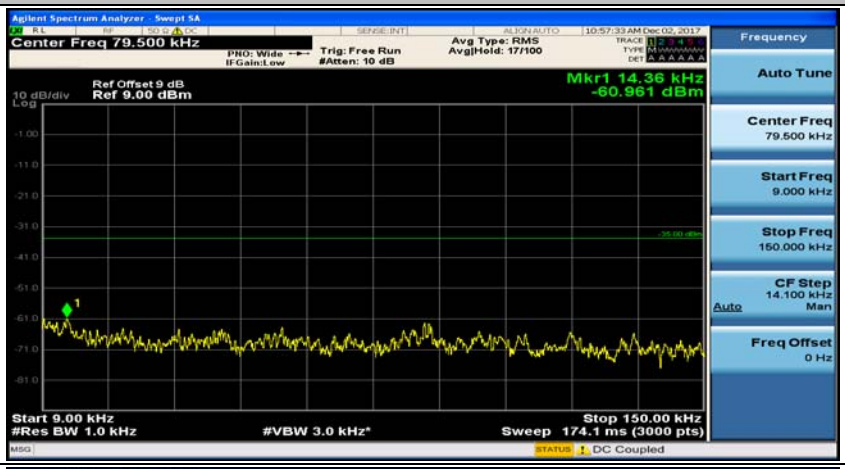
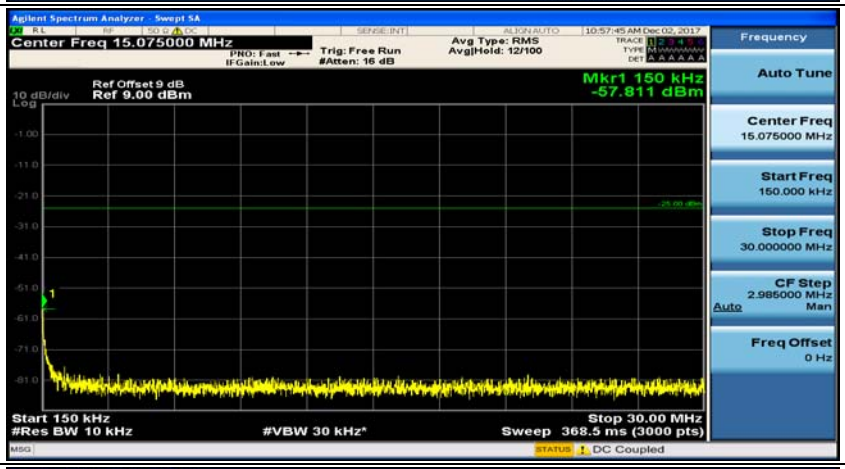
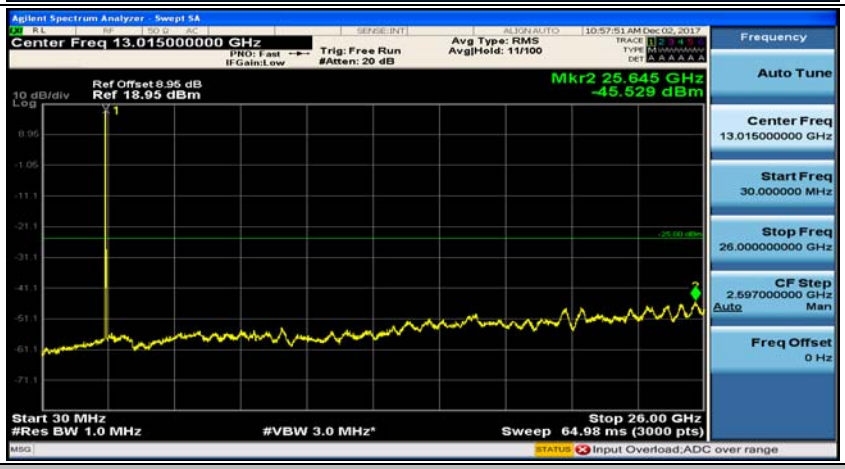
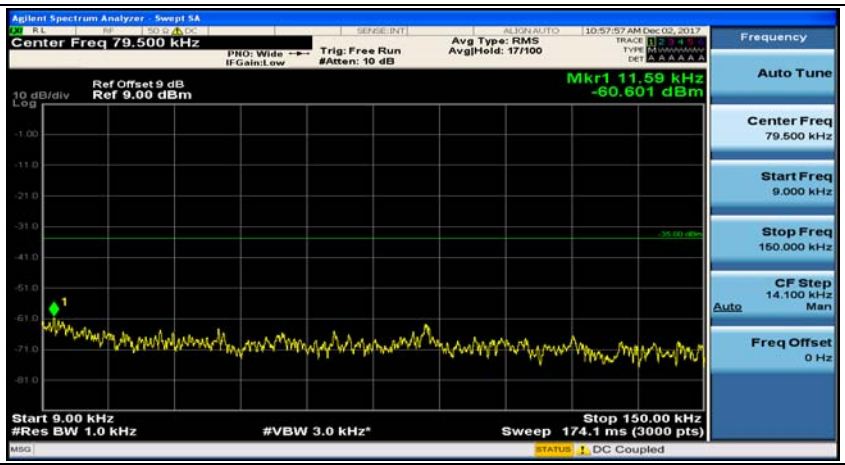
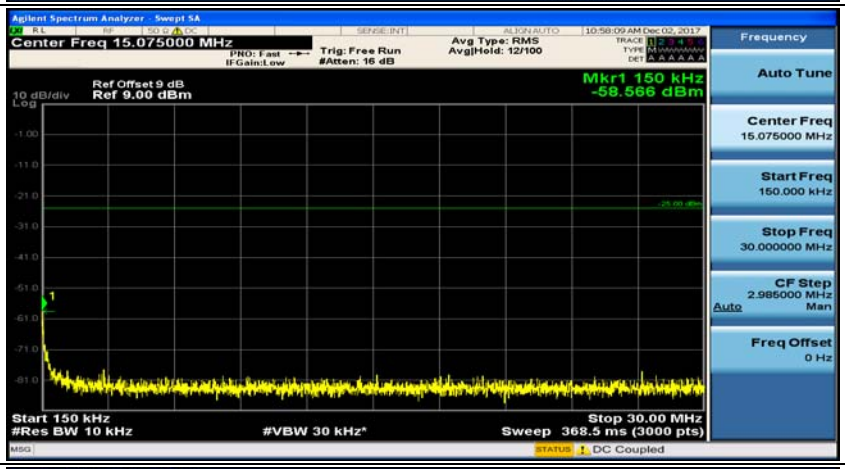
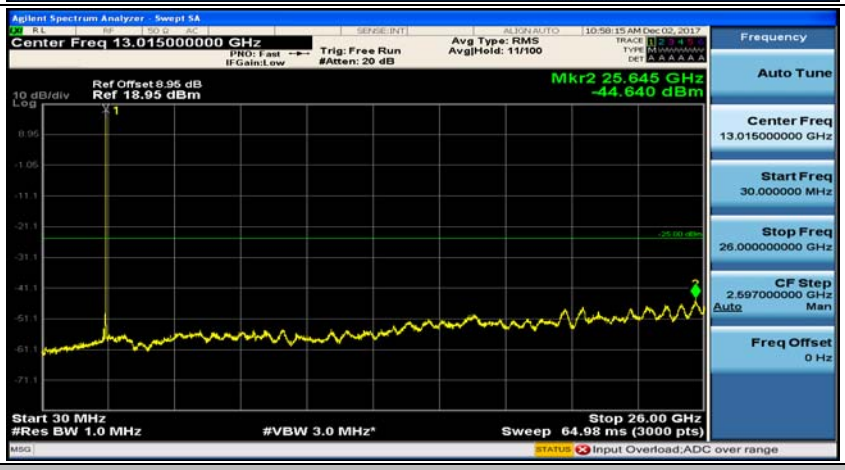
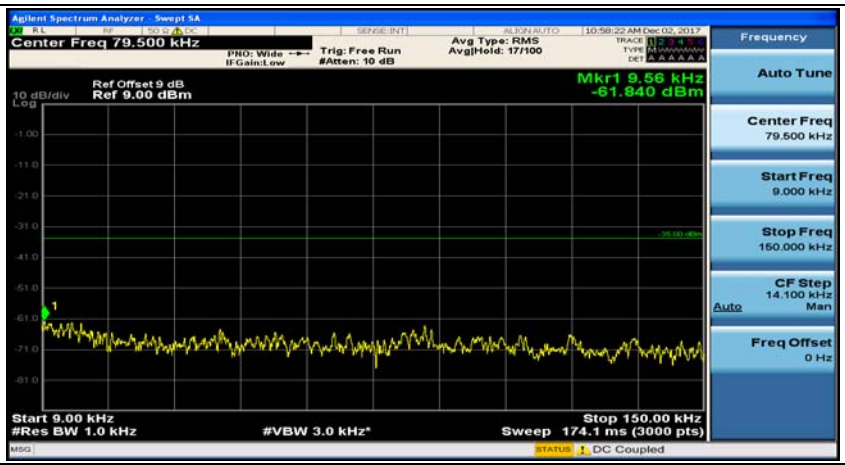
(Channel Bandwidth:15 MHz)_MCH_QPSK_1RB#0



(Channel Bandwidth:15 MHz)_MCH_QPSK_1RB#37

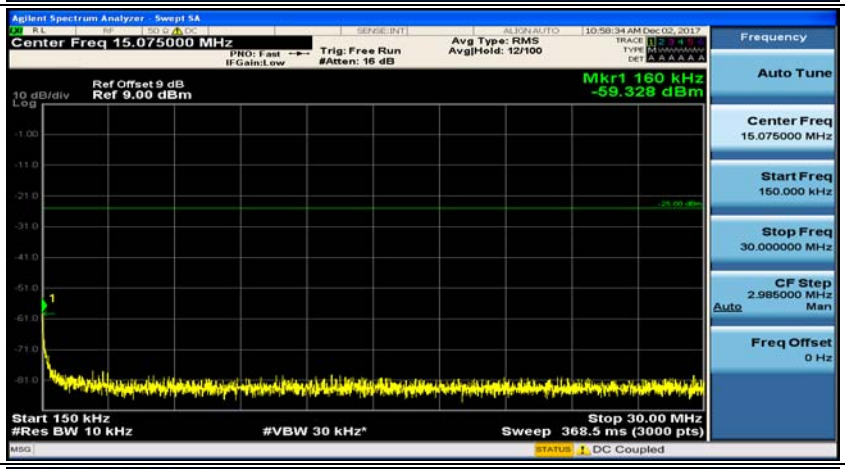


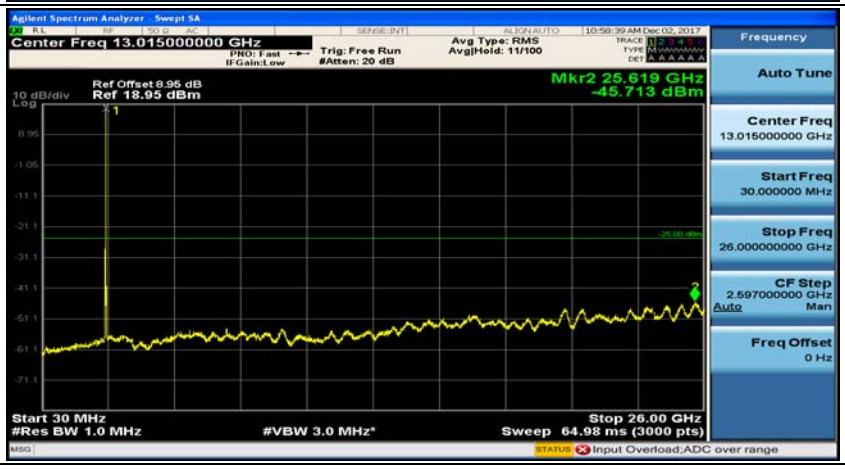


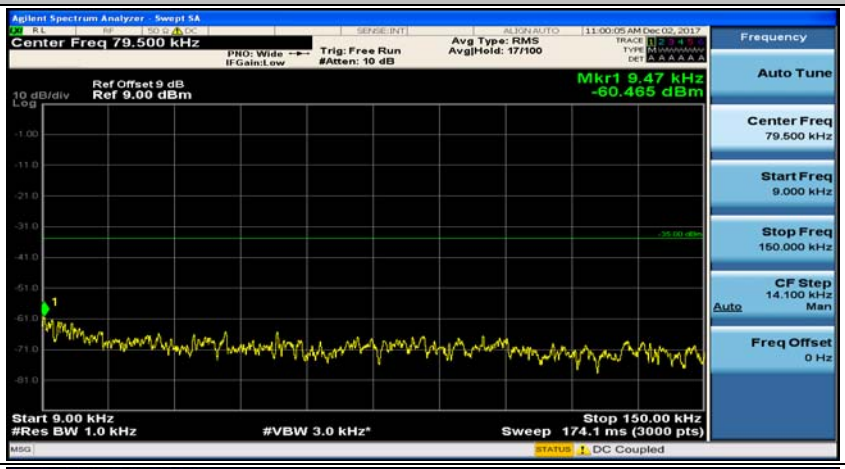
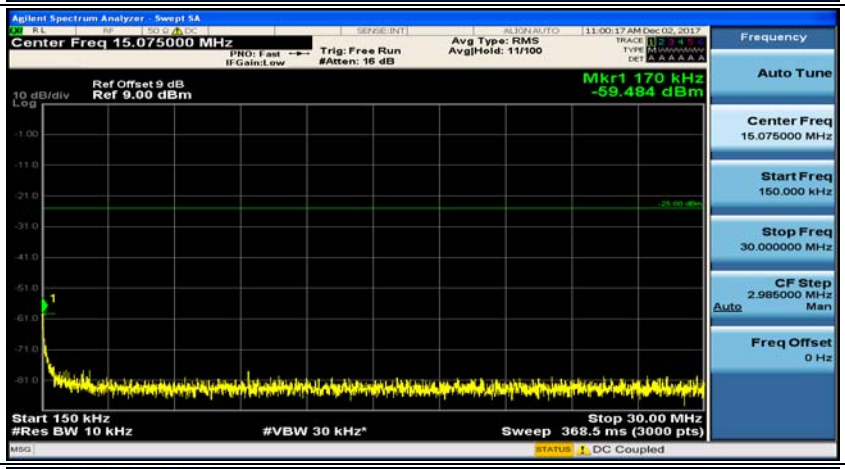
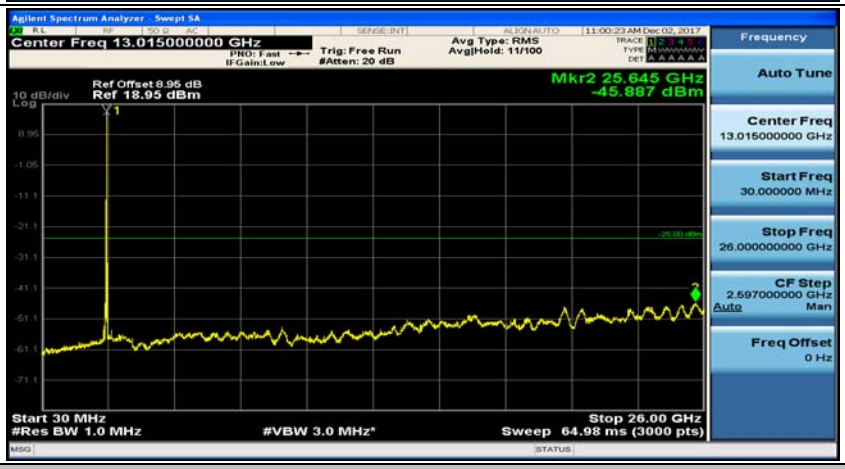


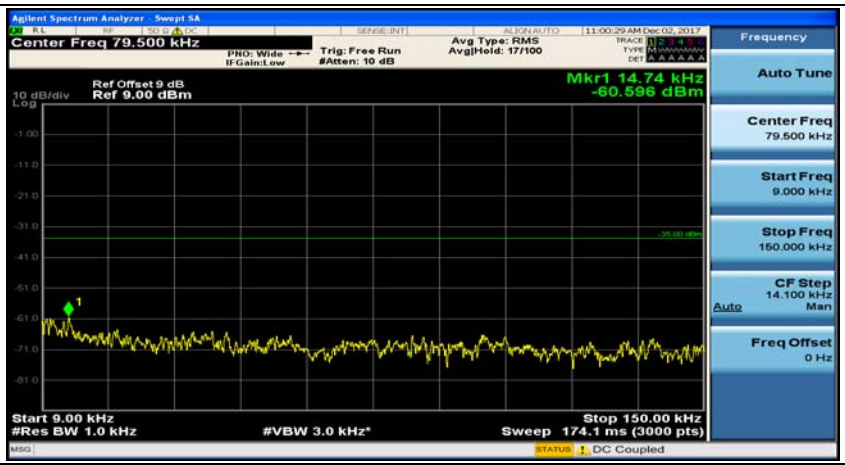
(Channel Bandwidth:15 MHz)_MCH_QPSK_1RB#74

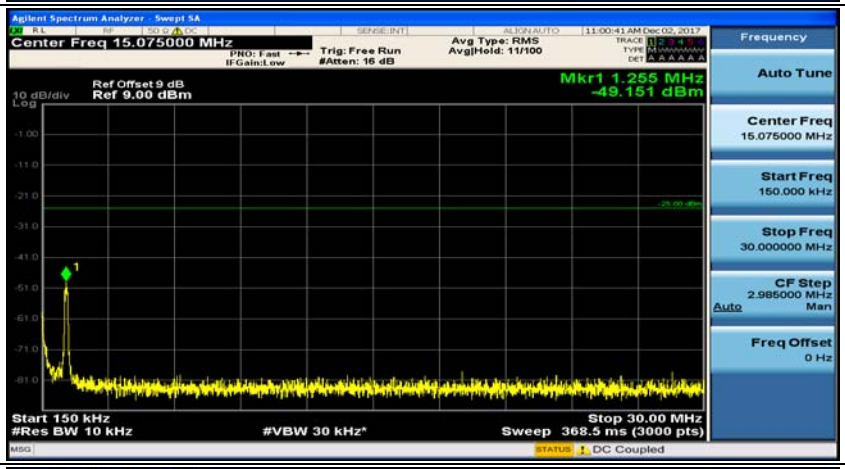

Agilent Spectrum Analyzer - Swept SA
Center Freq 79.500 kHz
PNO: Wide
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 17/100
10:58:22 AM Dec 02, 2017
Frequency
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Mkr1 9.56 kHz
-61.840 dBm
Auto Tune
Center Freq
79.500 kHz
Start Freq
9.000 kHz
Stop Freq
150.000 kHz
CF Step
14.100 kHz
Auto
Man
Freq Offset
0 Hz
Start 9.00 kHz
#Res BW 1.0 kHz
#VBW 3.0 kHz*
Stop 150.00 kHz
Sweep 174.1 ms (3000 pts)
DC Coupled


Agilent Spectrum Analyzer - Swept SA
Center Freq 15.075000 MHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 16 dB
Avg Type: RMS
Avg|Hold: 12/100
10:58:34 AM Dec 02, 2017
Frequency
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Mkr1 160 kHz
-59.328 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

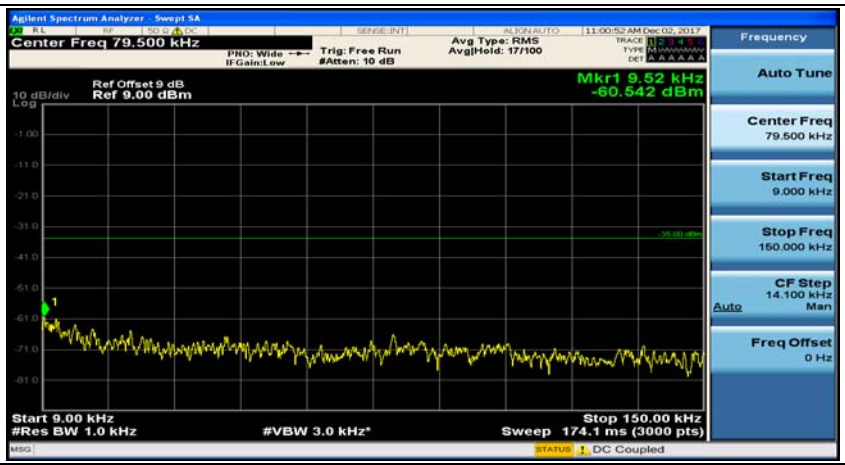

Agilent Spectrum Analyzer - Swept SA
Center Freq 13.015000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 20 dB
Avg Type: RMS
Avg|Hold: 11/100
10:58:39 AM Dec 02, 2017
Frequency
Ref Offset 8.95 dB
10 dB/div
Log
Ref 18.95 dBm
Mkr2 25.619 GHz
-45.713 dBm
Auto Tune
Center Freq
13.015000000 GHz
Start 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)
Input Overload;ADC over range

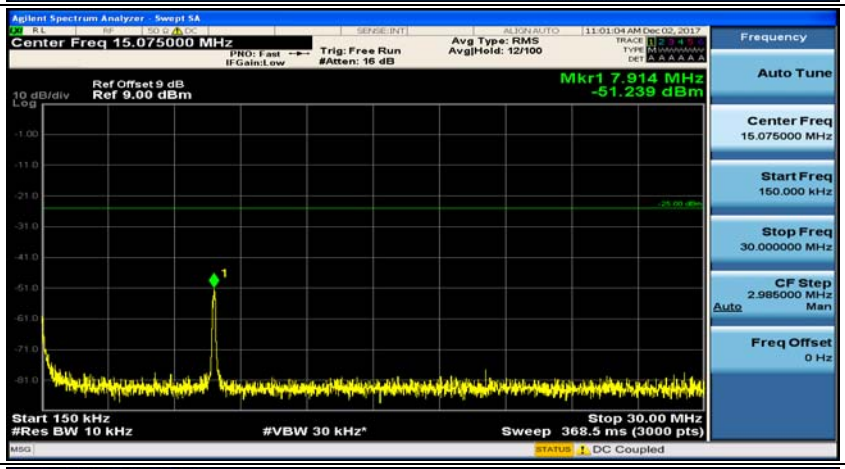
(Channel Bandwidth:15 MHz)_HCH_QPSK_1RB#0



(Channel Bandwidth:15 MHz)_HCH_QPSK_1RB#37

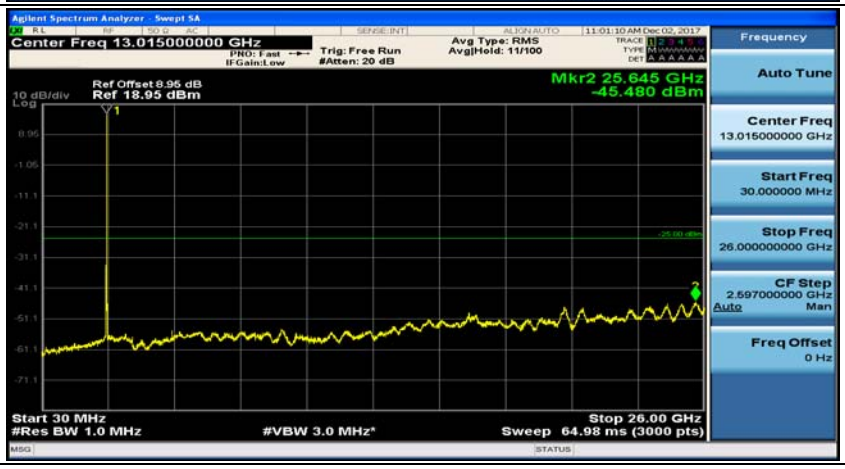


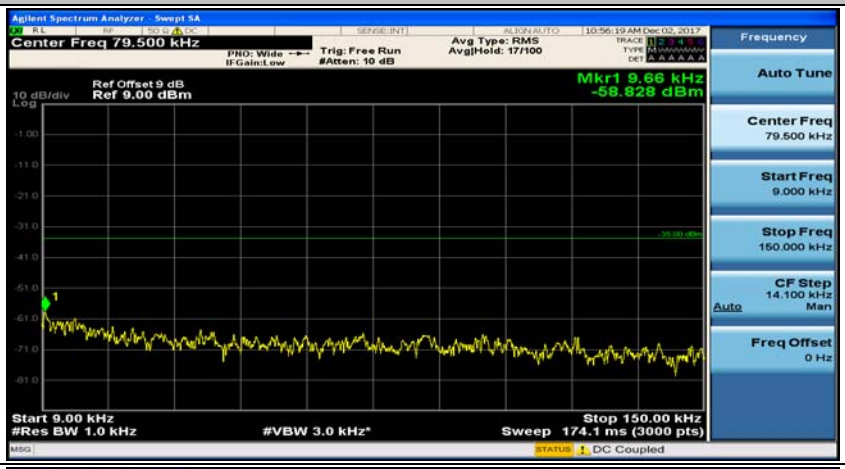
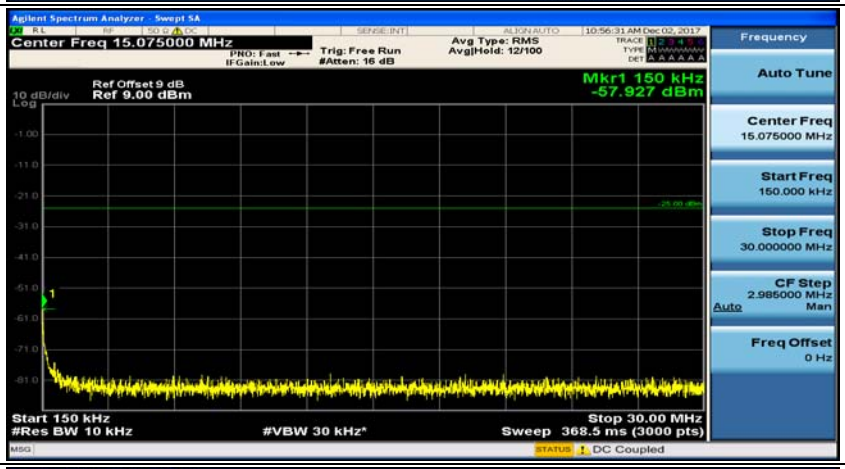
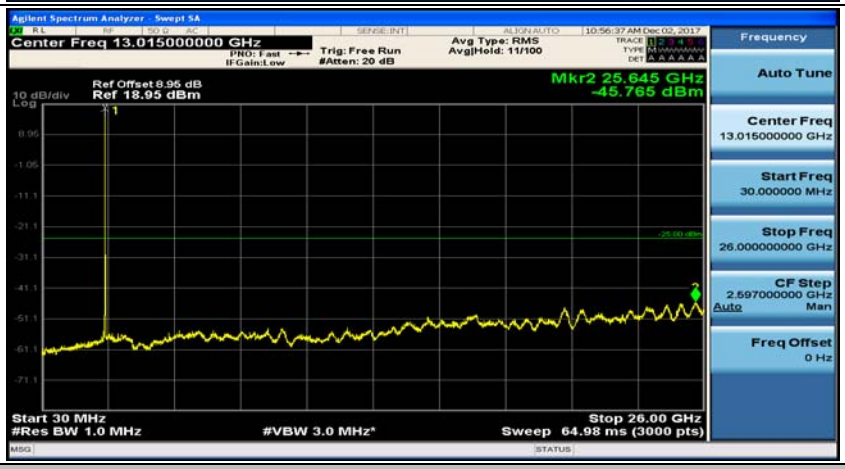


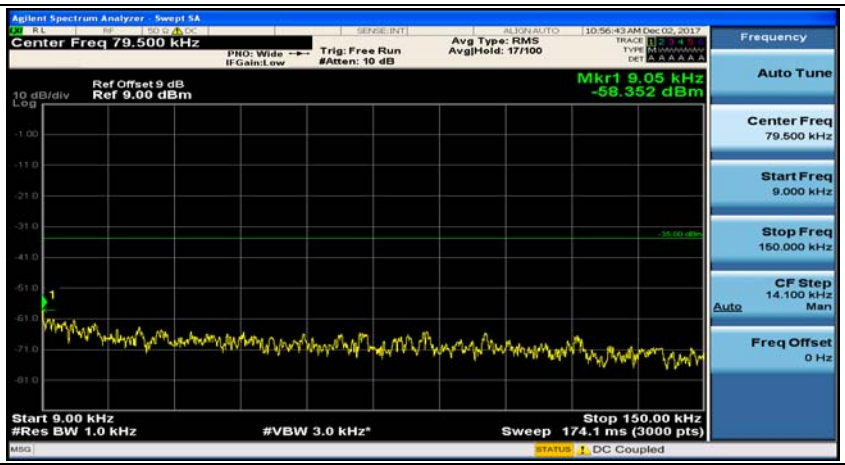
(Channel Bandwidth:15 MHz)_HCH_QPSK_1RB#74

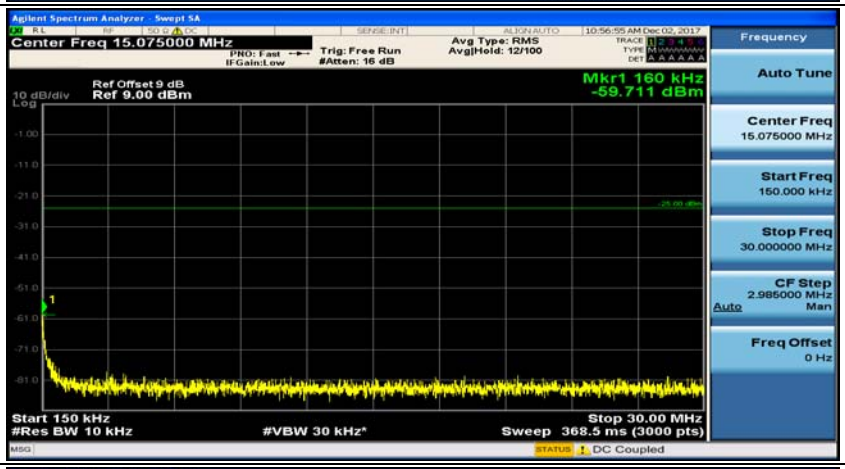

Agilent Spectrum Analyzer - Swept SA
Center Freq 79.500 kHz
PNO: Wide
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 17/100
11:00:52 AM Dec 02, 2017
Frequency
Auto Tune
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Mkr1 9.52 kHz
-60.542 dBm
Center Freq
79.500 kHz
Start Freq
9.000 kHz
Stop Freq
150.000 kHz
CF Step
14.100 kHz
Auto
Man
Freq Offset
0 Hz
Start 9.00 kHz
#Res BW 1.0 kHz
#VBW 3.0 kHz*
Stop 150.00 kHz
Sweep 174.1 ms (3000 pts)
DC Coupled

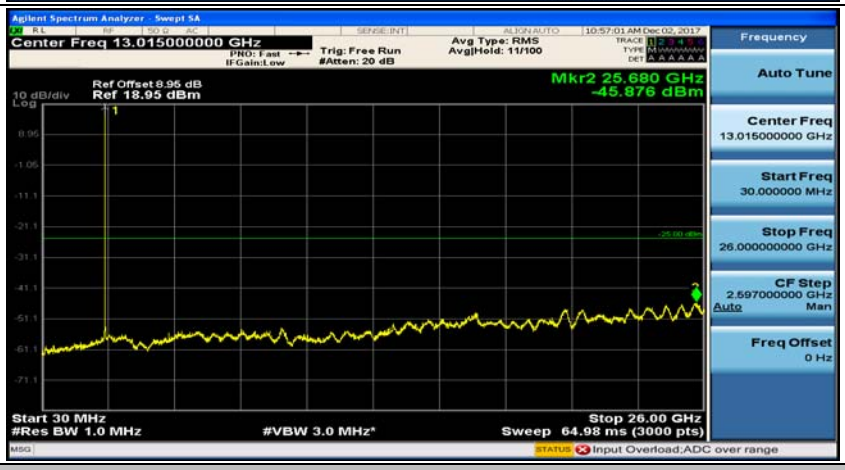

Agilent Spectrum Analyzer - Swept SA
Center Freq 15.075000 MHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 16 dB
Avg Type: RMS
Avg|Hold: 12/100
11:01:04 AM Dec 02, 2017
Frequency
Auto Tune
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Mkr1 7.914 MHz
-51.239 dBm
Center Freq
15.075000 MHz
Start Freq
150.000 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: 20 dB
Avg Type: RMS
Avg|Hold: 11/100
11:01:10 AM Dec 02, 2017
Frequency
Auto Tune
Ref Offset 8.95 dB
10 dB/div
Log
Ref 18.95 dBm
Mkr2 25.645 GHz
-45.480 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)

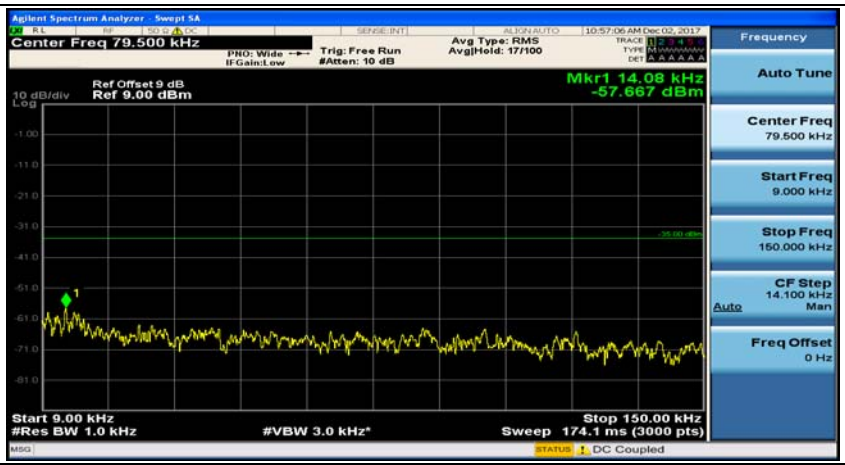
(Channel Bandwidth:15 MHz)_LCH_16QAM_1RB#0



(Channel Bandwidth:15 MHz)_LCH_16QAM_1RB#37

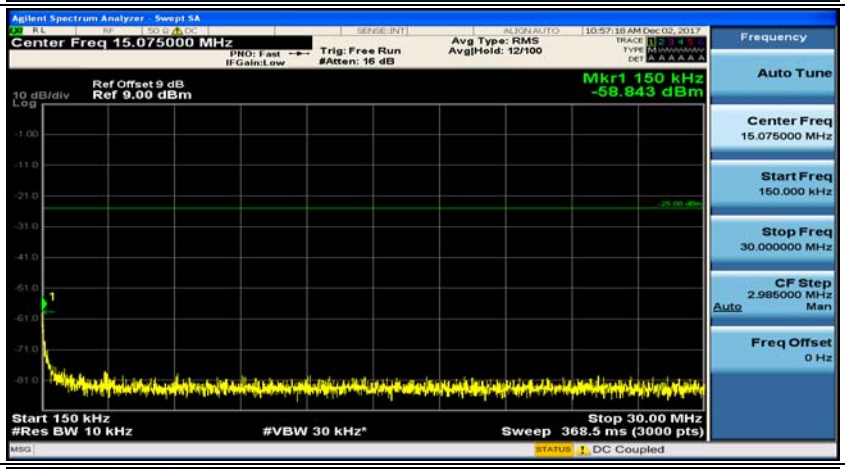


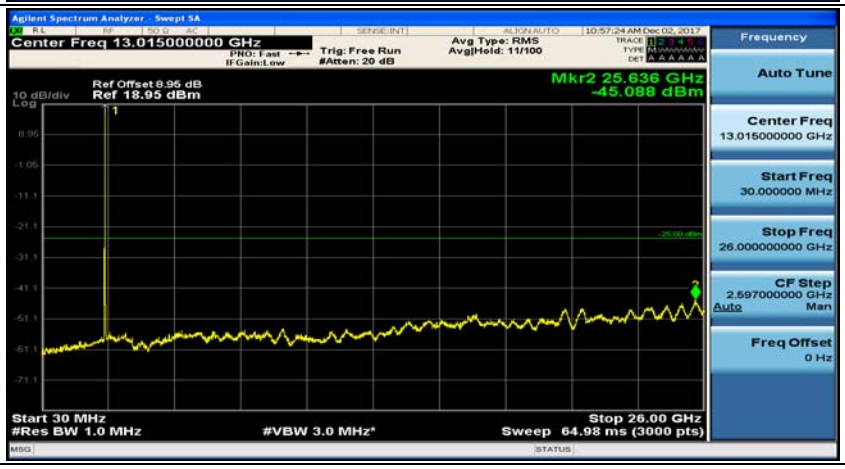


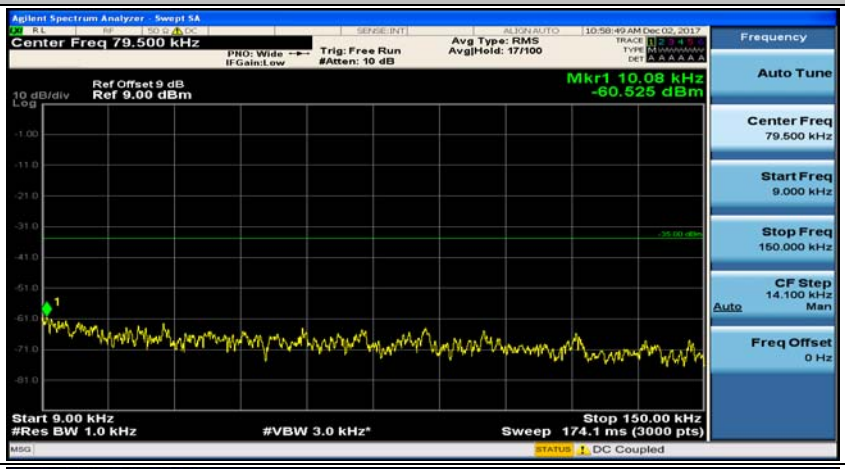
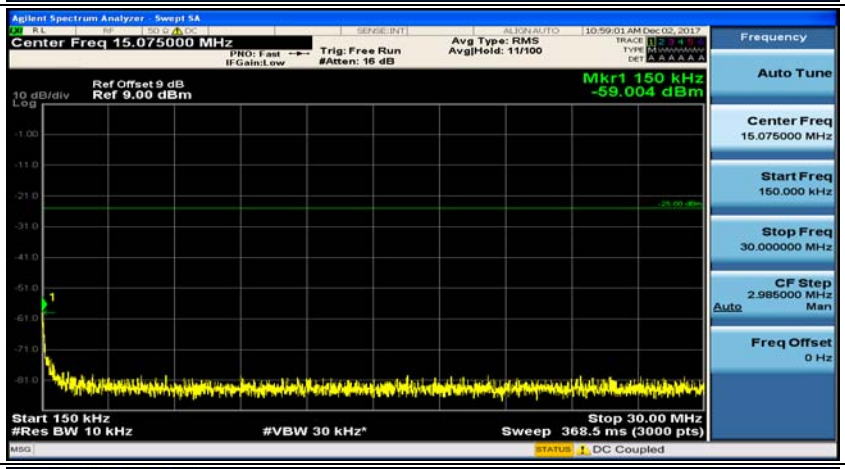
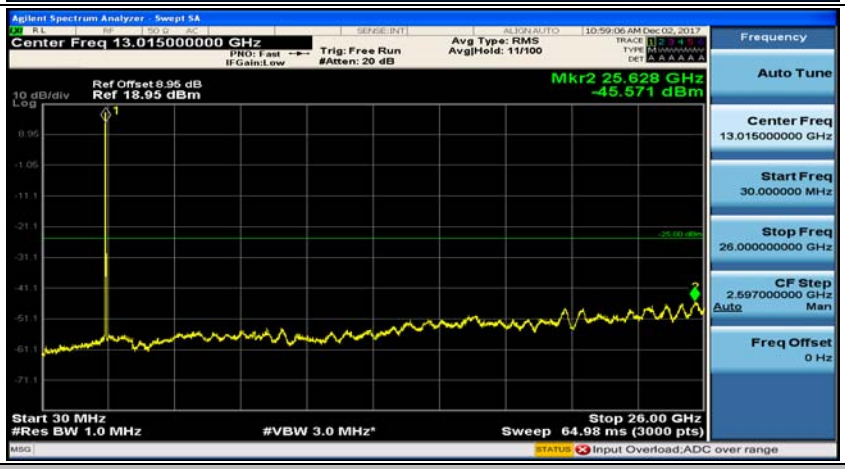


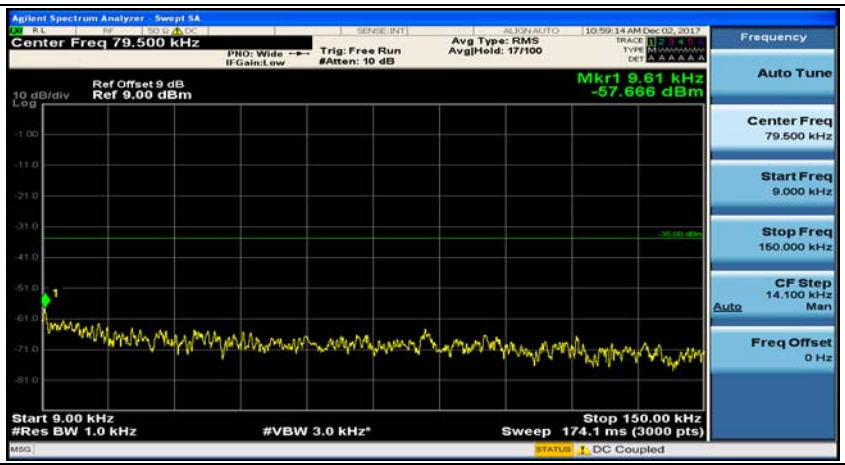
(Channel Bandwidth:15 MHz)_LCH_16QAM_1RB#74

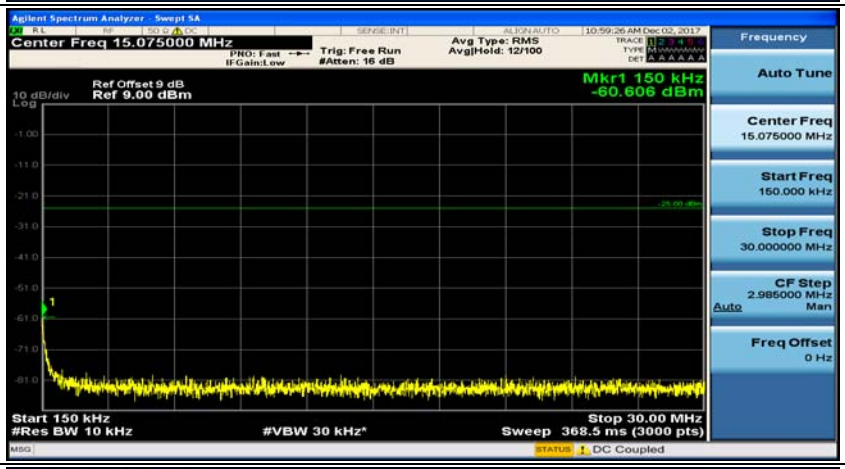

Agilent Spectrum Analyzer - Swept SA
Center Freq 79.500 kHz
PNO: Wide
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 17/100
10:57:06 AM Dec 02, 2017
Frequency
Auto Tune
Mkr1 14.08 kHz
-57.667 dBm
Ref Offset 9 dB
10 dB/div
Ref 9.00 dBm
Log
Center Freq
79.500 kHz
Start Freq
9.000 kHz
Stop Freq
150.000 kHz
CF Step
14.100 kHz
Auto
Man
Freq Offset
0 Hz
Start 9.00 kHz
#Res BW 1.0 kHz
#VBW 3.0 kHz*
Stop 150.00 kHz
Sweep 174.1 ms (3000 pts)
DC Coupled


Agilent Spectrum Analyzer - Swept SA
Center Freq 15.075000 MHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 16 dB
Avg Type: RMS
Avg|Hold: 12/100
10:57:18 AM Dec 02, 2017
Frequency
Auto Tune
Mkr1 150 kHz
-58.843 dBm
Ref Offset 9 dB
10 dB/div
Ref 9.00 dBm
Log
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

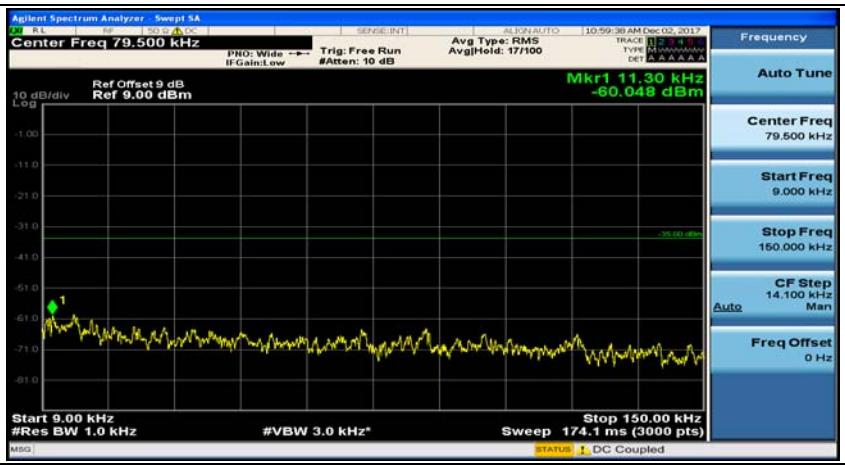

Agilent Spectrum Analyzer - Swept SA
Center Freq 13.015000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 20 dB
Avg Type: RMS
Avg|Hold: 11/100
10:57:24 AM Dec 02, 2017
Frequency
Auto Tune
Mkr2 25.636 GHz
-45.088 dBm
Ref Offset 8.95 dB
10 dB/div
Ref 18.95 dBm
Log
Center Freq
13.015000000 GHz
Start 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)

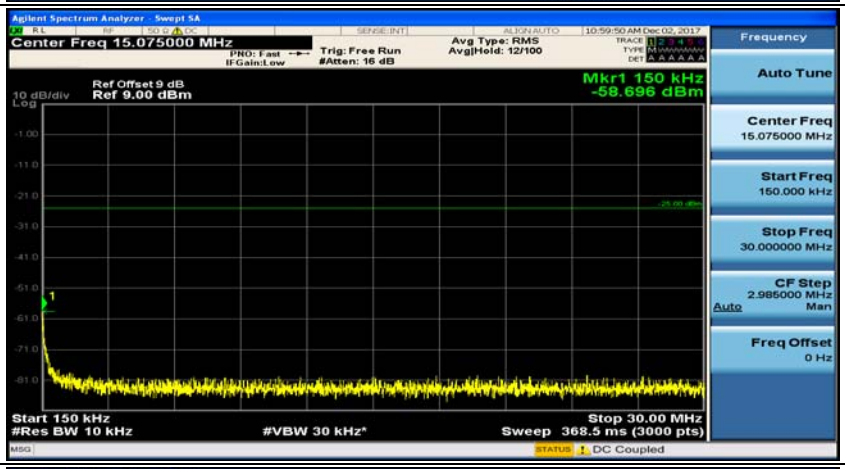
(Channel Bandwidth:15 MHz)_MCH_16QAM_1RB#0



(Channel Bandwidth:15 MHz)_MCH_16QAM_1RB#37

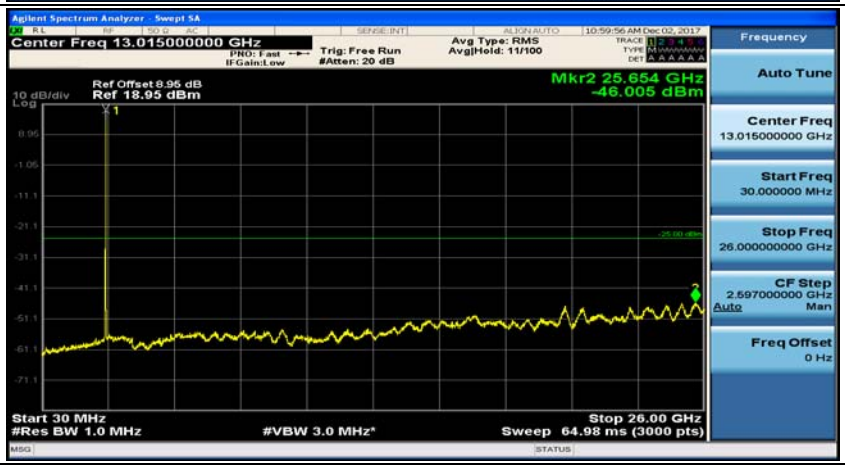


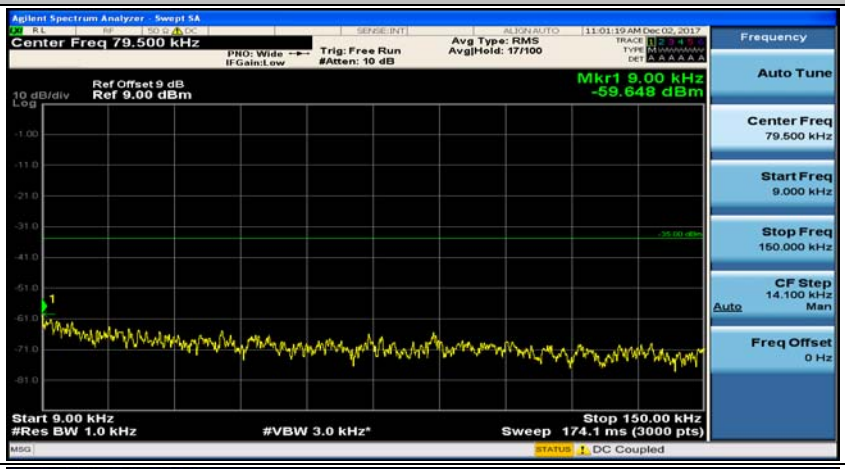
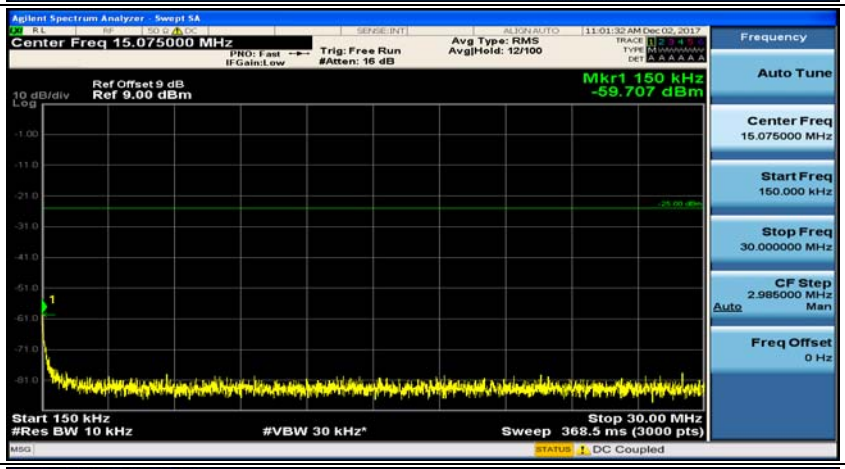
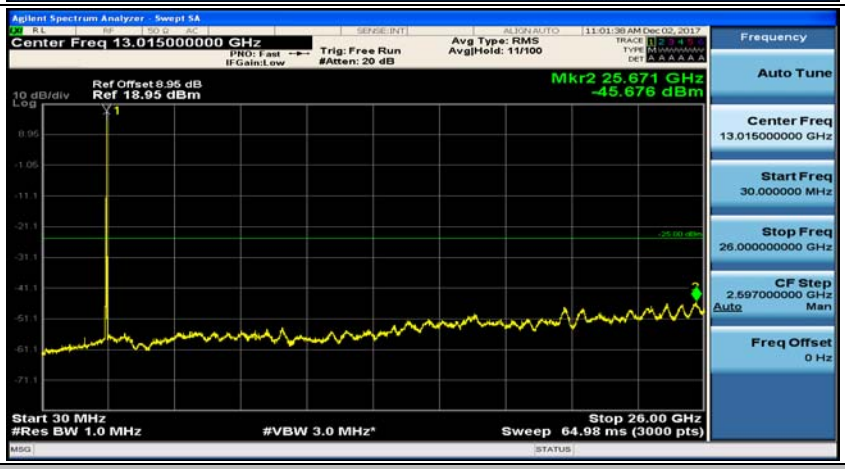


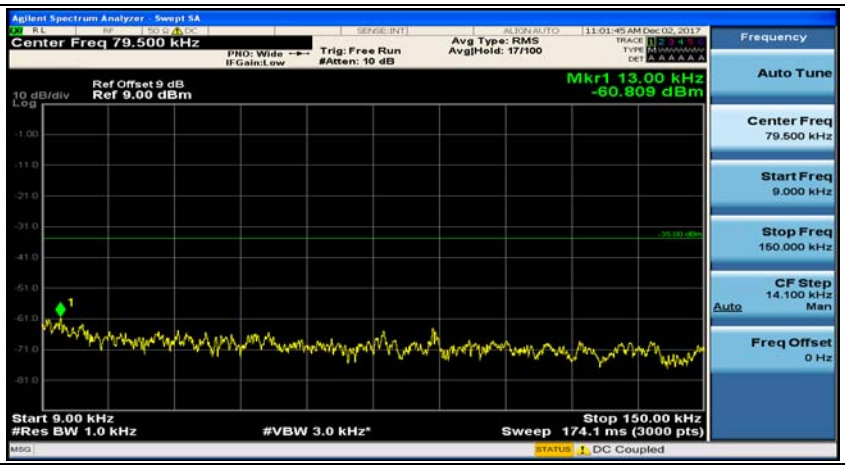
(Channel Bandwidth:15 MHz)_MCH_16QAM_1RB#74

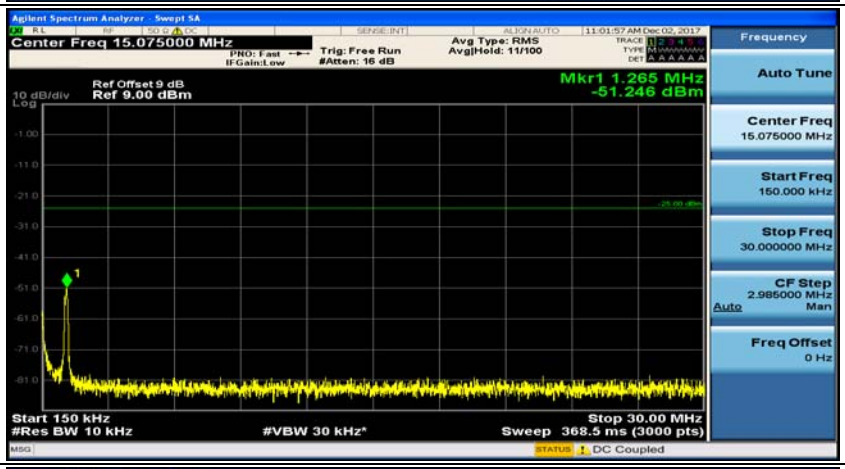

Agilent Spectrum Analyzer - Swept SA
Center Freq 79.500 kHz
PNO: Wide
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 17/100
10:59:38 AM Dec 02, 2017
Frequency
Auto Tune
Mkr1 11.30 kHz
-60.048 dBm
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Center Freq
79.500 kHz
Start Freq
9.000 kHz
Stop 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

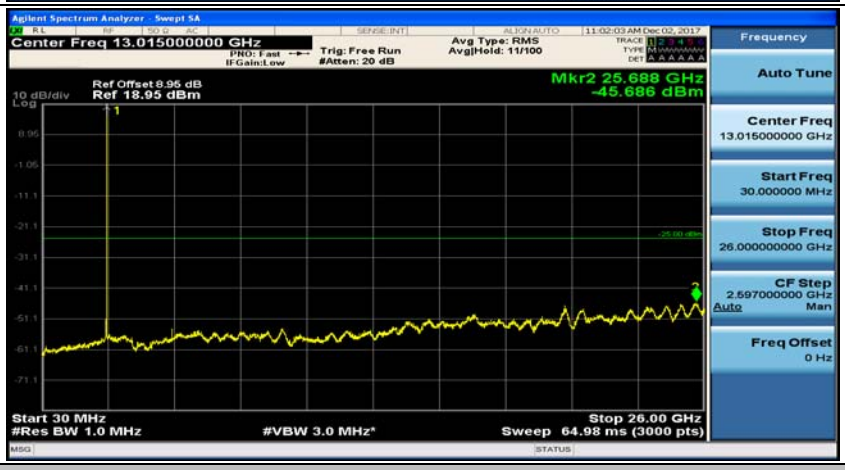

Agilent Spectrum Analyzer - Swept SA
Center Freq 15.075000 MHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 16 dB
Avg Type: RMS
Avg|Hold: 12/100
10:59:50 AM Dec 02, 2017
Frequency
Auto Tune
Mkr1 150 kHz
-58.696 dBm
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Center Freq
15.075000 MHz
Start Freq
150.000 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: 20 dB
Avg Type: RMS
Avg|Hold: 11/100
10:59:56 AM Dec 02, 2017
Frequency
Auto Tune
Mkr2 25.654 GHz
-46.005 dBm
Ref Offset 8.95 dB
10 dB/div
Log
Ref 18.95 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)

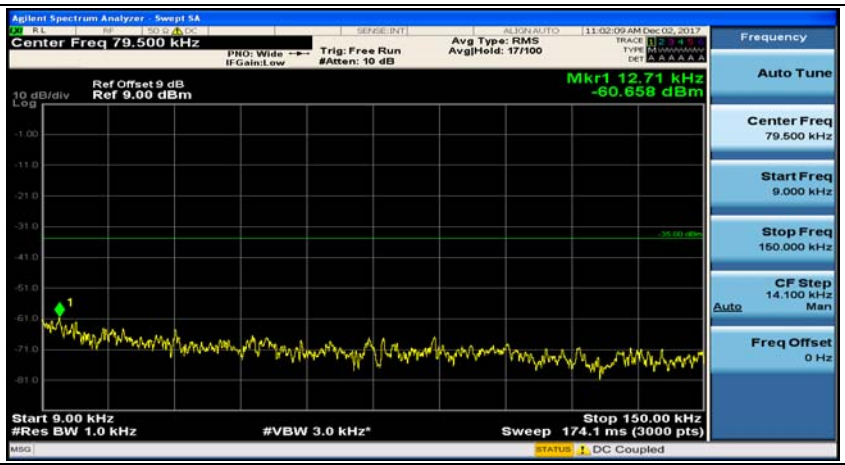
(Channel Bandwidth:15 MHz)_HCH_16QAM_1RB#0



(Channel Bandwidth:15 MHz)_HCH_16QAM_1RB#37

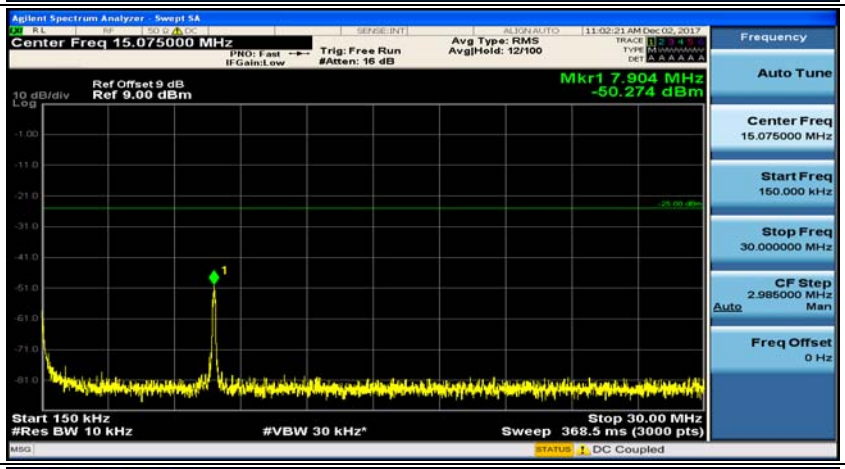


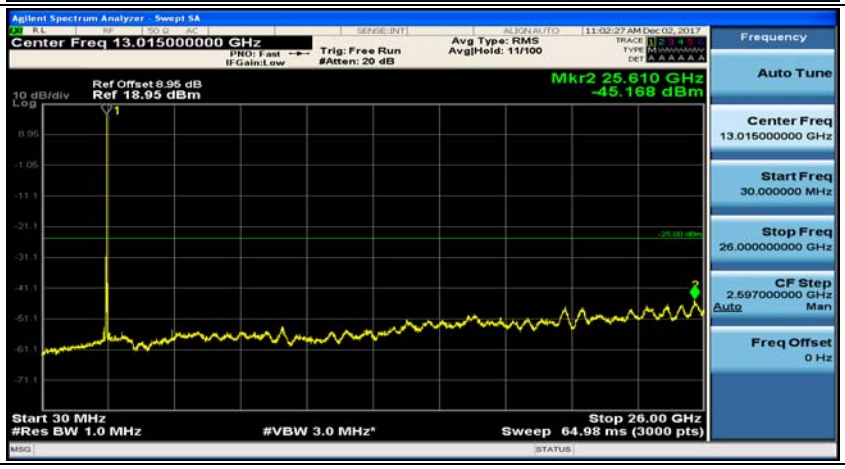




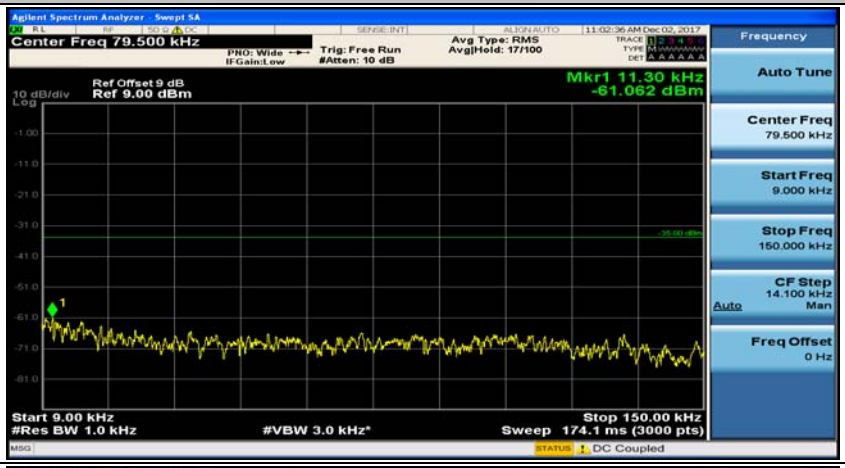
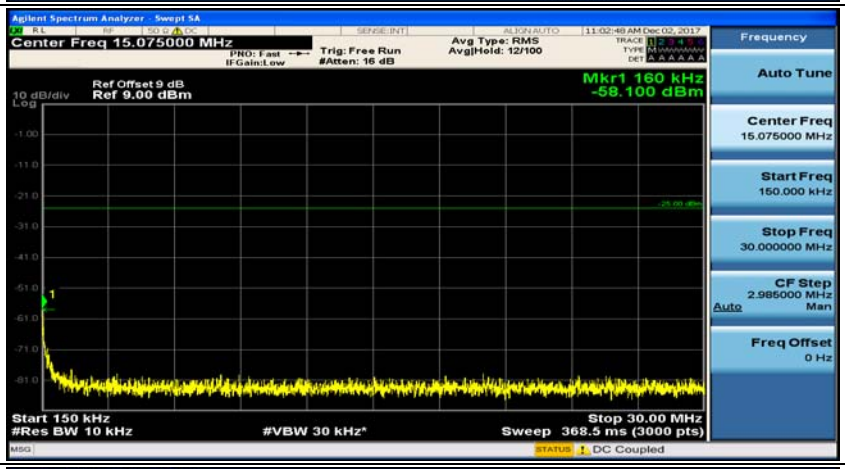
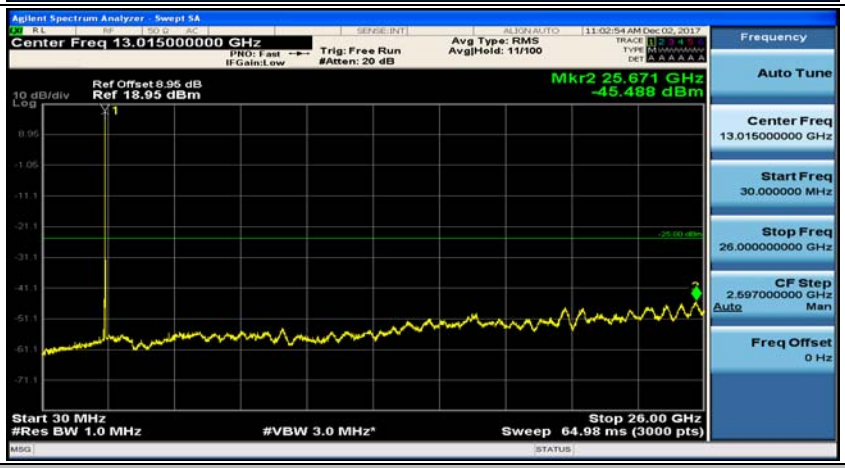
(Channel Bandwidth:15 MHz)_HCH_16QAM_1RB#74

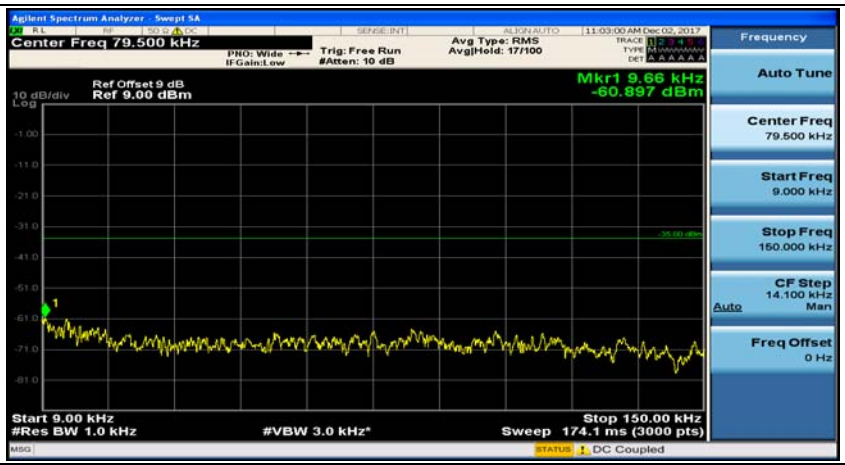

Agilent Spectrum Analyzer - Swept SA
Center Freq 79.500 kHz
PNO: Wide
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 17/100
11:02:09 AM Dec 02, 2017
Frequency
Auto Tune
Mkr1 12.71 kHz
-60.658 dBm
Ref Offset 9 dB
10 dB/div
Ref 9.00 dBm
Log
Center Freq
79.500 kHz
Start Freq
9.000 kHz
Stop Freq
150.000 kHz
CF Step
14.100 kHz
Auto
Man
Freq Offset
0 Hz
Start 9.00 kHz
#Res BW 1.0 kHz
#VBW 3.0 kHz*
Stop 150.00 kHz
Sweep 174.1 ms (3000 pts)
DC Coupled

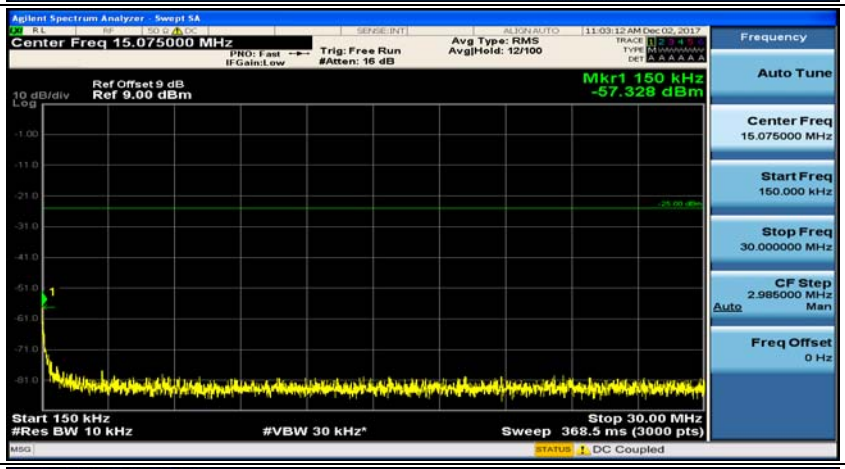

Agilent Spectrum Analyzer - Swept SA
Center Freq 15.075000 MHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 16 dB
Avg Type: RMS
Avg|Hold: 12/100
11:02:21 AM Dec 02, 2017
Frequency
Auto Tune
Mkr1 7.904 MHz
-50.274 dBm
Ref Offset 9 dB
10 dB/div
Ref 9.00 dBm
Log
Center Freq
15.075000 MHz
Start Freq
150.000 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

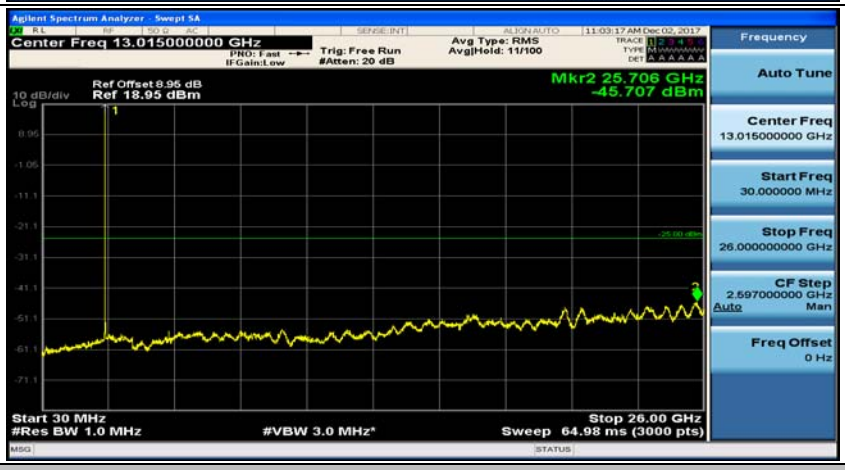

Agilent Spectrum Analyzer - Swept SA
Center Freq 13.015000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 20 dB
Avg Type: RMS
Avg|Hold: 11/100
11:02:27 AM Dec 02, 2017
Frequency
Auto Tune
Mkr2 25.610 GHz
-45.168 dBm
Ref Offset 8.95 dB
10 dB/div
Ref 18.95 dBm
Log
Center Freq
13.015000000 GHz
Start 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: 20 MHz

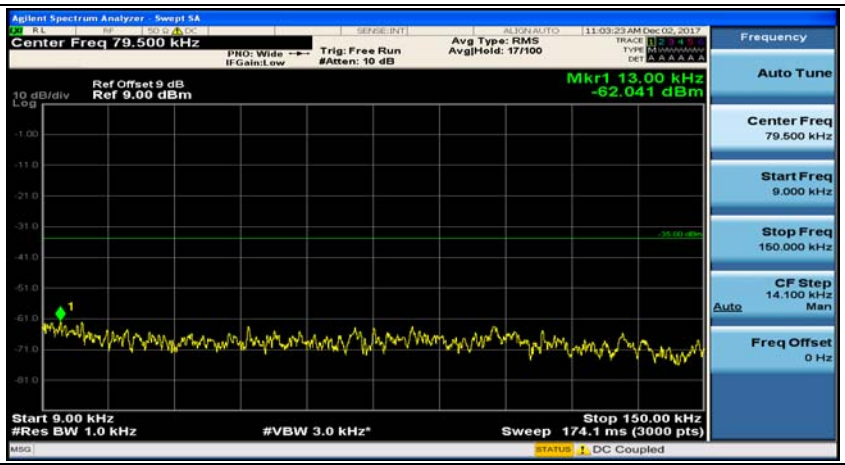
(Channel Bandwidth:20 MHz)_LCH_QPSK_1RB#0



(Channel Bandwidth:20 MHz)_LCH_QPSK_1RB#49

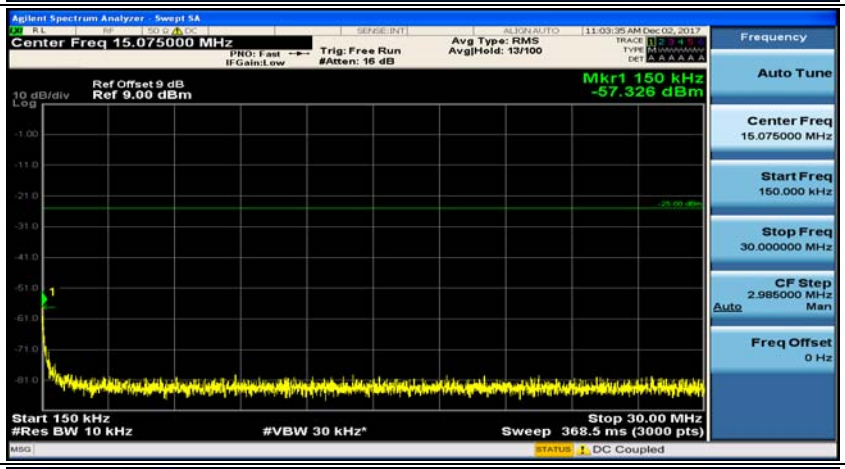


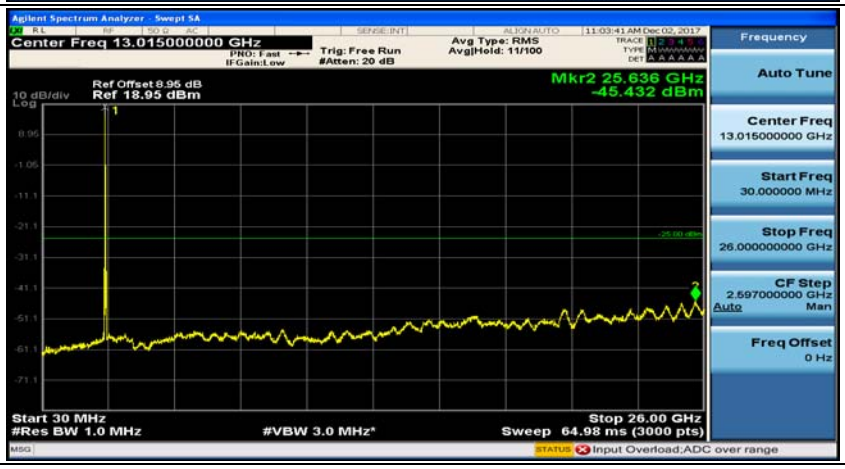


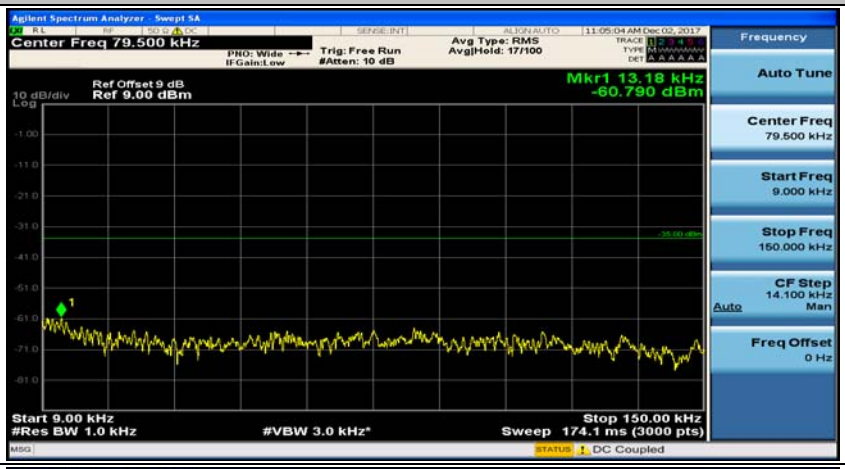
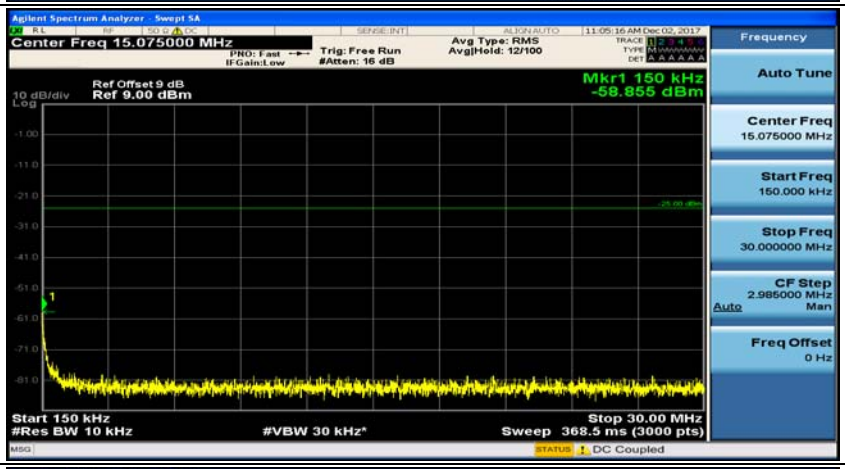
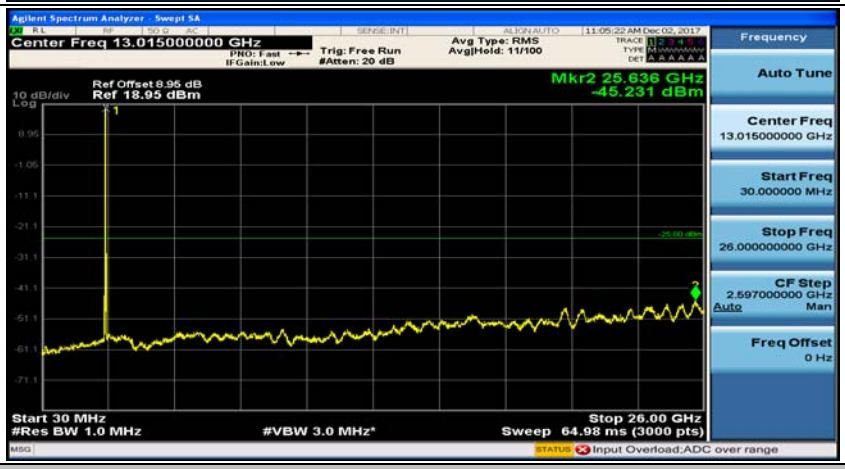


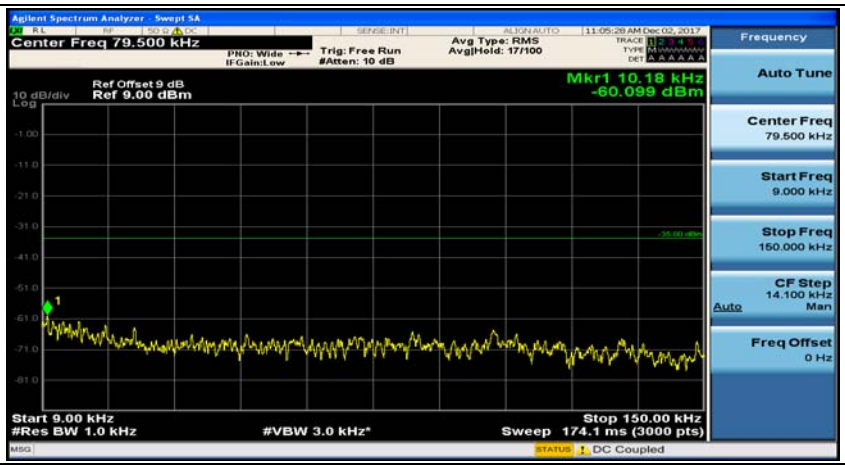
(Channel Bandwidth:20 MHz)_LCH_QPSK_1RB#99

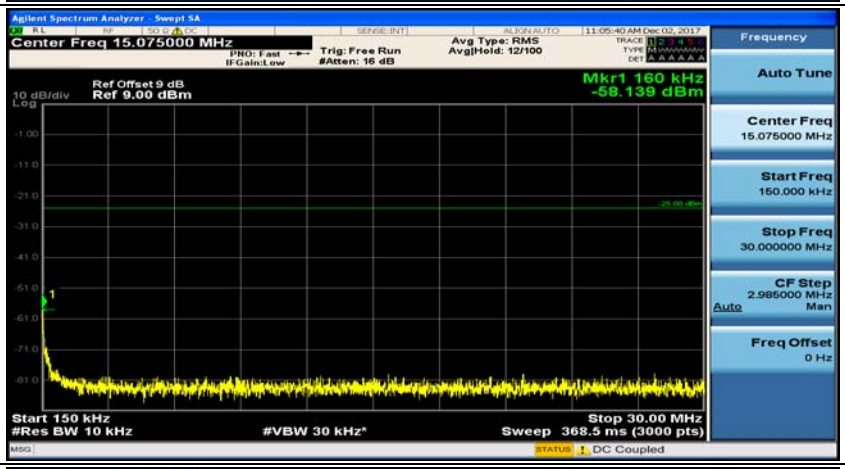

Agilent Spectrum Analyzer - Swept SA
Center Freq 79.500 kHz
PNO: Wide
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 17/100
11:03:23 AM Dec 02, 2017
Frequency
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Mkr1 13.00 kHz
-62.041 dBm
Auto Tune
Center Freq
79.500 kHz
Start Freq
9.000 kHz
Stop Freq
150.000 kHz
CF Step
14.100 kHz
Auto
Man
Freq Offset
0 Hz
Start 9.00 kHz
#Res BW 1.0 kHz
#VBW 3.0 kHz*
Stop 150.00 kHz
Sweep 174.1 ms (3000 pts)
DC Coupled

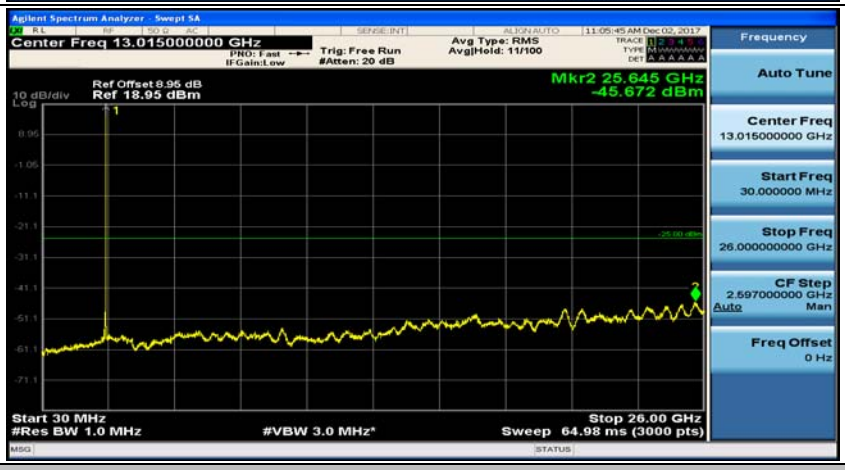

Agilent Spectrum Analyzer - Swept SA
Center Freq 15.075000 MHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 16 dB
Avg Type: RMS
Avg|Hold: 13/100
11:03:35 AM Dec 02, 2017
Frequency
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Mkr1 150 kHz
-57.326 dBm
Auto Tune
Center Freq
15.075000 MHz
Start Freq
150.000 kHz
Stop Freq
30.000000 MHz
CF Step
2.985000 MHz
Auto
Man
Freq Offset
0 Hz
Start 150 kHz
#Res BW 10 kHz
#VBW 30 kHz*
Stop 30.00 MHz
Sweep 368.5 ms (3000 pts)
DC Coupled


Agilent Spectrum Analyzer - Swept SA
Center Freq 13.015000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 20 dB
Avg Type: RMS
Avg|Hold: 11/100
11:03:41 AM Dec 02, 2017
Frequency
Ref Offset 8.95 dB
10 dB/div
Log
Ref 18.95 dBm
Mkr2 25.636 GHz
-45.432 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)
Input Overload;ADC over range

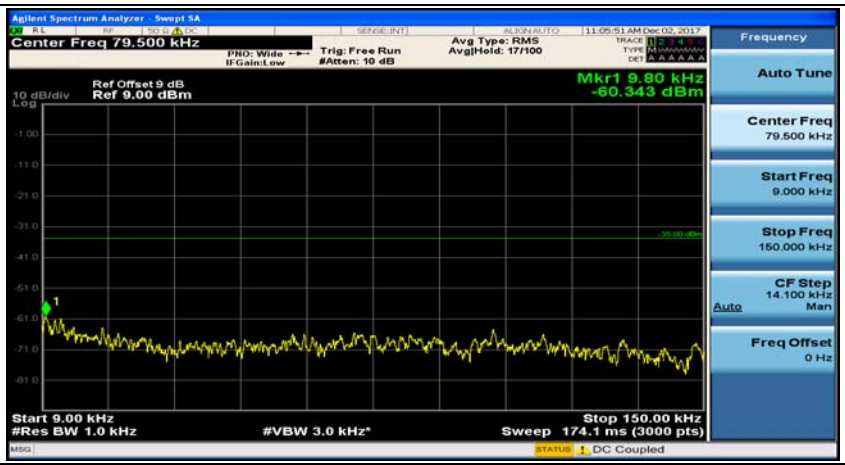
(Channel Bandwidth:20 MHz)_MCH_QPSK_1RB#0



(Channel Bandwidth:20 MHz)_MCH_QPSK_1RB#49

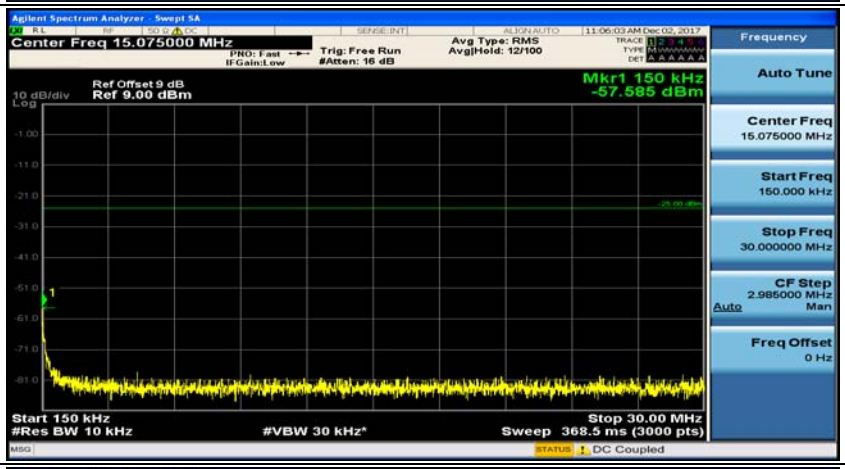




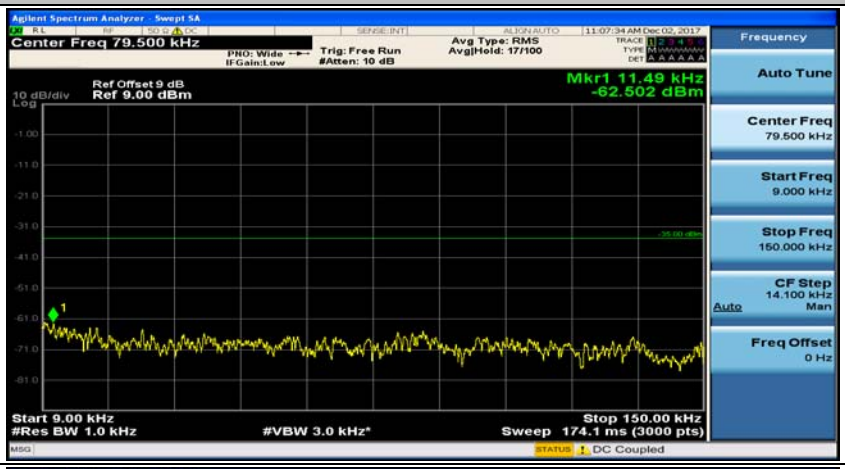
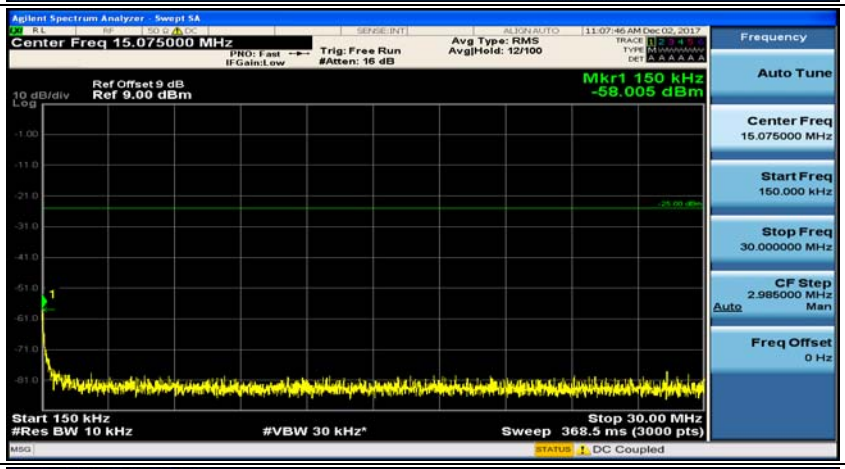
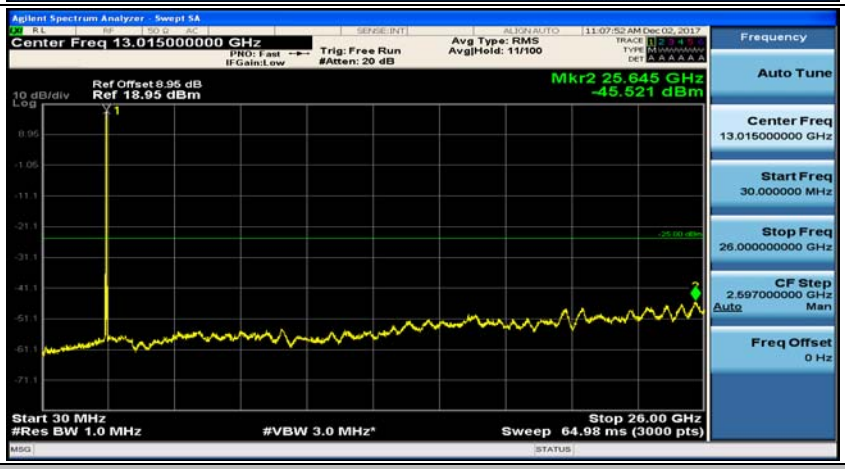


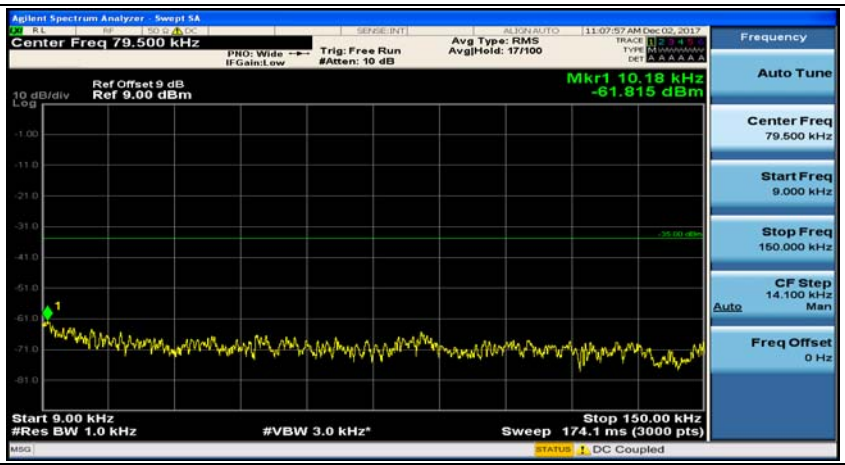
(Channel Bandwidth:20 MHz)_MCH_QPSK_1RB#99

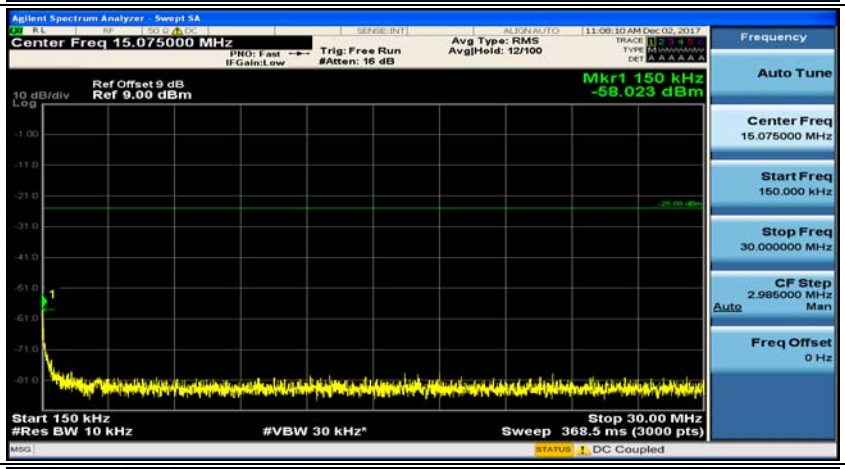

Agilent Spectrum Analyzer - Swept SA
Center Freq 79.500 kHz
PNO: Wide
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 17/100
11:05:51 AM Dec 02, 2017
Frequency
Auto Tune
Mkr1 9.80 kHz
-60.343 dBm
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Center Freq
79.500 kHz
Start Freq
9.000 kHz
Stop 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: 16 dB
Avg Type: RMS
Avg|Hold: 12/100
11:06:03 AM Dec 02, 2017
Frequency
Auto Tune
Mkr1 150 kHz
-57.585 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

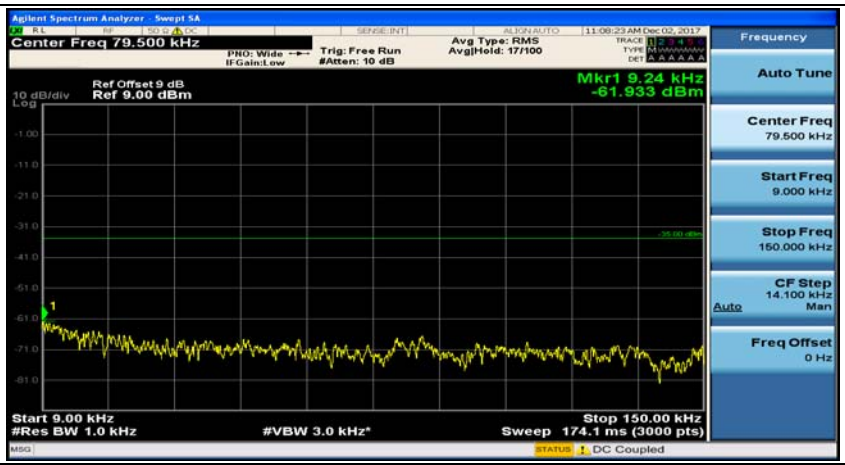

Agilent Spectrum Analyzer - Swept SA
Center Freq 13.015000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 20 dB
Avg Type: RMS
Avg|Hold: 11/100
11:06:10 AM Dec 02, 2017
Frequency
Auto Tune
Mkr2 25.688 GHz
-45.828 dBm
Ref Offset 8.95 dB
10 dB/div
Log
Ref 18.95 dBm
Center Freq
13.015000000 GHz
Start 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)

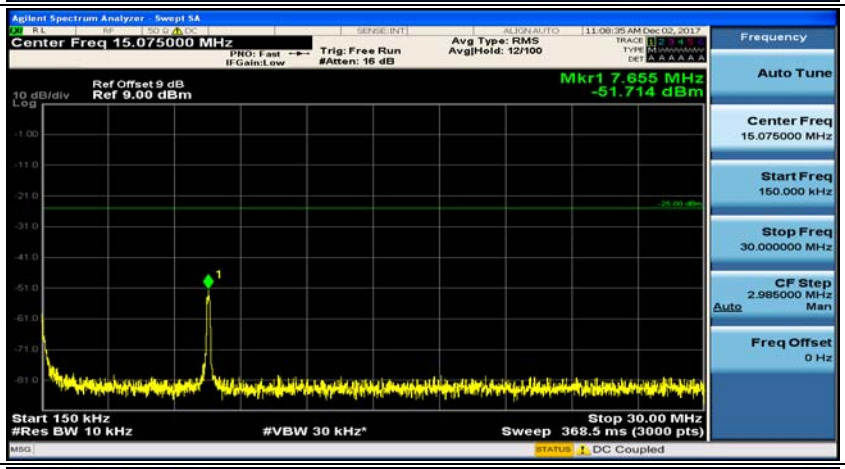
(Channel Bandwidth:20 MHz)_HCH_QPSK_1RB#0



(Channel Bandwidth:20 MHz)_HCH_QPSK_1RB#49

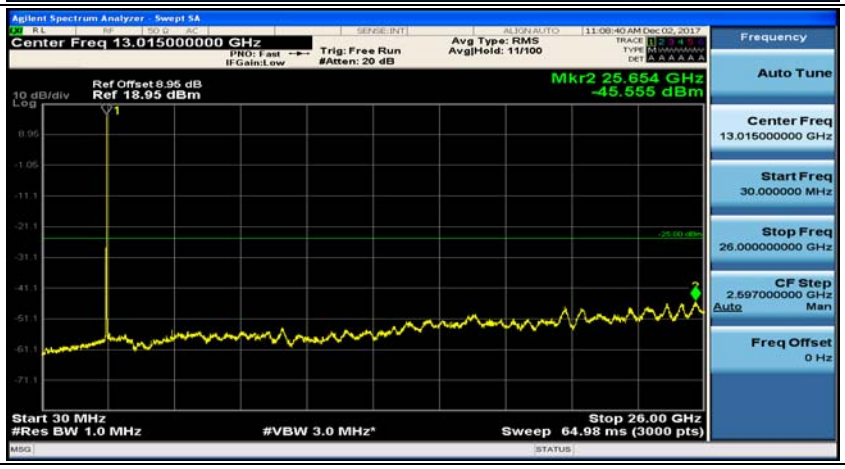


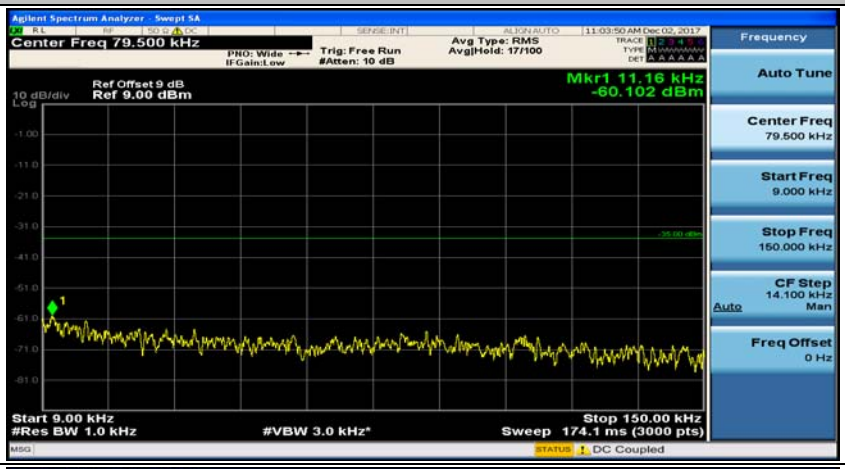
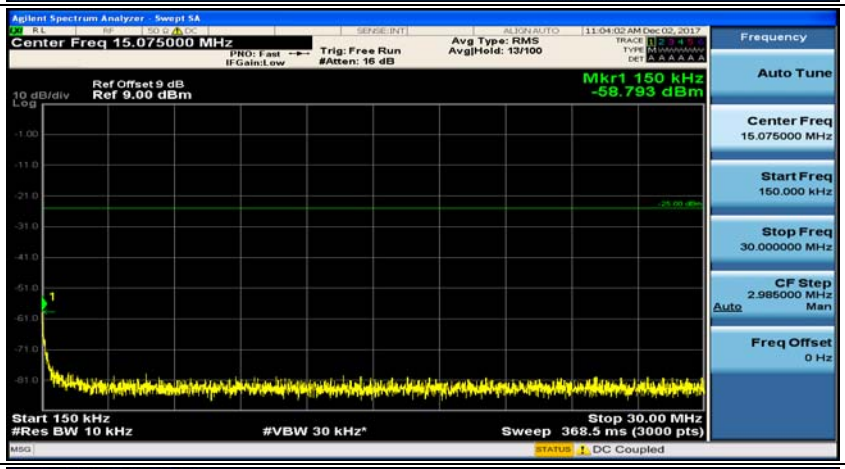
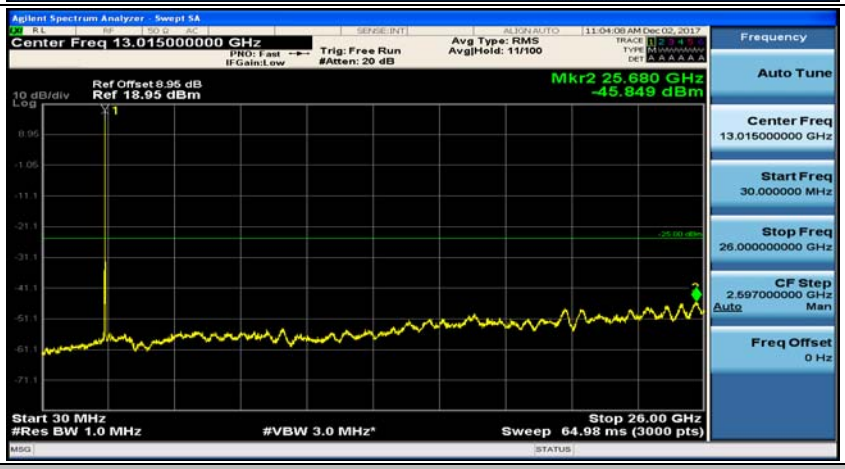


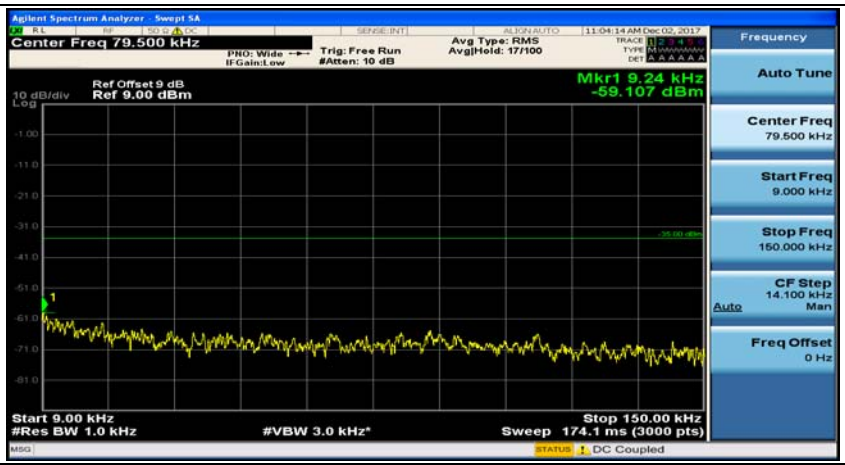
(Channel Bandwidth:20 MHz)_HCH_QPSK_1RB#99

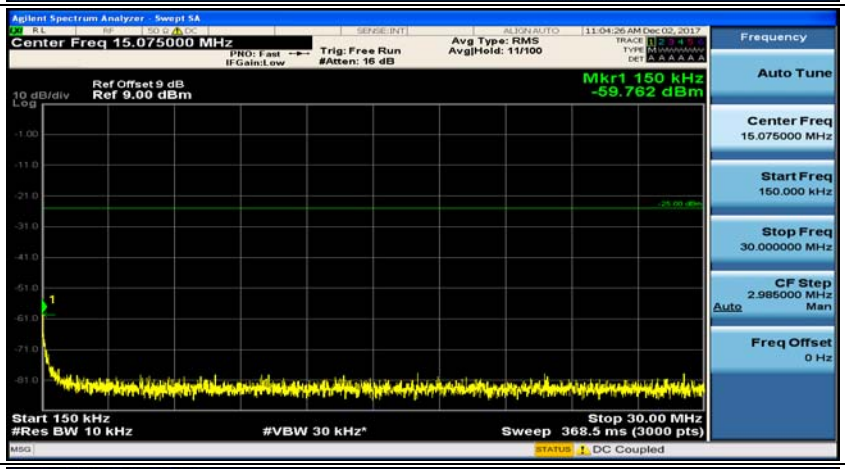

Agilent Spectrum Analyzer - Swept SA
Center Freq 79.500 kHz
PNO: Wide
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 17/100
11:08:23 AM Dec 02, 2017
Frequency
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Mkr1 9.24 kHz
-61.933 dBm
Auto Tune
Center Freq
79.500 kHz
Start Freq
9.000 kHz
Stop Freq
150.000 kHz
CF Step
14.100 kHz
Auto
Man
Freq Offset
0 Hz
Start 9.00 kHz
#Res BW 1.0 kHz
#VBW 3.0 kHz*
Stop 150.00 kHz
Sweep 174.1 ms (3000 pts)
DC Coupled

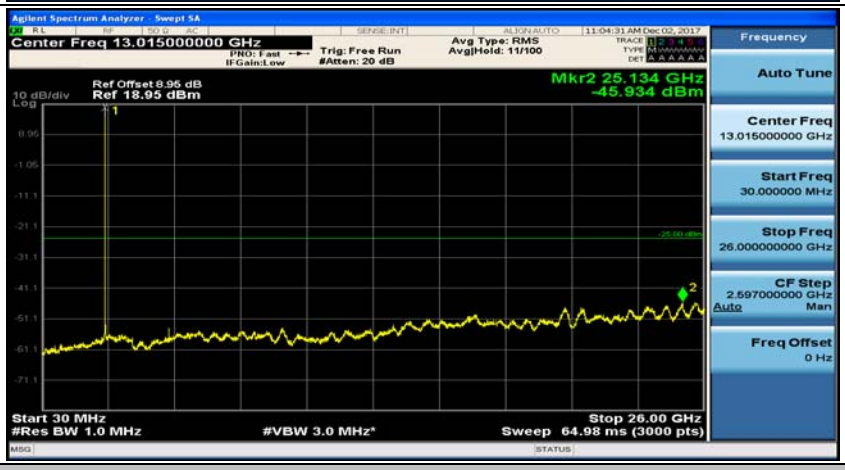

Agilent Spectrum Analyzer - Swept SA
Center Freq 15.075000 MHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 16 dB
Avg Type: RMS
Avg|Hold: 12/100
11:08:35 AM Dec 02, 2017
Frequency
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Mkr1 7.655 MHz
-51.714 dBm
Auto Tune
Center Freq
15.075000 MHz
Start Freq
150.000 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: 20 dB
Avg Type: RMS
Avg|Hold: 11/100
11:08:40 AM Dec 02, 2017
Frequency
Ref Offset 8.95 dB
10 dB/div
Log
Ref 18.95 dBm
Mkr2 25.654 GHz
-45.555 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)

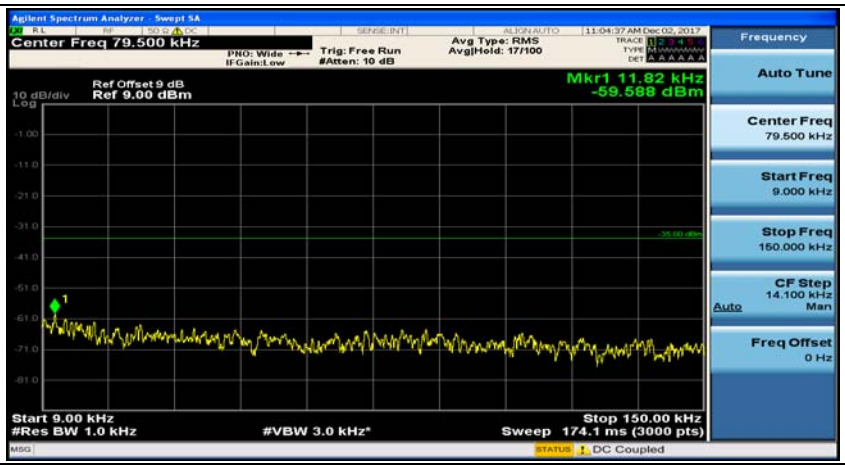
(Channel Bandwidth:20 MHz)_LCH_16QAM_1RB#0



(Channel Bandwidth:20 MHz)_LCH_16QAM_1RB#49

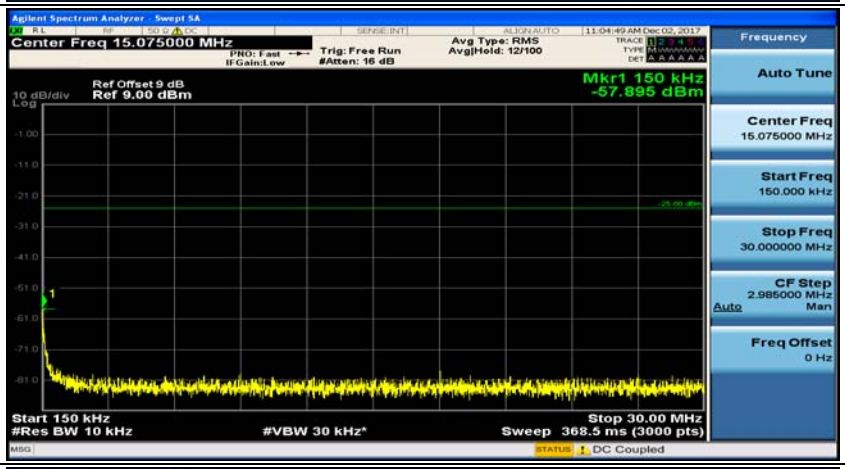


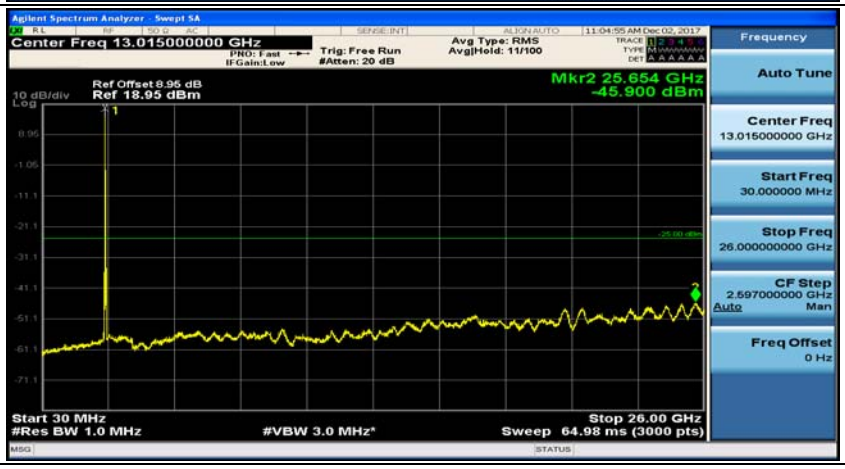


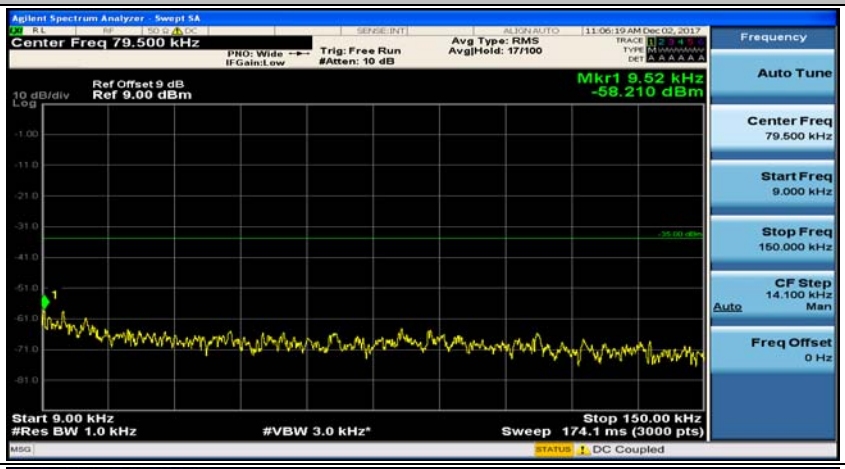
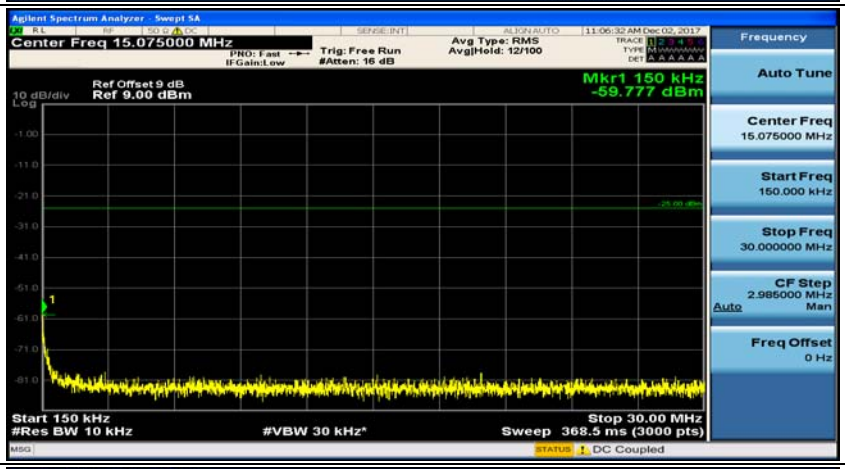
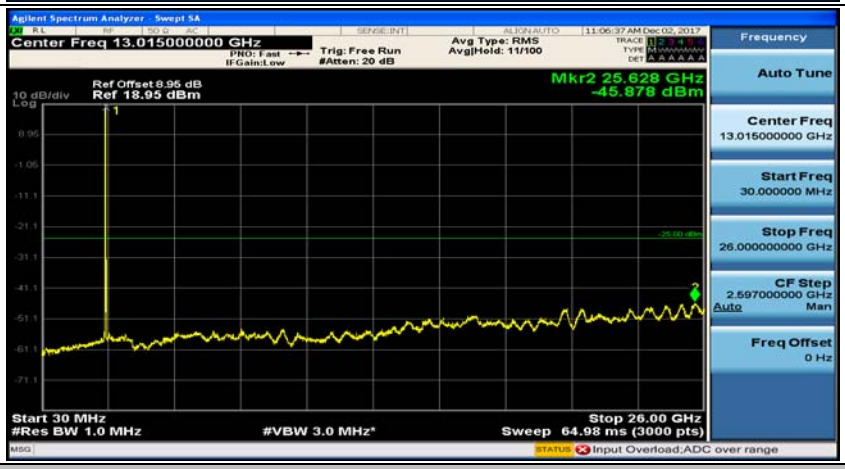


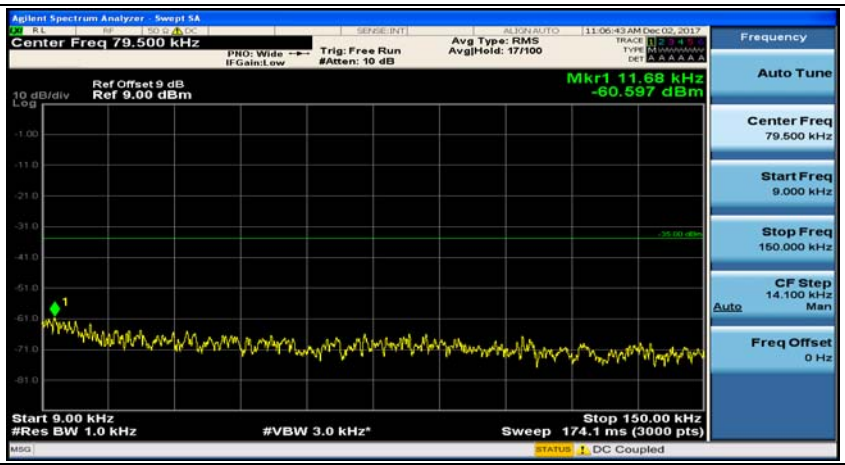
(Channel Bandwidth:20 MHz)_LCH_16QAM_1RB#99

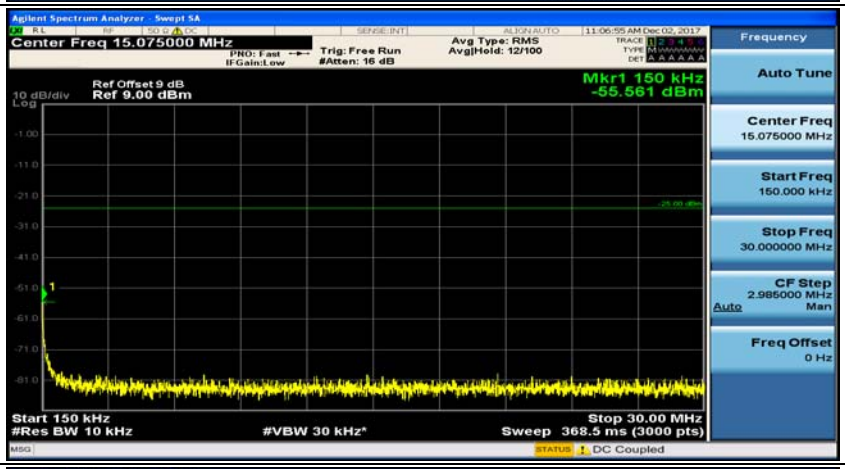

Agilent Spectrum Analyzer - Swept SA
Center Freq 79.500 kHz
PNO: Wide
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 17/100
11:04:37 AM Dec 02, 2017
Frequency
Mkr1 11.82 kHz
-59.588 dBm
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Auto Tune
Center Freq
79.500 kHz
Start Freq
9.000 kHz
Stop Freq
150.000 kHz
CF Step
14.100 kHz
Auto
Man
Freq Offset
0 Hz
Start 9.00 kHz
#Res BW 1.0 kHz
#VBW 3.0 kHz*
Stop 150.00 kHz
Sweep 174.1 ms (3000 pts)
DC Coupled

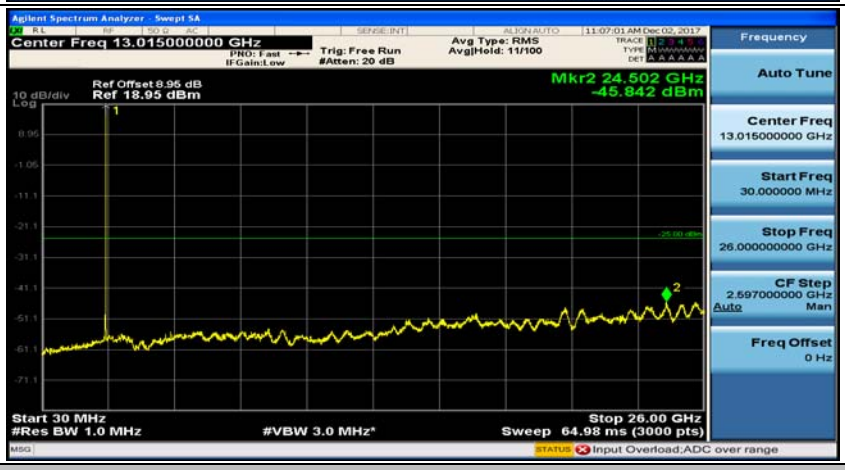

Agilent Spectrum Analyzer - Swept SA
Center Freq 15.075000 MHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 16 dB
Avg Type: RMS
Avg|Hold: 12/100
11:04:49 AM Dec 02, 2017
Frequency
Mkr1 150 kHz
-57.895 dBm
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Auto Tune
Center Freq
15.075000 MHz
Start Freq
150.000 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: 20 dB
Avg Type: RMS
Avg|Hold: 11/100
11:04:55 AM Dec 02, 2017
Frequency
Mkr2 25.654 GHz
-45.900 dBm
Ref Offset 8.95 dB
10 dB/div
Log
Ref 18.95 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)

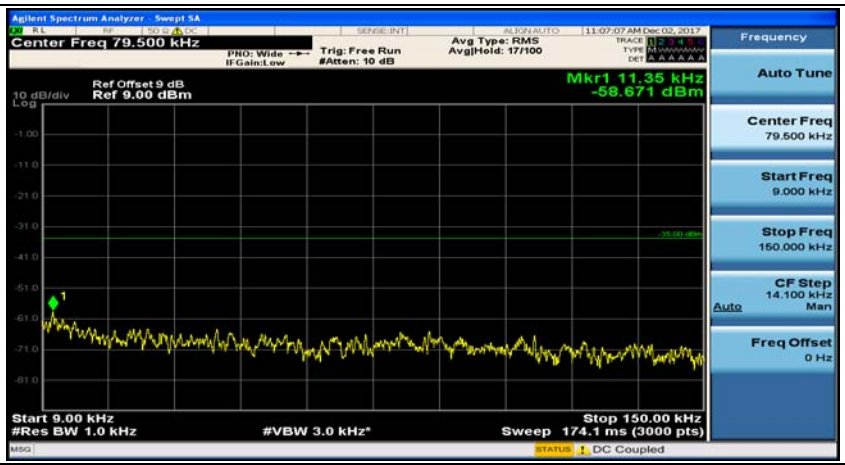
(Channel Bandwidth:20 MHz)_MCH_16QAM_1RB#0



(Channel Bandwidth:20 MHz)_MCH_16QAM_1RB#49

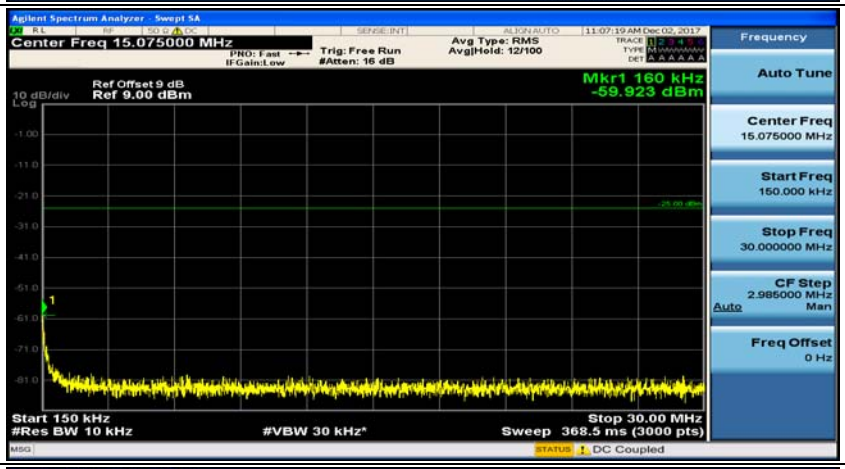


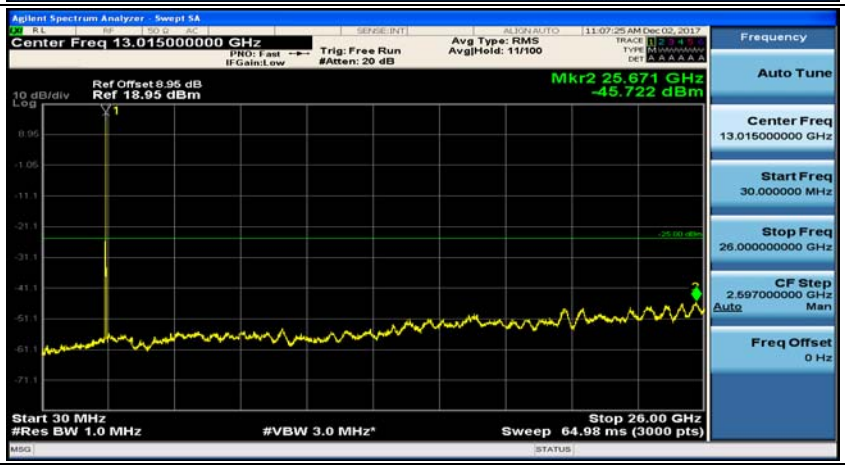


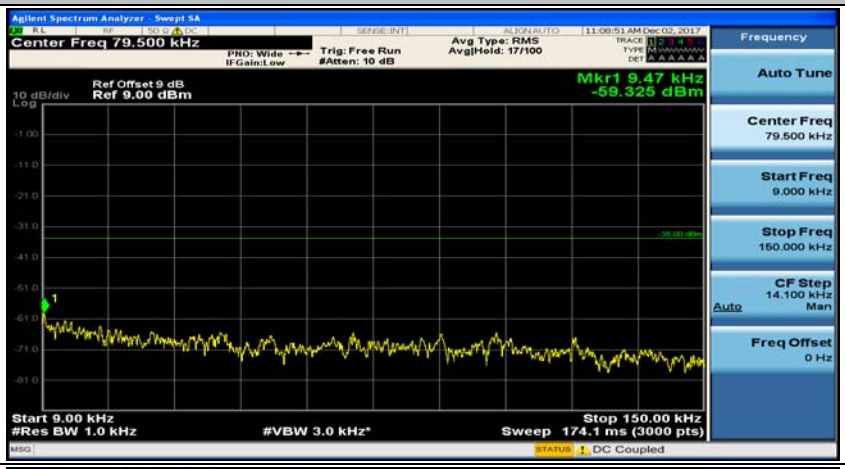
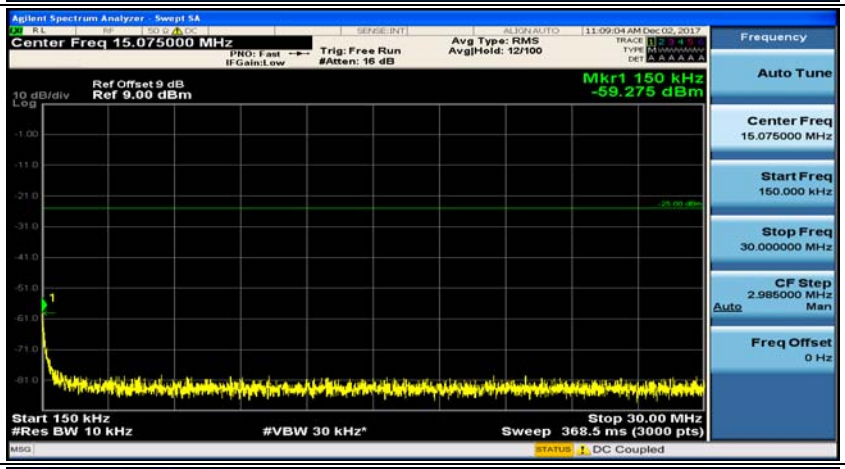
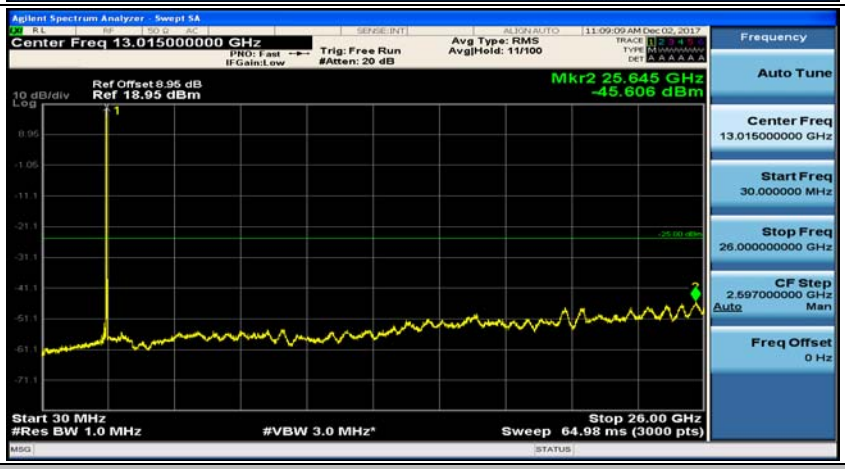


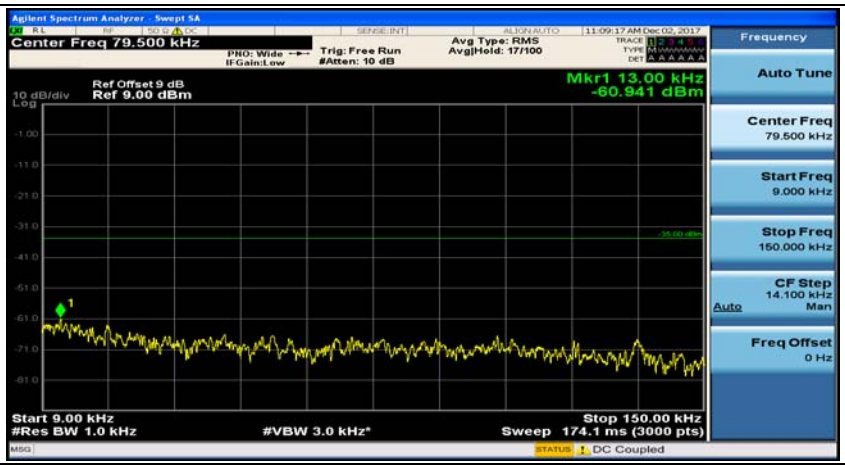
(Channel Bandwidth:20 MHz)_MCH_16QAM_1RB#99

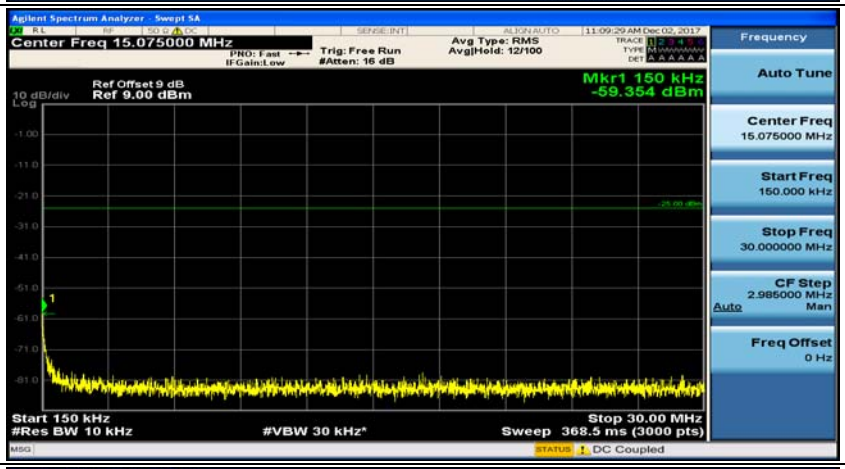

Agilent Spectrum Analyzer - Swept SA
Center Freq 79.500 kHz
PNO: Wide
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 17/100
11:07:07 AM Dec 02, 2017
Frequency
Auto Tune
Mkr1 11.35 kHz
-58.671 dBm
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Center Freq
79.500 kHz
Start Freq
9.000 kHz
Stop 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

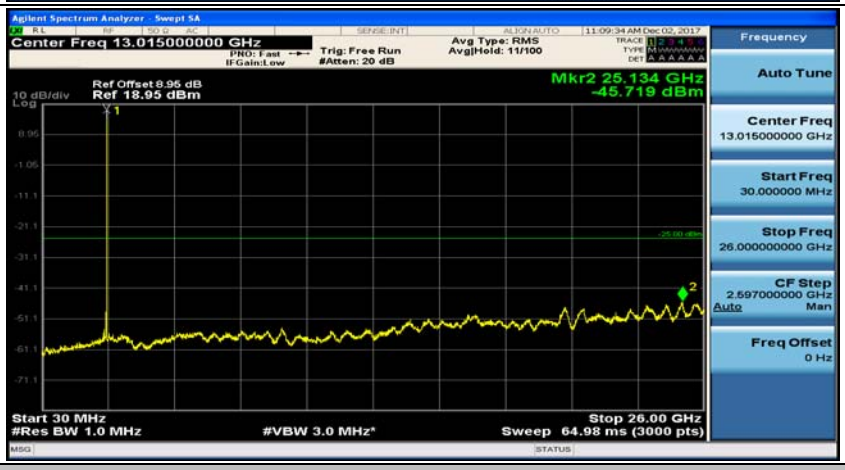

Agilent Spectrum Analyzer - Swept SA
Center Freq 15.075000 MHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 16 dB
Avg Type: RMS
Avg|Hold: 12/100
11:07:19 AM Dec 02, 2017
Frequency
Auto Tune
Mkr1 160 kHz
-59.923 dBm
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Center Freq
15.075000 MHz
Start Freq
150.000 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: 20 dB
Avg Type: RMS
Avg|Hold: 11/100
11:07:25 AM Dec 02, 2017
Frequency
Auto Tune
Mkr2 25.671 GHz
-45.722 dBm
Ref Offset 8.95 dB
10 dB/div
Log
Ref 18.95 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)

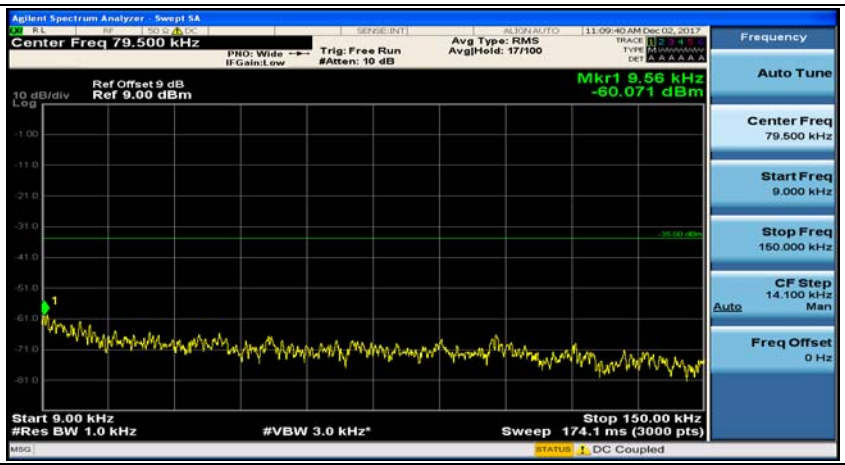
(Channel Bandwidth:20 MHz)_HCH_16QAM_1RB#0



(Channel Bandwidth:20 MHz)_HCH_16QAM_1RB#49

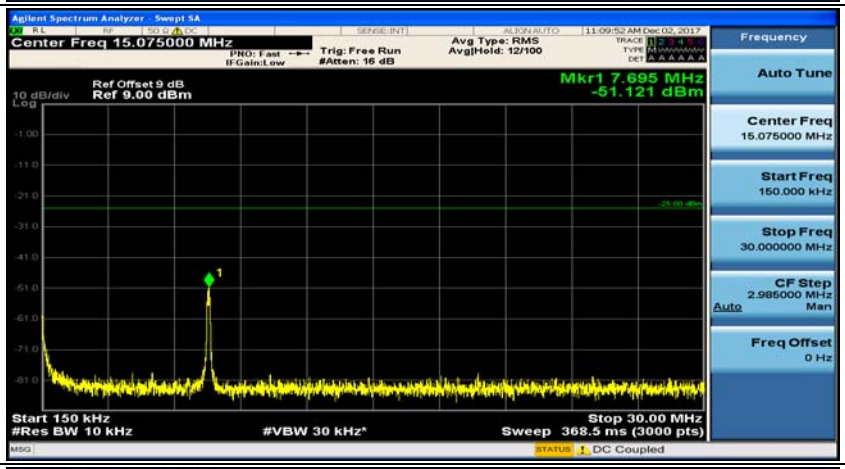






(Channel Bandwidth:20 MHz)_HCH_16QAM_1RB#99


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
11:09:40 AM Dec 02, 2017
Frequency
Auto Tune
Mkr1 9.56 kHz
-60.071 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: 16 dB
Avg Type: RMS
Avg|Hold: 12/100
11:09:52 AM Dec 02, 2017
Frequency
Auto Tune
Mkr1 7.695 MHz
-51.121 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: 20 dB
Avg Type: RMS
Avg|Hold: 11/100
11:09:58 AM Dec 02, 2017
Frequency
Auto Tune
Mkr2 25.628 GHz
-45.901 dBm
Ref Offset 8.95 dB
10 dB/div
Log
Ref 18.95 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: 5 MHz

Channel Bandwidth: 5 MHz							
Voltage							
Modulation	Channel	Voltage [Vdc]	Temperature (℃)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
QPSK	LCH	VL	TN	4	0.001598	± 2.5	PASS
		VN	TN	-1.88	-0.000751	± 2.5	PASS
		VH	TN	2.52	0.001007	± 2.5	PASS
	MCH	VL	TN	3.81	0.001503	± 2.5	PASS
		VN	TN	2.08	0.000821	± 2.5	PASS
		VH	TN	1.79	0.000706	± 2.5	PASS
	HCH	VL	TN	0.47	0.000183	± 2.5	PASS
		VN	TN	2.58	0.001005	± 2.5	PASS
		VH	TN	3.04	0.001184	± 2.5	PASS
16QAM	LCH	VL	TN	3.03	0.001211	± 2.5	PASS
		VN	TN	0.94	0.000376	± 2.5	PASS
		VH	TN	2.83	0.001131	± 2.5	PASS
	MCH	VL	TN	4.27	0.001684	± 2.5	PASS
		VN	TN	2.2	0.000868	± 2.5	PASS
		VH	TN	-1.1	-0.000434	± 2.5	PASS
	HCH	VL	TN	0.98	0.000382	± 2.5	PASS
		VN	TN	3.69	0.001437	± 2.5	PASS
		VH	TN	-0.49	-0.000191	± 2.5	PASS
Temperature							
Modulation	Channel	Voltage [Vdc]	Temperature (℃)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
QPSK	LCH	VN	-30	0.87	0.000348	± 2.5	PASS
		VN	-20	-0.18	-0.000072	± 2.5	PASS
		VN	-10	2.94	0.001175	± 2.5	PASS
		VN	0	1.88	0.000751	± 2.5	PASS
		VN	10	3.07	0.001227	± 2.5	PASS
		VN	20	2.5	0.000999	± 2.5	PASS
		VN	30	4.77	0.001906	± 2.5	PASS
		VN	40	0.88	0.000352	± 2.5	PASS
		VN	50	-0.29	-0.000116	± 2.5	PASS
	MCH	VN	-30	2.94	0.001160	± 2.5	PASS
		VN	-20	2.91	0.001148	± 2.5	PASS

		VN	-10	2.48	0.000978	± 2.5	PASS
		VN	0	2.15	0.000848	± 2.5	PASS
		VN	10	-0.84	-0.000331	± 2.5	PASS
		VN	20	-1.82	-0.000718	± 2.5	PASS
		VN	30	3.1	0.001223	± 2.5	PASS
		VN	40	-1.83	-0.000722	± 2.5	PASS
		VN	50	0.83	0.000327	± 2.5	PASS
	HCH	VN	-30	3.63	0.001414	± 2.5	PASS
		VN	-20	3.78	0.001472	± 2.5	PASS
		VN	-10	-1.91	-0.000744	± 2.5	PASS
		VN	0	-1.35	-0.000526	± 2.5	PASS
		VN	10	0	0.000000	± 2.5	PASS
		VN	20	1.76	0.000685	± 2.5	PASS
		VN	30	-1.09	-0.000425	± 2.5	PASS
		VN	40	-0.59	-0.000230	± 2.5	PASS
		VN	50	2.21	0.000861	± 2.5	PASS
16QAM	LCH	VN	-30	4.64	0.001854	± 2.5	PASS
		VN	-20	-1.45	-0.000579	± 2.5	PASS
		VN	-10	0.67	0.000268	± 2.5	PASS
		VN	0	3.21	0.001283	± 2.5	PASS
		VN	10	0.58	0.000232	± 2.5	PASS
		VN	20	1.37	0.000547	± 2.5	PASS
		VN	30	-1.38	-0.000551	± 2.5	PASS
		VN	40	4.13	0.001650	± 2.5	PASS
		VN	50	-1.27	-0.000507	± 2.5	PASS
	MCH	VN	-30	1.25	0.000493	± 2.5	PASS
		VN	-20	4.91	0.001937	± 2.5	PASS
		VN	-10	1.11	0.000438	± 2.5	PASS
		VN	0	-0.18	-0.000071	± 2.5	PASS
		VN	10	1.71	0.000675	± 2.5	PASS
		VN	20	2.9	0.001144	± 2.5	PASS
		VN	30	0.72	0.000284	± 2.5	PASS
		VN	40	0.29	0.000114	± 2.5	PASS
		VN	50	1.06	0.000418	± 2.5	PASS
	HCH	VN	-30	1.14	0.000444	± 2.5	PASS
		VN	-20	-0.28	-0.000109	± 2.5	PASS
		VN	-10	1.76	0.000685	± 2.5	PASS
		VN	0	3.25	0.001266	± 2.5	PASS
		VN	10	4.2	0.001636	± 2.5	PASS
		VN	20	-1.5	-0.000584	± 2.5	PASS
		VN	30	4.05	0.001577	± 2.5	PASS

		VN	40	-0.63	-0.000245	± 2.5	PASS
		VN	50	2.97	0.001157	± 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	3.32	0.001325	± 2.5	PASS
		VN	TN	0.49	0.000196	± 2.5	PASS
		VH	TN	1.24	0.000495	± 2.5	PASS
	MCH	VL	TN	-1.45	-0.000572	± 2.5	PASS
		VN	TN	0.48	0.000189	± 2.5	PASS
		VH	TN	2.06	0.000813	± 2.5	PASS
	HCH	VL	TN	-1.09	-0.000425	± 2.5	PASS
		VN	TN	0.2	0.000078	± 2.5	PASS
		VH	TN	0.15	0.000058	± 2.5	PASS
16QAM	LCH	VL	TN	1.87	0.000747	± 2.5	PASS
		VN	TN	-1.32	-0.000527	± 2.5	PASS
		VH	TN	3.55	0.001417	± 2.5	PASS
	MCH	VL	TN	1.34	0.000529	± 2.5	PASS
		VN	TN	4.02	0.001586	± 2.5	PASS
		VH	TN	-1.06	-0.000418	± 2.5	PASS
	HCH	VL	TN	0.47	0.000183	± 2.5	PASS
		VN	TN	2.82	0.001099	± 2.5	PASS
		VH	TN	-0.89	-0.000347	± 2.5	PASS
Temperature							
Modulation	Channel	Voltage [Vdc]	Temperature (℃)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
QPSK	LCH	VN	-30	0.55	0.000220	± 2.5	PASS
		VN	-20	-1.47	-0.000587	± 2.5	PASS
		VN	-10	2.77	0.001106	± 2.5	PASS
		VN	0	0.34	0.000136	± 2.5	PASS
		VN	10	4.8	0.001916	± 2.5	PASS
		VN	20	-1.89	-0.000754	± 2.5	PASS
		VN	30	0.85	0.000339	± 2.5	PASS
		VN	40	-0.27	-0.000108	± 2.5	PASS
		VN	50	3.51	0.001401	± 2.5	PASS
	MCH	VN	-30	1.64	0.000647	± 2.5	PASS
		VN	-20	3.81	0.001503	± 2.5	PASS
		VN	-10	4.34	0.001712	± 2.5	PASS

		VN	0	2.16	0.000852	± 2.5	PASS
		VN	10	3.72	0.001467	± 2.5	PASS
		VN	20	2.72	0.001073	± 2.5	PASS
		VN	30	1.31	0.000517	± 2.5	PASS
		VN	40	2.49	0.000982	± 2.5	PASS
		VN	50	-1.49	-0.000588	± 2.5	PASS
	HCH	VN	-30	-0.35	-0.000136	± 2.5	PASS
		VN	-20	0.84	0.000327	± 2.5	PASS
		VN	-10	4.68	0.001825	± 2.5	PASS
		VN	0	2.85	0.001111	± 2.5	PASS
		VN	10	0.84	0.000327	± 2.5	PASS
		VN	20	-0.04	-0.000016	± 2.5	PASS
		VN	30	-0.71	-0.000277	± 2.5	PASS
		VN	40	0.7	0.000273	± 2.5	PASS
		VN	50	-1.4	-0.000546	± 2.5	PASS
16QAM	LCH	VN	-30	4.35	0.001737	± 2.5	PASS
		VN	-20	-0.88	-0.000351	± 2.5	PASS
		VN	-10	-1.65	-0.000659	± 2.5	PASS
		VN	0	2.43	0.000970	± 2.5	PASS
		VN	10	3.17	0.001265	± 2.5	PASS
		VN	20	4.39	0.001752	± 2.5	PASS
		VN	30	0.97	0.000387	± 2.5	PASS
		VN	40	1.26	0.000503	± 2.5	PASS
		VN	50	-0.36	-0.000144	± 2.5	PASS
	MCH	VN	-30	4.09	0.001613	± 2.5	PASS
		VN	-20	-1.47	-0.000580	± 2.5	PASS
		VN	-10	0.54	0.000213	± 2.5	PASS
		VN	0	-1.55	-0.000611	± 2.5	PASS
		VN	10	2.39	0.000943	± 2.5	PASS
		VN	20	-1.75	-0.000690	± 2.5	PASS
		VN	30	4.65	0.001834	± 2.5	PASS
		VN	40	3.1	0.001223	± 2.5	PASS
		VN	50	-1.45	-0.000572	± 2.5	PASS
	HCH	VN	-30	1.3	0.000507	± 2.5	PASS
		VN	-20	-0.56	-0.000218	± 2.5	PASS
		VN	-10	-1.1	-0.000429	± 2.5	PASS
		VN	0	2.06	0.000803	± 2.5	PASS
		VN	10	2.02	0.000788	± 2.5	PASS
		VN	20	-1.67	-0.000651	± 2.5	PASS
		VN	30	-0.6	-0.000234	± 2.5	PASS
		VN	40	1.98	0.000772	± 2.5	PASS

		VN	50	-1.65	-0.000643	± 2.5	PASS

Channel Bandwidth: 15 MHz

Channel Bandwidth: 15 MHz							
Voltage							
Modulation	Channel	Voltage [Vdc]	Temperature (℃)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
QPSK	LCH	VL	TN	2.51	0.001001	± 2.5	PASS
		VN	TN	2.12	0.000845	± 2.5	PASS
		VH	TN	0.65	0.000259	± 2.5	PASS
	MCH	VL	TN	1.46	0.000576	± 2.5	PASS
		VN	TN	1.04	0.000410	± 2.5	PASS
		VH	TN	-0.1	-0.000039	± 2.5	PASS
	HCH	VL	TN	2.11	0.000823	± 2.5	PASS
		VN	TN	-0.92	-0.000359	± 2.5	PASS
		VH	TN	2	0.000780	± 2.5	PASS
16QAM	LCH	VL	TN	1.6	0.000638	± 2.5	PASS
		VN	TN	4.39	0.001751	± 2.5	PASS
		VH	TN	1	0.000399	± 2.5	PASS
	MCH	VL	TN	0.25	0.000099	± 2.5	PASS
		VN	TN	-0.47	-0.000185	± 2.5	PASS
		VH	TN	-0.99	-0.000391	± 2.5	PASS
	HCH	VL	TN	-0.81	-0.000316	± 2.5	PASS
		VN	TN	2.58	0.001007	± 2.5	PASS
		VH	TN	1.37	0.000535	± 2.5	PASS
Temperature							
Modulation	Channel	Voltage [Vdc]	Temperature (℃)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
QPSK	LCH	VN	-30	4	0.001595	± 2.5	PASS
		VN	-20	3.71	0.001480	± 2.5	PASS
		VN	-10	1.12	0.000447	± 2.5	PASS
		VN	0	4.16	0.001659	± 2.5	PASS
		VN	10	2.98	0.001188	± 2.5	PASS
		VN	20	-1.08	-0.000431	± 2.5	PASS
		VN	30	1.87	0.000746	± 2.5	PASS
		VN	40	4.43	0.001767	± 2.5	PASS
		VN	50	1.88	0.000750	± 2.5	PASS
	MCH	VN	-30	2.2	0.000868	± 2.5	PASS
		VN	-20	0.42	0.000166	± 2.5	PASS
		VN	-10	3.18	0.001254	± 2.5	PASS
		VN	0	-1.91	-0.000753	± 2.5	PASS

		VN	10	1.99	0.000785	± 2.5	PASS
		VN	20	3.51	0.001385	± 2.5	PASS
		VN	30	1.18	0.000465	± 2.5	PASS
		VN	40	3.54	0.001396	± 2.5	PASS
		VN	50	-0.65	-0.000256	± 2.5	PASS
	HCH	VN	-30	-1.25	-0.000488	± 2.5	PASS
		VN	-20	-1.78	-0.000695	± 2.5	PASS
		VN	-10	-0.12	-0.000047	± 2.5	PASS
		VN	0	2.49	0.000972	± 2.5	PASS
		VN	10	3.78	0.001475	± 2.5	PASS
		VN	20	-1.82	-0.000710	± 2.5	PASS
		VN	30	3.28	0.001280	± 2.5	PASS
		VN	40	3.29	0.001284	± 2.5	PASS
		VN	50	-0.2	-0.000078	± 2.5	PASS
16QAM	LCH	VN	-30	4.43	0.001767	± 2.5	PASS
		VN	-20	2.18	0.000869	± 2.5	PASS
		VN	-10	4.98	0.001986	± 2.5	PASS
		VN	0	1.89	0.000754	± 2.5	PASS
		VN	10	4.86	0.001938	± 2.5	PASS
		VN	20	1.1	0.000439	± 2.5	PASS
		VN	30	-1.68	-0.000670	± 2.5	PASS
		VN	40	0.83	0.000331	± 2.5	PASS
		VN	50	2.81	0.001121	± 2.5	PASS
	MCH	VN	-30	4.53	0.001787	± 2.5	PASS
		VN	-20	3.31	0.001306	± 2.5	PASS
		VN	-10	4.63	0.001826	± 2.5	PASS
		VN	0	4.72	0.001862	± 2.5	PASS
		VN	10	-1.9	-0.000750	± 2.5	PASS
		VN	20	4.25	0.001677	± 2.5	PASS
		VN	30	2.81	0.001108	± 2.5	PASS
		VN	40	4.75	0.001874	± 2.5	PASS
		VN	50	0.41	0.000162	± 2.5	PASS
	HCH	VN	-30	1.87	0.000730	± 2.5	PASS
		VN	-20	-0.07	-0.000027	± 2.5	PASS
		VN	-10	4.24	0.001655	± 2.5	PASS
		VN	0	4.49	0.001752	± 2.5	PASS
		VN	10	4.1	0.001600	± 2.5	PASS
		VN	20	-1.48	-0.000578	± 2.5	PASS
		VN	30	2.23	0.000870	± 2.5	PASS
		VN	40	-1.55	-0.000605	± 2.5	PASS
		VN	50	-1.34	-0.000523	± 2.5	PASS

Channel Bandwidth: 20 MHz

Channel Bandwidth: 20 MHz							
Voltage							
Modulation	Channel	Voltage [Vdc]	Temperature (℃)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
QPSK	LCH	VL	TN	-0.03	-0.000012	± 2.5	PASS
		VN	TN	1.24	0.000494	± 2.5	PASS
		VH	TN	-0.02	-0.000008	± 2.5	PASS
	MCH	VL	TN	-0.6	-0.000237	± 2.5	PASS
		VN	TN	3.8	0.001499	± 2.5	PASS
		VH	TN	4.69	0.001850	± 2.5	PASS
	HCH	VL	TN	-0.12	-0.000047	± 2.5	PASS
		VN	TN	2.87	0.001121	± 2.5	PASS
		VH	TN	1.22	0.000477	± 2.5	PASS
16QAM	LCH	VL	TN	-0.55	-0.000219	± 2.5	PASS
		VN	TN	0.79	0.000315	± 2.5	PASS
		VH	TN	-0.82	-0.000327	± 2.5	PASS
	MCH	VL	TN	2.08	0.000821	± 2.5	PASS
		VN	TN	2.27	0.000895	± 2.5	PASS
		VH	TN	4.8	0.001893	± 2.5	PASS
	HCH	VL	TN	0	0.000000	± 2.5	PASS
		VN	TN	4.62	0.001805	± 2.5	PASS
		VH	TN	0.12	0.000047	± 2.5	PASS
Temperature							
Modulation	Channel	Voltage [Vdc]	Temperature (℃)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
QPSK	LCH	VN	-30	3.03	0.001207	± 2.5	PASS
		VN	-20	-1.86	-0.000741	± 2.5	PASS
		VN	-10	0.37	0.000147	± 2.5	PASS
		VN	0	1.47	0.000586	± 2.5	PASS
		VN	10	1.37	0.000546	± 2.5	PASS
		VN	20	-1.32	-0.000526	± 2.5	PASS
		VN	30	1.98	0.000789	± 2.5	PASS
		VN	40	3.59	0.001430	± 2.5	PASS
		VN	50	0.71	0.000283	± 2.5	PASS
	MCH	VN	-30	-0.45	-0.000178	± 2.5	PASS
		VN	-20	-1.57	-0.000619	± 2.5	PASS
		VN	-10	-1.96	-0.000773	± 2.5	PASS
		VN	0	0.65	0.000256	± 2.5	PASS
		VN	10	4.34	0.001712	± 2.5	PASS
		VN	20	-1.18	-0.000465	± 2.5	PASS

		VN	30	-1.88	-0.000742	± 2.5	PASS
		VN	40	-1.34	-0.000529	± 2.5	PASS
		VN	50	2.57	0.001014	± 2.5	PASS
	HCH	VN	-30	4.92	0.001922	± 2.5	PASS
		VN	-20	0.89	0.000348	± 2.5	PASS
		VN	-10	4.95	0.001934	± 2.5	PASS
		VN	0	3.46	0.001352	± 2.5	PASS
		VN	10	-1.51	-0.000590	± 2.5	PASS
		VN	20	1.16	0.000453	± 2.5	PASS
		VN	30	-1.59	-0.000621	± 2.5	PASS
		VN	40	1.36	0.000531	± 2.5	PASS
		VN	50	-0.81	-0.000316	± 2.5	PASS
16QAM	LCH	VN	-30	-0.07	-0.000028	± 2.5	PASS
		VN	-20	3.61	0.001438	± 2.5	PASS
		VN	-10	2.19	0.000873	± 2.5	PASS
		VN	0	3.21	0.001279	± 2.5	PASS
		VN	10	0.07	0.000028	± 2.5	PASS
		VN	20	0.89	0.000355	± 2.5	PASS
		VN	30	1.99	0.000793	± 2.5	PASS
		VN	40	-1.92	-0.000765	± 2.5	PASS
		VN	50	0.14	0.000056	± 2.5	PASS
	MCH	VN	-30	3.94	0.001554	± 2.5	PASS
		VN	-20	3.66	0.001444	± 2.5	PASS
		VN	-10	0.17	0.000067	± 2.5	PASS
		VN	0	4.18	0.001649	± 2.5	PASS
		VN	10	1.93	0.000761	± 2.5	PASS
		VN	20	3.5	0.001381	± 2.5	PASS
		VN	30	1.52	0.000600	± 2.5	PASS
		VN	40	3.14	0.001239	± 2.5	PASS
		VN	50	1.92	0.000757	± 2.5	PASS
	HCH	VN	-30	4.72	0.001844	± 2.5	PASS
		VN	-20	-0.32	-0.000125	± 2.5	PASS
		VN	-10	4.67	0.001824	± 2.5	PASS
		VN	0	-0.08	-0.000031	± 2.5	PASS
		VN	10	3.24	0.001266	± 2.5	PASS
		VN	20	-0.42	-0.000164	± 2.5	PASS
		VN	30	-0.8	-0.000313	± 2.5	PASS
		VN	40	2.34	0.000914	± 2.5	PASS
		VN	50	2.51	0.000980	± 2.5	PASS