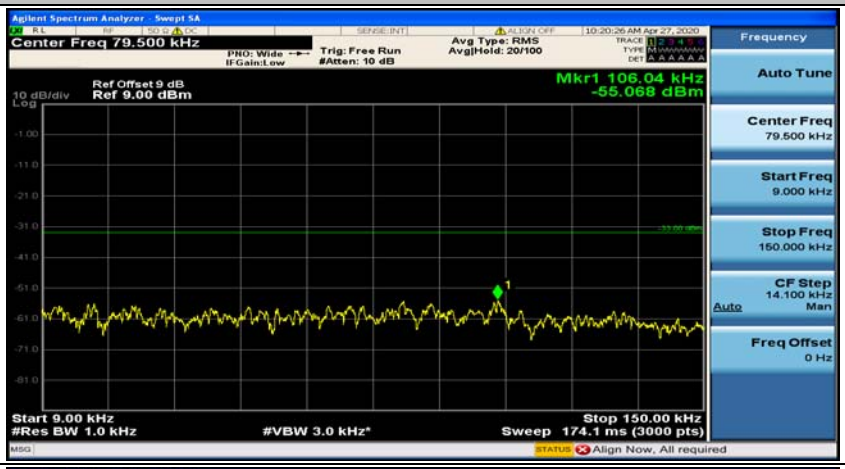
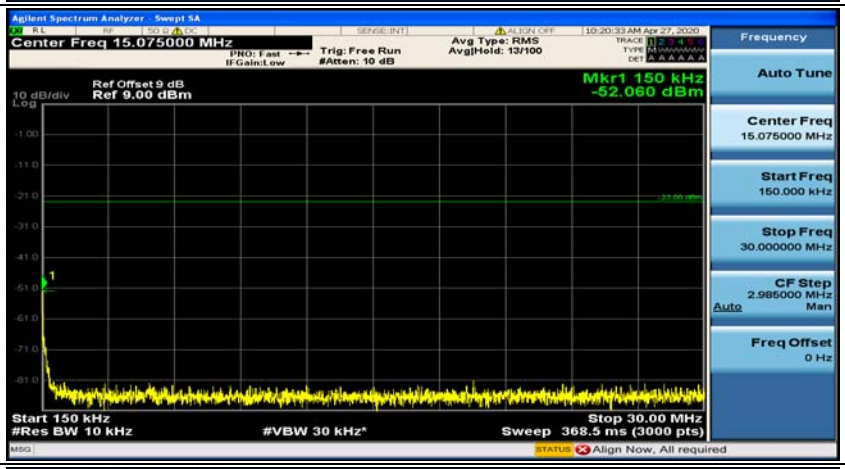
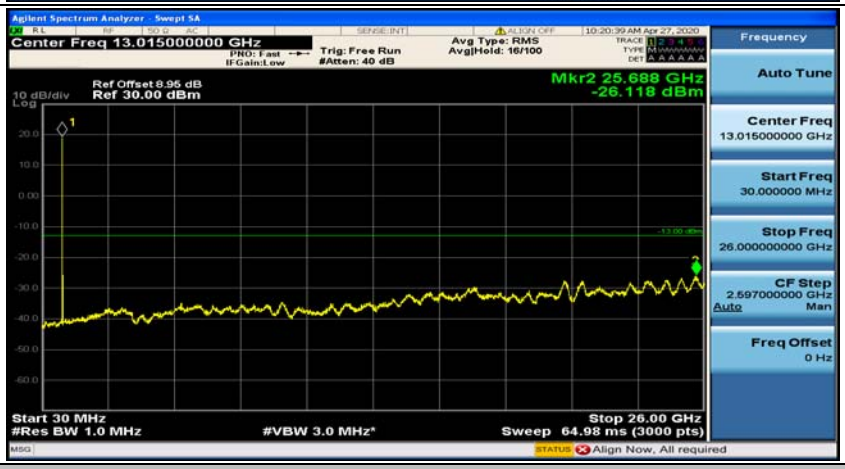
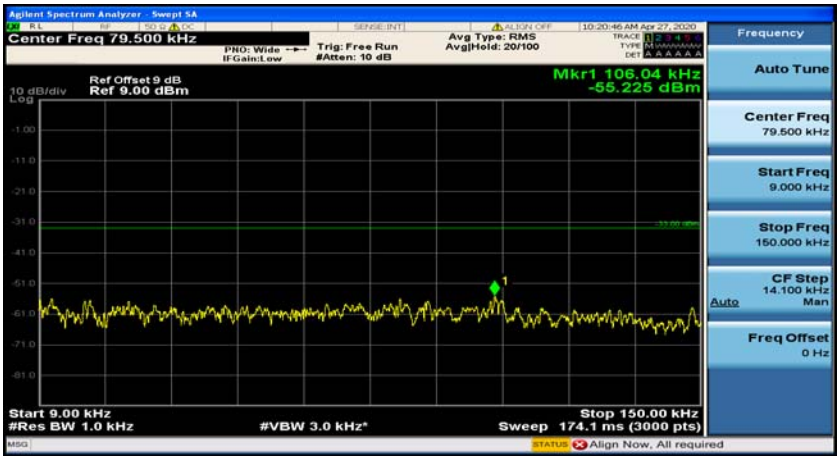
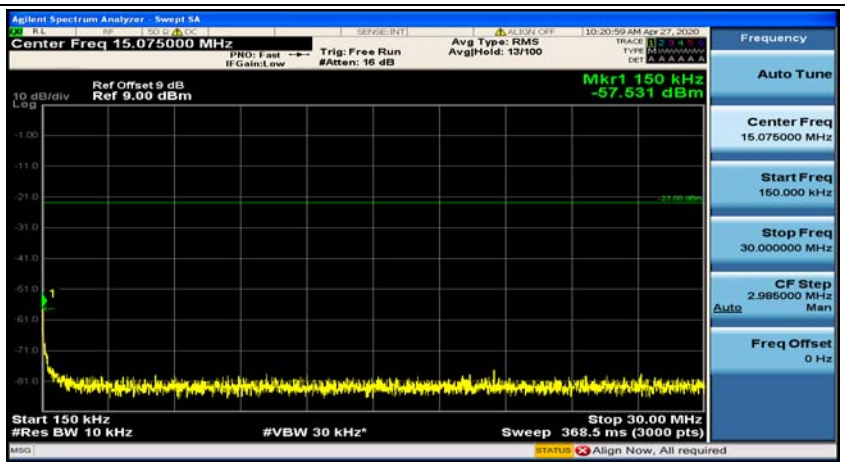
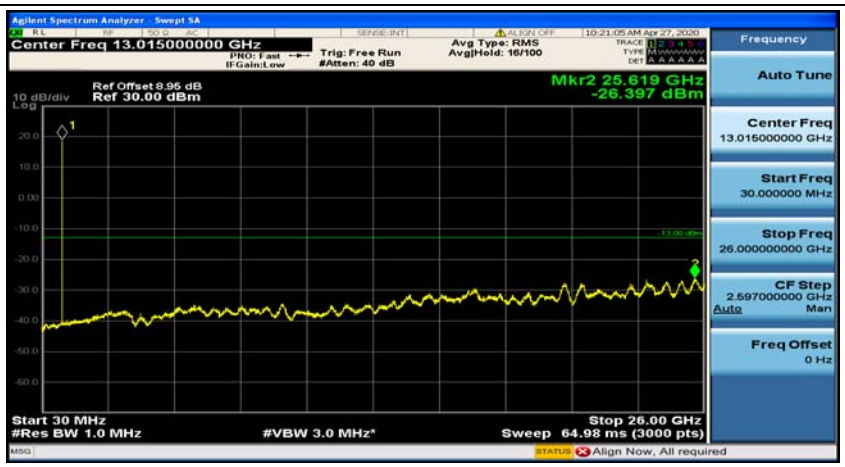
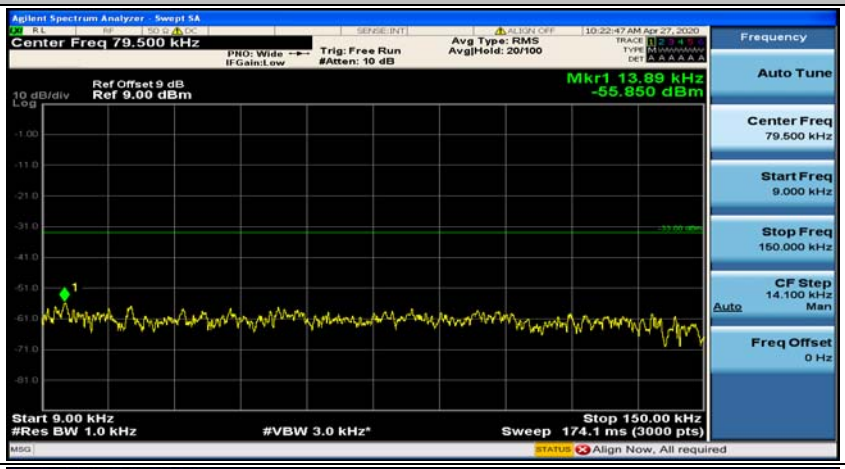
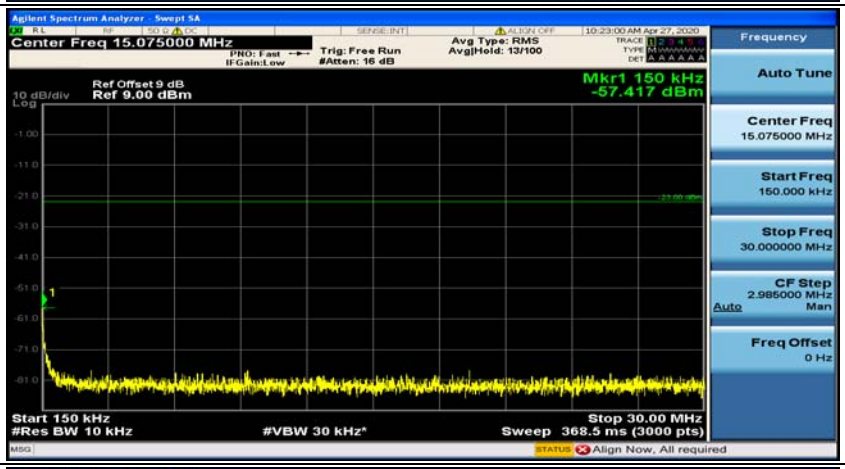
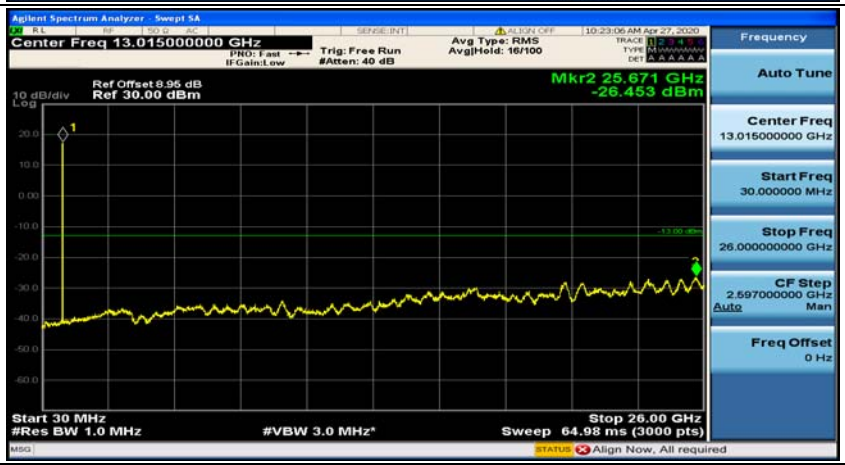
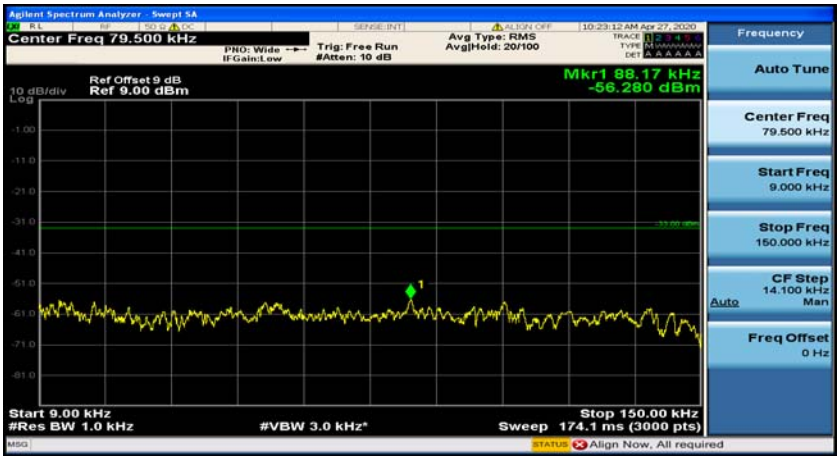
| (Channel Bandwidth: 3 MHz)_MCH_16QAM_1RB#0 |
| --- |
|  |
|  |
|  |
| (Channel Bandwidth: 3 MHz)_MCH_16QAM_1RB#7 |

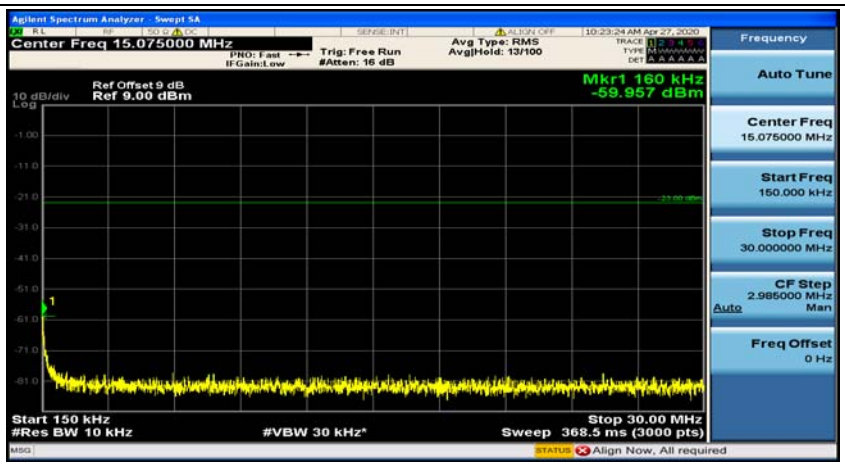

Agilent Spectrum Analyzer - Swept SA
Center Freq 79.500 kHz
PNO: Wide
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 20/100
10:20:46 AM Apr 27, 2020
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Mkr1 106.04 kHz
-55.225 dBm
Start 9.00 kHz
#Res BW 1.0 kHz
#VBW 3.0 kHz*
Stop 150.00 kHz
Sweep 174.1 ms (3000 pts)
Align Now, All required
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

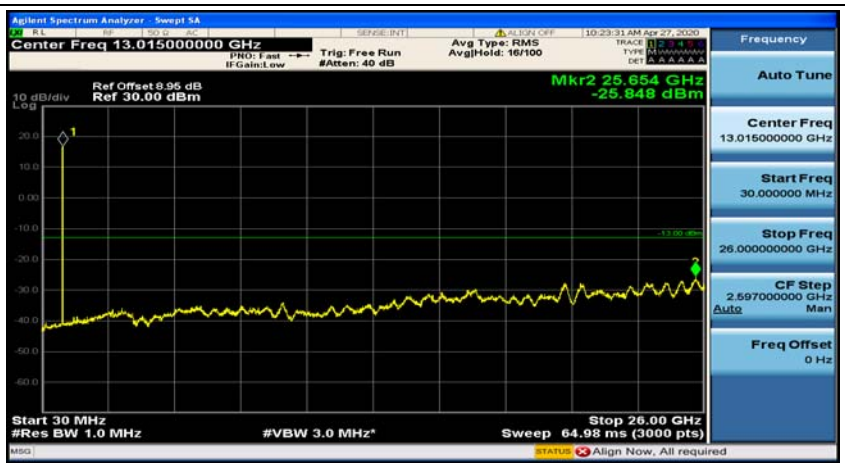

Agilent Spectrum Analyzer - Swept SA
Center Freq 15.075000 MHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 16 dB
Avg Type: RMS
Avg|Hold: 13/100
10:20:59 AM Apr 27, 2020
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Mkr1 150 kHz
-57.531 dBm
Start 150 kHz
#Res BW 10 kHz
#VBW 30 kHz*
Stop 30.00 MHz
Sweep 368.5 ms (3000 pts)
Align Now, All required
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: 16/100
10:21:05 AM Apr 27, 2020
Ref Offset 8.96 dB
10 dB/div
Log
Ref 30.00 dBm
Mkr2 25.619 GHz
-26.397 dBm
Start 30 MHz
#Res BW 1.0 MHz
#VBW 3.0 MHz*
Stop 26.00 GHz
Sweep 64.98 ms (3000 pts)
Align Now, All required
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

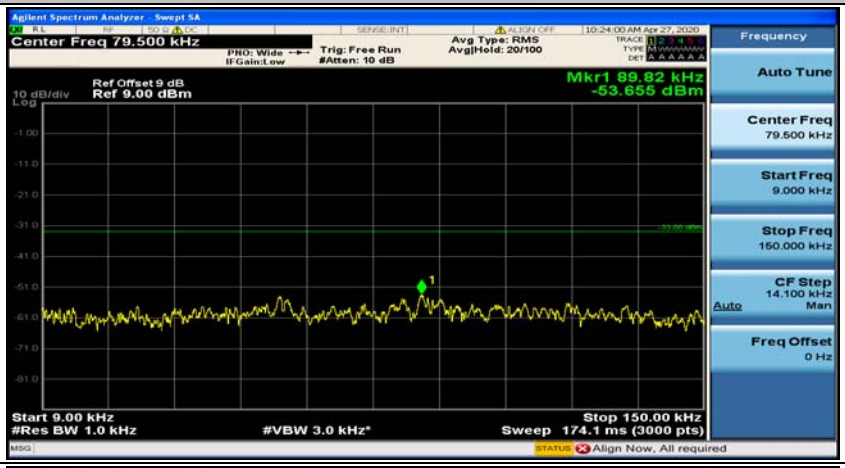
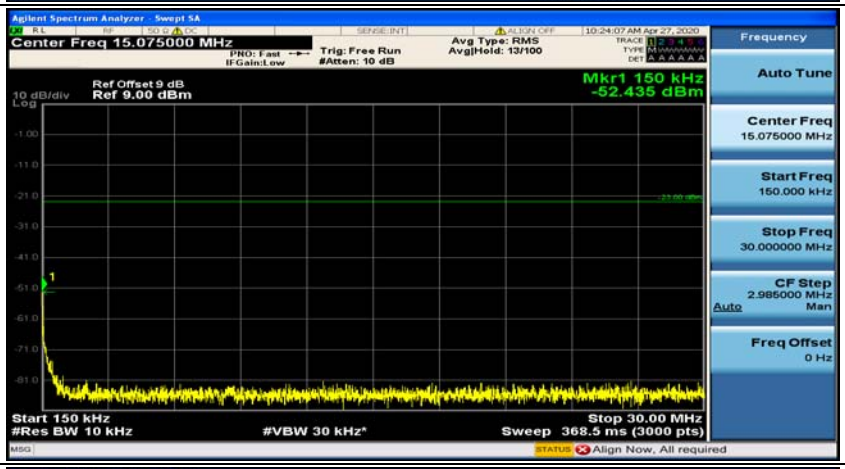
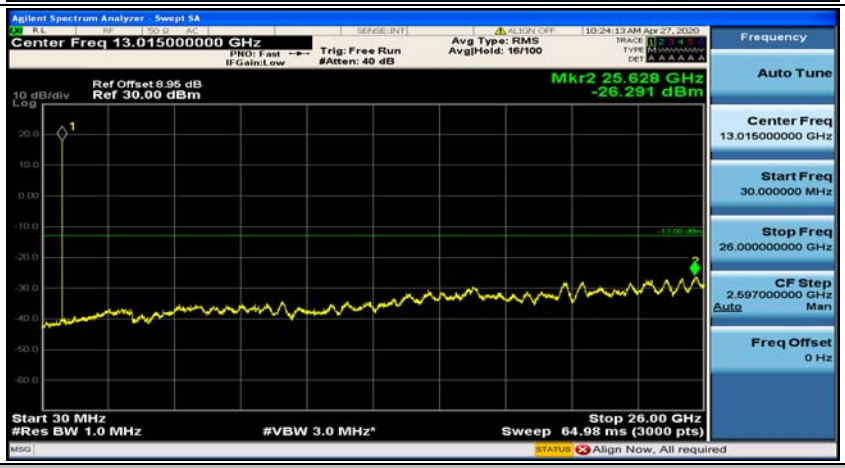
| (Channel Bandwidth: 3 MHz)_HCH_16QAM_1RB#0 |
| --- |
|  |
|  |
|  |
| (Channel Bandwidth: 3 MHz)_HCH_16QAM_1RB#7 |

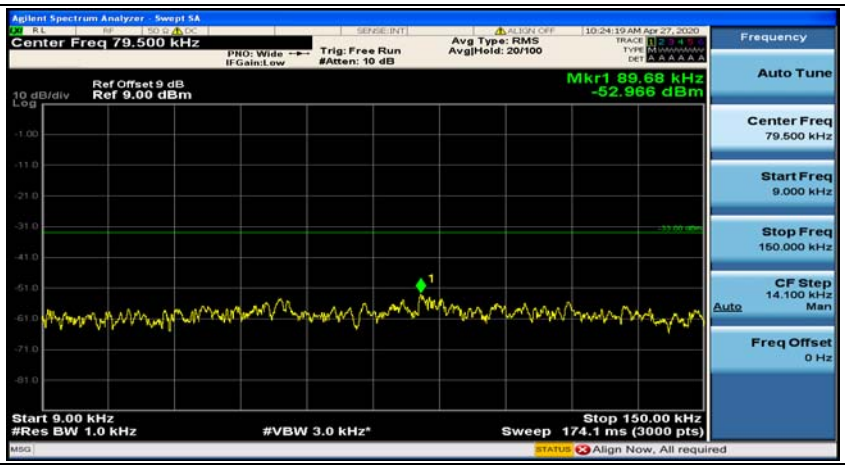

Agilent Spectrum Analyzer - Swept SA
Center Freq 79.500 kHz
PNO: Wide
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 20/100
10:23:12 AM Apr 27, 2020
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Mkr1 88.17 kHz
-56.280 dBm
Start 9.00 kHz
#Res BW 1.0 kHz
#VBW 3.0 kHz*
Stop 150.00 kHz
Sweep 174.1 ms (3000 pts)
Align Now, All required
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

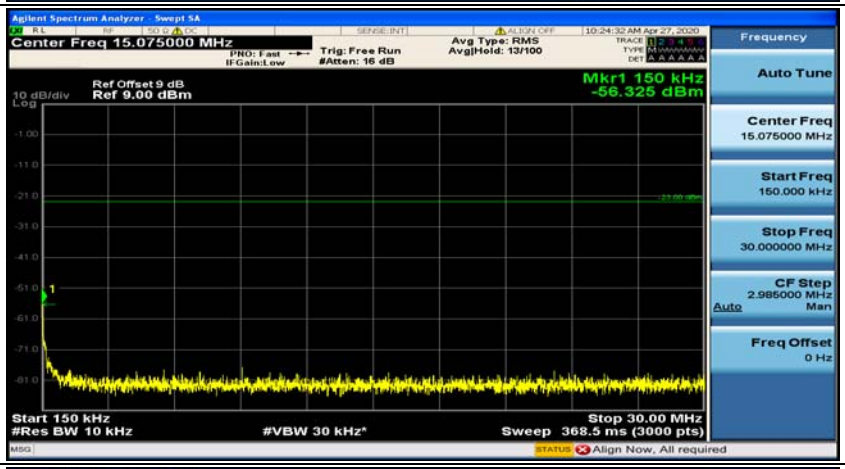

Agilent Spectrum Analyzer - Swept SA
Center Freq 15.075000 MHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 16 dB
Avg Type: RMS
Avg|Hold: 13/100
10:23:24 AM Apr 27, 2020
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Mkr1 160 kHz
-59.957 dBm
Start 150 kHz
#Res BW 10 kHz
#VBW 30 kHz*
Stop 30.00 MHz
Sweep 368.5 ms (3000 pts)
Align Now, All required
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: 16/100
10:23:31 AM Apr 27, 2020
Ref Offset 8.96 dB
10 dB/div
Log
Ref 30.00 dBm
Mkr2 25.654 GHz
-25.848 dBm
Start 30 MHz
#Res BW 1.0 MHz
#VBW 3.0 MHz*
Stop 26.00 GHz
Sweep 64.98 ms (3000 pts)
Align Now, All required
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

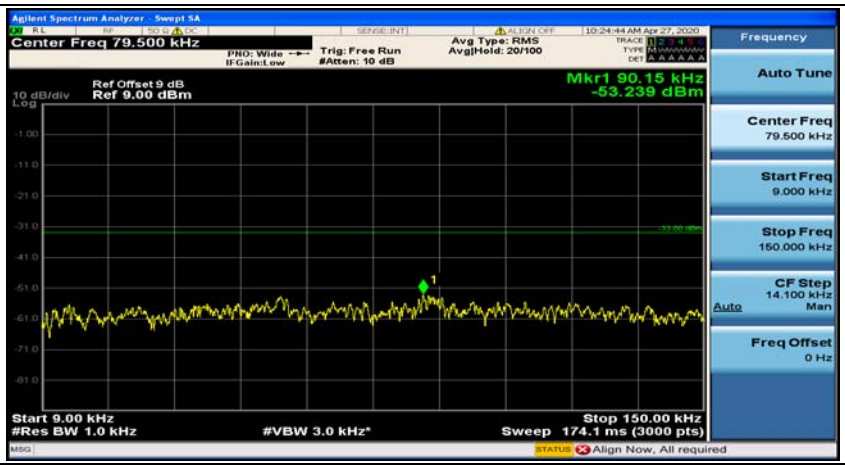
| (Channel Bandwidth: 5 MHz)_LCH_QPSK_1RB#0 |
| --- |
|  |
|  |
|  |
| (Channel Bandwidth: 5 MHz)_LCH_QPSK_1RB#12 |

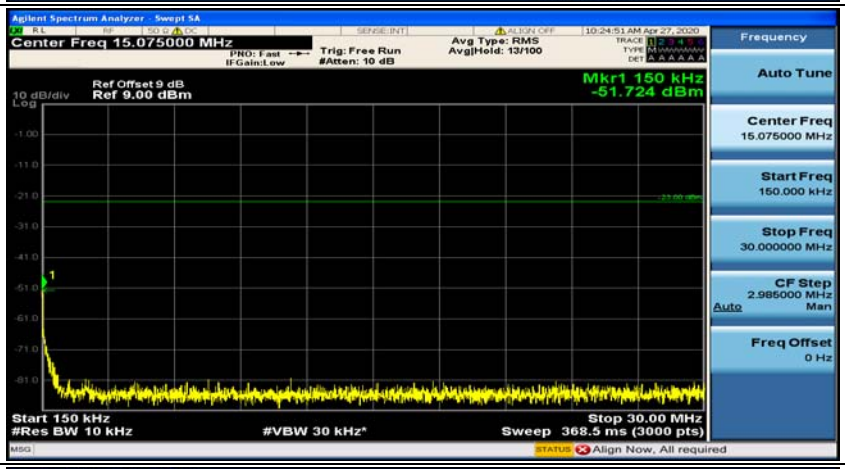


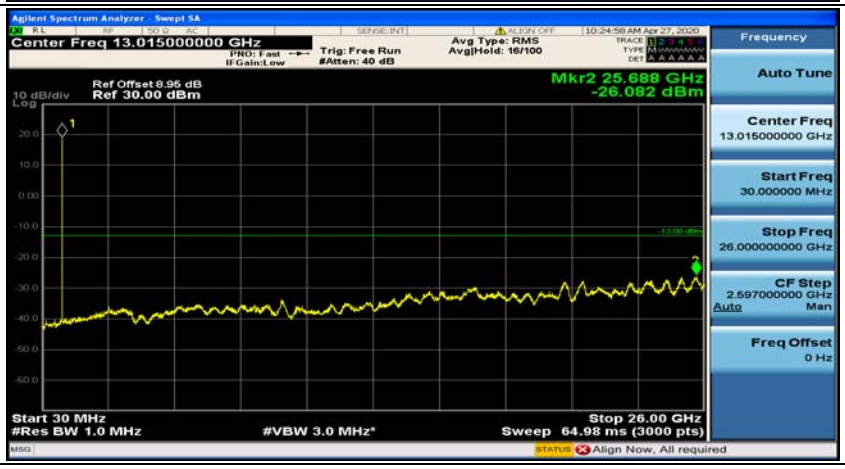



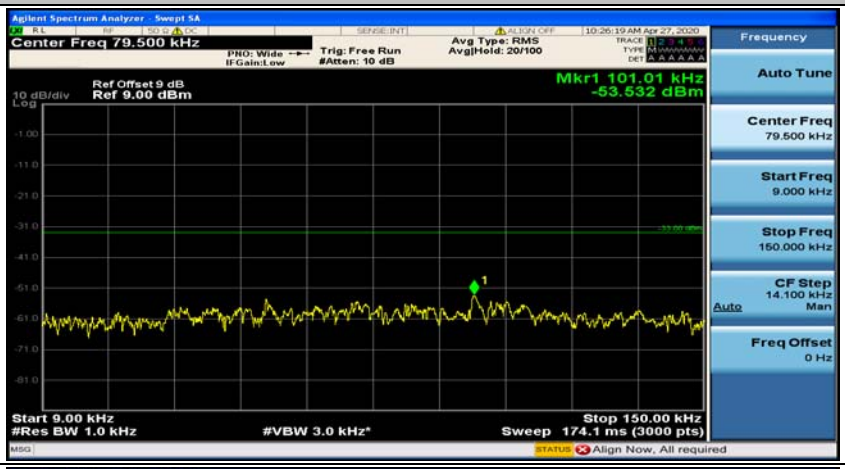
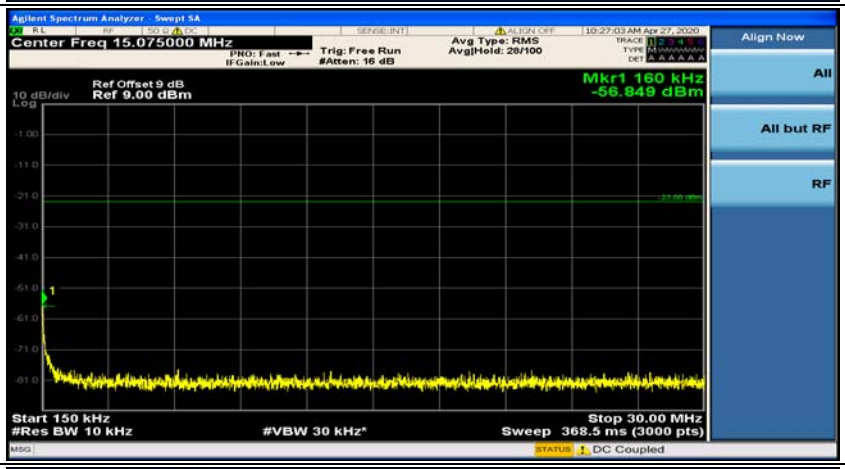
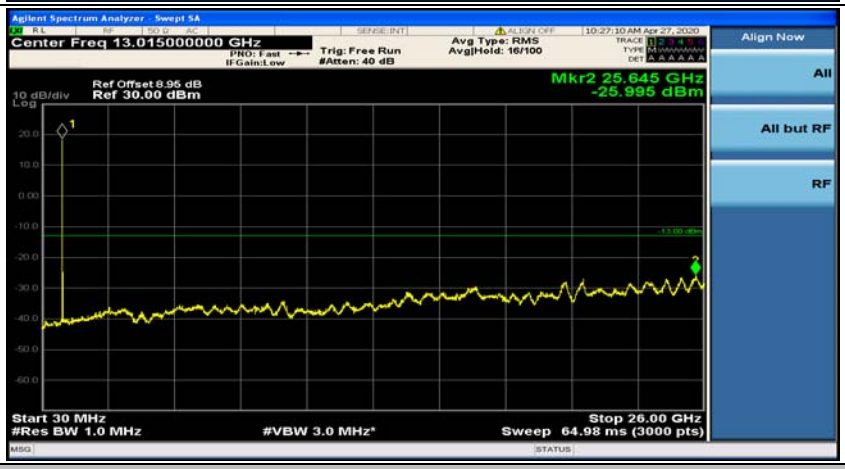


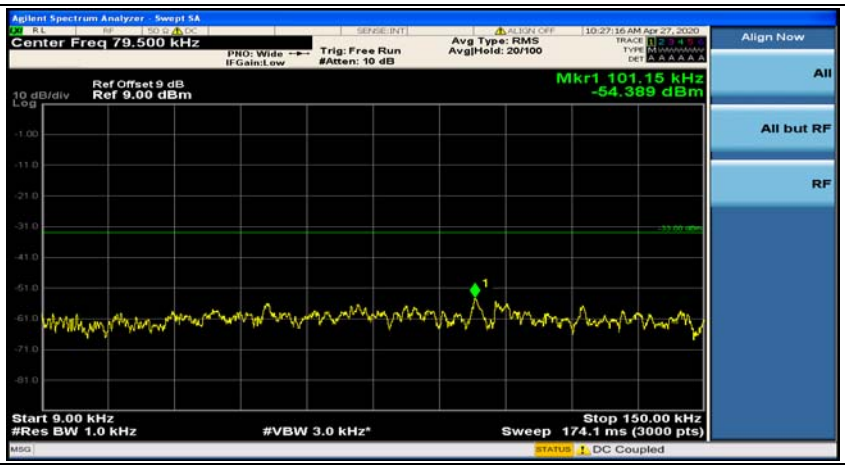
(Channel Bandwidth: 5 MHz)_LCH_QPSK_1RB#24

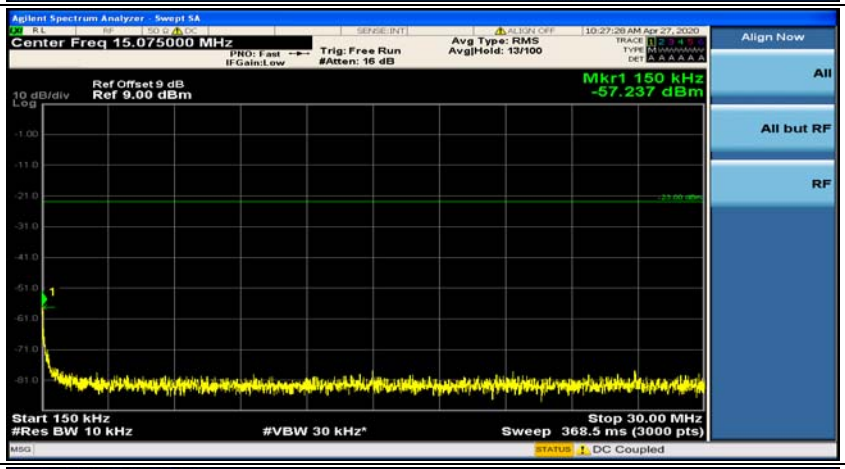

Agilent Spectrum Analyzer - Swept SA
Center Freq 79.500 kHz
PNO: Wide
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 20/100
10:24:44 AM Apr 27, 2020
Frequency
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Mkr1 90.15 kHz
-53.239 dBm
Auto Tune
Center Freq
79.500 kHz
Start Freq
9.000 kHz
Stop 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)
Align Now, All required


Agilent Spectrum Analyzer - Swept SA
Center Freq 15.075000 MHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 13/100
10:24:51 AM Apr 27, 2020
Frequency
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Mkr1 150 kHz
-51.724 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)
Align Now, All required


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: 16/100
10:24:58 AM Apr 27, 2020
Frequency
Ref Offset 8.95 dB
10 dB/div
Log
Ref 30.00 dBm
Mkr2 25.688 GHz
-26.082 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)
Align Now, All required

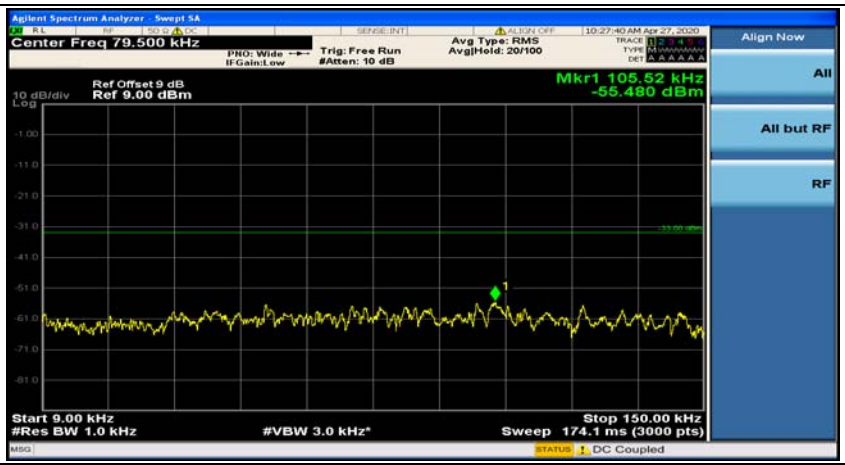
| (Channel Bandwidth: 5 MHz)_MCH_QPSK_1RB#0 |
| --- |
|  |
|  |
|  |
| (Channel Bandwidth: 5 MHz)_MCH_QPSK_1RB#12 |

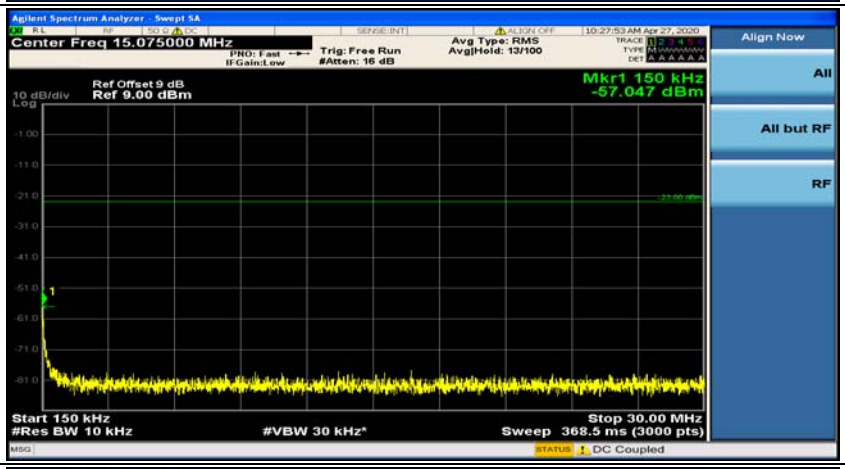


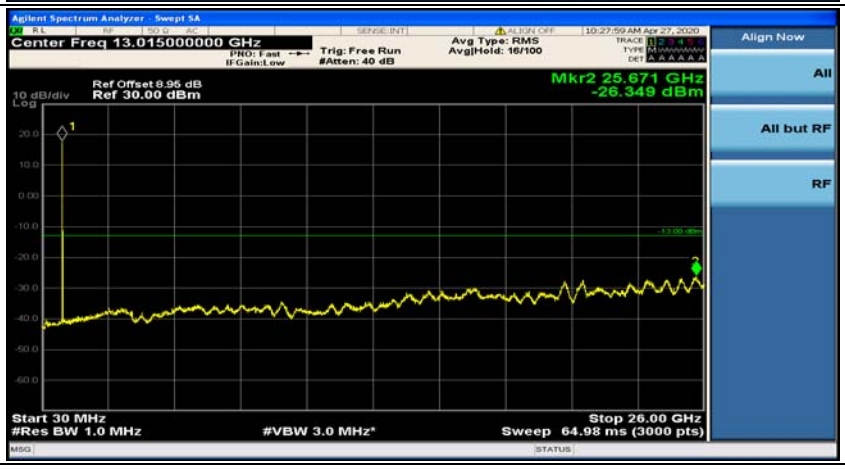



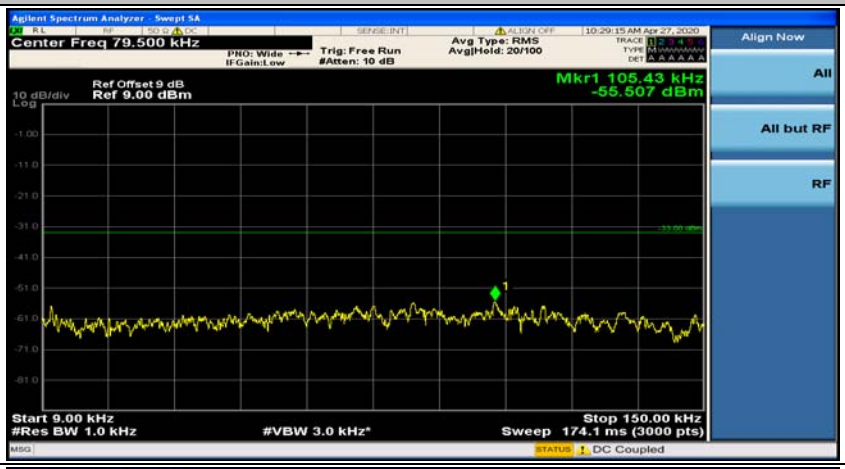
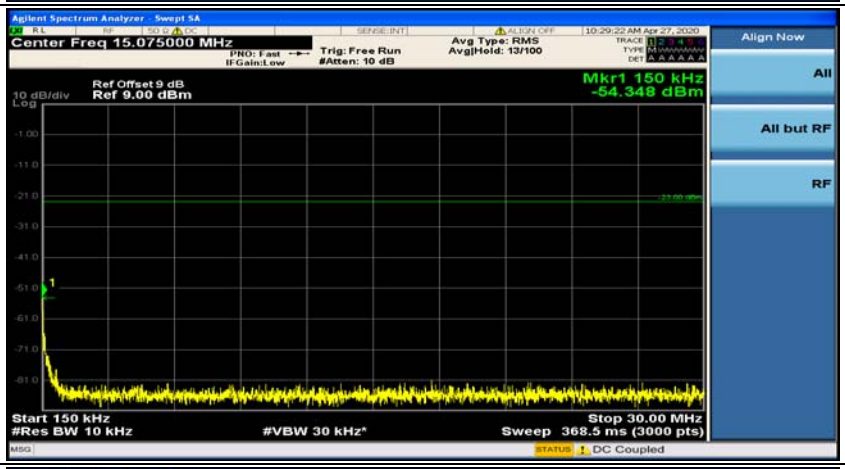
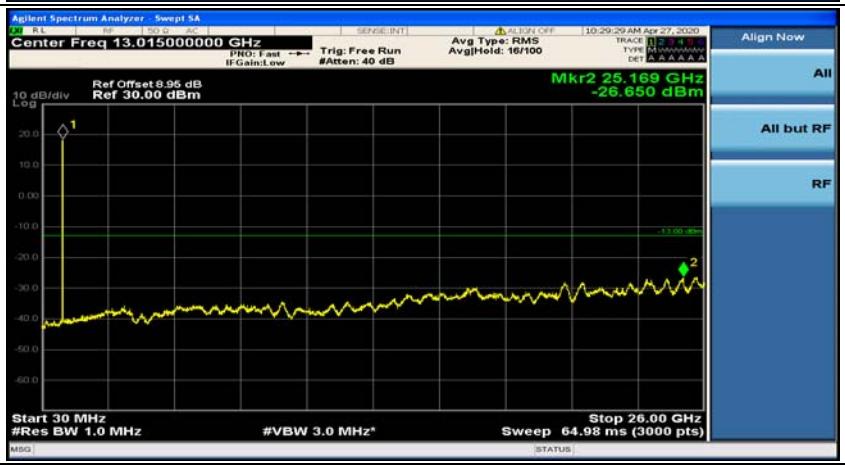


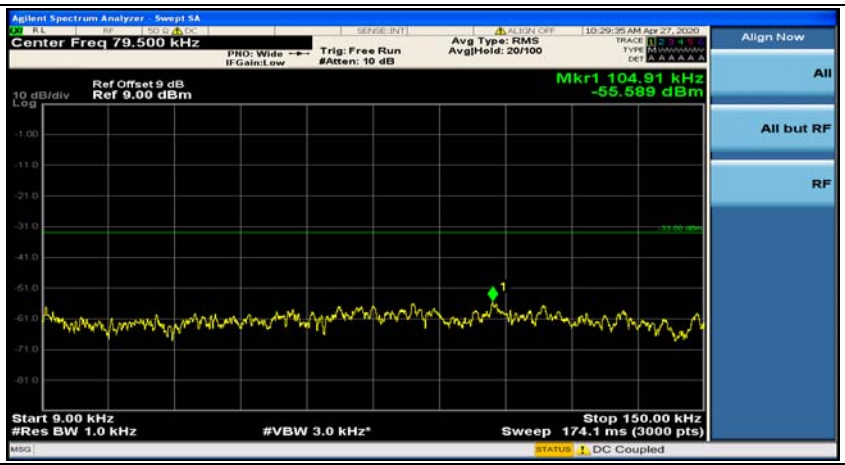
(Channel Bandwidth: 5 MHz)_MCH_QPSK_1RB#24

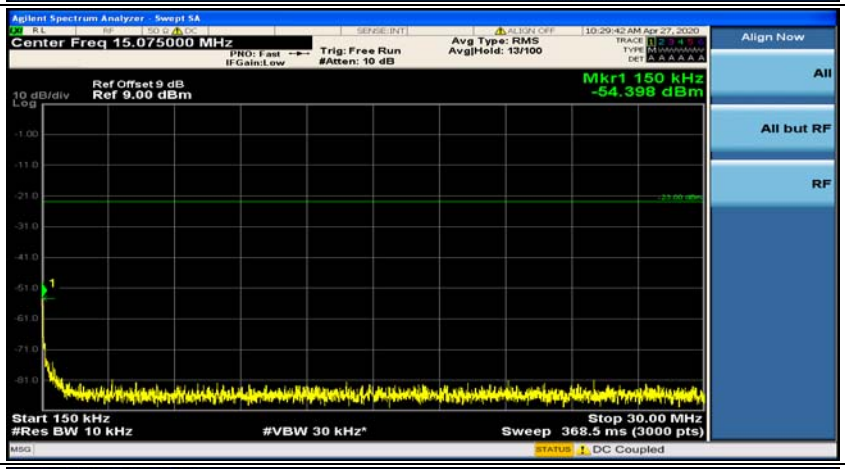

Agilent Spectrum Analyzer - Swept SA
Center Freq 79.500 kHz
PNO: Wide
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 20/100
10:27:40 AM Apr 27, 2020
Mkr1 105.52 kHz
-55.480 dBm
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Start 9.00 kHz
#Res BW 1.0 kHz
#VBW 3.0 kHz*
Stop 150.00 kHz
Sweep 174.1 ms (3000 pts)
DC Coupled
Align Now
All
All but RF
RF

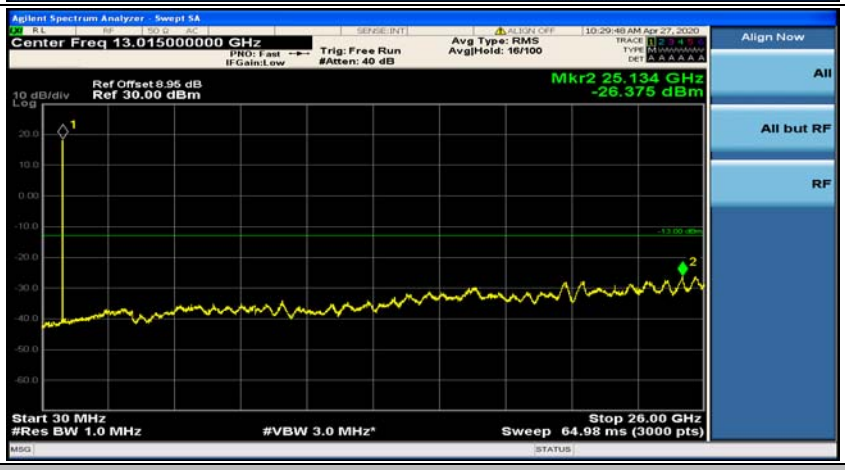

Agilent Spectrum Analyzer - Swept SA
Center Freq 15.075000 MHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 16 dB
Avg Type: RMS
Avg|Hold: 13/100
10:27:53 AM Apr 27, 2020
Mkr1 150 kHz
-57.047 dBm
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Start 150 kHz
#Res BW 10 kHz
#VBW 30 kHz*
Stop 30.00 MHz
Sweep 368.5 ms (3000 pts)
DC Coupled
Align Now
All
All but RF
RF


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: 16/100
10:27:59 AM Apr 27, 2020
Mkr2 25.671 GHz
-26.349 dBm
Ref Offset 8.95 dB
10 dB/div
Log
Ref 30.00 dBm
Start 30 MHz
#Res BW 1.0 MHz
#VBW 3.0 MHz*
Stop 26.00 GHz
Sweep 64.98 ms (3000 pts)
Align Now
All
All but RF
RF

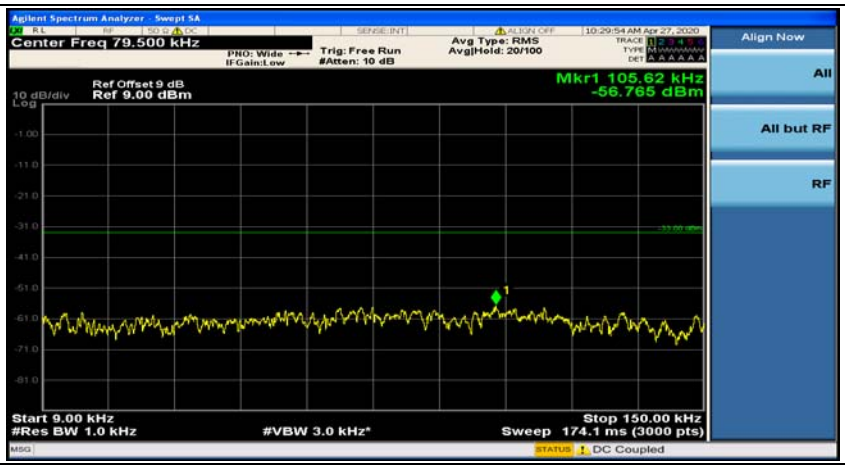
| (Channel Bandwidth: 5 MHz)_HCH_QPSK_1RB#0 |
| --- |
|  |
|  |
|  |
| (Channel Bandwidth: 5 MHz)_HCH_QPSK_1RB#12 |

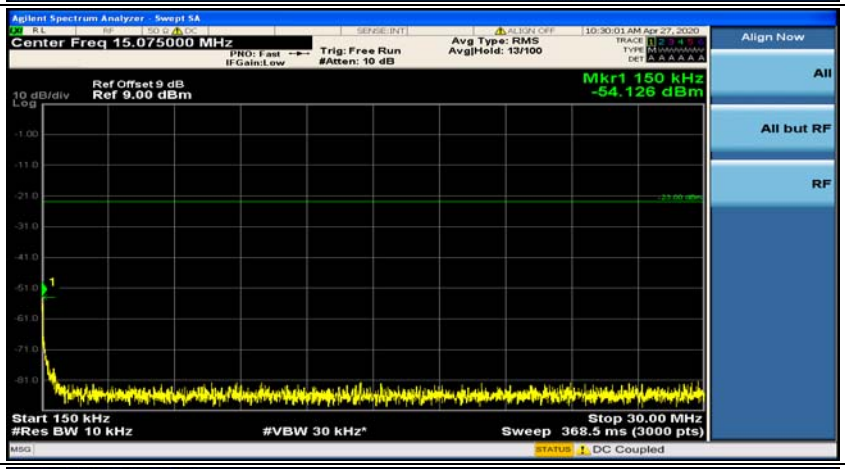


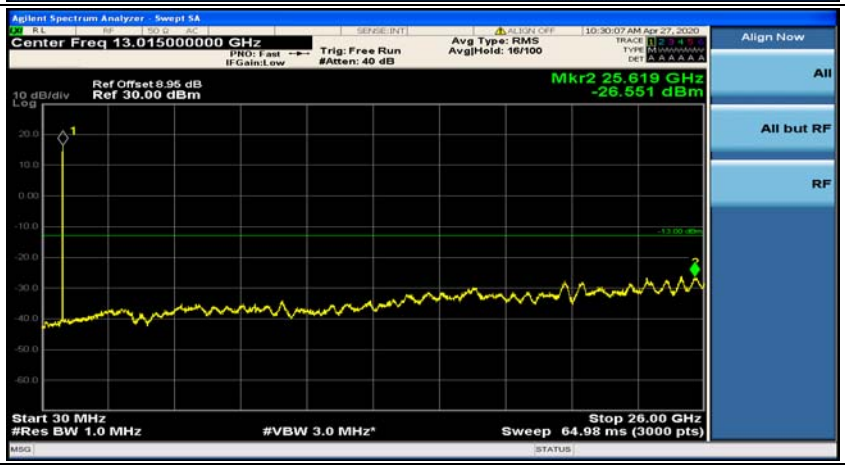



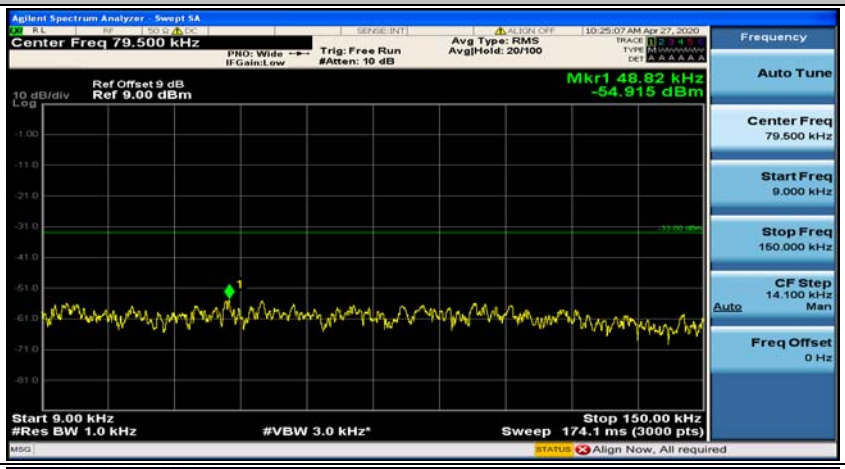
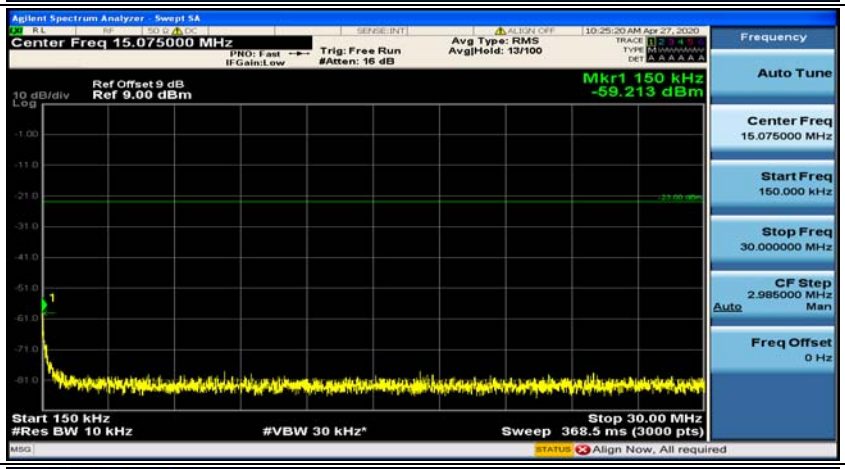
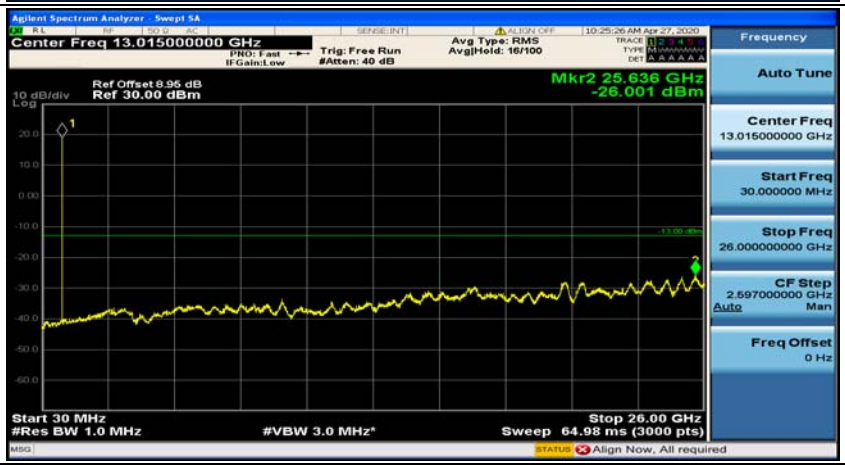



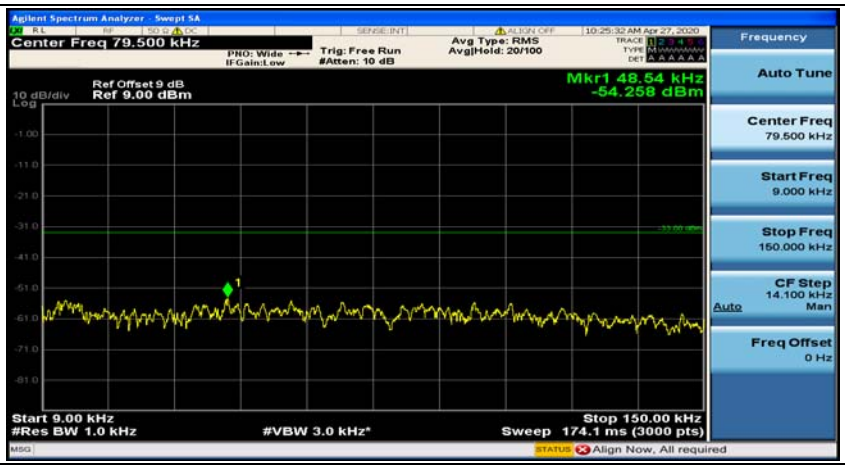

(Channel Bandwidth: 5 MHz)_HCH_QPSK_1RB#24

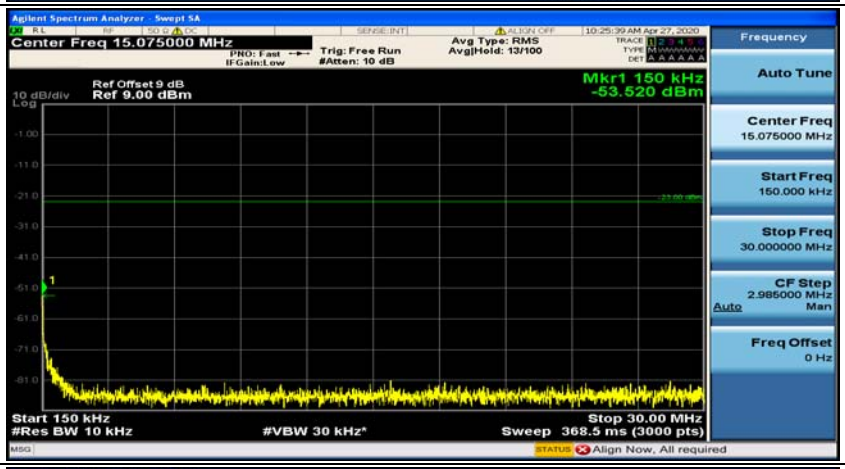

Agilent Spectrum Analyzer - Swept SA
Center Freq 79.500 kHz
PNO: Wide
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 20/100
10:29:54 AM Apr 27, 2020
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Mkr1 105.62 kHz
-56.765 dBm
Start 9.00 kHz
#Res BW 1.0 kHz
#VBW 3.0 kHz*
Stop 150.00 kHz
Sweep 174.1 ms (3000 pts)
DC Coupled
Align Now
All
All but RF
RF

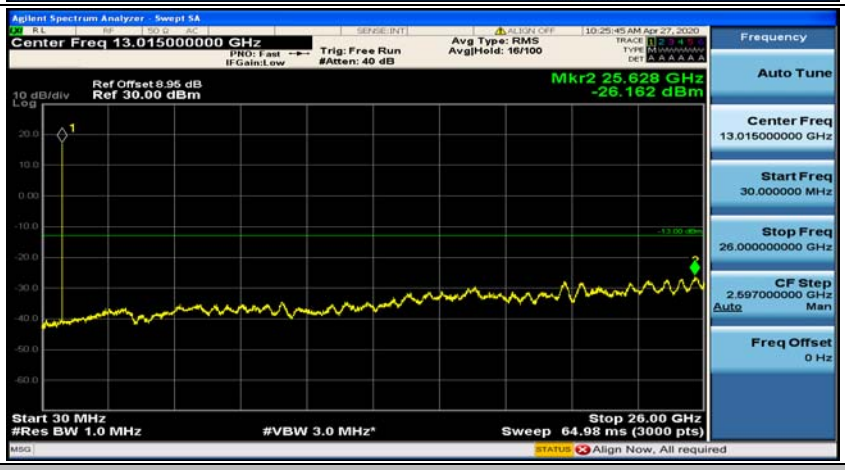

Agilent Spectrum Analyzer - Swept SA
Center Freq 15.075000 MHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 13/100
10:30:01 AM Apr 27, 2020
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Mkr1 150 kHz
-54.126 dBm
Start 150 kHz
#Res BW 10 kHz
#VBW 30 kHz*
Stop 30.00 MHz
Sweep 368.5 ms (3000 pts)
DC Coupled
Align Now
All
All but RF
RF


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: 16/100
10:30:07 AM Apr 27, 2020
Ref Offset 8.95 dB
10 dB/div
Log
Ref 30.00 dBm
Mkr2 25.619 GHz
-26.551 dBm
Start 30 MHz
#Res BW 1.0 MHz
#VBW 3.0 MHz*
Stop 26.00 GHz
Sweep 64.98 ms (3000 pts)
Align Now
All
All but RF
RF

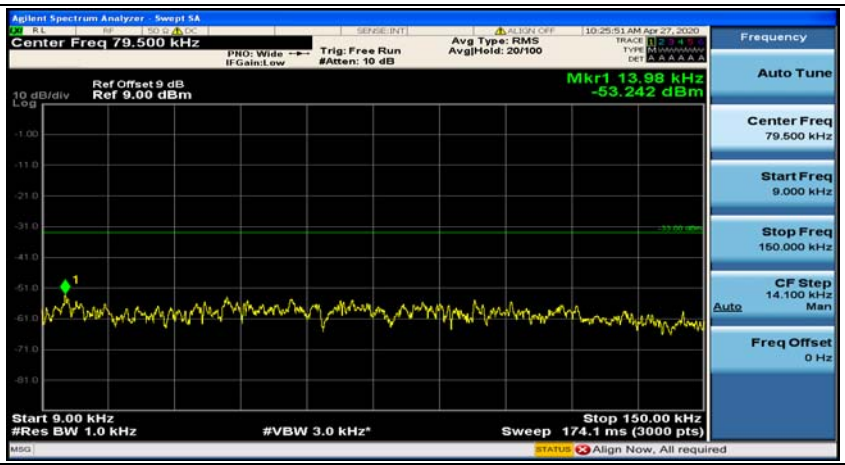
| (Channel Bandwidth: 5 MHz)_LCH_16QAM_1RB#0 |
| --- |
|  |
|  |
|  |
| (Channel Bandwidth: 5 MHz)_LCH_16QAM_1RB#12 |

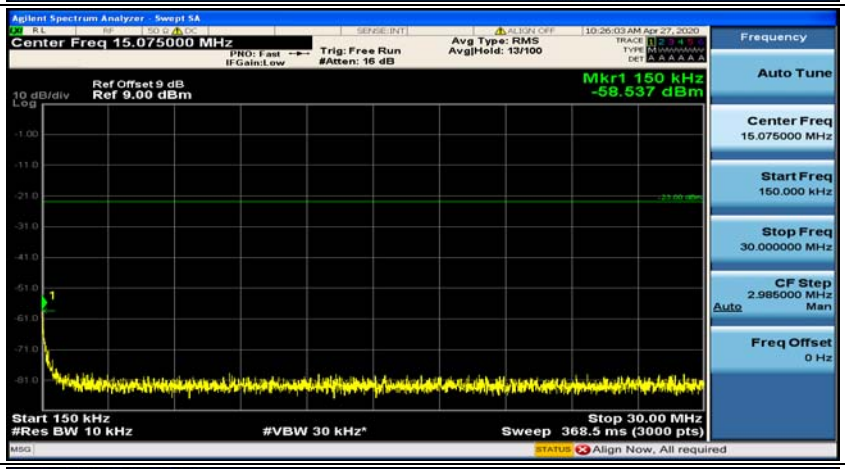


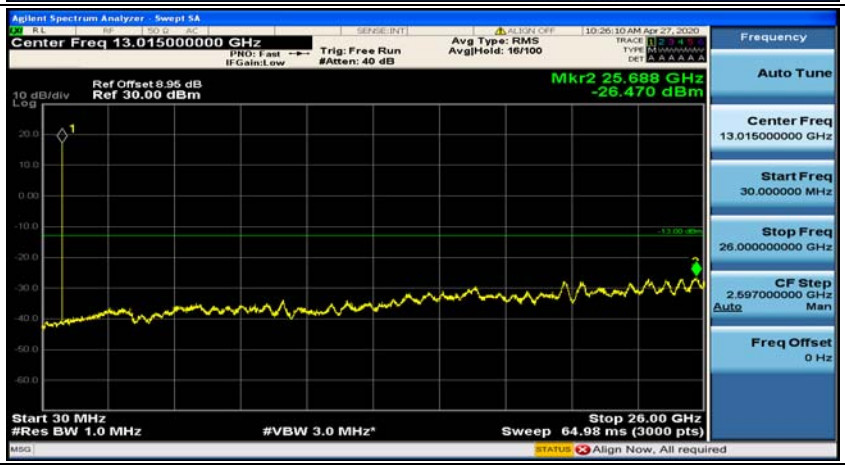



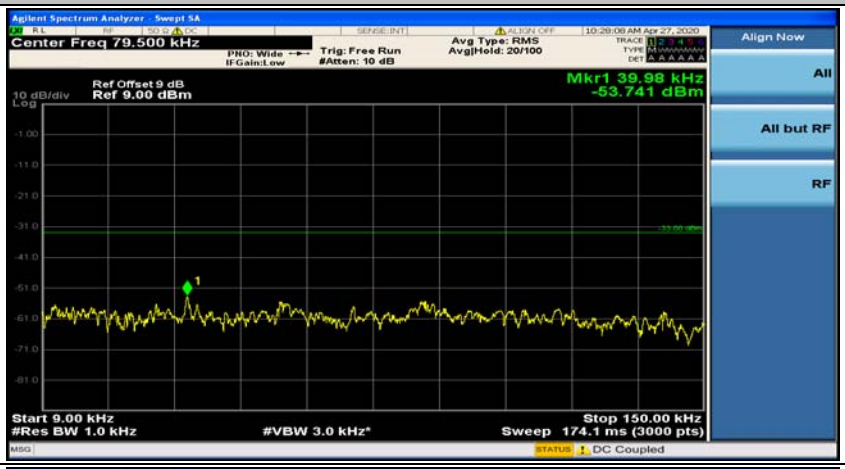
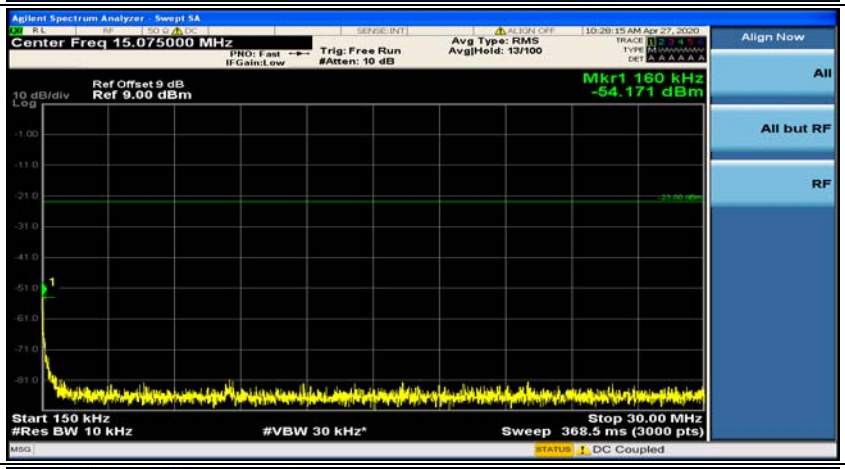
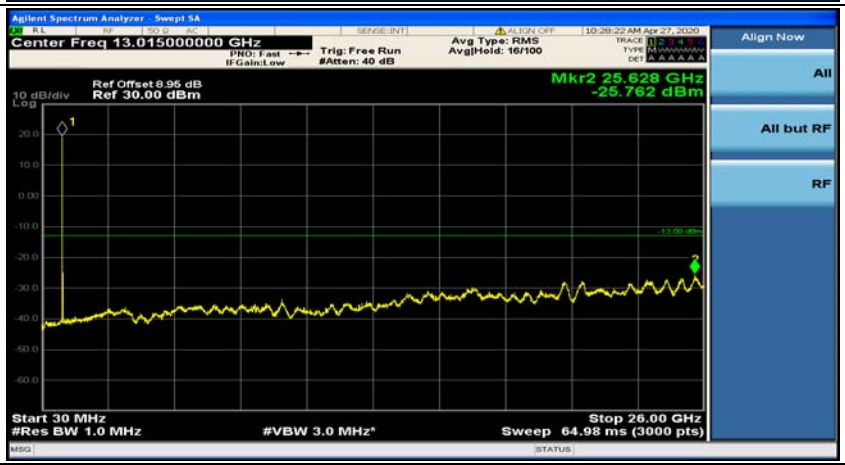



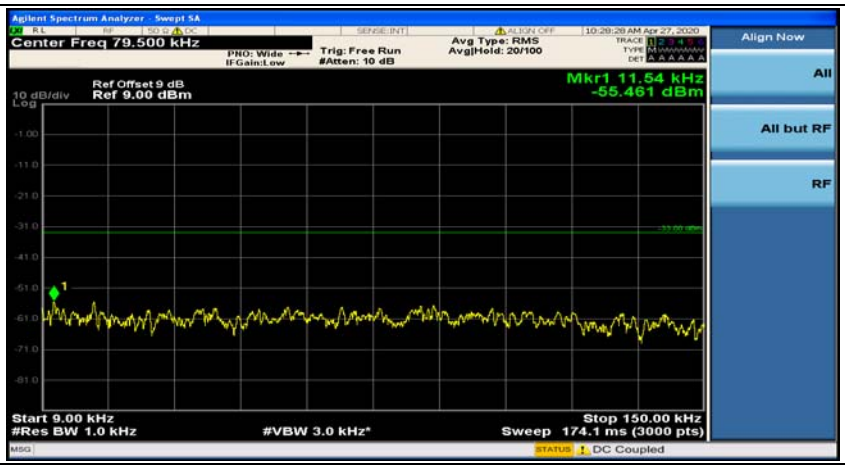

(Channel Bandwidth: 5 MHz)_LCH_16QAM_1RB#24

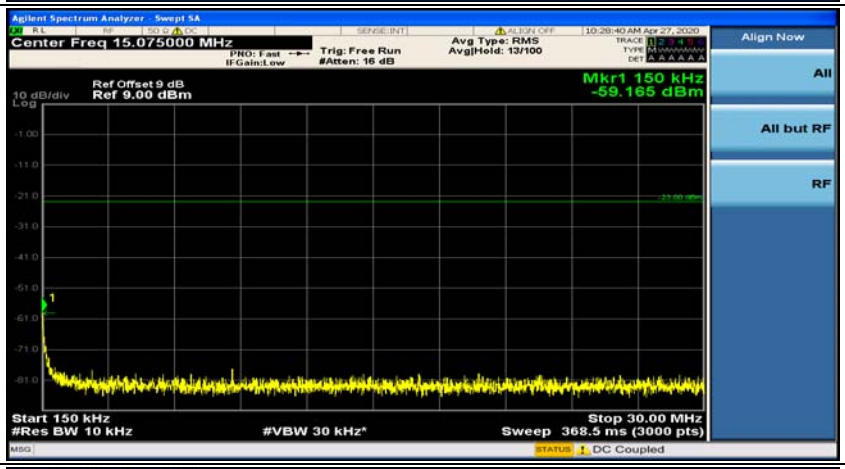

Agilent Spectrum Analyzer - Swept SA
Center Freq 79.500 kHz
PNO: Wide
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 20/100
10:25:51 AM Apr 27, 2020
Frequency
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Mkr1 13.98 kHz
-53.242 dBm
Auto Tune
Center Freq
79.500 kHz
Start Freq
9.000 kHz
Stop 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)
Align Now, All required

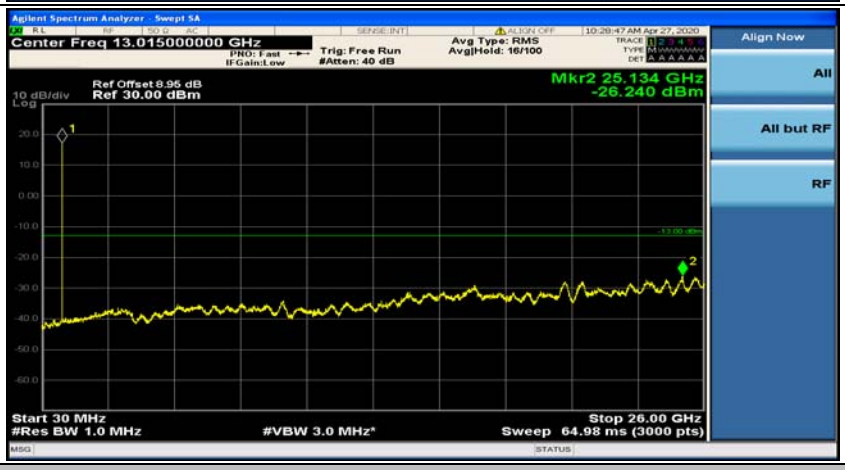

Agilent Spectrum Analyzer - Swept SA
Center Freq 15.075000 MHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 16 dB
Avg Type: RMS
Avg|Hold: 13/100
10:26:03 AM Apr 27, 2020
Frequency
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Mkr1 150 kHz
-58.537 dBm
Auto Tune
Center Freq
15.075000 MHz
Start Freq
150.000 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)
Align Now, All required


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: 16/100
10:26:10 AM Apr 27, 2020
Frequency
Ref Offset 8.95 dB
10 dB/div
Log
Ref 30.00 dBm
Mkr2 25.688 GHz
-26.470 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)
Align Now, All required

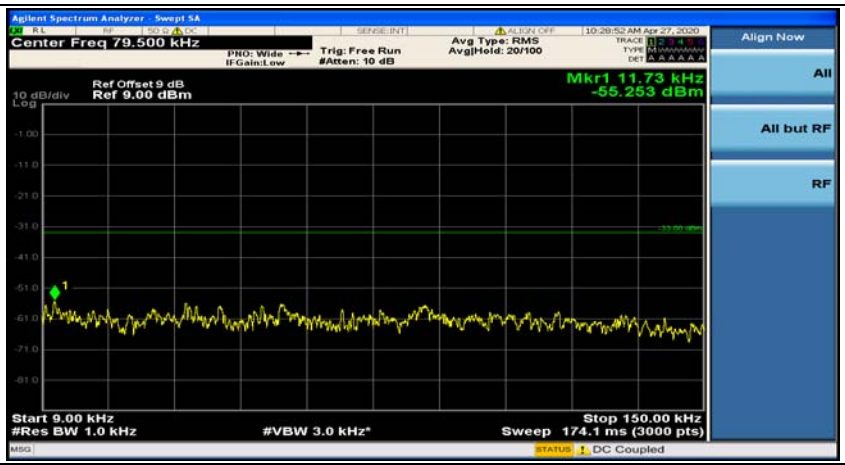
| (Channel Bandwidth: 5 MHz)_MCH_16QAM_1RB#0 |
| --- |
|  |
|  |
|  |
| (Channel Bandwidth: 5 MHz)_MCH_16QAM_1RB#12 |

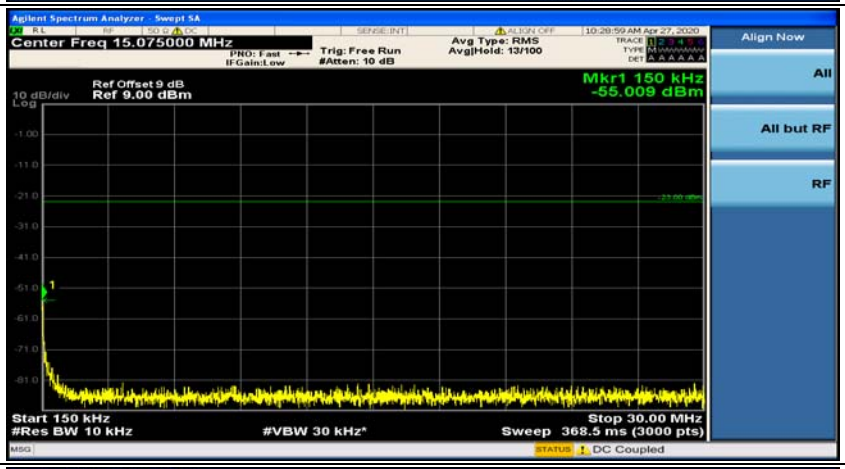


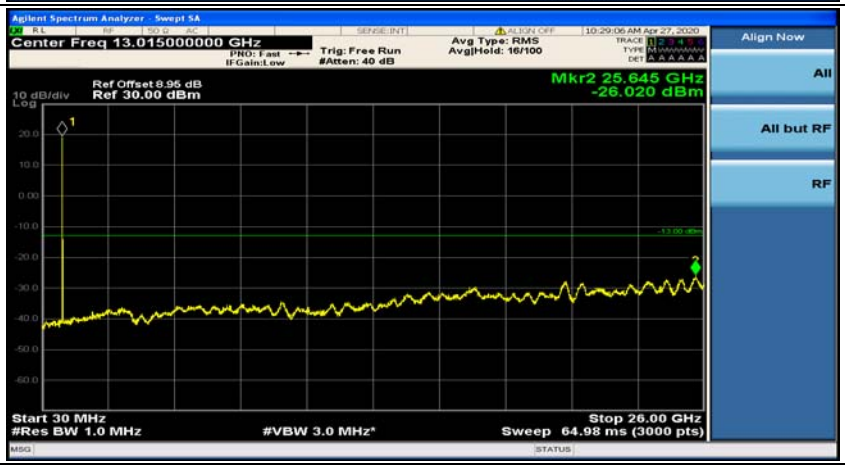



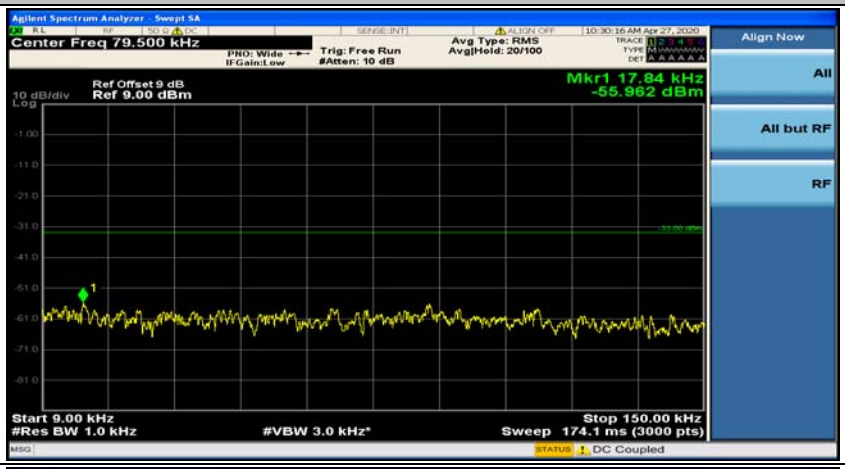
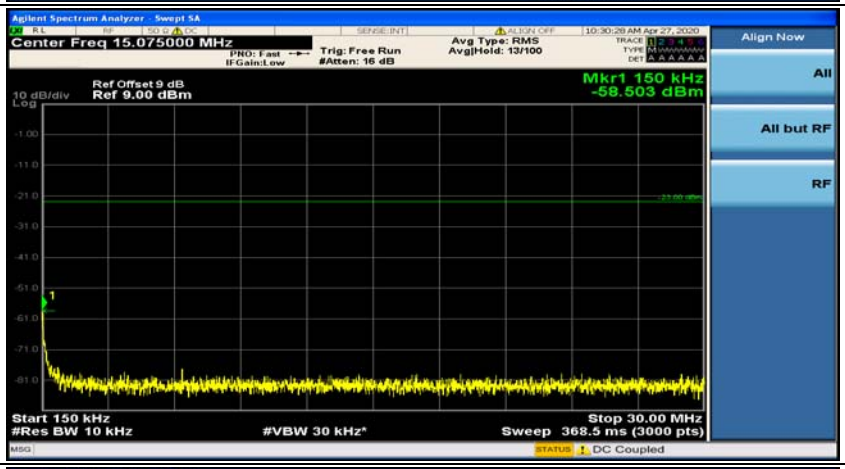
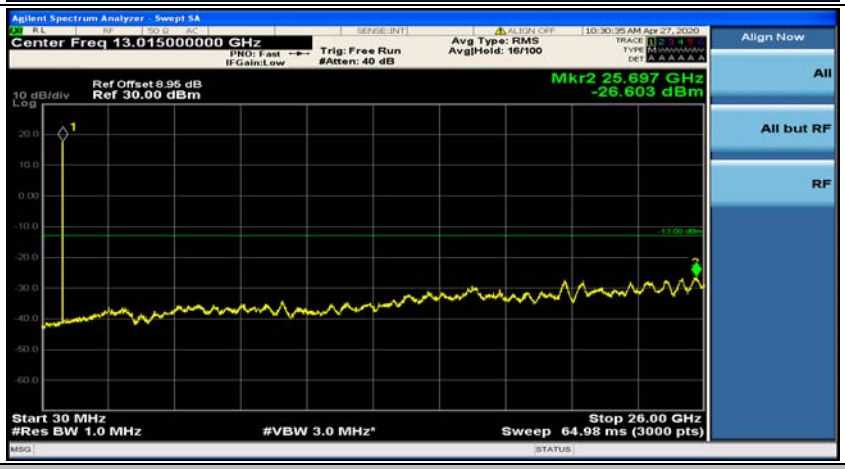



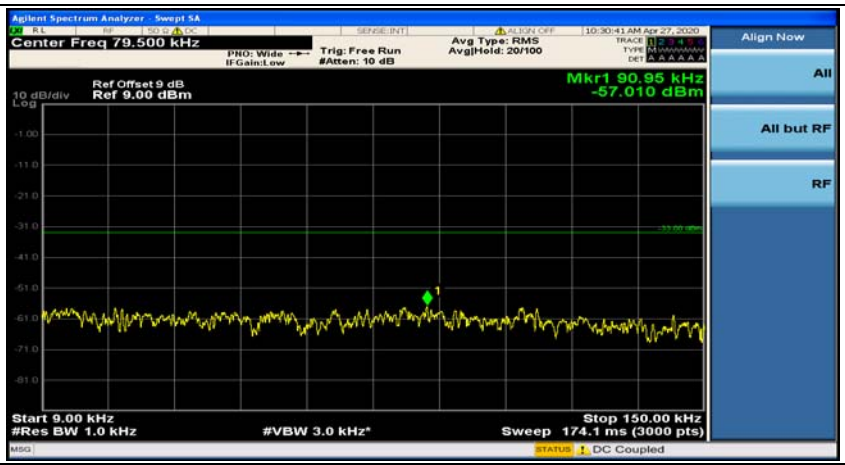

(Channel Bandwidth: 5 MHz)_MCH_16QAM_1RB#24

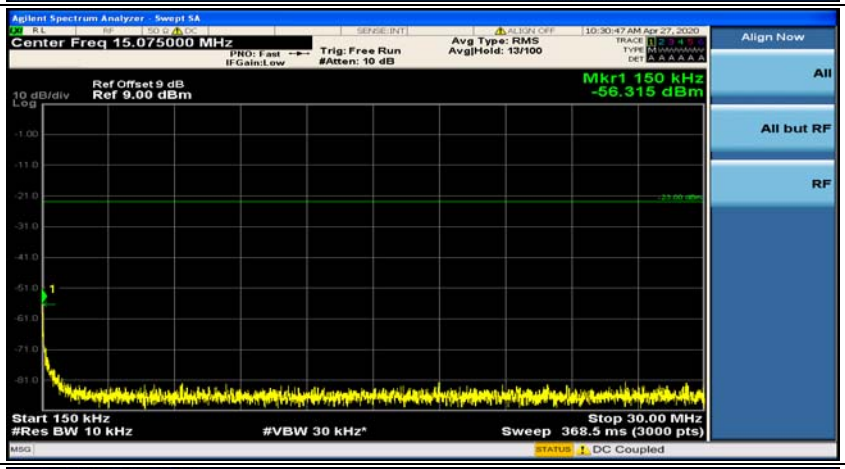

Agilent Spectrum Analyzer - Swept SA
Center Freq 79.500 kHz
PNO: Wide
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 20/100
10:28:52 AM Apr 27, 2020
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Mkr1 11.73 kHz
-55.253 dBm
Start 9.00 kHz
#Res BW 1.0 kHz
#VBW 3.0 kHz*
Stop 150.00 kHz
Sweep 174.1 ms (3000 pts)
DC Coupled
Align Now
All
All but RF
RF


Agilent Spectrum Analyzer - Swept SA
Center Freq 15.075000 MHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 13/100
10:28:59 AM Apr 27, 2020
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Mkr1 150 kHz
-55.009 dBm
Start 150 kHz
#Res BW 10 kHz
#VBW 30 kHz*
Stop 30.00 MHz
Sweep 368.5 ms (3000 pts)
DC Coupled
Align Now
All
All but RF
RF


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: 16/100
10:29:06 AM Apr 27, 2020
Ref Offset 8.95 dB
10 dB/div
Log
Ref 30.00 dBm
Mkr2 25.645 GHz
-26.020 dBm
Start 30 MHz
#Res BW 1.0 MHz
#VBW 3.0 MHz*
Stop 26.00 GHz
Sweep 64.98 ms (3000 pts)
Align Now
All
All but RF
RF

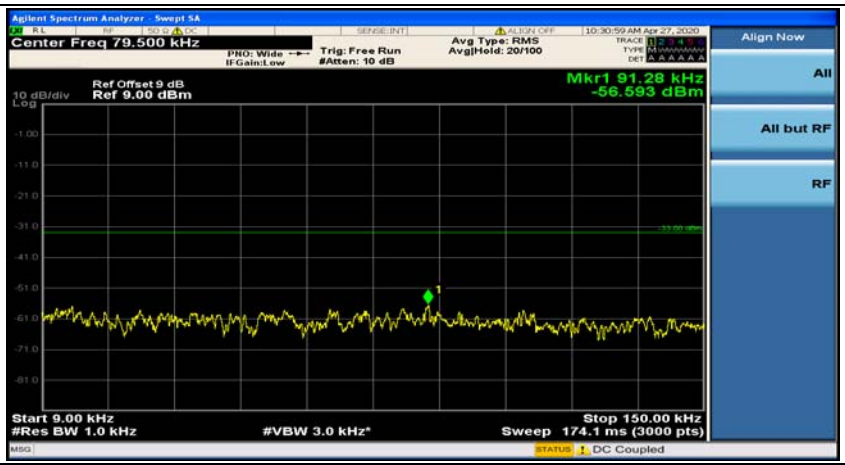
| (Channel Bandwidth: 5 MHz)_HCH_16QAM_1RB#0 |
| --- |
|  |
|  |
|  |
| (Channel Bandwidth: 5 MHz)_HCH_16QAM_1RB#12 |

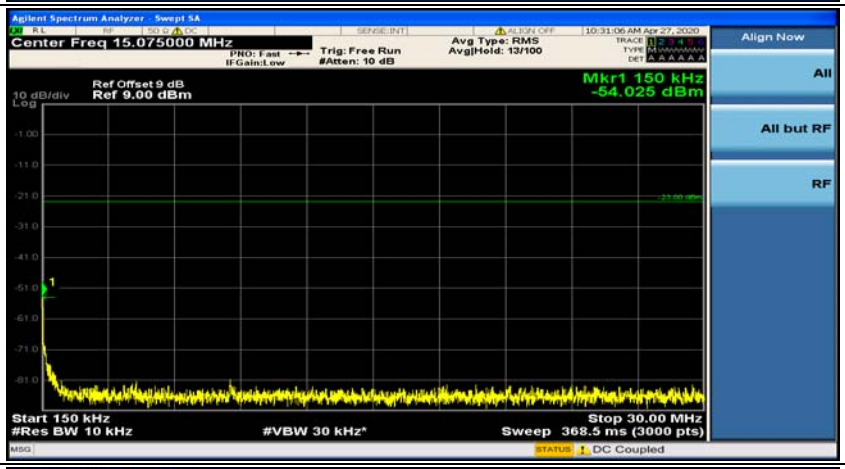


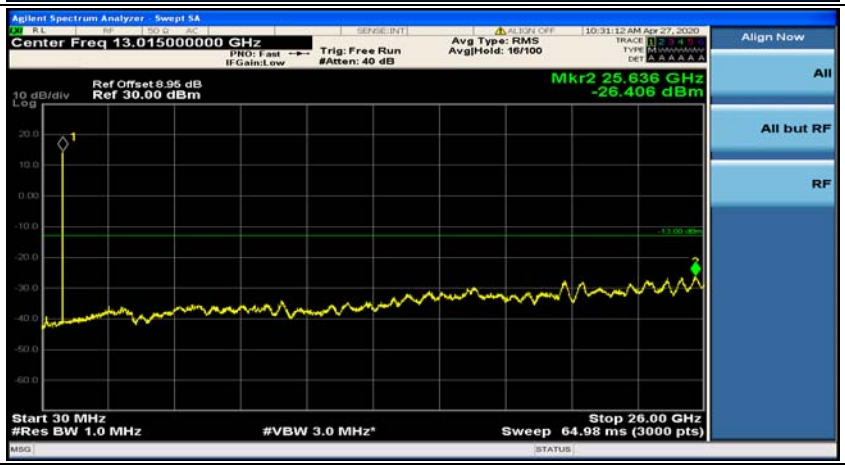





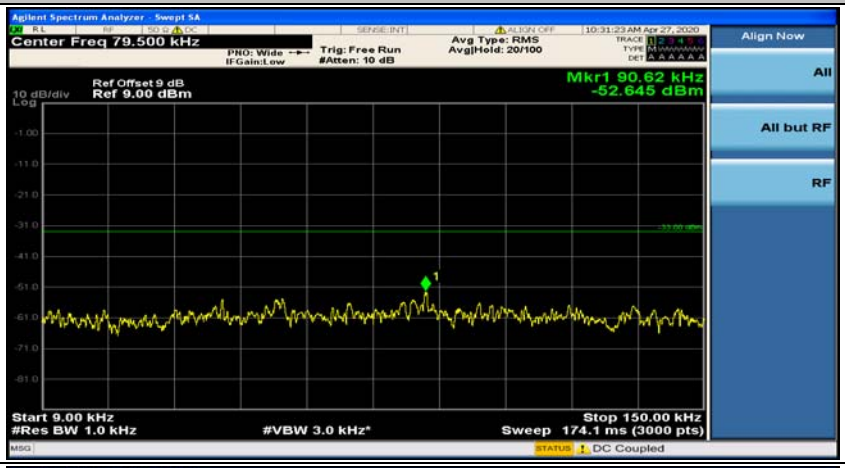
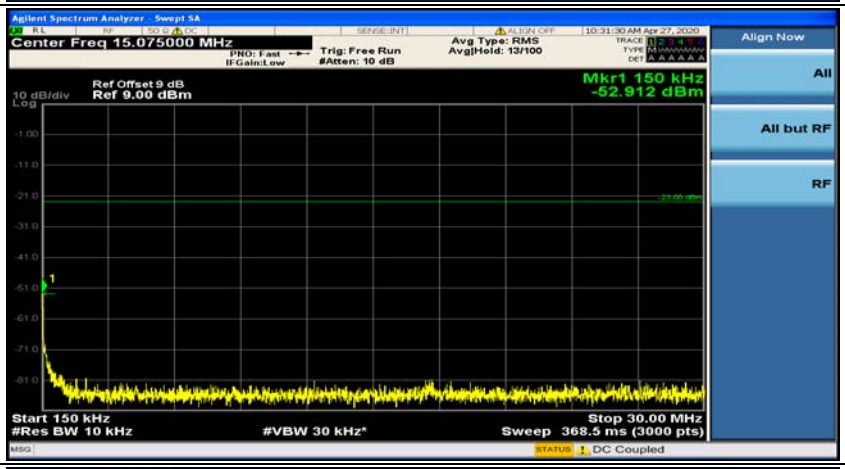
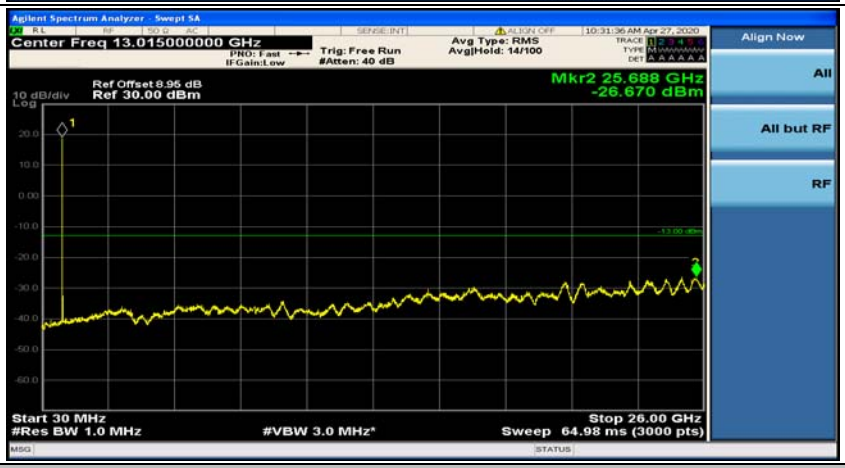
(Channel Bandwidth: 5 MHz)_HCH_16QAM_1RB#24

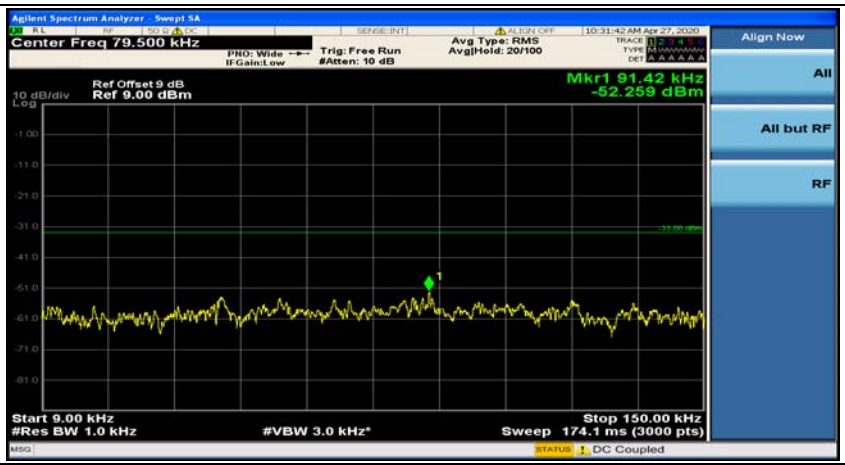

Agilent Spectrum Analyzer - Swept SA
Center Freq 79.500 kHz
PNO: Wide
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 20/100
10:30:59 AM Apr 27, 2020
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Mkr1 91.28 kHz
-56.593 dBm
Start 9.00 kHz
#Res BW 1.0 kHz
#VBW 3.0 kHz*
Stop 150.00 kHz
Sweep 174.1 ms (3000 pts)
DC Coupled
Align Now
All
All but RF
RF

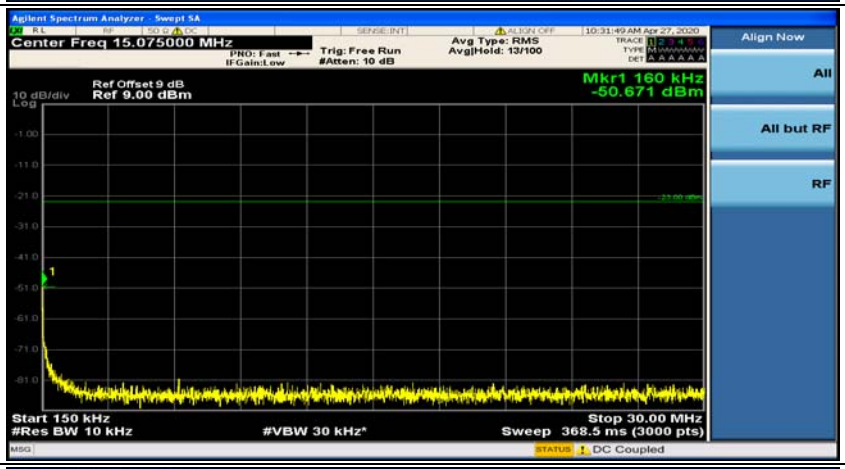

Agilent Spectrum Analyzer - Swept SA
Center Freq 15.075000 MHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 13/100
10:31:06 AM Apr 27, 2020
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Mkr1 150 kHz
-54.025 dBm
Start 150 kHz
#Res BW 10 kHz
#VBW 30 kHz*
Stop 30.00 MHz
Sweep 368.5 ms (3000 pts)
DC Coupled
Align Now
All
All but RF
RF


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: 16/100
10:31:12 AM Apr 27, 2020
Ref Offset 8.95 dB
10 dB/div
Log
Ref 30.00 dBm
Mkr2 25.636 GHz
-26.406 dBm
Start 30 MHz
#Res BW 1.0 MHz
#VBW 3.0 MHz*
Stop 26.00 GHz
Sweep 64.98 ms (3000 pts)
Align Now
All
All but RF
RF

## Channel Bandwidth: 10 MHz

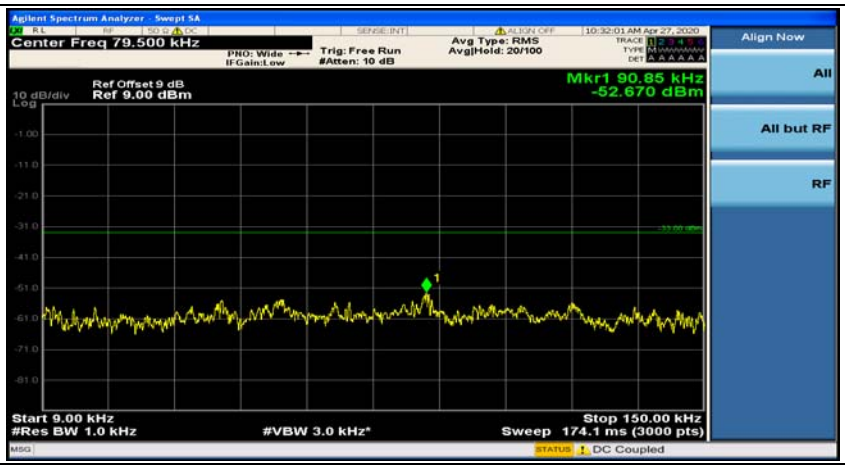
| Channel Bandwidth: 10 MHz_LCH_QPSK_1RB#0 |
| --- |
|  |
|  |
|  |
| Channel Bandwidth: 10 MHz_LCH_QPSK_1RB#24 |

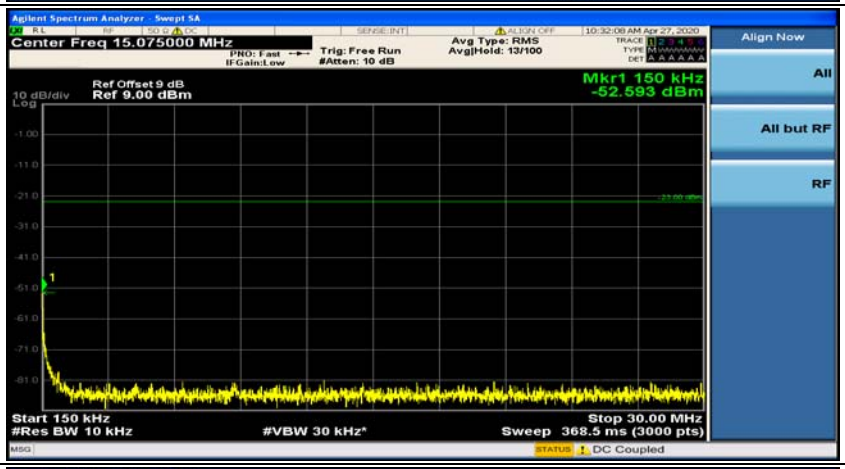


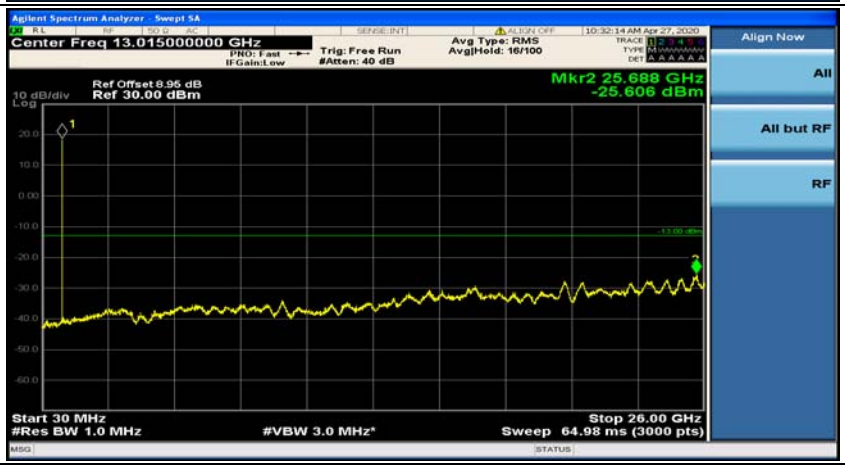



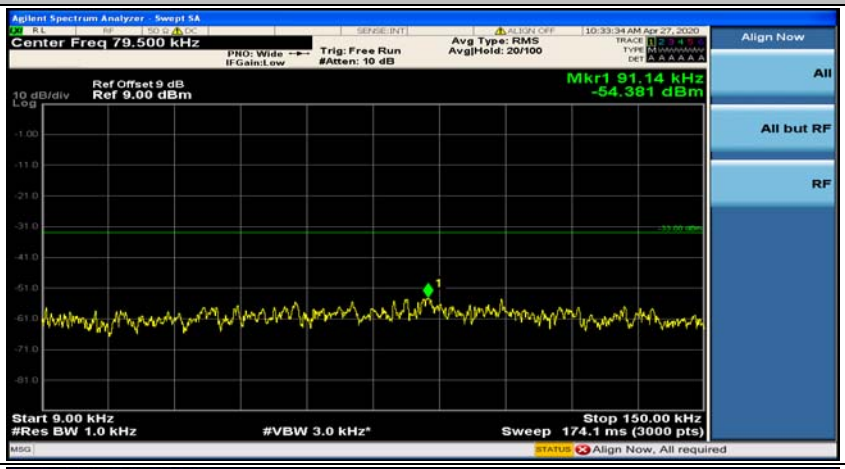
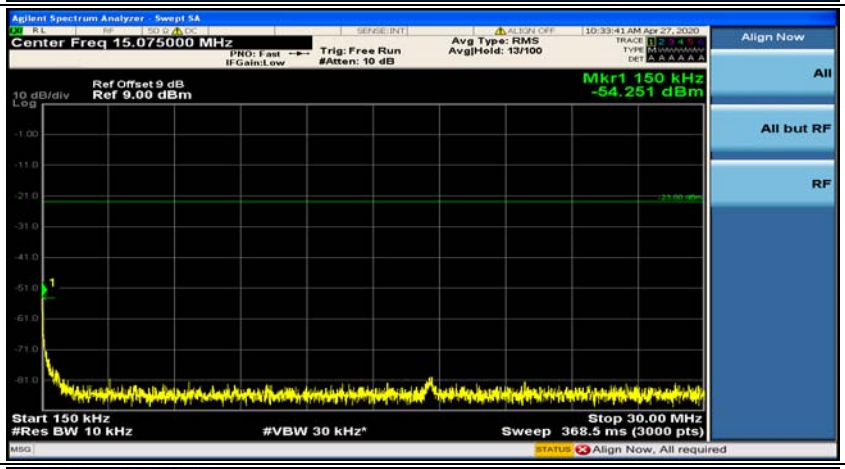
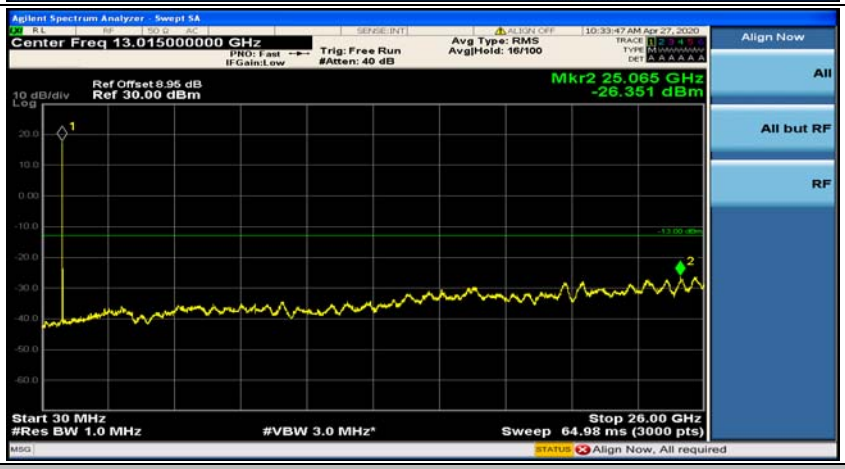


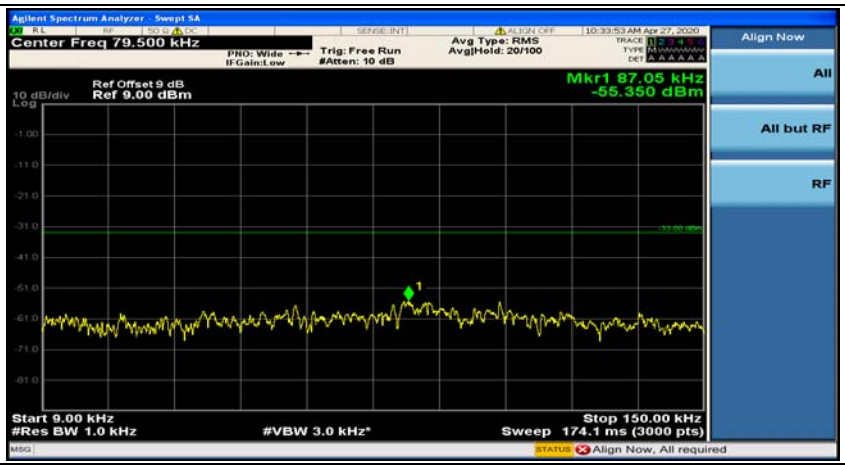
Channel Bandwidth: 10 MHz_LCH_QPSK_1RB#49

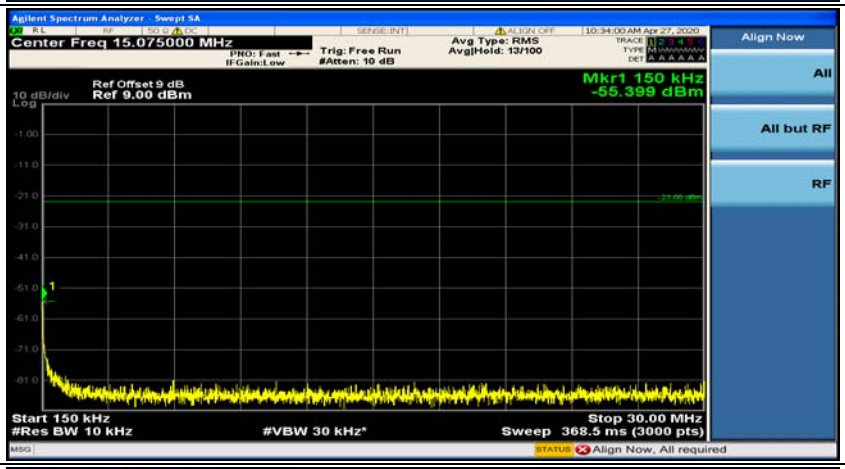

Agilent Spectrum Analyzer - Swept SA
Center Freq 79.500 kHz
PNO: Wide
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 20/100
10:32:01 AM Apr 27, 2020
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Mkr1 90.85 kHz
-52.670 dBm
Start 9.00 kHz
#Res BW 1.0 kHz
#VBW 3.0 kHz*
Stop 150.00 kHz
Sweep 174.1 ms (3000 pts)
DC Coupled
Align Now
All
All but RF
RF

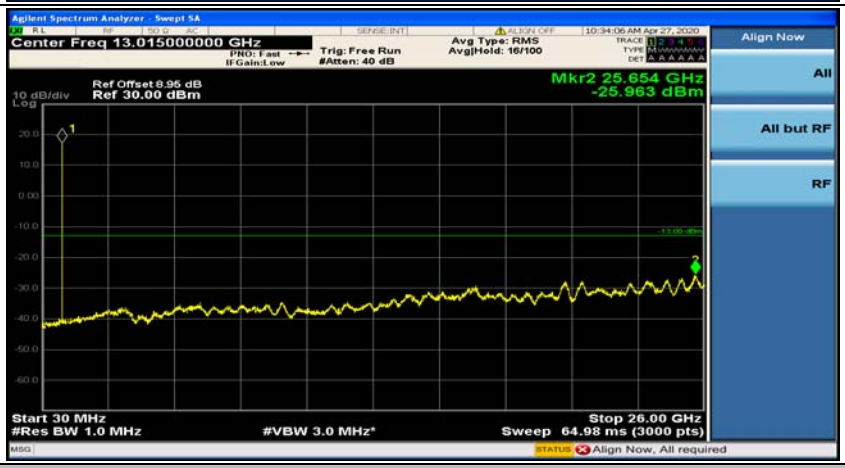

Agilent Spectrum Analyzer - Swept SA
Center Freq 15.075000 MHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 13/100
10:32:08 AM Apr 27, 2020
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Mkr1 150 kHz
-52.593 dBm
Start 150 kHz
#Res BW 10 kHz
#VBW 30 kHz*
Stop 30.00 MHz
Sweep 368.5 ms (3000 pts)
DC Coupled
Align Now
All
All but RF
RF


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: 16/100
10:32:14 AM Apr 27, 2020
Ref Offset 8.95 dB
10 dB/div
Log
Ref 30.00 dBm
Mkr2 25.688 GHz
-25.606 dBm
Start 30 MHz
#Res BW 1.0 MHz
#VBW 3.0 MHz*
Stop 26.00 GHz
Sweep 64.98 ms (3000 pts)
Align Now
All
All but RF
RF

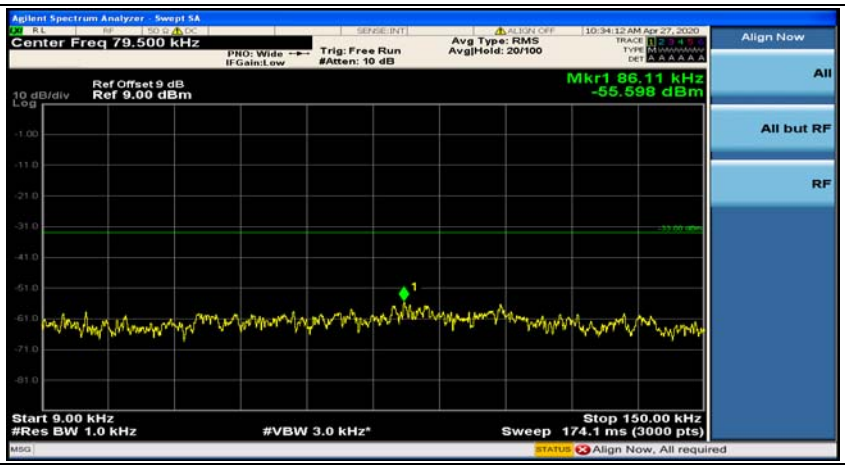
| Channel Bandwidth: 10 MHz_MCH_QPSK_1RB#0 |
|---|
|  |
|  |
|  |
| Channel Bandwidth: 10 MHz_MCH_QPSK_1RB#24 |

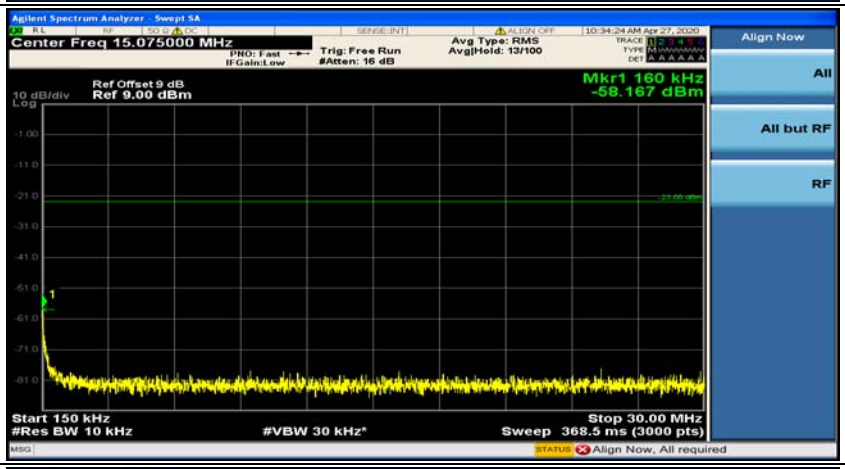


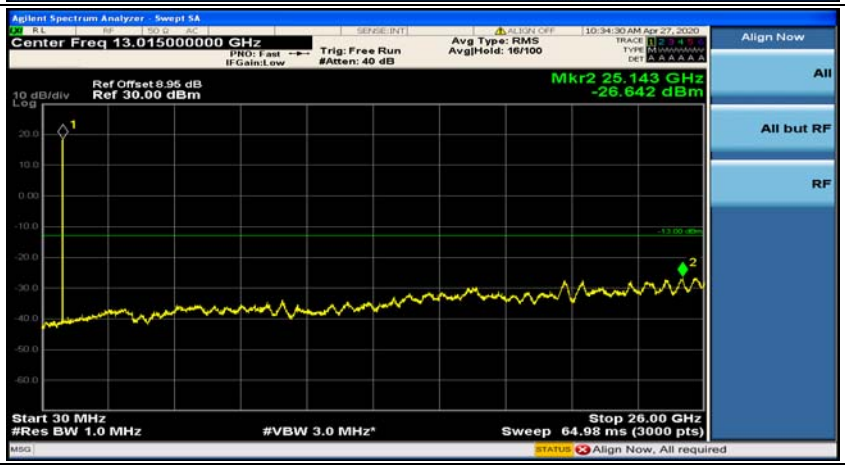



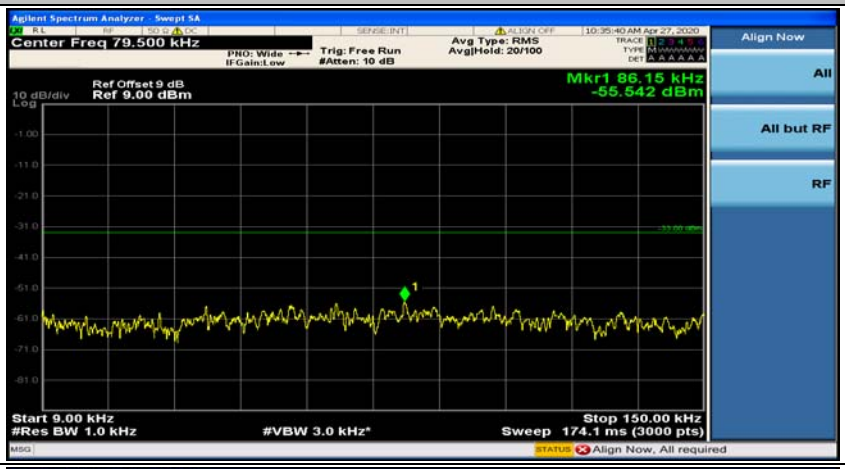
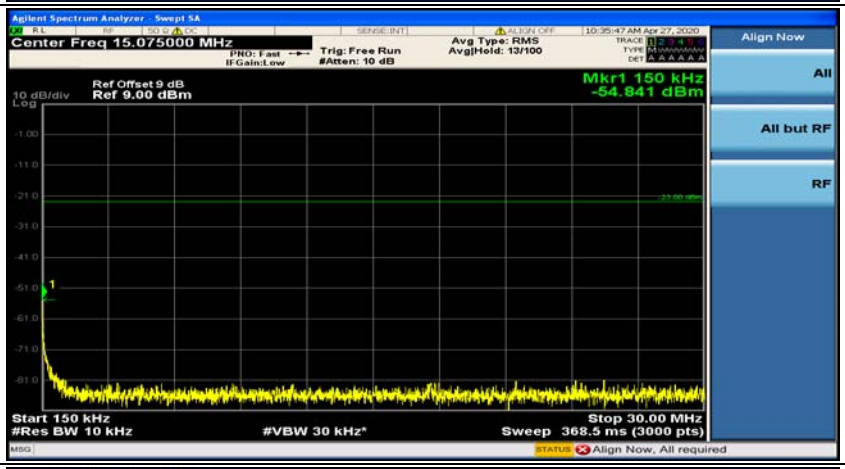
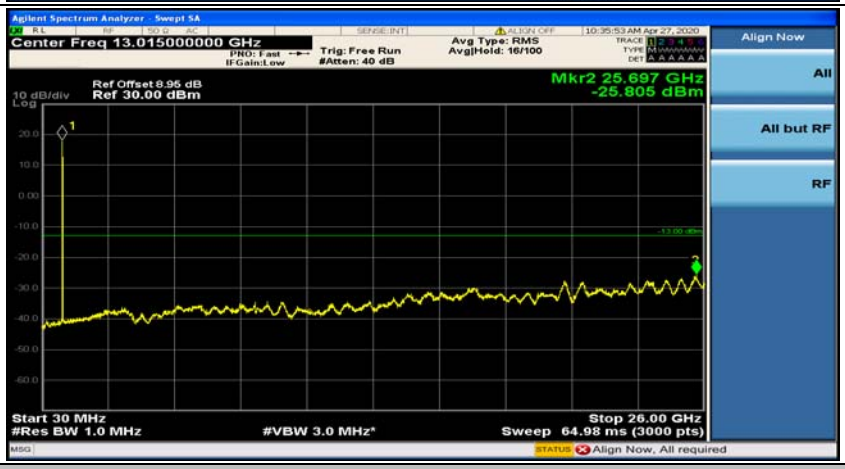



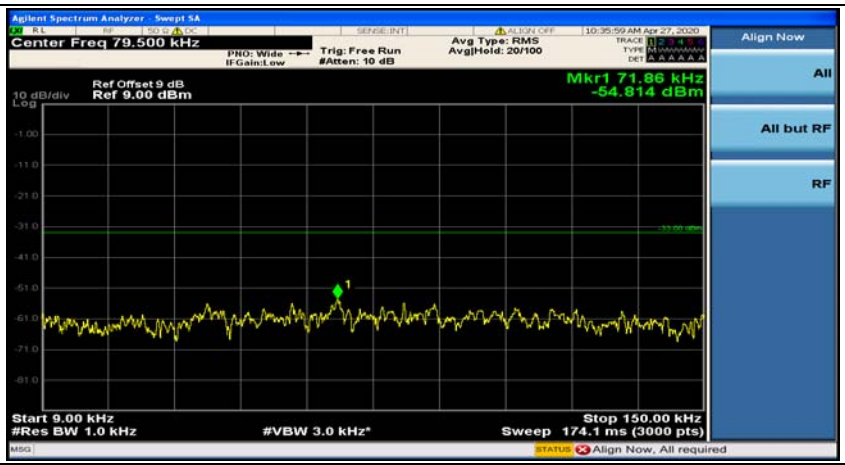

Channel Bandwidth: 10 MHz_MCH_QPSK_1RB#49

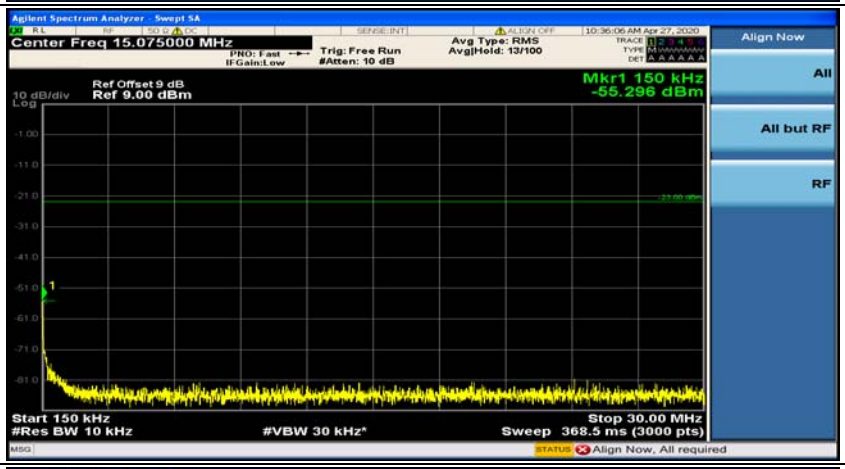

Agilent Spectrum Analyzer - Swept SA
Center Freq 79.500 kHz
PNO: Wide
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 20/100
10:34:12 AM Apr 27, 2020
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Mkr1 86.11 kHz
-55.598 dBm
Start 9.00 kHz
#Res BW 1.0 kHz
#VBW 3.0 kHz*
Stop 150.00 kHz
Sweep 174.1 ms (3000 pts)
Align Now, All required
Align Now
All
All but RF
RF

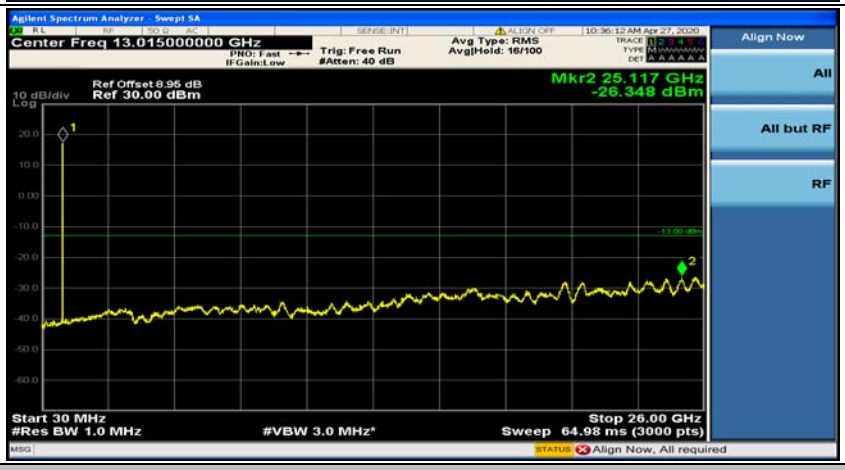

Agilent Spectrum Analyzer - Swept SA
Center Freq 15.075000 MHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 16 dB
Avg Type: RMS
Avg|Hold: 13/100
10:34:24 AM Apr 27, 2020
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Mkr1 160 kHz
-58.167 dBm
Start 150 kHz
#Res BW 10 kHz
#VBW 30 kHz*
Stop 30.00 MHz
Sweep 368.5 ms (3000 pts)
Align Now, All required
Align Now
All
All but RF
RF


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: 16/100
10:34:30 AM Apr 27, 2020
Ref Offset 8.95 dB
10 dB/div
Log
Ref 30.00 dBm
Mkr2 25.143 GHz
-26.642 dBm
Start 30 MHz
#Res BW 1.0 MHz
#VBW 3.0 MHz*
Stop 26.00 GHz
Sweep 64.98 ms (3000 pts)
Align Now, All required
Align Now
All
All but RF
RF

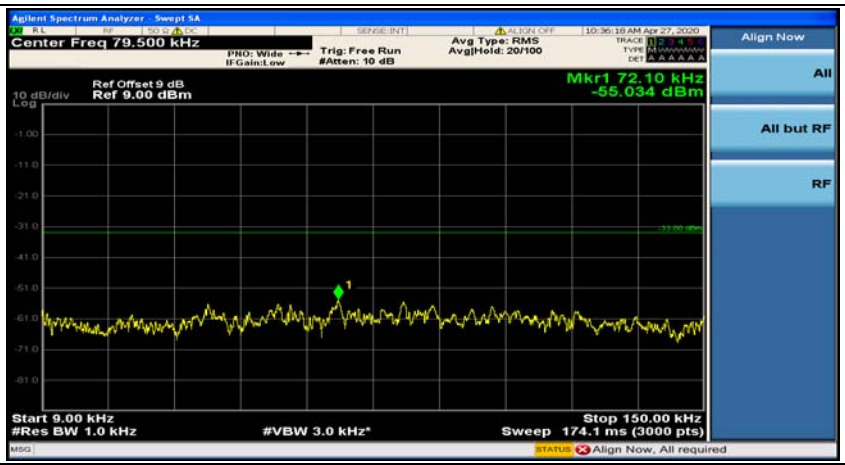
| Channel Bandwidth: 10 MHz_HCH_QPSK_1RB#0 |
|---|
|  |
|  |
|  |
| Channel Bandwidth: 10 MHz_HCH_QPSK_1RB#24 |

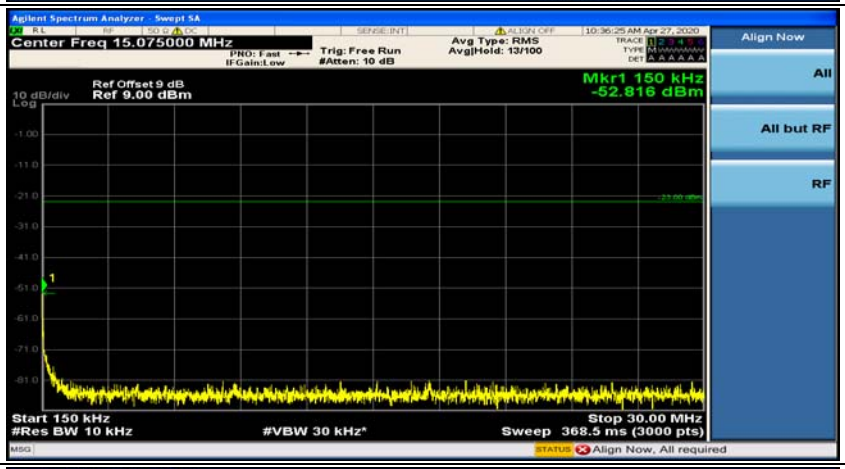


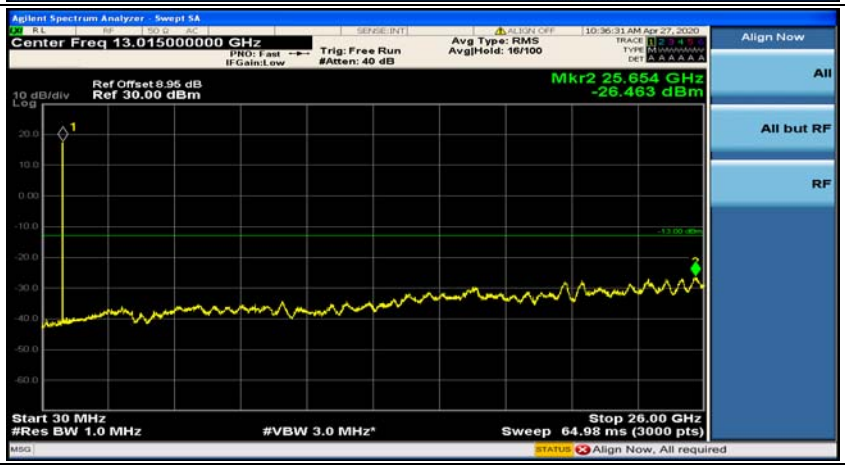



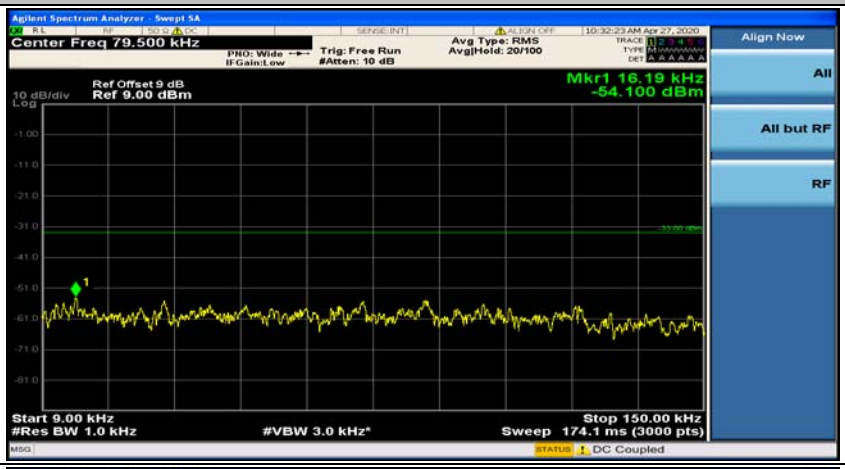
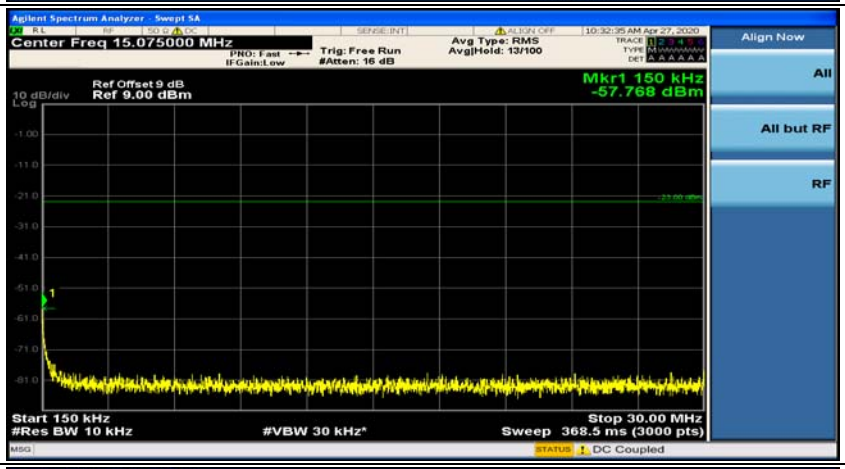
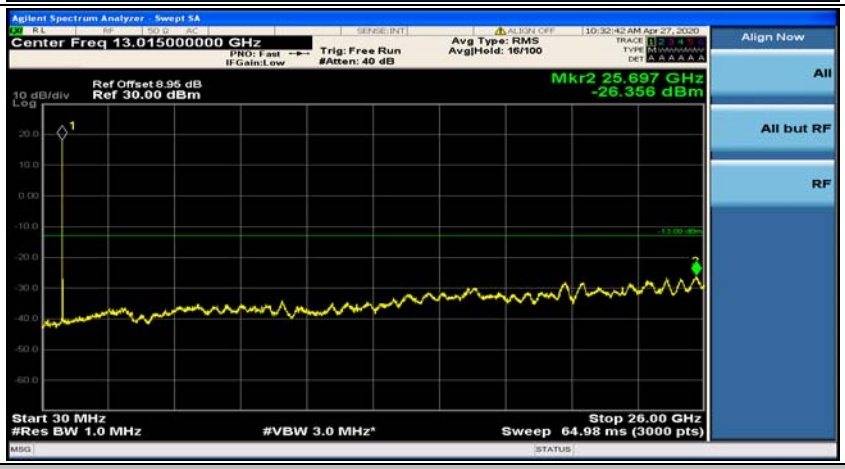



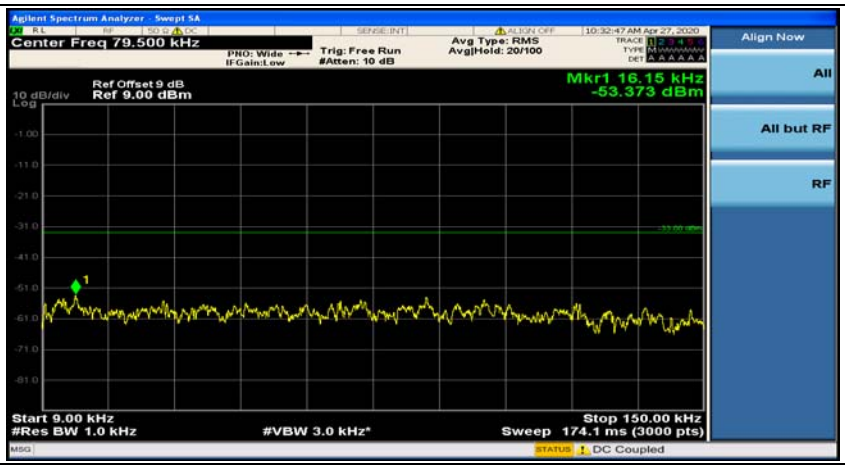

Channel Bandwidth: 10 MHz_HCH_QPSK_1RB#49

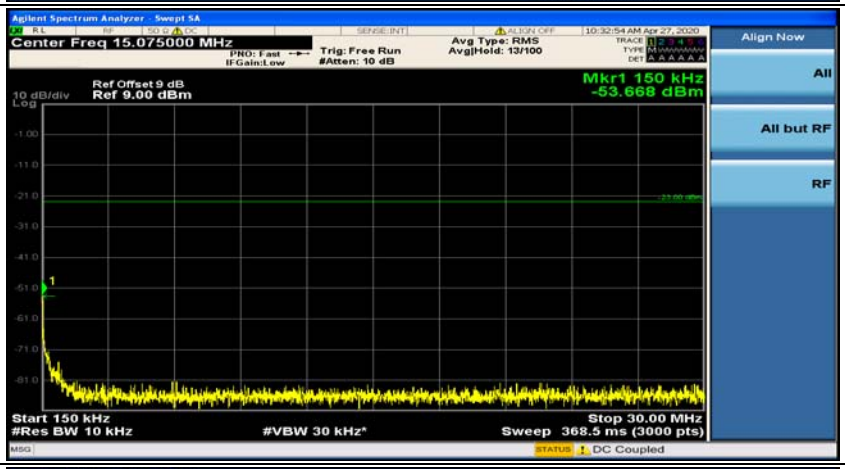

Agilent Spectrum Analyzer - Swept SA
Center Freq 79.500 kHz
PNO: Wide
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 20/100
10:36:16 AM Apr 27, 2020
Mkr1 72.10 kHz
-55.034 dBm
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Start 9.00 kHz
#Res BW 1.0 kHz
#VBW 3.0 kHz*
Stop 150.00 kHz
Sweep 174.1 ms (3000 pts)
Align Now, All required
Align Now
All
All but RF
RF

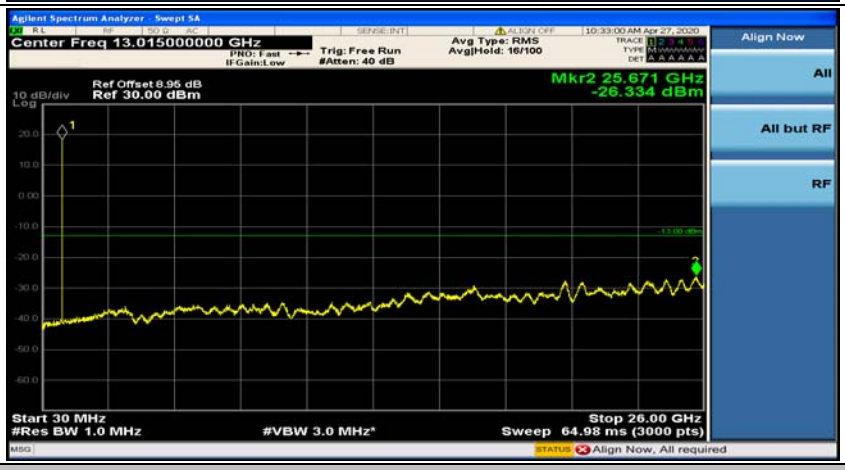

Agilent Spectrum Analyzer - Swept SA
Center Freq 15.075000 MHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 13/100
10:36:25 AM Apr 27, 2020
Mkr1 150 kHz
-52.816 dBm
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Start 150 kHz
#Res BW 10 kHz
#VBW 30 kHz*
Stop 30.00 MHz
Sweep 368.5 ms (3000 pts)
Align Now, All required
Align Now
All
All but RF
RF


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: 16/100
10:36:31 AM Apr 27, 2020
Mkr2 25.654 GHz
-26.463 dBm
Ref Offset 8.95 dB
10 dB/div
Log
Ref 30.00 dBm
Start 30 MHz
#Res BW 1.0 MHz
#VBW 3.0 MHz*
Stop 26.00 GHz
Sweep 64.98 ms (3000 pts)
Align Now, All required
Align Now
All
All but RF
RF

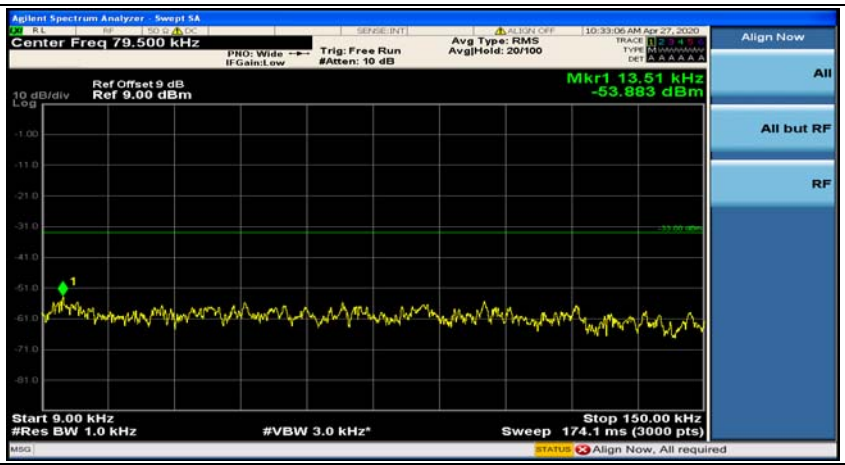
| Channel Bandwidth: 10 MHz_LCH_16QAM_1RB#0 |
|---|
|  |
|  |
|  |
| Channel Bandwidth: 10 MHz_LCH_16QAM_1RB#24 |

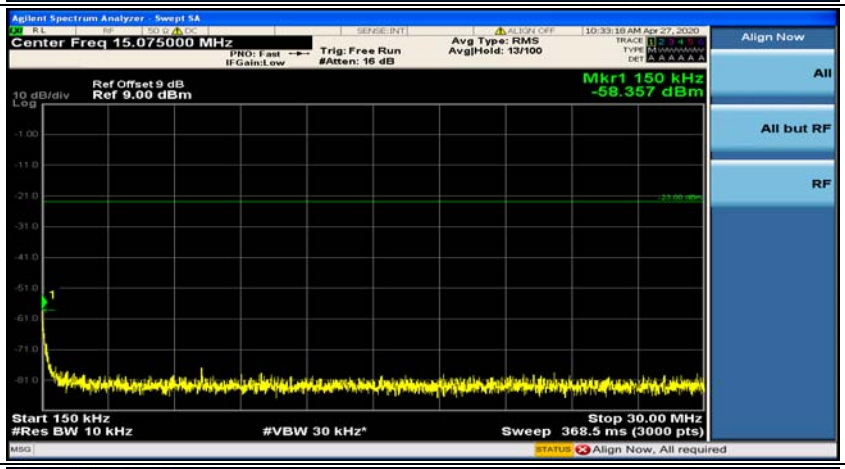


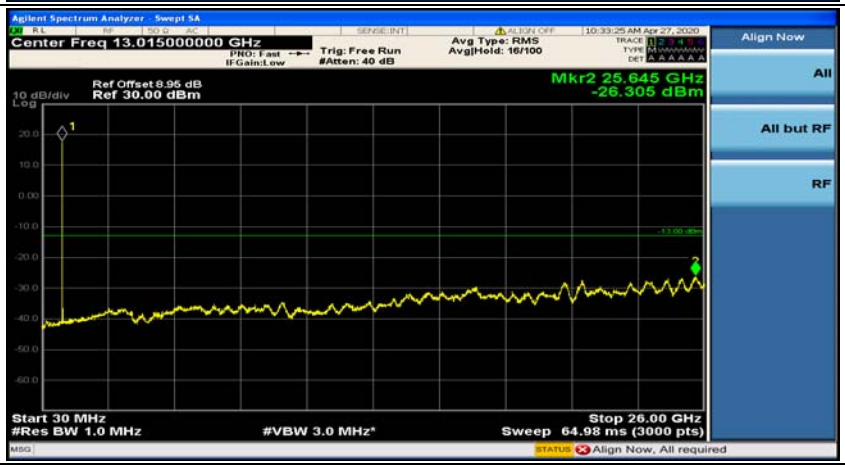



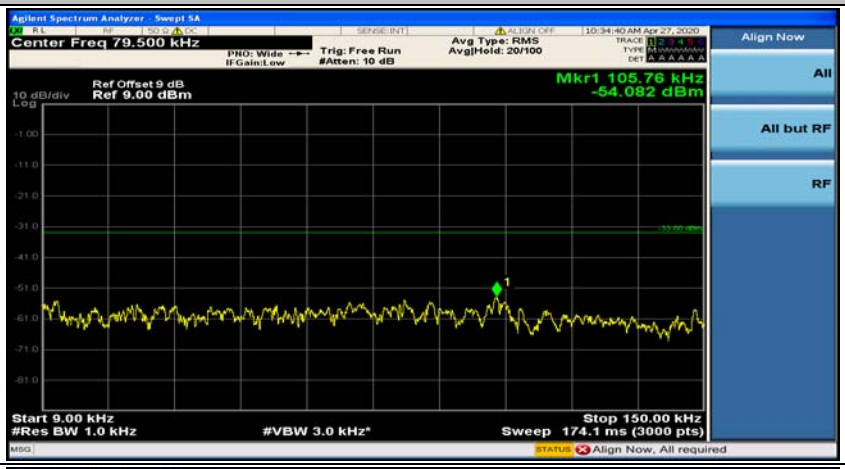
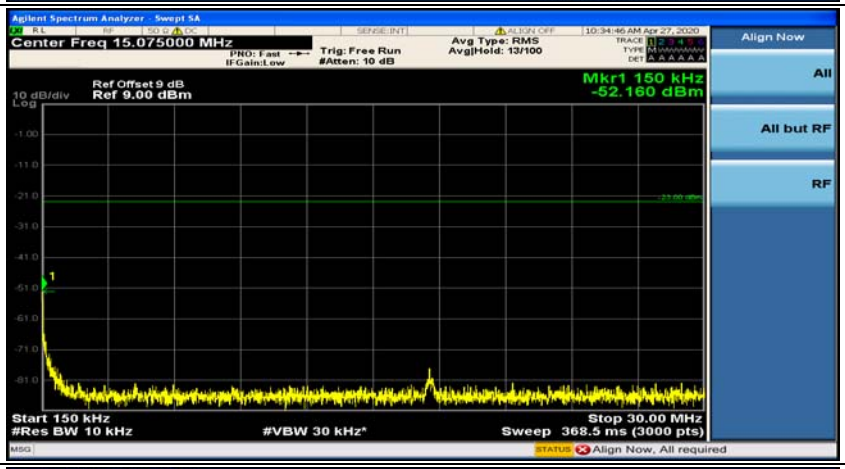
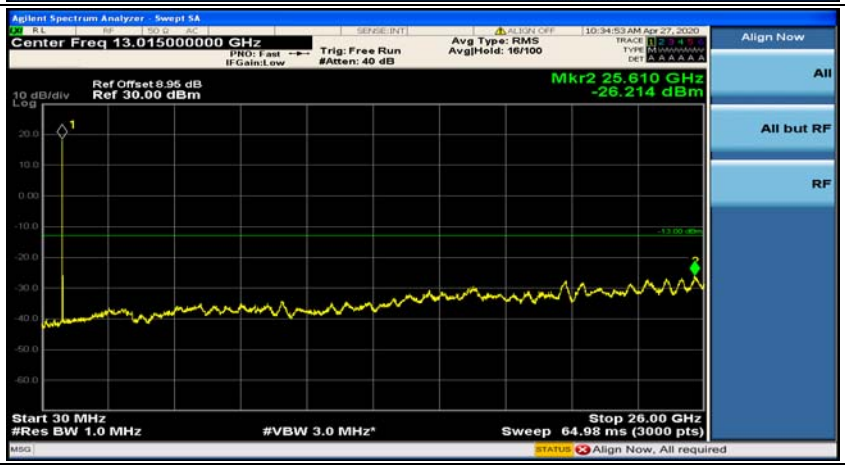



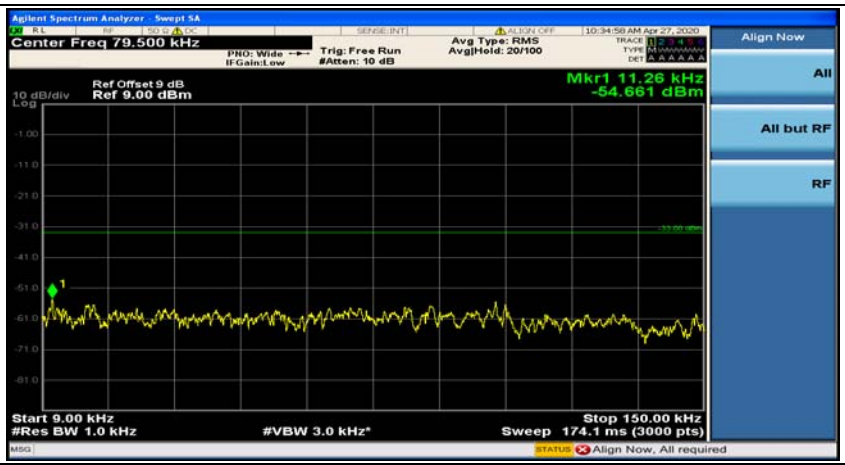

Channel Bandwidth: 10 MHz_LCH_16QAM_1RB#49

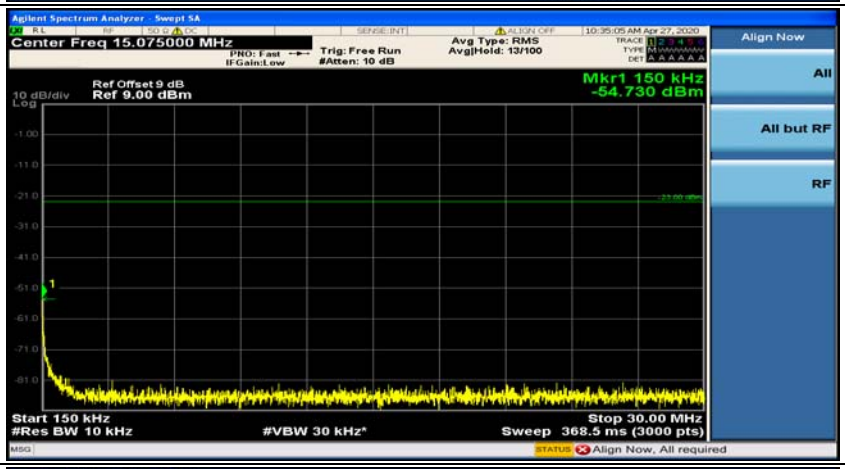

Agilent Spectrum Analyzer - Swept SA
Center Freq 79.500 kHz
PNO: Wide
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 20/100
10:33:06 AM Apr 27, 2020
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Mkr1 13.51 kHz
-53.883 dBm
Start 9.00 kHz
#Res BW 1.0 kHz
#VBW 3.0 kHz*
Stop 150.00 kHz
Sweep 174.1 ms (3000 pts)
Align Now, All required
Align Now
All
All but RF
RF

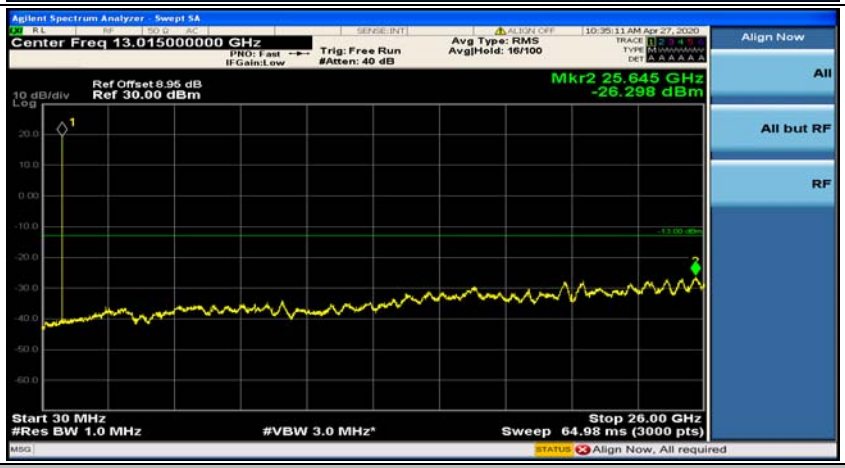

Agilent Spectrum Analyzer - Swept SA
Center Freq 15.075000 MHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 16 dB
Avg Type: RMS
Avg|Hold: 13/100
10:33:18 AM Apr 27, 2020
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Mkr1 150 kHz
-58.357 dBm
Start 150 kHz
#Res BW 10 kHz
#VBW 30 kHz*
Stop 30.00 MHz
Sweep 368.5 ms (3000 pts)
Align Now, All required
Align Now
All
All but RF
RF


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: 16/100
10:33:25 AM Apr 27, 2020
Ref Offset 8.95 dB
10 dB/div
Log
Ref 30.00 dBm
Mkr2 25.645 GHz
-26.305 dBm
Start 30 MHz
#Res BW 1.0 MHz
#VBW 3.0 MHz*
Stop 26.00 GHz
Sweep 64.98 ms (3000 pts)
Align Now, All required
Align Now
All
All but RF
RF

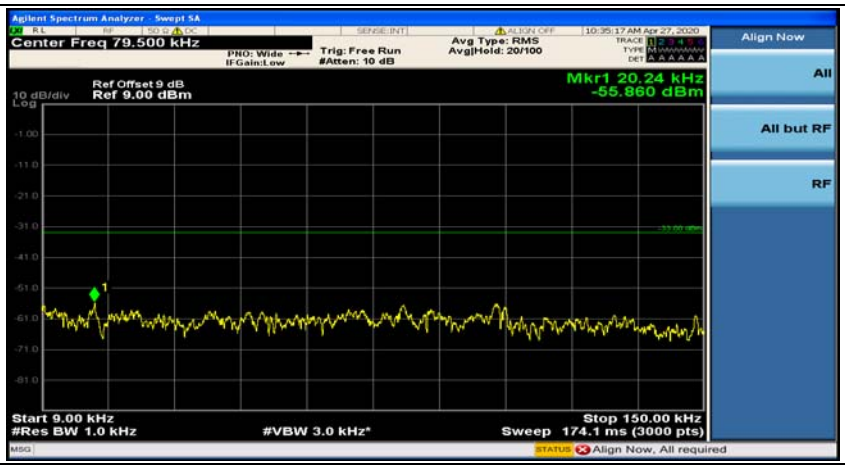
| Channel Bandwidth: 10 MHz_MCH_16QAM_1RB#0 |
|---|
|  |
|  |
|  |
| Channel Bandwidth: 10 MHz_MCH_16QAM_1RB#24 |

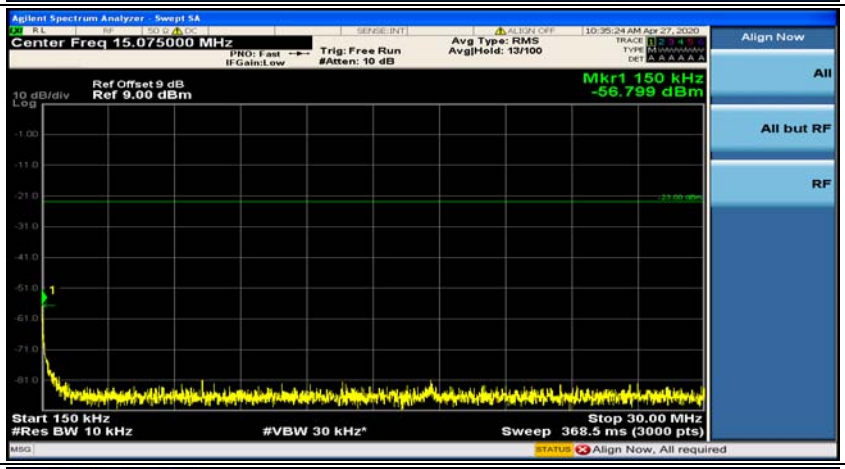


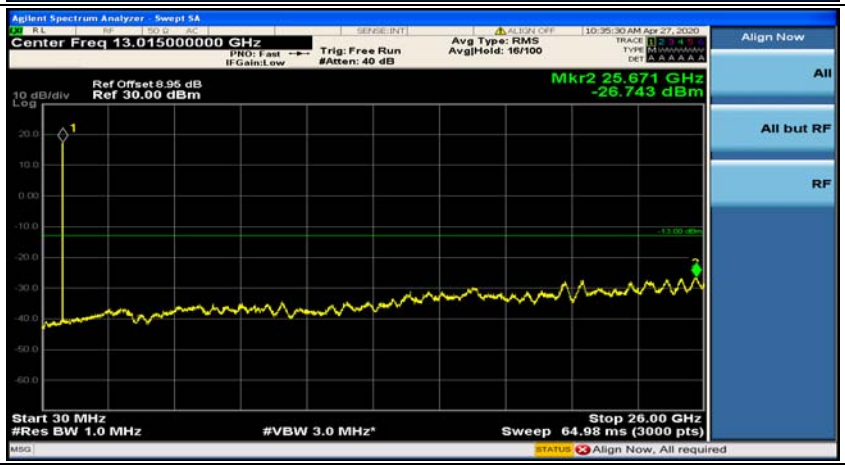



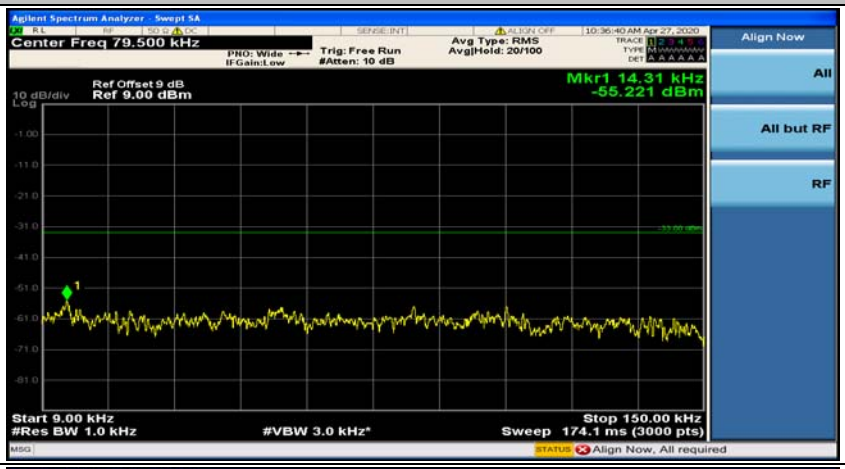
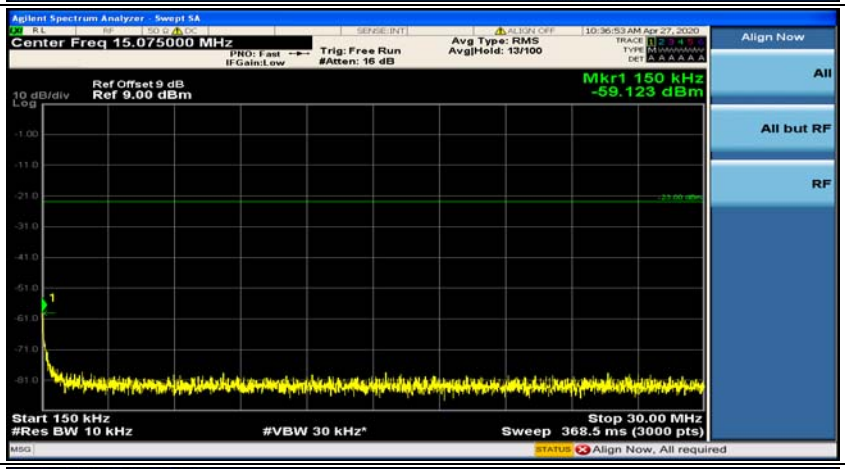
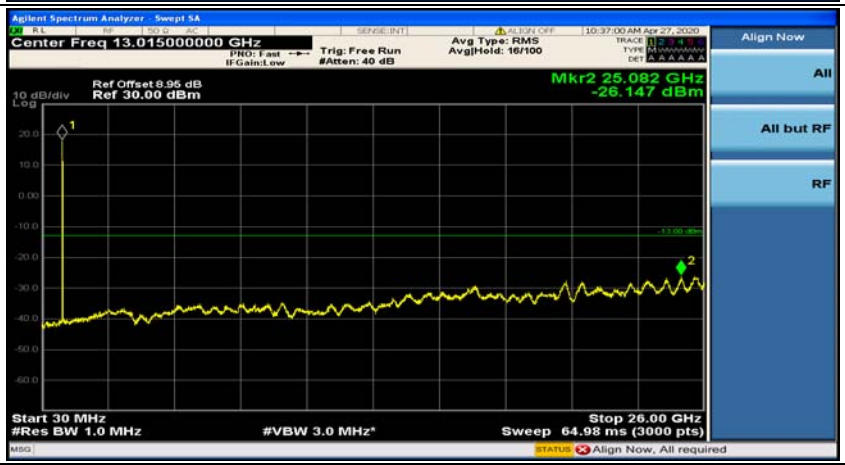



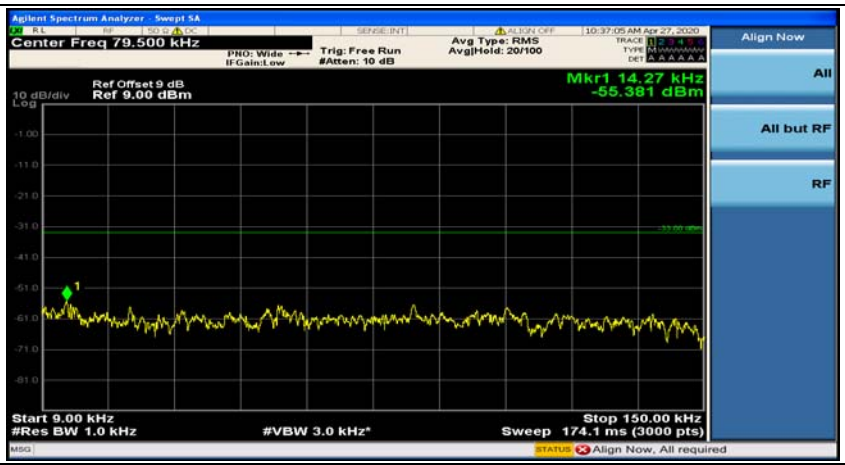

Channel Bandwidth: 10 MHz_MCH_16QAM_1RB#49

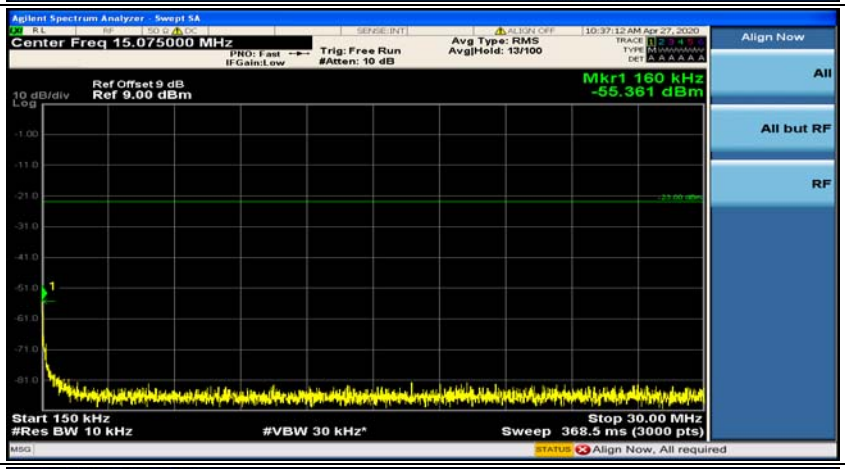

Agilent Spectrum Analyzer - Swept SA
Center Freq 79.500 kHz
PNO: Wide
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 20/100
10:35:17 AM Apr 27, 2020
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Mkr1 20.24 kHz
-55.860 dBm
Start 9.00 kHz
#Res BW 1.0 kHz
#VBW 3.0 kHz*
Stop 150.00 kHz
Sweep 174.1 ms (3000 pts)
Align Now, All required
Align Now
All
All but RF
RF

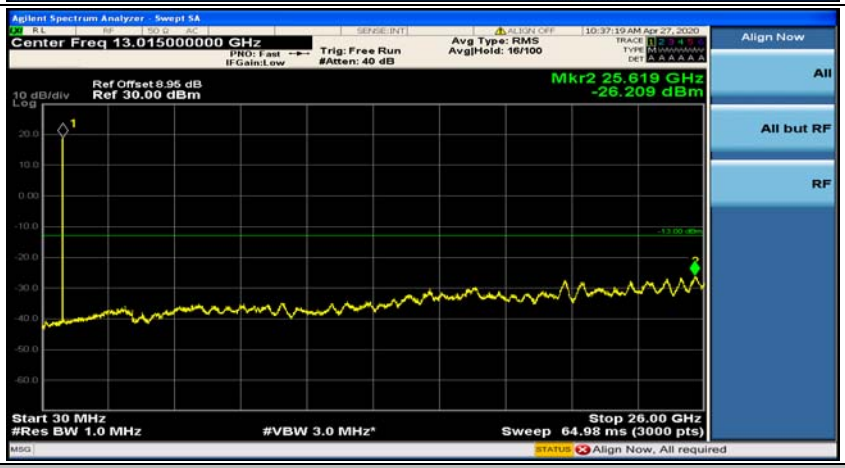

Agilent Spectrum Analyzer - Swept SA
Center Freq 15.075000 MHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 13/100
10:35:24 AM Apr 27, 2020
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Mkr1 150 kHz
-56.799 dBm
Start 150 kHz
#Res BW 10 kHz
#VBW 30 kHz*
Stop 30.00 MHz
Sweep 368.5 ms (3000 pts)
Align Now, All required
Align Now
All
All but RF
RF


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: 16/100
10:35:30 AM Apr 27, 2020
Ref Offset 8.95 dB
10 dB/div
Log
Ref 30.00 dBm
Mkr2 25.671 GHz
-26.743 dBm
Start 30 MHz
#Res BW 1.0 MHz
#VBW 3.0 MHz*
Stop 26.00 GHz
Sweep 64.98 ms (3000 pts)
Align Now, All required
Align Now
All
All but RF
RF

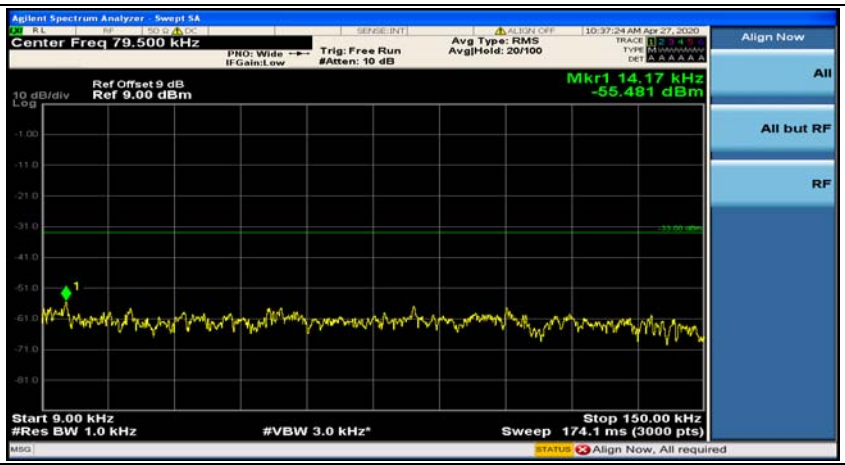
| Channel Bandwidth: 10 MHz_HCH_16QAM_1RB#0 |
|---|
|  |
|  |
|  |
| Channel Bandwidth: 10 MHz_HCH_16QAM_1RB#24 |

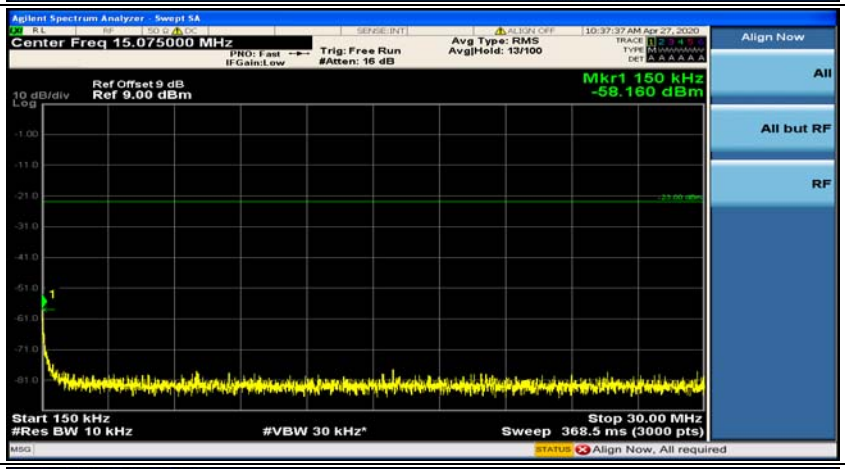


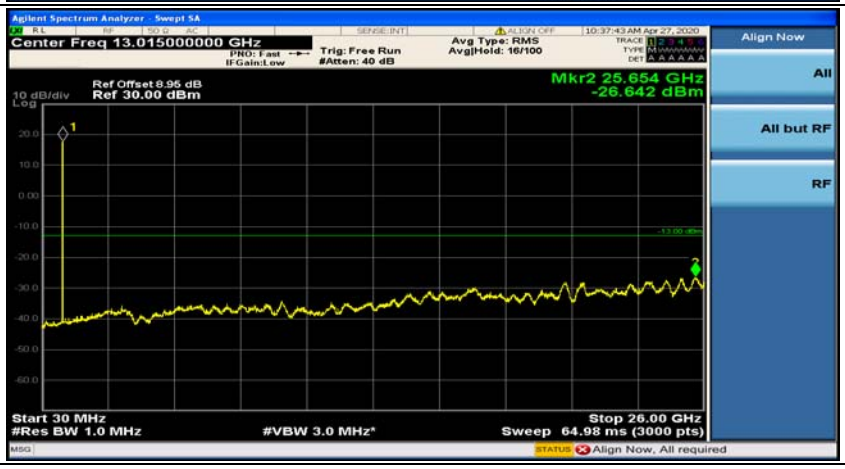




Channel Bandwidth: 10 MHz_HCH_16QAM_1RB#49


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: 20/100
10:37:24 AM Apr 27, 2020
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Mkr1 14.17 kHz
-55.481 dBm
Start 9.00 kHz
#Res BW 1.0 kHz
#VBW 3.0 kHz*
Stop 150.00 kHz
Sweep 174.1 ms (3000 pts)
Align Now, All required
Align Now
All
All but RF
RF


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
10:37:37 AM Apr 27, 2020
Ref Offset 9 dB
10 dB/div
Log
Ref 9.00 dBm
Mkr1 150 kHz
-58.160 dBm
Start 150 kHz
#Res BW 10 kHz
#VBW 30 kHz*
Stop 30.00 MHz
Sweep 368.5 ms (3000 pts)
Align Now, All required
Align Now
All
All but RF
RF


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: 16/100
10:37:43 AM Apr 27, 2020
Ref Offset 8.95 dB
10 dB/div
Log
Ref 30.00 dBm
Mkr2 25.654 GHz
-26.642 dBm
Start 30 MHz
#Res BW 1.0 MHz
#VBW 3.0 MHz*
Stop 26.00 GHz
Sweep 64.98 ms (3000 pts)
Align Now, All required
Align Now
All
All but RF
RF

# Appendix F: Frequency Stability

## Test Result

## Channel Bandwidth: 1.4 MHz

| Channel Bandwidth: 1.4 MHz | | | | | | | |
|---|---|---|---|---|---|---|---|
| Voltage | | | | | | | |
| Modulation | Channel | Voltage [Vdc] | Temperature (℃) | Deviation (Hz) | Deviation (ppm) | Limit (ppm) | Verdict |
| QPSK | LCH | VL | TN | 2.77 | 0.003359 | ± 2.5 | PASS |
| | | VN | TN | 3.56 | 0.004317 | ± 2.5 | PASS |
| | | VH | TN | 0.18 | 0.000218 | ± 2.5 | PASS |
| | MCH | VL | TN | 1.77 | 0.002116 | ± 2.5 | PASS |
| | | VN | TN | -1.21 | -0.001447 | ± 2.5 | PASS |
| | | VH | TN | 4.87 | 0.005822 | ± 2.5 | PASS |
| | HCH | VL | TN | 1.15 | 0.001356 | ± 2.5 | PASS |
| | | VN | TN | 2.46 | 0.002900 | ± 2.5 | PASS |
| | | VH | TN | 1.22 | 0.001438 | ± 2.5 | PASS |
| 16QAM | LCH | VL | TN | 2.39 | 0.002898 | ± 2.5 | PASS |
| | | VN | TN | 2.31 | 0.002801 | ± 2.5 | PASS |
| | | VH | TN | 0.03 | 0.000036 | ± 2.5 | PASS |
| | MCH | VL | TN | -0.91 | -0.001088 | ± 2.5 | PASS |
| | | VN | TN | 4.18 | 0.004997 | ± 2.5 | PASS |
| | | VH | TN | -0.98 | -0.001172 | ± 2.5 | PASS |
| | HCH | VL | TN | 3.98 | 0.004692 | ± 2.5 | PASS |
| | | VN | TN | 3.69 | 0.004350 | ± 2.5 | PASS |
| | | VH | TN | -0.84 | -0.000990 | ± 2.5 | PASS |
| Temperature | | | | | | | |
| Modulation | Channel | Voltage [Vdc] | Temperature (℃) | Deviation (Hz) | Deviation (ppm) | Limit (ppm) | Verdict |
| QPSK | LCH | VN | -30 | 4.9 | 0.005942 | ± 2.5 | PASS |
| | | VN | -20 | 1.1 | 0.001334 | ± 2.5 | PASS |
| | | VN | -10 | 1.18 | 0.001431 | ± 2.5 | PASS |
| | | VN | 0 | 2.93 | 0.003553 | ± 2.5 | PASS |
| | | VN | 10 | 1.66 | 0.002013 | ± 2.5 | PASS |
| | | VN | 20 | -0.96 | -0.001164 | ± 2.5 | PASS |
| | | VN | 30 | -0.26 | -0.000315 | ± 2.5 | PASS |
| | | VN | 40 | 2.89 | 0.003504 | ± 2.5 | PASS |
| | | VN | 50 | 3.61 | 0.004377 | ± 2.5 | PASS |
| | MCH | VN | -30 | 0.18 | 0.000215 | ± 2.5 | PASS |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | | VN | -20 | 3.02 | 0.003610 | ± 2.5 | PASS |
| | | VN | -10 | 2.33 | 0.002785 | ± 2.5 | PASS |
| | | VN | 0 | 0.81 | 0.000968 | ± 2.5 | PASS |
| | | VN | 10 | 0.2 | 0.000239 | ± 2.5 | PASS |
| | | VN | 20 | 2.97 | 0.003551 | ± 2.5 | PASS |
| | | VN | 30 | -1.06 | -0.001267 | ± 2.5 | PASS |
| | | VN | 40 | -1.05 | -0.001255 | ± 2.5 | PASS |
| | | VN | 50 | -1.61 | -0.001925 | ± 2.5 | PASS |
| | HCH | VN | -30 | -1.23 | -0.001450 | ± 2.5 | PASS |
| | | VN | -20 | 4.12 | 0.004857 | ± 2.5 | PASS |
| | | VN | -10 | 4.65 | 0.005482 | ± 2.5 | PASS |
| | | VN | 0 | 1.39 | 0.001639 | ± 2.5 | PASS |
| | | VN | 10 | -0.55 | -0.000648 | ± 2.5 | PASS |
| | | VN | 20 | -0.02 | -0.000024 | ± 2.5 | PASS |
| | | VN | 30 | 2.35 | 0.002770 | ± 2.5 | PASS |
| | | VN | 40 | 1.69 | 0.001992 | ± 2.5 | PASS |
| | | VN | 50 | -0.81 | -0.000955 | ± 2.5 | PASS |
| 16QAM | LCH | VN | -30 | 3.13 | 0.003795 | ± 2.5 | PASS |
| | | VN | -20 | 4.5 | 0.005457 | ± 2.5 | PASS |
| | | VN | -10 | -0.9 | -0.001091 | ± 2.5 | PASS |
| | | VN | 0 | -1.75 | -0.002122 | ± 2.5 | PASS |
| | | VN | 10 | -0.86 | -0.001043 | ± 2.5 | PASS |
| | | VN | 20 | -0.19 | -0.000230 | ± 2.5 | PASS |
| | | VN | 30 | -1.43 | -0.001734 | ± 2.5 | PASS |
| | | VN | 40 | -1.84 | -0.002231 | ± 2.5 | PASS |
| | | VN | 50 | 1.83 | 0.002219 | ± 2.5 | PASS |
| | MCH | VN | -30 | -0.66 | -0.000778 | ± 2.5 | PASS |
| | | VN | -20 | 0.93 | 0.001096 | ± 2.5 | PASS |
| | | VN | -10 | -0.6 | -0.000707 | ± 2.5 | PASS |
| | | VN | 0 | 2.54 | 0.002994 | ± 2.5 | PASS |
| | | VN | 10 | 3.46 | 0.004079 | ± 2.5 | PASS |
| | | VN | 20 | -0.98 | -0.001155 | ± 2.5 | PASS |
| | | VN | 30 | 1.04 | 0.001226 | ± 2.5 | PASS |
| | | VN | 40 | -1.05 | -0.001238 | ± 2.5 | PASS |
| | | VN | 50 | -0.27 | -0.000318 | ± 2.5 | PASS |
| | HCH | VN | -30 | -0.75 | -0.000884 | ± 2.5 | PASS |
| | | VN | -20 | -1.77 | -0.002087 | ± 2.5 | PASS |
| | | VN | -10 | -0.36 | -0.000424 | ± 2.5 | PASS |
| | | VN | 0 | 2.45 | 0.002888 | ± 2.5 | PASS |
| | | VN | 10 | 2.28 | 0.002688 | ± 2.5 | PASS |
| | | VN | 20 | 3.46 | 0.004079 | ± 2.5 | PASS |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | | VN | 30 | 3.13 | 0.003690 | ± 2.5 | PASS |
| | | VN | 40 | 4.43 | 0.005222 | ± 2.5 | PASS |
| | | VN | 50 | 4.71 | 0.005552 | ± 2.5 | PASS |

## Channel Bandwidth: 3 MHz

| Channel Bandwidth: 3 MHz+ | | | | | | | |
|---|---|---|---|---|---|---|---|
| Voltage | | | | | | | |
| Modulation | Channel | Voltage [Vdc] | Temperature (℃) | Deviation (Hz) | Deviation (ppm) | Limit (ppm) | Verdict |
| QPSK | LCH | VL | TN | 2.77 | 0.003356 | ± 2.5 | PASS |
| | | VN | TN | -1.99 | -0.002411 | ± 2.5 | PASS |
| | | VH | TN | 2.78 | 0.003368 | ± 2.5 | PASS |
| | MCH | VL | TN | 3.87 | 0.004626 | ± 2.5 | PASS |
| | | VN | TN | 3.09 | 0.003694 | ± 2.5 | PASS |
| | | VH | TN | 1.43 | 0.001710 | ± 2.5 | PASS |
| | HCH | VL | TN | 4.2 | 0.004956 | ± 2.5 | PASS |
| | | VN | TN | -0.11 | -0.000130 | ± 2.5 | PASS |
| | | VH | TN | 1.77 | 0.002088 | ± 2.5 | PASS |
| 16QAM | LCH | VL | TN | -1.74 | -0.002108 | ± 2.5 | PASS |
| | | VN | TN | 1.53 | 0.001853 | ± 2.5 | PASS |
| | | VH | TN | 2.06 | 0.002495 | ± 2.5 | PASS |
| | MCH | VL | TN | 0.17 | 0.000203 | ± 2.5 | PASS |
| | | VN | TN | 2.5 | 0.002989 | ± 2.5 | PASS |
| | | VH | TN | 0.17 | 0.000203 | ± 2.5 | PASS |
| | HCH | VL | TN | 3.6 | 0.004248 | ± 2.5 | PASS |
| | | VN | TN | 1.08 | 0.001274 | ± 2.5 | PASS |
| | | VH | TN | -0.12 | -0.000142 | ± 2.5 | PASS |
| Temperature | | | | | | | |
| Modulation | Channel | Voltage [Vdc] | Temperature (℃) | Deviation (Hz) | Deviation (ppm) | Limit (ppm) | Verdict |
| QPSK | LCH | VN | -30 | 4.7 | 0.005694 | ± 2.5 | PASS |
| | | VN | -20 | 4.87 | 0.005899 | ± 2.5 | PASS |
| | | VN | -10 | -1.2 | -0.001454 | ± 2.5 | PASS |
| | | VN | 0 | 3.65 | 0.004422 | ± 2.5 | PASS |
| | | VN | 10 | -0.12 | -0.000145 | ± 2.5 | PASS |
| | | VN | 20 | 3.31 | 0.004010 | ± 2.5 | PASS |
| | | VN | 30 | 0.32 | 0.000388 | ± 2.5 | PASS |
| | | VN | 40 | -1.95 | -0.002362 | ± 2.5 | PASS |
| | | VN | 50 | 0.93 | 0.001127 | ± 2.5 | PASS |
| | MCH | VN | -30 | -0.24 | -0.000287 | ± 2.5 | PASS |
| | | VN | -20 | -1.66 | -0.001984 | ± 2.5 | PASS |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | | VN | -10 | 4.96 | 0.005929 | ± 2.5 | PASS |
| | | VN | 0 | -0.42 | -0.000502 | ± 2.5 | PASS |
| | | VN | 10 | 4.82 | 0.005762 | ± 2.5 | PASS |
| | | VN | 20 | -1.21 | -0.001447 | ± 2.5 | PASS |
| | | VN | 30 | 0.56 | 0.000669 | ± 2.5 | PASS |
| | | VN | 40 | 2.48 | 0.002965 | ± 2.5 | PASS |
| | | VN | 50 | 4.93 | 0.005894 | ± 2.5 | PASS |
| | HCH | VN | -30 | 4.02 | 0.004743 | ± 2.5 | PASS |
| | | VN | -20 | 3.06 | 0.003611 | ± 2.5 | PASS |
| | | VN | -10 | -1.5 | -0.001770 | ± 2.5 | PASS |
| | | VN | 0 | 4.53 | 0.005345 | ± 2.5 | PASS |
| | | VN | 10 | 2.05 | 0.002419 | ± 2.5 | PASS |
| | | VN | 20 | 1 | 0.001180 | ± 2.5 | PASS |
| | | VN | 30 | 3.81 | 0.004496 | ± 2.5 | PASS |
| | | VN | 40 | 0.54 | 0.000637 | ± 2.5 | PASS |
| | | VN | 50 | 0.36 | 0.000425 | ± 2.5 | PASS |
| 16QAM | LCH | VN | -30 | -0.97 | -0.001160 | ± 2.5 | PASS |
| | | VN | -20 | 2.51 | 0.003001 | ± 2.5 | PASS |
| | | VN | -10 | -0.81 | -0.000968 | ± 2.5 | PASS |
| | | VN | 0 | 1.2 | 0.001435 | ± 2.5 | PASS |
| | | VN | 10 | 0.48 | 0.000574 | ± 2.5 | PASS |
| | | VN | 20 | 3.64 | 0.004351 | ± 2.5 | PASS |
| | | VN | 30 | 1.77 | 0.002116 | ± 2.5 | PASS |
| | | VN | 40 | -0.89 | -0.001064 | ± 2.5 | PASS |
| | | VN | 50 | -1.73 | -0.002068 | ± 2.5 | PASS |
| | MCH | VN | -30 | -0.76 | -0.000897 | ± 2.5 | PASS |
| | | VN | -20 | 4.86 | 0.005735 | ± 2.5 | PASS |
| | | VN | -10 | -0.98 | -0.001156 | ± 2.5 | PASS |
| | | VN | 0 | 3.24 | 0.003823 | ± 2.5 | PASS |
| | | VN | 10 | -1.81 | -0.002136 | ± 2.5 | PASS |
| | | VN | 20 | 2.93 | 0.003457 | ± 2.5 | PASS |
| | | VN | 30 | 3.11 | 0.003670 | ± 2.5 | PASS |
| | | VN | 40 | 4.76 | 0.005617 | ± 2.5 | PASS |
| | | VN | 50 | 4.35 | 0.005133 | ± 2.5 | PASS |
| | HCH | VN | -30 | 0.12 | 0.000142 | ± 2.5 | PASS |
| | | VN | -20 | 0.21 | 0.000248 | ± 2.5 | PASS |
| | | VN | -10 | 3.07 | 0.003622 | ± 2.5 | PASS |
| | | VN | 0 | -0.07 | -0.000083 | ± 2.5 | PASS |
| | | VN | 10 | -0.37 | -0.000437 | ± 2.5 | PASS |
| | | VN | 20 | -0.31 | -0.000366 | ± 2.5 | PASS |
| | | VN | 30 | -0.7 | -0.000826 | ± 2.5 | PASS |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | | VN | 40 | 4.33 | 0.005109 | ± 2.5 | PASS |
| | | VN | 50 | 4.57 | 0.005392 | ± 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 | 2.77 | 0.003351 | ± 2.5 | PASS |
| | | VN | TN | 3.96 | 0.004791 | ± 2.5 | PASS |
| | | VH | TN | -1.15 | -0.001391 | ± 2.5 | PASS |
| | MCH | VL | TN | 3.75 | 0.004483 | ± 2.5 | PASS |
| | | VN | TN | 0.88 | 0.001052 | ± 2.5 | PASS |
| | | VH | TN | 1.8 | 0.002152 | ± 2.5 | PASS |
| | HCH | VL | TN | 4.92 | 0.005812 | ± 2.5 | PASS |
| | | VN | TN | 4.82 | 0.005694 | ± 2.5 | PASS |
| | | VH | TN | 2.71 | 0.003201 | ± 2.5 | PASS |
| 16QAM | LCH | VL | TN | 2.65 | 0.003206 | ± 2.5 | PASS |
| | | VN | TN | 4.22 | 0.005106 | ± 2.5 | PASS |
| | | VH | TN | 3.96 | 0.004791 | ± 2.5 | PASS |
| | MCH | VL | TN | 3.23 | 0.003861 | ± 2.5 | PASS |
| | | VN | TN | 2.05 | 0.002451 | ± 2.5 | PASS |
| | | VH | TN | 4.23 | 0.005057 | ± 2.5 | PASS |
| | HCH | VL | TN | 0.93 | 0.001099 | ± 2.5 | PASS |
| | | VN | TN | 4.81 | 0.005682 | ± 2.5 | PASS |
| | | VH | TN | 2.99 | 0.003532 | ± 2.5 | PASS |
| Temperature | | | | | | | |
| Modulation | Channel | Voltage [Vdc] | Temperature (℃) | Deviation (Hz) | Deviation (ppm) | Limit (ppm) | Verdict |
| QPSK | LCH | VN | -30 | 4.47 | 0.005408 | ± 2.5 | PASS |
| | | VN | -20 | -1.16 | -0.001404 | ± 2.5 | PASS |
| | | VN | -10 | 4.11 | 0.004973 | ± 2.5 | PASS |
| | | VN | 0 | 4.64 | 0.005614 | ± 2.5 | PASS |
| | | VN | 10 | 4.58 | 0.005541 | ± 2.5 | PASS |
| | | VN | 20 | -0.28 | -0.000339 | ± 2.5 | PASS |
| | | VN | 30 | -1.79 | -0.002166 | ± 2.5 | PASS |
| | | VN | 40 | -0.02 | -0.000024 | ± 2.5 | PASS |
| | | VN | 50 | -0.12 | -0.000145 | ± 2.5 | PASS |
| | MCH | VN | -30 | 4.9 | 0.005858 | ± 2.5 | PASS |
| | | VN | -20 | 1.44 | 0.001721 | ± 2.5 | PASS |
| | | VN | -10 | -1.58 | -0.001889 | ± 2.5 | PASS |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | | VN | 0 | 3.2 | 0.003825 | ± 2.5 | PASS |
| | | VN | 10 | 2.24 | 0.002678 | ± 2.5 | PASS |
| | | VN | 20 | 4.06 | 0.004854 | ± 2.5 | PASS |
| | | VN | 30 | -1.15 | -0.001375 | ± 2.5 | PASS |
| | | VN | 40 | -0.97 | -0.001160 | ± 2.5 | PASS |
| | | VN | 50 | 4.43 | 0.005296 | ± 2.5 | PASS |
| | HCH | VN | -30 | 2.44 | 0.002882 | ± 2.5 | PASS |
| | | VN | -20 | 0.66 | 0.000780 | ± 2.5 | PASS |
| | | VN | -10 | -0.56 | -0.000662 | ± 2.5 | PASS |
| | | VN | 0 | 0.1 | 0.000118 | ± 2.5 | PASS |
| | | VN | 10 | 3.11 | 0.003674 | ± 2.5 | PASS |
| | | VN | 20 | -0.09 | -0.000106 | ± 2.5 | PASS |
| | | VN | 30 | 1.86 | 0.002197 | ± 2.5 | PASS |
| | | VN | 40 | 4.91 | 0.005800 | ± 2.5 | PASS |
| | | VN | 50 | 0.54 | 0.000638 | ± 2.5 | PASS |
| 16QAM | LCH | VN | -30 | -1.76 | -0.002104 | ± 2.5 | PASS |
| | | VN | -20 | 4.21 | 0.005033 | ± 2.5 | PASS |
| | | VN | -10 | -0.92 | -0.001100 | ± 2.5 | PASS |
| | | VN | 0 | -1.71 | -0.002044 | ± 2.5 | PASS |
| | | VN | 10 | 0.06 | 0.000072 | ± 2.5 | PASS |
| | | VN | 20 | 0.53 | 0.000634 | ± 2.5 | PASS |
| | | VN | 30 | 0.5 | 0.000598 | ± 2.5 | PASS |
| | | VN | 40 | 4.91 | 0.005870 | ± 2.5 | PASS |
| | | VN | 50 | 4.96 | 0.005929 | ± 2.5 | PASS |
| | MCH | VN | -30 | -0.17 | -0.000201 | ± 2.5 | PASS |
| | | VN | -20 | 2.43 | 0.002871 | ± 2.5 | PASS |
| | | VN | -10 | 4.09 | 0.004832 | ± 2.5 | PASS |
| | | VN | 0 | 1.72 | 0.002032 | ± 2.5 | PASS |
| | | VN | 10 | 4.31 | 0.005092 | ± 2.5 | PASS |
| | | VN | 20 | 4.02 | 0.004749 | ± 2.5 | PASS |
| | | VN | 30 | 0.03 | 0.000035 | ± 2.5 | PASS |
| | | VN | 40 | -0.46 | -0.000543 | ± 2.5 | PASS |
| | | VN | 50 | 2.9 | 0.003426 | ± 2.5 | PASS |
| | HCH | VN | -30 | -1.47 | -0.001737 | ± 2.5 | PASS |
| | | VN | -20 | 1.72 | 0.002032 | ± 2.5 | PASS |
| | | VN | -10 | 0.57 | 0.000673 | ± 2.5 | PASS |
| | | VN | 0 | 4.11 | 0.004855 | ± 2.5 | PASS |
| | | VN | 10 | -1.75 | -0.002067 | ± 2.5 | PASS |
| | | VN | 20 | 3.09 | 0.003650 | ± 2.5 | PASS |
| | | VN | 30 | 2.07 | 0.002445 | ± 2.5 | PASS |
| | | VN | 40 | 0.67 | 0.000791 | ± 2.5 | PASS |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | | VN | 50 | 3.64 | 0.004300 | ± 2.5 | PASS |

## Channel Bandwidth: 10 MHz

| Channel Bandwidth: 10 MHz | | | | | | | |
|---|---|---|---|---|---|---|---|
| Voltage | | | | | | | |
| Modulation | Channel | Voltage [Vdc] | Temperature (℃) | Deviation (Hz) | Deviation (ppm) | Limit (ppm) | Verdict |
| QPSK | LCH | VL | TN | 2.77 | 0.003341 | ± 2.5 | PASS |
| | | VN | TN | 2.7 | 0.003257 | ± 2.5 | PASS |
| | | VH | TN | -1.65 | -0.001990 | ± 2.5 | PASS |
| | MCH | VL | TN | 1.68 | 0.002008 | ± 2.5 | PASS |
| | | VN | TN | -0.1 | -0.000120 | ± 2.5 | PASS |
| | | VH | TN | 2.68 | 0.003204 | ± 2.5 | PASS |
| | HCH | VL | TN | -1.92 | -0.002275 | ± 2.5 | PASS |
| | | VN | TN | 3.23 | 0.003827 | ± 2.5 | PASS |
| | | VH | TN | 2.67 | 0.003164 | ± 2.5 | PASS |
| 16QAM | LCH | VL | TN | 1.51 | 0.001821 | ± 2.5 | PASS |
| | | VN | TN | -1.36 | -0.001641 | ± 2.5 | PASS |
| | | VH | TN | 0.88 | 0.001062 | ± 2.5 | PASS |
| | MCH | VL | TN | 2.7 | 0.003228 | ± 2.5 | PASS |
| | | VN | TN | 2.48 | 0.002965 | ± 2.5 | PASS |
| | | VH | TN | 3.89 | 0.004650 | ± 2.5 | PASS |
| | HCH | VL | TN | 2.15 | 0.002547 | ± 2.5 | PASS |
| | | VN | TN | 4.52 | 0.005355 | ± 2.5 | PASS |
| | | VH | TN | 4.92 | 0.005829 | ± 2.5 | PASS |
| Temperature | | | | | | | |
| Modulation | Channel | Voltage [Vdc] | Temperature (℃) | Deviation (Hz) | Deviation (ppm) | Limit (ppm) | Verdict |
| QPSK | LCH | VN | -30 | -1.5 | -0.001809 | ± 2.5 | PASS |
| | | VN | -20 | 1.44 | 0.001737 | ± 2.5 | PASS |
| | | VN | -10 | 4.38 | 0.005283 | ± 2.5 | PASS |
| | | VN | 0 | -1.37 | -0.001653 | ± 2.5 | PASS |
| | | VN | 10 | 0.8 | 0.000965 | ± 2.5 | PASS |
| | | VN | 20 | 1.68 | 0.002027 | ± 2.5 | PASS |
| | | VN | 30 | 4.4 | 0.005308 | ± 2.5 | PASS |
| | | VN | 40 | 1.37 | 0.001653 | ± 2.5 | PASS |
| | | VN | 50 | 4.61 | 0.005561 | ± 2.5 | PASS |
| | MCH | VN | -30 | -1.22 | -0.001458 | ± 2.5 | PASS |
| | | VN | -20 | 0.32 | 0.000383 | ± 2.5 | PASS |
| | | VN | -10 | 4.2 | 0.005021 | ± 2.5 | PASS |
| | | VN | 0 | 2.58 | 0.003084 | ± 2.5 | PASS |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | | VN | 10 | 2.67 | 0.003192 | ± 2.5 | PASS |
| | | VN | 20 | 2.92 | 0.003491 | ± 2.5 | PASS |
| | | VN | 30 | 1.11 | 0.001327 | ± 2.5 | PASS |
| | | VN | 40 | -0.36 | -0.000430 | ± 2.5 | PASS |
| | | VN | 50 | 0.48 | 0.000574 | ± 2.5 | PASS |
| | HCH | VN | -30 | 1.34 | 0.001588 | ± 2.5 | PASS |
| | | VN | -20 | 3.69 | 0.004372 | ± 2.5 | PASS |
| | | VN | -10 | 1.76 | 0.002085 | ± 2.5 | PASS |
| | | VN | 0 | 2.66 | 0.003152 | ± 2.5 | PASS |
| | | VN | 10 | -1.16 | -0.001374 | ± 2.5 | PASS |
| | | VN | 20 | -1.92 | -0.002275 | ± 2.5 | PASS |
| | | VN | 30 | 4.08 | 0.004834 | ± 2.5 | PASS |
| | | VN | 40 | 2.75 | 0.003258 | ± 2.5 | PASS |
| | | VN | 50 | 1.14 | 0.001351 | ± 2.5 | PASS |
| 16QAM | LCH | VN | -30 | 3.82 | 0.004567 | ± 2.5 | PASS |
| | | VN | -20 | -1.18 | -0.001411 | ± 2.5 | PASS |
| | | VN | -10 | 0.08 | 0.000096 | ± 2.5 | PASS |
| | | VN | 0 | 4.47 | 0.005344 | ± 2.5 | PASS |
| | | VN | 10 | 3.81 | 0.004555 | ± 2.5 | PASS |
| | | VN | 20 | -1.05 | -0.001255 | ± 2.5 | PASS |
| | | VN | 30 | 3.33 | 0.003981 | ± 2.5 | PASS |
| | | VN | 40 | 0.21 | 0.000251 | ± 2.5 | PASS |
| | | VN | 50 | 1.03 | 0.001231 | ± 2.5 | PASS |
| | MCH | VN | -30 | 3.52 | 0.004171 | ± 2.5 | PASS |
| | | VN | -20 | 1.35 | 0.001600 | ± 2.5 | PASS |
| | | VN | -10 | 4.08 | 0.004834 | ± 2.5 | PASS |
| | | VN | 0 | 0.34 | 0.000403 | ± 2.5 | PASS |
| | | VN | 10 | 4.09 | 0.004846 | ± 2.5 | PASS |
| | | VN | 20 | 3.23 | 0.003827 | ± 2.5 | PASS |
| | | VN | 30 | 2.59 | 0.003069 | ± 2.5 | PASS |
| | | VN | 40 | 1.18 | 0.001398 | ± 2.5 | PASS |
| | | VN | 50 | 1.36 | 0.001611 | ± 2.5 | PASS |
| | HCH | VN | -30 | -0.33 | -0.000391 | ± 2.5 | PASS |
| | | VN | -20 | 0.38 | 0.000450 | ± 2.5 | PASS |
| | | VN | -10 | 1.49 | 0.001765 | ± 2.5 | PASS |
| | | VN | 0 | 0.99 | 0.001173 | ± 2.5 | PASS |
| | | VN | 10 | -1.02 | -0.001209 | ± 2.5 | PASS |
| | | VN | 20 | 2.33 | 0.002761 | ± 2.5 | PASS |
| | | VN | 30 | -1.73 | -0.002050 | ± 2.5 | PASS |
| | | VN | 40 | 3.37 | 0.003993 | ± 2.5 | PASS |
| | | VN | 50 | 4.14 | 0.004905 | ± 2.5 | PASS |