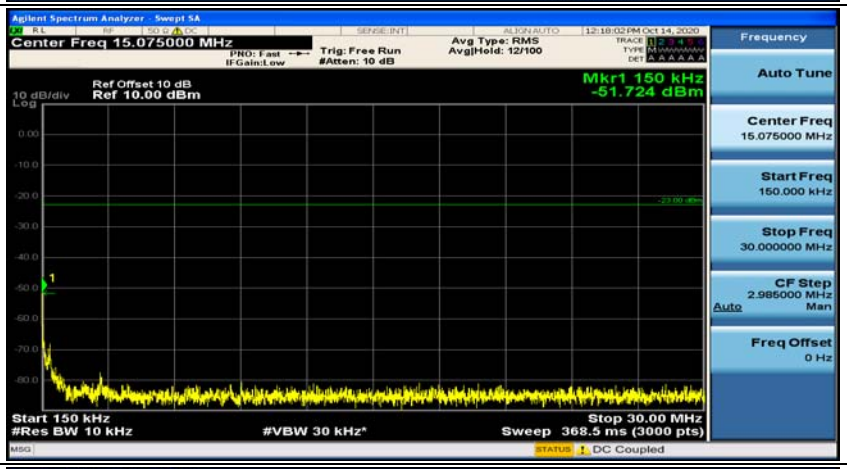
(Channel Bandwidth: 5 MHz)_HCH_QPSK_1RB#12



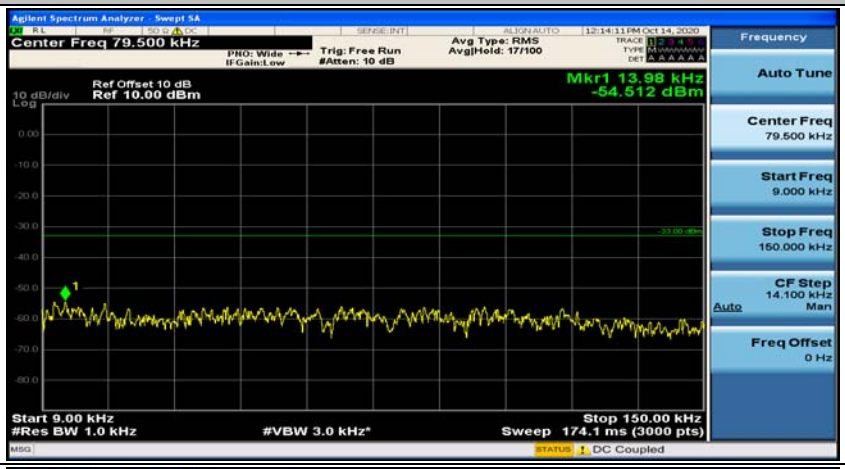
(Channel Bandwidth: 5 MHz)_HCH_QPSK_1RB#24

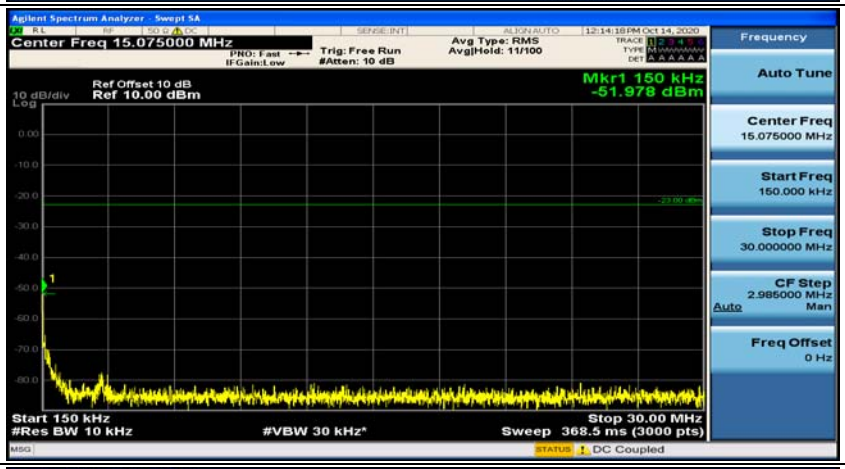

Agilent Spectrum Analyzer - Swept SA
Center Freq 79.500 kHz
PNO: Wide
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 17/100
12:17:55 PM Oct 14, 2020
Ref Offset 10 dB
10 dB/div Ref 10.00 dBm
Log
Mkr1 104.96 kHz
-55.467 dBm
Start 9.00 kHz
#Res BW 1.0 kHz
#VBW 3.0 kHz*
Stop 150.00 kHz
Sweep 174.1 ms (3000 pts)
DC Coupled
Frequency
Auto Tune
Center Freq 79.500 kHz
Start Freq 9.000 kHz
Stop Freq 150.000 kHz
CF Step 14.100 kHz
Auto Man
Freq Offset 0 Hz


Agilent Spectrum Analyzer - Swept SA
Center Freq 15.075000 MHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 12/100
12:18:02 PM Oct 14, 2020
Ref Offset 10 dB
10 dB/div Ref 10.00 dBm
Log
Mkr1 150 kHz
-51.724 dBm
Start 150 kHz
#Res BW 10 kHz
#VBW 30 kHz*
Stop 30.00 MHz
Sweep 368.5 ms (3000 pts)
DC Coupled
Frequency
Auto Tune
Center Freq 15.075000 MHz
Start Freq 150.000 kHz
Stop Freq 30.000000 MHz
CF Step 2.985000 MHz
Auto Man
Freq Offset 0 Hz

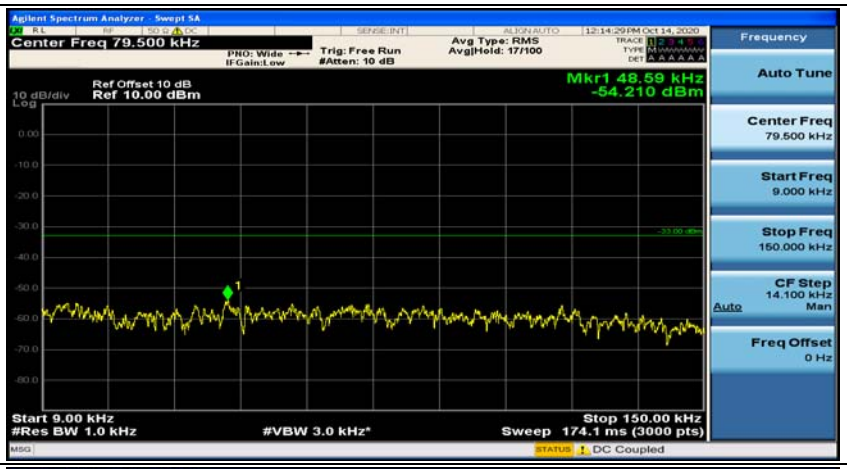
Agilent Spectrum Analyzer - Swept SA
Center Freq 13.015000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 40 dB
Avg Type: RMS
Avg|Hold: 10/100
12:18:08 PM Oct 14, 2020
Ref Offset 9.96 dB
10 dB/div Ref 30.00 dBm
Log
Mkr2 25.047 GHz
-29.223 dBm
Start 30 MHz
#Res BW 1.0 MHz
#VBW 3.0 MHz*
Stop 26.00 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

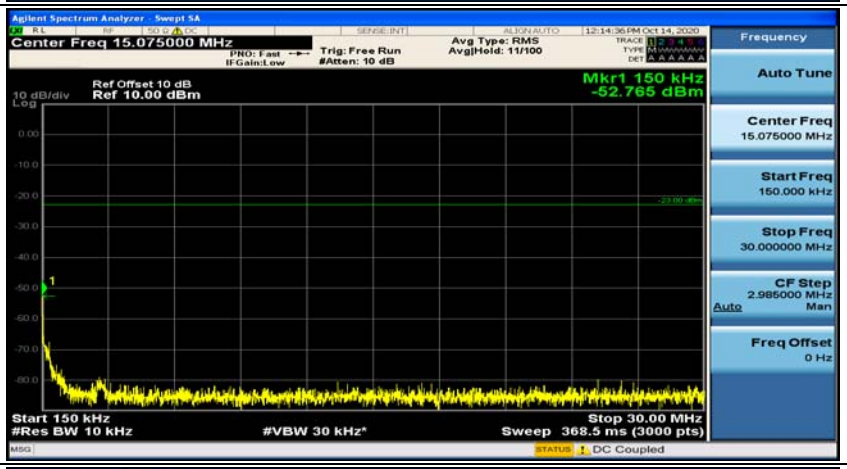
(Channel Bandwidth: 5 MHz)_LCH_16QAM_1RB#0



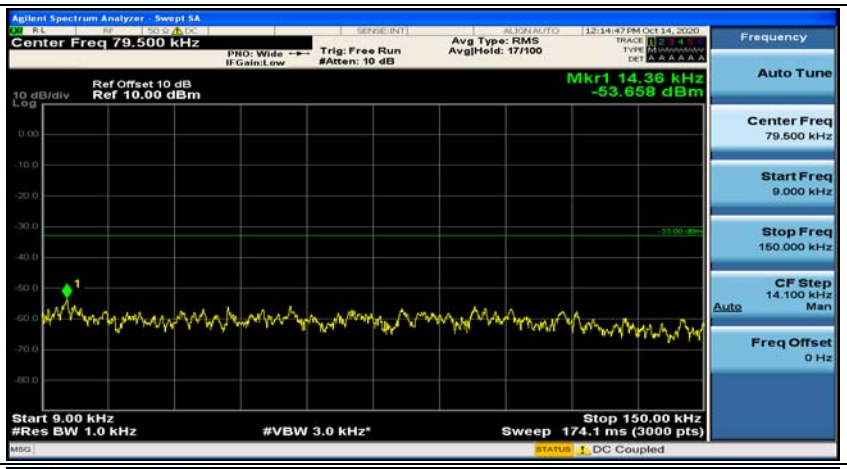



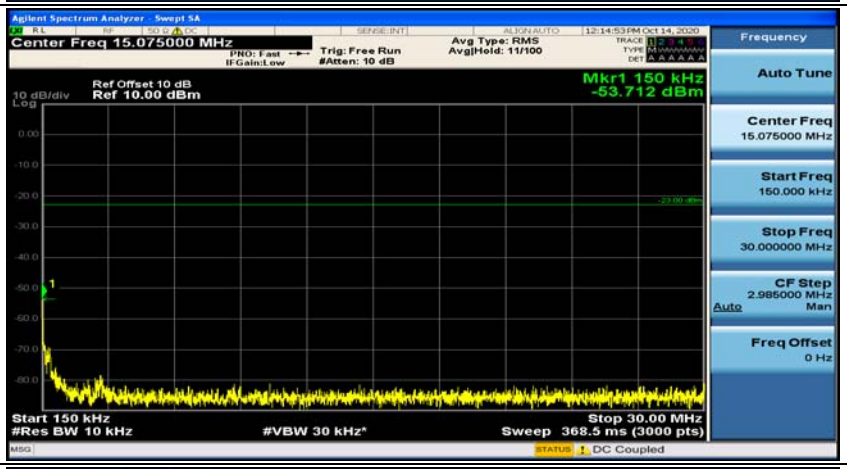
(Channel Bandwidth: 5 MHz)_LCH_16QAM_1RB#12



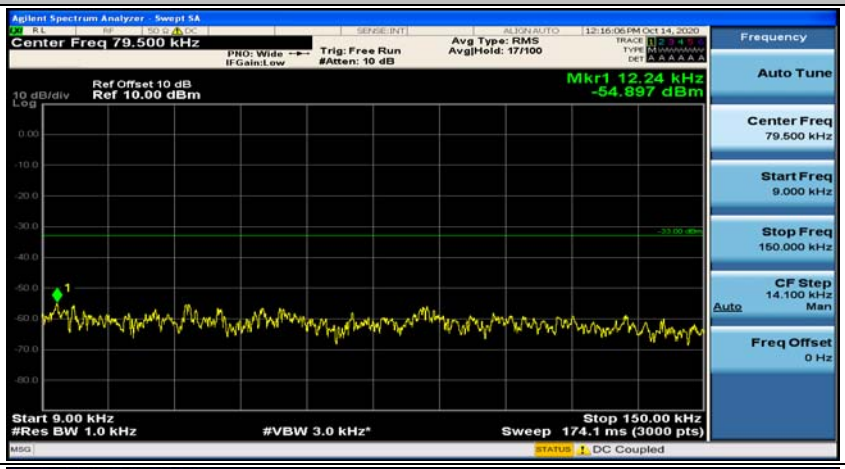
(Channel Bandwidth: 5 MHz)_LCH_16QAM_1RB#24

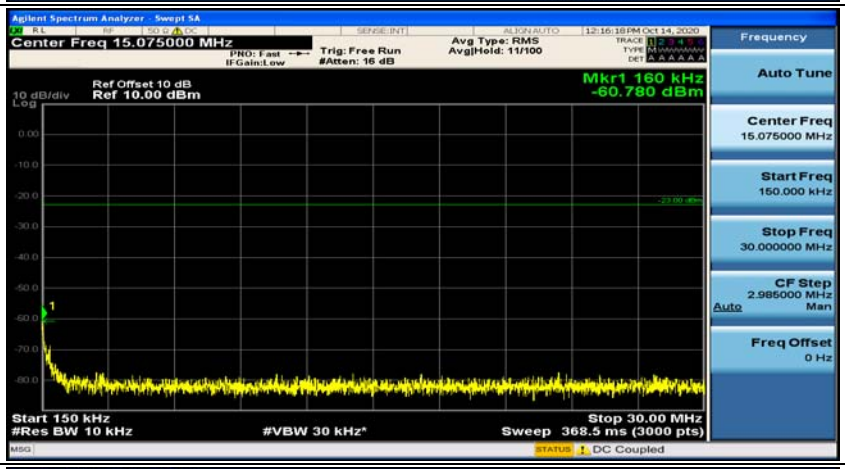

Agilent Spectrum Analyzer - Swept SA
Center Freq 79.500 kHz
PNO: Wide
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 17/100
12:14:47 PM Oct 14, 2020
Ref Offset 10 dB
10 dB/div Ref 10.00 dBm
Log
Mkr1 14.36 kHz
-53.658 dBm
Start 9.00 kHz
#Res BW 1.0 kHz
#VBW 3.0 kHz*
Stop 150.00 kHz
Sweep 174.1 ms (3000 pts)
DC Coupled
Frequency
Auto Tune
Center Freq 79.500 kHz
Start Freq 9.000 kHz
Stop Freq 150.000 kHz
CF Step 14.100 kHz
Auto Man
Freq Offset 0 Hz


Agilent Spectrum Analyzer - Swept SA
Center Freq 15.075000 MHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 11/100
12:14:53 PM Oct 14, 2020
Ref Offset 10 dB
10 dB/div Ref 10.00 dBm
Log
Mkr1 150 kHz
-53.712 dBm
Start 150 kHz
#Res BW 10 kHz
#VBW 30 kHz*
Stop 30.00 MHz
Sweep 368.5 ms (3000 pts)
DC Coupled
Frequency
Auto Tune
Center Freq 15.075000 MHz
Start Freq 150.000 kHz
Stop Freq 30.000000 MHz
CF Step 2.985000 MHz
Auto Man
Freq Offset 0 Hz

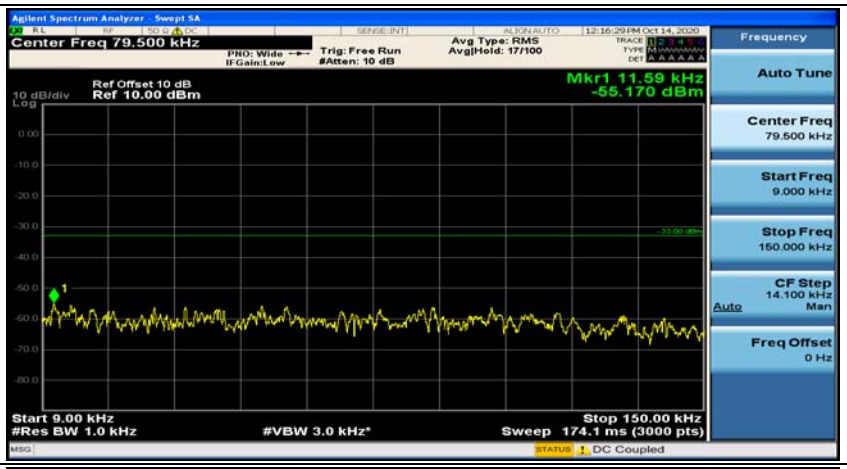
Agilent Spectrum Analyzer - Swept SA
Center Freq 13.015000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 40 dB
Avg Type: RMS
Avg|Hold: 11/100
12:14:59 PM Oct 14, 2020
Ref Offset 9.96 dB
10 dB/div Ref 30.00 dBm
Log
Mkr2 25.939 GHz
-27.676 dBm
Start 30 MHz
#Res BW 1.0 MHz
#VBW 3.0 MHz*
Stop 26.00 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

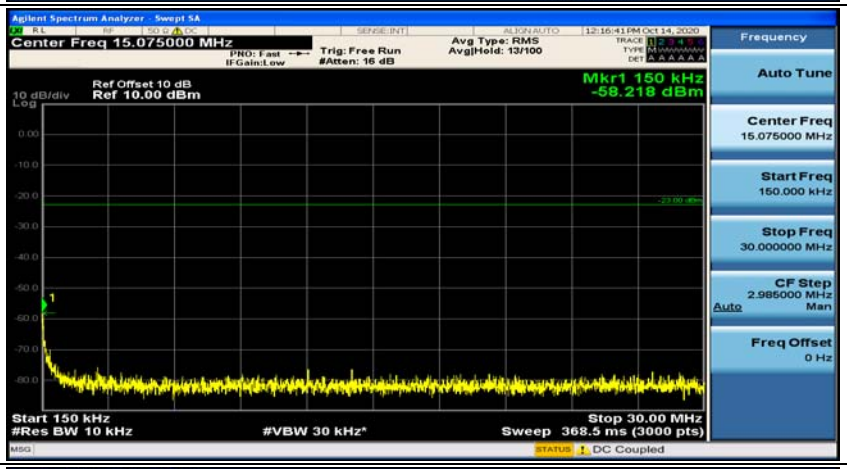
(Channel Bandwidth: 5 MHz)_MCH_16QAM_1RB#0



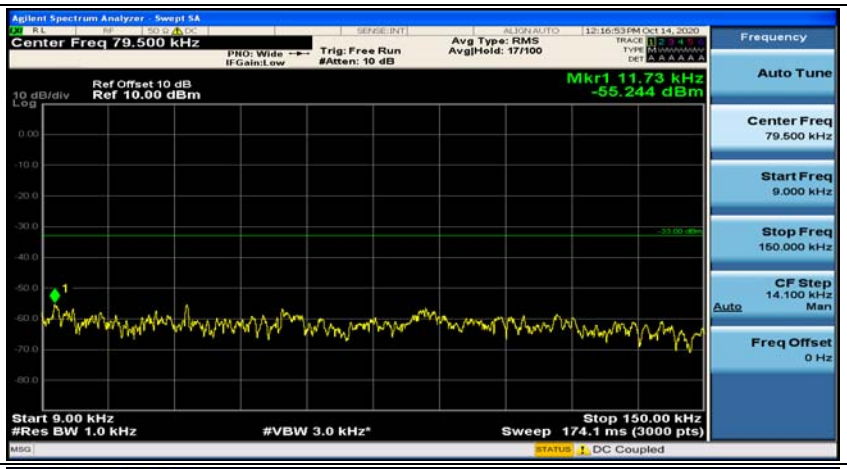



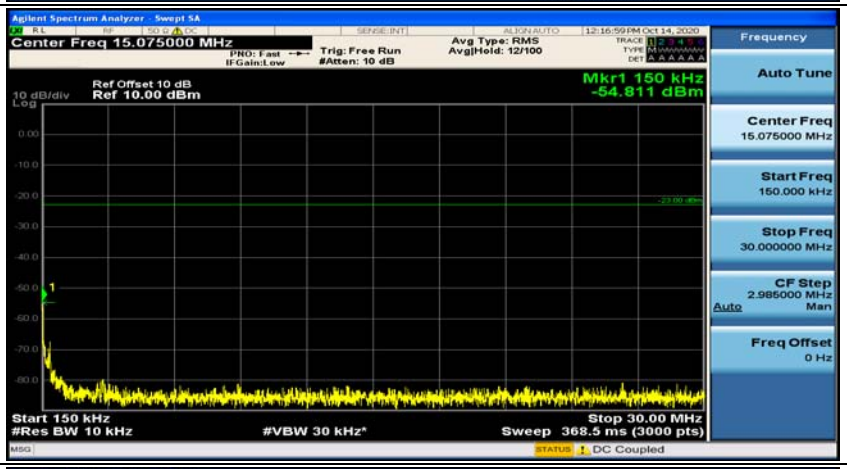
(Channel Bandwidth: 5 MHz)_MCH_16QAM_1RB#12



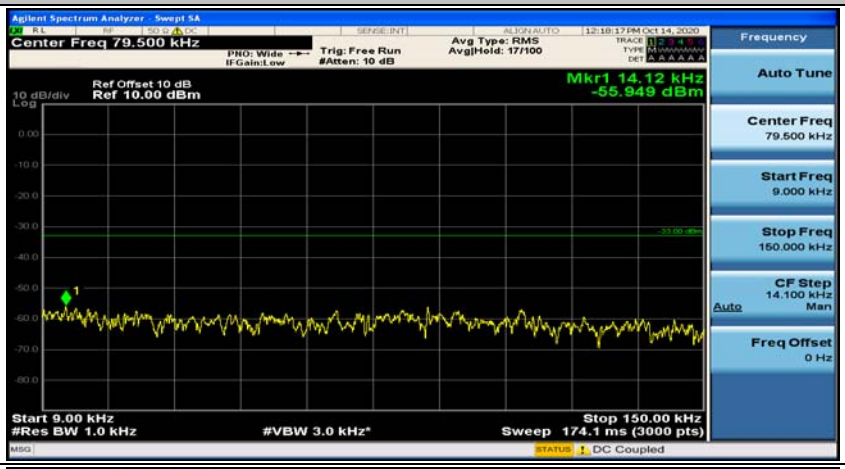
(Channel Bandwidth: 5 MHz)_MCH_16QAM_1RB#24

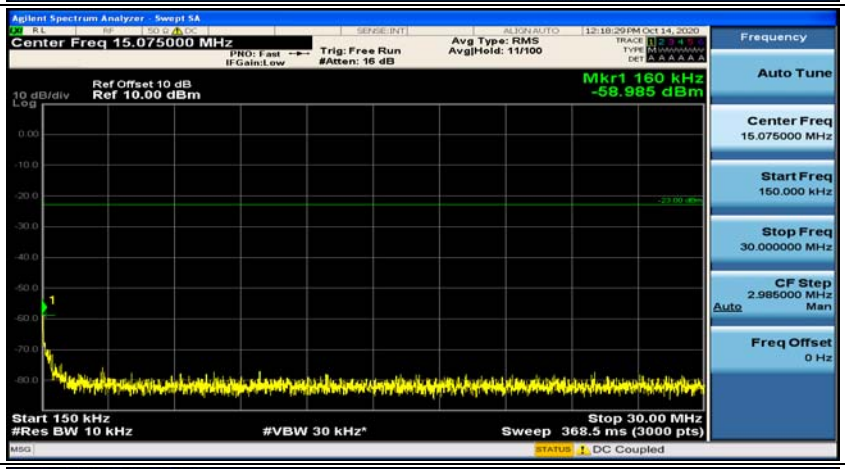

Agilent Spectrum Analyzer - Swept SA
Center Freq 79.500 kHz
PNO: Wide
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 17/100
12:16:53 PM Oct 14, 2020
Ref Offset 10 dB
10 dB/div Ref 10.00 dBm
Log
Mkr1 11.73 kHz
-55.244 dBm
Start 9.00 kHz
#Res BW 1.0 kHz
#VBW 3.0 kHz*
Stop 150.00 kHz
Sweep 174.1 ms (3000 pts)
DC Coupled
Frequency
Auto Tune
Center Freq 79.500 kHz
Start Freq 9.000 kHz
Stop Freq 150.000 kHz
CF Step 14.100 kHz
Auto Man
Freq Offset 0 Hz


Agilent Spectrum Analyzer - Swept SA
Center Freq 15.075000 MHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 12/100
12:16:59 PM Oct 14, 2020
Ref Offset 10 dB
10 dB/div Ref 10.00 dBm
Log
Mkr1 150 kHz
-54.811 dBm
Start 150 kHz
#Res BW 10 kHz
#VBW 30 kHz*
Stop 30.00 MHz
Sweep 368.5 ms (3000 pts)
DC Coupled
Frequency
Auto Tune
Center Freq 15.075000 MHz
Start Freq 150.000 kHz
Stop Freq 30.000000 MHz
CF Step 2.985000 MHz
Auto Man
Freq Offset 0 Hz

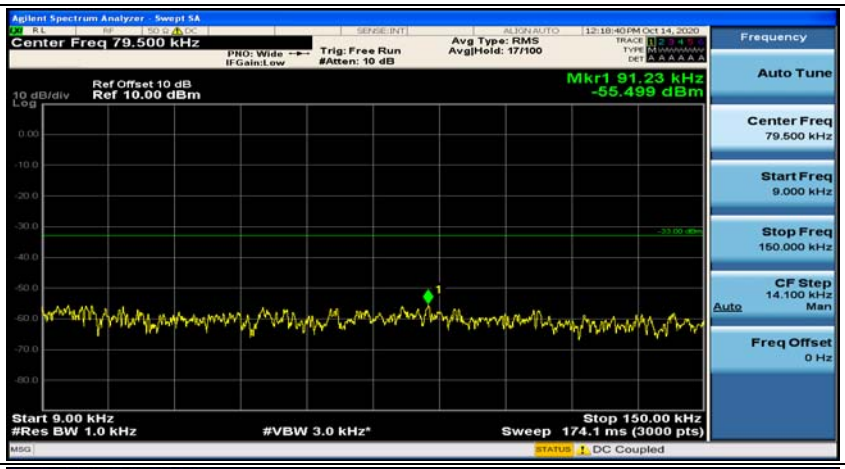
Agilent Spectrum Analyzer - Swept SA
Center Freq 13.015000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 40 dB
Avg Type: RMS
Avg|Hold: 10/100
12:17:05 PM Oct 14, 2020
Ref Offset 9.96 dB
10 dB/div Ref 30.00 dBm
Log
Mkr2 25.385 GHz
-28.942 dBm
Start 30 MHz
#Res BW 1.0 MHz
#VBW 3.0 MHz*
Stop 26.00 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

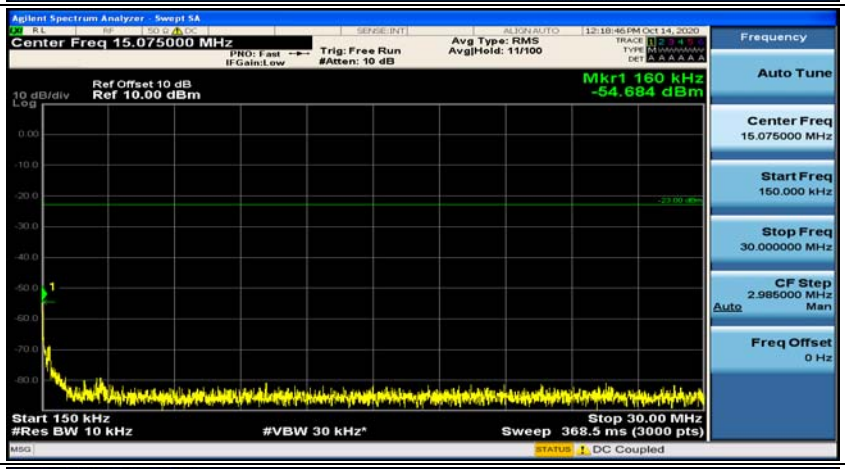
(Channel Bandwidth: 5 MHz)_HCH_16QAM_1RB#0



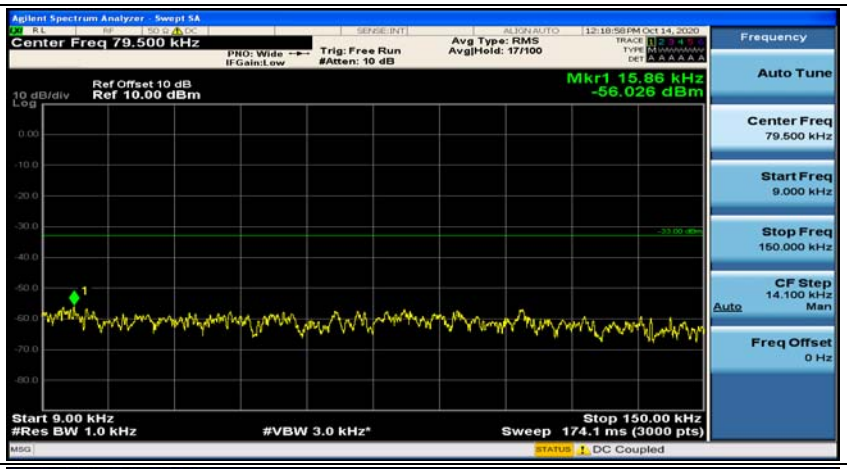



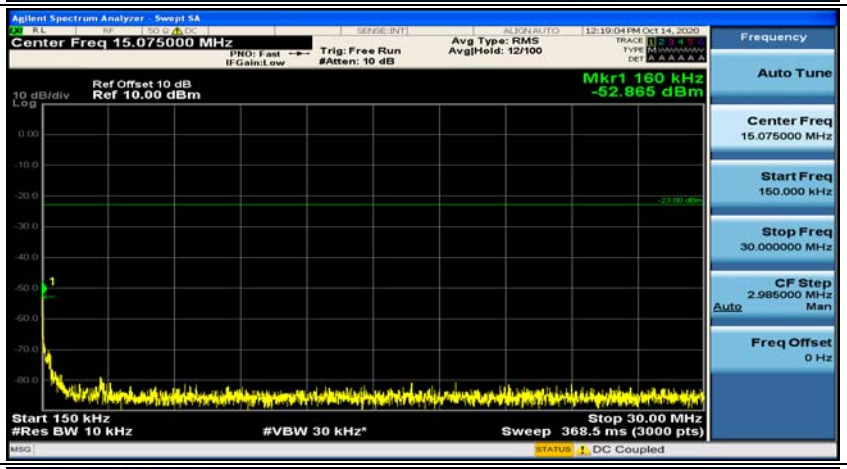
(Channel Bandwidth: 5 MHz)_HCH_16QAM_1RB#12



(Channel Bandwidth: 5 MHz)_HCH_16QAM_1RB#24

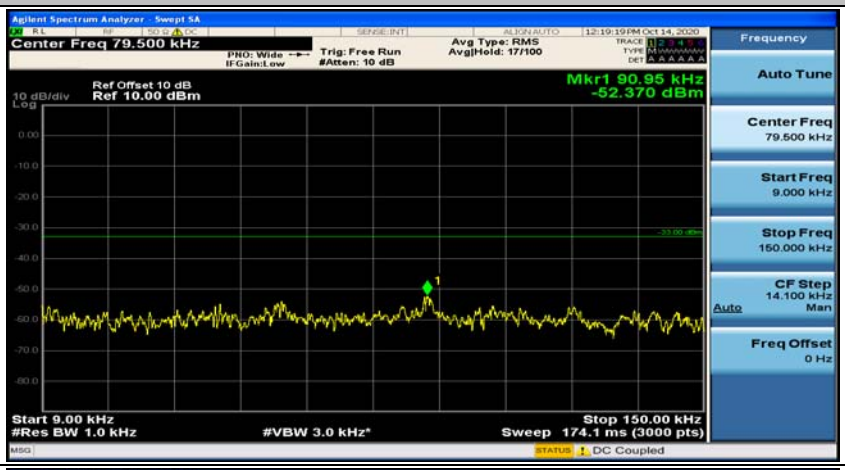

Agilent Spectrum Analyzer - Swept SA
Center Freq 79.500 kHz
PNO: Wide
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 17/100
12:18:58 PM Oct 14, 2020
Ref Offset 10 dB
10 dB/div Ref 10.00 dBm
Log
Mkr1 15.86 kHz
-56.026 dBm
Start 9.00 kHz
#Res BW 1.0 kHz
#VBW 3.0 kHz*
Stop 150.00 kHz
Sweep 174.1 ms (3000 pts)
DC Coupled
Frequency
Auto Tune
Center Freq
79.500 kHz
Start Freq
9.000 kHz
Stop Freq
150.000 kHz
CF Step
14.100 kHz
Auto
Man
Freq Offset
0 Hz

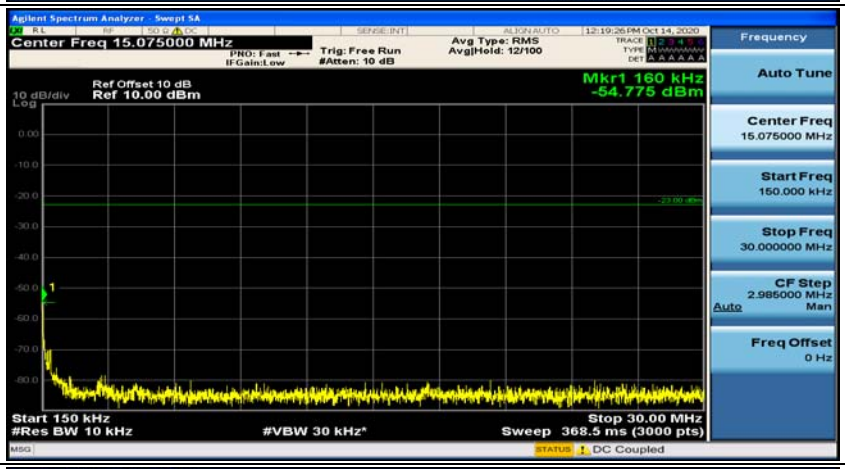

Agilent Spectrum Analyzer - Swept SA
Center Freq 15.075000 MHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 12/100
12:19:04 PM Oct 14, 2020
Ref Offset 10 dB
10 dB/div Ref 10.00 dBm
Log
Mkr1 160 kHz
-52.865 dBm
Start 150 kHz
#Res BW 10 kHz
#VBW 30 kHz*
Stop 30.00 MHz
Sweep 368.5 ms (3000 pts)
DC Coupled
Frequency
Auto Tune
Center Freq
15.075000 MHz
Start Freq
150.000 kHz
Stop Freq
30.000000 MHz
CF Step
2.985000 MHz
Auto
Man
Freq Offset
0 Hz

Agilent Spectrum Analyzer - Swept SA
Center Freq 13.015000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 40 dB
Avg Type: RMS
Avg|Hold: 10/100
12:19:10 PM Oct 14, 2020
Ref Offset 9.96 dB
10 dB/div Ref 30.00 dBm
Log
Mkr2 25.870 GHz
-28.888 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

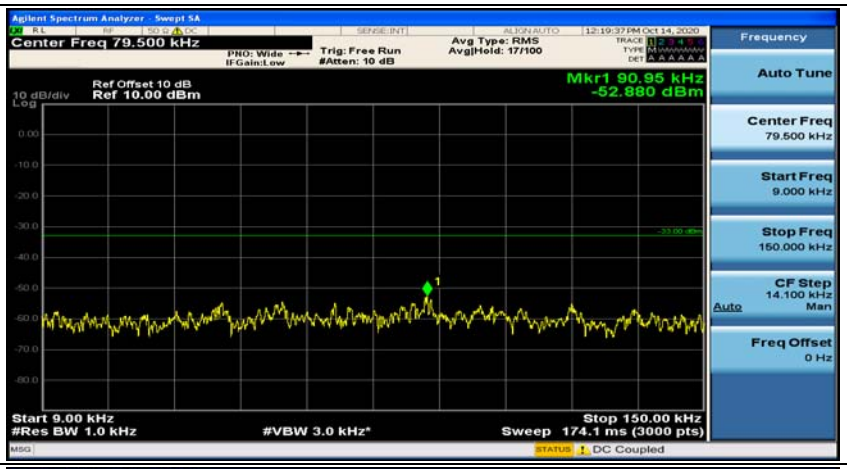
## Channel Bandwidth: 10 MHz

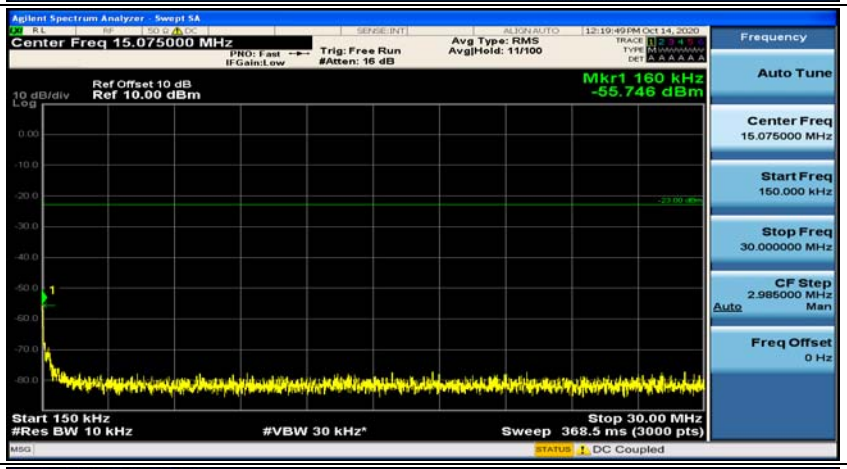
Channel Bandwidth: 10 MHz_LCH_QPSK_1RB#0



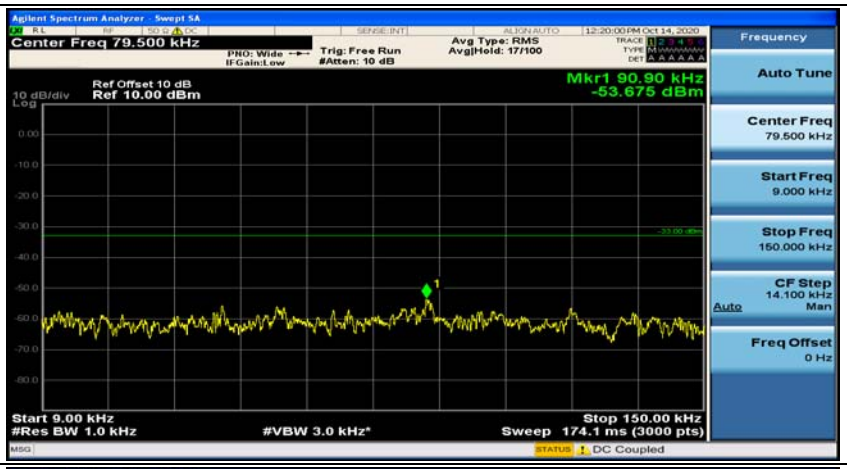



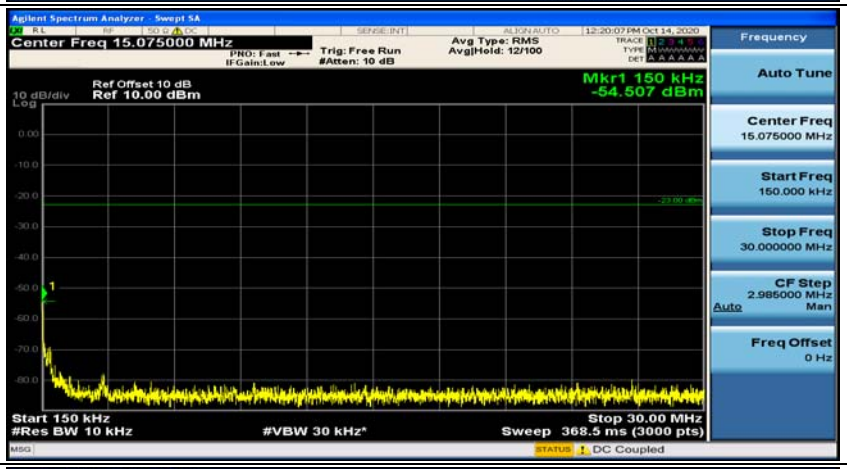
Channel Bandwidth: 10 MHz_LCH_QPSK_1RB#24



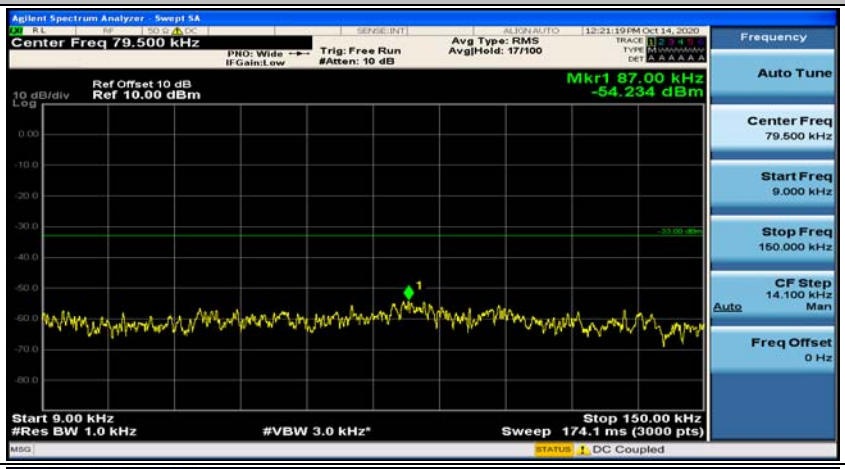
Channel Bandwidth: 10 MHz_LCH_QPSK_1RB#49

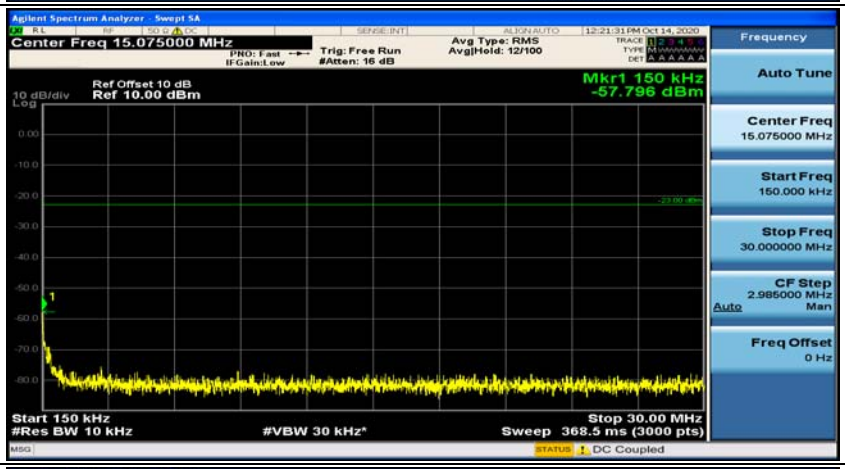

Agilent Spectrum Analyzer - Swept SA
Center Freq 79.500 kHz
PNO: Wide
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 17/100
12:20:00 PM Oct 14, 2020
Ref Offset 10 dB
10 dB/div Ref 10.00 dBm
Log
Mkr1 90.90 kHz
-53.675 dBm
Start 9.00 kHz
#Res BW 1.0 kHz
#VBW 3.0 kHz*
Stop 150.00 kHz
Sweep 174.1 ms (3000 pts)
DC Coupled
Frequency
Auto Tune
Center Freq 79.500 kHz
Start Freq 9.000 kHz
Stop Freq 150.000 kHz
CF Step 14.100 kHz
Auto Man
Freq Offset 0 Hz


Agilent Spectrum Analyzer - Swept SA
Center Freq 15.075000 MHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 12/100
12:20:07 PM Oct 14, 2020
Ref Offset 10 dB
10 dB/div Ref 10.00 dBm
Log
Mkr1 150 kHz
-54.507 dBm
Start 150 kHz
#Res BW 10 kHz
#VBW 30 kHz*
Stop 30.00 MHz
Sweep 368.5 ms (3000 pts)
DC Coupled
Frequency
Auto Tune
Center Freq 15.075000 MHz
Start Freq 150.000 kHz
Stop Freq 30.000000 MHz
CF Step 2.985000 MHz
Auto Man
Freq Offset 0 Hz

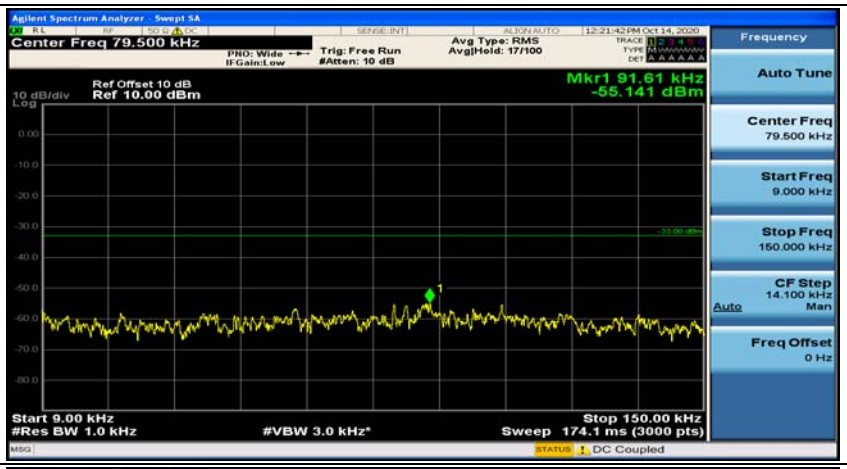
Agilent Spectrum Analyzer - Swept SA
Center Freq 13.015000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 40 dB
Avg Type: RMS
Avg|Hold: 11/100
12:20:13 PM Oct 14, 2020
Ref Offset 9.96 dB
10 dB/div Ref 30.00 dBm
Log
Mkr2 23.506 GHz
-29.109 dBm
Start 30 MHz
#Res BW 1.0 MHz
#VBW 3.0 MHz*
Stop 26.00 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

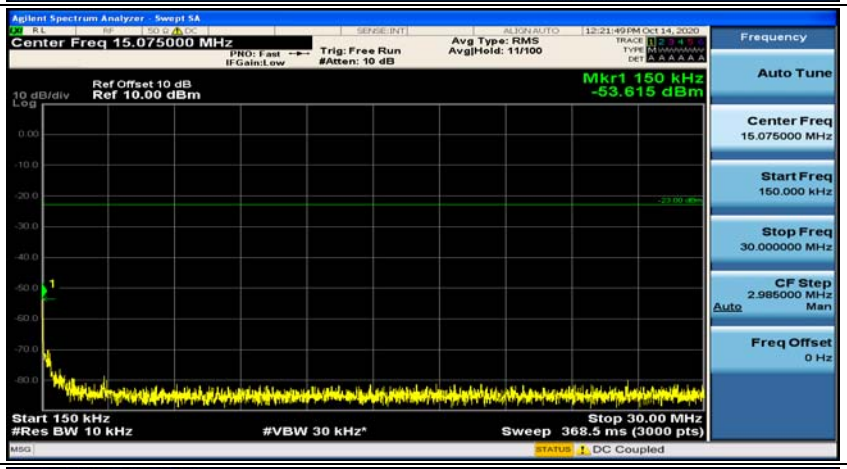
Channel Bandwidth: 10 MHz_MCH_QPSK_1RB#0



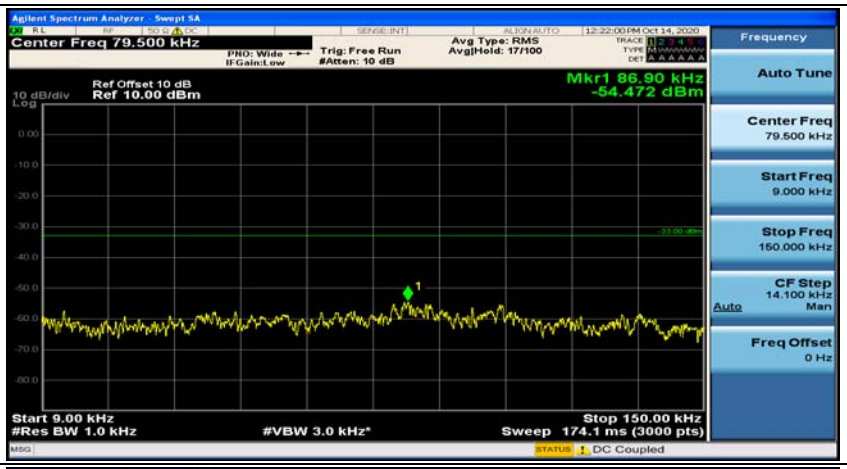



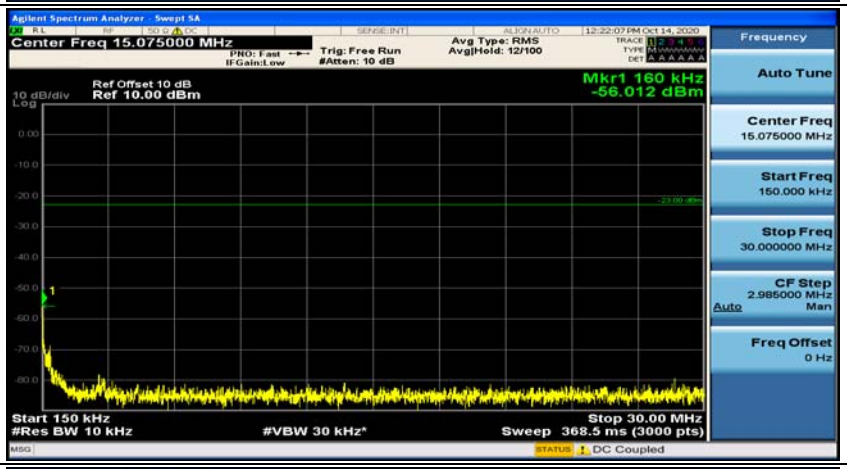
Channel Bandwidth: 10 MHz_MCH_QPSK_1RB#24



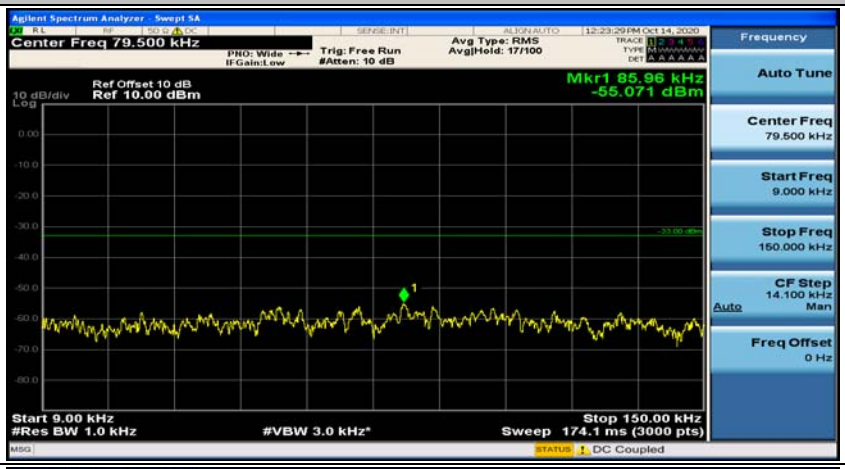
Channel Bandwidth: 10 MHz_MCH_QPSK_1RB#49

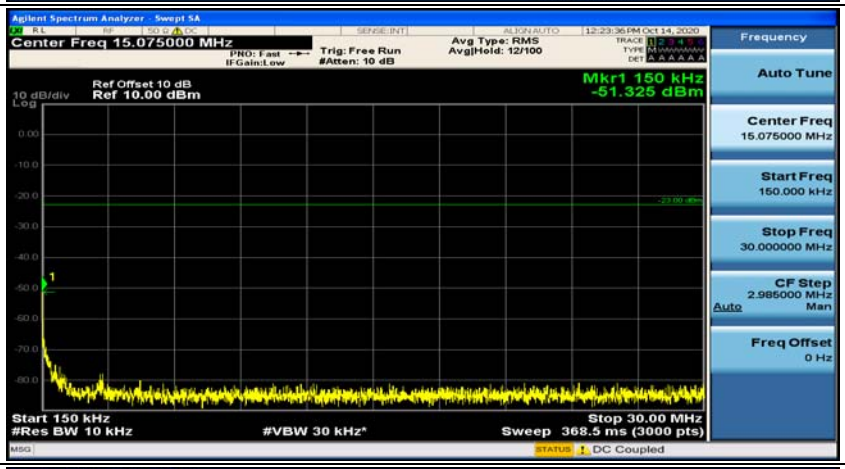

Agilent Spectrum Analyzer - Swept SA
Center Freq 79.500 kHz
PNO: Wide
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 17/100
12:22:00 PM Oct 14, 2020
Ref Offset 10 dB
10 dB/div Ref 10.00 dBm
Log
Mkr1 86.90 kHz
-54.472 dBm
Start 9.00 kHz
#Res BW 1.0 kHz
#VBW 3.0 kHz*
Stop 150.00 kHz
Sweep 174.1 ms (3000 pts)
DC Coupled
Frequency
Auto Tune
Center Freq 79.500 kHz
Start Freq 9.000 kHz
Stop Freq 150.000 kHz
CF Step 14.100 kHz
Auto Man
Freq Offset 0 Hz


Agilent Spectrum Analyzer - Swept SA
Center Freq 15.075000 MHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 12/100
12:22:07 PM Oct 14, 2020
Ref Offset 10 dB
10 dB/div Ref 10.00 dBm
Log
Mkr1 160 kHz
-56.012 dBm
Start 150 kHz
#Res BW 10 kHz
#VBW 30 kHz*
Stop 30.00 MHz
Sweep 368.5 ms (3000 pts)
DC Coupled
Frequency
Auto Tune
Center Freq 15.075000 MHz
Start Freq 150.000 kHz
Stop Freq 30.000000 MHz
CF Step 2.985000 MHz
Auto Man
Freq Offset 0 Hz

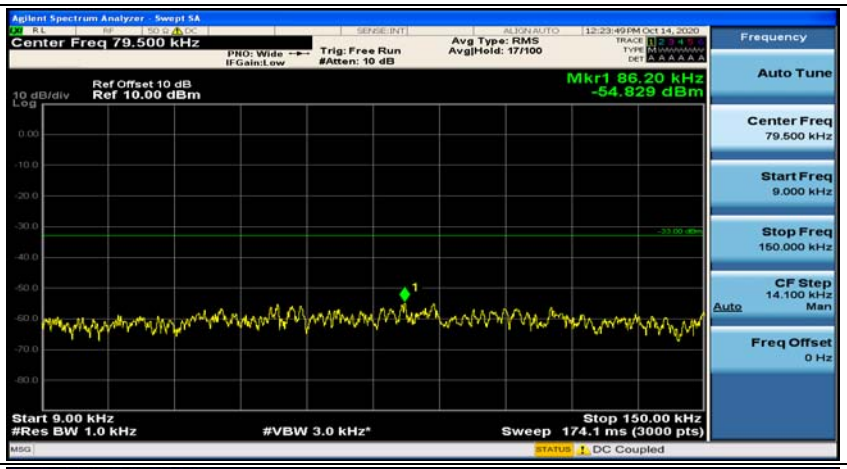
Agilent Spectrum Analyzer - Swept SA
Center Freq 13.015000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 40 dB
Avg Type: RMS
Avg|Hold: 11/100
12:22:12 PM Oct 14, 2020
Ref Offset 9.96 dB
10 dB/div Ref 30.00 dBm
Log
Mkr2 23.549 GHz
-29.025 dBm
Start 30 MHz
#Res BW 1.0 MHz
#VBW 3.0 MHz*
Stop 26.00 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

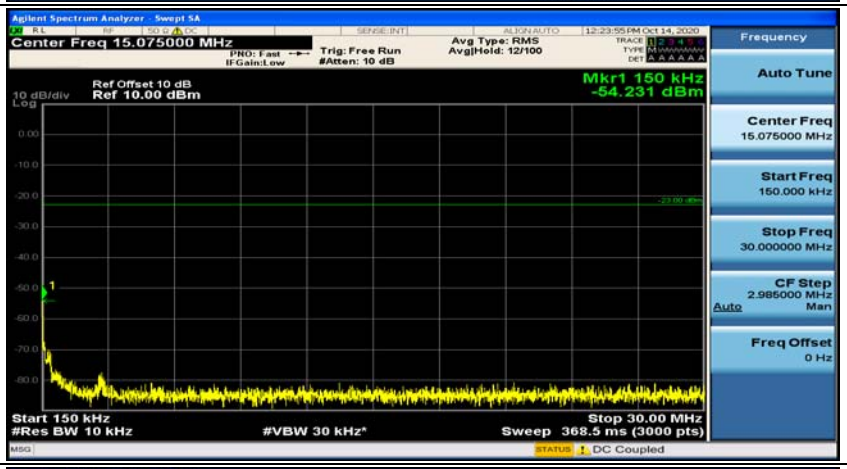
Channel Bandwidth: 10 MHz_HCH_QPSK_1RB#0



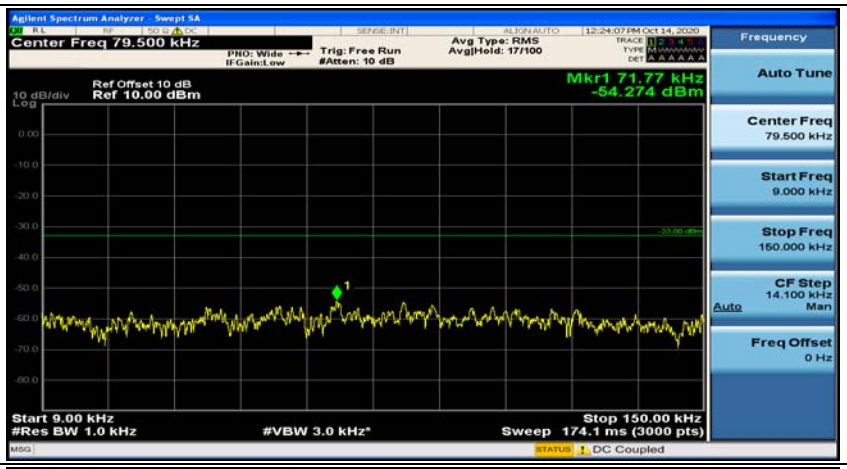



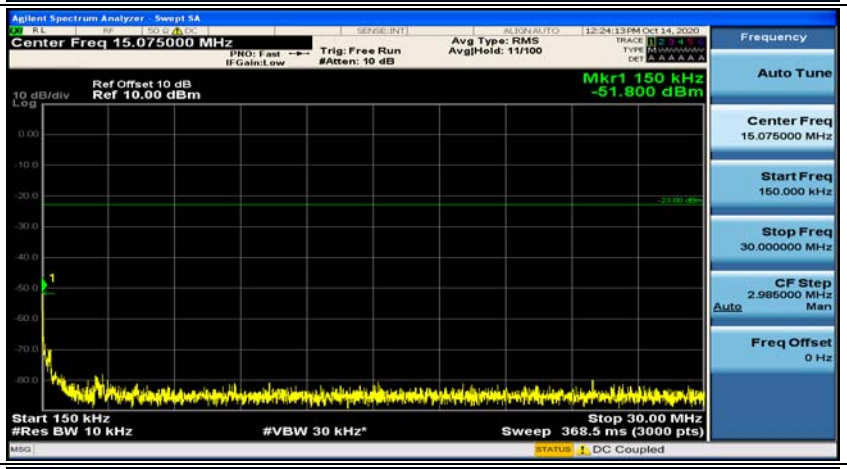
Channel Bandwidth: 10 MHz_HCH_QPSK_1RB#24



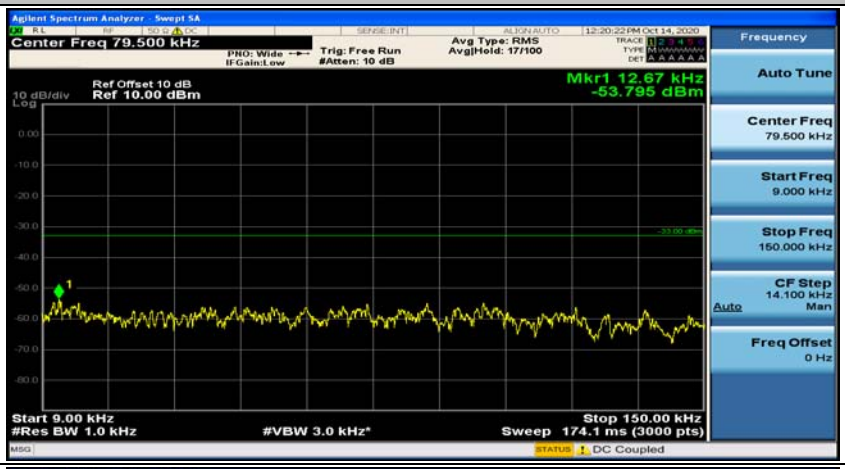
Channel Bandwidth: 10 MHz_HCH_QPSK_1RB#49

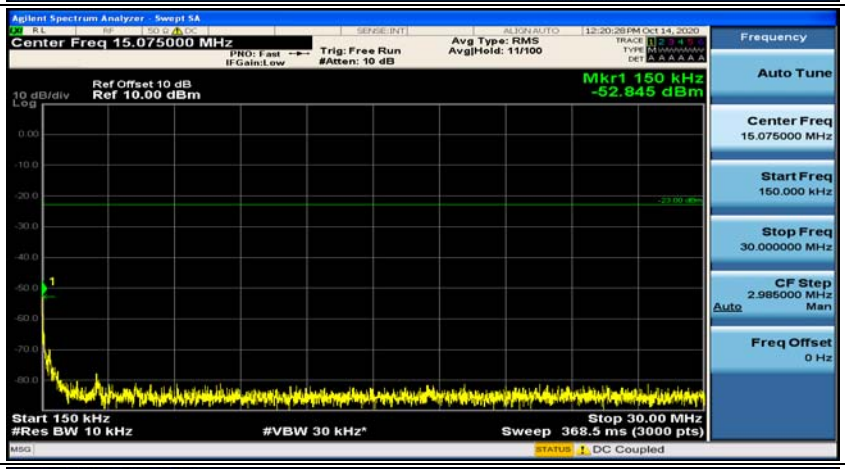

Agilent Spectrum Analyzer - Swept SA
Center Freq 79.500 kHz
PNO: Wide
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 17/100
12:24:07 PM Oct 14, 2020
Ref Offset 10 dB
10 dB/div Ref 10.00 dBm
Log
Mkr1 71.77 kHz
-54.274 dBm
Start 9.00 kHz
#Res BW 1.0 kHz
#VBW 3.0 kHz*
Stop 150.00 kHz
Sweep 174.1 ms (3000 pts)
DC Coupled
Frequency
Auto Tune
Center Freq 79.500 kHz
Start Freq 9.000 kHz
Stop Freq 150.000 kHz
CF Step 14.100 kHz
Auto Man
Freq Offset 0 Hz


Agilent Spectrum Analyzer - Swept SA
Center Freq 15.075000 MHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 11/100
12:24:13 PM Oct 14, 2020
Ref Offset 10 dB
10 dB/div Ref 10.00 dBm
Log
Mkr1 150 kHz
-51.800 dBm
Start 150 kHz
#Res BW 10 kHz
#VBW 30 kHz*
Stop 30.00 MHz
Sweep 368.5 ms (3000 pts)
DC Coupled
Frequency
Auto Tune
Center Freq 15.075000 MHz
Start Freq 150.000 kHz
Stop Freq 30.000000 MHz
CF Step 2.985000 MHz
Auto Man
Freq Offset 0 Hz

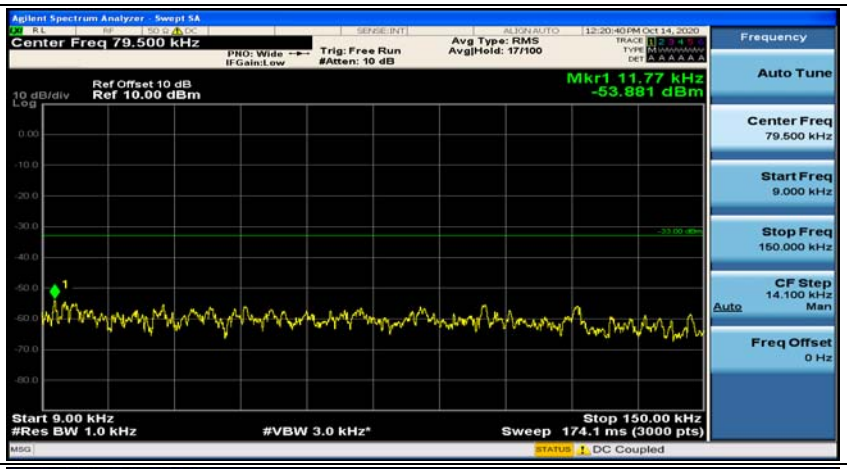
Agilent Spectrum Analyzer - Swept SA
Center Freq 13.015000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 40 dB
Avg Type: RMS
Avg|Hold: 11/100
12:24:19 PM Oct 14, 2020
Ref Offset 9.96 dB
10 dB/div Ref 30.00 dBm
Log
Mkr2 25.359 GHz
-28.541 dBm
Start 30 MHz
#Res BW 1.0 MHz
#VBW 3.0 MHz*
Stop 26.00 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

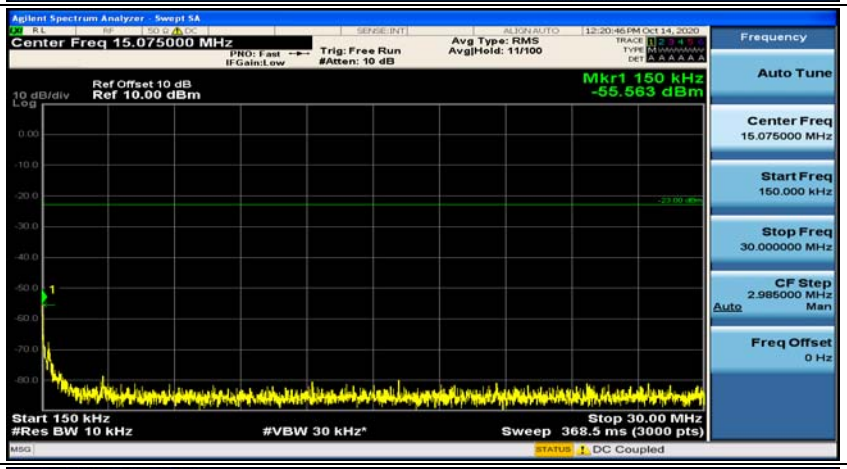
Channel Bandwidth: 10 MHz_LCH_16QAM_1RB#0



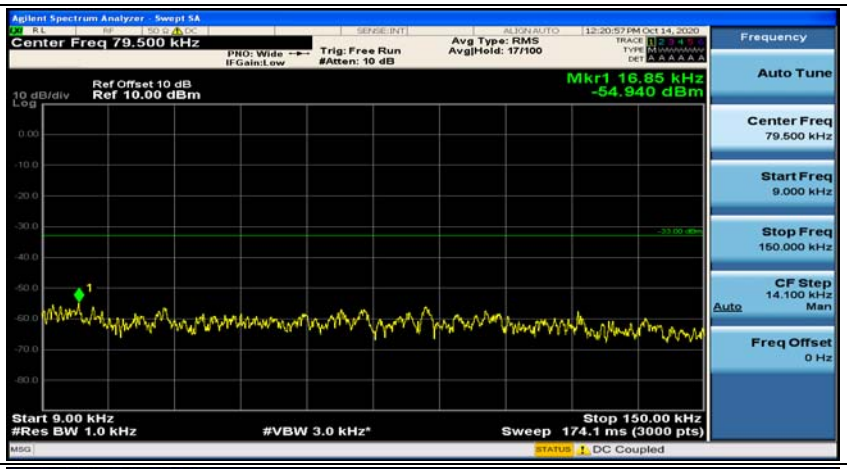



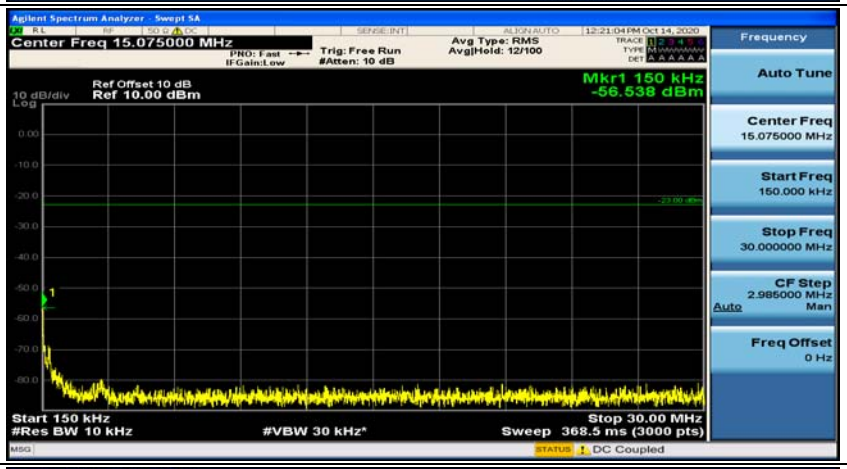
Channel Bandwidth: 10 MHz_LCH_16QAM_1RB#24



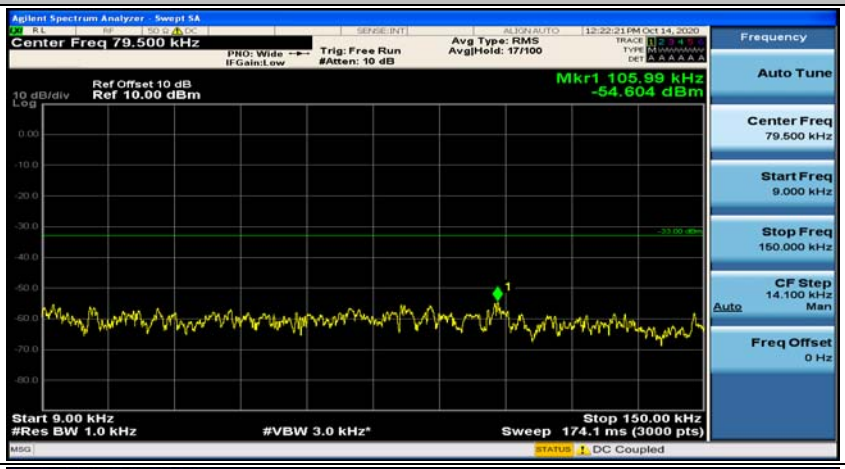
Channel Bandwidth: 10 MHz_LCH_16QAM_1RB#49

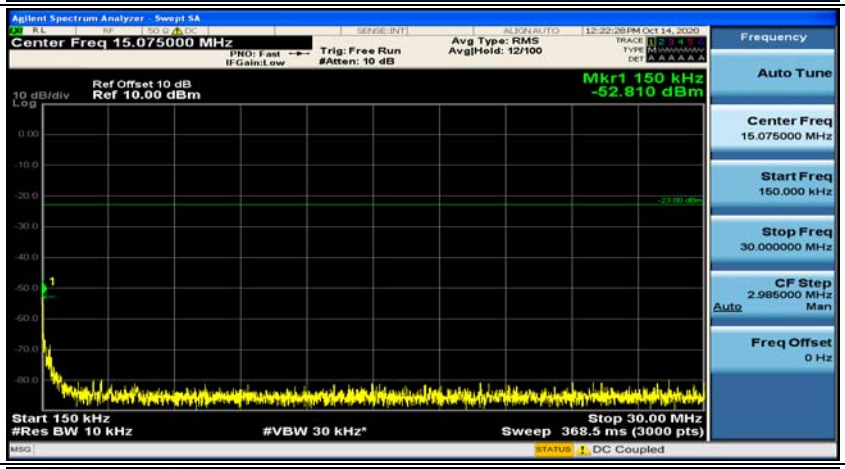

Agilent Spectrum Analyzer - Swept SA
Center Freq 79.500 kHz
PNO: Wide
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 17/100
12:20:57 PM Oct 14, 2020
Ref Offset 10 dB
10 dB/div Ref 10.00 dBm
Log
Mkr1 16.85 kHz
-54.940 dBm
Start 9.00 kHz
#Res BW 1.0 kHz
#VBW 3.0 kHz*
Stop 150.00 kHz
Sweep 174.1 ms (3000 pts)
DC Coupled
Frequency
Auto Tune
Center Freq
79.500 kHz
Start Freq
9.000 kHz
Stop Freq
150.000 kHz
CF Step
14.100 kHz
Auto
Man
Freq Offset
0 Hz


Agilent Spectrum Analyzer - Swept SA
Center Freq 15.075000 MHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 12/100
12:21:04 PM Oct 14, 2020
Ref Offset 10 dB
10 dB/div Ref 10.00 dBm
Log
Mkr1 150 kHz
-56.538 dBm
Start 150 kHz
#Res BW 10 kHz
#VBW 30 kHz*
Stop 30.00 MHz
Sweep 368.5 ms (3000 pts)
DC Coupled
Frequency
Auto Tune
Center Freq
15.075000 MHz
Start Freq
150.000 kHz
Stop Freq
30.000000 MHz
CF Step
2.985000 MHz
Auto
Man
Freq Offset
0 Hz

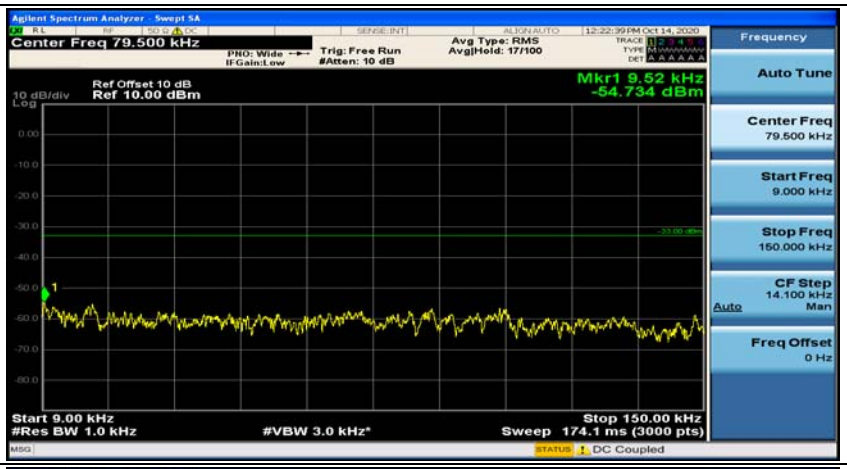
Agilent Spectrum Analyzer - Swept SA
Center Freq 13.015000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 40 dB
Avg Type: RMS
Avg|Hold: 11/100
12:21:10 PM Oct 14, 2020
Ref Offset 9.96 dB
10 dB/div Ref 30.00 dBm
Log
Mkr2 25.931 GHz
-28.812 dBm
Start 30 MHz
#Res BW 1.0 MHz
#VBW 3.0 MHz*
Stop 26.00 GHz
Sweep 64.98 ms (3000 pts)
Frequency
Auto Tune
Center Freq
13.015000000 GHz
Start Freq
30.000000 MHz
Stop Freq
26.000000000 GHz
CF Step
2.597000000 GHz
Auto
Man
Freq Offset
0 Hz

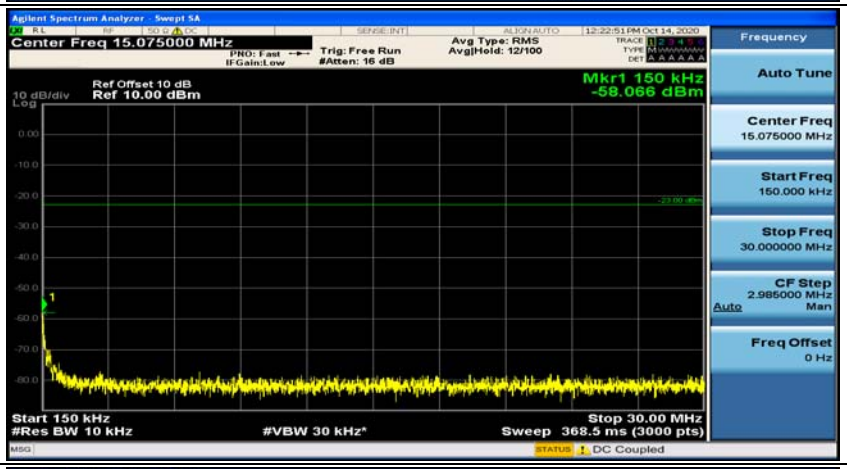
Channel Bandwidth: 10 MHz_MCH_16QAM_1RB#0



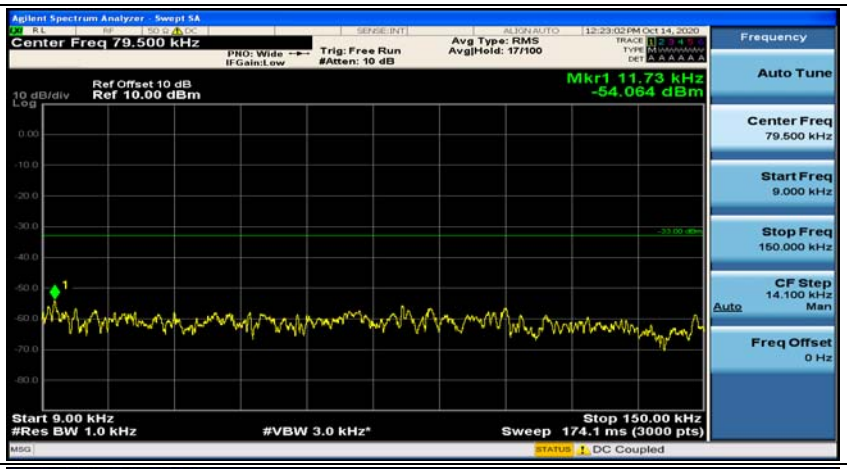



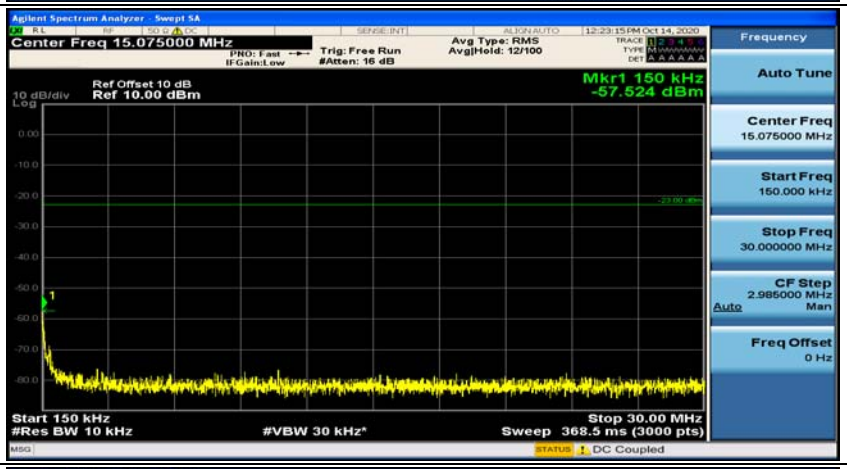
Channel Bandwidth: 10 MHz_MCH_16QAM_1RB#24



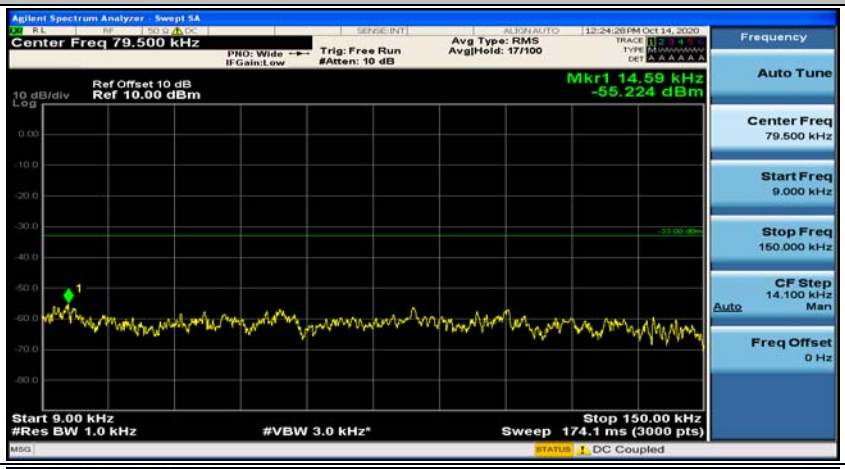
Channel Bandwidth: 10 MHz_MCH_16QAM_1RB#49

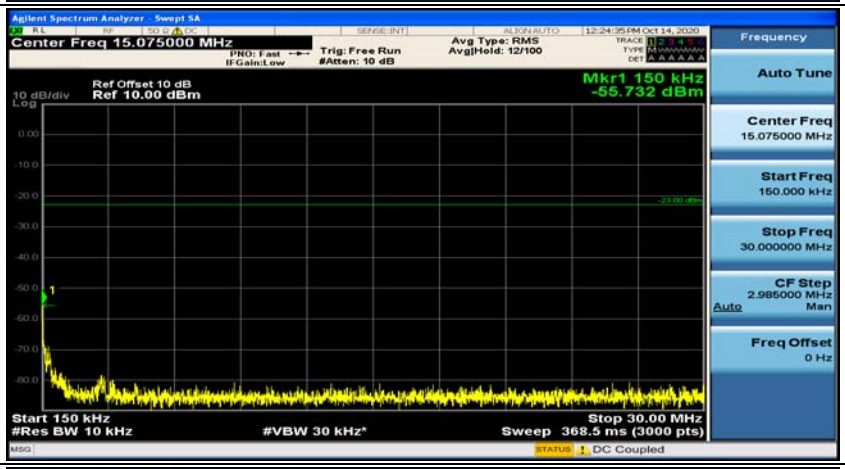

Agilent Spectrum Analyzer - Swept SA
Center Freq 79.500 kHz
PNO: Wide
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 17/100
12:23:02 PM Oct 14, 2020
Ref Offset 10 dB
10 dB/div Ref 10.00 dBm
Log
Mkr1 11.73 kHz
-54.064 dBm
Start 9.00 kHz
#Res BW 1.0 kHz
#VBW 3.0 kHz*
Stop 150.00 kHz
Sweep 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
12:23:15 PM Oct 14, 2020
Ref Offset 10 dB
10 dB/div Ref 10.00 dBm
Log
Mkr1 150 kHz
-57.524 dBm
Start 150 kHz
#Res BW 10 kHz
#VBW 30 kHz*
Stop 30.00 MHz
Sweep 368.5 ms (3000 pts)
DC Coupled
Frequency
Auto Tune
Center Freq 15.075000 MHz
Start Freq 150.000 kHz
Stop Freq 30.000000 MHz
CF Step 2.985000 MHz
Auto Man
Freq Offset 0 Hz

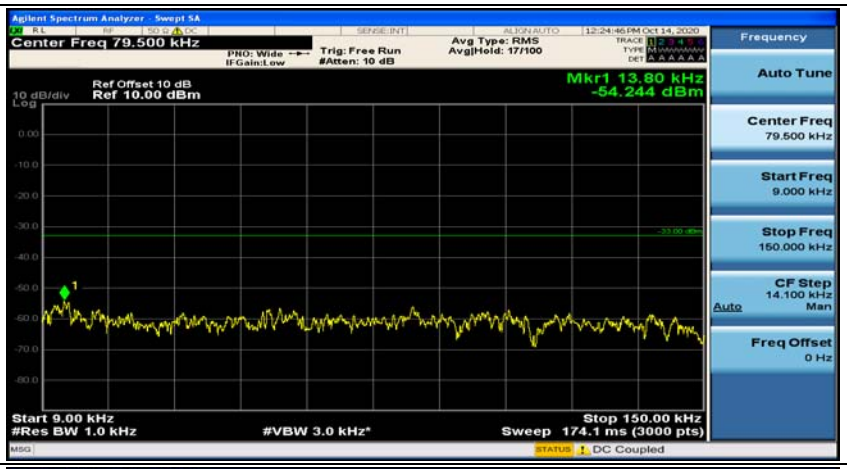
Agilent Spectrum Analyzer - Swept SA
Center Freq 13.015000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 40 dB
Avg Type: RMS
Avg|Hold: 11/100
12:23:20 PM Oct 14, 2020
Ref Offset 9.96 dB
10 dB/div Ref 30.00 dBm
Log
Mkr2 25.879 GHz
-29.407 dBm
Start 30 MHz
#Res BW 1.0 MHz
#VBW 3.0 MHz*
Stop 26.00 GHz
Sweep 64.98 ms (3000 pts)
Frequency
Auto Tune
Center Freq 13.015000000 GHz
Start Freq 30.000000 MHz
Stop Freq 26.000000000 GHz
CF Step 2.597000000 GHz
Auto Man
Freq Offset 0 Hz

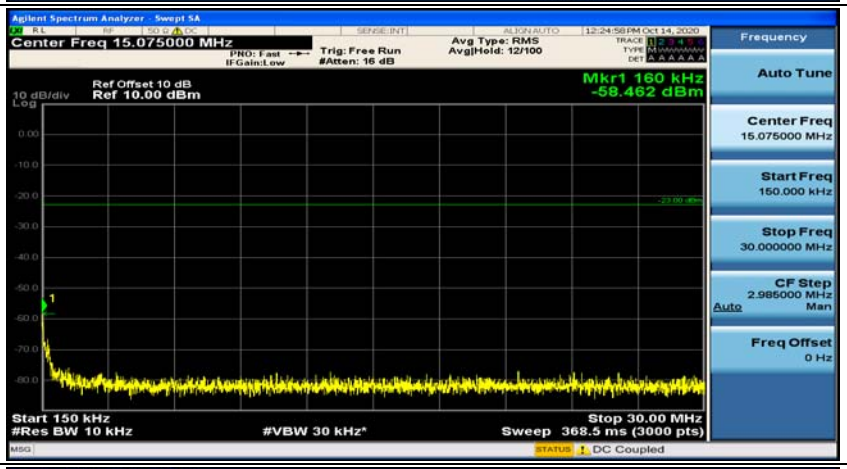
Channel Bandwidth: 10 MHz_HCH_16QAM_1RB#0



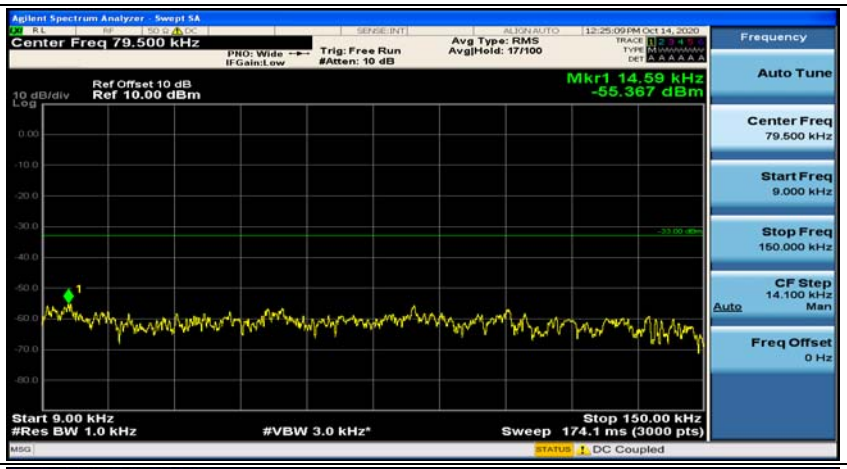



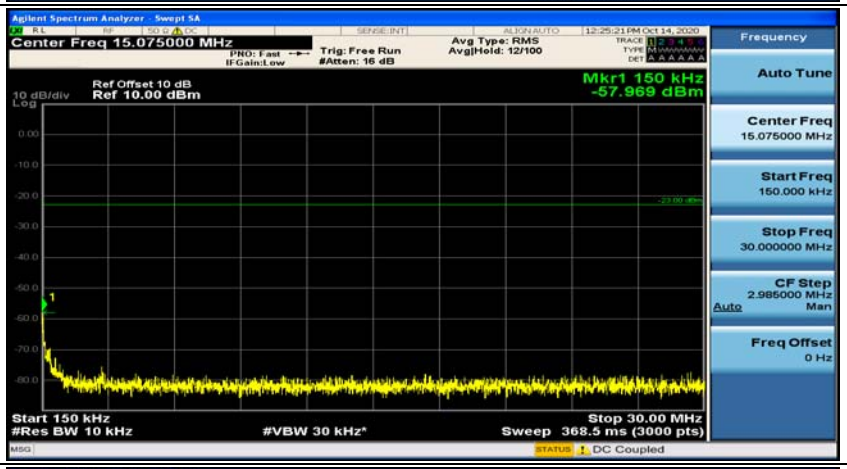
Channel Bandwidth: 10 MHz_HCH_16QAM_1RB#24



Channel Bandwidth: 10 MHz_HCH_16QAM_1RB#49


Agilent Spectrum Analyzer - Swept SA
Center Freq 79.500 kHz
PNO: Wide
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 17/100
12:25:09 PM Oct 14, 2020
Ref Offset 10 dB
10 dB/div Ref 10.00 dBm
Log
Mkr1 14.59 kHz
-55.367 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
12:25:21 PM Oct 14, 2020
Ref Offset 10 dB
10 dB/div Ref 10.00 dBm
Log
Mkr1 150 kHz
-57.969 dBm
Start 150 kHz
#Res BW 10 kHz
#VBW 30 kHz*
Stop 30.00 MHz
Sweep 368.5 ms (3000 pts)
DC Coupled
Frequency
Auto Tune
Center Freq 15.075000 MHz
Start Freq 150.000 kHz
Stop Freq 30.000000 MHz
CF Step 2.985000 MHz
Auto Man
Freq Offset 0 Hz

Agilent Spectrum Analyzer - Swept SA
Center Freq 13.015000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 40 dB
Avg Type: RMS
Avg|Hold: 11/100
12:25:27 PM Oct 14, 2020
Ref Offset 9.96 dB
10 dB/div Ref 30.00 dBm
Log
Mkr2 25.498 GHz
-28.746 dBm
Start 30 MHz
#Res BW 1.0 MHz
#VBW 3.0 MHz*
Stop 26.00 GHz
Sweep 64.98 ms (3000 pts)
Frequency
Auto Tune
Center Freq 13.015000000 GHz
Start Freq 30.000000 MHz
Stop Freq 26.000000000 GHz
CF Step 2.597000000 GHz
Auto Man
Freq Offset 0 Hz

# Appendix F: Frequency Stability

## Test Result

## Channel Bandwidth: 1.4 MHz

| Channel Bandwidth: 1.4 MHz | | | | | | | |
|---|---|---|---|---|---|---|---|
| Voltage | | | | | | | |
| Modulation | Channel | Voltage [Vdc] | Temperature (℃) | Deviation (Hz) | Deviation (ppm) | Limit (ppm) | Verdict |
| QPSK | LCH | VL | TN | 1.06 | 0.001515 | ± 2.5 | PASS |
| | | VN | TN | -0.02 | -0.000029 | ± 2.5 | PASS |
| | | VH | TN | -1.57 | -0.002244 | ± 2.5 | PASS |
| | MCH | VL | TN | 0.75 | 0.001060 | ± 2.5 | PASS |
| | | VN | TN | -1.17 | -0.001654 | ± 2.5 | PASS |
| | | VH | TN | -0.26 | -0.000367 | ± 2.5 | PASS |
| | HCH | VL | TN | -1.39 | -0.001943 | ± 2.5 | PASS |
| | | VN | TN | 1.43 | 0.001999 | ± 2.5 | PASS |
| | | VH | TN | 2.61 | 0.003649 | ± 2.5 | PASS |
| 16QAM | LCH | VL | TN | 1.88 | 0.002687 | ± 2.5 | PASS |
| | | VN | TN | 1.72 | 0.002458 | ± 2.5 | PASS |
| | | VH | TN | -1.43 | -0.002044 | ± 2.5 | PASS |
| | MCH | VL | TN | 4.47 | 0.006318 | ± 2.5 | PASS |
| | | VN | TN | 1.61 | 0.002276 | ± 2.5 | PASS |
| | | VH | TN | 2.88 | 0.004071 | ± 2.5 | PASS |
| | HCH | VL | TN | 0.12 | 0.000168 | ± 2.5 | PASS |
| | | VN | TN | 1.31 | 0.001831 | ± 2.5 | PASS |
| | | VH | TN | -0.54 | -0.000755 | ± 2.5 | PASS |
| Temperature | | | | | | | |
| Modulation | Channel | Voltage [Vdc] | Temperature (℃) | Deviation (Hz) | Deviation (ppm) | Limit (ppm) | Verdict |
| QPSK | LCH | VN | -30 | -1.78 | -0.002544 | ± 2.5 | PASS |
| | | VN | -20 | 3.79 | 0.005417 | ± 2.5 | PASS |
| | | VN | -10 | -1.52 | -0.002172 | ± 2.5 | PASS |
| | | VN | 0 | 2.62 | 0.003744 | ± 2.5 | PASS |
| | | VN | 10 | 0 | 0.000000 | ± 2.5 | PASS |
| | | VN | 20 | -1.95 | -0.002787 | ± 2.5 | PASS |
| | | VN | 30 | 2.2 | 0.003144 | ± 2.5 | PASS |
| | | VN | 40 | 4.09 | 0.005845 | ± 2.5 | PASS |
| | | VN | 50 | 2.57 | 0.003673 | ± 2.5 | PASS |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | MCH | VN | -30 | 2.71 | 0.003830 | ± 2.5 | PASS |
| | | VN | -20 | 1.05 | 0.001484 | ± 2.5 | PASS |
| | | VN | -10 | -0.21 | -0.000297 | ± 2.5 | PASS |
| | | VN | 0 | 1.25 | 0.001767 | ± 2.5 | PASS |
| | | VN | 10 | -0.04 | -0.000057 | ± 2.5 | PASS |
| | | VN | 20 | 3.75 | 0.005300 | ± 2.5 | PASS |
| | | VN | 30 | -1.1 | -0.001555 | ± 2.5 | PASS |
| | | VN | 40 | 4.2 | 0.005936 | ± 2.5 | PASS |
| | | VN | 50 | 4.39 | 0.006205 | ± 2.5 | PASS |
| | HCH | VN | -30 | 0.9 | 0.001258 | ± 2.5 | PASS |
| | | VN | -20 | 1.06 | 0.001482 | ± 2.5 | PASS |
| | | VN | -10 | -0.29 | -0.000405 | ± 2.5 | PASS |
| | | VN | 0 | -0.62 | -0.000867 | ± 2.5 | PASS |
| | | VN | 10 | -1.36 | -0.001901 | ± 2.5 | PASS |
| | | VN | 20 | 2.51 | 0.003509 | ± 2.5 | PASS |
| | | VN | 30 | -0.66 | -0.000923 | ± 2.5 | PASS |
| | | VN | 40 | 1.69 | 0.002363 | ± 2.5 | PASS |
| | | VN | 50 | 1.27 | 0.001775 | ± 2.5 | PASS |
| 16QAM | LCH | VN | -30 | 4.44 | 0.006346 | ± 2.5 | PASS |
| | | VN | -20 | 4.13 | 0.005903 | ± 2.5 | PASS |
| | | VN | -10 | 4.04 | 0.005774 | ± 2.5 | PASS |
| | | VN | 0 | 0.15 | 0.000214 | ± 2.5 | PASS |
| | | VN | 10 | 4.96 | 0.007089 | ± 2.5 | PASS |
| | | VN | 20 | 4.08 | 0.005831 | ± 2.5 | PASS |
| | | VN | 30 | 0.9 | 0.001286 | ± 2.5 | PASS |
| | | VN | 40 | -1.82 | -0.002601 | ± 2.5 | PASS |
| | | VN | 50 | 4.7 | 0.006717 | ± 2.5 | PASS |
| | MCH | VN | -30 | 3.25 | 0.004594 | ± 2.5 | PASS |
| | | VN | -20 | 0.64 | 0.000905 | ± 2.5 | PASS |
| | | VN | -10 | 1.29 | 0.001823 | ± 2.5 | PASS |
| | | VN | 0 | 1.09 | 0.001541 | ± 2.5 | PASS |
| | | VN | 10 | 2.1 | 0.002968 | ± 2.5 | PASS |
| | | VN | 20 | 2.85 | 0.004028 | ± 2.5 | PASS |
| | | VN | 30 | 0.38 | 0.000537 | ± 2.5 | PASS |
| | | VN | 40 | 1.39 | 0.001965 | ± 2.5 | PASS |
| | | VN | 50 | 1.74 | 0.002459 | ± 2.5 | PASS |
| | HCH | VN | -30 | 3.09 | 0.004320 | ± 2.5 | PASS |
| | | VN | -20 | 2.8 | 0.003914 | ± 2.5 | PASS |
| | | VN | -10 | -0.39 | -0.000545 | ± 2.5 | PASS |
| | | VN | 0 | 3.75 | 0.005243 | ± 2.5 | PASS |
| | | VN | 10 | 4.44 | 0.006207 | ± 2.5 | PASS |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | | VN | 20 | 3.12 | 0.004362 | ± 2.5 | PASS |
| | | VN | 30 | 1.74 | 0.002433 | ± 2.5 | PASS |
| | | VN | 40 | 2.47 | 0.003453 | ± 2.5 | PASS |
| | | VN | 50 | 2.58 | 0.003607 | ± 2.5 | PASS |

## Channel Bandwidth: 3 MHz

| Channel Bandwidth: 3 MHz+ | | | | | | | |
|---|---|---|---|---|---|---|---|
| Voltage | | | | | | | |
| Modulation | Channel | Voltage [Vdc] | Temperature (℃) | Deviation (Hz) | Deviation (ppm) | Limit (ppm) | Verdict |
| QPSK | LCH | VL | TN | 1.43 | 0.002041 | ± 2.5 | PASS |
| | | VN | TN | -1.83 | -0.002612 | ± 2.5 | PASS |
| | | VH | TN | -1.16 | -0.001656 | ± 2.5 | PASS |
| | MCH | VL | TN | 3.85 | 0.005442 | ± 2.5 | PASS |
| | | VN | TN | 3.51 | 0.004961 | ± 2.5 | PASS |
| | | VH | TN | 2.9 | 0.004099 | ± 2.5 | PASS |
| | HCH | VL | TN | 1.53 | 0.002141 | ± 2.5 | PASS |
| | | VN | TN | -0.5 | -0.000700 | ± 2.5 | PASS |
| | | VH | TN | 3.3 | 0.004619 | ± 2.5 | PASS |
| 16QAM | LCH | VL | TN | 2.59 | 0.003697 | ± 2.5 | PASS |
| | | VN | TN | -1.71 | -0.002441 | ± 2.5 | PASS |
| | | VH | TN | -1.23 | -0.001756 | ± 2.5 | PASS |
| | MCH | VL | TN | 0.78 | 0.001102 | ± 2.5 | PASS |
| | | VN | TN | -1.31 | -0.001852 | ± 2.5 | PASS |
| | | VH | TN | 3.26 | 0.004608 | ± 2.5 | PASS |
| | HCH | VL | TN | 3.87 | 0.005416 | ± 2.5 | PASS |
| | | VN | TN | -1.91 | -0.002673 | ± 2.5 | PASS |
| | | VH | TN | 3.35 | 0.004689 | ± 2.5 | PASS |
| Temperature | | | | | | | |
| Modulation | Channel | Voltage [Vdc] | Temperature (℃) | Deviation (Hz) | Deviation (ppm) | Limit (ppm) | Verdict |
| QPSK | LCH | VN | -30 | -0.87 | -0.001242 | ± 2.5 | PASS |
| | | VN | -20 | -1.17 | -0.001670 | ± 2.5 | PASS |
| | | VN | -10 | -0.19 | -0.000271 | ± 2.5 | PASS |
| | | VN | 0 | 4.67 | 0.006667 | ± 2.5 | PASS |
| | | VN | 10 | 1.62 | 0.002313 | ± 2.5 | PASS |
| | | VN | 20 | -0.34 | -0.000485 | ± 2.5 | PASS |
| | | VN | 30 | -0.57 | -0.000814 | ± 2.5 | PASS |
| | | VN | 40 | 1.92 | 0.002741 | ± 2.5 | PASS |
| | | VN | 50 | 4.58 | 0.006538 | ± 2.5 | PASS |
| | MCH | VN | -30 | 0.7 | 0.000989 | ± 2.5 | PASS |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | | VN | -20 | 2.64 | 0.003731 | ± 2.5 | PASS |
| | | VN | -10 | 4.64 | 0.006558 | ± 2.5 | PASS |
| | | VN | 0 | -1.45 | -0.002049 | ± 2.5 | PASS |
| | | VN | 10 | 3.9 | 0.005512 | ± 2.5 | PASS |
| | | VN | 20 | -0.8 | -0.001131 | ± 2.5 | PASS |
| | | VN | 30 | 3.23 | 0.004565 | ± 2.5 | PASS |
| | | VN | 40 | -0.91 | -0.001286 | ± 2.5 | PASS |
| | | VN | 50 | 0.39 | 0.000551 | ± 2.5 | PASS |
| | HCH | VN | -30 | 2.04 | 0.002855 | ± 2.5 | PASS |
| | | VN | -20 | 4.64 | 0.006494 | ± 2.5 | PASS |
| | | VN | -10 | 0.38 | 0.000532 | ± 2.5 | PASS |
| | | VN | 0 | 1.07 | 0.001498 | ± 2.5 | PASS |
| | | VN | 10 | 2.58 | 0.003611 | ± 2.5 | PASS |
| | | VN | 20 | 0.53 | 0.000742 | ± 2.5 | PASS |
| | | VN | 30 | 3.54 | 0.004955 | ± 2.5 | PASS |
| | | VN | 40 | -2 | -0.002799 | ± 2.5 | PASS |
| | | VN | 50 | 4.78 | 0.006690 | ± 2.5 | PASS |
| 16QAM | LCH | VN | -30 | -0.15 | -0.000214 | ± 2.5 | PASS |
| | | VN | -20 | 0.83 | 0.001185 | ± 2.5 | PASS |
| | | VN | -10 | 0.42 | 0.000600 | ± 2.5 | PASS |
| | | VN | 0 | 4.01 | 0.005724 | ± 2.5 | PASS |
| | | VN | 10 | -0.43 | -0.000614 | ± 2.5 | PASS |
| | | VN | 20 | 0.49 | 0.000700 | ± 2.5 | PASS |
| | | VN | 30 | 3.49 | 0.004982 | ± 2.5 | PASS |
| | | VN | 40 | -1.29 | -0.001842 | ± 2.5 | PASS |
| | | VN | 50 | 3.42 | 0.004882 | ± 2.5 | PASS |
| | MCH | VN | -30 | 4.85 | 0.006855 | ± 2.5 | PASS |
| | | VN | -20 | 2.4 | 0.003392 | ± 2.5 | PASS |
| | | VN | -10 | -0.09 | -0.000127 | ± 2.5 | PASS |
| | | VN | 0 | 2.9 | 0.004099 | ± 2.5 | PASS |
| | | VN | 10 | -1.86 | -0.002629 | ± 2.5 | PASS |
| | | VN | 20 | 0.62 | 0.000876 | ± 2.5 | PASS |
| | | VN | 30 | 4.1 | 0.005795 | ± 2.5 | PASS |
| | | VN | 40 | 0.55 | 0.000777 | ± 2.5 | PASS |
| | | VN | 50 | 1.95 | 0.002756 | ± 2.5 | PASS |
| | HCH | VN | -30 | 4.36 | 0.006102 | ± 2.5 | PASS |
| | | VN | -20 | -0.46 | -0.000644 | ± 2.5 | PASS |
| | | VN | -10 | 2.98 | 0.004171 | ± 2.5 | PASS |
| | | VN | 0 | 0.07 | 0.000098 | ± 2.5 | PASS |
| | | VN | 10 | 4 | 0.005598 | ± 2.5 | PASS |
| | | VN | 20 | 1.04 | 0.001456 | ± 2.5 | PASS |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | | VN | 30 | 2.75 | 0.003849 | ± 2.5 | PASS |
| | | VN | 40 | -1.66 | -0.002323 | ± 2.5 | PASS |
| | | VN | 50 | -0.62 | -0.000868 | ± 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 | 0.1 | 0.000143 | ± 2.5 | PASS |
| | | VN | TN | 0.42 | 0.000599 | ± 2.5 | PASS |
| | | VH | TN | 0.55 | 0.000784 | ± 2.5 | PASS |
| | MCH | VL | TN | 1 | 0.001413 | ± 2.5 | PASS |
| | | VN | TN | 2.99 | 0.004226 | ± 2.5 | PASS |
| | | VH | TN | 4.96 | 0.007011 | ± 2.5 | PASS |
| | HCH | VL | TN | -0.25 | -0.000350 | ± 2.5 | PASS |
| | | VN | TN | 0.55 | 0.000771 | ± 2.5 | PASS |
| | | VH | TN | 2.37 | 0.003322 | ± 2.5 | PASS |
| 16QAM | LCH | VL | TN | 2.43 | 0.003464 | ± 2.5 | PASS |
| | | VN | TN | -0.93 | -0.001326 | ± 2.5 | PASS |
| | | VH | TN | -1.11 | -0.001582 | ± 2.5 | PASS |
| | MCH | VL | TN | 4.33 | 0.006120 | ± 2.5 | PASS |
| | | VN | TN | 1.13 | 0.001597 | ± 2.5 | PASS |
| | | VH | TN | -1.46 | -0.002064 | ± 2.5 | PASS |
| | HCH | VL | TN | 0.21 | 0.000294 | ± 2.5 | PASS |
| | | VN | TN | 3.42 | 0.004793 | ± 2.5 | PASS |
| | | VH | TN | 4.27 | 0.005985 | ± 2.5 | PASS |
| Temperature | | | | | | | |
| Modulation | Channel | Voltage [Vdc] | Temperature (℃) | Deviation (Hz) | Deviation (ppm) | Limit (ppm) | Verdict |
| QPSK | LCH | VN | -30 | 1.4 | 0.001996 | ± 2.5 | PASS |
| | | VN | -20 | -0.93 | -0.001326 | ± 2.5 | PASS |
| | | VN | -10 | -0.15 | -0.000214 | ± 2.5 | PASS |
| | | VN | 0 | -0.43 | -0.000613 | ± 2.5 | PASS |
| | | VN | 10 | -1.5 | -0.002138 | ± 2.5 | PASS |
| | | VN | 20 | 2.81 | 0.004006 | ± 2.5 | PASS |
| | | VN | 30 | -0.97 | -0.001383 | ± 2.5 | PASS |
| | | VN | 40 | 2.03 | 0.002894 | ± 2.5 | PASS |
| | | VN | 50 | 0.86 | 0.001226 | ± 2.5 | PASS |
| | MCH | VN | -30 | 0.03 | 0.000042 | ± 2.5 | PASS |
| | | VN | -20 | 2.12 | 0.002996 | ± 2.5 | PASS |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | | VN | -10 | 4.74 | 0.006700 | ± 2.5 | PASS |
| | | VN | 0 | 3.1 | 0.004382 | ± 2.5 | PASS |
| | | VN | 10 | 4.74 | 0.006700 | ± 2.5 | PASS |
| | | VN | 20 | 2.93 | 0.004141 | ± 2.5 | PASS |
| | | VN | 30 | -1.09 | -0.001541 | ± 2.5 | PASS |
| | | VN | 40 | 4.49 | 0.006346 | ± 2.5 | PASS |
| | | VN | 50 | 3.49 | 0.004933 | ± 2.5 | PASS |
| | HCH | VN | -30 | 4.79 | 0.006713 | ± 2.5 | PASS |
| | | VN | -20 | -1.74 | -0.002439 | ± 2.5 | PASS |
| | | VN | -10 | 1.84 | 0.002579 | ± 2.5 | PASS |
| | | VN | 0 | 0.53 | 0.000743 | ± 2.5 | PASS |
| | | VN | 10 | 0.71 | 0.000995 | ± 2.5 | PASS |
| | | VN | 20 | -1.67 | -0.002341 | ± 2.5 | PASS |
| | | VN | 30 | 4.94 | 0.006924 | ± 2.5 | PASS |
| | | VN | 40 | 0.59 | 0.000827 | ± 2.5 | PASS |
| | | VN | 50 | -1.48 | -0.002074 | ± 2.5 | PASS |
| 16QAM | LCH | VN | -30 | 4.88 | 0.006957 | ± 2.5 | PASS |
| | | VN | -20 | -0.9 | -0.001283 | ± 2.5 | PASS |
| | | VN | -10 | 4.74 | 0.006757 | ± 2.5 | PASS |
| | | VN | 0 | -1.07 | -0.001525 | ± 2.5 | PASS |
| | | VN | 10 | -0.17 | -0.000242 | ± 2.5 | PASS |
| | | VN | 20 | 3.5 | 0.004989 | ± 2.5 | PASS |
| | | VN | 30 | -1.71 | -0.002438 | ± 2.5 | PASS |
| | | VN | 40 | -1.44 | -0.002053 | ± 2.5 | PASS |
| | | VN | 50 | -0.43 | -0.000613 | ± 2.5 | PASS |
| | MCH | VN | -30 | -0.2 | -0.000283 | ± 2.5 | PASS |
| | | VN | -20 | 1.42 | 0.002007 | ± 2.5 | PASS |
| | | VN | -10 | -1.73 | -0.002445 | ± 2.5 | PASS |
| | | VN | 0 | 3.77 | 0.005329 | ± 2.5 | PASS |
| | | VN | 10 | -0.56 | -0.000792 | ± 2.5 | PASS |
| | | VN | 20 | 1.45 | 0.002049 | ± 2.5 | PASS |
| | | VN | 30 | 3.85 | 0.005442 | ± 2.5 | PASS |
| | | VN | 40 | 2.81 | 0.003972 | ± 2.5 | PASS |
| | | VN | 50 | 2.99 | 0.004226 | ± 2.5 | PASS |
| | HCH | VN | -30 | 3.03 | 0.004247 | ± 2.5 | PASS |
| | | VN | -20 | 0.48 | 0.000673 | ± 2.5 | PASS |
| | | VN | -10 | -1.2 | -0.001682 | ± 2.5 | PASS |
| | | VN | 0 | 1.75 | 0.002453 | ± 2.5 | PASS |
| | | VN | 10 | 4.71 | 0.006601 | ± 2.5 | PASS |
| | | VN | 20 | 1.12 | 0.001570 | ± 2.5 | PASS |
| | | VN | 30 | 0.99 | 0.001388 | ± 2.5 | PASS |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | | VN | 40 | -0.25 | -0.000350 | ± 2.5 | PASS |
| | | VN | 50 | -0.83 | -0.001163 | ± 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 | 2.32 | 0.003295 | ± 2.5 | PASS |
| | | VN | TN | 3.82 | 0.005426 | ± 2.5 | PASS |
| | | VH | TN | -1.5 | -0.002131 | ± 2.5 | PASS |
| | MCH | VL | TN | 3.23 | 0.004565 | ± 2.5 | PASS |
| | | VN | TN | 2.84 | 0.004014 | ± 2.5 | PASS |
| | | VH | TN | 3.96 | 0.005597 | ± 2.5 | PASS |
| | HCH | VL | TN | 1.51 | 0.002124 | ± 2.5 | PASS |
| | | VN | TN | 1.58 | 0.002222 | ± 2.5 | PASS |
| | | VH | TN | 3.48 | 0.004895 | ± 2.5 | PASS |
| 16QAM | LCH | VL | TN | 2 | 0.002841 | ± 2.5 | PASS |
| | | VN | TN | 3.67 | 0.005213 | ± 2.5 | PASS |
| | | VH | TN | 0.89 | 0.001264 | ± 2.5 | PASS |
| | MCH | VL | TN | 4.37 | 0.006177 | ± 2.5 | PASS |
| | | VN | TN | 0.58 | 0.000820 | ± 2.5 | PASS |
| | | VH | TN | 2.53 | 0.003576 | ± 2.5 | PASS |
| | HCH | VL | TN | 2.33 | 0.003277 | ± 2.5 | PASS |
| | | VN | TN | 3.47 | 0.004880 | ± 2.5 | PASS |
| | | VH | TN | 2.11 | 0.002968 | ± 2.5 | PASS |
| Temperature | | | | | | | |
| Modulation | Channel | Voltage [Vdc] | Temperature (℃) | Deviation (Hz) | Deviation (ppm) | Limit (ppm) | Verdict |
| QPSK | LCH | VN | -30 | 4.57 | 0.006491 | ± 2.5 | PASS |
| | | VN | -20 | 2.42 | 0.003438 | ± 2.5 | PASS |
| | | VN | -10 | 2.14 | 0.003040 | ± 2.5 | PASS |
| | | VN | 0 | 2.26 | 0.003210 | ± 2.5 | PASS |
| | | VN | 10 | 2.33 | 0.003310 | ± 2.5 | PASS |
| | | VN | 20 | 2.34 | 0.003324 | ± 2.5 | PASS |
| | | VN | 30 | 1.71 | 0.002429 | ± 2.5 | PASS |
| | | VN | 40 | -0.94 | -0.001335 | ± 2.5 | PASS |
| | | VN | 50 | 0.85 | 0.001207 | ± 2.5 | PASS |
| | MCH | VN | -30 | 0.95 | 0.001343 | ± 2.5 | PASS |
| | | VN | -20 | 0.03 | 0.000042 | ± 2.5 | PASS |
| | | VN | -10 | 1.08 | 0.001527 | ± 2.5 | PASS |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | | VN | 0 | -1.88 | -0.002657 | ± 2.5 | PASS |
| | | VN | 10 | 2.81 | 0.003972 | ± 2.5 | PASS |
| | | VN | 20 | -1.56 | -0.002205 | ± 2.5 | PASS |
| | | VN | 30 | 4.97 | 0.007025 | ± 2.5 | PASS |
| | | VN | 40 | -0.67 | -0.000947 | ± 2.5 | PASS |
| | | VN | 50 | 3.52 | 0.004975 | ± 2.5 | PASS |
| | HCH | VN | -30 | 4.05 | 0.005696 | ± 2.5 | PASS |
| | | VN | -20 | 0.88 | 0.001238 | ± 2.5 | PASS |
| | | VN | -10 | -1.83 | -0.002574 | ± 2.5 | PASS |
| | | VN | 0 | -1.15 | -0.001617 | ± 2.5 | PASS |
| | | VN | 10 | 2.33 | 0.003277 | ± 2.5 | PASS |
| | | VN | 20 | 3.26 | 0.004585 | ± 2.5 | PASS |
| | | VN | 30 | -1.3 | -0.001828 | ± 2.5 | PASS |
| | | VN | 40 | 1.11 | 0.001561 | ± 2.5 | PASS |
| | | VN | 50 | -1.98 | -0.002785 | ± 2.5 | PASS |
| 16QAM | LCH | VN | -30 | -1.44 | -0.002045 | ± 2.5 | PASS |
| | | VN | -20 | -1.71 | -0.002429 | ± 2.5 | PASS |
| | | VN | -10 | 2.05 | 0.002912 | ± 2.5 | PASS |
| | | VN | 0 | -1.44 | -0.002045 | ± 2.5 | PASS |
| | | VN | 10 | -1.62 | -0.002301 | ± 2.5 | PASS |
| | | VN | 20 | 4.27 | 0.006065 | ± 2.5 | PASS |
| | | VN | 30 | 2.12 | 0.003011 | ± 2.5 | PASS |
| | | VN | 40 | 1.18 | 0.001676 | ± 2.5 | PASS |
| | | VN | 50 | -0.9 | -0.001278 | ± 2.5 | PASS |
| | MCH | VN | -30 | 2.02 | 0.002855 | ± 2.5 | PASS |
| | | VN | -20 | 0.35 | 0.000495 | ± 2.5 | PASS |
| | | VN | -10 | 2.34 | 0.003307 | ± 2.5 | PASS |
| | | VN | 0 | -1.81 | -0.002558 | ± 2.5 | PASS |
| | | VN | 10 | -1.27 | -0.001795 | ± 2.5 | PASS |
| | | VN | 20 | 1.89 | 0.002671 | ± 2.5 | PASS |
| | | VN | 30 | 0.04 | 0.000057 | ± 2.5 | PASS |
| | | VN | 40 | 2.26 | 0.003194 | ± 2.5 | PASS |
| | | VN | 50 | 0.54 | 0.000763 | ± 2.5 | PASS |
| | HCH | VN | -30 | 1.91 | 0.002686 | ± 2.5 | PASS |
| | | VN | -20 | 3.75 | 0.005274 | ± 2.5 | PASS |
| | | VN | -10 | -0.68 | -0.000956 | ± 2.5 | PASS |
| | | VN | 0 | -0.92 | -0.001294 | ± 2.5 | PASS |
| | | VN | 10 | -1.87 | -0.002630 | ± 2.5 | PASS |
| | | VN | 20 | 3.51 | 0.004937 | ± 2.5 | PASS |
| | | VN | 30 | 1.22 | 0.001716 | ± 2.5 | PASS |
| | | VN | 40 | 2.98 | 0.004191 | ± 2.5 | PASS |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | | VN | 50 | -1.79 | -0.002518 | ± 2.5 | PASS |