



## Report

# Contents

|                              |    |
|------------------------------|----|
| Conducted output power ..... | 2  |
| Frequency stability .....    | 5  |
| Peak-to-Average Ratio.....   | 7  |
| Occupied bandwidth.....      | 11 |
| Band edge.....               | 15 |
| Out-of-band emissions.....   | 18 |



## Report

### Conducted output power

| Band                 | Channel | Frequency (MHz) | Power (dBm) | Gain (dB) | EIRP (dBm) | EIRP Limit (dBm) | Verdict |
|----------------------|---------|-----------------|-------------|-----------|------------|------------------|---------|
| WCDMA Band2          | 9262    | 1852.4          | 24.45       | 3.15      | 27.60      | 33.01            | PASS    |
| WCDMA Band2          | 9400    | 1880            | 24.63       | 3.15      | 27.78      | 33.01            | PASS    |
| WCDMA Band2          | 9538    | 1907.6          | 24.67       | 3.15      | 27.82      | 33.01            | PASS    |
| HSDPA Band2 Subtest1 | 9262    | 1852.4          | 23.49       | 3.15      | 26.64      | 33.01            | PASS    |
| HSDPA Band2 Subtest2 | 9262    | 1852.4          | 23.10       | 3.15      | 26.25      | 33.01            | PASS    |
| HSDPA Band2 Subtest3 | 9262    | 1852.4          | 21.82       | 3.15      | 24.97      | 33.01            | PASS    |
| HSDPA Band2 Subtest4 | 9262    | 1852.4          | 21.51       | 3.15      | 24.66      | 33.01            | PASS    |
| HSDPA Band2 Subtest1 | 9400    | 1880            | 23.73       | 3.15      | 26.88      | 33.01            | PASS    |
| HSDPA Band2 Subtest2 | 9400    | 1880            | 23.36       | 3.15      | 26.51      | 33.01            | PASS    |
| HSDPA Band2 Subtest3 | 9400    | 1880            | 22.28       | 3.15      | 25.43      | 33.01            | PASS    |
| HSDPA Band2 Subtest4 | 9400    | 1880            | 22.16       | 3.15      | 25.31      | 33.01            | PASS    |
| HSDPA Band2 Subtest1 | 9538    | 1907.6          | 23.77       | 3.15      | 26.92      | 33.01            | PASS    |
| HSDPA Band2 Subtest2 | 9538    | 1907.6          | 23.37       | 3.15      | 26.52      | 33.01            | PASS    |
| HSDPA Band2 Subtest3 | 9538    | 1907.6          | 22.18       | 3.15      | 25.33      | 33.01            | PASS    |
| HSDPA Band2 Subtest4 | 9538    | 1907.6          | 22.30       | 3.15      | 25.45      | 33.01            | PASS    |
| HSUPA Band2 Subtest1 | 9262    | 1852.4          | 21.79       | 3.15      | 24.94      | 33.01            | PASS    |
| HSUPA Band2 Subtest2 | 9262    | 1852.4          | 23.39       | 3.15      | 26.54      | 33.01            | PASS    |
| HSUPA Band2 Subtest3 | 9262    | 1852.4          | 21.47       | 3.15      | 24.62      | 33.01            | PASS    |
| HSUPA Band2 Subtest4 | 9262    | 1852.4          | 23.47       | 3.15      | 26.62      | 33.01            | PASS    |
| HSUPA Band2 Subtest5 | 9262    | 1852.4          | 22.15       | 3.15      | 25.30      | 33.01            | PASS    |
| HSUPA Band2 Subtest1 | 9400    | 1880            | 23.50       | 3.15      | 26.65      | 33.01            | PASS    |
| HSUPA Band2 Subtest2 | 9400    | 1880            | 23.67       | 3.15      | 26.82      | 33.01            | PASS    |
| HSUPA Band2 Subtest3 | 9400    | 1880            | 22.17       | 3.15      | 25.32      | 33.01            | PASS    |
| HSUPA Band2 Subtest4 | 9400    | 1880            | 23.68       | 3.15      | 26.83      | 33.01            | PASS    |
| HSUPA Band2 Subtest5 | 9400    | 1880            | 23.03       | 3.15      | 26.18      | 33.01            | PASS    |
| HSUPA Band2 Subtest1 | 9538    | 1907.6          | 23.56       | 3.15      | 26.71      | 33.01            | PASS    |
| HSUPA Band2 Subtest2 | 9538    | 1907.6          | 23.63       | 3.15      | 26.78      | 33.01            | PASS    |
| HSUPA Band2 Subtest3 | 9538    | 1907.6          | 22.44       | 3.15      | 25.59      | 33.01            | PASS    |
| HSUPA Band2 Subtest4 | 9538    | 1907.6          | 23.73       | 3.15      | 26.88      | 33.01            | PASS    |
| HSUPA Band2 Subtest5 | 9538    | 1907.6          | 22.72       | 3.15      | 25.87      | 33.01            | PASS    |



## Report

| Band                 | Channel | Frequency (MHz) | Power (dBm) | Gain (dB) | EIRP (dBm) | EIRP Limit (dBm) | Verdict |
|----------------------|---------|-----------------|-------------|-----------|------------|------------------|---------|
| WCDMA Band4          | 1312    | 1712.4          | 24.40       | 2.17      | 26.57      | 30               | PASS    |
| WCDMA Band4          | 1450    | 1740            | 24.36       | 2.17      | 26.53      | 30               | PASS    |
| WCDMA Band4          | 1513    | 1752.6          | 24.38       | 2.17      | 26.55      | 30               | PASS    |
| HSDPA Band4 Subtest1 | 1312    | 1712.4          | 23.40       | 2.17      | 25.57      | 30               | PASS    |
| HSDPA Band4 Subtest2 | 1312    | 1712.4          | 23.07       | 2.17      | 25.24      | 30               | PASS    |
| HSDPA Band4 Subtest3 | 1312    | 1712.4          | 22.18       | 2.17      | 24.35      | 30               | PASS    |
| HSDPA Band4 Subtest4 | 1312    | 1712.4          | 22.21       | 2.17      | 24.38      | 30               | PASS    |
| HSDPA Band4 Subtest1 | 1450    | 1740            | 23.37       | 2.17      | 25.54      | 30               | PASS    |
| HSDPA Band4 Subtest2 | 1450    | 1740            | 23.01       | 2.17      | 25.18      | 30               | PASS    |
| HSDPA Band4 Subtest3 | 1450    | 1740            | 21.95       | 2.17      | 24.12      | 30               | PASS    |
| HSDPA Band4 Subtest4 | 1450    | 1740            | 21.95       | 2.17      | 24.12      | 30               | PASS    |
| HSDPA Band4 Subtest1 | 1513    | 1752.6          | 23.39       | 2.17      | 25.56      | 30               | PASS    |
| HSDPA Band4 Subtest2 | 1513    | 1752.6          | 22.99       | 2.17      | 25.16      | 30               | PASS    |
| HSDPA Band4 Subtest3 | 1513    | 1752.6          | 21.47       | 2.17      | 23.64      | 30               | PASS    |
| HSDPA Band4 Subtest4 | 1513    | 1752.6          | 22.04       | 2.17      | 24.21      | 30               | PASS    |
| HSUPA Band4 Subtest1 | 1312    | 1712.4          | 22.48       | 2.17      | 24.65      | 30               | PASS    |
| HSUPA Band4 Subtest2 | 1312    | 1712.4          | 23.13       | 2.17      | 25.30      | 30               | PASS    |
| HSUPA Band4 Subtest3 | 1312    | 1712.4          | 21.64       | 2.17      | 23.81      | 30               | PASS    |
| HSUPA Band4 Subtest4 | 1312    | 1712.4          | 23.39       | 2.17      | 25.56      | 30               | PASS    |
| HSUPA Band4 Subtest5 | 1312    | 1712.4          | 22.21       | 2.17      | 24.38      | 30               | PASS    |
| HSUPA Band4 Subtest1 | 1450    | 1740            | 23.21       | 2.17      | 25.38      | 30               | PASS    |
| HSUPA Band4 Subtest2 | 1450    | 1740            | 23.25       | 2.17      | 25.42      | 30               | PASS    |
| HSUPA Band4 Subtest3 | 1450    | 1740            | 21.94       | 2.17      | 24.11      | 30               | PASS    |
| HSUPA Band4 Subtest4 | 1450    | 1740            | 23.37       | 2.17      | 25.54      | 30               | PASS    |
| HSUPA Band4 Subtest5 | 1450    | 1740            | 22.88       | 2.17      | 25.05      | 30               | PASS    |
| HSUPA Band4 Subtest1 | 1513    | 1752.6          | 23.20       | 2.17      | 25.37      | 30               | PASS    |
| HSUPA Band4 Subtest2 | 1513    | 1752.6          | 23.29       | 2.17      | 25.46      | 30               | PASS    |
| HSUPA Band4 Subtest3 | 1513    | 1752.6          | 22.36       | 2.17      | 24.53      | 30               | PASS    |
| HSUPA Band4 Subtest4 | 1513    | 1752.6          | 23.39       | 2.17      | 25.56      | 30               | PASS    |
| HSUPA Band4 Subtest5 | 1513    | 1752.6          | 22.74       | 2.17      | 24.91      | 30               | PASS    |



## Report

| Band                 | Channel | Frequency (MHz) | Power (dBm) | Gain (dB) | ERP (dBm) | ERP Limit (dBm) | Verdict |
|----------------------|---------|-----------------|-------------|-----------|-----------|-----------------|---------|
| WCDMA Band5          | 4132    | 826.4           | 24.18       | 3.66      | 25.69     | 38.45           | PASS    |
| WCDMA Band5          | 4182    | 836.4           | 24.28       | 3.66      | 25.79     | 38.45           | PASS    |
| WCDMA Band5          | 4233    | 846.6           | 24.46       | 3.66      | 25.97     | 38.45           | PASS    |
| HSDPA Band5 Subtest1 | 4132    | 826.4           | 23.19       | 3.66      | 24.70     | 38.45           | PASS    |
| HSDPA Band5 Subtest2 | 4132    | 826.4           | 22.95       | 3.66      | 24.46     | 38.45           | PASS    |
| HSDPA Band5 Subtest3 | 4132    | 826.4           | 21.82       | 3.66      | 23.33     | 38.45           | PASS    |
| HSDPA Band5 Subtest4 | 4132    | 826.4           | 21.66       | 3.66      | 23.17     | 38.45           | PASS    |
| HSDPA Band5 Subtest1 | 4182    | 836.4           | 23.28       | 3.66      | 24.79     | 38.45           | PASS    |
| HSDPA Band5 Subtest2 | 4182    | 836.4           | 22.77       | 3.66      | 24.28     | 38.45           | PASS    |
| HSDPA Band5 Subtest3 | 4182    | 836.4           | 21.91       | 3.66      | 23.42     | 38.45           | PASS    |
| HSDPA Band5 Subtest4 | 4182    | 836.4           | 21.86       | 3.66      | 23.37     | 38.45           | PASS    |
| HSDPA Band5 Subtest1 | 4233    | 846.6           | 23.51       | 3.66      | 25.02     | 38.45           | PASS    |
| HSDPA Band5 Subtest2 | 4233    | 846.6           | 23.01       | 3.66      | 24.52     | 38.45           | PASS    |
| HSDPA Band5 Subtest3 | 4233    | 846.6           | 22.08       | 3.66      | 23.59     | 38.45           | PASS    |
| HSDPA Band5 Subtest4 | 4233    | 846.6           | 22.12       | 3.66      | 23.63     | 38.45           | PASS    |
| HSUPA Band5 Subtest1 | 4132    | 826.4           | 22.27       | 3.66      | 23.78     | 38.45           | PASS    |
| HSUPA Band5 Subtest2 | 4132    | 826.4           | 23.15       | 3.66      | 24.66     | 38.45           | PASS    |
| HSUPA Band5 Subtest3 | 4132    | 826.4           | 21.38       | 3.66      | 22.89     | 38.45           | PASS    |
| HSUPA Band5 Subtest4 | 4132    | 826.4           | 23.20       | 3.66      | 24.71     | 38.45           | PASS    |
| HSUPA Band5 Subtest5 | 4132    | 826.4           | 21.65       | 3.66      | 23.16     | 38.45           | PASS    |
| HSUPA Band5 Subtest1 | 4182    | 836.4           | 23.12       | 3.66      | 24.63     | 38.45           | PASS    |
| HSUPA Band5 Subtest2 | 4182    | 836.4           | 23.18       | 3.66      | 24.69     | 38.45           | PASS    |
| HSUPA Band5 Subtest3 | 4182    | 836.4           | 22.22       | 3.66      | 23.73     | 38.45           | PASS    |
| HSUPA Band5 Subtest4 | 4182    | 836.4           | 23.31       | 3.66      | 24.82     | 38.45           | PASS    |
| HSUPA Band5 Subtest5 | 4182    | 836.4           | 22.37       | 3.66      | 23.88     | 38.45           | PASS    |
| HSUPA Band5 Subtest1 | 4233    | 846.6           | 23.32       | 3.66      | 24.83     | 38.45           | PASS    |
| HSUPA Band5 Subtest2 | 4233    | 846.6           | 23.43       | 3.66      | 24.94     | 38.45           | PASS    |
| HSUPA Band5 Subtest3 | 4233    | 846.6           | 22.07       | 3.66      | 23.58     | 38.45           | PASS    |
| HSUPA Band5 Subtest4 | 4233    | 846.6           | 23.50       | 3.66      | 25.01     | 38.45           | PASS    |
| HSUPA Band5 Subtest5 | 4233    | 846.6           | 22.99       | 3.66      | 24.50     | 38.45           | PASS    |



## Report

### Frequency stability

| UMTS Band 2 /1880MHz |                 |            |            |                           |        |
|----------------------|-----------------|------------|------------|---------------------------|--------|
| Temperature (°C)     | Voltage         | Freq. Dev. | Freq. Dev. | Limit                     | Result |
|                      | (Volt)          | (Hz)       | (ppm)      |                           |        |
| 50                   | Normal Voltage  | 3.75       | 0.002      | Within<br>Authorized Band | PASS   |
| 40                   |                 | 3.78       | 0.002      |                           |        |
| 30                   |                 | -3.91      | -0.002     |                           |        |
| 20                   |                 | 5.94       | 0.003      |                           |        |
| 10                   |                 | 4.09       | 0.002      |                           |        |
| 0                    |                 | 4.06       | 0.002      |                           |        |
| -10                  |                 | -3.92      | -0.002     |                           |        |
| -20                  |                 | -3.98      | -0.002     |                           |        |
| -30                  |                 | 4.07       | 0.002      |                           |        |
| 20                   | Maximum Voltage | -3.65      | -0.002     |                           |        |
| 20                   | BEP             | -3.53      | -0.002     |                           |        |

| UMTS Band 4 /1740MHz |                 |            |            |                           |        |
|----------------------|-----------------|------------|------------|---------------------------|--------|
| Temperature (°C)     | Voltage         | Freq. Dev. | Freq. Dev. | Limit                     | Result |
|                      | (Volt)          | (Hz)       | (ppm)      |                           |        |
| 50                   | Normal Voltage  | -0.51      | 0.000      | Within<br>Authorized Band | PASS   |
| 40                   |                 | -0.56      | 0.000      |                           |        |
| 30                   |                 | -0.37      | 0.000      |                           |        |
| 20                   |                 | -2.78      | -0.001     |                           |        |
| 10                   |                 | -0.85      | 0.000      |                           |        |
| 0                    |                 | 0.83       | 0.000      |                           |        |
| -10                  |                 | 0.39       | 0.000      |                           |        |
| -20                  |                 | -0.58      | 0.000      |                           |        |
| -30                  |                 | -0.50      | 0.000      |                           |        |
| 20                   | Maximum Voltage | -0.43      | 0.000      |                           |        |
| 20                   | BEP             | 0.39       | 0.000      |                           |        |



## Report

| UMTS Band 5 / 836.6MHz |                 |            |            |        |        |
|------------------------|-----------------|------------|------------|--------|--------|
| Temperature (°C)       | Voltage         | Freq. Dev. | Freq. Dev. | Limit  | Result |
|                        | (Volt)          | (Hz)       | (ppm)      |        |        |
| 50                     | Normal Voltage  | -1.50      | -0.002     | 2.5ppm | PASS   |
| 40                     |                 | -1.31      | -0.002     |        |        |
| 30                     |                 | -1.37      | -0.002     |        |        |
| 20                     |                 | 1.27       | 0.002      |        |        |
| 10                     |                 | -1.60      | -0.002     |        |        |
| 0                      |                 | -1.52      | -0.002     |        |        |
| -10                    |                 | -1.35      | -0.002     |        |        |
| -20                    |                 | 1.55       | 0.002      |        |        |
| -30                    |                 | -1.33      | -0.002     |        |        |
| 20                     | Maximum Voltage | -1.53      | -0.002     |        |        |
| 20                     | BEP             | -1.74      | -0.002     |        |        |

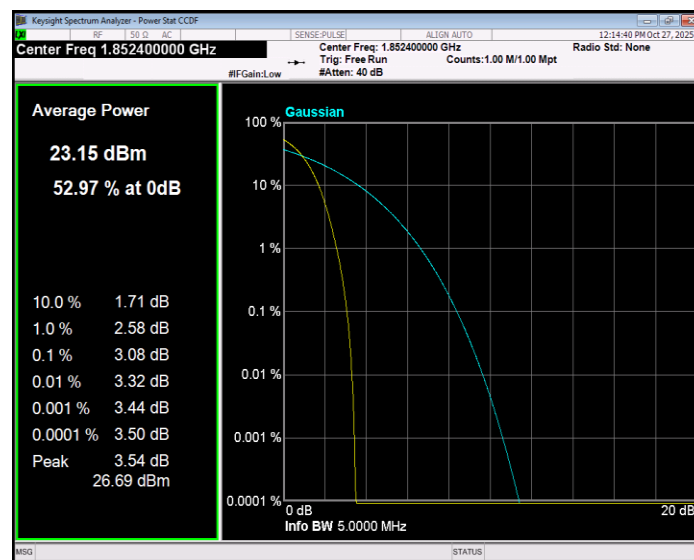


## Report

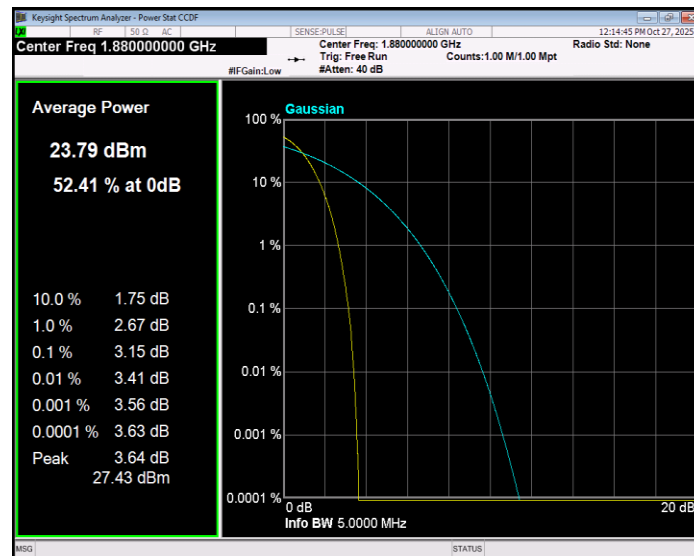
### Peak-to-Average Ratio

| Band        | Channel | Frequency (MHz) | Result (dB) | high Limit (dB) | Verdict |
|-------------|---------|-----------------|-------------|-----------------|---------|
| WCDMA Band2 | 9262    | 1852.4          | 3.08        | 13              | PASS    |
| WCDMA Band2 | 9400    | 1880            | 3.15        | 13              | PASS    |
| WCDMA Band2 | 9538    | 1907.6          | 3.03        | 13              | PASS    |
| WCDMA Band4 | 1312    | 1712.4          | 3.16        | 13              | PASS    |
| WCDMA Band4 | 1450    | 1740            | 3.16        | 13              | PASS    |
| WCDMA Band4 | 1513    | 1752.6          | 3.08        | 13              | PASS    |
| WCDMA Band5 | 4132    | 826.4           | 3.16        | 13              | PASS    |
| WCDMA Band5 | 4182    | 836.4           | 3.13        | 13              | PASS    |
| WCDMA Band5 | 4233    | 846.6           | 3.05        | 13              | PASS    |

WCDMA Band2 Channel=9262



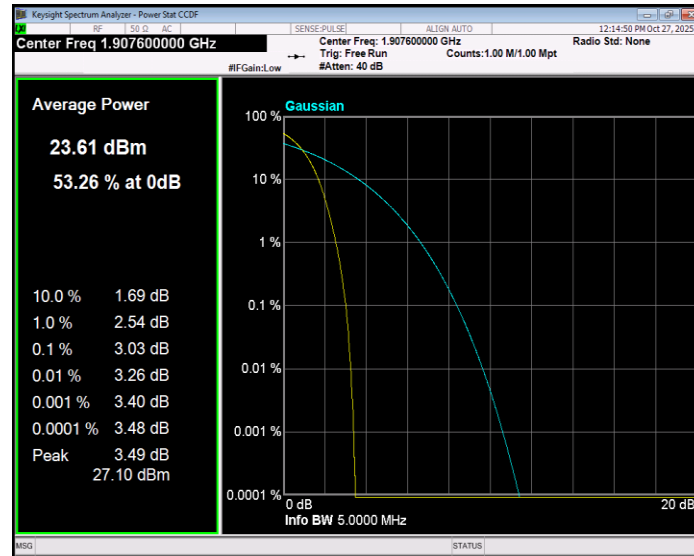
WCDMA Band2 Channel=9400



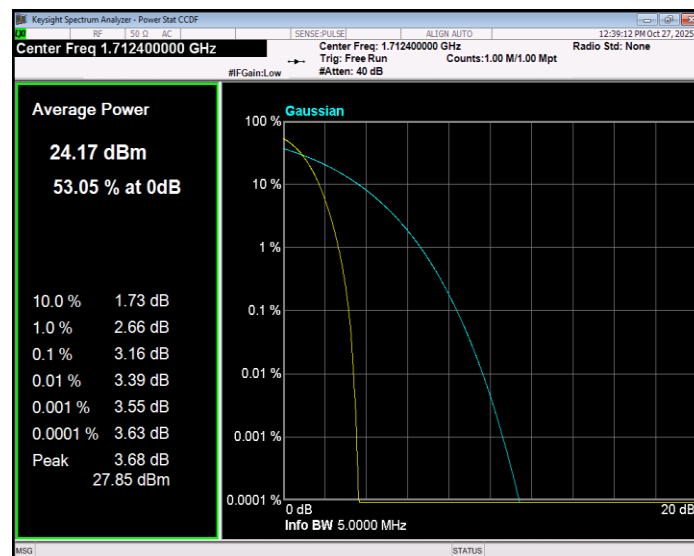
WCDMA Band2 Channel=9538



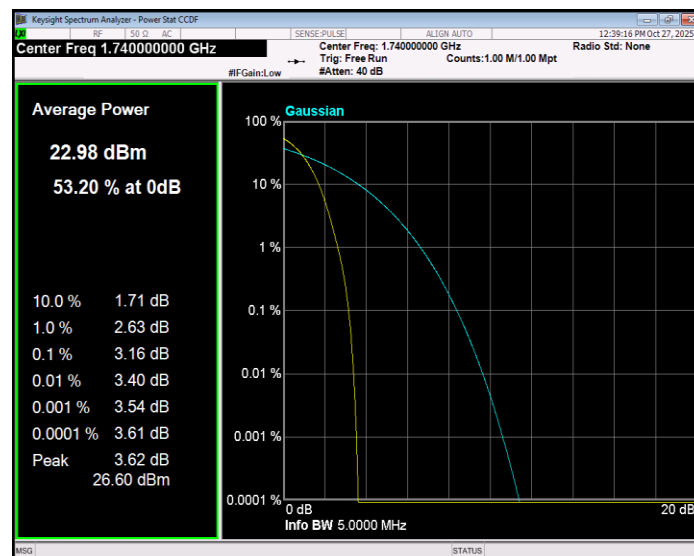
## Report



WCDMA Band4 Channel=1312



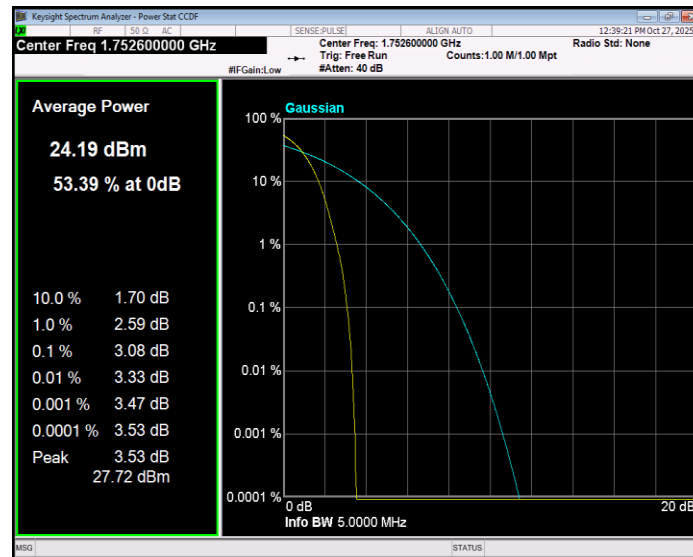
WCDMA Band4 Channel=1450



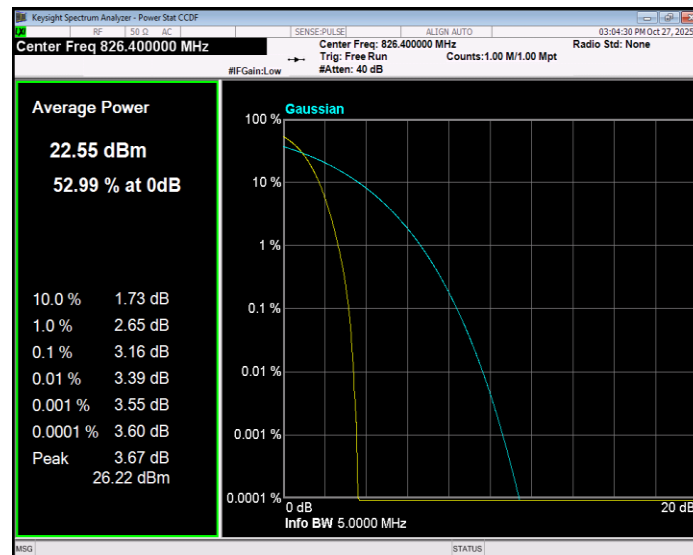


## Report

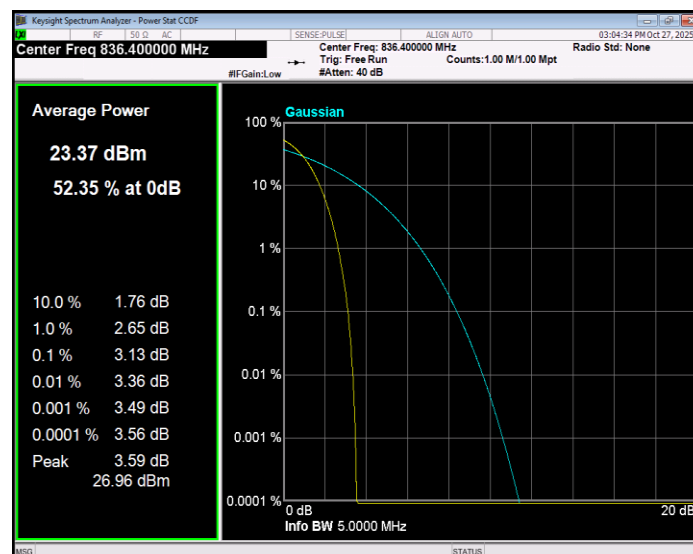
### WCDMA Band4 Channel=1513



### WCDMA Band5 Channel=4132



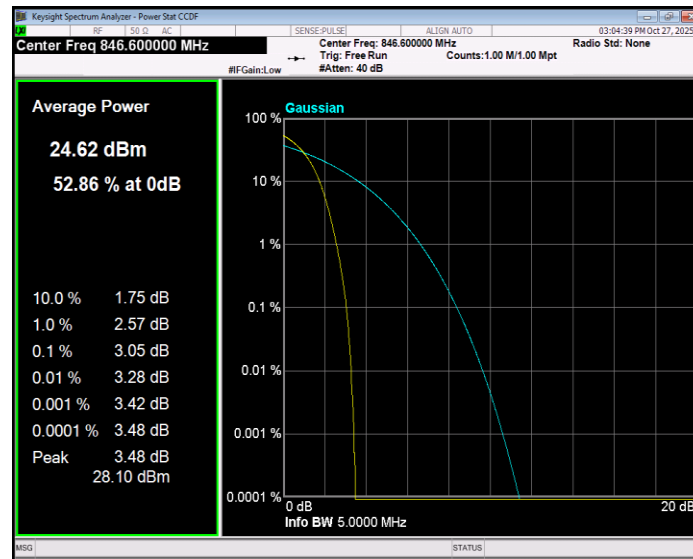
### WCDMA Band5 Channel=4182





## Report

WCDMA Band5 Channel=4233



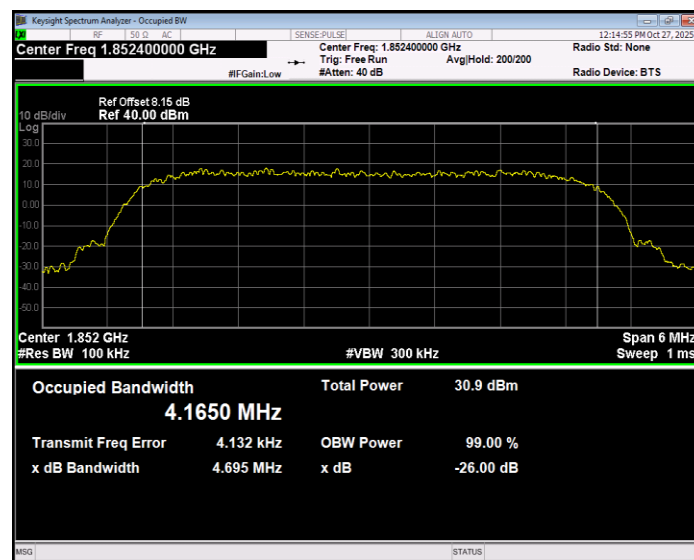


## Report

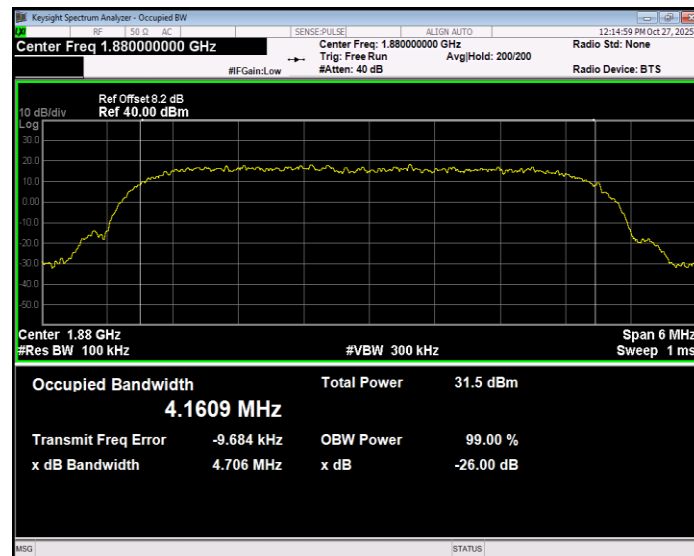
### Occupied bandwidth

| Band        | Channel | Frequency (MHz) | 99% OBW (MHz) | -26dB EBW (MHz) | Verdict |
|-------------|---------|-----------------|---------------|-----------------|---------|
| WCDMA Band2 | 9262    | 1852.4          | 4.165         | 4.695           | PASS    |
| WCDMA Band2 | 9400    | 1880            | 4.161         | 4.706           | PASS    |
| WCDMA Band2 | 9538    | 1907.6          | 4.169         | 4.688           | PASS    |
| WCDMA Band4 | 1312    | 1712.4          | 4.159         | 4.657           | PASS    |
| WCDMA Band4 | 1450    | 1740            | 4.148         | 4.700           | PASS    |
| WCDMA Band4 | 1513    | 1752.6          | 4.162         | 4.692           | PASS    |
| WCDMA Band5 | 4132    | 826.4           | 4.141         | 4.669           | PASS    |
| WCDMA Band5 | 4182    | 836.4           | 4.175         | 4.698           | PASS    |
| WCDMA Band5 | 4233    | 846.6           | 4.181         | 4.710           | PASS    |

WCDMA Band2 Channel=9262



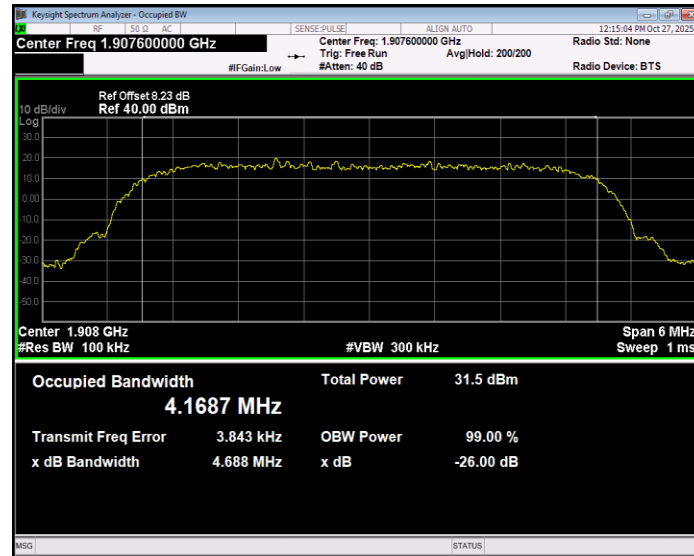
WCDMA Band2 Channel=9400



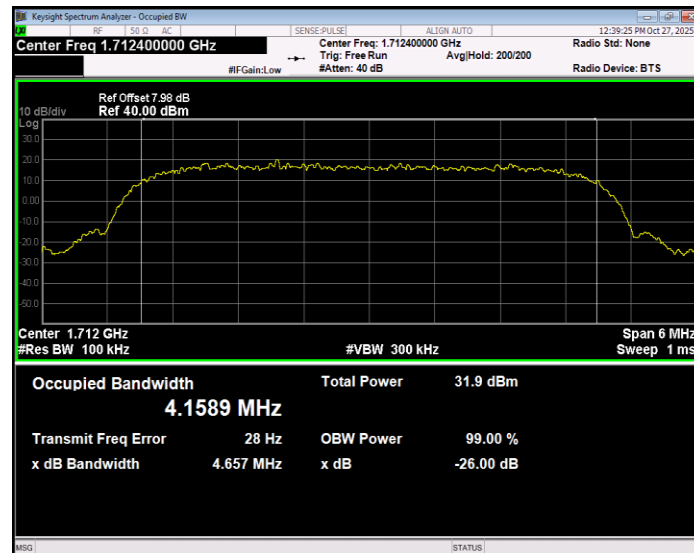
WCDMA Band2 Channel=9538



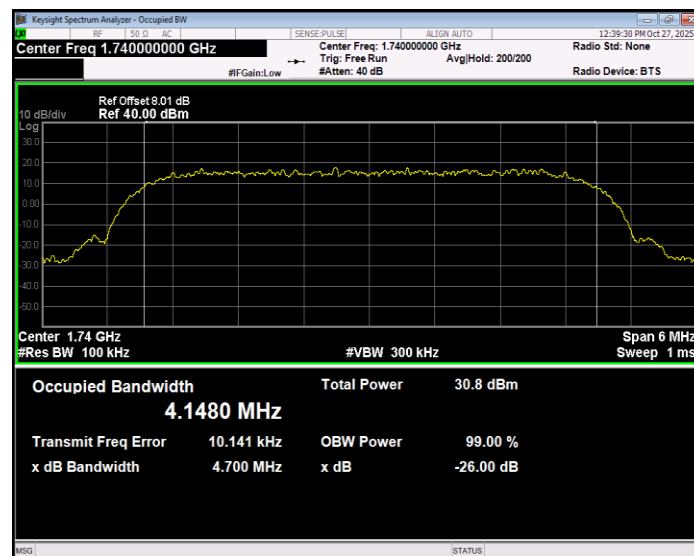
## Report



WCDMA Band4 Channel=1312



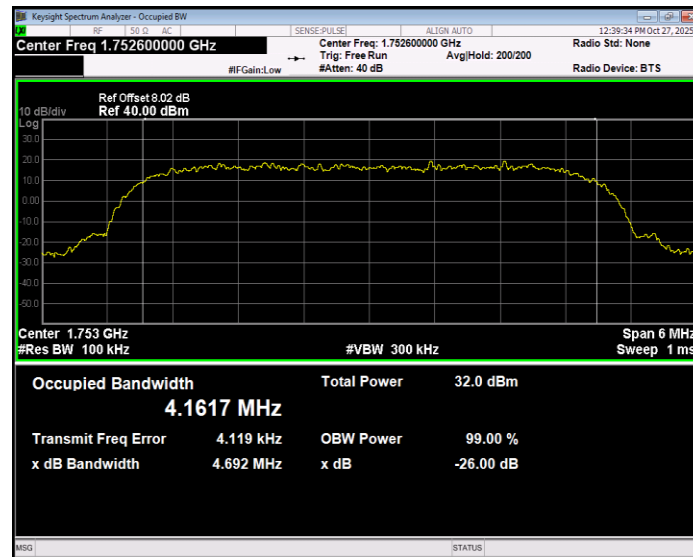
WCDMA Band4 Channel=1450



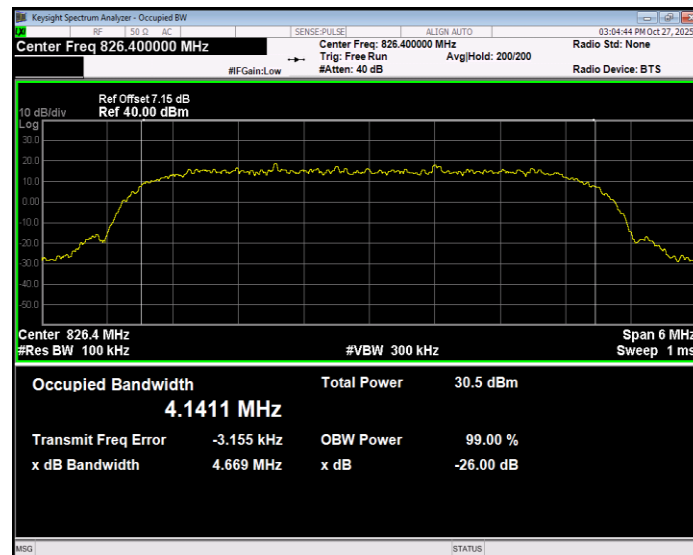


## Report

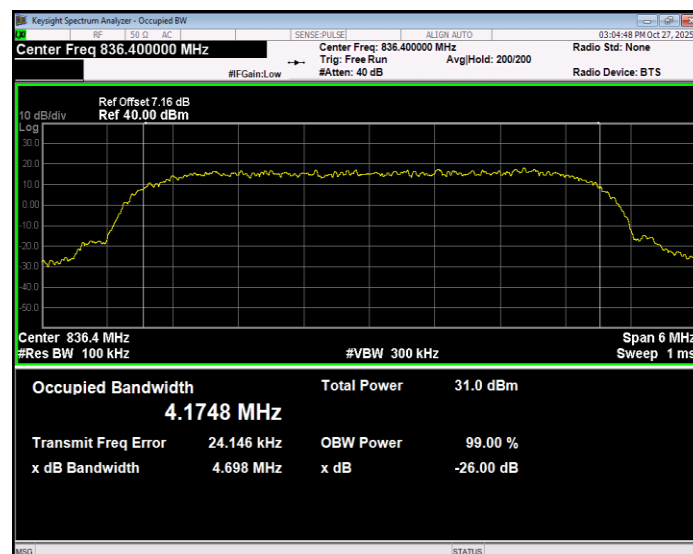
### WCDMA Band4 Channel=1513



### WCDMA Band5 Channel=4132



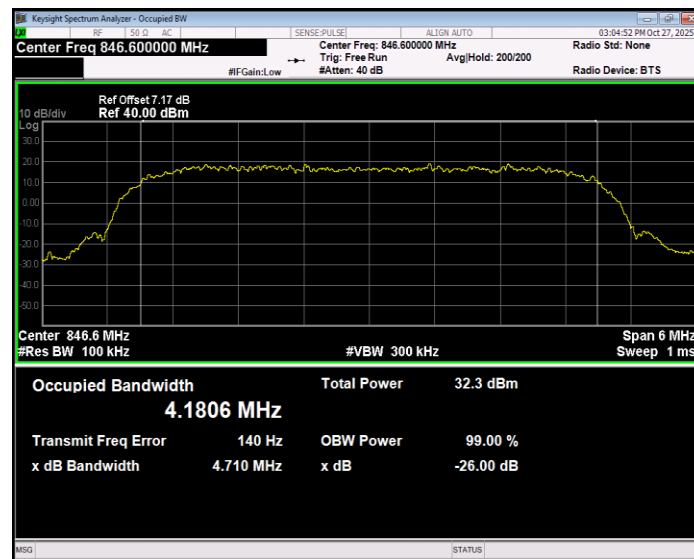
### WCDMA Band5 Channel=4182





## Report

WCDMA Band5 Channel=4233



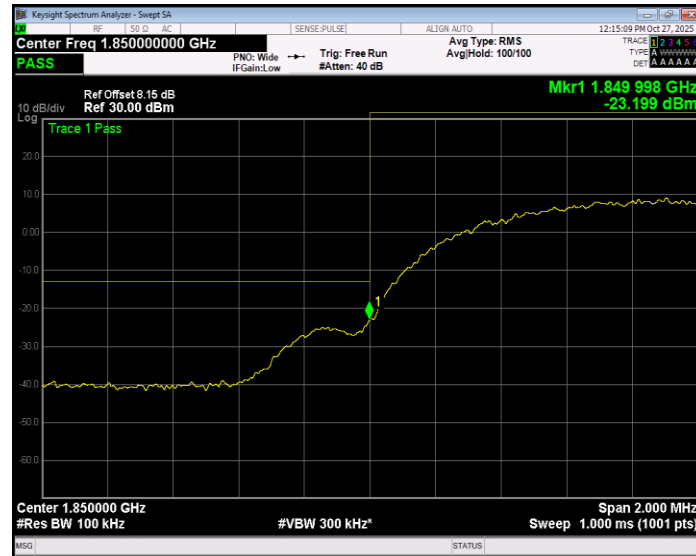


## Report

### Band edge

| Band        | Channel | Frequency (MHz) | Spur Freq (MHz) | Spur Level (dBm) | Limit (dBm) | Verdict |
|-------------|---------|-----------------|-----------------|------------------|-------------|---------|
| WCDMA Band2 | 9262    | 1852.4          | 1850.00         | -23.19           | -13         | PASS    |
| WCDMA Band2 | 9538    | 1907.6          | 1910.00         | -22.36           | -13         | PASS    |
| WCDMA Band4 | 1312    | 1712.4          | 1709.85         | -21.79           | -13         | PASS    |
| WCDMA Band4 | 1513    | 1752.6          | 1755.01         | -21.96           | -13         | PASS    |
| WCDMA Band5 | 4132    | 826.4           | 823.90          | -24.35           | -13         | PASS    |
| WCDMA Band5 | 4233    | 846.6           | 849.10          | -21.62           | -13         | PASS    |

WCDMA Band2 Channel=9262



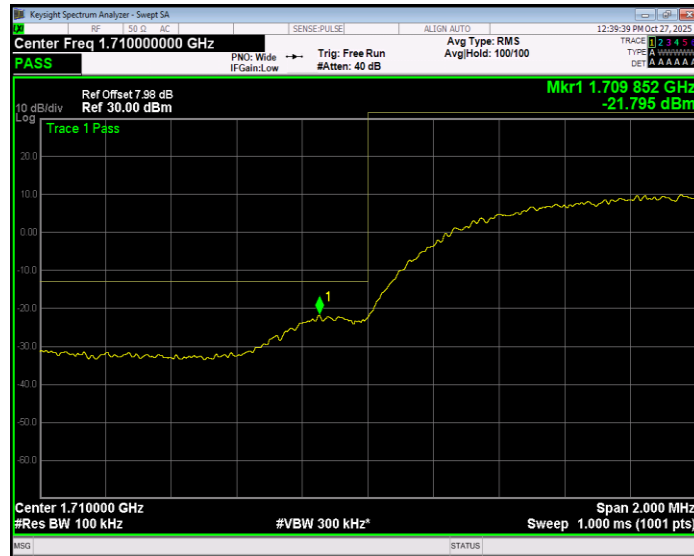
WCDMA Band2 Channel=9538



WCDMA Band4 Channel=1312



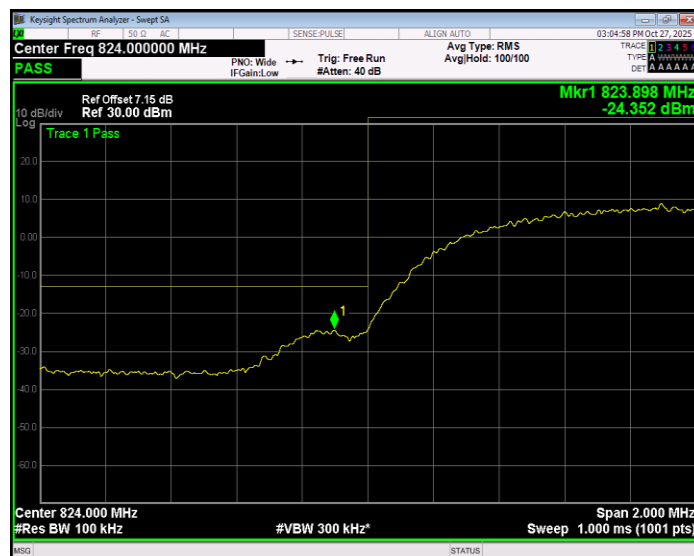
## Report



WCDMA Band4 Channel=1513



WCDMA Band5 Channel=4132





# Report

WCDMA Band5 Channel=4233



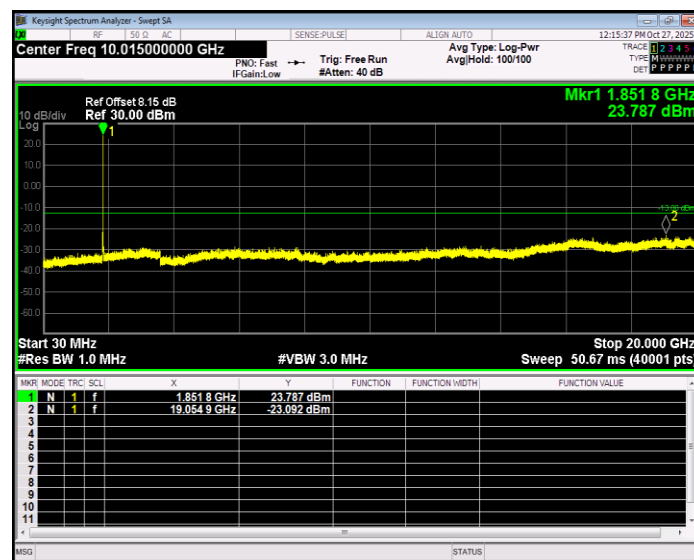


## Report

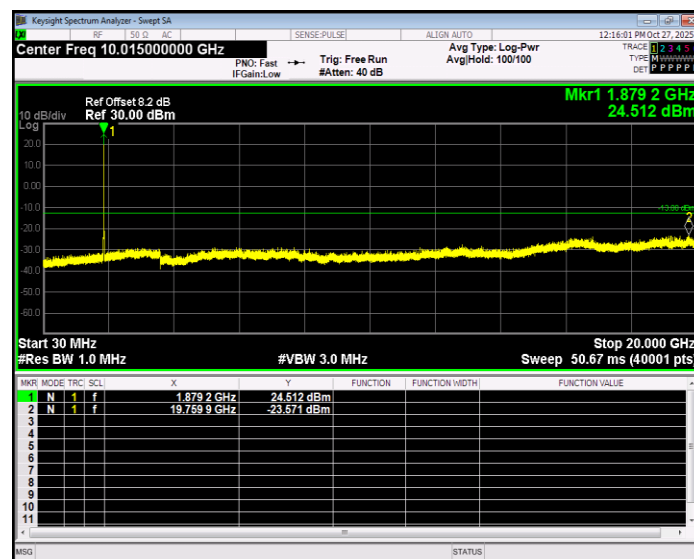
### Out-of-band emissions

| Band        | Channel | Frequency (MHz) | Spur Freq (MHz) | Spur Level (dBm) | Limit (dBm) | Verdict |
|-------------|---------|-----------------|-----------------|------------------|-------------|---------|
| WCDMA Band2 | 9262    | 1852.4          | 19054.92        | -23.09           | -13         | PASS    |
| WCDMA Band2 | 9400    | 1880            | 19759.86        | -23.57           | -13         | PASS    |
| WCDMA Band2 | 9538    | 1907.6          | 19059.91        | -23.32           | -13         | PASS    |
| WCDMA Band4 | 1312    | 1712.4          | 16530.71        | -24.22           | -13         | PASS    |
| WCDMA Band4 | 1450    | 1740            | 16162.27        | -23.81           | -13         | PASS    |
| WCDMA Band4 | 1513    | 1752.6          | 19058.41        | -22.94           | -13         | PASS    |
| WCDMA Band5 | 4132    | 826.4           | 3219.90         | -28.65           | -13         | PASS    |
| WCDMA Band5 | 4182    | 836.4           | 3314.37         | -28.88           | -13         | PASS    |
| WCDMA Band5 | 4233    | 846.6           | 3279.97         | -28.81           | -13         | PASS    |

WCDMA Band2 Channel=9262



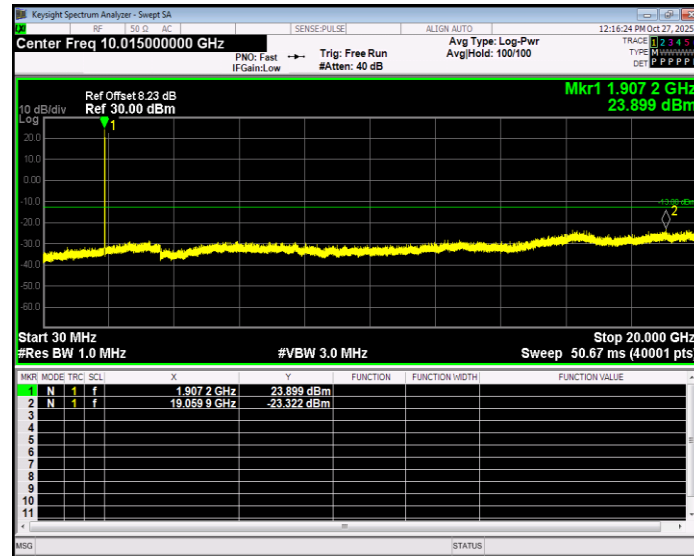
WCDMA Band2 Channel=9400



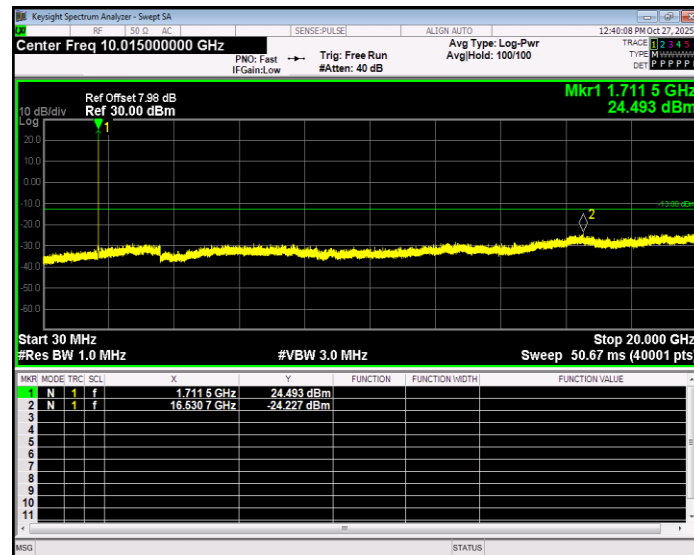
WCDMA Band2 Channel=9538



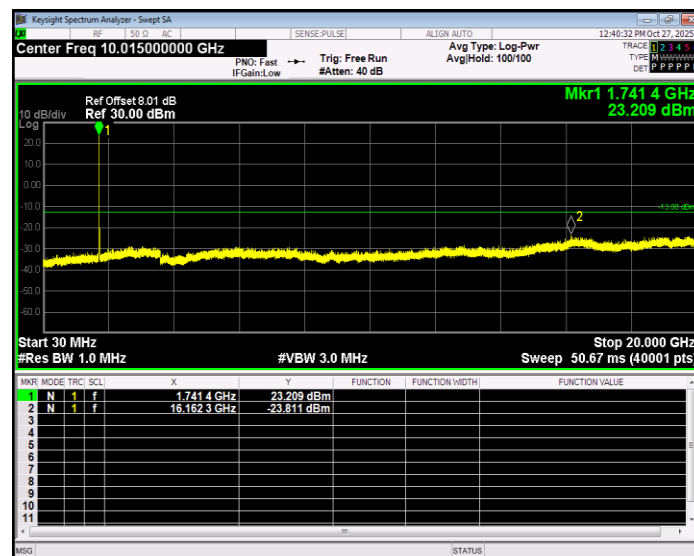
## Report



WCDMA Band4 Channel=1312



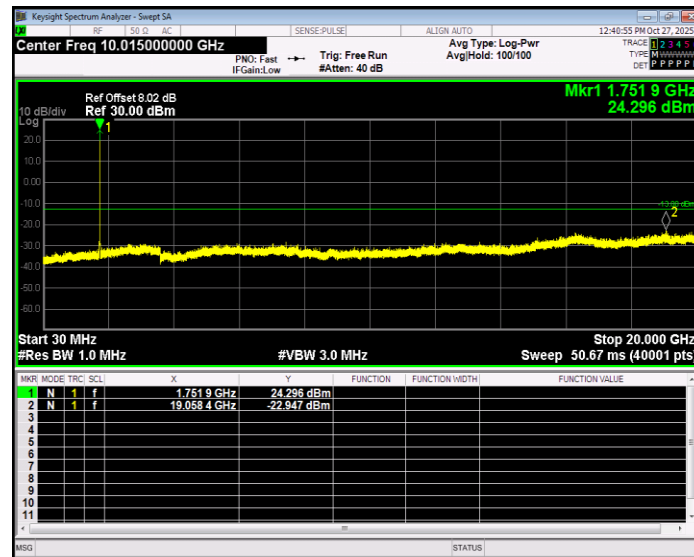
WCDMA Band4 Channel=1450



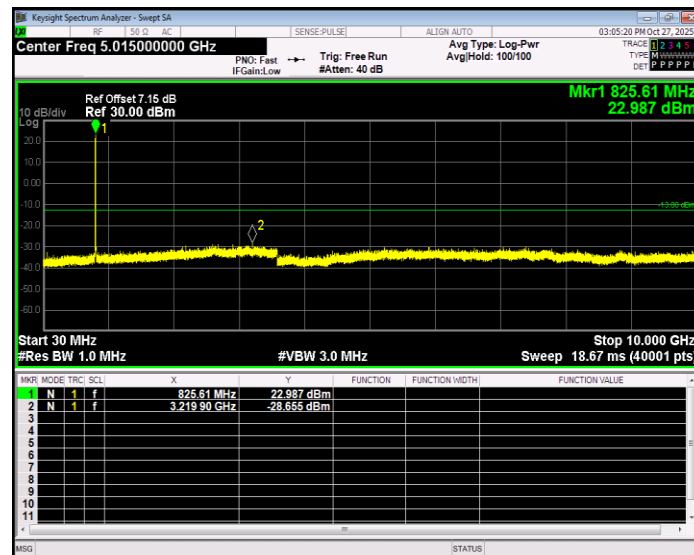


## Report

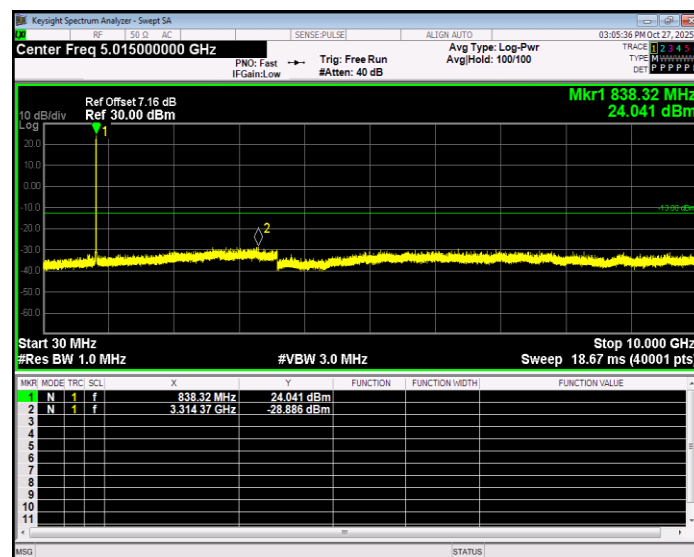
### WCDMA Band4 Channel=1513



### WCDMA Band5 Channel=4132



### WCDMA Band5 Channel=4182





# Report

WCDMA Band5 Channel=4233

