

Appendix G: Test Data for E-UTRA Band 7

Product Name: 4G Smartphone

Trade Mark: Hello Smart Phones

Test Model: Hello AN6 pro

Environmental Conditions

| | |
|--------------------|-------------|
| Temperature: | 24.3 |
| Relative Humidity: | 52.7 |
| ATM Pressure: | 100.0 kPa |
| Test Engineer: | Tom Liu |
| Supervised by: | Jayden Zhuo |

G.1 Conducted Output Power

| Conducted Output Power Test Result (Channel Bandwidth: 5 MHz) | | | | | | |
|---|---------|------------------|--------|---------------------|---------------------|---------|
| Modulation | Channel | RB Configuration | | Average Power [dBm] | Average Power [dBm] | Verdict |
| | | Size | Offset | QPSK | 16QAM | |
| QPSK / 16QAM | LCH | 1 | 0 | 22.85 | 22.12 | PASS |
| | | 1 | 12 | 22.66 | 22.01 | PASS |
| | | 1 | 24 | 22.51 | 21.80 | PASS |
| | | 12 | 0 | 22.54 | 21.73 | PASS |
| | | 12 | 6 | 22.73 | 22.03 | PASS |
| | | 12 | 13 | 22.60 | 21.65 | PASS |
| | | 25 | 0 | 22.99 | 21.86 | PASS |
| | MCH | 1 | 0 | 22.76 | 21.68 | PASS |
| | | 1 | 12 | 22.94 | 21.94 | PASS |
| | | 1 | 24 | 22.55 | 21.90 | PASS |
| | | 12 | 0 | 22.46 | 21.80 | PASS |
| | | 12 | 6 | 22.25 | 21.76 | PASS |
| | | 12 | 13 | 22.75 | 21.86 | PASS |
| | | 25 | 0 | 22.73 | 21.83 | PASS |
| | HCH | 1 | 0 | 22.55 | 21.78 | PASS |
| | | 1 | 12 | 22.36 | 21.58 | PASS |
| | | 1 | 24 | 22.19 | 21.51 | PASS |
| | | 12 | 0 | 22.23 | 21.58 | PASS |
| | | 12 | 6 | 22.52 | 21.65 | PASS |
| | | 12 | 13 | 22.31 | 21.60 | PASS |
| | | 25 | 0 | 22.79 | 21.70 | PASS |

Conducted Output Power Test Result (Channel Bandwidth: 10 MHz)

| Modulation | Channel | RB Configuration | | Average Power [dBm] | Average Power [dBm] | Verdict |
|-----------------|---------|------------------|--------|---------------------|---------------------|---------|
| | | Size | Offset | QPSK | 16QAM | |
| QPSK / 16QAM | LCH | 1 | 0 | 23.25 | 22.40 | PASS |
| | | 1 | 24 | 22.66 | 21.82 | PASS |
| | | 1 | 49 | 23.14 | 22.44 | PASS |
| | | 25 | 0 | 22.93 | 21.90 | PASS |
| | | 25 | 12 | 23.09 | 22.05 | PASS |
| | | 25 | 25 | 22.58 | 21.86 | PASS |
| | | 50 | 0 | 23.05 | 22.10 | PASS |
| | MCH | 1 | 0 | 23.01 | 21.90 | PASS |
| | | 1 | 24 | 22.95 | 22.21 | PASS |
| | | 1 | 49 | 23.19 | 22.38 | PASS |
| | | 25 | 0 | 22.88 | 21.95 | PASS |
| | | 25 | 12 | 23.03 | 22.23 | PASS |
| | | 25 | 25 | 22.77 | 21.94 | PASS |
| | | 50 | 0 | 23.16 | 22.48 | PASS |
| | HCH | 1 | 0 | 23.12 | 22.49 | PASS |
| | | 1 | 24 | 22.92 | 22.06 | PASS |
| | | 1 | 49 | 22.98 | 22.18 | PASS |
| | | 25 | 0 | 22.85 | 21.95 | PASS |
| | | 25 | 12 | 22.94 | 22.02 | PASS |
| | | 25 | 25 | 23.13 | 22.62 | PASS |
| | | 50 | 0 | 22.56 | 21.88 | PASS |

Conducted Output Power Test Result (Channel Bandwidth: 15 MHz)

| Modulation | Channel | RB Configuration | | Average Power [dBm] | Average Power [dBm] | Verdict |
|-----------------|---------|------------------|--------|---------------------|---------------------|---------|
| | | Size | Offset | QPSK | 16QAM | |
| QPSK / 16QAM | LCH | 1 | 0 | 22.21 | 21.49 | PASS |
| | | 1 | 37 | 22.69 | 21.60 | PASS |
| | | 1 | 74 | 22.72 | 21.73 | PASS |
| | | 37 | 0 | 22.29 | 21.49 | PASS |
| | | 37 | 18 | 22.44 | 21.63 | PASS |
| | | 37 | 38 | 22.61 | 21.72 | PASS |
| | | 75 | 0 | 22.69 | 21.89 | PASS |
| | MCH | 1 | 0 | 22.76 | 21.96 | PASS |
| | | 1 | 37 | 22.47 | 21.71 | PASS |
| | | 1 | 74 | 22.04 | 21.37 | PASS |
| | | 37 | 0 | 22.60 | 21.62 | PASS |
| | | 37 | 18 | 22.34 | 21.57 | PASS |
| | | 37 | 38 | 22.22 | 21.53 | PASS |
| | | 75 | 0 | 22.32 | 21.54 | PASS |
| | HCH | 1 | 0 | 22.69 | 21.71 | PASS |
| | | 1 | 37 | 22.40 | 21.62 | PASS |
| | | 1 | 74 | 22.12 | 21.48 | PASS |
| | | 37 | 0 | 22.09 | 21.47 | PASS |
| | | 37 | 18 | 22.84 | 21.72 | PASS |
| | | 37 | 38 | 22.24 | 21.51 | PASS |
| | | 75 | 0 | 21.98 | 21.36 | PASS |

Conducted Output Power Test Result (Channel Bandwidth: 20 MHz)

| Modulation | Channel | RB Configuration | | Average Power [dBm] | Average Power [dBm] | Verdict |
|-----------------|---------|------------------|--------|---------------------|---------------------|---------|
| | | Size | Offset | QPSK | 16QAM | |
| QPSK / 16QAM | LCH | 1 | 0 | 22.72 | 21.78 | PASS |
| | | 1 | 49 | 22.77 | 21.72 | PASS |
| | | 1 | 99 | 22.62 | 21.64 | PASS |
| | | 50 | 0 | 22.92 | 21.73 | PASS |
| | | 50 | 25 | 22.81 | 21.86 | PASS |
| | | 50 | 50 | 22.20 | 21.55 | PASS |
| | | 100 | 0 | 22.33 | 21.55 | PASS |
| | MCH | 1 | 0 | 22.67 | 21.65 | PASS |
| | | 1 | 49 | 22.70 | 21.70 | PASS |
| | | 1 | 99 | 22.81 | 21.95 | PASS |
| | | 50 | 0 | 22.33 | 21.55 | PASS |
| | | 50 | 25 | 22.26 | 21.55 | PASS |
| | | 50 | 50 | 22.83 | 21.66 | PASS |
| | | 100 | 0 | 22.73 | 22.00 | PASS |
| | HCH | 1 | 0 | 22.93 | 22.14 | PASS |
| | | 1 | 49 | 22.68 | 21.74 | PASS |
| | | 1 | 99 | 22.68 | 21.71 | PASS |
| | | 50 | 0 | 22.67 | 21.66 | PASS |
| | | 50 | 25 | 22.66 | 20.81 | PASS |
| | | 50 | 50 | 22.17 | 21.60 | PASS |
| | | 100 | 0 | 22.35 | 21.67 | PASS |

G.2 Peak-to-Average Ratio

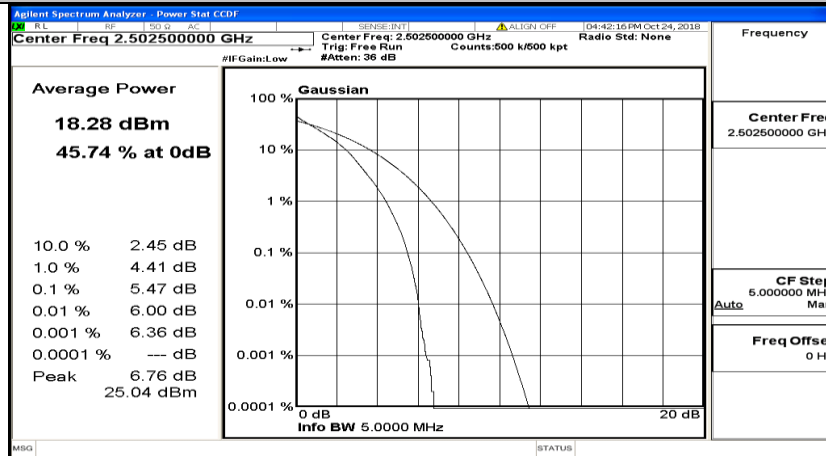
| Peak-to Average Ratio Test Result (Channel Bandwidth: 5 MHz) | | | | |
|--|---------|-------------------------------|---------------|---------|
| Modulation | Channel | Peak-to-Average Ratio [dB] | Limit [dB] | Verdict |
| QPSK | LCH | 5.47 | <13 | PASS |
| | MCH | 5.38 | <13 | PASS |
| | HCH | 5.31 | <13 | PASS |
| 16QAM | LCH | 6.3 | <13 | PASS |
| | MCH | 6.19 | <13 | PASS |
| | HCH | 6.11 | <13 | PASS |

| Peak-to Average Ratio Test Result (Channel Bandwidth: 10 MHz) | | | | |
|---|---------|-------------------------------|---------------|---------|
| Modulation | Channel | Peak-to-Average Ratio [dB] | Limit [dB] | Verdict |
| QPSK | LCH | 5.46 | <13 | PASS |
| | MCH | 5.32 | <13 | PASS |
| | HCH | 5.27 | <13 | PASS |
| 16QAM | LCH | 6.24 | <13 | PASS |
| | MCH | 6.1 | <13 | PASS |
| | HCH | 6.05 | <13 | PASS |

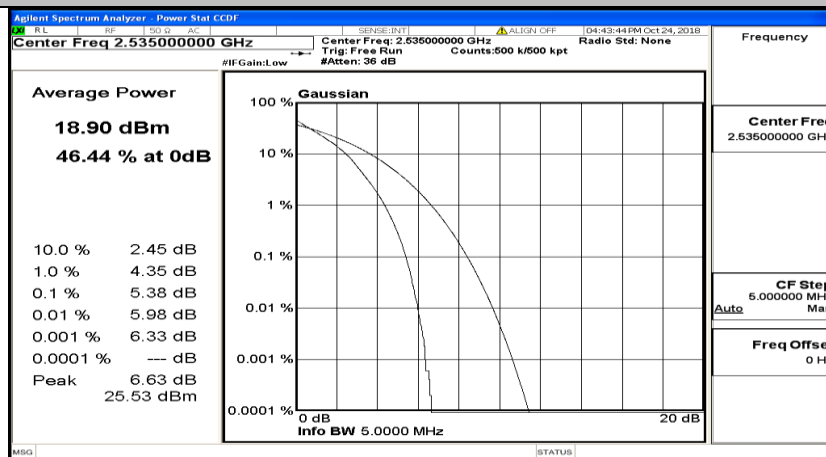
| Peak-to Average Ratio Test Result (Channel Bandwidth: 15 MHz) | | | | |
|---|---------|-------------------------------|---------------|---------|
| Modulation | Channel | Peak-to-Average Ratio [dB] | Limit [dB] | Verdict |
| QPSK | LCH | 4.96 | <13 | PASS |
| | MCH | 4.99 | <13 | PASS |
| | HCH | 4.95 | <13 | PASS |
| 16QAM | LCH | 6.28 | <13 | PASS |
| | MCH | 6.2 | <13 | PASS |
| | HCH | 6.14 | <13 | PASS |

| Peak-to Average Ratio Test Result (Channel Bandwidth: 20 MHz) | | | | |
|---|---------|-------------------------------|---------------|---------|
| Modulation | Channel | Peak-to-Average Ratio [dB] | Limit [dB] | Verdict |
| QPSK | LCH | 5.73 | <13 | PASS |
| | MCH | 5.71 | <13 | PASS |
| | HCH | 5.75 | <13 | PASS |
| 16QAM | LCH | 6.77 | <13 | PASS |
| | MCH | 6.73 | <13 | PASS |
| | HCH | 6.69 | <13 | PASS |

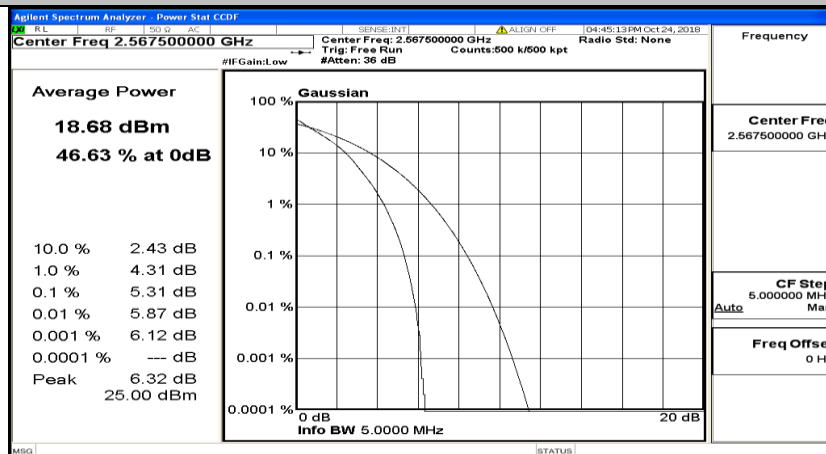
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 5 MHz)_LCH_QPSK



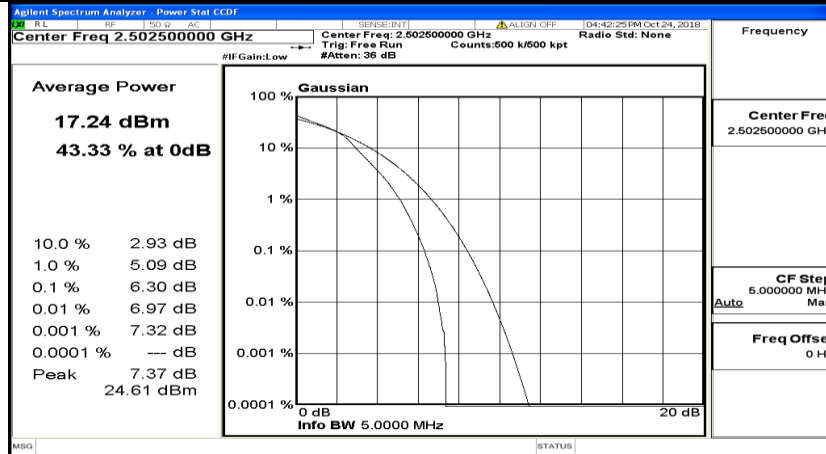
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 5 MHz)_MCH_QPSK



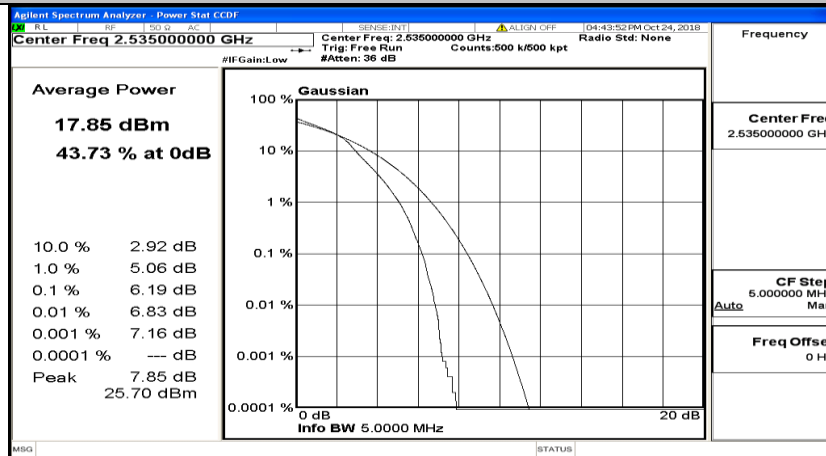
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 5 MHz)_HCH_QPSK



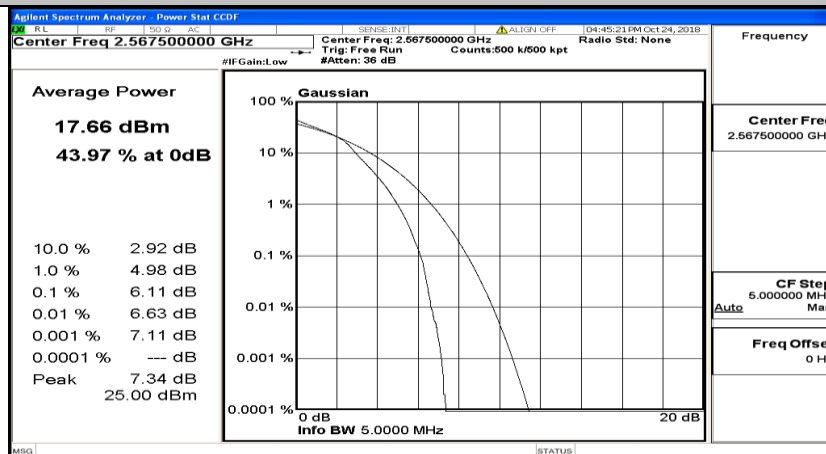
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 5 MHz)_LCH_16QAM



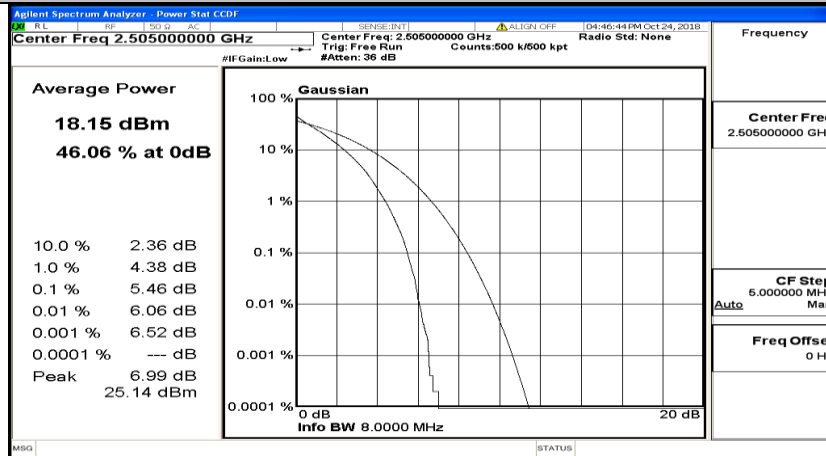
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 5 MHz)_MCH_16QAM



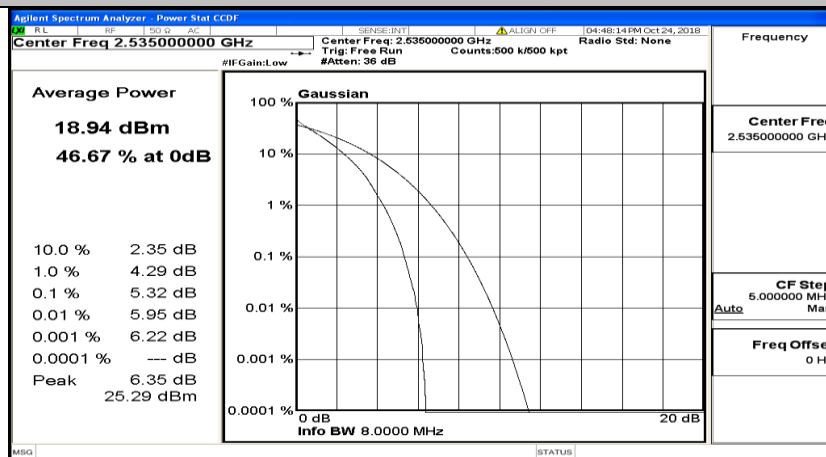
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 5 MHz)_HCH_16QAM



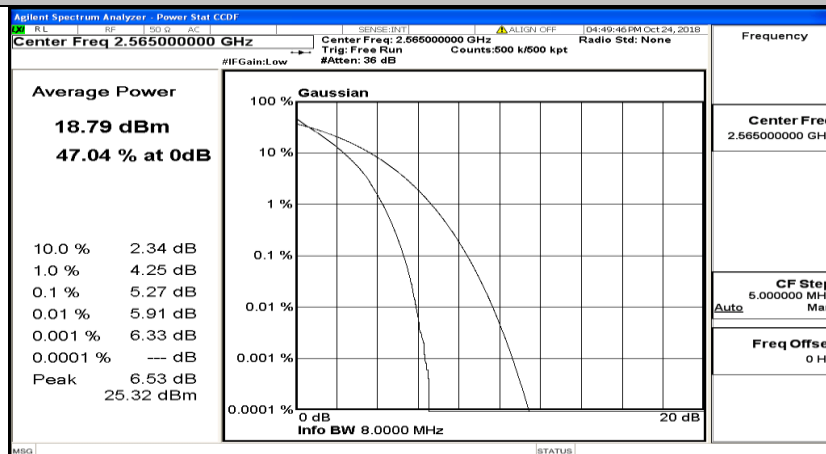
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 10 MHz)_LCH_QPSK



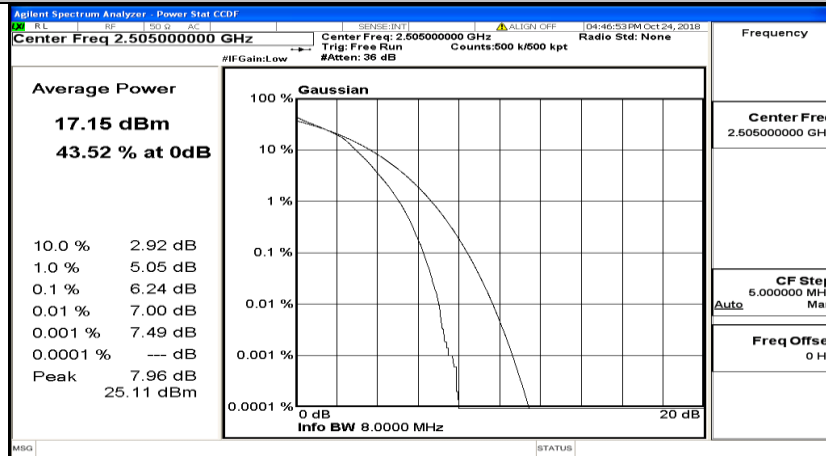
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 10 MHz)_MCH_QPSK



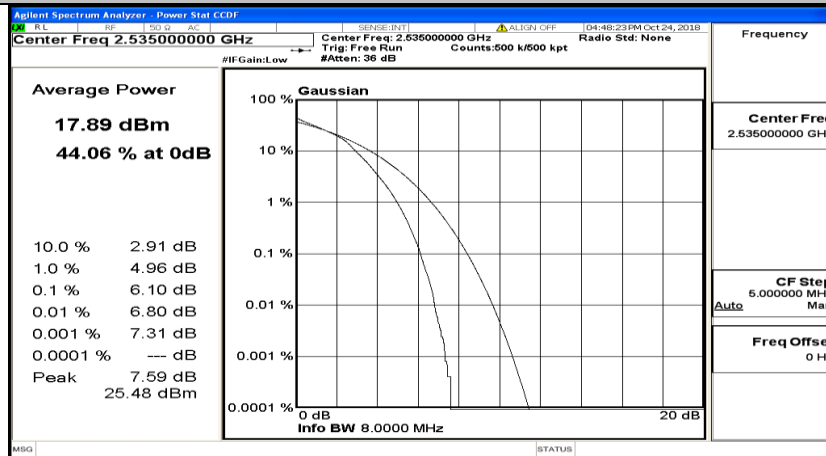
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 10 MHz)_HCH_QPSK



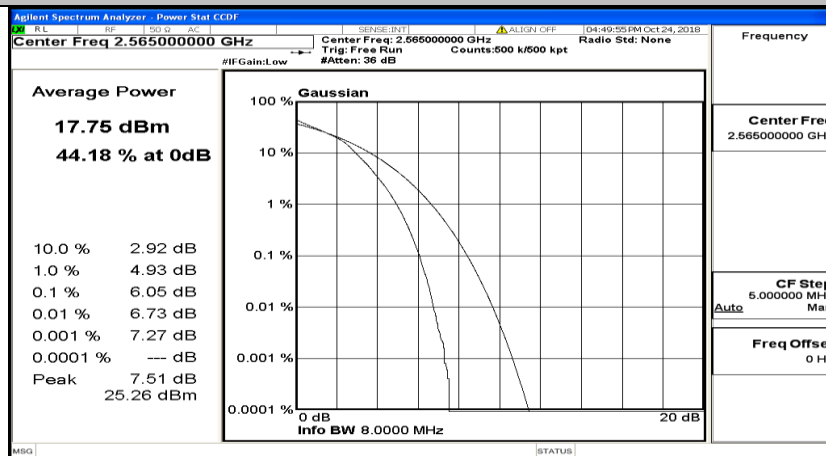
Peak-to-Average Ratio Test Graph(s) (Channel Bandwidth: 10 MHz)_LCH_16QAM



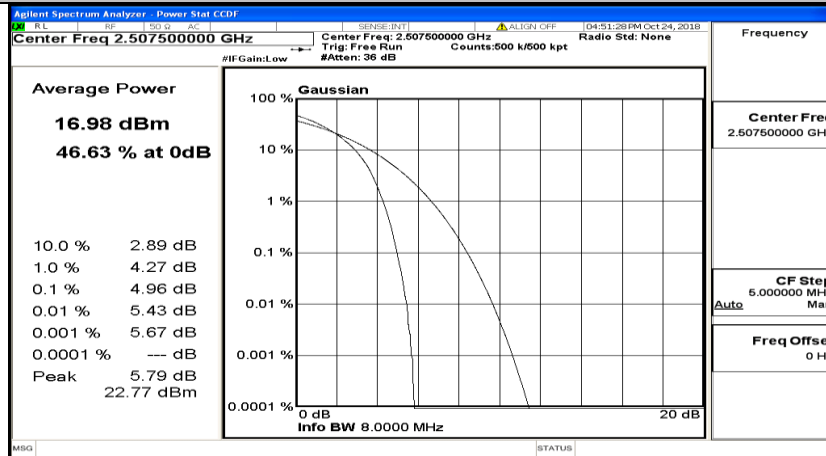
Peak-to-Average Ratio Test Graph(s) (Channel Bandwidth: 10 MHz)_MCH_16QAM



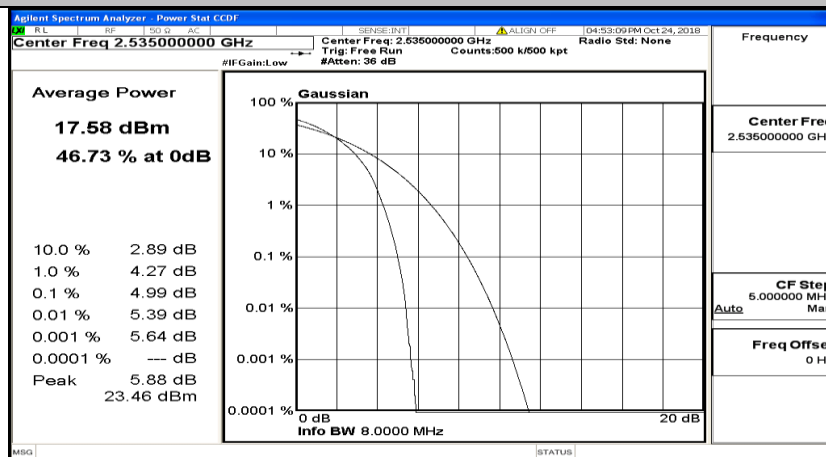
Peak-to-Average Ratio Test Graph(s) (Channel Bandwidth: 10 MHz)_HCH_16QAM



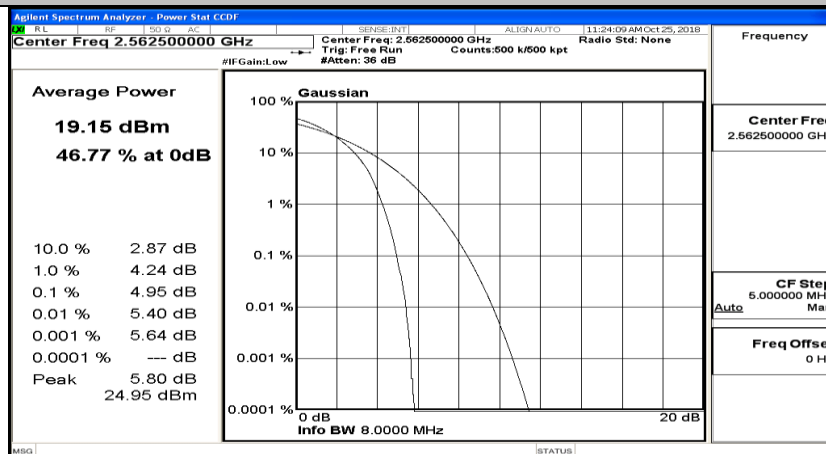
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth:15 MHz)_LCH_QPSK



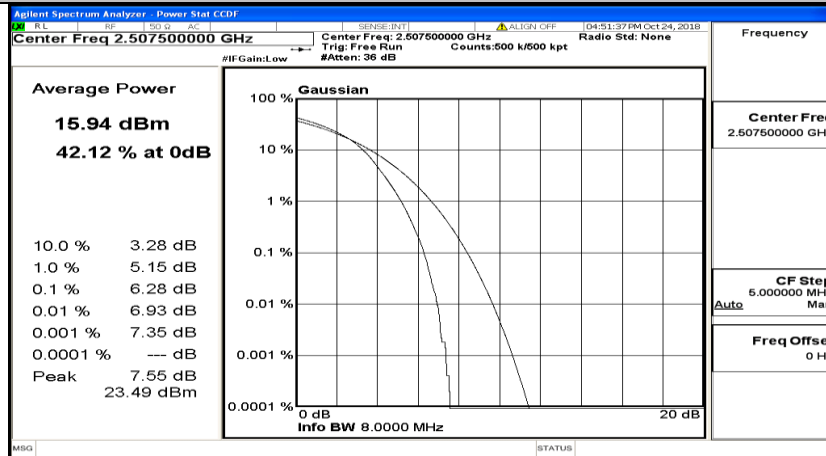
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth:15 MHz)_MCH_QPSK



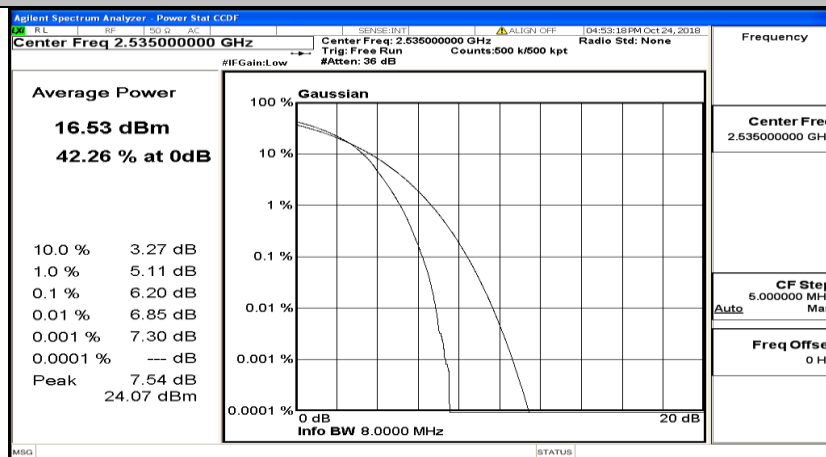
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth:15 MHz)_HCH_QPSK



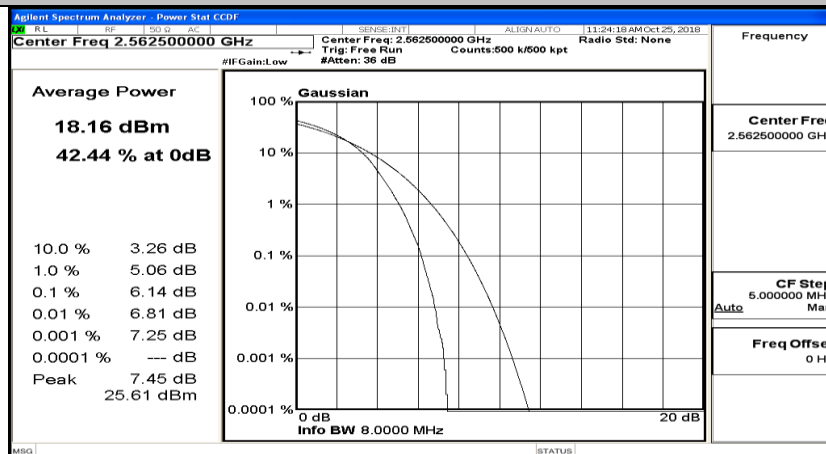
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth:15 MHz)_LCH_16QAM



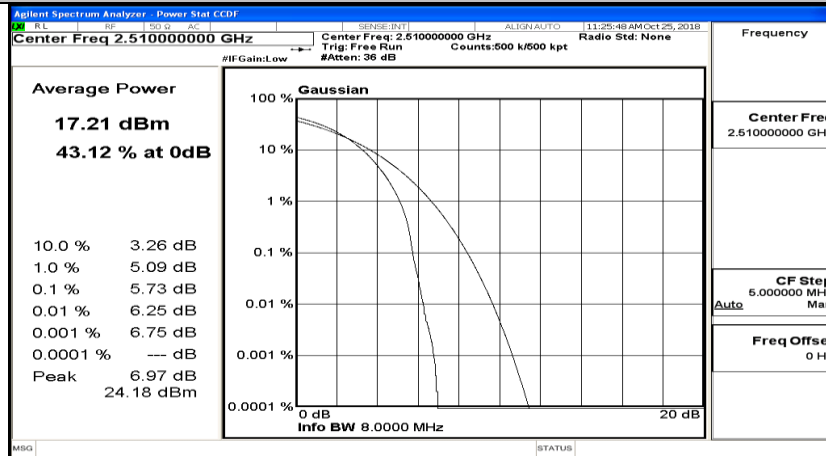
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth:15 MHz)_MCH_16QAM



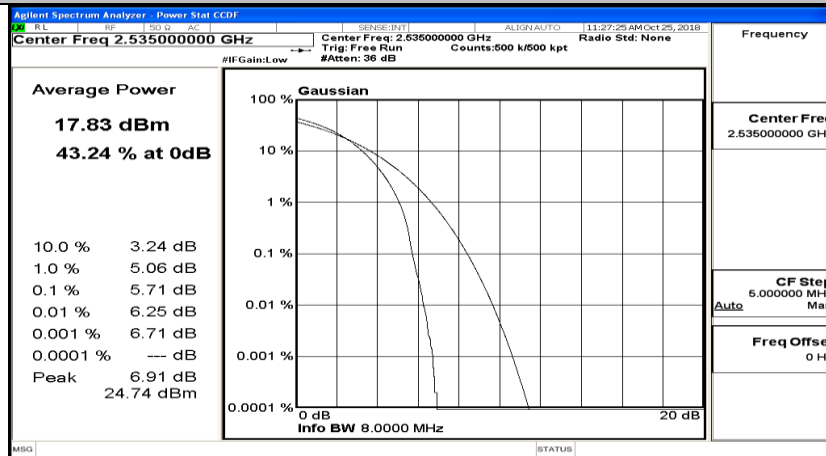
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth:15 MHz)_HCH_16QAM



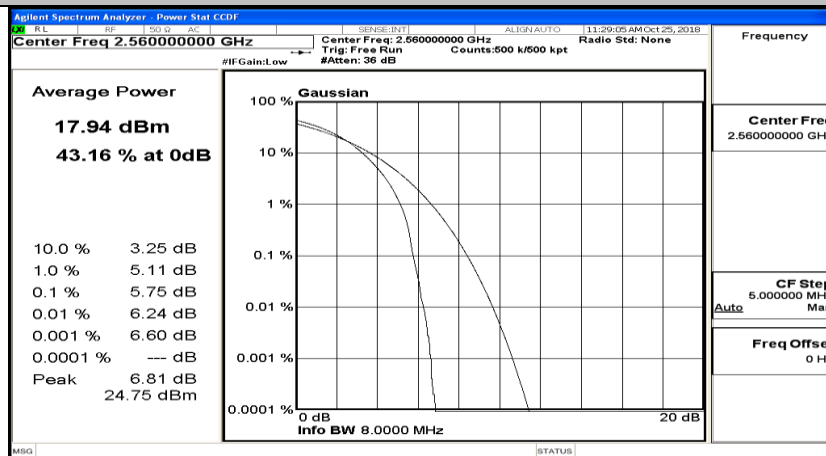
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth:20 MHz)_LCH_QPSK



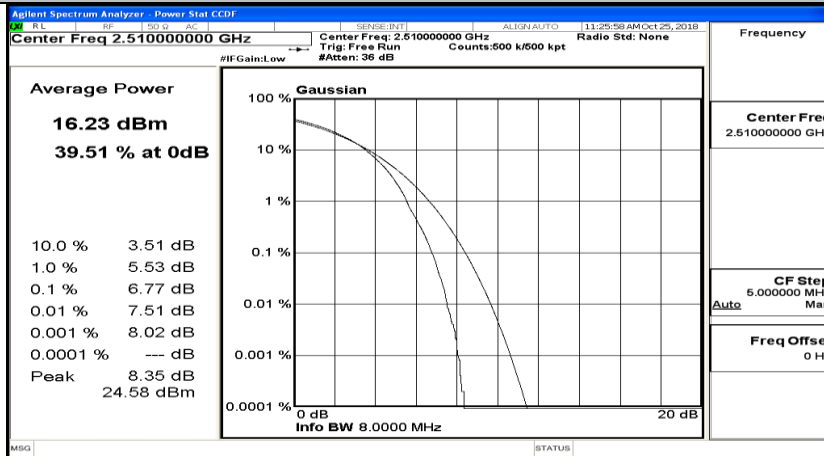
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth:20 MHz)_MCH_QPSK



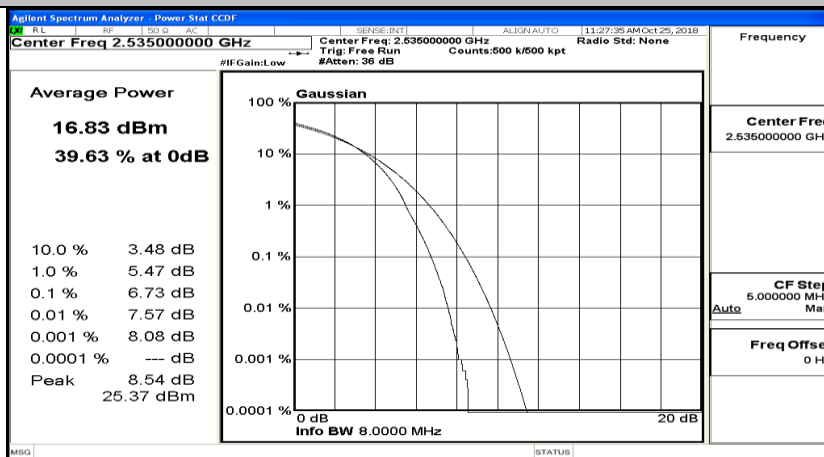
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth:20 MHz)_HCH_QPSK



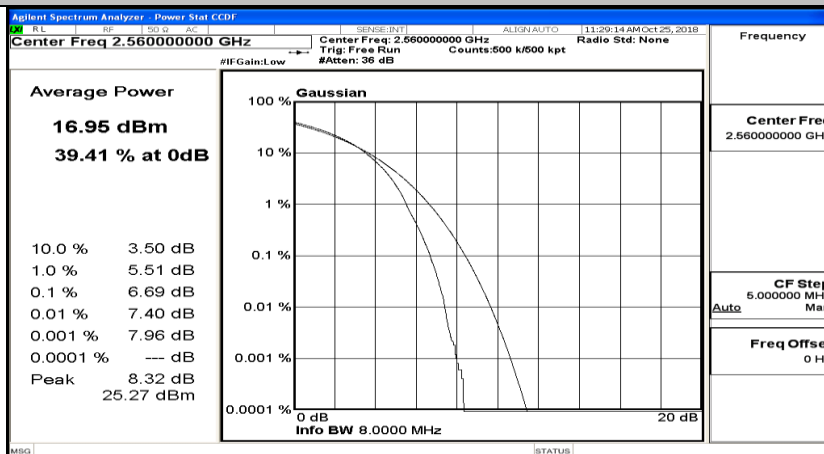
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth:20 MHz)_LCH_16QAM



Peak-to Average Ratio Test Graph(s) (Channel Bandwidth:20 MHz)_MCH_16QAM



Peak-to Average Ratio Test Graph(s) (Channel Bandwidth:20 MHz)_HCH_16QAM



G.3 26dB Bandwidth and Occupied Bandwidth

| EBW & OBW Test Result (Channel Bandwidth: 5 MHz) | | | | |
|--|---------|--------------------------|----------------------|---------|
| Modulation | Channel | Occupied Bandwidth (MHz) | 26dB Bandwidth (MHz) | Verdict |
| QPSK | LCH | 4.4754 | 4.790 | PASS |
| | MCH | 4.4823 | 4.799 | PASS |
| | HCH | 4.4920 | 4.838 | PASS |
| 16QAM | LCH | 4.4810 | 4.832 | PASS |
| | MCH | 4.4898 | 4.872 | PASS |
| | HCH | 4.4852 | 4.864 | PASS |

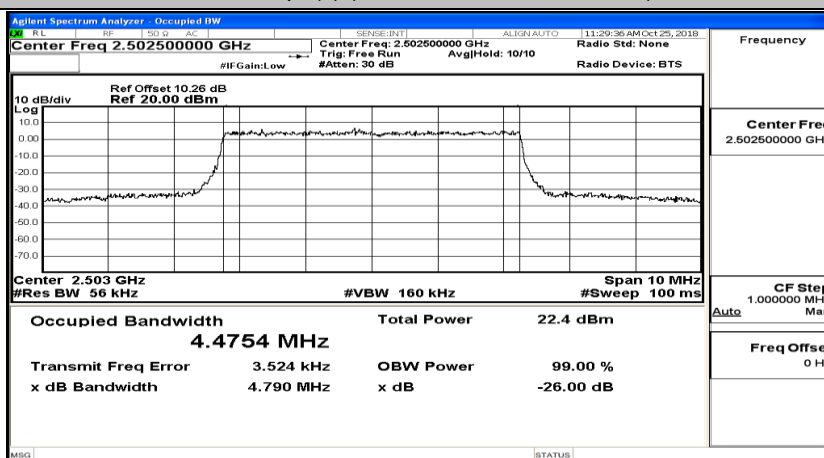
| EBW & OBW Test Result (Channel Bandwidth: 10 MHz) | | | | |
|---|---------|--------------------------|----------------------|---------|
| Modulation | Channel | Occupied Bandwidth (MHz) | 26dB Bandwidth (MHz) | Verdict |
| QPSK | LCH | 8.9341 | 9.448 | PASS |
| | MCH | 8.9440 | 9.455 | PASS |
| | HCH | 8.9355 | 9.468 | PASS |
| 16QAM | LCH | 8.9289 | 9.511 | PASS |
| | MCH | 8.9324 | 9.412 | PASS |
| | HCH | 8.9337 | 9.371 | PASS |

EBW & OBW Test Result (Channel Bandwidth: 15 MHz)

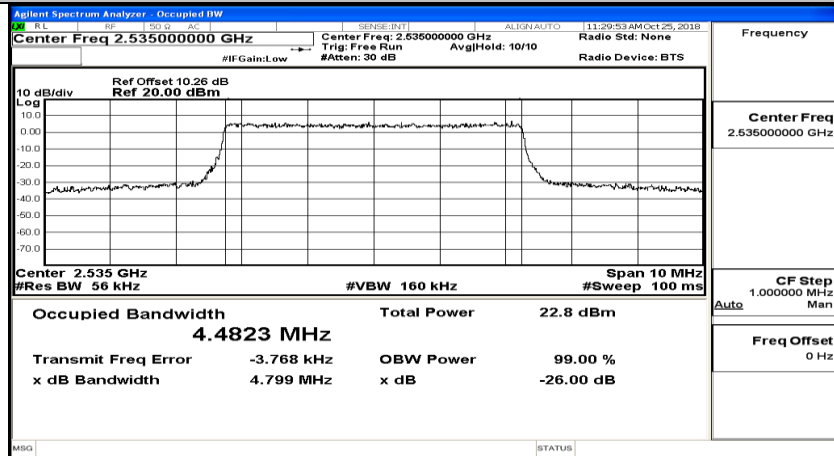
| Modulation | Channel | Occupied Bandwidth (MHz) | 26dB Bandwidth (MHz) | Verdict |
|------------|---------|--------------------------|----------------------|---------|
| QPSK | LCH | 13.403 | 14.14 | PASS |
| | MCH | 13.413 | 14.13 | PASS |
| | HCH | 13.409 | 14.04 | PASS |
| 16QAM | LCH | 13.399 | 14.06 | PASS |
| | MCH | 13.407 | 14.04 | PASS |
| | HCH | 13.406 | 14.10 | PASS |

EBW & OBW Test Result (Channel Bandwidth: 20 MHz)

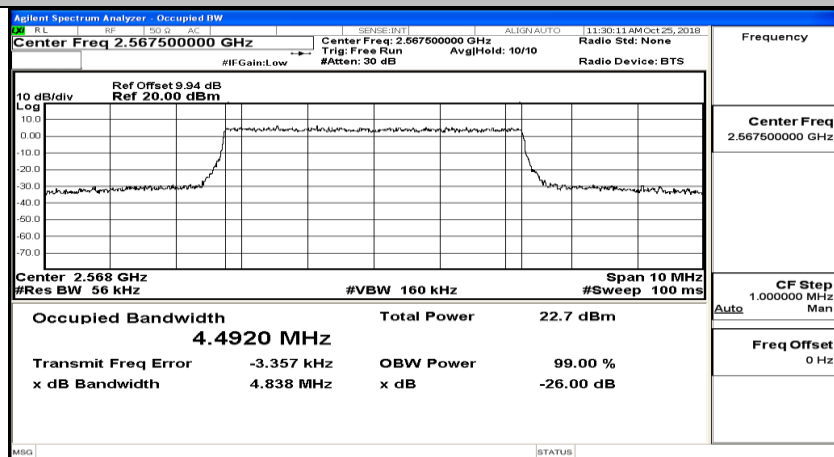
| Modulation | Channel | Occupied Bandwidth (MHz) | 26dB Bandwidth (MHz) | Verdict |
|------------|---------|--------------------------|----------------------|---------|
| QPSK | LCH | 17.862 | 18.60 | PASS |
| | MCH | 17.878 | 18.68 | PASS |
| | HCH | 17.857 | 18.70 | PASS |
| 16QAM | LCH | 17.884 | 18.61 | PASS |
| | MCH | 17.863 | 18.62 | PASS |
| | HCH | 17.862 | 18.55 | PASS |

EBW & OBW Test Graph(s) (Channel Bandwidth: 5 MHz) LCH_QPSK

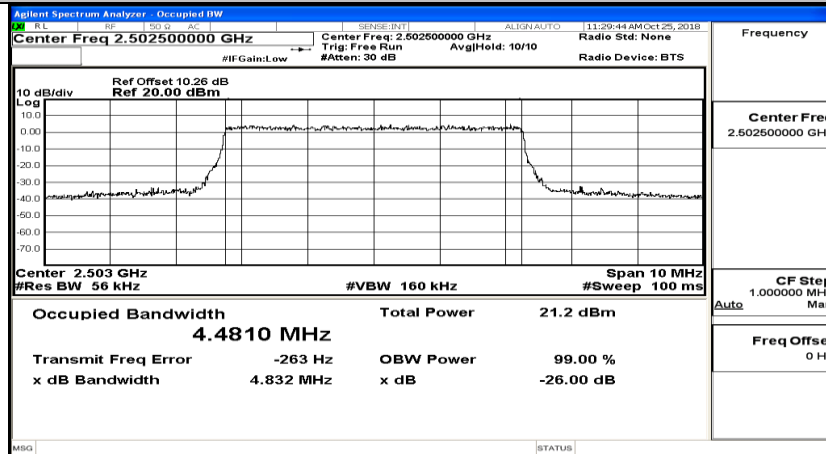
EBW & OBW Test Graph(s) (Channel Bandwidth: 5 MHz)_MCH_QPSK



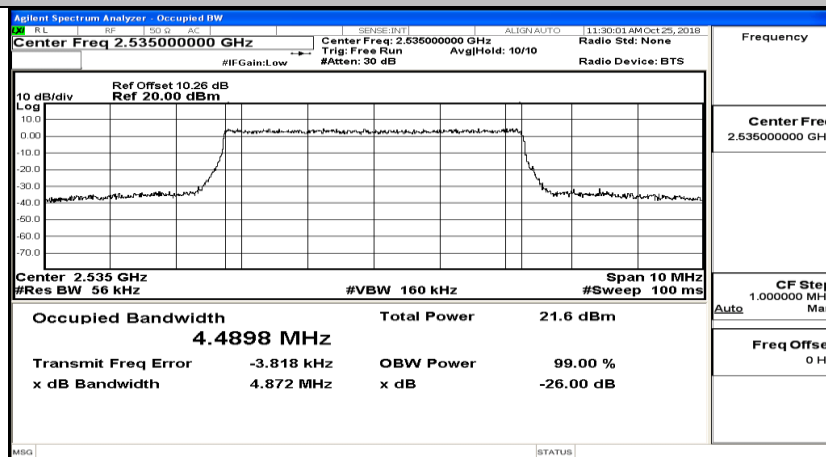
EBW & OBW Test Graph(s) (Channel Bandwidth: 5 MHz)_HCH_QPSK



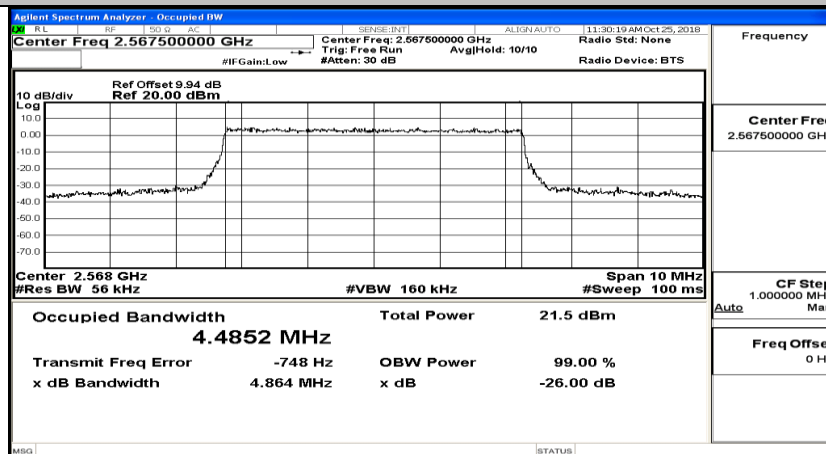
EBW & OBW Test Graph(s) (Channel Bandwidth: 5 MHz)_LCH_16QAM



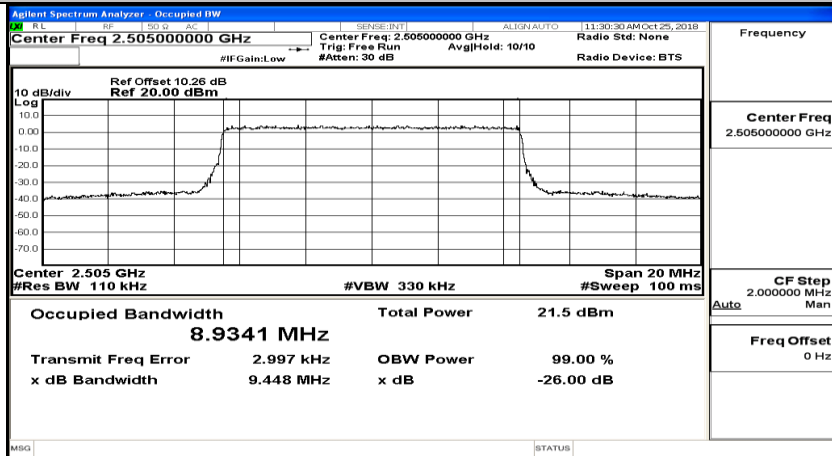
EBW & OBW Test Graph(s) (Channel Bandwidth: 5 MHz)_MCH_16QAM



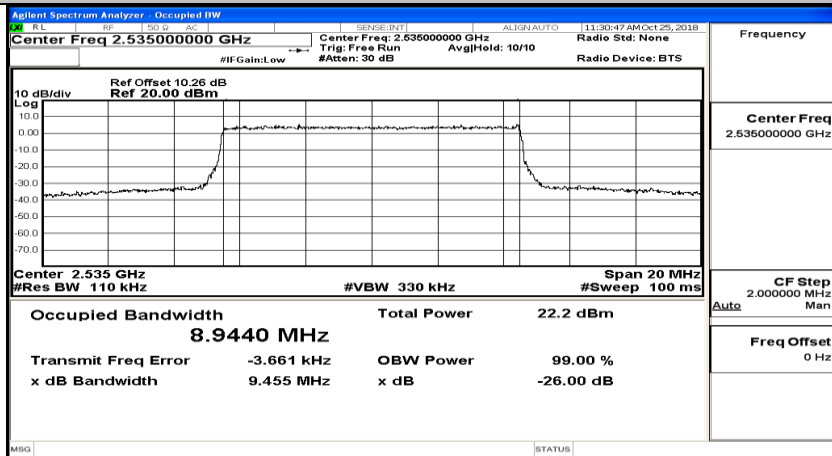
EBW & OBW Test Graph(s) (Channel Bandwidth: 5 MHz)_HCH_16QAM



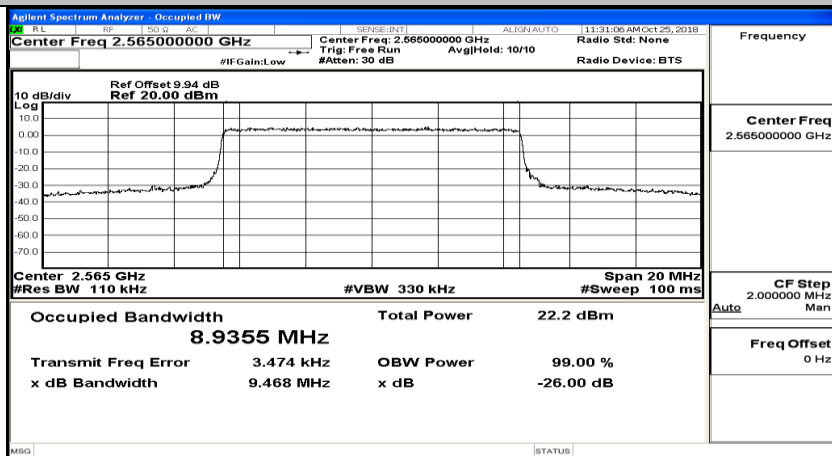
EBW & OBW Test Graph(s) (Channel Bandwidth: 10 MHz)_LCH_QPSK



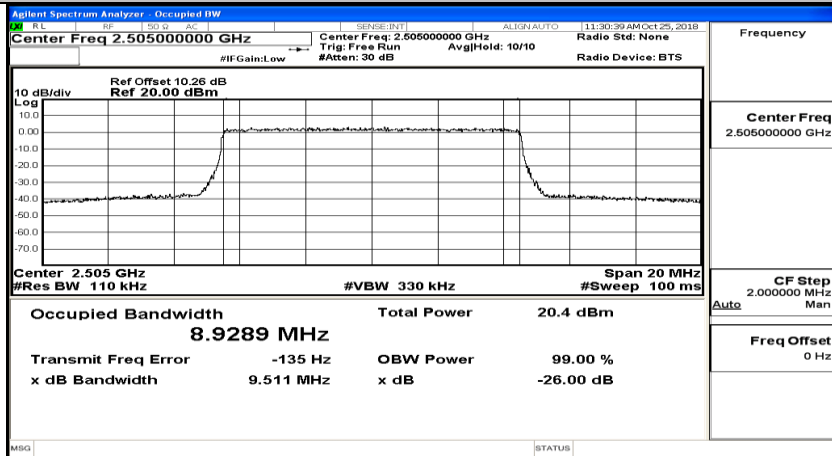
EBW & OBW Test Graph(s) (Channel Bandwidth: 10 MHz)_MCH_QPSK



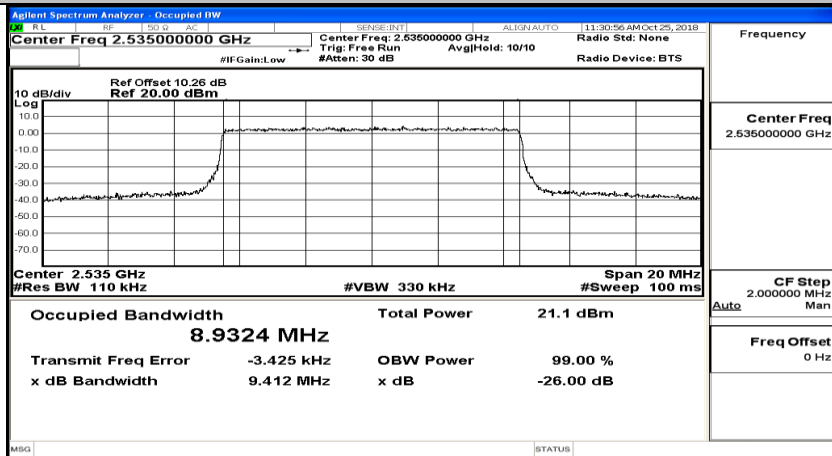
EBW & OBW Test Graph(s) (Channel Bandwidth: 10 MHz)_HCH_QPSK



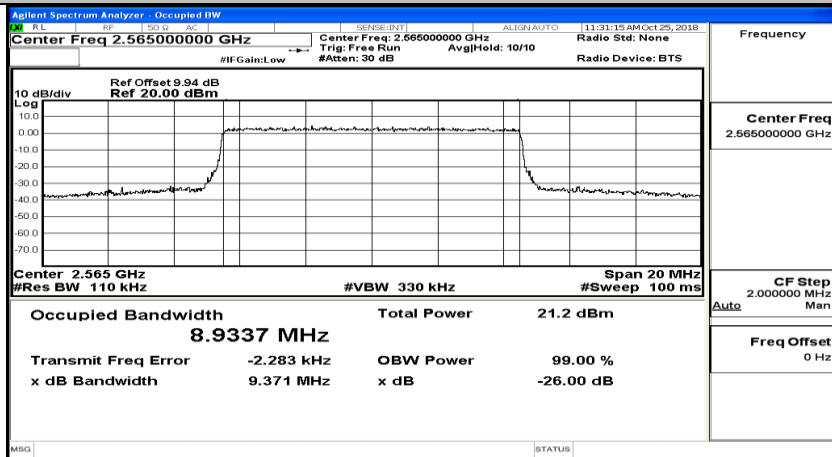
EBW & OBW Test Graph(s) (Channel Bandwidth: 10 MHz)_LCH_16QAM



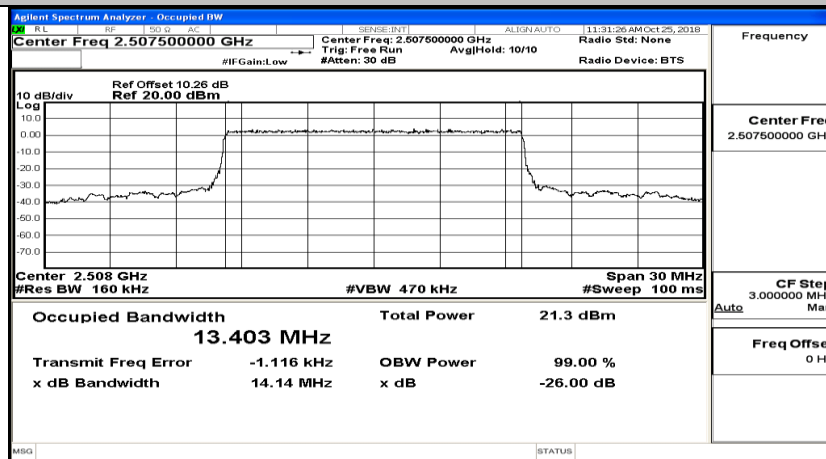
EBW & OBW Test Graph(s) (Channel Bandwidth: 10 MHz)_MCH_16QAM



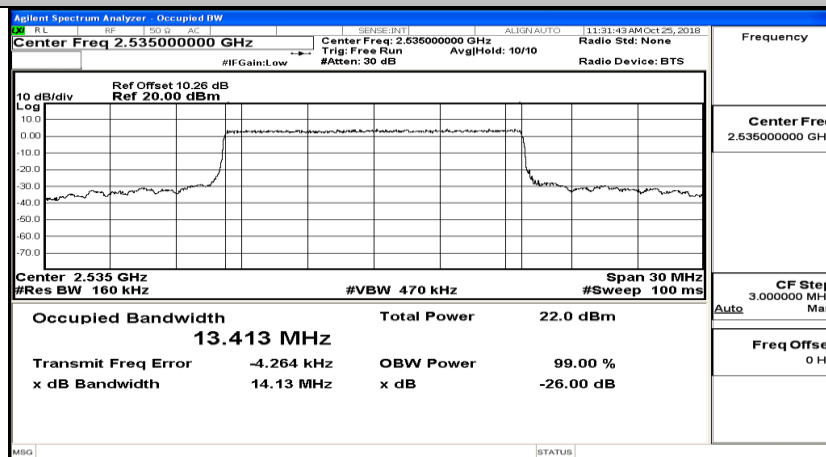
EBW & OBW Test Graph(s) (Channel Bandwidth: 10 MHz)_HCH_16QAM



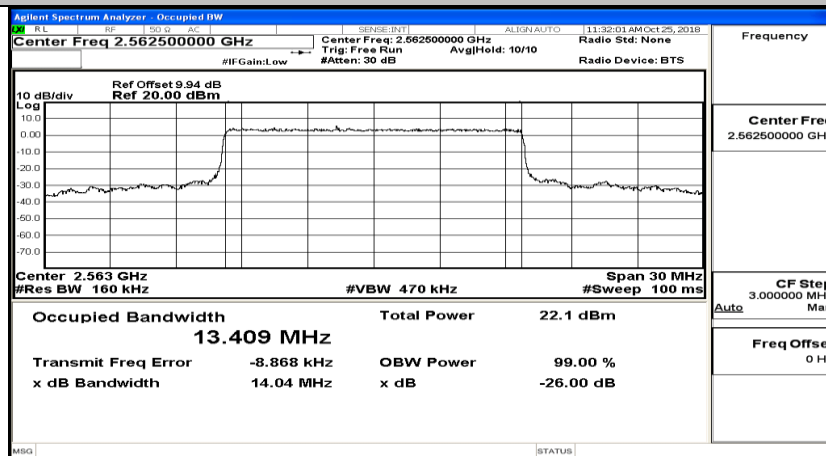
EBW & OBW Test Graph(s) (Channel Bandwidth:15 MHz)_LCH_QPSK



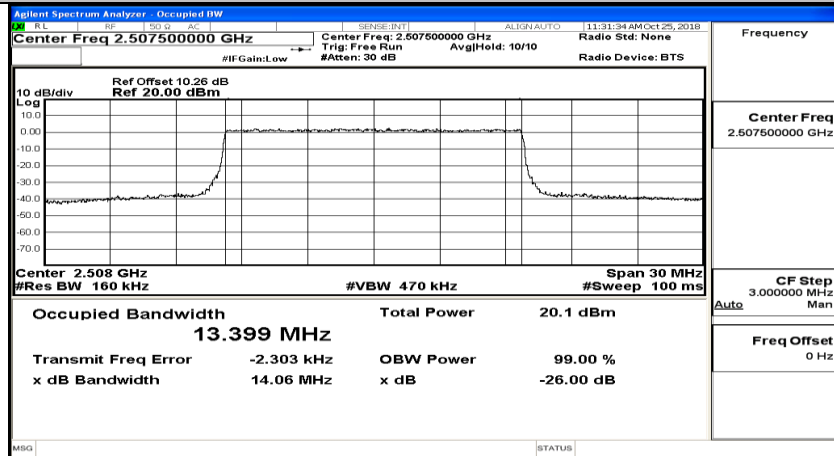
EBW & OBW Test Graph(s) (Channel Bandwidth:15 MHz)_MCH_QPSK



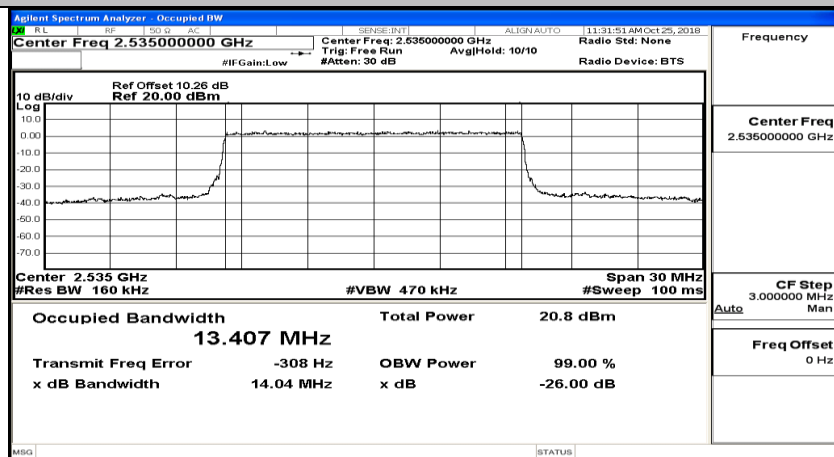
EBW & OBW Test Graph(s) (Channel Bandwidth:15 MHz)_HCH_QPSK



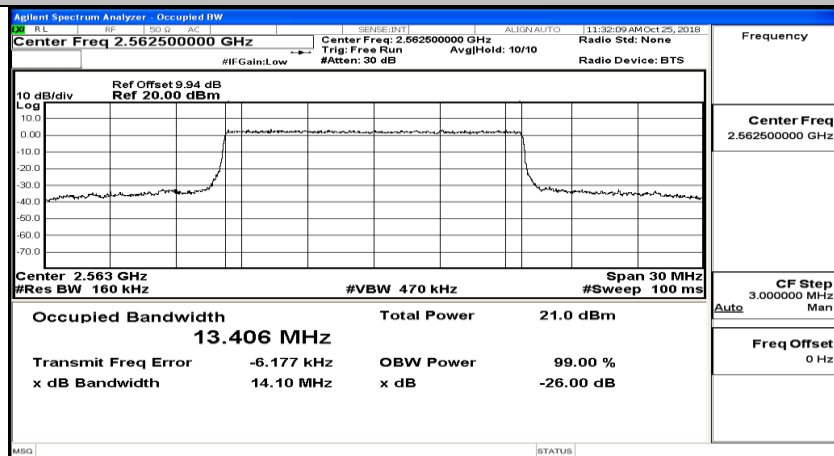
EBW & OBW Test Graph(s) (Channel Bandwidth:15 MHz)_LCH_16QAM



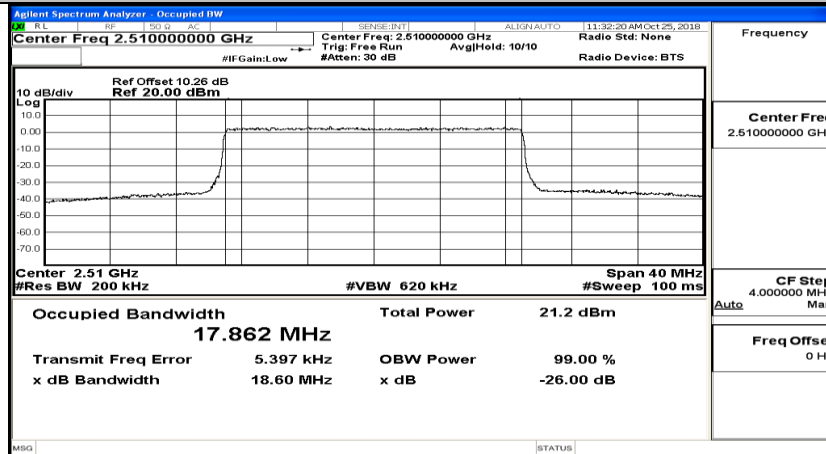
EBW & OBW Test Graph(s) (Channel Bandwidth:15 MHz)_MCH_16QAM



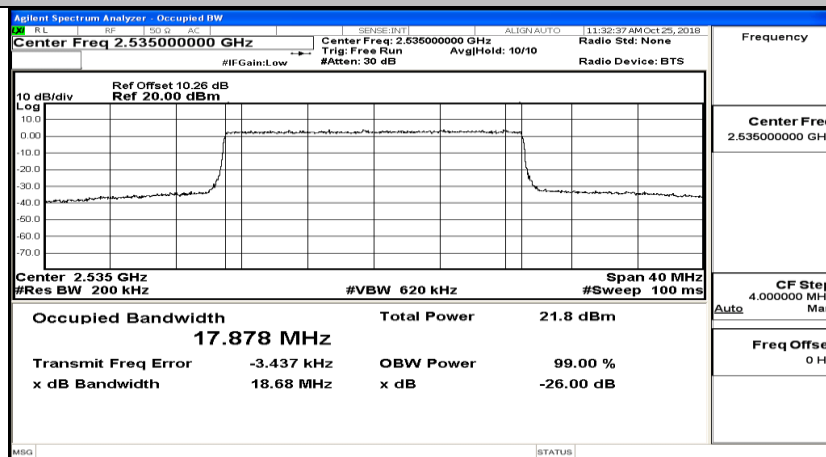
EBW & OBW Test Graph(s) (Channel Bandwidth:15 MHz)_HCH_16QAM



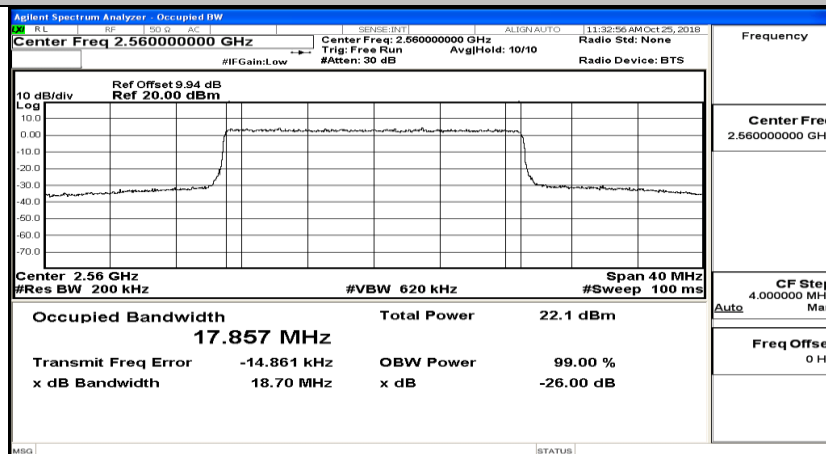
EBW & OBW Test Graph(s) (Channel Bandwidth:20 MHz)_LCH_QPSK



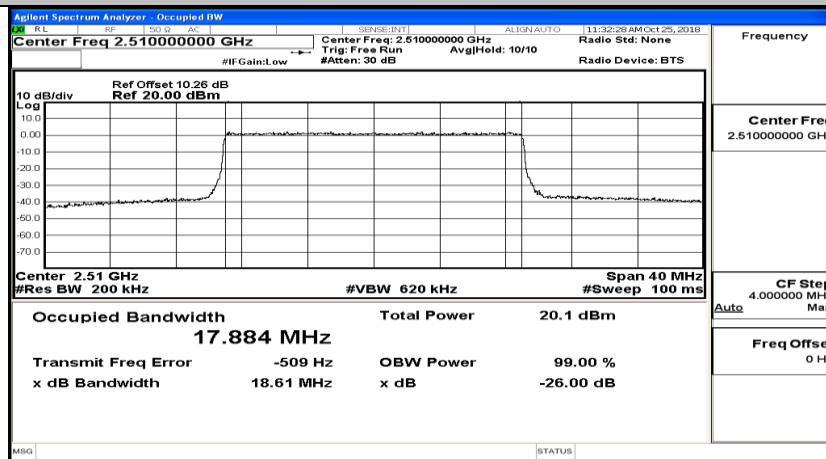
EBW & OBW Test Graph(s) (Channel Bandwidth:20 MHz)_MCH_QPSK



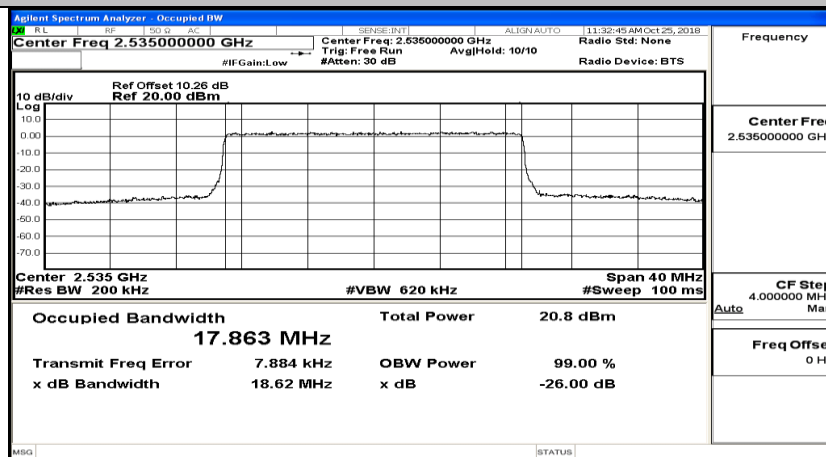
EBW & OBW Test Graph(s) (Channel Bandwidth:20 MHz)_HCH_QPSK



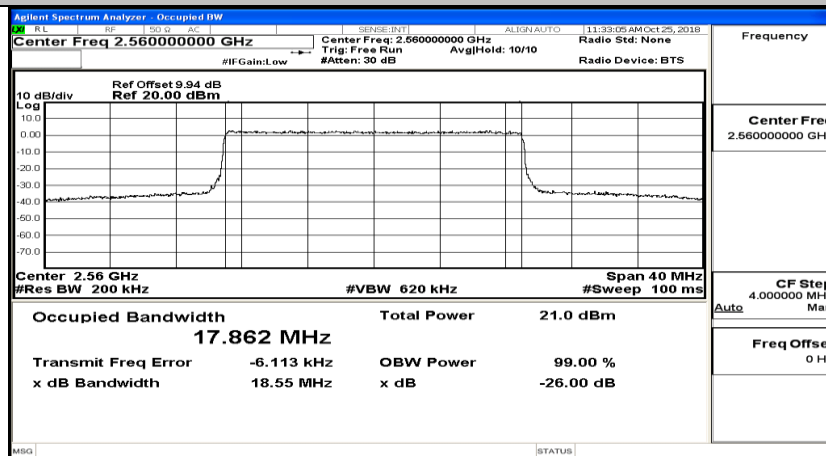
EBW & OBW Test Graph(s) (Channel Bandwidth:20 MHz)_LCH_16QAM



EBW & OBW Test Graph(s) (Channel Bandwidth:20 MHz)_MCH_16QAM

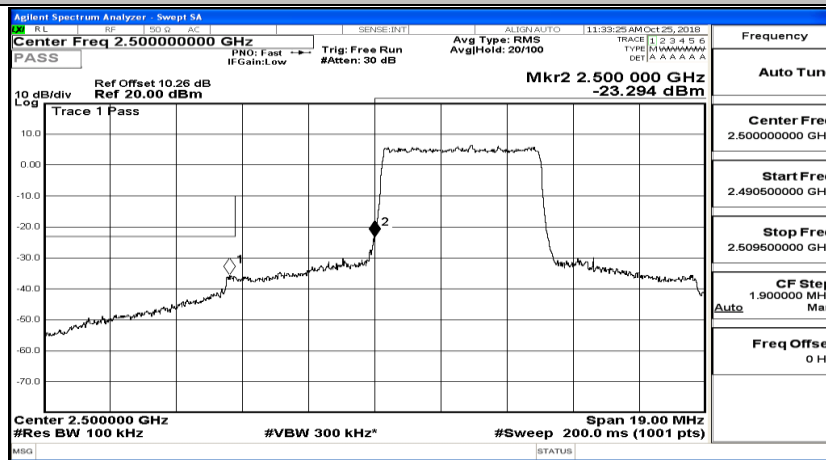


EBW & OBW Test Graph(s) (Channel Bandwidth:20 MHz)_HCH_16QAM

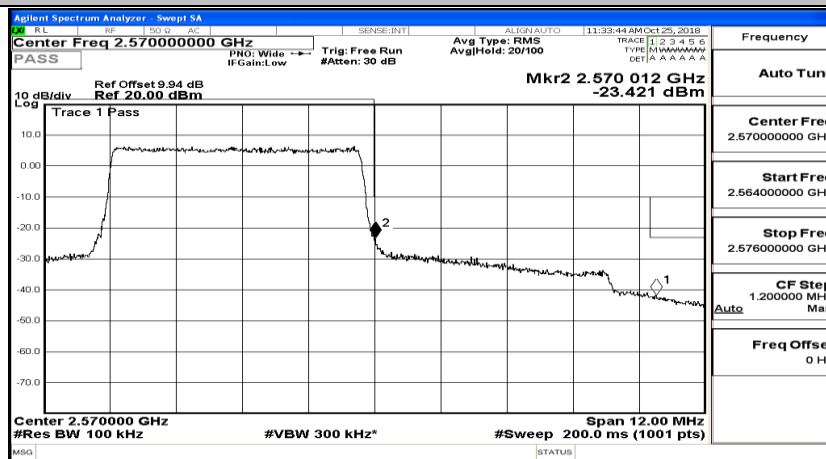


G.4 Band Edge

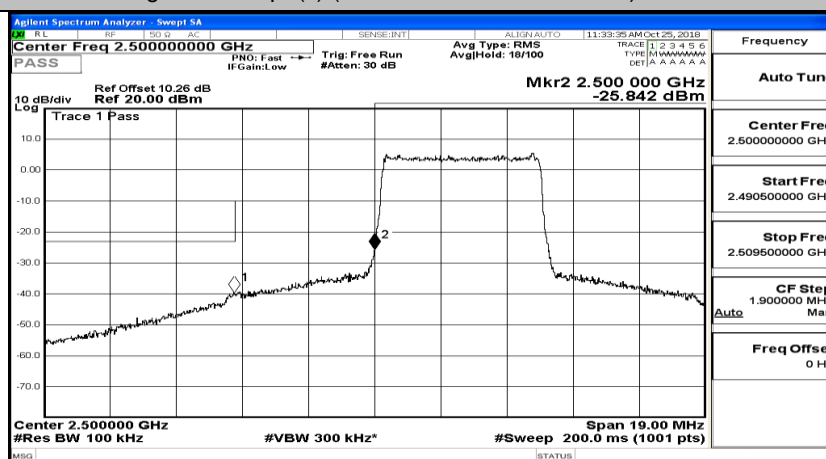
Band Edge Test Graph(s) (Channel Bandwidth: 5 MHz)_LCH_QPSK



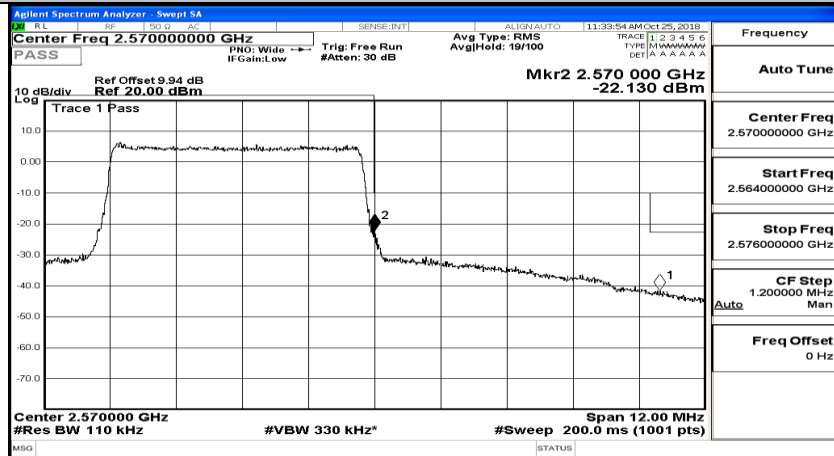
Band Edge Test Graph(s) (Channel Bandwidth: 5 MHz)_HCH_QPSK



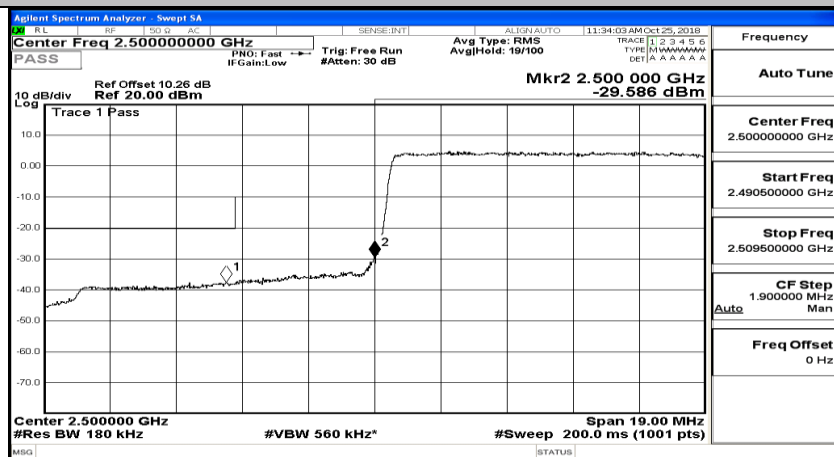
Band Edge Test Graph(s) (Channel Bandwidth: 5 MHz)_LCH_16QAM



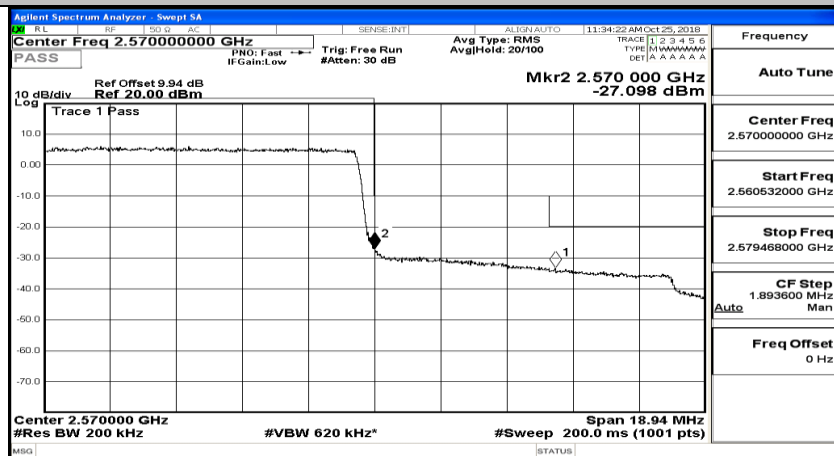
Band Edge Test Graph(s) (Channel Bandwidth: 5 MHz)_HCH_16QAM



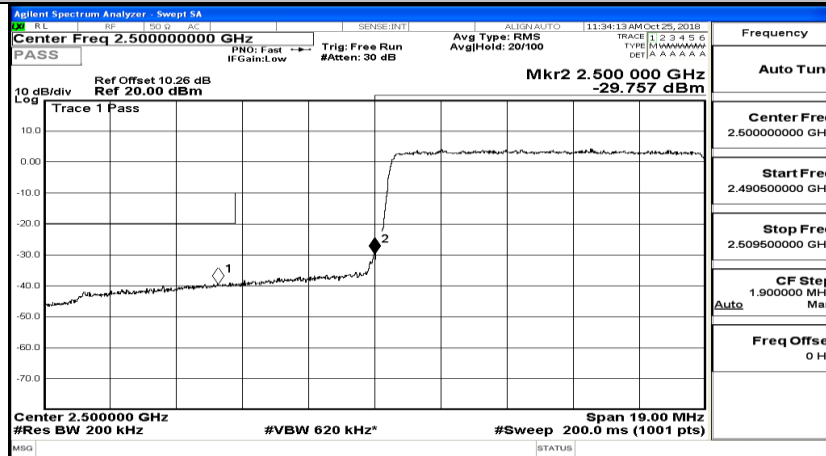
Band Edge Test Graph(s) (Channel Bandwidth: 10 MHz)_LCH_QPSK



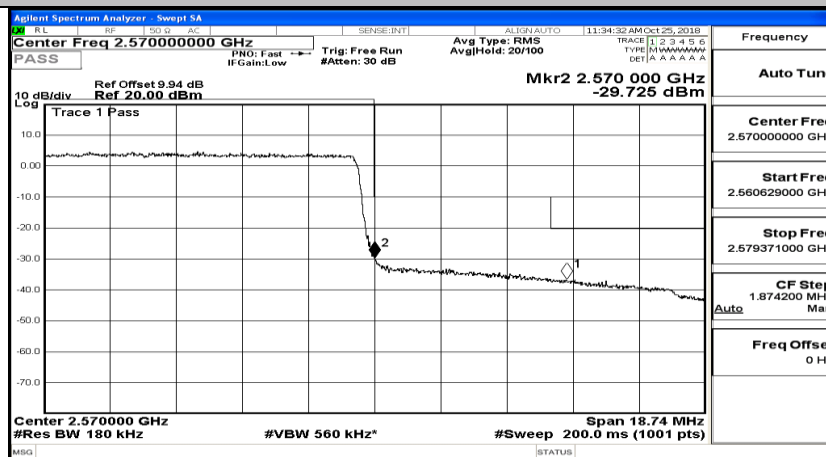
Band Edge Test Graph(s) (Channel Bandwidth: 10 MHz)_HCH_QPSK



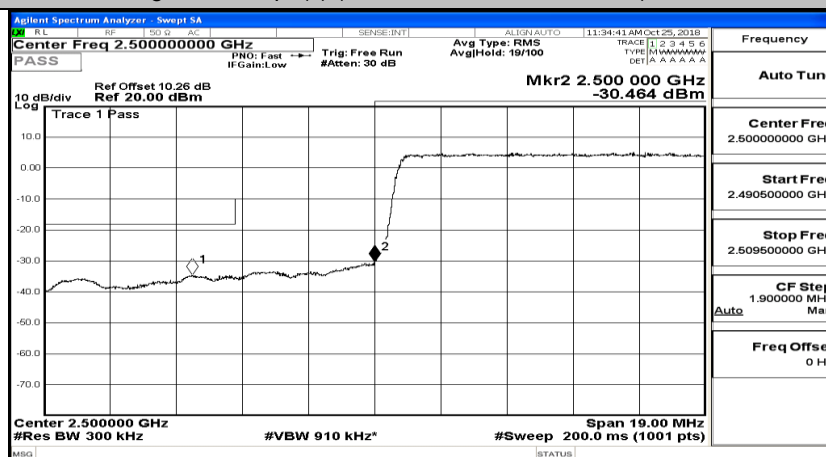
Band Edge Test Graph(s) (Channel Bandwidth: 10 MHz)_LCH_16QAM



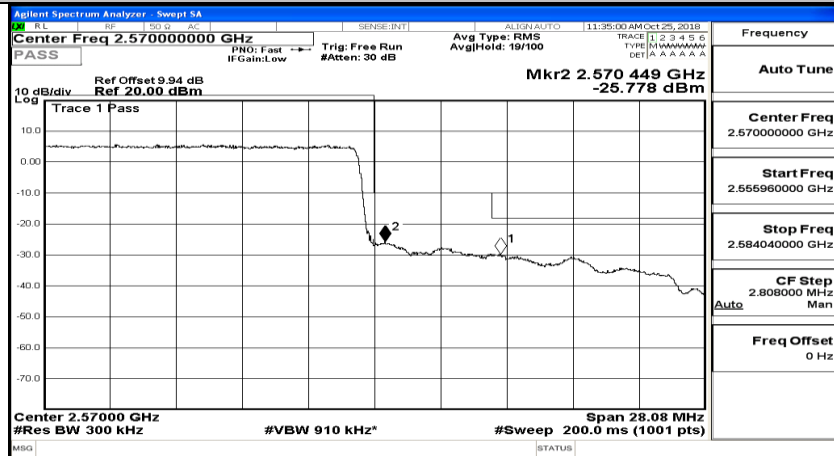
Band Edge Test Graph(s) (Channel Bandwidth: 10 MHz)_HCH_16QAM



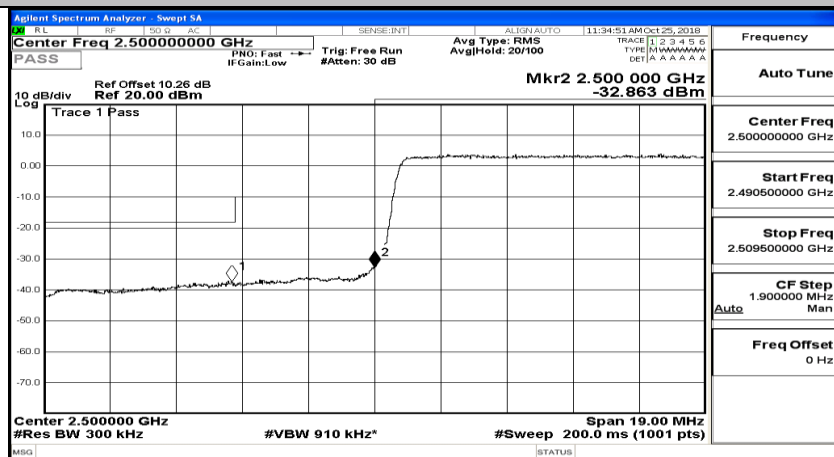
Band Edge Test Graph(s) (Channel Bandwidth:15 MHz)_LCH_QPSK



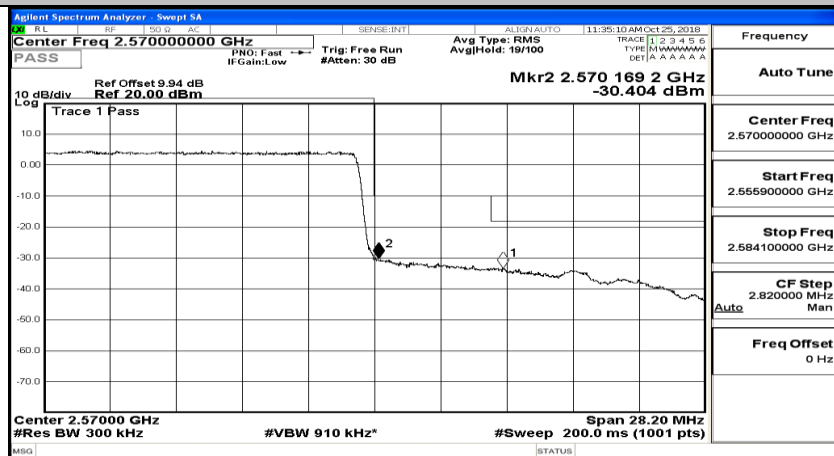
Band Edge Test Graph(s) (Channel Bandwidth:15 MHz)_HCH_QPSK



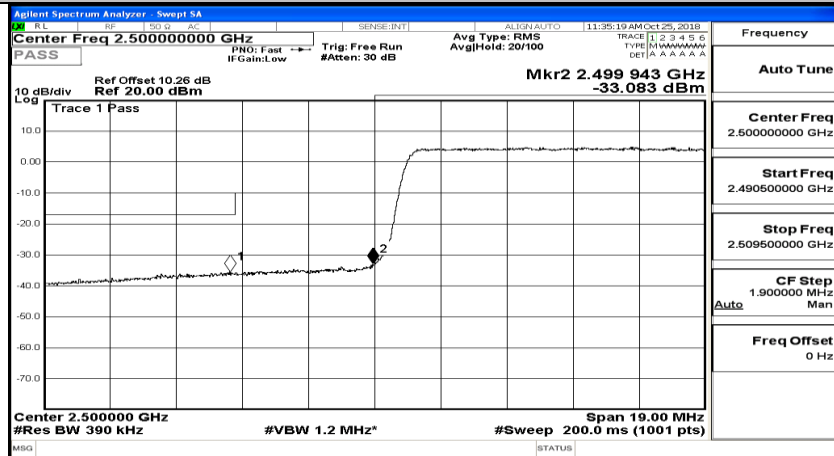
Band Edge Test Graph(s) (Channel Bandwidth:15 MHz)_LCH_16QAM



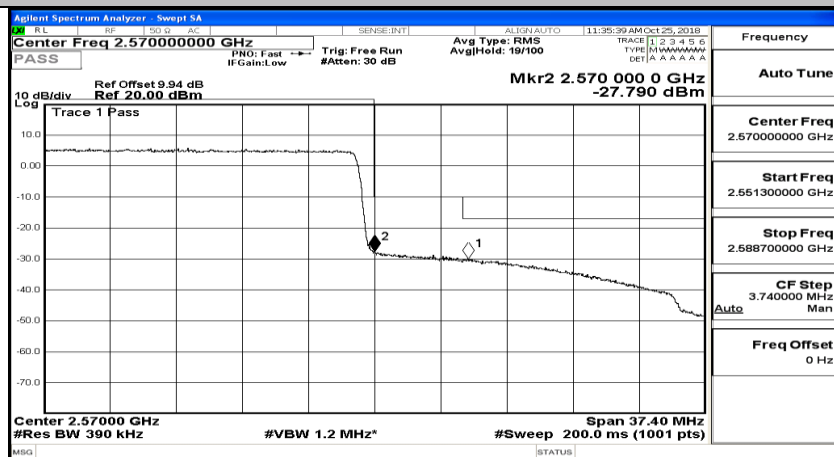
Band Edge Test Graph(s) (Channel Bandwidth:15 MHz)_HCH_16QAM



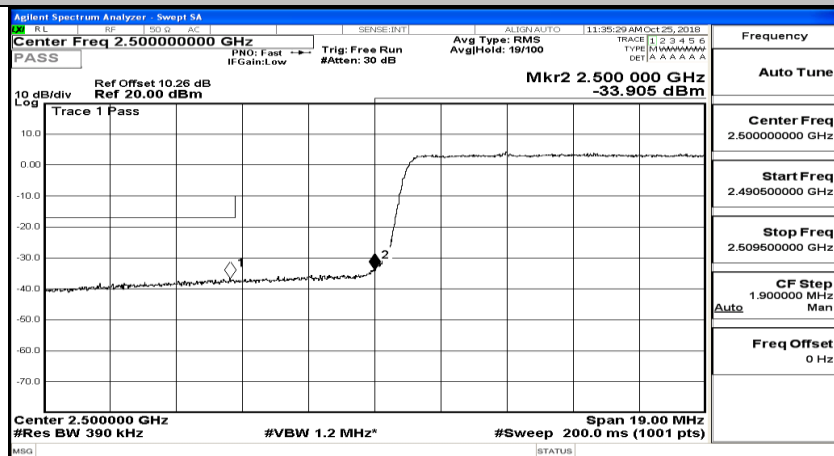
Band Edge Test Graph(s) (Channel Bandwidth:20 MHz)_LCH_QPSK



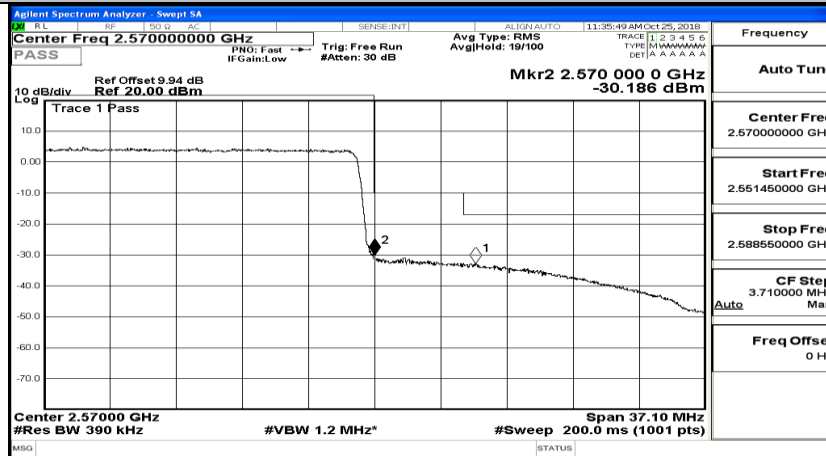
Band Edge Test Graph(s) (Channel Bandwidth:20 MHz)_HCH_QPSK



Band Edge Test Graph(s) (Channel Bandwidth:20 MHz)_LCH_16QAM

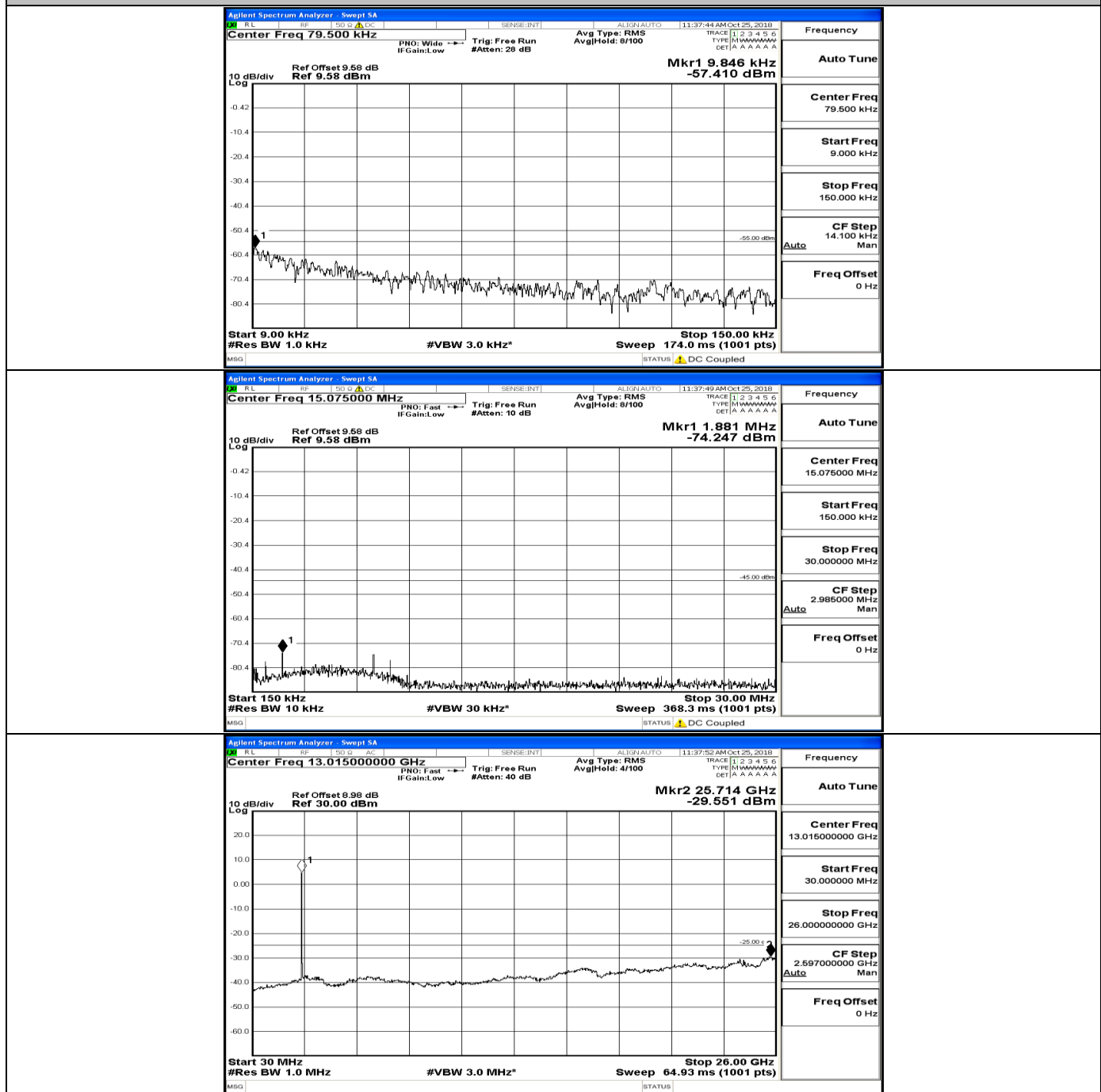


Band Edge Test Graph(s) (Channel Bandwidth:20 MHz)_HCH_16QAM

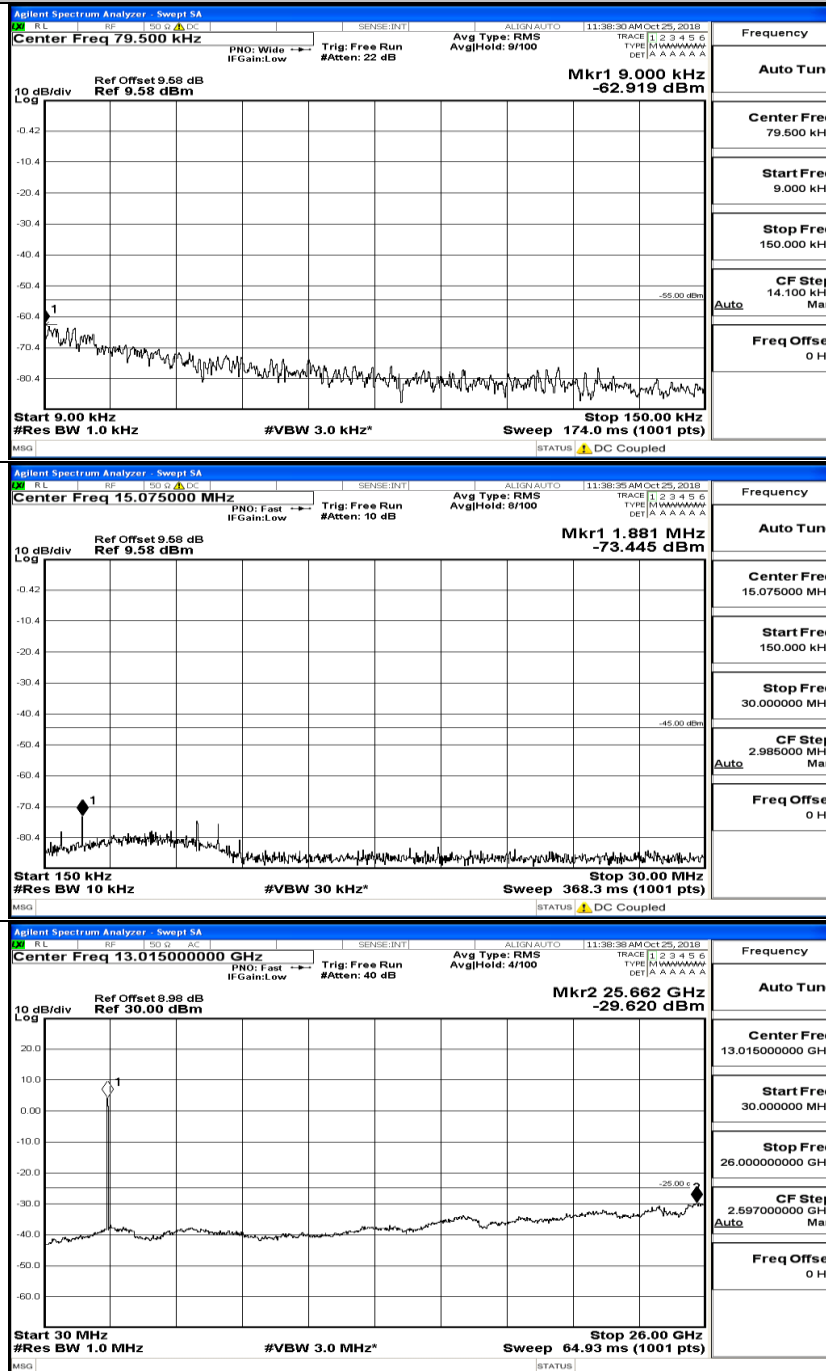


G.5 Conducted Spurious Emission

CSE Test Graph(s) (Channel Bandwidth: 10 MHz)_LCH_QPSK



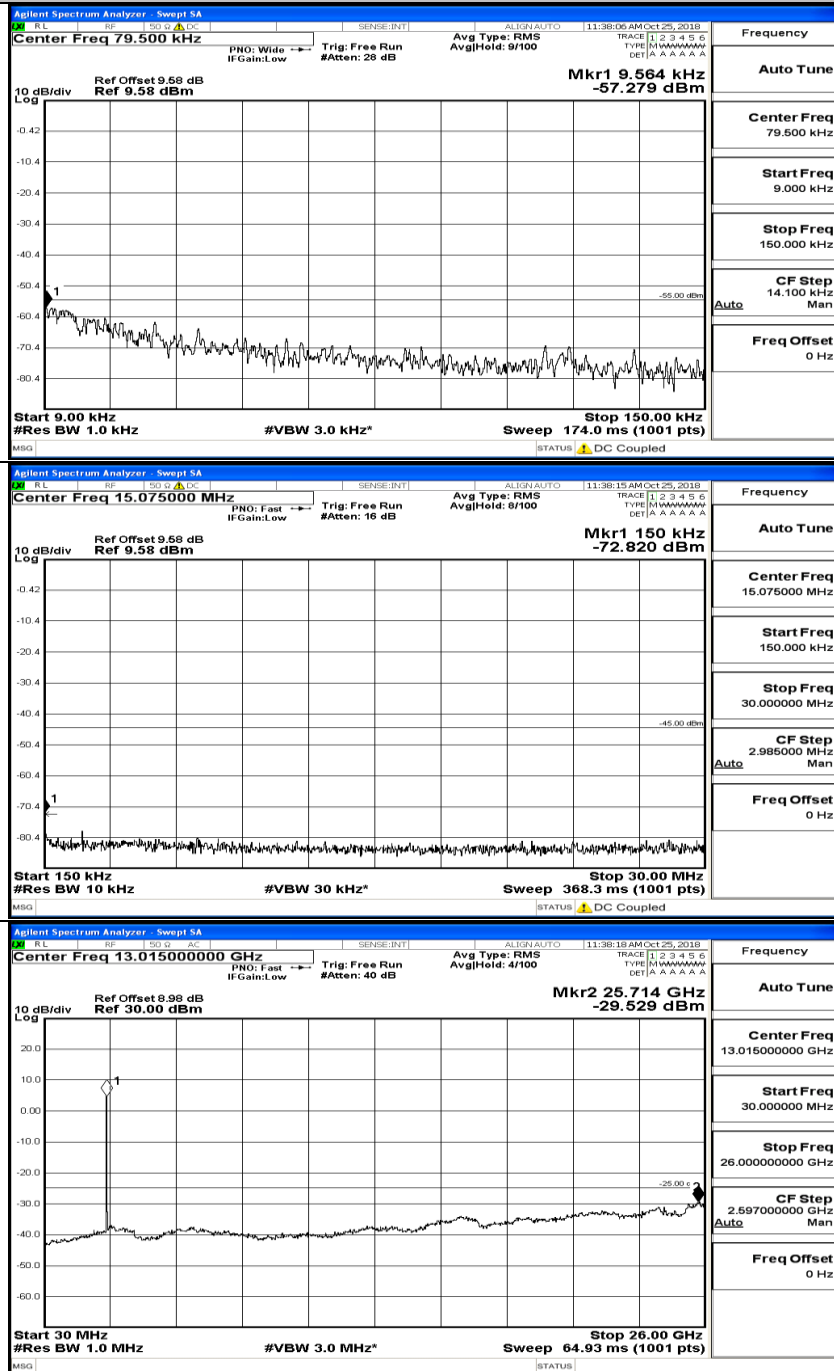
CSE Test Graph(s) (Channel Bandwidth: 10 MHz)_MCH_QPSK



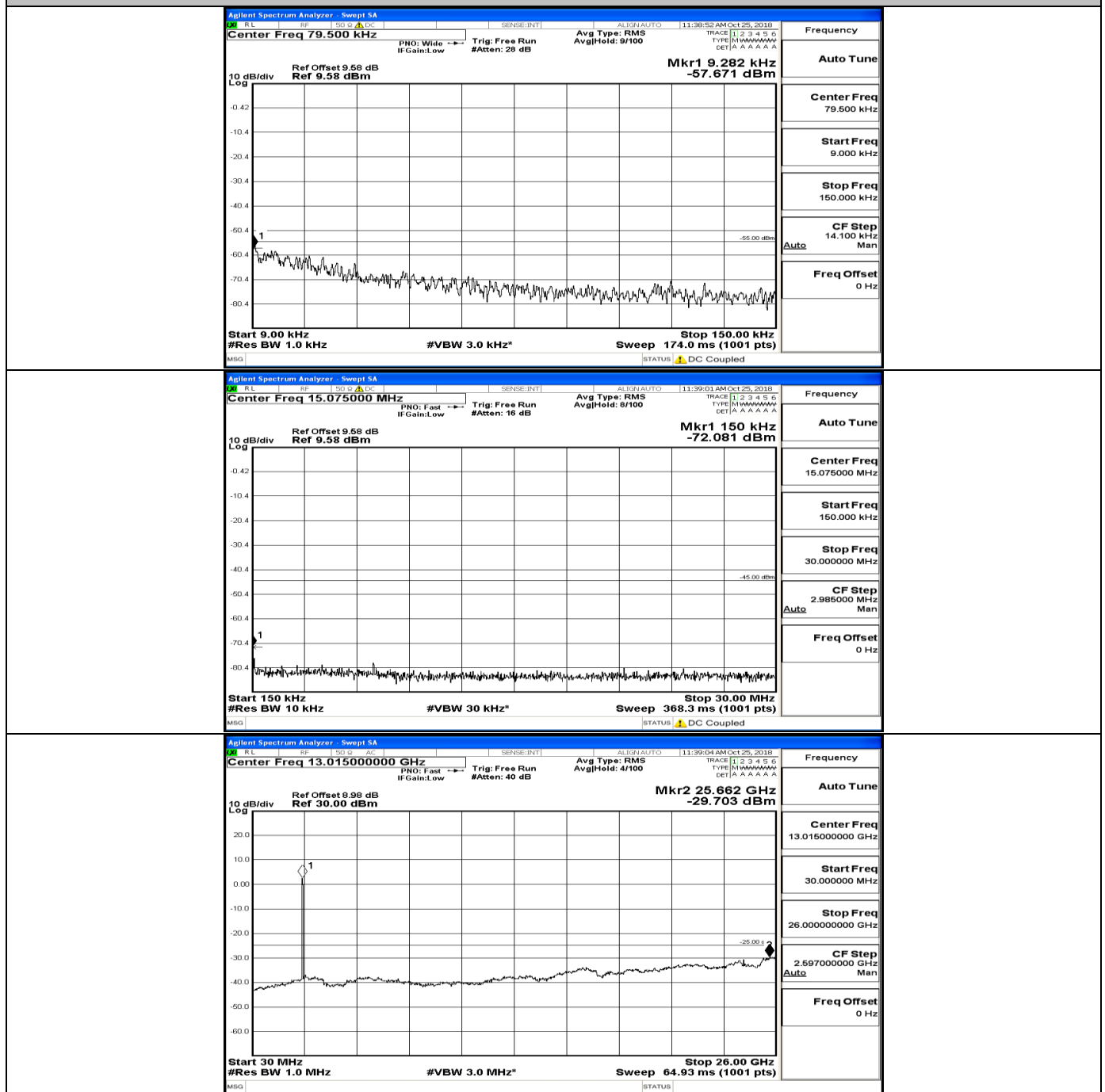
CSE Test Graph(s) (Channel Bandwidth: 10 MHz)_HCH_QPSK



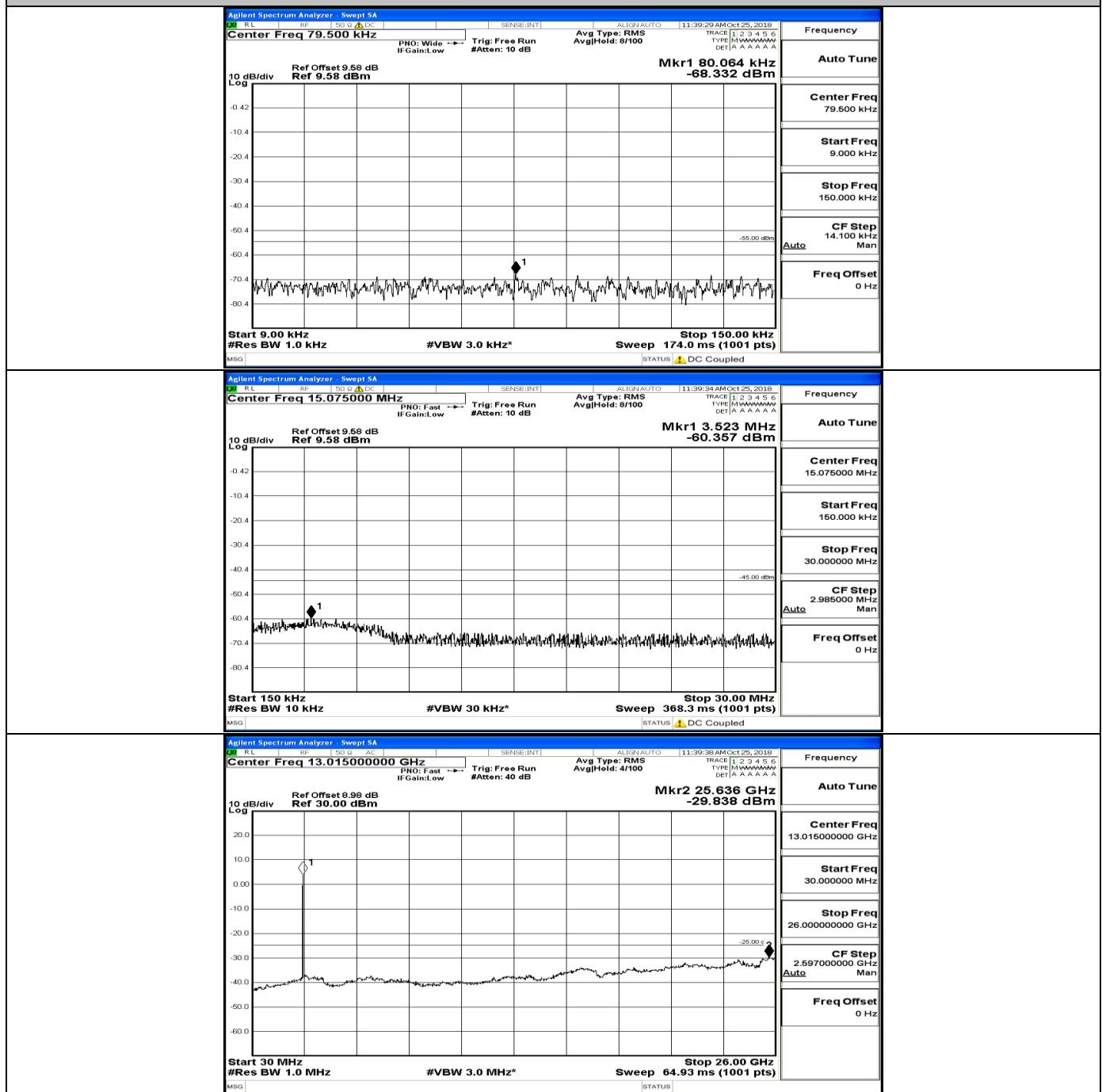
CSE Test Graph(s) (Channel Bandwidth: 10 MHz)_LCH_16QAM



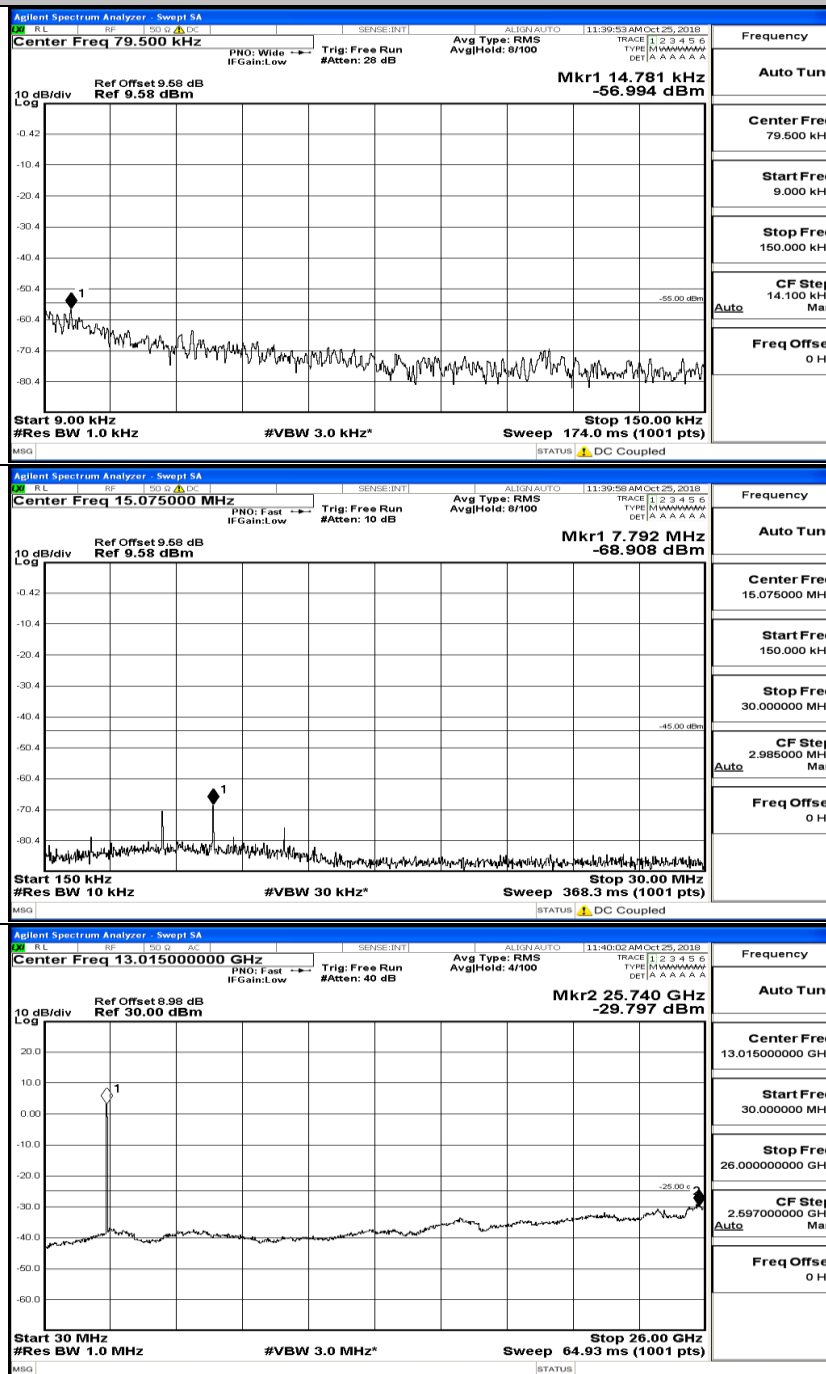
CSE Test Graph(s) (Channel Bandwidth: 10 MHz)_MCH_16QAM



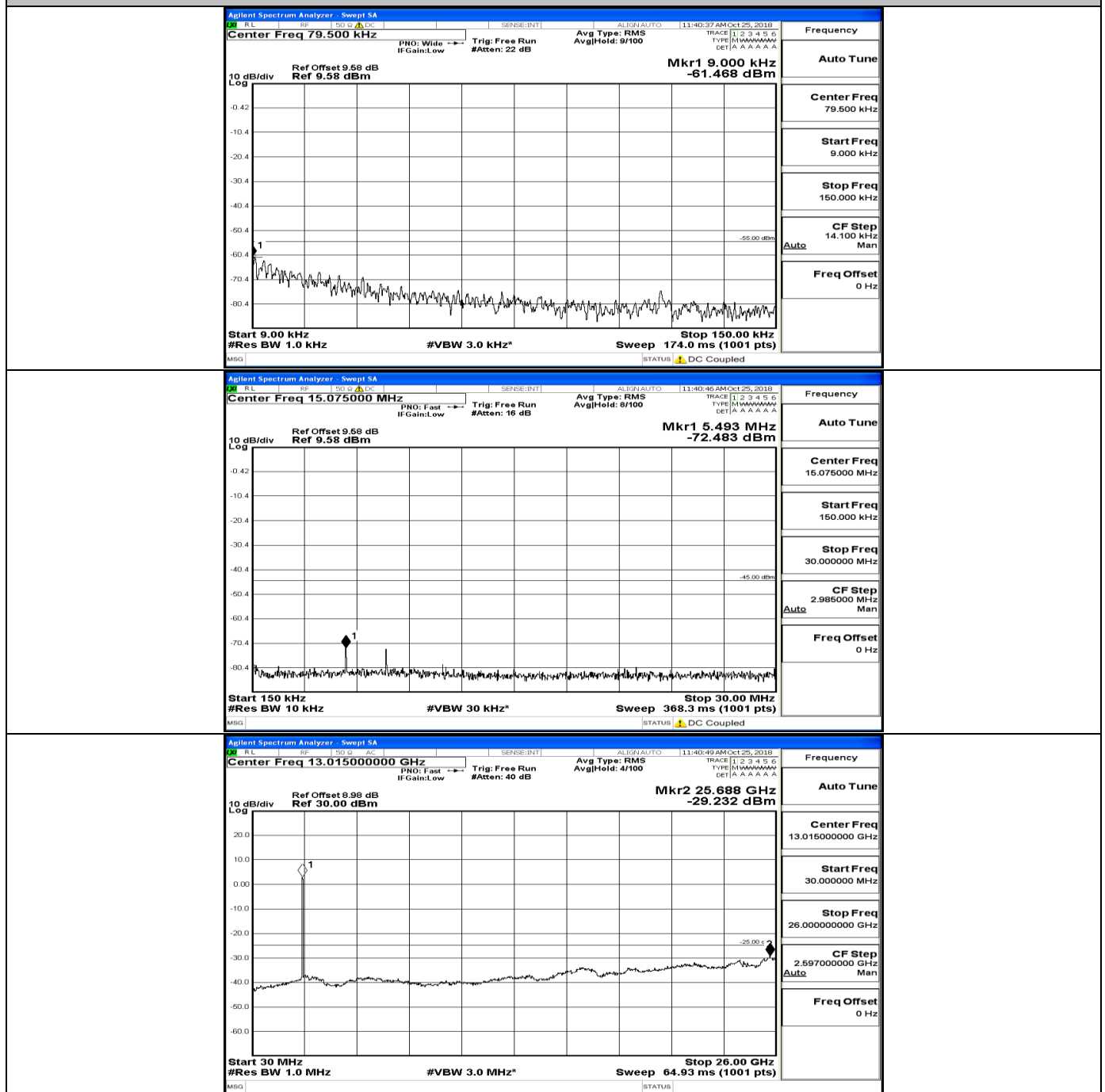
CSE Test Graph(s) (Channel Bandwidth: 10 MHz)_HCH_16QAM



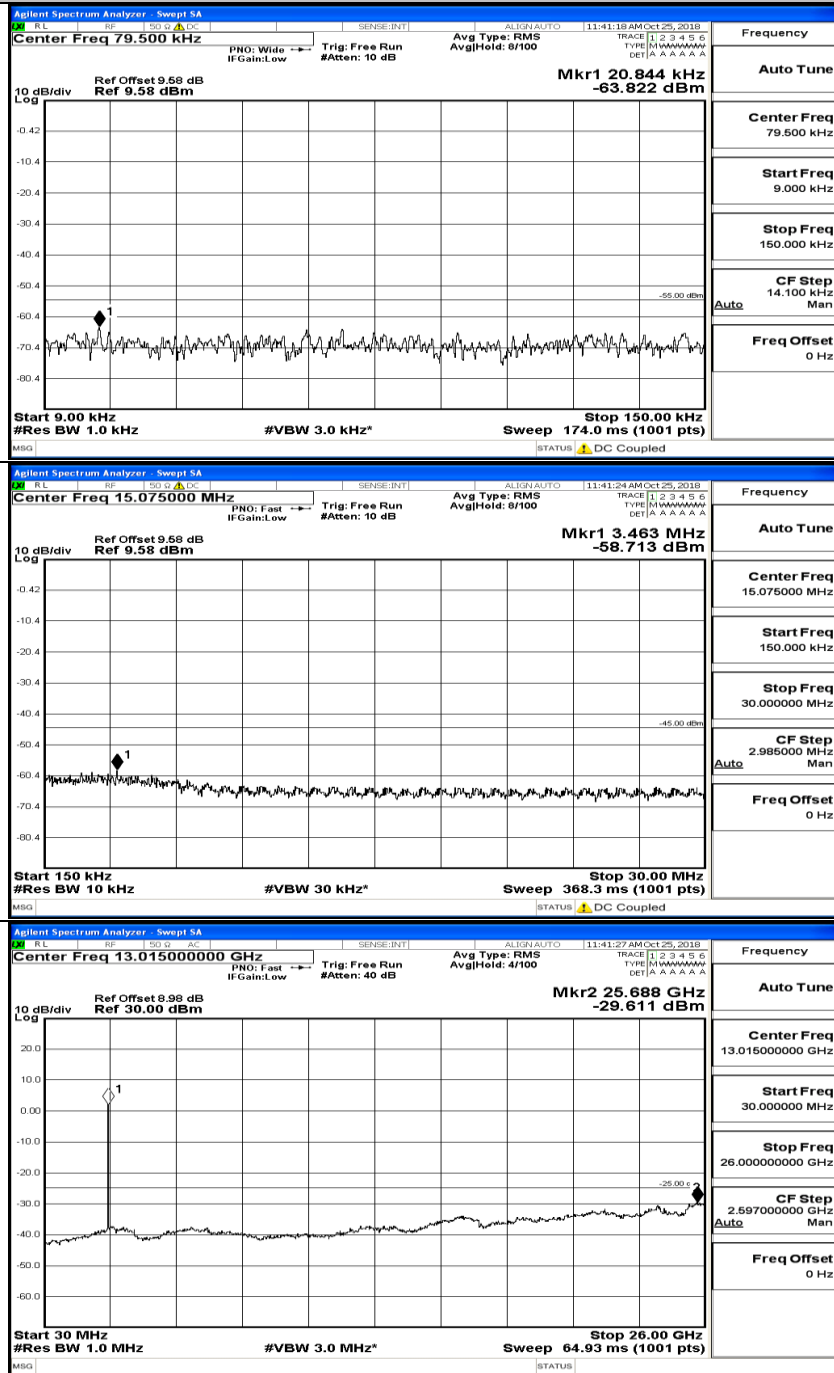
CSE Test Graph(s) (Channel Bandwidth:15 MHz)_LCH_QPSK



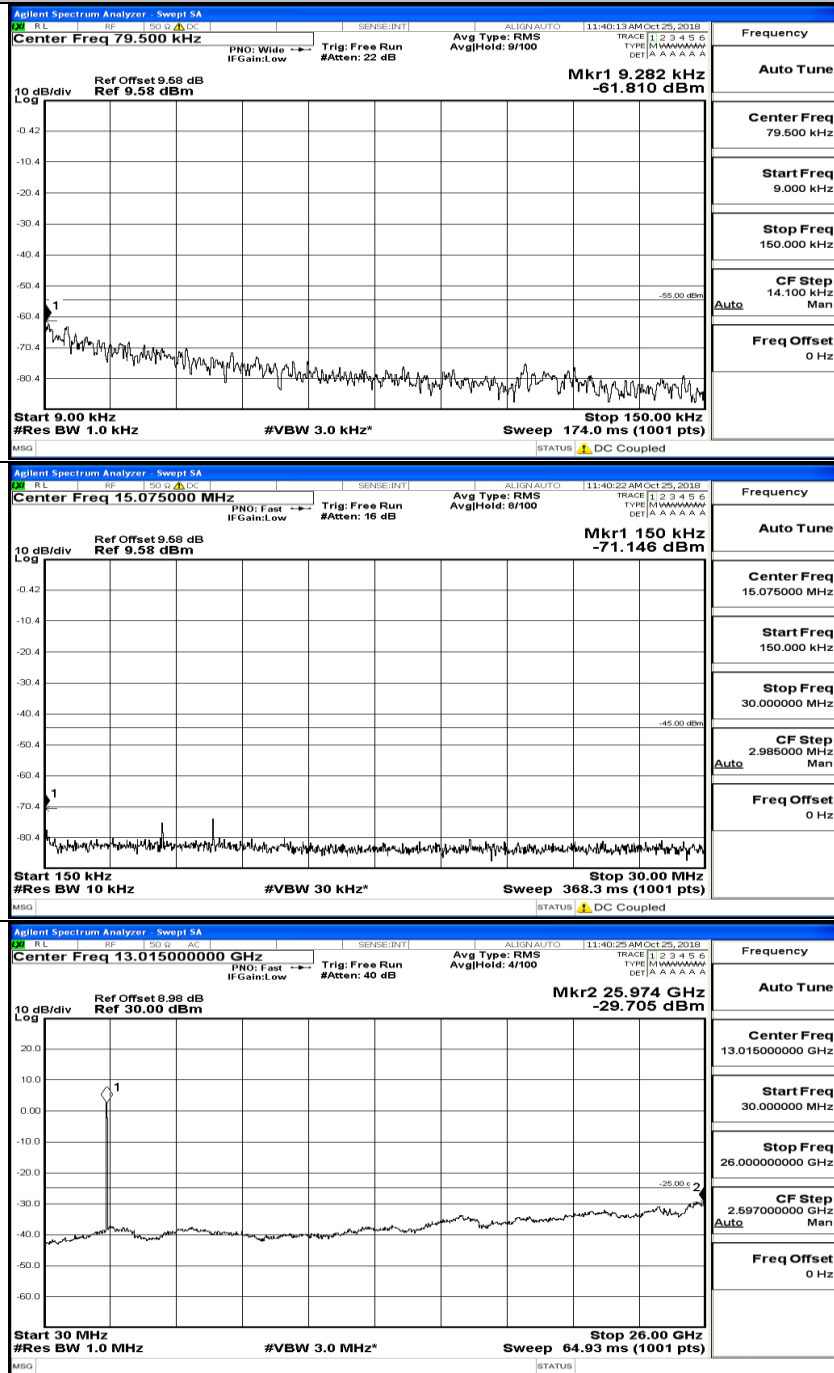
CSE Test Graph(s) (Channel Bandwidth:15 MHz)_MCH_QPSK



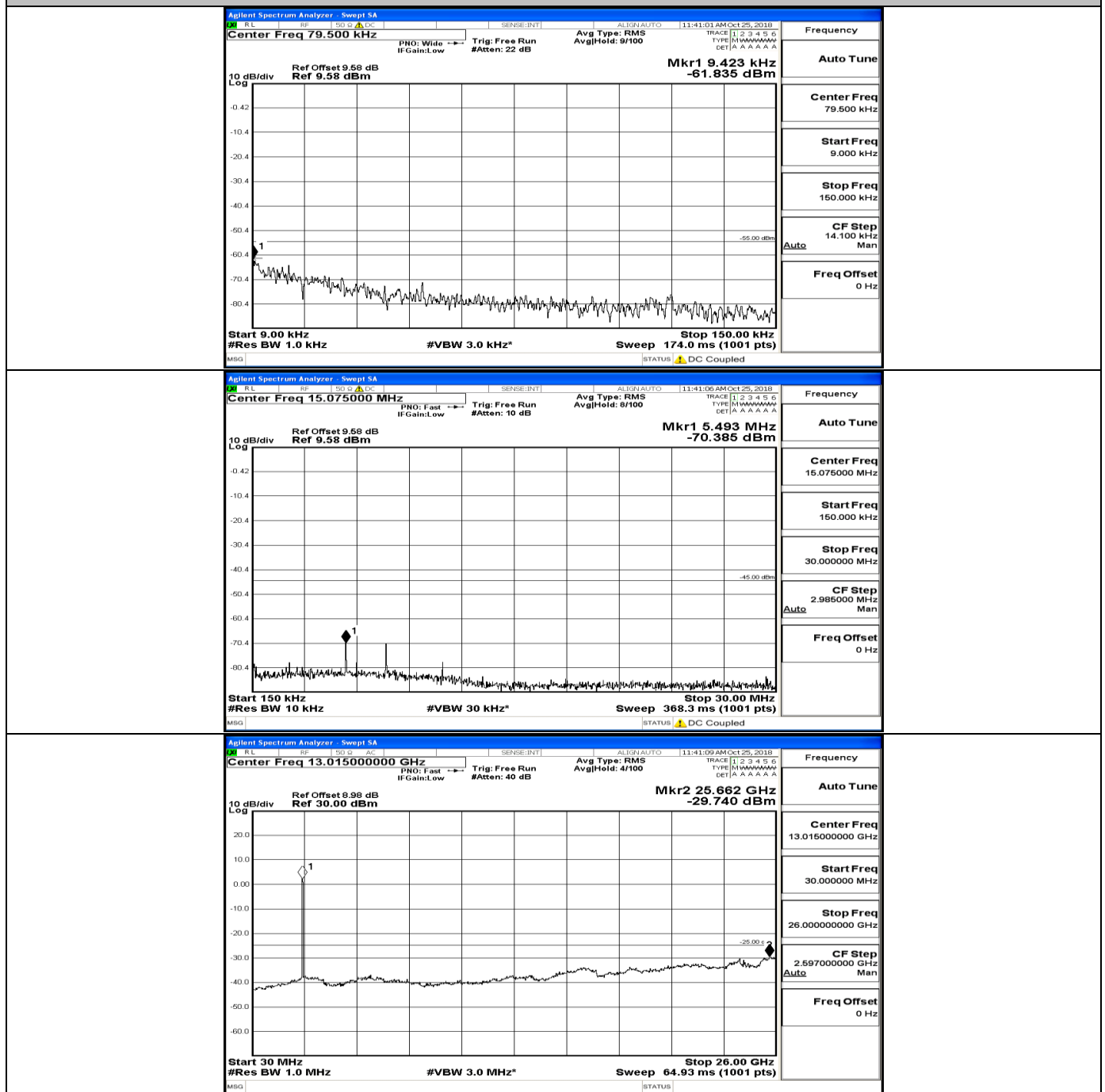
CSE Test Graph(s) (Channel Bandwidth:15 MHz)_HCH_QPSK



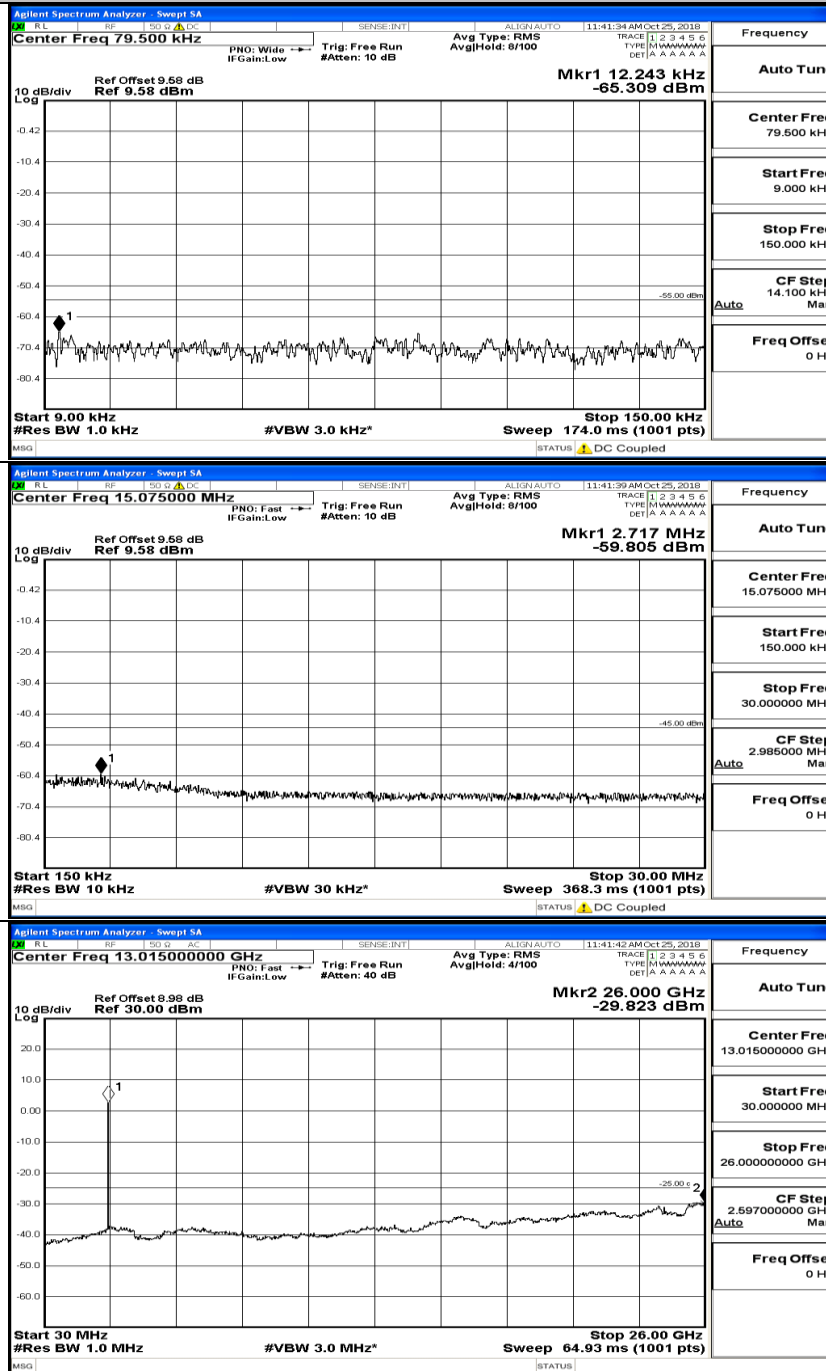
CSE Test Graph(s) (Channel Bandwidth:15 MHz)_LCH_16QAM



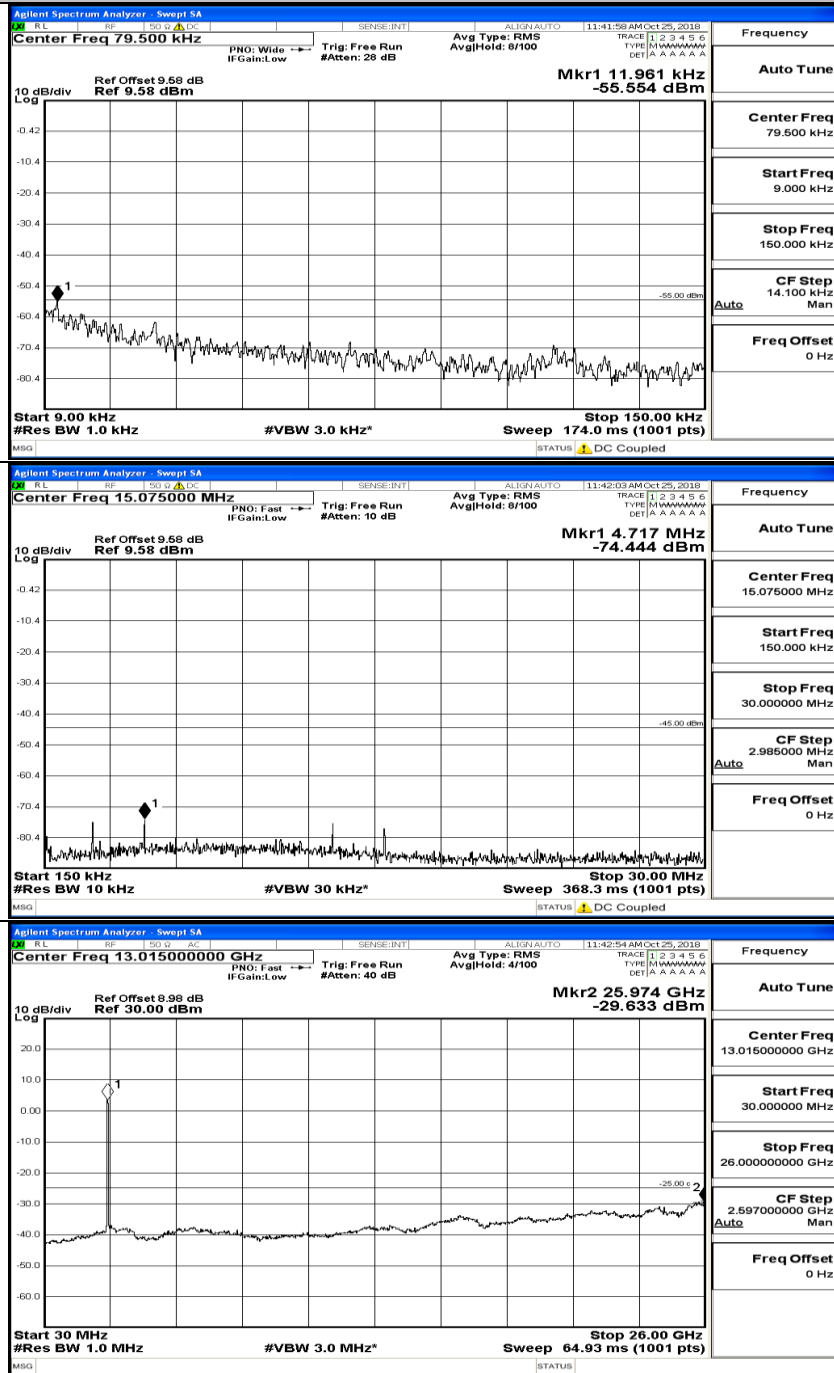
CSE Test Graph(s) (Channel Bandwidth:15 MHz)_MCH_16QAM



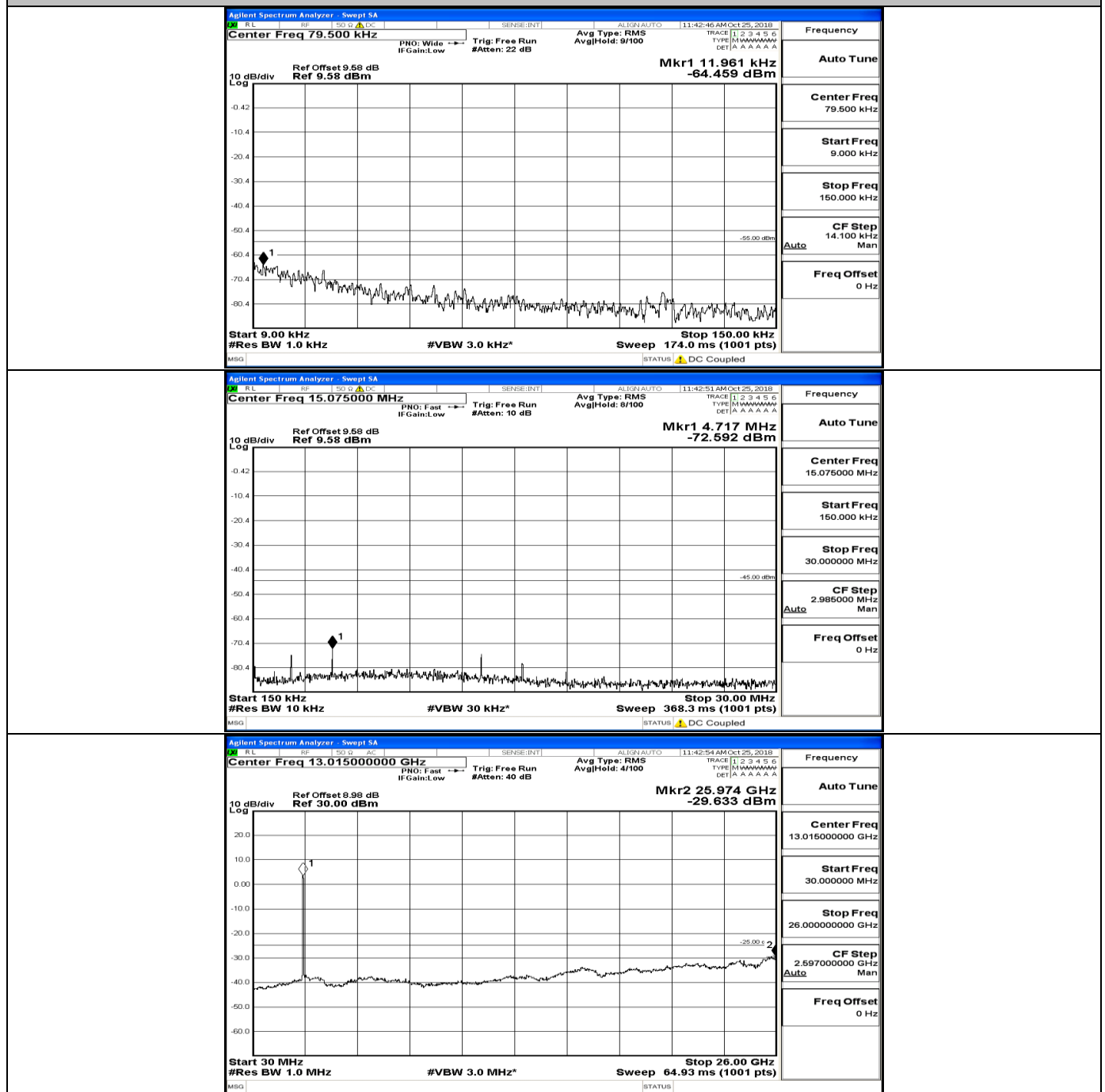
CSE Test Graph(s) (Channel Bandwidth:15 MHz)_HCH_16QAM



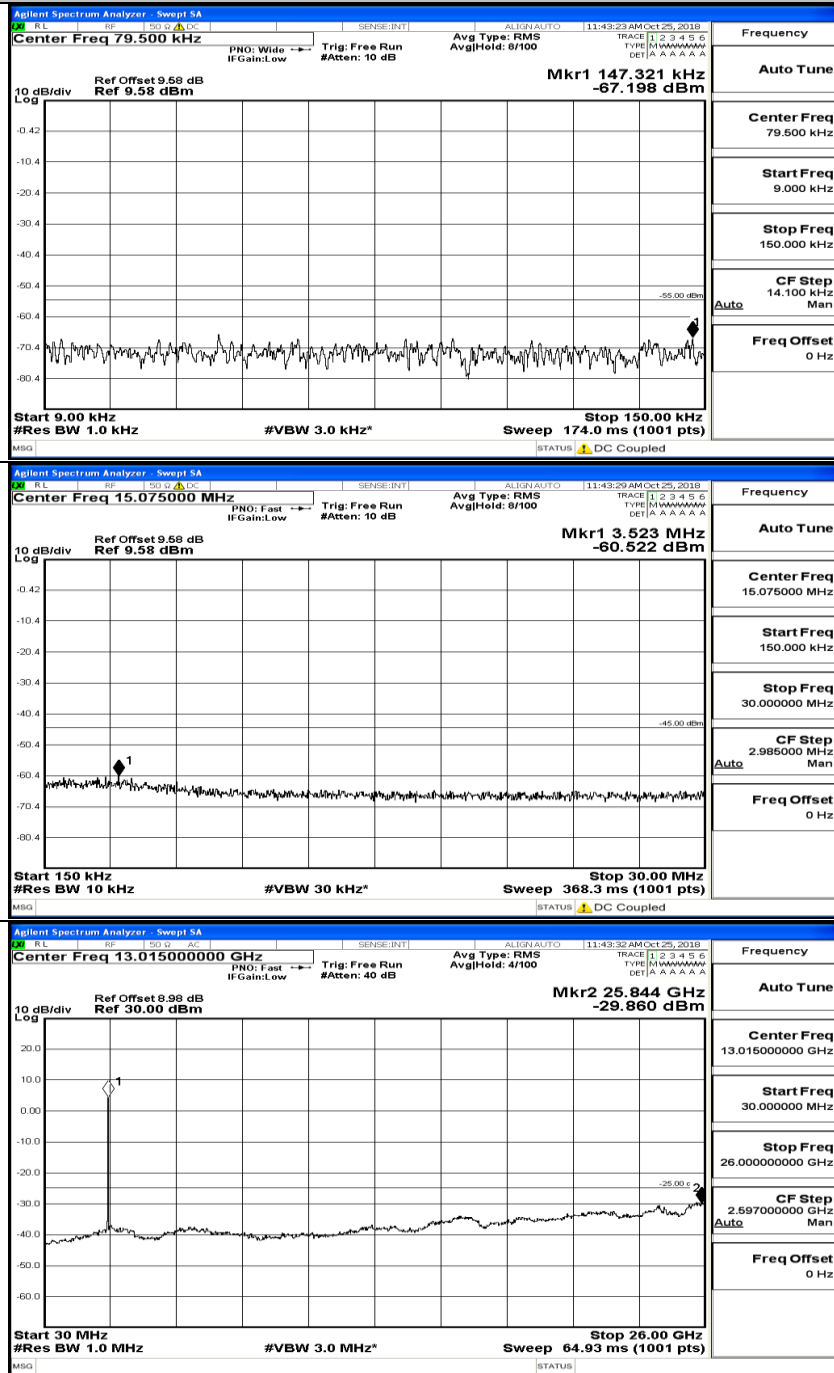
CSE Test Graph(s) (Channel Bandwidth:20 MHz)_LCH_QPSK



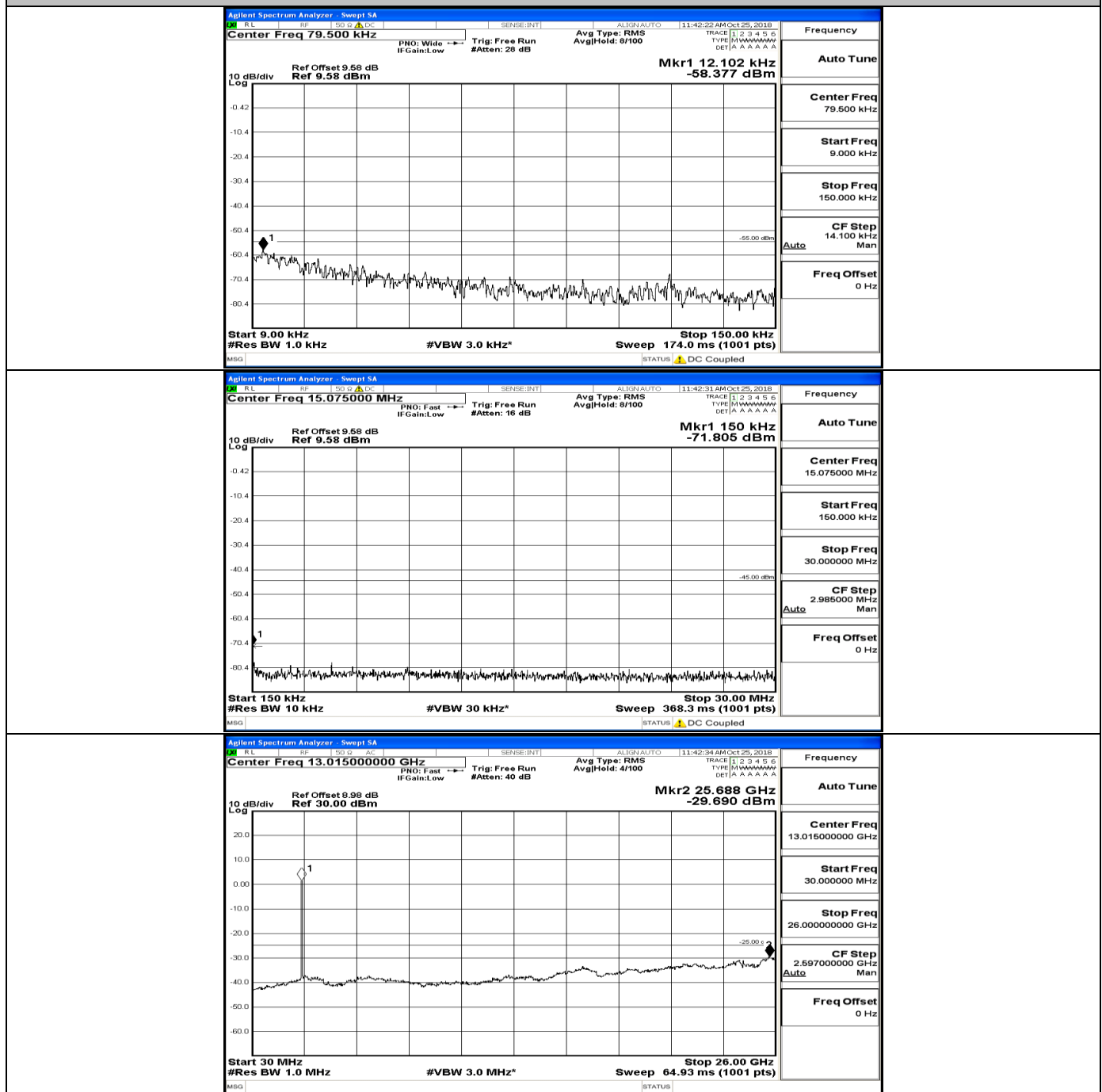
CSE Test Graph(s) (Channel Bandwidth:20 MHz)_MCH_QPSK



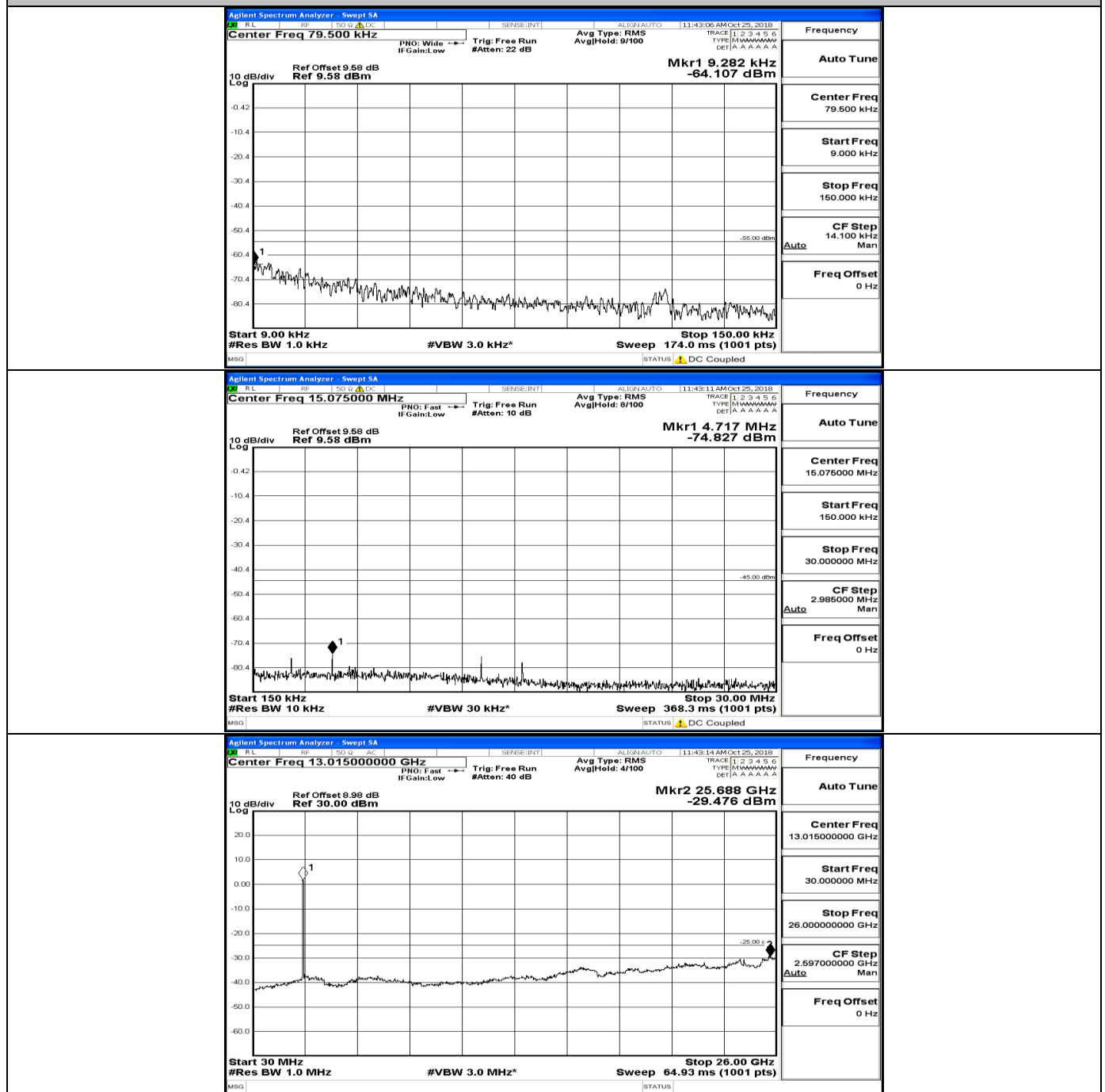
CSE Test Graph(s) (Channel Bandwidth:20 MHz)_HCH_QPSK



CSE Test Graph(s) (Channel Bandwidth:20 MHz)_LCH_16QAM



CSE Test Graph(s) (Channel Bandwidth:20 MHz)_MCH_16QAM



CSE Test Graph(s) (Channel Bandwidth:20 MHz)_HCH_16QAM

