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Test Report No.: PSU-QSU2403110115RF03





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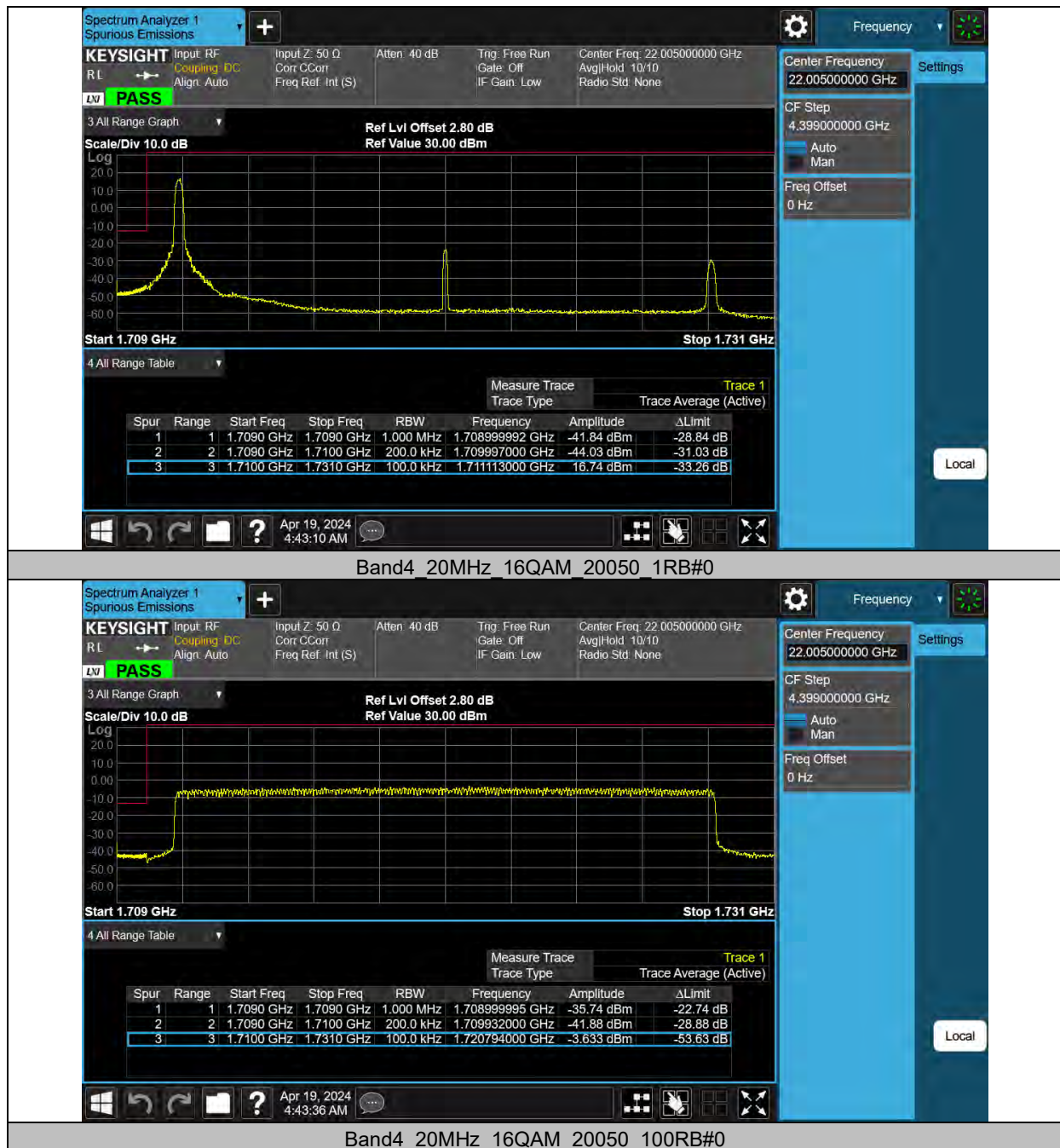
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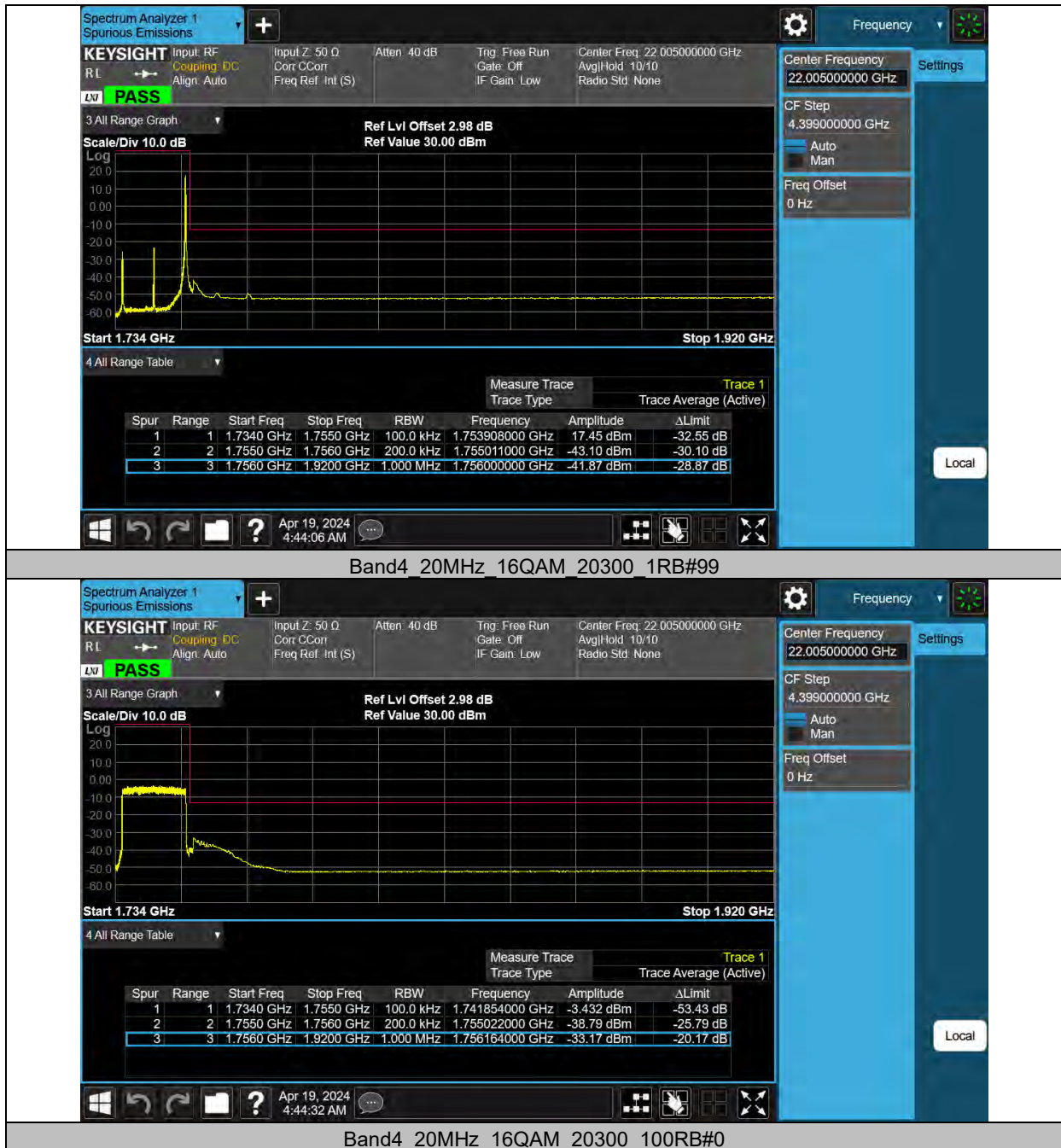
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## CONDUCTED SPURIOUS EMISSION

### Test Result

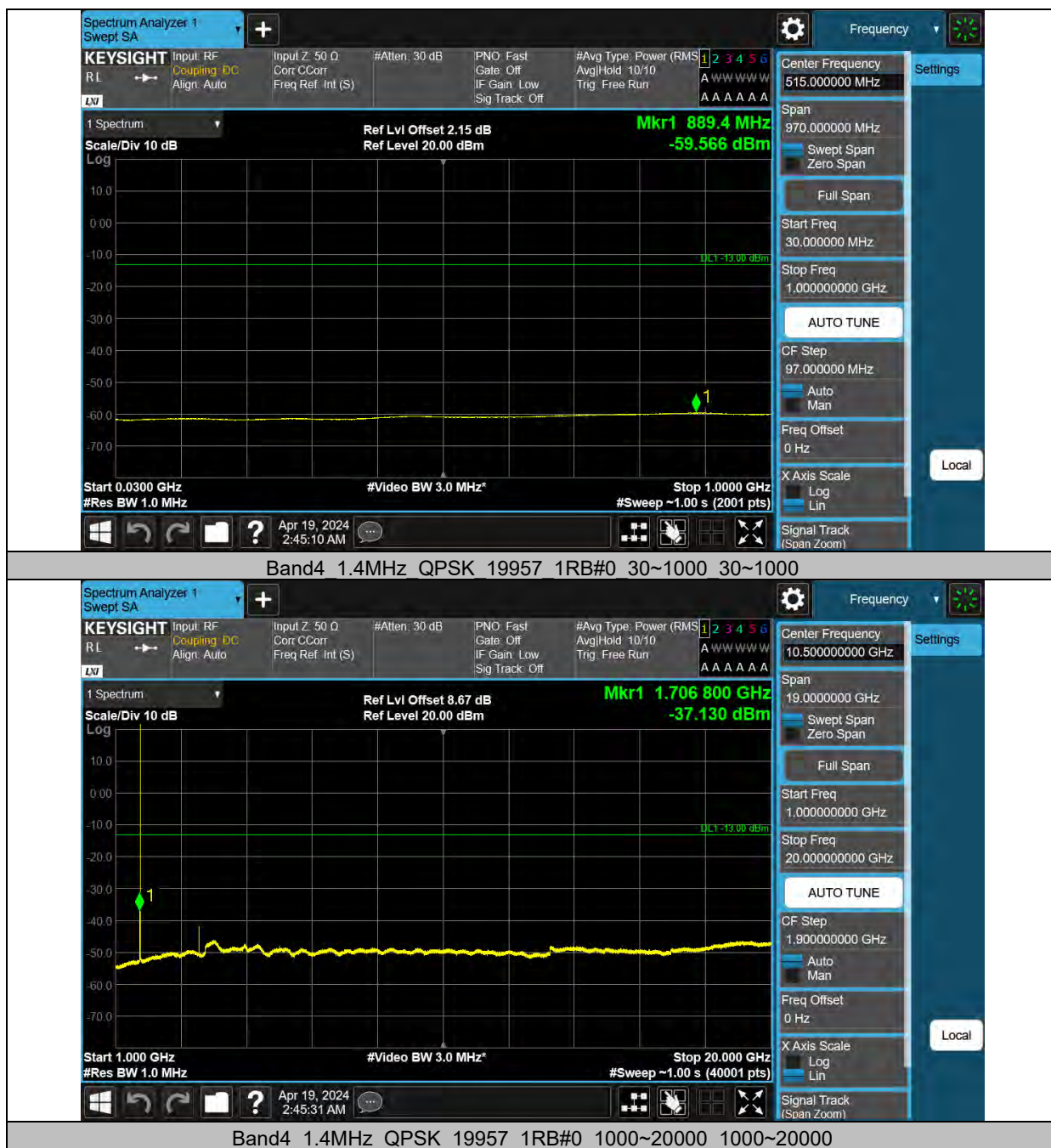
| Band  | Bandwidth | Modulation | Channel | RB Configuration | Frequency Range | Result (dBm) | Verdict |
|-------|-----------|------------|---------|------------------|-----------------|--------------|---------|
| Band4 | 1.4MHz    | QPSK       | 19957   | 1RB#0            | 30~1000         | -59.57       | PASS    |
| Band4 | 1.4MHz    | QPSK       | 19957   | 1RB#0            | 1000~20000      | -37.13       | PASS    |
| Band4 | 1.4MHz    | QPSK       | 20175   | 1RB#0            | 30~1000         | -59.58       | PASS    |
| Band4 | 1.4MHz    | QPSK       | 20175   | 1RB#0            | 1000~20000      | -36.06       | PASS    |
| Band4 | 1.4MHz    | QPSK       | 20393   | 1RB#0            | 30~1000         | -59.63       | PASS    |
| Band4 | 1.4MHz    | QPSK       | 20393   | 1RB#0            | 1000~20000      | -36.94       | PASS    |
| Band4 | 3MHz      | QPSK       | 19965   | 1RB#0            | 30~1000         | -59.63       | PASS    |
| Band4 | 3MHz      | QPSK       | 19965   | 1RB#0            | 1000~20000      | -42.50       | PASS    |
| Band4 | 3MHz      | QPSK       | 20175   | 1RB#0            | 30~1000         | -59.60       | PASS    |
| Band4 | 3MHz      | QPSK       | 20175   | 1RB#0            | 1000~20000      | -43.73       | PASS    |
| Band4 | 3MHz      | QPSK       | 20385   | 1RB#0            | 30~1000         | -59.60       | PASS    |
| Band4 | 3MHz      | QPSK       | 20385   | 1RB#0            | 1000~20000      | -42.75       | PASS    |
| Band4 | 5MHz      | QPSK       | 19975   | 1RB#0            | 30~1000         | -59.59       | PASS    |
| Band4 | 5MHz      | QPSK       | 19975   | 1RB#0            | 1000~20000      | -42.11       | PASS    |
| Band4 | 5MHz      | QPSK       | 19975   | 1RB#24           | 30~1000         | -59.55       | PASS    |
| Band4 | 5MHz      | QPSK       | 19975   | 1RB#24           | 1000~20000      | -45.27       | PASS    |
| Band4 | 5MHz      | QPSK       | 19975   | 25RB#0           | 30~1000         | -59.62       | PASS    |
| Band4 | 5MHz      | QPSK       | 19975   | 25RB#0           | 1000~20000      | -39.82       | PASS    |
| Band4 | 5MHz      | QPSK       | 20175   | 1RB#0            | 30~1000         | -59.62       | PASS    |
| Band4 | 5MHz      | QPSK       | 20175   | 1RB#0            | 1000~20000      | -44.44       | PASS    |
| Band4 | 5MHz      | QPSK       | 20175   | 1RB#24           | 30~1000         | -59.58       | PASS    |
| Band4 | 5MHz      | QPSK       | 20175   | 1RB#24           | 1000~20000      | -42.58       | PASS    |
| Band4 | 5MHz      | QPSK       | 20175   | 25RB#0           | 30~1000         | -59.62       | PASS    |
| Band4 | 5MHz      | QPSK       | 20175   | 25RB#0           | 1000~20000      | -39.27       | PASS    |
| Band4 | 5MHz      | QPSK       | 20375   | 1RB#0            | 30~1000         | -59.60       | PASS    |
| Band4 | 5MHz      | QPSK       | 20375   | 1RB#0            | 1000~20000      | -42.39       | PASS    |
| Band4 | 5MHz      | QPSK       | 20375   | 1RB#24           | 30~1000         | -59.57       | PASS    |
| Band4 | 5MHz      | QPSK       | 20375   | 1RB#24           | 1000~20000      | -43.53       | PASS    |
| Band4 | 5MHz      | QPSK       | 20375   | 25RB#0           | 30~1000         | -59.57       | PASS    |
| Band4 | 5MHz      | QPSK       | 20375   | 25RB#0           | 1000~20000      | -39.26       | PASS    |
| Band4 | 10MHz     | QPSK       | 20000   | 1RB#0            | 30~1000         | -59.58       | PASS    |
| Band4 | 10MHz     | QPSK       | 20000   | 1RB#0            | 1000~20000      | -42.98       | PASS    |
| Band4 | 10MHz     | QPSK       | 20175   | 1RB#0            | 30~1000         | -59.61       | PASS    |
| Band4 | 10MHz     | QPSK       | 20175   | 1RB#0            | 1000~20000      | -45.81       | PASS    |
| Band4 | 10MHz     | QPSK       | 20350   | 1RB#0            | 30~1000         | -59.55       | PASS    |
| Band4 | 10MHz     | QPSK       | 20350   | 1RB#0            | 1000~20000      | -41.47       | PASS    |
| Band4 | 15MHz     | QPSK       | 20025   | 1RB#0            | 30~1000         | -59.61       | PASS    |
| Band4 | 15MHz     | QPSK       | 20025   | 1RB#0            | 1000~20000      | -41.73       | PASS    |
| Band4 | 15MHz     | QPSK       | 20175   | 1RB#0            | 30~1000         | -59.60       | PASS    |
| Band4 | 15MHz     | QPSK       | 20175   | 1RB#0            | 1000~20000      | -46.12       | PASS    |
| Band4 | 15MHz     | QPSK       | 20325   | 1RB#0            | 30~1000         | -59.65       | PASS    |
| Band4 | 15MHz     | QPSK       | 20325   | 1RB#0            | 1000~20000      | -40.72       | PASS    |
| Band4 | 20MHz     | QPSK       | 20050   | 1RB#0            | 30~1000         | -59.61       | PASS    |
| Band4 | 20MHz     | QPSK       | 20050   | 1RB#0            | 1000~20000      | -42.49       | PASS    |
| Band4 | 20MHz     | QPSK       | 20175   | 1RB#0            | 30~1000         | -59.59       | PASS    |

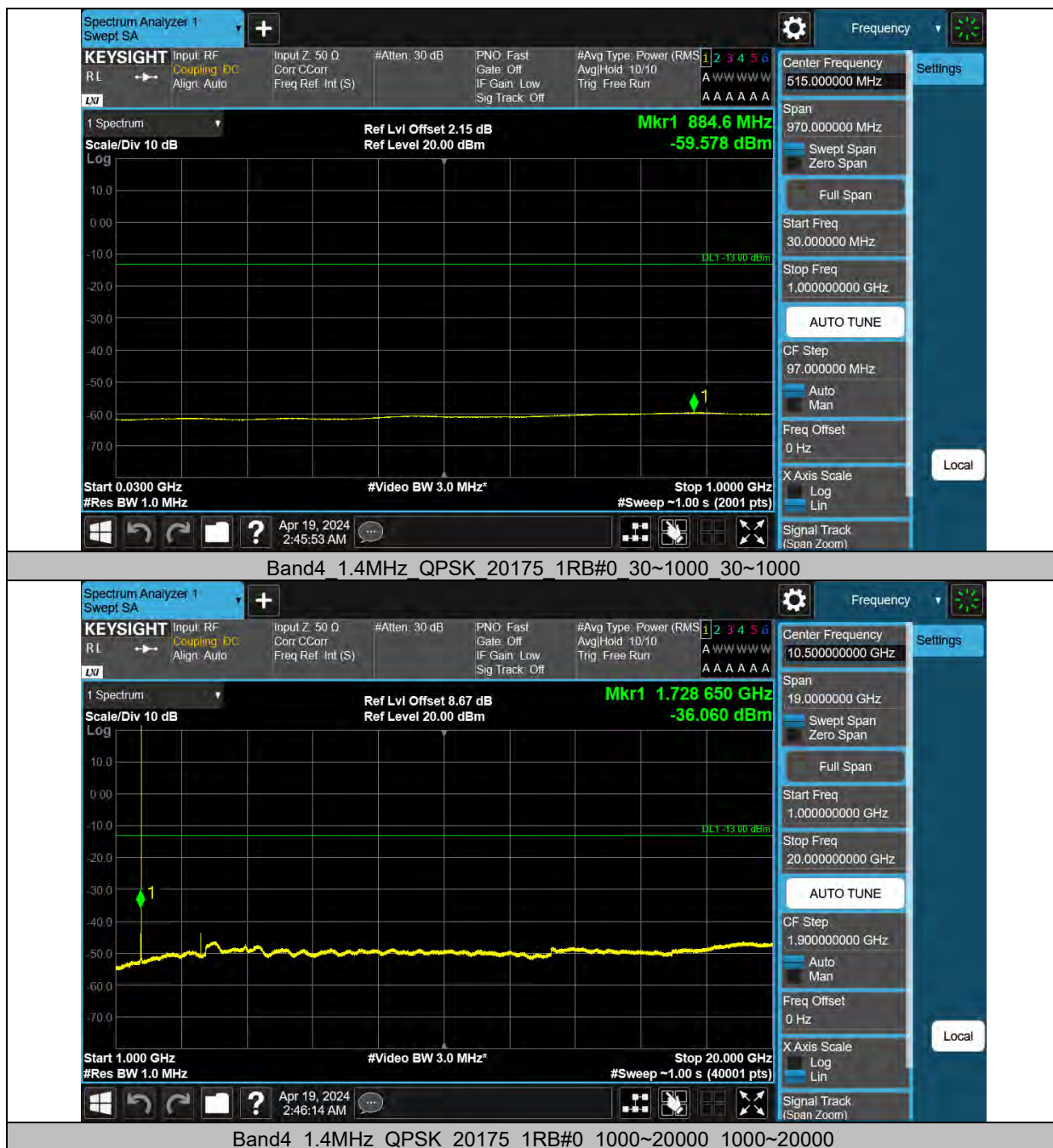


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|       |       |      |       |       |            |        |      |
|-------|-------|------|-------|-------|------------|--------|------|
| Band4 | 20MHz | QPSK | 20175 | 1RB#0 | 1000~20000 | -46.32 | PASS |
| Band4 | 20MHz | QPSK | 20300 | 1RB#0 | 30~1000    | -59.64 | PASS |
| Band4 | 20MHz | QPSK | 20300 | 1RB#0 | 1000~20000 | -41.61 | PASS |

## Test Graphs

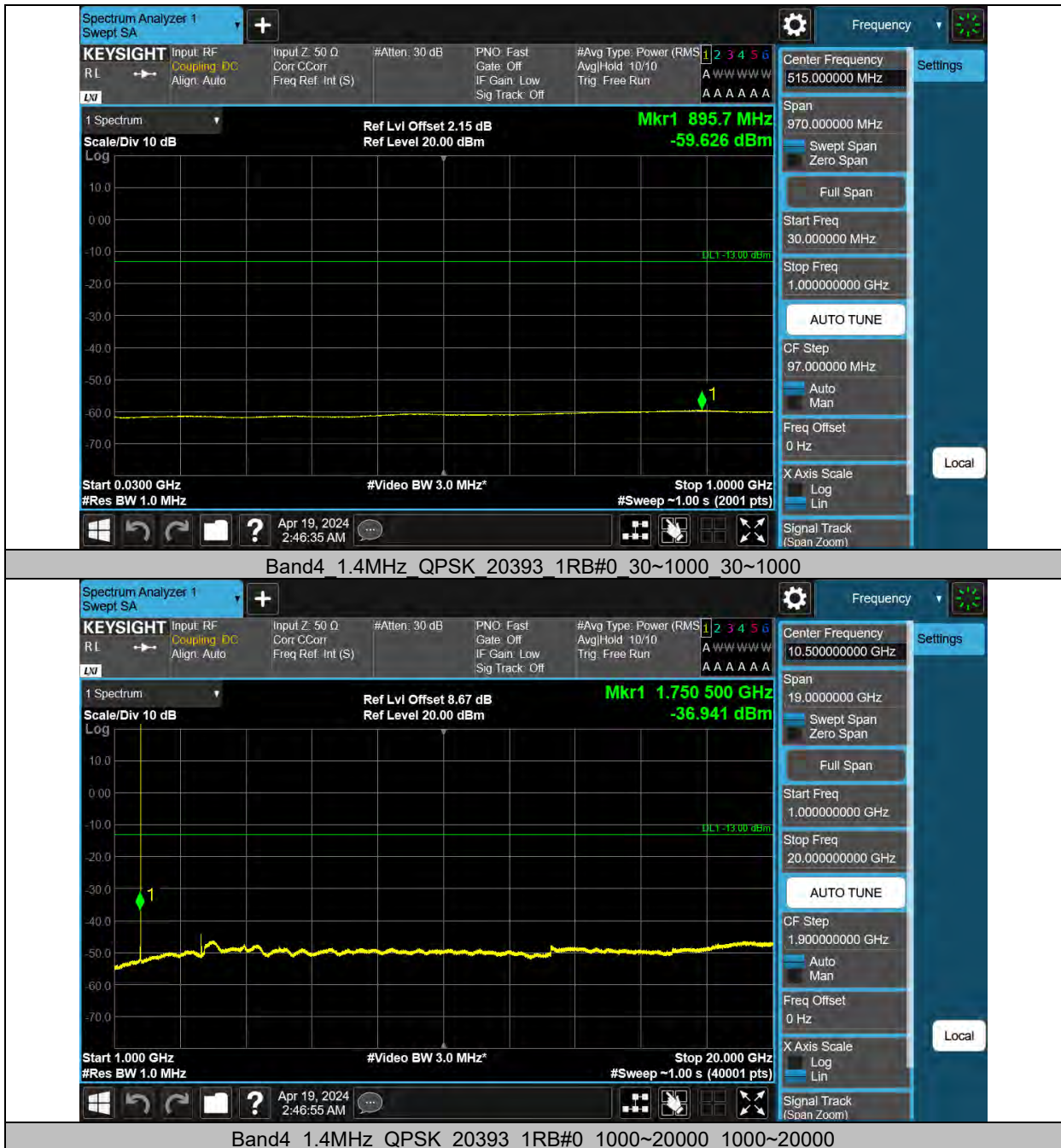


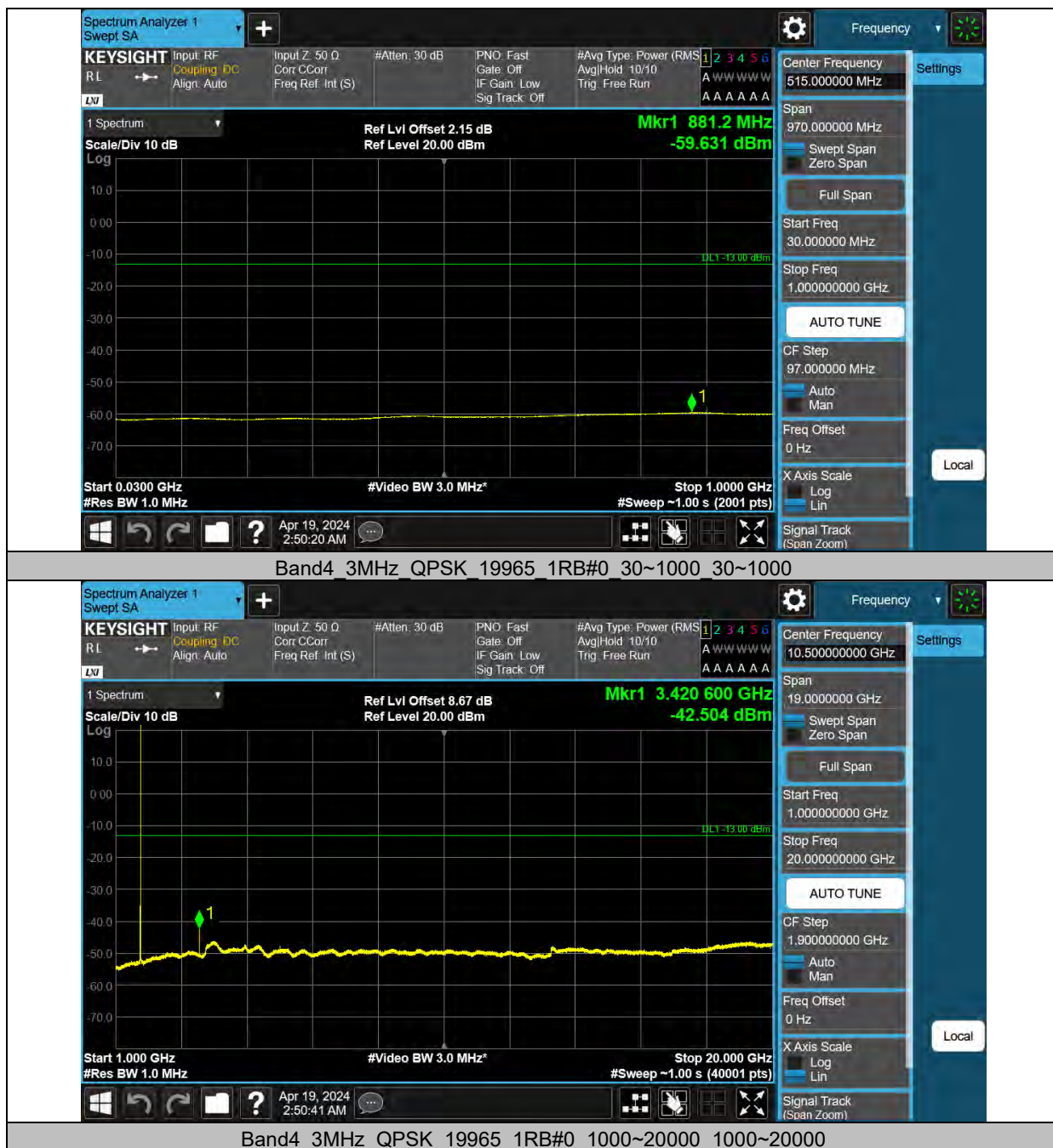




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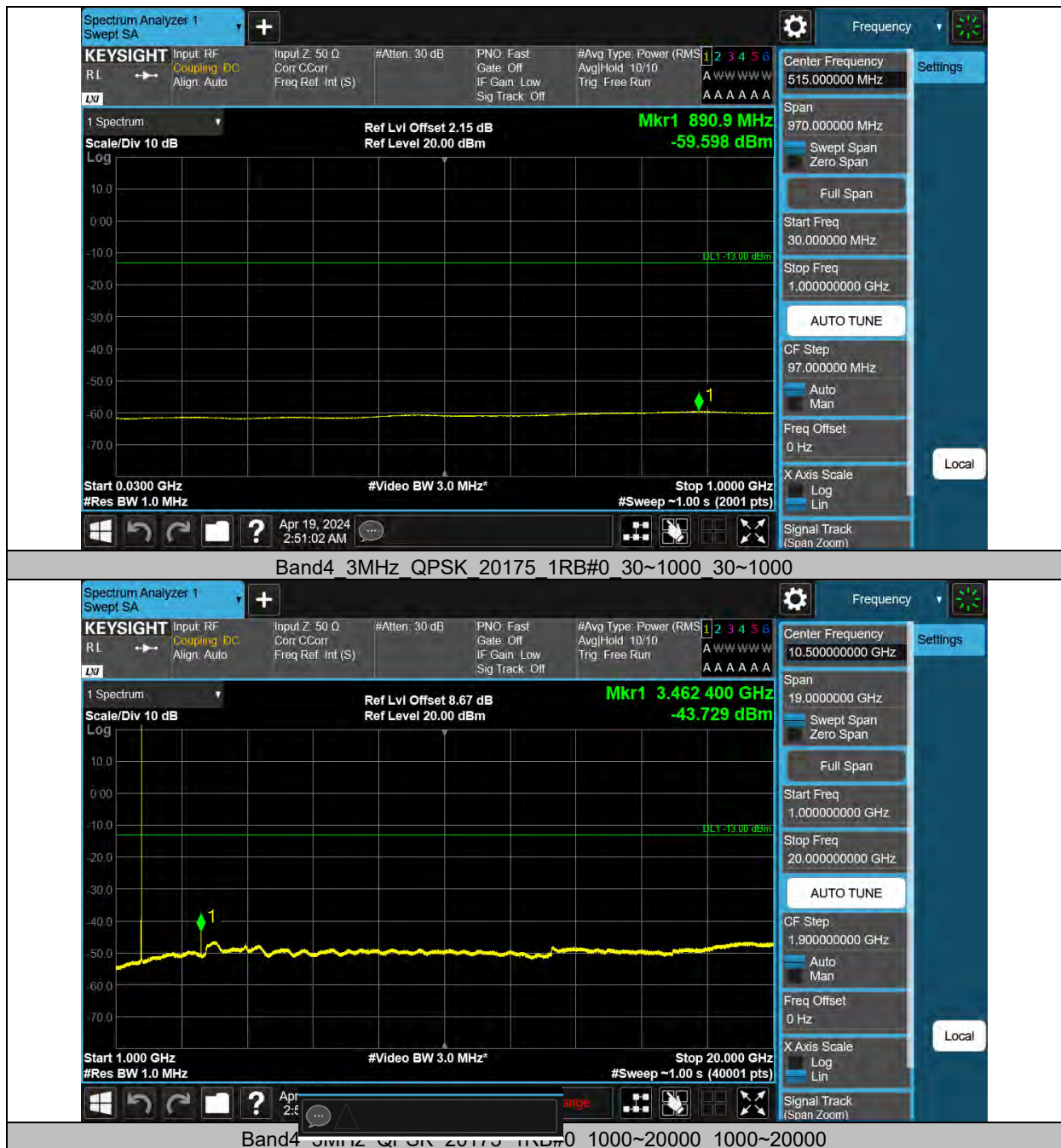


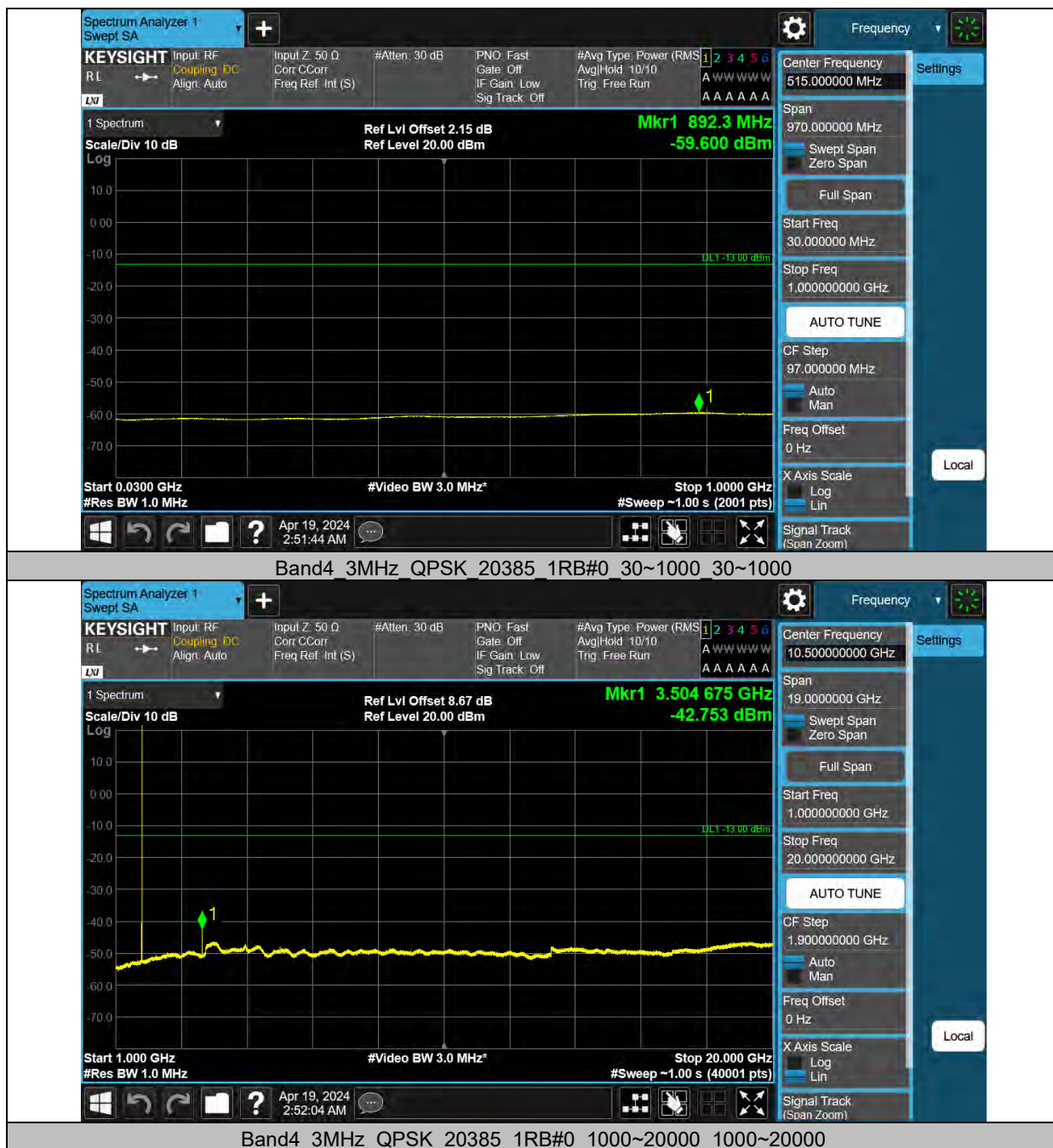


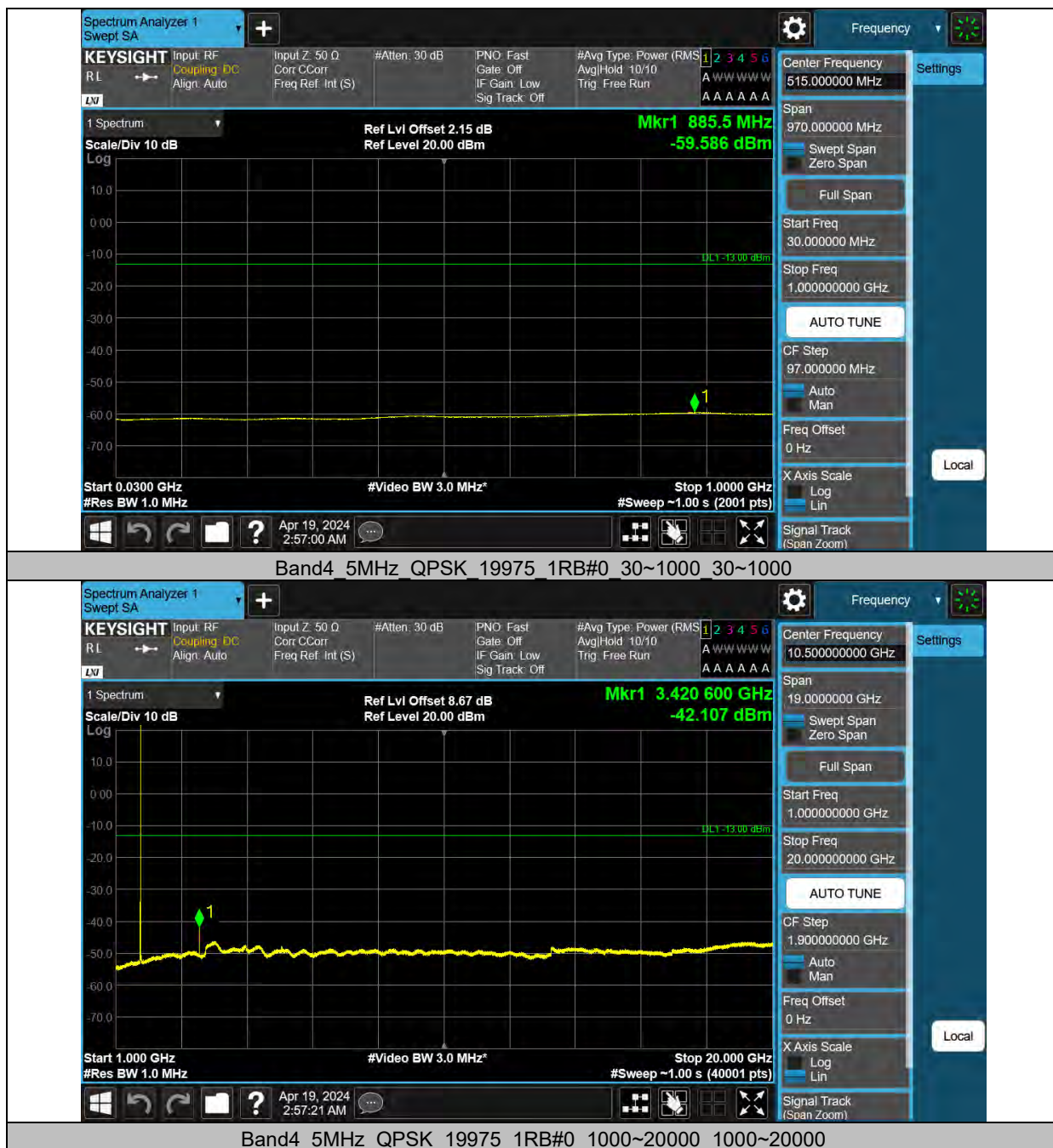


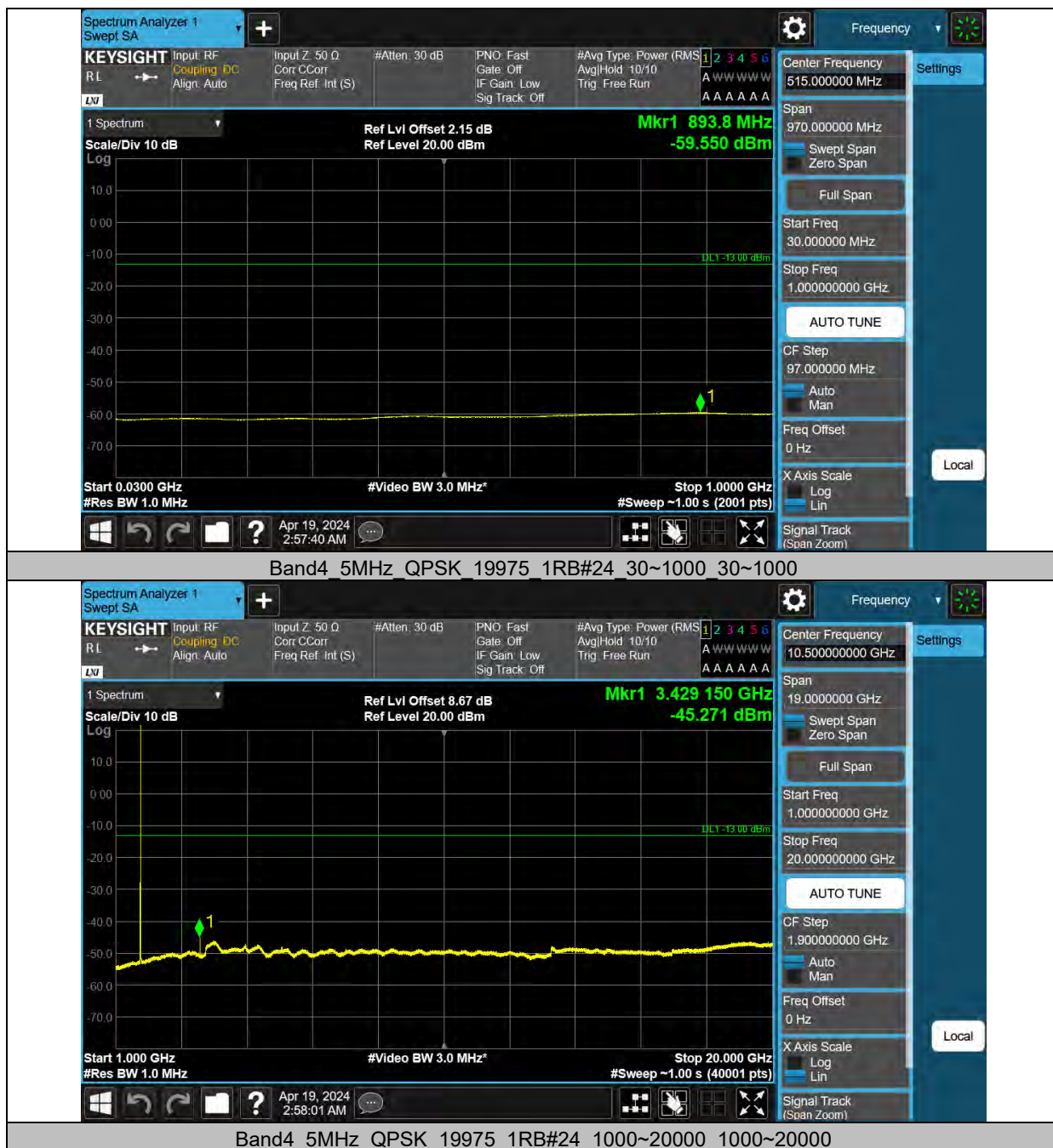
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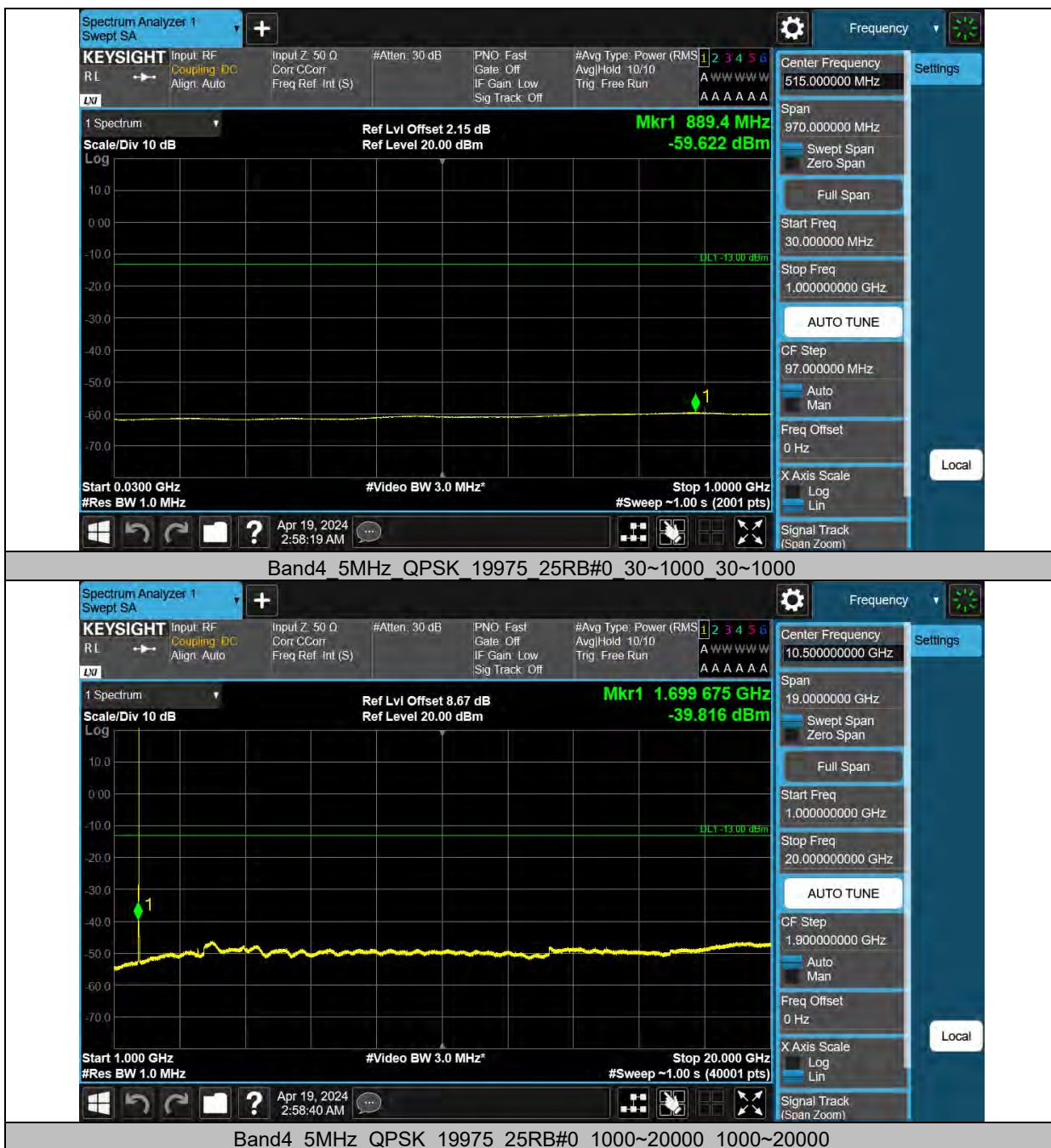
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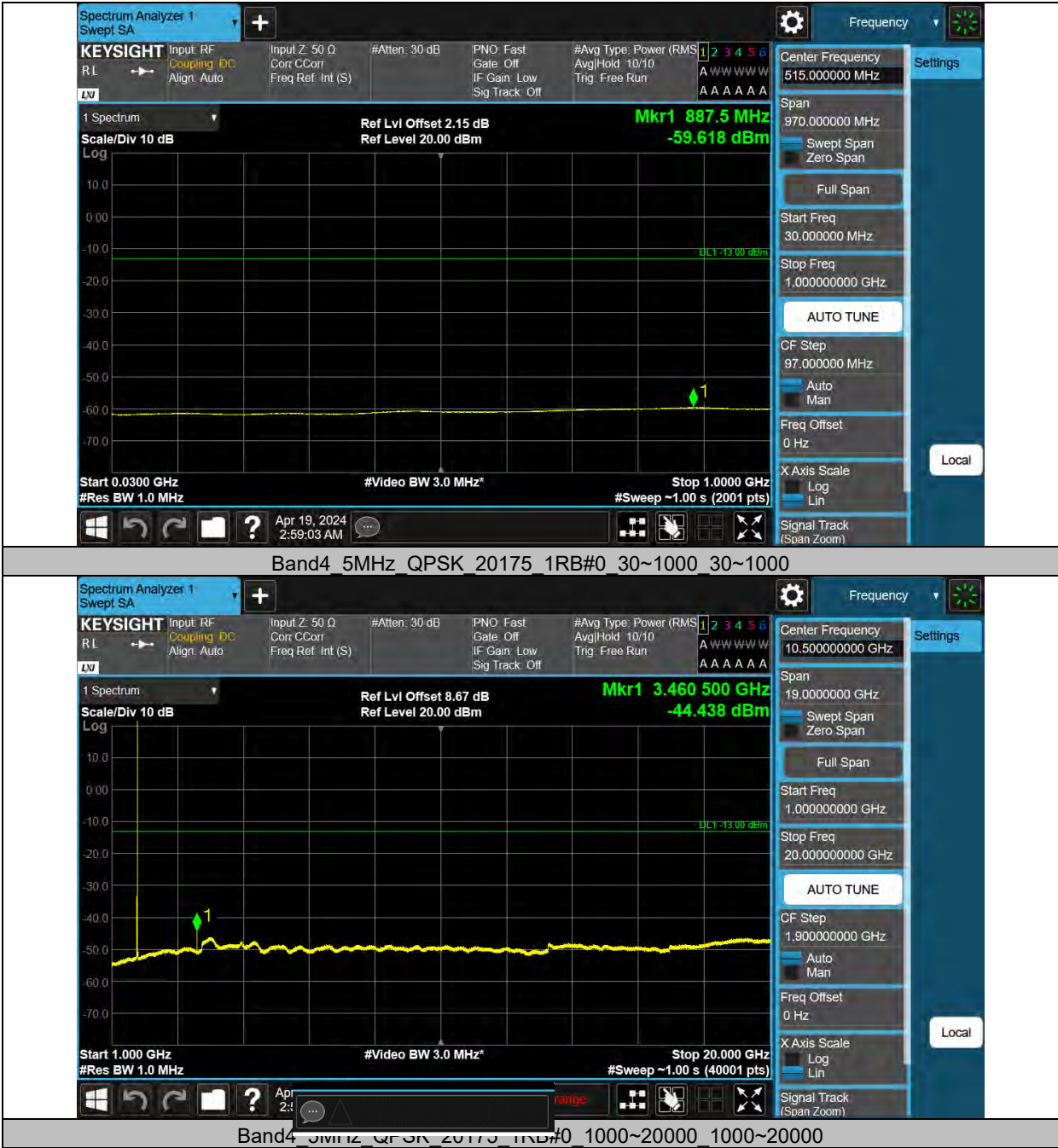


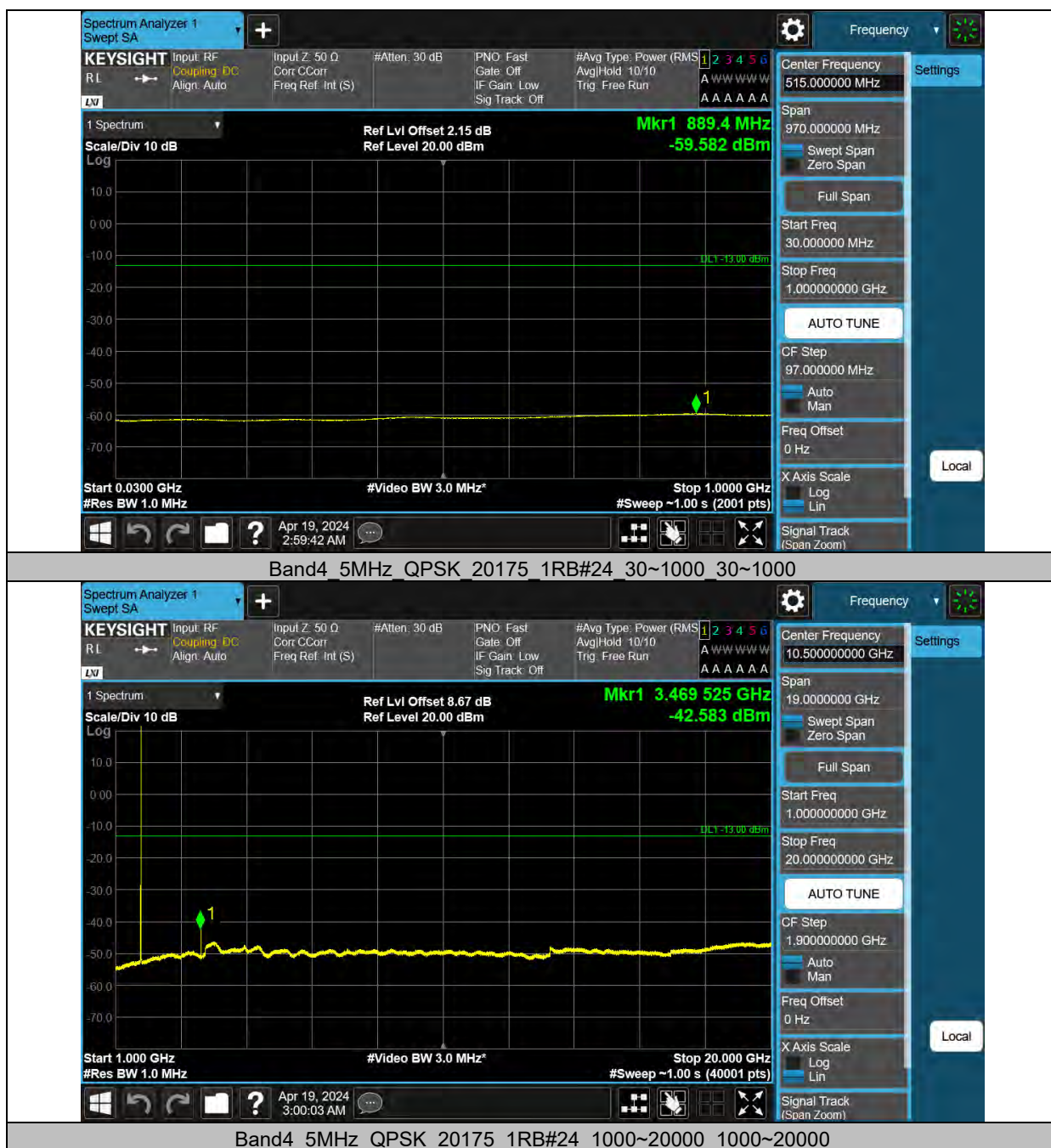


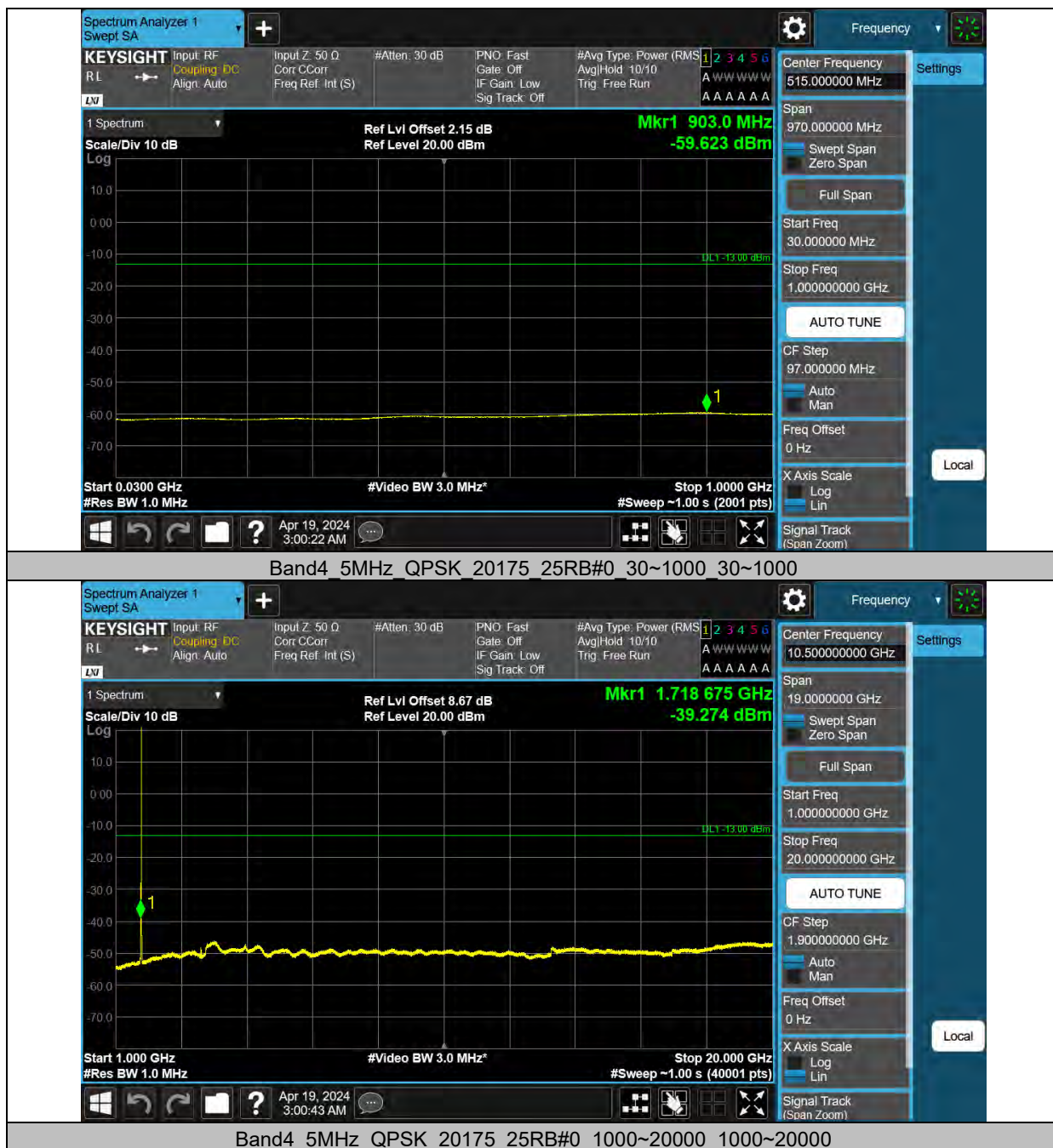


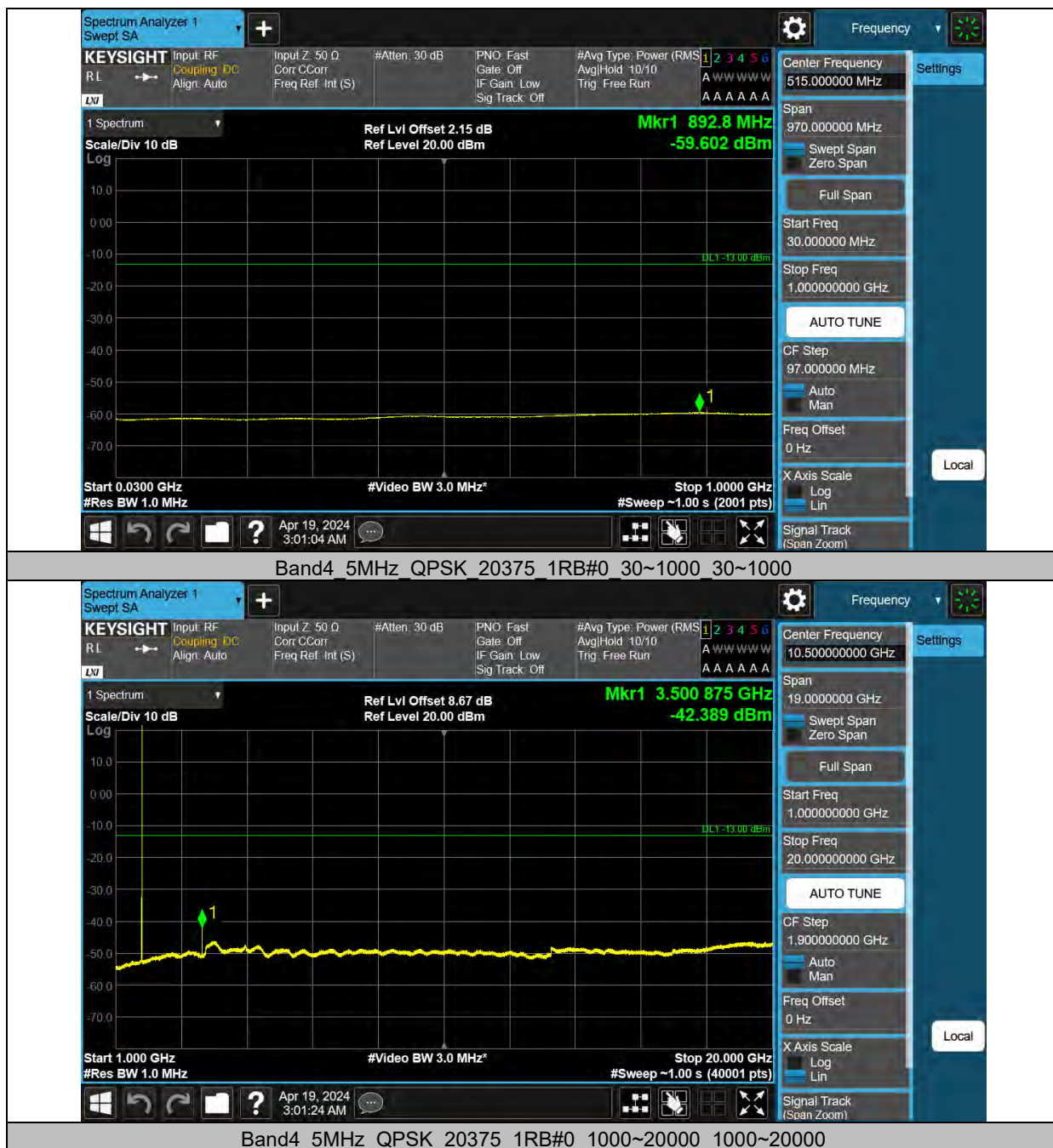
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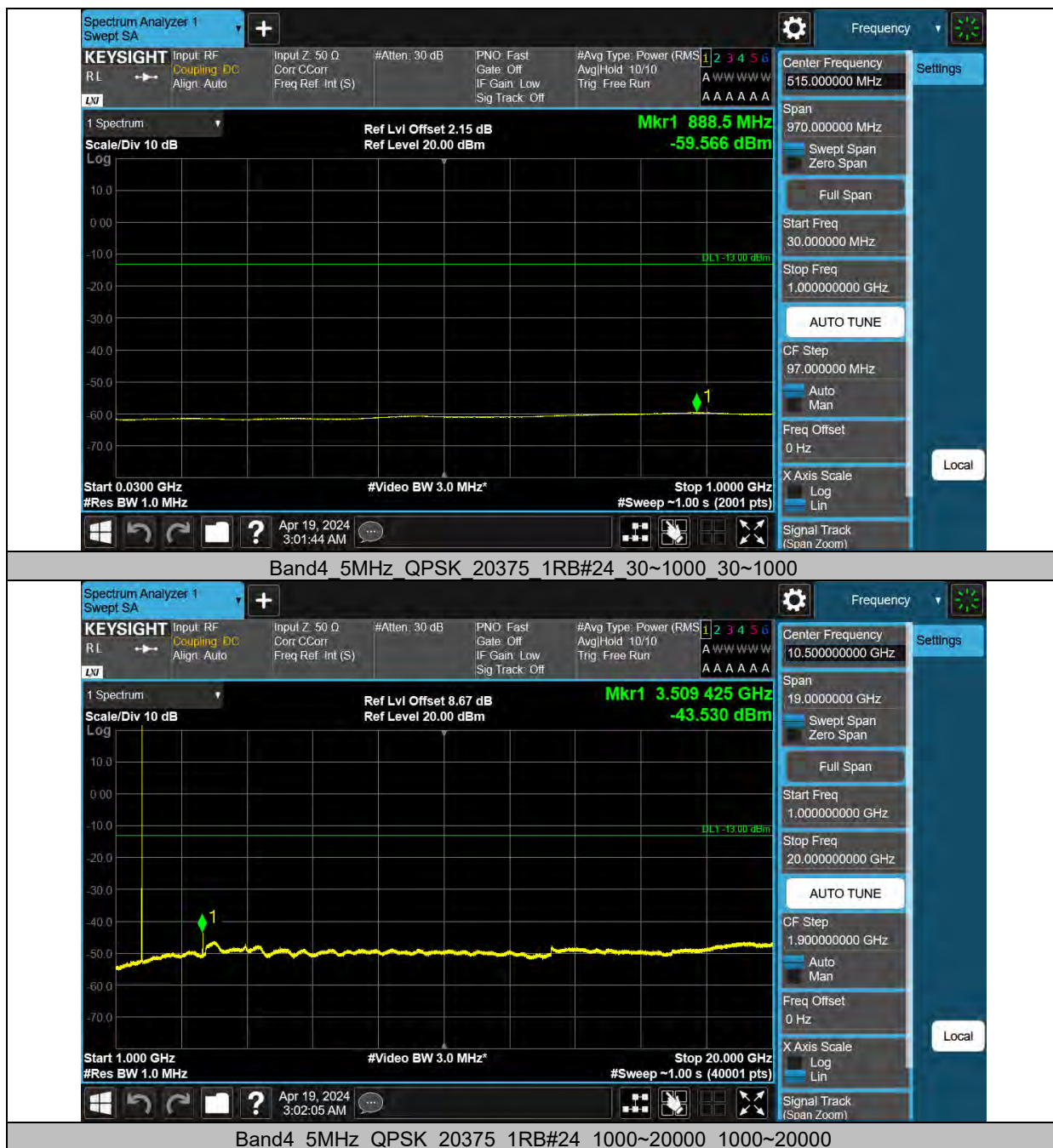
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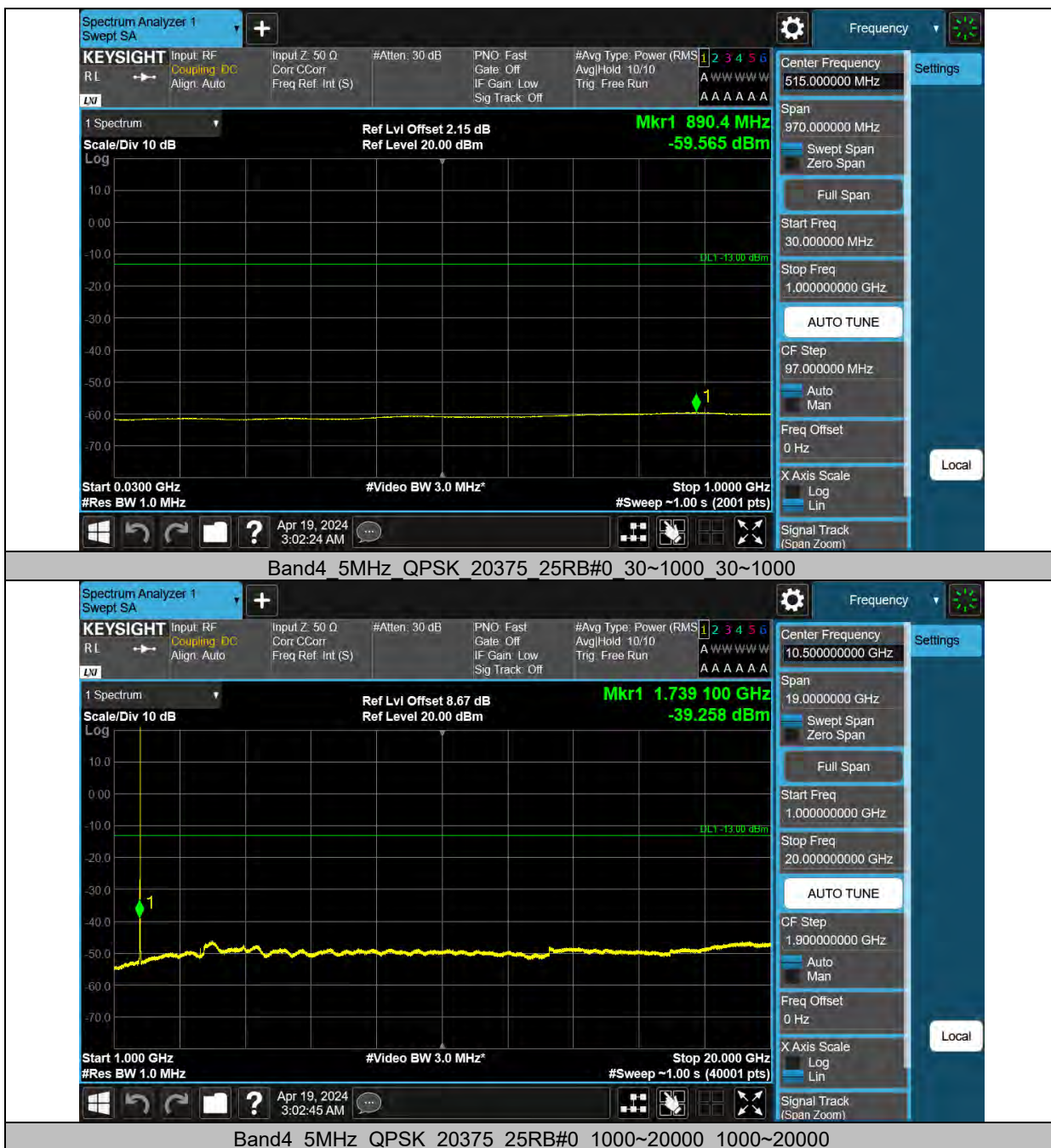








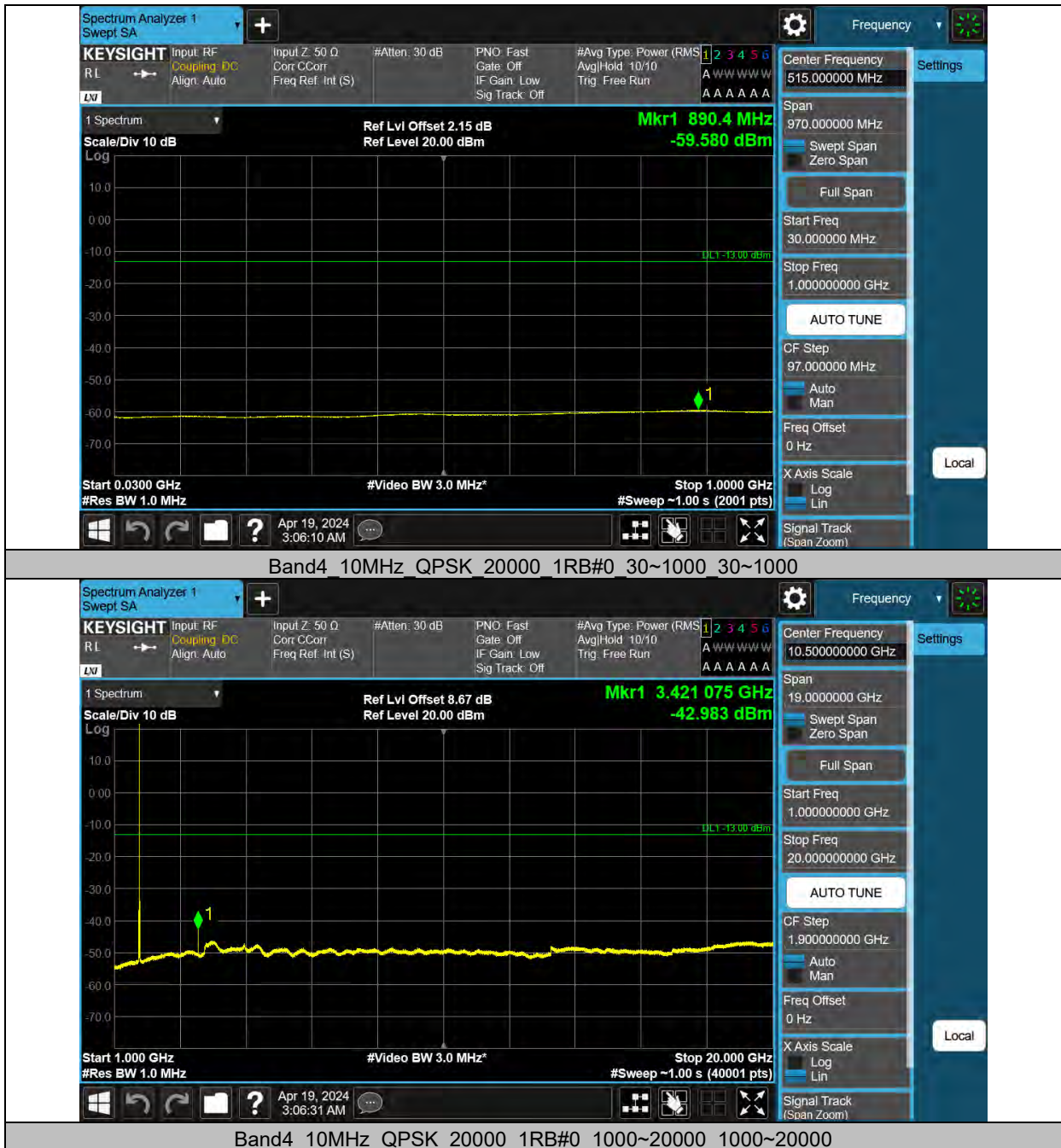






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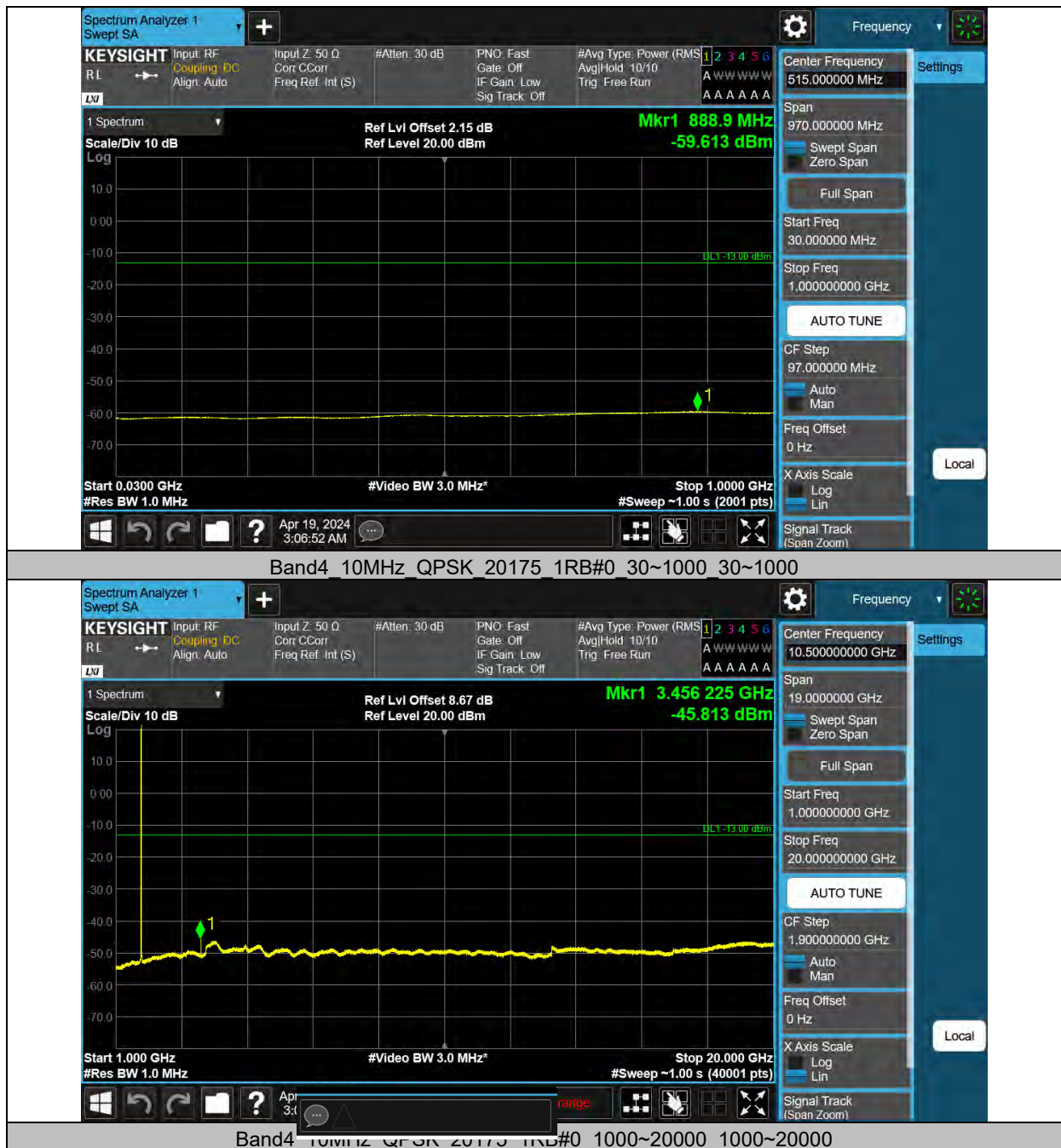
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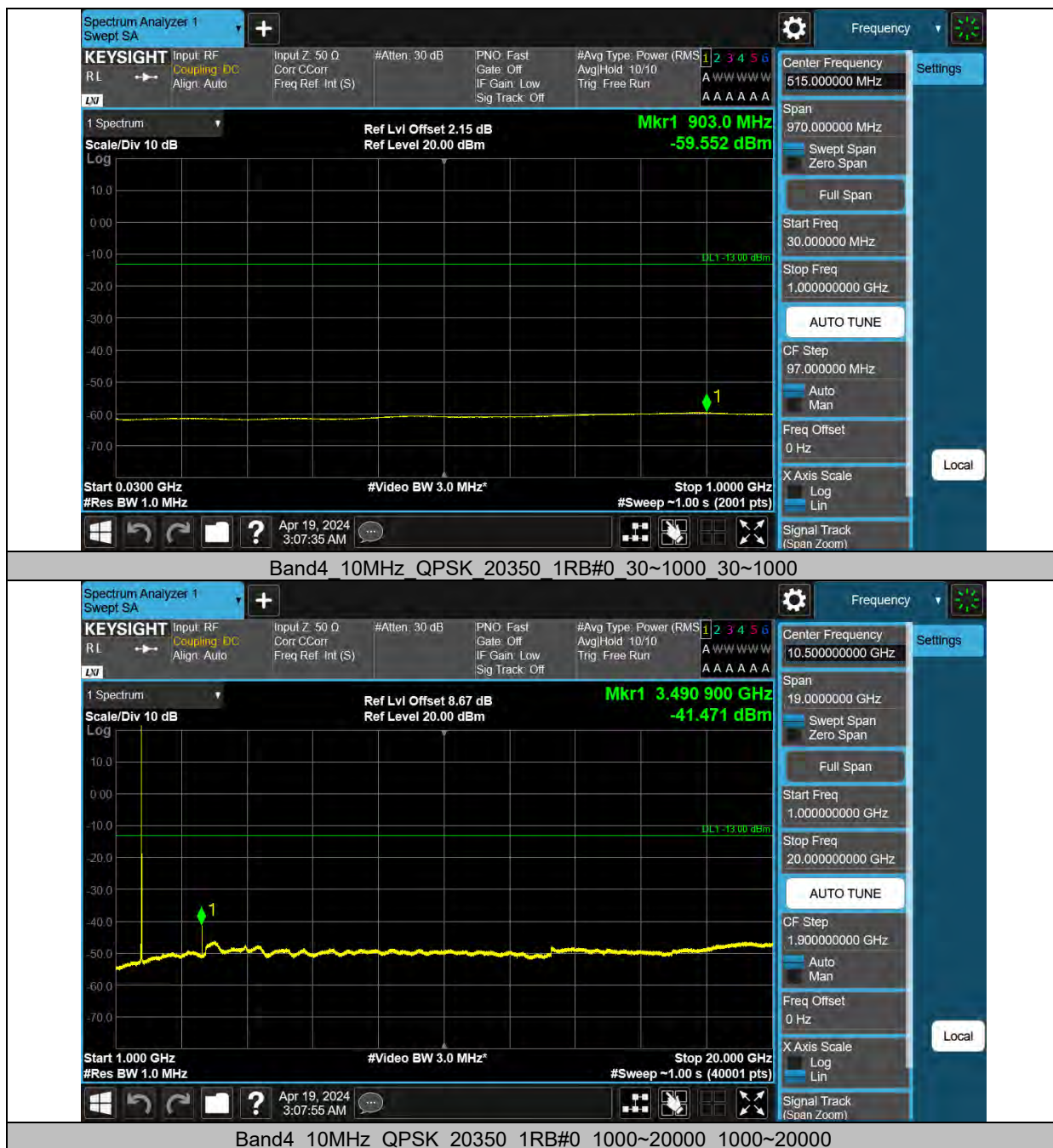




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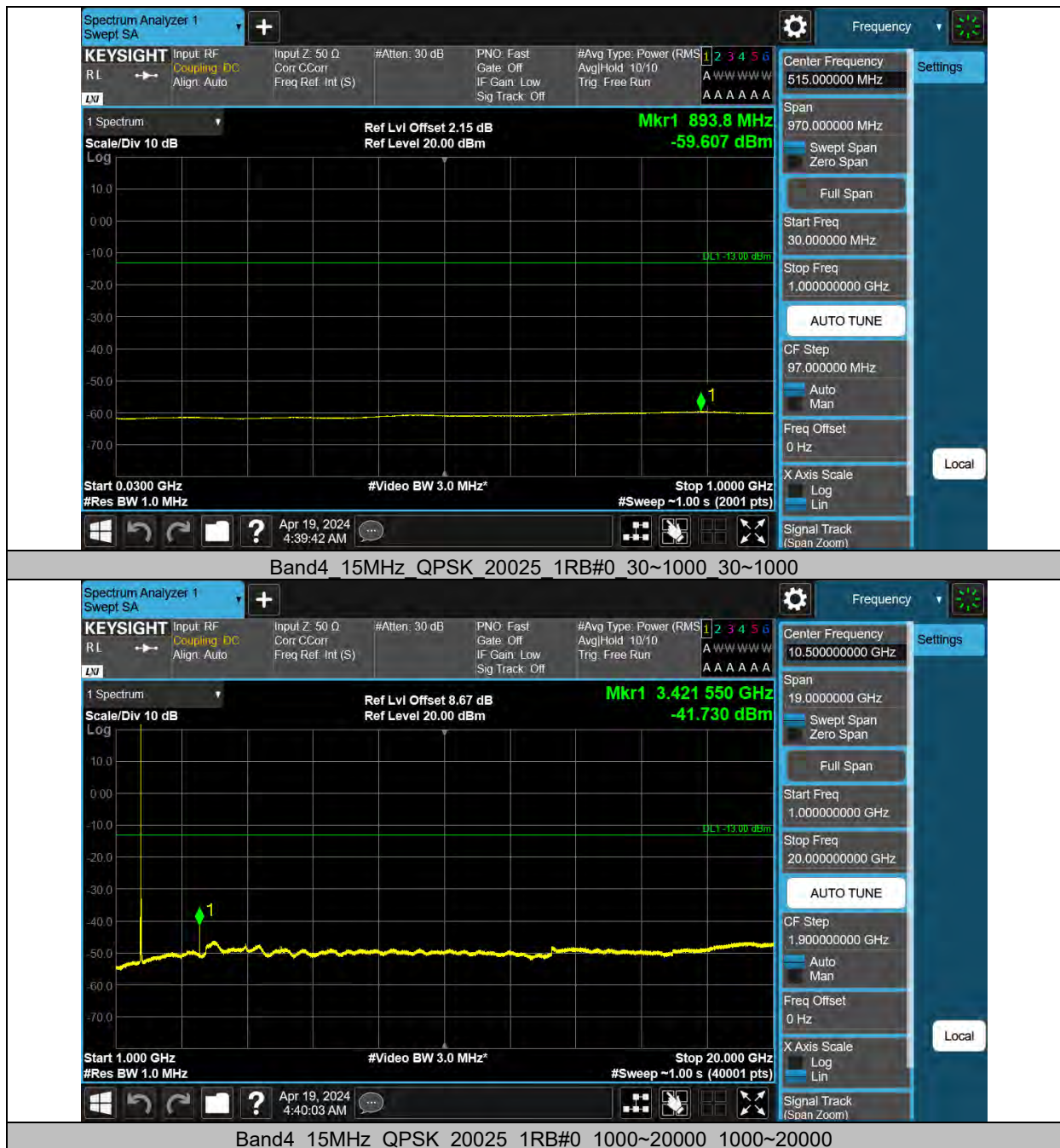


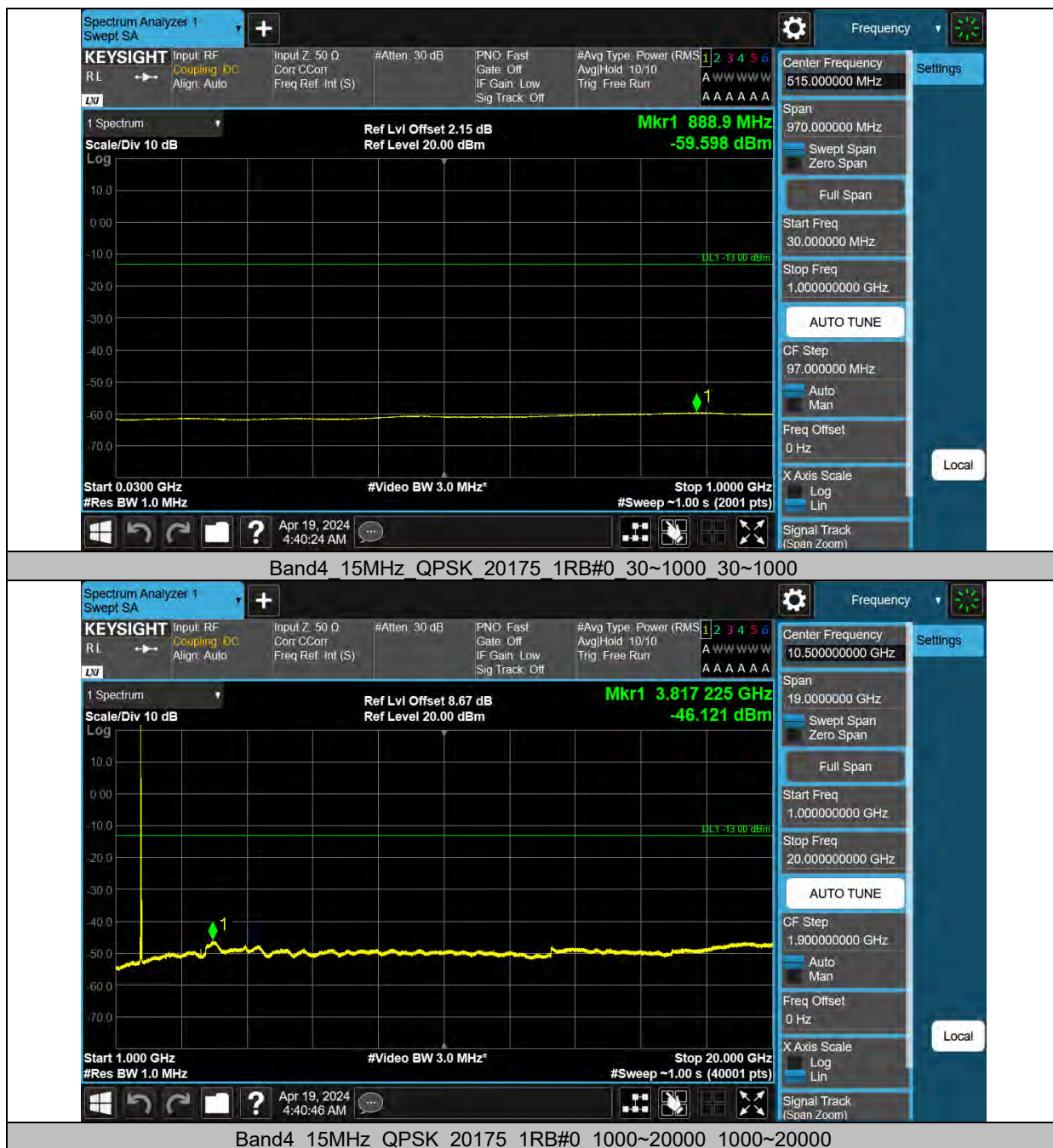


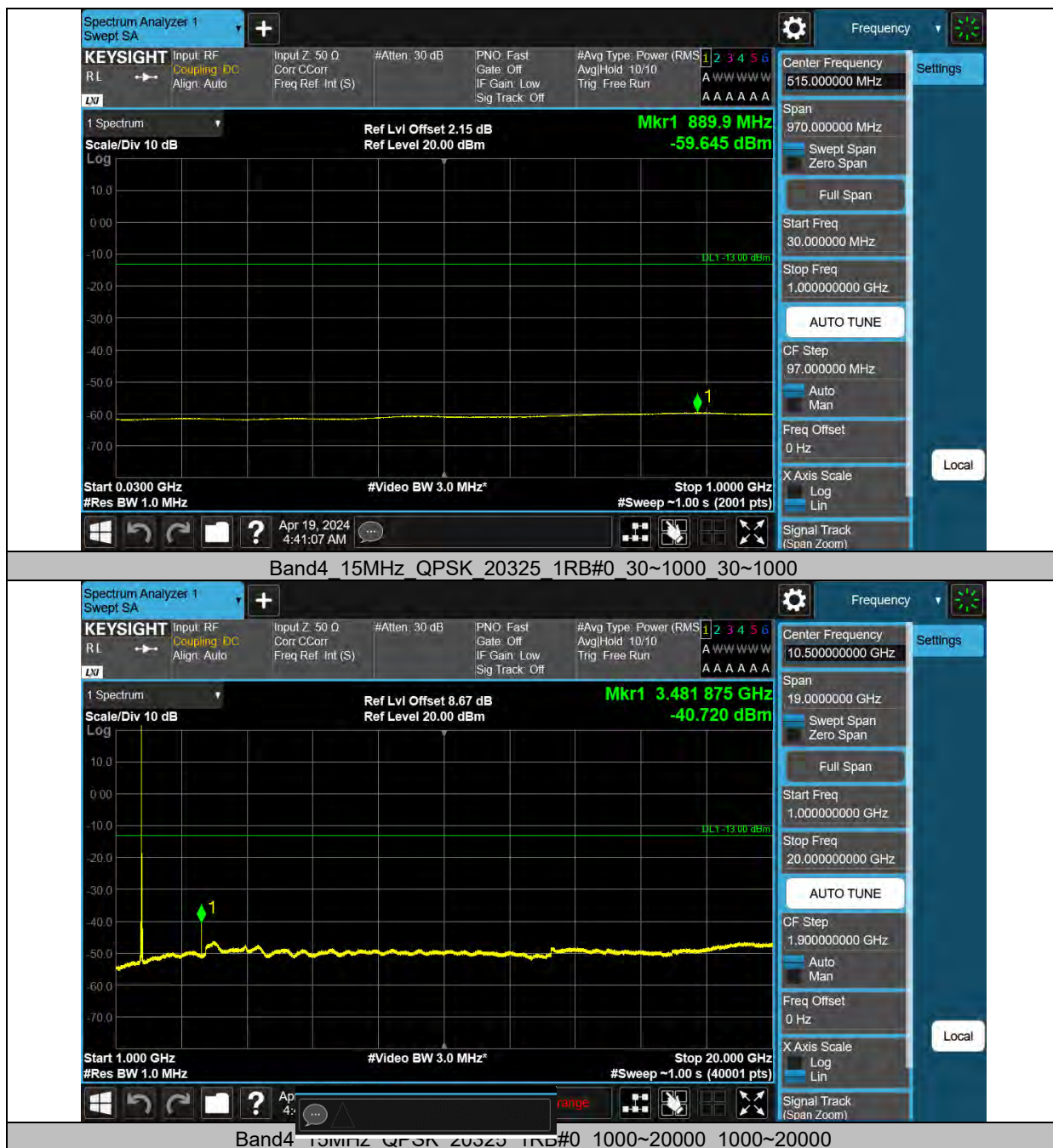


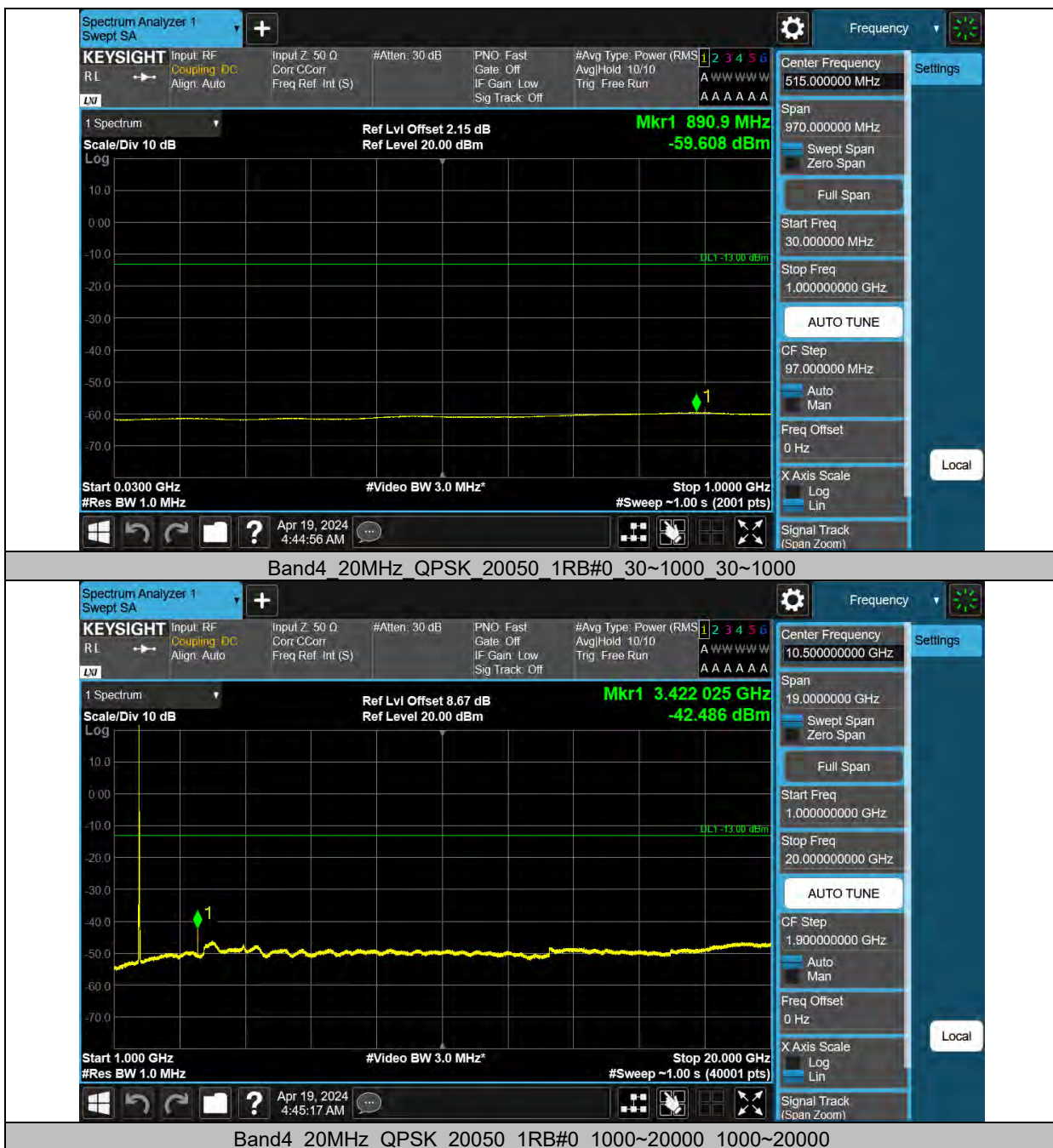
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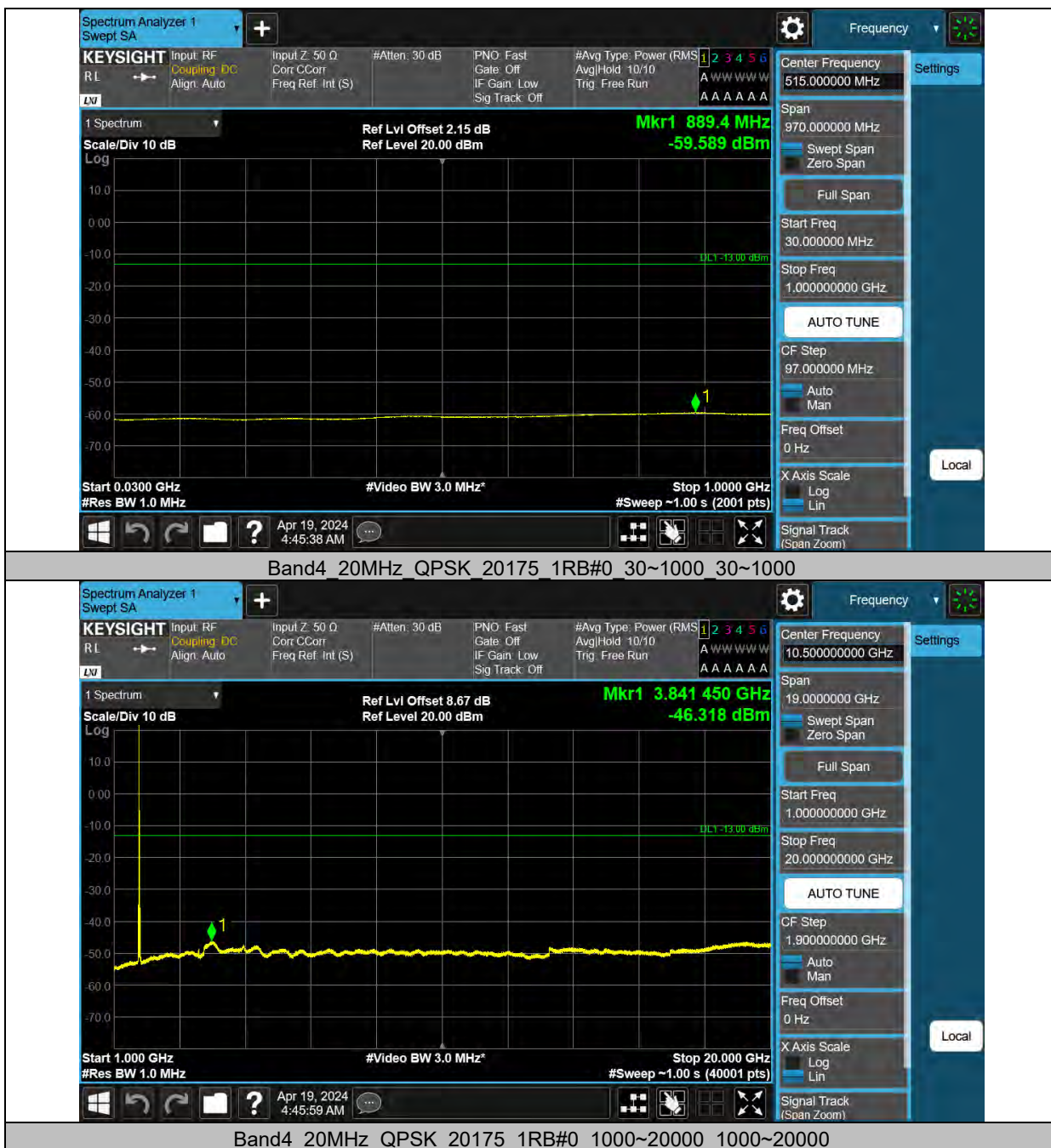
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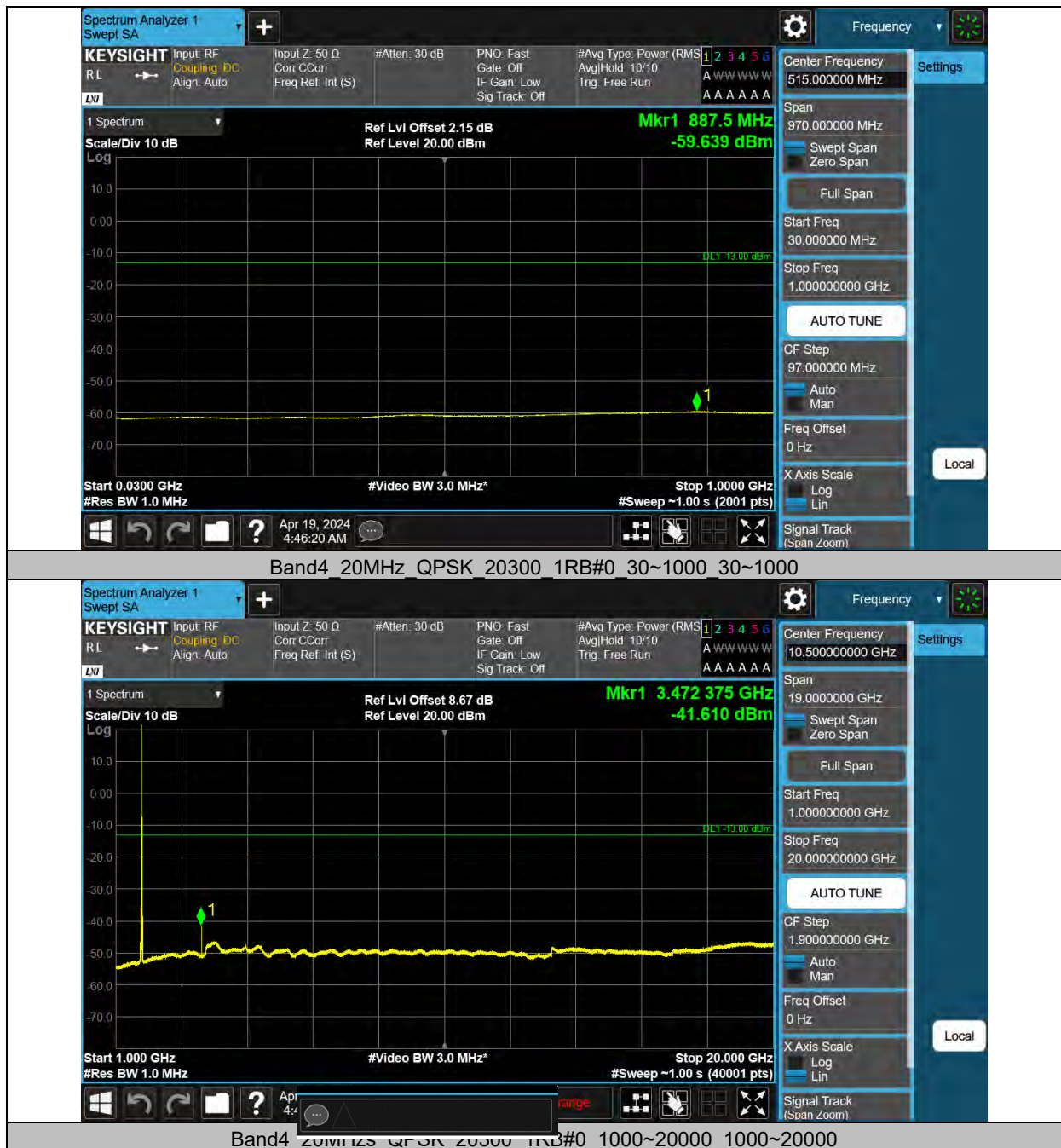






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## FREQUENCY STABILITY

### Test Result

| Voltage |           |            |         |              |               |                  |                |                 |             |         |
|---------|-----------|------------|---------|--------------|---------------|------------------|----------------|-----------------|-------------|---------|
| Band    | Bandwidth | Modulation | Channel | RB Configure | Voltage [Vdc] | Temperature (°C) | Deviation (Hz) | Deviation (ppm) | Limit (ppm) | Verdict |
| Band4   | 10MHz     | QPSK       | 20000   | 50RB#0       | VN            | NT               | -4.05          | -0.002362       | ±2.5        | PASS    |
| Band4   | 10MHz     | QPSK       | 20000   | 50RB#0       | VL            | NT               | -5.04          | -0.002939       | ±2.5        | PASS    |
| Band4   | 10MHz     | QPSK       | 20000   | 50RB#0       | VH            | NT               | -4.76          | -0.002776       | ±2.5        | PASS    |
| Band4   | 10MHz     | QPSK       | 20175   | 50RB#0       | VN            | NT               | 4.49           | 0.002592        | ±2.5        | PASS    |
| Band4   | 10MHz     | QPSK       | 20175   | 50RB#0       | VL            | NT               | 4.16           | 0.002401        | ±2.5        | PASS    |
| Band4   | 10MHz     | QPSK       | 20175   | 50RB#0       | VH            | NT               | -3.83          | -0.002211       | ±2.5        | PASS    |
| Band4   | 10MHz     | QPSK       | 20350   | 50RB#0       | VN            | NT               | 5.38           | 0.003074        | ±2.5        | PASS    |
| Band4   | 10MHz     | QPSK       | 20350   | 50RB#0       | VL            | NT               | 2.68           | 0.001531        | ±2.5        | PASS    |
| Band4   | 10MHz     | QPSK       | 20350   | 50RB#0       | VH            | NT               | 4.32           | 0.002469        | ±2.5        | PASS    |

| Temperature |           |            |         |              |               |                  |                |                 |             |         |
|-------------|-----------|------------|---------|--------------|---------------|------------------|----------------|-----------------|-------------|---------|
| Band        | Bandwidth | Modulation | Channel | RB Configure | Voltage [Vdc] | Temperature (°C) | Deviation (Hz) | Deviation (ppm) | Limit (ppm) | Verdict |
| Band4       | 10MHz     | QPSK       | 20000   | 50RB#0       | NV            | -30              | -6.02          | -0.003510       | ±2.5        | PASS    |
| Band4       | 10MHz     | QPSK       | 20000   | 50RB#0       | NV            | -20              | -7.84          | -0.004571       | ±2.5        | PASS    |
| Band4       | 10MHz     | QPSK       | 20000   | 50RB#0       | NV            | -10              | -4.05          | -0.002362       | ±2.5        | PASS    |
| Band4       | 10MHz     | QPSK       | 20000   | 50RB#0       | NV            | 0                | -3.40          | -0.001983       | ±2.5        | PASS    |
| Band4       | 10MHz     | QPSK       | 20000   | 50RB#0       | NV            | 10               | -2.02          | -0.001178       | ±2.5        | PASS    |
| Band4       | 10MHz     | QPSK       | 20000   | 50RB#0       | NV            | 20               | -5.94          | -0.003464       | ±2.5        | PASS    |
| Band4       | 10MHz     | QPSK       | 20000   | 50RB#0       | NV            | 30               | -5.64          | -0.003289       | ±2.5        | PASS    |
| Band4       | 10MHz     | QPSK       | 20000   | 50RB#0       | NV            | 40               | -5.54          | -0.003230       | ±2.5        | PASS    |
| Band4       | 10MHz     | QPSK       | 20000   | 50RB#0       | NV            | 50               | -5.11          | -0.002980       | ±2.5        | PASS    |
| Band4       | 10MHz     | QPSK       | 20175   | 50RB#0       | NV            | -30              | 2.78           | 0.001605        | ±2.5        | PASS    |
| Band4       | 10MHz     | QPSK       | 20175   | 50RB#0       | NV            | -20              | 3.79           | 0.002188        | ±2.5        | PASS    |
| Band4       | 10MHz     | QPSK       | 20175   | 50RB#0       | NV            | -10              | -2.46          | -0.001420       | ±2.5        | PASS    |
| Band4       | 10MHz     | QPSK       | 20175   | 50RB#0       | NV            | 0                | -5.34          | -0.003082       | ±2.5        | PASS    |
| Band4       | 10MHz     | QPSK       | 20175   | 50RB#0       | NV            | 10               | -3.15          | -0.001818       | ±2.5        | PASS    |
| Band4       | 10MHz     | QPSK       | 20175   | 50RB#0       | NV            | 20               | 3.46           | 0.001997        | ±2.5        | PASS    |
| Band4       | 10MHz     | QPSK       | 20175   | 50RB#0       | NV            | 30               | -3.15          | -0.001818       | ±2.5        | PASS    |
| Band4       | 10MHz     | QPSK       | 20175   | 50RB#0       | NV            | 40               | 4.25           | 0.002453        | ±2.5        | PASS    |
| Band4       | 10MHz     | QPSK       | 20175   | 50RB#0       | NV            | 50               | -2.17          | -0.001253       | ±2.5        | PASS    |
| Band4       | 10MHz     | QPSK       | 20350   | 50RB#0       | NV            | -30              | 6.15           | 0.003514        | ±2.5        | PASS    |
| Band4       | 10MHz     | QPSK       | 20350   | 50RB#0       | NV            | -20              | 2.62           | 0.001497        | ±2.5        | PASS    |
| Band4       | 10MHz     | QPSK       | 20350   | 50RB#0       | NV            | -10              | 6.05           | 0.003457        | ±2.5        | PASS    |
| Band4       | 10MHz     | QPSK       | 20350   | 50RB#0       | NV            | 0                | 3.83           | 0.002189        | ±2.5        | PASS    |
| Band4       | 10MHz     | QPSK       | 20350   | 50RB#0       | NV            | 10               | 1.69           | 0.000966        | ±2.5        | PASS    |
| Band4       | 10MHz     | QPSK       | 20350   | 50RB#0       | NV            | 20               | 4.73           | 0.002703        | ±2.5        | PASS    |
| Band4       | 10MHz     | QPSK       | 20350   | 50RB#0       | NV            | 30               | 3.60           | 0.002057        | ±2.5        | PASS    |
| Band4       | 10MHz     | QPSK       | 20350   | 50RB#0       | NV            | 40               | 3.76           | 0.002149        | ±2.5        | PASS    |
| Band4       | 10MHz     | QPSK       | 20350   | 50RB#0       | NV            | 50               | 5.24           | 0.002994        | ±2.5        | PASS    |

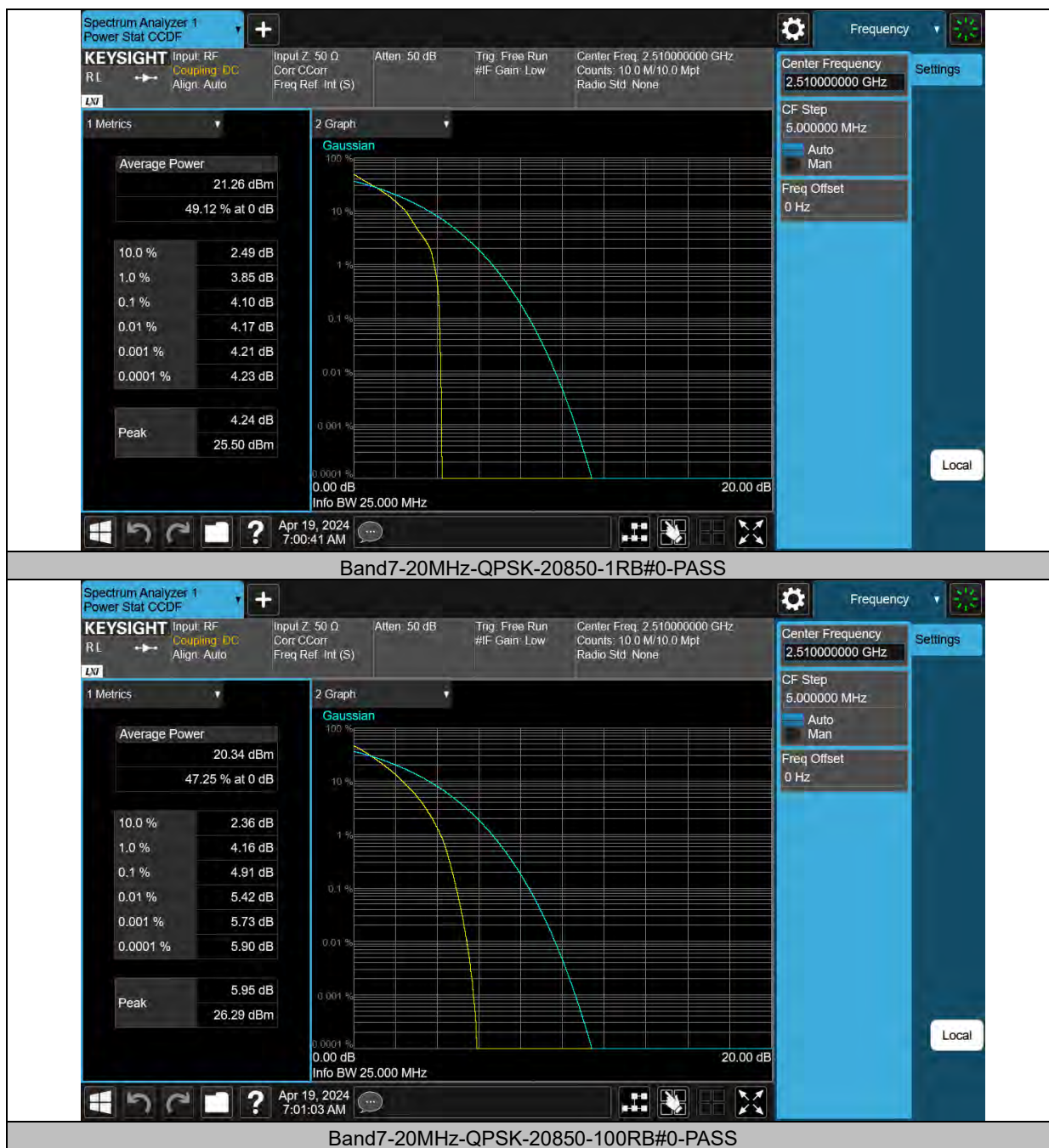
## **LTE BAND7**

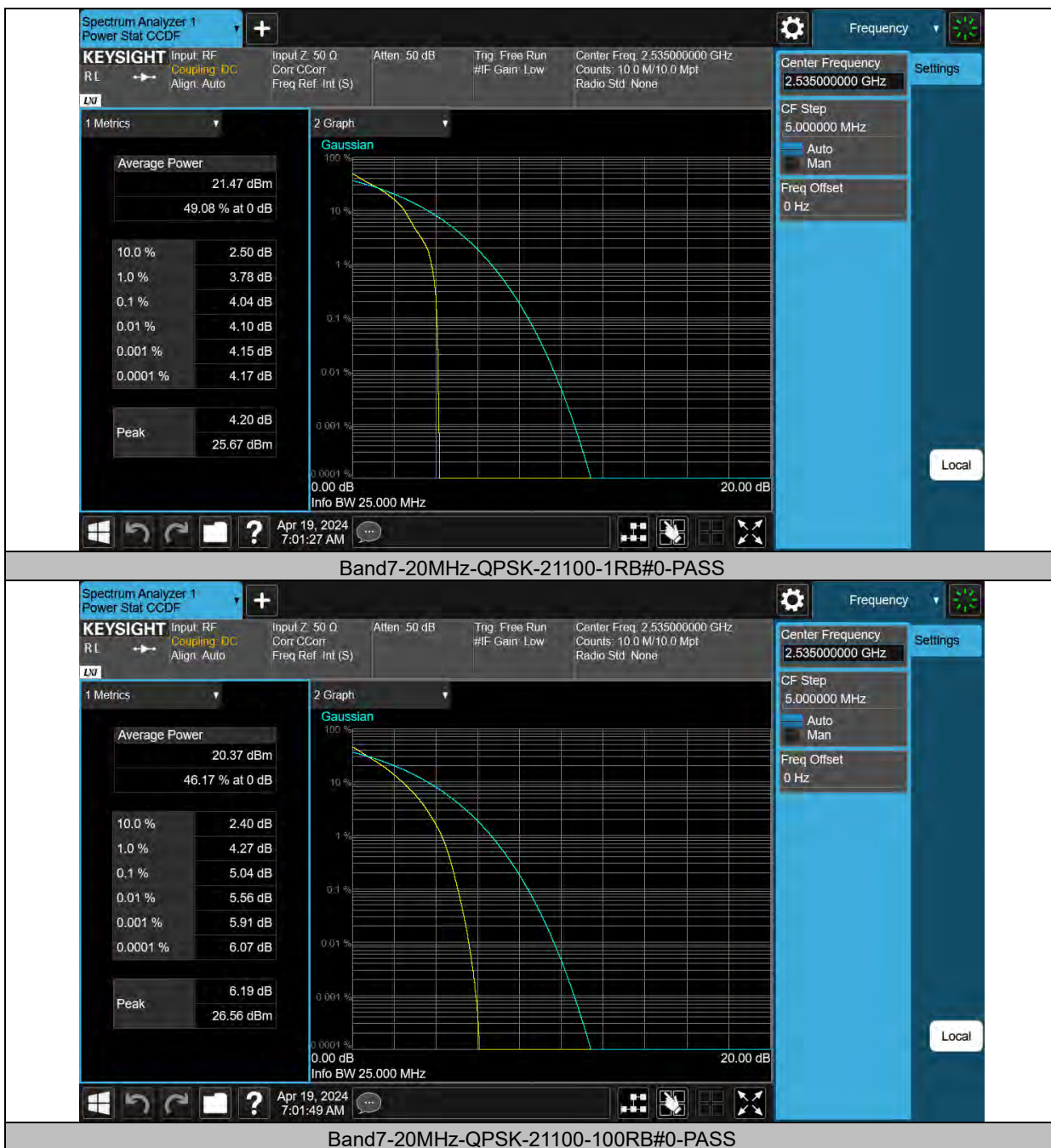
### **PEAK-TO-AVERAGE RATIO(CCDF)**

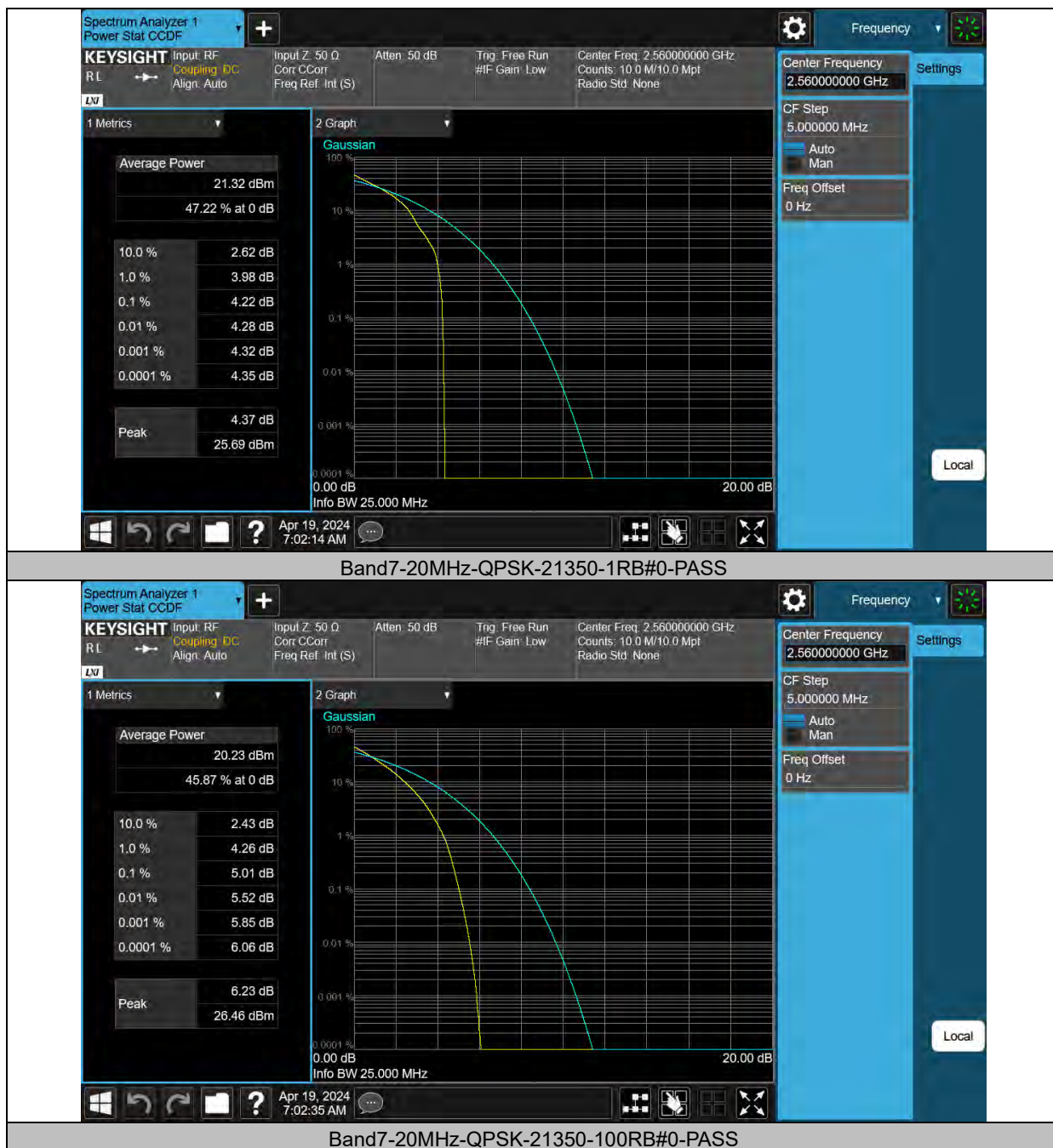
#### **Test Result**

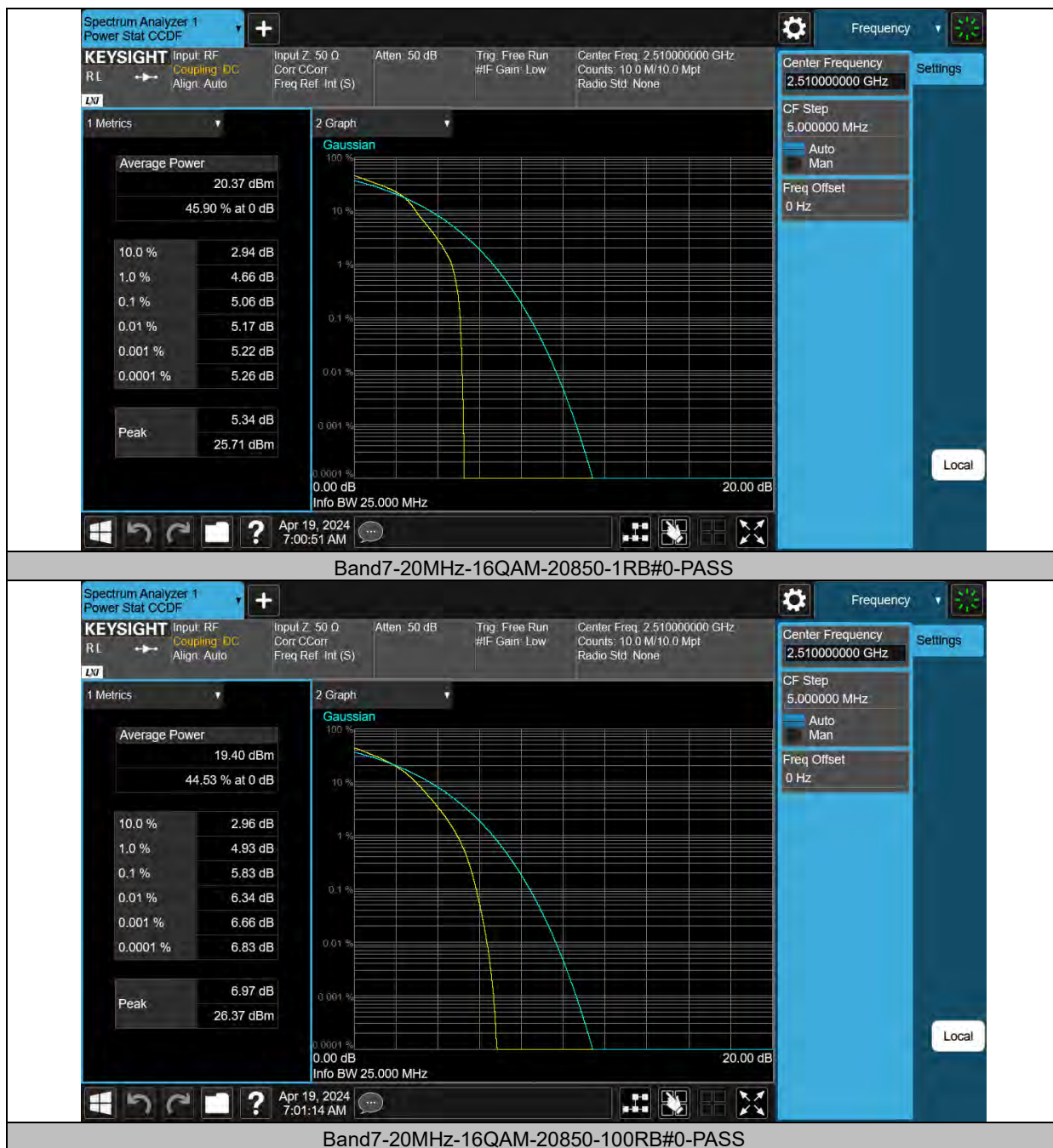
| Band  | Bandwidth | Modulation | Channel | RB Configuration | Result(dB) | Limit(dB) | Verdict |
|-------|-----------|------------|---------|------------------|------------|-----------|---------|
| Band7 | 20MHz     | QPSK       | 20850   | 1RB#0            | 4.10       | 13        | PASS    |
| Band7 | 20MHz     | QPSK       | 20850   | 100RB#0          | 4.91       | 13        | PASS    |
| Band7 | 20MHz     | QPSK       | 21100   | 1RB#0            | 4.04       | 13        | PASS    |
| Band7 | 20MHz     | QPSK       | 21100   | 100RB#0          | 5.04       | 13        | PASS    |
| Band7 | 20MHz     | QPSK       | 21350   | 1RB#0            | 4.22       | 13        | PASS    |
| Band7 | 20MHz     | QPSK       | 21350   | 100RB#0          | 5.01       | 13        | PASS    |
| Band7 | 20MHz     | 16QAM      | 20850   | 1RB#0            | 5.06       | 13        | PASS    |
| Band7 | 20MHz     | 16QAM      | 20850   | 100RB#0          | 5.83       | 13        | PASS    |
| Band7 | 20MHz     | 16QAM      | 21100   | 1RB#0            | 4.99       | 13        | PASS    |
| Band7 | 20MHz     | 16QAM      | 21100   | 100RB#0          | 5.93       | 13        | PASS    |
| Band7 | 20MHz     | 16QAM      | 21350   | 1RB#0            | 5.21       | 13        | PASS    |
| Band7 | 20MHz     | 16QAM      | 21350   | 100RB#0          | 5.93       | 13        | PASS    |

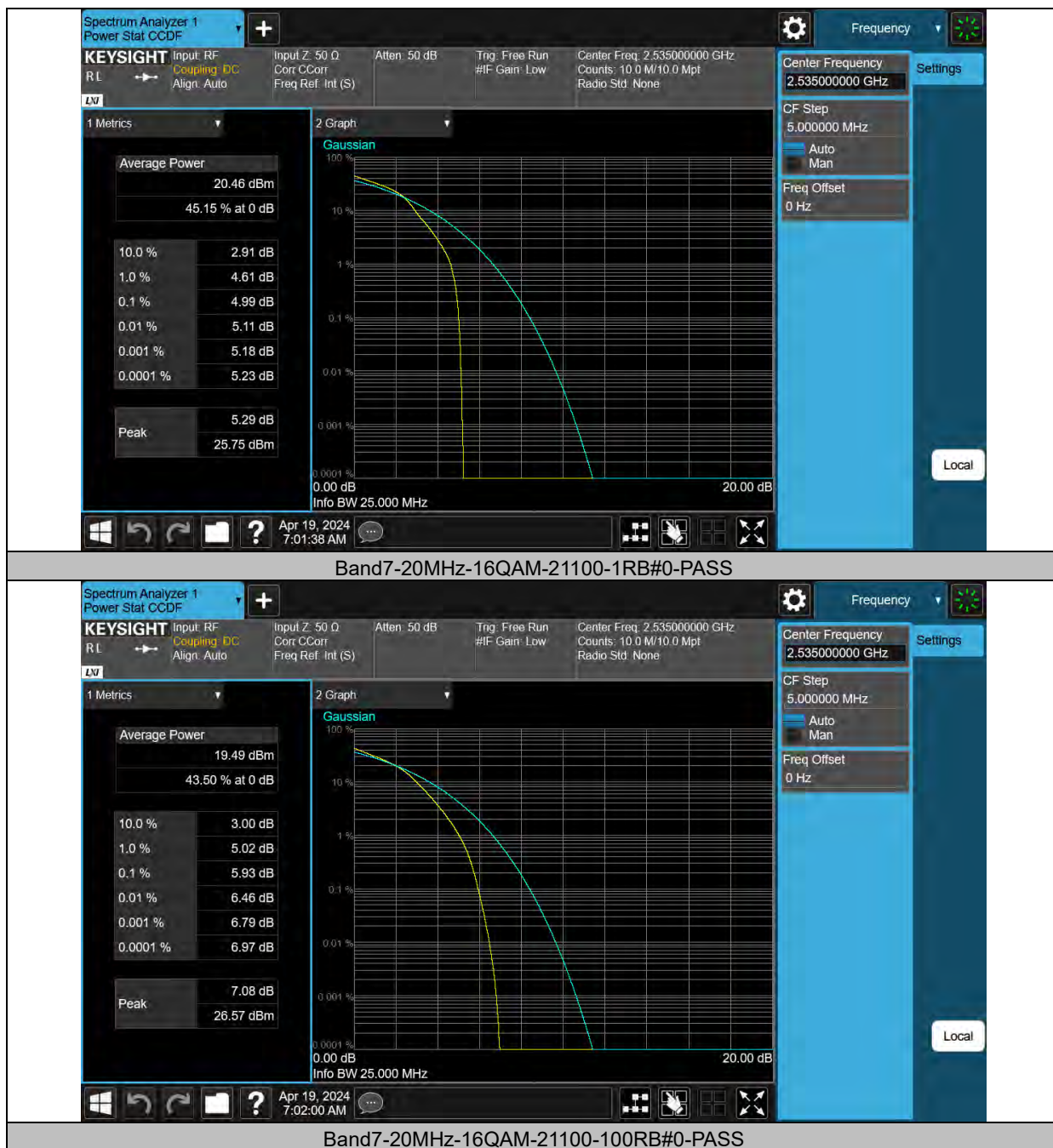
## Test Graphs

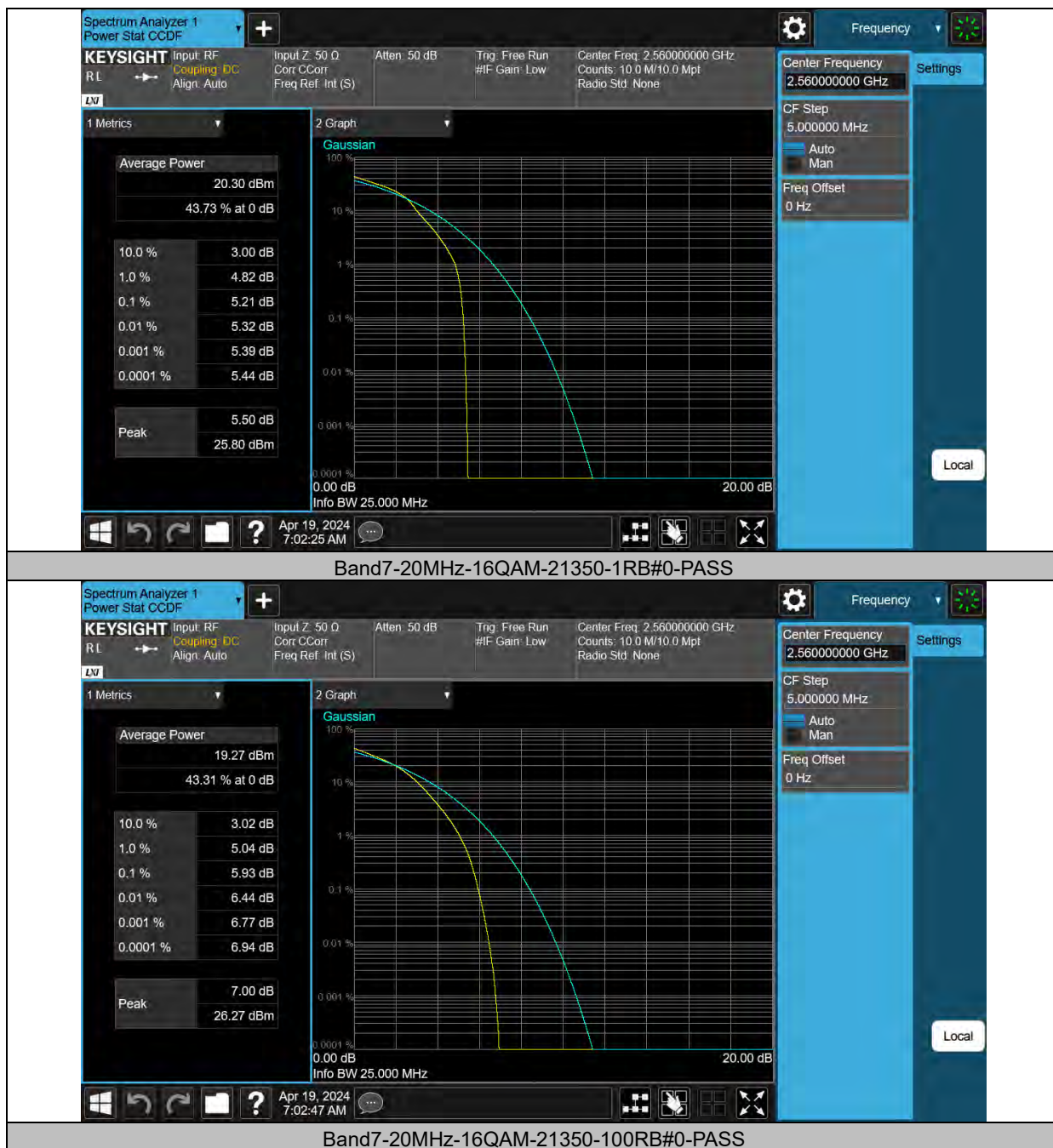












## 26DB BANDWIDTH AND OCCUPIED BANDWIDTH

### Test Result

| Band  | Bandwidth | Modulation | Channel | RB Configuration | Occupied Bandwidth (MHz) | 26dB Bandwidth (MHz) | Verdict |
|-------|-----------|------------|---------|------------------|--------------------------|----------------------|---------|
| Band7 | 5MHz      | QPSK       | 20775   | 25RB#0           | 4.5038                   | 5.016                | PASS    |
| Band7 | 5MHz      | QPSK       | 21100   | 25RB#0           | 4.5118                   | 5.011                | PASS    |
| Band7 | 5MHz      | QPSK       | 21425   | 25RB#0           | 4.5125                   | 4.989                | PASS    |
| Band7 | 5MHz      | 16QAM      | 20775   | 25RB#0           | 4.5100                   | 5.008                | PASS    |
| Band7 | 5MHz      | 16QAM      | 21100   | 25RB#0           | 4.5102                   | 5.040                | PASS    |
| Band7 | 5MHz      | 16QAM      | 21425   | 25RB#0           | 4.5095                   | 5.006                | PASS    |
| Band7 | 10MHz     | QPSK       | 20800   | 50RB#0           | 8.9529                   | 9.847                | PASS    |
| Band7 | 10MHz     | QPSK       | 21100   | 50RB#0           | 8.9768                   | 9.863                | PASS    |
| Band7 | 10MHz     | QPSK       | 21400   | 50RB#0           | 8.9868                   | 9.789                | PASS    |
| Band7 | 10MHz     | 16QAM      | 20800   | 50RB#0           | 8.9609                   | 9.890                | PASS    |
| Band7 | 10MHz     | 16QAM      | 21100   | 50RB#0           | 8.9737                   | 9.907                | PASS    |
| Band7 | 10MHz     | 16QAM      | 21400   | 50RB#0           | 8.9885                   | 9.825                | PASS    |
| Band7 | 15MHz     | QPSK       | 20825   | 75RB#0           | 13.417                   | 14.72                | PASS    |
| Band7 | 15MHz     | QPSK       | 21100   | 75RB#0           | 13.455                   | 14.65                | PASS    |
| Band7 | 15MHz     | QPSK       | 21375   | 75RB#0           | 13.457                   | 14.72                | PASS    |
| Band7 | 15MHz     | 16QAM      | 20825   | 75RB#0           | 13.403                   | 14.62                | PASS    |
| Band7 | 15MHz     | 16QAM      | 21100   | 75RB#0           | 13.459                   | 14.76                | PASS    |
| Band7 | 15MHz     | 16QAM      | 21375   | 75RB#0           | 13.473                   | 14.67                | PASS    |
| Band7 | 20MHz     | QPSK       | 20850   | 100RB#0          | 17.847                   | 19.31                | PASS    |
| Band7 | 20MHz     | QPSK       | 21100   | 100RB#0          | 17.945                   | 19.54                | PASS    |
| Band7 | 20MHz     | QPSK       | 21350   | 100RB#0          | 17.882                   | 19.47                | PASS    |
| Band7 | 20MHz     | 16QAM      | 20850   | 100RB#0          | 17.837                   | 19.50                | PASS    |
| Band7 | 20MHz     | 16QAM      | 21100   | 100RB#0          | 17.952                   | 19.52                | PASS    |
| Band7 | 20MHz     | 16QAM      | 21350   | 100RB#0          | 17.880                   | 19.49                | PASS    |

## Test Graphs

















