



SAMSUNG ELECTRONICS Co., Ltd.,  
Regulatory Compliance Group  
IT R&D Center  
416 Maetan3-Dong,  
Yeongtong-gu, Suwon city,  
Gyeonggi-Do, Korea 443-742

## FCC CFR47 PART 22 & 24 SUBPART CERTIFICATION REPORT

Model Tested : GT-I9300  
FCC ID (Requested) : A3LGTI9300A  
Report No : FJ-095-R1  
Job No : FJ-095  
Date issued : April 25, 2012

- Abstract -

All measurement reported herein accordance with FCC Rules, 47CFR Part2,  
Part22, Part24.

**Prepared By**

---

HK LEE – Test Engineer

**Authorized By**

---

WT JANG – Technical Manager



# TABLE OF CONTENT

| <b>MEASUREMENT REPORT</b>   | <b>Page</b> |
|---|-------------|
| <b>1. FCC CERTIFICATION INFORMATION</b> .....                             | <b>3</b>    |
| 1.1. §2.1033 General Information .....                                    | 3           |
| <b>2. INTRODUCTION</b> .....  | <b>4</b>    |
| 2.1. General .....  | 4           |
| <b>3. MEASURING INSTRUMENT CALIBRATION</b> .....                          | <b>5</b>    |
| <b>4. TEST EQUIPMENT LIST</b> .....                                       | <b>6</b>    |
| <b>5. DESCRIPTION OF TESTS</b> .....                                      | <b>7</b>    |
| 5.1. Effective Radiated Power / Equivalent Isotropic Radiated Power ..... | 7           |
| 5.2. Radiated Spurious & Harmonic Emission .....                          | 8           |
| 5.3. Peak-Average Ratio .....   | 9           |
| 5.4. Occupied Bandwidth .....   | 10          |
| 5.5. Spurious and Harmonic Emission at Antenna Terminal .....             | 10          |
| 5.5.1. Occupied Bandwidth Emission Limits .....                           | 10          |
| 5.5.2. Conducted Spurious Emission .....                                  | 12          |
| 5.6. Frequency Stability / Temperature Variation .....                    | 13          |
| <b>6. TEST DATA</b> .....   | <b>14</b>   |
| 6.1. Effective Radiated Power (E.R.P.) .....                              | 14          |
| 6.2. Equivalent Isotropic Radiated Power (E.I.R.P.) .....                 | 15          |
| 6.3. GSM850 Radiated Spurious & Harmonic measurement .....                | 16          |
| 6.4. GSM1900 Radiated Spurious & Harmonic measurement .....               | 17          |
| 6.5. GSM850 Radiated Spurious & Harmonic Conversion Table .....           | 18          |
| 6.6. GSM1900 Radiated Spurious & Harmonic Conversion Table .....          | 19          |
| 6.7. Frequency Stability .....  | 20          |
| 6.7.1. GSM850 Frequency Stability Table .....                             | 20          |
| 6.7.2. GSM850 Frequency Stability Graph .....                             | 21          |
| 6.7.3. GSM1900 Frequency Stability Table .....                            | 23          |
| 6.7.4. GSM1900 Frequency Stability Graph .....                            | 24          |
| <b>7. CONCLUSION</b> .....  | <b>26</b>   |
| <b>8. TEST PLOTS</b> .....  | <b>27</b>   |



# MEASUREMENT REPORT

## 1. FCC Certification Information

The following information is in accordance with FCC Rules, 47CFR Part2, Subpart J, Sections 2.1033 – 2.1055.

### 1.1. §2.1033 General Information

- Applicant Name : SAMSUNG ELECTRONICS CO., LTD.
- Address : 416 Maetan3-Dong, Yeongtong-gu, Suwon City  
Gyeonggi-Do, Korea 443-742
- FCC ID : A3LGTI9300A
- Model : GT-I9300
- Quantity : Quantity production is planned
- Emission Designators : 247KGXW(GSM850), 246KG7W(GSM850 EDGE)  
248KGXW(GSM1900), 249KG7W(GSM1900 EDGE)
- Tx Freq. Range : 824.2 - 848.8MHz (GSM850)  
1850.2MHz - 1909.8MHz (GSM1900)
- Rx Freq. Range : 869.2 - 893.8 MHz (GSM850)  
1930.2MHz - 1989.8MHz (GSM1900)
- Max. Power Rating : 0.511 W ERP GSM850 (27.08 dBm)  
0.918 W EIRP GSM1900 (29.63 dBm)  
0.239 W ERP GSM850 EDGE(23.79 dBm)  
0.597 W EIRP GSM1900 EDGE(27.76 dBm)
- FCC Classification(s) : PCS Licensed Portable Tx Held to Ear (PCE)
- Equipment (EUT) Type : 850/1900 GSM/GPRS/EDGE and Cellular/PSC  
WCDMA/HSPA Phone with Bluetooth and WLAN
- Frequency Tolerance :  $\pm 0.00025\%$  (2.5ppm)
- FCC Rule Part(s) : §24(E), §22(H), §2.
- Dates of Test : April 3-4, 2012
- Place of Test : SAMSUNG Lab,
- Test Report S/N : FJ-095-R1

## 2. INTRODUCTION

### 2.1. General

These measurement test were conducted at **SAMSUNG ELECTRONICS CO., LTD(SUWON)**. The site address is 416 Maetan3-Dong, Yeongtong-gu, Suwon City, Gyeonggi-Do, Korea 443-742 The site have 1 Fully-anechoic chamber and measurement facility.



**Figure1. Map of the Suwon City area.**

### **Measurement Procedure**

The radiated and spurious measurements were made Fully-anechoic chamber at a 3-meter test range (see Figure2). The equipment under testing was placed on a Non-conducted turntable 3-meters from the receive antenna. The receive antenna height and turntable rotations were adjusted for the highest reading on the receive spectrum analyzer. The substitution antenna will replace the EUT antenna it the same position and in vertical polarization. The frequency of the signal generator shall be set to the frequencies that were measured on the EUT. The test antenna shall be raised and lowered, if necessary, to ensure that the maximum signal is still being received. The signal generator, output level, shall be adjusted until an equal or a known related level to what was measured from the EUT is obtained in the spectrum analyzer. This level was recorded.

For readings above 1 GHz, the above procedure is repeated using horn antennas and the difference between the gain of the horn and an isotropic antenna are taken into consideration.



**Figure2. Photograph of 3m Fully-Anechoic Chamber**



### **3. MEASURING INSTRUMENT CALIBRATION**

The measuring equipment, which was utilized in performing the tests documented herein, has been calibrated in accordance with the manufacturer's recommendations for utilizing calibration equipment, which is traceable to recognized national standards.

#### 4. TEST EQUIPMENT LIST

| Name Of Equipment               | Model               | Serial No.       | Due Date     |
|---------------------------------|---------------------|------------------|--------------|
| Spectrum Analyzer               | ESI26               | 836119/010       | 2012-10-25   |
|                                 | E4440A(3Hz~26.5GHz) | MY46187454       | 2013-03-14   |
|                                 | E4440A(3Hz~26.5GHz) | MY41000236       | 2012-04-27   |
| Signal Generator                | SMR20               | 835197/030       | 2012-12-01   |
| Network Analyzer                | 8753E               | JP38160590       | 2012-06-21   |
| Pre-Amplifier                   | 8449B               | 3008A00691       | 2012-12-09   |
| Communication test set          | 8960                | MY47510060       | 2013-03-05   |
|                                 | 8960                | GB42360886       | 2012-09-02   |
| Controller                      | CO2000              | CO2000/424       | Not Required |
| Turn Unit                       | CT0800              | CT0800/057       | Not Required |
| Rotating Device                 | DE3600-RH-PR        | DE3600-RH-PR/050 | Not Required |
| Antenna Master                  | MA4000              | MA4000/204       | Not Required |
| Horn Antenna                    | HF906               | 100134           | 2013-09-05   |
|                                 | BBHA9120            | 9120D-636        | 2012-07-14   |
| Dipole Antenna                  | UHA 9105            | 9105-2412        | 2013-09-09   |
|                                 | UHA 9105            | 9105-2413        | 2012-07-15   |
| Receive Antenna                 | HL040               | 353255/019       | 2013-09-05   |
| Power Supply                    | E3640A              | MY40003594       | 2012-06-21   |
|                                 | E3640A              | MY40003595       | 2012-05-27   |
|                                 | E3632A              | MY40022438       | 2013-03-02   |
| Divider                         | 11636B              | 51946            | 2012-07-04   |
|                                 | 11636B              | 51942            | 2012-07-05   |
|                                 | 11636B              | 56918            | 2012-09-28   |
| High Pass Filter                | WHK/3.0/18G-10SS    | 492              | 2013-04-09   |
|                                 | WHK/3.5/18G-10SS    | 4                | 2013-04-09   |
| Environmental Chamber           | SH-241              | 92000549         | 2012-11-14   |
|                                 | SH-241              | 92000548         | 2012-11-14   |
| Shielded Fully Anechoic Chamber | CHAMBER             | ANT0001          | Not Required |

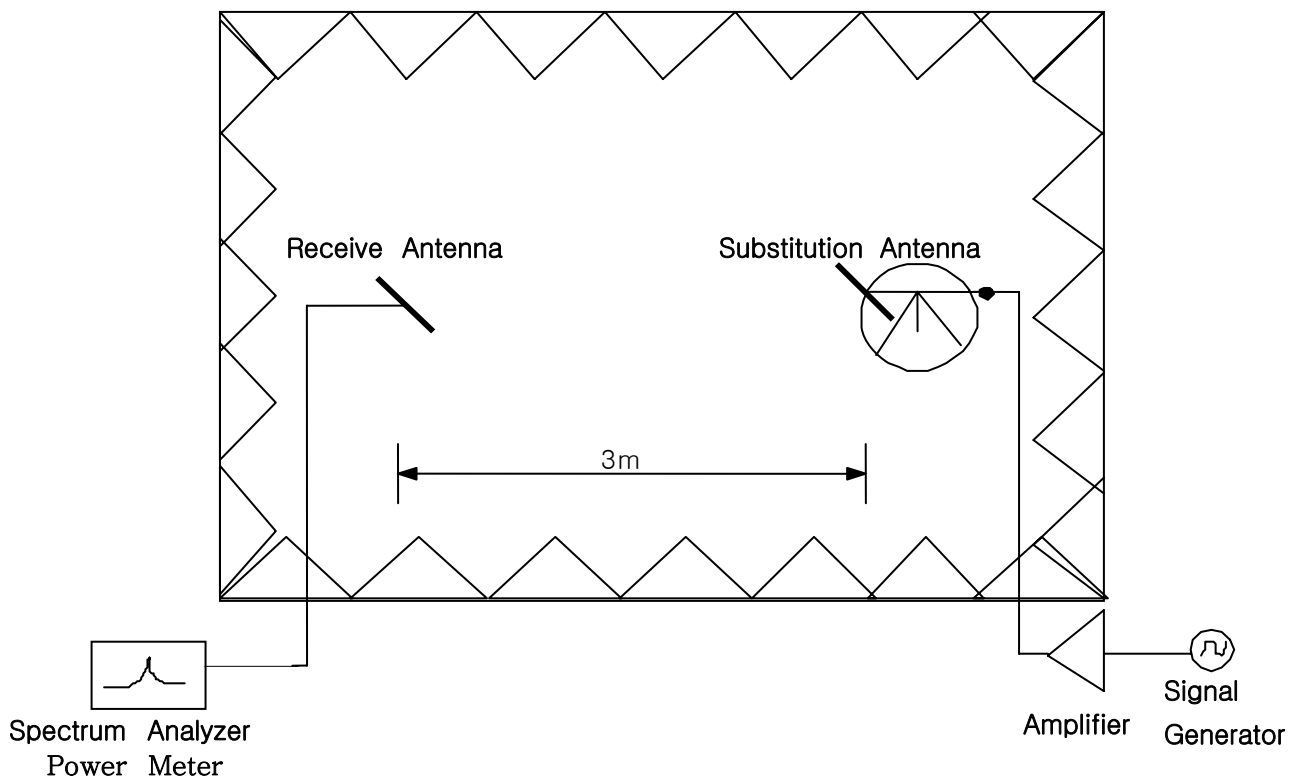
The test equipment are on a one year cal cycle, only the antennas are on a two year cal cycle

## 5. DESCRIPTION OF TESTS

### 5.1. Effective Radiated Power / Equivalent Isotropic Radiated Power

#### Test Set-up for the ERP/EIRP TEST

Effective Radiated Power Output and Equivalent Isotropic Radiated Power output Measurements by Substitution Method according to ANSI/TIA/EIA-603-C-2004



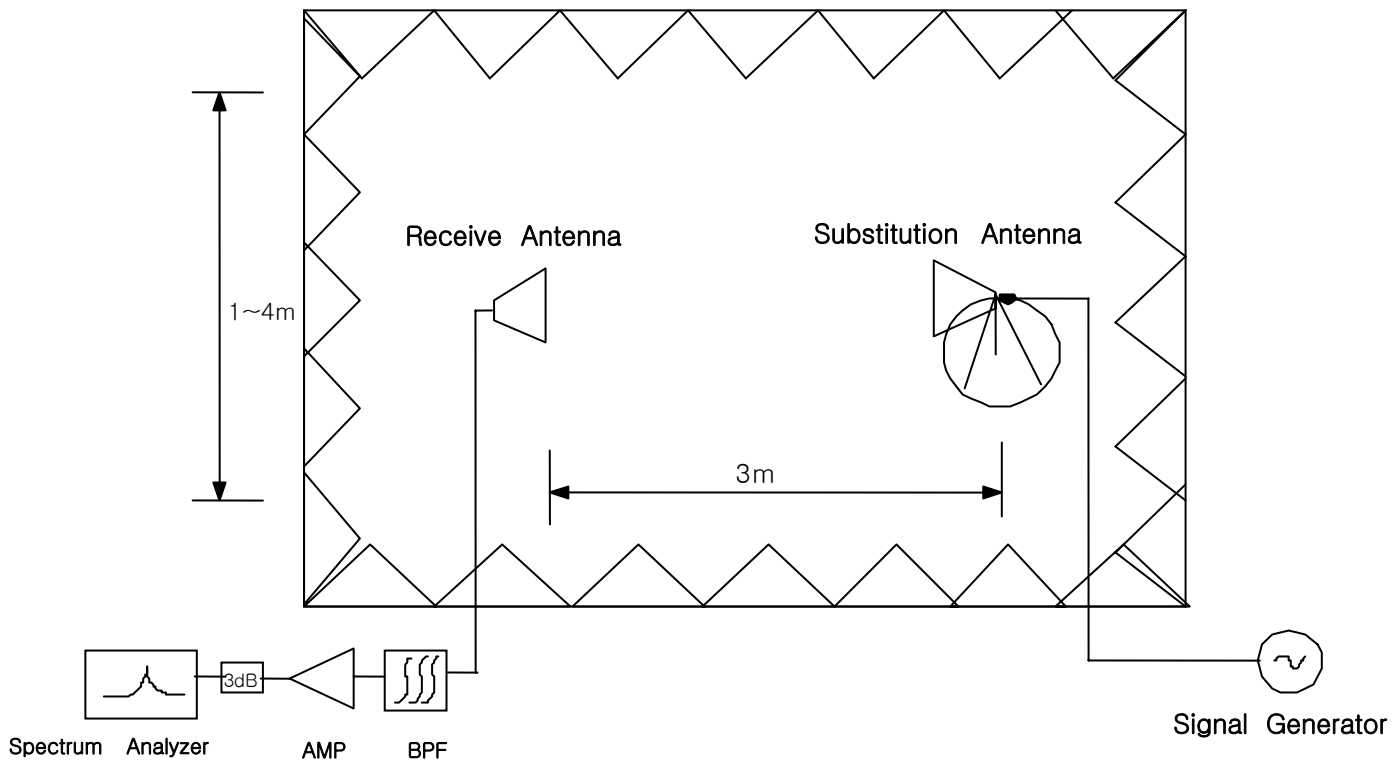
**Figure 3. Diagram of ERP/EIRP test Set-up**

The EUT was placed on the rotating device at 3-meters from the receive antenna and tested in 3 orthogonal planes. The turn unit and rotating device was adjusted for the highest reading on the receive spectrum analyzer. For GSM signals, an average detector is used, with RBW=VBW=3MHz, SPAN=10MHz. A half-wave dipole was substituted in place of the EUT. This dipole antenna was driven by a signal generator and the level of the signal generator was adjusted to obtain the same receive spectrum analyzer reading. The conducted power at the terminals of dipole is measured. The ERP and EIRP are recorded. For readings above 1GHz, the above procedure is repeated using horn antennas and the difference between the gain of the horn and an isotropic or dipole antenna are taken into consideration.

## 5.2. Radiated Spurious & Harmonic Emission

### Test Set-up for the Radiated Emission TEST

Radiated Spurious Emission Measurements by Substitution Method according to ANSI/TIA/EIA-603-C-2004



**Figure 4. Diagram of Radiated Spurious & Harmonic test Set-up**

The EUT was placed on the rotating device at 3-meters from the receive antenna and tested in 3 orthogonal planes. The turn unit and rotating device was adjusted for the highest reading on the receive spectrum analyzer. The Spectrum was investigated from 30MHz to the 10<sup>th</sup> Harmonic of the fundamental. A peak detector is used, with RBW=VBW=1MHz. The value that we could measure was only reported. A half-wave dipole was substituted in place of the EUT. This dipole antenna was driven by a signal generator and the level of the signal generator was adjusted to obtain the same receive spectrum analyzer reading. This spurious level is recorded. For readings above 1GHz, the above procedure is repeated using horn antennas and the difference between the gain of the horn and an isotropic or dipole antenna are taken into consideration.



## SAMPLE CALCULATION

### **Example: Channel 661 , Second Harmonic(3760.00MHz)**

The receive analyzer reading at 3meters with the EUT on the turntable was  $-81.0\text{dBm}$ . The gain of the substituted antenna is  $8.1\text{dBi}$ . The signal generator connected to the substituted antenna terminals is adjusted to produce a reading of  $-81.0\text{dBm}$  of the receive analyzer. The loss of the cable between the signal generator and the terminals of the substituted antenna is  $2.0\text{dB}$  at  $3760.00\text{MHz}$ . So  $6.1\text{dB}$  is added to the signal generator reading of  $-30.9\text{dBm}$  yielding  $-24.8\text{dBm}$ . The fundamental EIRP was  $25.5\text{dBm}$  so this harmonic was  $25.5\text{dBm} - (-24.8) = 50.3\text{dBc}$  .

### 5.3. Peak-Average Ratio

A peak to average ratio measurement is performed at the conducted port of the EUT. An average and a peak trace are used on a spectrum analyzer to determine the largest deviation between the average and the peak power of the EUT in a given bandwidth.

## 5.4. Occupied Bandwidth

### **Test Procedure**

The occupied bandwidth, that is the frequency bandwidth such that, below its lower and above its upper frequency limits, the mean powers radiated are each equal to 0.5 percent of the total mean power radiated by a given emission shall be measured. The span of the analyzer shall be set to capture all products of the modulation process, including the emission skirts. The resolution and video bandwidth shall be set to as close to 1 percent of the selected span as is possible without being below 1 percent. Video averaging is not permitted. The trace data points are recovered and are directly summed in linear terms. The recovered amplitude data points, beginning at the lowest frequency, are placed in a running sum until 0.5 percent of the total is reached and that frequency recorded. The process is repeated for the highest frequency data points. This frequency is recorded, The span between the two recorded frequencies is the occupied bandwidth. These measurements were performed on Agilent E4440A Spectrum Analyzer, and use analyzer's bandwidth measurement function.

## 5.5. Spurious and Harmonic Emission at Antenna Terminal

### 5.5.1. Occupied Bandwidth Emission Limits

#### **Part 24**

- (a) On any frequency outside a licensee's frequency block, the power of any emission shall be attenuated below the transmitter power (P) by at least  $43 + 10 \log(P)$  dB.
- (b) Compliance with these provisions is based on the use of measurement instrumentation employing a resolution bandwidth of 1 MHz or greater. However, in the 1MHz bands immediately outside and adjacent to the frequency block a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed. The emission bandwidth is defined as the width of the signal between two points, one below the carrier center frequency and one above the carrier center frequency, outside of which all emission are attenuated at least 26 dB below the transmitter power.
- (c) When measuring the emission limits, the nominal carrier frequency shall be adjusted as close to the licensee's frequency block edges, both upper and lower, as the design permits.

## Part 22

- (a) Out of band emissions. The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least  $43 + 10 \log(P)$  dB.
- (b) Measurement procedure. Compliance with these rules is based on the use of measurement instrumentation employing a resolution bandwidth of 100 kHz or greater. In the 1 MHz bands immediately outside and adjacent to the frequency block a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed. A narrower resolution bandwidth is permitted in all cases to improve measurement accuracy provided the measured power is integrated over the full required measurement bandwidth (i.e. 100 kHz or 1 percent of emission bandwidth, as specified). The emission bandwidth is defined as the width of the signal between two points, one below the carrier center frequency and one above the carrier center frequency, outside of which all emissions are attenuated at least 26 dB below the transmitter power.

| BLOCK | Freq. Range (MHz)<br>Transmitter (Tx) | Freq. Range (MHz)<br>Receiver (Rx) |
|-------|---------------------------------------|------------------------------------|
| A     | 1850 – 1865                           | 1930 – 1945                        |
| B     | 1870 – 1885                           | 1950 – 1965                        |
| C     | 1895 – 1910                           | 1975 – 1990                        |
| D     | 1865 – 1870                           | 1945 – 1950                        |
| E     | 1885 – 1890                           | 1965 – 1970                        |
| F     | 1890 – 1895                           | 1970 – 1975                        |

**Table 1. Broadband PCS Service Frequency Blocks**

| BLOCK      | Freq. Range (MHz)<br>Transmitter (Tx) | Freq. Range (MHz)<br>Receiver (Rx) |
|------------|---------------------------------------|------------------------------------|
| A* Low + A | 824 ~ 835                             | 869 ~ 880                          |
| B          | 835 ~ 845                             | 880 ~ 890                          |
| A* High    | 845 ~ 846.5                           | 890 ~ 891.5                        |
| B*         | 846.5 ~ 849                           | 891.5 ~ 894                        |

**Table 2. Cellular Service Frequency Blocks**

## 5.5.2. Conducted Spurious Emission

### **Minimum standard:**

On any frequency outside a license frequency block, the power of any emission shall be attenuated below the transmitter power(P) by at least  $43+10\log(P)$ dB. Limit equivalent to -13dBm, calculation shown below.

$$43 + 10\log ( 0.511 \text{ W} ) = 40.08 \text{ dB}$$

$$27.08 \text{ dBm} - 40.08 \text{ dB} = -13 \text{ dBm}$$

Compliance with the out-of-band emissions requirement is based on test being performed with an analyzer resolution bandwidth of 1MHz. However in the 1MHz band immediately outside and adjacent to the frequency block a resolution bandwidth of at least 1% of the fundamental emissions bandwidth may be employed.

Example)

In case of GSM :  $0.01 * 273\text{KHz} = 2.73\text{KHz}$

A Resolution BW of 3KHz was used for measurement at the band edges.

### **Test Procedure:**

The EUT was setup to maximum output power at its lowest channel. The Resolution BW of the analyzer is set to 1% of the emission bandwidth to show compliance with the -13dBm limit, in the 1MHz bands immediately outside and adjacent to the edge of the frequency block. The measurements are repeated for the EUT's highest channel. For the Out-of-Band measurements a 1MHz RBW was used to scan GSM850 Mode from 10MHz to 10GHz and GSM1900 Mode from 10MHz to 20GHz. A display line was placed at -13dBm to show compliance. The high, lowest and a middle channel were tested for out of band measurements.

Plots are shown herein.

## 5.6. Frequency Stability / Temperature Variation

The frequency stability of the transmitter is measured by:

- a.) Temperature: The temperature is carried from  $-30^{\circ}\text{C}$  to  $+50^{\circ}\text{C}$  using an environmental chamber.
- b.) Primary Supply Voltage: The primary supply voltage is varied from 85% to 115% of the voltage normally at the input to the device or at the power supply terminals if cables are not normally supplied.

Specification- The frequency stability shall be sufficient to ensure that the fundamental emission stays within the authorized frequency block. The frequency stability of the transmitter shall be maintained within  $\pm 0.00025$  ( $\pm 2.5\text{ppm}$ ) of the center frequency.

Time Period and Procedure:

1. The carrier frequency of the transmitter and the individual oscillators is measured at room temperature ( $25^{\circ}\text{C}$  to  $27^{\circ}\text{C}$  to provide a reference).
2. The equipment is subjected to an overnight "soak" at  $-30^{\circ}\text{C}$  without any power applied.
3. After the overnight "soak" at  $-30^{\circ}\text{C}$  (Usually 14~16 hours), the equipment is turned on in a "standby" condition for one minute before applying power to the transmitter. Measurement of the carrier frequency of the transmitter and the individual oscillators is made within a three minute interval after applying to the transmitter.
4. Frequency measurements are made at  $10^{\circ}\text{C}$  interval up to room temperature. At least a period of one and one half-hour is provided to allow stabilization of the equipment at each temperature level.
5. Again the transmitter carrier frequency and the individual oscillators is measured at room temperature to begin measurement of the upper temperature levels.
6. Frequency measurements are at 10 intervals starting at  $-30^{\circ}\text{C}$  up to  $+50^{\circ}\text{C}$  allowing at least two hours at each temperature for stabilization. In all measurements the frequency is measured within three minutes after re-applying power to the transmitter.
7. The artificial load is mounted external to the temperature chamber.

NOTE : The EUT is tested down to the battery endpoint.



## 6. TEST DATA

### 6.1. Effective Radiated Power (E.R.P.)

Supply Voltage : 3.7VDC

Modulation : GSM850

#### ■ Result

| Frequency (MHz) | Tested level [dBm] | Substitute Level [dBm] | Antenna Gain [dBd] | Polarization [H/V] | ERP [dBm] | ERP [W] | Battery  |
|-----------------|--------------------|------------------------|--------------------|--------------------|-----------|---------|----------|
| 824.20          | -10.96             | 27.82                  | -1.95              | H                  | 25.87     | 0.386   | Specific |
| 836.60          | -11.56             | 27.43                  | -1.72              | H                  | 25.71     | 0.372   | Specific |
| 848.80          | -12.31             | 28.66                  | -1.58              | H                  | 27.08     | 0.511   | Specific |

#### ■ EDGE Result

| Frequency (MHz) | Tested level (dBm) | Substitute Level [dBm] | Antenna Gain [dBd] | Polarization [H/V] | ERP (dBm) | ERP (W) | Battery  |
|-----------------|--------------------|------------------------|--------------------|--------------------|-----------|---------|----------|
| 848.80          | -15.64             | 25.37                  | -1.58              | H                  | 23.79     | 0.239   | Specific |

**NOTE :** Specific batteries is supplied for this phone (Battery Model: EB-L1G6LLU)

- All modes of operation were investigated, and the worst-case results are reported.

**Radiated measurements at 3 meters by Substitution Method**



## 6.2. Equivalent Isotropic Radiated Power (E.I.R.P.)

Supply Voltage : 3.7VDC

Modulation : PCS 1900

### ■ Result

| Frequency (MHz) | Tested level [dBm] | Substitute Level [dBm] | Antenna Gain [dBi] | Polarization [H/V] | EIRP [dBm] | EIRP [W] | Battery  |
|-----------------|--------------------|------------------------|--------------------|--------------------|------------|----------|----------|
| 1850.20         | -19.73             | 18.62                  | 10.16              | V                  | 28.78      | 0.755    | Specific |
| 1880.00         | -20.83             | 17.56                  | 10.16              | H                  | 27.72      | 0.592    | Specific |
| 1909.80         | -19.46             | 19.47                  | 10.16              | H                  | 29.63      | 0.918    | Specific |

### ■ EDGE Result

| Frequency (MHz) | Tested level (dBm) | Substitute Level [dBm] | Antenna Gain [dBi] | Polarization [H/V] | EIRP (dBm) | EIRP (W) | Battery  |
|-----------------|--------------------|------------------------|--------------------|--------------------|------------|----------|----------|
| 1909.80         | -21.33             | 17.6                   | 10.16              | H                  | 27.76      | 0.597    | Specific |

**NOTE :** Specific batteries is supplied for this phone (Battery Model: EB-L1G6LLU)

- All modes of operation were investigated, and the worst-case results are reported.

**Radiated measurements at 3 meters by Substitution Method**

### 6.3. GSM850 Radiated Spurious & Harmonic measurement

Operating Frequency : 824.20 MHz(Low), 836.60MHz(Middle), 848.80MHz(High)

Measured Output Power : 27.08 dBm = 0.511 W

Modulation Signal : GSM850

Limit :  $43 + 10\log_{10}(P) = 40.08 \text{ dBc}$

#### ■ Result

| Channel | Harmonic | Frequency (MHz) | From EUT Tested level (dBm) | POL (H/V) | Result (dBc) |
|---------|----------|-----------------|-----------------------------|-----------|--------------|
| 128     | 2        | 1648.40         | -64.16                      | H         | 78.65        |
|         | 3        | 2472.60         | -59.55                      | H         | 68.80        |
|         | 4        | 3296.80         | -68.22                      | V         | 73.60        |
|         | 5        | 4121.00         | -                           | -         | -            |
|         | 6        | 4945.20         | -                           | -         | -            |
|         | 7        | 5769.40         | -                           | -         | -            |
| 190     | 2        | 1673.20         | -63.83                      | H         | 78.07        |
|         | 3        | 2509.80         | -60.14                      | H         | 69.18        |
|         | 4        | 3346.40         | -67.83                      | V         | 73.30        |
|         | 5        | 4183.00         | -                           | -         | -            |
|         | 6        | 5019.60         | -                           | -         | -            |
|         | 7        | 5856.20         | -                           | -         | -            |
| 251     | 2        | 1697.60         | -63.52                      | H         | 76.48        |
|         | 3        | 2546.40         | -61.39                      | V         | 70.76        |
|         | 4        | 3395.20         | -68.42                      | V         | 73.75        |
|         | 5        | 4244.00         | -                           | -         | -            |
|         | 6        | 5092.80         | -                           | -         | -            |
|         | 7        | 5941.60         | -                           | -         | -            |

#### NOTE :

1. "-" Indicates the spurious emission could not be detected due to noise limitations or ambients.
2. The spectrum is measured from 30MHz to the 10<sup>th</sup> harmonic and All modes of operation were investigated, and the worst-case results are reported..

#### Radiated Spurious Emission measurements at 3 meters by Substitution Method



## 6.4. GSM1900 Radiated Spurious & Harmonic measurement

Operating Frequency : 1850.2 MHz(Low), 1880.00 MHz(Middle), 1909.80 MHz(High)

Measured Output Power : 29.63 dBm = 0.918 W

Modulation Signal : GSM1900

Limit :  $43 + 10\log_{10}(P) = 42.63$  dBc

### Result

| Channel | Harmonic | Frequency (MHz) | From EUT Tested level (dBm) | POL (H/V) | Result (dBc) |
|---------|----------|-----------------|-----------------------------|-----------|--------------|
| 512     | 2        | 3700.40         | -60.20                      | H         | 62.85        |
|         | 3        | 5550.60         | -62.93                      | H         | 62.16        |
|         | 4        | 7400.80         | -69.24                      | H         | 63.16        |
|         | 5        | 9251.00         | -                           | -         | -            |
|         | 6        | 11101.20        | -                           | -         | -            |
|         | 7        | 12951.40        | -                           | -         | -            |
| 661     | 2        | 3760.00         | -59.88                      | H         | 62.62        |
|         | 3        | 5640.00         | -62.98                      | H         | 61.87        |
|         | 4        | 7520.00         | -66.94                      | H         | 60.81        |
|         | 5        | 9400.00         | -                           | -         | -            |
|         | 6        | 11280.00        | -                           | -         | -            |
|         | 7        | 13160.00        | -                           | -         | -            |
| 810     | 2        | 3819.60         | -62.06                      | V         | 65.14        |
|         | 3        | 5729.40         | -63.69                      | H         | 62.12        |
|         | 4        | 7639.20         | -61.21                      | H         | 55.59        |
|         | 5        | 9549.00         | -                           | -         | -            |
|         | 6        | 11458.80        | -                           | -         | -            |
|         | 7        | 13368.60        | -                           | -         | -            |

#### NOTE :

1. "-" Indicates the spurious emission could not be detected due to noise limitations or ambients.
2. The spectrum is measured from 30MHz to the 10<sup>th</sup> harmonic and All modes of operation were investigated, and the worst-case results are reported.

### Radiated Spurious Emission measurements at 3 meters by Substitution Method



## 6.5. GSM850 Radiated Spurious & Harmonic Conversion Table

Date : April 4, 2012

Test Engineer : HK LEE

- ① Tx Cable loss
- ② Tx Horn Ant Gain
- ③ Tx Level to radiate -13dBm
- ④ ESI Level received from Tx with-13dBm
- ⑤ Tested Level from EUT
- ⑥ = ERP+ 2.15 - (-13 + ⑤ - ④)

| CH  | Har | Frequency (MHz) | ① Tx C/L dB | ②Tx Horn Gain dBi | ③Tx Level dBm | ④ ESI Level : H dBm | ④ ESI Level : V dBm | ⑤Tested EUT Level : H dBm | ⑤Tested EUT Level : V dBm | ⑥ Result EUT : H (dBc) | ⑥ Result EUT : V (dBc) |
|-----|-----|-----------------|-------------|-------------------|---------------|---------------------|---------------------|---------------------------|---------------------------|------------------------|------------------------|
| 128 | 2   | 1648.40         | -8.77       | 9.40              | -13.60        | -27.73              | -27.03              | -64.16                    | -63.48                    | 78.65                  | 78.67                  |
|     | 3   | 2472.60         | -11.12      | 10.60             | -12.50        | -32.97              | -32.23              | -59.55                    | -60.00                    | 68.80                  | 69.99                  |
|     | 4   | 3296.80         | -12.19      | 12.00             | -12.80        | -36.08              | -36.84              | -67.93                    | -68.22                    | 74.07                  | 73.60                  |
|     | 5   | 4121.00         | -13.85      | 12.60             | -11.80        | -39.75              | -39.33              | -                         | -                         | -                      | -                      |
|     | 6   | 4945.20         | -15.03      | 12.70             | -10.70        | -42.44              | -42.28              | -                         | -                         | -                      | -                      |
|     | 7   | 5769.40         | -17.11      | 13.10             | -9.00         | -44.12              | -44.43              | -                         | -                         | -                      | -                      |
| 190 | 2   | 1673.20         | -8.83       | 9.40              | -13.60        | -27.98              | -27.21              | -63.83                    | -64.57                    | 78.07                  | 79.58                  |
|     | 3   | 2509.80         | -11.24      | 10.60             | -12.40        | -33.18              | -32.42              | -60.14                    | -60.92                    | 69.18                  | 70.72                  |
|     | 4   | 3346.40         | -12.13      | 12.00             | -12.90        | -36.09              | -36.75              | -67.51                    | -67.83                    | 73.64                  | 73.30                  |
|     | 5   | 4183.00         | -14.18      | 12.60             | -11.40        | -39.47              | -39.56              | -                         | -                         | -                      | -                      |
|     | 6   | 5019.60         | -15.91      | 12.70             | -9.80         | -42.07              | -42.44              | -                         | -                         | -                      | -                      |
|     | 7   | 5856.20         | -17.15      | 13.10             | -9.00         | -45.07              | -44.94              | -                         | -                         | -                      | -                      |
| 251 | 2   | 1697.60         | -8.88       | 9.40              | -13.50        | -29.26              | -28.45              | -63.52                    | -65.27                    | 76.48                  | 79.04                  |
|     | 3   | 2546.40         | -11.22      | 10.60             | -12.40        | -32.63              | -32.85              | -61.43                    | -61.39                    | 71.02                  | 70.76                  |
|     | 4   | 3395.20         | -12.28      | 12.00             | -12.70        | -36.60              | -36.89              | -68.70                    | -68.42                    | 74.32                  | 73.75                  |
|     | 5   | 4244.00         | -14.15      | 12.60             | -11.50        | -39.36              | -39.77              | -                         | -                         | -                      | -                      |
|     | 6   | 5092.80         | -16.16      | 12.70             | -9.50         | -42.73              | -42.38              | -                         | -                         | -                      | -                      |
|     | 7   | 5941.60         | -17.34      | 13.10             | -8.80         | -45.37              | -45.34              | -                         | -                         | -                      | -                      |



## 6.6. GSM1900 Radiated Spurious & Harmonic Conversion Table

Date : April 4, 2012

Test Engineer : HK LEE

- ① Tx Cable loss
- ② Tx Horn Ant Gain
- ③ Tx Level to radiate -13dBm
- ④ ESI Level received from Tx with-13dBm
- ⑤ Tested Level from EUT
- ⑥ = EIRP - (-13 + ⑤ - ④)

| CH  | Har | Frequency (MHz) | ① Tx C/L dB | ②Tx Horn Gain dBi | ③Tx Level dBm | ④ ESI Level : H dBm | ④ ESI Level : V dBm | ⑤Tested EUT Level : H dBm | ⑤Tested EUT Level : V dBm | ⑥ Result EUT : H (dBc) | ⑥ Result EUT : V (dBc) |
|-----|-----|-----------------|-------------|-------------------|---------------|---------------------|---------------------|---------------------------|---------------------------|------------------------|------------------------|
| 512 | 2   | 3700.40         | -12.85      | 12.60             | -12.80        | -39.98              | -39.03              | -60.20                    | -60.74                    | 62.85                  | 64.34                  |
|     | 3   | 5550.60         | -16.92      | 12.50             | -8.60         | -43.40              | -42.99              | -62.93                    | -65.76                    | 62.16                  | 65.40                  |
|     | 4   | 7400.80         | -20.20      | 11.50             | -4.30         | -48.71              | -48.56              | -69.24                    | -69.51                    | 63.16                  | 63.58                  |
|     | 5   | 9251.00         | -23.05      | 11.90             | -1.90         | -53.11              | -52.12              | -                         | -                         | -                      | -                      |
|     | 6   | 11101.20        | -25.08      | 11.50             | 0.60          | -57.75              | -54.90              | -                         | -                         | -                      | -                      |
|     | 7   | 12951.40        | -28.10      | 14.42             | 0.70          | -61.50              | -58.01              | -                         | -                         | -                      | -                      |
| 661 | 2   | 3760.00         | -13.35      | 12.60             | -12.30        | -39.89              | -39.16              | -59.88                    | -60.76                    | 62.62                  | 64.23                  |
|     | 3   | 5640.00         | -17.07      | 12.50             | -8.40         | -43.74              | -43.42              | -62.98                    | -64.61                    | 61.87                  | 63.82                  |
|     | 4   | 7520.00         | -20.60      | 11.50             | -3.90         | -48.76              | -48.06              | -66.94                    | -68.01                    | 60.81                  | 62.58                  |
|     | 5   | 9400.00         | -23.50      | 11.90             | -1.40         | -52.65              | -51.24              | -                         | -                         | -                      | -                      |
|     | 6   | 11280.00        | -26.24      | 11.50             | 1.70          | -56.66              | -54.54              | -                         | -                         | -                      | -                      |
|     | 7   | 13160.00        | -28.79      | 14.42             | 1.40          | -61.01              | -57.76              | -                         | -                         | -                      | -                      |
| 810 | 2   | 3819.60         | -13.30      | 12.60             | -12.30        | -39.95              | -39.55              | -64.77                    | -62.06                    | 67.45                  | 65.14                  |
|     | 3   | 5729.40         | -17.16      | 12.50             | -8.30         | -44.20              | -43.35              | -63.69                    | -64.37                    | 62.12                  | 63.65                  |
|     | 4   | 7639.20         | -20.88      | 11.50             | -3.60         | -48.25              | -47.92              | -61.21                    | -62.86                    | 55.59                  | 57.57                  |
|     | 5   | 9549.00         | -24.09      | 11.90             | -0.80         | -52.88              | -51.48              | -                         | -                         | -                      | -                      |
|     | 6   | 11458.80        | -26.05      | 11.50             | 1.60          | -57.49              | -54.67              | -                         | -                         | -                      | -                      |
|     | 7   | 13368.60        | -28.74      | 14.42             | 1.30          | -63.03              | -59.49              | -                         | -                         | -                      | -                      |

## 6.7. Frequency Stability

### 6.7.1. GSM850 Frequency Stability Table

Operating Frequency : 836,600,000 Hz

Channel : 190

Reference Voltage : 3.7VDC

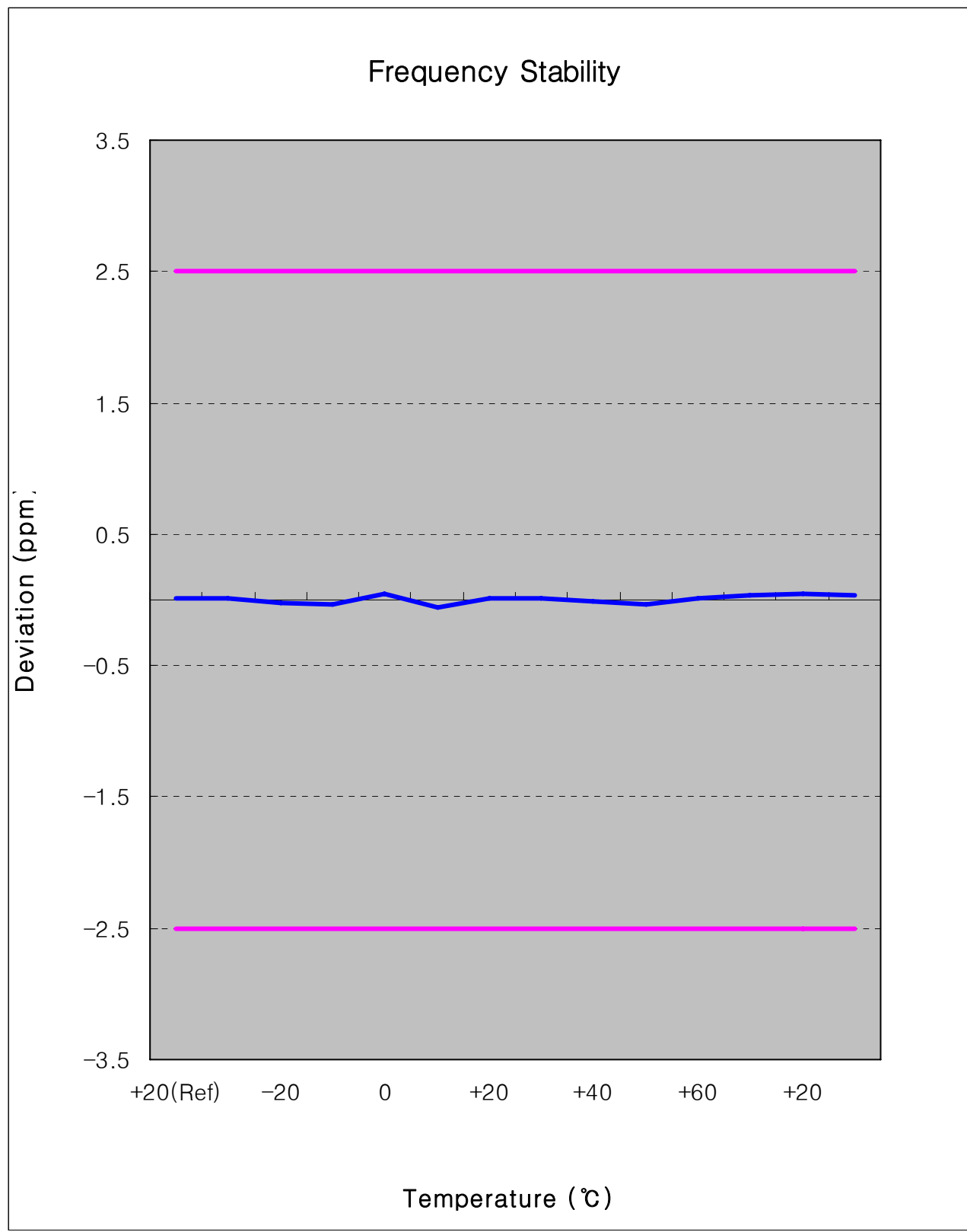
**Deviation Limit :  $\pm 0.00025$  % or 2.5ppm**

| Voltage (%)   | Power (VDC) | Temp. (°C) | Frequency Error (Hz) | Frequency (Hz) | Deviation (%) | ppm      |
|---------------|-------------|------------|----------------------|----------------|---------------|----------|
| 100%          | 3.70        | +20(Ref)   | 31.10                | 836,600,031    | 0.000004      | 0.037    |
| 100%          |             | -30        | -2.90                | 836,599,997    | 0.000000      | -0.003   |
| 100%          |             | -20        | 36.90                | 836,600,037    | 0.000004      | 0.044    |
| 100%          |             | -10        | -42.20               | 836,599,958    | -0.000005     | -0.050   |
| 100%          |             | 0          | -42.00               | 836,599,958    | -0.000005     | -0.050   |
| 100%          |             | +10        | -6.10                | 836,599,994    | -0.000001     | -0.007   |
| 100%          |             | +20        | 31.10                | 836,600,031    | 0.000004      | 0.037    |
| 100%          |             | +30        | 38.50                | 836,600,039    | 0.000005      | 0.046    |
| 100%          |             | +40        | -32.50               | 836,599,968    | -0.000004     | -0.039   |
| 100%          |             | +50        | -1.60                | 836,599,998    | 0.000000      | -0.002   |
| 100%          |             | +60        | 45.90                | 836,600,046    | 0.000005      | 0.055    |
| 115%          |             | 4.26       | +20                  | 49.60          | 836,600,050   | 0.000006 |
| Batt.Endpoint | 3.35        | +20        | -17.80               | 836,599,982    | -0.000002     | -0.021   |

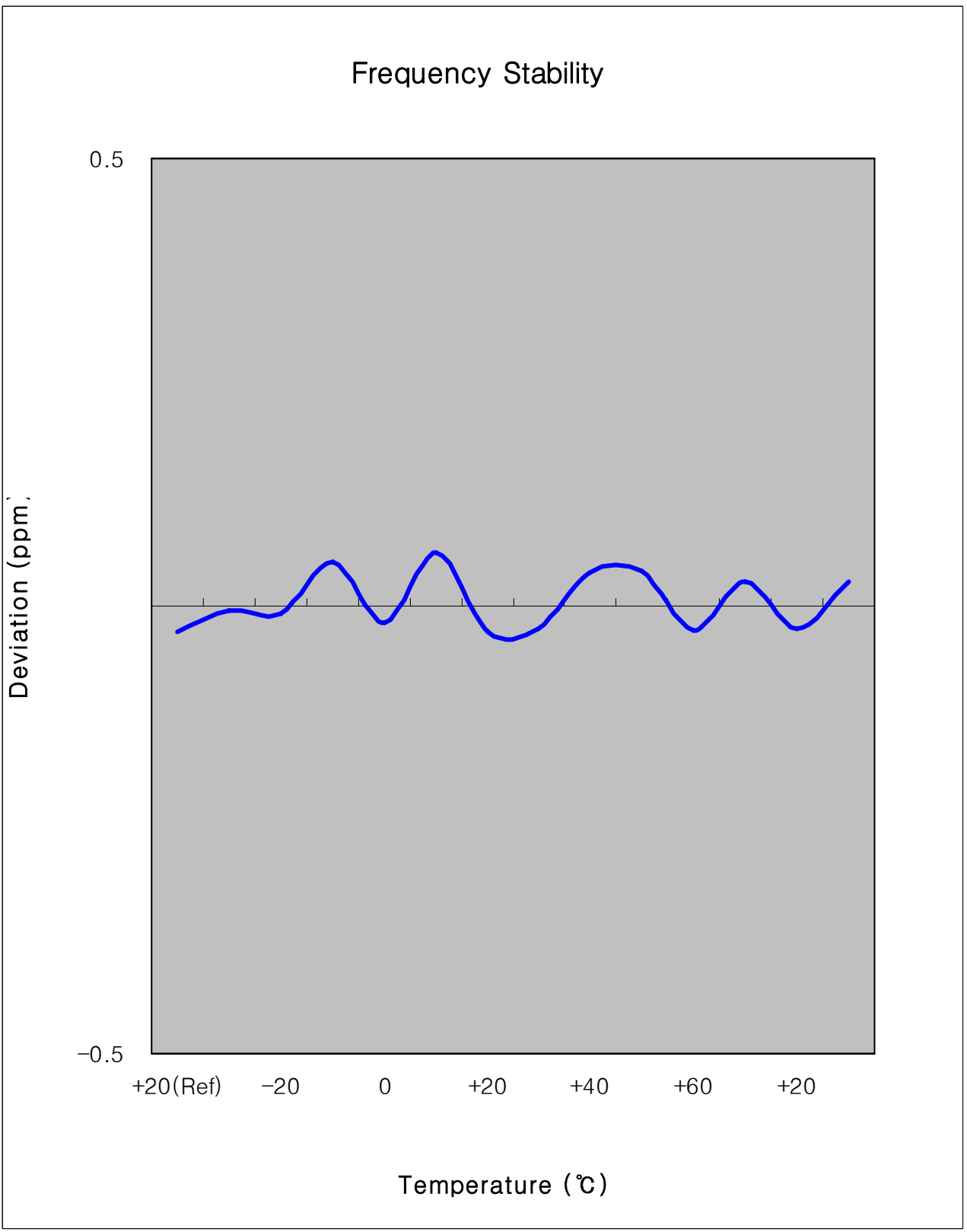
**Note : The temperature is varied from -30 °C to +50 °C using an environmental chamber.**

**The EUT is tested down to the battery end point.**

### 6.7.2. GSM850 Frequency Stability Graph



**Zoom IN**



### 6.7.3. GSM1900 Frequency Stability Table

Operating Frequency : 1,880,000,000 Hz

Channel : 661

Reference Voltage : 3.7VDC

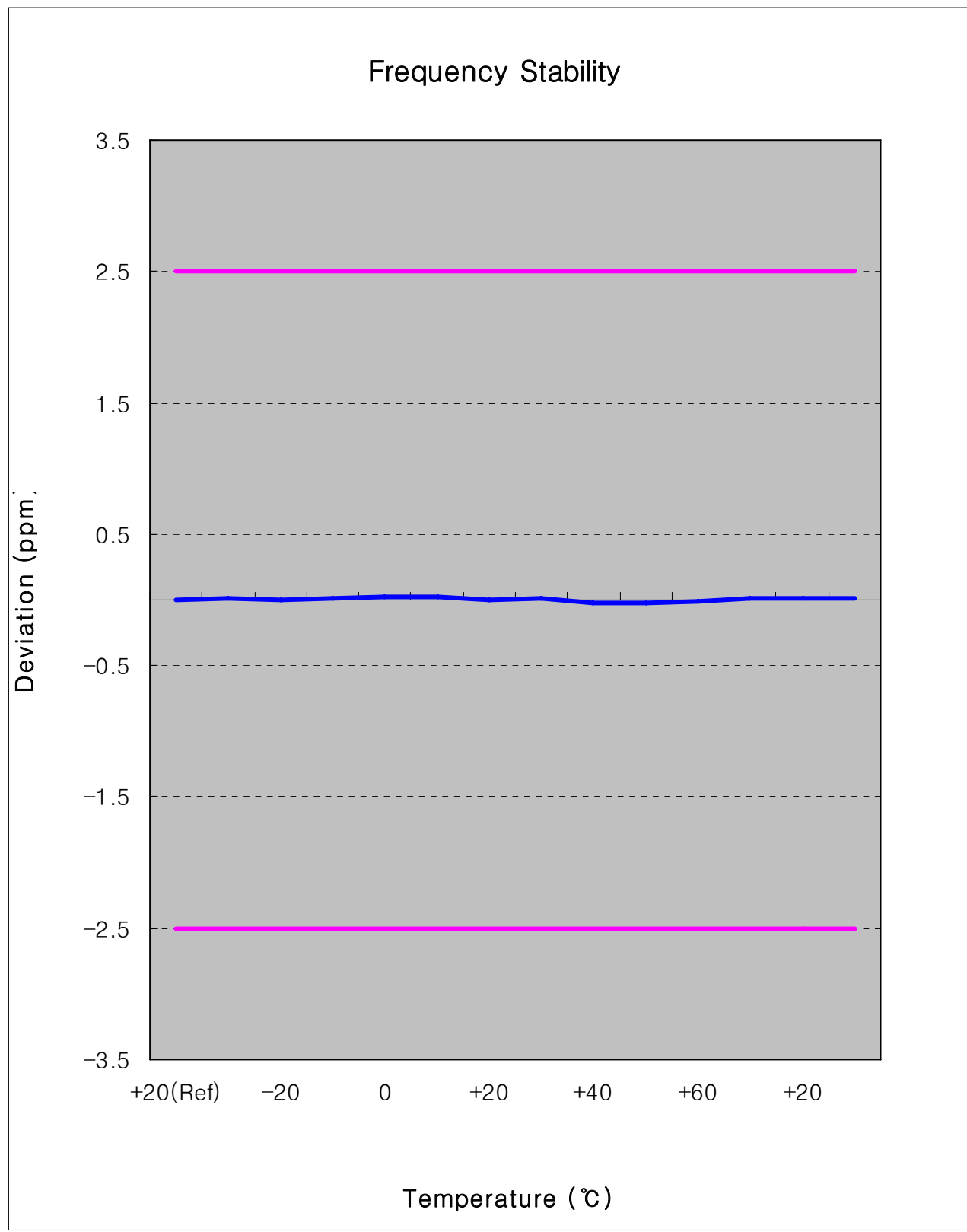
**Deviation Limit :  $\pm 0.00025$  % or 2.5ppm**

| Voltage (%)   | Power (VDC) | Temp. (°C) | Frequency Error (Hz) | Frequency (Hz) | Deviation (%) | ppm      |
|---------------|-------------|------------|----------------------|----------------|---------------|----------|
| 100%          | 3.70        | +20(Ref)   | -15.90               | 1,879,999,984  | -0.000001     | -0.008   |
| 100%          |             | -30        | -41.20               | 1,879,999,959  | -0.000002     | -0.022   |
| 100%          |             | -20        | -26.50               | 1,879,999,974  | -0.000001     | -0.014   |
| 100%          |             | -10        | -4.30                | 1,879,999,996  | 0.000000      | -0.002   |
| 100%          |             | 0          | 9.90                 | 1,880,000,010  | 0.000001      | 0.005    |
| 100%          |             | +10        | 39.20                | 1,880,000,039  | 0.000002      | 0.021    |
| 100%          |             | +20        | -15.90               | 1,879,999,984  | -0.000001     | -0.008   |
| 100%          |             | +30        | 0.40                 | 1,880,000,000  | 0.000000      | 0.000    |
| 100%          |             | +40        | -28.60               | 1,879,999,971  | -0.000002     | -0.015   |
| 100%          |             | +50        | 32.20                | 1,880,000,032  | 0.000002      | 0.017    |
| 100%          |             | +60        | -42.30               | 1,879,999,958  | -0.000002     | -0.023   |
| 115%          |             | 4.26       | +20                  | 24.10          | 1,880,000,024 | 0.000001 |
| Batt.Endpoint | 3.35        | +20        | -38.40               | 1,879,999,962  | -0.000002     | -0.020   |

**Note : The temperature is varied from -30 °C to +50 °C using an environmental chamber.**

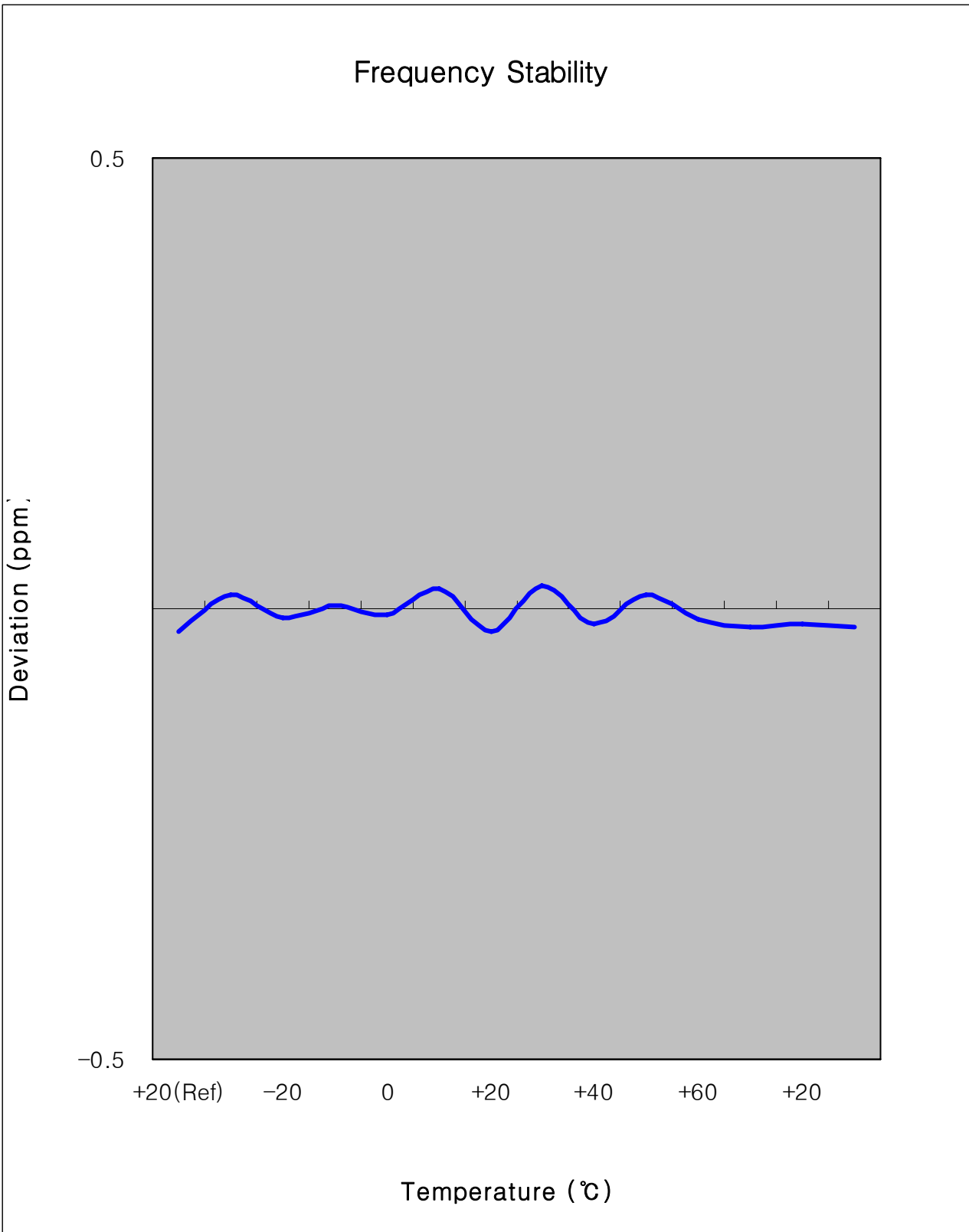
**The EUT is tested down to the battery end point.**

### 6.7.4. GSM1900 Frequency Stability Graph





**Zoom IN**





## 7. CONCLUSION

The data collected shows that the SAMSUNG 850/1900 GSM/GPRS/EDGE and Cellular/PSC WCDMA/HSPA Phone with Bluetooth and WLAN.

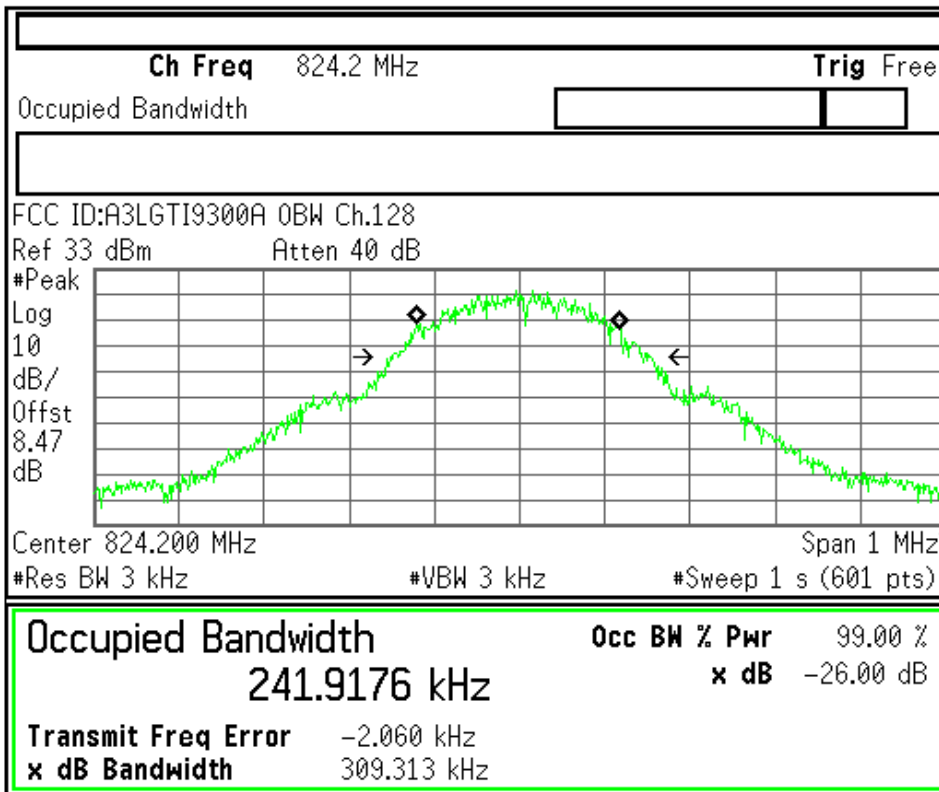
FCC ID : A3LGTI9300A complies with all the requirements of Parts 2,22,24 of the FCC Rules.



## 8. TEST PLOTS

Agilent

R T

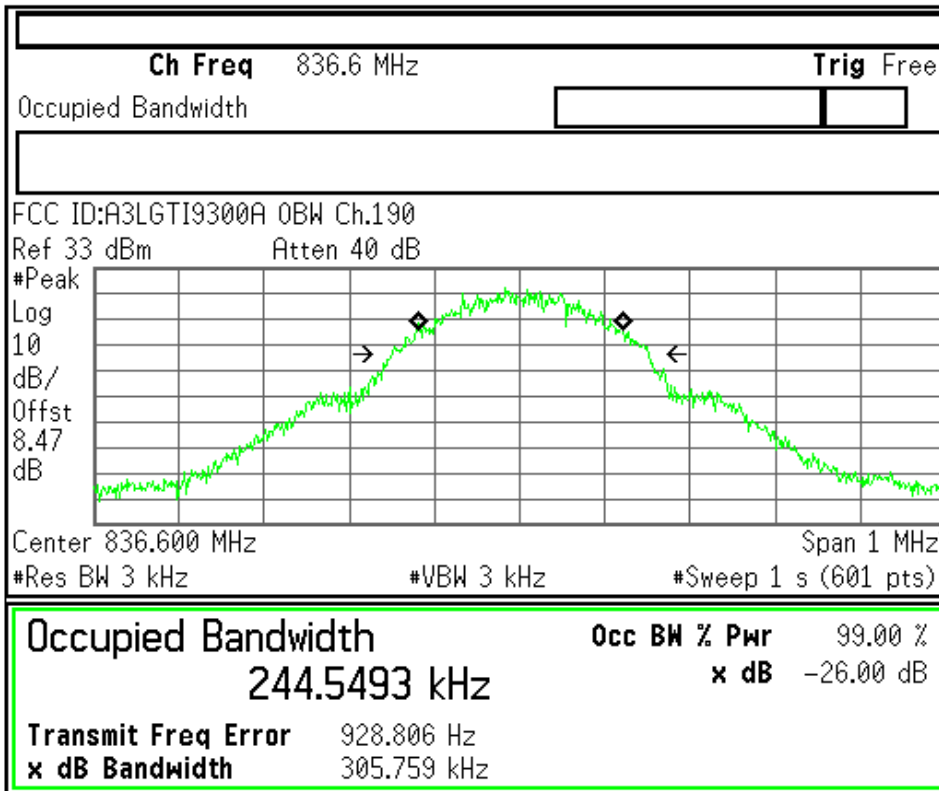


|  |
|--|
| <b>Freq/Channel</b>                          |
| <b>Center Freq</b><br>824.200000 MHz         |
| <b>Start Freq</b><br>823.700000 MHz          |
| <b>Stop Freq</b><br>824.700000 MHz           |
| <b>CF Step</b><br>100.000000 kHz<br>Auto Man |
| <b>Freq Offset</b><br>0.00000000 Hz          |
| <b>Signal Track</b><br>On Off                |

File Operation Status, C:\TEMP.GIF file saved

Agilent

R T



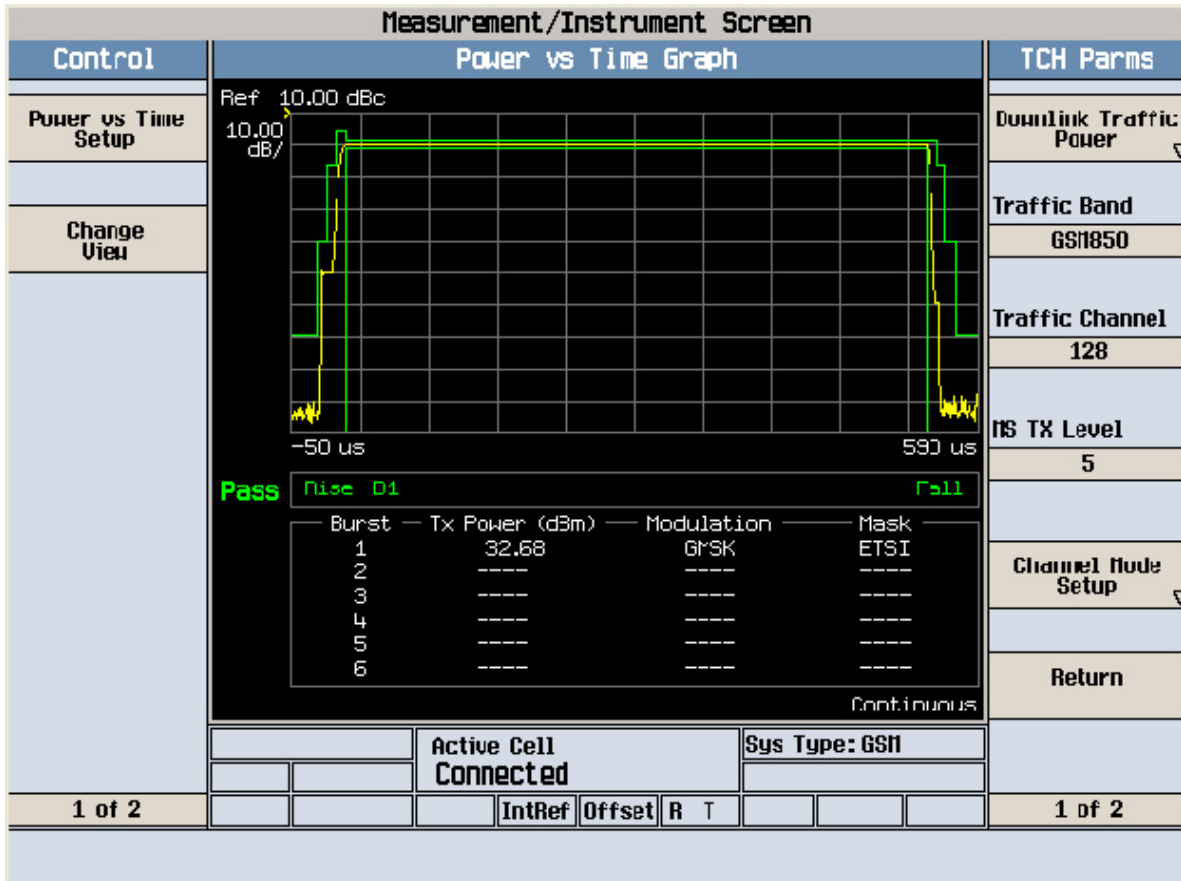
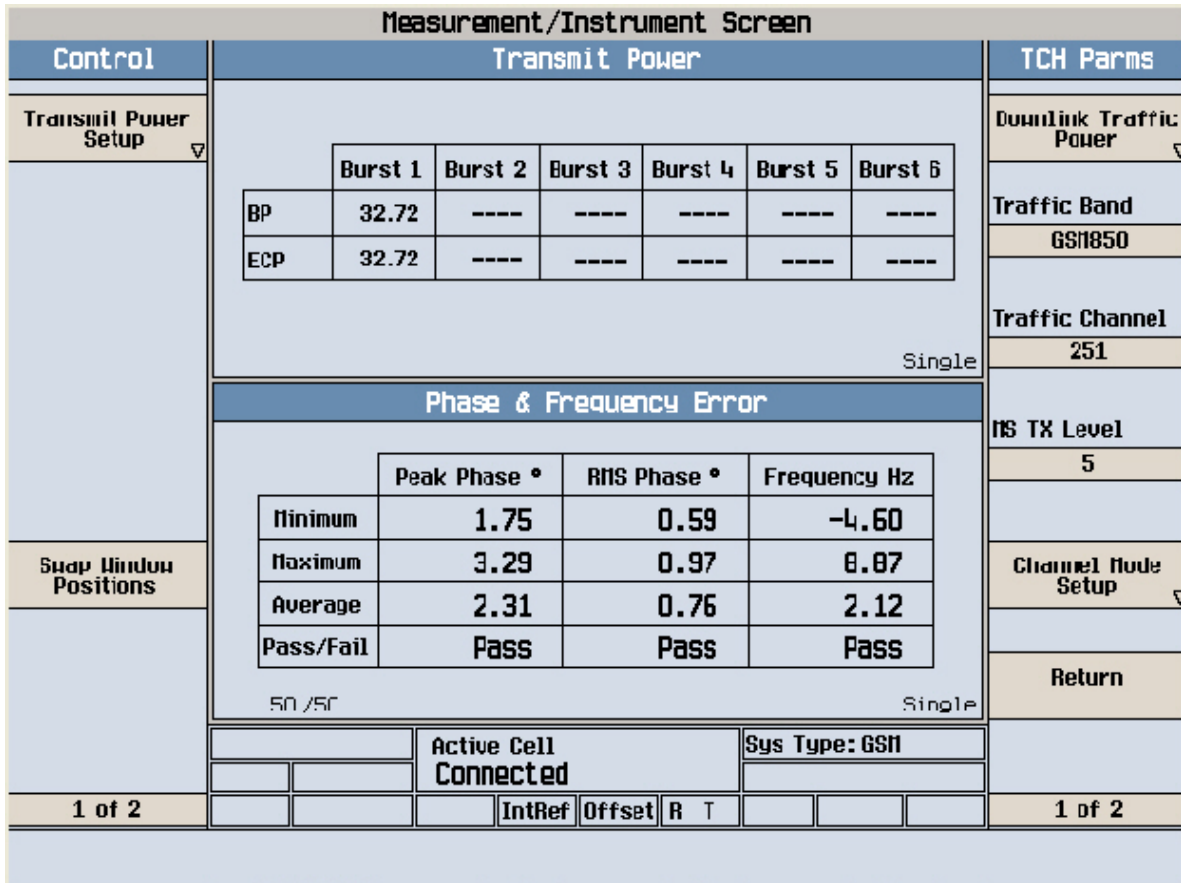
|  |
|--|
| <b>Freq/Channel</b>                          |
| <b>Center Freq</b><br>836.600000 MHz         |
| <b>Start Freq</b><br>836.100000 MHz          |
| <b>Stop Freq</b><br>837.100000 MHz           |
| <b>CF Step</b><br>100.000000 kHz<br>Auto Man |
| <b>Freq Offset</b><br>0.00000000 Hz          |
| <b>Signal Track</b><br>On Off                |

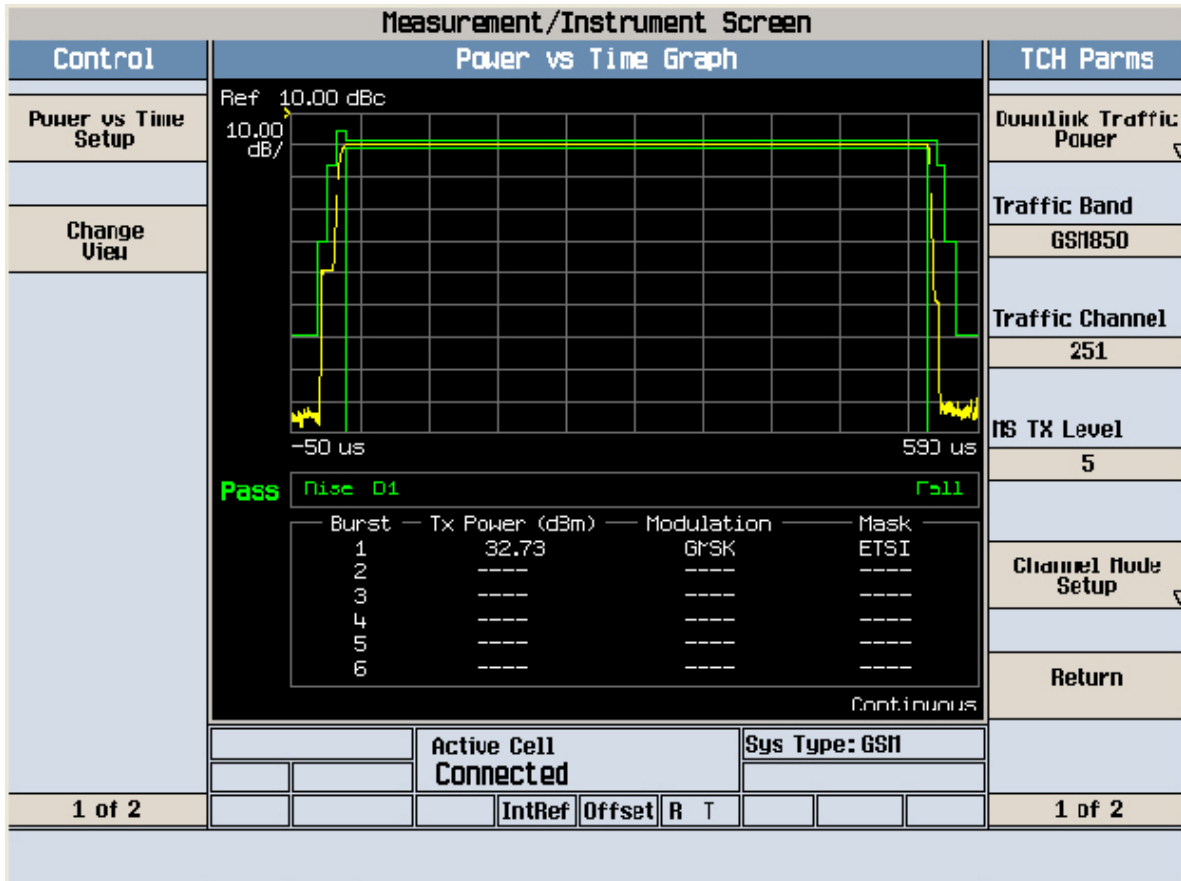
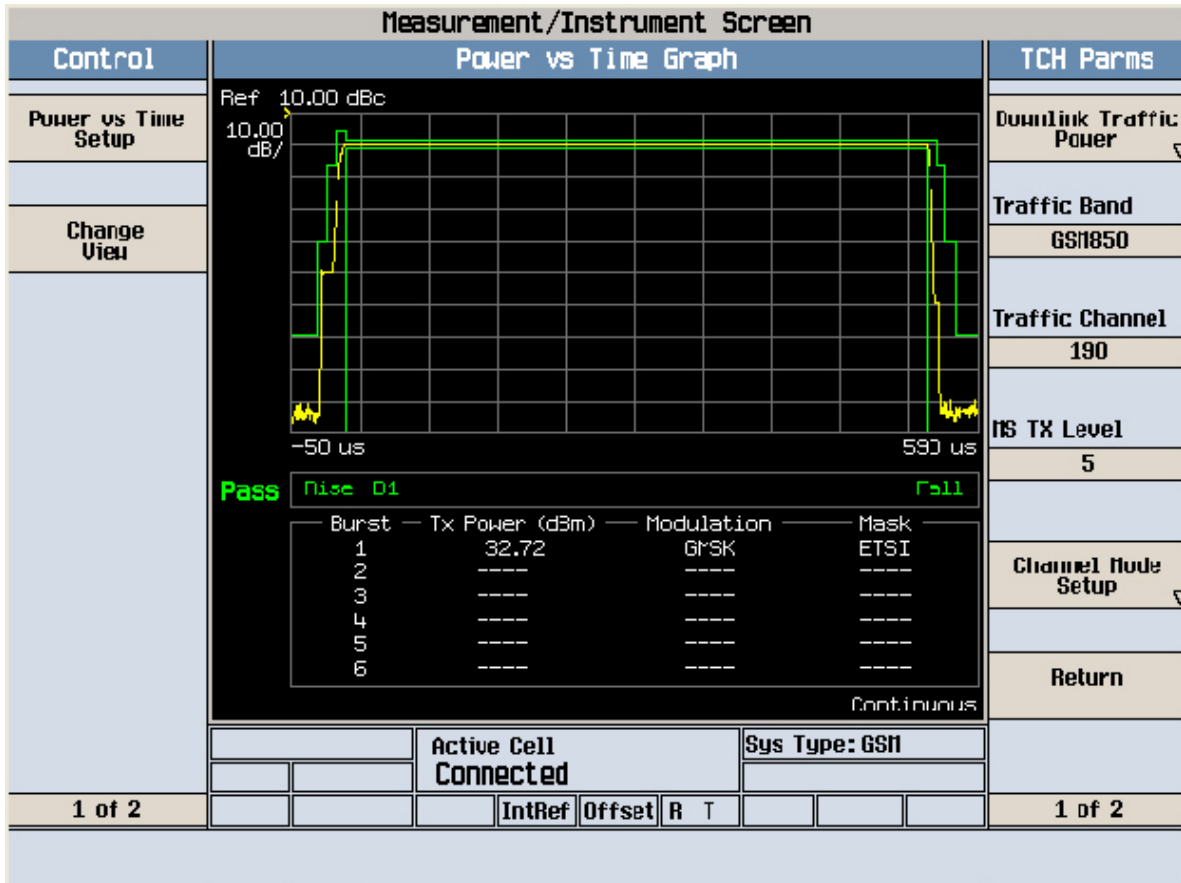
File Operation Status, C:\TEMP.GIF file saved

|  |  |  |  |
|--|--|--|--|
| <b>Ch Freq</b> 848.8 MHz <span style="float: right;"><b>Trig</b> Free</span>   |  | <b>Freq/Channel</b>                          |  |
| Occupied Bandwidth <span style="float: right;">[ ] [ ]</span>  |  | <b>Center Freq</b><br>848.800000 MHz         |  |
| FCC ID:A3LGTI9300A 0BW Ch.251<br>Ref 33 dBm Atten 40 dB  |  | <b>Start Freq</b><br>848.300000 MHz          |  |
|  |  | <b>Stop Freq</b><br>849.300000 MHz           |  |
| Center 848.800 MHz <span style="float: right;">Span 1 MHz</span><br>#Res BW 3 kHz <span style="margin-left: 100px;">#VBW 3 kHz</span> <span style="float: right;">#Sweep 1 s (601 pts)</span>  |  | <b>CF Step</b><br>100.000000 kHz<br>Auto Man |  |
| <div style="border: 2px solid green; padding: 5px;"> <b>Occupied Bandwidth</b> <span style="float: right;"><b>Occ BW % Pwr</b> 99.00 %</span><br/> <span style="font-size: 1.2em;">247.4759 kHz</span> <span style="float: right;"><b>x dB</b> -26.00 dB</span> </div> |  | <b>Freq Offset</b><br>0.00000000 Hz          |  |
| <b>Transmit Freq Error</b> 674.356 Hz<br><b>x dB Bandwidth</b> 308.290 kHz   |  | <b>Signal Track</b><br>On Off                |  |
| <b>File Operation Status, C:\TEMP.GIF file saved</b>   |  |  |  |

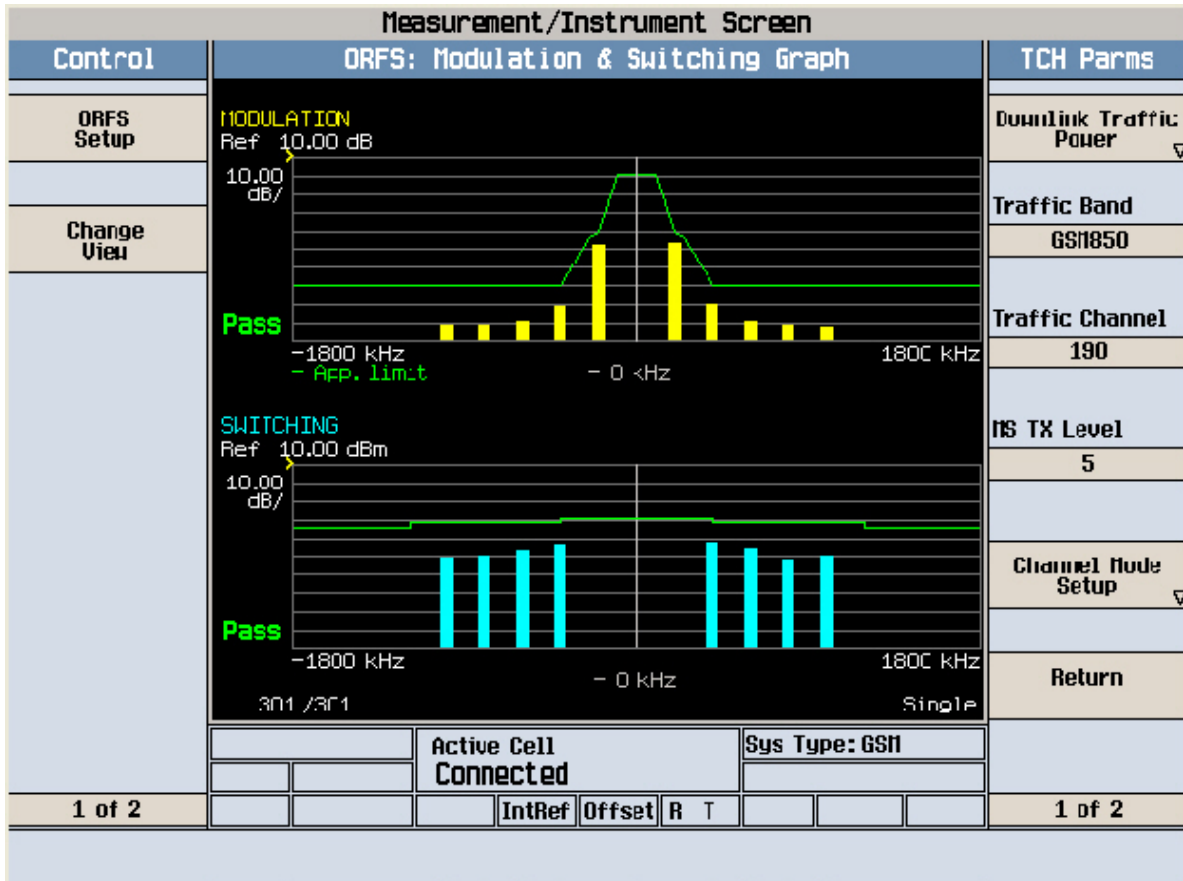
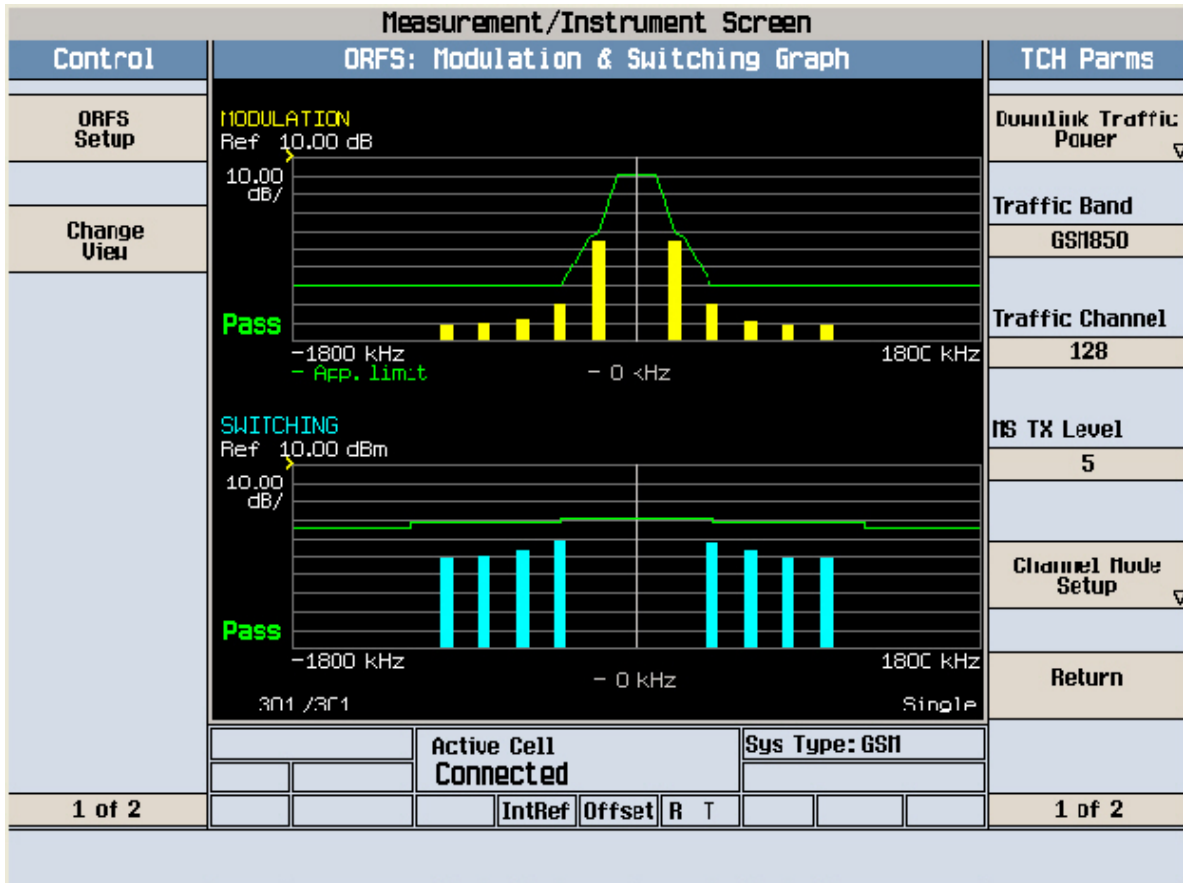
| Measurement/Instrument Screen |  |              |             |              |         |         |               |                    |              |             |              |         |         |         |        |         |      |      |      |         |      |      |       |           |      |      |      |                 |                        |  |
|-------------------------------|--|--------------|-------------|--------------|---------|---------|---------------|--------------------|--------------|-------------|--------------|---------|---------|---------|--------|---------|------|------|------|---------|------|------|-------|-----------|------|------|------|-----------------|------------------------|--|
| Control                       | Transmit Power   |              |             |              |         |         |               | TCH Parms          |              |             |              |         |         |         |        |         |      |      |      |         |      |      |       |           |      |      |      |                 |                        |  |
| Transmit Power Setup          | <table border="1"> <thead> <tr> <th></th> <th>Burst 1</th> <th>Burst 2</th> <th>Burst 3</th> <th>Burst 4</th> <th>Burst 5</th> <th>Burst 6</th> </tr> </thead> <tbody> <tr> <td>BP</td> <td>32.69</td> <td>----</td> <td>----</td> <td>----</td> <td>----</td> <td>----</td> </tr> <tr> <td>ECP</td> <td>32.69</td> <td>----</td> <td>----</td> <td>----</td> <td>----</td> <td>----</td> </tr> </tbody> </table>                                |              |             |              |         |         |               |                    | Burst 1      | Burst 2     | Burst 3      | Burst 4 | Burst 5 | Burst 6 | BP     | 32.69   | ---- | ---- | ---- | ----    | ---- | ECP  | 32.69 | ----      | ---- | ---- | ---- | ----            | Downlink Traffic Power |  |
|                               |  | Burst 1      | Burst 2     | Burst 3      | Burst 4 | Burst 5 | Burst 6       |                    |              |             |              |         |         |         |        |         |      |      |      |         |      |      |       |           |      |      |      |                 |                        |  |
| BP                            | 32.69  | ----         | ----        | ----         | ----    | ----    |               |                    |              |             |              |         |         |         |        |         |      |      |      |         |      |      |       |           |      |      |      |                 |                        |  |
| ECP                           | 32.69  | ----         | ----        | ----         | ----    | ----    |               |                    |              |             |              |         |         |         |        |         |      |      |      |         |      |      |       |           |      |      |      |                 |                        |  |
| Swap Window Positions         | <table border="1"> <thead> <tr> <th></th> <th>Peak Phase °</th> <th>RMS Phase °</th> <th>Frequency Hz</th> </tr> </thead> <tbody> <tr> <td>Minimum</td> <td>1.65</td> <td>0.59</td> <td>-12.72</td> </tr> <tr> <td>Maximum</td> <td>3.48</td> <td>1.01</td> <td>0.34</td> </tr> <tr> <td>Average</td> <td>2.37</td> <td>0.77</td> <td>-5.73</td> </tr> <tr> <td>Pass/Fail</td> <td>Pass</td> <td>Pass</td> <td>Pass</td> </tr> </tbody> </table> |              |             |              |         |         |               |                    | Peak Phase ° | RMS Phase ° | Frequency Hz | Minimum | 1.65    | 0.59    | -12.72 | Maximum | 3.48 | 1.01 | 0.34 | Average | 2.37 | 0.77 | -5.73 | Pass/Fail | Pass | Pass | Pass | Traffic Band    | GSM850                 |  |
|                               |  | Peak Phase ° | RMS Phase ° | Frequency Hz |         |         |               |                    |              |             |              |         |         |         |        |         |      |      |      |         |      |      |       |           |      |      |      |                 |                        |  |
| Minimum                       | 1.65   | 0.59         | -12.72      |              |         |         |               |                    |              |             |              |         |         |         |        |         |      |      |      |         |      |      |       |           |      |      |      |                 |                        |  |
| Maximum                       | 3.48   | 1.01         | 0.34        |              |         |         |               |                    |              |             |              |         |         |         |        |         |      |      |      |         |      |      |       |           |      |      |      |                 |                        |  |
| Average                       | 2.37   | 0.77         | -5.73       |              |         |         |               |                    |              |             |              |         |         |         |        |         |      |      |      |         |      |      |       |           |      |      |      |                 |                        |  |
| Pass/Fail                     | Pass   | Pass         | Pass        |              |         |         |               |                    |              |             |              |         |         |         |        |         |      |      |      |         |      |      |       |           |      |      |      |                 |                        |  |
| 1 of 2                        | <table border="1"> <thead> <tr> <th></th> <th>Peak Phase °</th> <th>RMS Phase °</th> <th>Frequency Hz</th> </tr> </thead> <tbody> <tr> <td>Minimum</td> <td>1.65</td> <td>0.59</td> <td>-12.72</td> </tr> <tr> <td>Maximum</td> <td>3.48</td> <td>1.01</td> <td>0.34</td> </tr> <tr> <td>Average</td> <td>2.37</td> <td>0.77</td> <td>-5.73</td> </tr> <tr> <td>Pass/Fail</td> <td>Pass</td> <td>Pass</td> <td>Pass</td> </tr> </tbody> </table> |              |             |              |         |         |               |                    | Peak Phase ° | RMS Phase ° | Frequency Hz | Minimum | 1.65    | 0.59    | -12.72 | Maximum | 3.48 | 1.01 | 0.34 | Average | 2.37 | 0.77 | -5.73 | Pass/Fail | Pass | Pass | Pass | Traffic Channel | 128                    |  |
|                               |  | Peak Phase ° | RMS Phase ° | Frequency Hz |         |         |               |                    |              |             |              |         |         |         |        |         |      |      |      |         |      |      |       |           |      |      |      |                 |                        |  |
| Minimum                       | 1.65   | 0.59         | -12.72      |              |         |         |               |                    |              |             |              |         |         |         |        |         |      |      |      |         |      |      |       |           |      |      |      |                 |                        |  |
| Maximum                       | 3.48   | 1.01         | 0.34        |              |         |         |               |                    |              |             |              |         |         |         |        |         |      |      |      |         |      |      |       |           |      |      |      |                 |                        |  |
| Average                       | 2.37   | 0.77         | -5.73       |              |         |         |               |                    |              |             |              |         |         |         |        |         |      |      |      |         |      |      |       |           |      |      |      |                 |                        |  |
| Pass/Fail                     | Pass   | Pass         | Pass        |              |         |         |               |                    |              |             |              |         |         |         |        |         |      |      |      |         |      |      |       |           |      |      |      |                 |                        |  |
| 50 / 50                       |  |              |             |              |         |         | Single        | MS TX Level        | 5            |             |              |         |         |         |        |         |      |      |      |         |      |      |       |           |      |      |      |                 |                        |  |
| Active Cell Connected         |  |              |             |              |         |         | Sys Type: GSM | Channel Mode Setup |              |             |              |         |         |         |        |         |      |      |      |         |      |      |       |           |      |      |      |                 |                        |  |
| IntRef                        |  |              |             |              |         |         | Offset        | R                  | T            | Return      |              |         |         |         |        |         |      |      |      |         |      |      |       |           |      |      |      |                 |                        |  |
|                               |  |              |             |              |         |         |               |                    |              | 1 of 2      |              |         |         |         |        |         |      |      |      |         |      |      |       |           |      |      |      |                 |                        |  |

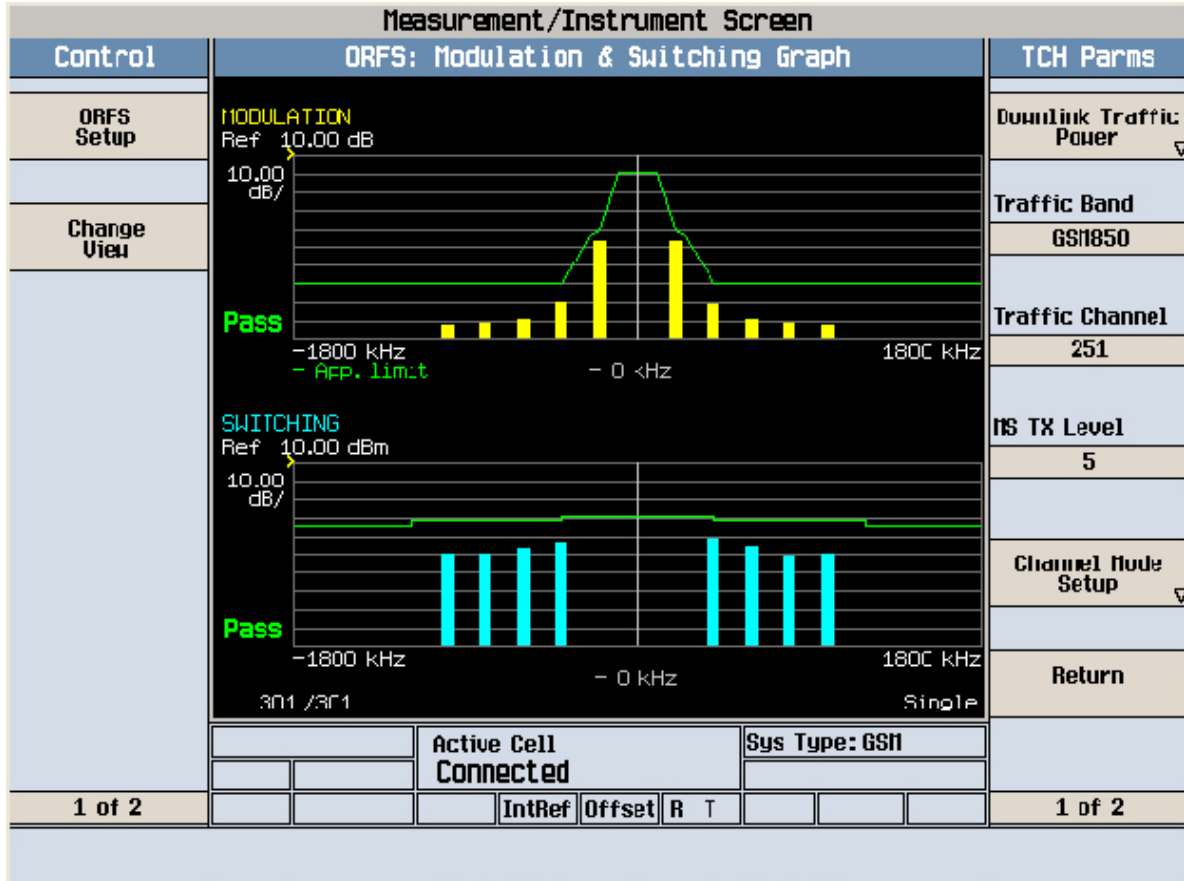
| Measurement/Instrument Screen |  |              |             |              |         |         |               |                    |              |             |              |         |         |         |       |         |      |      |      |         |      |      |       |           |      |      |      |                 |                        |  |
|-------------------------------|--|--------------|-------------|--------------|---------|---------|---------------|--------------------|--------------|-------------|--------------|---------|---------|---------|-------|---------|------|------|------|---------|------|------|-------|-----------|------|------|------|-----------------|------------------------|--|
| Control                       | Transmit Power   |              |             |              |         |         |               | TCH Parms          |              |             |              |         |         |         |       |         |      |      |      |         |      |      |       |           |      |      |      |                 |                        |  |
| Transmit Power Setup          | <table border="1"> <thead> <tr> <th></th> <th>Burst 1</th> <th>Burst 2</th> <th>Burst 3</th> <th>Burst 4</th> <th>Burst 5</th> <th>Burst 6</th> </tr> </thead> <tbody> <tr> <td>BP</td> <td>32.73</td> <td>----</td> <td>----</td> <td>----</td> <td>----</td> <td>----</td> </tr> <tr> <td>ECP</td> <td>32.73</td> <td>----</td> <td>----</td> <td>----</td> <td>----</td> <td>----</td> </tr> </tbody> </table>                              |              |             |              |         |         |               |                    | Burst 1      | Burst 2     | Burst 3      | Burst 4 | Burst 5 | Burst 6 | BP    | 32.73   | ---- | ---- | ---- | ----    | ---- | ECP  | 32.73 | ----      | ---- | ---- | ---- | ----            | Downlink Traffic Power |  |
|                               |  | Burst 1      | Burst 2     | Burst 3      | Burst 4 | Burst 5 | Burst 6       |                    |              |             |              |         |         |         |       |         |      |      |      |         |      |      |       |           |      |      |      |                 |                        |  |
| BP                            | 32.73  | ----         | ----        | ----         | ----    | ----    |               |                    |              |             |              |         |         |         |       |         |      |      |      |         |      |      |       |           |      |      |      |                 |                        |  |
| ECP                           | 32.73  | ----         | ----        | ----         | ----    | ----    |               |                    |              |             |              |         |         |         |       |         |      |      |      |         |      |      |       |           |      |      |      |                 |                        |  |
| Swap Window Positions         | <table border="1"> <thead> <tr> <th></th> <th>Peak Phase °</th> <th>RMS Phase °</th> <th>Frequency Hz</th> </tr> </thead> <tbody> <tr> <td>Minimum</td> <td>1.75</td> <td>0.65</td> <td>-0.44</td> </tr> <tr> <td>Maximum</td> <td>3.64</td> <td>1.22</td> <td>9.75</td> </tr> <tr> <td>Average</td> <td>2.56</td> <td>0.88</td> <td>3.75</td> </tr> <tr> <td>Pass/Fail</td> <td>Pass</td> <td>Pass</td> <td>Pass</td> </tr> </tbody> </table> |              |             |              |         |         |               |                    | Peak Phase ° | RMS Phase ° | Frequency Hz | Minimum | 1.75    | 0.65    | -0.44 | Maximum | 3.64 | 1.22 | 9.75 | Average | 2.56 | 0.88 | 3.75  | Pass/Fail | Pass | Pass | Pass | Traffic Band    | GSM850                 |  |
|                               |  | Peak Phase ° | RMS Phase ° | Frequency Hz |         |         |               |                    |              |             |              |         |         |         |       |         |      |      |      |         |      |      |       |           |      |      |      |                 |                        |  |
| Minimum                       | 1.75   | 0.65         | -0.44       |              |         |         |               |                    |              |             |              |         |         |         |       |         |      |      |      |         |      |      |       |           |      |      |      |                 |                        |  |
| Maximum                       | 3.64   | 1.22         | 9.75        |              |         |         |               |                    |              |             |              |         |         |         |       |         |      |      |      |         |      |      |       |           |      |      |      |                 |                        |  |
| Average                       | 2.56   | 0.88         | 3.75        |              |         |         |               |                    |              |             |              |         |         |         |       |         |      |      |      |         |      |      |       |           |      |      |      |                 |                        |  |
| Pass/Fail                     | Pass   | Pass         | Pass        |              |         |         |               |                    |              |             |              |         |         |         |       |         |      |      |      |         |      |      |       |           |      |      |      |                 |                        |  |
| 1 of 2                        | <table border="1"> <thead> <tr> <th></th> <th>Peak Phase °</th> <th>RMS Phase °</th> <th>Frequency Hz</th> </tr> </thead> <tbody> <tr> <td>Minimum</td> <td>1.75</td> <td>0.65</td> <td>-0.44</td> </tr> <tr> <td>Maximum</td> <td>3.64</td> <td>1.22</td> <td>9.75</td> </tr> <tr> <td>Average</td> <td>2.56</td> <td>0.88</td> <td>3.75</td> </tr> <tr> <td>Pass/Fail</td> <td>Pass</td> <td>Pass</td> <td>Pass</td> </tr> </tbody> </table> |              |             |              |         |         |               |                    | Peak Phase ° | RMS Phase ° | Frequency Hz | Minimum | 1.75    | 0.65    | -0.44 | Maximum | 3.64 | 1.22 | 9.75 | Average | 2.56 | 0.88 | 3.75  | Pass/Fail | Pass | Pass | Pass | Traffic Channel | 190                    |  |
|                               |  | Peak Phase ° | RMS Phase ° | Frequency Hz |         |         |               |                    |              |             |              |         |         |         |       |         |      |      |      |         |      |      |       |           |      |      |      |                 |                        |  |
| Minimum                       | 1.75   | 0.65         | -0.44       |              |         |         |               |                    |              |             |              |         |         |         |       |         |      |      |      |         |      |      |       |           |      |      |      |                 |                        |  |
| Maximum                       | 3.64   | 1.22         | 9.75        |              |         |         |               |                    |              |             |              |         |         |         |       |         |      |      |      |         |      |      |       |           |      |      |      |                 |                        |  |
| Average                       | 2.56   | 0.88         | 3.75        |              |         |         |               |                    |              |             |              |         |         |         |       |         |      |      |      |         |      |      |       |           |      |      |      |                 |                        |  |
| Pass/Fail                     | Pass   | Pass         | Pass        |              |         |         |               |                    |              |             |              |         |         |         |       |         |      |      |      |         |      |      |       |           |      |      |      |                 |                        |  |
| 50 / 50                       |  |              |             |              |         |         | Single        | MS TX Level        | 5            |             |              |         |         |         |       |         |      |      |      |         |      |      |       |           |      |      |      |                 |                        |  |
| Active Cell Connected         |  |              |             |              |         |         | Sys Type: GSM | Channel Mode Setup |              |             |              |         |         |         |       |         |      |      |      |         |      |      |       |           |      |      |      |                 |                        |  |
| IntRef                        |  |              |             |              |         |         | Offset        | R                  | T            | Return      |              |         |         |         |       |         |      |      |      |         |      |      |       |           |      |      |      |                 |                        |  |
|                               |  |              |             |              |         |         |               |                    |              | 1 of 2      |              |         |         |         |       |         |      |      |      |         |      |      |       |           |      |      |      |                 |                        |  |











Agilent

R L

Freq/Channel

FCC ID:A3LGTI9300A Cond Spur Ch.128

Ref 33 dBm

Atten 40 dB

#Peak

Log

10

dB/

Offst

8.47

dB

DI

-13.0

dBm

#LgAv

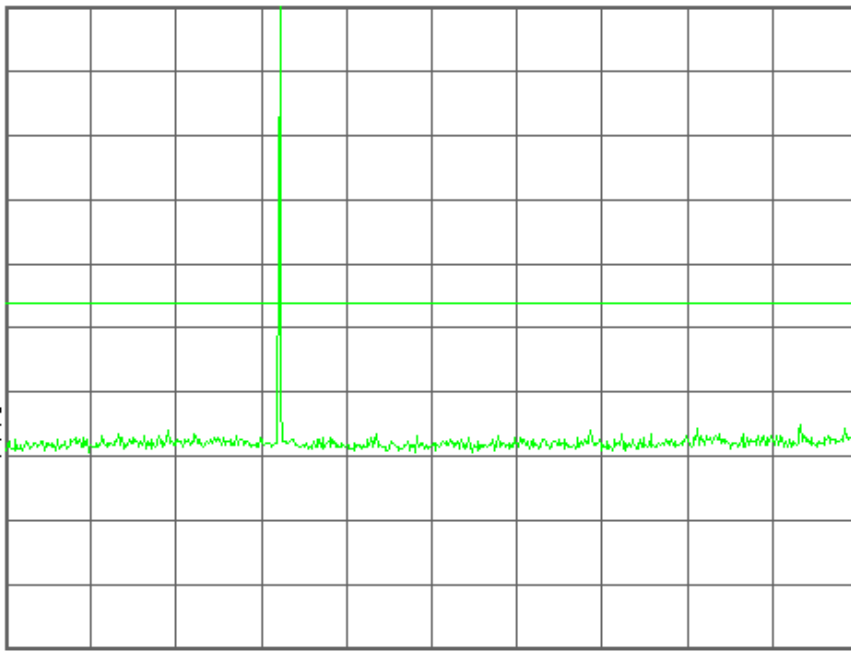
M1 S2

S3 FC

$\mathcal{E}(f)$ :

FTun

Swp



Center 1.265 GHz

Span 2.47 GHz

#Res BW 1 MHz

#VBW 1 MHz

Sweep 4.12 ms (601 pts)

Center Freq  
1.26500000 GHz

Start Freq  
30.0000000 MHz

Stop Freq  
2.50000000 GHz

CF Step  
247.000000 MHz  
Auto Man

Freq Offset  
0.00000000 Hz

Signal Track  
On Off

File Operation Status, C:\TEMP.GIF file saved

Agilent

R L

Freq/Channel

FCC ID:A3LGTI9300A Cond Spur Ch.128

Mkr1 817.9 MHz

Ref 33 dBm

Atten 40 dB

-30.44 dBm

#Peak

Log

10

dB/

Offst

8.47

dB

DI

-13.0

dBm

#LgAv

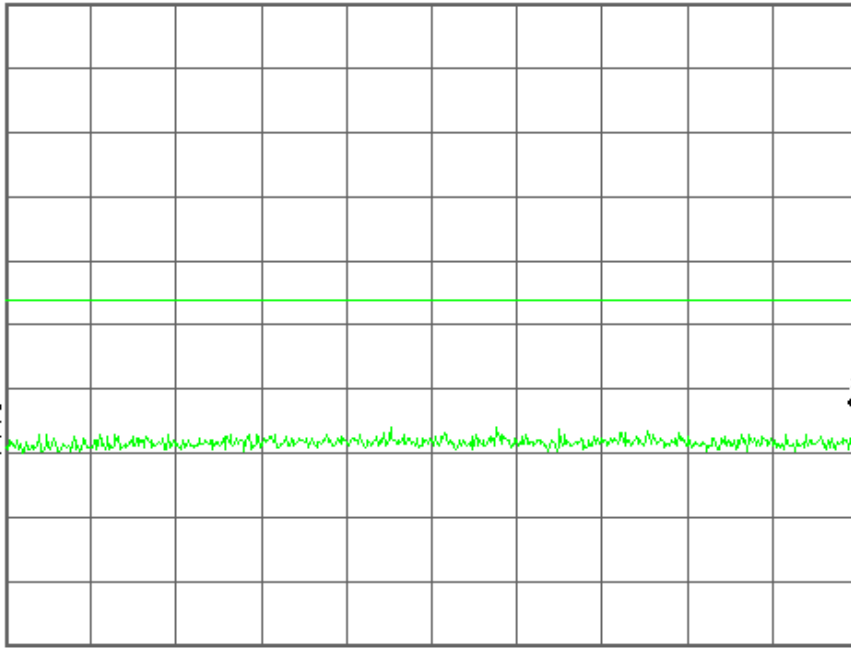
V1 S2

S3 FC

$\mathcal{E}(f)$ :

FTun

Swp



Center 424.6 MHz

Span 789.2 MHz

#Res BW 1 MHz

#VBW 1 MHz

Sweep 1.32 ms (601 pts)

Center Freq  
424.600000 MHz

Start Freq  
30.0000000 MHz

Stop Freq  
819.200000 MHz

CF Step  
78.9200000 MHz  
Auto Man

Freq Offset  
0.00000000 Hz

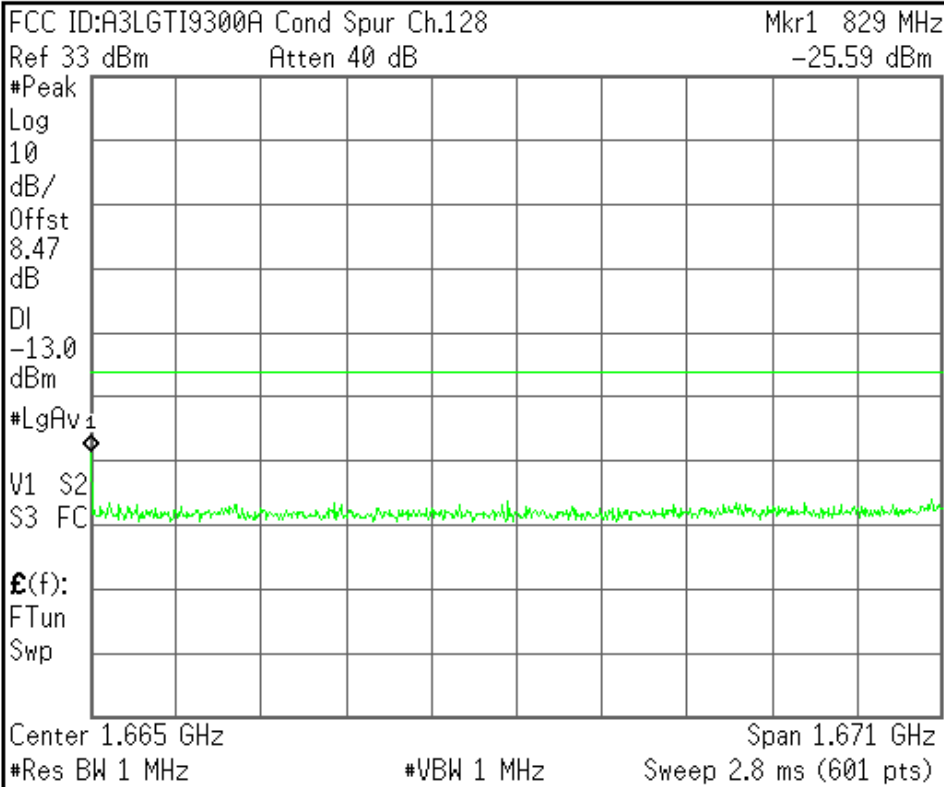
Signal Track  
On Off

File Operation Status, C:\TEMP.GIF file saved

Agilent

R L

Freq/Channel



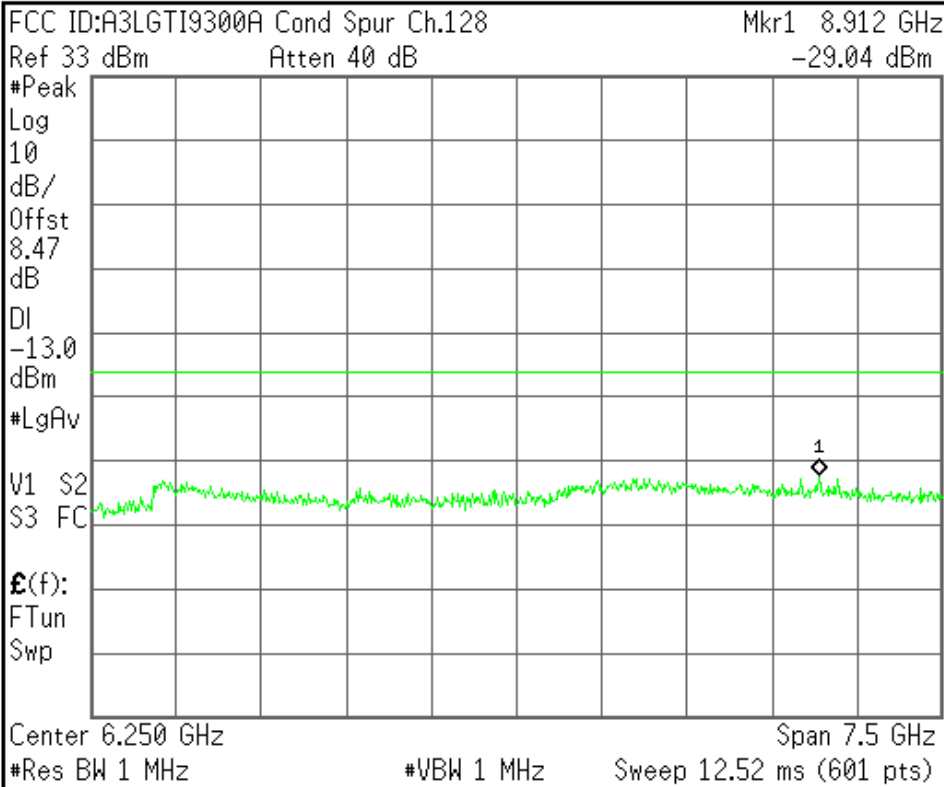
|  |
|--|
| <b>Center Freq</b><br>1.66460000 GHz         |
| <b>Start Freq</b><br>829.200000 MHz          |
| <b>Stop Freq</b><br>2.50000000 GHz           |
| <b>CF Step</b><br>167.080000 MHz<br>Auto Man |
| <b>Freq Offset</b><br>0.00000000 Hz          |
| <b>Signal Track</b><br>On Off                |

File Operation Status, C:\TEMP.GIF file saved

Agilent

R L

Freq/Channel



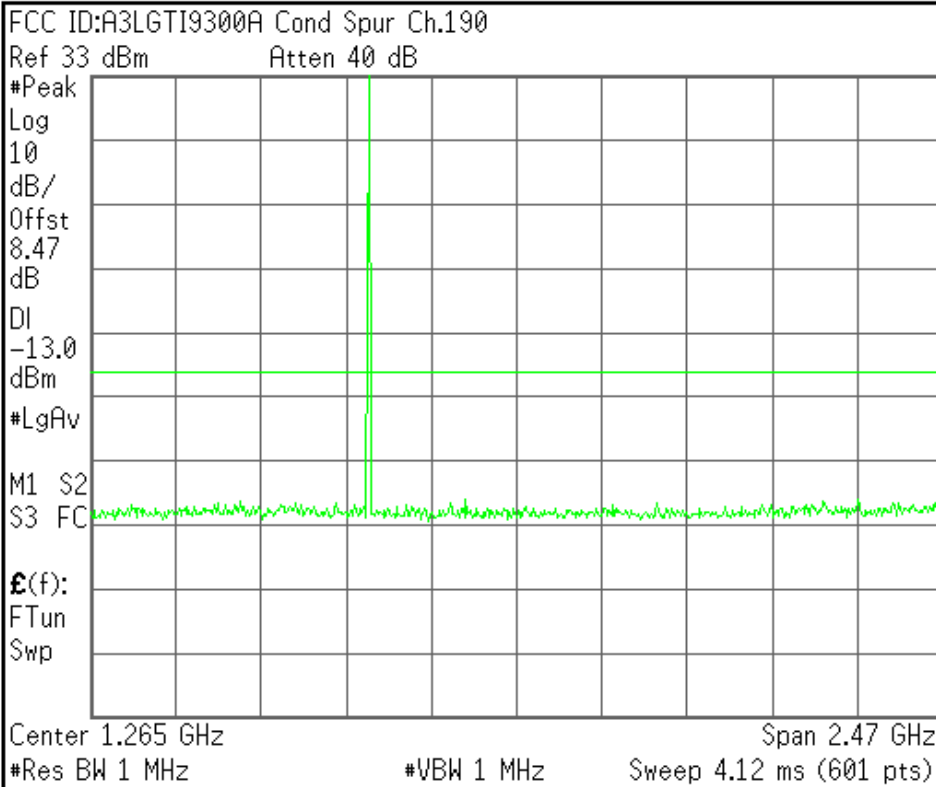
|  |
|--|
| <b>Center Freq</b><br>6.25000000 GHz         |
| <b>Start Freq</b><br>2.50000000 GHz          |
| <b>Stop Freq</b><br>10.00000000 GHz          |
| <b>CF Step</b><br>750.000000 MHz<br>Auto Man |
| <b>Freq Offset</b><br>0.00000000 Hz          |
| <b>Signal Track</b><br>On Off                |

File Operation Status, C:\TEMP.GIF file saved

Agilent

R L

Freq/Channel



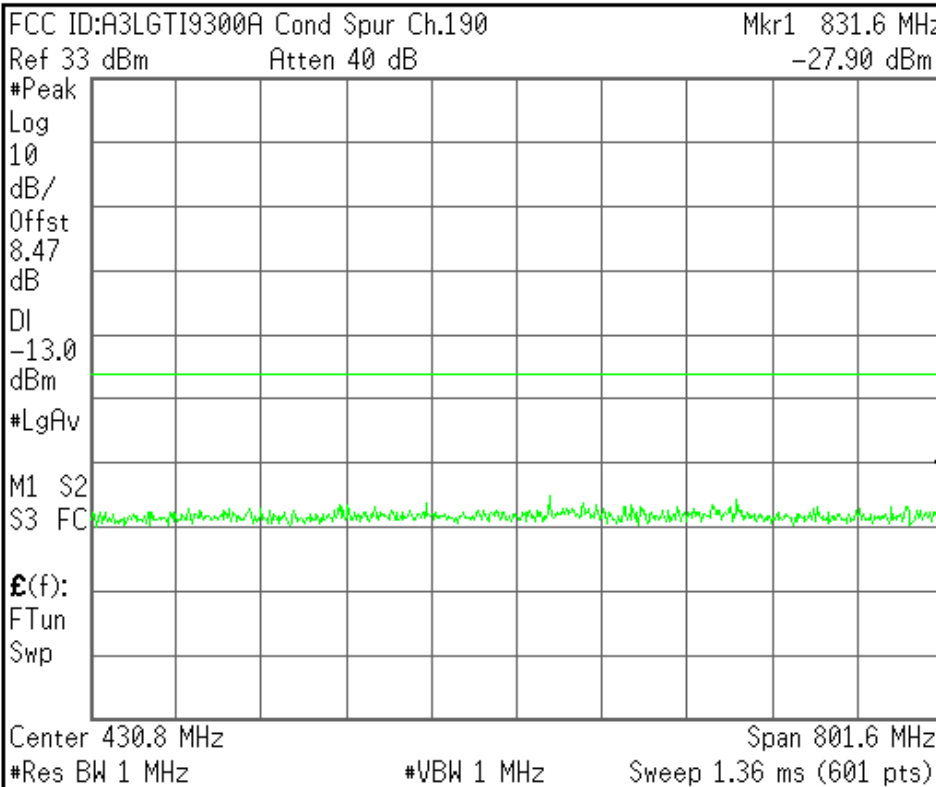
|                     |                            |
|---------------------|----------------------------|
| <b>Center Freq</b>  | 1.26500000 GHz             |
| <b>Start Freq</b>   | 30.0000000 MHz             |
| <b>Stop Freq</b>    | 2.50000000 GHz             |
| <b>CF Step</b>      | 247.000000 MHz<br>Auto Man |
| <b>Freq Offset</b>  | 0.00000000 Hz              |
| <b>Signal Track</b> | On Off                     |

File Operation Status, C:\TEMP.GIF file saved

Agilent

R L

Freq/Channel



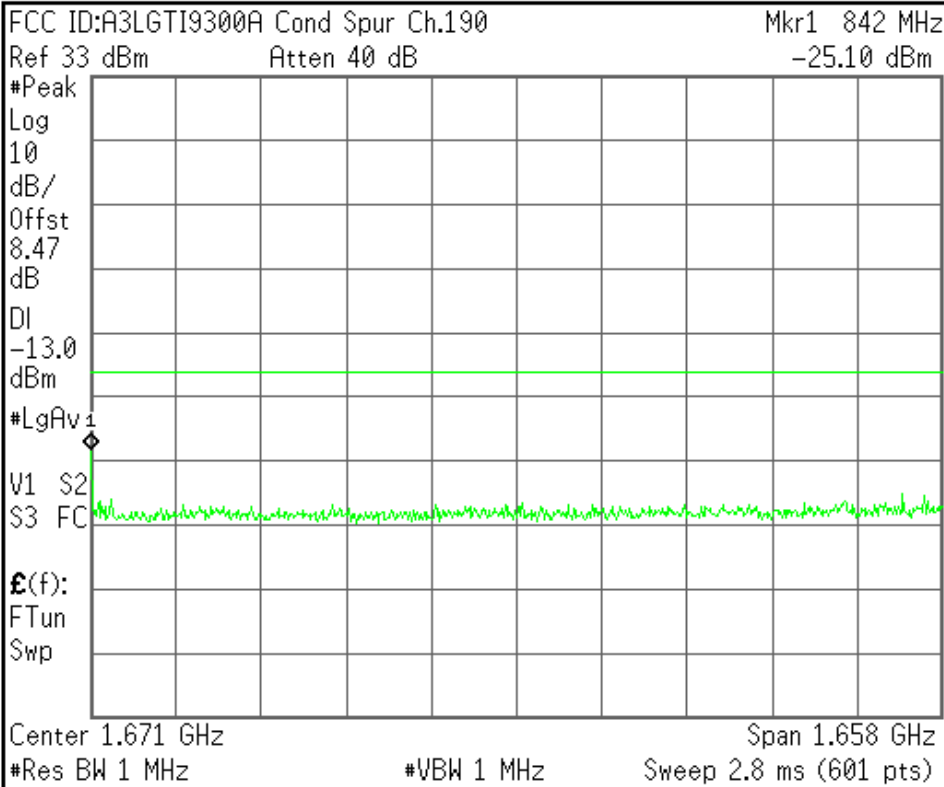
|                     |                            |
|---------------------|----------------------------|
| <b>Center Freq</b>  | 430.800000 MHz             |
| <b>Start Freq</b>   | 30.0000000 MHz             |
| <b>Stop Freq</b>    | 831.600000 MHz             |
| <b>CF Step</b>      | 80.1600000 MHz<br>Auto Man |
| <b>Freq Offset</b>  | 0.00000000 Hz              |
| <b>Signal Track</b> | On Off                     |

File Operation Status, C:\TEMP.GIF file saved

Agilent

R L

Freq/Channel



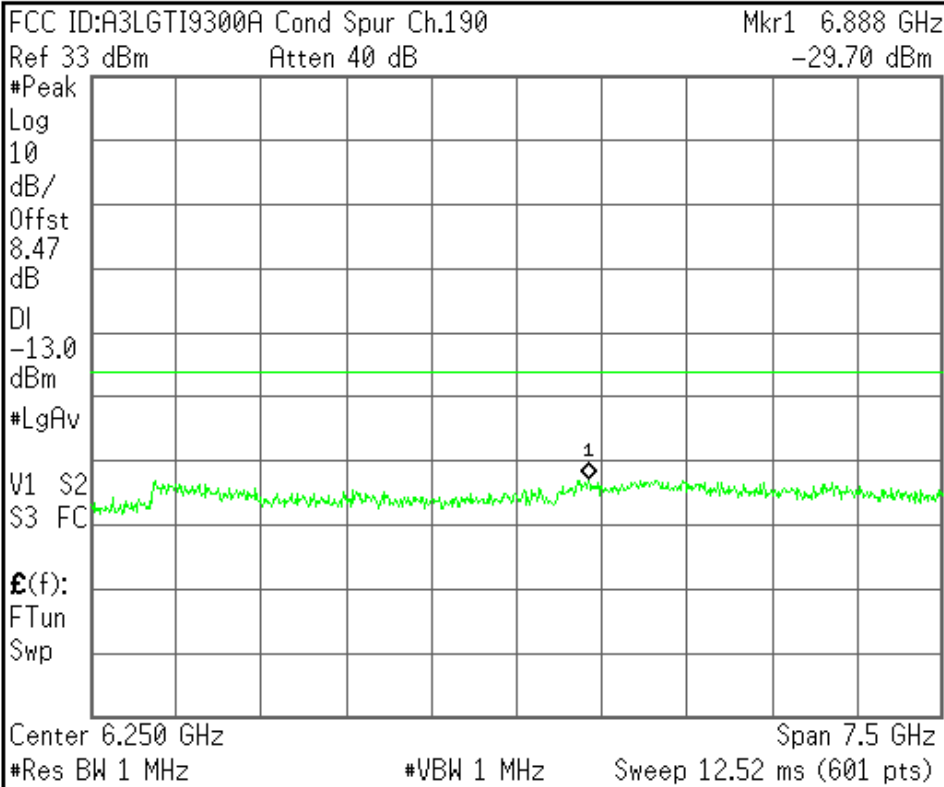
|  |
|--|
| <b>Center Freq</b><br>1.67080000 GHz         |
| <b>Start Freq</b><br>841.600000 MHz          |
| <b>Stop Freq</b><br>2.50000000 GHz           |
| <b>CF Step</b><br>165.840000 MHz<br>Auto Man |
| <b>Freq Offset</b><br>0.00000000 Hz          |
| <b>Signal Track</b><br>On Off                |

File Operation Status, C:\TEMP.GIF file saved

Agilent

R L

Freq/Channel



|  |
|--|
| <b>Center Freq</b><br>6.25000000 GHz         |
| <b>Start Freq</b><br>2.50000000 GHz          |
| <b>Stop Freq</b><br>10.00000000 GHz          |
| <b>CF Step</b><br>750.000000 MHz<br>Auto Man |
| <b>Freq Offset</b><br>0.00000000 Hz          |
| <b>Signal Track</b><br>On Off                |

File Operation Status, C:\TEMP.GIF file saved

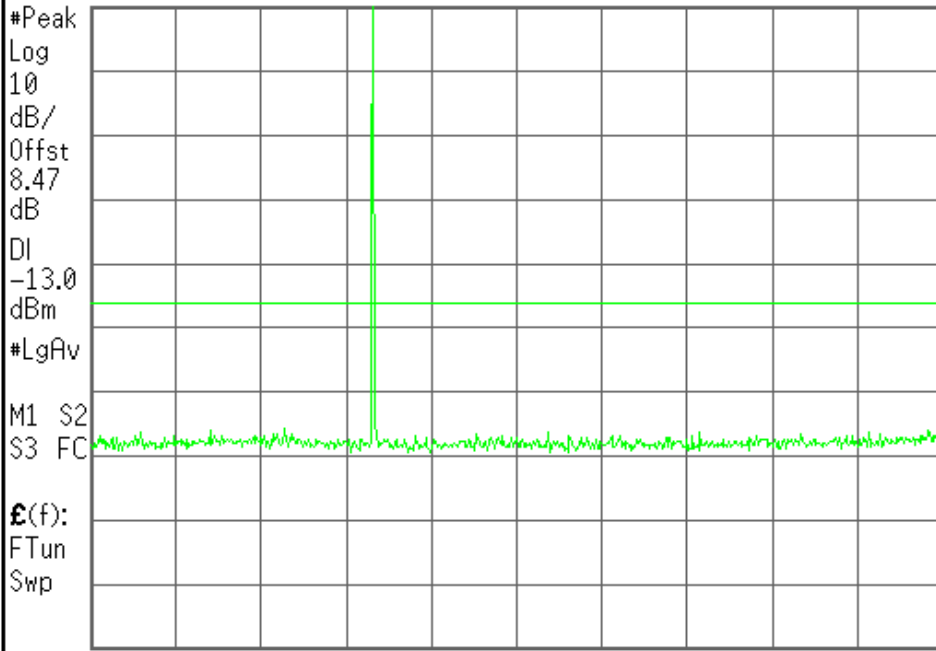
Agilent

R L

Freq/Channel

FCC ID:A3LGTI9300A Cond Spur Ch.251

Ref 33 dBm Atten 40 dB



Center 1.265 GHz Span 2.47 GHz  
#Res BW 1 MHz #VBW 1 MHz Sweep 4.12 ms (601 pts)

Center Freq  
1.26500000 GHz

Start Freq  
30.0000000 MHz

Stop Freq  
2.50000000 GHz

CF Step  
247.000000 MHz  
Auto Man

Freq Offset  
0.00000000 Hz

Signal Track  
On Off

File Operation Status, C:\TEMP.GIF file saved

Agilent

R L

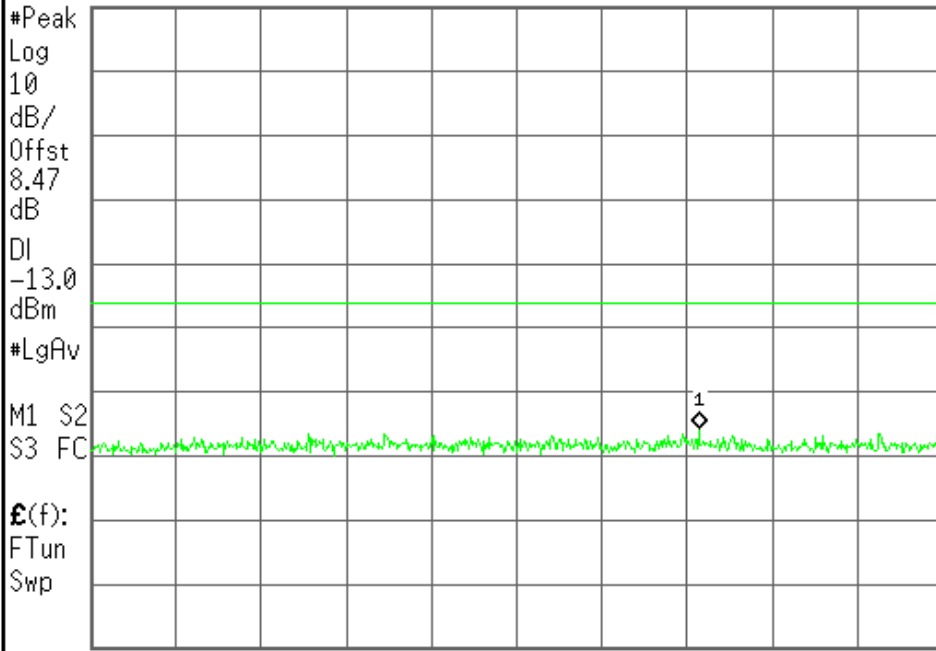
Freq/Channel

FCC ID:A3LGTI9300A Cond Spur Ch.251

Mkr1 610.5 MHz

Ref 33 dBm Atten 40 dB

-32.73 dBm



Center 436.9 MHz Span 813.8 MHz  
#Res BW 1 MHz #VBW 1 MHz Sweep 1.36 ms (601 pts)

Center Freq  
436.900000 MHz

Start Freq  
30.0000000 MHz

Stop Freq  
843.800000 MHz

CF Step  
81.3800000 MHz  
Auto Man

Freq Offset  
0.00000000 Hz

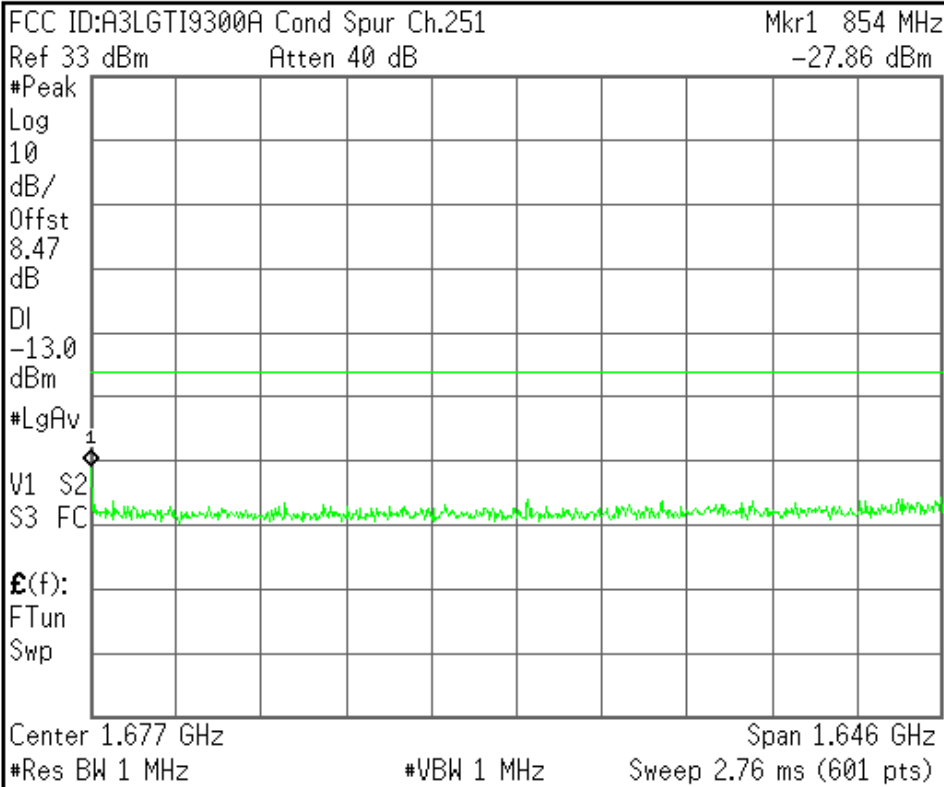
Signal Track  
On Off

File Operation Status, C:\TEMP.GIF file saved

Agilent

R L

Freq/Channel



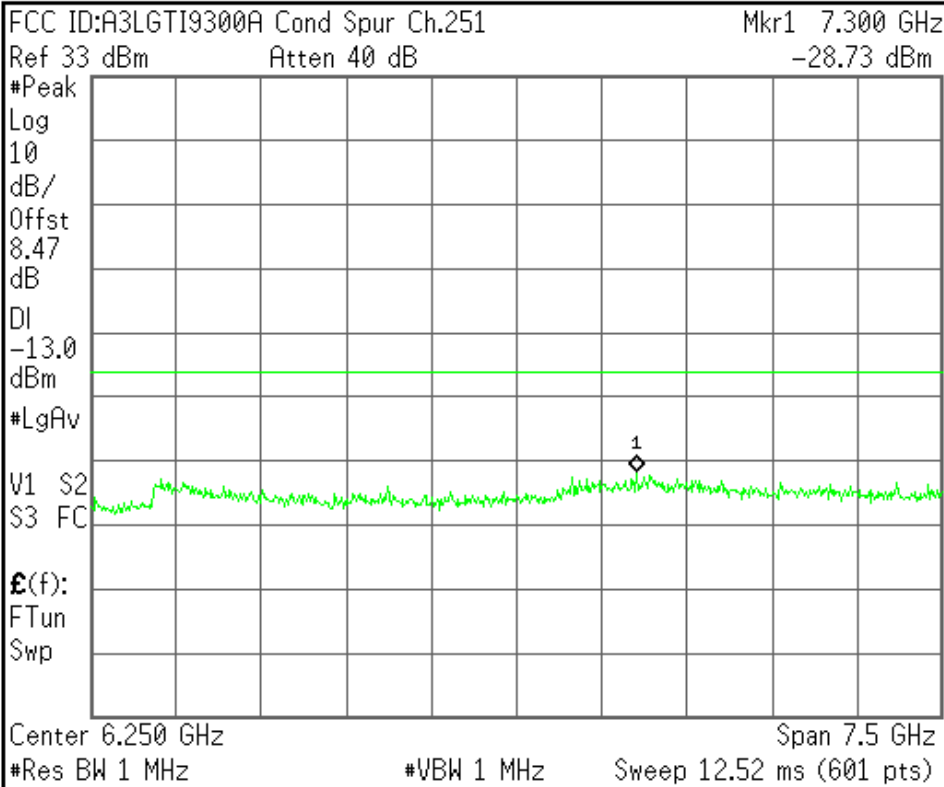
|  |
|--|
| <b>Center Freq</b><br>1.67690000 GHz         |
| <b>Start Freq</b><br>853.800000 MHz          |
| <b>Stop Freq</b><br>2.50000000 GHz           |
| <b>CF Step</b><br>164.620000 MHz<br>Auto Man |
| <b>Freq Offset</b><br>0.00000000 Hz          |
| <b>Signal Track</b><br>On Off                |

File Operation Status, C:\TEMP.GIF file saved

Agilent

R T

Freq/Channel



|  |
|--|
| <b>Center Freq</b><br>6.25000000 GHz         |
| <b>Start Freq</b><br>2.50000000 GHz          |
| <b>Stop Freq</b><br>10.00000000 GHz          |
| <b>CF Step</b><br>750.000000 MHz<br>Auto Man |
| <b>Freq Offset</b><br>0.00000000 Hz          |
| <b>Signal Track</b><br>On Off                |

File Operation Status, C:\TEMP.GIF file saved



Agilent

R L

Freq/Channel

FCC ID:A3LGTI9300A Band Edge Ch.128

Ref 33 dBm

Atten 40 dB

#Avg

Log

10

dB/

Offst

8.47

dB

DI

-13.0

dBm

#LgAv

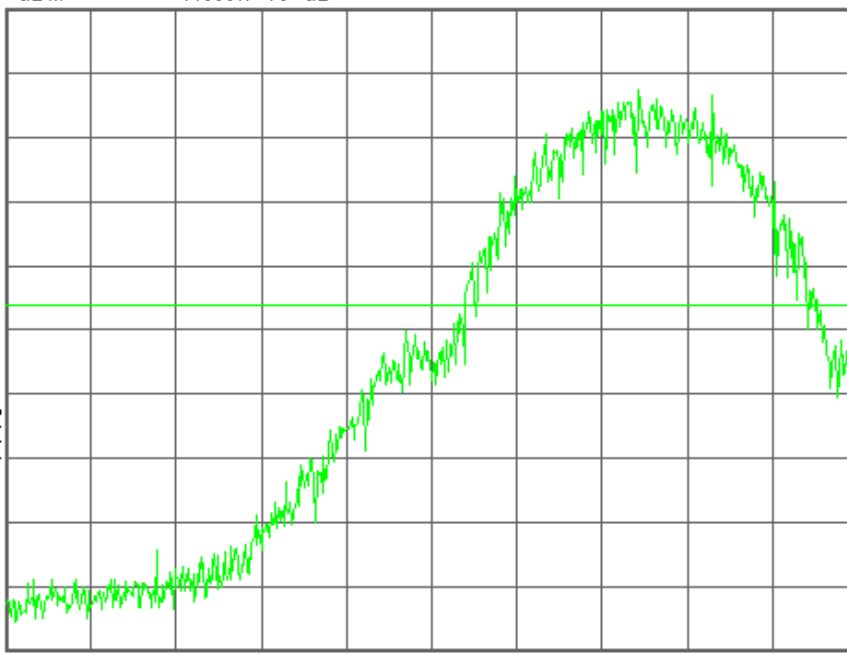
M1 S2

S3 FC

$\mathcal{E}(f)$ :

f>50k

Swp



Center 824.000 0 MHz

Span 810 kHz

#Res BW 3 kHz

#VBW 3 kHz

Sweep 343.2 ms (601 pts)

Center Freq  
824.000000 MHz

Start Freq  
823.595000 MHz

Stop Freq  
824.405000 MHz

CF Step  
81.0000000 kHz  
Auto Man

Freq Offset  
0.00000000 Hz

Signal Track  
On Off

File Operation Status, C:\TEMP.GIF file saved

Agilent

R T

Freq/Channel

FCC ID:A3LGTI9300A Band Edge Ch.128

Mkr1 823.985 3 MHz

Ref 33 dBm

Atten 40 dB

-18.52 dBm

#Avg

Log

10

dB/

Offst

8.47

dB

DI

-13.0

dBm

#LgAv

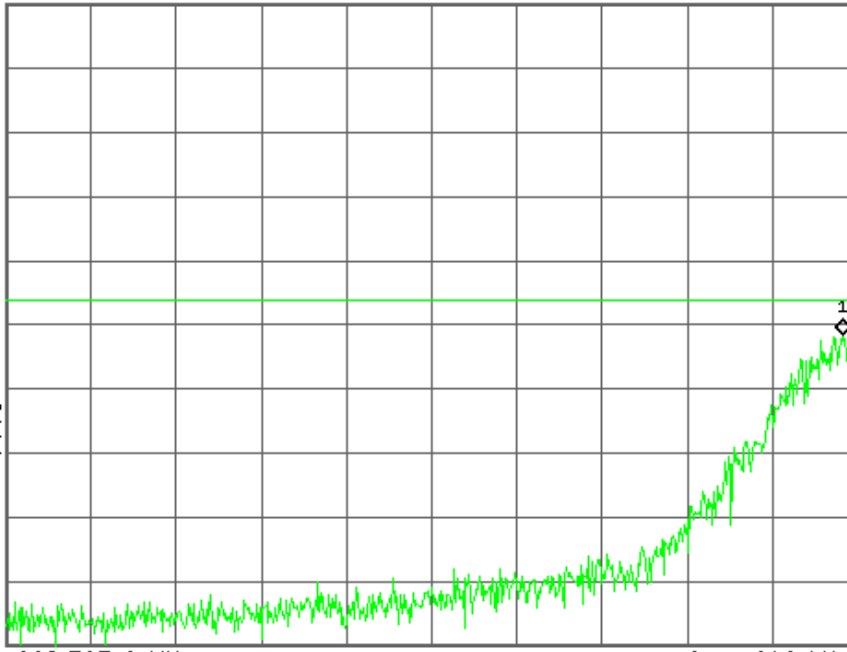
M1 S2

S3 FC

$\mathcal{E}(f)$ :

f>50k

Swp



Center 823.595 0 MHz

Span 810 kHz

#Res BW 3 kHz

#VBW 3 kHz

Sweep 343.2 ms (601 pts)

Center Freq  
823.595000 MHz

Start Freq  
823.190000 MHz

Stop Freq  
824.000000 MHz

CF Step  
81.0000000 kHz  
Auto Man

Freq Offset  
0.00000000 Hz

Signal Track  
On Off

File Operation Status, C:\TEMP.GIF file saved

Agilent

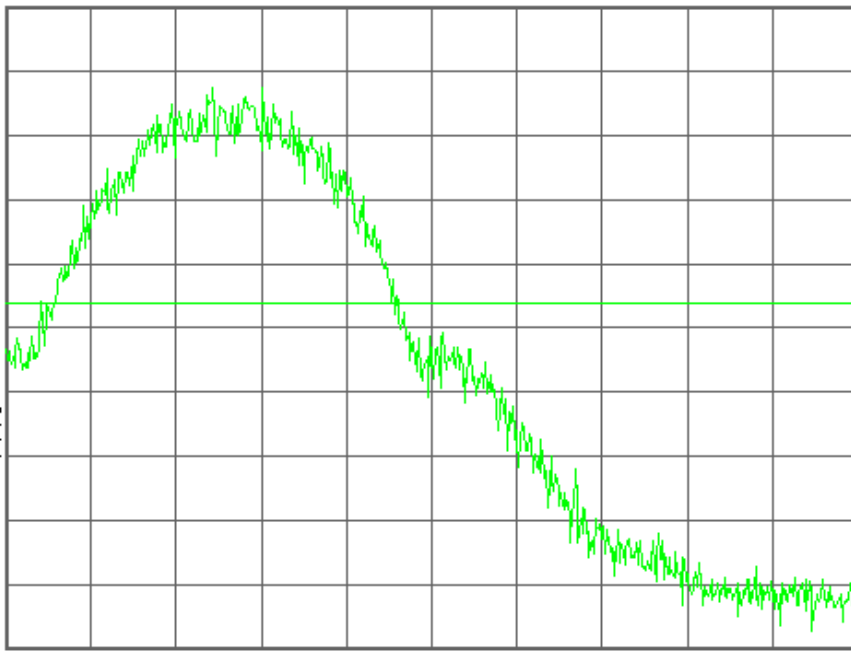
R L

Freq/Channel

FCC ID:A3LGTI9300A Band Edge Ch.251

Ref 33 dBm Atten 40 dB

#Avg  
Log  
10  
dB/  
Offst  
8.47  
dB  
DI  
-13.0  
dBm  
#LgAv  
M1 S2  
S3 FC  
E(f):  
f>50k  
Swp



Center 849.000 0 MHz Span 810 kHz  
#Res BW 3 kHz #VBW 3 kHz Sweep 343.2 ms (601 pts)

Center Freq  
849.000000 MHz

Start Freq  
848.595000 MHz

Stop Freq  
849.405000 MHz

CF Step  
81.0000000 kHz  
Auto Man

Freq Offset  
0.00000000 Hz

Signal Track  
On Off

File Operation Status, C:\TEMP.GIF file saved

Agilent

R T

Freq/Channel

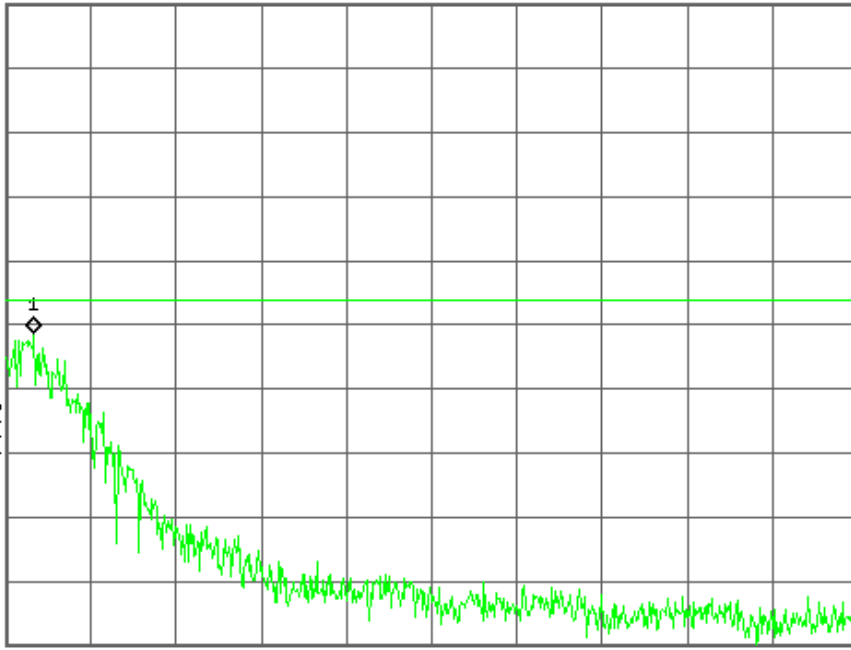
FCC ID:A3LGTI9300A Band Edge Ch.251

Mkr1 849.026 8 MHz

Ref 33 dBm Atten 40 dB

-18.28 dBm

#Avg  
Log  
10  
dB/  
Offst  
8.47  
dB  
DI  
-13.0  
dBm  
#LgAv  
M1 S2  
S3 FC  
E(f):  
f>50k  
Swp



Center 849.405 0 MHz Span 810 kHz  
#Res BW 3 kHz #VBW 3 kHz Sweep 343.2 ms (601 pts)

Center Freq  
849.405000 MHz

Start Freq  
849.000000 MHz

Stop Freq  
849.810000 MHz

CF Step  
81.0000000 kHz  
Auto Man

Freq Offset  
0.00000000 Hz

Signal Track  
On Off

File Operation Status, C:\TEMP.GIF file saved

GSM1900

Agilent

R T

**Ch Freq** 1.8502 GHz **Trig** Free

Occupied Bandwidth

FCC ID:A3LGTI9300A 0BW Ch.512  
Ref 30 dBm Atten 40 dB

Center 1.850 200 GHz Span 1 MHz  
#Res BW 3 kHz #VBW 3 kHz #Sweep 1 s (601 pts)

|                            |                     |             |
|----------------------------|---------------------|-------------|
| <b>Occupied Bandwidth</b>  | <b>Occ BW % Pwr</b> | 99.00 %     |
| 245.8573 kHz               | <b>x dB</b>         | -26.00 dB   |
| <b>Transmit Freq Error</b> |                     | 10.775 Hz   |
| <b>x dB Bandwidth</b>      |                     | 314.686 kHz |

**Freq/Channel**

**Center Freq**  
1.85020000 GHz

**Start Freq**  
1.84970000 GHz

**Stop Freq**  
1.85070000 GHz

**CF Step**  
100.000000 kHz  
Auto Man

**Freq Offset**  
0.00000000 Hz

**Signal Track**  
On Off

File Operation Status, C:\TEMP.GIF file saved

Agilent

R T

**Ch Freq** 1.88 GHz **Trig** Free

Occupied Bandwidth

FCC ID:A3LGTI9300A 0BW Ch.661  
Ref 30 dBm Atten 40 dB

Center 1.880 000 GHz Span 1 MHz  
#Res BW 3 kHz #VBW 3 kHz #Sweep 1 s (601 pts)

|                            |                     |             |
|----------------------------|---------------------|-------------|
| <b>Occupied Bandwidth</b>  | <b>Occ BW % Pwr</b> | 99.00 %     |
| 248.2083 kHz               | <b>x dB</b>         | -26.00 dB   |
| <b>Transmit Freq Error</b> |                     | -868.526 Hz |
| <b>x dB Bandwidth</b>      |                     | 311.915 kHz |

**Freq/Channel**

**Center Freq**  
1.88000000 GHz

**Start Freq**  
1.87950000 GHz

**Stop Freq**  
1.88050000 GHz

**CF Step**  
100.000000 kHz  
Auto Man

**Freq Offset**  
0.00000000 Hz

**Signal Track**  
On Off

File Operation Status, C:\TEMP.GIF file saved

|   |  |                             |  |
|---|--|-----------------------------|--|
| <b>Ch Freq</b> 1.9098 GHz                               |  | <b>Trig</b> Free            |  |
| Occupied Bandwidth                                      |  |                             |  |
| FCC ID:A3LGTI9300A 0BW Ch.810<br>Ref 30 dBm Atten 40 dB |  |                             |  |
|   |  |                             |  |
| Center 1.909 800 GHz                                    |  | Span 1 MHz                  |  |
| #Res BW 3 kHz   |  | #Sweep 1 s (601 pts)        |  |
| <b>Occupied Bandwidth</b>                               |  | <b>Occ BW % Pwr</b> 99.00 % |  |
| 247.1668 kHz  |  | <b>x dB</b> -26.00 dB       |  |
| <b>Transmit Freq Error</b> 1.489 kHz                    |  |                             |  |
| <b>x dB Bandwidth</b> 312.416 kHz                       |  |                             |  |
| <b>File Operation Status, C:\TEMP.GIF file saved</b>    |  |                             |  |

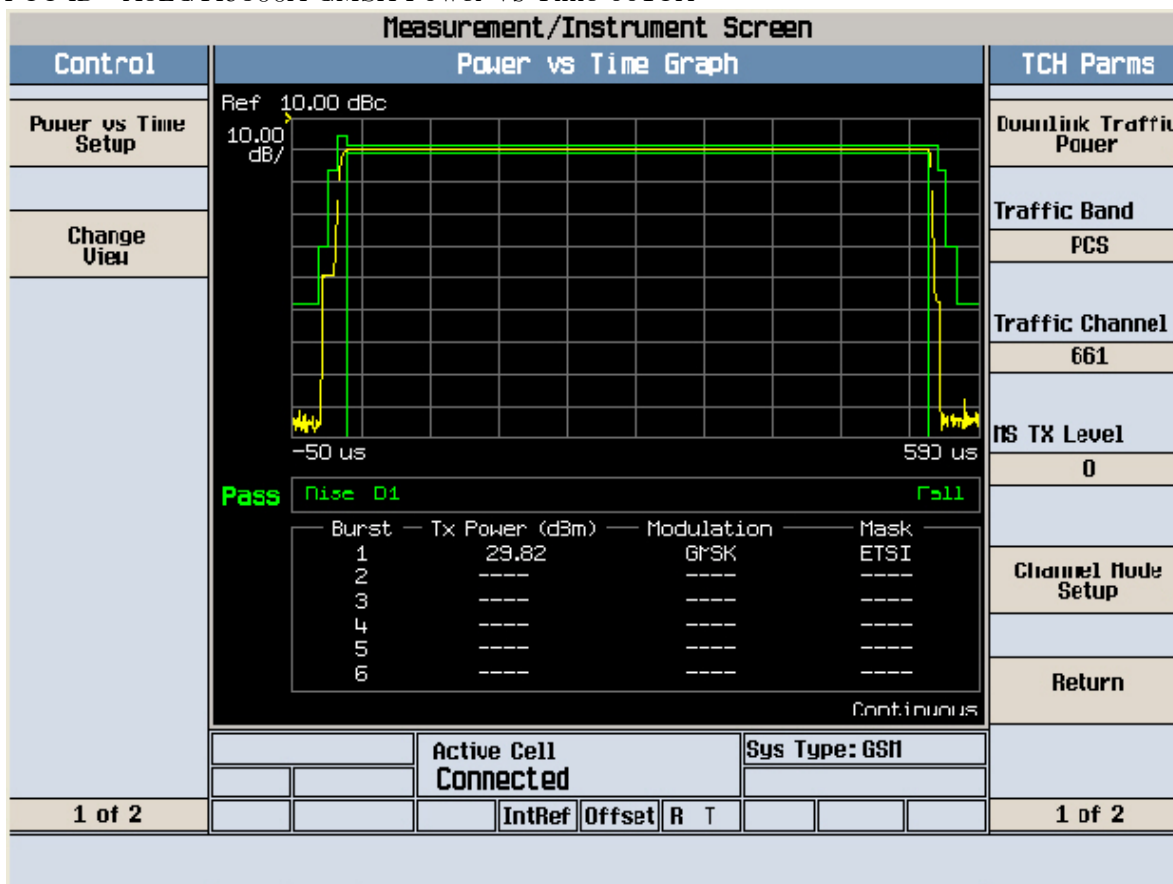
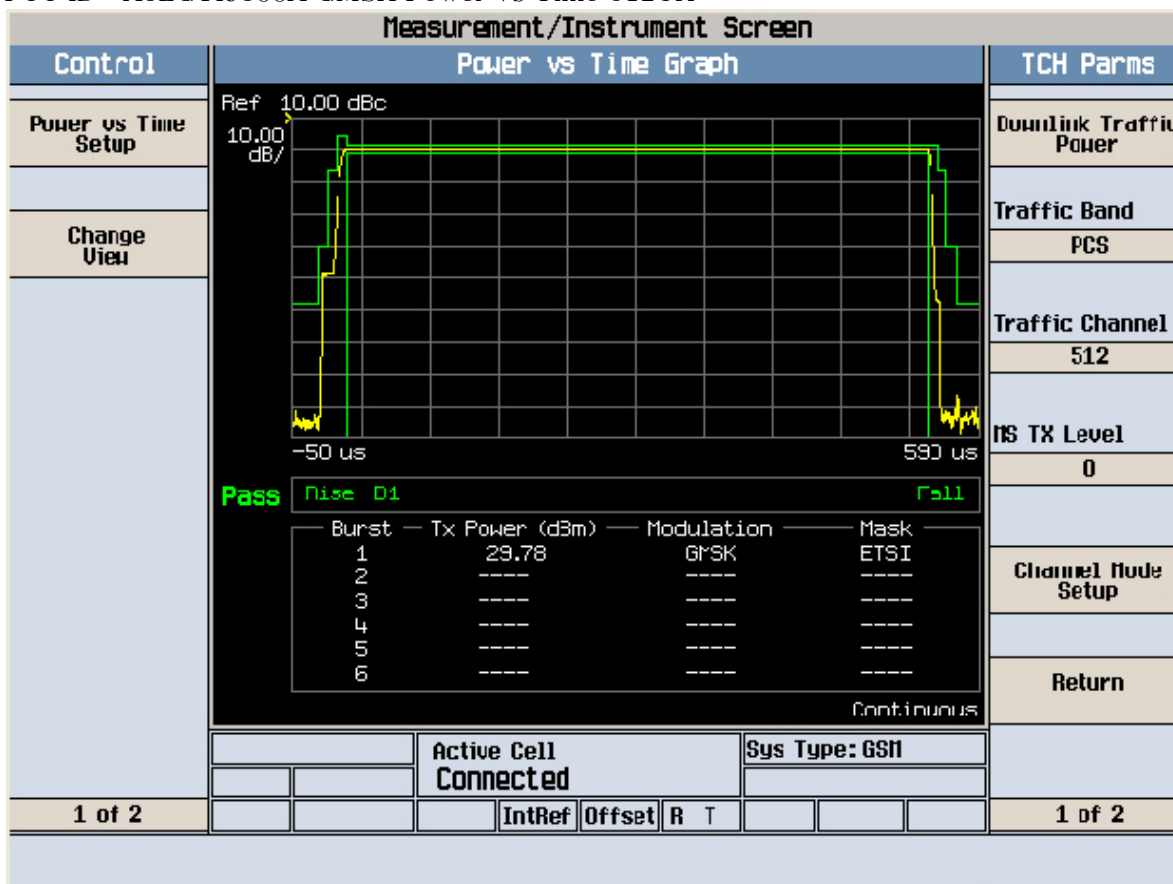
|  |
|--|
| <b>Freq/Channel</b>                          |
| <b>Center Freq</b><br>1.90980000 GHz         |
| <b>Start Freq</b><br>1.90930000 GHz          |
| <b>Stop Freq</b><br>1.91030000 GHz           |
| <b>CF Step</b><br>100.000000 kHz<br>Auto Man |
| <b>Freq Offset</b><br>0.00000000 Hz          |
| <b>Signal Track</b><br>On Off                |

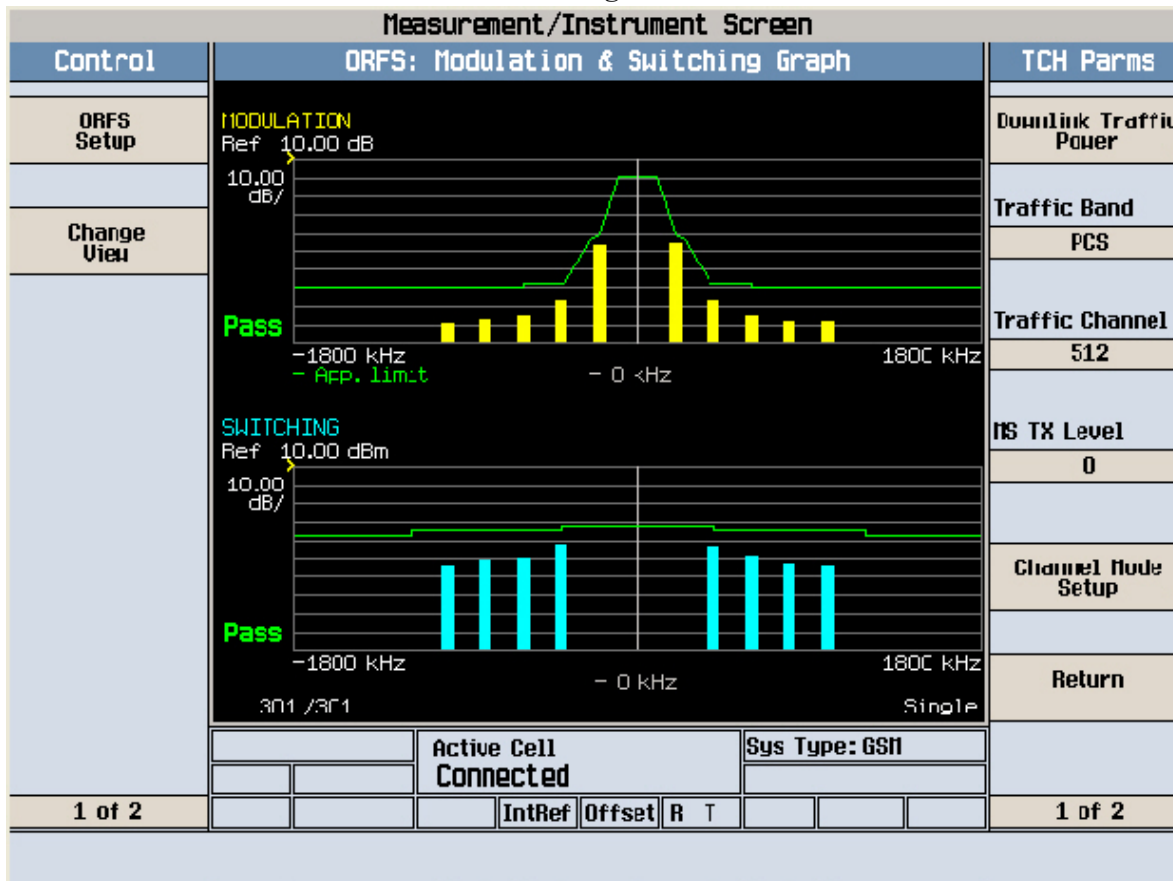
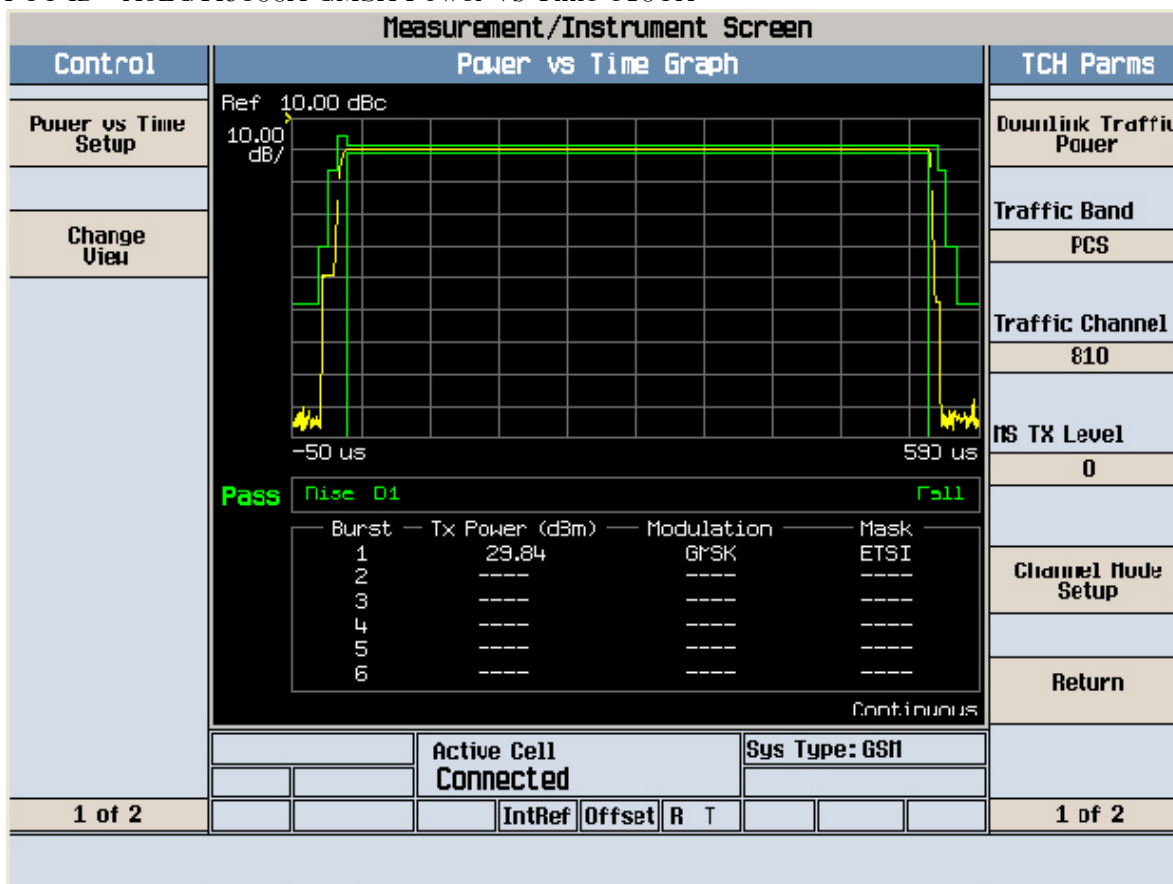
FCC ID : A3LGTI9300A Transmit Power 512CH

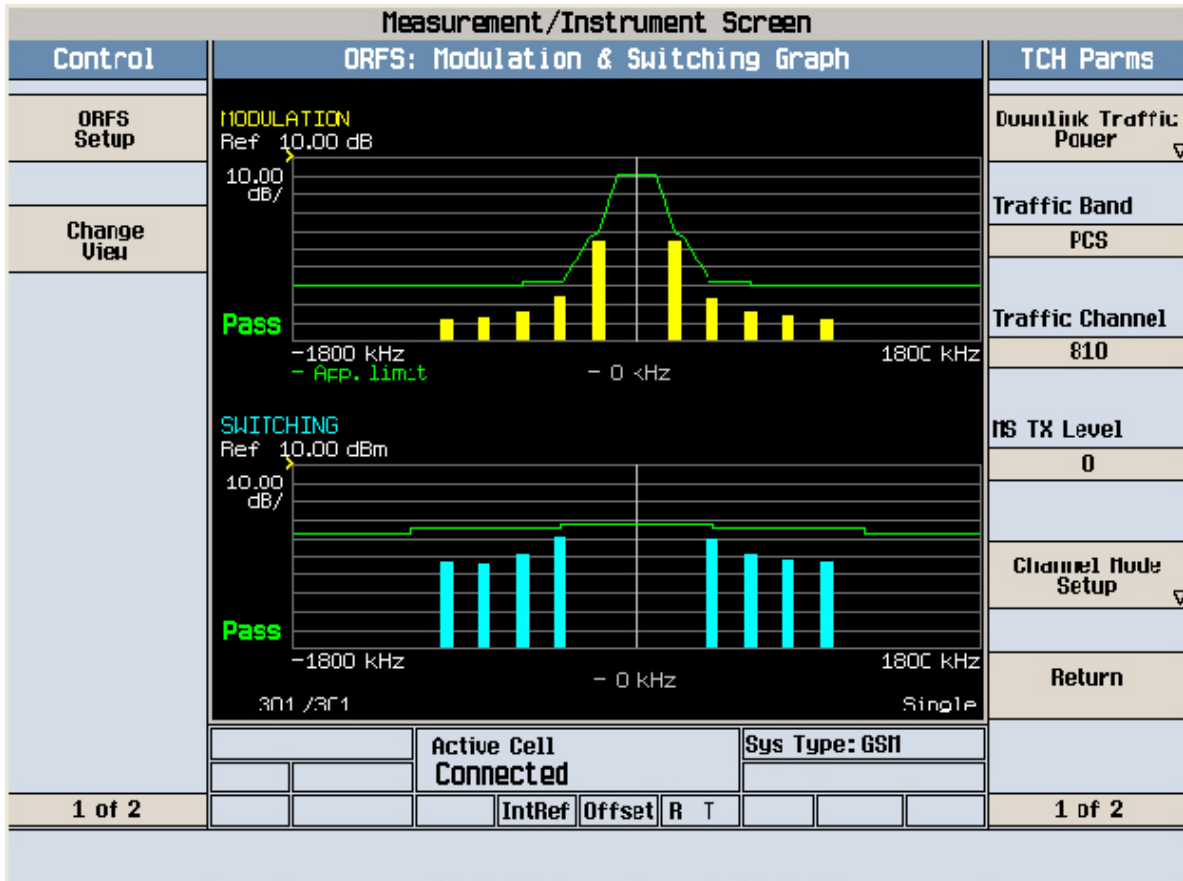
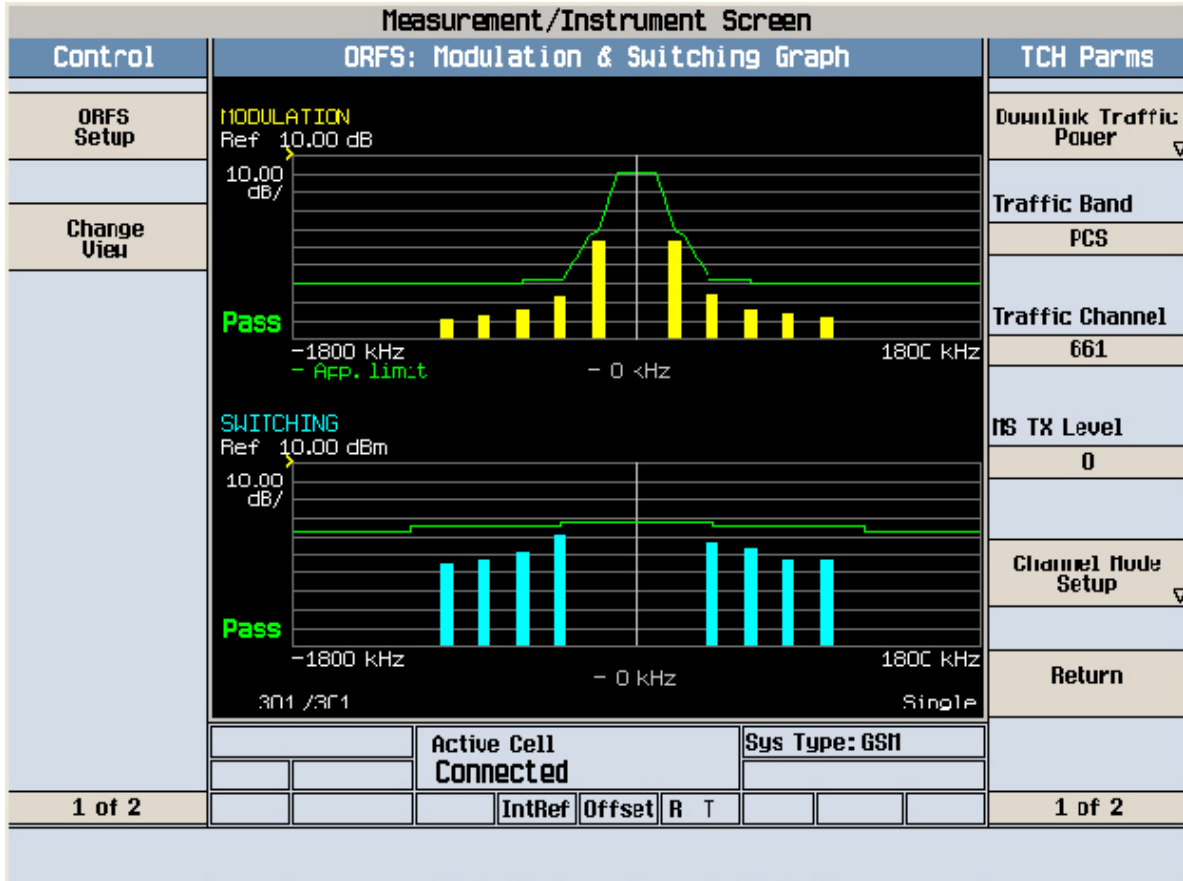
| Measurement/Instrument Screen |                |         |                       |         |                    |                        |
|-------------------------------|----------------|---------|-----------------------|---------|--------------------|------------------------|
| Control                       | Transmit Power |         |                       |         |                    | TCH Parms              |
| Transmit Power Setup          | Burst 1        | Burst 2 | Burst 3               | Burst 4 | Burst 5            | Burst 6                |
|                               | BP             | 29.77   | ----                  | ----    | ----               | ----                   |
| Setup Window Positions        | ECP            | 29.77   | ----                  | ----    | ----               | ----                   |
|                               | Single         |         |                       |         |                    | Downlink Traffic Power |
|                               |                |         |                       |         |                    | Traffic Band           |
|                               |                |         |                       |         |                    | PCS                    |
|                               |                |         |                       |         | Traffic Channel    |                        |
|                               |                |         |                       |         | 512                |                        |
|                               |                |         |                       |         | MS TX Level        |                        |
|                               |                |         |                       |         | 0                  |                        |
|                               |                |         |                       |         | Channel Mode Setup |                        |
|                               |                |         |                       |         | Return             |                        |
|                               |                |         |                       |         | 50 / 50            | Single                 |
|                               |                |         | Active Cell Connected |         | Sys Type: GSM      |                        |
| 1 of 2                        |                | IntRef  | Offset                | R T     | 1 of 2             |                        |

| Measurement/Instrument Screen   |  |              |                       |              |         |         |               |           |              |                    |              |         |                       |         |       |         |               |      |      |         |      |      |        |           |      |      |        |                 |                        |  |  |  |   |  |  |  |   |  |  |             |   |
|---|--|--------------|-----------------------|--------------|---------|---------|---------------|-----------|--------------|--------------------|--------------|---------|-----------------------|---------|-------|---------|---------------|------|------|---------|------|------|--------|-----------|------|------|--------|-----------------|------------------------|--|--|--|---|--|--|--|---|--|--|-------------|---|
| Control   | Transmit Power   |              |                       |              |         |         |               | TCH Parms |              |                    |              |         |                       |         |       |         |               |      |      |         |      |      |        |           |      |      |        |                 |                        |  |  |  |   |  |  |  |   |  |  |             |   |
| Transmit Power Setup  | <table border="1"> <thead> <tr> <th></th> <th>Burst 1</th> <th>Burst 2</th> <th>Burst 3</th> <th>Burst 4</th> <th>Burst 5</th> <th>Burst 6</th> </tr> </thead> <tbody> <tr> <td>BP</td> <td>29.81</td> <td>----</td> <td>----</td> <td>----</td> <td>----</td> <td>----</td> </tr> <tr> <td>ECP</td> <td>29.81</td> <td>----</td> <td>----</td> <td>----</td> <td>----</td> <td>----</td> </tr> </tbody> </table>                              |              |                       |              |         |         |               |           | Burst 1      | Burst 2            | Burst 3      | Burst 4 | Burst 5               | Burst 6 | BP    | 29.81   | ----          | ---- | ---- | ----    | ---- | ECP  | 29.81  | ----      | ---- | ---- | ----   | ----            | Downlink Traffic Power |  |  |  |   |  |  |  |   |  |  |             |   |
|   |  | Burst 1      | Burst 2               | Burst 3      | Burst 4 | Burst 5 | Burst 6       |           |              |                    |              |         |                       |         |       |         |               |      |      |         |      |      |        |           |      |      |        |                 |                        |  |  |  |   |  |  |  |   |  |  |             |   |
| BP  | 29.81  | ----         | ----                  | ----         | ----    | ----    |               |           |              |                    |              |         |                       |         |       |         |               |      |      |         |      |      |        |           |      |      |        |                 |                        |  |  |  |   |  |  |  |   |  |  |             |   |
| ECP   | 29.81  | ----         | ----                  | ----         | ----    | ----    |               |           |              |                    |              |         |                       |         |       |         |               |      |      |         |      |      |        |           |      |      |        |                 |                        |  |  |  |   |  |  |  |   |  |  |             |   |
| Swap Window Positions   | <table border="1"> <thead> <tr> <th></th> <th>Peak Phase °</th> <th>RMS Phase °</th> <th>Frequency Hz</th> </tr> </thead> <tbody> <tr> <td>Minimum</td> <td>3.02</td> <td>1.06</td> <td>-9.33</td> </tr> <tr> <td>Maximum</td> <td>5.99</td> <td>1.43</td> <td>9.41</td> </tr> <tr> <td>Average</td> <td>4.20</td> <td>1.20</td> <td>0.97</td> </tr> <tr> <td>Pass/Fail</td> <td>Pass</td> <td>Pass</td> <td>Pass</td> </tr> </tbody> </table> |              |                       |              |         |         |               |           | Peak Phase ° | RMS Phase °        | Frequency Hz | Minimum | 3.02                  | 1.06    | -9.33 | Maximum | 5.99          | 1.43 | 9.41 | Average | 4.20 | 1.20 | 0.97   | Pass/Fail | Pass | Pass | Pass   | Traffic Band    | PCS                    |  |  |  |   |  |  |  |   |  |  |             |   |
|   |  | Peak Phase ° | RMS Phase °           | Frequency Hz |         |         |               |           |              |                    |              |         |                       |         |       |         |               |      |      |         |      |      |        |           |      |      |        |                 |                        |  |  |  |   |  |  |  |   |  |  |             |   |
| Minimum   | 3.02   | 1.06         | -9.33                 |              |         |         |               |           |              |                    |              |         |                       |         |       |         |               |      |      |         |      |      |        |           |      |      |        |                 |                        |  |  |  |   |  |  |  |   |  |  |             |   |
| Maximum   | 5.99   | 1.43         | 9.41                  |              |         |         |               |           |              |                    |              |         |                       |         |       |         |               |      |      |         |      |      |        |           |      |      |        |                 |                        |  |  |  |   |  |  |  |   |  |  |             |   |
| Average   | 4.20   | 1.20         | 0.97                  |              |         |         |               |           |              |                    |              |         |                       |         |       |         |               |      |      |         |      |      |        |           |      |      |        |                 |                        |  |  |  |   |  |  |  |   |  |  |             |   |
| Pass/Fail   | Pass   | Pass         | Pass                  |              |         |         |               |           |              |                    |              |         |                       |         |       |         |               |      |      |         |      |      |        |           |      |      |        |                 |                        |  |  |  |   |  |  |  |   |  |  |             |   |
| 1 of 2  | <table border="1"> <thead> <tr> <th></th> <th>Peak Phase °</th> <th>RMS Phase °</th> <th>Frequency Hz</th> </tr> </thead> <tbody> <tr> <td>Minimum</td> <td>3.02</td> <td>1.06</td> <td>-9.33</td> </tr> <tr> <td>Maximum</td> <td>5.99</td> <td>1.43</td> <td>9.41</td> </tr> <tr> <td>Average</td> <td>4.20</td> <td>1.20</td> <td>0.97</td> </tr> <tr> <td>Pass/Fail</td> <td>Pass</td> <td>Pass</td> <td>Pass</td> </tr> </tbody> </table> |              |                       |              |         |         |               |           | Peak Phase ° | RMS Phase °        | Frequency Hz | Minimum | 3.02                  | 1.06    | -9.33 | Maximum | 5.99          | 1.43 | 9.41 | Average | 4.20 | 1.20 | 0.97   | Pass/Fail | Pass | Pass | Pass   | Traffic Channel | 661                    |  |  |  |   |  |  |  |   |  |  |             |   |
|   |  | Peak Phase ° | RMS Phase °           | Frequency Hz |         |         |               |           |              |                    |              |         |                       |         |       |         |               |      |      |         |      |      |        |           |      |      |        |                 |                        |  |  |  |   |  |  |  |   |  |  |             |   |
| Minimum   | 3.02   | 1.06         | -9.33                 |              |         |         |               |           |              |                    |              |         |                       |         |       |         |               |      |      |         |      |      |        |           |      |      |        |                 |                        |  |  |  |   |  |  |  |   |  |  |             |   |
| Maximum   | 5.99   | 1.43         | 9.41                  |              |         |         |               |           |              |                    |              |         |                       |         |       |         |               |      |      |         |      |      |        |           |      |      |        |                 |                        |  |  |  |   |  |  |  |   |  |  |             |   |
| Average   | 4.20   | 1.20         | 0.97                  |              |         |         |               |           |              |                    |              |         |                       |         |       |         |               |      |      |         |      |      |        |           |      |      |        |                 |                        |  |  |  |   |  |  |  |   |  |  |             |   |
| Pass/Fail   | Pass   | Pass         | Pass                  |              |         |         |               |           |              |                    |              |         |                       |         |       |         |               |      |      |         |      |      |        |           |      |      |        |                 |                        |  |  |  |   |  |  |  |   |  |  |             |   |
| <table border="1"> <tr> <td colspan="3">50 / 50</td> <td colspan="4">Active Cell Connected</td> <td colspan="3">Sys Type: GSM</td> </tr> <tr> <td colspan="3"></td> <td colspan="4">IntRef</td> <td colspan="3">Offset</td> </tr> <tr> <td colspan="3"></td> <td colspan="4">R</td> <td colspan="3">T</td> </tr> </table> |  |              |                       |              |         |         |               |           |              | 50 / 50            |              |         | Active Cell Connected |         |       |         | Sys Type: GSM |      |      |         |      |      | IntRef |           |      |      | Offset |                 |                        |  |  |  | R |  |  |  | T |  |  | MS TX Level | 0 |
| 50 / 50   |  |              | Active Cell Connected |              |         |         | Sys Type: GSM |           |              |                    |              |         |                       |         |       |         |               |      |      |         |      |      |        |           |      |      |        |                 |                        |  |  |  |   |  |  |  |   |  |  |             |   |
|   |  |              | IntRef                |              |         |         | Offset        |           |              |                    |              |         |                       |         |       |         |               |      |      |         |      |      |        |           |      |      |        |                 |                        |  |  |  |   |  |  |  |   |  |  |             |   |
|   |  |              | R                     |              |         |         | T             |           |              |                    |              |         |                       |         |       |         |               |      |      |         |      |      |        |           |      |      |        |                 |                        |  |  |  |   |  |  |  |   |  |  |             |   |
|   |  |              |                       |              |         |         |               |           |              | Channel Mode Setup |              |         |                       |         |       |         |               |      |      |         |      |      |        |           |      |      |        |                 |                        |  |  |  |   |  |  |  |   |  |  |             |   |
|   |  |              |                       |              |         |         |               |           |              | Return             |              |         |                       |         |       |         |               |      |      |         |      |      |        |           |      |      |        |                 |                        |  |  |  |   |  |  |  |   |  |  |             |   |
|   |  |              |                       |              |         |         |               |           |              | 1 of 2             |              |         |                       |         |       |         |               |      |      |         |      |      |        |           |      |      |        |                 |                        |  |  |  |   |  |  |  |   |  |  |             |   |

| Measurement/Instrument Screen   |  |              |                       |              |         |         |               |           |              |                    |              |         |                       |         |        |         |               |      |      |         |      |      |        |           |      |      |        |                 |                        |  |  |  |   |  |  |  |   |  |  |             |   |
|---|--|--------------|-----------------------|--------------|---------|---------|---------------|-----------|--------------|--------------------|--------------|---------|-----------------------|---------|--------|---------|---------------|------|------|---------|------|------|--------|-----------|------|------|--------|-----------------|------------------------|--|--|--|---|--|--|--|---|--|--|-------------|---|
| Control   | Transmit Power   |              |                       |              |         |         |               | TCH Parms |              |                    |              |         |                       |         |        |         |               |      |      |         |      |      |        |           |      |      |        |                 |                        |  |  |  |   |  |  |  |   |  |  |             |   |
| Transmit Power Setup  | <table border="1"> <thead> <tr> <th></th> <th>Burst 1</th> <th>Burst 2</th> <th>Burst 3</th> <th>Burst 4</th> <th>Burst 5</th> <th>Burst 6</th> </tr> </thead> <tbody> <tr> <td>BP</td> <td>29.82</td> <td>----</td> <td>----</td> <td>----</td> <td>----</td> <td>----</td> </tr> <tr> <td>ECP</td> <td>29.82</td> <td>----</td> <td>----</td> <td>----</td> <td>----</td> <td>----</td> </tr> </tbody> </table>                                |              |                       |              |         |         |               |           | Burst 1      | Burst 2            | Burst 3      | Burst 4 | Burst 5               | Burst 6 | BP     | 29.82   | ----          | ---- | ---- | ----    | ---- | ECP  | 29.82  | ----      | ---- | ---- | ----   | ----            | Downlink Traffic Power |  |  |  |   |  |  |  |   |  |  |             |   |
|   |  | Burst 1      | Burst 2               | Burst 3      | Burst 4 | Burst 5 | Burst 6       |           |              |                    |              |         |                       |         |        |         |               |      |      |         |      |      |        |           |      |      |        |                 |                        |  |  |  |   |  |  |  |   |  |  |             |   |
| BP  | 29.82  | ----         | ----                  | ----         | ----    | ----    |               |           |              |                    |              |         |                       |         |        |         |               |      |      |         |      |      |        |           |      |      |        |                 |                        |  |  |  |   |  |  |  |   |  |  |             |   |
| ECP   | 29.82  | ----         | ----                  | ----         | ----    | ----    |               |           |              |                    |              |         |                       |         |        |         |               |      |      |         |      |      |        |           |      |      |        |                 |                        |  |  |  |   |  |  |  |   |  |  |             |   |
| Swap Window Positions   | <table border="1"> <thead> <tr> <th></th> <th>Peak Phase °</th> <th>RMS Phase °</th> <th>Frequency Hz</th> </tr> </thead> <tbody> <tr> <td>Minimum</td> <td>2.93</td> <td>1.02</td> <td>-20.25</td> </tr> <tr> <td>Maximum</td> <td>6.21</td> <td>1.42</td> <td>0.88</td> </tr> <tr> <td>Average</td> <td>4.15</td> <td>1.19</td> <td>-9.75</td> </tr> <tr> <td>Pass/Fail</td> <td>Pass</td> <td>Pass</td> <td>Pass</td> </tr> </tbody> </table> |              |                       |              |         |         |               |           | Peak Phase ° | RMS Phase °        | Frequency Hz | Minimum | 2.93                  | 1.02    | -20.25 | Maximum | 6.21          | 1.42 | 0.88 | Average | 4.15 | 1.19 | -9.75  | Pass/Fail | Pass | Pass | Pass   | Traffic Band    | PCS                    |  |  |  |   |  |  |  |   |  |  |             |   |
|   |  | Peak Phase ° | RMS Phase °           | Frequency Hz |         |         |               |           |              |                    |              |         |                       |         |        |         |               |      |      |         |      |      |        |           |      |      |        |                 |                        |  |  |  |   |  |  |  |   |  |  |             |   |
| Minimum   | 2.93   | 1.02         | -20.25                |              |         |         |               |           |              |                    |              |         |                       |         |        |         |               |      |      |         |      |      |        |           |      |      |        |                 |                        |  |  |  |   |  |  |  |   |  |  |             |   |
| Maximum   | 6.21   | 1.42         | 0.88                  |              |         |         |               |           |              |                    |              |         |                       |         |        |         |               |      |      |         |      |      |        |           |      |      |        |                 |                        |  |  |  |   |  |  |  |   |  |  |             |   |
| Average   | 4.15   | 1.19         | -9.75                 |              |         |         |               |           |              |                    |              |         |                       |         |        |         |               |      |      |         |      |      |        |           |      |      |        |                 |                        |  |  |  |   |  |  |  |   |  |  |             |   |
| Pass/Fail   | Pass   | Pass         | Pass                  |              |         |         |               |           |              |                    |              |         |                       |         |        |         |               |      |      |         |      |      |        |           |      |      |        |                 |                        |  |  |  |   |  |  |  |   |  |  |             |   |
| 1 of 2  | <table border="1"> <thead> <tr> <th></th> <th>Peak Phase °</th> <th>RMS Phase °</th> <th>Frequency Hz</th> </tr> </thead> <tbody> <tr> <td>Minimum</td> <td>2.93</td> <td>1.02</td> <td>-20.25</td> </tr> <tr> <td>Maximum</td> <td>6.21</td> <td>1.42</td> <td>0.88</td> </tr> <tr> <td>Average</td> <td>4.15</td> <td>1.19</td> <td>-9.75</td> </tr> <tr> <td>Pass/Fail</td> <td>Pass</td> <td>Pass</td> <td>Pass</td> </tr> </tbody> </table> |              |                       |              |         |         |               |           | Peak Phase ° | RMS Phase °        | Frequency Hz | Minimum | 2.93                  | 1.02    | -20.25 | Maximum | 6.21          | 1.42 | 0.88 | Average | 4.15 | 1.19 | -9.75  | Pass/Fail | Pass | Pass | Pass   | Traffic Channel | 810                    |  |  |  |   |  |  |  |   |  |  |             |   |
|   |  | Peak Phase ° | RMS Phase °           | Frequency Hz |         |         |               |           |              |                    |              |         |                       |         |        |         |               |      |      |         |      |      |        |           |      |      |        |                 |                        |  |  |  |   |  |  |  |   |  |  |             |   |
| Minimum   | 2.93   | 1.02         | -20.25                |              |         |         |               |           |              |                    |              |         |                       |         |        |         |               |      |      |         |      |      |        |           |      |      |        |                 |                        |  |  |  |   |  |  |  |   |  |  |             |   |
| Maximum   | 6.21   | 1.42         | 0.88                  |              |         |         |               |           |              |                    |              |         |                       |         |        |         |               |      |      |         |      |      |        |           |      |      |        |                 |                        |  |  |  |   |  |  |  |   |  |  |             |   |
| Average   | 4.15   | 1.19         | -9.75                 |              |         |         |               |           |              |                    |              |         |                       |         |        |         |               |      |      |         |      |      |        |           |      |      |        |                 |                        |  |  |  |   |  |  |  |   |  |  |             |   |
| Pass/Fail   | Pass   | Pass         | Pass                  |              |         |         |               |           |              |                    |              |         |                       |         |        |         |               |      |      |         |      |      |        |           |      |      |        |                 |                        |  |  |  |   |  |  |  |   |  |  |             |   |
| <table border="1"> <tr> <td colspan="3">50 / 50</td> <td colspan="4">Active Cell Connected</td> <td colspan="3">Sys Type: GSM</td> </tr> <tr> <td colspan="3"></td> <td colspan="4">IntRef</td> <td colspan="3">Offset</td> </tr> <tr> <td colspan="3"></td> <td colspan="4">R</td> <td colspan="3">T</td> </tr> </table> |  |              |                       |              |         |         |               |           |              | 50 / 50            |              |         | Active Cell Connected |         |        |         | Sys Type: GSM |      |      |         |      |      | IntRef |           |      |      | Offset |                 |                        |  |  |  | R |  |  |  | T |  |  | MS TX Level | 0 |
| 50 / 50   |  |              | Active Cell Connected |              |         |         | Sys Type: GSM |           |              |                    |              |         |                       |         |        |         |               |      |      |         |      |      |        |           |      |      |        |                 |                        |  |  |  |   |  |  |  |   |  |  |             |   |
|   |  |              | IntRef                |              |         |         | Offset        |           |              |                    |              |         |                       |         |        |         |               |      |      |         |      |      |        |           |      |      |        |                 |                        |  |  |  |   |  |  |  |   |  |  |             |   |
|   |  |              | R                     |              |         |         | T             |           |              |                    |              |         |                       |         |        |         |               |      |      |         |      |      |        |           |      |      |        |                 |                        |  |  |  |   |  |  |  |   |  |  |             |   |
|   |  |              |                       |              |         |         |               |           |              | Channel Mode Setup |              |         |                       |         |        |         |               |      |      |         |      |      |        |           |      |      |        |                 |                        |  |  |  |   |  |  |  |   |  |  |             |   |
|   |  |              |                       |              |         |         |               |           |              | Return             |              |         |                       |         |        |         |               |      |      |         |      |      |        |           |      |      |        |                 |                        |  |  |  |   |  |  |  |   |  |  |             |   |
|   |  |              |                       |              |         |         |               |           |              | 1 of 2             |              |         |                       |         |        |         |               |      |      |         |      |      |        |           |      |      |        |                 |                        |  |  |  |   |  |  |  |   |  |  |             |   |





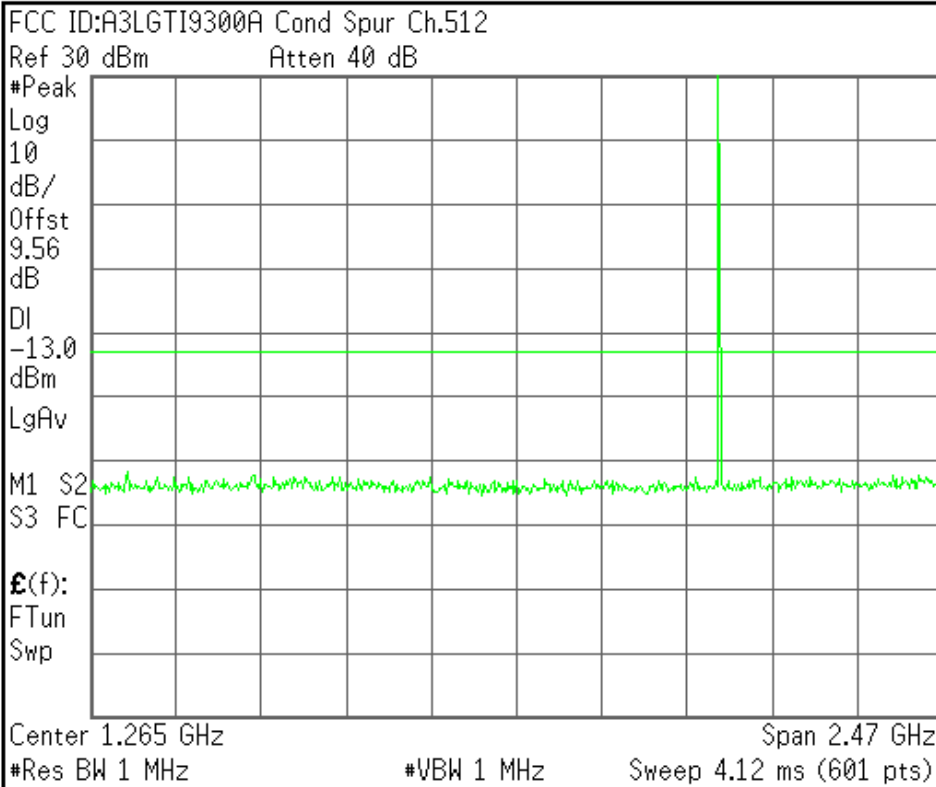




Agilent

R L

Freq/Channel



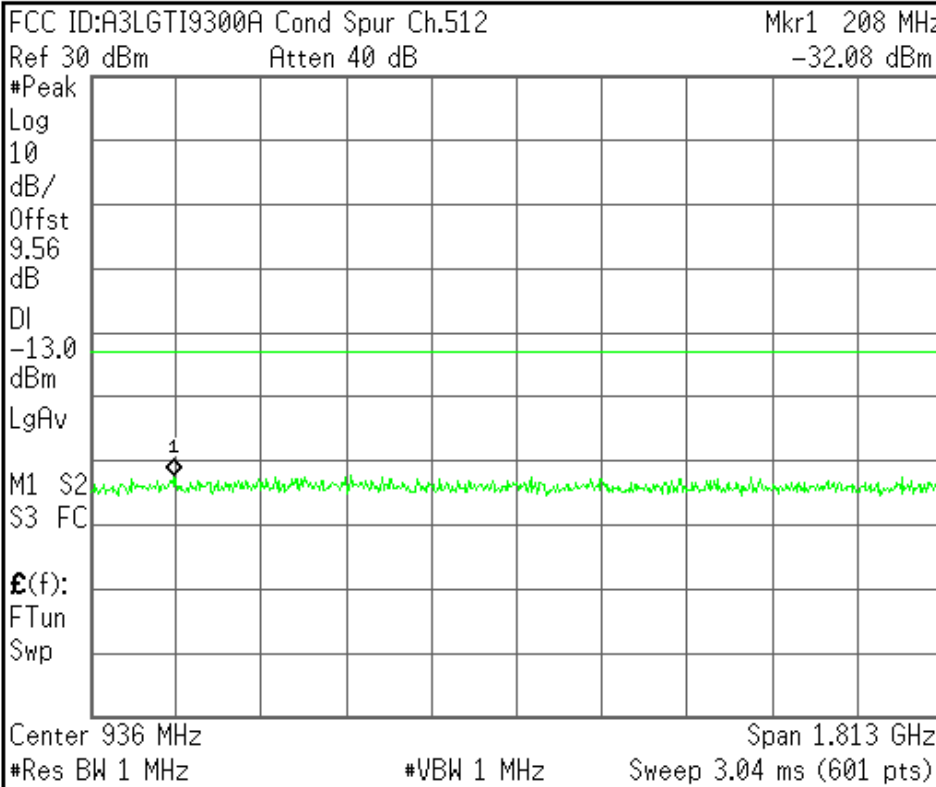
|  |
|--|
| <b>Center Freq</b><br>1.26500000 GHz         |
| <b>Start Freq</b><br>30.0000000 MHz          |
| <b>Stop Freq</b><br>2.50000000 GHz           |
| <b>CF Step</b><br>247.000000 MHz<br>Auto Man |
| <b>Freq Offset</b><br>0.00000000 Hz          |
| <b>Signal Track</b><br>On Off                |

Copyright 2000-2005 Agilent Technologies

Agilent

R L

Freq/Channel



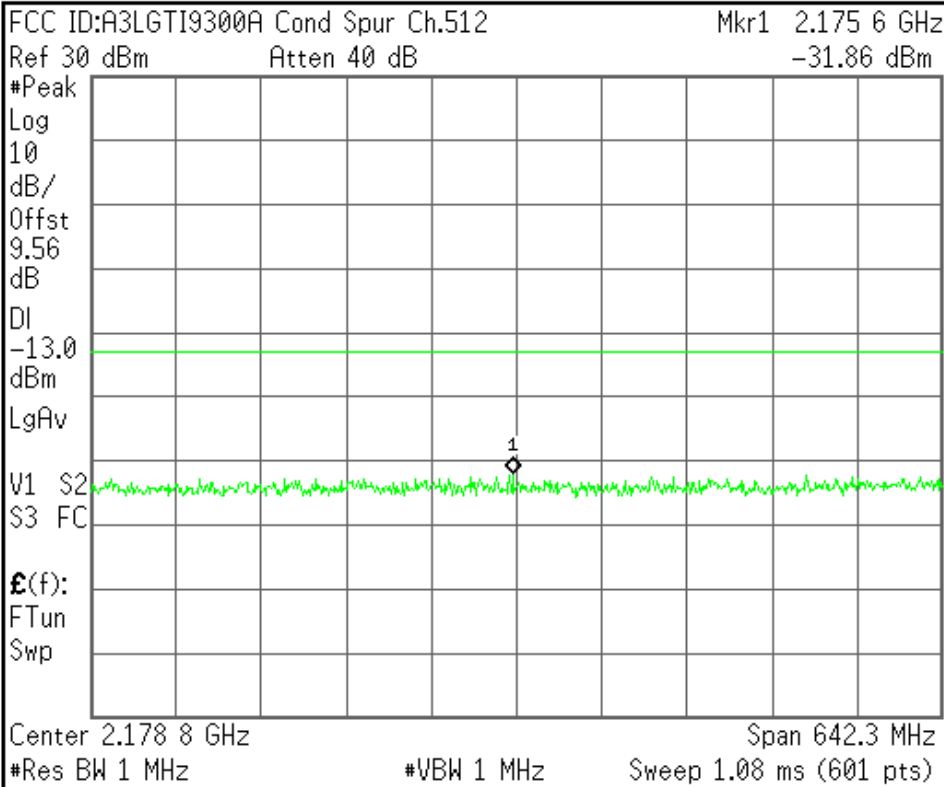
|  |
|--|
| <b>Center Freq</b><br>936.350000 MHz         |
| <b>Start Freq</b><br>30.0000000 MHz          |
| <b>Stop Freq</b><br>1.84270000 GHz           |
| <b>CF Step</b><br>181.270000 MHz<br>Auto Man |
| <b>Freq Offset</b><br>0.00000000 Hz          |
| <b>Signal Track</b><br>On Off                |

File Operation Status, C:\TEMP.GIF file saved

Agilent

R L

Freq/Channel



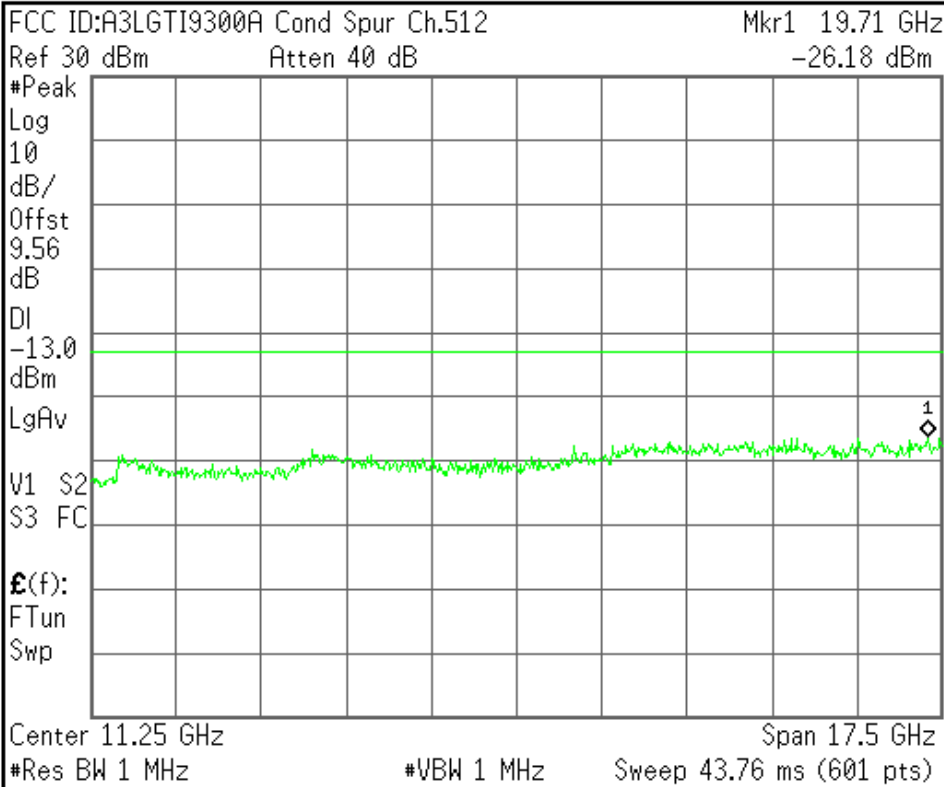
|  |
|--|
| <b>Center Freq</b><br>2.17885000 GHz         |
| <b>Start Freq</b><br>1.85770000 GHz          |
| <b>Stop Freq</b><br>2.50000000 GHz           |
| <b>CF Step</b><br>Auto Man<br>64.2300000 MHz |
| <b>Freq Offset</b><br>0.00000000 Hz          |
| <b>Signal Track</b><br>On Off                |

File Operation Status, C:\TEMP.GIF file saved

Agilent

R T

Freq/Channel



|  |
|--|
| <b>Center Freq</b><br>11.2500000 GHz         |
| <b>Start Freq</b><br>2.50000000 GHz          |
| <b>Stop Freq</b><br>20.0000000 GHz           |
| <b>CF Step</b><br>Auto Man<br>1.75000000 GHz |
| <b>Freq Offset</b><br>0.00000000 Hz          |
| <b>Signal Track</b><br>On Off                |

File Operation Status, C:\TEMP.GIF file saved

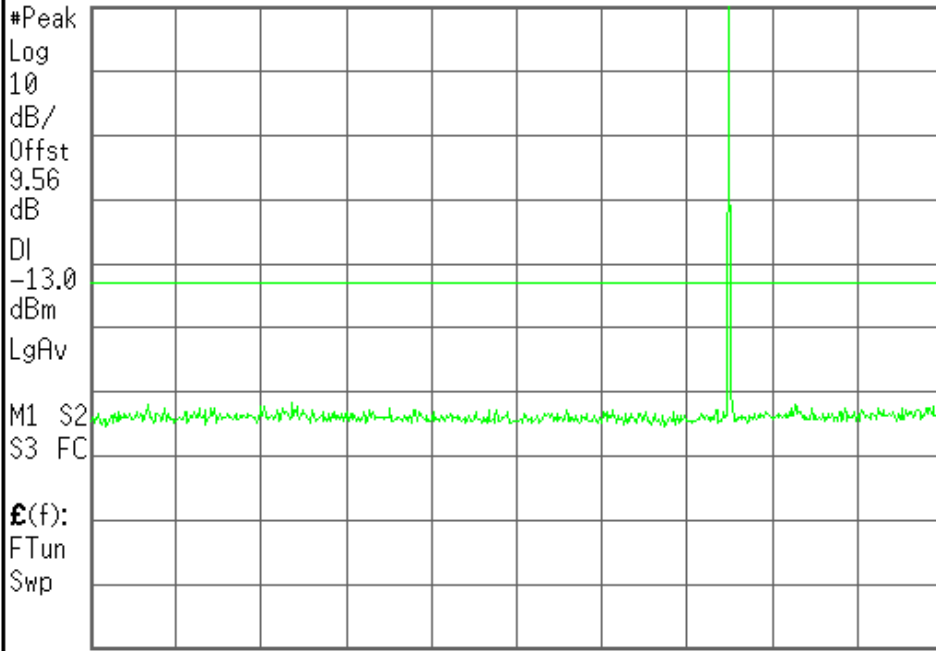
Agilent

R L

Freq/Channel

FCC ID:A3LGTI9300A Cond Spur Ch.661

Ref 30 dBm Atten 40 dB



Center Freq  
1.26500000 GHz

Start Freq  
30.0000000 MHz

Stop Freq  
2.50000000 GHz

CF Step  
247.000000 MHz  
Auto Man

Freq Offset  
0.00000000 Hz

Signal Track  
On Off

Center 1.265 GHz Span 2.47 GHz  
#Res BW 1 MHz #VBW 1 MHz Sweep 4.12 ms (601 pts)

File Operation Status, C:\TEMP.GIF file saved

Agilent

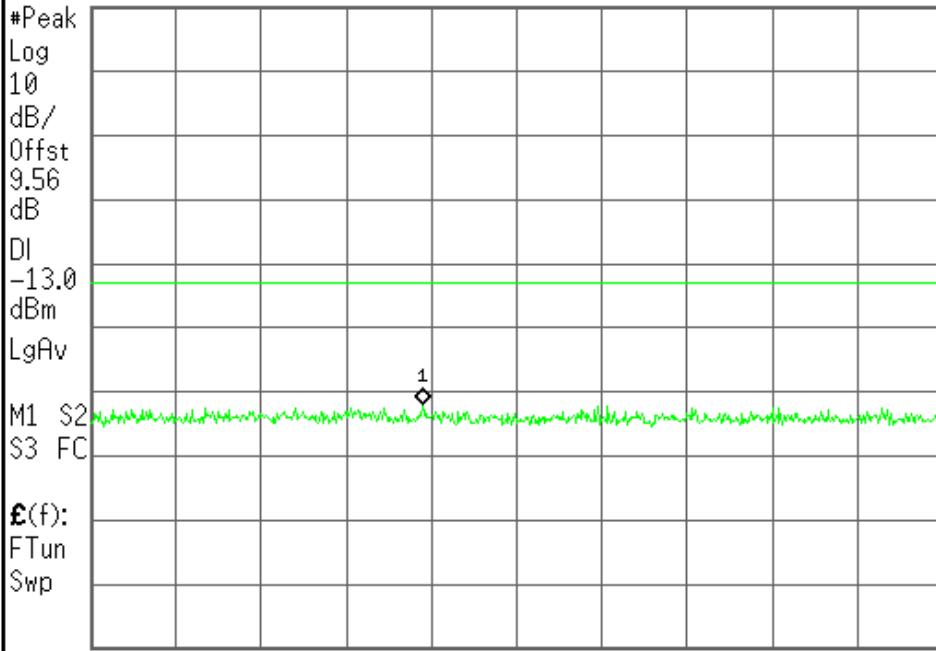
R L

Freq/Channel

FCC ID:A3LGTI9300A Cond Spur Ch.661

Ref 30 dBm Atten 40 dB

Mkr1 749 MHz  
-31.76 dBm



Center Freq  
951.250000 MHz

Start Freq  
30.0000000 MHz

Stop Freq  
1.87250000 GHz

CF Step  
184.250000 MHz  
Auto Man

Freq Offset  
0.00000000 Hz

Signal Track  
On Off

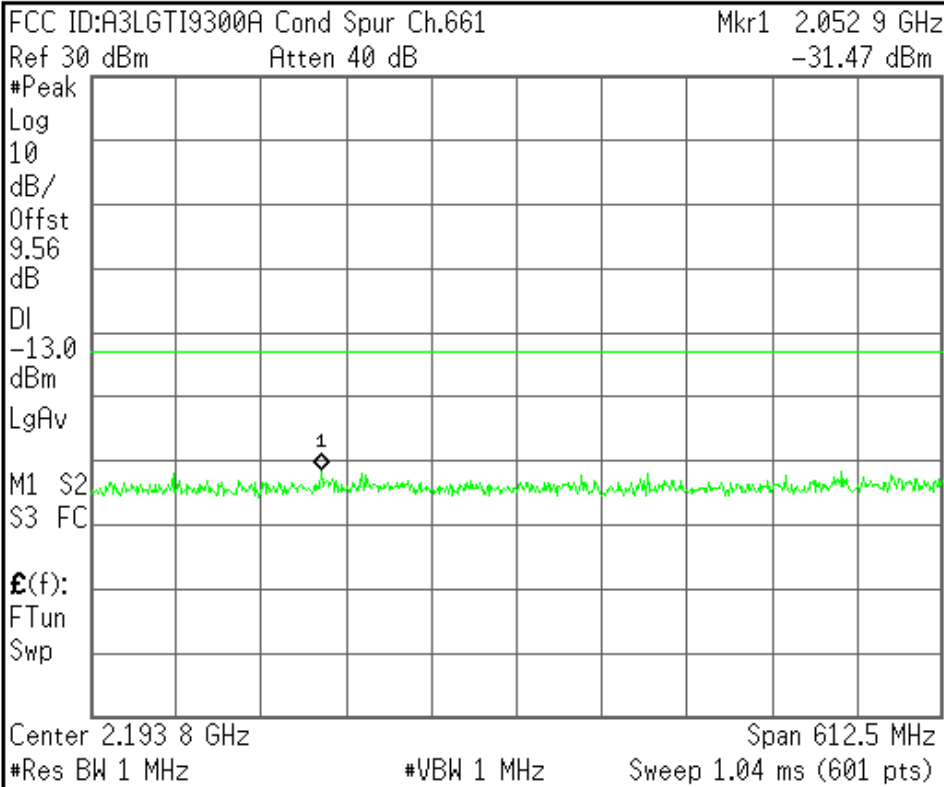
Center 951 MHz Span 1.843 GHz  
#Res BW 1 MHz #VBW 1 MHz Sweep 3.08 ms (601 pts)

File Operation Status, C:\TEMP.GIF file saved

Agilent

R L

Freq/Channel



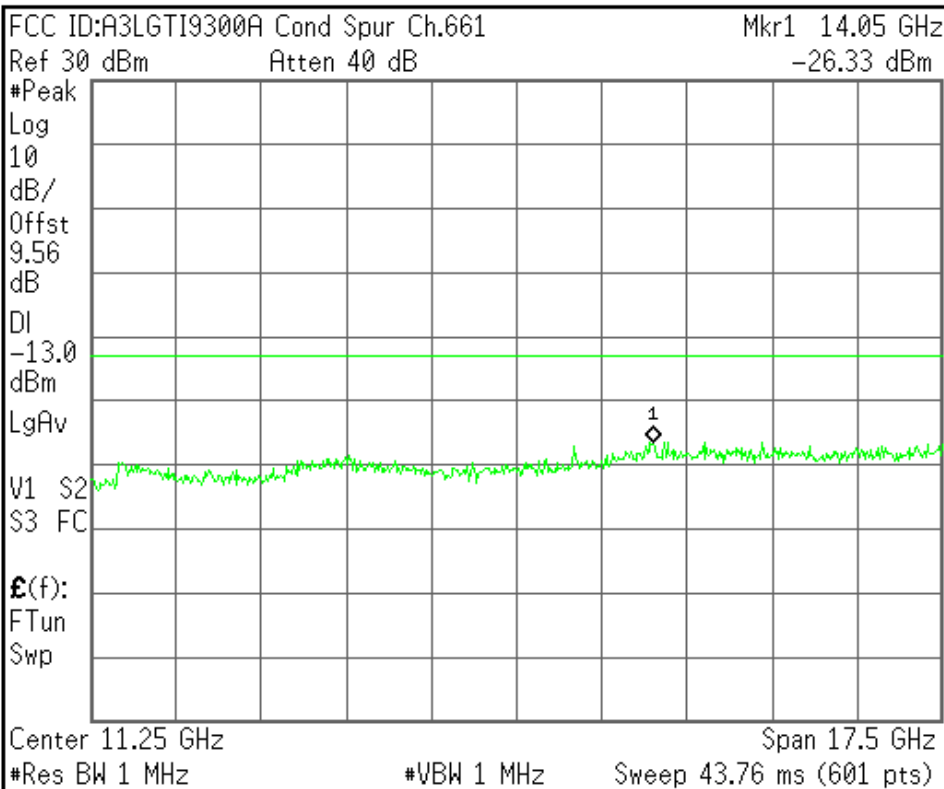
|  |
|--|
| <b>Center Freq</b><br>2.19375000 GHz         |
| <b>Start Freq</b><br>1.88750000 GHz          |
| <b>Stop Freq</b><br>2.50000000 GHz           |
| <b>CF Step</b><br>Auto Man<br>61.2500000 MHz |
| <b>Freq Offset</b><br>0.00000000 Hz          |
| <b>Signal Track</b><br>On Off                |

File Operation Status, C:\TEMP.GIF file saved

Agilent

R L

Freq/Channel



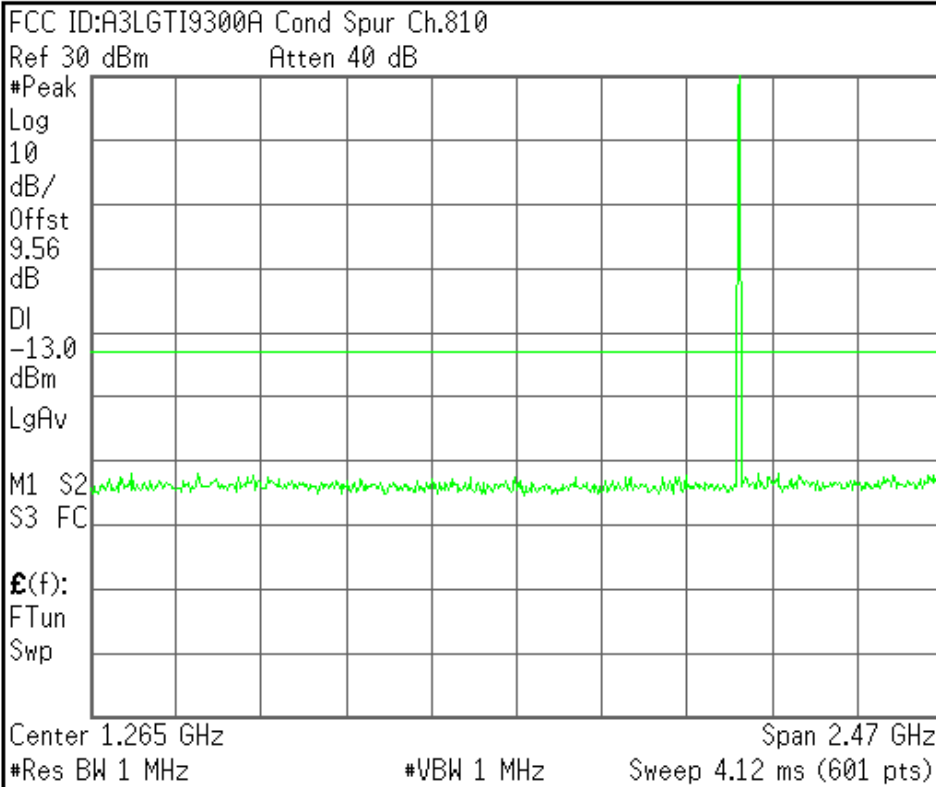
|  |
|--|
| <b>Center Freq</b><br>11.2500000 GHz         |
| <b>Start Freq</b><br>2.50000000 GHz          |
| <b>Stop Freq</b><br>20.0000000 GHz           |
| <b>CF Step</b><br>Auto Man<br>1.75000000 GHz |
| <b>Freq Offset</b><br>0.00000000 Hz          |
| <b>Signal Track</b><br>On Off                |

File Operation Status, C:\TEMP.GIF file saved

Agilent

R L

Freq/Channel



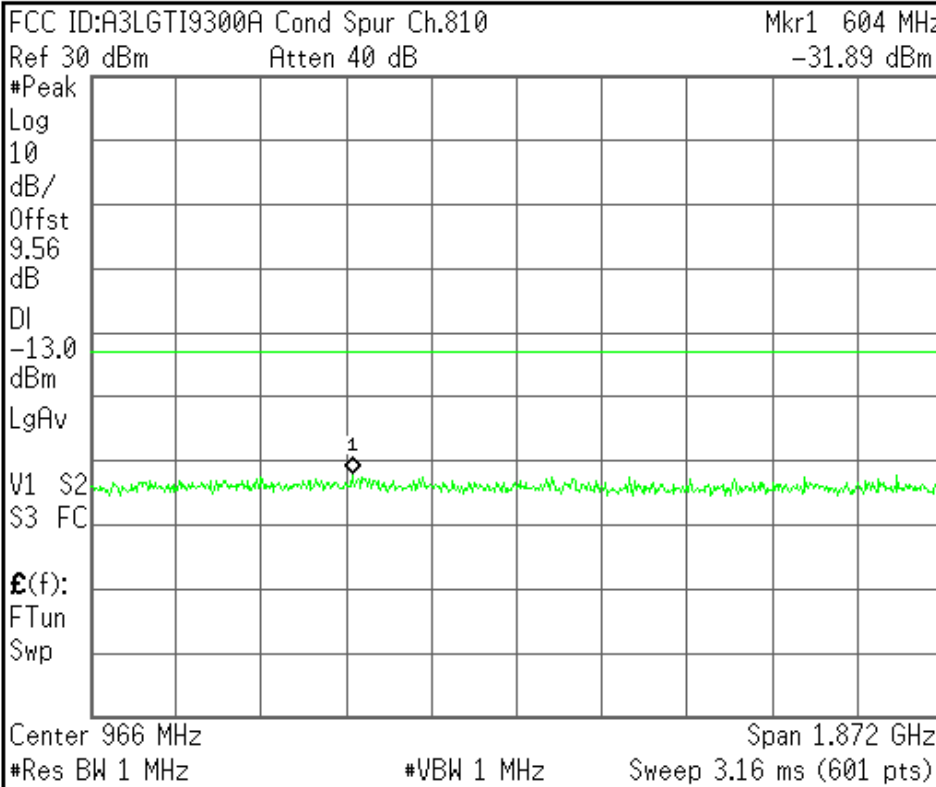
|  |
|--|
| <b>Center Freq</b><br>1.26500000 GHz         |
| <b>Start Freq</b><br>30.0000000 MHz          |
| <b>Stop Freq</b><br>2.50000000 GHz           |
| <b>CF Step</b><br>247.000000 MHz<br>Auto Man |
| <b>Freq Offset</b><br>0.00000000 Hz          |
| <b>Signal Track</b><br>On Off                |

File Operation Status, C:\TEMP.GIF file saved

Agilent

R L

Freq/Channel



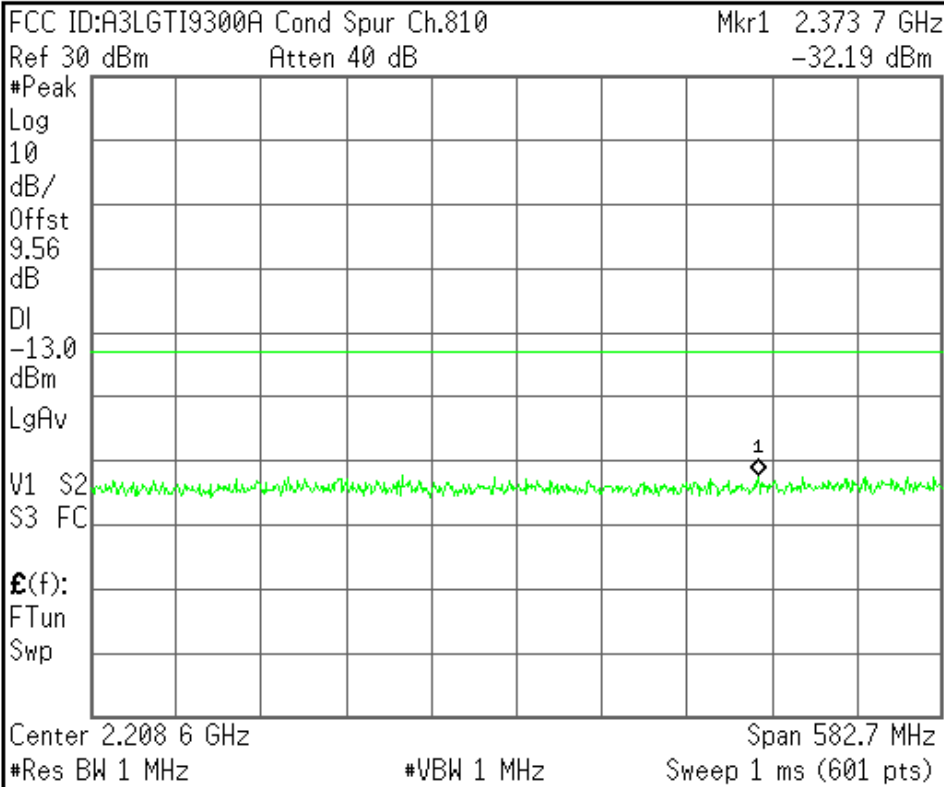
|  |
|--|
| <b>Center Freq</b><br>966.150000 MHz         |
| <b>Start Freq</b><br>30.0000000 MHz          |
| <b>Stop Freq</b><br>1.90230000 GHz           |
| <b>CF Step</b><br>187.230000 MHz<br>Auto Man |
| <b>Freq Offset</b><br>0.00000000 Hz          |
| <b>Signal Track</b><br>On Off                |

File Operation Status, C:\TEMP.GIF file saved

Agilent

R L

Freq/Channel



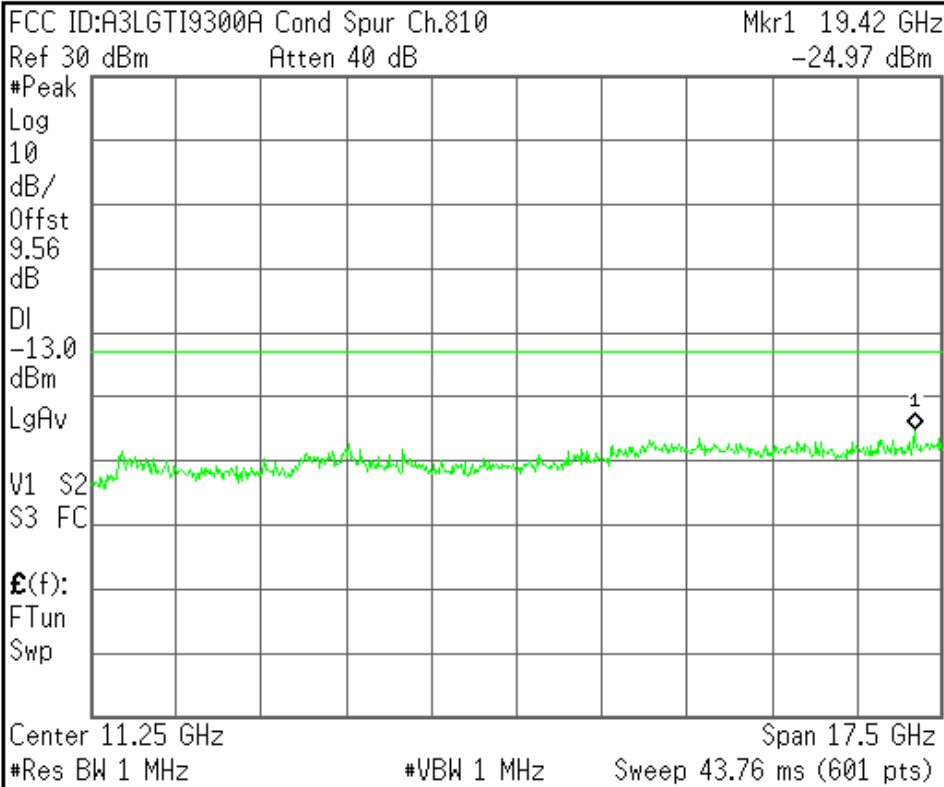
|  |
|--|
| <b>Center Freq</b><br>2.20865000 GHz         |
| <b>Start Freq</b><br>1.91730000 GHz          |
| <b>Stop Freq</b><br>2.50000000 GHz           |
| <b>CF Step</b><br>58.2700000 MHz<br>Auto Man |
| <b>Freq Offset</b><br>0.00000000 Hz          |
| <b>Signal Track</b><br>On Off                |

File Operation Status, C:\TEMP.GIF file saved

Agilent

R T

Freq/Channel



|  |
|--|
| <b>Center Freq</b><br>11.2500000 GHz         |
| <b>Start Freq</b><br>2.50000000 GHz          |
| <b>Stop Freq</b><br>20.0000000 GHz           |
| <b>CF Step</b><br>1.75000000 GHz<br>Auto Man |
| <b>Freq Offset</b><br>0.00000000 Hz          |
| <b>Signal Track</b><br>On Off                |

File Operation Status, C:\TEMP.GIF file saved

Agilent

R L

Freq/Channel

FCC ID:A3LGTI9300A Band Edge Ch.512

Ref 30 dBm

Atten 40 dB

#Avg

Log

10

dB/

Offst

9.56

dB

DI

-13.0

dBm

PAvg

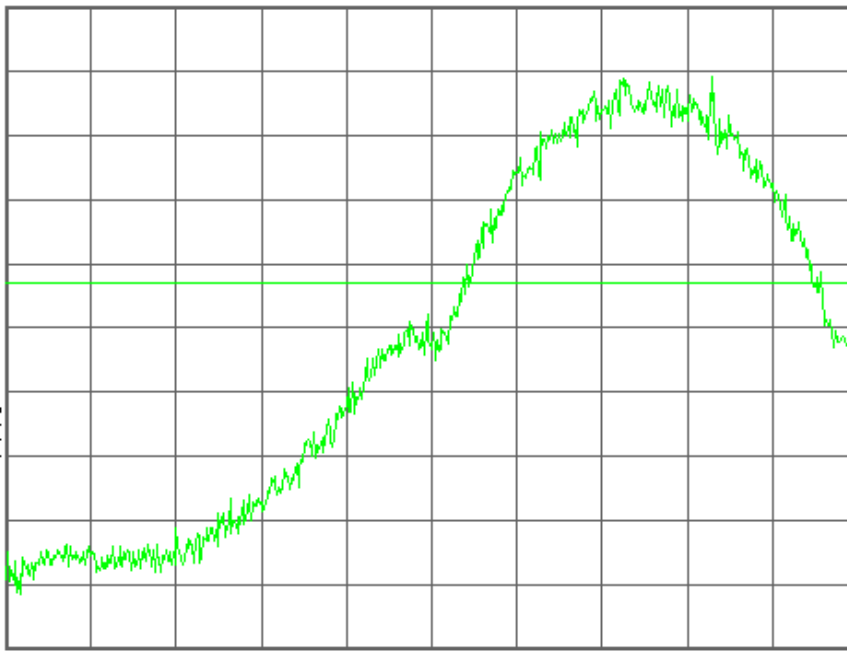
M1 S2

S3 FC

$\mathcal{E}(f)$ :

f>50k

Swp



Center 1.850 000 0 GHz

Span 810 kHz

#Res BW 3 kHz

#VBW 3 kHz

Sweep 343.2 ms (601 pts)

Center Freq  
1.85000000 GHz

Start Freq  
1.84959500 GHz

Stop Freq  
1.85040500 GHz

CF Step  
81.0000000 kHz  
Auto Man

Freq Offset  
0.00000000 Hz

Signal Track  
On Off

File Operation Status, C:\TEMP.GIF file saved

Agilent

R T

Freq/Channel

FCC ID:A3LGTI9300A Band Edge Ch.512

Mkr1 1.849 990 6 GHz

Ref 30 dBm

Atten 40 dB

-19.16 dBm

#Avg

Log

10

dB/

Offst

9.56

dB

DI

-13.0

dBm

PAvg

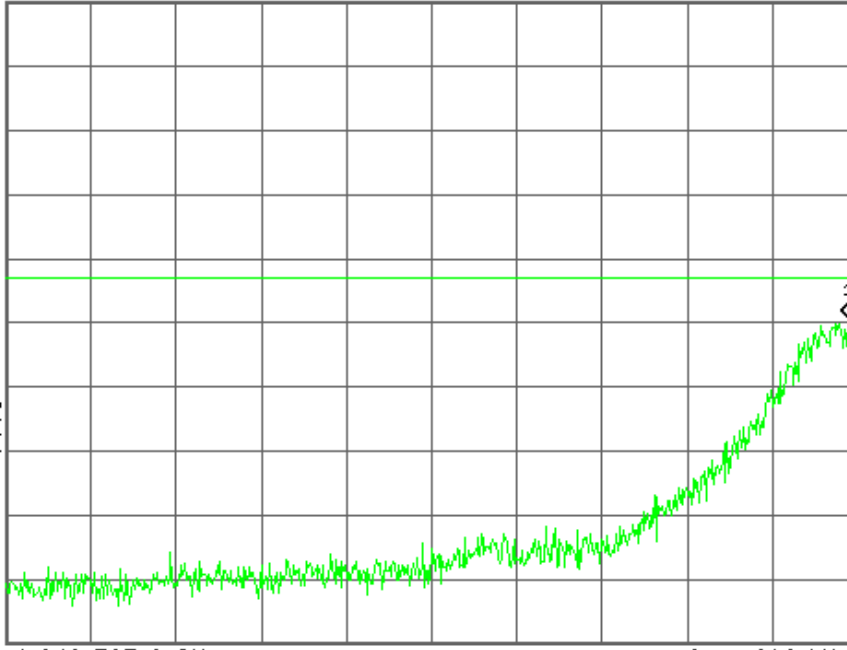
M1 S2

S3 FC

$\mathcal{E}(f)$ :

f>50k

Swp



Center 1.849 595 0 GHz

Span 810 kHz

#Res BW 3 kHz

#VBW 3 kHz

Sweep 343.2 ms (601 pts)

Center Freq  
1.84959500 GHz

Start Freq  
1.84919000 GHz

Stop Freq  
1.85000000 GHz

CF Step  
81.0000000 kHz  
Auto Man

Freq Offset  
0.00000000 Hz

Signal Track  
On Off

File Operation Status, C:\TEMP.GIF file saved

Agilent

R L

Freq/Channel

FCC ID:A3LGTI9300A Band Edge Ch.810

Ref 30 dBm Atten 40 dB

#Avg

Log

10

dB/

Offst

9.56

dB

DI

-13.0

dBm

PAvg

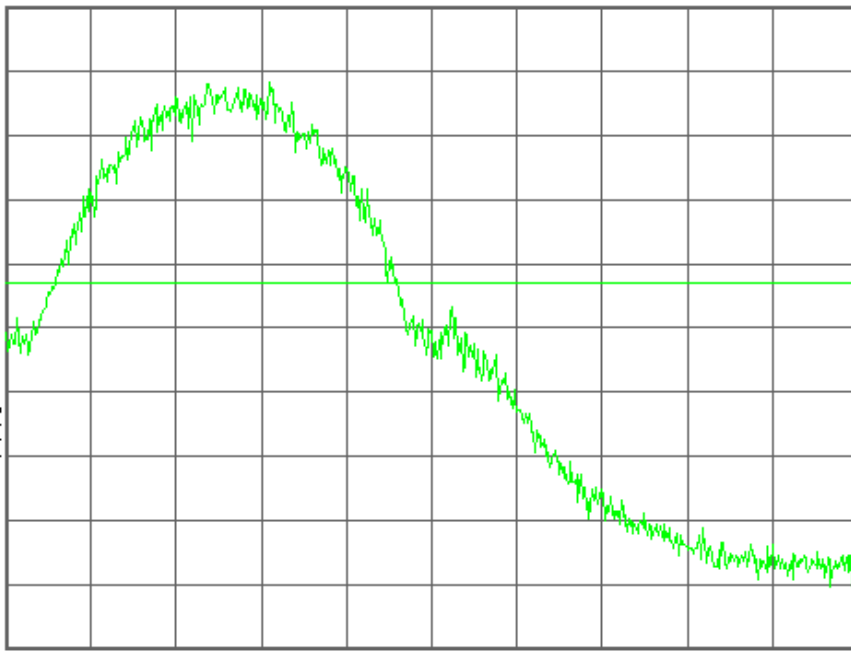
M1 S2

S3 FC

$\mathcal{E}(f)$ :

f>50k

Swp



Center 1.910 000 0 GHz

Span 810 kHz

#Res BW 3 kHz

#VBW 3 kHz

Sweep 343.2 ms (601 pts)

Center Freq  
1.91000000 GHz

Start Freq  
1.90959500 GHz

Stop Freq  
1.91040500 GHz

CF Step  
81.0000000 kHz  
Auto Man

Freq Offset  
0.00000000 Hz

Signal Track  
On Off

File Operation Status, C:\TEMP.GIF file saved

Agilent

R T

Freq/Channel

FCC ID:A3LGTI9300A Band Edge Ch.810

Mkr1 1.910 019 0 GHz

Ref 30 dBm Atten 40 dB

-19.32 dBm

#Avg

Log

10

dB/

Offst

9.56

dB

DI

-13.0

dBm

PAvg

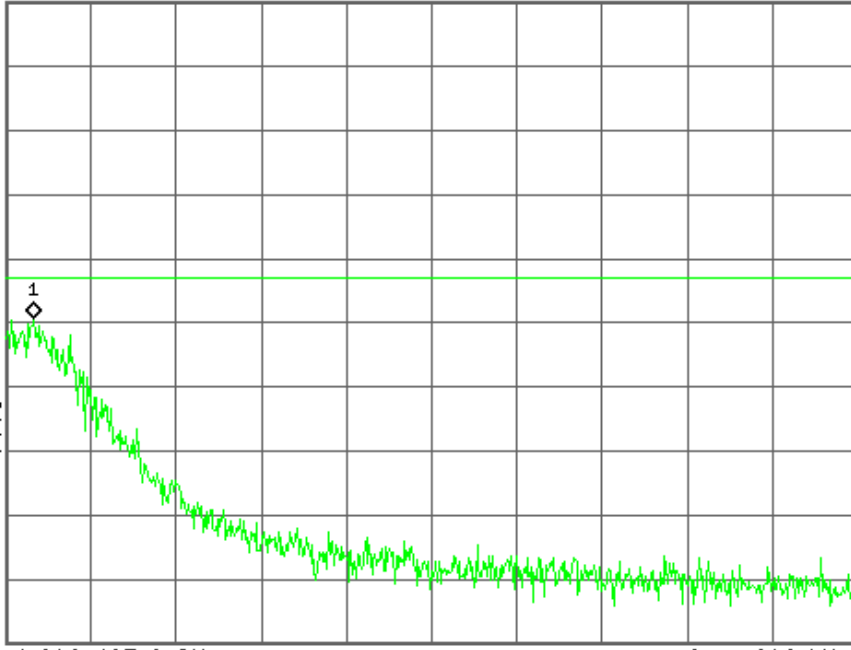
M1 S2

S3 FC

$\mathcal{E}(f)$ :

f>50k

Swp



Center 1.910 405 0 GHz

Span 810 kHz

#Res BW 3 kHz

#VBW 3 kHz

Sweep 343.2 ms (601 pts)

Center Freq  
1.91040500 GHz

Start Freq  
1.91000000 GHz

Stop Freq  
1.91081000 GHz

CF Step  
81.0000000 kHz  
Auto Man

Freq Offset  
0.00000000 Hz

Signal Track  
On Off

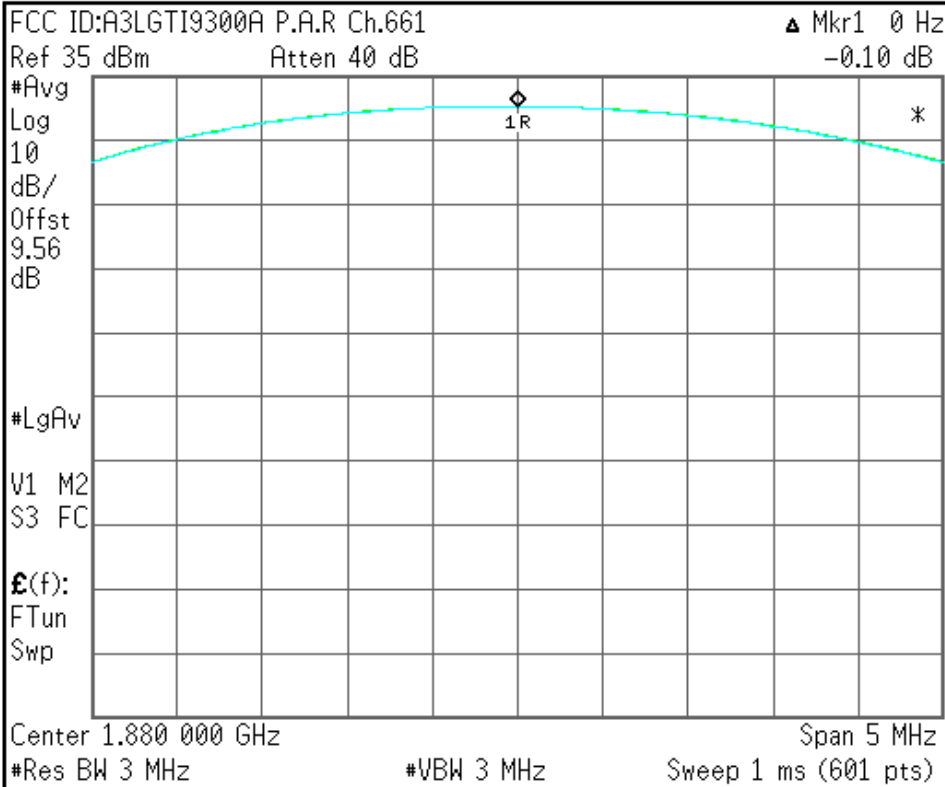
File Operation Status, C:\TEMP.GIF file saved



Agilent

R L

Freq/Channel



|  |
|--|
| <b>Center Freq</b><br>1.88000000 GHz         |
| <b>Start Freq</b><br>1.87750000 GHz          |
| <b>Stop Freq</b><br>1.88250000 GHz           |
| <b>CF Step</b><br>500.000000 kHz<br>Auto Man |
| <b>Freq Offset</b><br>0.00000000 Hz          |
| <b>Signal Track</b><br>On Off                |

File Operation Status, C:\TEMP.GIF file saved

Agilent

R T

**Ch Freq** 824.2 MHz **Trig** Free

Occupied Bandwidth

FCC ID:A3LGTI9300A 0BW Ch.128 EDGE  
 Ref 27 dBm Atten 30 dB

Center 824.200 MHz Span 1 MHz  
 #Res BW 3 kHz #VBW 3 kHz #Sweep 1 s (601 pts)

|                            |                     |           |
|----------------------------|---------------------|-----------|
| <b>Occupied Bandwidth</b>  | <b>Occ BW % Pwr</b> | 99.00 %   |
| 244.1369 kHz               | <b>x dB</b>         | -26.00 dB |
| <b>Transmit Freq Error</b> | -581.130 Hz         |           |
| <b>x dB Bandwidth</b>      | 297.435 kHz         |           |

**Freq/Channel**

**Center Freq**  
824.200000 MHz

**Start Freq**  
823.700000 MHz

**Stop Freq**  
824.700000 MHz

**CF Step**  
100.000000 kHz  
Auto Man

**Freq Offset**  
0.00000000 Hz

**Signal Track**  
On Off

File Operation Status, C:\TEMP.GIF file saved

Agilent

R T

**Ch Freq** 836.6 MHz **Trig** Free

Occupied Bandwidth

FCC ID:A3LGTI9300A 0BW Ch.190 EDGE  
 Ref 27 dBm Atten 30 dB

Center 836.600 MHz Span 1 MHz  
 #Res BW 3 kHz #VBW 3 kHz #Sweep 1 s (601 pts)

|                            |                     |           |
|----------------------------|---------------------|-----------|
| <b>Occupied Bandwidth</b>  | <b>Occ BW % Pwr</b> | 99.00 %   |
| 246.3791 kHz               | <b>x dB</b>         | -26.00 dB |
| <b>Transmit Freq Error</b> | 129.007 Hz          |           |
| <b>x dB Bandwidth</b>      | 309.744 kHz         |           |

**Freq/Channel**

**Center Freq**  
836.600000 MHz

**Start Freq**  
836.100000 MHz

**Stop Freq**  
837.100000 MHz

**CF Step**  
100.000000 kHz  
Auto Man

**Freq Offset**  
0.00000000 Hz

**Signal Track**  
On Off

File Operation Status, C:\TEMP.GIF file saved

|   |  |  |  |
|---|--|--|--|
| <b>Ch Freq</b> 848.8 MHz <span style="float: right;"><b>Trig</b> Free</span>  |  | <b>Freq/Channel</b>                          |  |
| Occupied Bandwidth <span style="float: right;">[ ] [ ]</span>   |  | <b>Center Freq</b><br>848.800000 MHz         |  |
| FCC ID:A3LGTI9300A 0BW Ch.251 EDGE<br>Ref 27 dBm Atten 30 dB  |  | <b>Start Freq</b><br>848.300000 MHz          |  |
|   |  | <b>Stop Freq</b><br>848.300000 MHz           |  |
| Center 848.800 MHz <span style="float: right;">Span 1 MHz</span><br>#Res BW 3 kHz <span style="margin-left: 100px;">#VBW 3 kHz</span> <span style="float: right;">#Sweep 1 s (601 pts)</span> |  | <b>CF Step</b><br>100.000000 kHz<br>Auto Man |  |
| <b>Occupied Bandwidth</b> <span style="float: right;"><b>Occ BW % Pwr</b> 99.00 %</span><br>244.1113 kHz <span style="float: right;"><b>x dB</b> -26.00 dB</span>                             |  | <b>Freq Offset</b><br>0.00000000 Hz          |  |
| <b>Transmit Freq Error</b> -47.889 Hz<br><b>x dB Bandwidth</b> 310.593 kHz  |  | <b>Signal Track</b><br>On Off                |  |
| <b>File Operation Status, C:\TEMP.GIF file saved</b>  |  |  |  |

Agilent

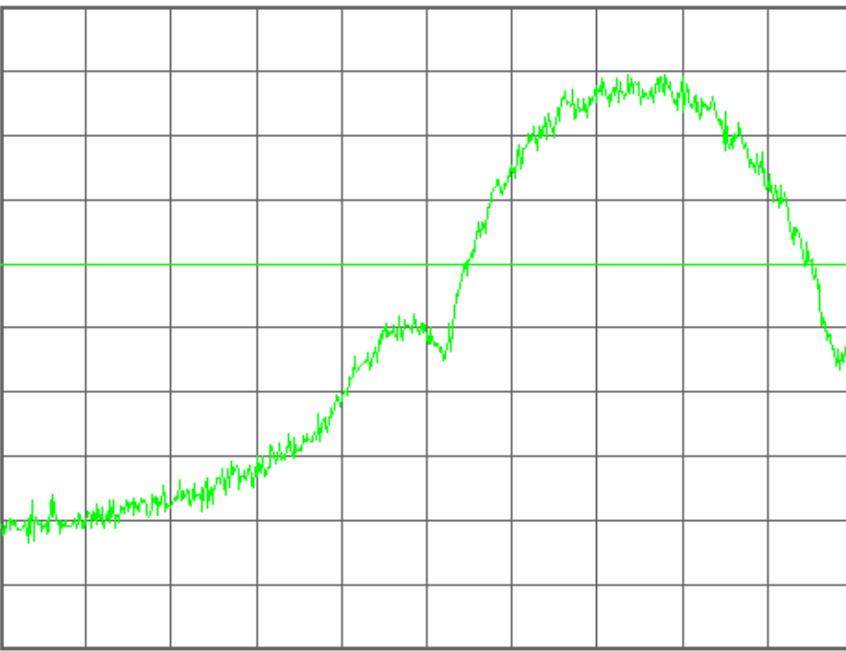
R L

Freq/Channel

FCC ID:A3LGTI9300A Band Edge Ch.128 EDGE

Ref 27 dBm Atten 30 dB

#Avg  
Log  
10  
dB/  
Offst  
8.47  
dB  
DI  
-13.0  
dBm  
PAvg  
M1 S2  
S3 FC  
E(f):  
f>50k  
Swp



Center 824.000 0 MHz Span 810 kHz  
#Res BW 3 kHz #VBW 3 kHz Sweep 343.2 ms (601 pts)

Center Freq  
824.000000 MHz

Start Freq  
823.595000 MHz

Stop Freq  
824.405000 MHz

CF Step  
81.0000000 kHz  
Auto Man

Freq Offset  
0.00000000 Hz

Signal Track  
On Off

File Operation Status, C:\TEMP.GIF file saved

Agilent

R T

Freq/Channel

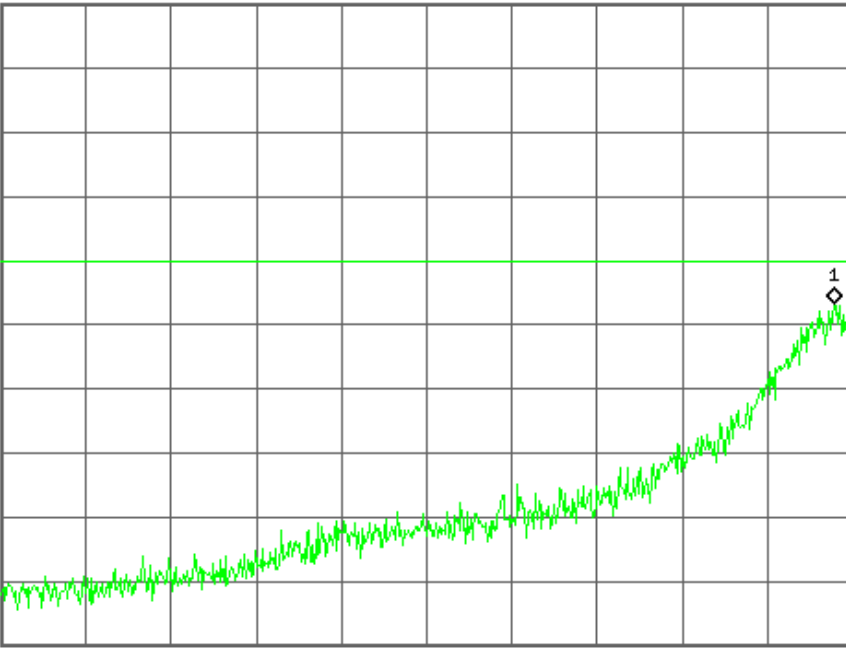
FCC ID:A3LGTI9300A Band Edge Ch.128 EDGE

Mkr1 823.982 6 MHz

Ref 27 dBm Atten 30 dB

-19.80 dBm

#Avg  
Log  
10  
dB/  
Offst  
8.47  
dB  
DI  
-13.0  
dBm  
PAvg  
M1 S2  
S3 FC  
E(f):  
f>50k  
Swp



Center 823.595 0 MHz Span 810 kHz  
#Res BW 3 kHz #VBW 3 kHz Sweep 343.2 ms (601 pts)

Center Freq  
823.595000 MHz

Start Freq  
823.190000 MHz

Stop Freq  
824.000000 MHz

CF Step  
81.0000000 kHz  
Auto Man

Freq Offset  
0.00000000 Hz

Signal Track  
On Off

File Operation Status, C:\TEMP.GIF file saved

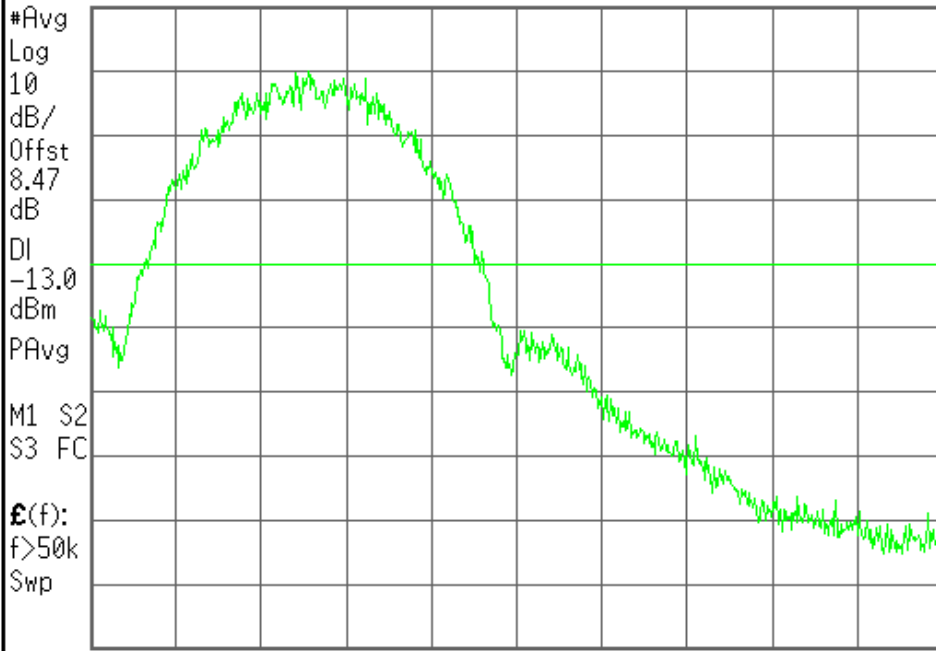
Agilent

R L

Freq/Channel

FCC ID:A3LGTI9300A Band Edge Ch.251 EDGE

Ref 27 dBm Atten 30 dB



Center Freq  
849.000000 MHz

Start Freq  
848.595000 MHz

Stop Freq  
849.405000 MHz

CF Step  
81.0000000 kHz  
Auto Man

Freq Offset  
0.00000000 Hz

Signal Track  
On Off

Center 849.000 0 MHz Span 810 kHz  
#Res BW 3 kHz #VBW 3 kHz Sweep 343.2 ms (601 pts)

File Operation Status, C:\TEMP.GIF file saved

Agilent

R T

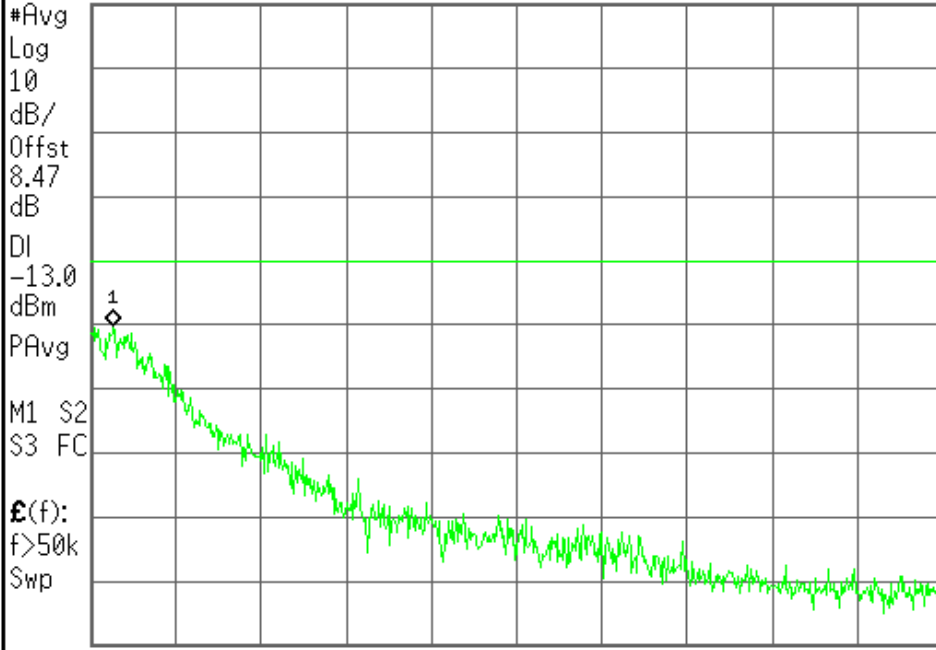
Freq/Channel

FCC ID:A3LGTI9300A Band Edge Ch.251 EDGE

Mkr1 849.021 4 MHz

Ref 27 dBm Atten 30 dB

-23.20 dBm



Center Freq  
849.405000 MHz

Start Freq  
849.000000 MHz

Stop Freq  
849.810000 MHz

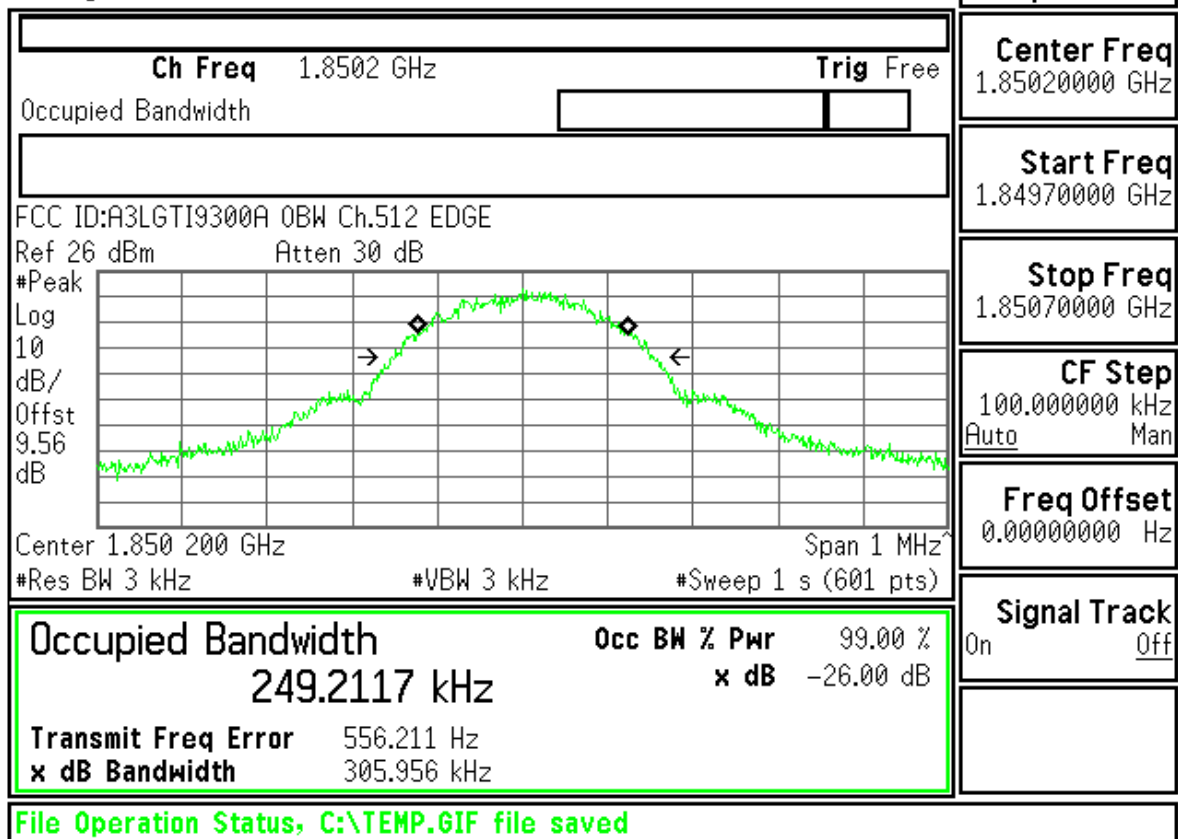
CF Step  
81.0000000 kHz  
Auto Man

Freq Offset  
0.00000000 Hz

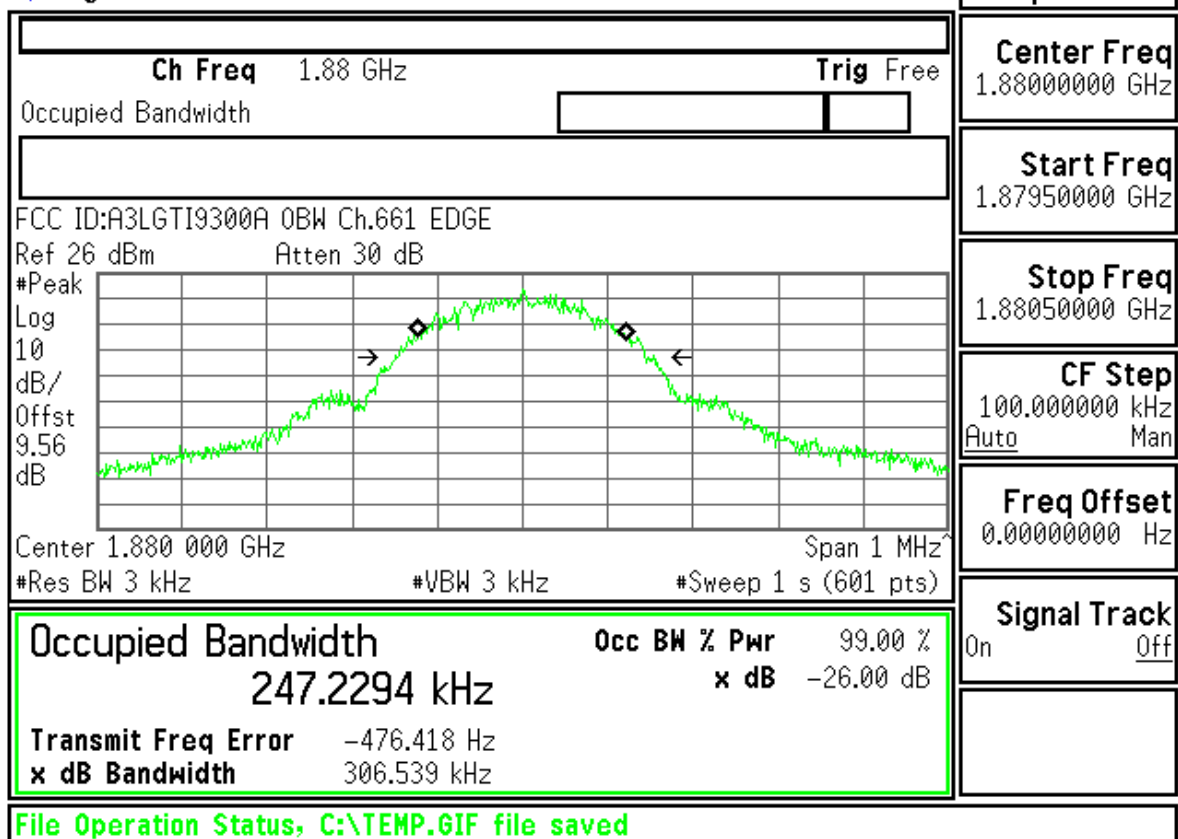
Signal Track  
On Off

Center 849.405 0 MHz Span 810 kHz  
#Res BW 3 kHz #VBW 3 kHz Sweep 343.2 ms (601 pts)

File Operation Status, C:\TEMP.GIF file saved



|  |
|--|
| <b>Freq/Channel</b>                          |
| <b>Center Freq</b><br>1.85020000 GHz         |
| <b>Start Freq</b><br>1.84970000 GHz          |
| <b>Stop Freq</b><br>1.85070000 GHz           |
| <b>CF Step</b><br>100.000000 kHz<br>Auto Man |
| <b>Freq Offset</b><br>0.00000000 Hz          |
| <b>Signal Track</b><br>On Off                |



|  |
|--|
| <b>Freq/Channel</b>                          |
| <b>Center Freq</b><br>1.88000000 GHz         |
| <b>Start Freq</b><br>1.87950000 GHz          |
| <b>Stop Freq</b><br>1.88050000 GHz           |
| <b>CF Step</b><br>100.000000 kHz<br>Auto Man |
| <b>Freq Offset</b><br>0.00000000 Hz          |
| <b>Signal Track</b><br>On Off                |

|  |  |   |  |
|--|--|---|--|
| <b>Ch Freq</b> 1.9098 GHz <b>Trig</b> Free<br>Occupied Bandwidth <span style="border: 1px solid black; display: inline-block; width: 100px; height: 15px;"></span> |  | <b>Freq/Channel</b><br><b>Center Freq</b><br>1.90980000 GHz |  |
| FCC ID:A3LGTI9300A 0BW Ch.810 EDGE<br>Ref 26 dBm Atten 30 dB   |  | <b>Start Freq</b><br>1.90930000 GHz                         |  |
|  |  | <b>Stop Freq</b><br>1.91030000 GHz                          |  |
| Center 1.909 800 GHz Span 1 MHz<br>#Res BW 3 kHz #VBW 3 kHz #Sweep 1 s (601 pts)   |  | <b>CF Step</b><br>100.000000 kHz<br>Auto Man                |  |
| <b>Occupied Bandwidth</b> 247.6072 kHz<br><b>Transmit Freq Error</b> 414.012 Hz<br><b>x dB Bandwidth</b> 313.676 kHz   |  | <b>Freq Offset</b><br>0.00000000 Hz                         |  |
| <b>Occ BW % Pwr</b> 99.00 %<br><b>x dB</b> -26.00 dB   |  | <b>Signal Track</b><br>On Off                               |  |
| <b>File Operation Status, C:\TEMP.GIF file saved</b>   |  |   |  |

Agilent

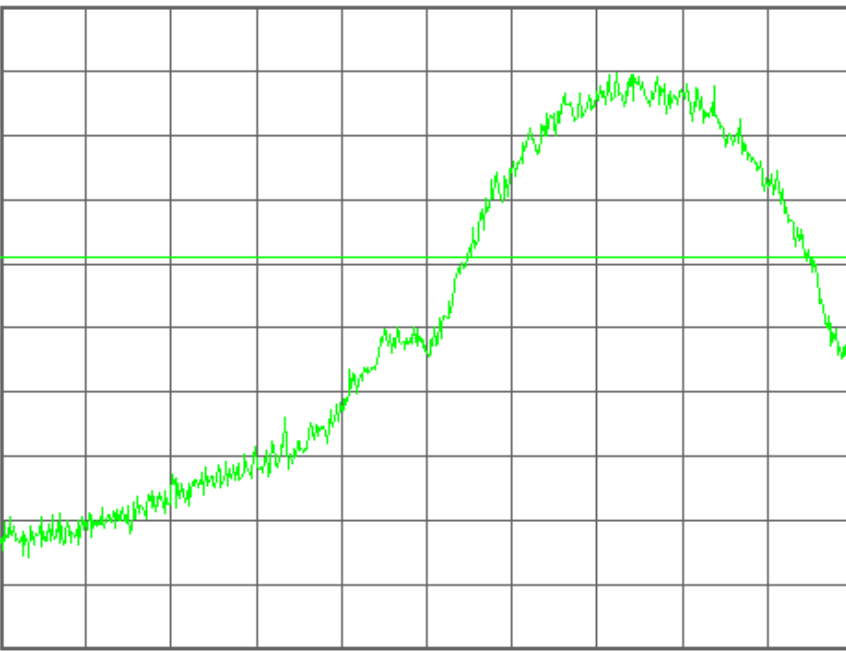
R L

Freq/Channel

FCC ID:A3LGTI9300A Band Edge Ch.512 EDGE

Ref 26 dBm Atten 30 dB

#Avg  
Log  
10  
dB/  
Offst  
9.56  
dB  
DI  
-13.0  
dBm  
PAvg  
M1 S2  
S3 FC  
E(f):  
f>50k  
Swp



Center 1.850 000 0 GHz

Span 810 kHz

#Res BW 3 kHz

#VBW 3 kHz

Sweep 343.2 ms (601 pts)

Center Freq  
1.85000000 GHz

Start Freq  
1.84959500 GHz

Stop Freq  
1.85040500 GHz

CF Step  
81.0000000 kHz  
Auto Man

Freq Offset  
0.00000000 Hz

Signal Track  
On Off

Copyright 2000-2005 Agilent Technologies

Agilent

R L

Freq/Channel

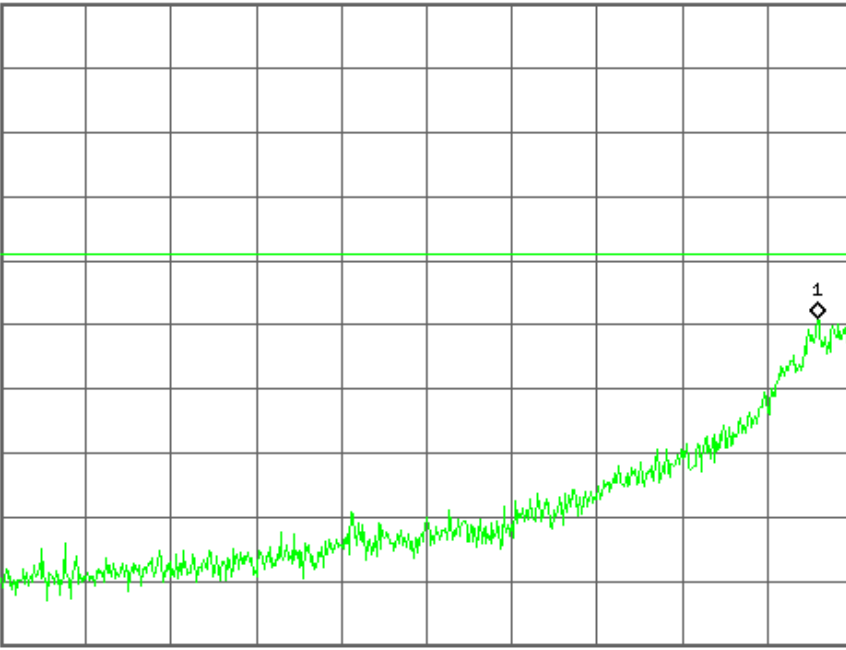
FCC ID:A3LGTI9300A Band Edge Ch.512 EDGE

Mkr1 1.849 966 6 GHz

Ref 26 dBm Atten 30 dB

-23.04 dBm

#Avg  
Log  
10  
dB/  
Offst  
9.56  
dB  
DI  
-13.0  
dBm  
PAvg  
M1 S2  
S3 FC  
E(f):  
f>50k  
Swp



Center 1.849 595 0 GHz

Span 810 kHz

#Res BW 3 kHz

#VBW 3 kHz

Sweep 343.2 ms (601 pts)

Center Freq  
1.84959500 GHz

Start Freq  
1.84919000 GHz

Stop Freq  
1.85000000 GHz

CF Step  
81.0000000 kHz  
Auto Man

Freq Offset  
0.00000000 Hz

Signal Track  
On Off

File Operation Status, C:\TEMP.GIF file saved



Agilent

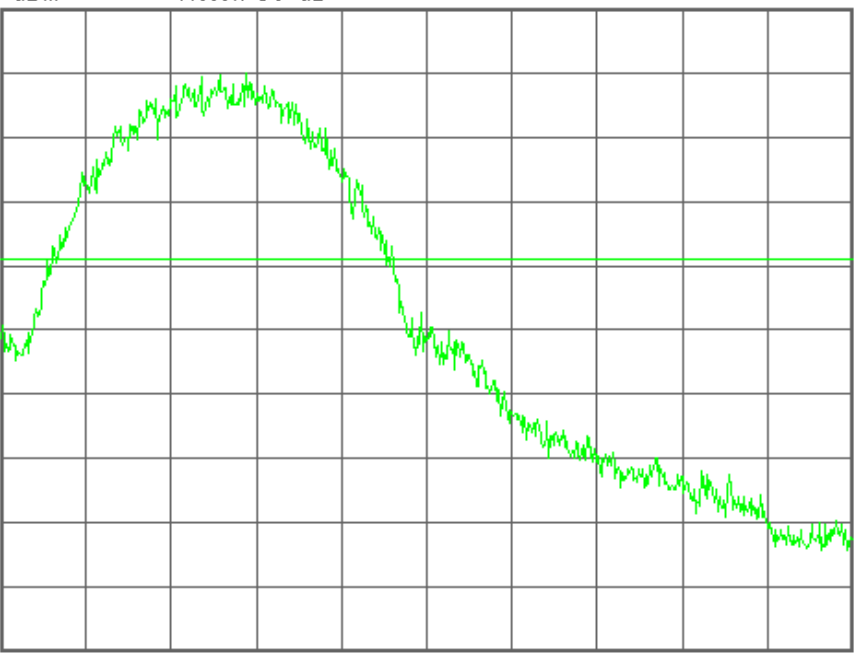
R L

Freq/Channel

FCC ID:A3LGTI9300A Band Edge Ch.810 EDGE

Ref 26 dBm Atten 30 dB

#Avg  
Log  
10  
dB/  
Offst  
9.56  
dB  
DI  
-13.0  
dBm  
PAvg  
  
M1 S2  
S3 FC  
  
£(f):  
f>50k  
Swp



Center 1.910 000 0 GHz

Span 810 kHz

#Res BW 3 kHz

#VBW 3 kHz

Sweep 343.2 ms (601 pts)

Center Freq  
1.91000000 GHz

Start Freq  
1.90959500 GHz

Stop Freq  
1.91040500 GHz

CF Step  
81.0000000 kHz  
Auto Man

Freq Offset  
0.00000000 Hz

Signal Track  
On Off

File Operation Status, C:\TEMP.GIF file saved

Agilent

R T

Freq/Channel

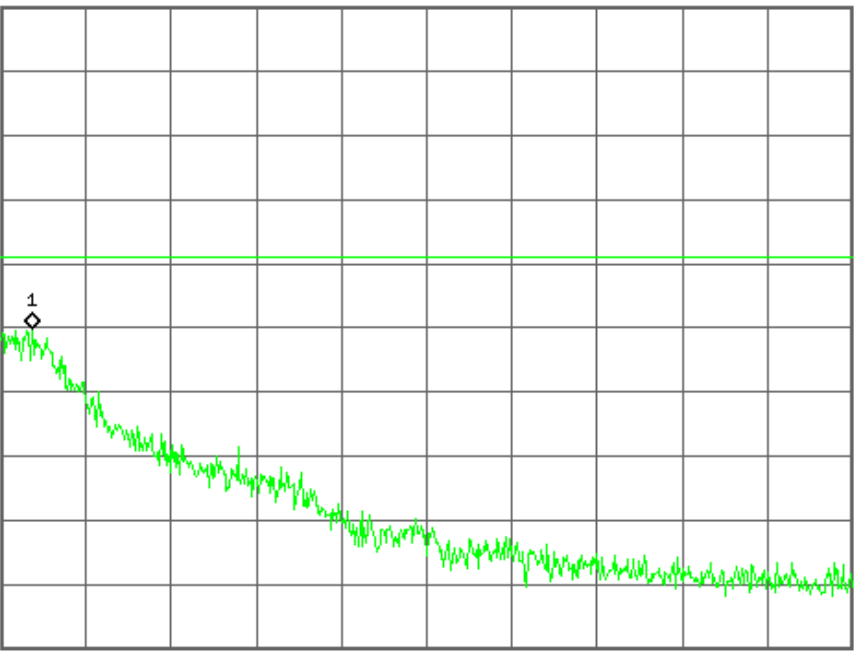
FCC ID:A3LGTI9300A Band Edge Ch.810 EDGE

Mkr1 1.910 021 8 GHz

Ref 26 dBm Atten 30 dB

-24.04 dBm

#Avg  
Log  
10  
dB/  
Offst  
9.56  
dB  
DI  
-13.0  
dBm  
PAvg  
  
M1 S2  
S3 FC  
  
£(f):  
f>50k  
Swp



Center 1.910 405 0 GHz

Span 810 kHz

#Res BW 3 kHz

#VBW 3 kHz

Sweep 343.2 ms (601 pts)

Center Freq  
1.91040500 GHz

Start Freq  
1.91000000 GHz

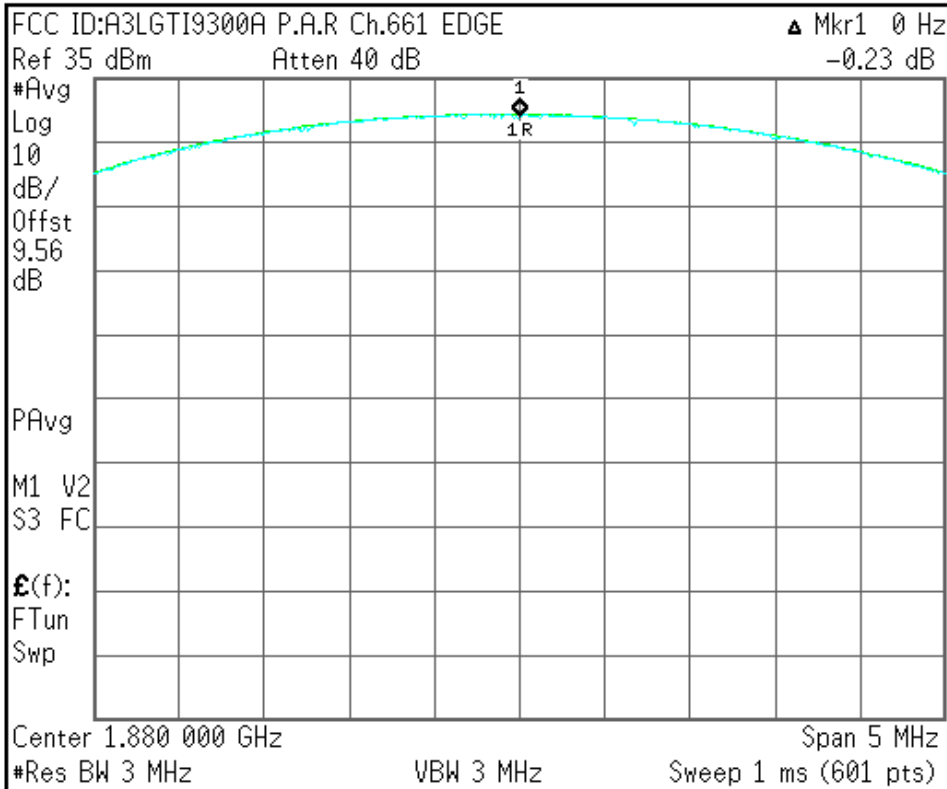
Stop Freq  
1.91081000 GHz

CF Step  
81.0000000 kHz  
Auto Man

Freq Offset  
0.00000000 Hz

Signal Track  
On Off

File Operation Status, C:\TEMP.GIF file saved



|  |
|--|
| <b>Freq/Channel</b>                          |
| <b>Center Freq</b><br>1.88000000 GHz         |
| <b>Start Freq</b><br>1.87750000 GHz          |
| <b>Stop Freq</b><br>1.88250000 GHz           |
| <b>CF Step</b><br>500.000000 kHz<br>Auto Man |
| <b>Freq Offset</b><br>0.00000000 Hz          |
| <b>Signal Track</b><br>On Off                |

Copyright 2000-2005 Agilent Technologies