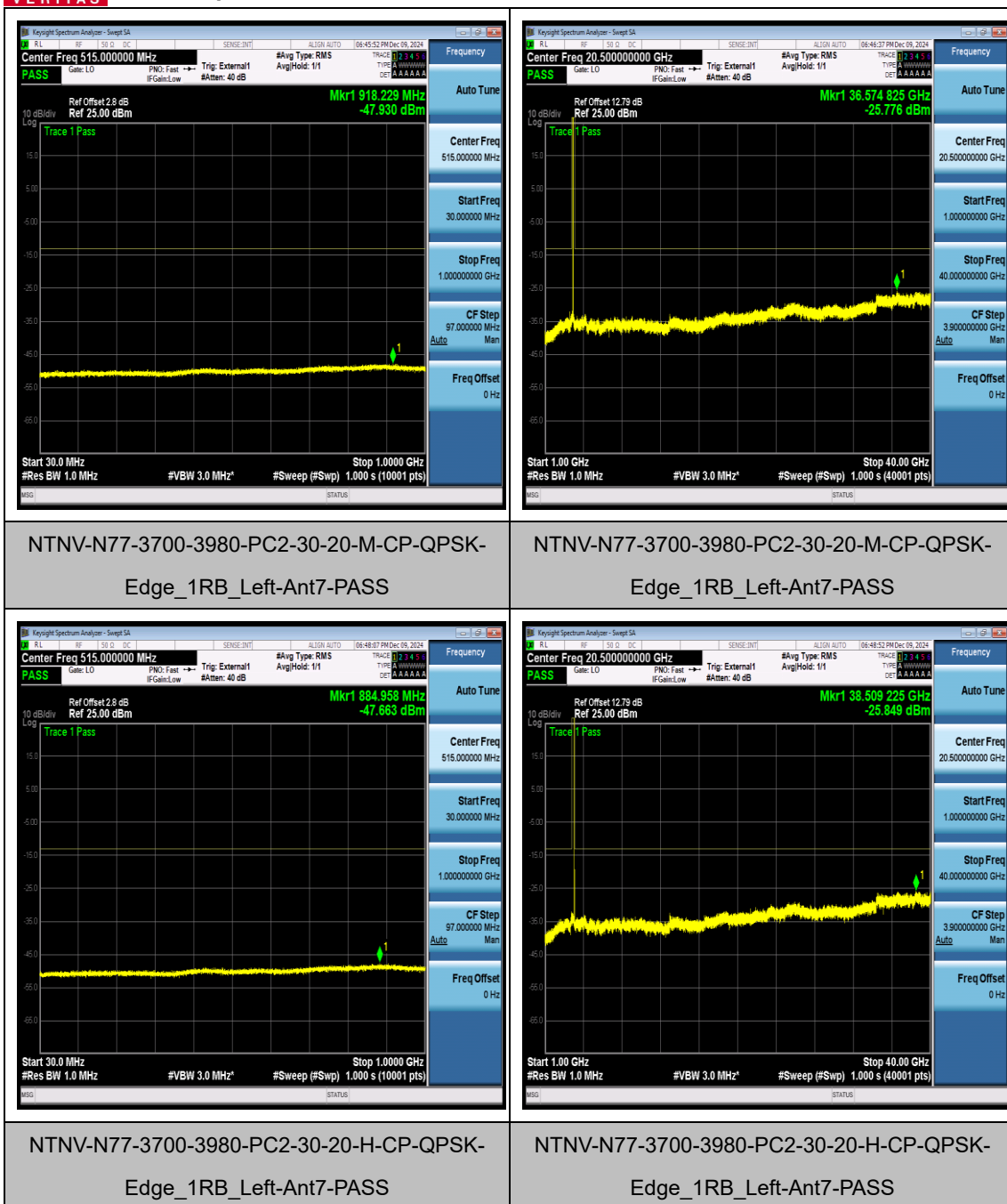
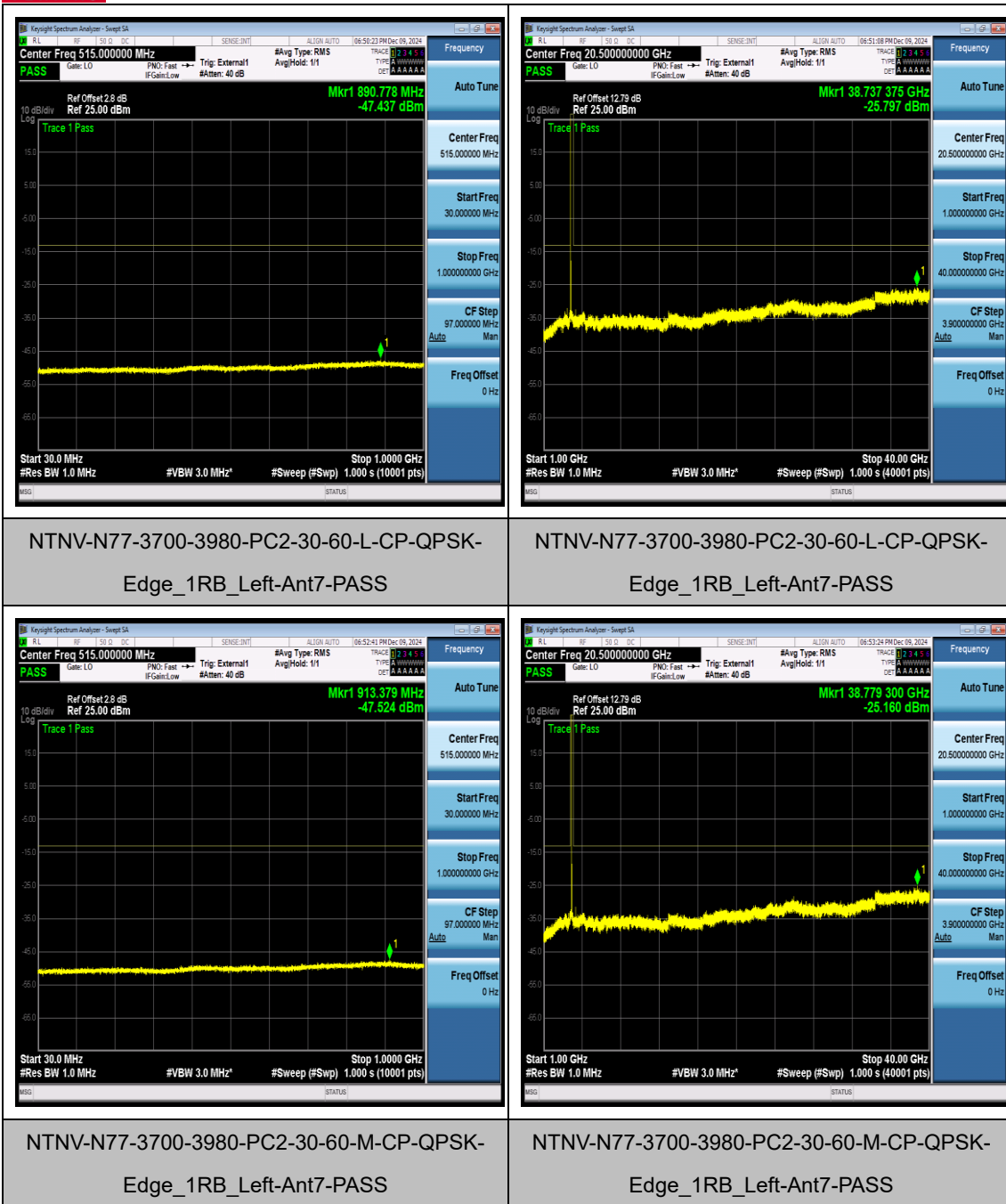
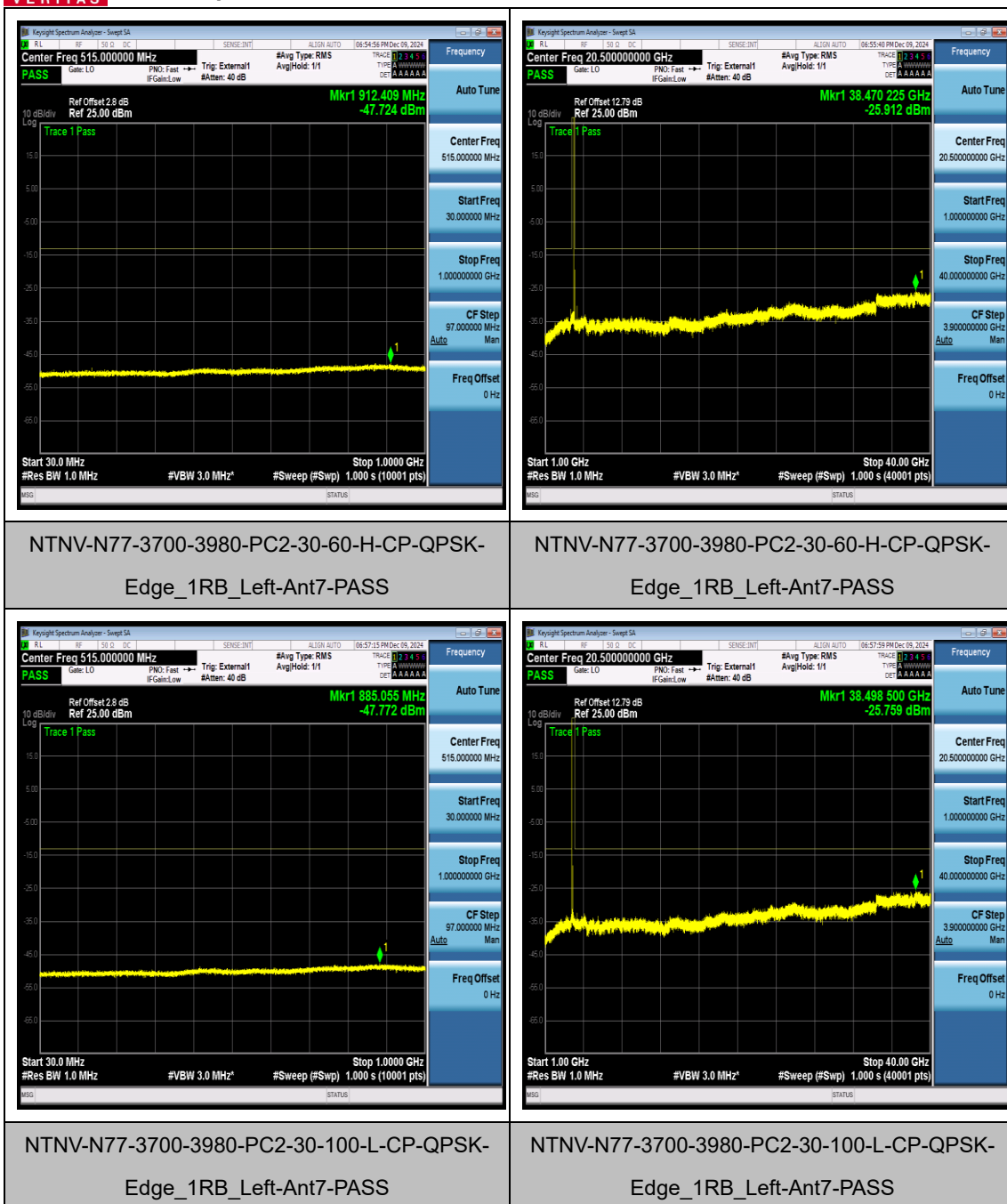
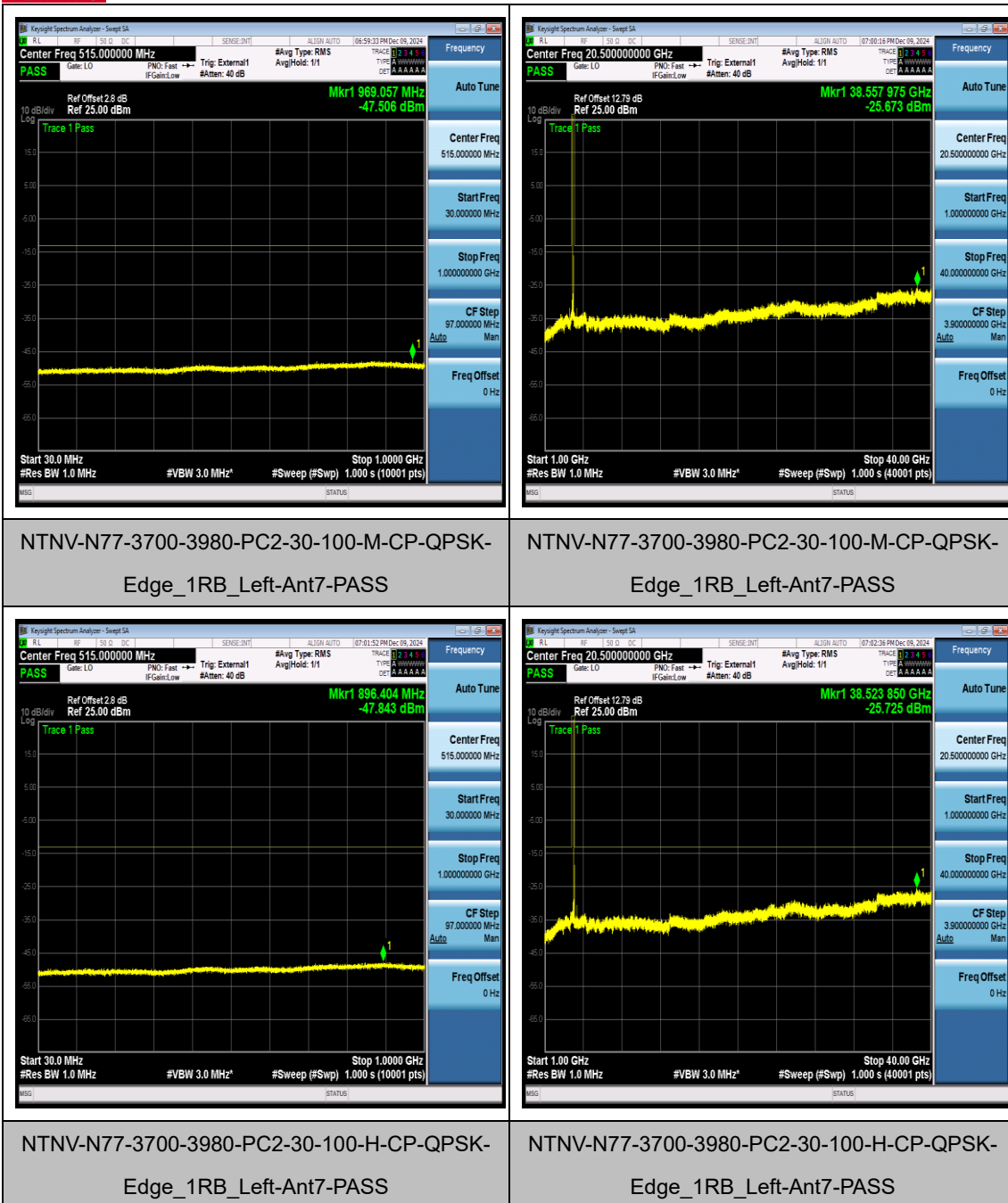












## FREQUENCY STABILITY FOR MIMO

## TEST RESULT-ANT1

## Frequency Error VS. Voltage

| Band          | SCS | Bandwidth | Modulation | Channel | RB Config  | Voltage | Temperature | Deviation(Hz) | Deviation (ppm) | Verdict |
|---------------|-----|-----------|------------|---------|------------|---------|-------------|---------------|-----------------|---------|
| N77-3700-3980 | 30  | 20        | CP-QPSK    | L       | Outer_Full | VL      | NT          | 4.989000      | 0.001345        | PASS    |
| N77-3700-3980 | 30  | 20        | CP-QPSK    | L       | Outer_Full | VN      | NT          | 0.284000      | 0.000077        | PASS    |
| N77-3700-3980 | 30  | 20        | CP-QPSK    | L       | Outer_Full | VH      | NT          | 4.817000      | 0.001298        | PASS    |
| N77-3700-3980 | 30  | 20        | CP-QPSK    | L       | Outer_Full | NV      | -30         | 3.105000      | 0.000837        | PASS    |
| N77-3700-3980 | 30  | 20        | CP-QPSK    | L       | Outer_Full | NV      | -20         | 1.625000      | 0.000438        | PASS    |
| N77-3700-3980 | 30  | 20        | CP-QPSK    | L       | Outer_Full | NV      | -10         | 5.832000      | 0.001572        | PASS    |
| N77-3700-3980 | 30  | 20        | CP-QPSK    | L       | Outer_Full | NV      | 0           | 12.550000     | 0.003383        | PASS    |
| N77-3700-3980 | 30  | 20        | CP-QPSK    | L       | Outer_Full | NV      | 10          | 11.221000     | 0.003025        | PASS    |
| N77-3700-3980 | 30  | 20        | CP-QPSK    | L       | Outer_Full | NV      | 20          | -1.124000     | -0.000303       | PASS    |
| N77-3700-3980 | 30  | 20        | CP-QPSK    | L       | Outer_Full | NV      | 30          | 6.695000      | 0.001805        | PASS    |



|               |    |    |         |   |            |    |     |           |           |      |
|---------------|----|----|---------|---|------------|----|-----|-----------|-----------|------|
| N77-3700-3980 | 30 | 20 | CP-QPSK | L | Outer_Full | NV | 40  | 10.906000 | 0.002940  | PASS |
| N77-3700-3980 | 30 | 20 | CP-QPSK | L | Outer_Full | NV | 50  | -3.242000 | -0.000874 | PASS |
| N77-3700-3980 | 30 | 20 | CP-QPSK | M | Outer_Full | VL | NT  | 1.668000  | 0.000434  | PASS |
| N77-3700-3980 | 30 | 20 | CP-QPSK | M | Outer_Full | VN | NT  | 3.591000  | 0.000935  | PASS |
| N77-3700-3980 | 30 | 20 | CP-QPSK | M | Outer_Full | VH | NT  | 0.347000  | 0.000090  | PASS |
| N77-3700-3980 | 30 | 20 | CP-QPSK | M | Outer_Full | NV | -30 | -0.460000 | -0.000120 | PASS |
| N77-3700-3980 | 30 | 20 | CP-QPSK | M | Outer_Full | NV | -20 | 1.793000  | 0.000467  | PASS |
| N77-3700-3980 | 30 | 20 | CP-QPSK | M | Outer_Full | NV | -10 | 2.075000  | 0.000540  | PASS |
| N77-3700-3980 | 30 | 20 | CP-QPSK | M | Outer_Full | NV | 0   | -0.724000 | -0.000189 | PASS |
| N77-3700-3980 | 30 | 20 | CP-QPSK | M | Outer_Full | NV | 10  | 1.700000  | 0.000443  | PASS |
| N77-3700-3980 | 30 | 20 | CP-QPSK | M | Outer_Full | NV | 20  | 8.715000  | 0.002270  | PASS |
| N77-3700-3980 | 30 | 20 | CP-QPSK | M | Outer_Full | NV | 30  | -5.689000 | -0.001482 | PASS |
| N77-3700-3980 | 30 | 20 | CP-QPSK | M | Outer_Full | NV | 40  | 7.094000  | 0.001847  | PASS |



|                       |    |    |         |   |            |    |     |           |          |      |
|-----------------------|----|----|---------|---|------------|----|-----|-----------|----------|------|
| 3700-<br>3980         |    |    |         |   |            |    |     |           |          |      |
| N77-<br>3700-<br>3980 | 30 | 20 | CP-QPSK | M | Outer_Full | NV | 50  | 1.832000  | 0.000477 | PASS |
| N77-<br>3700-<br>3980 | 30 | 20 | CP-QPSK | H | Outer_Full | VL | NT  | 3.988000  | 0.001005 | PASS |
| N77-<br>3700-<br>3980 | 30 | 20 | CP-QPSK | H | Outer_Full | VN | NT  | 6.534000  | 0.001646 | PASS |
| N77-<br>3700-<br>3980 | 30 | 20 | CP-QPSK | H | Outer_Full | VH | NT  | 7.723000  | 0.001945 | PASS |
| N77-<br>3700-<br>3980 | 30 | 20 | CP-QPSK | H | Outer_Full | NV | -30 | 4.086999  | 0.001029 | PASS |
| N77-<br>3700-<br>3980 | 30 | 20 | CP-QPSK | H | Outer_Full | NV | -20 | 2.456000  | 0.000619 | PASS |
| N77-<br>3700-<br>3980 | 30 | 20 | CP-QPSK | H | Outer_Full | NV | -10 | 11.417000 | 0.002876 | PASS |
| N77-<br>3700-<br>3980 | 30 | 20 | CP-QPSK | H | Outer_Full | NV | 0   | 9.991000  | 0.002517 | PASS |
| N77-<br>3700-<br>3980 | 30 | 20 | CP-QPSK | H | Outer_Full | NV | 10  | 7.832000  | 0.001973 | PASS |
| N77-<br>3700-<br>3980 | 30 | 20 | CP-QPSK | H | Outer_Full | NV | 20  | 0.916000  | 0.000231 | PASS |
| N77-<br>3700-<br>3980 | 30 | 20 | CP-QPSK | H | Outer_Full | NV | 30  | 0.817000  | 0.000206 | PASS |
| N77-<br>3700-         | 30 | 20 | CP-QPSK | H | Outer_Full | NV | 40  | 0.229000  | 0.000058 | PASS |



|               |    |    |         |   |            |    |    |          |          |      |
|---------------|----|----|---------|---|------------|----|----|----------|----------|------|
| 3980          |    |    |         |   |            |    |    |          |          |      |
| N77-3700-3980 | 30 | 20 | CP-QPSK | H | Outer_Full | NV | 50 | 0.948000 | 0.000239 | PASS |

## TEST RESULT-ANT7

| Band          | SCS | Bandwidth | Modulation | Channel | RB Config  | Voltage | Temperature | Deviation(Hz) | Deviation (ppm) | Verdict |
|---------------|-----|-----------|------------|---------|------------|---------|-------------|---------------|-----------------|---------|
| N77-3700-3980 | 30  | 20        | CP-QPSK    | L       | Outer_Full | VL      | NT          | -2.734000     | -0.000737       | PASS    |
| N77-3700-3980 | 30  | 20        | CP-QPSK    | L       | Outer_Full | VN      | NT          | -0.748000     | -0.000202       | PASS    |
| N77-3700-3980 | 30  | 20        | CP-QPSK    | L       | Outer_Full | VH      | NT          | -0.200000     | -0.000054       | PASS    |
| N77-3700-3980 | 30  | 20        | CP-QPSK    | L       | Outer_Full | NV      | -30         | 3.530000      | 0.000951        | PASS    |
| N77-3700-3980 | 30  | 20        | CP-QPSK    | L       | Outer_Full | NV      | -20         | -1.437000     | -0.000387       | PASS    |
| N77-3700-3980 | 30  | 20        | CP-QPSK    | L       | Outer_Full | NV      | -10         | -0.115000     | -0.000031       | PASS    |
| N77-3700-3980 | 30  | 20        | CP-QPSK    | L       | Outer_Full | NV      | 0           | 0.388000      | 0.000105        | PASS    |
| N77-3700-3980 | 30  | 20        | CP-QPSK    | L       | Outer_Full | NV      | 10          | 0.118000      | 0.000032        | PASS    |
| N77-3700-3980 | 30  | 20        | CP-QPSK    | L       | Outer_Full | NV      | 20          | 4.626000      | 0.001247        | PASS    |



|                       |    |    |         |   |            |    |     |           |           |      |
|-----------------------|----|----|---------|---|------------|----|-----|-----------|-----------|------|
| N77-<br>3700-<br>3980 | 30 | 20 | CP-QPSK | L | Outer_Full | NV | 30  | 5.307000  | 0.001430  | PASS |
| N77-<br>3700-<br>3980 | 30 | 20 | CP-QPSK | L | Outer_Full | NV | 40  | 10.830000 | 0.002919  | PASS |
| N77-<br>3700-<br>3980 | 30 | 20 | CP-QPSK | L | Outer_Full | NV | 50  | 3.276000  | 0.000883  | PASS |
| N77-<br>3700-<br>3980 | 30 | 20 | CP-QPSK | M | Outer_Full | VL | NT  | 2.786000  | 0.000726  | PASS |
| N77-<br>3700-<br>3980 | 30 | 20 | CP-QPSK | M | Outer_Full | VN | NT  | 2.959000  | 0.000771  | PASS |
| N77-<br>3700-<br>3980 | 30 | 20 | CP-QPSK | M | Outer_Full | VH | NT  | 9.885000  | 0.002574  | PASS |
| N77-<br>3700-<br>3980 | 30 | 20 | CP-QPSK | M | Outer_Full | NV | -30 | -6.043000 | -0.001574 | PASS |
| N77-<br>3700-<br>3980 | 30 | 20 | CP-QPSK | M | Outer_Full | NV | -20 | -6.060000 | -0.001578 | PASS |
| N77-<br>3700-<br>3980 | 30 | 20 | CP-QPSK | M | Outer_Full | NV | -10 | 2.876000  | 0.000749  | PASS |
| N77-<br>3700-<br>3980 | 30 | 20 | CP-QPSK | M | Outer_Full | NV | 0   | 3.885000  | 0.001012  | PASS |
| N77-<br>3700-<br>3980 | 30 | 20 | CP-QPSK | M | Outer_Full | NV | 10  | -3.640000 | -0.000948 | PASS |
| N77-<br>3700-<br>3980 | 30 | 20 | CP-QPSK | M | Outer_Full | NV | 20  | 4.099000  | 0.001067  | PASS |
| N77-<br>3700-<br>3980 | 30 | 20 | CP-QPSK | M | Outer_Full | NV | 30  | -0.394000 | -0.000103 | PASS |



|                       |    |    |         |   |            |    |     |           |           |      |
|-----------------------|----|----|---------|---|------------|----|-----|-----------|-----------|------|
| 3700-<br>3980         |    |    |         |   |            |    |     |           |           |      |
| N77-<br>3700-<br>3980 | 30 | 20 | CP-QPSK | M | Outer_Full | NV | 40  | 0.674000  | 0.000176  | PASS |
| N77-<br>3700-<br>3980 | 30 | 20 | CP-QPSK | M | Outer_Full | NV | 50  | 5.869000  | 0.001528  | PASS |
| N77-<br>3700-<br>3980 | 30 | 20 | CP-QPSK | H | Outer_Full | VL | NT  | 1.691000  | 0.000426  | PASS |
| N77-<br>3700-<br>3980 | 30 | 20 | CP-QPSK | H | Outer_Full | VN | NT  | -0.962000 | -0.000242 | PASS |
| N77-<br>3700-<br>3980 | 30 | 20 | CP-QPSK | H | Outer_Full | VH | NT  | 3.586000  | 0.000903  | PASS |
| N77-<br>3700-<br>3980 | 30 | 20 | CP-QPSK | H | Outer_Full | NV | -30 | 5.884000  | 0.001482  | PASS |
| N77-<br>3700-<br>3980 | 30 | 20 | CP-QPSK | H | Outer_Full | NV | -20 | 6.255000  | 0.001576  | PASS |
| N77-<br>3700-<br>3980 | 30 | 20 | CP-QPSK | H | Outer_Full | NV | -10 | 1.030999  | 0.000260  | PASS |
| N77-<br>3700-<br>3980 | 30 | 20 | CP-QPSK | H | Outer_Full | NV | 0   | 13.841000 | 0.003486  | PASS |
| N77-<br>3700-<br>3980 | 30 | 20 | CP-QPSK | H | Outer_Full | NV | 10  | -0.229000 | -0.000058 | PASS |
| N77-<br>3700-<br>3980 | 30 | 20 | CP-QPSK | H | Outer_Full | NV | 20  | 3.205000  | 0.000807  | PASS |
| N77-<br>3700-         | 30 | 20 | CP-QPSK | H | Outer_Full | NV | 30  | 0.463000  | 0.000117  | PASS |



Test Report No.: PSU-QSU2411180418RF10

|                       |    |    |         |   |            |    |    |           |          |      |
|-----------------------|----|----|---------|---|------------|----|----|-----------|----------|------|
| 3980                  |    |    |         |   |            |    |    |           |          |      |
| N77-<br>3700-<br>3980 | 30 | 20 | CP-QPSK | H | Outer_Full | NV | 40 | 9.934000  | 0.002502 | PASS |
| N77-<br>3700-<br>3980 | 30 | 20 | CP-QPSK | H | Outer_Full | NV | 50 | 10.003000 | 0.002520 | PASS |

--END--