

Appendix for Band 40(2350-2360MHz)

Product Name: Rugged Phone

Model No: CM17XA

Appendix A: Average Power Output Data

Test Result

Channel Bandwidth: 5 MHz

| Modulation | Channel | RB Configuration | | Average Power [dBm] | Verdict |
|------------|---------|------------------|--------|---------------------|---------|
| | | Size | Offset | | |
| QPSK | LCH | 1 | 0 | 22.69 | PASS |
| | | 1 | 12 | 22.96 | PASS |
| | | 1 | 24 | 22.66 | PASS |
| | | 12 | 0 | 21.66 | PASS |
| | | 12 | 6 | 21.68 | PASS |
| | | 12 | 13 | 21.69 | PASS |
| | | 25 | 0 | 21.72 | PASS |
| | MCH | 1 | 0 | 22.66 | PASS |
| | | 1 | 12 | 22.94 | PASS |
| | | 1 | 24 | 22.63 | PASS |
| | | 12 | 0 | 21.63 | PASS |
| | | 12 | 6 | 21.66 | PASS |
| | | 12 | 13 | 21.66 | PASS |
| | | 25 | 0 | 21.67 | PASS |
| | HCH | 1 | 0 | 22.62 | PASS |
| | | 1 | 12 | 22.90 | PASS |
| | | 1 | 24 | 22.59 | PASS |
| | | 12 | 0 | 21.59 | PASS |
| | | 12 | 6 | 21.68 | PASS |
| | | 12 | 13 | 21.67 | PASS |
| | | 25 | 0 | 21.69 | PASS |
| 16QAM | LCH | 1 | 0 | 21.87 | PASS |
| | | 1 | 12 | 22.16 | PASS |
| | | 1 | 24 | 21.84 | PASS |
| | | 12 | 0 | 20.73 | PASS |
| | | 12 | 6 | 20.78 | PASS |
| | | 12 | 13 | 20.75 | PASS |
| | | 25 | 0 | 20.72 | PASS |
| | MCH | 1 | 0 | 22.00 | PASS |
| | | 1 | 12 | 22.26 | PASS |
| | | 1 | 24 | 21.99 | PASS |
| | | 12 | 0 | 20.74 | PASS |
| | | 12 | 6 | 20.77 | PASS |

| | | | | | |
|--|-----|----|----|-------|------|
| | | 12 | 13 | 20.77 | PASS |
| | | 25 | 0 | 20.67 | PASS |
| | HCH | 1 | 0 | 21.90 | PASS |
| | | 1 | 12 | 22.16 | PASS |
| | | 1 | 24 | 21.89 | PASS |
| | | 12 | 0 | 20.61 | PASS |
| | | 12 | 6 | 20.68 | PASS |
| | | 12 | 13 | 20.70 | PASS |
| | | 25 | 0 | 20.72 | PASS |

Channel Bandwidth: 10 MHz

| Modulation | Channel | RB Configuration | | Average Power [dBm] | Verdict |
|------------|---------|------------------|--------|---------------------|---------|
| | | Size | Offset | | |
| QPSK | MCH | 1 | 0 | 22.99 | PASS |
| | | 1 | 24 | 22.79 | PASS |
| | | 1 | 49 | 22.75 | PASS |
| | | 25 | 0 | 21.76 | PASS |
| | | 25 | 12 | 21.77 | PASS |
| | | 25 | 25 | 21.84 | PASS |
| | | 50 | 0 | 21.79 | PASS |
| 16QAM | MCH | 1 | 0 | 22.05 | PASS |
| | | 1 | 24 | 22.05 | PASS |
| | | 1 | 49 | 21.96 | PASS |
| | | 25 | 0 | 20.75 | PASS |
| | | 25 | 12 | 20.76 | PASS |
| | | 25 | 25 | 20.82 | PASS |
| | | 50 | 0 | 20.77 | PASS |

Appendix B: Peak-to-Average Ratio

Test Result

Channel Bandwidth: 5 MHz

| Channel Bandwidth: 5 MHz | | | | | | |
|--------------------------|---------|------------------|--------|-------------------------------|---------------|---------|
| Modulation | Channel | RB Configuration | | Peak-to-Average Ratio [dB] | Limit [dB] | Verdict |
| | | Size | Offset | | | |
| QPSK | LCH | 1 | 0 | 10.31 | <13 | PASS |
| | | 1 | 12 | 11.44 | <13 | PASS |
| | | 1 | 24 | 8.8 | <13 | PASS |
| | | 12 | 0 | 9.73 | <13 | PASS |
| | | 12 | 6 | 8.78 | <13 | PASS |
| | | 12 | 13 | 9.37 | <13 | PASS |
| | | 25 | 0 | 12.18 | <13 | PASS |
| | MCH | 1 | 0 | 8.7 | <13 | PASS |
| | | 1 | 12 | 6.27 | <13 | PASS |
| | | 1 | 24 | 8.4 | <13 | PASS |
| | | 12 | 6 | 10.38 | <13 | PASS |
| | | 12 | 13 | 7.95 | <13 | PASS |
| | | 25 | 0 | 9.82 | <13 | PASS |
| | HCH | 1 | 0 | 10.59 | <13 | PASS |
| | | 1 | 12 | 10.92 | <13 | PASS |
| | | 1 | 24 | 12.97 | <13 | PASS |
| | | 12 | 0 | 9.29 | <13 | PASS |
| | | 12 | 6 | 11.35 | <13 | PASS |
| | | 12 | 13 | 8.09 | <13 | PASS |
| | | 25 | 0 | 9.65 | <13 | PASS |
| | 16QAM | LCH | 1 | 0 | 9.41 | <13 |
| 1 | | | 12 | 10.59 | <13 | PASS |
| 1 | | | 24 | 11.36 | <13 | PASS |
| 12 | | | 0 | 10.04 | <13 | PASS |
| 12 | | | 6 | 9.7 | <13 | PASS |
| 12 | | | 13 | 9.2 | <13 | PASS |
| 25 | | | 0 | 12.34 | <13 | PASS |
| MCH | | 1 | 0 | 11.35 | <13 | PASS |
| | | 1 | 12 | 8.98 | <13 | PASS |
| | | 1 | 24 | 11.12 | <13 | PASS |
| | | 12 | 6 | 10.27 | <13 | PASS |

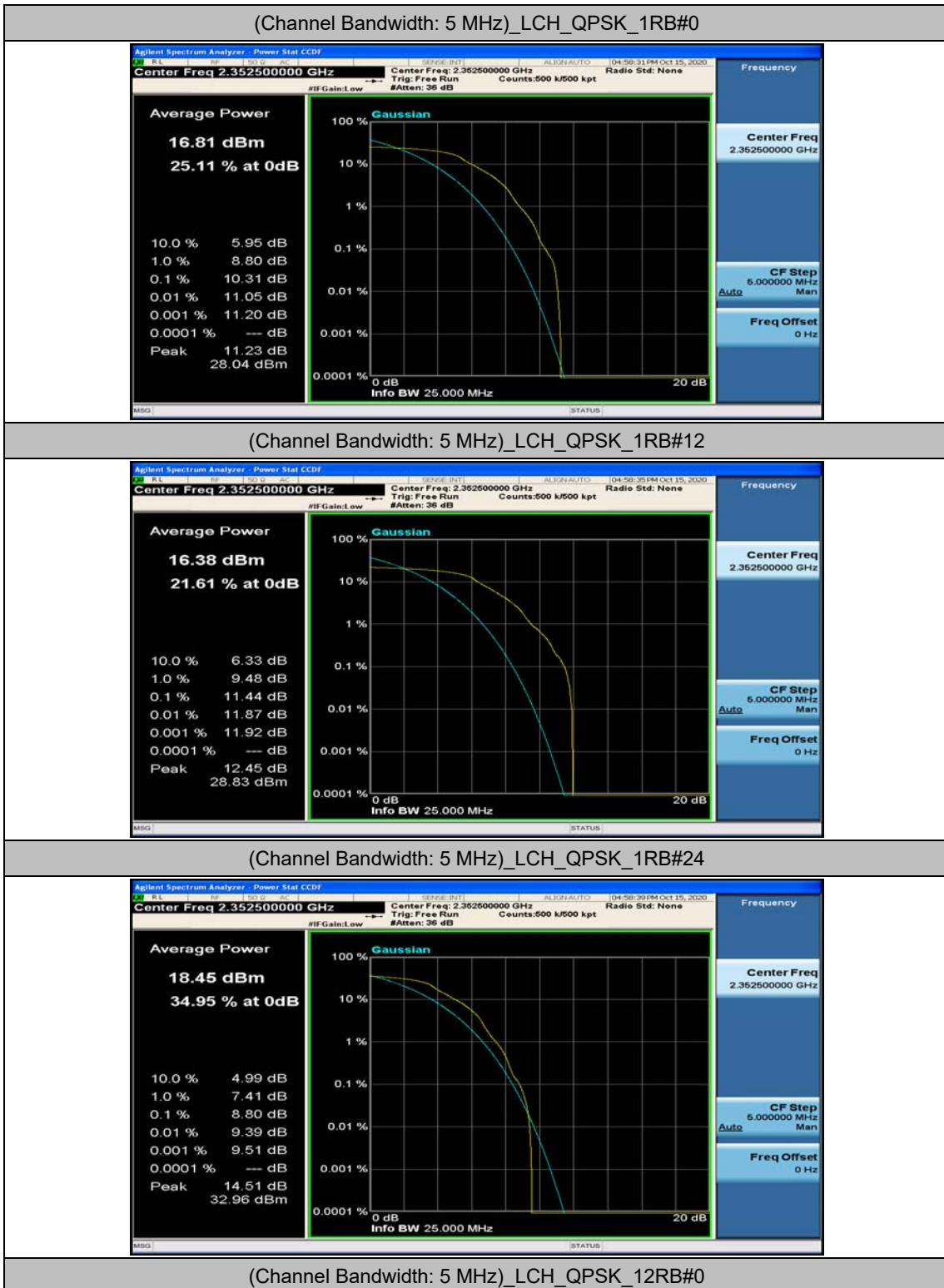
| | | | | | | |
|--|-----|----|----|-------|-----|------|
| | | 12 | 13 | 9.81 | <13 | PASS |
| | HCH | 1 | 0 | 11.67 | <13 | PASS |
| | | 1 | 12 | 9.19 | <13 | PASS |
| | | 1 | 24 | 8.4 | <13 | PASS |
| | | 12 | 0 | 8.72 | <13 | PASS |
| | | 12 | 6 | 10.32 | <13 | PASS |
| | | 12 | 13 | 9.09 | <13 | PASS |
| | | 25 | 0 | 10.99 | <13 | PASS |

Channel Bandwidth: 10 MHz

| Channel Bandwidth: 10 MHz | | | | | | |
|---------------------------|---------|------------------|--------|-------------------------------|---------------|---------|
| Modulation | Channel | RB Configuration | | Peak-to-Average Ratio [dB] | Limit [dB] | Verdict |
| | | Size | Offset | | | |
| QPSK | MCH | 1 | 0 | 11.32 | <13 | PASS |
| | | 1 | 24 | 8.72 | <13 | PASS |
| | | 1 | 49 | 8.41 | <13 | PASS |
| | | 25 | 0 | 9.77 | <13 | PASS |
| | | 25 | 12 | 8.36 | <13 | PASS |
| | | 25 | 25 | 8.09 | <13 | PASS |
| | | 50 | 0 | 8.51 | <13 | PASS |
| 16QAM | MCH | 1 | 0 | 10.98 | <13 | PASS |
| | | 1 | 24 | 9.96 | <13 | PASS |
| | | 1 | 49 | 8.64 | <13 | PASS |
| | | 25 | 0 | 10.71 | <13 | PASS |
| | | 25 | 12 | 11.1 | <13 | PASS |
| | | 25 | 25 | 8.87 | <13 | PASS |
| | | 50 | 0 | 9.52 | <13 | PASS |

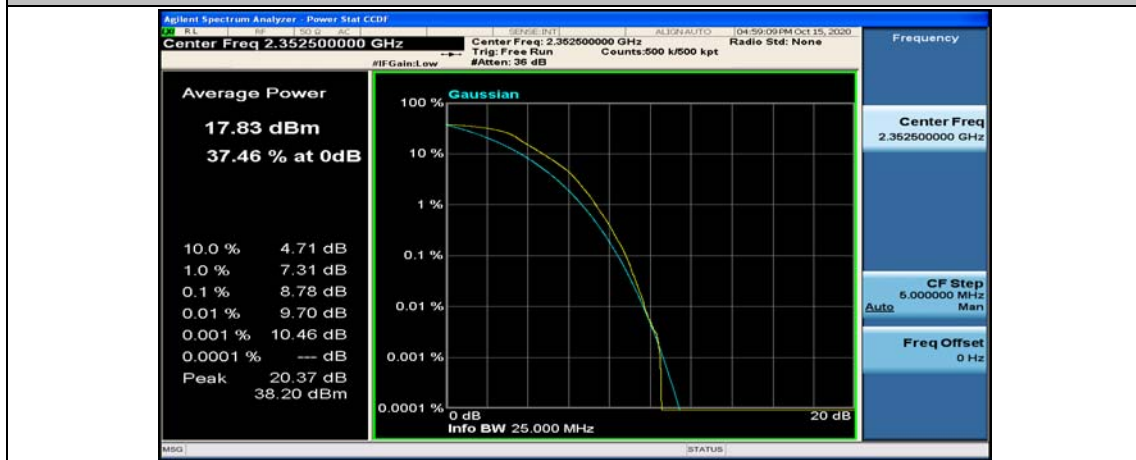
Test Graphs

Channel Bandwidth: 5 MHz





(Channel Bandwidth: 5 MHz)_LCH_QPSK_12RB#6



(Channel Bandwidth: 5 MHz)_LCH_QPSK_12RB#13



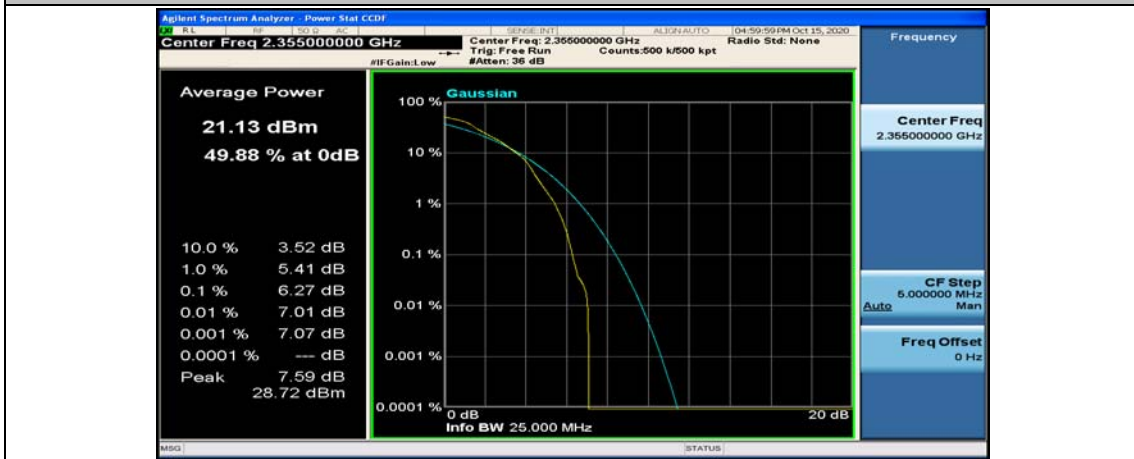
(Channel Bandwidth: 5 MHz)_LCH_QPSK_25RB#0



(Channel Bandwidth: 5 MHz)_MCH_QPSK_1RB#0



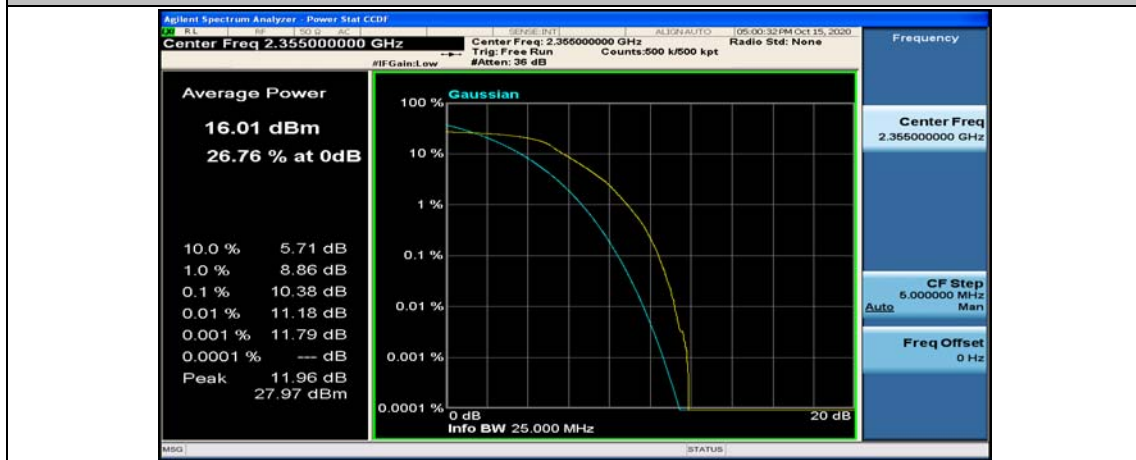
(Channel Bandwidth: 5 MHz)_MCH_QPSK_1RB#12



(Channel Bandwidth: 5 MHz)_MCH_QPSK_1RB#24



(Channel Bandwidth: 5 MHz)_MCH_QPSK_12RB#6



(Channel Bandwidth: 5 MHz)_MCH_QPSK_12RB#13



(Channel Bandwidth: 5 MHz)_MCH_QPSK_25RB#0



(Channel Bandwidth: 5 MHz)_HCH_QPSK_1RB#0



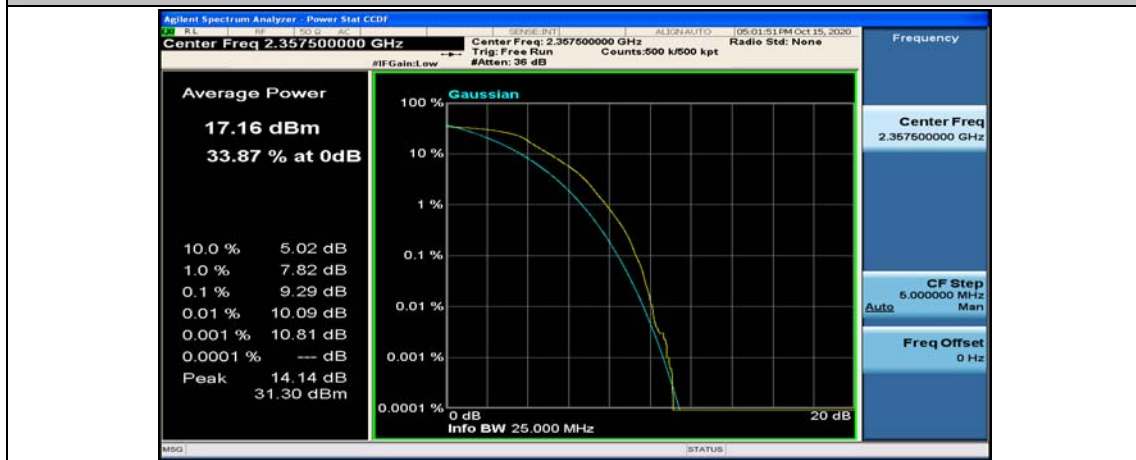
(Channel Bandwidth: 5 MHz)_HCH_QPSK_1RB#12



(Channel Bandwidth: 5 MHz)_HCH_QPSK_1RB#24



(Channel Bandwidth: 5 MHz)_HCH_QPSK_12RB#0



(Channel Bandwidth: 5 MHz)_HCH_QPSK_12RB#6



(Channel Bandwidth: 5 MHz)_HCH_QPSK_12RB#13



(Channel Bandwidth: 5 MHz)_HCH_QPSK_25RB#0



(Channel Bandwidth: 5 MHz)_LCH_16QAM_1RB#0



(Channel Bandwidth: 5 MHz)_LCH_16QAM_1RB#12





(Channel Bandwidth: 5 MHz)_LCH_16QAM_12RB#13



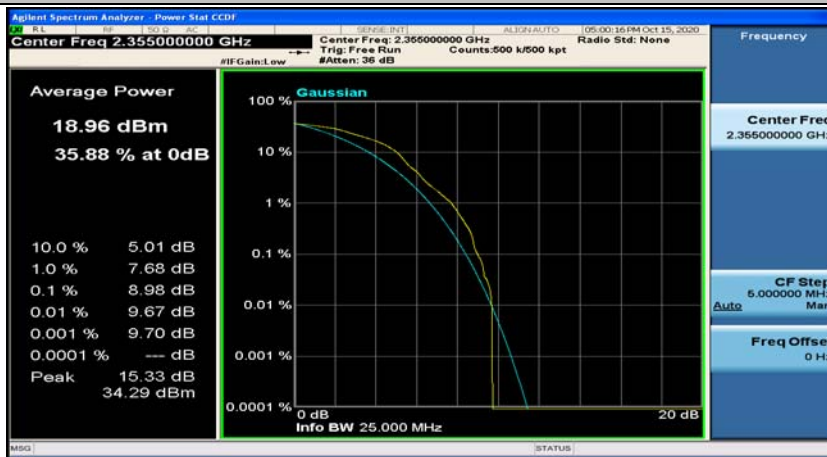
(Channel Bandwidth: 5 MHz)_LCH_16QAM_25RB#0



(Channel Bandwidth: 5 MHz)_MCH_16QAM_1RB#0



(Channel Bandwidth: 5 MHz)_MCH_16QAM_1RB#12



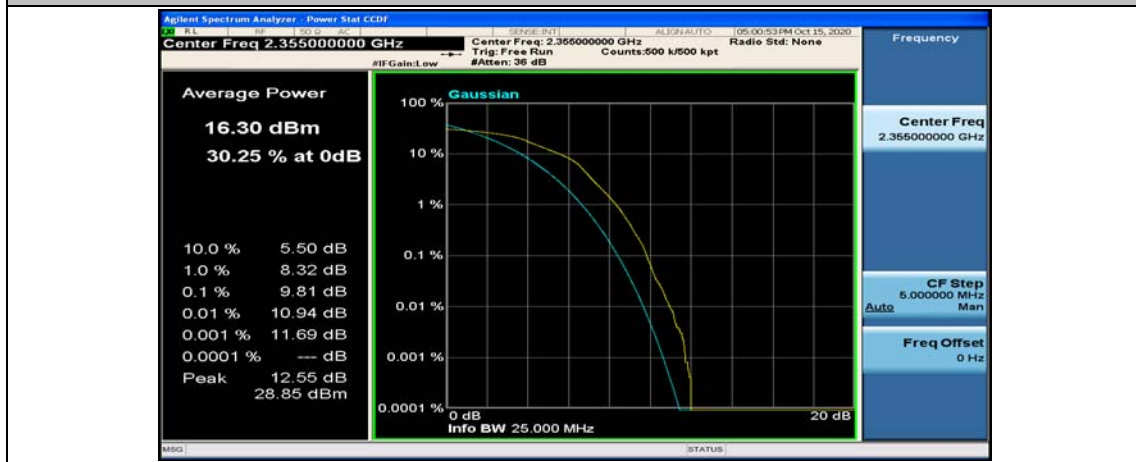
(Channel Bandwidth: 5 MHz)_MCH_16QAM_1RB#24



(Channel Bandwidth: 5 MHz)_MCH_16QAM_12RB#6



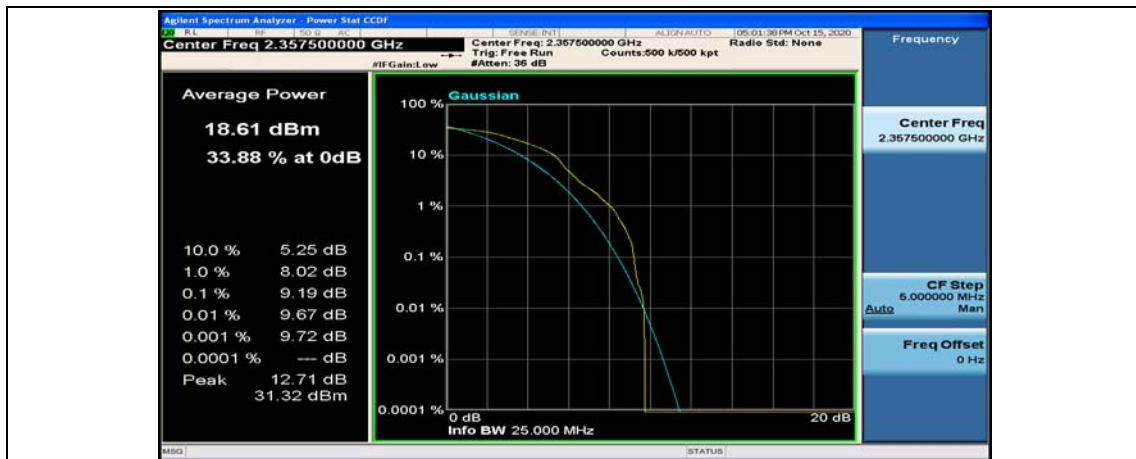
(Channel Bandwidth: 5 MHz)_MCH_16QAM_12RB#13



(Channel Bandwidth: 5 MHz)_HCH_16QAM_1RB#0



(Channel Bandwidth: 5 MHz)_HCH_16QAM_1RB#12



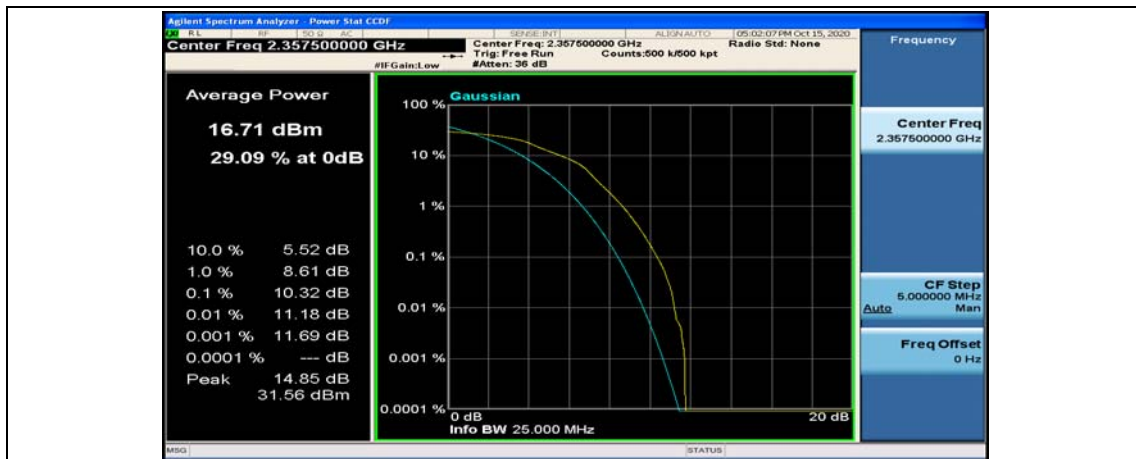
(Channel Bandwidth: 5 MHz)_HCH_16QAM_1RB#24



(Channel Bandwidth: 5 MHz)_HCH_16QAM_12RB#0



(Channel Bandwidth: 5 MHz)_HCH_16QAM_12RB#6



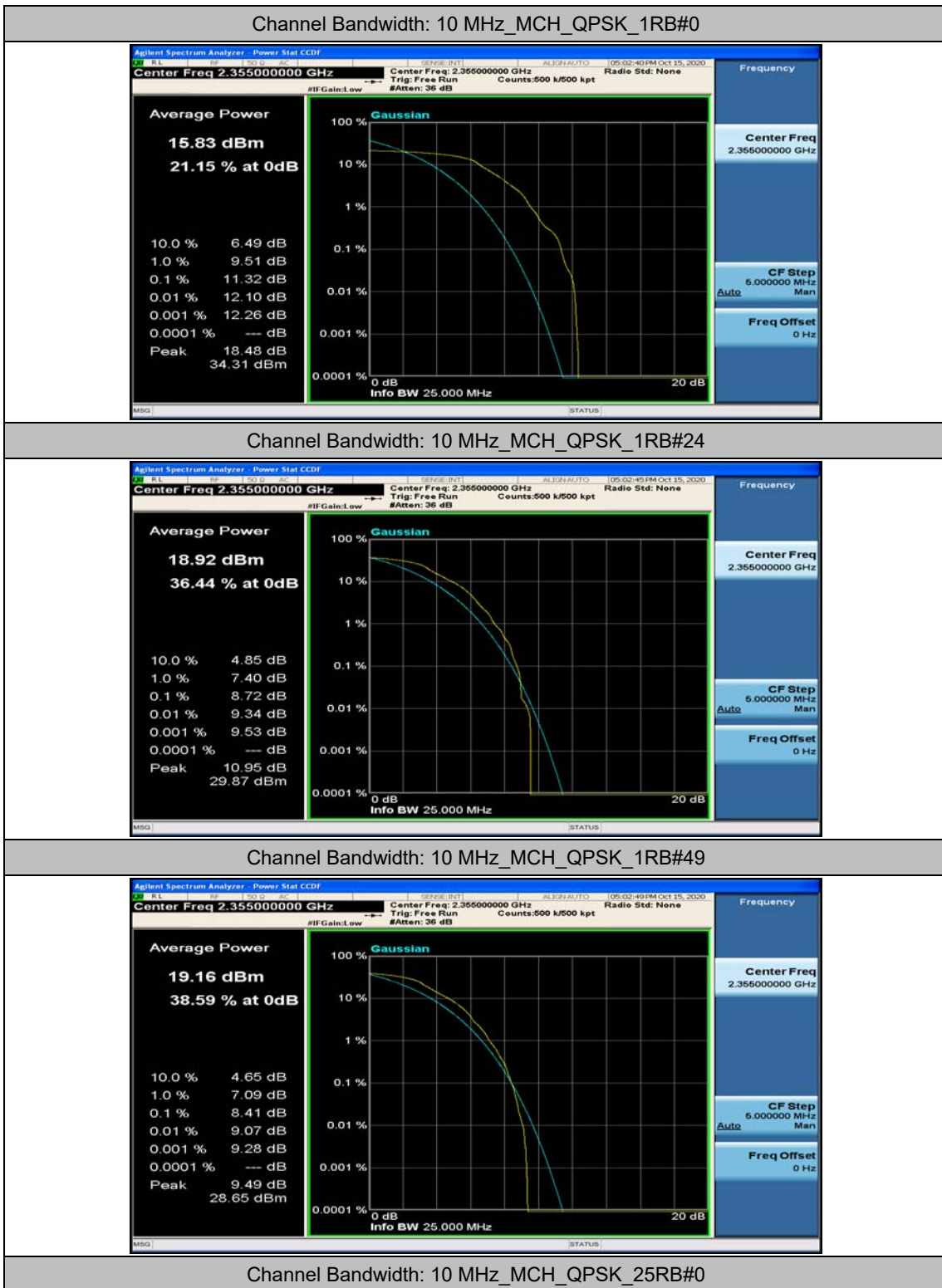
(Channel Bandwidth: 5 MHz)_HCH_16QAM_12RB#13

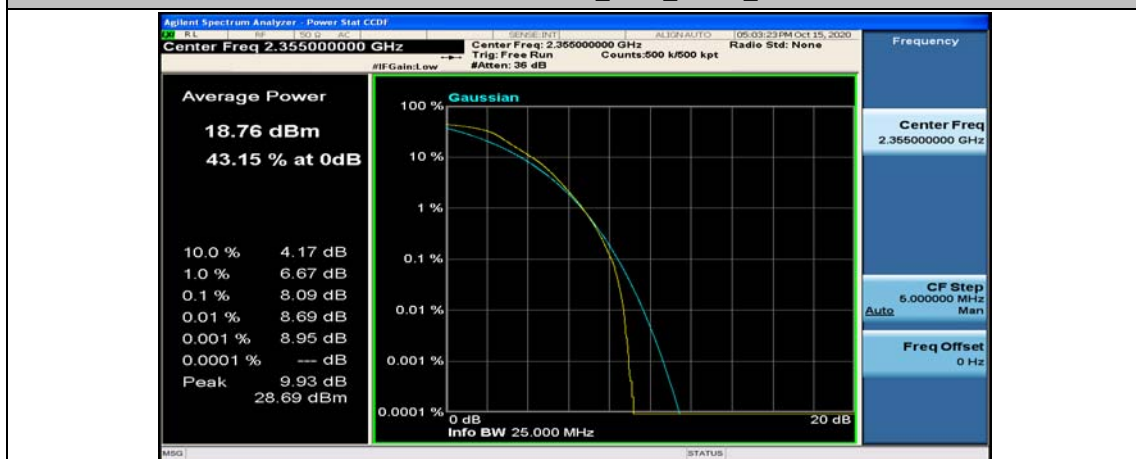
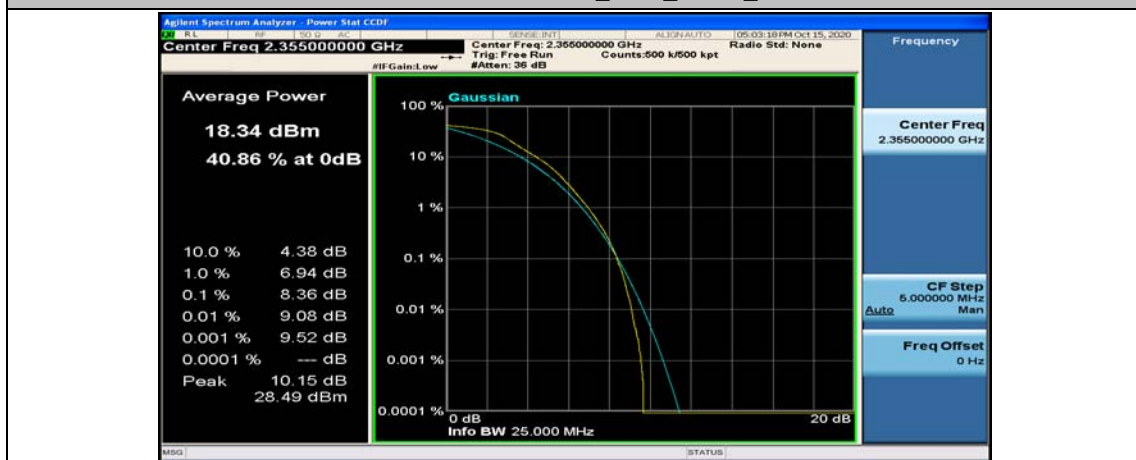


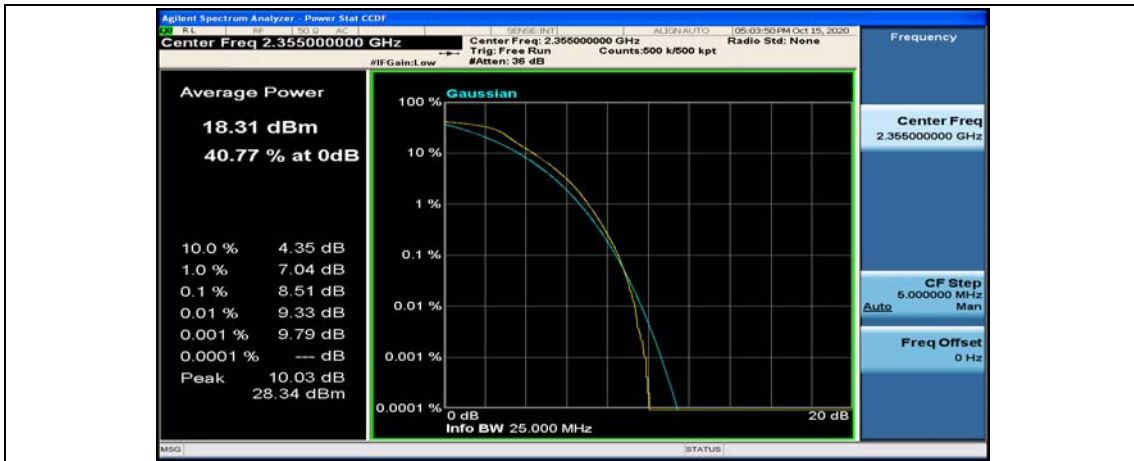
(Channel Bandwidth: 5 MHz)_HCH_16QAM_25RB#0



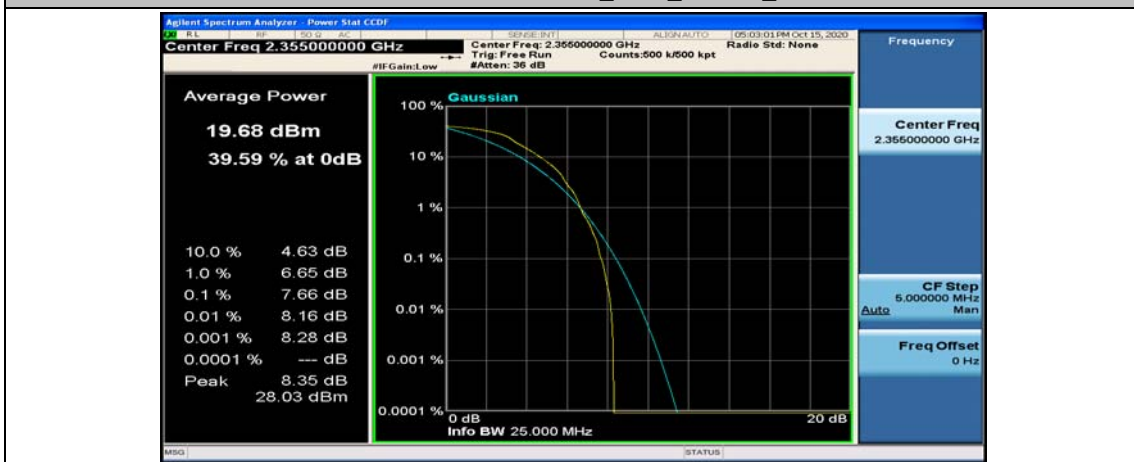
Channel Bandwidth: 10 MHz







Channel Bandwidth: 10 MHz_MCH_16QAM_1RB#0

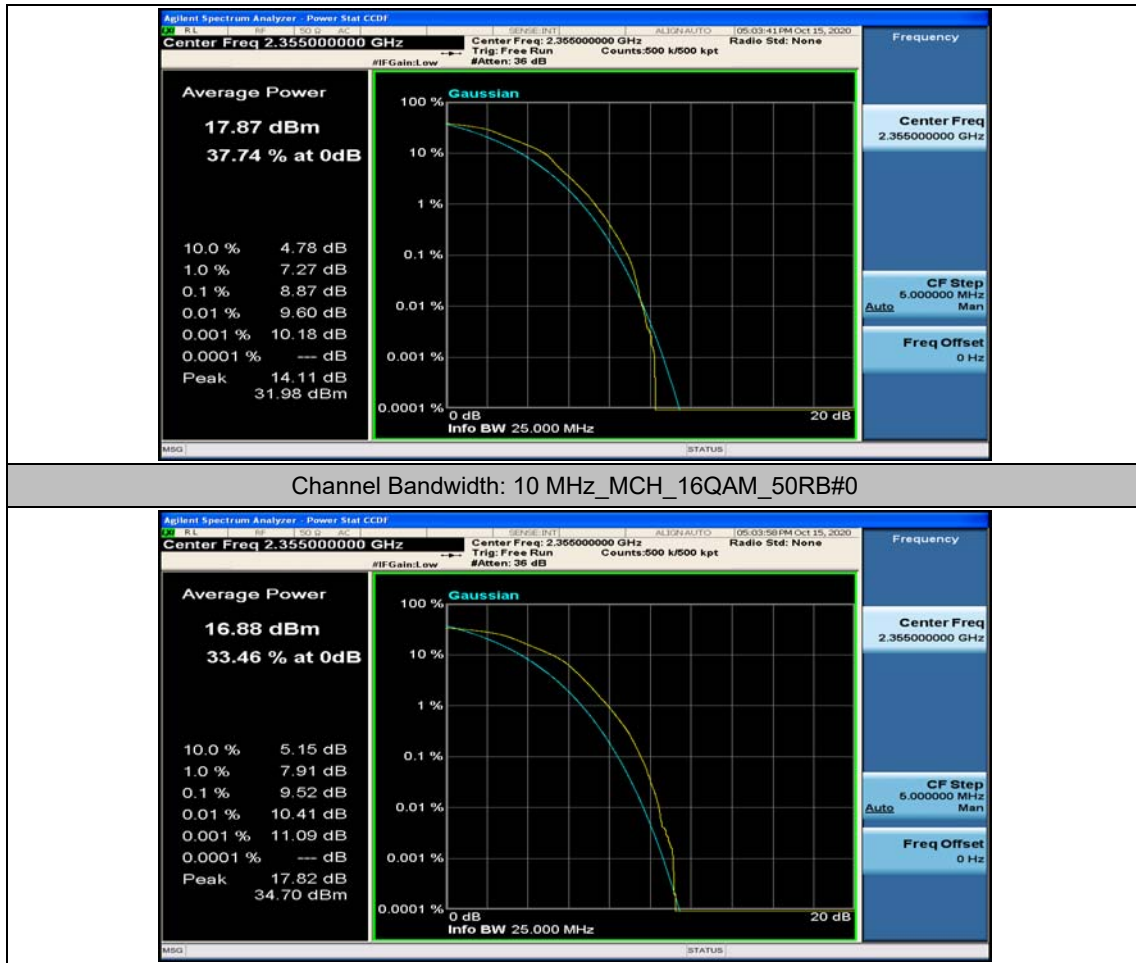


Channel Bandwidth: 10 MHz_MCH_16QAM_1RB#24



Channel Bandwidth: 10 MHz_MCH_16QAM_1RB#49





Appendix C: 26dB Bandwidth and Occupied Bandwidth

Test Result

Channel Bandwidth: 5 MHz

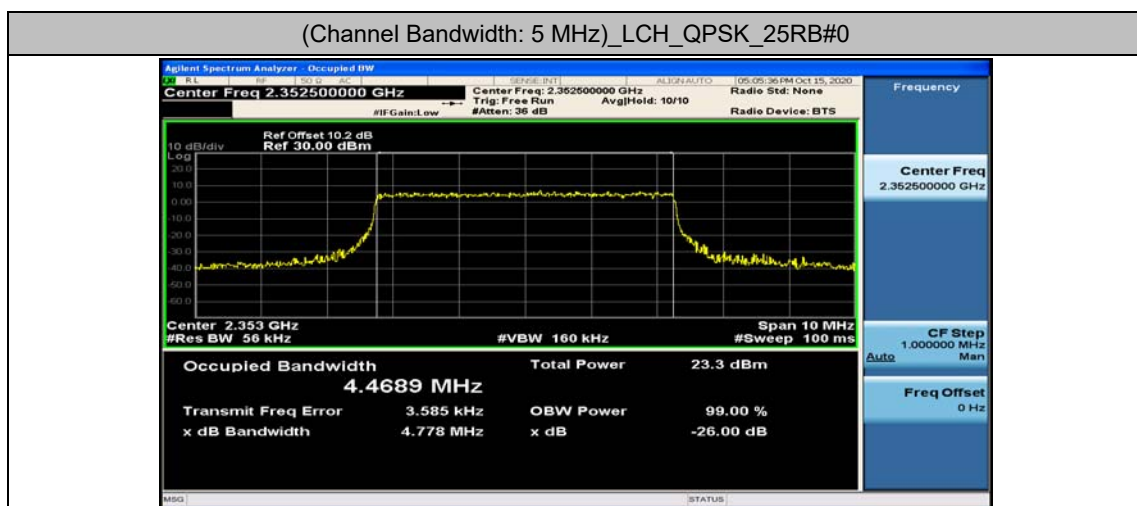
| Channel Bandwidth: 5 MHz | | | | | | |
|--------------------------|---------|------------------|--------|--------------------------|----------------------|---------|
| Modulation | Channel | RB Configuration | | Occupied Bandwidth (MHz) | 26dB Bandwidth (MHz) | Verdict |
| | | Size | Offset | | | |
| QPSK | LCH | 25 | 0 | 4.4689 | 4.778 | PASS |
| | MCH | 25 | 0 | 4.4691 | 4.762 | PASS |
| | HCH | 25 | 0 | 4.4747 | 4.889 | PASS |
| 16QAM | LCH | 25 | 0 | 4.4773 | 4.827 | PASS |
| | MCH | 25 | 0 | 4.4624 | 4.792 | PASS |
| | HCH | 25 | 0 | 4.4712 | 4.784 | PASS |

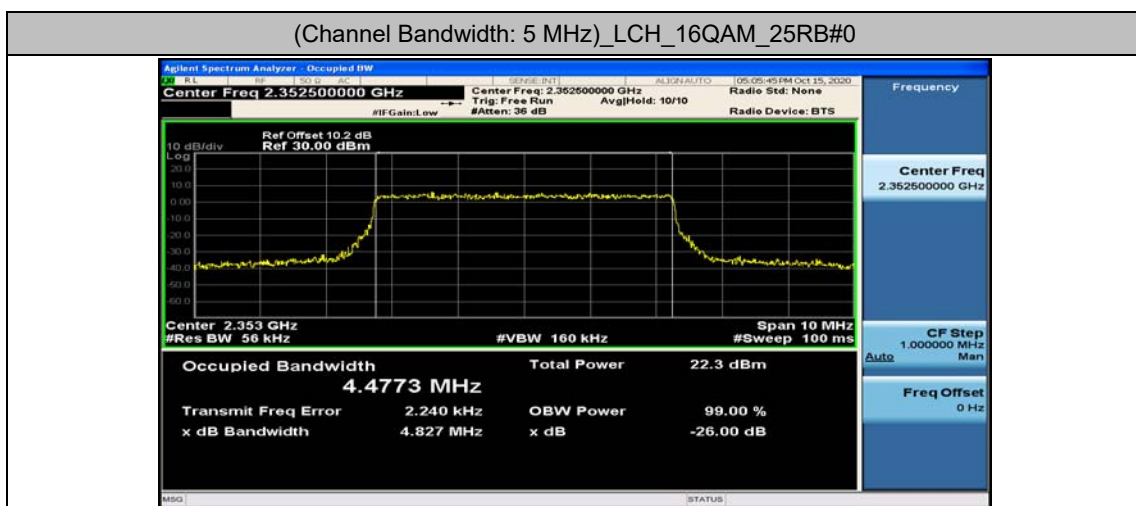
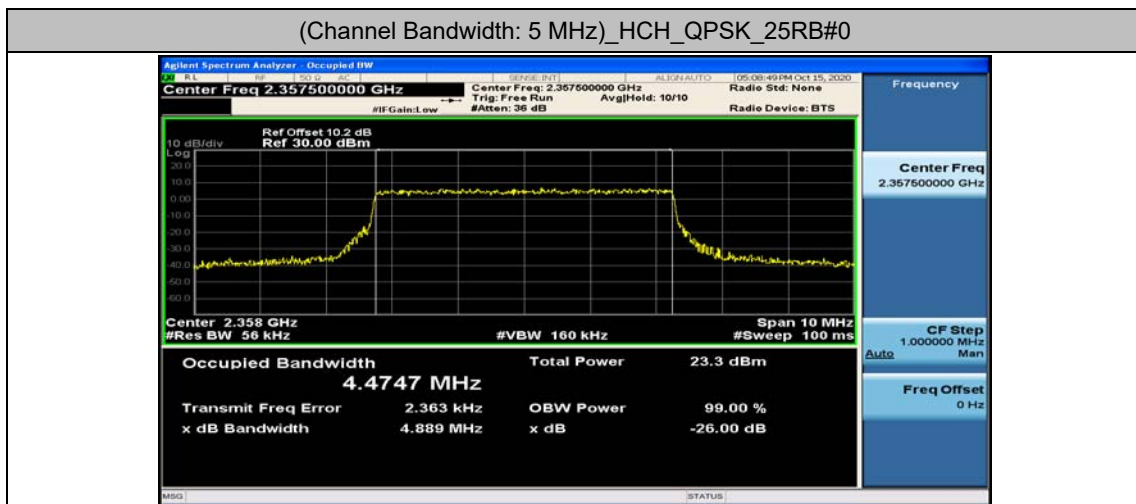
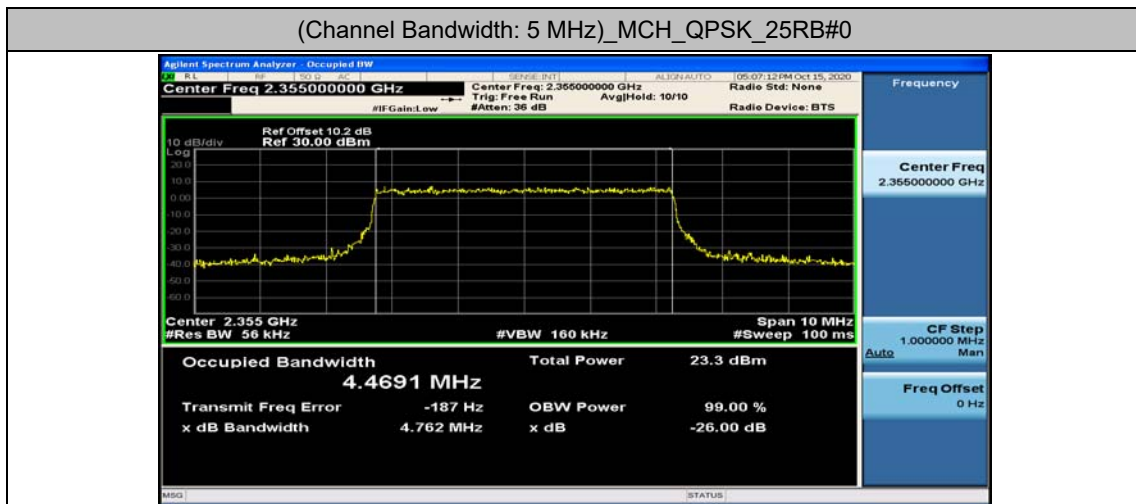
Channel Bandwidth: 10 MHz

| Channel Bandwidth: 10 MHz | | | | | | |
|---------------------------|---------|------------------|--------|--------------------------|----------------------|---------|
| Modulation | Channel | RB Configuration | | Occupied Bandwidth (MHz) | 26dB Bandwidth (MHz) | Verdict |
| | | Size | Offset | | | |
| QPSK | MCH | 50 | 0 | 8.9360 | 9.439 | PASS |
| 16QAM | MCH | 50 | 0 | 8.9523 | 9.406 | PASS |

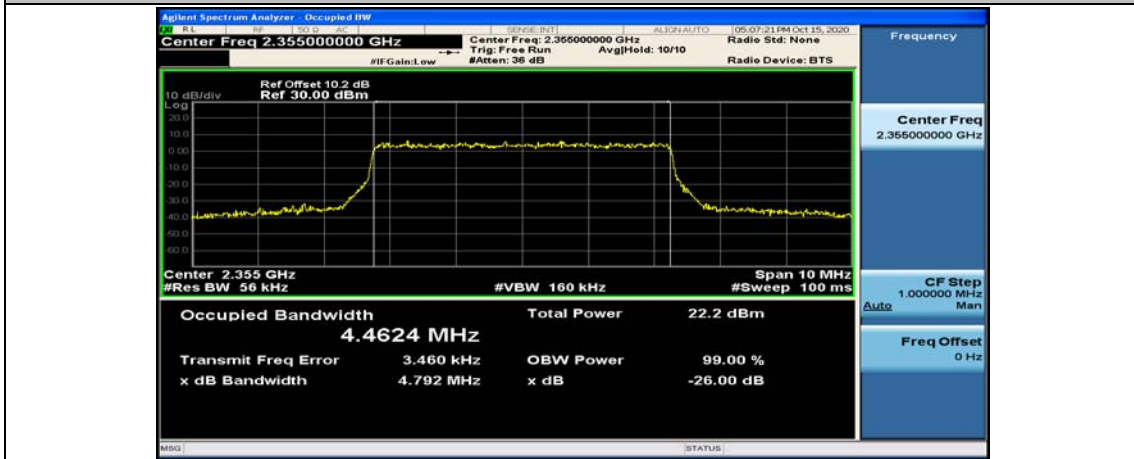
Test Graphs

Channel Bandwidth: 5 MHz

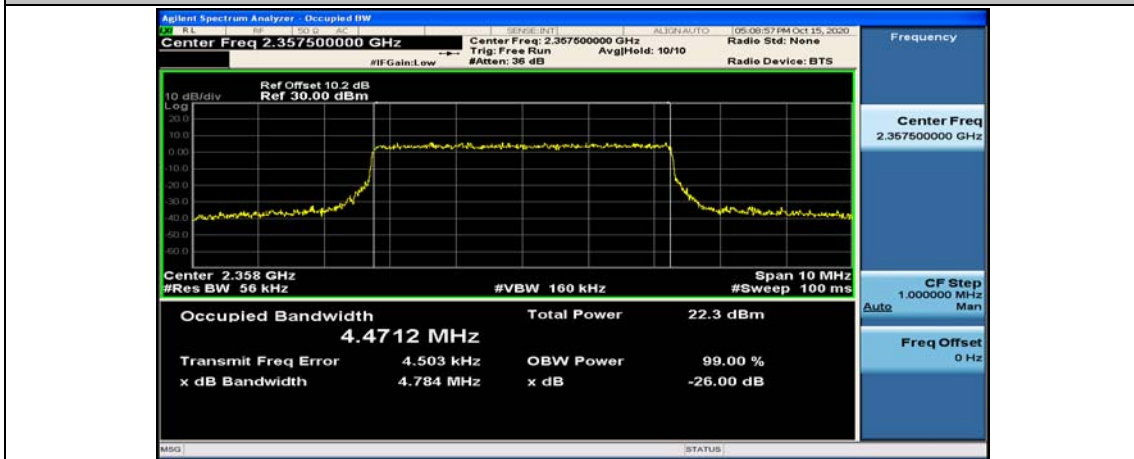




(Channel Bandwidth: 5 MHz)_MCH_16QAM_25RB#0

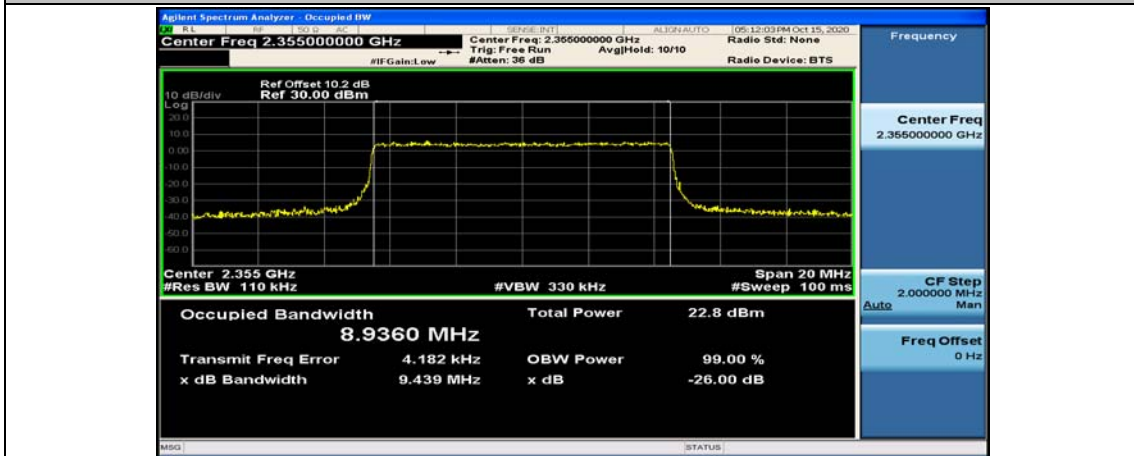


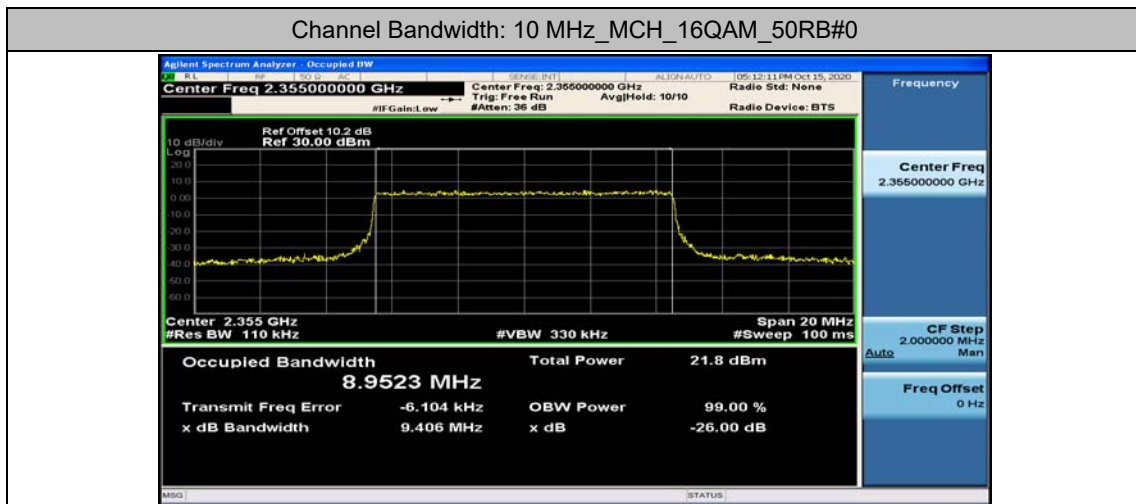
(Channel Bandwidth: 5 MHz)_HCH_16QAM_25RB#0



Channel Bandwidth: 10 MHz

Channel Bandwidth: 10 MHz_MCH_QPSK_50RB#0

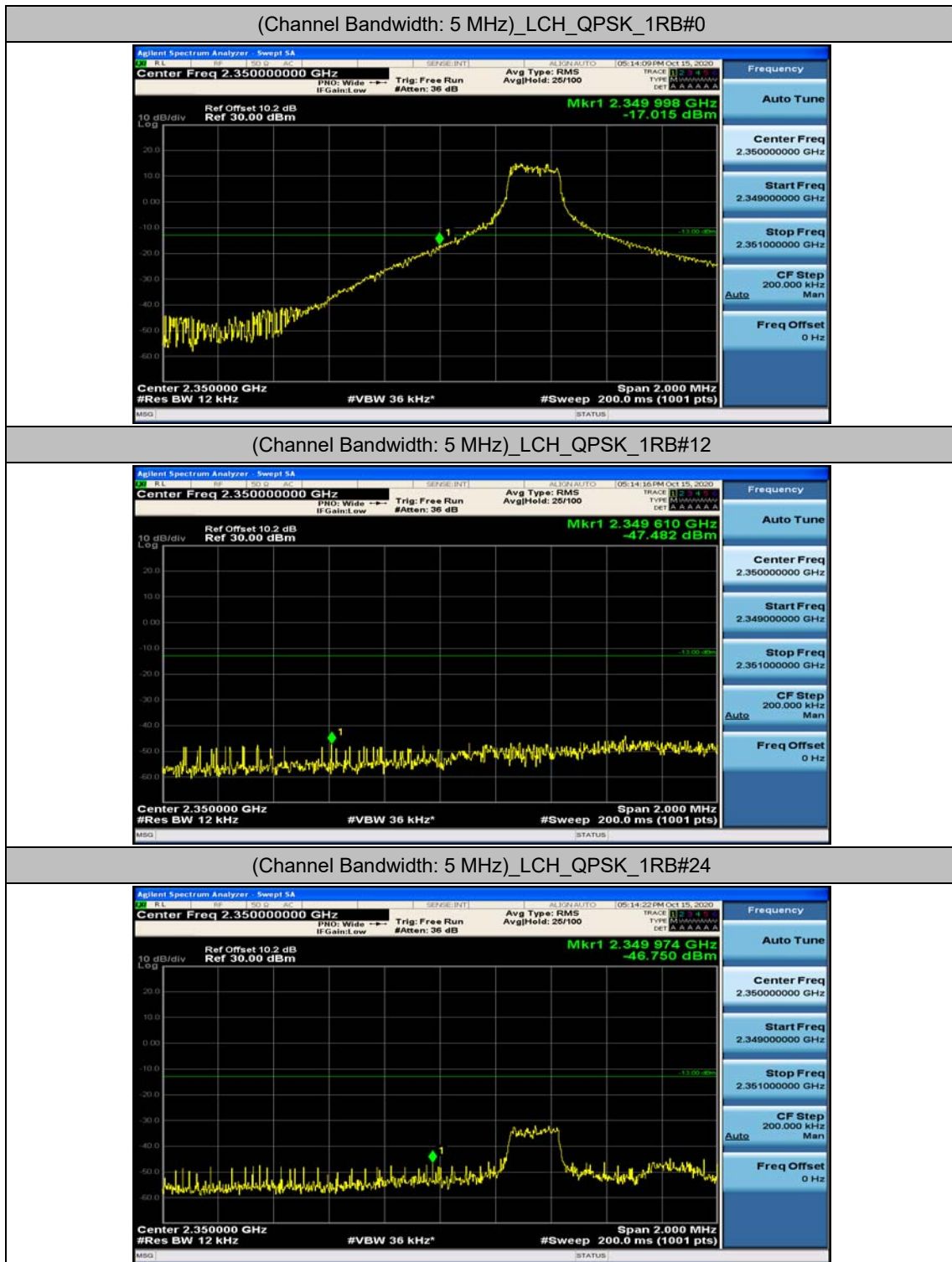




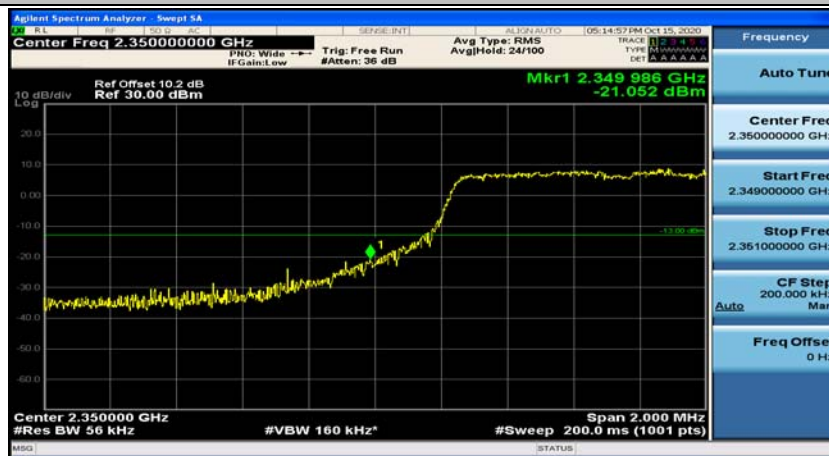
Appendix D: Band Edge

Test Graphs

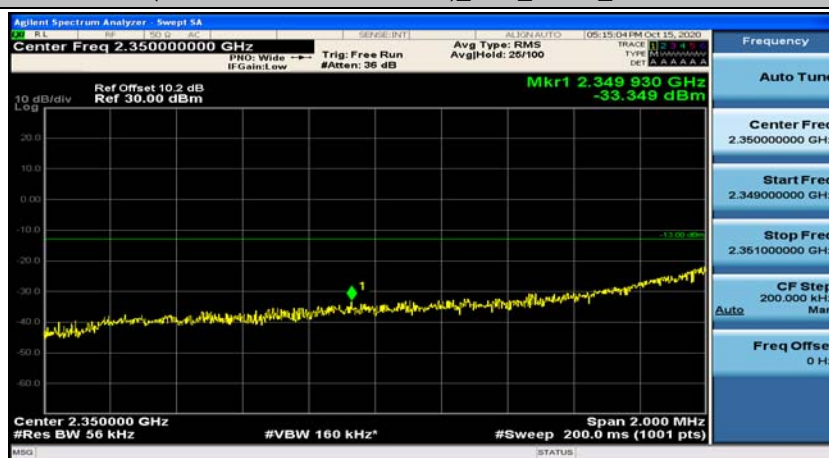
Channel Bandwidth: 5 MHz



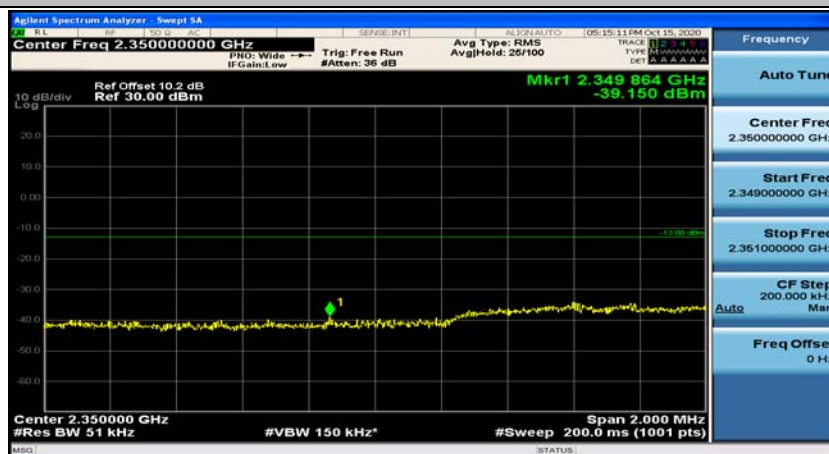
(Channel Bandwidth: 5 MHz)_LCH_QPSK_12RB#0



(Channel Bandwidth: 5 MHz)_LCH_QPSK_12RB#6



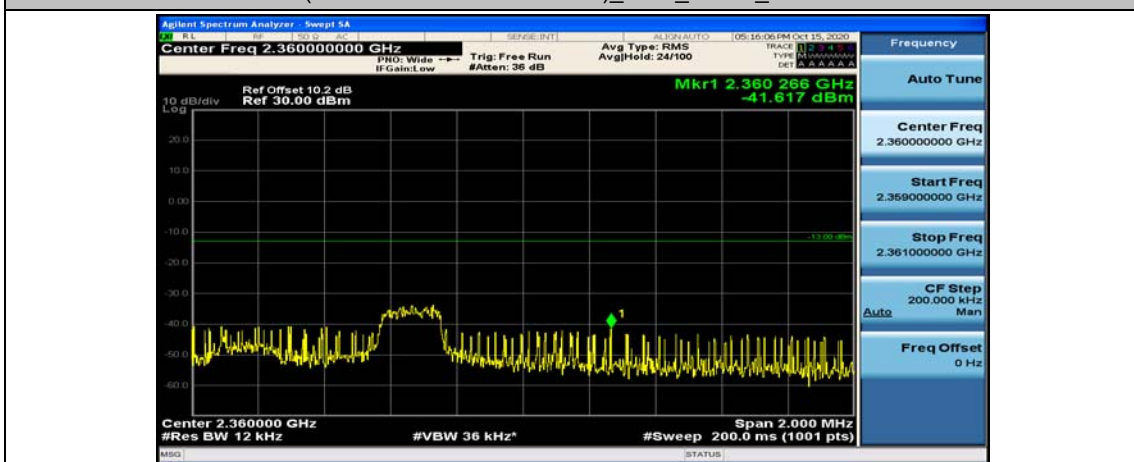
(Channel Bandwidth: 5 MHz)_LCH_QPSK_12RB#13



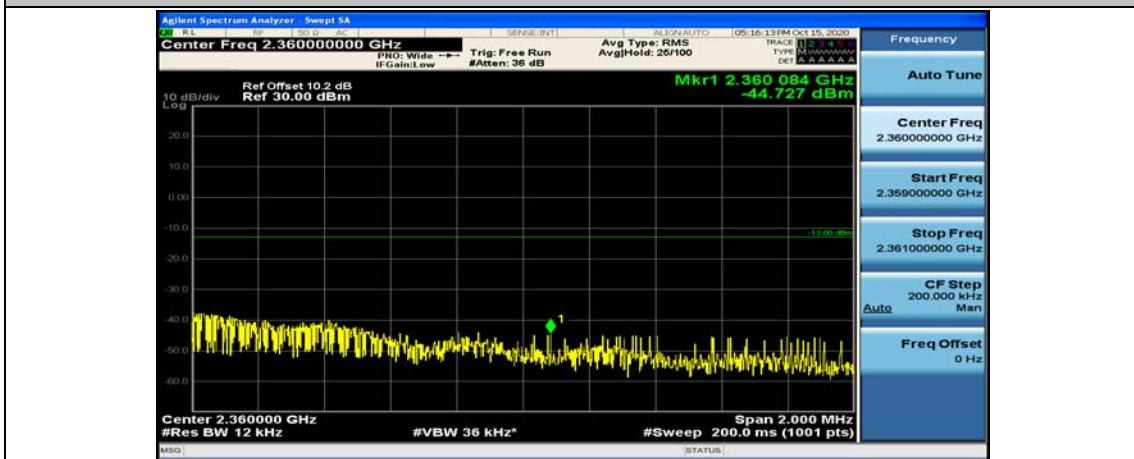
(Channel Bandwidth: 5 MHz)_LCH_QPSK_25RB#0



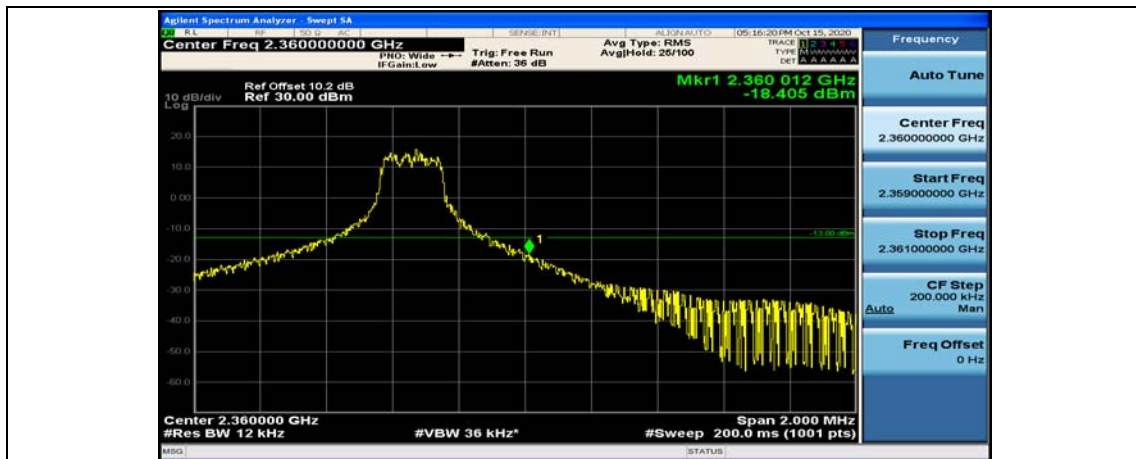
(Channel Bandwidth: 5 MHz)_HCH_QPSK_1RB#0



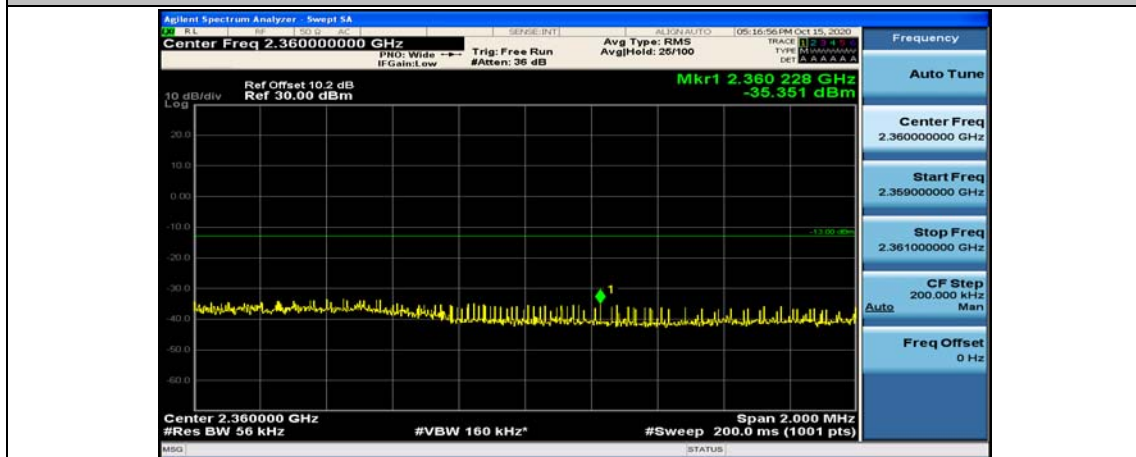
(Channel Bandwidth: 5 MHz)_HCH_QPSK_1RB#12



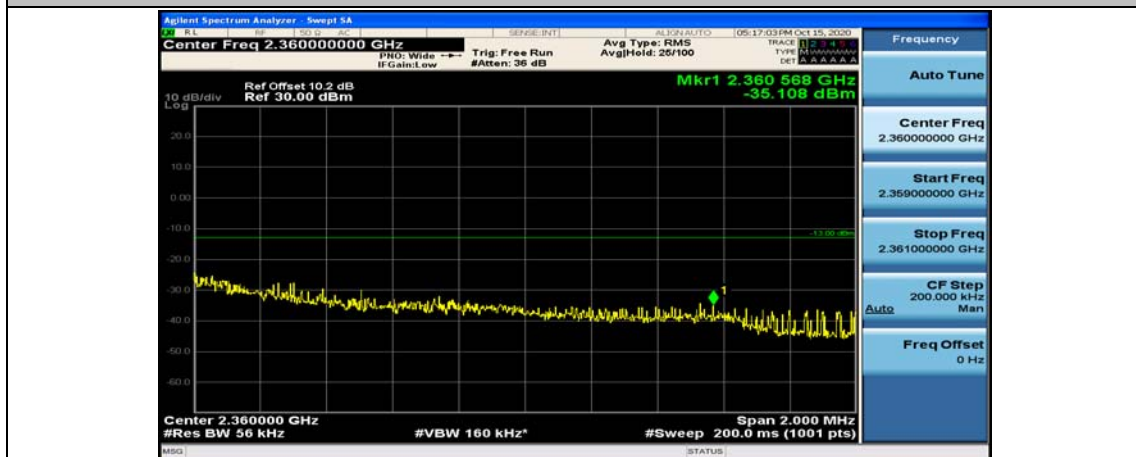
(Channel Bandwidth: 5 MHz)_HCH_QPSK_1RB#24



(Channel Bandwidth: 5 MHz)_HCH_QPSK_12RB#0



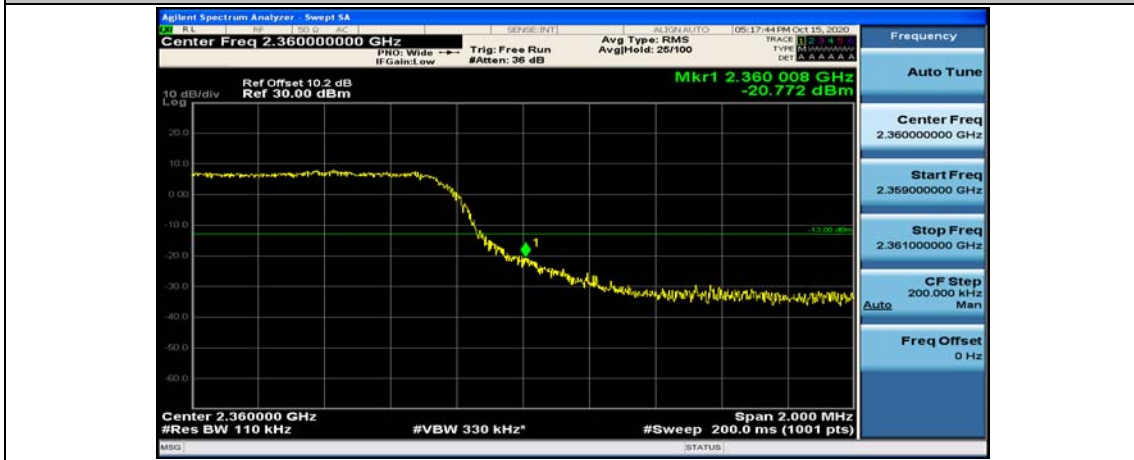
(Channel Bandwidth: 5 MHz)_HCH_QPSK_12RB#6



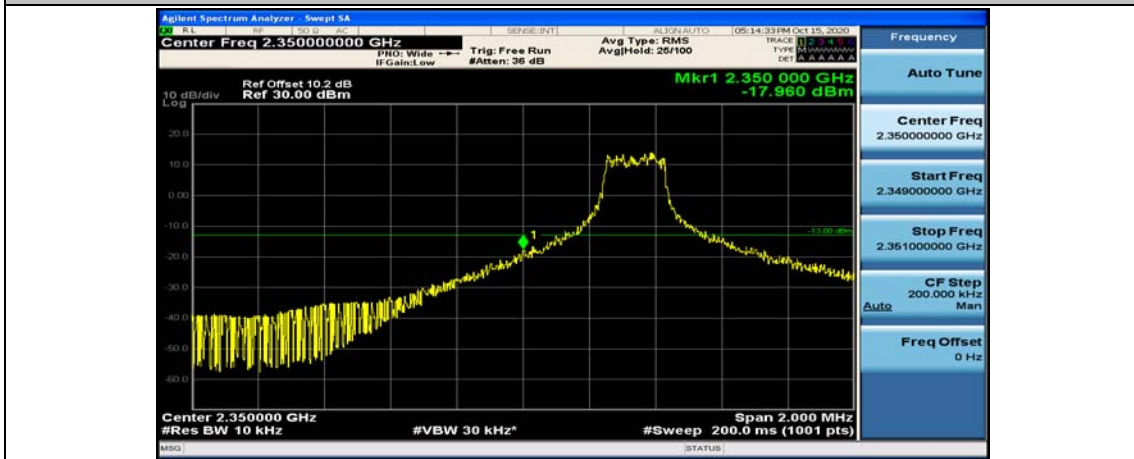
(Channel Bandwidth: 5 MHz)_HCH_QPSK_12RB#13



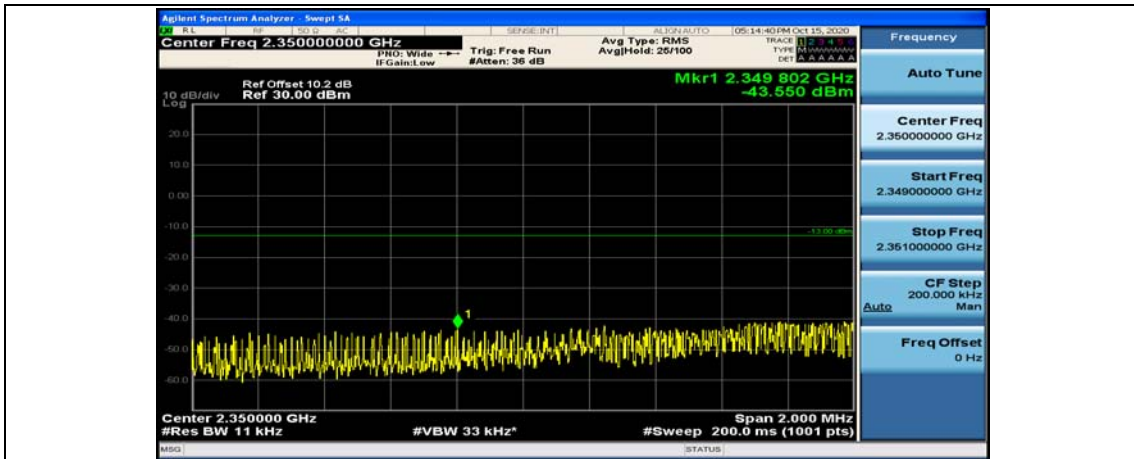
(Channel Bandwidth: 5 MHz)_HCH_QPSK_25RB#0



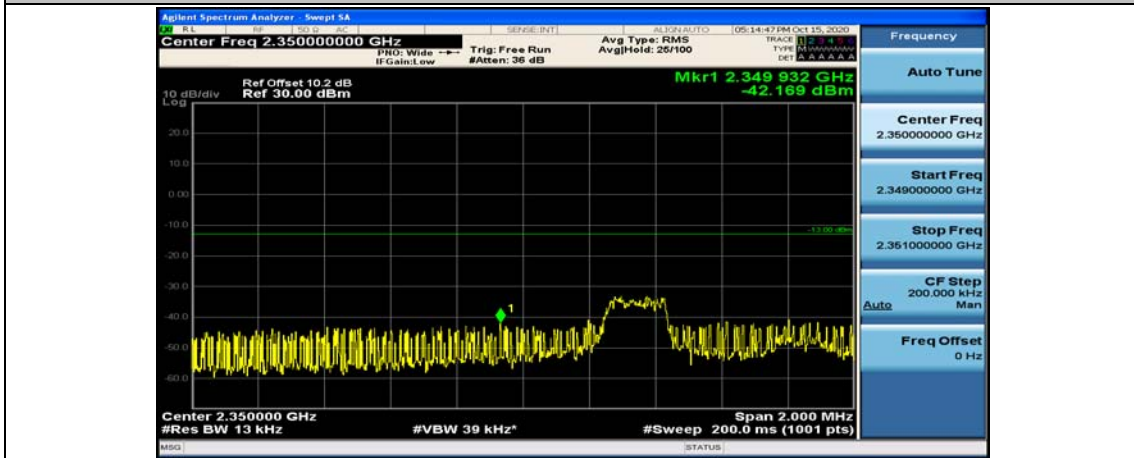
(Channel Bandwidth: 5 MHz)_MCH_16QAM_1RB#0



(Channel Bandwidth: 5 MHz)_MCH_16QAM_1RB#12



(Channel Bandwidth: 5 MHz)_MCH_16QAM_1RB#24



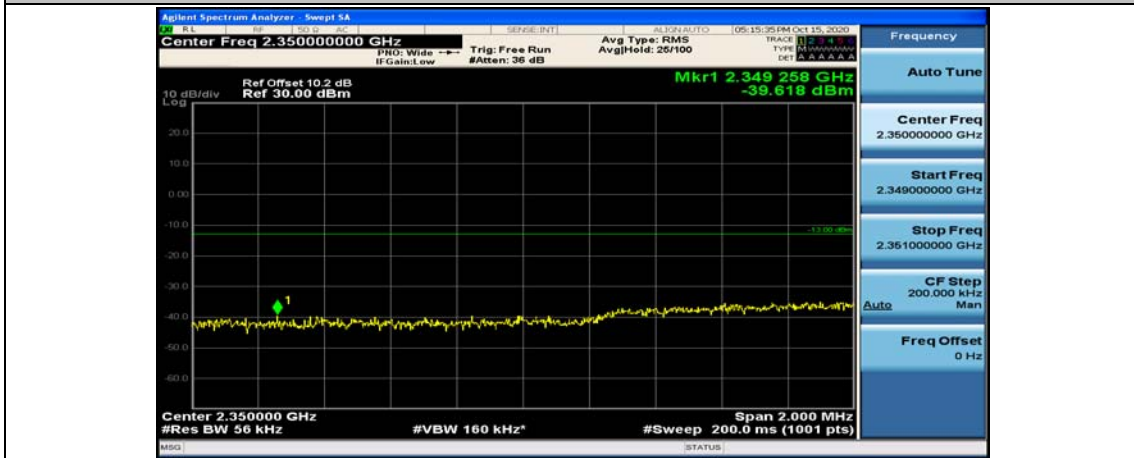
(Channel Bandwidth: 5 MHz)_MCH_6QAM_12RB#0



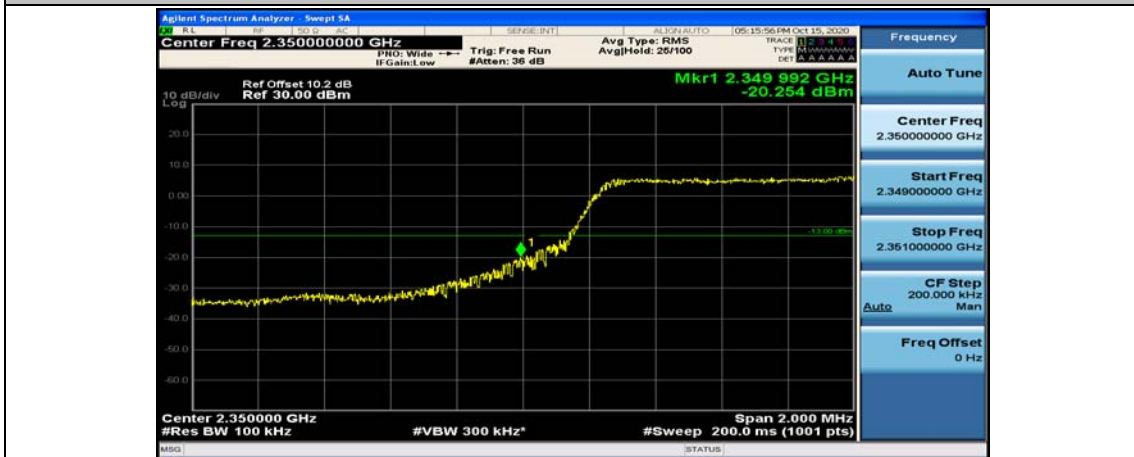
(Channel Bandwidth: 5 MHz)_MCH_16QAM_12RB#6



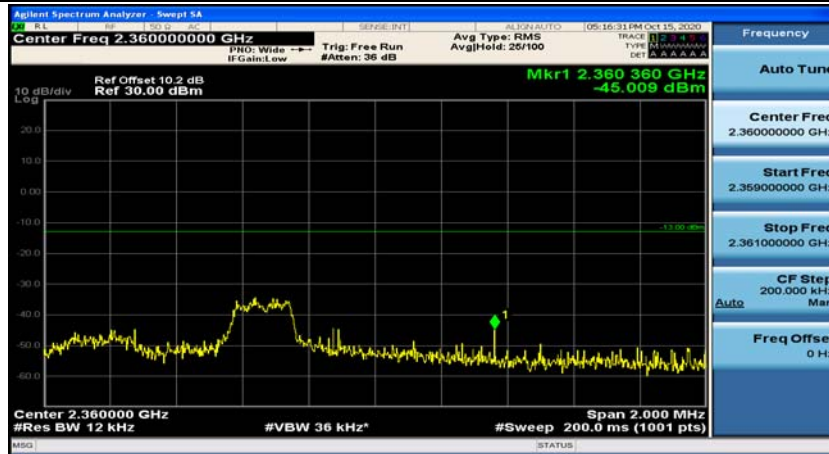
(Channel Bandwidth: 5 MHz)_MCH_16QAM_12RB#13



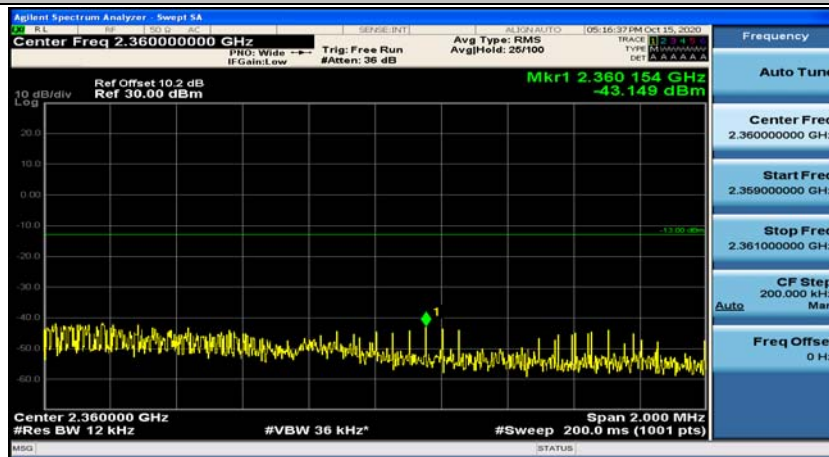
(Channel Bandwidth: 5 MHz)_MCH_16QAM_25RB#0



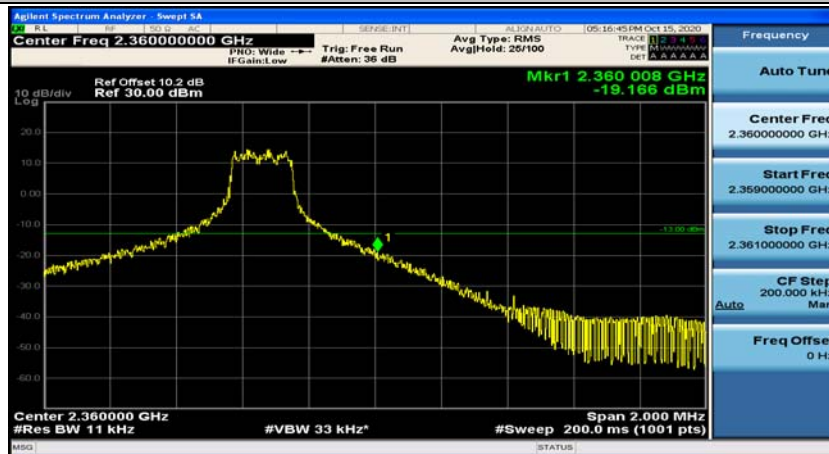
(Channel Bandwidth: 5 MHz)_MCH_16QAM_1RB#0



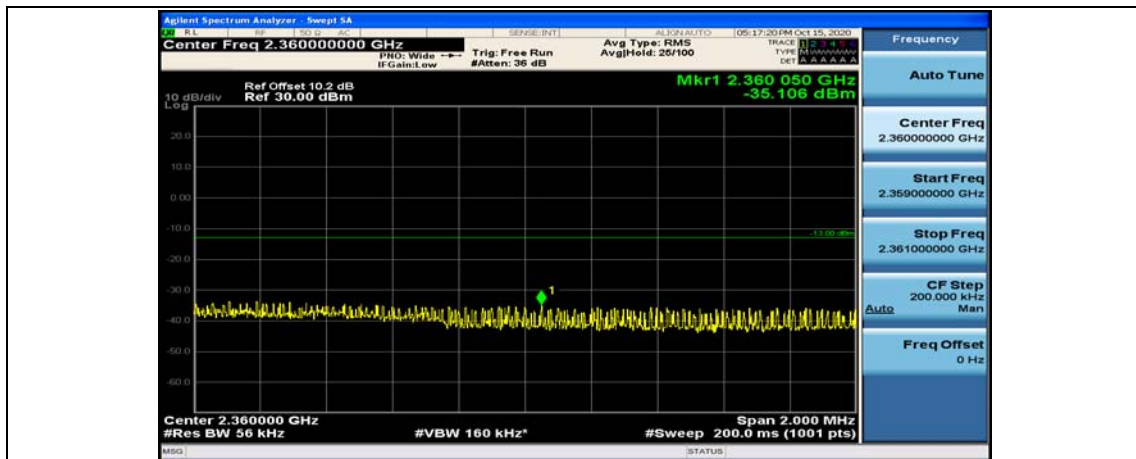
(Channel Bandwidth: 5 MHz)_MCH_16QAM_1RB#12



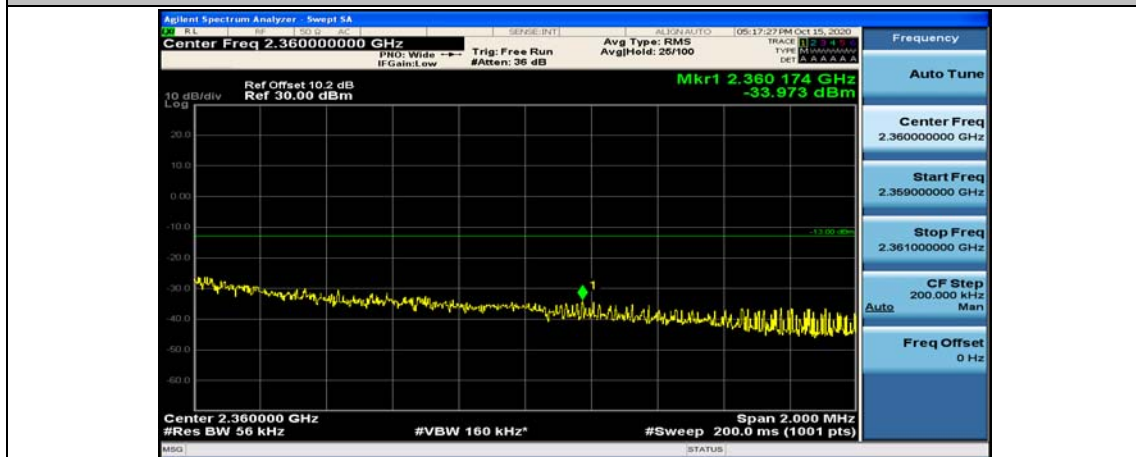
(Channel Bandwidth: 5 MHz)_MCH_16QAM_1RB#24



(Channel Bandwidth: 5 MHz)_MCH_16QAM_12RB#0



(Channel Bandwidth: 5 MHz)_MCH_16QAM_12RB#6



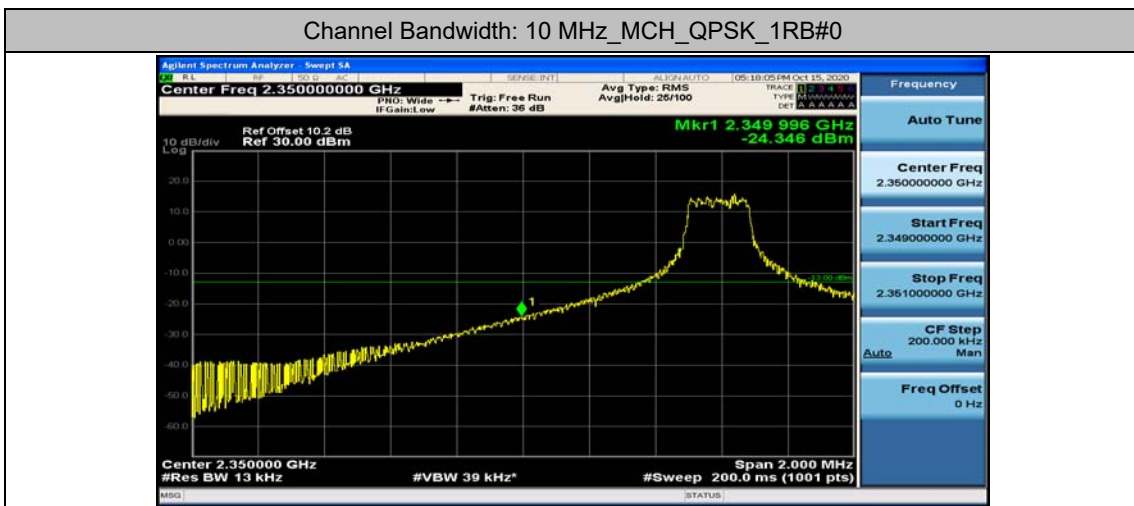
(Channel Bandwidth: 5 MHz)_MCH_16QAM_12RB#13



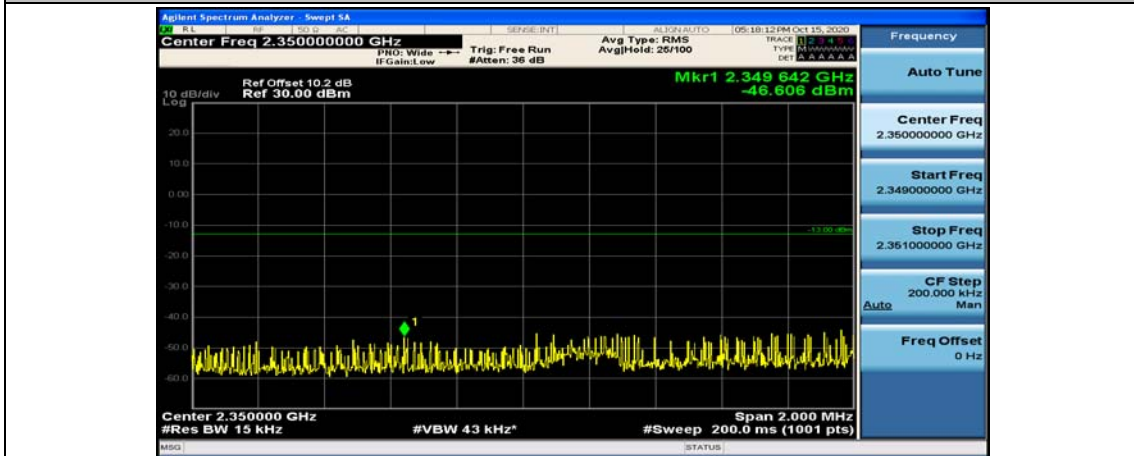
(Channel Bandwidth: 5 MHz)_MCH_16QAM_25RB#0



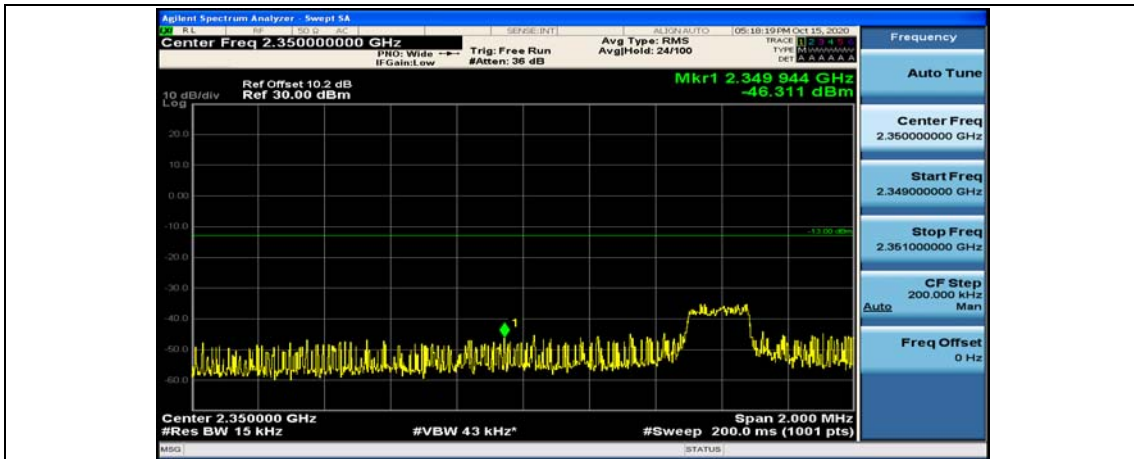
Channel Bandwidth: 10 MHz



Channel Bandwidth: 10 MHz_MCH_QPSK_1RB#24



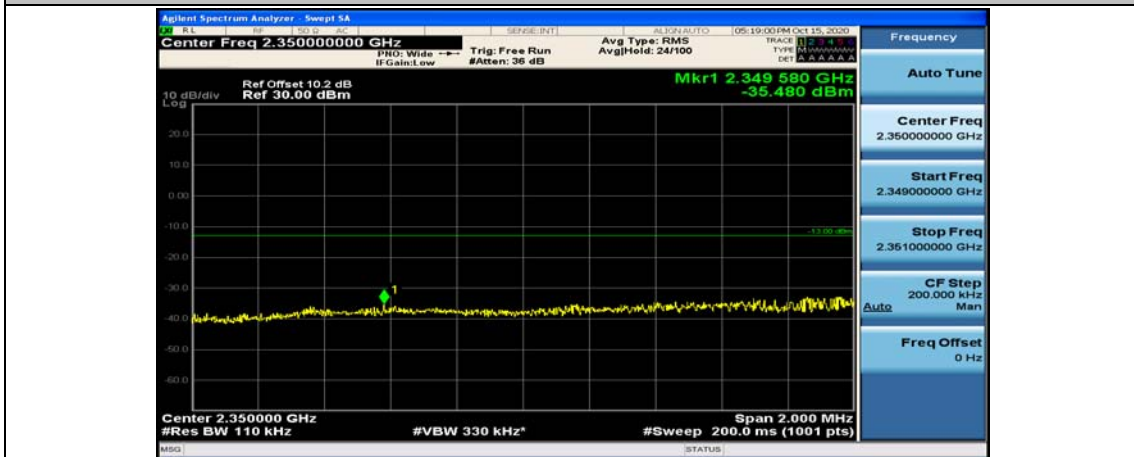
Channel Bandwidth: 10 MHz_MCH_QPSK_1RB#49



Channel Bandwidth: 10 MHz_MCH_QPSK_25RB#0



Channel Bandwidth: 10 MHz_MCH_QPSK_25RB#12



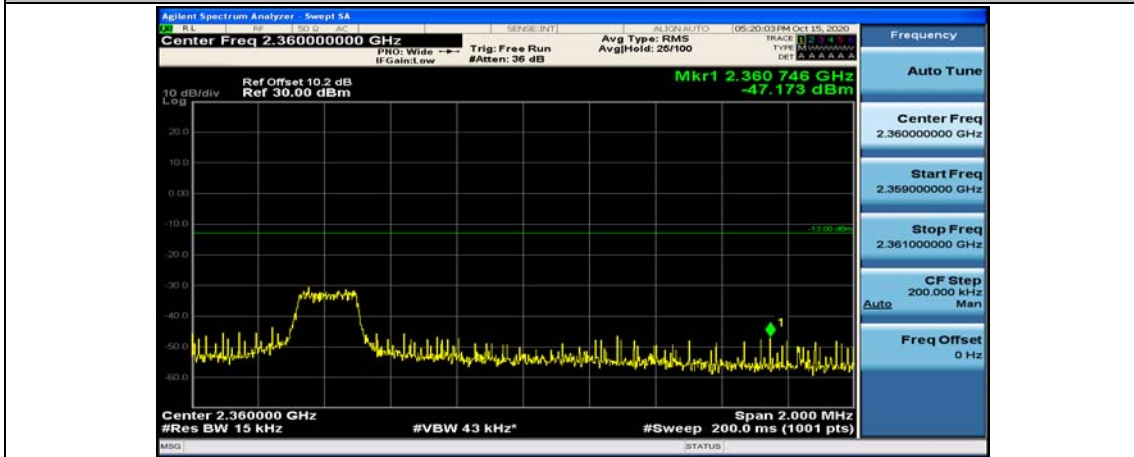
Channel Bandwidth: 10 MHz_MCH_QPSK_25RB#25



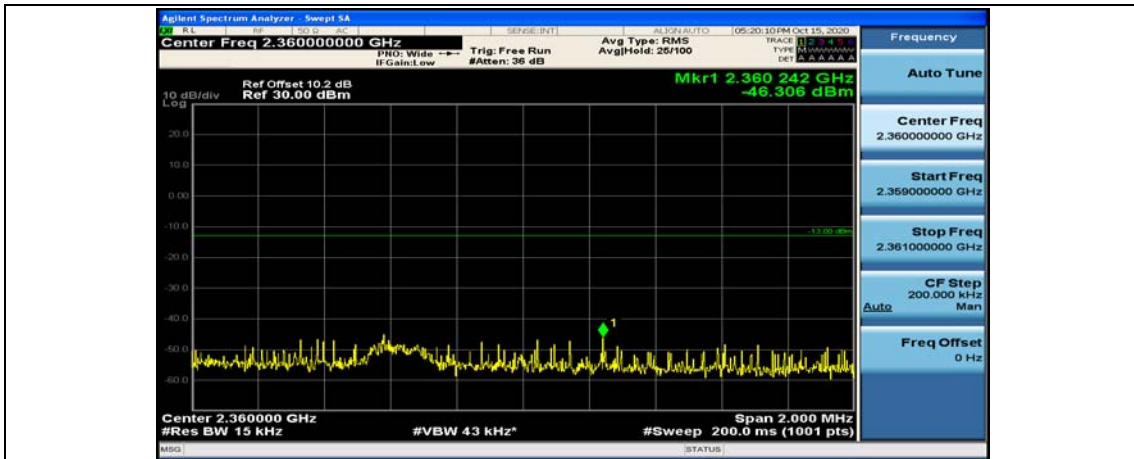
Channel Bandwidth: 10 MHz_MCH_QPSK_50RB#0



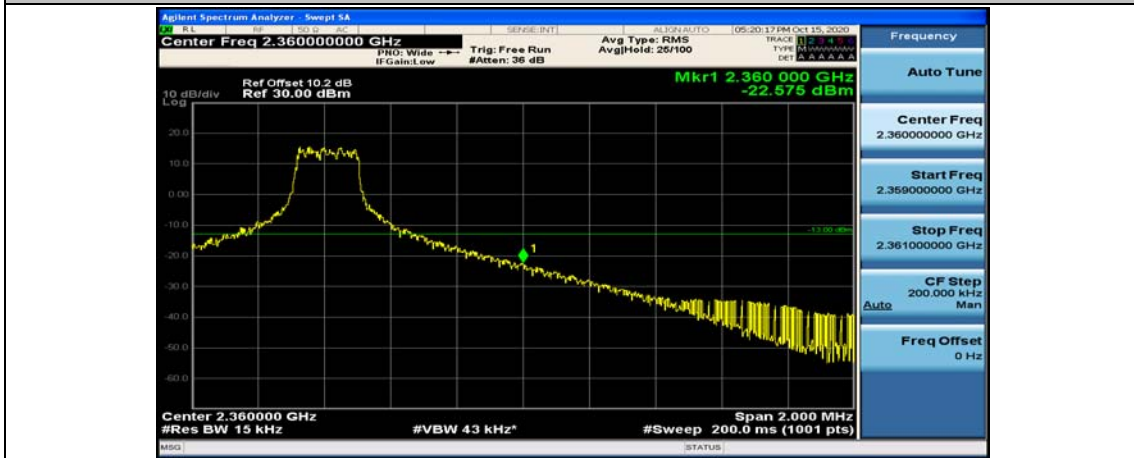
Channel Bandwidth: 10 MHz_MCH_QPSK_1RB#0



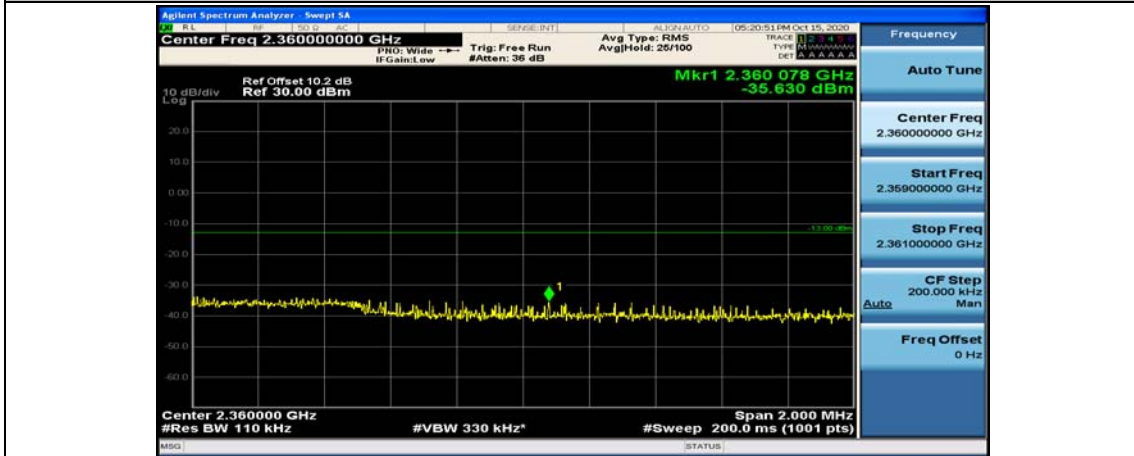
Channel Bandwidth: 10 MHz_MCH_QPSK_1RB#24



Channel Bandwidth: 10 MHz_MCH_QPSK_1RB#49



Channel Bandwidth: 10 MHz_MCH_QPSK_25RB#0



Channel Bandwidth: 10 MHz_MCH_QPSK_25RB#12