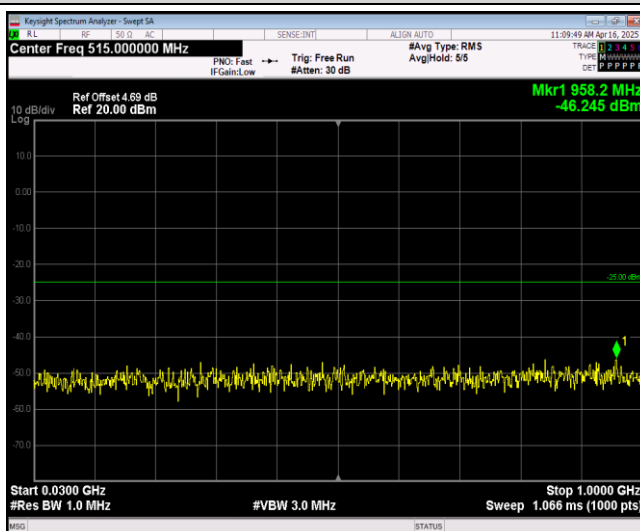
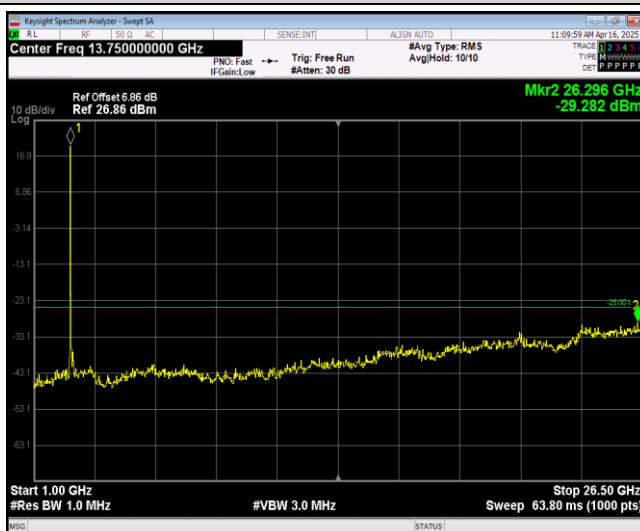


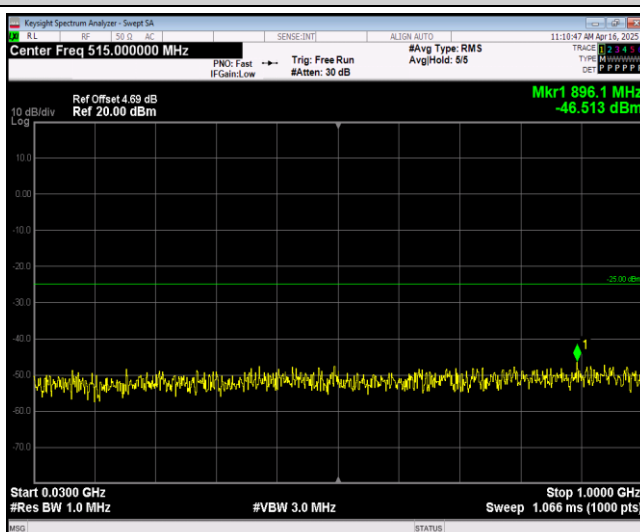
Band41-20MHz-QPSK-40140-1RB#0-Range1:30~1000MHz



Band41-20MHz-QPSK-40140-1RB#0-Range2:1000~26500MHz



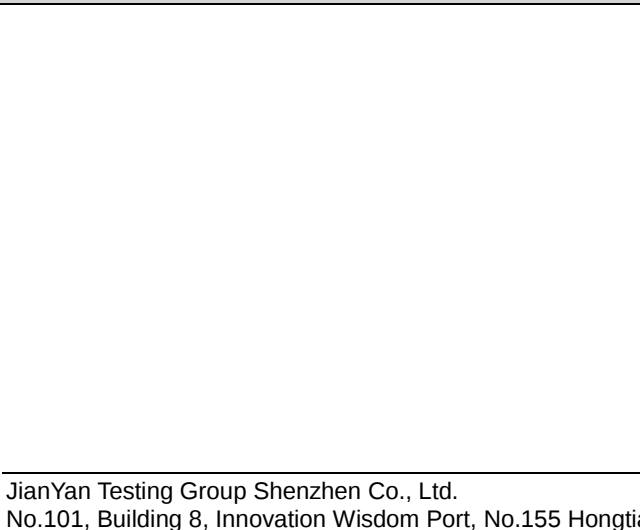
Band41-20MHz-QPSK-40640-1RB#0-Range1:30~1000MHz



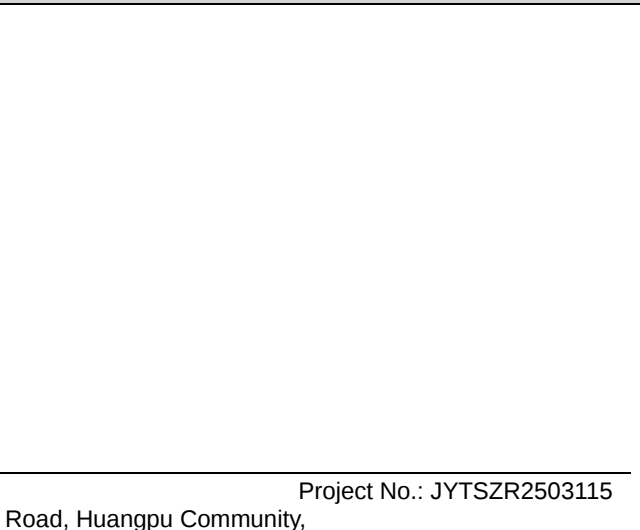
Band41-20MHz-QPSK-40640-1RB#0-Range2:1000~26500MHz

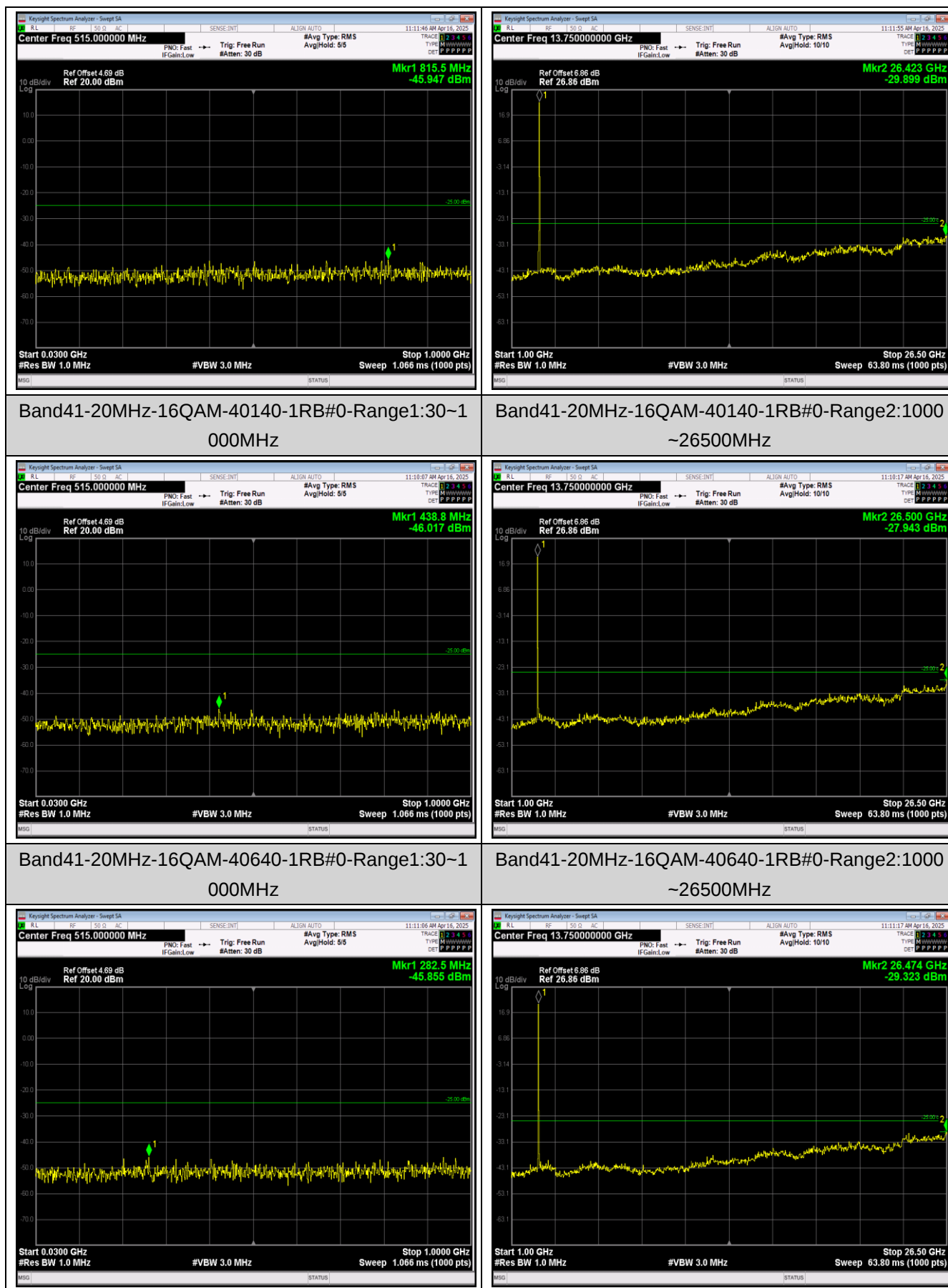


Band41-20MHz-QPSK-41140-1RB#0-Range1:30~1000MHz

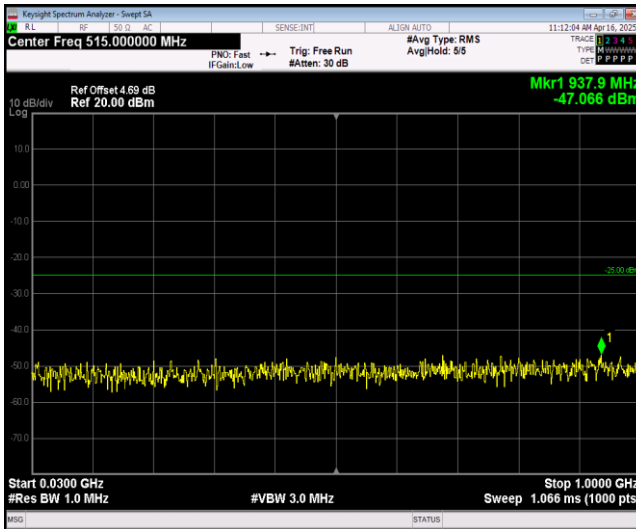


Band41-20MHz-QPSK-41140-1RB#0-Range2:1000~26500MHz





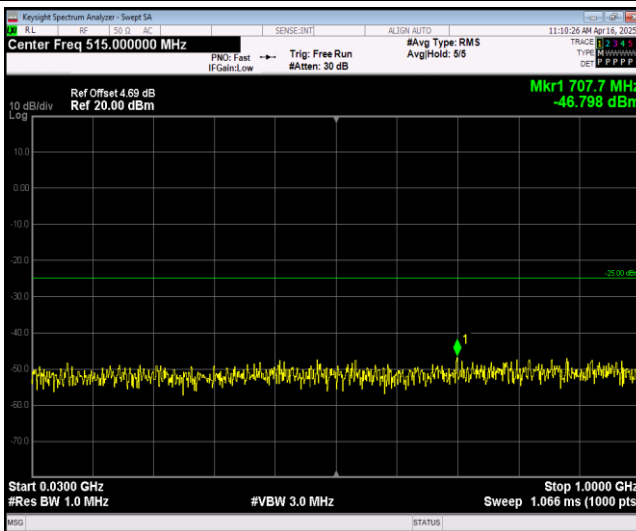
Band41-20MHz-16QAM-41140-1RB#0-Range1:30~1  
000MHz



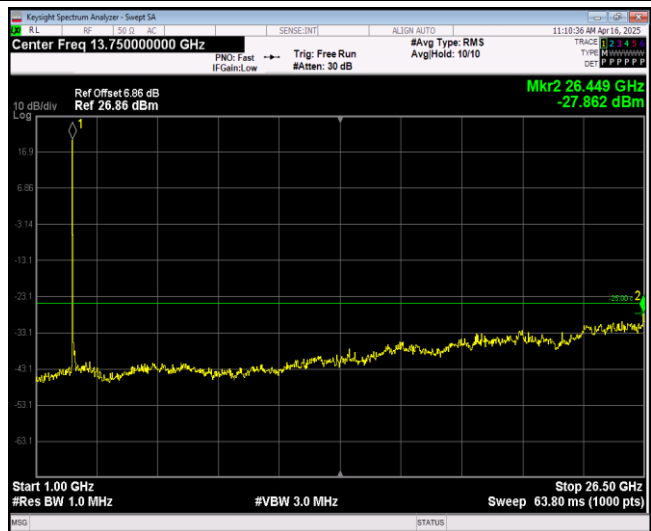
Band41-20MHz-16QAM-41140-1RB#0-Range2:1000  
~26500MHz



Band41-20MHz-64QAM-40140-1RB#0-Range1:30~1  
000MHz



Band41-20MHz-64QAM-40140-1RB#0-Range2:1000  
~26500MHz

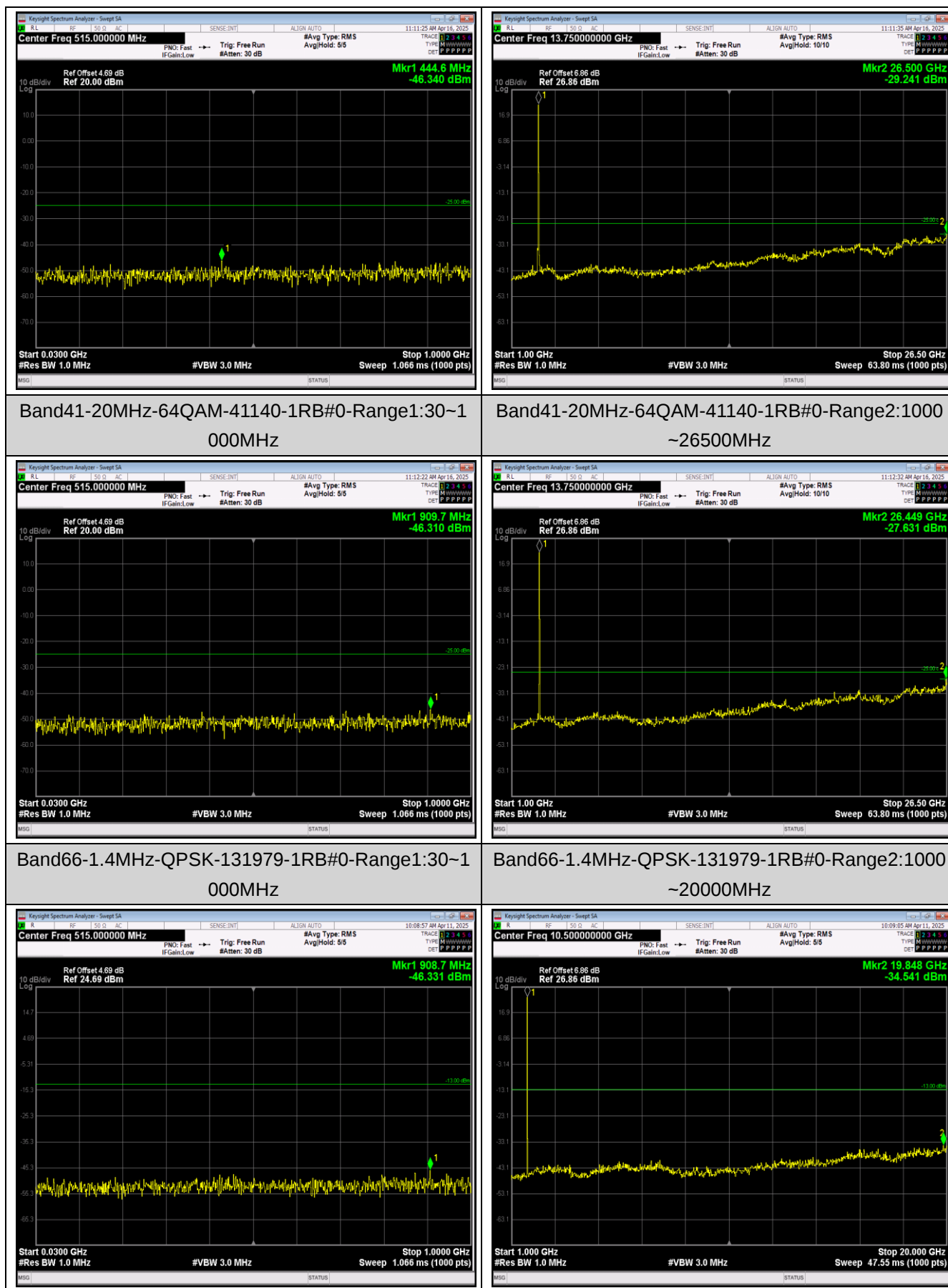


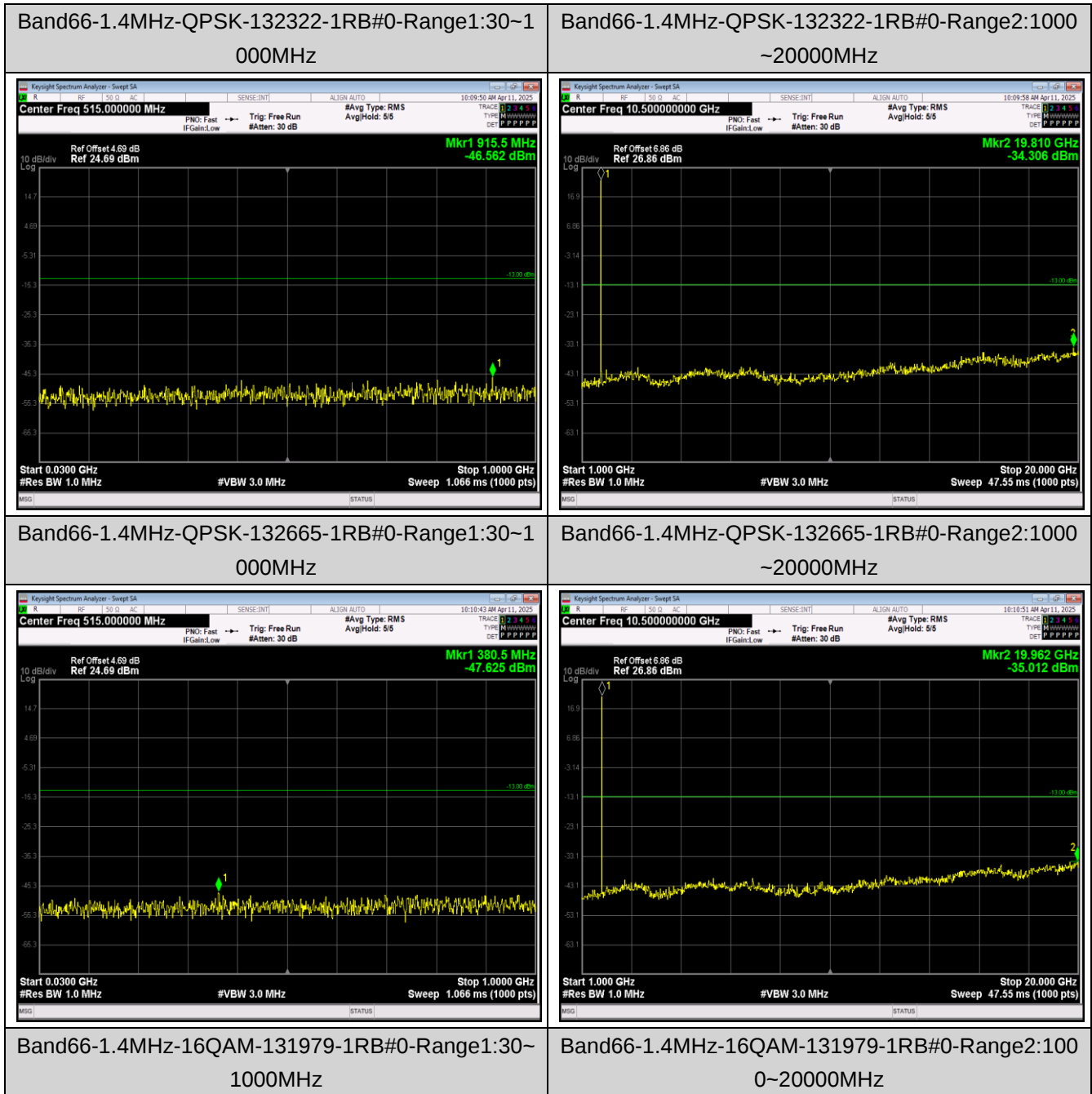
Band41-20MHz-64QAM-40640-1RB#0-Range1:30~1  
000MHz

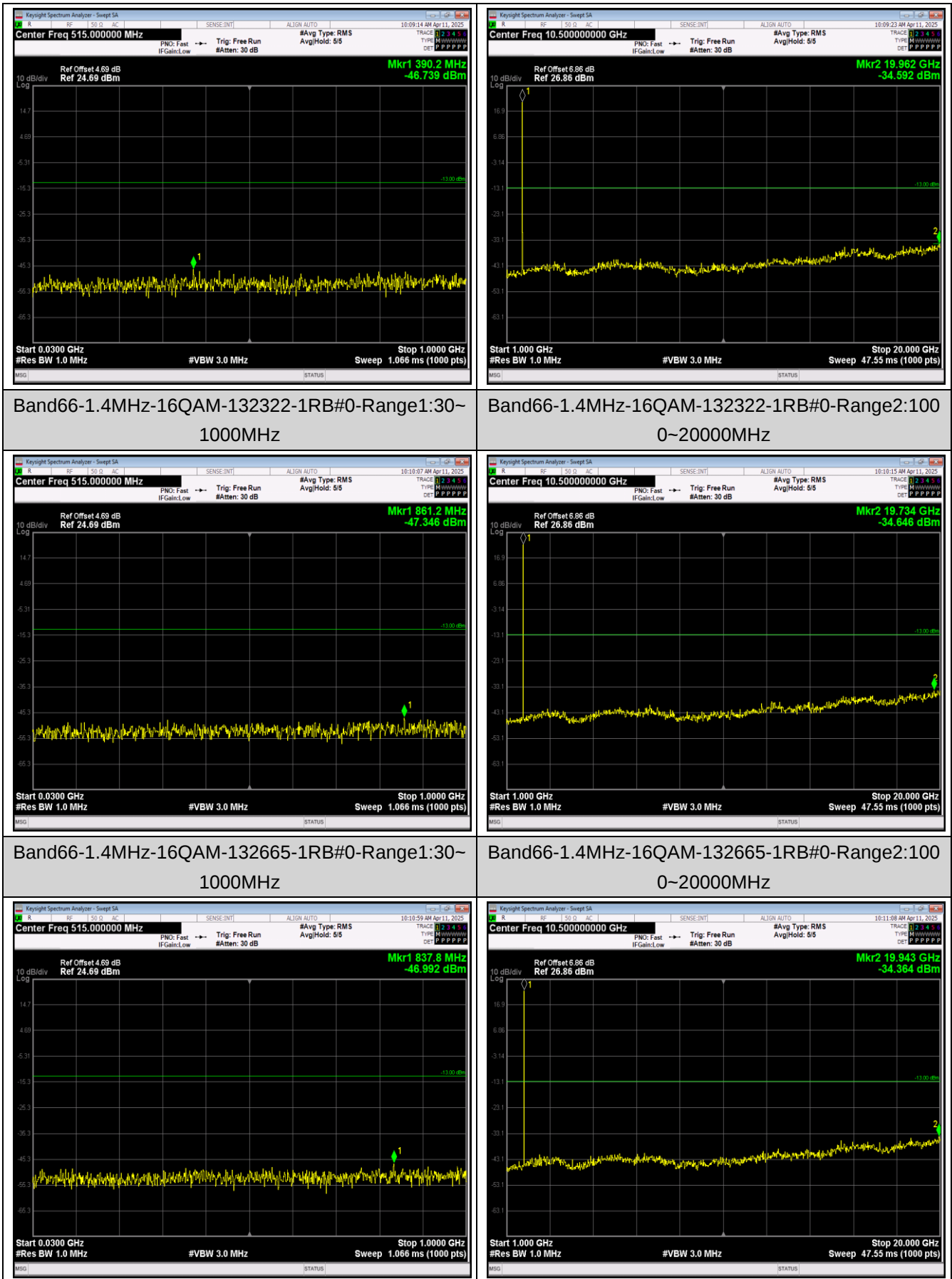


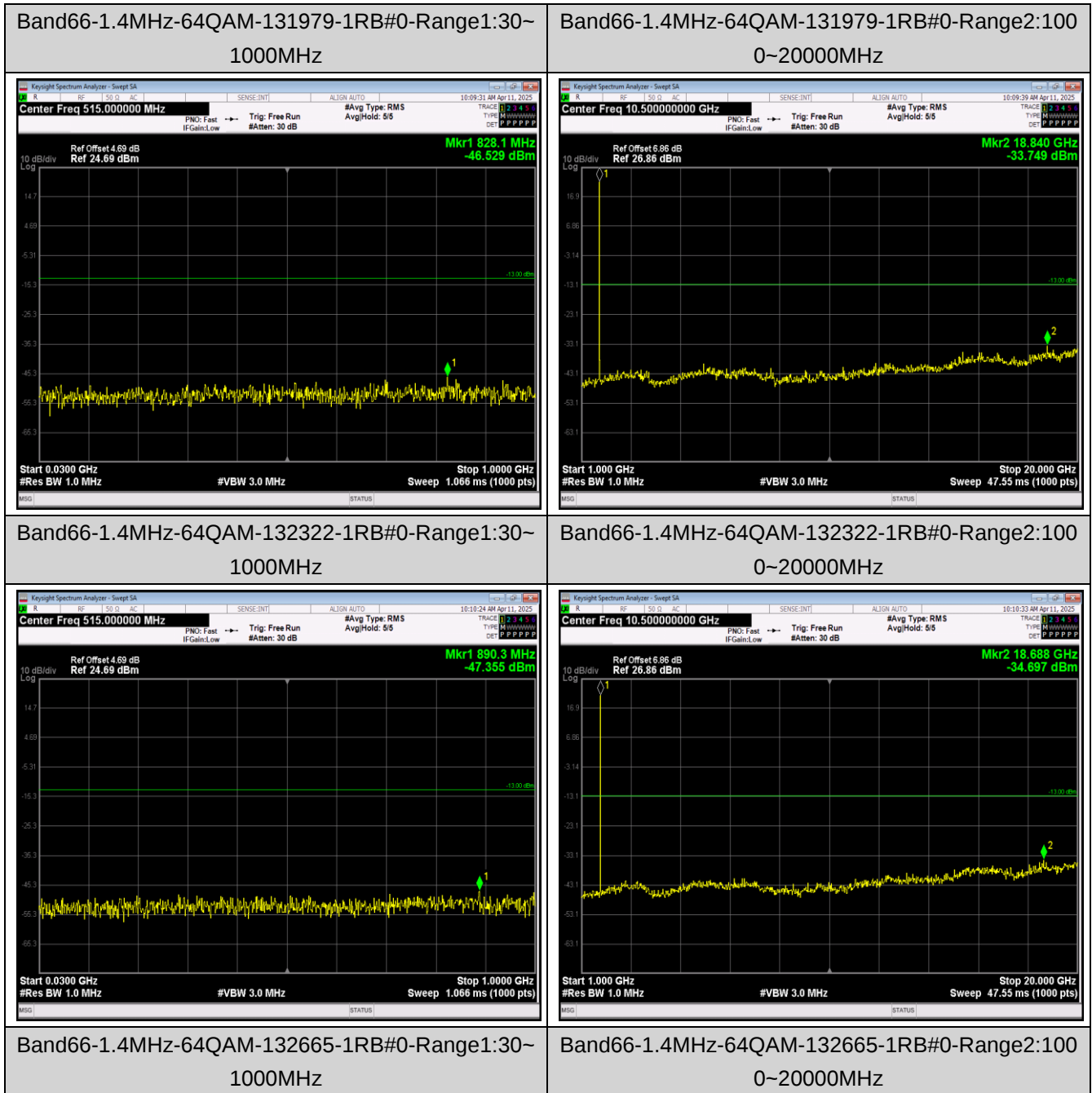
Band41-20MHz-64QAM-40640-1RB#0-Range2:1000  
~26500MHz

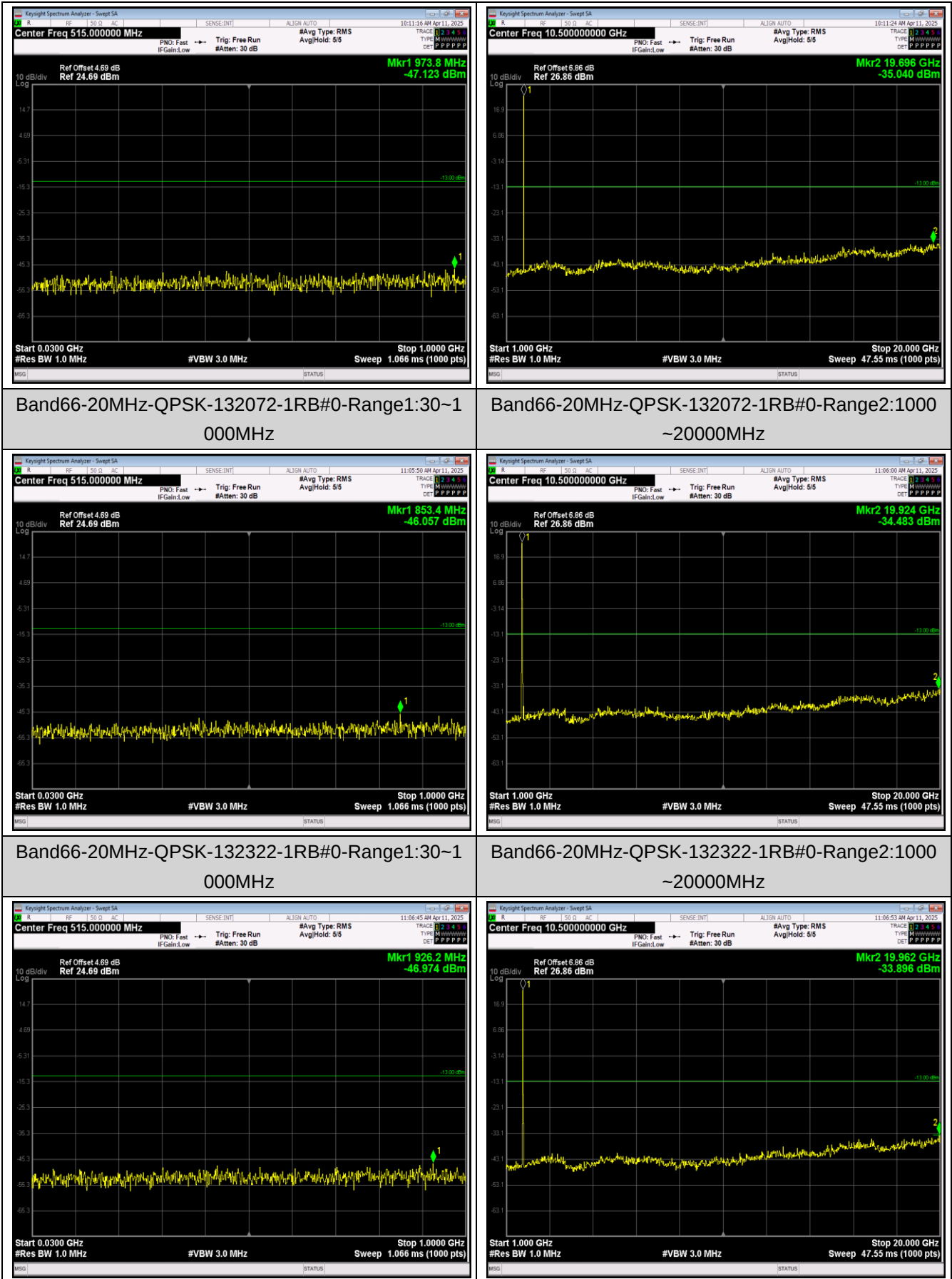




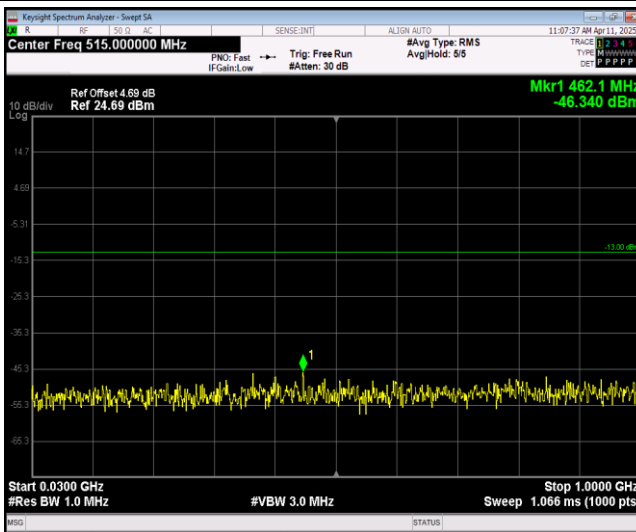




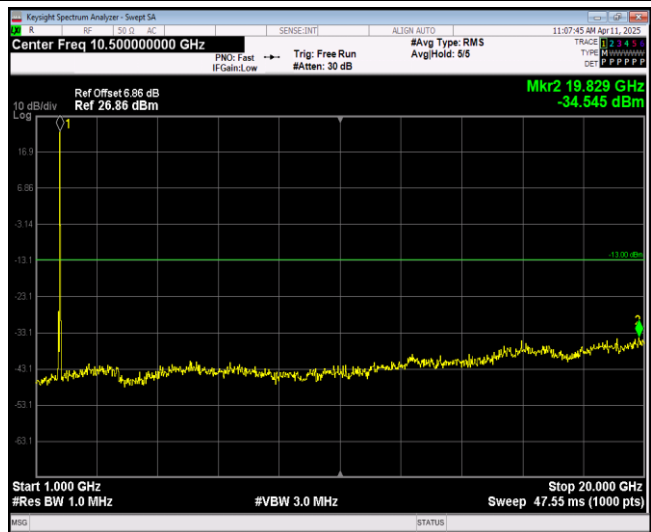




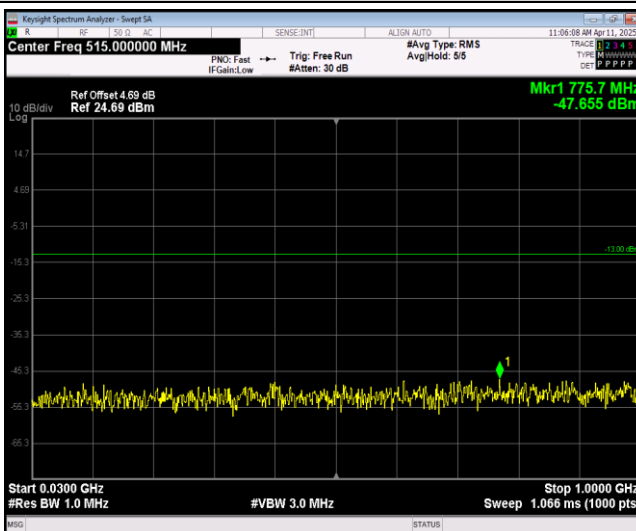
Band66-20MHz-QPSK-132572-1RB#0-Range1:30~1  
000MHz



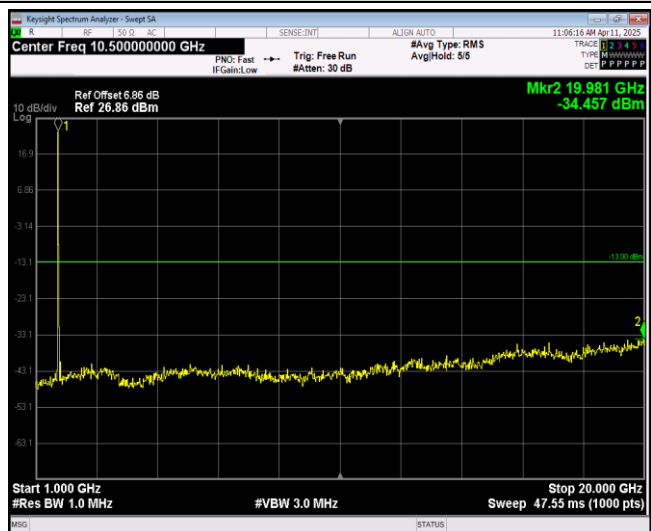
Band66-20MHz-QPSK-132572-1RB#0-Range2:1000  
~20000MHz



Band66-20MHz-16QAM-132072-1RB#0-Range1:30~  
1000MHz



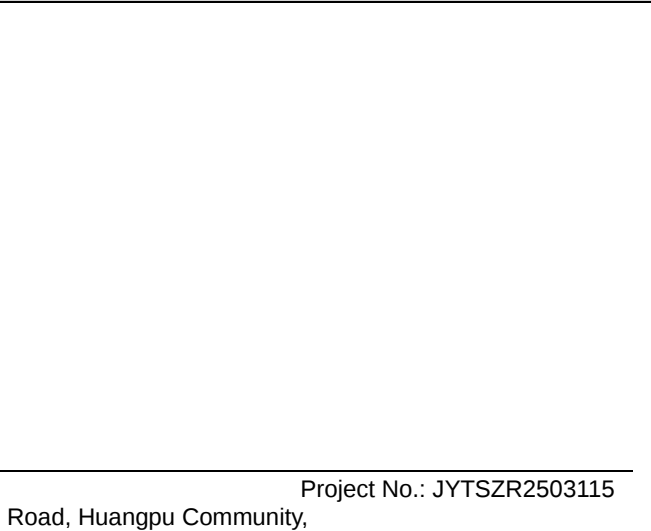
Band66-20MHz-16QAM-132072-1RB#0-Range2:100  
0~20000MHz

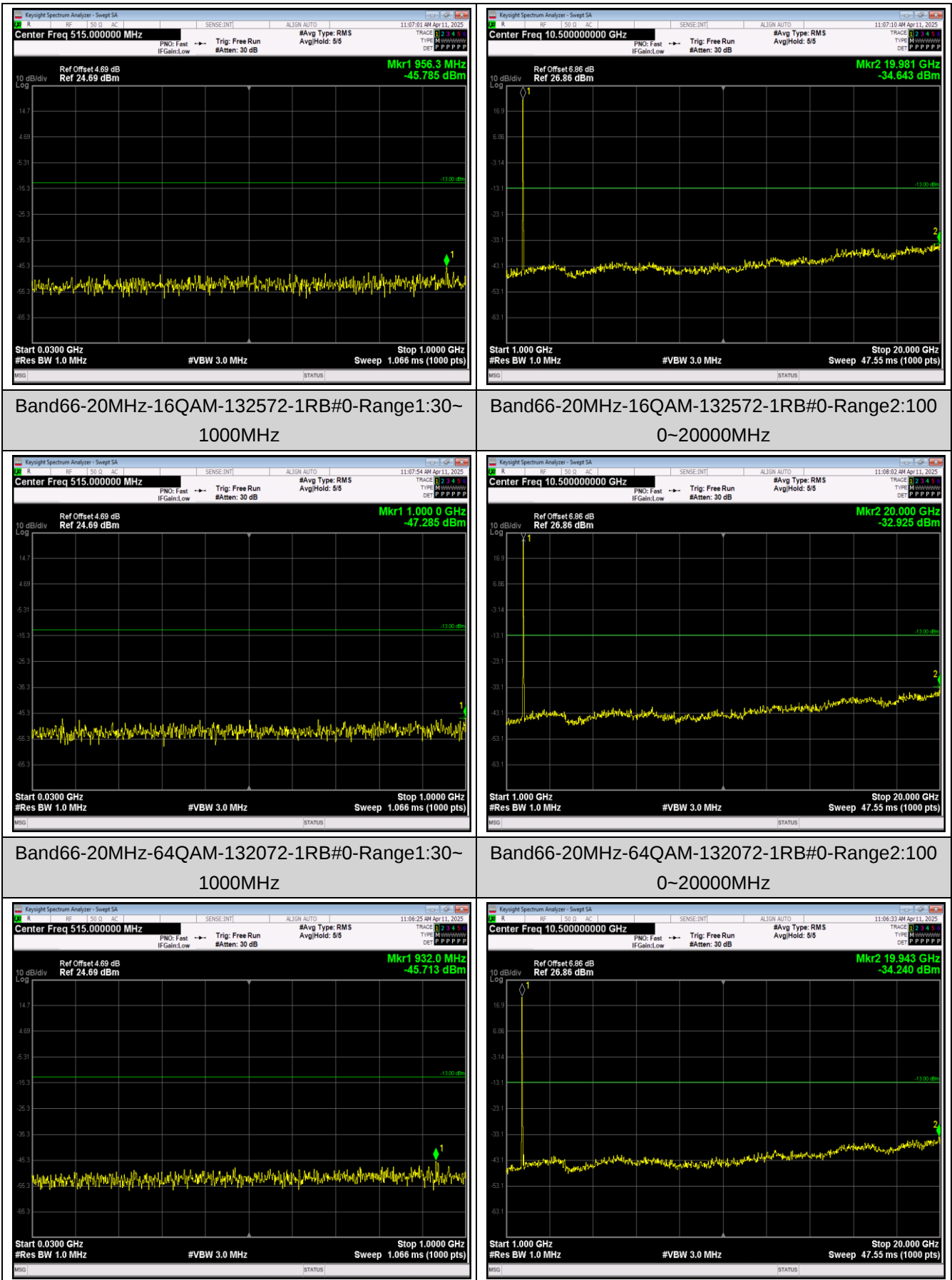


Band66-20MHz-16QAM-132322-1RB#0-Range1:30~  
1000MHz

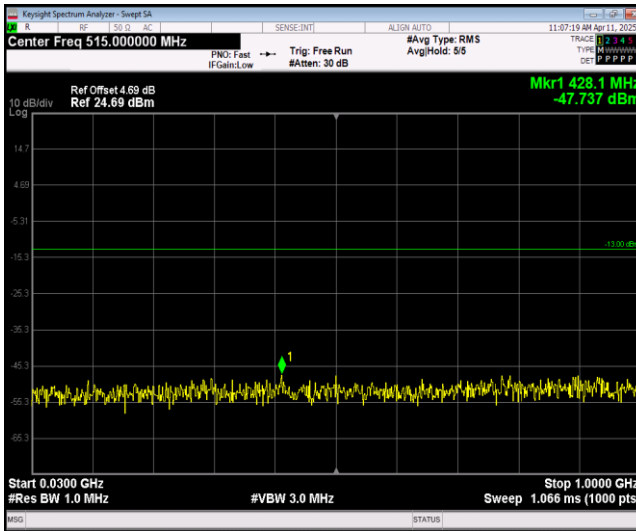


Band66-20MHz-16QAM-132322-1RB#0-Range2:100  
0~20000MHz

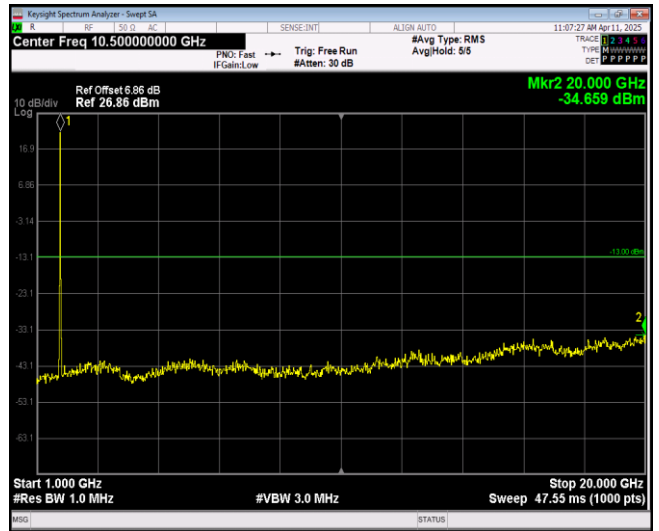




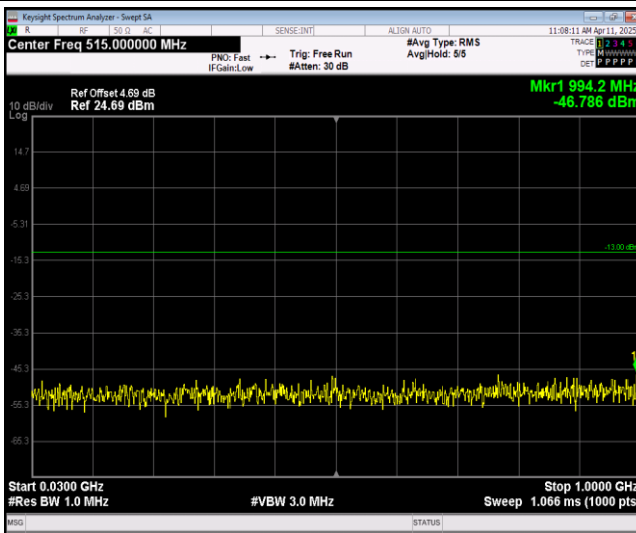
Band66-20MHz-64QAM-132322-1RB#0-Range1:30~1000MHz



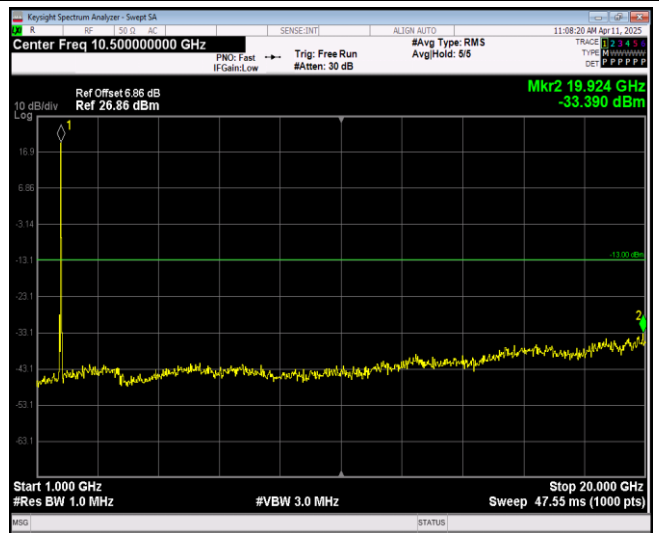
Band66-20MHz-64QAM-132322-1RB#0-Range2:1000~20000MHz



Band66-20MHz-64QAM-132572-1RB#0-Range1:30~1000MHz



Band66-20MHz-64QAM-132572-1RB#0-Range2:1000~20000MHz



## Appendix F: Frequency Stability

### Test Result

LTE Band 2 part:

| Reference Frequency: LTE Band 2 (10MHz) Middle channel=18900 Frequency=1880.0MHz |                     |                 |           |                                      |        |
|----------------------------------------------------------------------------------|---------------------|-----------------|-----------|--------------------------------------|--------|
| Temperature                                                                      |                     |                 |           |                                      |        |
| Power supplied<br>(Vdc)                                                          | Temperature<br>(°C) | Frequency error |           | Limit (ppm)                          | Result |
|                                                                                  |                     | Hz              | ppm       |                                      |        |
| QPSK                                                                             |                     |                 |           |                                      |        |
| 3.89                                                                             | -30                 | -16.64          | -0.008851 | Within authorized<br>band for Band 2 | Pass   |
|                                                                                  | -20                 | -18.48          | -0.009830 |                                      |        |
|                                                                                  | -10                 | -15.58          | -0.008287 |                                      |        |
|                                                                                  | 0                   | -9.74           | -0.005181 |                                      |        |
|                                                                                  | 10                  | 17.85           | 0.009495  |                                      |        |
|                                                                                  | 20                  | 23.42           | 0.012457  |                                      |        |
|                                                                                  | 30                  | 17.44           | 0.009277  |                                      |        |
|                                                                                  | 40                  | 27.88           | 0.014830  |                                      |        |
|                                                                                  | 50                  | 25.72           | 0.013681  |                                      |        |
| 16QAM                                                                            |                     |                 |           |                                      |        |
| 3.89                                                                             | -30                 | 59.08           | 0.031426  | Within authorized<br>band for Band 2 | Pass   |
|                                                                                  | -20                 | 27.54           | 0.014649  |                                      |        |
|                                                                                  | -10                 | 58.26           | 0.030989  |                                      |        |
|                                                                                  | 0                   | 38.67           | 0.020569  |                                      |        |
|                                                                                  | 10                  | -16.68          | -0.008872 |                                      |        |
|                                                                                  | 20                  | 14.18           | 0.007543  |                                      |        |
|                                                                                  | 30                  | 25.51           | 0.013569  |                                      |        |
|                                                                                  | 40                  | 38.92           | 0.020702  |                                      |        |
|                                                                                  | 50                  | 47.04           | 0.025021  |                                      |        |
| 64QAM                                                                            |                     |                 |           |                                      |        |
| 3.89                                                                             | -30                 | 50.38           | 0.026798  | Within authorized<br>band for Band 2 | Pass   |
|                                                                                  | -20                 | 36.31           | 0.019314  |                                      |        |
|                                                                                  | -10                 | 50.81           | 0.027027  |                                      |        |
|                                                                                  | 0                   | 7.31            | 0.003888  |                                      |        |
|                                                                                  | 10                  | 21.13           | 0.011239  |                                      |        |
|                                                                                  | 20                  | 41.10           | 0.021862  |                                      |        |
|                                                                                  | 30                  | 21.51           | 0.011441  |                                      |        |
|                                                                                  | 40                  | 38.74           | 0.020606  |                                      |        |
|                                                                                  | 50                  | 46.49           | 0.024729  |                                      |        |

| Voltage                                                                                                          |                         |                 |           |                                      |        |
|------------------------------------------------------------------------------------------------------------------|-------------------------|-----------------|-----------|--------------------------------------|--------|
| Temperature<br>(°C)                                                                                              | Power supplied<br>(Vdc) | Frequency error |           | Limit (ppm)                          | Result |
|                                                                                                                  |                         | Hz              | ppm       |                                      |        |
| QPSK                                                                                                             |                         |                 |           |                                      |        |
| 25                                                                                                               | 3.50                    | 54.03           | 0.028739  | Within authorized<br>band for Band 2 | Pass   |
|                                                                                                                  | 3.89                    | 45.96           | 0.024447  |                                      |        |
|                                                                                                                  | 4.48                    | -16.48          | -0.008766 |                                      |        |
| 16QAM                                                                                                            |                         |                 |           |                                      |        |
| 25                                                                                                               | 3.50                    | 34.93           | 0.018580  | Within authorized<br>band for Band 2 | Pass   |
|                                                                                                                  | 3.89                    | 33.40           | 0.017766  |                                      |        |
|                                                                                                                  | 4.48                    | 27.62           | 0.014691  |                                      |        |
| 64QAM                                                                                                            |                         |                 |           |                                      |        |
| 25                                                                                                               | 3.50                    | 54.43           | 0.028952  | Within authorized<br>band for Band 2 | Pass   |
|                                                                                                                  | 3.89                    | 26.97           | 0.014346  |                                      |        |
|                                                                                                                  | 4.48                    | 27.95           | 0.014867  |                                      |        |
| Remark: All bandwidth and all modulation had been tested, but only the worst case data displayed in this report. |                         |                 |           |                                      |        |

LTE Band 4 part:

| Reference Frequency: LTE Band 4(10MHz) Middle channel=20175 Frequency=1732.5MHz |                     |                 |           |                                      |        |
|---------------------------------------------------------------------------------|---------------------|-----------------|-----------|--------------------------------------|--------|
| Temperature                                                                     |                     |                 |           |                                      |        |
| Power supplied<br>(Vdc)                                                         | Temperature<br>(°C) | Frequency error |           | Limit (ppm)                          | Result |
|                                                                                 |                     | Hz              | ppm       |                                      |        |
| QPSK                                                                            |                     |                 |           |                                      |        |
| 3.89                                                                            | -30                 | 13.45           | 0.007763  | Within authorized<br>band for Band 4 | Pass   |
|                                                                                 | -20                 | -23.12          | -0.013345 |                                      |        |
|                                                                                 | -10                 | -39.61          | -0.022863 |                                      |        |
|                                                                                 | 0                   | -23.98          | -0.013841 |                                      |        |
|                                                                                 | 10                  | -43.85          | -0.025310 |                                      |        |
|                                                                                 | 20                  | -18.00          | -0.010390 |                                      |        |
|                                                                                 | 30                  | -23.47          | -0.013547 |                                      |        |
|                                                                                 | 40                  | -38.52          | -0.022234 |                                      |        |
|                                                                                 | 50                  | -41.21          | -0.023786 |                                      |        |
| 16QAM                                                                           |                     |                 |           |                                      |        |
| 3.89                                                                            | -30                 | -8.43           | -0.004866 | Within authorized<br>band for Band 4 | Pass   |
|                                                                                 | -20                 | 25.01           | 0.014436  |                                      |        |
|                                                                                 | -10                 | 33.30           | 0.019221  |                                      |        |
|                                                                                 | 0                   | 48.91           | 0.028231  |                                      |        |
|                                                                                 | 10                  | 11.24           | 0.006488  |                                      |        |
|                                                                                 | 20                  | 19.71           | 0.011377  |                                      |        |
|                                                                                 | 30                  | 26.18           | 0.015111  |                                      |        |
|                                                                                 | 40                  | 29.00           | 0.016739  |                                      |        |
|                                                                                 | 50                  | 41.21           | 0.023786  |                                      |        |
| 64QAM                                                                           |                     |                 |           |                                      |        |
| 3.89                                                                            | -30                 | -11.56          | -0.006672 | Within authorized<br>band for Band 4 | Pass   |
|                                                                                 | -20                 | 18.51           | 0.010684  |                                      |        |
|                                                                                 | -10                 | 29.80           | 0.017201  |                                      |        |
|                                                                                 | 0                   | -12.83          | -0.007405 |                                      |        |
|                                                                                 | 10                  | 17.37           | 0.010026  |                                      |        |
|                                                                                 | 20                  | 27.31           | 0.015763  |                                      |        |
|                                                                                 | 30                  | 34.55           | 0.019942  |                                      |        |
|                                                                                 | 40                  | 43.27           | 0.024975  |                                      |        |
|                                                                                 | 50                  | -10.29          | -0.005939 |                                      |        |

| Voltage                                                                                                          |                         |                 |           |                                      |        |
|------------------------------------------------------------------------------------------------------------------|-------------------------|-----------------|-----------|--------------------------------------|--------|
| Temperature<br>(°C)                                                                                              | Power supplied<br>(Vdc) | Frequency error |           | Limit (ppm)                          | Result |
|                                                                                                                  |                         | Hz              | ppm       |                                      |        |
| QPSK                                                                                                             |                         |                 |           |                                      |        |
| 25                                                                                                               | 3.50                    | 8.15            | 0.004704  | Within authorized<br>band for Band 4 | Pass   |
|                                                                                                                  | 3.89                    | 41.84           | 0.024150  |                                      |        |
|                                                                                                                  | 4.48                    | -35.69          | -0.020600 |                                      |        |
| 16QAM                                                                                                            |                         |                 |           |                                      |        |
| 25                                                                                                               | 3.50                    | -37.09          | -0.021408 | Within authorized<br>band for Band 4 | Pass   |
|                                                                                                                  | 3.89                    | -51.20          | -0.029553 |                                      |        |
|                                                                                                                  | 4.48                    | -24.46          | -0.014118 |                                      |        |
| 64QAM                                                                                                            |                         |                 |           |                                      |        |
| 25                                                                                                               | 3.50                    | 34.88           | 0.020133  | Within authorized<br>band for Band 4 | Pass   |
|                                                                                                                  | 3.89                    | 14.38           | 0.008300  |                                      |        |
|                                                                                                                  | 4.48                    | 55.73           | 0.032167  |                                      |        |
| Remark: All bandwidth and all modulation had been tested, but only the worst case data displayed in this report. |                         |                 |           |                                      |        |

LTE Band 5 part:

| Reference Frequency: LTE Band 5(10MHz) Middle channel=20525 Frequency=836.5MHz |                     |                 |           |             |        |
|--------------------------------------------------------------------------------|---------------------|-----------------|-----------|-------------|--------|
| Temperature                                                                    |                     |                 |           |             |        |
| Power supplied<br>(Vdc)                                                        | Temperature<br>(°C) | Frequency error |           | Limit (ppm) | Result |
|                                                                                |                     | Hz              | ppm       |             |        |
| QPSK                                                                           |                     |                 |           |             |        |
| 3.89                                                                           | -30                 | -21.84          | -0.026109 | ±2.5        | Pass   |
|                                                                                | -20                 | -32.13          | -0.038410 |             |        |
|                                                                                | -10                 | -43.04          | -0.051452 |             |        |
|                                                                                | 0                   | -50.04          | -0.059821 |             |        |
|                                                                                | 10                  | -9.78           | -0.011692 |             |        |
|                                                                                | 20                  | -15.42          | -0.018434 |             |        |
|                                                                                | 30                  | -16.09          | -0.019235 |             |        |
|                                                                                | 40                  | -17.91          | -0.021411 |             |        |
|                                                                                | 50                  | -17.77          | -0.021243 |             |        |
| 16QAM                                                                          |                     |                 |           |             |        |
| 3.89                                                                           | -30                 | 20.91           | 0.024997  | ±2.5        | Pass   |
|                                                                                | -20                 | 28.92           | 0.034573  |             |        |
|                                                                                | -10                 | 36.78           | 0.043969  |             |        |
|                                                                                | 0                   | 42.69           | 0.051034  |             |        |
|                                                                                | 10                  | 46.71           | 0.055840  |             |        |
|                                                                                | 20                  | 5.81            | 0.006946  |             |        |
|                                                                                | 30                  | 11.59           | 0.013855  |             |        |
|                                                                                | 40                  | 13.95           | 0.016677  |             |        |
|                                                                                | 50                  | 17.71           | 0.021172  |             |        |
| 64QAM                                                                          |                     |                 |           |             |        |
| 3.89                                                                           | -30                 | 37.71           | 0.045081  | ±2.5        | Pass   |
|                                                                                | -20                 | 43.26           | 0.051715  |             |        |
|                                                                                | -10                 | 49.78           | 0.059510  |             |        |
|                                                                                | 0                   | 8.01            | 0.009576  |             |        |
|                                                                                | 10                  | 11.42           | 0.013652  |             |        |
|                                                                                | 20                  | 19.24           | 0.023001  |             |        |
|                                                                                | 30                  | 20.48           | 0.024483  |             |        |
|                                                                                | 40                  | 25.08           | 0.029982  |             |        |
|                                                                                | 50                  | 29.97           | 0.035828  |             |        |

| Voltage                                                                                                          |                         |                 |           |             |        |
|------------------------------------------------------------------------------------------------------------------|-------------------------|-----------------|-----------|-------------|--------|
| Temperature<br>(°C)                                                                                              | Power supplied<br>(Vdc) | Frequency error |           | Limit (ppm) | Result |
|                                                                                                                  |                         | Hz              | ppm       |             |        |
| QPSK                                                                                                             |                         |                 |           |             |        |
| 25                                                                                                               | 3.50                    | 8.03            | 0.009600  | ±2.5        | Pass   |
|                                                                                                                  | 3.89                    | 44.98           | 0.053772  |             |        |
|                                                                                                                  | 4.48                    | -10.93          | -0.013066 |             |        |
| 16QAM                                                                                                            |                         |                 |           |             |        |
| 25                                                                                                               | 3.50                    | -17.02          | -0.020347 | ±2.5        | Pass   |
|                                                                                                                  | 3.89                    | -24.26          | -0.029002 |             |        |
|                                                                                                                  | 4.48                    | 4.23            | 0.005057  |             |        |
| 64QAM                                                                                                            |                         |                 |           |             |        |
| 25                                                                                                               | 3.50                    | 23.42           | 0.027998  | ±2.5        | Pass   |
|                                                                                                                  | 3.89                    | 20.93           | 0.025021  |             |        |
|                                                                                                                  | 4.48                    | 29.50           | 0.035266  |             |        |
| Remark: All bandwidth and all modulation had been tested, but only the worst case data displayed in this report. |                         |                 |           |             |        |

LTE Band 7 part:

| Reference Frequency: LTE Band 7(10MHz) Middle channel=21100 Frequency=2535.0MHz |                     |                 |           |                                      |        |
|---------------------------------------------------------------------------------|---------------------|-----------------|-----------|--------------------------------------|--------|
| Temperature                                                                     |                     |                 |           |                                      |        |
| Power supplied<br>(Vdc)                                                         | Temperature<br>(°C) | Frequency error |           | Limit (ppm)                          | Result |
|                                                                                 |                     | Hz              | ppm       |                                      |        |
| QPSK                                                                            |                     |                 |           |                                      |        |
| 3.89                                                                            | -30                 | -66.58          | -0.026264 | Within authorized<br>band for Band 7 | Pass   |
|                                                                                 | -20                 | -57.51          | -0.022686 |                                      |        |
|                                                                                 | -10                 | -54.27          | -0.021408 |                                      |        |
|                                                                                 | 0                   | -51.94          | -0.020489 |                                      |        |
|                                                                                 | 10                  | -50.98          | -0.020110 |                                      |        |
|                                                                                 | 20                  | -52.41          | -0.020675 |                                      |        |
|                                                                                 | 30                  | -42.50          | -0.016765 |                                      |        |
|                                                                                 | 40                  | -53.57          | -0.021132 |                                      |        |
|                                                                                 | 50                  | -63.00          | -0.024852 |                                      |        |
| 16QAM                                                                           |                     |                 |           |                                      |        |
| 3.89                                                                            | -30                 | -53.40          | -0.021065 | Within authorized<br>band for Band 7 | Pass   |
|                                                                                 | -20                 | 26.87           | 0.010600  |                                      |        |
|                                                                                 | -10                 | 29.53           | 0.011649  |                                      |        |
|                                                                                 | 0                   | 33.07           | 0.013045  |                                      |        |
|                                                                                 | 10                  | 33.55           | 0.013235  |                                      |        |
|                                                                                 | 20                  | 37.79           | 0.014907  |                                      |        |
|                                                                                 | 30                  | 40.53           | 0.015988  |                                      |        |
|                                                                                 | 40                  | 31.23           | 0.012320  |                                      |        |
|                                                                                 | 50                  | 29.61           | 0.011680  |                                      |        |
| 64QAM                                                                           |                     |                 |           |                                      |        |
| 3.89                                                                            | -30                 | 45.23           | 0.017842  | Within authorized<br>band for Band 7 | Pass   |
|                                                                                 | -20                 | 42.60           | 0.016805  |                                      |        |
|                                                                                 | -10                 | 51.14           | 0.020174  |                                      |        |
|                                                                                 | 0                   | 46.53           | 0.018355  |                                      |        |
|                                                                                 | 10                  | 53.43           | 0.021077  |                                      |        |
|                                                                                 | 20                  | 57.22           | 0.022572  |                                      |        |
|                                                                                 | 30                  | 56.18           | 0.022162  |                                      |        |
|                                                                                 | 40                  | 53.86           | 0.021247  |                                      |        |
|                                                                                 | 50                  | 47.58           | 0.018769  |                                      |        |

| Voltage                                                                                                          |                         |                 |           |                                      |        |
|------------------------------------------------------------------------------------------------------------------|-------------------------|-----------------|-----------|--------------------------------------|--------|
| Temperature<br>(°C)                                                                                              | Power supplied<br>(Vdc) | Frequency error |           | Limit (ppm)                          | Result |
|                                                                                                                  |                         | Hz              | ppm       |                                      |        |
| QPSK                                                                                                             |                         |                 |           |                                      |        |
| 25                                                                                                               | 3.50                    | -45.05          | -0.017771 | Within authorized<br>band for Band 7 | Pass   |
|                                                                                                                  | 3.89                    | -21.16          | -0.008347 |                                      |        |
|                                                                                                                  | 4.48                    | -62.40          | -0.024615 |                                      |        |
| 16QAM                                                                                                            |                         |                 |           |                                      |        |
| 25                                                                                                               | 3.50                    | -41.01          | -0.016178 | Within authorized<br>band for Band 7 | Pass   |
|                                                                                                                  | 3.89                    | -53.53          | -0.021116 |                                      |        |
|                                                                                                                  | 4.48                    | -36.69          | -0.014473 |                                      |        |
| 64QAM                                                                                                            |                         |                 |           |                                      |        |
| 25                                                                                                               | 3.50                    | 48.02           | 0.018943  | Within authorized<br>band for Band 7 | Pass   |
|                                                                                                                  | 3.89                    | 36.84           | 0.014533  |                                      |        |
|                                                                                                                  | 4.48                    | 46.95           | 0.018521  |                                      |        |
| Remark: All bandwidth and all modulation had been tested, but only the worst case data displayed in this report. |                         |                 |           |                                      |        |

LTE Band 12 part:

| Reference Frequency: LTE Band 12(10MHz) Middle channel=23095 Frequency=707.5MHz |                     |                 |           |                                       |        |
|---------------------------------------------------------------------------------|---------------------|-----------------|-----------|---------------------------------------|--------|
| Temperature                                                                     |                     |                 |           |                                       |        |
| Power supplied<br>(Vdc)                                                         | Temperature<br>(°C) | Frequency error |           | Limit (ppm)                           | Result |
|                                                                                 |                     | Hz              | ppm       |                                       |        |
| QPSK                                                                            |                     |                 |           |                                       |        |
| 3.89                                                                            | -30                 | 5.76            | 0.008141  | Within authorized<br>band for Band 12 | Pass   |
|                                                                                 | -20                 | -10.91          | -0.015420 |                                       |        |
|                                                                                 | -10                 | -23.16          | -0.032735 |                                       |        |
|                                                                                 | 0                   | -29.35          | -0.041484 |                                       |        |
|                                                                                 | 10                  | -34.38          | -0.048594 |                                       |        |
|                                                                                 | 20                  | -40.96          | -0.057894 |                                       |        |
|                                                                                 | 30                  | -43.33          | -0.061244 |                                       |        |
|                                                                                 | 40                  | -46.53          | -0.065767 |                                       |        |
|                                                                                 | 50                  | -50.02          | -0.070700 |                                       |        |
| 16QAM                                                                           |                     |                 |           |                                       |        |
| 3.89                                                                            | -30                 | 20.56           | 0.029060  | Within authorized<br>band for Band 12 | Pass   |
|                                                                                 | -20                 | 23.07           | 0.032608  |                                       |        |
|                                                                                 | -10                 | 27.58           | 0.038982  |                                       |        |
|                                                                                 | 0                   | 29.40           | 0.041555  |                                       |        |
|                                                                                 | 10                  | 33.83           | 0.047816  |                                       |        |
|                                                                                 | 20                  | 34.88           | 0.049300  |                                       |        |
|                                                                                 | 30                  | 36.59           | 0.051717  |                                       |        |
|                                                                                 | 40                  | 39.95           | 0.056466  |                                       |        |
|                                                                                 | 50                  | 38.01           | 0.053724  |                                       |        |
| 64QAM                                                                           |                     |                 |           |                                       |        |
| 3.89                                                                            | -30                 | 11.99           | 0.016947  | Within authorized<br>band for Band 12 | Pass   |
|                                                                                 | -20                 | 19.90           | 0.028127  |                                       |        |
|                                                                                 | -10                 | 24.15           | 0.034134  |                                       |        |
|                                                                                 | 0                   | 31.83           | 0.044989  |                                       |        |
|                                                                                 | 10                  | 32.39           | 0.045781  |                                       |        |
|                                                                                 | 20                  | 36.03           | 0.050926  |                                       |        |
|                                                                                 | 30                  | 38.94           | 0.055039  |                                       |        |
|                                                                                 | 40                  | 39.77           | 0.056212  |                                       |        |
|                                                                                 | 50                  | 43.70           | 0.061767  |                                       |        |

| Voltage                                                                                                          |                         |                 |          |                                       |        |
|------------------------------------------------------------------------------------------------------------------|-------------------------|-----------------|----------|---------------------------------------|--------|
| Temperature<br>(°C)                                                                                              | Power supplied<br>(Vdc) | Frequency error |          | Limit (ppm)                           | Result |
|                                                                                                                  |                         | Hz              | ppm      |                                       |        |
| QPSK                                                                                                             |                         |                 |          |                                       |        |
| 25                                                                                                               | 3.50                    | 34.07           | 0.048155 | Within authorized<br>band for Band 12 | Pass   |
|                                                                                                                  | 3.89                    | 27.65           | 0.039081 |                                       |        |
|                                                                                                                  | 4.48                    | 22.99           | 0.032495 |                                       |        |
| 16QAM                                                                                                            |                         |                 |          |                                       |        |
| 25                                                                                                               | 3.50                    | 11.59           | 0.016382 | Within authorized<br>band for Band 12 | Pass   |
|                                                                                                                  | 3.89                    | 8.58            | 0.012127 |                                       |        |
|                                                                                                                  | 4.48                    | 16.85           | 0.023816 |                                       |        |
| 64QAM                                                                                                            |                         |                 |          |                                       |        |
| 25                                                                                                               | 3.50                    | 49.72           | 0.070276 | Within authorized<br>band for Band 12 | Pass   |
|                                                                                                                  | 3.89                    | 41.18           | 0.058205 |                                       |        |
|                                                                                                                  | 4.48                    | 4.06            | 0.005739 |                                       |        |
| Remark: All bandwidth and all modulation had been tested, but only the worst case data displayed in this report. |                         |                 |          |                                       |        |

LTE Band 17 part:

| Reference Frequency: LTE Band 17(10MHz) Middle channel=23790 Frequency=710.0MHz |                  |                 |           |                                    |        |
|---------------------------------------------------------------------------------|------------------|-----------------|-----------|------------------------------------|--------|
| Temperature                                                                     |                  |                 |           |                                    |        |
| Power supplied (Vdc)                                                            | Temperature (°C) | Frequency error |           | Limit (ppm)                        | Result |
|                                                                                 |                  | Hz              | ppm       |                                    |        |
| QPSK                                                                            |                  |                 |           |                                    |        |
| 3.89                                                                            | -30              | -12.33          | -0.017366 | Within authorized band for Band 17 | Pass   |
|                                                                                 | -20              | -19.96          | -0.028113 |                                    |        |
|                                                                                 | -10              | -30.47          | -0.042915 |                                    |        |
|                                                                                 | 0                | -33.30          | -0.046901 |                                    |        |
|                                                                                 | 10               | -37.84          | -0.053296 |                                    |        |
|                                                                                 | 20               | -44.69          | -0.062944 |                                    |        |
|                                                                                 | 30               | -49.81          | -0.070155 |                                    |        |
|                                                                                 | 40               | 7.15            | 0.010070  |                                    |        |
|                                                                                 | 50               | -10.20          | -0.014366 |                                    |        |
| 16QAM                                                                           |                  |                 |           |                                    |        |
| 3.89                                                                            | -30              | 17.92           | 0.025239  | Within authorized band for Band 17 | Pass   |
|                                                                                 | -20              | 25.55           | 0.035986  |                                    |        |
|                                                                                 | -10              | 33.62           | 0.047352  |                                    |        |
|                                                                                 | 0                | 41.80           | 0.058873  |                                    |        |
|                                                                                 | 10               | 42.44           | 0.059775  |                                    |        |
|                                                                                 | 20               | 46.18           | 0.065042  |                                    |        |
|                                                                                 | 30               | 48.15           | 0.067817  |                                    |        |
|                                                                                 | 40               | 47.31           | 0.066634  |                                    |        |
|                                                                                 | 50               | 49.70           | 0.070000  |                                    |        |
| 64QAM                                                                           |                  |                 |           |                                    |        |
| 3.89                                                                            | -30              | 21.92           | 0.030873  | Within authorized band for Band 17 | Pass   |
|                                                                                 | -20              | 33.33           | 0.046944  |                                    |        |
|                                                                                 | -10              | 40.14           | 0.056535  |                                    |        |
|                                                                                 | 0                | 43.24           | 0.060901  |                                    |        |
|                                                                                 | 10               | 51.86           | 0.073042  |                                    |        |
|                                                                                 | 20               | 16.68           | 0.023493  |                                    |        |
|                                                                                 | 30               | 23.98           | 0.033775  |                                    |        |
|                                                                                 | 40               | 27.62           | 0.038901  |                                    |        |
|                                                                                 | 50               | 30.90           | 0.043521  |                                    |        |

| Voltage                                                                                                          |                         |                 |           |                                       |        |
|------------------------------------------------------------------------------------------------------------------|-------------------------|-----------------|-----------|---------------------------------------|--------|
| Temperature<br>(°C)                                                                                              | Power supplied<br>(Vdc) | Frequency error |           | Limit (ppm)                           | Result |
|                                                                                                                  |                         | Hz              | ppm       |                                       |        |
| QPSK                                                                                                             |                         |                 |           |                                       |        |
| 25                                                                                                               | 3.50                    | 18.87           | 0.026577  | Within authorized<br>band for Band 17 | Pass   |
|                                                                                                                  | 3.89                    | 13.80           | 0.019437  |                                       |        |
|                                                                                                                  | 4.48                    | 7.74            | 0.010901  |                                       |        |
| 16QAM                                                                                                            |                         |                 |           |                                       |        |
| 25                                                                                                               | 3.50                    | -6.54           | -0.009211 | Within authorized<br>band for Band 17 | Pass   |
|                                                                                                                  | 3.89                    | -12.36          | -0.017408 |                                       |        |
|                                                                                                                  | 4.48                    | 10.61           | 0.014944  |                                       |        |
| 64QAM                                                                                                            |                         |                 |           |                                       |        |
| 25                                                                                                               | 3.50                    | 8.01            | 0.011282  | Within authorized<br>band for Band 17 | Pass   |
|                                                                                                                  | 3.89                    | -5.22           | -0.007352 |                                       |        |
|                                                                                                                  | 4.48                    | 16.85           | 0.023732  |                                       |        |
| Remark: All bandwidth and all modulation had been tested, but only the worst case data displayed in this report. |                         |                 |           |                                       |        |

LTE Band 25 part:

| Reference Frequency: LTE Band 25(10MHz) Middle channel=26365 Frequency=1882.5MHz |                     |                 |           |                                       |        |
|----------------------------------------------------------------------------------|---------------------|-----------------|-----------|---------------------------------------|--------|
| Temperature                                                                      |                     |                 |           |                                       |        |
| Power supplied<br>(Vdc)                                                          | Temperature<br>(°C) | Frequency error |           | Limit (ppm)                           | Result |
|                                                                                  |                     | Hz              | ppm       |                                       |        |
| QPSK                                                                             |                     |                 |           |                                       |        |
| 3.89                                                                             | -30                 | -27.21          | -0.014454 | Within authorized<br>band for Band 25 | Pass   |
|                                                                                  | -20                 | -42.80          | -0.022736 |                                       |        |
|                                                                                  | -10                 | -60.01          | -0.031878 |                                       |        |
|                                                                                  | 0                   | 15.01           | 0.007973  |                                       |        |
|                                                                                  | 10                  | 14.76           | 0.007841  |                                       |        |
|                                                                                  | 20                  | -13.12          | -0.006969 |                                       |        |
|                                                                                  | 30                  | -9.54           | -0.005068 |                                       |        |
|                                                                                  | 40                  | 14.92           | 0.007926  |                                       |        |
|                                                                                  | 50                  | 15.01           | 0.007973  |                                       |        |
| 16QAM                                                                            |                     |                 |           |                                       |        |
| 3.89                                                                             | -30                 | 48.02           | 0.025509  | Within authorized<br>band for Band 25 | Pass   |
|                                                                                  | -20                 | -21.99          | -0.011681 |                                       |        |
|                                                                                  | -10                 | -11.29          | -0.005997 |                                       |        |
|                                                                                  | 0                   | 18.15           | 0.009641  |                                       |        |
|                                                                                  | 10                  | 23.55           | 0.012510  |                                       |        |
|                                                                                  | 20                  | 34.43           | 0.018290  |                                       |        |
|                                                                                  | 30                  | 40.14           | 0.021323  |                                       |        |
|                                                                                  | 40                  | 51.13           | 0.027161  |                                       |        |
|                                                                                  | 50                  | 51.70           | 0.027463  |                                       |        |
| 64QAM                                                                            |                     |                 |           |                                       |        |
| 3.89                                                                             | -30                 | 38.17           | 0.020276  | Within authorized<br>band for Band 25 | Pass   |
|                                                                                  | -20                 | 30.43           | 0.016165  |                                       |        |
|                                                                                  | -10                 | 46.95           | 0.024940  |                                       |        |
|                                                                                  | 0                   | 19.98           | 0.010614  |                                       |        |
|                                                                                  | 10                  | 46.02           | 0.024446  |                                       |        |
|                                                                                  | 20                  | 18.77           | 0.009971  |                                       |        |
|                                                                                  | 30                  | 39.73           | 0.021105  |                                       |        |
|                                                                                  | 40                  | 47.04           | 0.024988  |                                       |        |
|                                                                                  | 50                  | 14.55           | 0.007729  |                                       |        |

| Voltage                                                                                                          |                         |                 |           |                                       |        |
|------------------------------------------------------------------------------------------------------------------|-------------------------|-----------------|-----------|---------------------------------------|--------|
| Temperature<br>(°C)                                                                                              | Power supplied<br>(Vdc) | Frequency error |           | Limit (ppm)                           | Result |
|                                                                                                                  |                         | Hz              | ppm       |                                       |        |
| QPSK                                                                                                             |                         |                 |           |                                       |        |
| 25                                                                                                               | 3.50                    | 17.54           | 0.009317  | Within authorized<br>band for Band 25 | Pass   |
|                                                                                                                  | 3.89                    | 40.38           | 0.021450  |                                       |        |
|                                                                                                                  | 4.48                    | -19.53          | -0.010375 |                                       |        |
| 16QAM                                                                                                            |                         |                 |           |                                       |        |
| 25                                                                                                               | 3.50                    | 7.41            | 0.003936  | Within authorized<br>band for Band 25 | Pass   |
|                                                                                                                  | 3.89                    | -21.67          | -0.011511 |                                       |        |
|                                                                                                                  | 4.48                    | 30.93           | 0.016430  |                                       |        |
| 64QAM                                                                                                            |                         |                 |           |                                       |        |
| 25                                                                                                               | 3.50                    | 57.28           | 0.030428  | Within authorized<br>band for Band 25 | Pass   |
|                                                                                                                  | 3.89                    | 28.04           | 0.014895  |                                       |        |
|                                                                                                                  | 4.48                    | 59.15           | 0.031421  |                                       |        |
| Remark: All bandwidth and all modulation had been tested, but only the worst case data displayed in this report. |                         |                 |           |                                       |        |

LTE Band 26 part:

| Reference Frequency: LTE Band 26(10MHz) Middle channel=26740 Frequency=819.0MHz |                  |                 |           |                                    |        |
|---------------------------------------------------------------------------------|------------------|-----------------|-----------|------------------------------------|--------|
| Temperature                                                                     |                  |                 |           |                                    |        |
| Power supplied (Vdc)                                                            | Temperature (°C) | Frequency error |           | Limit (ppm)                        | Result |
|                                                                                 |                  | Hz              | ppm       |                                    |        |
| QPSK                                                                            |                  |                 |           |                                    |        |
| 3.89                                                                            | -30              | 12.40           | 0.015140  | Within authorized band for Band 26 | Pass   |
|                                                                                 | -20              | 8.67            | 0.010586  |                                    |        |
|                                                                                 | -10              | 7.98            | 0.009744  |                                    |        |
|                                                                                 | 0                | -6.95           | -0.008486 |                                    |        |
|                                                                                 | 10               | -10.86          | -0.013260 |                                    |        |
|                                                                                 | 20               | -12.75          | -0.015568 |                                    |        |
|                                                                                 | 30               | -17.51          | -0.021380 |                                    |        |
|                                                                                 | 40               | -22.36          | -0.027302 |                                    |        |
|                                                                                 | 50               | -30.21          | -0.036886 |                                    |        |
| 16QAM                                                                           |                  |                 |           |                                    |        |
| 3.89                                                                            | -30              | -18.38          | -0.022442 | Within authorized band for Band 26 | Pass   |
|                                                                                 | -20              | -24.22          | -0.029573 |                                    |        |
|                                                                                 | -10              | -26.26          | -0.032063 |                                    |        |
|                                                                                 | 0                | -29.90          | -0.036508 |                                    |        |
|                                                                                 | 10               | -35.28          | -0.043077 |                                    |        |
|                                                                                 | 20               | -36.91          | -0.045067 |                                    |        |
|                                                                                 | 30               | -41.27          | -0.050391 |                                    |        |
|                                                                                 | 40               | -43.37          | -0.052955 |                                    |        |
|                                                                                 | 50               | -43.69          | -0.053346 |                                    |        |
| 64QAM                                                                           |                  |                 |           |                                    |        |
| 3.89                                                                            | -30              | -8.04           | -0.009817 | Within authorized band for Band 26 | Pass   |
|                                                                                 | -20              | -9.73           | -0.011880 |                                    |        |
|                                                                                 | -10              | -15.01          | -0.018327 |                                    |        |
|                                                                                 | 0                | -9.80           | -0.011966 |                                    |        |
|                                                                                 | 10               | -12.63          | -0.015421 |                                    |        |
|                                                                                 | 20               | -17.09          | -0.020867 |                                    |        |
|                                                                                 | 30               | -22.36          | -0.027302 |                                    |        |
|                                                                                 | 40               | -24.95          | -0.030464 |                                    |        |
|                                                                                 | 50               | -28.55          | -0.034860 |                                    |        |

| Voltage                                                                                                          |                         |                 |           |                                       |        |
|------------------------------------------------------------------------------------------------------------------|-------------------------|-----------------|-----------|---------------------------------------|--------|
| Temperature<br>(°C)                                                                                              | Power supplied<br>(Vdc) | Frequency error |           | Limit (ppm)                           | Result |
|                                                                                                                  |                         | Hz              | ppm       |                                       |        |
| QPSK                                                                                                             |                         |                 |           |                                       |        |
| 25                                                                                                               | 3.50                    | 5.12            | 0.006252  | Within authorized<br>band for Band 26 | Pass   |
|                                                                                                                  | 3.89                    | 45.26           | 0.055263  |                                       |        |
|                                                                                                                  | 4.48                    | 9.71            | 0.011856  |                                       |        |
| 16QAM                                                                                                            |                         |                 |           |                                       |        |
| 25                                                                                                               | 3.50                    | -26.11          | -0.031880 | Within authorized<br>band for Band 26 | Pass   |
|                                                                                                                  | 3.89                    | -24.95          | -0.030464 |                                       |        |
|                                                                                                                  | 4.48                    | -25.22          | -0.030794 |                                       |        |
| 64QAM                                                                                                            |                         |                 |           |                                       |        |
| 25                                                                                                               | 3.50                    | -7.62           | -0.009304 | Within authorized<br>band for Band 26 | Pass   |
|                                                                                                                  | 3.89                    | -6.17           | -0.007534 |                                       |        |
|                                                                                                                  | 4.48                    | -5.72           | -0.006984 |                                       |        |
| Remark: All bandwidth and all modulation had been tested, but only the worst case data displayed in this report. |                         |                 |           |                                       |        |

LTE Band 26 part:

| Reference Frequency: LTE Band 26(10MHz) Middle channel=26915 Frequency=836.5MHz |                     |                 |           |                                       |        |
|---------------------------------------------------------------------------------|---------------------|-----------------|-----------|---------------------------------------|--------|
| Temperature                                                                     |                     |                 |           |                                       |        |
| Power supplied<br>(Vdc)                                                         | Temperature<br>(°C) | Frequency error |           | Limit (ppm)                           | Result |
|                                                                                 |                     | Hz              | ppm       |                                       |        |
| QPSK                                                                            |                     |                 |           |                                       |        |
| 3.89                                                                            | -30                 | -28.17          | -0.033676 | Within authorized<br>band for Band 26 | Pass   |
|                                                                                 | -20                 | -44.43          | -0.053114 |                                       |        |
|                                                                                 | -10                 | -49.91          | -0.059665 |                                       |        |
|                                                                                 | 0                   | -5.15           | -0.006157 |                                       |        |
|                                                                                 | 10                  | -13.63          | -0.016294 |                                       |        |
|                                                                                 | 20                  | -22.00          | -0.026300 |                                       |        |
|                                                                                 | 30                  | -23.13          | -0.027651 |                                       |        |
|                                                                                 | 40                  | -27.54          | -0.032923 |                                       |        |
|                                                                                 | 50                  | -29.54          | -0.035314 |                                       |        |
| 16QAM                                                                           |                     |                 |           |                                       |        |
| 3.89                                                                            | -30                 | -27.01          | -0.032289 | Within authorized<br>band for Band 26 | Pass   |
|                                                                                 | -20                 | -27.82          | -0.033258 |                                       |        |
|                                                                                 | -10                 | -33.07          | -0.039534 |                                       |        |
|                                                                                 | 0                   | -29.61          | -0.035397 |                                       |        |
|                                                                                 | 10                  | -33.09          | -0.039558 |                                       |        |
|                                                                                 | 20                  | -33.56          | -0.040120 |                                       |        |
|                                                                                 | 30                  | -34.58          | -0.041339 |                                       |        |
|                                                                                 | 40                  | -38.19          | -0.045655 |                                       |        |
|                                                                                 | 50                  | -39.51          | -0.047233 |                                       |        |
| 64QAM                                                                           |                     |                 |           |                                       |        |
| 3.89                                                                            | -30                 | -32.59          | -0.038960 | Within authorized<br>band for Band 26 | Pass   |
|                                                                                 | -20                 | -34.86          | -0.041674 |                                       |        |
|                                                                                 | -10                 | -36.36          | -0.043467 |                                       |        |
|                                                                                 | 0                   | -37.55          | -0.044889 |                                       |        |
|                                                                                 | 10                  | -39.17          | -0.046826 |                                       |        |
|                                                                                 | 20                  | -38.81          | -0.046396 |                                       |        |
|                                                                                 | 30                  | -39.38          | -0.047077 |                                       |        |
|                                                                                 | 40                  | -39.61          | -0.047352 |                                       |        |
|                                                                                 | 50                  | -39.20          | -0.046862 |                                       |        |

| Voltage                                                                                                          |                         |                 |           |                                       |        |
|------------------------------------------------------------------------------------------------------------------|-------------------------|-----------------|-----------|---------------------------------------|--------|
| Temperature<br>(°C)                                                                                              | Power supplied<br>(Vdc) | Frequency error |           | Limit (ppm)                           | Result |
|                                                                                                                  |                         | Hz              | ppm       |                                       |        |
| QPSK                                                                                                             |                         |                 |           |                                       |        |
| 25                                                                                                               | 3.50                    | -4.46           | -0.005332 | Within authorized<br>band for Band 26 | Pass   |
|                                                                                                                  | 3.89                    | 33.86           | 0.040478  |                                       |        |
|                                                                                                                  | 4.48                    | -16.87          | -0.020167 |                                       |        |
| 16QAM                                                                                                            |                         |                 |           |                                       |        |
| 25                                                                                                               | 3.50                    | -33.57          | -0.040132 | Within authorized<br>band for Band 26 | Pass   |
|                                                                                                                  | 3.89                    | -32.82          | -0.039235 |                                       |        |
|                                                                                                                  | 4.48                    | -29.17          | -0.034871 |                                       |        |
| 64QAM                                                                                                            |                         |                 |           |                                       |        |
| 25                                                                                                               | 3.50                    | -34.19          | -0.040873 | Within authorized<br>band for Band 26 | Pass   |
|                                                                                                                  | 3.89                    | -37.71          | -0.045081 |                                       |        |
|                                                                                                                  | 4.48                    | -34.28          | -0.040980 |                                       |        |
| Remark: All bandwidth and all modulation had been tested, but only the worst case data displayed in this report. |                         |                 |           |                                       |        |

**LTE Band 41 part:**

| Reference Frequency: LTE Band 41 (10MHz) Middle channel=40640 Frequency=2595.0MHz |                     |                 |           |                                       |        |
|-----------------------------------------------------------------------------------|---------------------|-----------------|-----------|---------------------------------------|--------|
| Temperature                                                                       |                     |                 |           |                                       |        |
| Power supplied<br>(Vdc)                                                           | Temperature<br>(°C) | Frequency error |           | Limit (ppm)                           | Result |
|                                                                                   |                     | Hz              | ppm       |                                       |        |
| QPSK                                                                              |                     |                 |           |                                       |        |
| 3.89                                                                              | -30                 | 46.95           | 0.018092  | Within authorized<br>band for Band 41 | Pass   |
|                                                                                   | -20                 | 32.64           | 0.012578  |                                       |        |
|                                                                                   | -10                 | 24.05           | 0.009268  |                                       |        |
|                                                                                   | 0                   | -24.23          | -0.009337 |                                       |        |
|                                                                                   | 10                  | -27.54          | -0.010613 |                                       |        |
|                                                                                   | 20                  | -22.89          | -0.008821 |                                       |        |
|                                                                                   | 30                  | -23.93          | -0.009222 |                                       |        |
|                                                                                   | 40                  | -36.33          | -0.014000 |                                       |        |
|                                                                                   | 50                  | -45.30          | -0.017457 |                                       |        |
| 16QAM                                                                             |                     |                 |           |                                       |        |
| 3.89                                                                              | -30                 | 41.83           | 0.016119  | Within authorized<br>band for Band 41 | Pass   |
|                                                                                   | -20                 | 54.90           | 0.021156  |                                       |        |
|                                                                                   | -10                 | 71.05           | 0.027380  |                                       |        |
|                                                                                   | 0                   | -27.27          | -0.010509 |                                       |        |
|                                                                                   | 10                  | -14.10          | -0.005434 |                                       |        |
|                                                                                   | 20                  | 42.60           | 0.016416  |                                       |        |
|                                                                                   | 30                  | 21.63           | 0.008335  |                                       |        |
|                                                                                   | 40                  | 29.63           | 0.011418  |                                       |        |
|                                                                                   | 50                  | 45.29           | 0.017453  |                                       |        |
| 64QAM                                                                             |                     |                 |           |                                       |        |
| 3.89                                                                              | -30                 | 22.17           | 0.008543  | Within authorized<br>band for Band 41 | Pass   |
|                                                                                   | -20                 | 36.74           | 0.014158  |                                       |        |
|                                                                                   | -10                 | 51.73           | 0.019934  |                                       |        |
|                                                                                   | 0                   | 50.84           | 0.019592  |                                       |        |
|                                                                                   | 10                  | 64.36           | 0.024802  |                                       |        |
|                                                                                   | 20                  | 13.90           | 0.005356  |                                       |        |
|                                                                                   | 30                  | 17.58           | 0.006775  |                                       |        |
|                                                                                   | 40                  | 24.91           | 0.009599  |                                       |        |
|                                                                                   | 50                  | 31.66           | 0.012200  |                                       |        |

| Voltage                                                                                                          |                         |                 |           |                                       |        |
|------------------------------------------------------------------------------------------------------------------|-------------------------|-----------------|-----------|---------------------------------------|--------|
| Temperature<br>(°C)                                                                                              | Power supplied<br>(Vdc) | Frequency error |           | Limit (ppm)                           | Result |
|                                                                                                                  |                         | Hz              | ppm       |                                       |        |
| QPSK                                                                                                             |                         |                 |           |                                       |        |
| 25                                                                                                               | 3.50                    | 56.16           | 0.021642  | Within authorized<br>band for Band 41 | Pass   |
|                                                                                                                  | 3.89                    | 33.20           | 0.012794  |                                       |        |
|                                                                                                                  | 4.48                    | 56.16           | 0.021642  |                                       |        |
| 16QAM                                                                                                            |                         |                 |           |                                       |        |
| 25                                                                                                               | 3.50                    | -18.31          | -0.007056 | Within authorized<br>band for Band41  | Pass   |
|                                                                                                                  | 3.89                    | -28.55          | -0.011002 |                                       |        |
|                                                                                                                  | 4.48                    | 23.73           | 0.009145  |                                       |        |
| 64QAM                                                                                                            |                         |                 |           |                                       |        |
| 25                                                                                                               | 3.50                    | 59.35           | 0.022871  | Within authorized<br>band for Band41  | Pass   |
|                                                                                                                  | 3.89                    | 48.59           | 0.018724  |                                       |        |
|                                                                                                                  | 4.48                    | 54.22           | 0.020894  |                                       |        |
| Remark: All bandwidth and all modulation had been tested, but only the worst case data displayed in this report. |                         |                 |           |                                       |        |

LTE Band 66 part:

| Reference Frequency: LTE Band 66 (10MHz) Middle channel=132322 Frequency=1745.0MHz |                  |                 |           |                                    |        |
|------------------------------------------------------------------------------------|------------------|-----------------|-----------|------------------------------------|--------|
| Temperature                                                                        |                  |                 |           |                                    |        |
| Power supplied (Vdc)                                                               | Temperature (°C) | Frequency error |           | Limit (ppm)                        | Result |
|                                                                                    |                  | Hz              | ppm       |                                    |        |
| QPSK                                                                               |                  |                 |           |                                    |        |
| 3.89                                                                               | -30              | -47.38          | -0.027152 | Within authorized band for Band 66 | Pass   |
|                                                                                    | -20              | -12.66          | -0.007255 |                                    |        |
|                                                                                    | -10              | -29.68          | -0.017009 |                                    |        |
|                                                                                    | 0                | -14.89          | -0.008533 |                                    |        |
|                                                                                    | 10               | -26.31          | -0.015077 |                                    |        |
|                                                                                    | 20               | -33.50          | -0.019198 |                                    |        |
|                                                                                    | 30               | -9.20           | -0.005272 |                                    |        |
|                                                                                    | 40               | -11.74          | -0.006728 |                                    |        |
|                                                                                    | 50               | -20.46          | -0.011725 |                                    |        |
| 16QAM                                                                              |                  |                 |           |                                    |        |
| 3.89                                                                               | -30              | 20.94           | 0.012000  | Within authorized band for Band 66 | Pass   |
|                                                                                    | -20              | 37.16           | 0.021295  |                                    |        |
|                                                                                    | -10              | 17.52           | 0.010040  |                                    |        |
|                                                                                    | 0                | 27.15           | 0.015559  |                                    |        |
|                                                                                    | 10               | 34.36           | 0.019691  |                                    |        |
|                                                                                    | 20               | 50.02           | 0.028665  |                                    |        |
|                                                                                    | 30               | 21.30           | 0.012206  |                                    |        |
|                                                                                    | 40               | 33.50           | 0.019198  |                                    |        |
|                                                                                    | 50               | 35.51           | 0.020350  |                                    |        |
| 64QAM                                                                              |                  |                 |           |                                    |        |
| 3.89                                                                               | -30              | 38.51           | 0.022069  | Within authorized band for Band 66 | Pass   |
|                                                                                    | -20              | 21.70           | 0.012436  |                                    |        |
|                                                                                    | -10              | 41.06           | 0.023530  |                                    |        |
|                                                                                    | 0                | 16.87           | 0.009668  |                                    |        |
|                                                                                    | 10               | 31.23           | 0.017897  |                                    |        |
|                                                                                    | 20               | 46.28           | 0.026521  |                                    |        |
|                                                                                    | 30               | 15.72           | 0.009009  |                                    |        |
|                                                                                    | 40               | 31.84           | 0.018246  |                                    |        |
|                                                                                    | 50               | 32.62           | 0.018693  |                                    |        |

| Voltage                                                                                                          |                         |                 |           |                                       |        |
|------------------------------------------------------------------------------------------------------------------|-------------------------|-----------------|-----------|---------------------------------------|--------|
| Temperature<br>(°C)                                                                                              | Power supplied<br>(Vdc) | Frequency error |           | Limit (ppm)                           | Result |
|                                                                                                                  |                         | Hz              | ppm       |                                       |        |
| QPSK                                                                                                             |                         |                 |           |                                       |        |
| 25                                                                                                               | 3.50                    | 33.45           | 0.019169  | Within authorized<br>band for Band 66 | Pass   |
|                                                                                                                  | 3.89                    | 18.05           | 0.010344  |                                       |        |
|                                                                                                                  | 4.48                    | -9.33           | -0.005347 |                                       |        |
| 16QAM                                                                                                            |                         |                 |           |                                       |        |
| 25                                                                                                               | 3.50                    | -21.20          | -0.012149 | Within authorized<br>band for Band 66 | Pass   |
|                                                                                                                  | 3.89                    | -29.43          | -0.016865 |                                       |        |
|                                                                                                                  | 4.48                    | 12.06           | 0.006911  |                                       |        |
| 64QAM                                                                                                            |                         |                 |           |                                       |        |
| 25                                                                                                               | 3.50                    | -23.36          | -0.013387 | Within authorized<br>band for Band 66 | Pass   |
|                                                                                                                  | 3.89                    | 41.03           | 0.023513  |                                       |        |
|                                                                                                                  | 4.48                    | 26.08           | 0.014946  |                                       |        |
| Remark: All bandwidth and all modulation had been tested, but only the worst case data displayed in this report. |                         |                 |           |                                       |        |

## Appendix G: Modulation Characteristics

### Test Result

| Band   | Bandwidth | Modulation | Channel | RB Configuration | Result | Verdict |
|--------|-----------|------------|---------|------------------|--------|---------|
| Band2  | 20MHz     | QPSK       | 18900   | 100RB#0          | PASS   | PASS    |
| Band2  | 20MHz     | 16QAM      | 18900   | 100RB#0          | PASS   | PASS    |
| Band2  | 20MHz     | 64QAM      | 18900   | 100RB#0          | PASS   | PASS    |
| Band4  | 20MHz     | QPSK       | 20175   | 100RB#0          | PASS   | PASS    |
| Band4  | 20MHz     | 16QAM      | 20175   | 100RB#0          | PASS   | PASS    |
| Band4  | 20MHz     | 64QAM      | 20175   | 100RB#0          | PASS   | PASS    |
| Band5  | 10MHz     | QPSK       | 20525   | 50RB#0           | PASS   | PASS    |
| Band5  | 10MHz     | 16QAM      | 20525   | 50RB#0           | PASS   | PASS    |
| Band5  | 10MHz     | 64QAM      | 20525   | 50RB#0           | PASS   | PASS    |
| Band7  | 20MHz     | QPSK       | 21100   | 100RB#0          | PASS   | PASS    |
| Band7  | 20MHz     | 16QAM      | 21100   | 100RB#0          | PASS   | PASS    |
| Band7  | 20MHz     | 64QAM      | 21100   | 100RB#0          | PASS   | PASS    |
| Band12 | 10MHz     | QPSK       | 23095   | 50RB#0           | PASS   | PASS    |
| Band12 | 10MHz     | 16QAM      | 23095   | 50RB#0           | PASS   | PASS    |
| Band12 | 10MHz     | 64QAM      | 23095   | 50RB#0           | PASS   | PASS    |
| Band17 | 10MHz     | QPSK       | 23790   | 50RB#0           | PASS   | PASS    |
| Band17 | 10MHz     | 16QAM      | 23790   | 50RB#0           | PASS   | PASS    |
| Band17 | 10MHz     | 64QAM      | 23790   | 50RB#0           | PASS   | PASS    |
| Band25 | 20MHz     | QPSK       | 26365   | 100RB#0          | PASS   | PASS    |
| Band25 | 20MHz     | 16QAM      | 26365   | 100RB#0          | PASS   | PASS    |
| Band25 | 20MHz     | 64QAM      | 26365   | 100RB#0          | PASS   | PASS    |
| Band26 | 10MHz     | QPSK       | 26740   | 50RB#0           | PASS   | PASS    |
| Band26 | 10MHz     | 16QAM      | 26740   | 50RB#0           | PASS   | PASS    |
| Band26 | 10MHz     | 64QAM      | 26740   | 50RB#0           | PASS   | PASS    |
| Band26 | 15MHz     | QPSK       | 26915   | 75RB#0           | PASS   | PASS    |
| Band26 | 15MHz     | 16QAM      | 26915   | 75RB#0           | PASS   | PASS    |
| Band26 | 15MHz     | 64QAM      | 26915   | 75RB#0           | PASS   | PASS    |
| Band41 | 20MHz     | QPSK       | 40640   | 100RB#0          | PASS   | PASS    |
| Band41 | 20MHz     | 16QAM      | 40640   | 100RB#0          | PASS   | PASS    |
| Band41 | 20MHz     | 64QAM      | 40640   | 100RB#0          | PASS   | PASS    |
| Band66 | 20MHz     | QPSK       | 132322  | 100RB#0          | PASS   | PASS    |
| Band66 | 20MHz     | 16QAM      | 132322  | 100RB#0          | PASS   | PASS    |
| Band66 | 20MHz     | 64QAM      | 132322  | 100RB#0          | PASS   | PASS    |

Remark: All bandwidth and all modulation had been tested, but only the worst case data displayed in this report.

## Test Graphs

