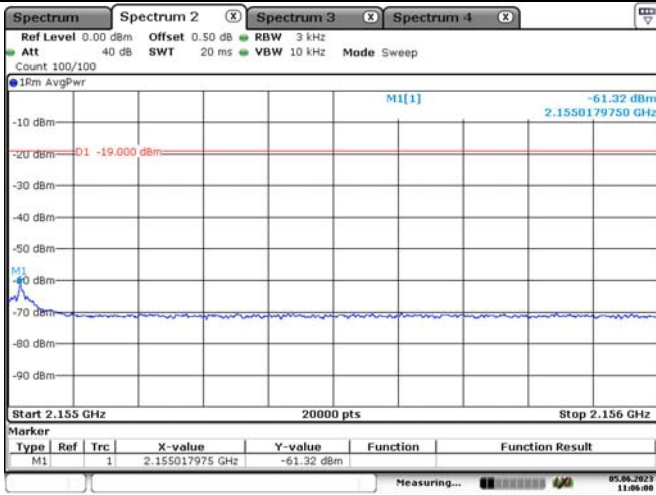
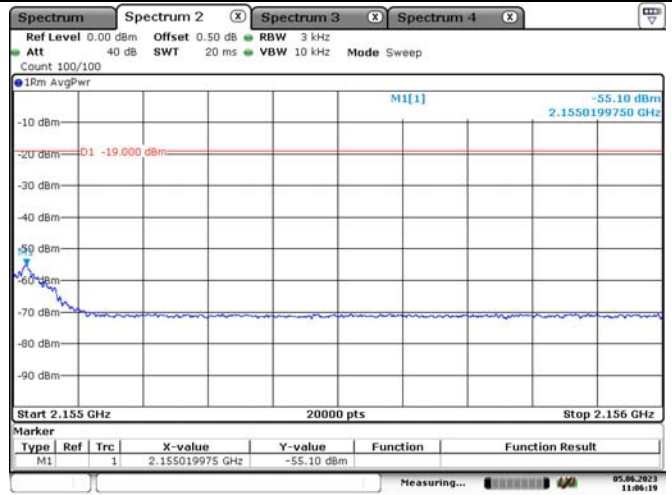


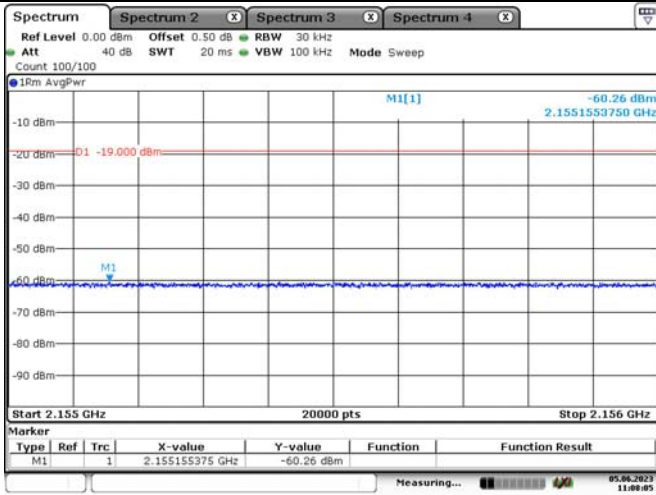
Right Side-GSM-Pre AGC



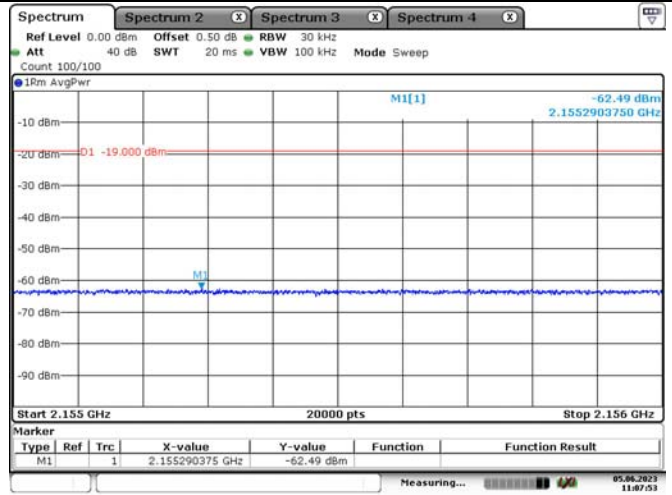
Right Side-GSM-Above AGC



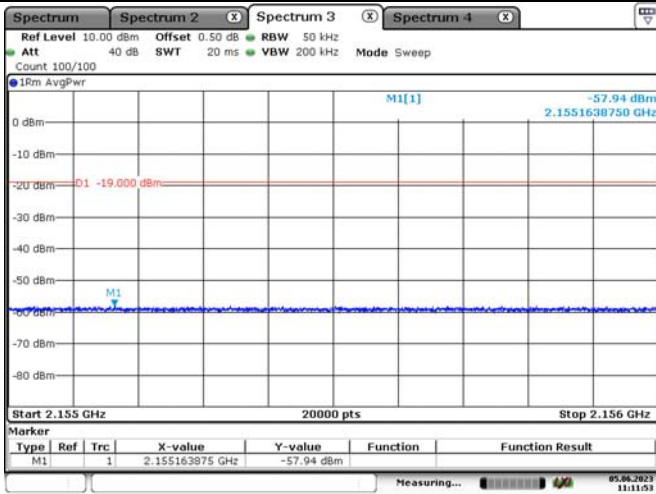
Right Side-CDMA-Pre AGC



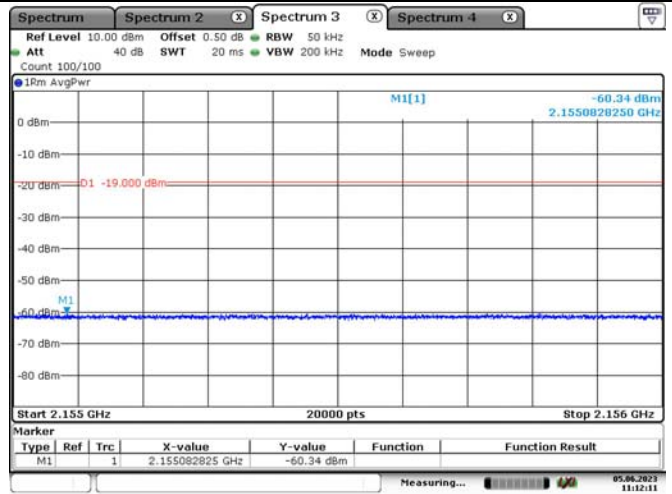
Right Side-CDMA-Above AGC



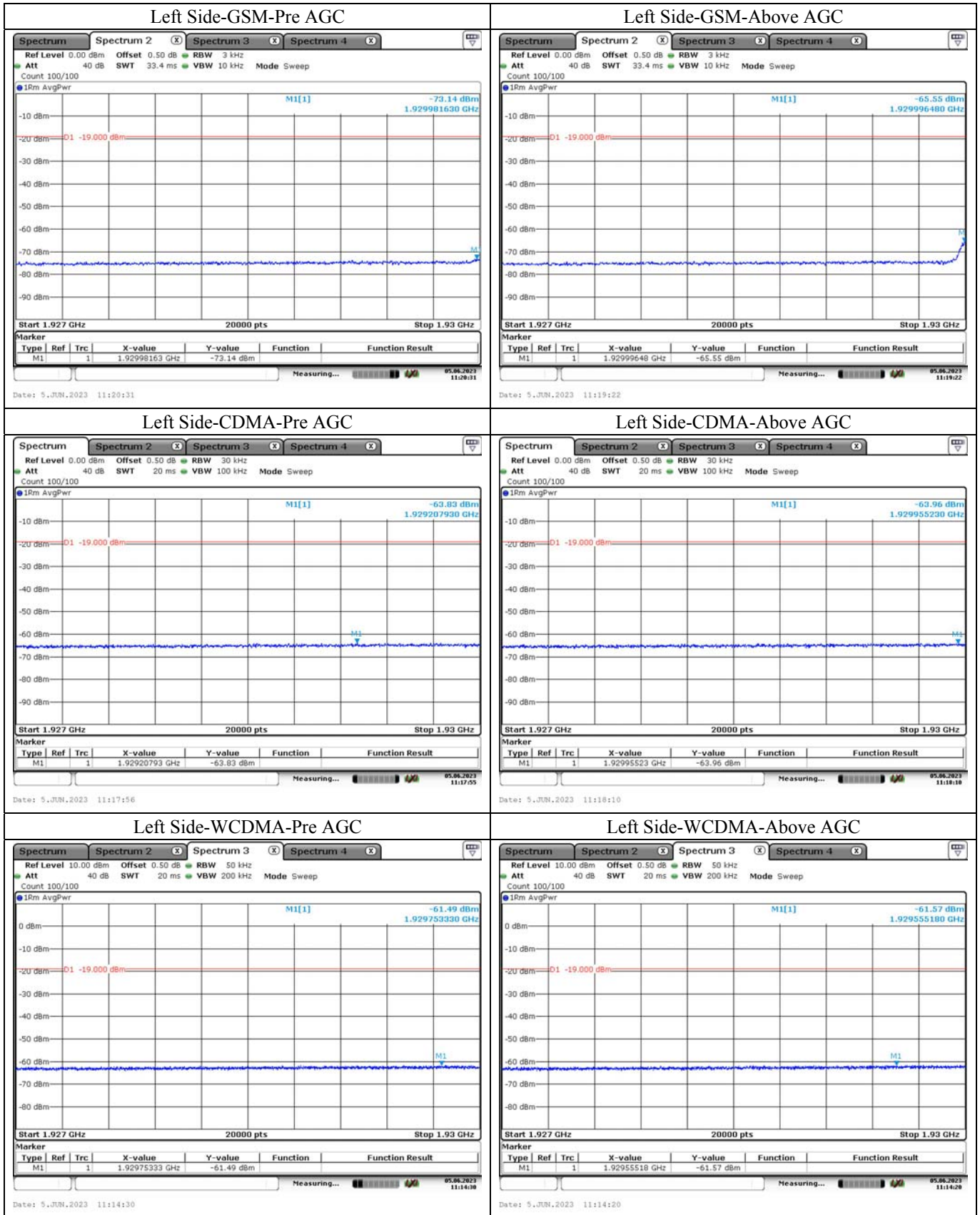
Right Side-WCDMA-Pre AGC



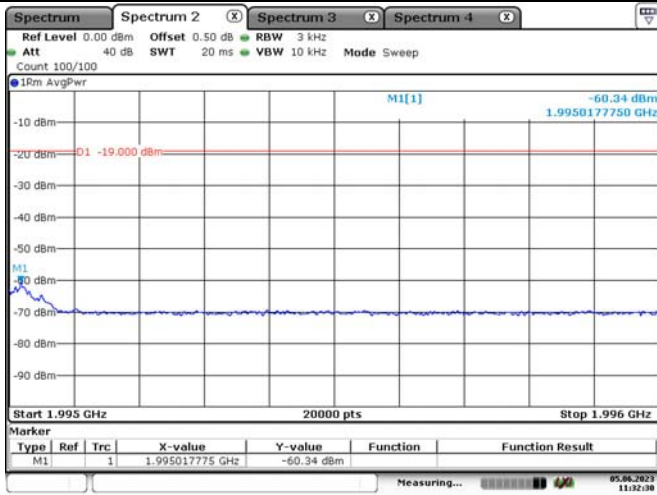
Right Side-WCDMA-Above AGC



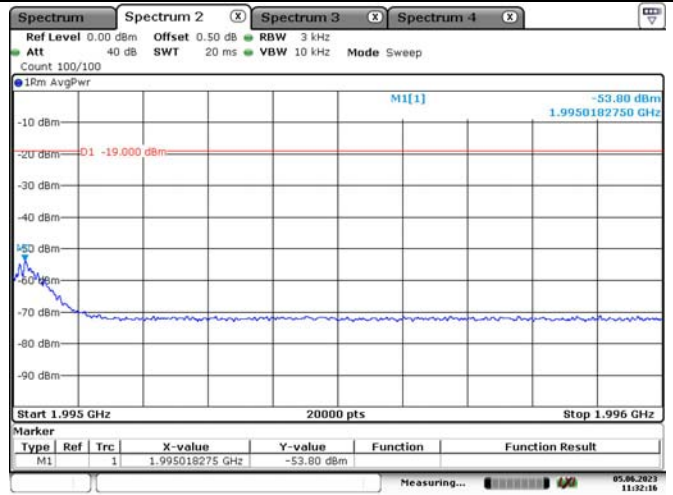
PCS Band Downlink



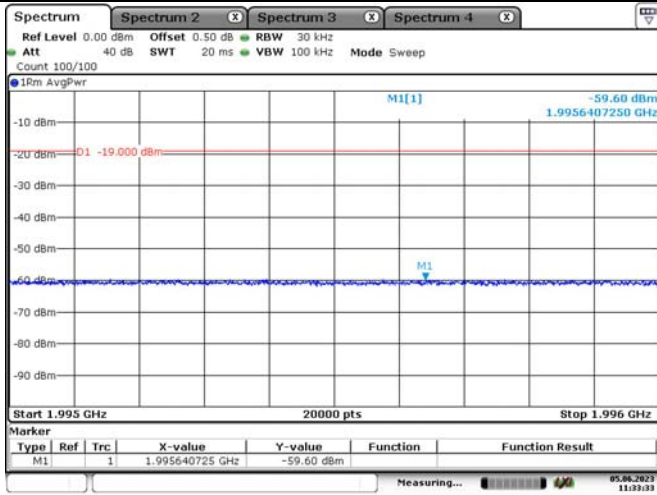
Right Side-GSM-Pre AGC



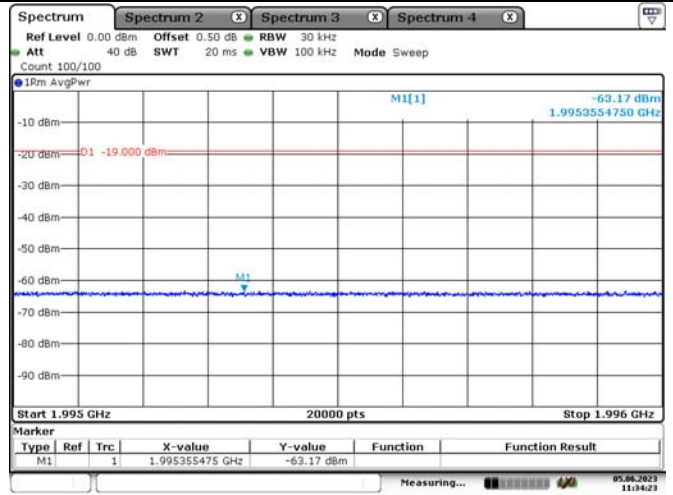
Right Side-GSM-Above AGC



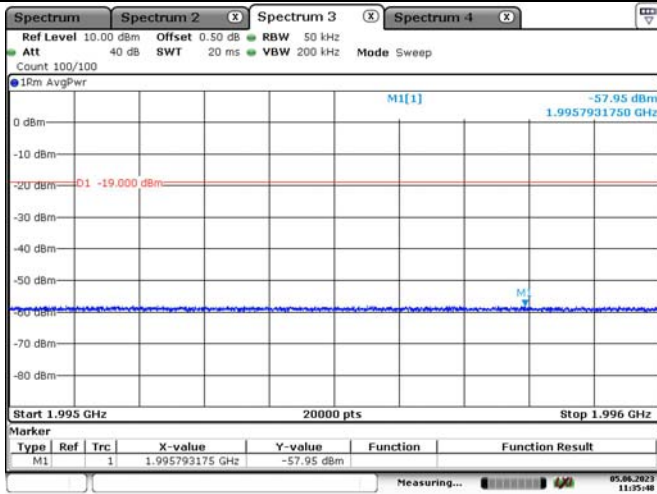
Right Side-CDMA-Pre AGC



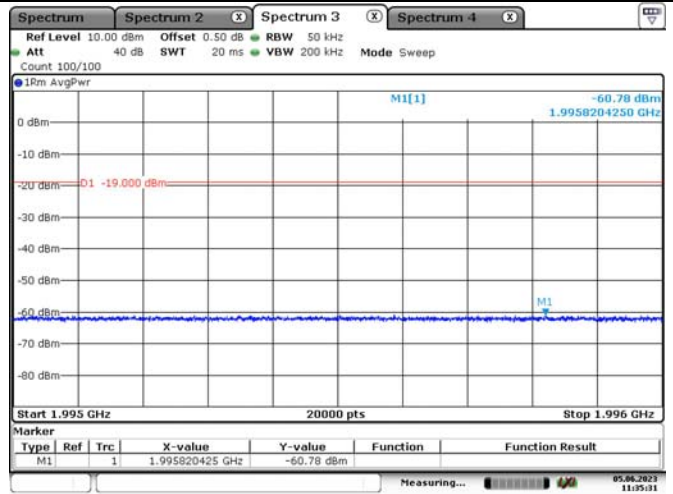
Right Side-CDMA-Above AGC



Right Side-WCDMA-Pre AGC



Right Side-WCDMA-Above AGC



**4.6 Spurious Emissions at Antenna Terminals:**

|                |           |              |                     |
|----------------|-----------|--------------|---------------------|
| Serial Number: | 22X8_1    | Test Date:   | 2023/6/5, 2024/3/14 |
| Test Site:     | RF        | Test Mode:   | Transmitting        |
| Tester:        | Sern Shen | Test Result: | Pass                |

**Environmental Conditions:**

|                      |           |                              |       |                        |             |
|----------------------|-----------|------------------------------|-------|------------------------|-------------|
| Temperature:<br>(°C) | 21.3~28.3 | Relative<br>Humidity:<br>(%) | 38~45 | ATM Pressure:<br>(kPa) | 100.2~101.9 |
|----------------------|-----------|------------------------------|-------|------------------------|-------------|

**Test Equipment List and Details:**

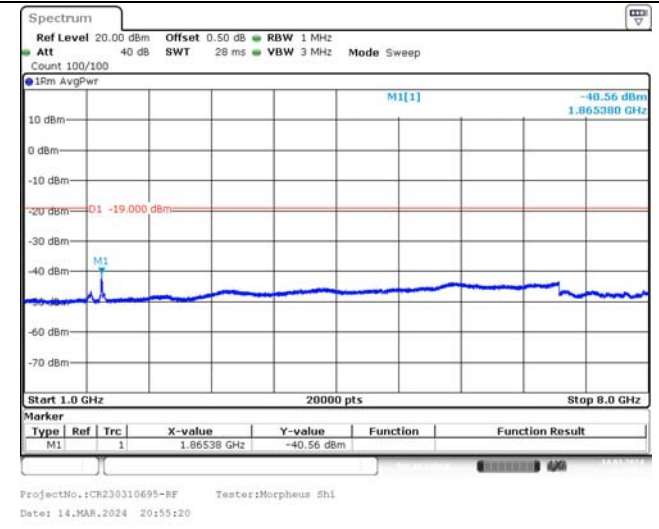
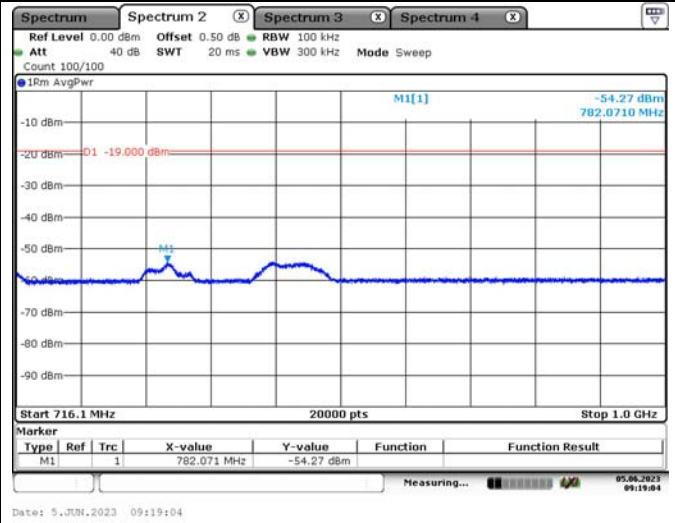
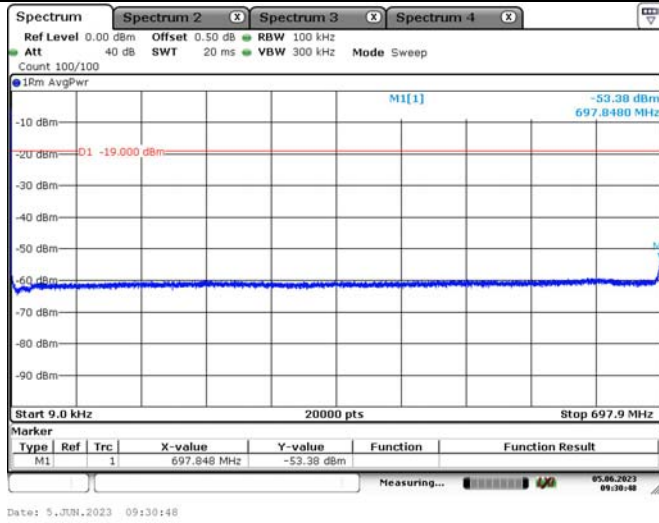
| Manufacturer | Description                 | Model  | Serial Number | Calibration Date | Calibration Due Date |
|--------------|-----------------------------|--------|---------------|------------------|----------------------|
| R&S          | Spectrum Analyzer           | FSV40  | 101474        | 2022/7/15        | 2023/7/14            |
| R&S          | Spectrum Analyzer           | FSV40  | 101474        | 2023/3/31        | 2024/3/30            |
| YINSAIGE     | Coaxial Cable               | SS402  | SJ0100001     | Each time        | N/A                  |
| YINSAIGE     | Coaxial Cable               | SS402  | SJ0100002     | Each time        | N/A                  |
| Agilent      | MXG Vector Signal Generator | N5182B | MY51350144    | 2022/4/22        | 2023/4/21            |
| Agilent      | MXG Vector Signal Generator | N5182B | MY51350144    | 2023/3/31        | 2024/3/30            |

\* Statement of Traceability: China Certification ICT Co., Ltd (Dongguan) attests that all calibrations have been performed, traceable to National Primary Standards and International System of Units (SI).

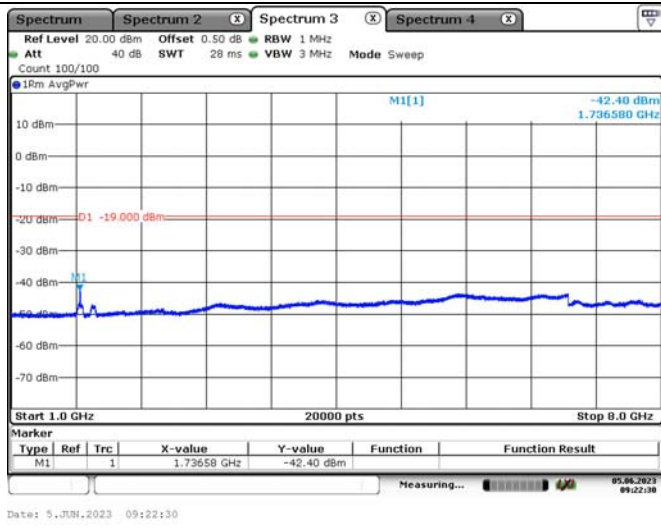
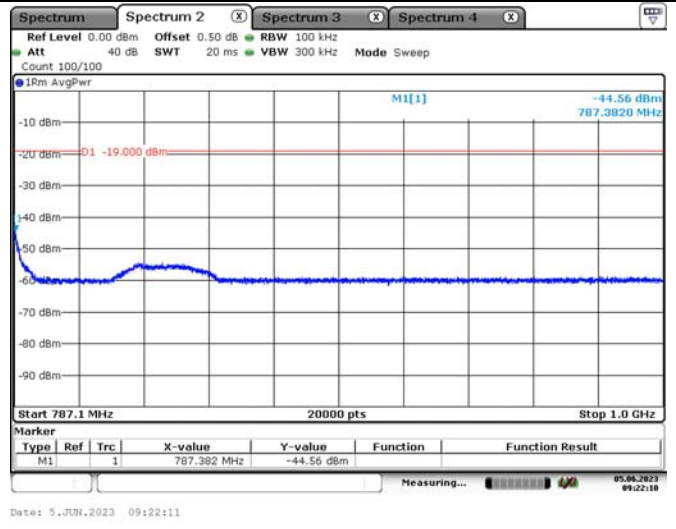
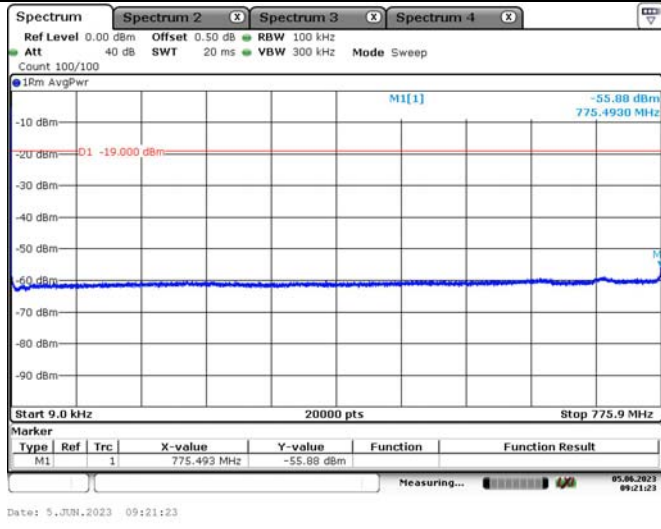
Test Data:

Uplink

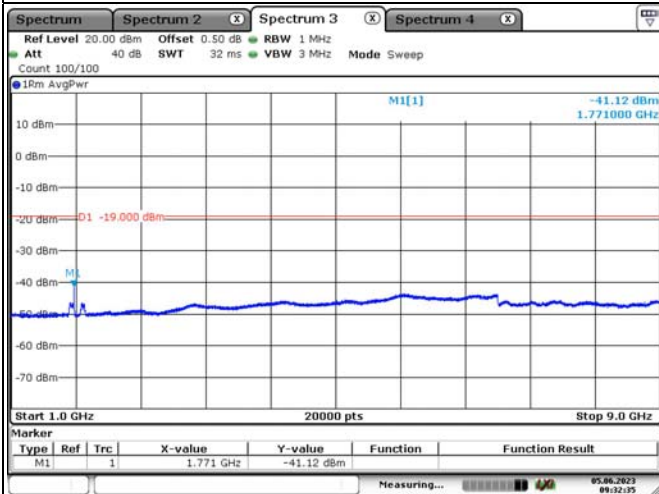
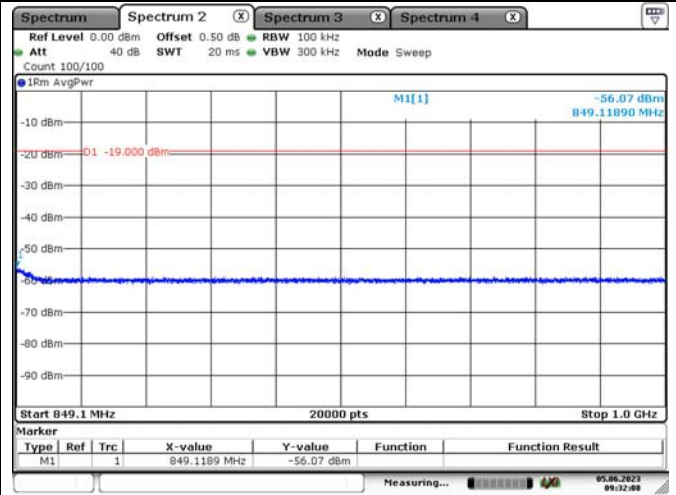
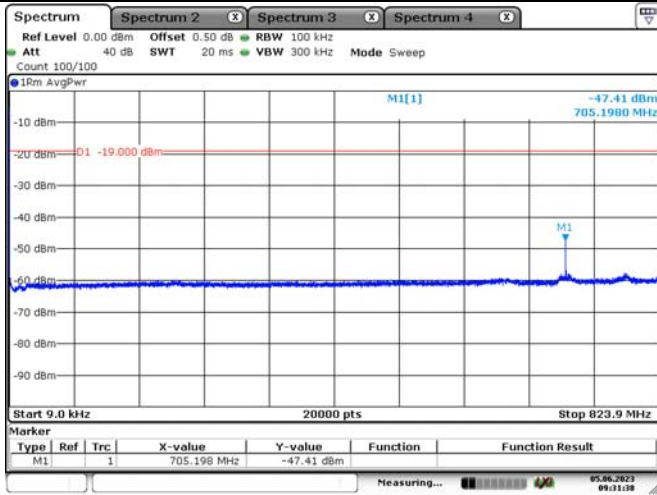
Lower 700MHz Band



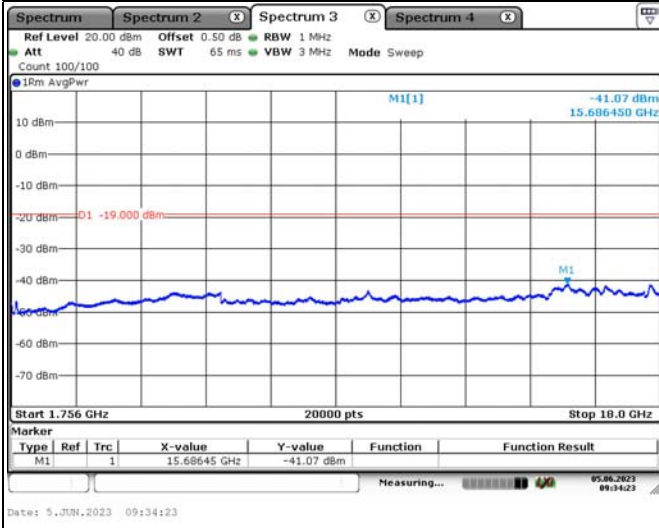
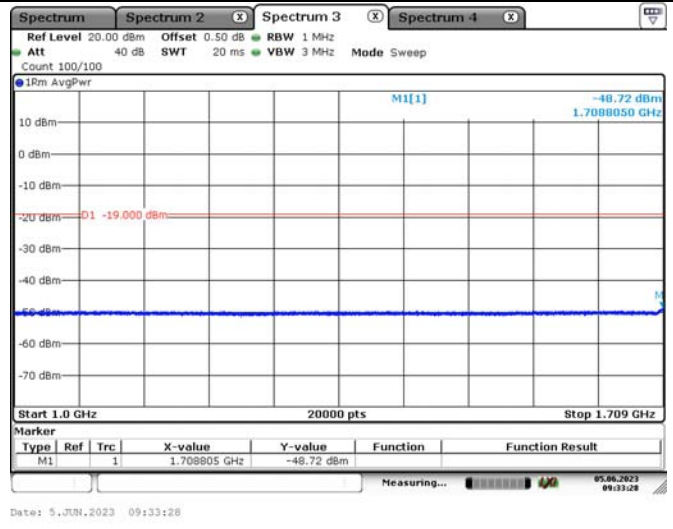
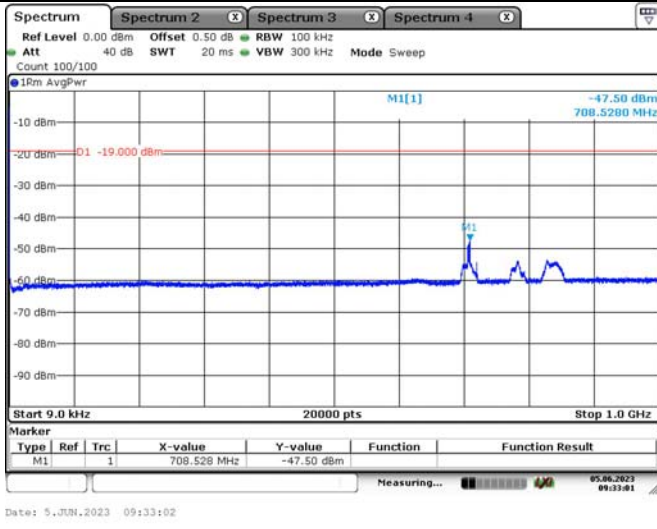
Upper 700MHz Band



Cellular Band

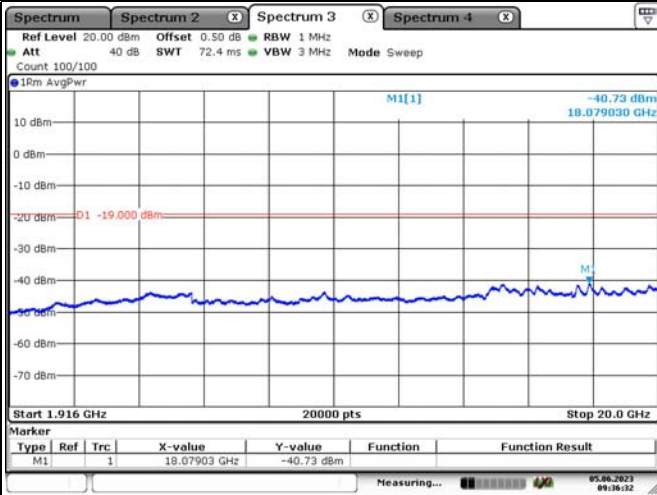
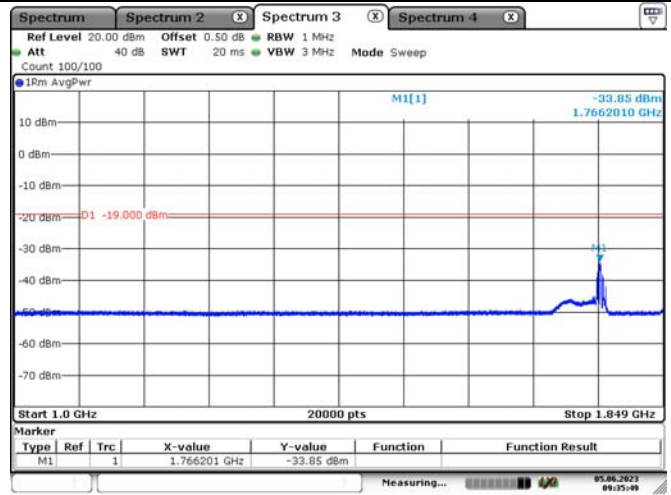
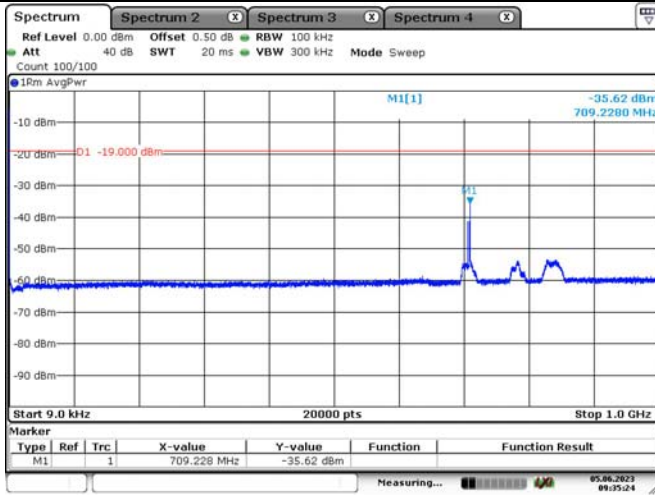


AWS-1 Band



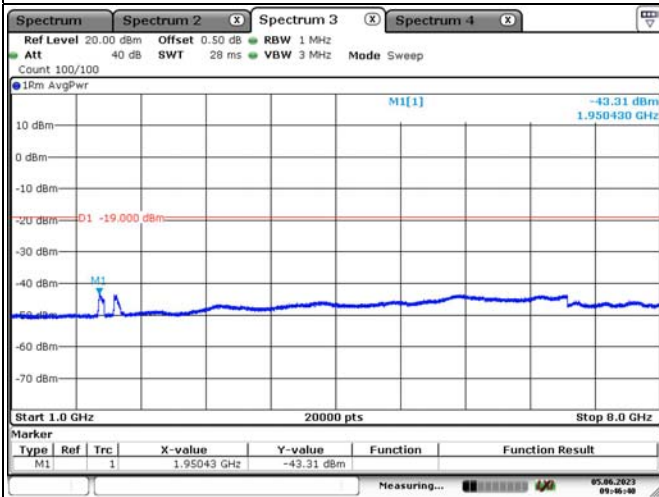
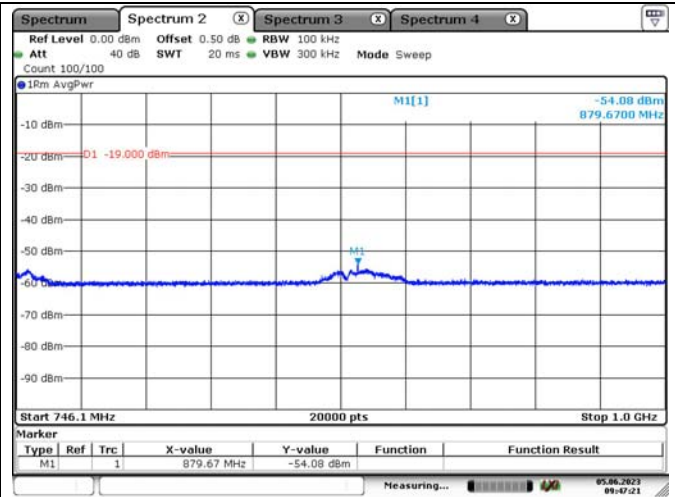
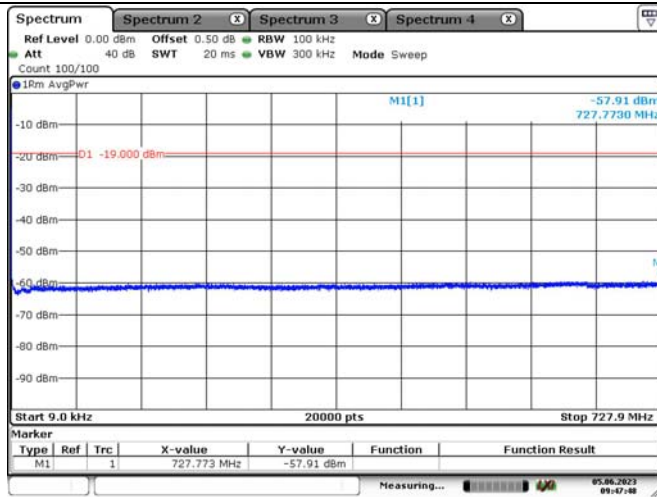


PCS Band

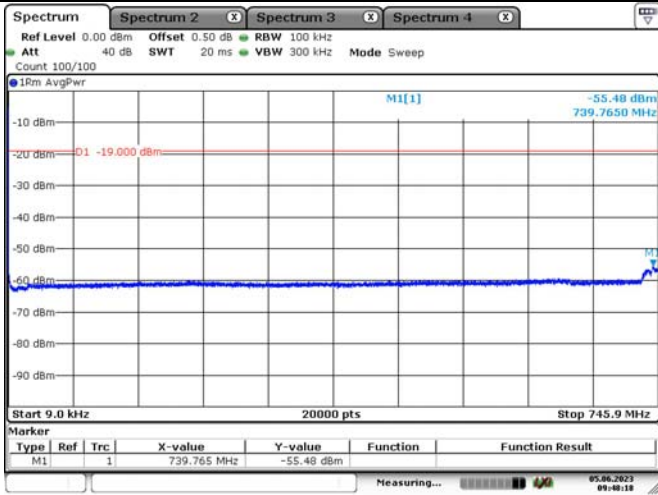


Downlink

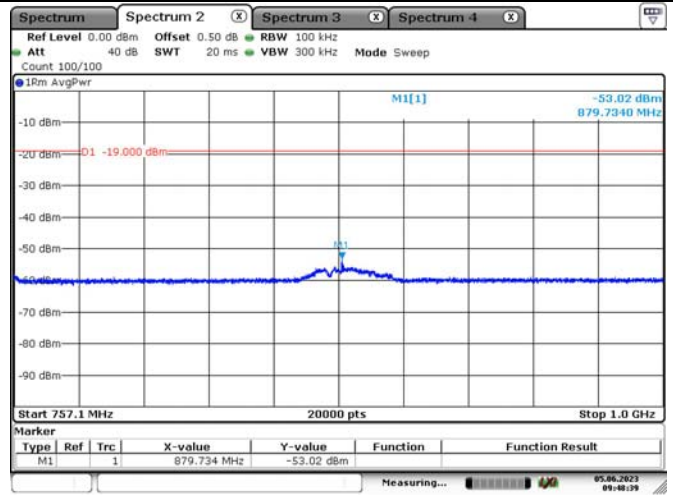
Lower 700MHz Band



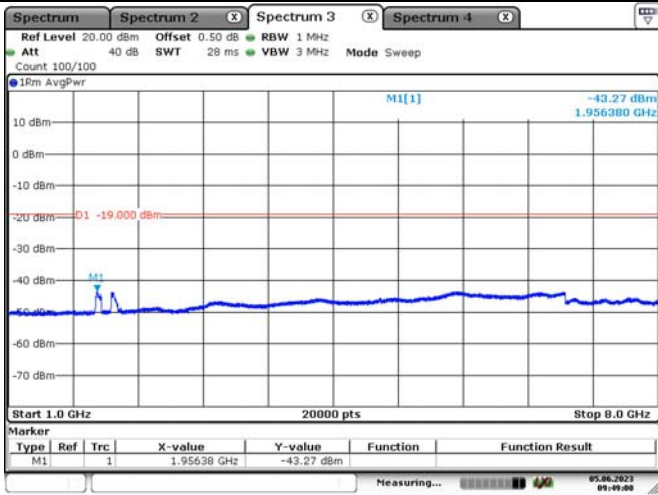
Upper 700MHz Band



Date: 5 JUN 2023 09:48:18

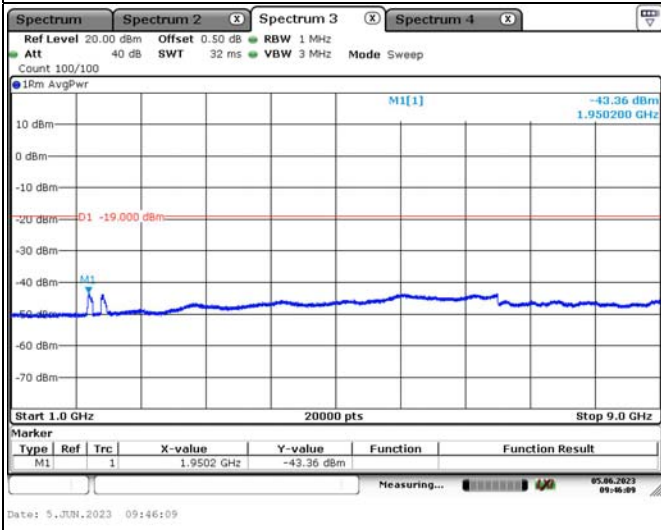
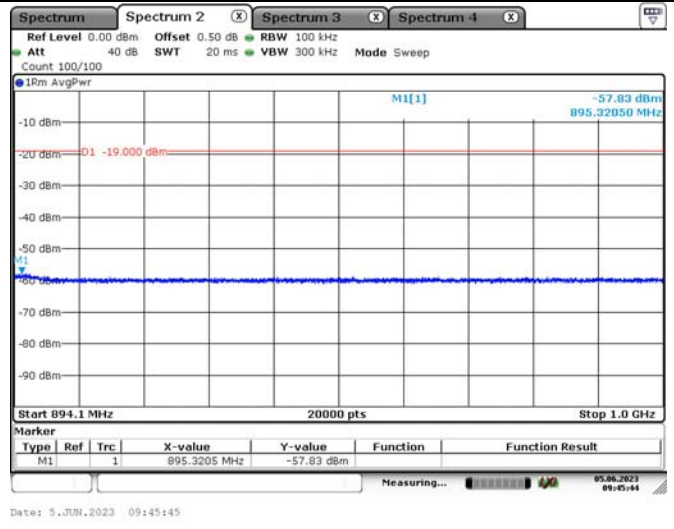
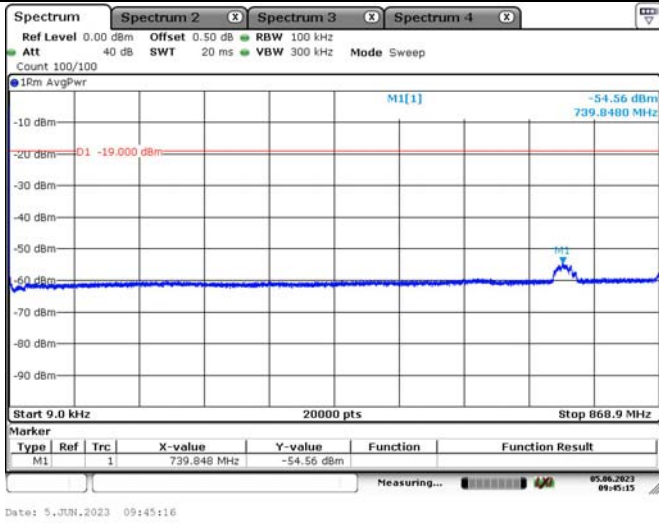


Date: 5 JUN 2023 09:48:39

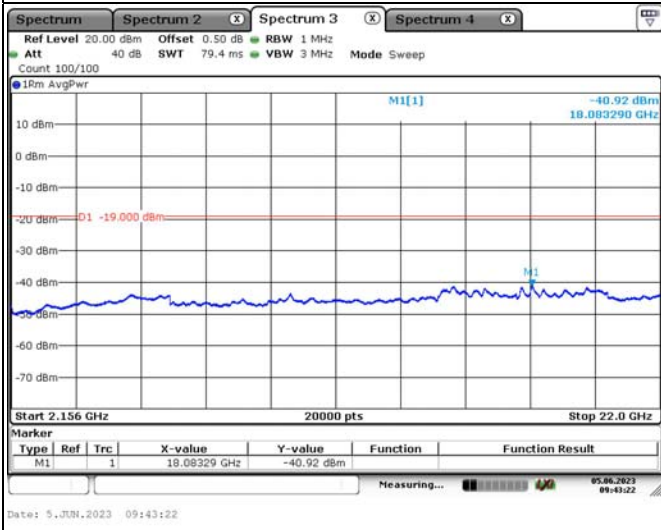
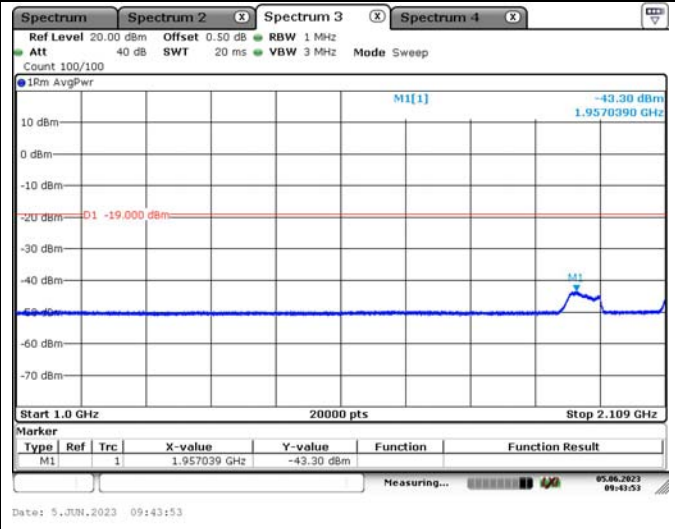
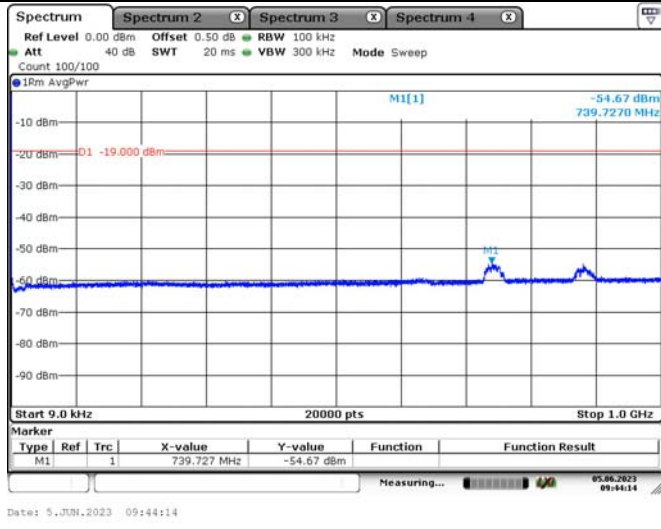


Date: 5 JUN 2023 09:49:00

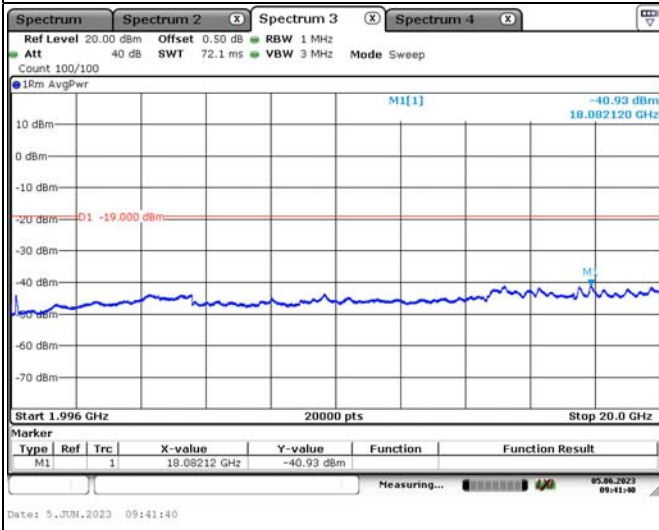
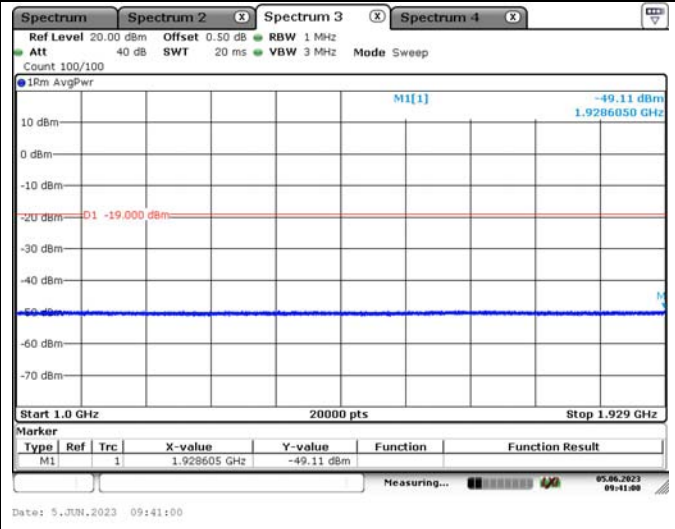
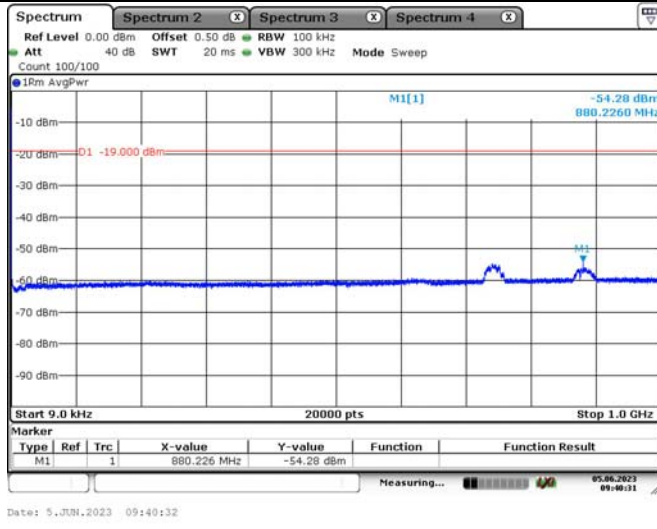
Cellular Band



AWS-1 Band



PCS Band



**4.7 Noise Limits:**

|                |           |              |                     |
|----------------|-----------|--------------|---------------------|
| Serial Number: | 22X8_1    | Test Date:   | 2023/4/20~2023/4/23 |
| Test Site:     | RF        | Test Mode:   | Transmitting        |
| Tester:        | Sern Shen | Test Result: | Pass                |

**Environmental Conditions:**

|                      |           |                              |       |                        |             |
|----------------------|-----------|------------------------------|-------|------------------------|-------------|
| Temperature:<br>(°C) | 21.3~28.3 | Relative<br>Humidity:<br>(%) | 38~45 | ATM Pressure:<br>(kPa) | 100.2~101.9 |
|----------------------|-----------|------------------------------|-------|------------------------|-------------|

**Test Equipment List and Details:**

| Manufacturer | Description                 | Model  | Serial Number | Calibration Date | Calibration Due Date |
|--------------|-----------------------------|--------|---------------|------------------|----------------------|
| R&S          | Spectrum Analyzer           | FSV40  | 101474        | 2022/7/15        | 2023/7/14            |
| YINSAIGE     | Coaxial Cable               | SS402  | SJ0100001     | Each time        | N/A                  |
| YINSAIGE     | Coaxial Cable               | SS402  | SJ0100002     | Each time        | N/A                  |
| Agilent      | MXG Vector Signal Generator | N5182B | MY51350144    | 2023/3/31        | 2024/3/30            |

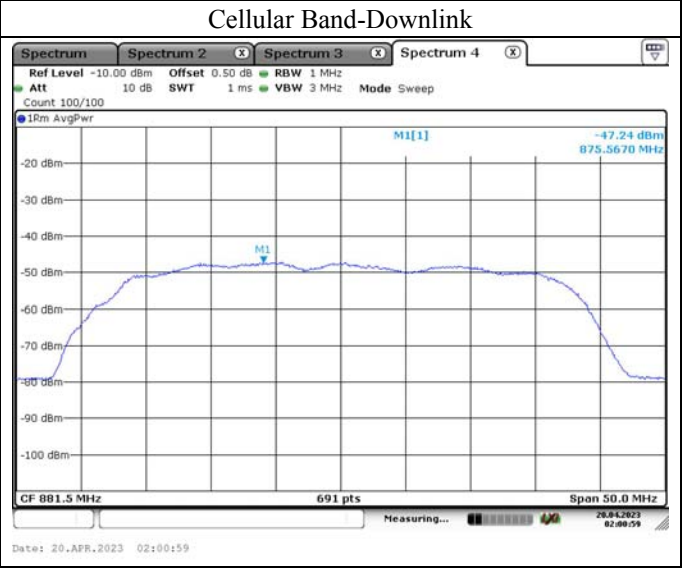
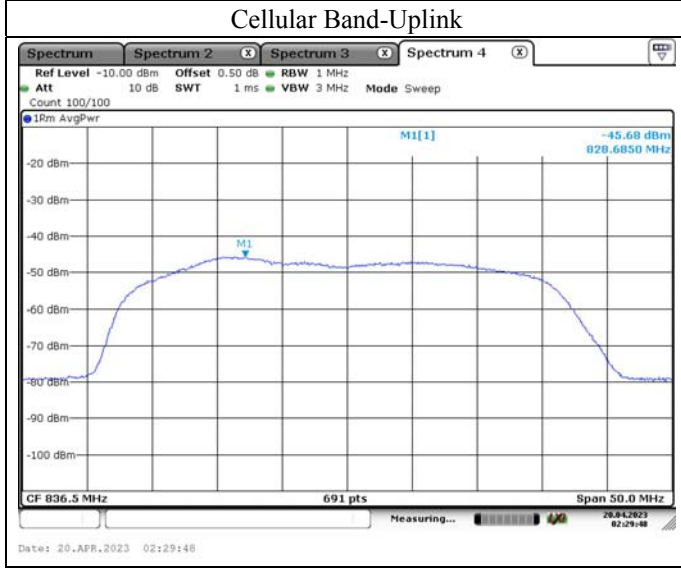
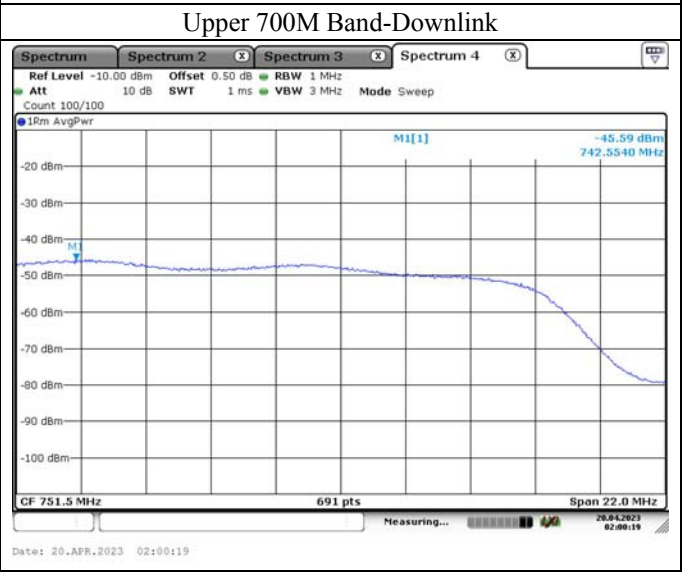
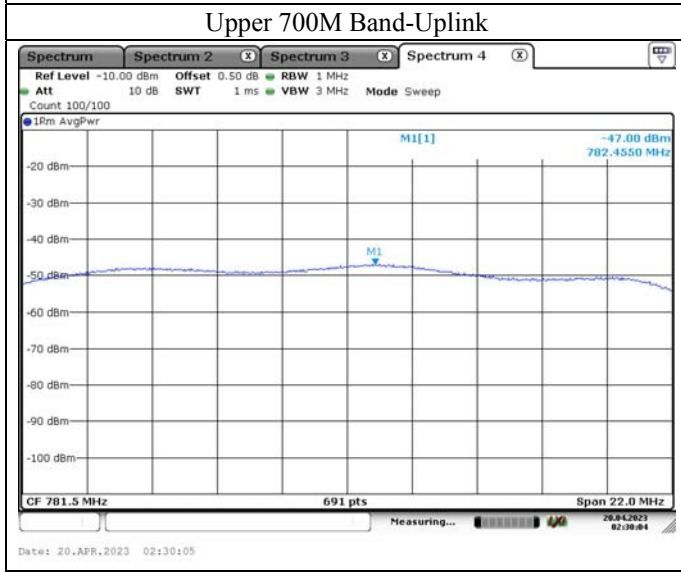
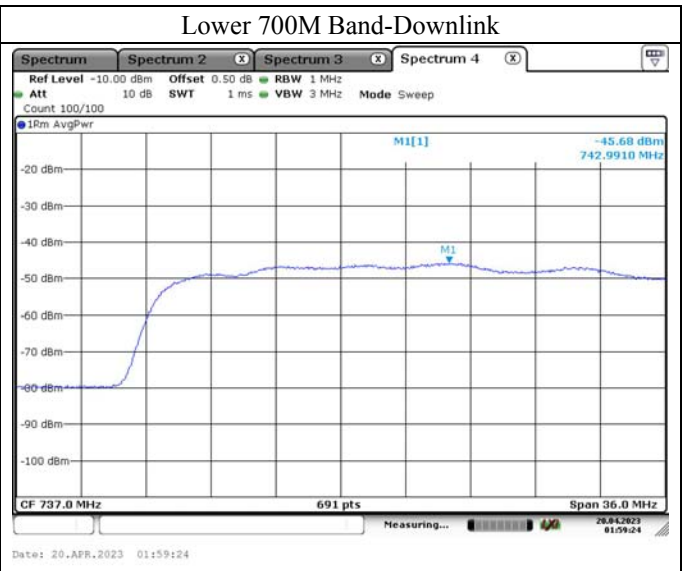
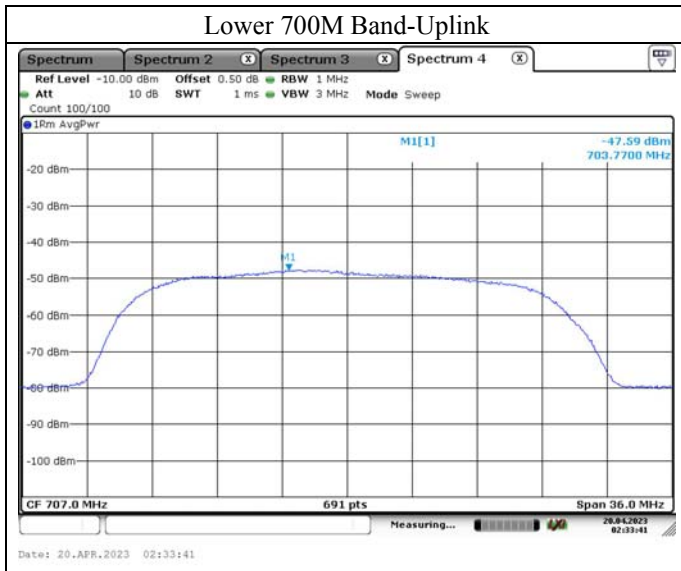
\* Statement of Traceability: China Certification ICT Co., Ltd (Dongguan) attests that all calibrations have been performed, traceable to National Primary Standards and International System of Units (SI).

**Test Data:****Maximum Transmitter Noise Power Level**

| Operation Band | Uplink Noise (dBm/MHz) | Downlink Noise (dBm/MHz) | Limit (dBm/MHz) |
|----------------|------------------------|--------------------------|-----------------|
| Lower 700MHz   | -47.59                 | -45.68                   | -45.51          |
| Upper 700MHz   | -47.00                 | -45.59                   | -44.64          |
| Cellular       | -45.68                 | -47.24                   | -44.05          |
| AWS-1          | -48.17                 | -42.57                   | -37.73          |
| PCS            | -52.46                 | -46.68                   | -37.01          |

**Note:**

1. Mobile booster maximum noise power shall not exceed -59 dBm/MHz.
2. Fixed booster maximum noise power shall not exceed  $-102.5 \text{ dBm/MHz} + 20 \text{ Log}_{10}(\text{Frequency})$ , where Frequency is the uplink mid-band frequency of the supported spectrum bands in MHz.
3. Device is fixed consumer signal boosters.





### AWS-1 Band-Uplink



Date: 20.APR.2023 02:29:31

### AWS-1 Band-Downlink



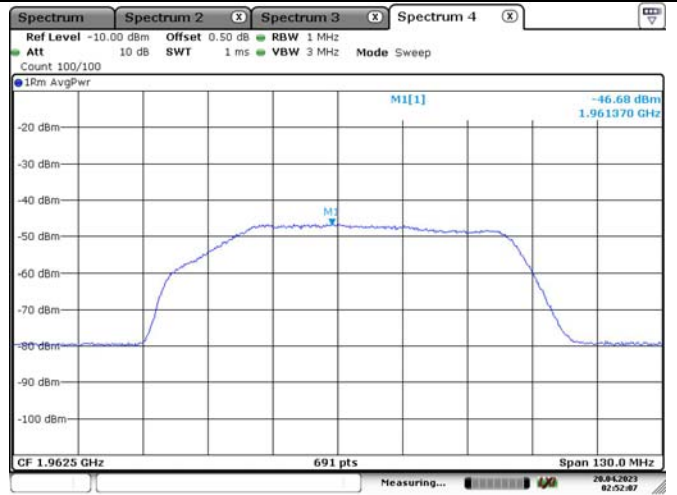
Date: 20.APR.2023 02:02:46

### PCS Band-Uplink



Date: 20.APR.2023 02:35:58

### PCS Band-Downlink



Date: 20.APR.2023 02:52:08

**Variable Uplink Noise Limit:**

| <b>Lower 700</b> |              |              |               |
|------------------|--------------|--------------|---------------|
| <b>RSSI</b>      | <b>Noise</b> | <b>Limit</b> | <b>Margin</b> |
| <b>dBm</b>       | <b>dBm</b>   | <b>dBm</b>   | <b>dB</b>     |
| -90              | -46.3        | -45.51       | 0.79          |
| -80              | -46.4        | -45.51       | 0.89          |
| -70              | -46.4        | -45.51       | 0.84          |
| -60              | -49.6        | -45.51       | 4.09          |
| -57.49           | -51.4        | -45.51       | 5.89          |
| -50.49           | -57.1        | -52.51       | 4.59          |
| -44.49           | -61.9        | -58.51       | 3.39          |
| -37.49           | -82.4        | -65.51       | 16.86         |
| -33              | -82.4        | -70          | 12.44         |
| -30              | -82.5        | -70          | 12.53         |
| -20              | -82.5        | -70          | 12.47         |
| -10              | -82.5        | -70          | 12.51         |

| <b>Upper 700</b> |              |              |               |
|------------------|--------------|--------------|---------------|
| <b>RSSI</b>      | <b>Noise</b> | <b>Limit</b> | <b>Margin</b> |
| <b>dBm</b>       | <b>dBm</b>   | <b>dBm</b>   | <b>dB</b>     |
| -90              | -45.6        | -44.64       | 0.96          |
| -80              | -45.6        | -44.64       | 0.96          |
| -70              | -45.6        | -44.64       | 0.96          |
| -60              | -45.6        | -44.64       | 0.96          |
| -58.36           | -46.5        | -44.64       | 1.86          |
| -51.36           | -53.0        | -51.64       | 1.36          |
| -46.36           | -58.7        | -56.64       | 2.06          |
| -38.36           | -82.4        | -64.64       | 17.72         |
| -33              | -82.5        | -70          | 12.46         |
| -30              | -82.5        | -70          | 12.45         |
| -20              | -82.4        | -70          | 12.41         |
| -10              | -82.5        | -70          | 12.52         |

| <b>Cellular</b> |              |              |               |
|-----------------|--------------|--------------|---------------|
| <b>RSSI</b>     | <b>Noise</b> | <b>Limit</b> | <b>Margin</b> |
| <b>dBm</b>      | <b>dBm</b>   | <b>dBm</b>   | <b>dB</b>     |
| -90             | -45.7        | -44.05       | 1.63          |
| -80             | -45.7        | -44.05       | 1.62          |
| -70             | -45.8        | -44.05       | 1.71          |
| -60             | -47.6        | -44.05       | 3.58          |
| -58.95          | -48.8        | -44.05       | 4.77          |
| -51.95          | -55.8        | -51.05       | 4.79          |
| -44.95          | -62.1        | -58.05       | 4.06          |
| -39.95          | -82.0        | -63.05       | 18.99         |
| -33             | -82.3        | -70          | 12.26         |
| -30             | -82.2        | -70          | 12.15         |
| -20             | -82.2        | -70          | 12.21         |
| -10             | -82.2        | -70          | 12.23         |

| AWS-1  |       |        |        |
|--------|-------|--------|--------|
| RSSI   | Noise | Limit  | Margin |
| dBm    | dBm   | dBm    | dB     |
| -90    | -45.1 | -37.73 | 7.33   |
| -80    | -45.3 | -37.73 | 7.53   |
| -70    | -45.3 | -37.73 | 7.59   |
| -65.27 | -45.1 | -37.73 | 7.41   |
| -60.27 | -45.2 | -42.73 | 2.51   |
| -50.27 | -53.9 | -52.73 | 1.19   |
| -43.27 | -63.4 | -59.73 | 3.66   |
| -33    | -81.1 | -70    | 11.11  |
| -30    | -81.3 | -70    | 11.28  |
| -20    | -81.3 | -70    | 11.26  |
| -10    | -81.2 | -70    | 11.2   |

| PCS    |       |        |        |
|--------|-------|--------|--------|
| RSSI   | Noise | Limit  | Margin |
| dBm    | dBm   | dBm    | dB     |
| -90    | -44.0 | -37.01 | 7.03   |
| -80    | -44.4 | -37.01 | 7.42   |
| -70    | -44.6 | -37.01 | 7.59   |
| -65.99 | -44.4 | -37.01 | 7.34   |
| -60.99 | -43.7 | -42.01 | 1.69   |
| -52.99 | -51.2 | -50.01 | 1.19   |
| -43.99 | -60.2 | -59.01 | 1.23   |
| -33    | -80.9 | -70    | 10.9   |
| -30    | -81.0 | -70    | 11.02  |
| -20    | -81.0 | -70    | 11.01  |
| -10    | -81.0 | -70    | 10.95  |

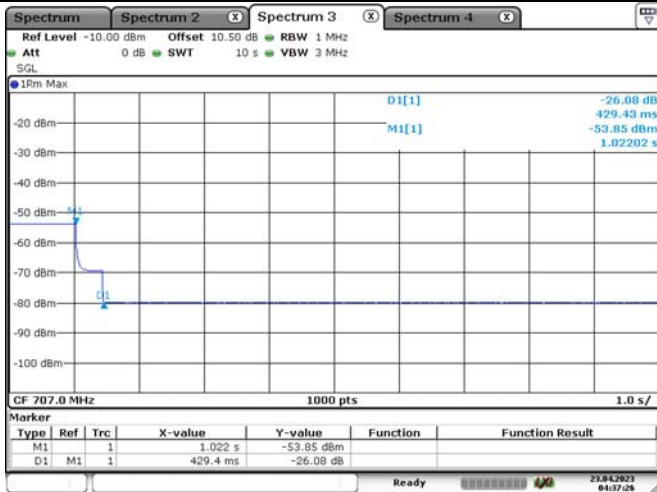
Note:

According to KDB 935210 D03 Signal Booster Measurements v04r04 Annex D, the Variable uplink Noise limit is  $-103 \text{ dBm/MHz} - \text{RSSI}$  in RSSI-Dependent Region, out of RSSI-Dependent Region, it is  $-102.5 \text{ dBm/MHz} + 20 \text{ Log}_{10}(\text{Frequency})$ , where Frequency is the uplink mid-band frequency of the supported spectrum bands in MHz..

#### Variable Uplink Noise Timing:

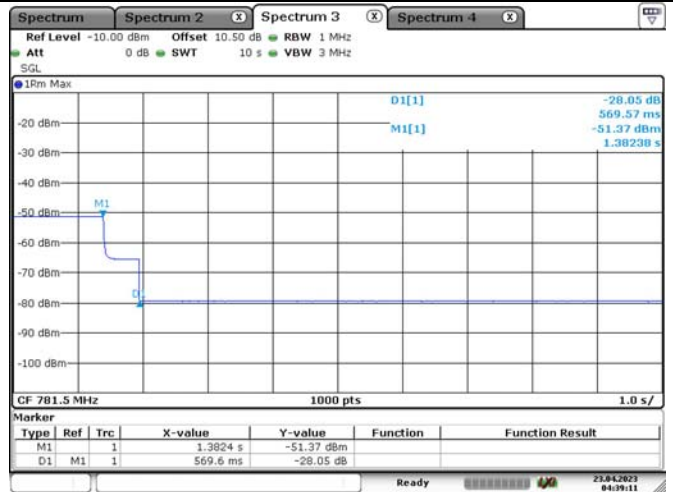
| Operating Band | Measured Value | Limit |
|----------------|----------------|-------|
|                | s              | s     |
| Lower 700MHz   | 0.429          | 3     |
| Upper 700MHz   | 0.570          | 3     |
| Cellular       | 0.750          | 3     |
| AWS-1          | 0.069          | 3     |
| PCS            | 0.449          | 3     |

Lower 700MHz Band



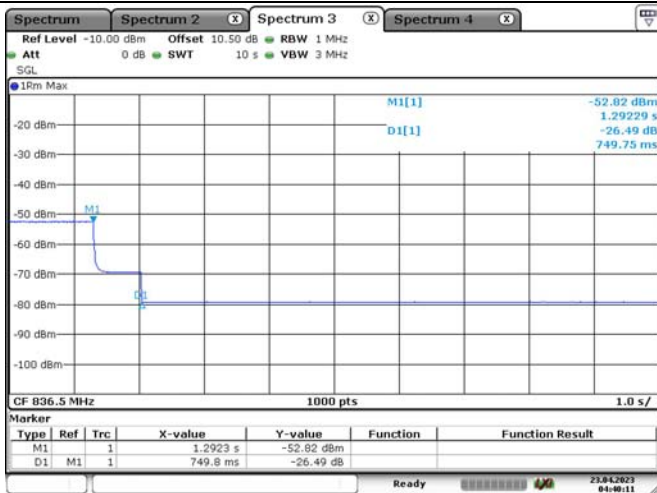
Date: 23.APR.2023 04:37:26

Upper 700MHz Band



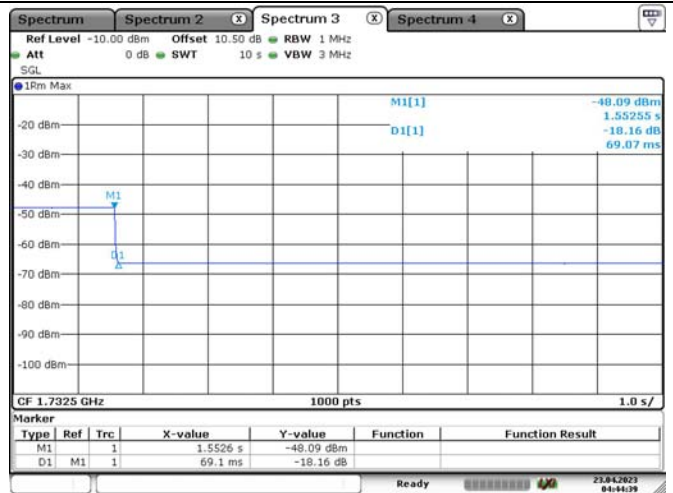
Date: 23.APR.2023 04:39:11

Cellular Band



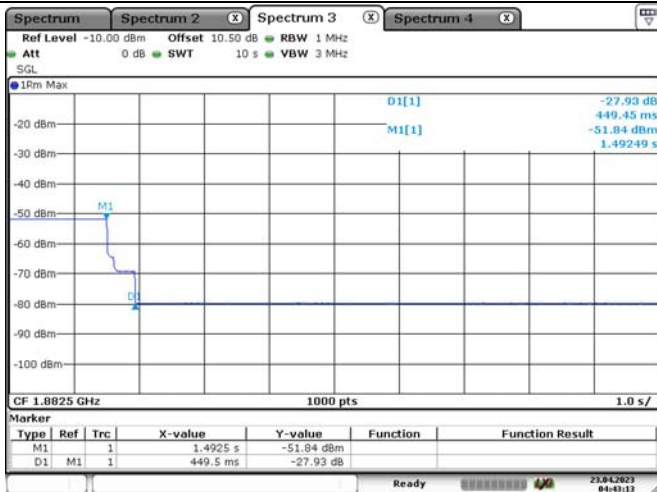
Date: 23.APR.2023 04:40:12

AWS-1 Band



Date: 23.APR.2023 04:44:40

PCS Band



Date: 23.APR.2023 04:45:13

**4.8 Uplink Inactivity:**

|                |           |              |              |
|----------------|-----------|--------------|--------------|
| Serial Number: | 22X8_1    | Test Date:   | 2023/6/3     |
| Test Site:     | RF        | Test Mode:   | Transmitting |
| Tester:        | Sern Shen | Test Result: | Pass         |

**Environmental Conditions:**

|                      |           |                              |       |                        |             |
|----------------------|-----------|------------------------------|-------|------------------------|-------------|
| Temperature:<br>(°C) | 21.3~28.3 | Relative<br>Humidity:<br>(%) | 38~45 | ATM Pressure:<br>(kPa) | 100.2~101.9 |
|----------------------|-----------|------------------------------|-------|------------------------|-------------|

**Test Equipment List and Details:**

| Manufacturer | Description                 | Model  | Serial Number | Calibration Date | Calibration Due Date |
|--------------|-----------------------------|--------|---------------|------------------|----------------------|
| R&S          | Spectrum Analyzer           | FSV40  | 101474        | 2022/7/15        | 2023/7/14            |
| YINSAIGE     | Coaxial Cable               | SS402  | SJ0100001     | Each time        | N/A                  |
| YINSAIGE     | Coaxial Cable               | SS402  | SJ0100002     | Each time        | N/A                  |
| Agilent      | MXG Vector Signal Generator | N5182B | MY51350144    | 2023/3/31        | 2024/3/30            |

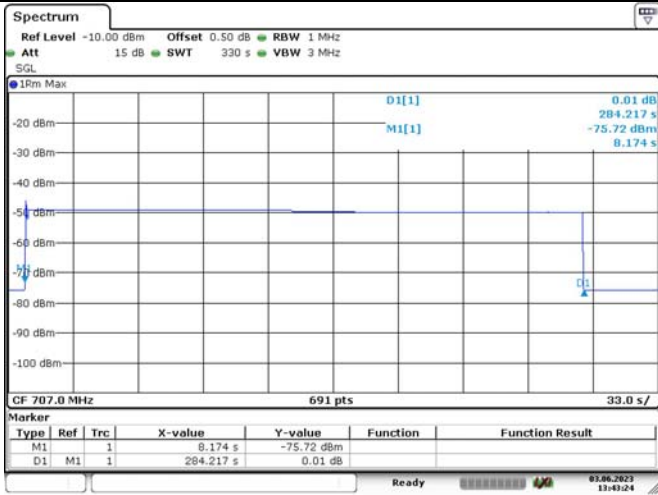
\* Statement of Traceability: China Certification ICT Co., Ltd (Dongguan) attests that all calibrations have been performed, traceable to National Primary Standards and International System of Units (SI).

**Test Data:**

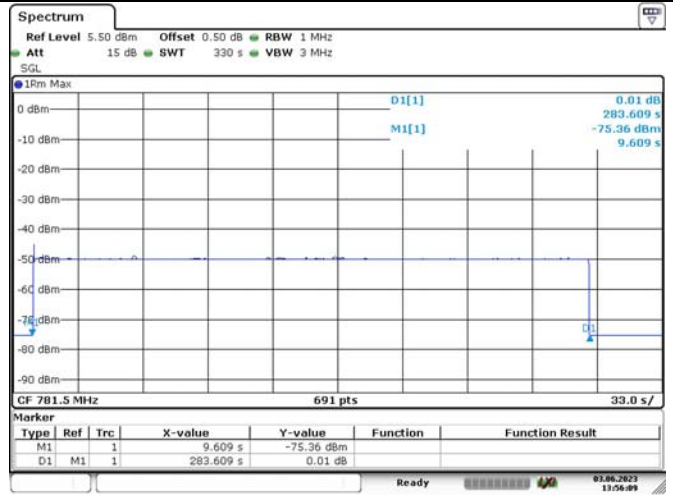
| Operation Band | Measured value | Limit |
|----------------|----------------|-------|
|                | s              | s     |
| Lower 700MHz   | 284.22         | 300   |
| Upper 700MHz   | 283.61         |       |
| Cellular       | 283.13         |       |
| AWS-1          | 283.61         |       |
| PCS            | 283.13         |       |

Note: When the consumer booster is not serving an active device connection after 5 minutes the uplink noise power not exceed  $-70$  dBm/MHz.

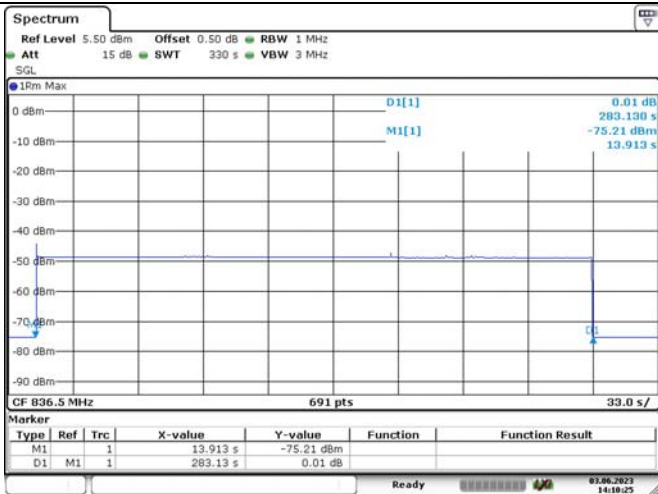
Lower 700MHz Band



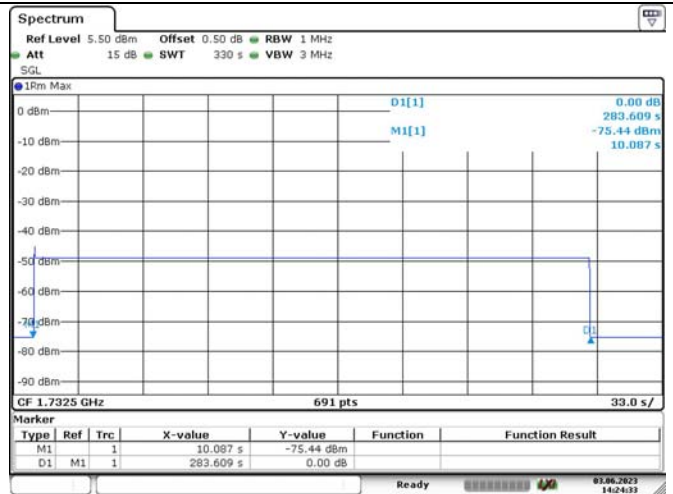
Upper 700MHz Band



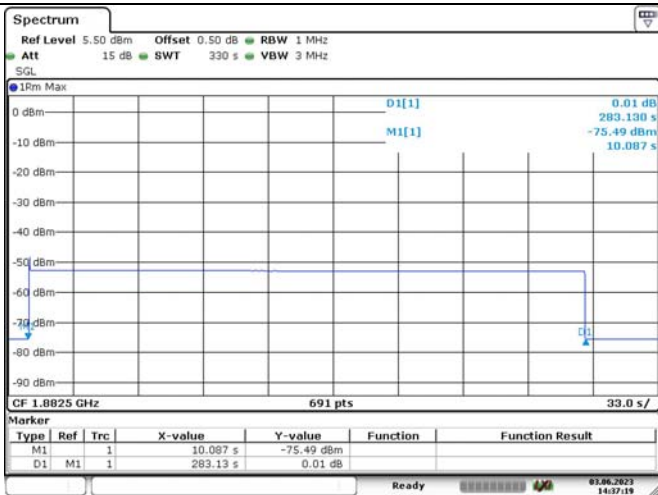
Cellular Band



AWS-1 Band



PCS Band



**4.9 Variable Booster Gain:**

|                |           |              |                      |
|----------------|-----------|--------------|----------------------|
| Serial Number: | 22X8_1    | Test Date:   | 2023/4/14~2023/12/27 |
| Test Site:     | RF        | Test Mode:   | Transmitting         |
| Tester:        | Sern Shen | Test Result: | Pass                 |

**Environmental Conditions:**

|                      |           |                              |       |                        |             |
|----------------------|-----------|------------------------------|-------|------------------------|-------------|
| Temperature:<br>(°C) | 21.3~28.3 | Relative<br>Humidity:<br>(%) | 38~45 | ATM Pressure:<br>(kPa) | 100.2~101.9 |
|----------------------|-----------|------------------------------|-------|------------------------|-------------|

**Test Equipment List and Details:**

| Manufacturer | Description                 | Model  | Serial Number | Calibration Date | Calibration Due Date |
|--------------|-----------------------------|--------|---------------|------------------|----------------------|
| R&S          | Spectrum Analyzer           | FSV40  | 101474        | 2022/7/15        | 2023/7/14            |
| R&S          | Spectrum Analyzer           | FSV40  | 101474        | 2023/3/31        | 2024/3/30            |
| YINSAIGE     | Coaxial Cable               | SS402  | SJ0100001     | Each time        | N/A                  |
| YINSAIGE     | Coaxial Cable               | SS402  | SJ0100002     | Each time        | N/A                  |
| Agilent      | MXG Vector Signal Generator | N5182B | MY51350144    | 2022/4/22        | 2023/4/21            |
| Agilent      | MXG Vector Signal Generator | N5182B | MY51350144    | 2023/3/31        | 2024/3/30            |

\* Statement of Traceability: China Certification ICT Co., Ltd (Dongguan) attests that all calibrations have been performed, traceable to National Primary Standards and International System of Units (SI).

**Test Data:****MSCL Calculation:**

| Operation Bands | Frequency | Distance | Path Loss | Inside Cable Loss | Inside Antenna Gain | MSCL  |
|-----------------|-----------|----------|-----------|-------------------|---------------------|-------|
|                 | MHz       | m        | dB        | (dB)              | (dBi)               |       |
| Lower 700MHz    | 707       | 3        | 39.03     | 0.38              | 4.81                | 34.60 |
| Upper 700MHz    | 781.5     | 3        | 39.90     | 0.39              | 3.90                | 36.39 |
| Cellular        | 836.5     | 3        | 40.49     | 0.41              | 5.81                | 35.09 |
| AWS-1           | 1732.5    | 3        | 46.82     | 1.10              | 7.35                | 40.57 |
| PCS             | 1882.5    | 3        | 47.54     | 1.15              | 7.13                | 41.56 |

Note:

1. Path loss =  $20\log f + 20\log d - 27.5$  (dB)

f = frequency is the uplink mid-band frequency of the supported spectrum bands in MHz

d = minimum separation distance between the mobile device and booster server antenna

2. MSCL = Path loss + Indoor Cable Loss - Mobile Antenna Gain (0dBi) - Indoor Antenna Gain

The Inside Cable Loss was including in the inside Antenna Gain;

The Minimum MSCL was calculated and used according to the User Manual;

**Variable Booster Gain:**

| Operation Bands | RSSI   | P <sub>in</sub> | P <sub>out</sub> | Measured Value | MSCL  | Limit | Margin |
|-----------------|--------|-----------------|------------------|----------------|-------|-------|--------|
|                 | dBm    | dBm             | dBm              | dB             | dB    | dB    | dB     |
| Lower 700MHz    | -90    | -47.6           | 13.35            | 60.95          | 34.60 | 63.49 | 2.54   |
|                 | -80    | -47.6           | 13.31            | 60.91          | 34.60 | 63.49 | 2.58   |
|                 | -62.89 | -47.6           | 13.03            | 60.63          | 34.60 | 63.49 | 2.86   |
|                 | -52    | -47.6           | -6.36            | 41.24          | 34.60 | 52.60 | 11.36  |
|                 | -45    | -47.6           | -14.35           | 33.25          | 34.60 | 45.60 | 12.35  |
|                 | -22.40 | -47.6           | -35.26           | 12.34          | 34.60 | 23.00 | 10.66  |
|                 | -20    | -47.6           | -37.81           | 9.79           | 34.60 | 23.00 | 13.21  |
| Upper 700MHz    | -10    | -47.6           | -37.89           | 9.71           | 34.60 | 23.00 | 13.29  |
|                 | -90    | -43.2           | 15.96            | 59.16          | 36.39 | 64.36 | 5.20   |
|                 | -80    | -43.2           | 15.92            | 59.12          | 36.39 | 64.36 | 5.24   |
|                 | -61.97 | -43.2           | 16.07            | 59.27          | 36.39 | 64.36 | 5.09   |
|                 | -60    | -43.2           | 7.63             | 50.83          | 36.39 | 62.39 | 11.56  |
|                 | -49    | -43.2           | -13.31           | 29.89          | 36.39 | 51.39 | 21.50  |
|                 | -20.61 | -43.2           | -31.96           | 11.24          | 36.39 | 23.00 | 11.76  |
| Cellular        | -20.00 | -43.2           | -32.14           | 11.06          | 36.39 | 23.00 | 11.94  |
|                 | -10    | -43.2           | -32.33           | 10.87          | 36.39 | 23.00 | 12.13  |
|                 | -90    | -42.9           | 16.32            | 59.22          | 35.09 | 64.95 | 5.73   |
|                 | -80    | -42.9           | 16.45            | 59.35          | 35.09 | 64.95 | 5.60   |
|                 | -63.86 | -42.9           | 16.27            | 59.17          | 35.09 | 64.95 | 5.78   |
|                 | -59    | -42.9           | 4.66             | 47.56          | 35.09 | 60.09 | 12.53  |
|                 | -47    | -42.9           | -16.25           | 26.65          | 35.09 | 48.09 | 21.44  |
| AWS-1           | -21.91 | -42.9           | -32.33           | 10.57          | 35.09 | 23.00 | 12.43  |
|                 | -20.00 | -42.9           | -32.42           | 10.48          | 35.09 | 23.00 | 12.52  |
|                 | -10    | -42.9           | -32.25           | 10.65          | 35.09 | 23.00 | 12.35  |
|                 | -90    | -43.5           | 14.25            | 57.75          | 40.57 | 71.27 | 13.52  |
|                 | -80    | -43.5           | 14.31            | 57.81          | 40.57 | 71.27 | 13.46  |
|                 | -64.70 | -43.5           | 14.29            | 57.79          | 40.57 | 71.27 | 13.48  |
|                 | -52    | -43.5           | -1.36            | 42.14          | 40.57 | 58.57 | 16.43  |
| PCS             | -48    | -43.5           | -6.29            | 37.21          | 40.57 | 54.57 | 17.36  |
|                 | -16.43 | -43.5           | -33.36           | 10.14          | 40.57 | 23.00 | 12.86  |
|                 | -10    | -43.5           | -33.25           | 10.25          | 40.57 | 23.00 | 12.75  |
|                 | -90    | -39.8           | 15.26            | 55.06          | 41.56 | 71.99 | 16.93  |
|                 | -80    | -39.8           | 15.45            | 55.25          | 41.56 | 71.99 | 16.74  |
|                 | -64.43 | -39.8           | 15.33            | 55.13          | 41.56 | 71.99 | 16.86  |
| PCS             | -53.00 | -39.8           | 1.45             | 41.25          | 41.56 | 60.56 | 19.31  |
|                 | -49    | -39.8           | -4.01            | 35.79          | 41.56 | 56.56 | 20.77  |
|                 | -15.44 | -39.8           | -28.52           | 11.28          | 41.56 | 23.00 | 11.72  |
|                 | -10    | -39.8           | -28.37           | 11.43          | 41.56 | 23.00 | 11.57  |

Note: According to KDB 935210 D03 Signal Booster Measurements v04r04 Annex D

1. For Mobile Booster, Variable booster gain Limit: -34 dB - RSSI + MSCL in RSSI-Dependent Region, out of RSSI-Dependent Region, it is 50 dB when MSCL = 20dB.

2. For Fixed Booster, Variable booster gain Limit: -34 dB - RSSI + MSCL.

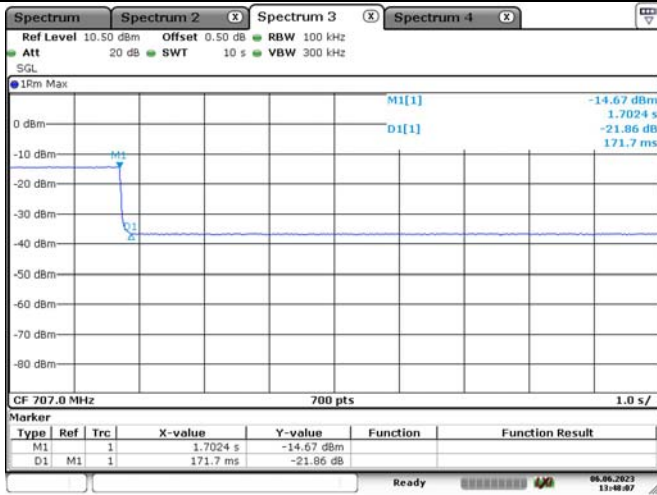


**Variable Gain Timing:**

| <b>Operation Band</b> | <b>Measured Value<br/>(s)</b> | <b>Limit<br/>(s)</b> |
|-----------------------|-------------------------------|----------------------|
| Lower 700MHz          | 0.1717                        | 3                    |
| Upper 700MHz          | 0.7725                        | 3                    |
| Cellular              | 0.2289                        | 3                    |
| AWS-1                 | 0.6009                        | 3                    |
| PCS                   | 0.1717                        | 3                    |

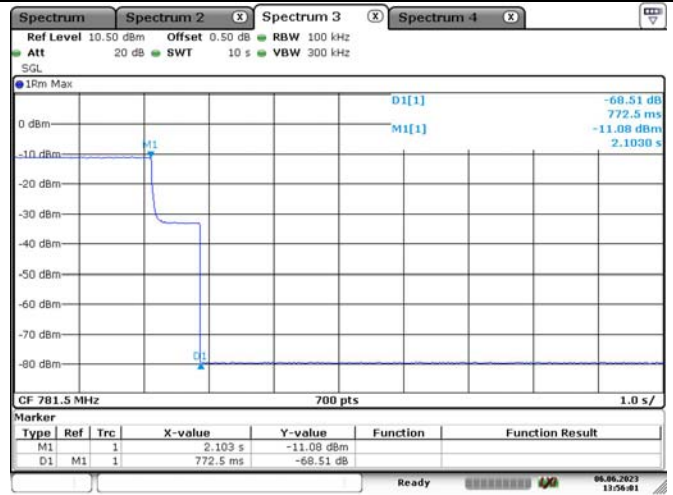
Note: The uplink noise decreases to the specified level within 3 seconds for fixed devices.

Lower 700M Band



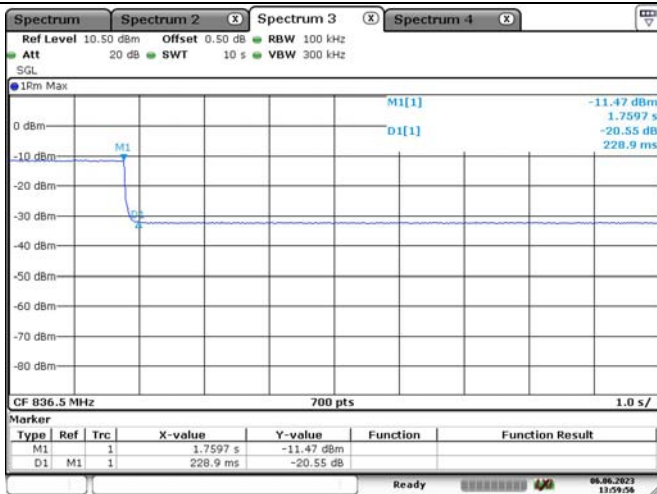
Date: 6.JUN.2023 13:48:08

Upper 700M Band



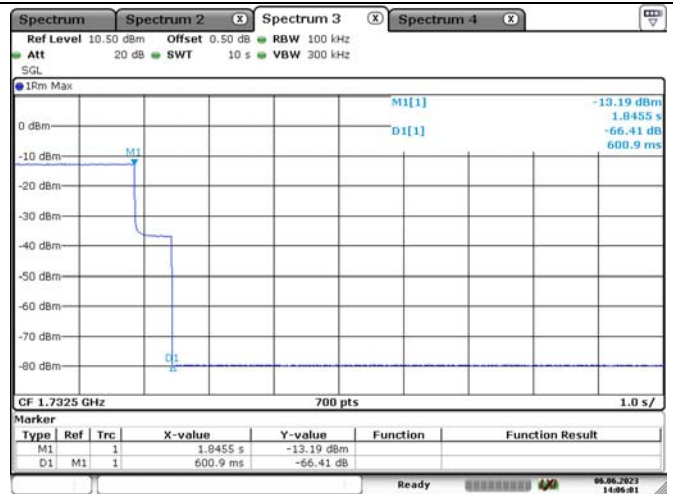
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Cellular Band



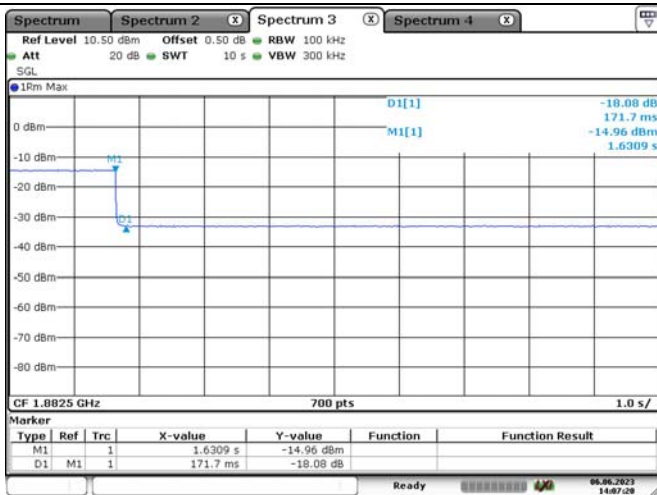
Date: 6.JUN.2023 13:59:16

AWS-1 Band



Date: 6.JUN.2023 14:06:02

PCS Band



Date: 6.JUN.2023 14:07:21

**4.10 Occupied Bandwidth:**

|                |           |              |              |
|----------------|-----------|--------------|--------------|
| Serial Number: | 22X8_1    | Test Date:   | 2023/6/4     |
| Test Site:     | RF        | Test Mode:   | Transmitting |
| Tester:        | Sern Shen | Test Result: | Pass         |

**Environmental Conditions:**

|                      |           |                              |       |                        |             |
|----------------------|-----------|------------------------------|-------|------------------------|-------------|
| Temperature:<br>(°C) | 21.3~28.3 | Relative<br>Humidity:<br>(%) | 38~45 | ATM Pressure:<br>(kPa) | 100.2~101.9 |
|----------------------|-----------|------------------------------|-------|------------------------|-------------|

**Test Equipment List and Details:**

| Manufacturer | Description                 | Model  | Serial Number | Calibration Date | Calibration Due Date |
|--------------|-----------------------------|--------|---------------|------------------|----------------------|
| R&S          | Spectrum Analyzer           | FSV40  | 101474        | 2022/7/15        | 2023/7/14            |
| YINSAIGE     | Coaxial Cable               | SS402  | SJ0100001     | Each time        | N/A                  |
| YINSAIGE     | Coaxial Cable               | SS402  | SJ0100002     | Each time        | N/A                  |
| Agilent      | MXG Vector Signal Generator | N5182B | MY51350144    | 2023/3/31        | 2024/3/30            |

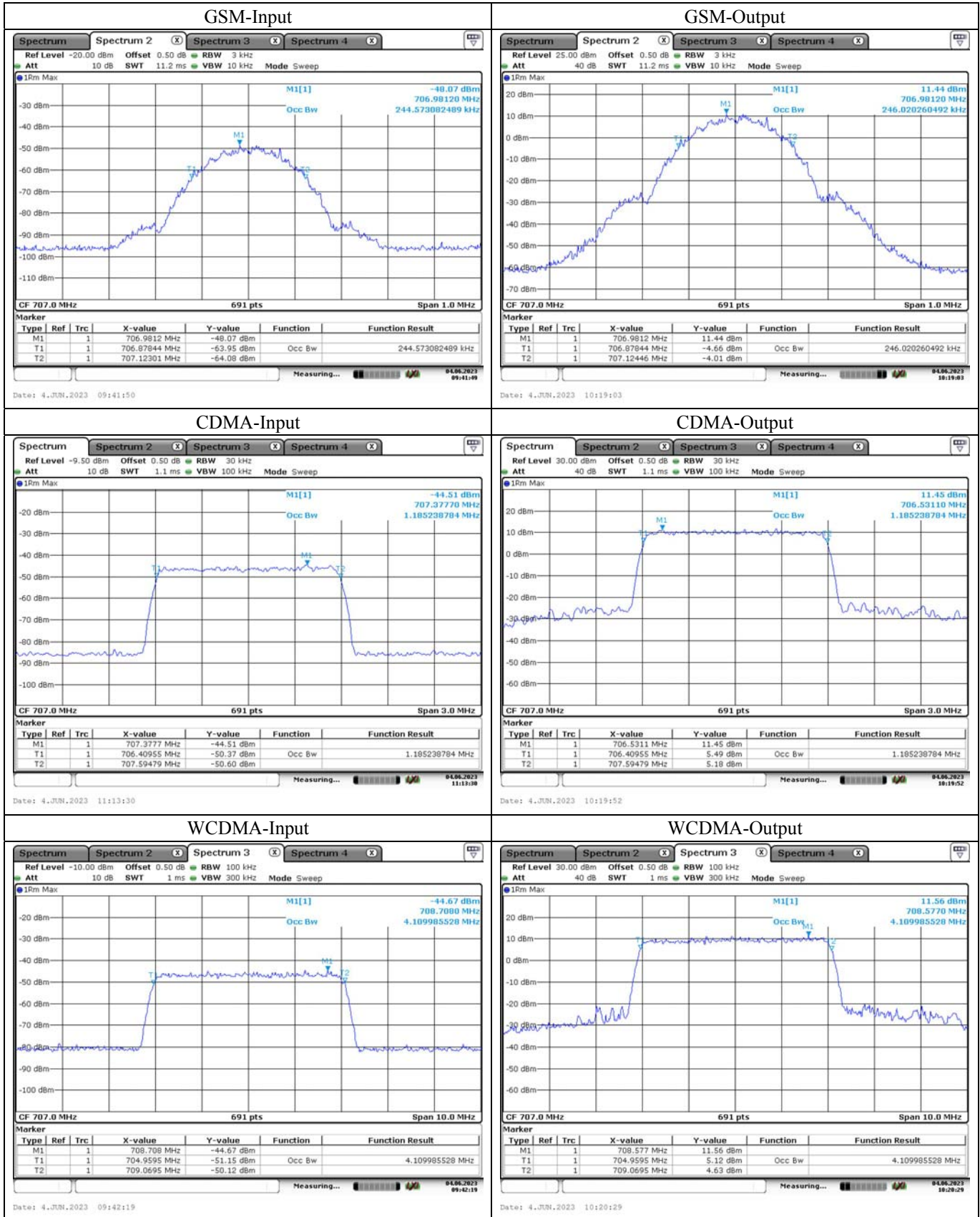
\* Statement of Traceability: China Certification ICT Co., Ltd (Dongguan) attests that all calibrations have been performed, traceable to National Primary Standards and International System of Units (SI).

**Test Data:**

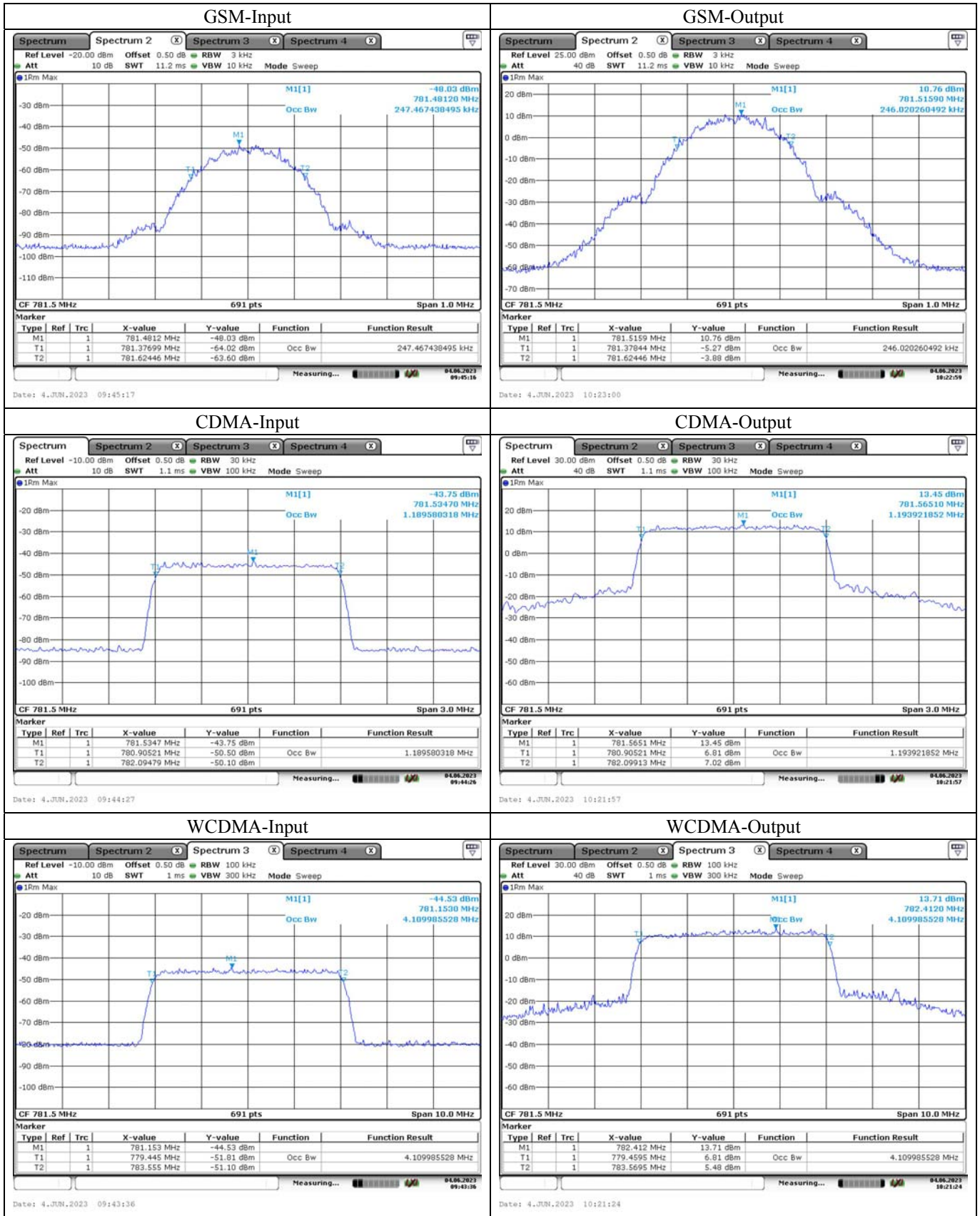
| Mode     | Operation Band | Signal Type | Input | Output |
|----------|----------------|-------------|-------|--------|
|          |                |             | MHz   | MHz    |
| Uplink   | Lower 700MHz   | GSM         | 0.245 | 0.246  |
|          |                | CDMA        | 1.185 | 1.185  |
|          |                | WCDMA       | 4.110 | 4.110  |
|          | Upper 700MHz   | GSM         | 0.247 | 0.246  |
|          |                | CDMA        | 1.190 | 1.194  |
|          |                | WCDMA       | 4.110 | 4.110  |
|          | Cellular       | GSM         | 0.247 | 0.246  |
|          |                | CDMA        | 1.194 | 1.194  |
|          |                | WCDMA       | 4.110 | 4.124  |
|          | AWS-1          | GSM         | 0.246 | 0.246  |
|          |                | CDMA        | 1.185 | 1.194  |
|          |                | WCDMA       | 4.139 | 4.110  |
| PCS      | GSM            | 0.246       | 0.246 |        |
|          | CDMA           | 1.190       | 1.190 |        |
|          | WCDMA          | 4.124       | 4.110 |        |
| Downlink | Lower 700MHz   | GSM         | 0.250 | 0.246  |
|          |                | CDMA        | 1.194 | 1.190  |
|          |                | WCDMA       | 4.226 | 4.124  |
|          | Upper 700MHz   | GSM         | 0.252 | 0.246  |
|          |                | CDMA        | 1.198 | 1.190  |
|          |                | WCDMA       | 4.240 | 4.067  |
|          | Cellular       | GSM         | 0.252 | 0.246  |
|          |                | CDMA        | 1.203 | 1.185  |
|          |                | WCDMA       | 4.240 | 4.096  |
|          | AWS-1          | GSM         | 0.253 | 0.246  |
|          |                | CDMA        | 1.194 | 1.190  |
|          |                | WCDMA       | 4.240 | 4.110  |
|          | PCS            | GSM         | 0.252 | 0.246  |
|          |                | CDMA        | 1.194 | 1.185  |
|          |                | WCDMA       | 4.226 | 4.110  |

**Uplink:**

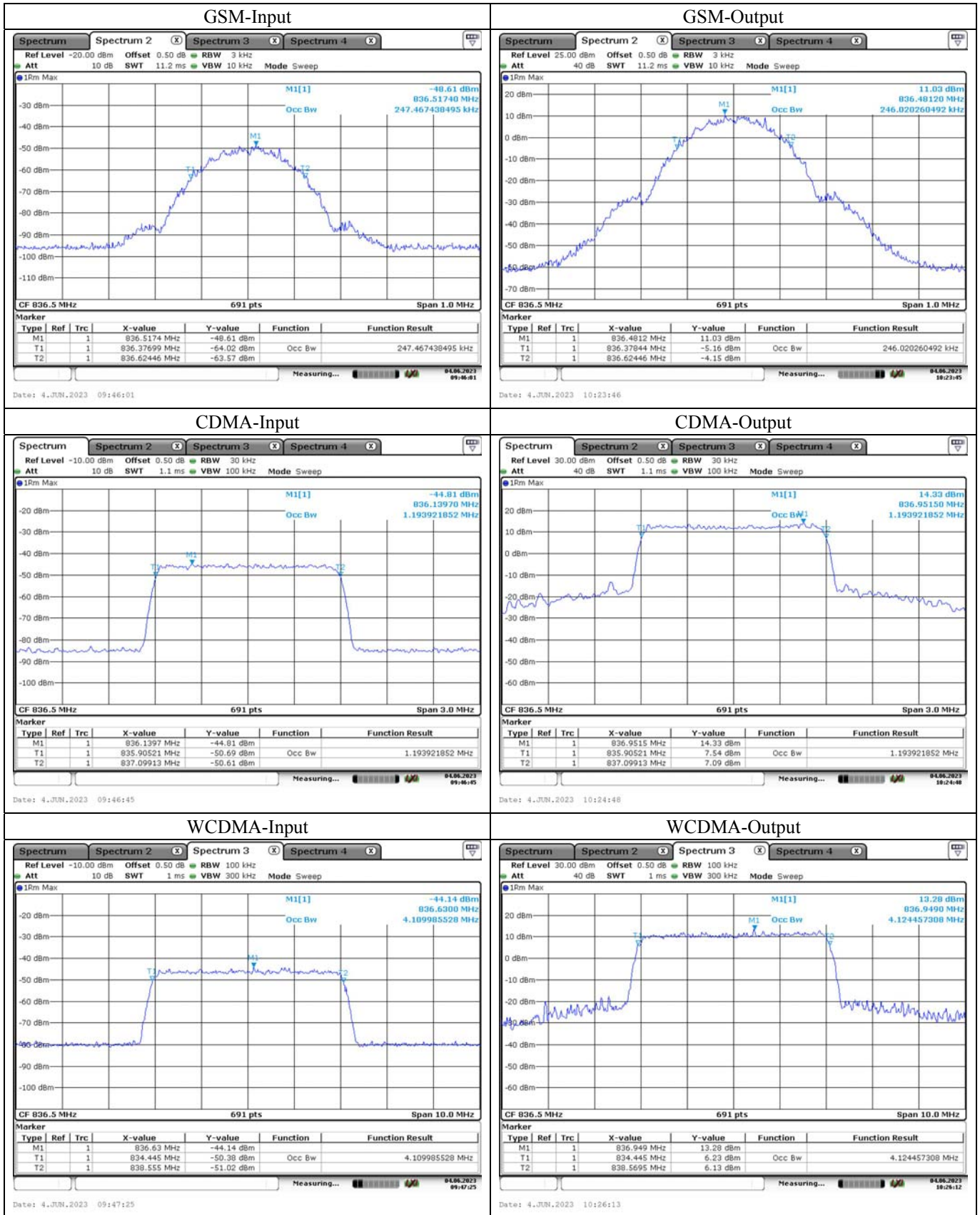
**Lower 700M Band**



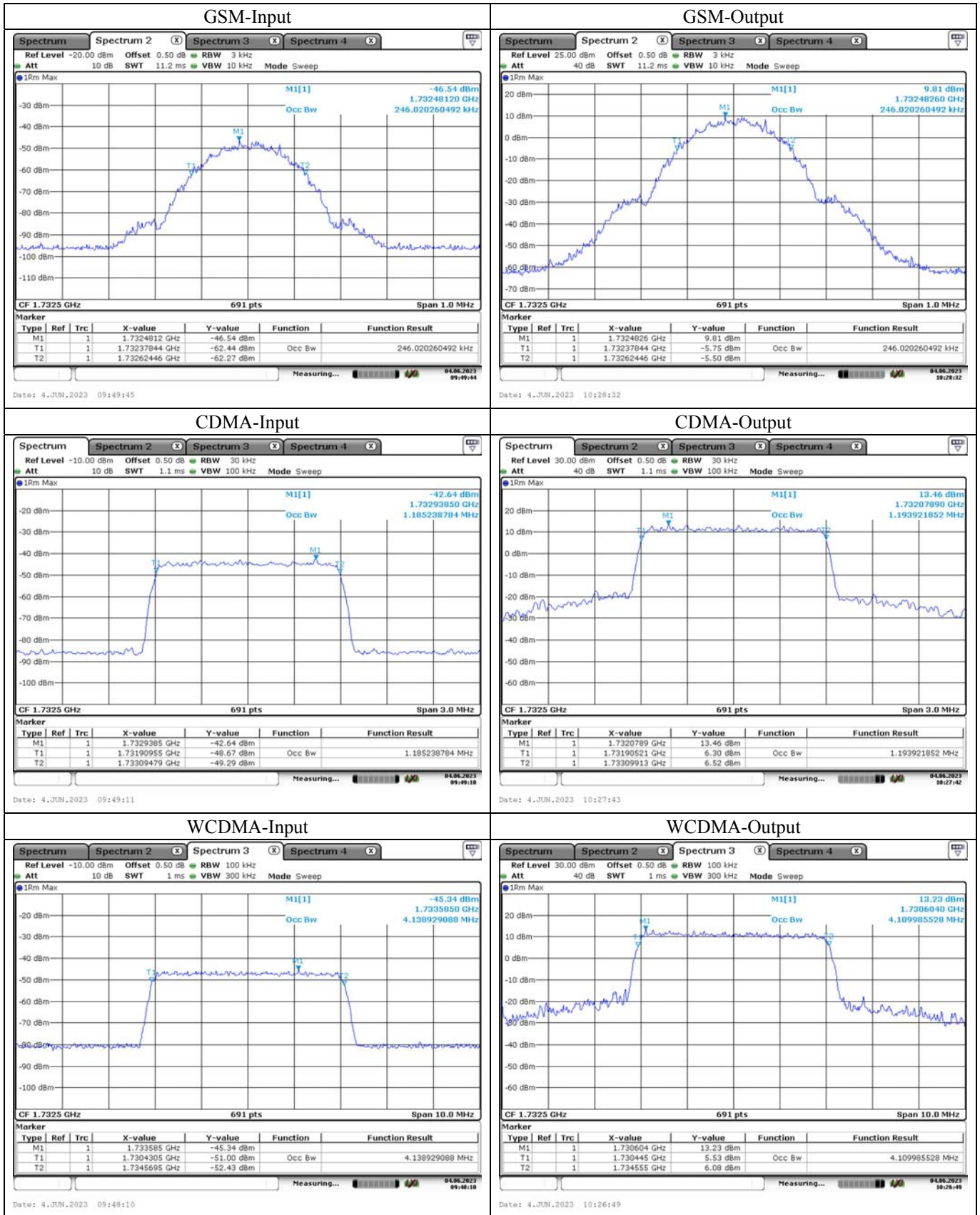
Upper 700M Band



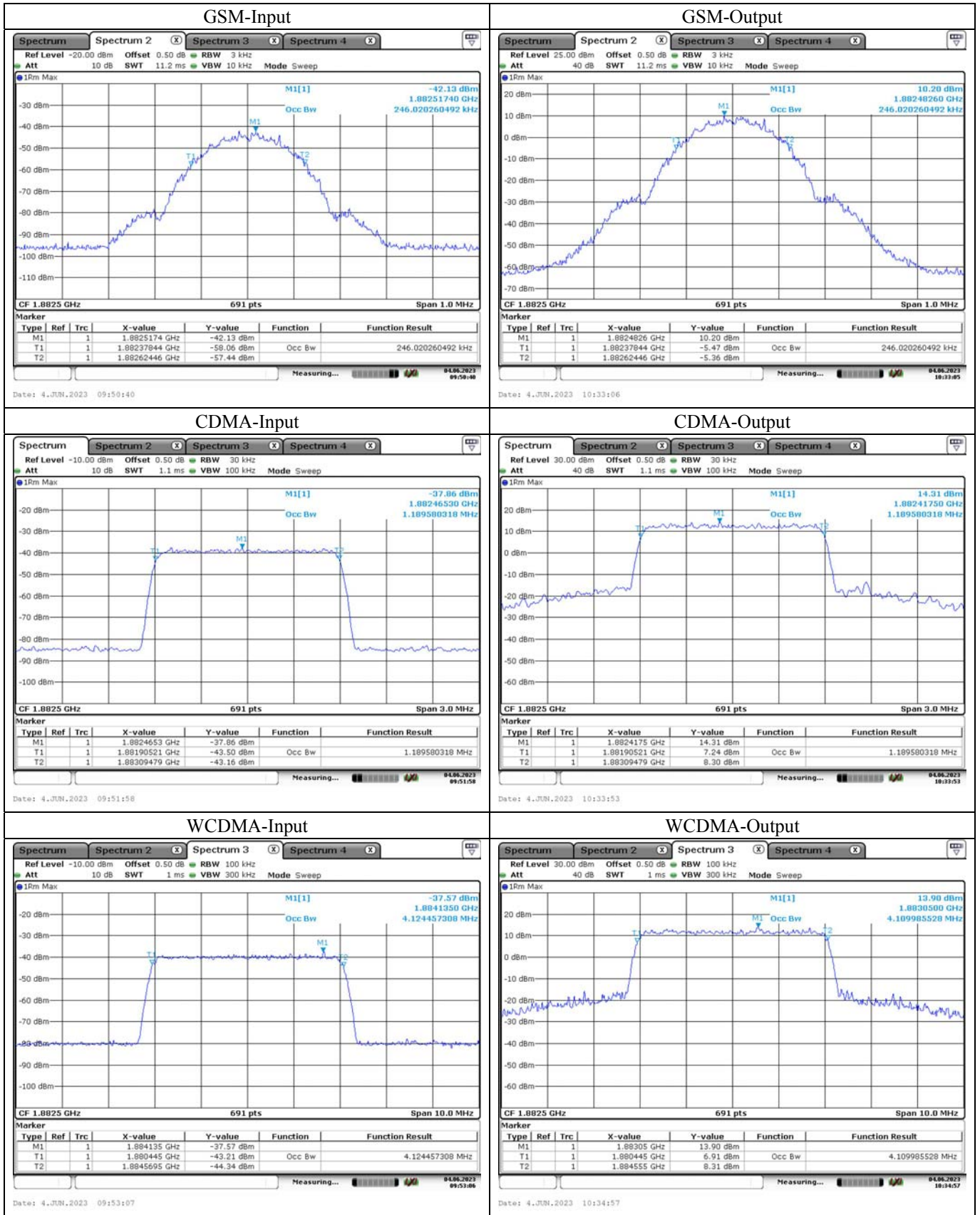
Cellular Band



**AWS-1 Band**



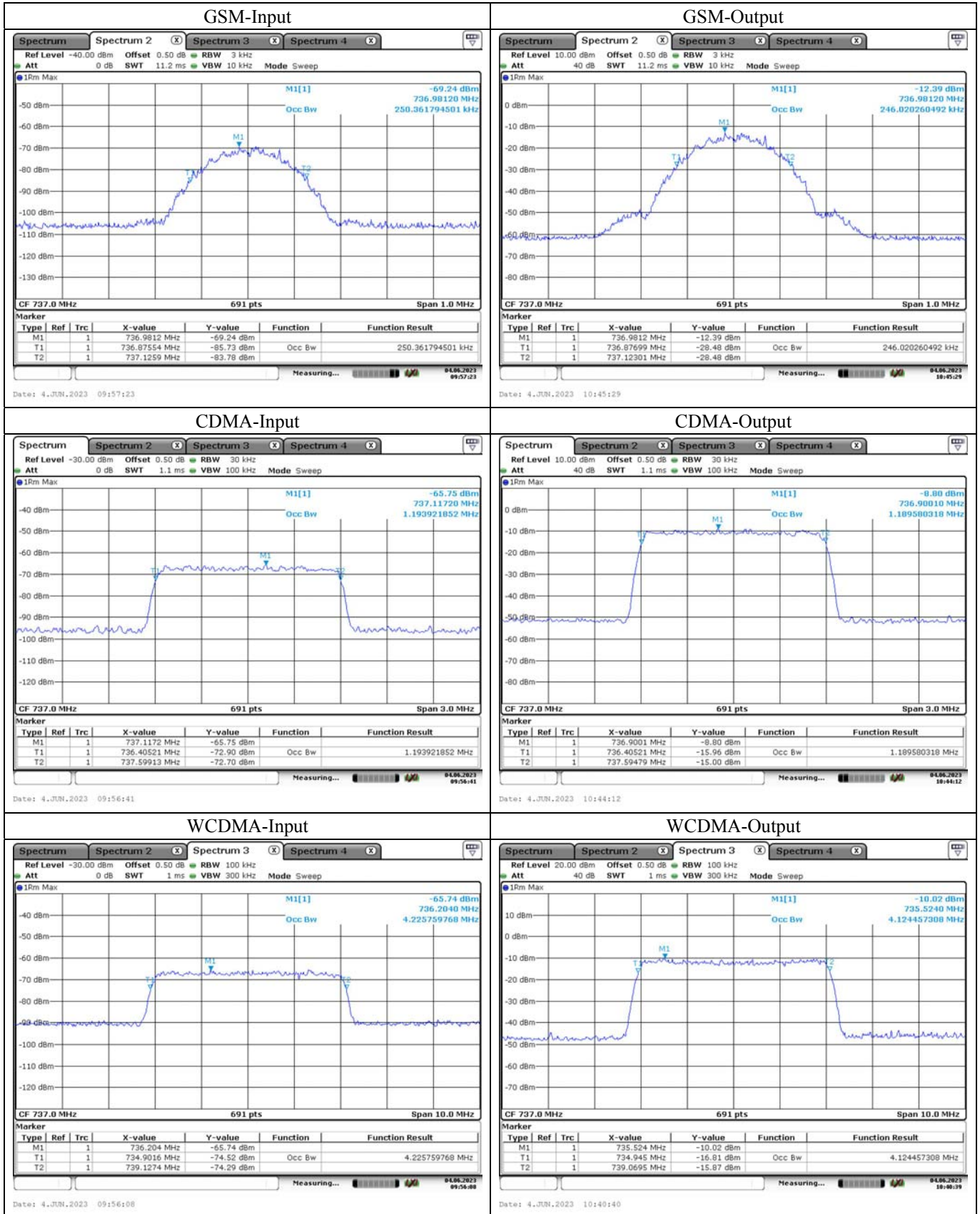
PCS Band



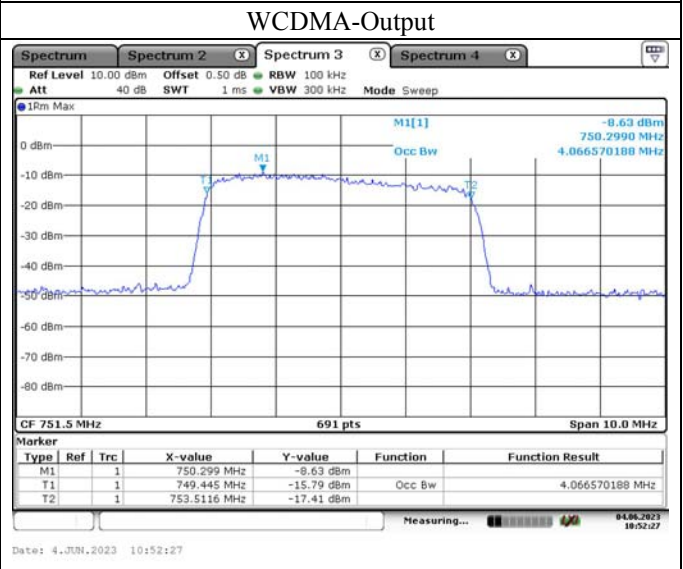
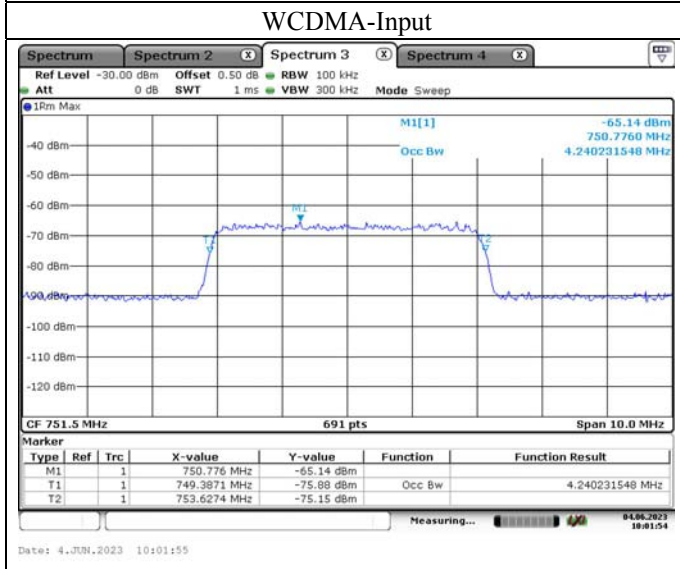
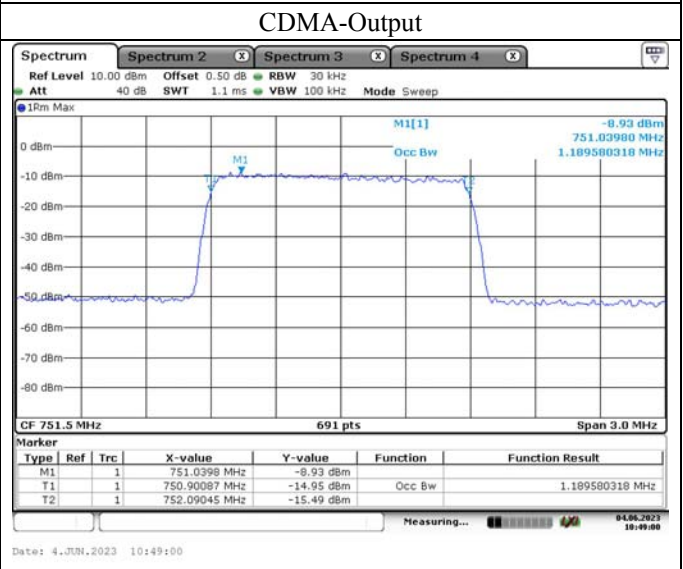
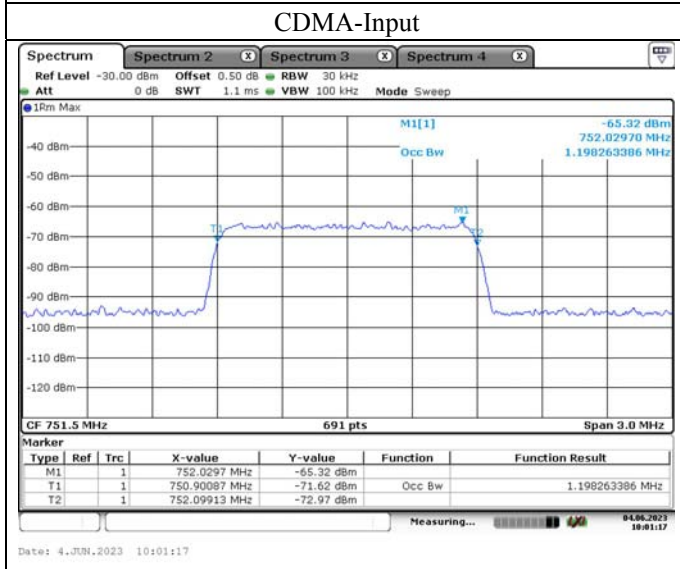
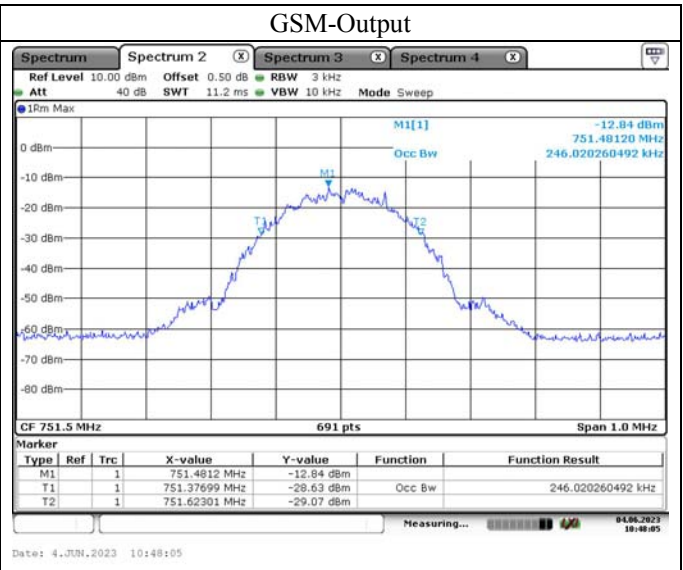
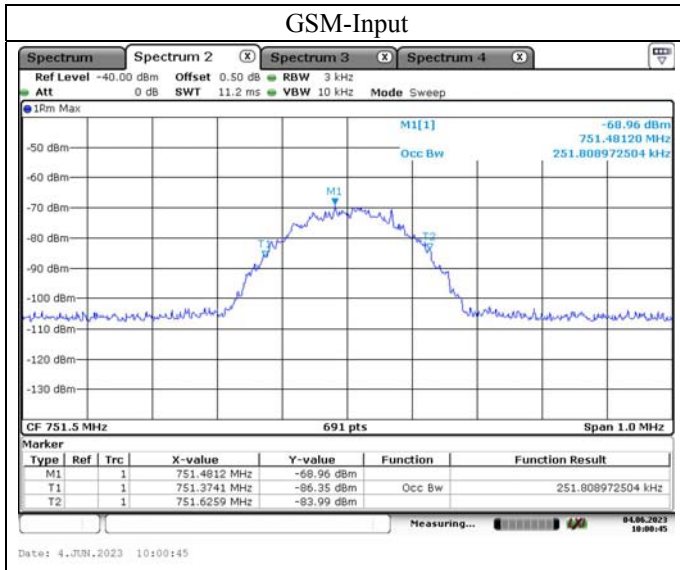


Downlink:

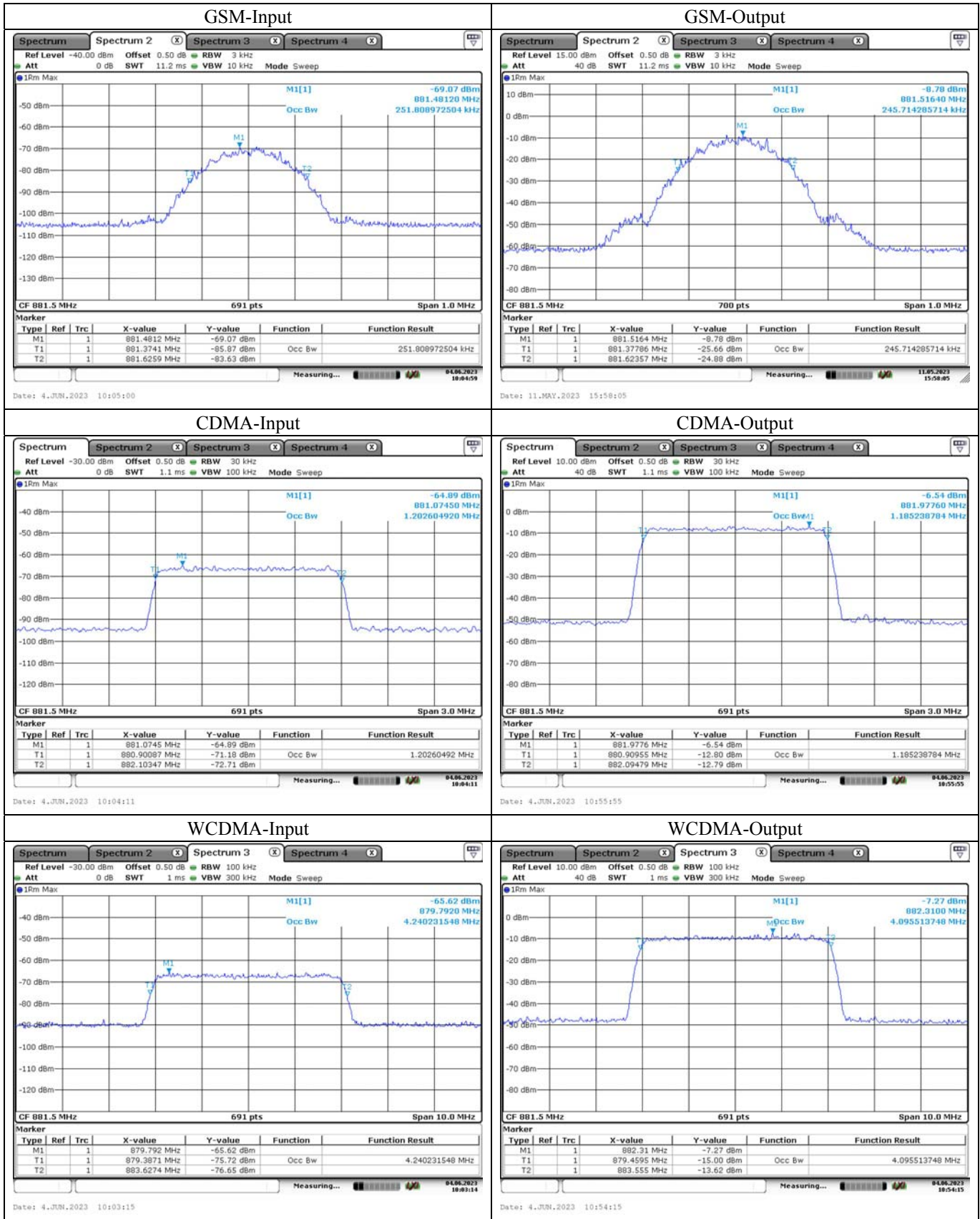
Lower 700M Band



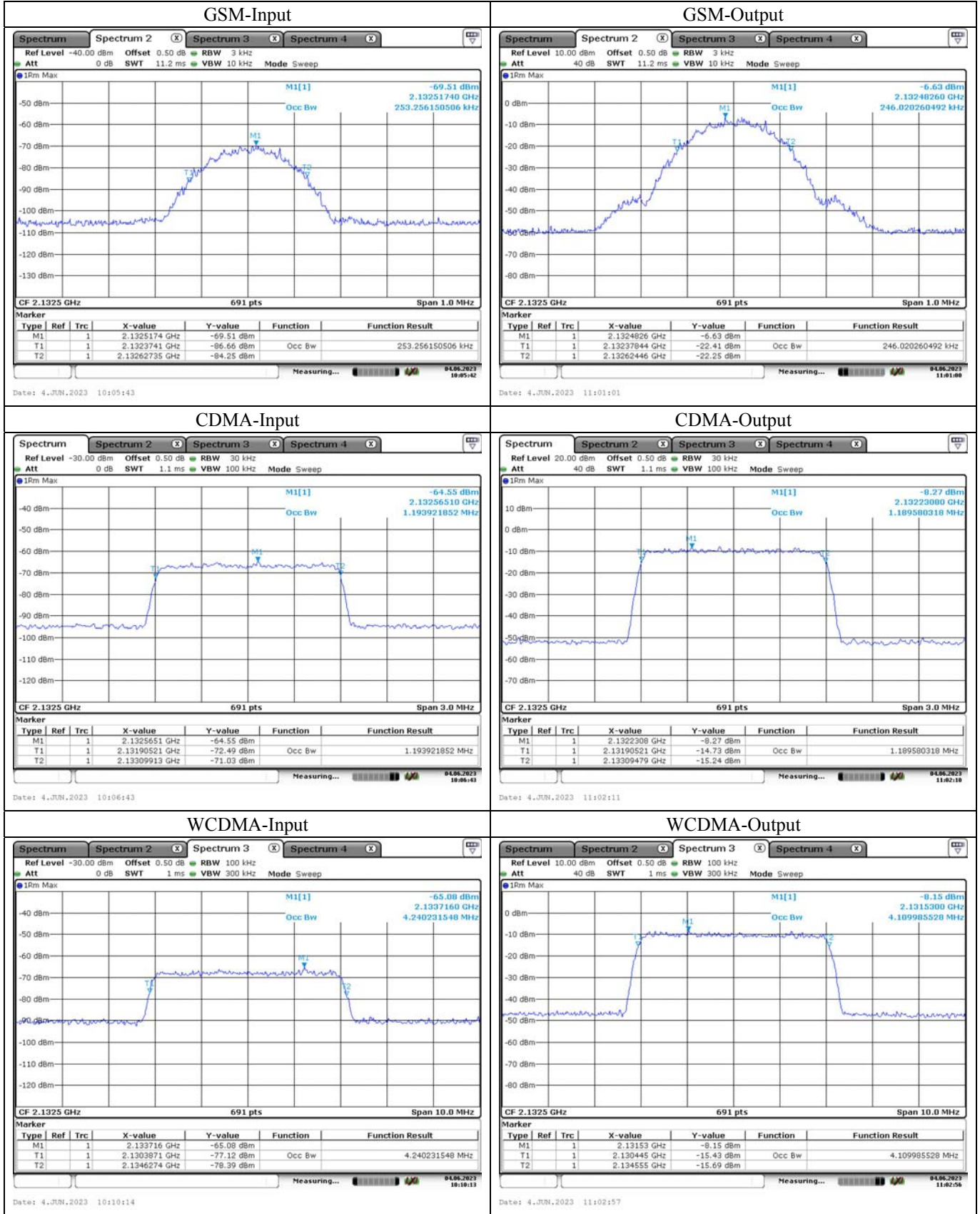
Upper 700M Band



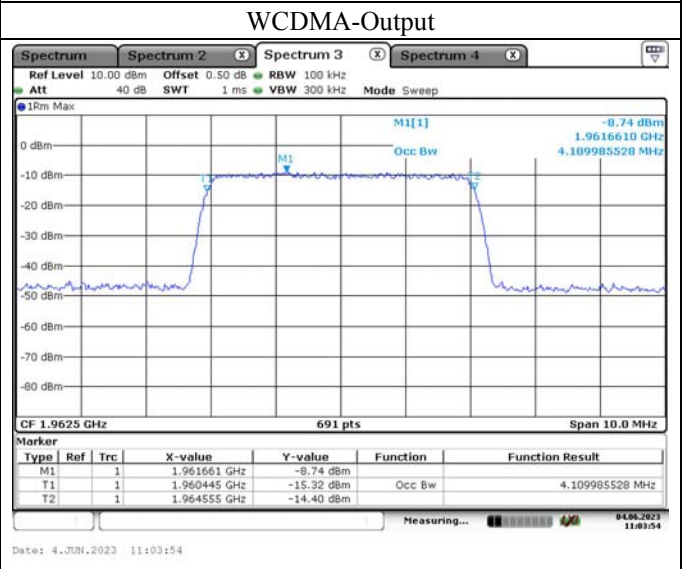
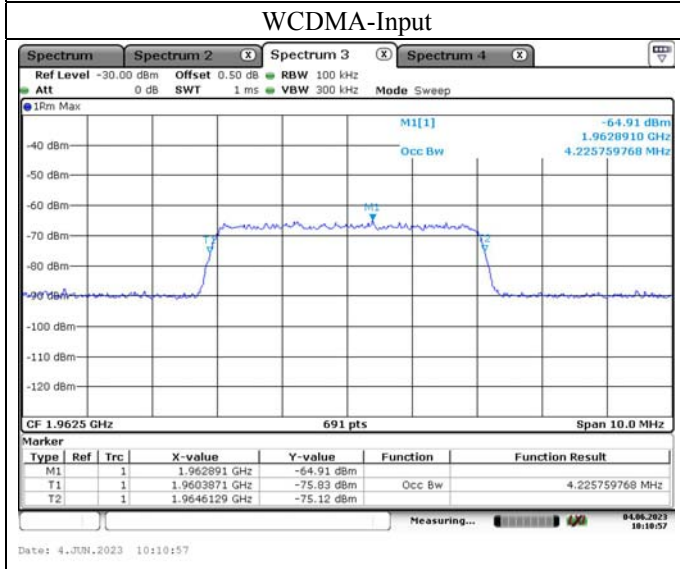
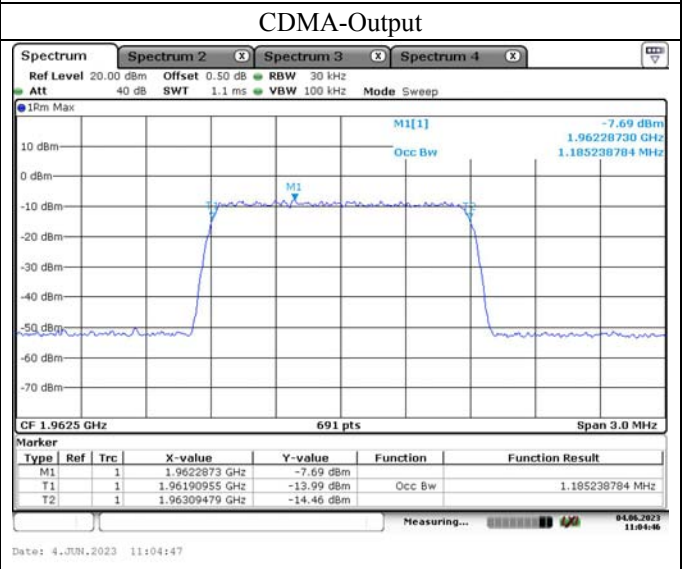
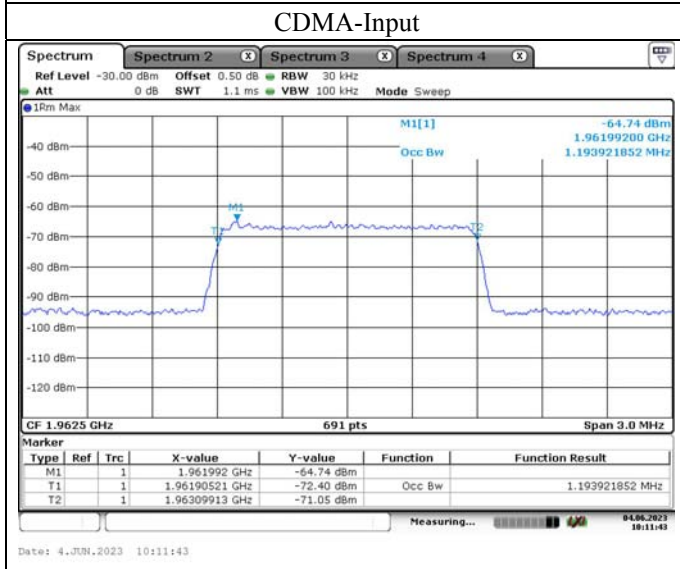
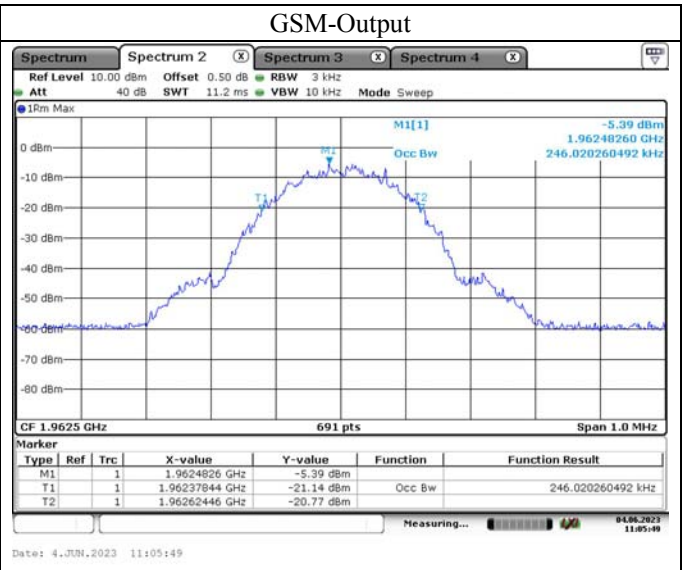
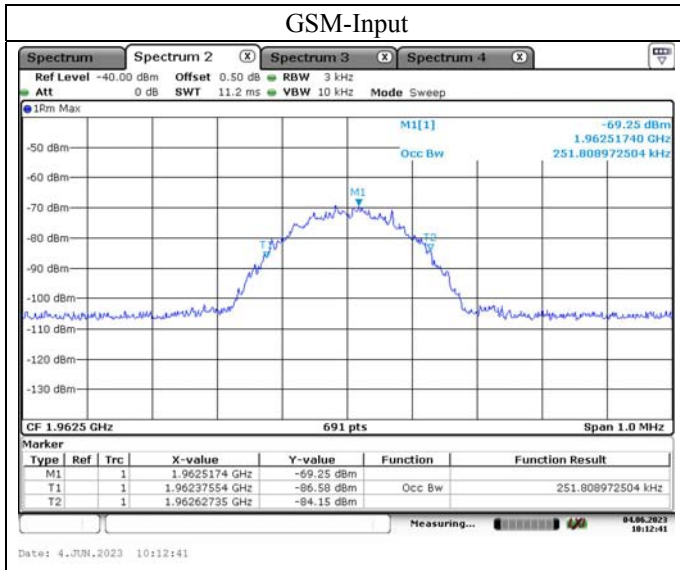
Cellular Band



**AWS-1 Band**



PCS Band



**4.11 Oscillation Detection:**

|                |                        |              |                                 |
|----------------|------------------------|--------------|---------------------------------|
| Serial Number: | 22X8_1                 | Test Date:   | 2023/11/4~2023/12/26, 2024/1/14 |
| Test Site:     | RF                     | Test Mode:   | Transmitting                    |
| Tester:        | Sern Shen,Morpheus Shi | Test Result: | Pass                            |

**Environmental Conditions:**

|                      |           |                              |       |                        |             |
|----------------------|-----------|------------------------------|-------|------------------------|-------------|
| Temperature:<br>(°C) | 21.3~28.3 | Relative<br>Humidity:<br>(%) | 38~45 | ATM Pressure:<br>(kPa) | 100.2~101.9 |
|----------------------|-----------|------------------------------|-------|------------------------|-------------|

**Test Equipment List and Details:**

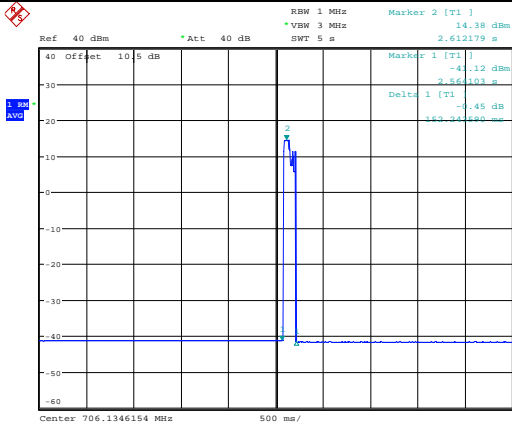
| Manufacturer | Description                 | Model  | Serial Number | Calibration Date | Calibration Due Date |
|--------------|-----------------------------|--------|---------------|------------------|----------------------|
| R&S          | Spectrum Analyzer           | FSV40  | 101474        | 2023/3/31        | 2024/3/30            |
| YINSAIGE     | Coaxial Cable               | SS402  | SJ0100001     | Each time        | N/A                  |
| YINSAIGE     | Coaxial Cable               | SS402  | SJ0100002     | Each time        | N/A                  |
| Agilent      | MXG Vector Signal Generator | N5182B | MY51350144    | 2023/3/31        | 2024/3/30            |

\* Statement of Traceability: China Certification ICT Co., Ltd (Dongguan) attests that all calibrations have been performed, traceable to National Primary Standards and International System of Units (SI).

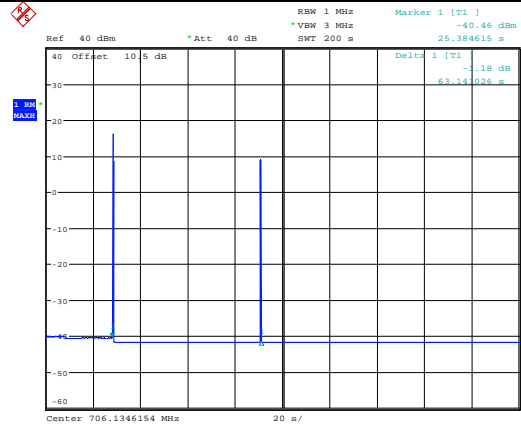
**Test Data:****Oscillation Restart Time:**

| Mode     | Operation Bands | Detection Time (s) |       | Power level<br>dBm | Between restart time (s) |       | Number of restart |       |   |
|----------|-----------------|--------------------|-------|--------------------|--------------------------|-------|-------------------|-------|---|
|          |                 | Reading            | Limit |                    | Reading                  | Limit | Reading           | Limit |   |
| Uplink   | Lower 700MHz    | 0.152              | <0.3  | 14.38              | ≥60                      | 63.14 | 2                 | ≤5    |   |
|          | Upper 700MHz    | 0.123              |       | -11.59             |                          |       | 63.78             |       | 2 |
|          | Cellular        | 0.212              |       | 14.75              |                          |       | 62.88             |       | 2 |
|          | AWS-1           | 0.136              |       | 18.38              |                          |       | 63.53             |       | 2 |
|          | PCS             | 0.104              |       | 21.34              |                          |       | 62.50             |       | 2 |
| Downlink | Lower 700MHz    | 0.153              | <1    | 6.02               | ≥60                      | 63.14 | 2                 | ≤5    |   |
|          | Upper 700MHz    | 0.431              |       | 4.15               |                          |       | 63.78             |       | 2 |
|          | Cellular        | 0.364              |       | -5.63              |                          |       | 63.14             |       | 2 |
|          | AWS-1           | 0.168              |       | 10.12              |                          |       | 63.14             |       | 2 |
|          | PCS             | 0.128              |       | -24.33             |                          |       | 63.46             |       | 2 |

Lower 700M-Uplink

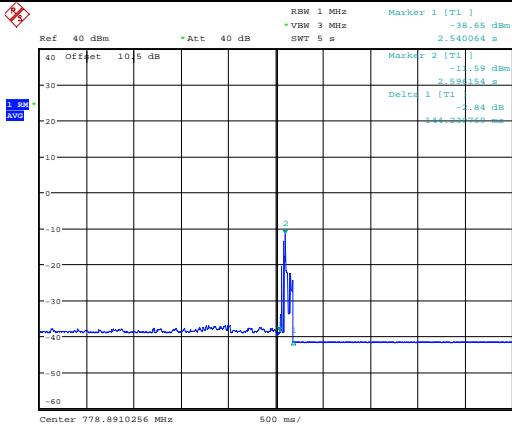


ProjectNo.:CR230310695-RF Tester:Morpheus Shi  
Date: 14.JAN.2024 14:34:22

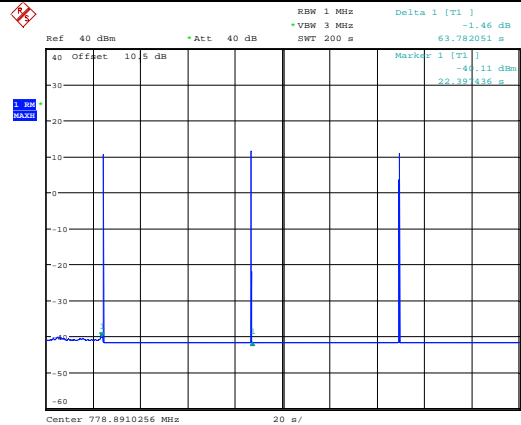


ProjectNo.:CR230310695-RF Tester:Morpheus Shi  
Date: 4.NOV.2023 13:58:24

Upper 700M-Uplink

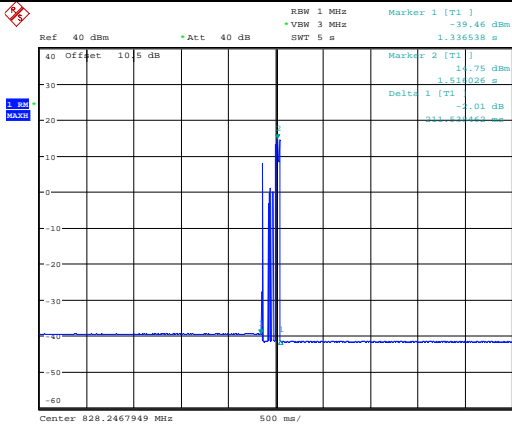


ProjectNo.:CR230310695-RF Tester:Morpheus Shi  
Date: 14.JAN.2024 14:51:34

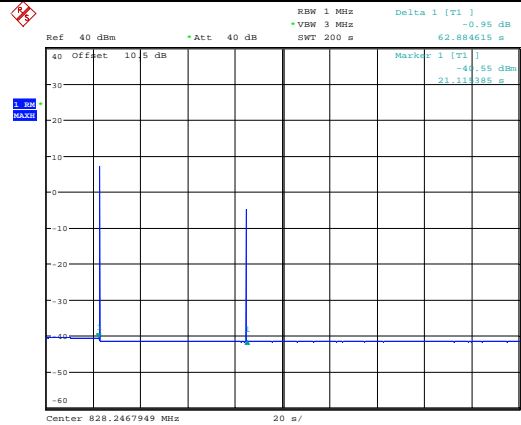


ProjectNo.:CR230310695-RF Tester:Morpheus Shi  
Date: 4.NOV.2023 14:40:26

Cellular-Uplink

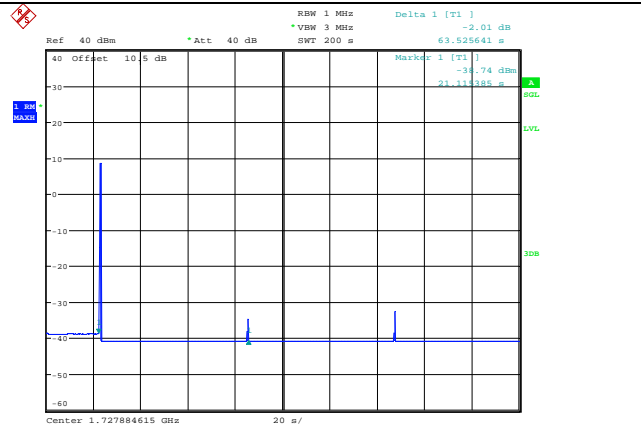
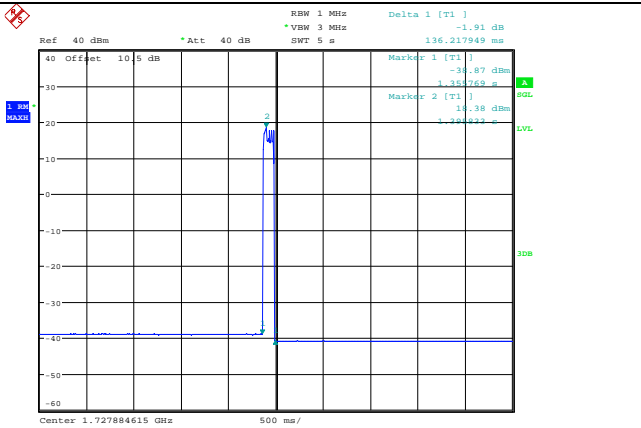


ProjectNo.:CR230310695-RF Tester:Morpheus Shi  
Date: 4.NOV.2023 15:53:30



ProjectNo.:CR230310695-RF Tester:Morpheus Shi  
Date: 4.NOV.2023 15:04:15

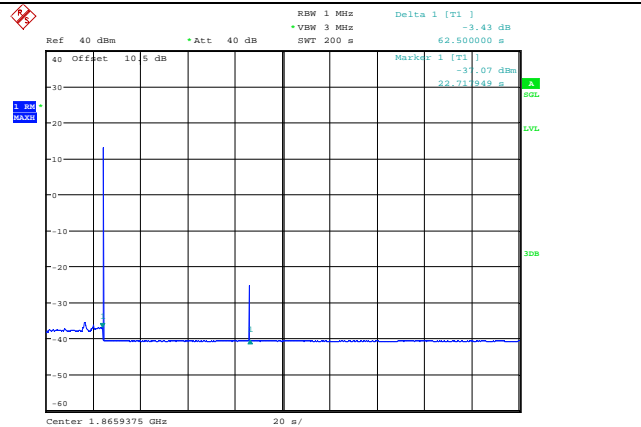
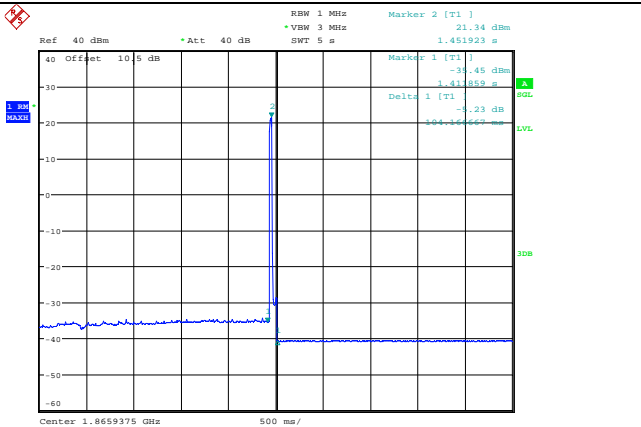
### AWS-1-Uplink



ProjectNo.:CR230310695-RF Tester:Morpheus Shi  
Date: 4.NOV.2023 15:16:52

ProjectNo.:CR230310695-RF Tester:Morpheus Shi  
Date: 4.NOV.2023 15:29:59

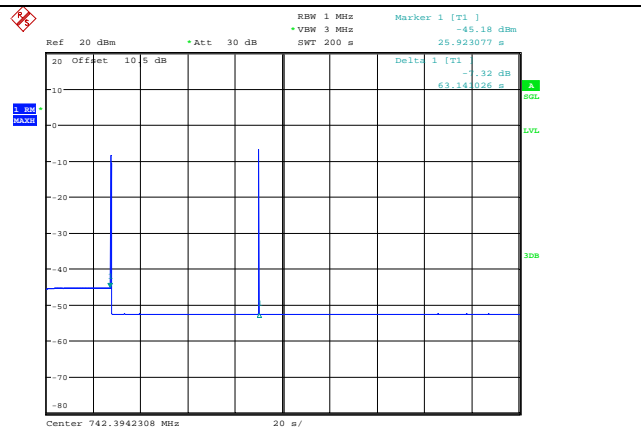
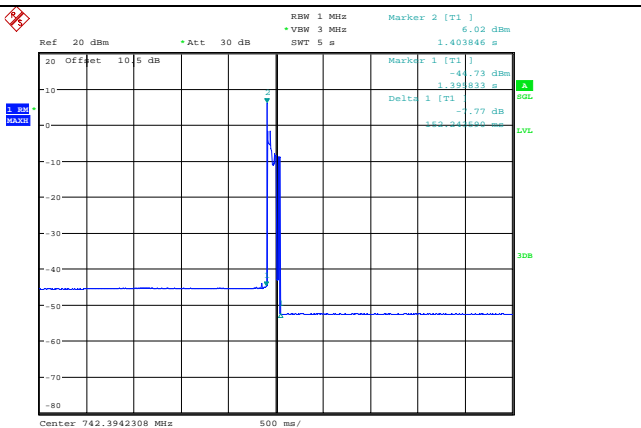
### PCS-Uplink



ProjectNo.:CR230310695-RF Tester:Morpheus Shi  
Date: 4.NOV.2023 15:36:49

ProjectNo.:CR230310695-RF Tester:Morpheus Shi  
Date: 4.NOV.2023 15:47:37

### Lower 700M-Downlink

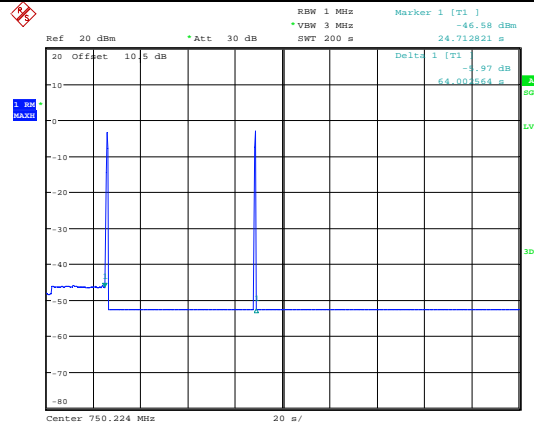
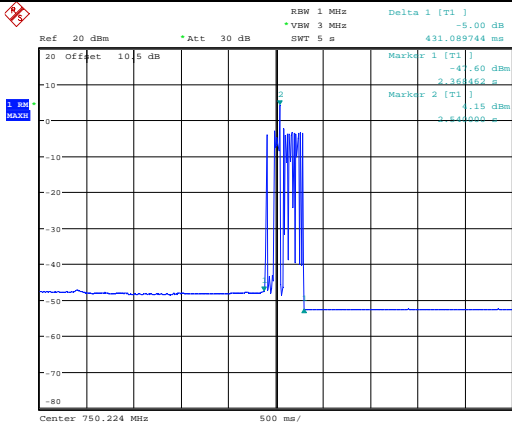


ProjectNo.:CR230310695-RF Tester:Morpheus Shi  
Date: 4.NOV.2023 16:27:11

ProjectNo.:CR230310695-RF Tester:Morpheus Shi  
Date: 4.NOV.2023 16:25:29



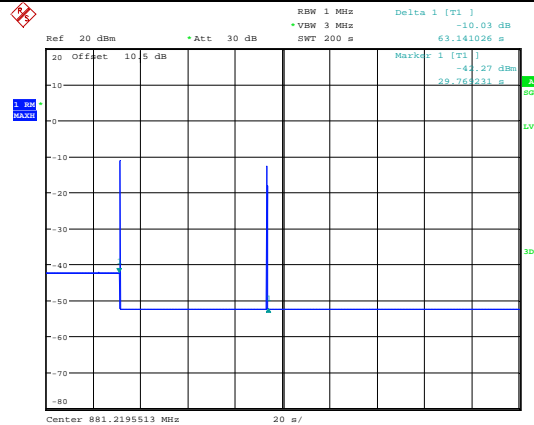
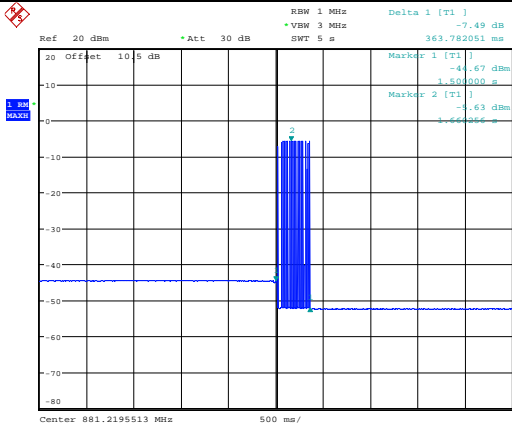
### Upper 700M-Downlink



ProjectNo.:CR230310695-RF Tester:Morpheus Shi  
Date: 26.DEC.2023 11:33:57

ProjectNo.:CR230310695-RF Tester:Morpheus Shi  
Date: 26.DEC.2023 11:51:36

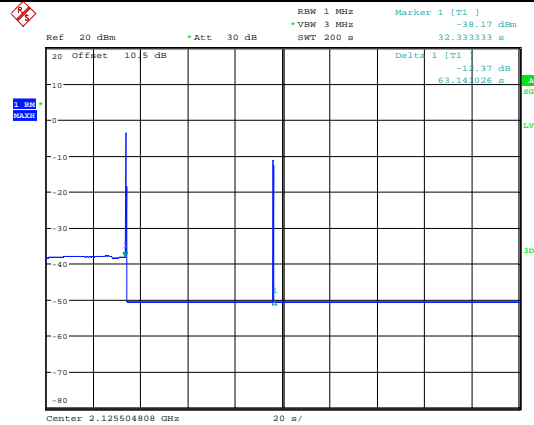
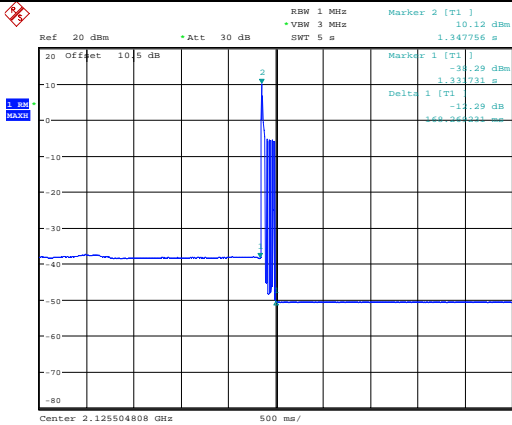
### Cellular-Downlink



ProjectNo.:CR230310695-RF Tester:Morpheus Shi  
Date: 4.NOV.2023 16:51:16

ProjectNo.:CR230310695-RF Tester:Morpheus Shi  
Date: 4.NOV.2023 16:57:45

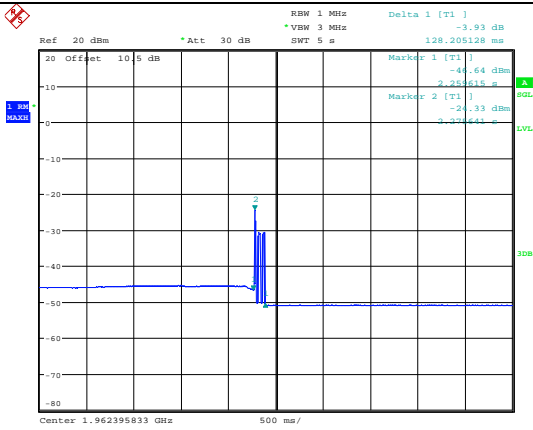
### AWS-1-Downlink



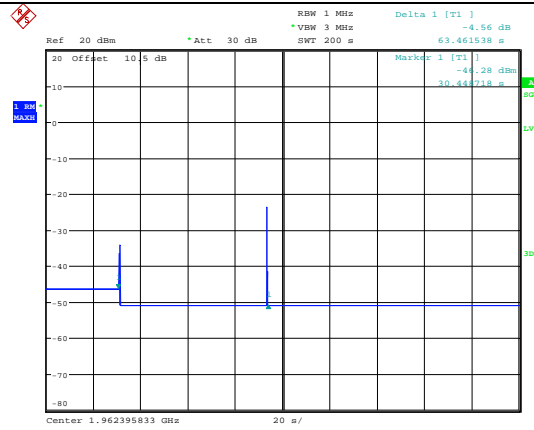
ProjectNo.:CR230310695-RF Tester:Morpheus Shi  
Date: 4.NOV.2023 17:01:56

ProjectNo.:CR230310695-RF Tester:Morpheus Shi  
Date: 4.NOV.2023 17:07:11

PCS-Downlink



ProjectNo.:CR230310695-RF    Tester:Morpheus Shi  
Date: 9.NOV.2023 19:34:03



ProjectNo.:CR230310695-RF    Tester:Morpheus Shi  
Date: 9.NOV.2023 19:49:18

**Oscillation Mitigation or Shutdown:**

Note: "/" means that booster is shut down.

| Mode   | Operation Band | Maximum Gain | Isolation | Difference | Limit | Time to Mitigate Oscillation | Mitigation Time Limit |
|--------|----------------|--------------|-----------|------------|-------|------------------------------|-----------------------|
|        |                | dB           | dB        | dB         | dB    | s                            | s                     |
| Uplink | Lower 700MHz   | 62.33        | +5        | 11.93      | 12    | /                            | <300                  |
|        |                |              | +4        | 12.33      | 12    | 284.03                       | <300                  |
|        |                |              | +3        | 12.85      | 12    | 283.47                       | <300                  |
|        |                |              | +2        | 15.88      | 12    | 284.03                       | <300                  |
|        |                |              | +1        | 18.42      | 12    | 284.03                       | <300                  |
|        |                |              | +0        | 21.56      | 12    | 284.03                       | <300                  |
|        |                |              | -1        | 27.09      | 12    | 283.47                       | <300                  |
|        |                |              | -2        | Shut down  | 12    | /                            | <300                  |
|        |                |              | -3        | Shut down  | 12    | /                            | <300                  |
|        |                |              | -4        | Shut down  | 12    | /                            | <300                  |
|        | Upper 700MHz   | 60.34        | +5        | 10.180     | 12    | /                            | <300                  |
|        |                |              | +4        | 11.660     | 12    | /                            | <300                  |
|        |                |              | +3        | 12.280     | 12    | 283.47                       | <300                  |
|        |                |              | +2        | 14.110     | 12    | 283.37                       | <300                  |
|        |                |              | +1        | 16.970     | 12    | 284.03                       | <300                  |
|        |                |              | +0        | 22.120     | 12    | 283.47                       | <300                  |
|        |                |              | -1        | Shut down  | 12    | /                            | <300                  |
|        |                |              | -2        | Shut down  | 12    | /                            | <300                  |
|        |                |              | -3        | Shut down  | 12    | /                            | <300                  |
|        |                |              | -4        | Shut down  | 12    | /                            | <300                  |
|        | Cellular       | 60.71        | +5        | 12.120     | 12    | 283.37                       | <300                  |
|        |                |              | +4        | 11.910     | 12    | /                            | <300                  |
|        |                |              | +3        | 15.260     | 12    | 282.80                       | <300                  |
|        |                |              | +2        | 16.980     | 12    | 282.80                       | <300                  |
|        |                |              | +1        | 18.430     | 12    | 282.80                       | <300                  |
|        |                |              | +0        | 22.930     | 12    | 282.80                       | <300                  |
|        |                |              | -1        | Shut down  | 12    | /                            | <300                  |
|        |                |              | -2        | Shut down  | 12    | /                            | <300                  |
|        |                |              | -3        | Shut down  | 12    | /                            | <300                  |
|        |                |              | -4        | Shut down  | 12    | /                            | <300                  |
|        | AWS-1          | 61.25        | +5        | 11.810     | 12    | /                            | <300                  |
|        |                |              | +4        | 13.280     | 12    | 282.80                       | <300                  |
|        |                |              | +3        | 15.290     | 12    | 282.80                       | <300                  |
|        |                |              | +2        | 17.090     | 12    | 283.37                       | <300                  |
|        |                |              | +1        | 18.500     | 12    | 283.37                       | <300                  |
|        |                |              | +0        | 20.650     | 12    | 283.37                       | <300                  |
|        |                |              | -1        | 22.550     | 12    | 283.37                       | <300                  |
|        |                |              | -2        | 38.050     | 12    | 282.80                       | <300                  |
|        |                |              | -3        | Shut down  | 12    | /                            | <300                  |
|        |                |              | -4        | Shut down  | 12    | /                            | <300                  |
| -5     | Shut down      | 12           | /         | <300       |       |                              |                       |

| Mode     | Operation Band | Maximum Gain | Isolation | Difference | Limit  | Time to Mitigate Oscillation | Mitigation Time Limit |
|----------|----------------|--------------|-----------|------------|--------|------------------------------|-----------------------|
|          |                | dB           | dB        | dB         | dB     | s                            | s                     |
| Uplink   | PCS            | 57.29        | +5        | 9.280      | 12     | /                            | <300                  |
|          |                |              | +4        | 9.820      | 12     | /                            | <300                  |
|          |                |              | +3        | 10.630     | 12     | /                            | <300                  |
|          |                |              | +2        | 14.150     | 12     | 282.63                       | <300                  |
|          |                |              | +1        | 14.870     | 12     | 282.24                       | <300                  |
|          |                |              | +0        | Shut down  | 12     | /                            | <300                  |
|          |                |              | -1        | Shut down  | 12     | /                            | <300                  |
|          |                |              | -2        | Shut down  | 12     | /                            | <300                  |
|          |                |              | -3        | Shut down  | 12     | /                            | <300                  |
|          |                |              | -4        | Shut down  | 12     | /                            | <300                  |
| Downlink | Lower 700MHz   | 61.61        | +5        | 10.12      | 12     | /                            | <300                  |
|          |                |              | +4        | 11.25      | 12     | /                            | <300                  |
|          |                |              | +3        | 12.03      | 12     | 282.07                       | <300                  |
|          |                |              | +2        | 12.77      | 12     | 282.63                       | <300                  |
|          |                |              | +1        | 12.90      | 12     | 282.63                       | <300                  |
|          |                |              | +0        | 13.26      | 12     | 282.63                       | <300                  |
|          |                |              | -1        | 15.66      | 12     | 283.19                       | <300                  |
|          |                |              | -2        | 21.68      | 12     | 282.63                       | <300                  |
|          |                |              | -3        | 31.30      | 12     | 282.63                       | <300                  |
|          |                |              | -4        | Shut down  | 12     | /                            | <300                  |
|          | -5             | Shut down    | 12        | /          | <300   |                              |                       |
|          | Upper 700MHz   | 60.27        | +5        | 8.430      | 12     | /                            | <300                  |
|          |                |              | +4        | 14.380     | 12     | 282.07                       | <300                  |
|          |                |              | +3        | 14.190     | 12     | 282.63                       | <300                  |
|          |                |              | +2        | 14.790     | 12     | 282.63                       | <300                  |
|          |                |              | +1        | 15.500     | 12     | 282.63                       | <300                  |
|          |                |              | +0        | 17.560     | 12     | 282.63                       | <300                  |
|          |                |              | -1        | Shut down  | 12     | /                            | <300                  |
|          |                |              | -2        | Shut down  | 12     | /                            | <300                  |
|          |                |              | -3        | Shut down  | 12     | /                            | <300                  |
|          |                |              | -4        | Shut down  | 12     | /                            | <300                  |
|          | Cellular       | 61.19        | +5        | 6.880      | 12     | /                            | <300                  |
|          |                |              | +4        | 7.280      | 12     | /                            | <300                  |
|          |                |              | +3        | 7.810      | 12     | /                            | <300                  |
|          |                |              | +2        | 8.120      | 12     | /                            | <300                  |
|          |                |              | +1        | 9.000      | 12     | /                            | <300                  |
|          |                |              | +0        | 9.750      | 12     | /                            | <300                  |
|          |                |              | -1        | 10.950     | 12     | /                            | <300                  |
|          |                |              | -2        | 12.740     | 12     | 282.07                       | <300                  |
|          |                |              | -3        | 12.740     | 12     | 282.07                       | <300                  |
| -4       |                |              | 16.460    | 12         | 282.63 | <300                         |                       |
| -5       | 20.260         | 12           | 282.63    | <300       |        |                              |                       |

| Mode     | Operation Band | Maximum Gain | Isolation | Difference | Limit | Time to Mitigate Oscillation | Mitigation Time Limit |
|----------|----------------|--------------|-----------|------------|-------|------------------------------|-----------------------|
|          |                | dB           | dB        | dB         | dB    | s                            | s                     |
| Downlink | AWS-1          | 60.13        | +5        | 6.650      | 12    | /                            | <300                  |
|          |                |              | +4        | 7.340      | 12    | /                            | <300                  |
|          |                |              | +3        | 7.980      | 12    | /                            | <300                  |
|          |                |              | +2        | 8.740      | 12    | /                            | <300                  |
|          |                |              | +1        | 10.530     | 12    | /                            | <300                  |
|          |                |              | +0        | 10.680     | 12    | /                            | <300                  |
|          |                |              | -1        | 9.770      | 12    | /                            | <300                  |
|          |                |              | -2        | 11.370     | 12    | /                            | <300                  |
|          |                |              | -3        | Shut down  | 12    | /                            | <300                  |
|          |                |              | -4        | Shut down  | 12    | /                            | <300                  |
|          | -5             | Shut down    | 12        | /          | <300  |                              |                       |
|          | PCS            | 61.76        | +5        | 6.67       | 12    | /                            | <300                  |
|          |                |              | +4        | 6.70       | 12    | /                            | <300                  |
|          |                |              | +3        | 6.74       | 12    | /                            | <300                  |
|          |                |              | +2        | 6.74       | 12    | /                            | <300                  |
|          |                |              | +1        | 6.74       | 12    | /                            | <300                  |
|          |                |              | +0        | 6.64       | 12    | /                            | <300                  |
|          |                |              | -1        | Shut down  | 12    | /                            | <300                  |
|          |                |              | -2        | Shut down  | 12    | /                            | <300                  |
|          |                |              | -3        | Shut down  | 12    | /                            | <300                  |
| -4       |                |              | Shut down | 12         | /     | <300                         |                       |
| -5       | Shut down      | 12           | /         | <300       |       |                              |                       |

**4.12 Radiated Spurious Emissions:**

|                |                    |              |              |
|----------------|--------------------|--------------|--------------|
| Serial Number: | 22X8_1             | Test Date:   | 2023/4/26    |
| Test Site:     | 966-2, 966-1       | Test Mode:   | Transmitting |
| Tester:        | Carl Xue, Coco Tan | Test Result: | Pass         |

**Environmental Conditions:**

|                      |           |                              |       |                        |       |
|----------------------|-----------|------------------------------|-------|------------------------|-------|
| Temperature:<br>(°C) | 26.3~26.5 | Relative<br>Humidity:<br>(%) | 46~53 | ATM Pressure:<br>(kPa) | 100.9 |
|----------------------|-----------|------------------------------|-------|------------------------|-------|

**Test Equipment List and Details:**

| Manufacturer    | Description                     | Model                 | Serial Number | Calibration Date | Calibration Due Date |
|-----------------|---------------------------------|-----------------------|---------------|------------------|----------------------|
| Sunol Sciences  | Antenna                         | JB6                   | A082520-5     | 2020/10/19       | 2023/10/18           |
| R&S             | EMI Test Receiver               | ESR3                  | 102724        | 2022/07/15       | 2023/07/14           |
| TIMES MICROWAVE | Coaxial Cable                   | LMR-600-UltraFlex     | C-0470-02     | 2022/07/17       | 2023/07/16           |
| TIMES MICROWAVE | Coaxial Cable                   | LMR-600-UltraFlex     | C-0780-01     | 2022/07/17       | 2023/07/16           |
| Sonoma          | Amplifier                       | 310N                  | 186165        | 2022/07/17       | 2023/07/16           |
| EMCO            | Adjustable Dipole Antenna       | 3121C                 | 9109-756      | N/A              | N/A                  |
| ETS-Lindgren    | Horn Antenna                    | 3115                  | 9912-5985     | 2020/10/13       | 2023/10/12           |
| R&S             | Spectrum Analyzer               | FSV40                 | 101591        | 2022/07/15       | 2023/07/14           |
| MICRO-COAX      | Coaxial Cable                   | UFA210A-1-1200-70U300 | 217423-008    | 2022/08/07       | 2023/08/06           |
| MICRO-COAX      | Coaxial Cable                   | UFA210A-1-2362-300300 | 235780-001    | 2022/08/07       | 2023/08/06           |
| Mini            | Pre-amplifier                   | ZVA-183-S+            | 5969001149    | 2022/11/09       | 2023/11/08           |
| AH              | Double Ridge Guide Horn Antenna | SAS-571               | 1396          | 2021/10/18       | 2024/10/17           |
| MICRO-COAX      | Coaxial Cable                   | UFA210B-0-0720-300300 | 99G1448       | 2022/07/17       | 2023/07/16           |
| Agilent         | Signal Generator                | E8247C                | MY43321352    | 2022/11/18       | 2023/11/17           |
| PASTERNAK       | Horn Antenna                    | PE9852/2F-20          | 112002        | 2021/02/05       | 2024/02/04           |
| PASTERNAK       | Horn Antenna                    | PE9852/2F-20          | 112001        | 2021/02/05       | 2024/02/04           |
| AH              | Preamplifier                    | PAM-1840VH            | 190           | 2022/11/09       | 2023/11/08           |
| PASTERNAK       | Horn Antenna                    | PE9850/2F-20          | 072001        | 2021/02/05       | 2024/02/04           |
| PASTERNAK       | Horn Antenna                    | PE9850/2F-20          | 072002        | 2021/02/05       | 2024/02/04           |
| MICRO-COAX      | Coaxial Cable                   | UFB142A-1-2362-200200 | 235772-001    | 2022/08/07       | 2023/08/06           |

\* Statement of Traceability: China Certification ICT Co., Ltd (Dongguan) attests that all calibrations have been performed, traceable to National Primary Standards and International System of Units (SI).

**Test Data:****Uplink:**

| Frequency (MHz)                                | Polar (H / V) | Receiver Reading (dBμV) | Substituted Method      |                        |                 | Absolute Level (dBm) | Limit (dBm) | Margin (dB) |
|--|---------------|-------------------------|-------------------------|------------------------|-----------------|----------------------|-------------|-------------|
|  |               |                         | Substituted Level (dBm) | Antenna Gain (dBd/dBi) | Cable Loss (dB) |                      |             |             |
| <b>Lower 700MHz, Test Frequency: 707MHz</b>    |               |                         |                         |                        |                 |                      |             |             |
| 163.86   | H             | 57.48                   | -54.29                  | 0.00                   | 0.24            | -54.53               | -19.00      | 35.53       |
| 163.86   | V             | 60.17                   | -48.46                  | 0.00                   | 0.24            | -48.70               | -19.00      | 29.70       |
| 1414.000                                       | H             | 34.15                   | -69.52                  | 8.26                   | 0.72            | -61.98               | -19.00      | 42.98       |
| 1414.000                                       | V             | 34.67                   | -69.05                  | 8.26                   | 0.72            | -61.51               | -19.00      | 42.51       |
| 2121.00  | H             | 36.01                   | -65.97                  | 9.17                   | 0.92            | -57.72               | -19.00      | 38.72       |
| 2121.00  | V             | 36.16                   | -65.80                  | 9.17                   | 0.92            | -57.55               | -19.00      | 38.55       |
| 4949.00  | H             | 34.73                   | -58.14                  | 11.14                  | 1.51            | -48.51               | -19.00      | 29.51       |
| 5656.00  | V             | 39.16                   | -54.17                  | 11.31                  | 1.55            | -44.41               | -19.00      | 25.41       |
| 5656.00  | H             | 37.48                   | -55.98                  | 11.31                  | 1.55            | -46.22               | -19.00      | 27.22       |
| 6363.00  | V             | 38.47                   | -53.58                  | 11.19                  | 1.85            | -44.24               | -19.00      | 25.24       |
| 6363.00  | H             | 38.57                   | -53.52                  | 11.19                  | 1.85            | -44.18               | -19.00      | 25.18       |
| 7070.00  | V             | 36.29                   | -53.45                  | 11.16                  | 1.91            | -44.20               | -19.00      | 25.20       |
| 7070.00  | H             | 36.48                   | -53.35                  | 11.16                  | 1.91            | -44.10               | -19.00      | 25.10       |
| <b>Upper 700MHz, Test Frequency: 781.5MHz</b>  |               |                         |                         |                        |                 |                      |             |             |
| 165.80   | H             | 57.90                   | -53.96                  | 0.00                   | 0.24            | -54.20               | -19.00      | 35.20       |
| 45.52  | V             | 64.95                   | -31.86                  | -19.29                 | 0.12            | -51.27               | -19.00      | 32.27       |
| 1563.000                                       | H             | 34.51                   | -69.52                  | 8.58                   | 0.80            | -61.74               | -19.00      | 42.74       |
| 1563.000                                       | V             | 35.21                   | -68.87                  | 8.58                   | 0.80            | -61.09               | -19.00      | 42.09       |
| 2344.50  | H             | 36.16                   | -65.37                  | 9.31                   | 0.97            | -57.03               | -19.00      | 38.03       |
| 2344.50  | V             | 36.67                   | -64.63                  | 9.31                   | 0.97            | -56.29               | -19.00      | 37.29       |
| 5470.50  | H             | 38.26                   | -54.97                  | 11.48                  | 1.47            | -44.96               | -19.00      | 25.96       |
| 6252.00  | V             | 38.62                   | -53.28                  | 11.10                  | 1.74            | -43.92               | -19.00      | 24.92       |
| 6252.00  | H             | 38.58                   | -53.40                  | 11.10                  | 1.74            | -44.04               | -19.00      | 25.04       |
| 7033.50  | V             | 38.45                   | -51.76                  | 11.18                  | 1.92            | -42.50               | -19.00      | 23.50       |
| 7033.50  | H             | 37.79                   | -52.55                  | 11.18                  | 1.92            | -43.29               | -19.00      | 24.29       |
| 7815.00  | V             | 37.70                   | -52.09                  | 10.84                  | 1.99            | -43.24               | -19.00      | 24.24       |
| 7815.00  | H             | 37.37                   | -52.03                  | 10.84                  | 1.99            | -43.18               | -19.00      | 24.18       |
| <b>Cellular Band, Test Frequency: 836.5MHz</b> |               |                         |                         |                        |                 |                      |             |             |
| 161.92   | H             | 55.81                   | -55.88                  | 0.00                   | 0.24            | -56.12               | -19.00      | 37.12       |
| 43.58  | V             | 62.86                   | -31.60                  | -21.67                 | 0.12            | -53.39               | -19.00      | 34.39       |
| 1673.000                                       | H             | 35.71                   | -68.60                  | 8.71                   | 0.85            | -60.74               | -19.00      | 41.74       |
| 1673.000                                       | V             | 35.58                   | -68.83                  | 8.71                   | 0.85            | -60.97               | -19.00      | 41.97       |
| 2509.50  | H             | 35.85                   | -64.76                  | 9.42                   | 1.01            | -56.35               | -19.00      | 37.35       |
| 2509.50  | V             | 35.49                   | -65.13                  | 9.42                   | 1.01            | -56.72               | -19.00      | 37.72       |
| 5855.50  | H             | 37.83                   | -55.72                  | 11.07                  | 1.59            | -46.24               | -19.00      | 27.24       |
| 6692.00  | V             | 37.25                   | -53.83                  | 11.26                  | 1.87            | -44.44               | -19.00      | 25.44       |
| 6692.00  | H             | 38.13                   | -53.21                  | 11.26                  | 1.87            | -43.82               | -19.00      | 24.82       |
| 7528.50  | V             | 38.82                   | -51.45                  | 10.89                  | 1.96            | -42.52               | -19.00      | 23.52       |
| 7528.50  | H             | 39.58                   | -50.14                  | 10.89                  | 1.96            | -41.21               | -19.00      | 22.21       |
| 8365.00  | V             | 37.95                   | -50.37                  | 10.87                  | 2.20            | -41.70               | -19.00      | 22.70       |
| 8365.00  | H             | 38.42                   | -49.61                  | 10.87                  | 2.20            | -40.94               | -19.00      | 21.94       |

| <b>AWS-1 Band, Test Frequency: 1732.5MHz</b> |   |       |        |       |      |        |        |       |
|--|---|-------|--------|-------|------|--------|--------|-------|
| 132.82                                       | H | 55.30 | -56.92 | 0.00  | 0.22 | -57.14 | -19.00 | 38.14 |
| 132.82                                       | V | 63.19 | -43.99 | 0.00  | 0.22 | -44.21 | -19.00 | 25.21 |
| 3465.000                                     | H | 36.66 | -61.15 | 10.39 | 1.15 | -51.91 | -19.00 | 32.91 |
| 3465.000                                     | V | 37.84 | -59.93 | 10.39 | 1.15 | -50.69 | -19.00 | 31.69 |
| 5197.50                                      | H | 37.83 | -56.30 | 11.32 | 1.44 | -46.42 | -19.00 | 27.42 |
| 5197.50                                      | V | 37.30 | -56.68 | 11.32 | 1.44 | -46.80 | -19.00 | 27.80 |
| 12127.50                                     | H | 36.51 | -49.14 | 11.45 | 2.63 | -40.32 | -19.00 | 21.32 |
| 13860.00                                     | V | 33.46 | -50.20 | 11.99 | 2.57 | -40.78 | -19.00 | 21.78 |
| 13860.00                                     | H | 30.74 | -51.92 | 11.99 | 2.57 | -42.50 | -19.00 | 23.50 |
| 15592.50                                     | V | 30.11 | -55.10 | 13.90 | 2.62 | -43.82 | -19.00 | 24.82 |
| 15592.50                                     | H | 33.06 | -52.73 | 13.90 | 2.62 | -41.45 | -19.00 | 22.45 |
| 17325.00                                     | V | 30.45 | -46.26 | 12.74 | 2.95 | -36.47 | -19.00 | 17.47 |
| 17325.00                                     | H | 31.30 | -46.27 | 12.74 | 2.95 | -36.48 | -19.00 | 17.48 |
| <b>PCS Band, Test Frequency: 1882.5MHz</b>   |   |       |        |       |      |        |        |       |
| 132.82                                       | H | 55.47 | -56.75 | 0.00  | 0.22 | -56.97 | -19.00 | 37.97 |
| 132.82                                       | V | 62.20 | -44.98 | 0.00  | 0.22 | -45.20 | -19.00 | 26.20 |
| 3765.000                                     | H | 35.99 | -60.34 | 10.67 | 1.25 | -50.92 | -19.00 | 31.92 |
| 3765.000                                     | V | 36.91 | -59.30 | 10.67 | 1.25 | -49.88 | -19.00 | 30.88 |
| 5647.50                                      | H | 37.16 | -56.29 | 11.32 | 1.55 | -46.52 | -19.00 | 27.52 |
| 5647.50                                      | V | 37.65 | -55.68 | 11.32 | 1.55 | -45.91 | -19.00 | 26.91 |
| 13177.50                                     | H | 33.44 | -50.25 | 11.96 | 2.56 | -40.85 | -19.00 | 21.85 |
| 15060.00                                     | V | 29.71 | -51.99 | 13.99 | 2.54 | -40.54 | -19.00 | 21.54 |
| 15060.00                                     | H | 31.43 | -50.59 | 13.99 | 2.54 | -39.14 | -19.00 | 20.14 |
| 16942.50                                     | V | 31.85 | -47.45 | 13.05 | 2.88 | -37.28 | -19.00 | 18.28 |
| 16942.50                                     | H | 32.29 | -47.36 | 13.05 | 2.88 | -37.19 | -19.00 | 18.19 |

Note 1: The unit of antenna gain is dBd for frequency below 1GHz and is dBi for frequency above 1GHz.

Note 2:

Absolute Level = Substituted Level - Cable loss + Antenna Gain

Margin = Limit - Absolute Level



**Downlink:**

| Frequency (MHz)                               | Polar (H / V) | Receiver Reading (dBμV) | Substituted Method      |                        |                 | Absolute Level (dBm) | Limit (dBm) | Margin (dB) |
|---|---------------|-------------------------|-------------------------|------------------------|-----------------|----------------------|-------------|-------------|
|   |               |                         | Substituted Level (dBm) | Antenna Gain (dBd/dBi) | Cable Loss (dB) |                      |             |             |
| <b>Lower 700MHz, Test Frequency: 737MHz</b>   |               |                         |                         |                        |                 |                      |             |             |
| 156.13  | H             | 54.89                   | -56.85                  | 0.00                   | 0.23            | -57.08               | -19.00      | 38.08       |
| 49.43   | V             | 66.69                   | -33.98                  | -15.46                 | 0.12            | -49.56               | -19.00      | 30.56       |
| 1474.000                                      | H             | 33.53                   | -69.98                  | 8.43                   | 0.75            | -62.30               | -19.00      | 43.30       |
| 1474.000                                      | V             | 34.34                   | -69.25                  | 8.43                   | 0.75            | -61.57               | -19.00      | 42.57       |
| 2211.00                                       | H             | 35.35                   | -66.95                  | 9.23                   | 0.94            | -58.66               | -19.00      | 39.66       |
| 2211.00                                       | V             | 36.66                   | -65.70                  | 9.23                   | 0.94            | -57.41               | -19.00      | 38.41       |
| 5159.00                                       | H             | 37.96                   | -55.84                  | 11.30                  | 1.43            | -45.97               | -19.00      | 26.97       |
| 5896.00                                       | V             | 40.55                   | -53.13                  | 11.02                  | 1.68            | -43.79               | -19.00      | 24.79       |
| 5896.00                                       | H             | 39.47                   | -54.14                  | 11.02                  | 1.68            | -44.80               | -19.00      | 25.80       |
| 6633.00                                       | V             | 39.04                   | -52.50                  | 11.27                  | 1.90            | -43.13               | -19.00      | 24.13       |
| 6633.00                                       | H             | 40.34                   | -51.29                  | 11.27                  | 1.90            | -41.92               | -19.00      | 22.92       |
| 7370.00                                       | V             | 40.33                   | -49.52                  | 10.98                  | 1.97            | -40.51               | -19.00      | 21.51       |
| 7370.00                                       | H             | 38.91                   | -50.26                  | 10.98                  | 1.97            | -41.25               | -19.00      | 22.25       |
| <b>Upper 700MHz , Test Frequency:751.5MHz</b> |               |                         |                         |                        |                 |                      |             |             |
| 154.16  | H             | 54.14                   | -57.66                  | 0.00                   | 0.23            | -57.89               | -19.00      | 38.89       |
| 49.40   | V             | 67.25                   | -33.39                  | -15.49                 | 0.12            | -49.00               | -19.00      | 30.00       |
| 1503.000                                      | H             | 32.15                   | -71.32                  | 8.50                   | 0.76            | -63.58               | -19.00      | 44.58       |
| 1503.000                                      | V             | 33.21                   | -70.36                  | 8.50                   | 0.76            | -62.62               | -19.00      | 43.62       |
| 2254.50                                       | H             | 36.66                   | -65.46                  | 9.25                   | 0.93            | -57.14               | -19.00      | 38.14       |
| 2254.50                                       | V             | 35.95                   | -66.09                  | 9.25                   | 0.93            | -57.77               | -19.00      | 38.77       |
| 5260.50                                       | H             | 37.88                   | -55.83                  | 11.36                  | 1.47            | -45.94               | -19.00      | 26.94       |
| 6012.00                                       | V             | 40.25                   | -52.52                  | 10.91                  | 1.66            | -43.27               | -19.00      | 24.27       |
| 6012.00                                       | H             | 40.50                   | -52.41                  | 10.91                  | 1.66            | -43.16               | -19.00      | 24.16       |
| 6763.50                                       | V             | 38.81                   | -52.54                  | 11.25                  | 1.84            | -43.13               | -19.00      | 24.13       |
| 6763.50                                       | H             | 39.82                   | -51.74                  | 11.25                  | 1.84            | -42.33               | -19.00      | 23.33       |
| 7515.00                                       | V             | 39.47                   | -50.81                  | 10.90                  | 1.95            | -41.86               | -19.00      | 22.86       |
| 7515.00                                       | H             | 39.73                   | -50.04                  | 10.90                  | 1.95            | -41.09               | -19.00      | 22.09       |
| <b>Cellular Band, Test Frequency:881.5MHz</b> |               |                         |                         |                        |                 |                      |             |             |
| 158.04  | H             | 54.97                   | -56.70                  | 0.00                   | 0.23            | -56.93               | -19.00      | 37.93       |
| 49.40   | V             | 66.38                   | -34.26                  | -15.49                 | 0.12            | -49.87               | -19.00      | 30.87       |
| 1763.000                                      | H             | 36.93                   | -66.86                  | 8.82                   | 0.86            | -58.90               | -19.00      | 39.90       |
| 1763.000                                      | V             | 37.09                   | -66.87                  | 8.82                   | 0.86            | -58.91               | -19.00      | 39.91       |
| 2644.50                                       | H             | 36.40                   | -63.55                  | 9.63                   | 1.06            | -54.98               | -19.00      | 35.98       |
| 2644.50                                       | V             | 36.47                   | -63.39                  | 9.63                   | 1.06            | -54.82               | -19.00      | 35.82       |
| 6170.50                                       | H             | 39.54                   | -52.51                  | 11.04                  | 1.77            | -43.24               | -19.00      | 24.24       |
| 7052.00                                       | V             | 37.65                   | -52.32                  | 11.17                  | 1.93            | -43.08               | -19.00      | 24.08       |
| 7052.00                                       | H             | 37.63                   | -52.45                  | 11.17                  | 1.93            | -43.21               | -19.00      | 24.21       |
| 7933.50                                       | V             | 38.16                   | -50.89                  | 10.81                  | 2.07            | -42.15               | -19.00      | 23.15       |
| 7933.50                                       | H             | 36.97                   | -51.66                  | 10.81                  | 2.07            | -42.92               | -19.00      | 23.92       |
| 8815.00                                       | V             | 38.14                   | -49.98                  | 11.15                  | 2.29            | -41.12               | -19.00      | 22.12       |
| 8815.00                                       | H             | 36.03                   | -51.00                  | 11.15                  | 2.29            | -42.14               | -19.00      | 23.14       |

| <b>AWS-1 Band, Test Frequency:2132.5MHz</b> |   |       |        |        |      |        |        |       |
|---|---|-------|--------|--------|------|--------|--------|-------|
| 163.86                                      | H | 54.40 | -57.37 | 0.00   | 0.24 | -57.61 | -19.00 | 38.61 |
| 49.40                                       | V | 66.66 | -33.98 | -15.49 | 0.12 | -49.59 | -19.00 | 30.59 |
| 4265.000                                    | H | 37.95 | -58.22 | 10.74  | 1.31 | -48.79 | -19.00 | 29.79 |
| 4265.000                                    | V | 36.72 | -59.35 | 10.74  | 1.31 | -49.92 | -19.00 | 30.92 |
| 6397.50                                     | H | 38.16 | -53.88 | 11.22  | 1.89 | -44.55 | -19.00 | 25.55 |
| 6397.50                                     | V | 38.82 | -53.26 | 11.22  | 1.89 | -43.93 | -19.00 | 24.93 |
| 14927.50                                    | H | 31.77 | -49.60 | 13.87  | 2.51 | -38.24 | -19.00 | 19.24 |
| 17060.00                                    | V | 32.05 | -46.28 | 12.95  | 2.92 | -36.25 | -19.00 | 17.25 |
| 17060.00                                    | H | 30.62 | -48.11 | 12.95  | 2.92 | -38.08 | -19.00 | 19.08 |
| <b>PCS Band, Test Frequency:1962.5MHz</b>   |   |       |        |        |      |        |        |       |
| 156.10                                      | H | 55.26 | -56.48 | 0.00   | 0.23 | -56.71 | -19.00 | 37.71 |
| 49.40                                       | V | 66.19 | -34.45 | -15.49 | 0.12 | -50.06 | -19.00 | 31.06 |
| 3925.000                                    | H | 36.54 | -59.53 | 10.83  | 1.28 | -49.98 | -19.00 | 30.98 |
| 3925.000                                    | V | 36.16 | -59.85 | 10.83  | 1.28 | -50.30 | -19.00 | 31.30 |
| 5887.50                                     | H | 39.89 | -53.71 | 11.04  | 1.66 | -44.33 | -19.00 | 25.33 |
| 5887.50                                     | V | 39.09 | -54.56 | 11.04  | 1.66 | -45.18 | -19.00 | 26.18 |
| 13737.50                                    | H | 29.08 | -53.98 | 11.89  | 2.56 | -44.65 | -19.00 | 25.65 |
| 15700.00                                    | V | 30.85 | -54.56 | 13.90  | 2.66 | -43.32 | -19.00 | 24.32 |
| 15700.00                                    | H | 33.58 | -52.23 | 13.90  | 2.66 | -40.99 | -19.00 | 21.99 |
| 17662.50                                    | V | 28.67 | -42.66 | 12.41  | 2.81 | -33.06 | -19.00 | 14.06 |
| 17662.50                                    | H | 32.89 | -42.32 | 12.41  | 2.81 | -32.72 | -19.00 | 13.72 |

Note 1: The unit of antenna gain is dBd for frequency below 1GHz and is dBi for frequency above 1GHz.

Note 2:

Absolute Level = Substituted Level - Cable loss + Antenna Gain

Margin = Limit- Absolute Level

## 5. RF EXPOSURE EVALUATION

### 5.1 FCC Maximum Permissible Exposure (MPE)

#### 5.1.1 Applicable Standard

According to subpart §1.1310, systems operating under the provisions of this section shall be operated in a manner that ensures that the public is not exposed to radio frequency energy level in excess of the Commission's guidelines.

#### 5.1.2 Limits

Maximum Permissible Exposure (MPE) (§1.1310, §2.1091)

| <b>(B) Limits for General Population/Uncontrolled Exposure</b> |                               |                               |                                     |                          |
|--|-------------------------------|-------------------------------|-------------------------------------|--------------------------|
| Frequency Range (MHz)  | Electric Field Strength (V/m) | Magnetic Field Strength (A/m) | Power Density (mW/cm <sup>2</sup> ) | Averaging Time (minutes) |
| 0.3–1.34   | 614                           | 1.63                          | *(100)                              | 30                       |
| 1.34–30  | 824/f                         | 2.19/f                        | *(180/f <sup>2</sup> )              | 30                       |
| 30–300   | 27.5                          | 0.073                         | 0.2                                 | 30                       |
| 300–1500   | /                             | /                             | f/1500                              | 30                       |
| 1500–100,000   | /                             | /                             | 1.0                                 | 30                       |

f = frequency in MHz; \* = Plane-wave equivalent power density;

According to §1.1310 and §2.1091 RF exposure is calculated.

#### 5.1.3 Calculated Formulary:

Predication of MPE limit at a given distance

$S = PG/4\pi R^2$  = power density (in appropriate units, e.g. mW/cm<sup>2</sup>);

P = power input to the antenna (in appropriate units, e.g., mW);

G = power gain of the antenna in the direction of interest relative to an isotropic radiator, the power gain factor, is normally numeric gain;

R = distance to the center of radiation of the antenna (appropriate units, e.g., cm);

### 5.1.4 Calculated Data

| Mode     | Frequency Band (MHz) | Maximum Tune-up Conducted Power (dBm) | Antenna Gain (dBi) | Cable Loss (dB) | Evaluation Distance (cm) | Power Density (mW/cm <sup>2</sup> ) | MPE Limit (mW/cm <sup>2</sup> ) |
|----------|----------------------|---------------------------------------|--------------------|-----------------|--------------------------|-------------------------------------|---------------------------------|
| Uplink   | 698-716              | 24                                    | 7.42               | 1.55            | 20                       | 0.193                               | 0.465                           |
|          | 776-787              | 24                                    | 7.45               | 1.59            | 20                       | 0.193                               | 0.517                           |
|          | 824-849              | 23                                    | 7.72               | 1.63            | 20                       | 0.161                               | 0.549                           |
|          | 1710-1755            | 25                                    | 6.35               | 2.91            | 20                       | 0.139                               | 1.000                           |
|          | 1850-1915            | 25                                    | 7.47               | 3.05            | 20                       | 0.174                               | 1.000                           |
| Downlink | 728-746              | 10                                    | 4.81               | 0.38            | 20                       | 0.006                               | 0.485                           |
|          | 746-757              | 9                                     | 3.90               | 0.39            | 20                       | 0.004                               | 0.497                           |
|          | 869-894              | 9                                     | 5.81               | 0.41            | 20                       | 0.006                               | 0.579                           |
|          | 2110-2155            | 6                                     | 7.35               | 1.10            | 20                       | 0.003                               | 1.000                           |
|          | 1930-1995            | 4                                     | 7.13               | 1.15            | 20                       | 0.002                               | 1.000                           |

**Result: Compliant,** The device meet MPE requirement at 20 cm distance.

## **6. EUT PHOTOGRAPHS**

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Please refer to the attachment CR230310695-EXP EUT EXTERNAL PHOTOGRAPHS and CR230310695-  
INP EUT INTERNAL PHOTOGRAPHS

## **7. TEST SETUP PHOTOGRAPHS**

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Please refer to the attachment CR230310695-00-TSP TEST SETUP PHOTOGRAPHS.

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