

## 2. Frequency stability

### 2.1 Test Result

| Test Band: 41 5MHz Bandwidth (Frequency Error VS. Voltage) |               |        |            |            |                  |     |     |                       |         |         |             |         |
|------------------------------------------------------------|---------------|--------|------------|------------|------------------|-----|-----|-----------------------|---------|---------|-------------|---------|
| Test Mode                                                  | RB Allocation |        | Test Temp. | Test Volt. | Freq. Error (Hz) |     |     | Freq. vs. rated (ppm) |         |         | Limit (ppm) | Verdict |
|                                                            | Size          | Offset |            |            | LCH              | MCH | HCH | LCH                   | MCH     | HCH     |             |         |
| QPSK                                                       | 25            | 0      | NT         | LV         | 5                | 3   | -12 | 0.0020                | 0.0012  | -0.0045 | 2.50        | PASS    |
|                                                            |               |        |            | NV         | 4                | 7   | -5  | 0.0016                | 0.0027  | -0.0019 | 2.50        | PASS    |
|                                                            |               |        |            | HV         | -16              | 5   | 5   | -0.0064               | 0.0019  | 0.0019  | 2.50        | PASS    |
| 16QAM                                                      | 25            | 0      | NT         | LV         | 7                | 1   | 4   | 0.0028                | 0.0004  | 0.0015  | 2.50        | PASS    |
|                                                            |               |        |            | NV         | -12              | -3  | -8  | -0.0048               | -0.0012 | -0.0030 | 2.50        | PASS    |
|                                                            |               |        |            | HV         | -2               | -9  | 7   | -0.0008               | -0.0035 | 0.0026  | 2.50        | PASS    |
| 64QAM                                                      | 25            | 0      | NT         | LV         | -12              | 5   | 10  | -0.0048               | 0.0019  | 0.0037  | 2.50        | PASS    |
|                                                            |               |        |            | NV         | -13              | 7   | 0   | -0.0052               | 0.0027  | 0.0000  | 2.50        | PASS    |
|                                                            |               |        |            | HV         | 2                | -11 | -4  | 0.0008                | -0.0042 | -0.0015 | 2.50        | PASS    |

| Test Band: 41 5MHz Bandwidth (Frequency Error VS. Temperature) |               |        |            |            |                  |         |      |                       |         |         |             |         |
|----------------------------------------------------------------|---------------|--------|------------|------------|------------------|---------|------|-----------------------|---------|---------|-------------|---------|
| Test Mode                                                      | RB Allocation |        | Test Volt. | Test Temp. | Freq. Error (Hz) |         |      | Freq. vs. rated (ppm) |         |         | Limit (ppm) | Verdict |
|                                                                | Size          | Offset |            |            | LCH              | MCH     | HCH  | LCH                   | MCH     | HCH     |             |         |
| QPSK                                                           | 25            | 0      | NV         | -30.00     | -4               | -6      | 0    | -0.0016               | -0.0023 | 0.0000  | 2.50        | PASS    |
|                                                                |               |        |            | -20.00     | 1                | 1       | -7   | 0.0004                | 0.0004  | -0.0026 | 2.50        | PASS    |
|                                                                |               |        |            | -10.00     | 2                | 5       | 12   | 0.0008                | 0.0019  | 0.0045  | 2.50        | PASS    |
|                                                                |               |        |            | 0.00       | 7                | -12     | 5    | 0.0028                | -0.0046 | 0.0019  | 2.50        | PASS    |
|                                                                |               |        |            | 10.00      | 13               | -1      | 6    | 0.0052                | -0.0004 | 0.0022  | 2.50        | PASS    |
|                                                                |               |        |            | 20.00      | -3               | -1      | 5    | -0.0012               | -0.0004 | 0.0019  | 2.50        | PASS    |
|                                                                |               |        |            | 30.00      | 7                | -4      | 2    | 0.0028                | -0.0015 | 0.0007  | 2.50        | PASS    |
|                                                                |               |        |            | 40.00      | -14              | -2      | -3   | -0.0056               | -0.0008 | -0.0011 | 2.50        | PASS    |
| 50.00                                                          | 9             | -3     | -2         | 0.0036     | -0.0012          | -0.0007 | 2.50 | PASS                  |         |         |             |         |
| 16QAM                                                          | 25            | 0      | NV         | -30.00     | -3               | -13     | -1   | -0.0012               | -0.0050 | -0.0004 | 2.50        | PASS    |
|                                                                |               |        |            | -20.00     | -1               | -6      | -7   | -0.0004               | -0.0023 | -0.0026 | 2.50        | PASS    |
|                                                                |               |        |            | -10.00     | -10              | 6       | -4   | -0.0040               | 0.0023  | -0.0015 | 2.50        | PASS    |
|                                                                |               |        |            | 0.00       | -1               | -5      | 5    | -0.0004               | -0.0019 | 0.0019  | 2.50        | PASS    |
|                                                                |               |        |            | 10.00      | -10              | 3       | 2    | -0.0040               | 0.0012  | 0.0007  | 2.50        | PASS    |
|                                                                |               |        |            | 20.00      | -10              | 4       | -5   | -0.0040               | 0.0015  | -0.0019 | 2.50        | PASS    |
|                                                                |               |        |            | 30.00      | -2               | 2       | -10  | -0.0008               | 0.0008  | -0.0037 | 2.50        | PASS    |
|                                                                |               |        |            | 40.00      | 0                | 0       | -1   | 0.0000                | 0.0000  | -0.0004 | 2.50        | PASS    |
| 50.00                                                          | 1             | 4      | -5         | 0.0004     | 0.0015           | -0.0019 | 2.50 | PASS                  |         |         |             |         |
| 64QAM                                                          | 25            | 0      | NV         | -30.00     | 8                | 13      | 9    | 0.0032                | 0.0050  | 0.0033  | 2.50        | PASS    |
|                                                                |               |        |            | -20.00     | 10               | -9      | -1   | 0.0040                | -0.0035 | -0.0004 | 2.50        | PASS    |
|                                                                |               |        |            | -10.00     | -7               | -3      | 3    | -0.0028               | -0.0012 | 0.0011  | 2.50        | PASS    |
|                                                                |               |        |            | 0.00       | 6                | -8      | -4   | 0.0024                | -0.0031 | -0.0015 | 2.50        | PASS    |
|                                                                |               |        |            | 10.00      | 9                | -8      | 6    | 0.0036                | -0.0031 | 0.0022  | 2.50        | PASS    |
|                                                                |               |        |            | 20.00      | 13               | 0       | 13   | 0.0052                | 0.0000  | 0.0048  | 2.50        | PASS    |
|                                                                |               |        |            | 30.00      | -3               | -13     | 13   | -0.0012               | -0.0050 | 0.0048  | 2.50        | PASS    |
|                                                                |               |        |            | 40.00      | -14              | -1      | 0    | -0.0056               | -0.0004 | 0.0000  | 2.50        | PASS    |
| 50.00                                                          | -10           | -6     | 11         | -0.0040    | -0.0023          | 0.0041  | 2.50 | PASS                  |         |         |             |         |

| Test Band: 41 10MHz Bandwidth (Frequency Error VS. Voltage) |               |        |            |            |                  |     |     |                       |         |         |             |         |
|-------------------------------------------------------------|---------------|--------|------------|------------|------------------|-----|-----|-----------------------|---------|---------|-------------|---------|
| Test Mode                                                   | RB Allocation |        | Test Temp. | Test Volt. | Freq. Error (Hz) |     |     | Freq. vs. rated (ppm) |         |         | Limit (ppm) | Verdict |
|                                                             | Size          | Offset |            |            | LCH              | MCH | HCH | LCH                   | MCH     | HCH     |             |         |
| QPSK                                                        | 50            | 0      | NT         | LV         | 1                | 4   | -2  | 0.0004                | 0.0015  | -0.0007 | 2.50        | PASS    |
|                                                             |               |        |            | NV         | 6                | -1  | 15  | 0.0024                | -0.0004 | 0.0056  | 2.50        | PASS    |
|                                                             |               |        |            | HV         | 13               | 5   | 5   | 0.0052                | 0.0019  | 0.0019  | 2.50        | PASS    |
| 16QAM                                                       | 50            | 0      | NT         | LV         | -5               | 13  | 7   | -0.0020               | 0.0050  | 0.0026  | 2.50        | PASS    |
|                                                             |               |        |            | NV         | -3               | 3   | 14  | -0.0012               | 0.0012  | 0.0052  | 2.50        | PASS    |
|                                                             |               |        |            | HV         | 14               | 11  | -14 | 0.0056                | 0.0042  | -0.0052 | 2.50        | PASS    |
| 64QAM                                                       | 50            | 0      | NT         | LV         | 4                | -1  | -1  | 0.0016                | -0.0004 | -0.0004 | 2.50        | PASS    |
|                                                             |               |        |            | NV         | -11              | 0   | -7  | -0.0044               | 0.0000  | -0.0026 | 2.50        | PASS    |
|                                                             |               |        |            | HV         | 8                | -1  | -2  | 0.0032                | -0.0004 | -0.0007 | 2.50        | PASS    |

| Test Band: 41 10MHz Bandwidth (Frequency Error VS. Temperature) |               |        |            |            |                  |     |     |                       |         |         |             |         |
|-----------------------------------------------------------------|---------------|--------|------------|------------|------------------|-----|-----|-----------------------|---------|---------|-------------|---------|
| Test Mode                                                       | RB Allocation |        | Test Volt. | Test Temp. | Freq. Error (Hz) |     |     | Freq. vs. rated (ppm) |         |         | Limit (ppm) | Verdict |
|                                                                 | Size          | Offset |            |            | LCH              | MCH | HCH | LCH                   | MCH     | HCH     |             |         |
| QPSK                                                            | 50            | 0      | NV         | -30.00     | -13              | 3   | 14  | -0.0052               | 0.0012  | 0.0052  | 2.50        | PASS    |
|                                                                 |               |        |            | -20.00     | 4                | 0   | -10 | 0.0016                | 0.0000  | -0.0037 | 2.50        | PASS    |
|                                                                 |               |        |            | -10.00     | -13              | -5  | -8  | -0.0052               | -0.0019 | -0.0030 | 2.50        | PASS    |
|                                                                 |               |        |            | 0.00       | 9                | -10 | 2   | 0.0036                | -0.0039 | 0.0007  | 2.50        | PASS    |
|                                                                 |               |        |            | 10.00      | 9                | 3   | 13  | 0.0036                | 0.0012  | 0.0048  | 2.50        | PASS    |
|                                                                 |               |        |            | 20.00      | -15              | 0   | -11 | -0.0060               | 0.0000  | -0.0041 | 2.50        | PASS    |
|                                                                 |               |        |            | 30.00      | -5               | 13  | 4   | -0.0020               | 0.0050  | 0.0015  | 2.50        | PASS    |
|                                                                 |               |        |            | 40.00      | -2               | 5   | -15 | -0.0008               | 0.0019  | -0.0056 | 2.50        | PASS    |
|                                                                 |               |        |            | 50.00      | 2                | 5   | 12  | 0.0008                | 0.0019  | 0.0045  | 2.50        | PASS    |
| 16QAM                                                           | 50            | 0      | NV         | -30.00     | 3                | 0   | -4  | 0.0012                | 0.0000  | -0.0015 | 2.50        | PASS    |
|                                                                 |               |        |            | -20.00     | 7                | -16 | -1  | 0.0028                | -0.0062 | -0.0004 | 2.50        | PASS    |
|                                                                 |               |        |            | -10.00     | -3               | 11  | 1   | -0.0012               | 0.0042  | 0.0004  | 2.50        | PASS    |
|                                                                 |               |        |            | 0.00       | -4               | 2   | -7  | -0.0016               | 0.0008  | -0.0026 | 2.50        | PASS    |
|                                                                 |               |        |            | 10.00      | -12              | 9   | 0   | -0.0048               | 0.0035  | 0.0000  | 2.50        | PASS    |
|                                                                 |               |        |            | 20.00      | -8               | 8   | -7  | -0.0032               | 0.0031  | -0.0026 | 2.50        | PASS    |
|                                                                 |               |        |            | 30.00      | -10              | -8  | 12  | -0.0040               | -0.0031 | 0.0045  | 2.50        | PASS    |
|                                                                 |               |        |            | 40.00      | -3               | -1  | -1  | -0.0012               | -0.0004 | -0.0004 | 2.50        | PASS    |
|                                                                 |               |        |            | 50.00      | -13              | 2   | -7  | -0.0052               | 0.0008  | -0.0026 | 2.50        | PASS    |
| 64QAM                                                           | 50            | 0      | NV         | -30.00     | -8               | 7   | -3  | -0.0032               | 0.0027  | -0.0011 | 2.50        | PASS    |
|                                                                 |               |        |            | -20.00     | 7                | 9   | -6  | 0.0028                | 0.0035  | -0.0022 | 2.50        | PASS    |
|                                                                 |               |        |            | -10.00     | -6               | -1  | -3  | -0.0024               | -0.0004 | -0.0011 | 2.50        | PASS    |
|                                                                 |               |        |            | 0.00       | -4               | 1   | 3   | -0.0016               | 0.0004  | 0.0011  | 2.50        | PASS    |
|                                                                 |               |        |            | 10.00      | 5                | 2   | -15 | 0.0020                | 0.0008  | -0.0056 | 2.50        | PASS    |
|                                                                 |               |        |            | 20.00      | -11              | -5  | 0   | -0.0044               | -0.0019 | 0.0000  | 2.50        | PASS    |
|                                                                 |               |        |            | 30.00      | 0                | -9  | -5  | 0.0000                | -0.0035 | -0.0019 | 2.50        | PASS    |
|                                                                 |               |        |            | 40.00      | -9               | 9   | -13 | -0.0036               | 0.0035  | -0.0048 | 2.50        | PASS    |
|                                                                 |               |        |            | 50.00      | -7               | -1  | 7   | -0.0028               | -0.0004 | 0.0026  | 2.50        | PASS    |

| Test Band: 41 15MHz Bandwidth (Frequency Error VS. Voltage) |               |        |            |            |                  |     |     |                       |         |         |             |         |
|-------------------------------------------------------------|---------------|--------|------------|------------|------------------|-----|-----|-----------------------|---------|---------|-------------|---------|
| Test Mode                                                   | RB Allocation |        | Test Temp. | Test Volt. | Freq. Error (Hz) |     |     | Freq. vs. rated (ppm) |         |         | Limit (ppm) | Verdict |
|                                                             | Size          | Offset |            |            | LCH              | MCH | HCH | LCH                   | MCH     | HCH     |             |         |
| QPSK                                                        | 75            | 0      | NT         | LV         | 11               | -14 | -14 | 0.0044                | -0.0054 | -0.0052 | 2.50        | PASS    |
|                                                             |               |        |            | NV         | 15               | -10 | 5   | 0.0060                | -0.0039 | 0.0019  | 2.50        | PASS    |
|                                                             |               |        |            | HV         | 10               | 4   | 3   | 0.0040                | 0.0015  | 0.0011  | 2.50        | PASS    |
| 16QAM                                                       | 75            | 0      | NT         | LV         | 7                | -4  | 0   | 0.0028                | -0.0015 | 0.0000  | 2.50        | PASS    |
|                                                             |               |        |            | NV         | 5                | -13 | -3  | 0.0020                | -0.0050 | -0.0011 | 2.50        | PASS    |
|                                                             |               |        |            | HV         | 3                | 3   | 11  | 0.0012                | 0.0012  | 0.0041  | 2.50        | PASS    |
| 64QAM                                                       | 75            | 0      | NT         | LV         | 1                | -2  | -5  | 0.0004                | -0.0008 | -0.0019 | 2.50        | PASS    |
|                                                             |               |        |            | NV         | 9                | 13  | 2   | 0.0036                | 0.0050  | 0.0007  | 2.50        | PASS    |
|                                                             |               |        |            | HV         | -11              | -3  | -11 | -0.0044               | -0.0012 | -0.0041 | 2.50        | PASS    |

| Test Band: 41 15MHz Bandwidth (Frequency Error VS. Temperature) |               |        |            |            |                  |     |     |                       |         |         |             |         |
|-----------------------------------------------------------------|---------------|--------|------------|------------|------------------|-----|-----|-----------------------|---------|---------|-------------|---------|
| Test Mode                                                       | RB Allocation |        | Test Volt. | Test Temp. | Freq. Error (Hz) |     |     | Freq. vs. rated (ppm) |         |         | Limit (ppm) | Verdict |
|                                                                 | Size          | Offset |            |            | LCH              | MCH | HCH | LCH                   | MCH     | HCH     |             |         |
| QPSK                                                            | 75            | 0      | NV         | -30.00     | -10              | -6  | 2   | -0.0040               | -0.0023 | 0.0007  | 2.50        | PASS    |
|                                                                 |               |        |            | -20.00     | -4               | 6   | 3   | -0.0016               | 0.0023  | 0.0011  | 2.50        | PASS    |
|                                                                 |               |        |            | -10.00     | 2                | -5  | 0   | 0.0008                | -0.0019 | 0.0000  | 2.50        | PASS    |
|                                                                 |               |        |            | 0.00       | 1                | 8   | -2  | 0.0004                | 0.0031  | -0.0007 | 2.50        | PASS    |
|                                                                 |               |        |            | 10.00      | -3               | -16 | 13  | -0.0012               | -0.0062 | 0.0048  | 2.50        | PASS    |
|                                                                 |               |        |            | 20.00      | 13               | -1  | 6   | 0.0052                | -0.0004 | 0.0022  | 2.50        | PASS    |
|                                                                 |               |        |            | 30.00      | 13               | -13 | -9  | 0.0052                | -0.0050 | -0.0034 | 2.50        | PASS    |
|                                                                 |               |        |            | 40.00      | -13              | 0   | 2   | -0.0052               | 0.0000  | 0.0007  | 2.50        | PASS    |
|                                                                 |               |        |            | 50.00      | 3                | -8  | -6  | 0.0012                | -0.0031 | -0.0022 | 2.50        | PASS    |
| 16QAM                                                           | 75            | 0      | NV         | -30.00     | 6                | 10  | 3   | 0.0024                | 0.0039  | 0.0011  | 2.50        | PASS    |
|                                                                 |               |        |            | -20.00     | 8                | 1   | 7   | 0.0032                | 0.0004  | 0.0026  | 2.50        | PASS    |
|                                                                 |               |        |            | -10.00     | -2               | -14 | -13 | -0.0008               | -0.0054 | -0.0048 | 2.50        | PASS    |
|                                                                 |               |        |            | 0.00       | 10               | -11 | 5   | 0.0040                | -0.0042 | 0.0019  | 2.50        | PASS    |
|                                                                 |               |        |            | 10.00      | 9                | -11 | 10  | 0.0036                | -0.0042 | 0.0037  | 2.50        | PASS    |
|                                                                 |               |        |            | 20.00      | 11               | -4  | 0   | 0.0044                | -0.0015 | 0.0000  | 2.50        | PASS    |
|                                                                 |               |        |            | 30.00      | -2               | -2  | -4  | -0.0008               | -0.0008 | -0.0015 | 2.50        | PASS    |
|                                                                 |               |        |            | 40.00      | -4               | 3   | -10 | -0.0016               | 0.0012  | -0.0037 | 2.50        | PASS    |
|                                                                 |               |        |            | 50.00      | 2                | -5  | 9   | 0.0008                | -0.0019 | 0.0034  | 2.50        | PASS    |
| 64QAM                                                           | 75            | 0      | NV         | -30.00     | -18              | 6   | 5   | -0.0072               | 0.0023  | 0.0019  | 2.50        | PASS    |
|                                                                 |               |        |            | -20.00     | 0                | 6   | 7   | 0.0000                | 0.0023  | 0.0026  | 2.50        | PASS    |
|                                                                 |               |        |            | -10.00     | 1                | -6  | -7  | 0.0004                | -0.0023 | -0.0026 | 2.50        | PASS    |
|                                                                 |               |        |            | 0.00       | 11               | 13  | -1  | 0.0044                | 0.0050  | -0.0004 | 2.50        | PASS    |
|                                                                 |               |        |            | 10.00      | -12              | -2  | 1   | -0.0048               | -0.0008 | 0.0004  | 2.50        | PASS    |
|                                                                 |               |        |            | 20.00      | -1               | -1  | 4   | -0.0004               | -0.0004 | 0.0015  | 2.50        | PASS    |
|                                                                 |               |        |            | 30.00      | 3                | -3  | -10 | 0.0012                | -0.0012 | -0.0037 | 2.50        | PASS    |
|                                                                 |               |        |            | 40.00      | 2                | 1   | 4   | 0.0008                | 0.0004  | 0.0015  | 2.50        | PASS    |
|                                                                 |               |        |            | 50.00      | 1                | 10  | 3   | 0.0004                | 0.0039  | 0.0011  | 2.50        | PASS    |

| Test Band: 41 20MHz Bandwidth (Frequency Error VS. Voltage) |               |        |            |            |                  |     |     |                       |         |         |             |         |
|-------------------------------------------------------------|---------------|--------|------------|------------|------------------|-----|-----|-----------------------|---------|---------|-------------|---------|
| Test Mode                                                   | RB Allocation |        | Test Temp. | Test Volt. | Freq. Error (Hz) |     |     | Freq. vs. rated (ppm) |         |         | Limit (ppm) | Verdict |
|                                                             | Size          | Offset |            |            | LCH              | MCH | HCH | LCH                   | MCH     | HCH     |             |         |
| QPSK                                                        | 100           | 0      | NT         | LV         | -11              | -15 | 4   | -0.0044               | -0.0058 | 0.0015  | 2.50        | PASS    |
|                                                             |               |        |            | NV         | -5               | -15 | -4  | -0.0020               | -0.0058 | -0.0015 | 2.50        | PASS    |
|                                                             |               |        |            | HV         | -8               | -12 | 0   | -0.0032               | -0.0046 | 0.0000  | 2.50        | PASS    |
| 16QAM                                                       | 100           | 0      | NT         | LV         | -7               | -11 | -13 | -0.0028               | -0.0042 | -0.0049 | 2.50        | PASS    |
|                                                             |               |        |            | NV         | -2               | -1  | -7  | -0.0008               | -0.0004 | -0.0026 | 2.50        | PASS    |
|                                                             |               |        |            | HV         | -9               | -5  | 0   | -0.0036               | -0.0019 | 0.0000  | 2.50        | PASS    |
| 64QAM                                                       | 100           | 0      | NT         | LV         | -8               | -6  | -2  | -0.0032               | -0.0023 | -0.0007 | 2.50        | PASS    |
|                                                             |               |        |            | NV         | 2                | 12  | 7   | 0.0008                | 0.0046  | 0.0026  | 2.50        | PASS    |
|                                                             |               |        |            | HV         | -12              | 9   | -6  | -0.0048               | 0.0035  | -0.0022 | 2.50        | PASS    |

| Test Band: 41 20MHz Bandwidth (Frequency Error VS. Temperature) |               |        |            |            |                  |     |     |                       |         |         |             |         |
|-----------------------------------------------------------------|---------------|--------|------------|------------|------------------|-----|-----|-----------------------|---------|---------|-------------|---------|
| Test Mode                                                       | RB Allocation |        | Test Volt. | Test Temp. | Freq. Error (Hz) |     |     | Freq. vs. rated (ppm) |         |         | Limit (ppm) | Verdict |
|                                                                 | Size          | Offset |            |            | LCH              | MCH | HCH | LCH                   | MCH     | HCH     |             |         |
| QPSK                                                            | 100           | 0      | NV         | -30.00     | -8               | 14  | -6  | -0.0032               | 0.0054  | -0.0022 | 2.50        | PASS    |
|                                                                 |               |        |            | -20.00     | -7               | 4   | 2   | -0.0028               | 0.0015  | 0.0007  | 2.50        | PASS    |
|                                                                 |               |        |            | -10.00     | -10              | 3   | 13  | -0.0040               | 0.0012  | 0.0049  | 2.50        | PASS    |
|                                                                 |               |        |            | 0.00       | -1               | 6   | 6   | -0.0004               | 0.0023  | 0.0022  | 2.50        | PASS    |
|                                                                 |               |        |            | 10.00      | -11              | 7   | 2   | -0.0044               | 0.0027  | 0.0007  | 2.50        | PASS    |
|                                                                 |               |        |            | 20.00      | 2                | -15 | -5  | 0.0008                | -0.0058 | -0.0019 | 2.50        | PASS    |
|                                                                 |               |        |            | 30.00      | 6                | -2  | 0   | 0.0024                | -0.0008 | 0.0000  | 2.50        | PASS    |
|                                                                 |               |        |            | 40.00      | 2                | -14 | -4  | 0.0008                | -0.0054 | -0.0015 | 2.50        | PASS    |
|                                                                 |               |        |            | 50.00      | -3               | -6  | -2  | -0.0012               | -0.0023 | -0.0007 | 2.50        | PASS    |
| 16QAM                                                           | 100           | 0      | NV         | -30.00     | -3               | -6  | 8   | -0.0012               | -0.0023 | 0.0030  | 2.50        | PASS    |
|                                                                 |               |        |            | -20.00     | 2                | 7   | -4  | 0.0008                | 0.0027  | -0.0015 | 2.50        | PASS    |
|                                                                 |               |        |            | -10.00     | 10               | -2  | 3   | 0.0040                | -0.0008 | 0.0011  | 2.50        | PASS    |
|                                                                 |               |        |            | 0.00       | 10               | 8   | 8   | 0.0040                | 0.0031  | 0.0030  | 2.50        | PASS    |
|                                                                 |               |        |            | 10.00      | 5                | 3   | 14  | 0.0020                | 0.0012  | 0.0052  | 2.50        | PASS    |
|                                                                 |               |        |            | 20.00      | -11              | 1   | 2   | -0.0044               | 0.0004  | 0.0007  | 2.50        | PASS    |
|                                                                 |               |        |            | 30.00      | -15              | -8  | 1   | -0.0060               | -0.0031 | 0.0004  | 2.50        | PASS    |
|                                                                 |               |        |            | 40.00      | -11              | 7   | 7   | -0.0044               | 0.0027  | 0.0026  | 2.50        | PASS    |
|                                                                 |               |        |            | 50.00      | 2                | 0   | -8  | 0.0008                | 0.0000  | -0.0030 | 2.50        | PASS    |
| 64QAM                                                           | 100           | 0      | NV         | -30.00     | -11              | -5  | 12  | -0.0044               | -0.0019 | 0.0045  | 2.50        | PASS    |
|                                                                 |               |        |            | -20.00     | 4                | -16 | 0   | 0.0016                | -0.0062 | 0.0000  | 2.50        | PASS    |
|                                                                 |               |        |            | -10.00     | 17               | 0   | 1   | 0.0068                | 0.0000  | 0.0004  | 2.50        | PASS    |
|                                                                 |               |        |            | 0.00       | 3                | -1  | 8   | 0.0012                | -0.0004 | 0.0030  | 2.50        | PASS    |
|                                                                 |               |        |            | 10.00      | -2               | -2  | -8  | -0.0008               | -0.0008 | -0.0030 | 2.50        | PASS    |
|                                                                 |               |        |            | 20.00      | 6                | -19 | 3   | 0.0024                | -0.0073 | 0.0011  | 2.50        | PASS    |
|                                                                 |               |        |            | 30.00      | 2                | 2   | -2  | 0.0008                | 0.0008  | -0.0007 | 2.50        | PASS    |
|                                                                 |               |        |            | 40.00      | 14               | -1  | 5   | 0.0056                | -0.0004 | 0.0019  | 2.50        | PASS    |
|                                                                 |               |        |            | 50.00      | -5               | 15  | 15  | -0.0020               | 0.0058  | 0.0056  | 2.50        | PASS    |

| Test Band: 48 5MHz Bandwidth (Frequency Error VS. Voltage) |               |        |            |            |                  |     |     |                       |         |         |             |         |
|------------------------------------------------------------|---------------|--------|------------|------------|------------------|-----|-----|-----------------------|---------|---------|-------------|---------|
| Test Mode                                                  | RB Allocation |        | Test Temp. | Test Volt. | Freq. Error (Hz) |     |     | Freq. vs. rated (ppm) |         |         | Limit (ppm) | Verdict |
|                                                            | Size          | Offset |            |            | LCH              | MCH | HCH | LCH                   | MCH     | HCH     |             |         |
| QPSK                                                       | 25            | 0      | NT         | LV         | -8               | 5   | -1  | -0.0023               | 0.0019  | -0.0003 | 2.50        | PASS    |
|                                                            |               |        |            | NV         | 8                | 0   | 3   | 0.0023                | 0.0000  | 0.0008  | 2.50        | PASS    |
|                                                            |               |        |            | HV         | -12              | 11  | -11 | -0.0034               | 0.0042  | -0.0030 | 2.50        | PASS    |
| 16QAM                                                      | 25            | 0      | NT         | LV         | -7               | -8  | 3   | -0.0020               | -0.0031 | 0.0008  | 2.50        | PASS    |
|                                                            |               |        |            | NV         | 14               | 5   | -9  | 0.0039                | 0.0019  | -0.0024 | 2.50        | PASS    |
|                                                            |               |        |            | HV         | 0                | 1   | 11  | 0.0000                | 0.0004  | 0.0030  | 2.50        | PASS    |
| 64QAM                                                      | 25            | 0      | NT         | LV         | -7               | -3  | 19  | -0.0020               | -0.0012 | 0.0051  | 2.50        | PASS    |
|                                                            |               |        |            | NV         | -1               | 4   | -2  | -0.0003               | 0.0015  | -0.0005 | 2.50        | PASS    |
|                                                            |               |        |            | HV         | 7                | -8  | 2   | 0.0020                | -0.0031 | 0.0005  | 2.50        | PASS    |

| Test Band: 48 5MHz Bandwidth (Frequency Error VS. Temperature) |               |        |            |            |                  |     |     |                       |         |         |             |         |
|----------------------------------------------------------------|---------------|--------|------------|------------|------------------|-----|-----|-----------------------|---------|---------|-------------|---------|
| Test Mode                                                      | RB Allocation |        | Test Volt. | Test Temp. | Freq. Error (Hz) |     |     | Freq. vs. rated (ppm) |         |         | Limit (ppm) | Verdict |
|                                                                | Size          | Offset |            |            | LCH              | MCH | HCH | LCH                   | MCH     | HCH     |             |         |
| QPSK                                                           | 25            | 0      | NV         | -30.00     | -4               | -4  | 4   | -0.0011               | -0.0015 | 0.0011  | 2.50        | PASS    |
|                                                                |               |        |            | -20.00     | 7                | 16  | 13  | 0.0020                | 0.0062  | 0.0035  | 2.50        | PASS    |
|                                                                |               |        |            | -10.00     | 4                | 12  | -2  | 0.0011                | 0.0046  | -0.0005 | 2.50        | PASS    |
|                                                                |               |        |            | 0.00       | -9               | 9   | 2   | -0.0025               | 0.0035  | 0.0005  | 2.50        | PASS    |
|                                                                |               |        |            | 10.00      | -6               | -7  | -12 | -0.0017               | -0.0027 | -0.0032 | 2.50        | PASS    |
|                                                                |               |        |            | 20.00      | 9                | 5   | -5  | 0.0025                | 0.0019  | -0.0014 | 2.50        | PASS    |
|                                                                |               |        |            | 30.00      | -8               | -2  | 9   | -0.0023               | -0.0008 | 0.0024  | 2.50        | PASS    |
|                                                                |               |        |            | 40.00      | -8               | 5   | 3   | -0.0023               | 0.0019  | 0.0008  | 2.50        | PASS    |
|                                                                |               |        |            | 50.00      | 5                | 3   | 7   | 0.0014                | 0.0012  | 0.0019  | 2.50        | PASS    |
| 16QAM                                                          | 25            | 0      | NV         | -30.00     | -13              | -1  | 5   | -0.0037               | -0.0004 | 0.0014  | 2.50        | PASS    |
|                                                                |               |        |            | -20.00     | 1                | -14 | 6   | 0.0003                | -0.0054 | 0.0016  | 2.50        | PASS    |
|                                                                |               |        |            | -10.00     | 11               | -1  | 1   | 0.0031                | -0.0004 | 0.0003  | 2.50        | PASS    |
|                                                                |               |        |            | 0.00       | -8               | -14 | -13 | -0.0023               | -0.0054 | -0.0035 | 2.50        | PASS    |
|                                                                |               |        |            | 10.00      | 11               | 1   | 1   | 0.0031                | 0.0004  | 0.0003  | 2.50        | PASS    |
|                                                                |               |        |            | 20.00      | -12              | 5   | 4   | -0.0034               | 0.0019  | 0.0011  | 2.50        | PASS    |
|                                                                |               |        |            | 30.00      | 4                | 17  | 4   | 0.0011                | 0.0066  | 0.0011  | 2.50        | PASS    |
|                                                                |               |        |            | 40.00      | 3                | -3  | 7   | 0.0008                | -0.0012 | 0.0019  | 2.50        | PASS    |
|                                                                |               |        |            | 50.00      | 15               | -1  | -4  | 0.0042                | -0.0004 | -0.0011 | 2.50        | PASS    |
| 64QAM                                                          | 25            | 0      | NV         | -30.00     | -1               | 13  | -4  | -0.0003               | 0.0050  | -0.0011 | 2.50        | PASS    |
|                                                                |               |        |            | -20.00     | -11              | -4  | 7   | -0.0031               | -0.0015 | 0.0019  | 2.50        | PASS    |
|                                                                |               |        |            | -10.00     | -2               | 3   | -11 | -0.0006               | 0.0012  | -0.0030 | 2.50        | PASS    |
|                                                                |               |        |            | 0.00       | 14               | -6  | -7  | 0.0039                | -0.0023 | -0.0019 | 2.50        | PASS    |
|                                                                |               |        |            | 10.00      | -2               | -6  | -4  | -0.0006               | -0.0023 | -0.0011 | 2.50        | PASS    |
|                                                                |               |        |            | 20.00      | 11               | -15 | -4  | 0.0031                | -0.0058 | -0.0011 | 2.50        | PASS    |
|                                                                |               |        |            | 30.00      | 8                | 5   | 11  | 0.0023                | 0.0019  | 0.0030  | 2.50        | PASS    |
|                                                                |               |        |            | 40.00      | -12              | 2   | 11  | -0.0034               | 0.0008  | 0.0030  | 2.50        | PASS    |
|                                                                |               |        |            | 50.00      | -3               | 0   | 9   | -0.0008               | 0.0000  | 0.0024  | 2.50        | PASS    |

| Test Band: 48 10MHz Bandwidth (Frequency Error VS. Voltage) |               |        |            |            |                  |     |     |                       |         |         |             |         |
|-------------------------------------------------------------|---------------|--------|------------|------------|------------------|-----|-----|-----------------------|---------|---------|-------------|---------|
| Test Mode                                                   | RB Allocation |        | Test Temp. | Test Volt. | Freq. Error (Hz) |     |     | Freq. vs. rated (ppm) |         |         | Limit (ppm) | Verdict |
|                                                             | Size          | Offset |            |            | LCH              | MCH | HCH | LCH                   | MCH     | HCH     |             |         |
| QPSK                                                        | 50            | 0      | NT         | LV         | 0                | -9  | -16 | 0.0000                | -0.0035 | -0.0043 | 2.50        | PASS    |
|                                                             |               |        |            | NV         | 6                | 2   | 6   | 0.0017                | 0.0008  | 0.0016  | 2.50        | PASS    |
|                                                             |               |        |            | HV         | 1                | 12  | 2   | 0.0003                | 0.0046  | 0.0005  | 2.50        | PASS    |
| 16QAM                                                       | 50            | 0      | NT         | LV         | 1                | -5  | 2   | 0.0003                | -0.0019 | 0.0005  | 2.50        | PASS    |
|                                                             |               |        |            | NV         | 8                | -7  | 10  | 0.0023                | -0.0027 | 0.0027  | 2.50        | PASS    |
|                                                             |               |        |            | HV         | 14               | 0   | 6   | 0.0039                | 0.0000  | 0.0016  | 2.50        | PASS    |
| 64QAM                                                       | 50            | 0      | NT         | LV         | -1               | 4   | 7   | -0.0003               | 0.0015  | 0.0019  | 2.50        | PASS    |
|                                                             |               |        |            | NV         | 19               | -6  | 13  | 0.0054                | -0.0023 | 0.0035  | 2.50        | PASS    |
|                                                             |               |        |            | HV         | 9                | -4  | -6  | 0.0025                | -0.0015 | -0.0016 | 2.50        | PASS    |

| Test Band: 48_10MHz Bandwidth (Frequency Error VS. Temperature) |               |        |            |            |                  |     |     |                       |         |         |             |         |
|-----------------------------------------------------------------|---------------|--------|------------|------------|------------------|-----|-----|-----------------------|---------|---------|-------------|---------|
| Test Mode                                                       | RB Allocation |        | Test Volt. | Test Temp. | Freq. Error (Hz) |     |     | Freq. vs. rated (ppm) |         |         | Limit (ppm) | Verdict |
|                                                                 | Size          | Offset |            |            | LCH              | MCH | HCH | LCH                   | MCH     | HCH     |             |         |
| QPSK                                                            | 50            | 0      | NV         | -30.00     | -12              | 0   | -6  | -0.0034               | 0.0000  | -0.0016 | 2.50        | PASS    |
|                                                                 |               |        |            | -20.00     | 9                | -18 | 9   | 0.0025                | -0.0069 | 0.0024  | 2.50        | PASS    |
|                                                                 |               |        |            | -10.00     | 5                | -9  | 4   | 0.0014                | -0.0035 | 0.0011  | 2.50        | PASS    |
|                                                                 |               |        |            | 0.00       | -4               | 6   | 6   | -0.0011               | 0.0023  | 0.0016  | 2.50        | PASS    |
|                                                                 |               |        |            | 10.00      | 4                | 6   | 4   | 0.0011                | 0.0023  | 0.0011  | 2.50        | PASS    |
|                                                                 |               |        |            | 20.00      | 4                | 12  | 7   | 0.0011                | 0.0046  | 0.0019  | 2.50        | PASS    |
|                                                                 |               |        |            | 30.00      | 7                | 14  | -7  | 0.0020                | 0.0054  | -0.0019 | 2.50        | PASS    |
|                                                                 |               |        |            | 40.00      | 5                | 4   | -1  | 0.0014                | 0.0015  | -0.0003 | 2.50        | PASS    |
|                                                                 |               |        |            | 50.00      | 2                | 1   | -1  | 0.0006                | 0.0004  | -0.0003 | 2.50        | PASS    |
| 16QAM                                                           | 50            | 0      | NV         | -30.00     | -13              | -8  | 1   | -0.0037               | -0.0031 | 0.0003  | 2.50        | PASS    |
|                                                                 |               |        |            | -20.00     | 13               | 0   | 4   | 0.0037                | 0.0000  | 0.0011  | 2.50        | PASS    |
|                                                                 |               |        |            | -10.00     | -6               | -2  | -4  | -0.0017               | -0.0008 | -0.0011 | 2.50        | PASS    |
|                                                                 |               |        |            | 0.00       | 5                | -8  | -15 | 0.0014                | -0.0031 | -0.0041 | 2.50        | PASS    |
|                                                                 |               |        |            | 10.00      | -7               | 6   | -14 | -0.0020               | 0.0023  | -0.0038 | 2.50        | PASS    |
|                                                                 |               |        |            | 20.00      | -2               | -13 | -5  | -0.0006               | -0.0050 | -0.0014 | 2.50        | PASS    |
|                                                                 |               |        |            | 30.00      | -3               | 4   | -3  | -0.0008               | 0.0015  | -0.0008 | 2.50        | PASS    |
|                                                                 |               |        |            | 40.00      | -9               | 0   | -4  | -0.0025               | 0.0000  | -0.0011 | 2.50        | PASS    |
|                                                                 |               |        |            | 50.00      | 5                | 2   | -3  | 0.0014                | 0.0008  | -0.0008 | 2.50        | PASS    |
| 64QAM                                                           | 50            | 0      | NV         | -30.00     | 0                | -8  | 17  | 0.0000                | -0.0031 | 0.0046  | 2.50        | PASS    |
|                                                                 |               |        |            | -20.00     | -3               | -15 | -11 | -0.0008               | -0.0058 | -0.0030 | 2.50        | PASS    |
|                                                                 |               |        |            | -10.00     | 1                | 8   | -7  | 0.0003                | 0.0031  | -0.0019 | 2.50        | PASS    |
|                                                                 |               |        |            | 0.00       | -8               | -13 | -5  | -0.0023               | -0.0050 | -0.0014 | 2.50        | PASS    |
|                                                                 |               |        |            | 10.00      | -5               | -3  | -7  | -0.0014               | -0.0012 | -0.0019 | 2.50        | PASS    |
|                                                                 |               |        |            | 20.00      | -1               | -6  | -2  | -0.0003               | -0.0023 | -0.0005 | 2.50        | PASS    |
|                                                                 |               |        |            | 30.00      | 6                | 4   | -12 | 0.0017                | 0.0015  | -0.0032 | 2.50        | PASS    |
|                                                                 |               |        |            | 40.00      | -6               | -6  | -7  | -0.0017               | -0.0023 | -0.0019 | 2.50        | PASS    |
|                                                                 |               |        |            | 50.00      | 14               | -16 | 9   | 0.0039                | -0.0062 | 0.0024  | 2.50        | PASS    |

| Test Band: 48 15MHz Bandwidth (Frequency Error VS. Voltage) |               |        |            |            |                  |     |     |                       |         |         |             |         |
|-------------------------------------------------------------|---------------|--------|------------|------------|------------------|-----|-----|-----------------------|---------|---------|-------------|---------|
| Test Mode                                                   | RB Allocation |        | Test Temp. | Test Volt. | Freq. Error (Hz) |     |     | Freq. vs. rated (ppm) |         |         | Limit (ppm) | Verdict |
|                                                             | Size          | Offset |            |            | LCH              | MCH | HCH | LCH                   | MCH     | HCH     |             |         |
| QPSK                                                        | 75            | 0      | NT         | LV         | -1               | -2  | -7  | -0.0003               | -0.0008 | -0.0019 | 2.50        | PASS    |
|                                                             |               |        |            | NV         | -8               | -1  | -4  | -0.0023               | -0.0004 | -0.0011 | 2.50        | PASS    |
|                                                             |               |        |            | HV         | 2                | -4  | 1   | 0.0006                | -0.0015 | 0.0003  | 2.50        | PASS    |
| 16QAM                                                       | 75            | 0      | NT         | LV         | -6               | -8  | -4  | -0.0017               | -0.0031 | -0.0011 | 2.50        | PASS    |
|                                                             |               |        |            | NV         | 10               | -10 | -1  | 0.0028                | -0.0039 | -0.0003 | 2.50        | PASS    |
|                                                             |               |        |            | HV         | 0                | 2   | 13  | 0.0000                | 0.0008  | 0.0035  | 2.50        | PASS    |
| 64QAM                                                       | 75            | 0      | NT         | LV         | 6                | 11  | -12 | 0.0017                | 0.0042  | -0.0032 | 2.50        | PASS    |
|                                                             |               |        |            | NV         | 8                | -6  | -16 | 0.0023                | -0.0023 | -0.0043 | 2.50        | PASS    |
|                                                             |               |        |            | HV         | -9               | 10  | -1  | -0.0025               | 0.0039  | -0.0003 | 2.50        | PASS    |

| Test Band: 48 15MHz Bandwidth (Frequency Error VS. Temperature) |               |        |            |            |                  |     |     |                       |         |         |             |         |
|-----------------------------------------------------------------|---------------|--------|------------|------------|------------------|-----|-----|-----------------------|---------|---------|-------------|---------|
| Test Mode                                                       | RB Allocation |        | Test Volt. | Test Temp. | Freq. Error (Hz) |     |     | Freq. vs. rated (ppm) |         |         | Limit (ppm) | Verdict |
|                                                                 | Size          | Offset |            |            | LCH              | MCH | HCH | LCH                   | MCH     | HCH     |             |         |
| QPSK                                                            | 75            | 0      | NV         | -30.00     | 6                | 0   | 3   | 0.0017                | 0.0000  | 0.0008  | 2.50        | PASS    |
|                                                                 |               |        |            | -20.00     | -1               | -12 | -8  | -0.0003               | -0.0046 | -0.0022 | 2.50        | PASS    |
|                                                                 |               |        |            | -10.00     | 12               | -4  | 0   | 0.0034                | -0.0015 | 0.0000  | 2.50        | PASS    |
|                                                                 |               |        |            | 0.00       | 17               | -8  | 10  | 0.0048                | -0.0031 | 0.0027  | 2.50        | PASS    |
|                                                                 |               |        |            | 10.00      | 7                | 0   | -15 | 0.0020                | 0.0000  | -0.0041 | 2.50        | PASS    |
|                                                                 |               |        |            | 20.00      | 6                | -2  | 2   | 0.0017                | -0.0008 | 0.0005  | 2.50        | PASS    |
|                                                                 |               |        |            | 30.00      | -1               | -2  | -4  | -0.0003               | -0.0008 | -0.0011 | 2.50        | PASS    |
|                                                                 |               |        |            | 40.00      | 2                | -6  | 5   | 0.0006                | -0.0023 | 0.0014  | 2.50        | PASS    |
|                                                                 |               |        |            | 50.00      | -14              | 14  | 3   | -0.0039               | 0.0054  | 0.0008  | 2.50        | PASS    |
| 16QAM                                                           | 75            | 0      | NV         | -30.00     | 3                | -2  | 10  | 0.0008                | -0.0008 | 0.0027  | 2.50        | PASS    |
|                                                                 |               |        |            | -20.00     | -3               | -15 | 0   | -0.0008               | -0.0058 | 0.0000  | 2.50        | PASS    |
|                                                                 |               |        |            | -10.00     | 4                | -5  | 5   | 0.0011                | -0.0019 | 0.0014  | 2.50        | PASS    |
|                                                                 |               |        |            | 0.00       | -6               | -5  | 0   | -0.0017               | -0.0019 | 0.0000  | 2.50        | PASS    |
|                                                                 |               |        |            | 10.00      | 15               | 3   | 0   | 0.0042                | 0.0012  | 0.0000  | 2.50        | PASS    |
|                                                                 |               |        |            | 20.00      | -1               | -1  | -5  | -0.0003               | -0.0004 | -0.0014 | 2.50        | PASS    |
|                                                                 |               |        |            | 30.00      | -6               | 9   | 0   | -0.0017               | 0.0035  | 0.0000  | 2.50        | PASS    |
|                                                                 |               |        |            | 40.00      | -3               | -4  | -10 | -0.0008               | -0.0015 | -0.0027 | 2.50        | PASS    |
|                                                                 |               |        |            | 50.00      | -2               | -4  | -12 | -0.0006               | -0.0015 | -0.0032 | 2.50        | PASS    |
| 64QAM                                                           | 75            | 0      | NV         | -30.00     | -3               | -7  | -6  | -0.0008               | -0.0027 | -0.0016 | 2.50        | PASS    |
|                                                                 |               |        |            | -20.00     | -4               | -5  | 1   | -0.0011               | -0.0019 | 0.0003  | 2.50        | PASS    |
|                                                                 |               |        |            | -10.00     | -9               | 3   | 2   | -0.0025               | 0.0012  | 0.0005  | 2.50        | PASS    |
|                                                                 |               |        |            | 0.00       | 2                | 0   | 9   | 0.0006                | 0.0000  | 0.0024  | 2.50        | PASS    |
|                                                                 |               |        |            | 10.00      | 1                | -5  | 0   | 0.0003                | -0.0019 | 0.0000  | 2.50        | PASS    |
|                                                                 |               |        |            | 20.00      | 10               | 8   | 7   | 0.0028                | 0.0031  | 0.0019  | 2.50        | PASS    |
|                                                                 |               |        |            | 30.00      | 15               | 0   | -11 | 0.0042                | 0.0000  | -0.0030 | 2.50        | PASS    |
|                                                                 |               |        |            | 40.00      | -5               | 7   | 7   | -0.0014               | 0.0027  | 0.0019  | 2.50        | PASS    |
|                                                                 |               |        |            | 50.00      | 8                | -6  | 8   | 0.0023                | -0.0023 | 0.0022  | 2.50        | PASS    |

| Test Band: 48 20MHz Bandwidth (Frequency Error VS. Voltage) |               |        |            |            |                  |     |     |                       |         |         |             |         |
|-------------------------------------------------------------|---------------|--------|------------|------------|------------------|-----|-----|-----------------------|---------|---------|-------------|---------|
| Test Mode                                                   | RB Allocation |        | Test Temp. | Test Volt. | Freq. Error (Hz) |     |     | Freq. vs. rated (ppm) |         |         | Limit (ppm) | Verdict |
|                                                             | Size          | Offset |            |            | LCH              | MCH | HCH | LCH                   | MCH     | HCH     |             |         |
| QPSK                                                        | 100           | 0      | NT         | LV         | 1                | 0   | 2   | 0.0004                | 0.0000  | 0.0007  | 2.50        | PASS    |
|                                                             |               |        |            | NV         | 1                | -12 | 7   | 0.0004                | -0.0046 | 0.0026  | 2.50        | PASS    |
|                                                             |               |        |            | HV         | -3               | -1  | 3   | -0.0012               | -0.0004 | 0.0011  | 2.50        | PASS    |
| 16QAM                                                       | 100           | 0      | NT         | LV         | -11              | 4   | -3  | -0.0044               | 0.0015  | -0.0011 | 2.50        | PASS    |
|                                                             |               |        |            | NV         | 6                | 6   | -2  | 0.0024                | 0.0023  | -0.0007 | 2.50        | PASS    |
|                                                             |               |        |            | HV         | 8                | 1   | -17 | 0.0032                | 0.0004  | -0.0063 | 2.50        | PASS    |
| 64QAM                                                       | 100           | 0      | NT         | LV         | -3               | 8   | -10 | -0.0012               | 0.0031  | -0.0037 | 2.50        | PASS    |
|                                                             |               |        |            | NV         | -1               | 10  | -11 | -0.0004               | 0.0039  | -0.0041 | 2.50        | PASS    |
|                                                             |               |        |            | HV         | -2               | 11  | 3   | -0.0008               | 0.0042  | 0.0011  | 2.50        | PASS    |

| Test Band: 48 20MHz Bandwidth (Frequency Error VS. Temperature) |               |        |            |            |                  |     |     |                       |         |         |             |         |
|-----------------------------------------------------------------|---------------|--------|------------|------------|------------------|-----|-----|-----------------------|---------|---------|-------------|---------|
| Test Mode                                                       | RB Allocation |        | Test Volt. | Test Temp. | Freq. Error (Hz) |     |     | Freq. vs. rated (ppm) |         |         | Limit (ppm) | Verdict |
|                                                                 | Size          | Offset |            |            | LCH              | MCH | HCH | LCH                   | MCH     | HCH     |             |         |
| QPSK                                                            | 100           | 0      | NV         | -30.00     | 2                | 9   | 7   | 0.0008                | 0.0035  | 0.0026  | 2.50        | PASS    |
|                                                                 |               |        |            | -20.00     | 5                | -3  | -14 | 0.0020                | -0.0012 | -0.0052 | 2.50        | PASS    |
|                                                                 |               |        |            | -10.00     | 4                | -10 | 9   | 0.0016                | -0.0039 | 0.0034  | 2.50        | PASS    |
|                                                                 |               |        |            | 0.00       | -2               | 15  | 2   | -0.0008               | 0.0058  | 0.0007  | 2.50        | PASS    |
|                                                                 |               |        |            | 10.00      | 17               | -1  | 8   | 0.0068                | -0.0004 | 0.0030  | 2.50        | PASS    |
|                                                                 |               |        |            | 20.00      | -3               | -5  | -4  | -0.0012               | -0.0019 | -0.0015 | 2.50        | PASS    |
|                                                                 |               |        |            | 30.00      | 0                | -11 | 9   | 0.0000                | -0.0042 | 0.0034  | 2.50        | PASS    |
|                                                                 |               |        |            | 40.00      | 7                | 14  | -8  | 0.0028                | 0.0054  | -0.0030 | 2.50        | PASS    |
|                                                                 |               |        |            | 50.00      | -14              | 2   | -14 | -0.0056               | 0.0008  | -0.0052 | 2.50        | PASS    |
| 16QAM                                                           | 100           | 0      | NV         | -30.00     | 1                | 9   | 11  | 0.0004                | 0.0035  | 0.0041  | 2.50        | PASS    |
|                                                                 |               |        |            | -20.00     | 12               | -4  | 11  | 0.0048                | -0.0015 | 0.0041  | 2.50        | PASS    |
|                                                                 |               |        |            | -10.00     | 0                | -9  | -1  | 0.0000                | -0.0035 | -0.0004 | 2.50        | PASS    |
|                                                                 |               |        |            | 0.00       | -10              | -10 | -13 | -0.0040               | -0.0039 | -0.0049 | 2.50        | PASS    |
|                                                                 |               |        |            | 10.00      | 1                | 12  | 5   | 0.0004                | 0.0046  | 0.0019  | 2.50        | PASS    |
|                                                                 |               |        |            | 20.00      | 1                | 11  | -13 | 0.0004                | 0.0042  | -0.0049 | 2.50        | PASS    |
|                                                                 |               |        |            | 30.00      | 5                | -4  | -2  | 0.0020                | -0.0015 | -0.0007 | 2.50        | PASS    |
|                                                                 |               |        |            | 40.00      | 10               | -12 | 6   | 0.0040                | -0.0046 | 0.0022  | 2.50        | PASS    |
|                                                                 |               |        |            | 50.00      | -3               | -3  | 7   | -0.0012               | -0.0012 | 0.0026  | 2.50        | PASS    |
| 64QAM                                                           | 100           | 0      | NV         | -30.00     | 12               | -3  | -3  | 0.0048                | -0.0012 | -0.0011 | 2.50        | PASS    |
|                                                                 |               |        |            | -20.00     | -1               | 2   | -7  | -0.0004               | 0.0008  | -0.0026 | 2.50        | PASS    |
|                                                                 |               |        |            | -10.00     | -10              | 6   | -4  | -0.0040               | 0.0023  | -0.0015 | 2.50        | PASS    |
|                                                                 |               |        |            | 0.00       | -5               | -3  | 9   | -0.0020               | -0.0012 | 0.0034  | 2.50        | PASS    |
|                                                                 |               |        |            | 10.00      | 4                | 17  | 14  | 0.0016                | 0.0066  | 0.0052  | 2.50        | PASS    |
|                                                                 |               |        |            | 20.00      | -10              | 14  | -6  | -0.0040               | 0.0054  | -0.0022 | 2.50        | PASS    |
|                                                                 |               |        |            | 30.00      | 17               | 7   | -17 | 0.0068                | 0.0027  | -0.0063 | 2.50        | PASS    |
|                                                                 |               |        |            | 40.00      | 8                | -3  | -13 | 0.0032                | -0.0012 | -0.0049 | 2.50        | PASS    |
|                                                                 |               |        |            | 50.00      | 7                | -12 | 2   | 0.0028                | -0.0046 | 0.0007  | 2.50        | PASS    |