

## WCDMA B5(ANT1) TX

## WCDMA B2/B4 (ANT0) TX

### AppendixA: Effective (Isotropic) Radiated Power Output Data

#### Test Result(WCDMA)

| Band  | Type     | Channel | Conducted Power (dBm) | ERP/EIRP (dBm) | ERP/EIRP Limit (dBm) | Verdict |
|-------|----------|---------|-----------------------|----------------|----------------------|---------|
| Band2 | Voice    | 9262    | 22.66                 | 19.86          | 33.01                | PASS    |
| Band2 | TestMode | 9262    | 22.72                 | 19.92          | 33.01                | PASS    |
| Band2 | TestMode | 9400    | 22.79                 | 19.99          | 33.01                | PASS    |
| Band2 | Voice    | 9400    | 22.72                 | 19.92          | 33.01                | PASS    |
| Band2 | Voice    | 9538    | 22.83                 | 20.03          | 33.01                | PASS    |
| Band2 | TestMode | 9538    | 22.87                 | 20.07          | 33.01                | PASS    |
| Band4 | TestMode | 1312    | 22.67                 | 19.97          | 30.00                | PASS    |
| Band4 | Voice    | 1312    | 22.63                 | 19.93          | 30.00                | PASS    |
| Band4 | TestMode | 1413    | 23.24                 | 20.54          | 30.00                | PASS    |
| Band4 | Voice    | 1413    | 23.16                 | 20.46          | 30.00                | PASS    |
| Band4 | TestMode | 1513    | 22.77                 | 20.07          | 30.00                | PASS    |
| Band4 | Voice    | 1513    | 22.73                 | 20.03          | 30.00                | PASS    |
| Band5 | TestMode | 4132    | 23.48                 | 15.44          | 38.45                | PASS    |
| Band5 | Voice    | 4132    | 23.43                 | 15.39          | 38.45                | PASS    |
| Band5 | Voice    | 4183    | 23.68                 | 15.64          | 38.45                | PASS    |
| Band5 | TestMode | 4183    | 23.72                 | 15.68          | 38.45                | PASS    |
| Band5 | Voice    | 4233    | 23.54                 | 15.5           | 38.45                | PASS    |
| Band5 | TestMode | 4233    | 23.57                 | 15.53          | 38.45                | PASS    |

#### Test Result(HSDPA)

| Band  | Channel | SubTest | Conducted Power (dBm) | ERP/EIRP (dBm) | ERP/EIRP Limit (dBm) | Verdict |
|-------|---------|---------|-----------------------|----------------|----------------------|---------|
| Band2 | 9262    | 1       | 22.64                 | 19.84          | 33.01                | PASS    |
| Band2 | 9262    | 2       | 22.44                 | 19.64          | 33.01                | PASS    |
| Band2 | 9262    | 3       | 22.25                 | 19.45          | 33.01                | PASS    |
| Band2 | 9262    | 4       | 22.28                 | 19.48          | 33.01                | PASS    |
| Band2 | 9400    | 1       | 22.35                 | 19.55          | 33.01                | PASS    |
| Band2 | 9400    | 2       | 22.07                 | 19.27          | 33.01                | PASS    |
| Band2 | 9400    | 3       | 21.89                 | 19.09          | 33.01                | PASS    |
| Band2 | 9400    | 4       | 21.94                 | 19.14          | 33.01                | PASS    |

|       |      |   |       |       |       |      |
|-------|------|---|-------|-------|-------|------|
| Band2 | 9538 | 1 | 22.46 | 19.66 | 33.01 | PASS |
| Band2 | 9538 | 2 | 22.21 | 19.41 | 33.01 | PASS |
| Band2 | 9538 | 3 | 22.08 | 19.28 | 33.01 | PASS |
| Band2 | 9538 | 4 | 22.07 | 19.27 | 33.01 | PASS |
| Band4 | 1312 | 1 | 22.51 | 19.81 | 30.00 | PASS |
| Band4 | 1312 | 2 | 22.67 | 19.97 | 30.00 | PASS |
| Band4 | 1312 | 3 | 22.68 | 19.98 | 30.00 | PASS |
| Band4 | 1312 | 4 | 22.69 | 19.99 | 30.00 | PASS |
| Band4 | 1413 | 1 | 23.26 | 20.56 | 30.00 | PASS |
| Band4 | 1413 | 2 | 23.28 | 20.58 | 30.00 | PASS |
| Band4 | 1413 | 3 | 23.21 | 20.51 | 30.00 | PASS |
| Band4 | 1413 | 4 | 23.24 | 20.54 | 30.00 | PASS |
| Band4 | 1513 | 1 | 22.24 | 19.54 | 30.00 | PASS |
| Band4 | 1513 | 2 | 22.42 | 19.72 | 30.00 | PASS |
| Band4 | 1513 | 3 | 22.43 | 19.73 | 30.00 | PASS |
| Band4 | 1513 | 4 | 22.48 | 19.78 | 30.00 | PASS |
| Band5 | 4132 | 1 | 22.56 | 14.52 | 38.5  | PASS |
| Band5 | 4132 | 2 | 22.36 | 14.32 | 38.5  | PASS |
| Band5 | 4132 | 3 | 21.72 | 13.68 | 38.5  | PASS |
| Band5 | 4132 | 4 | 21.75 | 13.71 | 38.5  | PASS |
| Band5 | 4183 | 1 | 22.53 | 14.49 | 38.5  | PASS |
| Band5 | 4183 | 2 | 22.31 | 14.27 | 38.5  | PASS |
| Band5 | 4183 | 3 | 21.91 | 13.87 | 38.5  | PASS |
| Band5 | 4183 | 4 | 21.95 | 13.91 | 38.5  | PASS |
| Band5 | 4233 | 1 | 22.77 | 14.73 | 38.5  | PASS |
| Band5 | 4233 | 2 | 22.64 | 14.6  | 38.5  | PASS |
| Band5 | 4233 | 3 | 22.02 | 13.98 | 38.5  | PASS |
| Band5 | 4233 | 4 | 22.24 | 14.2  | 38.5  | PASS |

## Test Result(HSUPA)

| Band  | Channel | SubTest | Conducted Power (dBm) | ERP/EIRP (dBm) | ERP/EIRP Limit (dBm) | Verdict |
|-------|---------|---------|-----------------------|----------------|----------------------|---------|
| Band2 | 9262    | 1       | 20.40                 | 17.6           | 33.01                | PASS    |
| Band2 | 9262    | 2       | 21.13                 | 18.33          | 33.01                | PASS    |
| Band2 | 9262    | 3       | 20.86                 | 18.06          | 33.01                | PASS    |
| Band2 | 9262    | 4       | 21.19                 | 18.39          | 33.01                | PASS    |
| Band2 | 9262    | 5       | 22.88                 | 20.08          | 33.01                | PASS    |
| Band2 | 9400    | 1       | 20.57                 | 17.77          | 33.01                | PASS    |
| Band2 | 9400    | 2       | 21.08                 | 18.28          | 33.01                | PASS    |
| Band2 | 9400    | 3       | 20.82                 | 18.02          | 33.01                | PASS    |
| Band2 | 9400    | 4       | 21.14                 | 18.34          | 33.01                | PASS    |

|       |      |   |       |       |       |      |
|-------|------|---|-------|-------|-------|------|
| Band2 | 9400 | 5 | 22.47 | 19.67 | 33.01 | PASS |
| Band2 | 9538 | 1 | 20.52 | 17.72 | 33.01 | PASS |
| Band2 | 9538 | 2 | 20.95 | 18.15 | 33.01 | PASS |
| Band2 | 9538 | 3 | 20.73 | 17.93 | 33.01 | PASS |
| Band2 | 9538 | 4 | 21.04 | 18.24 | 33.01 | PASS |
| Band2 | 9538 | 5 | 22.65 | 19.85 | 33.01 | PASS |
| Band4 | 1312 | 1 | 22.54 | 19.84 | 30.00 | PASS |
| Band4 | 1312 | 2 | 22.65 | 19.95 | 30.00 | PASS |
| Band4 | 1312 | 3 | 22.42 | 19.72 | 30.00 | PASS |
| Band4 | 1312 | 4 | 22.71 | 20.01 | 30.00 | PASS |
| Band4 | 1312 | 5 | 22.86 | 20.16 | 30.00 | PASS |
| Band4 | 1413 | 1 | 23.25 | 20.55 | 30.00 | PASS |
| Band4 | 1413 | 2 | 23.23 | 20.53 | 30.00 | PASS |
| Band4 | 1413 | 3 | 23.13 | 20.43 | 30.00 | PASS |
| Band4 | 1413 | 4 | 23.29 | 20.59 | 30.00 | PASS |
| Band4 | 1413 | 5 | 23.40 | 20.7  | 30.00 | PASS |
| Band4 | 1513 | 1 | 22.42 | 19.72 | 30.00 | PASS |
| Band4 | 1513 | 2 | 22.59 | 19.89 | 30.00 | PASS |
| Band4 | 1513 | 3 | 22.34 | 19.64 | 30.00 | PASS |
| Band4 | 1513 | 4 | 22.66 | 19.96 | 30.00 | PASS |
| Band4 | 1513 | 5 | 22.56 | 19.86 | 30.00 | PASS |
| Band5 | 4132 | 1 | 20.48 | 12.44 | 38.5  | PASS |
| Band5 | 4132 | 2 | 20.80 | 12.76 | 38.5  | PASS |
| Band5 | 4132 | 3 | 20.60 | 12.56 | 38.5  | PASS |
| Band5 | 4132 | 4 | 20.35 | 12.31 | 38.5  | PASS |
| Band5 | 4132 | 5 | 22.74 | 14.7  | 38.5  | PASS |
| Band5 | 4183 | 1 | 20.78 | 12.74 | 38.5  | PASS |
| Band5 | 4183 | 2 | 20.91 | 12.87 | 38.5  | PASS |
| Band5 | 4183 | 3 | 20.66 | 12.62 | 38.5  | PASS |
| Band5 | 4183 | 4 | 20.42 | 12.38 | 38.5  | PASS |
| Band5 | 4183 | 5 | 22.97 | 14.93 | 38.5  | PASS |
| Band5 | 4233 | 1 | 20.96 | 12.92 | 38.5  | PASS |
| Band5 | 4233 | 2 | 21.07 | 13.03 | 38.5  | PASS |
| Band5 | 4233 | 3 | 20.82 | 12.78 | 38.5  | PASS |
| Band5 | 4233 | 4 | 20.65 | 12.61 | 38.5  | PASS |
| Band5 | 4233 | 5 | 23.00 | 14.96 | 38.5  | PASS |

Remark: EIRP (dBm) = Conducted power (dBm) + Antenna Gain (dBi). (For Band2 & 4)

ERP (dBm) = EIRP (dBm) - 2.15 (dB). (For Band5)

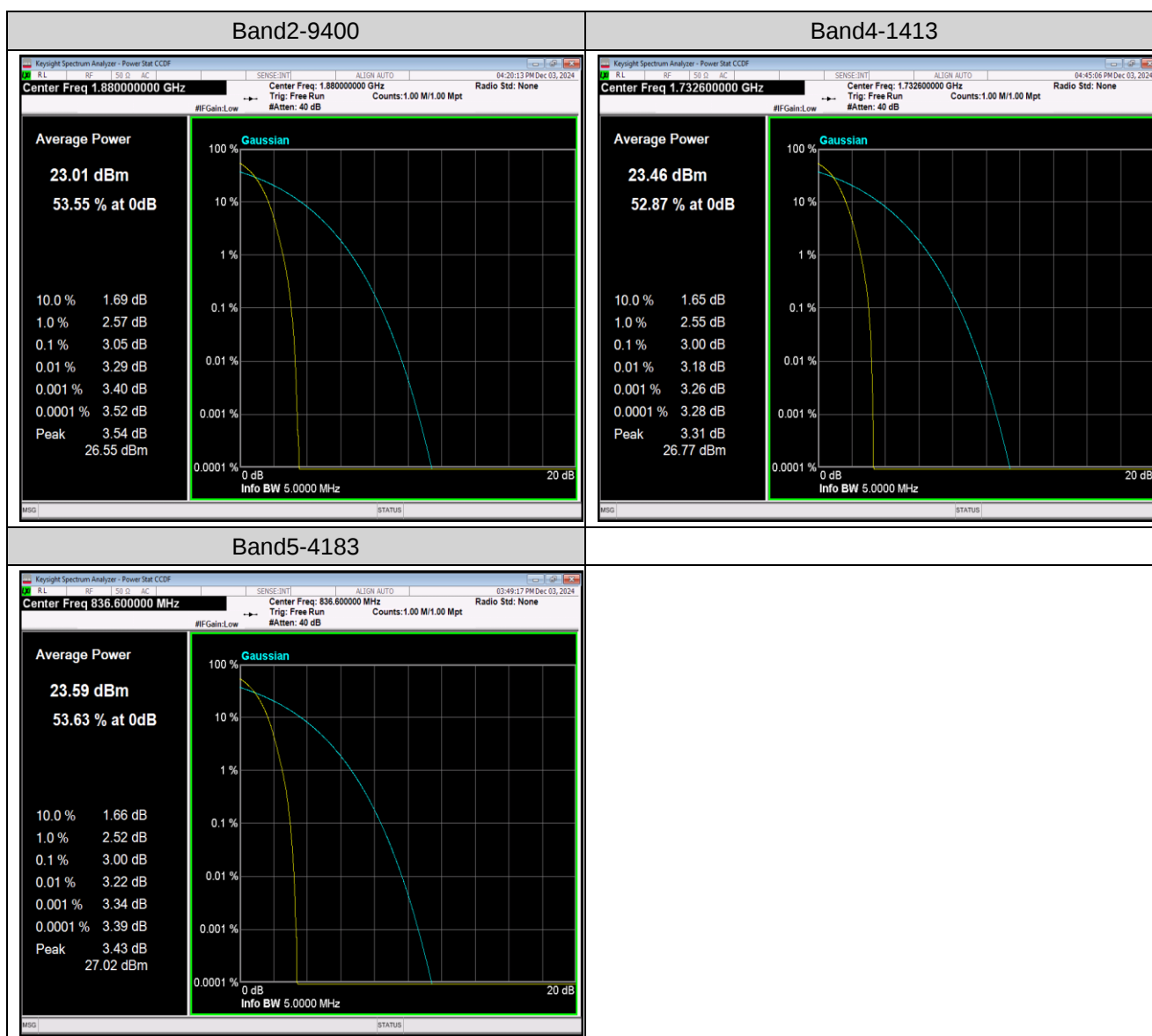
## AppendixB:Peak-to-Average Ratio

### Test Result(WCDMA)

| Band  | Channel | Peak-to-Average Ratio(dB) | Limit(dB) | Verdict |
|-------|---------|---------------------------|-----------|---------|
| Band2 | 9400    | 3.05                      | 13        | PASS    |
| Band4 | 1413    | 3                         | 13        | PASS    |
| Band5 | 4183    | 3                         | 13        | PASS    |

Remark: All channel had been tested, but only the worst case data displayed in this report.

### Test Graphs(WCDMA)

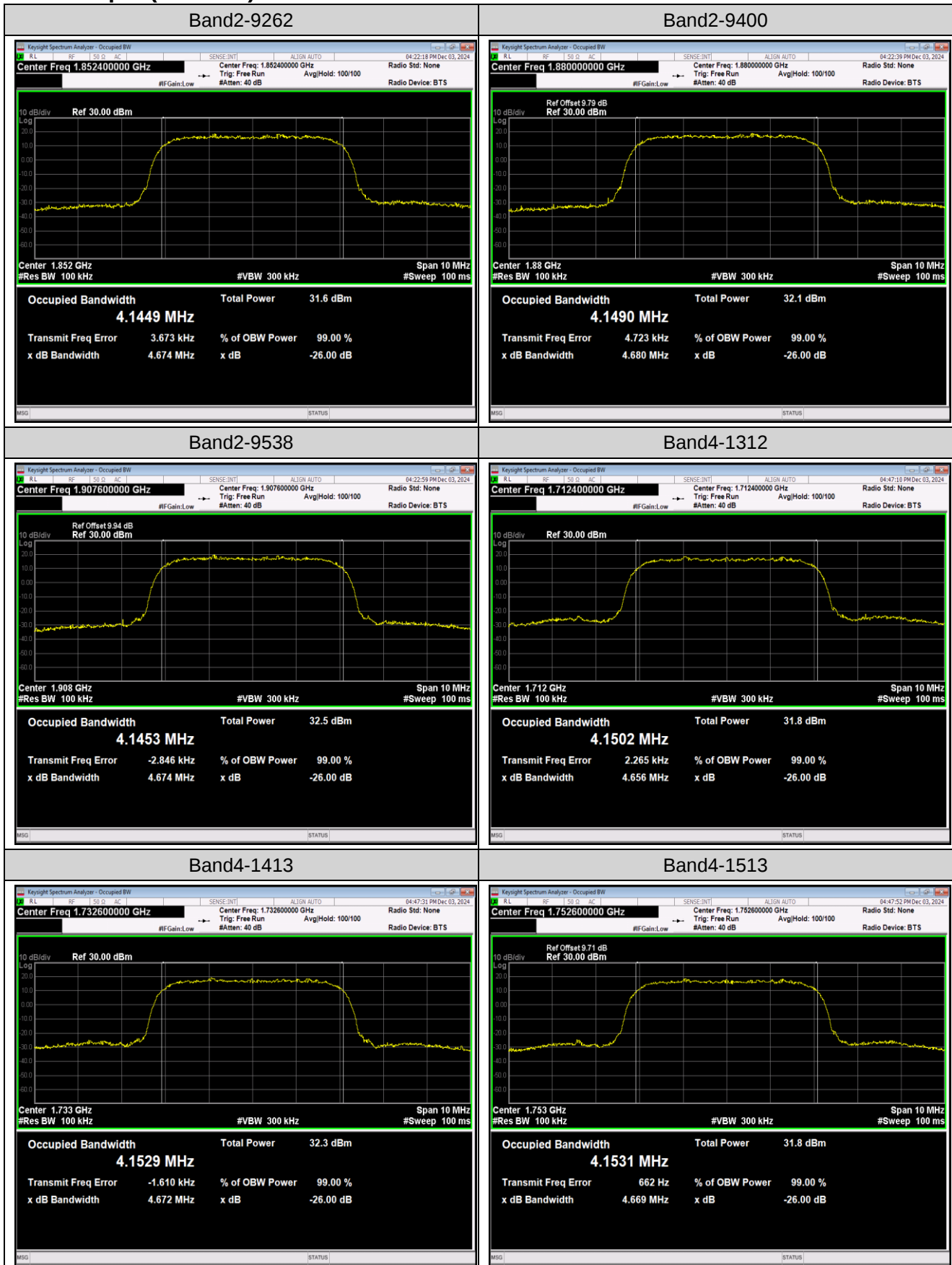


## AppendixC:26dB Bandwidth andOccupied Bandwidth

### Test Result(WCDMA)

| Band  | Channel | Occupied Bandwidth<br>(MHz) | 26dB Bandwidth<br>(MHz) | Limit(kHz) | Verdict |
|-------|---------|-----------------------------|-------------------------|------------|---------|
| Band2 | 9262    | 4.1449                      | 4.674                   | ---        | PASS    |
| Band2 | 9400    | 4.1490                      | 4.680                   | ---        | PASS    |
| Band2 | 9538    | 4.1453                      | 4.674                   | ---        | PASS    |
| Band4 | 1312    | 4.1502                      | 4.656                   | ---        | PASS    |
| Band4 | 1413    | 4.1529                      | 4.672                   | ---        | PASS    |
| Band4 | 1513    | 4.1531                      | 4.669                   | ---        | PASS    |
| Band5 | 4132    | 4.1460                      | 4.674                   | ---        | PASS    |
| Band5 | 4183    | 4.1406                      | 4.670                   | ---        | PASS    |
| Band5 | 4233    | 4.1490                      | 4.665                   | ---        | PASS    |

## Test Graphs(WCDMA)



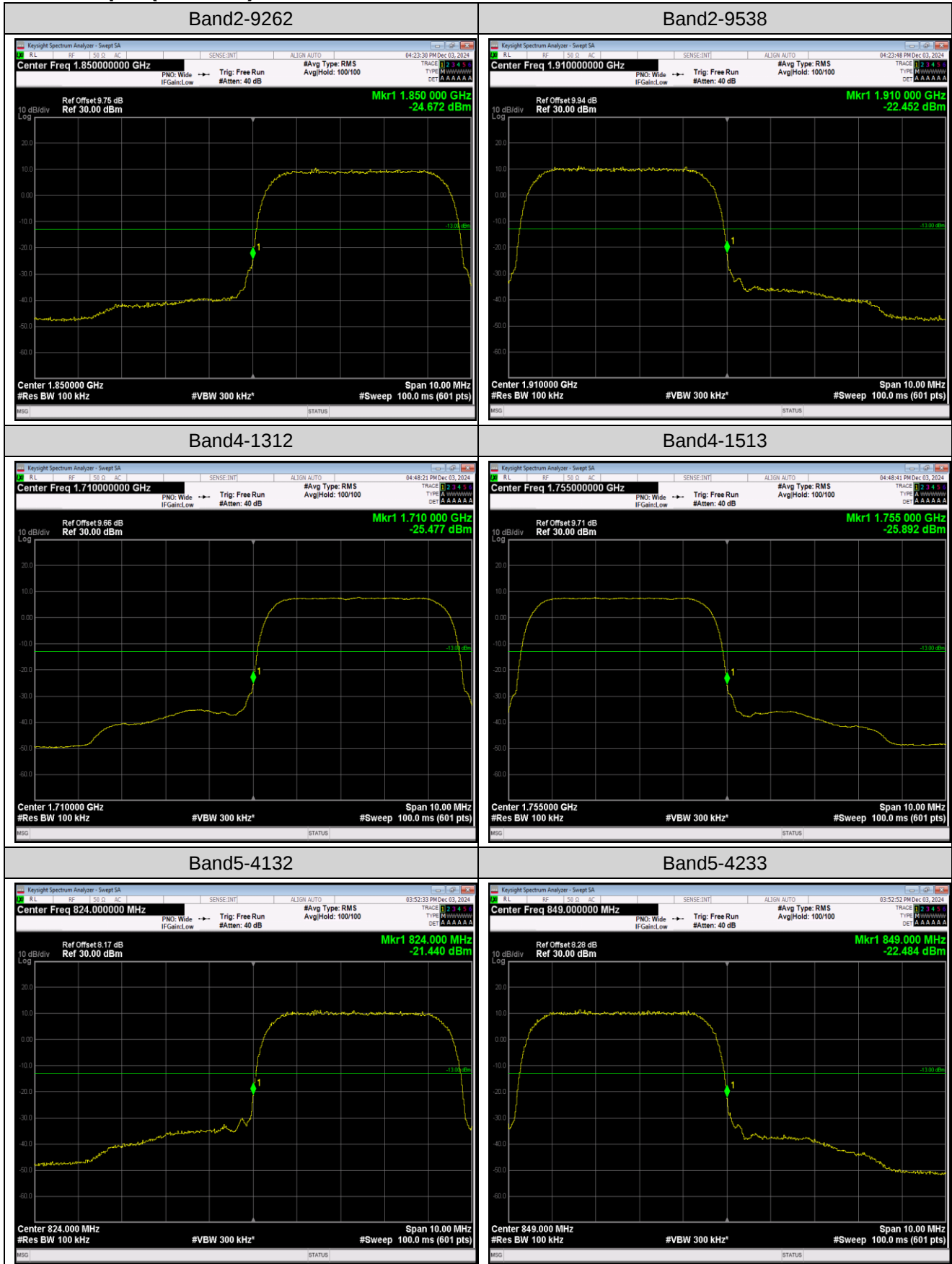


## AppendixD:Band Edge

### Test Result(WCDMA)

| Band  | Channel | Frequency (MHz) | Result (dBm) | Limit(dBm) | Verdict |
|-------|---------|-----------------|--------------|------------|---------|
| Band2 | 9262    | 1850.00         | -24.67       | -13        | PASS    |
| Band2 | 9538    | 1910.00         | -22.45       | -13        | PASS    |
| Band4 | 1312    | 1710.00         | -25.48       | -13        | PASS    |
| Band4 | 1513    | 1755.00         | -25.89       | -13        | PASS    |
| Band5 | 4132    | 824.00          | -21.44       | -13        | PASS    |
| Band5 | 4233    | 849.00          | -22.48       | -13        | PASS    |

## Test Graphs(WCDMA)



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No.101, Building 8, Innovation Wisdom Port, No.155 Hongtian Road, Huangpu Community, Xinqiao Street, Bao'an District, Shenzhen, Guangdong, People's Republic of China.

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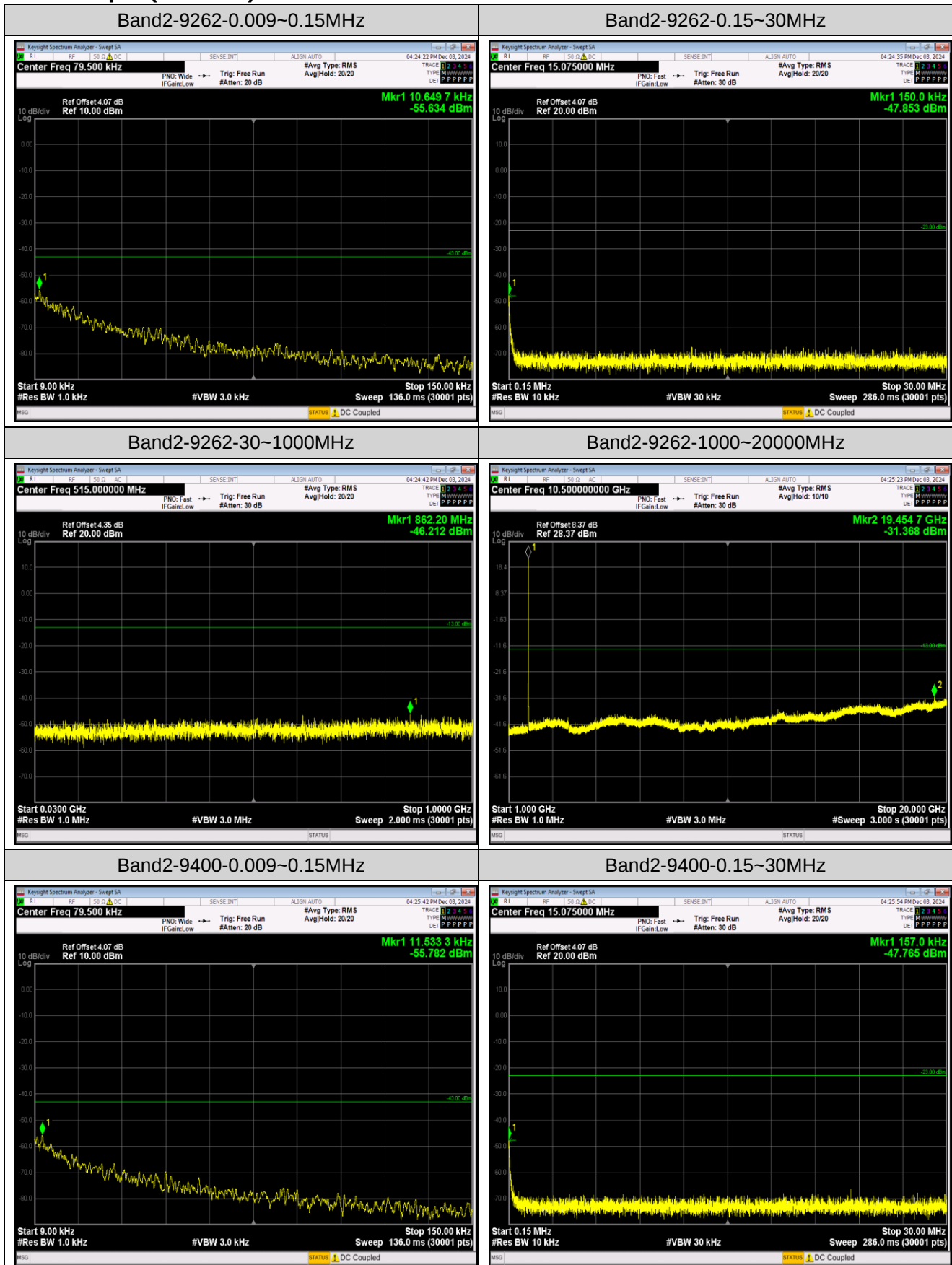
Project No.: JYTSZR2411084

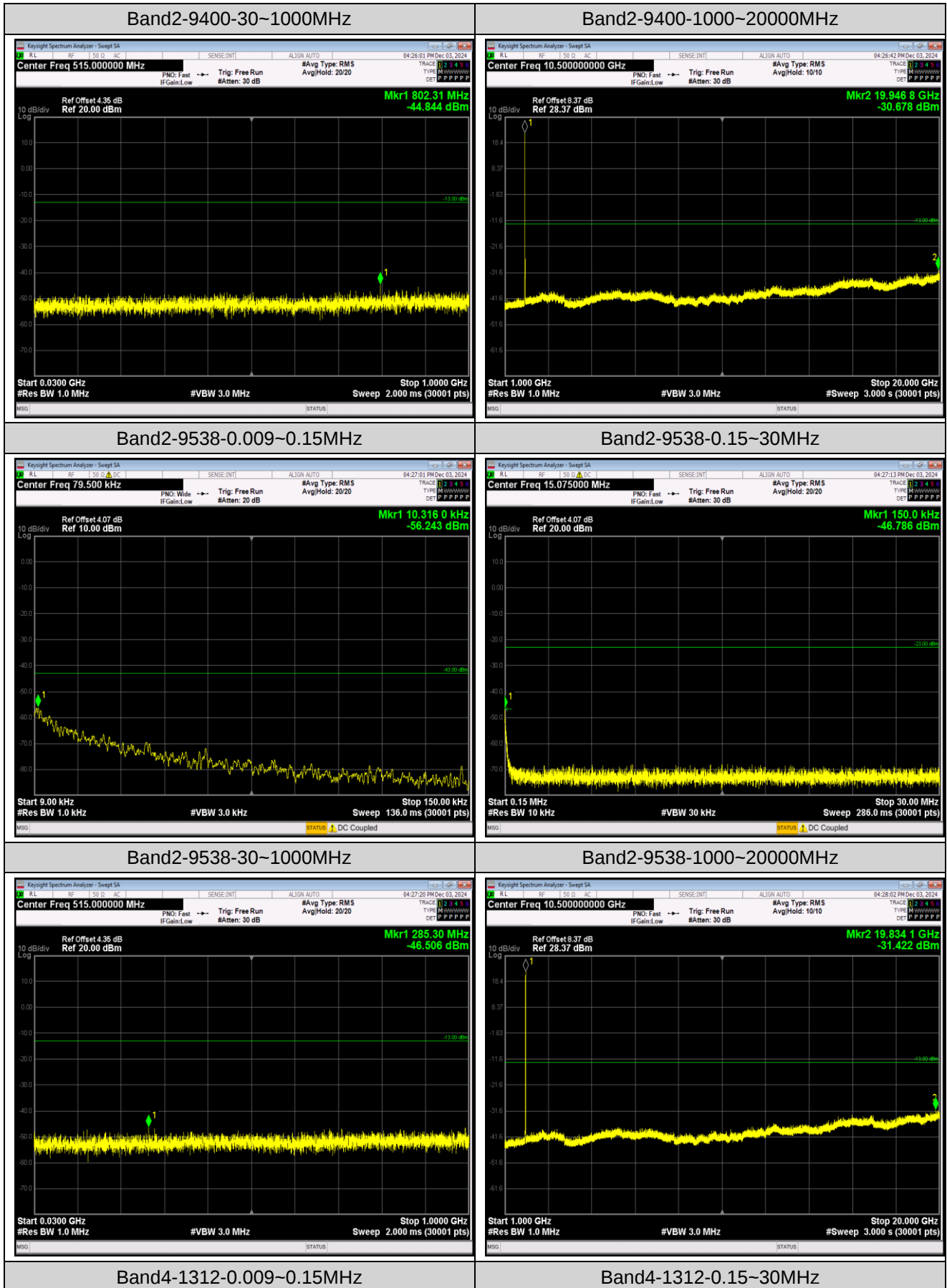
## AppendixE:Conducted SpuriousEmission

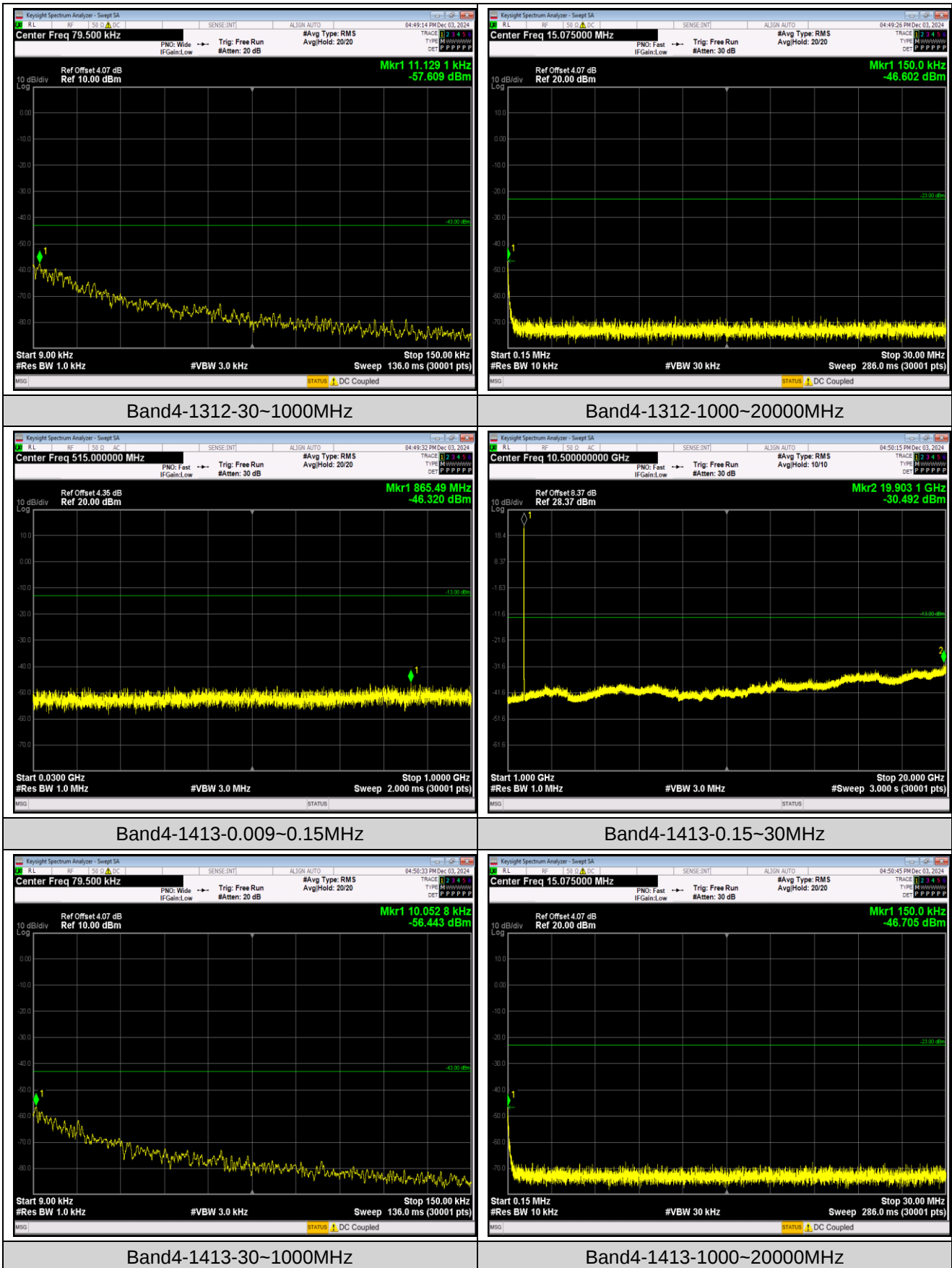
### Test Result(WCDMA)

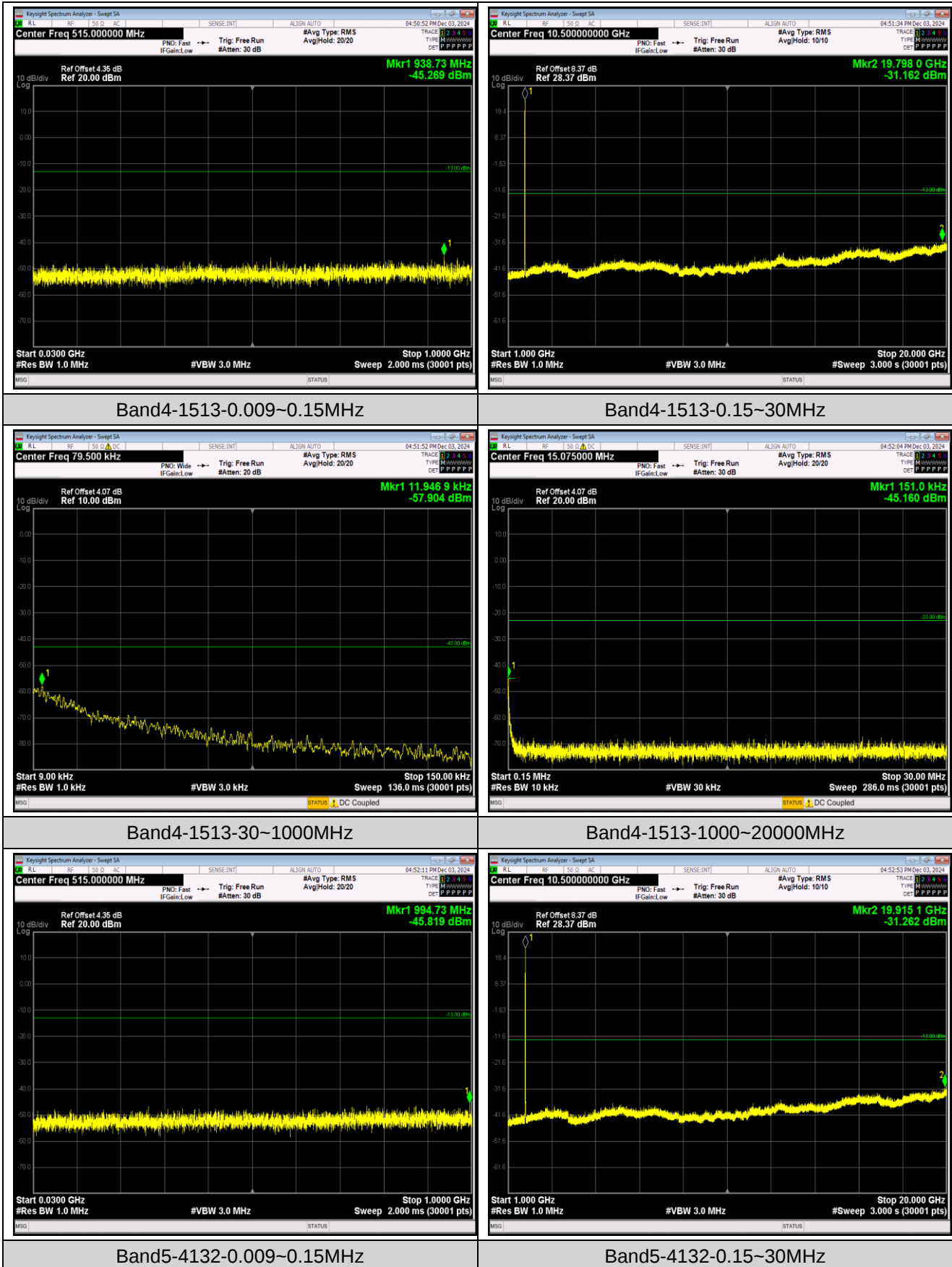
| Band  | Channel | Frequency Range (Mhz) | Frequency (dBm) | Result (dBm) | Limit (dBm) | Verdict |
|-------|---------|-----------------------|-----------------|--------------|-------------|---------|
| Band2 | 9262    | 0.009~0.15MHz         | 0.01            | -55.63       | -43         | PASS    |
| Band2 | 9262    | 0.15~30MHz            | 0.15            | -47.85       | -23         | PASS    |
| Band2 | 9262    | 30~1000MHz            | 862.2           | -46.21       | -13         | PASS    |
| Band2 | 9262    | 1000~20000MHz         | 19454.7         | -31.37       | -13         | PASS    |
| Band2 | 9400    | 0.009~0.15MHz         | 0.01            | -55.78       | -43         | PASS    |
| Band2 | 9400    | 0.15~30MHz            | 0.16            | -47.77       | -23         | PASS    |
| Band2 | 9400    | 30~1000MHz            | 802.31          | -44.84       | -13         | PASS    |
| Band2 | 9400    | 1000~20000MHz         | 19946.8         | -30.68       | -13         | PASS    |
| Band2 | 9538    | 0.009~0.15MHz         | 0.01            | -56.24       | -43         | PASS    |
| Band2 | 9538    | 0.15~30MHz            | 0.15            | -46.79       | -23         | PASS    |
| Band2 | 9538    | 30~1000MHz            | 285.3           | -46.51       | -13         | PASS    |
| Band2 | 9538    | 1000~20000MHz         | 19834.07        | -31.42       | -13         | PASS    |
| Band4 | 1312    | 0.009~0.15MHz         | 0.01            | -57.61       | -43         | PASS    |
| Band4 | 1312    | 0.15~30MHz            | 0.15            | -46.6        | -23         | PASS    |
| Band4 | 1312    | 30~1000MHz            | 865.49          | -46.32       | -13         | PASS    |
| Band4 | 1312    | 1000~20000MHz         | 19903.1         | -30.49       | -13         | PASS    |
| Band4 | 1413    | 0.009~0.15MHz         | 0.01            | -56.44       | -43         | PASS    |
| Band4 | 1413    | 0.15~30MHz            | 0.15            | -46.71       | -23         | PASS    |
| Band4 | 1413    | 30~1000MHz            | 938.73          | -45.27       | -13         | PASS    |
| Band4 | 1413    | 1000~20000MHz         | 19797.97        | -31.16       | -13         | PASS    |
| Band4 | 1513    | 0.009~0.15MHz         | 0.01            | -57.9        | -43         | PASS    |
| Band4 | 1513    | 0.15~30MHz            | 0.15            | -45.16       | -23         | PASS    |
| Band4 | 1513    | 30~1000MHz            | 994.73          | -45.82       | -13         | PASS    |
| Band4 | 1513    | 1000~20000MHz         | 19915.13        | -31.26       | -13         | PASS    |
| Band5 | 4132    | 0.009~0.15MHz         | 0.01            | -54.93       | -33         | PASS    |
| Band5 | 4132    | 0.15~30MHz            | 0.15            | -47.2        | -13         | PASS    |
| Band5 | 4132    | 30~1000MHz            | 934.33          | -55.55       | -13         | PASS    |
| Band5 | 4132    | 1000~10000MHz         | 5946.1          | -37.24       | -13         | PASS    |
| Band5 | 4183    | 0.009~0.15MHz         | 0.01            | -57.12       | -33         | PASS    |
| Band5 | 4183    | 0.15~30MHz            | 0.16            | -47.65       | -13         | PASS    |
| Band5 | 4183    | 30~1000MHz            | 504.1           | -54.96       | -13         | PASS    |
| Band5 | 4183    | 1000~10000MHz         | 5927.5          | -37.3        | -13         | PASS    |
| Band5 | 4233    | 0.009~0.15MHz         | 0.01            | -56.26       | -33         | PASS    |
| Band5 | 4233    | 0.15~30MHz            | 0.15            | -46.25       | -13         | PASS    |
| Band5 | 4233    | 30~1000MHz            | 529.78          | -55.08       | -13         | PASS    |
| Band5 | 4233    | 1000~10000MHz         | 6948.4          | -37.35       | -13         | PASS    |

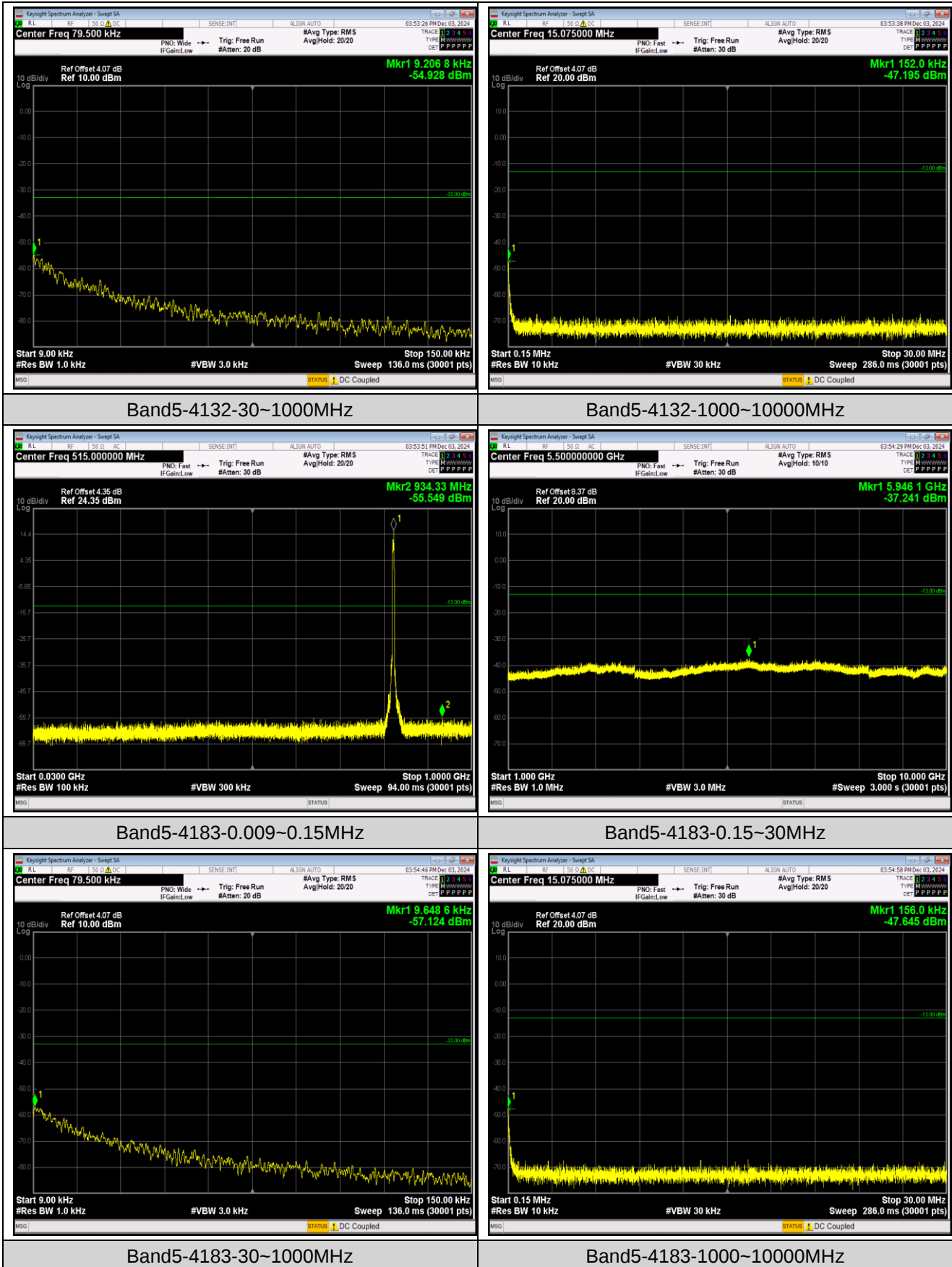
## Test Graphs(WCDMA)

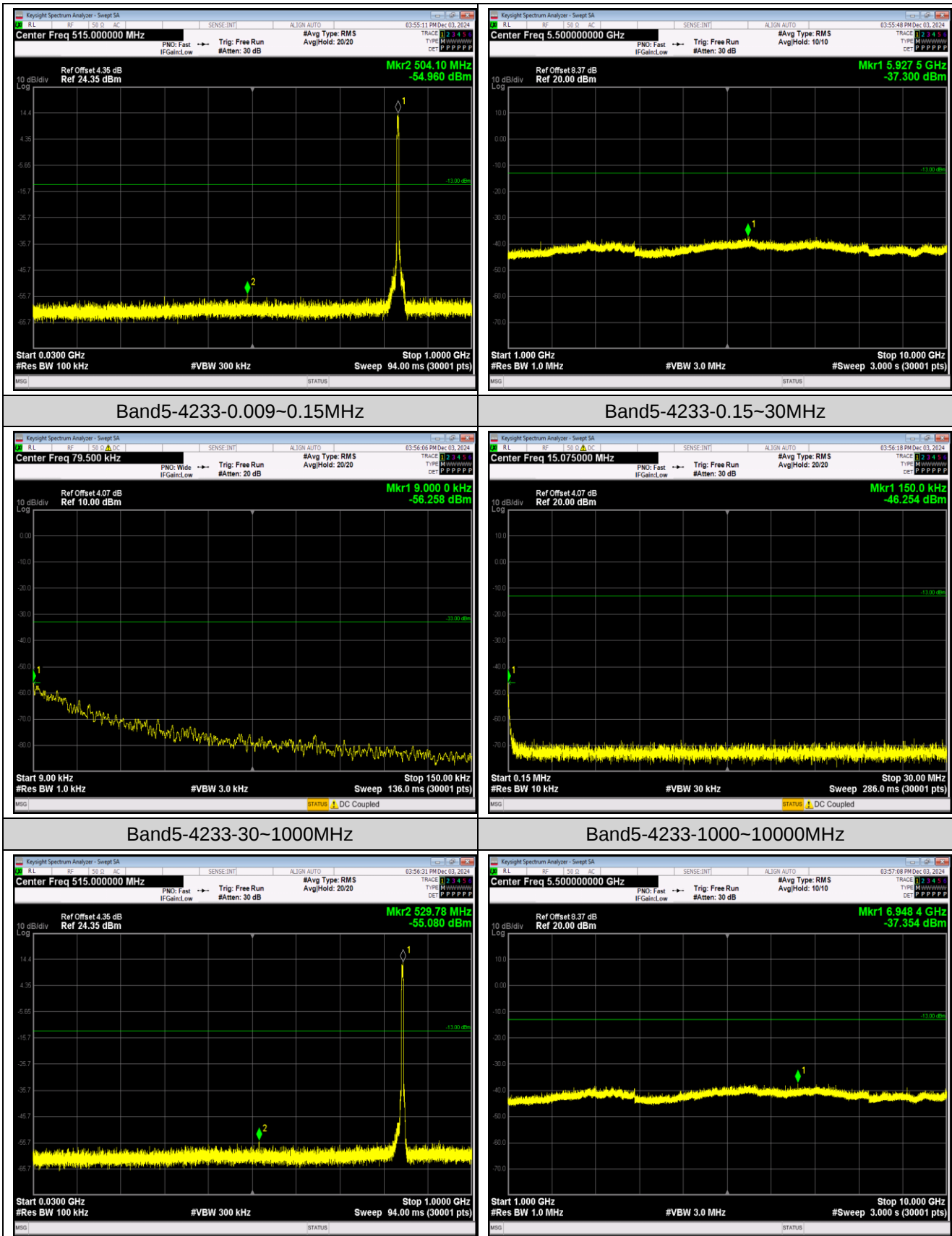












## AppendixF:Frequency Stability

### Test Result

| Reference Frequency: WCDMA BAND V 12.2k RMC Middle channel=4183 Frequency=836.6MHz          |                         |                 |           |             |        |
|---------------------------------------------------------------------------------------------|-------------------------|-----------------|-----------|-------------|--------|
| Temperature                                                                                 |                         |                 |           |             |        |
| Power supplied<br>(Vdc)                                                                     | Temperature<br>(°C)     | Frequency error |           | Limit (ppm) | Result |
|                                                                                             |                         | Hz              | ppm       |             |        |
| 3.85                                                                                        | -30                     | -0.14           | -0.000167 | ±2.5        | Pass   |
|                                                                                             | -20                     | 0.49            | 0.000586  |             |        |
|                                                                                             | -10                     | 0.13            | 0.000155  |             |        |
|                                                                                             | 0                       | 1.49            | 0.001781  |             |        |
|                                                                                             | 10                      | 1.57            | 0.001877  |             |        |
|                                                                                             | 20                      | -0.55           | -0.000657 |             |        |
|                                                                                             | 30                      | 0.25            | 0.000299  |             |        |
|                                                                                             | 40                      | -2.40           | -0.002869 |             |        |
|                                                                                             | 50                      | -3.15           | -0.003765 |             |        |
| Voltage                                                                                     |                         |                 |           |             |        |
| Temperature<br>(°C)                                                                         | Power supplied<br>(Vdc) | Frequency error |           | Limit (ppm) | Result |
|                                                                                             |                         | Hz              | ppm       |             |        |
| 25                                                                                          | 3.45                    | 0.95            | 0.001136  | ±2.5        | Pass   |
|                                                                                             | 3.85                    | -1.53           | -0.001829 |             |        |
|                                                                                             | 4.40                    | -2.06           | -0.002462 |             |        |
| Remark: All channel had been tested, but only the worst case data displayed in this report. |                         |                 |           |             |        |

| Reference Frequency: WCDMA BAND IV 12.2k RMC Middle Frequency=1413 channel=1732.6MHz        |                         |                 |           |                                       |        |
|---------------------------------------------------------------------------------------------|-------------------------|-----------------|-----------|---------------------------------------|--------|
| Temperature                                                                                 |                         |                 |           |                                       |        |
| Power supplied<br>(Vdc)                                                                     | Temperature<br>(℃)      | Frequency error |           | Limit (ppm)                           | Result |
|                                                                                             |                         | Hz              | ppm       |                                       |        |
| 3.85                                                                                        | -30                     | -3.96           | -0.002286 | Within authorized<br>band for BAND IV | Pass   |
|                                                                                             | -20                     | 0.67            | 0.000387  |                                       |        |
|                                                                                             | -10                     | -8.56           | -0.004941 |                                       |        |
|                                                                                             | 0                       | -4.09           | -0.002361 |                                       |        |
|                                                                                             | 10                      | 0.67            | 0.000387  |                                       |        |
|                                                                                             | 20                      | -3.13           | -0.001807 |                                       |        |
|                                                                                             | 30                      | 8.71            | 0.005027  |                                       |        |
|                                                                                             | 40                      | 0.96            | 0.000554  |                                       |        |
|                                                                                             | 50                      | 1.61            | 0.000929  |                                       |        |
| Voltage                                                                                     |                         |                 |           |                                       |        |
| Temperature<br>(℃)                                                                          | Power supplied<br>(Vdc) | Frequency error |           | Limit (ppm)                           | Result |
|                                                                                             |                         | Hz              | ppm       |                                       |        |
| 25                                                                                          | 3.45                    | -7.50           | -0.004329 | Within authorized<br>band for BAND IV | Pass   |
|                                                                                             | 3.85                    | 0.99            | 0.000571  |                                       |        |
|                                                                                             | 4.40                    | -3.29           | -0.001899 |                                       |        |
| Remark: All channel had been tested, but only the worst case data displayed in this report. |                         |                 |           |                                       |        |

| Reference Frequency: WCDMA BAND II 12.2k RMC Middle Frequency=9400 channel=1880MHz          |                         |                 |           |                                       |        |
|---------------------------------------------------------------------------------------------|-------------------------|-----------------|-----------|---------------------------------------|--------|
| Temperature                                                                                 |                         |                 |           |                                       |        |
| Power supplied<br>(Vdc)                                                                     | Temperature<br>(°C)     | Frequency error |           | Limit (ppm)                           | Result |
|                                                                                             |                         | Hz              | ppm       |                                       |        |
| 3.85                                                                                        | -30                     | -1.65           | -0.000878 | Within authorized<br>band for BAND II | Pass   |
|                                                                                             | -20                     | 6.59            | 0.003505  |                                       |        |
|                                                                                             | -10                     | 8.93            | 0.004750  |                                       |        |
|                                                                                             | 0                       | -0.57           | -0.000303 |                                       |        |
|                                                                                             | 10                      | 3.55            | 0.001888  |                                       |        |
|                                                                                             | 20                      | -8.88           | -0.004723 |                                       |        |
|                                                                                             | 30                      | -2.52           | -0.001340 |                                       |        |
|                                                                                             | 40                      | -2.85           | -0.001516 |                                       |        |
|                                                                                             | 50                      | -1.78           | -0.000947 |                                       |        |
| Voltage                                                                                     |                         |                 |           |                                       |        |
| Temperature<br>(°C)                                                                         | Power supplied<br>(Vdc) | Frequency error |           | Limit (ppm)                           | Result |
|                                                                                             |                         | Hz              | ppm       |                                       |        |
| 25                                                                                          | 3.45                    | 7.00            | 0.003723  | Within authorized<br>band for BAND II | Pass   |
|                                                                                             | 3.85                    | 1.32            | 0.000702  |                                       |        |
|                                                                                             | 4.40                    | -2.25           | -0.001197 |                                       |        |
| Remark: All channel had been tested, but only the worst case data displayed in this report. |                         |                 |           |                                       |        |

## Appendix G: Modulation Characteristics

### Test Result

| Band  | Channel | Result | Verdict |
|-------|---------|--------|---------|
| Band2 | 9400    | PASS   | PASS    |
| Band4 | 1413    | PASS   | PASS    |
| Band5 | 4183    | PASS   | PASS    |

Remark: All channel had been tested, but only the worst case data displayed in this report.

### Test Graphs

