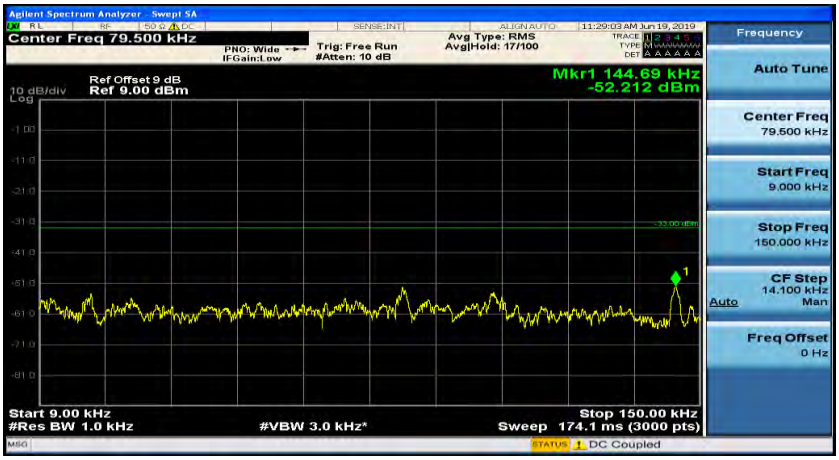
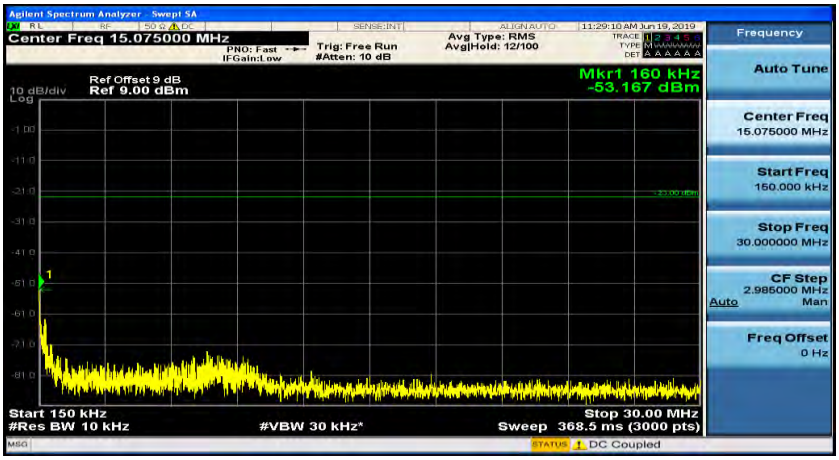
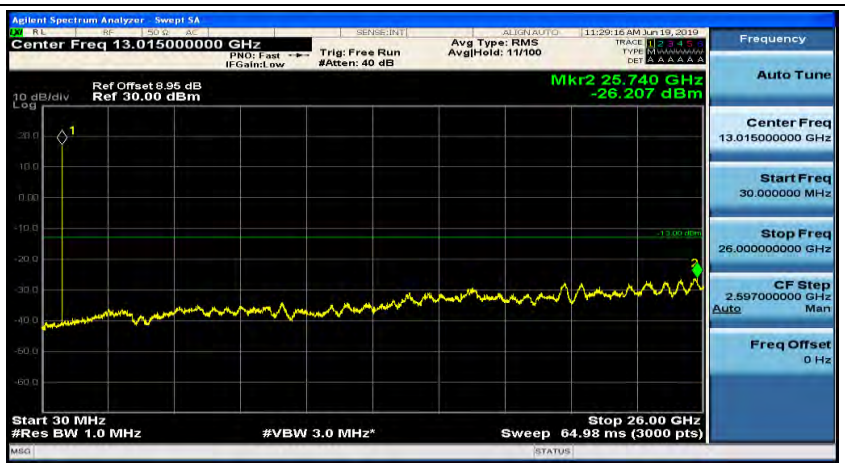
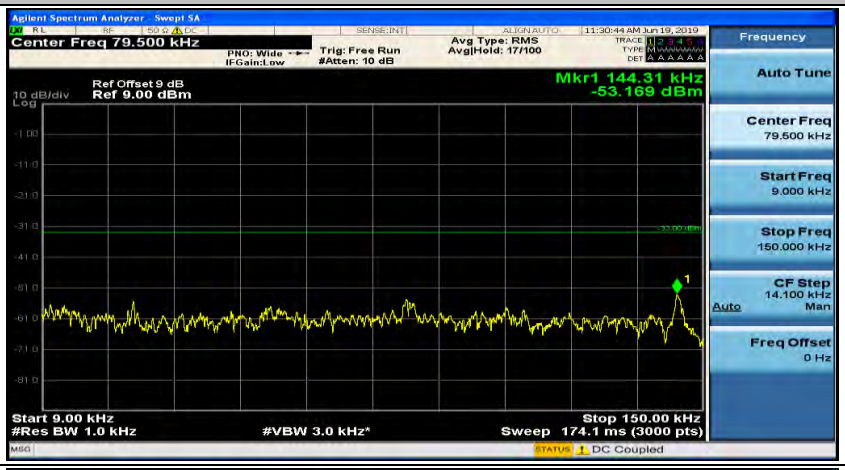
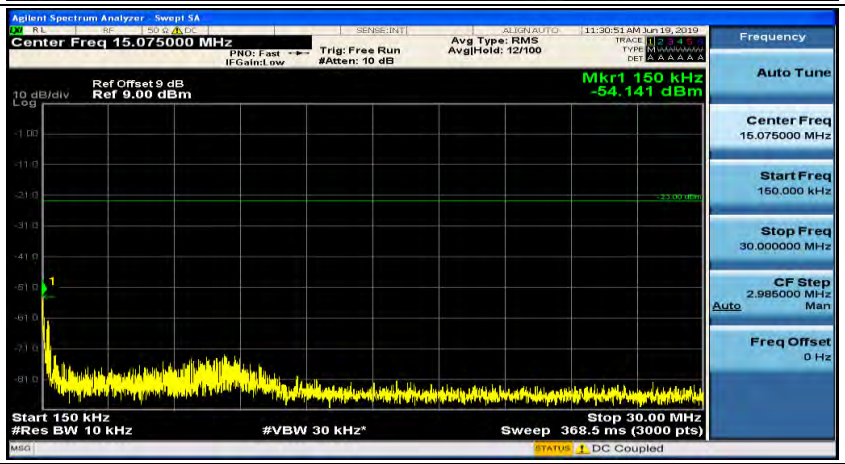

Agilent Spectrum Analyzer - Swept SA
Center Freq 79.500 kHz
PNO: Wide
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 17/100
11:29:03 AM Jun 19, 2019
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Mkr1 144.69 kHz
-52.212 dBm
Start 9.00 kHz
#Res BW 1.0 kHz
#VBW 3.0 kHz*
Stop 150.00 kHz
Sweep 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

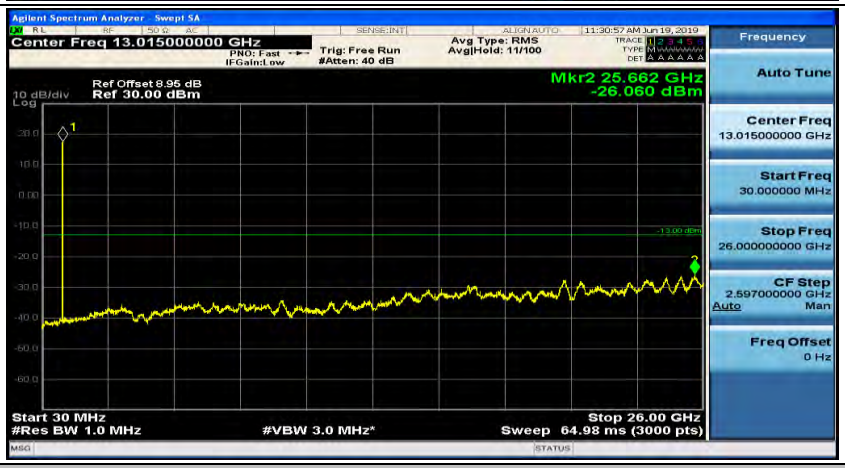

Agilent Spectrum Analyzer - Swept SA
Center Freq 15.075000 MHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 12/100
11:29:10 AM Jun 19, 2019
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Mkr1 160 kHz
-53.167 dBm
Start 150 kHz
#Res BW 10 kHz
#VBW 30 kHz*
Stop 30.00 MHz
Sweep 368.5 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
11:29:16 AM Jun 19, 2019
Ref Offset 8.95 dB
10 dB/div
Log
Ref 30.00 dBm
Mkr2 25.740 GHz
-26.207 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

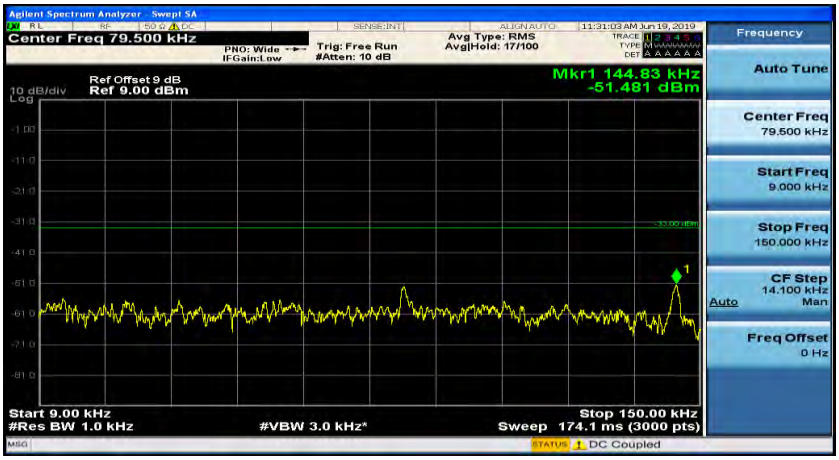
(Channel Bandwidth: 3 MHz)_HCH_16QAM_1RB#0

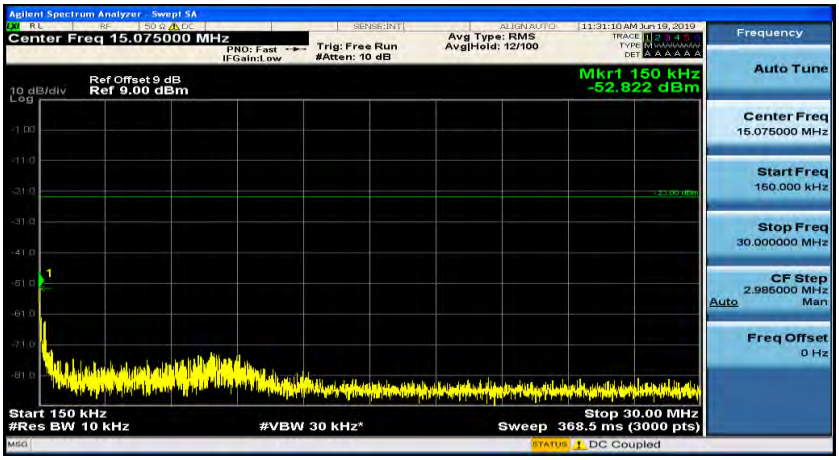


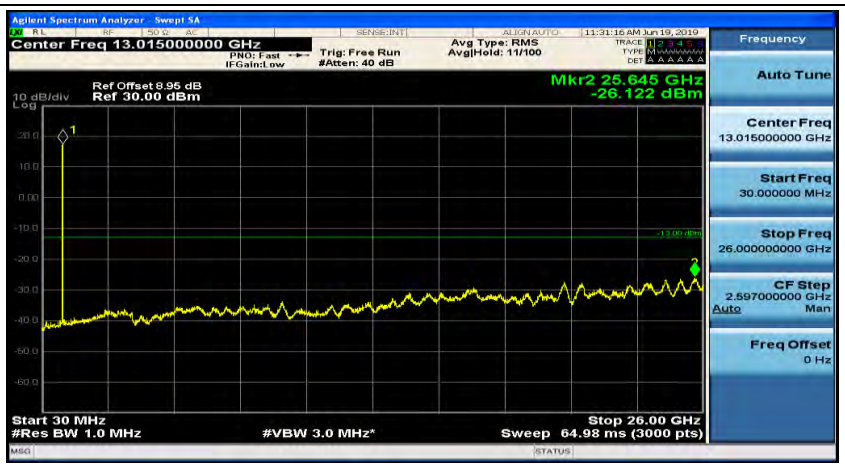




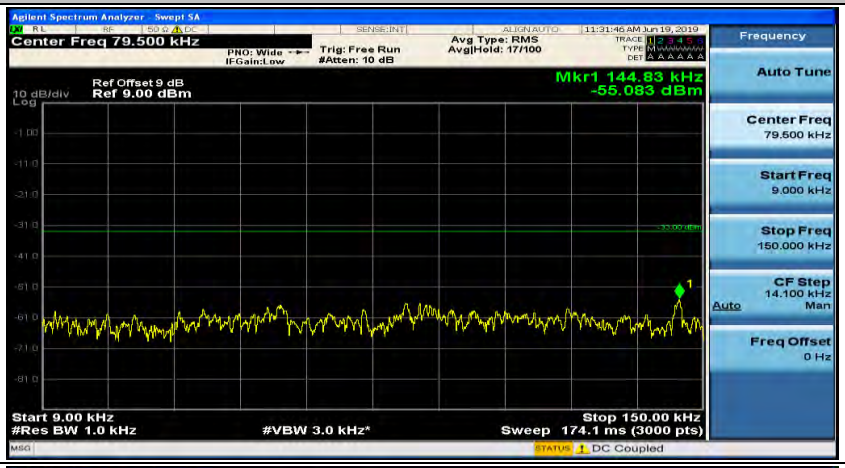
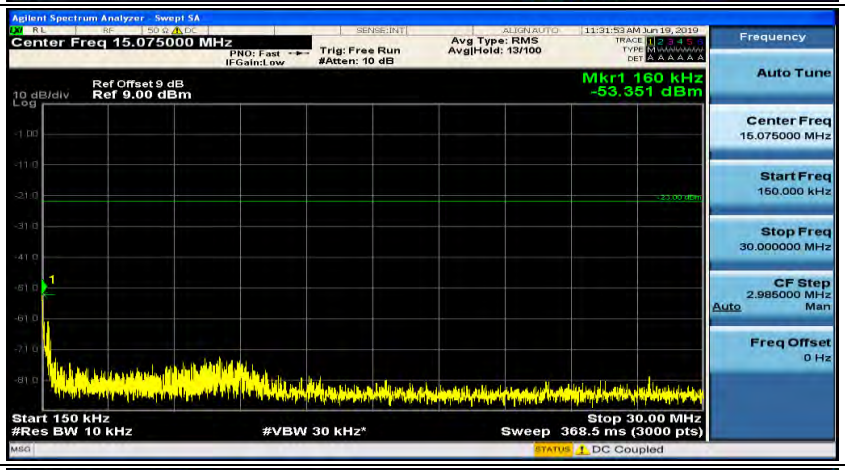
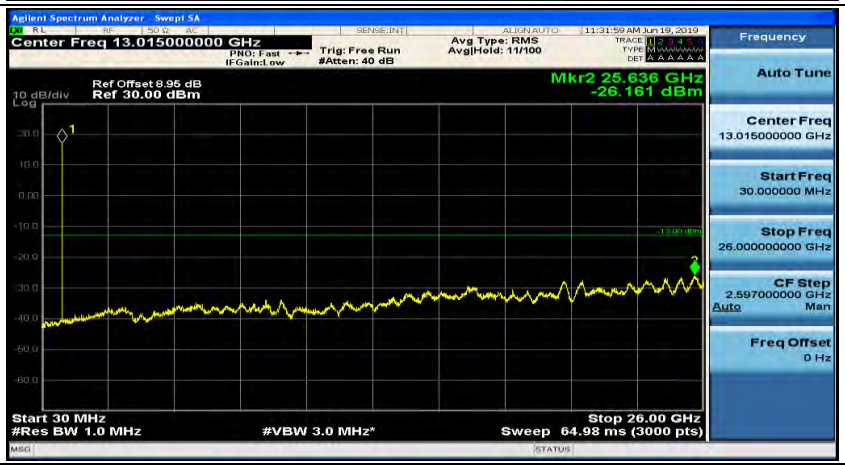
(Channel Bandwidth: 3 MHz)_HCH_16QAM_1RB#7

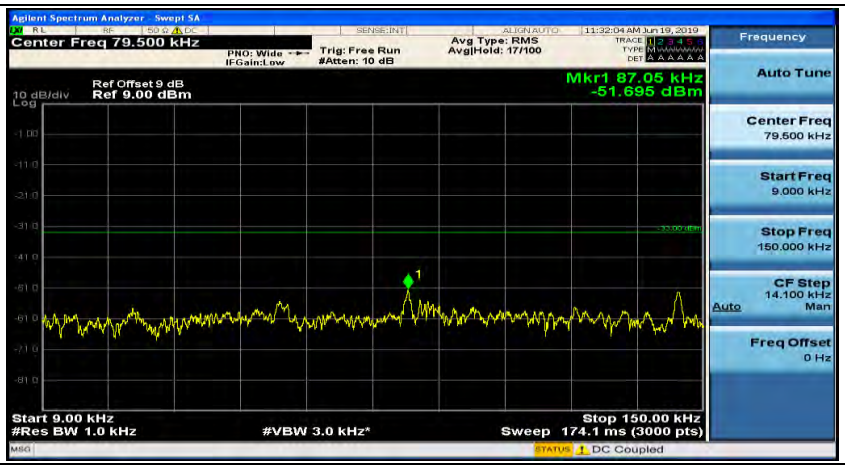

Agilent Spectrum Analyzer - Swept SA
Center Freq 79.500 kHz
PNO: Wide
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 17/100
11:31:03 AM Jun 19, 2019
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Mkr1 144.83 kHz
-51.481 dBm
Start 9.00 kHz
#Res BW 1.0 kHz
#VBW 3.0 kHz*
Stop 150.00 kHz
Sweep 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

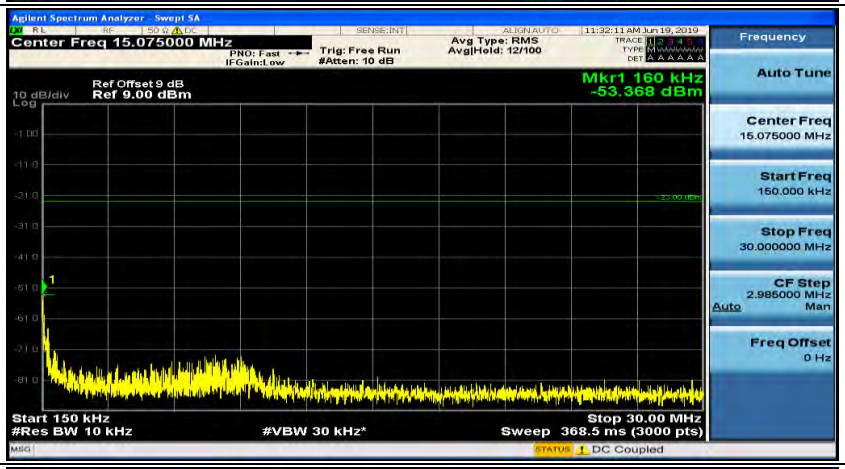

Agilent Spectrum Analyzer - Swept SA
Center Freq 15.075000 MHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 12/100
11:31:10 AM Jun 19, 2019
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Mkr1 150 kHz
-52.822 dBm
Start 150 kHz
#Res BW 10 kHz
#VBW 30 kHz*
Stop 30.00 MHz
Sweep 368.5 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
11:31:16 AM Jun 19, 2019
Ref Offset 8.95 dB
10 dB/div
Log
Ref 30.00 dBm
Mkr2 25.645 GHz
-26.122 dBm
Start 30 MHz
#Res BW 1.0 MHz
#VBW 3.0 MHz*
Stop 26.00 GHz
Sweep 64.98 ms (3000 pts)
Frequency
Auto Tune
Center Freq
13.015000000 GHz
Start Freq
30.000000 MHz
Stop Freq
26.000000000 GHz
CF Step
2.597000000 GHz
Auto
Man
Freq Offset
0 Hz

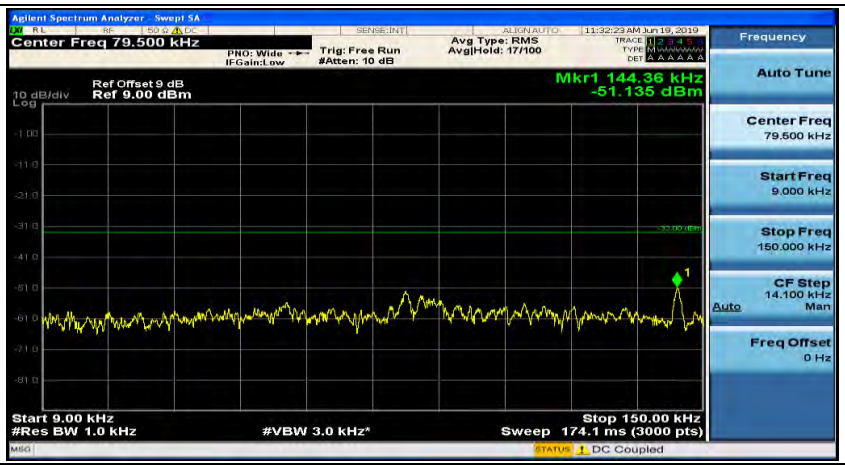
Channel Bandwidth: 5 MHz

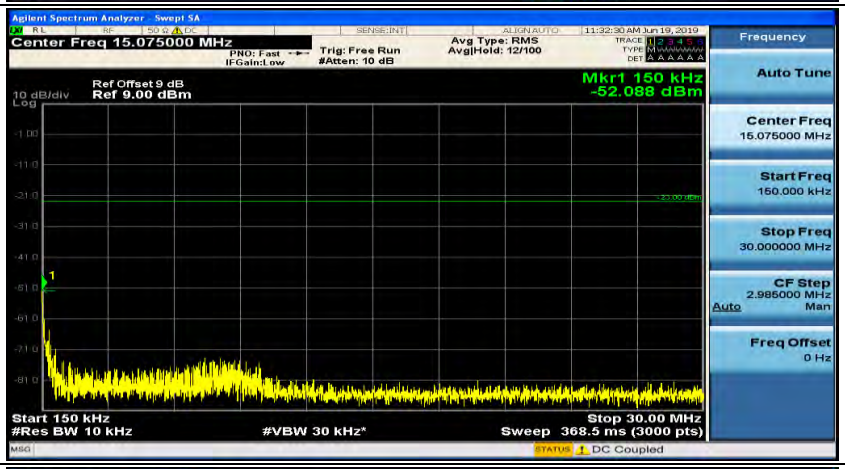
(Channel Bandwidth: 5 MHz)_LCH_QPSK_1RB#0



(Channel Bandwidth: 5 MHz)_LCH_QPSK_1RB#12



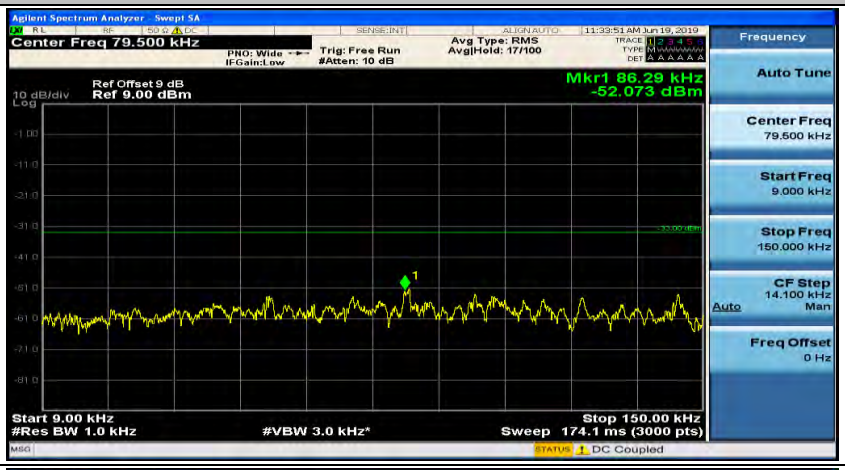
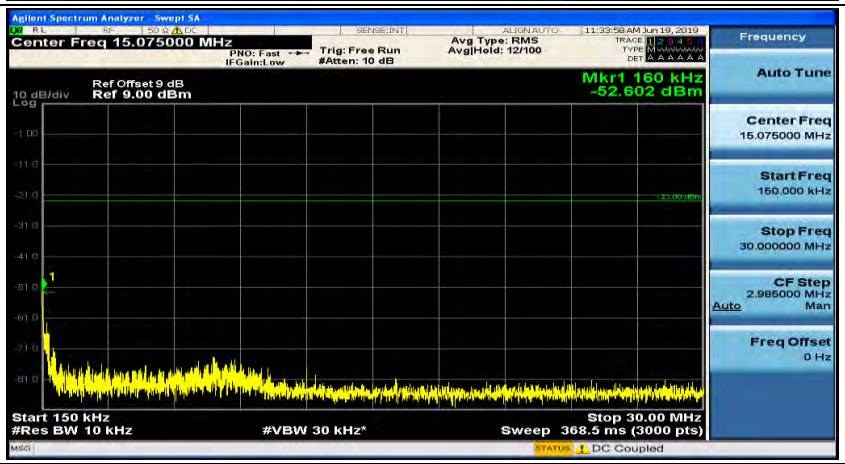


(Channel Bandwidth: 5 MHz)_LCH_QPSK_1RB#24

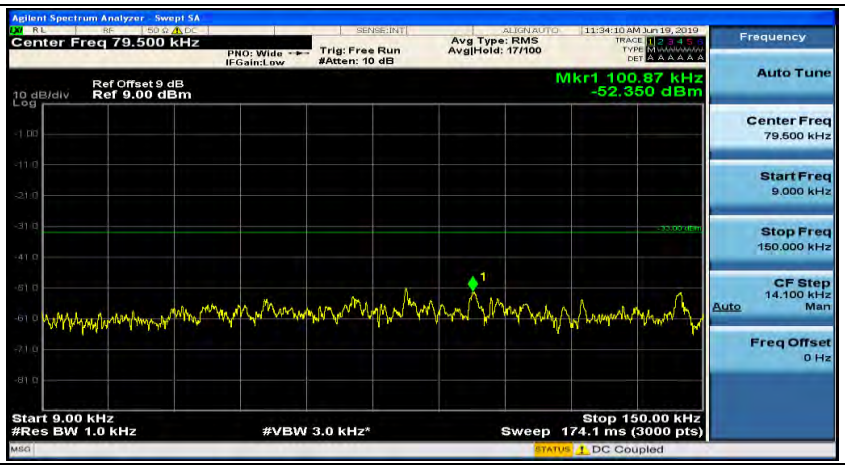

Agilent Spectrum Analyzer - Swept SA
Center Freq 79.500 kHz
PNO: Wide
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 17/100
11:32:23 AM Jun 19, 2019
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Mkr1 144.36 kHz
-51.135 dBm
Start 9.00 kHz
#Res BW 1.0 kHz
#VBW 3.0 kHz*
Stop 150.00 kHz
Sweep 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

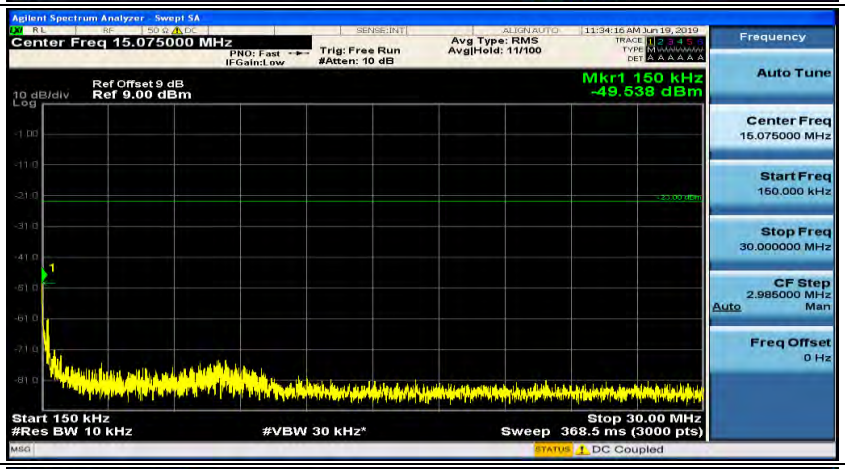

Agilent Spectrum Analyzer - Swept SA
Center Freq 15.075000 MHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 12/100
11:32:30 AM Jun 19, 2019
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Mkr1 150 kHz
-52.088 dBm
Start 150 kHz
#Res BW 10 kHz
#VBW 30 kHz*
Stop 30.00 MHz
Sweep 368.5 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
11:32:36 AM Jun 19, 2019
Ref Offset 8.95 dB
10 dB/div
Log
Ref 30.00 dBm
Mkr2 25.610 GHz
-25.893 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

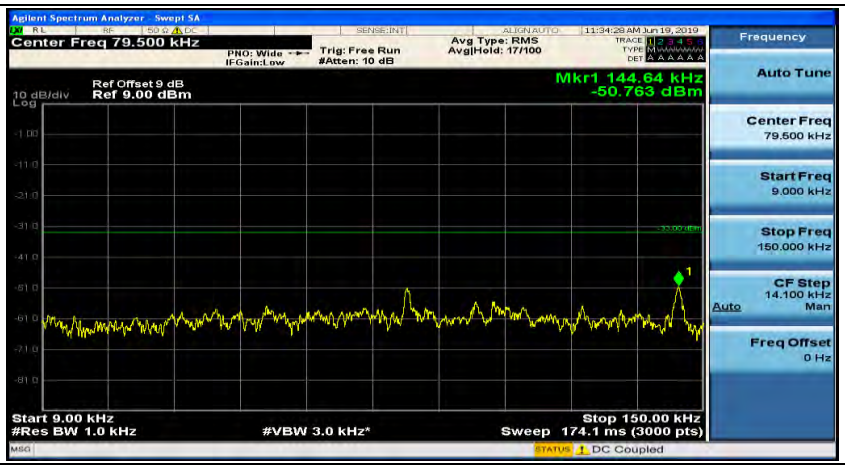
(Channel Bandwidth: 5 MHz)_MCH_QPSK_1RB#0



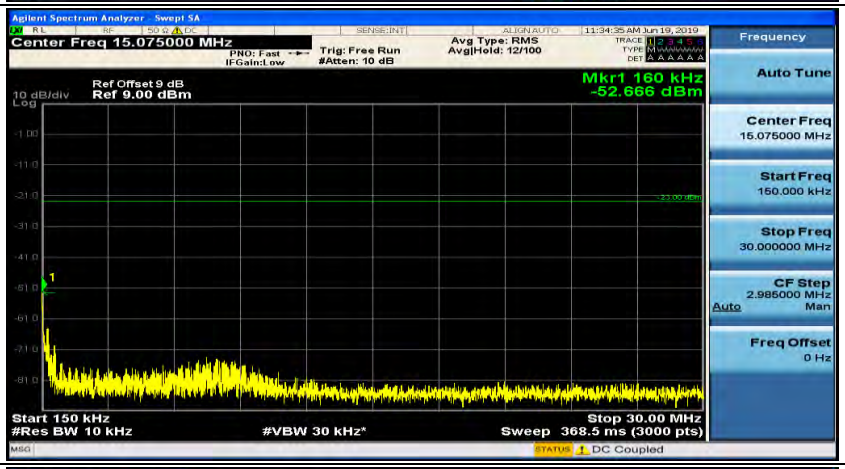
(Channel Bandwidth: 5 MHz)_MCH_QPSK_1RB#12



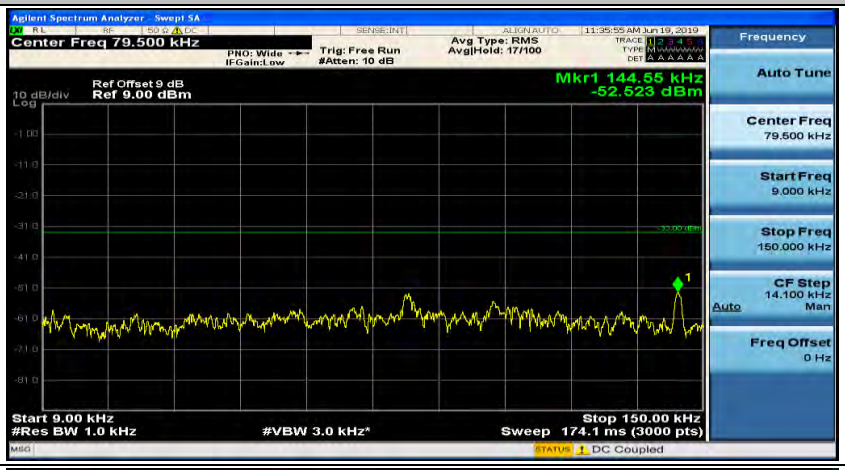
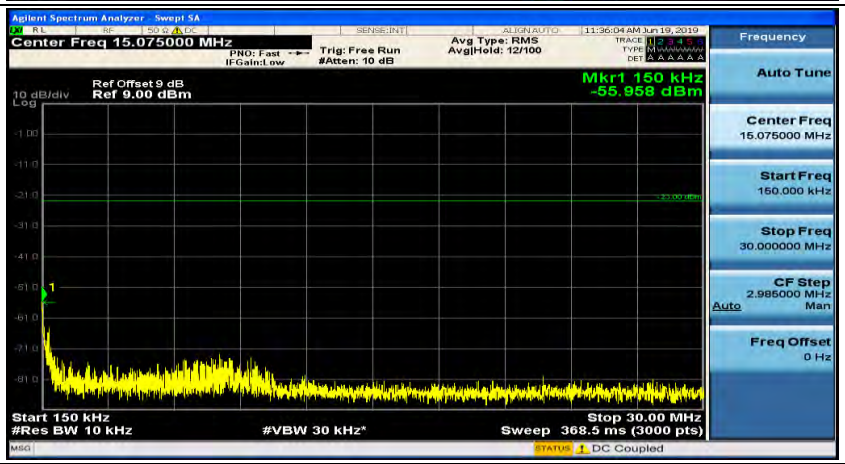


(Channel Bandwidth: 5 MHz)_MCH_QPSK_1RB#24

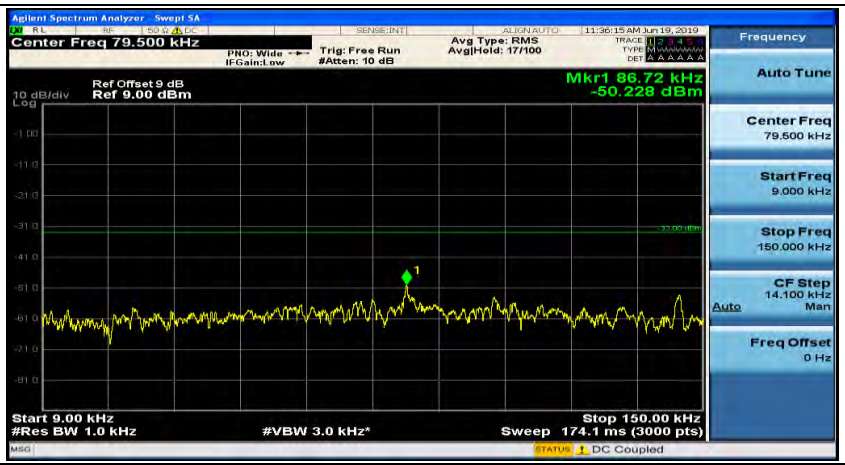

Agilent Spectrum Analyzer - Swept SA
Center Freq 79.500 kHz
PNO: Wide
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 17/100
11:34:28 AM Jun 19, 2019
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Mkr1 144.64 kHz
-50.763 dBm
Start 9.00 kHz
#Res BW 1.0 kHz
#VBW 3.0 kHz*
Stop 150.00 kHz
Sweep 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

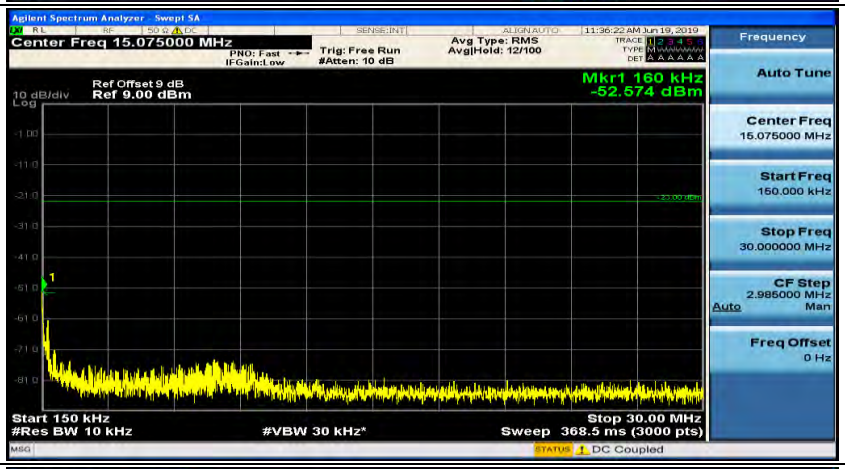

Agilent Spectrum Analyzer - Swept SA
Center Freq 15.075000 MHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 12/100
11:34:35 AM Jun 19, 2019
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Mkr1 160 kHz
-52.666 dBm
Start 150 kHz
#Res BW 10 kHz
#VBW 30 kHz*
Stop 30.00 MHz
Sweep 368.5 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
11:34:41 AM Jun 19, 2019
Ref Offset 8.95 dB
10 dB/div
Log
Ref 30.00 dBm
Mkr2 25.706 GHz
-26.153 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

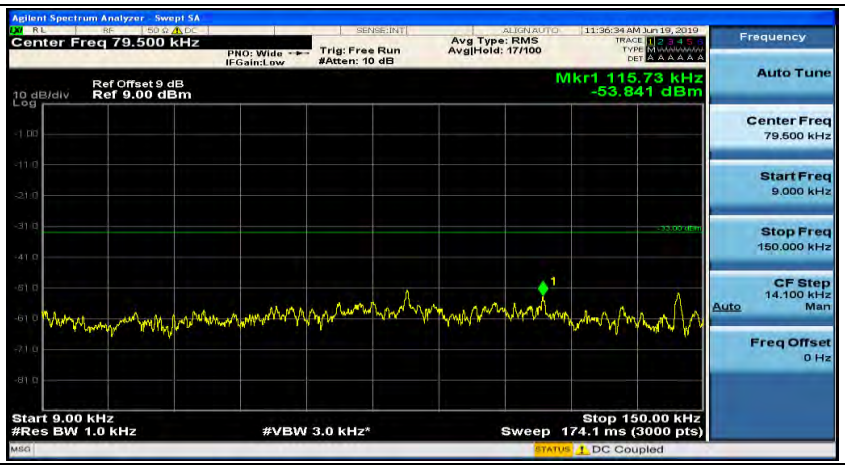
(Channel Bandwidth: 5 MHz)_HCH_QPSK_1RB#0



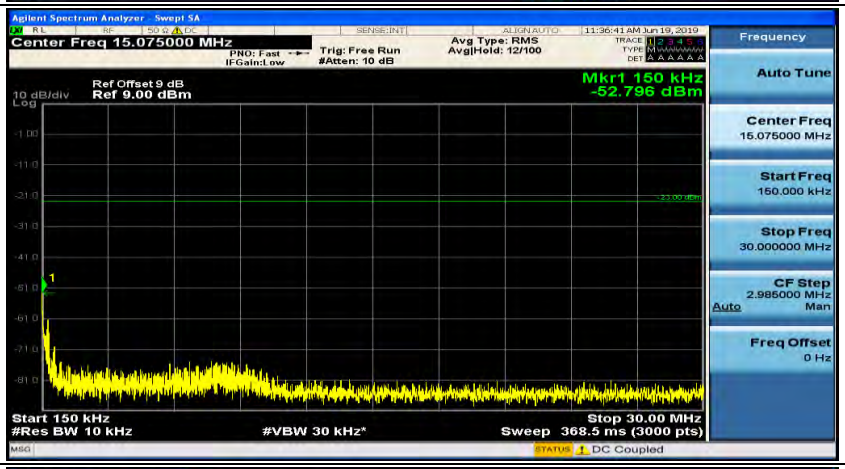
(Channel Bandwidth: 5 MHz)_HCH_QPSK_1RB#12



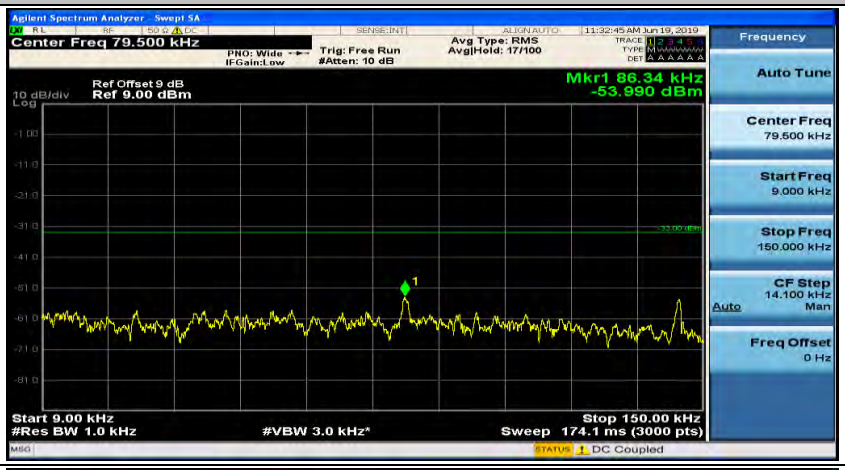
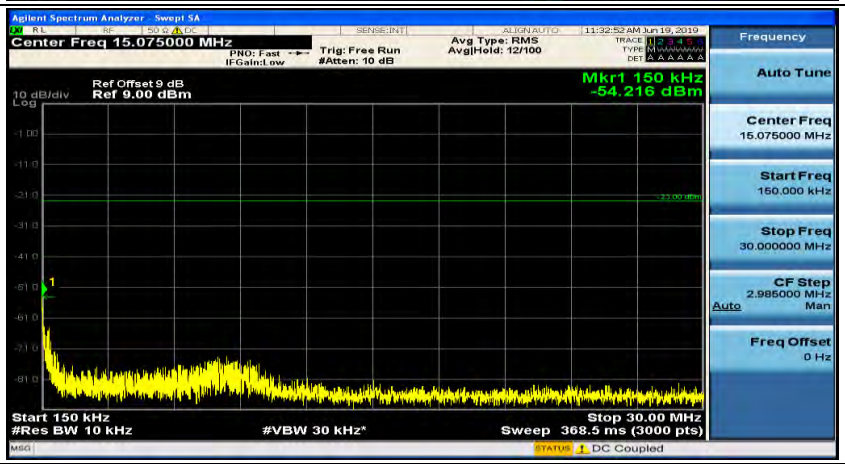


(Channel Bandwidth: 5 MHz)_HCH_QPSK_1RB#24

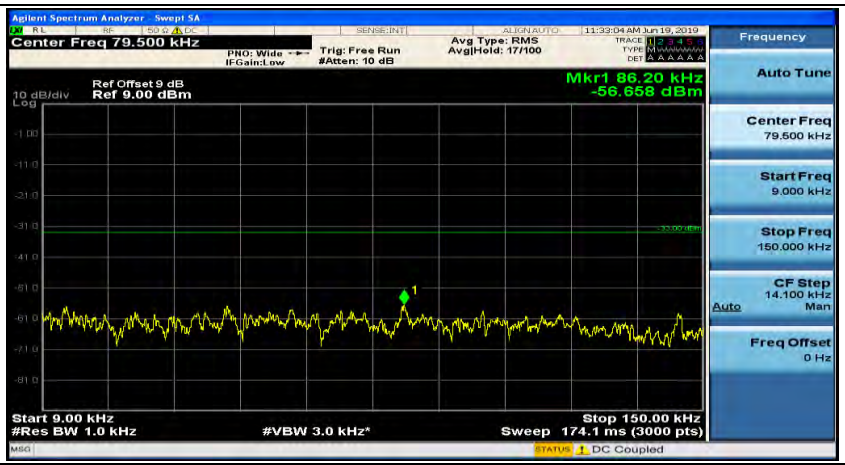

Agilent Spectrum Analyzer - Swept SA
Center Freq 79.500 kHz
PNO: Wide
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 17/100
11:36:34 AM Jun 19, 2019
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Mkr1 115.73 kHz
-53.841 dBm
Start 9.00 kHz
#Res BW 1.0 kHz
#VBW 3.0 kHz*
Stop 150.00 kHz
Sweep 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

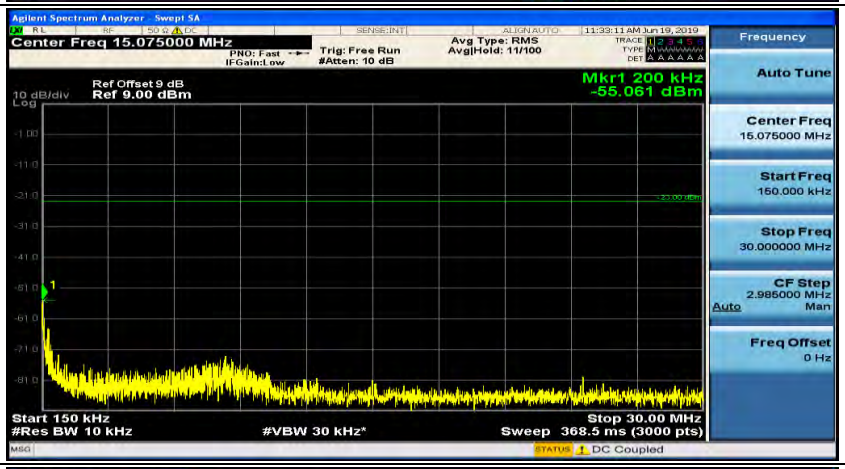

Agilent Spectrum Analyzer - Swept SA
Center Freq 15.075000 MHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 12/100
11:36:41 AM Jun 19, 2019
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Mkr1 150 kHz
-52.796 dBm
Start 150 kHz
#Res BW 10 kHz
#VBW 30 kHz*
Stop 30.00 MHz
Sweep 368.5 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
11:36:47 AM Jun 19, 2019
Ref Offset 8.95 dB
10 dB/div
Log
Ref 30.00 dBm
Mkr2 25.619 GHz
-26.058 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

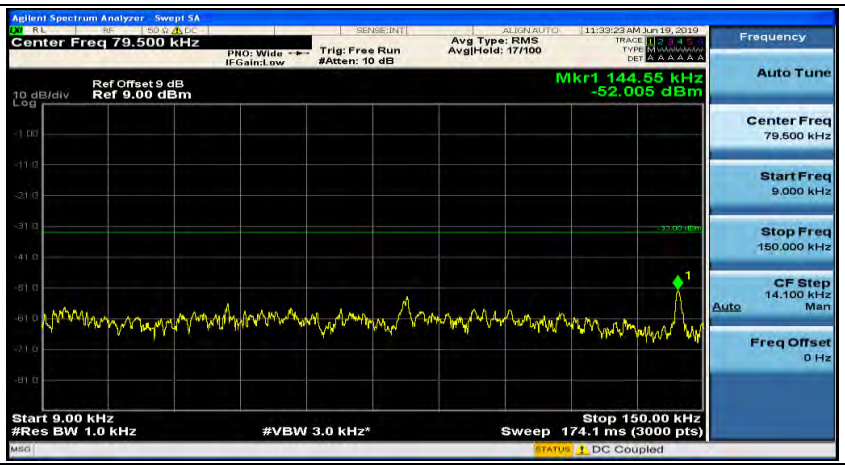
(Channel Bandwidth: 5 MHz)_LCH_16QAM_1RB#0



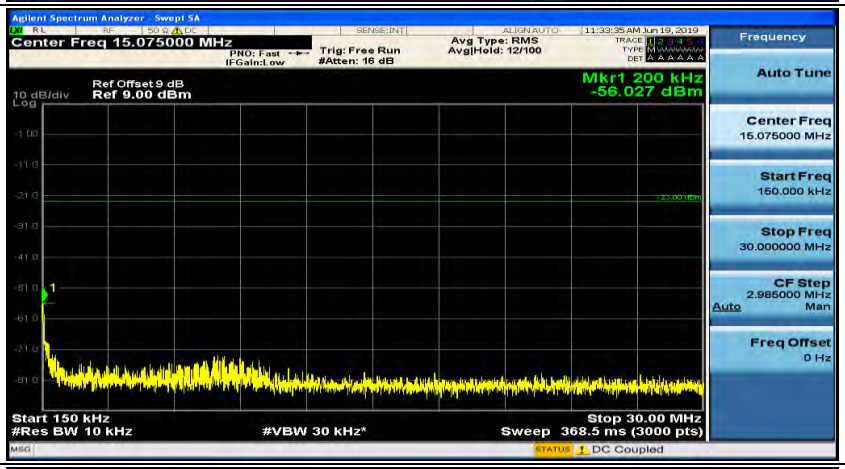
(Channel Bandwidth: 5 MHz)_LCH_16QAM_1RB#12



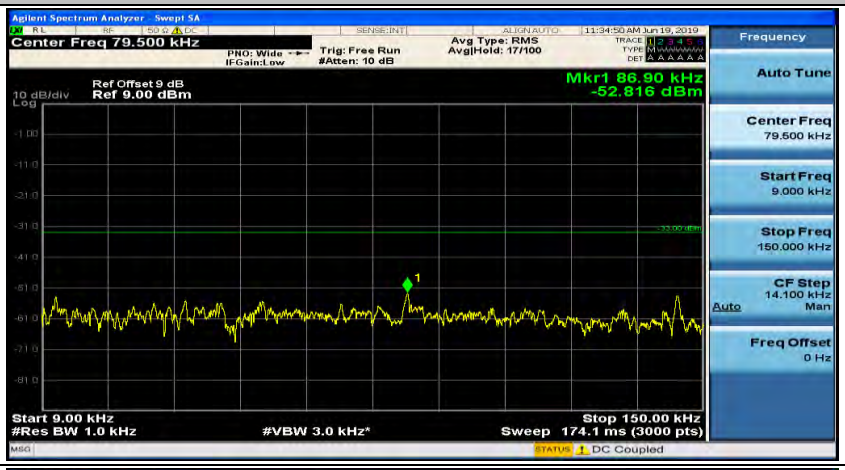
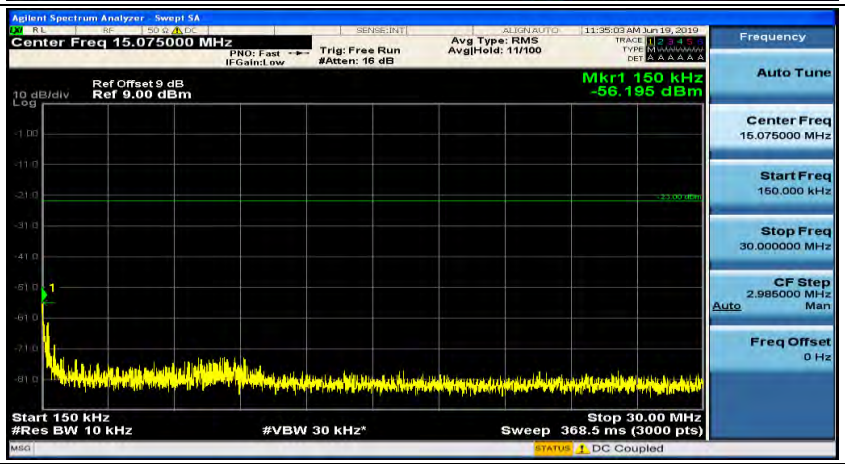


(Channel Bandwidth: 5 MHz)_LCH_16QAM_1RB#24

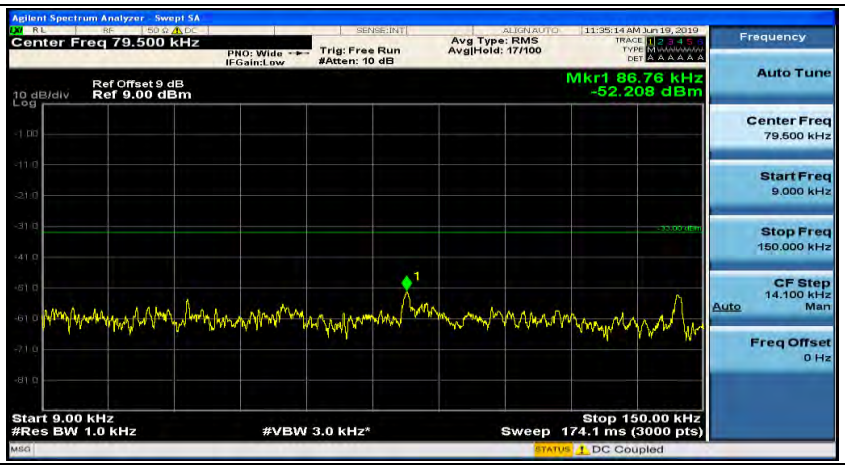

Agilent Spectrum Analyzer - Swept SA
Center Freq 79.500 kHz
PNO: Wide
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 17/100
11:33:23 AM Jun 19, 2019
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Mkr1 144.55 kHz
-52.005 dBm
Start 9.00 kHz
#Res BW 1.0 kHz
#VBW 3.0 kHz*
Stop 150.00 kHz
Sweep 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

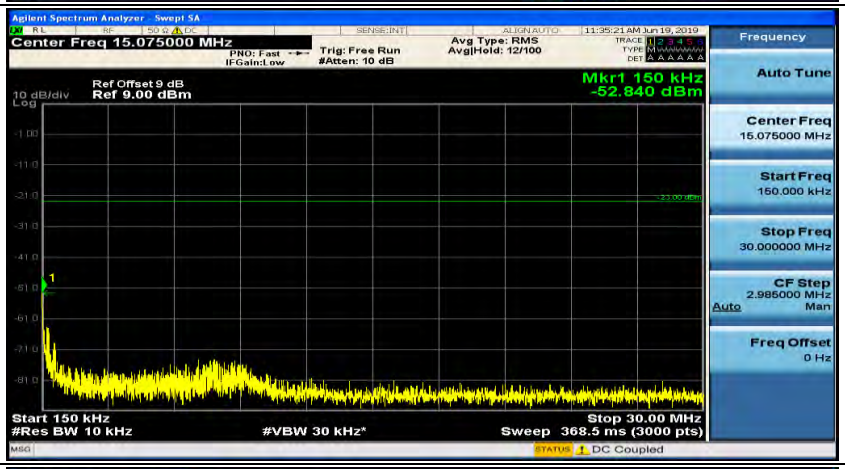

Agilent Spectrum Analyzer - Swept SA
Center Freq 15.075000 MHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 16 dB
Avg Type: RMS
Avg|Hold: 12/100
11:33:35 AM Jun 19, 2019
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Mkr1 200 kHz
-56.027 dBm
Start 150 kHz
#Res BW 10 kHz
#VBW 30 kHz*
Stop 30.00 MHz
Sweep 368.5 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
11:33:41 AM Jun 19, 2019
Ref Offset 8.95 dB
10 dB/div
Log
Ref 30.00 dBm
Mkr2 25.662 GHz
-26.491 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



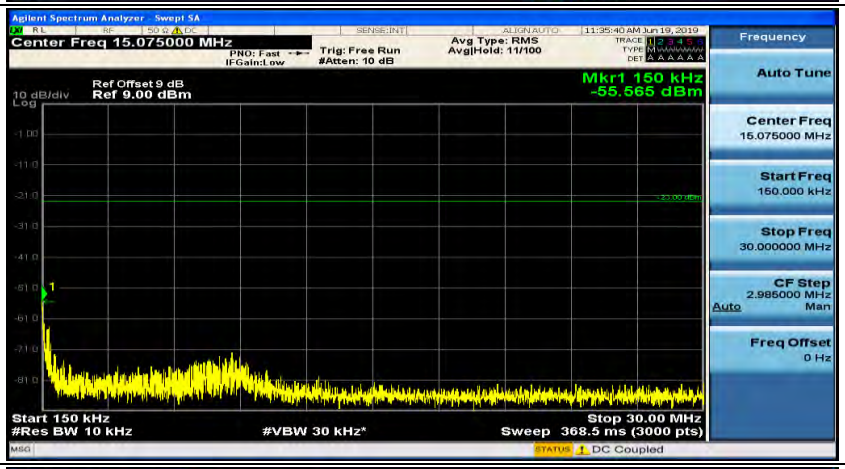
(Channel Bandwidth: 5 MHz)_MCH_16QAM_1RB#12



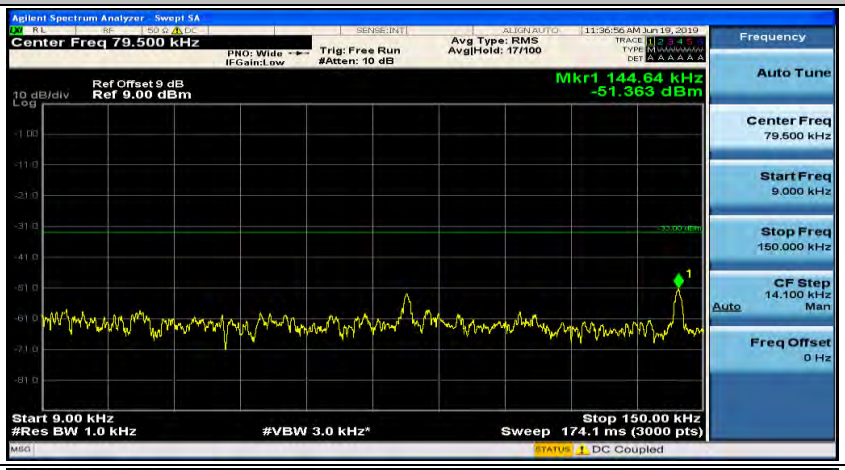
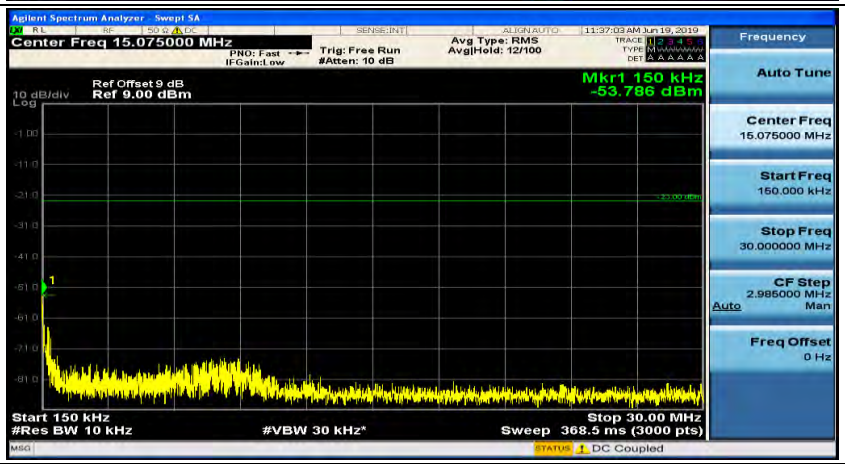
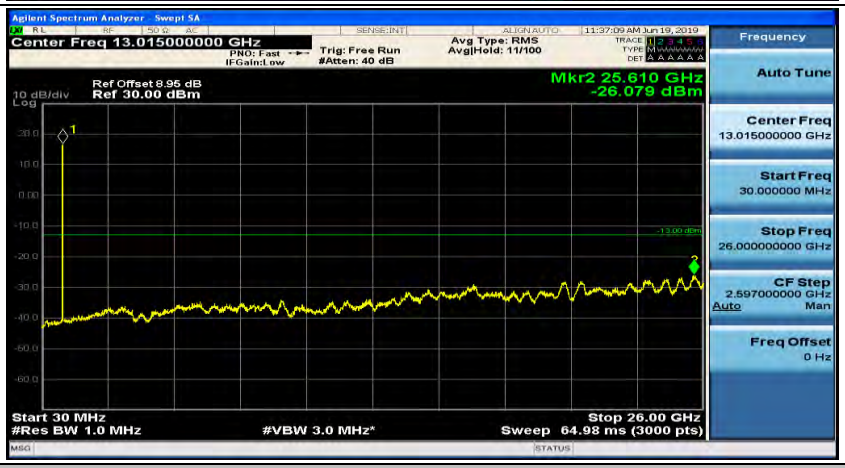


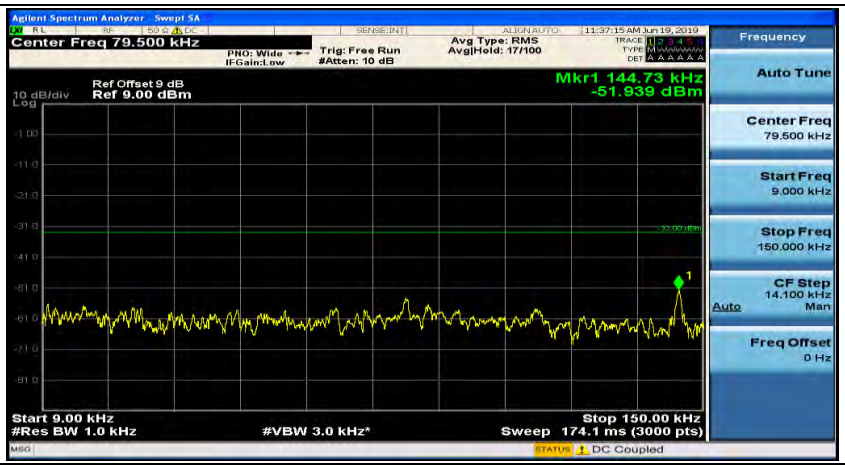
(Channel Bandwidth: 5 MHz)_MCH_16QAM_1RB#24

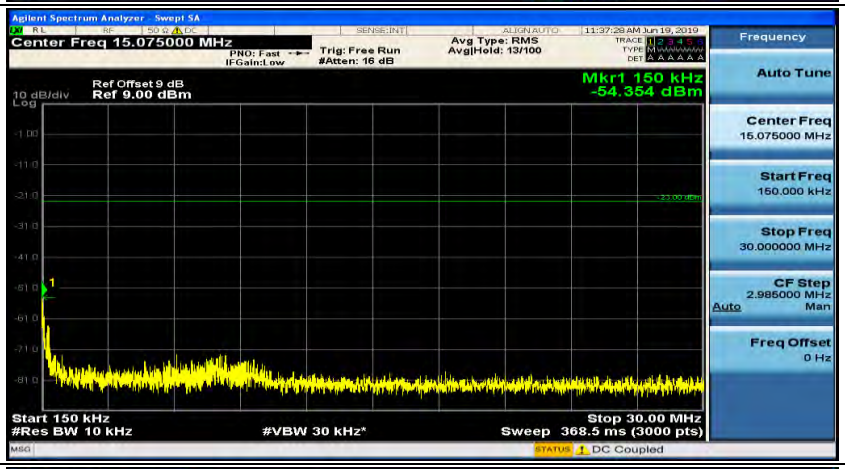

Agilent Spectrum Analyzer - Swept SA
Center Freq 79.500 kHz
PNO: Wide
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 17/100
11:35:33 AM Jun 19, 2019
Frequency
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Mkr1 144.45 kHz
-53.087 dBm
Auto Tune
Center Freq
79.500 kHz
Start Freq
9.000 kHz
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: 11/100
11:35:40 AM Jun 19, 2019
Frequency
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Mkr1 150 kHz
-55.565 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

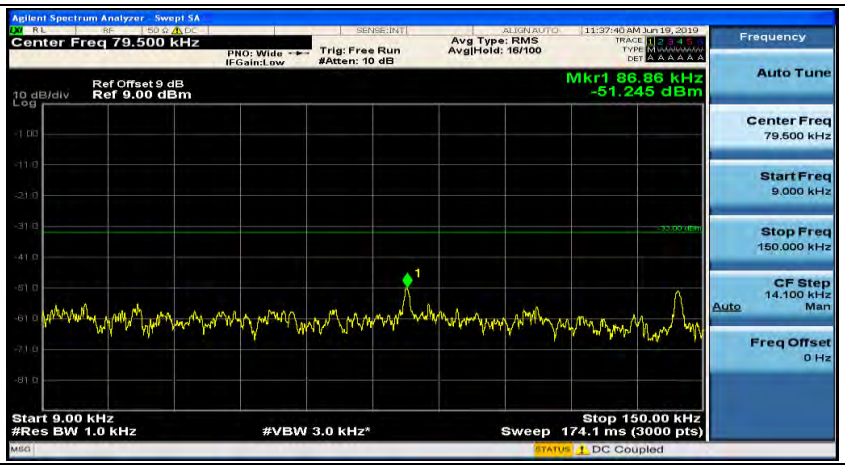

Agilent Spectrum Analyzer - Swept SA
Center Freq 13.015000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 40 dB
Avg Type: RMS
Avg|Hold: 11/100
11:35:46 AM Jun 19, 2019
Frequency
Ref Offset 8.95 dB
10 dB/div
Log
Ref 30.00 dBm
Mkr2 25.688 GHz
-25.868 dBm
Auto Tune
Center Freq
13.015000000 GHz
Start Freq
30.000000 MHz
Stop Freq
26.000000000 GHz
CF Step
2.597000000 GHz
Auto
Man
Freq Offset
0 Hz
Start 30 MHz
#Res BW 1.0 MHz
#VBW 3.0 MHz*
Stop 26.00 GHz
Sweep 64.98 ms (3000 pts)

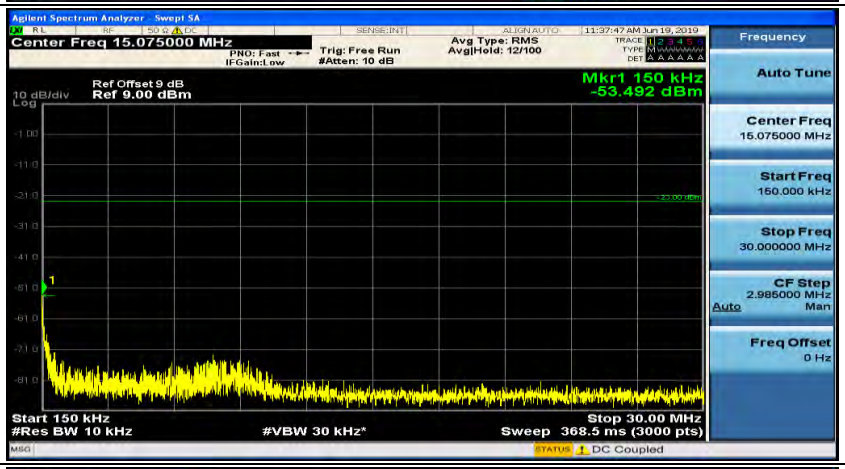
(Channel Bandwidth: 5 MHz)_HCH_16QAM_1RB#0



(Channel Bandwidth: 5 MHz)_HCH_16QAM_1RB#12





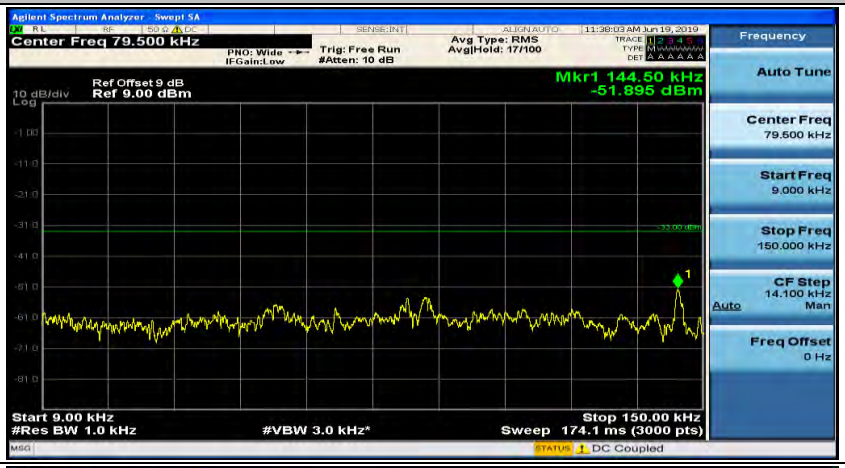
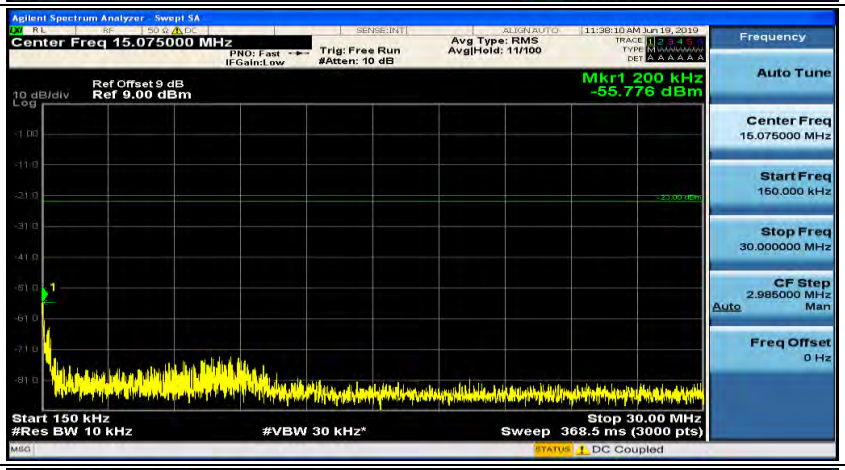
(Channel Bandwidth: 5 MHz)_HCH_16QAM_1RB#24


Agilent Spectrum Analyzer - Swept SA
Center Freq 79.500 kHz
PNO: Wide
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 16/100
11:37:40 AM Jun 19, 2019
Frequency
Auto Tune
Mkr1 86.86 kHz
-51.245 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

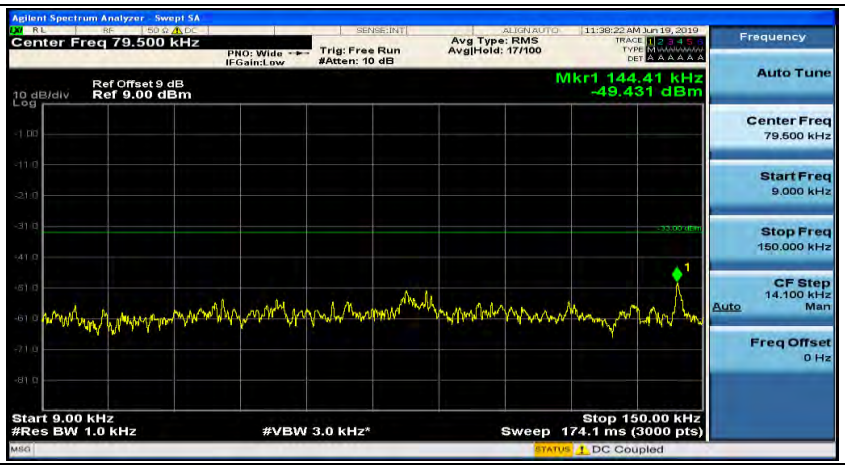

Agilent Spectrum Analyzer - Swept SA
Center Freq 15.075000 MHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 12/100
11:37:47 AM Jun 19, 2019
Frequency
Auto Tune
Mkr1 150 kHz
-53.492 dBm
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Center Freq
15.075000 MHz
Start Freq
150.000 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

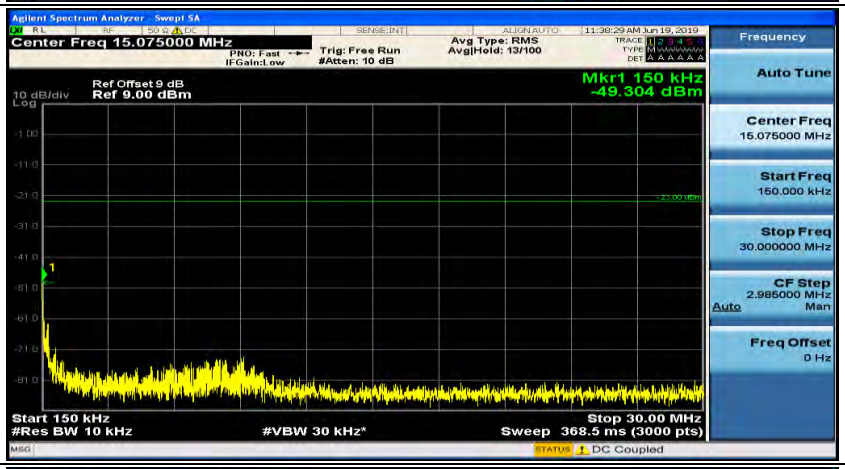

Agilent Spectrum Analyzer - Swept SA
Center Freq 13.015000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 40 dB
Avg Type: RMS
Avg|Hold: 11/100
11:37:53 AM Jun 19, 2019
Frequency
Auto Tune
Mkr2 25.688 GHz
-25.786 dBm
Ref Offset 8.95 dB
10 dB/div
Log
Ref 30.00 dBm
Center Freq
13.015000000 GHz
Start 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

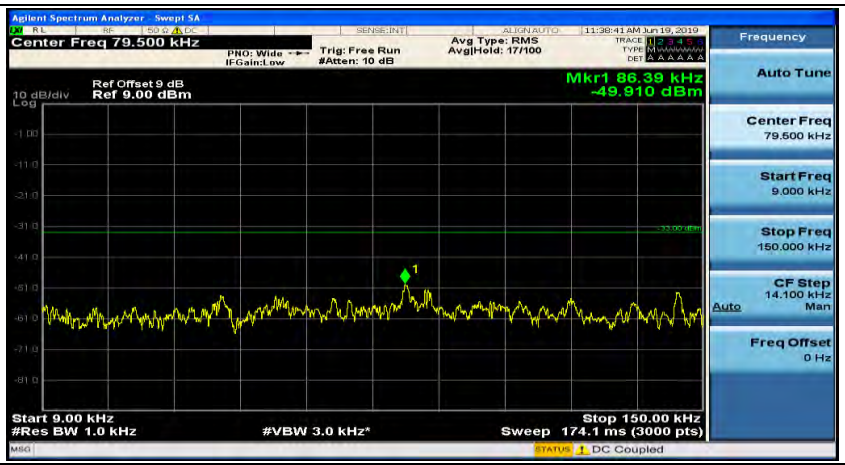
Channel Bandwidth: 10 MHz_LCH_QPSK_1RB#0



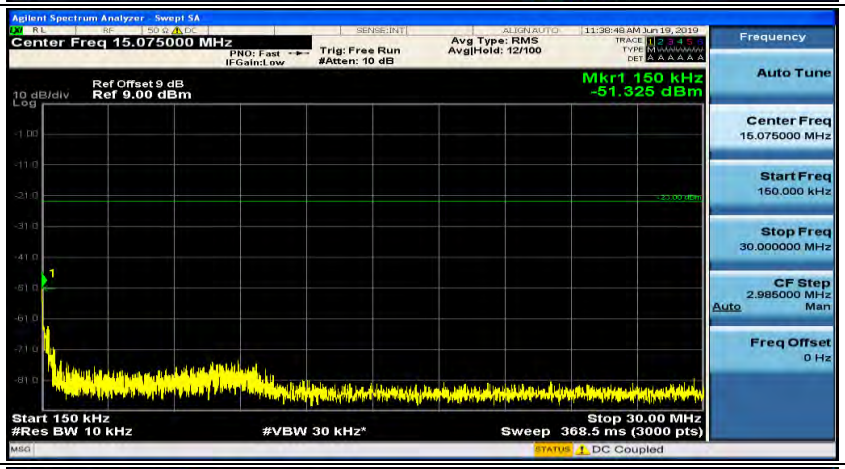
Channel Bandwidth: 10 MHz_LCH_QPSK_1RB#24



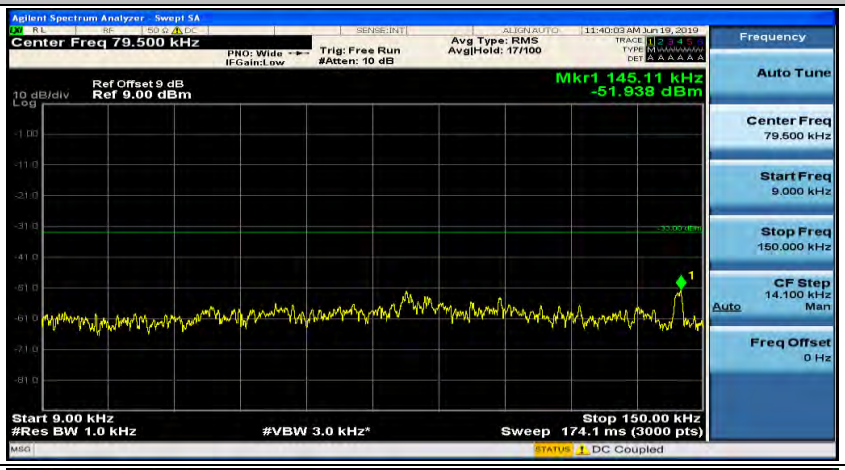
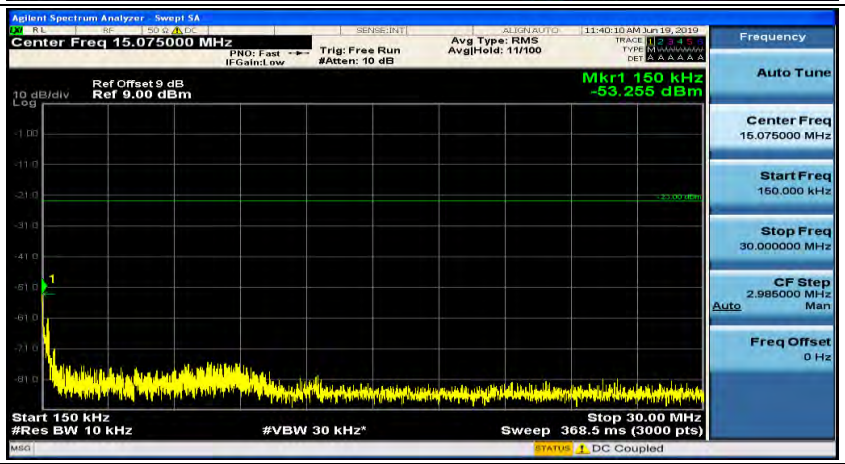


Channel Bandwidth: 10 MHz_LCH_QPSK_1RB#49

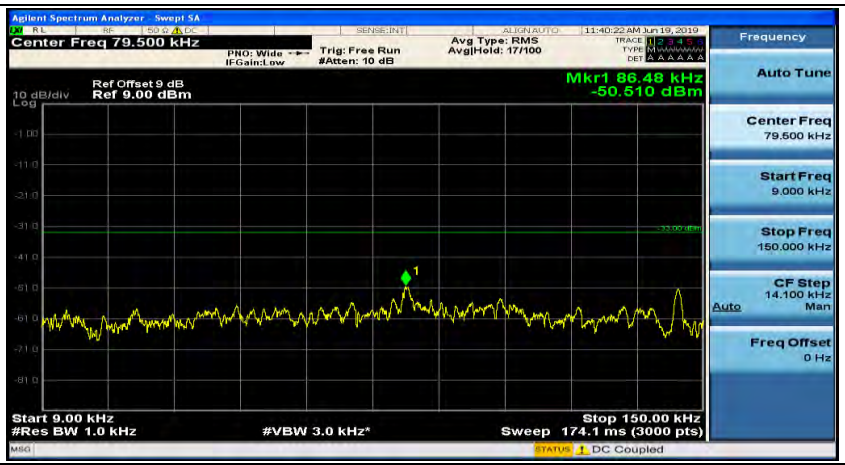

Agilent Spectrum Analyzer - Swept SA
Center Freq 79.500 kHz
PNO: Wide
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 17/100
11:38:41 AM Jun 19, 2019
Frequency
Auto Tune
Mkr1 86.39 kHz
-49.910 dBm
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Center Freq
79.500 kHz
Start Freq
9.000 kHz
Stop 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

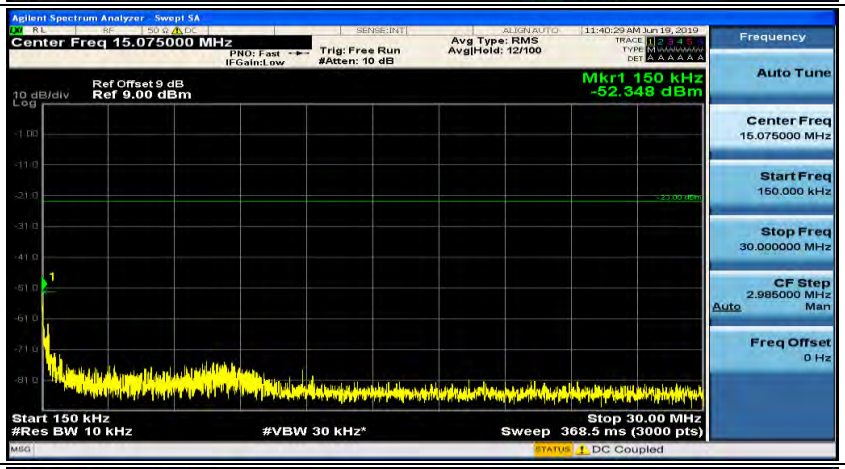

Agilent Spectrum Analyzer - Swept SA
Center Freq 15.075000 MHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 12/100
11:38:48 AM Jun 19, 2019
Frequency
Auto Tune
Mkr1 150 kHz
-51.325 dBm
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Center Freq
15.075000 MHz
Start Freq
150.000 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
11:38:54 AM Jun 19, 2019
Frequency
Auto Tune
Mkr2 25.680 GHz
-26.288 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)

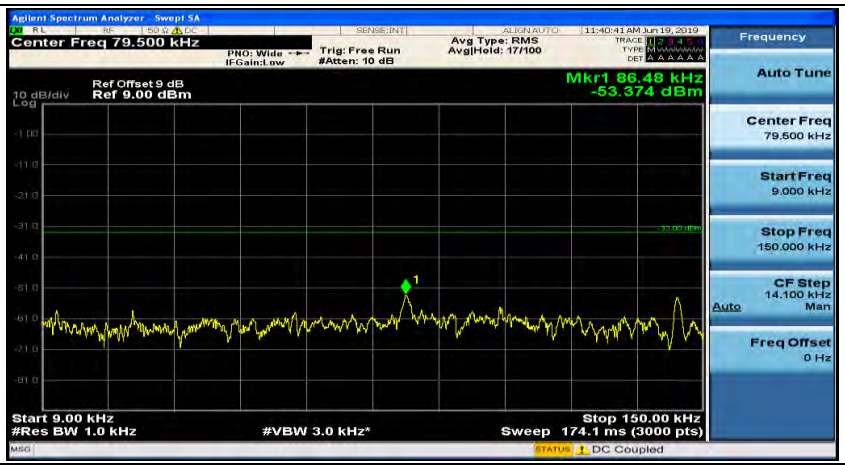
Channel Bandwidth: 10 MHz_MCH_QPSK_1RB#0



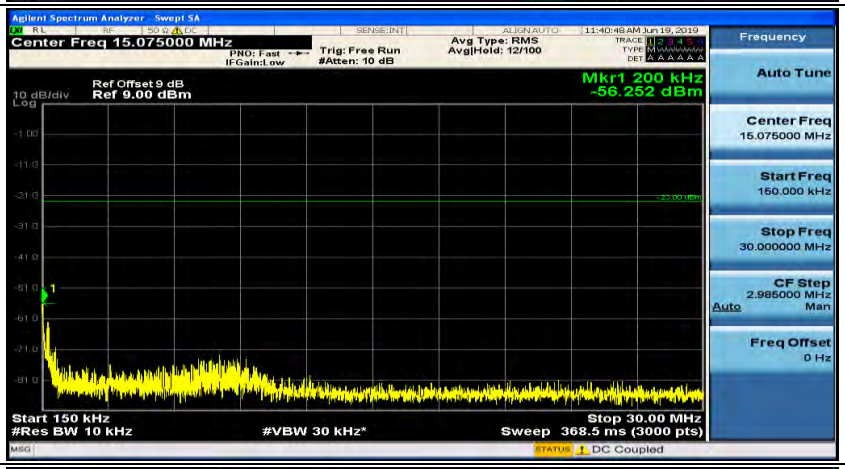
Channel Bandwidth: 10 MHz_MCH_QPSK_1RB#24



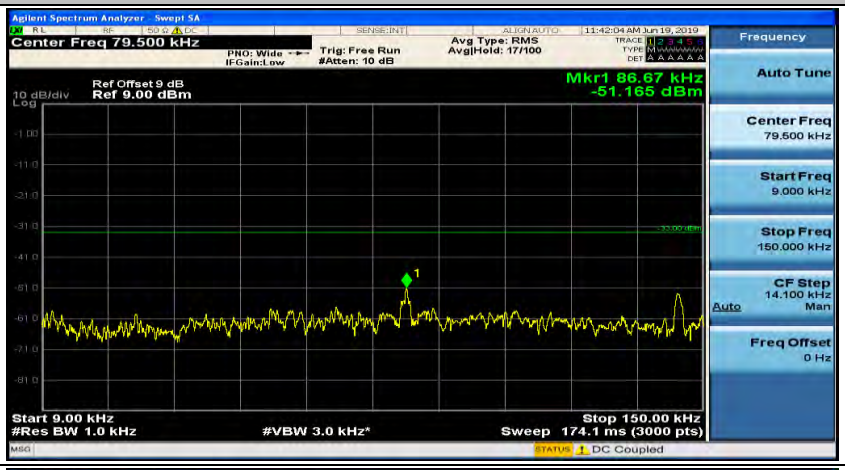
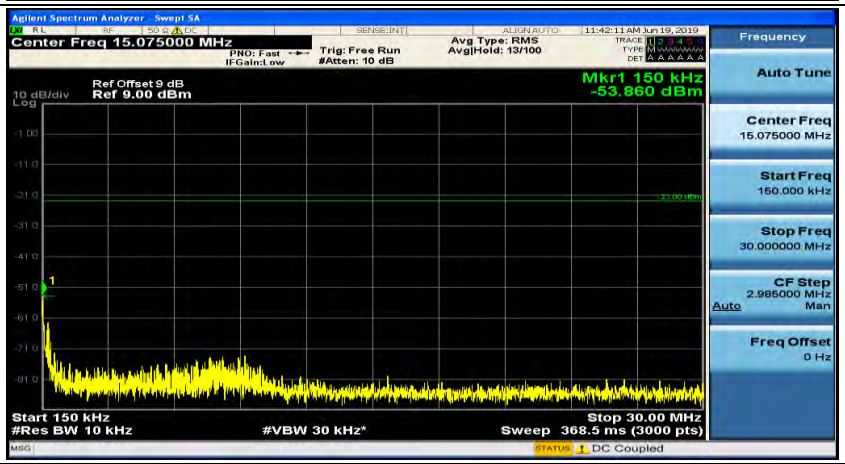


Channel Bandwidth: 10 MHz_MCH_QPSK_1RB#49

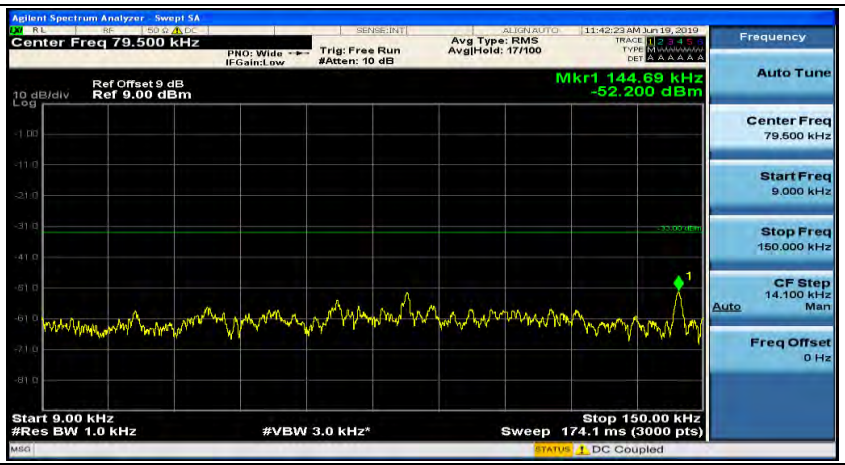

Agilent Spectrum Analyzer - Swept SA
Center Freq 79.500 kHz
PNO: Wide
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 17/100
11:40:41 AM Jun 19, 2019
Frequency
Auto Tune
Mkr1 86.48 kHz
-53.374 dBm
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Center Freq
79.500 kHz
Start Freq
9.000 kHz
Stop 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

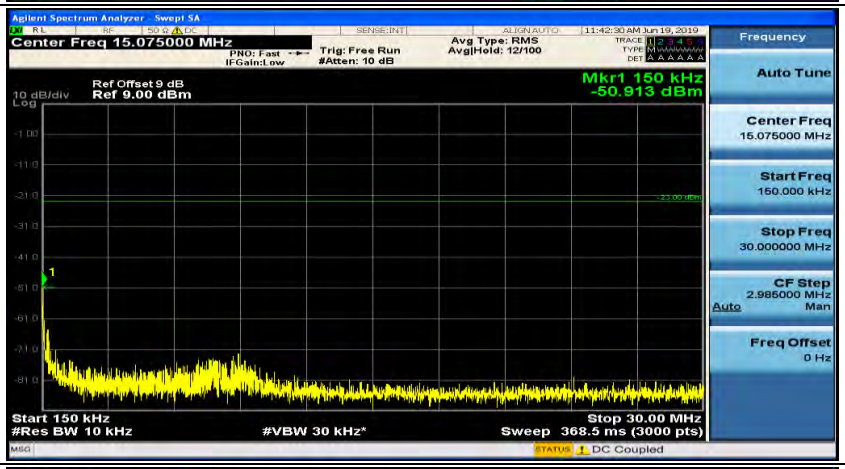

Agilent Spectrum Analyzer - Swept SA
Center Freq 15.075000 MHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 12/100
11:40:48 AM Jun 19, 2019
Frequency
Auto Tune
Mkr1 200 kHz
-56.252 dBm
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Center Freq
15.075000 MHz
Start Freq
150.000 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
11:40:54 AM Jun 19, 2019
Frequency
Auto Tune
Mkr2 25.593 GHz
-26.501 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)

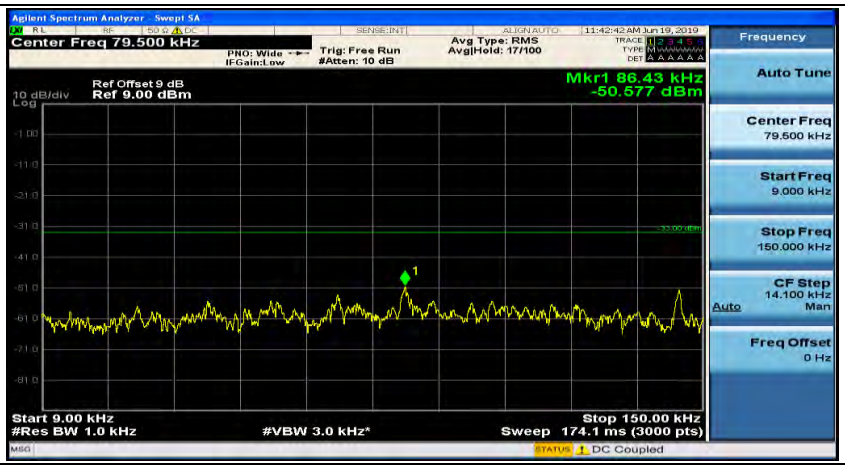
Channel Bandwidth: 10 MHz_HCH_QPSK_1RB#0



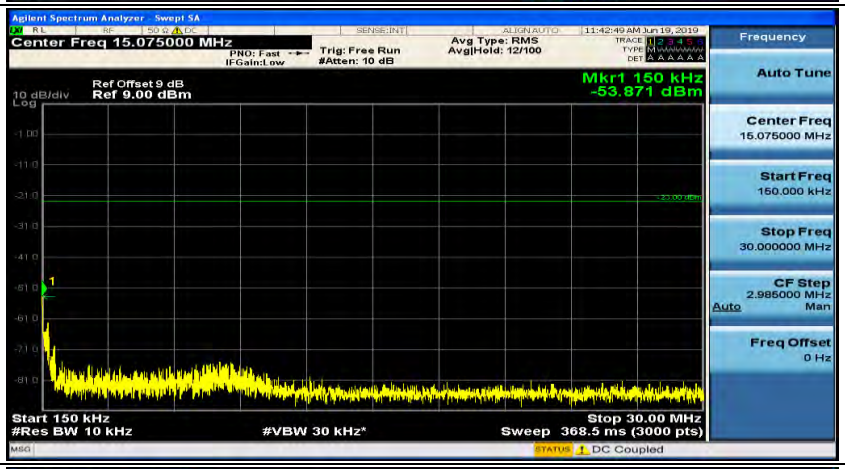
Channel Bandwidth: 10 MHz_HCH_QPSK_1RB#24



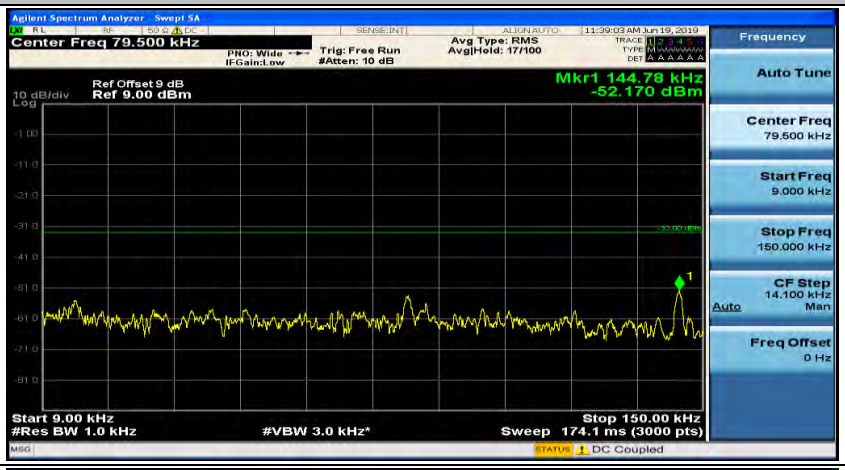
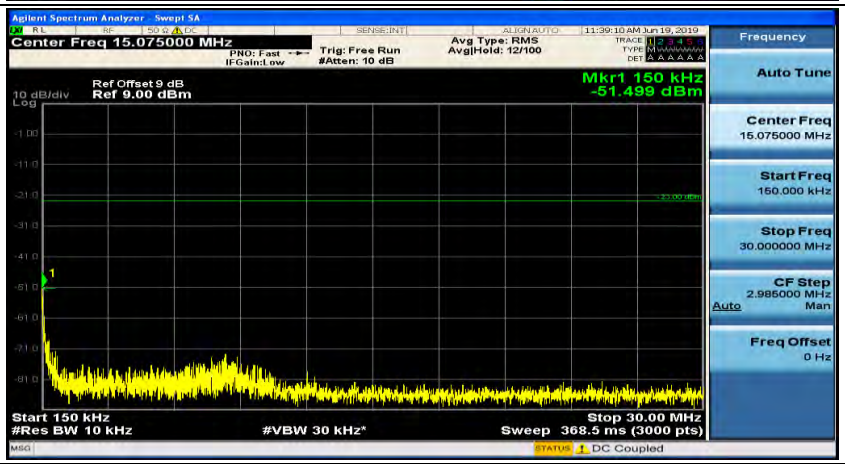


Channel Bandwidth: 10 MHz_HCH_QPSK_1RB#49

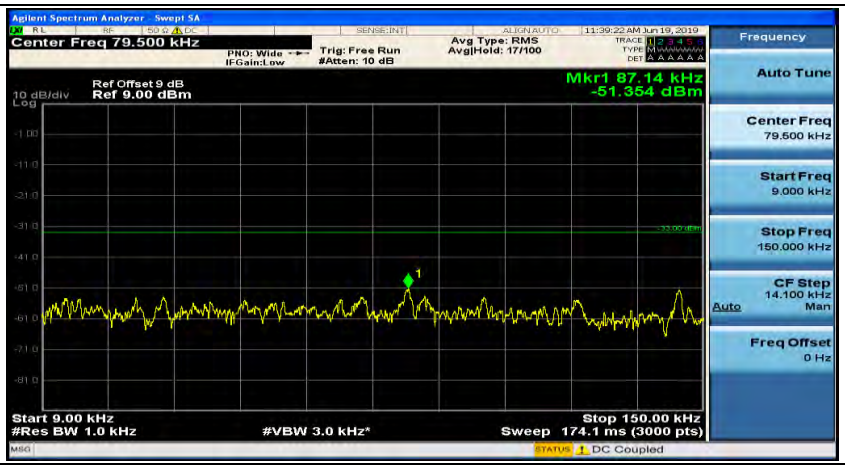

Agilent Spectrum Analyzer - Swept SA
Center Freq 79.500 kHz
PNO: Wide
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 17/100
11:42:42 AM Jun 19, 2019
Frequency
Auto Tune
Mkr1 86.43 kHz
-50.577 dBm
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Center Freq
79.500 kHz
Start Freq
9.000 kHz
Stop 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

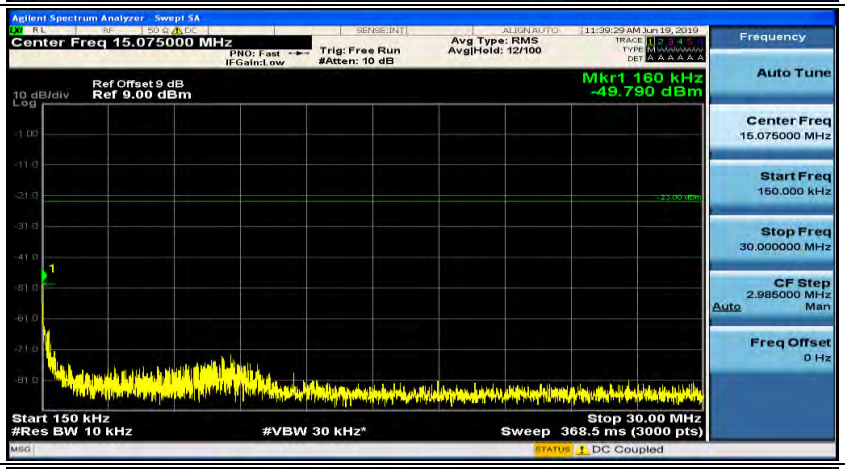

Agilent Spectrum Analyzer - Swept SA
Center Freq 15.075000 MHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 12/100
11:42:49 AM Jun 19, 2019
Frequency
Auto Tune
Mkr1 150 kHz
-53.871 dBm
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Center Freq
15.075000 MHz
Start Freq
150.000 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
11:42:55 AM Jun 19, 2019
Frequency
Auto Tune
Mkr2 25.628 GHz
-26.181 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)

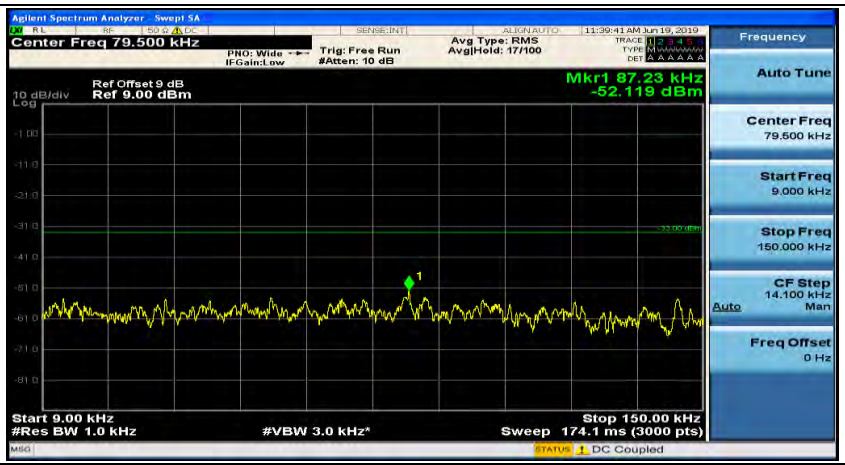
Channel Bandwidth: 10 MHz_LCH_16QAM_1RB#0



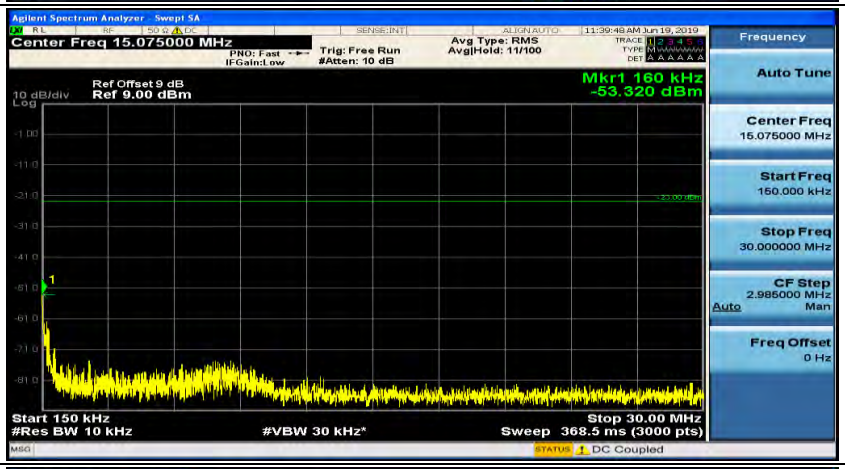
Channel Bandwidth: 10 MHz_LCH_16QAM_1RB#24



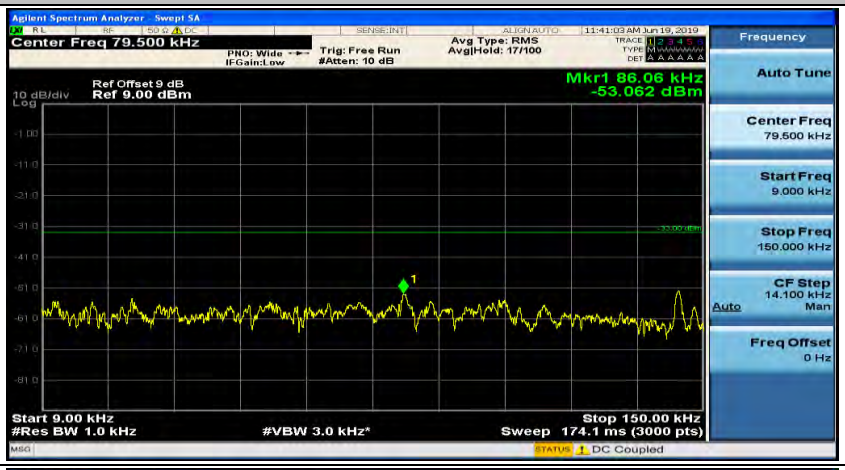
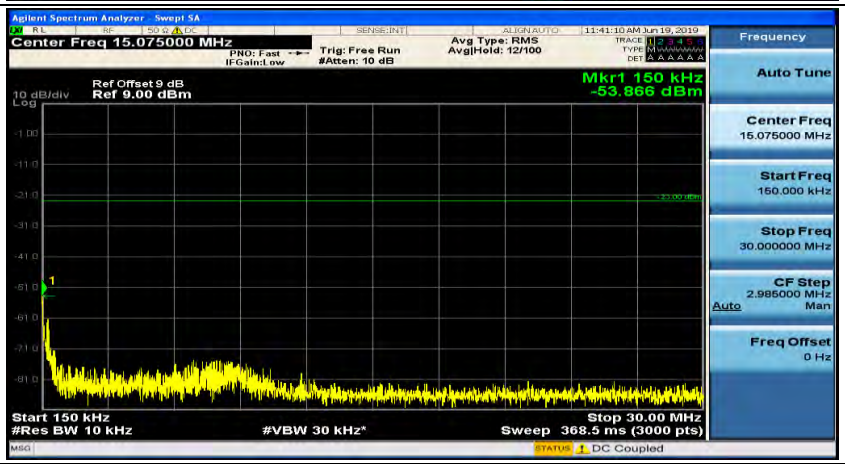


Channel Bandwidth: 10 MHz_LCH_16QAM_1RB#49

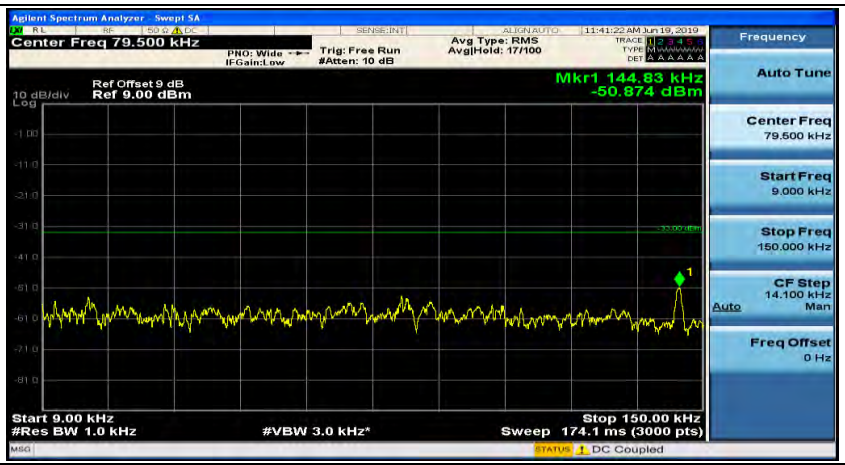

Agilent Spectrum Analyzer - Swept SA
Center Freq 79.500 kHz
PNO: Wide
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 17/100
11:39:41 AM Jun 19, 2019
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Mkr1 87.23 kHz
-52.119 dBm
Start 9.00 kHz
#Res BW 1.0 kHz
#VBW 3.0 kHz*
Stop 150.00 kHz
Sweep 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

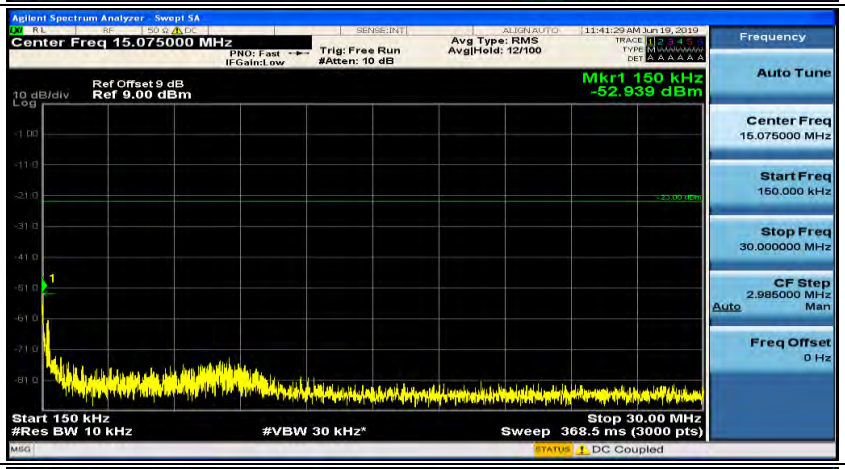

Agilent Spectrum Analyzer - Swept SA
Center Freq 15.075000 MHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 11/100
11:39:48 AM Jun 19, 2019
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Mkr1 160 kHz
-53.320 dBm
Start 150 kHz
#Res BW 10 kHz
#VBW 30 kHz*
Stop 30.00 MHz
Sweep 368.5 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
11:39:54 AM Jun 19, 2019
Ref Offset 8.95 dB
10 dB/div
Log
Ref 30.00 dBm
Mkr2 25.645 GHz
-26.077 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

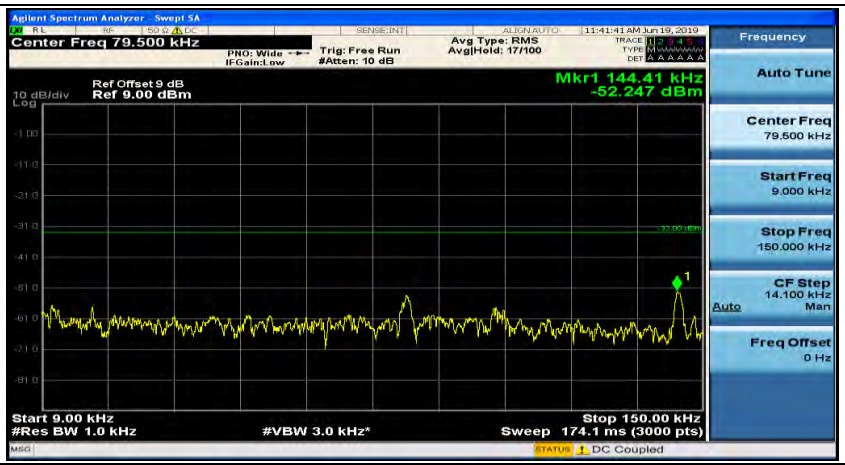
Channel Bandwidth: 10 MHz_MCH_16QAM_1RB#0



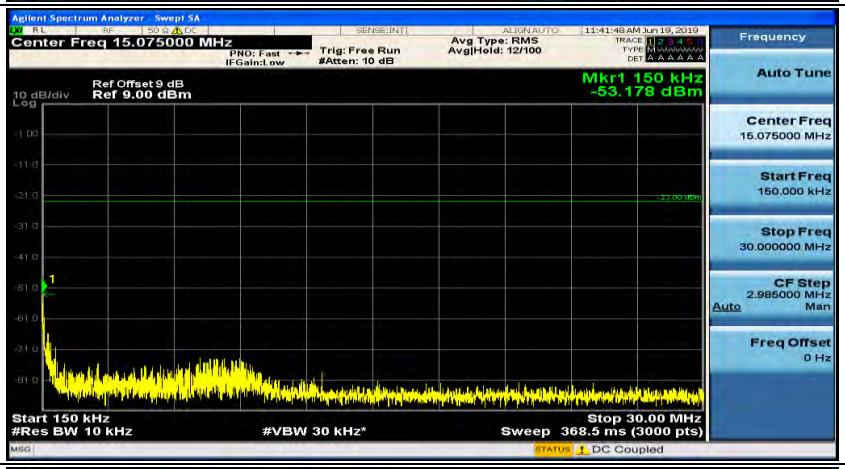
Channel Bandwidth: 10 MHz_MCH_16QAM_1RB#24



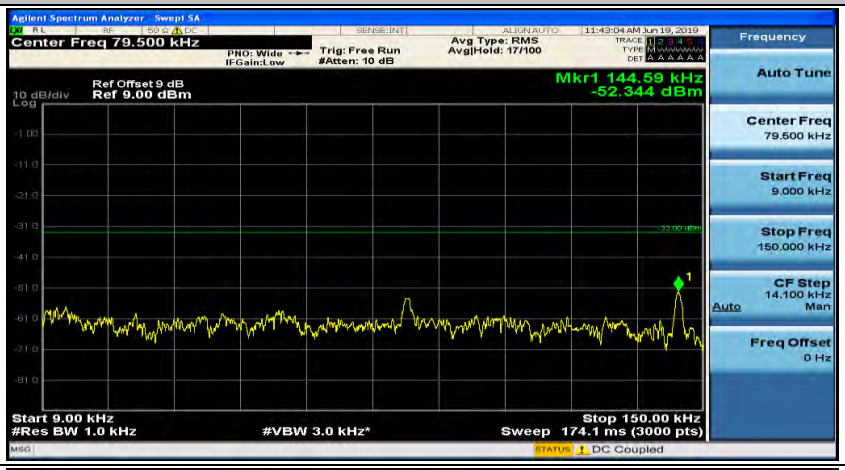
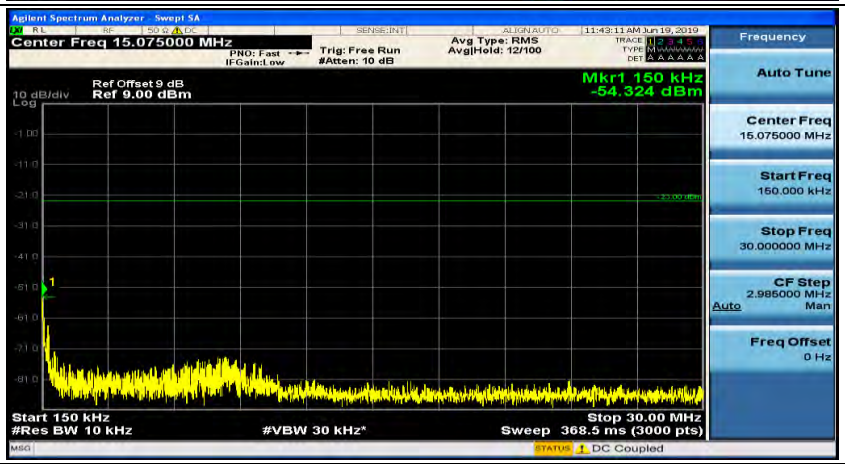


Channel Bandwidth: 10 MHz_MCH_16QAM_1RB#49

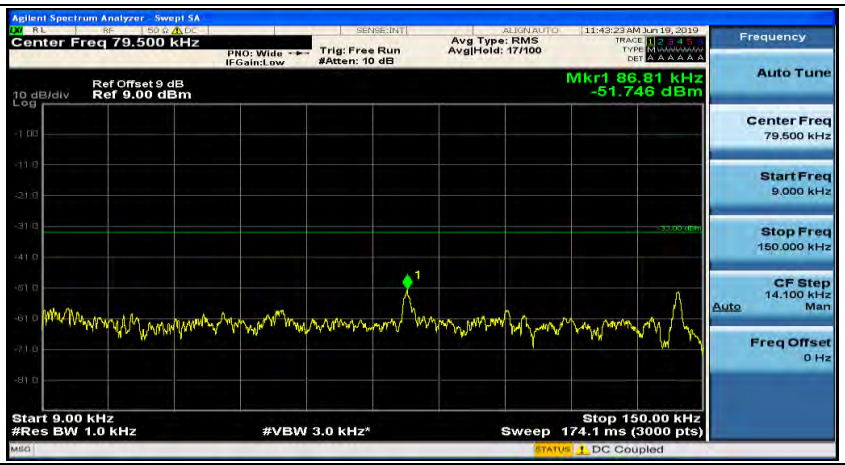

Agilent Spectrum Analyzer - Swept SA
Center Freq 79.500 kHz
PNO: Wide
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 17/100
11:41:41 AM Jun 19, 2019
Frequency
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Mkr1 144.41 kHz
-52.247 dBm
Auto Tune
Center Freq
79.500 kHz
Start Freq
9.000 kHz
Stop Freq
150.000 kHz
CF Step
14.100 kHz
Auto
Man
Freq Offset
0 Hz
Start 9.00 kHz
#Res BW 1.0 kHz
#VBW 3.0 kHz*
Stop 150.00 kHz
Sweep 174.1 ms (3000 pts)
DC Coupled

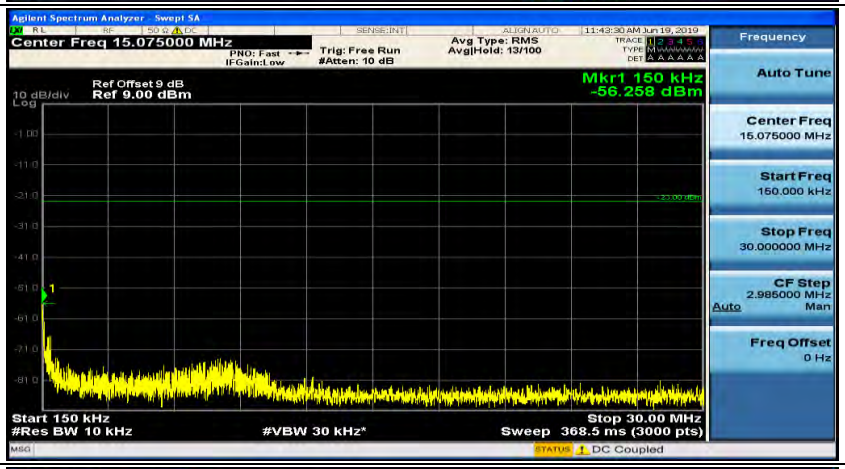

Agilent Spectrum Analyzer - Swept SA
Center Freq 15.075000 MHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 12/100
11:41:48 AM Jun 19, 2019
Frequency
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Mkr1 150 kHz
-53.178 dBm
Auto Tune
Center Freq
15.075000 MHz
Start Freq
150.000 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
11:41:54 AM Jun 19, 2019
Frequency
Ref Offset 8.95 dB
10 dB/div
Log
Ref 30.00 dBm
Mkr2 25.610 GHz
-25.991 dBm
Auto Tune
Center Freq
13.015000000 GHz
Start Freq
30.000000 MHz
Stop Freq
26.000000000 GHz
CF Step
2.597000000 GHz
Auto
Man
Freq Offset
0 Hz
Start 30 MHz
#Res BW 1.0 MHz
#VBW 3.0 MHz*
Stop 26.00 GHz
Sweep 64.98 ms (3000 pts)

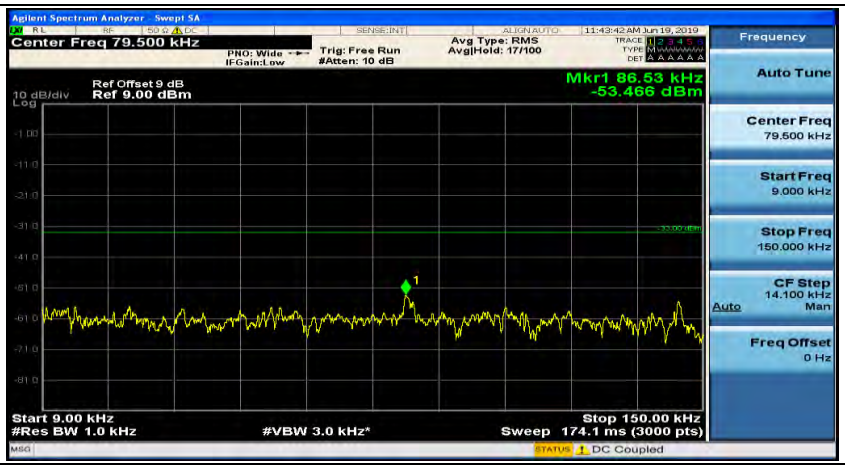
Channel Bandwidth: 10 MHz_HCH_16QAM_1RB#0



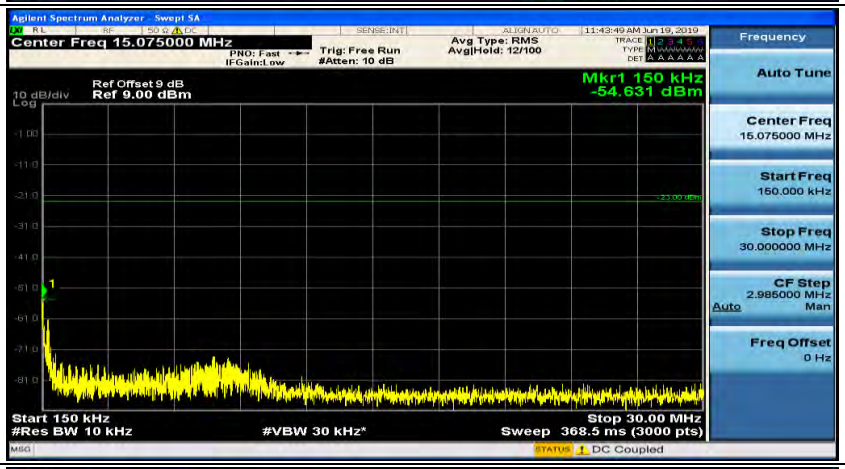
Channel Bandwidth: 10 MHz_HCH_16QAM_1RB#24





Channel Bandwidth: 10 MHz_HCH_16QAM_1RB#49


Agilent Spectrum Analyzer - Swept SA
Center Freq 79.500 kHz
PNO: Wide
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 17/100
11:43:42 AM Jun 19, 2019
Frequency
Auto Tune
Mkr1 86.53 kHz
-53.466 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
11:43:49 AM Jun 19, 2019
Frequency
Auto Tune
Mkr1 150 kHz
-54.631 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
11:43:55 AM Jun 19, 2019
Frequency
Auto Tune
Mkr2 25.697 GHz
-26.026 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)

Appendix F: Frequency Stability

Test Result

Channel Bandwidth: 1.4 MHz

Channel Bandwidth: 1.4 MHz							
Voltage							
Modulation	Channel	Voltage [Vdc]	Temperature (℃)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
QPSK	LCH	VL	TN	-0.79	-0.000958	± 2.5	PASS
		VN	TN	4.56	0.005529	± 2.5	PASS
		VH	TN	-0.45	-0.000546	± 2.5	PASS
	MCH	VL	TN	0.93	0.001112	± 2.5	PASS
		VN	TN	4.87	0.005822	± 2.5	PASS
		VH	TN	0.3	0.000359	± 2.5	PASS
	HCH	VL	TN	2.07	0.002440	± 2.5	PASS
		VN	TN	0.73	0.000861	± 2.5	PASS
		VH	TN	2.26	0.002664	± 2.5	PASS
16QAM	LCH	VL	TN	0.42	0.000509	± 2.5	PASS
		VN	TN	-0.25	-0.000303	± 2.5	PASS
		VH	TN	3.46	0.004195	± 2.5	PASS
	MCH	VL	TN	1.43	0.001710	± 2.5	PASS
		VN	TN	-1.33	-0.001590	± 2.5	PASS
		VH	TN	-0.99	-0.001184	± 2.5	PASS
	HCH	VL	TN	3.47	0.004091	± 2.5	PASS
		VN	TN	2.37	0.002794	± 2.5	PASS
		VH	TN	4.3	0.005069	± 2.5	PASS
Temperature							
Modulation	Channel	Voltage [Vdc]	Temperature (℃)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
QPSK	LCH	VN	-30	3.15	0.003820	± 2.5	PASS
		VN	-20	0.31	0.000376	± 2.5	PASS
		VN	-10	2.23	0.002704	± 2.5	PASS
		VN	0	1.53	0.001855	± 2.5	PASS
		VN	10	2.98	0.003613	± 2.5	PASS
		VN	20	4.44	0.005384	± 2.5	PASS
		VN	30	1.63	0.001976	± 2.5	PASS
		VN	40	4.27	0.005178	± 2.5	PASS
		VN	50	2.51	0.003044	± 2.5	PASS
	MCH	VN	-30	-1.1	-0.001315	± 2.5	PASS
		VN	-20	3.82	0.004567	± 2.5	PASS

		VN	-10	-0.8	-0.000956	± 2.5	PASS
		VN	0	4.11	0.004913	± 2.5	PASS
		VN	10	4.14	0.004949	± 2.5	PASS
		VN	20	4.13	0.004937	± 2.5	PASS
		VN	30	-0.81	-0.000968	± 2.5	PASS
		VN	40	-1.19	-0.001423	± 2.5	PASS
		VN	50	4.55	0.005439	± 2.5	PASS
	HCH	VN	-30	2.79	0.003289	± 2.5	PASS
		VN	-20	-0.81	-0.000955	± 2.5	PASS
		VN	-10	-1.34	-0.001580	± 2.5	PASS
		VN	0	-1.31	-0.001544	± 2.5	PASS
		VN	10	4.83	0.005694	± 2.5	PASS
		VN	20	0.36	0.000424	± 2.5	PASS
		VN	30	4.24	0.004998	± 2.5	PASS
		VN	40	4.8	0.005658	± 2.5	PASS
		VN	50	4.1	0.004833	± 2.5	PASS
16QAM	LCH	VN	-30	-0.07	-0.000085	± 2.5	PASS
		VN	-20	0.5	0.000606	± 2.5	PASS
		VN	-10	-0.66	-0.000800	± 2.5	PASS
		VN	0	2.99	0.003626	± 2.5	PASS
		VN	10	3.84	0.004656	± 2.5	PASS
		VN	20	4.82	0.005845	± 2.5	PASS
		VN	30	-1.81	-0.002195	± 2.5	PASS
		VN	40	4.34	0.005263	± 2.5	PASS
		VN	50	0.83	0.001006	± 2.5	PASS
	MCH	VN	-30	0.31	0.000365	± 2.5	PASS
		VN	-20	3.53	0.004161	± 2.5	PASS
		VN	-10	4.93	0.005812	± 2.5	PASS
		VN	0	0.92	0.001085	± 2.5	PASS
		VN	10	4	0.004715	± 2.5	PASS
		VN	20	-0.65	-0.000766	± 2.5	PASS
		VN	30	2.22	0.002617	± 2.5	PASS
		VN	40	0.91	0.001073	± 2.5	PASS
		VN	50	2.21	0.002605	± 2.5	PASS
	HCH	VN	-30	3.06	0.003607	± 2.5	PASS
		VN	-20	3.29	0.003878	± 2.5	PASS
		VN	-10	-0.44	-0.000519	± 2.5	PASS
		VN	0	1.99	0.002346	± 2.5	PASS
		VN	10	2.57	0.003030	± 2.5	PASS
		VN	20	0.7	0.000825	± 2.5	PASS
		VN	30	0.7	0.000825	± 2.5	PASS

		VN	40	-1.63	-0.001921	± 2.5	PASS
		VN	50	4.39	0.005175	± 2.5	PASS

Channel Bandwidth: 3 MHz

Channel Bandwidth: 3 MHz+							
Voltage							
Modulation	Channel	Voltage [Vdc]	Temperature (℃)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
QPSK	LCH	VL	TN	0.44	0.000533	± 2.5	PASS
		VN	TN	4.49	0.005439	± 2.5	PASS
		VH	TN	-1.39	-0.001684	± 2.5	PASS
	MCH	VL	TN	2.71	0.003240	± 2.5	PASS
		VN	TN	-0.23	-0.000275	± 2.5	PASS
		VH	TN	1.77	0.002116	± 2.5	PASS
	HCH	VL	TN	4.82	0.005687	± 2.5	PASS
		VN	TN	-0.63	-0.000743	± 2.5	PASS
		VH	TN	3.96	0.004673	± 2.5	PASS
16QAM	LCH	VL	TN	1.83	0.002217	± 2.5	PASS
		VN	TN	0.37	0.000448	± 2.5	PASS
		VH	TN	-1.07	-0.001296	± 2.5	PASS
	MCH	VL	TN	0.56	0.000669	± 2.5	PASS
		VN	TN	4.68	0.005595	± 2.5	PASS
		VH	TN	-1.43	-0.001710	± 2.5	PASS
	HCH	VL	TN	2.99	0.003528	± 2.5	PASS
		VN	TN	1.57	0.001853	± 2.5	PASS
		VH	TN	1.45	0.001711	± 2.5	PASS
Temperature							
Modulation	Channel	Voltage [Vdc]	Temperature (℃)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
QPSK	LCH	VN	-30	3.91	0.004737	± 2.5	PASS
		VN	-20	2.81	0.003404	± 2.5	PASS
		VN	-10	4.03	0.004882	± 2.5	PASS
		VN	0	3.31	0.004010	± 2.5	PASS
		VN	10	-0.14	-0.000170	± 2.5	PASS
		VN	20	-0.59	-0.000715	± 2.5	PASS
		VN	30	4.47	0.005415	± 2.5	PASS
		VN	40	1.81	0.002193	± 2.5	PASS
		VN	50	3.92	0.004749	± 2.5	PASS
	MCH	VN	-30	1.12	0.001339	± 2.5	PASS
		VN	-20	1.26	0.001506	± 2.5	PASS
		VN	-10	4.24	0.005069	± 2.5	PASS

		VN	0	4.13	0.004937	± 2.5	PASS
		VN	10	1.39	0.001662	± 2.5	PASS
		VN	20	-1.65	-0.001973	± 2.5	PASS
		VN	30	0.59	0.000705	± 2.5	PASS
		VN	40	4.64	0.005547	± 2.5	PASS
		VN	50	3.37	0.004029	± 2.5	PASS
	HCH	VN	-30	2.38	0.002808	± 2.5	PASS
		VN	-20	0.64	0.000755	± 2.5	PASS
		VN	-10	-0.83	-0.000979	± 2.5	PASS
		VN	0	2.74	0.003233	± 2.5	PASS
		VN	10	-0.76	-0.000897	± 2.5	PASS
		VN	20	2.37	0.002796	± 2.5	PASS
		VN	30	4.32	0.005097	± 2.5	PASS
		VN	40	-1.07	-0.001263	± 2.5	PASS
		VN	50	3.3	0.003894	± 2.5	PASS
QPSK	LCH	VN	-30	4.67	0.005583	± 2.5	PASS
		VN	-20	1.42	0.001698	± 2.5	PASS
		VN	-10	2.26	0.002702	± 2.5	PASS
		VN	0	0.15	0.000179	± 2.5	PASS
		VN	10	2.9	0.003467	± 2.5	PASS
		VN	20	2.7	0.003228	± 2.5	PASS
		VN	30	0.54	0.000646	± 2.5	PASS
		VN	40	1.1	0.001315	± 2.5	PASS
		VN	50	4.04	0.004830	± 2.5	PASS
	MCH	VN	-30	-0.24	-0.000283	± 2.5	PASS
		VN	-20	1.38	0.001628	± 2.5	PASS
		VN	-10	4.49	0.005298	± 2.5	PASS
		VN	0	-1.46	-0.001723	± 2.5	PASS
		VN	10	2.17	0.002560	± 2.5	PASS
		VN	20	-1.51	-0.001782	± 2.5	PASS
		VN	30	-0.55	-0.000649	± 2.5	PASS
		VN	40	2.63	0.003103	± 2.5	PASS
		VN	50	4.44	0.005239	± 2.5	PASS
	HCH	VN	-30	0.55	0.000649	± 2.5	PASS
		VN	-20	-1.12	-0.001322	± 2.5	PASS
		VN	-10	1.97	0.002324	± 2.5	PASS
		VN	0	-1.58	-0.001864	± 2.5	PASS
		VN	10	4.77	0.005628	± 2.5	PASS
		VN	20	4.35	0.005133	± 2.5	PASS
		VN	30	0.63	0.000743	± 2.5	PASS
		VN	40	1.15	0.001357	± 2.5	PASS

		VN	50	4.04	0.004767	± 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	4.15	0.005021	± 2.5	PASS
		VN	TN	-0.94	-0.001137	± 2.5	PASS
		VH	TN	0.14	0.000169	± 2.5	PASS
	MCH	VL	TN	-1.83	-0.002188	± 2.5	PASS
		VN	TN	2.83	0.003383	± 2.5	PASS
		VH	TN	-0.92	-0.001100	± 2.5	PASS
	HCH	VL	TN	-1.74	-0.002056	± 2.5	PASS
		VN	TN	2.43	0.002871	± 2.5	PASS
		VH	TN	4.01	0.004737	± 2.5	PASS
16QAM	LCH	VL	TN	-0.18	-0.000218	± 2.5	PASS
		VN	TN	2.17	0.002626	± 2.5	PASS
		VH	TN	3.62	0.004380	± 2.5	PASS
	MCH	VL	TN	4.85	0.005798	± 2.5	PASS
		VN	TN	2.58	0.003084	± 2.5	PASS
		VH	TN	1.97	0.002355	± 2.5	PASS
	HCH	VL	TN	-1.95	-0.002304	± 2.5	PASS
		VN	TN	1.87	0.002209	± 2.5	PASS
		VH	TN	-0.14	-0.000165	± 2.5	PASS
Temperature							
Modulation	Channel	Voltage [Vdc]	Temperature (℃)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
QPSK	LCH	VN	-30	0.5	0.000605	± 2.5	PASS
		VN	-20	-1.84	-0.002226	± 2.5	PASS
		VN	-10	4.28	0.005178	± 2.5	PASS
		VN	0	3.94	0.004767	± 2.5	PASS
		VN	10	-1.77	-0.002142	± 2.5	PASS
		VN	20	1.46	0.001766	± 2.5	PASS
		VN	30	0.55	0.000665	± 2.5	PASS
		VN	40	-1.26	-0.001525	± 2.5	PASS
		VN	50	0.69	0.000835	± 2.5	PASS
	MCH	VN	-30	0.82	0.000980	± 2.5	PASS
		VN	-20	0.06	0.000072	± 2.5	PASS
		VN	-10	0.27	0.000323	± 2.5	PASS
		VN	0	0.65	0.000777	± 2.5	PASS

		VN	10	1.86	0.002224	± 2.5	PASS
		VN	20	2.51	0.003001	± 2.5	PASS
		VN	30	1.23	0.001470	± 2.5	PASS
		VN	40	3.33	0.003981	± 2.5	PASS
		VN	50	4.71	0.005631	± 2.5	PASS
	HCH	VN	-30	1.21	0.001429	± 2.5	PASS
		VN	-20	-1.14	-0.001347	± 2.5	PASS
		VN	-10	2.14	0.002528	± 2.5	PASS
		VN	0	0.52	0.000614	± 2.5	PASS
		VN	10	3.7	0.004371	± 2.5	PASS
		VN	20	1.41	0.001666	± 2.5	PASS
		VN	30	1.57	0.001855	± 2.5	PASS
		VN	40	0.98	0.001158	± 2.5	PASS
		VN	50	2	0.002363	± 2.5	PASS
16QAM	LCH	VN	-30	-0.95	-0.001136	± 2.5	PASS
		VN	-20	1.75	0.002092	± 2.5	PASS
		VN	-10	3.64	0.004351	± 2.5	PASS
		VN	0	3.63	0.004340	± 2.5	PASS
		VN	10	2.92	0.003491	± 2.5	PASS
		VN	20	-1.73	-0.002068	± 2.5	PASS
		VN	30	0.3	0.000359	± 2.5	PASS
		VN	40	0.59	0.000705	± 2.5	PASS
		VN	50	3.91	0.004674	± 2.5	PASS
	MCH	VN	-30	1.18	0.001394	± 2.5	PASS
		VN	-20	-0.16	-0.000189	± 2.5	PASS
		VN	-10	1.85	0.002185	± 2.5	PASS
		VN	0	2.52	0.002977	± 2.5	PASS
		VN	10	3.7	0.004371	± 2.5	PASS
		VN	20	4.91	0.005800	± 2.5	PASS
		VN	30	2.56	0.003024	± 2.5	PASS
		VN	40	1.79	0.002115	± 2.5	PASS
		VN	50	-0.68	-0.000803	± 2.5	PASS
	HCH	VN	-30	2.4	0.002835	± 2.5	PASS
		VN	-20	2.18	0.002575	± 2.5	PASS
		VN	-10	3.96	0.004678	± 2.5	PASS
		VN	0	-1.7	-0.002008	± 2.5	PASS
		VN	10	-0.88	-0.001040	± 2.5	PASS
		VN	20	-1.91	-0.002256	± 2.5	PASS
		VN	30	-0.26	-0.000307	± 2.5	PASS
		VN	40	-1.65	-0.001949	± 2.5	PASS
		VN	50	-0.74	-0.000874	± 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	3.09	0.003727	± 2.5	PASS
		VN	TN	0.26	0.000314	± 2.5	PASS
		VH	TN	1.87	0.002256	± 2.5	PASS
	MCH	VL	TN	3.44	0.004112	± 2.5	PASS
		VN	TN	-0.72	-0.000861	± 2.5	PASS
		VH	TN	2.16	0.002582	± 2.5	PASS
	HCH	VL	TN	-1.59	-0.001884	± 2.5	PASS
		VN	TN	0.09	0.000107	± 2.5	PASS
		VH	TN	1.92	0.002275	± 2.5	PASS
16QAM	LCH	VL	TN	-0.36	-0.000434	± 2.5	PASS
		VN	TN	2.81	0.003390	± 2.5	PASS
		VH	TN	-1.96	-0.002364	± 2.5	PASS
	MCH	VL	TN	0.54	0.000646	± 2.5	PASS
		VN	TN	4.58	0.005475	± 2.5	PASS
		VH	TN	-0.38	-0.000454	± 2.5	PASS
	HCH	VL	TN	-0.65	-0.000770	± 2.5	PASS
		VN	TN	0.06	0.000071	± 2.5	PASS
		VH	TN	2.32	0.002749	± 2.5	PASS
Temperature							
Modulation	Channel	Voltage [Vdc]	Temperature (℃)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
16QAM	LCH	VN	-30	1.03	0.001242	± 2.5	PASS
		VN	-20	0.15	0.000181	± 2.5	PASS
		VN	-10	-0.18	-0.000217	± 2.5	PASS
		VN	0	-1.16	-0.001399	± 2.5	PASS
		VN	10	0.93	0.001122	± 2.5	PASS
		VN	20	2.43	0.002931	± 2.5	PASS
		VN	30	3.11	0.003752	± 2.5	PASS
		VN	40	3.24	0.003908	± 2.5	PASS
		VN	50	-1	-0.001206	± 2.5	PASS
	MCH	VN	-30	1.42	0.001698	± 2.5	PASS
		VN	-20	2.43	0.002905	± 2.5	PASS
		VN	-10	4.66	0.005571	± 2.5	PASS
		VN	0	3.24	0.003873	± 2.5	PASS
		VN	10	3.38	0.004041	± 2.5	PASS
		VN	20	-1.85	-0.002212	± 2.5	PASS

		VN	30	0.42	0.000502	± 2.5	PASS
		VN	40	1.03	0.001231	± 2.5	PASS
		VN	50	0.56	0.000669	± 2.5	PASS
	HCH	VN	-30	-0.49	-0.000581	± 2.5	PASS
		VN	-20	4.79	0.005675	± 2.5	PASS
		VN	-10	3.78	0.004479	± 2.5	PASS
		VN	0	3.02	0.003578	± 2.5	PASS
		VN	10	1.11	0.001315	± 2.5	PASS
		VN	20	0.52	0.000616	± 2.5	PASS
		VN	30	2.84	0.003365	± 2.5	PASS
		VN	40	2.74	0.003246	± 2.5	PASS
		VN	50	1.27	0.001505	± 2.5	PASS
QPSK	LCH	VN	-30	-1.76	-0.002104	± 2.5	PASS
		VN	-20	-1.92	-0.002295	± 2.5	PASS
		VN	-10	1.3	0.001554	± 2.5	PASS
		VN	0	4.36	0.005212	± 2.5	PASS
		VN	10	2.16	0.002582	± 2.5	PASS
		VN	20	0.82	0.000980	± 2.5	PASS
		VN	30	3.83	0.004579	± 2.5	PASS
		VN	40	1.44	0.001721	± 2.5	PASS
		VN	50	-1.84	-0.002200	± 2.5	PASS
	MCH	VN	-30	3.33	0.003945	± 2.5	PASS
		VN	-20	2.23	0.002642	± 2.5	PASS
		VN	-10	0.82	0.000972	± 2.5	PASS
		VN	0	3.22	0.003815	± 2.5	PASS
		VN	10	-1.76	-0.002085	± 2.5	PASS
		VN	20	4.1	0.004858	± 2.5	PASS
		VN	30	0.83	0.000983	± 2.5	PASS
		VN	40	-0.03	-0.000036	± 2.5	PASS
		VN	50	0.58	0.000687	± 2.5	PASS
	HCH	VN	-30	4.13	0.004893	± 2.5	PASS
		VN	-20	3.09	0.003661	± 2.5	PASS
		VN	-10	-1.7	-0.002014	± 2.5	PASS
		VN	0	0.65	0.000770	± 2.5	PASS
		VN	10	4.02	0.004763	± 2.5	PASS
		VN	20	-1.96	-0.002322	± 2.5	PASS
		VN	30	-1.76	-0.002085	± 2.5	PASS
		VN	40	-1.71	-0.002026	± 2.5	PASS
		VN	50	2.85	0.003377	± 2.5	PASS