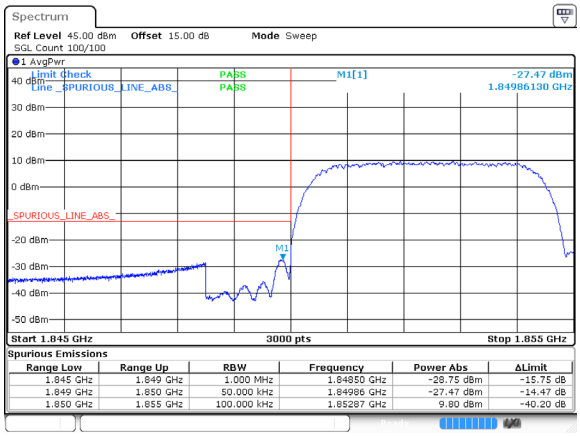
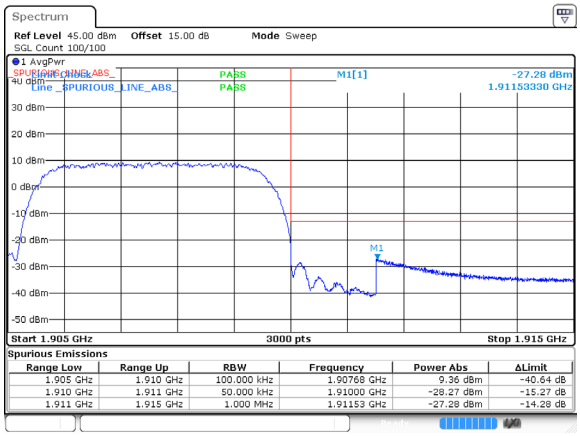
## WCDMA (HSPA+) Mode, Left Band Edge




ProjectNo.:RKSA250928001 Tester:Hugh Wu
Date: 10.OCT.2025 16:00:05

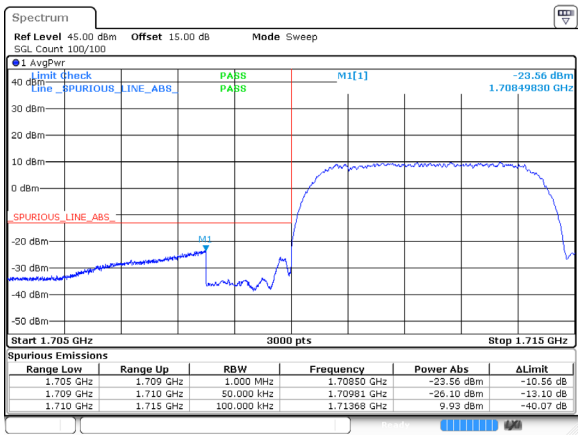
## WCDMA (HSPA+) Mode, Right Band Edge




ProjectNo.:RKSA250928001 Tester:Hugh Wu
Date: 10.OCT.2025 16:00:28

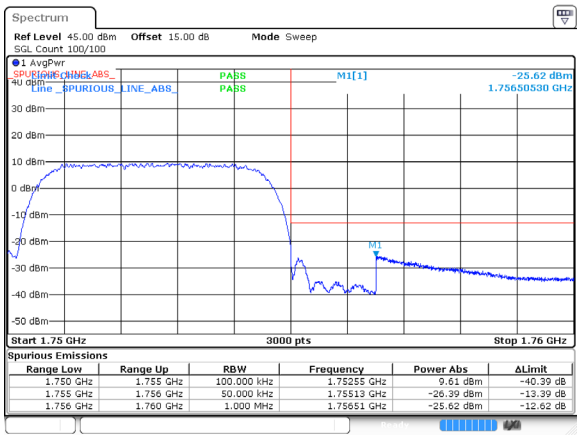
# WCDMA Band IV

## WCDMA (Rel 99) Mode, Left Band Edge



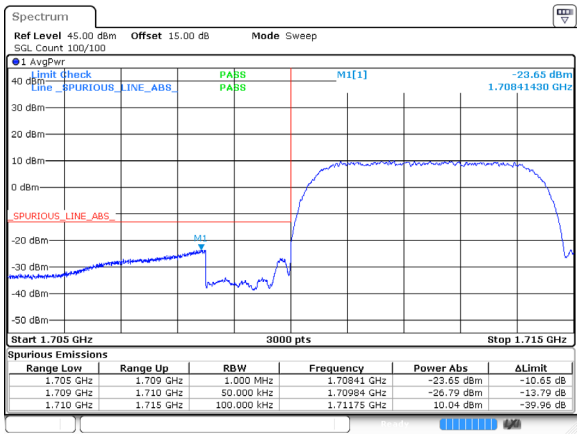

ProjectNo.:RKSA250928001 Tester:Hugh Wu
Date: 10.OCT.2025 10:51:10

## WCDMA (Rel 99) Mode, Right Band Edge



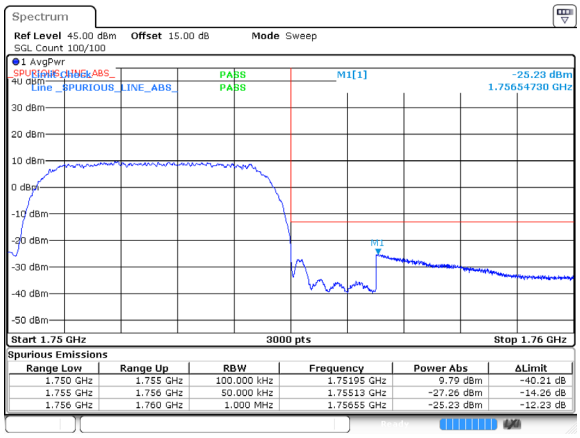

ProjectNo.:RKSA250928001 Tester:Hugh Wu
Date: 10.OCT.2025 10:51:33

## WCDMA (HSDPA) Mode, Left Band Edge



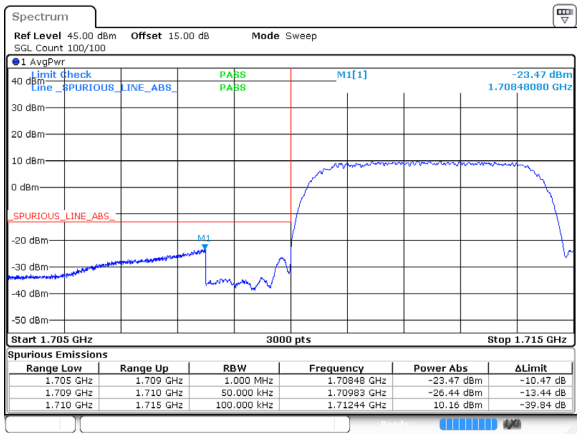

ProjectNo.:RKSA250928001 Tester:Hugh Wu
Date: 10.OCT.2025 13:54:05

## WCDMA (HSDPA) Mode, Right Band Edge



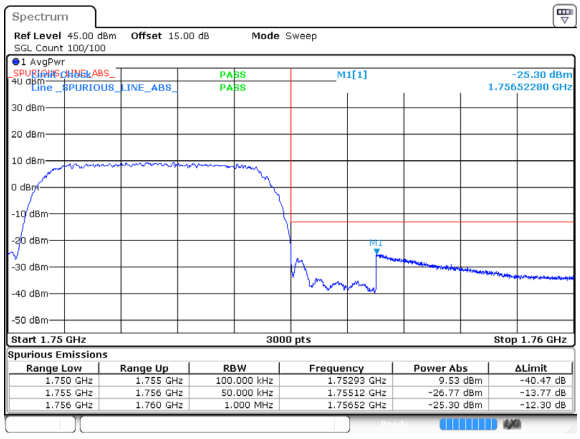

ProjectNo.:RKSA250928001 Tester:Hugh Wu
Date: 10.OCT.2025 13:54:28

## WCDMA (HSUPA) Mode, Left Band Edge



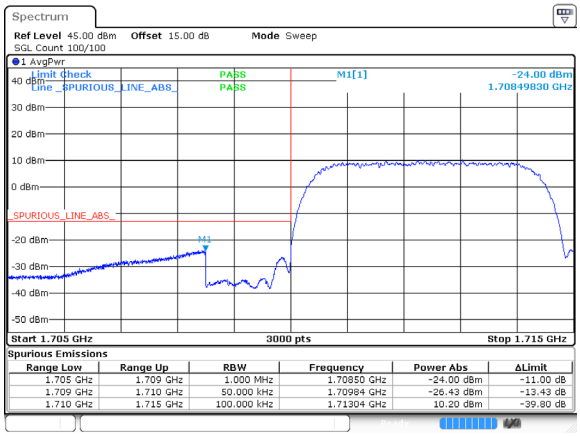

ProjectNo.:RKSA250928001 Tester:Hugh Wu
Date: 10.OCT.2025 11:28:34

## WCDMA (HSUPA) Mode, Right Band Edge



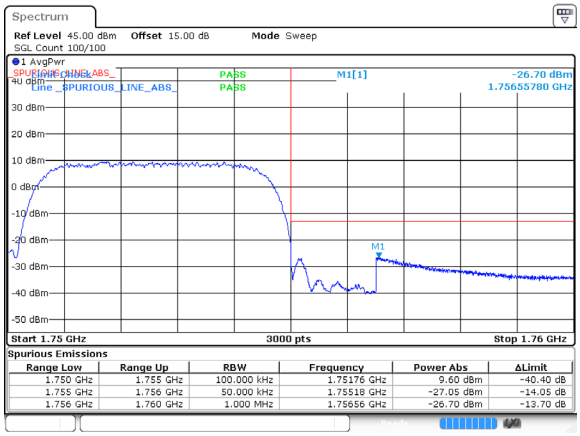

ProjectNo.:RKSA250928001 Tester:Hugh Wu
Date: 10.OCT.2025 11:28:56

WCDMA (HSPA+) Mode, Left Band Edge




ProjectNo.:RKSA250928001 Tester:Hugh Wu
Date: 10.OCT.2025 16:00:54

WCDMA (HSPA+) Mode, Right Band Edge




ProjectNo.:RKSA250928001 Tester:Hugh Wu
Date: 10.OCT.2025 16:01:17

# FREQUENCY STABILITY

## Environmental Conditions & Test Information

| | |
|---|---|
| **Test Date:** | 2025-10-09 to 2025-10-10 |
| **Temperature:** | 23.4-23.9℃ |
| **Relative Humidity:** | 50-53 % |
| **ATM Pressure:** | 100.9-101.3 kPa |
| **Test Result:** | Pass |
| **Test Engineer:** | Hugh Wu |

*EUT operation mode: Transmitting*

| GPRS 850,Middle channel | | | | |
|---|---|---|---|---|
| **Temperature (℃)** | **Voltage Supplied ($V_{DC}$)** | **Frequency Error (Hz)** | **Frequency Error (ppm)** | **Limit (ppm)** |
| -30 | 3.85 | 17 | 0.02032 | 2.5 |
| -20 | | 40 | 0.04781 | 2.5 |
| -10 | | 17 | 0.02032 | 2.5 |
| 0 | | 15 | 0.01793 | 2.5 |
| 10 | | 28 | 0.03347 | 2.5 |
| 20 | | 6 | 0.00717 | 2.5 |
| 30 | | 24 | 0.02869 | 2.5 |
| 40 | | 12 | 0.01434 | 2.5 |
| 50 | | 27 | 0.03227 | 2.5 |
| 60 | | 27 | 0.03227 | 2.5 |
| 20 | V min.= 3.47 | 10 | 0.01195 | 2.5 |
| 20 | V max.= 4.27 | 9 | 0.01076 | 2.5 |

| EGPRS 850, Middle channel | | | | |
|---|---|---|---|---|
| **Temperature (℃)** | **Voltage Supplied ($V_{DC}$)** | **Frequency Error (Hz)** | **Frequency Error (ppm)** | **Limit (ppm)** |
| -30 | 3.85 | 46 | 0.05498 | 2.5 |
| -20 | | 52 | 0.06216 | 2.5 |
| -10 | | 12 | 0.01434 | 2.5 |
| 0 | | 13 | 0.01554 | 2.5 |
| 10 | | 13 | 0.01554 | 2.5 |
| 20 | | 20 | 0.02391 | 2.5 |
| 30 | | 15 | 0.01793 | 2.5 |
| 40 | | 27 | 0.03227 | 2.5 |
| 50 | | 50 | 0.05977 | 2.5 |
| 60 | | 39 | 0.04662 | 2.5 |
| 20 | V min.= 3.47 | 35 | 0.04184 | 2.5 |
| 20 | V max.= 4.27 | 24 | 0.02869 | 2.5 |

| GPRS 1900, low channel& high channel | | | | | |
|---|---|---|---|---|---|
| **Temperature (℃)** | **Voltage Supplied ($V_{DC}$)** | **$F_L$ (MHz)** | **$F_H$ (MHz)** | **$F_L$ Limit (MHz)** | **$F_H$ Limit (MHz)** |
| -30 | 3.85 | 1850.07215 | 1909.97225 | 1850 | 1910 |
| -20 | | 1850.04662 | 1909.91564 | 1850 | 1910 |
| -10 | | 1850.07437 | 1909.93007 | 1850 | 1910 |
| 0 | | 1850.02553 | 1909.93451 | 1850 | 1910 |
| 10 | | 1850.06771 | 1909.90565 | 1850 | 1910 |
| 20 | | 1850.03219 | 1909.99112 | 1850 | 1910 |
| 30 | | 1850.06882 | 1909.89899 | 1850 | 1910 |
| 40 | | 1850.02331 | 1909.93562 | 1850 | 1910 |
| 50 | | 1850.02442 | 1909.91675 | 1850 | 1910 |
| 60 | | 1850.01665 | 1909.97114 | 1850 | 1910 |
| 20 | V min.= 3.47 | 1850.11100 | 1909.97669 | 1850 | 1910 |
| 20 | V max.= 4.27 | 1850.052 | 1909.892 | 1850 | 1910 |

| EGPRS 1900, low channel& high channel | | | | | |
|---|---|---|---|---|---|
| **Temperature (℃)** | **Voltage Supplied ($V_{DC}$)** | **$F_L$ (MHz)** | **$F_H$ (MHz)** | **$F_L$ Limit (MHz)** | **$F_H$ Limit (MHz)** |
| -30 | 3.85 | 1850.08214 | 1909.96781 | 1850 | 1910 |
| -20 | | 1850.04107 | 1909.99778 | 1850 | 1910 |
| -10 | | 1850.04884 | 1909.94117 | 1850 | 1910 |
| 0 | | 1850.08436 | 1909.90454 | 1850 | 1910 |
| 10 | | 1850.00111 | 1909.93340 | 1850 | 1910 |
| 20 | | 1850.05328 | 1909.94561 | 1850 | 1910 |
| 30 | | 1850.11100 | 1909.97447 | 1850 | 1910 |
| 40 | | 1850.04107 | 1909.94561 | 1850 | 1910 |
| 50 | | 1850.08214 | 1909.92119 | 1850 | 1910 |
| 60 | | 1850.00555 | 1909.91564 | 1850 | 1910 |
| 20 | V min.= 3.47 | 1850.08991 | 1909.89344 | 1850 | 1910 |
| 20 | V max.= 4.27 | 1850.01998 | 1909.91231 | 1850 | 1910 |

## WCDMA Band II:

| WCDMA Mode , low channel& high channel | | | | | |
|---|---|---|---|---|---|
| **Temperature (℃)** | **Voltage Supplied ($V_{DC}$)** | **$F_L$ (MHz)** | **$F_H$ (MHz)** | **$F_L$ Limit (MHz)** | **$F_H$ Limit (MHz)** |
| -30 | 3.85 | 1850.07992 | 1909.90676 | 1850 | 1910 |
| -20 | | 1850.09546 | 1909.95005 | 1850 | 1910 |
| -10 | | 1850.09213 | 1909.95671 | 1850 | 1910 |
| 0 | | 1850.10989 | 1909.93673 | 1850 | 1910 |
| 10 | | 1850.07326 | 1909.99889 | 1850 | 1910 |
| 20 | | 1850.09768 | 1909.97891 | 1850 | 1910 |
| 30 | | 1850.09990 | 1909.93340 | 1850 | 1910 |
| 40 | | 1850.01443 | 1909.93673 | 1850 | 1910 |
| 50 | | 1850.03330 | 1909.93562 | 1850 | 1910 |
| 60 | | 1850.08658 | 1909.99778 | 1850 | 1910 |
| 20 | V min.= 3.47 | 1850.09213 | 1909.97891 | 1850 | 1910 |
| 20 | V max.= 4.27 | 1850.02553 | 1909.98668 | 1850 | 1910 |

## WCDMA Band IV:

| WCDMA Mode , low channel& high channel | | | | | |
|---|---|---|---|---|---|
| **Temperature (℃)** | **Voltage Supplied ($V_{DC}$)** | **$F_L$ (MHz)** | **$F_H$ (MHz)** | **$F_L$ Limit (MHz)** | **$F_H$ Limit (MHz)** |
| -30 | 3.85 | 1710.07659 | 1754.95338 | 1710 | 1755 |
| -20 | | 1710.06660 | 1754.97891 | 1710 | 1755 |
| -10 | | 1710.10989 | 1754.90676 | 1710 | 1755 |
| 0 | | 1710.02775 | 1754.97780 | 1710 | 1755 |
| 10 | | 1710.02775 | 1754.99112 | 1710 | 1755 |
| 20 | | 1710.09102 | 1754.98335 | 1710 | 1755 |
| 30 | | 1710.04218 | 1754.95893 | 1710 | 1755 |
| 40 | | 1710.10878 | 1754.95671 | 1710 | 1755 |
| 50 | | 1710.04218 | 1754.95005 | 1710 | 1755 |
| 60 | | 1710.03548 | 1754.97254 | 1710 | 1755 |
| 20 | V min.= 3.47 | 1710.06549 | 1754.94450 | 1710 | 1755 |
| 20 | V max.= 4.27 | 1710.09657 | 1754.89233 | 1710 | 1755 |

## WCDMA Band V:

| WCDMA Mode ，Middle channel | | | | |
|---|---|---|---|---|
| **Temperature (℃)** | **Voltage Supplied ($V_{DC}$)** | **Frequency Error (Hz)** | **Frequency Error (ppm)** | **Limit (ppm)** |
| -30 | 3.85 | 47 | 0.05618 | 2.5 |
| -20 | | 61 | 0.07291 | 2.5 |
| -10 | | 34 | 0.04064 | 2.5 |
| 0 | | 50 | 0.05977 | 2.5 |
| 10 | | 37 | 0.04423 | 2.5 |
| 20 | | 9 | 0.01076 | 2.5 |
| 30 | | 30 | 0.03586 | 2.5 |
| 40 | | 54 | 0.06455 | 2.5 |
| 50 | | 38 | 0.04542 | 2.5 |
| 60 | | 34 | 0.04064 | 2.5 |
| 20 | V min.= 3.47 | 44 | 0.05259 | 2.5 |
| 20 | V max.= 4.27 | 70 | 0.08367 | 2.5 |

## LTE Band 2:

| QPSK, 20MHz, low channel& high channel | | | | | |
|---|---|---|---|---|---|
| **Temperature (℃)** | **Voltage Supplied ($V_{DC}$)** | **$F_L$ (MHz)** | **$F_H$ (MHz)** | **$F_L$ Limit (MHz)** | **$F_H$ Limit (MHz)** |
| -30 | 3.85 | 1850.02442 | 1909.93118 | 1850 | 1910 |
| -20 | | 1850.06438 | 1909.99667 | 1850 | 1910 |
| -10 | | 1850.06549 | 1909.93784 | 1850 | 1910 |
| 0 | | 1850.01776 | 1909.98335 | 1850 | 1910 |
| 10 | | 1850.02553 | 1909.91675 | 1850 | 1910 |
| 20 | | 1850.01665 | 1909.90898 | 1850 | 1910 |
| 30 | | 1850.00777 | 1909.98335 | 1850 | 1910 |
| 40 | | 1850.03996 | 1909.97114 | 1850 | 1910 |
| 50 | | 1850.08436 | 1909.97891 | 1850 | 1910 |
| 60 | | 1850.08658 | 1909.92119 | 1850 | 1910 |
| 20 | V min.= 3.47 | 1850.05772 | 1909.93451 | 1850 | 1910 |
| 20 | V max.= 4.27 | 1850.07437 | 1909.93895 | 1850 | 1910 |

| 16-QAM, 20MHz, low channel& high channel | | | | | |
|---|---|---|---|---|---|
| **Temperature (℃)** | **Voltage Supplied ($V_{DC}$)** | **$F_L$ (MHz)** | **$F_H$ (MHz)** | **$F_L$ Limit (MHz)** | **$F_H$ Limit (MHz)** |
| -30 | 3.85 | 1850.10434 | 1909.96115 | 1850 | 1910 |
| -20 | | 1850.01554 | 1909.98557 | 1850 | 1910 |
| -10 | | 1850.03885 | 1909.97003 | 1850 | 1910 |
| 0 | | 1850.06882 | 1909.92563 | 1850 | 1910 |
| 10 | | 1850.09657 | 1909.97891 | 1850 | 1910 |
| 20 | | 1850.07548 | 1909.90565 | 1850 | 1910 |
| 30 | | 1850.02109 | 1909.95227 | 1850 | 1910 |
| 40 | | 1850.01221 | 1909.90676 | 1850 | 1910 |
| 50 | | 1850.04662 | 1909.95227 | 1850 | 1910 |
| 60 | | 1850.10878 | 1909.97780 | 1850 | 1910 |
| 20 | V min.= 3.47 | 1850.08769 | 1909.89011 | 1850 | 1910 |
| 20 | V max.= 4.27 | 1850.03552 | 1909.95893 | 1850 | 1910 |

## LTE Band 4:

| QPSK, 20MHz, low channel& high channel | | | | | |
|---|---|---|---|---|---|
| **Temperature** | **Power Supplied** | **$F_L$** | **$F_H$** | **$F_L$ Limit** | **$F_H$ Limit** |
| **(℃)** | **($V_{DC}$)** | **(MHz)** | **(MHz)** | **(MHz)** | **(MHz)** |
| -30 | 3.85 | 1710.00444 | 1754.91231 | 1710 | 1755 |
| -20 | | 1710.10434 | 1754.89344 | 1710 | 1755 |
| -10 | | 1710.00111 | 1754.95338 | 1710 | 1755 |
| 0 | | 1710.03996 | 1754.98446 | 1710 | 1755 |
| 10 | | 1710.00555 | 1754.99001 | 1710 | 1755 |
| 20 | | 1710.02331 | 1754.93451 | 1710 | 1755 |
| 30 | | 1710.08214 | 1754.89899 | 1710 | 1755 |
| 40 | | 1710.04995 | 1754.89566 | 1710 | 1755 |
| 50 | | 1710.00666 | 1754.95560 | 1710 | 1755 |
| 60 | | 1710.08103 | 1754.98335 | 1710 | 1755 |
| 20 | V min.= 3.47 | 1710.00888 | 1754.96337 | 1710 | 1755 |
| 20 | V max.= 4.27 | 1710.06882 | 1754.95338 | 1710 | 1755 |

| 16QAM, 20MHz, low channel& high channel | | | | | |
|---|---|---|---|---|---|
| **Temperature (℃)** | **Power Supplied ($V_{DC}$)** | **$F_L$ (MHz)** | **$F_H$ (MHz)** | **$F_L$ Limit (MHz)** | **$F_H$ Limit (MHz)** |
| -30 | 3.85 | 1710.10323 | 1754.91897 | 1710 | 1755 |
| -20 | | 1710.08769 | 1754.99223 | 1710 | 1755 |
| -10 | | 1710.02220 | 1754.98446 | 1710 | 1755 |
| 0 | | 1710.08991 | 1754.91453 | 1710 | 1755 |
| 10 | | 1710.09435 | 1754.96670 | 1710 | 1755 |
| 20 | | 1710.06882 | 1754.98890 | 1710 | 1755 |
| 30 | | 1710.10212 | 1754.96226 | 1710 | 1755 |
| 40 | | 1710.06327 | 1754.94339 | 1710 | 1755 |
| 50 | | 1710.08436 | 1754.90121 | 1710 | 1755 |
| 60 | | 1710.02775 | 1754.96337 | 1710 | 1755 |
| 20 | V min.= 3.47 | 1710.09768 | 1754.98335 | 1710 | 1755 |
| 20 | V max.= 4.27 | 1710.10767 | 1754.89899 | 1710 | 1755 |

## LTE Band 5:

| QPSK, 10.0 MHz,Middle channel | | | | |
|---|---|---|---|---|
| **Temperature (℃)** | **Voltage Supplied ($V_{DC}$)** | **Frequency Error (Hz)** | **Frequency Error (ppm)** | **Limit (ppm)** |
| -30 | 3.85 | 51 | 0.06097 | 2.5 |
| -20 | | 65 | 0.07770 | 2.5 |
| -10 | | 34 | 0.04065 | 2.5 |
| 0 | | 49 | 0.05858 | 2.5 |
| 10 | | 32 | 0.03825 | 2.5 |
| 20 | | 16 | 0.01913 | 2.5 |
| 30 | | 33 | 0.03945 | 2.5 |
| 40 | | 48 | 0.05738 | 2.5 |
| 50 | | 34 | 0.04065 | 2.5 |
| 60 | | 33 | 0.03945 | 2.5 |
| 20 | V min.= 3.47 | 47 | 0.05619 | 2.5 |
| 20 | V max.= 4.27 | 66 | 0.07890 | 2.5 |

| 16-QAM, 10.0 MHz, Middle channel | | | | |
|---|---|---|---|---|
| **Temperature (℃)** | **Voltage Supplied ($V_{DC}$)** | **Frequency Error (Hz)** | **Frequency Error (ppm)** | **Limit (ppm)** |
| -30 | 3.85 | 50 | 0.05977 | 2.5 |
| -20 | | 67 | 0.08010 | 2.5 |
| -10 | | 42 | 0.05021 | 2.5 |
| 0 | | 53 | 0.06336 | 2.5 |
| 10 | | 32 | 0.03825 | 2.5 |
| 20 | | 11 | 0.01315 | 2.5 |
| 30 | | 33 | 0.03945 | 2.5 |
| 40 | | 53 | 0.06336 | 2.5 |
| 50 | | 39 | 0.04662 | 2.5 |
| 60 | | 40 | 0.04782 | 2.5 |
| 20 | V min.= 3.47 | 47 | 0.05619 | 2.5 |
| 20 | V max.= 4.27 | 73 | 0.08727 | 2.5 |

## LTE Band 7:

| QPSK，20 MHz, low channel& high channel | | | | | |
|---|---|---|---|---|---|
| **Temperature (℃)** | **Power Supplied ($V_{DC}$)** | **$F_L$ (MHz)** | **$F_H$ (MHz)** | **$F_L$ Limit (MHz)** | **$F_H$ Limit (MHz)** |
| -30 | 3.85 | 2500.010 | 2569.895 | 2500 | 2570 |
| -20 | | 2500.098 | 2569.959 | 2500 | 2570 |
| -10 | | 2500.087 | 2569.891 | 2500 | 2570 |
| 0 | | 2500.052 | 2569.941 | 2500 | 2570 |
| 10 | | 2500.098 | 2569.933 | 2500 | 2570 |
| 20 | | 2500.014 | 2569.990 | 2500 | 2570 |
| 30 | | 2500.051 | 2569.960 | 2500 | 2570 |
| 40 | | 2500.057 | 2569.964 | 2500 | 2570 |
| 50 | | 2500.089 | 2569.922 | 2500 | 2570 |
| 60 | | 2500.041 | 2569.901 | 2500 | 2570 |
| 20 | V min.= 3.47 | 2500.054 | 2569.925 | 2500 | 2570 |
| 20 | V max.= 4.27 | 2500.009 | 2569.967 | 2500 | 2570 |

| 16-QAM, 20 MHz, low channel& high channel | | | | | |
|---|---|---|---|---|---|
| **Temperature (℃)** | **Power Supplied ($V_{DC}$)** | **$F_L$ (MHz)** | **$F_H$ (MHz)** | **$F_L$ Limit (MHz)** | **$F_H$ Limit (MHz)** |
| -30 | 3.85 | 2500.091 | 2569.917 | 2500 | 2570 |
| -20 | | 2500.104 | 2569.951 | 2500 | 2570 |
| -10 | | 2500.006 | 2569.890 | 2500 | 2570 |
| 0 | | 2500.021 | 2569.936 | 2500 | 2570 |
| 10 | | 2500.077 | 2569.905 | 2500 | 2570 |
| 20 | | 2500.089 | 2569.942 | 2500 | 2570 |
| 30 | | 2500.047 | 2569.963 | 2500 | 2570 |
| 40 | | 2500.010 | 2569.908 | 2500 | 2570 |
| 50 | | 2500.094 | 2569.949 | 2500 | 2570 |
| 60 | | 2500.030 | 2569.978 | 2500 | 2570 |
| 20 | V min.= 3.47 | 2500.109 | 2569.922 | 2500 | 2570 |
| 20 | V max.= 4.27 | 2500.080 | 2569.994 | 2500 | 2570 |

## LTE Band 12:

| QPSK, 10MHz, low channel& high channel | | | | | |
|---|---|---|---|---|---|
| **Temperature (℃)** | **Power Supplied ($V_{DC}$)** | **$F_L$ (MHz)** | **$F_H$ (MHz)** | **$F_L$ Limit (MHz)** | **$F_H$ Limit (MHz)** |
| -30 | 3.85 | 699.073 | 715.998 | 699 | 716 |
| -20 | | 699.092 | 715.989 | 699 | 716 |
| -10 | | 699.052 | 715.992 | 699 | 716 |
| 0 | | 699.046 | 715.989 | 699 | 716 |
| 10 | | 699.040 | 715.916 | 699 | 716 |
| 20 | | 699.030 | 715.976 | 699 | 716 |
| 30 | | 699.020 | 715.969 | 699 | 716 |
| 40 | | 699.110 | 715.931 | 699 | 716 |
| 50 | | 699.082 | 715.898 | 699 | 716 |
| 60 | | 699.020 | 715.898 | 699 | 716 |
| 20 | V min.= 3.47 | 699.022 | 715.922 | 699 | 716 |
| 20 | V max.= 4.27 | 699.037 | 715.958 | 699 | 716 |

| 16QAM, 10MHz, low channel& high channel | | | | | |
|---|---|---|---|---|---|
| **Temperature (℃)** | **Power Supplied ($V_{DC}$)** | **$F_L$ (MHz)** | **$F_H$ (MHz)** | **$F_L$ Limit (MHz)** | **$F_H$ Limit (MHz)** |
| -30 | 3.85 | 699.07215 | 715.94339 | 699 | 716 |
| -20 | | 699.0222 | 715.90565 | 699 | 716 |
| -10 | | 699.00888 | 715.89788 | 699 | 716 |
| 0 | | 699.02997 | 715.91342 | 699 | 716 |
| 10 | | 699.07659 | 715.90787 | 699 | 716 |
| 20 | | 699.01887 | 715.90454 | 699 | 716 |
| 30 | | 699.02442 | 715.99223 | 699 | 716 |
| 40 | | 699.08769 | 715.98335 | 699 | 716 |
| 50 | | 699.03885 | 715.91231 | 699 | 716 |
| 60 | | 699.06771 | 715.89344 | 699 | 716 |
| 20 | V min.= 3.47 | 699.00999 | 715.93562 | 699 | 716 |
| 20 | V max.= 4.27 | 699.02997 | 715.89566 | 699 | 716 |

## LTE Band 17:

| QPSK, 10MHz, low channel& high channel | | | | | |
|---|---|---|---|---|---|
| **Temperature (℃)** | **Power Supplied ($V_{DC}$)** | **$F_L$ (MHz)** | **$F_H$ (MHz)** | **$F_L$ Limit (MHz)** | **$F_H$ Limit (MHz)** |
| -30 | 3.85 | 704.06216 | 715.97336 | 704 | 716 |
| -20 | | 704.10212 | 715.99334 | 704 | 716 |
| -10 | | 704.0444 | 715.97447 | 704 | 716 |
| 0 | | 704.01776 | 715.93007 | 704 | 716 |
| 10 | | 704.07659 | 715.89011 | 704 | 716 |
| 20 | | 704.05217 | 715.93673 | 704 | 716 |
| 30 | | 704.09546 | 715.92785 | 704 | 716 |
| 40 | | 704.08547 | 715.889 | 704 | 716 |
| 50 | | 704.07437 | 715.94117 | 704 | 716 |
| 60 | | 704.01332 | 715.92563 | 704 | 716 |
| 20 | V min.= 3.47 | 704.02331 | 715.97003 | 704 | 716 |
| 20 | V max.= 4.27 | 704.06882 | 715.99334 | 704 | 716 |

| 16QAM, 10MHz, low channel& high channel | | | | | |
|---|---|---|---|---|---|
| **Temperature (℃)** | **Power Supplied ($V_{DC}$)** | **$F_L$ (MHz)** | **$F_H$ (MHz)** | **$F_L$ Limit (MHz)** | **$F_H$ Limit (MHz)** |
| -30 | 3.85 | 704.08103 | 715.91453 | 704 | 716 |
| -20 | | 704.09546 | 715.98335 | 704 | 716 |
| -10 | | 704.05106 | 715.99667 | 704 | 716 |
| 0 | | 704.05550 | 715.92008 | 704 | 716 |
| 10 | | 704.09435 | 715.91009 | 704 | 716 |
| 20 | | 704.09213 | 715.97891 | 704 | 716 |
| 30 | | 704.06660 | 715.94561 | 704 | 716 |
| 40 | | 704.06993 | 715.98557 | 704 | 716 |
| 50 | | 704.03219 | 715.91342 | 704 | 716 |
| 60 | | 704.07770 | 715.92008 | 704 | 716 |
| 20 | V min.= 3.47 | 704.03441 | 715.89455 | 704 | 716 |
| 20 | V max.= 4.27 | 704.02553 | 715.98779 | 704 | 716 |

## LTE Band 25:

| QPSK, 20MHz, low channel& high channel | | | | | |
|---|---|---|---|---|---|
| **Temperature (℃)** | **Voltage Supplied ($V_{DC}$)** | **$F_L$ (MHz)** | **$F_H$ (MHz)** | **$F_L$ Limit (MHz)** | **$F_H$ Limit (MHz)** |
| -30 | 3.85 | **1850.009** | **1914.96004** | 1850 | 1915 |
| -20 | | 1850.00111 | 1914.96559 | 1850 | 1915 |
| -10 | | 1850.04884 | 1914.89233 | 1850 | 1915 |
| 0 | | 1850.09768 | 1914.96448 | 1850 | 1915 |
| 10 | | 1850.05883 | 1914.91564 | 1850 | 1915 |
| 20 | | 1850.0555 | 1914.9223 | 1850 | 1915 |
| 30 | | 1850.05883 | 1914.98446 | 1850 | 1915 |
| 40 | | 1850.07326 | 1914.89455 | 1850 | 1915 |
| 50 | | 1850.10545 | 1914.96892 | 1850 | 1915 |
| 60 | | 1850.07881 | 1914.94006 | 1850 | 1915 |
| 20 | V min.= 3.47 | 1850.0999 | 1914.91786 | 1850 | 1915 |
| 20 | V max.= 4.27 | 1850.07215 | 1914.89788 | 1850 | 1915 |

| 16-QAM, 20MHz, low channel& high channel | | | | | |
|---|---|---|---|---|---|
| **Temperature (℃)** | **Voltage Supplied ($V_{DC}$)** | **$F_L$ (MHz)** | **$F_H$ (MHz)** | **$F_L$ Limit (MHz)** | **$F_H$ Limit (MHz)** |
| -30 | 3.85 | **1850.023** | **1914.917** | **1850** | **1915** |
| -20 | | 1850.003 | 1914.967 | 1850 | 1915 |
| -10 | | 1850.082 | 1914.998 | 1850 | 1915 |
| 0 | | 1850.103 | 1914.910 | 1850 | 1915 |
| 10 | | 1850.104 | 1914.939 | 1850 | 1915 |
| 20 | | 1850.030 | 1914.937 | 1850 | 1915 |
| 30 | | 1850.036 | 1914.993 | 1850 | 1915 |
| 40 | | 1850.053 | 1914.963 | 1850 | 1915 |
| 50 | | 1850.030 | 1914.930 | 1850 | 1915 |
| 60 | | 1850.109 | 1914.989 | 1850 | 1915 |
| 20 | V min.= 3.47 | 1850.050 | 1914.923 | 1850 | 1915 |
| 20 | V max.= 4.27 | 1850.052 | 1914.949 | 1850 | 1915 |

## LTE Band 26(814-824MHz)

| QPSK, 15MHz Low Channel, fo =821.5MHz | | | | |
|---|---|---|---|---|
| **Temperature (℃)** | **Voltage Supplied ($V_{DC}$)** | **Frequency Error (Hz)** | **Frequency Error (ppm)** | **Limit (ppm)** |
| -30 | 3.85 | 47 | 0.05721 | 2.5 |
| -20 | | 66 | 0.08034 | 2.5 |
| -10 | | 34 | 0.04139 | 2.5 |
| 0 | | 54 | 0.06573 | 2.5 |
| 10 | | 35 | 0.04260 | 2.5 |
| 20 | | 12 | 0.01461 | 2.5 |
| 30 | | 35 | 0.04260 | 2.5 |
| 40 | | 52 | 0.06330 | 2.5 |
| 50 | | 38 | 0.04626 | 2.5 |
| 60 | | 35 | 0.04260 | 2.5 |
| 20 | V min.= 3.47 | 48 | 0.05843 | 2.5 |
| 20 | V max.= 4.27 | 70 | 0.08521 | 2.5 |

| 16-QAM, 15MHz Low Channel, fo =821.5MHz | | | | |
|---|---|---|---|---|
| **Temperature (℃)** | **Voltage Supplied ($V_{DC}$)** | **Frequency Error (Hz)** | **Frequency Error (ppm)** | **Limit (ppm)** |
| -30 | 3.85 | 50 | 0.06086 | 2.5 |
| -20 | | 71 | 0.08643 | 2.5 |
| -10 | | 35 | 0.04260 | 2.5 |
| 0 | | 54 | 0.06573 | 2.5 |
| 10 | | 39 | 0.04747 | 2.5 |
| 20 | | 13 | 0.01582 | 2.5 |
| 30 | | 36 | 0.04382 | 2.5 |
| 40 | | 50 | 0.06086 | 2.5 |
| 50 | | 36 | 0.04382 | 2.5 |
| 60 | | 37 | 0.04504 | 2.5 |
| 20 | V min.= 3.47 | 51 | 0.06208 | 2.5 |
| 20 | V max.= 4.27 | 65 | 0.07912 | 2.5 |

## LTE Band 26(824-849MHz)

| QPSK, 15 MHz,Middle channel | | | | |
|---|---|---|---|---|
| **Temperature (℃)** | **Voltage Supplied ($V_{DC}$)** | **Frequency Error (Hz)** | **Frequency Error (ppm)** | **Limit (ppm)** |
| -30 | 3.85 | 44 | 0.05260 | 2.5 |
| -20 | | 66 | 0.07890 | 2.5 |
| -10 | | 36 | 0.04304 | 2.5 |
| 0 | | 47 | 0.05619 | 2.5 |
| 10 | | 40 | 0.04782 | 2.5 |
| 20 | | 16 | 0.01913 | 2.5 |
| 30 | | 30 | 0.03586 | 2.5 |
| 40 | | 48 | 0.05738 | 2.5 |
| 50 | | 39 | 0.04662 | 2.5 |
| 60 | | 32 | 0.03825 | 2.5 |
| 20 | V min.= 3.47 | 47 | 0.05619 | 2.5 |
| 20 | V max.= 4.27 | 72 | 0.08607 | 2.5 |

| 16-QAM, 15 MHz,Middle channel | | | | |
|---|---|---|---|---|
| **Temperature (℃)** | **Voltage Supplied ($V_{DC}$)** | **Frequency Error (Hz)** | **Frequency Error (ppm)** | **Limit (ppm)** |
| -30 | 3.85 | 52 | 0.06216 | 2.5 |
| -20 | | 69 | 0.08249 | 2.5 |
| -10 | | 39 | 0.04662 | 2.5 |
| 0 | | 46 | 0.05499 | 2.5 |
| 10 | | 33 | 0.03945 | 2.5 |
| 20 | | 16 | 0.01913 | 2.5 |
| 30 | | 34 | 0.04065 | 2.5 |
| 40 | | 45 | 0.05380 | 2.5 |
| 50 | | 32 | 0.03825 | 2.5 |
| 60 | | 35 | 0.04184 | 2.5 |
| 20 | V min.= 3.47 | 51 | 0.06097 | 2.5 |
| 20 | V max.= 4.27 | 71 | 0.08488 | 2.5 |

## LTE Band 41:

| QPSK, 20 MHz, low channel& high channel | | | | | |
|---|---|---|---|---|---|
| **Temperature (℃)** | **Power Supplied ($V_{DC}$)** | **$F_L$ (MHz)** | **$F_H$ (MHz)** | **$F_L$ Limit (MHz)** | **$F_H$ Limit (MHz)** |
| -30 | 3.85 | 2496.046 | 2689.902 | 2496 | 2690 |
| -20 | | 2496.072 | 2689.947 | 2496 | 2690 |
| -10 | | 2496.085 | 2689.950 | 2496 | 2690 |
| 0 | | 2496.050 | 2689.996 | 2496 | 2690 |
| 10 | | 2496.013 | 2689.963 | 2496 | 2690 |
| 20 | | 2496.070 | 2689.976 | 2496 | 2690 |
| 30 | | 2496.032 | 2689.942 | 2496 | 2690 |
| 40 | | 2496.041 | 2689.990 | 2496 | 2690 |
| 50 | | 2496.081 | 2689.990 | 2496 | 2690 |
| 60 | | 2496.040 | 2689.993 | 2496 | 2690 |
| 20 | V min.= 3.47 | 2496.110 | 2689.891 | 2496 | 2690 |
| 20 | V max.= 4.27 | 2496.011 | 2689.969 | 2496 | 2690 |

| 16-QAM, 20 MHz, low channel& high channel | | | | | |
|---|---|---|---|---|---|
| **Temperature (℃)** | **Power Supplied ($V_{DC}$)** | **$F_L$ (MHz)** | **$F_H$ (MHz)** | **$F_L$ Limit (MHz)** | **$F_H$ Limit (MHz)** |
| -30 | 3.85 | 2496.029 | 2689.892 | 2496 | 2690 |
| -20 | | 2496.090 | 2689.930 | 2496 | 2690 |
| -10 | | 2496.079 | 2689.897 | 2496 | 2690 |
| 0 | | 2496.052 | 2689.989 | 2496 | 2690 |
| 10 | | 2496.011 | 2689.987 | 2496 | 2690 |
| 20 | | 2496.034 | 2689.976 | 2496 | 2690 |
| 30 | | 2496.016 | 2689.958 | 2496 | 2690 |
| 40 | | 2496.105 | 2689.903 | 2496 | 2690 |
| 50 | | 2496.008 | 2689.917 | 2496 | 2690 |
| 60 | | 2496.016 | 2689.911 | 2496 | 2690 |
| 20 | V min.= 3.47 | 2496.083 | 2689.971 | 2496 | 2690 |
| 20 | V max.= 4.27 | 2496.041 | 2689.936 | 2496 | 2690 |

## LTE Band 66:

| QPSK, 20MHz, low channel& high channel | | | | | |
|---|---|---|---|---|---|
| **Temperature (℃)** | **Power Supplied ($V_{DC}$)** | **$F_L$ (MHz)** | **$F_H$ (MHz)** | **$F_L$ Limit (MHz)** | **$F_H$ Limit (MHz)** |
| -30 | 3.85 | 1710.062 | 1779.954 | 1710 | 1780 |
| -20 | | 1710.030 | 1779.902 | 1710 | 1780 |
| -10 | | 1710.098 | 1779.971 | 1710 | 1780 |
| 0 | | 1710.017 | 1779.925 | 1710 | 1780 |
| 10 | | 1710.061 | 1779.973 | 1710 | 1780 |
| 20 | | 1710.032 | 1779.895 | 1710 | 1780 |
| 30 | | 1710.083 | 1779.908 | 1710 | 1780 |
| 40 | | 1710.107 | 1779.979 | 1710 | 1780 |
| 50 | | 1710.043 | 1779.900 | 1710 | 1780 |
| 60 | | 1710.007 | 1779.992 | 1710 | 1780 |
| 20 | V min.= 3.47 | 1710.036 | 1779.976 | 1710 | 1780 |
| 20 | V max.= 4.27 | 1710.007 | 1779.933 | 1710 | 1780 |

| 16QAM, 20MHz, low channel& high channel | | | | | |
|---|---|---|---|---|---|
| **Temperature (℃)** | **Power Supplied ($V_{DC}$)** | **$F_L$ (MHz)** | **$F_H$ (MHz)** | **$F_L$ Limit (MHz)** | **$F_H$ Limit (MHz)** |
| -30 | 3.85 | 1710.080 | 1779.891 | 1710 | 1780 |
| -20 | | 1710.006 | 1779.980 | 1710 | 1780 |
| -10 | | 1710.038 | 1779.907 | 1710 | 1780 |
| 0 | | 1710.097 | 1779.971 | 1710 | 1780 |
| 10 | | 1710.100 | 1779.919 | 1710 | 1780 |
| 20 | | 1710.052 | 1779.921 | 1710 | 1780 |
| 30 | | 1710.108 | 1779.953 | 1710 | 1780 |
| 40 | | 1710.030 | 1779.979 | 1710 | 1780 |
| 50 | | 1710.050 | 1779.983 | 1710 | 1780 |
| 60 | | 1710.090 | 1779.941 | 1710 | 1780 |
| 20 | V min.= 3.47 | 1710.044 | 1779.976 | 1710 | 1780 |
| 20 | V max.= 4.27 | 1710.077 | 1779.905 | 1710 | 1780 |

## Declarations

1. The laboratory is not responsible for the authenticity of any information provided by the applicant. Information from the applicant that may affect test results is marked with "★".

2. The test data was only valid for the test sample(s).

3. This report is valid only with a valid digital signature. The digital signature may be available only under the Adobe software above version 7.0.

4. Otherwise required by the applicant or Product Regulations, Decision Rule in this report did not consider the uncertainty.

5. The extended uncertainty given in this report is obtained by combining the standard uncertainty times the coverage factor k=2 with the 95.45% confidence interval.

******* END OF REPORT *******