

| LTE Band2 (Mid Channel)                   |                 |                  |                 |                |                    |             |             |
|-------------------------------------------|-----------------|------------------|-----------------|----------------|--------------------|-------------|-------------|
| Frequency (MHz)                           | Ant. Pol. (H/V) | SG Reading (dBm) | Cable Loss (dB) | Ant Gain (dBi) | EIRP Measure (dBm) | Limit (dBm) | Margin (dB) |
| QPSK, CH18900 / 1880MHz, Bandwidth 1.4MHz |                 |                  |                 |                |                    |             |             |
| 1880                                      | H               | 17.86            | 1.07            | 4.61           | 21.41              | 33          | -11.59      |
| 1880                                      | V               | 16.40            | 1.07            | 4.61           | 19.95              | 33          | -13.05      |
| QPSK, CH18900 / 1880MHz, Bandwidth 3MHz   |                 |                  |                 |                |                    |             |             |
| 1880                                      | H               | 17.62            | 1.07            | 4.59           | 21.14              | 33          | -11.86      |
| 1880                                      | V               | 16.48            | 1.07            | 4.59           | 20.00              | 33          | -13.00      |
| QPSK, CH18900 / 1880MHz, Bandwidth 5MHz   |                 |                  |                 |                |                    |             |             |
| 1880                                      | H               | 17.86            | 1.07            | 4.56           | 21.35              | 33          | -11.65      |
| 1880                                      | V               | 16.41            | 1.07            | 4.56           | 19.90              | 33          | -13.10      |
| QPSK, CH18900 / 1880MHz, Bandwidth 10MHz  |                 |                  |                 |                |                    |             |             |
| 1880                                      | H               | 18.27            | 1.07            | 4.56           | 21.76              | 33          | -11.24      |
| 1880                                      | V               | 16.89            | 1.07            | 4.56           | 20.38              | 33          | -12.62      |
| QPSK, CH18900 / 1880MHz, Bandwidth 15MHz  |                 |                  |                 |                |                    |             |             |
| 1880                                      | H               | 18.00            | 1.07            | 4.56           | 21.49              | 33          | -11.51      |
| 1880                                      | V               | 16.43            | 1.07            | 4.56           | 19.92              | 33          | -13.08      |
| QPSK, CH18900 / 1880MHz, Bandwidth 20MHz  |                 |                  |                 |                |                    |             |             |
| 1880                                      | H               | 16.33            | 1.07            | 4.56           | 19.82              | 33          | -13.18      |
| 1880                                      | V               | 14.78            | 1.07            | 4.56           | 18.27              | 33          | -14.73      |

#### NOTES:

- ERP (dBm) / EIRP (dBm)=  
SG Reading (dBm) - Cable Loss (dB) + Substitute Antenna Gain (dBd/dBi)
- This unit was tested with its standard adapter.
- The EUT was tested in three orthogonal planes and in all possible test configurations and positioning.

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|--------------------------------------------|-----------------|------------------|-----------------|----------------|--------------------|-------------|-------------|
| Frequency (MHz)                            | Ant. Pol. (H/V) | SG Reading (dBm) | Cable Loss (dB) | Ant Gain (dBi) | EIRP Measure (dBm) | Limit (dBm) | Margin (dB) |
| 16QAM, CH18900 / 1880MHz, Bandwidth 1.4MHz |                 |                  |                 |                |                    |             |             |
| 1880                                       | H               | 17.64            | 1.07            | 4.61           | 21.19              | 33          | -11.81      |
| 1880                                       | V               | 16.13            | 1.07            | 4.61           | 19.68              | 33          | -13.32      |
| 16QAM, CH18900 / 1880MHz, Bandwidth 3MHz   |                 |                  |                 |                |                    |             |             |
| 1880                                       | H               | 17.41            | 1.07            | 4.59           | 20.93              | 33          | -12.07      |
| 1880                                       | V               | 16.31            | 1.07            | 4.59           | 19.83              | 33          | -13.17      |
| 16QAM, CH18900 / 1880MHz, Bandwidth 5MHz   |                 |                  |                 |                |                    |             |             |
| 1880                                       | H               | 17.70            | 1.07            | 4.56           | 21.19              | 33          | -11.81      |
| 1880                                       | V               | 16.30            | 1.07            | 4.56           | 19.79              | 33          | -13.21      |
| 16QAM, CH18900 / 1880MHz, Bandwidth 10MHz  |                 |                  |                 |                |                    |             |             |
| 1880                                       | H               | 18.02            | 1.07            | 4.56           | 21.51              | 33          | -11.49      |
| 1880                                       | V               | 16.63            | 1.07            | 4.56           | 20.12              | 33          | -12.88      |
| 16QAM, CH18900 / 1880MHz, Bandwidth 15MHz  |                 |                  |                 |                |                    |             |             |
| 1880                                       | H               | 17.70            | 1.07            | 4.56           | 21.19              | 33          | -11.81      |
| 1880                                       | V               | 16.33            | 1.07            | 4.56           | 19.82              | 33          | -13.18      |
| 16QAM, CH18900 / 1880MHz, Bandwidth 20MHz  |                 |                  |                 |                |                    |             |             |
| 1880                                       | H               | 16.06            | 1.07            | 4.56           | 19.55              | 33          | -13.45      |
| 1880                                       | V               | 14.53            | 1.07            | 4.56           | 18.02              | 33          | -14.98      |

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| LTE Band2 (High Channel)                    |                 |                  |                 |                |                    |             |             |
|---------------------------------------------|-----------------|------------------|-----------------|----------------|--------------------|-------------|-------------|
| Frequency (MHz)                             | Ant. Pol. (H/V) | SG Reading (dBm) | Cable Loss (dB) | Ant Gain (dBi) | EIRP Measure (dBm) | Limit (dBm) | Margin (dB) |
| QPSK, CH19193 / 1909.3MHz, Bandwidth 1.4MHz |                 |                  |                 |                |                    |             |             |
| 1909.3                                      | H               | 17.73            | 1.07            | 4.61           | 21.28              | 33          | -11.72      |
| 1909.3                                      | V               | 16.99            | 1.07            | 4.61           | 20.54              | 33          | -12.46      |
| QPSK, CH19185 / 1908.5MHz, Bandwidth 3MHz   |                 |                  |                 |                |                    |             |             |
| 1908.5                                      | H               | 17.80            | 1.07            | 4.59           | 21.32              | 33          | -11.68      |
| 1908.5                                      | V               | 17.51            | 1.07            | 4.59           | 21.03              | 33          | -11.97      |
| QPSK, CH19175 / 1907.5MHz, Bandwidth 5MHz   |                 |                  |                 |                |                    |             |             |
| 1907.5                                      | H               | 18.11            | 1.07            | 4.56           | 21.60              | 33          | -11.40      |
| 1907.5                                      | V               | 17.36            | 1.07            | 4.56           | 20.85              | 33          | -12.15      |
| QPSK, CH19150 / 1905MHz, Bandwidth 10MHz    |                 |                  |                 |                |                    |             |             |
| 1905                                        | H               | 18.62            | 1.07            | 4.56           | 22.11              | 33          | -10.89      |
| 1905                                        | V               | 17.88            | 1.07            | 4.56           | 21.37              | 33          | -11.63      |
| QPSK, CH19125 / 1902.5MHz, Bandwidth 15MHz  |                 |                  |                 |                |                    |             |             |
| 1902.5                                      | H               | 18.38            | 1.07            | 4.56           | 21.87              | 33          | -11.13      |
| 1902.5                                      | V               | 17.71            | 1.07            | 4.56           | 21.20              | 33          | -11.80      |
| QPSK, CH19100 / 1900MHz, Bandwidth 20MHz    |                 |                  |                 |                |                    |             |             |
| 1900                                        | H               | 16.02            | 1.07            | 4.56           | 19.51              | 33          | -13.49      |
| 1900                                        | V               | 16.27            | 1.07            | 4.56           | 19.76              | 33          | -13.24      |

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| LTE Band2 (High Channel)                     |                 |                  |                 |                |                    |             |             |
|----------------------------------------------|-----------------|------------------|-----------------|----------------|--------------------|-------------|-------------|
| Frequency (MHz)                              | Ant. Pol. (H/V) | SG Reading (dBm) | Cable Loss (dB) | Ant Gain (dBi) | EIRP Measure (dBm) | Limit (dBm) | Margin (dB) |
| 16QAM, CH19193 / 1909.3MHz, Bandwidth 1.4MHz |                 |                  |                 |                |                    |             |             |
| 1909.3                                       | H               | 17.48            | 1.07            | 4.61           | 21.03              | 33          | -11.97      |
| 1909.3                                       | V               | 16.67            | 1.07            | 4.61           | 20.22              | 33          | -12.78      |
| 16QAM, CH19185 / 1908.5MHz, Bandwidth 3MHz   |                 |                  |                 |                |                    |             |             |
| 1908.5                                       | H               | 17.59            | 1.07            | 4.59           | 21.11              | 33          | -11.89      |
| 1908.5                                       | V               | 17.37            | 1.07            | 4.59           | 20.89              | 33          | -12.11      |
| 16QAM, CH19175 / 1907.5MHz, Bandwidth 5MHz   |                 |                  |                 |                |                    |             |             |
| 1907.5                                       | H               | 17.77            | 1.07            | 4.56           | 21.26              | 33          | -11.74      |
| 1907.5                                       | V               | 17.10            | 1.07            | 4.56           | 20.59              | 33          | -12.41      |
| 16QAM, CH19150 / 1905MHz, Bandwidth 10MHz    |                 |                  |                 |                |                    |             |             |
| 1905                                         | H               | 18.46            | 1.07            | 4.56           | 21.95              | 33          | -11.05      |
| 1905                                         | V               | 17.62            | 1.07            | 4.56           | 21.11              | 33          | -11.89      |
| 16QAM, CH19125 / 1902.5MHz, Bandwidth 15MHz  |                 |                  |                 |                |                    |             |             |
| 1902.5                                       | H               | 18.12            | 1.07            | 4.56           | 21.61              | 33          | -11.39      |
| 1902.5                                       | V               | 17.52            | 1.07            | 4.56           | 21.01              | 33          | -11.99      |
| 16QAM, CH19100 / 1900MHz, Bandwidth 20MHz    |                 |                  |                 |                |                    |             |             |
| 1900                                         | H               | 15.85            | 1.07            | 4.56           | 19.34              | 33          | -13.66      |
| 1900                                         | V               | 16.02            | 1.07            | 4.56           | 19.51              | 33          | -13.49      |

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| LTE Band4 (Low Channel)                     |                 |                  |                 |                |                    |             |             |
|---------------------------------------------|-----------------|------------------|-----------------|----------------|--------------------|-------------|-------------|
| Frequency (MHz)                             | Ant. Pol. (H/V) | SG Reading (dBm) | Cable Loss (dB) | Ant Gain (dBi) | EIRP Measure (dBm) | Limit (dBm) | Margin (dB) |
| QPSK, CH19957 / 1710.7MHz, Bandwidth 1.4MHz |                 |                  |                 |                |                    |             |             |
| 1710.7                                      | H               | 17.45            | 1.10            | 4.92           | 21.26              | 30          | -8.74       |
| 1710.7                                      | V               | 13.89            | 1.10            | 4.92           | 17.70              | 30          | -12.30      |
| QPSK, CH19965 / 1711.5MHz, Bandwidth 3MHz   |                 |                  |                 |                |                    |             |             |
| 1711.5                                      | H               | 16.35            | 1.10            | 4.92           | 20.16              | 30          | -9.84       |
| 1711.5                                      | V               | 14.11            | 1.10            | 4.92           | 17.92              | 30          | -12.08      |
| QPSK, CH19975 / 1712.5MHz, Bandwidth 5MHz   |                 |                  |                 |                |                    |             |             |
| 1712.5                                      | H               | 16.62            | 1.10            | 4.92           | 20.43              | 30          | -9.57       |
| 1712.5                                      | V               | 13.97            | 1.10            | 4.92           | 17.78              | 30          | -12.22      |
| QPSK, CH20000 / 1715MHz, Bandwidth 10MHz    |                 |                  |                 |                |                    |             |             |
| 1715                                        | H               | 15.71            | 1.10            | 4.92           | 19.52              | 30          | -10.48      |
| 1715                                        | V               | 13.96            | 1.10            | 4.92           | 17.77              | 30          | -12.23      |
| QPSK, CH20025 / 1717.5MHz, Bandwidth 15MHz  |                 |                  |                 |                |                    |             |             |
| 1717.5                                      | H               | 16.11            | 1.10            | 4.92           | 19.92              | 30          | -10.08      |
| 1717.5                                      | V               | 14.29            | 1.10            | 4.92           | 18.10              | 30          | -11.90      |
| QPSK, CH20050 / 1720MHz, Bandwidth 20MHz    |                 |                  |                 |                |                    |             |             |
| 1720                                        | H               | 14.23            | 1.10            | 4.92           | 18.04              | 30          | -11.96      |
| 1720                                        | V               | 12.18            | 1.10            | 4.92           | 15.99              | 30          | -14.01      |

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| LTE Band4 (Low Channel)                      |                 |                  |                 |                |                    |             |             |
|----------------------------------------------|-----------------|------------------|-----------------|----------------|--------------------|-------------|-------------|
| Frequency (MHz)                              | Ant. Pol. (H/V) | SG Reading (dBm) | Cable Loss (dB) | Ant Gain (dBi) | EIRP Measure (dBm) | Limit (dBm) | Margin (dB) |
| 16QAM, CH19957 / 1710.7MHz, Bandwidth 1.4MHz |                 |                  |                 |                |                    |             |             |
| 1710.7                                       | H               | 17.22            | 1.10            | 4.92           | 21.03              | 30          | -8.97       |
| 1710.7                                       | V               | 13.63            | 1.10            | 4.92           | 17.44              | 30          | -12.56      |
| 16QAM, CH19965 / 1711.5MHz, Bandwidth 3MHz   |                 |                  |                 |                |                    |             |             |
| 1711.5                                       | H               | 16.09            | 1.10            | 4.92           | 19.90              | 30          | -10.10      |
| 1711.5                                       | V               | 13.98            | 1.10            | 4.92           | 17.79              | 30          | -12.21      |
| 16QAM, CH19975 / 1712.5MHz, Bandwidth 5MHz   |                 |                  |                 |                |                    |             |             |
| 1712.5                                       | H               | 16.50            | 1.10            | 4.92           | 20.31              | 30          | -9.69       |
| 1712.5                                       | V               | 13.78            | 1.10            | 4.92           | 17.59              | 30          | -12.41      |
| 16QAM, CH20000 / 1715MHz, Bandwidth 10MHz    |                 |                  |                 |                |                    |             |             |
| 1715                                         | H               | 15.56            | 1.10            | 4.92           | 19.37              | 30          | -10.63      |
| 1715                                         | V               | 13.75            | 1.10            | 4.92           | 17.56              | 30          | -12.44      |
| 16QAM, CH20025 / 1717.5MHz, Bandwidth 15MHz  |                 |                  |                 |                |                    |             |             |
| 1717.5                                       | H               | 15.93            | 1.10            | 4.92           | 19.74              | 30          | -10.26      |
| 1717.5                                       | V               | 14.10            | 1.10            | 4.92           | 17.91              | 30          | -12.09      |
| 16QAM, CH20050 / 1720MHz, Bandwidth 20MHz    |                 |                  |                 |                |                    |             |             |
| 1720                                         | H               | 14.07            | 1.10            | 4.92           | 17.88              | 30          | -12.12      |
| 1720                                         | V               | 11.91            | 1.10            | 4.92           | 15.72              | 30          | -14.28      |

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| Frequency (MHz)                            | Ant. Pol. (H/V) | SG Reading (dBm) | Cable Loss (dB) | Ant Gain (dBi) | EIRP Measure (dBm) | Limit (dBm) | Margin (dB) |
| QPSK, CH20175 /1732.5MHz, Bandwidth 1.4MHz |                 |                  |                 |                |                    |             |             |
| 1732.5                                     | H               | 16.81            | 1.11            | 4.86           | 20.56              | 30          | -9.44       |
| 1732.5                                     | V               | 14.84            | 1.11            | 4.86           | 18.59              | 30          | -11.41      |
| QPSK, CH20175 /1732.5MHz, Bandwidth 3MHz   |                 |                  |                 |                |                    |             |             |
| 1732.5                                     | H               | 16.78            | 1.11            | 4.86           | 20.53              | 30          | -9.47       |
| 1732.5                                     | V               | 14.62            | 1.11            | 4.86           | 18.37              | 30          | -11.63      |
| QPSK, CH20175 /1732.5MHz, Bandwidth 5MHz   |                 |                  |                 |                |                    |             |             |
| 1732.5                                     | H               | 16.76            | 1.11            | 4.86           | 20.51              | 30          | -9.49       |
| 1732.5                                     | V               | 14.53            | 1.11            | 4.86           | 18.28              | 30          | -11.72      |
| QPSK, CH20175 /1732.5MHz, Bandwidth 10MHz  |                 |                  |                 |                |                    |             |             |
| 1732.5                                     | H               | 16.62            | 1.11            | 4.86           | 20.37              | 30          | -9.63       |
| 1732.5                                     | V               | 14.73            | 1.11            | 4.86           | 18.48              | 30          | -11.52      |
| QPSK, CH20175 /1732.5MHz, Bandwidth 15MHz  |                 |                  |                 |                |                    |             |             |
| 1732.5                                     | H               | 16.75            | 1.11            | 4.86           | 20.50              | 30          | -9.50       |
| 1732.5                                     | V               | 14.95            | 1.11            | 4.86           | 18.70              | 30          | -11.30      |
| QPSK, CH20175 /1732.5MHz, Bandwidth 20MHz  |                 |                  |                 |                |                    |             |             |
| 1732.5                                     | H               | 15.47            | 1.11            | 4.86           | 19.22              | 30          | -10.78      |
| 1732.5                                     | V               | 12.53            | 1.11            | 4.86           | 16.28              | 30          | -13.72      |

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| Frequency (MHz)                             | Ant. Pol. (H/V) | SG Reading (dBm) | Cable Loss (dB) | Ant Gain (dBi) | EIRP Measure (dBm) | Limit (dBm) | Margin (dB) |
| 16QAM, CH20175 /1732.5MHz, Bandwidth 1.4MHz |                 |                  |                 |                |                    |             |             |
| 1732.5                                      | H               | 16.56            | 1.11            | 4.86           | 20.31              | 30          | -9.69       |
| 1732.5                                      | V               | 14.66            | 1.11            | 4.86           | 18.41              | 30          | -11.59      |
| 16QAM, CH20175 /1732.5MHz, Bandwidth 3MHz   |                 |                  |                 |                |                    |             |             |
| 1732.5                                      | H               | 16.53            | 1.11            | 4.86           | 20.28              | 30          | -9.72       |
| 1732.5                                      | V               | 14.47            | 1.11            | 4.86           | 18.22              | 30          | -11.78      |
| 16QAM, CH20175 /1732.5MHz, Bandwidth 5MHz   |                 |                  |                 |                |                    |             |             |
| 1732.5                                      | H               | 16.57            | 1.11            | 4.86           | 20.32              | 30          | -9.68       |
| 1732.5                                      | V               | 14.27            | 1.11            | 4.86           | 18.02              | 30          | -11.98      |
| 16QAM, CH20175 /1732.5MHz, Bandwidth 10MHz  |                 |                  |                 |                |                    |             |             |
| 1732.5                                      | H               | 16.36            | 1.11            | 4.86           | 20.11              | 30          | -9.89       |
| 1732.5                                      | V               | 14.53            | 1.11            | 4.86           | 18.28              | 30          | -11.72      |
| 16QAM, CH20175 /1732.5MHz, Bandwidth 15MHz  |                 |                  |                 |                |                    |             |             |
| 1732.5                                      | H               | 16.64            | 1.11            | 4.86           | 20.39              | 30          | -9.61       |
| 1732.5                                      | V               | 14.80            | 1.11            | 4.86           | 18.55              | 30          | -11.45      |
| 16QAM, CH20175 /1732.5MHz, Bandwidth 20MHz  |                 |                  |                 |                |                    |             |             |
| 1732.5                                      | H               | 15.29            | 1.11            | 4.86           | 19.04              | 30          | -10.96      |
| 1732.5                                      | V               | 12.31            | 1.11            | 4.86           | 16.06              | 30          | -13.94      |

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| QPSK, CH20393 / 1754.3MHz, Bandwidth 1.4MHz |                 |                  |                 |                |                    |             |             |
| 1754.3                                      | H               | 17.37            | 1.11            | 4.81           | 21.07              | 30          | -8.93       |
| 1754.3                                      | V               | 16.11            | 1.11            | 4.81           | 19.81              | 30          | -10.19      |
| QPSK, CH20385 / 1753.5MHz, Bandwidth 3MHz   |                 |                  |                 |                |                    |             |             |
| 1753.5                                      | H               | 17.63            | 1.11            | 4.81           | 21.33              | 30          | -8.67       |
| 1753.5                                      | V               | 15.93            | 1.11            | 4.81           | 19.63              | 30          | -10.37      |
| QPSK, CH20375 / 1752.5MHz, Bandwidth 5MHz   |                 |                  |                 |                |                    |             |             |
| 1752.5                                      | H               | 16.55            | 1.11            | 4.81           | 20.25              | 30          | -9.75       |
| 1752.5                                      | V               | 15.75            | 1.11            | 4.81           | 19.45              | 30          | -10.55      |
| QPSK, CH20350 / 1750MHz, Bandwidth 10MHz    |                 |                  |                 |                |                    |             |             |
| 1750                                        | H               | 16.95            | 1.11            | 4.81           | 20.65              | 30          | -9.35       |
| 1750                                        | V               | 15.58            | 1.11            | 4.81           | 19.28              | 30          | -10.72      |
| QPSK, CH20325 / 1747.5MHz, Bandwidth 15MHz  |                 |                  |                 |                |                    |             |             |
| 1747.5                                      | H               | 16.87            | 1.11            | 4.81           | 20.57              | 30          | -9.43       |
| 1747.5                                      | V               | 15.36            | 1.11            | 4.81           | 19.06              | 30          | -10.94      |
| QPSK, CH20300 / 1745MHz, Bandwidth 20MHz    |                 |                  |                 |                |                    |             |             |
| 1745                                        | H               | 15.51            | 1.11            | 4.81           | 19.21              | 30          | -10.79      |
| 1745                                        | V               | 13.38            | 1.11            | 4.81           | 17.08              | 30          | -12.92      |

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| LTE Band4 (High Channel)                     |                 |                  |                 |                |                    |             |             |
|----------------------------------------------|-----------------|------------------|-----------------|----------------|--------------------|-------------|-------------|
| Frequency (MHz)                              | Ant. Pol. (H/V) | SG Reading (dBm) | Cable Loss (dB) | Ant Gain (dBi) | EIRP Measure (dBm) | Limit (dBm) | Margin (dB) |
| 16QAM, CH20393 / 1754.3MHz, Bandwidth 1.4MHz |                 |                  |                 |                |                    |             |             |
| 1754.3                                       | H               | 17.23            | 1.11            | 4.81           | 20.93              | 30          | -9.07       |
| 1754.3                                       | V               | 15.98            | 1.11            | 4.81           | 19.68              | 30          | -10.32      |
| 16QAM, CH20385 / 1753.5MHz, Bandwidth 3MHz   |                 |                  |                 |                |                    |             |             |
| 1753.5                                       | H               | 17.46            | 1.11            | 4.81           | 21.16              | 30          | -8.84       |
| 1753.5                                       | V               | 15.74            | 1.11            | 4.81           | 19.44              | 30          | -10.56      |
| 16QAM, CH20375 / 1752.5MHz, Bandwidth 5MHz   |                 |                  |                 |                |                    |             |             |
| 1752.5                                       | H               | 16.35            | 1.11            | 4.81           | 20.05              | 30          | -9.95       |
| 1752.5                                       | V               | 15.74            | 1.11            | 4.81           | 19.44              | 30          | -10.56      |
| 16QAM, CH20350 / 1750MHz, Bandwidth 10MHz    |                 |                  |                 |                |                    |             |             |
| 1750                                         | H               | 16.71            | 1.11            | 4.81           | 20.41              | 30          | -9.59       |
| 1750                                         | V               | 15.36            | 1.11            | 4.81           | 19.06              | 30          | -10.94      |
| 16QAM, CH20325 / 1747.5MHz, Bandwidth 15MHz  |                 |                  |                 |                |                    |             |             |
| 1747.5                                       | H               | 16.69            | 1.11            | 4.81           | 20.39              | 30          | -9.61       |
| 1747.5                                       | V               | 15.18            | 1.11            | 4.81           | 18.88              | 30          | -11.12      |
| 16QAM, CH20300 / 1745MHz, Bandwidth 20MHz    |                 |                  |                 |                |                    |             |             |
| 1745                                         | H               | 15.32            | 1.11            | 4.81           | 19.02              | 30          | -10.98      |
| 1745                                         | V               | 13.19            | 1.11            | 4.81           | 16.89              | 30          | -13.11      |

#### NOTES:

- ERP (dBm) / EIRP (dBm)=  
SG Reading (dBm) - Cable Loss (dB) + Substitute Antenna Gain (dBd/dBi)
- This unit was tested with its standard adapter.
- The EUT was tested in three orthogonal planes and in all possible test configurations and positioning.

| LTE Band5 (Low Channel)                     |                 |                  |                 |                |                   |             |             |
|---------------------------------------------|-----------------|------------------|-----------------|----------------|-------------------|-------------|-------------|
| Frequency (MHz)                             | Ant. Pol. (H/V) | SG Reading (dBm) | Cable Loss (dB) | Ant Gain (dBi) | ERP Measure (dBm) | Limit (dBm) | Margin (dB) |
| QPSK, CH20407 / 824.7MHz, Bandwidth 1.4MHz  |                 |                  |                 |                |                   |             |             |
| 824.7                                       | H               | 2.48             | 0.88            | 7.53           | 9.13              | 38.5        | -29.37      |
| 824.7                                       | V               | 7.87             | 0.88            | 7.53           | 14.52             | 38.5        | -23.98      |
| QPSK, CH20415 / 825.5MHz, Bandwidth 3MHz    |                 |                  |                 |                |                   |             |             |
| 825.5                                       | H               | 1.61             | 0.88            | 7.53           | 8.26              | 38.5        | -30.24      |
| 825.5                                       | V               | 7.70             | 0.88            | 7.53           | 14.35             | 38.5        | -24.15      |
| QPSK, CH20425 / 826.5MHz, Bandwidth 5MHz    |                 |                  |                 |                |                   |             |             |
| 826.5                                       | H               | 1.63             | 0.88            | 7.53           | 8.28              | 38.5        | -30.22      |
| 826.5                                       | V               | 8.04             | 0.88            | 7.53           | 14.69             | 38.5        | -23.81      |
| QPSK, CH20450 / 829MHz, Bandwidth 10MHz     |                 |                  |                 |                |                   |             |             |
| 829                                         | H               | 2.74             | 0.88            | 7.53           | 9.39              | 38.5        | -29.11      |
| 829                                         | V               | 7.75             | 0.88            | 7.53           | 14.40             | 38.5        | -24.10      |
| 16QAM, CH20407 / 824.7MHz, Bandwidth 1.4MHz |                 |                  |                 |                |                   |             |             |
| 824.7                                       | H               | 2.28             | 0.88            | 7.53           | 8.93              | 38.5        | -29.57      |
| 824.7                                       | V               | 7.74             | 0.88            | 7.53           | 14.39             | 38.5        | -24.11      |
| 16QAM, CH20415 / 825.5MHz, Bandwidth 3MHz   |                 |                  |                 |                |                   |             |             |
| 825.5                                       | H               | 1.37             | 0.88            | 7.53           | 8.02              | 38.5        | -30.48      |
| 825.5                                       | V               | 7.54             | 0.88            | 7.53           | 14.19             | 38.5        | -24.31      |
| 16QAM, CH20425 / 826.5MHz, Bandwidth 5MHz   |                 |                  |                 |                |                   |             |             |
| 826.5                                       | H               | 1.38             | 0.88            | 7.53           | 8.03              | 38.5        | -30.47      |
| 826.5                                       | V               | 7.84             | 0.88            | 7.53           | 14.49             | 38.5        | -24.01      |
| 16QAM, CH20450 / 829MHz, Bandwidth 10MHz    |                 |                  |                 |                |                   |             |             |
| 829                                         | H               | 2.48             | 0.88            | 7.53           | 9.13              | 38.5        | -29.37      |
| 829                                         | V               | 7.59             | 0.88            | 7.53           | 14.24             | 38.5        | -24.26      |

**NOTES:**

- ERP (dBm) / EIRP (dBm)=  
SG Reading (dBm) - Cable Loss (dB) + Substitute Antenna Gain (dBd/dBi)
- This unit was tested with its standard adapter.
- The EUT was tested in three orthogonal planes and in all possible test configurations and positioning.

| LTE Band5 (Mid Channel)                     |                 |                  |                 |                |                   |             |             |
|---------------------------------------------|-----------------|------------------|-----------------|----------------|-------------------|-------------|-------------|
| Frequency (MHz)                             | Ant. Pol. (H/V) | SG Reading (dBm) | Cable Loss (dB) | Ant Gain (dBi) | ERP Measure (dBm) | Limit (dBm) | Margin (dB) |
| QPSK, CH20525 / 836.5MHz, Bandwidth 1.4MHz  |                 |                  |                 |                |                   |             |             |
| 836.5                                       | H               | 2.80             | 0.88            | 7.53           | 9.45              | 38.5        | -29.05      |
| 836.5                                       | V               | 9.62             | 0.88            | 7.53           | 16.27             | 38.5        | -22.23      |
| QPSK, CH20525 / 836.5MHz, Bandwidth 3MHz    |                 |                  |                 |                |                   |             |             |
| 836.5                                       | H               | 2.70             | 0.88            | 7.53           | 9.35              | 38.5        | -29.15      |
| 836.5                                       | V               | 8.97             | 0.88            | 7.53           | 15.62             | 38.5        | -22.88      |
| QPSK, CH20525 / 836.5MHz, Bandwidth 5MHz    |                 |                  |                 |                |                   |             |             |
| 836.5                                       | H               | 2.58             | 0.88            | 7.53           | 9.23              | 38.5        | -29.27      |
| 836.5                                       | V               | 8.85             | 0.88            | 7.53           | 15.50             | 38.5        | -23.00      |
| QPSK, CH20525 / 836.5MHz, Bandwidth 10MHz   |                 |                  |                 |                |                   |             |             |
| 836.5                                       | H               | 2.23             | 0.88            | 7.53           | 8.88              | 38.5        | -29.62      |
| 836.5                                       | V               | 8.57             | 0.88            | 7.53           | 15.22             | 38.5        | -23.28      |
| 16QAM, CH20525 / 836.5MHz, Bandwidth 1.4MHz |                 |                  |                 |                |                   |             |             |
| 836.5                                       | H               | 2.64             | 0.88            | 7.53           | 9.29              | 38.5        | -29.21      |
| 836.5                                       | V               | 9.37             | 0.88            | 7.53           | 16.02             | 38.5        | -22.48      |
| 16QAM, CH20525 / 836.5MHz, Bandwidth 3MHz   |                 |                  |                 |                |                   |             |             |
| 836.5                                       | H               | 2.46             | 0.88            | 7.53           | 9.11              | 38.5        | -29.39      |
| 836.5                                       | V               | 8.77             | 0.88            | 7.53           | 15.42             | 38.5        | -23.08      |
| 16QAM, CH20525 / 836.5MHz, Bandwidth 5MHz   |                 |                  |                 |                |                   |             |             |
| 836.5                                       | H               | 2.43             | 0.88            | 7.53           | 9.08              | 38.5        | -29.42      |
| 836.5                                       | V               | 8.73             | 0.88            | 7.53           | 15.38             | 38.5        | -23.12      |
| 16QAM, CH20525 / 836.5MHz, Bandwidth 10MHz  |                 |                  |                 |                |                   |             |             |
| 836.5                                       | H               | 1.97             | 0.88            | 7.53           | 8.62              | 38.5        | -29.88      |
| 836.5                                       | V               | 8.38             | 0.88            | 7.53           | 15.03             | 38.5        | -23.47      |

**NOTES:**

- ERP (dBm) / EIRP (dBm)=  
SG Reading (dBm) - Cable Loss (dB) + Substitute Antenna Gain (dBd/dBi)
- This unit was tested with its standard adapter.
- The EUT was tested in three orthogonal planes and in all possible test configurations and positioning.

| LTE Band5 (High Channel)                    |                 |                  |                 |                |                   |             |             |
|---------------------------------------------|-----------------|------------------|-----------------|----------------|-------------------|-------------|-------------|
| Frequency (MHz)                             | Ant. Pol. (H/V) | SG Reading (dBm) | Cable Loss (dB) | Ant Gain (dBi) | ERP Measure (dBm) | Limit (dBm) | Margin (dB) |
| QPSK, CH20643 / 848.3MHz, Bandwidth 1.4MHz  |                 |                  |                 |                |                   |             |             |
| 848.3                                       | H               | 0.54             | 0.88            | 7.54           | 7.20              | 38.5        | -31.30      |
| 848.3                                       | V               | 8.64             | 0.88            | 7.54           | 15.30             | 38.5        | -23.20      |
| QPSK, CH20635 / 847.5MHz, Bandwidth 3MHz    |                 |                  |                 |                |                   |             |             |
| 847.5                                       | H               | 0.63             | 0.88            | 7.54           | 7.29              | 38.5        | -31.21      |
| 847.5                                       | V               | 9.00             | 0.88            | 7.54           | 15.66             | 38.5        | -22.84      |
| QPSK, CH20625 / 846.5MHz, Bandwidth 5MHz    |                 |                  |                 |                |                   |             |             |
| 846.5                                       | H               | -0.30            | 0.88            | 7.54           | 6.36              | 38.5        | -32.14      |
| 846.5                                       | V               | 8.55             | 0.88            | 7.54           | 15.21             | 38.5        | -23.29      |
| QPSK, CH20600 / 844MHz, Bandwidth 10MHz     |                 |                  |                 |                |                   |             |             |
| 844                                         | H               | -1.06            | 0.88            | 7.54           | 5.60              | 38.5        | -32.90      |
| 844                                         | V               | 7.52             | 0.88            | 7.54           | 14.18             | 38.5        | -24.32      |
| 16QAM, CH20643 / 848.3MHz, Bandwidth 1.4MHz |                 |                  |                 |                |                   |             |             |
| 848.3                                       | H               | 0.32             | 0.88            | 7.54           | 6.98              | 38.5        | -31.52      |
| 848.3                                       | V               | 8.46             | 0.88            | 7.54           | 15.12             | 38.5        | -23.38      |
| 16QAM, CH20635 / 847.5MHz, Bandwidth 3MHz   |                 |                  |                 |                |                   |             |             |
| 847.5                                       | H               | 0.37             | 0.88            | 7.54           | 7.03              | 38.5        | -31.47      |
| 847.5                                       | V               | 8.85             | 0.88            | 7.54           | 15.51             | 38.5        | -22.99      |
| 16QAM, CH20625 / 846.5MHz, Bandwidth 5MHz   |                 |                  |                 |                |                   |             |             |
| 846.5                                       | H               | -0.54            | 0.88            | 7.54           | 6.12              | 38.5        | -32.38      |
| 846.5                                       | V               | 8.37             | 0.88            | 7.54           | 15.03             | 38.5        | -23.47      |
| 16QAM, CH20600 / 844MHz, Bandwidth 10MHz    |                 |                  |                 |                |                   |             |             |
| 844                                         | H               | -1.23            | 0.88            | 7.54           | 5.43              | 38.5        | -33.07      |
| 844                                         | V               | 7.36             | 0.88            | 7.54           | 14.02             | 38.5        | -24.48      |

**NOTES:**

- ERP (dBm) / EIRP (dBm)=  
SG Reading (dBm) - Cable Loss (dB) + Substitute Antenna Gain (dBd/dBi)
- This unit was tested with its standard adapter.
- The EUT was tested in three orthogonal planes and in all possible test configurations and positioning.

| LTE Band12 (Low Channel)                    |                 |                  |                 |                |                   |             |             |
|---------------------------------------------|-----------------|------------------|-----------------|----------------|-------------------|-------------|-------------|
| Frequency (MHz)                             | Ant. Pol. (H/V) | SG Reading (dBm) | Cable Loss (dB) | Ant Gain (dBi) | ERP Measure (dBm) | Limit (dBm) | Margin (dB) |
| QPSK, CH23017 / 699.7MHz, Bandwidth 1.4MHz  |                 |                  |                 |                |                   |             |             |
| 699.7                                       | H               | 8.27             | 0.84            | 7.40           | 14.83             | 34.8        | -19.97      |
| 699.7                                       | V               | 3.39             | 0.84            | 7.40           | 9.95              | 34.8        | -24.85      |
| QPSK, CH23025 / 700.5MHz, Bandwidth 3MHz    |                 |                  |                 |                |                   |             |             |
| 700.5                                       | H               | 7.43             | 0.84            | 7.40           | 13.99             | 34.8        | -20.81      |
| 700.5                                       | V               | 2.71             | 0.84            | 7.40           | 9.27              | 34.8        | -25.53      |
| QPSK, CH23035 / 701.5MHz, Bandwidth 5MHz    |                 |                  |                 |                |                   |             |             |
| 701.5                                       | H               | 7.11             | 0.84            | 7.40           | 13.67             | 34.8        | -21.13      |
| 701.5                                       | V               | 2.14             | 0.84            | 7.40           | 8.70              | 34.8        | -26.10      |
| QPSK, CH23060 / 704MHz, Bandwidth 10MHz     |                 |                  |                 |                |                   |             |             |
| 704                                         | H               | 7.29             | 0.84            | 7.40           | 13.85             | 34.8        | -20.95      |
| 704                                         | V               | 2.80             | 0.84            | 7.40           | 9.36              | 34.8        | -25.44      |
| 16QAM, CH23017 / 699.7MHz, Bandwidth 1.4MHz |                 |                  |                 |                |                   |             |             |
| 699.7                                       | H               | 8.07             | 0.84            | 7.40           | 14.63             | 34.8        | -20.17      |
| 699.7                                       | V               | 3.23             | 0.84            | 7.40           | 9.79              | 34.8        | -25.01      |
| 16QAM, CH23025 / 700.5MHz, Bandwidth 3MHz   |                 |                  |                 |                |                   |             |             |
| 700.5                                       | H               | 7.16             | 0.84            | 7.40           | 13.72             | 34.8        | -21.08      |
| 700.5                                       | V               | 2.53             | 0.84            | 7.40           | 9.09              | 34.8        | -25.71      |
| 16QAM, CH23035 / 701.5MHz, Bandwidth 5MHz   |                 |                  |                 |                |                   |             |             |
| 701.5                                       | H               | 6.94             | 0.84            | 7.40           | 13.50             | 34.8        | -21.30      |
| 701.5                                       | V               | 1.97             | 0.84            | 7.40           | 8.53              | 34.8        | -26.27      |
| 16QAM, CH23060 / 704MHz, Bandwidth 10MHz    |                 |                  |                 |                |                   |             |             |
| 704                                         | H               | 7.09             | 0.84            | 7.40           | 13.65             | 34.8        | -21.15      |
| 704                                         | V               | 2.64             | 0.84            | 7.40           | 9.20              | 34.8        | -25.60      |

**NOTES:**

- ERP (dBm) / EIRP (dBm)=  
SG Reading (dBm) - Cable Loss (dB) + Substitute Antenna Gain (dBd/dBi)
- This unit was tested with its standard adapter.
- The EUT was tested in three orthogonal planes and in all possible test configurations and positioning.

| LTE Band12 (Mid Channel)                    |                 |                  |                 |                |                   |             |             |
|---------------------------------------------|-----------------|------------------|-----------------|----------------|-------------------|-------------|-------------|
| Frequency (MHz)                             | Ant. Pol. (H/V) | SG Reading (dBm) | Cable Loss (dB) | Ant Gain (dBi) | ERP Measure (dBm) | Limit (dBm) | Margin (dB) |
| QPSK, CH23095 / 707.5MHz, Bandwidth 1.4MHz  |                 |                  |                 |                |                   |             |             |
| 707.5                                       | H               | 6.63             | 0.84            | 7.43           | 13.22             | 34.8        | -21.58      |
| 707.5                                       | V               | 2.68             | 0.84            | 7.43           | 9.27              | 34.8        | -25.53      |
| QPSK, CH23095 / 707.5MHz, Bandwidth 3MHz    |                 |                  |                 |                |                   |             |             |
| 707.5                                       | H               | 6.78             | 0.84            | 7.43           | 13.37             | 34.8        | -21.43      |
| 707.5                                       | V               | 2.31             | 0.84            | 7.43           | 8.90              | 34.8        | -25.90      |
| QPSK, CH23095 / 707.5MHz, Bandwidth 5MHz    |                 |                  |                 |                |                   |             |             |
| 707.5                                       | H               | 6.78             | 0.84            | 7.43           | 13.37             | 34.8        | -21.43      |
| 707.5                                       | V               | 2.43             | 0.84            | 7.43           | 9.02              | 34.8        | -25.78      |
| QPSK, CH23095 / 707.5MHz, Bandwidth 10MHz   |                 |                  |                 |                |                   |             |             |
| 707.5                                       | H               | 6.54             | 0.84            | 7.43           | 13.13             | 34.8        | -21.67      |
| 707.5                                       | V               | 2.05             | 0.84            | 7.43           | 8.64              | 34.8        | -26.16      |
| 16QAM, CH23095 / 707.5MHz, Bandwidth 1.4MHz |                 |                  |                 |                |                   |             |             |
| 707.5                                       | H               | 6.49             | 0.84            | 7.43           | 13.08             | 34.8        | -21.72      |
| 707.5                                       | V               | 2.53             | 0.84            | 7.43           | 9.12              | 34.8        | -25.68      |
| 16QAM, CH23095 / 707.5MHz, Bandwidth 3MHz   |                 |                  |                 |                |                   |             |             |
| 707.5                                       | H               | 6.59             | 0.84            | 7.43           | 13.18             | 34.8        | -21.62      |
| 707.5                                       | V               | 2.18             | 0.84            | 7.43           | 8.77              | 34.8        | -26.03      |
| 16QAM, CH23095 / 707.5MHz, Bandwidth 5MHz   |                 |                  |                 |                |                   |             |             |
| 707.5                                       | H               | 6.62             | 0.84            | 7.43           | 13.21             | 34.8        | -21.59      |
| 707.5                                       | V               | 2.30             | 0.84            | 7.43           | 8.89              | 34.8        | -25.91      |
| 16QAM, CH23095 / 707.5MHz, Bandwidth 10MHz  |                 |                  |                 |                |                   |             |             |
| 707.5                                       | H               | 6.50             | 0.84            | 7.43           | 13.09             | 34.8        | -21.71      |
| 707.5                                       | V               | 1.92             | 0.84            | 7.43           | 8.51              | 34.8        | -26.29      |

**NOTES:**

- ERP (dBm) / EIRP (dBm)=  
SG Reading (dBm) - Cable Loss (dB) + Substitute Antenna Gain (dBd/dBi)
- This unit was tested with its standard adapter.
- The EUT was tested in three orthogonal planes and in all possible test configurations and positioning.

| LTE Band12 (High Channel)                   |                 |                  |                 |                |                   |             |             |
|---------------------------------------------|-----------------|------------------|-----------------|----------------|-------------------|-------------|-------------|
| Frequency (MHz)                             | Ant. Pol. (H/V) | SG Reading (dBm) | Cable Loss (dB) | Ant Gain (dBi) | ERP Measure (dBm) | Limit (dBm) | Margin (dB) |
| QPSK, CH23173 / 715.3MHz, Bandwidth 1.4MHz  |                 |                  |                 |                |                   |             |             |
| 715.3                                       | H               | 6.22             | 0.84            | 7.48           | 12.86             | 34.8        | -21.94      |
| 715.3                                       | V               | 0.93             | 0.84            | 7.48           | 7.57              | 34.8        | -27.23      |
| QPSK, CH23165 / 714.5MHz, Bandwidth 3MHz    |                 |                  |                 |                |                   |             |             |
| 714.5                                       | H               | 6.15             | 0.84            | 7.48           | 12.79             | 34.8        | -22.01      |
| 714.5                                       | V               | 1.16             | 0.84            | 7.48           | 7.80              | 34.8        | -27.00      |
| QPSK, CH23155 / 713.5MHz, Bandwidth 5MHz    |                 |                  |                 |                |                   |             |             |
| 713.5                                       | H               | 5.18             | 0.84            | 7.48           | 11.82             | 34.8        | -22.98      |
| 713.5                                       | V               | 0.81             | 0.84            | 7.48           | 7.45              | 34.8        | -27.35      |
| QPSK, CH23130 / 711MHz, Bandwidth 10MHz     |                 |                  |                 |                |                   |             |             |
| 711                                         | H               | 6.37             | 0.84            | 7.48           | 13.01             | 34.8        | -21.79      |
| 711                                         | V               | 0.61             | 0.84            | 7.48           | 7.25              | 34.8        | -27.55      |
| 16QAM, CH23173 / 715.3MHz, Bandwidth 1.4MHz |                 |                  |                 |                |                   |             |             |
| 715.3                                       | H               | 6.02             | 0.84            | 7.48           | 12.66             | 34.8        | -22.14      |
| 715.3                                       | V               | 0.75             | 0.84            | 7.48           | 7.39              | 34.8        | -27.41      |
| 16QAM, CH23165 / 714.5MHz, Bandwidth 3MHz   |                 |                  |                 |                |                   |             |             |
| 714.5                                       | H               | 6.01             | 0.84            | 7.48           | 12.65             | 34.8        | -22.15      |
| 714.5                                       | V               | 1.02             | 0.84            | 7.48           | 7.66              | 34.8        | -27.14      |
| 16QAM, CH23155 / 713.5MHz, Bandwidth 5MHz   |                 |                  |                 |                |                   |             |             |
| 713.5                                       | H               | 5.13             | 0.84            | 7.48           | 11.77             | 34.8        | -23.03      |
| 713.5                                       | V               | 0.65             | 0.84            | 7.48           | 7.29              | 34.8        | -27.51      |
| 16QAM, CH23130 / 711MHz, Bandwidth 10MHz    |                 |                  |                 |                |                   |             |             |
| 711                                         | H               | 6.24             | 0.84            | 7.48           | 12.88             | 34.8        | -21.92      |
| 711                                         | V               | 0.47             | 0.84            | 7.48           | 7.11              | 34.8        | -27.69      |

**NOTES:**

- ERP (dBm) / EIRP (dBm)=  
SG Reading (dBm) - Cable Loss (dB) + Substitute Antenna Gain (dBd/dBi)
- This unit was tested with its standard adapter.
- The EUT was tested in three orthogonal planes and in all possible test configurations and positioning.



### Radiated Spurious Emission

| LTE Band2                                 |                 |                  |                 |                |                    |             |             |
|-------------------------------------------|-----------------|------------------|-----------------|----------------|--------------------|-------------|-------------|
| Frequency (MHz)                           | Ant. Pol. (H/V) | SG Reading (dBm) | Cable Loss (dB) | Ant Gain (dBi) | EIRP Measure (dBm) | Limit (dBm) | Margin (dB) |
| QPSK, CH18900 / 1880MHz, Bandwidth 1.4MHz |                 |                  |                 |                |                    |             |             |
| 3760                                      | H               | -64.77           | 1.36            | 7.95           | -58.18             | -13         | -45.18      |
| 5640                                      | H               | -58.52           | 1.79            | 10.10          | -50.21             | -13         | -37.21      |
| 7520                                      | H               | -64.33           | 1.72            | 11.72          | -54.33             | -13         | -41.33      |
| 3760                                      | V               | -62.44           | 1.36            | 7.95           | -55.85             | -13         | -42.85      |
| 5640                                      | V               | -57.80           | 1.79            | 10.10          | -49.49             | -13         | -36.49      |
| 7520                                      | V               | -65.32           | 1.72            | 11.72          | -55.32             | -13         | -42.32      |
| QPSK, CH18900 / 1880MHz, Bandwidth 3MHz   |                 |                  |                 |                |                    |             |             |
| 3760                                      | H               | -64.90           | 1.36            | 7.95           | -58.31             | -13         | -45.31      |
| 5640                                      | H               | -58.49           | 1.79            | 10.10          | -50.18             | -13         | -37.18      |
| 7520                                      | H               | -64.19           | 1.72            | 11.72          | -54.19             | -13         | -41.19      |
| 3760                                      | V               | -62.36           | 1.36            | 7.95           | -55.77             | -13         | -42.77      |
| 5640                                      | V               | -57.78           | 1.79            | 10.10          | -49.47             | -13         | -36.47      |
| 7520                                      | V               | -65.52           | 1.72            | 11.72          | -55.52             | -13         | -42.52      |
| QPSK, CH18900 / 1880MHz, Bandwidth 5MHz   |                 |                  |                 |                |                    |             |             |
| 3760                                      | H               | -64.84           | 1.36            | 7.95           | -58.25             | -13         | -45.25      |
| 5640                                      | H               | -58.61           | 1.79            | 10.10          | -50.30             | -13         | -37.30      |
| 7520                                      | H               | -64.29           | 1.72            | 11.72          | -54.29             | -13         | -41.29      |
| 3760                                      | V               | -62.50           | 1.36            | 7.95           | -55.91             | -13         | -42.91      |
| 5640                                      | V               | -57.93           | 1.79            | 10.10          | -49.62             | -13         | -36.62      |
| 7520                                      | V               | -65.44           | 1.72            | 11.72          | -55.44             | -13         | -42.44      |

Note:

- Spurious emissions within 30-1000MHz & Other harmonic were found more than 20dB below limit line.
- $EIRP \text{ or } ERP \text{ (dBm)} = SG \text{ Reading (dBm)} - Cable \text{ Loss (dB)} + Substitute \text{ Antenna Gain (dBi)}$

| LTE Band2                                |                 |                  |                 |                |                    |             |             |
|------------------------------------------|-----------------|------------------|-----------------|----------------|--------------------|-------------|-------------|
| Frequency (MHz)                          | Ant. Pol. (H/V) | SG Reading (dBm) | Cable Loss (dB) | Ant Gain (dBi) | EIRP Measure (dBm) | Limit (dBm) | Margin (dB) |
| QPSK, CH18900 / 1880MHz, Bandwidth 10MHz |                 |                  |                 |                |                    |             |             |
| 3760                                     | H               | -64.70           | 1.36            | 7.95           | -58.11             | -13         | -45.11      |
| 5640                                     | H               | -58.43           | 1.79            | 10.10          | -50.12             | -13         | -37.12      |
| 7520                                     | H               | -64.23           | 1.72            | 11.72          | -54.23             | -13         | -41.23      |
| 3760                                     | V               | -62.33           | 1.36            | 7.95           | -55.74             | -13         | -42.74      |
| 5640                                     | V               | -58.14           | 1.79            | 10.10          | -49.83             | -13         | -36.83      |
| 7520                                     | V               | -65.24           | 1.72            | 11.72          | -55.24             | -13         | -42.24      |
| QPSK, CH18900 / 1880MHz, Bandwidth 15MHz |                 |                  |                 |                |                    |             |             |
| 3760                                     | H               | -65.01           | 1.36            | 7.95           | -58.42             | -13         | -45.42      |
| 5640                                     | H               | -58.84           | 1.79            | 10.10          | -50.53             | -13         | -37.53      |
| 7520                                     | H               | -64.38           | 1.72            | 11.72          | -54.38             | -13         | -41.38      |
| 3760                                     | V               | -62.47           | 1.36            | 7.95           | -55.88             | -13         | -42.88      |
| 5640                                     | V               | -58.28           | 1.79            | 10.10          | -49.97             | -13         | -36.97      |
| 7520                                     | V               | -65.42           | 1.72            | 11.72          | -55.42             | -13         | -42.42      |
| QPSK, CH18900 / 1880MHz, Bandwidth 20MHz |                 |                  |                 |                |                    |             |             |
| 3760                                     | H               | -64.95           | 1.36            | 7.95           | -58.36             | -13         | -45.36      |
| 5640                                     | H               | -58.59           | 1.79            | 10.10          | -50.28             | -13         | -37.28      |
| 7520                                     | H               | -64.46           | 1.72            | 11.72          | -54.46             | -13         | -41.46      |
| 3760                                     | V               | -62.25           | 1.36            | 7.95           | -55.66             | -13         | -42.66      |
| 5640                                     | V               | -58.14           | 1.79            | 10.10          | -49.83             | -13         | -36.83      |
| 7520                                     | V               | -65.36           | 1.72            | 11.72          | -55.36             | -13         | -42.36      |

Note:

1. Spurious emissions within 30-1000MHz & Other harmonic were found more than 20dB below limit line.
2.  $EIRP \text{ or } ERP \text{ (dBm)} = SG \text{ Reading (dBm)} - Cable \text{ Loss (dB)} + Substitute \text{ Antenna Gain (dBi)}$

| LTE Band4                                  |                 |                  |                 |                |                    |             |             |
|--------------------------------------------|-----------------|------------------|-----------------|----------------|--------------------|-------------|-------------|
| Frequency (MHz)                            | Ant. Pol. (H/V) | SG Reading (dBm) | Cable Loss (dB) | Ant Gain (dBi) | EIRP Measure (dBm) | Limit (dBm) | Margin (dB) |
| QPSK, CH20175 /1732.5MHz, Bandwidth 1.4MHz |                 |                  |                 |                |                    |             |             |
| 3465                                       | H               | -63.69           | 1.33            | 7.65           | -57.37             | -13         | -44.37      |
| 5197.5                                     | H               | -66.14           | 1.68            | 9.88           | -57.94             | -13         | -44.94      |
| 6930                                       | H               | -62.22           | 1.81            | 11.15          | -52.88             | -13         | -39.88      |
| 3465                                       | V               | -65.09           | 1.33            | 7.65           | -58.77             | -13         | -45.77      |
| 5197.5                                     | V               | -58.73           | 1.68            | 9.88           | -50.53             | -13         | -37.53      |
| 6930                                       | V               | -61.02           | 1.81            | 11.15          | -51.68             | -13         | -38.68      |
| QPSK, CH20175 /1732.5MHz, Bandwidth 3MHz   |                 |                  |                 |                |                    |             |             |
| 3465                                       | H               | -63.93           | 1.33            | 7.65           | -57.61             | -13         | -44.61      |
| 5197.5                                     | H               | -66.14           | 1.68            | 9.88           | -57.94             | -13         | -44.94      |
| 6930                                       | H               | -62.18           | 1.81            | 11.15          | -52.84             | -13         | -39.84      |
| 3465                                       | V               | -65.27           | 1.33            | 7.65           | -58.95             | -13         | -45.95      |
| 5197.5                                     | V               | -58.97           | 1.68            | 9.88           | -50.77             | -13         | -37.77      |
| 6930                                       | V               | -61.15           | 1.81            | 11.15          | -51.81             | -13         | -38.81      |
| QPSK, CH20175 /1732.5MHz, Bandwidth 5MHz   |                 |                  |                 |                |                    |             |             |
| 3465                                       | H               | -63.81           | 1.33            | 7.65           | -57.49             | -13         | -44.49      |
| 5197.5                                     | H               | -66.07           | 1.68            | 9.88           | -57.87             | -13         | -44.87      |
| 6930                                       | H               | -62.30           | 1.81            | 11.15          | -52.96             | -13         | -39.96      |
| 3465                                       | V               | -65.15           | 1.33            | 7.65           | -58.83             | -13         | -45.83      |
| 5197.5                                     | V               | -58.89           | 1.68            | 9.88           | -50.69             | -13         | -37.69      |
| 6930                                       | V               | -61.31           | 1.81            | 11.15          | -51.97             | -13         | -38.97      |

Note:

1. Spurious emissions within 30-1000MHz & Other harmonic were found more than 20dB below limit line.
2.  $EIRP \text{ or } ERP \text{ (dBm)} = SG \text{ Reading (dBm)} - Cable \text{ Loss (dB)} + Substitute \text{ Antenna Gain (dBi)}$

| LTE Band4                                 |                 |                  |                 |                |                    |             |             |
|-------------------------------------------|-----------------|------------------|-----------------|----------------|--------------------|-------------|-------------|
| Frequency (MHz)                           | Ant. Pol. (H/V) | SG Reading (dBm) | Cable Loss (dB) | Ant Gain (dBi) | EIRP Measure (dBm) | Limit (dBm) | Margin (dB) |
| QPSK, CH20175 /1732.5MHz, Bandwidth 10MHz |                 |                  |                 |                |                    |             |             |
| 3465                                      | H               | -63.61           | 1.33            | 7.65           | -57.29             | -13         | -44.29      |
| 5197.5                                    | H               | -65.79           | 1.68            | 9.88           | -57.59             | -13         | -44.59      |
| 6930                                      | H               | -62.10           | 1.81            | 11.15          | -52.76             | -13         | -39.76      |
| 3465                                      | V               | -65.00           | 1.33            | 7.65           | -58.68             | -13         | -45.68      |
| 5197.5                                    | V               | -58.64           | 1.68            | 9.88           | -50.44             | -13         | -37.44      |
| 6930                                      | V               | -61.07           | 1.81            | 11.15          | -51.73             | -13         | -38.73      |
| QPSK, CH20175 /1732.5MHz, Bandwidth 15MHz |                 |                  |                 |                |                    |             |             |
| 3465                                      | H               | -63.67           | 1.33            | 7.65           | -57.35             | -13         | -44.35      |
| 5197.5                                    | H               | -65.81           | 1.68            | 9.88           | -57.61             | -13         | -44.61      |
| 6930                                      | H               | -62.18           | 1.81            | 11.15          | -52.84             | -13         | -39.84      |
| 3465                                      | V               | -65.11           | 1.33            | 7.65           | -58.79             | -13         | -45.79      |
| 5197.5                                    | V               | -58.71           | 1.68            | 9.88           | -50.51             | -13         | -37.51      |
| 6930                                      | V               | -61.17           | 1.81            | 11.15          | -51.83             | -13         | -38.83      |
| QPSK, CH20175 /1732.5MHz, Bandwidth 20MHz |                 |                  |                 |                |                    |             |             |
| 3465                                      | H               | -64.85           | 1.33            | 7.65           | -58.53             | -13         | -45.53      |
| 5197.5                                    | H               | -66.17           | 1.68            | 9.88           | -57.97             | -13         | -44.97      |
| 6930                                      | H               | -62.27           | 1.81            | 11.15          | -52.93             | -13         | -39.93      |
| 3465                                      | V               | -65.26           | 1.33            | 7.65           | -58.94             | -13         | -45.94      |
| 5197.5                                    | V               | -58.99           | 1.68            | 9.88           | -50.79             | -13         | -37.79      |
| 6930                                      | V               | -61.33           | 1.81            | 11.15          | -51.99             | -13         | -38.99      |

Note:

1. Spurious emissions within 30-1000MHz & Other harmonic were found more than 20dB below limit line.
2.  $EIRP \text{ or } ERP \text{ (dBm)} = SG \text{ Reading (dBm)} - Cable \text{ Loss (dB)} + Substitute \text{ Antenna Gain (dBi)}$

| LTE Band5                                  |                 |                  |                 |                |                   |             |             |
|--------------------------------------------|-----------------|------------------|-----------------|----------------|-------------------|-------------|-------------|
| Frequency (MHz)                            | Ant. Pol. (H/V) | SG Reading (dBm) | Cable Loss (dB) | Ant Gain (dBi) | ERP Measure (dBm) | Limit (dBm) | Margin (dB) |
| QPSK, CH20525 / 836.5MHz, Bandwidth 1.4MHz |                 |                  |                 |                |                   |             |             |
| 1673                                       | H               | -63.25           | 1.05            | 5.02           | -59.28            | -13         | -46.28      |
| 2509.5                                     | H               | -63.23           | 1.14            | 5.64           | -58.73            | -13         | -45.73      |
| 3346                                       | H               | -66.31           | 1.32            | 7.12           | -60.51            | -13         | -47.51      |
| 1673                                       | V               | -62.25           | 1.05            | 5.02           | -58.28            | -13         | -45.28      |
| 2509.5                                     | V               | -60.49           | 1.14            | 5.64           | -55.99            | -13         | -42.99      |
| 3346                                       | V               | -64.67           | 1.32            | 7.12           | -58.87            | -13         | -45.87      |
| QPSK, CH20525 / 836.5MHz, Bandwidth 3MHz   |                 |                  |                 |                |                   |             |             |
| 1673                                       | H               | -63.03           | 1.05            | 5.02           | -59.06            | -13         | -46.06      |
| 2509.5                                     | H               | -62.91           | 1.14            | 5.64           | -58.41            | -13         | -45.41      |
| 3346                                       | H               | -65.91           | 1.32            | 7.12           | -60.11            | -13         | -47.11      |
| 1673                                       | V               | -61.98           | 1.05            | 5.02           | -58.01            | -13         | -45.01      |
| 2509.5                                     | V               | -60.22           | 1.14            | 5.64           | -55.72            | -13         | -42.72      |
| 3346                                       | V               | -64.39           | 1.32            | 7.12           | -58.59            | -13         | -45.59      |

Note:

1. Spurious emissions within 30-1000MHz & Other harmonic were found more than 20dB below limit line.
2. EIRP or ERP (dBm) = SG Reading (dBm) - Cable Loss (dB) + Substitute Antenna Gain (dBi)

| LTE Band5                                 |                 |                  |                 |                |                   |             |             |
|-------------------------------------------|-----------------|------------------|-----------------|----------------|-------------------|-------------|-------------|
| Frequency (MHz)                           | Ant. Pol. (H/V) | SG Reading (dBm) | Cable Loss (dB) | Ant Gain (dBi) | ERP Measure (dBm) | Limit (dBm) | Margin (dB) |
| QPSK, CH20525 / 836.5MHz, Bandwidth 5MHz  |                 |                  |                 |                |                   |             |             |
| 1673                                      | H               | -63.08           | 1.05            | 5.02           | -59.11            | -13         | -46.11      |
| 2509.5                                    | H               | -63.06           | 1.14            | 5.64           | -58.56            | -13         | -45.56      |
| 3346                                      | H               | -66.16           | 1.32            | 7.12           | -60.36            | -13         | -47.36      |
| 1673                                      | V               | -62.12           | 1.05            | 5.02           | -58.15            | -13         | -45.15      |
| 2509.5                                    | V               | -60.42           | 1.14            | 5.64           | -55.92            | -13         | -42.92      |
| 3346                                      | V               | -64.56           | 1.32            | 7.12           | -58.76            | -13         | -45.76      |
| QPSK, CH20525 / 836.5MHz, Bandwidth 10MHz |                 |                  |                 |                |                   |             |             |
| 1673                                      | H               | -63.29           | 1.05            | 5.02           | -59.32            | -13         | -46.32      |
| 2509.5                                    | H               | -63.28           | 1.14            | 5.64           | -58.78            | -13         | -45.78      |
| 3346                                      | H               | -66.43           | 1.32            | 7.12           | -60.63            | -13         | -47.63      |
| 1673                                      | V               | -62.36           | 1.05            | 5.02           | -58.39            | -13         | -45.39      |
| 2509.5                                    | V               | -60.27           | 1.14            | 5.64           | -55.77            | -13         | -42.77      |
| 3346                                      | V               | -64.68           | 1.32            | 7.12           | -58.88            | -13         | -45.88      |

Note:

1. Spurious emissions within 30-1000MHz & Other harmonic were found more than 20dB below limit line.
2. EIRP or ERP (dBm) = SG Reading (dBm) - Cable Loss (dB) + Substitute Antenna Gain (dBi)

| LTE Band12                                 |                 |                  |                 |                |                   |             |             |
|--------------------------------------------|-----------------|------------------|-----------------|----------------|-------------------|-------------|-------------|
| Frequency (MHz)                            | Ant. Pol. (H/V) | SG Reading (dBm) | Cable Loss (dB) | Ant Gain (dBi) | ERP Measure (dBm) | Limit (dBm) | Margin (dB) |
| QPSK, CH23095 / 707.5MHz, Bandwidth 1.4MHz |                 |                  |                 |                |                   |             |             |
| 1415                                       | H               | -44.65           | 1.02            | 4.75           | -40.92            | -13         | -27.92      |
| 2122.5                                     | H               | -58.03           | 1.16            | 4.74           | -54.45            | -13         | -41.45      |
| 2830                                       | H               | -45.78           | 1.27            | 6.44           | -40.61            | -13         | -27.61      |
| 1415                                       | V               | -46.54           | 1.02            | 4.75           | -42.81            | -13         | -29.81      |
| 2122.5                                     | V               | -54.21           | 1.16            | 4.74           | -50.63            | -13         | -37.63      |
| 2830                                       | V               | -53.80           | 1.27            | 6.44           | -48.63            | -13         | -35.63      |
| QPSK, CH23095 / 707.5MHz, Bandwidth 3MHz   |                 |                  |                 |                |                   |             |             |
| 1415                                       | H               | -44.66           | 1.02            | 4.75           | -40.93            | -13         | -27.93      |
| 2122.5                                     | H               | -58.13           | 1.16            | 4.74           | -54.55            | -13         | -41.55      |
| 2830                                       | H               | -45.88           | 1.27            | 6.44           | -40.71            | -13         | -27.71      |
| 1415                                       | V               | -46.61           | 1.02            | 4.75           | -42.88            | -13         | -29.88      |
| 2122.5                                     | V               | -54.24           | 1.16            | 4.74           | -50.66            | -13         | -37.66      |
| 2830                                       | V               | -53.68           | 1.27            | 6.44           | -48.51            | -13         | -35.51      |

Note:

1. Spurious emissions within 30-1000MHz & Other harmonic were found more than 20dB below limit line.
2. EIRP or ERP (dBm) = SG Reading (dBm) - Cable Loss (dB) + Substitute Antenna Gain (dBi)

| LTE Band12                                |                 |                  |                 |                |                   |             |             |
|-------------------------------------------|-----------------|------------------|-----------------|----------------|-------------------|-------------|-------------|
| Frequency (MHz)                           | Ant. Pol. (H/V) | SG Reading (dBm) | Cable Loss (dB) | Ant Gain (dBi) | ERP Measure (dBm) | Limit (dBm) | Margin (dB) |
| QPSK, CH23095 / 707.5MHz, Bandwidth 5MHz  |                 |                  |                 |                |                   |             |             |
| 1415                                      | H               | -44.47           | 1.02            | 4.75           | -40.74            | -13         | -27.74      |
| 2122.5                                    | H               | -57.82           | 1.16            | 4.74           | -54.24            | -13         | -41.24      |
| 2830                                      | H               | -45.51           | 1.27            | 6.44           | -40.34            | -13         | -27.34      |
| 1415                                      | V               | -46.38           | 1.02            | 4.75           | -42.65            | -13         | -29.65      |
| 2122.5                                    | V               | -54.04           | 1.16            | 4.74           | -50.46            | -13         | -37.46      |
| 2830                                      | V               | -53.44           | 1.27            | 6.44           | -48.27            | -13         | -35.27      |
| QPSK, CH23095 / 707.5MHz, Bandwidth 10MHz |                 |                  |                 |                |                   |             |             |
| 1415                                      | H               | -44.28           | 1.02            | 4.75           | -40.55            | -13         | -27.55      |
| 2122.5                                    | H               | -57.68           | 1.16            | 4.74           | -54.10            | -13         | -41.10      |
| 2830                                      | H               | -45.32           | 1.27            | 6.44           | -40.15            | -13         | -27.15      |
| 1415                                      | V               | -46.15           | 1.02            | 4.75           | -42.42            | -13         | -29.42      |
| 2122.5                                    | V               | -53.86           | 1.16            | 4.74           | -50.28            | -13         | -37.28      |
| 2830                                      | V               | -53.20           | 1.27            | 6.44           | -48.03            | -13         | -35.03      |

Note:

1. Spurious emissions within 30-1000MHz & Other harmonic were found more than 20dB below limit line.
2. EIRP or ERP (dBm) = SG Reading (dBm) - Cable Loss (dB) + Substitute Antenna Gain (dBi)



## 7.6. Peak-Average Ratio

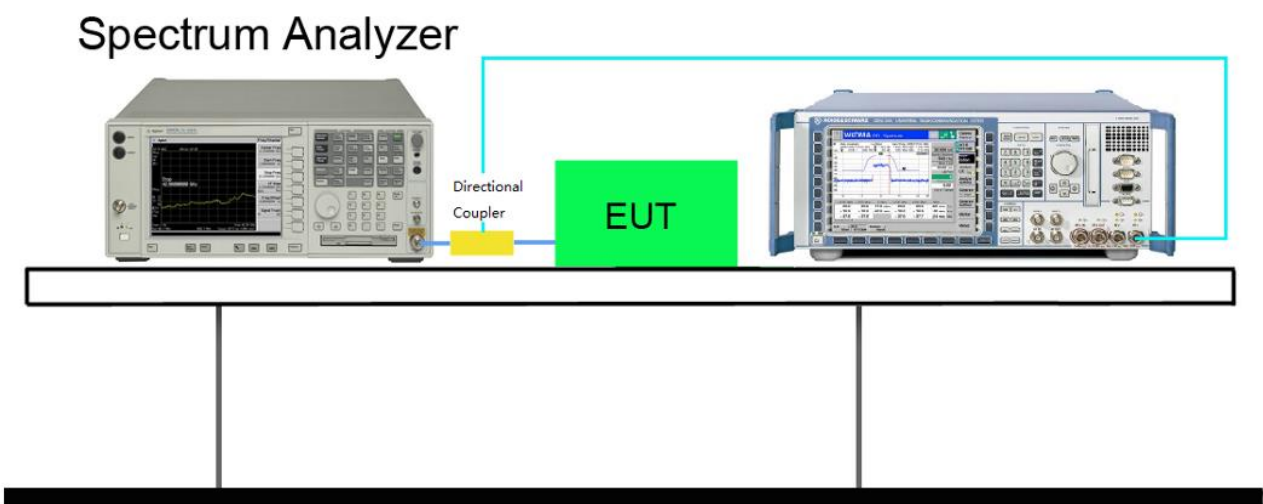
### 7.6.1 Test Limit

The transmitter's peak-to-average power ratio (PAPR) shall not exceed 13 dB for more than 0.1% of the time using a signal corresponding to the highest PAPR during periods of continuous transmission.

### 7.6.2 Test Procedure

KDB 971168 D01v03r01 - Section 5.7 & ANSI/TIA-603-E-2016

### 7.6.3 Test Setup



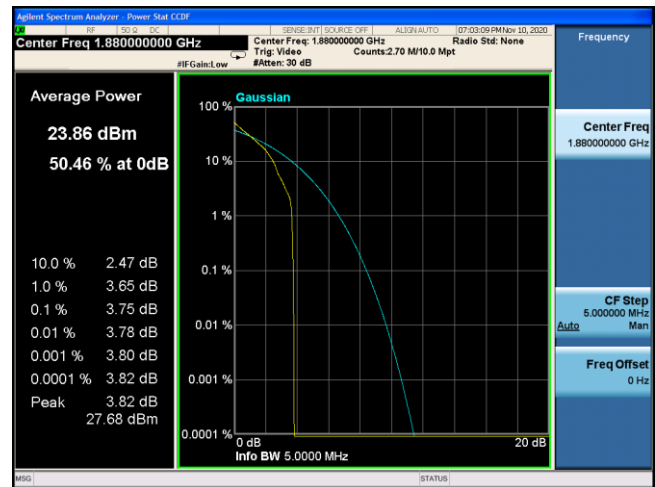
#### 7.6.4 Test Result

| Test Mode  | Modulation | Channel/<br>Frequency<br>(MHz) | Bandwidth<br>(MHz) | RB Size | RB Offset | Test<br>Result |
|------------|------------|--------------------------------|--------------------|---------|-----------|----------------|
| LTE Band 2 | QPSK       | CH18900/1880MHz                | 1.4                | 1       | 2         | Pass           |
|            |            |                                | 3                  | 1       | 7         | Pass           |
|            |            |                                | 5                  | 1       | 12        | Pass           |
|            |            |                                | 10                 | 1       | 25        | Pass           |
|            |            |                                | 15                 | 1       | 36        | Pass           |
|            |            |                                | 20                 | 1       | 49        | Pass           |
|            | 16QAM      |                                | 1.4                | 1       | 2         | Pass           |
|            |            |                                | 3                  | 1       | 7         | Pass           |
|            |            |                                | 5                  | 1       | 12        | Pass           |
|            |            |                                | 10                 | 1       | 25        | Pass           |
|            |            |                                | 15                 | 1       | 36        | Pass           |
|            |            |                                | 20                 | 1       | 49        | Pass           |

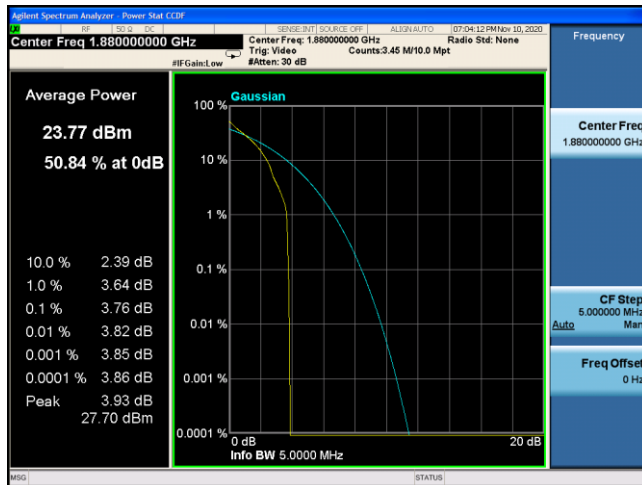
### LTE Band 2 QPSK 1.4MHz CH18900 1RB#2



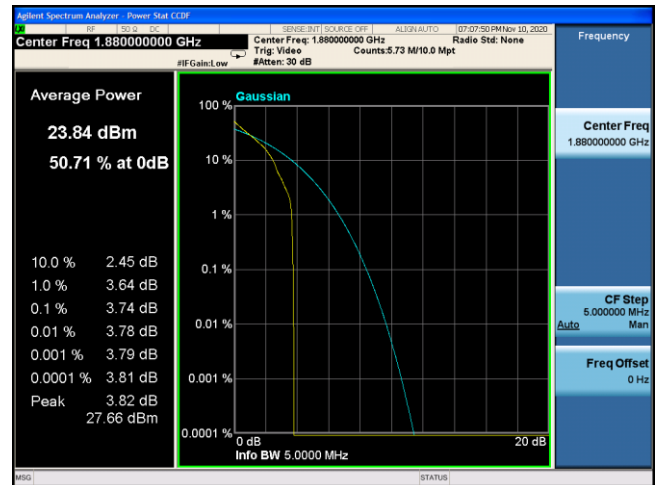
### LTE Band 2 QPSK 3MHz CH18900 1RB#7



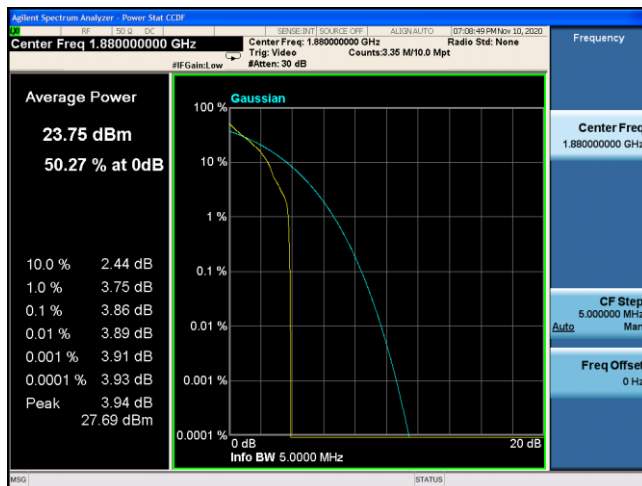
### LTE Band 2 QPSK 5MHz CH18900 1RB#12



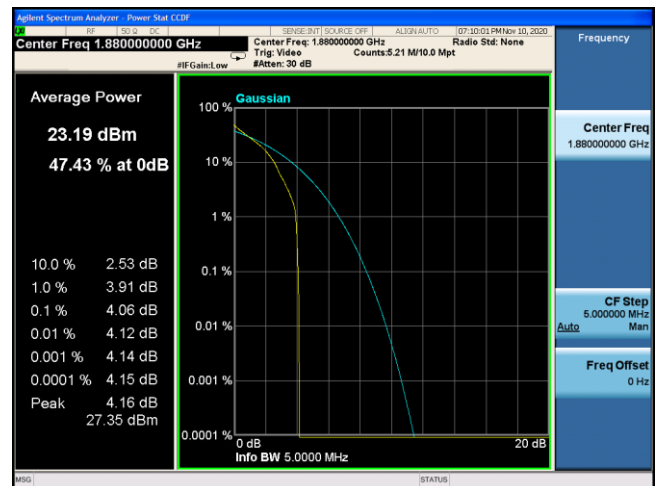
### LTE Band 2 QPSK 10MHz CH18900 1RB#25



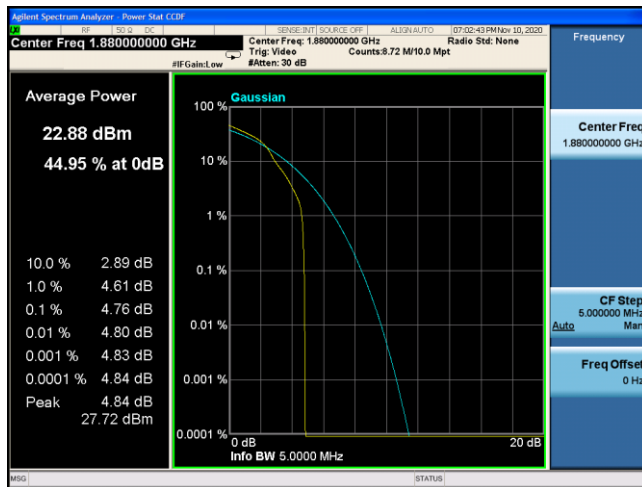
### LTE Band 2 QPSK 15MHz CH18900 1RB#36



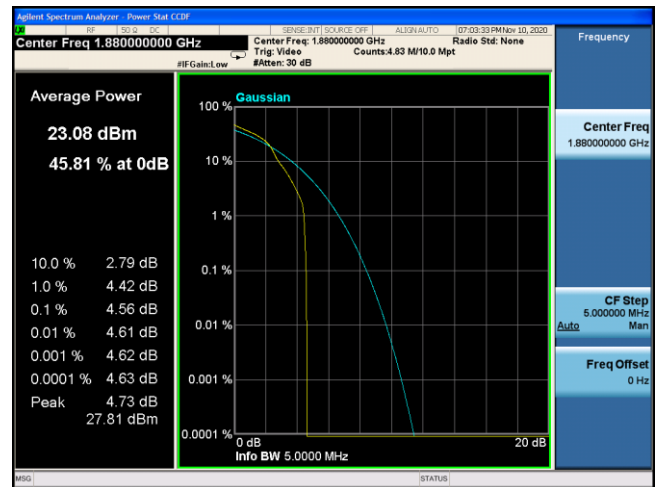
### LTE Band 2 QPSK 20MHz CH18900 1RB#49



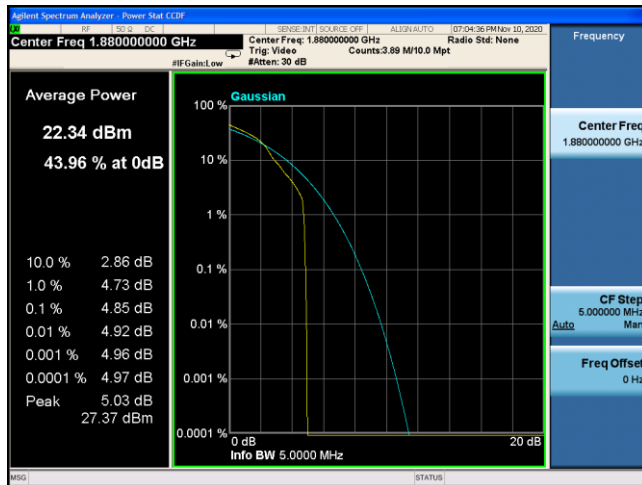
### LTE Band 2 16QAM 1.4MHz CH18900 1RB#2



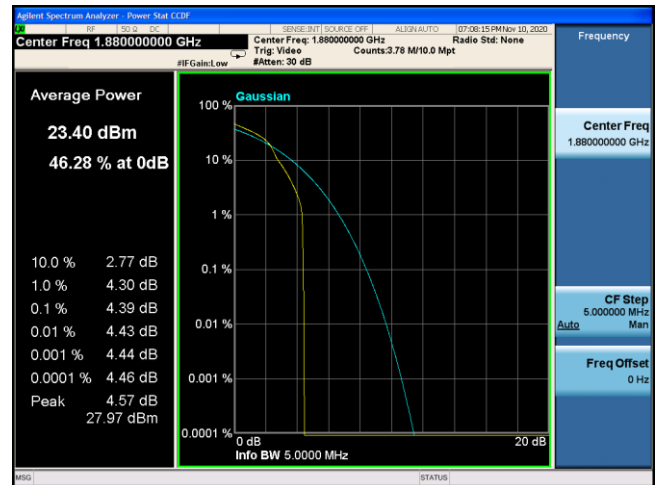
### LTE Band 2 16QAM 3MHz CH18900 1RB#7



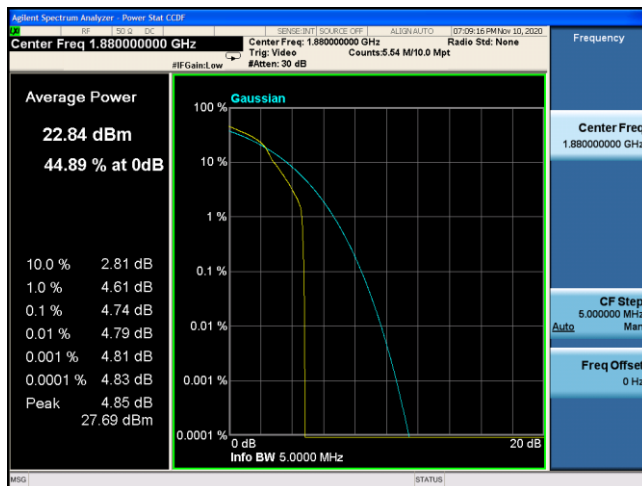
### LTE Band 2 16QAM 5MHz CH18900 1RB#12



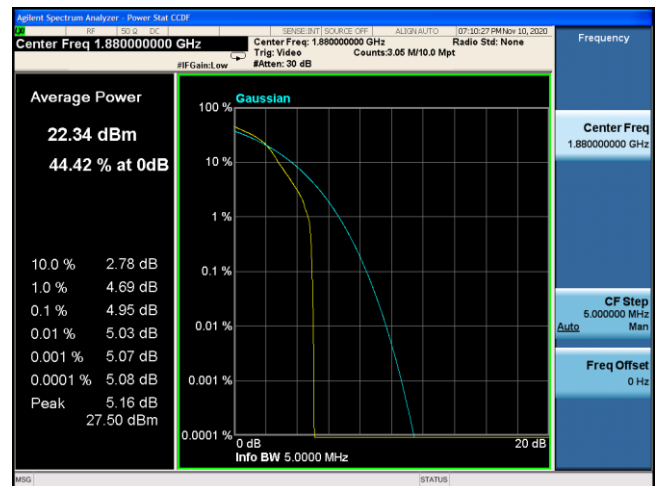
### LTE Band 2 16QAM 10MHz CH18900 1RB#25



### LTE Band 2 16QAM 15MHz CH18900 1RB#36



### LTE Band 2 16QAM 20MHz CH18900 1RB#49

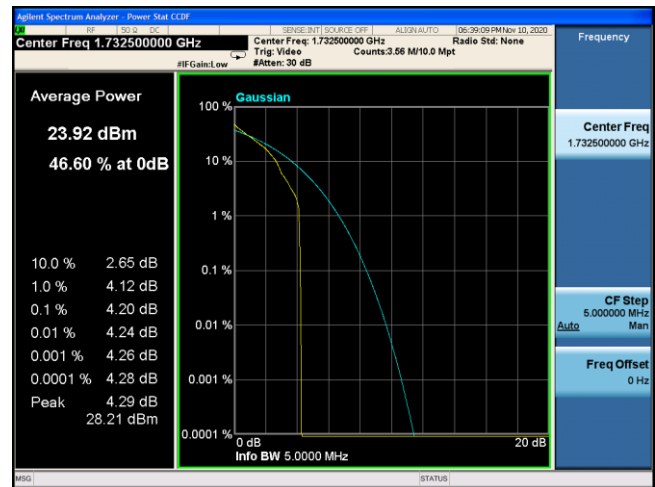


| Test Mode  | Modulation | Channel/<br>Frequency<br>(MHz) | Bandwidth<br>(MHz) | RB Size | RB Offset | Test<br>Result |
|------------|------------|--------------------------------|--------------------|---------|-----------|----------------|
| LTE Band 4 | QPSK       | CH20175 / 1732.5MHz            | 1.4                | 1       | 2         | Pass           |
|            |            |                                | 3                  | 1       | 7         | Pass           |
|            |            |                                | 5                  | 1       | 12        | Pass           |
|            |            |                                | 10                 | 1       | 25        | Pass           |
|            |            |                                | 15                 | 1       | 36        | Pass           |
|            |            |                                | 20                 | 1       | 49        | Pass           |
|            | 16QAM      |                                | 1.4                | 1       | 2         | Pass           |
|            |            |                                | 3                  | 1       | 7         | Pass           |
|            |            |                                | 5                  | 1       | 12        | Pass           |
|            |            |                                | 10                 | 1       | 25        | Pass           |
|            |            |                                | 15                 | 1       | 36        | Pass           |
|            |            |                                | 20                 | 1       | 49        | Pass           |

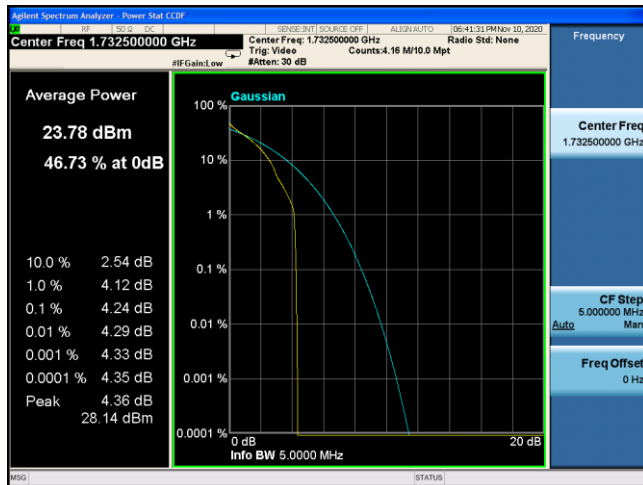
### LTE Band 4 QPSK 1.4MHz CH20175 1RB#2



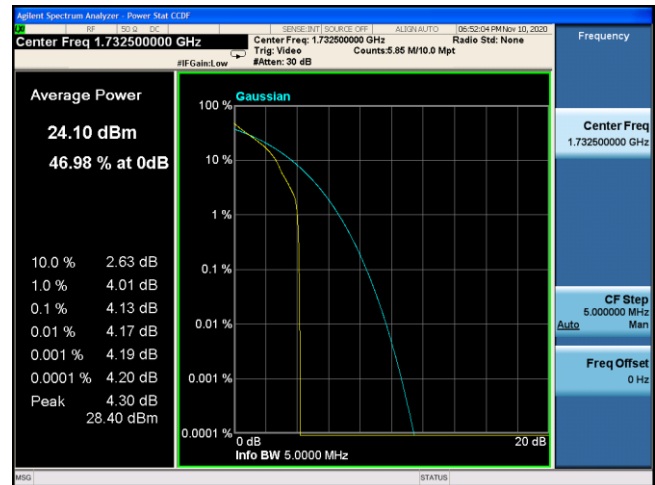
### LTE Band 4 QPSK 3MHz CH20175 1RB#7



### LTE Band 4 QPSK 5MHz CH20175 1RB#12



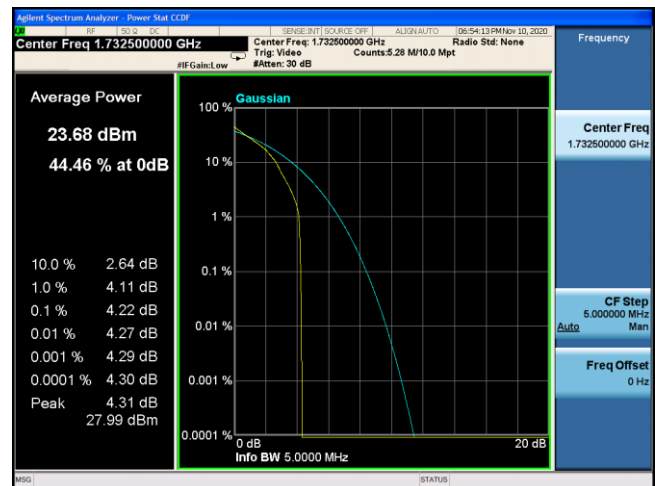
### LTE Band 4 QPSK 10MHz CH20175 1RB#25



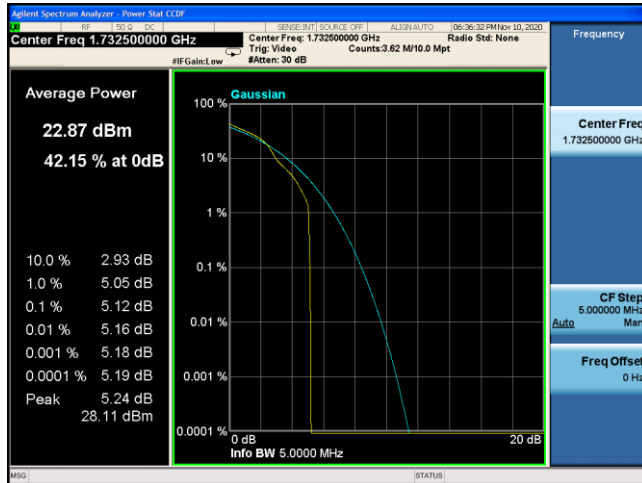
### LTE Band 4 QPSK 15MHz CH20175 1RB#36



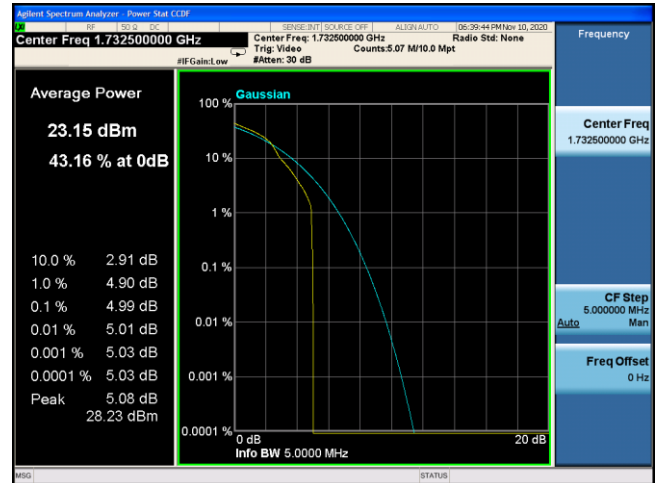
### LTE Band 4 QPSK 20MHz CH20175 1RB#49



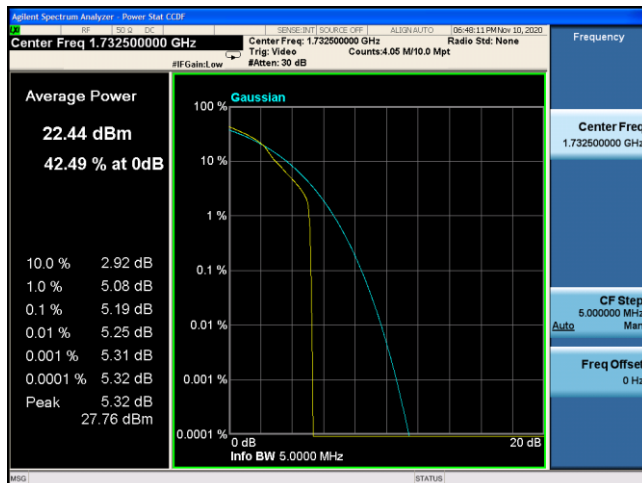
### LTE Band 4 16QAM 1.4MHz CH20175 1RB#2



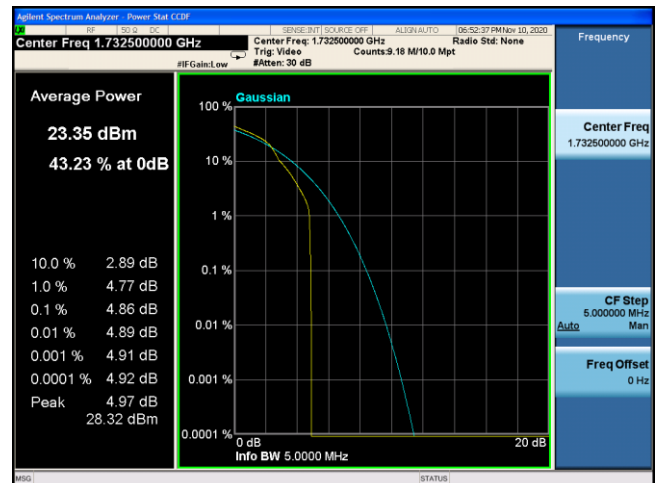
### LTE Band 4 16QAM 3MHz CH20175 1RB#7



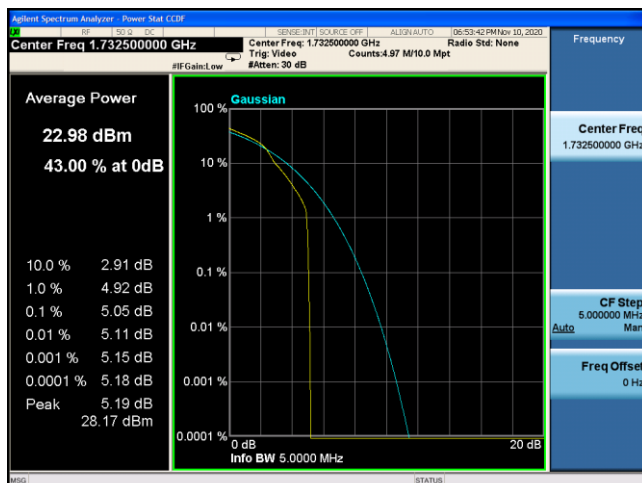
### LTE Band 4 16QAM 5MHz CH20175 1RB#12



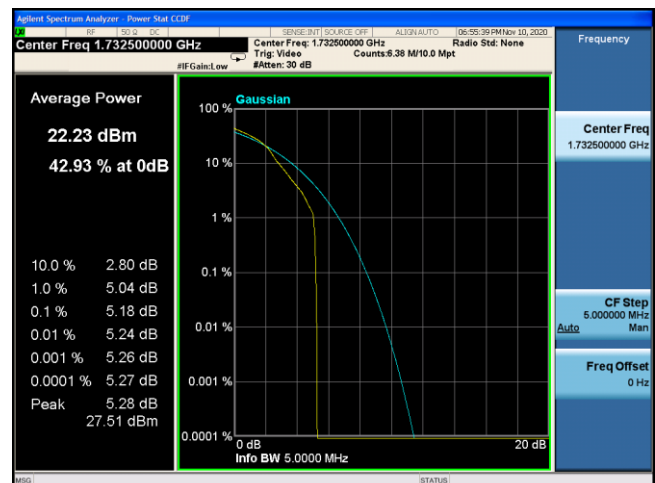
### LTE Band 4 16QAM 10MHz CH20175 1RB#25



### LTE Band 4 16QAM 15MHz CH20175 1RB#36



### LTE Band 4 16QAM 20MHz CH20175 1RB#49



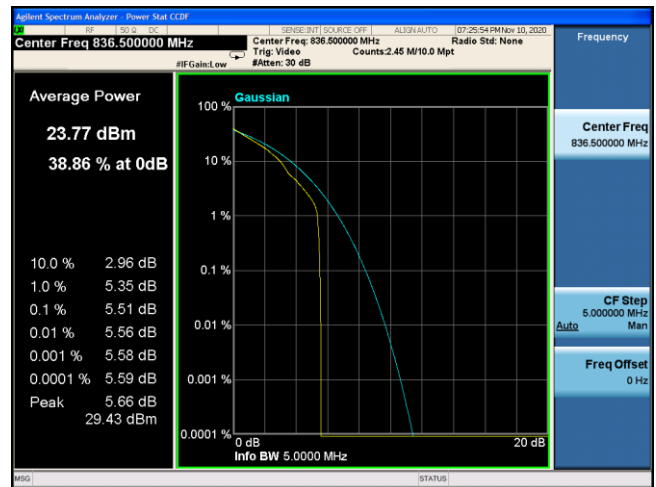
| Test Mode  | Modulation | Channel/<br>Frequency<br>(MHz) | Bandwidth<br>(MHz) | RB Size | RB Offset | Test<br>Result |
|------------|------------|--------------------------------|--------------------|---------|-----------|----------------|
| LTE Band 5 | QPSK       | CH20525 / 836.5MHz             | 1.4                | 1       | 2         | Pass           |
|            |            |                                | 3                  | 1       | 7         | Pass           |
|            |            |                                | 5                  | 1       | 12        | Pass           |
|            |            |                                | 10                 | 1       | 25        | Pass           |
|            | 16QAM      |                                | 1.4                | 1       | 2         | Pass           |
|            |            |                                | 3                  | 1       | 7         | Pass           |
|            |            |                                | 5                  | 1       | 12        | Pass           |
|            |            |                                | 10                 | 1       | 25        | Pass           |



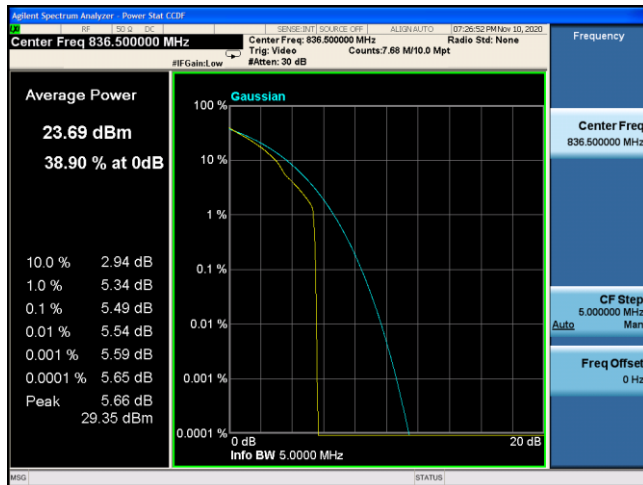
### LTE Band 5 QPSK 1.4MHz CH20525 1RB#2



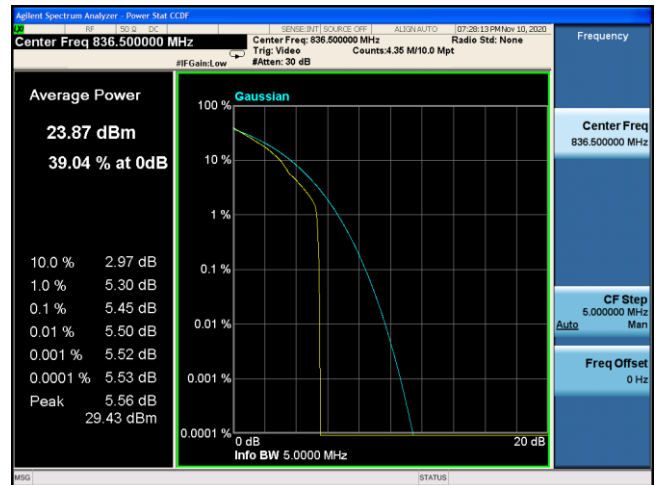
### LTE Band 5 QPSK 3MHz CH20525 1RB#7



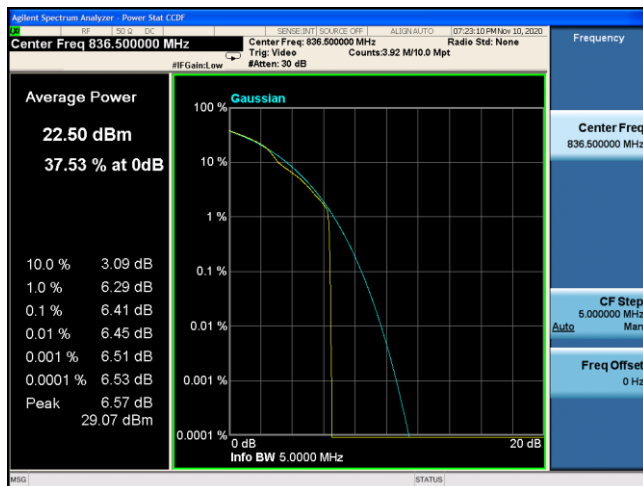
### LTE Band 5 QPSK 5MHz CH20525 1RB#12



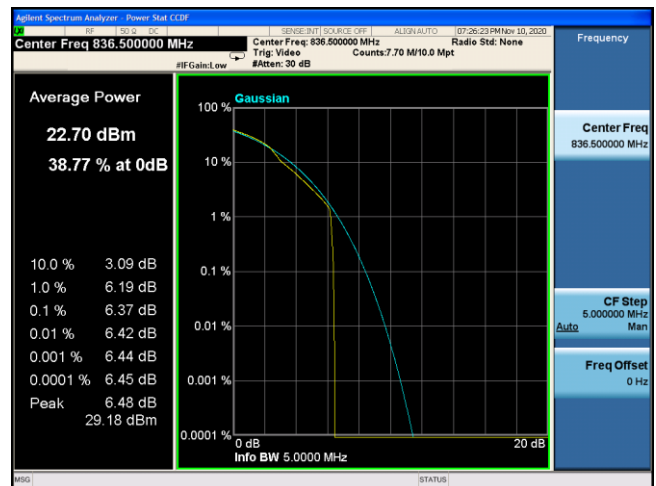
### LTE Band 5 QPSK 10MHz CH20525 1RB#25



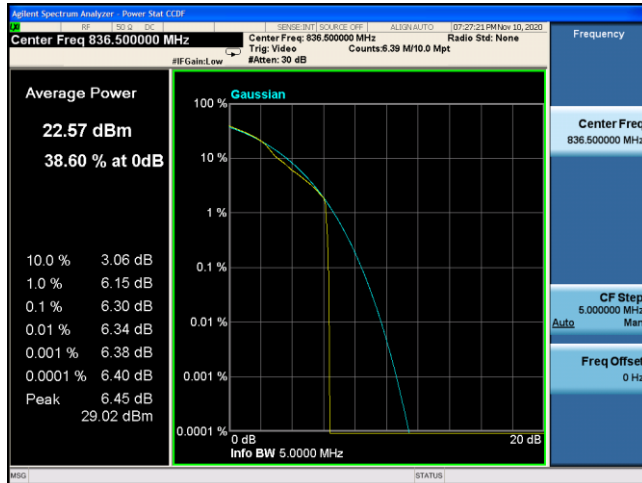
### LTE Band 5 16QAM 1.4MHz CH20525 1RB#2



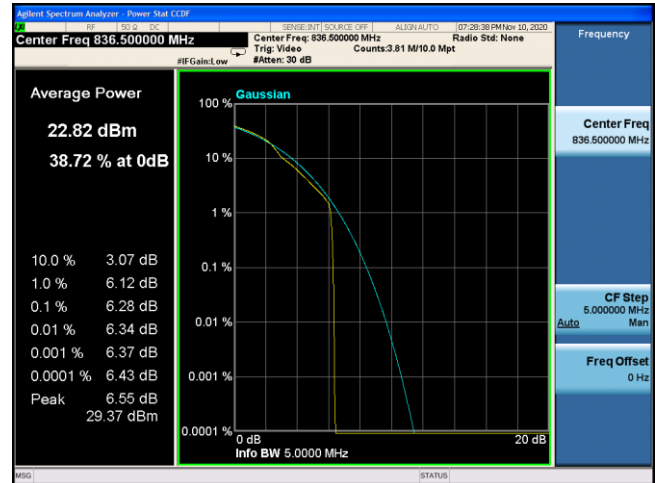
### LTE Band 5 16QAM 3MHz CH20525 1RB#7



### LTE Band 5 16QAM 5MHz CH20525 1RB#12



### LTE Band 5 16QAM 10MHz CH20525 1RB#25

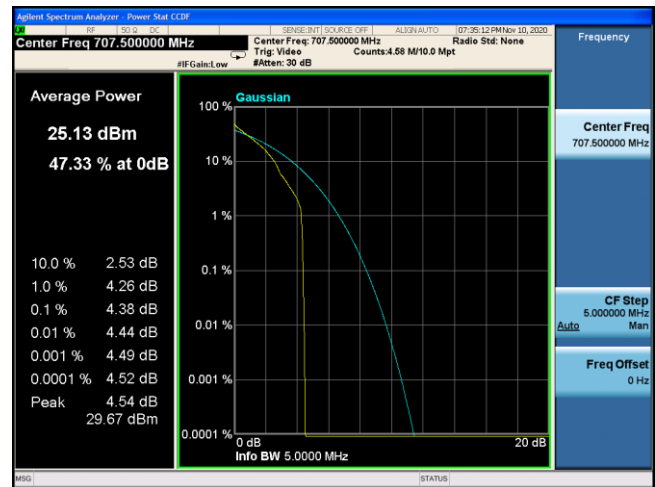


| Test Mode   | Modulation | Channel/<br>Frequency<br>(MHz) | Bandwidth<br>(MHz) | RB Size | RB Offset | Test<br>Result |
|-------------|------------|--------------------------------|--------------------|---------|-----------|----------------|
| LTE Band 12 | QPSK       | CH23095 / 707.5MHz             | 1.4                | 1       | 2         | Pass           |
|             |            |                                | 3                  | 1       | 7         | Pass           |
|             |            |                                | 5                  | 1       | 12        | Pass           |
|             |            |                                | 10                 | 1       | 25        | Pass           |
|             | 16QAM      |                                | 1.4                | 1       | 2         | Pass           |
|             |            |                                | 3                  | 1       | 7         | Pass           |
|             |            |                                | 5                  | 1       | 12        | Pass           |
|             |            |                                | 10                 | 1       | 25        | Pass           |

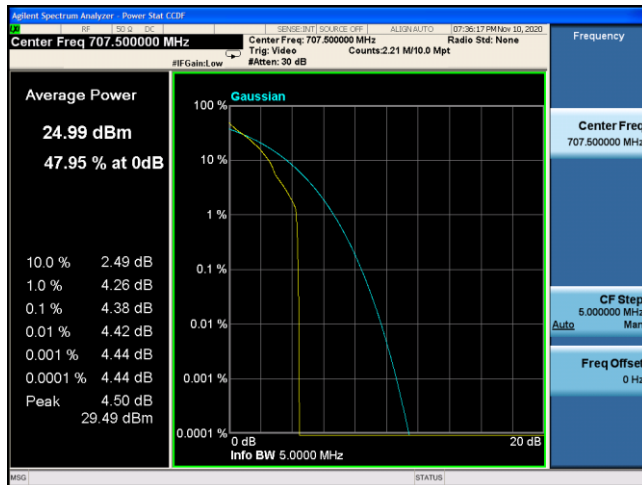
### LTE Band 12 QPSK 1.4MHz CH23095 1RB#2



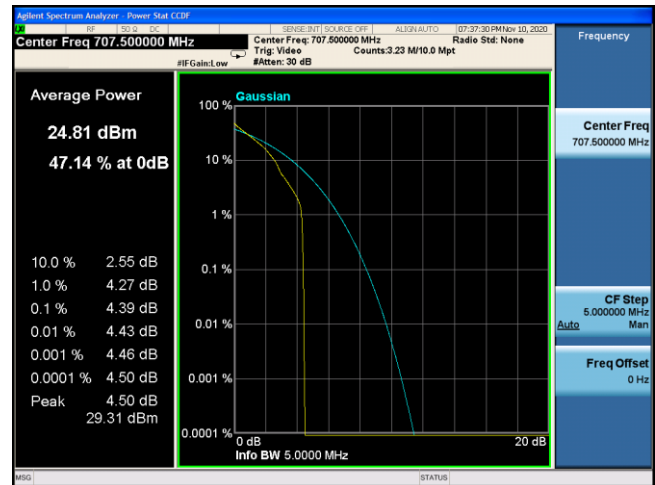
### LTE Band 12 QPSK 3MHz CH23095 1RB#7



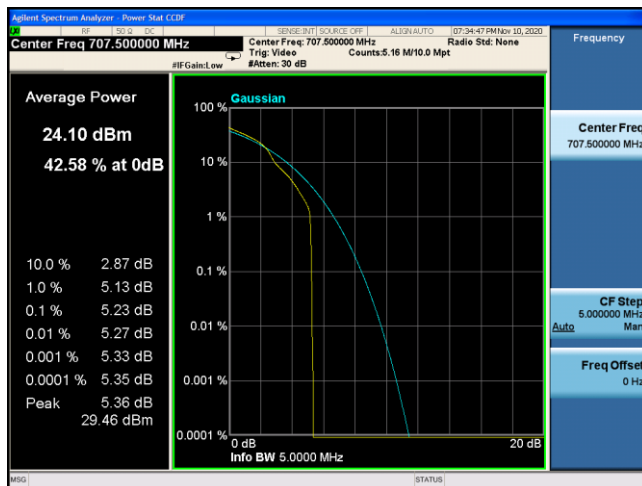
### LTE Band 12 QPSK 5MHz CH23095 1RB#12



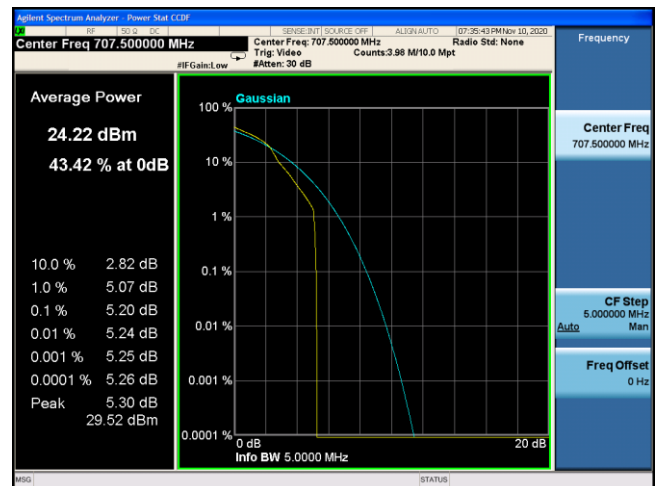
### LTE Band 12 QPSK 10MHz CH23095 1RB#25



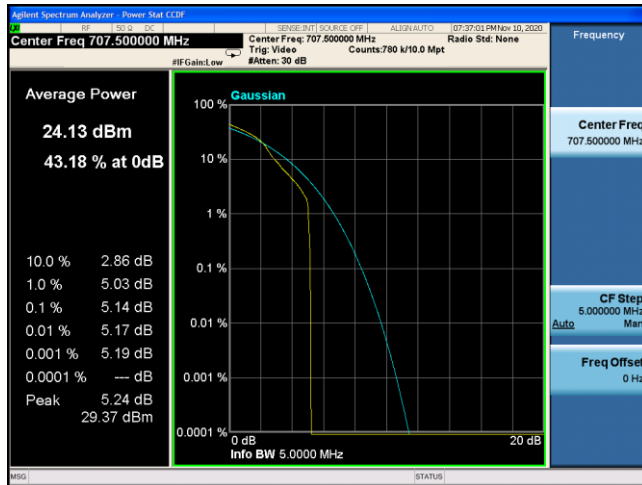
### LTE Band 12 16QAM 1.4MHz CH23095 1RB#2



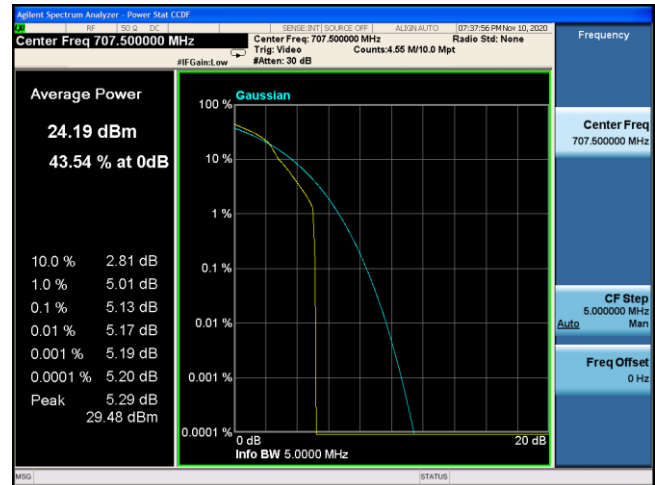
### LTE Band 12 16QAM 3MHz CH23095 1RB#7



### LTE Band 12 16QAM 5MHz CH23095 1RB#12



### LTE Band 12 16QAM 10MHz CH23095 1RB#25



## 7.7. Frequency Stability Under Temperature & Voltage Variations

### 7.7.1 Test Limit

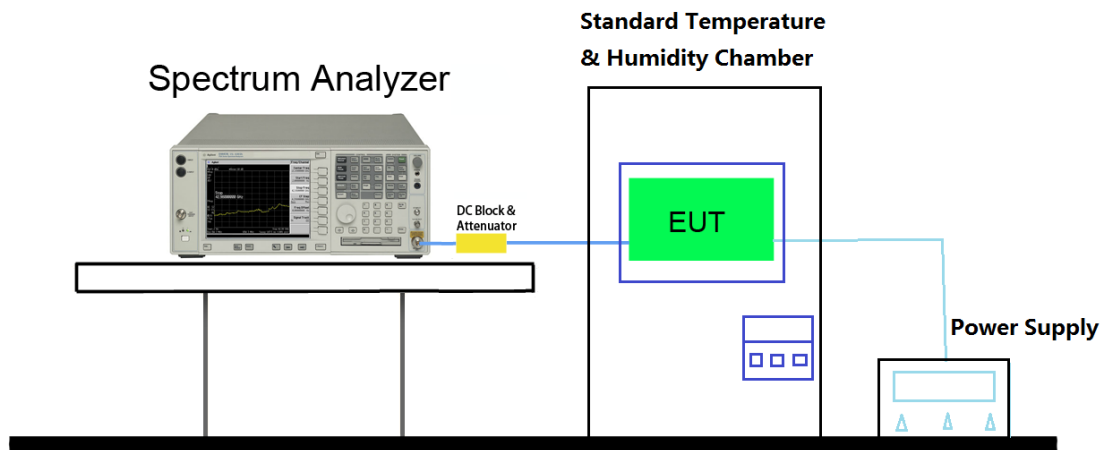
The frequency stability shall be sufficient to ensure that the fundamental emission stays within the authorized frequency block.

|       |                 |
|-------|-----------------|
| Limit | $< \pm 2.5$ ppm |
|-------|-----------------|

### 7.7.2 Test Procedure

KDB 971168 D01v03r01 - Section 9.0 & ANSI/TIA-603-E-2016

### 7.7.3 Test Setup



#### 7.7.4 Test Result

|                     |              |
|---------------------|--------------|
| Operating Frequency | 1880MHz      |
| Channel             | CH18900      |
| Test Mode           | LTE Band 2   |
| Reference Voltage   | AC 120V/60Hz |

| Temperature vs. Frequency Stability |             |            |                          |                         |                           |             |
|-------------------------------------|-------------|------------|--------------------------|-------------------------|---------------------------|-------------|
| Voltage (%)                         | Power (VAC) | Temp (°C)  | Declared Frequency (MHz) | Measured Frequency (Hz) | Frequency Tolerance (ppm) | Limit (ppm) |
| 100%                                | 120V/60Hz   | -30        | 1880                     | -7.70                   | -0.004                    | ±2.5        |
|                                     |             | -20        | 1880                     | -7.48                   | -0.004                    | ±2.5        |
|                                     |             | -10        | 1880                     | -10.09                  | -0.005                    | ±2.5        |
|                                     |             | 0          | 1880                     | -9.31                   | -0.005                    | ±2.5        |
|                                     |             | 10         | 1880                     | -7.67                   | -0.004                    | ±2.5        |
|                                     |             | + 20 (Ref) | 1880                     | -8.43                   | -0.004                    | ±2.5        |
|                                     |             | 30         | 1880                     | -10.49                  | -0.006                    | ±2.5        |
|                                     |             | 40         | 1880                     | -10.44                  | -0.006                    | ±2.5        |
|                                     |             | 50         | 1880                     | -12.16                  | -0.006                    | ±2.5        |
| Voltage vs. Frequency Stability     |             |            |                          |                         |                           |             |
| Voltage (%)                         | Power (VAC) | Temp (°C)  | Declared Frequency (MHz) | Measured Frequency (Hz) | Frequency Tolerance (ppm) | Limit (ppm) |
| 100%                                | 120V/60Hz   | 20         | 1880                     | -10.81                  | -0.006                    | ±2.5        |
| 115%                                | 138V/60Hz   | 20         | 1880                     | -10.69                  | -0.006                    | ±2.5        |
| 85%                                 | 102V/60Hz   | 20         | 1880                     | -9.80                   | -0.005                    | ±2.5        |

|                     |              |
|---------------------|--------------|
| Operating Frequency | 1732.6MHz    |
| Channel             | CH20175      |
| Test Mode           | LTE Band 4   |
| Reference Voltage   | AC 120V/60Hz |

| Temperature vs. Frequency Stability |             |            |                          |                         |                           |             |
|-------------------------------------|-------------|------------|--------------------------|-------------------------|---------------------------|-------------|
| Voltage (%)                         | Power (VAC) | Temp (°C)  | Declared Frequency (MHz) | Measured Frequency (Hz) | Frequency Tolerance (ppm) | Limit (ppm) |
| 100%                                | 120V/60Hz   | -30        | 1732.6                   | 5.85                    | 0.003                     | ±2.5        |
|                                     |             | -20        | 1732.6                   | -3.73                   | -0.002                    | ±2.5        |
|                                     |             | -10        | 1732.6                   | 7.12                    | 0.004                     | ±2.5        |
|                                     |             | 0          | 1732.6                   | 5.15                    | 0.003                     | ±2.5        |
|                                     |             | 10         | 1732.6                   | 6.59                    | 0.004                     | ±2.5        |
|                                     |             | + 20 (Ref) | 1732.6                   | 7.72                    | 0.004                     | ±2.5        |
|                                     |             | 30         | 1732.6                   | 4.84                    | 0.003                     | ±2.5        |
|                                     |             | 40         | 1732.6                   | -5.16                   | -0.003                    | ±2.5        |
|                                     |             | 50         | 1732.6                   | 6.19                    | 0.004                     | ±2.5        |
| Voltage vs. Frequency Stability     |             |            |                          |                         |                           |             |
| Voltage (%)                         | Power (VAC) | Temp (°C)  | Declared Frequency (MHz) | Measured Frequency (Hz) | Frequency Tolerance (ppm) | Limit (ppm) |
| 100%                                | 120V/60Hz   | 20         | 1732.6                   | 5.49                    | 0.003                     | ±2.5        |
| 115%                                | 138V/60Hz   | 20         | 1732.6                   | -5.85                   | -0.003                    | ±2.5        |
| 85%                                 | 102V/60Hz   | 20         | 1732.6                   | 5.65                    | 0.003                     | ±2.5        |



|                     |              |
|---------------------|--------------|
| Operating Frequency | 836.6MHz     |
| Channel             | CH20525      |
| Test Mode           | LTE Band 5   |
| Reference Voltage   | AC 120V/60Hz |

| Temperature vs. Frequency Stability |             |            |                          |                         |                           |             |
|-------------------------------------|-------------|------------|--------------------------|-------------------------|---------------------------|-------------|
| Voltage (%)                         | Power (VAC) | Temp (°C)  | Declared Frequency (MHz) | Measured Frequency (Hz) | Frequency Tolerance (ppm) | Limit (ppm) |
| 100%                                | 120V/60Hz   | -30        | 836.6                    | 5.08                    | 0.006                     | ±2.5        |
|                                     |             | -20        | 836.6                    | 3.79                    | 0.005                     | ±2.5        |
|                                     |             | -10        | 836.6                    | 3.92                    | 0.005                     | ±2.5        |
|                                     |             | 0          | 836.6                    | 4.43                    | 0.005                     | ±2.5        |
|                                     |             | 10         | 836.6                    | 3.25                    | 0.004                     | ±2.5        |
|                                     |             | + 20 (Ref) | 836.6                    | 4.01                    | 0.005                     | ±2.5        |
|                                     |             | 30         | 836.6                    | -3.33                   | -0.004                    | ±2.5        |
|                                     |             | 40         | 836.6                    | 2.33                    | 0.003                     | ±2.5        |
|                                     |             | 50         | 836.6                    | -4.52                   | -0.005                    | ±2.5        |
| Voltage vs. Frequency Stability     |             |            |                          |                         |                           |             |
| Voltage (%)                         | Power (VAC) | Temp (°C)  | Declared Frequency (MHz) | Measured Frequency (Hz) | Frequency Tolerance (ppm) | Limit (ppm) |
| 100%                                | 120V/60Hz   | 20         | 836.6                    | 2.86                    | 0.003                     | ±2.5        |
| 115%                                | 138V/60Hz   | 20         | 836.6                    | -3.06                   | -0.004                    | ±2.5        |
| 85%                                 | 102V/60Hz   | 20         | 836.6                    | -3.09                   | -0.004                    | ±2.5        |

|                     |              |
|---------------------|--------------|
| Operating Frequency | 707.5MHz     |
| Channel             | CH23095      |
| Test Mode           | LTE Band 12  |
| Reference Voltage   | AC 120V/60Hz |

| Temperature vs. Frequency Stability |             |            |                          |                         |                           |             |
|-------------------------------------|-------------|------------|--------------------------|-------------------------|---------------------------|-------------|
| Voltage (%)                         | Power (VAC) | Temp (°C)  | Declared Frequency (MHz) | Measured Frequency (Hz) | Frequency Tolerance (ppm) | Limit (ppm) |
| 100%                                | 120V/60Hz   | -30        | 707.5                    | 3.69                    | 0.005                     | ±2.5        |
|                                     |             | -20        | 707.5                    | 3.71                    | 0.005                     | ±2.5        |
|                                     |             | -10        | 707.5                    | 3.38                    | 0.005                     | ±2.5        |
|                                     |             | 0          | 707.5                    | 2.78                    | 0.004                     | ±2.5        |
|                                     |             | 10         | 707.5                    | 3.92                    | 0.006                     | ±2.5        |
|                                     |             | + 20 (Ref) | 707.5                    | 4.09                    | 0.006                     | ±2.5        |
|                                     |             | 30         | 707.5                    | -3.45                   | -0.005                    | ±2.5        |
|                                     |             | 40         | 707.5                    | 3.25                    | 0.005                     | ±2.5        |
|                                     |             | 50         | 707.5                    | -4.46                   | -0.006                    | ±2.5        |
| Voltage vs. Frequency Stability     |             |            |                          |                         |                           |             |
| Voltage (%)                         | Power (VAC) | Temp (°C)  | Declared Frequency (MHz) | Measured Frequency (Hz) | Frequency Tolerance (ppm) | Limit (ppm) |
| 100%                                | 120V/60Hz   | 20         | 707.5                    | 3.22                    | 0.005                     | ±2.5        |
| 115%                                | 138V/60Hz   | 20         | 707.5                    | -2.95                   | -0.004                    | ±2.5        |
| 85%                                 | 102V/60Hz   | 20         | 707.5                    | -2.35                   | -0.003                    | ±2.5        |

\_\_\_\_\_ The End \_\_\_\_\_