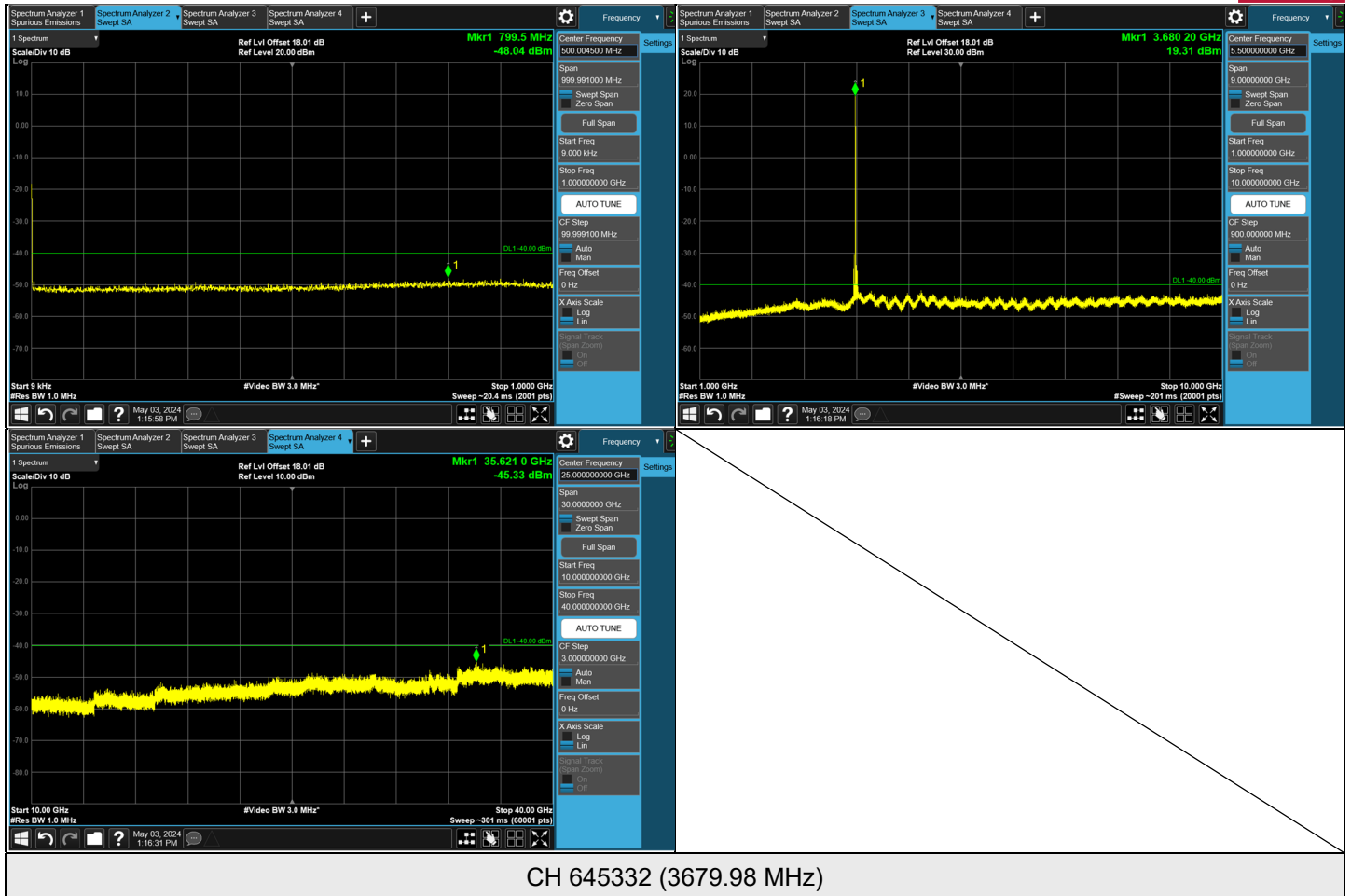


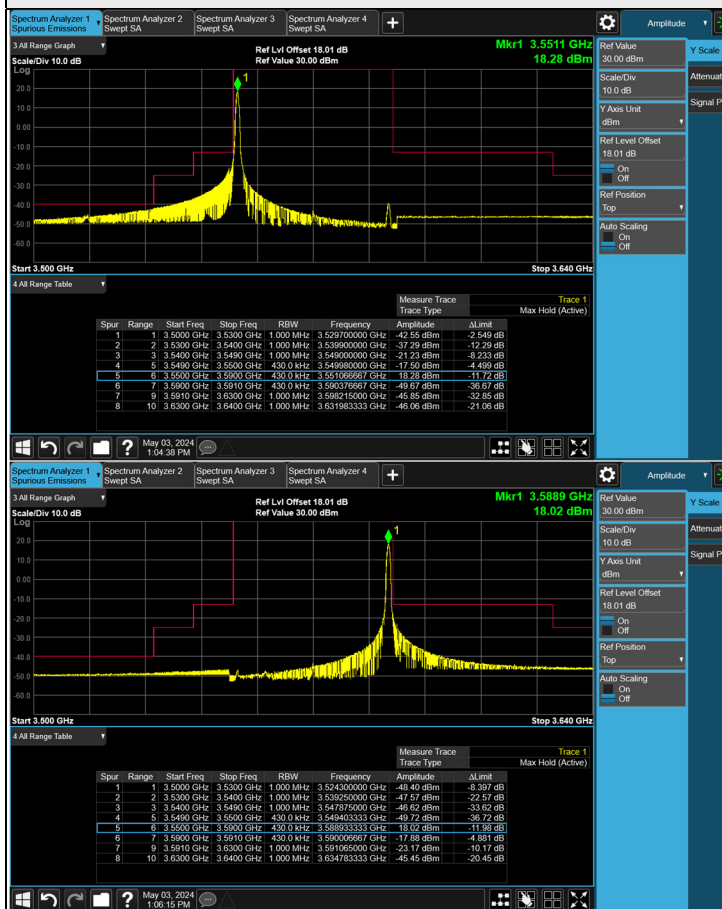


Note: The signal at 9 kHz is IF signal from spectrum analyzer.

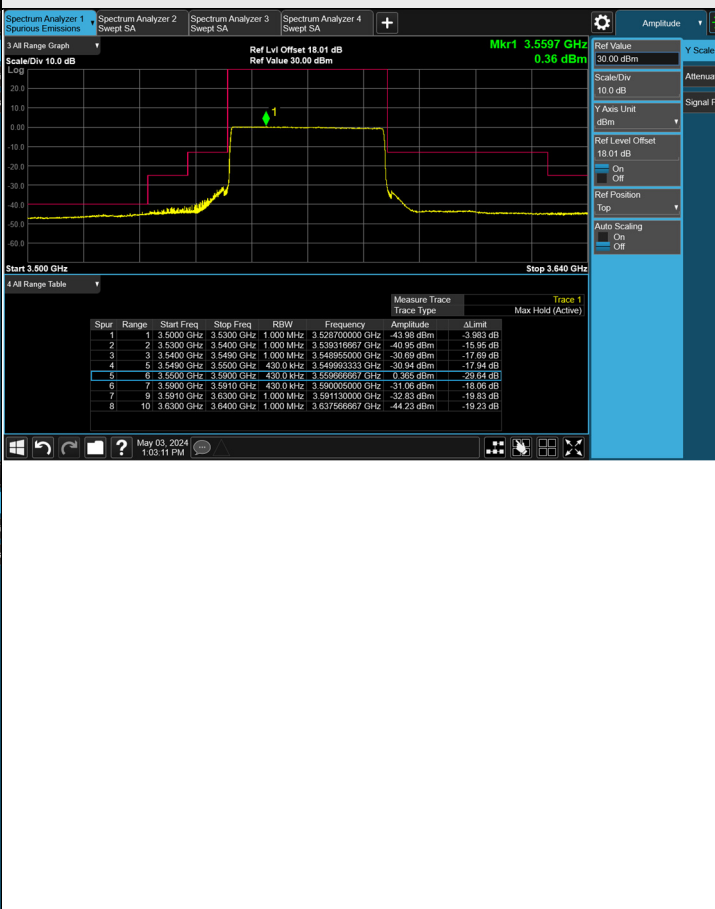
# NR n48 SCS 30 kHz (3.55 GHz ~ 3.7 GHz) Chain 1, Channel Bandwidth: 40 MHz

CH 638000 (3570 MHz)

1 RB

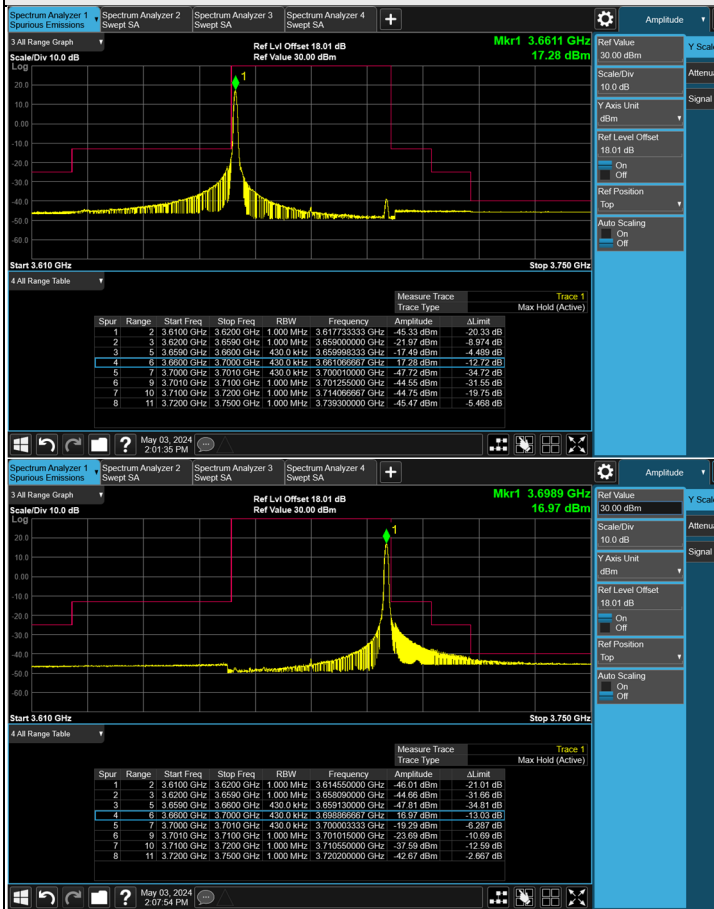


FULL RB

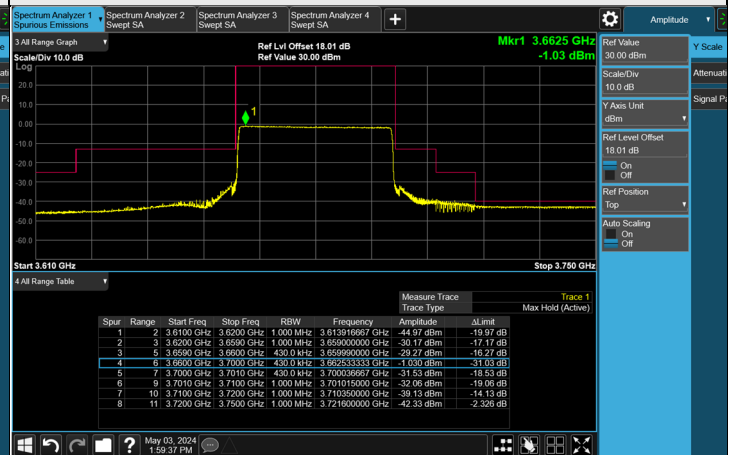


# CH 645332 (3679.98 MHz)

1 RB



FULL RB



## 7.6 Radiated Spurious Emissions below 1GHz

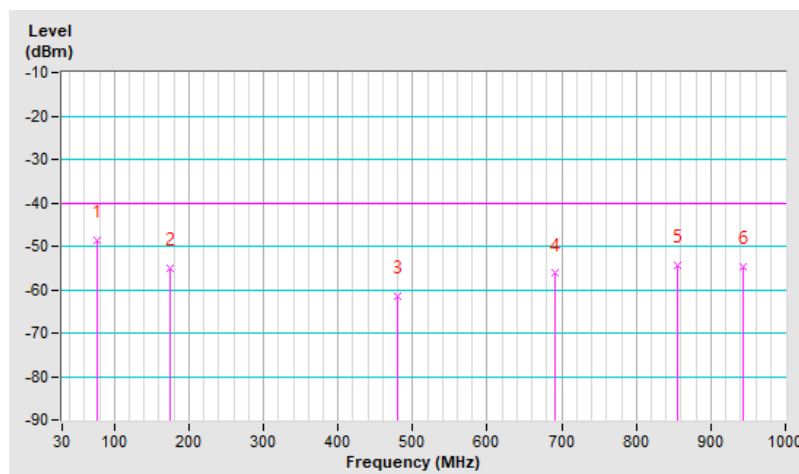
### 7.6.1 NR n48 - MIMO

|                        |                                    |                                          |                         |
|------------------------|------------------------------------|------------------------------------------|-------------------------|
| <b>RF Mode</b>         | NR n48<br>Channel Bandwidth: 40MHz | <b>Channel</b>                           | CH 641666 : 3624.99 MHz |
| <b>Frequency Range</b> | 30 MHz ~ 1 GHz                     | <b>Detector Function &amp; Bandwidth</b> | 1 MHz/3 MHz (RMS)       |
| <b>Input Power</b>     | 120 Vac, 60 Hz                     | <b>Environmental Conditions</b>          | 23 °C, 67 % RH          |
| <b>Tested By</b>       | Vincent Chen                       |                                          |                         |

| Antenna Polarity & Test Distance : Horizontal at 3 m |                 |            |             |             |                    |                      |                  |                          |
|------------------------------------------------------|-----------------|------------|-------------|-------------|--------------------|----------------------|------------------|--------------------------|
| No                                                   | Frequency (MHz) | EIRP (dBm) | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                    | 77.15           | -48.70     | -40.00      | -8.70       | 1.50 H             | 111                  | 59.30            | -108.00                  |
| 2                                                    | 174.55          | -55.00     | -40.00      | -15.00      | 1.50 H             | 266                  | 49.30            | -104.30                  |
| 3                                                    | 479.22          | -61.50     | -40.00      | -21.50      | 1.00 H             | 177                  | 37.10            | -98.60                   |
| 4                                                    | 691.22          | -56.30     | -40.00      | -16.30      | 2.00 H             | 222                  | 38.50            | -94.80                   |
| 5                                                    | 855.25          | -54.40     | -40.00      | -14.40      | 1.00 H             | 119                  | 37.20            | -91.60                   |
| 6                                                    | 944.22          | -54.90     | -40.00      | -14.90      | 1.50 H             | 177                  | 35.10            | -90.00                   |

#### Remarks:

1.  $EIRP(dBm) = Raw\ Value(dBuV) + Correction\ Factor(dB/m)$
2.  $Correction\ Factor(dB/m) = Antenna\ Factor(dB/m) + Cable\ Factor(dB) - Pre-Amplifier\ Factor(dB) + 20\log(D) - 104.8$
3.  $Margin\ value = EIRP - Limit\ value$
4. The other EIRP levels were very low against the limit of frequency range 30 MHz ~ 1 GHz.
5. The frequency range 9 kHz ~ 30 MHz: all emissions are more than 20 dB below the limit, therefore do not be recorded in this report.

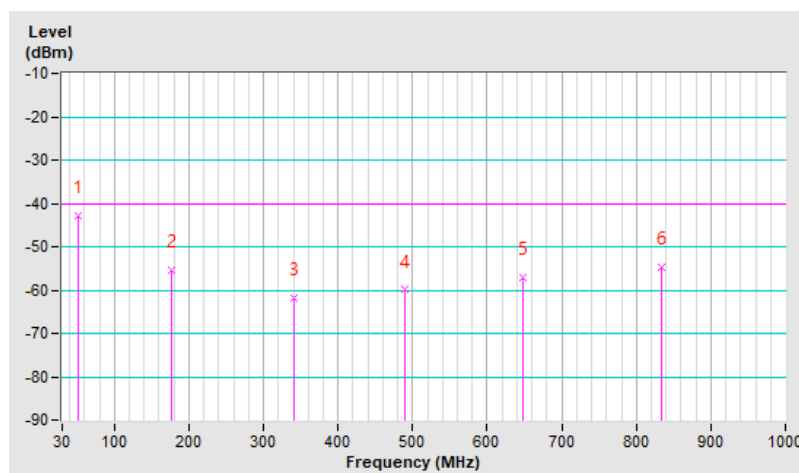


|                        |                                    |                                          |                         |
|------------------------|------------------------------------|------------------------------------------|-------------------------|
| <b>RF Mode</b>         | NR n48<br>Channel Bandwidth: 40MHz | <b>Channel</b>                           | CH 641666 : 3624.99 MHz |
| <b>Frequency Range</b> | 30 MHz ~ 1 GHz                     | <b>Detector Function &amp; Bandwidth</b> | 1 MHz/3 MHz (RMS)       |
| <b>Input Power</b>     | 120 Vac, 60 Hz                     | <b>Environmental Conditions</b>          | 23 °C, 67 % RH          |
| <b>Tested By</b>       | Vincent Chen                       |                                          |                         |

| Antenna Polarity & Test Distance : Vertical at 3 m |                 |            |             |             |                    |                      |                  |                          |
|----------------------------------------------------|-----------------|------------|-------------|-------------|--------------------|----------------------|------------------|--------------------------|
| No                                                 | Frequency (MHz) | EIRP (dBm) | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                  | 51.22           | -42.80     | -40.00      | -2.80       | 1.00 V             | 55                   | 61.50            | -104.30                  |
| 2                                                  | 177.15          | -55.40     | -40.00      | -15.40      | 1.50 V             | 199                  | 49.20            | -104.60                  |
| 3                                                  | 341.22          | -62.00     | -40.00      | -22.00      | 1.50 V             | 144                  | 39.30            | -101.30                  |
| 4                                                  | 488.77          | -60.00     | -40.00      | -20.00      | 1.50 V             | 355                  | 38.50            | -98.50                   |
| 5                                                  | 648.22          | -57.20     | -40.00      | -17.20      | 1.50 V             | 194                  | 38.20            | -95.40                   |
| 6                                                  | 833.36          | -54.80     | -40.00      | -14.80      | 1.50 V             | 145                  | 37.20            | -92.00                   |

#### Remarks:

1.  $EIRP(dBm) = Raw\ Value(dBuV) + Correction\ Factor(dB/m)$
2.  $Correction\ Factor(dB/m) = Antenna\ Factor(dB/m) + Cable\ Factor(dB) - Pre-Amplifier\ Factor(dB) + 20\log(D) - 104.8$
3.  $Margin\ value = EIRP - Limit\ value$
4. The other EIRP levels were very low against the limit of frequency range 30 MHz ~ 1 GHz.
5. The frequency range 9 kHz ~ 30 MHz: all emissions are more than 20 dB below the limit, therefore do not be recorded in this report.



## 7.7 Radiated Spurious Emissions above 1GHz

### 7.7.1 NR n48 - MIMO

|                        |                                    |                                          |                      |
|------------------------|------------------------------------|------------------------------------------|----------------------|
| <b>RF Mode</b>         | NR n48<br>Channel Bandwidth: 10MHz | <b>Channel</b>                           | CH 637000 : 3555 MHz |
| <b>Frequency Range</b> | 1 GHz ~ 40 GHz                     | <b>Detector Function &amp; Bandwidth</b> | 1 MHz/3 MHz (RMS)    |
| <b>Input Power</b>     | 120 Vac, 60 Hz                     | <b>Environmental Conditions</b>          | 23 °C, 67 % RH       |
| <b>Tested By</b>       | Adair Peng                         |                                          |                      |

| Antenna Polarity & Test Distance : Horizontal at 3 m |                 |            |             |             |                    |                      |                  |                          |
|------------------------------------------------------|-----------------|------------|-------------|-------------|--------------------|----------------------|------------------|--------------------------|
| No                                                   | Frequency (MHz) | EIRP (dBm) | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                    | 7110.00         | -42.03     | -40.00      | -2.03       | 1.75 H             | 336                  | 43.59            | -85.62                   |
| Antenna Polarity & Test Distance : Vertical at 3 m   |                 |            |             |             |                    |                      |                  |                          |
| No                                                   | Frequency (MHz) | EIRP (dBm) | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                    | 7110.00         | -42.24     | -40.00      | -2.24       | 2.85 V             | 239                  | 43.38            | -85.62                   |

#### Remarks:

1.  $EIRP(dBm) = Raw\ Value(dBuV) + Correction\ Factor(dB/m)$
2.  $Correction\ Factor(dB/m) = Antenna\ Factor(dB/m) + Cable\ Factor(dB) - Pre-Amplifier\ Factor(dB) + 20\log(D) - 104.8$
3.  $Margin\ value = EIRP - Limit\ value$
4. The other EIRP levels were very low against the limit.

|                        |                                    |                                          |                         |
|------------------------|------------------------------------|------------------------------------------|-------------------------|
| <b>RF Mode</b>         | NR n48<br>Channel Bandwidth: 10MHz | <b>Channel</b>                           | CH 641666 : 3624.99 MHz |
| <b>Frequency Range</b> | 1 GHz ~ 40 GHz                     | <b>Detector Function &amp; Bandwidth</b> | 1 MHz/3 MHz (RMS)       |
| <b>Input Power</b>     | 120 Vac, 60 Hz                     | <b>Environmental Conditions</b>          | 23 °C, 67 % RH          |
| <b>Tested By</b>       | Adair Peng                         |                                          |                         |

| Antenna Polarity & Test Distance : Horizontal at 3 m |                 |            |             |             |                    |                      |                  |                          |
|------------------------------------------------------|-----------------|------------|-------------|-------------|--------------------|----------------------|------------------|--------------------------|
| No                                                   | Frequency (MHz) | EIRP (dBm) | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                    | 7249.98         | -41.27     | -40.00      | -1.27       | 1.75 H             | 333                  | 43.55            | -84.82                   |
| Antenna Polarity & Test Distance : Vertical at 3 m   |                 |            |             |             |                    |                      |                  |                          |
| No                                                   | Frequency (MHz) | EIRP (dBm) | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                    | 7249.98         | -41.41     | -40.00      | -1.41       | 2.85 V             | 242                  | 43.41            | -84.82                   |

**Remarks:**

1.  $EIRP(dBm) = Raw\ Value(dBuV) + Correction\ Factor(dB/m)$
2.  $Correction\ Factor(dB/m) = Antenna\ Factor(dB/m) + Cable\ Factor(dB) - Pre-Amplifier\ Factor(dB) + 20\log(D) - 104.8$
3. Margin value = EIRP – Limit value
4. The other EIRP levels were very low against the limit.

|                        |                                    |                                          |                         |
|------------------------|------------------------------------|------------------------------------------|-------------------------|
| <b>RF Mode</b>         | NR n48<br>Channel Bandwidth: 10MHz | <b>Channel</b>                           | CH 646332 : 3694.98 MHz |
| <b>Frequency Range</b> | 1 GHz ~ 40 GHz                     | <b>Detector Function &amp; Bandwidth</b> | 1 MHz/3 MHz (RMS)       |
| <b>Input Power</b>     | 120 Vac, 60 Hz                     | <b>Environmental Conditions</b>          | 23 °C, 67 % RH          |
| <b>Tested By</b>       | Adair Peng                         |                                          |                         |

| Antenna Polarity & Test Distance : Horizontal at 3 m |                 |            |             |             |                    |                      |                  |                          |
|------------------------------------------------------|-----------------|------------|-------------|-------------|--------------------|----------------------|------------------|--------------------------|
| No                                                   | Frequency (MHz) | EIRP (dBm) | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                    | 7389.96         | -41.38     | -40.00      | -1.38       | 1.57 H             | 341                  | 43.64            | -85.02                   |
| Antenna Polarity & Test Distance : Vertical at 3 m   |                 |            |             |             |                    |                      |                  |                          |
| No                                                   | Frequency (MHz) | EIRP (dBm) | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                    | 7389.96         | -41.68     | -40.00      | -1.68       | 2.89 V             | 249                  | 43.34            | -85.02                   |

**Remarks:**

1.  $EIRP(dBm) = Raw\ Value(dBuV) + Correction\ Factor(dB/m)$
2.  $Correction\ Factor(dB/m) = Antenna\ Factor(dB/m) + Cable\ Factor(dB) - Pre-Amplifier\ Factor(dB) + 20\log(D) - 104.8$
3. Margin value = EIRP – Limit value
4. The other EIRP levels were very low against the limit.

|                        |                                    |                                          |                         |
|------------------------|------------------------------------|------------------------------------------|-------------------------|
| <b>RF Mode</b>         | NR n48<br>Channel Bandwidth: 20MHz | <b>Channel</b>                           | CH 637334 : 3560.01 MHz |
| <b>Frequency Range</b> | 1 GHz ~ 40 GHz                     | <b>Detector Function &amp; Bandwidth</b> | 1 MHz/3 MHz (RMS)       |
| <b>Input Power</b>     | 120 Vac, 60 Hz                     | <b>Environmental Conditions</b>          | 23 °C, 67 % RH          |
| <b>Tested By</b>       | Adair Peng                         |                                          |                         |

| Antenna Polarity & Test Distance : Horizontal at 3 m |                 |            |             |             |                    |                      |                  |                          |
|------------------------------------------------------|-----------------|------------|-------------|-------------|--------------------|----------------------|------------------|--------------------------|
| No                                                   | Frequency (MHz) | EIRP (dBm) | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                    | 7120.02         | -41.77     | -40.00      | -1.77       | 1.49 H             | 345                  | 43.81            | -85.58                   |
| Antenna Polarity & Test Distance : Vertical at 3 m   |                 |            |             |             |                    |                      |                  |                          |
| No                                                   | Frequency (MHz) | EIRP (dBm) | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                    | 7120.02         | -42.01     | -40.00      | -2.01       | 2.93 V             | 239                  | 43.57            | -85.58                   |

**Remarks:**

1.  $EIRP(dBm) = Raw\ Value(dBuV) + Correction\ Factor(dB/m)$
2.  $Correction\ Factor(dB/m) = Antenna\ Factor(dB/m) + Cable\ Factor(dB) - Pre-Amplifier\ Factor(dB) + 20\log(D) - 104.8$
3. Margin value = EIRP – Limit value
4. The other EIRP levels were very low against the limit.

|                        |                                    |                                          |                         |
|------------------------|------------------------------------|------------------------------------------|-------------------------|
| <b>RF Mode</b>         | NR n48<br>Channel Bandwidth: 20MHz | <b>Channel</b>                           | CH 641666 : 3624.99 MHz |
| <b>Frequency Range</b> | 1 GHz ~ 40 GHz                     | <b>Detector Function &amp; Bandwidth</b> | 1 MHz/3 MHz (RMS)       |
| <b>Input Power</b>     | 120 Vac, 60 Hz                     | <b>Environmental Conditions</b>          | 23 °C, 67 % RH          |
| <b>Tested By</b>       | Adair Peng                         |                                          |                         |

| Antenna Polarity & Test Distance : Horizontal at 3 m |                 |            |             |             |                    |                      |                  |                          |
|------------------------------------------------------|-----------------|------------|-------------|-------------|--------------------|----------------------|------------------|--------------------------|
| No                                                   | Frequency (MHz) | EIRP (dBm) | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                    | 7249.98         | -41.15     | -40.00      | -1.15       | 1.57 H             | 333                  | 43.67            | -84.82                   |
| Antenna Polarity & Test Distance : Vertical at 3 m   |                 |            |             |             |                    |                      |                  |                          |
| No                                                   | Frequency (MHz) | EIRP (dBm) | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                    | 7249.98         | -41.34     | -40.00      | -1.34       | 2.77 V             | 237                  | 43.48            | -84.82                   |

**Remarks:**

1.  $EIRP(dBm) = Raw\ Value(dBuV) + Correction\ Factor(dB/m)$
2.  $Correction\ Factor(dB/m) = Antenna\ Factor(dB/m) + Cable\ Factor(dB) - Pre-Amplifier\ Factor(dB) + 20\log(D) - 104.8$
3. Margin value = EIRP – Limit value
4. The other EIRP levels were very low against the limit.

|                        |                                    |                                          |                      |
|------------------------|------------------------------------|------------------------------------------|----------------------|
| <b>RF Mode</b>         | NR n48<br>Channel Bandwidth: 20MHz | <b>Channel</b>                           | CH 646000 : 3690 MHz |
| <b>Frequency Range</b> | 1 GHz ~ 40 GHz                     | <b>Detector Function &amp; Bandwidth</b> | 1 MHz/3 MHz (RMS)    |
| <b>Input Power</b>     | 120 Vac, 60 Hz                     | <b>Environmental Conditions</b>          | 23 °C, 67 % RH       |
| <b>Tested By</b>       | Adair Peng                         |                                          |                      |

| Antenna Polarity & Test Distance : Horizontal at 3 m |                 |            |             |             |                    |                      |                  |                          |
|------------------------------------------------------|-----------------|------------|-------------|-------------|--------------------|----------------------|------------------|--------------------------|
| No                                                   | Frequency (MHz) | EIRP (dBm) | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                    | 7380.00         | -41.38     | -40.00      | -1.38       | 1.57 H             | 337                  | 43.62            | -85.00                   |
| Antenna Polarity & Test Distance : Vertical at 3 m   |                 |            |             |             |                    |                      |                  |                          |
| No                                                   | Frequency (MHz) | EIRP (dBm) | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                    | 7380.00         | -41.73     | -40.00      | -1.73       | 2.79 V             | 245                  | 43.27            | -85.00                   |

**Remarks:**

1.  $EIRP(dBm) = Raw\ Value(dBuV) + Correction\ Factor(dB/m)$
2.  $Correction\ Factor(dB/m) = Antenna\ Factor(dB/m) + Cable\ Factor(dB) - Pre-Amplifier\ Factor(dB) + 20\log(D) - 104.8$
3. Margin value = EIRP – Limit value
4. The other EIRP levels were very low against the limit.

|                        |                                    |                                          |                      |
|------------------------|------------------------------------|------------------------------------------|----------------------|
| <b>RF Mode</b>         | NR n48<br>Channel Bandwidth: 40MHz | <b>Channel</b>                           | CH 638000 : 3570 MHz |
| <b>Frequency Range</b> | 1 GHz ~ 40 GHz                     | <b>Detector Function &amp; Bandwidth</b> | 1 MHz/3 MHz (RMS)    |
| <b>Input Power</b>     | 120 Vac, 60 Hz                     | <b>Environmental Conditions</b>          | 23 °C, 67 % RH       |
| <b>Tested By</b>       | Adair Peng                         |                                          |                      |

| Antenna Polarity & Test Distance : Horizontal at 3 m |                 |            |             |             |                    |                      |                  |                          |
|------------------------------------------------------|-----------------|------------|-------------|-------------|--------------------|----------------------|------------------|--------------------------|
| No                                                   | Frequency (MHz) | EIRP (dBm) | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                    | 7140.00         | -41.69     | -40.00      | -1.69       | 1.55 H             | 297                  | 43.77            | -85.46                   |
| Antenna Polarity & Test Distance : Vertical at 3 m   |                 |            |             |             |                    |                      |                  |                          |
| No                                                   | Frequency (MHz) | EIRP (dBm) | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                    | 7140.00         | -41.85     | -40.00      | -1.85       | 2.71 V             | 252                  | 43.61            | -85.46                   |

**Remarks:**

1.  $EIRP(dBm) = Raw\ Value(dBuV) + Correction\ Factor(dB/m)$
2.  $Correction\ Factor(dB/m) = Antenna\ Factor(dB/m) + Cable\ Factor(dB) - Pre-Amplifier\ Factor(dB) + 20\log(D) - 104.8$
3.  $Margin\ value = EIRP - Limit\ value$
4. The other EIRP levels were very low against the limit.

|                        |                                    |                                          |                         |
|------------------------|------------------------------------|------------------------------------------|-------------------------|
| <b>RF Mode</b>         | NR n48<br>Channel Bandwidth: 40MHz | <b>Channel</b>                           | CH 641666 : 3624.99 MHz |
| <b>Frequency Range</b> | 1 GHz ~ 40 GHz                     | <b>Detector Function &amp; Bandwidth</b> | 1 MHz/3 MHz (RMS)       |
| <b>Input Power</b>     | 120 Vac, 60 Hz                     | <b>Environmental Conditions</b>          | 23 °C, 67 % RH          |
| <b>Tested By</b>       | Adair Peng                         |                                          |                         |

| Antenna Polarity & Test Distance : Horizontal at 3 m |                 |            |             |             |                    |                      |                  |                          |
|------------------------------------------------------|-----------------|------------|-------------|-------------|--------------------|----------------------|------------------|--------------------------|
| No                                                   | Frequency (MHz) | EIRP (dBm) | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                    | 7249.98         | -41.10     | -40.00      | -1.10       | 1.52 H             | 326                  | 43.72            | -84.82                   |
| Antenna Polarity & Test Distance : Vertical at 3 m   |                 |            |             |             |                    |                      |                  |                          |
| No                                                   | Frequency (MHz) | EIRP (dBm) | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                    | 7249.98         | -41.34     | -40.00      | -1.34       | 2.82 V             | 249                  | 43.48            | -84.82                   |

**Remarks:**

1.  $EIRP(dBm) = Raw\ Value(dBuV) + Correction\ Factor(dB/m)$
2.  $Correction\ Factor(dB/m) = Antenna\ Factor(dB/m) + Cable\ Factor(dB) - Pre-Amplifier\ Factor(dB) + 20\log(D) - 104.8$
3. Margin value = EIRP – Limit value
4. The other EIRP levels were very low against the limit.

|                        |                                    |                                          |                         |
|------------------------|------------------------------------|------------------------------------------|-------------------------|
| <b>RF Mode</b>         | NR n48<br>Channel Bandwidth: 40MHz | <b>Channel</b>                           | CH 645332 : 3679.98 MHz |
| <b>Frequency Range</b> | 1 GHz ~ 40 GHz                     | <b>Detector Function &amp; Bandwidth</b> | 1 MHz/3 MHz (RMS)       |
| <b>Input Power</b>     | 120 Vac, 60 Hz                     | <b>Environmental Conditions</b>          | 23 °C, 67 % RH          |
| <b>Tested By</b>       | Adair Peng                         |                                          |                         |

| Antenna Polarity & Test Distance : Horizontal at 3 m |                 |            |             |             |                    |                      |                  |                          |
|------------------------------------------------------|-----------------|------------|-------------|-------------|--------------------|----------------------|------------------|--------------------------|
| No                                                   | Frequency (MHz) | EIRP (dBm) | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                    | 7359.96         | -41.27     | -40.00      | -1.27       | 1.57 H             | 339                  | 43.69            | -84.96                   |
| Antenna Polarity & Test Distance : Vertical at 3 m   |                 |            |             |             |                    |                      |                  |                          |
| No                                                   | Frequency (MHz) | EIRP (dBm) | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                    | 7359.96         | -41.58     | -40.00      | -1.58       | 2.77 V             | 228                  | 43.38            | -84.96                   |

**Remarks:**

1.  $EIRP(dBm) = Raw\ Value(dBuV) + Correction\ Factor(dB/m)$
2.  $Correction\ Factor(dB/m) = Antenna\ Factor(dB/m) + Cable\ Factor(dB) - Pre-Amplifier\ Factor(dB) + 20\log(D) - 104.8$
3. Margin value = EIRP – Limit value
4. The other EIRP levels were very low against the limit.

## 7.8 Frequency Stability

|                           |              |            |             |
|---------------------------|--------------|------------|-------------|
| Environmental Conditions: | 25°C, 60% RH | Tested By: | Willy Cheng |
|---------------------------|--------------|------------|-------------|

7.8.1 NR n48 SCS 30 kHz (3.55 GHz ~ 3.7 GHz) – MIMO (Chain 0)

**NR n48 SCS 30 kHz (3.55 GHz ~ 3.7 GHz), Channel Bandwidth: 10 MHz**

| Frequency Stability Versus Voltage |                      |                       |                         |                       |
|------------------------------------|----------------------|-----------------------|-------------------------|-----------------------|
| Voltage (Vdc)                      | CH 637000 (3555 MHz) |                       | CH 646333 (3694.98 MHz) |                       |
|                                    | Frequency (MHz)      | Frequency Error (ppm) | Frequency (MHz)         | Frequency Error (ppm) |
| 3.27                               | 3555.000002          | 0.0006                | 3694.979998             | -0.0005               |
| 3.85                               | 3554.999994          | -0.0017               | 3694.979999             | -0.0027               |
| 4.43                               | 3554.999997          | -0.0008               | 3694.979996             | -0.0011               |

Note: The applicant defined the normal working voltage is from 3.27 to 4.43 Vdc.

| Frequency Stability Versus Temperature |                      |                       |                         |                       |
|----------------------------------------|----------------------|-----------------------|-------------------------|-----------------------|
| Temperature (°C)                       | CH 637000 (3555 MHz) |                       | CH 646333 (3694.98 MHz) |                       |
|                                        | Frequency (MHz)      | Frequency Error (ppm) | Frequency (MHz)         | Frequency Error (ppm) |
| -30                                    | 3555.000004          | 0.0011                | 3694.98                 | 0                     |
| -20                                    | 3554.999992          | -0.0023               | 3694.979999             | -0.0027               |
| -10                                    | 3555                 | 0                     | 3694.979999             | -0.0003               |
| 0                                      | 3555.000009          | 0.0025                | 3694.980007             | 0.0019                |
| 10                                     | 3555.000002          | 0.0006                | 3694.979997             | -0.0008               |
| 20                                     | 3554.999998          | -0.0006               | 3694.979996             | -0.0011               |
| 30                                     | 3554.999991          | -0.0025               | 3694.979993             | -0.0019               |
| 40                                     | 3555.000007          | 0.002                 | 3694.980004             | 0.0011                |
| 50                                     | 3555.000008          | 0.0023                | 3694.980009             | 0.0024                |
| 55                                     | 3555                 | 0                     | 3694.980001             | 0.0003                |

**NR n48 SCS 30 kHz (3.55 GHz ~ 3.7 GHz), Channel Bandwidth: 15 MHz**

| Frequency Stability Versus Voltage |                         |                       |                         |                       |
|------------------------------------|-------------------------|-----------------------|-------------------------|-----------------------|
| Voltage (Vdc)                      | CH 637168 (3557.52 MHz) |                       | CH 646166 (3692.49 MHz) |                       |
|                                    | Frequency (MHz)         | Frequency Error (ppm) | Frequency (MHz)         | Frequency Error (ppm) |
| 3.27                               | 3557.519994             | -0.0017               | 3692.489994             | -0.0016               |
| 3.85                               | 3557.519999             | -0.0003               | 3692.490002             | 0.0005                |
| 4.43                               | 3557.520007             | 0.002                 | 3692.490007             | 0.0019                |

Note: The applicant defined the normal working voltage is from 3.27 to 4.43 Vdc.

| Frequency Stability Versus Temperature |                         |                       |                         |                       |
|----------------------------------------|-------------------------|-----------------------|-------------------------|-----------------------|
| Temperature (°C)                       | CH 637168 (3557.52 MHz) |                       | CH 646166 (3692.49 MHz) |                       |
|                                        | Frequency (MHz)         | Frequency Error (ppm) | Frequency (MHz)         | Frequency Error (ppm) |
| -30                                    | 3557.52                 | 0                     | 3692.489999             | -0.0003               |
| -20                                    | 3557.519991             | -0.0025               | 3692.489993             | -0.0019               |
| -10                                    | 3557.520005             | 0.0014                | 3692.490001             | 0.0003                |
| 0                                      | 3557.520004             | 0.0011                | 3692.490007             | 0.0019                |
| 10                                     | 3557.519991             | -0.0025               | 3692.489991             | -0.0024               |
| 20                                     | 3557.520008             | 0.0022                | 3692.49001              | 0.0027                |
| 30                                     | 3557.519998             | -0.0006               | 3692.490002             | 0.0005                |
| 40                                     | 3557.519997             | -0.0008               | 3692.489995             | -0.0014               |
| 50                                     | 3557.520007             | 0.002                 | 3692.490007             | 0.0019                |
| 55                                     | 3557.520007             | 0.002                 | 3692.490008             | 0.0022                |

**NR n48 SCS 30 kHz (3.55 GHz ~ 3.7 GHz), Channel Bandwidth: 20 MHz**

| Frequency Stability Versus Voltage |                         |                       |                      |                       |
|------------------------------------|-------------------------|-----------------------|----------------------|-----------------------|
| Voltage (Vdc)                      | CH 637334 (3560.01 MHz) |                       | CH 646000 (3690 MHz) |                       |
|                                    | Frequency (MHz)         | Frequency Error (ppm) | Frequency (MHz)      | Frequency Error (ppm) |
| 3.27                               | 3560.010003             | 0.0008                | 3690                 | 0                     |
| 3.85                               | 3560.010003             | 0.0008                | 3690.000007          | 0.0019                |
| 4.43                               | 3560.010005             | 0.0014                | 3690.000001          | 0.0003                |

Note: The applicant defined the normal working voltage is from 3.27 to 4.43 Vdc.

| Frequency Stability Versus Temperature |                         |                       |                      |                       |
|----------------------------------------|-------------------------|-----------------------|----------------------|-----------------------|
| Temperature (°C)                       | CH 637334 (3560.01 MHz) |                       | CH 646000 (3690 MHz) |                       |
|                                        | Frequency (MHz)         | Frequency Error (ppm) | Frequency (MHz)      | Frequency Error (ppm) |
| -30                                    | 3560.009991             | -0.0025               | 3689.999991          | -0.0024               |
| -20                                    | 3560.010008             | 0.0022                | 3690.000007          | 0.0019                |
| -10                                    | 3560.009995             | -0.0014               | 3689.999992          | -0.0022               |
| 0                                      | 3560.009998             | -0.0006               | 3690                 | 0                     |
| 10                                     | 3560.010001             | 0.0028                | 3690.000009          | 0.0024                |
| 20                                     | 3560.009993             | -0.002                | 3689.999992          | -0.0022               |
| 30                                     | 3560.010006             | 0.0017                | 3690.000008          | 0.0022                |
| 40                                     | 3560.009996             | -0.0011               | 3689.999994          | -0.0016               |
| 50                                     | 3560.010009             | 0.0025                | 3690.000007          | 0.0019                |
| 55                                     | 3560.009999             | -0.0003               | 3690                 | 0                     |

**NR n48 SCS 30 kHz (3.55 GHz ~ 3.7 GHz), Channel Bandwidth: 30 MHz**

| Frequency Stability Versus Voltage |                         |                       |                         |                       |
|------------------------------------|-------------------------|-----------------------|-------------------------|-----------------------|
| Voltage (Vdc)                      | CH 637668 (3565.02 MHz) |                       | CH 645666 (3684.99 MHz) |                       |
|                                    | Frequency (MHz)         | Frequency Error (ppm) | Frequency (MHz)         | Frequency Error (ppm) |
| 3.27                               | 3565.019998             | -0.0006               | 3684.990003             | 0.0008                |
| 3.85                               | 3565.019993             | -0.002                | 3684.98999              | -0.0027               |
| 4.43                               | 3565.019993             | -0.002                | 3684.98999              | -0.0027               |

Note: The applicant defined the normal working voltage is from 3.27 to 4.43 Vdc.

| Frequency Stability Versus Temperature |                         |                       |                         |                       |
|----------------------------------------|-------------------------|-----------------------|-------------------------|-----------------------|
| Temperature (°C)                       | CH 637668 (3565.02 MHz) |                       | CH 645666 (3684.99 MHz) |                       |
|                                        | Frequency (MHz)         | Frequency Error (ppm) | Frequency (MHz)         | Frequency Error (ppm) |
| -30                                    | 3565.020004             | 0.0011                | 3684.990007             | 0.0019                |
| -20                                    | 3565.020009             | 0.0025                | 3684.990009             | 0.0024                |
| -10                                    | 3565.020006             | 0.0017                | 3684.990009             | 0.0024                |
| 0                                      | 3565.019992             | -0.0022               | 3684.989993             | -0.0019               |
| 10                                     | 3565.019991             | -0.0025               | 3684.989991             | -0.0024               |
| 20                                     | 3565.020006             | 0.0017                | 3684.990008             | 0.0022                |
| 30                                     | 3565.019997             | -0.0008               | 3684.989992             | -0.0022               |
| 40                                     | 3565.019991             | -0.0025               | 3684.989991             | -0.0024               |
| 50                                     | 3565.01999              | -0.0028               | 3684.989991             | -0.0024               |
| 55                                     | 3565.020001             | 0.0003                | 3684.989998             | -0.0005               |

**NR n48 SCS 30 kHz (3.55 GHz ~ 3.7 GHz), Channel Bandwidth: 40 MHz**

| Frequency Stability Versus Voltage |                      |                       |                         |                       |
|------------------------------------|----------------------|-----------------------|-------------------------|-----------------------|
| Voltage (Vdc)                      | CH 638000 (3570 MHz) |                       | CH 645332 (3679.98 MHz) |                       |
|                                    | Frequency (MHz)      | Frequency Error (ppm) | Frequency (MHz)         | Frequency Error (ppm) |
| 3.27                               | 3570                 | 0                     | 3679.980005             | 0.0014                |
| 3.85                               | 3570.00001           | 0.0028                | 3679.98001              | 0.0027                |
| 4.43                               | 3570.000003          | 0.0008                | 3679.980007             | 0.0019                |

Note: The applicant defined the normal working voltage is from 3.27 to 4.43 Vdc.

| Frequency Stability Versus Temperature |                      |                       |                         |                       |
|----------------------------------------|----------------------|-----------------------|-------------------------|-----------------------|
| Temperature (°C)                       | CH 638000 (3570 MHz) |                       | CH 645332 (3679.98 MHz) |                       |
|                                        | Frequency (MHz)      | Frequency Error (ppm) | Frequency (MHz)         | Frequency Error (ppm) |
| -30                                    | 3569.999999          | -0.0003               | 3679.980002             | 0.0005                |
| -20                                    | 3569.999999          | -0.0003               | 3679.980003             | 0.0008                |
| -10                                    | 3569.999995          | -0.0014               | 3679.979997             | -0.0008               |
| 0                                      | 3569.999995          | -0.0014               | 3679.979995             | -0.0014               |
| 10                                     | 3569.999997          | -0.0008               | 3679.979999             | -0.0003               |
| 20                                     | 3569.999997          | -0.0008               | 3679.98                 | 0                     |
| 30                                     | 3570                 | 0                     | 3679.980002             | 0.0005                |
| 40                                     | 3570.000006          | 0.0017                | 3679.980008             | 0.0022                |
| 50                                     | 3570.000009          | 0.0025                | 3679.980007             | 0.0019                |
| 55                                     | 3570.000002          | 0.0006                | 3679.980004             | 0.0011                |

## 7.8.2 NR n48 SCS 30 kHz (3.55 GHz ~ 3.7 GHz) – MIMO (Chain 1)

### NR n48 SCS 30 kHz (3.55 GHz ~ 3.7 GHz), Channel Bandwidth: 10 MHz

| Frequency Stability Versus Voltage |                      |                       |                         |                       |
|------------------------------------|----------------------|-----------------------|-------------------------|-----------------------|
| Voltage (Vdc)                      | CH 637000 (3555 MHz) |                       | CH 646333 (3694.98 MHz) |                       |
|                                    | Frequency (MHz)      | Frequency Error (ppm) | Frequency (MHz)         | Frequency Error (ppm) |
| 3.27                               | 3554.999997          | -0.0008               | 3694.979997             | -0.0008               |
| 3.85                               | 3554.999995          | -0.0014               | 3694.979996             | -0.0011               |
| 4.43                               | 3554.999999          | -0.0003               | 3694.979997             | -0.0008               |

Note: The applicant defined the normal working voltage is from 3.27 to 4.43 Vdc.

| Frequency Stability Versus Temperature |                      |                       |                         |                       |
|----------------------------------------|----------------------|-----------------------|-------------------------|-----------------------|
| Temperature (°C)                       | CH 637000 (3555 MHz) |                       | CH 646333 (3694.98 MHz) |                       |
|                                        | Frequency (MHz)      | Frequency Error (ppm) | Frequency (MHz)         | Frequency Error (ppm) |
| -30                                    | 3555.000001          | 0.0003                | 3694.980003             | 0.0008                |
| -20                                    | 3554.999998          | -0.0006               | 3694.979997             | -0.0008               |
| -10                                    | 3554.999993          | -0.002                | 3694.979997             | -0.0008               |
| 0                                      | 3554.999998          | -0.0006               | 3694.980001             | 0.0003                |
| 10                                     | 3554.999992          | -0.0023               | 3694.979991             | -0.0024               |
| 20                                     | 3554.99999           | -0.0028               | 3694.979994             | -0.0016               |
| 30                                     | 3554.999993          | -0.002                | 3694.979994             | -0.0016               |
| 40                                     | 3554.999998          | -0.0006               | 3694.979997             | -0.0008               |
| 50                                     | 3554.999995          | -0.0014               | 3694.979996             | -0.0011               |
| 55                                     | 3555.000001          | 0.0003                | 3694.980006             | 0.0016                |

**NR n48 SCS 30 kHz (3.55 GHz ~ 3.7 GHz), Channel Bandwidth: 15 MHz**

| Frequency Stability Versus Voltage |                         |                       |                         |                       |
|------------------------------------|-------------------------|-----------------------|-------------------------|-----------------------|
| Voltage (Vdc)                      | CH 637168 (3557.52 MHz) |                       | CH 646166 (3692.49 MHz) |                       |
|                                    | Frequency (MHz)         | Frequency Error (ppm) | Frequency (MHz)         | Frequency Error (ppm) |
| 3.27                               | 3557.519998             | -0.0006               | 3692.490002             | 0.0005                |
| 3.85                               | 3557.52001              | 0.0028                | 3692.490007             | 0.0019                |
| 4.43                               | 3557.52                 | 0                     | 3692.490004             | 0.0011                |

Note: The applicant defined the normal working voltage is from 3.27 to 4.43 Vdc.

| Frequency Stability Versus Temperature |                         |                       |                         |                       |
|----------------------------------------|-------------------------|-----------------------|-------------------------|-----------------------|
| Temperature (°C)                       | CH 637168 (3557.52 MHz) |                       | CH 646166 (3692.49 MHz) |                       |
|                                        | Frequency (MHz)         | Frequency Error (ppm) | Frequency (MHz)         | Frequency Error (ppm) |
| -30                                    | 3557.520004             | 0.0011                | 3692.490008             | 0.0022                |
| -20                                    | 3557.519992             | -0.0022               | 3692.489997             | -0.0008               |
| -10                                    | 3557.520001             | 0.0003                | 3692.490005             | 0.0014                |
| 0                                      | 3557.519994             | -0.0017               | 3692.489995             | -0.0014               |
| 10                                     | 3557.52001              | 0.0028                | 3692.490007             | 0.0019                |
| 20                                     | 3557.519996             | -0.0011               | 3692.489995             | -0.0014               |
| 30                                     | 3557.519999             | -0.0003               | 3692.489998             | -0.0005               |
| 40                                     | 3557.52                 | 0                     | 3692.489997             | -0.0008               |
| 50                                     | 3557.519992             | -0.0022               | 3692.489994             | -0.0016               |
| 55                                     | 3557.519991             | -0.0025               | 3692.489995             | -0.0014               |

**NR n48 SCS 30 kHz (3.55 GHz ~ 3.7 GHz), Channel Bandwidth: 20 MHz**

| Frequency Stability Versus Voltage |                         |                       |                      |                       |
|------------------------------------|-------------------------|-----------------------|----------------------|-----------------------|
| Voltage (Vdc)                      | CH 637334 (3560.01 MHz) |                       | CH 646000 (3690 MHz) |                       |
|                                    | Frequency (MHz)         | Frequency Error (ppm) | Frequency (MHz)      | Frequency Error (ppm) |
| 3.27                               | 3560.009999             | -0.0003               | 3689.999999          | -0.0003               |
| 3.85                               | 3560.009997             | -0.0008               | 3690                 | 0                     |
| 4.43                               | 3560.009992             | -0.0022               | 3689.999997          | -0.0008               |

Note: The applicant defined the normal working voltage is from 3.27 to 4.43 Vdc.

| Frequency Stability Versus Temperature |                         |                       |                      |                       |
|----------------------------------------|-------------------------|-----------------------|----------------------|-----------------------|
| Temperature (°C)                       | CH 637334 (3560.01 MHz) |                       | CH 646000 (3690 MHz) |                       |
|                                        | Frequency (MHz)         | Frequency Error (ppm) | Frequency (MHz)      | Frequency Error (ppm) |
| -30                                    | 3560.010003             | 0.0008                | 3690.000001          | 0.0003                |
| -20                                    | 3560.009997             | -0.0008               | 3689.999999          | -0.0003               |
| -10                                    | 3560.009996             | -0.0011               | 3689.999995          | -0.0014               |
| 0                                      | 3560.010003             | 0.0008                | 3690.000007          | 0.0019                |
| 10                                     | 3560.009995             | -0.0014               | 3689.999995          | -0.0014               |
| 20                                     | 3560.009995             | -0.0014               | 3689.999999          | -0.0027               |
| 30                                     | 3560.010001             | 0.0003                | 3690.000006          | 0.0016                |
| 40                                     | 3560.010009             | 0.0025                | 3690.000009          | 0.0024                |
| 50                                     | 3560.009992             | -0.0022               | 3689.999992          | -0.0022               |
| 55                                     | 3560.009994             | -0.0017               | 3689.999992          | -0.0022               |

**NR n48 SCS 30 kHz (3.55 GHz ~ 3.7 GHz), Channel Bandwidth: 30 MHz**

| Frequency Stability Versus Voltage |                         |                       |                         |                       |
|------------------------------------|-------------------------|-----------------------|-------------------------|-----------------------|
| Voltage (Vdc)                      | CH 637668 (3565.02 MHz) |                       | CH 645666 (3684.99 MHz) |                       |
|                                    | Frequency (MHz)         | Frequency Error (ppm) | Frequency (MHz)         | Frequency Error (ppm) |
| 3.27                               | 3565.020005             | 0.0014                | 3684.990003             | 0.0008                |
| 3.85                               | 3565.02                 | 0                     | 3684.989999             | -0.0003               |
| 4.43                               | 3565.020004             | 0.0011                | 3684.990006             | 0.0016                |

Note: The applicant defined the normal working voltage is from 3.27 to 4.43 Vdc.

| Frequency Stability Versus Temperature |                         |                       |                         |                       |
|----------------------------------------|-------------------------|-----------------------|-------------------------|-----------------------|
| Temperature (°C)                       | CH 637668 (3565.02 MHz) |                       | CH 645666 (3684.99 MHz) |                       |
|                                        | Frequency (MHz)         | Frequency Error (ppm) | Frequency (MHz)         | Frequency Error (ppm) |
| -30                                    | 3565.019992             | -0.0022               | 3684.989992             | -0.0022               |
| -20                                    | 3565.020001             | 0.0028                | 3684.990005             | 0.0014                |
| -10                                    | 3565.019996             | -0.0011               | 3684.989997             | -0.0008               |
| 0                                      | 3565.01999              | -0.0028               | 3684.989993             | -0.0019               |
| 10                                     | 3565.020009             | 0.0025                | 3684.990008             | 0.0022                |
| 20                                     | 3565.019996             | -0.0011               | 3684.99                 | 0                     |
| 30                                     | 3565.020008             | 0.0022                | 3684.990008             | 0.0022                |
| 40                                     | 3565.020009             | 0.0025                | 3684.990004             | 0.0011                |
| 50                                     | 3565.019994             | -0.0017               | 3684.989999             | -0.0003               |
| 55                                     | 3565.020002             | 0.0006                | 3684.990005             | 0.0014                |

**NR n48 SCS 30 kHz (3.55 GHz ~ 3.7 GHz), Channel Bandwidth: 40 MHz**

| Frequency Stability Versus Voltage |                      |                       |                         |                       |
|------------------------------------|----------------------|-----------------------|-------------------------|-----------------------|
| Voltage (Vdc)                      | CH 638000 (3570 MHz) |                       | CH 645332 (3679.98 MHz) |                       |
|                                    | Frequency (MHz)      | Frequency Error (ppm) | Frequency (MHz)         | Frequency Error (ppm) |
| 3.27                               | 3570                 | 0                     | 3679.98                 | 0                     |
| 3.85                               | 3570.000001          | 0.0003                | 3679.979996             | -0.0011               |
| 4.43                               | 3569.999993          | -0.002                | 3679.979991             | -0.0024               |

Note: The applicant defined the normal working voltage is from 3.27 to 4.43 Vdc.

| Frequency Stability Versus Temperature |                      |                       |                         |                       |
|----------------------------------------|----------------------|-----------------------|-------------------------|-----------------------|
| Temperature (°C)                       | CH 638000 (3570 MHz) |                       | CH 645332 (3679.98 MHz) |                       |
|                                        | Frequency (MHz)      | Frequency Error (ppm) | Frequency (MHz)         | Frequency Error (ppm) |
| -30                                    | 3570.000007          | 0.002                 | 3679.980003             | 0.0008                |
| -20                                    | 3569.999992          | -0.0022               | 3679.979991             | -0.0024               |
| -10                                    | 3570                 | 0                     | 3679.98                 | 0                     |
| 0                                      | 3569.999998          | -0.0006               | 3679.980002             | 0.0005                |
| 10                                     | 3569.999993          | -0.002                | 3679.979995             | -0.0014               |
| 20                                     | 3569.999997          | -0.0008               | 3679.979996             | -0.0011               |
| 30                                     | 3570.000006          | 0.0017                | 3679.980004             | 0.0011                |
| 40                                     | 3569.999999          | -0.0003               | 3679.980001             | 0.0003                |
| 50                                     | 3570.000003          | 0.0008                | 3679.980001             | 0.0003                |
| 55                                     | 3570.000001          | 0.0003                | 3679.979997             | -0.0008               |

## 8 Pictures of Test Arrangements

Please refer to the attached file (Test Setup Photo)

## 9 Information of the Testing Laboratories

We, Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch, were founded in 1988 to provide our best service in EMC, Radio, Telecom and Safety consultation. Our laboratories are FCC recognized accredited test firms and accredited according to ISO/IEC 17025.

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The address and road map of all our labs can be found in our web site also.

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