# Appendix F: Test Data for LTE Band 5

# Product Name: TD0301 LTE Wi-Fi Hotspot

# Test Model: TD0301

## F1. Effective (Isotropic) Radiated Power Output Data

### F1.1 Test Result

| Test Band: 5 _ 1.4MHz Bandwidth | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Modulation | RB Allocation | | Conducted Power (dBm) | | | Antenna gain | | ERP(dBm) | | | Limit (dBm) | Verdict |
| | Size | Offset | LCH | MCH | HCH | (dBd) | (dBi) | LCH | MCH | HCH | | |
| QPSK | 1 | 0 | 23.65 | 23.83 | 24.35 | -1.15 | 1.00 | 22.50 | 22.68 | 23.20 | 38.45 | PASS |
| | | 2 | 23.96 | 23.86 | 24.36 | -1.15 | 1.00 | 22.81 | 22.71 | 23.21 | 38.45 | PASS |
| | | 5 | 23.88 | 23.80 | 24.52 | -1.15 | 1.00 | 22.73 | 22.65 | 23.37 | 38.45 | PASS |
| | 3 | 0 | 23.86 | 23.99 | 24.30 | -1.15 | 1.00 | 22.71 | 22.84 | 23.15 | 38.45 | PASS |
| | | 2 | 23.85 | 24.13 | 24.46 | -1.15 | 1.00 | 22.70 | 22.98 | 23.31 | 38.45 | PASS |
| | | 3 | 23.79 | 23.95 | 24.25 | -1.15 | 1.00 | 22.64 | 22.80 | 23.10 | 38.45 | PASS |
| | 6 | 0 | 22.89 | 22.94 | 23.29 | -1.15 | 1.00 | 21.74 | 21.79 | 22.14 | 38.45 | PASS |
| 16QAM | 1 | | 23.40 | 22.94 | 23.24 | -1.15 | 1.00 | 22.25 | 21.79 | 22.09 | 38.45 | PASS |
| | | 2 | 23.54 | 23.31 | 23.44 | -1.15 | 1.00 | 22.39 | 22.16 | 22.29 | 38.45 | PASS |
| | | 5 | 23.29 | 23.36 | 23.13 | -1.15 | 1.00 | 22.14 | 22.21 | 21.98 | 38.45 | PASS |
| | 3 | 0 | 22.66 | 22.62 | 23.01 | -1.15 | 1.00 | 21.51 | 21.47 | 21.86 | 38.45 | PASS |
| | | 2 | 22.73 | 22.57 | 23.46 | -1.15 | 1.00 | 21.58 | 21.42 | 22.31 | 38.45 | PASS |
| | | 3 | 22.85 | 22.53 | 23.39 | -1.15 | 1.00 | 21.70 | 21.38 | 22.24 | 38.45 | PASS |
| | 6 | 0 | 21.84 | 21.99 | 22.42 | -1.15 | 1.00 | 20.69 | 20.84 | 21.27 | 38.45 | PASS |

Note:
1) dBd = dBi - 2.15
2) EIRP = Conducted output power + Antenna gain (dBi)
3) ERP = Conducted output power + Antenna gain (dBd)

| Test Band: 5 _ 3MHz Bandwidth | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Modulation | RB Allocation | | Conducted Power (dBm) | | | Antenna gain | | ERP(dBm) | | | Limit (dBm) | Verdict |
| | Size | Offset | LCH | MCH | HCH | (dBd) | (dBi) | LCH | MCH | HCH | | |
| QPSK | 1 | 0 | 23.90 | 23.96 | 24.37 | -1.15 | 1.00 | 22.75 | 22.81 | 23.22 | 38.45 | PASS |
| | | 7 | 23.87 | 24.12 | 24.29 | -1.15 | 1.00 | 22.72 | 22.97 | 23.14 | 38.45 | PASS |
| | | 14 | 23.76 | 24.04 | 24.10 | -1.15 | 1.00 | 22.61 | 22.89 | 22.95 | 38.45 | PASS |
| | 8 | 0 | 22.92 | 23.09 | 23.45 | -1.15 | 1.00 | 21.77 | 21.94 | 22.30 | 38.45 | PASS |
| | | 4 | 22.82 | 23.11 | 23.43 | -1.15 | 1.00 | 21.67 | 21.96 | 22.28 | 38.45 | PASS |
| | | 7 | 22.84 | 23.10 | 23.35 | -1.15 | 1.00 | 21.69 | 21.95 | 22.20 | 38.45 | PASS |
| | 15 | 0 | 22.87 | 23.08 | 23.51 | -1.15 | 1.00 | 21.72 | 21.93 | 22.36 | 38.45 | PASS |
| 16QAM | 1 | | 22.85 | 22.88 | 23.24 | -1.15 | 1.00 | 21.70 | 21.73 | 22.09 | 38.45 | PASS |
| | | 7 | 22.88 | 22.97 | 23.62 | -1.15 | 1.00 | 21.73 | 21.82 | 22.47 | 38.45 | PASS |
| | | 14 | 22.62 | 22.99 | 23.22 | -1.15 | 1.00 | 21.47 | 21.84 | 22.07 | 38.45 | PASS |
| | 8 | 0 | 21.66 | 22.09 | 22.32 | -1.15 | 1.00 | 20.51 | 20.94 | 21.17 | 38.45 | PASS |
| | | 4 | 21.57 | 22.13 | 22.23 | -1.15 | 1.00 | 20.42 | 20.98 | 21.08 | 38.45 | PASS |
| | | 7 | 21.50 | 22.10 | 22.14 | -1.15 | 1.00 | 20.35 | 20.95 | 20.99 | 38.45 | PASS |
| | 15 | 0 | 21.82 | 21.88 | 22.42 | -1.15 | 1.00 | 20.67 | 20.73 | 21.27 | 38.45 | PASS |
| Note:<br>1) dBd = dBi - 2.15<br>2) EIRP = Conducted output power + Antenna gain (dBi)<br>3) ERP = Conducted output power + Antenna gain (dBd) | | | | | | | | | | | | |

| Test Band: 5 _ 5MHz Bandwidth | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Modulation | RB Allocation | | Conducted Power (dBm) | | | Antenna gain | | ERP(dBm) | | | Limit (dBm) | Verdict |
| | Size | Offset | LCH | MCH | HCH | (dBd) | (dBi) | LCH | MCH | HCH | | |
| QPSK | 1 | 0 | 23.76 | 23.89 | 24.14 | -1.15 | 1.00 | 22.61 | 22.74 | 22.99 | 38.45 | PASS |
| | | 13 | 23.48 | 24.05 | 24.36 | -1.15 | 1.00 | 22.33 | 22.90 | 23.21 | 38.45 | PASS |
| | | 24 | 23.30 | 23.87 | 24.09 | -1.15 | 1.00 | 22.15 | 22.72 | 22.94 | 38.45 | PASS |
| | 12 | 0 | 22.83 | 23.02 | 23.40 | -1.15 | 1.00 | 21.68 | 21.87 | 22.25 | 38.45 | PASS |
| | | 6 | 22.84 | 23.07 | 23.50 | -1.15 | 1.00 | 21.69 | 21.92 | 22.35 | 38.45 | PASS |
| | | 13 | 22.71 | 23.13 | 23.36 | -1.15 | 1.00 | 21.56 | 21.98 | 22.21 | 38.45 | PASS |
| | 25 | 0 | 22.81 | 23.01 | 23.50 | -1.15 | 1.00 | 21.66 | 21.86 | 22.35 | 38.45 | PASS |
| 16QAM | 1 | | 22.78 | 23.13 | 22.95 | -1.15 | 1.00 | 21.63 | 21.98 | 21.80 | 38.45 | PASS |
| | | 13 | 22.73 | 23.33 | 23.34 | -1.15 | 1.00 | 21.58 | 22.18 | 22.19 | 38.45 | PASS |
| | | 24 | 22.56 | 23.33 | 22.83 | -1.15 | 1.00 | 21.41 | 22.18 | 21.68 | 38.45 | PASS |
| | 12 | 0 | 21.73 | 21.93 | 22.40 | -1.15 | 1.00 | 20.58 | 20.78 | 21.25 | 38.45 | PASS |
| | | 6 | 21.91 | 21.89 | 22.49 | -1.15 | 1.00 | 20.76 | 20.74 | 21.34 | 38.45 | PASS |
| | | 13 | 21.71 | 22.05 | 22.35 | -1.15 | 1.00 | 20.56 | 20.90 | 21.20 | 38.45 | PASS |
| | 25 | 0 | 21.80 | 22.06 | 22.49 | -1.15 | 1.00 | 20.65 | 20.91 | 21.34 | 38.45 | PASS |
| Note:<br>1) dBd = dBi - 2.15<br>2) EIRP = Conducted output power + Antenna gain (dBi)<br>3) ERP = Conducted output power + Antenna gain (dBd) | | | | | | | | | | | | |

| Test Band: 5 _ 10MHz Bandwidth | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Modulation | RB Allocation | | Conducted Power (dBm) | | | Antenna gain | | ERP(dBm) | | | Limit (dBm) | Verdict |
| | Size | Offset | LCH | MCH | HCH | (dBd) | (dBi) | LCH | MCH | HCH | | |
| QPSK | 1 | 0 | 23.86 | 23.73 | 24.15 | -1.15 | 1.00 | 22.71 | 22.58 | 23.00 | 38.45 | PASS |
| | | 25 | 24.00 | 24.10 | 24.32 | -1.15 | 1.00 | 22.85 | 22.95 | 23.17 | 38.45 | PASS |
| | | 49 | 23.72 | 24.27 | 24.12 | -1.15 | 1.00 | 22.57 | 23.12 | 22.97 | 38.45 | PASS |
| | 25 | 0 | 22.72 | 23.00 | 23.45 | -1.15 | 1.00 | 21.57 | 21.85 | 22.30 | 38.45 | PASS |
| | | 13 | 22.75 | 23.08 | 23.56 | -1.15 | 1.00 | 21.60 | 21.93 | 22.41 | 38.45 | PASS |
| | | 25 | 22.79 | 23.23 | 23.46 | -1.15 | 1.00 | 21.64 | 22.08 | 22.31 | 38.45 | PASS |
| | 50 | 0 | 22.82 | 23.15 | 23.40 | -1.15 | 1.00 | 21.67 | 22.00 | 22.25 | 38.45 | PASS |
| 16QAM | 1 | | 22.88 | 22.94 | 23.22 | -1.15 | 1.00 | 21.73 | 21.79 | 22.07 | 38.45 | PASS |
| | | 25 | 22.80 | 23.09 | 23.59 | -1.15 | 1.00 | 21.65 | 21.94 | 22.44 | 38.45 | PASS |
| | | 49 | 22.68 | 24.05 | 23.27 | -1.15 | 1.00 | 21.53 | 22.90 | 22.12 | 38.45 | PASS |
| | 25 | 0 | 21.74 | 22.00 | 22.51 | -1.15 | 1.00 | 20.59 | 20.85 | 21.36 | 38.45 | PASS |
| | | 13 | 21.78 | 22.22 | 22.55 | -1.15 | 1.00 | 20.63 | 21.07 | 21.40 | 38.45 | PASS |
| | | 25 | 21.83 | 22.29 | 22.33 | -1.15 | 1.00 | 20.68 | 21.14 | 21.18 | 38.45 | PASS |
| | 50 | 0 | 21.88 | 22.11 | 22.33 | -1.15 | 1.00 | 20.73 | 20.96 | 21.18 | 38.45 | PASS |

Note:
1) dBd = dBi - 2.15
2) EIRP = Conducted output power + Antenna gain (dBi)
3) ERP = Conducted output power + Antenna gain (dBd)

# F2. Frequency stability

## F2.1 Test Result

| Test Band: 5 _ 1.4MHz Bandwidth (Frequency Error VS. Voltage) | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Test Mode | RB Allocation | | Test Temp. | Test Volt. | Freq. Error (Hz) | | | Freq. vs. rated (ppm) | | | Limit (ppm) | Verdict |
| | Size | Offset | | | LCH | MCH | HCH | LCH | MCH | HCH | | |
| QPSK | 6 | 0 | NT | LV | -1.3447 | -1.1301 | 0.5293 | -0.0016 | -0.0014 | 0.0006 | 2.50 | PASS |
| | | | | NV | -0.3147 | 0.3862 | -0.6008 | -0.0004 | 0.0005 | -0.0007 | 2.50 | PASS |
| | | | | HV | -1.6165 | -0.8583 | -0.2146 | -0.0020 | -0.0010 | -0.0003 | 2.50 | PASS |
| 16QAM | 6 | 0 | NT | LV | -0.9727 | -0.3719 | -1.9169 | -0.0012 | -0.0004 | -0.0023 | 2.50 | PASS |
| | | | | NV | -1.9169 | -1.9026 | -0.7582 | -0.0023 | -0.0023 | -0.0009 | 2.50 | PASS |
| | | | | HV | -1.6594 | -1.5163 | -1.7452 | -0.0020 | -0.0018 | -0.0021 | 2.50 | PASS |

| Test Band: 5 _ 1.4MHz Bandwidth (Frequency Error VS. Temperature) | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Test Mode | RB Allocation | | Test Volt. | Test Temp. | Freq. Error (Hz) | | | Freq. vs. rated (ppm) | | | Limit (ppm) | Verdict |
| | Size | Offset | | | LCH | MCH | HCH | LCH | MCH | HCH | | |
| QPSK | 6 | 0 | NV | -30.00 | -1.5020 | 0.3862 | -1.7023 | -0.0018 | 0.0005 | -0.0020 | 2.50 | PASS |
| | | | | -20.00 | -1.7309 | -1.7595 | 0.2575 | -0.0021 | -0.0021 | 0.0003 | 2.50 | PASS |
| | | | | -10.00 | -0.6151 | -0.2432 | 0.3433 | -0.0007 | -0.0003 | 0.0004 | 2.50 | PASS |
| | | | | 0.00 | -1.6594 | -0.3004 | 1.1158 | -0.0020 | -0.0004 | 0.0013 | 2.50 | PASS |
| | | | | 10.00 | -2.2745 | -0.3147 | -1.0729 | -0.0028 | -0.0004 | -0.0013 | 2.50 | PASS |
| | | | | 20.00 | -1.4877 | 0.1860 | -0.2146 | -0.0018 | 0.0002 | -0.0003 | 2.50 | PASS |
| | | | | 30.00 | -2.0027 | -0.6008 | 0.4292 | -0.0024 | -0.0007 | 0.0005 | 2.50 | PASS |
| | | | | 40.00 | -1.4162 | -0.2575 | 0.2289 | -0.0017 | -0.0003 | 0.0003 | 2.50 | PASS |
| | | | | 50.00 | -1.3733 | -0.6151 | -0.5436 | -0.0017 | -0.0007 | -0.0006 | 2.50 | PASS |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 16QAM | 6 | 0 | NV | -30.00 | -1.7881 | 0.0715 | -0.5722 | -0.0022 | 0.0001 | -0.0007 | 2.50 | PASS |
| | | | | -20.00 | -1.1015 | -1.4019 | -1.2016 | -0.0013 | -0.0017 | -0.0014 | 2.50 | PASS |
| | | | | -10.00 | -1.1301 | 1.1730 | 0.1860 | -0.0014 | 0.0014 | 0.0002 | 2.50 | PASS |
| | | | | 0.00 | -0.9871 | -0.9584 | 0.4148 | -0.0012 | -0.0011 | 0.0005 | 2.50 | PASS |
| | | | | 10.00 | -0.4435 | -1.0729 | -0.6437 | -0.0005 | -0.0013 | -0.0008 | 2.50 | PASS |
| | | | | 20.00 | -1.1730 | -1.2302 | -0.2575 | -0.0014 | -0.0015 | -0.0003 | 2.50 | PASS |
| | | | | 30.00 | -0.7868 | -0.5722 | -0.5436 | -0.0010 | -0.0007 | -0.0006 | 2.50 | PASS |
| | | | | 40.00 | -2.6178 | -0.6580 | -0.3719 | -0.0032 | -0.0008 | -0.0004 | 2.50 | PASS |
| | | | | 50.00 | -2.3317 | -1.9312 | 0.1574 | -0.0028 | -0.0023 | 0.0002 | 2.50 | PASS |

| Test Band: 5 _ 3MHz Bandwidth (Frequency Error VS. Voltage) | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Test Mode | RB Allocation | | Test Temp. | Test Volt. | Freq. Error (Hz) | | | Freq. vs. rated (ppm) | | | Limit (ppm) | Verdict |
| | Size | Offset | | | LCH | MCH | HCH | LCH | MCH | HCH | | |
| QPSK | 15 | 0 | NT | LV | -0.4292 | -1.4162 | -1.7881 | -0.0005 | -0.0017 | -0.0021 | 2.50 | PASS |
| | | | | NV | -0.2289 | -0.5579 | -0.4721 | -0.0003 | -0.0007 | -0.0006 | 2.50 | PASS |
| | | | | HV | -0.1574 | -0.5722 | -1.7452 | -0.0002 | -0.0007 | -0.0021 | 2.50 | PASS |
| 16QAM | 15 | 0 | NT | LV | -0.7153 | -0.8726 | -1.5879 | -0.0009 | -0.0010 | -0.0019 | 2.50 | PASS |
| | | | | NV | 0.3862 | 0.3433 | -1.2588 | 0.0005 | 0.0004 | -0.0015 | 2.50 | PASS |
| | | | | HV | -0.2718 | -1.3018 | 0.3576 | -0.0003 | -0.0016 | 0.0004 | 2.50 | PASS |

| Test Band: 5 _ 3MHz Bandwidth (Frequency Error VS. Temperature) | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Test Mode | RB Allocation | | Test Volt. | Test Temp. | Freq. Error (Hz) | | | Freq. vs. rated (ppm) | | | Limit (ppm) | Verdict |
| | Size | Offset | | | LCH | MCH | HCH | LCH | MCH | HCH | | |
| QPSK | 15 | 0 | NV | -30.00 | 0.0000 | -0.9441 | -2.0313 | 0.0000 | -0.0011 | -0.0024 | 2.50 | PASS |
| | | | | -20.00 | -0.1431 | -0.7725 | -1.6594 | -0.0002 | -0.0009 | -0.0020 | 2.50 | PASS |
| | | | | -10.00 | -0.1287 | -0.0286 | -2.2602 | -0.0002 | 0.0000 | -0.0027 | 2.50 | PASS |
| | | | | 0.00 | -0.7010 | -0.3147 | -1.4162 | -0.0008 | -0.0004 | -0.0017 | 2.50 | PASS |
| | | | | 10.00 | -0.5150 | -0.5865 | -2.3603 | -0.0006 | -0.0007 | -0.0028 | 2.50 | PASS |
| | | | | 20.00 | -0.9727 | -1.2159 | -2.3746 | -0.0012 | -0.0015 | -0.0028 | 2.50 | PASS |
| | | | | 30.00 | -0.2718 | -0.6008 | -2.2745 | -0.0003 | -0.0007 | -0.0027 | 2.50 | PASS |
| | | | | 40.00 | -0.2718 | -0.7296 | -1.6880 | -0.0003 | -0.0009 | -0.0020 | 2.50 | PASS |
| | | | | 50.00 | 0.1860 | 0.2575 | -1.9312 | 0.0002 | 0.0003 | -0.0023 | 2.50 | PASS |
| 16QAM | 15 | 0 | NV | -30.00 | -0.3290 | -0.5722 | -2.1744 | -0.0004 | -0.0007 | -0.0026 | 2.50 | PASS |
| | | | | -20.00 | 0.5007 | -0.7582 | -1.8311 | 0.0006 | -0.0009 | -0.0022 | 2.50 | PASS |
| | | | | -10.00 | -1.1015 | -1.6594 | -1.5306 | -0.0013 | -0.0020 | -0.0018 | 2.50 | PASS |
| | | | | 0.00 | -0.0429 | -0.7296 | -1.2445 | -0.0001 | -0.0009 | -0.0015 | 2.50 | PASS |
| | | | | 10.00 | -0.6866 | 0.2146 | -1.6880 | -0.0008 | 0.0003 | -0.0020 | 2.50 | PASS |
| | | | | 20.00 | -0.3719 | -1.3733 | -0.1860 | -0.0005 | -0.0016 | -0.0002 | 2.50 | PASS |
| | | | | 30.00 | 0.0715 | -1.0300 | -0.6151 | 0.0001 | -0.0012 | -0.0007 | 2.50 | PASS |
| | | | | 40.00 | -1.0586 | -0.3004 | -1.0586 | -0.0013 | -0.0004 | -0.0012 | 2.50 | PASS |
| | | | | 50.00 | -1.0443 | -0.5150 | -1.9598 | -0.0013 | -0.0006 | -0.0023 | 2.50 | PASS |

| Test Band: 5 _ 5MHz Bandwidth (Frequency Error VS. Voltage) | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Test Mode | RB Allocation | | Test Temp. | Test Volt. | Freq. Error (Hz) | | | Freq. vs. rated (ppm) | | | Limit (ppm) | Verdict |
| | Size | Offset | | | LCH | MCH | HCH | LCH | MCH | HCH | | |
| QPSK | 25 | 0 | NT | LV | -1.1730 | -0.5865 | -1.1301 | -0.0014 | -0.0007 | -0.0013 | 2.50 | PASS |
| | | | | NV | -2.2888 | -0.3862 | 0.4435 | -0.0028 | -0.0005 | 0.0005 | 2.50 | PASS |
| | | | | HV | -1.9312 | -0.7439 | -0.3719 | -0.0023 | -0.0009 | -0.0004 | 2.50 | PASS |
| 16QAM | 25 | 0 | NT | LV | -1.6165 | -1.3161 | -0.1287 | -0.0020 | -0.0016 | -0.0002 | 2.50 | PASS |
| | | | | NV | -1.9598 | -1.3590 | -0.2289 | -0.0024 | -0.0016 | -0.0003 | 2.50 | PASS |
| | | | | HV | -2.5749 | -0.3004 | -0.0858 | -0.0031 | -0.0004 | -0.0001 | 2.50 | PASS |

| Test Band: 5 _ 5MHz Bandwidth (Frequency Error VS. Temperature) | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Test Mode | RB Allocation | | Test Volt. | Test Temp. | Freq. Error (Hz) | | | Freq. vs. rated (ppm) | | | Limit (ppm) | Verdict |
| | Size | Offset | | | LCH | MCH | HCH | LCH | MCH | HCH | | |
| QPSK | 25 | 0 | NV | -30.00 | -2.1887 | -0.6151 | -1.7738 | -0.0026 | -0.0007 | -0.0021 | 2.50 | PASS |
| | | | | -20.00 | -1.0872 | -0.4578 | -0.6151 | -0.0013 | -0.0005 | -0.0007 | 2.50 | PASS |
| | | | | -10.00 | -1.9741 | -0.3147 | -0.1001 | -0.0024 | -0.0004 | -0.0001 | 2.50 | PASS |
| | | | | 0.00 | -1.8311 | -0.7153 | -0.6294 | -0.0022 | -0.0009 | -0.0007 | 2.50 | PASS |
| | | | | 10.00 | -1.4305 | -0.0286 | -0.8154 | -0.0017 | 0.0000 | -0.0010 | 2.50 | PASS |
| | | | | 20.00 | -1.5306 | -0.7153 | -0.2575 | -0.0019 | -0.0009 | -0.0003 | 2.50 | PASS |
| | | | | 30.00 | -2.6178 | -0.6866 | -0.1431 | -0.0032 | -0.0008 | -0.0002 | 2.50 | PASS |
| | | | | 40.00 | -2.0885 | -0.2861 | -1.0014 | -0.0025 | -0.0003 | -0.0012 | 2.50 | PASS |
| | | | | 50.00 | -1.4305 | -0.9584 | -0.7296 | -0.0017 | -0.0011 | -0.0009 | 2.50 | PASS |
| 16QAM | 25 | 0 | NV | -30.00 | -1.4734 | -0.7010 | -0.1574 | -0.0018 | -0.0008 | -0.0002 | 2.50 | PASS |
| | | | | -20.00 | -2.3317 | -0.0429 | -0.5293 | -0.0028 | -0.0001 | -0.0006 | 2.50 | PASS |
| | | | | -10.00 | - | - | - | -0.0024 | -0.0013 | -0.0009 | 2.50 | PASS |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | 1.9884 | 1.1015 | 0.7868 | | | | | |
| | | | | 0.00 | -2.2745 | -0.5150 | -0.1431 | -0.0028 | -0.0006 | -0.0002 | 2.50 | PASS |
| | | | | 10.00 | -1.5020 | -0.7439 | -0.2575 | -0.0018 | -0.0009 | -0.0003 | 2.50 | PASS |
| | | | | 20.00 | -1.7023 | 0.2575 | -0.1574 | -0.0021 | 0.0003 | -0.0002 | 2.50 | PASS |
| | | | | 30.00 | -1.6737 | -0.8297 | 0.1144 | -0.0020 | -0.0010 | 0.0001 | 2.50 | PASS |
| | | | | 40.00 | -1.3018 | -0.9012 | -0.7582 | -0.0016 | -0.0011 | -0.0009 | 2.50 | PASS |
| | | | | 50.00 | -2.0170 | -0.2575 | -0.3290 | -0.0024 | -0.0003 | -0.0004 | 2.50 | PASS |

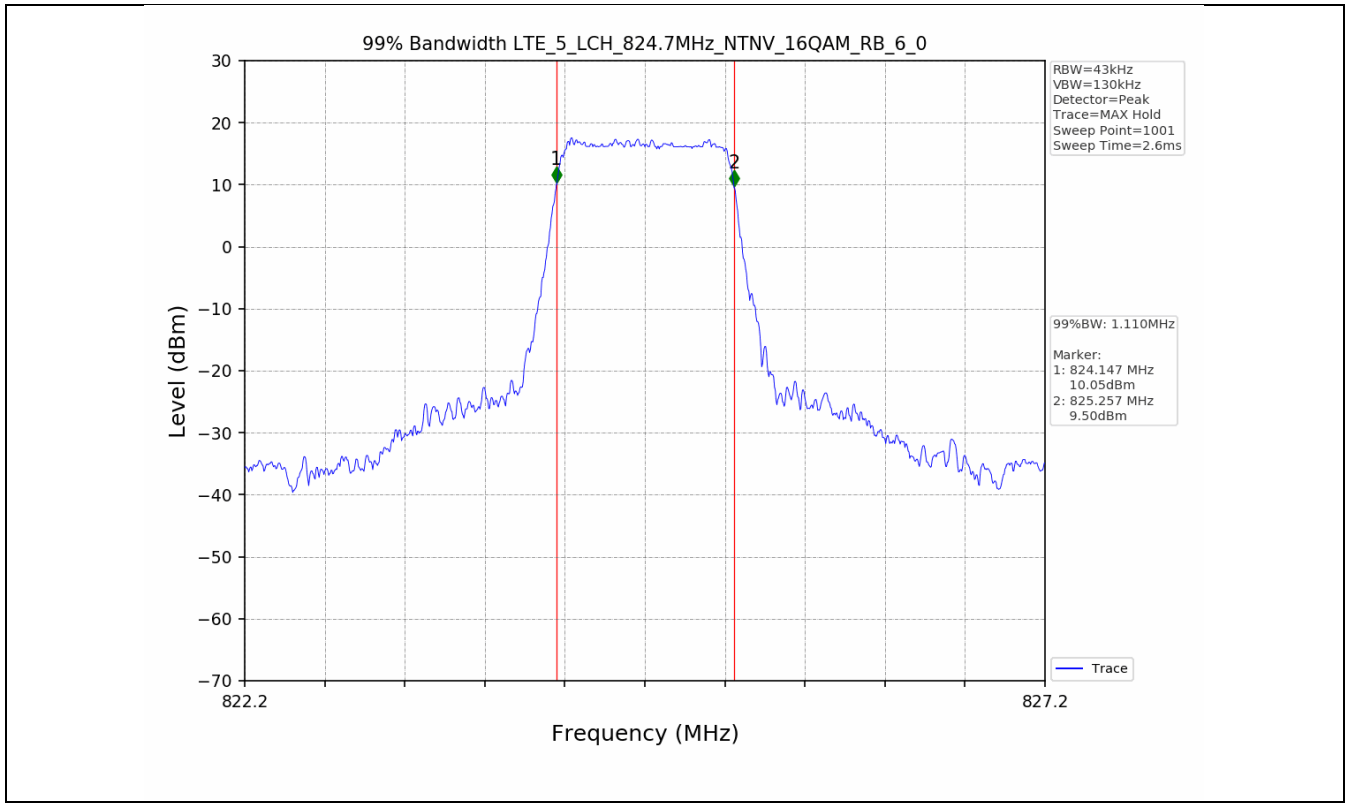
| Test Band: 5 _ 10MHz Bandwidth (Frequency Error VS. Voltage) | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Test Mode | RB Allocation | | Test Temp. | Test Volt. | Freq. Error (Hz) | | | Freq. vs. rated (ppm) | | | Limit (ppm) | Verdict |
| | Size | Offset | | | LCH | MCH | HCH | LCH | MCH | HCH | | |
| QPSK | 50 | 0 | NT | LV | -1.0443 | 0.0572 | -0.7582 | -0.0013 | 0.0001 | -0.0009 | 2.50 | PASS |
| | | | | NV | -0.5579 | -0.1287 | -0.0858 | -0.0007 | -0.0002 | -0.0001 | 2.50 | PASS |
| | | | | HV | -1.0586 | -1.2875 | -0.6580 | -0.0013 | -0.0015 | -0.0008 | 2.50 | PASS |
| 16QAM | 50 | 0 | NT | LV | -0.3719 | 0.1287 | -1.6880 | -0.0004 | 0.0002 | -0.0020 | 2.50 | PASS |
| | | | | NV | -0.6866 | 0.0000 | -1.4019 | -0.0008 | 0.0000 | -0.0017 | 2.50 | PASS |
| | | | | HV | -0.7868 | -0.5150 | -0.7582 | -0.0009 | -0.0006 | -0.0009 | 2.50 | PASS |

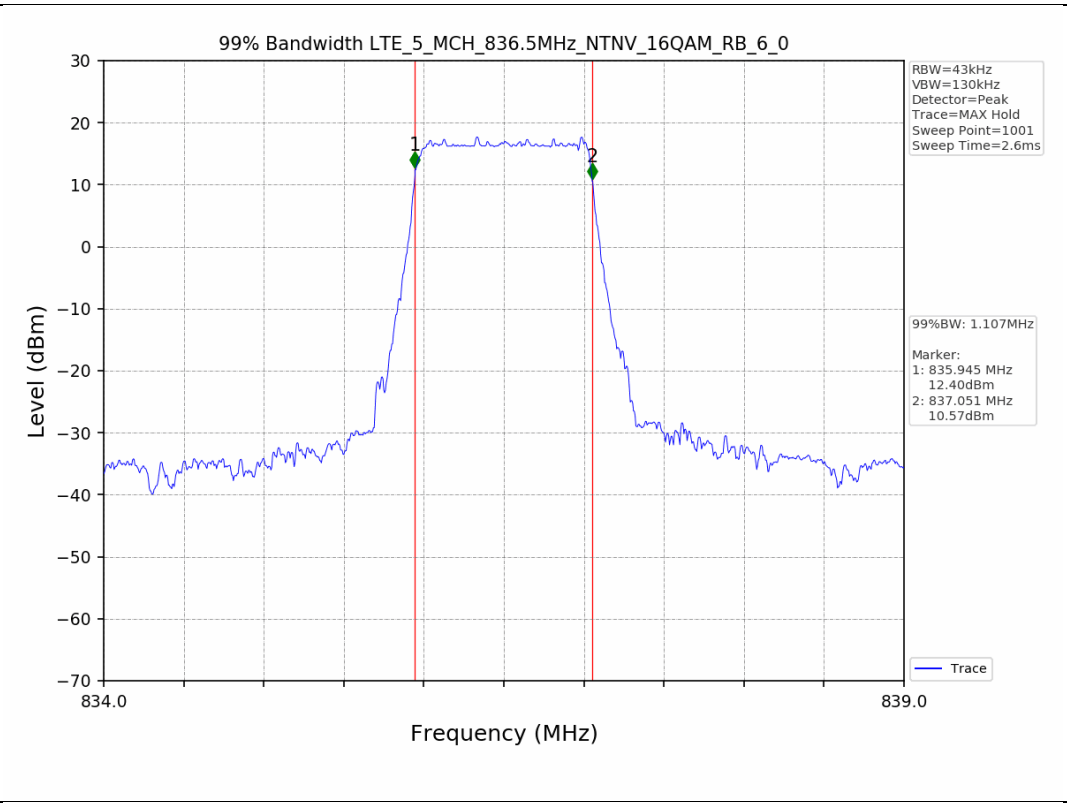
| Test Band: 5 _ 10MHz Bandwidth (Frequency Error VS. Temperature) | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Test Mode | RB Allocation | | Test Volt. | Test Temp. | Freq. Error (Hz) | | | Freq. vs. rated (ppm) | | | Limit (ppm) | Verdict |
| | Size | Offset | | | LCH | MCH | HCH | LCH | MCH | HCH | | |
| QPSK | 50 | 0 | NV | -30.00 | -0.4005 | -0.4578 | -0.5436 | -0.0005 | -0.0005 | -0.0006 | 2.50 | PASS |
| | | | | -20.00 | -0.9727 | -1.1015 | -0.5150 | -0.0012 | -0.0013 | -0.0006 | 2.50 | PASS |
| | | | | -10.00 | -0.6723 | 0.1717 | -1.2445 | -0.0008 | 0.0002 | -0.0015 | 2.50 | PASS |
| | | | | 0.00 | -0.1860 | -1.2016 | -1.0729 | -0.0002 | -0.0014 | -0.0013 | 2.50 | PASS |
| | | | | 10.00 | -0.7296 | -0.7153 | 0.3862 | -0.0009 | -0.0009 | 0.0005 | 2.50 | PASS |
| | | | | 20.00 | -0.3147 | -0.6008 | -0.7153 | -0.0004 | -0.0007 | -0.0008 | 2.50 | PASS |
| | | | | 30.00 | -1.4305 | -0.8583 | -0.8011 | -0.0017 | -0.0010 | -0.0009 | 2.50 | PASS |
| | | | | 40.00 | -0.1574 | -0.4721 | -0.2575 | -0.0002 | -0.0006 | -0.0003 | 2.50 | PASS |
| | | | | 50.00 | -0.8011 | -0.5436 | -1.4591 | -0.0010 | -0.0006 | -0.0017 | 2.50 | PASS |
| 16QAM | 50 | 0 | NV | -30.00 | -0.7725 | -0.9871 | -0.8297 | -0.0009 | -0.0012 | -0.0010 | 2.50 | PASS |
| | | | | -20.00 | -0.7296 | -1.2445 | -1.2302 | -0.0009 | -0.0015 | -0.0015 | 2.50 | PASS |
| | | | | -10.00 | -0.8869 | -1.6022 | -1.7023 | -0.0011 | -0.0019 | -0.0020 | 2.50 | PASS |
| | | | | 0.00 | -1.1730 | -1.2445 | -0.9012 | -0.0014 | -0.0015 | -0.0011 | 2.50 | PASS |
| | | | | 10.00 | -0.8297 | -1.1158 | -1.3161 | -0.0010 | -0.0013 | -0.0016 | 2.50 | PASS |
| | | | | 20.00 | -0.6008 | -0.5722 | -0.6723 | -0.0007 | -0.0007 | -0.0008 | 2.50 | PASS |
| | | | | 30.00 | -0.7010 | -0.5722 | -0.5007 | -0.0008 | -0.0007 | -0.0006 | 2.50 | PASS |
| | | | | 40.00 | -0.4435 | -0.4721 | -0.5007 | -0.0005 | -0.0006 | -0.0006 | 2.50 | PASS |
| | | | | 50.00 | -0.6866 | -0.8869 | -1.5593 | -0.0008 | -0.0011 | -0.0018 | 2.50 | PASS |

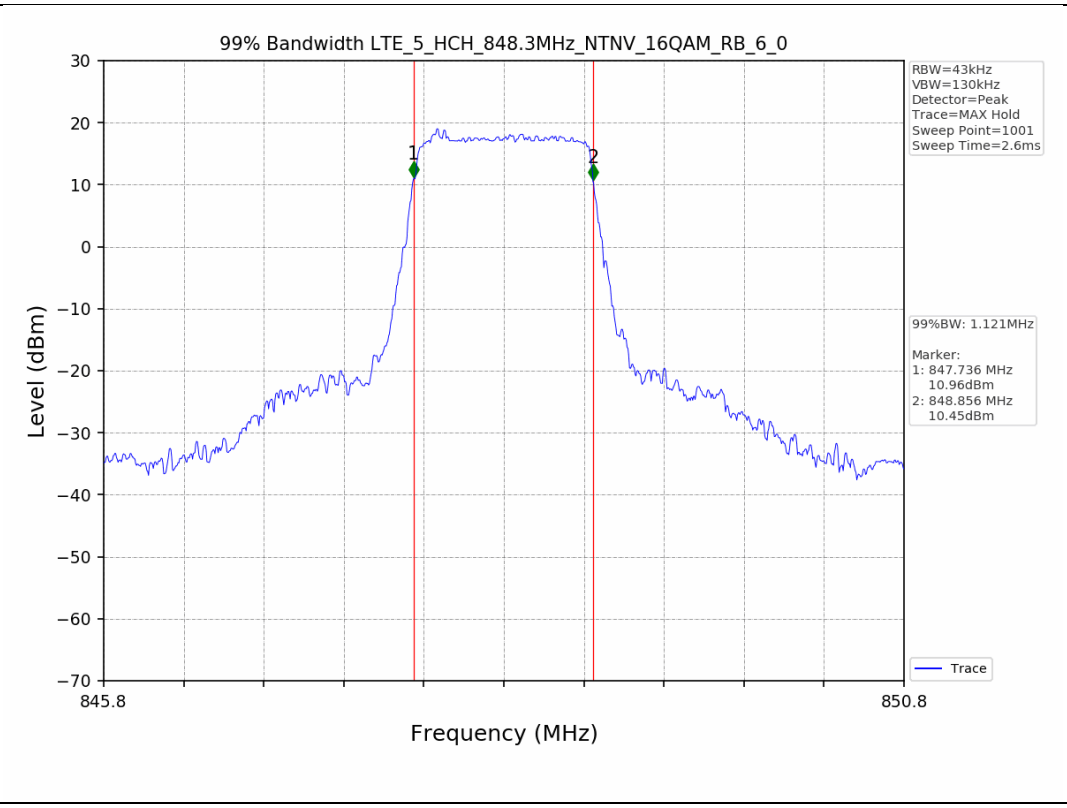
# F3. 99% & 26dB Bandwidth

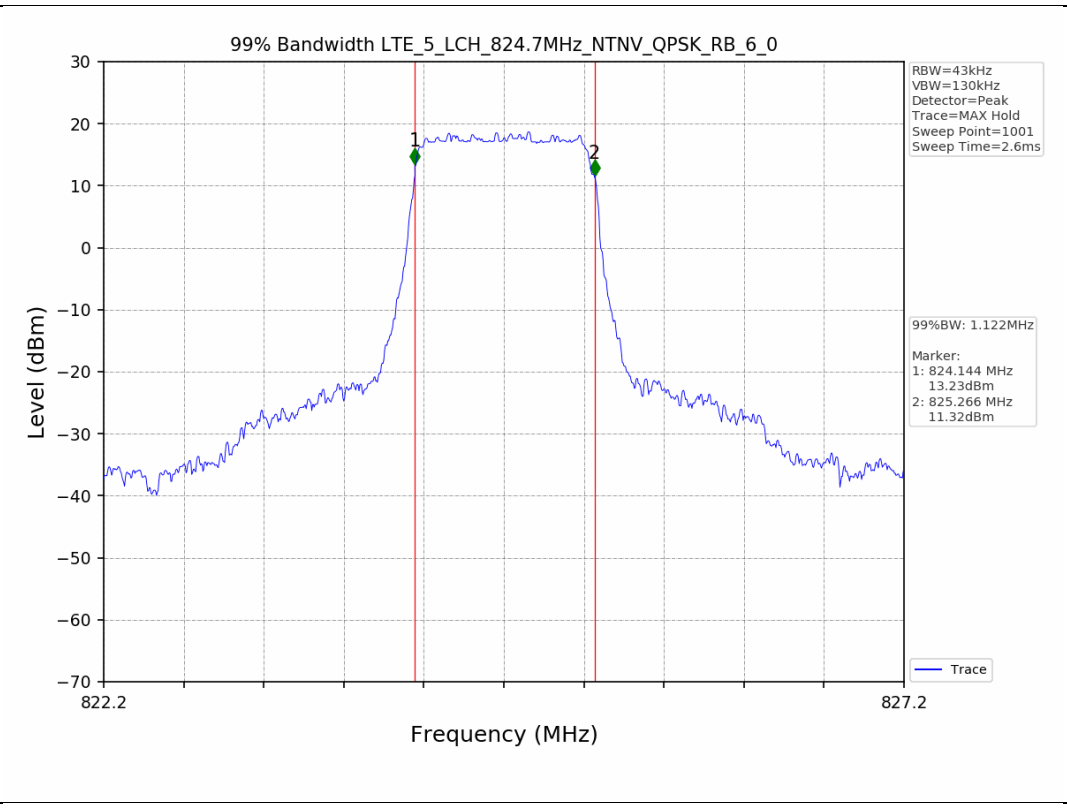
## F3.1 Test Result

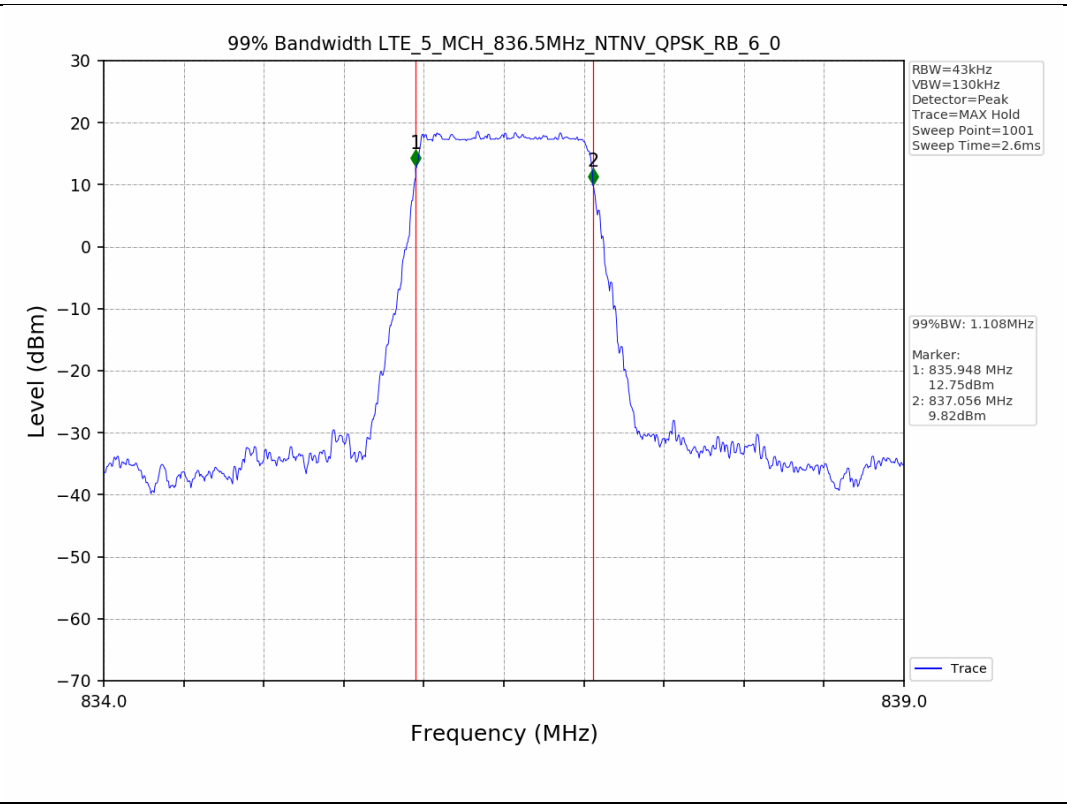
| Test Band: 5 _ 1.4MHz Bandwidth | | | | | | | |
|---|---|---|---|---|---|---|---|
| Test Mode | RB Allocation | | 99% Occupied Bandwidth (MHz) | | | Limit | Verdict |
| | Size | Offset | LCH | MCH | HCH | | |
| QPSK | 6 | 0 | 1.122 | 1.108 | 1.112 | N/A | PASS |
| 16QAM | 6 | 0 | 1.110 | 1.107 | 1.121 | N/A | PASS |

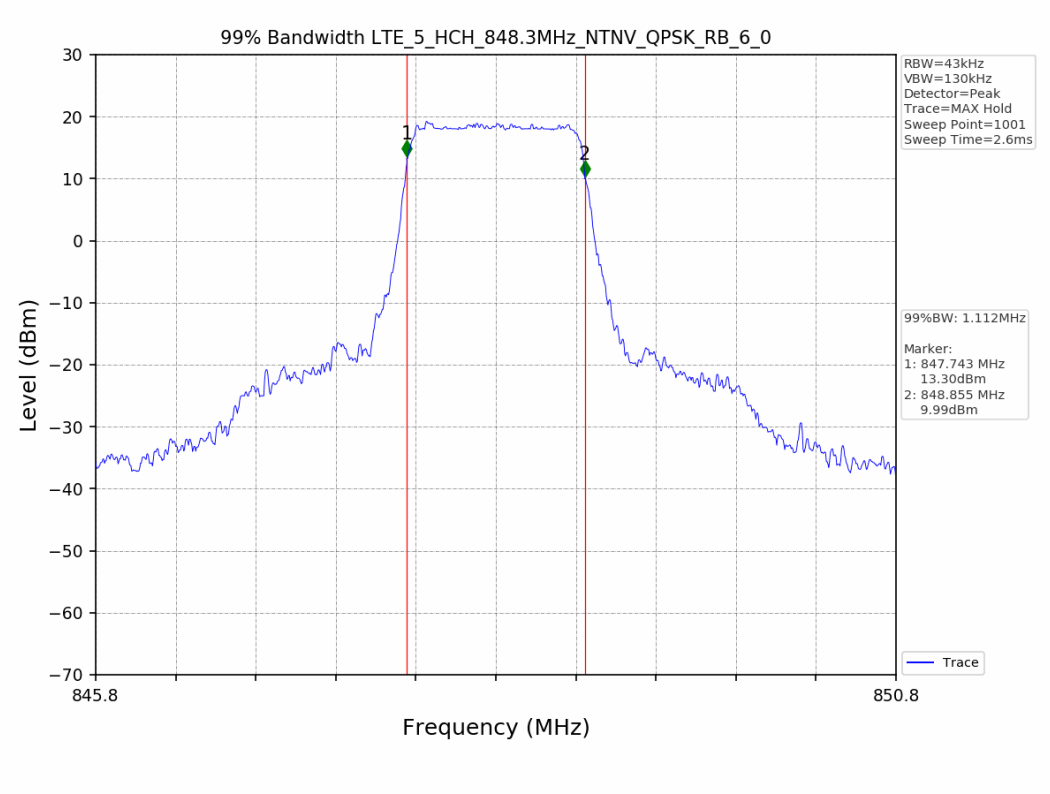



99% Bandwidth LTE_5_MCH_836.5MHz_NTNV_16QAM_RB_6_0
RBW=43kHz
VBW=130kHz
Detector=Peak
Trace=MAX Hold
Sweep Point=1001
Sweep Time=2.6ms
99%BW: 1.107MHz
Marker:
1: 835.945 MHz
12.40dBm
2: 837.051 MHz
10.57dBm
Trace
Level (dBm)
Frequency (MHz)
834.0
839.0

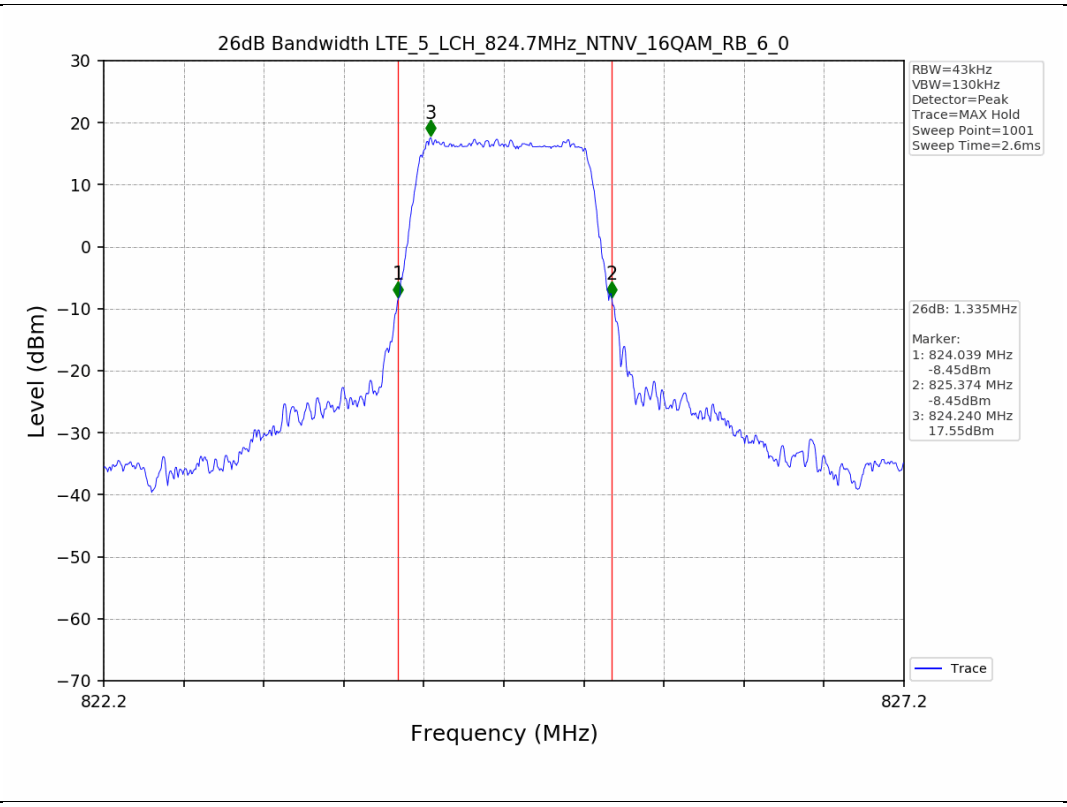

99% Bandwidth LTE_5_HCH_848.3MHz_NTNV_16QAM_RB_6_0
RBW=43kHz
VBW=130kHz
Detector=Peak
Trace=MAX Hold
Sweep Point=1001
Sweep Time=2.6ms
99%BW: 1.121MHz
Marker:
1: 847.736 MHz
10.96dBm
2: 848.856 MHz
10.45dBm
Trace
Level (dBm)
Frequency (MHz)
845.8
850.8

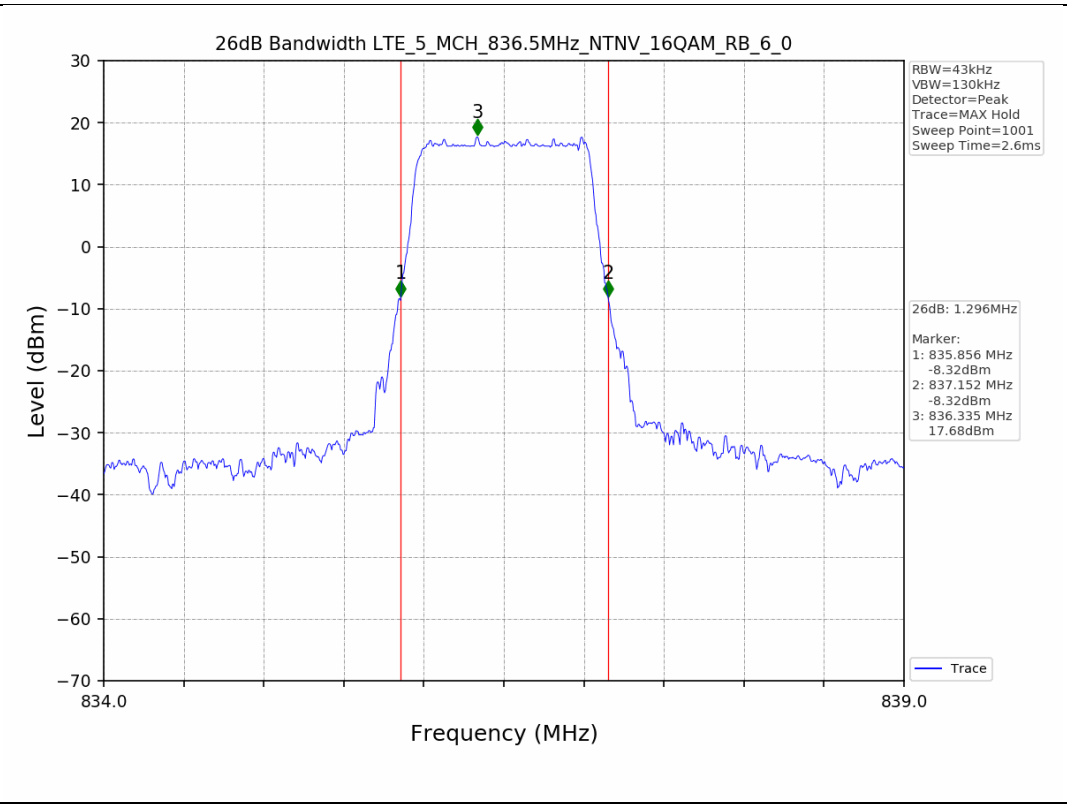

99% Bandwidth LTE_5_LCH_824.7MHz_NTNV_QPSK_RB_6_0
RBW=43kHz
VBW=130kHz
Detector=Peak
Trace=MAX Hold
Sweep Point=1001
Sweep Time=2.6ms
99%BW: 1.122MHz
Marker:
1: 824.144 MHz
13.23dBm
2: 825.266 MHz
11.32dBm
Trace
Level (dBm)
Frequency (MHz)
822.2
827.2

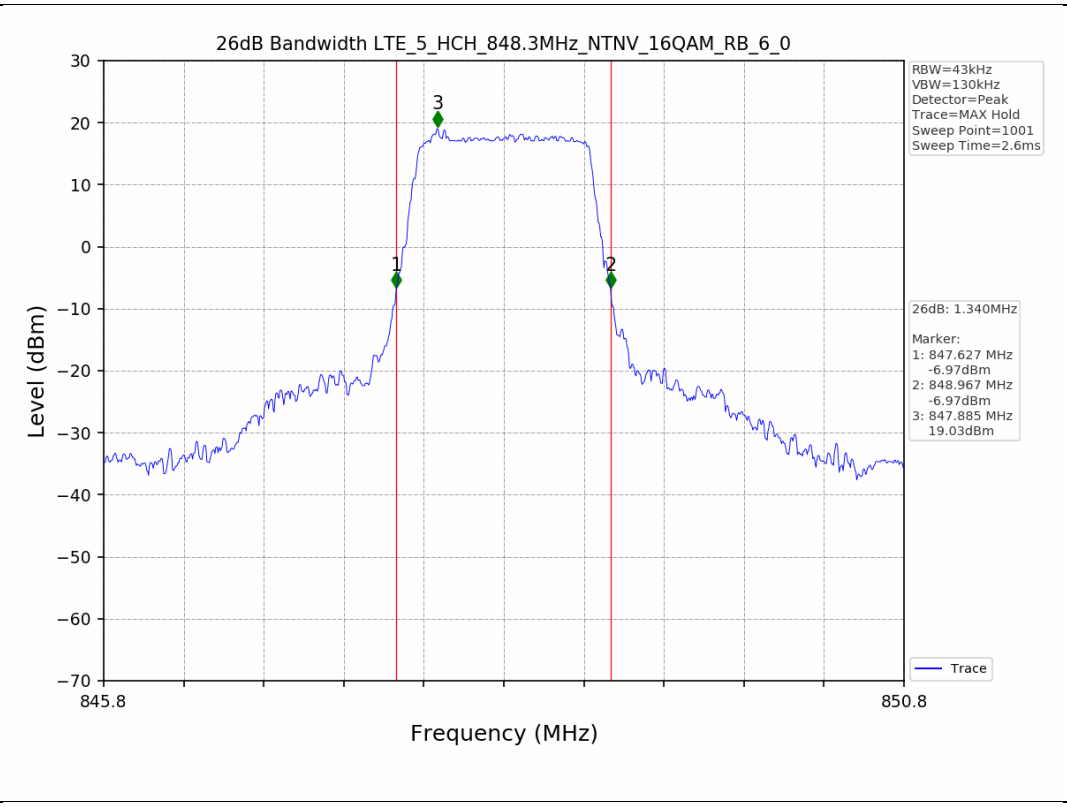

99% Bandwidth LTE_5_MCH_836.5MHz_NTNV_QPSK_RB_6_0
RBW=43kHz
VBW=130kHz
Detector=Peak
Trace=MAX Hold
Sweep Point=1001
Sweep Time=2.6ms
99%BW: 1.108MHz
Marker:
1: 835.948 MHz
12.75dBm
2: 837.056 MHz
9.82dBm
Trace
Level (dBm)
Frequency (MHz)
834.0
839.0

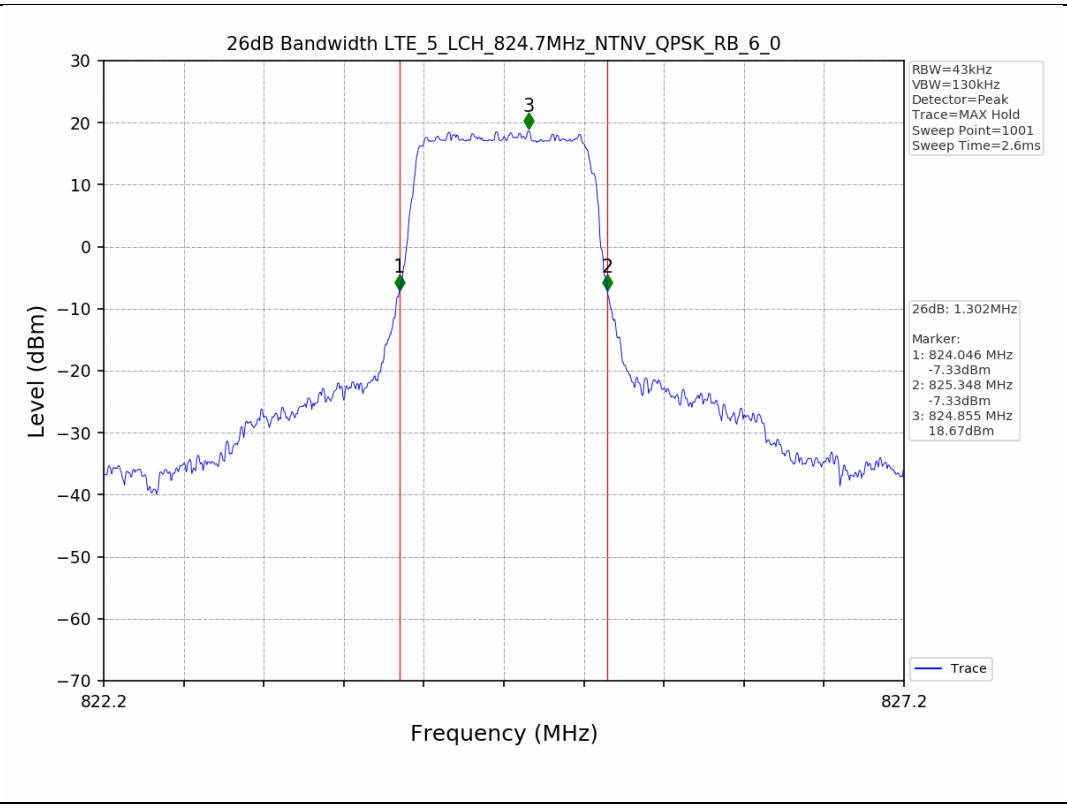


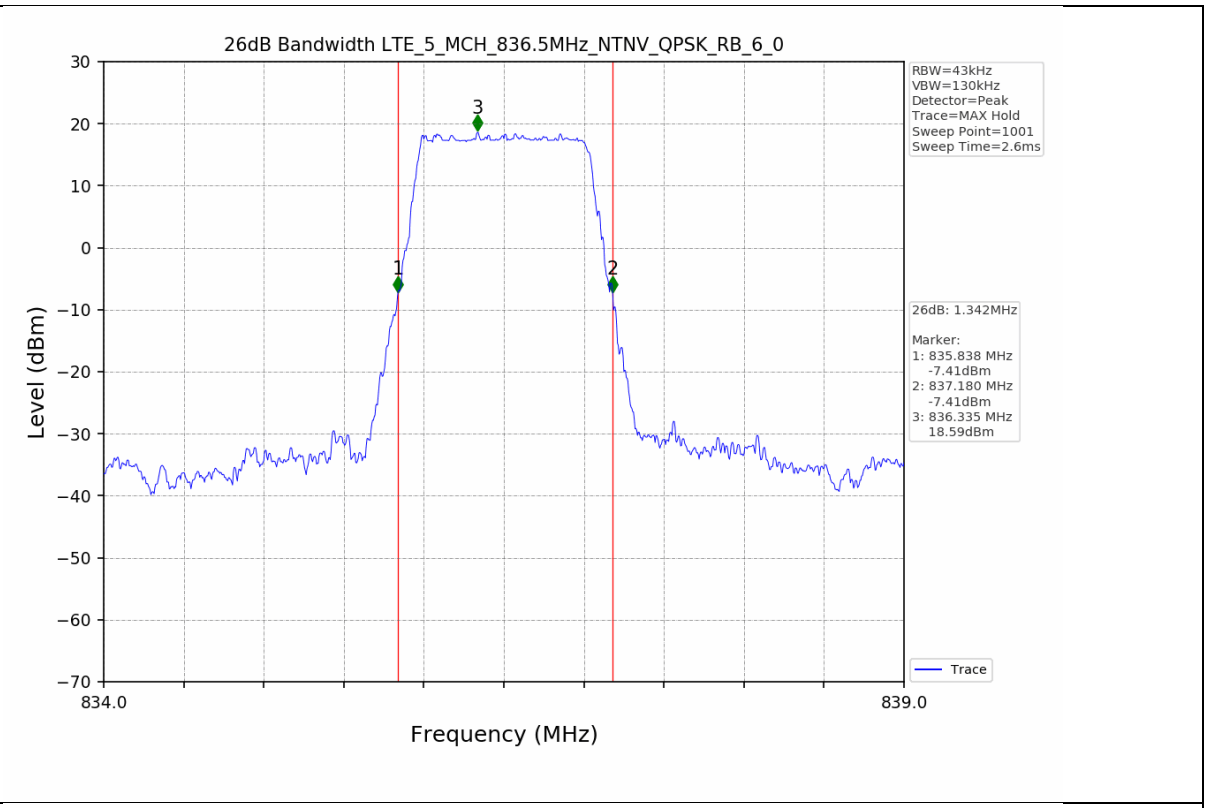

| Test Band: 5 _ 1.4MHz Bandwidth | | | | | | | |
|---|---|---|---|---|---|---|---|
| Test Mode | RB Allocation | | 26dB Bandwidth (MHz) | | | Limit | Verdict |
| | Size | Offset | LCH | MCH | HCH | | |
| QPSK | 6 | 0 | 1.302 | 1.342 | 1.338 | N/A | PASS |
| 16QAM | 6 | 0 | 1.335 | 1.296 | 1.340 | N/A | PASS |

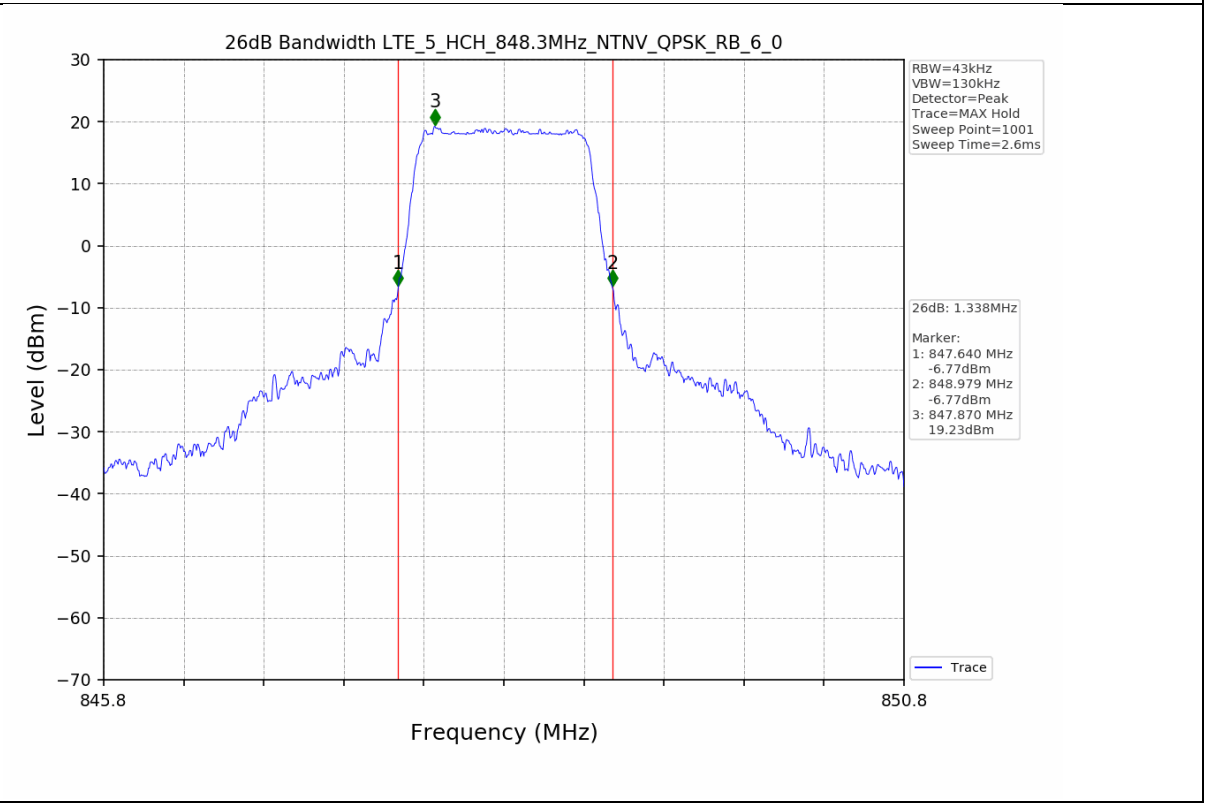

26dB Bandwidth LTE_5_LCH_824.7MHz_NTNV_16QAM_RB_6_0
RBW=43kHz
VBW=130kHz
Detector=Peak
Trace=MAX Hold
Sweep Point=1001
Sweep Time=2.6ms
26dB: 1.335MHz
Marker:
1: 824.039 MHz
-8.45dBm
2: 825.374 MHz
-8.45dBm
3: 824.240 MHz
17.55dBm
Trace
Level (dBm)
Frequency (MHz)
822.2
827.2


26dB Bandwidth LTE_5_MCH_836.5MHz_NTNV_16QAM_RB_6_0
RBW=43kHz
VBW=130kHz
Detector=Peak
Trace=MAX Hold
Sweep Point=1001
Sweep Time=2.6ms
26dB: 1.296MHz
Marker:
1: 835.856 MHz
-8.32dBm
2: 837.152 MHz
-8.32dBm
3: 836.335 MHz
17.68dBm
Trace
Level (dBm)
Frequency (MHz)
834.0
839.0

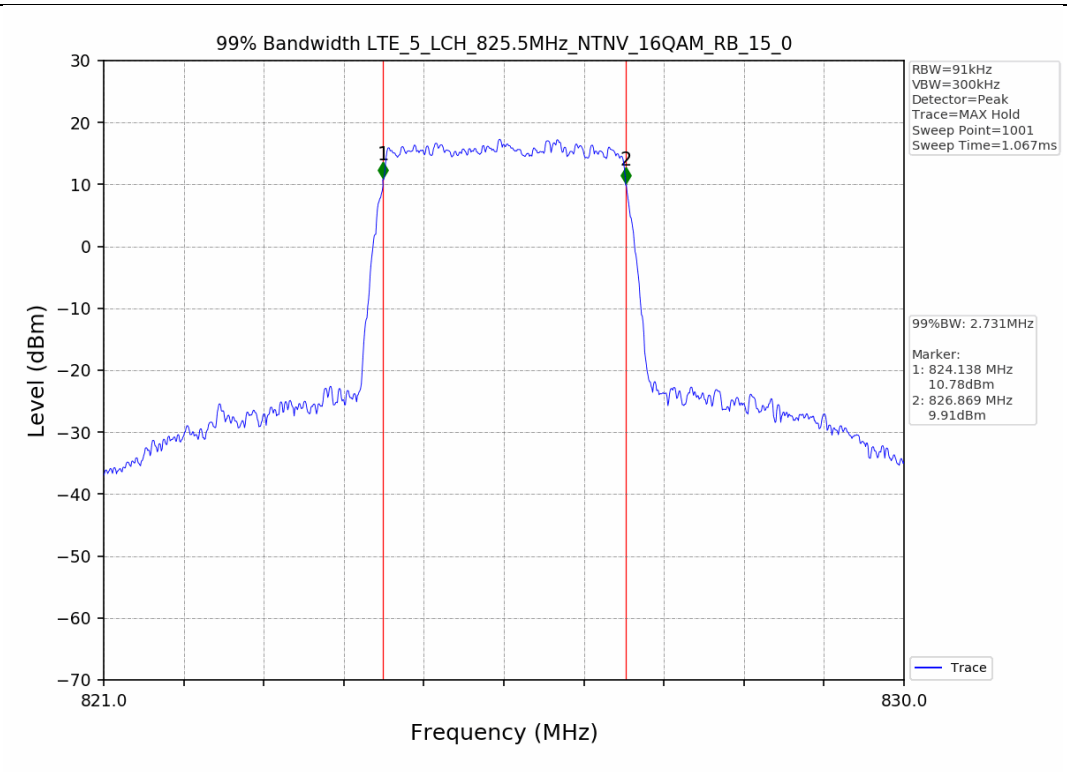

26dB Bandwidth LTE_5_HCH_848.3MHz_NTNV_16QAM_RB_6_0
RBW=43kHz
VBW=130kHz
Detector=Peak
Trace=MAX Hold
Sweep Point=1001
Sweep Time=2.6ms
26dB: 1.340MHz
Marker:
1: 847.627 MHz
-6.97dBm
2: 848.967 MHz
-6.97dBm
3: 847.885 MHz
19.03dBm
Trace
Level (dBm)
Frequency (MHz)
845.8
850.8

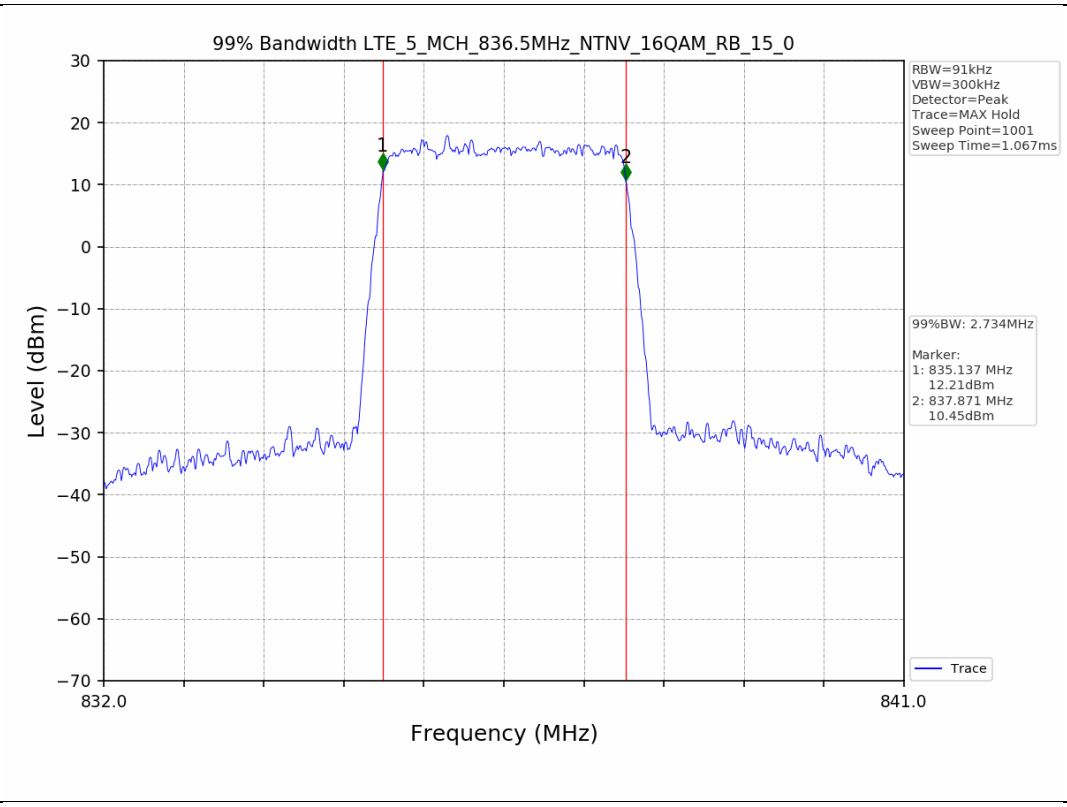

26dB Bandwidth LTE_5_LCH_824.7MHz_NTNV_QPSK_RB_6_0
RBW=43kHz
VBW=130kHz
Detector=Peak
Trace=MAX Hold
Sweep Point=1001
Sweep Time=2.6ms
26dB: 1.302MHz
Marker:
1: 824.046 MHz
-7.33dBm
2: 825.348 MHz
-7.33dBm
3: 824.855 MHz
18.67dBm
Trace
Level (dBm)
Frequency (MHz)
822.2
827.2

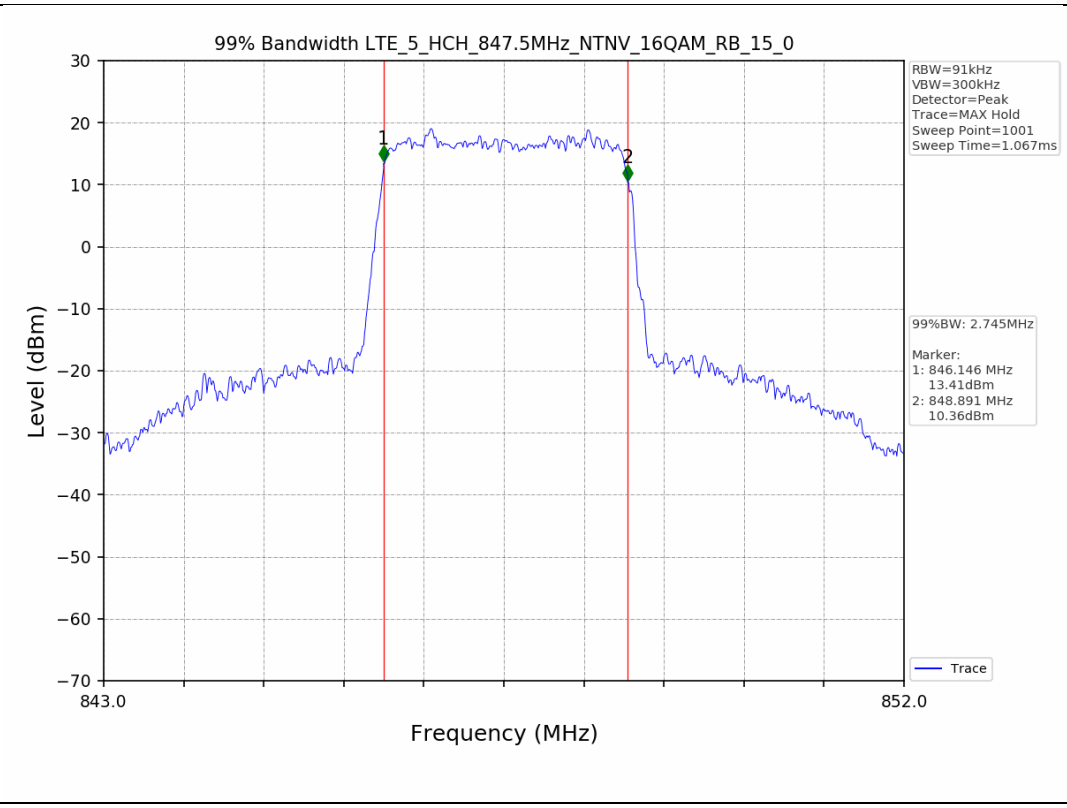

26dB Bandwidth LTE_5_MCH_836.5MHz_NTNV_QPSK_RB_6_0
RBW=43kHz
VBW=130kHz
Detector=Peak
Trace=MAX Hold
Sweep Point=1001
Sweep Time=2.6ms
26dB: 1.342MHz
Marker:
1: 835.838 MHz
-7.41dBm
2: 837.180 MHz
-7.41dBm
3: 836.335 MHz
18.59dBm
Trace
Level (dBm)
Frequency (MHz)
834.0
839.0

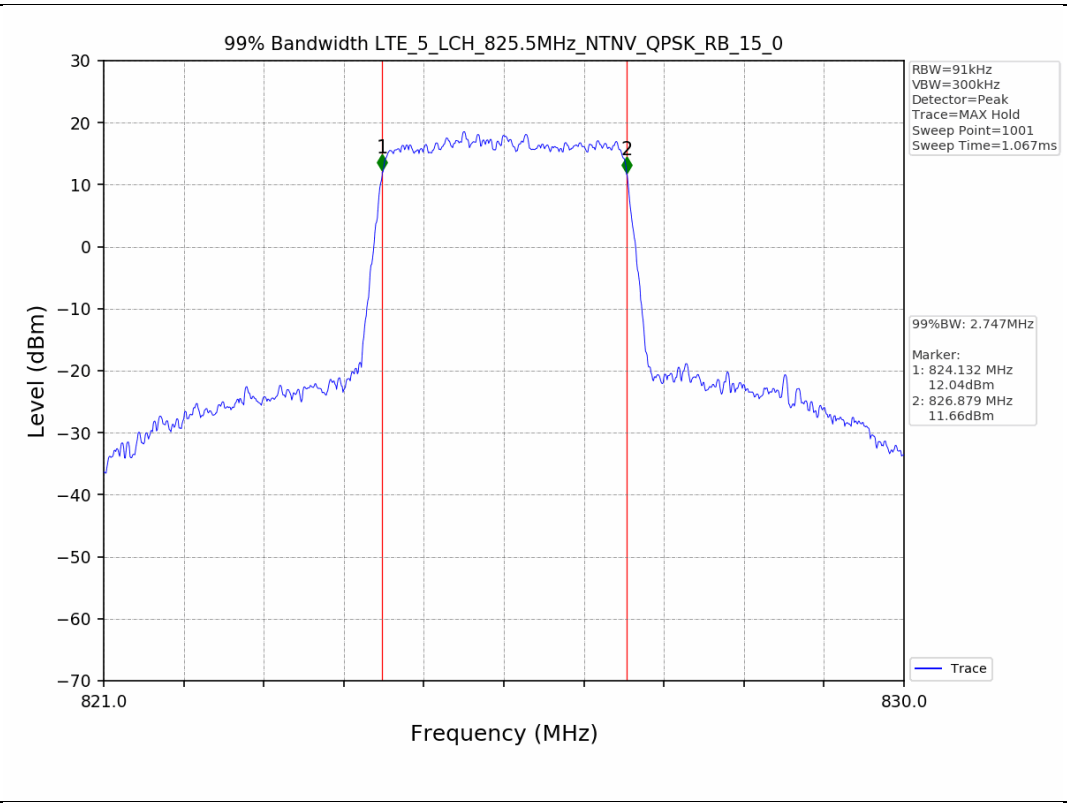

26dB Bandwidth LTE_5_HCH_848.3MHz_NTNV_QPSK_RB_6_0
RBW=43kHz
VBW=130kHz
Detector=Peak
Trace=MAX Hold
Sweep Point=1001
Sweep Time=2.6ms
26dB: 1.338MHz
Marker:
1: 847.640 MHz
-6.77dBm
2: 848.979 MHz
-6.77dBm
3: 847.870 MHz
19.23dBm
Trace
Level (dBm)
Frequency (MHz)
845.8
850.8

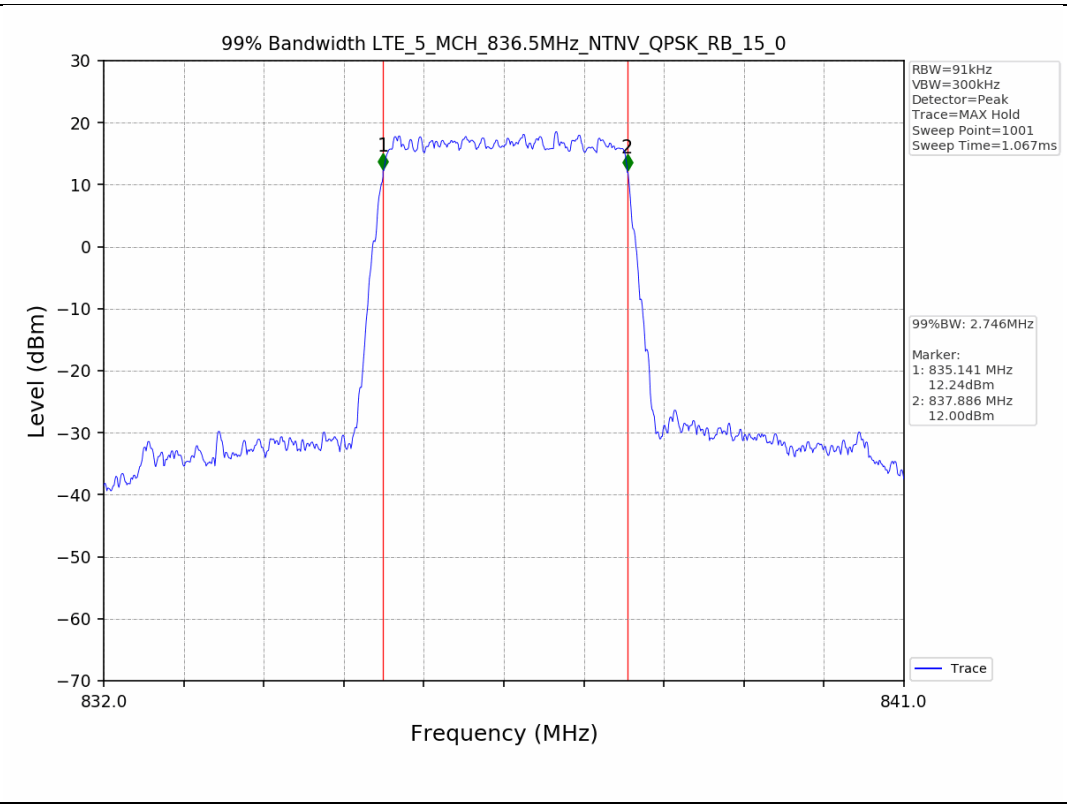
| Test Band: 5 _ 3MHz Bandwidth | | | | | | | |
|---|---|---|---|---|---|---|---|
| Test Mode | RB Allocation | | 99% Occupied Bandwidth (MHz) | | | Limit | Verdict |
| | Size | Offset | LCH | MCH | HCH | | |
| QPSK | 15 | 0 | 2.747 | 2.746 | 2.743 | N/A | PASS |
| 16QAM | 15 | 0 | 2.731 | 2.734 | 2.745 | N/A | PASS |

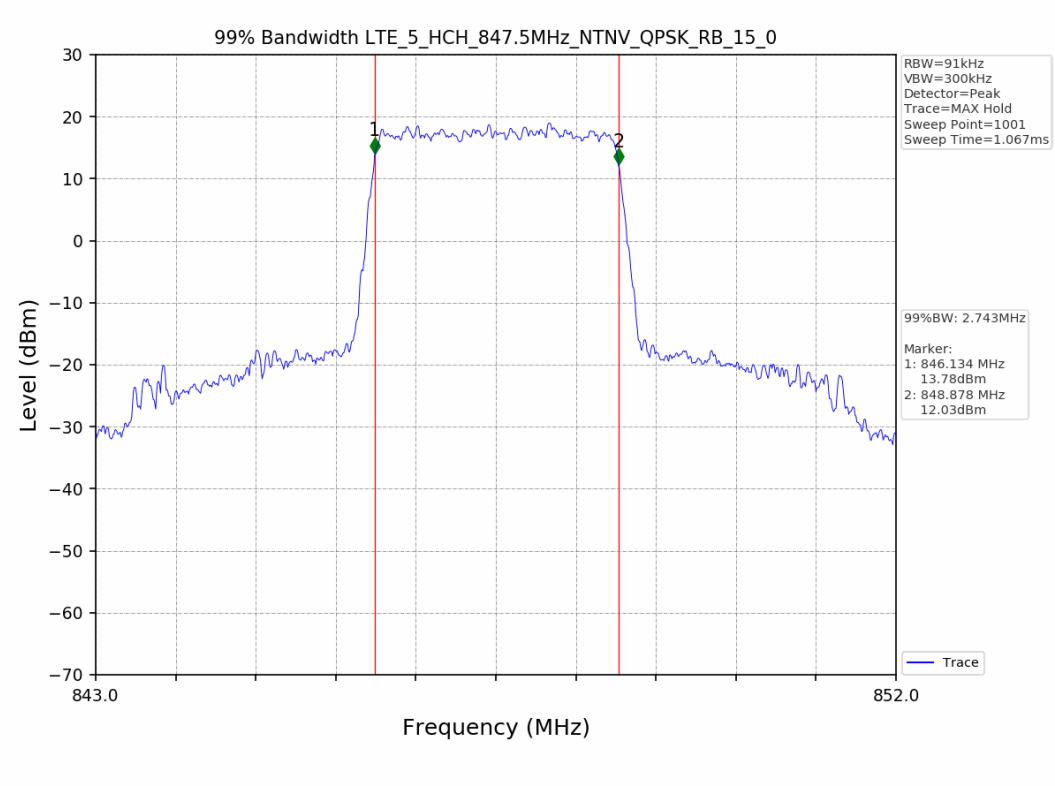



99% Bandwidth LTE_5_MCH_836.5MHz_NTNV_16QAM_RB_15_0
RBW=91kHz
VBW=300kHz
Detector=Peak
Trace=MAX Hold
Sweep Point=1001
Sweep Time=1.067ms
99%BW: 2.734MHz
Marker:
1: 835.137 MHz
12.21dBm
2: 837.871 MHz
10.45dBm
Trace
Level (dBm)
Frequency (MHz)
832.0
841.0

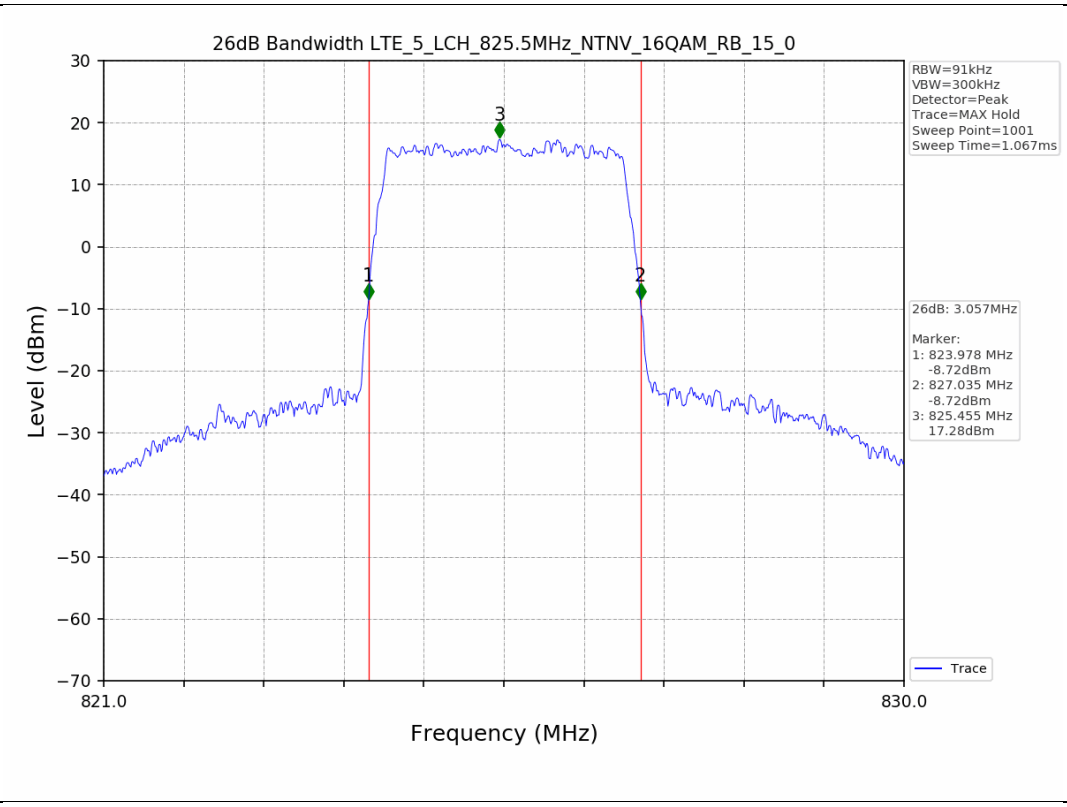

99% Bandwidth LTE_5_HCH_847.5MHz_NTNV_16QAM_RB_15_0
RBW=91kHz
VBW=300kHz
Detector=Peak
Trace=MAX Hold
Sweep Point=1001
Sweep Time=1.067ms
99%BW: 2.745MHz
Marker:
1: 846.146 MHz
13.41dBm
2: 848.891 MHz
10.36dBm
Trace
Level (dBm)
Frequency (MHz)
843.0
852.0

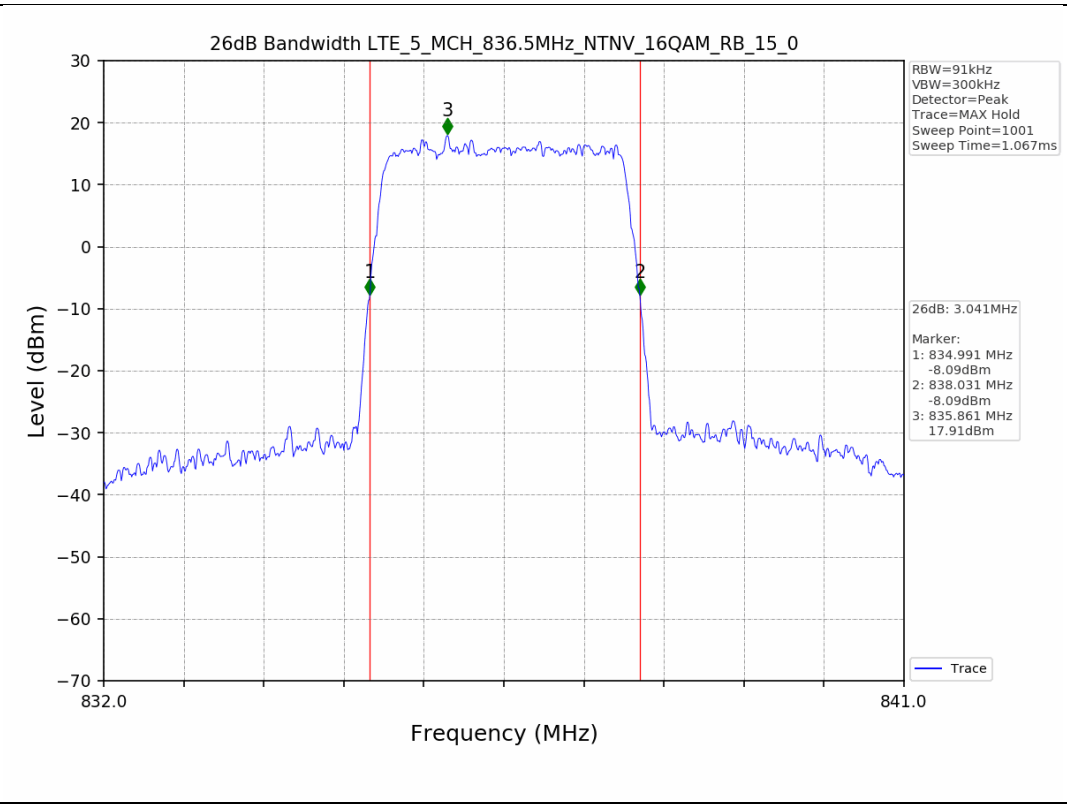

99% Bandwidth LTE_5_LCH_825.5MHz_NTNV_QPSK_RB_15_0
RBW=91kHz
VBW=300kHz
Detector=Peak
Trace=MAX Hold
Sweep Point=1001
Sweep Time=1.067ms
99%BW: 2.747MHz
Marker:
1: 824.132 MHz
12.04dBm
2: 826.879 MHz
11.66dBm
Trace
Level (dBm)
Frequency (MHz)
821.0
830.0

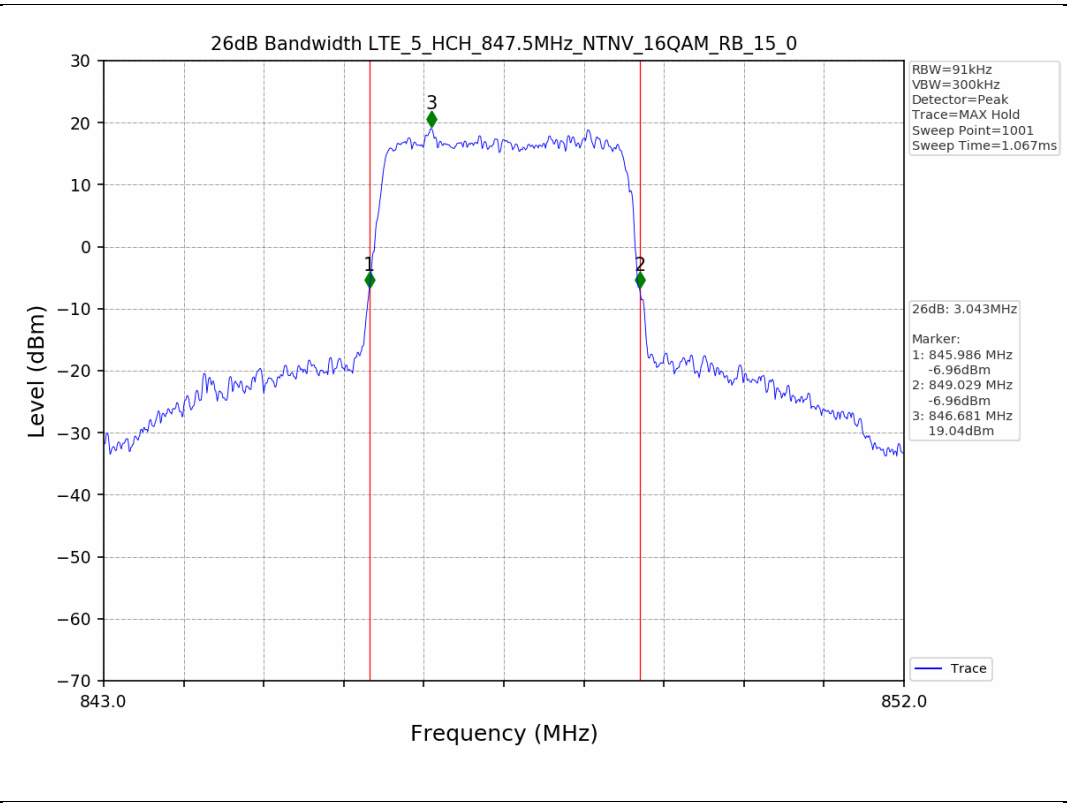

99% Bandwidth LTE_5_MCH_836.5MHz_NTNV_QPSK_RB_15_0
RBW=91kHz
VBW=300kHz
Detector=Peak
Trace=MAX Hold
Sweep Point=1001
Sweep Time=1.067ms
99%BW: 2.746MHz
Marker:
1: 835.141 MHz
12.24dBm
2: 837.886 MHz
12.00dBm
Trace
Level (dBm)
Frequency (MHz)
832.0
841.0

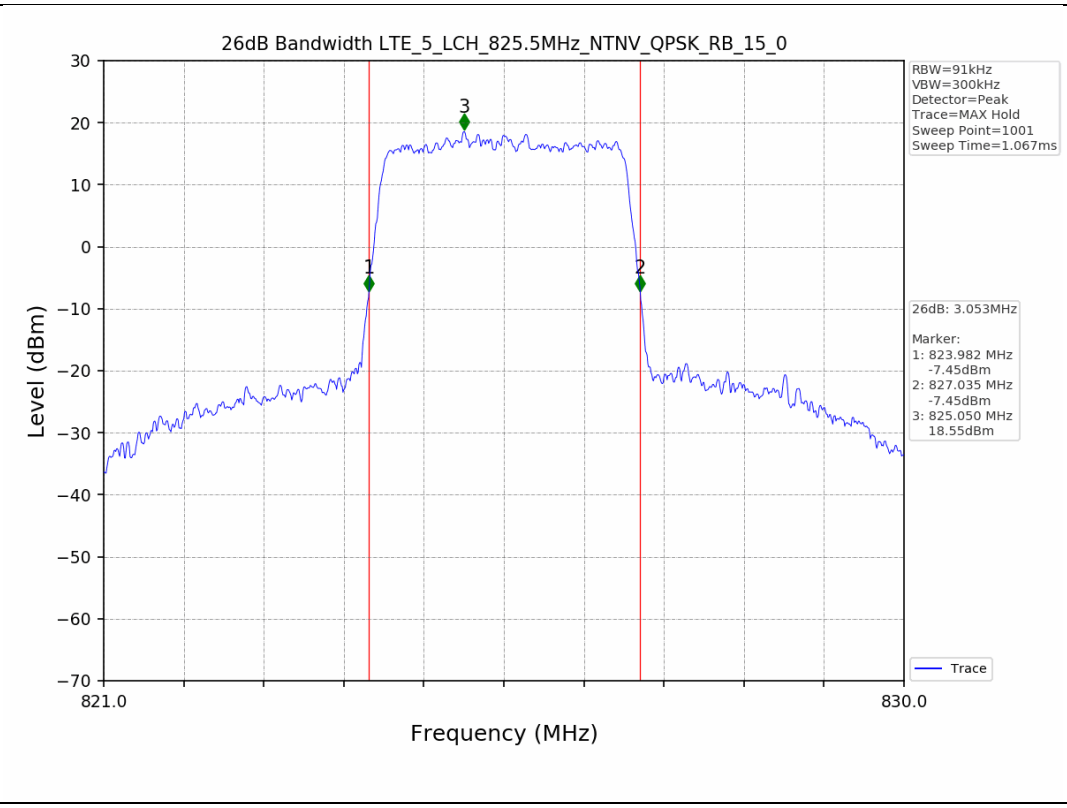


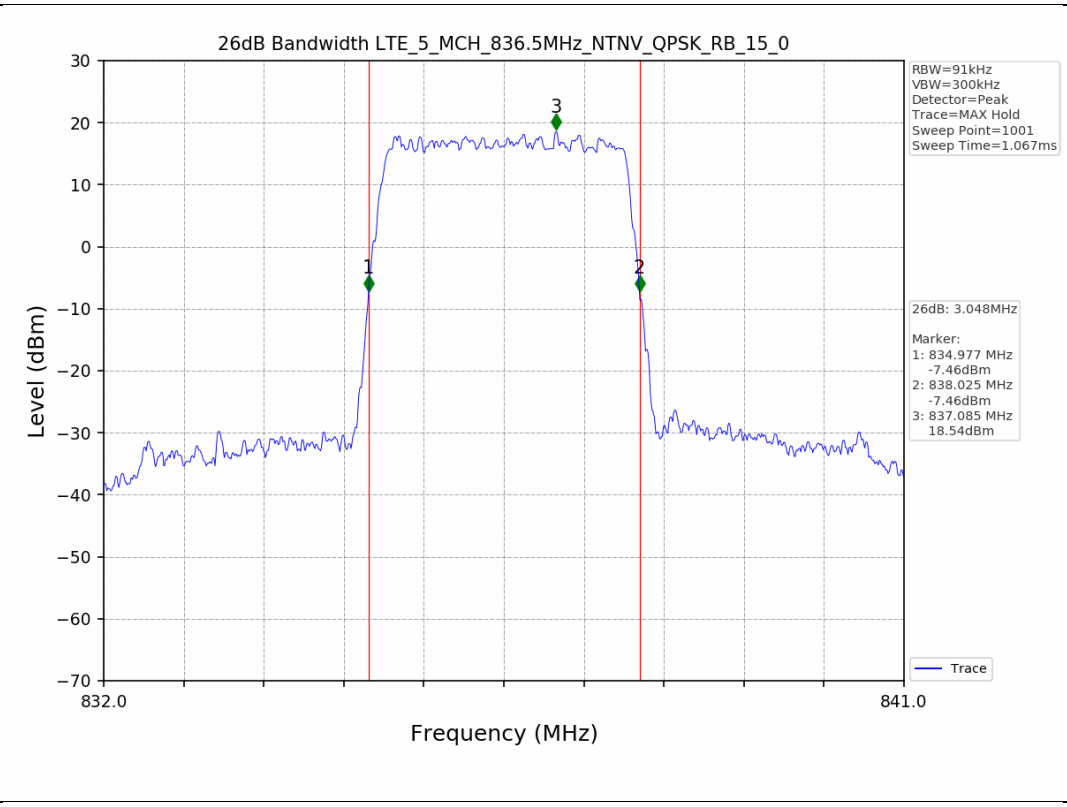

| Test Band: 5 _ 3MHz Bandwidth | | | | | | | |
|---|---|---|---|---|---|---|---|
| Test Mode | RB Allocation | | 26dB Bandwidth (MHz) | | | Limit | Verdict |
| | Size | Offset | LCH | MCH | HCH | | |
| QPSK | 15 | 0 | 3.053 | 3.048 | 3.065 | N/A | PASS |
| 16QAM | 15 | 0 | 3.057 | 3.041 | 3.043 | N/A | PASS |

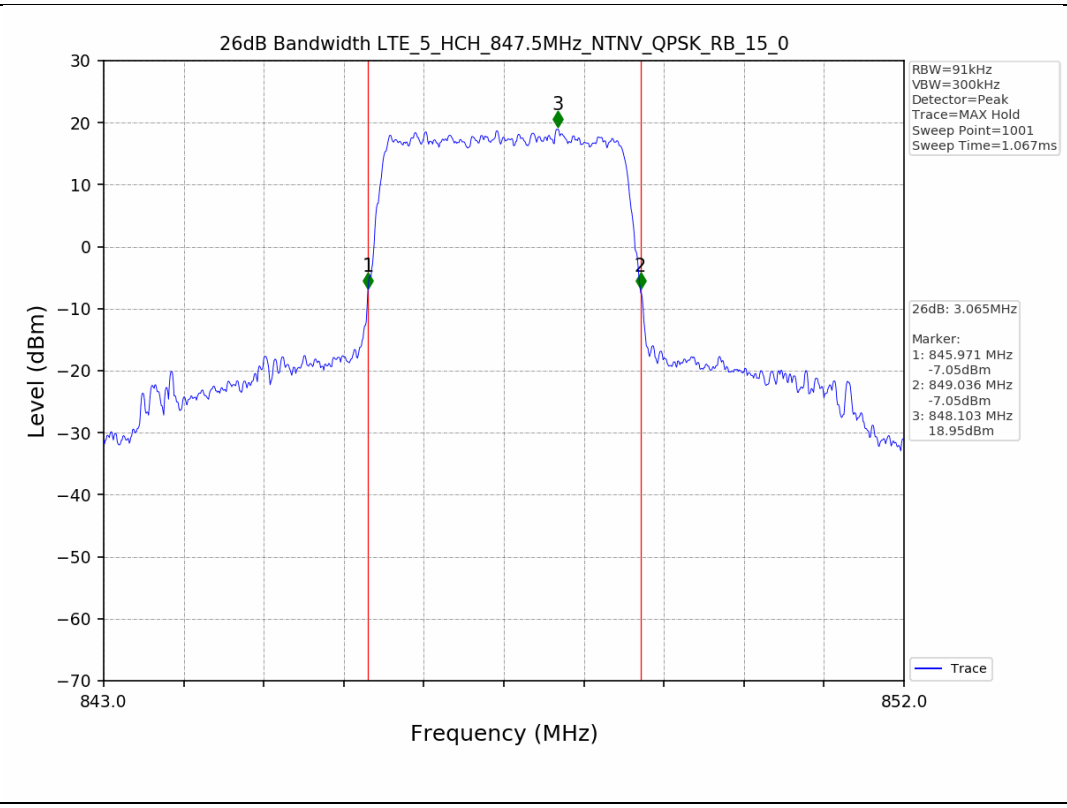

26dB Bandwidth LTE_5_LCH_825.5MHz_NTNV_16QAM_RB_15_0
RBW=91kHz
VBW=300kHz
Detector=Peak
Trace=MAX Hold
Sweep Point=1001
Sweep Time=1.067ms
26dB: 3.057MHz
Marker:
1: 823.978 MHz
-8.72dBm
2: 827.035 MHz
-8.72dBm
3: 825.455 MHz
17.28dBm
Trace
Level (dBm)
Frequency (MHz)
821.0
830.0


26dB Bandwidth LTE_5_MCH_836.5MHz_NTNV_16QAM_RB_15_0
RBW=91kHz
VBW=300kHz
Detector=Peak
Trace=MAX Hold
Sweep Point=1001
Sweep Time=1.067ms
26dB: 3.041MHz
Marker:
1: 834.991 MHz
-8.09dBm
2: 838.031 MHz
-8.09dBm
3: 835.861 MHz
17.91dBm
Trace
Level (dBm)
Frequency (MHz)
832.0
841.0

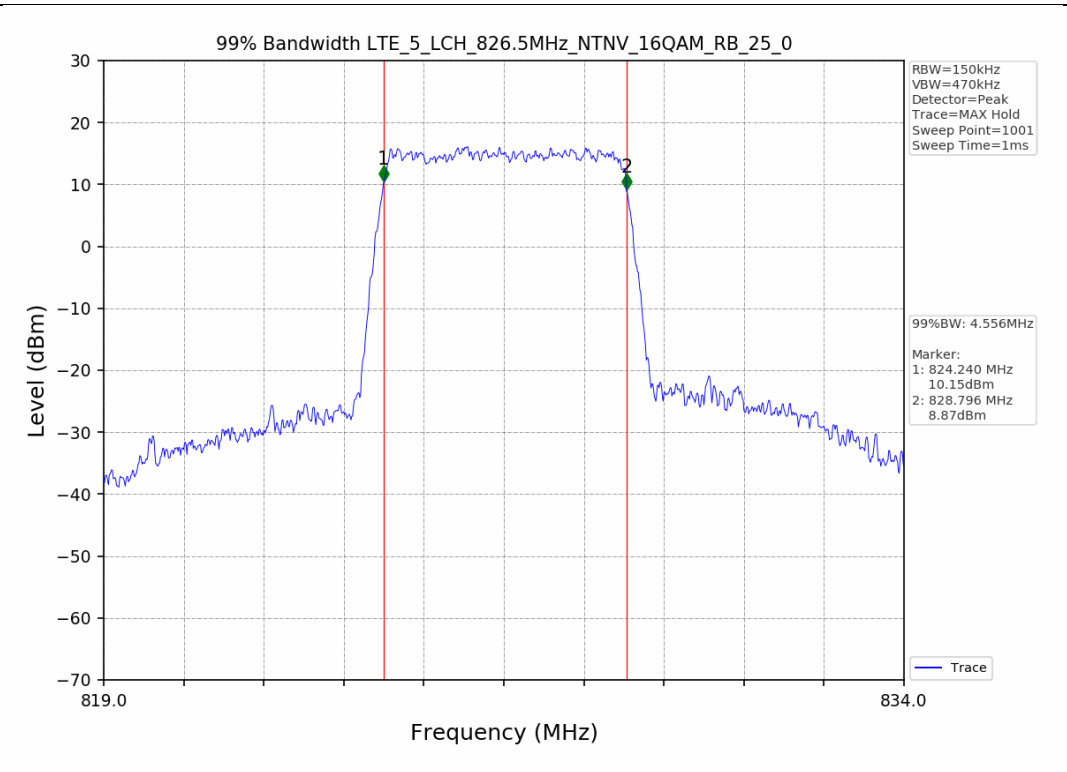

26dB Bandwidth LTE_5_HCH_847.5MHz_NTNV_16QAM_RB_15_0
RBW=91kHz
VBW=300kHz
Detector=Peak
Trace=MAX Hold
Sweep Point=1001
Sweep Time=1.067ms
26dB: 3.043MHz
Marker:
1: 845.986 MHz
-6.96dBm
2: 849.029 MHz
-6.96dBm
3: 846.681 MHz
19.04dBm
Trace
Level (dBm)
Frequency (MHz)
843.0
852.0

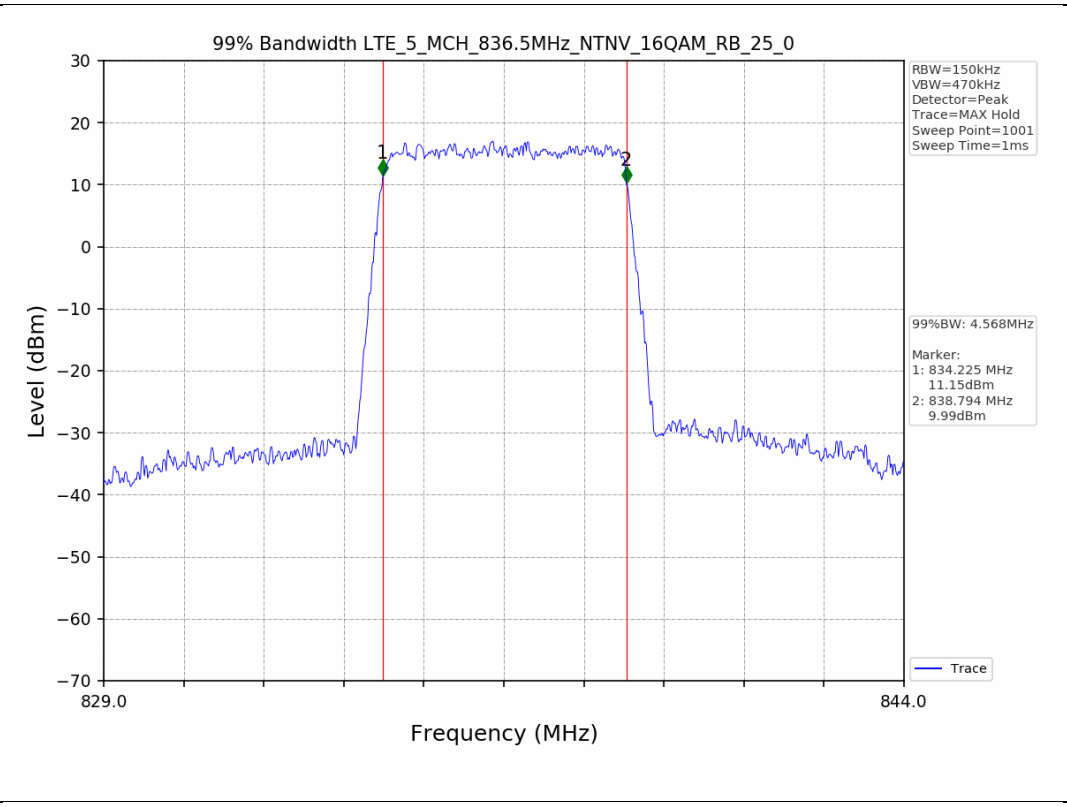

26dB Bandwidth LTE_5_LCH_825.5MHz_NTNV_QPSK_RB_15_0
RBW=91kHz
VBW=300kHz
Detector=Peak
Trace=MAX Hold
Sweep Point=1001
Sweep Time=1.067ms
26dB: 3.053MHz
Marker:
1: 823.982 MHz
-7.45dBm
2: 827.035 MHz
-7.45dBm
3: 825.050 MHz
18.55dBm
Trace
Level (dBm)
Frequency (MHz)
821.0
830.0

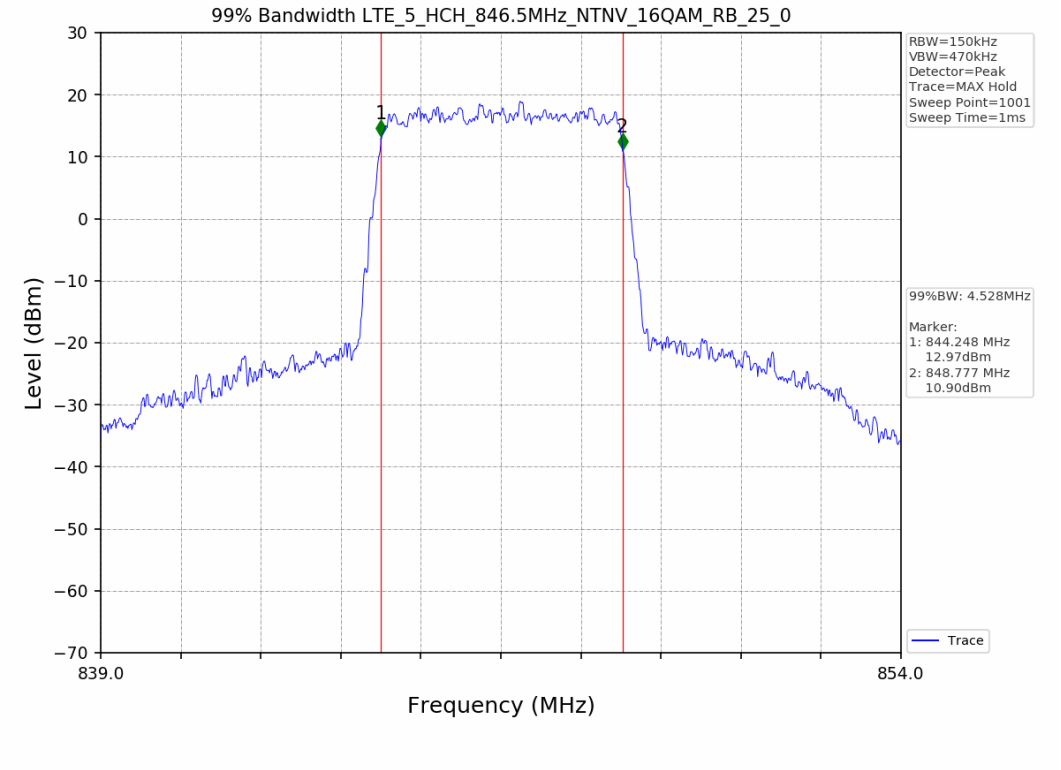

26dB Bandwidth LTE_5_MCH_836.5MHz_NTNV_QPSK_RB_15_0
RBW=91kHz
VBW=300kHz
Detector=Peak
Trace=MAX Hold
Sweep Point=1001
Sweep Time=1.067ms
26dB: 3.048MHz
Marker:
1: 834.977 MHz
-7.46dBm
2: 838.025 MHz
-7.46dBm
3: 837.085 MHz
18.54dBm
Trace
Level (dBm)
Frequency (MHz)
832.0
841.0

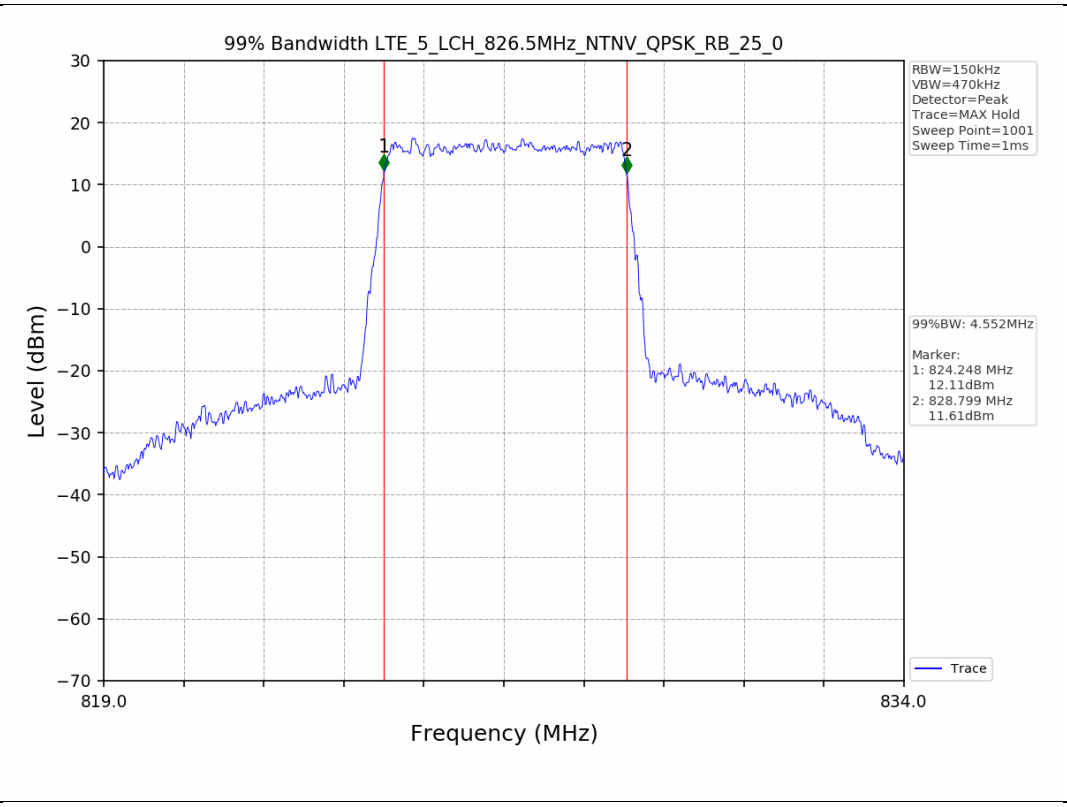

26dB Bandwidth LTE_5_HCH_847.5MHz_NTNV_QPSK_RB_15_0
RBW=91kHz
VBW=300kHz
Detector=Peak
Trace=MAX Hold
Sweep Point=1001
Sweep Time=1.067ms
26dB: 3.065MHz
Marker:
1: 845.971 MHz
-7.05dBm
2: 849.036 MHz
-7.05dBm
3: 848.103 MHz
18.95dBm
Trace
Level (dBm)
Frequency (MHz)
843.0
852.0

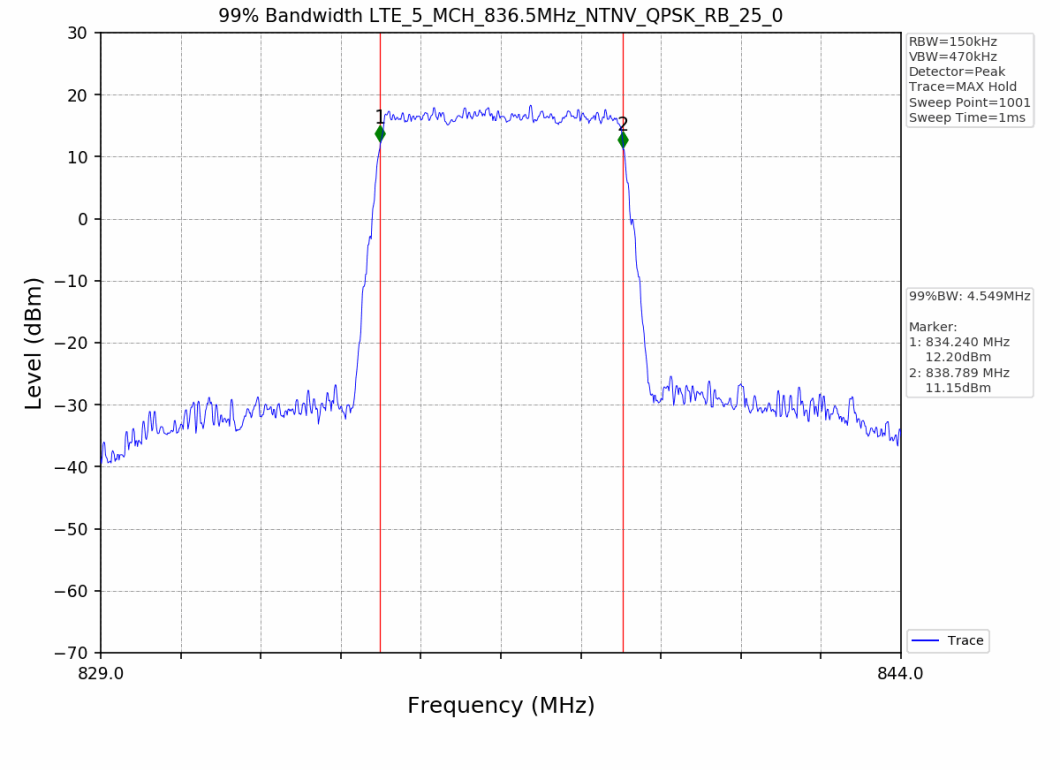
| Test Band: 5 _ 5MHz Bandwidth | | | | | | | |
|---|---|---|---|---|---|---|---|
| Test Mode | RB Allocation | | 99% Occupied Bandwidth (MHz) | | | Limit | Verdict |
| | Size | Offset | LCH | MCH | HCH | | |
| QPSK | 25 | 0 | 4.552 | 4.549 | 4.567 | N/A | PASS |
| 16QAM | 25 | 0 | 4.556 | 4.568 | 4.528 | N/A | PASS |

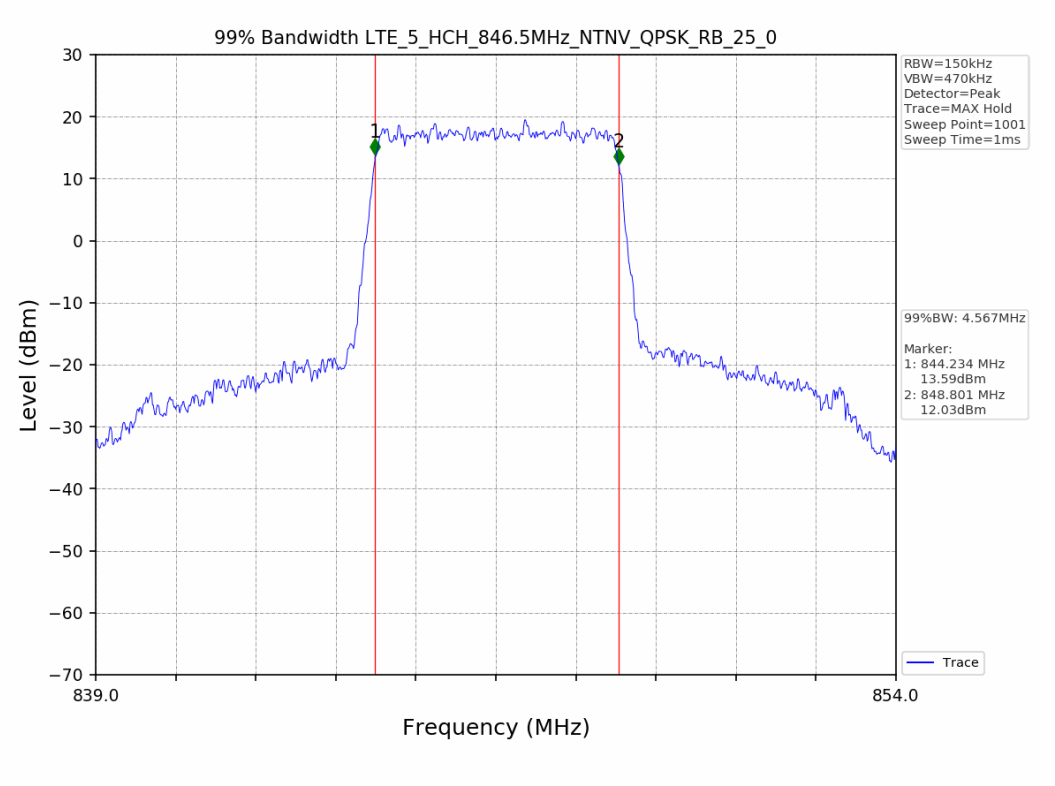



99% Bandwidth LTE_5_MCH_836.5MHz_NTNV_16QAM_RB_25_0
RBW=150kHz
VBW=470kHz
Detector=Peak
Trace=MAX Hold
Sweep Point=1001
Sweep Time=1ms
99%BW: 4.568MHz
Marker:
1: 834.225 MHz
11.15dBm
2: 838.794 MHz
9.99dBm
Trace
Level (dBm)
Frequency (MHz)
829.0
844.0

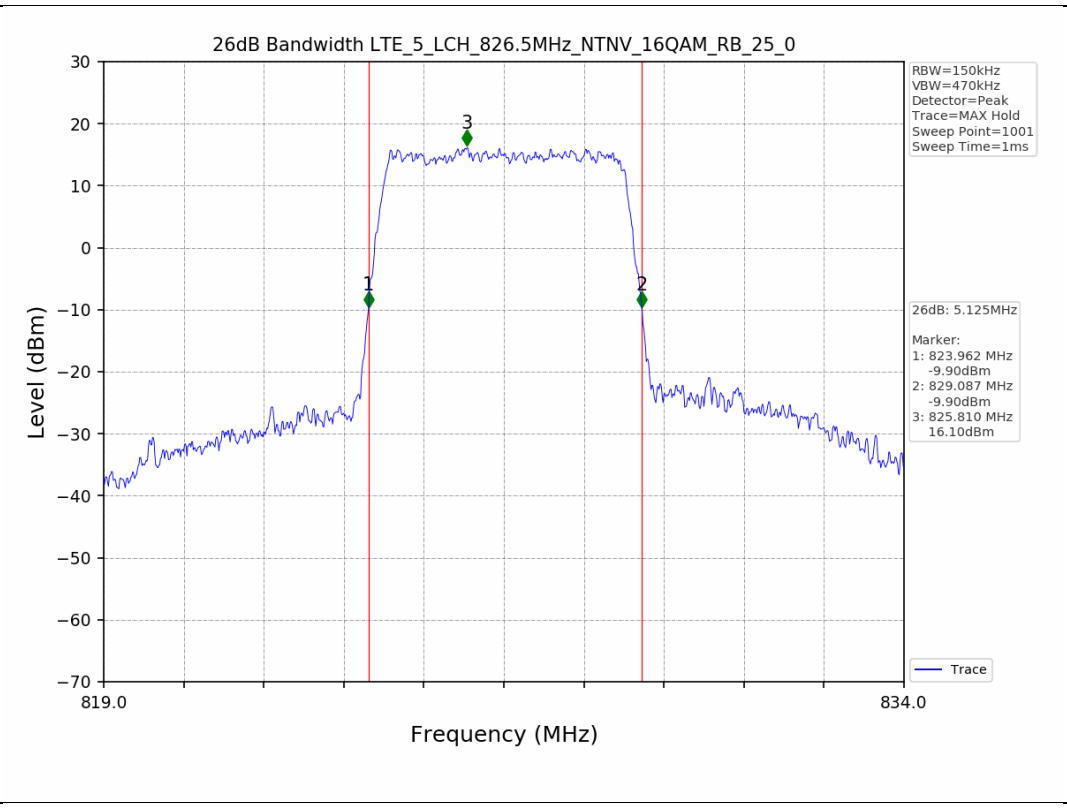

99% Bandwidth LTE_5_HCH_846.5MHz_NTNV_16QAM_RB_25_0
RBW=150kHz
VBW=470kHz
Detector=Peak
Trace=MAX Hold
Sweep Point=1001
Sweep Time=1ms
99%BW: 4.528MHz
Marker:
1: 844.248 MHz
12.97dBm
2: 848.777 MHz
10.90dBm
Trace
Level (dBm)
Frequency (MHz)
839.0
854.0

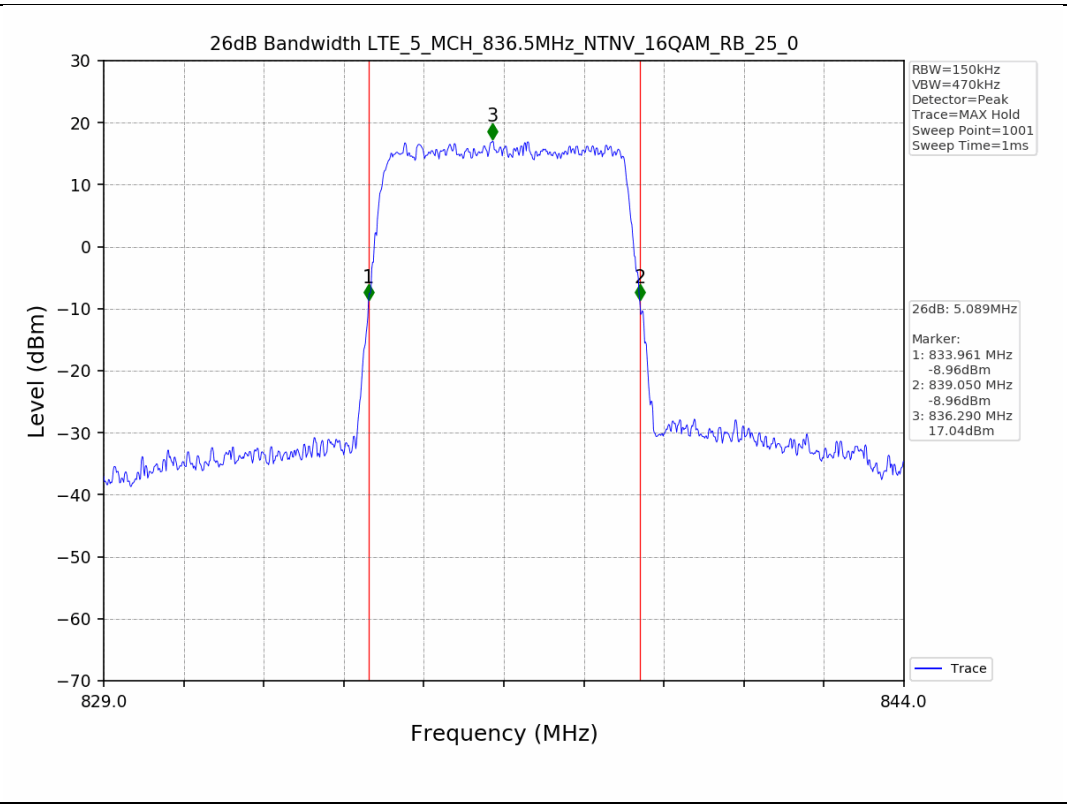

99% Bandwidth LTE_5_LCH_826.5MHz_NTNV_QPSK_RB_25_0
RBW=150kHz
VBW=470kHz
Detector=Peak
Trace=MAX Hold
Sweep Point=1001
Sweep Time=1ms
99%BW: 4.552MHz
Marker:
1: 824.248 MHz
12.11dBm
2: 828.799 MHz
11.61dBm
Trace
Level (dBm)
Frequency (MHz)
819.0
834.0

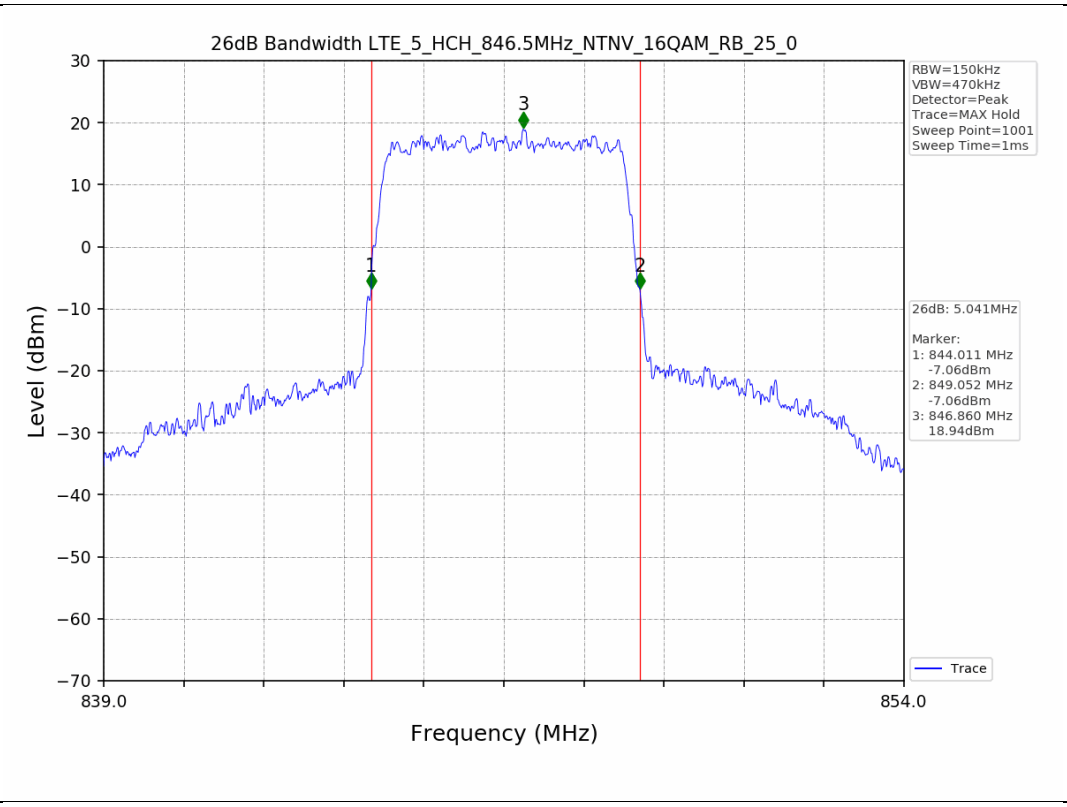

99% Bandwidth LTE_5_MCH_836.5MHz_NTNV_QPSK_RB_25_0
RBW=150kHz
VBW=470kHz
Detector=Peak
Trace=MAX Hold
Sweep Point=1001
Sweep Time=1ms
99%BW: 4.549MHz
Marker:
1: 834.240 MHz
12.20dBm
2: 838.789 MHz
11.15dBm
Trace
Level (dBm)
Frequency (MHz)
829.0
844.0

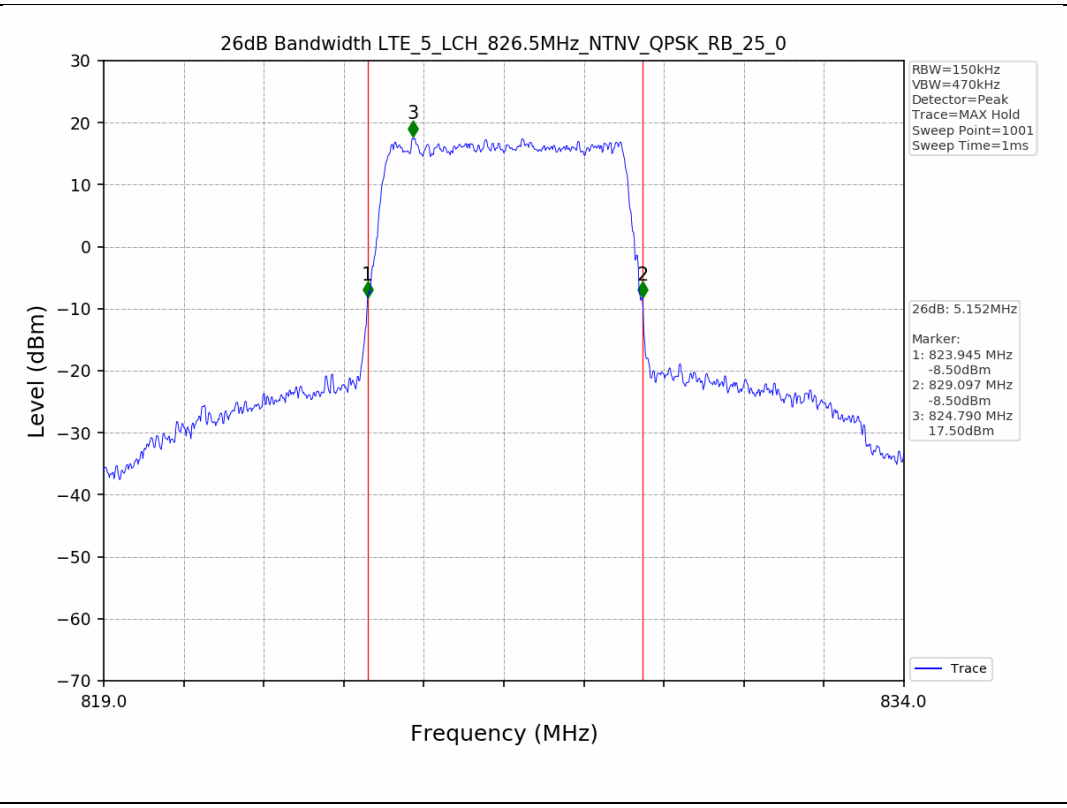


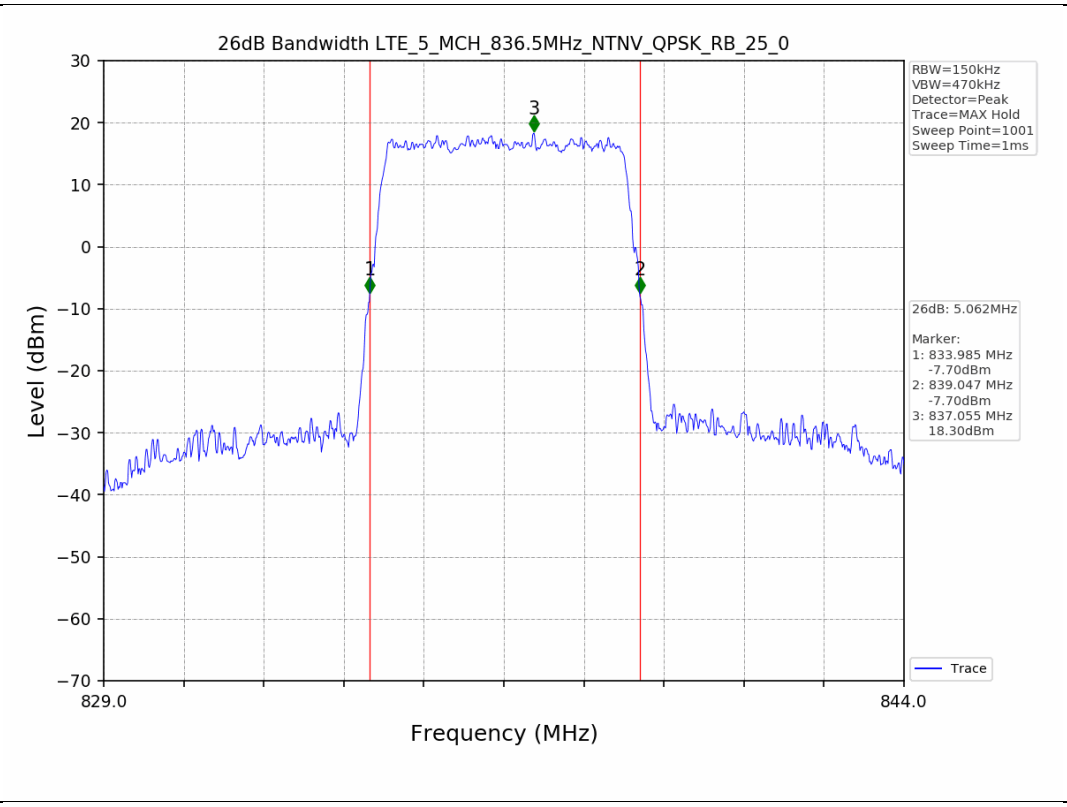

| Test Band: 5 _ 5MHz Bandwidth | | | | | | | |
|---|---|---|---|---|---|---|---|
| Test Mode | RB Allocation | | 26dB Bandwidth (MHz) | | | Limit | Verdict |
| | Size | Offset | LCH | MCH | HCH | | |
| QPSK | 25 | 0 | 5.152 | 5.062 | 5.081 | N/A | PASS |
| 16QAM | 25 | 0 | 5.125 | 5.089 | 5.041 | N/A | PASS |

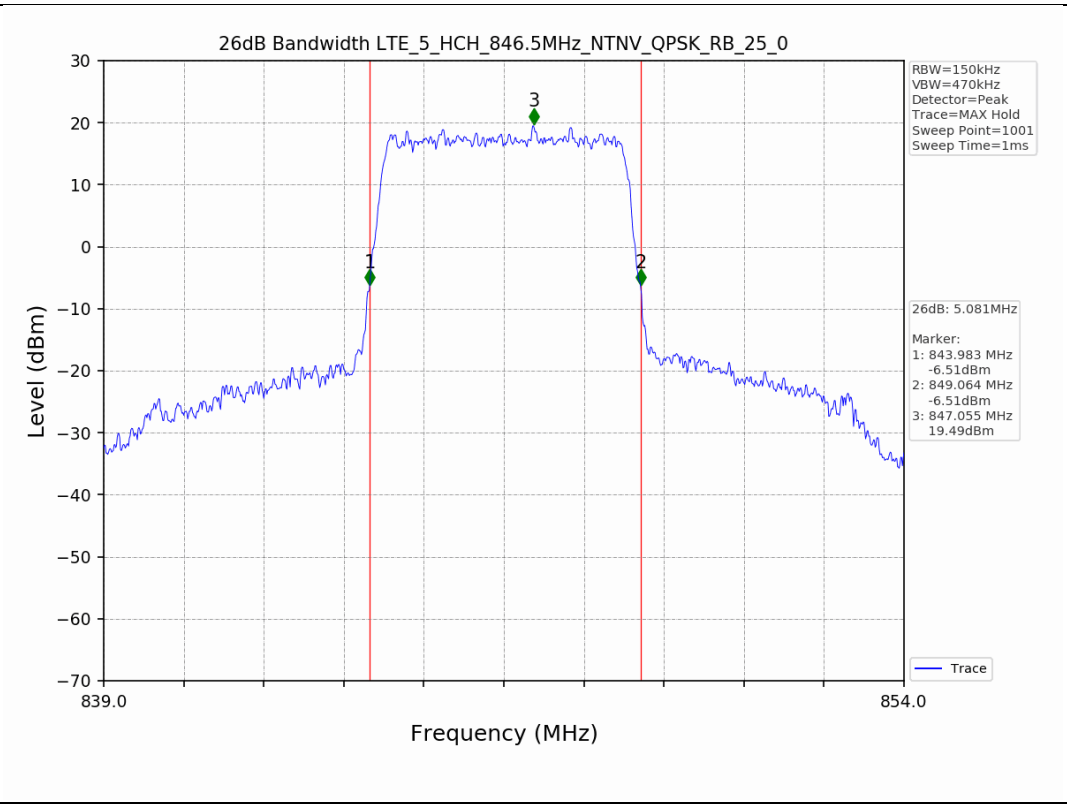

26dB Bandwidth LTE_5_LCH_826.5MHz_NTNV_16QAM_RB_25_0
RBW=150kHz
VBW=470kHz
Detector=Peak
Trace=MAX Hold
Sweep Point=1001
Sweep Time=1ms
26dB: 5.125MHz
Marker:
1: 823.962 MHz
-9.90dBm
2: 829.087 MHz
-9.90dBm
3: 825.810 MHz
16.10dBm
Trace
Level (dBm)
Frequency (MHz)
819.0
834.0


26dB Bandwidth LTE_5_MCH_836.5MHz_NTNV_16QAM_RB_25_0
RBW=150kHz
VBW=470kHz
Detector=Peak
Trace=MAX Hold
Sweep Point=1001
Sweep Time=1ms
26dB: 5.089MHz
Marker:
1: 833.961 MHz
-8.96dBm
2: 839.050 MHz
-8.96dBm
3: 836.290 MHz
17.04dBm
Trace
Level (dBm)
Frequency (MHz)
829.0
844.0

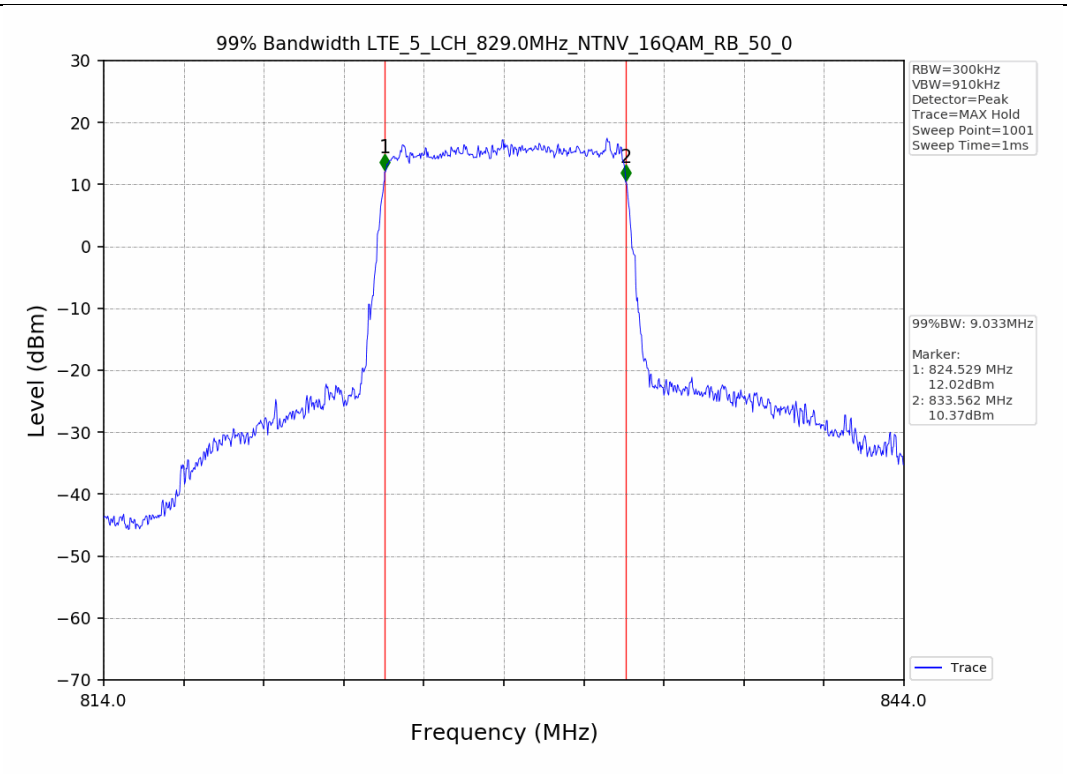

26dB Bandwidth LTE_5_HCH_846.5MHz_NTNV_16QAM_RB_25_0
RBW=150kHz
VBW=470kHz
Detector=Peak
Trace=MAX Hold
Sweep Point=1001
Sweep Time=1ms
26dB: 5.041MHz
Marker:
1: 844.011 MHz
-7.06dBm
2: 849.052 MHz
-7.06dBm
3: 846.860 MHz
18.94dBm
Trace
Level (dBm)
Frequency (MHz)
839.0
854.0

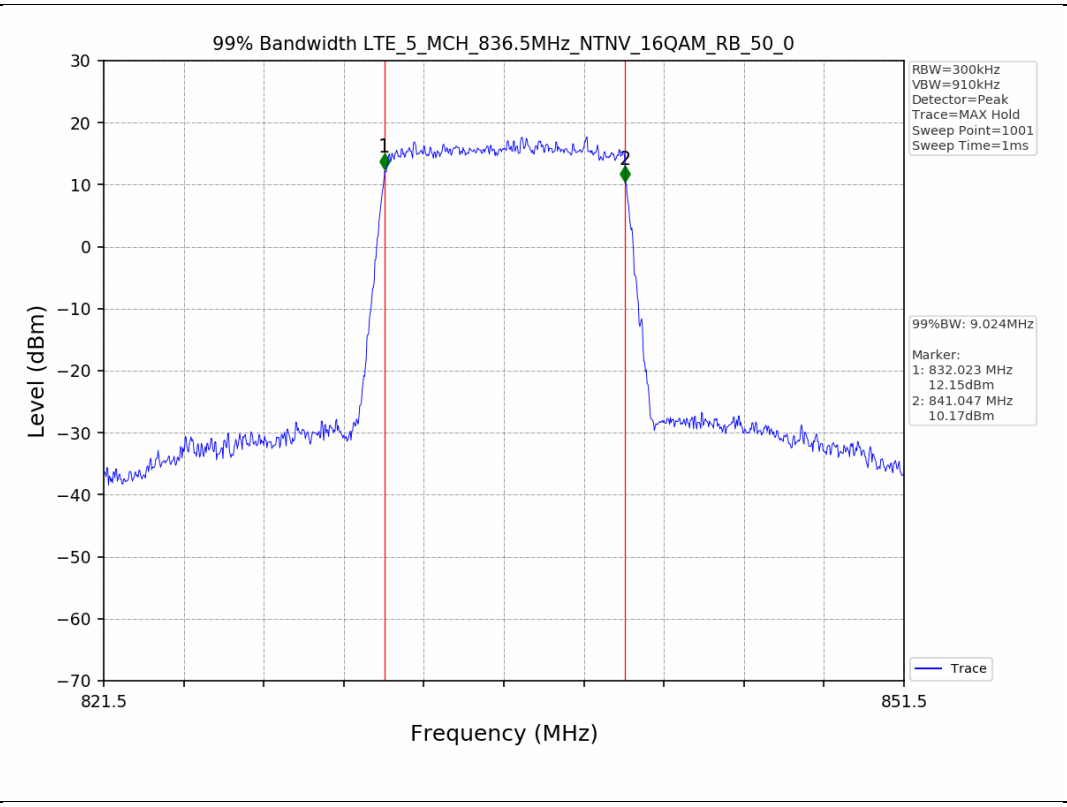

26dB Bandwidth LTE_5_LCH_826.5MHz_NTNV_QPSK_RB_25_0
RBW=150kHz
VBW=470kHz
Detector=Peak
Trace=MAX Hold
Sweep Point=1001
Sweep Time=1ms
26dB: 5.152MHz
Marker:
1: 823.945 MHz
-8.50dBm
2: 829.097 MHz
-8.50dBm
3: 824.790 MHz
17.50dBm
Trace
Level (dBm)
Frequency (MHz)
819.0
834.0

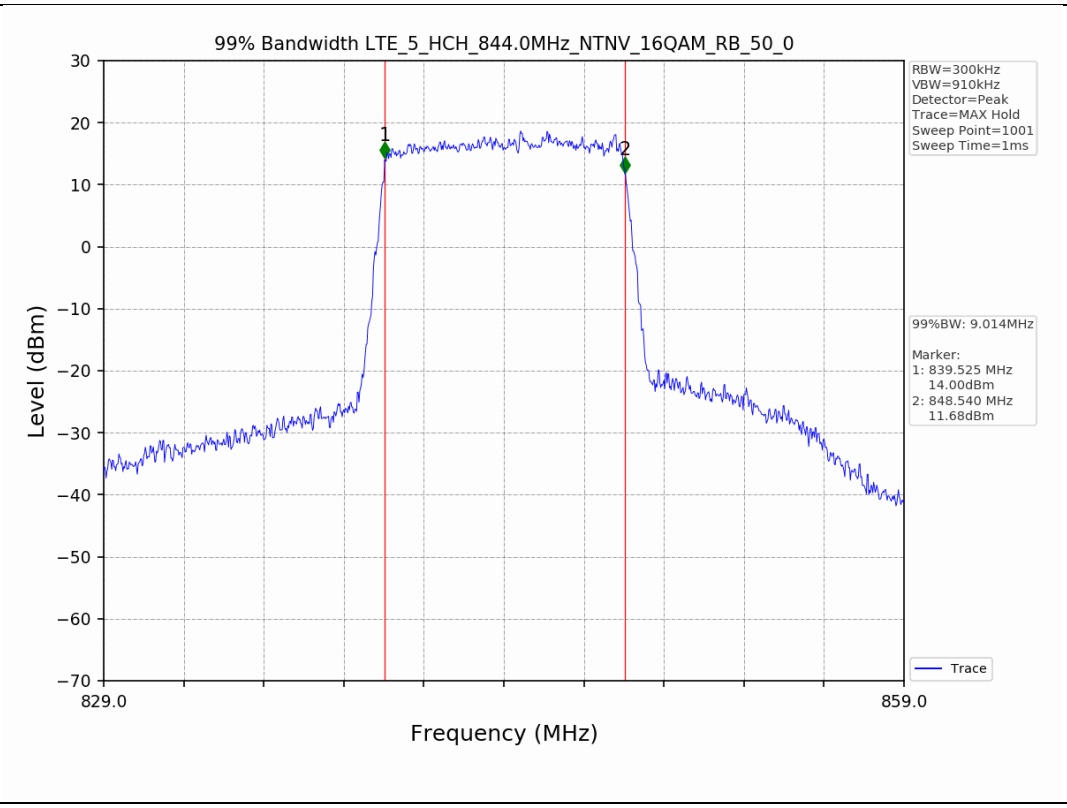

26dB Bandwidth LTE_5_MCH_836.5MHz_NTNV_QPSK_RB_25_0
RBW=150kHz
VBW=470kHz
Detector=Peak
Trace=MAX Hold
Sweep Point=1001
Sweep Time=1ms
26dB: 5.062MHz
Marker:
1: 833.985 MHz
-7.70dBm
2: 839.047 MHz
-7.70dBm
3: 837.055 MHz
18.30dBm
Trace
Level (dBm)
Frequency (MHz)
829.0
844.0

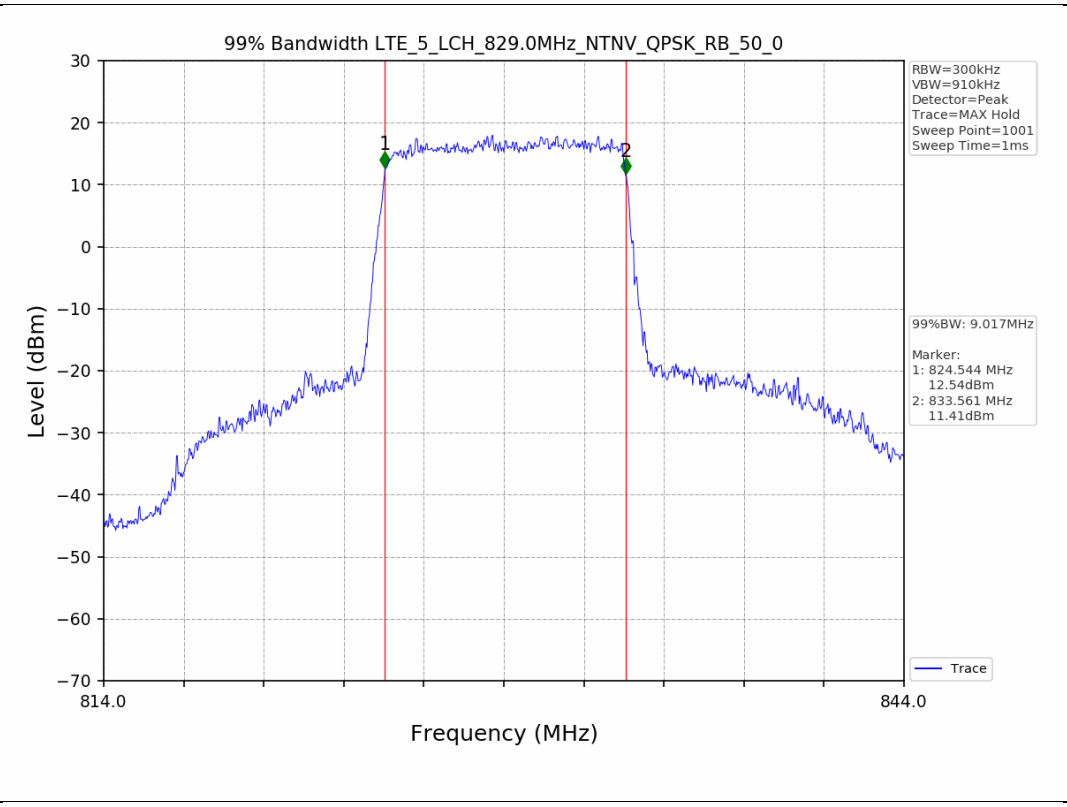

26dB Bandwidth LTE_5_HCH_846.5MHz_NTNV_QPSK_RB_25_0
RBW=150kHz
VBW=470kHz
Detector=Peak
Trace=MAX Hold
Sweep Point=1001
Sweep Time=1ms
26dB: 5.081MHz
Marker:
1: 843.983 MHz
-6.51dBm
2: 849.064 MHz
-6.51dBm
3: 847.055 MHz
19.49dBm
Trace
Level (dBm)
Frequency (MHz)
839.0
854.0

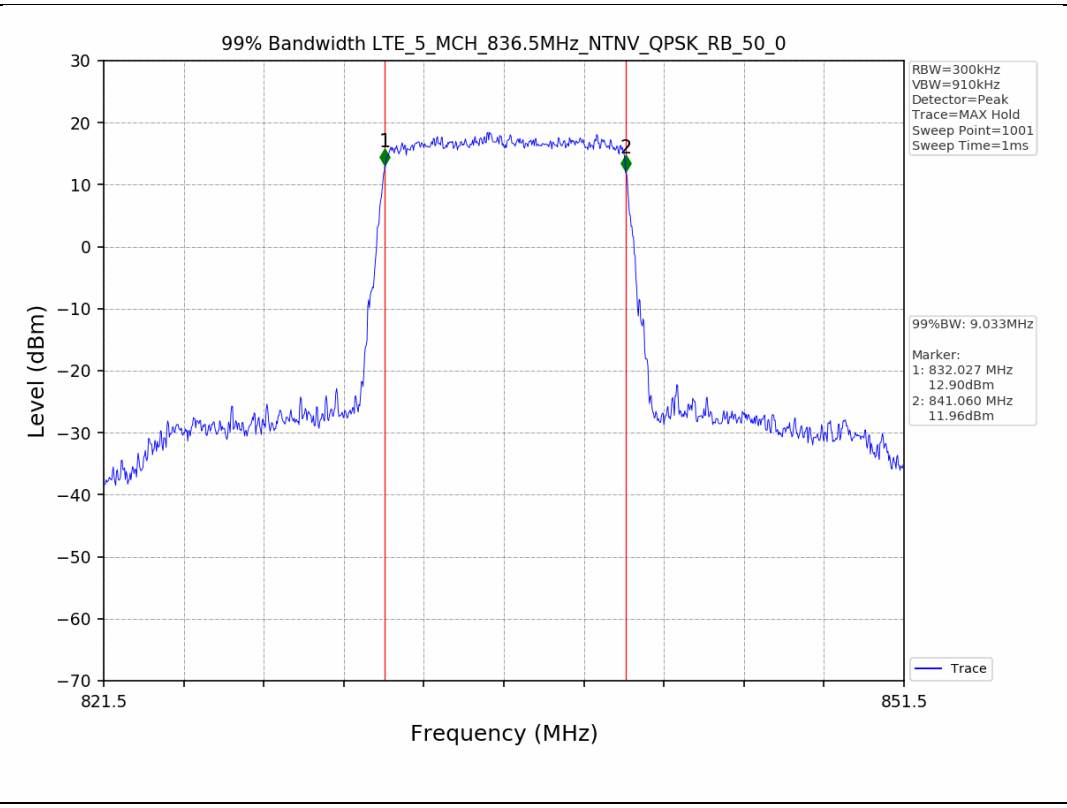
| Test Band: 5 _ 10MHz Bandwidth | | | | | | | |
|---|---|---|---|---|---|---|---|
| Test Mode | RB Allocation | | 99% Occupied Bandwidth (MHz) | | | Limit | Verdict |
| | Size | Offset | LCH | MCH | HCH | | |
| QPSK | 50 | 0 | 9.017 | 9.033 | 9.045 | N/A | PASS |
| 16QAM | 50 | 0 | 9.033 | 9.024 | 9.014 | N/A | PASS |

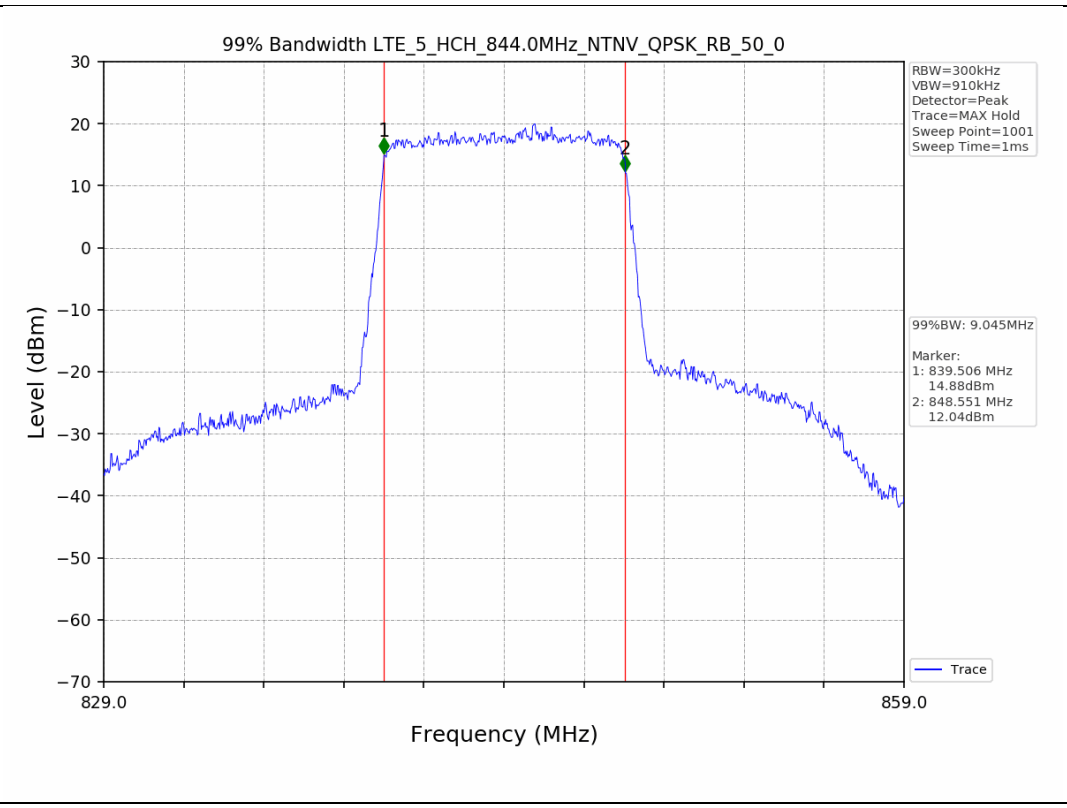



99% Bandwidth LTE_5_MCH_836.5MHz_NTNV_16QAM_RB_50_0
RBW=300kHz
VBW=910kHz
Detector=Peak
Trace=MAX Hold
Sweep Point=1001
Sweep Time=1ms
99%BW: 9.024MHz
Marker:
1: 832.023 MHz
12.15dBm
2: 841.047 MHz
10.17dBm
Trace
Level (dBm)
Frequency (MHz)
821.5
851.5

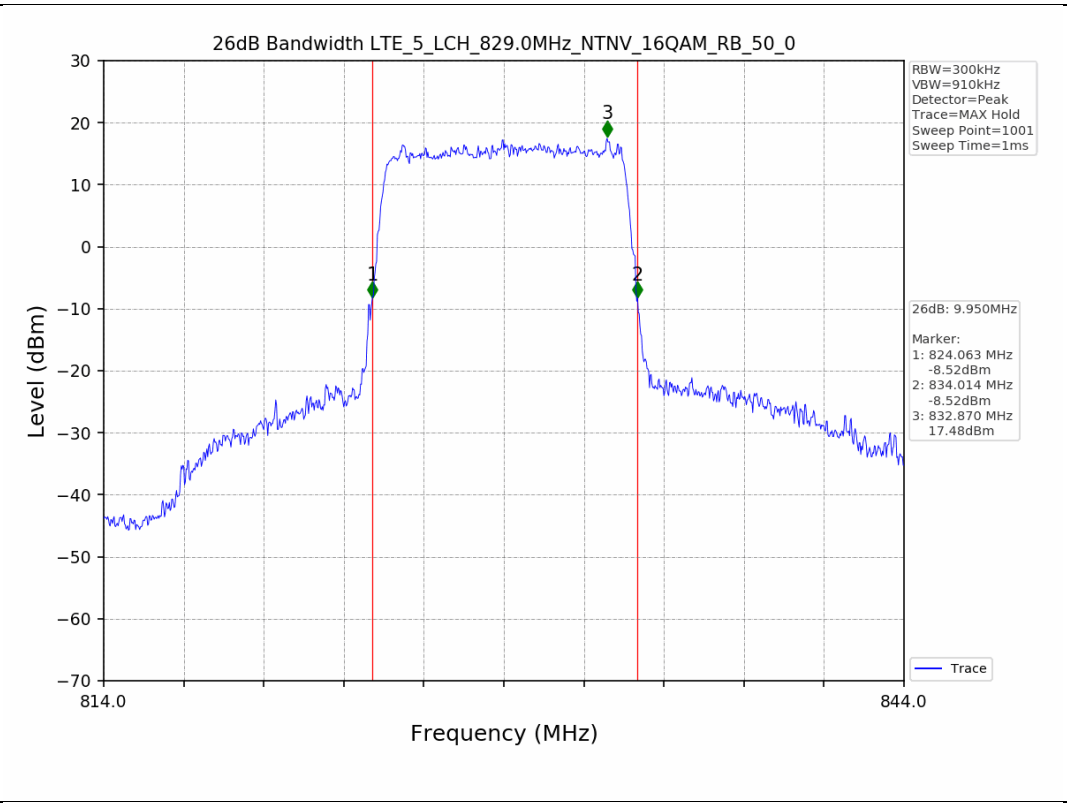

99% Bandwidth LTE_5_HCH_844.0MHz_NTNV_16QAM_RB_50_0
RBW=300kHz
VBW=910kHz
Detector=Peak
Trace=MAX Hold
Sweep Point=1001
Sweep Time=1ms
99%BW: 9.014MHz
Marker:
1: 839.525 MHz
14.00dBm
2: 848.540 MHz
11.68dBm
Trace
Level (dBm)
Frequency (MHz)
829.0
859.0

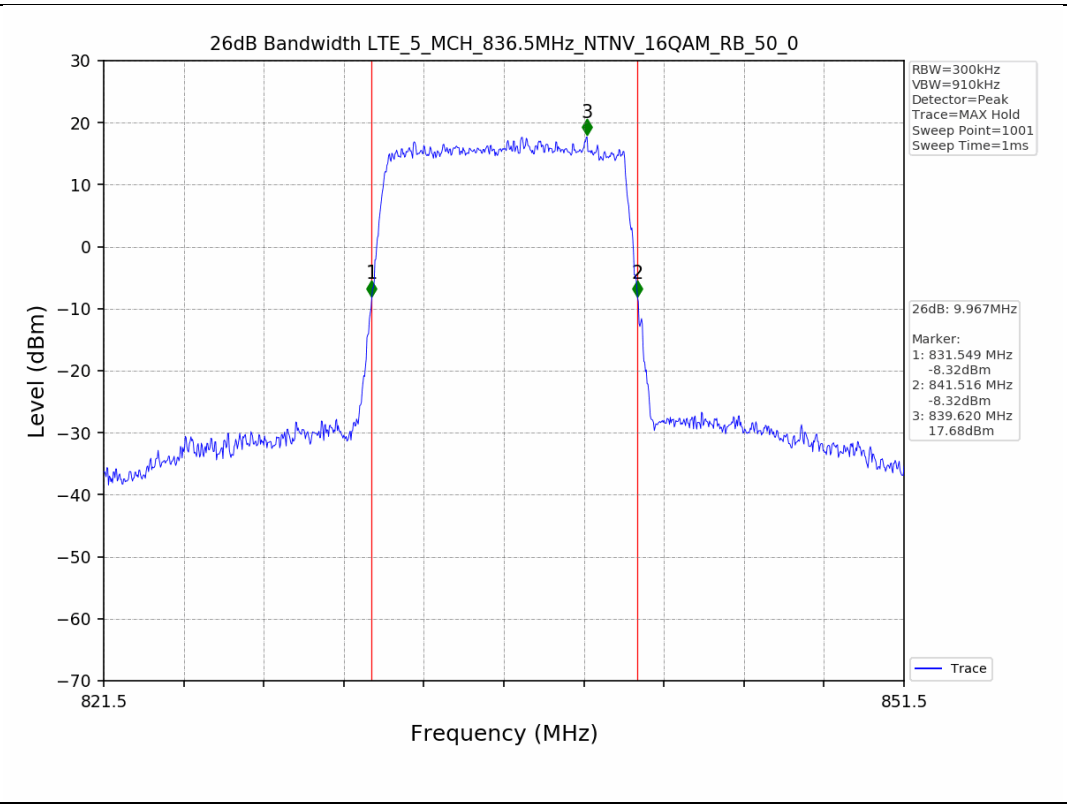

99% Bandwidth LTE_5_LCH_829.0MHz_NTNV_QPSK_RB_50_0
RBW=300kHz
VBW=910kHz
Detector=Peak
Trace=MAX Hold
Sweep Point=1001
Sweep Time=1ms
99%BW: 9.017MHz
Marker:
1: 824.544 MHz
12.54dBm
2: 833.561 MHz
11.41dBm
Trace
Level (dBm)
Frequency (MHz)
814.0
844.0

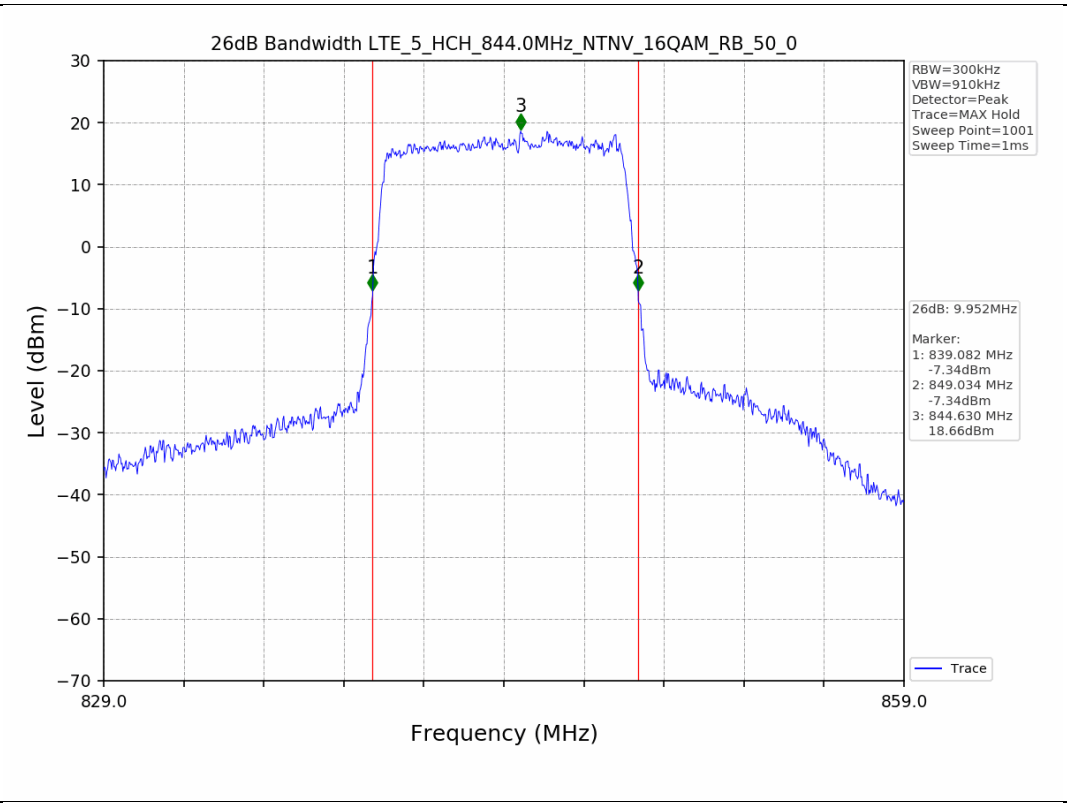

99% Bandwidth LTE_5_MCH_836.5MHz_NTNV_QPSK_RB_50_0
RBW=300kHz
VBW=910kHz
Detector=Peak
Trace=MAX Hold
Sweep Point=1001
Sweep Time=1ms
99%BW: 9.033MHz
Marker:
1: 832.027 MHz
12.90dBm
2: 841.060 MHz
11.96dBm
Trace
Level (dBm)
Frequency (MHz)
821.5
851.5

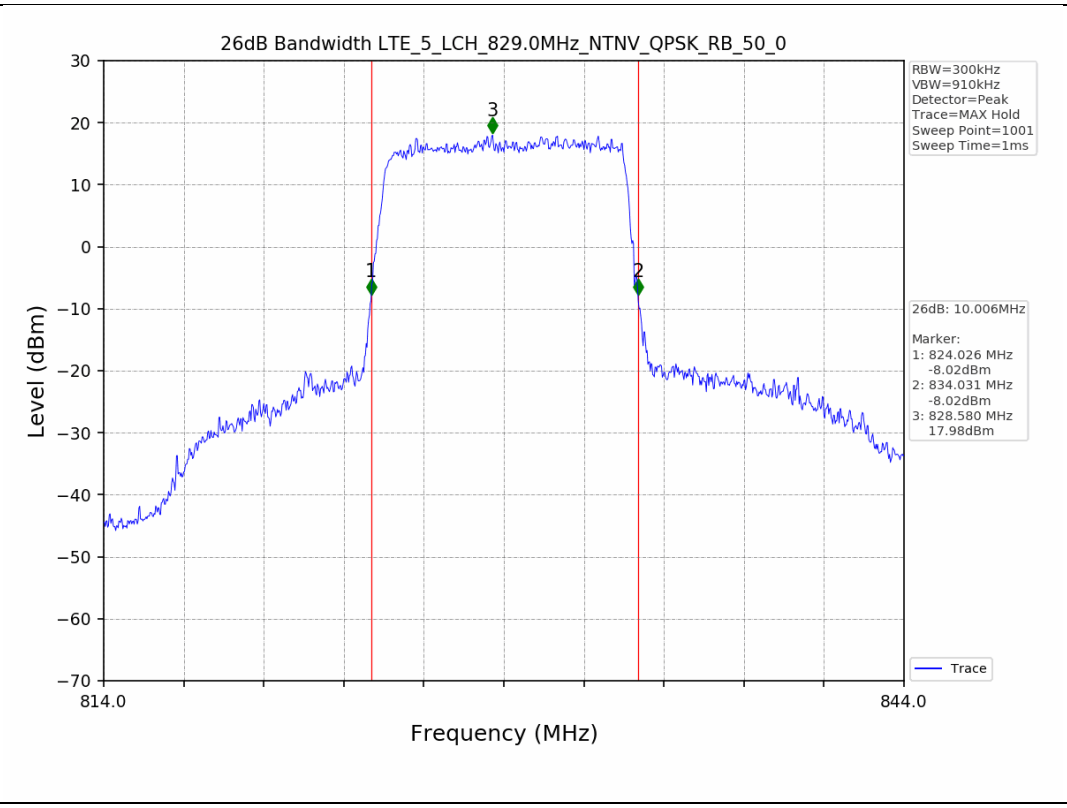


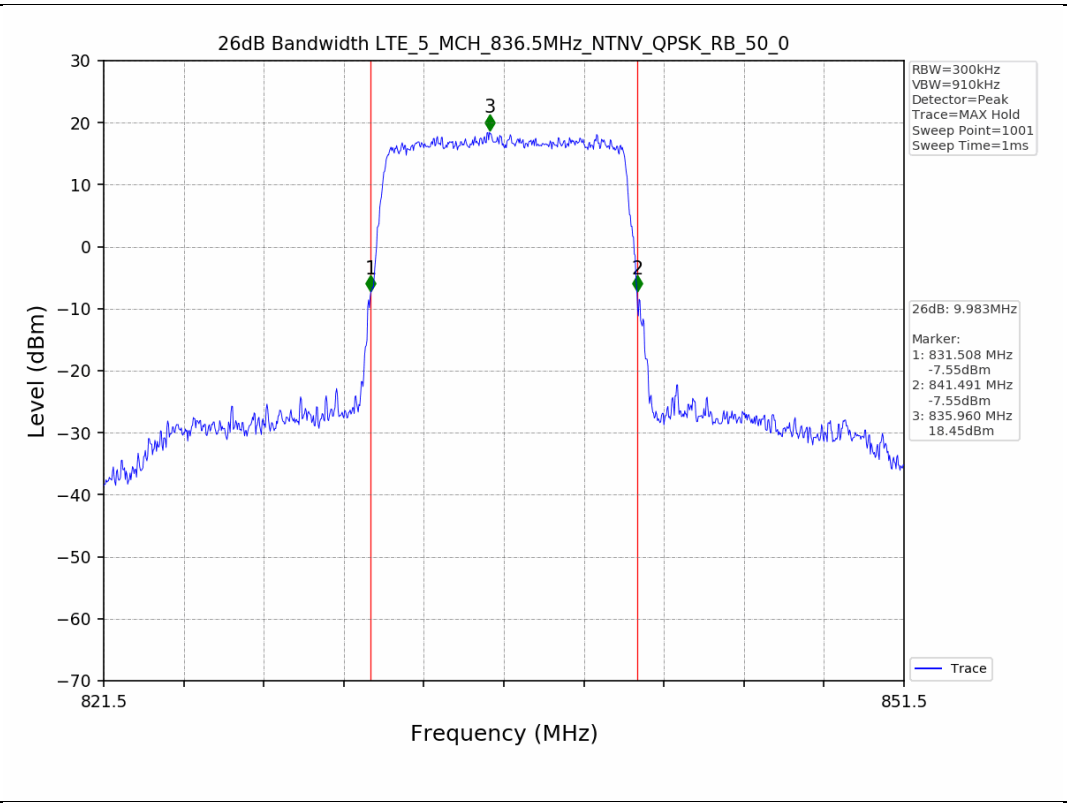

| Test Band: 5 _ 10MHz Bandwidth | | | | | | | |
|---|---|---|---|---|---|---|---|
| Test Mode | RB Allocation | | 26dB Bandwidth (MHz) | | | Limit | Verdict |
| | Size | Offset | LCH | MCH | HCH | | |
| QPSK | 50 | 0 | 10.006 | 9.983 | 10.006 | N/A | PASS |
| 16QAM | 50 | 0 | 9.950 | 9.967 | 9.952 | N/A | PASS |

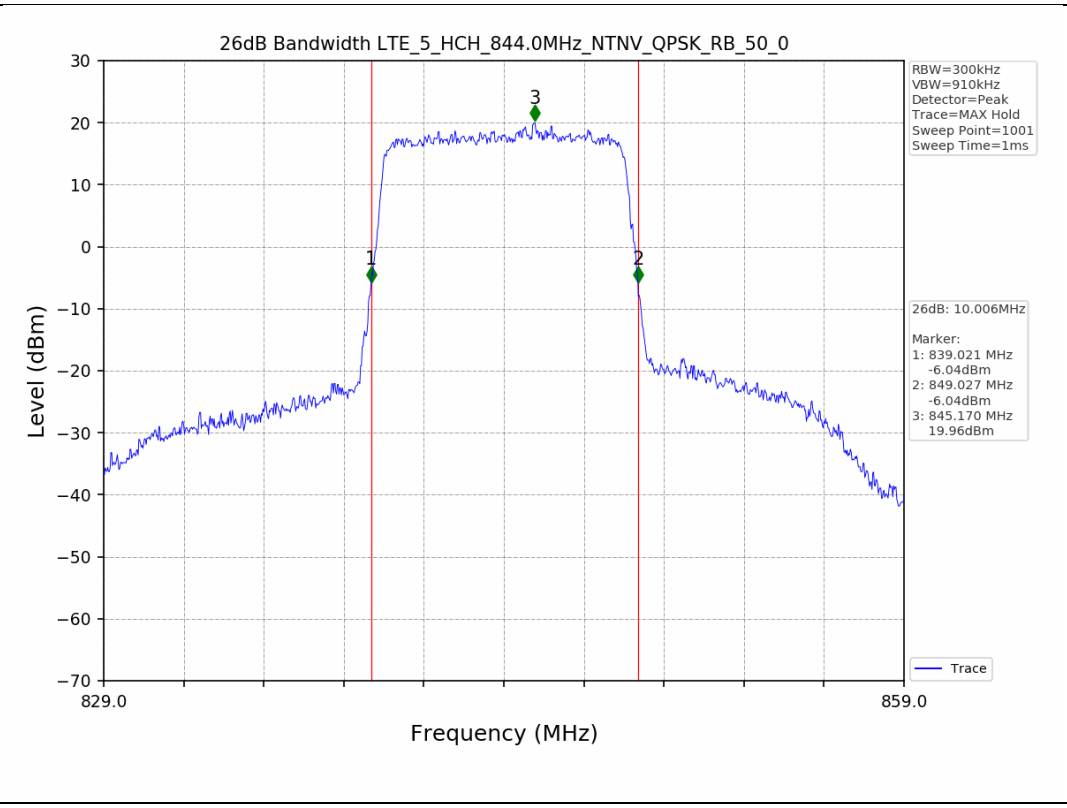

26dB Bandwidth LTE_5_LCH_829.0MHz_NTNV_16QAM_RB_50_0
RBW=300kHz
VBW=910kHz
Detector=Peak
Trace=MAX Hold
Sweep Point=1001
Sweep Time=1ms
26dB: 9.950MHz
Marker:
1: 824.063 MHz
-8.52dBm
2: 834.014 MHz
-8.52dBm
3: 832.870 MHz
17.48dBm
Trace
Level (dBm)
Frequency (MHz)
814.0
844.0


26dB Bandwidth LTE_5_MCH_836.5MHz_NTNV_16QAM_RB_50_0
RBW=300kHz
VBW=910kHz
Detector=Peak
Trace=MAX Hold
Sweep Point=1001
Sweep Time=1ms
26dB: 9.967MHz
Marker:
1: 831.549 MHz
-8.32dBm
2: 841.516 MHz
-8.32dBm
3: 839.620 MHz
17.68dBm
Trace
Level (dBm)
Frequency (MHz)
821.5
851.5


26dB Bandwidth LTE_5_HCH_844.0MHz_NTNV_16QAM_RB_50_0
RBW=300kHz
VBW=910kHz
Detector=Peak
Trace=MAX Hold
Sweep Point=1001
Sweep Time=1ms
26dB: 9.952MHz
Marker:
1: 839.082 MHz
-7.34dBm
2: 849.034 MHz
-7.34dBm
3: 844.630 MHz
18.66dBm
Trace
Level (dBm)
Frequency (MHz)
829.0
859.0


26dB Bandwidth LTE_5_LCH_829.0MHz_NTNV_QPSK_RB_50_0
RBW=300kHz
VBW=910kHz
Detector=Peak
Trace=MAX Hold
Sweep Point=1001
Sweep Time=1ms
26dB: 10.006MHz
Marker:
1: 824.026 MHz
-8.02dBm
2: 834.031 MHz
-8.02dBm
3: 828.580 MHz
17.98dBm
Trace
Level (dBm)
Frequency (MHz)
814.0
844.0

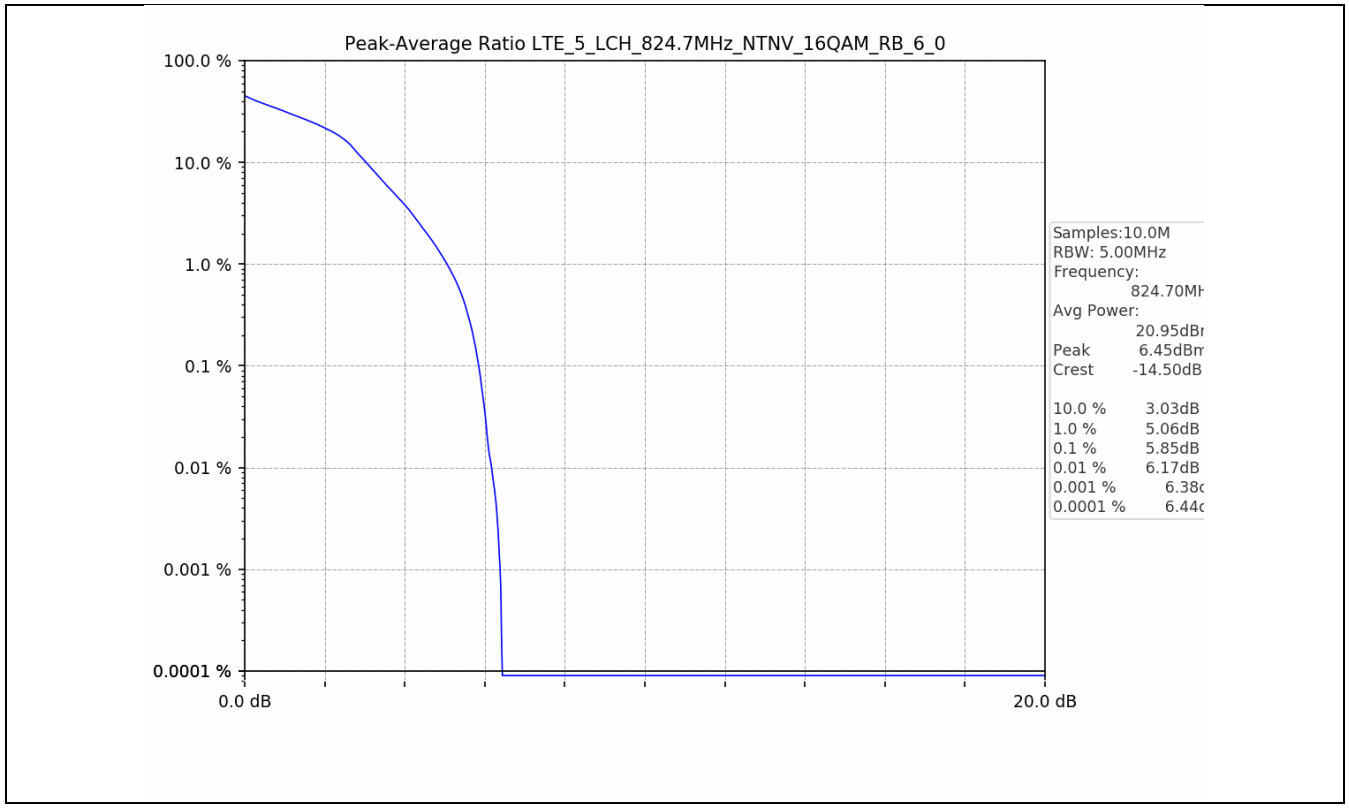

26dB Bandwidth LTE_5_MCH_836.5MHz_NTNV_QPSK_RB_50_0
RBW=300kHz
VBW=910kHz
Detector=Peak
Trace=MAX Hold
Sweep Point=1001
Sweep Time=1ms
26dB: 9.983MHz
Marker:
1: 831.508 MHz
-7.55dBm
2: 841.491 MHz
-7.55dBm
3: 835.960 MHz
18.45dBm
Trace
Level (dBm)
Frequency (MHz)
821.5
851.5

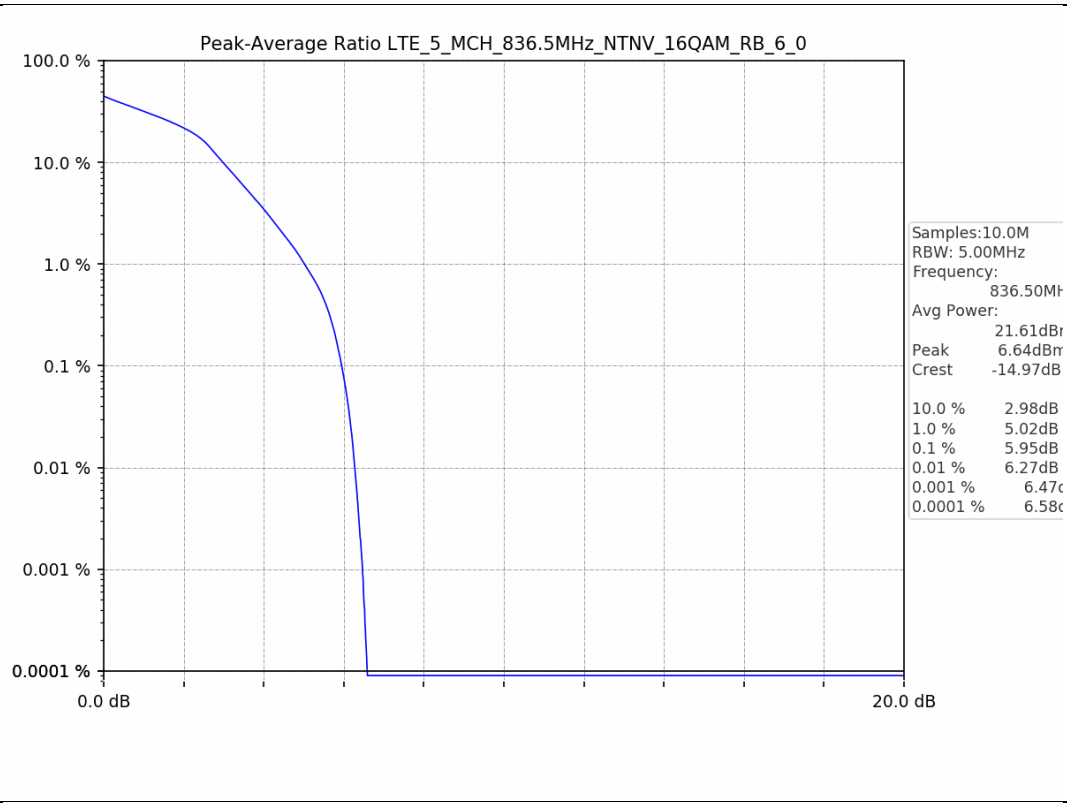

26dB Bandwidth LTE_5_HCH_844.0MHz_NTNV_QPSK_RB_50_0
RBW=300kHz
VBW=910kHz
Detector=Peak
Trace=MAX Hold
Sweep Point=1001
Sweep Time=1ms
26dB: 10.006MHz
Marker:
1: 839.021 MHz
-6.04dBm
2: 849.027 MHz
-6.04dBm
3: 845.170 MHz
19.96dBm
Trace
Level (dBm)
Frequency (MHz)
829.0
859.0

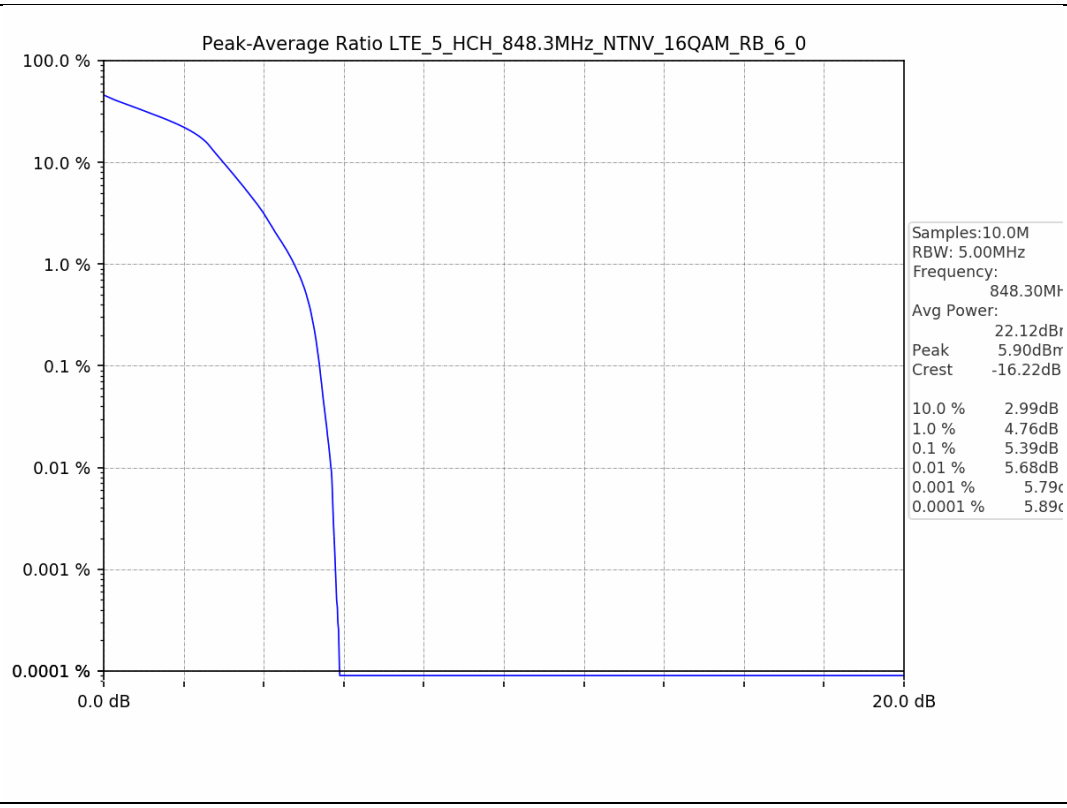
# F4. Peak-Average Ratio

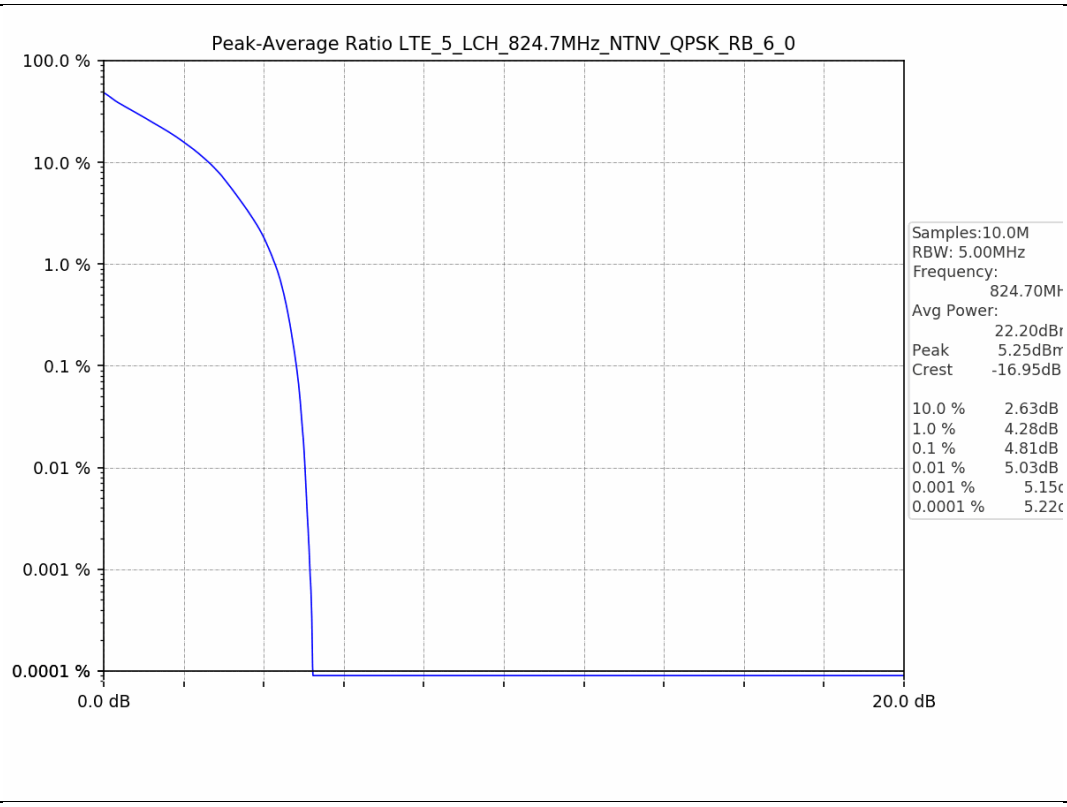
## F4.1 Test Result

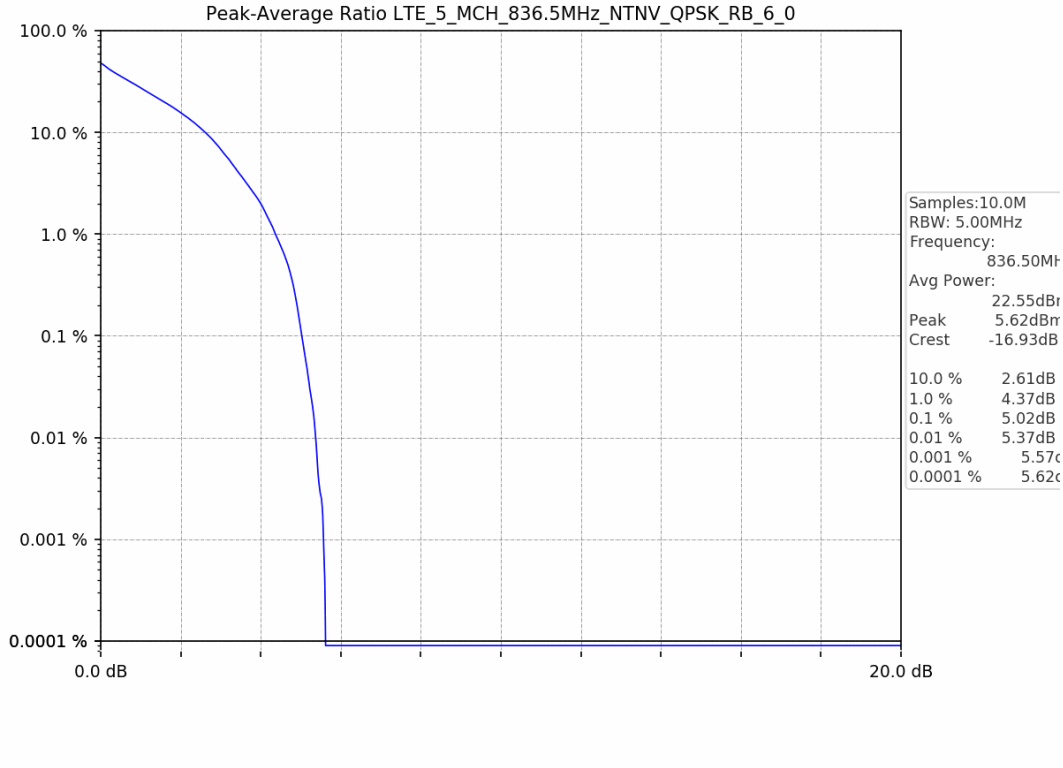
| Test Band: 5 _ 1.4MHz Bandwidth | | | | | | | |
|---|---|---|---|---|---|---|---|
| Test Mode | RB Allocation | | Test result (dB) | | | Limit (dB) | Verdict |
| | Size | Offset | LCH | MCH | HCH | | |
| QPSK | 6 | 0 | 4.81 | 5.02 | 4.41 | 13 | PASS |
| 16QAM | 6 | 0 | 5.85 | 5.95 | 5.39 | 13 | PASS |

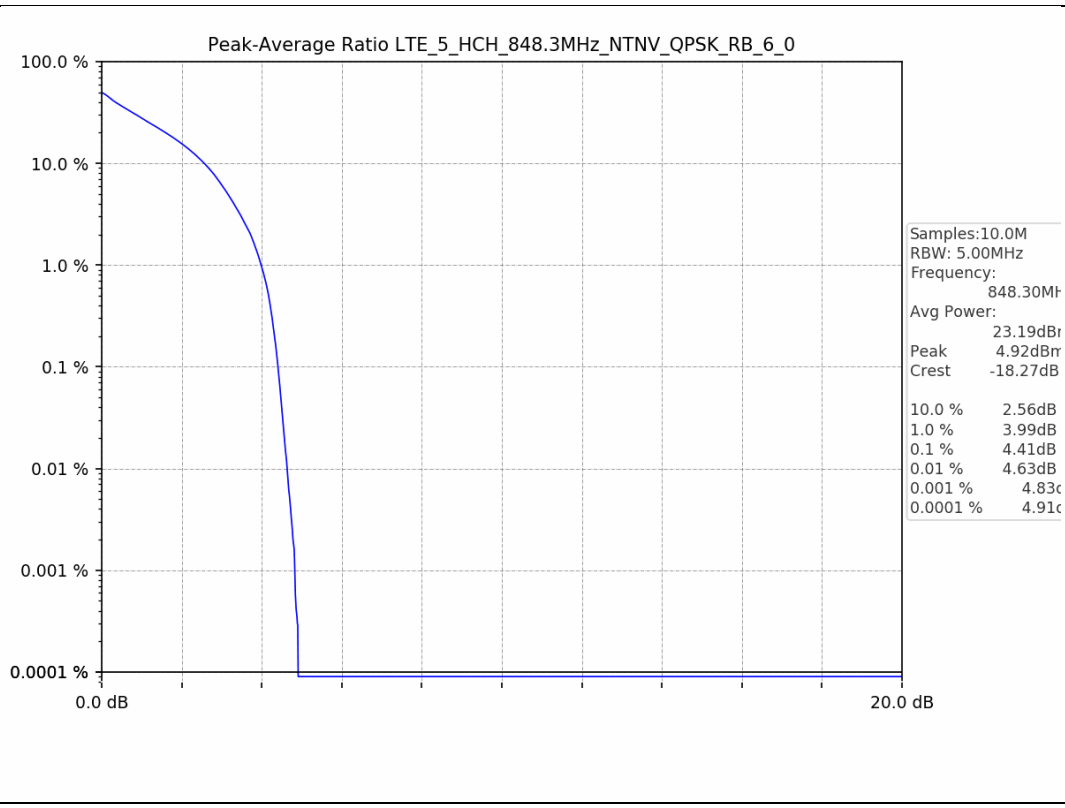



Peak-Average Ratio LTE_5_MCH_836.5MHz_NTNV_16QAM_RB_6_0
100.0 %
10.0 %
1.0 %
0.1 %
0.01 %
0.001 %
0.0001 %
0.0 dB
20.0 dB
Samples:10.0M
RBW: 5.00MHz
Frequency:
836.50MH
Avg Power:
21.61dBr
Peak 6.64dBr
Crest -14.97dB
10.0 % 2.98dB
1.0 % 5.02dB
0.1 % 5.95dB
0.01 % 6.27dB
0.001 % 6.47
0.0001 % 6.58

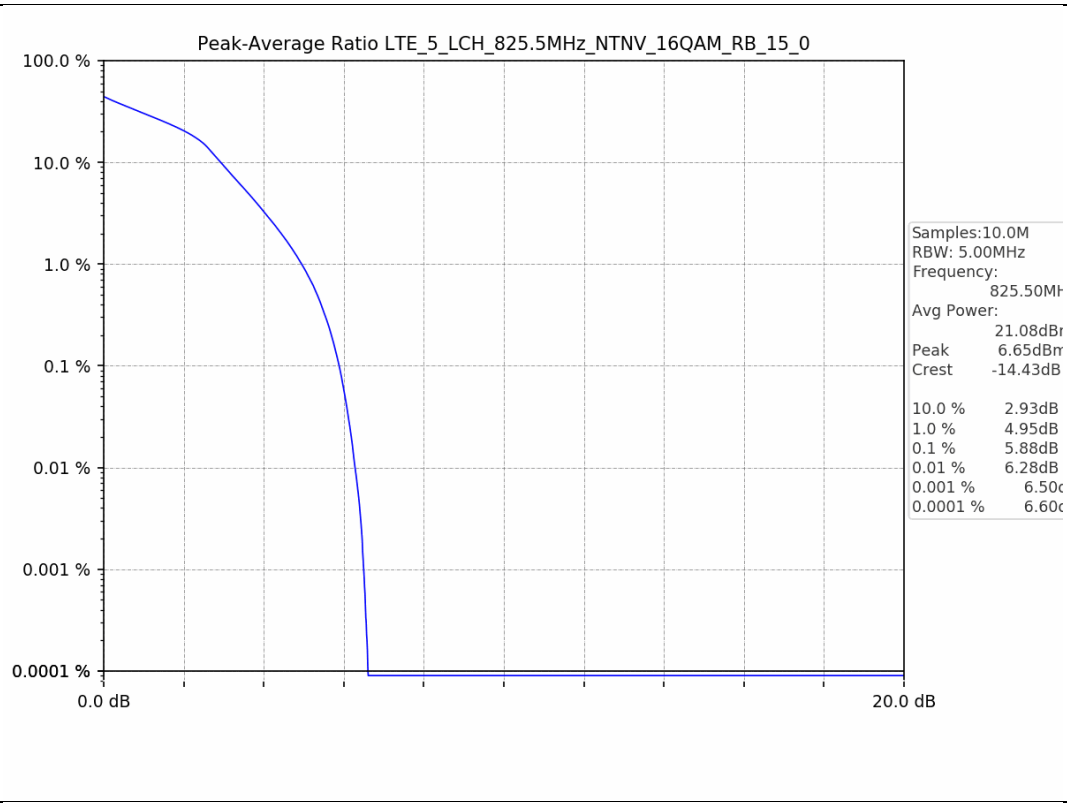

Peak-Average Ratio LTE_5_HCH_848.3MHz_NTNV_16QAM_RB_6_0
100.0 %
10.0 %
1.0 %
0.1 %
0.01 %
0.001 %
0.0001 %
0.0 dB
20.0 dB
Samples:10.0M
RBW: 5.00MHz
Frequency:
848.30MH
Avg Power:
22.12dBr
Peak 5.90dBr
Crest -16.22dB
10.0 % 2.99dB
1.0 % 4.76dB
0.1 % 5.39dB
0.01 % 5.68dB
0.001 % 5.79
0.0001 % 5.89

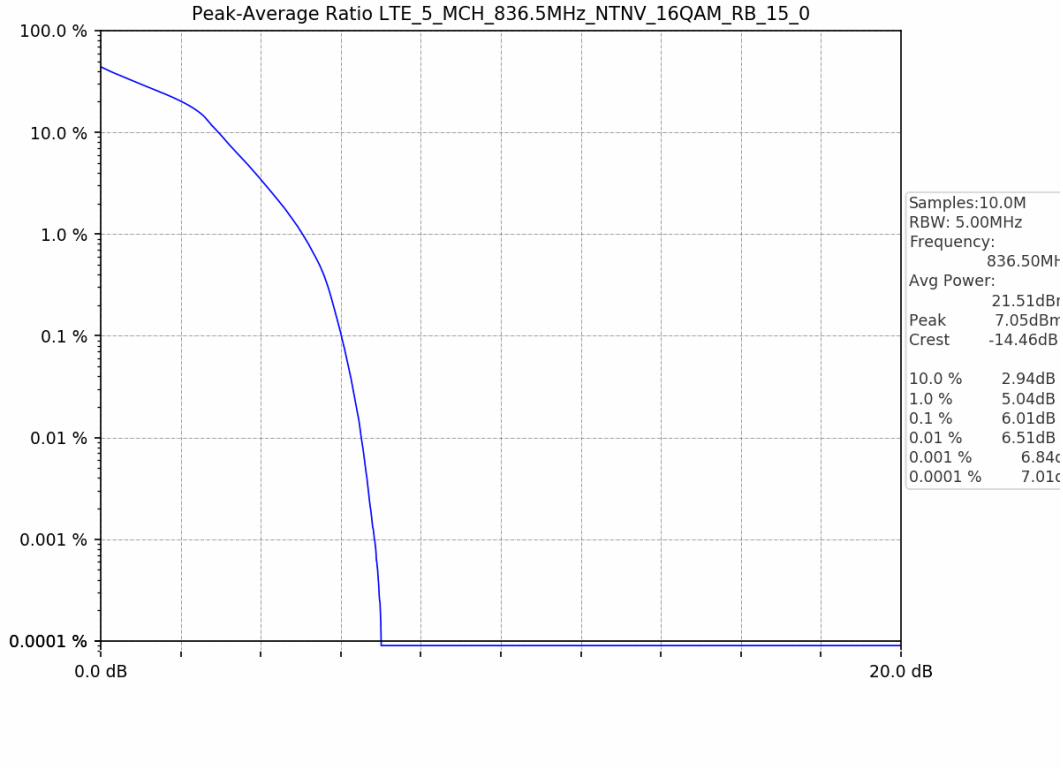

Peak-Average Ratio LTE_5_LCH_824.7MHz_NTNV_QPSK_RB_6_0
100.0 %
10.0 %
1.0 %
0.1 %
0.01 %
0.001 %
0.0001 %
0.0 dB
20.0 dB
Samples:10.0M
RBW: 5.00MHz
Frequency:
824.70MH
Avg Power:
22.20dBr
Peak 5.25dBr
Crest -16.95dB
10.0 % 2.63dB
1.0 % 4.28dB
0.1 % 4.81dB
0.01 % 5.03dB
0.001 % 5.15
0.0001 % 5.22

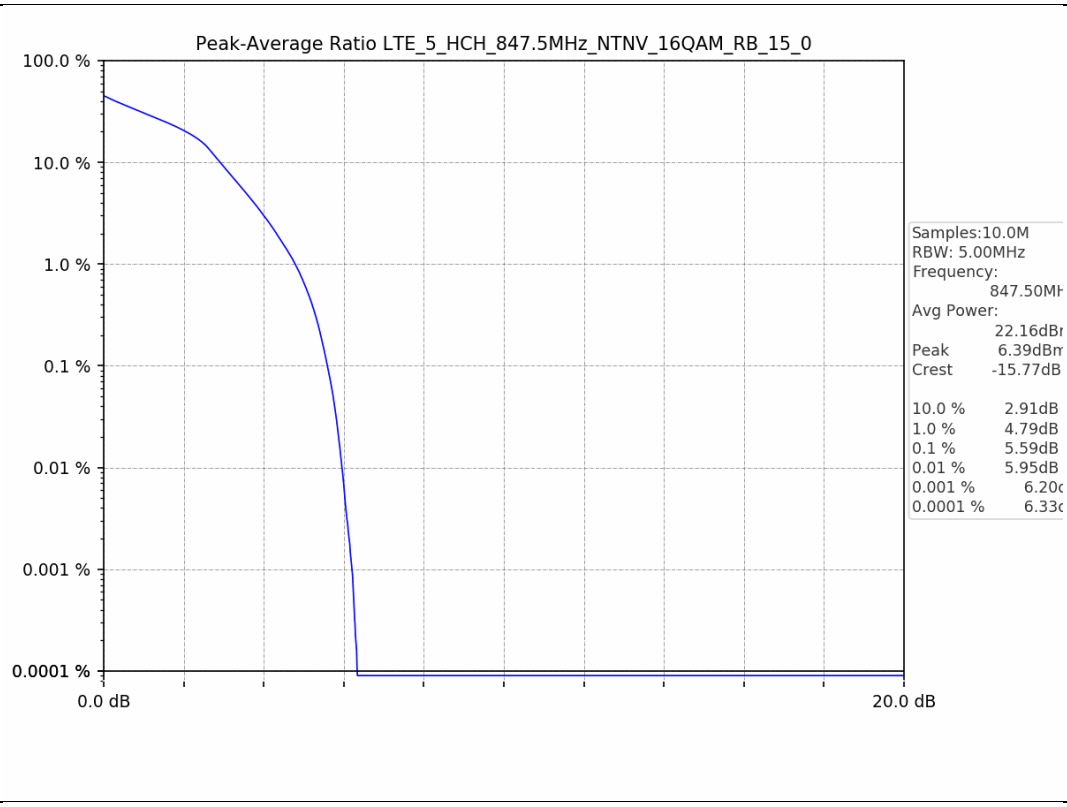

Peak-Average Ratio LTE_5_MCH_836.5MHz_NTNV_QPSK_RB_6_0
100.0 %
10.0 %
1.0 %
0.1 %
0.01 %
0.001 %
0.0001 %
0.0 dB
20.0 dB
Samples:10.0M
RBW: 5.00MHz
Frequency:
836.50MH
Avg Power:
22.55dBr
Peak 5.62dBr
Crest -16.93dB
10.0 % 2.61dB
1.0 % 4.37dB
0.1 % 5.02dB
0.01 % 5.37dB
0.001 % 5.57
0.0001 % 5.62

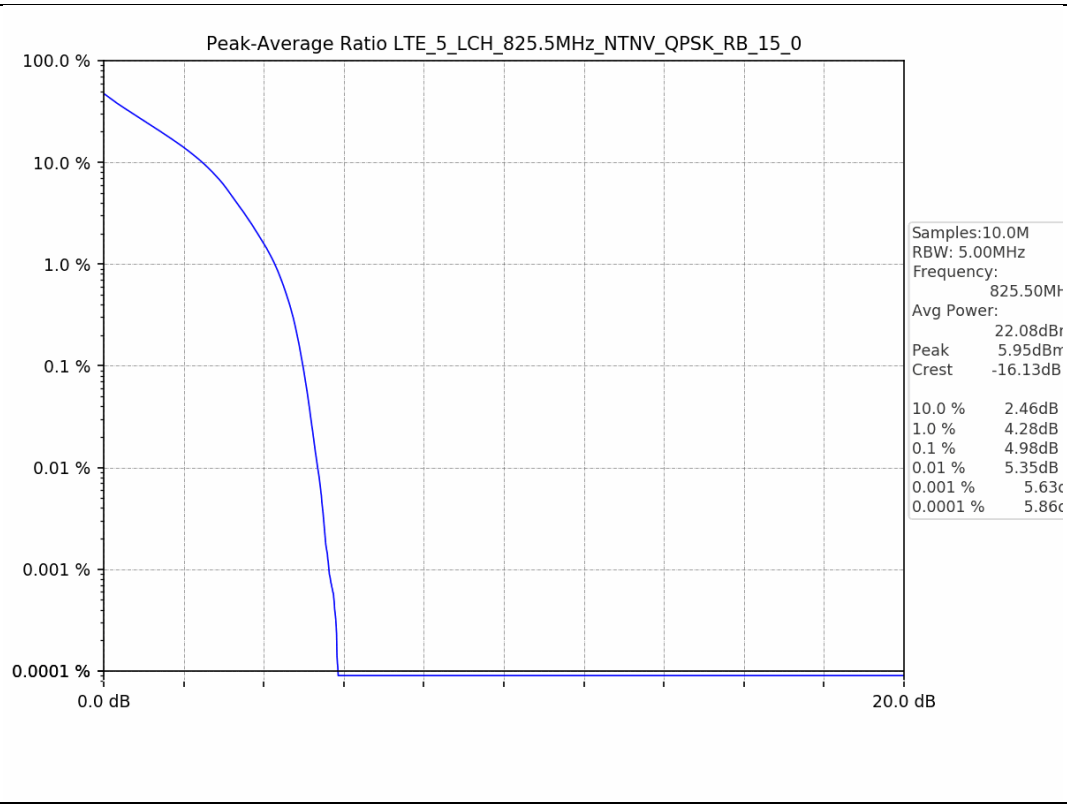


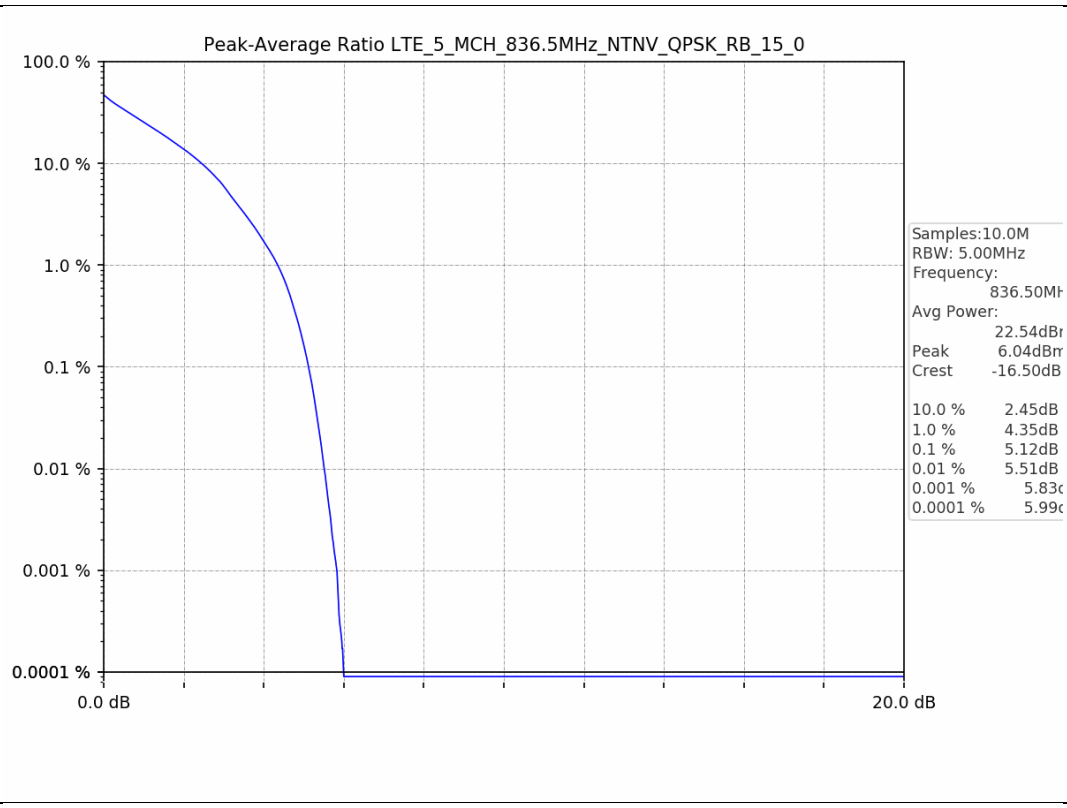

| Test Band: 5 _ 3MHz Bandwidth | | | | | | | |
|---|---|---|---|---|---|---|---|
| Test Mode | RB Allocation | | Test result (dB) | | | Limit (dB) | Verdict |
| | Size | Offset | LCH | MCH | HCH | | |
| QPSK | 15 | 0 | 4.98 | 5.12 | 4.61 | 13 | PASS |
| 16QAM | 15 | 0 | 5.88 | 6.01 | 5.59 | 13 | PASS |

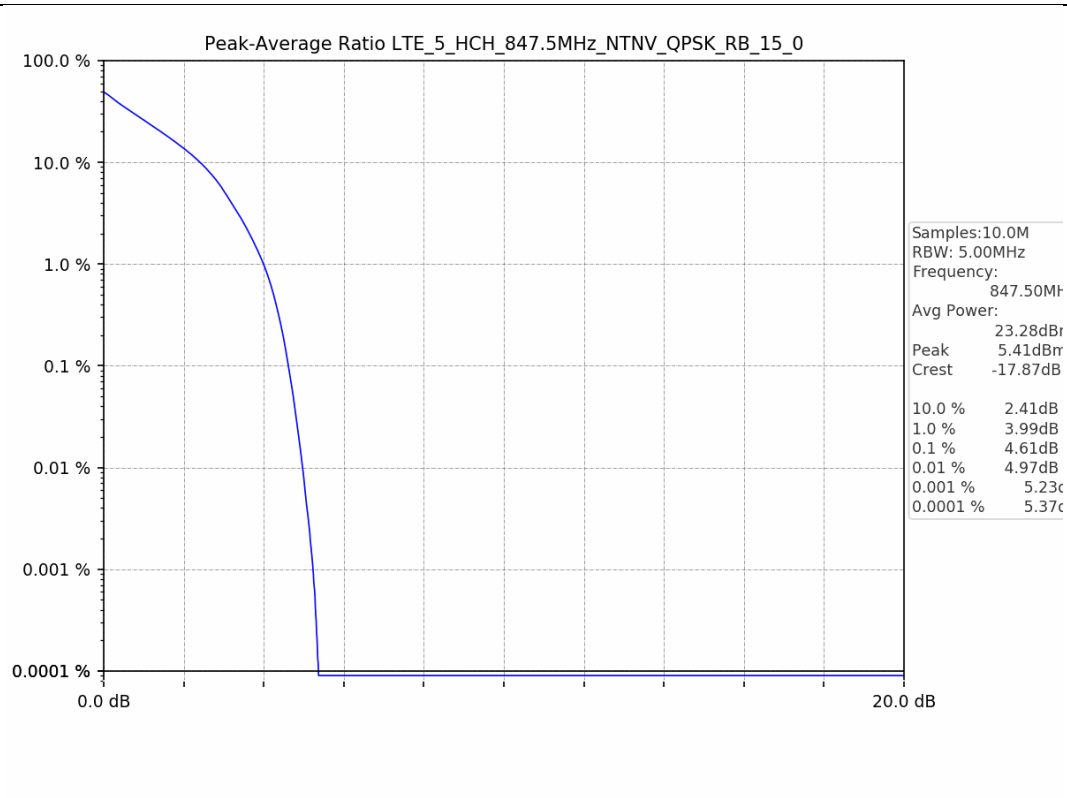

Peak-Average Ratio LTE_5_LCH_825.5MHz_NTNV_16QAM_RB_15_0
100.0 %
10.0 %
1.0 %
0.1 %
0.01 %
0.001 %
0.0001 %
0.0 dB
20.0 dB
Samples:10.0M
RBW: 5.00MHz
Frequency:
825.50MH
Avg Power:
21.08dBr
Peak 6.65dBr
Crest -14.43dB
10.0 % 2.93dB
1.0 % 4.95dB
0.1 % 5.88dB
0.01 % 6.28dB
0.001 % 6.50
0.0001 % 6.60


Peak-Average Ratio LTE_5_MCH_836.5MHz_NTNV_16QAM_RB_15_0
100.0 %
10.0 %
1.0 %
0.1 %
0.01 %
0.001 %
0.0001 %
0.0 dB
20.0 dB
Samples:10.0M
RBW: 5.00MHz
Frequency:
836.50MH
Avg Power:
21.51dBr
Peak 7.05dBr
Crest -14.46dB
10.0 % 2.94dB
1.0 % 5.04dB
0.1 % 6.01dB
0.01 % 6.51dB
0.001 % 6.84
0.0001 % 7.01


Peak-Average Ratio LTE_5_HCH_847.5MHz_NTNV_16QAM_RB_15_0
100.0 %
10.0 %
1.0 %
0.1 %
0.01 %
0.001 %
0.0001 %
0.0 dB
20.0 dB
Samples:10.0M
RBW: 5.00MHz
Frequency:
847.50MH
Avg Power:
22.16dBr
Peak 6.39dBr
Crest -15.77dB
10.0 % 2.91dB
1.0 % 4.79dB
0.1 % 5.59dB
0.01 % 5.95dB
0.001 % 6.20
0.0001 % 6.33


Peak-Average Ratio LTE_5_LCH_825.5MHz_NTNV_QPSK_RB_15_0
100.0 %
10.0 %
1.0 %
0.1 %
0.01 %
0.001 %
0.0001 %
0.0 dB
20.0 dB
Samples:10.0M
RBW: 5.00MHz
Frequency:
825.50MH
Avg Power:
22.08dBr
Peak 5.95dBr
Crest -16.13dB
10.0 % 2.46dB
1.0 % 4.28dB
0.1 % 4.98dB
0.01 % 5.35dB
0.001 % 5.63
0.0001 % 5.86


Peak-Average Ratio LTE_5_MCH_836.5MHz_NTNV_QPSK_RB_15_0
100.0 %
10.0 %
1.0 %
0.1 %
0.01 %
0.001 %
0.0001 %
0.0 dB
20.0 dB
Samples:10.0M
RBW: 5.00MHz
Frequency:
836.50MH
Avg Power:
22.54dBr
Peak 6.04dBr
Crest -16.50dB
10.0 % 2.45dB
1.0 % 4.35dB
0.1 % 5.12dB
0.01 % 5.51dB
0.001 % 5.83
0.0001 % 5.99


Peak-Average Ratio LTE_5_HCH_847.5MHz_NTNV_QPSK_RB_15_0
100.0 %
10.0 %
1.0 %
0.1 %
0.01 %
0.001 %
0.0001 %
0.0 dB
20.0 dB
Samples:10.0M
RBW: 5.00MHz
Frequency:
847.50MH
Avg Power:
23.28dBr
Peak 5.41dBr
Crest -17.87dB
10.0 % 2.41dB
1.0 % 3.99dB
0.1 % 4.61dB
0.01 % 4.97dB
0.001 % 5.23
0.0001 % 5.37