

# Cellphone-Mate, Inc.

## ADDENDUM TEST REPORT TO 95255-14A

### Fixed Wideband Consumer Signal Booster Model: Force-5

#### Tested To The Following Standards:

FCC Part 20.21

Report No.: 95255-14B

Date of issue: April 2, 2014



This test report bears the accreditation symbol indicating that the testing performed herein meets the test and reporting requirements of ISO/IEC 17025 under the applicable scope of EMC testing for CKC Laboratories, Inc.

We strive to create long-term, trust based relationships by providing sound, adaptive, customer first testing services. We embrace each of our customers' unique EMC challenges, not as an interruption to set processes, but rather as the reason we are in business.

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## ADMINISTRATIVE INFORMATION

### Test Report Information

**REPORT PREPARED FOR:**

Cellphone-Mate, Inc.  
48346 Milmont Drive  
Fremont, CA 94538

Representative: Hongtao Zhan  
Customer Reference Number: CKC20131226

**DATE OF EQUIPMENT RECEIPT:****DATE(S) OF TESTING:****REPORT PREPARED BY:**

Dianne Dudley  
CKC Laboratories, Inc.  
5046 Sierra Pines Drive  
Mariposa, CA 95338

Project Number: 95255

January 3, 2014

January 3 - 21, 2014

February 4, 2014

### Revision History

**Original:** Testing of the Fixed Wideband Consumer Signal Booster, Force-5 to FCC Part 20.21.

**Addendum A:** In section 7.9 the uplink gain plot was recalculated with the manufacturer's MSCL value.

**Addendum B:** Test summary table added to Clause 7.7 Noise Limits and Clause 7.9, Booster Gain Limits.

### Report Authorization

The test data contained in this report documents the observed testing parameters pertaining to and are relevant for only the sample equipment tested in the agreed upon operational mode(s) and configuration(s) as identified herein. Compliance assessment remains the client's responsibility. This report may not be used to claim product endorsement by A2LA or any government agencies. This test report has been authorized for release under quality control from CKC Laboratories, Inc.



**Steve Behm**  
*Director of Quality Assurance & Engineering Services*  
CKC Laboratories, Inc.

## Test Facility Information



Our laboratories are configured to effectively test a wide variety of product types. CKC utilizes first class test equipment, anechoic chambers, data acquisition and information services to create accurate, repeatable and affordable test results.

TEST LOCATION(S):  
CKC Laboratories, Inc.  
110 Olinda Place  
Brea, CA 92823

## Software Versions

| CKC Laboratories Proprietary Software | Version |
|---------------------------------------|---------|
| EMITest Emissions                     | 5.00.14 |

## Site Registration & Accreditation Information

| Location | CB #   | TAIWAN         | CANADA  | FCC    | JAPAN  |
|----------|--------|----------------|---------|--------|--------|
| Brea D   | US0060 | SL2-IN-E-1146R | 3082D-2 | 100638 | A-0147 |

## SUMMARY OF RESULTS

### Standard / Specification: FCC Part 20.21

| Draft KDB 935210 D03 Wideband Consumer Signal Booster Measurement Guidance DR04 41516 (August 7 <sup>th</sup> , 2013) |                                                                  | FCC Part 20.21 Section Correlation                                |                                             | Results         |
|-----------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------|-------------------------------------------------------------------|---------------------------------------------|-----------------|
| Guidance Sec #                                                                                                        | Guidance Description                                             | FCC Sec #                                                         | FCC Rule Description                        |                 |
| 7.1.1 - 7.1.12                                                                                                        | Authorized Frequency Band Verification                           | 20.21(e)(3)                                                       | Frequency Bands                             | Pass            |
| 7.2.1 - 7.2.16                                                                                                        | Maximum Power Measurement Procedure                              | 20.21(e)(8)(i)(D)                                                 | Power Limit                                 | Pass            |
| 7.3.1 - 7.3.3                                                                                                         | Maximum Booster Gain Computation                                 | 20.21(e)(8)(i)(B)                                                 | Bidirectional Capabilities                  | Pass            |
| 7.4.1 - 7.4.13                                                                                                        | Intermodulation Product                                          | 20.21(e)(8)(i)(F)                                                 | Intermodulation Limit                       | Pass            |
| 7.5.1 - 7.5.14                                                                                                        | Out of Band Emissions                                            | 20.21(e)(8)(i)(E)                                                 | Out of Band Emission                        | Pass            |
| 7.6.1 - 7.6.13 <sup>1</sup>                                                                                           | Conducted Spurious Emission <sup>1</sup>                         | Part 22/24/27 <sup>1</sup>                                        | Conducted Spurious Emission <sup>1</sup>    | NA <sup>1</sup> |
| 7.7.1 - 7.7.7<br>7.7.8 - 7.7.13<br>7.7.14 - 7.7.20                                                                    | Noise Limit procedure<br>Variable Noise<br>Variable Noise Timing | 20.21(e)(8)(i)(A)(2)<br>20.21(e)(8)(i)(A)(1)<br>20.21(e)(8)(i)(H) | Noise Limits<br><br>Transmit power off Mode | Pass            |
| 7.8.1 - 7.8.12                                                                                                        | Uplink inactivity                                                | 20.21(e)(8)(i)(I)                                                 | Uplink inactivity                           | Pass            |
| 7.9.1 - 7.9.12<br>7.9.13 - 7.9.19                                                                                     | Variable Booster gain<br>Variable Uplink Gain Timing             | 20.21(e)(8)(i)(C) (1),(2)<br>20.21(e)(8)(i)(H)                    | Booster Gain<br>Transmit power off mode     | Pass            |
| 7.10.1 - 7.10.10 <sup>1</sup>                                                                                         | Occupied Band Width <sup>1</sup>                                 | 2.1049 Part 22/24/27 <sup>1</sup>                                 | Occupied bandwidth <sup>1</sup>             | NA <sup>1</sup> |
| 7.11.1 - 7.11.14                                                                                                      | Anti-oscillation                                                 | 20.21(e)(8)(ii)(A)                                                | Anti-oscillation                            | Pass            |
| 7.12.1 - 7.12.6 <sup>1</sup>                                                                                          | Radiated Spurious Emission <sup>1</sup>                          | Part 22/24/27 <sup>1</sup>                                        | Radiated Spurious Emission <sup>1</sup>     | NA <sup>1</sup> |
| 7.13.1 - 7.13.3                                                                                                       | Spectrum Block Filter                                            | NA                                                                | NA                                          | NA <sup>2</sup> |

NA<sup>1</sup> = A different standard applies; see applicable test report.

NA<sup>2</sup> = Not applicable. See the section in the report for the reason.

## Conditions During Testing

This list is a summary of the conditions noted for or modifications made to the equipment during testing.

| Summary of Conditions |
|-----------------------|
| None                  |

## EQUIPMENT UNDER TEST (EUT)

### EQUIPMENT UNDER TEST

#### **Fixed Wideband Consumer Signal Booster**

Manuf: Cellphone-Mate, Inc.

Model: Force-5

Serial: None

### PERIPHERAL DEVICES

The EUT was tested with the following peripheral device(s):

#### **Signal Generator**

Manuf: Agilent

Model: E4438C

Serial: MY42082260

#### **AC to 18VDC Power Adapter**

Manuf: Adapter Tech.

Model: STD-1805

Serial: None

## FCC PART 20.21

This report contains EMC emissions test results under United States Federal Communications Commission (FCC) 47 CFR 15C requirements for Unlicensed Radio Frequency Devices, Subpart C - Intentional Radiators.

### Clause 7.1 Authorized Frequency Band Verification

#### Test Conditions / Setup

Test Location: CKC Laboratories, Inc. • 110 North Olinda Place • Brea, CA 92823 • 714-993-6112

Customer: **Cellphone-Mate, Inc**  
 Specification: **7.1 Authorized Frequency Band Verification**  
 Work Order #: **95255** Date: 01/03/2014  
 Test Type: **Conducted Emissions**  
 Equipment: Fixed Wideband Consumer Signal  
 Booster  
 Manufacturer: Cellphone-Mate, Inc. Tested By: S. Yamamoto  
 Model: Force-5 110V 60Hz  
 S/N: (none)

#### Test Equipment:

| Asset # | Description       | Model              | Calibration Date | Cal Due Date |
|---------|-------------------|--------------------|------------------|--------------|
| 02869   | Spectrum Analyzer | E4446A             | 9/4/2012         | 9/4/2014     |
| 03431   | Attenuator        | 89-20-21           | 9/5/2013         | 9/5/2015     |
| 02946   | Cable             | 32022-2-2909K-36TC | 7/31/2013        | 7/31/2015    |

#### Equipment Under Test (\* = EUT):

| Function                                 | Manufacturer         | Model # | S/N    |
|------------------------------------------|----------------------|---------|--------|
| Fixed Wideband Consumer Signal Booster * | Cellphone-Mate, Inc. | Force-5 | (none) |

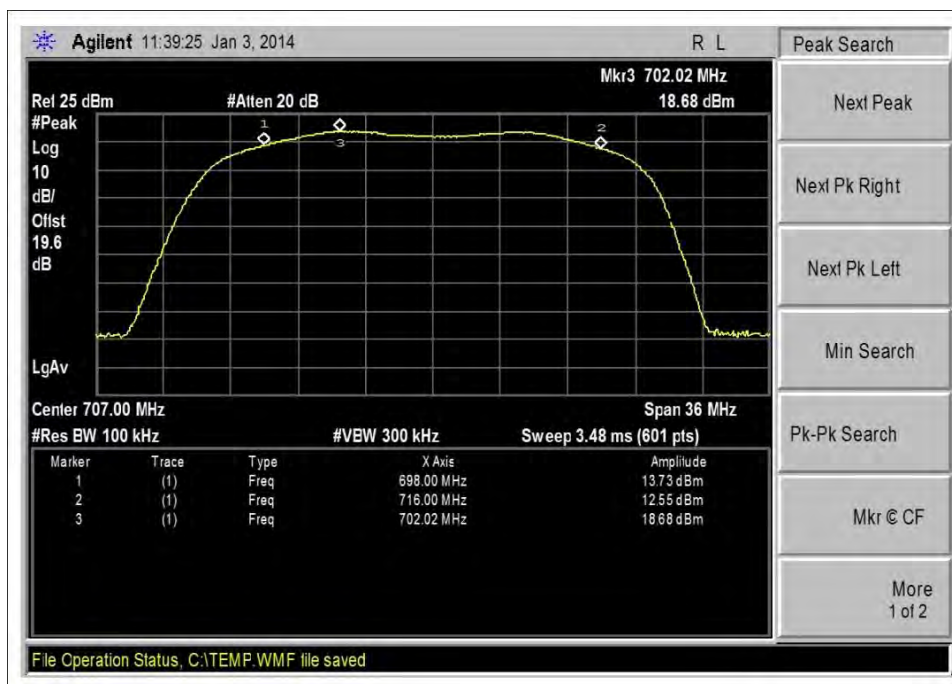
#### Support Devices:

| Function                  | Manufacturer  | Model #  | S/N        |
|---------------------------|---------------|----------|------------|
| Signal Generator          | Agilent       | E4438C   | MY42082260 |
| AC to 18Vdc Power Adapter | Adapter Tech. | STD-1805 | (none)     |

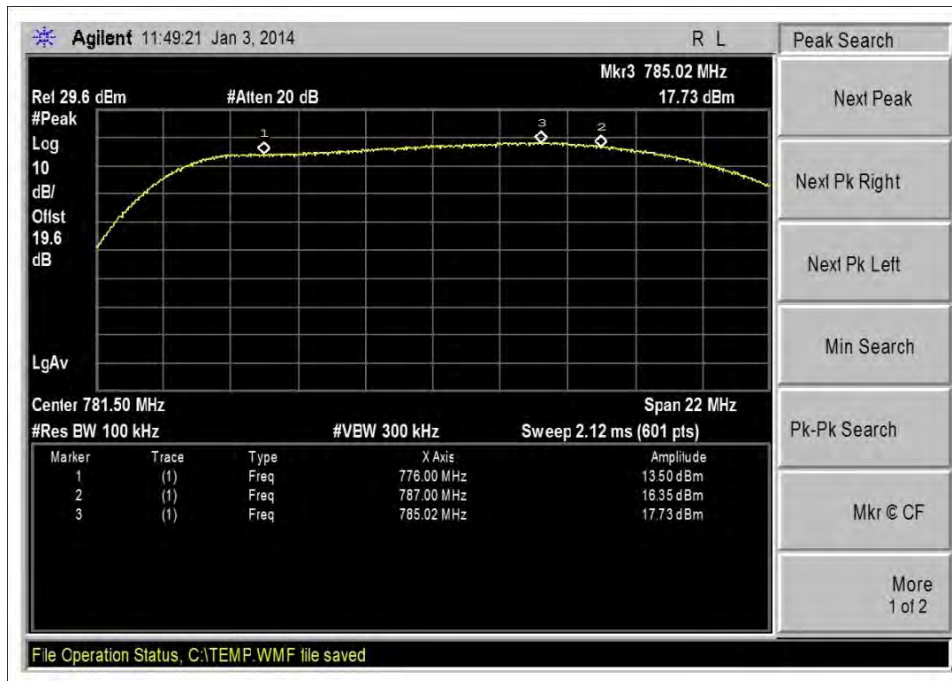
#### Test Conditions / Notes:

The EUT is placed on the test bench. Gain is set to the maximum gain. All dip switches are set to off position. Evaluation performed at the Outside (Donor) and Inside (Server) antenna port.  
 Test performed at for each of the following bands: UL 776-787MHz, UL 698-716MHz, UL 824-849MHz, UL 1710-1755MHz, UL 1850-1915MHz, DL 746-757MHz, DL 728-746MHz, DL 869-894MHz, DL 2110-2155MHz, DL 1930-1995MHz  
 Authorized Frequency Band Verification Test procedure:  
 The test was performed in accordance with section 7.1 of the FCC Publication: 935210 D03 Wideband Consumer Signal Booster Measurement Guidance DR04-41516: August 7, 2013.  
 Site D. Test environment conditions: 21°C, 37%, 100kPa

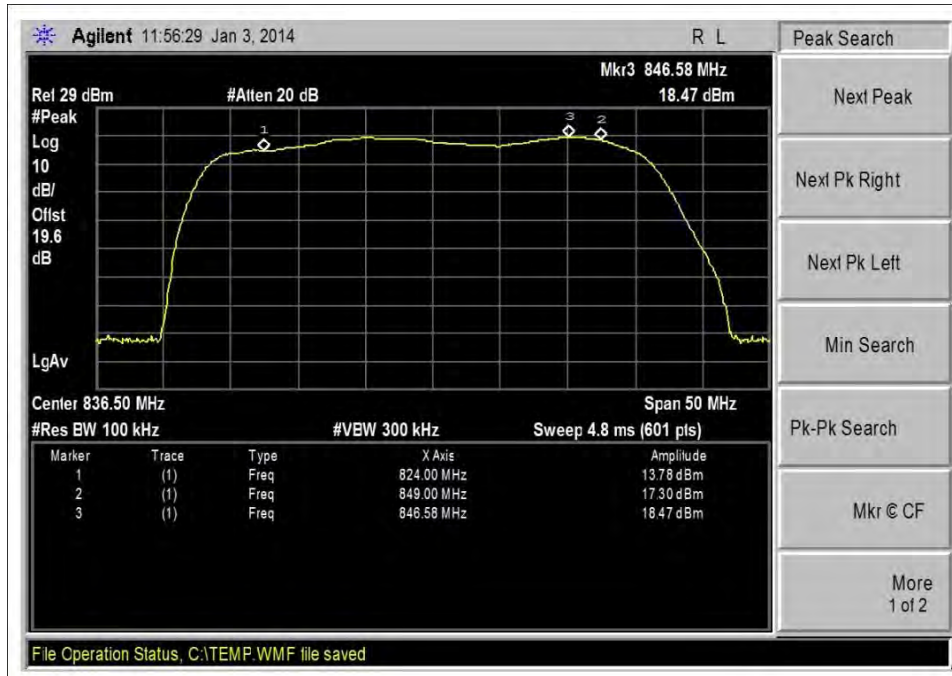
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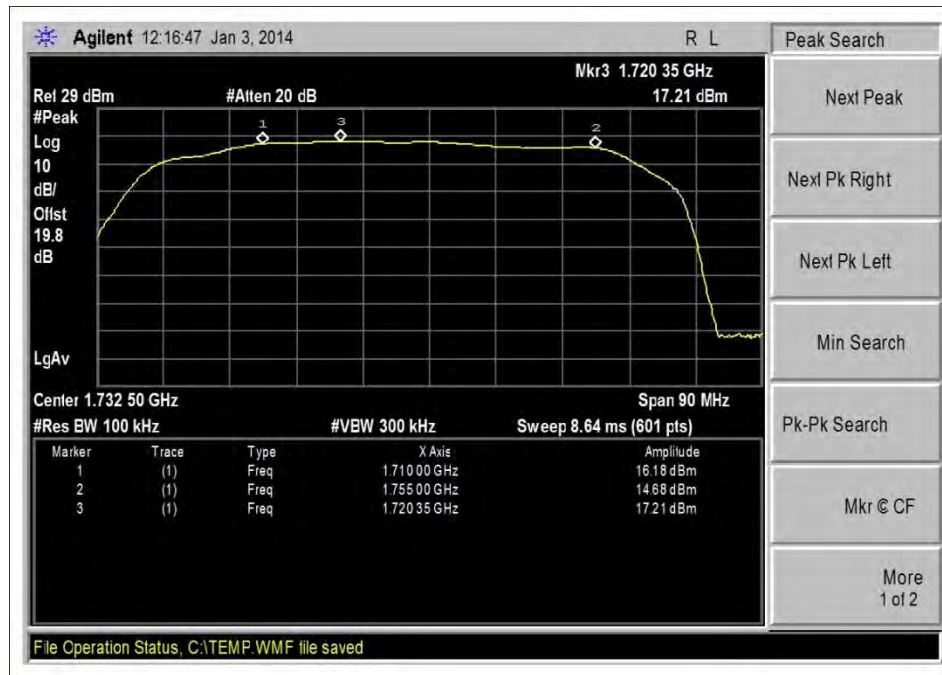
698-716MHz UL



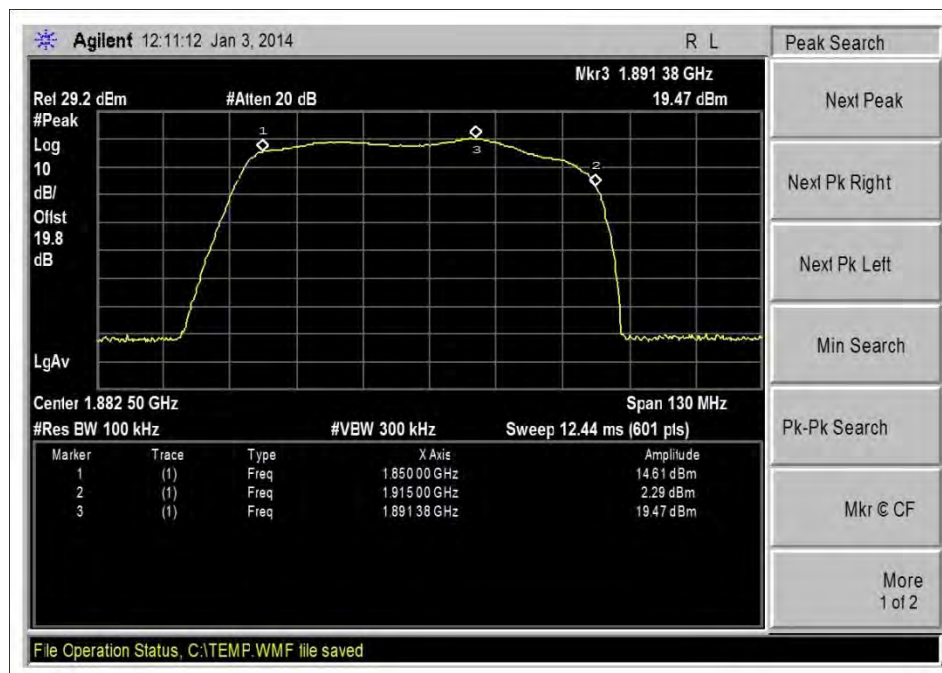
776-787MHz UL



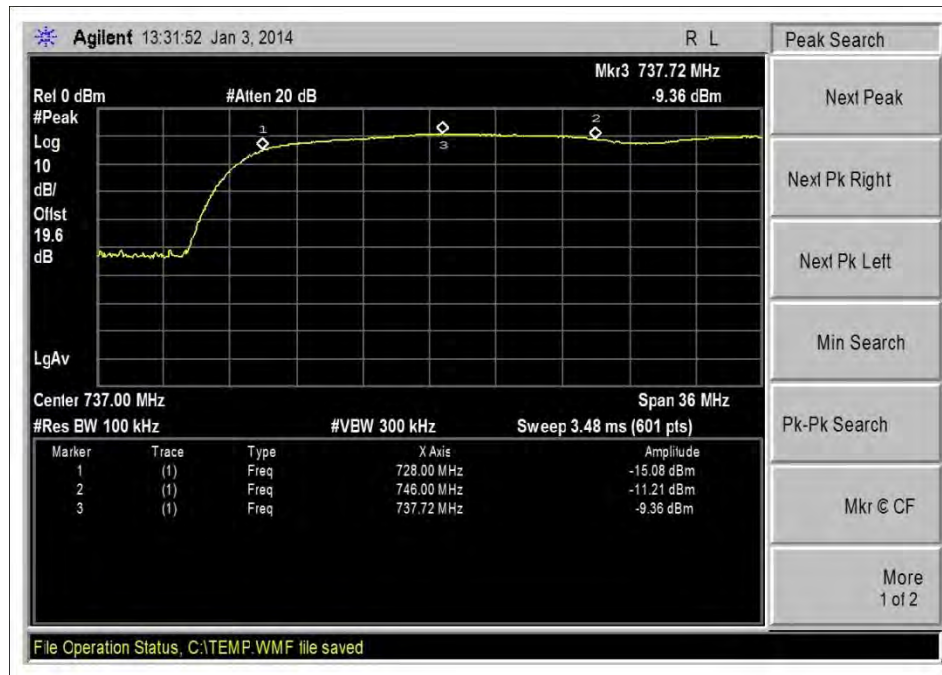
824-849MHz UL



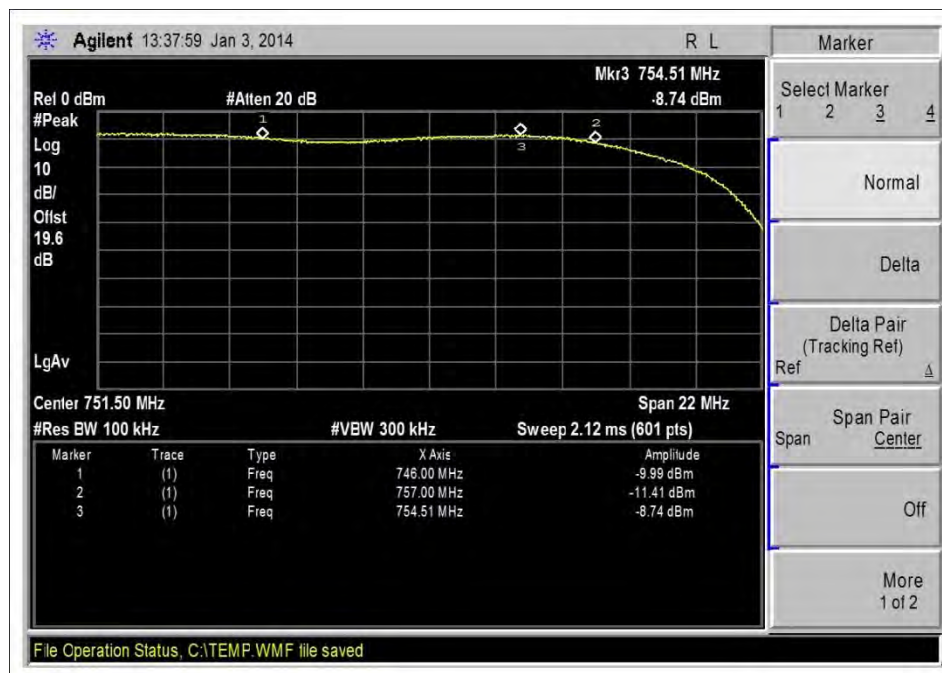
1710-1755MHz UL



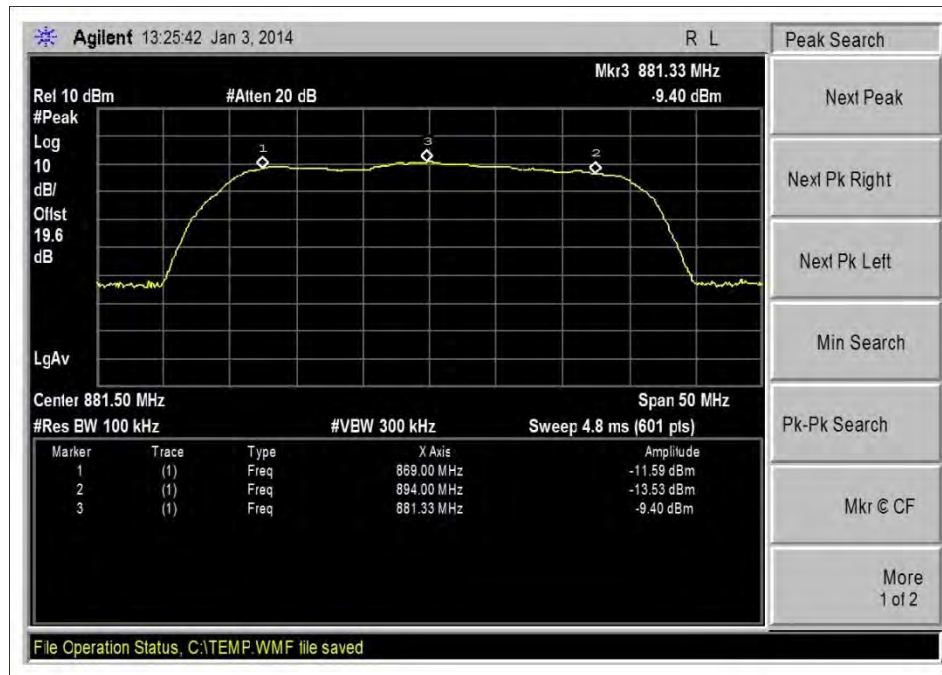
1850-1915MHz UL



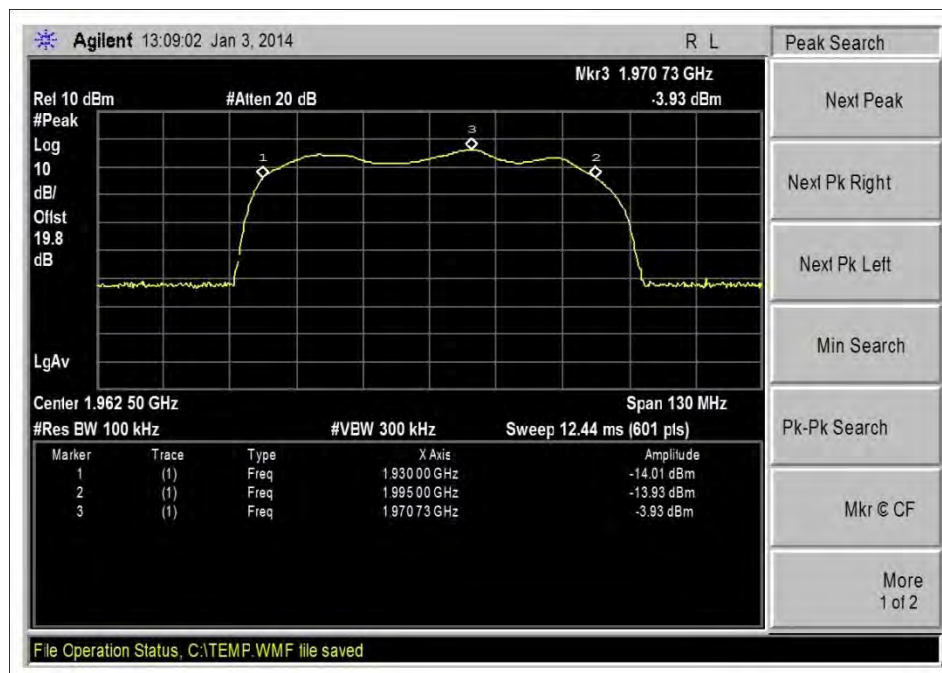
728-746MHz DL



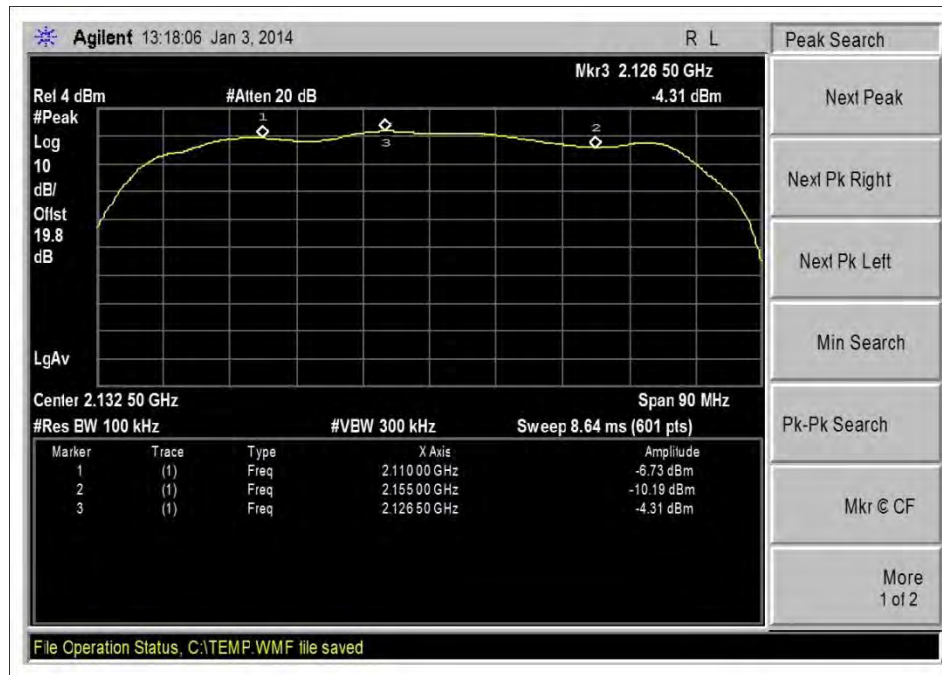
746-757MHz DL



869-894MHz DL



1930-1995MHz DL



2110-2155MHz DL

**Test Setup Photo(s)**



## Clause 7.2 & 7.3 Maximum Power/ Maximum Gain

### Test Conditions / Setup

Test Location: CKC Laboratories, Inc. • 110 North Olinda Place • Brea, CA 92823 • 714-993-6112

Customer: **Cellphone-Mate, Inc**

Specification: **7.2 Maximum Power**

Work Order #: **95255**

Date: 01/03,04/2014

Test Type: **Conducted Emissions**

Equipment: Fixed Wideband Consumer Signal

Booster

Manufacturer: Cellphone-Mate, Inc.

Tested By: S. Yamamoto

Model: Force-5

110V 60Hz

S/N: (none)

#### Test Equipment:

| Asset # | Description       | Model              | Calibration Date | Cal Due Date |
|---------|-------------------|--------------------|------------------|--------------|
| 02869   | Spectrum Analyzer | E4446A             | 9/4/2012         | 9/4/2014     |
| 03431   | Attenuator        | 89-20-21           | 9/5/2013         | 9/5/2015     |
| 02946   | Cable             | 32022-2-2909K-36TC | 7/31/2013        | 7/31/2015    |

#### Equipment Under Test (\* = EUT):

| Function                                 | Manufacturer         | Model # | S/N    |
|------------------------------------------|----------------------|---------|--------|
| Fixed Wideband Consumer Signal Booster * | Cellphone-Mate, Inc. | Force-5 | (none) |

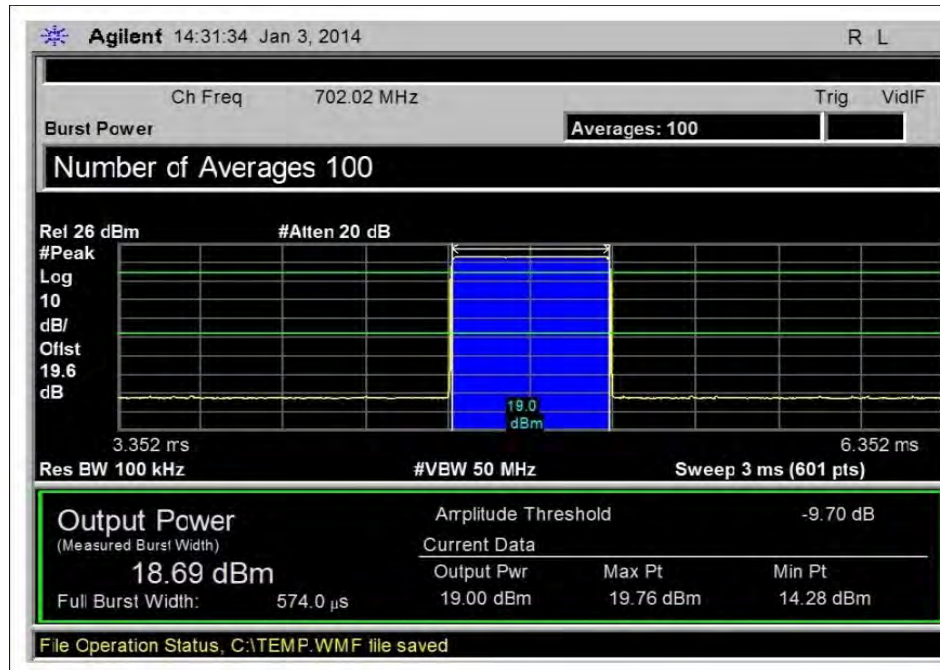
#### Support Devices:

| Function                  | Manufacturer  | Model #  | S/N        |
|---------------------------|---------------|----------|------------|
| Signal Generator          | Agilent       | E4438C   | MY42082260 |
| AC to 18Vdc Power Adapter | Adapter Tech. | STD-1805 | (none)     |

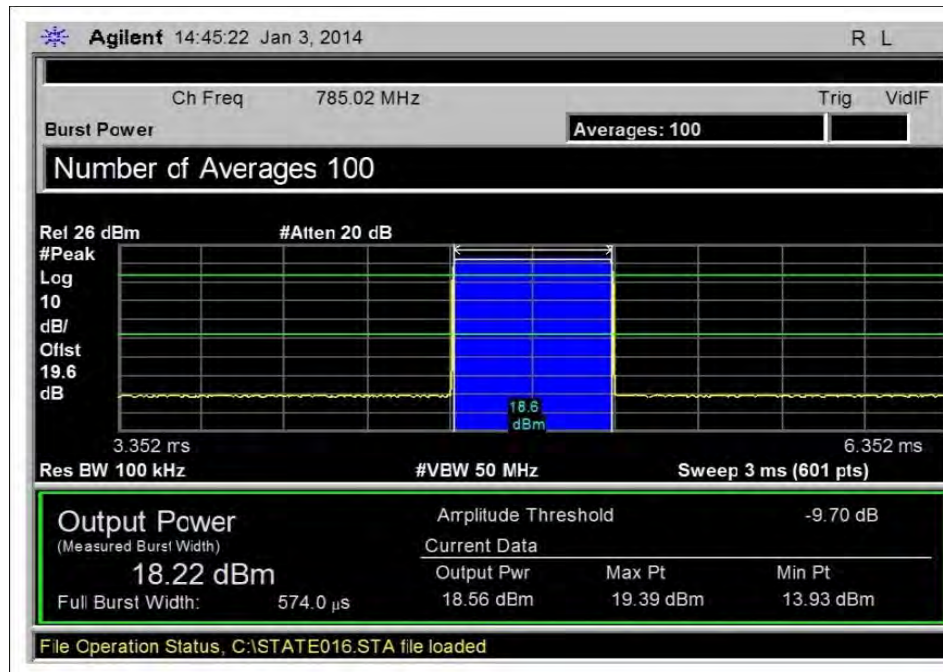
#### Test Conditions / Notes:

The EUT is placed on the test bench. Gain is set to the maximum gain. All dip switches are set to off position. Evaluation performed at the Outside (Donor) and Inside (Server) antenna port. Test performed at the frequency of highest power within each of the following bands: UL 776-787MHz, UL 698-716MHz, UL 824-849MHz, UL 1710-1755MHz, UL 1850-1915MHz, DL 746-757MHz, DL 728-746MHz, DL 869-894MHz, DL 2110-2155MHz, DL 1930-1995MHz. Pulsed GSM and AWGN 4.1MHz. Test procedure: The test was performed in accordance with section 7.2 of the FCC Publication: 935210 D03 Wideband Consumer Signal Booster Measurement Guidance DR04-41516 August 7, 2013. Test environment conditions: 21°C, 31% , 100kPa

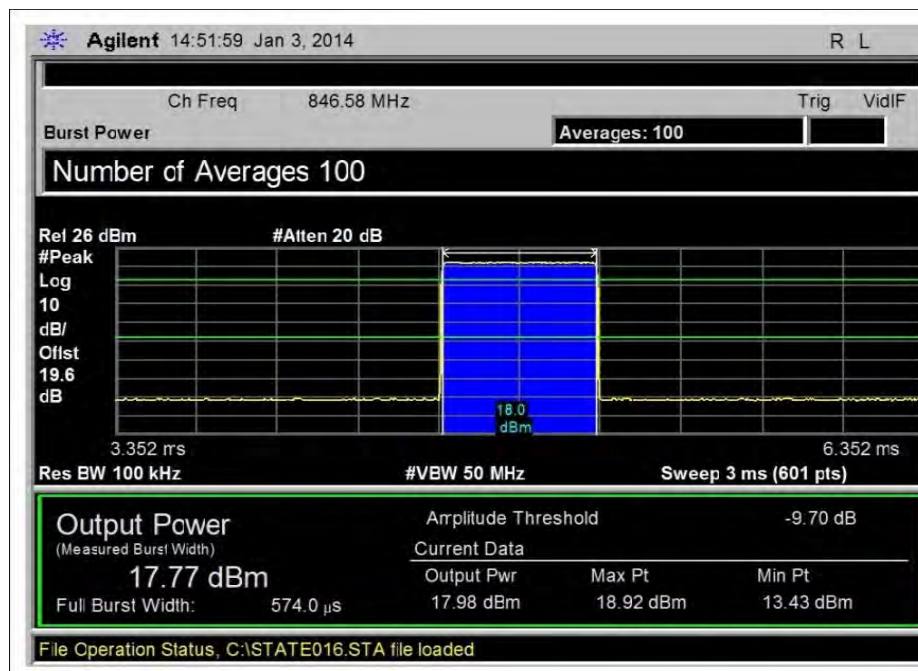
## Test Data



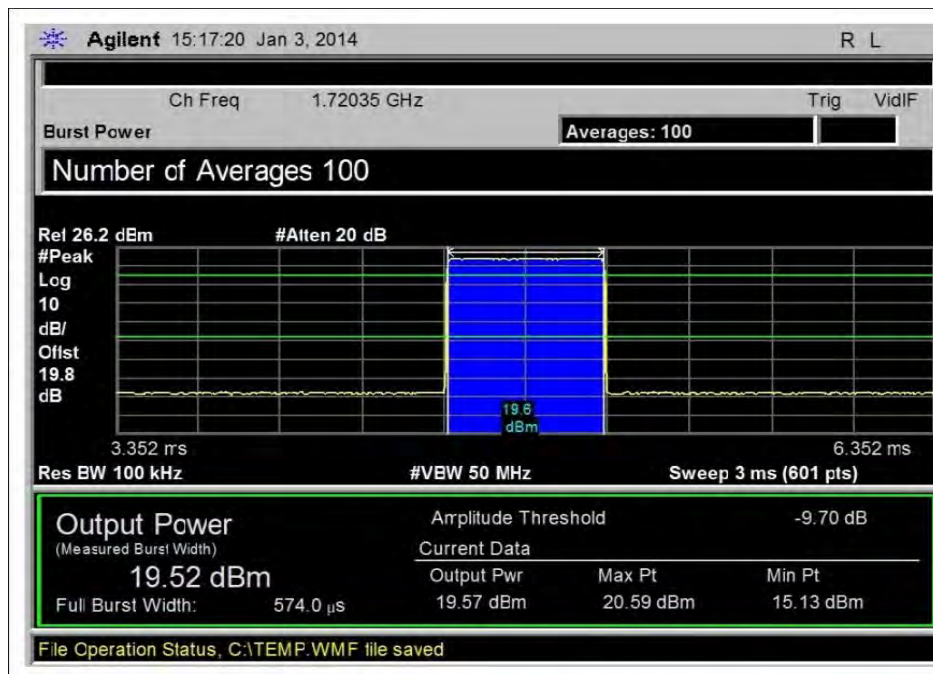
698-716MHz UL, GSM



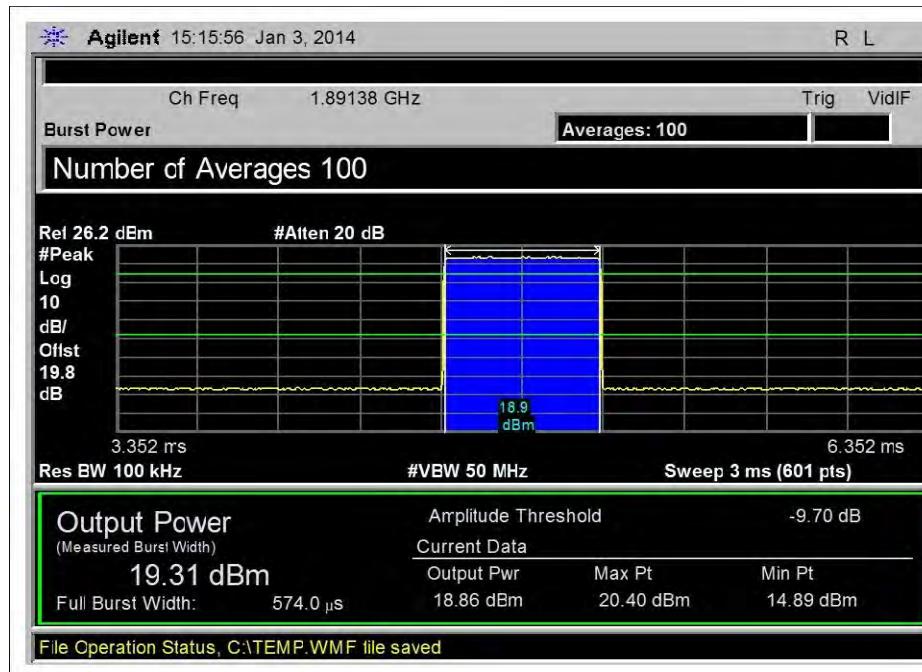
776-787MHz UL, GSM



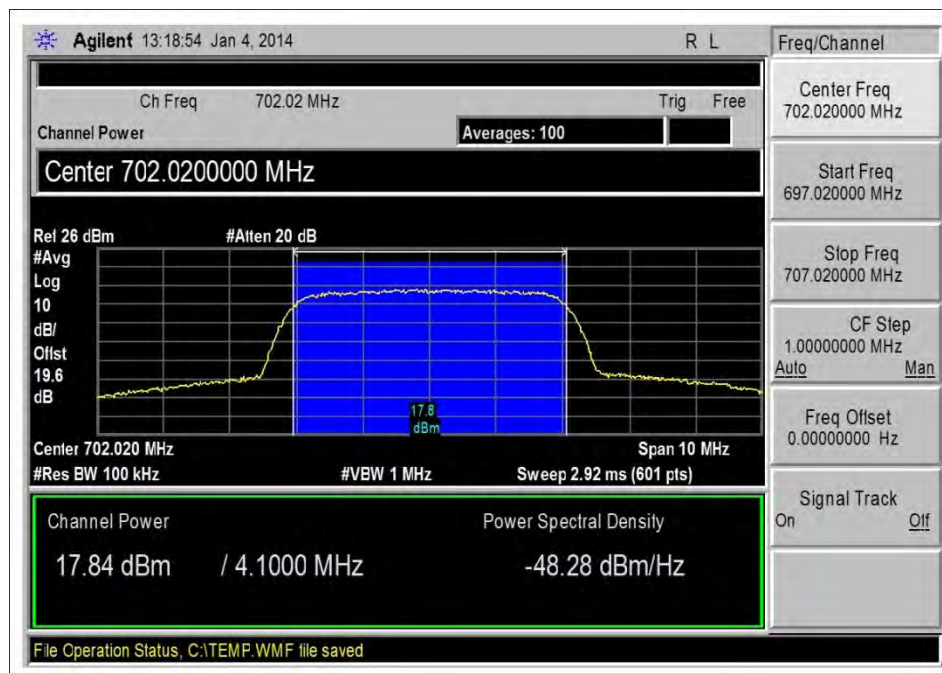
824-849MHz UL, GSM



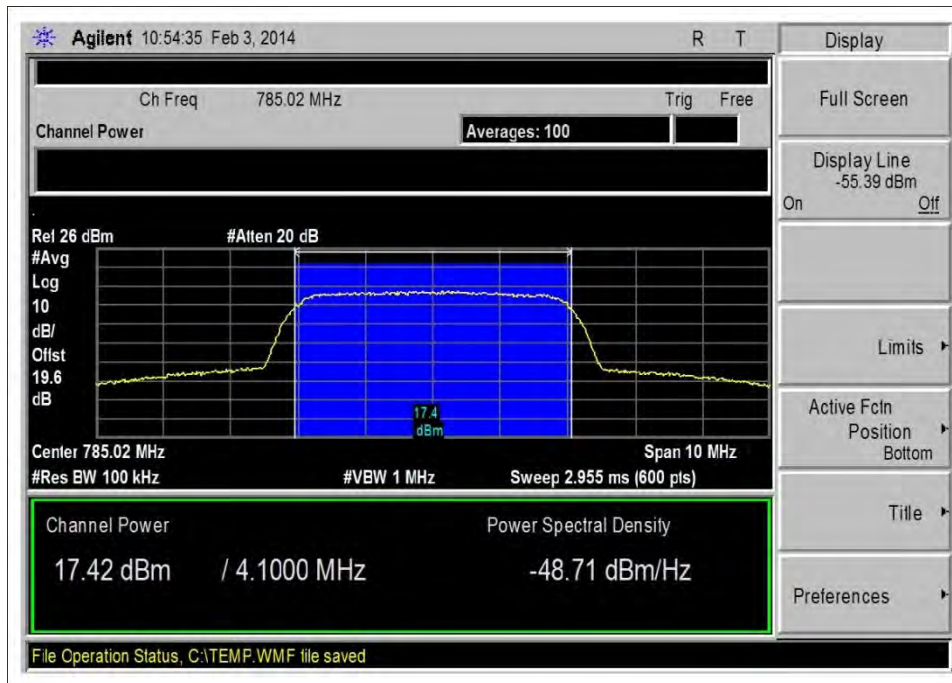
1710-1755MHz UL, GSM



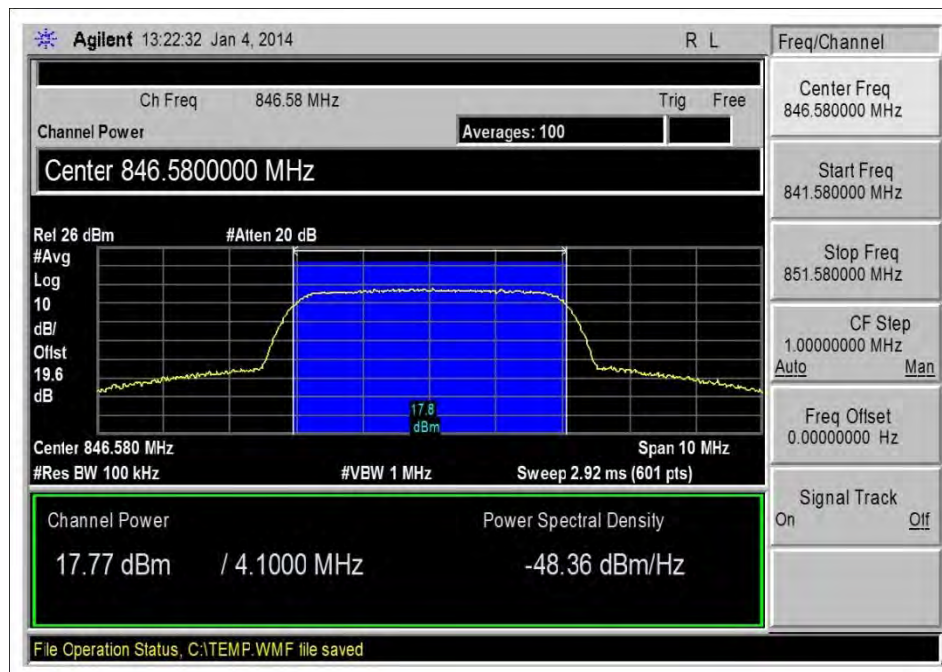
1850-1915MHz UL, GSM



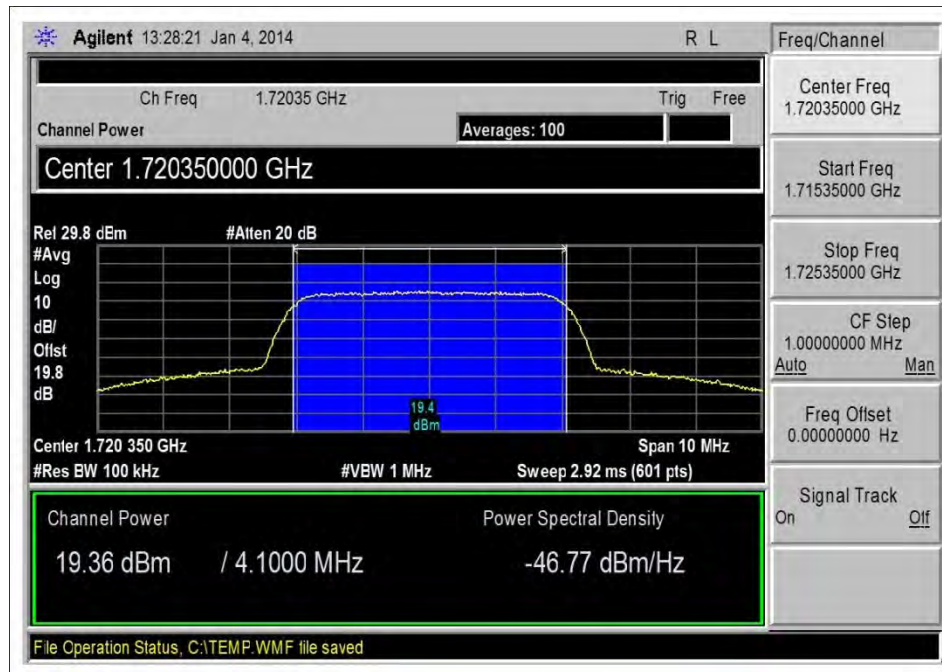
698-716MHz UL, AWGN



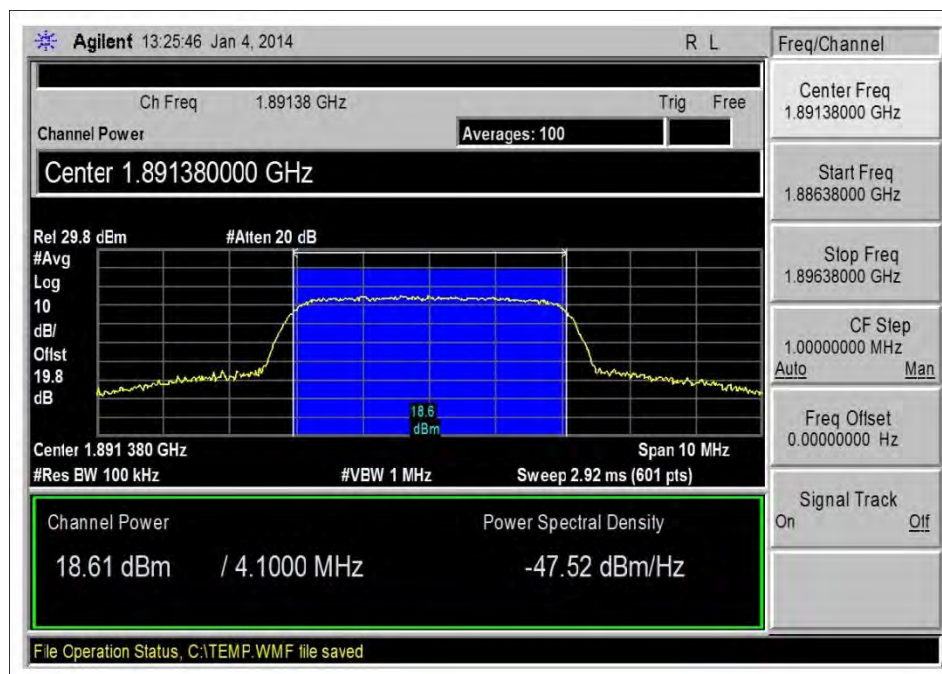
776-787MHz UL, AWGN



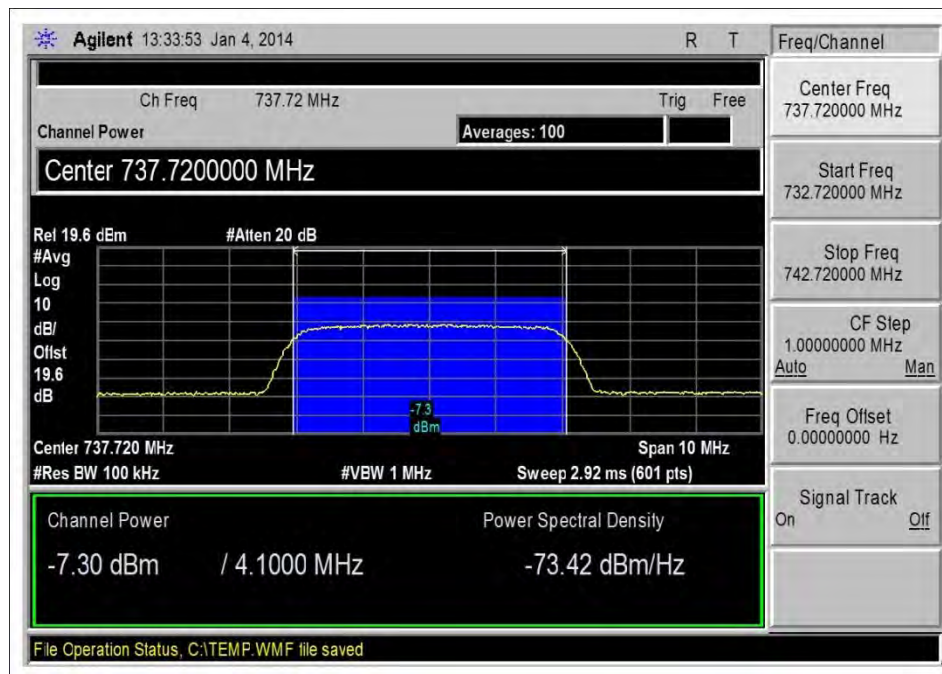
824-849MHz UL, AWGN



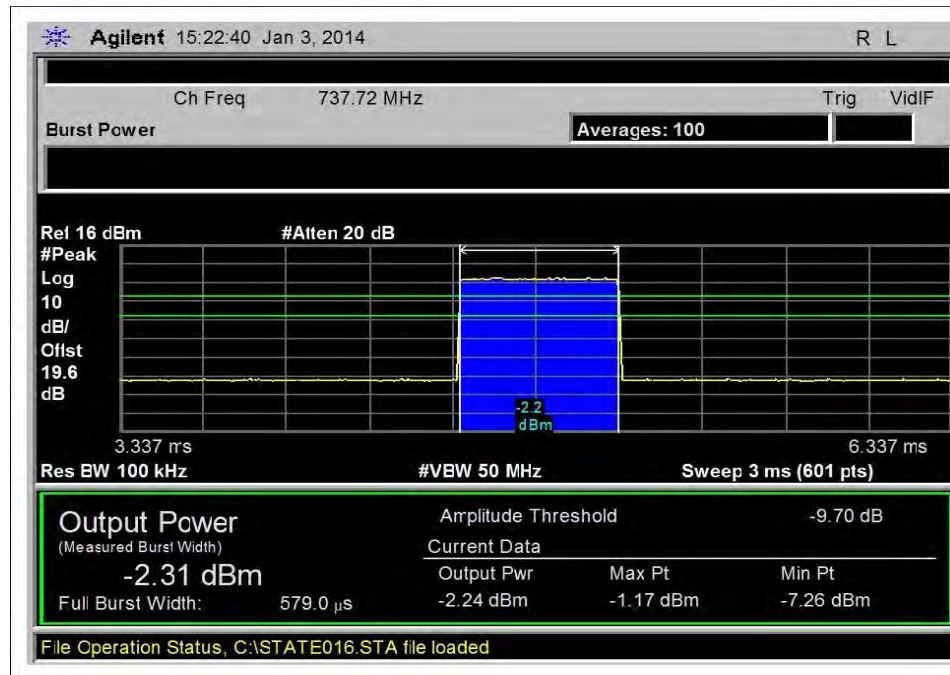
1710-1755MHz UL, AWGN



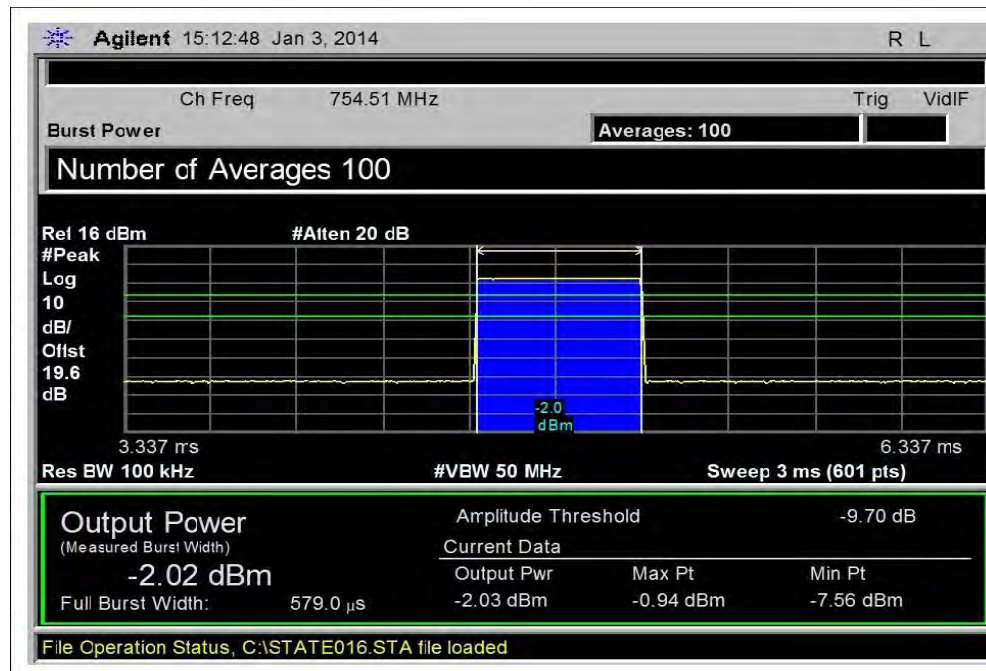
1850-1915MHz UL, AWGN



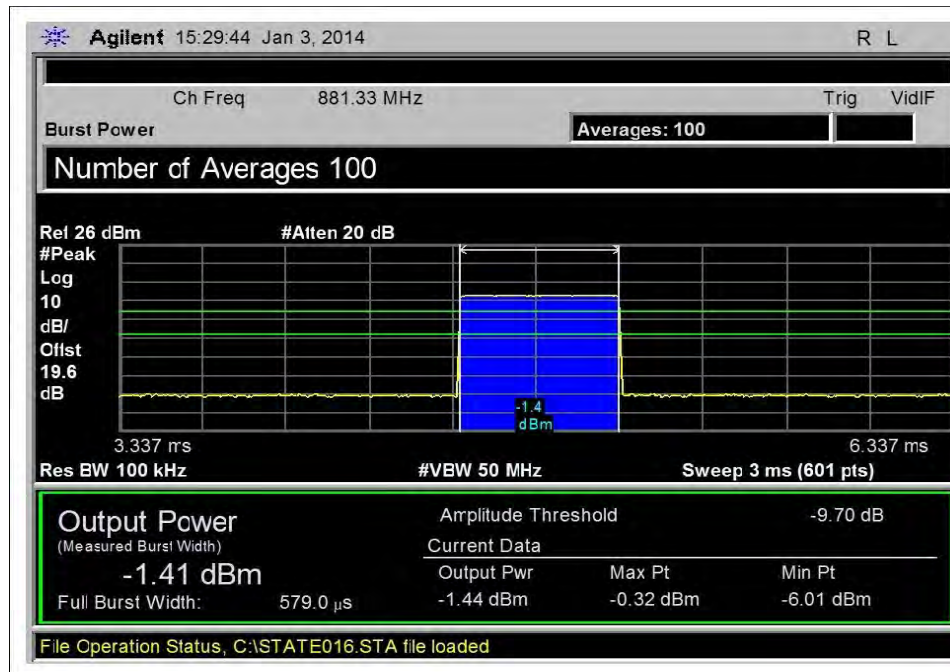
728-746MHz DL, AWGN



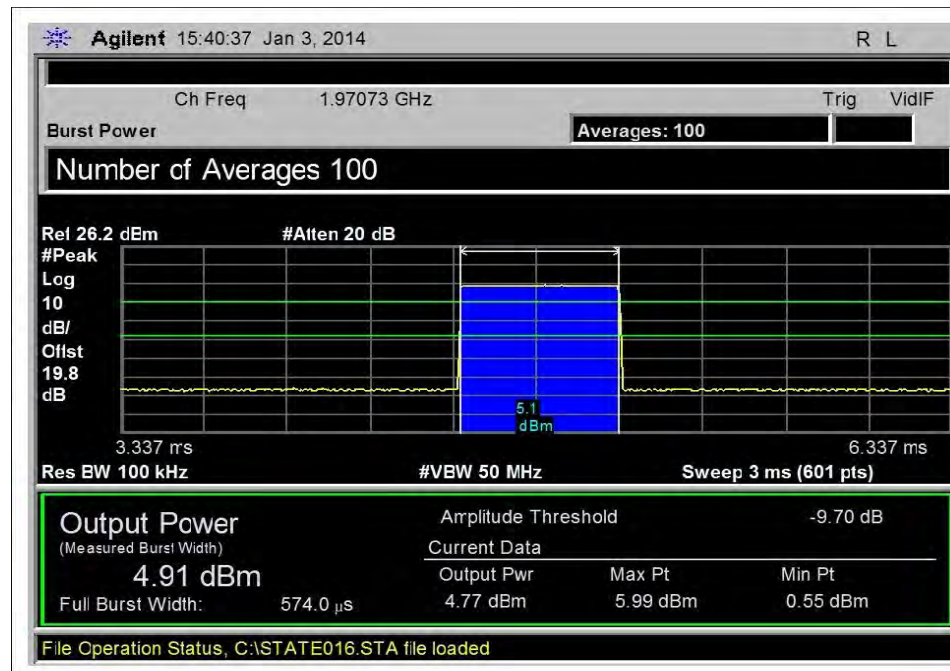
728-746MHz DL, GSM



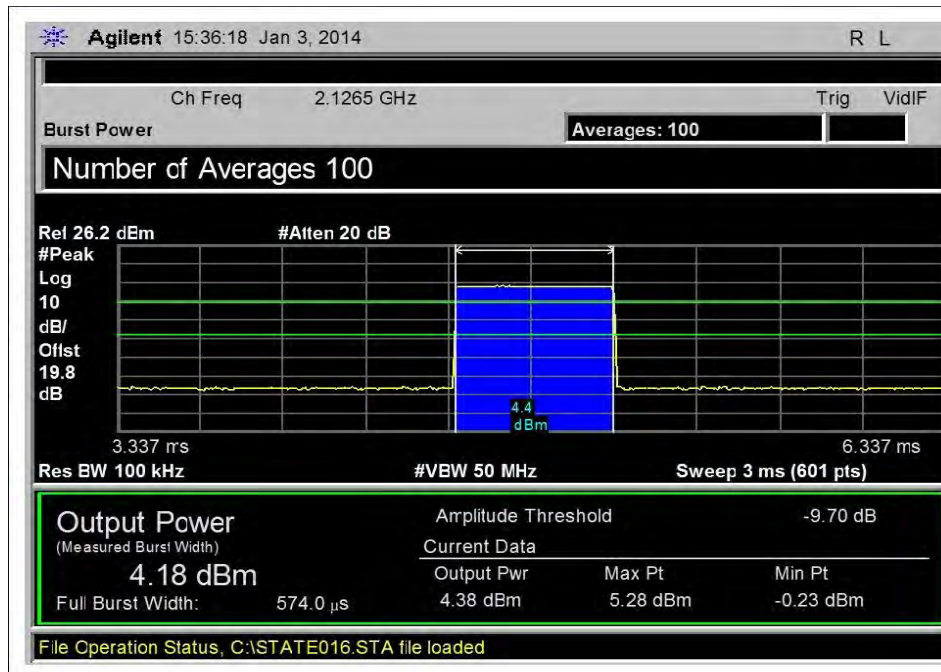
746-757MHz DL, GSM



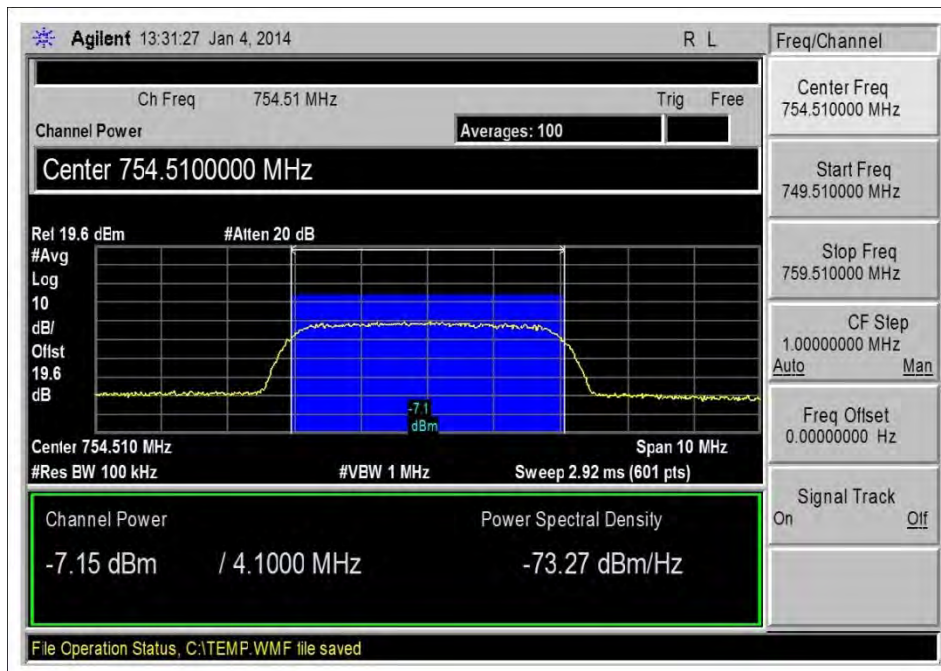
869-894MHz DL, GSM



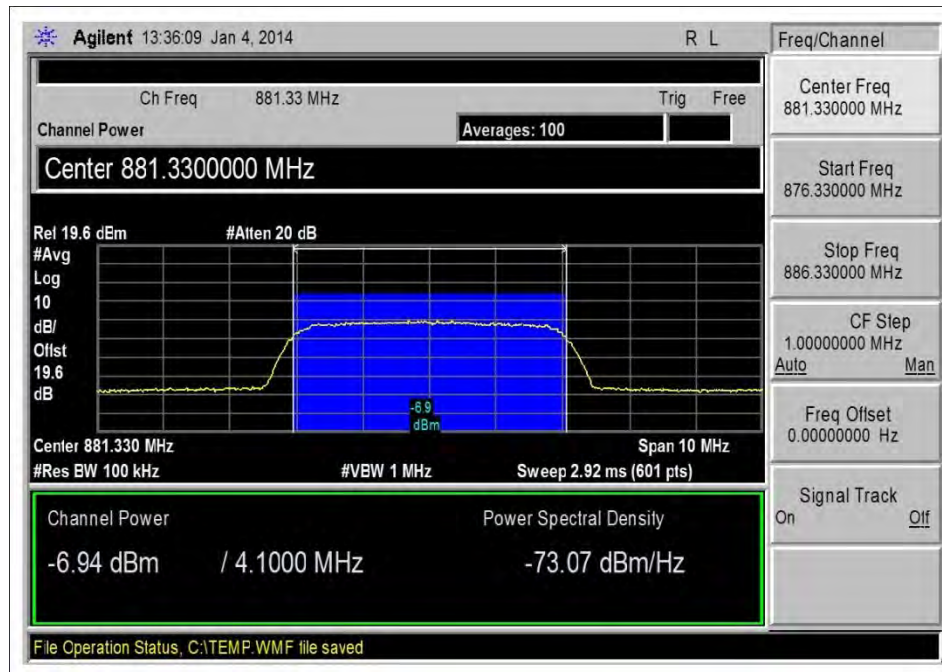
1930-1995MHz DL, GSM



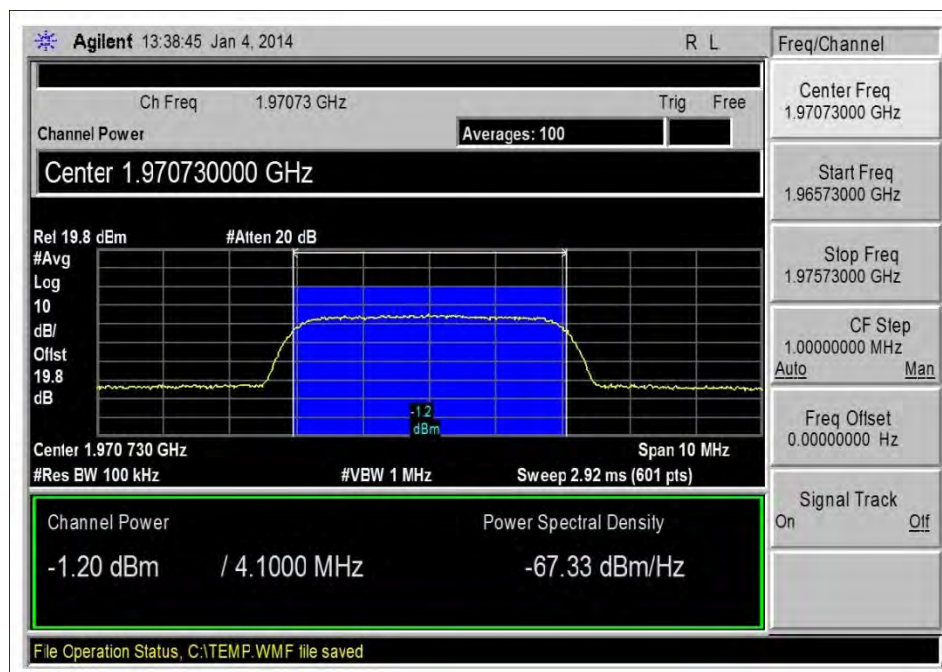
2110-2155 DL, GSM



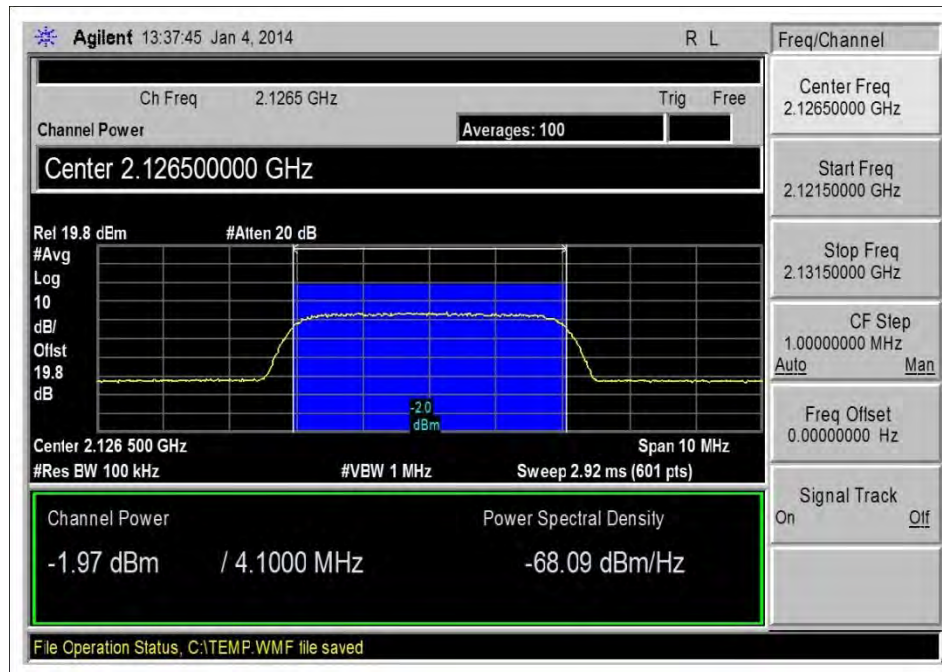
746-757MHz DL, AWGN



869-894MHz DL, AWGN



1930-1995MHz DL, AWGN



2110-2155MHz DL, AWGN

**Test Setup Photo(s)**



## Test Conditions / Setup

Test Location: CKC Laboratories, Inc. • 110 North Olinda Place • Brea, CA 92823 • 714-993-6112

Customer: **Cellphone-Mate, Inc**  
Specification: **7.3 Maximum Booster Gain Computation**

Work Order #: **95255** Date: 01/04/2014  
Test Type: **Conducted Emissions**  
Equipment: Fixed Wideband Consumer Signal Sequence#: 1  
Booster  
Manufacturer: Cellphone-Mate, Inc. Tested By: S. Yamamoto  
Model: Force-5 110V 60Hz  
S/N: (none)

### Test Equipment:

| Asset # | Description       | Model              | Calibration Date | Cal Due Date |
|---------|-------------------|--------------------|------------------|--------------|
| 02672   | Spectrum Analyzer | E4446A             | 9/4/2012         | 9/4/2014     |
| 03431   | Attenuator        | 89-20-21           | 9/5/2013         | 9/5/2015     |
| 02946   | Cable             | 32022-2-2909K-36TC | 7/31/2013        | 7/31/2015    |

### Equipment Under Test (\* = EUT):

| Function                                 | Manufacturer         | Model # | S/N    |
|------------------------------------------|----------------------|---------|--------|
| Fixed Wideband Consumer Signal Booster * | Cellphone-Mate, Inc. | Force-5 | (none) |

### Support Devices:

| Function                  | Manufacturer  | Model #  | S/N        |
|---------------------------|---------------|----------|------------|
| Signal Generator          | Agilent       | E4438C   | MY42082260 |
| AC to 18Vdc Power Adapter | Adapter Tech. | STD-1805 | (none)     |

### Test Conditions / Notes:

The EUT is placed on the test bench. Gain is set to the maximum gain. All dip switches are set to off position. Evaluation performed at the Outside (Donor) and Inside (Server) antenna port.  
Test performed at for each of the following bands: UL 776-787MHz, UL 698-716MHz, UL 824-849MHz, UL 1710-1755MHz, UL 1850-1915MHz, DL 746-757MHz, DL 728-746MHz, DL 869-894MHz, DL 2110-2155MHz, DL 1930-1995MHz  
Test procedure: The test was performed in accordance with section 7.3 of the FCC Publication: 935210 D03 Wideband Consumer Signal Booster Measurement Guidance DR04-41516: August 7, 2013.  
Test environment conditions: 21°C, 37%, 100kPa

| Pulse GSM                    |            |              |           | 4.1 MHz AWGN |              |          |
|------------------------------|------------|--------------|-----------|--------------|--------------|----------|
| Frequency                    | Input(dBm) | Output (dBm) | Gain (dB) | Input(dBm)   | Output (dBm) | Gain(dB) |
| DL 746-757                   | -58.8      | -2.0         | 56.8      | -64.6        | -7.15        | 57.5     |
| DL 728-746                   | -60.1      | -2.3         | 57.8      | -66.0        | -7.3         | 58.7     |
| DL 869-894                   | -61.2      | -1.4         | 59.8      | -67.4        | -6.94        | 60.5     |
| DL 2110-2155                 | -59.0      | 4.2          | 63.2      | -65.6        | -2.0         | 63.6     |
| DL 1930-1995                 | -59.2      | 4.9          | 64.1      | -65.8        | -1.2         | 64.6     |
| UL 1850-1915                 | -45.7      | 19.3         | 65.0      | -47.0        | 18.6         | 65.6     |
| UL 1710-1755                 | -44.4      | 19.5         | 63.9      | -45.3        | 19.4         | 64.7     |
| UL 824-849                   | -41.1      | 17.8         | 58.9      | -42.3        | 17.8         | 60.1     |
| UL 698-716                   | -39.5      | 18.7         | 58.2      | -41.2        | 17.8         | 59.0     |
| UL 776-787                   | -41.5      | 18.2         | 59.7      | -41.5        | 16.3         | 58.9     |
| Pulse GSM                    |            |              |           | 4.1 MHz AWGN |              |          |
| UL gain vs DL gain 1850/1930 |            | 0.9 dB       |           | 1.0 dB       |              |          |
| UL gain vs DL gain 1710/2110 |            | 0.7 dB       |           | 1.0 dB       |              |          |
| UL gain vs DL gain 824/869   |            | -0.9 dB      |           | -0.4 dB      |              |          |
| UL gain vs DL gain 698/728   |            | 0.4 dB       |           | 0.3 dB       |              |          |
| UL gain vs DL gain 776/746   |            | 2.9 dB       |           | 0.3 dB       |              |          |

| Pulse GSM    |              |          |            |             |            |
|--------------|--------------|----------|------------|-------------|------------|
| Frequency    | Output Power | Ant Gain | Cable Loss | EIRP(dBm)   | Limit(dBm) |
| DL 746-757   | -2.0         | 7        | 2.53       | <b>2.5</b>  | 17         |
| DL 728-746   | -2.3         | 7        | 2.53       | <b>2.2</b>  | 17         |
| DL 869-894   | -1.4         | 7        | 2.63       | <b>3.0</b>  | 17         |
| DL 2110-2155 | 4.2          | 10       | 3.77       | <b>10.4</b> | 17         |
| DL 1930-1995 | 4.9          | 10       | 3.57       | <b>11.3</b> | 17         |
| UL 1850-1915 | 19.3         | 10       | 5.43       | <b>23.9</b> | 30         |
| UL 1710-1755 | 19.5         | 10       | 5.11       | <b>24.4</b> | 30         |
| UL 824-849   | 17.8         | 10       | 3.89       | <b>23.9</b> | 30         |
| UL 698-716   | 18.7         | 10       | 3.74       | <b>25.0</b> | 30         |
| UL 776-787   | 18.2         | 10       | 3.74       | <b>24.5</b> | 30         |

| 4.1MHz AWGN  |              |          |            |             |            |
|--------------|--------------|----------|------------|-------------|------------|
| Frequency    | Output Power | Ant Gain | Cable Loss | EIRP(dBm)   | Limit(dBm) |
| DL 746-757   | -7.2         | 7        | 2.53       | <b>-2.7</b> | 17         |
| DL 728-746   | -7.3         | 7        | 2.53       | <b>-2.8</b> | 17         |
| DL 869-894   | -6.9         | 7        | 2.63       | <b>-2.6</b> | 17         |
| DL 2110-2155 | -2.0         | 10       | 3.77       | <b>4.3</b>  | 17         |
| DL 1930-1995 | -1.2         | 10       | 3.57       | <b>5.2</b>  | 17         |
| UL 1850-1915 | 18.6         | 10       | 5.43       | <b>23.2</b> | 30         |
| UL 1710-1755 | 19.4         | 10       | 5.11       | <b>24.3</b> | 30         |
| UL 824-849   | 17.8         | 10       | 3.89       | <b>23.9</b> | 30         |
| UL 698-716   | 17.8         | 10       | 3.74       | <b>24.1</b> | 30         |
| UL 776-787   | 17.4         | 10       | 3.74       | <b>23.7</b> | 30         |

### Test Setup Photo(s)

**Note:** For section 7.3 Maximum Booster Gain Computation there is no setup photo since it consists only of calculations.

## Clause 7.4 Intermodulation Product

Test Location: CKC Laboratories, Inc. • 110 North Olinda Place • Brea, CA 92823 • 714-993-6112

Customer: **Cellphone-Mate, Inc**  
Specification: **7.4 Intermodulation Product**

Work Order #: **95255**

Date: 01/05/2014

Test Type: **Conducted Emissions**

Equipment: Fixed Wideband Consumer Signal  
Booster

Manufacturer: Cellphone-Mate, Inc.

Tested By: S. Yamamoto

Model: Force-5

110V 60Hz

S/N: (none)

### Test Equipment:

| Asset # | Description       | Model              | Calibration Date | Cal Due Date |
|---------|-------------------|--------------------|------------------|--------------|
| 02672   | Spectrum Analyzer | E4446A             | 9/4/2012         | 9/4/2014     |
| 03431   | Attenuator        | 89-20-21           | 9/5/2013         | 9/5/2015     |
| 02946   | Cable             | 32022-2-2909K-36TC | 7/31/2013        | 7/31/2015    |

### Equipment Under Test (\* = EUT):

| Function                                 | Manufacturer         | Model # | S/N    |
|------------------------------------------|----------------------|---------|--------|
| Fixed Wideband Consumer Signal Booster * | Cellphone-Mate, Inc. | Force-5 | (none) |

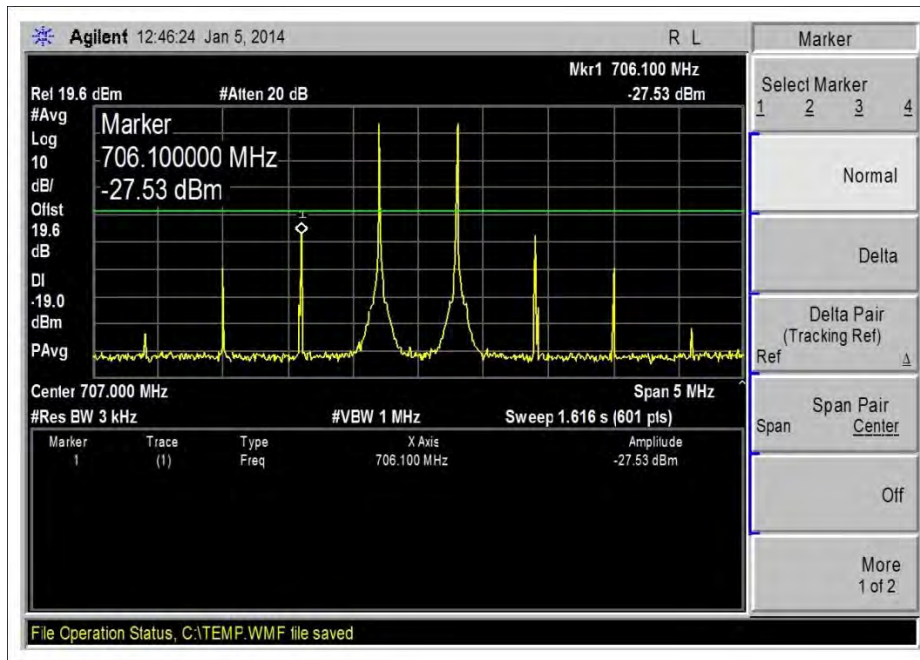
### Support Devices:

| Function                  | Manufacturer  | Model #  | S/N        |
|---------------------------|---------------|----------|------------|
| Signal Generator          | Agilent       | E4438C   | MY42082260 |
| Signal Generator          | Agilent       | E4438C   | MY42081492 |
| Combiner                  | Anaren        | 44000    | 0583       |
| AC to 18Vdc Power Adapter | Adapter Tech. | STD-1805 | (none)     |

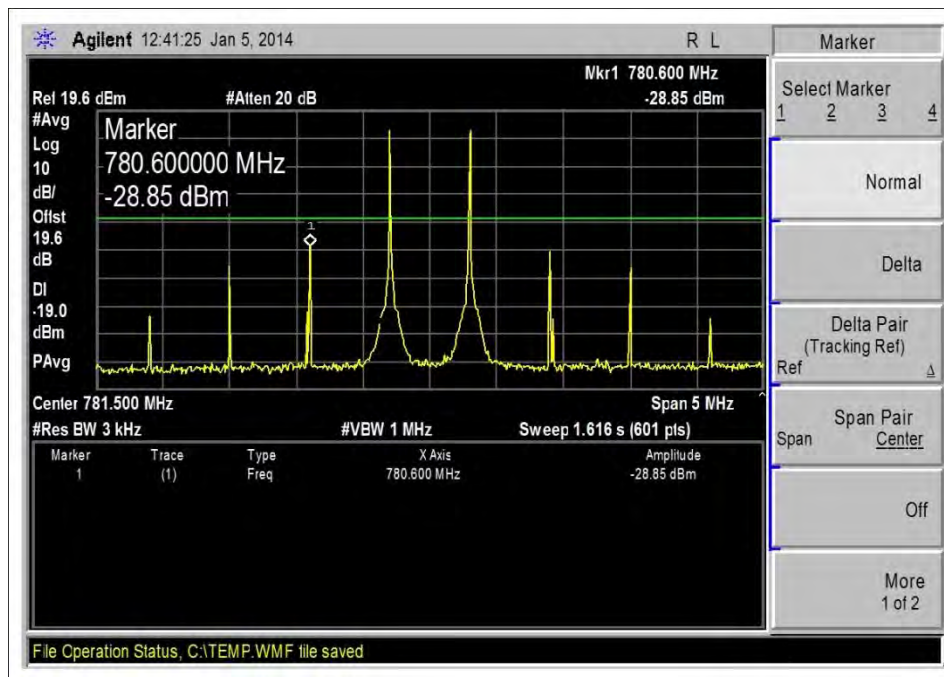
### Test Conditions / Notes:

The EUT is placed on the test bench. Gain is set to the maximum gain. All dip switches are set to off position. Evaluation performed at the Outside (Donor) and Inside (Server) antenna port.  
Test performed at for each of the following bands: UL 776-787MHz, UL 698-716MHz, UL 824-849MHz, UL 1710-1755MHz, UL 1850-1915MHz, DL 746-757MHz, DL 728-746MHz, DL 869-894MHz, DL 2110-2155MHz, DL 1930-1995MHz  
Intermodulation Product Test procedure: The test was performed in accordance with section 7.4 of the FCC Publication: 935210 D03 Wideband Consumer Signal Booster Measurement Guidance DR04-41516: August 7, 2013.  
Site D. Test environment conditions: 21°C, 37%, 100kPa

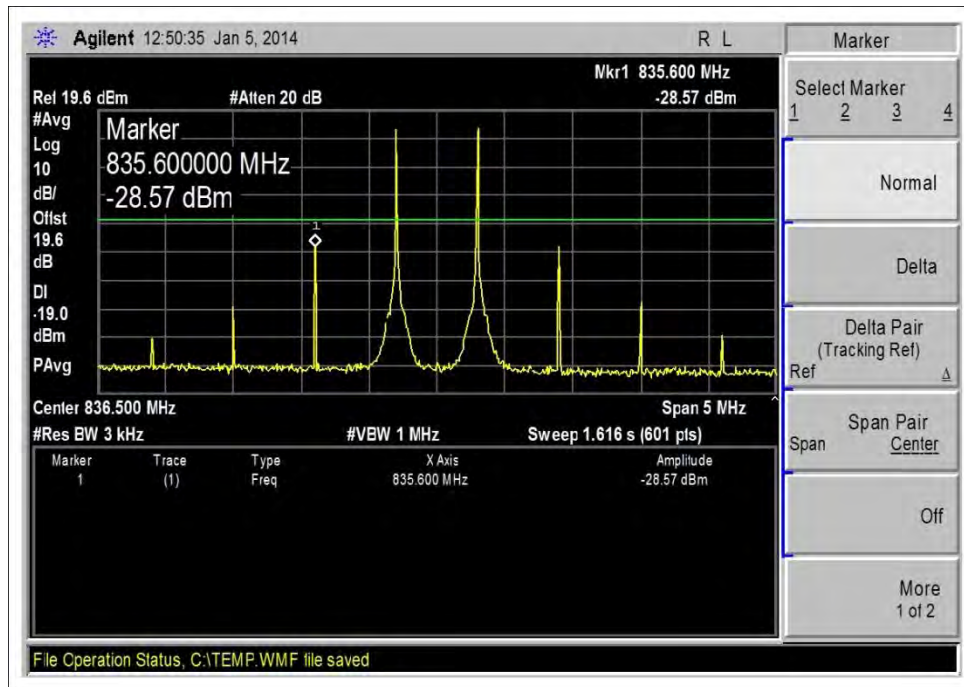
## Test Data



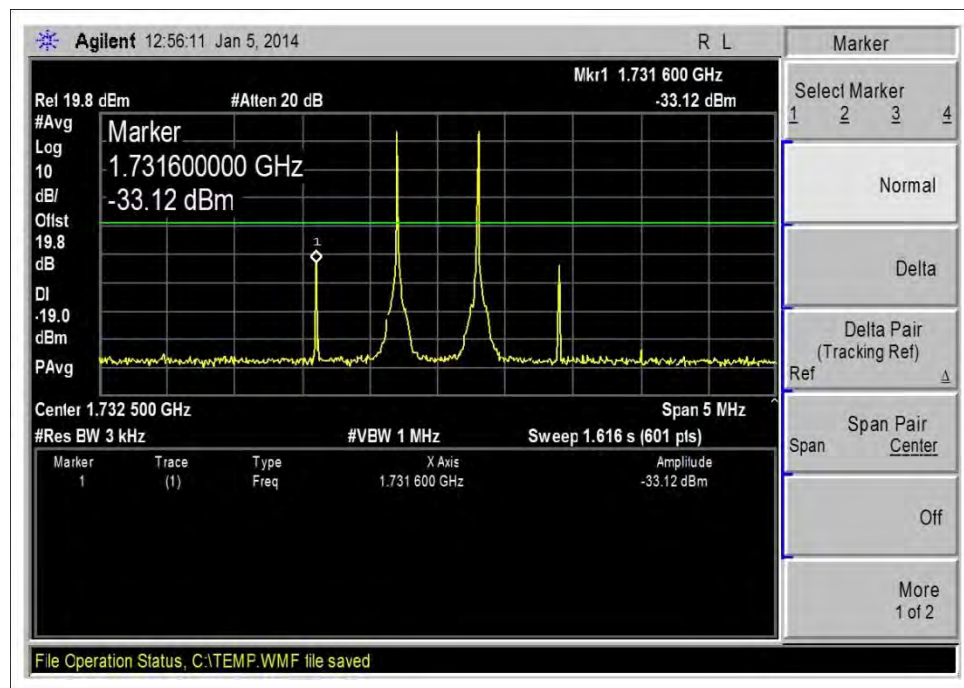
698-716MHz, UL



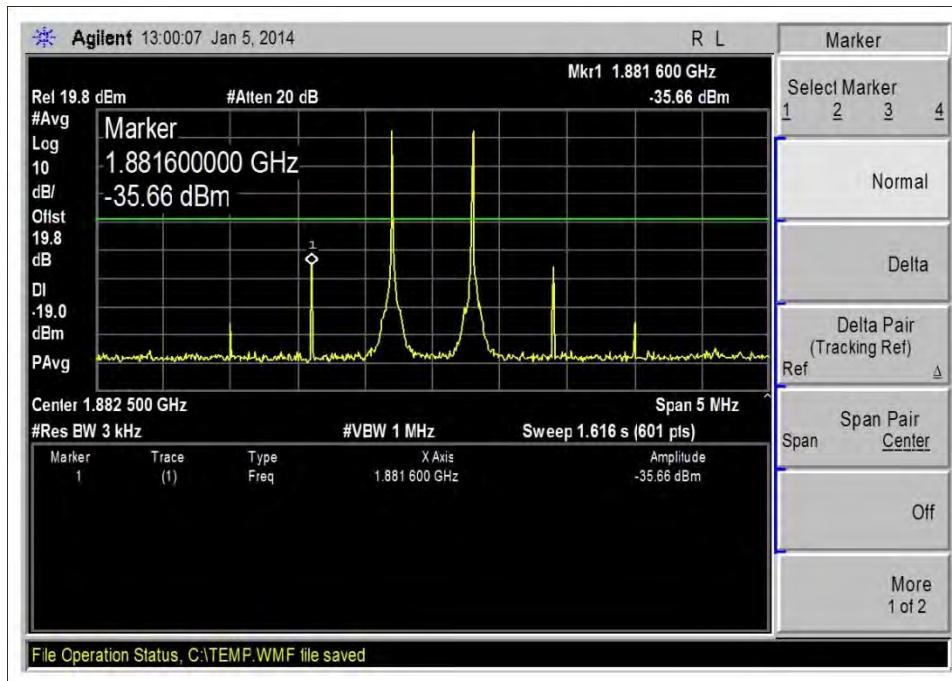
776-787MHz, UL



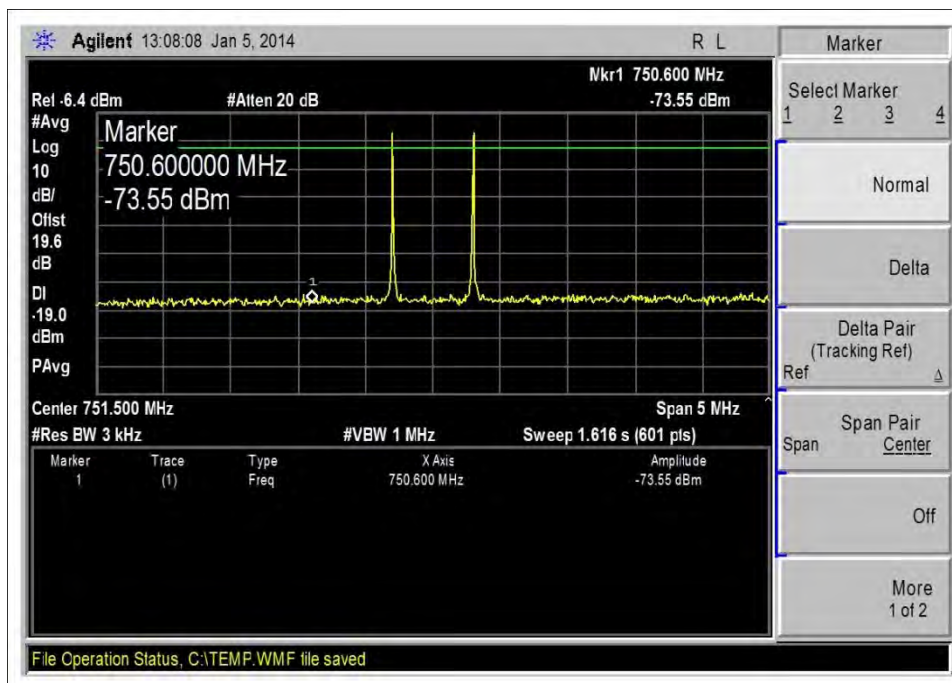
824-849MHz, UL



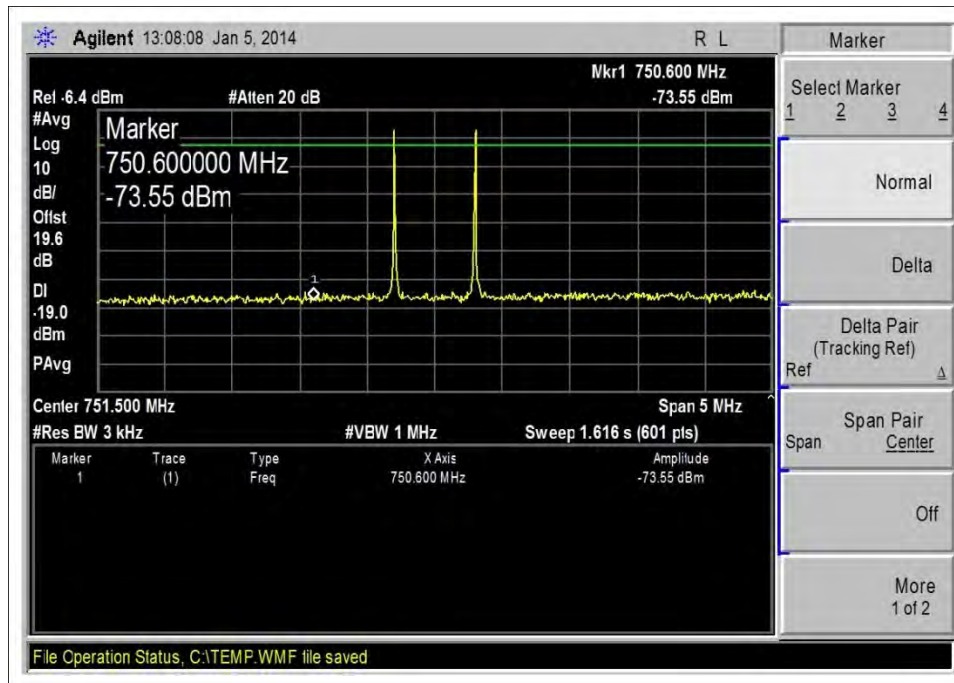
1710-1755MHz, UL



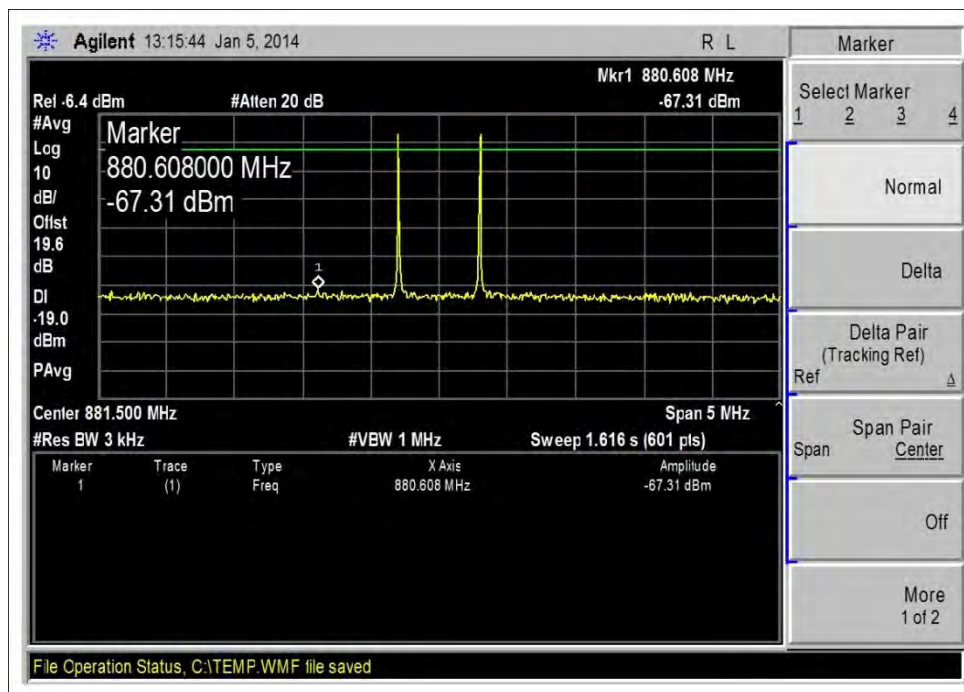
1850-1915MHz, UL



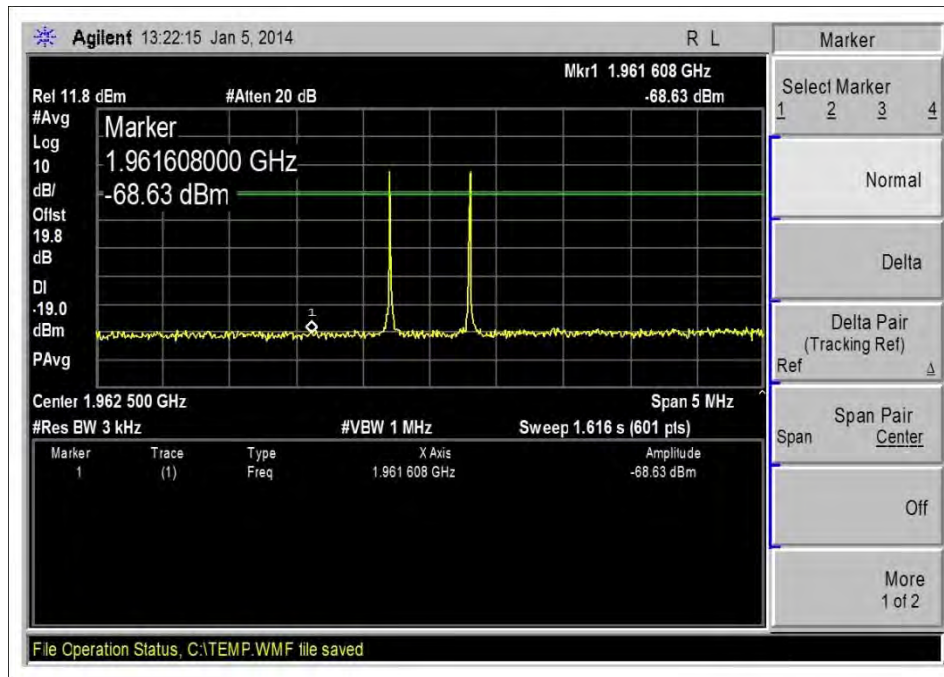
728-746MHz, DL



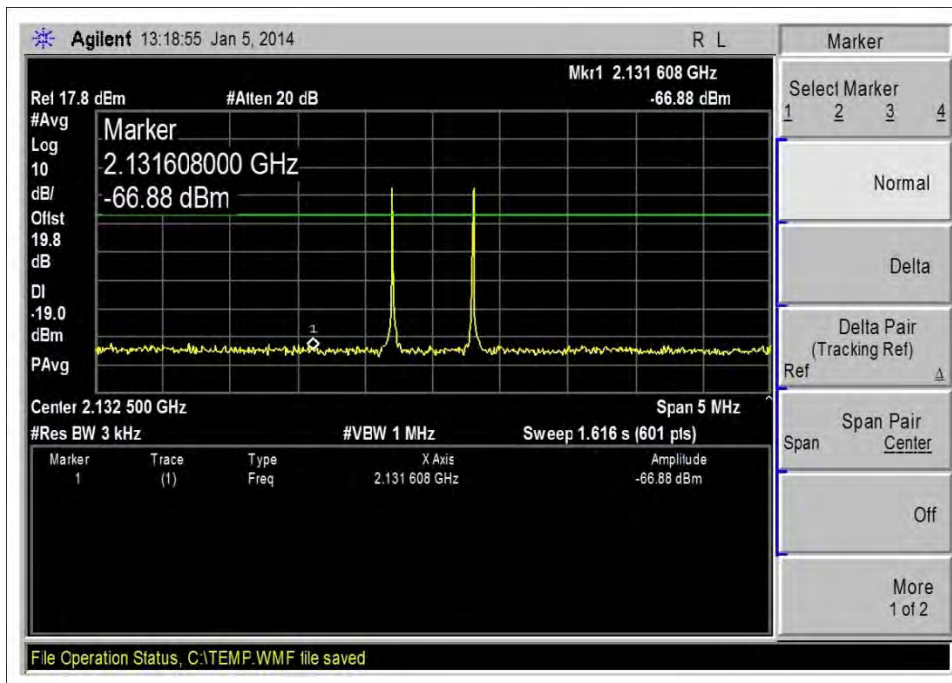
746-757MHz, DL



869-894MHz, DL



1930-1995MHz, DL



2110-2155MHz, DL

**Test Setup Photo(s)**



## Clause 7.5 Out of Band Emissions

Test Location: CKC Laboratories, Inc. • 110 North Olinda Place • Brea, CA 92823 • 714-993-6112

Customer: **Cellphone-Mate, Inc**  
Specification: **7.5 Out of band emissions**  
Work Order #: **95255**

Date: 01/07,08/2014

Test Type: **Conducted Emissions**  
Equipment: Fixed Wideband Consumer Signal  
Booster

Manufacturer: Cellphone-Mate, Inc.  
Model: Force-5  
S/N: (none)

Tested By: S. Yamamoto  
110V 60Hz

### Test Equipment:

| Asset # | Description       | Model              | Calibration Date | Cal Due Date |
|---------|-------------------|--------------------|------------------|--------------|
| 02672   | Spectrum Analyzer | E4446A             | 9/4/2012         | 9/4/2014     |
| 03431   | Attenuator        | 89-20-21           | 9/5/2013         | 9/5/2015     |
| 02946   | Cable             | 32022-2-2909K-36TC | 7/31/2013        | 7/31/2015    |

### Equipment Under Test (\* = EUT):

| Function                                 | Manufacturer         | Model # | S/N    |
|------------------------------------------|----------------------|---------|--------|
| Fixed Wideband Consumer Signal Booster * | Cellphone-Mate, Inc. | Force-5 | (none) |

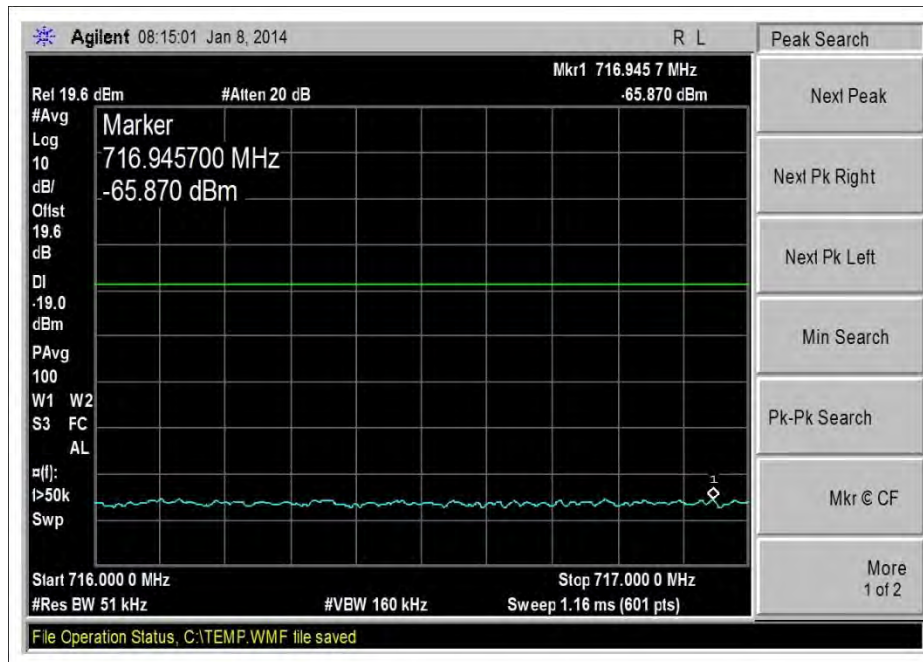
### Support Devices:

| Function                  | Manufacturer  | Model #  | S/N        |
|---------------------------|---------------|----------|------------|
| Signal Generator          | Agilent       | E4438C   | MY42081492 |
| AC to 18Vdc Power Adapter | Adapter Tech. | STD-1805 | (none)     |

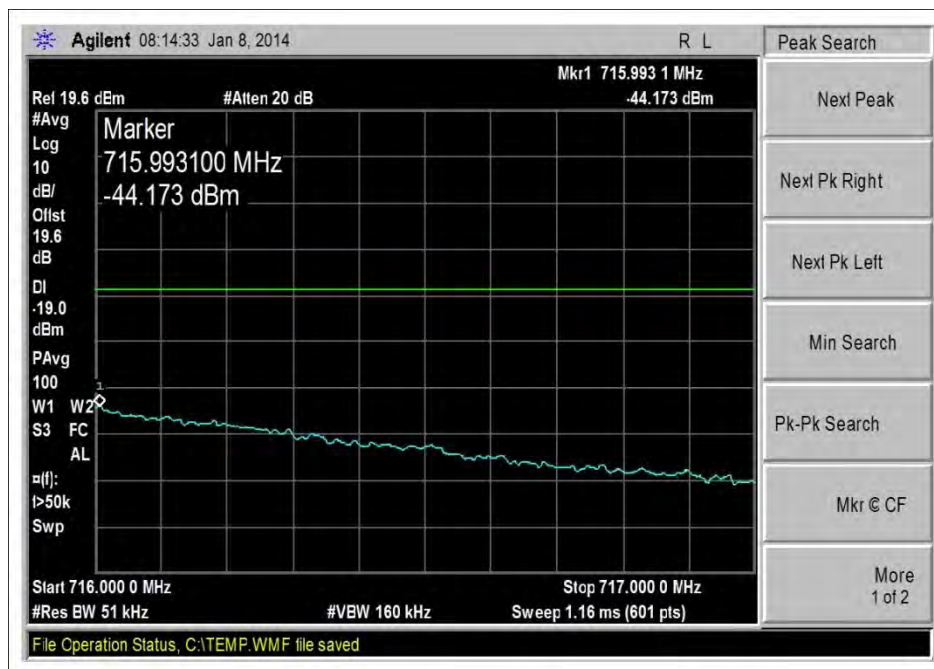
### Test Conditions / Notes:

The EUT is placed on the test bench. Gain is set to the maximum gain. All dip switches are set to off position. Evaluation performed at the Outside (Donor) and Inside (Server) antenna port.  
Test performed at for each of the following bands: UL 776-787MHz, UL 698-716MHz, UL 824-849MHz, UL 1710-1755MHz, UL 1850-1915MHz, DL 746-757MHz, DL 728-746MHz, DL 869-894MHz, DL 2110-2155MHz, DL 1930-1995MHz  
Out of band emissions test procedure: The test was performed in accordance with section 7.5 of the FCC Publication: 935210 D03 Wideband Consumer Signal Booster Measurement Guidance DR04-41516: August 7, 2013.  
Site D. Test environment conditions: 21°C, 37%, 100kPa

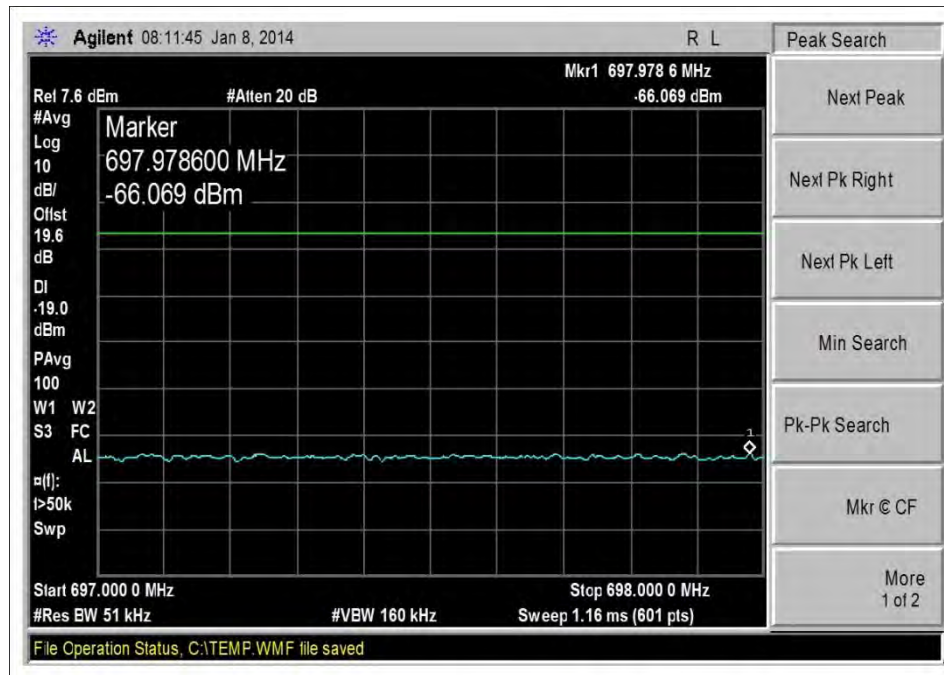
## Test Data



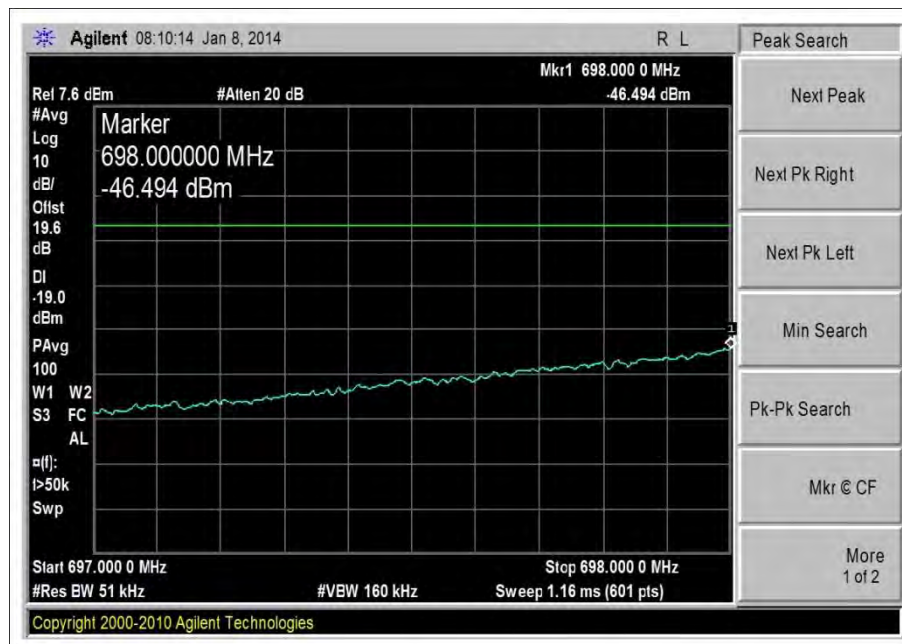
UL\_698-716MHz\_CDMA\_H\_0dBm



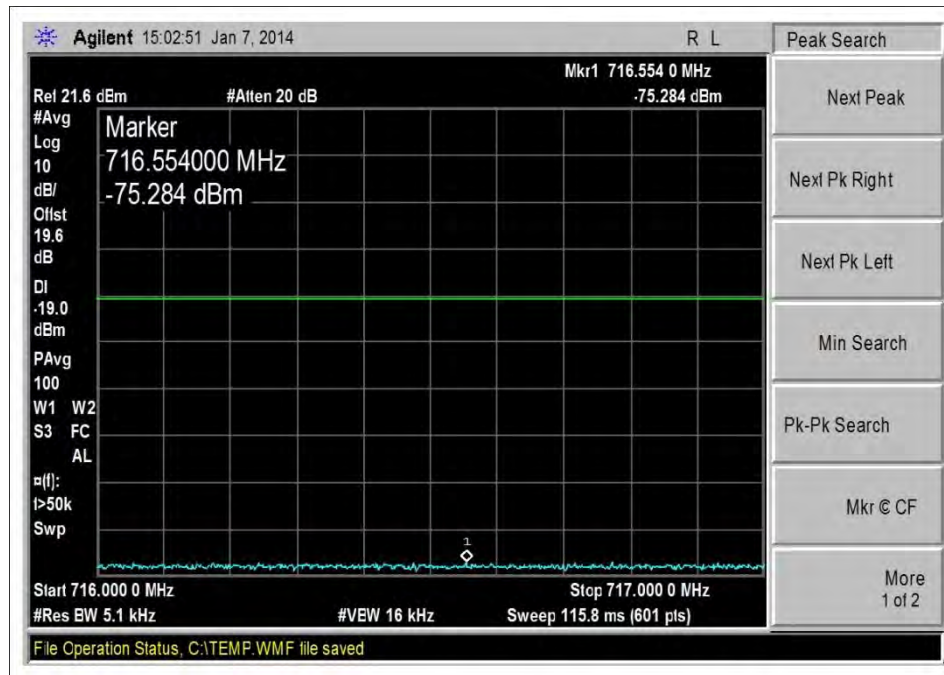
UL\_698-716MHz\_CDMA\_H\_-41dBm



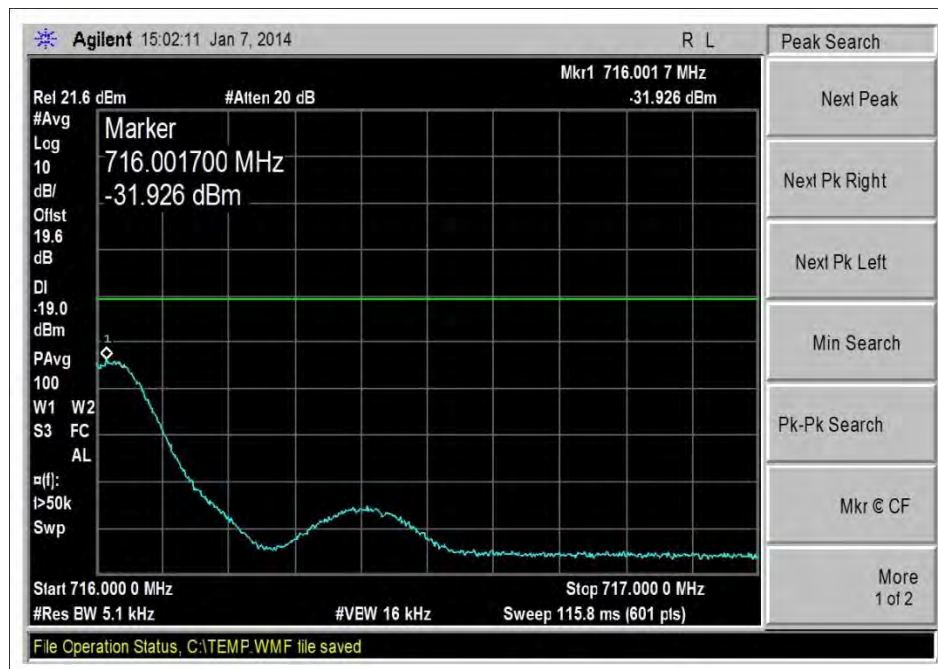
UL\_698-716MHz\_CDMA\_L\_0dBm



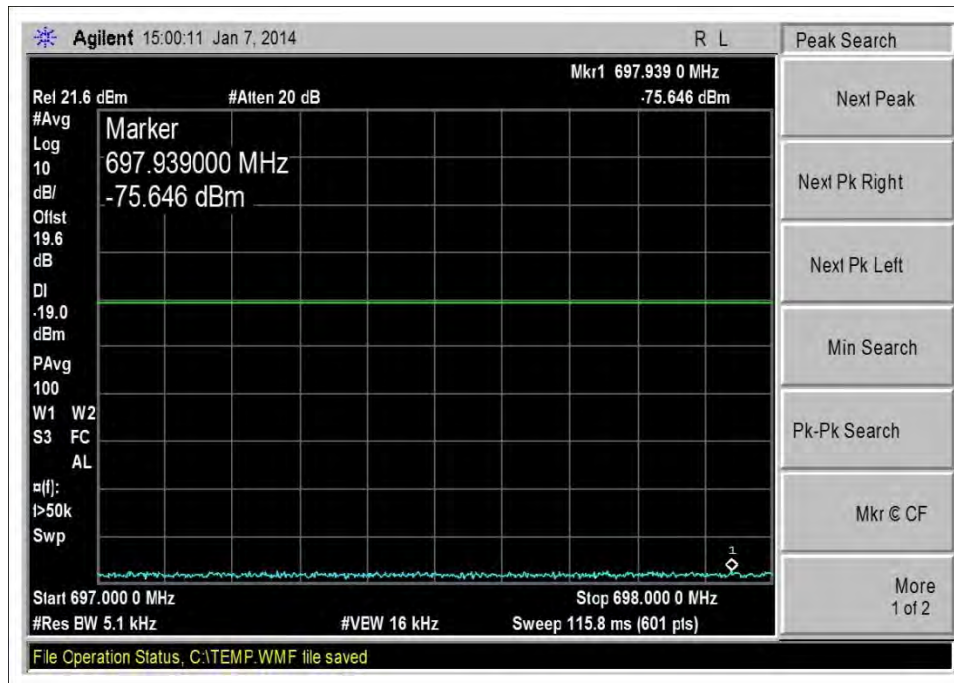
UL\_698-716MHz\_CDMA\_L\_-41dBm



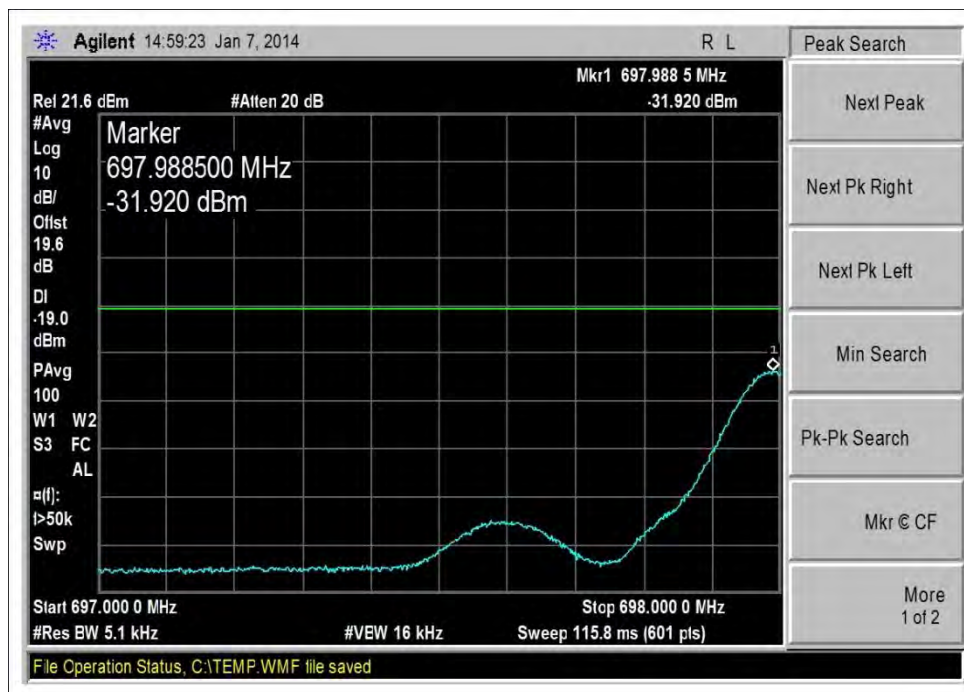
UL\_698-716MHz\_GSM\_H\_0dBm



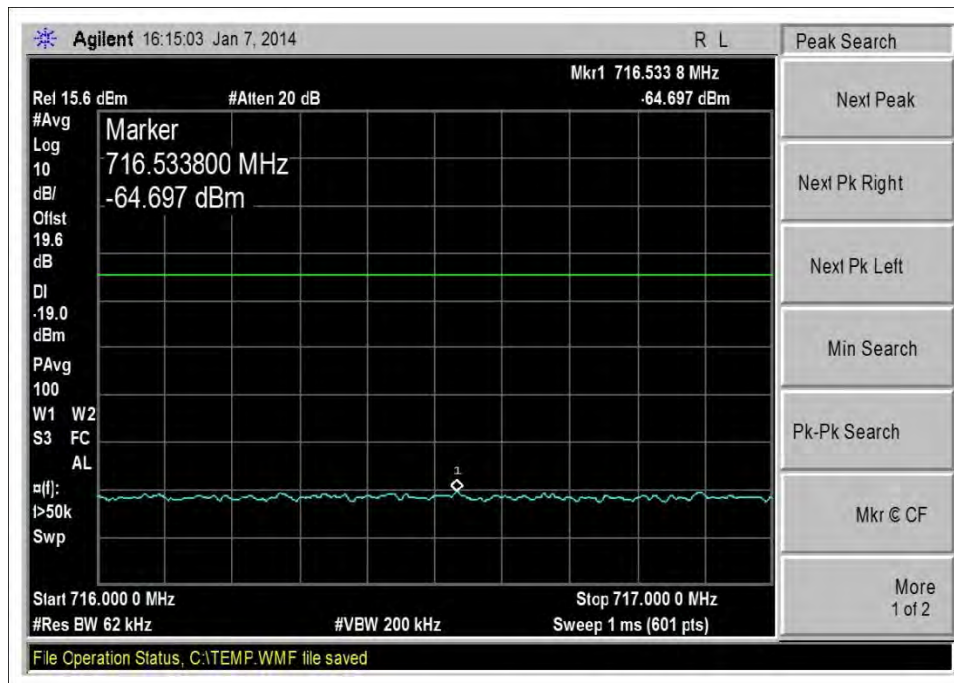
UL\_698-716MHz\_GSM\_H\_-34dBm



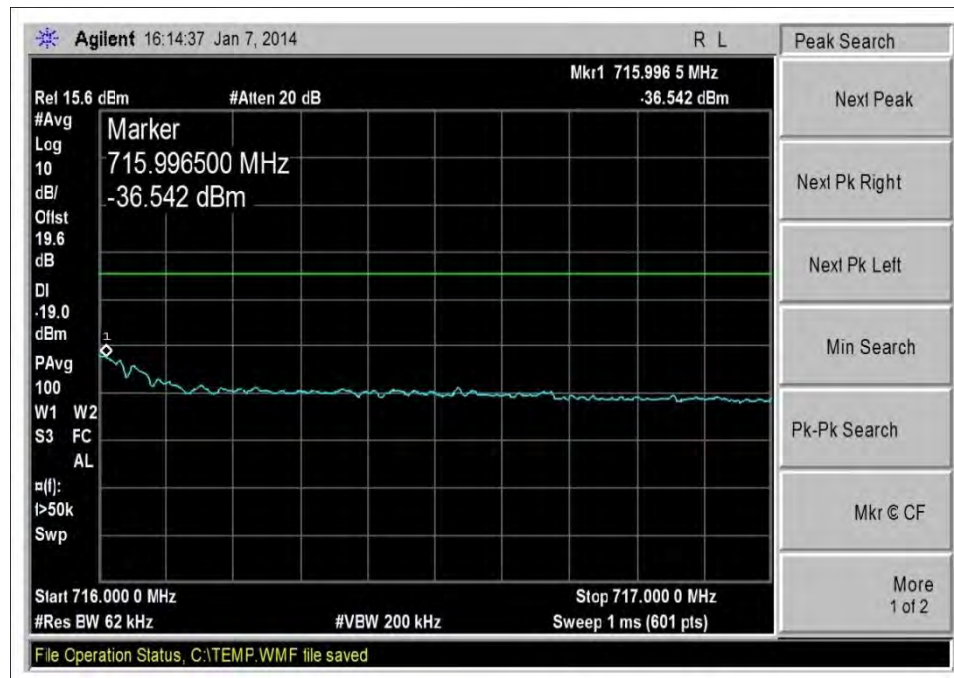
UL\_698-716MHz\_GSM\_L\_0dBm



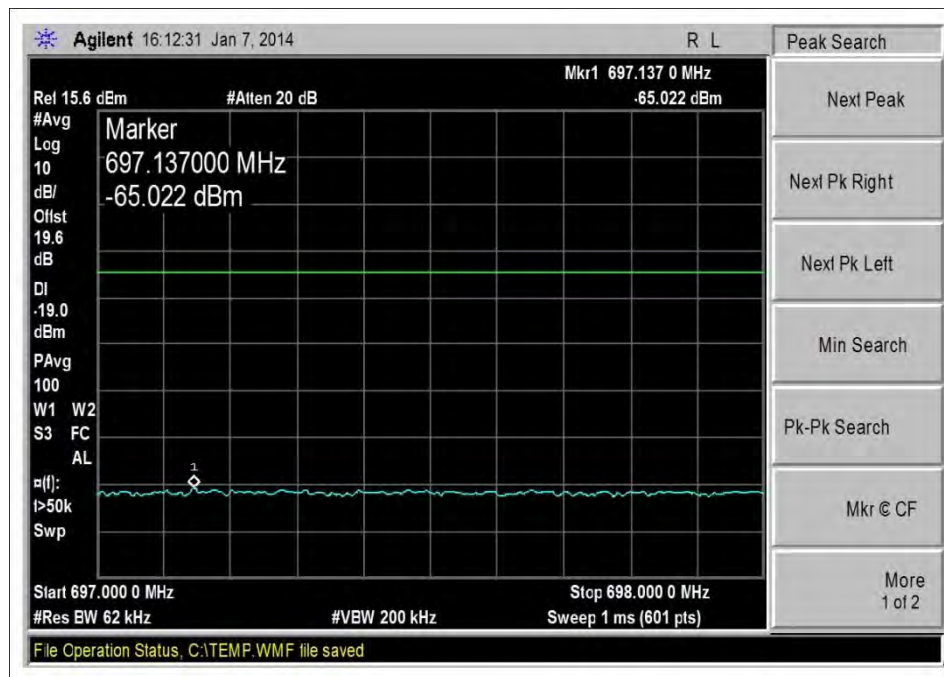
UL\_698-716MHz\_GSM\_L\_-36dBm



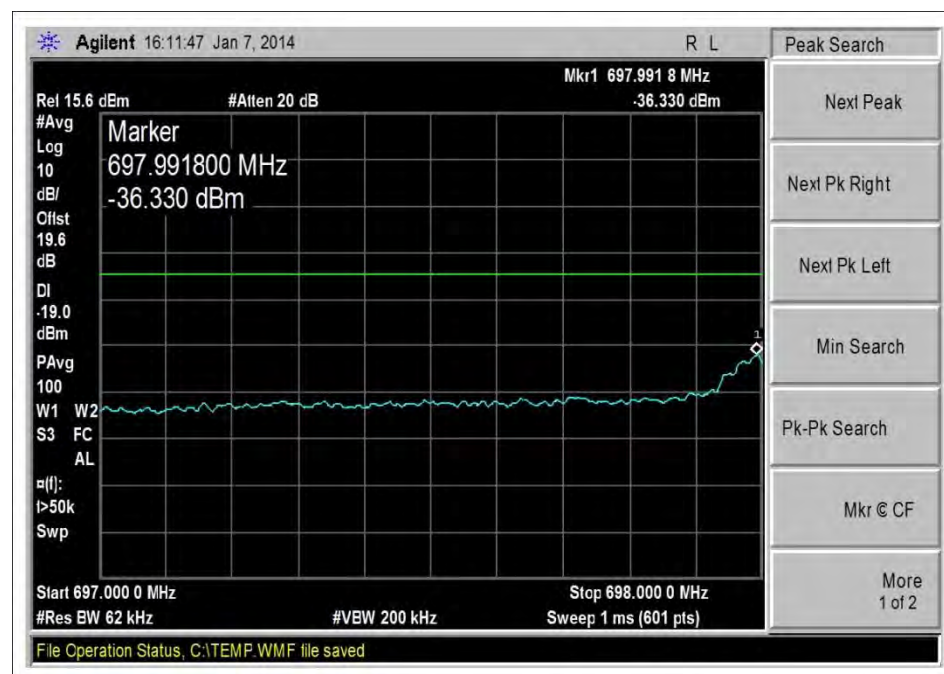
UL\_698-716MHz\_LTE\_H\_0dBm



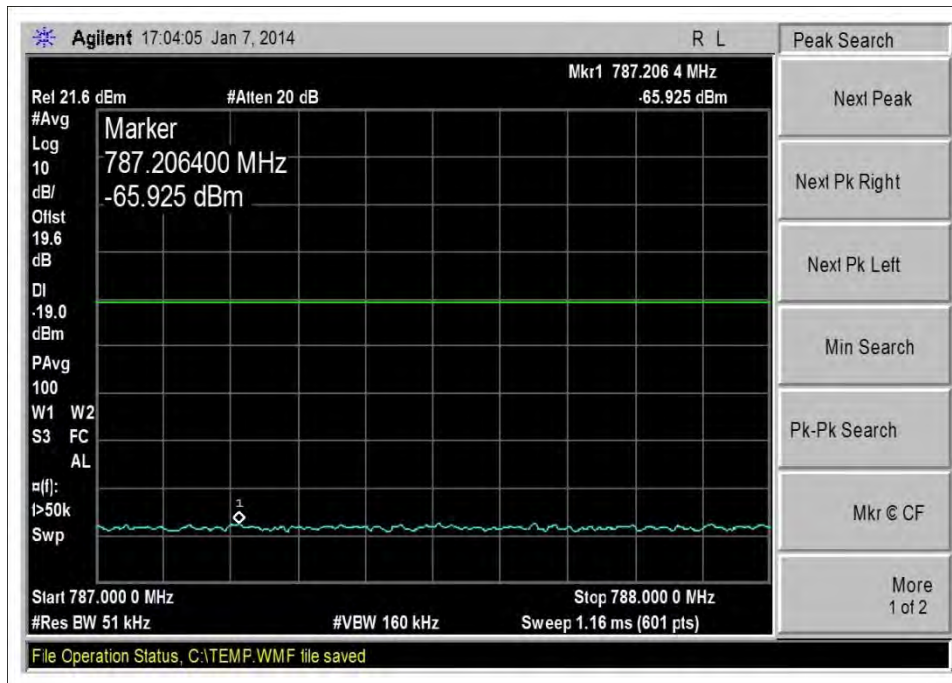
UL\_698-716MHz\_LTE\_H\_-39dBm



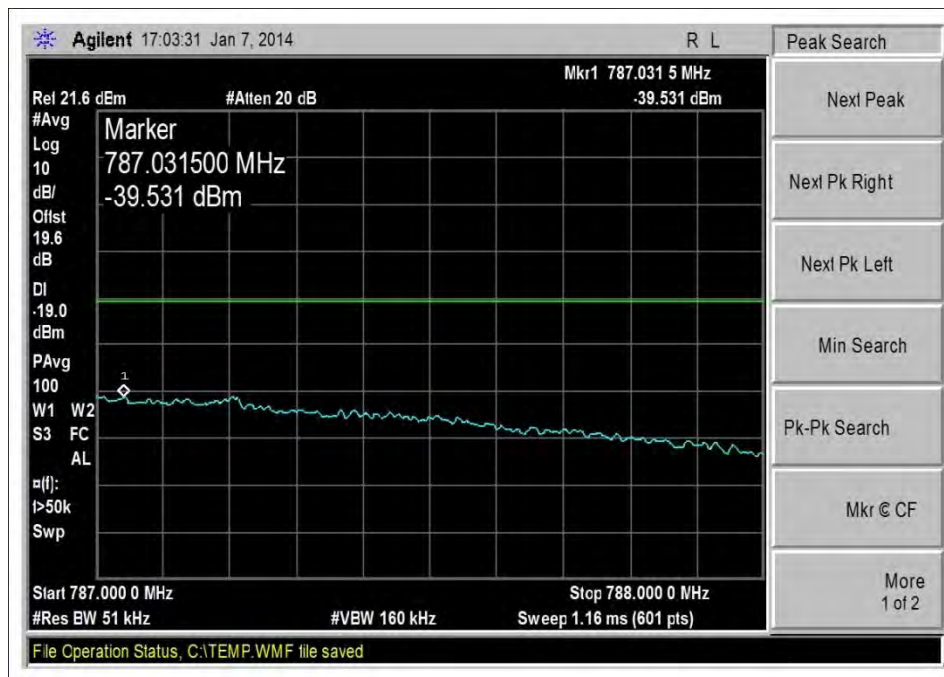
UL\_698-716MHz\_LTE\_L\_0dBm



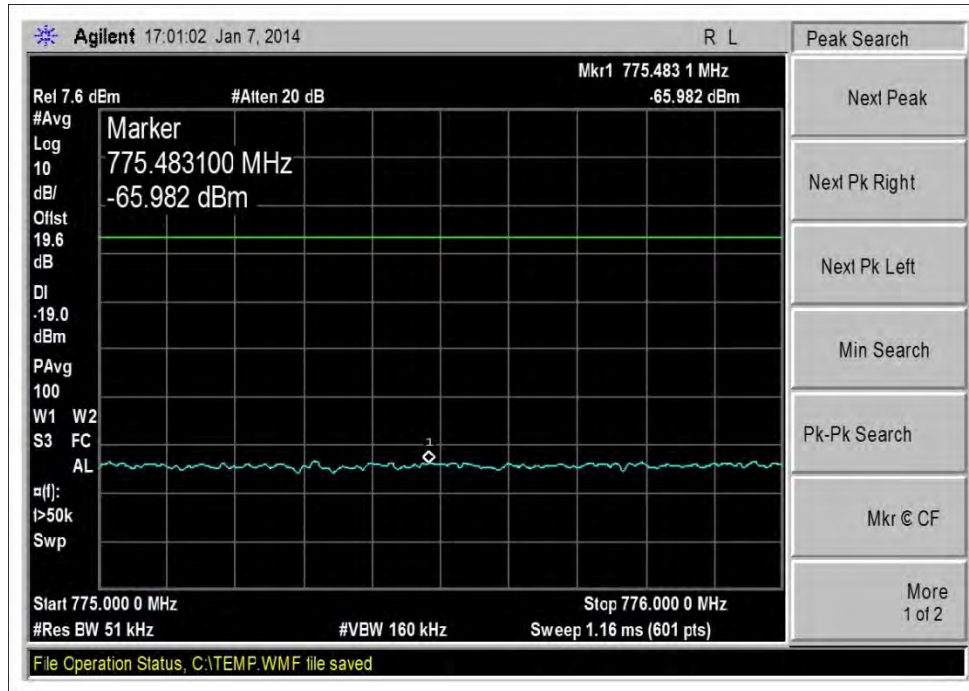
UL\_698-716MHz\_LTE\_L\_-40dBm



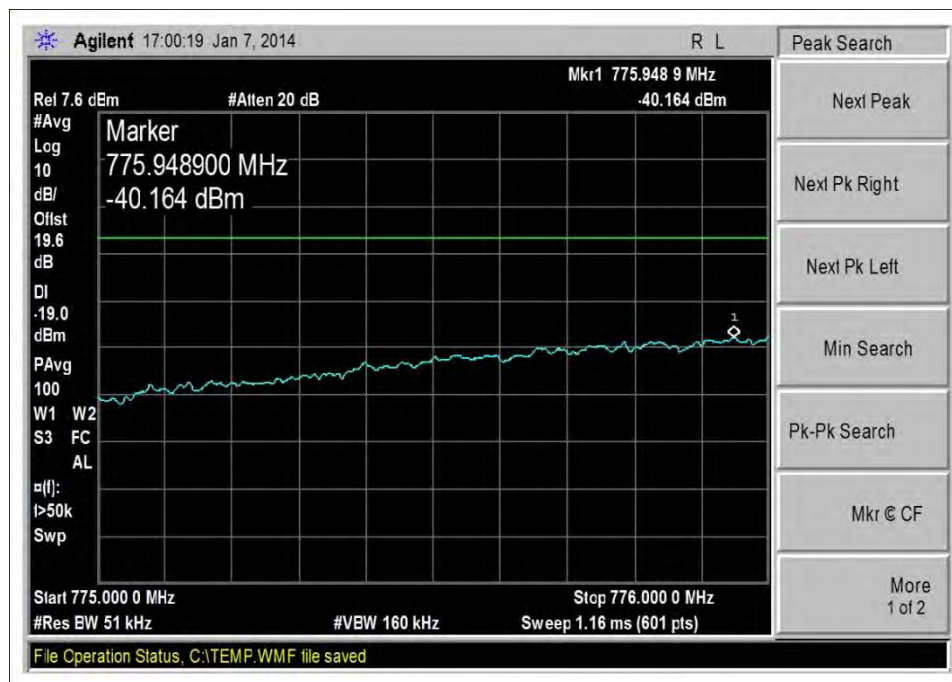
UL\_776-787MHz\_CDMA\_H\_0dBm



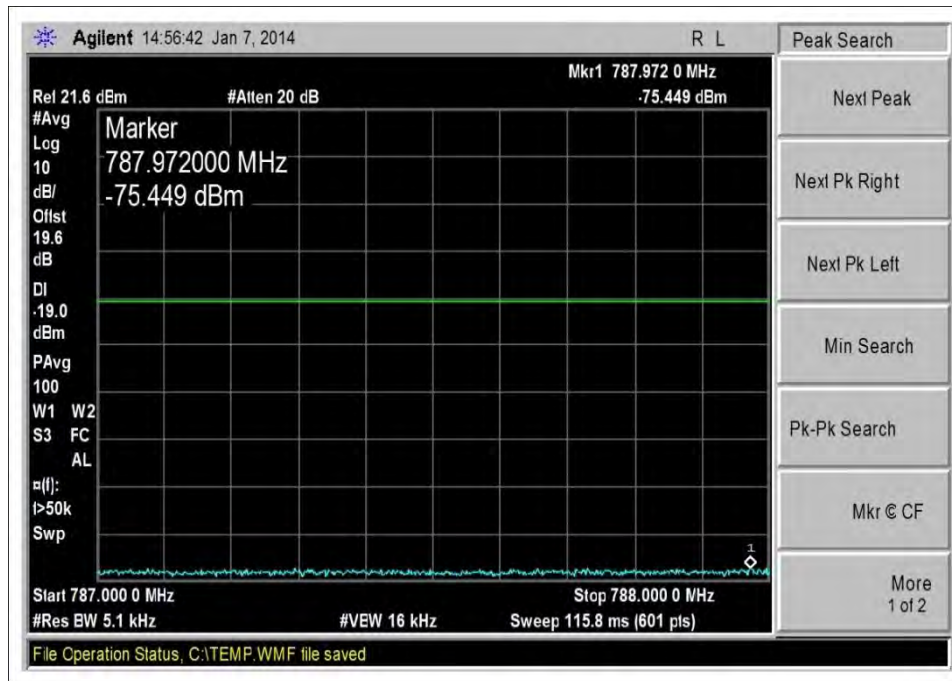
UL\_776-787MHz\_CDMA\_H\_-42dBm



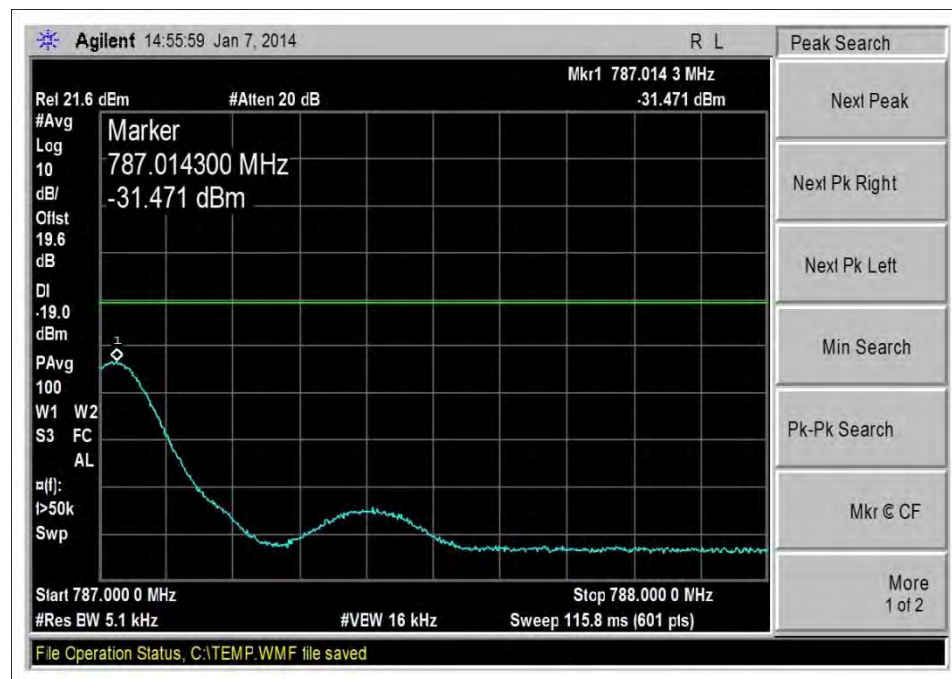
UL\_776-787MHz\_CDMA\_L\_0dBm



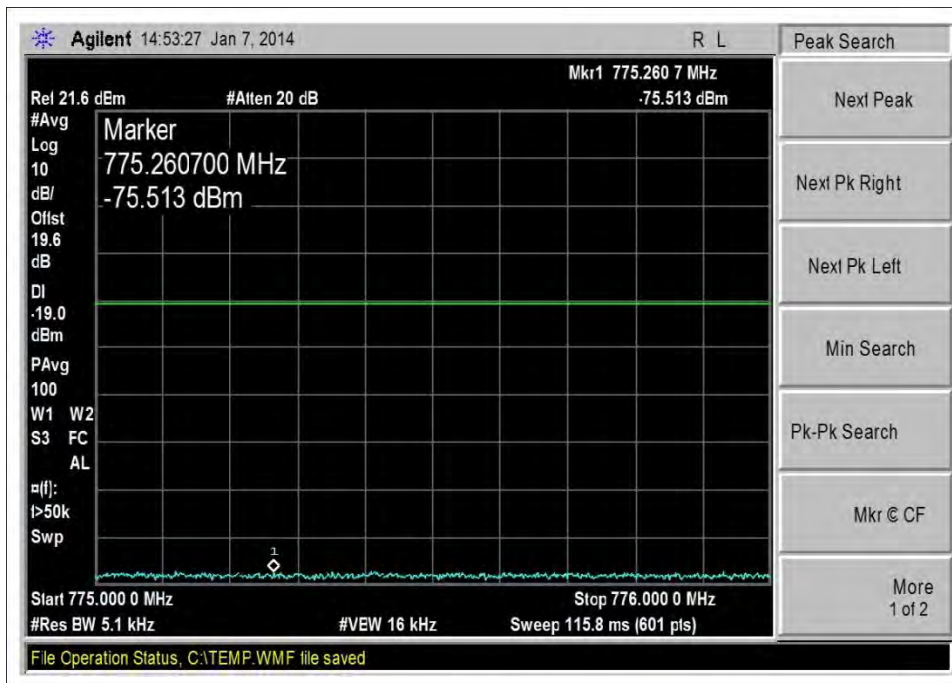
UL\_776-787MHz\_CDMA\_L\_-39dBm



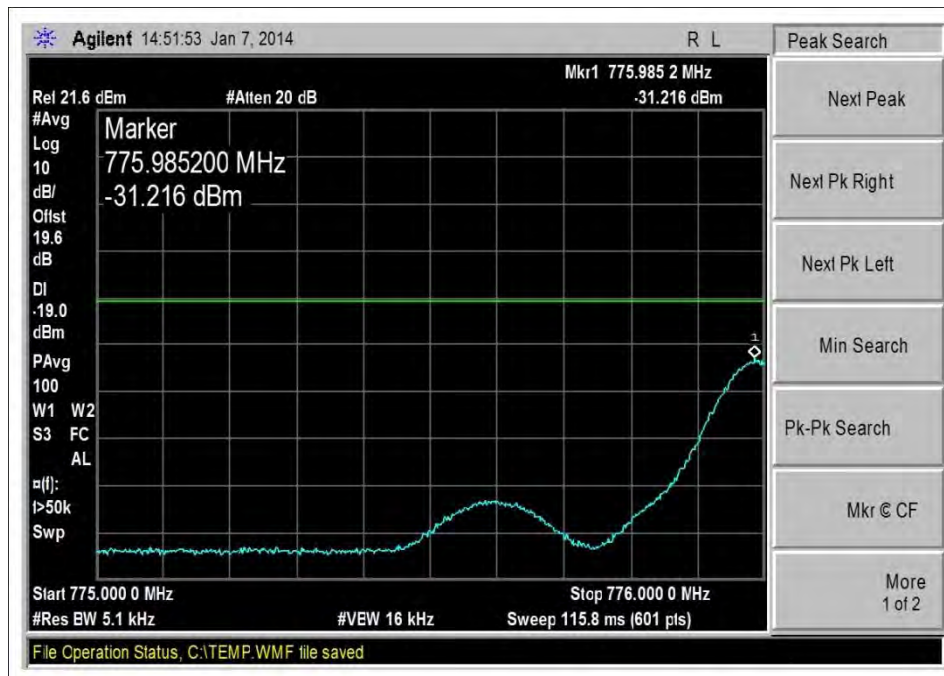
UL\_776-787MHz\_GSM\_H\_0dBm



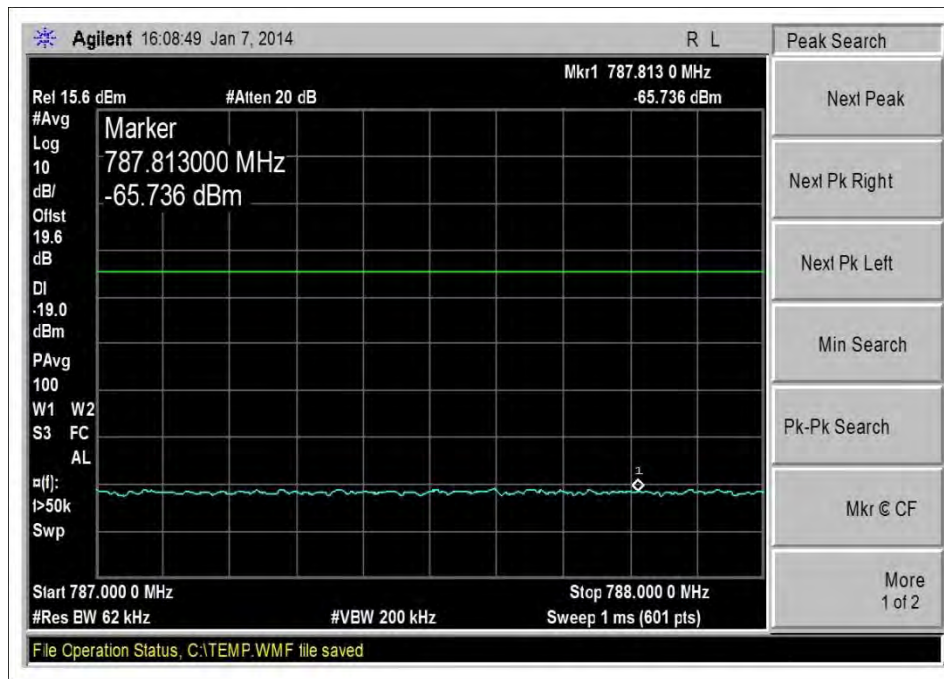
UL\_776-787MHz\_GSM\_H\_-38dBm



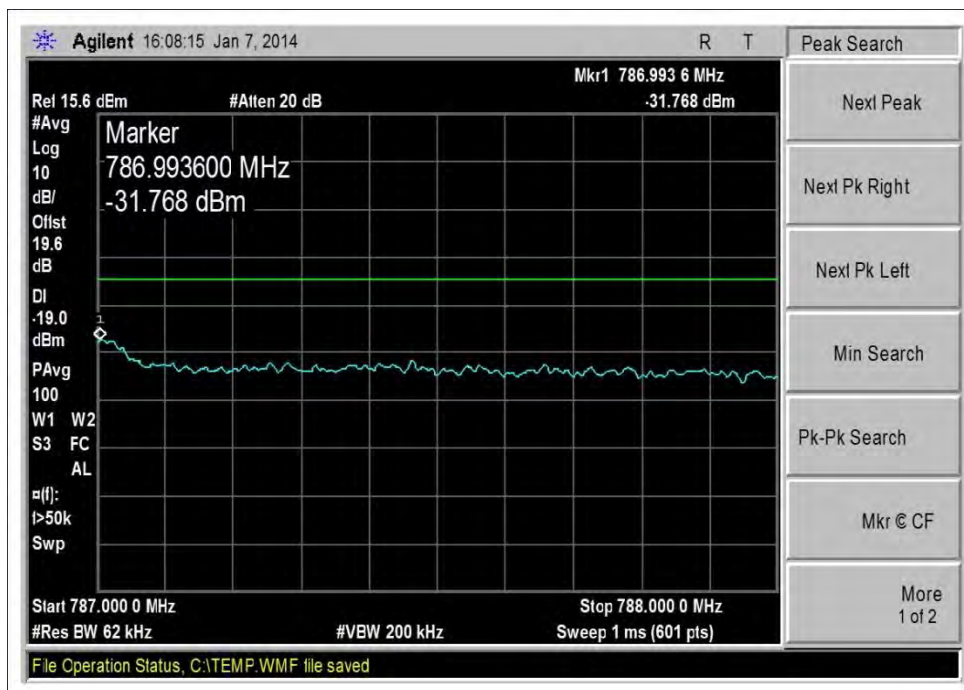
UL\_776-787MHz\_GSM\_L\_0dBm



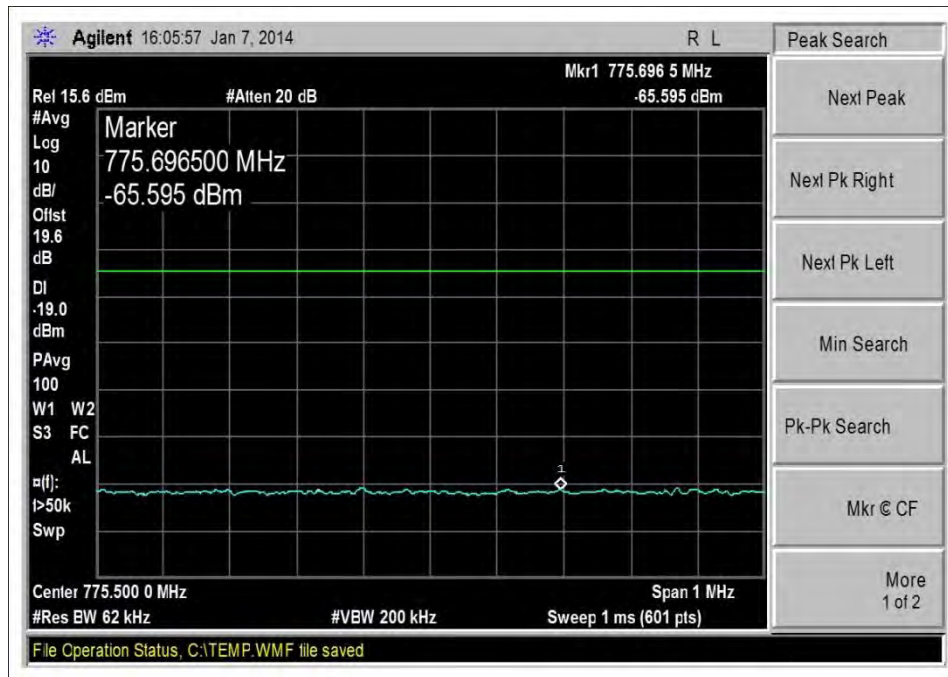
UL\_776-787MHz\_GSM\_L\_-36dBm



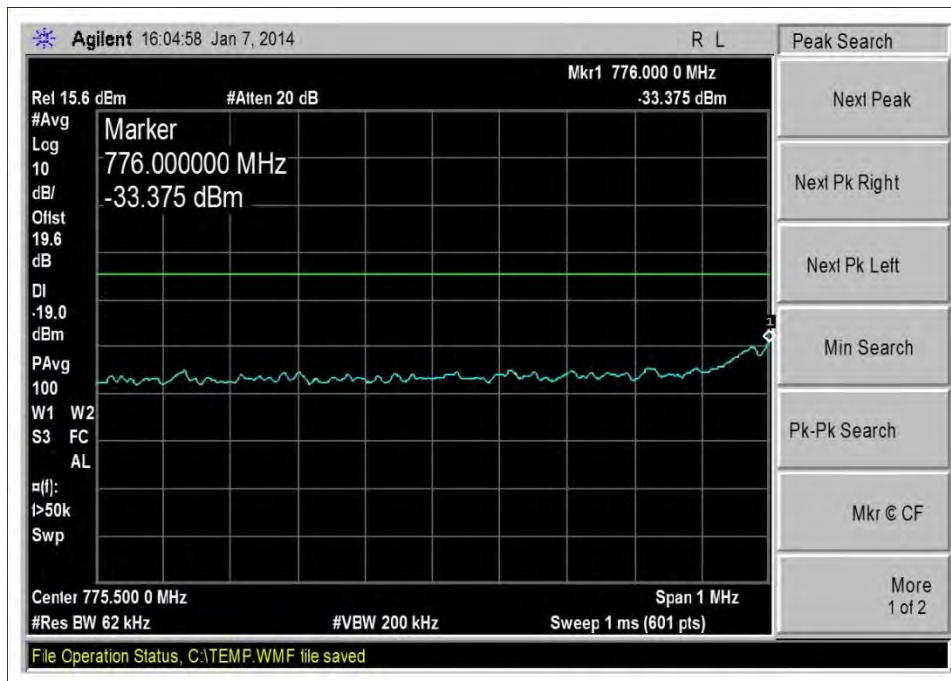
UL\_776-787MHz\_LTE\_H\_0dBm



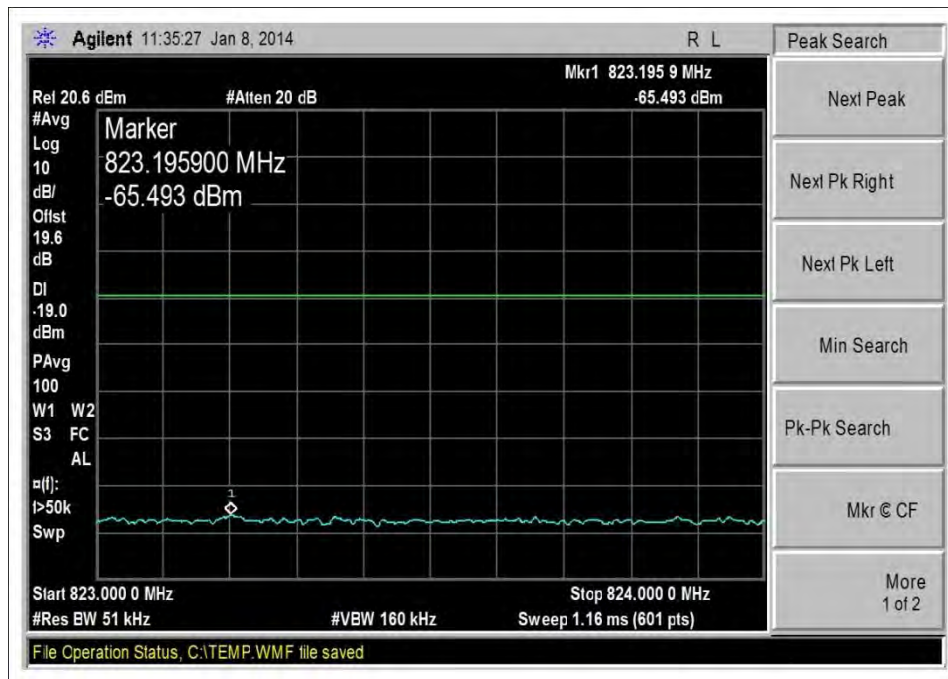
UL\_776-787MHz\_LTE\_H\_-40dBm



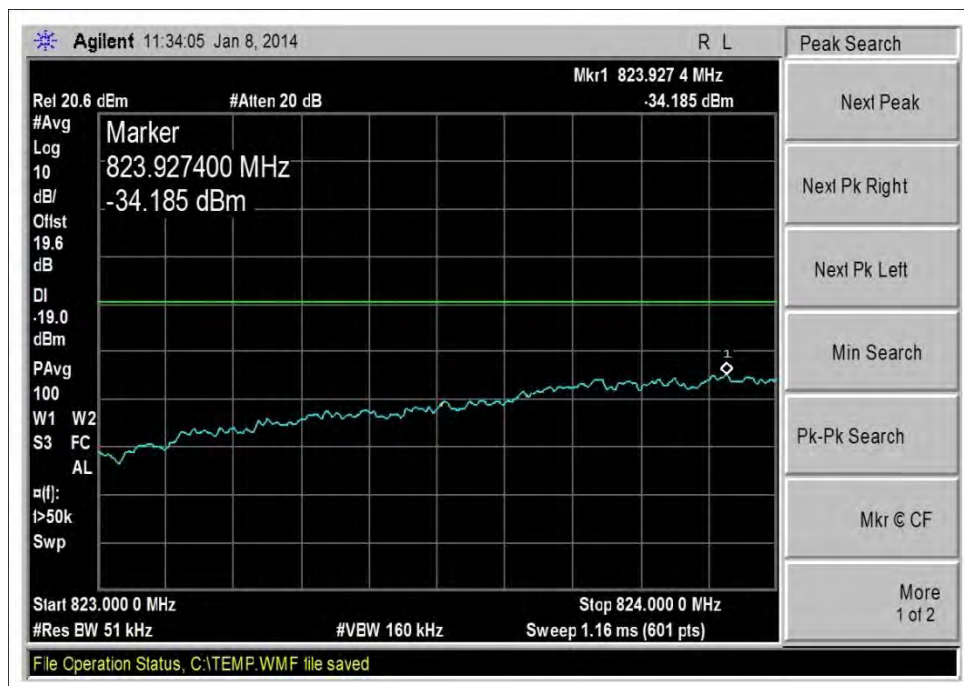
UL\_776-787MHz\_LTE\_L\_0dBm



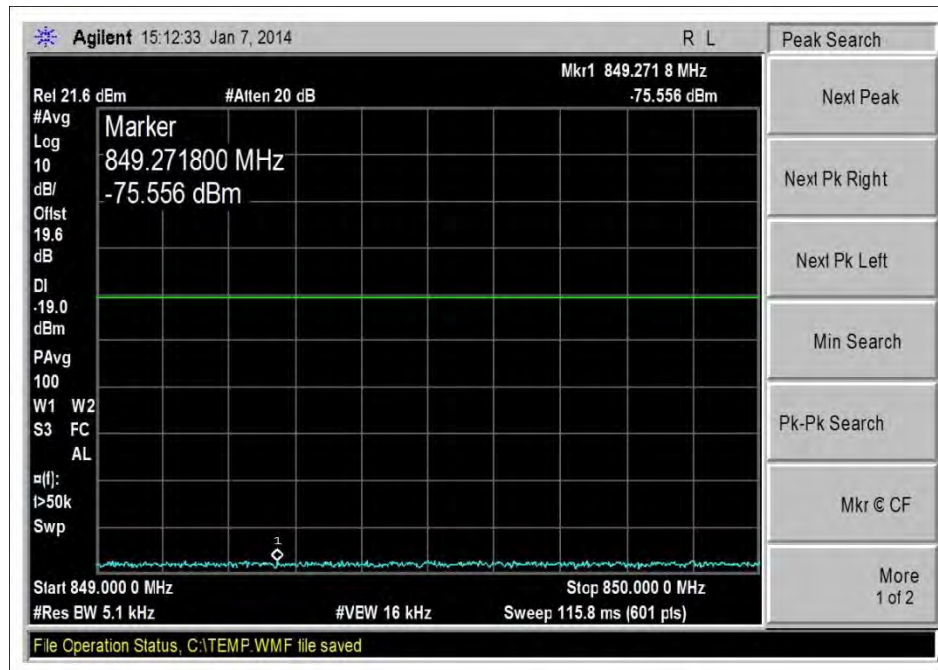
UL\_776-787MHz\_LTE\_L\_-38dBm



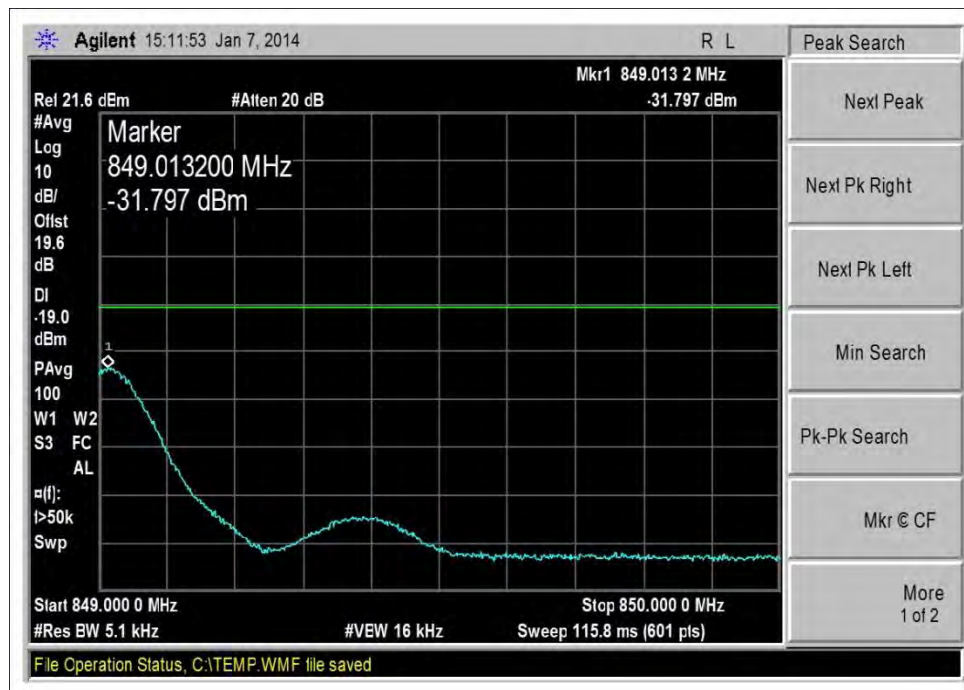
UL\_824-835MHz\_CDMA\_L\_0dBm



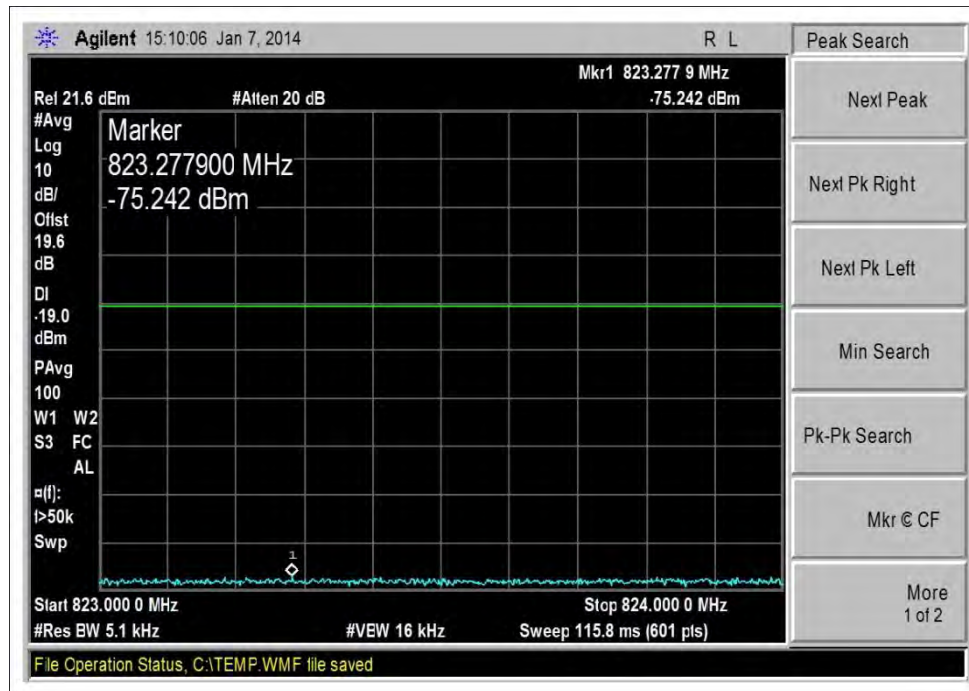
UL\_824-835MHz\_CDMA\_L\_-40dBm



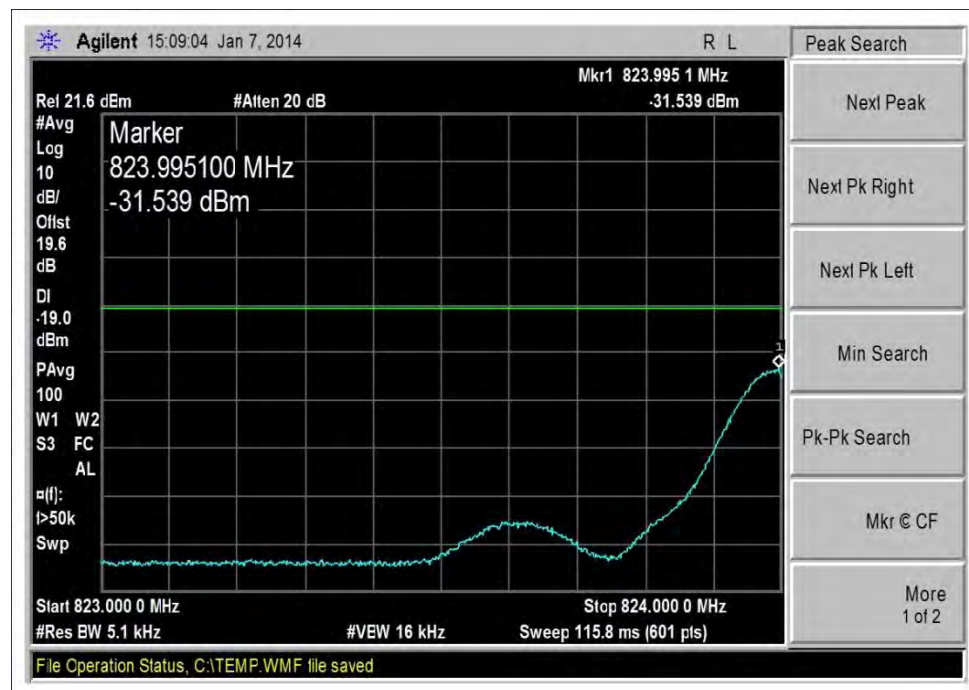
UL\_824-849MHz\_GSM\_H\_0dBm



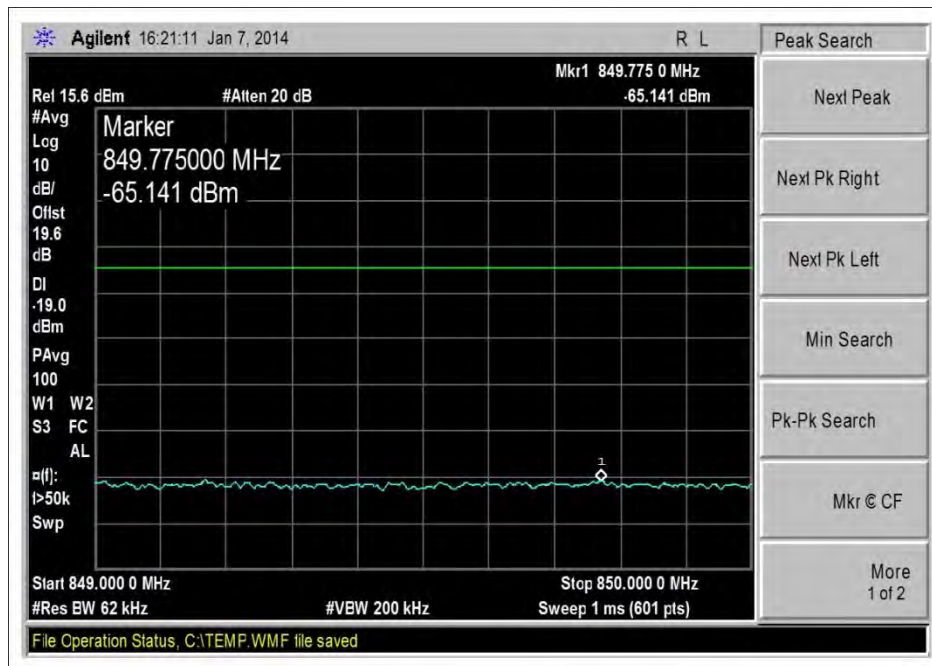
UL\_824-849MHz\_GSM\_H\_-40dBm



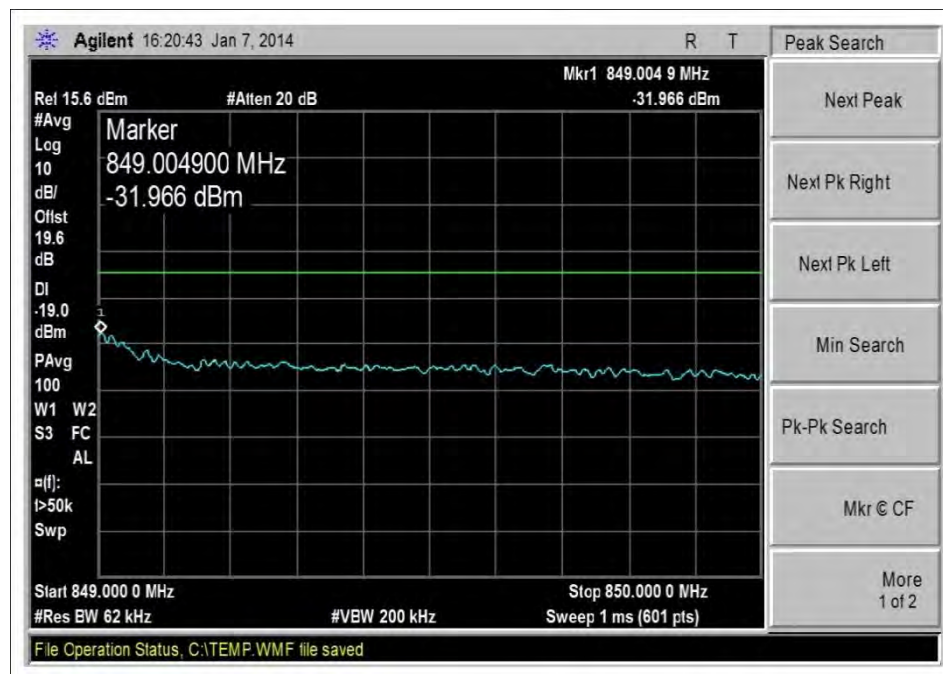
UL\_824-849MHz\_GSM\_L\_0dBm



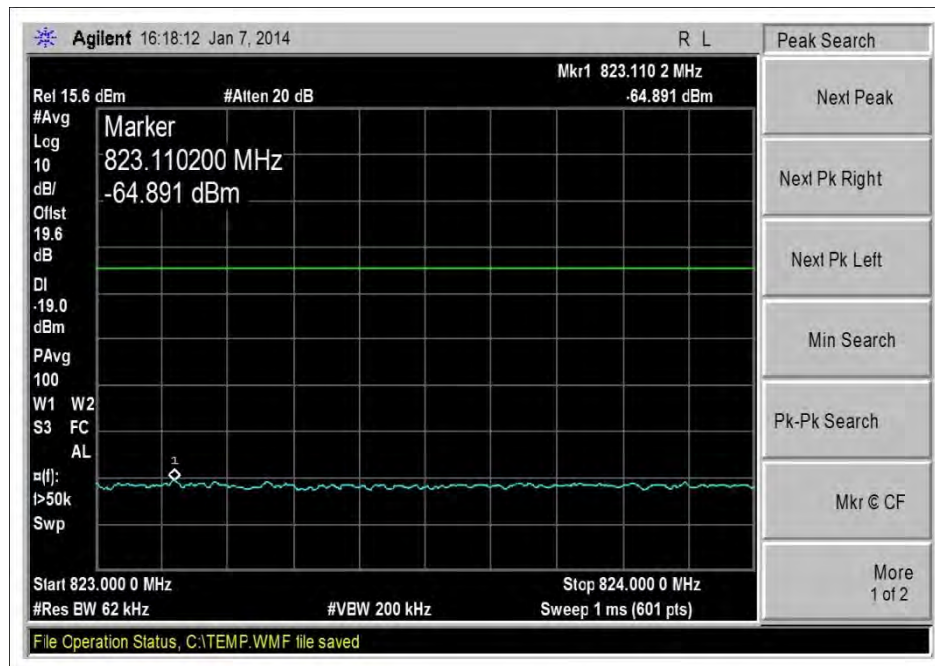
UL\_824-849MHz\_GSM\_L\_-36dBm



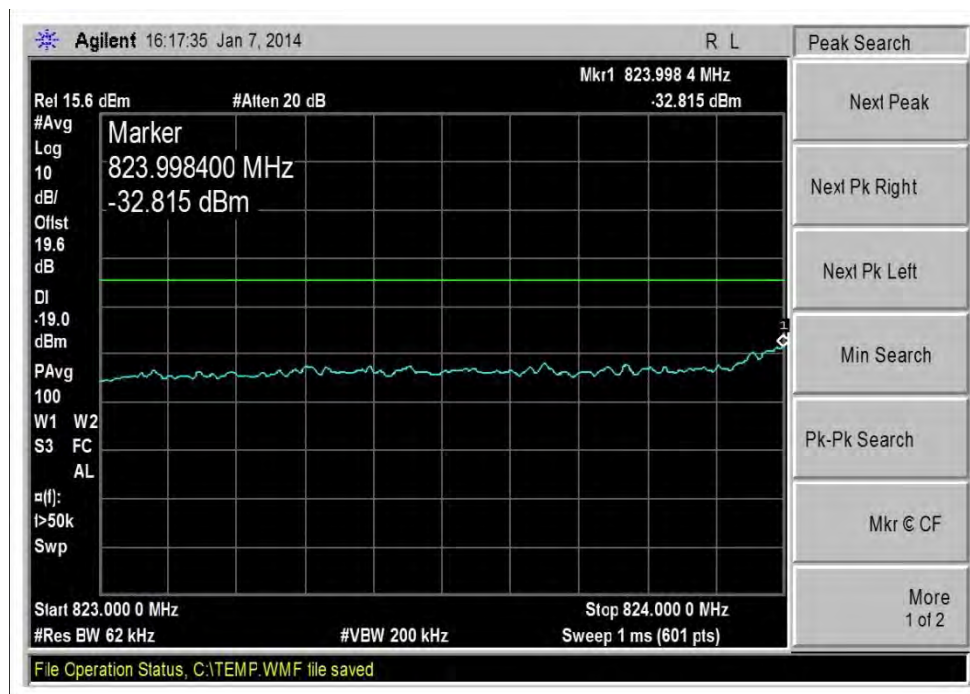
UL\_824-849MHz\_LTE\_H\_0dBm



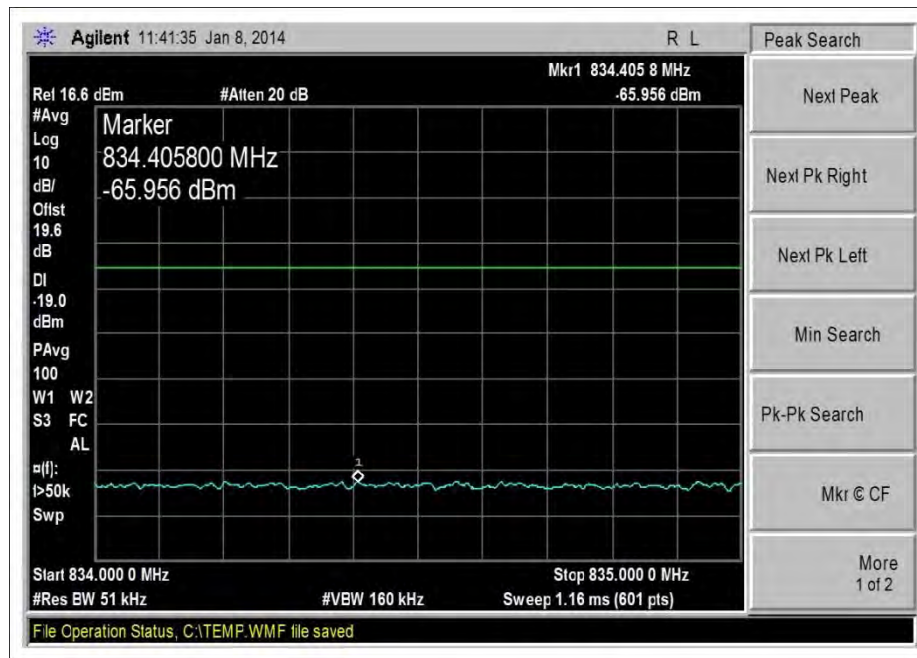
UL\_824-849MHz\_LTE\_H\_-41dBm



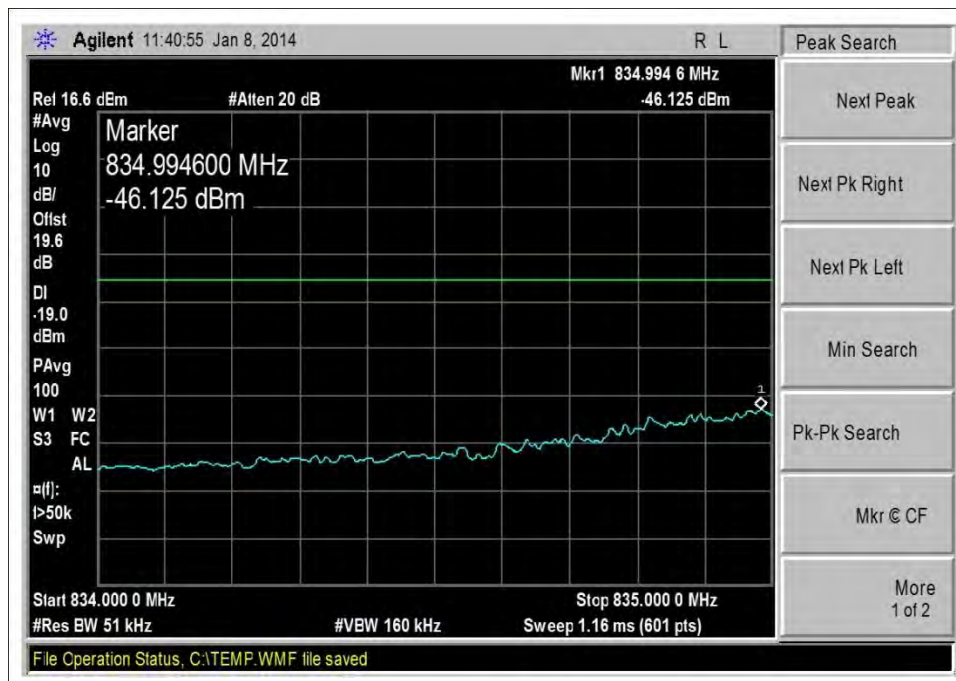
7.5\_OBE\_UL\_824-849MHz\_LTE\_L\_0dBm



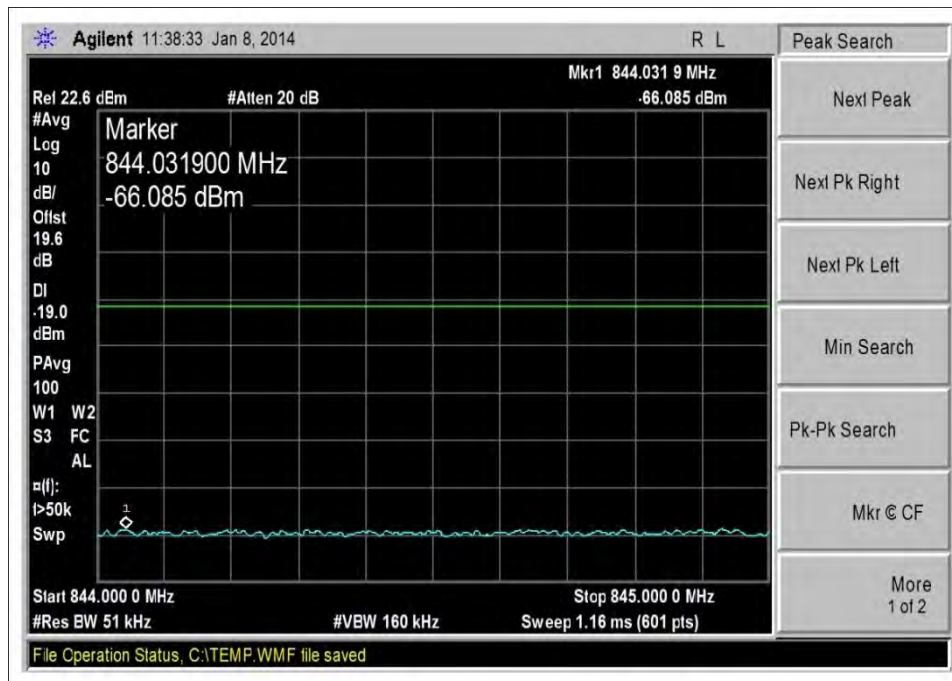
UL\_824-849MHz\_LTE\_L\_-39dBm



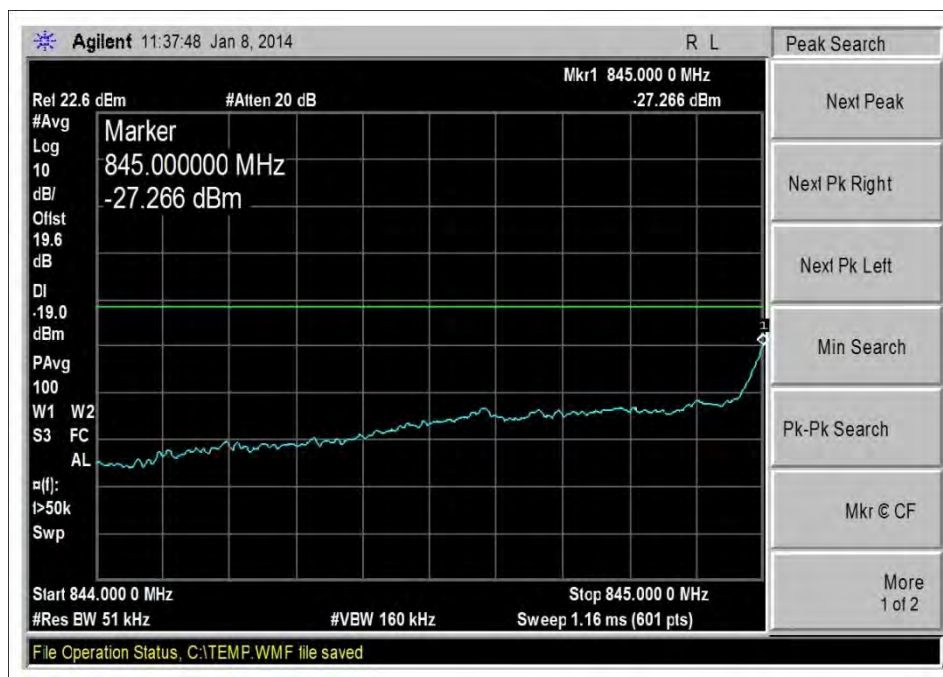
UL\_835-845MHz\_CDMA\_L\_0dBm



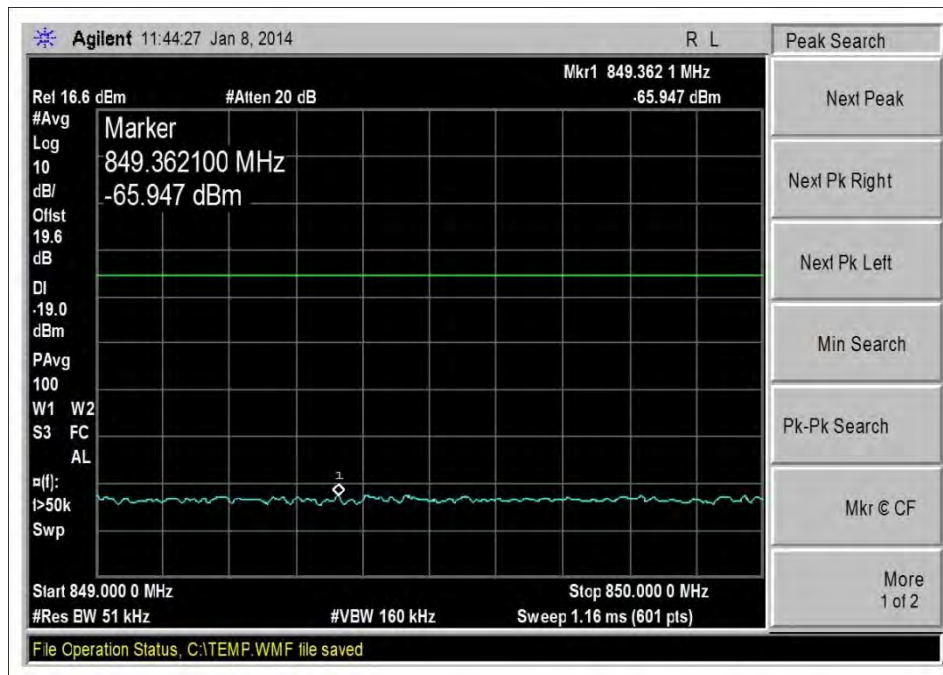
UL\_835-845MHz\_CDMA\_L\_-42dBm



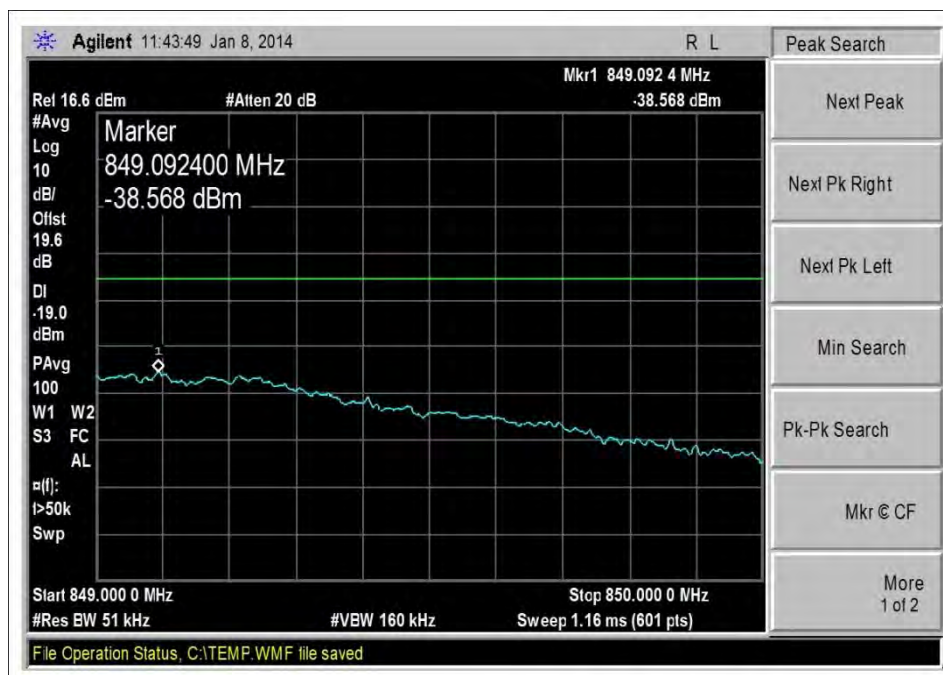
UL\_845-846.5MHz\_CDMA\_L\_0dBm



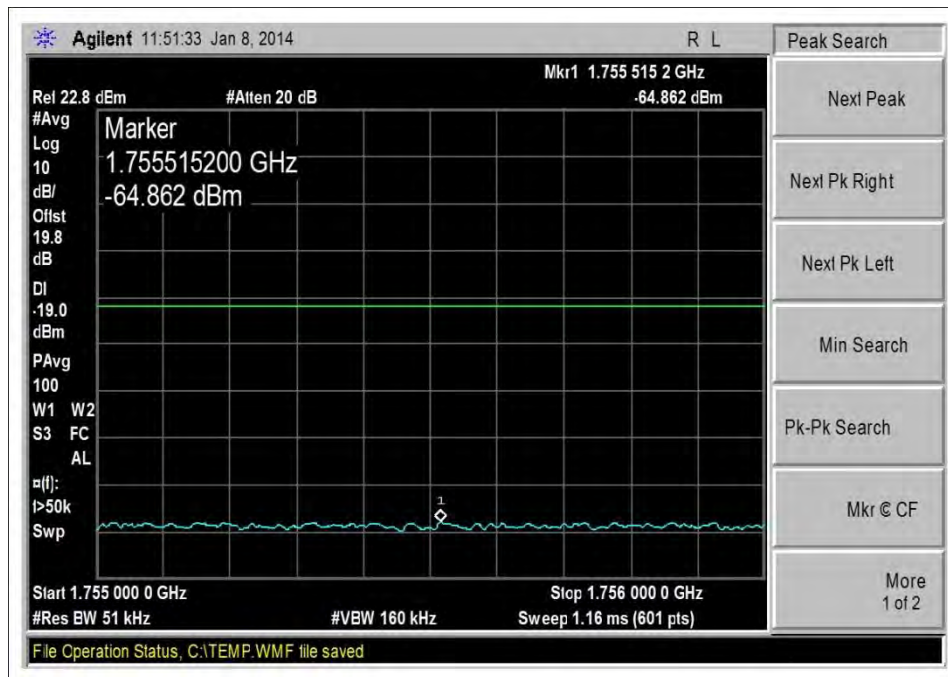
UL\_845-846.5MHz\_CDMA\_L\_-44dBm



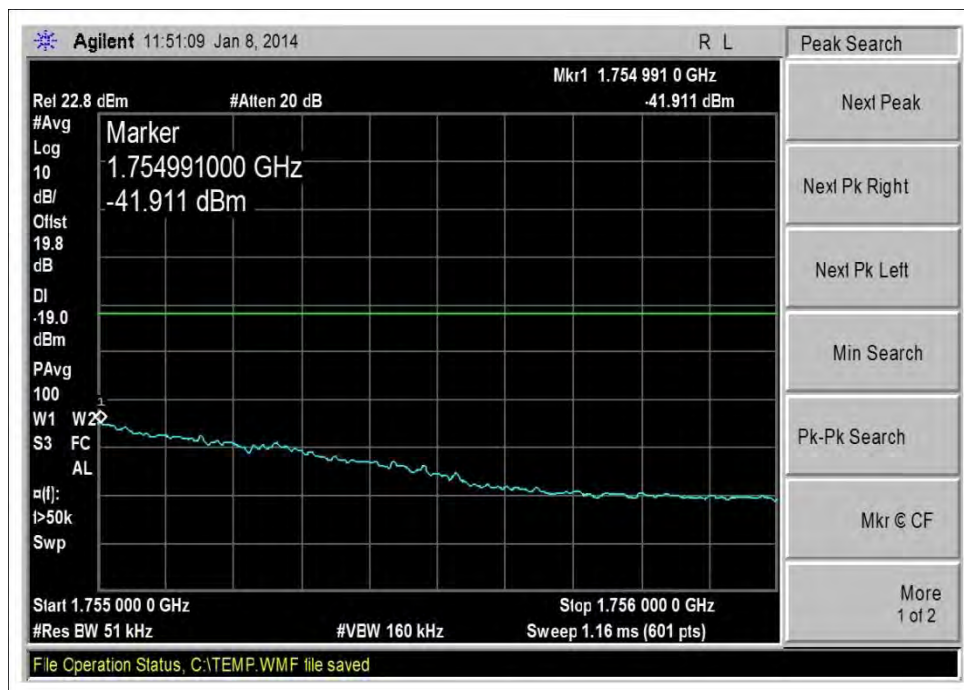
UL\_846.5-849MHz\_CDMA\_H\_0dBm



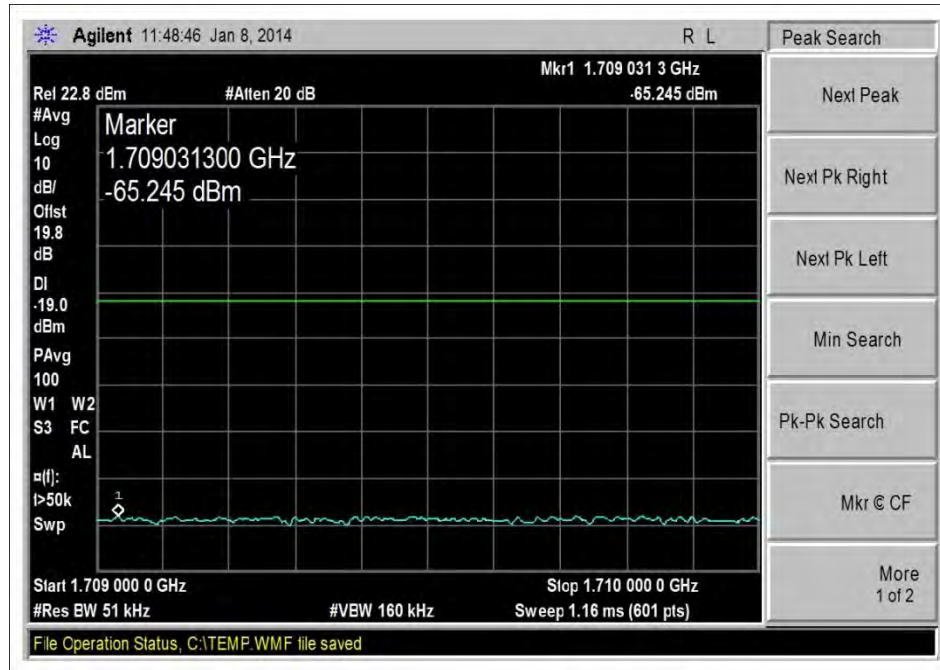
UL\_846.5-849MHz\_CDMA\_H\_-44dBm



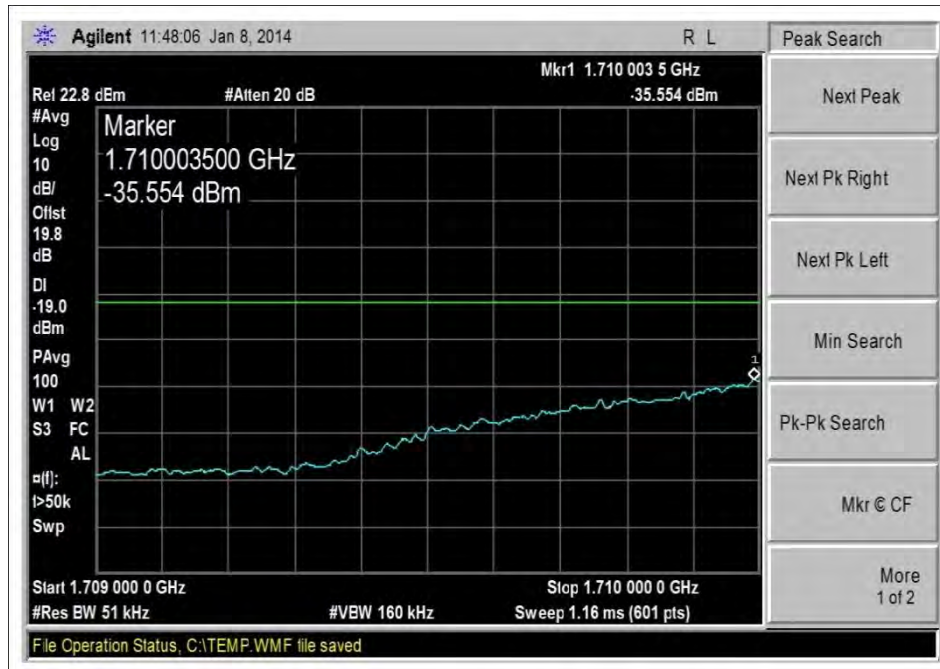
UL\_1710-1755MHz\_CDMA\_H\_0dBm



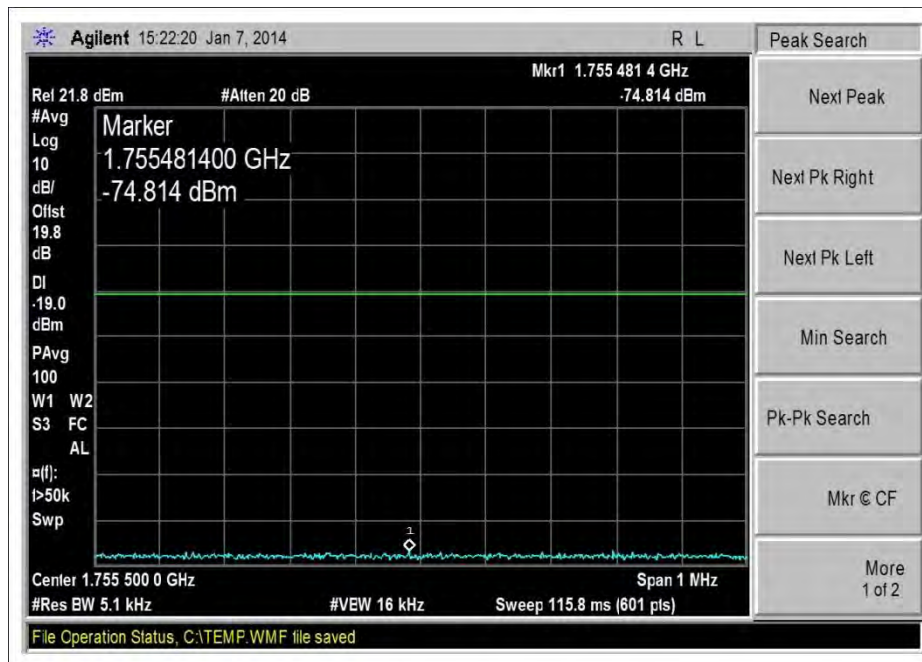
UL\_1710-1755MHz\_CDMA\_H\_-45dBm



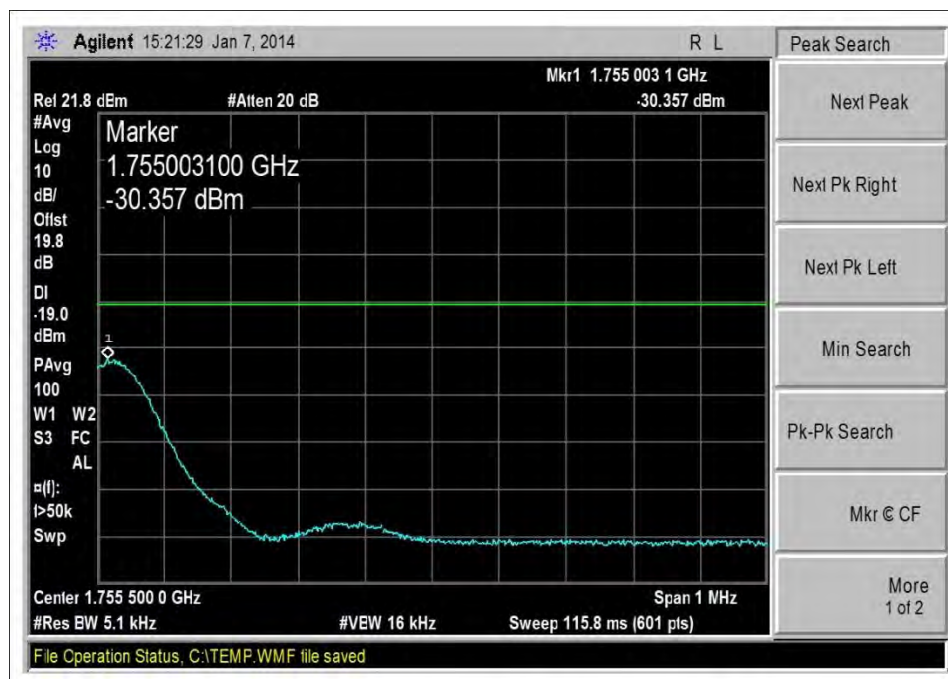
UL\_1710-1755MHz\_CDMA\_L\_0dBm



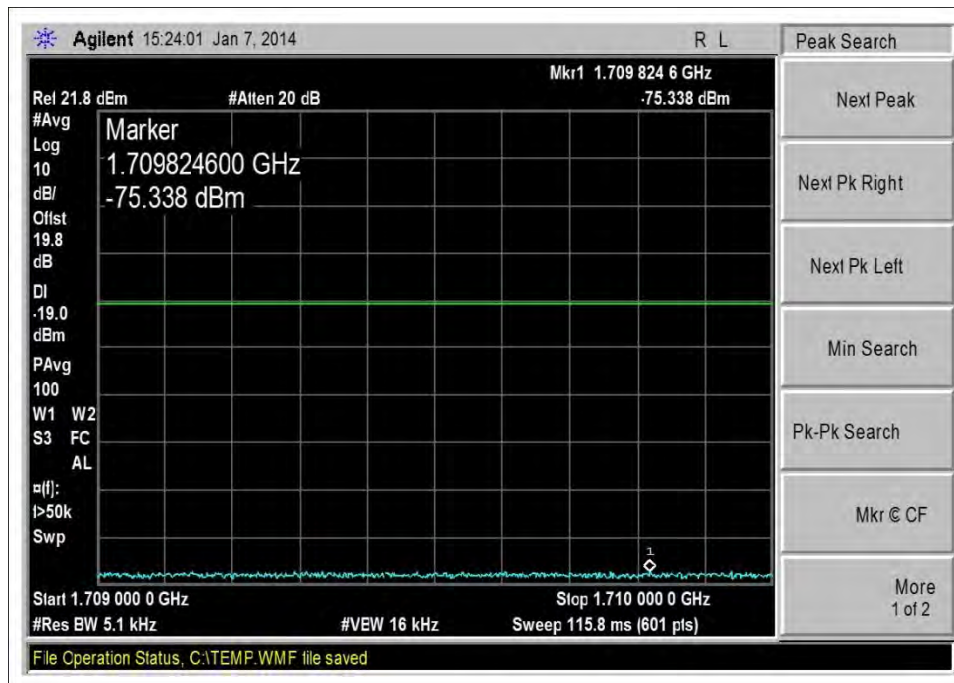
UL\_1710-1755MHz\_CDMA\_L\_-45dBm



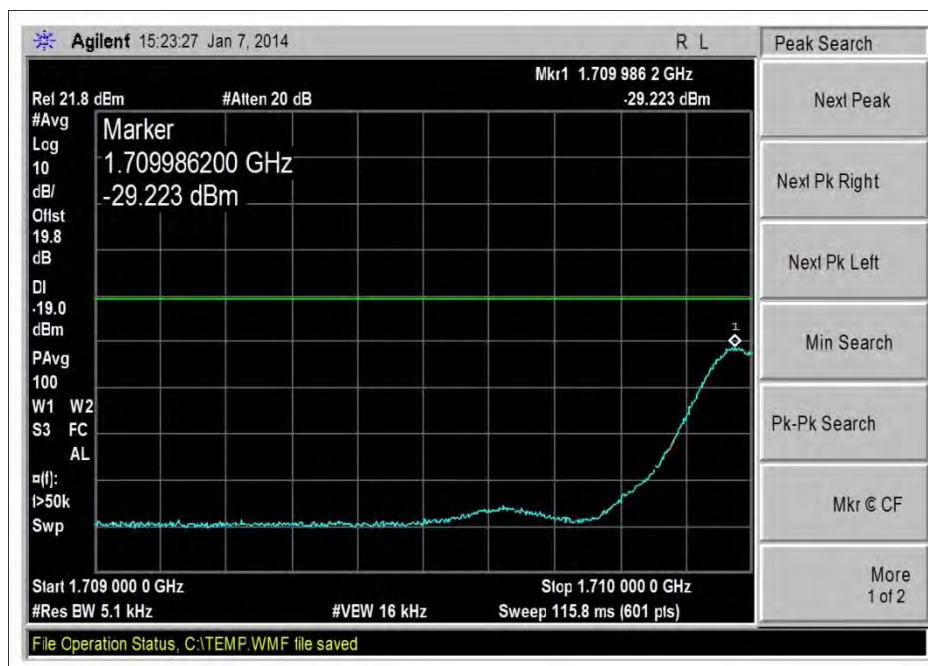
UL\_1710-1755MHz\_GSM\_H\_0dBm



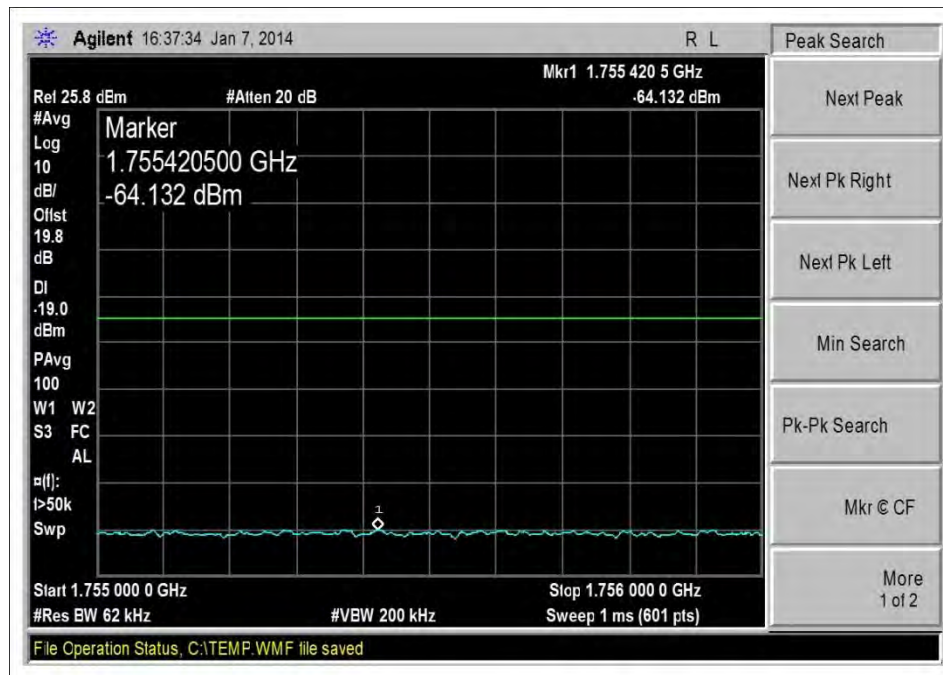
UL\_1710-1755MHz\_GSM\_H\_-41dBm



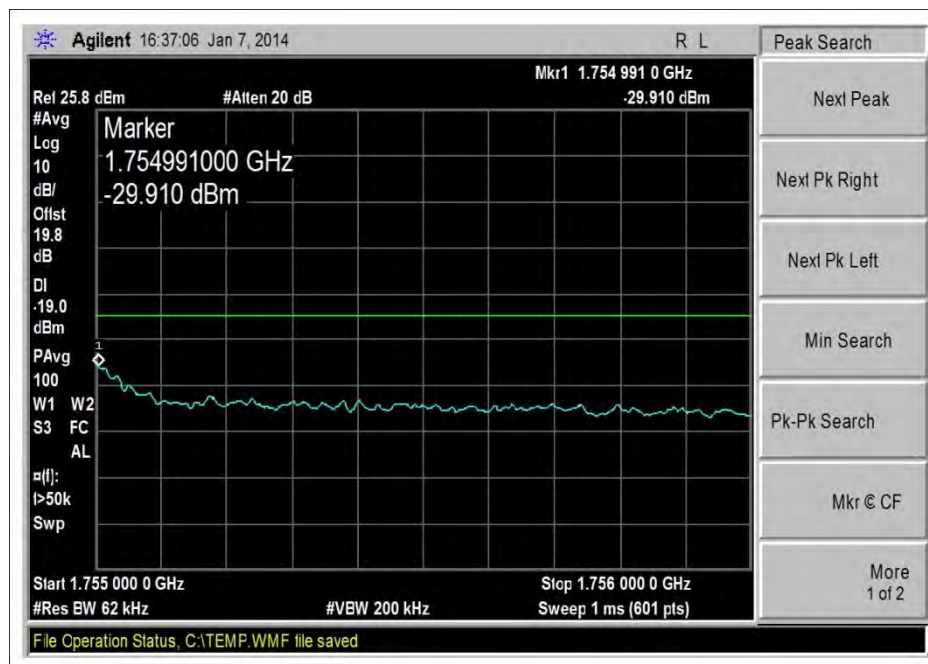
UL\_1710-1755MHz\_GSM\_L\_0dBm



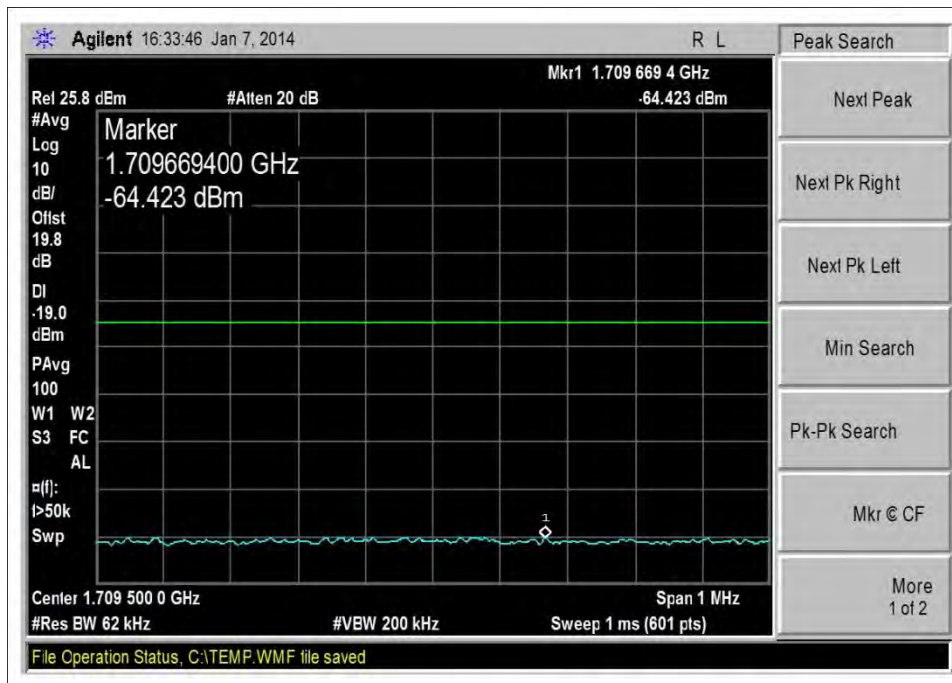
UL\_1710-1755MHz\_GSM\_L\_-41dBm



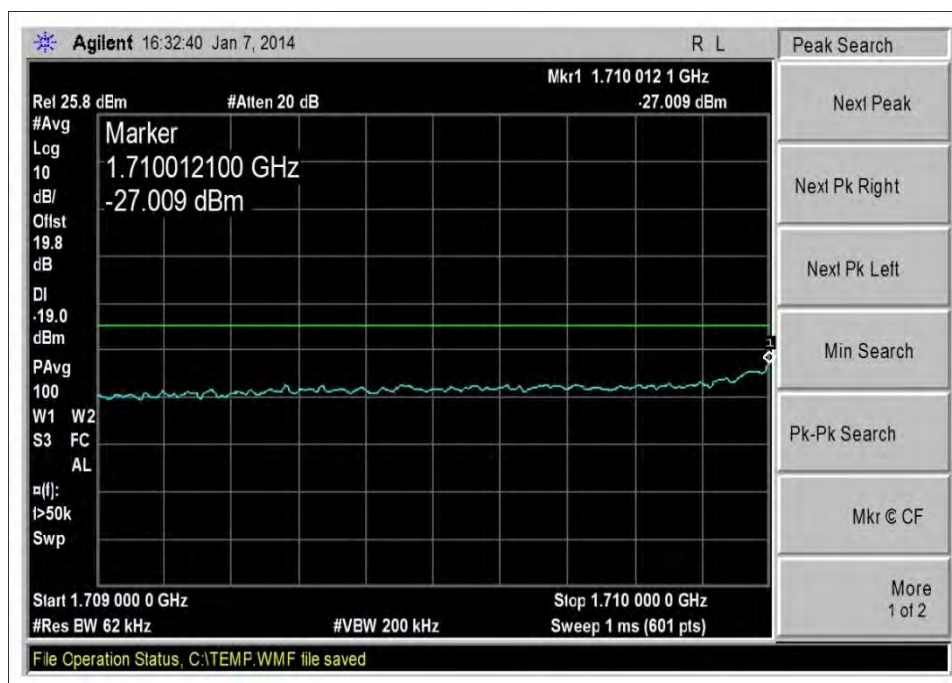
UL\_1710-1755MHz\_LTE\_H\_0dBm



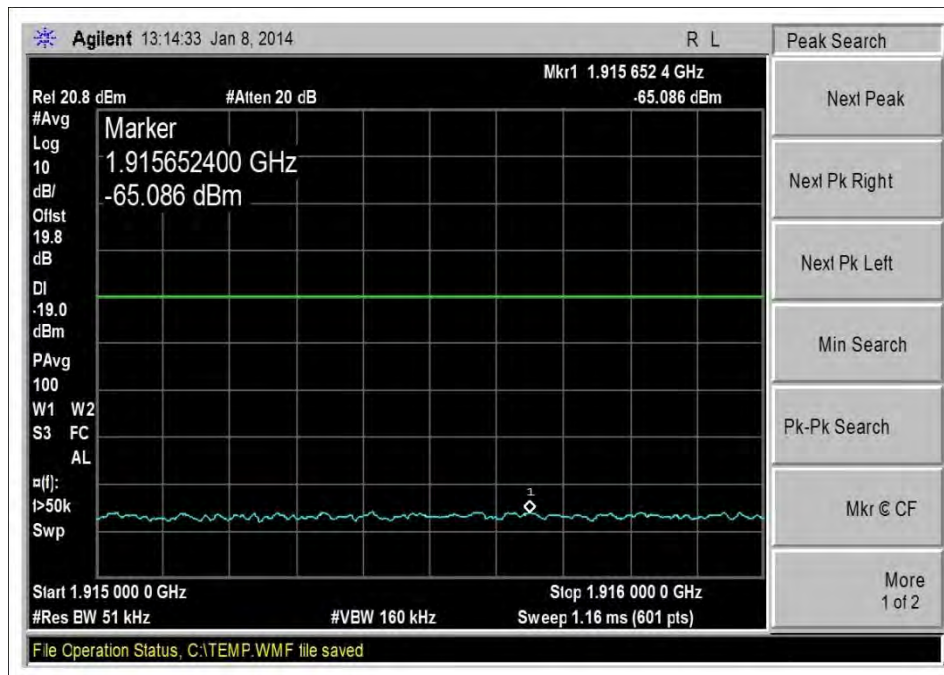
UL\_1710-1755MHz\_LTE\_H\_-43dBm



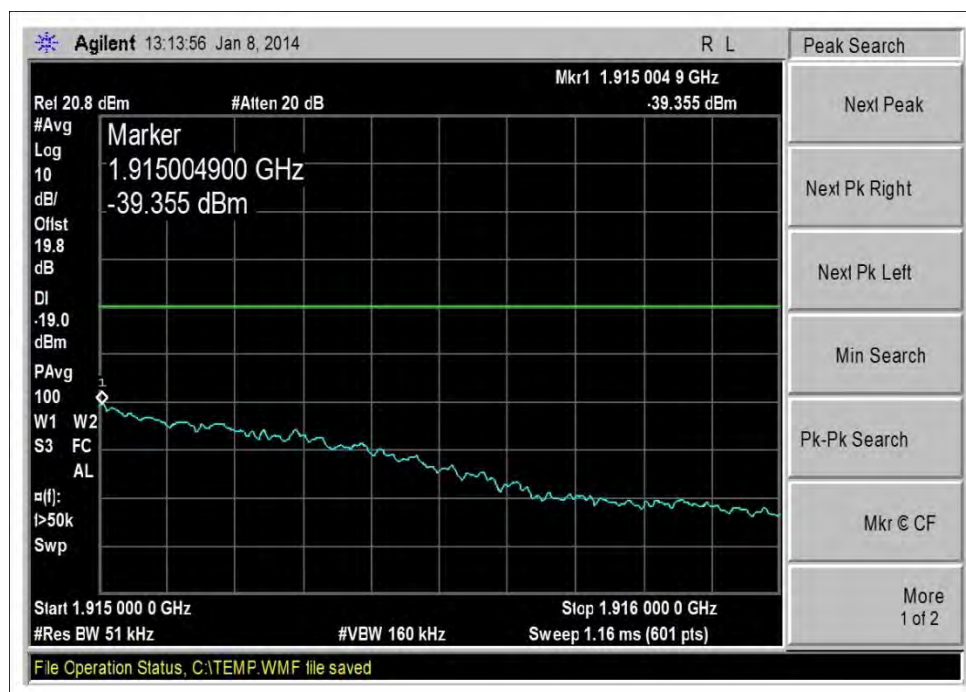
UL\_1710-1755MHz\_LTE\_L\_0dBm



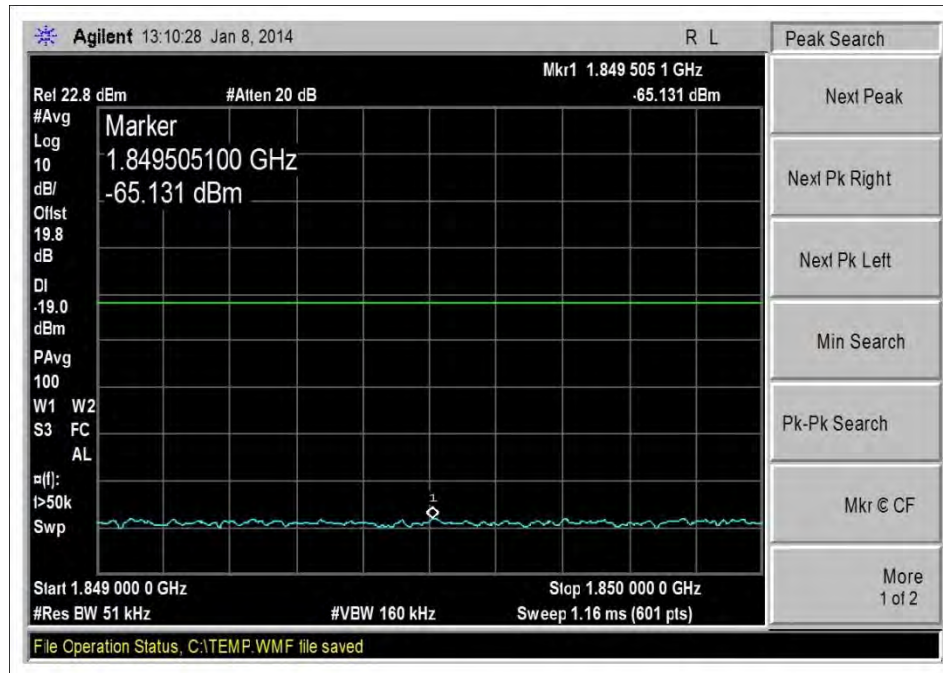
UL\_1710-1755MHz\_LTE\_L\_-43dBm



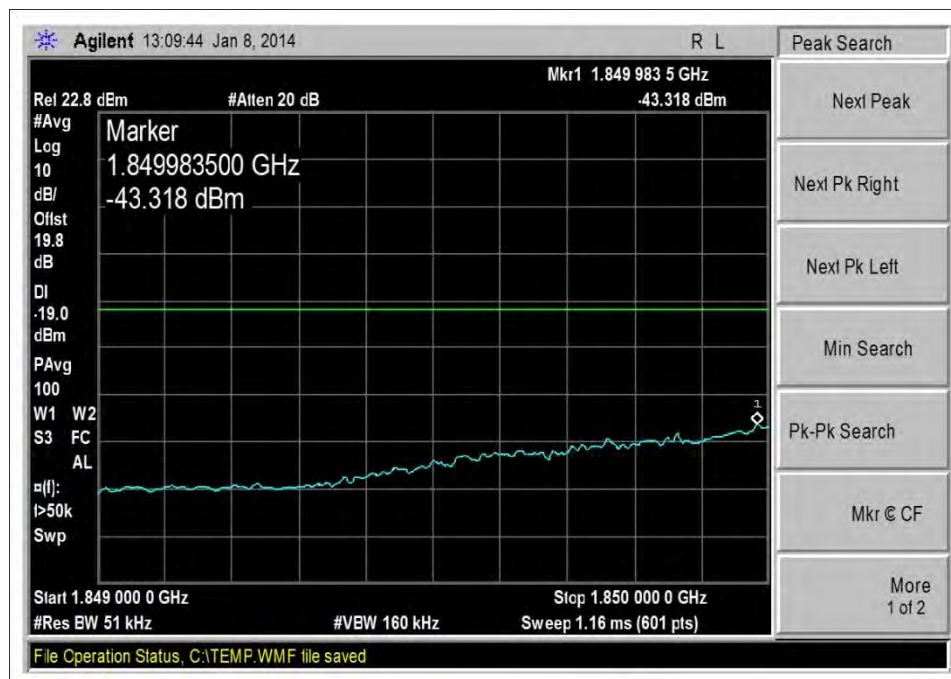
UL\_1850-1915MHz\_CDMA\_H\_0dBm



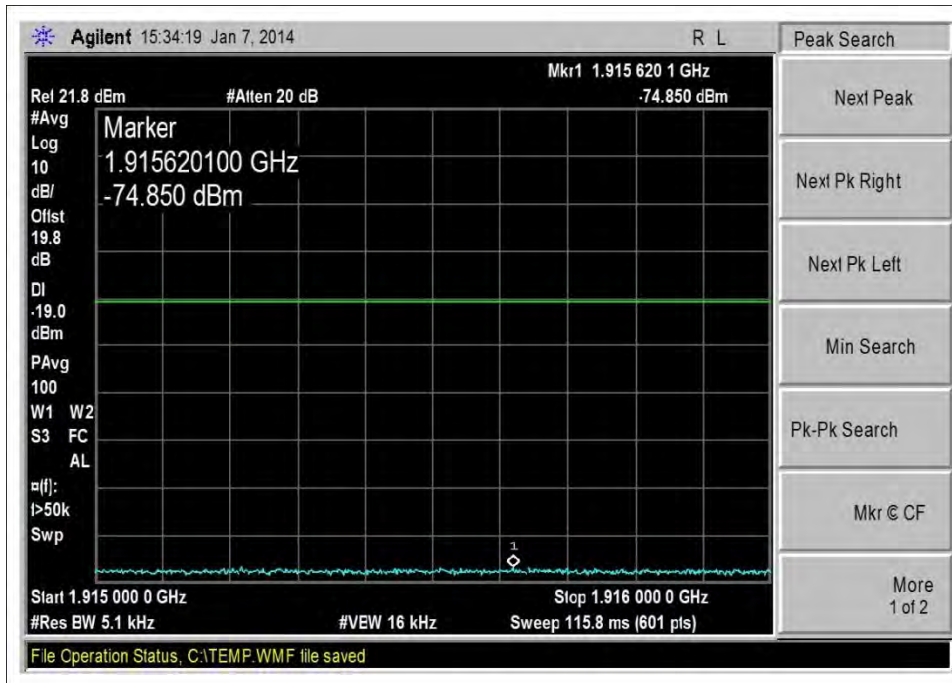
UL\_1850-1915MHz\_CDMA\_H\_-39dBm



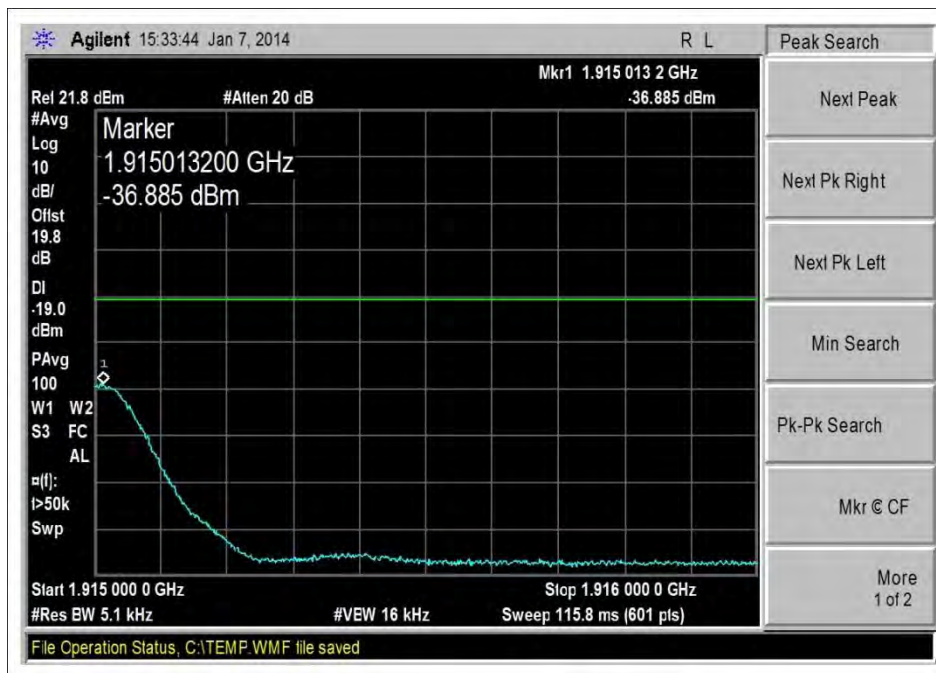
UL\_1850-1915MHz\_CDMA\_L\_0dBm



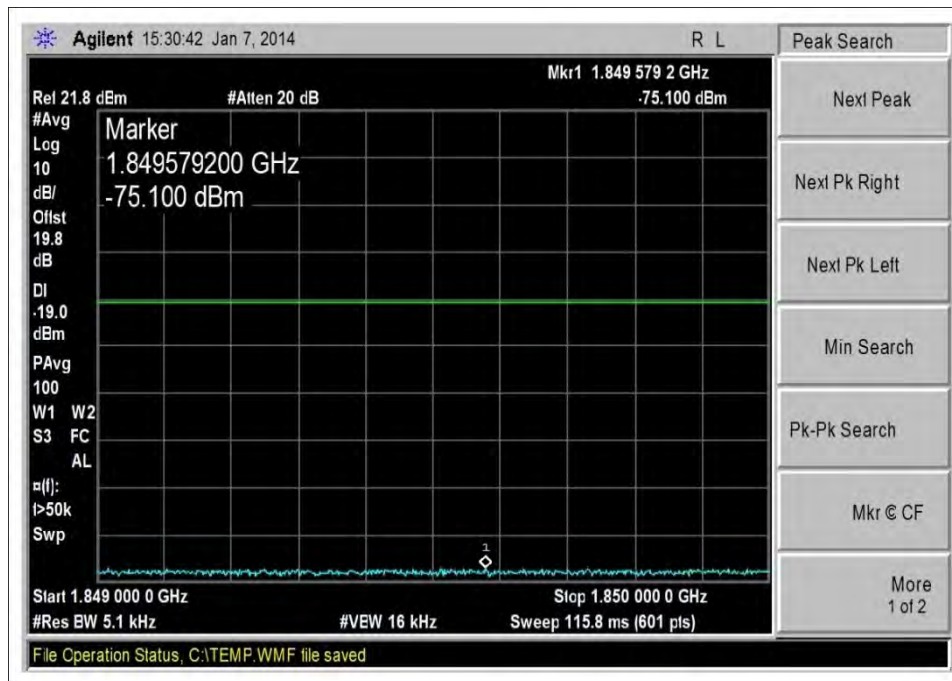
UL\_1850-1915MHz\_CDMA\_L\_-46dBm



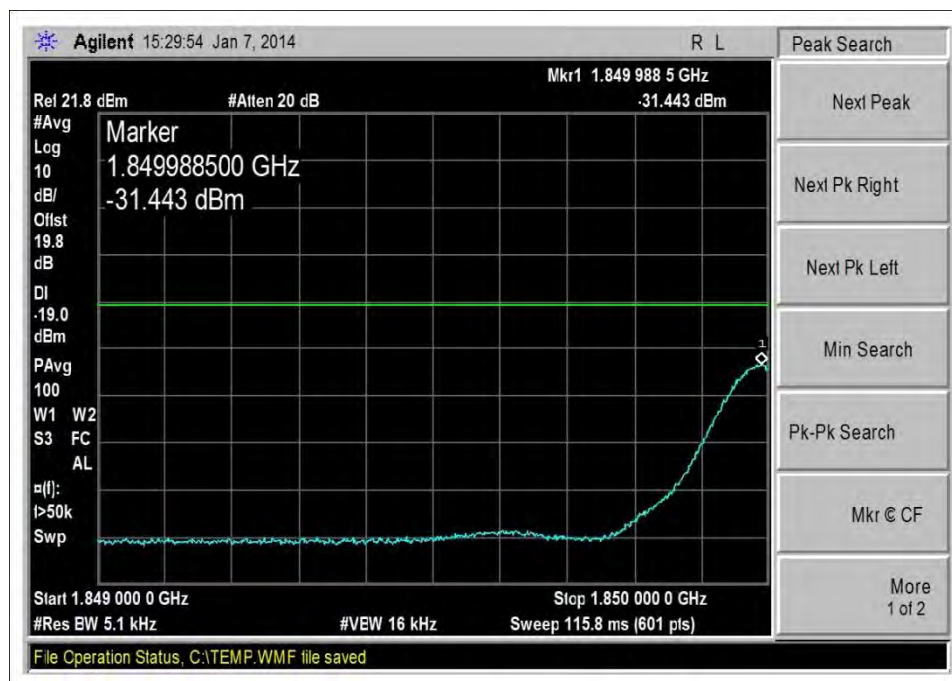
UL\_1850-1915MHz\_GSM\_H\_0dBm



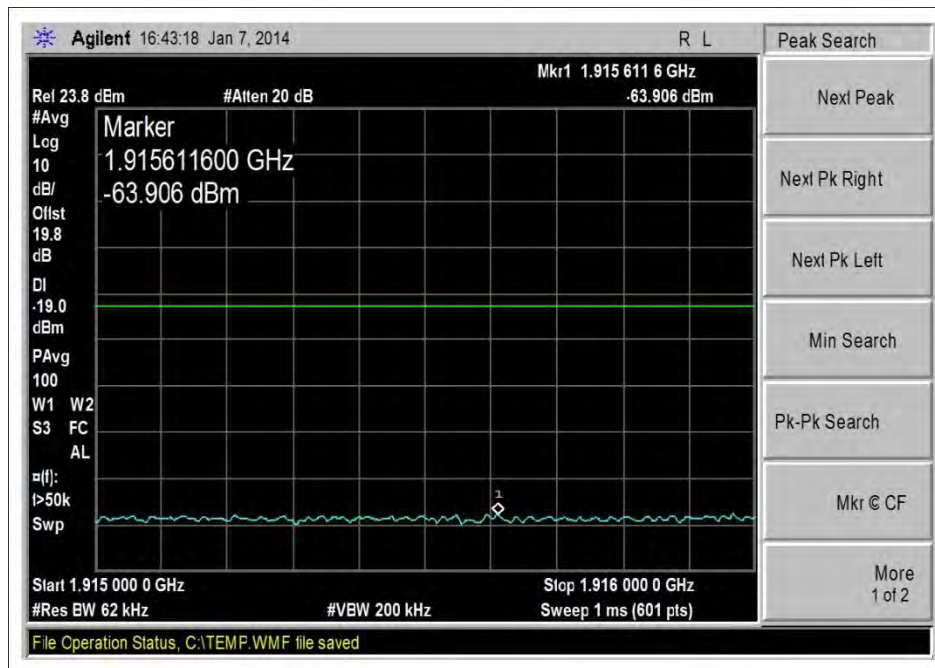
UL\_1850-1915MHz\_GSM\_H\_-32dBm



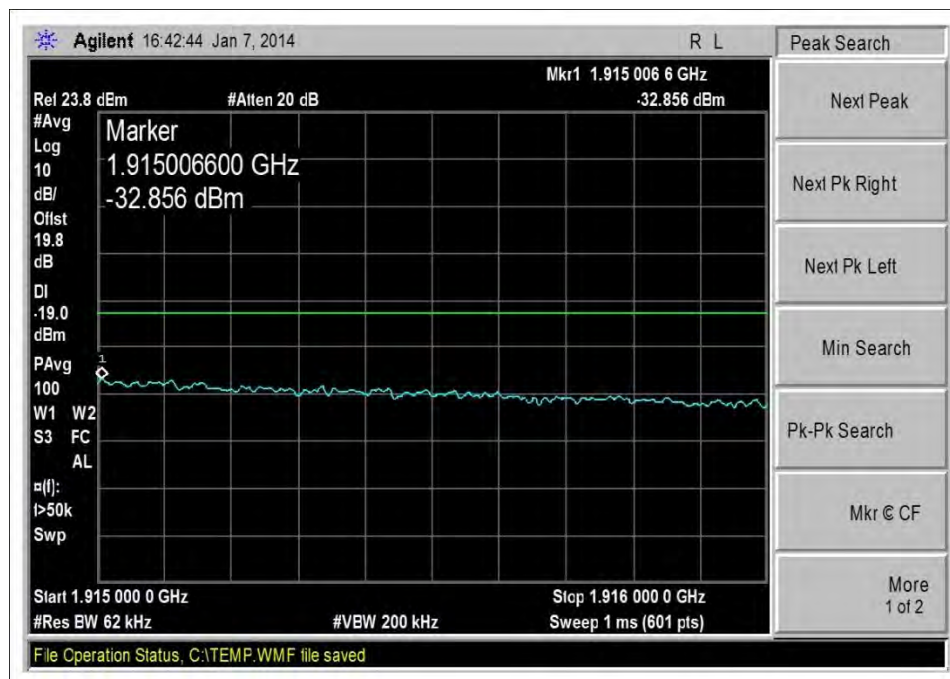
UL\_1850-1915MHz\_GSM\_L\_0dBm



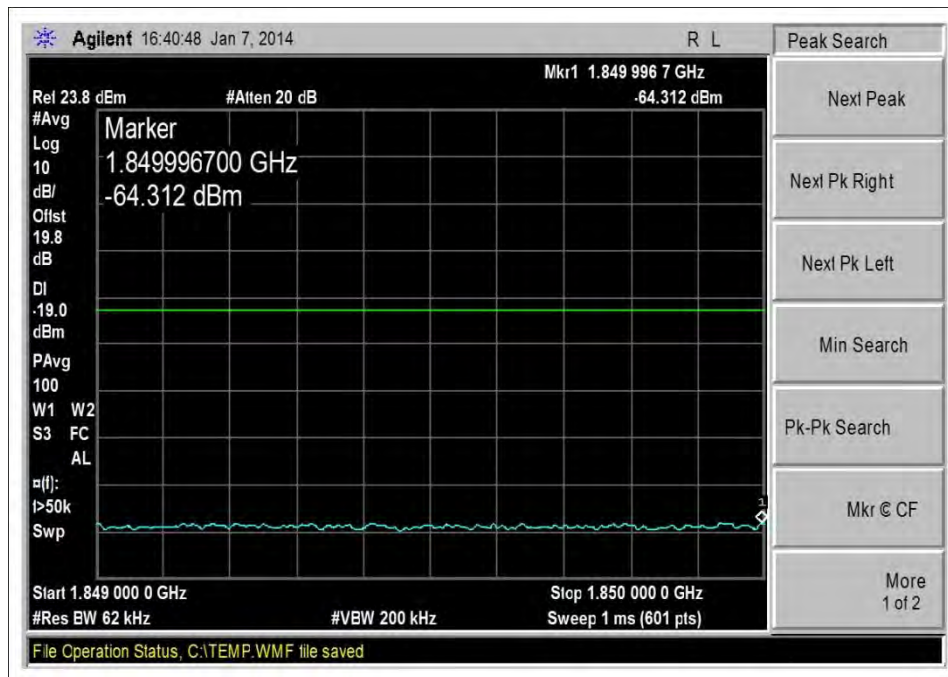
UL\_1850-1915MHz\_GSM\_L\_-42dBm



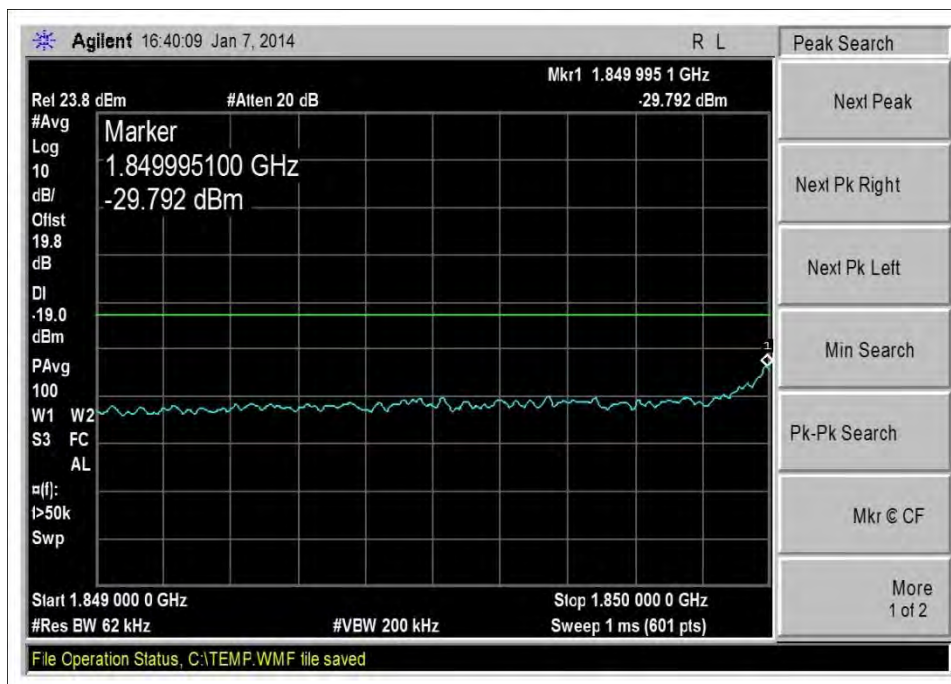
UL\_1850-1915MHz\_LTE\_H\_0dBm



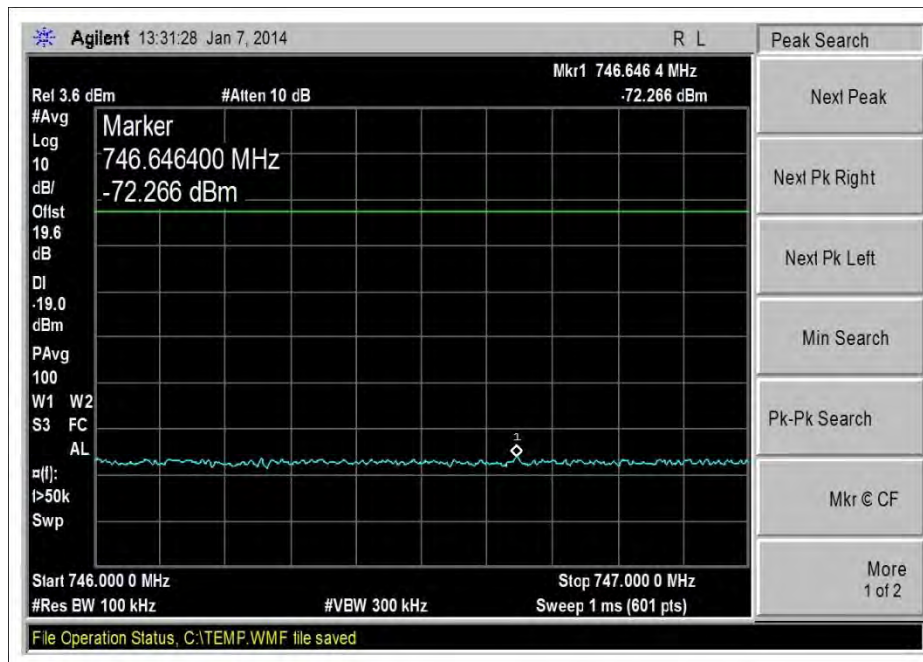
UL\_1850-1915MHz\_LTE\_H\_-37dBm



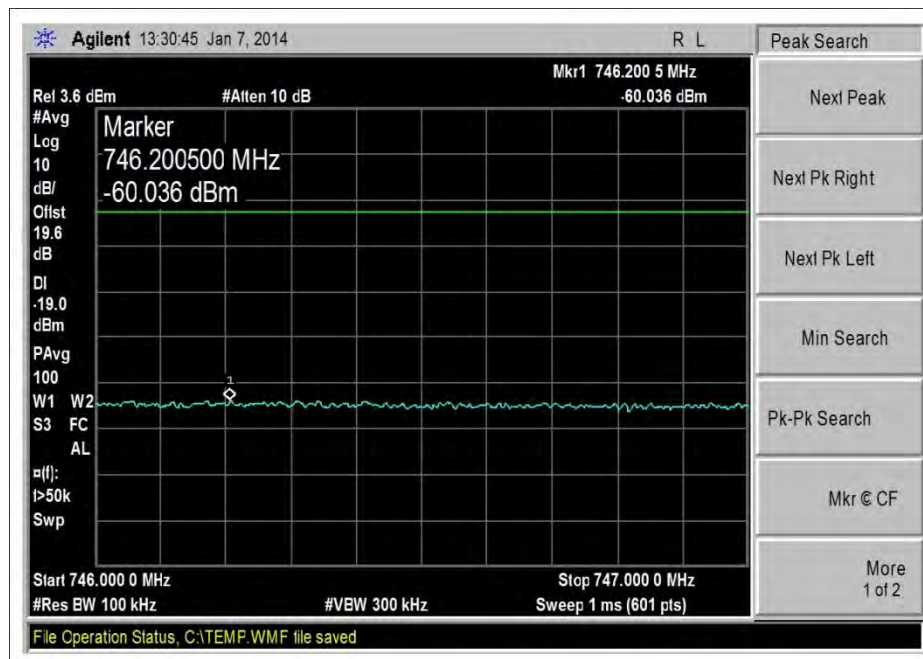
UL\_1850-1915MHz\_LTE\_L\_0dBm



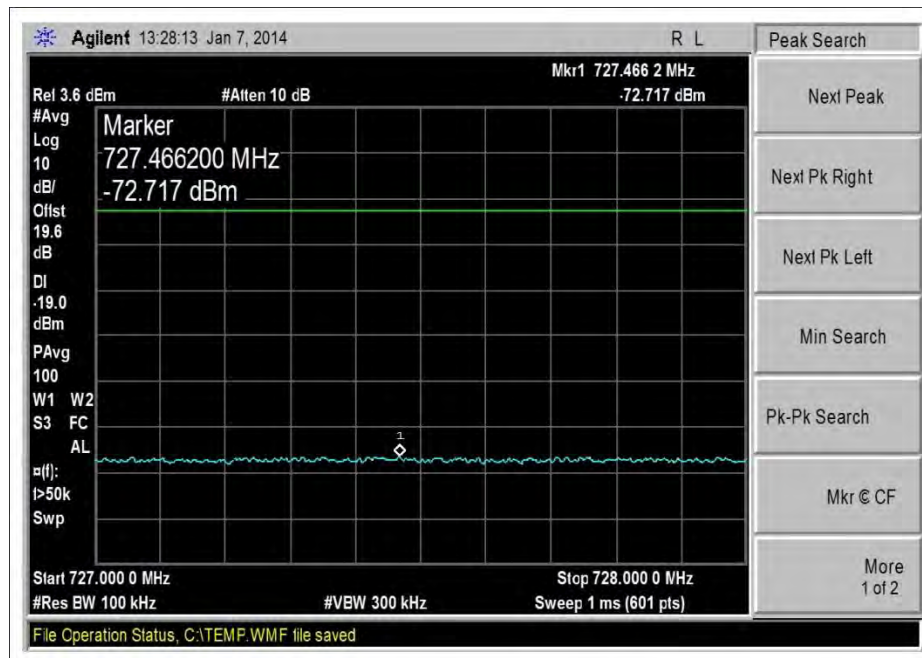
UL\_1850-1915MHz\_LTE\_L\_-43dBm



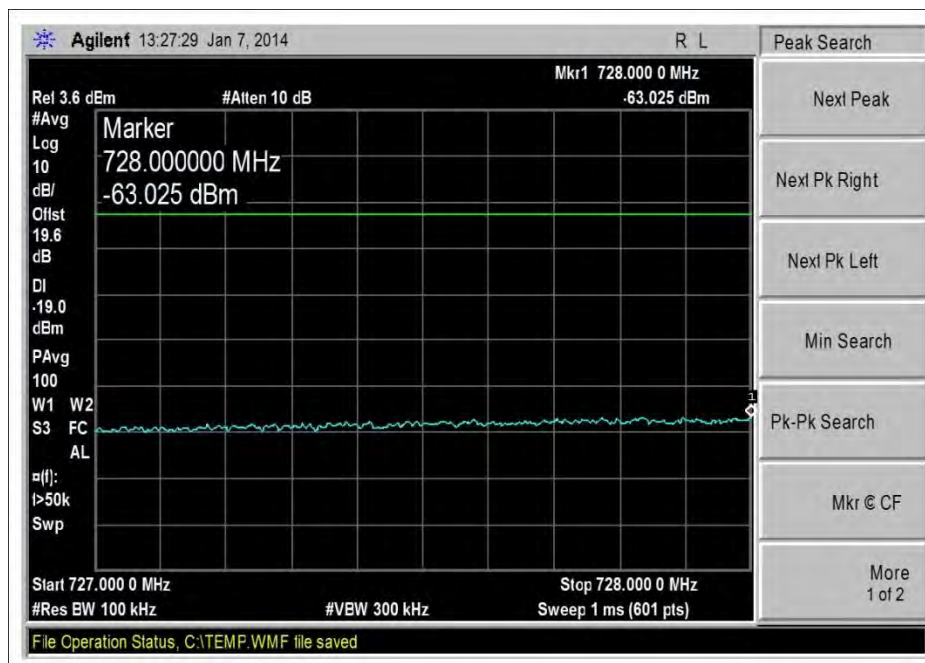
DL\_728-746MHz\_CDMA\_H\_-20dBm



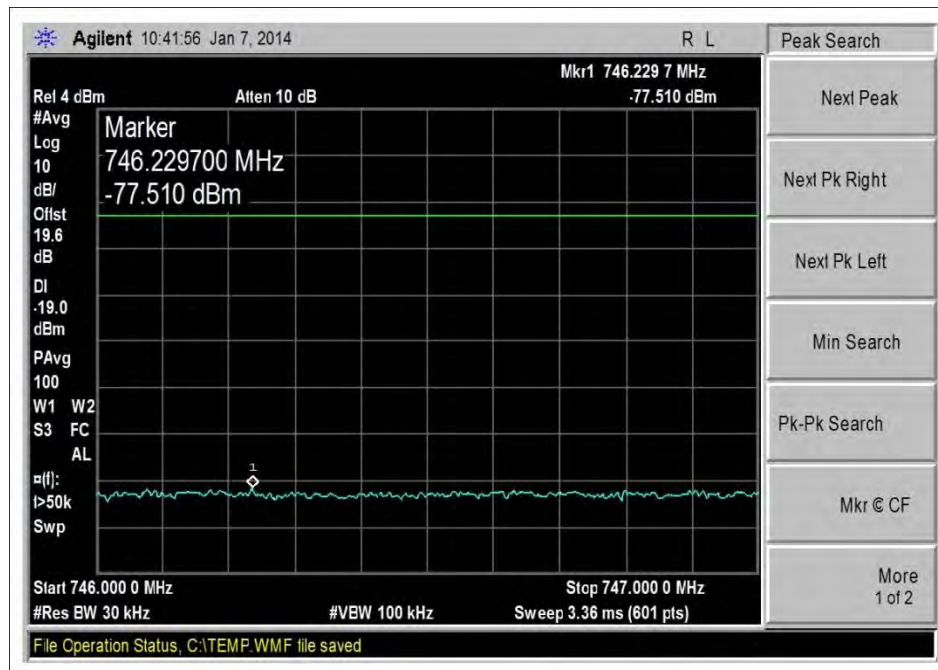
DL\_728-746MHz\_CDMA\_H\_-63dBm



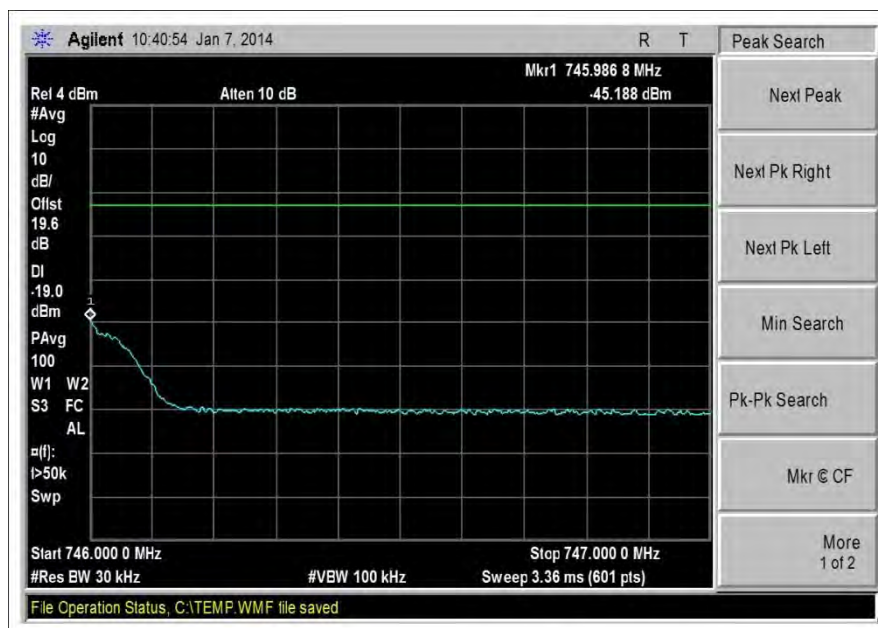
DL\_728-746MHz\_CDMA\_L\_-20dBm



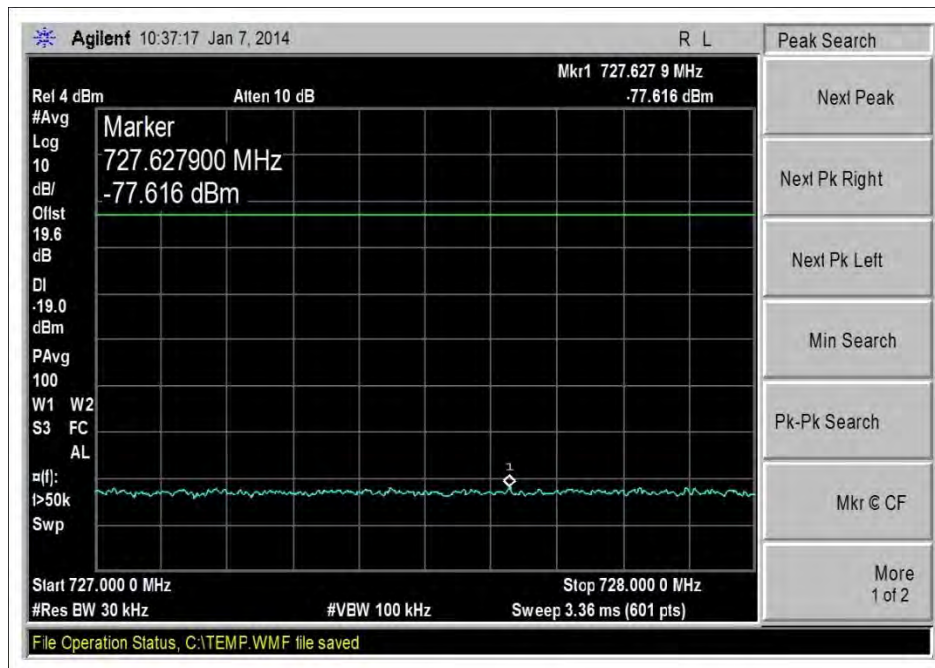
DL\_728-746MHz\_CDMA\_L\_-63dBm



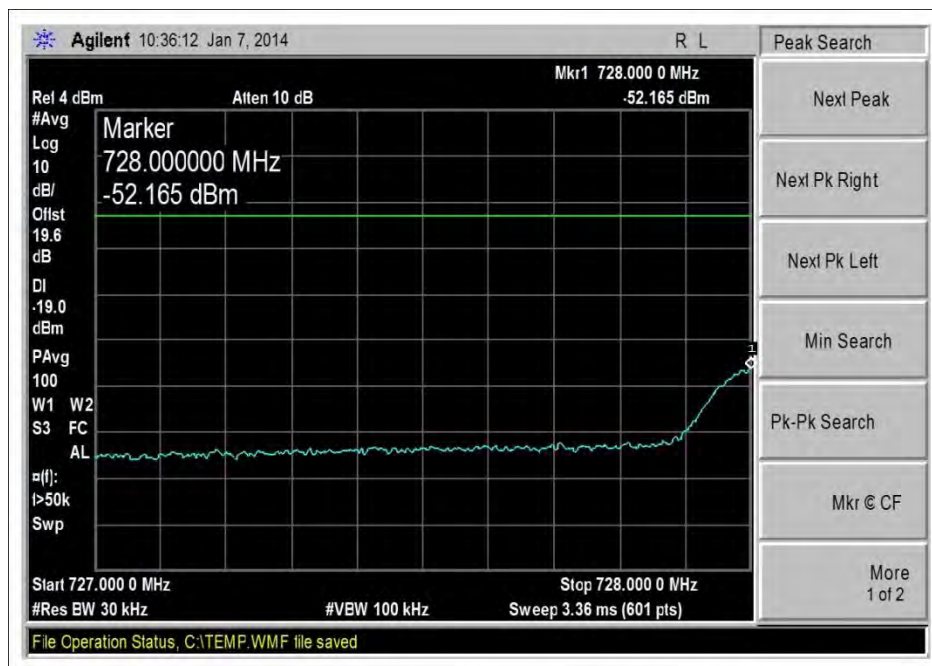
DL\_728-746MHz\_GSM\_H\_-20dBm



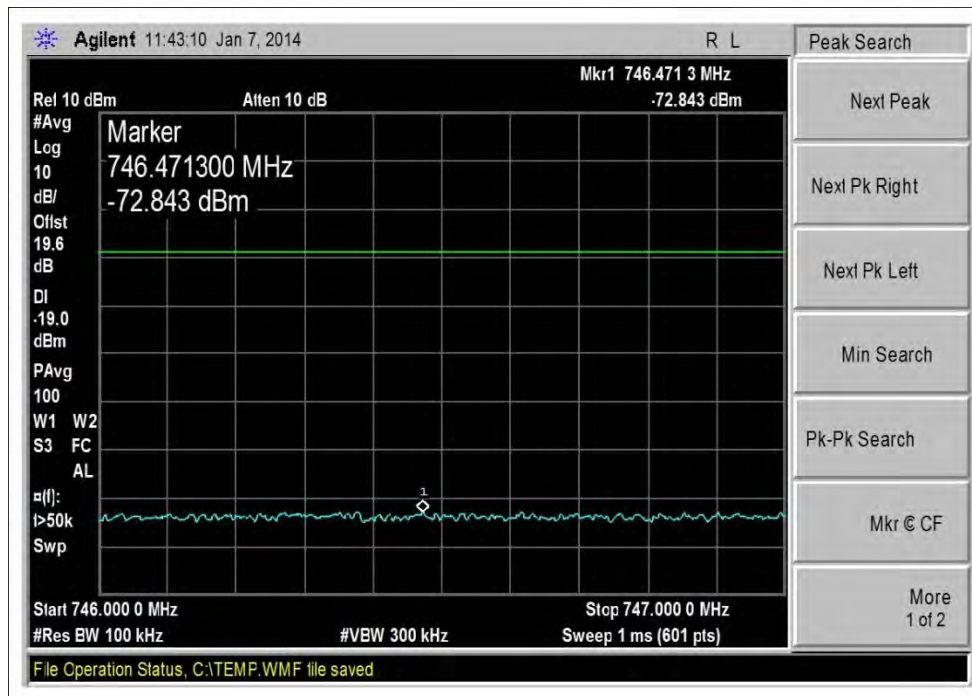
DL\_728-746MHz\_GSM\_H\_-62dBm



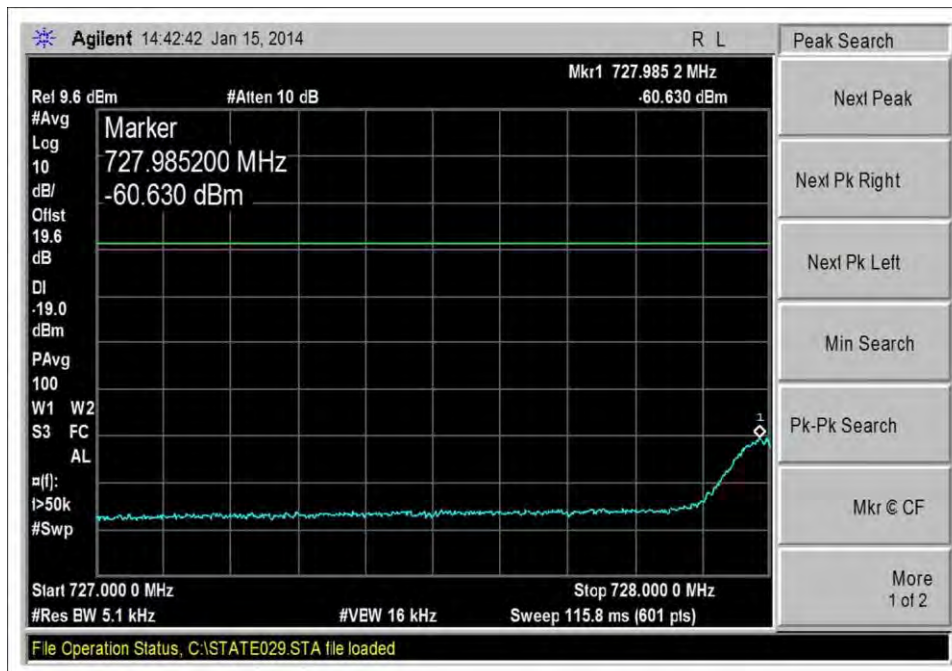
DL\_728-746MHz\_GSM\_L\_-20dBm



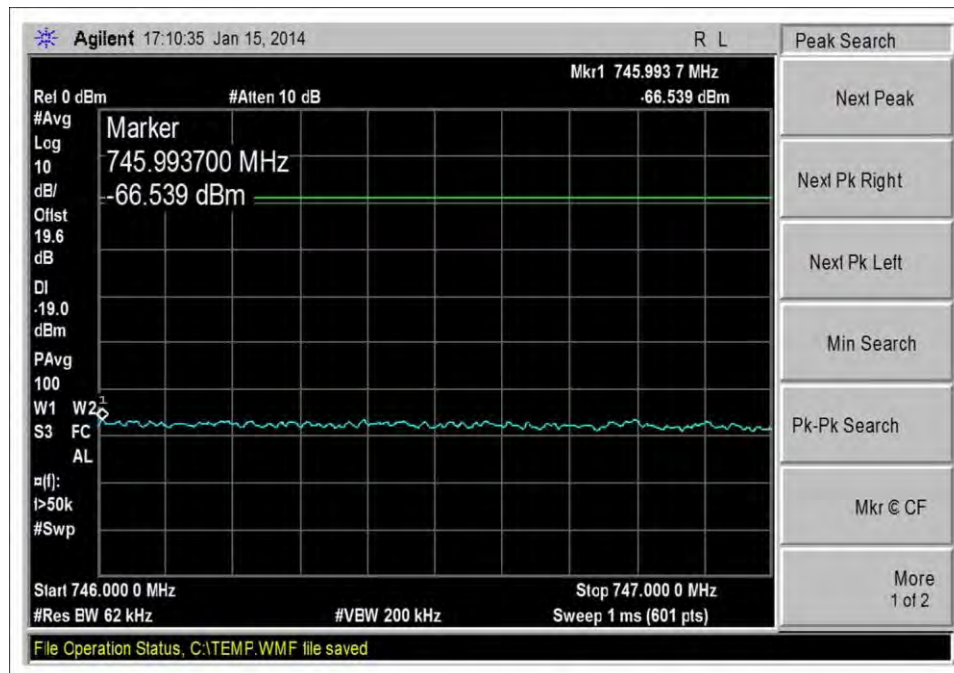
DL\_728-746MHz\_GSM\_L\_-63dBm



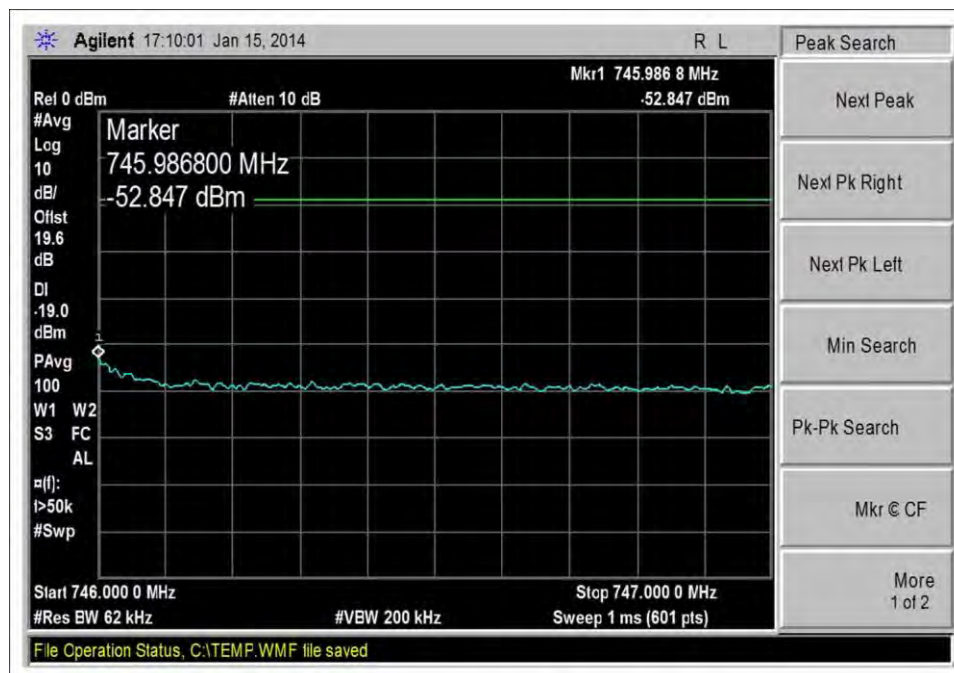
DL\_728-746MHz\_LTE\_H\_-20dBm



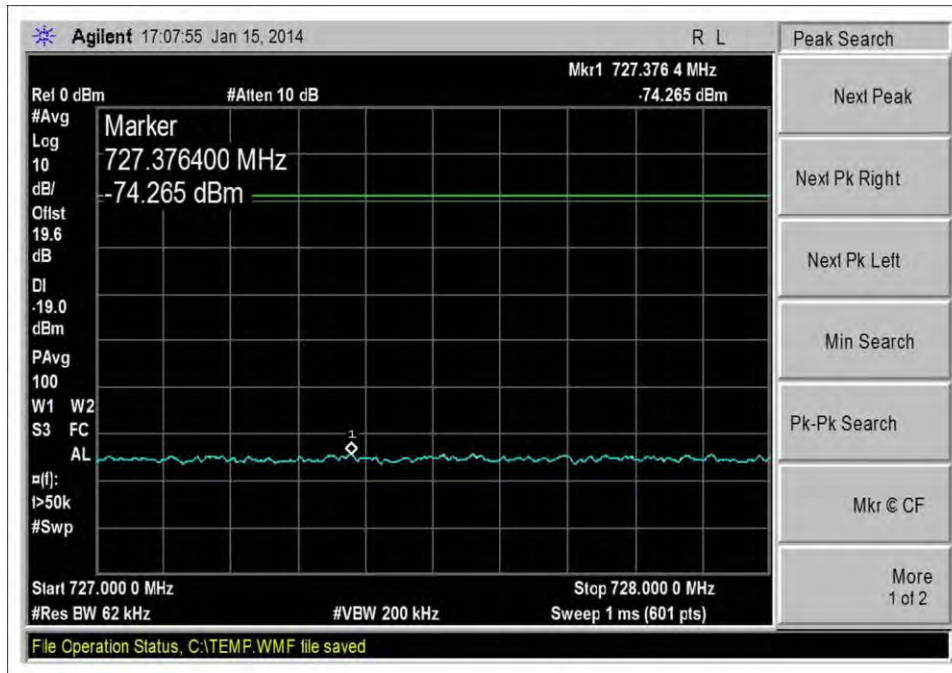
DL\_728-746MHz\_GSM\_L\_-63dBm



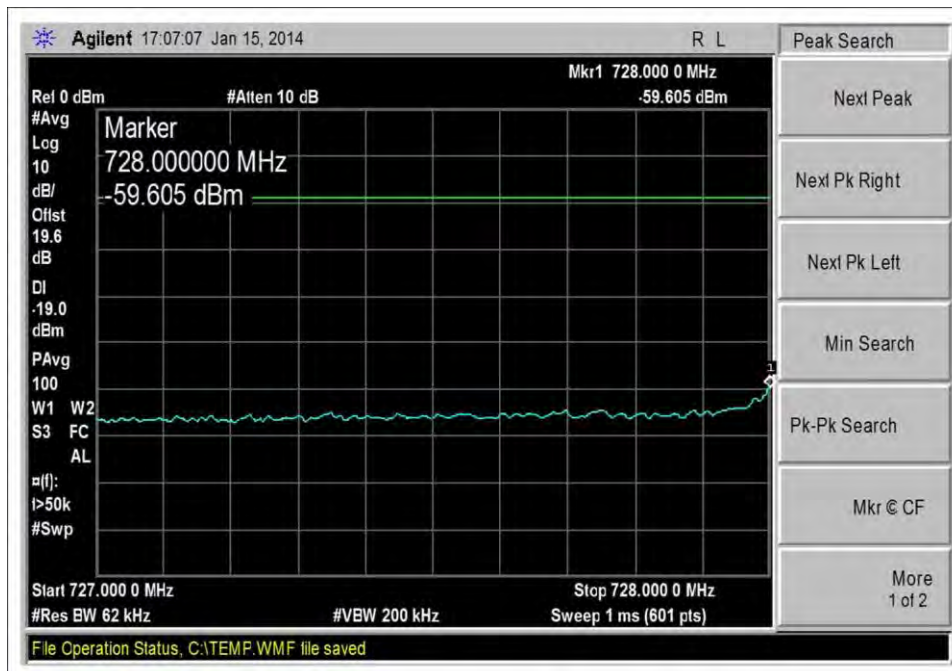
DL\_728-746MHz\_LTE\_H\_-20dBm



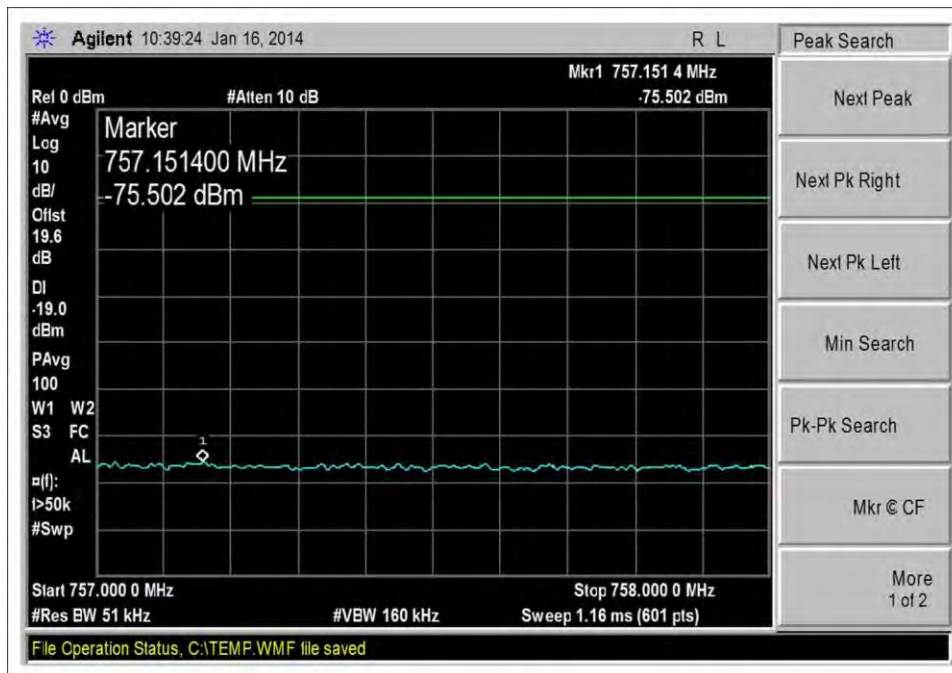
DL\_728-746MHz\_LTE\_H\_-66dBm



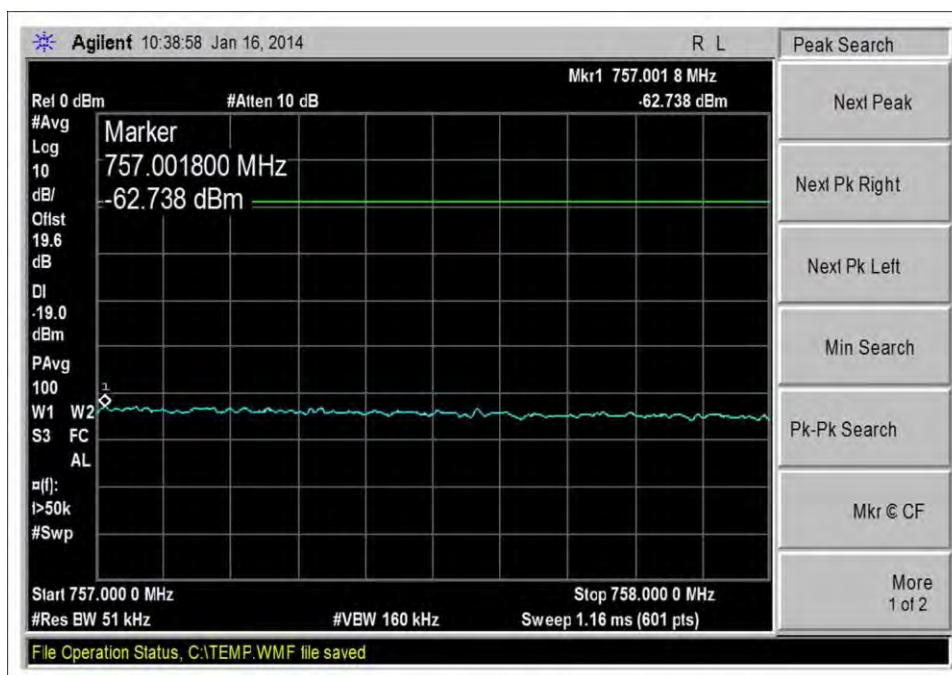
DL\_728-746MHz\_LTE\_L\_-20dBm



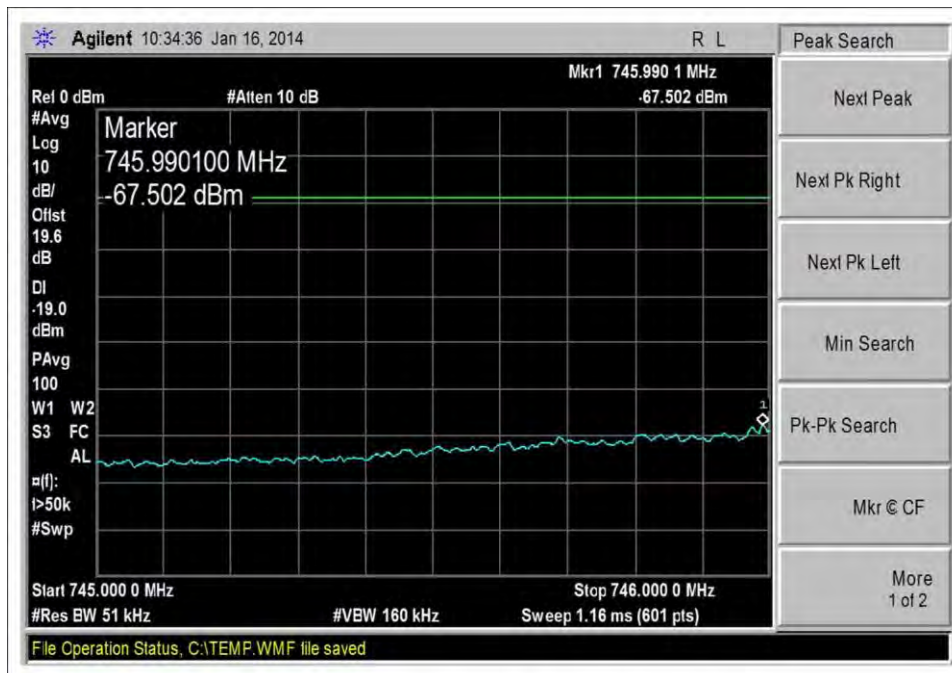
DL\_728-746MHz\_LTE\_L\_-65dBm



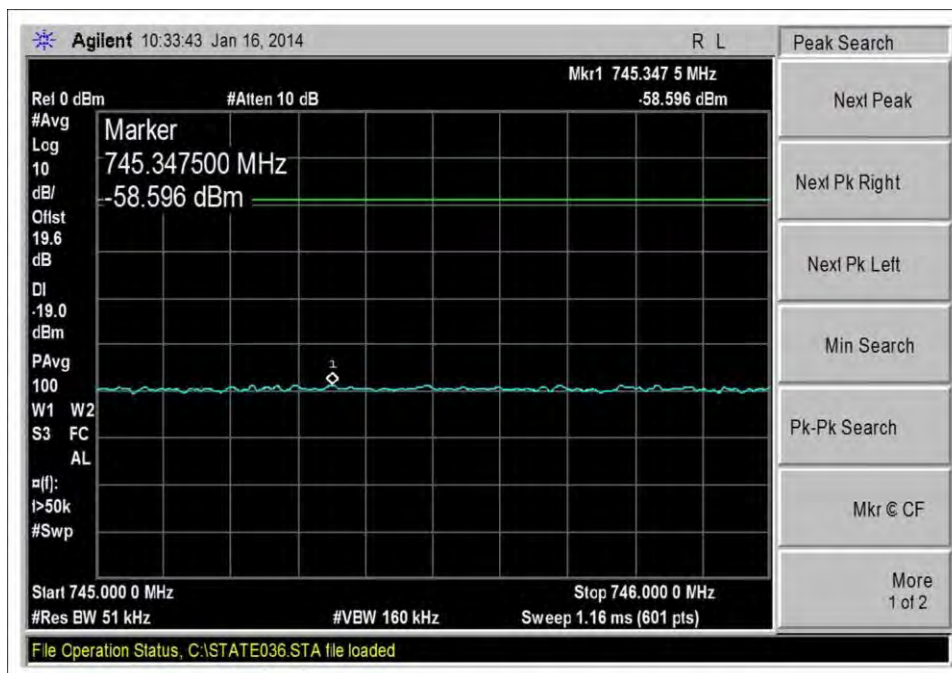
DL\_746-757MHz\_CDMA\_H\_-20dBm



DL\_746-757MHz\_CDMA\_H\_-63dBm



DL\_746-757MHz\_CDMA\_L\_-20dBm



7.5\_OBE\_DL\_746-757MHz\_CDMA\_L\_-66dBm