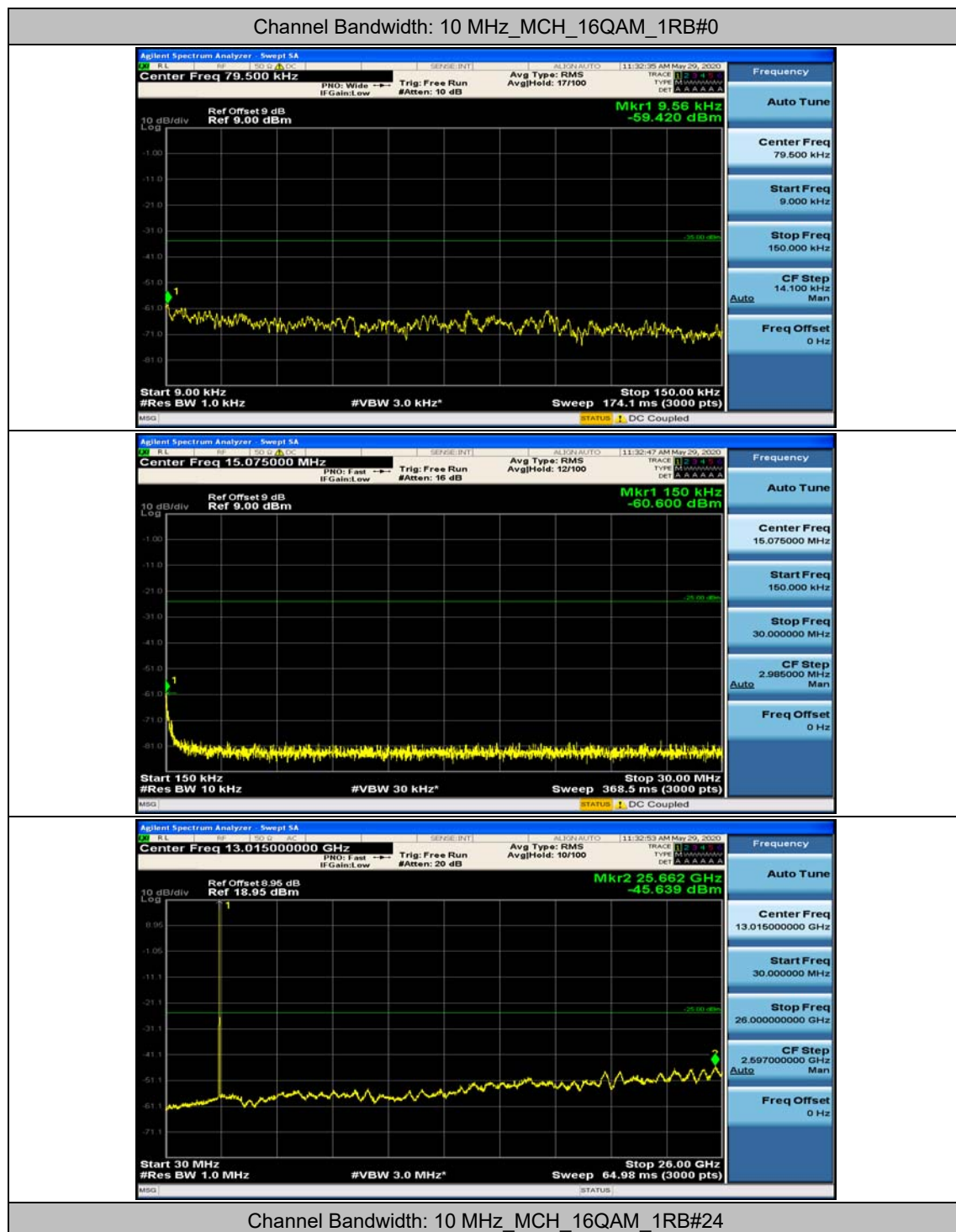
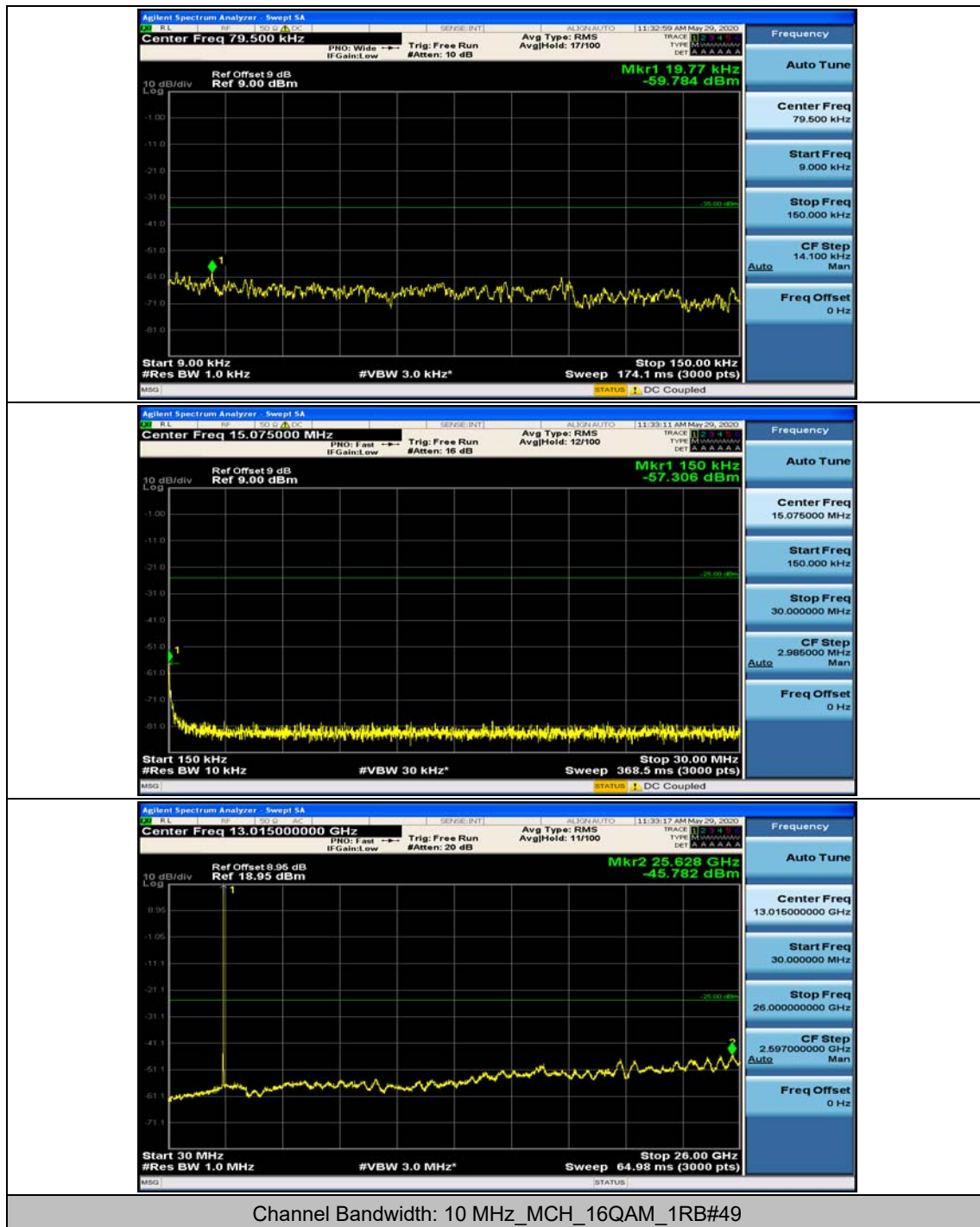
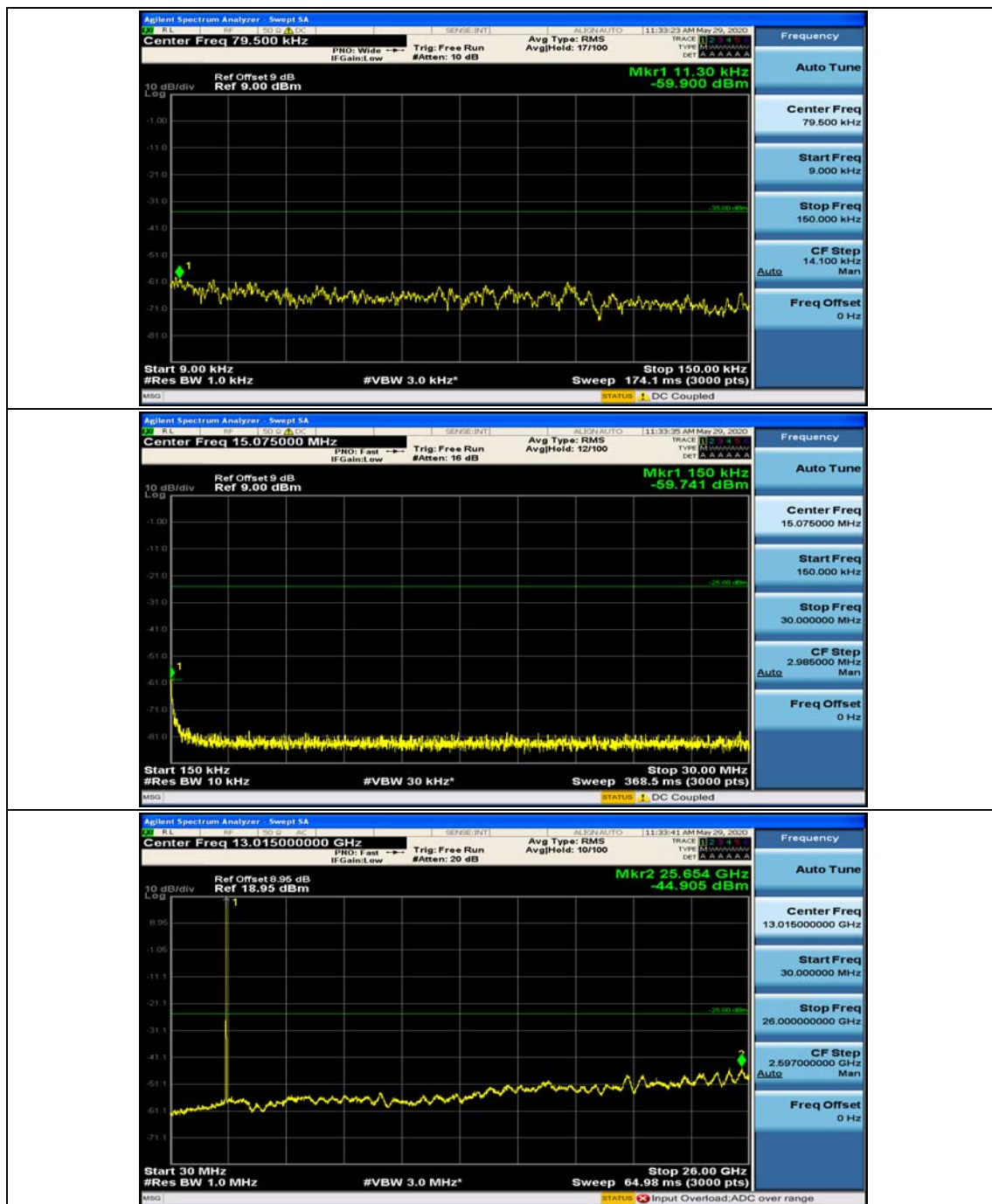
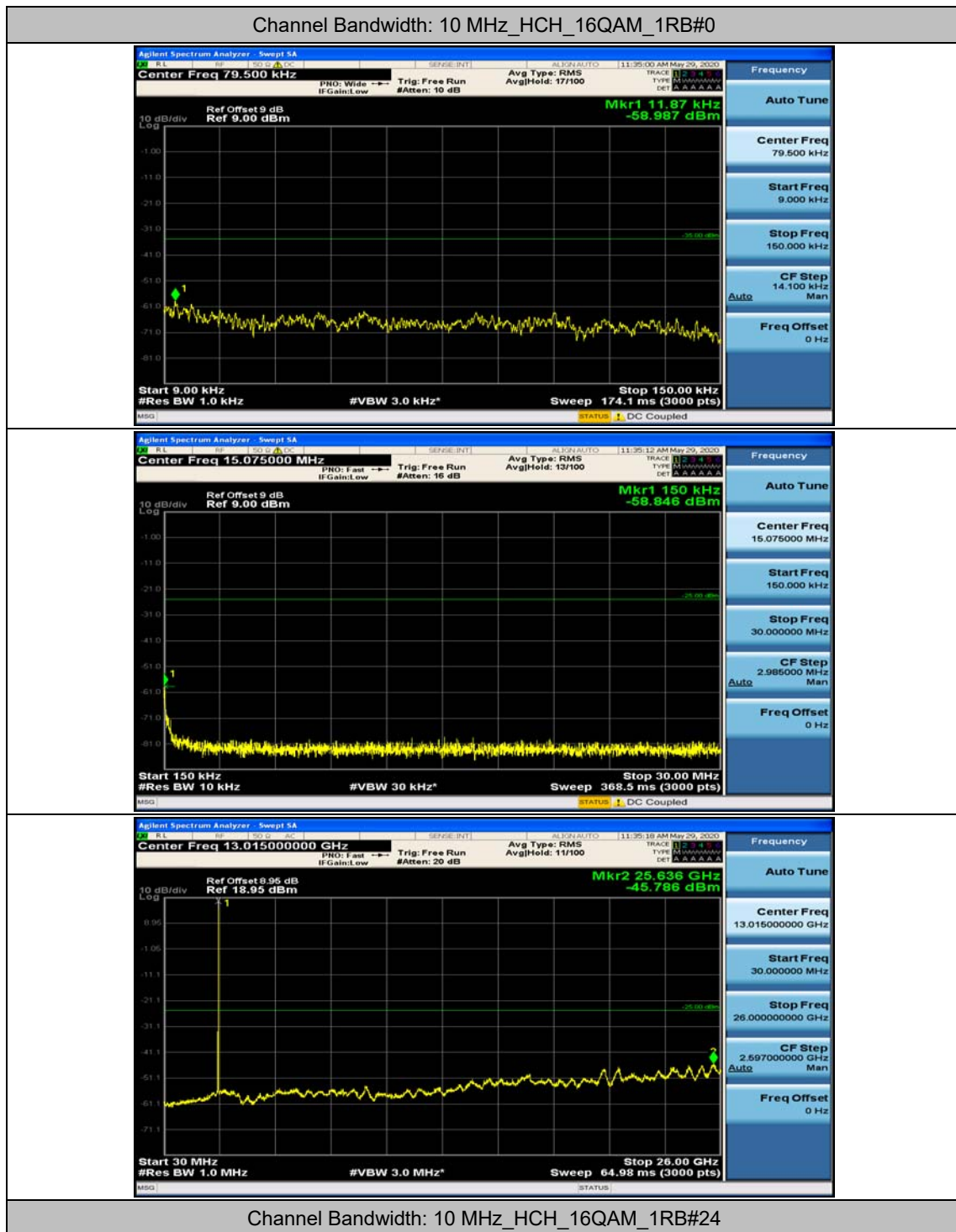
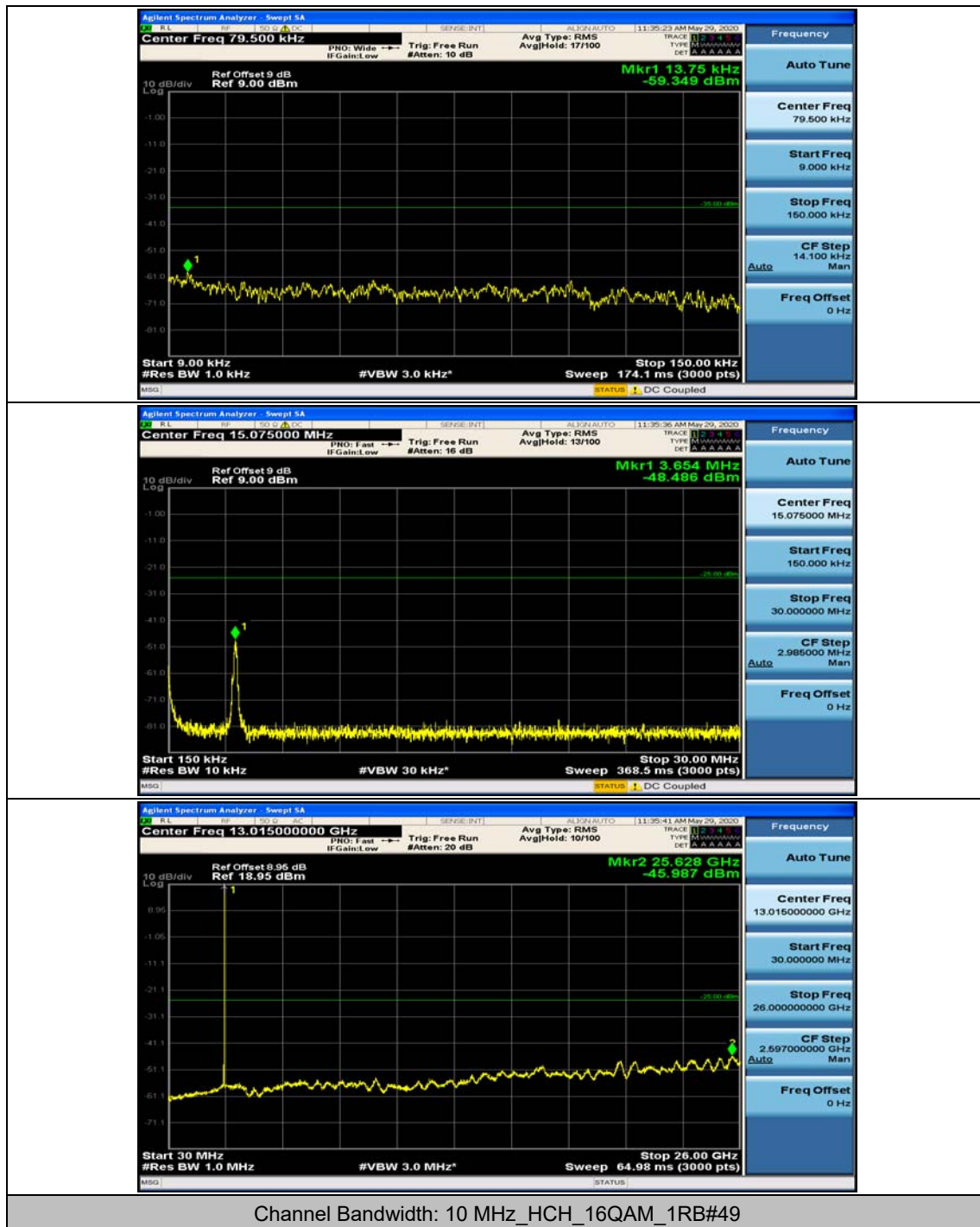


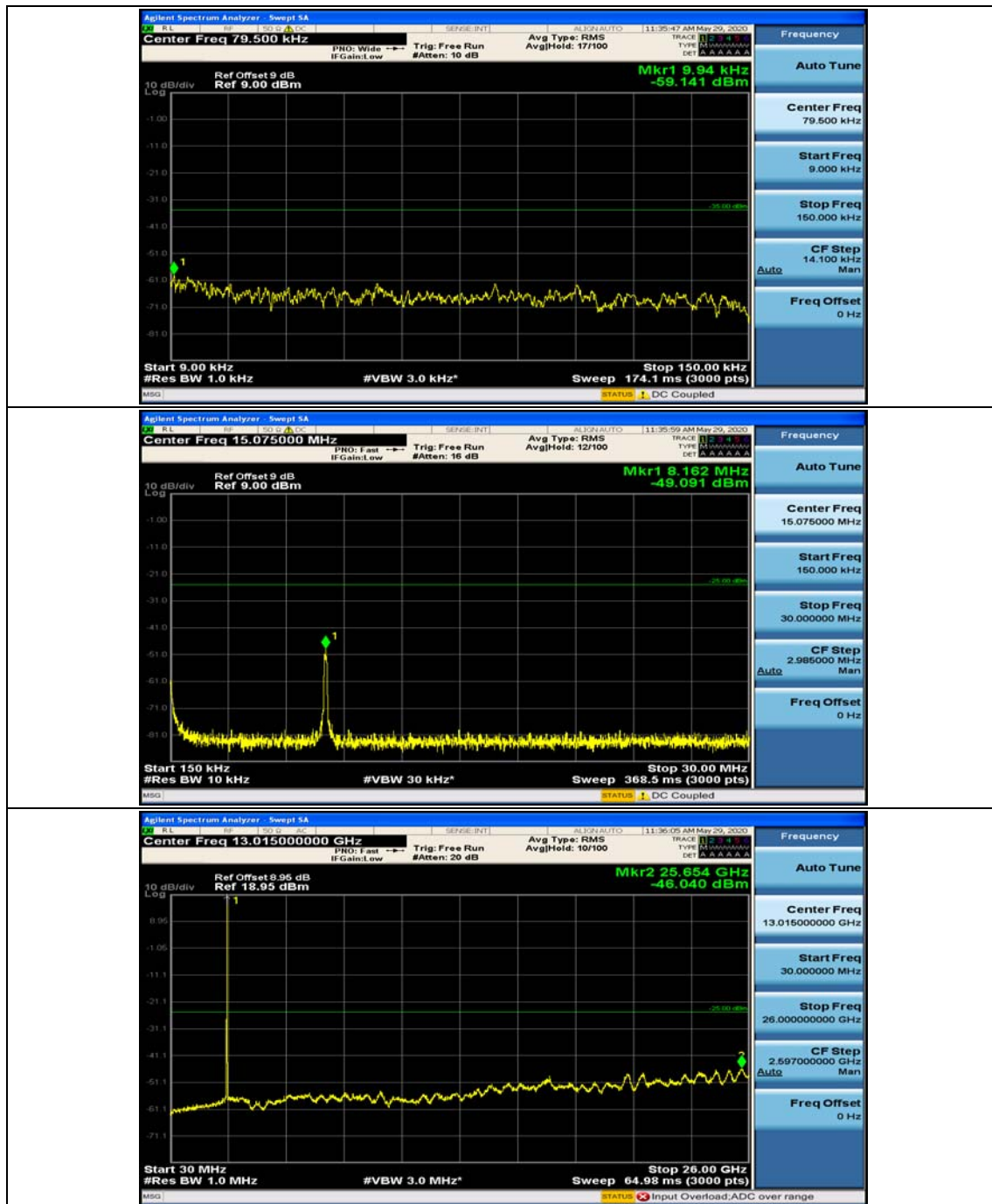




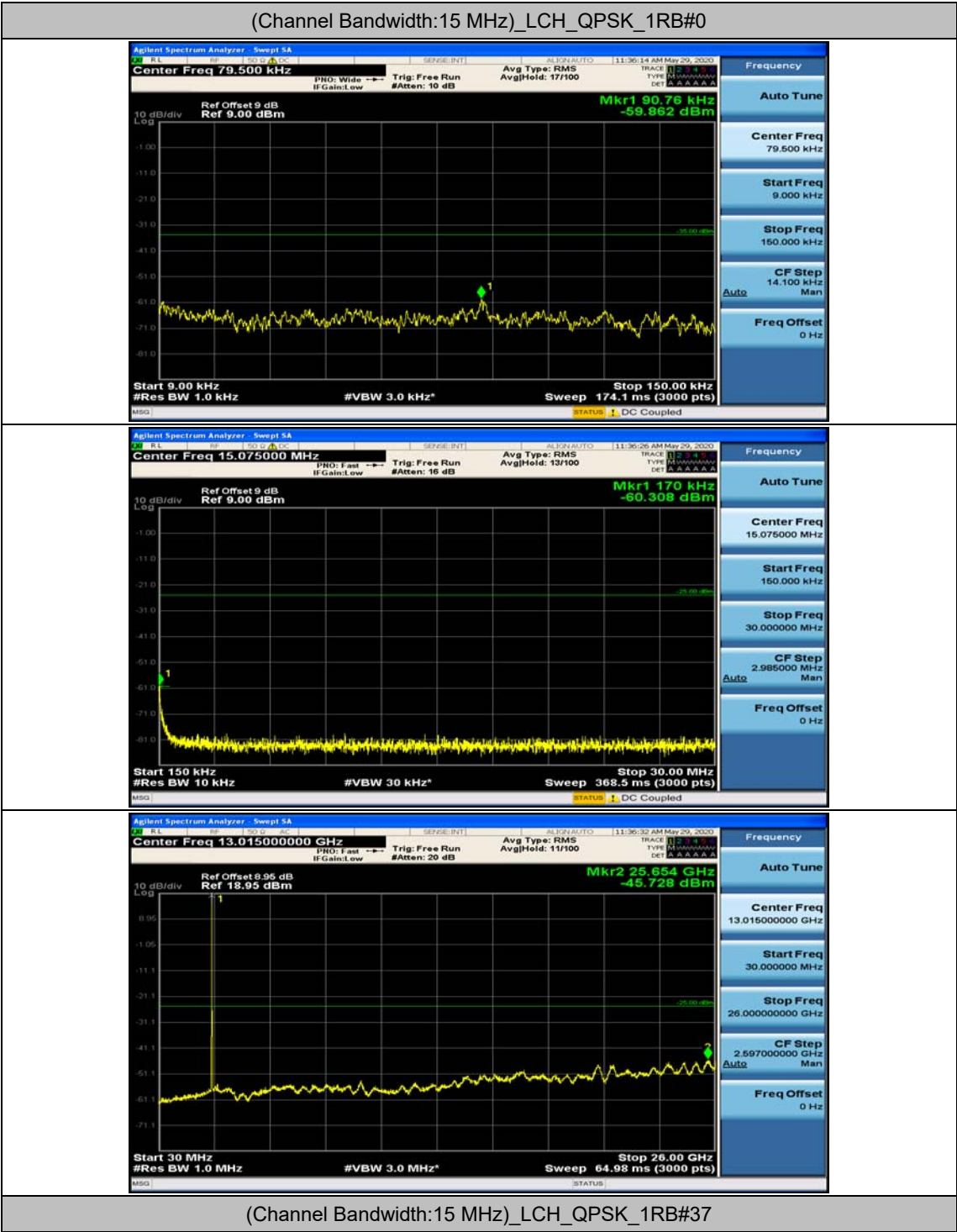


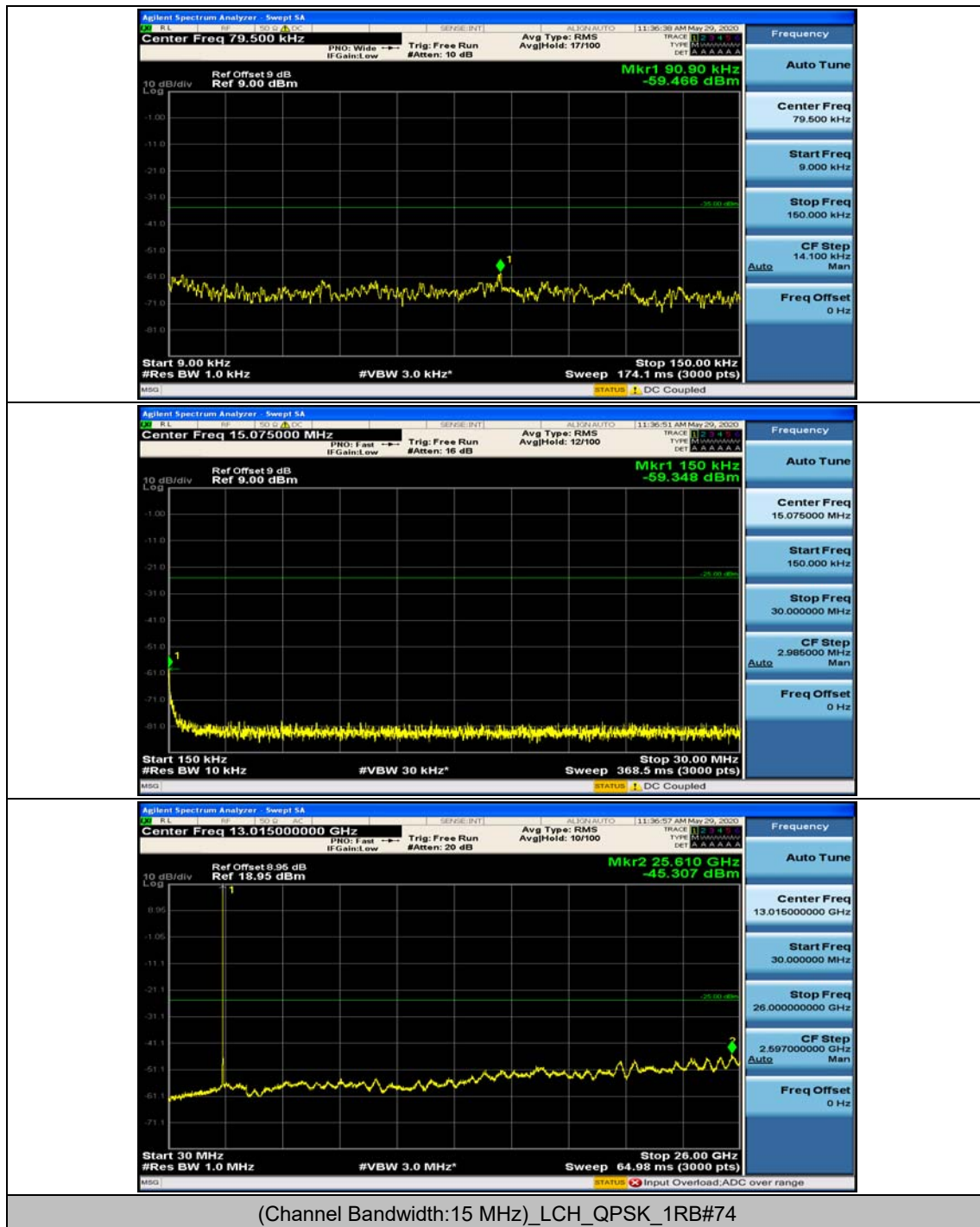


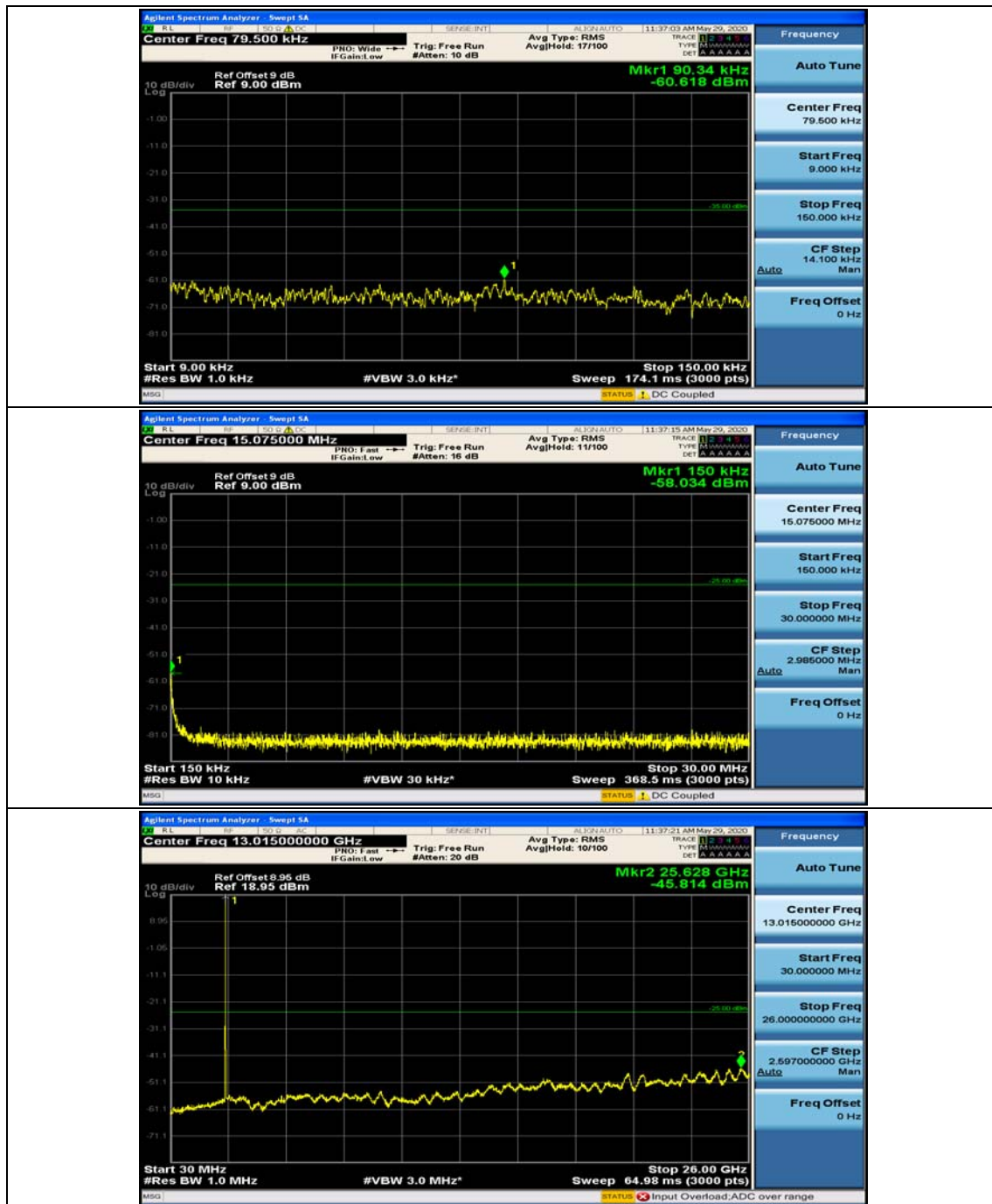




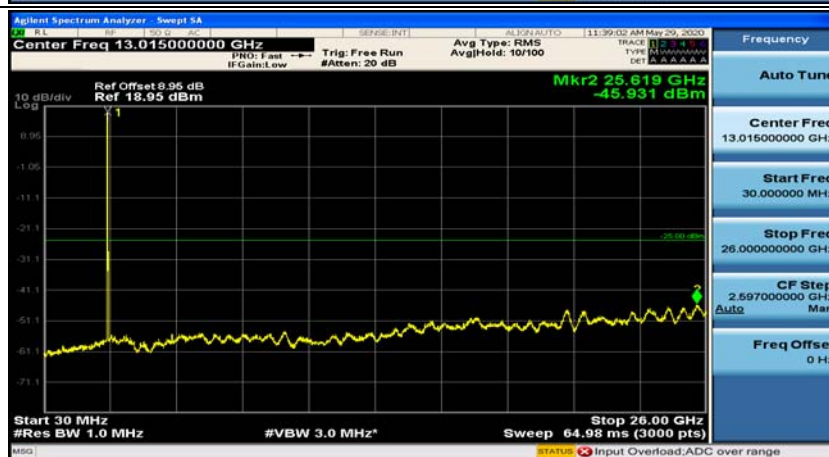
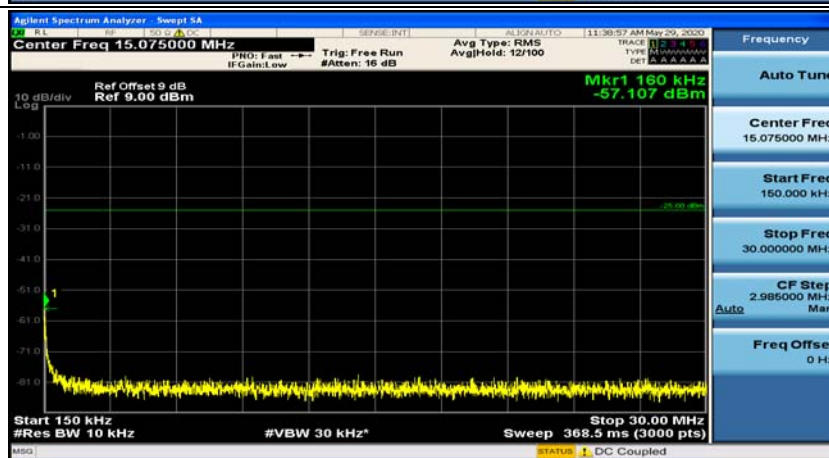
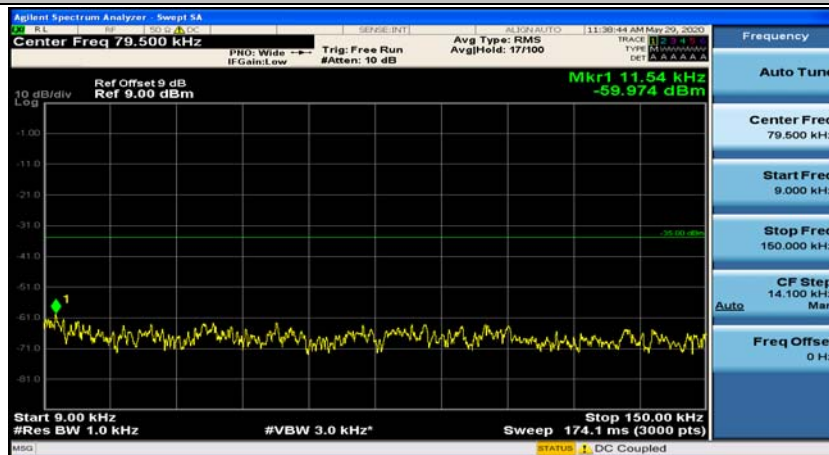
Channel Bandwidth: 15 MHz



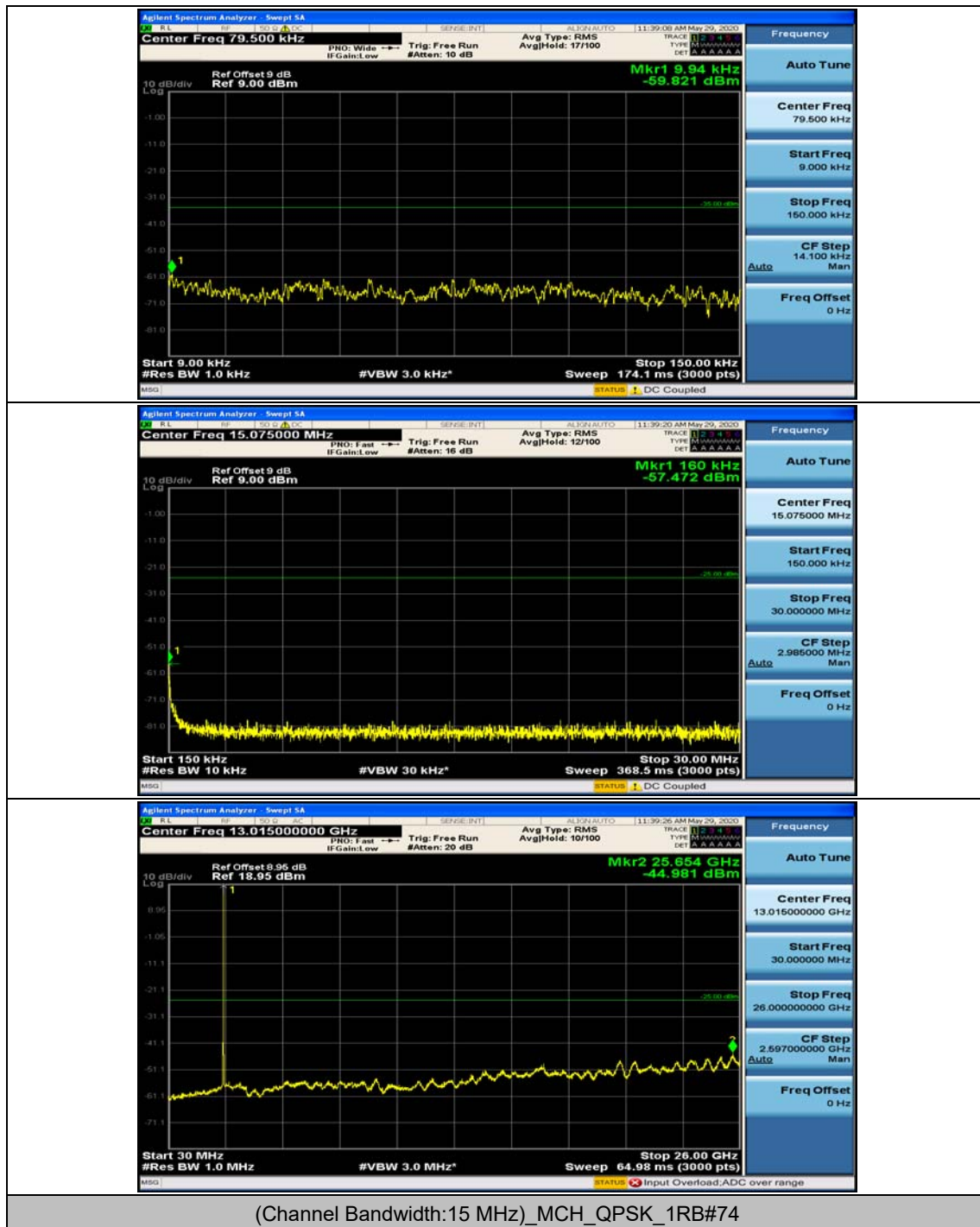


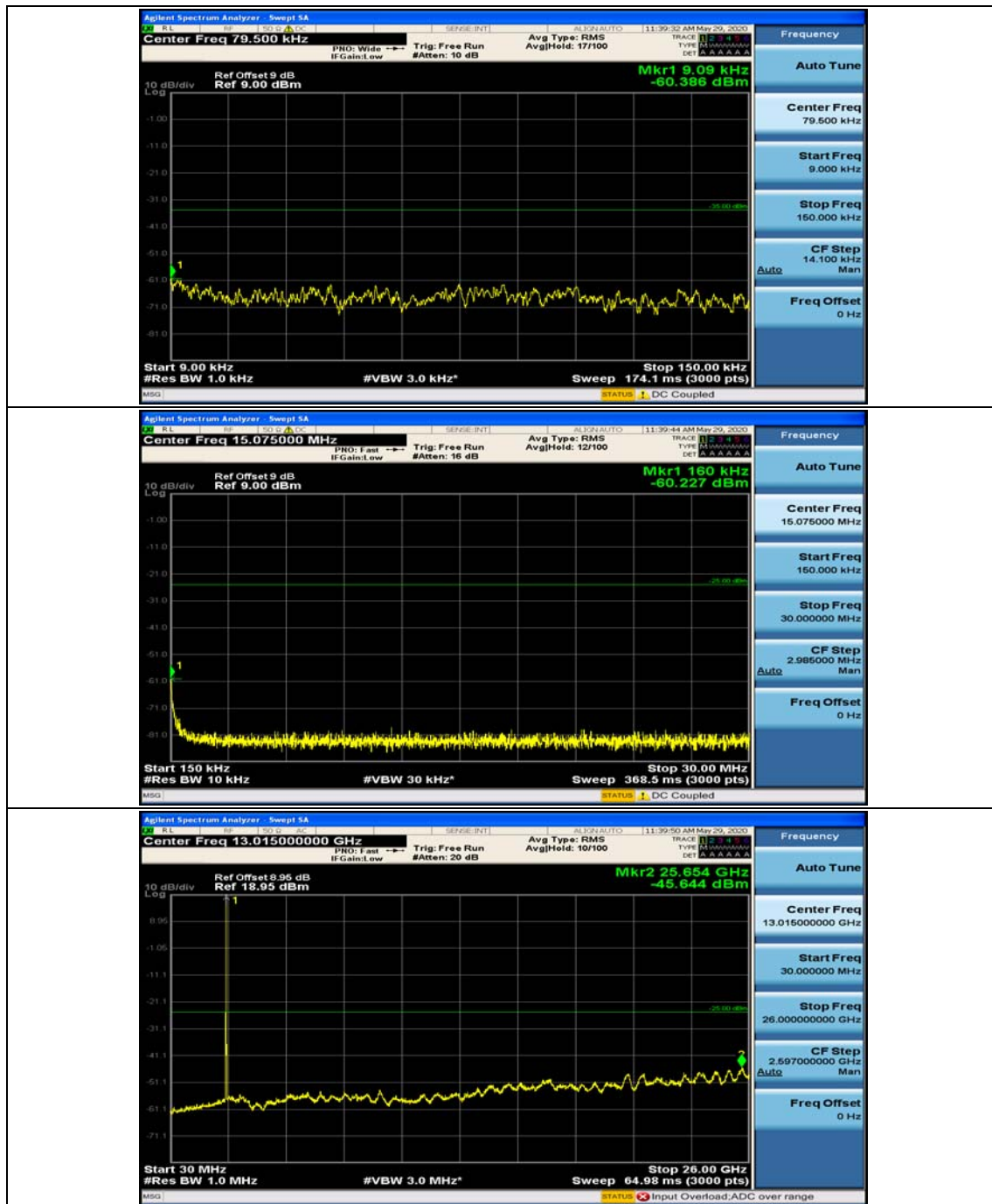


(Channel Bandwidth:15 MHz)\_MCH\_QPSK\_1RB#0

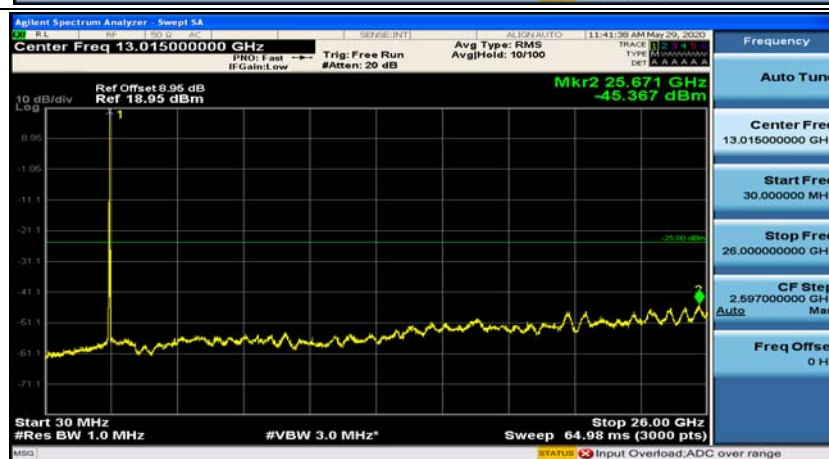
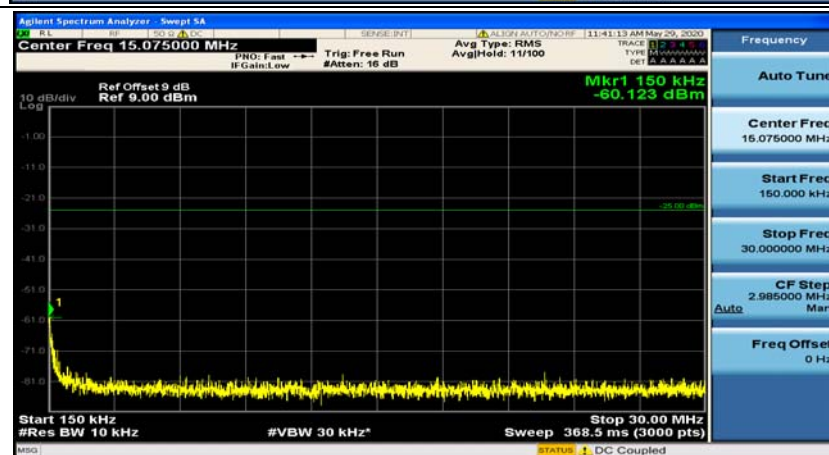
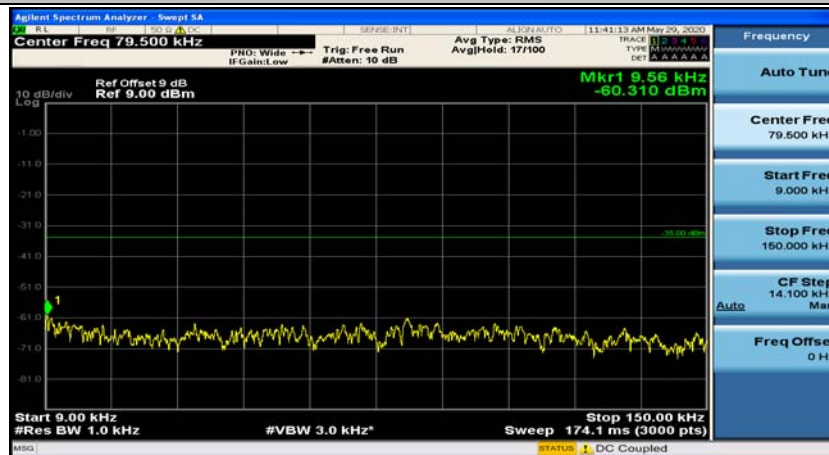


(Channel Bandwidth:15 MHz)\_MCH\_QPSK\_1RB#37

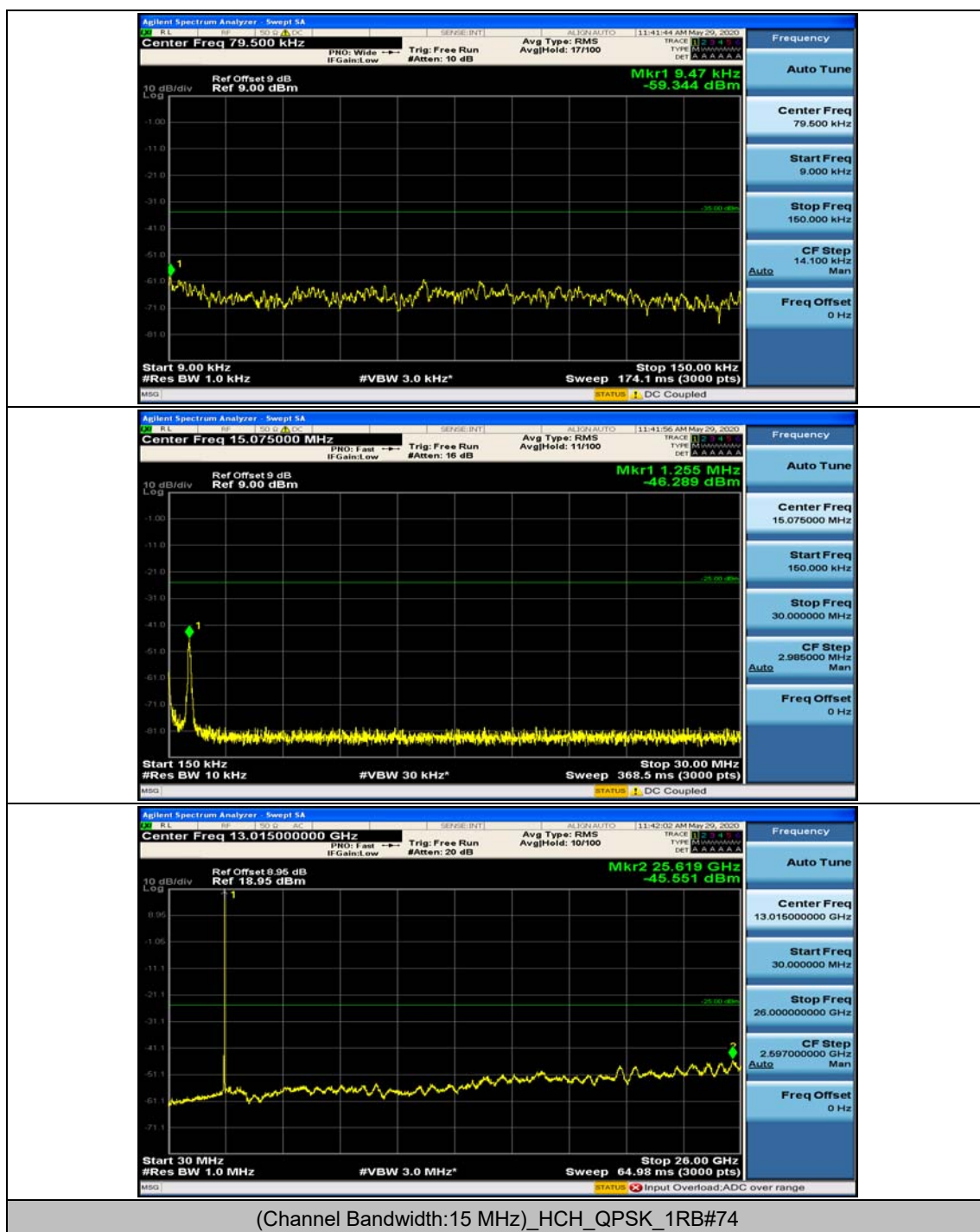


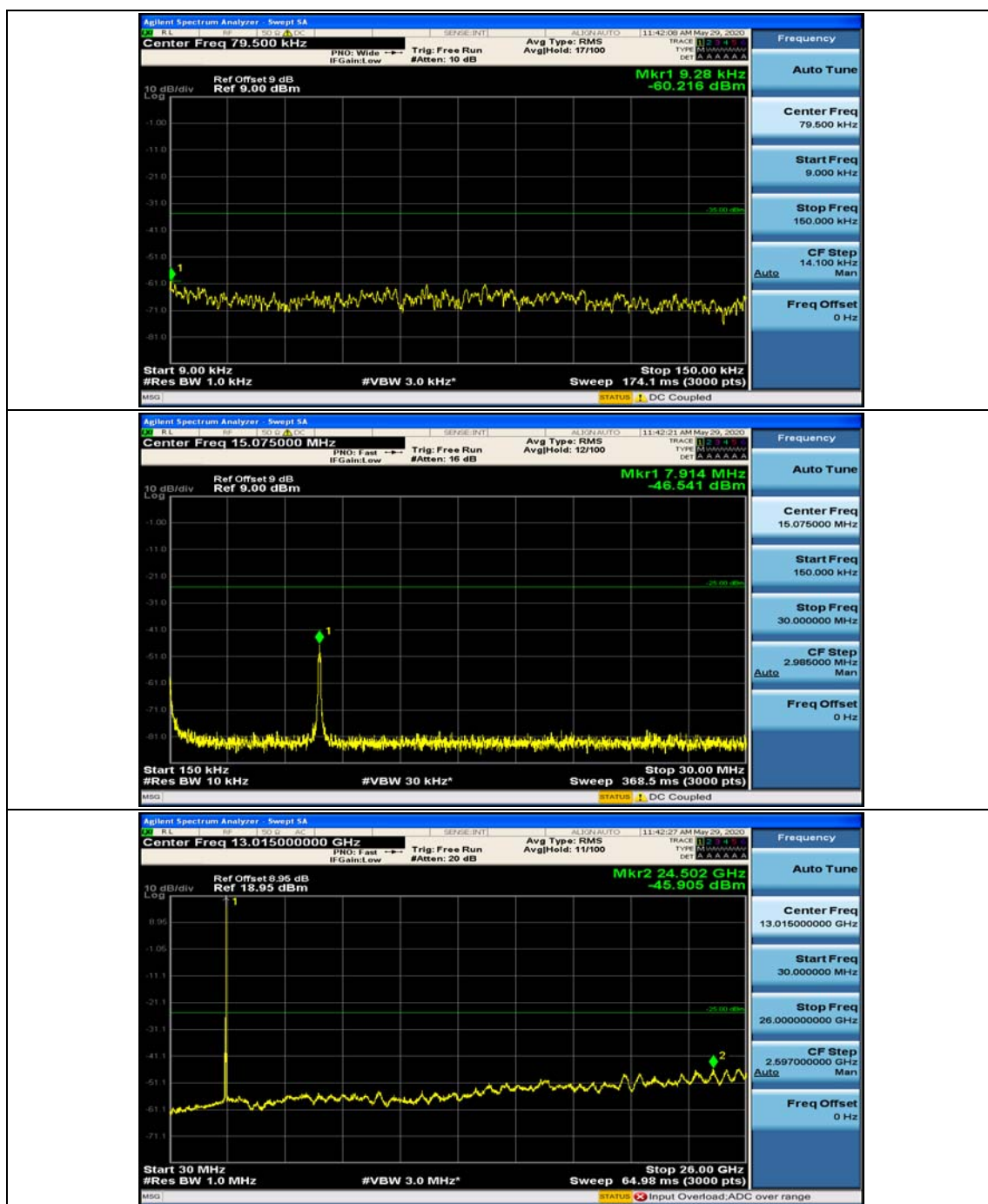


(Channel Bandwidth:15 MHz)\_HCH\_QPSK\_1RB#0

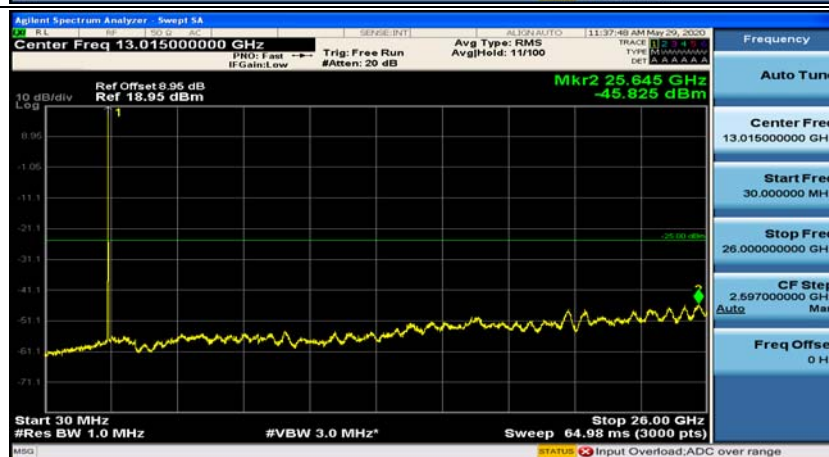
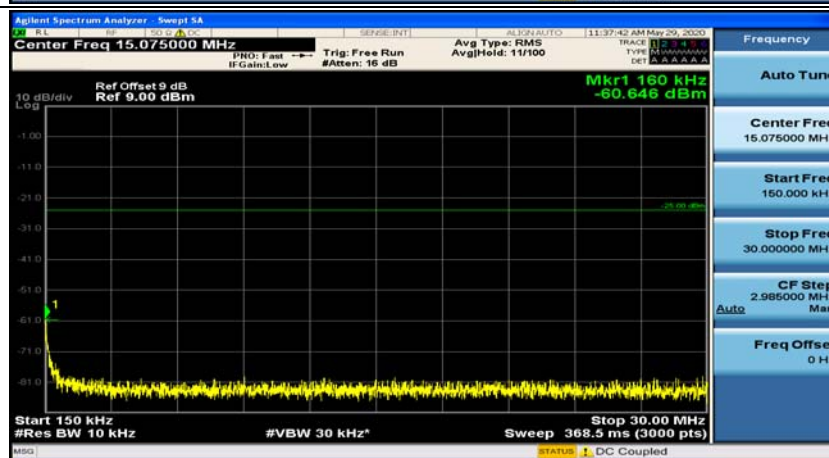
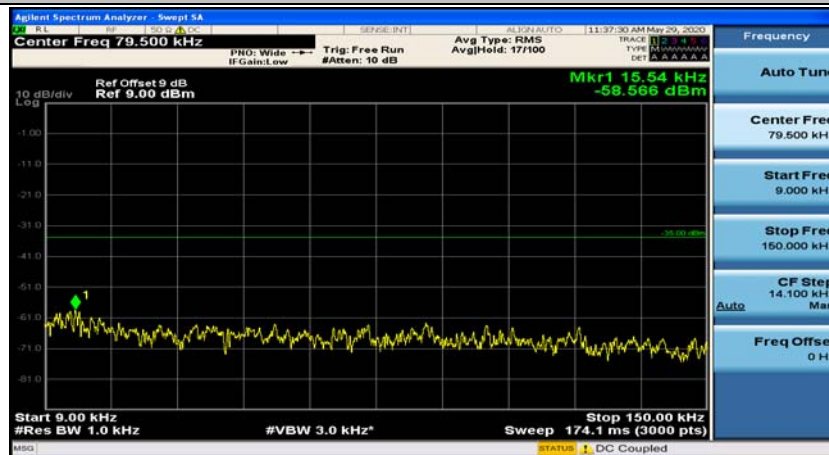


(Channel Bandwidth:15 MHz)\_HCH\_QPSK\_1RB#37

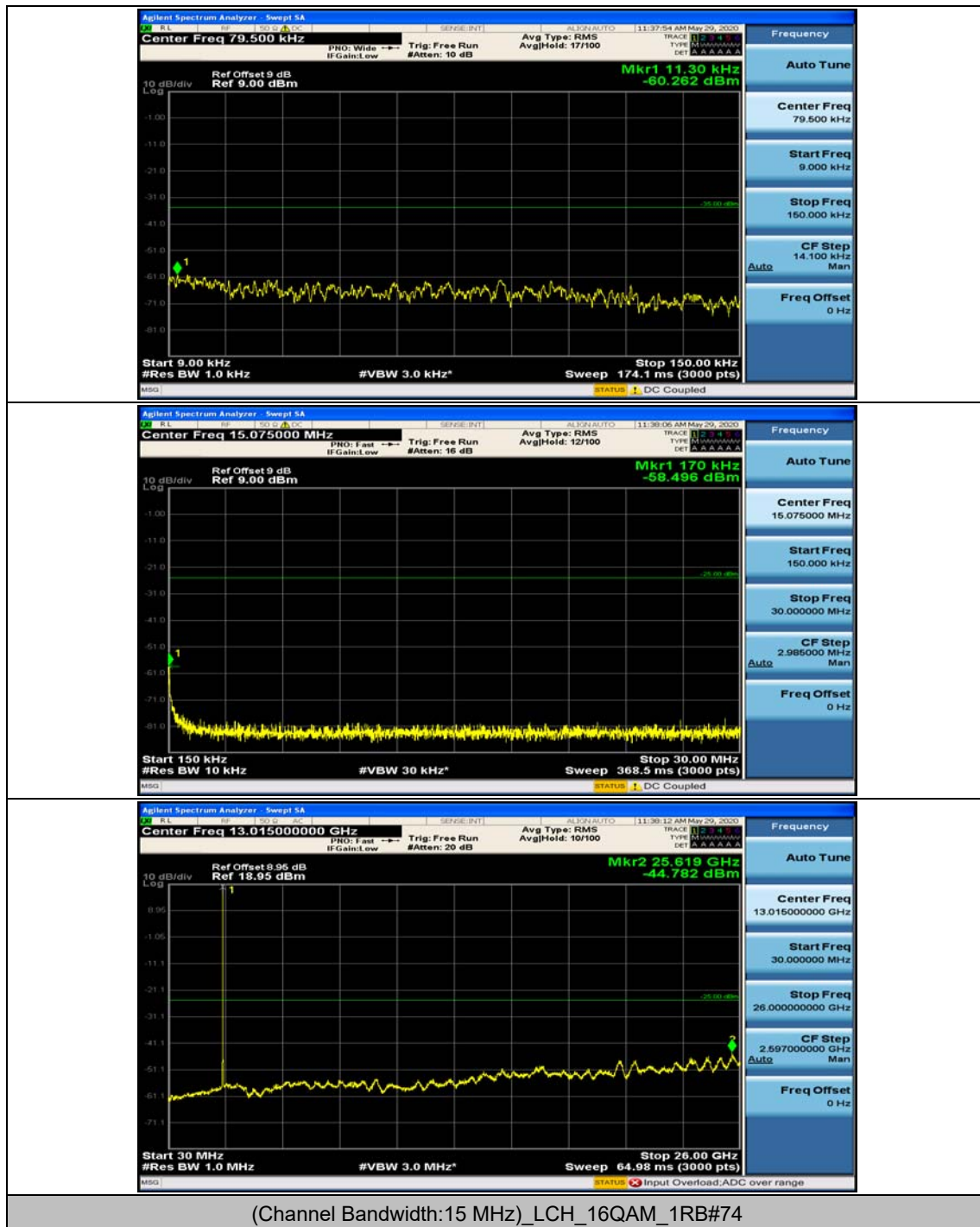


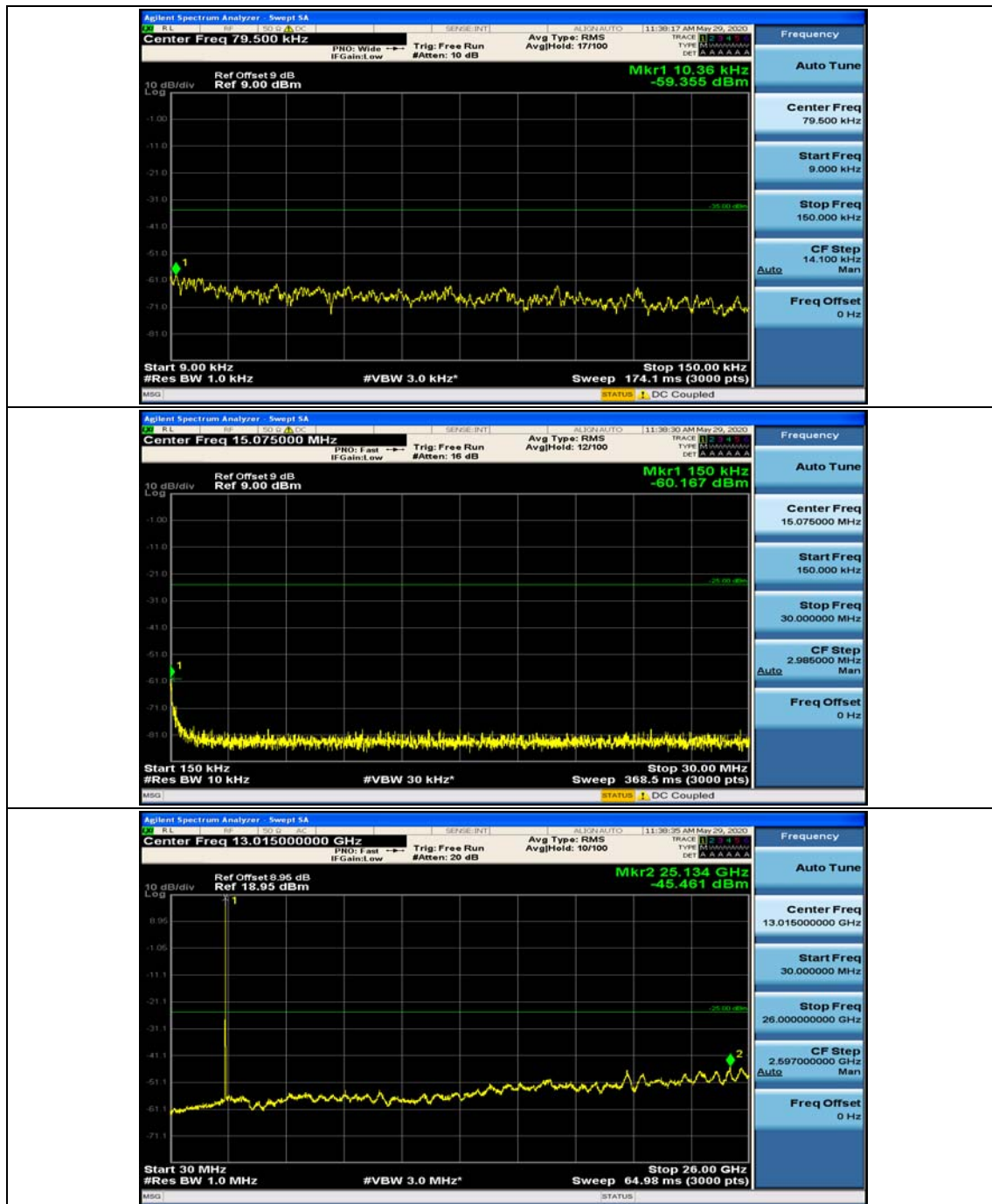


(Channel Bandwidth:15 MHz)\_LCH\_16QAM\_1RB#0

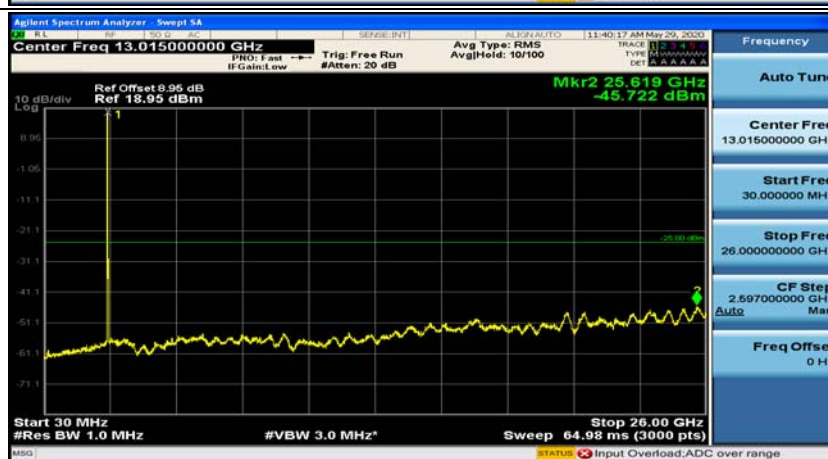
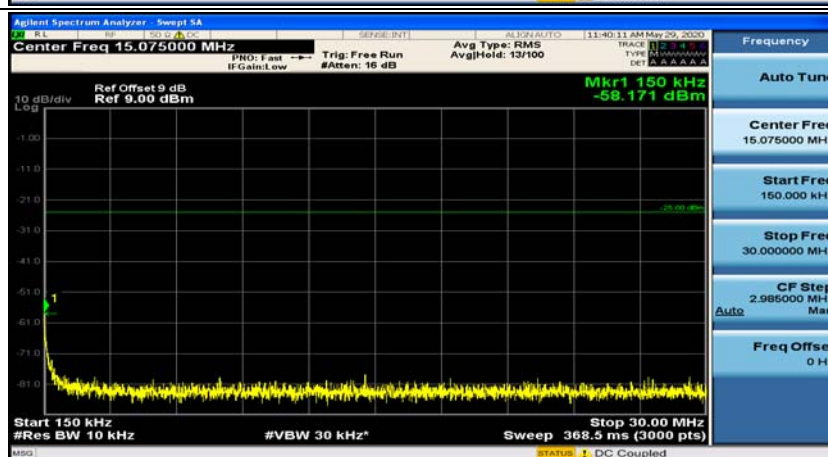
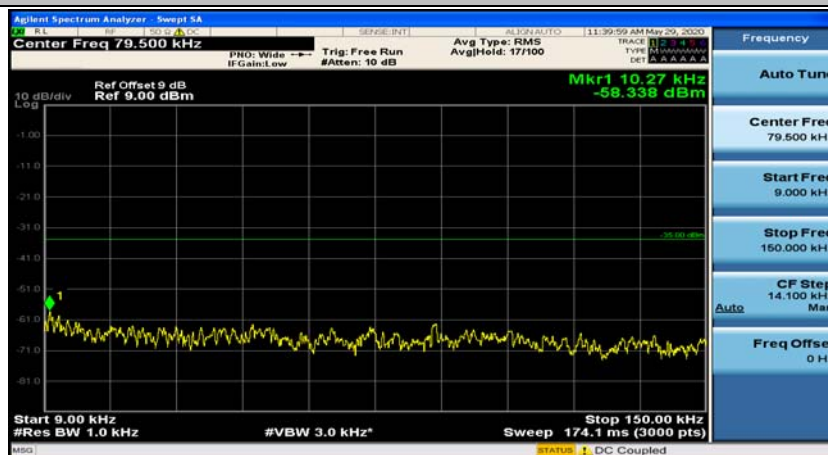


(Channel Bandwidth:15 MHz)\_LCH\_16QAM\_1RB#37

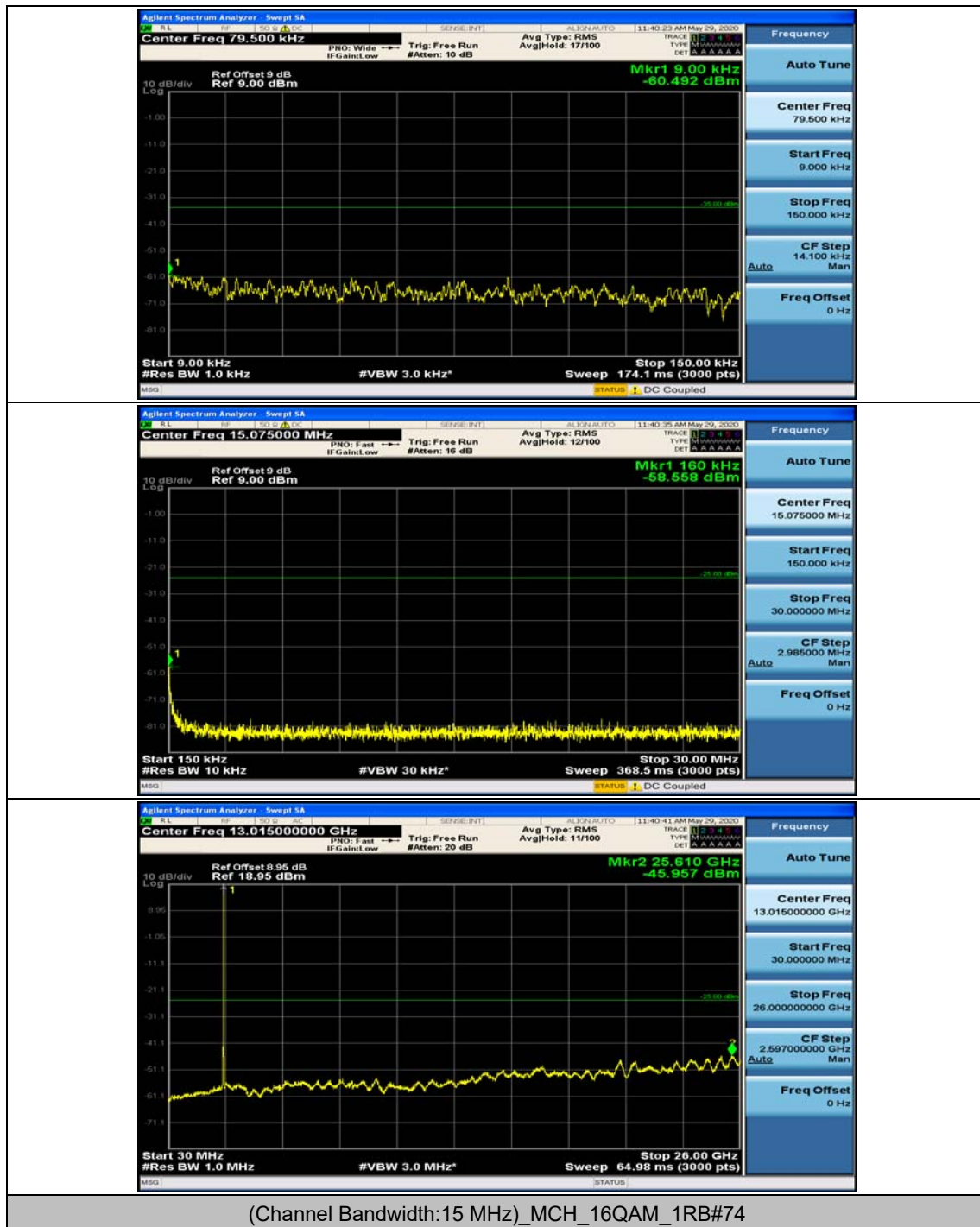


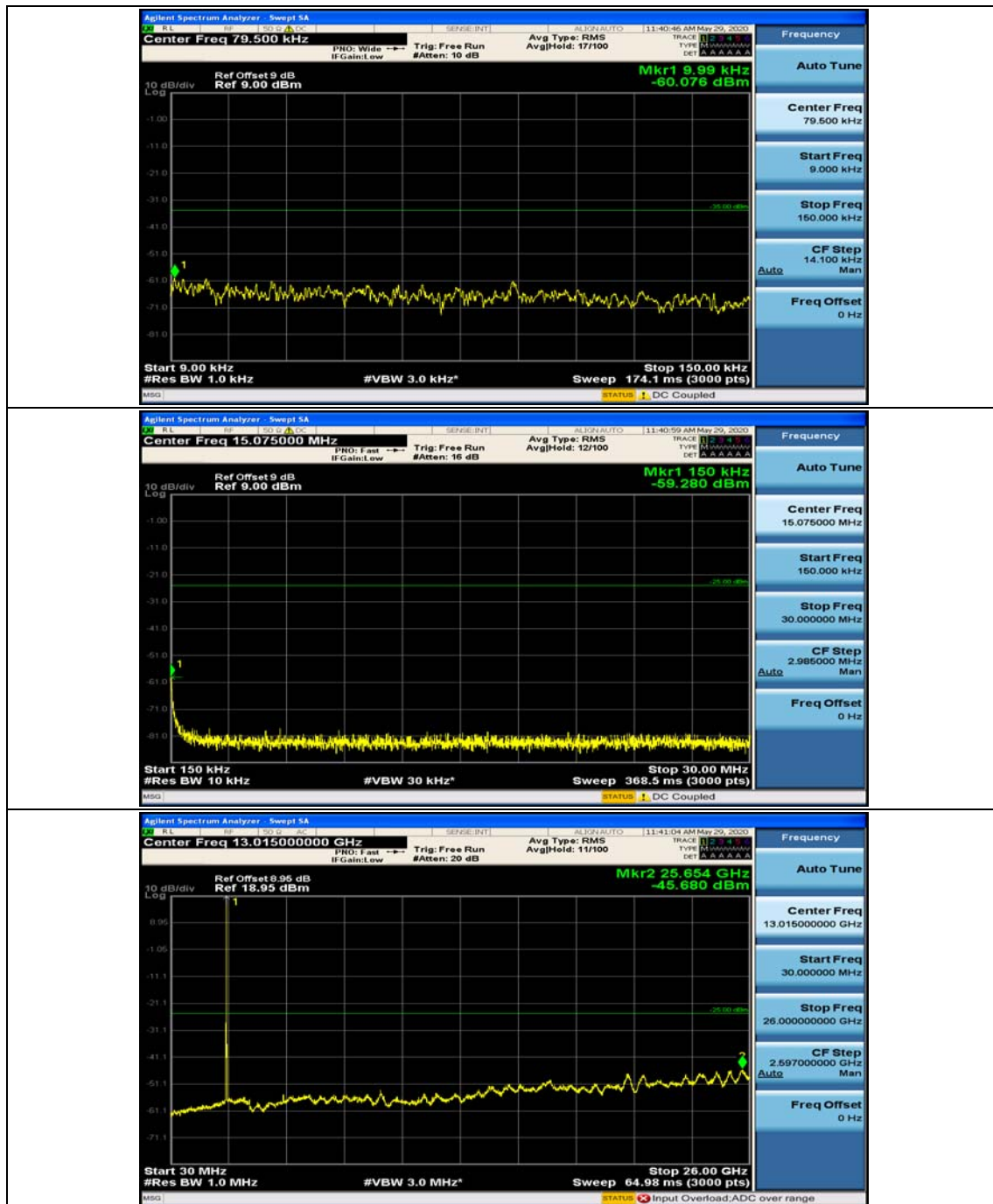


(Channel Bandwidth:15 MHz)\_MCH\_16QAM\_1RB#0

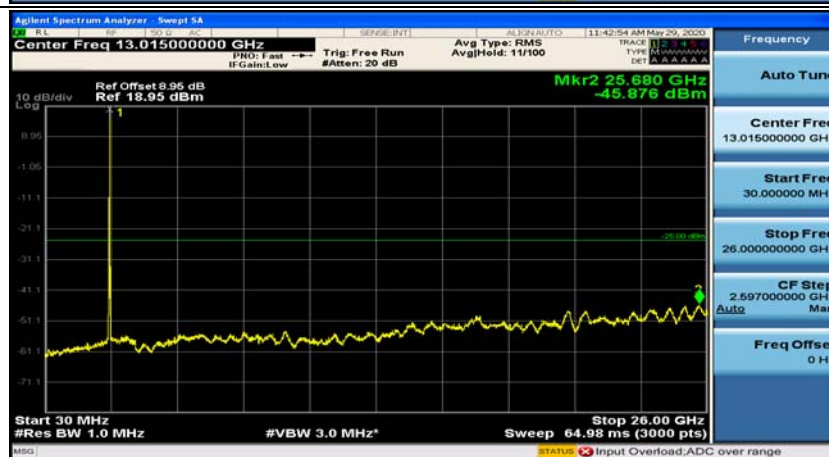
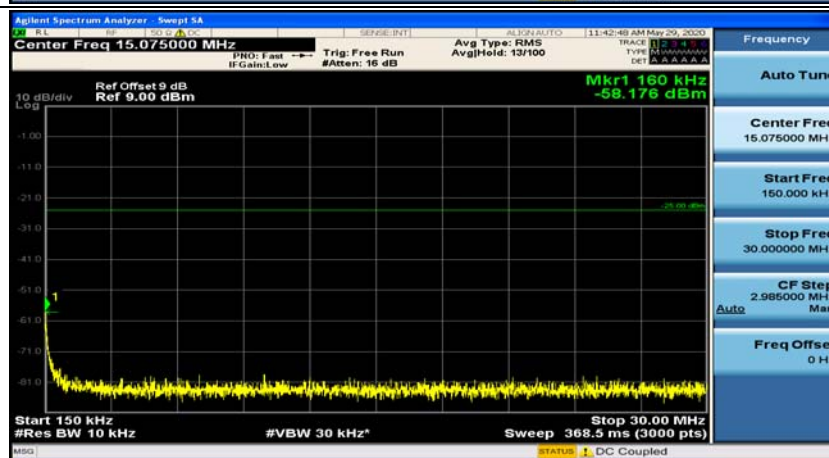
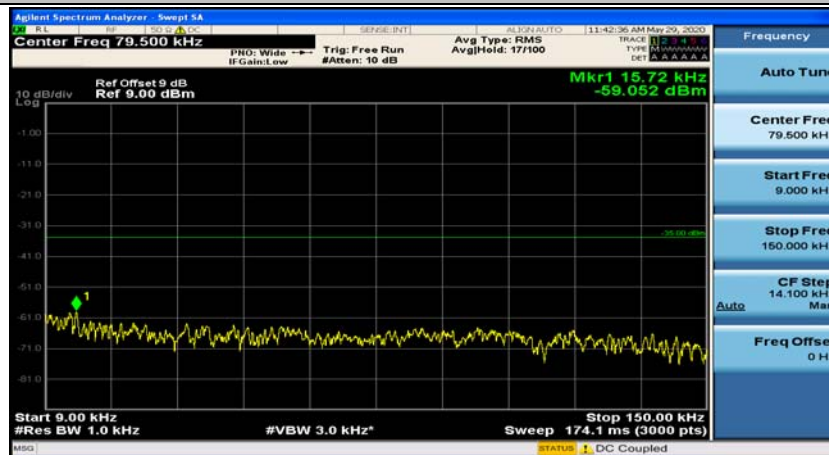


(Channel Bandwidth:15 MHz)\_MCH\_16QAM\_1RB#37

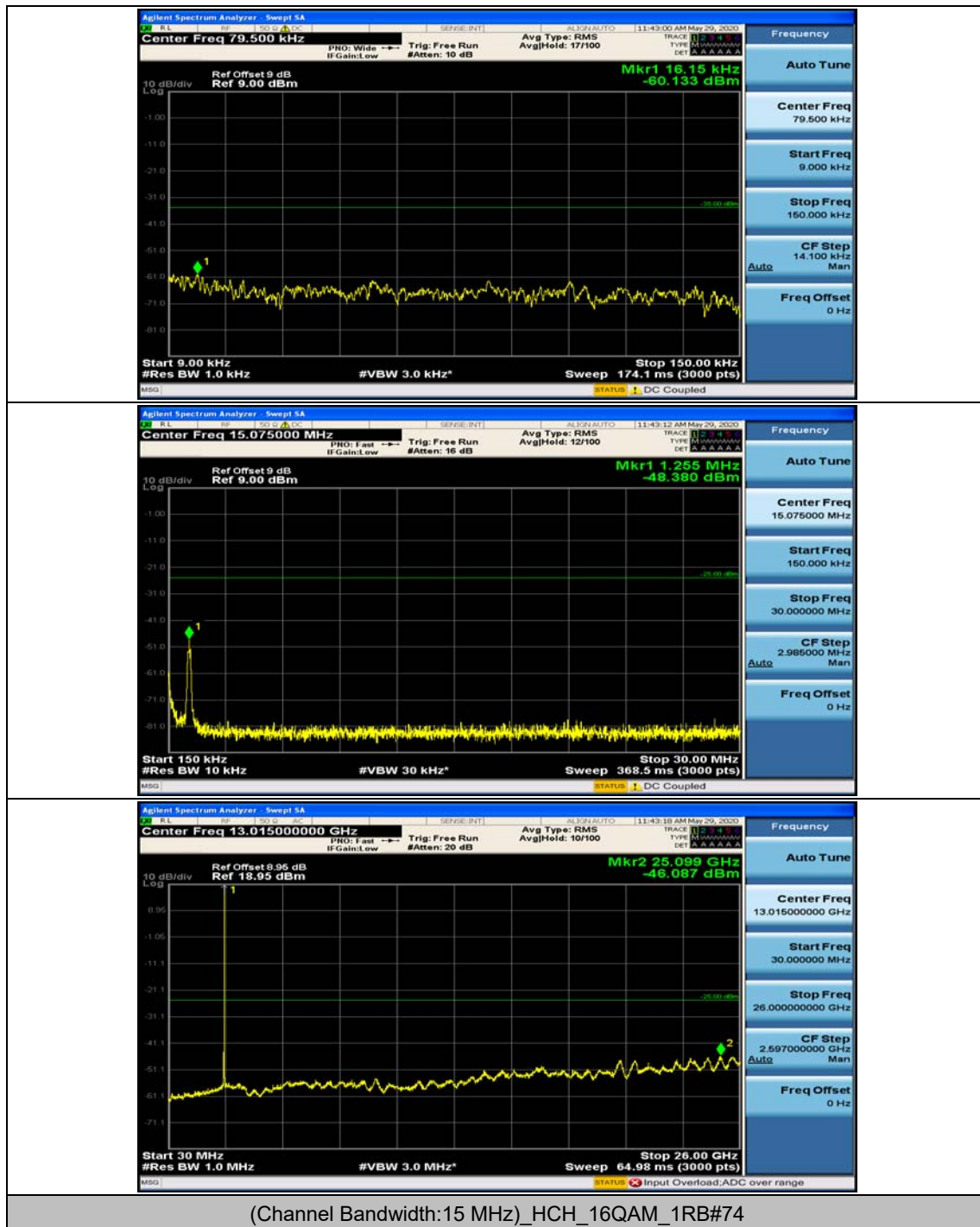


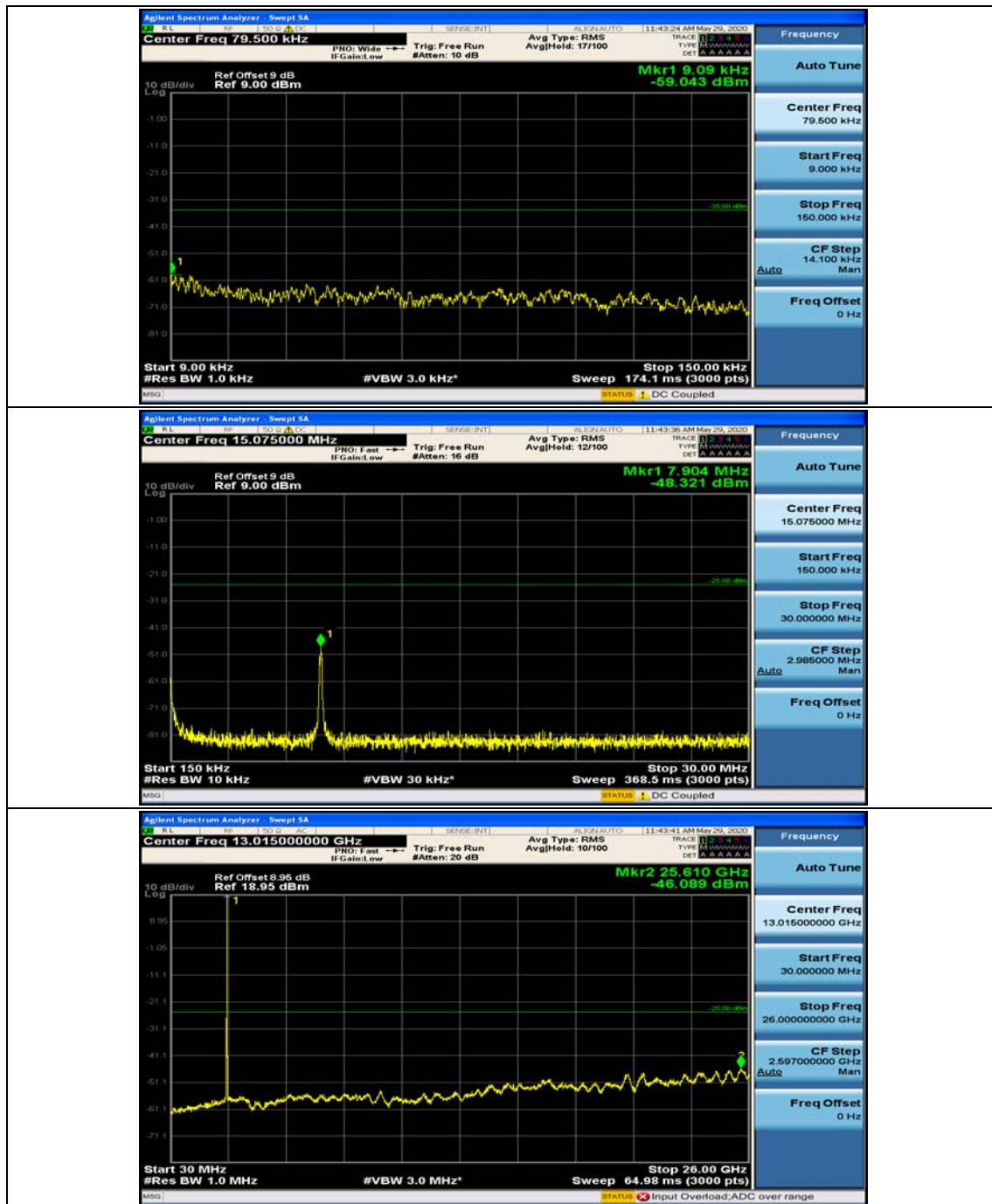


(Channel Bandwidth:15 MHz)\_HCH\_16QAM\_1RB#0

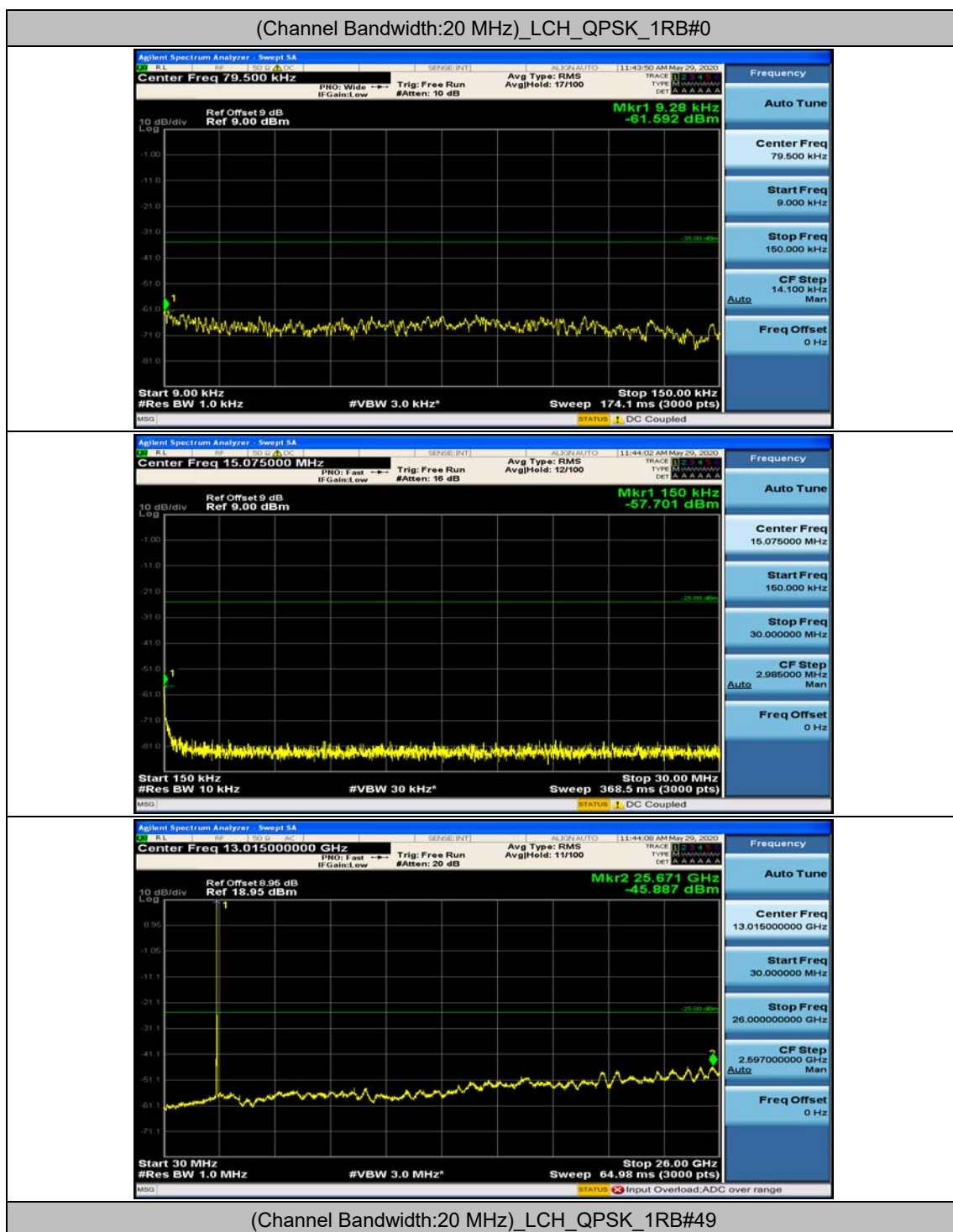


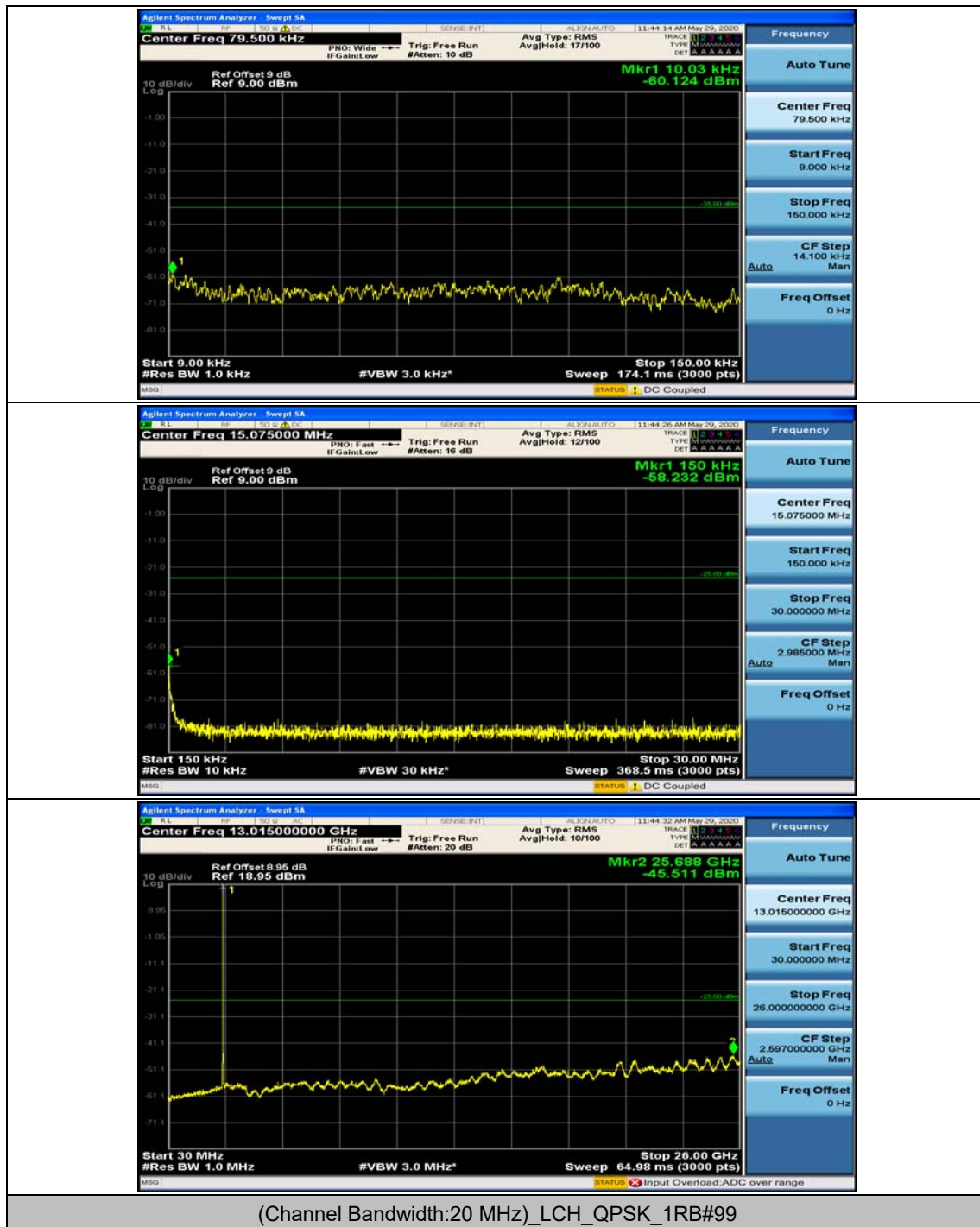
(Channel Bandwidth:15 MHz)\_HCH\_16QAM\_1RB#37

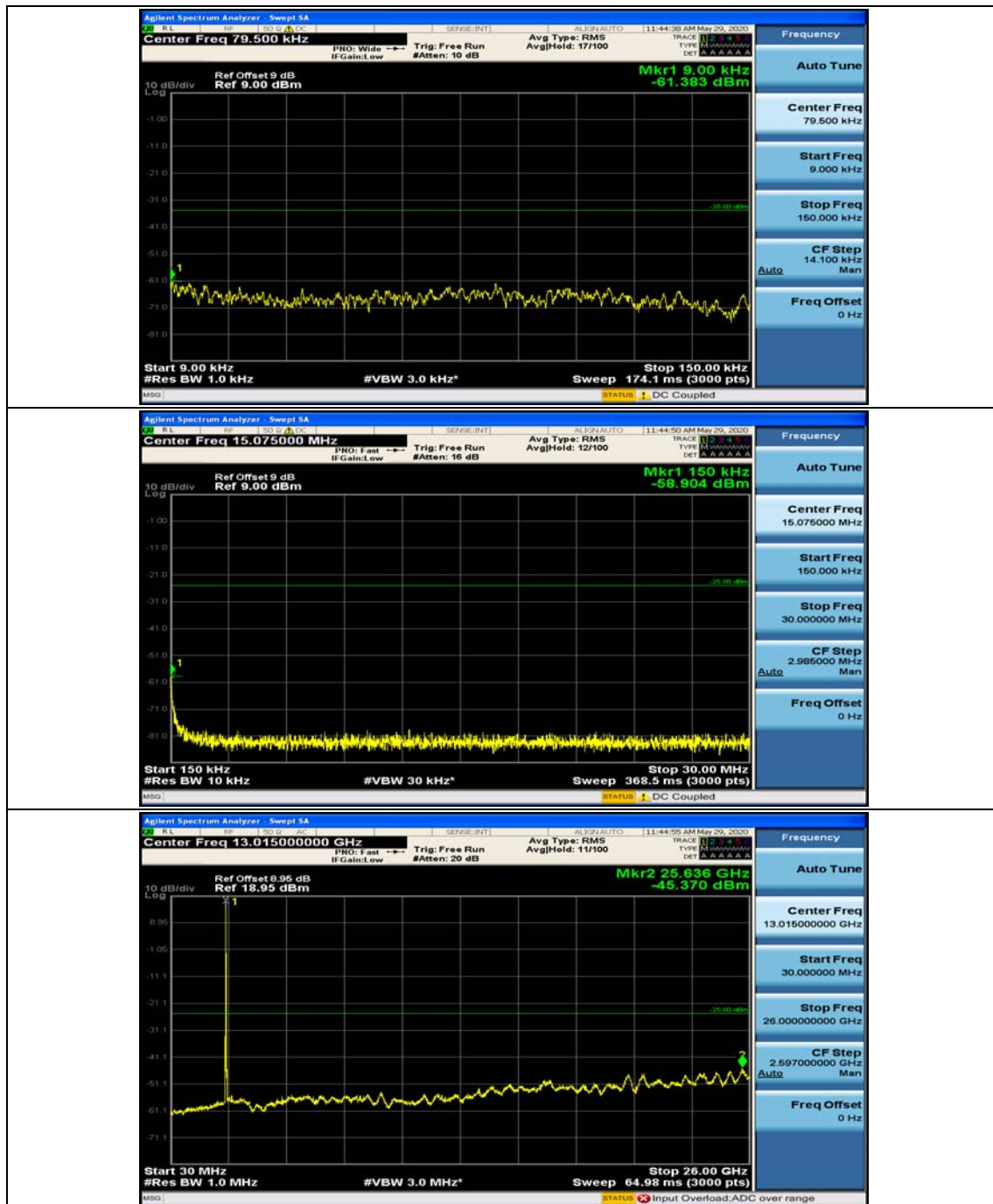




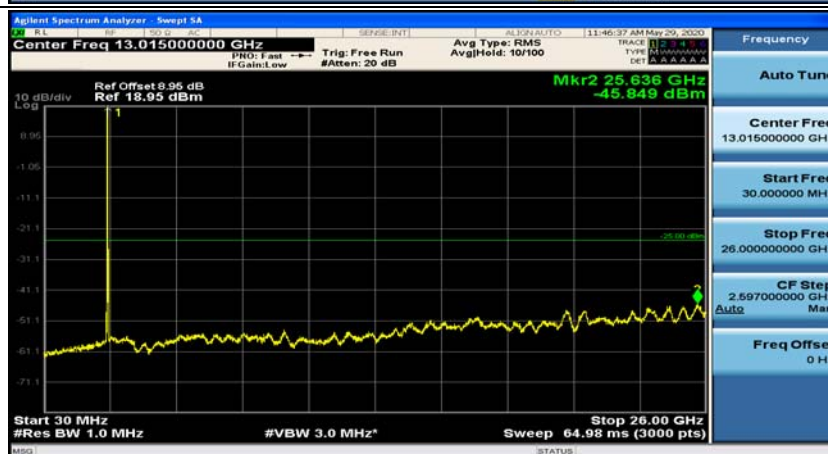
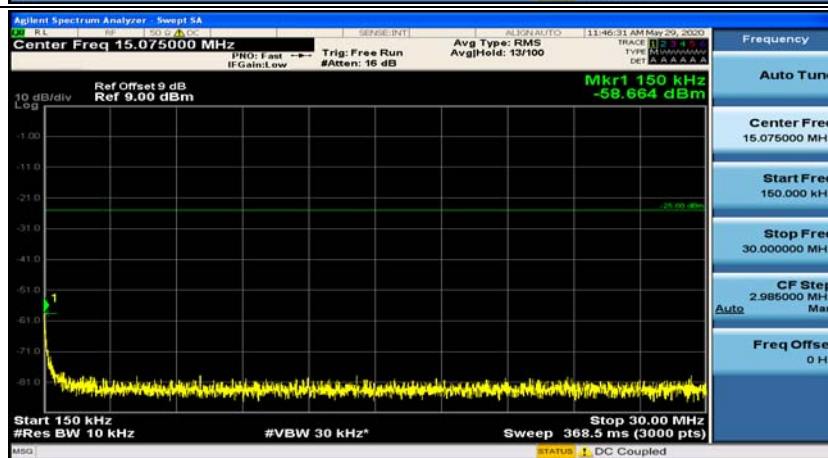
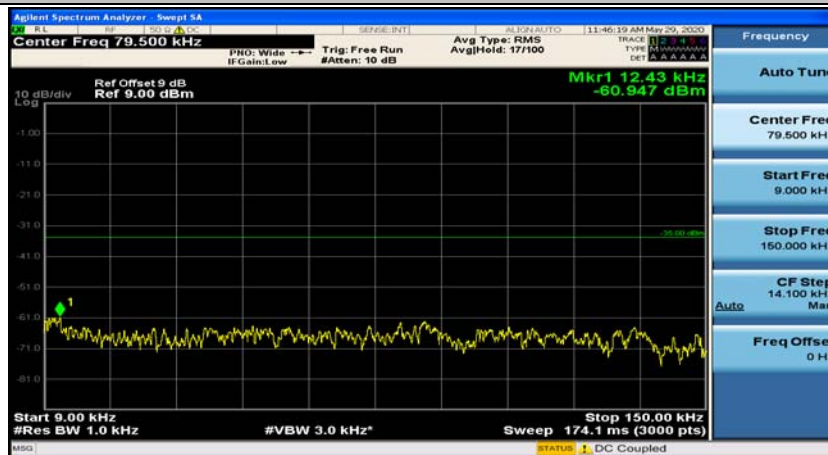
## Channel Bandwidth: 20 MHz



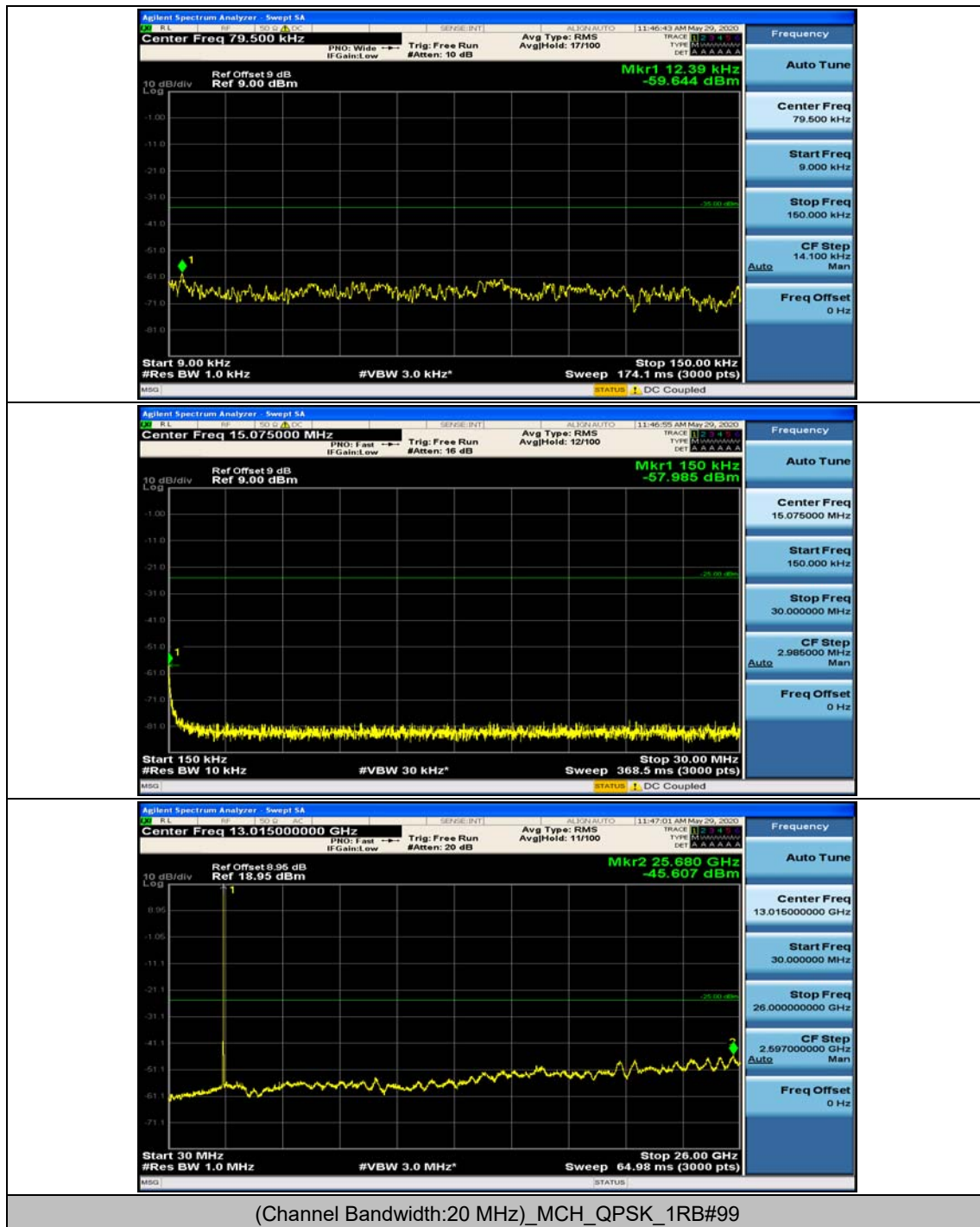


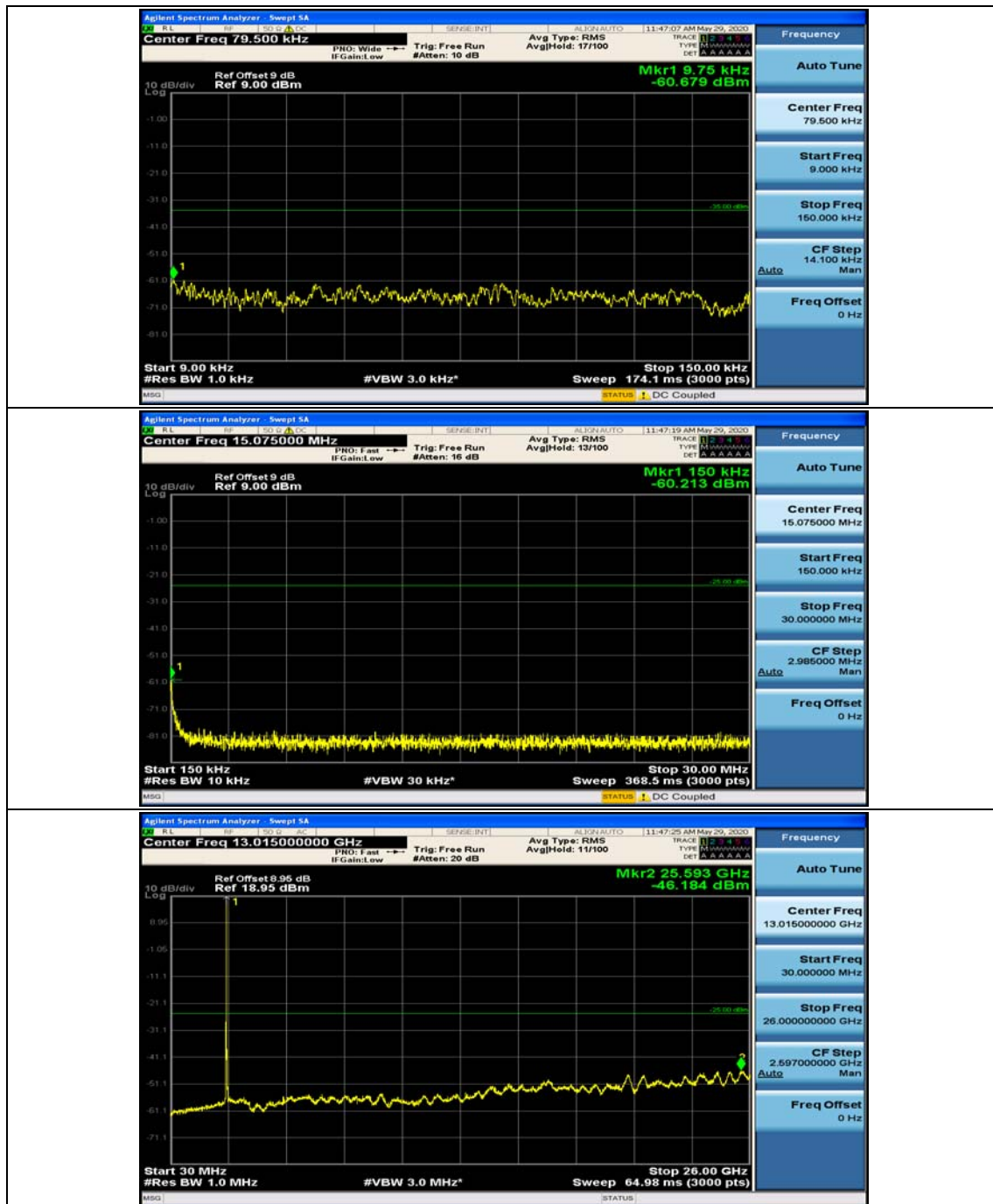


(Channel Bandwidth:20 MHz)\_MCH\_QPSK\_1RB#0

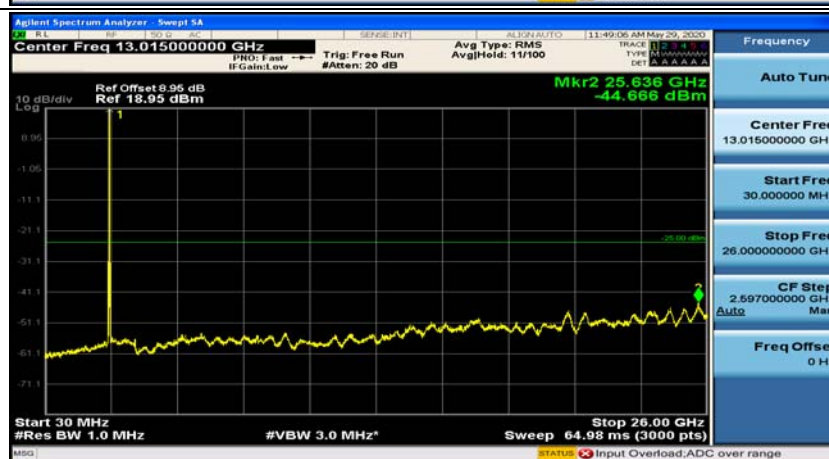
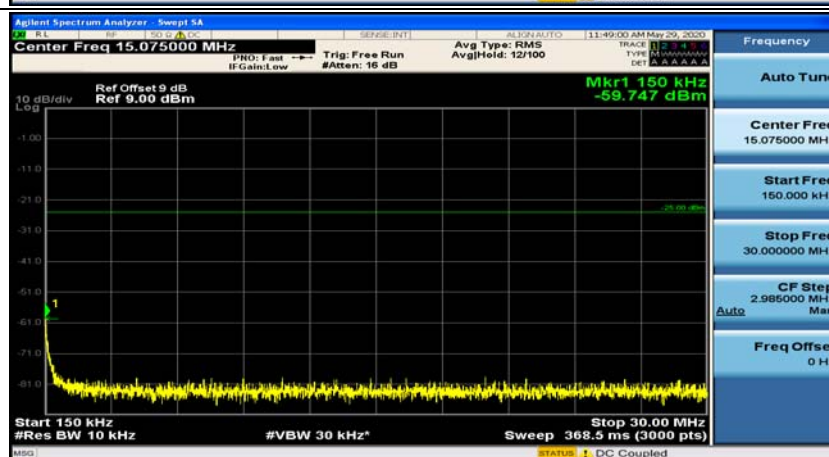
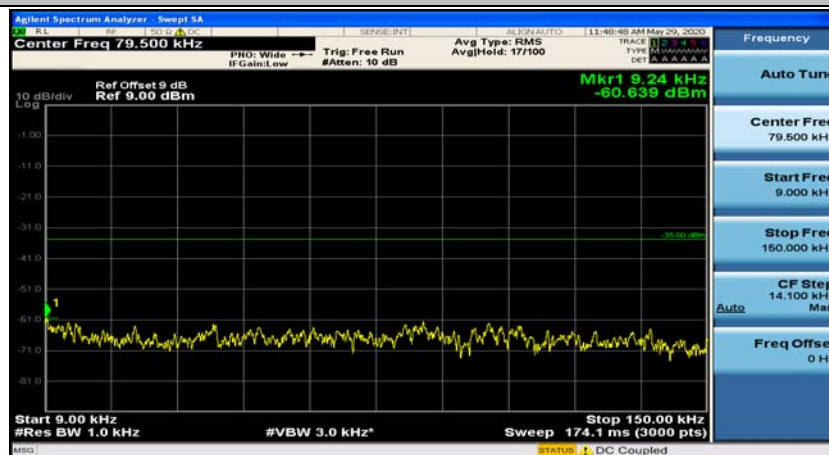


(Channel Bandwidth:20 MHz)\_MCH\_QPSK\_1RB#49

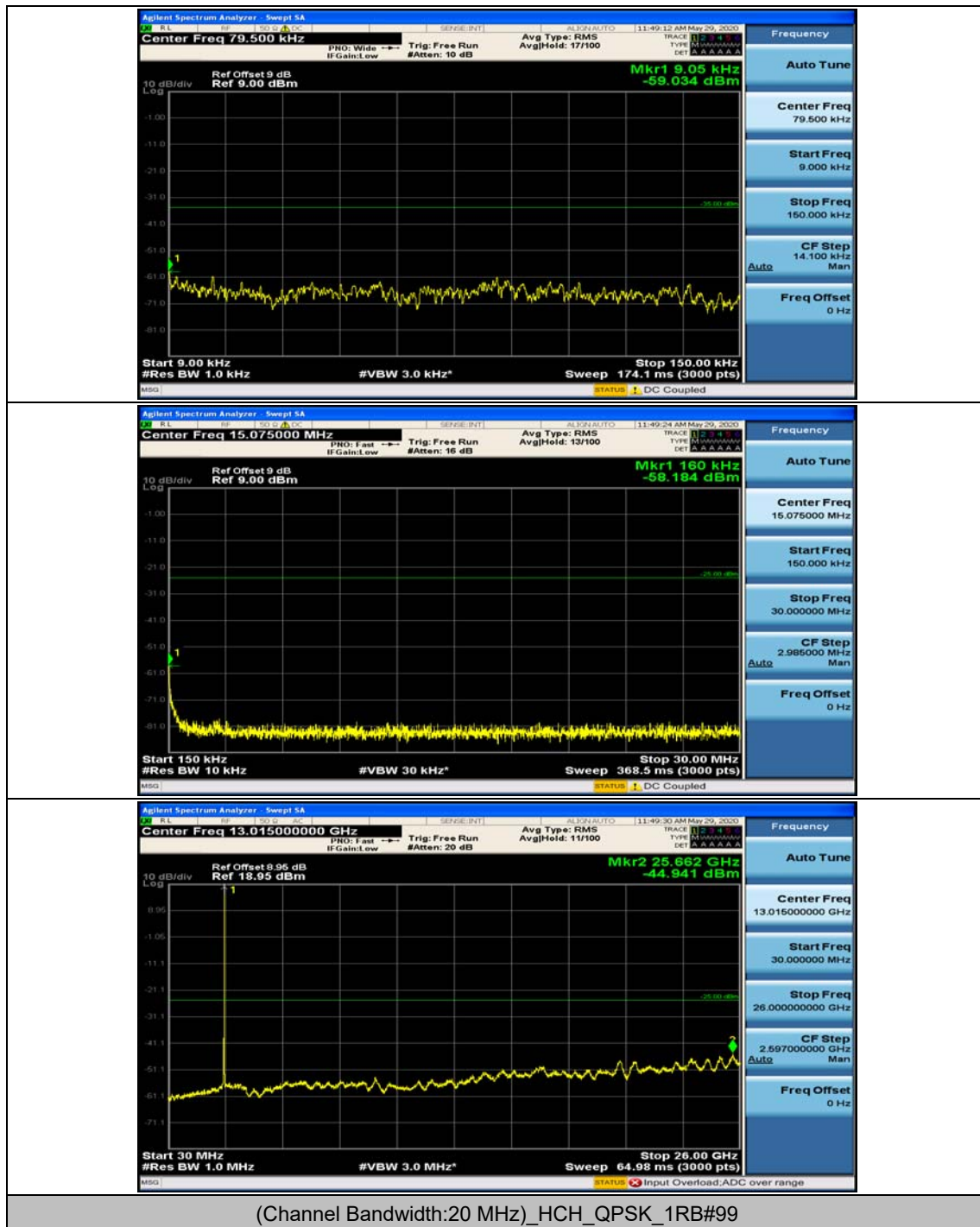


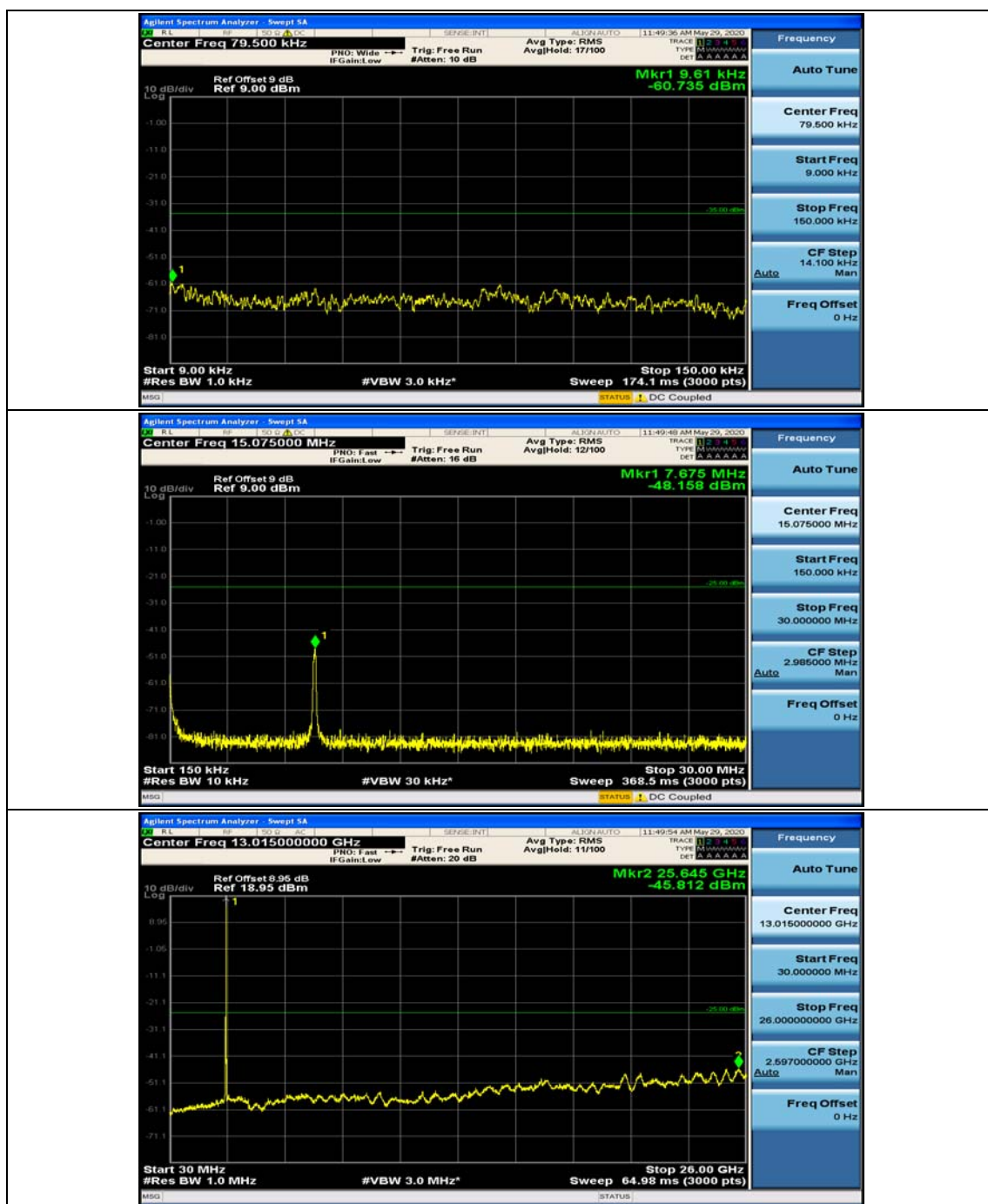


(Channel Bandwidth:20 MHz)\_HCH\_QPSK\_1RB#0

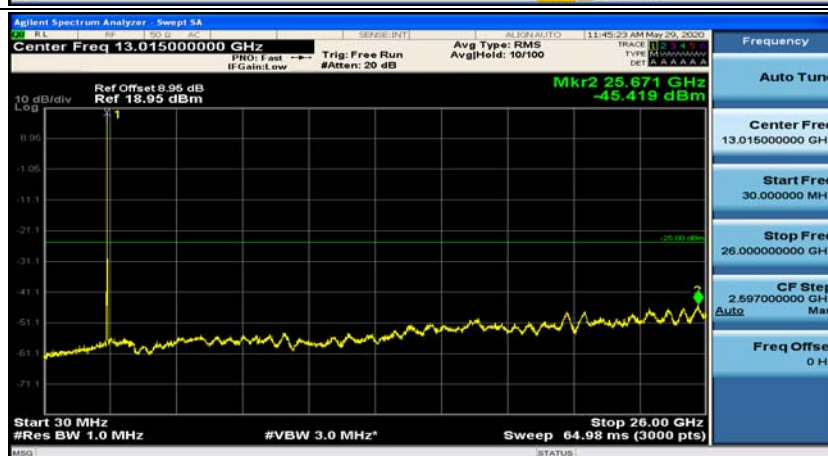
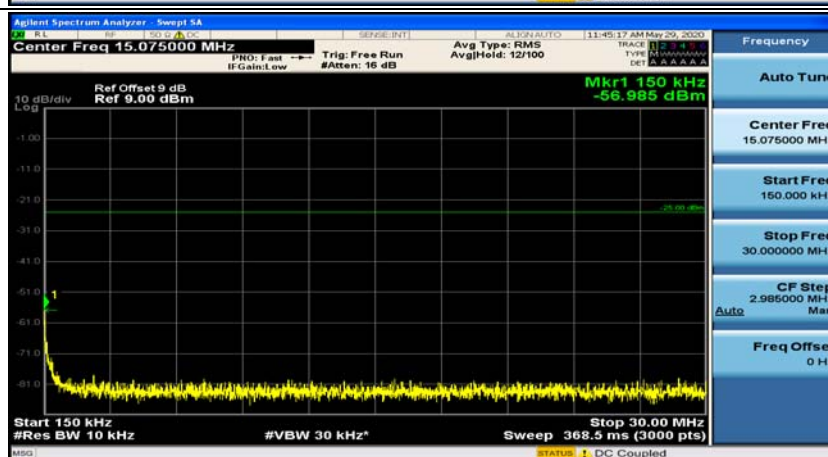
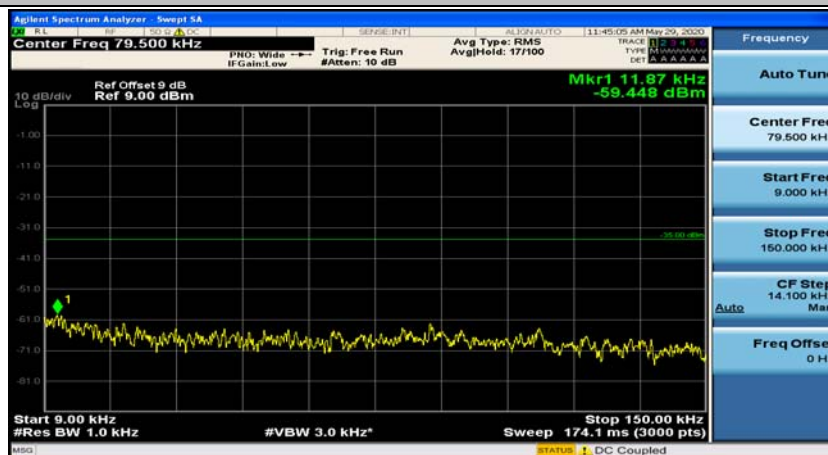


(Channel Bandwidth:20 MHz)\_HCH\_QPSK\_1RB#49

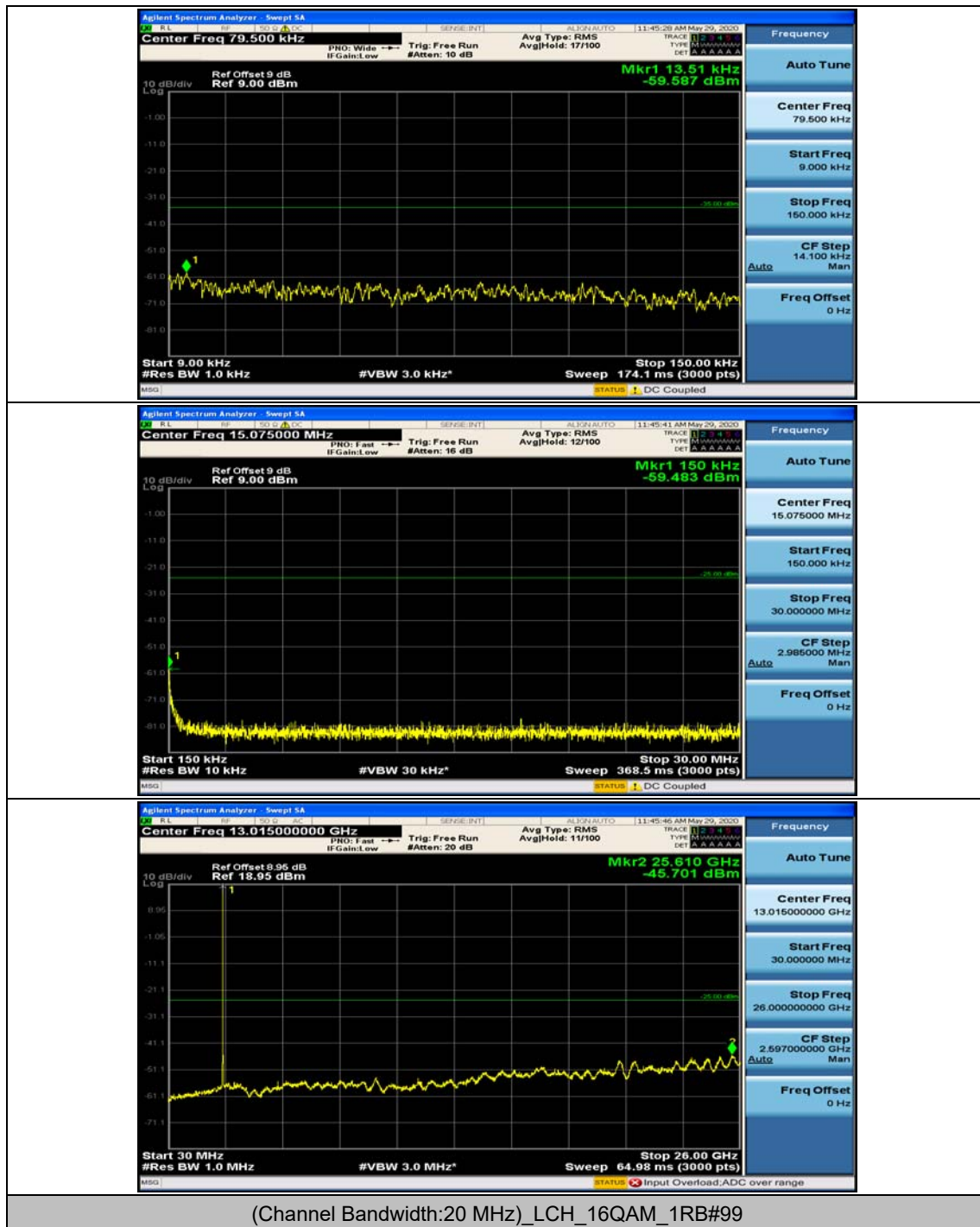


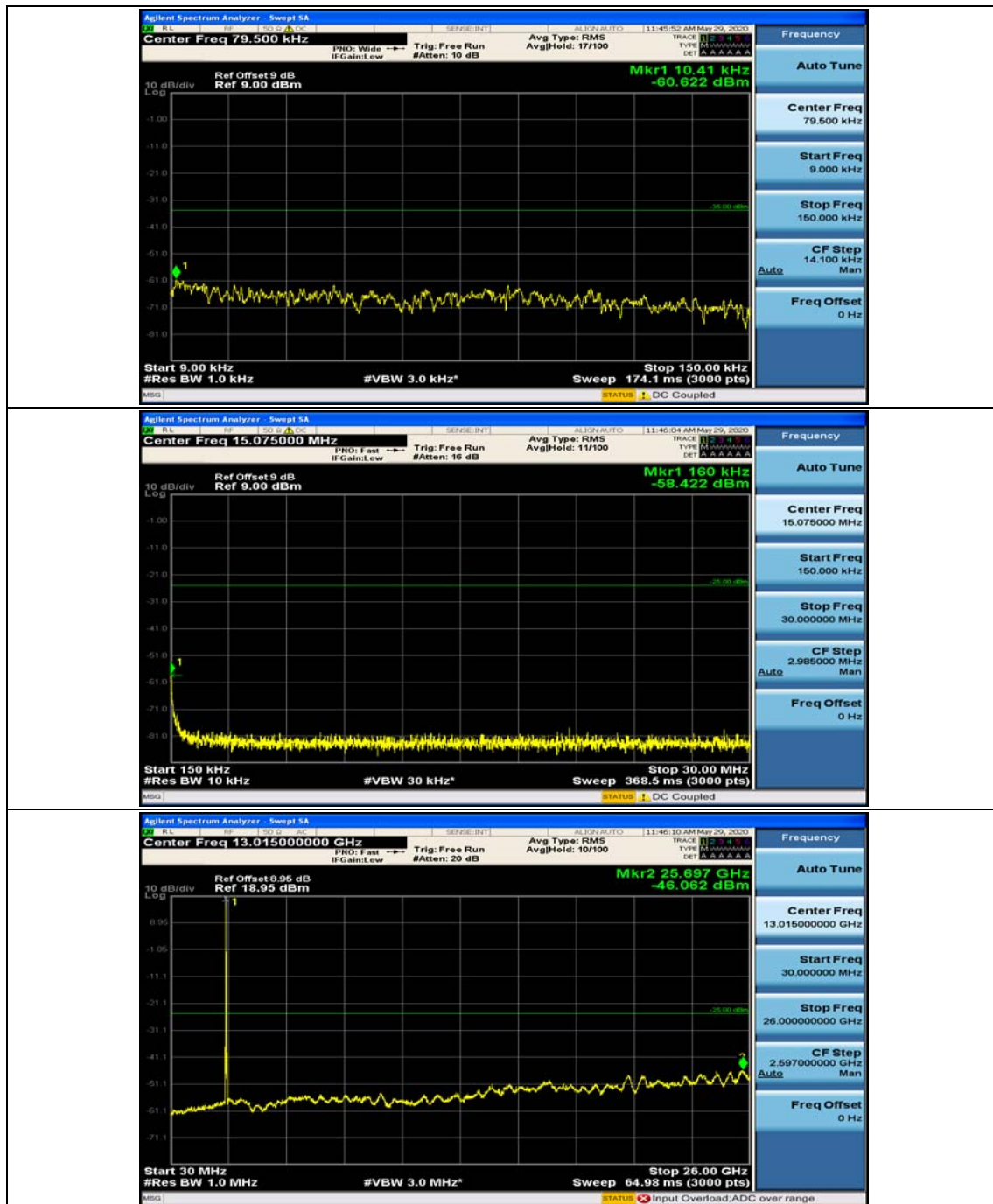


(Channel Bandwidth:20 MHz)\_LCH\_16QAM\_1RB#0

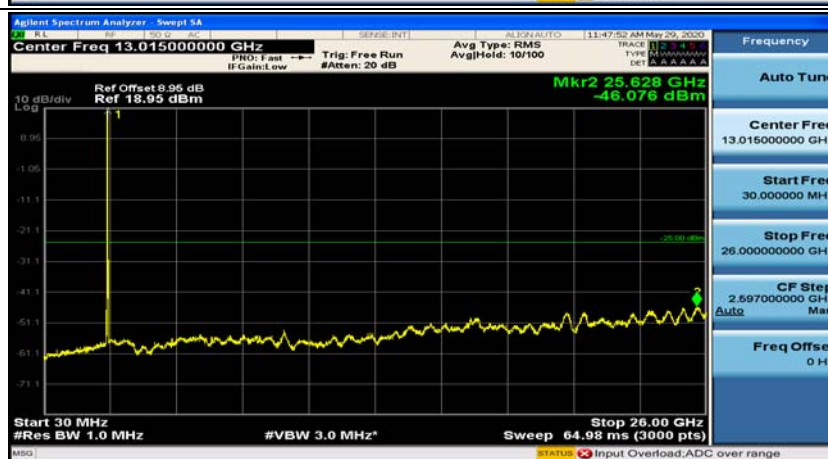
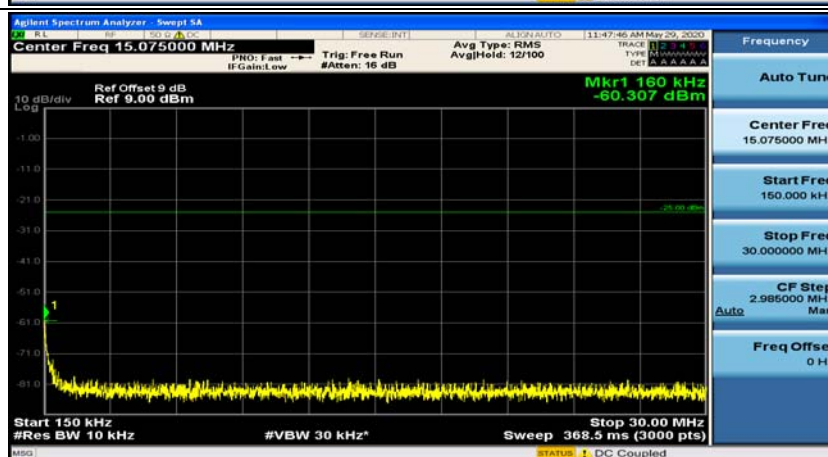
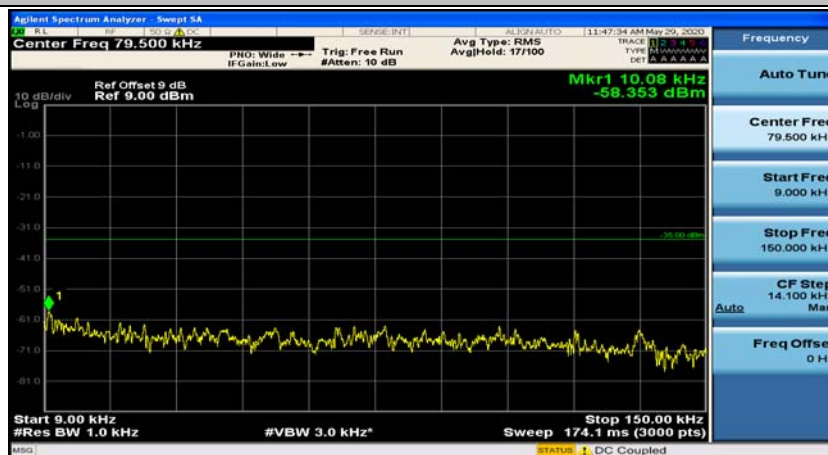


(Channel Bandwidth:20 MHz)\_LCH\_16QAM\_1RB#49

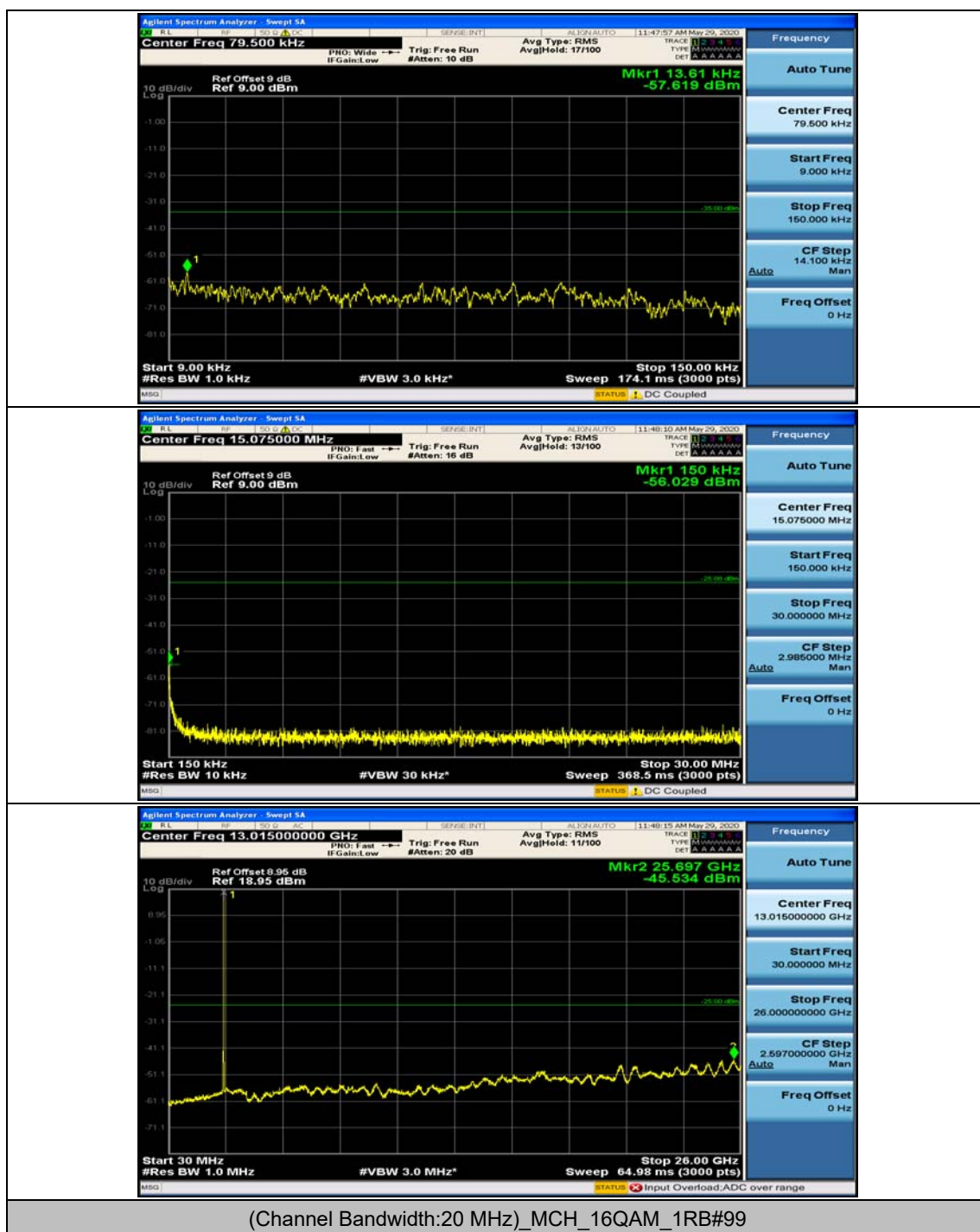


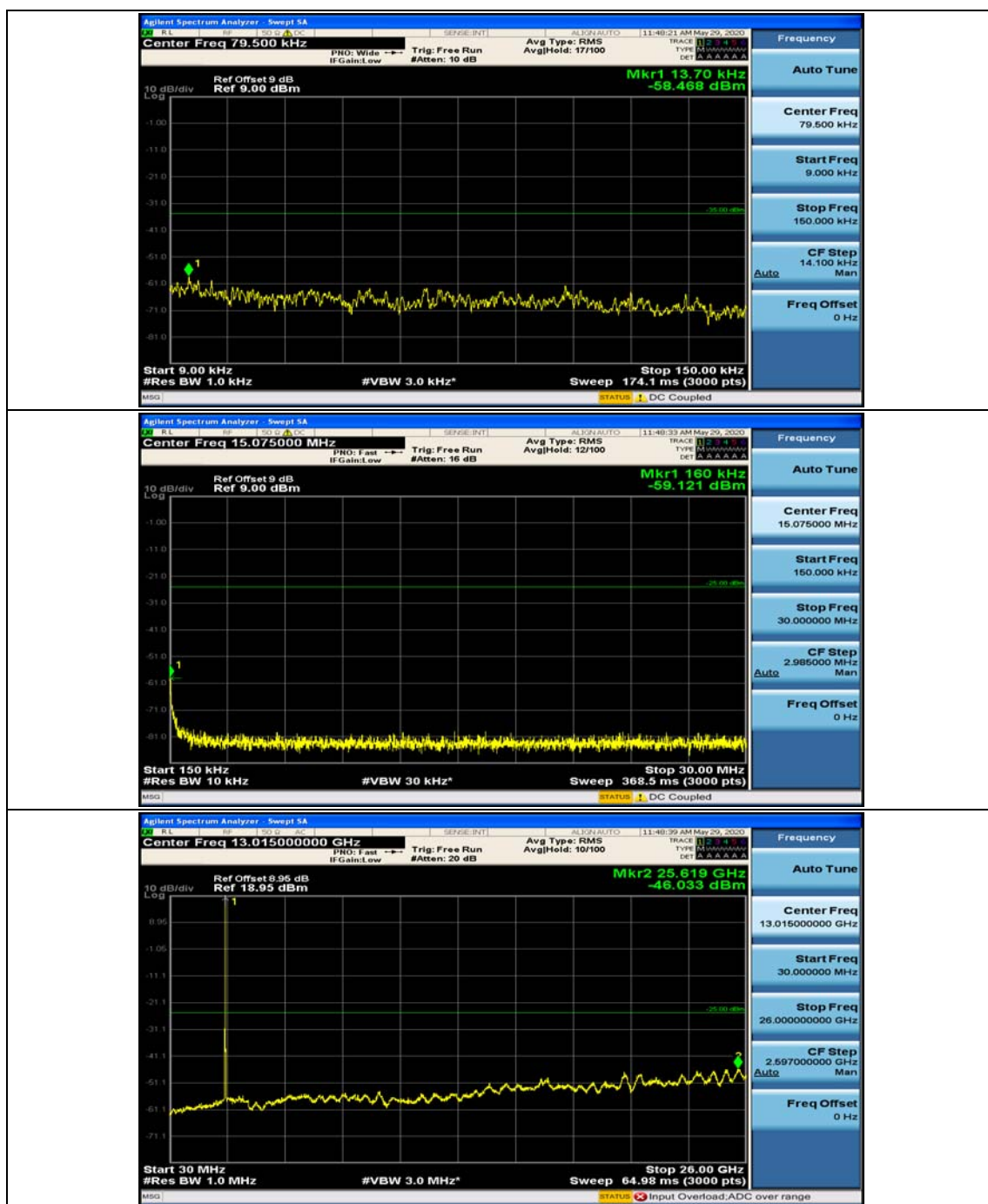


(Channel Bandwidth:20 MHz)\_MCH\_16QAM\_1RB#0

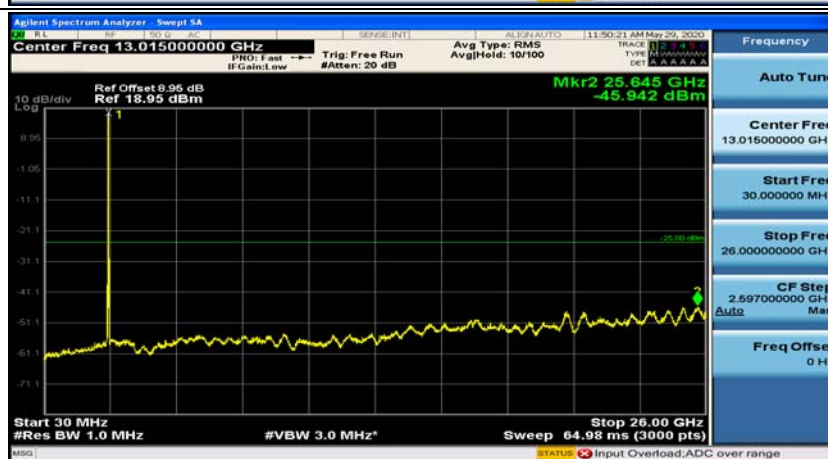
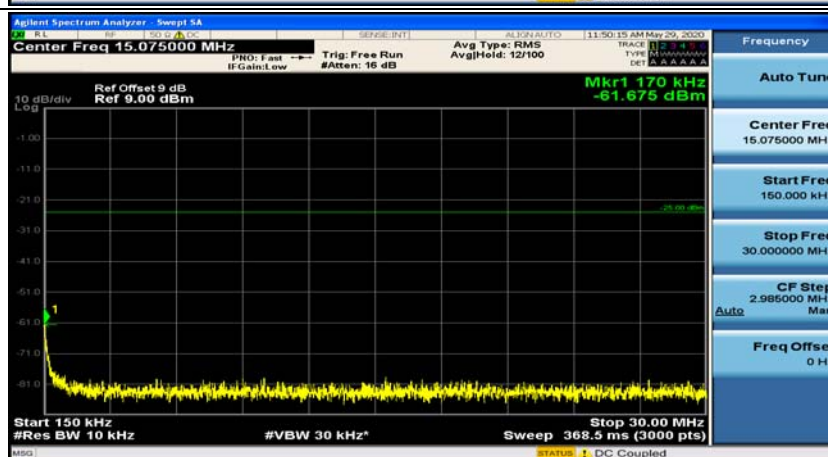
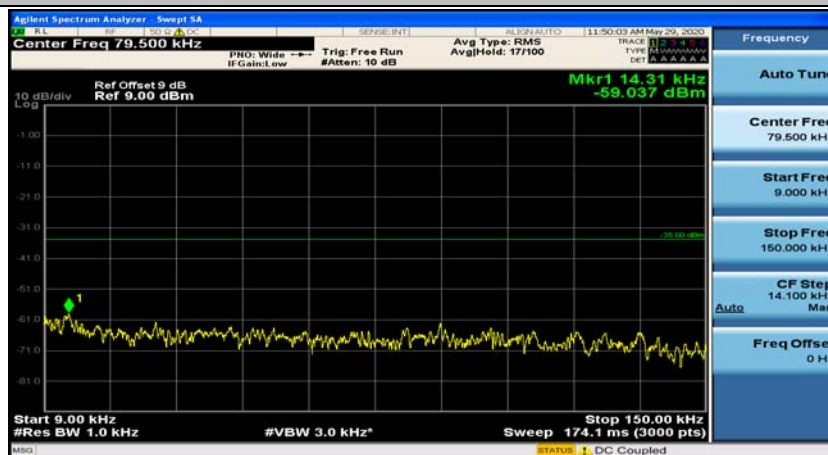


(Channel Bandwidth:20 MHz)\_MCH\_16QAM\_1RB#49

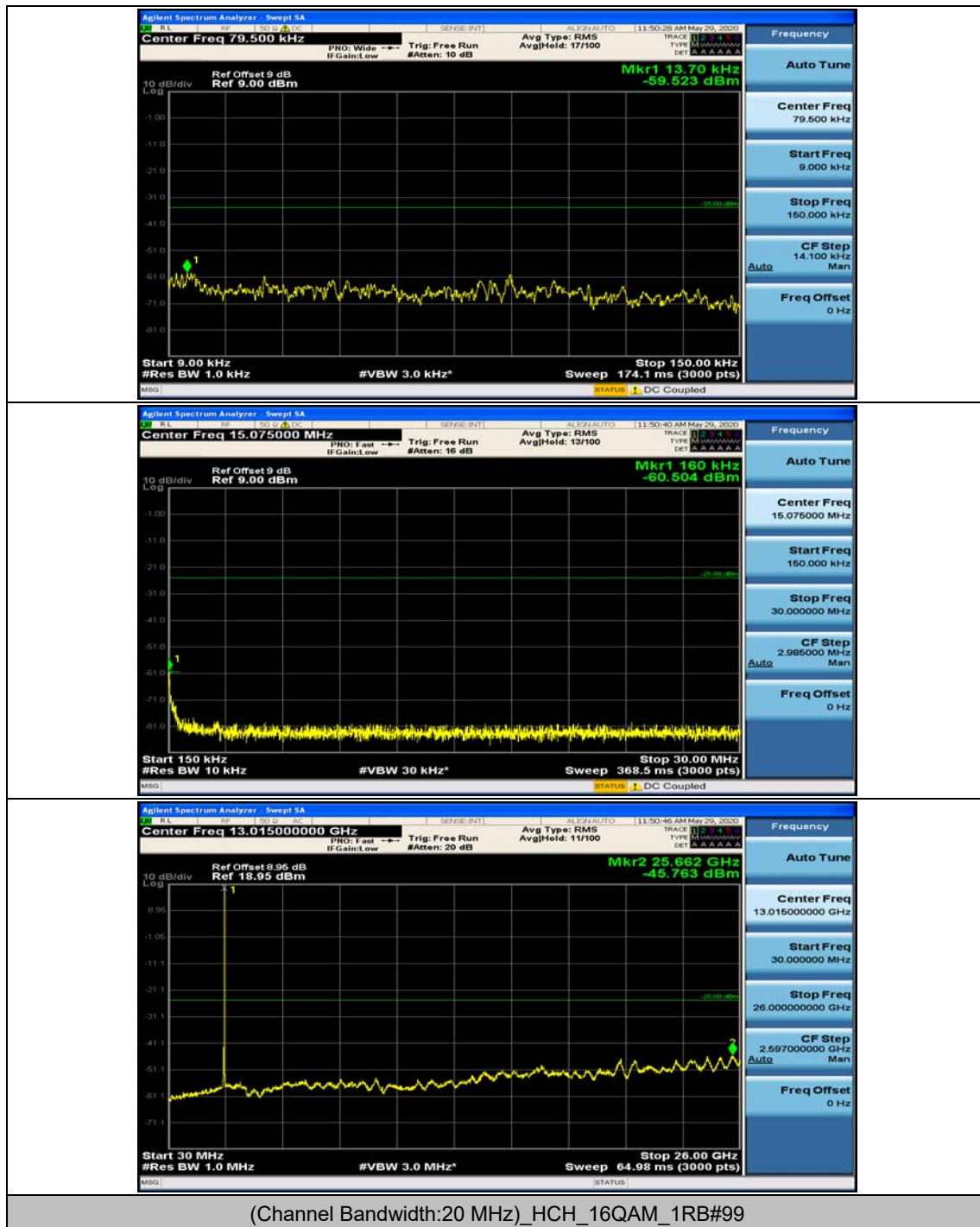


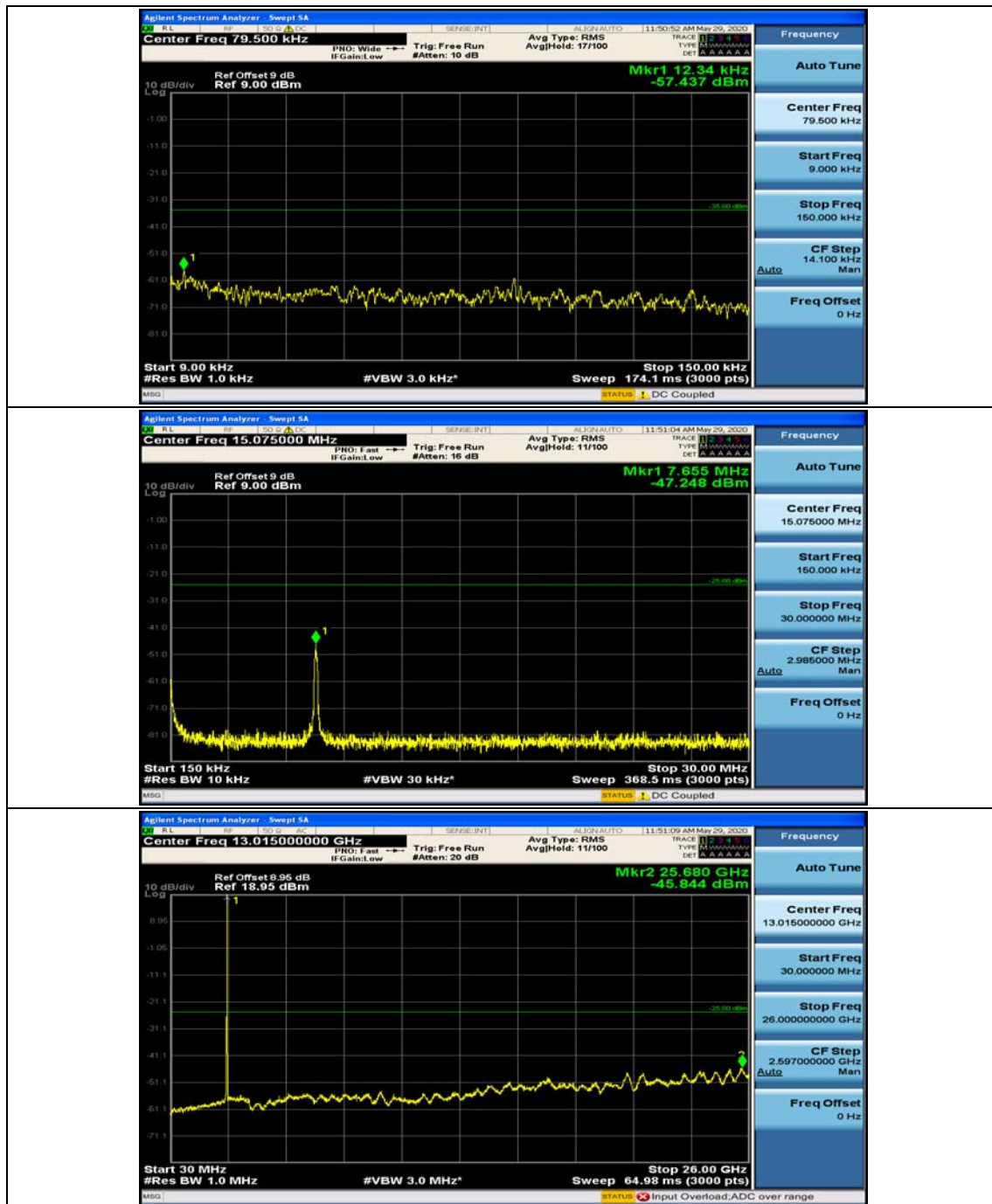


(Channel Bandwidth:20 MHz)\_HCH\_16QAM\_1RB#0



(Channel Bandwidth:20 MHz)\_HCH\_16QAM\_1RB#49





## Appendix F: Frequency Stability

### Test Result

#### Channel Bandwidth: 5 MHz

| Channel Bandwidth: 5 MHz |         |               |                  |                |                 |             |         |
|--------------------------|---------|---------------|------------------|----------------|-----------------|-------------|---------|
| Voltage                  |         |               |                  |                |                 |             |         |
| Modulation               | Channel | Voltage [Vdc] | Temperature (°C) | Deviation (Hz) | Deviation (ppm) | Limit (ppm) | Verdict |
| QPSK                     | LCH     | VL            | TN               | 1.5            | 0.000599        | ± 2.5       | PASS    |
|                          |         | VN            | TN               | 3.05           | 0.001219        | ± 2.5       | PASS    |
|                          |         | VH            | TN               | -1.48          | -0.000591       | ± 2.5       | PASS    |
|                          | MCH     | VL            | TN               | 4.17           | 0.001645        | ± 2.5       | PASS    |
|                          |         | VN            | TN               | 2.87           | 0.001132        | ± 2.5       | PASS    |
|                          |         | VH            | TN               | 1.41           | 0.000556        | ± 2.5       | PASS    |
|                          | HCH     | VL            | TN               | -0.98          | -0.000382       | ± 2.5       | PASS    |
|                          |         | VN            | TN               | -1.32          | -0.000514       | ± 2.5       | PASS    |
|                          |         | VH            | TN               | 2.43           | 0.000946        | ± 2.5       | PASS    |
| 16QAM                    | LCH     | VL            | TN               | 0.63           | 0.000252        | ± 2.5       | PASS    |
|                          |         | VN            | TN               | 3.69           | 0.001475        | ± 2.5       | PASS    |
|                          |         | VH            | TN               | 4.66           | 0.001862        | ± 2.5       | PASS    |
|                          | MCH     | VL            | TN               | 1.88           | 0.000742        | ± 2.5       | PASS    |
|                          |         | VN            | TN               | 4.67           | 0.001842        | ± 2.5       | PASS    |
|                          |         | VH            | TN               | 1.1            | 0.000434        | ± 2.5       | PASS    |
|                          | HCH     | VL            | TN               | 3.75           | 0.001461        | ± 2.5       | PASS    |
|                          |         | VN            | TN               | -1.93          | -0.000752       | ± 2.5       | PASS    |
|                          |         | VH            | TN               | -1.46          | -0.000569       | ± 2.5       | PASS    |
| Temperature              |         |               |                  |                |                 |             |         |
| Modulation               | Channel | Voltage [Vdc] | Temperature (°C) | Deviation (Hz) | Deviation (ppm) | Limit (ppm) | Verdict |
| QPSK                     | LCH     | VN            | -30              | 2.51           | 0.001003        | ± 2.5       | PASS    |
|                          |         | VN            | -20              | 2.6            | 0.001039        | ± 2.5       | PASS    |
|                          |         | VN            | -10              | -1.1           | -0.000440       | ± 2.5       | PASS    |
|                          |         | VN            | 0                | -0.43          | -0.000172       | ± 2.5       | PASS    |
|                          |         | VN            | 10               | 3.19           | 0.001275        | ± 2.5       | PASS    |
|                          |         | VN            | 20               | 0              | 0.000000        | ± 2.5       | PASS    |
|                          |         | VN            | 30               | -0.67          | -0.000268       | ± 2.5       | PASS    |
|                          |         | VN            | 40               | -0.54          | -0.000216       | ± 2.5       | PASS    |
|                          |         | VN            | 50               | 4.43           | 0.001770        | ± 2.5       | PASS    |
|                          | MCH     | VN            | -30              | -0.51          | -0.000201       | ± 2.5       | PASS    |

|       |     |    |     |       |           |       |      |
|-------|-----|----|-----|-------|-----------|-------|------|
|       |     | VN | -20 | 0.2   | 0.000079  | ± 2.5 | PASS |
|       |     | VN | -10 | 1.63  | 0.000643  | ± 2.5 | PASS |
|       |     | VN | 0   | -1.05 | -0.000414 | ± 2.5 | PASS |
|       |     | VN | 10  | -0.34 | -0.000134 | ± 2.5 | PASS |
|       |     | VN | 20  | 4.35  | 0.001716  | ± 2.5 | PASS |
|       |     | VN | 30  | -0.21 | -0.000083 | ± 2.5 | PASS |
|       |     | VN | 40  | 4.78  | 0.001886  | ± 2.5 | PASS |
|       |     | VN | 50  | 4.27  | 0.001684  | ± 2.5 | PASS |
|       | HCH | VN | -30 | -0.24 | -0.000093 | ± 2.5 | PASS |
|       |     | VN | -20 | -0.33 | -0.000129 | ± 2.5 | PASS |
|       |     | VN | -10 | 3.43  | 0.001336  | ± 2.5 | PASS |
|       |     | VN | 0   | -0.07 | -0.000027 | ± 2.5 | PASS |
|       |     | VN | 10  | 1.04  | 0.000405  | ± 2.5 | PASS |
|       |     | VN | 20  | 1.85  | 0.000721  | ± 2.5 | PASS |
|       |     | VN | 30  | 0.76  | 0.000296  | ± 2.5 | PASS |
|       |     | VN | 40  | -1.08 | -0.000421 | ± 2.5 | PASS |
| 16QAM | LCH | VN | -30 | 2.21  | 0.000883  | ± 2.5 | PASS |
|       |     | VN | -20 | -0.94 | -0.000376 | ± 2.5 | PASS |
|       |     | VN | -10 | 0.28  | 0.000112  | ± 2.5 | PASS |
|       |     | VN | 0   | 0.28  | 0.000112  | ± 2.5 | PASS |
|       |     | VN | 10  | 3.26  | 0.001303  | ± 2.5 | PASS |
|       |     | VN | 20  | 1.42  | 0.000567  | ± 2.5 | PASS |
|       |     | VN | 30  | 1.41  | 0.000563  | ± 2.5 | PASS |
|       |     | VN | 40  | 2.83  | 0.001131  | ± 2.5 | PASS |
|       |     | VN | 50  | 0.42  | 0.000168  | ± 2.5 | PASS |
|       | MCH | VN | -30 | 1.64  | 0.000647  | ± 2.5 | PASS |
|       |     | VN | -20 | -0.27 | -0.000107 | ± 2.5 | PASS |
|       |     | VN | -10 | 1.38  | 0.000544  | ± 2.5 | PASS |
|       |     | VN | 0   | 0.79  | 0.000312  | ± 2.5 | PASS |
|       |     | VN | 10  | 0.53  | 0.000209  | ± 2.5 | PASS |
|       |     | VN | 20  | 0.06  | 0.000024  | ± 2.5 | PASS |
|       |     | VN | 30  | 1.36  | 0.000536  | ± 2.5 | PASS |
|       |     | VN | 40  | -0.99 | -0.000391 | ± 2.5 | PASS |
|       |     | VN | 50  | 1.49  | 0.000588  | ± 2.5 | PASS |
|       | HCH | VN | -30 | 3.73  | 0.001453  | ± 2.5 | PASS |
|       |     | VN | -20 | 1.18  | 0.000460  | ± 2.5 | PASS |
|       |     | VN | -10 | -0.86 | -0.000335 | ± 2.5 | PASS |
|       |     | VN | 0   | 4.98  | 0.001940  | ± 2.5 | PASS |
|       |     | VN | 10  | 4.45  | 0.001733  | ± 2.5 | PASS |
|       |     | VN | 20  | 0.9   | 0.000351  | ± 2.5 | PASS |

|  |  |    |    |      |          |       |      |
|--|--|----|----|------|----------|-------|------|
|  |  | VN | 30 | 2.15 | 0.000837 | ± 2.5 | PASS |
|  |  | VN | 40 | 3.93 | 0.001531 | ± 2.5 | PASS |
|  |  | VN | 50 | 2.3  | 0.000896 | ± 2.5 | PASS |

**Channel Bandwidth: 10 MHz**

| Channel Bandwidth: 10 MHz |         |               |                  |                |                 |             |         |
|---------------------------|---------|---------------|------------------|----------------|-----------------|-------------|---------|
| Voltage                   |         |               |                  |                |                 |             |         |
| Modulation                | Channel | Voltage [Vdc] | Temperature (°C) | Deviation (Hz) | Deviation (ppm) | Limit (ppm) | Verdict |
| QPSK                      | LCH     | VL            | TN               | 1.98           | 0.000790        | ± 2.5       | PASS    |
|                           |         | VN            | TN               | 4.65           | 0.001856        | ± 2.5       | PASS    |
|                           |         | VH            | TN               | 1.79           | 0.000715        | ± 2.5       | PASS    |
|                           | MCH     | VL            | TN               | -1.31          | -0.000517       | ± 2.5       | PASS    |
|                           |         | VN            | TN               | 0.7            | 0.000276        | ± 2.5       | PASS    |
|                           |         | VH            | TN               | 4.42           | 0.001744        | ± 2.5       | PASS    |
|                           | HCH     | VL            | TN               | 2.92           | 0.001138        | ± 2.5       | PASS    |
|                           |         | VN            | TN               | -1.57          | -0.000612       | ± 2.5       | PASS    |
|                           |         | VH            | TN               | 0.58           | 0.000226        | ± 2.5       | PASS    |
| 16QAM                     | LCH     | VL            | TN               | 1.89           | 0.000754        | ± 2.5       | PASS    |
|                           |         | VN            | TN               | -0.06          | -0.000024       | ± 2.5       | PASS    |
|                           |         | VH            | TN               | 1.95           | 0.000778        | ± 2.5       | PASS    |
|                           | MCH     | VL            | TN               | 3.76           | 0.001483        | ± 2.5       | PASS    |
|                           |         | VN            | TN               | 0.27           | 0.000107        | ± 2.5       | PASS    |
|                           |         | VH            | TN               | 4.02           | 0.001586        | ± 2.5       | PASS    |
|                           | HCH     | VL            | TN               | 3.04           | 0.001185        | ± 2.5       | PASS    |
|                           |         | VN            | TN               | 4.01           | 0.001563        | ± 2.5       | PASS    |
|                           |         | VH            | TN               | 4.46           | 0.001739        | ± 2.5       | PASS    |
| Temperature               |         |               |                  |                |                 |             |         |
| Modulation                | Channel | Voltage [Vdc] | Temperature (°C) | Deviation (Hz) | Deviation (ppm) | Limit (ppm) | Verdict |
| QPSK                      | LCH     | VN            | -30              | 1.42           | 0.000567        | ± 2.5       | PASS    |
|                           |         | VN            | -20              | 1.02           | 0.000407        | ± 2.5       | PASS    |
|                           |         | VN            | -10              | 1.23           | 0.000491        | ± 2.5       | PASS    |
|                           |         | VN            | 0                | -1.93          | -0.000770       | ± 2.5       | PASS    |
|                           |         | VN            | 10               | -0.52          | -0.000208       | ± 2.5       | PASS    |
|                           |         | VN            | 20               | 2.71           | 0.001082        | ± 2.5       | PASS    |
|                           |         | VN            | 30               | 4.76           | 0.001900        | ± 2.5       | PASS    |
|                           |         | VN            | 40               | 1.01           | 0.000403        | ± 2.5       | PASS    |
|                           |         | VN            | 50               | 1.43           | 0.000571        | ± 2.5       | PASS    |
|                           | MCH     | VN            | -30              | -1.91          | -0.000753       | ± 2.5       | PASS    |
|                           |         | VN            | -20              | -1.26          | -0.000497       | ± 2.5       | PASS    |

|     |       |     |     |       |           |           |       |      |
|-----|-------|-----|-----|-------|-----------|-----------|-------|------|
|     |       | VN  | -10 | 1.31  | 0.000517  | ± 2.5     | PASS  |      |
|     |       | VN  | 0   | 4.93  | 0.001945  | ± 2.5     | PASS  |      |
|     |       | VN  | 10  | -1.38 | -0.000544 | ± 2.5     | PASS  |      |
|     |       | VN  | 20  | 4.27  | 0.001684  | ± 2.5     | PASS  |      |
|     |       | VN  | 30  | 0.04  | 0.000016  | ± 2.5     | PASS  |      |
|     |       | VN  | 40  | 4.06  | 0.001602  | ± 2.5     | PASS  |      |
|     |       | VN  | 50  | 2.68  | 0.001057  | ± 2.5     | PASS  |      |
|     | HCH   | VN  | -30 | 1.24  | 0.000483  | ± 2.5     | PASS  |      |
|     |       | VN  | -20 | -0.12 | -0.000047 | ± 2.5     | PASS  |      |
|     |       | VN  | -10 | 0.63  | 0.000246  | ± 2.5     | PASS  |      |
|     |       | VN  | 0   | -1.77 | -0.000690 | ± 2.5     | PASS  |      |
|     |       | VN  | 10  | -0.7  | -0.000273 | ± 2.5     | PASS  |      |
|     |       | VN  | 20  | 4.78  | 0.001864  | ± 2.5     | PASS  |      |
|     |       | VN  | 30  | 4.43  | 0.001727  | ± 2.5     | PASS  |      |
|     |       | VN  | 40  | 3.47  | 0.001353  | ± 2.5     | PASS  |      |
|     |       | VN  | 50  | 1.11  | 0.000433  | ± 2.5     | PASS  |      |
|     | 16QAM | LCH | VN  | -30   | -0.74     | -0.000295 | ± 2.5 | PASS |
|     |       |     | VN  | -20   | -0.09     | -0.000036 | ± 2.5 | PASS |
| VN  |       |     | -10 | -1.67 | -0.000667 | ± 2.5     | PASS  |      |
| VN  |       |     | 0   | 2.84  | 0.001134  | ± 2.5     | PASS  |      |
| VN  |       |     | 10  | 0.54  | 0.000216  | ± 2.5     | PASS  |      |
| VN  |       |     | 20  | 0.45  | 0.000180  | ± 2.5     | PASS  |      |
| VN  |       |     | 30  | 2.69  | 0.001074  | ± 2.5     | PASS  |      |
| VN  |       |     | 40  | 1     | 0.000399  | ± 2.5     | PASS  |      |
| VN  |       |     | 50  | 4.48  | 0.001788  | ± 2.5     | PASS  |      |
| MCH |       | VN  | -30 | 1.35  | 0.000533  | ± 2.5     | PASS  |      |
|     |       | VN  | -20 | -0.27 | -0.000107 | ± 2.5     | PASS  |      |
|     |       | VN  | -10 | 1.71  | 0.000675  | ± 2.5     | PASS  |      |
|     |       | VN  | 0   | 4.08  | 0.001609  | ± 2.5     | PASS  |      |
|     |       | VN  | 10  | 1.56  | 0.000615  | ± 2.5     | PASS  |      |
|     |       | VN  | 20  | 2.64  | 0.001041  | ± 2.5     | PASS  |      |
|     |       | VN  | 30  | 4.25  | 0.001677  | ± 2.5     | PASS  |      |
|     |       | VN  | 40  | -0.3  | -0.000118 | ± 2.5     | PASS  |      |
|     |       | VN  | 50  | -1.76 | -0.000694 | ± 2.5     | PASS  |      |
| HCH |       | VN  | -30 | 2.27  | 0.000885  | ± 2.5     | PASS  |      |
|     |       | VN  | -20 | -0.04 | -0.000016 | ± 2.5     | PASS  |      |
|     |       | VN  | -10 | 2.18  | 0.000850  | ± 2.5     | PASS  |      |
|     |       | VN  | 0   | -1.78 | -0.000694 | ± 2.5     | PASS  |      |
|     |       | VN  | 10  | 4.78  | 0.001864  | ± 2.5     | PASS  |      |
|     |       | VN  | 20  | 0.93  | 0.000363  | ± 2.5     | PASS  |      |
|     |       | VN  | 30  | 1.06  | 0.000413  | ± 2.5     | PASS  |      |

|  |  |    |    |       |           |       |      |
|--|--|----|----|-------|-----------|-------|------|
|  |  | VN | 40 | -0.19 | -0.000074 | ± 2.5 | PASS |
|  |  | VN | 50 | 4.5   | 0.001754  | ± 2.5 | PASS |

**Channel Bandwidth: 15 MHz**

| Channel Bandwidth: 15 MHz |         |               |                  |                |                 |             |         |
|---------------------------|---------|---------------|------------------|----------------|-----------------|-------------|---------|
| Voltage                   |         |               |                  |                |                 |             |         |
| Modulation                | Channel | Voltage [Vdc] | Temperature (°C) | Deviation (Hz) | Deviation (ppm) | Limit (ppm) | Verdict |
| QPSK                      | LCH     | VL            | TN               | 0.91           | 0.000363        | ± 2.5       | PASS    |
|                           |         | VN            | TN               | 4.78           | 0.001906        | ± 2.5       | PASS    |
|                           |         | VH            | TN               | 4.18           | 0.001667        | ± 2.5       | PASS    |
|                           | MCH     | VL            | TN               | -1.94          | -0.000765       | ± 2.5       | PASS    |
|                           |         | VN            | TN               | 0.69           | 0.000272        | ± 2.5       | PASS    |
|                           |         | VH            | TN               | 1.62           | 0.000639        | ± 2.5       | PASS    |
|                           | HCH     | VL            | TN               | 4.06           | 0.001584        | ± 2.5       | PASS    |
|                           |         | VN            | TN               | 4.1            | 0.001600        | ± 2.5       | PASS    |
|                           |         | VH            | TN               | 0.66           | 0.000258        | ± 2.5       | PASS    |
| 16QAM                     | LCH     | VL            | TN               | -1.99          | -0.000794       | ± 2.5       | PASS    |
|                           |         | VN            | TN               | 4.31           | 0.001719        | ± 2.5       | PASS    |
|                           |         | VH            | TN               | -1.1           | -0.000439       | ± 2.5       | PASS    |
|                           | MCH     | VL            | TN               | 1.74           | 0.000686        | ± 2.5       | PASS    |
|                           |         | VN            | TN               | 0.45           | 0.000178        | ± 2.5       | PASS    |
|                           |         | VH            | TN               | 2              | 0.000789        | ± 2.5       | PASS    |
|                           | HCH     | VL            | TN               | 3.35           | 0.001307        | ± 2.5       | PASS    |
|                           |         | VN            | TN               | 0.68           | 0.000265        | ± 2.5       | PASS    |
|                           |         | VH            | TN               | -1.51          | -0.000589       | ± 2.5       | PASS    |
| Temperature               |         |               |                  |                |                 |             |         |
| Modulation                | Channel | Voltage [Vdc] | Temperature (°C) | Deviation (Hz) | Deviation (ppm) | Limit (ppm) | Verdict |
| QPSK                      | LCH     | VN            | -30              | 3.39           | 0.001352        | ± 2.5       | PASS    |
|                           |         | VN            | -20              | 1.1            | 0.000439        | ± 2.5       | PASS    |
|                           |         | VN            | -10              | 4.23           | 0.001687        | ± 2.5       | PASS    |
|                           |         | VN            | 0                | 2.81           | 0.001121        | ± 2.5       | PASS    |
|                           |         | VN            | 10               | 1.69           | 0.000674        | ± 2.5       | PASS    |
|                           |         | VN            | 20               | -1.8           | -0.000718       | ± 2.5       | PASS    |
|                           |         | VN            | 30               | 4.91           | 0.001958        | ± 2.5       | PASS    |
|                           |         | VN            | 40               | 1.34           | 0.000534        | ± 2.5       | PASS    |
|                           |         | VN            | 50               | 4.04           | 0.001611        | ± 2.5       | PASS    |
|                           | MCH     | VN            | -30              | 1.68           | 0.000663        | ± 2.5       | PASS    |
|                           |         | VN            | -20              | 1.74           | 0.000686        | ± 2.5       | PASS    |
|                           |         | VN            | -10              | 3.87           | 0.001527        | ± 2.5       | PASS    |

|       |     |    |     |       |           |       |      |
|-------|-----|----|-----|-------|-----------|-------|------|
|       |     | VN | 0   | 2.22  | 0.000876  | ± 2.5 | PASS |
|       |     | VN | 10  | 1.01  | 0.000398  | ± 2.5 | PASS |
|       |     | VN | 20  | 0.93  | 0.000367  | ± 2.5 | PASS |
|       |     | VN | 30  | 4.13  | 0.001629  | ± 2.5 | PASS |
|       |     | VN | 40  | 3.37  | 0.001329  | ± 2.5 | PASS |
|       |     | VN | 50  | 1.91  | 0.000753  | ± 2.5 | PASS |
|       | HCH | VN | -30 | -0.94 | -0.000367 | ± 2.5 | PASS |
|       |     | VN | -20 | -1.87 | -0.000730 | ± 2.5 | PASS |
|       |     | VN | -10 | -0.98 | -0.000382 | ± 2.5 | PASS |
|       |     | VN | 0   | -0.93 | -0.000363 | ± 2.5 | PASS |
|       |     | VN | 10  | 0.37  | 0.000144  | ± 2.5 | PASS |
|       |     | VN | 20  | 2.76  | 0.001077  | ± 2.5 | PASS |
|       |     | VN | 30  | -0.61 | -0.000238 | ± 2.5 | PASS |
|       |     | VN | 40  | 4.29  | 0.001674  | ± 2.5 | PASS |
|       |     | VN | 50  | 4.04  | 0.001577  | ± 2.5 | PASS |
| 16QAM | LCH | VN | -30 | 0.47  | 0.000187  | ± 2.5 | PASS |
|       |     | VN | -20 | 2.23  | 0.000889  | ± 2.5 | PASS |
|       |     | VN | -10 | 3.51  | 0.001400  | ± 2.5 | PASS |
|       |     | VN | 0   | 4.77  | 0.001902  | ± 2.5 | PASS |
|       |     | VN | 10  | 4.2   | 0.001675  | ± 2.5 | PASS |
|       |     | VN | 20  | 0.72  | 0.000287  | ± 2.5 | PASS |
|       |     | VN | 30  | -1.51 | -0.000602 | ± 2.5 | PASS |
|       |     | VN | 40  | 3.5   | 0.001396  | ± 2.5 | PASS |
|       |     | VN | 50  | 0.3   | 0.000120  | ± 2.5 | PASS |
|       | MCH | VN | -30 | 1.84  | 0.000726  | ± 2.5 | PASS |
|       |     | VN | -20 | 1.85  | 0.000730  | ± 2.5 | PASS |
|       |     | VN | -10 | 3.23  | 0.001274  | ± 2.5 | PASS |
|       |     | VN | 0   | 2.87  | 0.001132  | ± 2.5 | PASS |
|       |     | VN | 10  | -0.84 | -0.000331 | ± 2.5 | PASS |
|       |     | VN | 20  | 1.55  | 0.000611  | ± 2.5 | PASS |
|       |     | VN | 30  | 2.18  | 0.000860  | ± 2.5 | PASS |
|       |     | VN | 40  | 1.73  | 0.000682  | ± 2.5 | PASS |
|       |     | VN | 50  | 4.19  | 0.001653  | ± 2.5 | PASS |
|       | HCH | VN | -30 | -0.16 | -0.000062 | ± 2.5 | PASS |
|       |     | VN | -20 | 1.63  | 0.000636  | ± 2.5 | PASS |
|       |     | VN | -10 | 0.31  | 0.000121  | ± 2.5 | PASS |
|       |     | VN | 0   | 2.62  | 0.001022  | ± 2.5 | PASS |
|       |     | VN | 10  | 4.68  | 0.001826  | ± 2.5 | PASS |
|       |     | VN | 20  | 2.39  | 0.000933  | ± 2.5 | PASS |
|       |     | VN | 30  | 1.58  | 0.000617  | ± 2.5 | PASS |
|       |     | VN | 40  | 4.67  | 0.001822  | ± 2.5 | PASS |

|  |  |    |    |      |          |       |      |
|--|--|----|----|------|----------|-------|------|
|  |  | VN | 50 | 0.53 | 0.000207 | ± 2.5 | PASS |
|--|--|----|----|------|----------|-------|------|

**Channel Bandwidth: 20 MHz**

| Channel Bandwidth: 20 MHz |         |               |                  |                |                 |             |         |
|---------------------------|---------|---------------|------------------|----------------|-----------------|-------------|---------|
| Voltage                   |         |               |                  |                |                 |             |         |
| Modulation                | Channel | Voltage [Vdc] | Temperature (°C) | Deviation (Hz) | Deviation (ppm) | Limit (ppm) | Verdict |
| QPSK                      | LCH     | VL            | TN               | -1.18          | -0.000470       | ± 2.5       | PASS    |
|                           |         | VN            | TN               | 3.04           | 0.001211        | ± 2.5       | PASS    |
|                           |         | VH            | TN               | 3.08           | 0.001227        | ± 2.5       | PASS    |
|                           | MCH     | VL            | TN               | 2.17           | 0.000856        | ± 2.5       | PASS    |
|                           |         | VN            | TN               | -0.3           | -0.000118       | ± 2.5       | PASS    |
|                           |         | VH            | TN               | 1.8            | 0.000710        | ± 2.5       | PASS    |
|                           | HCH     | VL            | TN               | -1.7           | -0.000664       | ± 2.5       | PASS    |
|                           |         | VN            | TN               | -0.97          | -0.000379       | ± 2.5       | PASS    |
|                           |         | VH            | TN               | 0.36           | 0.000141        | ± 2.5       | PASS    |
| 16QAM                     | LCH     | VL            | TN               | 3.94           | 0.001570        | ± 2.5       | PASS    |
|                           |         | VN            | TN               | -0.7           | -0.000279       | ± 2.5       | PASS    |
|                           |         | VH            | TN               | 4.81           | 0.001916        | ± 2.5       | PASS    |
|                           | MCH     | VL            | TN               | -1.65          | -0.000651       | ± 2.5       | PASS    |
|                           |         | VN            | TN               | 2.49           | 0.000982        | ± 2.5       | PASS    |
|                           |         | VH            | TN               | 4.79           | 0.001890        | ± 2.5       | PASS    |
|                           | HCH     | VL            | TN               | 0.79           | 0.000309        | ± 2.5       | PASS    |
|                           |         | VN            | TN               | 1.28           | 0.000500        | ± 2.5       | PASS    |
|                           |         | VH            | TN               | 2.38           | 0.000930        | ± 2.5       | PASS    |
| Temperature               |         |               |                  |                |                 |             |         |
| Modulation                | Channel | Voltage [Vdc] | Temperature (°C) | Deviation (Hz) | Deviation (ppm) | Limit (ppm) | Verdict |
| QPSK                      | LCH     | VN            | -30              | -1.62          | -0.000645       | ± 2.5       | PASS    |
|                           |         | VN            | -20              | -1.6           | -0.000637       | ± 2.5       | PASS    |
|                           |         | VN            | -10              | 3.55           | 0.001414        | ± 2.5       | PASS    |
|                           |         | VN            | 0                | 4.44           | 0.001769        | ± 2.5       | PASS    |
|                           |         | VN            | 10               | -1.03          | -0.000410       | ± 2.5       | PASS    |
|                           |         | VN            | 20               | -1.81          | -0.000721       | ± 2.5       | PASS    |
|                           |         | VN            | 30               | 2.61           | 0.001040        | ± 2.5       | PASS    |
|                           |         | VN            | 40               | 3.58           | 0.001426        | ± 2.5       | PASS    |
|                           |         | VN            | 50               | 2.15           | 0.000857        | ± 2.5       | PASS    |
|                           | MCH     | VN            | -30              | 4.57           | 0.001803        | ± 2.5       | PASS    |
|                           |         | VN            | -20              | -0.08          | -0.000032       | ± 2.5       | PASS    |
|                           |         | VN            | -10              | 3.66           | 0.001444        | ± 2.5       | PASS    |
|                           |         | VN            | 0                | 2.1            | 0.000828        | ± 2.5       | PASS    |
|                           |         | VN            | 10               | -0.61          | -0.000241       | ± 2.5       | PASS    |

|       |     |    |     |       |           |       |      |
|-------|-----|----|-----|-------|-----------|-------|------|
|       |     | VN | 20  | 1.73  | 0.000682  | ± 2.5 | PASS |
|       |     | VN | 30  | 4.9   | 0.001933  | ± 2.5 | PASS |
|       |     | VN | 40  | -1.86 | -0.000734 | ± 2.5 | PASS |
|       |     | VN | 50  | -1.48 | -0.000584 | ± 2.5 | PASS |
|       | HCH | VN | -30 | -1.36 | -0.000531 | ± 2.5 | PASS |
|       |     | VN | -20 | -0.82 | -0.000320 | ± 2.5 | PASS |
|       |     | VN | -10 | 0.35  | 0.000137  | ± 2.5 | PASS |
|       |     | VN | 0   | 0.96  | 0.000375  | ± 2.5 | PASS |
|       |     | VN | 10  | 4.02  | 0.001570  | ± 2.5 | PASS |
|       |     | VN | 20  | -0.28 | -0.000109 | ± 2.5 | PASS |
|       |     | VN | 30  | 3.76  | 0.001469  | ± 2.5 | PASS |
|       |     | VN | 40  | 0.9   | 0.000352  | ± 2.5 | PASS |
|       |     | VN | 50  | 1.4   | 0.000547  | ± 2.5 | PASS |
| 16QAM | LCH | VN | -30 | 0.61  | 0.000243  | ± 2.5 | PASS |
|       |     | VN | -20 | 1.09  | 0.000434  | ± 2.5 | PASS |
|       |     | VN | -10 | 2.1   | 0.000837  | ± 2.5 | PASS |
|       |     | VN | 0   | 1.46  | 0.000582  | ± 2.5 | PASS |
|       |     | VN | 10  | 0.69  | 0.000275  | ± 2.5 | PASS |
|       |     | VN | 20  | 4.01  | 0.001598  | ± 2.5 | PASS |
|       |     | VN | 30  | 4.27  | 0.001701  | ± 2.5 | PASS |
|       |     | VN | 40  | 2.93  | 0.001167  | ± 2.5 | PASS |
|       |     | VN | 50  | -0.3  | -0.000120 | ± 2.5 | PASS |
|       | MCH | VN | -30 | 2.17  | 0.000856  | ± 2.5 | PASS |
|       |     | VN | -20 | 1.96  | 0.000773  | ± 2.5 | PASS |
|       |     | VN | -10 | 1.96  | 0.000773  | ± 2.5 | PASS |
|       |     | VN | 0   | -1.5  | -0.000592 | ± 2.5 | PASS |
|       |     | VN | 10  | 2.42  | 0.000955  | ± 2.5 | PASS |
|       |     | VN | 20  | 2.69  | 0.001061  | ± 2.5 | PASS |
|       |     | VN | 30  | 1.39  | 0.000548  | ± 2.5 | PASS |
|       |     | VN | 40  | 2.47  | 0.000974  | ± 2.5 | PASS |
|       |     | VN | 50  | -0.83 | -0.000327 | ± 2.5 | PASS |
|       | HCH | VN | -30 | 4.16  | 0.001625  | ± 2.5 | PASS |
|       |     | VN | -20 | -1    | -0.000391 | ± 2.5 | PASS |
|       |     | VN | -10 | 2.48  | 0.000969  | ± 2.5 | PASS |
|       |     | VN | 0   | -0.52 | -0.000203 | ± 2.5 | PASS |
|       |     | VN | 10  | 1.05  | 0.000410  | ± 2.5 | PASS |
|       |     | VN | 20  | 2.23  | 0.000871  | ± 2.5 | PASS |
|       |     | VN | 30  | -1.31 | -0.000512 | ± 2.5 | PASS |
|       |     | VN | 40  | -0.86 | -0.000336 | ± 2.5 | PASS |
|       |     | VN | 50  | 3.49  | 0.001363  | ± 2.5 | PASS |