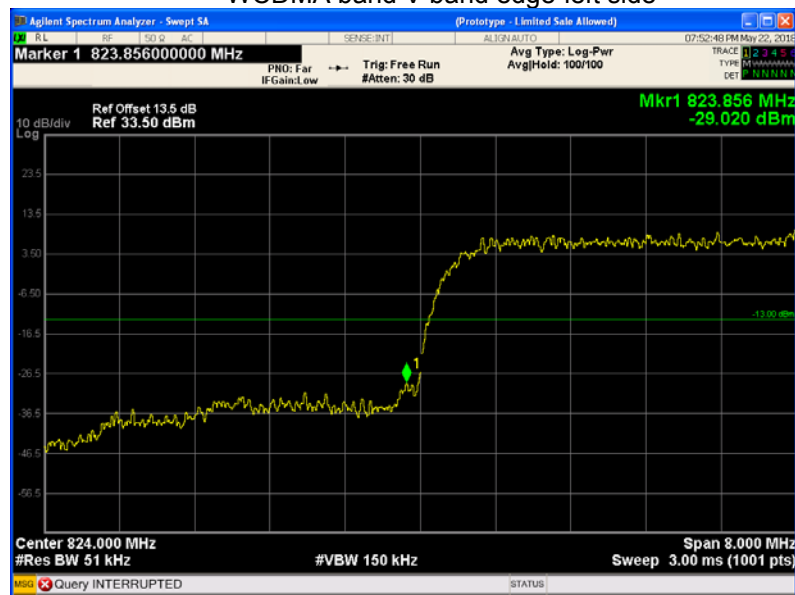
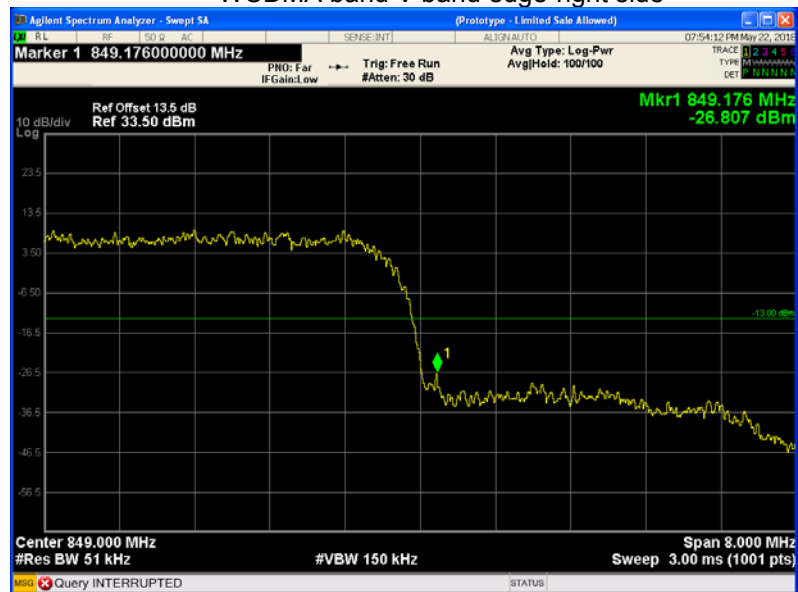


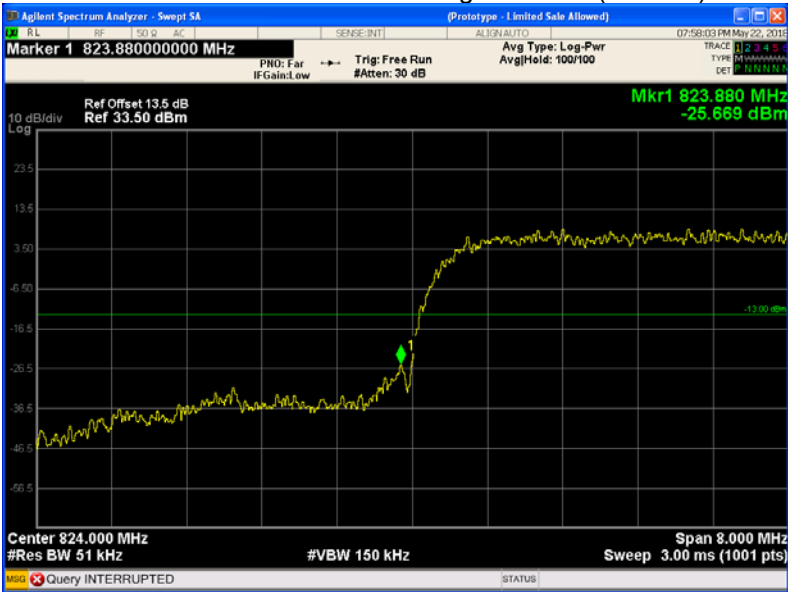
WCDMA band V band edge-left side



WCDMA band V band edge-right side



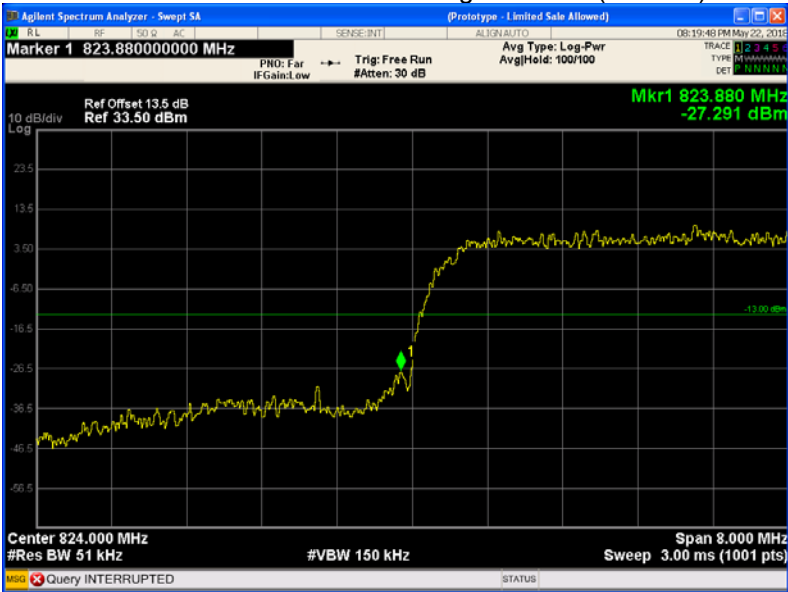
WCDMA band V band edge-left side (HSDPA)



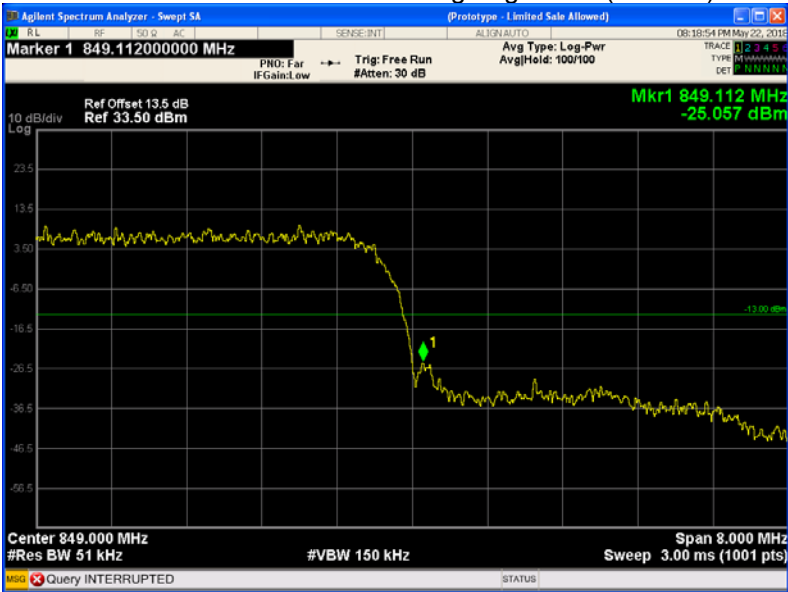
WCDMA band V band edge-right side (HSDPA)



WCDMA band V band edge-left side (HSUPA)

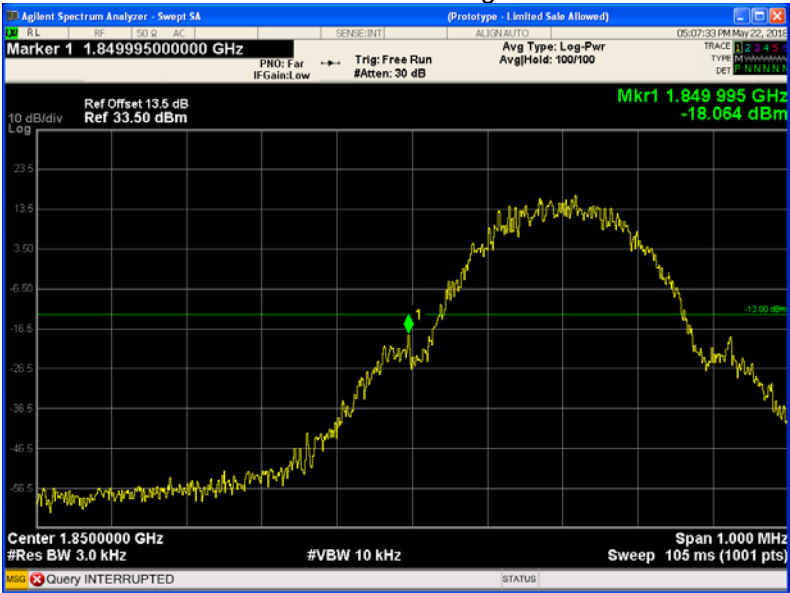


WCDMA band V band edge-right side (HSUPA)



Cellular Band (Part 24E)

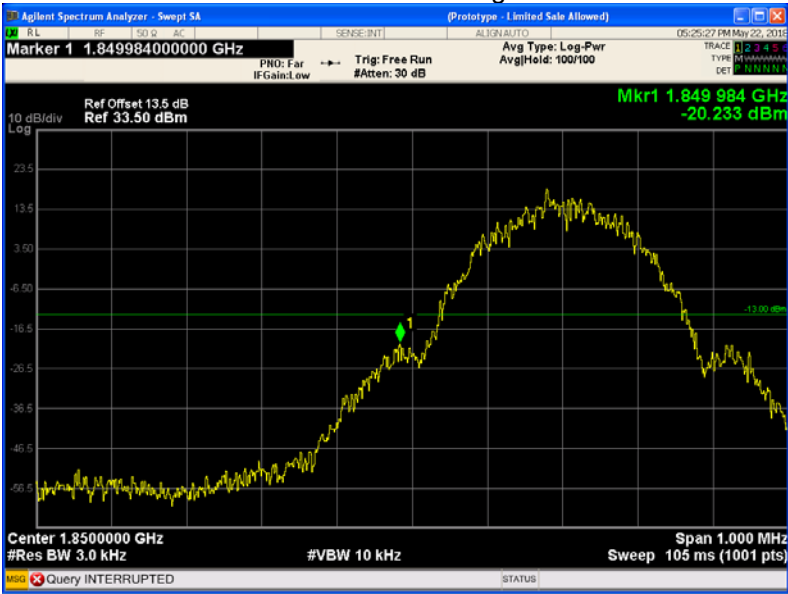
PCS 1900 band edge-left side



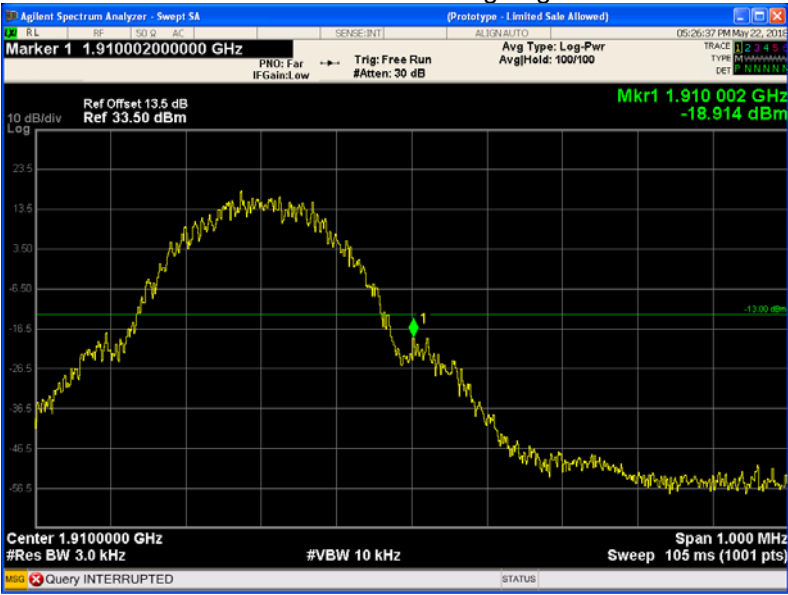
PCS 1900 band edge-right side



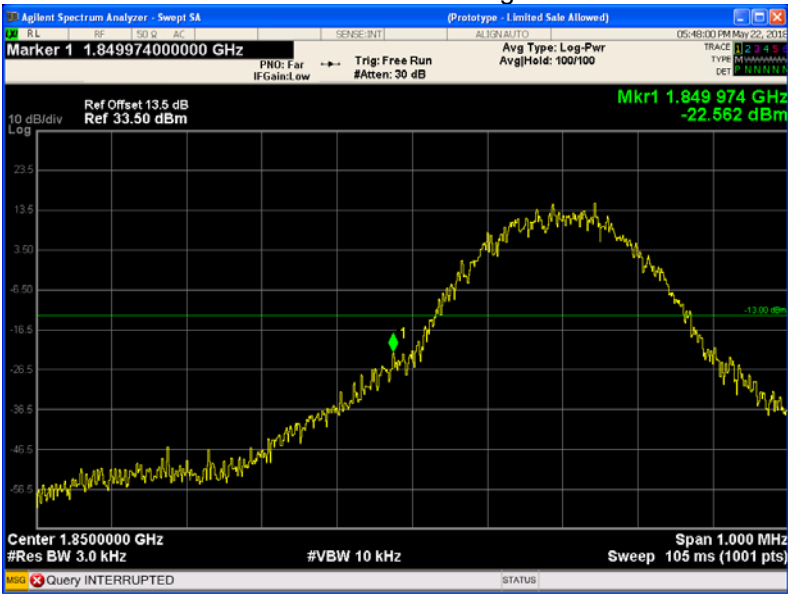
GPRS 1900 band edge-left side



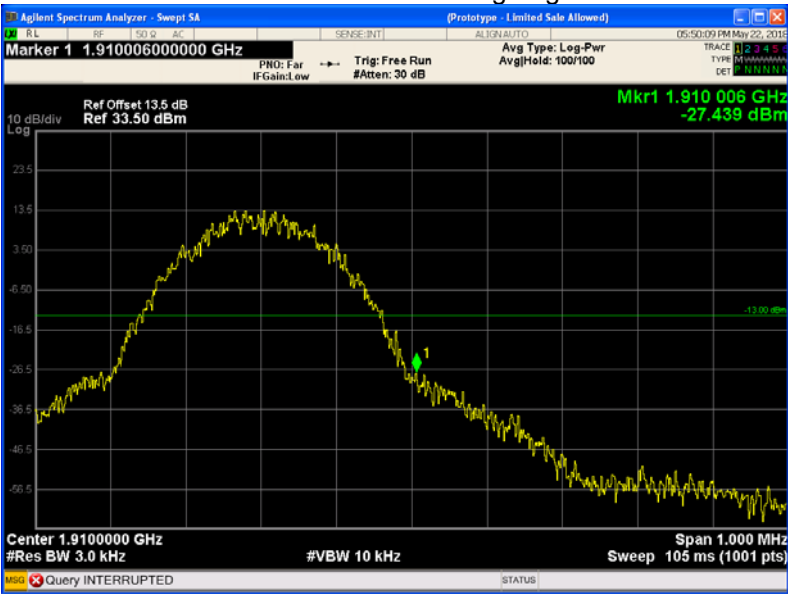
GPRS 1900 band edge-right side



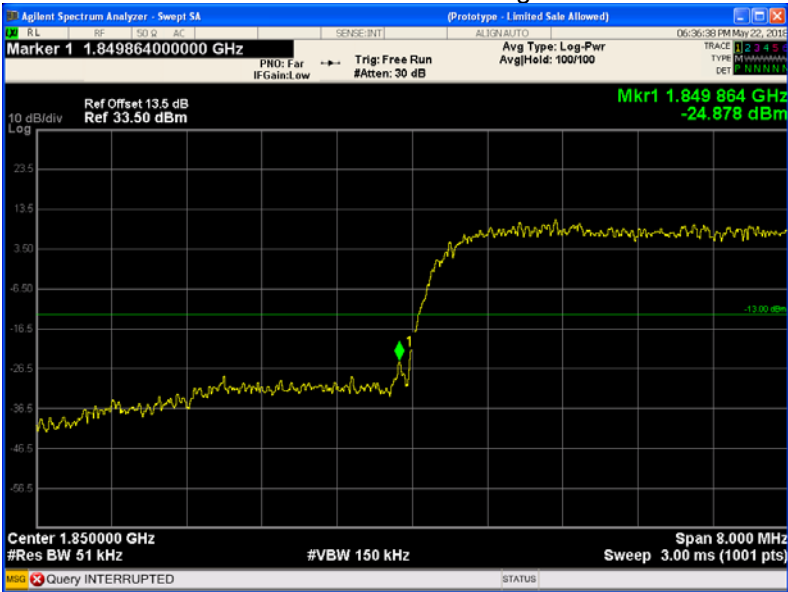
EGPRS 1900 band edge-left side



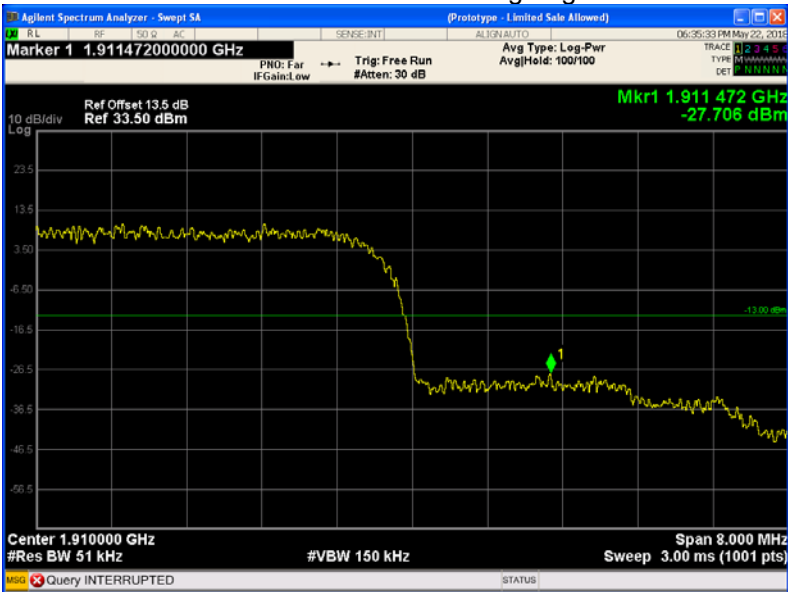
EGPRS 1900 band edge-right side



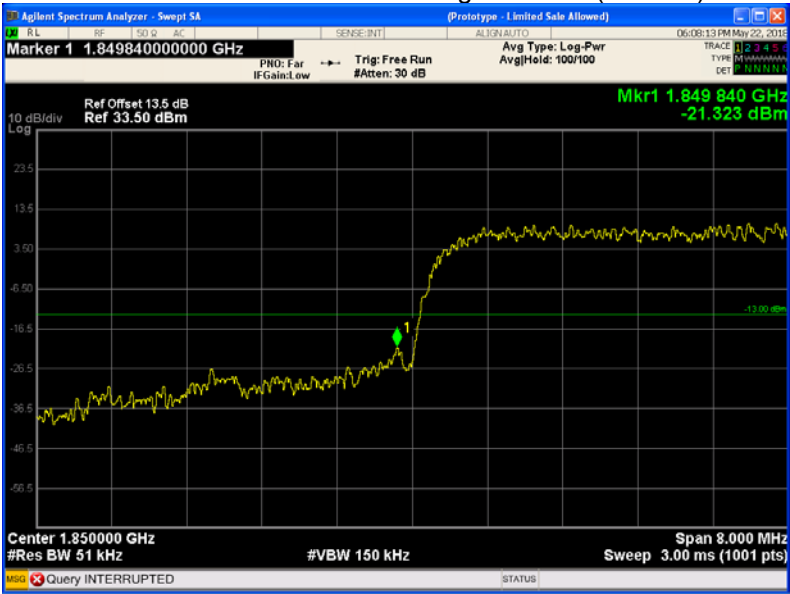
WCDMA band II band edge-left side



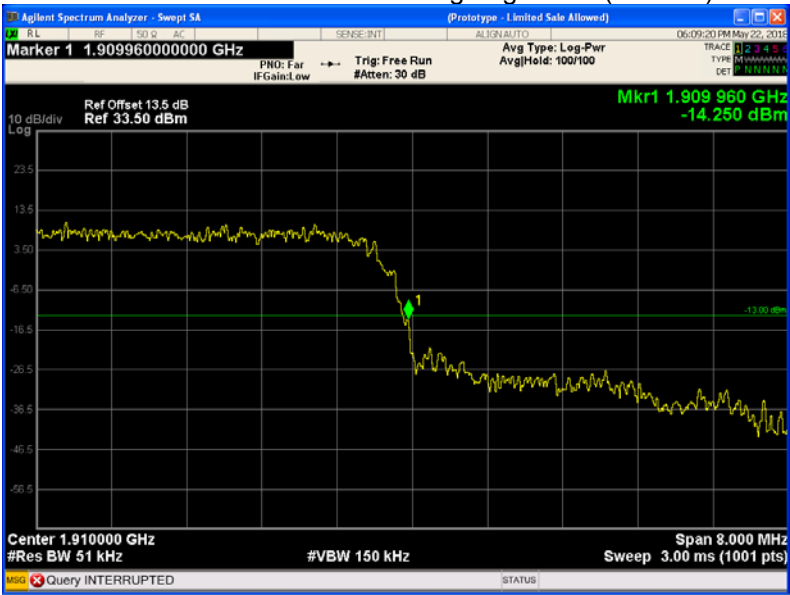
WCDMA band II band edge-right side



WCDMA band II band edge-left side (HSDPA)

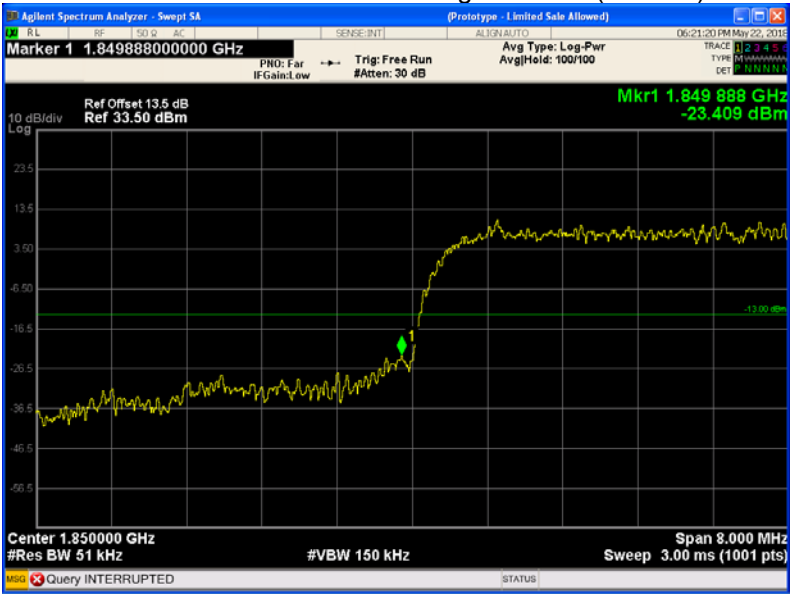


WCDMA band II band edge-right side (HSDPA)

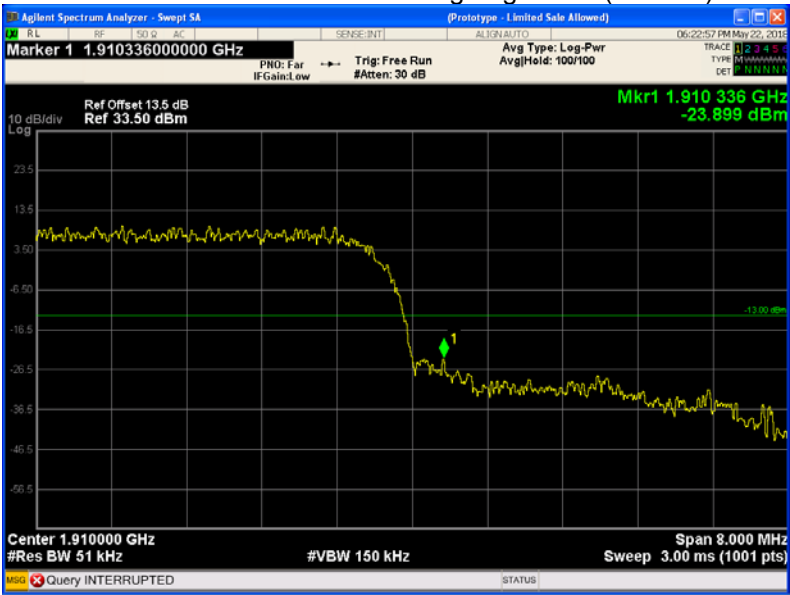




WCDMA band II band edge-left side (HSUPA)



WCDMA band II band edge-right side (HSUPA)



Part 27

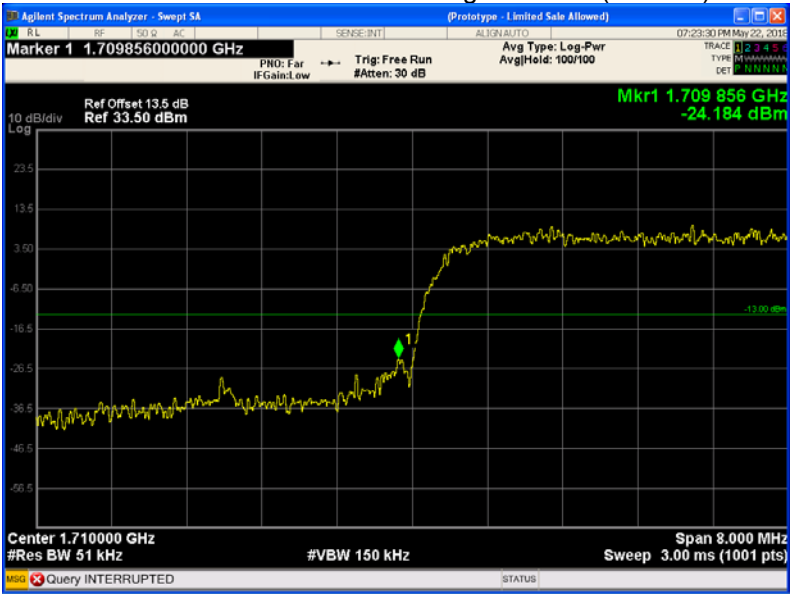
WCDMA band IV band edge-left side



WCDMA band IV band edge-right side



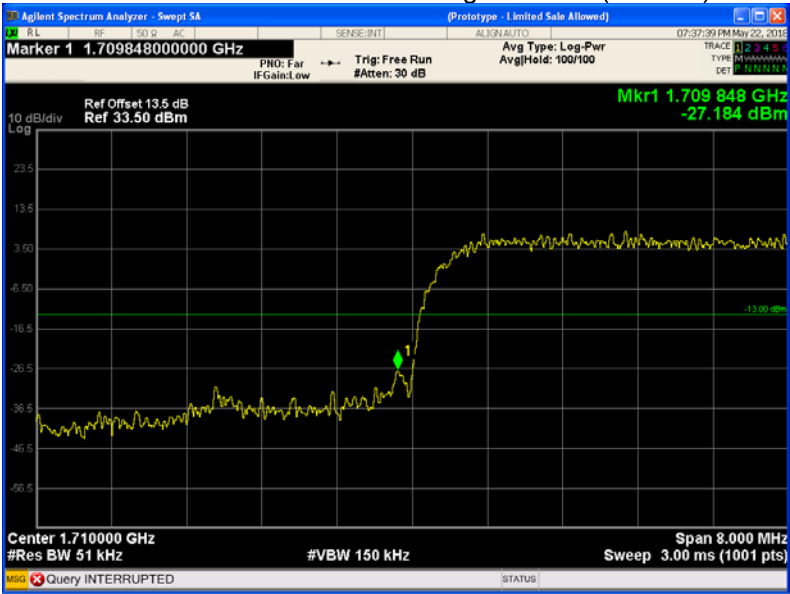
WCDMA band IV band edge-left side (HSDPA)



WCDMA band IV band edge-right side (HSDPA)



WCDMA band IV band edge-left side (HSUPA)



WCDMA band IV band edge-right side (HSUPA)



## 14 FREQUENCY STABILITY

|                   |                                                |
|-------------------|------------------------------------------------|
| Test Requirement: | FCC Part 2.1055, 22.355, 24.235, 27.5(h),27.54 |
| Test Method:      | TIA/EIA-603-D:2010<br>KDB971168 D01 v03        |
| Test Mode:        | TX transmitting                                |

### 14.1 EUT Operation

Operating Environment :

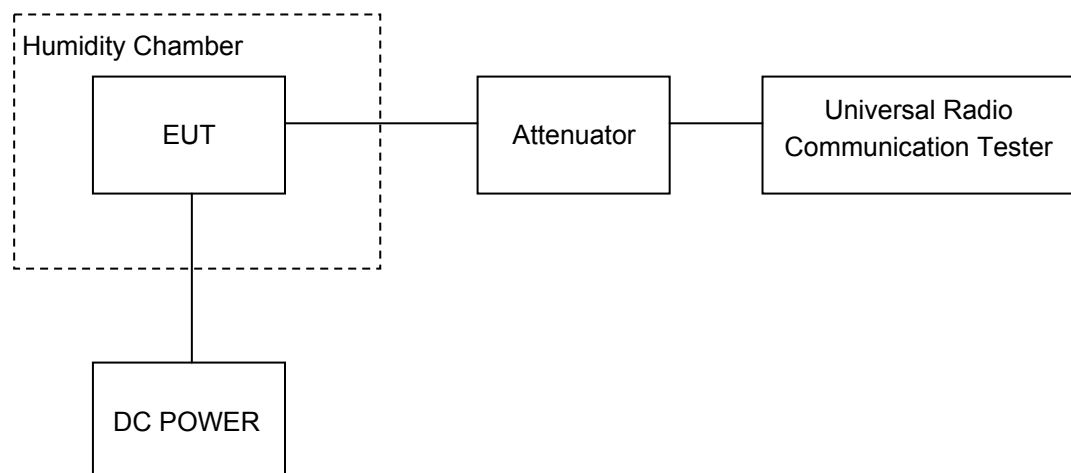
|                       |           |
|-----------------------|-----------|
| Temperature:          | 22.9 °C   |
| Humidity:             | 52.0 % RH |
| Atmospheric Pressure: | 101.3kPa  |

### 14.2 Test Procedure

Frequency Stability vs. Temperature: The equipment under test was connected to an external DC power supply and the RF output was connected to communication test set via feed-through attenuators. The EUT was placed inside the temperature chamber. The DC leads and RF output cable exited the chamber through an opening made for the purpose.

After the temperature stabilized for approximately 20 minutes, the frequency output was recorded from the communication test set.

Frequency Stability vs. Voltage: For hand carried, battery powered equipment; reduce primary supply voltage to the battery operating end point which shall be specified by the manufacturer.



### 14.3 Test Result

Cellular Band (Part 22H)

| GSM 850 Test Frequency:836.6MHz |                    |                      |                       |             |
|---------------------------------|--------------------|----------------------|-----------------------|-------------|
| Temperature (°C)                | Power Supply (VDC) | Frequency Error (Hz) | Frequency Error (ppm) | Limit (ppm) |
| 50                              | 3.8                | -5                   | -0.0060               | 2.5         |
| 40                              |                    | -2                   | -0.0024               | 2.5         |
| 30                              |                    | 0                    | 0.0000                | 2.5         |
| 20                              |                    | 0                    | 0.0000                | 2.5         |
| 10                              |                    | 6                    | 0.0072                | 2.5         |
| 0                               |                    | 6                    | 0.0072                | 2.5         |
| -10                             |                    | -1                   | -0.0012               | 2.5         |
| -20                             |                    | 4                    | 0.0048                | 2.5         |
| -30                             |                    | -3                   | -0.0036               | 2.5         |
| 20                              | 3.3                | -1                   | -0.0012               | 2.5         |
| 20                              | 4.2                | -6                   | -0.0072               | 2.5         |

| GPRS 850 Test Frequency:836.6MHz |                    |                      |                       |             |
|----------------------------------|--------------------|----------------------|-----------------------|-------------|
| Temperature (°C)                 | Power Supply (VDC) | Frequency Error (Hz) | Frequency Error (ppm) | Limit (ppm) |
| 50                               | 3.8                | -11                  | -0.0131               | 2.5         |
| 40                               |                    | 2                    | 0.0024                | 2.5         |
| 30                               |                    | -6                   | -0.0072               | 2.5         |
| 20                               |                    | -3                   | -0.0036               | 2.5         |
| 10                               |                    | 1                    | 0.0012                | 2.5         |
| 0                                |                    | 6                    | 0.0072                | 2.5         |
| -10                              |                    | 4                    | 0.0048                | 2.5         |
| -20                              |                    | 2                    | 0.0024                | 2.5         |
| -30                              |                    | -6                   | -0.0072               | 2.5         |
| 20                               | 3.3                | 1                    | 0.0012                | 2.5         |
| 20                               | 4.2                | -2                   | -0.0024               | 2.5         |

| EGPRS 850 Test Frequency:836.6MHz |                    |                      |                       |             |
|-----------------------------------|--------------------|----------------------|-----------------------|-------------|
| Temperature (°C)                  | Power Supply (VDC) | Frequency Error (Hz) | Frequency Error (ppm) | Limit (ppm) |
| 50                                | 3.8                | -1                   | -0.0012               | 2.5         |
| 40                                |                    | 5                    | 0.0060                | 2.5         |
| 30                                |                    | 9                    | 0.0108                | 2.5         |
| 20                                |                    | 2                    | 0.0024                | 2.5         |
| 10                                |                    | 5                    | 0.0060                | 2.5         |
| 0                                 |                    | -3                   | -0.0036               | 2.5         |
| -10                               |                    | 6                    | 0.0072                | 2.5         |
| -20                               |                    | -3                   | -0.0036               | 2.5         |
| -30                               |                    | 6                    | 0.0072                | 2.5         |
| 20                                | 3.3                | -2                   | -0.0024               | 2.5         |
| 20                                | 4.2                | 5                    | 0.0060                | 2.5         |

| WCDMA Band V Test Frequency:836.6MHz |                    |                      |                       |             |
|--------------------------------------|--------------------|----------------------|-----------------------|-------------|
| Temperature (°C)                     | Power Supply (VDC) | Frequency Error (Hz) | Frequency Error (ppm) | Limit (ppm) |
| 50                                   | 3.8                | -7                   | -0.0037               | 2.5         |
| 40                                   |                    | 1                    | 0.0005                | 2.5         |
| 30                                   |                    | 3                    | 0.0016                | 2.5         |
| 20                                   |                    | -2                   | -0.0011               | 2.5         |
| 10                                   |                    | -5                   | -0.0027               | 2.5         |
| 0                                    |                    | 4                    | 0.0021                | 2.5         |
| -10                                  |                    | -6                   | -0.0032               | 2.5         |
| -20                                  |                    | 2                    | 0.0011                | 2.5         |
| -30                                  |                    | -4                   | -0.0021               | 2.5         |
| 20                                   | 3.3                | -5                   | -0.0027               | 2.5         |
| 20                                   | 4.2                | -3                   | -0.0016               | 2.5         |

| WCDMA Band V Test Frequency:836.6MHz(HSDPA) |                    |                      |                       |             |
|---------------------------------------------|--------------------|----------------------|-----------------------|-------------|
| Temperature (°C)                            | Power Supply (VDC) | Frequency Error (Hz) | Frequency Error (ppm) | Limit (ppm) |
| 50                                          | 3.8                | -7                   | -0.0084               | 2.5         |
| 40                                          |                    | -8                   | -0.0096               | 2.5         |
| 30                                          |                    | -10                  | -0.0120               | 2.5         |
| 20                                          |                    | -2                   | -0.0024               | 2.5         |
| 10                                          |                    | 6                    | 0.0072                | 2.5         |
| 0                                           |                    | -7                   | -0.0084               | 2.5         |
| -10                                         |                    | -9                   | -0.0108               | 2.5         |
| -20                                         |                    | -4                   | -0.0048               | 2.5         |
| -30                                         |                    | 7                    | 0.0084                | 2.5         |
| 20                                          | 3.3                | -1                   | -0.0012               | 2.5         |
| 20                                          | 4.2                | -9                   | -0.0108               | 2.5         |

| WCDMA Band V Test Frequency:836.6MHz(HSUPA) |                    |                      |                       |             |
|---------------------------------------------|--------------------|----------------------|-----------------------|-------------|
| Temperature (°C)                            | Power Supply (VDC) | Frequency Error (Hz) | Frequency Error (ppm) | Limit (ppm) |
| 50                                          | 3.8                | -2                   | -0.0024               | 2.5         |
| 40                                          |                    | -11                  | -0.0132               | 2.5         |
| 30                                          |                    | -2                   | -0.0024               | 2.5         |
| 20                                          |                    | -4                   | -0.0048               | 2.5         |
| 10                                          |                    | -4                   | -0.0048               | 2.5         |
| 0                                           |                    | -6                   | -0.0072               | 2.5         |
| -10                                         |                    | -11                  | -0.0132               | 2.5         |
| -20                                         |                    | 3                    | 0.0036                | 2.5         |
| -30                                         |                    | -9                   | -0.0108               | 2.5         |
| 20                                          | 3.3                | -5                   | -0.0060               | 2.5         |
| 20                                          | 4.2                | 3                    | 0.0036                | 2.5         |



## PCS Band (Part 24E)

| PCS 1900 Test Frequency:1880.0MHz |                    |                      |                       |             |
|-----------------------------------|--------------------|----------------------|-----------------------|-------------|
| Temperature (°C)                  | Power Supply (VDC) | Frequency Error (Hz) | Frequency Error (ppm) | Limit (ppm) |
| 50                                | 3.8                | 9                    | 0.0048                | 2.5         |
| 40                                |                    | 7                    | 0.0037                | 2.5         |
| 30                                |                    | -1                   | -0.0005               | 2.5         |
| 20                                |                    | 1                    | 0.0005                | 2.5         |
| 10                                |                    | -2                   | -0.0011               | 2.5         |
| 0                                 |                    | -4                   | -0.0021               | 2.5         |
| -10                               |                    | -5                   | -0.0027               | 2.5         |
| -20                               |                    | -7                   | -0.0037               | 2.5         |
| -30                               |                    | -8                   | -0.0043               | 2.5         |
| 20                                | 3.3                | -4                   | -0.0021               | 2.5         |
| 20                                | 4.2                | -3                   | -0.0016               | 2.5         |

| GPRS 1900 Test Frequency:1880.0MHz |                    |                      |                       |             |
|------------------------------------|--------------------|----------------------|-----------------------|-------------|
| Temperature (°C)                   | Power Supply (VDC) | Frequency Error (Hz) | Frequency Error (ppm) | Limit (ppm) |
| 50                                 | 3.8                | -3                   | -0.0016               | 2.5         |
| 40                                 |                    | -2                   | -0.0011               | 2.5         |
| 30                                 |                    | 6                    | 0.0032                | 2.5         |
| 20                                 |                    | -2                   | -0.0011               | 2.5         |
| 10                                 |                    | -8                   | -0.0043               | 2.5         |
| 0                                  |                    | -4                   | -0.0021               | 2.5         |
| -10                                |                    | -1                   | -0.0005               | 2.5         |
| -20                                |                    | -11                  | -0.0059               | 2.5         |
| -30                                |                    | -11                  | -0.0059               | 2.5         |
| 20                                 | 3.3                | -4                   | -0.0021               | 2.5         |
| 20                                 | 4.2                | -1                   | -0.0005               | 2.5         |

| EGPRS 1900 Test Frequency:1880.0MHz |                    |                      |                       |             |
|-------------------------------------|--------------------|----------------------|-----------------------|-------------|
| Temperature (°C)                    | Power Supply (VDC) | Frequency Error (Hz) | Frequency Error (ppm) | Limit (ppm) |
| 50                                  | 3.8                | 23                   | 0.0122                | 2.5         |
| 40                                  |                    | 29                   | 0.0154                | 2.5         |
| 30                                  |                    | 19                   | 0.0101                | 2.5         |
| 20                                  |                    | 20                   | 0.0106                | 2.5         |
| 10                                  |                    | 13                   | 0.0069                | 2.5         |
| 0                                   |                    | 15                   | 0.0080                | 2.5         |
| -10                                 |                    | 15                   | 0.0080                | 2.5         |
| -20                                 |                    | 20                   | 0.0106                | 2.5         |
| -30                                 |                    | 22                   | 0.0117                | 2.5         |
| 20                                  | 3.3                | 20                   | 0.0106                | 2.5         |
| 20                                  | 4.2                | 22                   | 0.0117                | 2.5         |

| WCDMA Band II Test Frequency:1880.0MHz |                    |                      |                       |             |
|----------------------------------------|--------------------|----------------------|-----------------------|-------------|
| Temperature (°C)                       | Power Supply (VDC) | Frequency Error (Hz) | Frequency Error (ppm) | Limit (ppm) |
| 50                                     | 3.8                | 7                    | 0.0037                | 2.5         |
| 40                                     |                    | -4                   | -0.0021               | 2.5         |
| 30                                     |                    | -8                   | -0.0043               | 2.5         |
| 20                                     |                    | 1                    | 0.0005                | 2.5         |
| 10                                     |                    | 7                    | 0.0037                | 2.5         |
| 0                                      |                    | -7                   | -0.0037               | 2.5         |
| -10                                    |                    | -1                   | -0.0005               | 2.5         |
| -20                                    |                    | 10                   | 0.0053                | 2.5         |
| -30                                    |                    | -2                   | -0.0011               | 2.5         |
| 20                                     | 3.3                | -7                   | -0.0037               | 2.5         |
| 20                                     | 4.2                | 4                    | 0.0021                | 2.5         |

| WCDMA Band II Test Frequency:1880.0MHz(HSDPA) |                    |                      |                       |             |
|-----------------------------------------------|--------------------|----------------------|-----------------------|-------------|
| Temperature (°C)                              | Power Supply (VDC) | Frequency Error (Hz) | Frequency Error (ppm) | Limit (ppm) |
| 50                                            | 3.8                | -1                   | -0.0005               | 2.5         |
| 40                                            |                    | 5                    | 0.0027                | 2.5         |
| 30                                            |                    | -3                   | -0.0016               | 2.5         |
| 20                                            |                    | -3                   | -0.0016               | 2.5         |
| 10                                            |                    | 3                    | 0.0016                | 2.5         |
| 0                                             |                    | -5                   | -0.0027               | 2.5         |
| -10                                           |                    | 1                    | 0.0005                | 2.5         |
| -20                                           |                    | -3                   | -0.0016               | 2.5         |
| -30                                           |                    | 2                    | 0.0011                | 2.5         |
| 20                                            | 3.3                | 3                    | 0.0016                | 2.5         |
| 20                                            | 4.2                | -11                  | -0.0059               | 2.5         |

| WCDMA Band II Test Frequency:1880.0MHz(HSUPA) |                    |                      |                       |             |
|-----------------------------------------------|--------------------|----------------------|-----------------------|-------------|
| Temperature (°C)                              | Power Supply (VDC) | Frequency Error (Hz) | Frequency Error (ppm) | Limit (ppm) |
| 50                                            | 3.8                | 5                    | 0.0027                | 2.5         |
| 40                                            |                    | -7                   | -0.0037               | 2.5         |
| 30                                            |                    | 3                    | 0.0016                | 2.5         |
| 20                                            |                    | -2                   | -0.0011               | 2.5         |
| 10                                            |                    | -9                   | -0.0048               | 2.5         |
| 0                                             |                    | -6                   | -0.0032               | 2.5         |
| -10                                           |                    | -2                   | -0.0011               | 2.5         |
| -20                                           |                    | -3                   | -0.0016               | 2.5         |
| -30                                           |                    | 1                    | 0.0005                | 2.5         |
| 20                                            | 3.3                | -8                   | -0.0043               | 2.5         |
| 20                                            | 4.2                | 4                    | 0.0021                | 2.5         |

## Part 27

| WCDMA Band IV Test Frequency:1732.6MHz |                    |                      |                       |             |
|----------------------------------------|--------------------|----------------------|-----------------------|-------------|
| Temperature (°C)                       | Power Supply (VDC) | Frequency Error (Hz) | Frequency Error (ppm) | Limit (ppm) |
| 50                                     | 3.8                | 4                    | 0.0023                | 2.5         |
| 40                                     |                    | -5                   | -0.0029               | 2.5         |
| 30                                     |                    | 9                    | 0.0052                | 2.5         |
| 20                                     |                    | 3                    | 0.0017                | 2.5         |
| 10                                     |                    | 6                    | 0.0035                | 2.5         |
| 0                                      |                    | 3                    | 0.0017                | 2.5         |
| -10                                    |                    | 5                    | 0.0029                | 2.5         |
| -20                                    |                    | 7                    | 0.0040                | 2.5         |
| -30                                    |                    | 9                    | 0.0052                | 2.5         |
| 20                                     | 3.3                | 10                   | 0.0058                | 2.5         |
| 20                                     | 4.2                | 11                   | 0.0063                | 2.5         |

| WCDMA Band IV Test Frequency:1732.6MHz (HSDPA) |                    |                      |                       |             |
|------------------------------------------------|--------------------|----------------------|-----------------------|-------------|
| Temperature (°C)                               | Power Supply (VDC) | Frequency Error (Hz) | Frequency Error (ppm) | Limit (ppm) |
| 50                                             | 3.8                | 4                    | 0.0023                | 2.5         |
| 40                                             |                    | -5                   | -0.0029               | 2.5         |
| 30                                             |                    | 9                    | 0.0052                | 2.5         |
| 20                                             |                    | 3                    | 0.0017                | 2.5         |
| 10                                             |                    | 6                    | 0.0035                | 2.5         |
| 0                                              |                    | 3                    | 0.0017                | 2.5         |
| -10                                            |                    | 5                    | 0.0029                | 2.5         |
| -20                                            |                    | 7                    | 0.0040                | 2.5         |
| -30                                            |                    | 9                    | 0.0052                | 2.5         |
| 20                                             | 3.3                | 10                   | 0.0058                | 2.5         |
| 20                                             | 4.2                | 11                   | 0.0063                | 2.5         |

| WCDMA Band IV Test Frequency:1732.6MHz (HSUPA) |                    |                      |                       |             |
|------------------------------------------------|--------------------|----------------------|-----------------------|-------------|
| Temperature (°C)                               | Power Supply (VDC) | Frequency Error (Hz) | Frequency Error (ppm) | Limit (ppm) |
| 50                                             | 3.8                | 4                    | 0.0023                | 2.5         |
| 40                                             |                    | -5                   | -0.0029               | 2.5         |
| 30                                             |                    | 9                    | 0.0052                | 2.5         |
| 20                                             |                    | 3                    | 0.0017                | 2.5         |
| 10                                             |                    | 6                    | 0.0035                | 2.5         |
| 0                                              |                    | 3                    | 0.0017                | 2.5         |
| -10                                            |                    | 5                    | 0.0029                | 2.5         |
| -20                                            |                    | 7                    | 0.0040                | 2.5         |
| -30                                            |                    | 9                    | 0.0052                | 2.5         |
| 20                                             | 3.3                | 10                   | 0.0058                | 2.5         |
| 20                                             | 4.2                | 11                   | 0.0063                | 2.5         |

## **15 RF Exposure**

Remark: refer to SAR test report: WTS18S05111844-1W.

## **16 Photographs of test setup and EUT.**

Note: Please refer to appendix: WTS18S05111844W\_Photo.

===== End of Report =====