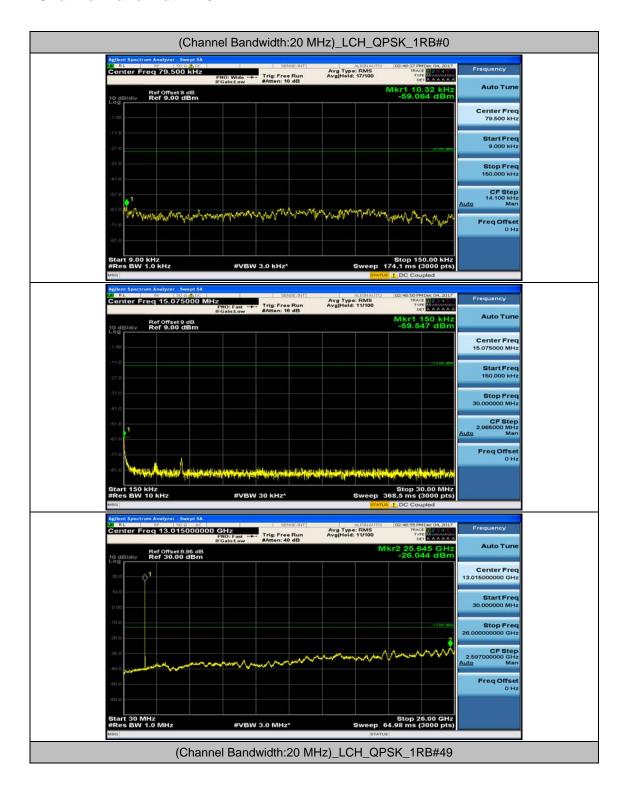




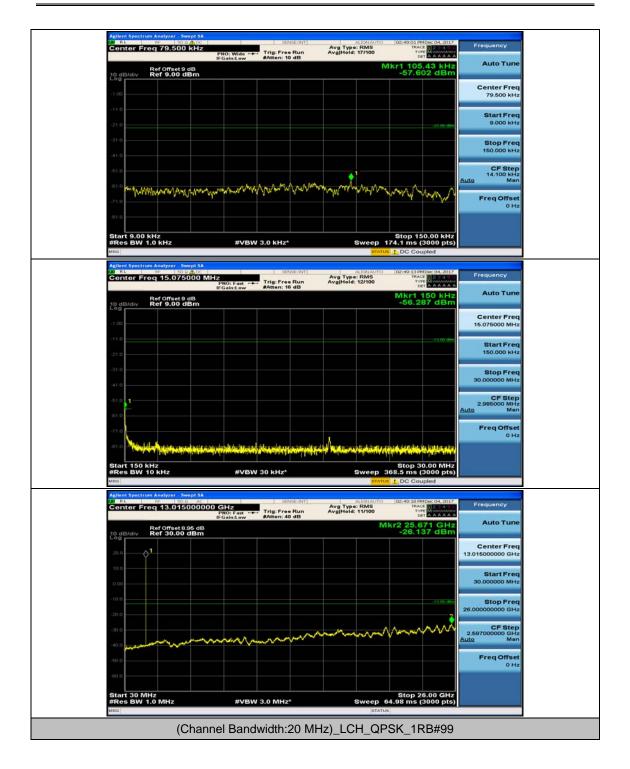


Channel Bandwidth: 20 MHz



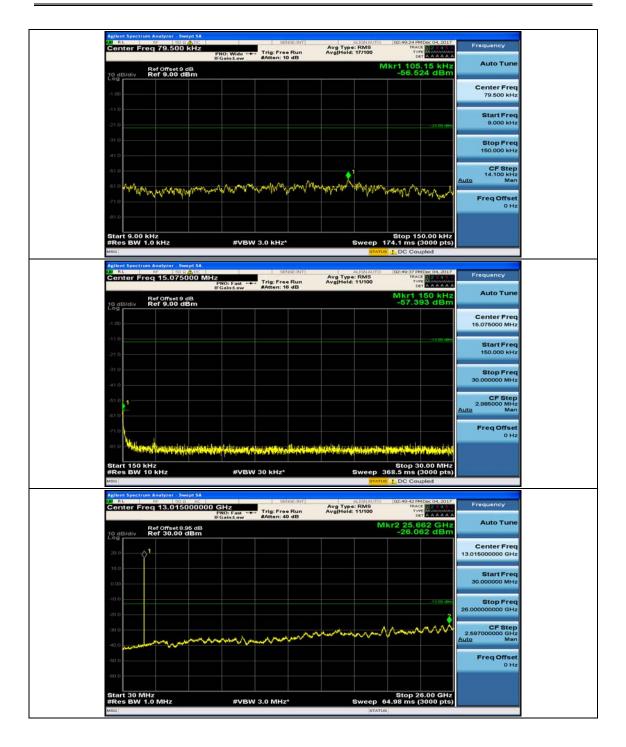






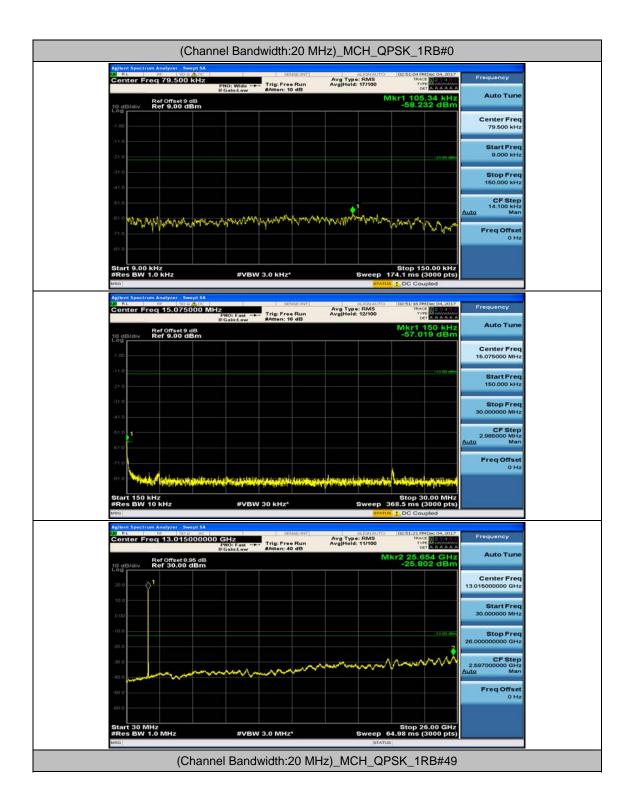






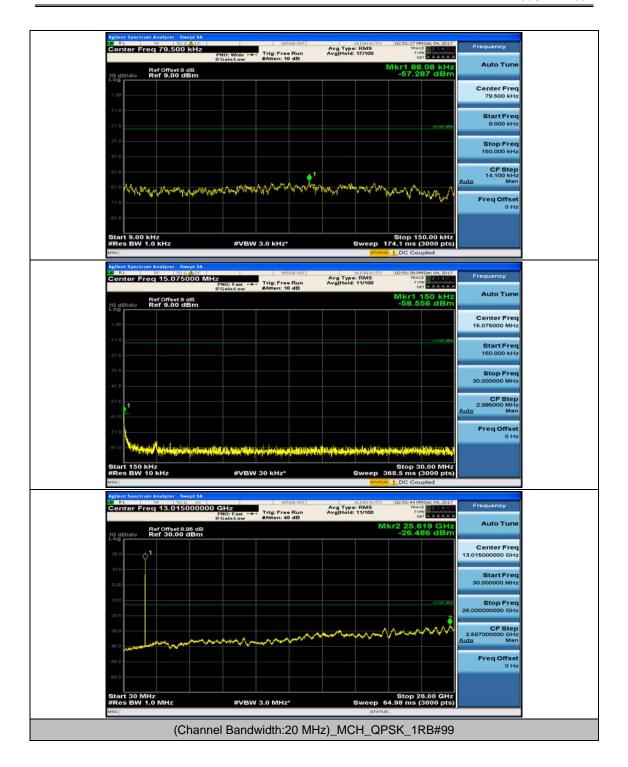






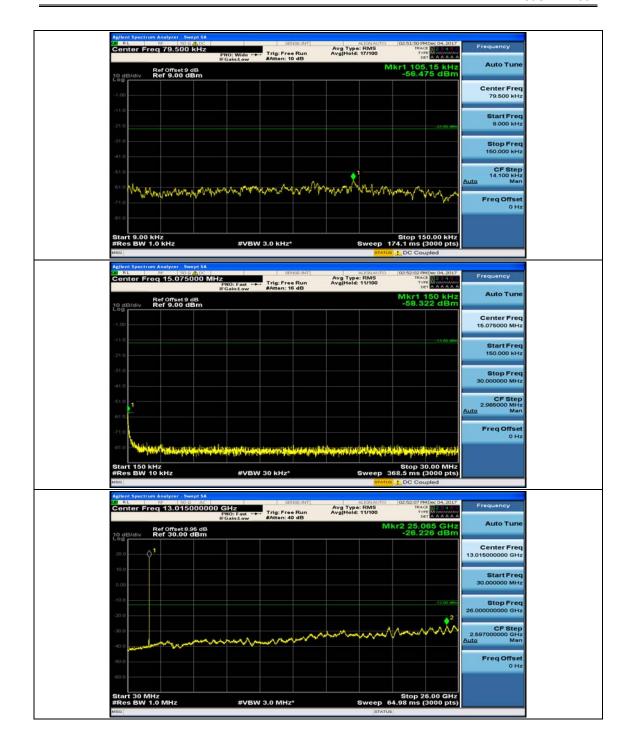






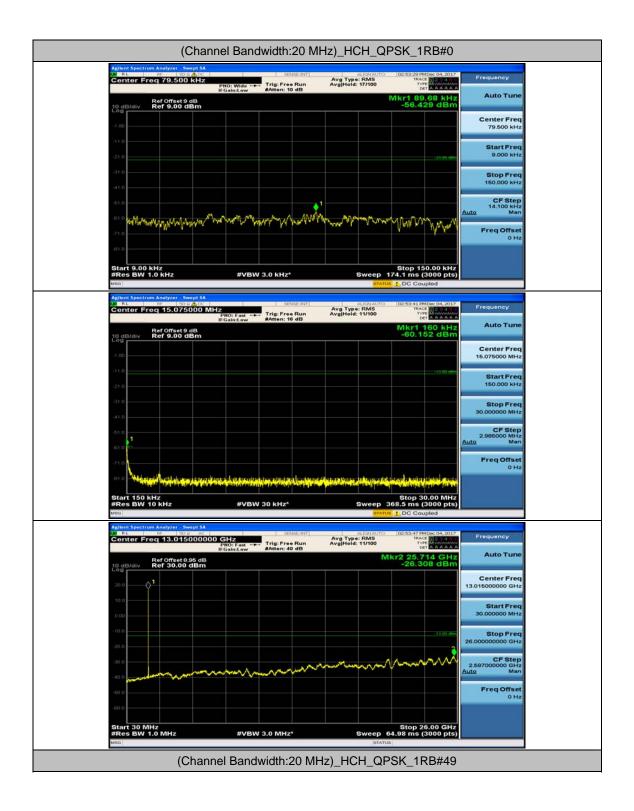






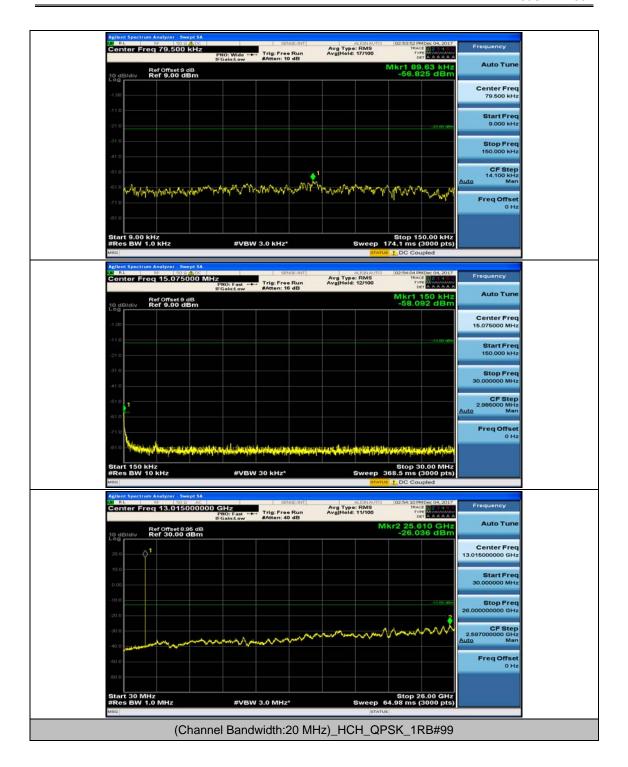






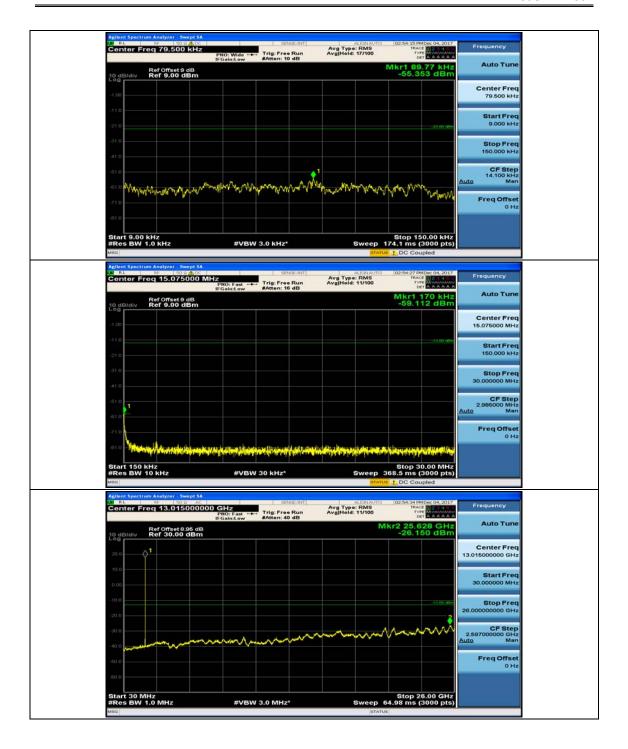






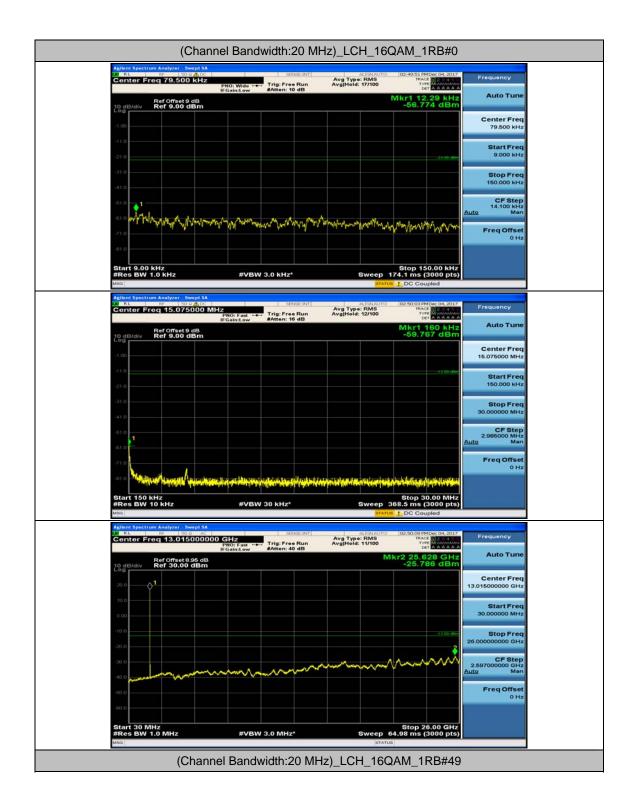






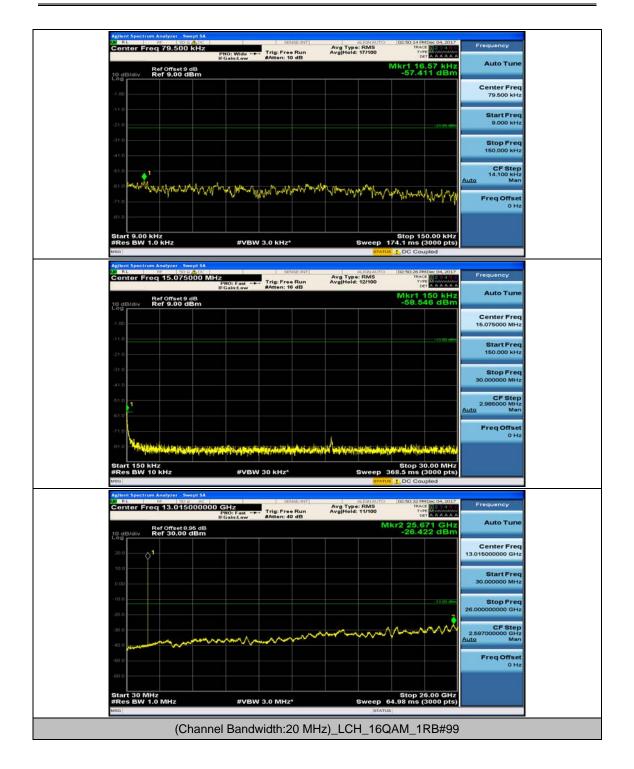






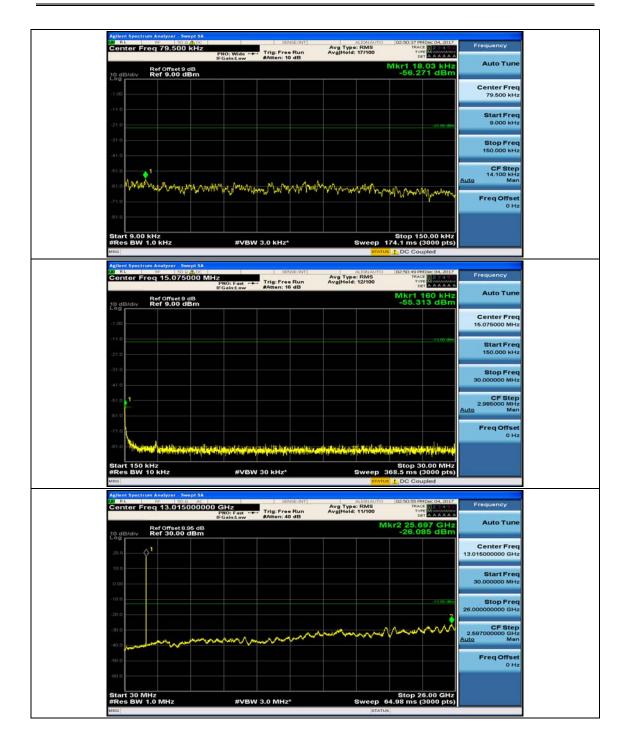






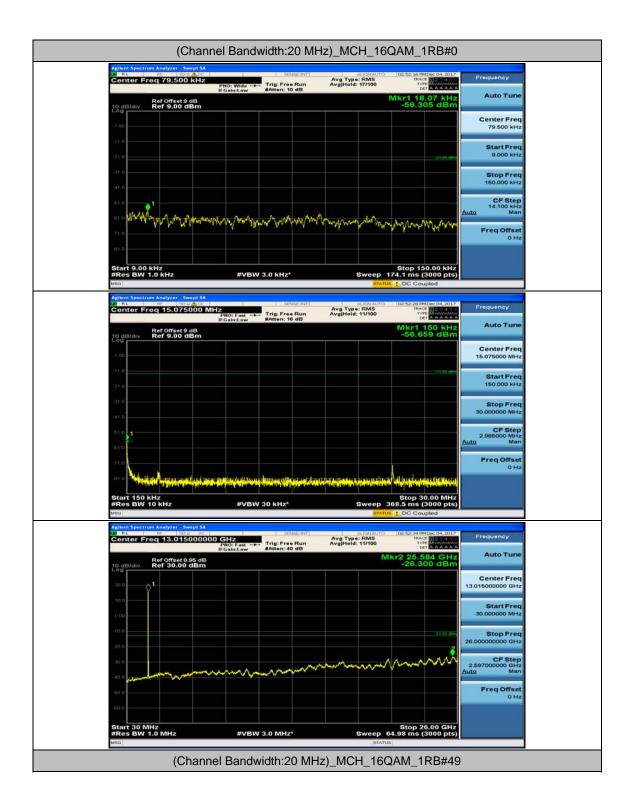






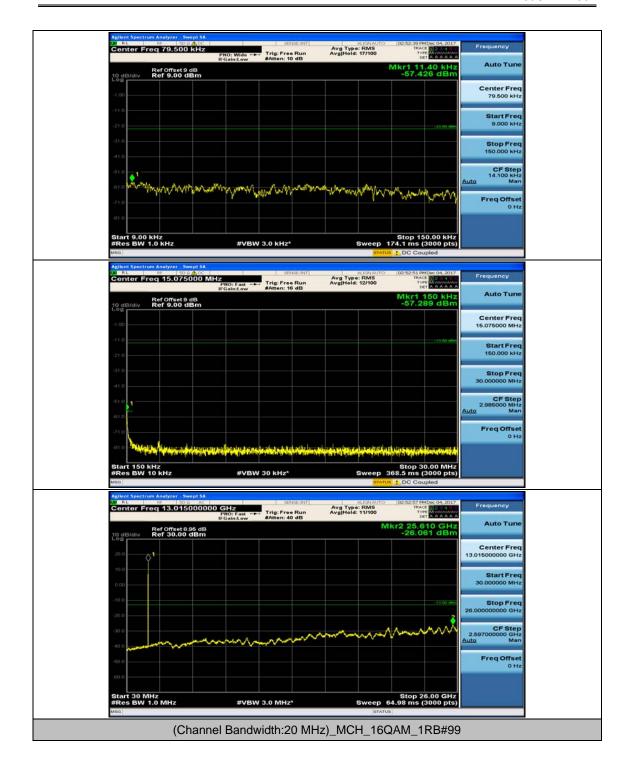






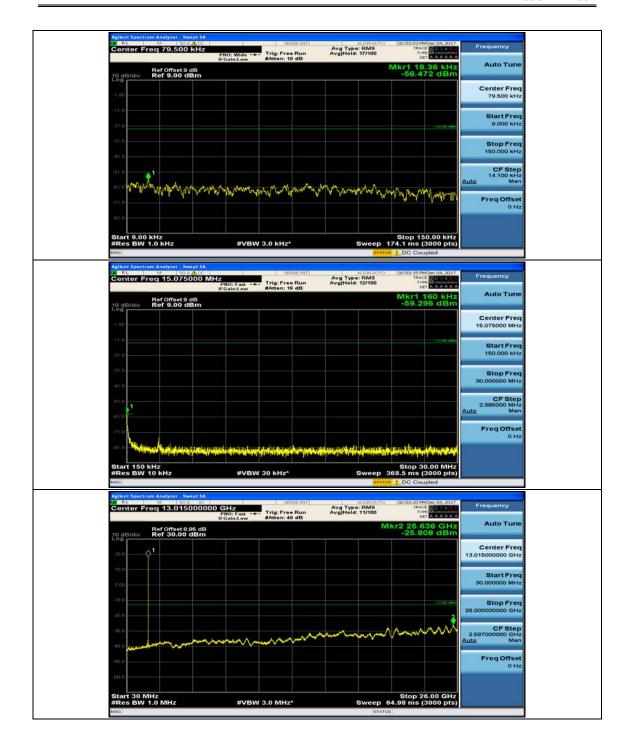






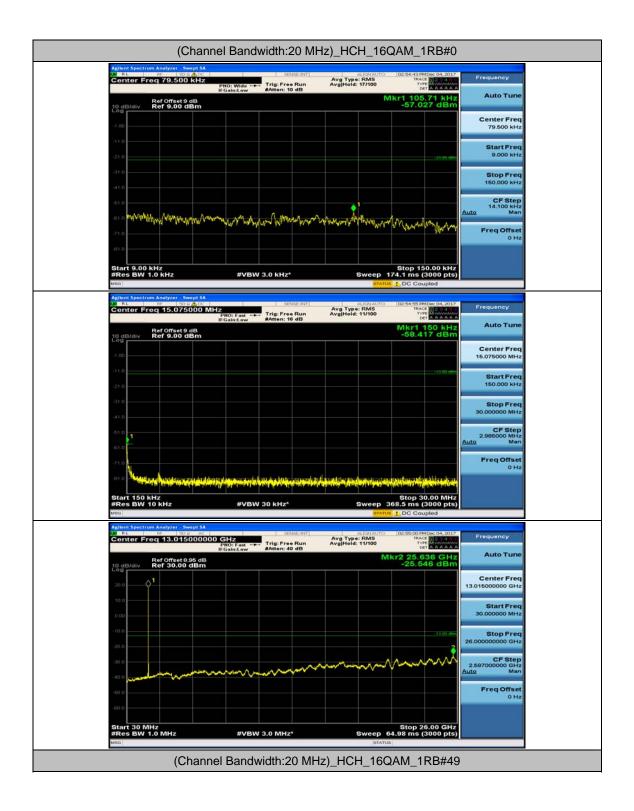






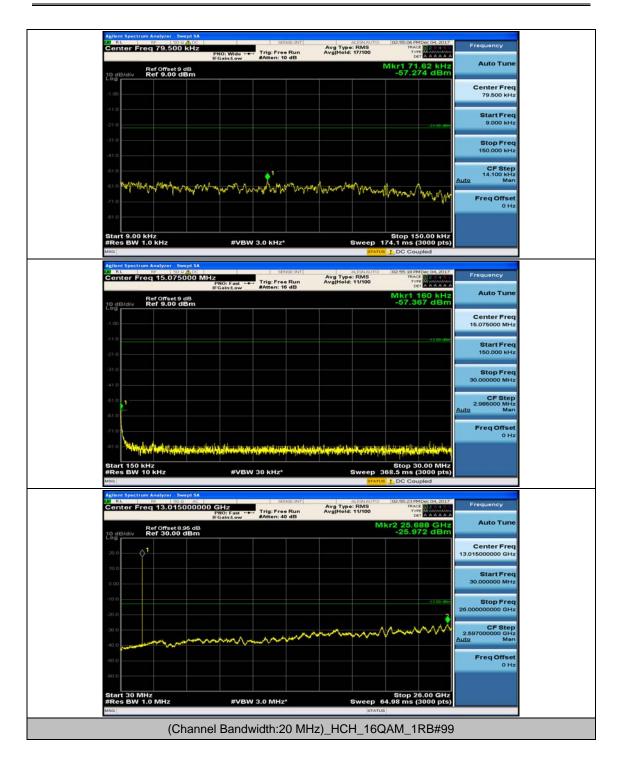






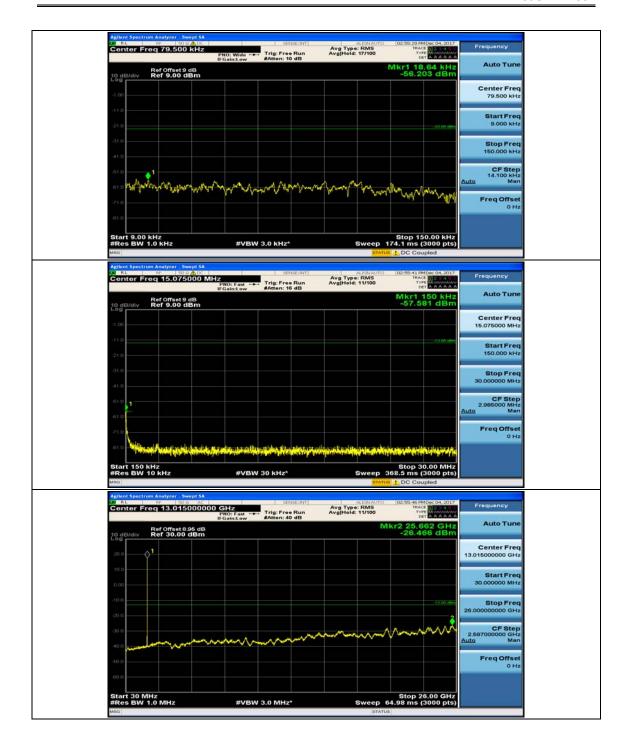
















Appendix F: Frequency Stability

Test Result

Channel Bandwidth: 1.4 MHz

| | | | Channel Band | width: 1.4 MHz | | | | | | | |
|------------|-------------|------------------|---------------------|-------------------|--------------------|----------------|---------|--|--|--|--|
| Voltage | | | | | | | | | | | |
| Modulation | Channel | Voltage [Vdc] | Temperature (°C) | Deviation (Hz) | Deviation (ppm) | Limit (ppm) | Verdict | | | | |
| | | VL | TN | 0.001456 | 0.001456 | ± 2.5 | PASS | | | | |
| | LCH | VN | TN | 0.000433 | 0.000433 | ± 2.5 | PASS | | | | |
| | | VH | TN | -0.000883 | -0.000883 | ± 2.5 | PASS | | | | |
| | | VL | TN | -0.000202 | -0.000202 | ± 2.5 | PASS | | | | |
| QPSK | MCH | VN | TN | 0.001483 | 0.001483 | ± 2.5 | PASS | | | | |
| | | VH | TN | 0.001131 | 0.001131 | ± 2.5 | PASS | | | | |
| | | VL | TN | 0.002178 | 0.002178 | ± 2.5 | PASS | | | | |
| | HCH | VN | TN | 0.002428 | 0.002428 | ± 2.5 | PASS | | | | |
| | | VH | TN | -0.000068 | -0.000068 | ± 2.5 | PASS | | | | |
| | | VL | TN | 0.002099 | 0.002099 | ± 2.5 | PASS | | | | |
| | LCH | VN | TN | 0.000608 | 0.000608 | ± 2.5 | PASS | | | | |
| | | VH | TN | 0.002180 | 0.002180 | ± 2.5 | PASS | | | | |
| | | VL | TN | 0.001616 | 0.001616 | ± 2.5 | PASS | | | | |
| 16QAM | MCH | VN | TN | 0.000398 | 0.000398 | ± 2.5 | PASS | | | | |
| | | VH | TN | 0.000410 | 0.000410 | ± 2.5 | PASS | | | | |
| | нсн | VL | TN | -0.000063 | -0.000063 | ± 2.5 | PASS | | | | |
| | | VN | TN | 0.000416 | 0.000416 | ± 2.5 | PASS | | | | |
| | | VH | TN | 0.002645 | 0.002645 | ± 2.5 | PASS | | | | |
| | | | Tempe | erature | | i . | | | | | |
| Modulation | Channe I | Voltage [Vdc] | Temperature (℃) | Deviation (Hz) | Deviation (ppm) | Limit (ppm) | Verdict | | | | |
| | | VN | -30 | 1.93 | 0.001128 | ± 2.5 | PASS | | | | |
| | | VN | -20 | 2.59 | 0.001514 | ± 2.5 | PASS | | | | |
| | | VN | -10 | 0.11 | 0.000064 | ± 2.5 | PASS | | | | |
| | | VN | 0 | 0.53 | 0.000310 | ± 2.5 | PASS | | | | |
| QPSK | LCH | VN | 10 | 4.25 | 0.002484 | ± 2.5 | PASS | | | | |
| WF3N | | VN | 20 | 1.77 | 0.001035 | ± 2.5 | PASS | | | | |
| | | VN | 30 | -0.53 | -0.000310 | ± 2.5 | PASS | | | | |
| | | VN | 40 | -1.6 | -0.000935 | ± 2.5 | PASS | | | | |
| | | VN | 50 | 0.68 | 0.000397 | ± 2.5 | PASS | | | | |
| | MCH | VN | -30 | 1.99 | 0.001149 | ± 2.5 | PASS | | | | |

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LTE Band 4



| | | VN | -20 | 3.9 | 0.002251 | ± 2.5 | PASS |
|-------|-------|----|-----|-------|-----------|-------|------|
| | | VN | -10 | 1.45 | 0.000837 | ± 2.5 | PASS |
| | | VN | 0 | 4.86 | 0.002805 | ± 2.5 | PASS |
| | | VN | 10 | 2.88 | 0.001662 | ± 2.5 | PASS |
| | | VN | 20 | -1.89 | -0.001091 | ± 2.5 | PASS |
| | | VN | 30 | 4.04 | 0.002332 | ± 2.5 | PASS |
| | | VN | 40 | 0.47 | 0.000271 | ± 2.5 | PASS |
| | | VN | 50 | -1.15 | -0.000664 | ± 2.5 | PASS |
| | | VN | -30 | 2.57 | 0.001465 | ± 2.5 | PASS |
| | | VN | -20 | 3.65 | 0.002081 | ± 2.5 | PASS |
| | | VN | -10 | 3.87 | 0.002206 | ± 2.5 | PASS |
| | | VN | 0 | 3.64 | 0.002075 | ± 2.5 | PASS |
| | НСН | VN | 10 | -1.77 | -0.001009 | ± 2.5 | PASS |
| | | VN | 20 | -1.17 | -0.000667 | ± 2.5 | PASS |
| | | VN | 30 | 2.28 | 0.001300 | ± 2.5 | PASS |
| | | VN | 40 | -1.92 | -0.001094 | ± 2.5 | PASS |
| | | VN | 50 | -1.27 | -0.000724 | ± 2.5 | PASS |
| | | VN | -30 | 0.02 | 0.000012 | ± 2.5 | PASS |
| | LCH | VN | -20 | -0.07 | -0.000041 | ± 2.5 | PASS |
| | | VN | -10 | 1.19 | 0.000696 | ± 2.5 | PASS |
| | | VN | 0 | 1.36 | 0.000795 | ± 2.5 | PASS |
| | | VN | 10 | -0.3 | -0.000175 | ± 2.5 | PASS |
| | | VN | 20 | 4.39 | 0.002566 | ± 2.5 | PASS |
| | | VN | 30 | 3.2 | 0.001871 | ± 2.5 | PASS |
| | | VN | 40 | -1.12 | -0.000655 | ± 2.5 | PASS |
| | | VN | 50 | 1.8 | 0.001052 | ± 2.5 | PASS |
| | | VN | -30 | 2.93 | 0.001670 | ± 2.5 | PASS |
| | | VN | -20 | -1.49 | -0.000849 | ± 2.5 | PASS |
| 16QAM | | VN | -10 | -1.27 | -0.000724 | ± 2.5 | PASS |
| IOQAW | | VN | 0 | 1.59 | 0.000906 | ± 2.5 | PASS |
| | MCH | VN | 10 | 3.51 | 0.002001 | ± 2.5 | PASS |
| | | VN | 20 | 2.65 | 0.001511 | ± 2.5 | PASS |
| | | VN | 30 | -1.39 | -0.000792 | ± 2.5 | PASS |
| | | VN | 40 | -1.58 | -0.000901 | ± 2.5 | PASS |
| | | VN | 50 | 1.03 | 0.000587 | ± 2.5 | PASS |
| | | VN | -30 | 0.38 | 0.000217 | ± 2.5 | PASS |
| | | VN | -20 | 4.27 | 0.002434 | ± 2.5 | PASS |
| | LICIT | VN | -10 | -0.53 | -0.000302 | ± 2.5 | PASS |
| | HCH | VN | 0 | -0.68 | -0.000388 | ± 2.5 | PASS |
| | | VN | 10 | -1.39 | -0.000792 | ± 2.5 | PASS |
| 1 | I | VN | 20 | 4.73 | 0.002696 | ± 2.5 | PASS |



| VN | 30 | 3.5 | 0.001995 | ± 2.5 | PASS |
|----|----|-------|-----------|-------|------|
| VN | 40 | 2.89 | 0.001647 | ± 2.5 | PASS |
| VN | 50 | -0.06 | -0.000034 | ± 2.5 | PASS |

Channel Bandwidth: 3 MHz

| | | | Channel Band | lwidth: 3 MHz+ | | | |
|------------|---------|------------------|---------------------|-------------------|--------------------|----------------|---------|
| | | | | tage | | | |
| Modulation | Channel | Voltage [Vdc] | Temperature (°C) | Deviation (Hz) | Deviation (ppm) | Limit (ppm) | Verdict |
| | | VL | TN | 1.58 | 0.000923 | ± 2.5 | PASS |
| | LCH | VN | TN | -1 | -0.000584 | ± 2.5 | PASS |
| | | VH | TN | -0.41 | -0.000240 | ± 2.5 | PASS |
| | | VL | TN | -0.03 | -0.000017 | ± 2.5 | PASS |
| QPSK | MCH | VN | TN | 4.98 | 0.002874 | ± 2.5 | PASS |
| | | VH | TN | -1.74 | -0.001004 | ± 2.5 | PASS |
| | | VL | TN | 2.44 | 0.001392 | ± 2.5 | PASS |
| | HCH | VN | TN | 2.61 | 0.001488 | ± 2.5 | PASS |
| | | VH | TN | 2.26 | 0.001289 | ± 2.5 | PASS |
| | | VL | TN | -1.65 | -0.000964 | ± 2.5 | PASS |
| | LCH | VN | TN | -0.83 | -0.000485 | ± 2.5 | PASS |
| | | VH | TN | 1.96 | 0.001145 | ± 2.5 | PASS |
| | | VL | TN | -0.64 | -0.000369 | ± 2.5 | PASS |
| 16QAM | MCH | VN | TN | 3.89 | 0.002245 | ± 2.5 | PASS |
| | | VH | TN | 3.58 | 0.002066 | ± 2.5 | PASS |
| | НСН | VL | TN | 0.63 | 0.000359 | ± 2.5 | PASS |
| | | VN | TN | 3.8 | 0.002167 | ± 2.5 | PASS |
| | | VH | TN | 2.62 | 0.001494 | ± 2.5 | PASS |
| | | | Tempe | erature | | | |
| Modulation | Channel | Voltage [Vdc] | Temperature (℃) | Deviation (Hz) | Deviation (ppm) | Limit (ppm) | Verdict |
| | | VN | -30 | 2.14 | 0.001250 | ± 2.5 | PASS |
| | | VN | -20 | 1.9 | 0.001110 | ± 2.5 | PASS |
| | | VN | -10 | 3.93 | 0.002296 | ± 2.5 | PASS |
| | | VN | 0 | 2.83 | 0.001654 | ± 2.5 | PASS |
| | LCH | VN | 10 | 2.6 | 0.001519 | ± 2.5 | PASS |
| QPSK | | VN | 20 | -1.97 | -0.001151 | ± 2.5 | PASS |
| | | VN | 30 | 2.71 | 0.001583 | ± 2.5 | PASS |
| | | VN | 40 | 2.01 | 0.001174 | ± 2.5 | PASS |
| | | VN | 50 | -1.28 | -0.000748 | ± 2.5 | PASS |
| | MOLL | VN | -30 | 0.3 | 0.000173 | ± 2.5 | PASS |
| | MCH | VN | -20 | -1.84 | -0.001062 | ± 2.5 | PASS |





| | | VN | -10 | 4.33 | 0.002499 | ± 2.5 | PASS |
|-------|-----|----|-----|-------|-----------|-------|------|
| | | VN | 0 | 0.11 | 0.000063 | ± 2.5 | PASS |
| | | VN | 10 | -1.18 | -0.000681 | ± 2.5 | PASS |
| | | VN | 20 | 1.78 | 0.001027 | ± 2.5 | PASS |
| | | VN | 30 | 2.85 | 0.001645 | ± 2.5 | PASS |
| | | VN | 40 | 4.86 | 0.002805 | ± 2.5 | PASS |
| | | VN | 50 | 3.35 | 0.001934 | ± 2.5 | PASS |
| | | VN | -30 | 2.61 | 0.001488 | ± 2.5 | PASS |
| | | VN | -20 | 4.2 | 0.002395 | ± 2.5 | PASS |
| | | VN | -10 | 0.82 | 0.000468 | ± 2.5 | PASS |
| | | VN | 0 | 2.11 | 0.001203 | ± 2.5 | PASS |
| | HCH | VN | 10 | 4.7 | 0.002680 | ± 2.5 | PASS |
| | | VN | 20 | -0.41 | -0.000234 | ± 2.5 | PASS |
| | | VN | 30 | -0.63 | -0.000359 | ± 2.5 | PASS |
| | | VN | 40 | -0.7 | -0.000399 | ± 2.5 | PASS |
| | | VN | 50 | 1.81 | 0.001032 | ± 2.5 | PASS |
| | | VN | -30 | 3.25 | 0.001876 | ± 2.5 | PASS |
| | | VN | -20 | 2.28 | 0.001316 | ± 2.5 | PASS |
| | | VN | -10 | 0.83 | 0.000479 | ± 2.5 | PASS |
| | | VN | 0 | 3.32 | 0.001916 | ± 2.5 | PASS |
| | LCH | VN | 10 | 0.01 | 0.000006 | ± 2.5 | PASS |
| | | VN | 20 | 4.49 | 0.002592 | ± 2.5 | PASS |
| | | VN | 30 | 3.24 | 0.001870 | ± 2.5 | PASS |
| | | VN | 40 | 3.35 | 0.001934 | ± 2.5 | PASS |
| | | VN | 50 | -1.65 | -0.000952 | ± 2.5 | PASS |
| | | VN | -30 | 2.35 | 0.001340 | ± 2.5 | PASS |
| | | VN | -20 | 3.61 | 0.002059 | ± 2.5 | PASS |
| | | VN | -10 | 1.51 | 0.000861 | ± 2.5 | PASS |
| 16QAM | | VN | 0 | 0 | 0.000000 | ± 2.5 | PASS |
| | MCH | VN | 10 | 2.61 | 0.001488 | ± 2.5 | PASS |
| | | VN | 20 | -1.42 | -0.000810 | ± 2.5 | PASS |
| | | VN | 30 | -1.81 | -0.001032 | ± 2.5 | PASS |
| | | VN | 40 | 2.92 | 0.001665 | ± 2.5 | PASS |
| | | VN | 50 | 3.64 | 0.002076 | ± 2.5 | PASS |
| | | VN | -30 | 4.58 | 0.002612 | ± 2.5 | PASS |
| | | VN | -20 | 4.1 | 0.002338 | ± 2.5 | PASS |
| | | VN | -10 | -1.89 | -0.001078 | ± 2.5 | PASS |
| | HCH | VN | 0 | 1.03 | 0.000587 | ± 2.5 | PASS |
| | | VN | 10 | 4.99 | 0.002846 | ± 2.5 | PASS |
| | | VN | 20 | -0.77 | -0.000439 | ± 2.5 | PASS |
| | | VN | 30 | 0.52 | 0.000297 | ± 2.5 | PASS |



| | VN | 40 | 1.01 | 0.000576 | ± 2.5 | PASS |
|--|----|----|------|----------|-------|------|
| | VN | 50 | 3.88 | 0.002213 | ± 2.5 | PASS |

Channel Bandwidth: 5 MHz

| | | | Channel Ban | dwidth: 5 MHz | | | | | | | |
|------------|---------|------------------|--------------------------------------|-------------------|--------------------|----------------|---------|--|--|--|--|
| Voltage | | | | | | | | | | | |
| Modulation | Channel | Voltage [Vdc] | Temperature (°C) | Deviation (Hz) | Deviation (ppm) | Limit (ppm) | Verdict | | | | |
| | | VL | TN | 2.32 | 0.001355 | ± 2.5 | PASS | | | | |
| | LCH | VN | TN | 3.98 | 0.002324 | ± 2.5 | PASS | | | | |
| | | VH | TN | 2.93 | 0.001711 | ± 2.5 | PASS | | | | |
| | | VL | TN | 4.29 | 0.002476 | ± 2.5 | PASS | | | | |
| QPSK | MCH | VN | TN | 3.77 | 0.002176 | ± 2.5 | PASS | | | | |
| | | VH | TN | -1.38 | -0.000797 | ± 2.5 | PASS | | | | |
| | | VL | TN | -0.76 | -0.000434 | ± 2.5 | PASS | | | | |
| | HCH | VN | TN | 2.57 | 0.001466 | ± 2.5 | PASS | | | | |
| | | VH | TN | 1.2 | 0.000685 | ± 2.5 | PASS | | | | |
| | | VL | TN | 4.01 | 0.002342 | ± 2.5 | PASS | | | | |
| | LCH | VN | TN | -1.47 | -0.000858 | ± 2.5 | PASS | | | | |
| | | VH | TN | -0.49 | -0.000286 | ± 2.5 | PASS | | | | |
| | MCH | VL | TN | 4.1 | 0.002367 | ± 2.5 | PASS | | | | |
| 16QAM | | VN | TN | 4.56 | 0.002632 | ± 2.5 | PASS | | | | |
| | | VH | TN | 2.92 | 0.001685 | ± 2.5 | PASS | | | | |
| | | VL | TN | 1 | 0.000571 | ± 2.5 | PASS | | | | |
| | HCH | VN | TN | 0.31 | 0.000177 | ± 2.5 | PASS | | | | |
| | | VH | TN | 2.06 | 0.001175 | ± 2.5 | PASS | | | | |
| | 1 | • | Tempe | erature | | 1 | | | | | |
| Modulation | Channel | Voltage [Vdc] | Temperature $(^{\circ}\!\mathbb{C})$ | Deviation (Hz) | Deviation (ppm) | Limit (ppm) | Verdict | | | | |
| | | VN | -30 | 4.69 | 0.002739 | ± 2.5 | PASS | | | | |
| | | VN | -20 | 2.17 | 0.001267 | ± 2.5 | PASS | | | | |
| | | VN | -10 | 3.33 | 0.001945 | ± 2.5 | PASS | | | | |
| | | VN | 0 | -1.92 | -0.001121 | ± 2.5 | PASS | | | | |
| | LCH | VN | 10 | 3.62 | 0.002114 | ± 2.5 | PASS | | | | |
| OBSK | | VN | 20 | 2.59 | 0.001512 | ± 2.5 | PASS | | | | |
| QPSK | | VN | 30 | -1.1 | -0.000642 | ± 2.5 | PASS | | | | |
| | | VN | 40 | 4.92 | 0.002873 | ± 2.5 | PASS | | | | |
| | | VN | 50 | 0.63 | 0.000368 | ± 2.5 | PASS | | | | |
| | | VN | -30 | 2.59 | 0.001495 | ± 2.5 | PASS | | | | |
| | MCH | VN | -20 | 3.21 | 0.001853 | ± 2.5 | PASS | | | | |
| | | VN | -10 | 3.13 | 0.001807 | ± 2.5 | PASS | | | | |

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| | | VN | 0 | 0.14 | 0.000081 | ± 2.5 | PASS |
|-------|-----|----|-----|-------|-----------|-------|------|
| | | VN | 10 | 2.34 | 0.001351 | ± 2.5 | PASS |
| | | VN | 20 | -1.85 | -0.001068 | ± 2.5 | PASS |
| | | VN | 30 | -1.31 | -0.000756 | ± 2.5 | PASS |
| | | VN | 40 | 2.58 | 0.001489 | ± 2.5 | PASS |
| | | VN | 50 | 1.48 | 0.000854 | ± 2.5 | PASS |
| | | VN | -30 | 2.21 | 0.001261 | ± 2.5 | PASS |
| | | VN | -20 | 3.15 | 0.001651 | ± 2.5 | PASS |
| | | VN | -10 | 0.91 | 0.000477 | ± 2.5 | PASS |
| | | VN | 0 | 0.73 | 0.000383 | ± 2.5 | PASS |
| | HCH | VN | 10 | -1.6 | -0.000839 | ± 2.5 | PASS |
| | | VN | 20 | -0.44 | -0.000231 | ± 2.5 | PASS |
| | | VN | 30 | 1.49 | 0.000781 | ± 2.5 | PASS |
| | | VN | 40 | 2.54 | 0.001332 | ± 2.5 | PASS |
| | | VN | 50 | 1.44 | 0.000755 | ± 2.5 | PASS |
| | | VN | -30 | -1.51 | -0.000872 | ± 2.5 | PASS |
| | | VN | -20 | 1.79 | 0.001033 | ± 2.5 | PASS |
| | | VN | -10 | 1.03 | 0.000595 | ± 2.5 | PASS |
| | LCH | VN | 0 | -1.51 | -0.000872 | ± 2.5 | PASS |
| | | VN | 10 | -1.88 | -0.001085 | ± 2.5 | PASS |
| | | VN | 20 | 2.91 | 0.001680 | ± 2.5 | PASS |
| | | VN | 30 | -0.58 | -0.000335 | ± 2.5 | PASS |
| | | VN | 40 | 2.97 | 0.001714 | ± 2.5 | PASS |
| | | VN | 50 | 1.95 | 0.001126 | ± 2.5 | PASS |
| | | VN | -30 | 4.89 | 0.002790 | ± 2.5 | PASS |
| | | VN | -20 | -1.86 | -0.001061 | ± 2.5 | PASS |
| | | VN | -10 | -0.83 | -0.000474 | ± 2.5 | PASS |
| 16QAM | | VN | 0 | 4.24 | 0.002419 | ± 2.5 | PASS |
| IOQAW | MCH | VN | 10 | -1.38 | -0.000787 | ± 2.5 | PASS |
| | | VN | 20 | -0.34 | -0.000194 | ± 2.5 | PASS |
| | | VN | 30 | 1.3 | 0.000742 | ± 2.5 | PASS |
| | | VN | 40 | -0.73 | -0.000417 | ± 2.5 | PASS |
| | | VN | 50 | 1.01 | 0.000576 | ± 2.5 | PASS |
| | | VN | -30 | 2.52 | 0.001321 | ± 2.5 | PASS |
| | | VN | -20 | -1.69 | -0.000886 | ± 2.5 | PASS |
| | | VN | -10 | 0.21 | 0.000110 | ± 2.5 | PASS |
| | ПОП | VN | 0 | 0.33 | 0.000173 | ± 2.5 | PASS |
| | HCH | VN | 10 | 2.75 | 0.001442 | ± 2.5 | PASS |
| | | VN | 20 | 5 | 0.002621 | ± 2.5 | PASS |
| | | VN | 30 | 3.36 | 0.001761 | ± 2.5 | PASS |
| | | VN | 40 | -1.71 | -0.000896 | ± 2.5 | PASS |



| | VN | 50 | -1.26 | -0.000661 | ± 2.5 | PASS |
|--|----|----|-------|-----------|-------|------|
| | | 00 | 1.20 | 0.000001 | | . , |

Channel Bandwidth: 10 MHz

| | | | Channel Band | lwidth: 10 MHz | | | |
|------------|---------|------------------|---------------------|-------------------|--------------------|----------------|---------|
| | | | Vol | tage | | | |
| Modulation | Channel | Voltage [Vdc] | Temperature (°C) | Deviation (Hz) | Deviation (ppm) | Limit (ppm) | Verdict |
| | | VL | TN | 4.03 | 0.002350 | ± 2.5 | PASS |
| | LCH | VN | TN | 0.38 | 0.000222 | ± 2.5 | PASS |
| | | VH | TN | 2.57 | 0.001499 | ± 2.5 | PASS |
| | | VL | TN | 1.29 | 0.000745 | ± 2.5 | PASS |
| QPSK | MCH | VN | TN | 1.06 | 0.000612 | ± 2.5 | PASS |
| | | VH | TN | 4.1 | 0.002367 | ± 2.5 | PASS |
| | | VL | TN | 2.1 | 0.001200 | ± 2.5 | PASS |
| | HCH | VN | TN | 4.34 | 0.002480 | ± 2.5 | PASS |
| | | VH | TN | -1.14 | -0.000651 | ± 2.5 | PASS |
| | | VL | TN | 3.91 | 0.002280 | ± 2.5 | PASS |
| | LCH | VN | TN | 4 | 0.002332 | ± 2.5 | PASS |
| | | VH | TN | -1.97 | -0.001149 | ± 2.5 | PASS |
| | MCH | VL | TN | 4.47 | 0.002580 | ± 2.5 | PASS |
| 16QAM | | VN | TN | 4.1 | 0.002367 | ± 2.5 | PASS |
| | | VH | TN | 2.97 | 0.001714 | ± 2.5 | PASS |
| | | VL | TN | 4.99 | 0.002851 | ± 2.5 | PASS |
| | HCH | VN | TN | -0.71 | -0.000406 | ± 2.5 | PASS |
| | | VH | TN | 4.52 | 0.002583 | ± 2.5 | PASS |
| | | | Tempe | erature | | | |
| Modulation | Channel | Voltage [Vdc] | Temperature (℃) | Deviation (Hz) | Deviation (ppm) | Limit (ppm) | Verdict |
| | | VN | -30 | -0.66 | -0.000385 | ± 2.5 | PASS |
| | | VN | -20 | 2 | 0.001166 | ± 2.5 | PASS |
| | | VN | -10 | -1.61 | -0.000939 | ± 2.5 | PASS |
| | | VN | 0 | -1.36 | -0.000793 | ± 2.5 | PASS |
| | LCH | VN | 10 | 2.81 | 0.001638 | ± 2.5 | PASS |
| | | VN | 20 | 3.03 | 0.001767 | ± 2.5 | PASS |
| 16QAM | | VN | 30 | 3.46 | 0.002017 | ± 2.5 | PASS |
| | | VN | 40 | -0.08 | -0.000047 | ± 2.5 | PASS |
| | | VN | 50 | 0.29 | 0.000169 | ± 2.5 | PASS |
| | | VN | -30 | 3.94 | 0.002274 | ± 2.5 | PASS |
| | MCH | VN | -20 | -1.3 | -0.000750 | ± 2.5 | PASS |
| | MCH | VN | -10 | 0.6 | 0.000346 | ± 2.5 | PASS |
| | | VN | 0 | 0.17 | 0.000098 | ± 2.5 | PASS |





| | | VN | 10 | 4.97 | 0.002869 | ± 2.5 | PASS |
|------|-----|----|-----|-------|-----------|-------|------|
| | | VN | 20 | 2.17 | 0.001253 | ± 2.5 | PASS |
| | | VN | 30 | -1.24 | -0.000716 | ± 2.5 | PASS |
| | | VN | 40 | 4.23 | 0.002442 | ± 2.5 | PASS |
| | | VN | 50 | 2.46 | 0.001420 | ± 2.5 | PASS |
| | | VN | -30 | 1.6 | 0.000914 | ± 2.5 | PASS |
| | | VN | -20 | 2.25 | 0.001286 | ± 2.5 | PASS |
| | | VN | -10 | 0.99 | 0.000566 | ± 2.5 | PASS |
| | | VN | 0 | -0.27 | -0.000154 | ± 2.5 | PASS |
| | HCH | VN | 10 | 2.17 | 0.001240 | ± 2.5 | PASS |
| | | VN | 20 | -0.99 | -0.000566 | ± 2.5 | PASS |
| | | VN | 30 | 4.72 | 0.002697 | ± 2.5 | PASS |
| | | VN | 40 | -0.01 | -0.000006 | ± 2.5 | PASS |
| | | VN | 50 | -0.37 | -0.000211 | ± 2.5 | PASS |
| | | VN | -30 | 1.21 | 0.000698 | ± 2.5 | PASS |
| | | VN | -20 | 3.15 | 0.001818 | ± 2.5 | PASS |
| | | VN | -10 | -1.23 | -0.000710 | ± 2.5 | PASS |
| | | VN | 0 | 2.38 | 0.001374 | ± 2.5 | PASS |
| | LCH | VN | 10 | -1.81 | -0.001045 | ± 2.5 | PASS |
| | | VN | 20 | 2.37 | 0.001368 | ± 2.5 | PASS |
| | | VN | 30 | 4.82 | 0.002782 | ± 2.5 | PASS |
| | | VN | 40 | 1.07 | 0.000618 | ± 2.5 | PASS |
| | | VN | 50 | -0.3 | -0.000173 | ± 2.5 | PASS |
| | | VN | -30 | -0.63 | -0.000360 | ± 2.5 | PASS |
| | | VN | -20 | 2.37 | 0.001354 | ± 2.5 | PASS |
| | | VN | -10 | 3.2 | 0.001829 | ± 2.5 | PASS |
| | | VN | 0 | -0.17 | -0.000097 | ± 2.5 | PASS |
| QPSK | MCH | VN | 10 | 4.79 | 0.002737 | ± 2.5 | PASS |
| | | VN | 20 | 0.69 | 0.000394 | ± 2.5 | PASS |
| | | VN | 30 | 3.17 | 0.001811 | ± 2.5 | PASS |
| | | VN | 40 | 3.99 | 0.002280 | ± 2.5 | PASS |
| | | VN | 50 | -0.28 | -0.000160 | ± 2.5 | PASS |
| | | VN | -30 | 0.65 | 0.000371 | ± 2.5 | PASS |
| | | VN | -20 | 0.41 | 0.000234 | ± 2.5 | PASS |
| | | VN | -10 | 4.15 | 0.002371 | ± 2.5 | PASS |
| | | VN | 0 | -1.63 | -0.000931 | ± 2.5 | PASS |
| | HCH | VN | 10 | 2.24 | 0.001280 | ± 2.5 | PASS |
| | | VN | 20 | 3.69 | 0.002109 | ± 2.5 | PASS |
| | | VN | 30 | -1.53 | -0.000874 | ± 2.5 | PASS |
| | | VN | 40 | 2.73 | 0.001560 | ± 2.5 | PASS |
| | | VN | 50 | -1.42 | -0.000811 | ± 2.5 | PASS |



Channel Bandwidth: 15 MHz

| | | | Channel Band | lwidth: 15 MHz | | | | | | | | |
|------------|---------|------------------|---------------------|-------------------|--------------------|----------------|---------|--|--|--|--|--|
| | Voltage | | | | | | | | | | | |
| Modulation | Channel | Voltage [Vdc] | Temperature (°C) | Deviation (Hz) | Deviation (ppm) | Limit (ppm) | Verdict | | | | | |
| | | VL | TN | 0.000099 | 0.000099 | ± 2.5 | PASS | | | | | |
| | LCH | VN | TN | -0.000594 | -0.000594 | ± 2.5 | PASS | | | | | |
| | | VH | TN | 0.001392 | 0.001392 | ± 2.5 | PASS | | | | | |
| | | VL | TN | 0.001887 | 0.001887 | ± 2.5 | PASS | | | | | |
| QPSK | MCH | VN | TN | 0.002442 | 0.002442 | ± 2.5 | PASS | | | | | |
| | | VH | TN | 0.001062 | 0.001062 | ± 2.5 | PASS | | | | | |
| | | VL | TN | 0.000258 | 0.000258 | ± 2.5 | PASS | | | | | |
| | HCH | VN | TN | 0.002020 | 0.002020 | ± 2.5 | PASS | | | | | |
| | | VH | TN | -0.000126 | -0.000126 | ± 2.5 | PASS | | | | | |
| | | VL | TN | 0.001974 | 0.001974 | ± 2.5 | PASS | | | | | |
| | LCH | VN | TN | -0.000413 | -0.000413 | ± 2.5 | PASS | | | | | |
| | | VH | TN | 0.000512 | 0.000512 | ± 2.5 | PASS | | | | | |
| | | VL | TN | 0.002609 | 0.002609 | ± 2.5 | PASS | | | | | |
| 16QAM | MCH | VN | TN | 0.000156 | 0.000156 | ± 2.5 | PASS | | | | | |
| | | VH | TN | 0.002378 | 0.002378 | ± 2.5 | PASS | | | | | |
| | | VL | TN | 0.002426 | 0.002426 | ± 2.5 | PASS | | | | | |
| | HCH | VN | TN | 0.000670 | 0.000670 | ± 2.5 | PASS | | | | | |
| | | VH | TN | 0.000458 | 0.000458 | ± 2.5 | PASS | | | | | |
| | | | Tempe | erature | | | | | | | | |
| Modulation | Channel | Voltage [Vdc] | Temperature (℃) | Deviation (Hz) | Deviation (ppm) | Limit (ppm) | Verdict | | | | | |
| | | VN | -30 | 0.001491 | 0.001491 | ± 2.5 | PASS | | | | | |
| | | VN | -20 | 0.002603 | 0.002603 | ± 2.5 | PASS | | | | | |
| | | VN | -10 | -0.000565 | -0.000565 | ± 2.5 | PASS | | | | | |
| | | VN | 0 | -0.000838 | -0.000838 | ± 2.5 | PASS | | | | | |
| | LCH | VN | 10 | 0.002684 | 0.002684 | ± 2.5 | PASS | | | | | |
| | | VN | 20 | 0.000967 | 0.000967 | ± 2.5 | PASS | | | | | |
| | | VN | 30 | 0.002702 | 0.002702 | ± 2.5 | PASS | | | | | |
| QPSK | | VN | 40 | -0.000076 | -0.000076 | ± 2.5 | PASS | | | | | |
| | | VN | 50 | -0.000093 | -0.000093 | ± 2.5 | PASS | | | | | |
| | | VN | -30 | 0.001489 | 0.001489 | ± 2.5 | PASS | | | | | |
| | | VN | -20 | 0.002240 | 0.002240 | ± 2.5 | PASS | | | | | |
| | MCH | VN | -10 | -0.000398 | -0.000398 | ± 2.5 | PASS | | | | | |
| | IVICH | VN | 0 | 0.001518 | 0.001518 | ± 2.5 | PASS | | | | | |
| | | VN | 10 | 0.002528 | 0.002528 | ± 2.5 | PASS | | | | | |
| | | VN | 20 | 0.001506 | 0.001506 | ± 2.5 | PASS | | | | | |

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| | | VN | 30 | 0.001760 | 0.001760 | ± 2.5 | PASS |
|-------|-----|----|-----|------------|------------|-------|------|
| | | VN | 40 | 0.001760 | 0.001760 | ± 2.5 | PASS |
| | | VN | 50 | 0.00029 | 0.00029 | ± 2.5 | PASS |
| | | VN | -30 | 0.002274 | 0.002274 | ± 2.5 | PASS |
| | | VN | -20 | -0.0001308 | -0.0001308 | ± 2.5 | PASS |
| | | VN | -10 | | | | PASS |
| | | | | 0.001780 | 0.001780 | ± 2.5 | |
| | НСН | VN | 0 | 0.002220 | 0.002220 | ± 2.5 | PASS |
| | | VN | 10 | -0.000406 | -0.000406 | ± 2.5 | PASS |
| | | VN | 20 | 0.000023 | 0.000023 | ± 2.5 | PASS |
| | | VN | 30 | 0.002649 | 0.002649 | ± 2.5 | PASS |
| | | VN | 40 | 0.001654 | 0.001654 | ± 2.5 | PASS |
| | | VN | 50 | 0.001247 | 0.001247 | ± 2.5 | PASS |
| | | VN | -30 | 0.000964 | 0.000964 | ± 2.5 | PASS |
| | | VN | -20 | 0.001772 | 0.001772 | ± 2.5 | PASS |
| | | VN | -10 | 0.002193 | 0.002193 | ± 2.5 | PASS |
| | | VN | 0 | 0.000519 | 0.000519 | ± 2.5 | PASS |
| | LCH | VN | 10 | 0.000214 | 0.000214 | ± 2.5 | PASS |
| | | VN | 20 | -0.000618 | -0.000618 | ± 2.5 | PASS |
| | | VN | 30 | 0.000670 | 0.000670 | ± 2.5 | PASS |
| | | VN | 40 | -0.000491 | -0.000491 | ± 2.5 | PASS |
| | | VN | 50 | -0.000035 | -0.000035 | ± 2.5 | PASS |
| | МСН | VN | -30 | 0.000761 | 0.000761 | ± 2.5 | PASS |
| | | VN | -20 | 0.001751 | 0.001751 | ± 2.5 | PASS |
| | | VN | -10 | -0.001024 | -0.001024 | ± 2.5 | PASS |
| 16QAM | | VN | 0 | -0.000996 | -0.000996 | ± 2.5 | PASS |
| | | VN | 10 | 0.001516 | 0.001516 | ± 2.5 | PASS |
| | | VN | 20 | -0.000315 | -0.000315 | ± 2.5 | PASS |
| | | VN | 30 | 0.000086 | 0.000086 | ± 2.5 | PASS |
| | | VN | 40 | -0.000544 | -0.000544 | ± 2.5 | PASS |
| | | VN | 50 | -0.000498 | -0.000498 | ± 2.5 | PASS |
| | нсн | VN | -30 | 0.002758 | 0.002758 | ± 2.5 | PASS |
| | | VN | -20 | 0.001190 | 0.001190 | ± 2.5 | PASS |
| | | VN | -10 | 0.000286 | 0.000286 | ± 2.5 | PASS |
| | | VN | 0 | 0.002066 | 0.002066 | ± 2.5 | PASS |
| | | VN | 10 | 0.002472 | 0.002472 | ± 2.5 | PASS |
| | | VN | 20 | -0.000143 | -0.000143 | ± 2.5 | PASS |
| | | VN | 30 | 0.000401 | 0.000401 | ± 2.5 | PASS |
| | | VN | 40 | 0.000670 | 0.000670 | ± 2.5 | PASS |
| | | VN | 50 | 0.002861 | 0.002861 | ± 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 | | |
| | | VL | TN | 0.002855 | 0.002855 | ± 2.5 | PASS | | |
| QPSK | LCH | VN | TN | -0.000517 | -0.000517 | ± 2.5 | PASS | | |
| | | VH | TN | 0.001622 | 0.001622 | ± 2.5 | PASS | | |
| | MCH | VL | TN | -0.000554 | -0.000554 | ± 2.5 | PASS | | |
| | | VN | TN | -0.000364 | -0.000364 | ± 2.5 | PASS | | |
| | | VH | TN | 0.002153 | 0.002153 | ± 2.5 | PASS | | |
| | НСН | VL | TN | -0.001135 | -0.001135 | ± 2.5 | PASS | | |
| | | VN | TN | -0.000980 | -0.000980 | ± 2.5 | PASS | | |
| | | VH | TN | -0.000350 | -0.000350 | ± 2.5 | PASS | | |
| | | VL | TN | 0.002326 | 0.002326 | ± 2.5 | PASS | | |
| | LCH | VN | TN | -0.000384 | -0.000384 | ± 2.5 | PASS | | |
| | | VH | TN | -0.000657 | -0.000657 | ± 2.5 | PASS | | |
| | MCH | VL | TN | 0.000797 | 0.000797 | ± 2.5 | PASS | | |
| 16QAM | | VN | TN | 0.002788 | 0.002788 | ± 2.5 | PASS | | |
| | | VH | TN | 0.002805 | 0.002805 | ± 2.5 | PASS | | |
| | НСН | VL | TN | 0.000819 | 0.000819 | ± 2.5 | PASS | | |
| | | VN | TN | -0.000189 | -0.000189 | ± 2.5 | PASS | | |
| | | VH | TN | 0.000178 | 0.000178 | ± 2.5 | PASS | | |
| | | | Tempe | erature | | | | | |
| Modulation | Channel | Voltage [Vdc] | Temperature (℃) | Deviation (Hz) | Deviation (ppm) | Limit (ppm) | Verdict | | |
| QPSK | LCH | VN | -30 | -1.03 | -0.000599 | ± 2.5 | PASS | | |
| | | VN | -20 | 4.16 | 0.002419 | ± 2.5 | PASS | | |
| | | VN | -10 | -1.18 | -0.000686 | ± 2.5 | PASS | | |
| | | VN | 0 | 1.33 | 0.000773 | ± 2.5 | PASS | | |
| | | VN | 10 | -0.88 | -0.000512 | ± 2.5 | PASS | | |
| | | VN | 20 | 3.1 | 0.001802 | ± 2.5 | PASS | | |
| | | VN | 30 | 2.23 | 0.001297 | ± 2.5 | PASS | | |
| | | VN | 40 | -0.86 | -0.000500 | ± 2.5 | PASS | | |
| | | VN | 50 | 1.62 | 0.000942 | ± 2.5 | PASS | | |
| | мсн | VN | -30 | 4.87 | 0.002811 | ± 2.5 | PASS | | |
| | | VN | -20 | -0.96 | -0.000554 | ± 2.5 | PASS | | |
| | | VN | -10 | 1.78 | 0.001027 | ± 2.5 | PASS | | |
| | | VN | 0 | 3.95 | 0.002280 | ± 2.5 | PASS | | |
| | | VN | 10 | 3.26 | 0.001882 | ± 2.5 | PASS | | |
| | | VN | 20 | -1.45 | -0.000837 | ± 2.5 | PASS | | |

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| | | VN | 30 | 2.14 | 0.001235 | ± 2.5 | PASS |
|-------|-----|----|-----|-------|-----------|-------|------|
| | | VN | 40 | 0.92 | 0.000531 | ± 2.5 | PASS |
| | | VN | 50 | 0.14 | 0.000081 | ± 2.5 | PASS |
| | | VN | -30 | 1.12 | 0.000642 | ± 2.5 | PASS |
| | | VN | -20 | -0.89 | -0.000510 | ± 2.5 | PASS |
| | | VN | -10 | -1 | -0.000573 | ± 2.5 | PASS |
| | НСН | VN | 0 | 2.33 | 0.001335 | ± 2.5 | PASS |
| | | VN | 10 | 3.5 | 0.002006 | ± 2.5 | PASS |
| | | VN | 20 | 0.12 | 0.000069 | ± 2.5 | PASS |
| | | VN | 30 | 2.46 | 0.001410 | ± 2.5 | PASS |
| | | VN | 40 | 0.63 | 0.000361 | ± 2.5 | PASS |
| | | VN | 50 | 2.52 | 0.001444 | ± 2.5 | PASS |
| | | VN | -30 | 4.13 | 0.002384 | ± 2.5 | PASS |
| | | VN | -20 | 1.41 | 0.000814 | ± 2.5 | PASS |
| | | VN | -10 | 4.93 | 0.002846 | ± 2.5 | PASS |
| | LCH | VN | 0 | -0.95 | -0.000548 | ± 2.5 | PASS |
| | | VN | 10 | 2.64 | 0.001524 | ± 2.5 | PASS |
| | | VN | 20 | 4.34 | 0.002505 | ± 2.5 | PASS |
| | | VN | 30 | 0.04 | 0.000023 | ± 2.5 | PASS |
| | | VN | 40 | 4.31 | 0.002488 | ± 2.5 | PASS |
| | | VN | 50 | 3.95 | 0.002280 | ± 2.5 | PASS |
| | МСН | VN | -30 | 1.39 | 0.000797 | ± 2.5 | PASS |
| | | VN | -20 | 0.54 | 0.000309 | ± 2.5 | PASS |
| | | VN | -10 | 1.19 | 0.000682 | ± 2.5 | PASS |
| 16QAM | | VN | 0 | 4.84 | 0.002774 | ± 2.5 | PASS |
| | | VN | 10 | 1.26 | 0.000722 | ± 2.5 | PASS |
| | | VN | 20 | 2.1 | 0.001203 | ± 2.5 | PASS |
| | | VN | 30 | 1.12 | 0.000642 | ± 2.5 | PASS |
| | | VN | 40 | 1.49 | 0.000854 | ± 2.5 | PASS |
| | | VN | 50 | 0.7 | 0.000401 | ± 2.5 | PASS |
| | НСН | VN | -30 | -1.18 | -0.000676 | ± 2.5 | PASS |
| | | VN | -20 | -1.55 | -0.000888 | ± 2.5 | PASS |
| | | VN | -10 | 2.23 | 0.001278 | ± 2.5 | PASS |
| | | VN | 0 | 3.16 | 0.001811 | ± 2.5 | PASS |
| | | VN | 10 | -1.01 | -0.000579 | ± 2.5 | PASS |
| | | VN | 20 | -0.54 | -0.000309 | ± 2.5 | PASS |
| | | VN | 30 | -0.57 | -0.000327 | ± 2.5 | PASS |
| | | VN | 40 | -0.29 | -0.000166 | ± 2.5 | PASS |
| | | VN | 50 | 0.81 | 0.000464 | ± 2.5 | PASS |
| | | | | | | | |