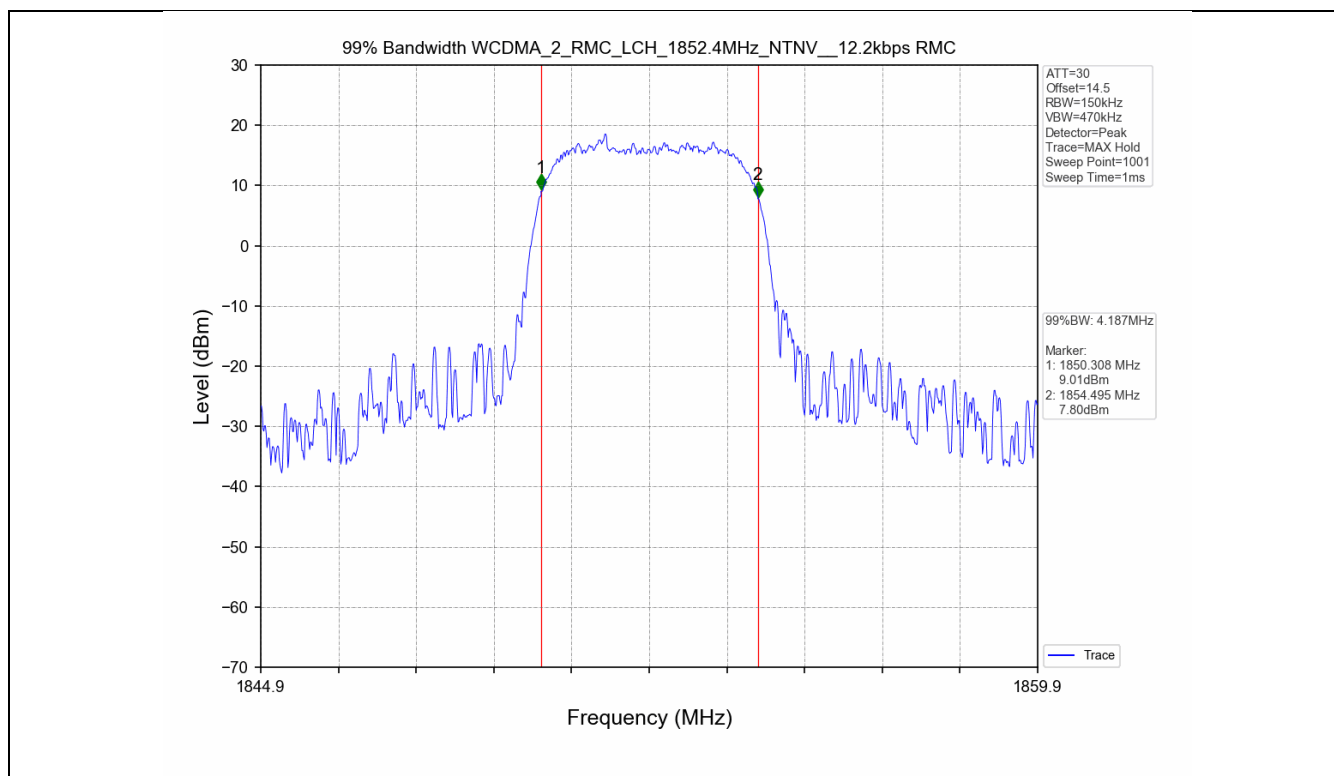


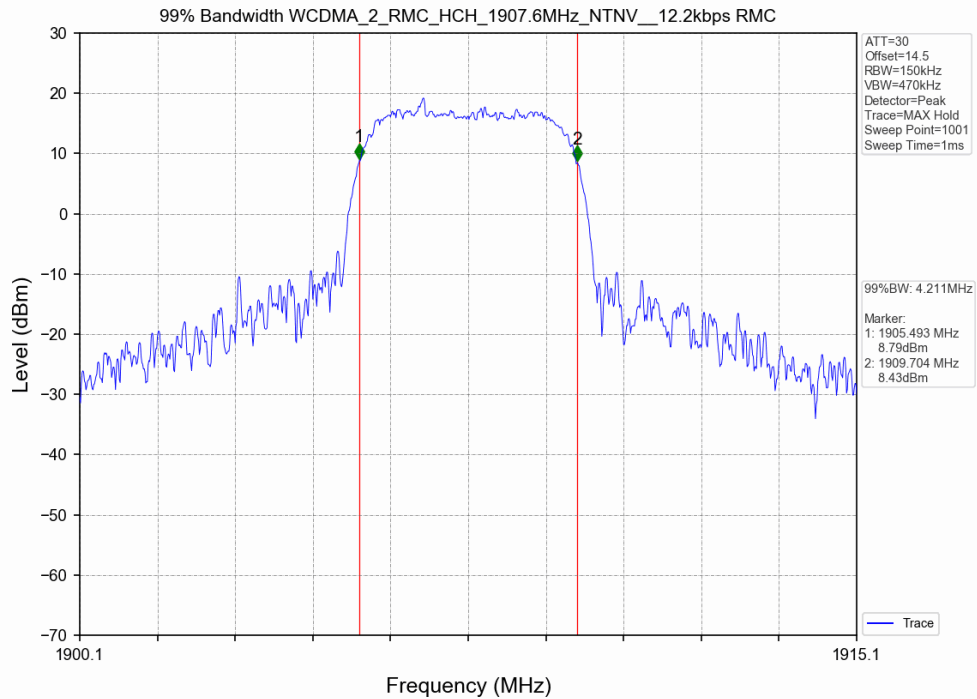
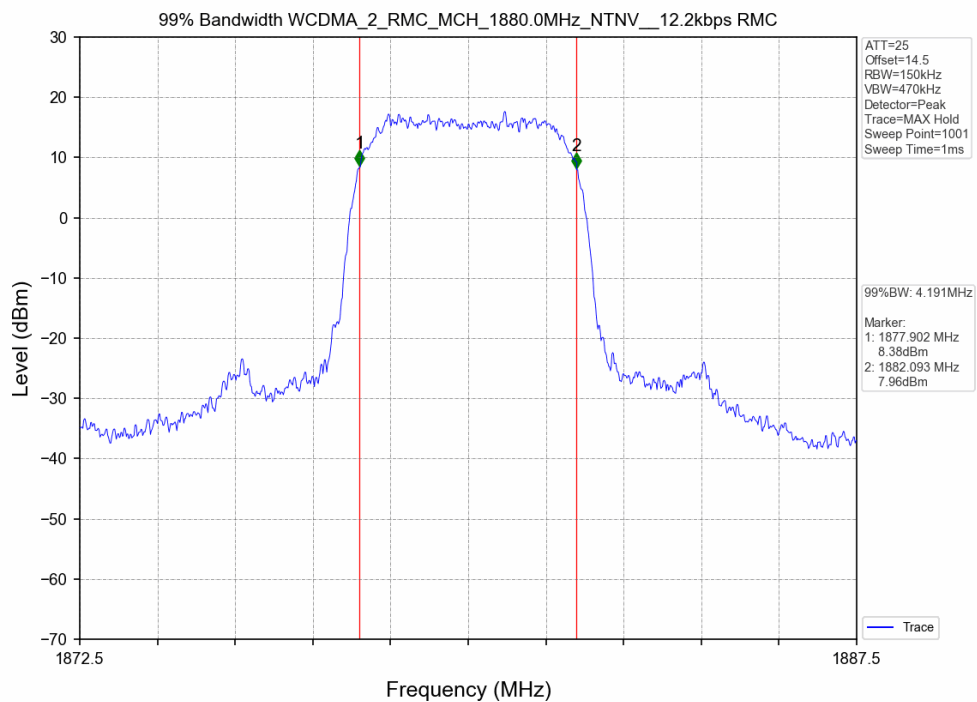
## Appendix F for KSEM210700112906

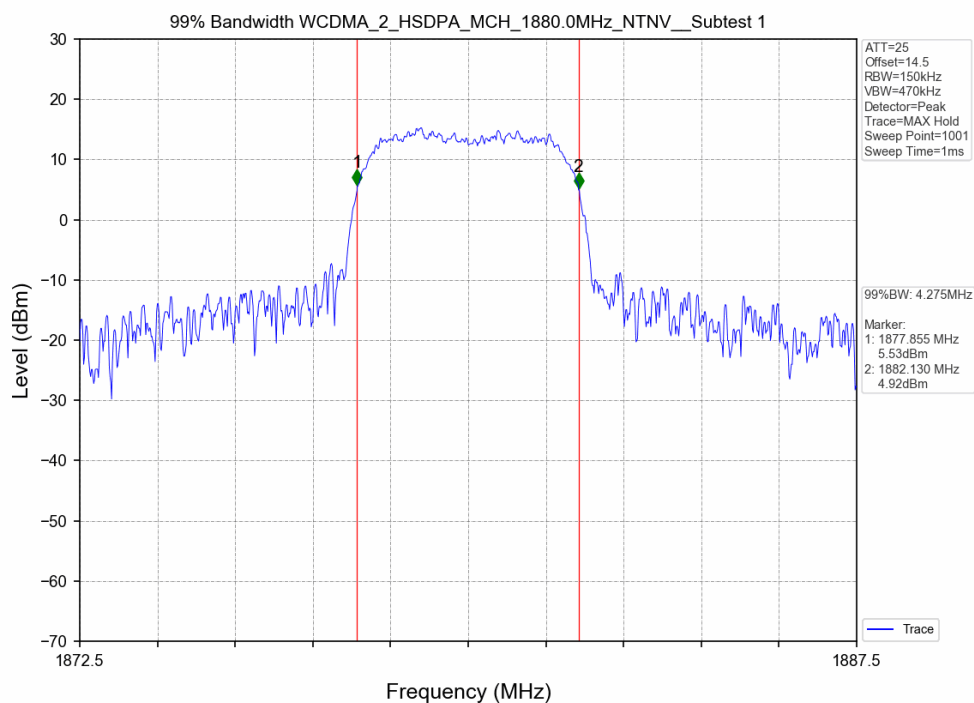
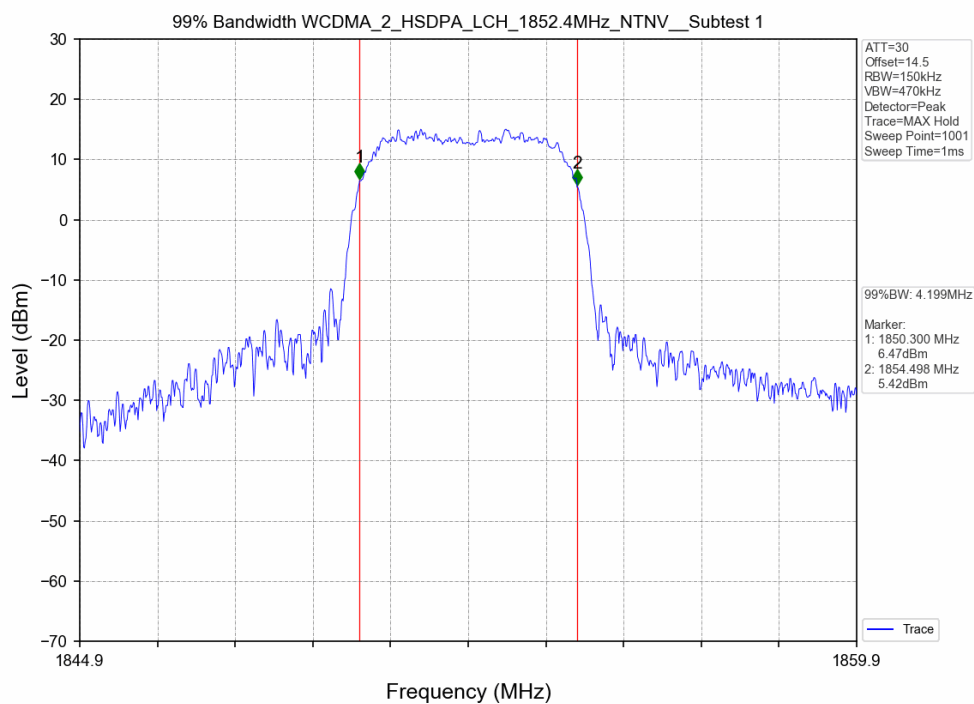
### 1.99% & 26dB Bandwidth

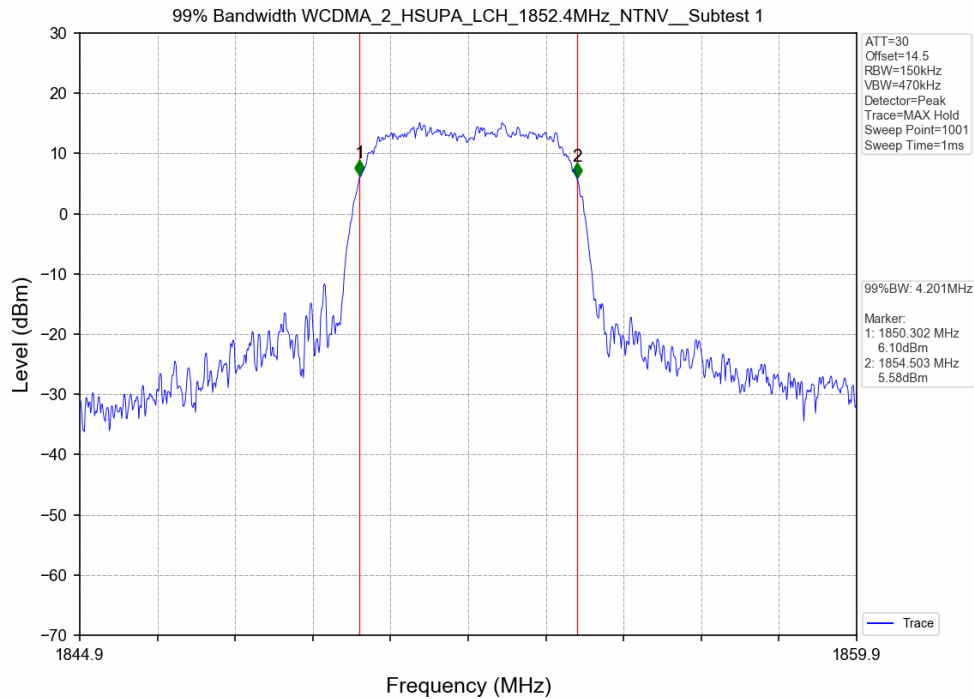
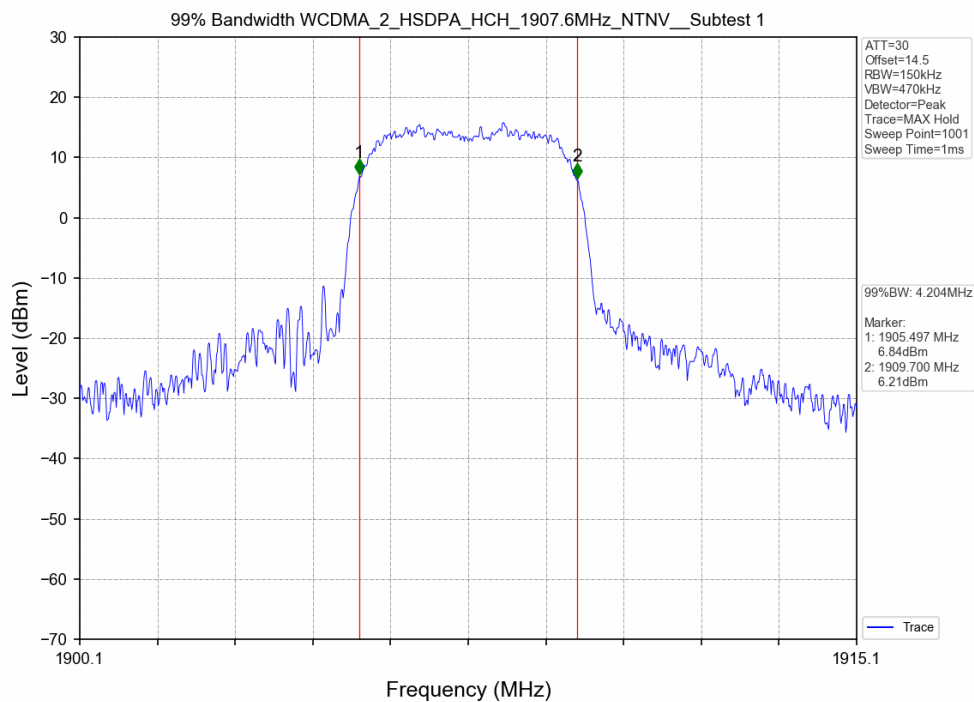
#### Band 2

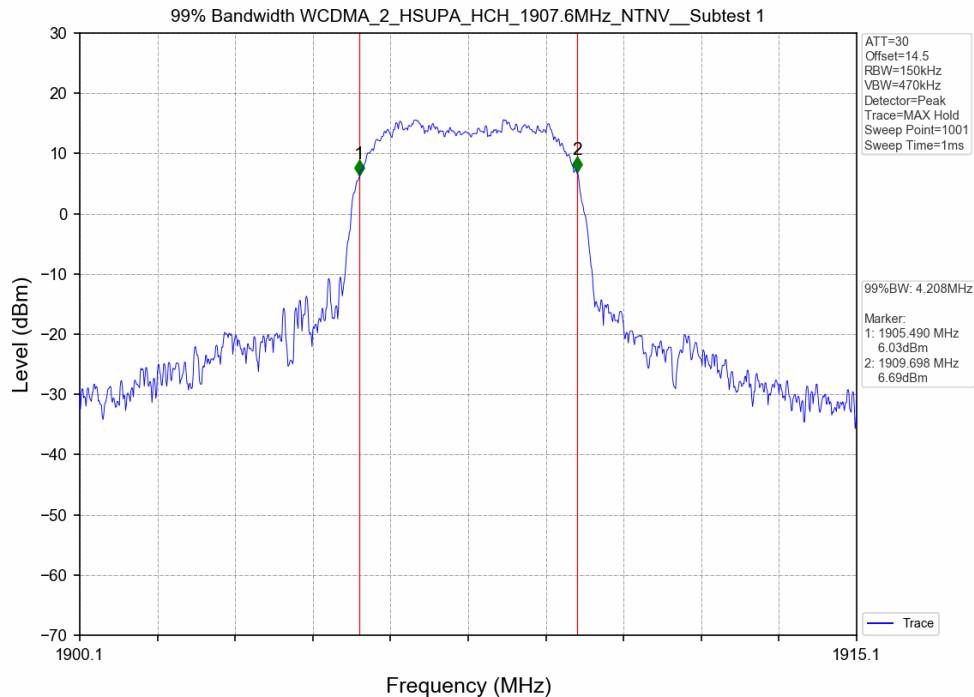
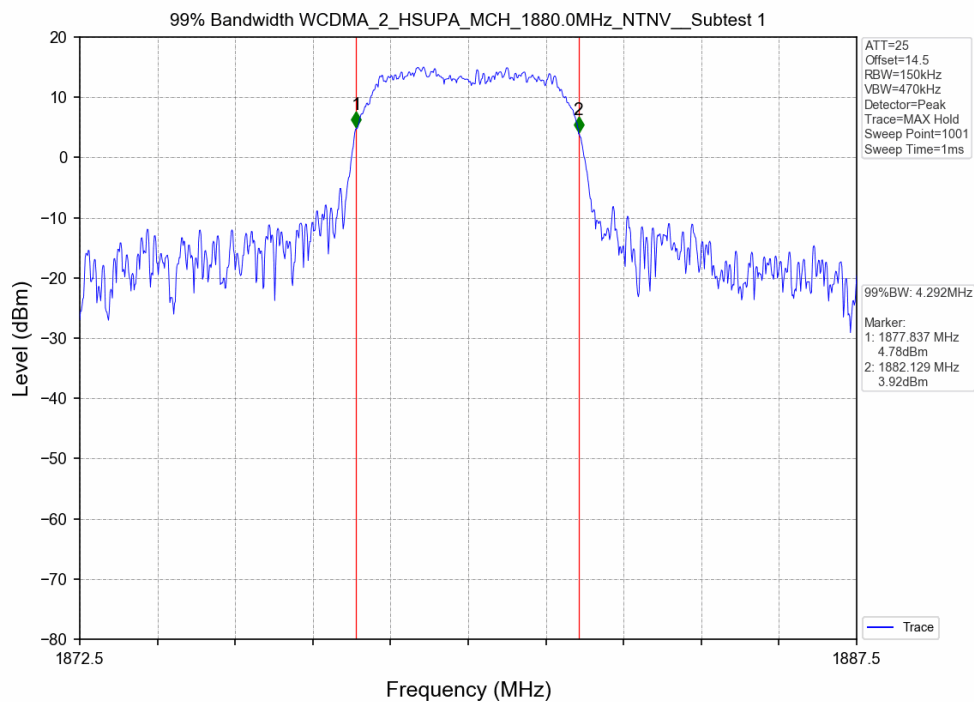
| Test Band: 2 |                              |       |       |       |         |
|--------------|------------------------------|-------|-------|-------|---------|
| Test Mode    | 99% Occupied Bandwidth (MHz) |       |       | Limit | Verdict |
|              | LCH                          | MCH   | HCH   |       |         |
| HSUPA        | 4.201                        | 4.292 | 4.208 | N/A   | PASS    |
| HSDPA        | 4.199                        | 4.275 | 4.204 | N/A   | PASS    |
| RMC          | 4.187                        | 4.191 | 4.211 | N/A   | PASS    |



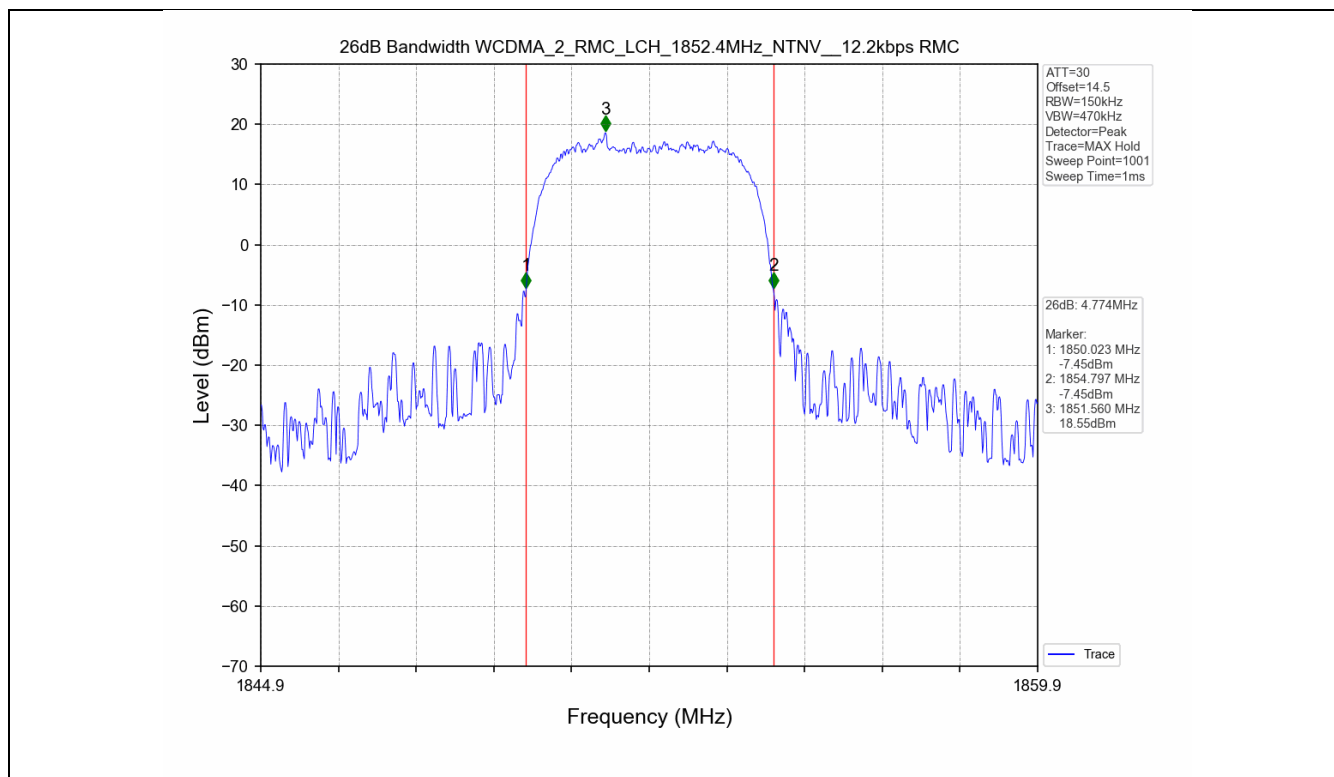


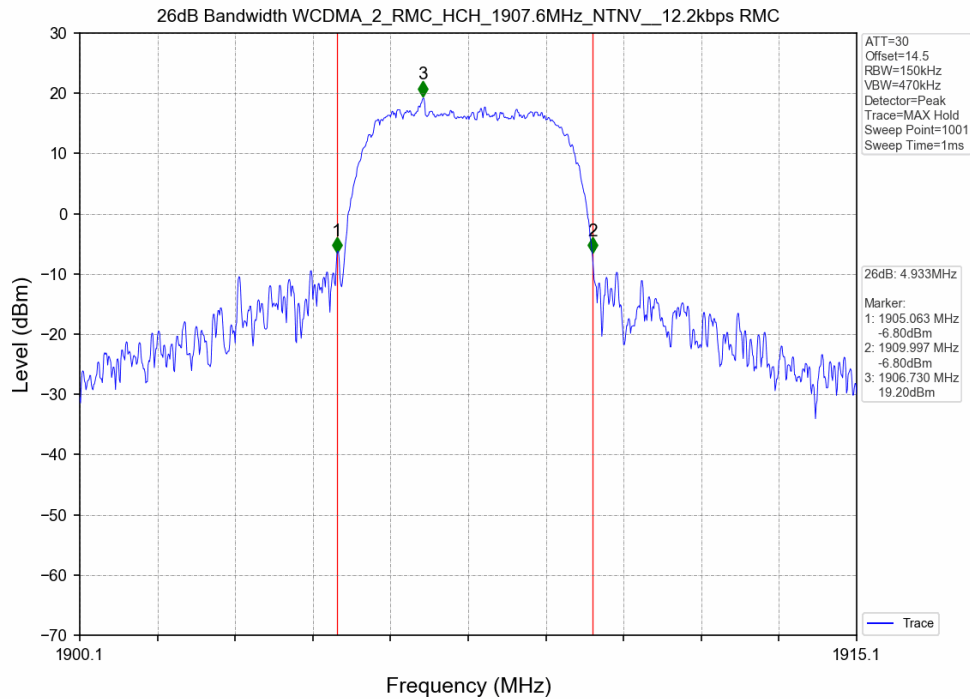
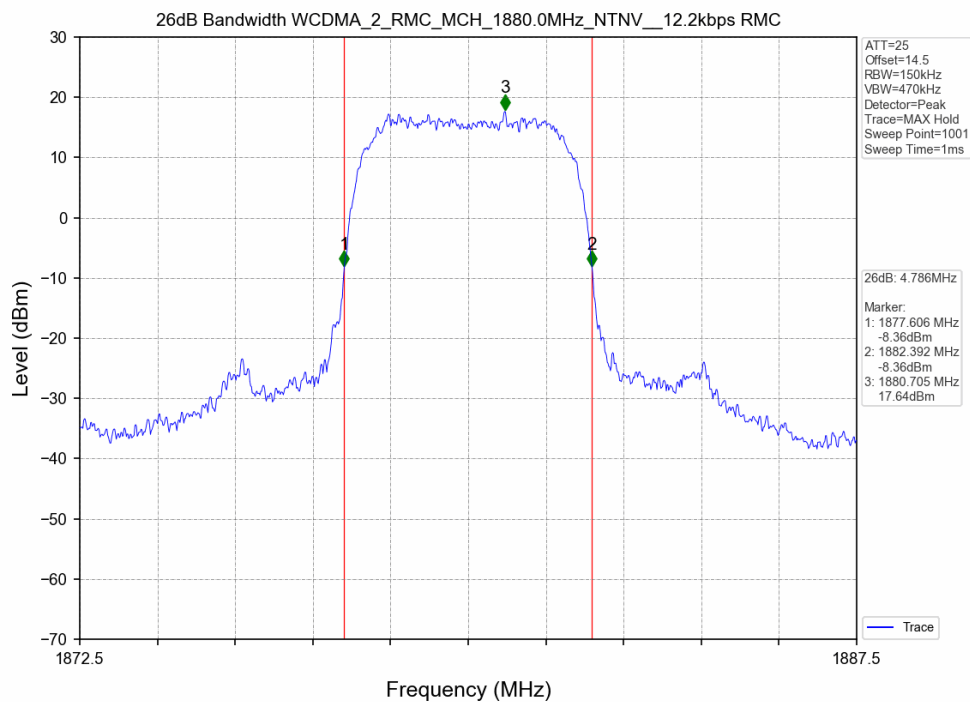


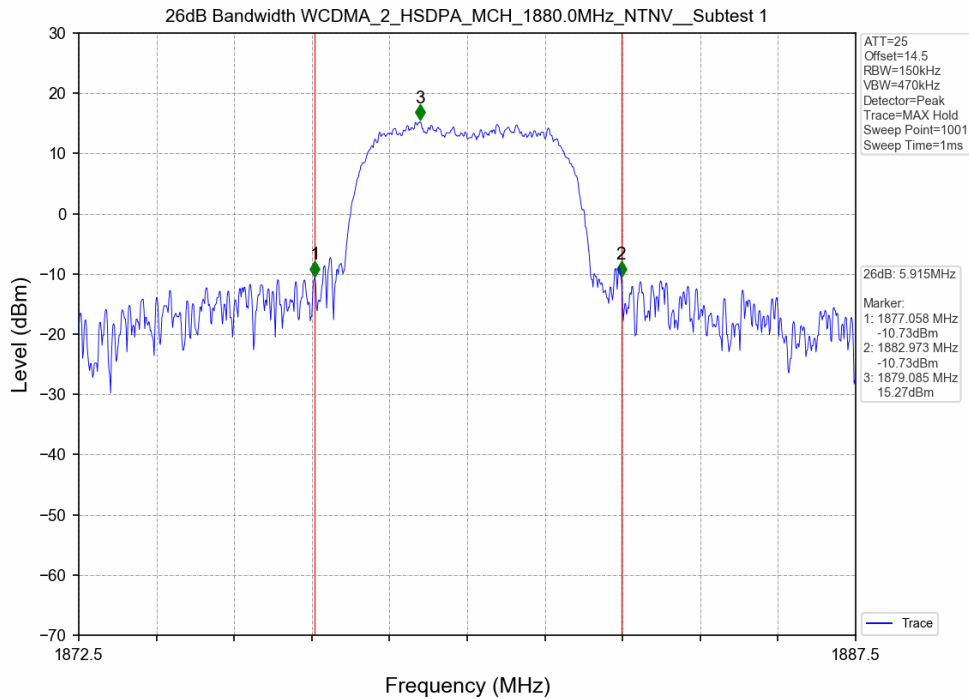
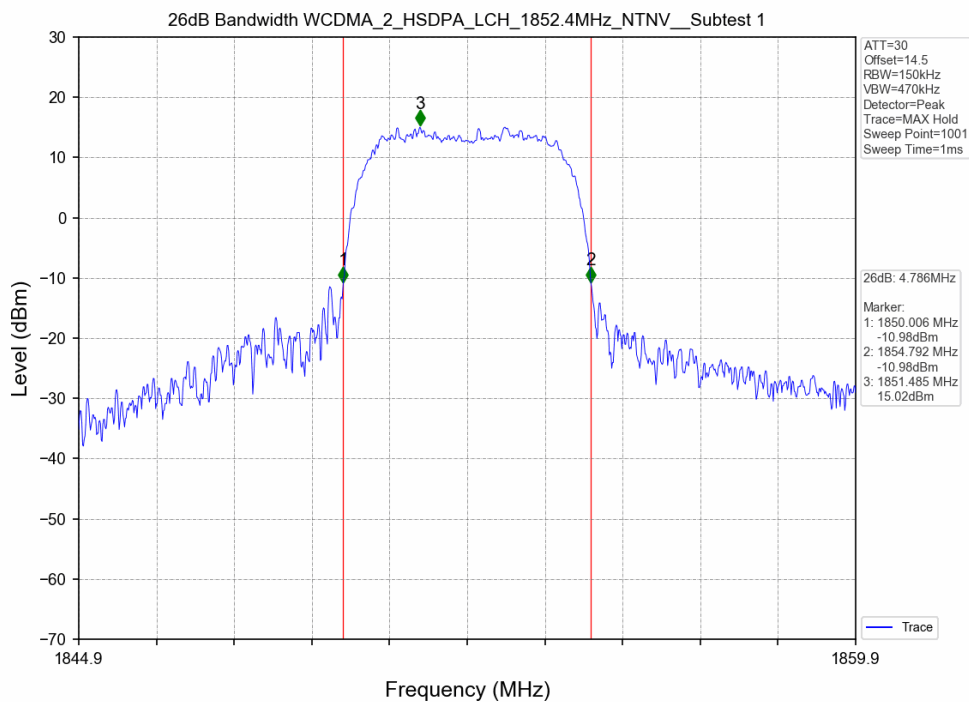


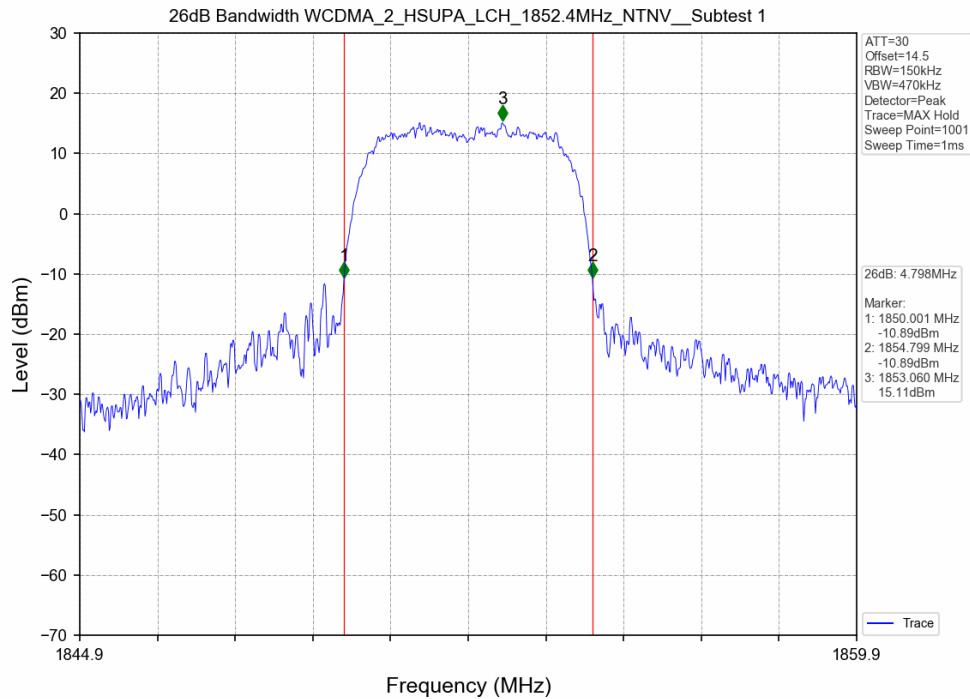
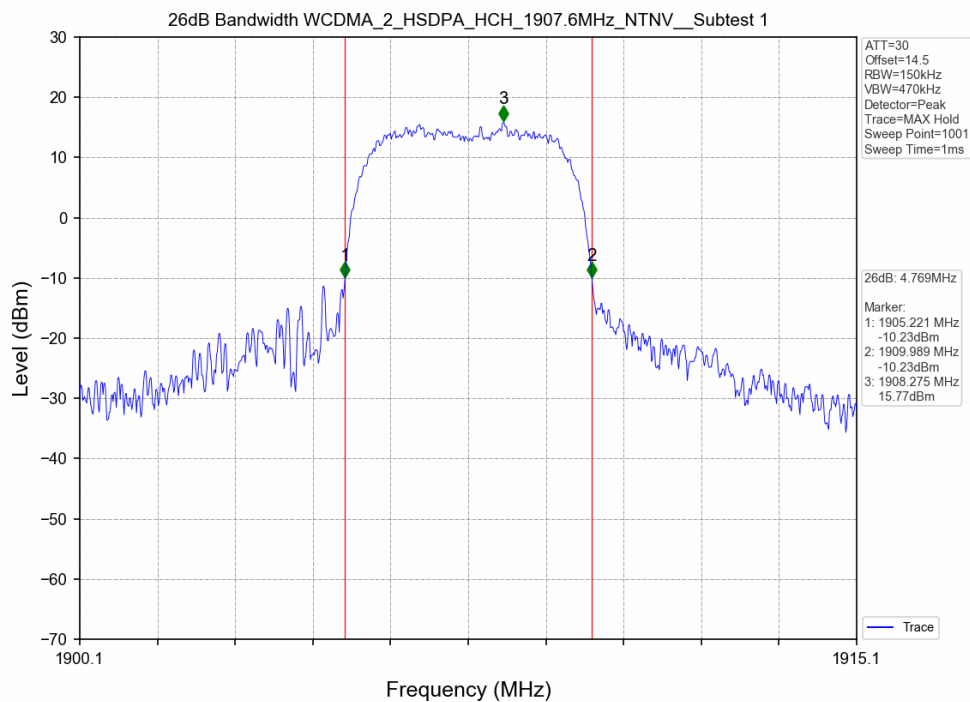


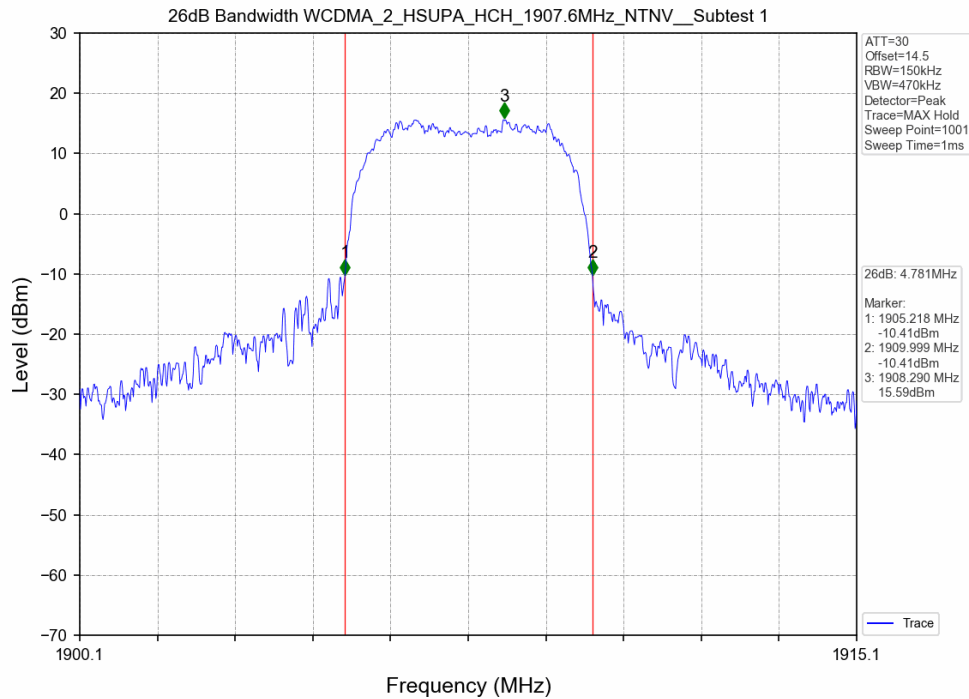
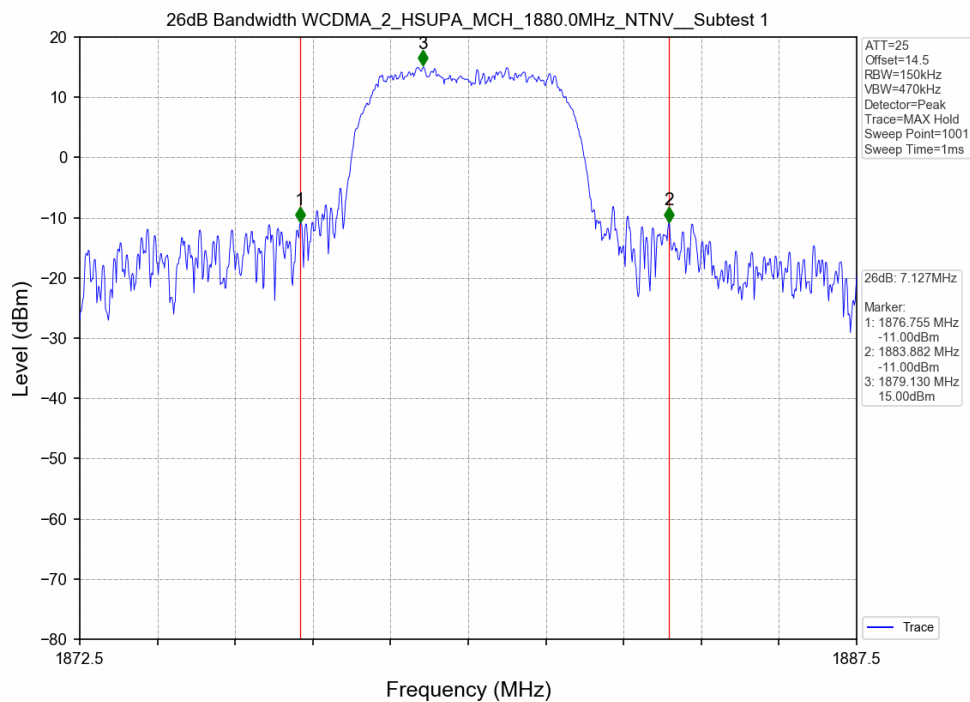
| Test Mode | 26dB Bandwidth (MHz) |       |       | Limit | Verdict |
|-----------|----------------------|-------|-------|-------|---------|
|           | LCH                  | MCH   | HCH   |       |         |
| HSUPA     | 4.798                | 7.127 | 4.781 | N/A   | PASS    |
| HSDPA     | 4.786                | 5.915 | 4.769 | N/A   | PASS    |
| RMC       | 4.774                | 4.786 | 4.933 | N/A   | PASS    |





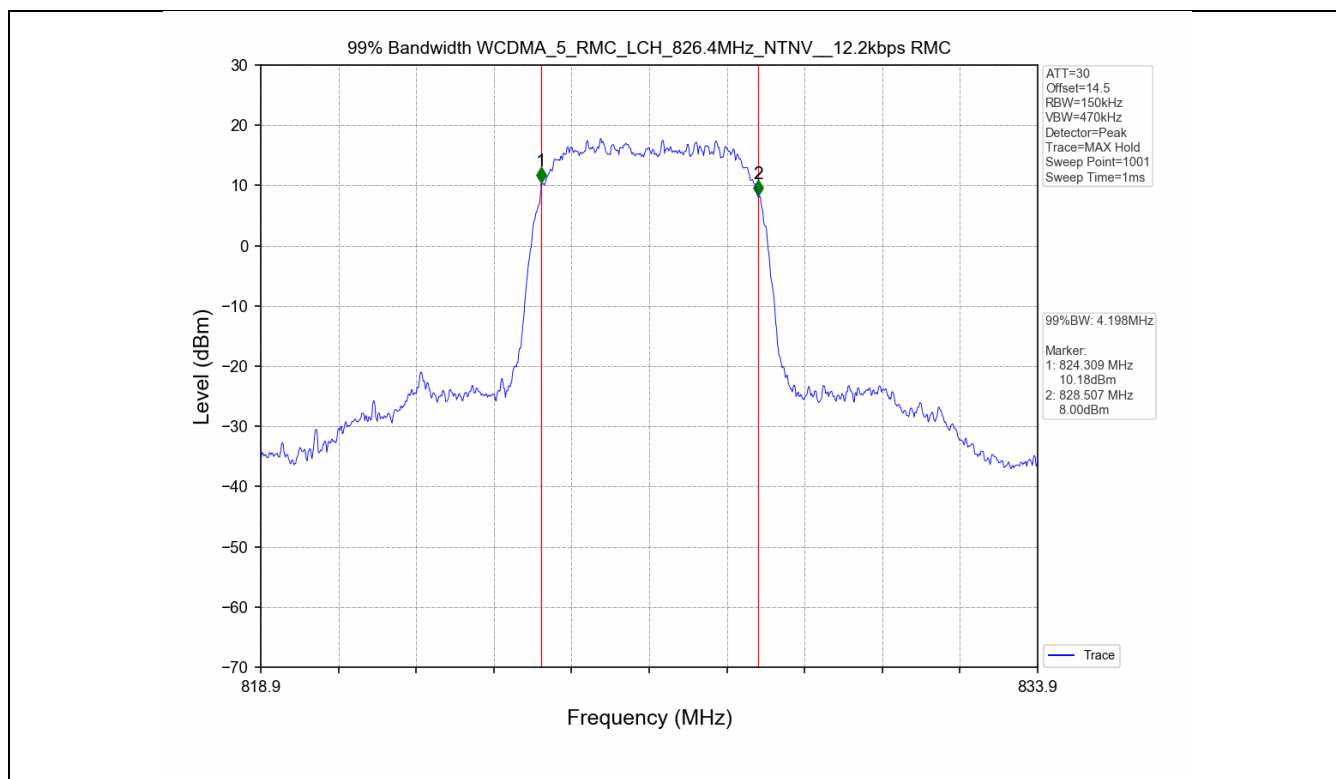


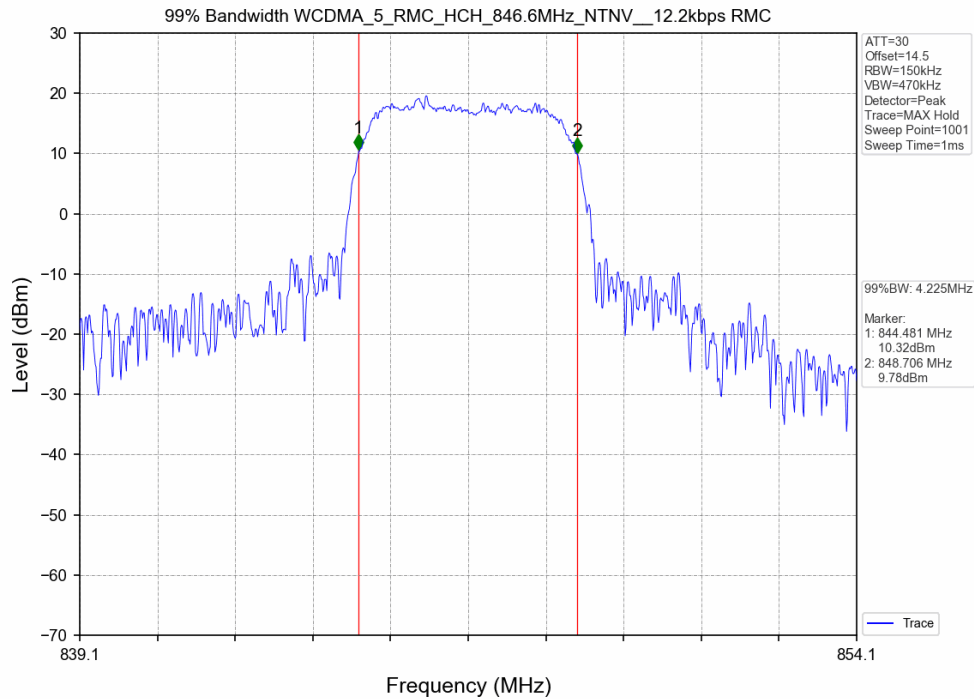
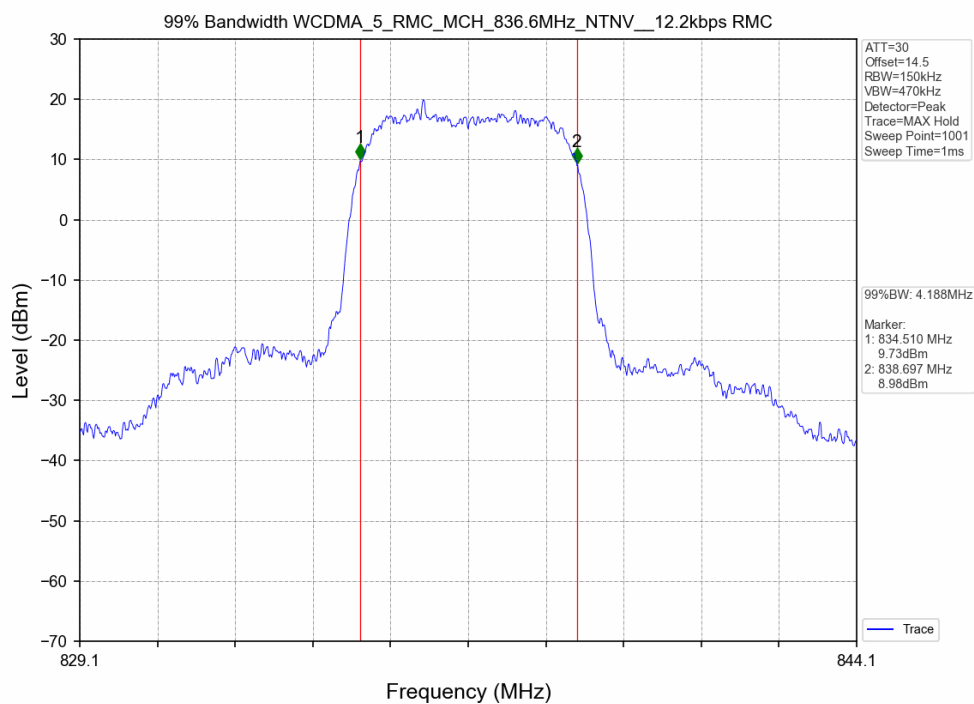


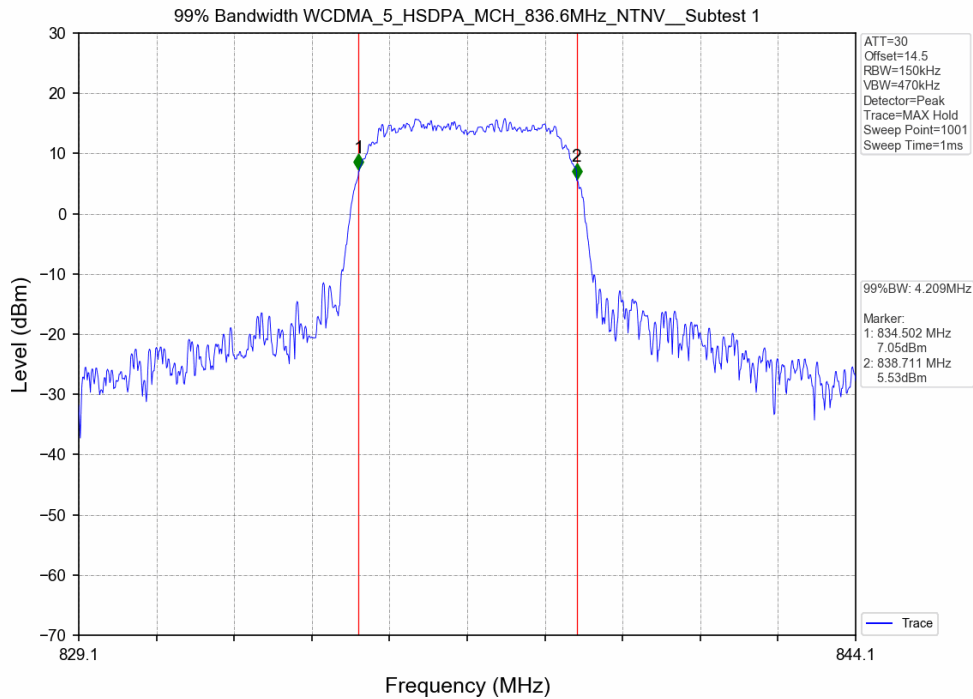
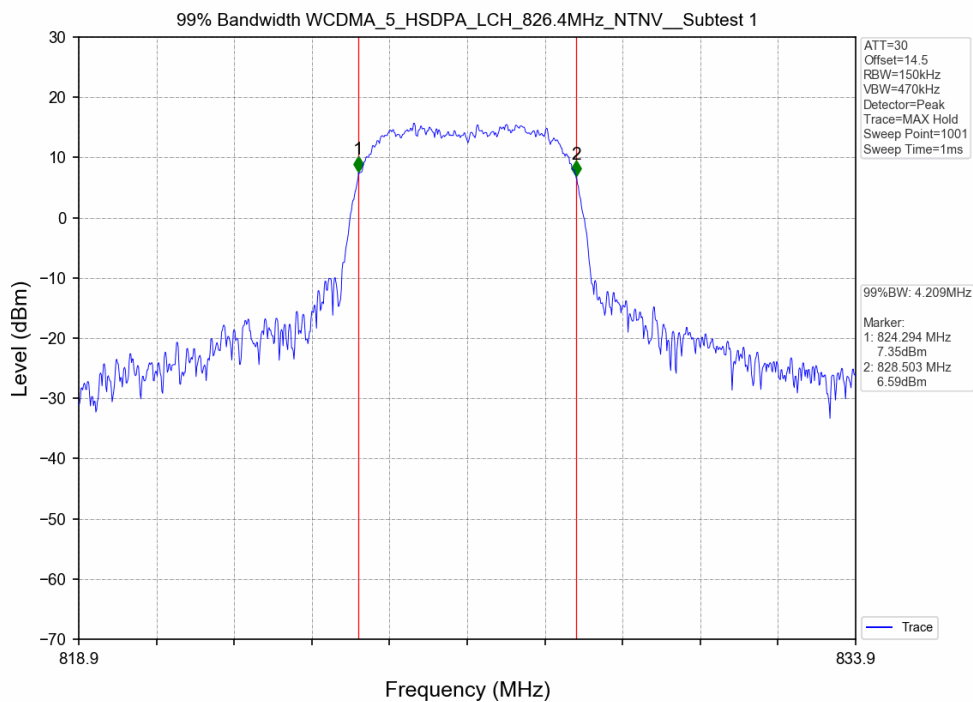


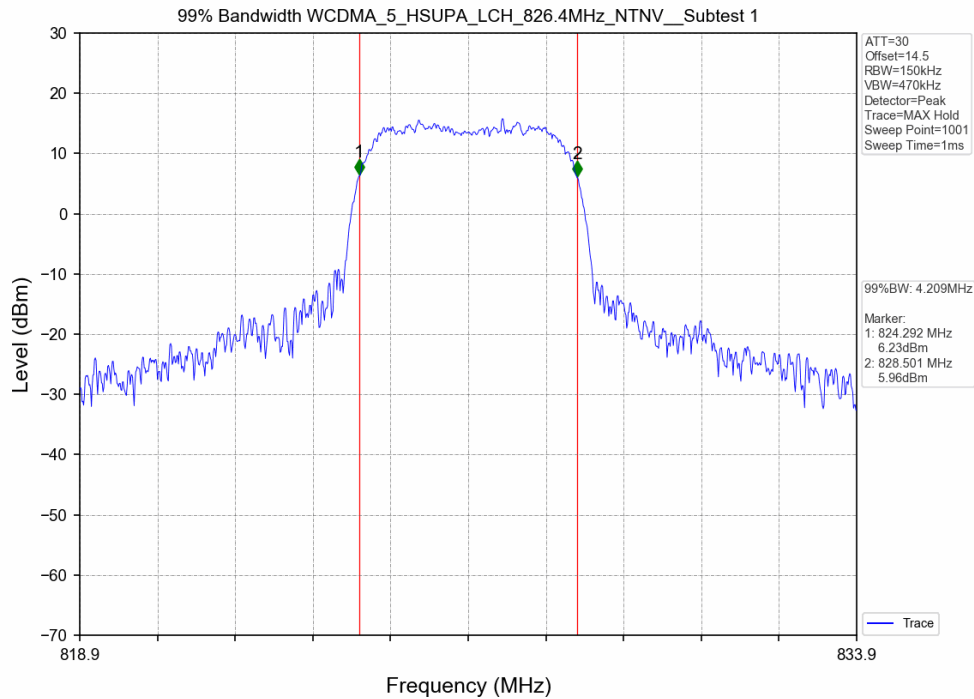
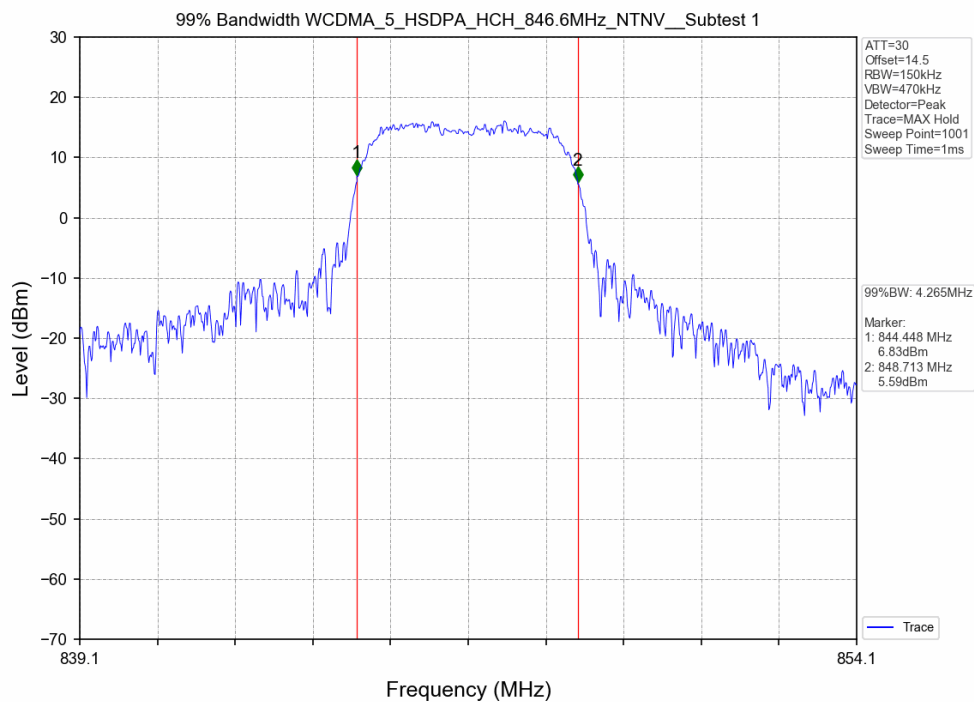
Band 5

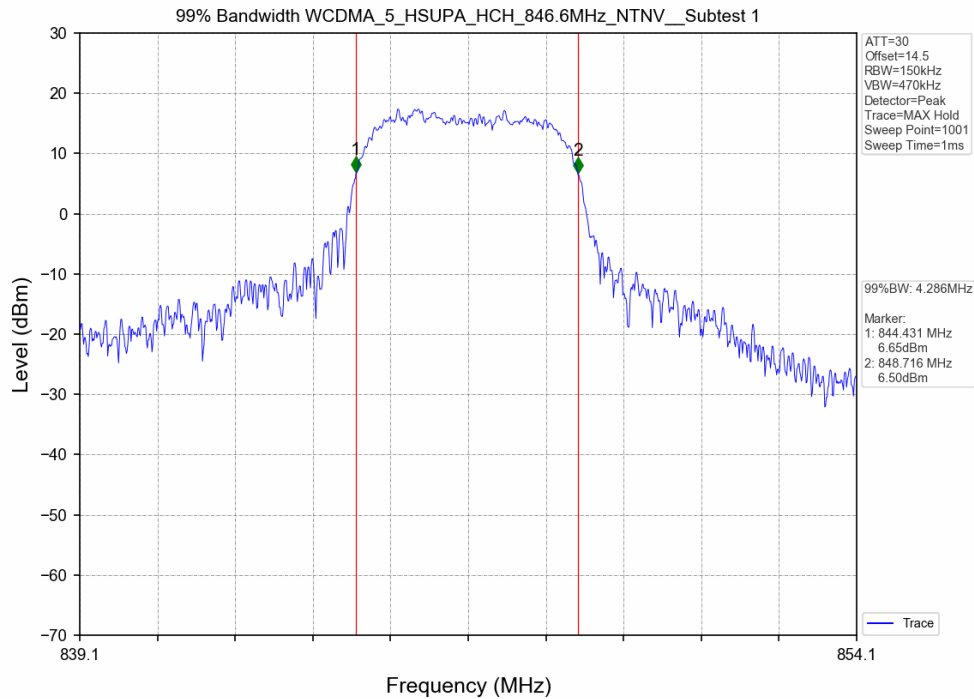
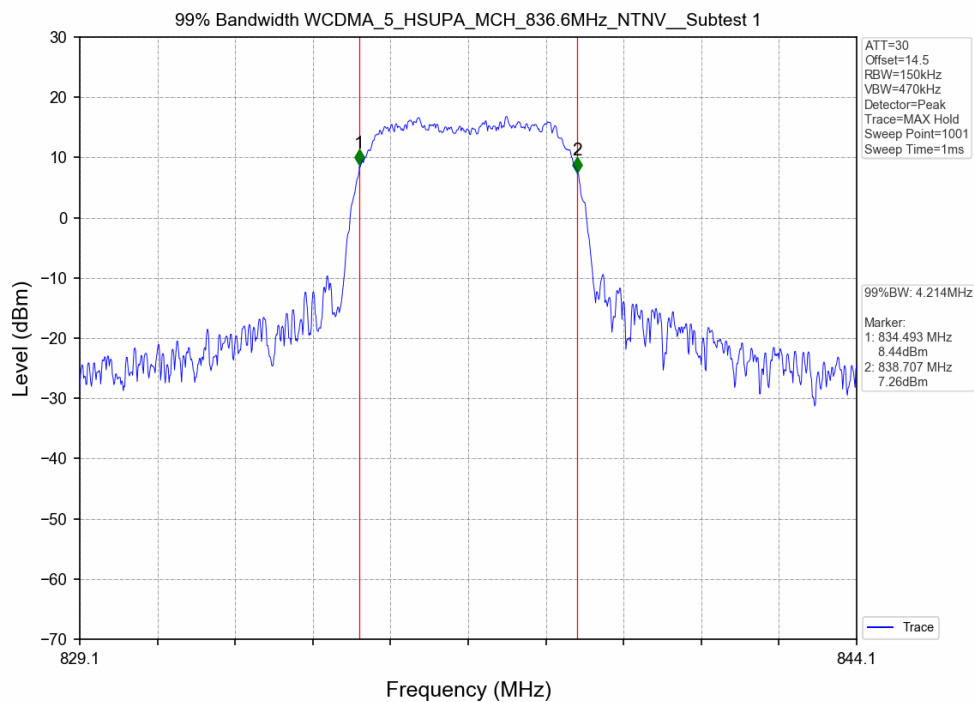
| Test Band: 5 |                              |       |       |       |         |
|--------------|------------------------------|-------|-------|-------|---------|
| Test Mode    | 99% Occupied Bandwidth (MHz) |       |       | Limit | Verdict |
|              | LCH                          | MCH   | HCH   |       |         |
| HSUPA        | 4.209                        | 4.214 | 4.286 | N/A   | PASS    |
| HSDPA        | 4.209                        | 4.209 | 4.265 | N/A   | PASS    |
| RMC          | 4.198                        | 4.188 | 4.225 | N/A   | PASS    |



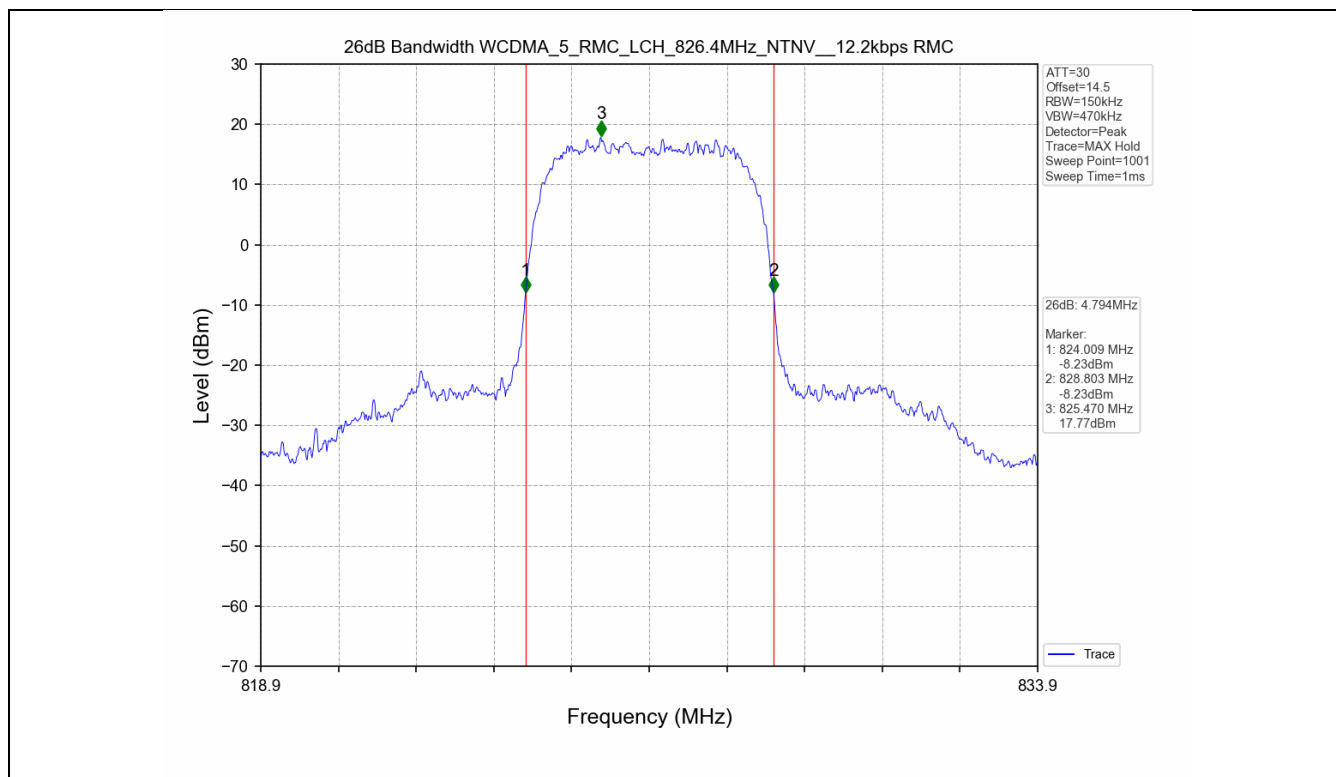


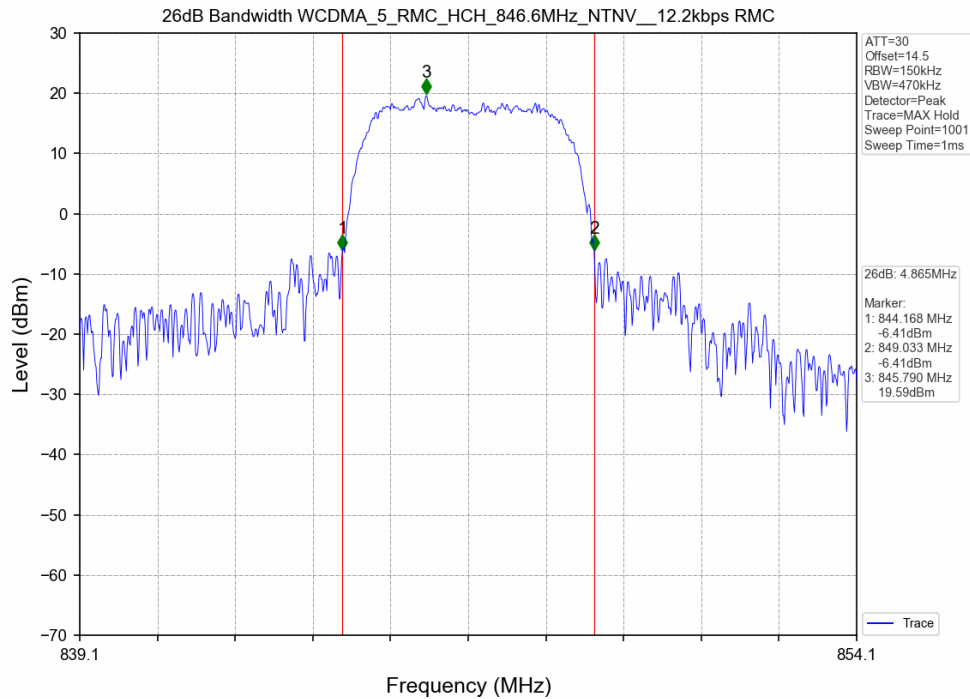
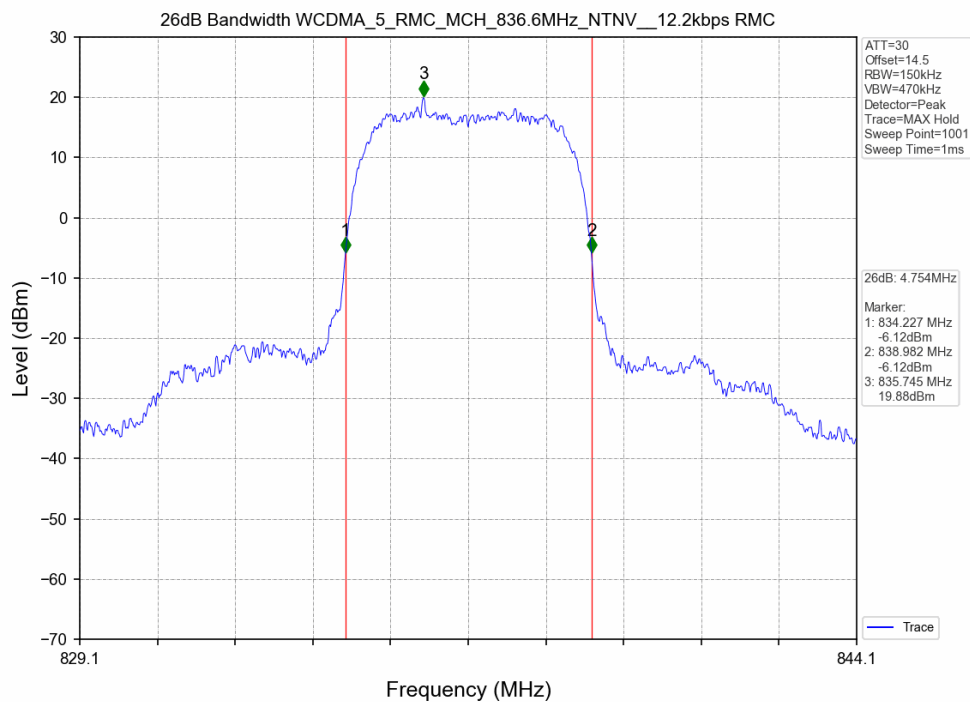


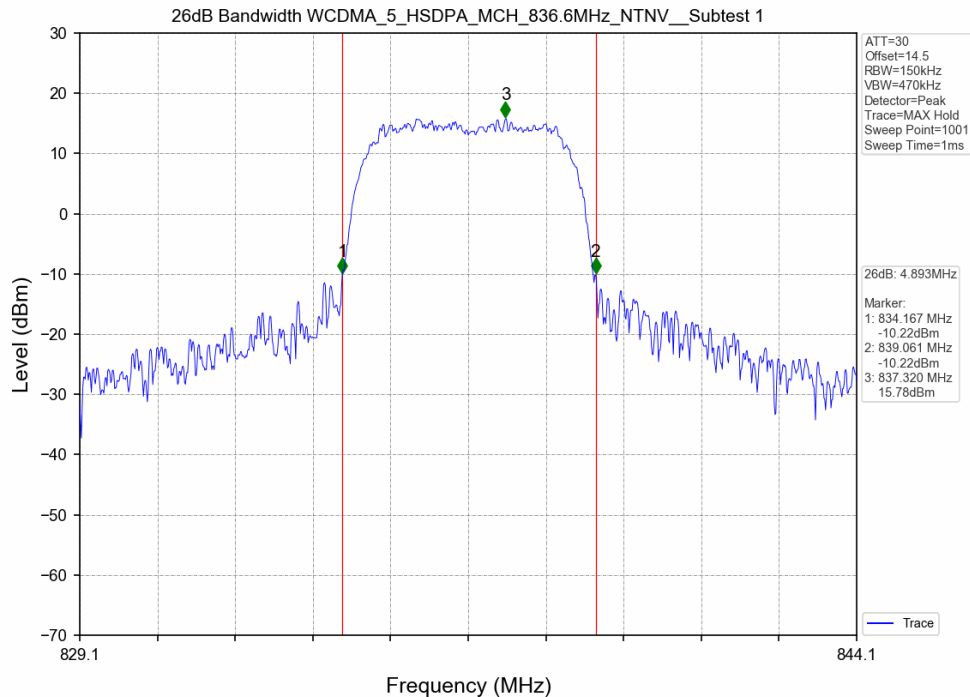
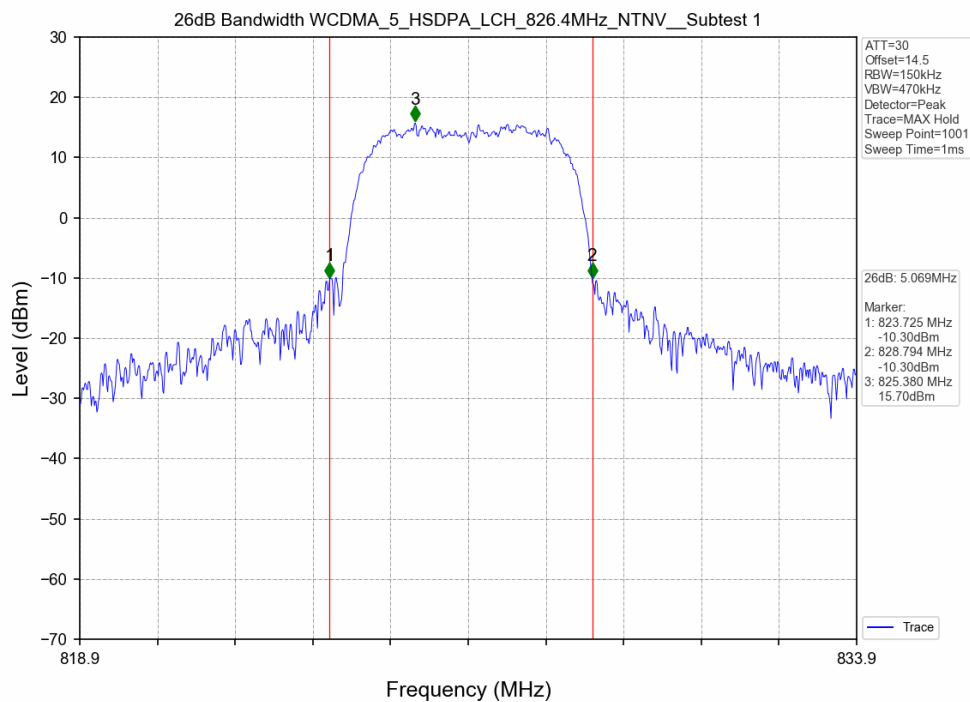


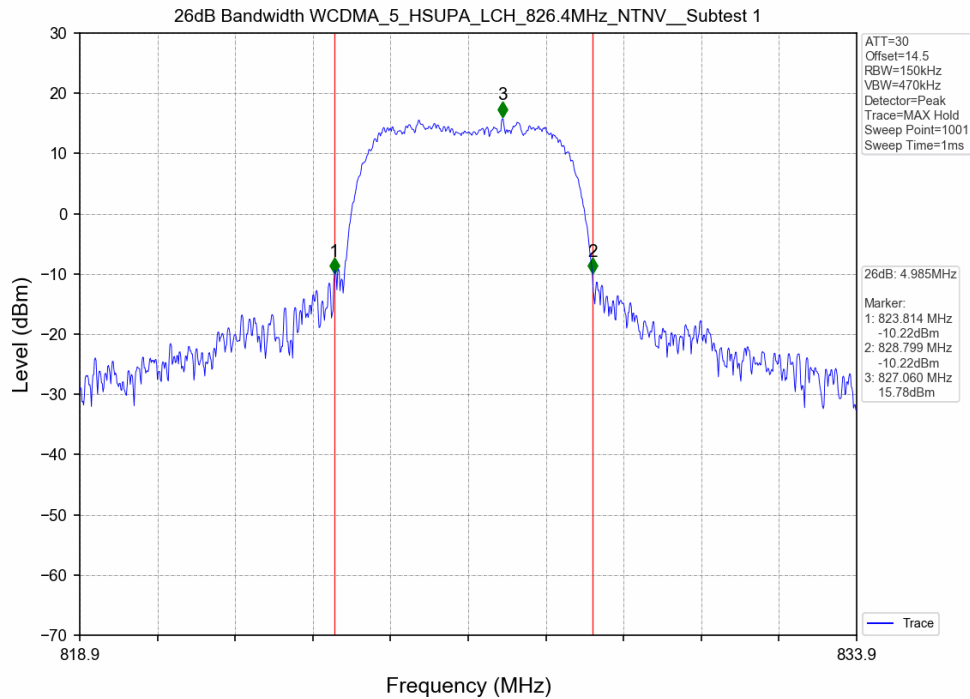
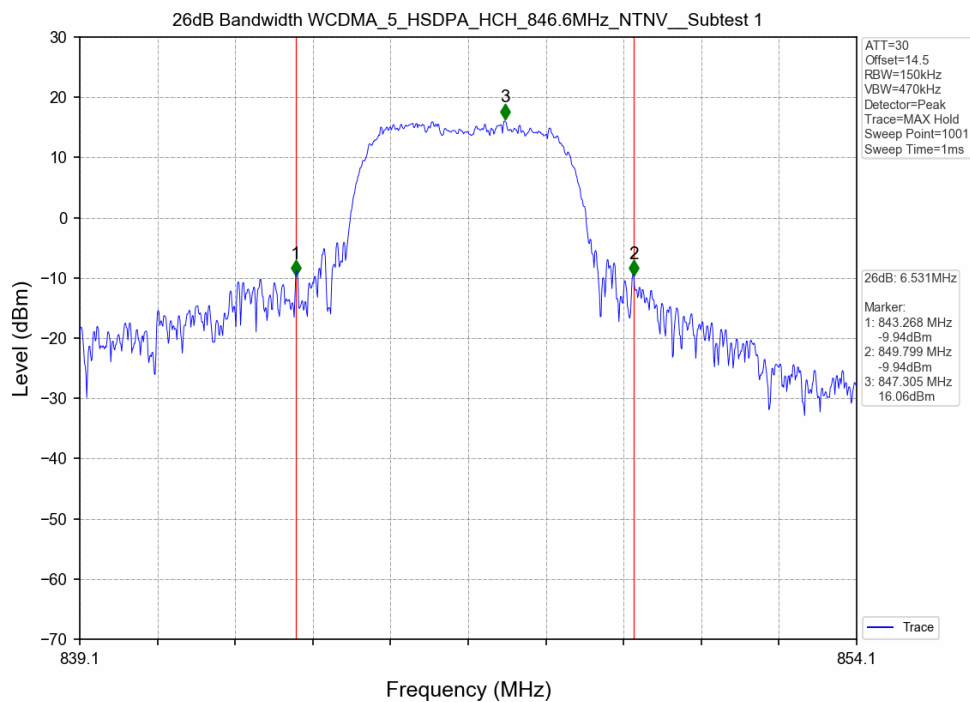


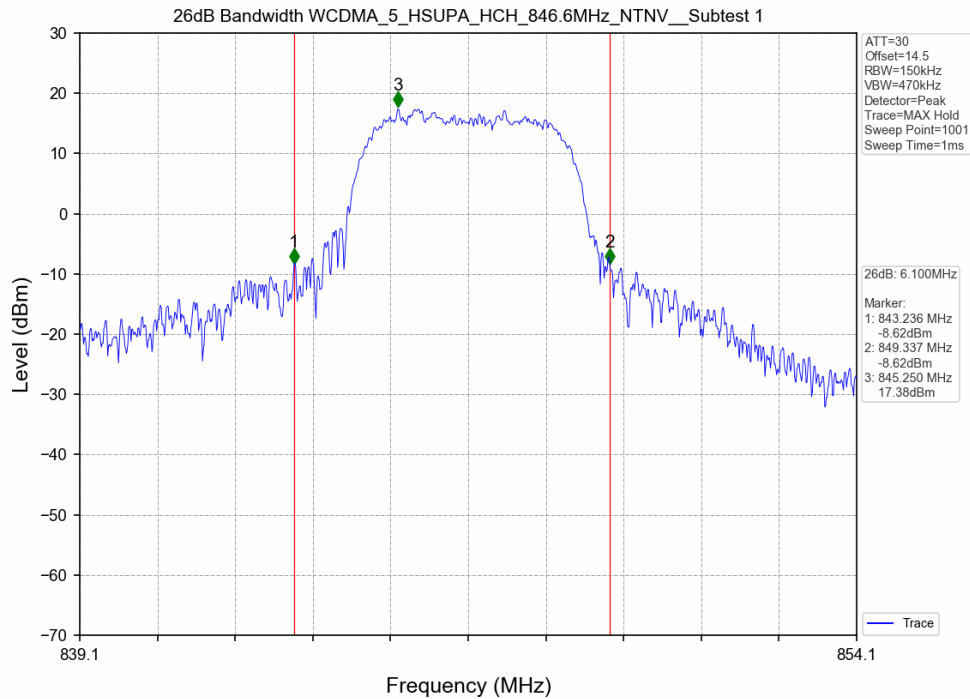
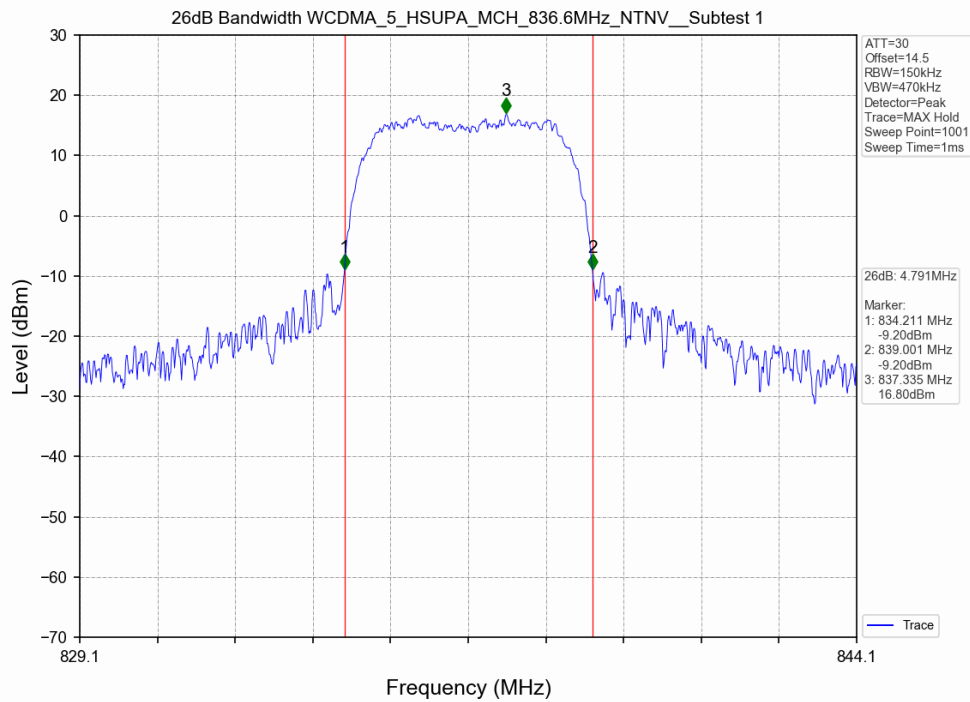
| Test Mode | 26dB Bandwidth (MHz) |       |       | Limit | Verdict |
|-----------|----------------------|-------|-------|-------|---------|
|           | LCH                  | MCH   | HCH   |       |         |
| HSUPA     | 4.985                | 4.791 | 6.100 | N/A   | PASS    |
| HSDPA     | 5.069                | 4.893 | 6.531 | N/A   | PASS    |
| RMC       | 4.794                | 4.754 | 4.865 | N/A   | PASS    |











## 2.Frequency stability

### Band 2

| Test Band: 2 (Frequency Error VS. Voltage) |            |            |                  |          |          |                       |         |         |             |         |
|--------------------------------------------|------------|------------|------------------|----------|----------|-----------------------|---------|---------|-------------|---------|
| Test Mode                                  | Test Temp. | Test Volt. | Freq. Error (Hz) |          |          | Freq. vs. rated (ppm) |         |         | Limit (ppm) | Verdict |
|                                            |            |            | LCH              | MCH      | HCH      | LCH                   | MCH     | HCH     |             |         |
| HSUPA                                      | NT         | LV         | -5.2714          | -7.5388  | 0.4148   | -0.0028               | -0.0040 | 0.0002  | 2.50        | PASS    |
|                                            |            | NV         | -1.6165          | -1.6809  | -3.1114  | -0.0009               | -0.0009 | -0.0016 | 2.50        | PASS    |
|                                            |            | HV         | -7.9179          | 1.3375   | -6.8235  | -0.0043               | 0.0007  | -0.0036 | 2.50        | PASS    |
| HSDPA                                      | NT         | LV         | -5.1641          | -3.7193  | -3.8409  | -0.0028               | -0.0020 | -0.0020 | 2.50        | PASS    |
|                                            |            | NV         | -5.8579          | -4.4060  | -1.7810  | -0.0032               | -0.0023 | -0.0009 | 2.50        | PASS    |
|                                            |            | HV         | -11.0221         | -0.5293  | -9.5773  | -0.0060               | -0.0003 | -0.0050 | 2.50        | PASS    |
| RMC                                        | NT         | LV         | -16.6726         | -10.6931 | -6.8736  | -0.0090               | -0.0057 | -0.0036 | 2.50        | PASS    |
|                                            |            | NV         | -21.1215         | -6.4874  | -16.4080 | -0.0114               | -0.0035 | -0.0086 | 2.50        | PASS    |
|                                            |            | HV         | -19.1331         | -11.8589 | -13.7687 | -0.0103               | -0.0063 | -0.0072 | 2.50        | PASS    |

| Test Band: 2 (Frequency Error VS. Temperature) |            |            |                  |          |          |                       |         |         |             |         |
|------------------------------------------------|------------|------------|------------------|----------|----------|-----------------------|---------|---------|-------------|---------|
| Test Mode                                      | Test Volt. | Test Temp. | Freq. Error (Hz) |          |          | Freq. vs. rated (ppm) |         |         | Limit (ppm) | Verdict |
|                                                |            |            | LCH              | MCH      | HCH      | LCH                   | MCH     | HCH     |             |         |
| HSUPA                                          | NV         | -20.00     | -10.9148         | 2.2316   | -13.0749 | -0.0059               | 0.0012  | -0.0069 | 2.50        | PASS    |
|                                                |            | -10.00     | -11.2224         | -0.9155  | -9.8062  | -0.0061               | -0.0005 | -0.0051 | 2.50        | PASS    |
|                                                |            | 0.00       | -8.3613          | -7.3385  | -13.1392 | -0.0045               | -0.0039 | -0.0069 | 2.50        | PASS    |
|                                                |            | 10.00      | -9.5201          | -9.8777  | -11.9305 | -0.0051               | -0.0053 | -0.0063 | 2.50        | PASS    |
|                                                |            | 20.00      | -10.9863         | -5.9009  | -11.3297 | -0.0059               | -0.0031 | -0.0059 | 2.50        | PASS    |
|                                                |            | 30.00      | -8.1968          | -7.6890  | -8.1754  | -0.0044               | -0.0041 | -0.0043 | 2.50        | PASS    |
|                                                |            | 40.00      | -12.6100         | -5.0354  | -10.1638 | -0.0068               | -0.0027 | -0.0053 | 2.50        | PASS    |
|                                                |            | 50.00      | -7.6818          | -6.7806  | -12.0735 | -0.0041               | -0.0036 | -0.0063 | 2.50        | PASS    |
| HSDPA                                          | NV         | 60.00      | -8.0967          | -4.3058  | -8.0466  | -0.0044               | -0.0023 | -0.0042 | 2.50        | PASS    |
|                                                |            | -20.00     | -7.6032          | 0.0572   | -9.2196  | -0.0041               | 0.0000  | -0.0048 | 2.50        | PASS    |
|                                                |            | -10.00     | -13.3967         | 1.6308   | -13.0176 | -0.0072               | 0.0009  | -0.0068 | 2.50        | PASS    |
|                                                |            | 0.00       | -8.1754          | 1.1301   | -12.0807 | -0.0044               | 0.0006  | -0.0063 | 2.50        | PASS    |
|                                                |            | 10.00      | -11.4369         | 1.5235   | -6.9237  | -0.0062               | 0.0008  | -0.0036 | 2.50        | PASS    |
|                                                |            | 20.00      | -8.6904          | -7.1669  | -13.6972 | -0.0047               | -0.0038 | -0.0072 | 2.50        | PASS    |
|                                                |            | 30.00      | -12.0091         | -6.4158  | -8.8620  | -0.0065               | -0.0034 | -0.0046 | 2.50        | PASS    |
|                                                |            | 40.00      | -11.1222         | -5.0354  | -11.9376 | -0.0060               | -0.0027 | -0.0063 | 2.50        | PASS    |
| RMC                                            | NV         | 50.00      | -13.7901         | -4.9996  | -7.2885  | -0.0074               | -0.0027 | -0.0038 | 2.50        | PASS    |
|                                                |            | 60.00      | -7.1526          | -1.3518  | -13.0820 | -0.0039               | -0.0007 | -0.0069 | 2.50        | PASS    |
|                                                |            | -20.00     | -18.7969         | -14.0333 | -16.0932 | -0.0101               | -0.0075 | -0.0084 | 2.50        | PASS    |
|                                                |            | -10.00     | -20.7996         | -11.5943 | -16.9015 | -0.0112               | -0.0062 | -0.0089 | 2.50        | PASS    |
|                                                |            | 0.00       | -17.8957         | -12.6100 | -14.4625 | -0.0097               | -0.0067 | -0.0076 | 2.50        | PASS    |
|                                                |            | 10.00      | -19.5694         | -16.4366 | -15.0990 | -0.0106               | -0.0087 | -0.0079 | 2.50        | PASS    |
|                                                |            | 20.00      | -16.6368         | -14.9846 | -16.3436 | -0.0090               | -0.0080 | -0.0086 | 2.50        | PASS    |
|                                                |            | 30.00      | -19.4621         | -11.3440 | -18.0530 | -0.0105               | -0.0060 | -0.0095 | 2.50        | PASS    |
|                                                |            | 40.00      | -16.2506         | -9.3913  | -19.2833 | -0.0088               | -0.0050 | -0.0101 | 2.50        | PASS    |
|                                                |            | 50.00      | -15.7356         | -10.2425 | -19.3262 | -0.0085               | -0.0054 | -0.0101 | 2.50        | PASS    |
|                                                |            | 60.00      | -17.6525         | -9.7632  | -14.3194 | -0.0095               | -0.0052 | -0.0075 | 2.50        | PASS    |

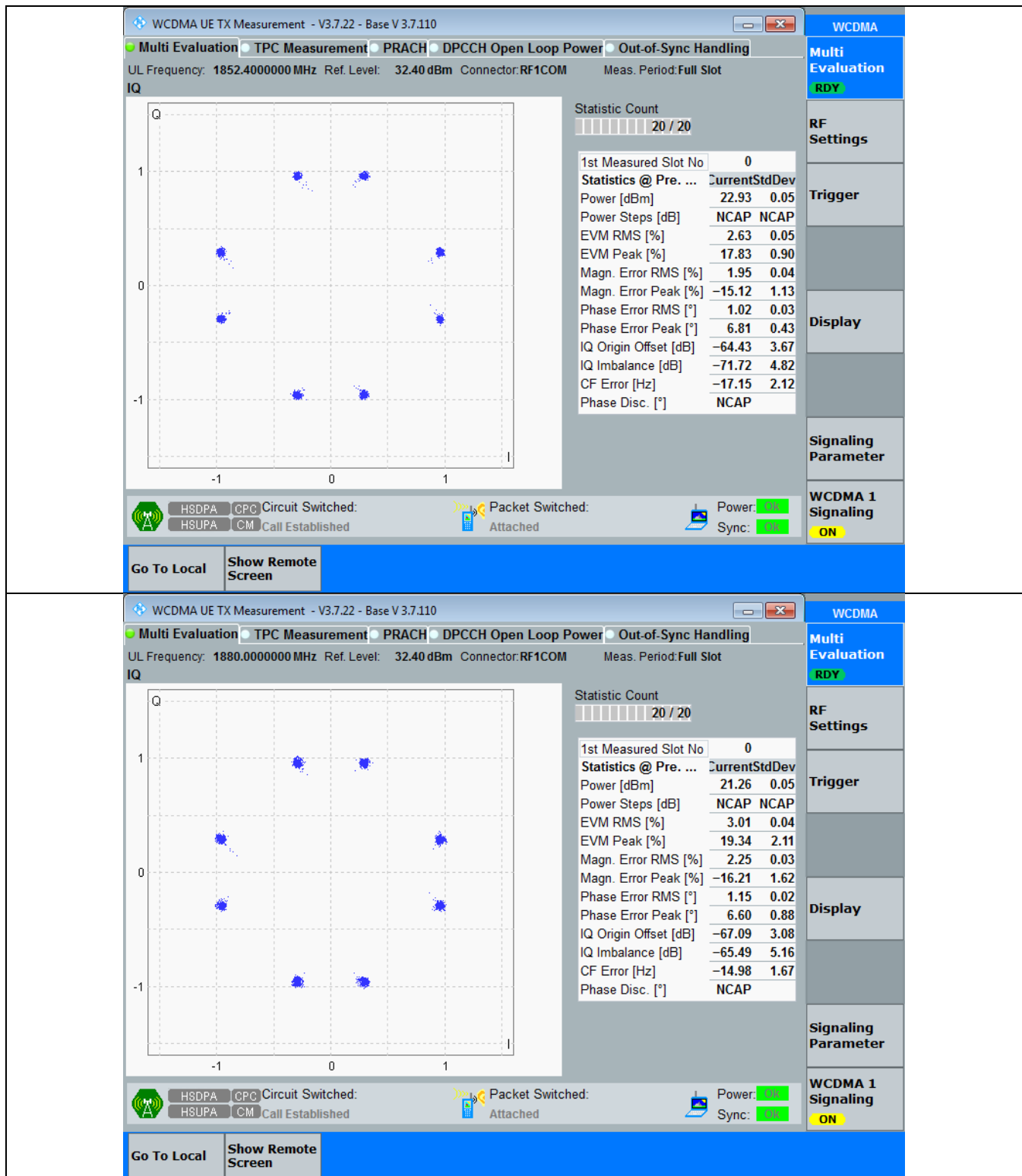
### Band 5

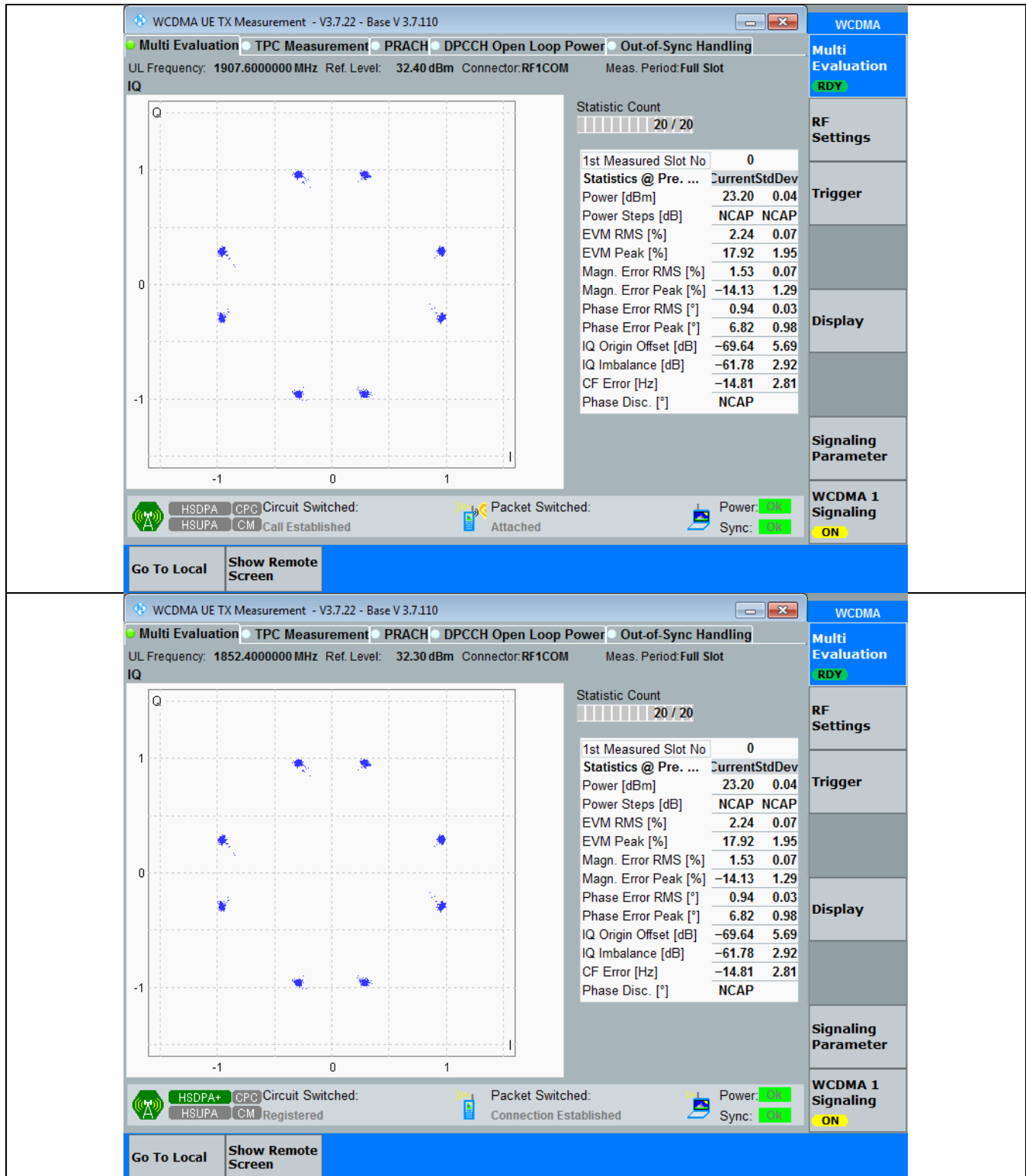
| Test Band: 5 (Frequency Error VS. Voltage) |            |            |                  |          |          |                       |         |         |             |         |
|--------------------------------------------|------------|------------|------------------|----------|----------|-----------------------|---------|---------|-------------|---------|
| Test Mode                                  | Test Temp. | Test Volt. | Freq. Error (Hz) |          |          | Freq. vs. rated (ppm) |         |         | Limit (ppm) | Verdict |
|                                            |            |            | LCH              | MCH      | HCH      | LCH                   | MCH     | HCH     |             |         |
| HSUPA                                      | NT         | LV         | -10.5000         | -6.8450  | /        | -0.0127               | -0.0082 | /       | 2.50        | PASS    |
|                                            |            | NV         | -2.8682          | -11.2009 | /        | -0.0035               | -0.0134 | /       | 2.50        | PASS    |
|                                            |            | HV         | -4.0555          | -7.9250  | /        | -0.0049               | -0.0095 | /       | 2.50        | PASS    |
| HSDPA                                      | NT         | LV         | -5.6720          | -6.9809  | /        | -0.0069               | -0.0083 | /       | 2.50        | PASS    |
|                                            |            | NV         | -3.4332          | -10.6502 | /        | -0.0042               | -0.0127 | /       | 2.50        | PASS    |
|                                            |            | HV         | -4.0340          | -9.2769  | /        | -0.0049               | -0.0111 | /       | 2.50        | PASS    |
| RMC                                        | NT         | LV         | -14.6341         | -6.8665  | -9.1839  | -0.0177               | -0.0082 | -0.0108 | 2.50        | PASS    |
|                                            |            | NV         | -12.1450         | -16.1362 | -13.9260 | -0.0147               | -0.0193 | -0.0164 | 2.50        | PASS    |
|                                            |            | HV         | -8.4972          | -12.9819 | -14.2980 | -0.0103               | -0.0155 | -0.0169 | 2.50        | PASS    |

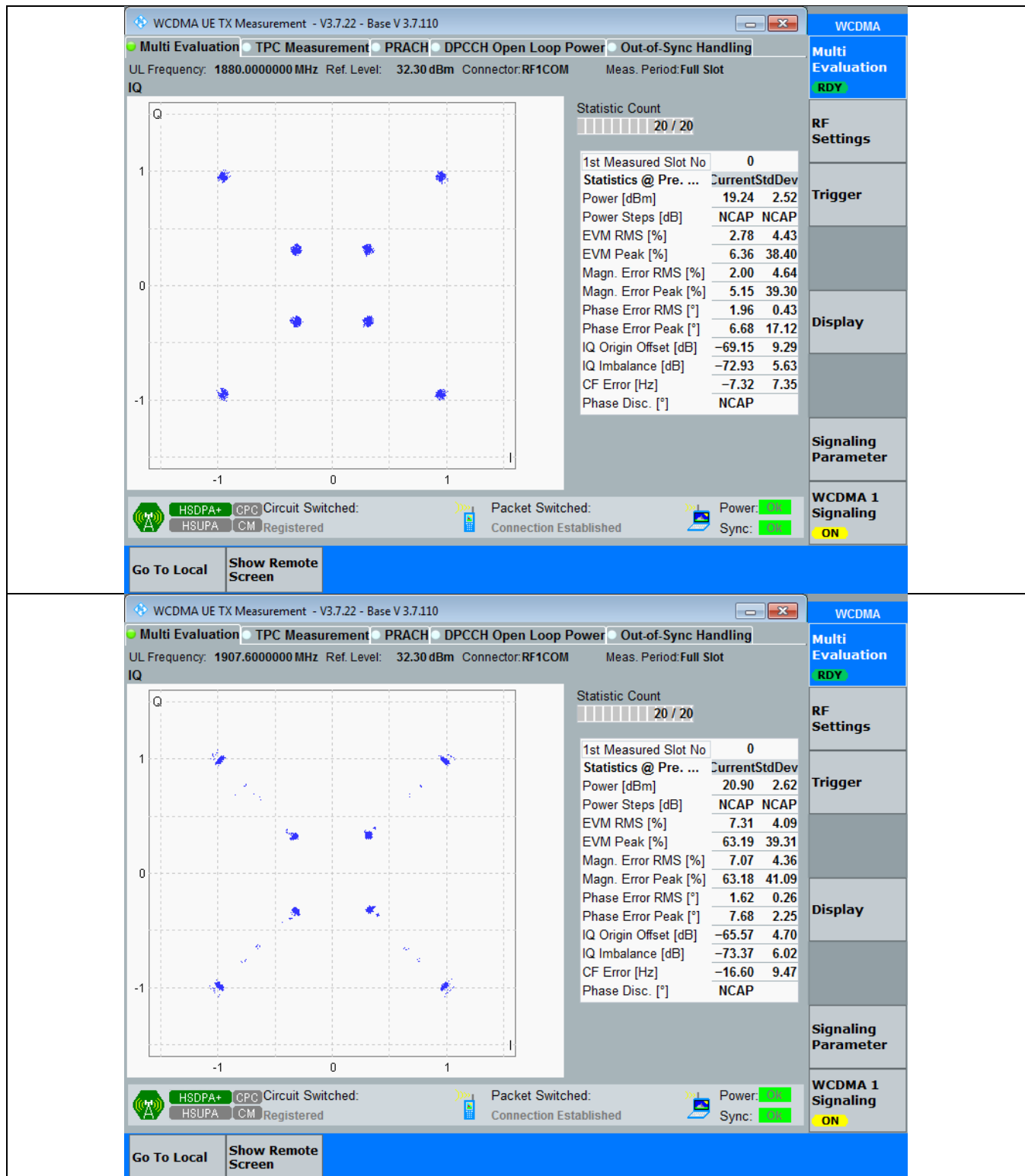
| Test Band: 5 (Frequency Error VS. Temperature) |            |            |                  |          |          |                       |         |         |             |         |
|------------------------------------------------|------------|------------|------------------|----------|----------|-----------------------|---------|---------|-------------|---------|
| Test Mode                                      | Test Volt. | Test Temp. | Freq. Error (Hz) |          |          | Freq. vs. rated (ppm) |         |         | Limit (ppm) | Verdict |
|                                                |            |            | LCH              | MCH      | HCH      | LCH                   | MCH     | HCH     |             |         |
| HSUPA                                          | NV         | -20.00     | -7.2527          | -10.1209 | /        | -0.0088               | -0.0121 | /       | 2.50        | PASS    |
|                                                |            | -10.00     | -8.7261          | -12.8603 | /        | -0.0106               | -0.0154 | /       | 2.50        | PASS    |
|                                                |            | 0.00       | -2.4247          | -14.0977 | /        | -0.0029               | -0.0169 | /       | 2.50        | PASS    |
|                                                |            | 10.00      | -7.1597          | -15.4924 | /        | -0.0087               | -0.0185 | /       | 2.50        | PASS    |
|                                                |            | 20.00      | -4.3774          | -8.7190  | /        | -0.0053               | -0.0104 | /       | 2.50        | PASS    |
|                                                |            | 30.00      | -8.8406          | -9.3627  | /        | -0.0107               | -0.0112 | /       | 2.50        | PASS    |
|                                                |            | 40.00      | -4.8923          | -9.5701  | /        | -0.0059               | -0.0114 | /       | 2.50        | PASS    |
|                                                |            | 50.00      | -12.5241         | -11.0722 | /        | -0.0152               | -0.0132 | /       | 2.50        | PASS    |
| HSDPA                                          | NV         | 60.00      | -9.7489          | -10.8147 | /        | -0.0118               | -0.0129 | /       | 2.50        | PASS    |
|                                                |            | -20.00     | -5.3430          | -10.0350 | /        | -0.0065               | -0.0120 | /       | 2.50        | PASS    |
|                                                |            | -10.00     | -3.2830          | -12.1665 | /        | -0.0040               | -0.0145 | /       | 2.50        | PASS    |
|                                                |            | 0.00       | -5.1928          | -13.1822 | /        | -0.0063               | -0.0158 | /       | 2.50        | PASS    |
|                                                |            | 10.00      | -6.7592          | -13.2894 | /        | -0.0082               | -0.0159 | /       | 2.50        | PASS    |
|                                                |            | 20.00      | -7.0453          | -14.9632 | /        | -0.0085               | -0.0179 | /       | 2.50        | PASS    |
|                                                |            | 30.00      | -3.3832          | -14.8988 | /        | -0.0041               | -0.0178 | /       | 2.50        | PASS    |
|                                                |            | 40.00      | -9.3842          | -14.8272 | /        | -0.0114               | -0.0177 | /       | 2.50        | PASS    |
| RMC                                            | NV         | 50.00      | -4.4060          | -14.7271 | /        | -0.0053               | -0.0176 | /       | 2.50        | PASS    |
|                                                |            | 60.00      | -11.0221         | -13.8760 | /        | -0.0133               | -0.0166 | /       | 2.50        | PASS    |
|                                                |            | -20.00     | -13.5541         | -14.5554 | -15.0418 | -0.0164               | -0.0174 | -0.0178 | 2.50        | PASS    |
|                                                |            | -10.00     | -10.5500         | -14.2622 | -15.8858 | -0.0128               | -0.0170 | -0.0188 | 2.50        | PASS    |
|                                                |            | 0.00       | -16.0432         | -14.6914 | -13.1106 | -0.0194               | -0.0176 | -0.0155 | 2.50        | PASS    |
|                                                |            | 10.00      | -12.4025         | -13.5970 | -13.2465 | -0.0150               | -0.0163 | -0.0156 | 2.50        | PASS    |
|                                                |            | 20.00      | -15.7785         | -10.7789 | -9.2697  | -0.0191               | -0.0129 | -0.0109 | 2.50        | PASS    |
|                                                |            | 30.00      | -11.1866         | -10.5715 | -14.4625 | -0.0135               | -0.0126 | -0.0171 | 2.50        | PASS    |
|                                                |            | 40.00      | -11.2653         | -14.7915 | -13.4897 | -0.0136               | -0.0177 | -0.0159 | 2.50        | PASS    |
|                                                |            | 50.00      | -10.7646         | -12.9819 | -12.0878 | -0.0130               | -0.0155 | -0.0143 | 2.50        | PASS    |
|                                                |            | 60.00      | -9.9349          | -8.6689  | -12.4311 | -0.0120               | -0.0104 | -0.0147 | 2.50        | PASS    |

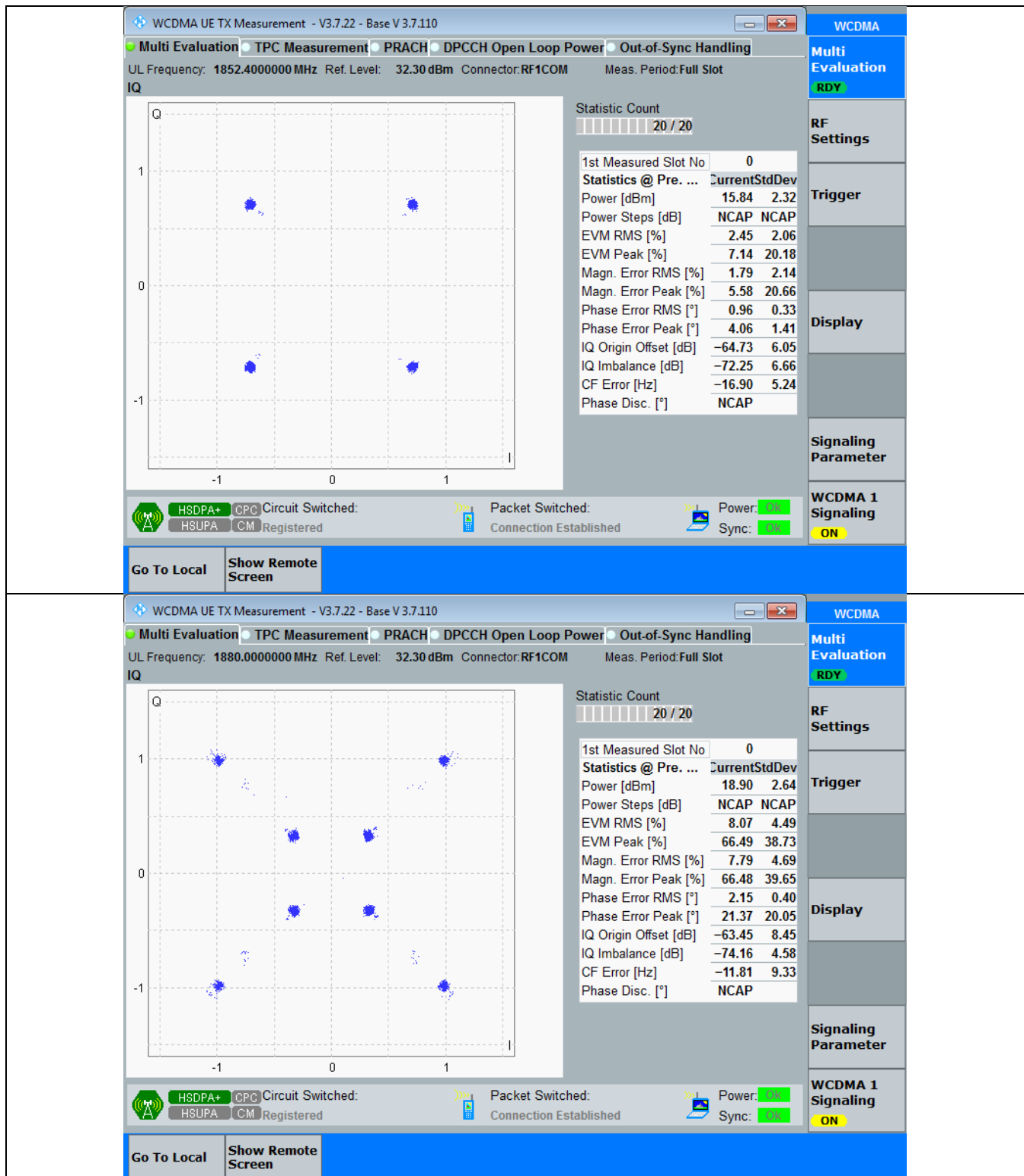
## 3.Modulation Characteristics

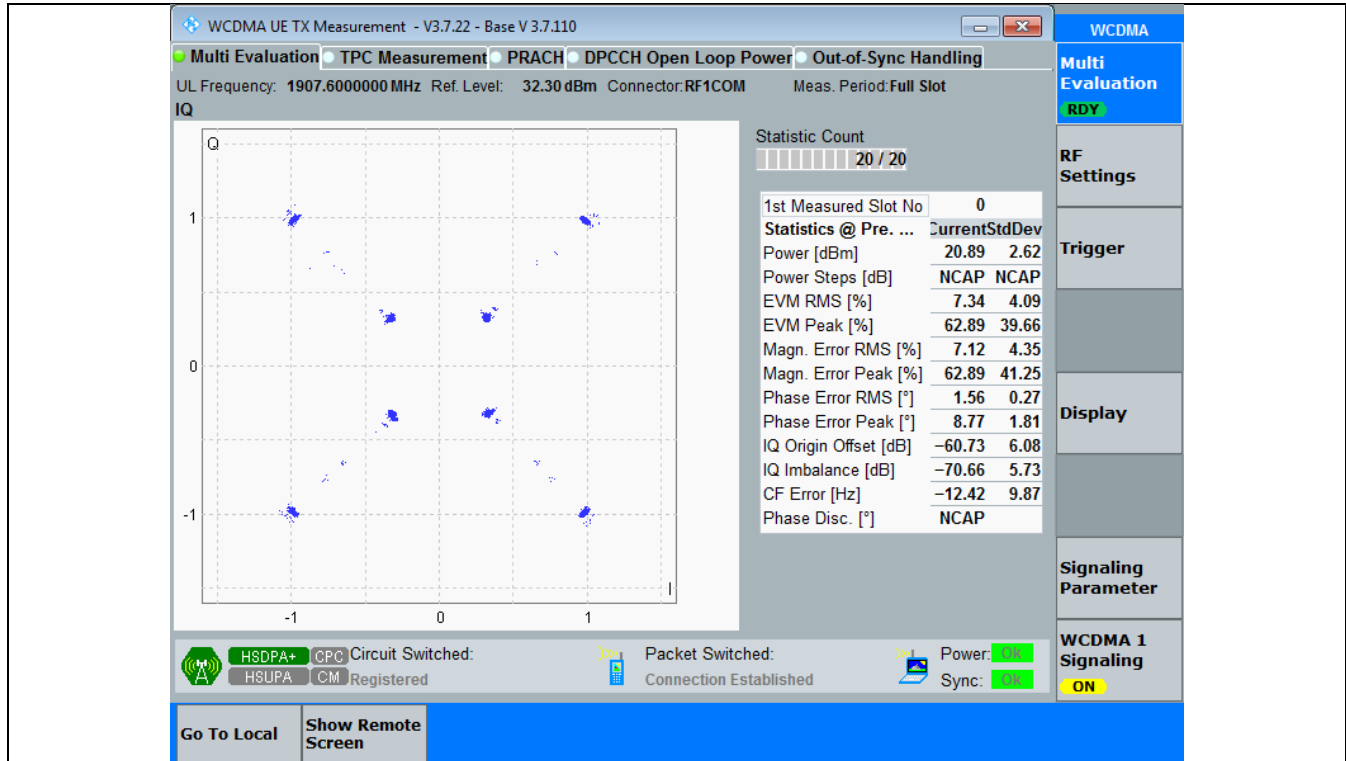
## Band 2



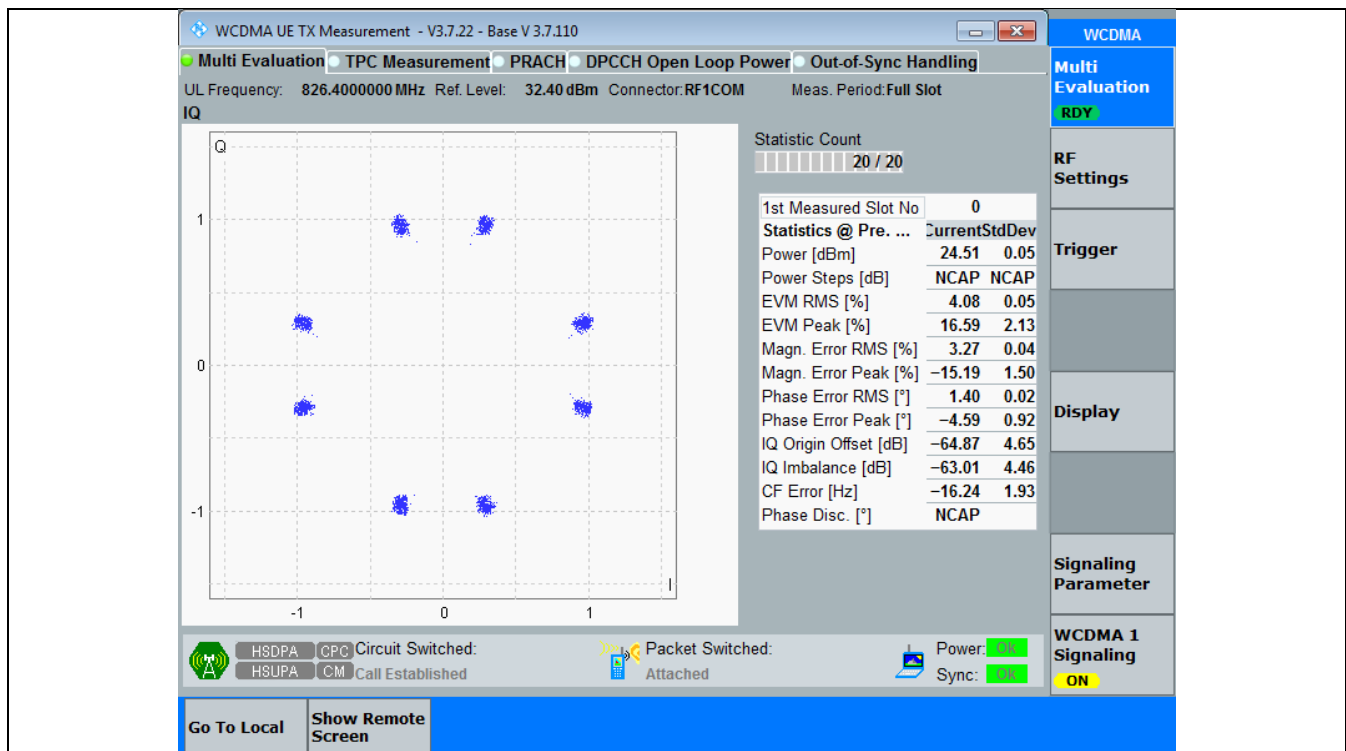


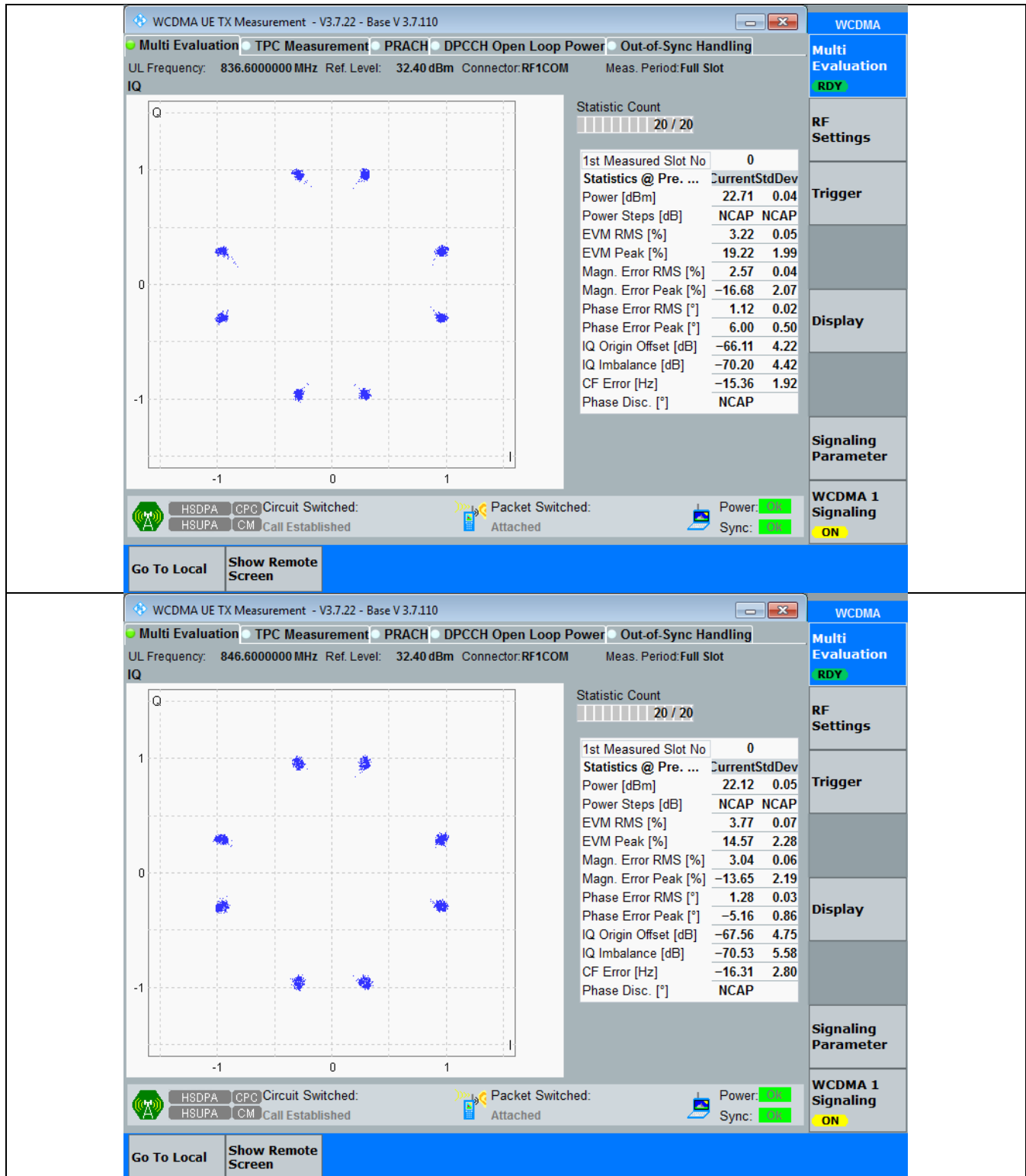


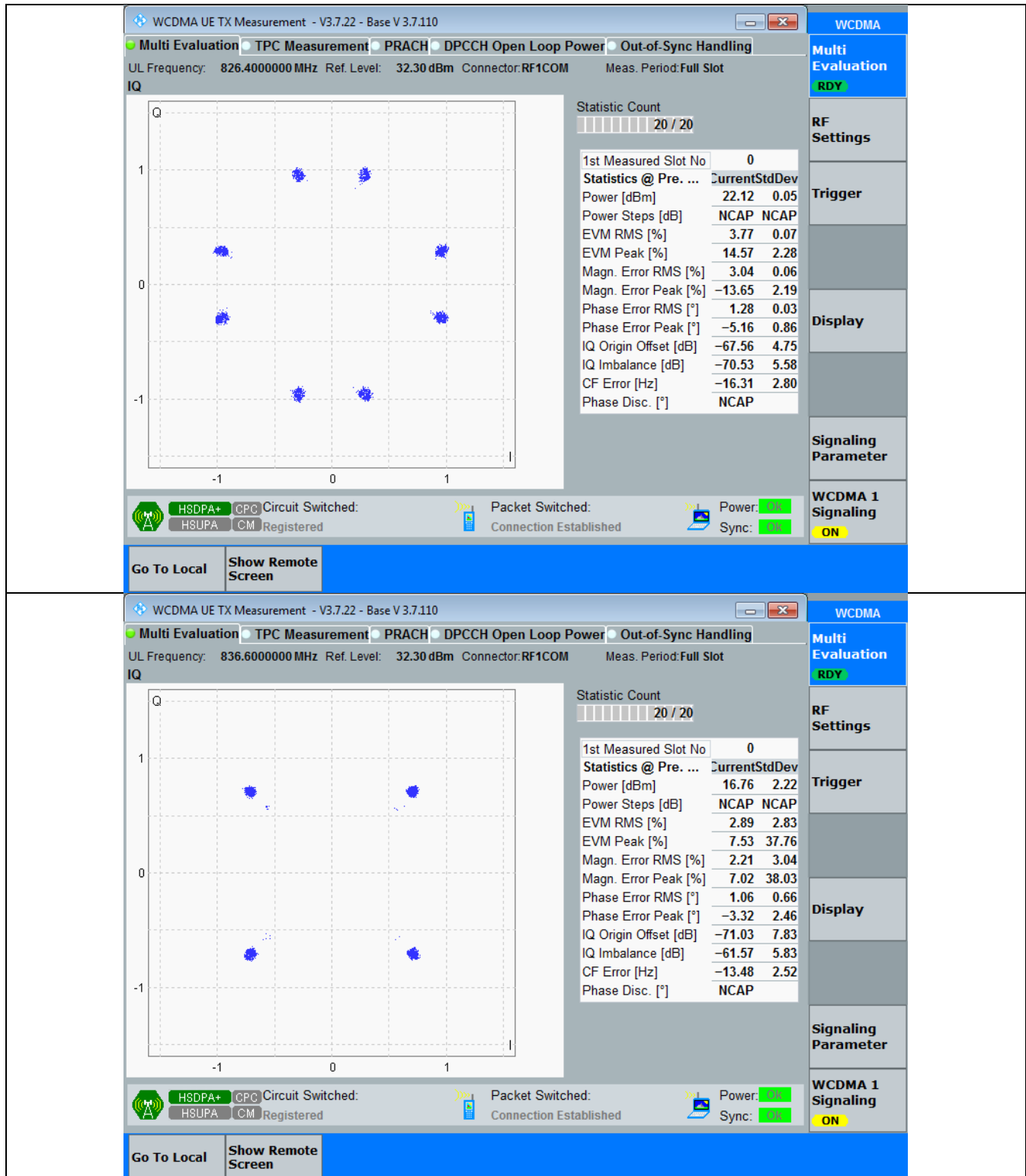


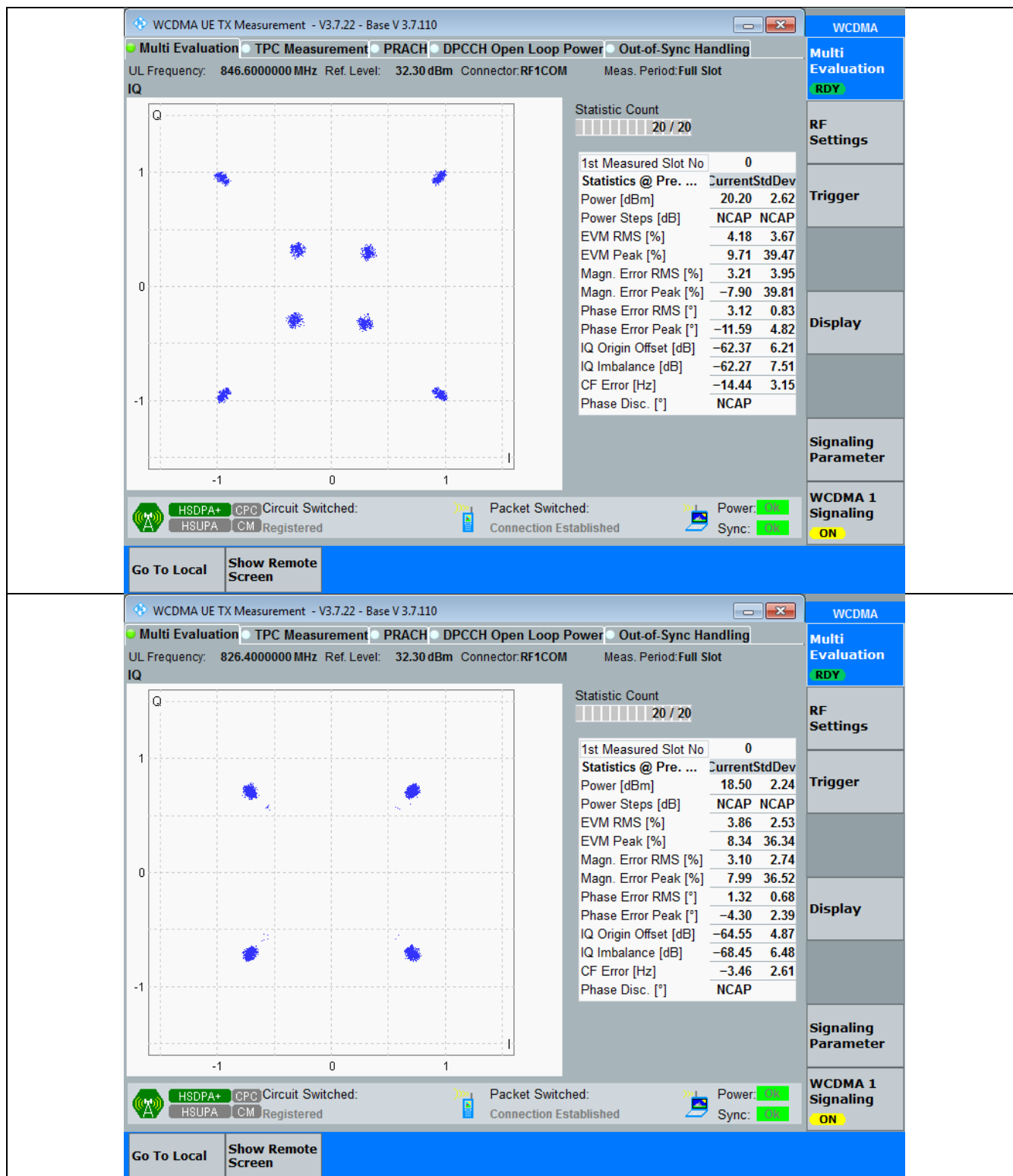


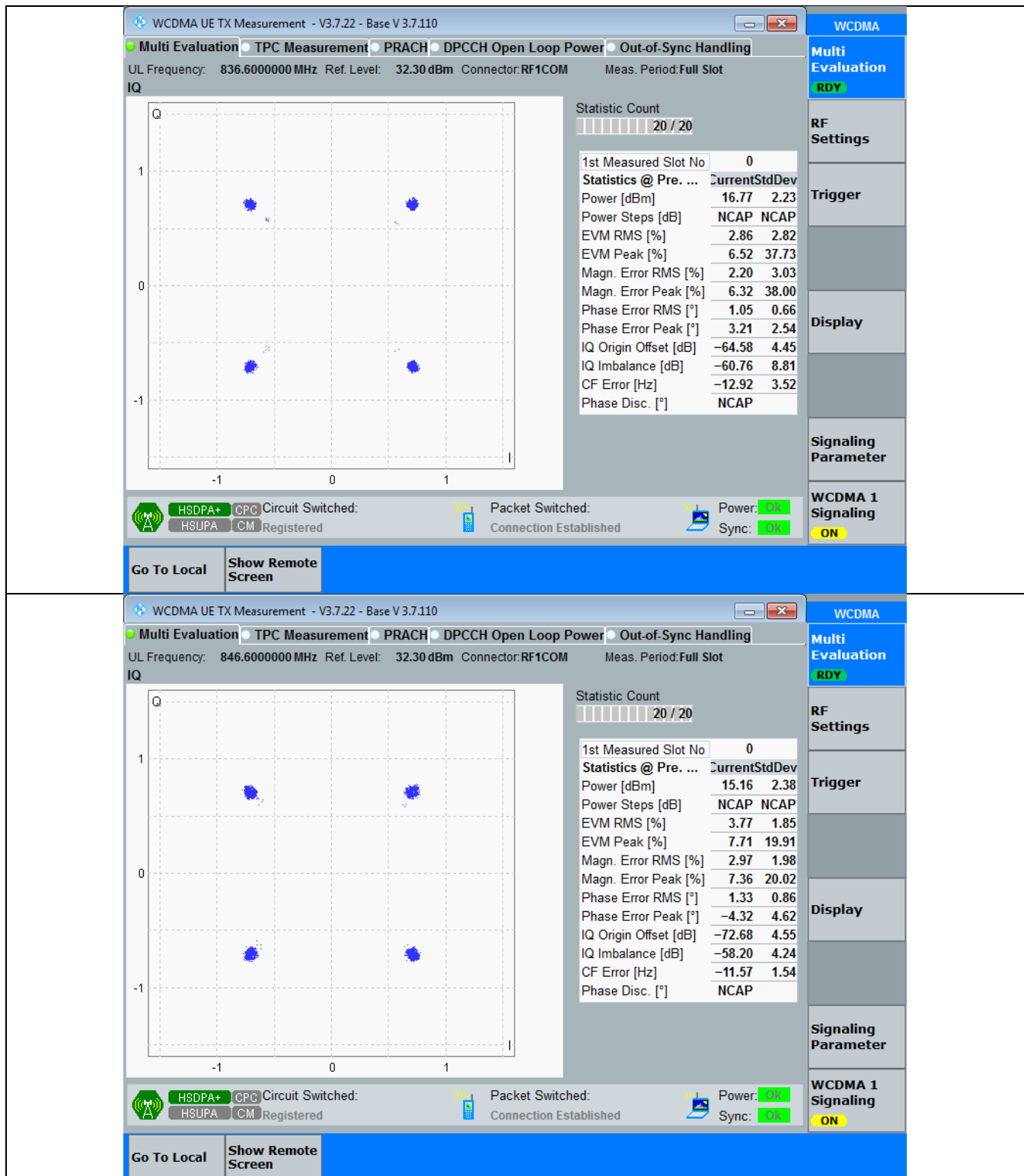
## Band 5







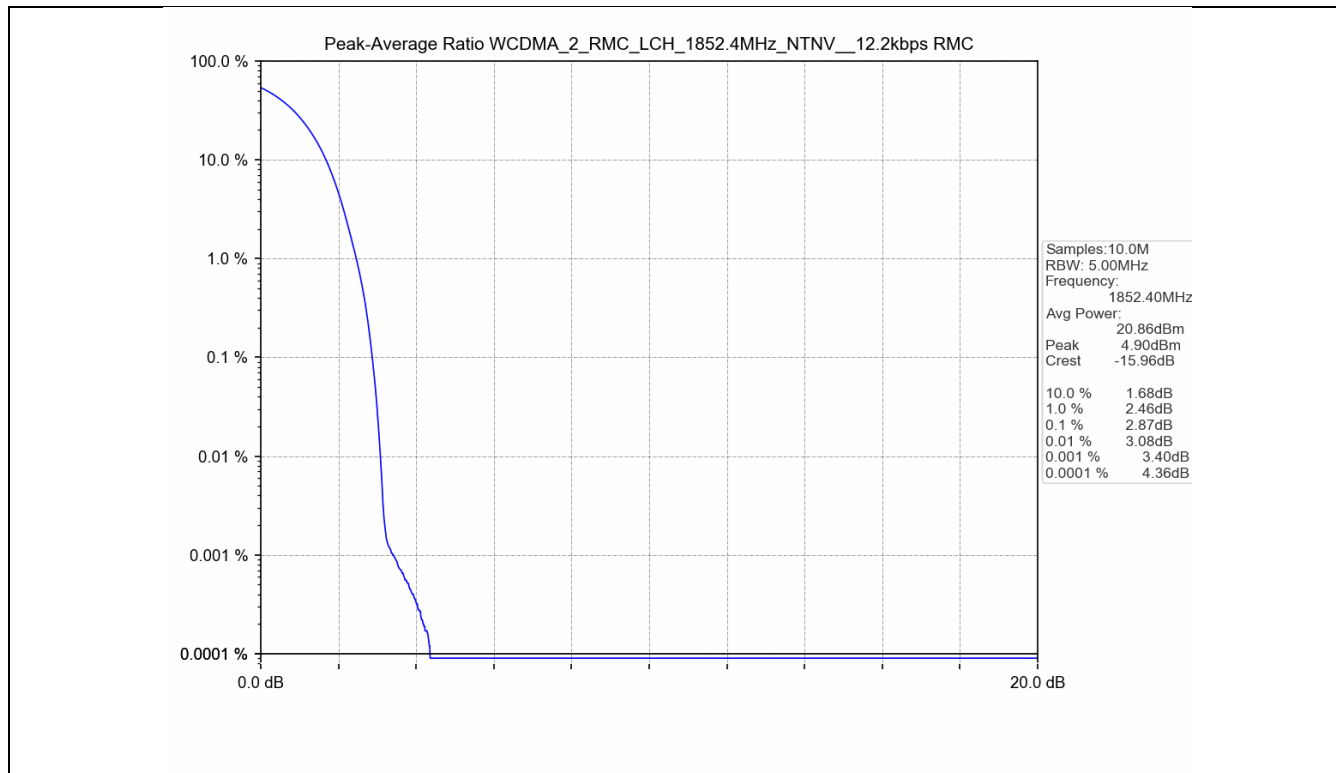


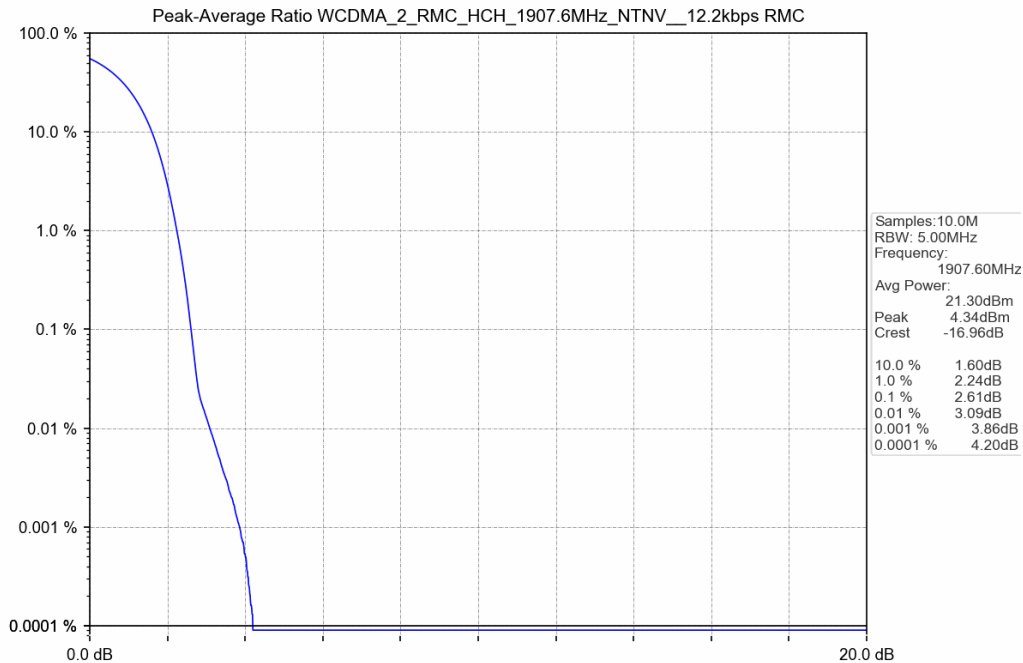
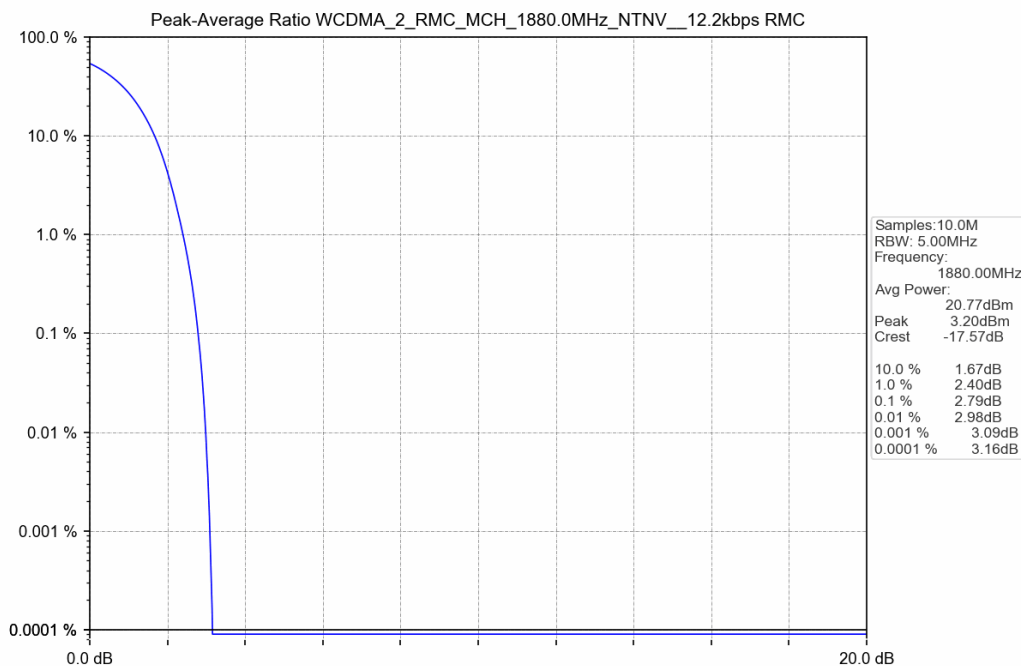


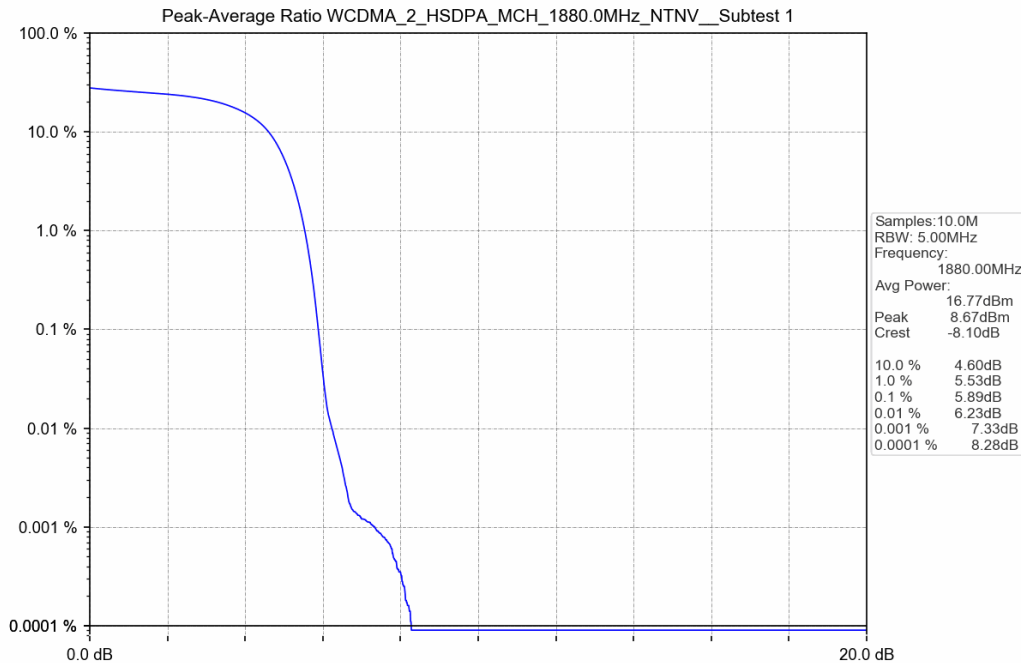
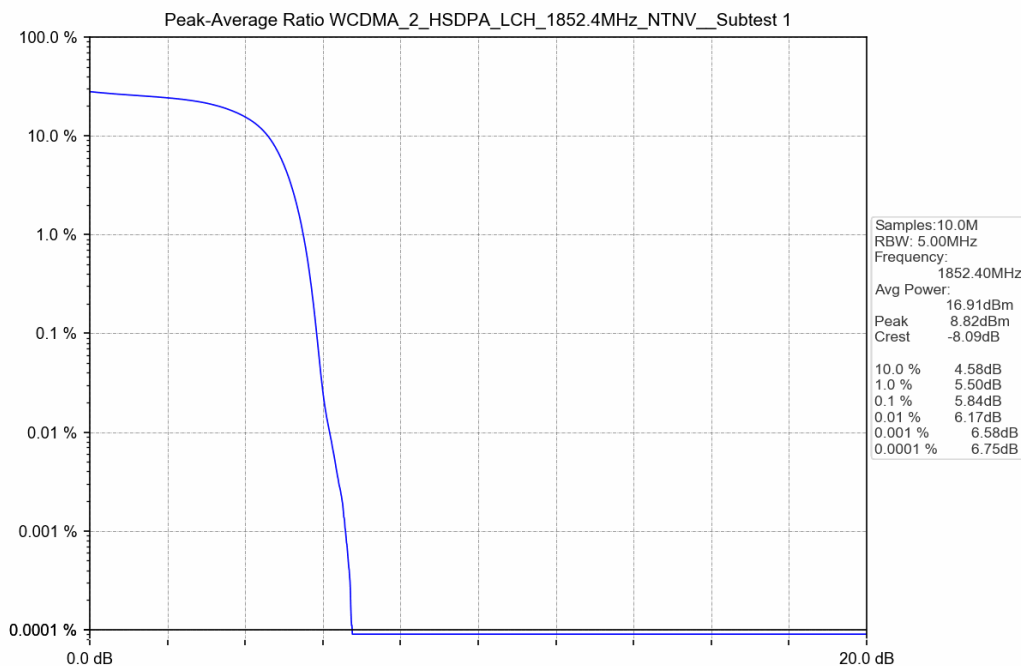
#### 4. Peak-Average Ratio

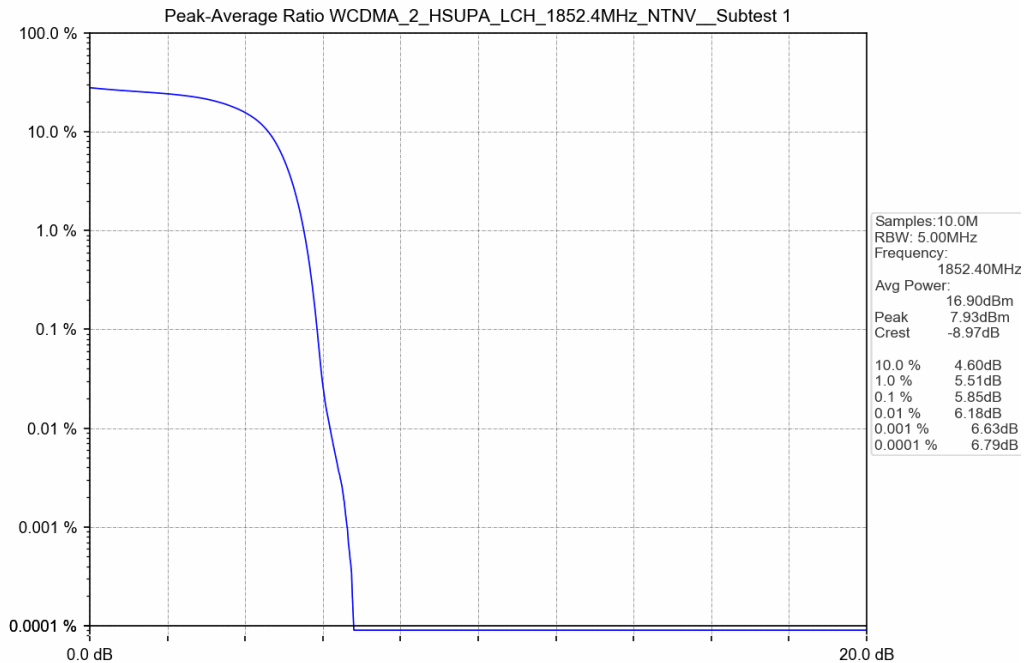
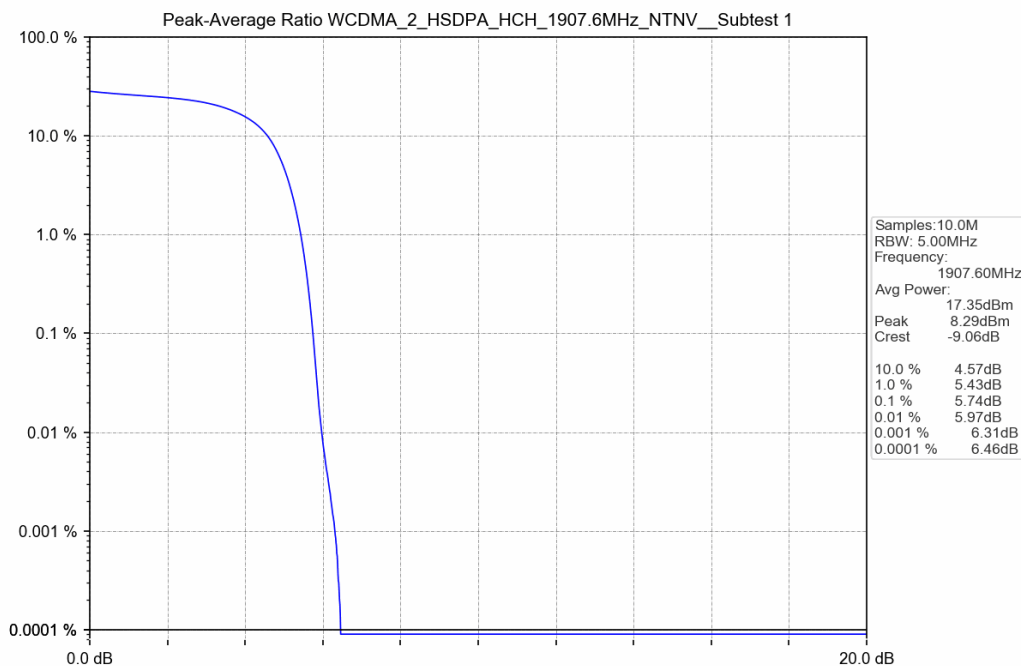
### Band 2

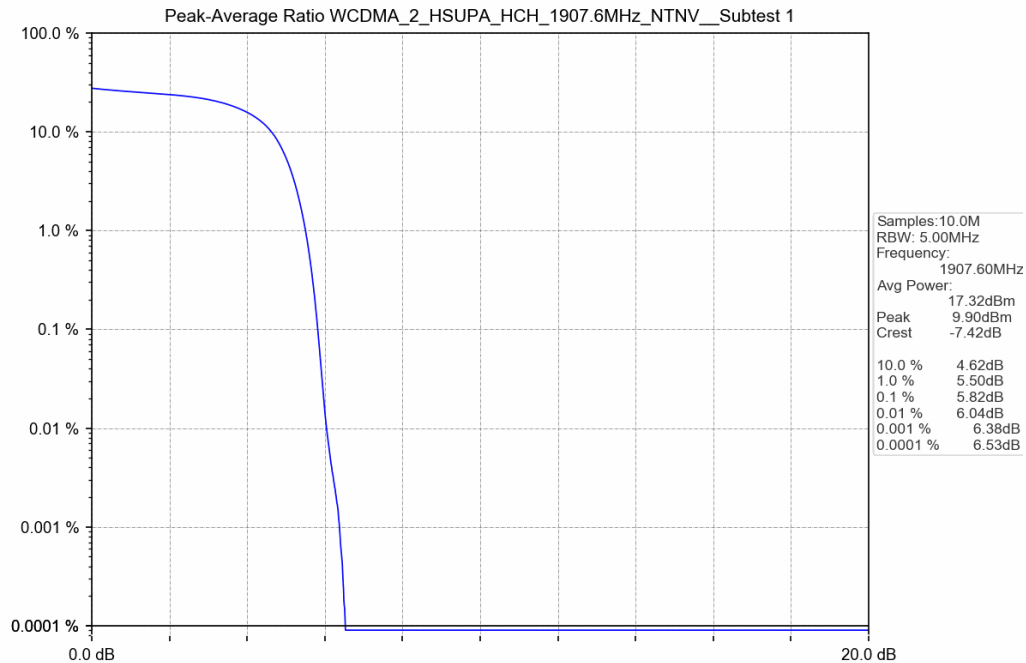
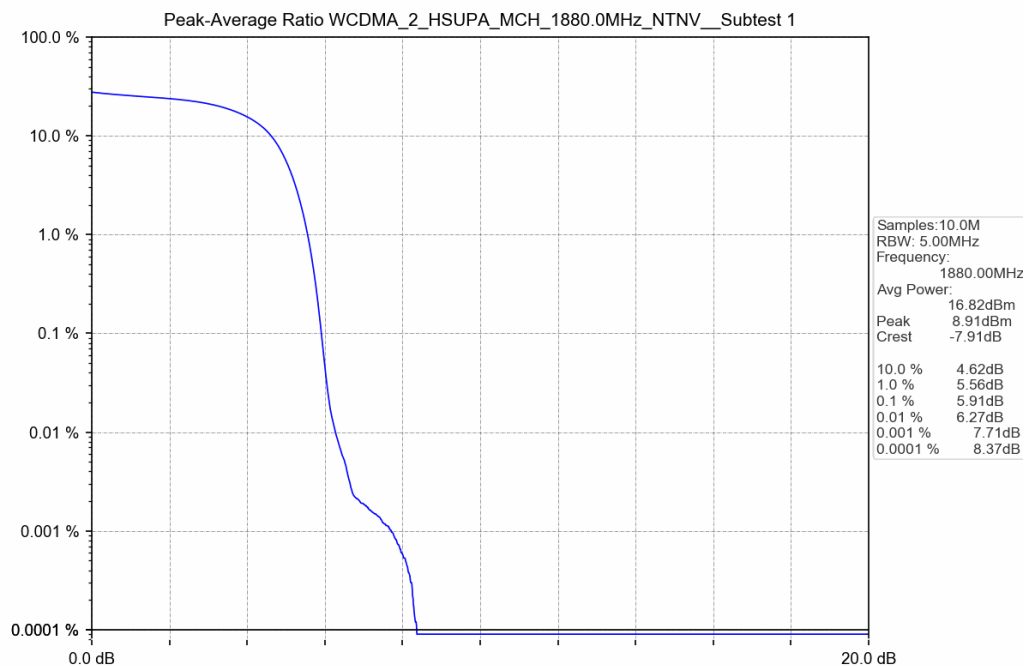
| Test Band: 2 |                  |      |      |            |         |
|--------------|------------------|------|------|------------|---------|
| Test Mode    | Test result (dB) |      |      | Limit (dB) | Verdict |
|              | LCH              | MCH  | HCH  |            |         |
| HSUPA        | 5.85             | 5.91 | 5.82 | 13         | PASS    |
| HSDPA        | 5.84             | 5.89 | 5.74 | 13         | PASS    |
| RMC          | 2.87             | 2.79 | 2.61 | 13         | PASS    |



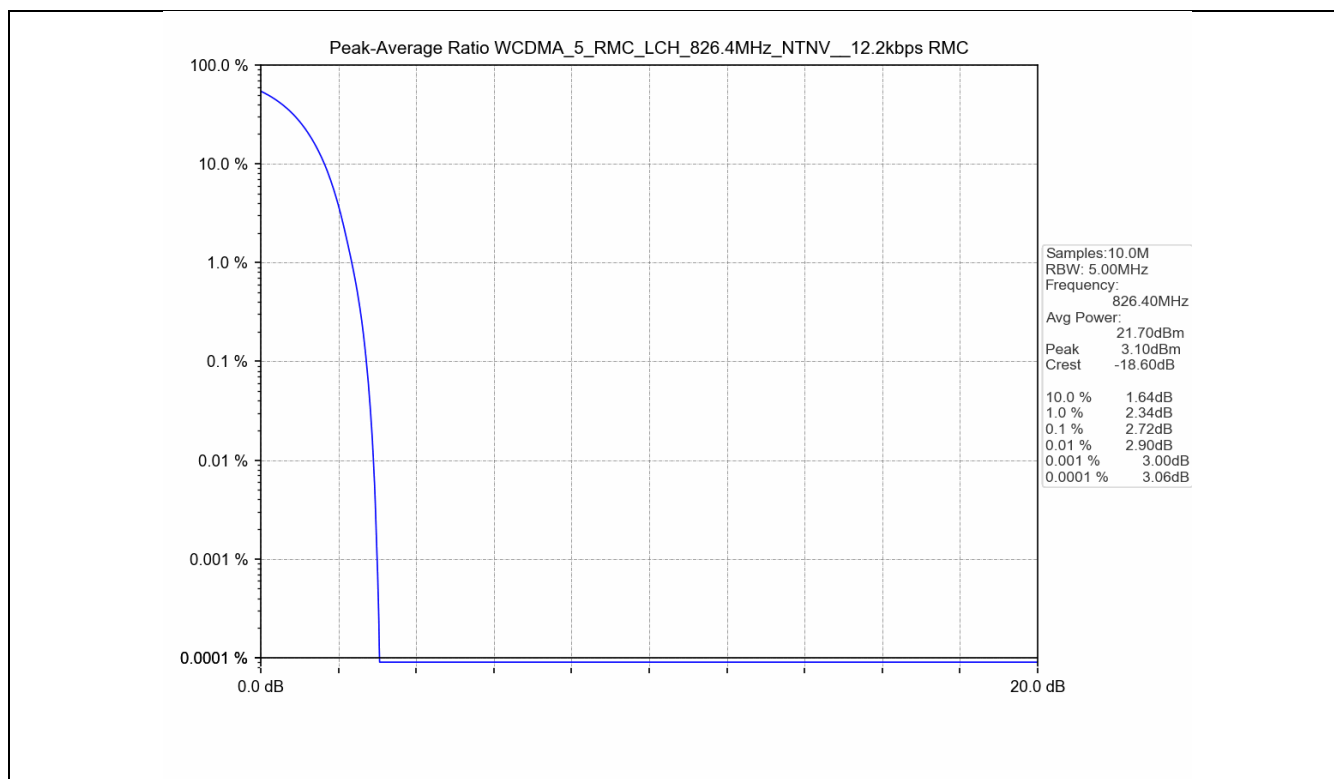


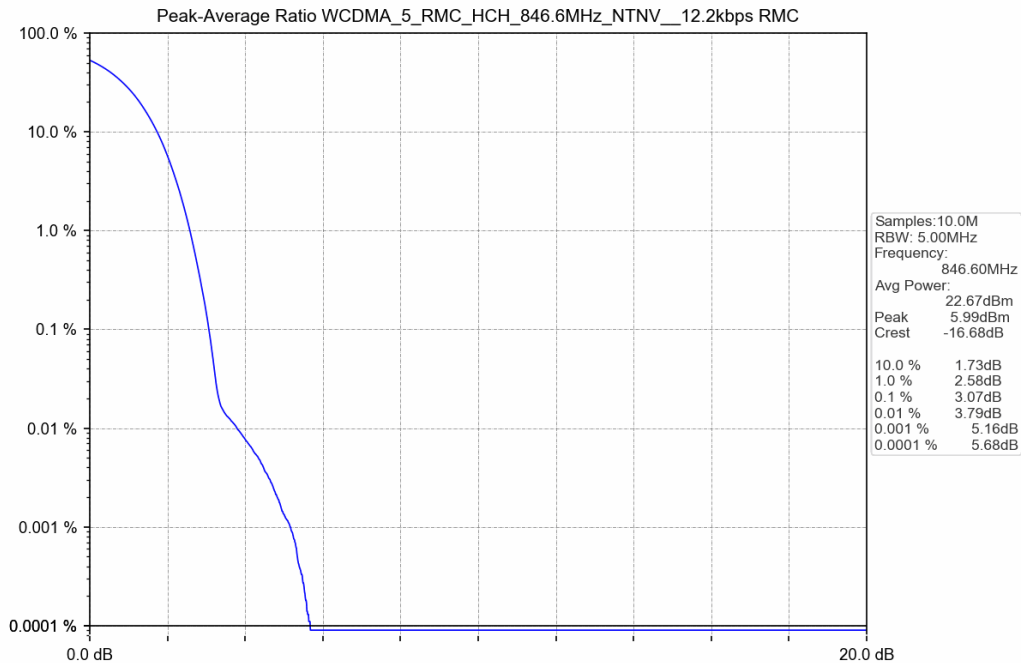
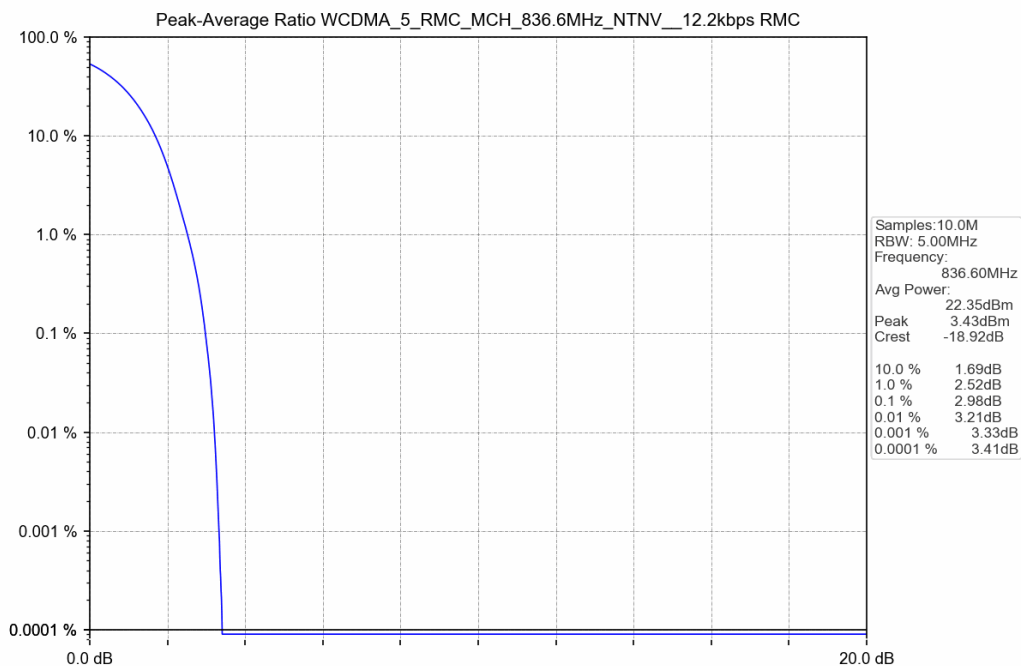


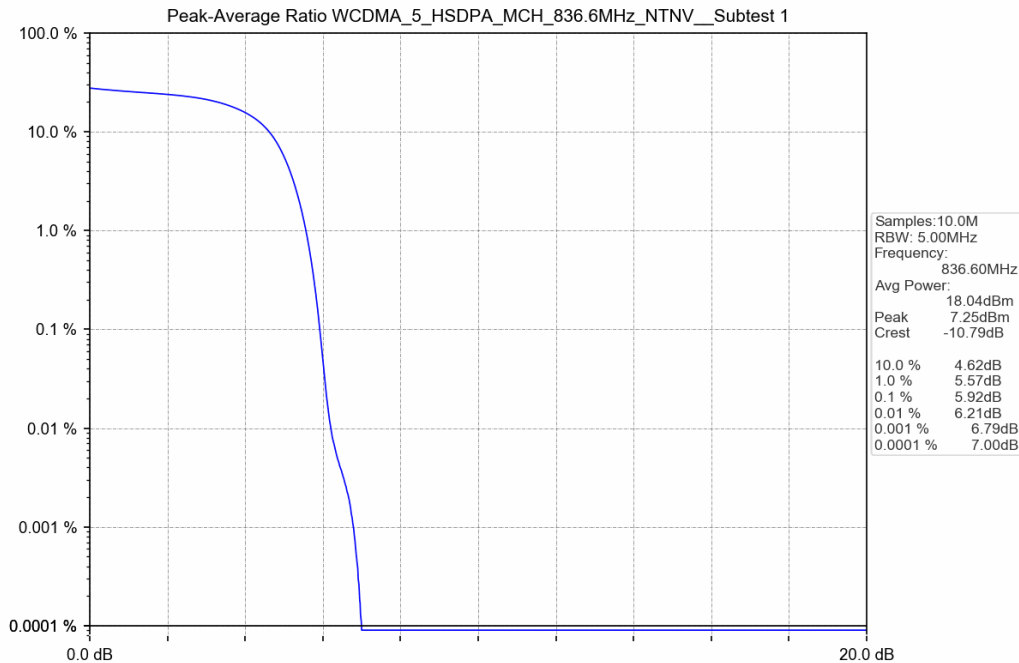
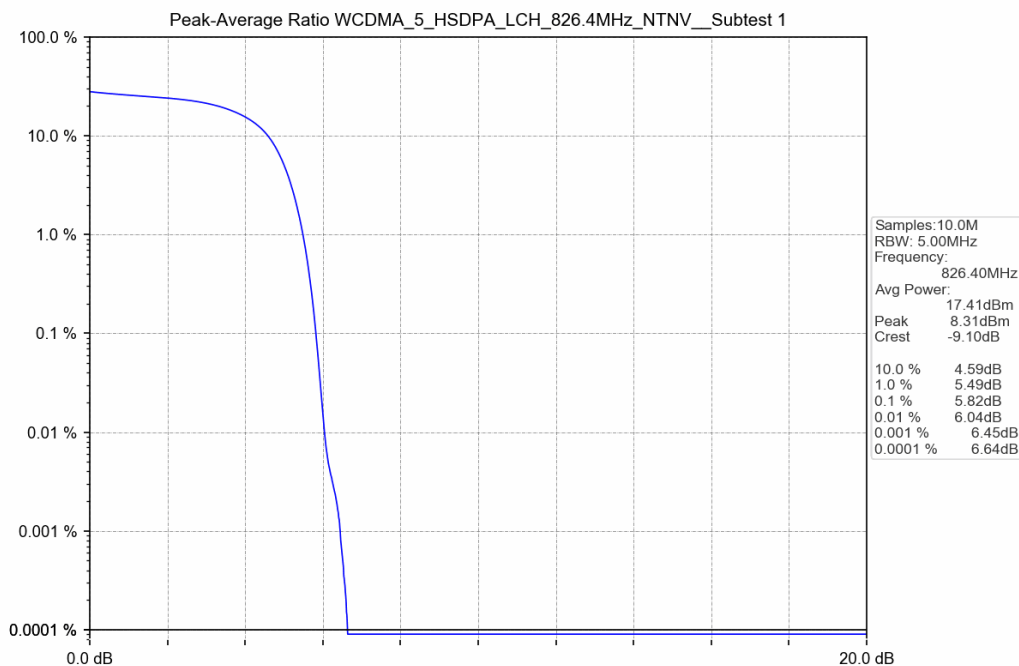


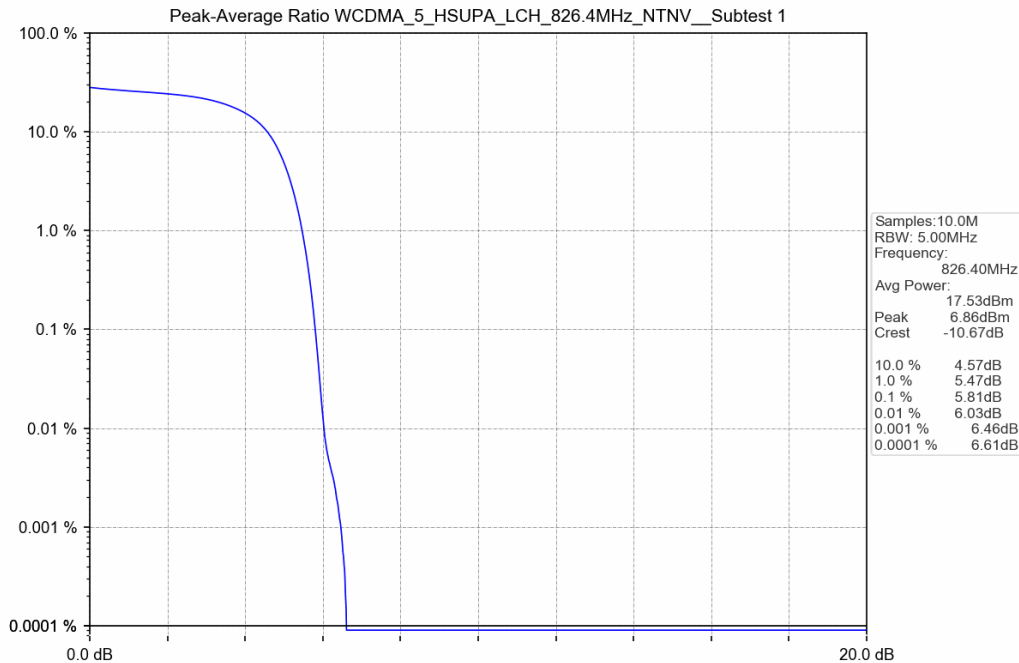
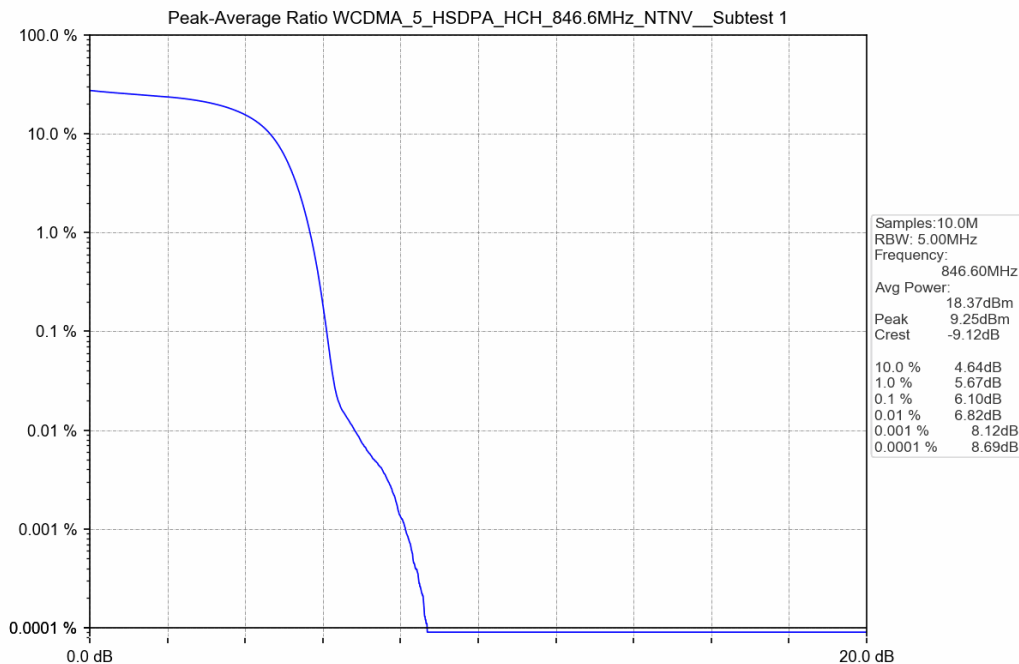


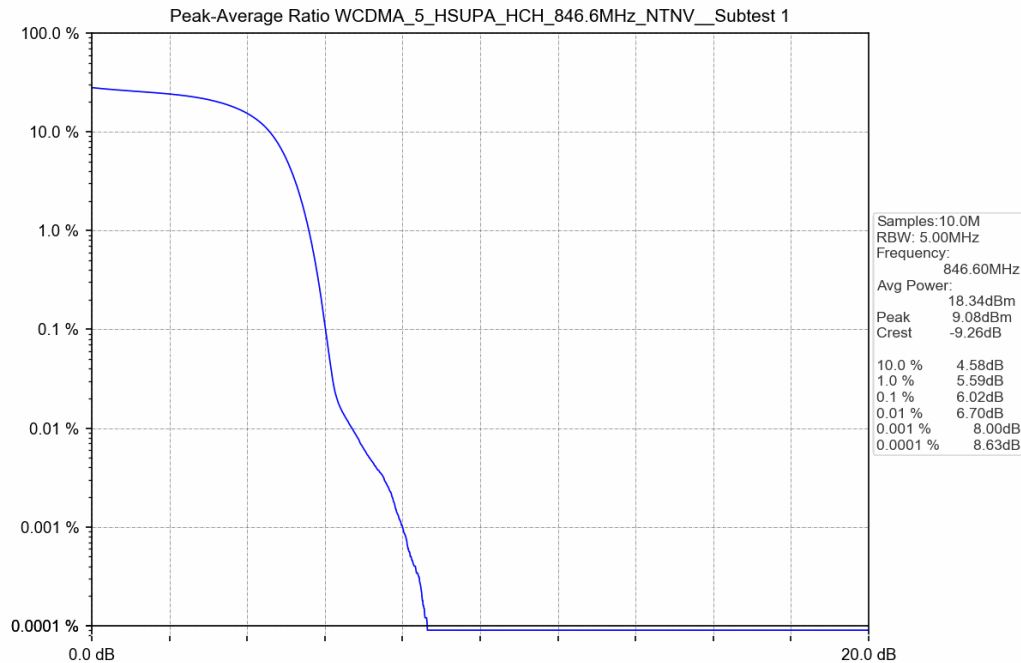
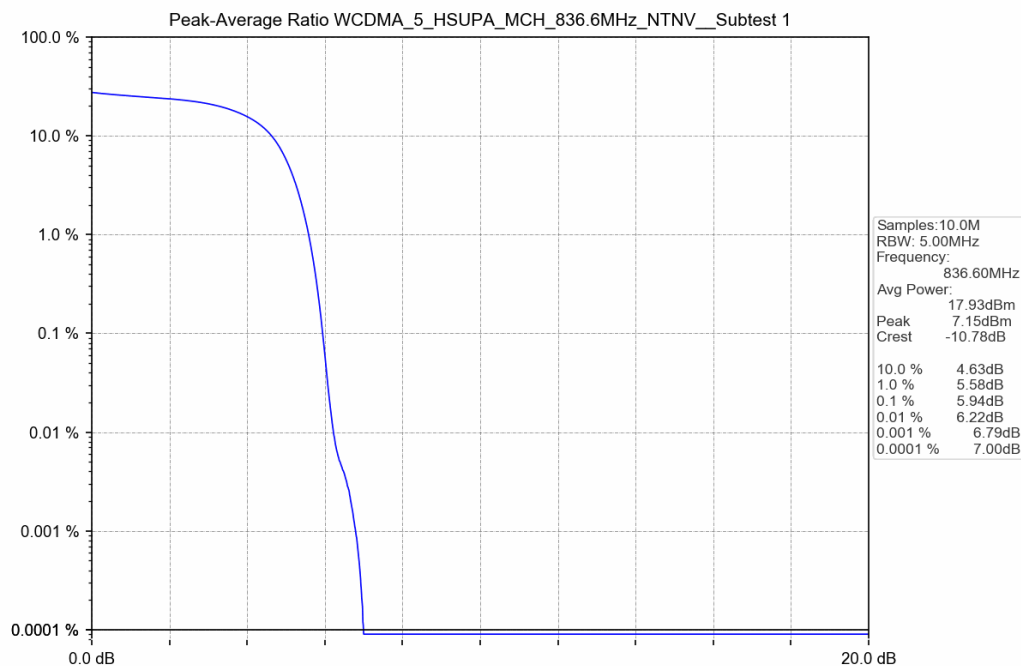
| Test Band: 5 |                  |      |      |            |         |
|--------------|------------------|------|------|------------|---------|
| Test Mode    | Test result (dB) |      |      | Limit (dB) | Verdict |
|              | LCH              | MCH  | HCH  |            |         |
| HSUPA        | 5.81             | 5.94 | 6.02 | 13         | PASS    |
| HSDPA        | 5.82             | 5.92 | 6.10 | 13         | PASS    |
| RMC          | 2.72             | 2.98 | 3.07 | 13         | PASS    |











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

## Band 2

| Test Band: 2 |              |                       |       |       |              |       |           |       |       |             |         |
|--------------|--------------|-----------------------|-------|-------|--------------|-------|-----------|-------|-------|-------------|---------|
| Test Mode    |              | Conducted Power (dBm) |       |       | Antenna gain |       | EIRP(dBm) |       |       | Limit (dBm) | Verdict |
|              |              | LCH                   | MCH   | HCH   | (dBd)        | (dBi) | LCH       | MCH   | HCH   |             |         |
| HSUPA        | Subtest 1    | 17.07                 | 17.08 | 17.93 | 0.95         | 3.10  | 20.17     | 20.18 | 21.03 | 33.01       | PASS    |
|              | Subtest 2    | 17.56                 | 17.08 | 17.39 | 0.95         | 3.10  | 20.66     | 20.18 | 20.49 | 33.01       | PASS    |
|              | Subtest 3    | 17.35                 | 17.60 | 17.41 | 0.95         | 3.10  | 20.45     | 20.70 | 20.51 | 33.01       | PASS    |
|              | Subtest 4    | 17.01                 | 17.44 | 17.69 | 0.95         | 3.10  | 20.11     | 20.54 | 20.79 | 33.01       | PASS    |
|              | Subtest 5    | 17.32                 | 17.43 | 17.38 | 0.95         | 3.10  | 20.42     | 20.53 | 20.48 | 33.01       | PASS    |
| HSDPA        | Subtest 1    | 17.56                 | 17.38 | 17.67 | 0.95         | 3.10  | 20.66     | 20.48 | 20.77 | 33.01       | PASS    |
|              | Subtest 2    | 17.08                 | 17.13 | 17.69 | 0.95         | 3.10  | 20.18     | 20.23 | 20.79 | 33.01       | PASS    |
|              | Subtest 3    | 17.03                 | 17.63 | 17.64 | 0.95         | 3.10  | 20.13     | 20.73 | 20.74 | 33.01       | PASS    |
|              | Subtest 4    | 17.04                 | 17.43 | 17.38 | 0.95         | 3.10  | 20.14     | 20.53 | 20.48 | 33.01       | PASS    |
| RMC          | 12.2kbps RMC | 21.90                 | 21.95 | 22.25 | 0.95         | 3.10  | 25.00     | 25.05 | 25.35 | 33.01       | PASS    |

Note:

1) dBd = dBi - 2.15

2) EIRP = Conducted output power + Antenna gain (dBi)

## Band 5

| Test Band: 5 |              |                       |       |       |              |       |          |       |       |             |         |
|--------------|--------------|-----------------------|-------|-------|--------------|-------|----------|-------|-------|-------------|---------|
| Test Mode    |              | Conducted Power (dBm) |       |       | Antenna gain |       | ERP(dBm) |       |       | Limit (dBm) | Verdict |
|              |              | LCH                   | MCH   | HCH   | (dBd)        | (dBi) | LCH      | MCH   | HCH   |             |         |
| HSUPA        | Subtest 1    | 18.71                 | 18.99 | 18.98 | 0.55         | 2.70  | 19.26    | 19.54 | 19.53 | 38.45       | PASS    |
|              | Subtest 2    | 18.73                 | 18.99 | 19.22 | 0.55         | 2.70  | 19.28    | 19.54 | 19.77 | 38.45       | PASS    |
|              | Subtest 3    | 18.55                 | 19.00 | 19.45 | 0.55         | 2.70  | 19.10    | 19.55 | 20.00 | 38.45       | PASS    |
|              | Subtest 4    | 18.54                 | 18.77 | 19.46 | 0.55         | 2.70  | 19.09    | 19.32 | 20.01 | 38.45       | PASS    |
|              | Subtest 5    | 18.72                 | 19.01 | 19.46 | 0.55         | 2.70  | 19.27    | 19.56 | 20.01 | 38.45       | PASS    |
| HSDPA        | Subtest 1    | 18.47                 | 18.71 | 18.93 | 0.55         | 2.70  | 19.02    | 19.26 | 19.48 | 38.45       | PASS    |
|              | Subtest 2    | 18.17                 | 19.07 | 19.22 | 0.55         | 2.70  | 18.72    | 19.62 | 19.77 | 38.45       | PASS    |
|              | Subtest 3    | 18.22                 | 18.72 | 18.95 | 0.55         | 2.70  | 18.77    | 19.27 | 19.50 | 38.45       | PASS    |
|              | Subtest 4    | 18.50                 | 19.24 | 19.41 | 0.55         | 2.70  | 19.05    | 19.79 | 19.96 | 38.45       | PASS    |
| RMC          | 12.2kbps RMC | 22.98                 | 23.57 | 23.75 | 0.55         | 2.70  | 23.53    | 24.12 | 24.30 | 38.45       | PASS    |

Note:

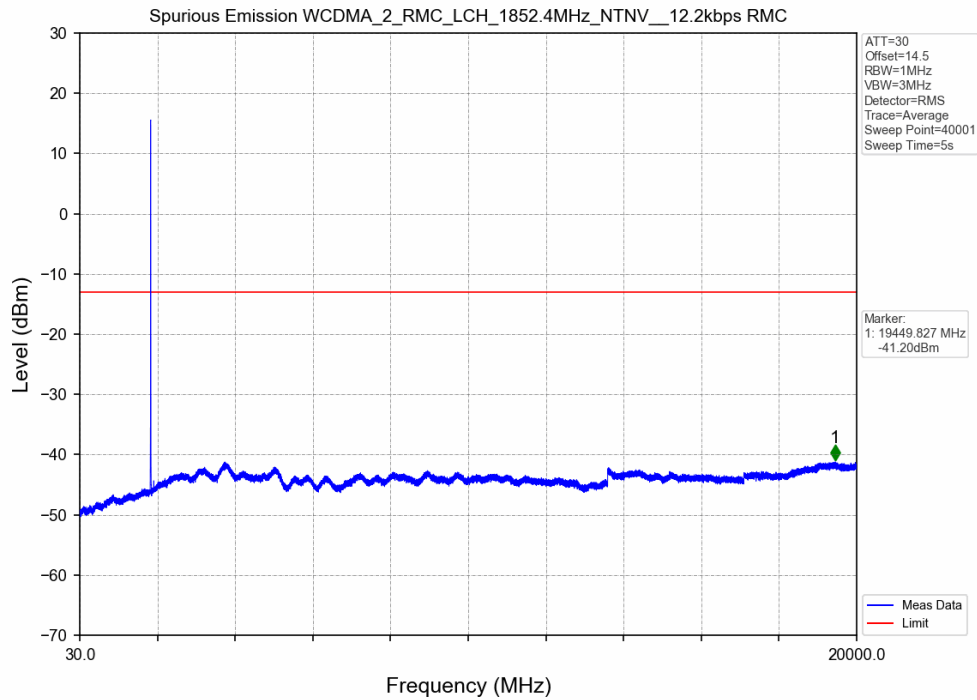
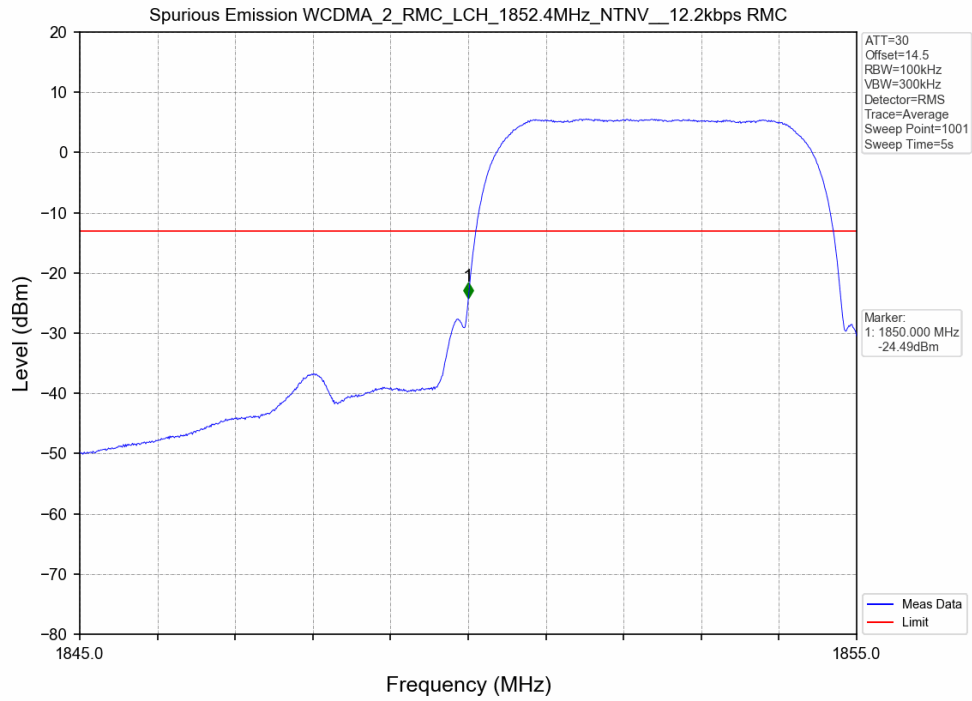
1) dBd = dBi - 2.15

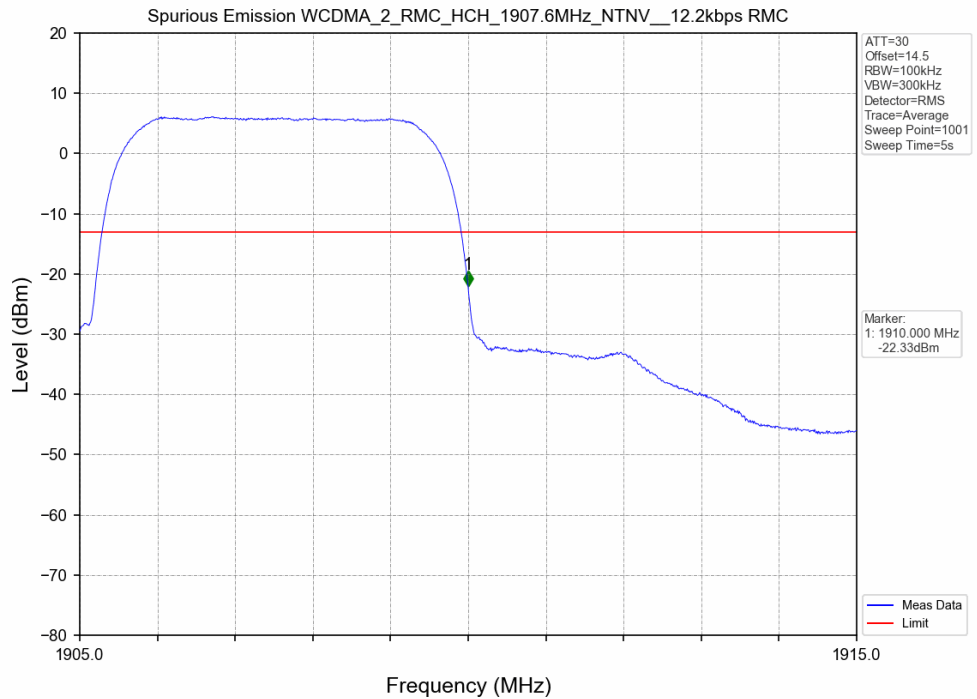
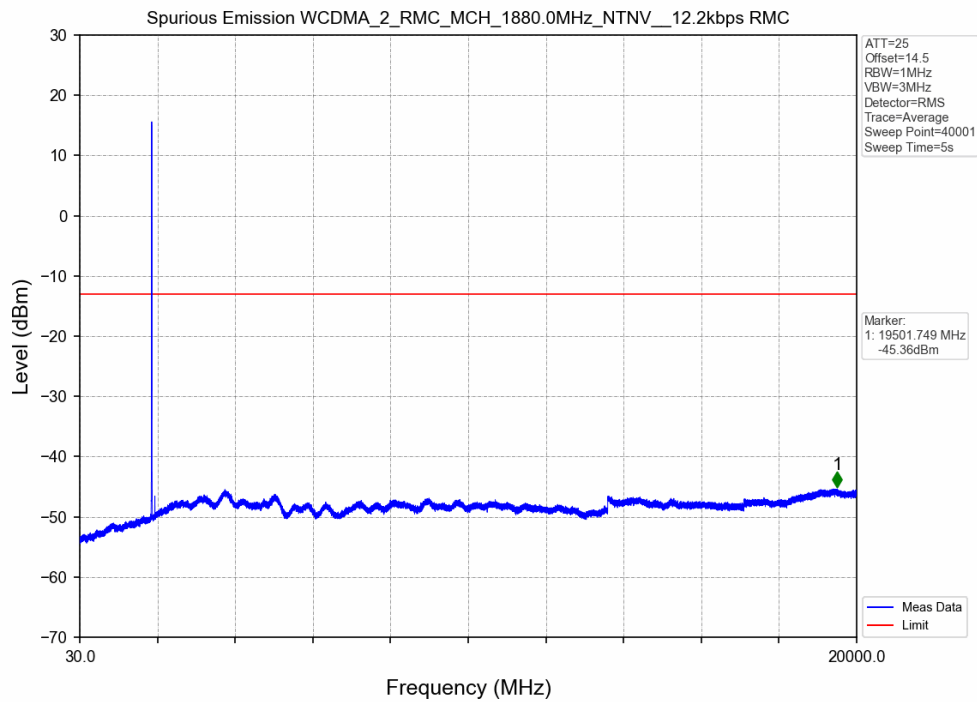
2) EIRP = Conducted output power + Antenna gain (dBi)

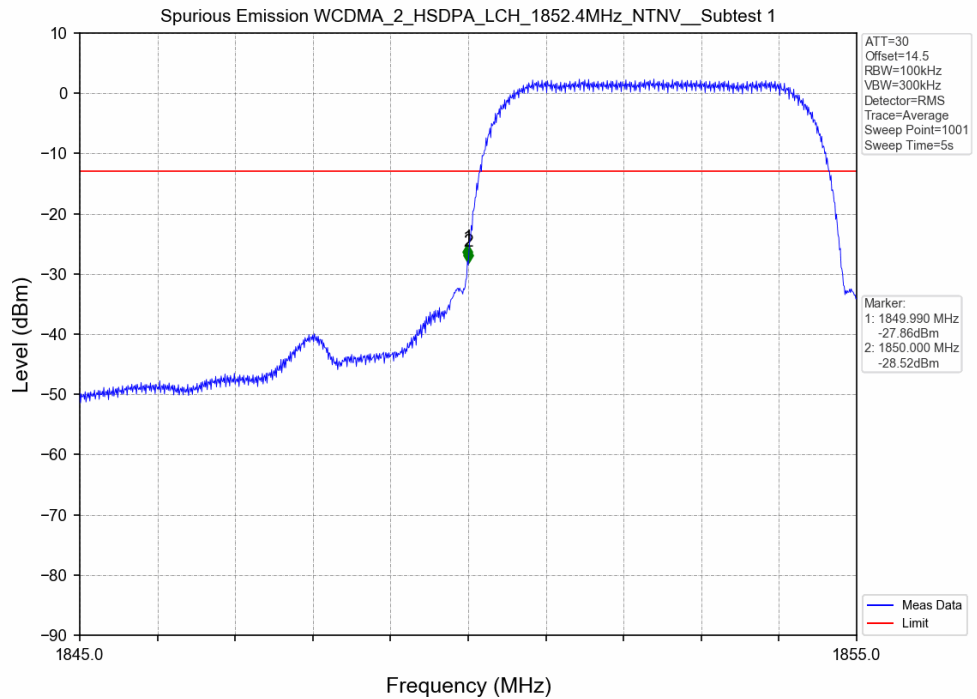
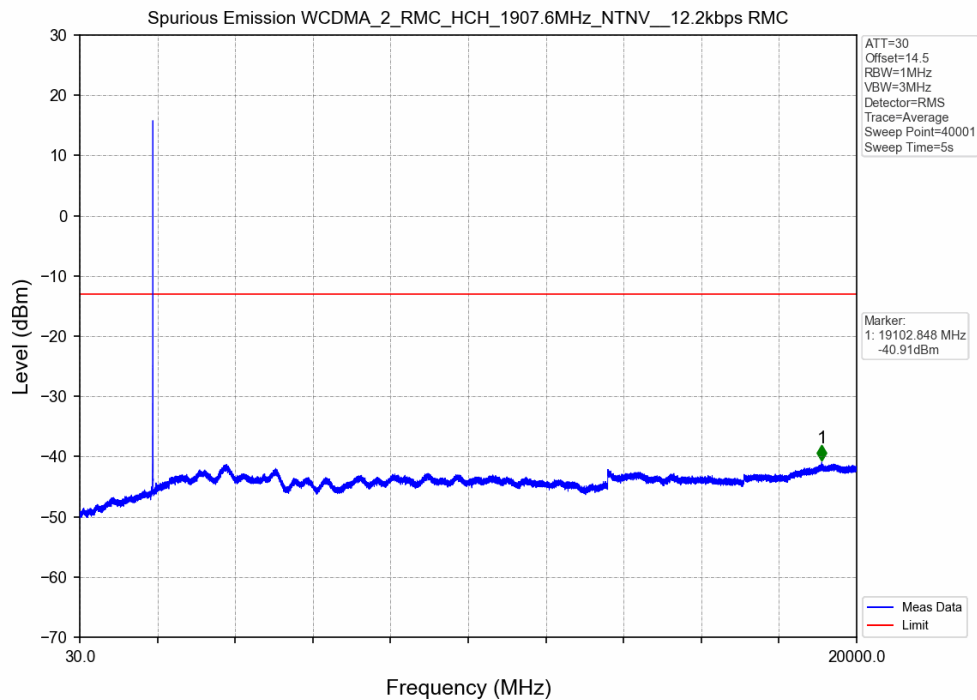
3) ERP = Conducted output power + Antenna gain (dBd)

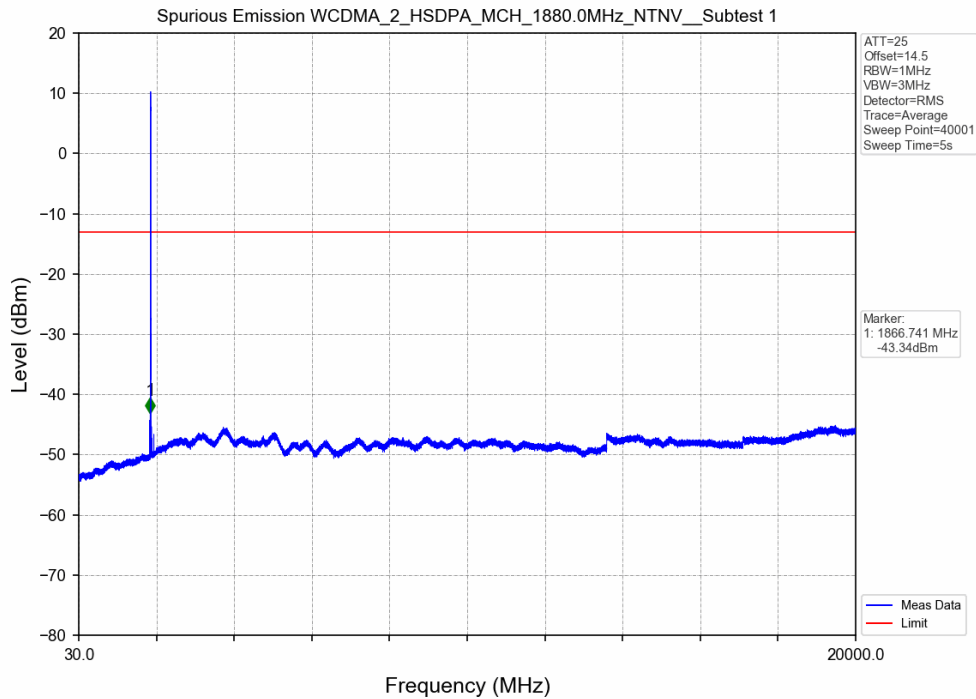
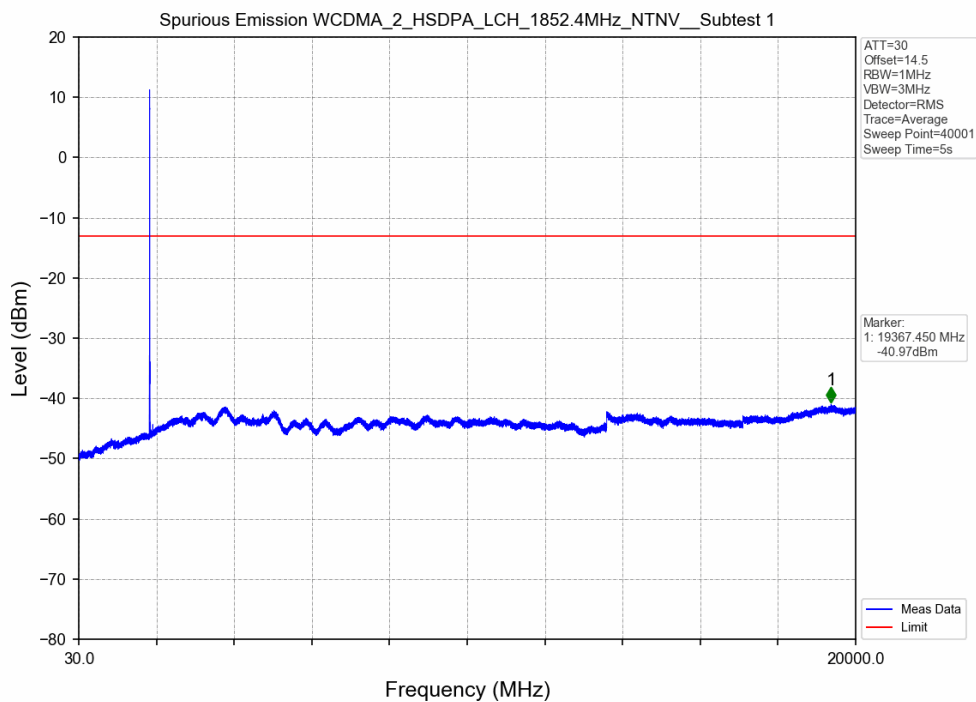
## 6.Spurious Emission

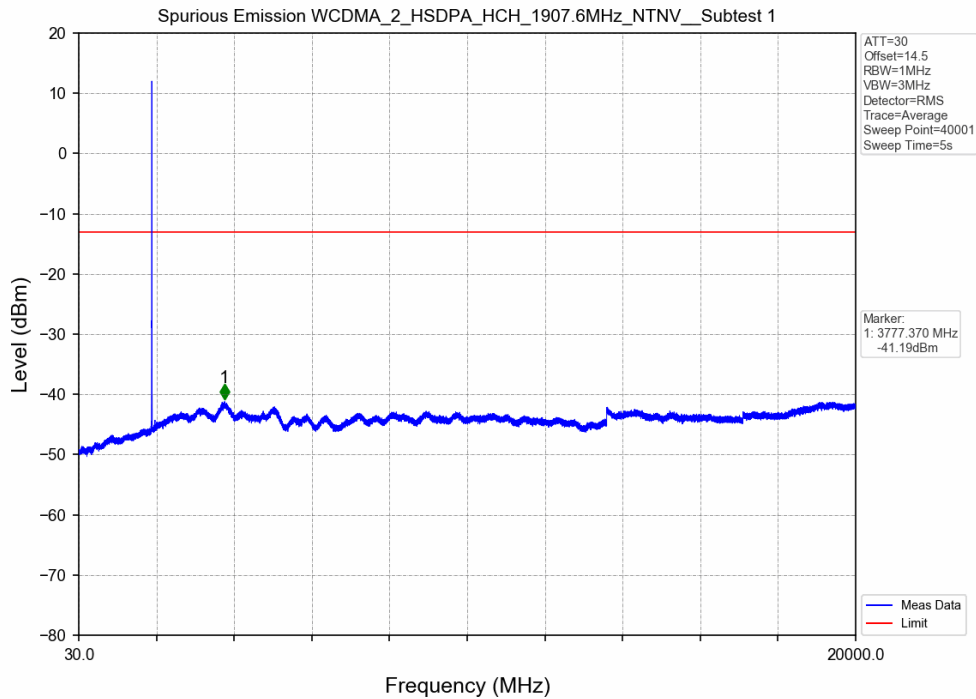
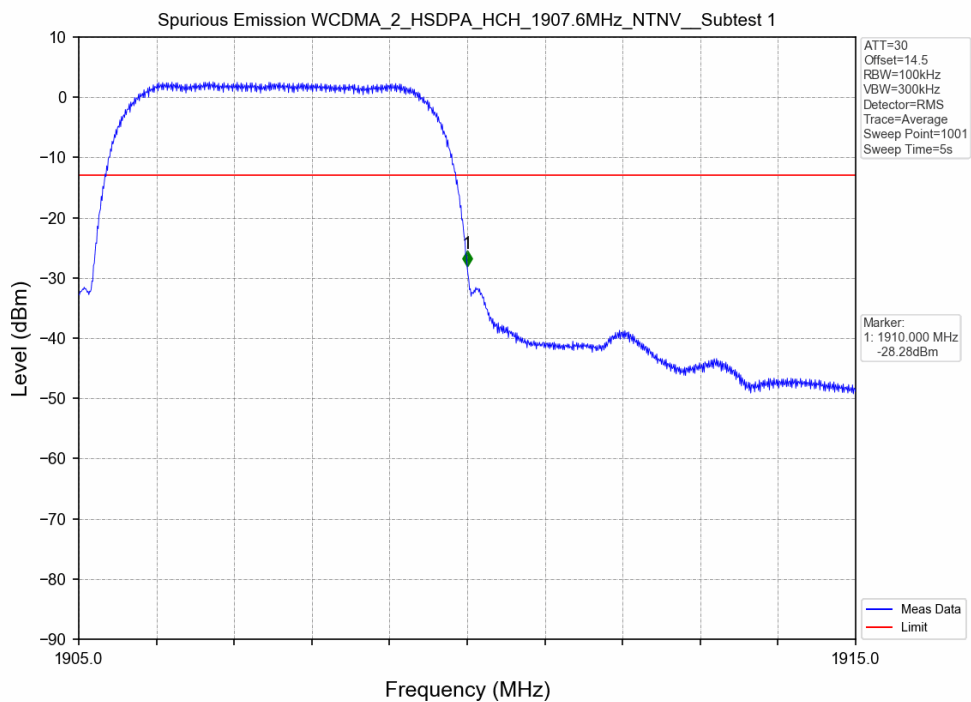
### Band 2

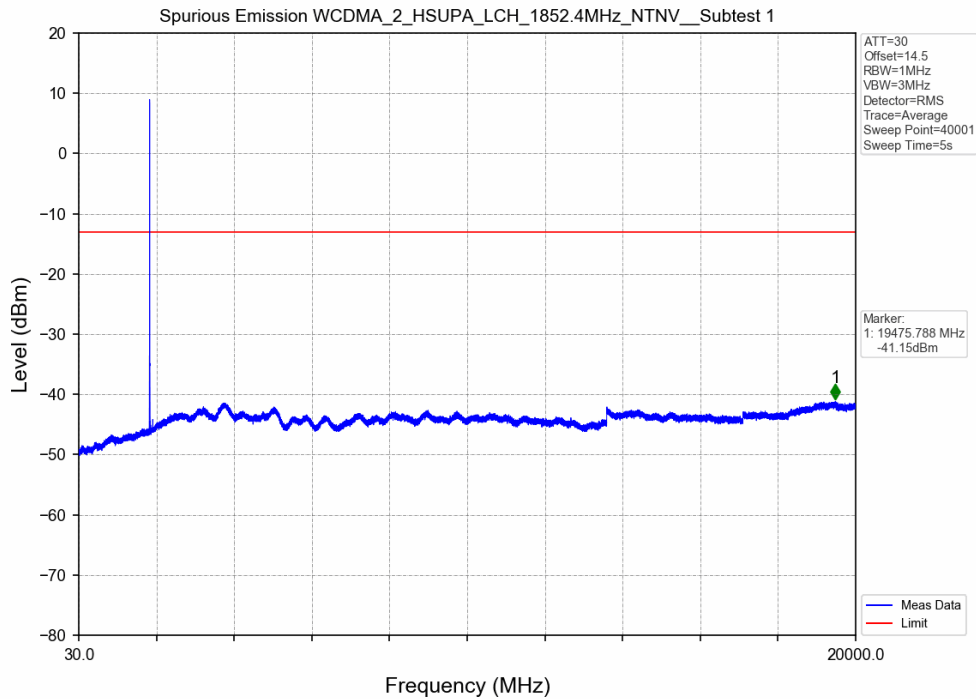
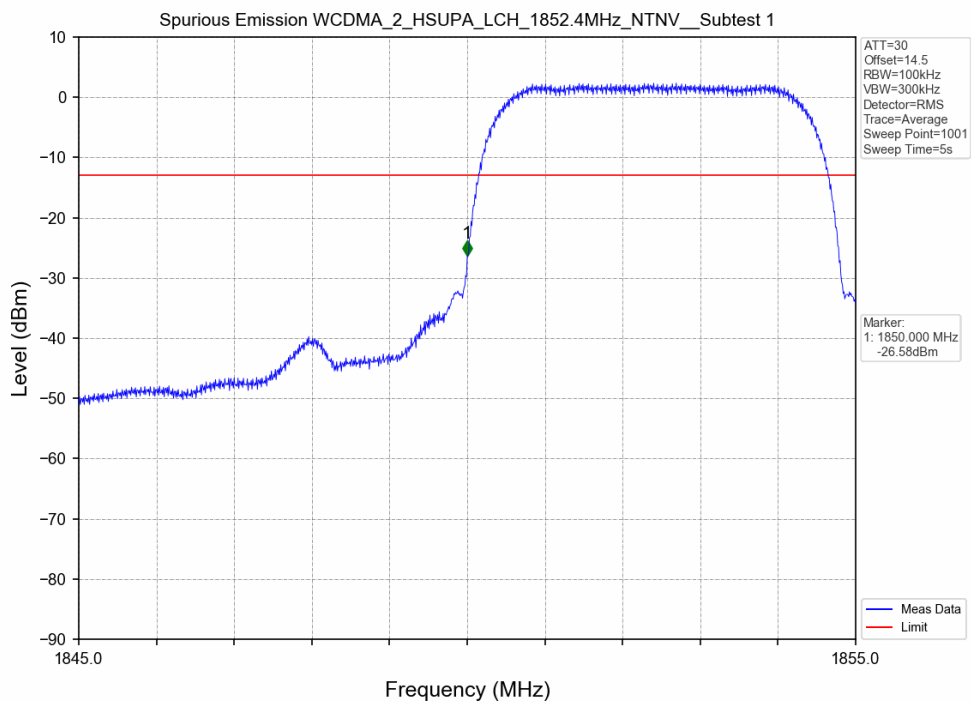


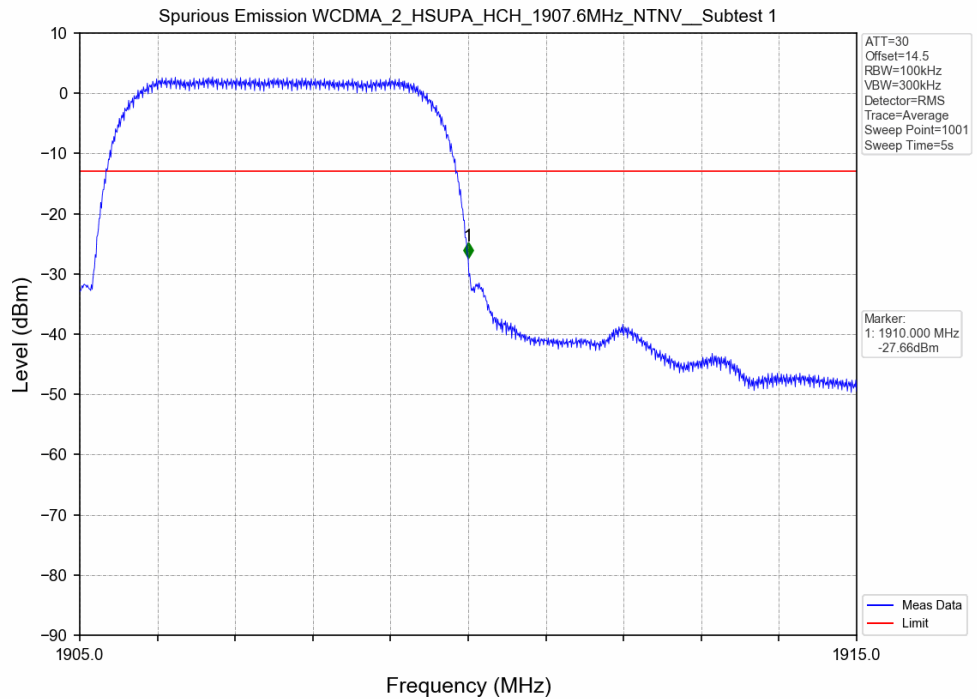
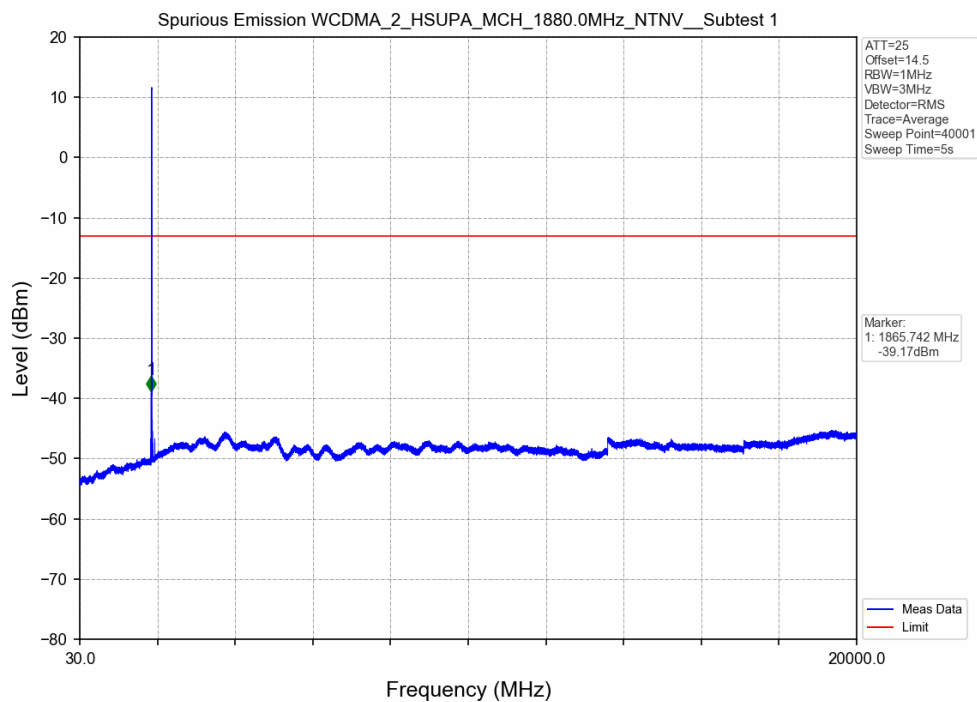


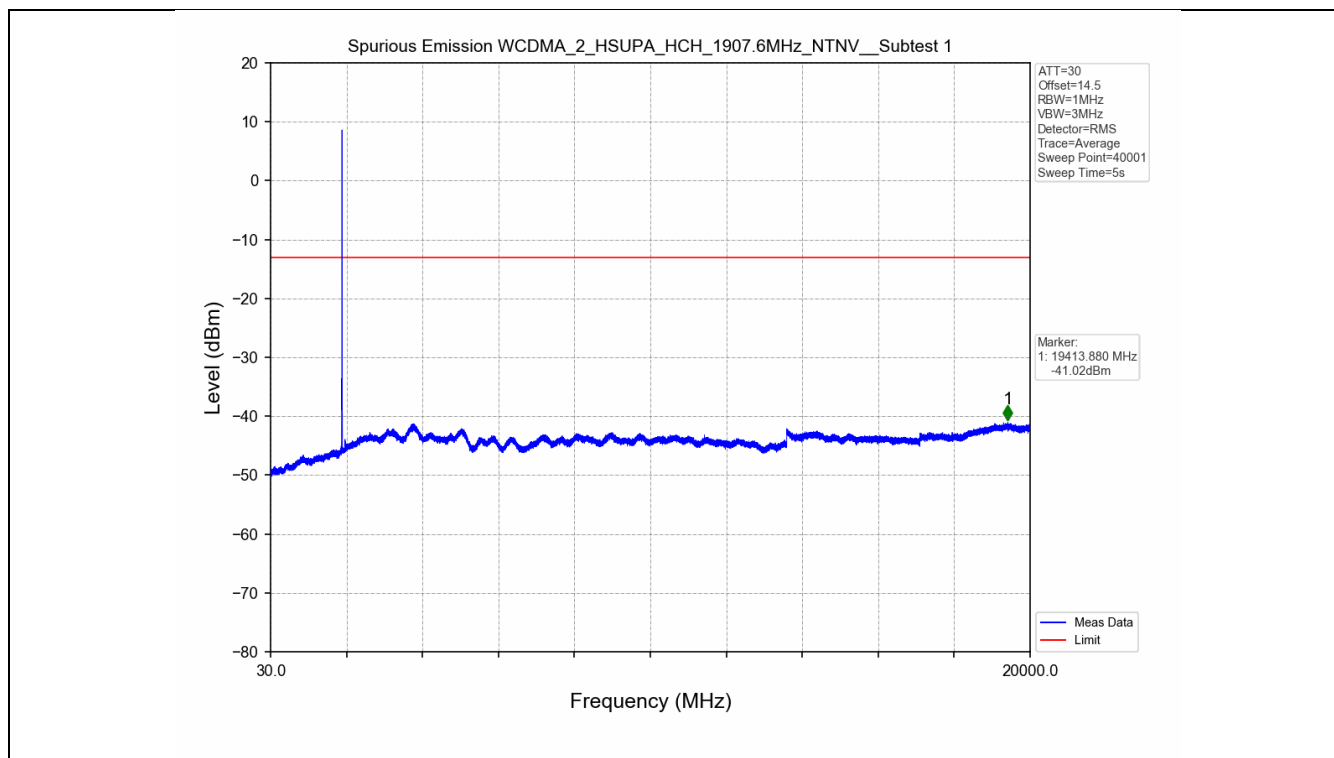












## Band 5

