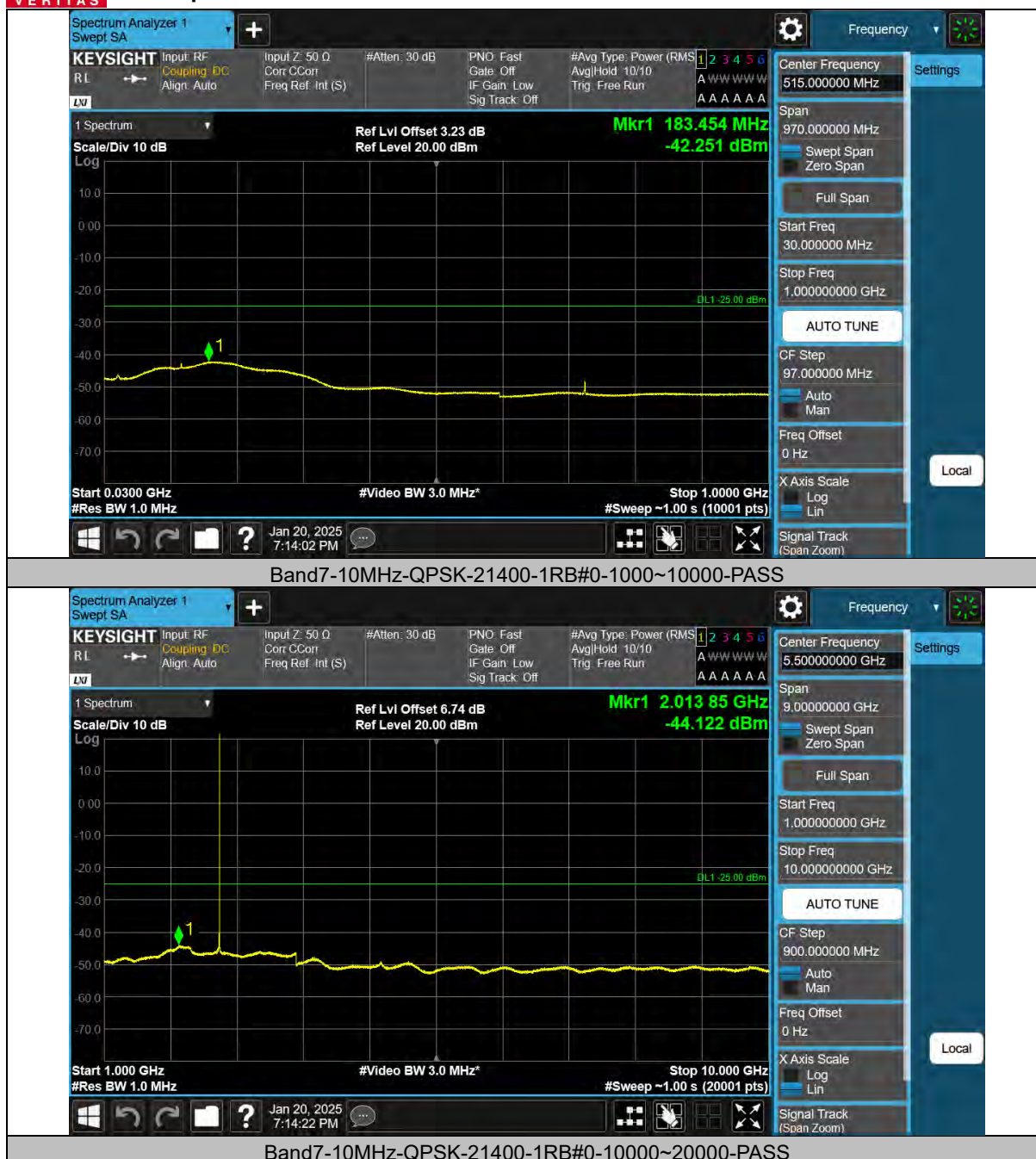




BUREAU  
VERITAS

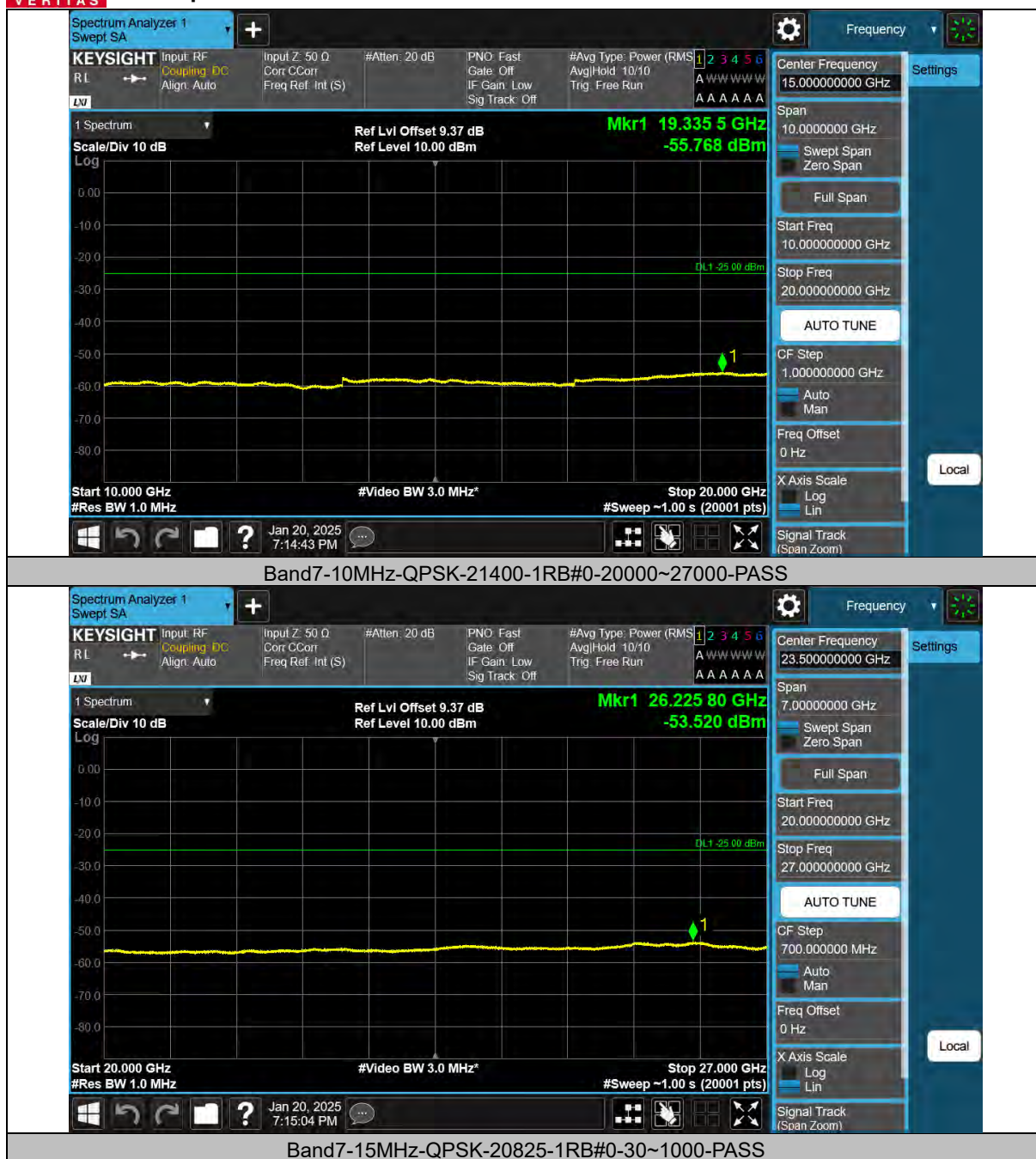
Test Report No.: PSU-NQN2412090110RF03





BUREAU  
VERITAS

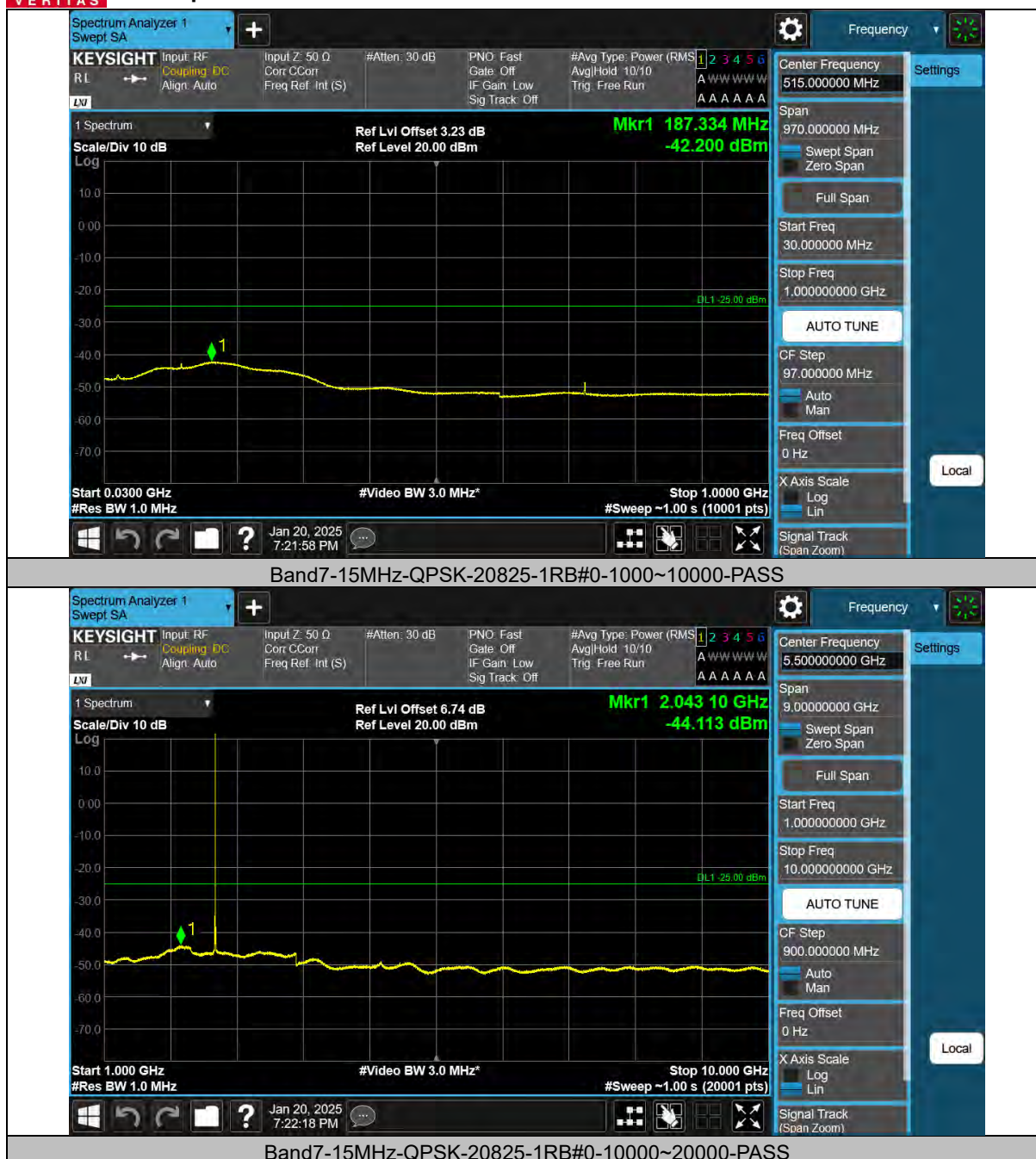
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BUREAU  
VERITAS

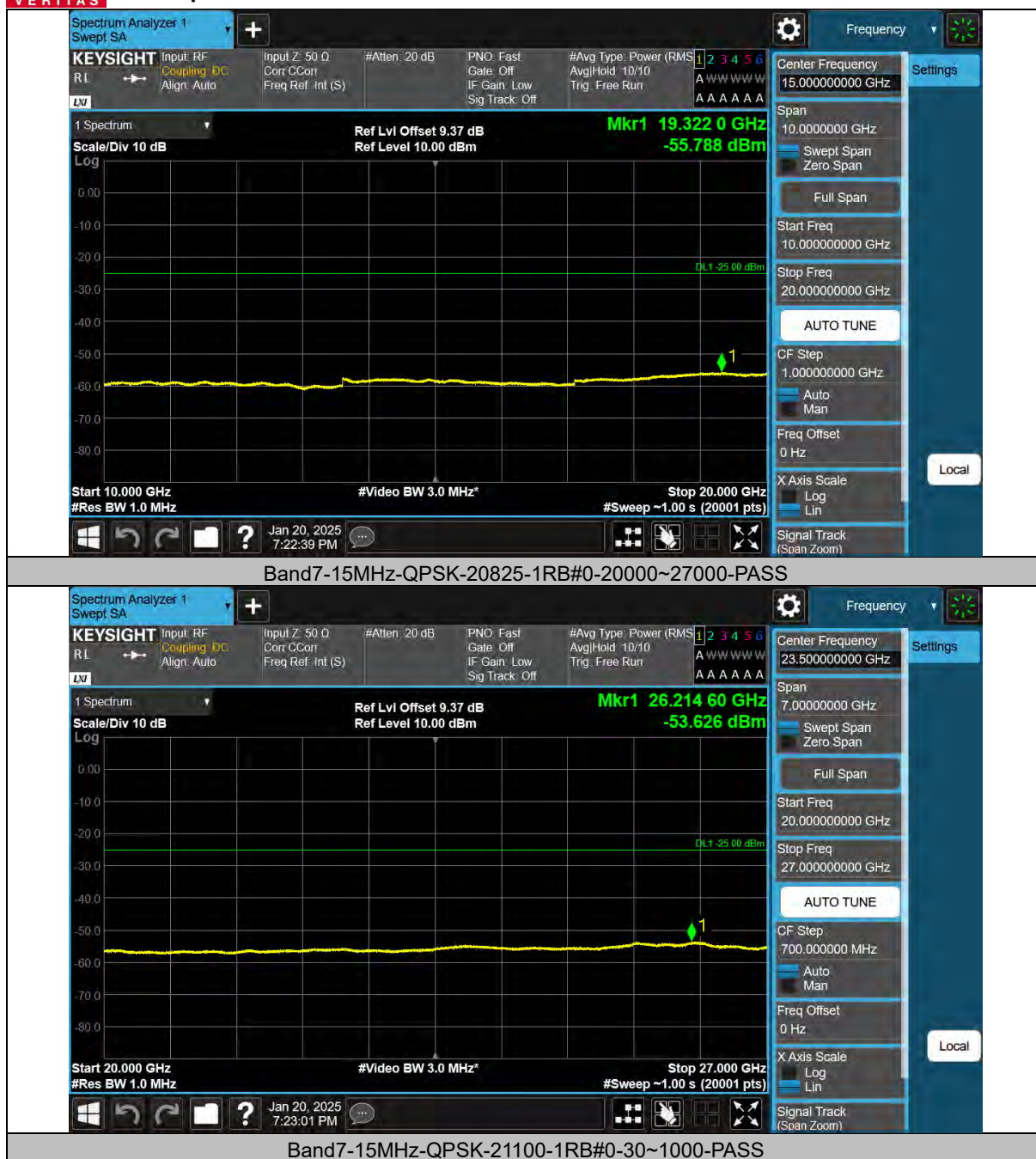
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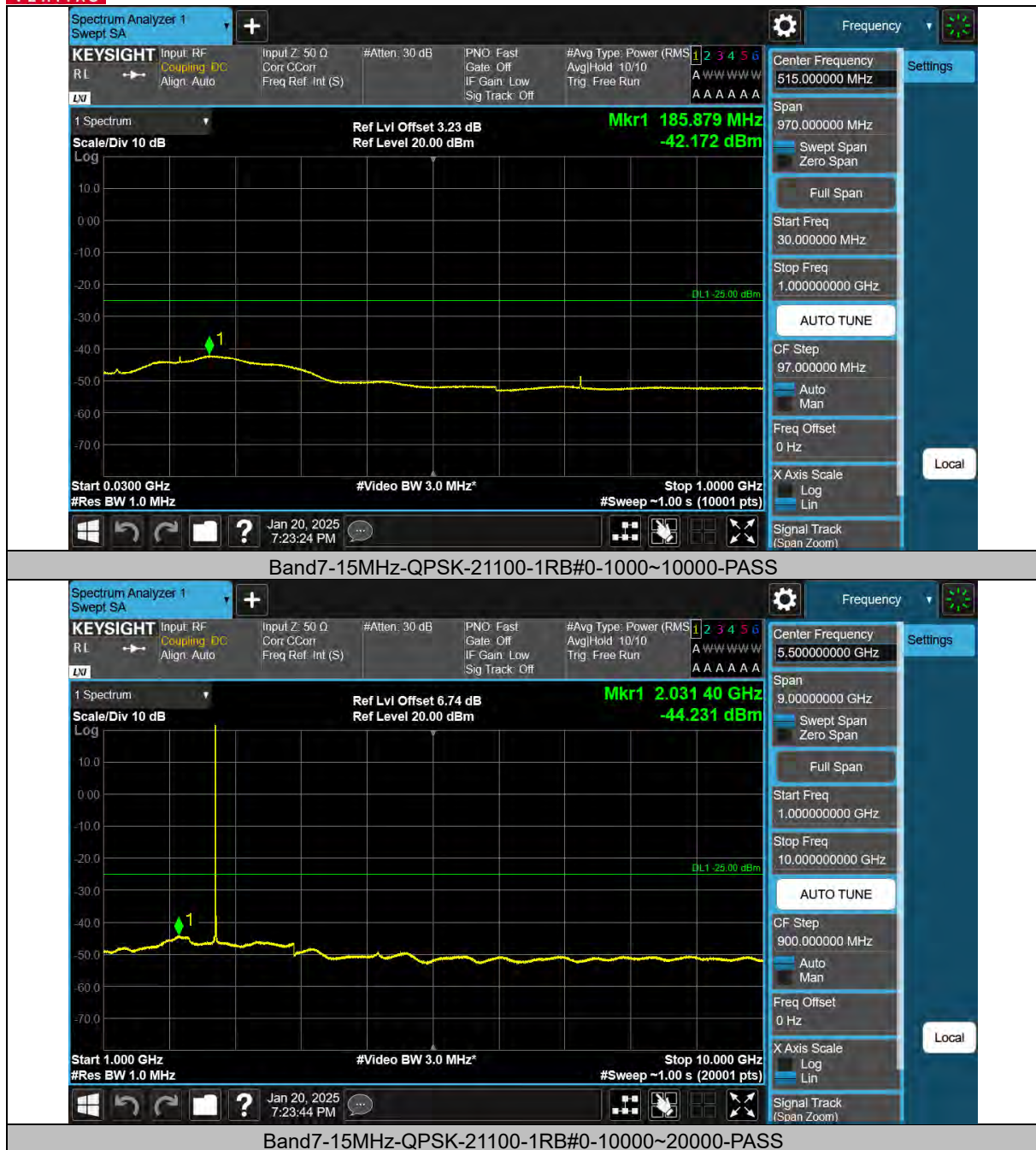




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Test Report No.: PSU-NQN2412090110RF03

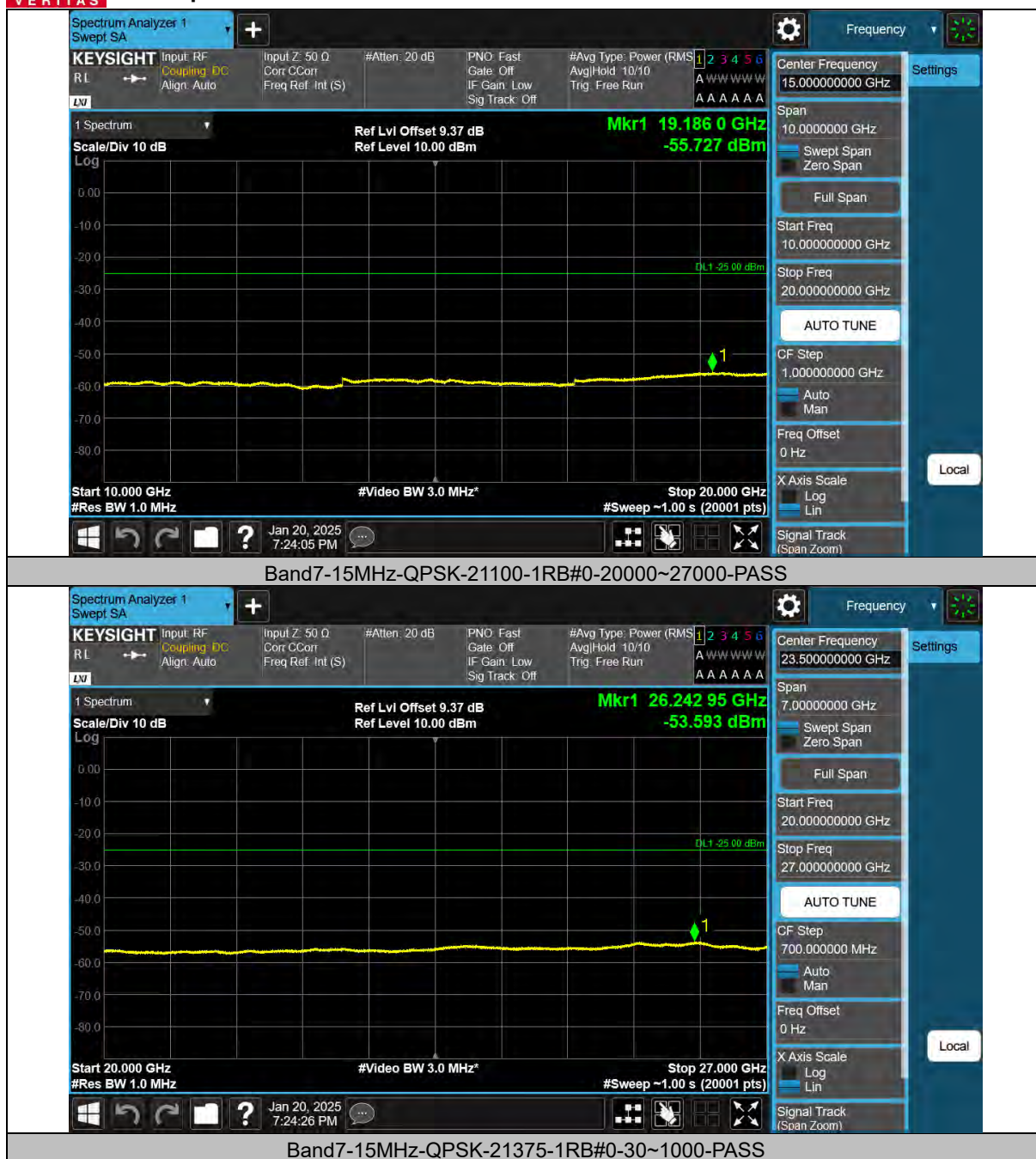






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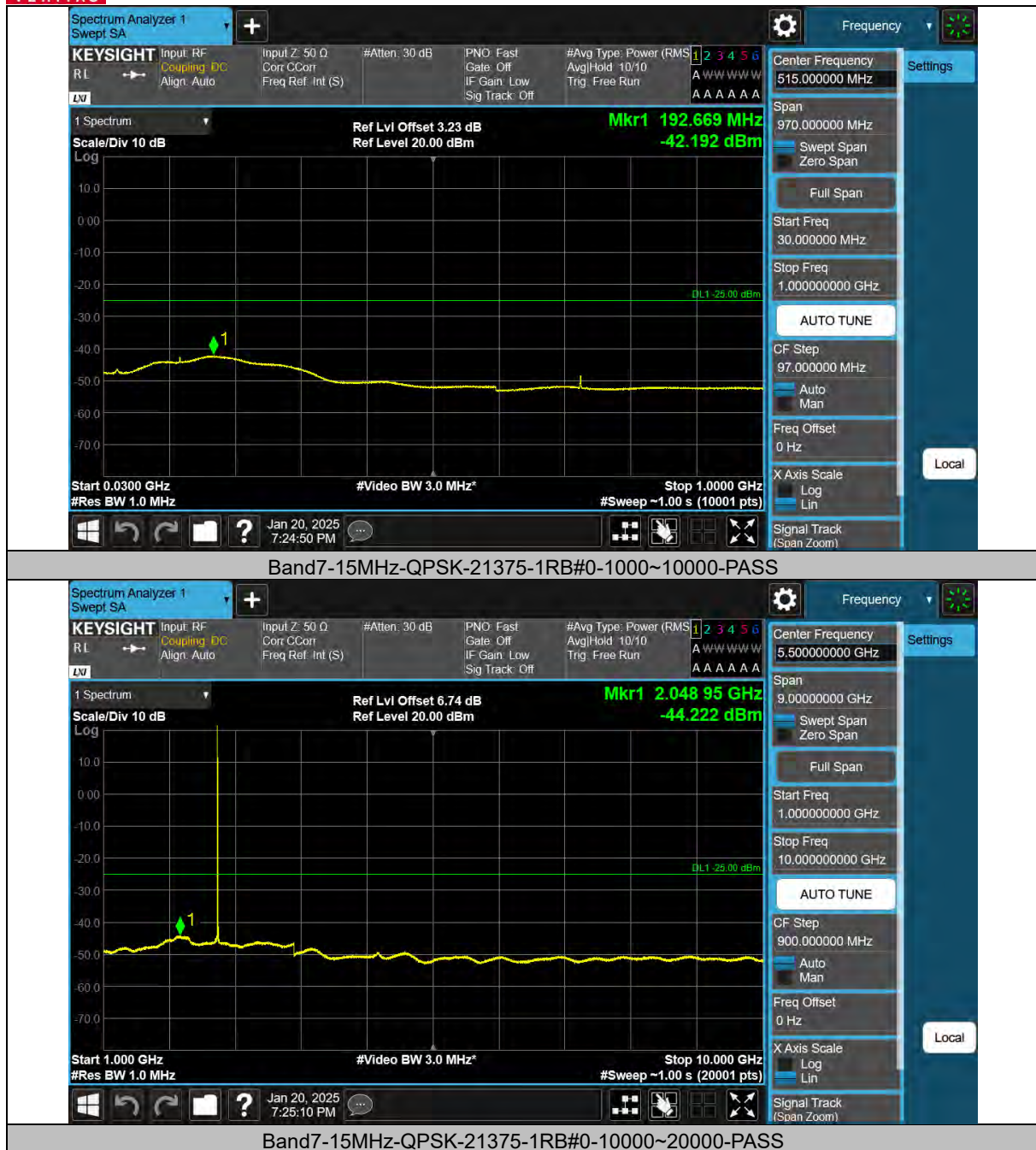
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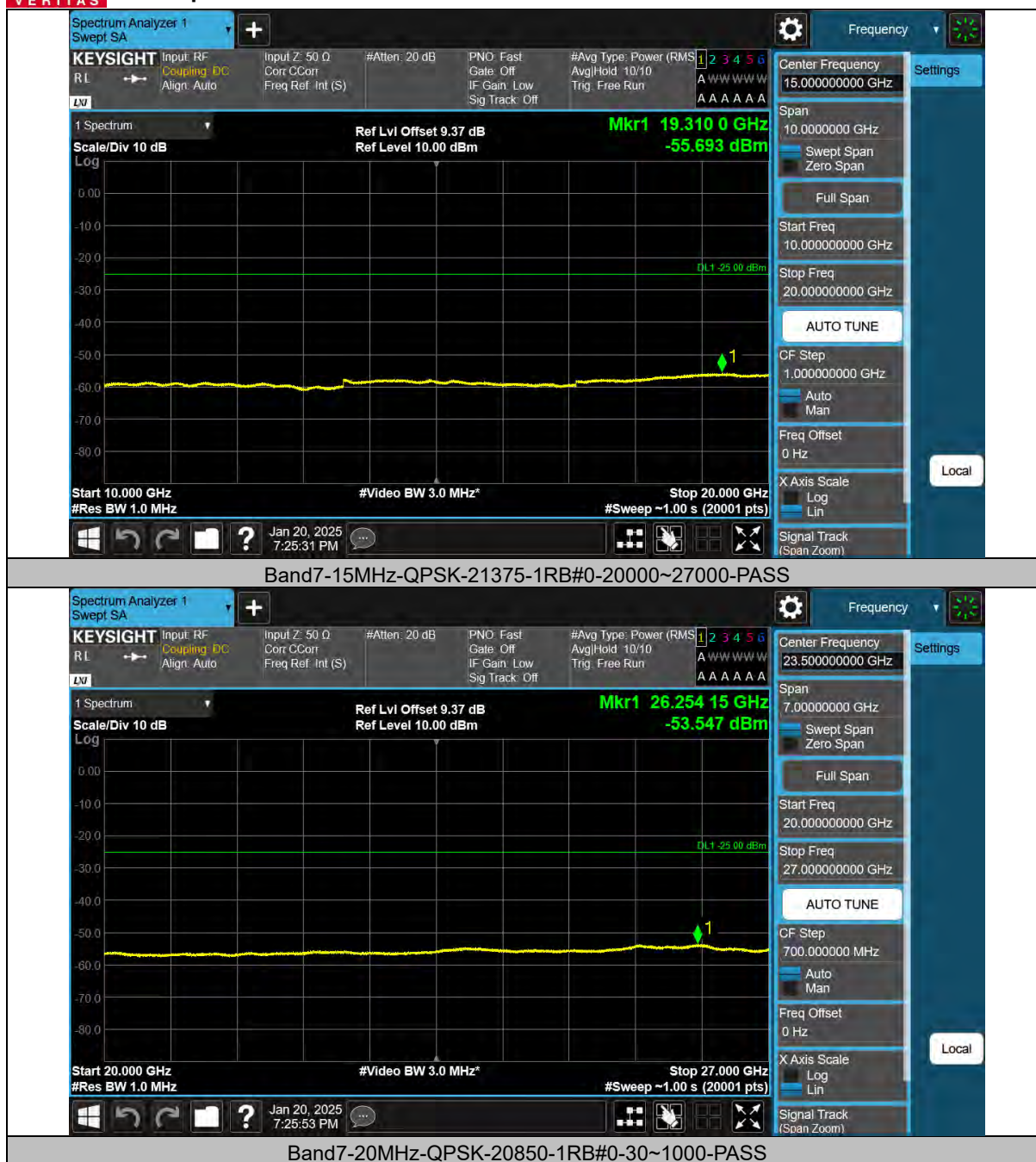
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VERITAS

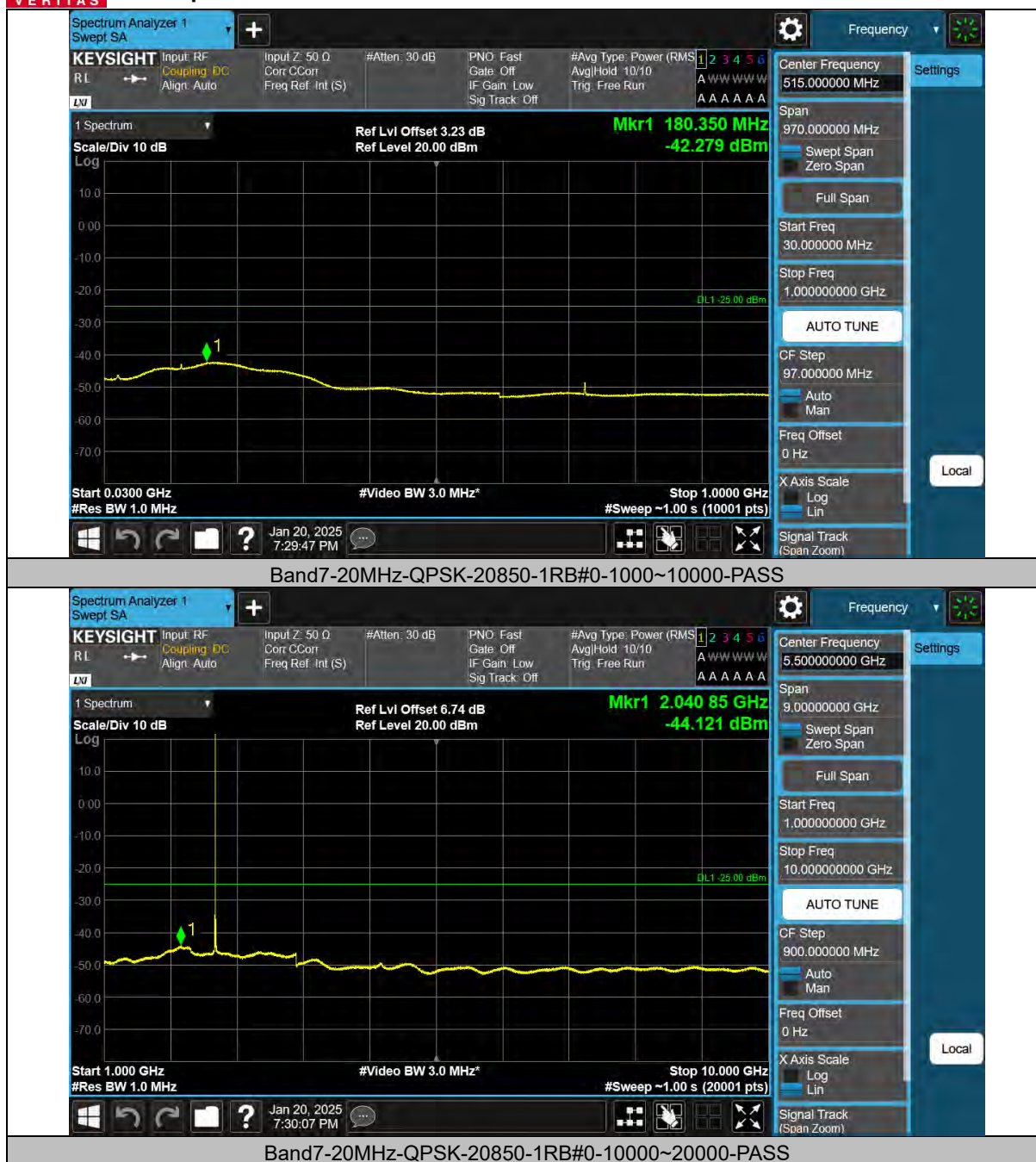
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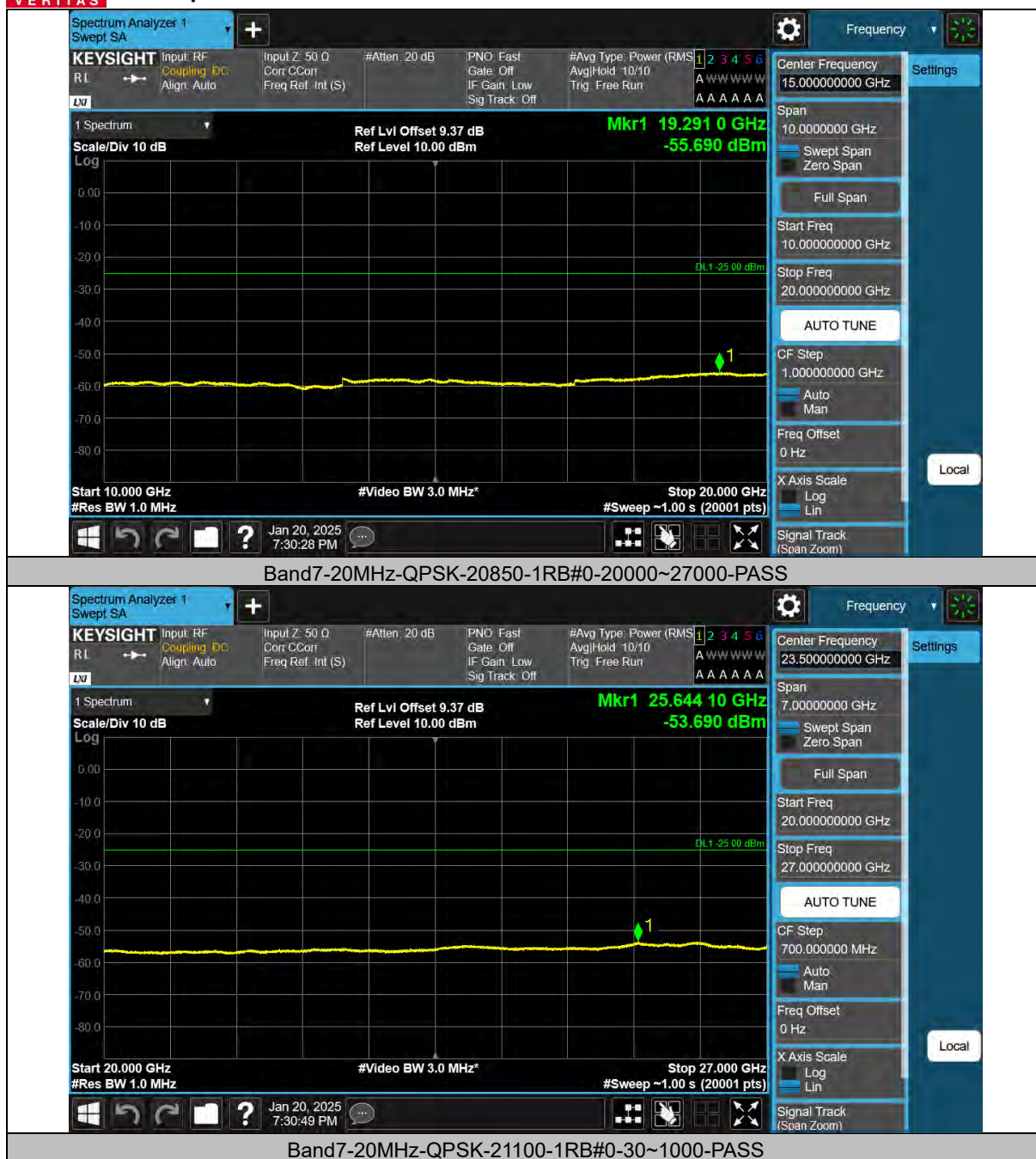
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VERITAS

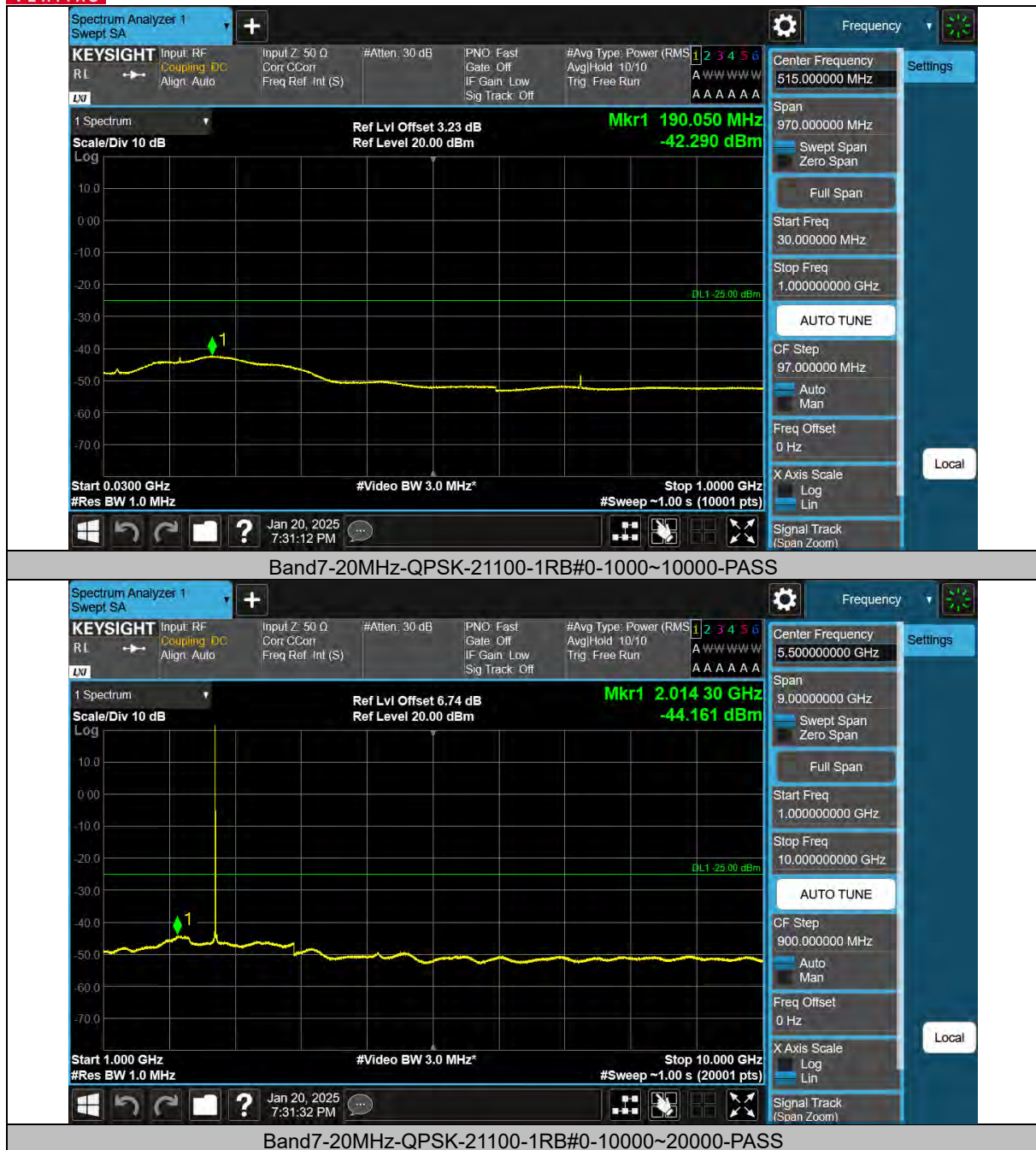
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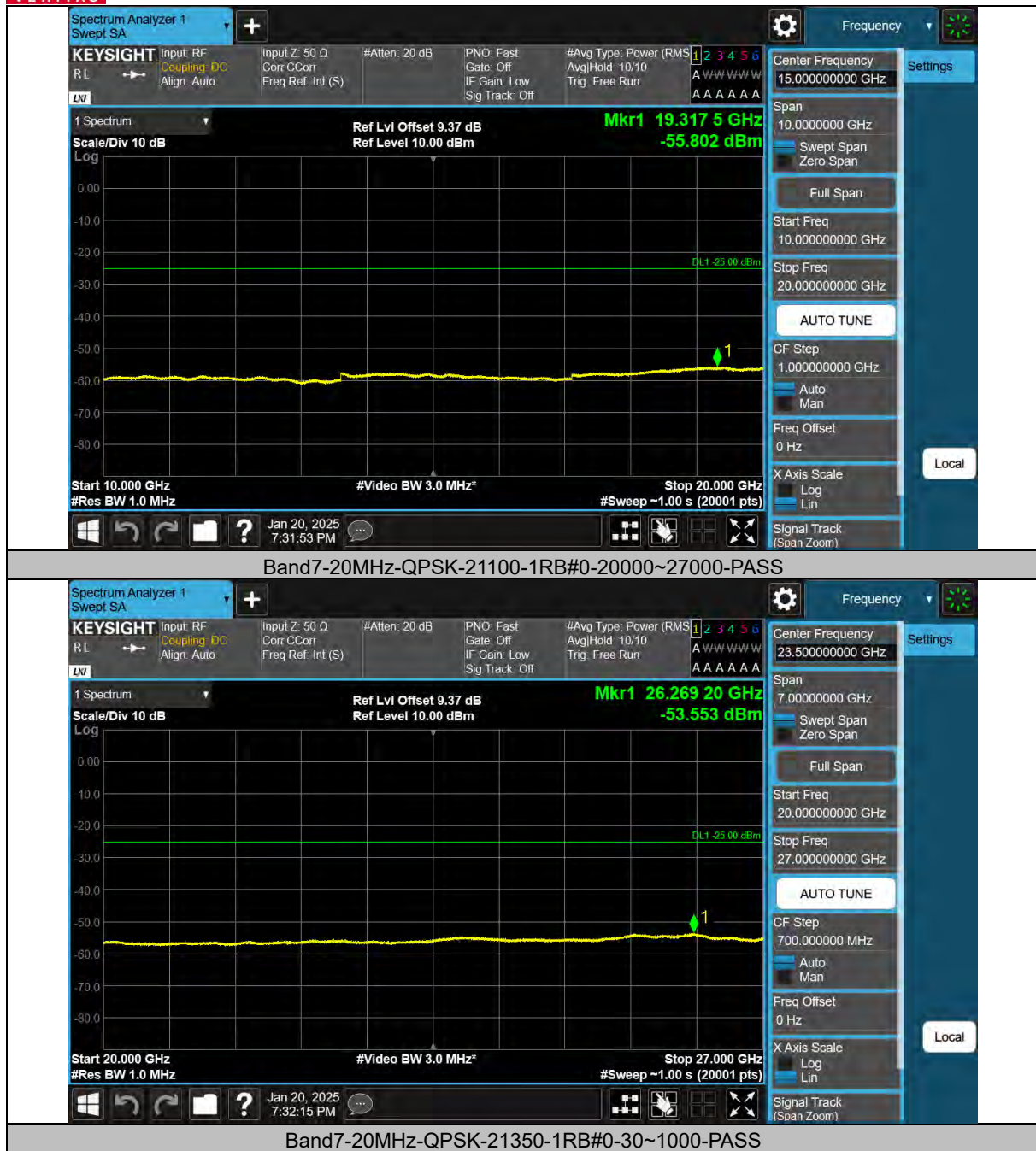
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VERITAS

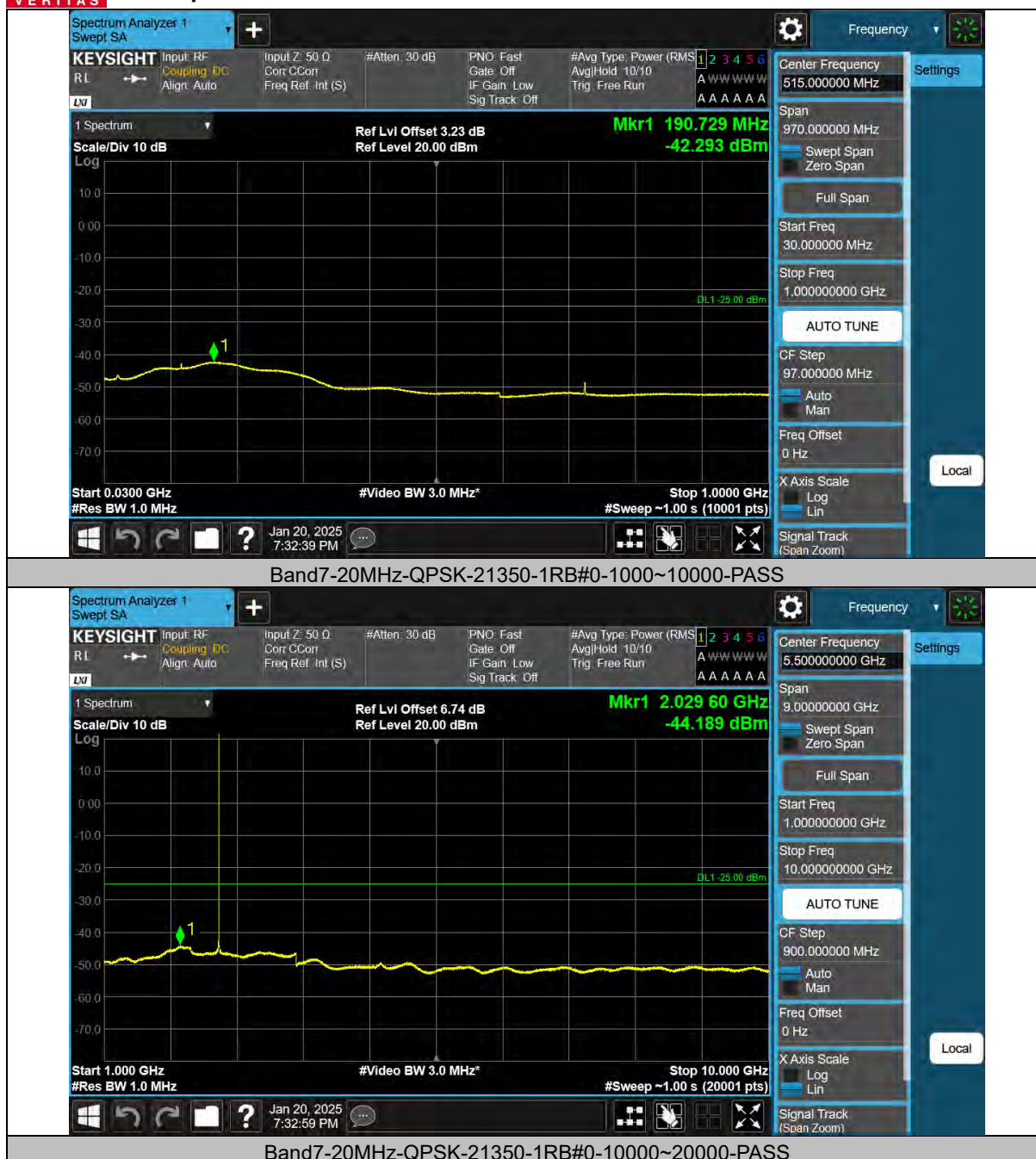
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VERITAS

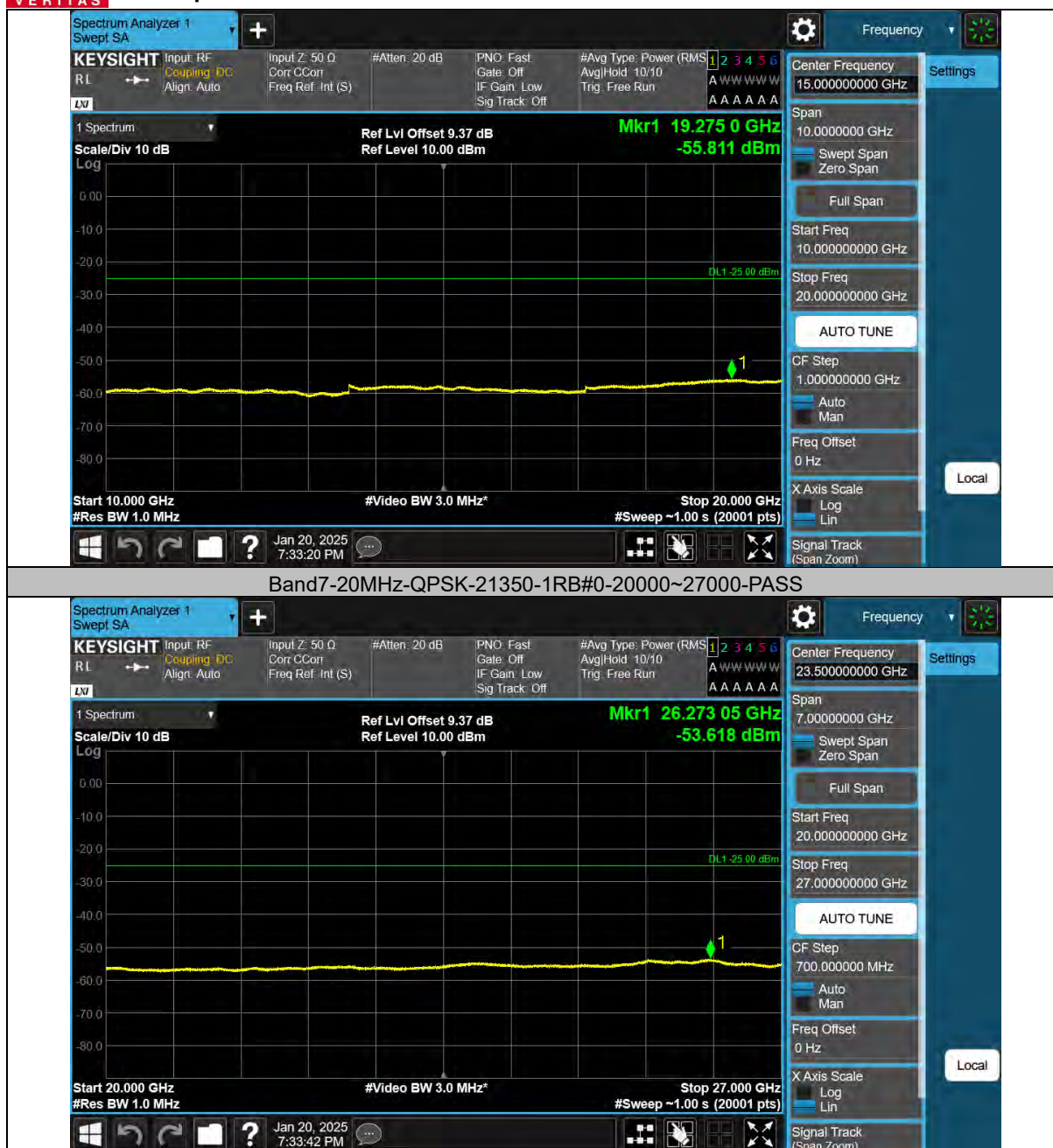
Test Report No.: PSU-NQN2412090110RF03





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Test Report No.: PSU-NQN2412090110RF03



**FREQUENCY STABILITY****Test Result**

| Voltage |           |            |         |              |               |                  |                |                 |             |         |
|---------|-----------|------------|---------|--------------|---------------|------------------|----------------|-----------------|-------------|---------|
| Band    | Bandwidth | Modulation | Channel | RB Configure | Voltage [Vdc] | Temperature (°C) | Deviation (Hz) | Deviation (ppm) | Limit (ppm) | Verdict |
| Band7   | 10MHz     | QPSK       | 20800   | 50RB#0       | VN            | NT               | -2.88          | -0.001150       | ±2.5        | PASS    |
| Band7   | 10MHz     | QPSK       | 20800   | 50RB#0       | VL            | NT               | -3.33          | -0.001329       | ±2.5        | PASS    |
| Band7   | 10MHz     | QPSK       | 20800   | 50RB#0       | VH            | NT               | -3.15          | -0.001257       | ±2.5        | PASS    |
| Band7   | 10MHz     | QPSK       | 21400   | 50RB#0       | VN            | NT               | 2.70           | 0.001053        | ±2.5        | PASS    |
| Band7   | 10MHz     | QPSK       | 21400   | 50RB#0       | VL            | NT               | 4.16           | 0.001622        | ±2.5        | PASS    |
| Band7   | 10MHz     | QPSK       | 21400   | 50RB#0       | VH            | NT               | -1.96          | -0.000764       | ±2.5        | PASS    |

| Temperature |           |            |         |              |               |                  |                |                 |             |         |
|-------------|-----------|------------|---------|--------------|---------------|------------------|----------------|-----------------|-------------|---------|
| Band        | Bandwidth | Modulation | Channel | RB Configure | Voltage [Vdc] | Temperature (°C) | Deviation (Hz) | Deviation (ppm) | Limit (ppm) | Verdict |
| Band7       | 10MHz     | QPSK       | 20800   | 50RB#0       | NV            | -30              | -1.50          | -0.000599       | ±2.5        | PASS    |
| Band7       | 10MHz     | QPSK       | 20800   | 50RB#0       | NV            | -20              | -3.91          | -0.001561       | ±2.5        | PASS    |
| Band7       | 10MHz     | QPSK       | 20800   | 50RB#0       | NV            | -10              | -10.36         | -0.004136       | ±2.5        | PASS    |
| Band7       | 10MHz     | QPSK       | 20800   | 50RB#0       | NV            | 0                | 4.32           | 0.001725        | ±2.5        | PASS    |
| Band7       | 10MHz     | QPSK       | 20800   | 50RB#0       | NV            | 10               | 1.63           | 0.000651        | ±2.5        | PASS    |
| Band7       | 10MHz     | QPSK       | 20800   | 50RB#0       | NV            | 20               | -3.65          | -0.001457       | ±2.5        | PASS    |
| Band7       | 10MHz     | QPSK       | 20800   | 50RB#0       | NV            | 30               | -3.68          | -0.001469       | ±2.5        | PASS    |
| Band7       | 10MHz     | QPSK       | 20800   | 50RB#0       | NV            | 40               | -4.73          | -0.001888       | ±2.5        | PASS    |
| Band7       | 10MHz     | QPSK       | 20800   | 50RB#0       | NV            | 50               | 3.63           | 0.001449        | ±2.5        | PASS    |
| Band7       | 10MHz     | QPSK       | 21400   | 50RB#0       | NV            | -30              | -1.97          | -0.000768       | ±2.5        | PASS    |
| Band7       | 10MHz     | QPSK       | 21400   | 50RB#0       | NV            | -20              | 3.50           | 0.001365        | ±2.5        | PASS    |
| Band7       | 10MHz     | QPSK       | 21400   | 50RB#0       | NV            | -10              | -3.55          | -0.001384       | ±2.5        | PASS    |
| Band7       | 10MHz     | QPSK       | 21400   | 50RB#0       | NV            | 0                | 3.00           | 0.001170        | ±2.5        | PASS    |
| Band7       | 10MHz     | QPSK       | 21400   | 50RB#0       | NV            | 10               | 1.99           | 0.000776        | ±2.5        | PASS    |
| Band7       | 10MHz     | QPSK       | 21400   | 50RB#0       | NV            | 20               | 1.87           | 0.000729        | ±2.5        | PASS    |
| Band7       | 10MHz     | QPSK       | 21400   | 50RB#0       | NV            | 30               | -9.46          | -0.003688       | ±2.5        | PASS    |
| Band7       | 10MHz     | QPSK       | 21400   | 50RB#0       | NV            | 40               | 2.56           | 0.000998        | ±2.5        | PASS    |
| Band7       | 10MHz     | QPSK       | 21400   | 50RB#0       | NV            | 50               | 3.29           | 0.001283        | ±2.5        | PASS    |



## LTE BAND 12

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

#### Test Result

| Band   | Bandwidth | Modulation | Channel | RB Configuration | Result(dB) | Limit(dB) | Verdict |
|--------|-----------|------------|---------|------------------|------------|-----------|---------|
| Band12 | 1.4MHz    | QPSK       | 23017   | 1RB#0            | 4.63       | 13        | PASS    |
| Band12 | 1.4MHz    | QPSK       | 23017   | 6RB#0            | 5.16       | 13        | PASS    |
| Band12 | 1.4MHz    | QPSK       | 23095   | 1RB#0            | 5.13       | 13        | PASS    |
| Band12 | 1.4MHz    | QPSK       | 23095   | 6RB#0            | 5.51       | 13        | PASS    |
| Band12 | 1.4MHz    | QPSK       | 23173   | 1RB#0            | 4.38       | 13        | PASS    |
| Band12 | 1.4MHz    | QPSK       | 23173   | 6RB#0            | 4.96       | 13        | PASS    |
| Band12 | 1.4MHz    | 16QAM      | 23017   | 1RB#0            | 5.49       | 13        | PASS    |
| Band12 | 1.4MHz    | 16QAM      | 23017   | 6RB#0            | 6.03       | 13        | PASS    |
| Band12 | 1.4MHz    | 16QAM      | 23095   | 1RB#0            | 6.06       | 13        | PASS    |
| Band12 | 1.4MHz    | 16QAM      | 23095   | 6RB#0            | 6.33       | 13        | PASS    |
| Band12 | 1.4MHz    | 16QAM      | 23173   | 1RB#0            | 5.35       | 13        | PASS    |
| Band12 | 1.4MHz    | 16QAM      | 23173   | 6RB#0            | 5.82       | 13        | PASS    |
| Band12 | 3MHz      | QPSK       | 23025   | 1RB#0            | 4.63       | 13        | PASS    |
| Band12 | 3MHz      | QPSK       | 23025   | 15RB#0           | 5.23       | 13        | PASS    |
| Band12 | 3MHz      | QPSK       | 23095   | 1RB#0            | 5.00       | 13        | PASS    |
| Band12 | 3MHz      | QPSK       | 23095   | 15RB#0           | 5.49       | 13        | PASS    |
| Band12 | 3MHz      | QPSK       | 23165   | 1RB#0            | 4.72       | 13        | PASS    |
| Band12 | 3MHz      | QPSK       | 23165   | 15RB#0           | 5.13       | 13        | PASS    |
| Band12 | 3MHz      | 16QAM      | 23025   | 1RB#0            | 5.52       | 13        | PASS    |
| Band12 | 3MHz      | 16QAM      | 23025   | 15RB#0           | 6.07       | 13        | PASS    |
| Band12 | 3MHz      | 16QAM      | 23095   | 1RB#0            | 5.88       | 13        | PASS    |
| Band12 | 3MHz      | 16QAM      | 23095   | 15RB#0           | 6.30       | 13        | PASS    |
| Band12 | 3MHz      | 16QAM      | 23165   | 1RB#0            | 5.67       | 13        | PASS    |
| Band12 | 3MHz      | 16QAM      | 23165   | 15RB#0           | 5.97       | 13        | PASS    |
| Band12 | 5MHz      | QPSK       | 23035   | 1RB#0            | 4.58       | 13        | PASS    |
| Band12 | 5MHz      | QPSK       | 23035   | 25RB#0           | 5.28       | 13        | PASS    |
| Band12 | 5MHz      | QPSK       | 23095   | 1RB#0            | 4.99       | 13        | PASS    |
| Band12 | 5MHz      | QPSK       | 23095   | 25RB#0           | 5.51       | 13        | PASS    |
| Band12 | 5MHz      | QPSK       | 23155   | 1RB#0            | 4.98       | 13        | PASS    |
| Band12 | 5MHz      | QPSK       | 23155   | 25RB#0           | 5.22       | 13        | PASS    |
| Band12 | 5MHz      | 16QAM      | 23035   | 1RB#0            | 5.49       | 13        | PASS    |
| Band12 | 5MHz      | 16QAM      | 23035   | 25RB#0           | 6.14       | 13        | PASS    |
| Band12 | 5MHz      | 16QAM      | 23095   | 1RB#0            | 5.93       | 13        | PASS    |
| Band12 | 5MHz      | 16QAM      | 23095   | 25RB#0           | 6.32       | 13        | PASS    |
| Band12 | 5MHz      | 16QAM      | 23155   | 1RB#0            | 5.82       | 13        | PASS    |
| Band12 | 5MHz      | 16QAM      | 23155   | 25RB#0           | 6.05       | 13        | PASS    |
| Band12 | 10MHz     | QPSK       | 23060   | 1RB#0            | 4.65       | 13        | PASS    |
| Band12 | 10MHz     | QPSK       | 23060   | 50RB#0           | 5.37       | 13        | PASS    |
| Band12 | 10MHz     | QPSK       | 23095   | 1RB#0            | 4.88       | 13        | PASS    |
| Band12 | 10MHz     | QPSK       | 23095   | 50RB#0           | 5.51       | 13        | PASS    |
| Band12 | 10MHz     | QPSK       | 23130   | 1RB#0            | 5.02       | 13        | PASS    |
| Band12 | 10MHz     | QPSK       | 23130   | 50RB#0           | 5.42       | 13        | PASS    |
| Band12 | 10MHz     | 16QAM      | 23060   | 1RB#0            | 5.55       | 13        | PASS    |
| Band12 | 10MHz     | 16QAM      | 23060   | 50RB#0           | 6.19       | 13        | PASS    |
| Band12 | 10MHz     | 16QAM      | 23095   | 1RB#0            | 5.75       | 13        | PASS    |

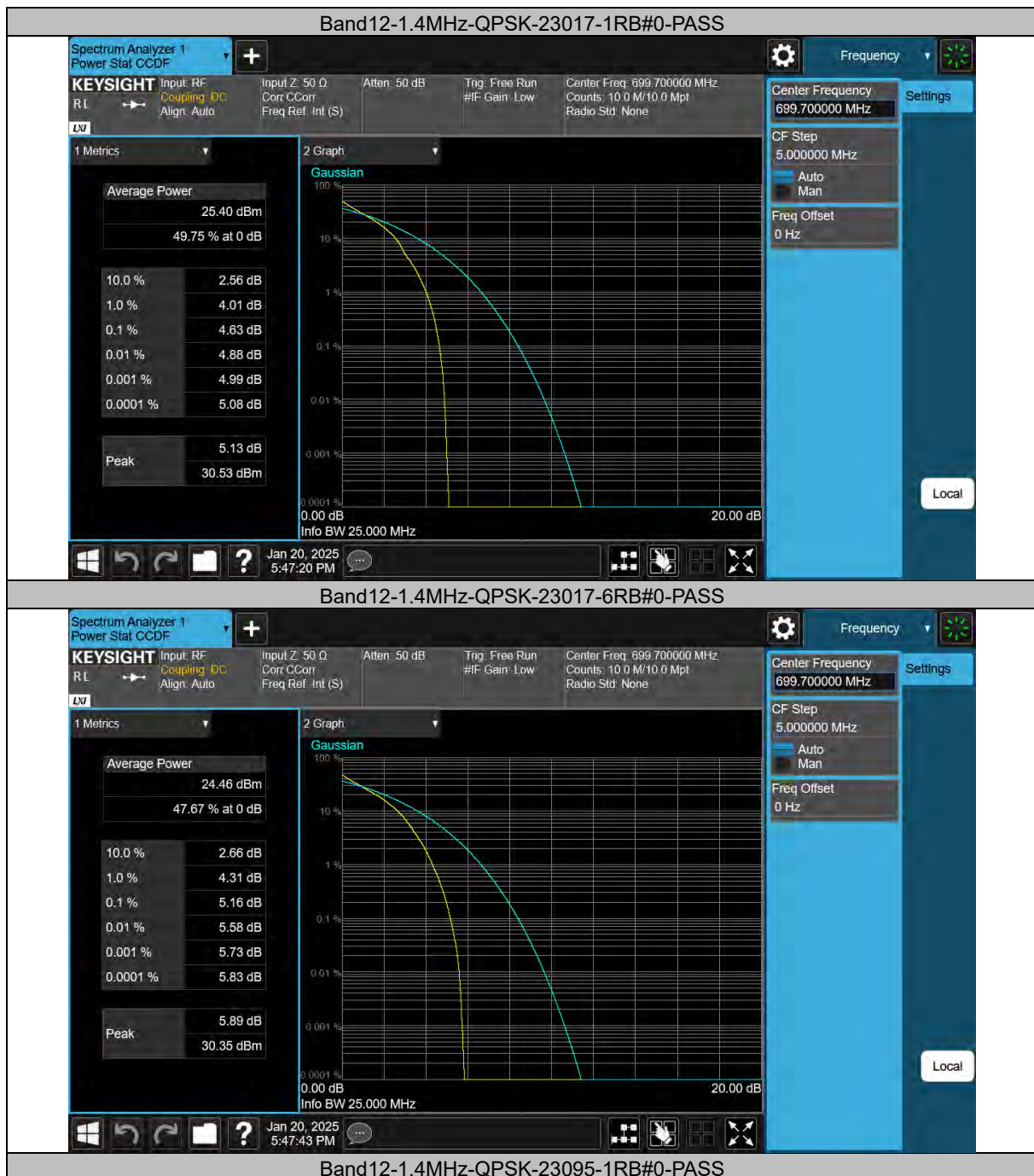


**Test Report No.: PSU-NQN2412090110RF03**

|        |       |       |       |        |      |    |      |
|--------|-------|-------|-------|--------|------|----|------|
| Band12 | 10MHz | 16QAM | 23095 | 50RB#0 | 6.29 | 13 | PASS |
| Band12 | 10MHz | 16QAM | 23130 | 1RB#0  | 5.87 | 13 | PASS |
| Band12 | 10MHz | 16QAM | 23130 | 50RB#0 | 6.20 | 13 | PASS |

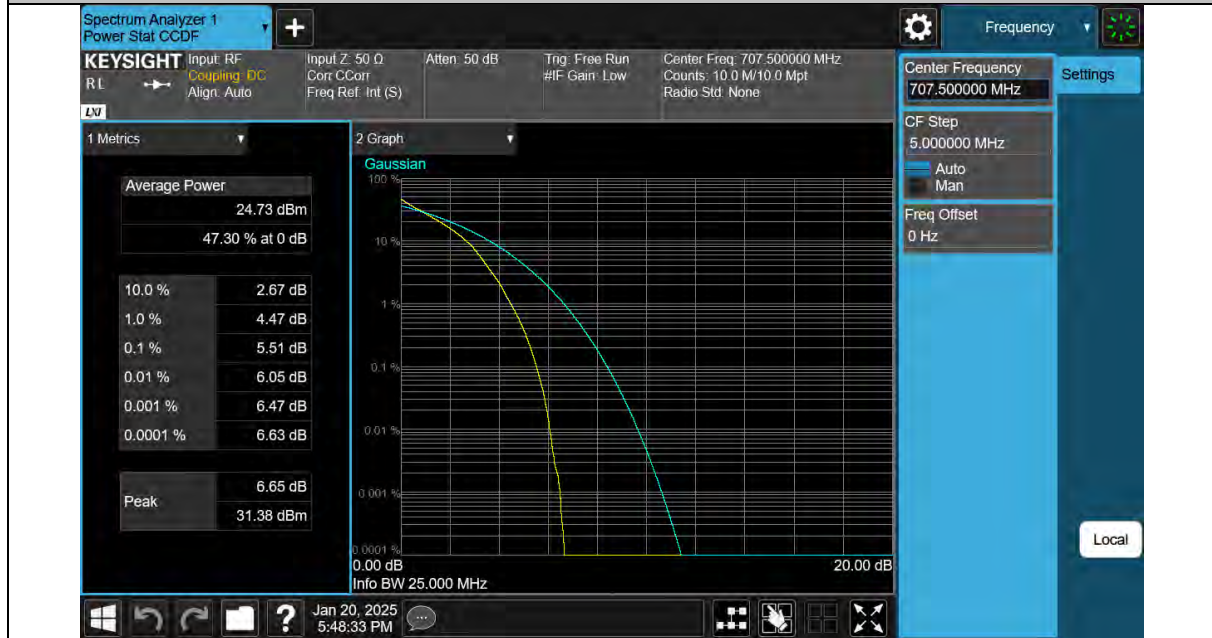


## Test Graphs





Band12-1.4MHz-QPSK-23095-6RB#0-PASS



Band12-1.4MHz-QPSK-23173-1RB#0-PASS



Band12-1.4MHz-QPSK-23173-6RB#0-PASS



Band12-1.4MHz-16QAM-23017-1RB#0-PASS



Band12-1.4MHz-16QAM-23017-6RB#0-PASS



Band12-1.4MHz-16QAM-23095-1RB#0-PASS



Band12-1.4MHz-16QAM-23095-6RB#0-PASS



Band12-1.4MHz-16QAM-23173-1RB#0-PASS



Band12-1.4MHz-16QAM-23173-6RB#0-PASS



Band12-3MHz-QPSK-23025-1RB#0-PASS



Band12-3MHz-QPSK-23025-15RB#0-PASS



Band12-3MHz-QPSK-23095-1RB#0-PASS



Band12-3MHz-QPSK-23095-15RB#0-PASS



Band12-3MHz-QPSK-23165-1RB#0-PASS



Band12-3MHz-QPSK-23165-15RB#0-PASS



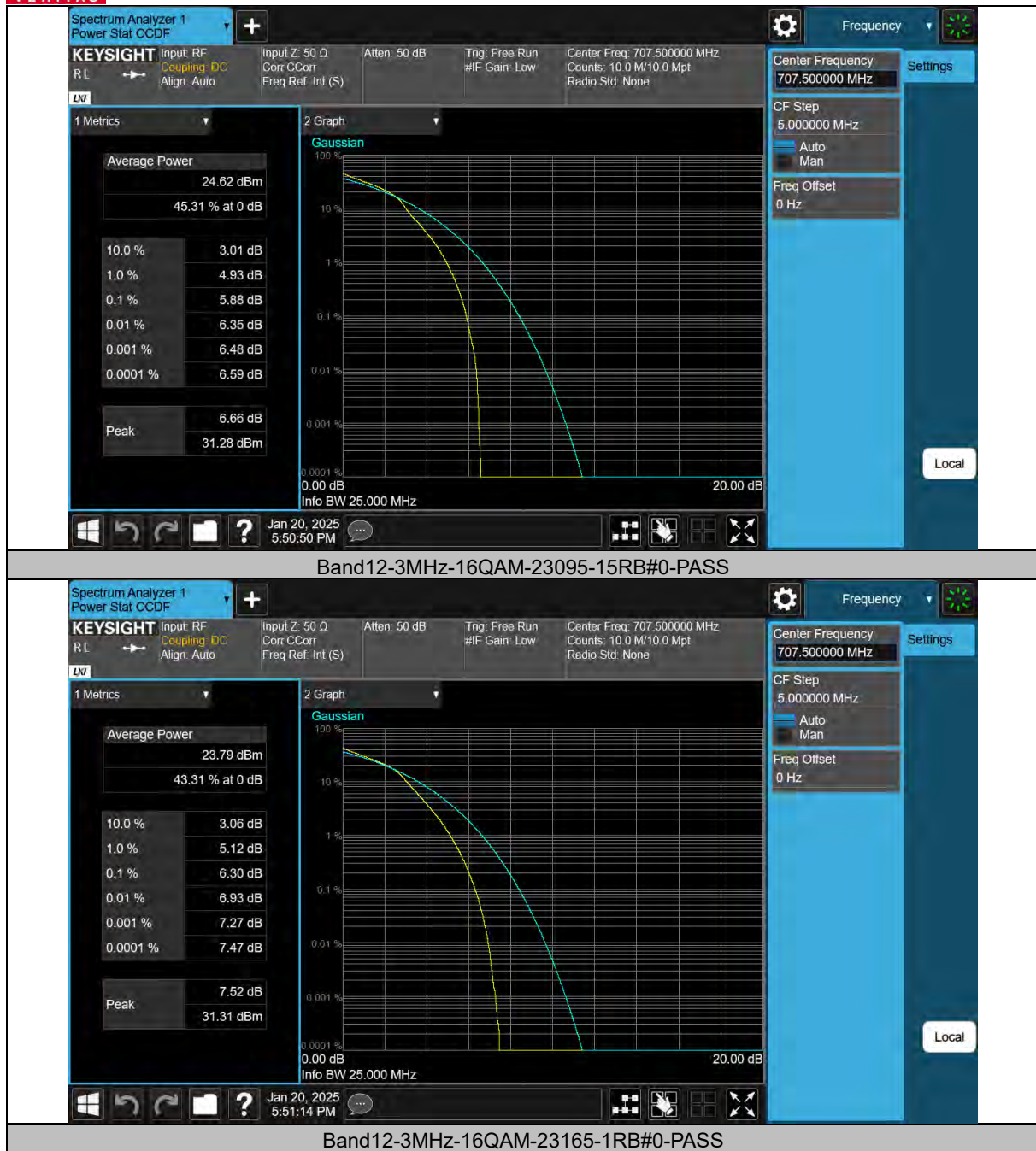
Band12-3MHz-16QAM-23025-1RB#0-PASS



Band12-3MHz-16QAM-23025-15RB#0-PASS



Band12-3MHz-16QAM-23095-1RB#0-PASS





Band12-3MHz-16QAM-23165-15RB#0-PASS



Band12-5MHz-QPSK-23035-1RB#0-PASS



Band12-5MHz-QPSK-23035-25RB#0-PASS



Band12-5MHz-QPSK-23095-1RB#0-PASS



Band12-5MHz-QPSK-23095-25RB#0-PASS



Band12-5MHz-QPSK-23155-1RB#0-PASS



Band12-5MHz-QPSK-23155-25RB#0-PASS



Band12-5MHz-16QAM-23035-1RB#0-PASS



Band12-5MHz-16QAM-23035-25RB#0-PASS



Band12-5MHz-16QAM-23095-1RB#0-PASS



Band12-5MHz-16QAM-23095-25RB#0-PASS



Band12-5MHz-16QAM-23155-1RB#0-PASS



Band12-5MHz-16QAM-23155-25RB#0-PASS



Band12-10MHz-QPSK-23060-1RB#0-PASS



Band12-10MHz-QPSK-23060-50RB#0-PASS



Band12-10MHz-QPSK-23095-1RB#0-PASS



Band12-10MHz-QPSK-23095-50RB#0-PASS



Band12-10MHz-QPSK-23130-1RB#0-PASS



Band12-10MHz-QPSK-23130-50RB#0-PASS



Band12-10MHz-16QAM-23060-1RB#0-PASS



Band12-10MHz-16QAM-23060-50RB#0-PASS



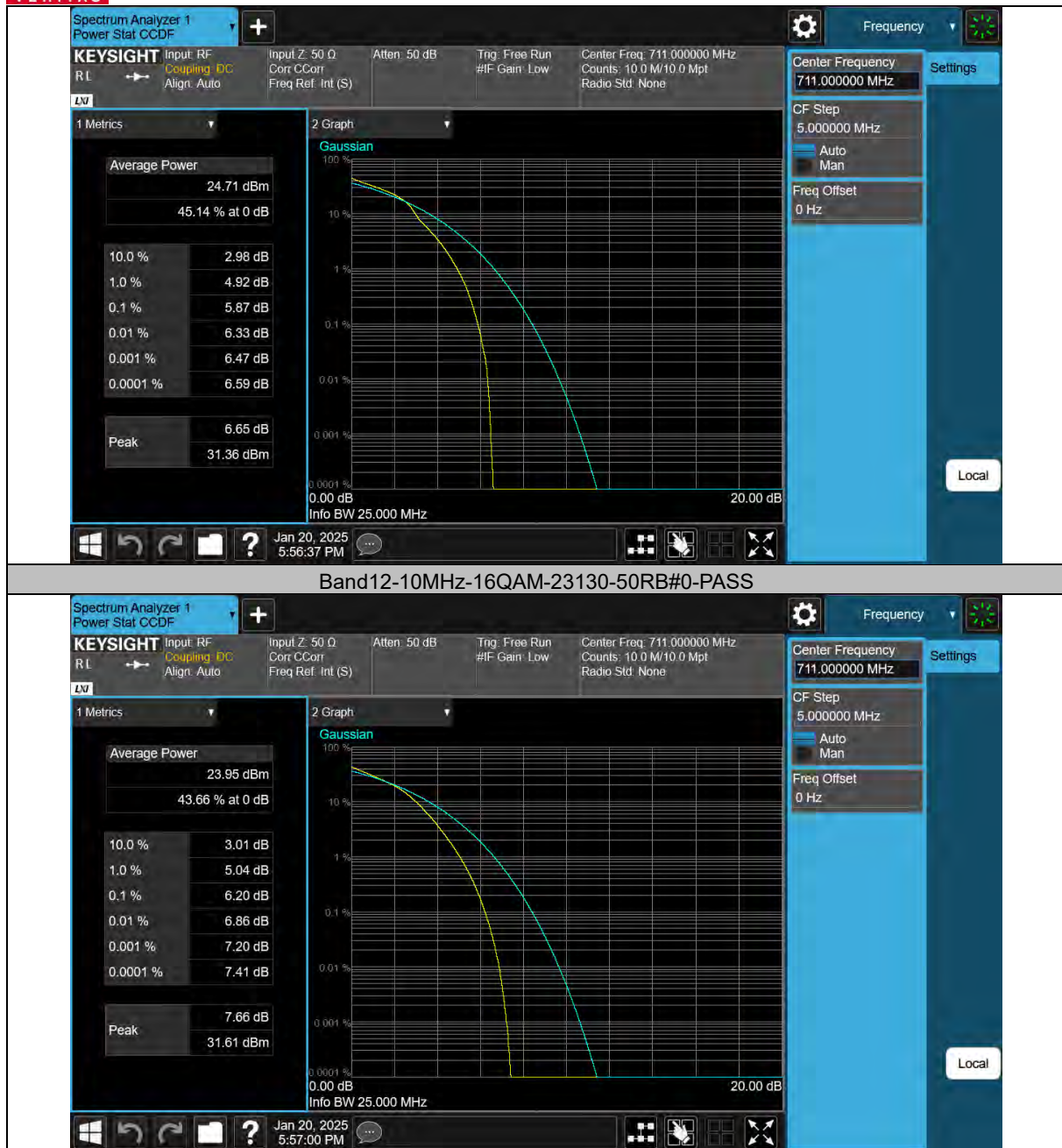
Band12-10MHz-16QAM-23095-1RB#0-PASS



Band12-10MHz-16QAM-23095-50RB#0-PASS



Band12-10MHz-16QAM-23130-1RB#0-PASS



## 26DB BANDWIDTH AND OCCUPIED BANDWIDTH

### Test Result

| Band   | Bandwidth | Modulation | Channel | RB Configuration | Occupied Bandwidth (MHz) | 26dB Bandwidth (MHz) | Verdict |
|--------|-----------|------------|---------|------------------|--------------------------|----------------------|---------|
| Band12 | 1.4MHz    | QPSK       | 23017   | 6RB#0            | 1.1052                   | 1.366                | PASS    |
| Band12 | 1.4MHz    | QPSK       | 23095   | 6RB#0            | 1.1012                   | 1.368                | PASS    |
| Band12 | 1.4MHz    | QPSK       | 23173   | 6RB#0            | 1.0980                   | 1.326                | PASS    |
| Band12 | 1.4MHz    | 16QAM      | 23017   | 6RB#0            | 1.1036                   | 1.357                | PASS    |
| Band12 | 1.4MHz    | 16QAM      | 23095   | 6RB#0            | 1.1044                   | 1.355                | PASS    |
| Band12 | 1.4MHz    | 16QAM      | 23173   | 6RB#0            | 1.1014                   | 1.350                | PASS    |
| Band12 | 3MHz      | QPSK       | 23025   | 15RB#0           | 2.7012                   | 3.021                | PASS    |
| Band12 | 3MHz      | QPSK       | 23095   | 15RB#0           | 2.7053                   | 3.042                | PASS    |
| Band12 | 3MHz      | QPSK       | 23165   | 15RB#0           | 2.7046                   | 3.055                | PASS    |
| Band12 | 3MHz      | 16QAM      | 23025   | 15RB#0           | 2.7049                   | 3.077                | PASS    |
| Band12 | 3MHz      | 16QAM      | 23095   | 15RB#0           | 2.7012                   | 3.021                | PASS    |
| Band12 | 3MHz      | 16QAM      | 23165   | 15RB#0           | 2.7084                   | 3.024                | PASS    |
| Band12 | 5MHz      | QPSK       | 23035   | 25RB#0           | 4.5151                   | 5.204                | PASS    |
| Band12 | 5MHz      | QPSK       | 23095   | 25RB#0           | 4.5225                   | 5.166                | PASS    |
| Band12 | 5MHz      | QPSK       | 23155   | 25RB#0           | 4.5243                   | 5.163                | PASS    |
| Band12 | 5MHz      | 16QAM      | 23035   | 25RB#0           | 4.5260                   | 5.130                | PASS    |
| Band12 | 5MHz      | 16QAM      | 23095   | 25RB#0           | 4.5440                   | 5.171                | PASS    |
| Band12 | 5MHz      | 16QAM      | 23155   | 25RB#0           | 4.5177                   | 5.166                | PASS    |
| Band12 | 10MHz     | QPSK       | 23060   | 50RB#0           | 8.9583                   | 10.02                | PASS    |
| Band12 | 10MHz     | QPSK       | 23095   | 50RB#0           | 9.0109                   | 10.11                | PASS    |
| Band12 | 10MHz     | QPSK       | 23130   | 50RB#0           | 9.0247                   | 10.01                | PASS    |
| Band12 | 10MHz     | 16QAM      | 23060   | 50RB#0           | 8.9593                   | 10.03                | PASS    |
| Band12 | 10MHz     | 16QAM      | 23095   | 50RB#0           | 9.0233                   | 9.969                | PASS    |
| Band12 | 10MHz     | 16QAM      | 23130   | 50RB#0           | 9.0155                   | 10.09                | PASS    |

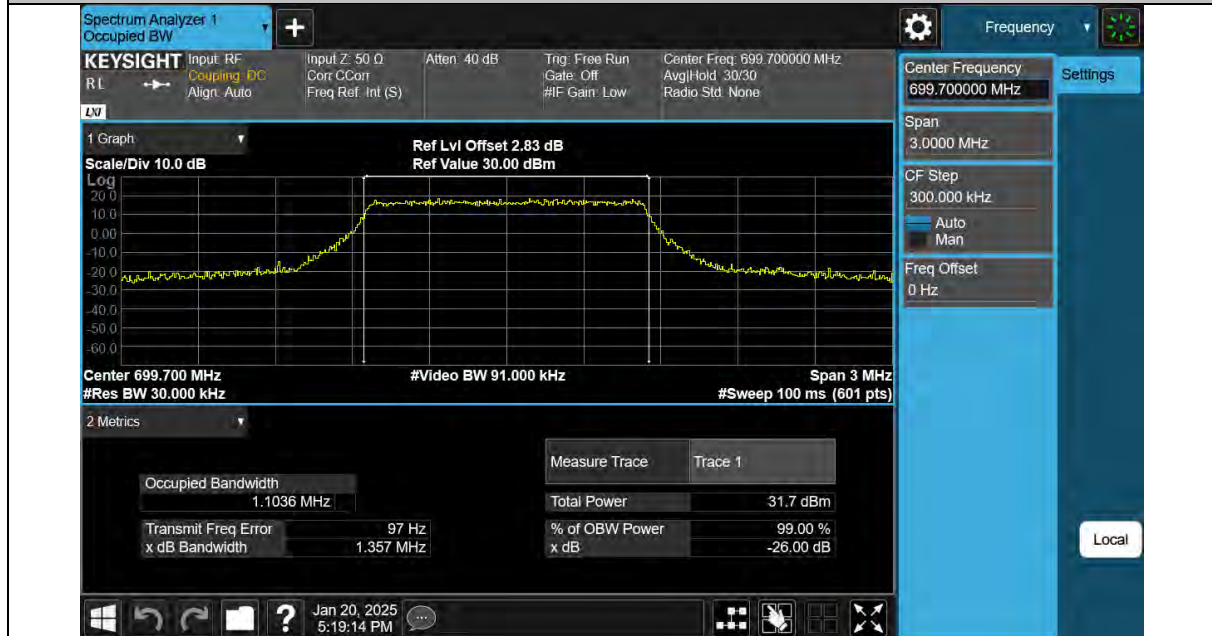


## Test Graphs



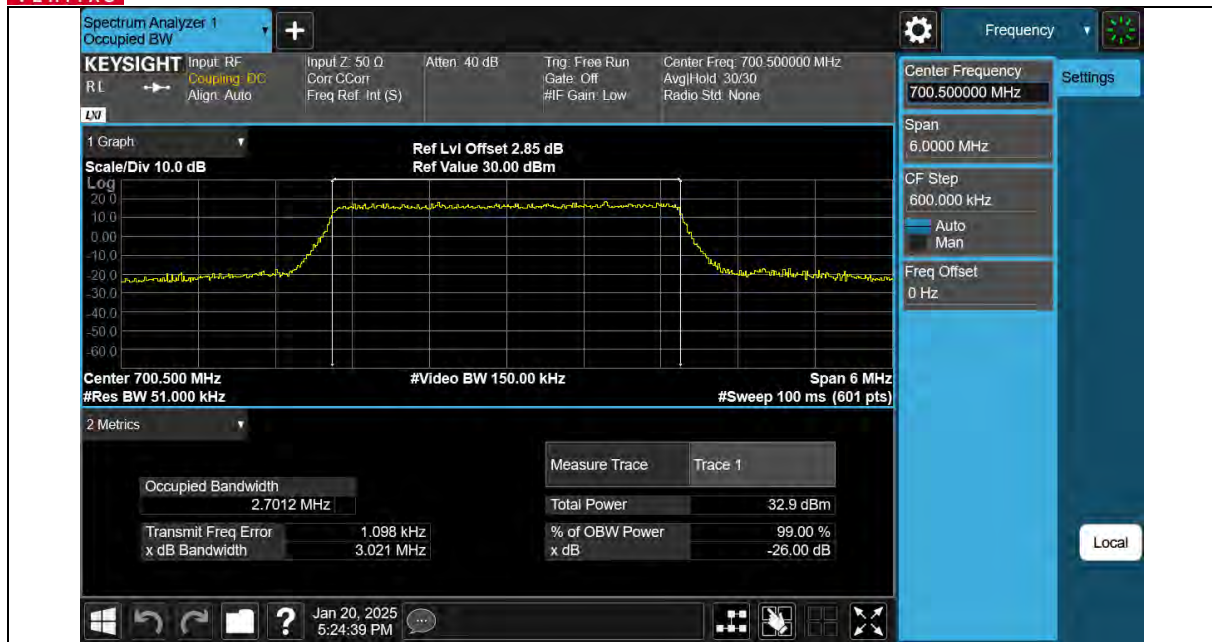


Band12-1.4MHz-16QAM-23017-6RB#0-PASS



Band12-1.4MHz-16QAM-23095-6RB#0-PASS





Band12-3MHz-QPSK-23095-15RB#0-PASS



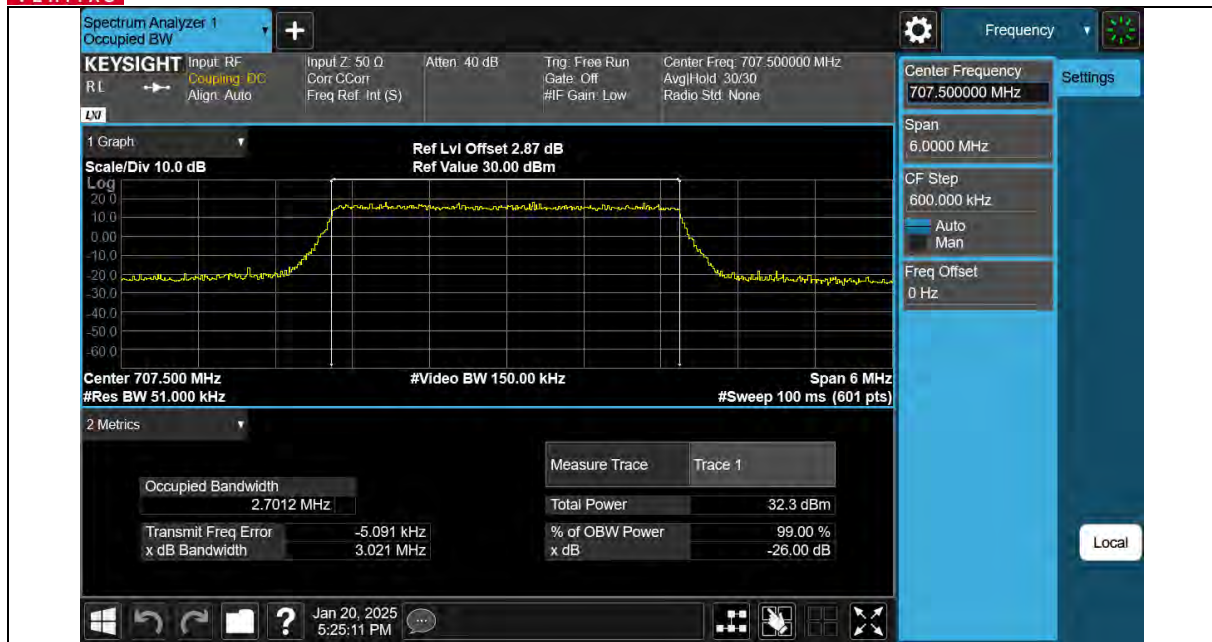
Band12-3MHz-QPSK-23165-15RB#0-PASS



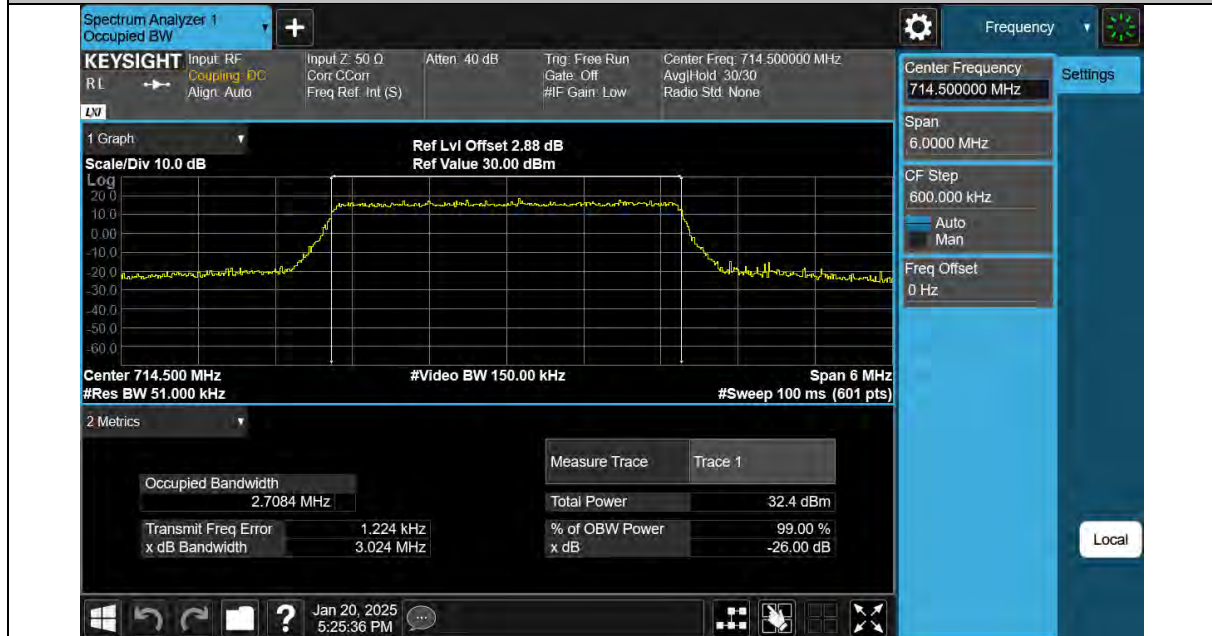
Band12-3MHz-16QAM-23025-15RB#0-PASS



Band12-3MHz-16QAM-23095-15RB#0-PASS



Band12-3MHz-16QAM-23165-15RB#0-PASS



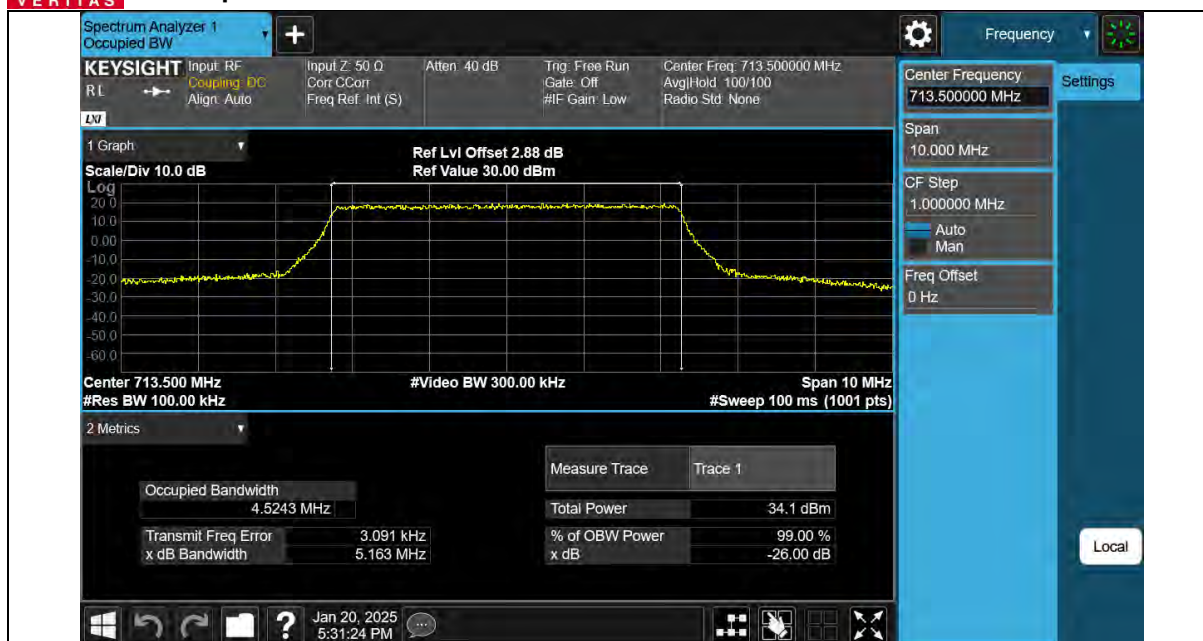
Band12-5MHz-QPSK-23035-25RB#0-PASS



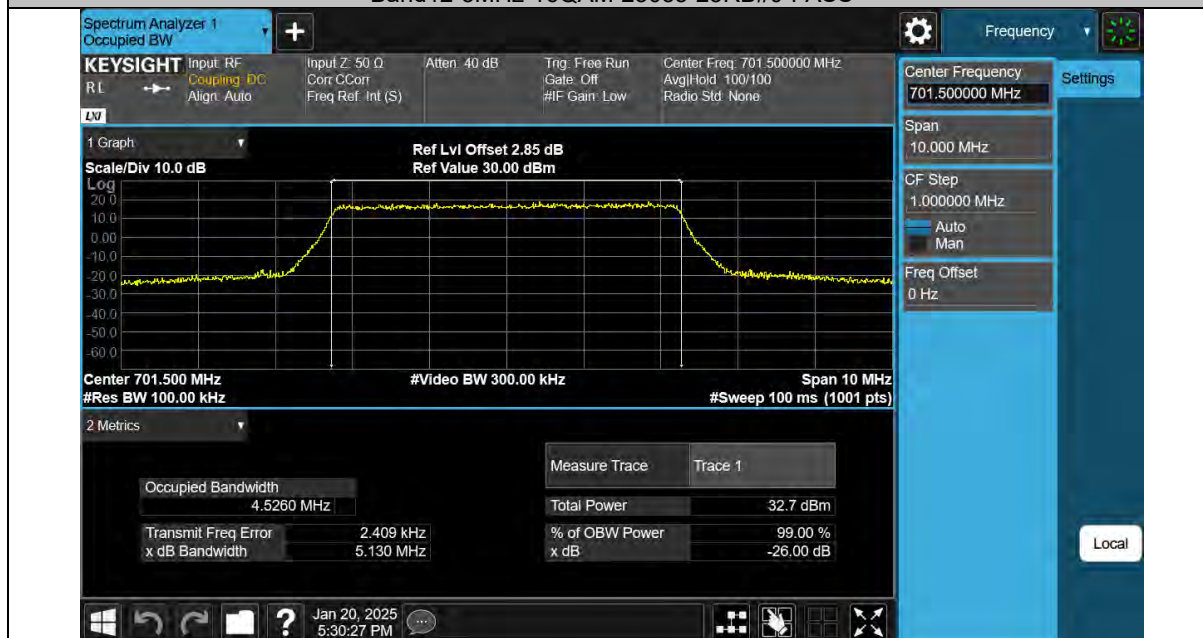
Band12-5MHz-QPSK-23095-25RB#0-PASS



Band12-5MHz-QPSK-23155-25RB#0-PASS



Band12-5MHz-16QAM-23035-25RB#0-PASS



Band12-5MHz-16QAM-23095-25RB#0-PASS



Band12-5MHz-16QAM-23155-25RB#0-PASS



Band12-10MHz-QPSK-23060-50RB#0-PASS



Band12-10MHz-QPSK-23095-50RB#0-PASS



Band12-10MHz-QPSK-23130-50RB#0-PASS



Band12-10MHz-16QAM-23060-50RB#0-PASS



Band12-10MHz-16QAM-23095-50RB#0-PASS