

## RF Power Output and Effective Radiated Power

| LTE Band<br>26 | Channel/<br>Frequency(MHz) | Index | RB#<br>RBstart<br>QPSK | RB#<br>RBstart<br>16QAM | Conducted Power<br>(dBm) |       |
|----------------|----------------------------|-------|------------------------|-------------------------|--------------------------|-------|
|                |                            |       |                        |                         | QPSK                     | 16QAM |
| 1.4MHz         | 26697/814.7                | 0     | 1#0                    | 1#0                     | 23.31                    | 22.41 |
|                |                            | 0     | 6#0                    | 5#0                     | 21.28                    | 21.38 |
|                | 26740/819                  | 0     | 1#0                    | 1#0                     | 23.25                    | 22.31 |
|                |                            | 0     | 6#0                    | 5#0                     | 21.27                    | 21.43 |
|                | 26783/823.3                | 0     | 1#5                    | 1#5                     | 23.21                    | 22.36 |
|                |                            | 0     | 6#0                    | 5#0                     | 21.26                    | 21.37 |
| 3MHz           | 26705/815.5                | 0     | 1#0                    | 1#0                     | 23.43                    | 22.47 |
|                |                            | 0     | 6#0                    | 5#0                     | 21.27                    | 21.36 |
|                | 26740/819                  | 0     | 1#0                    | 1#0                     | 23.51                    | 22.28 |
|                |                            | 0     | 6#0                    | 5#0                     | 21.30                    | 21.21 |
|                | 26775/822.5                | 1     | 1#5                    | 1#5                     | 23.27                    | 22.33 |
|                |                            | 1     | 6#0                    | 5#0                     | 21.25                    | 21.35 |
| 5MHz           | 26715/816.5                | 3     | 1#0                    | 1#0                     | 23.37                    | 22.91 |
|                |                            | 0     | 6#0                    | 5#0                     | 22.19                    | 21.43 |
|                | 26740/819                  | 0     | 1#0                    | 1#0                     | 23.52                    | 23.22 |
|                |                            | 0     | 6#0                    | 5#0                     | 22.18                    | 21.24 |
|                | 26765/821.5                | 0     | 1#5                    | 1#5                     | 23.15                    | 22.84 |
|                |                            | 3     | 6#0                    | 5#0                     | 22.26                    | 21.41 |
| 10MHz          | 26740/819                  | 0     | 1#0                    | 1#0                     | 23.55                    | 23.26 |
|                |                            | 0     | 4#0                    | 4#0                     | 23.17                    | 22.21 |

## Occupied Bandwidth

| Mode   | Bandwidth | Modulation | Channel/<br>Frequency(MHz) | RB  | Index | Bandwidth(MHz) |        |
|--------|-----------|------------|----------------------------|-----|-------|----------------|--------|
|        |           |            |                            |     |       | 99% Power      | -26dBc |
| Band26 | 10MHz     | QPSK       | 26740/819                  | 6#0 | 0     | 1.117          | 1.315  |
|        |           | 16QAM      | 26740/819                  | 6#0 | 0     | 0.96276        | 1.167  |



## LTE Band 26 10MHz QPSK CH-Middle



## LTE Band 26 10MHz 16QAM CH-Middle



# Band Edge Compliance

LTE Band 26 10MHz QPSK 1RB CH-Low



LTE Band 26 10MHz QPSK 1RB CH-High



LTE Band 26 10MHz QPSK 100%RB CH-Low



LTE Band 26 10MHz QPSK 100%RB CH-High



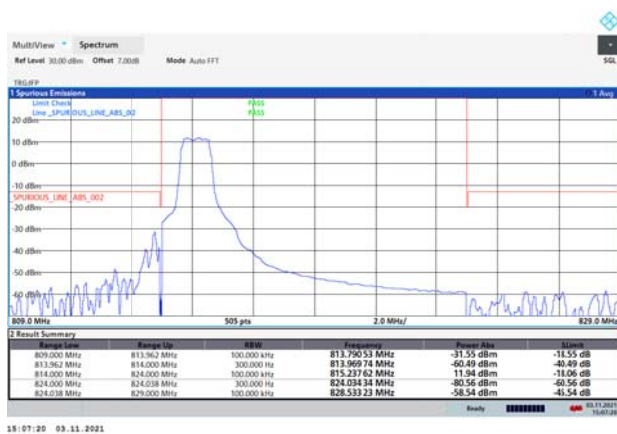
### LTE Band 26 10MHz 16QAM 1RB CH-Low



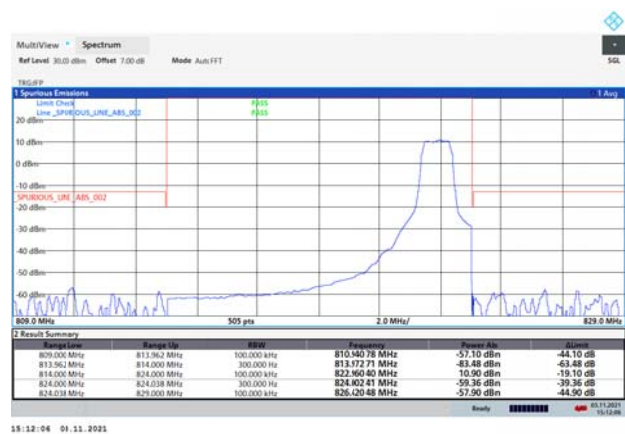
### LTE Band 26 10MHz 16QAM 1RB CH-High



### LTE Band 26 10MHz 16QAM 100%RB CH-Low



### LTE Band 26 10MHz 16QAM 100%RB CH-High



## Peak-to-Average Power Ratio (PAPR)

| Mode   | Bandwidth | Modulation | Channel/<br>Frequency(MHz) | Peak-to-Average Power Ratio (PAPR) |          |          |
|--------|-----------|------------|----------------------------|------------------------------------|----------|----------|
|        |           |            |                            | Peak(dBm)                          | Avg(dBm) | PAPR(dB) |
| Band26 | 1.4MHz    | QPSK       | 26740/819                  | 25.39                              | 16.32    | 9.07     |
|        |           | 16QAM      | 26740/819                  | 26.01                              | 15.90    | 10.11    |
|        | 3MHz      | QPSK       | 26740/819                  | 25.39                              | 16.40    | 8.99     |
|        |           | 16QAM      | 26740/819                  | 26.04                              | 15.86    | 10.18    |
|        | 5MHz      | QPSK       | 26740/819                  | 26.14                              | 16.91    | 9.23     |
|        |           | 16QAM      | 26740/819                  | 26.07                              | 15.92    | 10.15    |
|        | 10MHz     | QPSK       | 26740/819                  | 26.15                              | 16.69    | 9.46     |
|        |           | 16QAM      | 26740/819                  | 26.74                              | 16.95    | 9.79     |

# Frequency Stability

| LTE Band 26    |         |                    |                    |                                 |                                 |         |
|----------------|---------|--------------------|--------------------|---------------------------------|---------------------------------|---------|
| Condition      |         | Freq.Error<br>(Hz) | Freq.Error<br>(Hz) | Frequency<br>Stability<br>(ppm) | Frequency<br>Stability<br>(ppm) | Verdict |
| BANDWIDTH      | 1.4MHz  |                    |                    |                                 |                                 |         |
| Temperature    | Voltage | 16QAM              | QPSK               | 16QAM                           | QPSK                            |         |
| Normal (25℃)   | Normal  | 17.03              | 17.30              | 0.02079                         | 0.02113                         | PASS    |
| Extreme (85℃)  |         | 12.58              | 16.07              | 0.01536                         | 0.01962                         | PASS    |
| Extreme (80℃)  |         | 12.60              | 1.49               | 0.01538                         | 0.00182                         | PASS    |
| Extreme (70℃)  |         | 6.27               | 1.91               | 0.00766                         | 0.00233                         | PASS    |
| Extreme (60℃)  |         | 1.67               | 10.71              | 0.00204                         | 0.01307                         | PASS    |
| Extreme (50℃)  |         | 15.20              | 8.29               | 0.01856                         | 0.01012                         | PASS    |
| Extreme (40℃)  |         | 2.53               | 7.51               | 0.00309                         | 0.00917                         | PASS    |
| Extreme (30℃)  |         | 5.27               | 13.05              | 0.00644                         | 0.01594                         | PASS    |
| Extreme (20℃)  |         | 9.04               | 6.39               | 0.01103                         | 0.00780                         | PASS    |
| Extreme (10℃)  |         | 7.28               | 3.93               | 0.00889                         | 0.00480                         | PASS    |
| Extreme (0℃)   |         | 12.43              | 5.27               | 0.01518                         | 0.00643                         | PASS    |
| Extreme (-10℃) |         | 15.84              | 4.31               | 0.01934                         | 0.00526                         | PASS    |
| Extreme (-20℃) |         | 10.73              | 13.23              | 0.01311                         | 0.01615                         | PASS    |
| Extreme (-30℃) |         | 17.37              | 1.92               | 0.02121                         | 0.00234                         | PASS    |
| Extreme (-40℃) |         | 17.38              | 10.91              | 0.02122                         | 0.01332                         | PASS    |
| 25℃            | LV      | 7.90               | 10.85              | 0.00964                         | 0.01325                         | PASS    |
|                | HV      | 6.37               | 7.01               | 0.00777                         | 0.00856                         | PASS    |
| Condition      |         | Freq.Error<br>(Hz) | Freq.Error<br>(Hz) | Frequency<br>Stability<br>(ppm) | Frequency<br>Stability<br>(ppm) | Verdict |
| BANDWIDTH      | 3MHz    |                    |                    |                                 |                                 |         |
| Temperature    | Voltage | 16QAM              | QPSK               | 16QAM                           | QPSK                            |         |
| Normal (25℃)   | Normal  | 9.15               | 17.97              | 0.01117                         | 0.02194                         | PASS    |
| Extreme (85℃)  |         | 15.56              | 9.20               | 0.01900                         | 0.01123                         | PASS    |
| Extreme (80℃)  |         | 5.08               | 2.40               | 0.00620                         | 0.00293                         | PASS    |
| Extreme (70℃)  |         | 12.35              | 9.80               | 0.01508                         | 0.01196                         | PASS    |
| Extreme (60℃)  |         | 1.30               | 4.06               | 0.00159                         | 0.00496                         | PASS    |
| Extreme (50℃)  |         | 16.87              | 17.32              | 0.02060                         | 0.02115                         | PASS    |
| Extreme (40℃)  |         | 4.15               | 7.92               | 0.00507                         | 0.00967                         | PASS    |
| Extreme (30℃)  |         | 13.95              | 6.95               | 0.01704                         | 0.00849                         | PASS    |
| Extreme (20℃)  |         | 10.75              | 12.56              | 0.01313                         | 0.01534                         | PASS    |
| Extreme (10℃)  |         | 1.45               | 8.36               | 0.00177                         | 0.01020                         | PASS    |
| Extreme (0℃)   |         | 8.33               | 14.61              | 0.01017                         | 0.01784                         | PASS    |
| Extreme (-10℃) |         | 5.52               | 11.81              | 0.00674                         | 0.01442                         | PASS    |



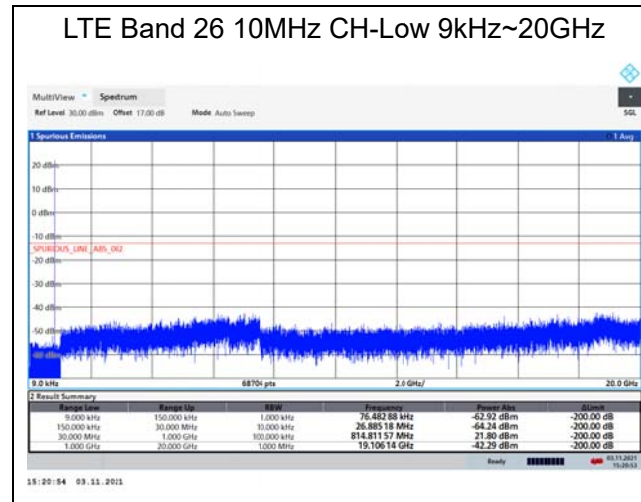
|                |         |                 |                 |                           |                           |         |
|----------------|---------|-----------------|-----------------|---------------------------|---------------------------|---------|
| Extreme (-20℃) |         | 3.38            | 8.61            | 0.00413                   | 0.01051                   | PASS    |
| Extreme (-30℃) |         | 10.10           | 4.78            | 0.01234                   | 0.00583                   | PASS    |
| Extreme (-40℃) |         | 16.46           | 15.55           | 0.02010                   | 0.01899                   | PASS    |
| 25℃            | LV      | 3.40            | 14.94           | 0.00415                   | 0.01825                   | PASS    |
|                | HV      | 8.93            | 5.72            | 0.01091                   | 0.00699                   | PASS    |
| Condition      |         | Freq.Error (Hz) | Freq.Error (Hz) | Frequency Stability (ppm) | Frequency Stability (ppm) | Verdict |
| BANDWIDTH      | 5MHz    |                 |                 |                           |                           |         |
| Temperature    | Voltage | 16QAM           | QPSK            | 16QAM                     | QPSK                      |         |
| Normal (25℃)   | Normal  | 1.73            | 2.92            | 0.00211                   | 0.00356                   | PASS    |
| Extreme (85℃)  |         | 11.63           | 12.26           | 0.01420                   | 0.01497                   | PASS    |
| Extreme (80℃)  |         | 5.12            | 15.81           | 0.00625                   | 0.01930                   | PASS    |
| Extreme (70℃)  |         | 3.70            | 14.55           | 0.00452                   | 0.01777                   | PASS    |
| Extreme (60℃)  |         | 10.10           | 8.98            | 0.01234                   | 0.01096                   | PASS    |
| Extreme (50℃)  |         | 6.12            | 13.85           | 0.00748                   | 0.01691                   | PASS    |
| Extreme (40℃)  |         | 16.11           | 15.26           | 0.01968                   | 0.01863                   | PASS    |
| Extreme (30℃)  |         | 6.11            | 8.51            | 0.00746                   | 0.01040                   | PASS    |
| Extreme (20℃)  |         | 2.75            | 9.49            | 0.00336                   | 0.01159                   | PASS    |
| Extreme (10℃)  |         | 9.64            | 13.95           | 0.01177                   | 0.01703                   | PASS    |
| Extreme (0℃)   |         | 14.31           | 8.99            | 0.01747                   | 0.01098                   | PASS    |
| Extreme (-10℃) |         | 1.58            | 1.63            | 0.00192                   | 0.00200                   | PASS    |
| Extreme (-20℃) |         | 8.96            | 2.84            | 0.01094                   | 0.00347                   | PASS    |
| Extreme (-30℃) |         | 16.66           | 17.38           | 0.02034                   | 0.02122                   | PASS    |
| Extreme (-40℃) |         | 15.25           | 10.18           | 0.01862                   | 0.01243                   | PASS    |
| 25℃            | LV      | 4.23            | 12.01           | 0.00517                   | 0.01467                   | PASS    |
|                | HV      | 15.04           | 17.12           | 0.01837                   | 0.02090                   | PASS    |
| Condition      |         | Freq.Error (Hz) | Freq.Error (Hz) | Frequency Stability (ppm) | Frequency Stability (ppm) | Verdict |
| BANDWIDTH      | 10MHz   |                 |                 |                           |                           |         |
| Temperature    | Voltage | 16QAM           | QPSK            | 16QAM                     | QPSK                      |         |
| Normal (25℃)   | Normal  | 12.01           | 11.14           | 0.01466                   | 0.01360                   | PASS    |
| Extreme (85℃)  |         | 3.52            | 12.29           | 0.00430                   | 0.01500                   | PASS    |
| Extreme (80℃)  |         | 1.59            | 4.49            | 0.00194                   | 0.00548                   | PASS    |
| Extreme (70℃)  |         | 16.87           | 14.59           | 0.02060                   | 0.01782                   | PASS    |
| Extreme (60℃)  |         | 10.87           | 12.29           | 0.01328                   | 0.01500                   | PASS    |
| Extreme (50℃)  |         | 15.56           | 14.33           | 0.01900                   | 0.01749                   | PASS    |
| Extreme (40℃)  |         | 4.55            | 1.39            | 0.00556                   | 0.00170                   | PASS    |
| Extreme (30℃)  |         | 10.74           | 11.86           | 0.01311                   | 0.01448                   | PASS    |
| Extreme (20℃)  |         | 8.34            | 13.54           | 0.01018                   | 0.01654                   | PASS    |
| Extreme (10℃)  |         | 8.33            | 14.53           | 0.01017                   | 0.01775                   | PASS    |
| Extreme (0℃)   |         | 8.28            | 12.21           | 0.01011                   | 0.01491                   | PASS    |
| Extreme (-10℃) |         | 13.63           | 8.03            | 0.01664                   | 0.00981                   | PASS    |





|                |    |       |       |         |         |      |
|----------------|----|-------|-------|---------|---------|------|
| Extreme (-20℃) |    | 2.34  | 6.55  | 0.00286 | 0.00800 | PASS |
| Extreme (-30℃) |    | 2.87  | 11.22 | 0.00350 | 0.01369 | PASS |
| Extreme (-40℃) |    | 11.18 | 8.82  | 0.01365 | 0.01077 | PASS |
| 25℃            | LV | 1.08  | 10.92 | 0.00132 | 0.01333 | PASS |
|                | HV | 12.72 | 17.42 | 0.01554 | 0.02128 | PASS |

## Spurious Emissions at Antenna Terminals



## Radiates Spurious Emission

LTE Band 26 5MHz CH Middle

| Harmonic | Frequency (MHz) | SG (dBm) | Cable Loss (dB) | Gain (dBi) | Antenna Polarization | ERP Level (dBm) | Limit (dBm) | Margin (dB) | Azimuth (deg) |
|----------|-----------------|----------|-----------------|------------|----------------------|-----------------|-------------|-------------|---------------|
| 2        | 1638.0          | -53.10   | 2.00            | 10.75      | Horizontal           | -46.50          | -13.00      | 33.50       | 45            |
| 3        | 2457.0          | -55.81   | 2.51            | 11.05      | Horizontal           | -49.42          | -13.00      | 36.42       | 135           |
| 4        | 3269.6          | -61.28   | 4.20            | 11.15      | Horizontal           | -56.48          | -13.00      | 43.48       | 225           |
| 5        | 4086.0          | -60.40   | 5.20            | 11.15      | Horizontal           | -56.60          | -13.00      | 43.60       | 45            |
| 6        | 4903.0          | -59.74   | 5.50            | 11.95      | Horizontal           | -55.44          | -13.00      | 42.44       | 90            |
| 7        | 5720.0          | -60.50   | 5.70            | 13.55      | Horizontal           | -54.80          | -13.00      | 41.80       | 90            |
| 8        | 6538.0          | -58.28   | 6.30            | 13.75      | Horizontal           | -52.98          | -13.00      | 39.98       | 45            |
| 9        | 7355.0          | -54.46   | 6.80            | 13.85      | Horizontal           | -49.56          | -13.00      | 36.56       | 45            |
| 10       | 8172.5          | -53.52   | 6.90            | 14.25      | Horizontal           | -48.32          | -13.00      | 35.32       | 90            |

Note: 1.The other Spurious RF Radiated emissions level is no more than noise floor.

2.The worst emission was found in the antenna is Horizontal position.

## Main Test Instruments

Date of Testing (variant): September 2, 2021 ~ November 5, 2021

| Name                     | Manufacturer | Type       | Serial Number  | Calibration Date | Expiration Date |
|--------------------------|--------------|------------|----------------|------------------|-----------------|
| Base Station Simulator   | R&S          | CMW500     | 113824         | 2021-05-15       | 2022-05-14      |
| Climate Chamber          | Weiss        | VT4002     | 58226119450010 | 2021-05-15       | 2022-05-14      |
| Spectrum Analyzer        | Key sight    | N9020      | MY52330084     | 2021-05-15       | 2022-05-14      |
| Signal Analyzer          | R&S          | FSV3030    | 101411         | 2020-12-13       | 2021-12-12      |
| Signal Analyzer          | R&S          | FSV30      | 100815         | 2020-12-13       | 2021-12-12      |
| TRILOG Broadband Antenna | Schwarzbeck  | VULB 9163  | 01111          | 2019--9-12       | 2022-09-11      |
| Horn Antenna             | Schwarzbeck  | BBHA 9120D | 1594           | 2020-12-17       | 2021-12-16      |