

# Appendix-B LTE Band 71

## Effective (Isotropic) Radiated Power Output Data

### Test Result

| Band   | Bandwidth | Modulation | Channel | RB Configuration | Result (dBm) | ERP (dBm) | Limit (dBm) | Verdict |
|--------|-----------|------------|---------|------------------|--------------|-----------|-------------|---------|
| Band71 | 5MHz      | QPSK       | 133147  | 1RB#0            | 23.01        | 22.08     | 34.77       | PASS    |
| Band71 | 5MHz      | QPSK       | 133147  | 1RB#12           | 23.06        | 22.13     | 34.77       | PASS    |
| Band71 | 5MHz      | QPSK       | 133147  | 1RB#24           | 23.08        | 22.15     | 34.77       | PASS    |
| Band71 | 5MHz      | QPSK       | 133147  | 25RB#0           | 22.13        | 21.2      | 34.77       | PASS    |
| Band71 | 5MHz      | 16QAM      | 133147  | 1RB#0            | 22.49        | 21.56     | 34.77       | PASS    |
| Band71 | 5MHz      | 16QAM      | 133147  | 1RB#12           | 22.49        | 21.56     | 34.77       | PASS    |
| Band71 | 5MHz      | 16QAM      | 133147  | 1RB#24           | 22.38        | 21.45     | 34.77       | PASS    |
| Band71 | 5MHz      | 16QAM      | 133147  | 25RB#0           | 21.4         | 20.47     | 34.77       | PASS    |
| Band71 | 5MHz      | QPSK       | 133297  | 1RB#0            | 23.02        | 22.09     | 34.77       | PASS    |
| Band71 | 5MHz      | QPSK       | 133297  | 1RB#12           | 23.32        | 22.39     | 34.77       | PASS    |
| Band71 | 5MHz      | QPSK       | 133297  | 1RB#24           | 23.2         | 22.27     | 34.77       | PASS    |
| Band71 | 5MHz      | QPSK       | 133297  | 25RB#0           | 22.27        | 21.34     | 34.77       | PASS    |
| Band71 | 5MHz      | 16QAM      | 133297  | 1RB#0            | 22.43        | 21.5      | 34.77       | PASS    |
| Band71 | 5MHz      | 16QAM      | 133297  | 1RB#12           | 22.31        | 21.38     | 34.77       | PASS    |
| Band71 | 5MHz      | 16QAM      | 133297  | 1RB#24           | 22.4         | 21.47     | 34.77       | PASS    |
| Band71 | 5MHz      | 16QAM      | 133297  | 25RB#0           | 21.38        | 20.45     | 34.77       | PASS    |
| Band71 | 5MHz      | QPSK       | 133447  | 1RB#0            | 23.35        | 22.42     | 34.77       | PASS    |
| Band71 | 5MHz      | QPSK       | 133447  | 1RB#12           | 23.32        | 22.39     | 34.77       | PASS    |
| Band71 | 5MHz      | QPSK       | 133447  | 1RB#24           | 23.43        | 22.5      | 34.77       | PASS    |
| Band71 | 5MHz      | QPSK       | 133447  | 25RB#0           | 22.46        | 21.53     | 34.77       | PASS    |
| Band71 | 5MHz      | 16QAM      | 133447  | 1RB#0            | 22.47        | 21.54     | 34.77       | PASS    |
| Band71 | 5MHz      | 16QAM      | 133447  | 1RB#12           | 22.73        | 21.8      | 34.77       | PASS    |
| Band71 | 5MHz      | 16QAM      | 133447  | 1RB#24           | 22.75        | 21.82     | 34.77       | PASS    |
| Band71 | 5MHz      | 16QAM      | 133447  | 25RB#0           | 21.48        | 20.55     | 34.77       | PASS    |
| Band71 | 10MHz     | QPSK       | 133172  | 1RB#0            | 23.34        | 22.41     | 34.77       | PASS    |
| Band71 | 10MHz     | QPSK       | 133172  | 1RB#24           | 23.26        | 22.33     | 34.77       | PASS    |
| Band71 | 10MHz     | QPSK       | 133172  | 1RB#49           | 23.18        | 22.25     | 34.77       | PASS    |
| Band71 | 10MHz     | QPSK       | 133172  | 50RB#0           | 22.23        | 21.3      | 34.77       | PASS    |
| Band71 | 10MHz     | 16QAM      | 133172  | 1RB#0            | 22.39        | 21.46     | 34.77       | PASS    |
| Band71 | 10MHz     | 16QAM      | 133172  | 1RB#24           | 22.46        | 21.53     | 34.77       | PASS    |
| Band71 | 10MHz     | 16QAM      | 133172  | 1RB#49           | 22.43        | 21.5      | 34.77       | PASS    |
| and71  | 10MHz     | 16QAM      | 133172  | 50RB#0           | 21.28        | 20.35     | 34.77       | PASS    |
| Band71 | 10MHz     | QPSK       | 133297  | 1RB#0            | 23.15        | 22.22     | 34.77       | PASS    |
| Band71 | 10MHz     | QPSK       | 133297  | 1RB#24           | 23.61        | 22.68     | 34.77       | PASS    |
| Band71 | 10MHz     | QPSK       | 133297  | 1RB#49           | 23.29        | 22.36     | 34.77       | PASS    |

|        |       |       |        |         |       |       |       |      |
|--------|-------|-------|--------|---------|-------|-------|-------|------|
| Band71 | 10MHz | QPSK  | 133297 | 50RB#0  | 22.37 | 21.44 | 34.77 | PASS |
| Band71 | 10MHz | 16QAM | 133297 | 1RB#0   | 22.47 | 21.54 | 34.77 | PASS |
| Band71 | 10MHz | 16QAM | 133297 | 1RB#24  | 22.34 | 21.41 | 34.77 | PASS |
| Band71 | 10MHz | 16QAM | 133297 | 1RB#49  | 22.41 | 21.48 | 34.77 | PASS |
| Band71 | 10MHz | 16QAM | 133297 | 50RB#0  | 21.45 | 20.52 | 34.77 | PASS |
| Band71 | 10MHz | QPSK  | 133422 | 1RB#0   | 23.37 | 22.44 | 34.77 | PASS |
| Band71 | 10MHz | QPSK  | 133422 | 1RB#24  | 23.45 | 22.52 | 34.77 | PASS |
| Band71 | 10MHz | QPSK  | 133422 | 1RB#49  | 23.2  | 22.27 | 34.77 | PASS |
| Band71 | 10MHz | QPSK  | 133422 | 50RB#0  | 22.59 | 21.66 | 34.77 | PASS |
| Band71 | 10MHz | 16QAM | 133422 | 1RB#0   | 22.43 | 21.5  | 34.77 | PASS |
| Band71 | 10MHz | 16QAM | 133422 | 1RB#24  | 22.46 | 21.53 | 34.77 | PASS |
| Band71 | 10MHz | 16QAM | 133422 | 1RB#49  | 22.49 | 21.56 | 34.77 | PASS |
| Band71 | 10MHz | 16QAM | 133422 | 50RB#0  | 21.48 | 20.55 | 34.77 | PASS |
| Band71 | 15MHz | QPSK  | 133197 | 1RB#0   | 23.36 | 22.43 | 34.77 | PASS |
| Band71 | 15MHz | QPSK  | 133197 | 1RB#38  | 23.41 | 22.48 | 34.77 | PASS |
| Band71 | 15MHz | QPSK  | 133197 | 1RB#74  | 23.07 | 22.14 | 34.77 | PASS |
| Band71 | 15MHz | QPSK  | 133197 | 75RB#0  | 22.31 | 21.38 | 34.77 | PASS |
| Band71 | 15MHz | 16QAM | 133197 | 1RB#0   | 22.47 | 21.54 | 34.77 | PASS |
| Band71 | 15MHz | 16QAM | 133197 | 1RB#38  | 22.35 | 21.42 | 34.77 | PASS |
| Band71 | 15MHz | 16QAM | 133197 | 1RB#74  | 22.45 | 21.52 | 34.77 | PASS |
| Band71 | 15MHz | 16QAM | 133197 | 75RB#0  | 21.28 | 20.35 | 34.77 | PASS |
| Band71 | 15MHz | QPSK  | 133297 | 1RB#0   | 23.19 | 22.26 | 34.77 | PASS |
| Band71 | 15MHz | QPSK  | 133297 | 1RB#38  | 23.43 | 22.5  | 34.77 | PASS |
| Band71 | 15MHz | QPSK  | 133297 | 1RB#74  | 23.07 | 22.14 | 34.77 | PASS |
| Band71 | 15MHz | QPSK  | 133297 | 75RB#0  | 22.32 | 21.39 | 34.77 | PASS |
| Band71 | 15MHz | 16QAM | 133297 | 1RB#0   | 22.47 | 21.54 | 34.77 | PASS |
| Band71 | 15MHz | 16QAM | 133297 | 1RB#38  | 22.39 | 21.46 | 34.77 | PASS |
| Band71 | 15MHz | 16QAM | 133297 | 1RB#74  | 22.51 | 21.58 | 34.77 | PASS |
| Band71 | 15MHz | 16QAM | 133297 | 75RB#0  | 21.41 | 20.48 | 34.77 | PASS |
| Band71 | 15MHz | QPSK  | 133397 | 1RB#0   | 23.6  | 22.67 | 34.77 | PASS |
| Band71 | 15MHz | QPSK  | 133397 | 1RB#38  | 23.55 | 22.62 | 34.77 | PASS |
| Band71 | 15MHz | QPSK  | 133397 | 1RB#74  | 23.34 | 22.41 | 34.77 | PASS |
| Band71 | 15MHz | QPSK  | 133397 | 75RB#0  | 22.36 | 21.43 | 34.77 | PASS |
| Band71 | 15MHz | 16QAM | 133397 | 1RB#0   | 22.49 | 21.56 | 34.77 | PASS |
| Band71 | 15MHz | 16QAM | 133397 | 1RB#38  | 22.47 | 21.54 | 34.77 | PASS |
| Band71 | 15MHz | 16QAM | 133397 | 1RB#74  | 22.44 | 21.51 | 34.77 | PASS |
| Band71 | 15MHz | 16QAM | 133397 | 75RB#0  | 21.41 | 20.48 | 34.77 | PASS |
| Band71 | 20MHz | QPSK  | 133222 | 1RB#0   | 23.25 | 22.32 | 34.77 | PASS |
| Band71 | 20MHz | QPSK  | 133222 | 1RB#49  | 23.46 | 22.53 | 34.77 | PASS |
| Band71 | 20MHz | QPSK  | 133222 | 1RB#99  | 23.26 | 22.33 | 34.77 | PASS |
| Band71 | 20MHz | QPSK  | 133222 | 100RB#0 | 22.15 | 21.22 | 34.77 | PASS |
| Band71 | 20MHz | 16QAM | 133222 | 1RB#0   | 22.44 | 21.51 | 34.77 | PASS |
| Band71 | 20MHz | 16QAM | 133222 | 1RB#49  | 22.63 | 21.7  | 34.77 | PASS |
| Band71 | 20MHz | 16QAM | 133222 | 1RB#99  | 22.48 | 21.55 | 34.77 | PASS |

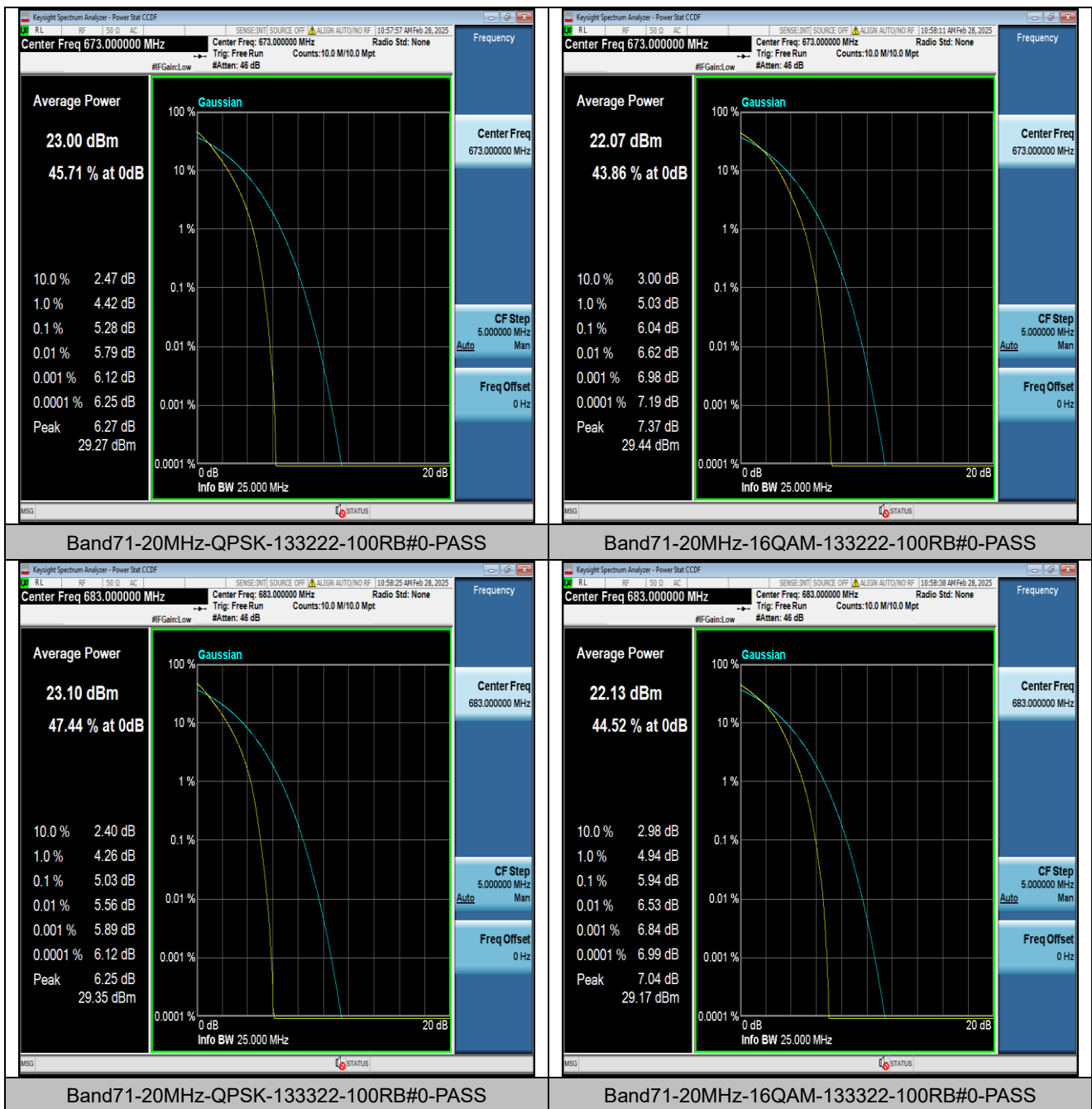
|        |       |       |        |         |       |       |       |      |
|--------|-------|-------|--------|---------|-------|-------|-------|------|
| Band71 | 20MHz | 16QAM | 133222 | 100RB#0 | 21.29 | 20.36 | 34.77 | PASS |
| Band71 | 20MHz | QPSK  | 133322 | 1RB#0   | 23.07 | 22.14 | 34.77 | PASS |
| Band71 | 20MHz | QPSK  | 133322 | 1RB#49  | 23.53 | 22.6  | 34.77 | PASS |
| Band71 | 20MHz | QPSK  | 133322 | 1RB#99  | 22.93 | 22    | 34.77 | PASS |
| Band71 | 20MHz | QPSK  | 133322 | 100RB#0 | 22.35 | 21.42 | 34.77 | PASS |
| Band71 | 20MHz | 16QAM | 133322 | 1RB#0   | 22.43 | 21.5  | 34.77 | PASS |
| Band71 | 20MHz | 16QAM | 133322 | 1RB#49  | 22.69 | 21.76 | 34.77 | PASS |
| Band71 | 20MHz | 16QAM | 133322 | 1RB#99  | 22.39 | 21.46 | 34.77 | PASS |
| Band71 | 20MHz | 16QAM | 133322 | 100RB#0 | 21.21 | 20.28 | 34.77 | PASS |
| Band71 | 20MHz | QPSK  | 133372 | 1RB#0   | 23.03 | 22.1  | 34.77 | PASS |
| Band71 | 20MHz | QPSK  | 133372 | 1RB#49  | 23.64 | 22.71 | 34.77 | PASS |
| Band71 | 20MHz | QPSK  | 133372 | 1RB#99  | 23.04 | 22.11 | 34.77 | PASS |
| Band71 | 20MHz | QPSK  | 133372 | 100RB#0 | 22.41 | 21.48 | 34.77 | PASS |
| Band71 | 20MHz | 16QAM | 133372 | 1RB#0   | 22.42 | 21.49 | 34.77 | PASS |
| Band71 | 20MHz | 16QAM | 133372 | 1RB#49  | 22.75 | 21.82 | 34.77 | PASS |
| Band71 | 20MHz | 16QAM | 133372 | 1RB#99  | 22.49 | 21.56 | 34.77 | PASS |
| Band71 | 20MHz | 16QAM | 133372 | 100RB#0 | 21.35 | 20.42 | 34.77 | PASS |

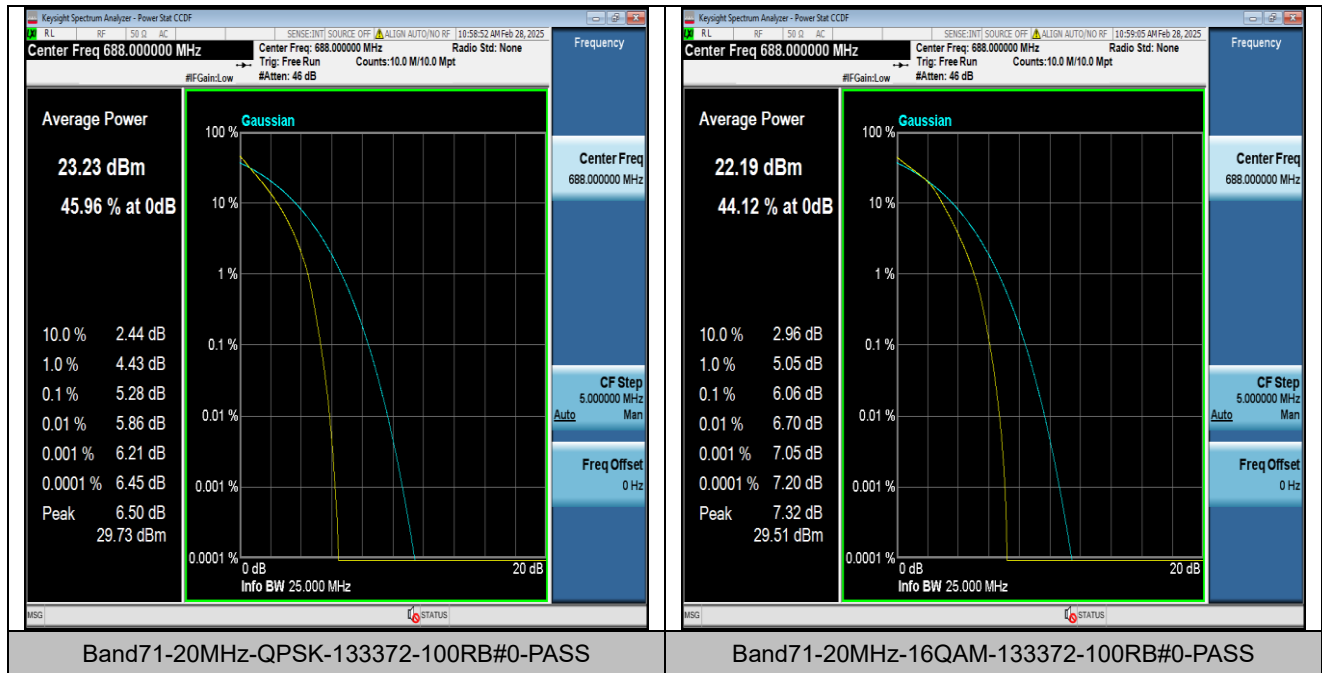
## Peak-to-Average Ratio(CCDF)

### Test Result

| Band   | Bandwidth | Modulation | Channel | RB Configuration | Result (dB) | Limit (dB) | Verdict |
|--------|-----------|------------|---------|------------------|-------------|------------|---------|
| Band71 | 20MHz     | QPSK       | 133222  | 100RB#0          | 5.28        | 13         | PASS    |
| Band71 | 20MHz     | 16QAM      | 133222  | 100RB#0          | 6.04        | 13         | PASS    |
| Band71 | 20MHz     | QPSK       | 133322  | 100RB#0          | 5.03        | 13         | PASS    |
| Band71 | 20MHz     | 16QAM      | 133322  | 100RB#0          | 5.94        | 13         | PASS    |
| Band71 | 20MHz     | QPSK       | 133372  | 100RB#0          | 5.28        | 13         | PASS    |
| Band71 | 20MHz     | 16QAM      | 133372  | 100RB#0          | 6.06        | 13         | PASS    |

## Test Graphs



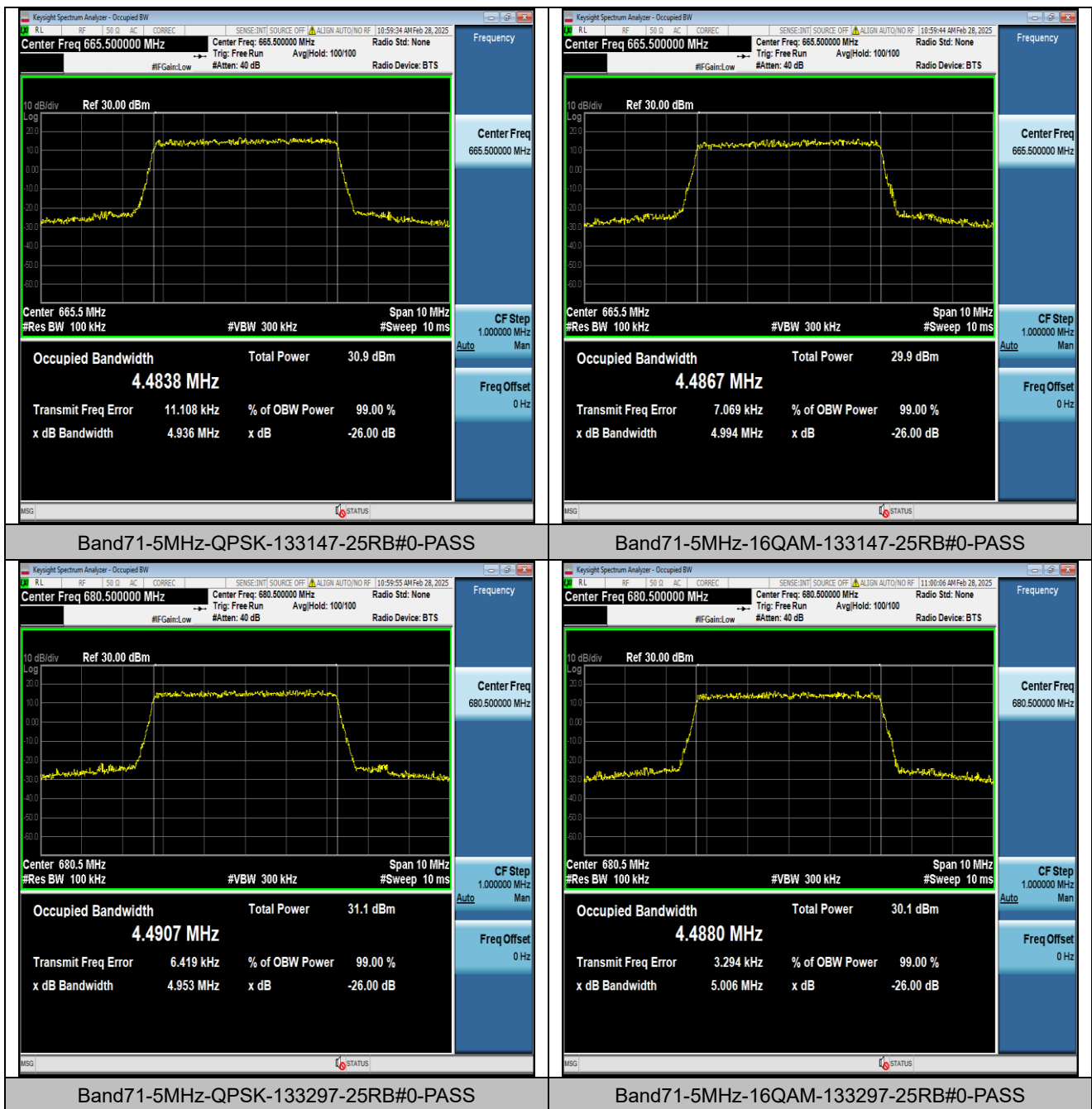


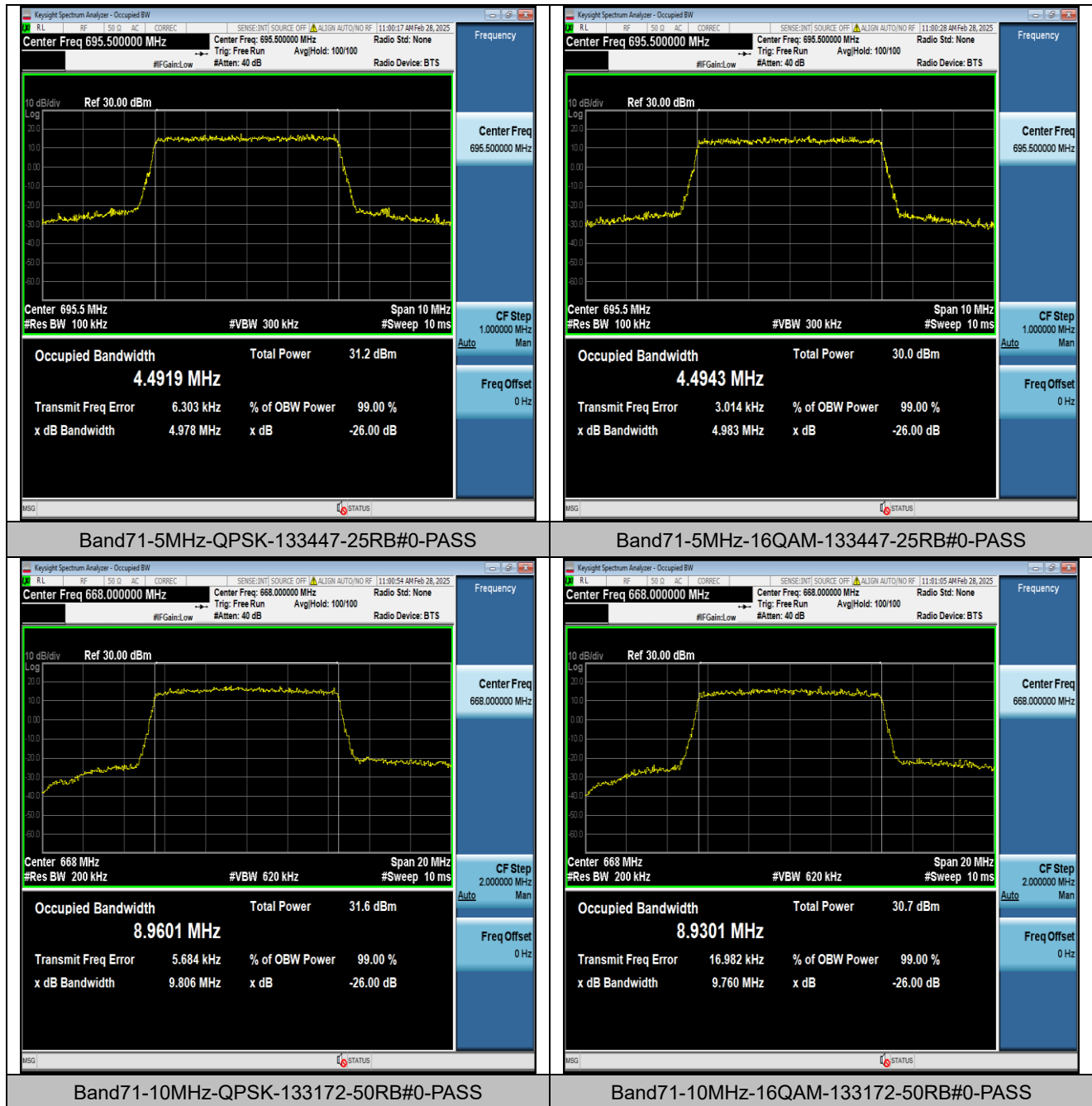
## 26dB Bandwidth and Occupied Bandwidth

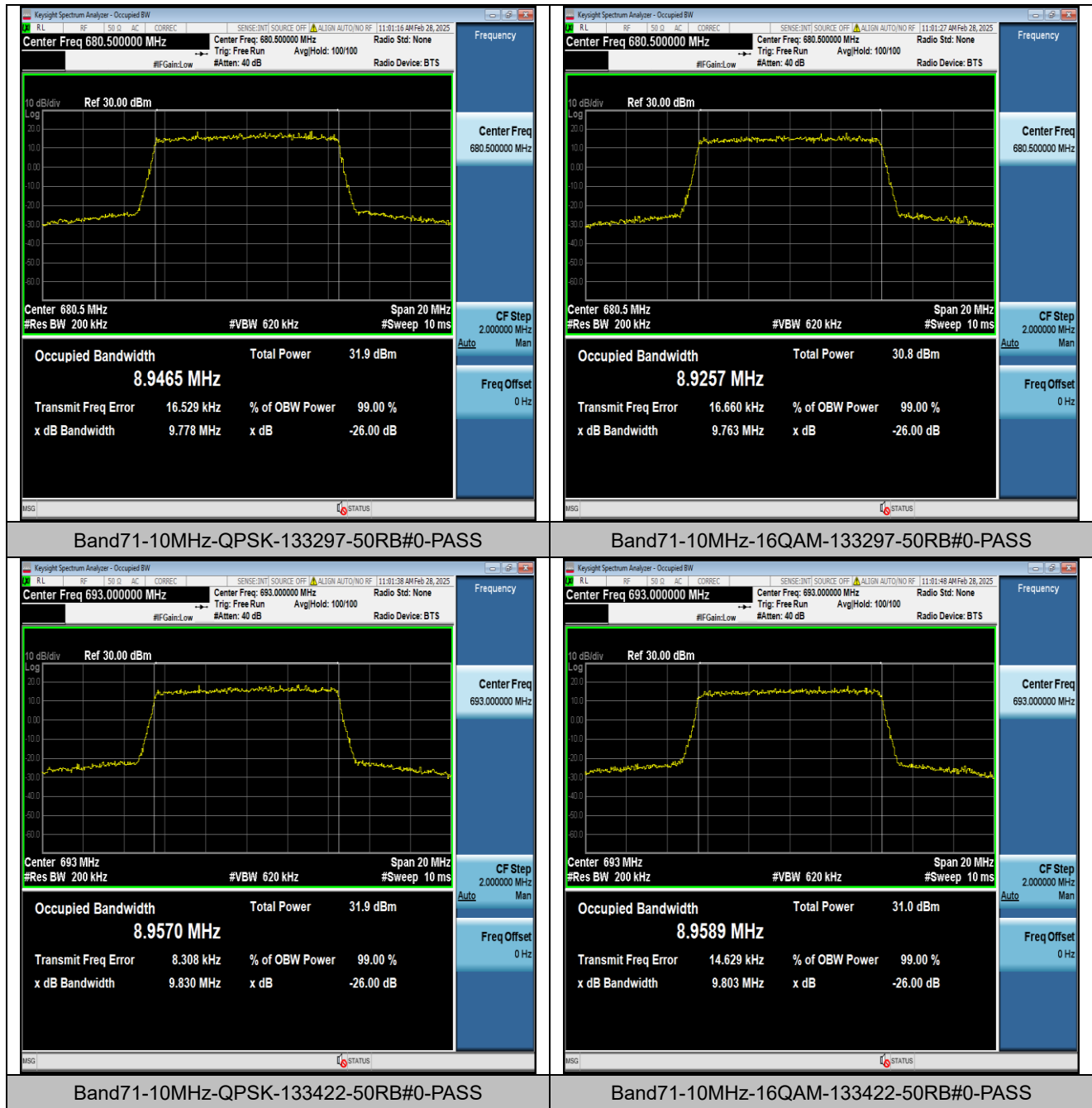
### Test Result

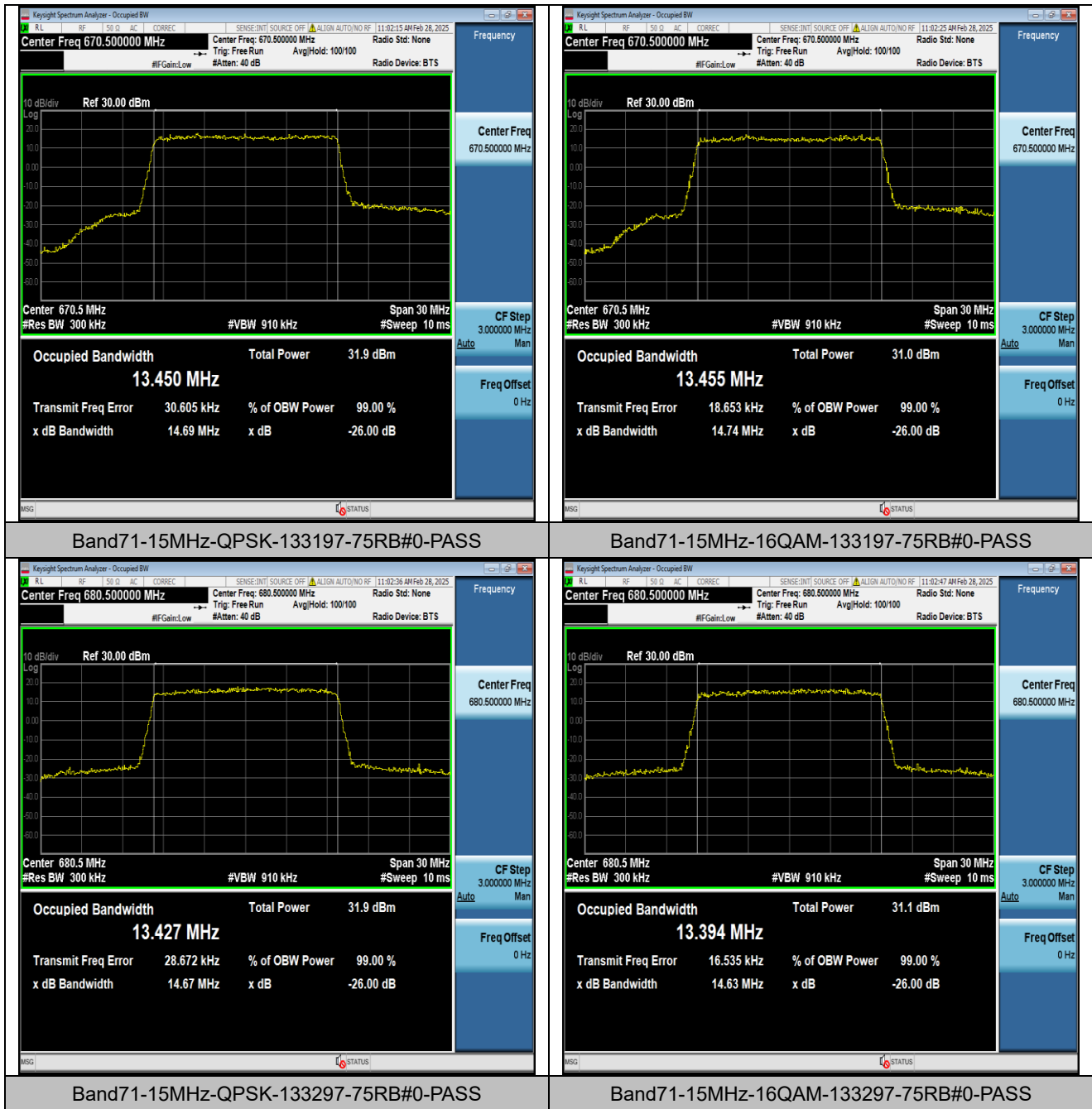
| Band   | Bandwidth | Modulation | Channel | RB Configuration | OBW (MHz) | 26dB EBW (MHz) | Verdict |
|--------|-----------|------------|---------|------------------|-----------|----------------|---------|
| Band71 | 5MHz      | QPSK       | 133147  | 25RB#0           | 4.4838    | 4.936          | PASS    |
| Band71 | 5MHz      | 16QAM      | 133147  | 25RB#0           | 4.4867    | 4.994          | PASS    |
| Band71 | 5MHz      | QPSK       | 133297  | 25RB#0           | 4.4907    | 4.953          | PASS    |
| Band71 | 5MHz      | 16QAM      | 133297  | 25RB#0           | 4.4880    | 5.006          | PASS    |
| Band71 | 5MHz      | QPSK       | 133447  | 25RB#0           | 4.4919    | 4.978          | PASS    |
| Band71 | 5MHz      | 16QAM      | 133447  | 25RB#0           | 4.4943    | 4.983          | PASS    |
| Band71 | 10MHz     | QPSK       | 133172  | 50RB#0           | 8.9601    | 9.806          | PASS    |
| Band71 | 10MHz     | 16QAM      | 133172  | 50RB#0           | 8.9301    | 9.760          | PASS    |
| Band71 | 10MHz     | QPSK       | 133297  | 50RB#0           | 8.9465    | 9.778          | PASS    |
| Band71 | 10MHz     | 16QAM      | 133297  | 50RB#0           | 8.9257    | 9.763          | PASS    |
| Band71 | 10MHz     | QPSK       | 133422  | 50RB#0           | 8.9570    | 9.830          | PASS    |
| Band71 | 10MHz     | 16QAM      | 133422  | 50RB#0           | 8.9589    | 9.803          | PASS    |
| Band71 | 15MHz     | QPSK       | 133197  | 75RB#0           | 13.450    | 14.69          | PASS    |
| Band71 | 15MHz     | 16QAM      | 133197  | 75RB#0           | 13.455    | 14.74          | PASS    |
| Band71 | 15MHz     | QPSK       | 133297  | 75RB#0           | 13.427    | 14.67          | PASS    |
| Band71 | 15MHz     | 16QAM      | 133297  | 75RB#0           | 13.394    | 14.63          | PASS    |
| Band71 | 15MHz     | QPSK       | 133397  | 75RB#0           | 13.483    | 14.71          | PASS    |
| Band71 | 15MHz     | 16QAM      | 133397  | 75RB#0           | 13.492    | 14.75          | PASS    |
| Band71 | 20MHz     | QPSK       | 133222  | 100RB#0          | 17.902    | 19.35          | PASS    |
| Band71 | 20MHz     | 16QAM      | 133222  | 100RB#0          | 17.880    | 19.38          | PASS    |
| Band71 | 20MHz     | QPSK       | 133322  | 100RB#0          | 17.898    | 19.28          | PASS    |
| Band71 | 20MHz     | 16QAM      | 133322  | 100RB#0          | 17.787    | 19.34          | PASS    |
| Band71 | 20MHz     | QPSK       | 133372  | 100RB#0          | 17.957    | 19.40          | PASS    |
| Band71 | 20MHz     | 16QAM      | 133372  | 100RB#0          | 17.880    | 19.43          | PASS    |

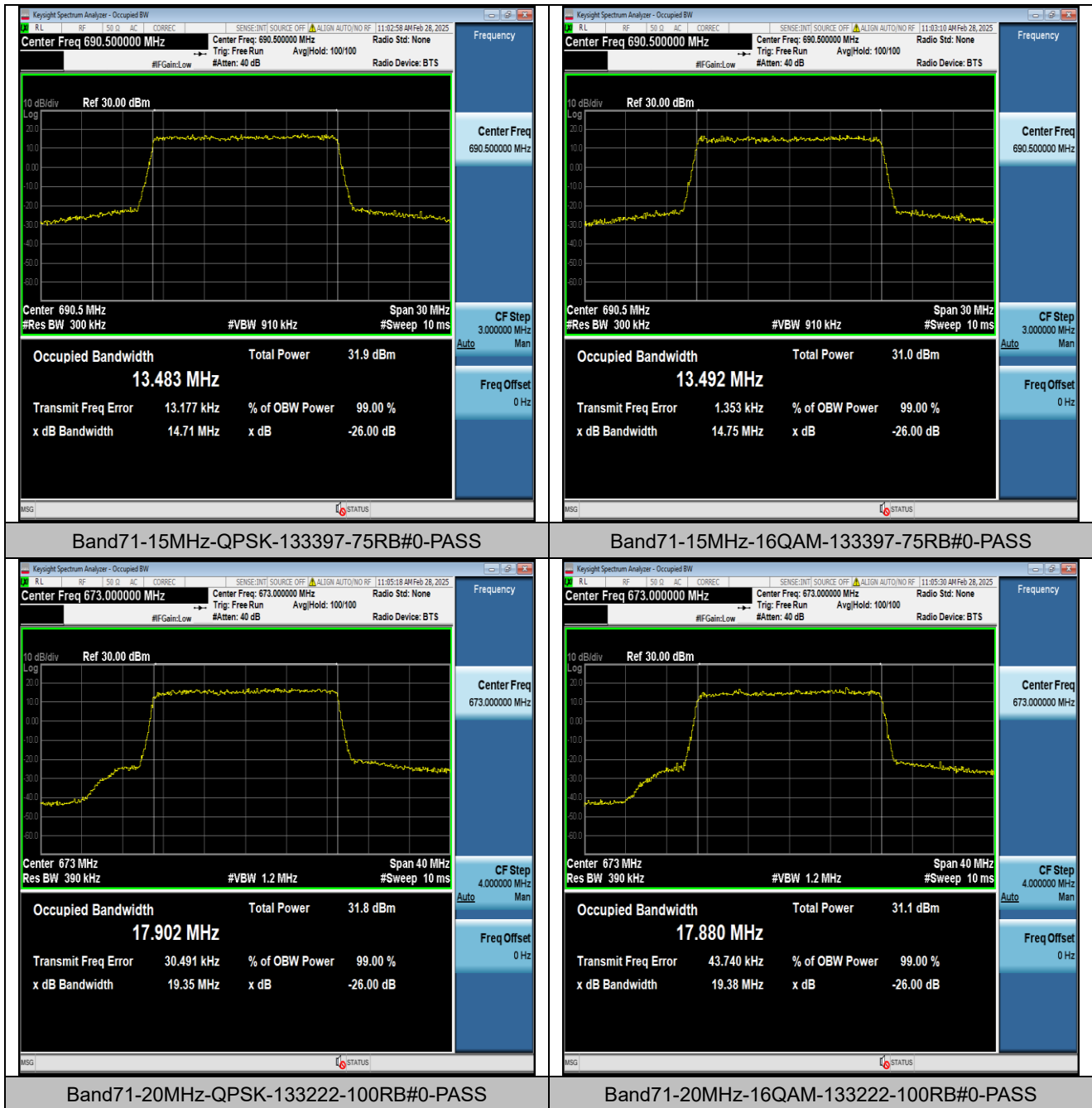
## Test Graphs

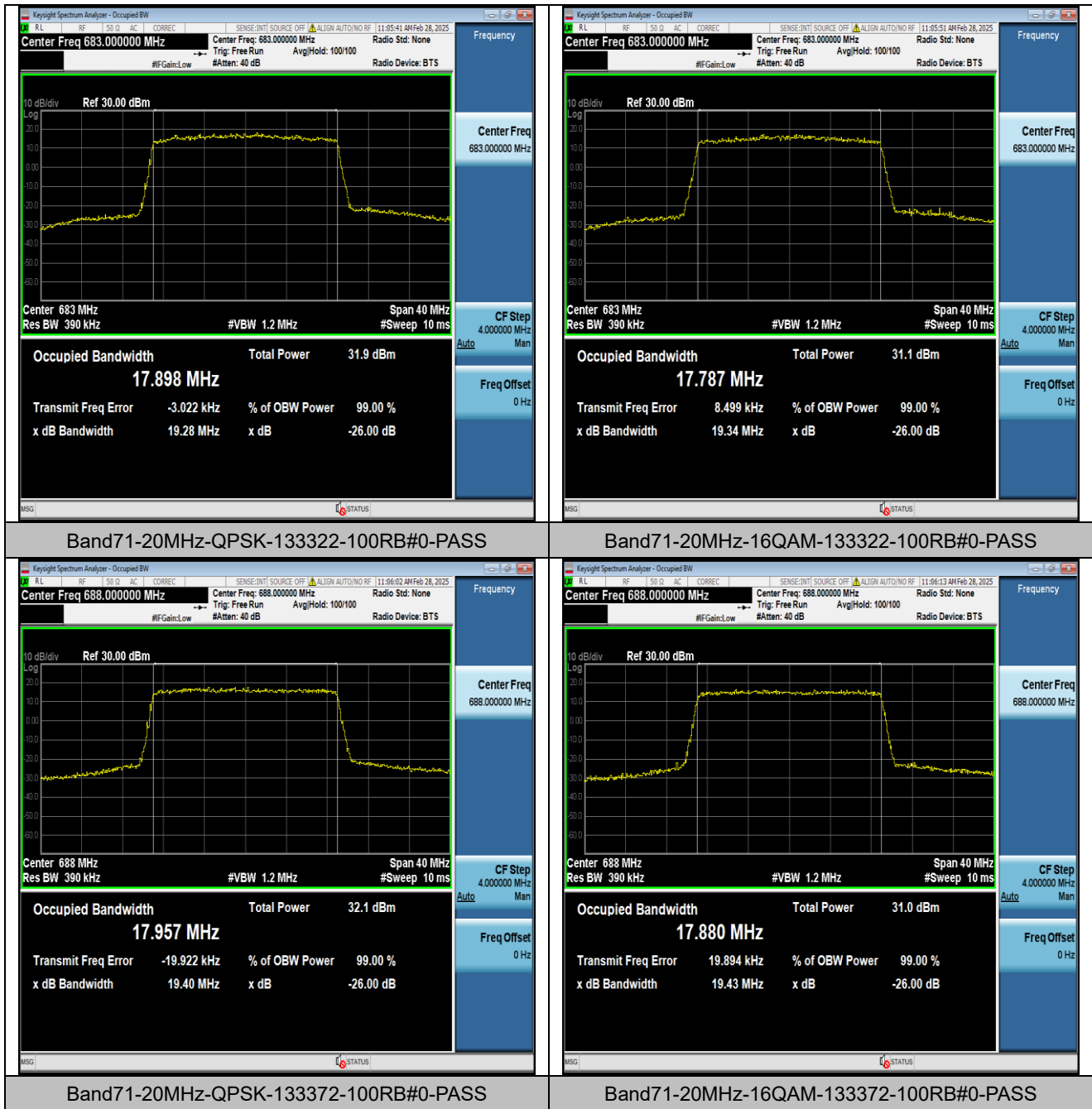






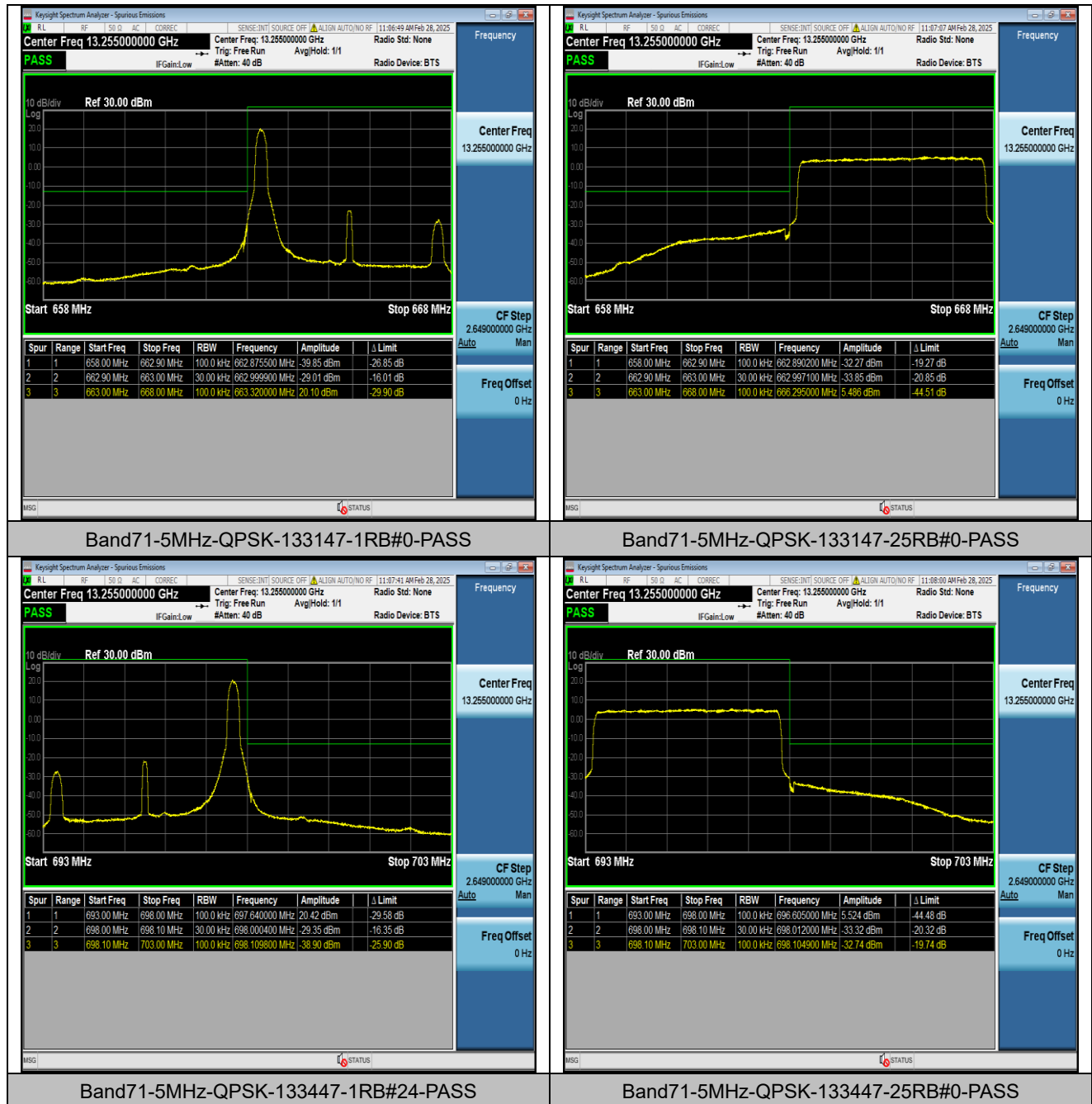


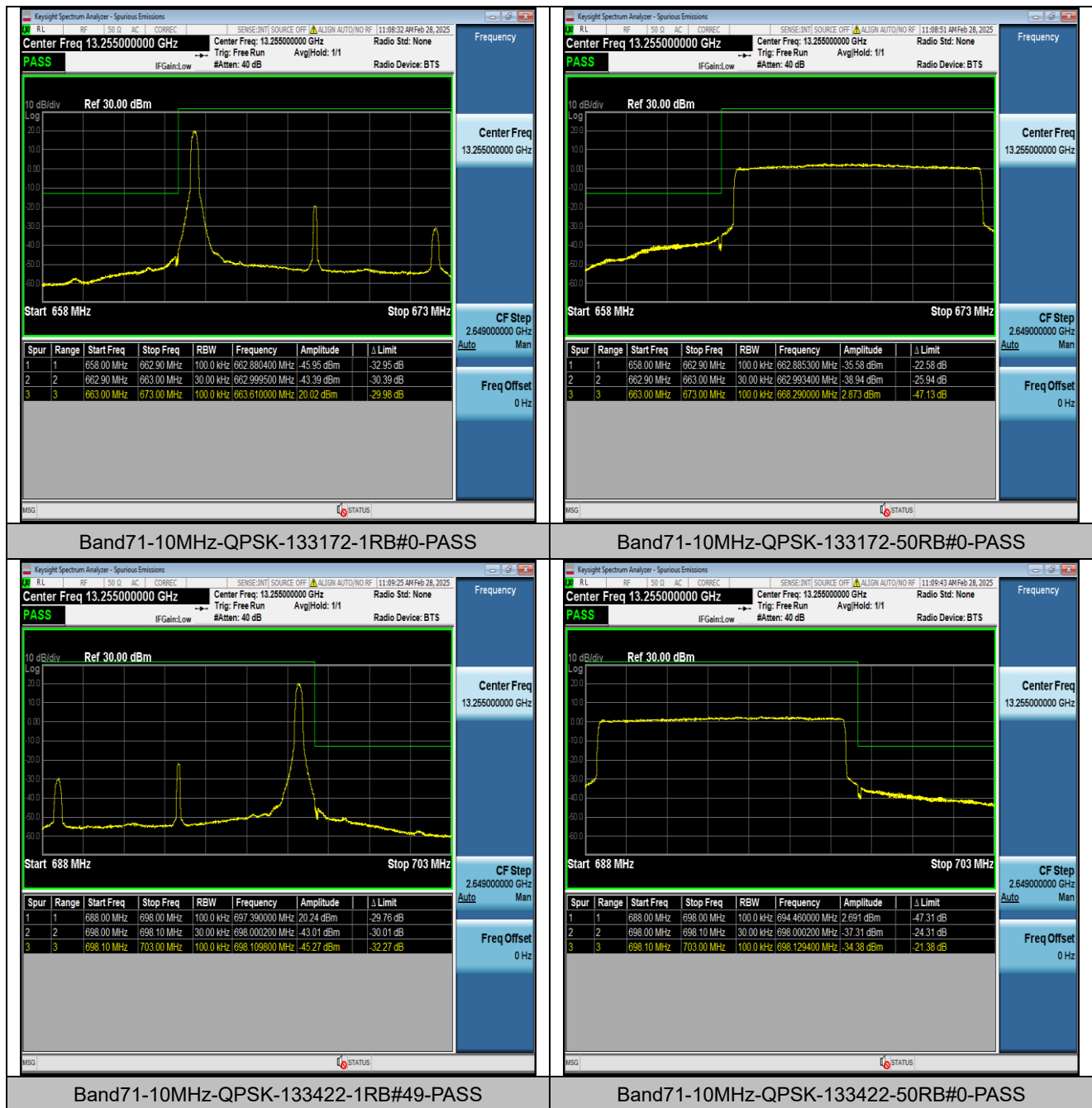


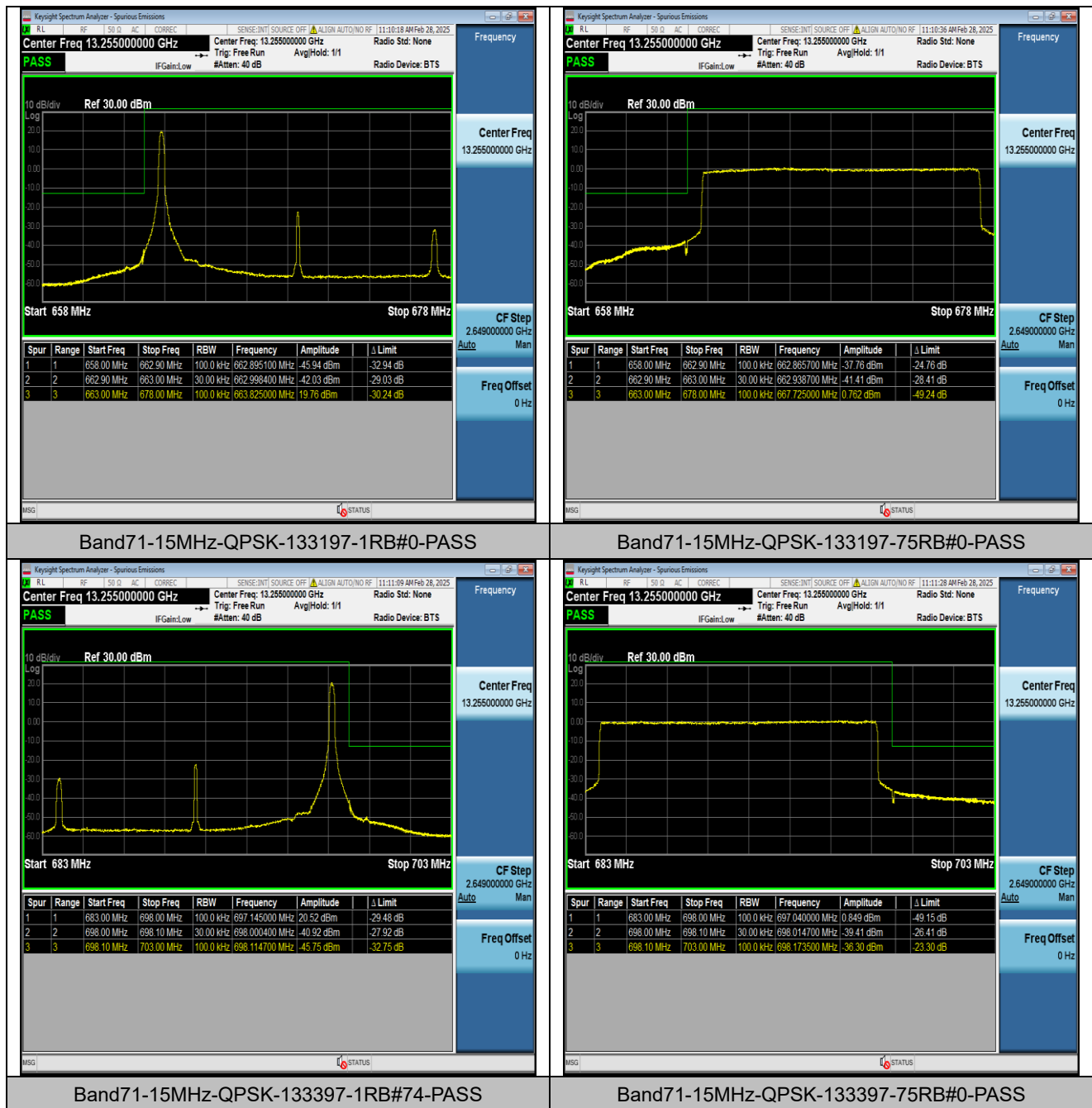


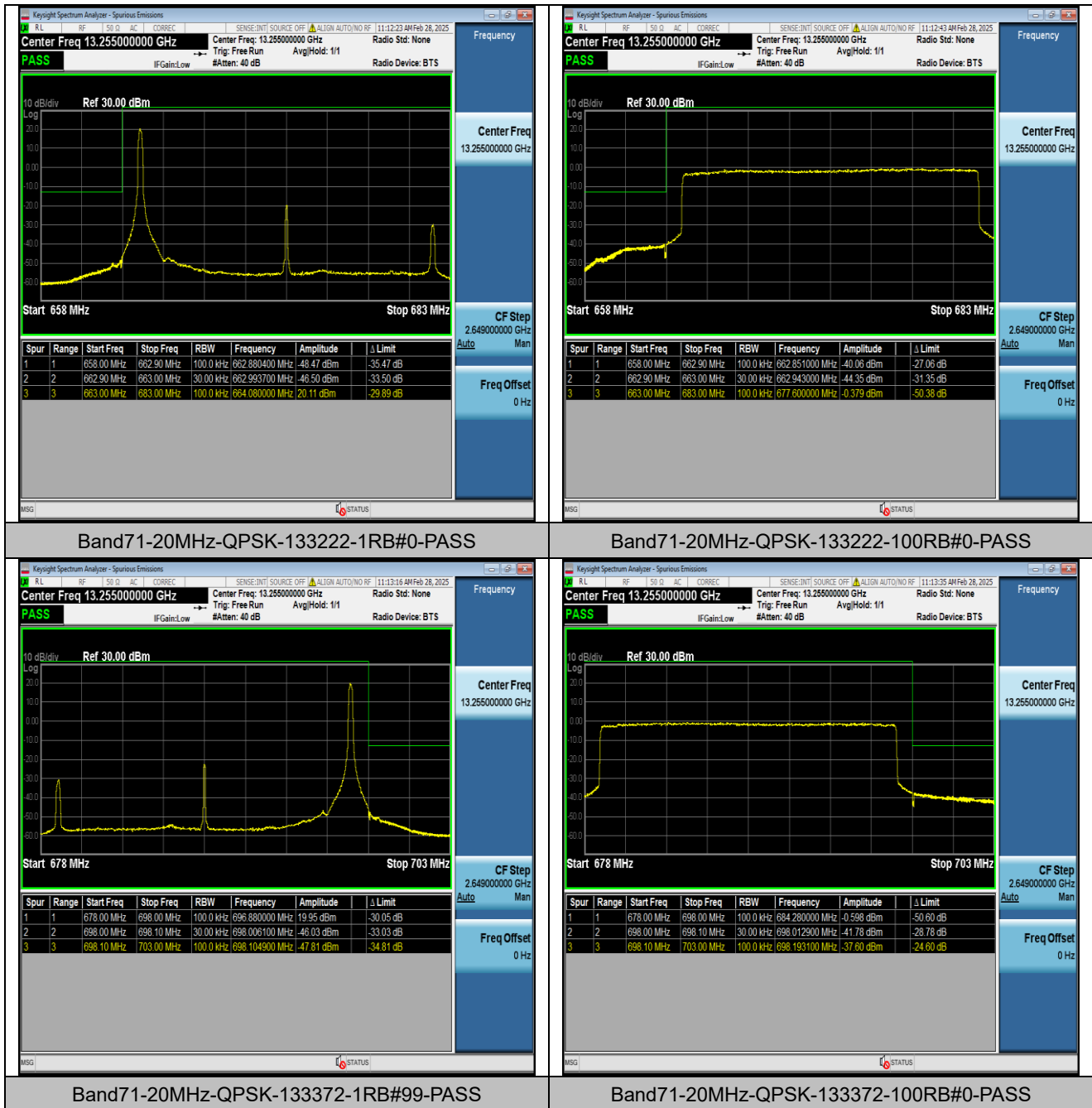
## Band Edge

## Test Graphs



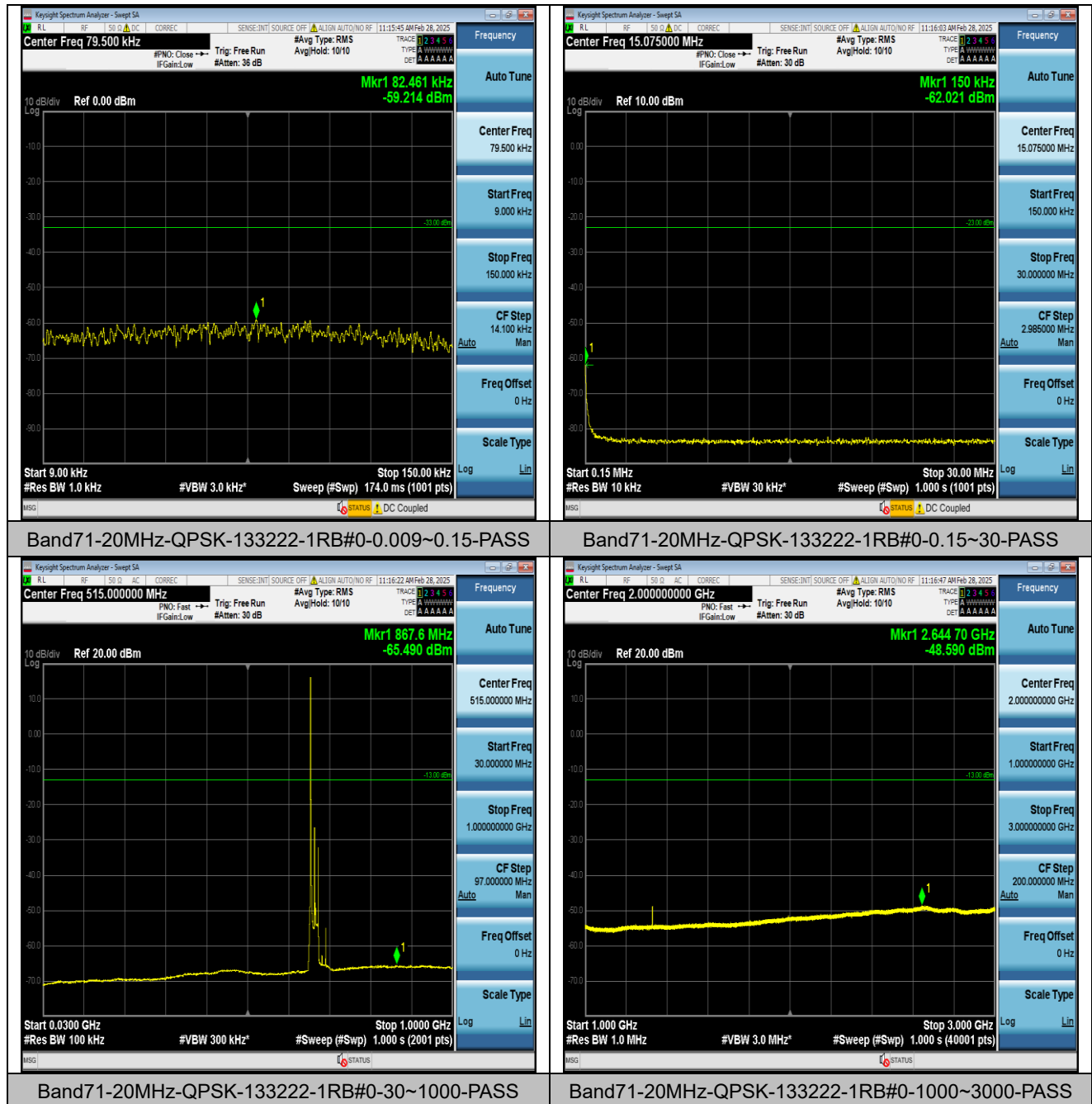


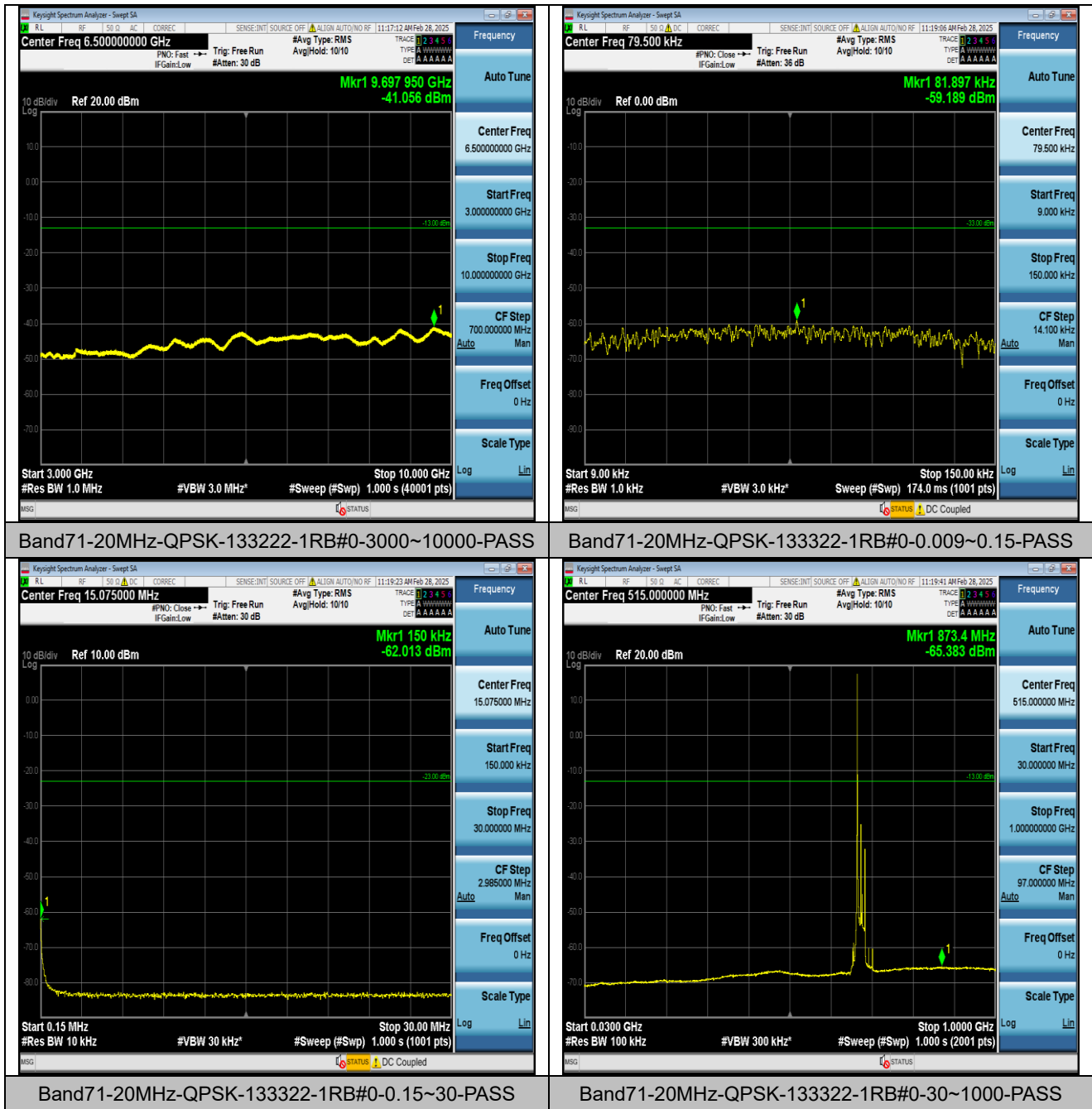


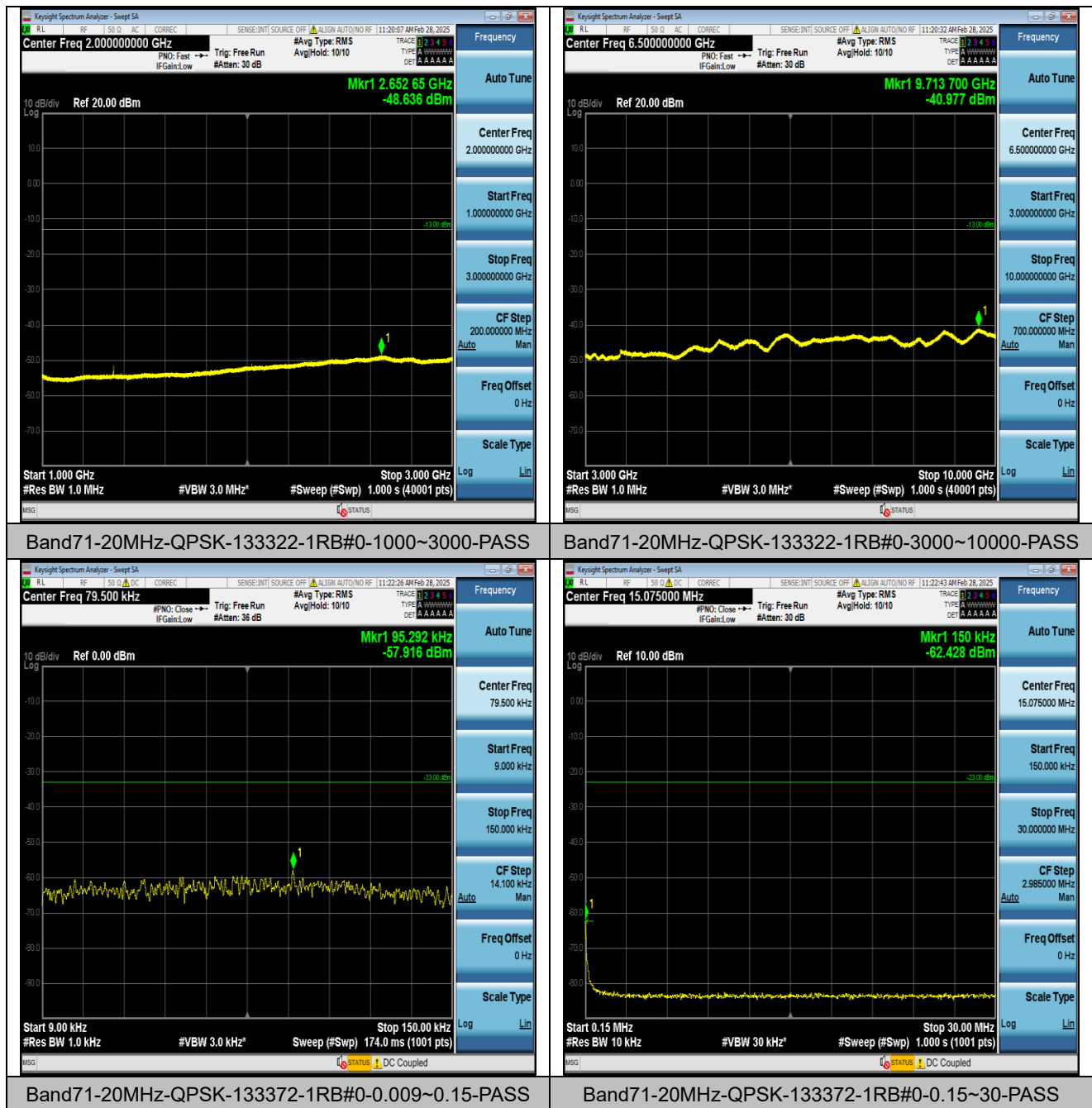


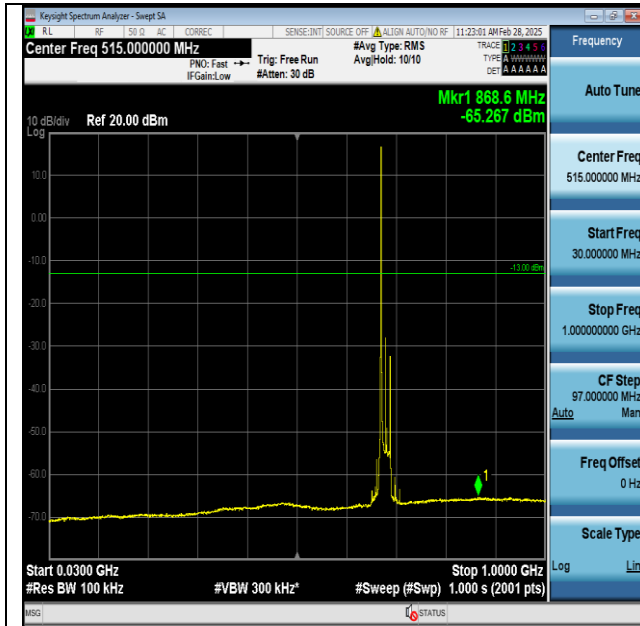
# Conducted Spurious Emission

## Test Graphs

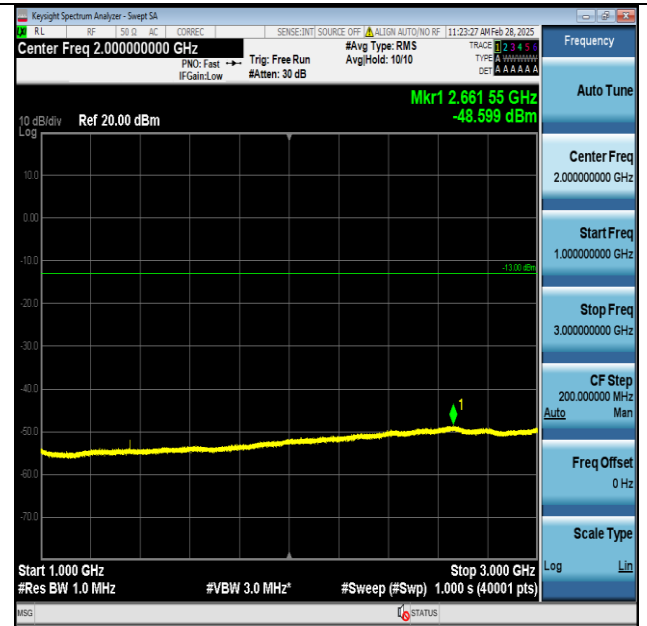




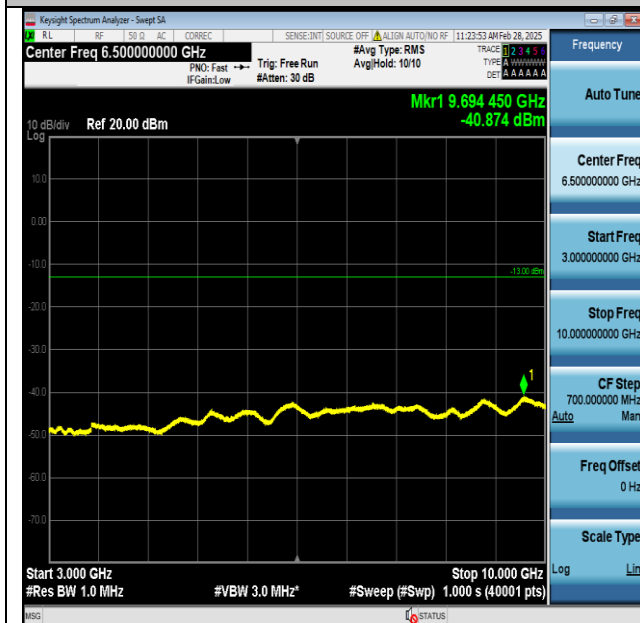




Band71-20MHz-QPSK-133372-1RB#0-30~1000-PASS



Band71-20MHz-QPSK-133372-1RB#0-1000~3000-PASS



Band71-20MHz-QPSK-133372-1RB#0-3000~10000-PASS

## Frequency Stability

### Test Result

| Voltage |           |            |         |              |               |                  |                |                 |         |
|---------|-----------|------------|---------|--------------|---------------|------------------|----------------|-----------------|---------|
| Band    | Bandwidth | Modulation | Channel | RB Configure | Voltage [Vdc] | Temperature (°C) | Deviation (Hz) | Deviation (ppm) | Verdict |
| Band71  | 20MHz     | QPSK       | 133322  | 100RB#0      | VN            | NT               | -2.30          | -0.003367       | PASS    |
| Band71  | 20MHz     | QPSK       | 133322  | 100RB#0      | VL            | NT               | -2.10          | -0.003075       | PASS    |
| Band71  | 20MHz     | QPSK       | 133322  | 100RB#0      | VH            | NT               | -2.60          | -0.003807       | PASS    |

| Temperature |           |            |         |              |               |                  |                |                 |         |
|-------------|-----------|------------|---------|--------------|---------------|------------------|----------------|-----------------|---------|
| Band        | Bandwidth | Modulation | Channel | RB Configure | Voltage [Vdc] | Temperature (°C) | Deviation (Hz) | Deviation (ppm) | Verdict |
| Band71      | 20MHz     | QPSK       | 133322  | 100RB#0      | NV            | -30              | -1.90          | -0.002782       | PASS    |
| Band71      | 20MHz     | QPSK       | 133322  | 100RB#0      | NV            | -20              | -1.10          | -0.001611       | PASS    |
| Band71      | 20MHz     | QPSK       | 133322  | 100RB#0      | NV            | -10              | -2.80          | -0.004100       | PASS    |
| Band71      | 20MHz     | QPSK       | 133322  | 100RB#0      | NV            | 0                | -0.90          | -0.001318       | PASS    |
| Band71      | 20MHz     | QPSK       | 133322  | 100RB#0      | NV            | 10               | -2.90          | -0.004246       | PASS    |
| Band71      | 20MHz     | QPSK       | 133322  | 100RB#0      | NV            | 20               | -1.20          | -0.001757       | PASS    |
| Band71      | 20MHz     | QPSK       | 133322  | 100RB#0      | NV            | 30               | -1.20          | -0.001757       | PASS    |
| Band71      | 20MHz     | QPSK       | 133322  | 100RB#0      | NV            | 40               | -1.60          | -0.002343       | PASS    |
| Band71      | 20MHz     | QPSK       | 133322  | 100RB#0      | NV            | 50               | -2.30          | -0.003367       | PASS    |

~The End~