



## Appendix H: Test Data for E-UTRA Band 13

Product Name: Smartphone

Test Model: ZG65

### Environmental Conditions

|                    |           |
|--------------------|-----------|
| Temperature:       | 23.8° C   |
| Relative Humidity: | 52.1%     |
| ATM Pressure:      | 100.0 kPa |
| Test Engineer:     | Nick Peng |
| Supervised by:     | Ling Zhu  |



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## H.1 Conducted Power Output Data

### Test Result

| Band   | Bandwidth | Modulation | Channel | RB Configuration | Result(dBm) | Verdict |
|--------|-----------|------------|---------|------------------|-------------|---------|
| Band13 | 5MHz      | QPSK       | 23205   | 1RB#0            | 23.05       | PASS    |
| Band13 | 5MHz      | 16QAM      | 23205   | 1RB#0            | 21.96       | PASS    |
| Band13 | 5MHz      | QPSK       | 23205   | 1RB#12           | 23.17       | PASS    |
| Band13 | 5MHz      | 16QAM      | 23205   | 1RB#12           | 22.06       | PASS    |
| Band13 | 5MHz      | QPSK       | 23205   | 1RB#24           | 23.01       | PASS    |
| Band13 | 5MHz      | 16QAM      | 23205   | 1RB#24           | 22.00       | PASS    |
| Band13 | 5MHz      | QPSK       | 23205   | 12RB#0           | 22.10       | PASS    |
| Band13 | 5MHz      | 16QAM      | 23205   | 12RB#0           | 21.08       | PASS    |
| Band13 | 5MHz      | QPSK       | 23205   | 12RB#6           | 22.13       | PASS    |
| Band13 | 5MHz      | 16QAM      | 23205   | 12RB#6           | 21.05       | PASS    |
| Band13 | 5MHz      | QPSK       | 23205   | 12RB#13          | 22.09       | PASS    |
| Band13 | 5MHz      | 16QAM      | 23205   | 12RB#13          | 21.04       | PASS    |
| Band13 | 5MHz      | QPSK       | 23205   | 25RB#0           | 22.08       | PASS    |
| Band13 | 5MHz      | 16QAM      | 23205   | 25RB#0           | 21.08       | PASS    |
| Band13 | 5MHz      | QPSK       | 23230   | 1RB#0            | 23.01       | PASS    |
| Band13 | 5MHz      | 16QAM      | 23230   | 1RB#0            | 22.13       | PASS    |
| Band13 | 5MHz      | QPSK       | 23230   | 1RB#12           | 23.14       | PASS    |
| Band13 | 5MHz      | 16QAM      | 23230   | 1RB#12           | 22.29       | PASS    |
| Band13 | 5MHz      | QPSK       | 23230   | 1RB#24           | 23.01       | PASS    |
| Band13 | 5MHz      | 16QAM      | 23230   | 1RB#24           | 22.12       | PASS    |
| Band13 | 5MHz      | QPSK       | 23230   | 12RB#0           | 22.06       | PASS    |
| Band13 | 5MHz      | 16QAM      | 23230   | 12RB#0           | 21.05       | PASS    |
| Band13 | 5MHz      | QPSK       | 23230   | 12RB#6           | 22.05       | PASS    |
| Band13 | 5MHz      | 16QAM      | 23230   | 12RB#6           | 21.05       | PASS    |
| Band13 | 5MHz      | QPSK       | 23230   | 12RB#13          | 22.07       | PASS    |
| Band13 | 5MHz      | 16QAM      | 23230   | 12RB#13          | 21.14       | PASS    |
| Band13 | 5MHz      | QPSK       | 23230   | 25RB#0           | 22.05       | PASS    |
| Band13 | 5MHz      | 16QAM      | 23230   | 25RB#0           | 21.07       | PASS    |
| Band13 | 5MHz      | QPSK       | 23255   | 1RB#0            | 23.05       | PASS    |
| Band13 | 5MHz      | 16QAM      | 23255   | 1RB#0            | 22.03       | PASS    |
| Band13 | 5MHz      | QPSK       | 23255   | 1RB#12           | 23.18       | PASS    |
| Band13 | 5MHz      | 16QAM      | 23255   | 1RB#12           | 22.11       | PASS    |
| Band13 | 5MHz      | QPSK       | 23255   | 1RB#24           | 22.94       | PASS    |
| Band13 | 5MHz      | 16QAM      | 23255   | 1RB#24           | 21.86       | PASS    |
| Band13 | 5MHz      | QPSK       | 23255   | 12RB#0           | 21.97       | PASS    |
| Band13 | 5MHz      | 16QAM      | 23255   | 12RB#0           | 20.96       | PASS    |



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|        |       |       |       |         |       |      |
|--------|-------|-------|-------|---------|-------|------|
| Band13 | 5MHz  | QPSK  | 23255 | 12RB#6  | 21.96 | PASS |
| Band13 | 5MHz  | 16QAM | 23255 | 12RB#6  | 20.96 | PASS |
| Band13 | 5MHz  | QPSK  | 23255 | 12RB#13 | 21.87 | PASS |
| Band13 | 5MHz  | 16QAM | 23255 | 12RB#13 | 20.88 | PASS |
| Band13 | 5MHz  | QPSK  | 23255 | 25RB#0  | 21.99 | PASS |
| Band13 | 5MHz  | 16QAM | 23255 | 25RB#0  | 20.98 | PASS |
| Band13 | 10MHz | QPSK  | 23230 | 1RB#0   | 23.08 | PASS |
| Band13 | 10MHz | 16QAM | 23230 | 1RB#0   | 22.19 | PASS |
| Band13 | 10MHz | QPSK  | 23230 | 1RB#24  | 23.15 | PASS |
| Band13 | 10MHz | 16QAM | 23230 | 1RB#24  | 22.34 | PASS |
| Band13 | 10MHz | QPSK  | 23230 | 1RB#49  | 22.96 | PASS |
| Band13 | 10MHz | 16QAM | 23230 | 1RB#49  | 22.03 | PASS |
| Band13 | 10MHz | QPSK  | 23230 | 25RB#0  | 22.16 | PASS |
| Band13 | 10MHz | 16QAM | 23230 | 25RB#0  | 21.12 | PASS |
| Band13 | 10MHz | QPSK  | 23230 | 25RB#12 | 22.14 | PASS |
| Band13 | 10MHz | 16QAM | 23230 | 25RB#12 | 21.14 | PASS |
| Band13 | 10MHz | QPSK  | 23230 | 25RB#25 | 22.08 | PASS |
| Band13 | 10MHz | 16QAM | 23230 | 25RB#25 | 21.06 | PASS |
| Band13 | 10MHz | QPSK  | 23230 | 50RB#0  | 22.08 | PASS |
| Band13 | 10MHz | 16QAM | 23230 | 50RB#0  | 21.07 | PASS |





## H.2 Peak-to-Average Ratio(CCDF)

### Test Result

| Band   | Bandwidth | Modulation | Channel | RB Configuration | Result(dB) | Limit(dB) | Verdict |
|--------|-----------|------------|---------|------------------|------------|-----------|---------|
| Band13 | 5MHz      | QPSK       | 23205   | 25RB#0           | 4.23       | 13        | PASS    |
| Band13 | 5MHz      | 16QAM      | 23205   | 25RB#0           | 5.05       | 13        | PASS    |
| Band13 | 5MHz      | QPSK       | 23230   | 25RB#0           | 4.56       | 13        | PASS    |
| Band13 | 5MHz      | 16QAM      | 23230   | 25RB#0           | 5.40       | 13        | PASS    |
| Band13 | 5MHz      | QPSK       | 23255   | 25RB#0           | 4.50       | 13        | PASS    |
| Band13 | 5MHz      | 16QAM      | 23255   | 25RB#0           | 5.30       | 13        | PASS    |
| Band13 | 10MHz     | QPSK       | 23230   | 50RB#0           | 4.44       | 13        | PASS    |
| Band13 | 10MHz     | 16QAM      | 23230   | 50RB#0           | 5.23       | 13        | PASS    |



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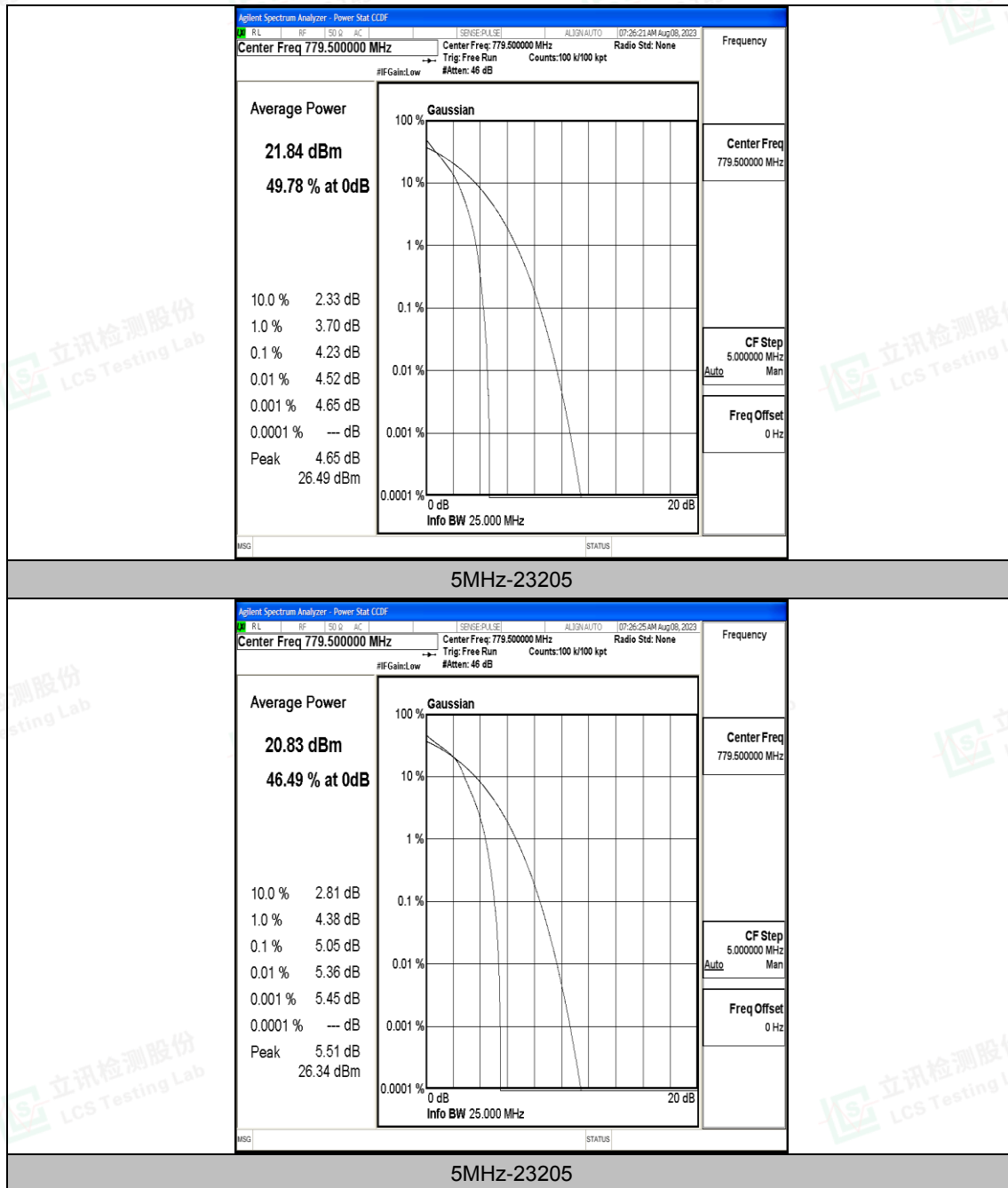
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## Test Graphs

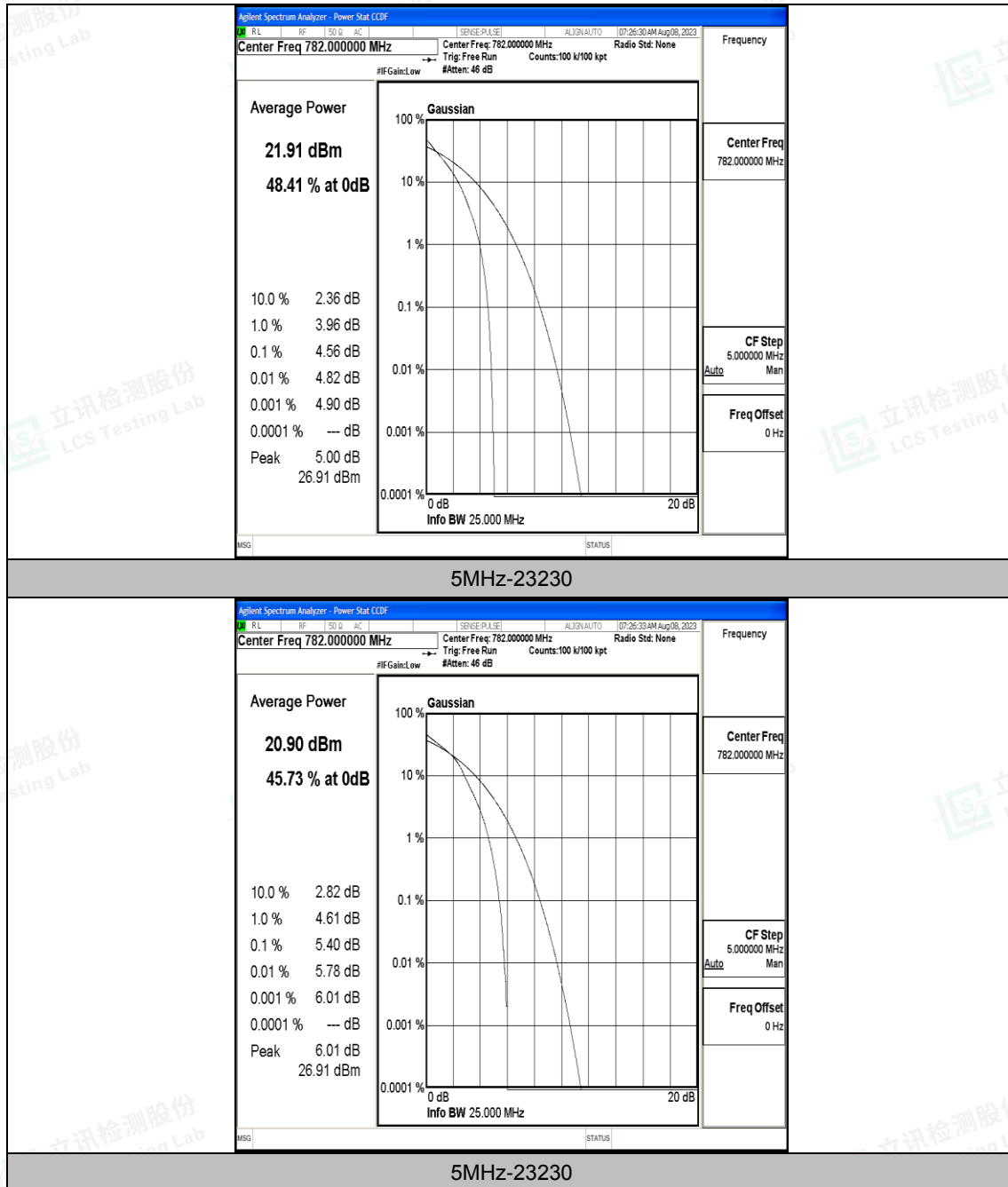


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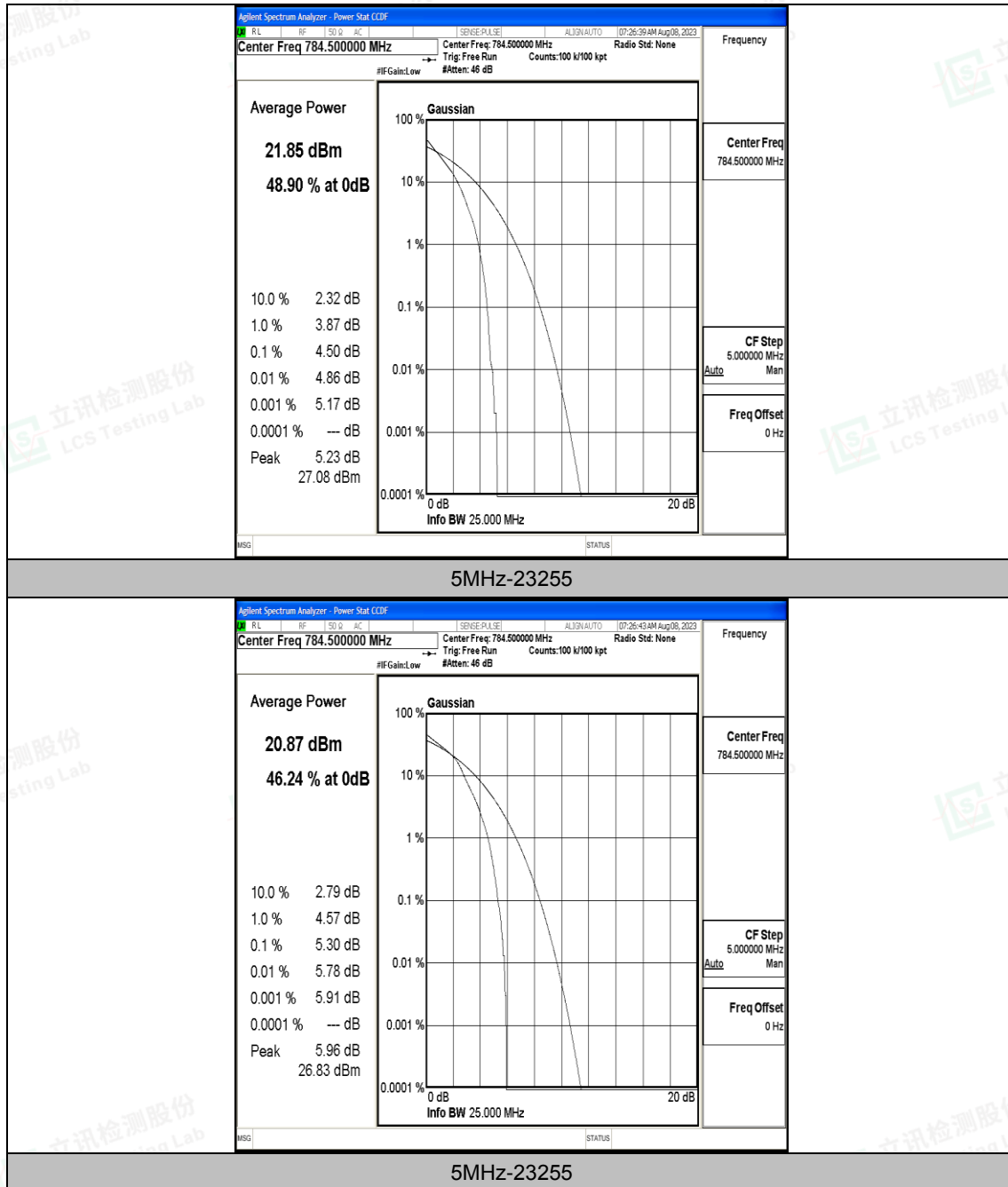


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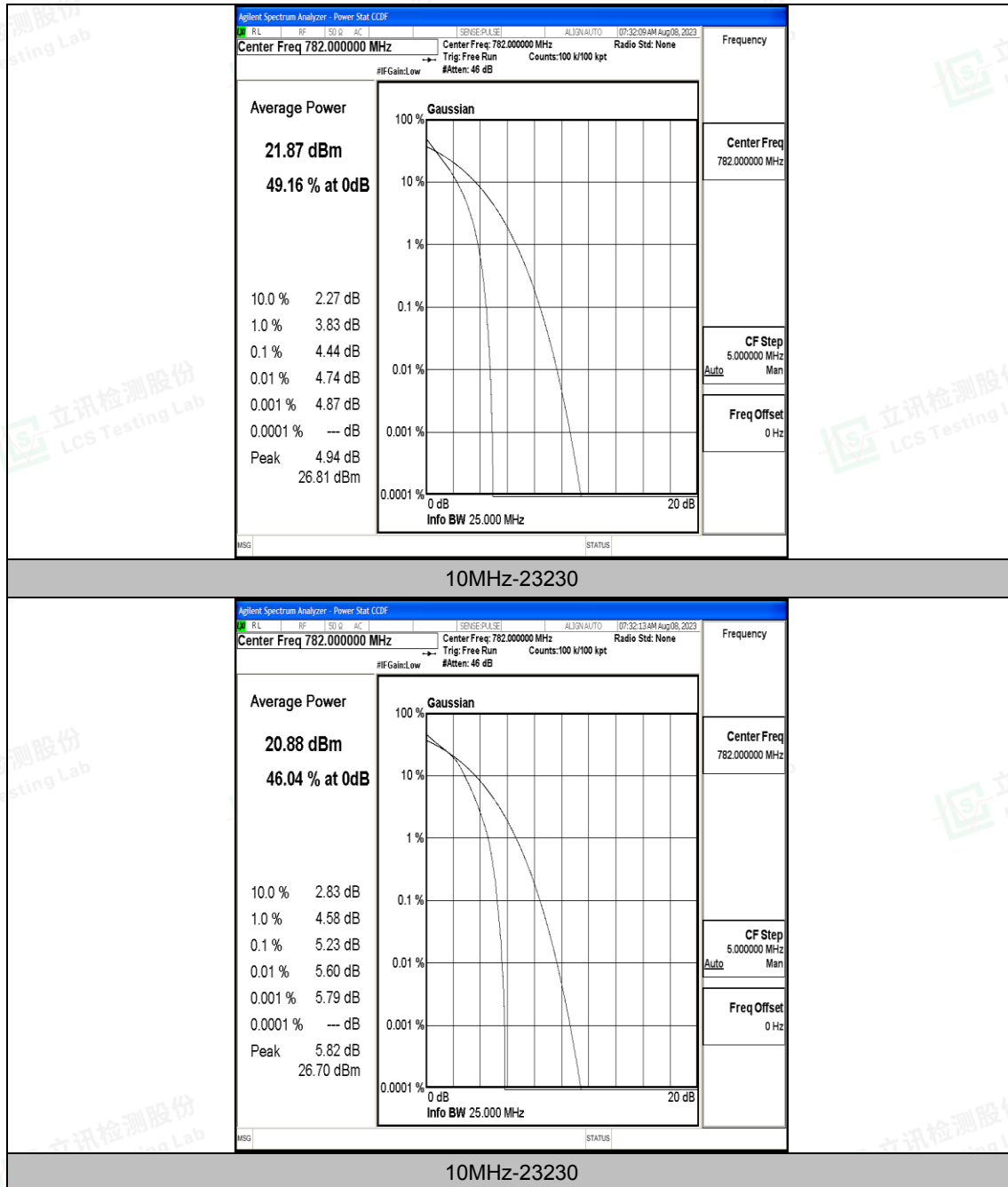


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### H.3 26dB Bandwidth and Occupied Bandwidth

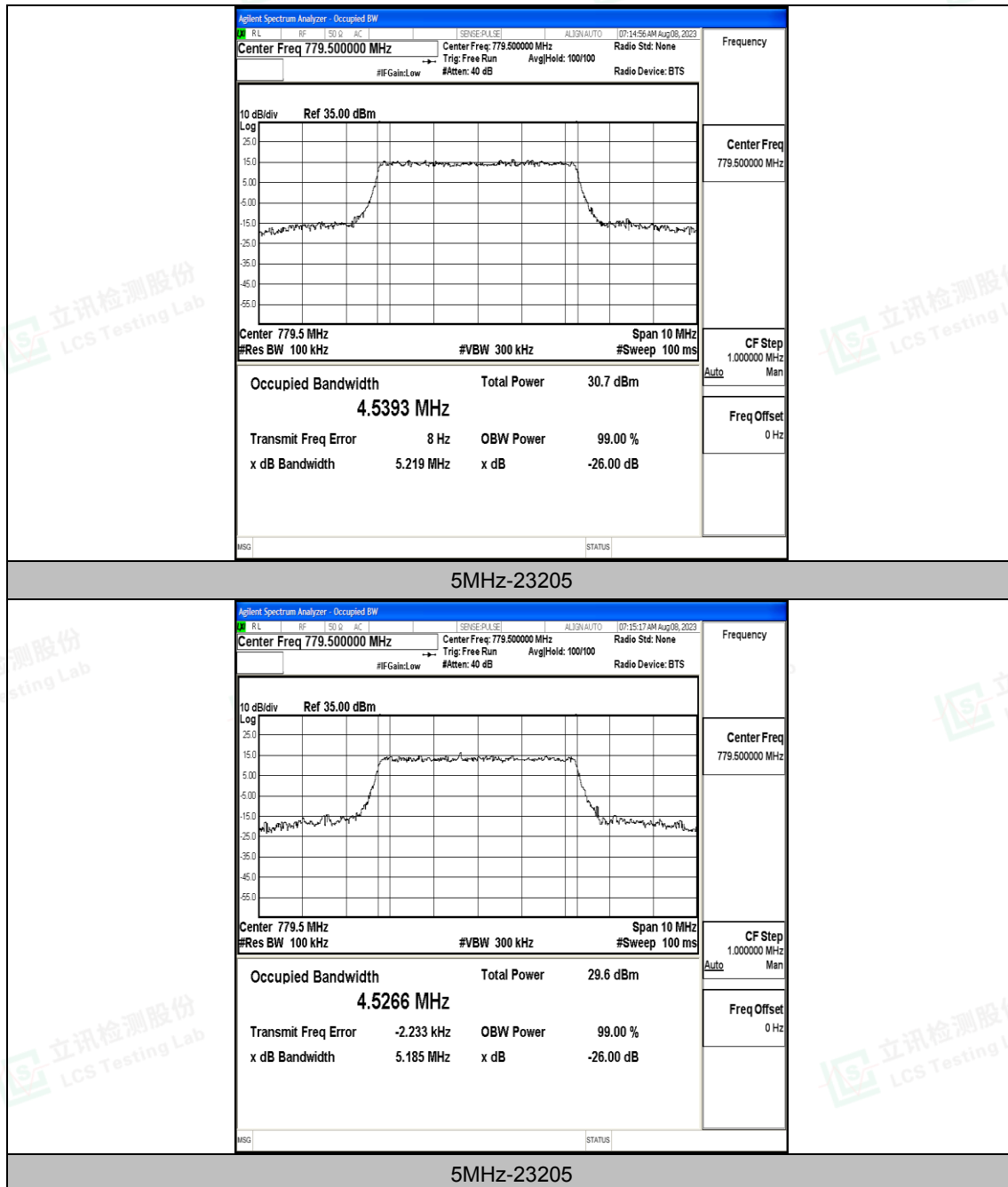
#### Test Result

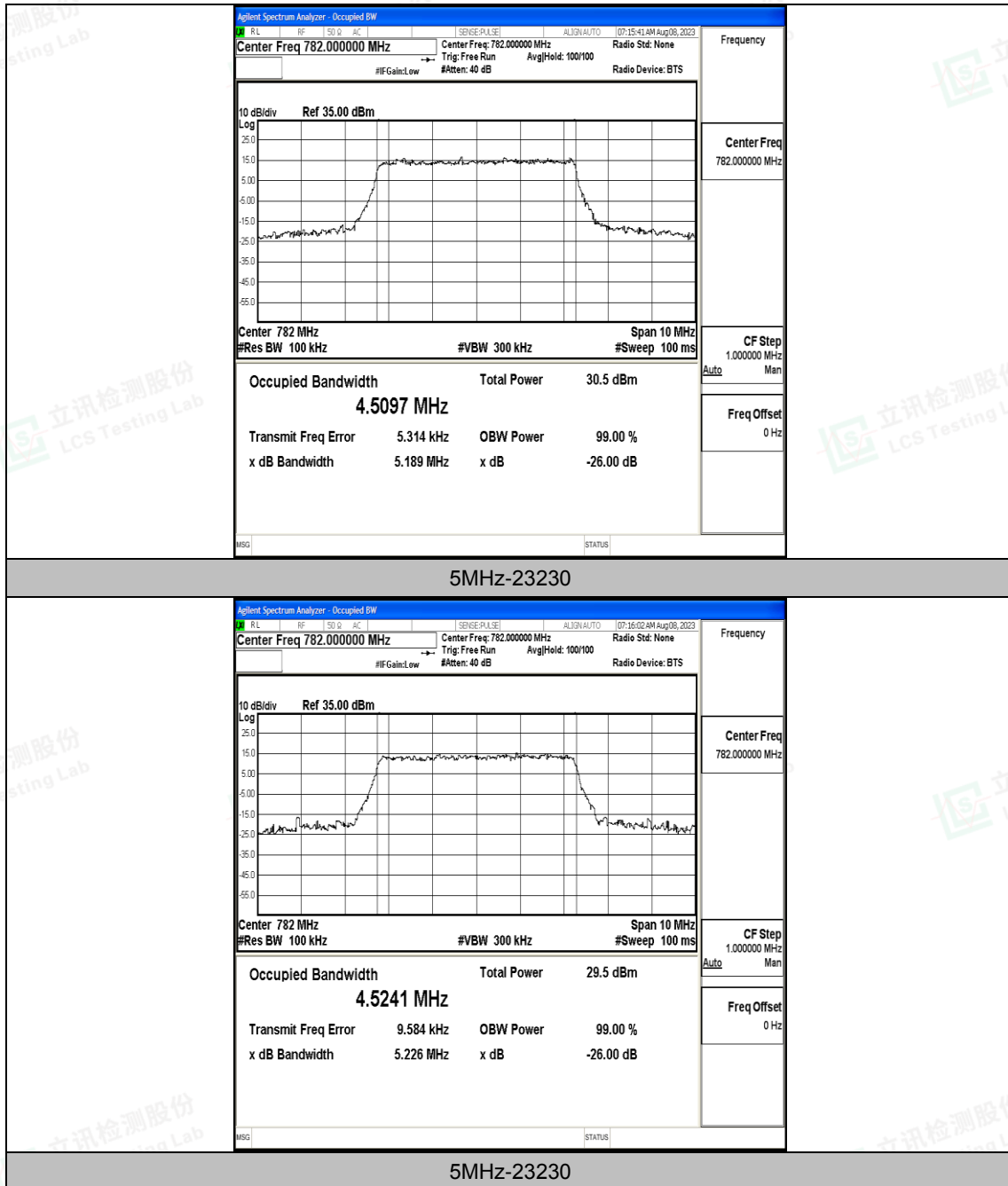
| Band   | Bandwidth | Modulation | Channel | RB Configuration | Occupied Bandwidth (MHz) | 26dB Bandwidth (MHz) | Verdict |
|--------|-----------|------------|---------|------------------|--------------------------|----------------------|---------|
| Band13 | 5MHz      | QPSK       | 23205   | 25RB#0           | 4.5393                   | 5.219                | PASS    |
| Band13 | 5MHz      | 16QAM      | 23205   | 25RB#0           | 4.5266                   | 5.185                | PASS    |
| Band13 | 5MHz      | QPSK       | 23230   | 25RB#0           | 4.5097                   | 5.189                | PASS    |
| Band13 | 5MHz      | 16QAM      | 23230   | 25RB#0           | 4.5241                   | 5.226                | PASS    |
| Band13 | 5MHz      | QPSK       | 23255   | 25RB#0           | 4.5113                   | 5.198                | PASS    |
| Band13 | 5MHz      | 16QAM      | 23255   | 25RB#0           | 4.5236                   | 5.113                | PASS    |
| Band13 | 10MHz     | QPSK       | 23230   | 50RB#0           | 9.0105                   | 10.14                | PASS    |
| Band13 | 10MHz     | 16QAM      | 23230   | 50RB#0           | 9.0074                   | 10.08                | PASS    |





## Test Graphs



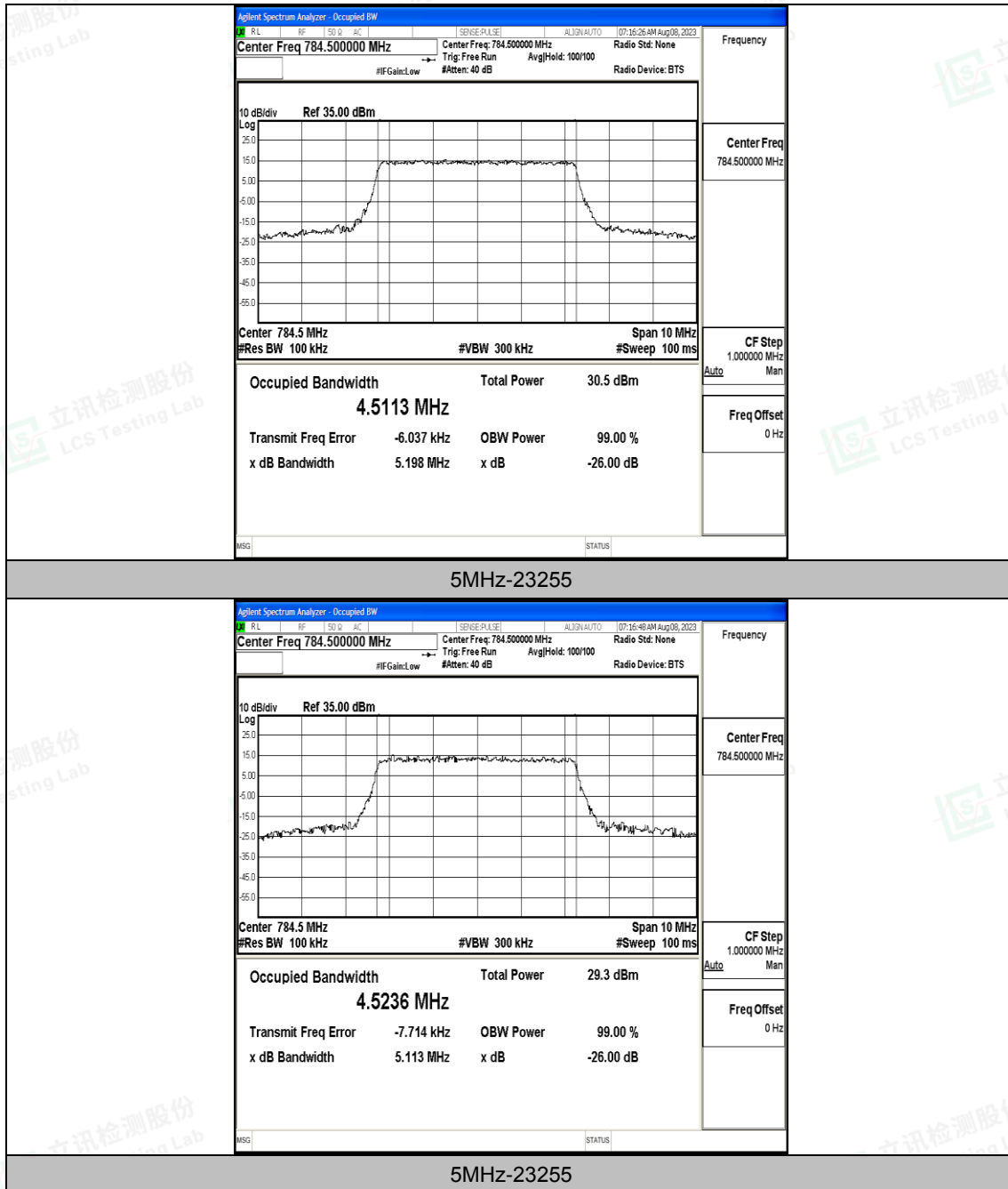


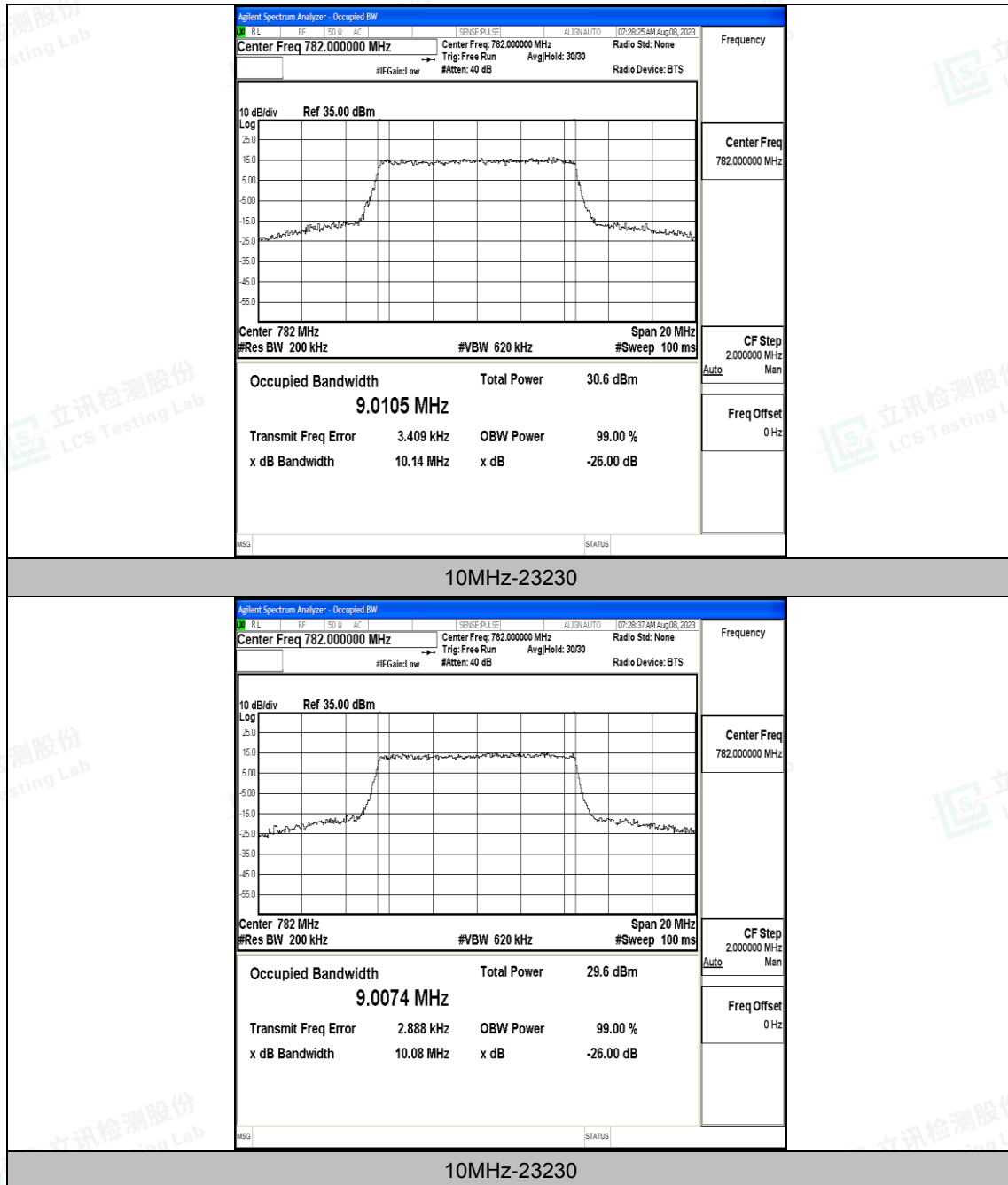
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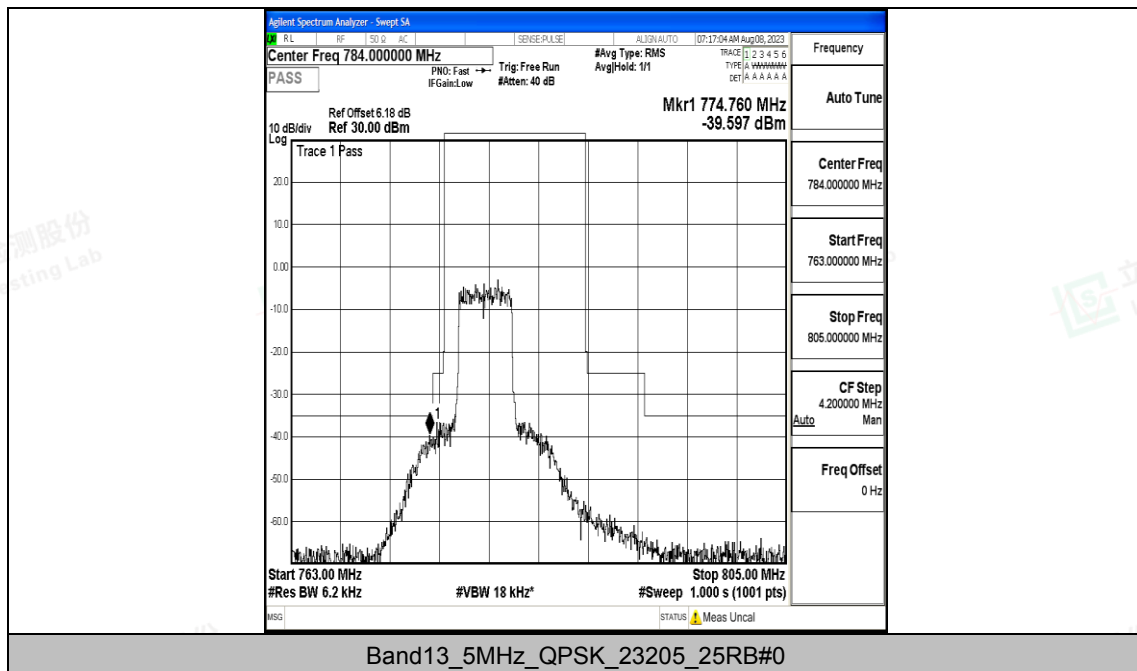


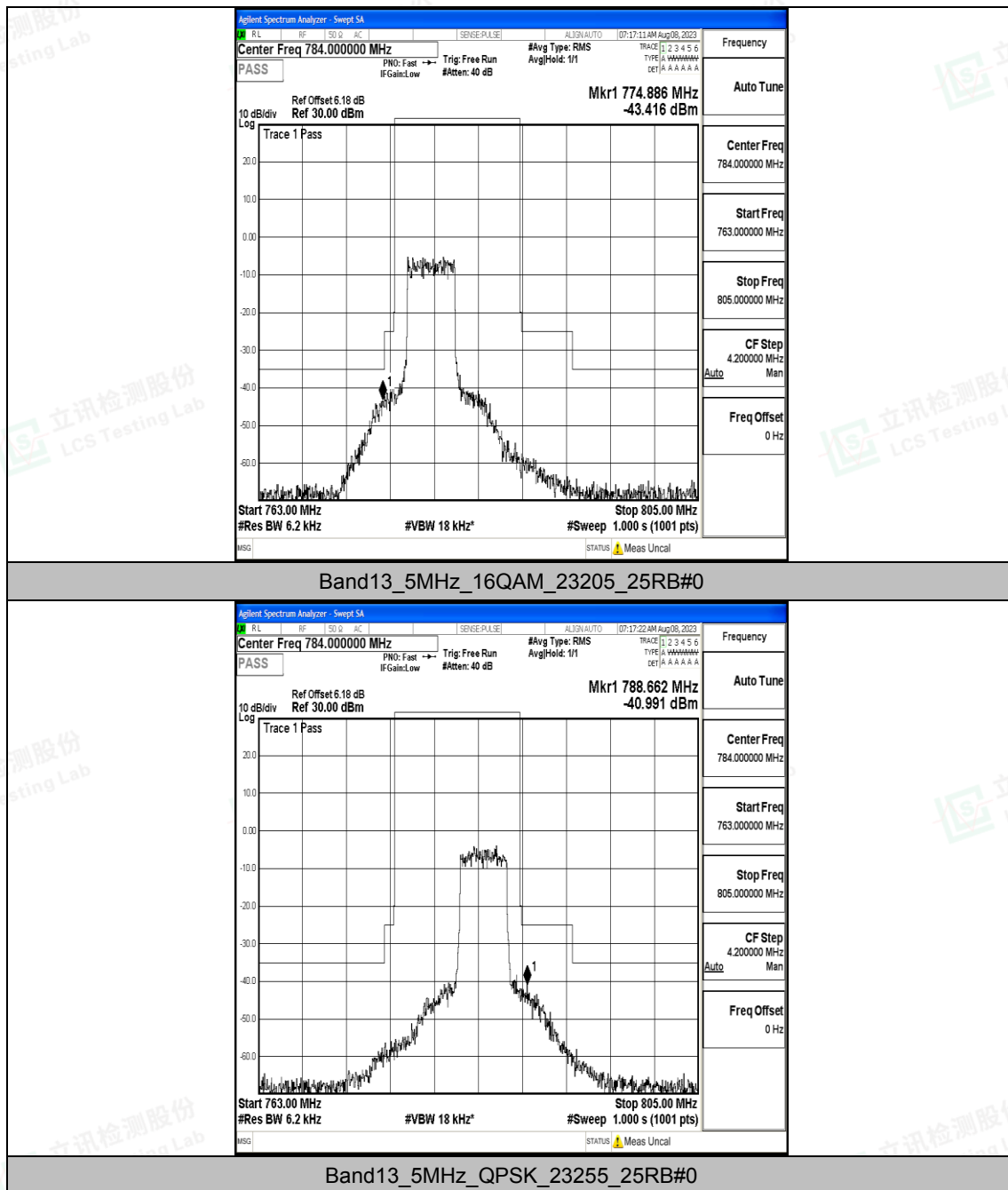
## H.4 Band Edge

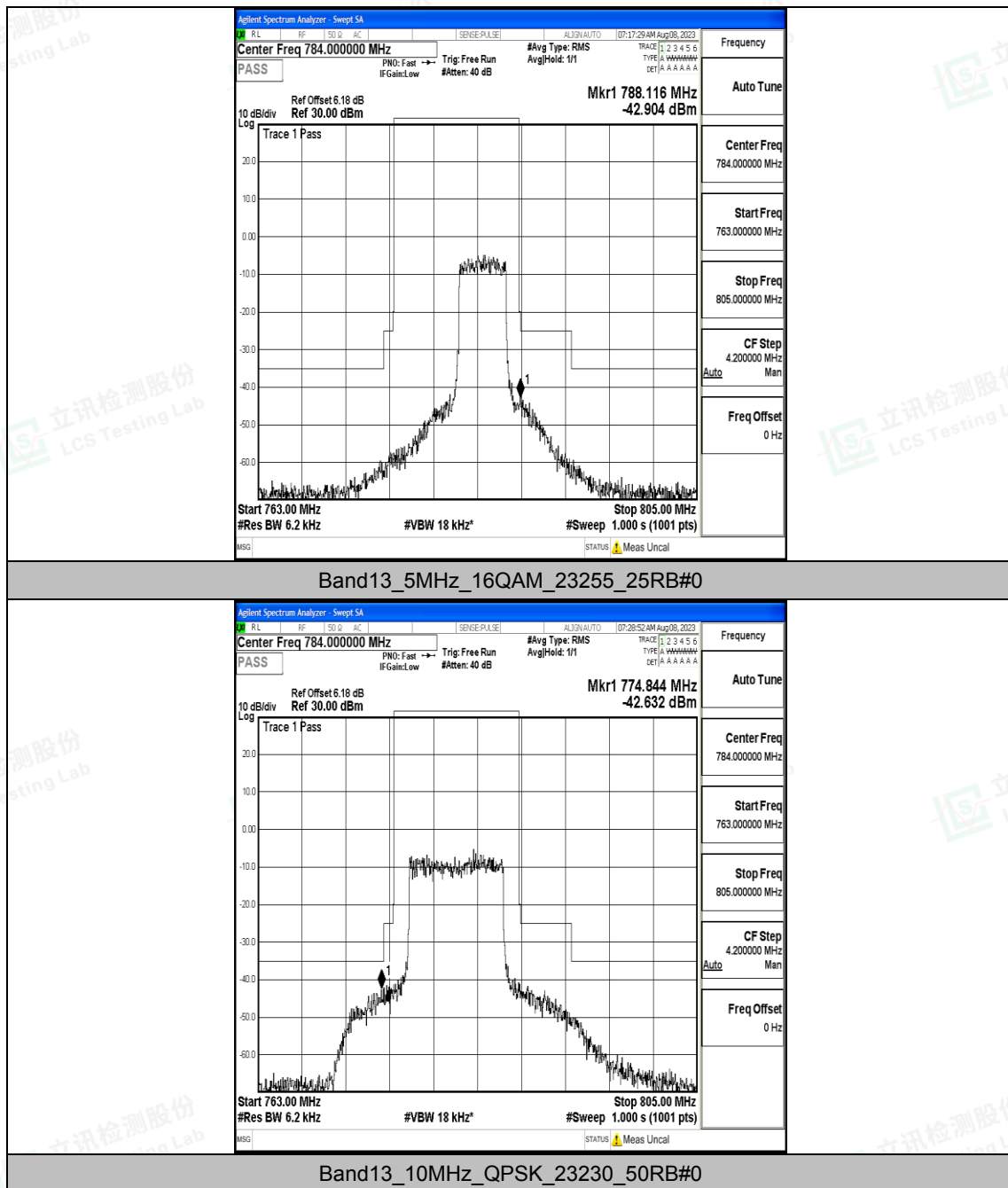
### Test Result

| Band   | Bandwidth | Modulation | Channel | RB Configuration | Peak Frequency | Result(dBm) | Verdict |
|--------|-----------|------------|---------|------------------|----------------|-------------|---------|
| Band13 | 5MHz      | QPSK       | 23205   | 25RB#0           | 774.76         | -39.60      | PASS    |
| Band13 | 5MHz      | 16QAM      | 23205   | 25RB#0           | 774.89         | -43.42      | PASS    |
| Band13 | 5MHz      | QPSK       | 23255   | 25RB#0           | 788.66         | -40.99      | PASS    |
| Band13 | 5MHz      | 16QAM      | 23255   | 25RB#0           | 788.12         | -42.90      | PASS    |
| Band13 | 10MHz     | QPSK       | 23230   | 50RB#0           | 774.84         | -42.63      | PASS    |
| Band13 | 10MHz     | 16QAM      | 23230   | 50RB#0           | 774.76         | -45.24      | PASS    |

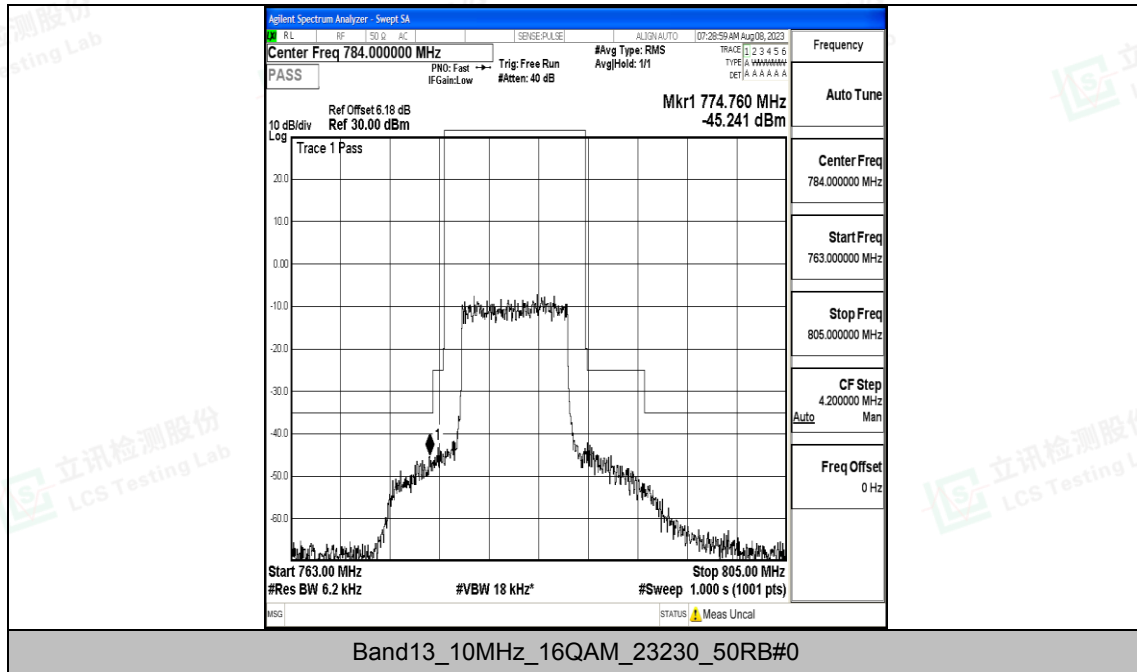
### Test Graphs













## H.5 Conducted Spurious Emission

### Test Result

| Band   | Bandwidth | Modulation | Channel | RB Configuration | Frequency Range | Result (dBm) | Verdict |
|--------|-----------|------------|---------|------------------|-----------------|--------------|---------|
| Band13 | 5MHz      | QPSK       | 23205   | 1RB#0            | 0.009~0.15      | -58.13       | PASS    |
| Band13 | 5MHz      | QPSK       | 23205   | 1RB#0            | 0.15~30         | -51.54       | PASS    |
| Band13 | 5MHz      | QPSK       | 23205   | 1RB#0            | 30~1000         | -62.75       | PASS    |
| Band13 | 5MHz      | QPSK       | 23205   | 1RB#0            | 1000~3000       | -42.88       | PASS    |
| Band13 | 5MHz      | QPSK       | 23205   | 1RB#0            | 3000~10000      | -44.41       | PASS    |
| Band13 | 5MHz      | 16QAM      | 23205   | 1RB#0            | 0.009~0.15      | -59.69       | PASS    |
| Band13 | 5MHz      | 16QAM      | 23205   | 1RB#0            | 0.15~30         | -50.74       | PASS    |
| Band13 | 5MHz      | 16QAM      | 23205   | 1RB#0            | 30~1000         | -62.73       | PASS    |
| Band13 | 5MHz      | 16QAM      | 23205   | 1RB#0            | 1000~3000       | -43.33       | PASS    |
| Band13 | 5MHz      | 16QAM      | 23205   | 1RB#0            | 3000~10000      | -44.27       | PASS    |
| Band13 | 5MHz      | QPSK       | 23230   | 1RB#0            | 0.009~0.15      | -55.49       | PASS    |
| Band13 | 5MHz      | QPSK       | 23230   | 1RB#0            | 0.15~30         | -52.13       | PASS    |
| Band13 | 5MHz      | QPSK       | 23230   | 1RB#0            | 30~1000         | -62.80       | PASS    |
| Band13 | 5MHz      | QPSK       | 23230   | 1RB#0            | 1000~3000       | -44.00       | PASS    |
| Band13 | 5MHz      | QPSK       | 23230   | 1RB#0            | 3000~10000      | -44.15       | PASS    |
| Band13 | 5MHz      | 16QAM      | 23230   | 1RB#0            | 0.009~0.15      | -59.02       | PASS    |
| Band13 | 5MHz      | 16QAM      | 23230   | 1RB#0            | 0.15~30         | -54.29       | PASS    |
| Band13 | 5MHz      | 16QAM      | 23230   | 1RB#0            | 30~1000         | -63.05       | PASS    |
| Band13 | 5MHz      | 16QAM      | 23230   | 1RB#0            | 1000~3000       | -45.28       | PASS    |
| Band13 | 5MHz      | 16QAM      | 23230   | 1RB#0            | 3000~10000      | -44.27       | PASS    |
| Band13 | 5MHz      | QPSK       | 23255   | 1RB#0            | 0.009~0.15      | -55.93       | PASS    |
| Band13 | 5MHz      | QPSK       | 23255   | 1RB#0            | 0.15~30         | -51.95       | PASS    |
| Band13 | 5MHz      | QPSK       | 23255   | 1RB#0            | 30~1000         | -62.87       | PASS    |
| Band13 | 5MHz      | QPSK       | 23255   | 1RB#0            | 1000~3000       | -43.80       | PASS    |
| Band13 | 5MHz      | QPSK       | 23255   | 1RB#0            | 3000~10000      | -44.01       | PASS    |
| Band13 | 5MHz      | 16QAM      | 23255   | 1RB#0            | 0.009~0.15      | -57.10       | PASS    |
| Band13 | 5MHz      | 16QAM      | 23255   | 1RB#0            | 0.15~30         | -52.65       | PASS    |
| Band13 | 5MHz      | 16QAM      | 23255   | 1RB#0            | 30~1000         | -62.72       | PASS    |
| Band13 | 5MHz      | 16QAM      | 23255   | 1RB#0            | 1000~3000       | -44.45       | PASS    |
| Band13 | 5MHz      | 16QAM      | 23255   | 1RB#0            | 3000~10000      | -44.08       | PASS    |
| Band13 | 10MHz     | QPSK       | 23230   | 1RB#0            | 0.009~0.15      | -58.43       | PASS    |
| Band13 | 10MHz     | QPSK       | 23230   | 1RB#0            | 0.15~30         | -55.88       | PASS    |
| Band13 | 10MHz     | QPSK       | 23230   | 1RB#0            | 30~1000         | -62.91       | PASS    |
| Band13 | 10MHz     | QPSK       | 23230   | 1RB#0            | 1000~3000       | -43.62       | PASS    |
| Band13 | 10MHz     | QPSK       | 23230   | 1RB#0            | 3000~10000      | -43.81       | PASS    |



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|--------|-------|-------|-------|-------|------------|--------|------|
| Band13 | 10MHz | 16QAM | 23230 | 1RB#0 | 0.009~0.15 | -58.87 | PASS |
| Band13 | 10MHz | 16QAM | 23230 | 1RB#0 | 0.15~30    | -50.04 | PASS |
| Band13 | 10MHz | 16QAM | 23230 | 1RB#0 | 30~1000    | -62.96 | PASS |
| Band13 | 10MHz | 16QAM | 23230 | 1RB#0 | 1000~3000  | -44.98 | PASS |
| Band13 | 10MHz | 16QAM | 23230 | 1RB#0 | 3000~10000 | -44.38 | PASS |

## Test Graphs

