



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-B7320L  
FCC ID(Requested) : A3LGTB7320L  
Report No : FG-227-R1  
Job No : FG-227  
Date issued : August 19, 2009

- Abstract -

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

Prepared By

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KJ KWON – Test Engineer

Authorized By

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# 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 : A3LGTB7320L
- Model : GT-B7320L
- Quantity : Quantity production is planned
- Emission Designators : 245KGXW(GSM850), 245KG7W(GSM850 EDGE)  
247KGXW(GSM1900), 246KG7W(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 : 1.028 W ERP GSM850 (30.12 dBm)  
1.318 W EIRP GSM1900 (31.20 dBm)  
0.428 W ERP GSM850 EDGE(26.31 dBm)  
0.700 W EIRP GSM1900 EDGE(28.45 dBm)
- FCC Classification(s) : PCS Licensed Portable Tx Held to Ear (PCE)
- Equipment (EUT) Type : 850/1900 GSM/WCDMA/EDGE/GPRS Phone with  
Bluetooth and WLAN
- Frequency Tolerance :  $\pm 0.00025\%$  (2.5ppm)
- FCC Rule Part(s) : §24(E), §22(H), §2.
- Dates of Test : August 7-8, 2009
- Place of Test : SAMSUNG Lab,
- Test Report S/N : FG-227-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

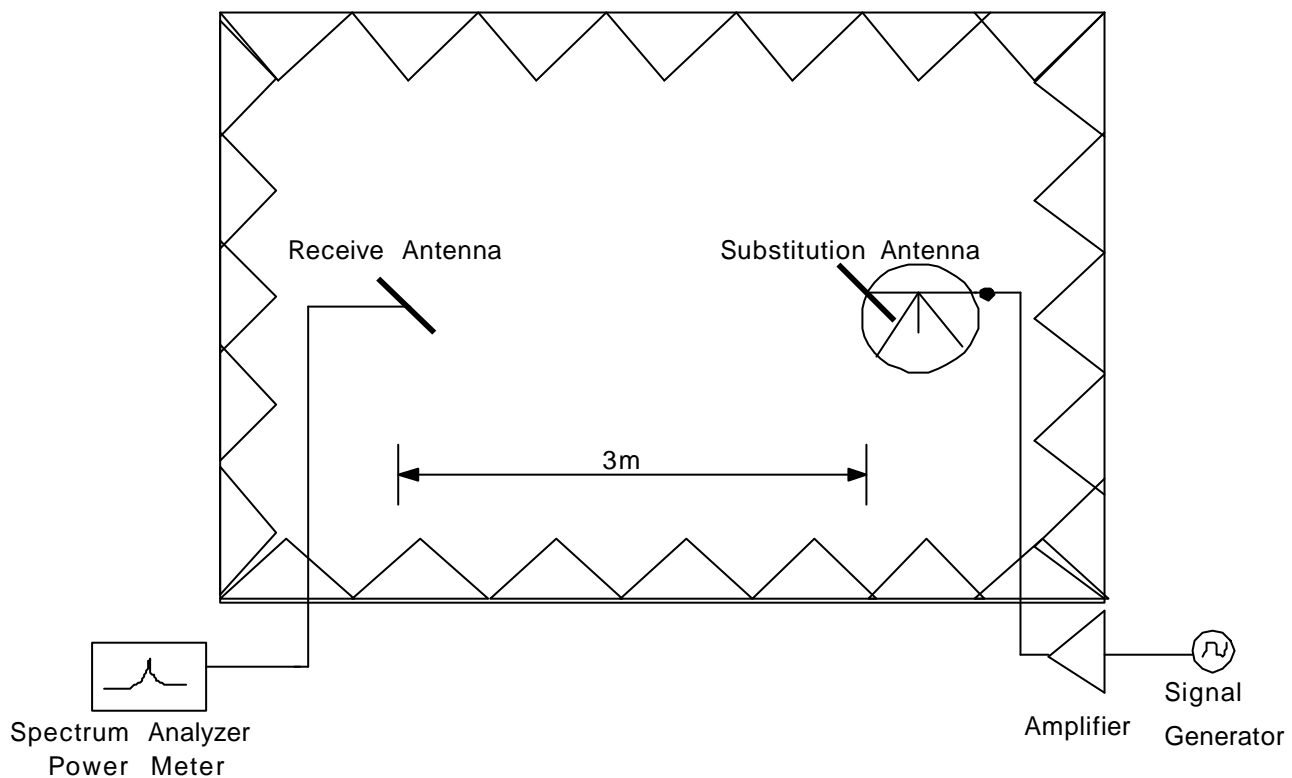
Name Of Equipment	Model	Serial No.	Due Date
Spectrum Analyzer	ESI26	836119/010	2009-10-21
	E4440A(3Hz~26.5GHz)	MY46187454	2010-03-06
	E4440A(3Hz~26.5GHz)	MY41000236	2010-04-14
Network Analyzer	8753E	JP38160590	2010-06-19
Pre-Amplifier	8449B	3008A00691	2009-12-15
Communication test set	8960	MY47510060	2010-03-06
	8960	GB42230535	2009-12-18
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	2009-10-24
	HF906	360306/011	2010-06-13
	BBHA9120	9120D-637	2009-10-24
Dipole Antenna	UHA 9105	9105-2412	2009-11-07
	UHA 9105	9105-2413	2010-06-13
Power Supply	E3640A	MY40003594	2010-06-19
	E3640A	MY40003595	2010-06-19
	E3632A	MY40022438	2010-03-06
Divider	11636B	51946	Not Required
	11636B	56913	Not Required
	11636B	56918	Not Required
High Pass Filter	WHK/3.0/18G-10SS	492	Not Required
	WHK/3.5/18G-10SS	4	Not Required
Environmental Chamber	SH-241	92000549	2009-11-14
	SH-241	92000548	2009-11-14
Shielded Fully Anechoic Chamber	CHAMBER	ANT0001	Not Required

## 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



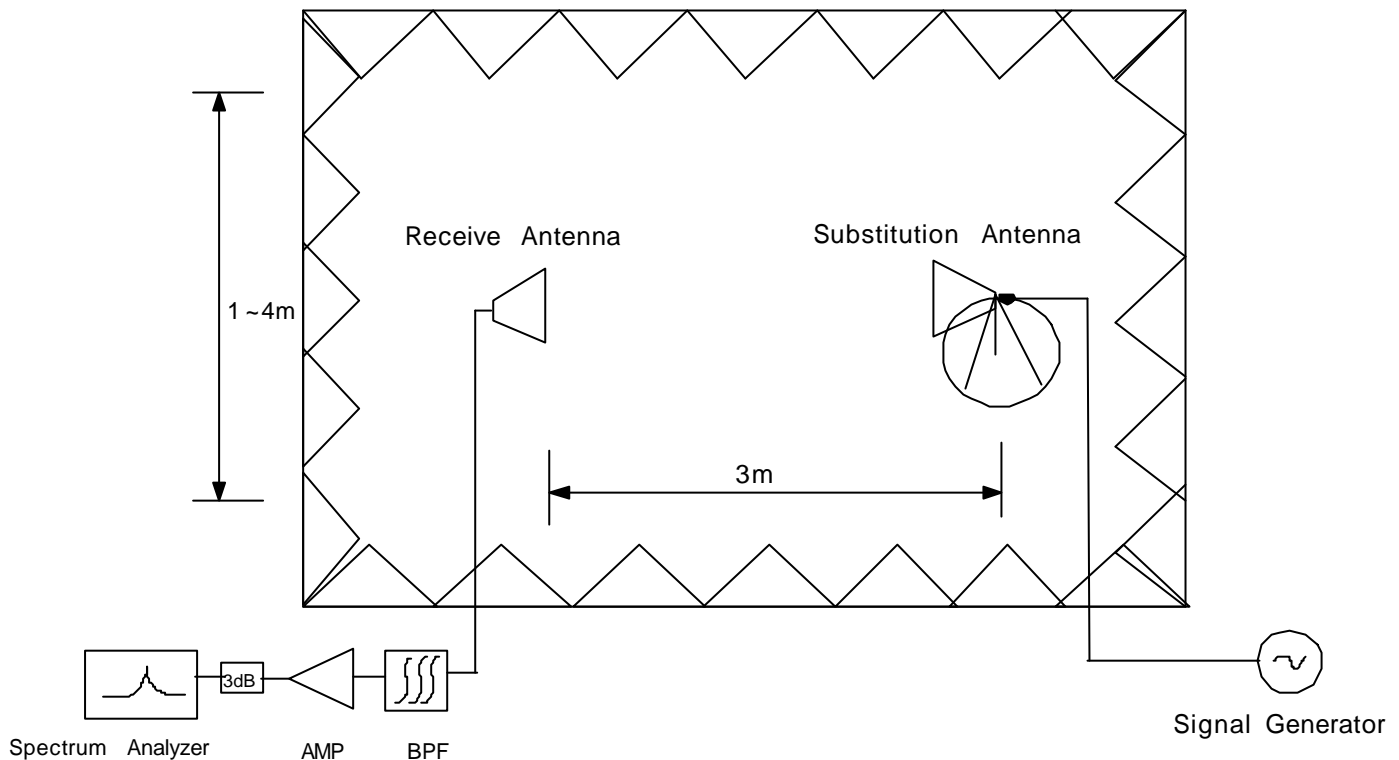
**Figure 3. Diagram of ERP/EIRP test Set-up**

The EUT was placed on the rotating device at 3-meters from the receive antenna. 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. 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 EUT was setup to maximum output power at its lowest channel. The occupied bandwidth was measured using a spectrum analyzer. The measurements are repeated for the highest and a middle channel. The EUT's occupied bandwidth is measured as the width of the signal between two points, one below the carrier center frequency and one above the carrier frequency, outside of which all emissions are attenuated at least 26dB below the transmitter power.

Plots of the EUT's occupied bandwidth are shown herein.

## 5.5. Spurious and Harmonic Emission at Antenna Terminal

### 5.5.1. Occupied Bandwidth Emission Limits

- (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.
- (d) The measurement of emission power can be expressed in peak or average values, provided they are expressed in the same parameters as the transmitter power.



<b>BLOCK</b>	<b>Freq. Range (MHz) Transmitter (Tx)</b>	<b>Freq. Range (MHz) Receiver (Rx)</b>
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**

<b>BLOCK</b>	<b>Freq. Range (MHz) Transmitter (Tx)</b>	<b>Freq. Range (MHz) Receiver (Rx)</b>
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.

$$43 + 10\log ( 1.028 W) = 43.12 \text{ dB}$$

$$30.12 \text{ dBm} - 43.12 \text{ dB} = -13 \text{ dBm}$$

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.

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 from 10MHz to 10GHz. (GSM1900 Mode : 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 °C to +60 °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  $\pm 0.00025$  ( $\pm 2.5$ 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 °C to 27 °C to provide a reference).
2. The equipment is subjected to an overnight "soak" at -30 °C without any power applied.
3. After the overnight "soak" at -30 °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 °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 °C up to +60 °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. Conducted Output Power

A base station simulator was used to establish communication with the Samsung 850/1900 GSM/WCDMA/EDGE/GPRS Phone with Bluetooth and WLAN FCC ID: A3LGTB7320L. The base station simulator parameters were set to produce the maximum power from the EUT. This device was tested under all configurations and the highest power is reported in WCDMA mode with HSDPA inactive at 12.2 kbps RMC and TPC bits all set to “1” and in GSM mode and using a Power Control Level of “0” in the PCS BAND and “5” in the Cellular Band. The GSM and WCDMA conducted powers are reported below, respectively.

BAND	Channel	RF Conducted Power Table				
		Voice	GPRS Data			
			1 Tx Slot	2 Tx Slot	3 Tx Slot	4 Tx Slot
PCS	512	29.27	29.37	29.50	26.87	26.86
	661	29.75	29.82	29.85	27.27	27.26
	810	29.81	29.51	29.56	27.30	27.28
Cellular	128	32.96	32.80	32.75	29.96	28.93
	190	32.89	32.68	32.57	29.90	28.86
	251	32.77	32.54	32.45	29.77	28.74

Table 6-1 GSM Conducted Output Powers



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

Supply Voltage : 3.7VDC

Modulation : GSM850

### Reference level

Frequency (MHz)	Output (dBm)	Polarization (H/V)	S/A (dBm)	Ant gain (dBd)	Ref level (dBm)
824.20	27.00	H	-9.48	-0.67	-8.81
		V	-9.67	-0.67	-9.00
836.60	29.00	H	-8.86	-0.73	-8.13
		V	-8.37	-0.73	-7.64
848.80	30.00	H	-10.52	-0.79	-9.73
		V	-9.17	-0.79	-8.38

### Result

Frequency (MHz)	Tested level (dBm)	Polarization (H/V)	Azimuth (angle)	ERP (dBm)	ERP (W)	Battery
824.20	-8.62	H	285/90	27.19	0.524	Standard
836.60	-8.28	H	287/80	28.85	0.767	Standard
848.80	-9.61	H	278/90	30.12	1.028	Standard

### EDGE Result

Frequency (MHz)	Tested level (dBm)	Polarization (H/V)	Azimuth (angle)	ERP (dBm)	ERP (W)	Battery
848.80	-13.57	H	278/90	26.31	0.428	Standard

**NOTE : Standard batteries are the only battery options for this phone**

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

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



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

Supply Voltage : 3.7VDC

Modulation : PCS 1900

#### Reference level

Frequency (MHz)	Output (dBm)	Polarization (H/V)	S/A (dBm)	Ant gain (dBi)	Ref level (dBm)
1850.20	28.00	H	-10.74	9.70	-20.44
		V	-10.38	9.70	-20.08
1880.00	31.00	H	-8.11	9.70	-17.81
		V	-8.11	9.70	-17.81
1909.80	29.00	H	-10.11	9.70	-19.81
		V	-9.80	9.70	-19.50

#### Result

Frequency (MHz)	Tested level (dBm)	Polarization (H/V)	Azimuth (angle)	EIRP (dBm)	EIRP (W)	Battery
1850.20	-20.45	V	134/90	27.63	0.579	Standard
1880.00	-17.61	V	224/100	31.20	1.318	Standard
1909.80	-19.10	V	215/90	29.40	0.871	Standard

#### EDGE Result

Frequency (MHz)	Tested level (dBm)	Polarization (H/V)	Azimuth (angle)	EIRP (dBm)	EIRP (W)	Battery
1880.00	-20.36	V	224/100	28.45	0.700	Standard

**NOTE : Standard batteries are the only battery options for this phone**

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

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

## 6.4. GSM850 Radiated Spurious & Harmonic measurement

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

Measured Output Power : 30.12 dBm = 1.028 W

Modulation Signal : GSM850

Limit :  $43 + 10\log_{10}(P) = 43.12$  dBc

### Result

Channel	Harmonic	Frequency (MHz)	From EUT Tested level (dBm)	POL (H/V)	Result (dBc)
128	2	1648.40	-61.49	V	79.65
	3	2472.60	-58.09	V	71.90
	4	3296.80	-64.00	V	73.83
	5	4121.00	-	-	-
	6	4945.20	-	-	-
	7	5769.40	-	-	-
190	2	1673.20	-59.29	H	76.81
	3	2509.80	-61.16	H	74.73
	4	3346.40	-65.80	V	75.46
	5	4183.00	-	-	-
	6	5019.60	-	-	-
	7	5856.20	-	-	-
251	2	1697.60	-57.09	V	74.60
	3	2546.40	-61.05	H	74.73
	4	3395.20	-66.07	V	75.87
	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



## 6.5. GSM1900 Radiated Spurious & Harmonic measurement

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

Measured Output Power : 31.20 dBm = 1.318 W

Modulation Signal : GSM1900

Limit :  $43 + 10\log_{10}(P) = 44.2$  dBc

### Result

Channel	Harmonic	Frequency (MHz)	From EUT Tested level (dBm)	POL (H/V)	Result (dBc)
512	2	3700.40	-66.63	H	73.89
	3	5550.60	-60.88	H	62.40
	4	7400.80	-59.07	H	55.94
	5	9251.00	-	-	-
	6	11101.20	-	-	-
	7	12951.40	-	-	-
661	2	3760.00	-67.25	V	74.40
	3	5640.00	-61.02	V	62.14
	4	7520.00	-58.41	V	55.66
	5	9400.00	-	-	-
	6	11280.00	-	-	-
	7	13160.00	-	-	-
810	2	3819.60	-67.26	H	72.92
	3	5729.40	-61.14	V	61.85
	4	7639.20	-60.05	V	56.81
	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



## 6.6. GSM850 Radiated Spurious & Harmonic Conversion Table

Date : 2009. 08. 8

Test Engineer : KJ KWON

Tx Cable loss

Tx Horn Ant Gain

Tx Level to radiate -13dBm

ESI Level received from Tx with -13dBm

Tested Level from EUT

= ERP+2.14 - (-13 + - )

CH	Har	Frequency (MHz)	Tx C/L dB	Tx Horn Gain dBi	Tx Level dBm	ESI Level : H dBm	ESI Level : V dBm	Tested EUT Level : H dBm	Tested EUT Level : V dBm	Result EUT : H (dBc)	Result EUT : V (dBc)
128	2	1648.40	-9.02	9.50	-13.50	-27.24	-27.10	-63.61	-61.49	81.63	79.65
	3	2472.60	-11.41	10.70	-12.30	-31.70	-31.45	-60.26	-58.09	73.82	71.90
	4	3296.80	-13.59	12.30	-11.70	-34.96	-35.43	-65.61	-64.00	75.91	73.83
	5	4121.00	-15.15	12.50	-10.30	-38.60	-38.90	-	-	-	-
	6	4945.20	-16.71	12.70	-9.00	-40.65	-40.69	-	-	-	-
	7	5769.40	-18.17	12.90	-7.70	-43.29	-43.30	-	-	-	-
	190	2	1673.20	-9.07	9.50	-13.40	-27.74	-28.63	-59.29	-61.49	76.81
3		2509.80	-11.43	10.70	-12.30	-31.69	-31.64	-61.16	-62.37	74.73	75.99
4		3346.40	-13.78	12.30	-11.50	-35.46	-35.60	-66.85	-65.80	76.65	75.46
5		4183.00	-15.26	12.50	-10.20	-38.67	-39.11	-	-	-	-
6		5019.60	-16.94	12.70	-8.80	-41.28	-41.32	-	-	-	-
7		5856.20	-18.23	12.90	-7.70	-43.94	-43.84	-	-	-	-
251		2	1697.60	-9.08	9.50	-13.40	-27.95	-27.75	-59.41	-57.09	76.72
	3	2546.40	-11.41	10.70	-12.30	-31.58	-32.94	-61.05	-62.69	74.73	75.01
	4	3395.20	-13.82	12.30	-11.50	-35.17	-35.46	-67.50	-66.07	77.59	75.87
	5	4244.00	-15.38	12.50	-10.10	-38.81	-39.07	-	-	-	-
	6	5092.80	-17.06	12.70	-8.60	-41.51	-41.42	-	-	-	-
	7	5941.60	-18.41	12.90	-7.50	-43.83	-43.32	-	-	-	-



## 6.7. GSM1900 Radiated Spurious & Harmonic Conversion Table

Date : 2009. 08. 8

Test Engineer : KJ KWON

Tx Cable loss  
 Tx Horn Ant Gain  
 Tx Level to radiate -13dBm  
 ESI Level received from Tx with -13dBm  
 Tested Level from EUT  
 = EIRP - (-13 + - )

CH	Har	Frequency (MHz)	Tx C/L dB	Tx Horn Gain dBi	Tx Level dBm	ESI Level : H dBm	ESI Level : V dBm	Tested EUT Level : H dBm	Tested EUT Level : V dBm	Result EUT : H (dBc)	Result EUT : V (dBc)
512	2	3700.40	-14.91	12.40	-10.50	-36.94	-36.57	-66.63	-67.95	73.89	75.58
	3	5550.60	-17.69	12.90	-8.20	-42.68	-42.80	-60.88	-62.03	62.40	63.43
	4	7400.80	-20.43	10.50	-3.10	-47.33	-46.96	-59.07	-59.92	55.94	57.16
	5	9251.00	-23.63	11.20	-0.60	-51.79	-50.45	-	-	-	-
	6	11101.20	-26.86	11.60	2.30	-54.95	-55.26	-	-	-	-
	7	12951.40	-28.80	12.90	2.90	-58.88	-58.56	-	-	-	-
661	2	3760.00	-15.19	12.40	-10.20	-37.08	-37.05	-67.35	-67.25	74.47	74.40
	3	5640.00	-17.78	12.90	-8.10	-42.73	-43.08	-62.14	-61.02	63.61	62.14
	4	7520.00	-20.67	10.60	-2.90	-47.12	-46.95	-63.08	-58.41	60.16	55.66
	5	9400.00	-23.23	11.60	-1.40	-51.75	-52.22	-	-	-	-
	6	11280.00	-26.34	12.10	1.20	-55.98	-56.30	-	-	-	-
	7	13160.00	-28.12	12.80	2.30	-59.32	-58.91	-	-	-	-
810	2	3819.60	-14.23	12.40	-11.20	-38.02	-38.68	-67.26	-67.40	73.44	72.92
	3	5729.40	-18.11	13.00	-7.90	-43.48	-43.49	-62.04	-61.14	62.76	61.85
	4	7639.20	-21.16	11.20	-3.00	-47.29	-47.44	-62.91	-60.05	59.82	56.81
	5	9549.00	-23.54	11.70	-1.20	-52.60	-52.08	-	-	-	-
	6	11458.80	-26.84	11.70	2.10	-56.26	-56.23	-	-	-	-
	7	13368.60	-28.23	12.30	2.90	-60.44	-59.84	-	-	-	-

## 6.8. Frequency Stability

### 6.8.1. GSM850 Frequency Stability Table

Operating Frequency : 836,600,000 Hz

Channel : 190

Reference Voltage : 3.7VDC

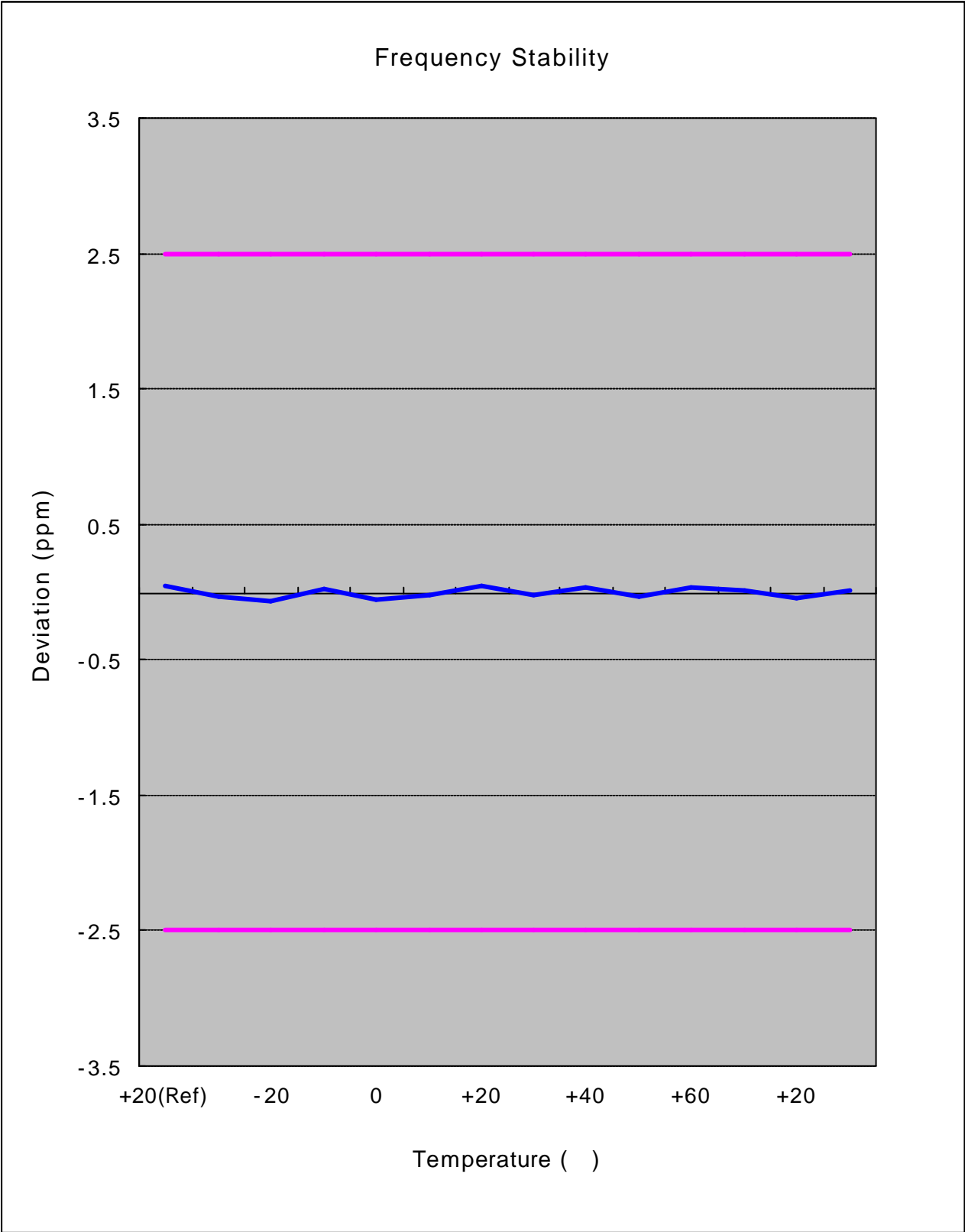
Deviation Limit :  $\pm 0.00025\%$  or 2.5ppm

Voltage (%)	Power (VDC)	Temp. (°C)	Frequency Error (Hz)	Frequency (Hz)	Deviation (%)	ppm
100%	3.70	+20(Ref)	27.80	836,600,028	0.000003	0.033
100%		-30	-39.30	836,599,961	-0.000005	-0.047
100%		-20	-2.00	836,599,998	0.000000	-0.002
100%		-10	27.80	836,600,028	0.000003	0.033
100%		0	-34.10	836,599,966	-0.000004	-0.041
100%		+10	-33.70	836,599,966	-0.000004	-0.040
100%		+20	27.80	836,600,028	0.000003	0.033
100%		+30	-42.60	836,599,957	-0.000005	-0.051
100%		+40	12.50	836,600,013	0.000001	0.015
100%		+50	45.00	836,600,045	0.000005	0.054
100%		+60	-45.10	836,599,955	-0.000005	-0.054
85%		3.35	+20	31.50	836,600,032	0.000004
115%	4.26	+20	4.90	836,600,005	0.000001	0.006
Batt.Endpoint	3.35	+20	31.50	836,600,032	0.000004	0.038

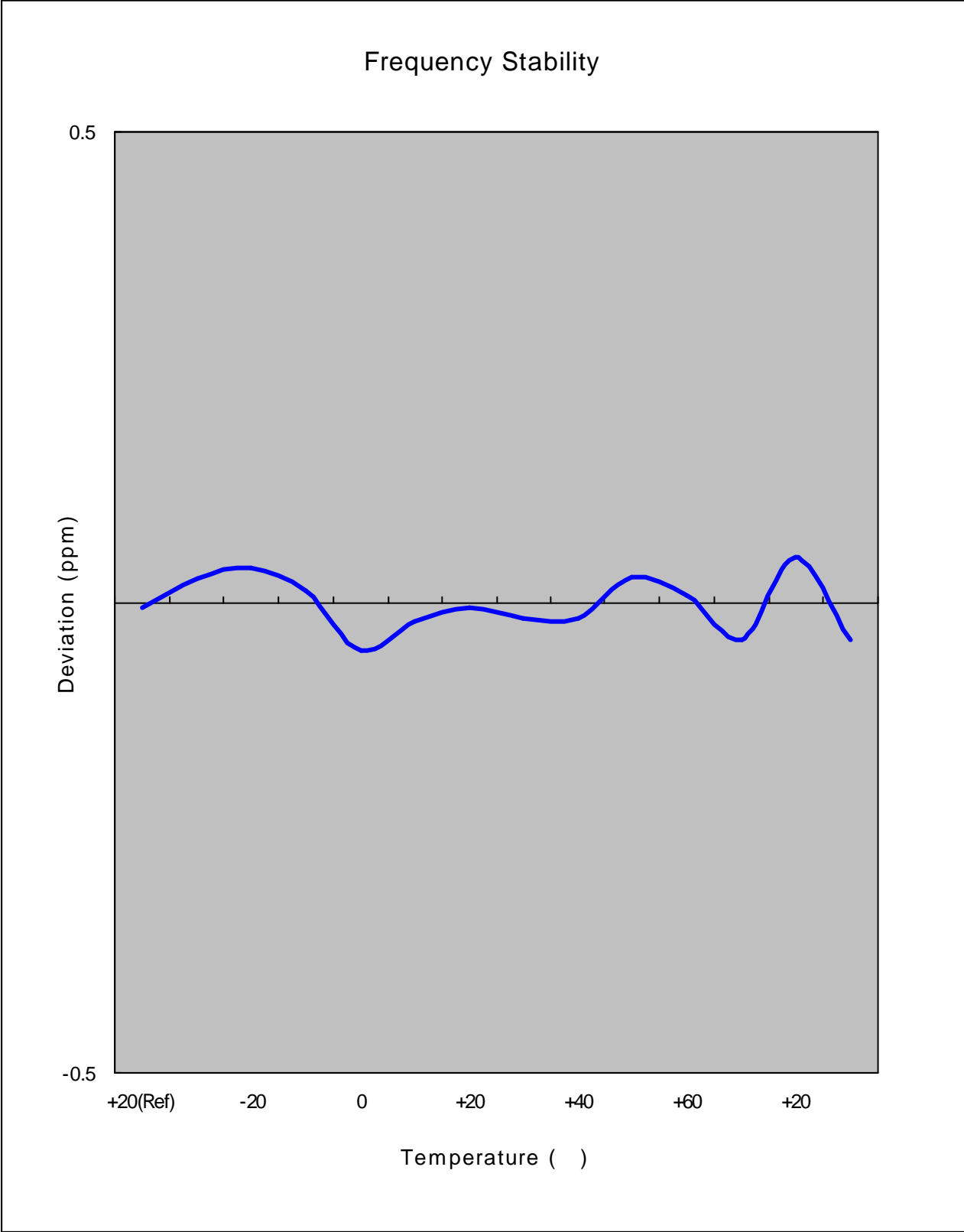
Note : The temperature is varied from -30 °C to +60 °C using an environmental chamber.

The EUT is tested down to the battery end point.

6.8.2. GSM850 Frequency Stability Graph



**Zoom IN**



### 6.8.3. GSM1900 Frequency Stability Table

Operating Frequency : 1,880,000,000 Hz

Channel : 661

Reference Voltage : 3.7VDC

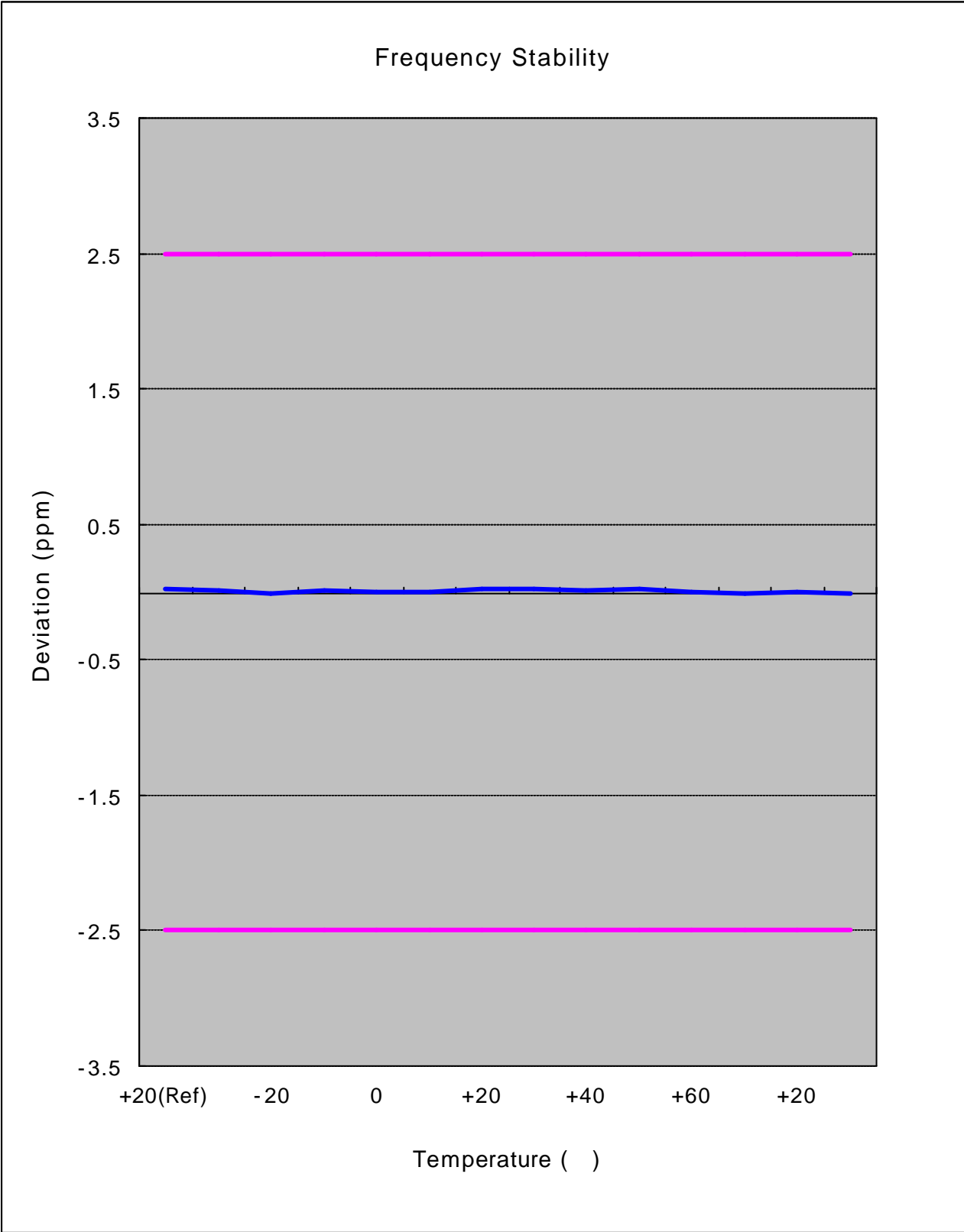
**Deviation Limit :  $\pm 0.00025$  % or 2.5ppm**

Voltage (%)	Power (VDC)	Temp. (°C)	Frequency Error (Hz)	Frequency (Hz)	Deviation (%)	ppm
100%	3.70	+20(Ref)	3.20	1,880,000,003	0.000000	0.002
100%		-30	20.90	1,880,000,021	0.000001	0.011
100%		-20	40.20	1,880,000,040	0.000002	0.021
100%		-10	-35.50	1,879,999,965	-0.000002	-0.019
100%		0	-29.80	1,879,999,970	-0.000002	-0.016
100%		+10	9.90	1,880,000,010	0.000001	0.005
100%		+20	3.20	1,880,000,003	0.000000	0.002
100%		+30	21.50	1,880,000,022	0.000001	0.011
100%		+40	-25.50	1,879,999,975	-0.000001	-0.014
100%		+50	-14.90	1,879,999,985	-0.000001	-0.008
100%		+60	45.30	1,880,000,045	0.000002	0.024
85%		3.35	+20	34.00	1,880,000,034	0.000002
115%	4.26	+20	20.20	1,880,000,020	0.000001	0.011
Batt.Endpoint	3.35	+20	34.00	1,880,000,034	0.000002	0.018

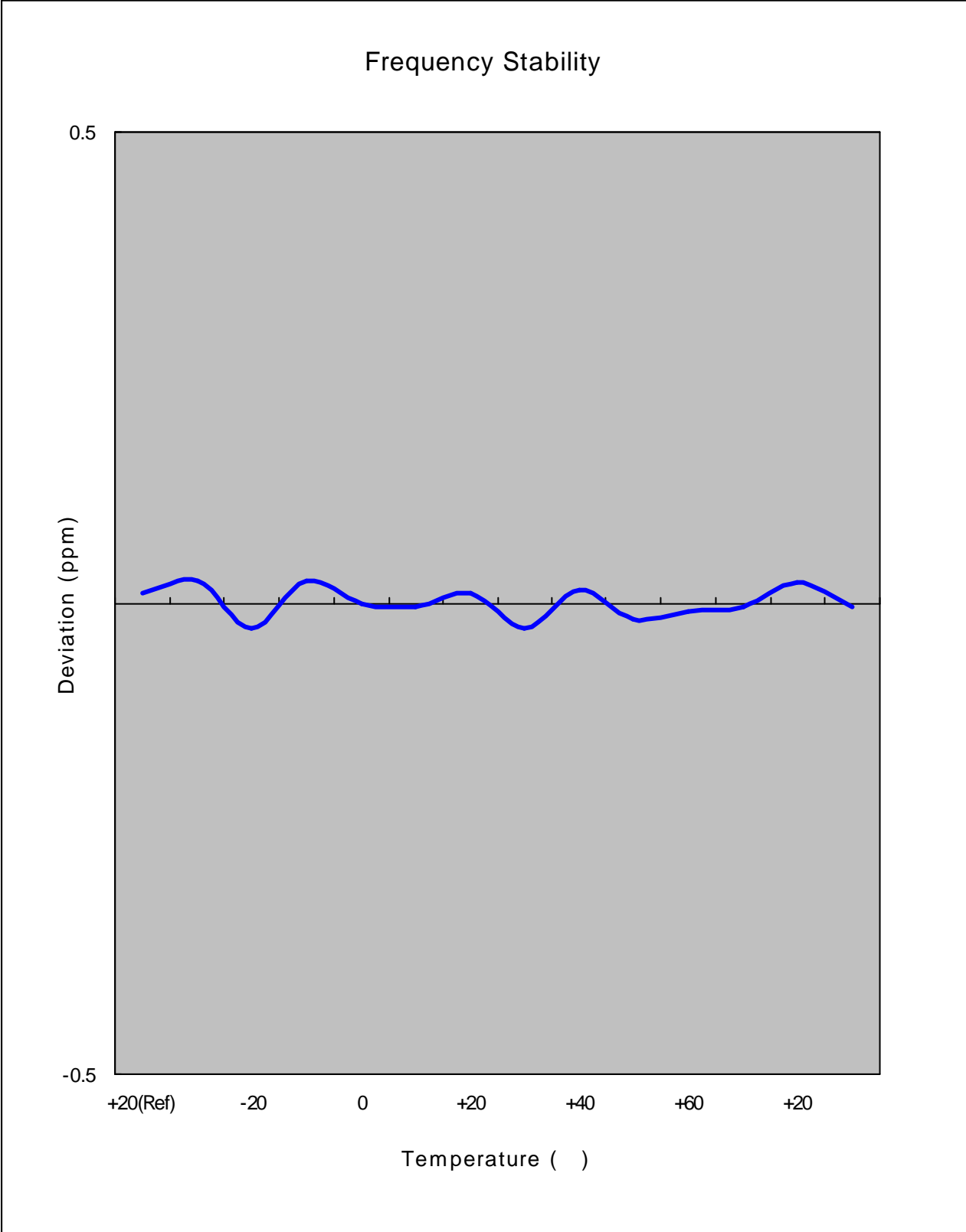
**Note : The temperature is varied from -30 °C to +60 °C using an environmental chamber.**

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

**6.8.4. GSM1900 Frequency Stability Graph**



**Zoom IN**





## 7. CONCLUSION

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

FCC ID : A3LGTB7320L complies with all the requirements of Parts 2,22,24 of the FCC Rules.



## 8. TEST PLOTS

GSM850

Agilent

R T

Ch Freq 824.2 MHz Trig Free

Occupied Bandwidth

FCC ID:A3LGTB7320L 0BW Ch.128  
Ref 33 dBm Atten 40 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 %
244.7040 kHz	<b>x dB</b>	-26.00 dB
<b>Transmit Freq Error</b>	1.832 kHz	
<b>x dB Bandwidth</b>	304.721 kHz	

<b>Freq/Channel</b>
<b>Center Freq</b> 824.200000 MHz
<b>Start Freq</b> 823.700000 MHz
<b>Stop Freq</b> 824.700000 MHz
<b>CF Step</b> 100.000000 kHz 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 T

Ch Freq 836.6 MHz Trig Free

Occupied Bandwidth

FCC ID:A3LGTB7320L 0BW Ch.190  
Ref 33 dBm Atten 40 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 %
243.7953 kHz	<b>x dB</b>	-26.00 dB
<b>Transmit Freq Error</b>	311.185 Hz	
<b>x dB Bandwidth</b>	315.391 kHz	

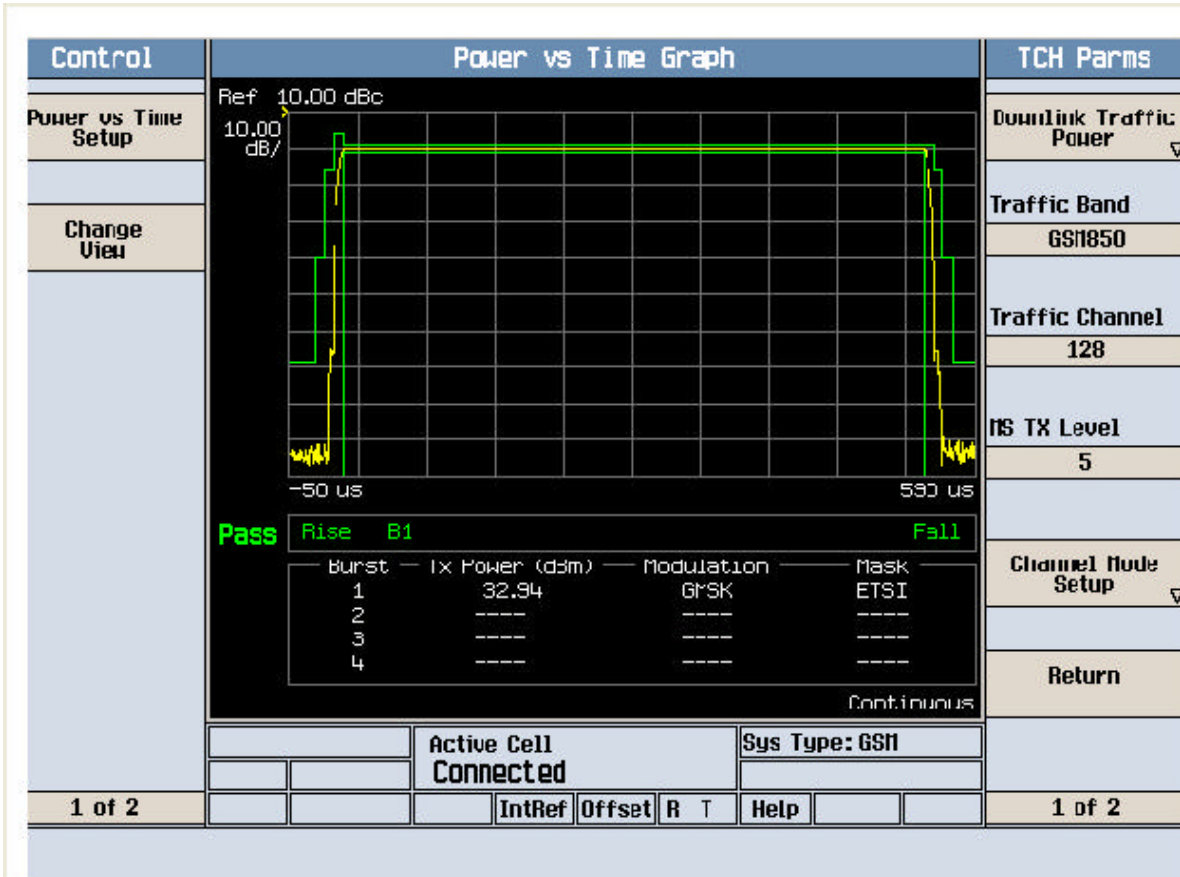
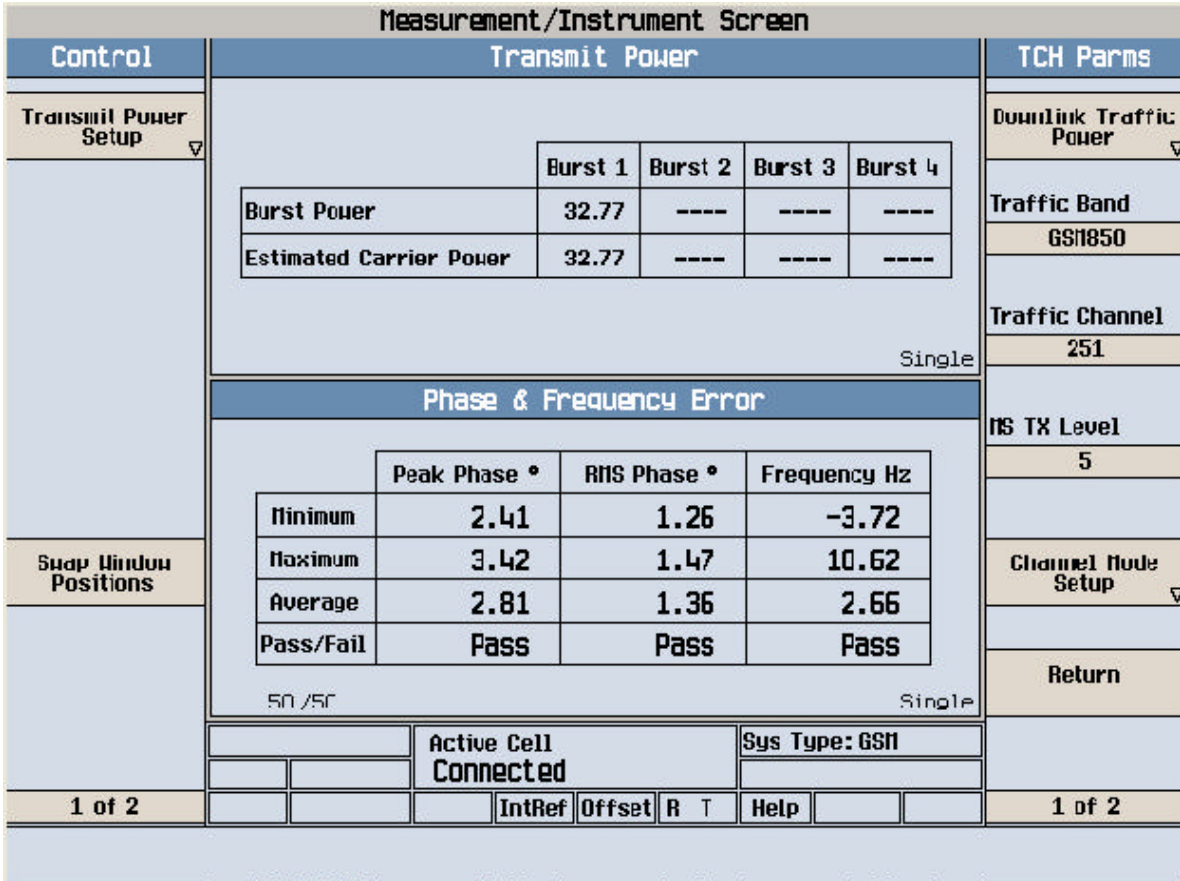
<b>Freq/Channel</b>
<b>Center Freq</b> 836.600000 MHz
<b>Start Freq</b> 836.100000 MHz
<b>Stop Freq</b> 837.100000 MHz
<b>CF Step</b> 100.000000 kHz Auto Man
<b>Freq Offset</b> 0.00000000 Hz
<b>Signal Track</b> On Off

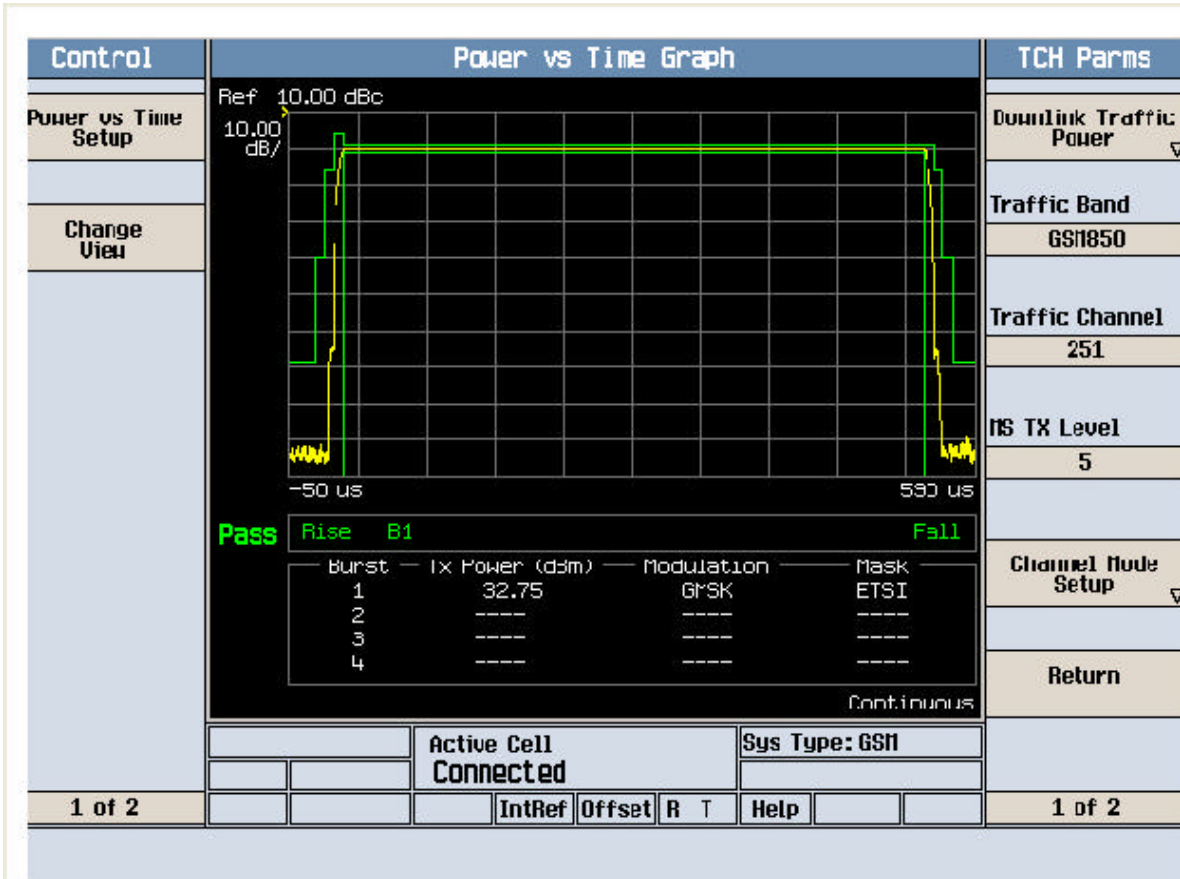
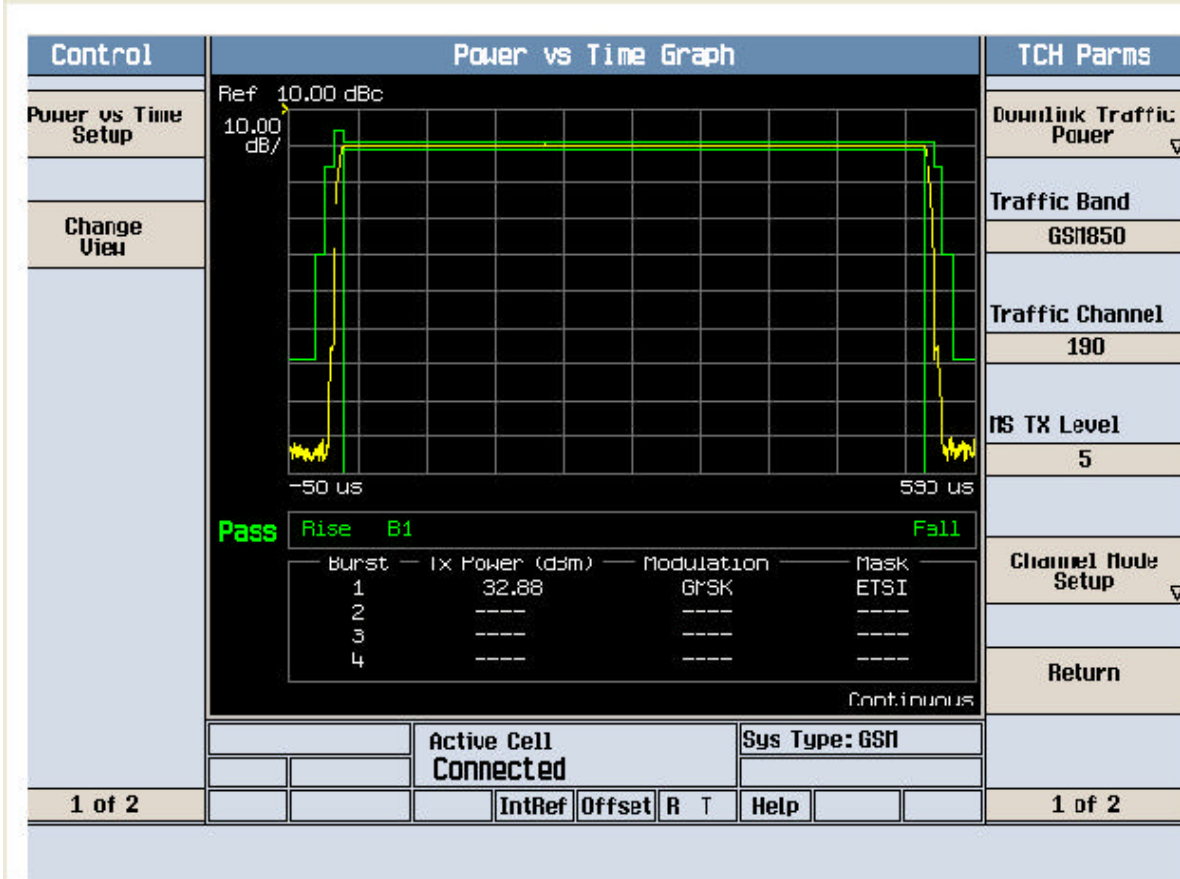
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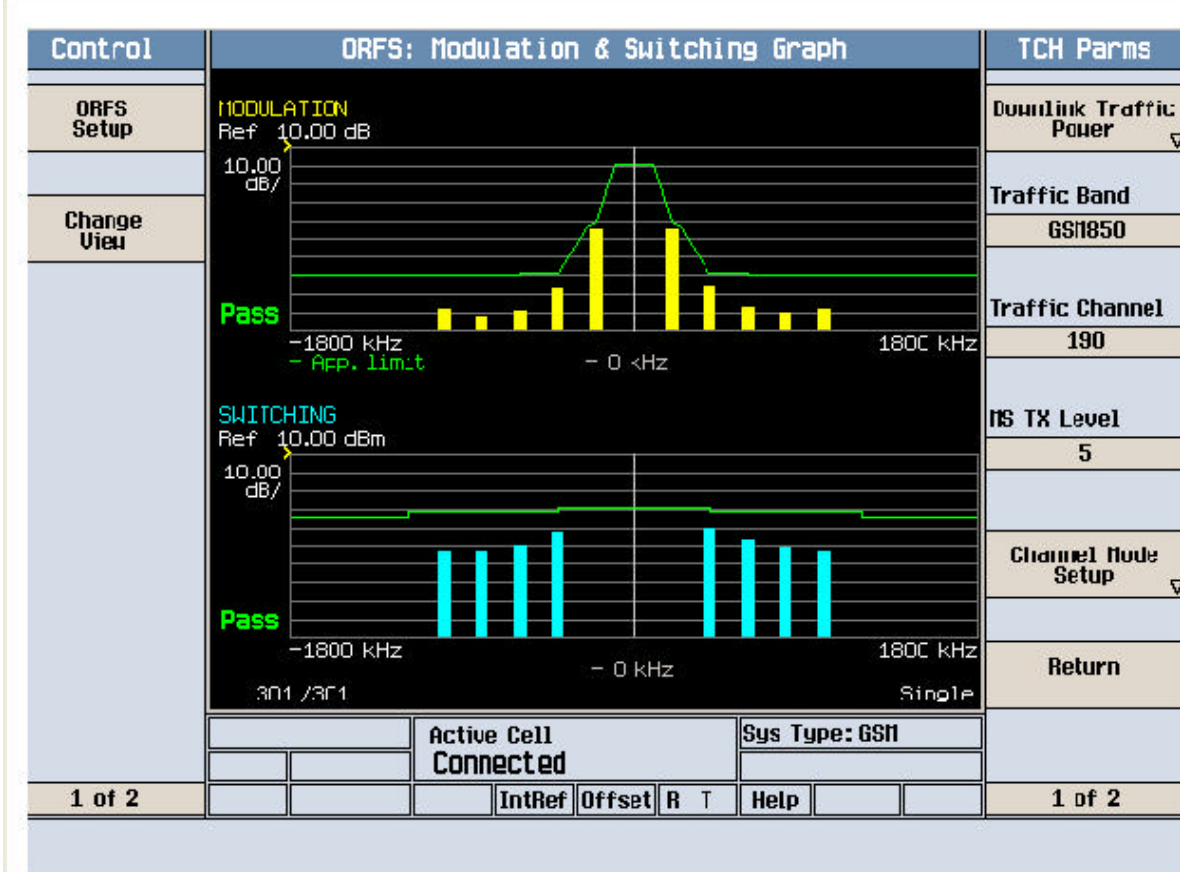
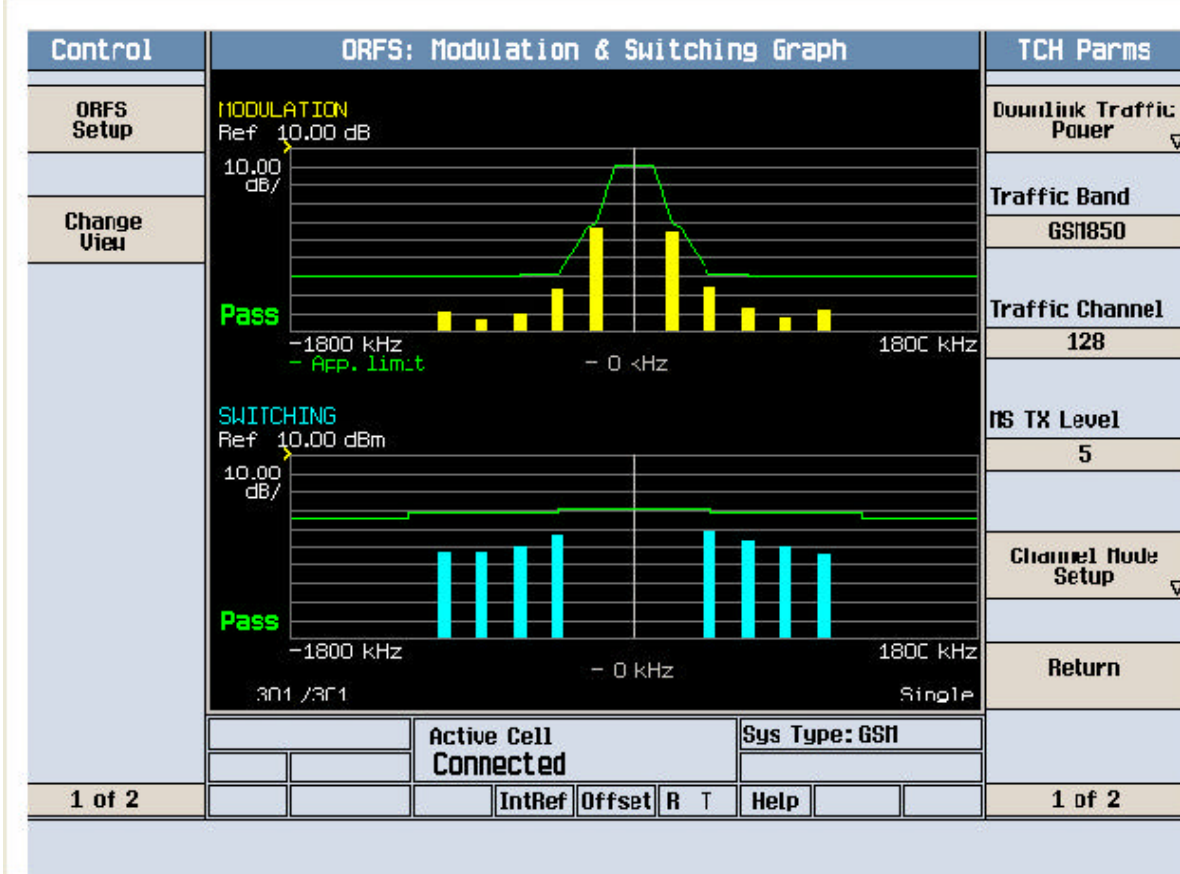
<b>Ch Freq</b> 848.8 MHz <b>Trig</b> Free Occupied Bandwidth		<b>Freq/Channel</b> <b>Center Freq</b> 848.800000 MHz
FCC ID:A3LGTB7320L 0BW Ch.251 Ref 33 dBm Atten 40 dB		<b>Start Freq</b> 848.300000 MHz
#Peak Log 10 dB/ Offst 7.83 dB		<b>Stop Freq</b> 849.300000 MHz
		<b>CF Step</b> 100.000000 kHz Auto Man
Center 848.800 MHz Span 1 MHz #Res BW 3 kHz #VBW 3 kHz #Sweep 1 s (601 pts)		<b>Freq Offset</b> 0.00000000 Hz
<b>Occupied Bandwidth</b> 240.4003 kHz <b>Transmit Freq Error</b> 1.035 kHz <b>x dB Bandwidth</b> 299.979 kHz		<b>Signal Track</b> On Off
<b>Occ BW % Pwr</b> 99.00 % <b>x dB</b> -26.00 dB		
File Operation Status, C:\TEMP.GIF file saved		

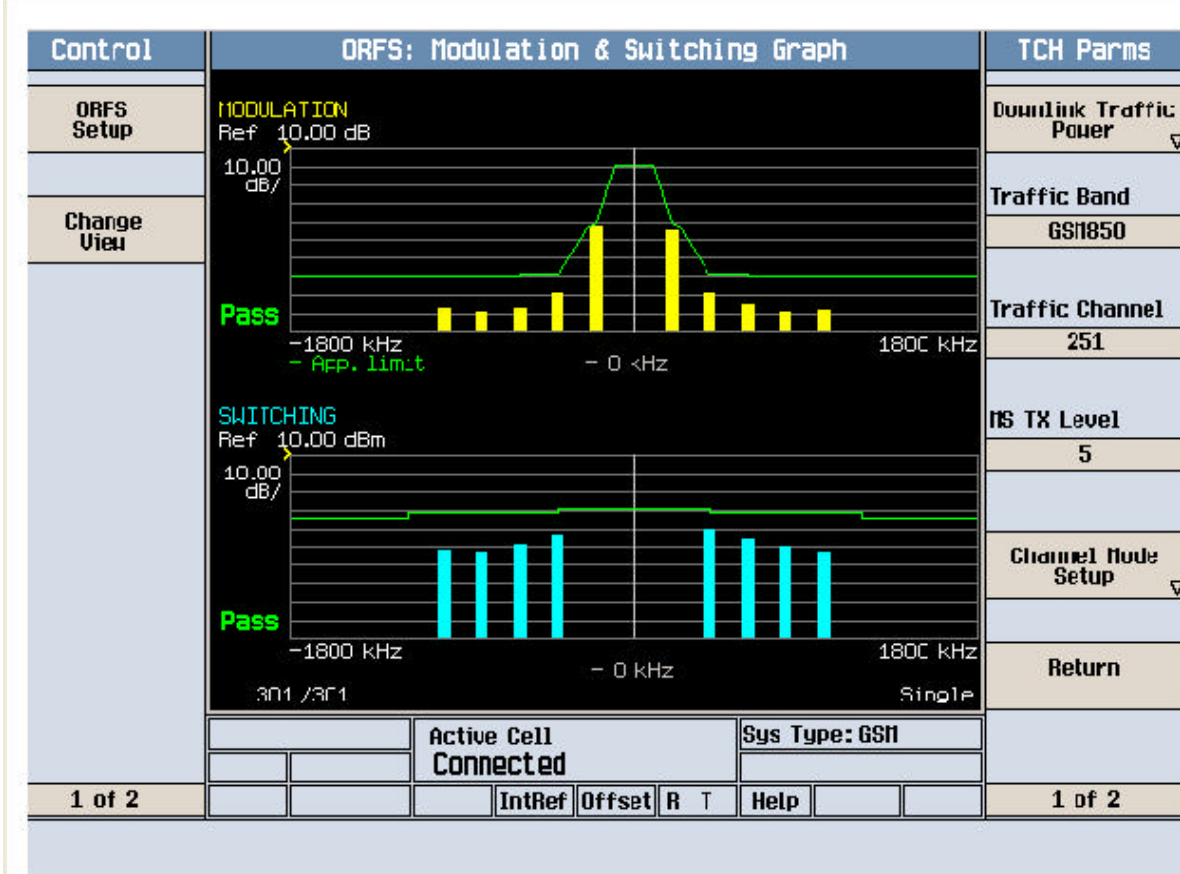
Measurement/Instrument Screen																																	
Control	Transmit Power							TCH Parms																									
Transmit Power Setup								Downlink Traffic Power																									
								Traffic Band																									
Swap Window Positions								GS1850																									
								Traffic Channel																									
							128																										
							MS TX Level																										
							5																										
							Channel Mode Setup																										
							Return																										
							1 of 2																										
<table border="1"> <thead> <tr> <th colspan="4">Phase &amp; Frequency Error</th> </tr> <tr> <th></th> <th>Peak Phase °</th> <th>RMS Phase °</th> <th>Frequency Hz</th> </tr> </thead> <tbody> <tr> <td>Minimum</td> <td>2.38</td> <td>1.31</td> <td>-7.21</td> </tr> <tr> <td>Maximum</td> <td>3.58</td> <td>1.53</td> <td>1.97</td> </tr> <tr> <td>Average</td> <td>3.01</td> <td>1.42</td> <td>-3.36</td> </tr> <tr> <td>Pass/Fail</td> <td>Pass</td> <td>Pass</td> <td>Pass</td> </tr> </tbody> </table>										Phase & Frequency Error					Peak Phase °	RMS Phase °	Frequency Hz	Minimum	2.38	1.31	-7.21	Maximum	3.58	1.53	1.97	Average	3.01	1.42	-3.36	Pass/Fail	Pass	Pass	Pass
Phase & Frequency Error																																	
	Peak Phase °	RMS Phase °	Frequency Hz																														
Minimum	2.38	1.31	-7.21																														
Maximum	3.58	1.53	1.97																														
Average	3.01	1.42	-3.36																														
Pass/Fail	Pass	Pass	Pass																														
<table border="1"> <tr> <td colspan="3">Active Cell Connected</td> <td colspan="4">Sys Type: GSM</td> </tr> </table>										Active Cell Connected			Sys Type: GSM																				
Active Cell Connected			Sys Type: GSM																														
<table border="1"> <tr> <td>IntRef</td> <td>Offset</td> <td>R</td> <td>T</td> <td>Help</td> </tr> </table>										IntRef	Offset	R	T	Help																			
IntRef	Offset	R	T	Help																													

Measurement/Instrument Screen																																	
Control	Transmit Power							TCH Parms																									
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								Traffic Band																									
Swap Window Positions								GS1850																									
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							190																										
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							5																										
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							1 of 2																										
<table border="1"> <thead> <tr> <th colspan="4">Phase &amp; Frequency Error</th> </tr> <tr> <th></th> <th>Peak Phase °</th> <th>RMS Phase °</th> <th>Frequency Hz</th> </tr> </thead> <tbody> <tr> <td>Minimum</td> <td>2.54</td> <td>1.26</td> <td>-5.90</td> </tr> <tr> <td>Maximum</td> <td>3.50</td> <td>1.55</td> <td>2.71</td> </tr> <tr> <td>Average</td> <td>2.96</td> <td>1.40</td> <td>-2.01</td> </tr> <tr> <td>Pass/Fail</td> <td>Pass</td> <td>Pass</td> <td>Pass</td> </tr> </tbody> </table>										Phase & Frequency Error					Peak Phase °	RMS Phase °	Frequency Hz	Minimum	2.54	1.26	-5.90	Maximum	3.50	1.55	2.71	Average	2.96	1.40	-2.01	Pass/Fail	Pass	Pass	Pass
Phase & Frequency Error																																	
	Peak Phase °	RMS Phase °	Frequency Hz																														
Minimum	2.54	1.26	-5.90																														
Maximum	3.50	1.55	2.71																														
Average	2.96	1.40	-2.01																														
Pass/Fail	Pass	Pass	Pass																														
<table border="1"> <tr> <td colspan="3">Active Cell Connected</td> <td colspan="4">Sys Type: GSM</td> </tr> </table>										Active Cell Connected			Sys Type: GSM																				
Active Cell Connected			Sys Type: GSM																														
<table border="1"> <tr> <td>IntRef</td> <td>Offset</td> <td>R</td> <td>T</td> <td>Help</td> </tr> </table>										IntRef	Offset	R	T	Help																			
IntRef	Offset	R	T	Help																													









Agilent

R L

Freq/Channel

FCC ID:A3LGTB7320L Cond Spur Ch.128

Ref 33 dBm

Atten 40 dB

#Peak

Log

10

dB/

Offst

7.83

dB

DI

-13.0

dBm

#LgAv

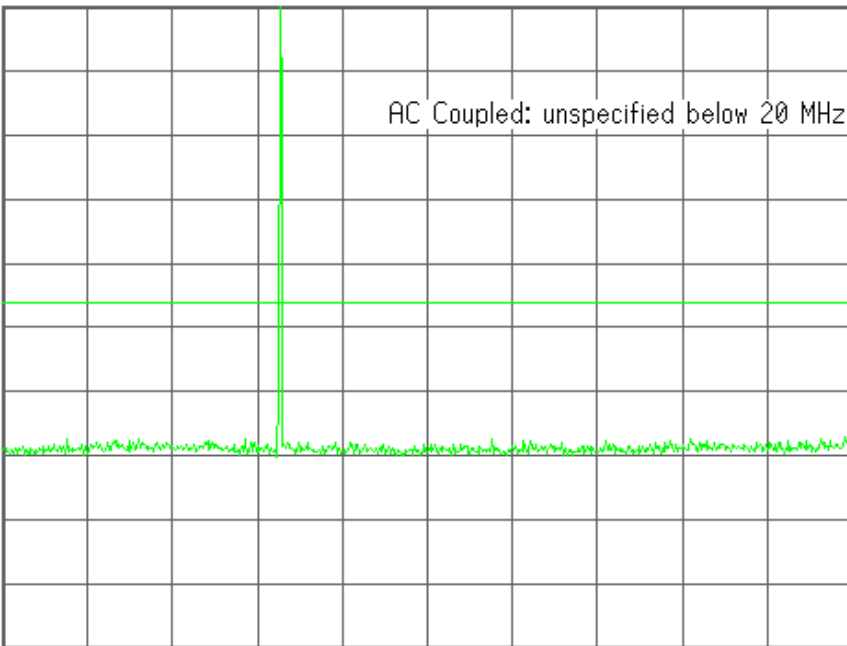
M1 S2

S3 FC

£(f):

FTun

Swp



Center 1.255 GHz

Span 2.49 GHz

#Res BW 1 MHz

#VBW 1 MHz

Sweep 4.16 ms (601 pts)

Center Freq  
1.25500000 GHz

Start Freq  
10.0000000 MHz

Stop Freq  
2.50000000 GHz

CF Step  
249.000000 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:A3LGTB7320L Cond Spur Ch.128

Mkr1 599.4 MHz

Ref 33 dBm

Atten 40 dB

-34.00 dBm

#Peak

Log

10

dB/

Offst

7.83

dB

DI

-13.0

dBm

#LgAv

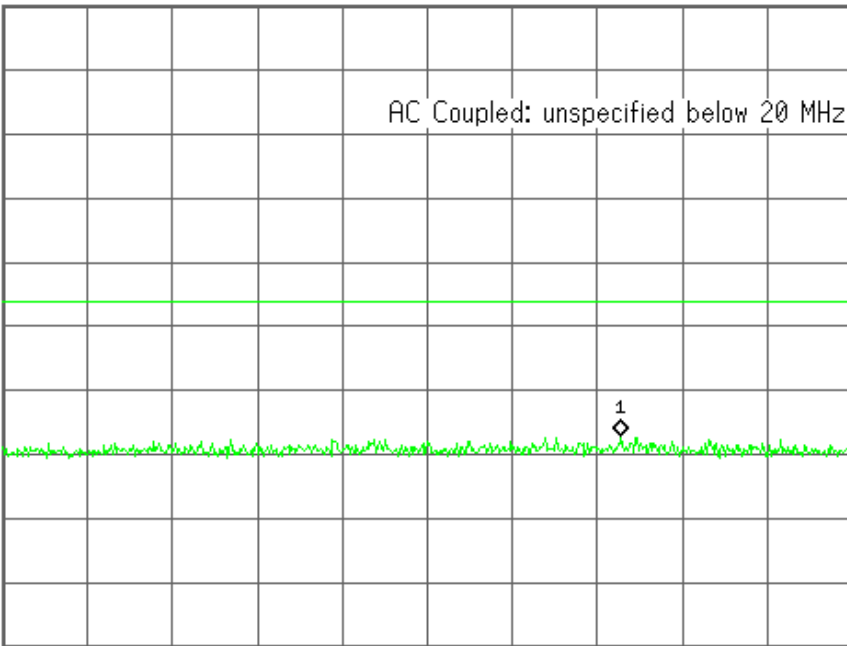
M1 S2

S3 FC

£(f):

FTun

Swp



Center 414.6 MHz

Span 809.2 MHz

#Res BW 1 MHz

#VBW 1 MHz

Sweep 1.36 ms (601 pts)

Center Freq  
414.600000 MHz

Start Freq  
10.0000000 MHz

Stop Freq  
819.200000 MHz

CF Step  
80.9200000 MHz  
Auto Man

Freq Offset  
0.00000000 Hz

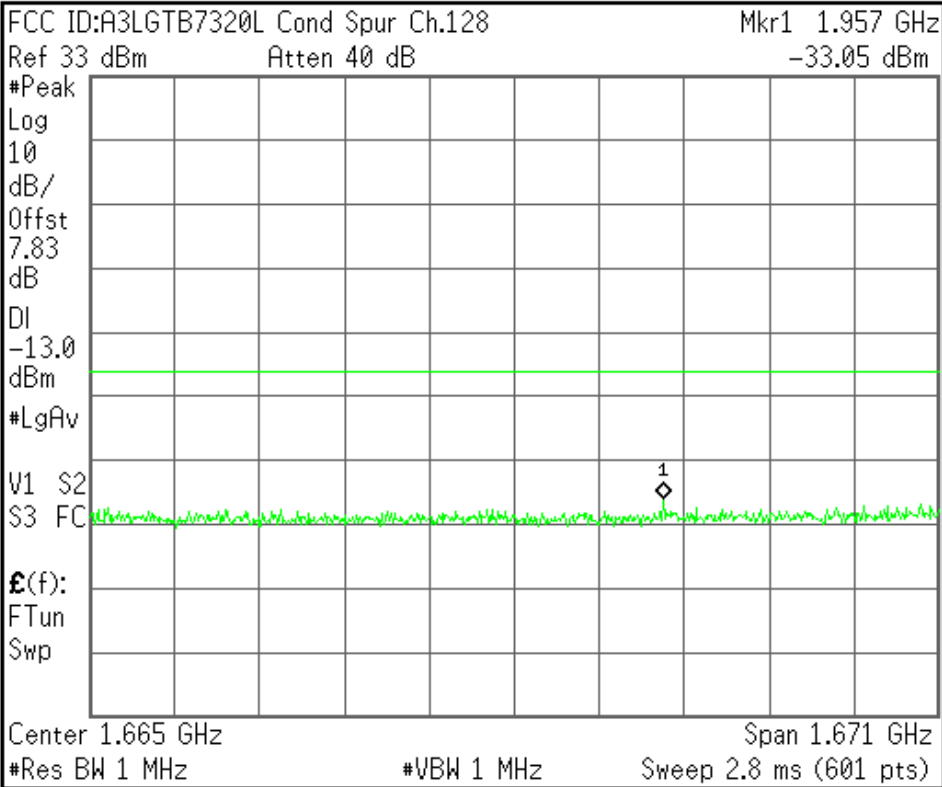
Signal Track  
On Off

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

Agilent

R L

Freq/Channel



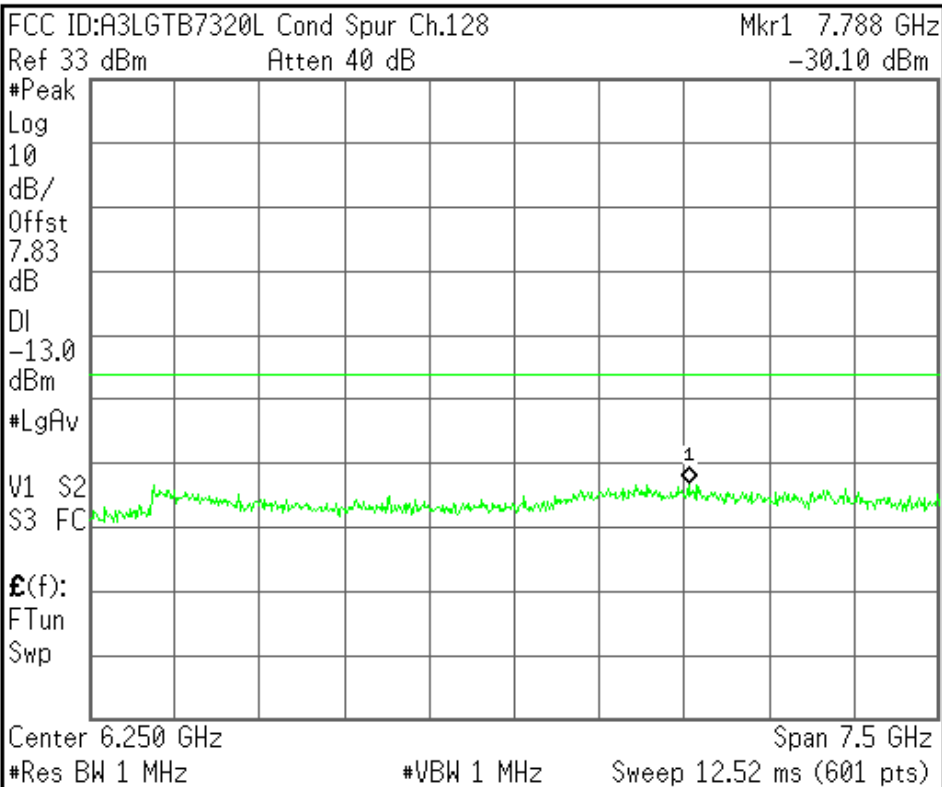
<b>Center Freq</b> 1.66460000 GHz
<b>Start Freq</b> 829.200000 MHz
<b>Stop Freq</b> 2.50000000 GHz
<b>CF Step</b> 167.080000 MHz Auto Man
<b>Freq Offset</b> 0.00000000 Hz
<b>Signal Track</b> On Off

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

Agilent

R T

Freq/Channel



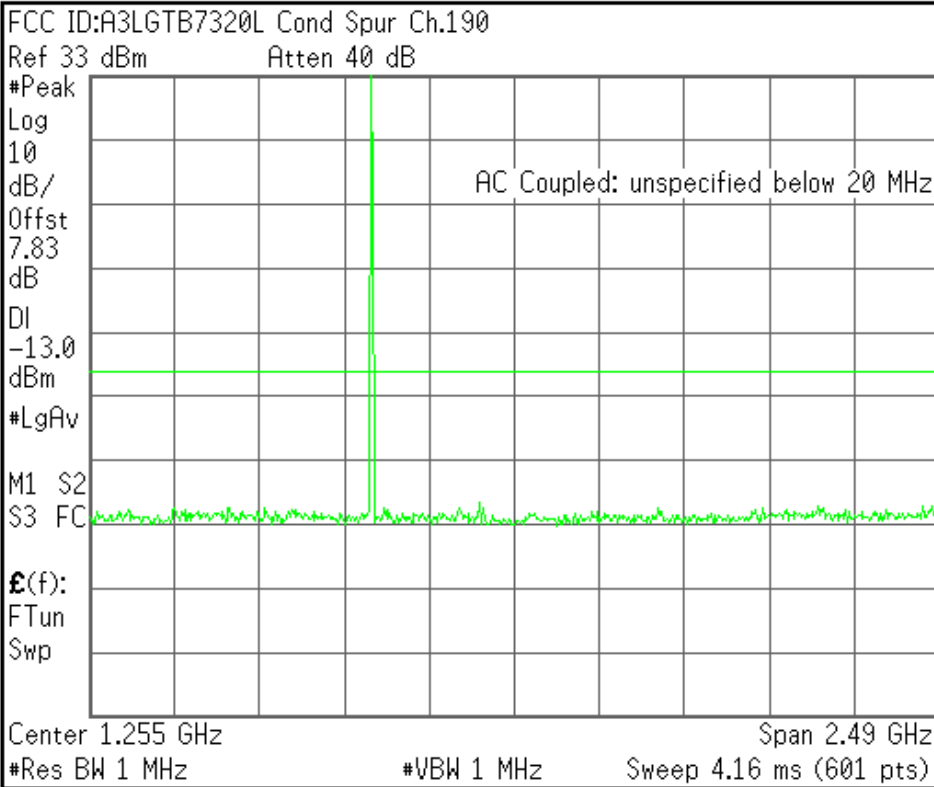
<b>Center Freq</b> 6.25000000 GHz
<b>Start Freq</b> 2.50000000 GHz
<b>Stop Freq</b> 10.00000000 GHz
<b>CF Step</b> 750.000000 MHz Auto Man
<b>Freq Offset</b> 0.00000000 Hz
<b>Signal Track</b> On Off

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

Agilent

R L

Freq/Channel



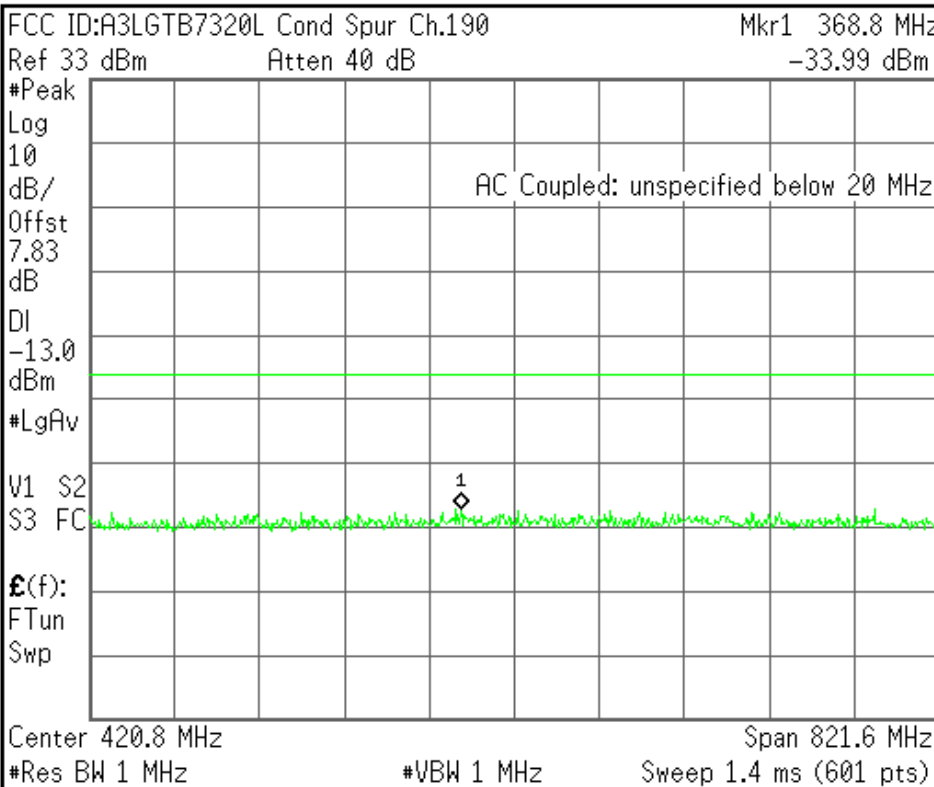
<b>Center Freq</b> 1.25500000 GHz
<b>Start Freq</b> 10.0000000 MHz
<b>Stop Freq</b> 2.50000000 GHz
<b>CF Step</b> 249.000000 MHz Auto Man
<b>Freq Offset</b> 0.00000000 Hz
<b>Signal Track</b> On Off

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

Agilent

R L

Freq/Channel



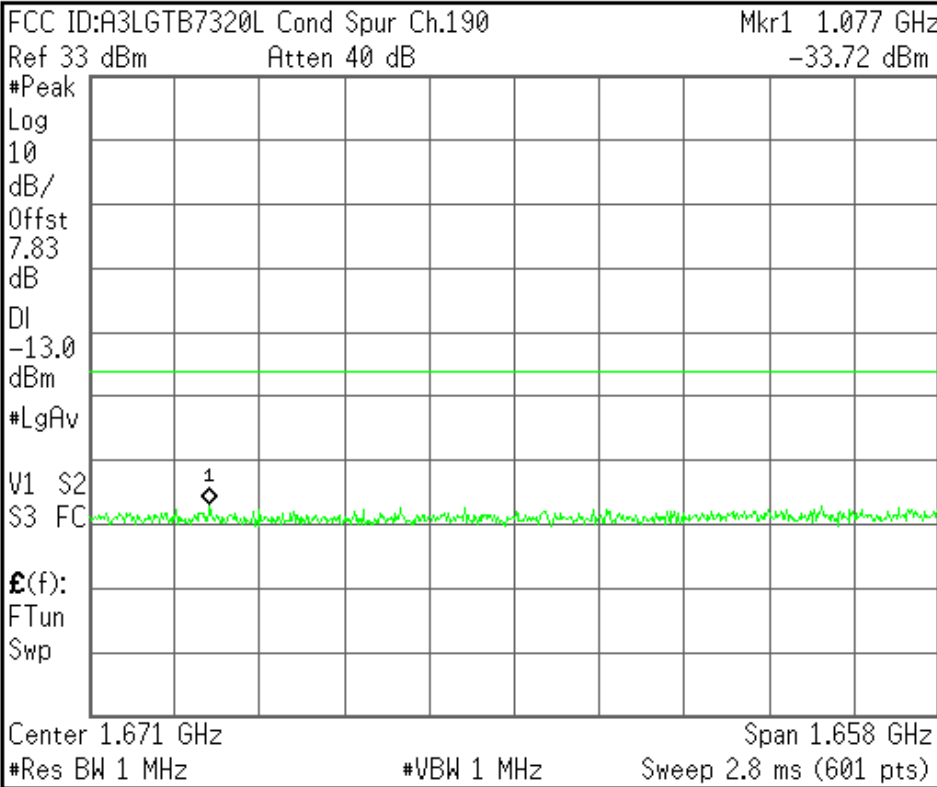
<b>Center Freq</b> 420.800000 MHz
<b>Start Freq</b> 10.0000000 MHz
<b>Stop Freq</b> 831.600000 MHz
<b>CF Step</b> 82.1600000 MHz Auto Man
<b>Freq Offset</b> 0.00000000 Hz
<b>Signal Track</b> On Off

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

Agilent

R L

Freq/Channel



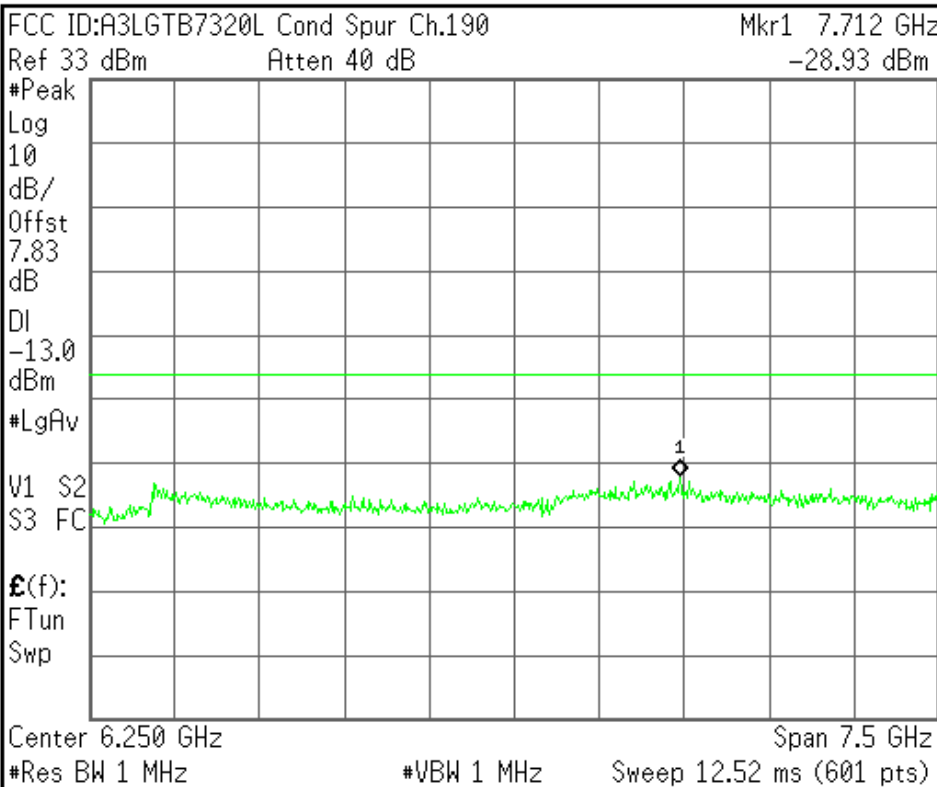
<b>Center Freq</b> 1.67080000 GHz
<b>Start Freq</b> 841.600000 MHz
<b>Stop Freq</b> 2.50000000 GHz
<b>CF Step</b> 165.840000 MHz Auto Man
<b>Freq Offset</b> 0.00000000 Hz
<b>Signal Track</b> On Off

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

Agilent

R L

Freq/Channel



<b>Center Freq</b> 6.25000000 GHz
<b>Start Freq</b> 2.50000000 GHz
<b>Stop Freq</b> 10.00000000 GHz
<b>CF Step</b> 750.000000 MHz 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

FCC ID:A3LGTB7320L Cond Spur Ch.251

Ref 33 dBm

Atten 40 dB

#Peak

Log

10

dB/

Offst

7.83

dB

DI

-13.0

dBm

#LgAv

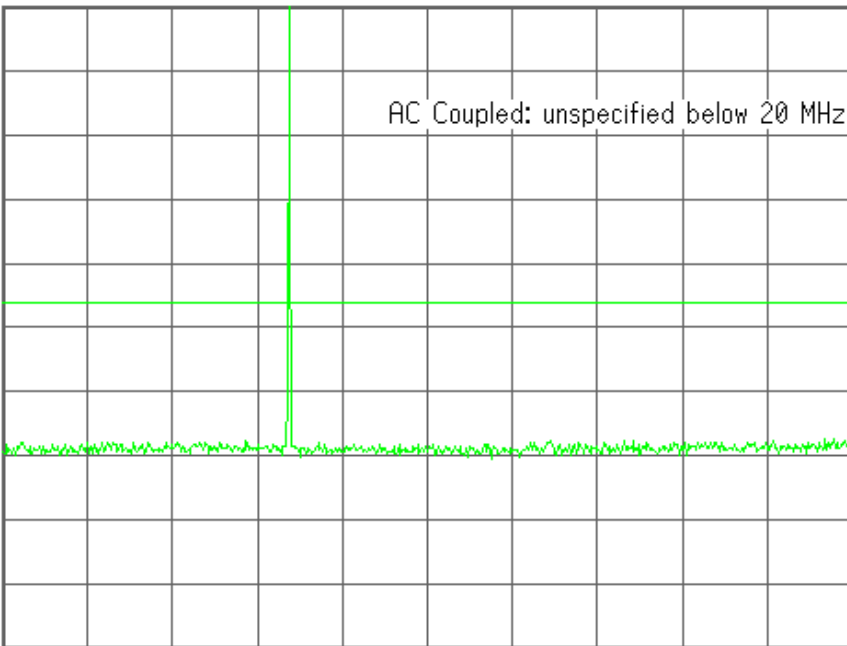
M1 S2

S3 FC

£(f):

FTun

Swp



Center 1.255 GHz

Span 2.49 GHz

#Res BW 1 MHz

#VBW 1 MHz

Sweep 4.16 ms (601 pts)

Center Freq  
1.25500000 GHz

Start Freq  
10.0000000 MHz

Stop Freq  
2.50000000 GHz

CF Step  
249.000000 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:A3LGTB7320L Cond Spur Ch.251

Mkr1 204.6 MHz

Ref 33 dBm

Atten 40 dB

-33.96 dBm

#Peak

Log

10

dB/

Offst

7.83

dB

DI

-13.0

dBm

#LgAv

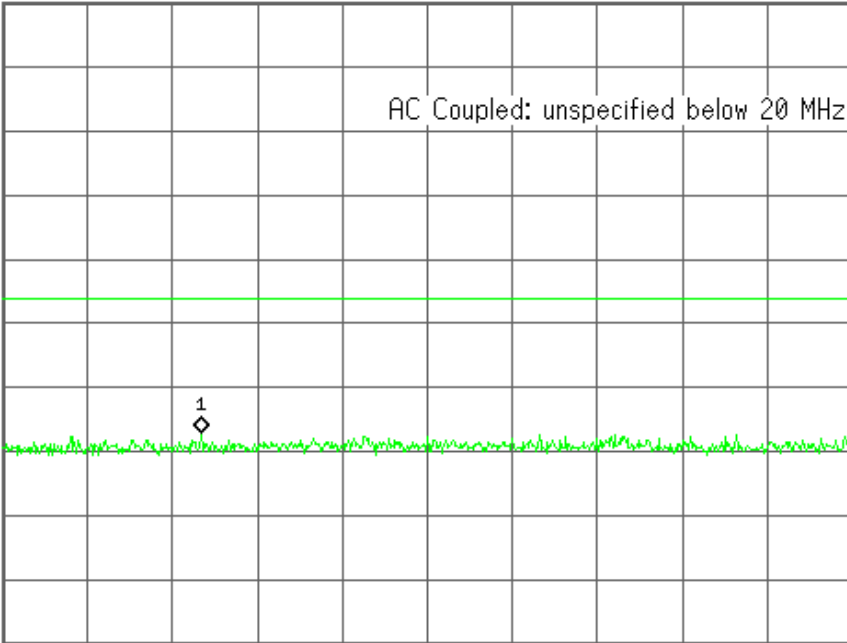
V1 S2

S3 FC

£(f):

FTun

Swp



Center 426.9 MHz

Span 833.8 MHz

#Res BW 1 MHz

#VBW 1 MHz

Sweep 1.4 ms (601 pts)

Center Freq  
426.900000 MHz

Start Freq  
10.0000000 MHz

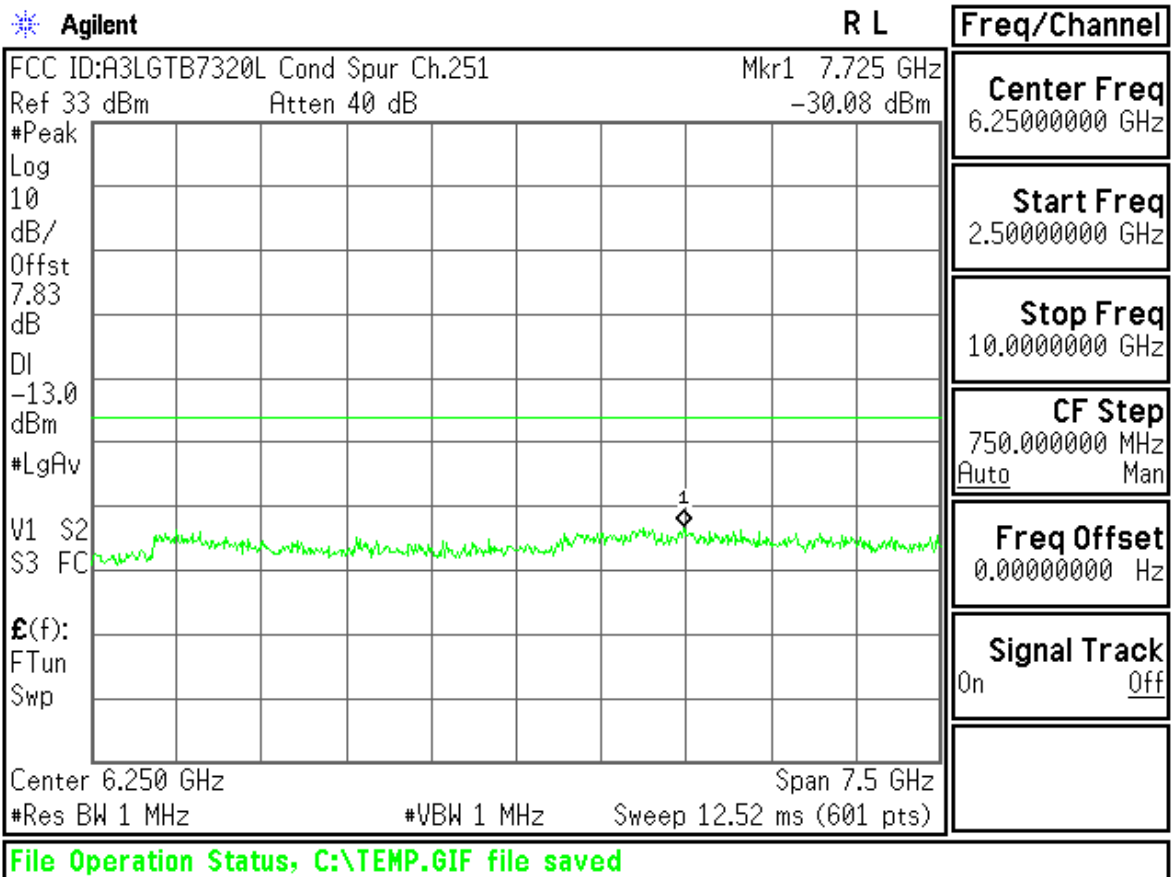
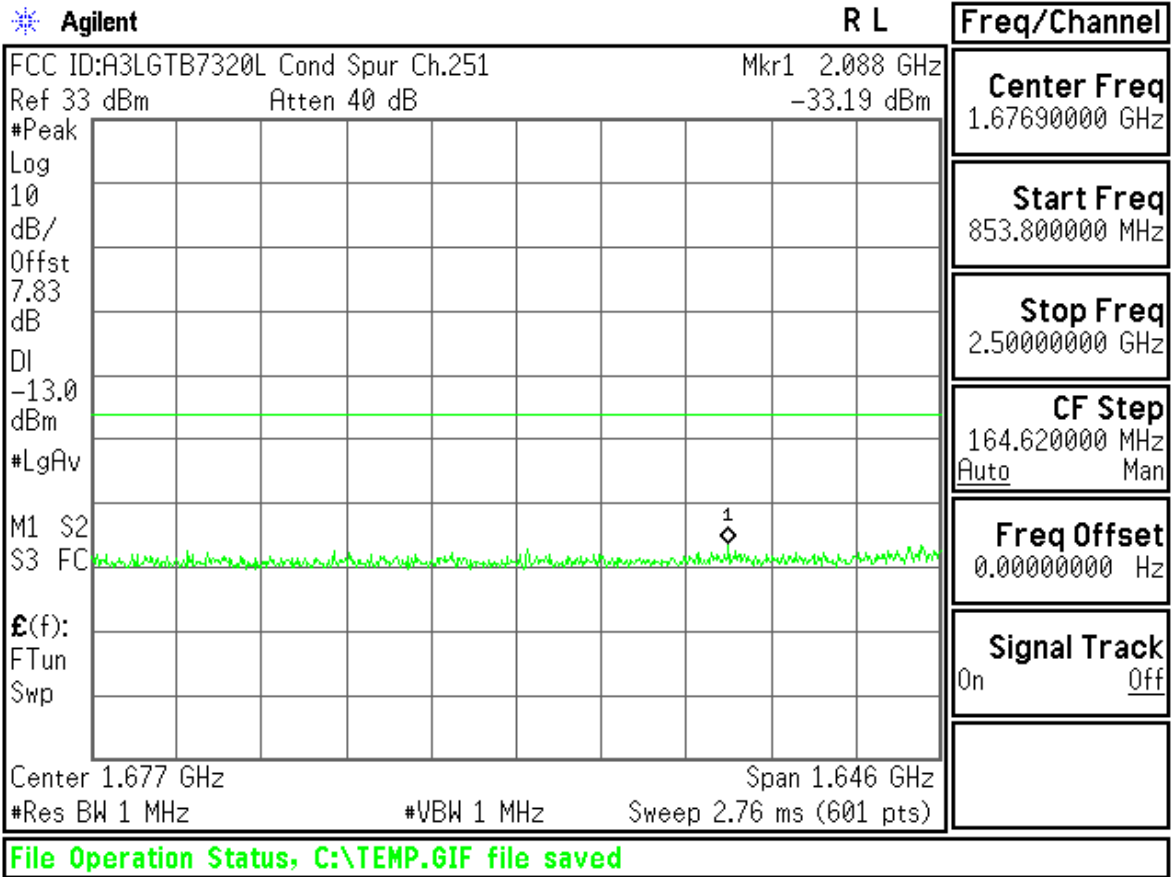
Stop Freq  
843.800000 MHz

CF Step  
83.3800000 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

FCC ID:A3LGTB7320L Band Edge Ch.128

Ref 33 dBm

Atten 40 dB

#Avg

Log

10

dB/

Offst

7.83

dB

DI

-13.0

dBm

#LgAv

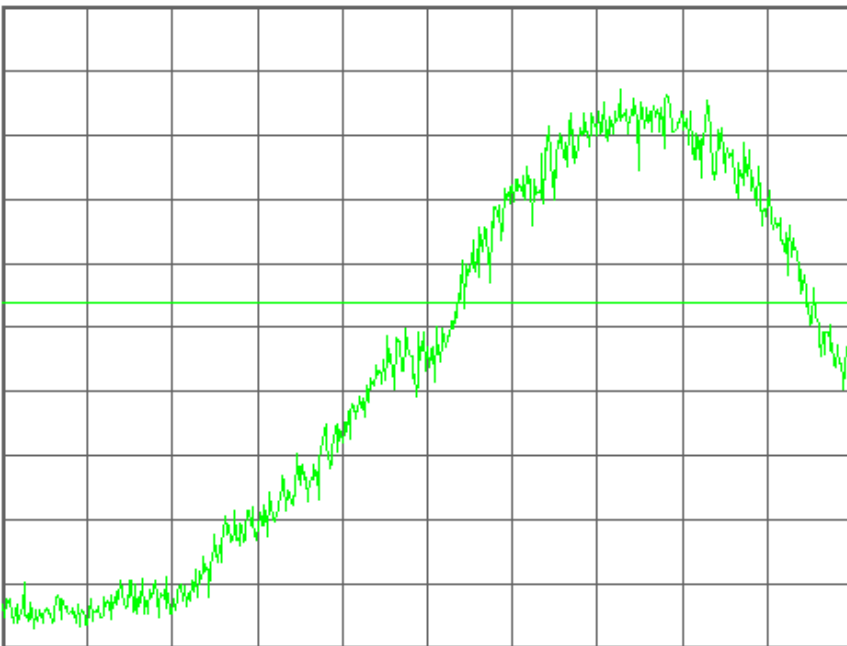
M1 S2

S3 FC

£(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:A3LGTB7320L Band Edge Ch.128

Mkr1 823.996 0 MHz

Ref 33 dBm

Atten 40 dB

-15.15 dBm

#Avg

Log

10

dB/

Offst

7.83

dB

DI

-13.0

dBm

#LgAv

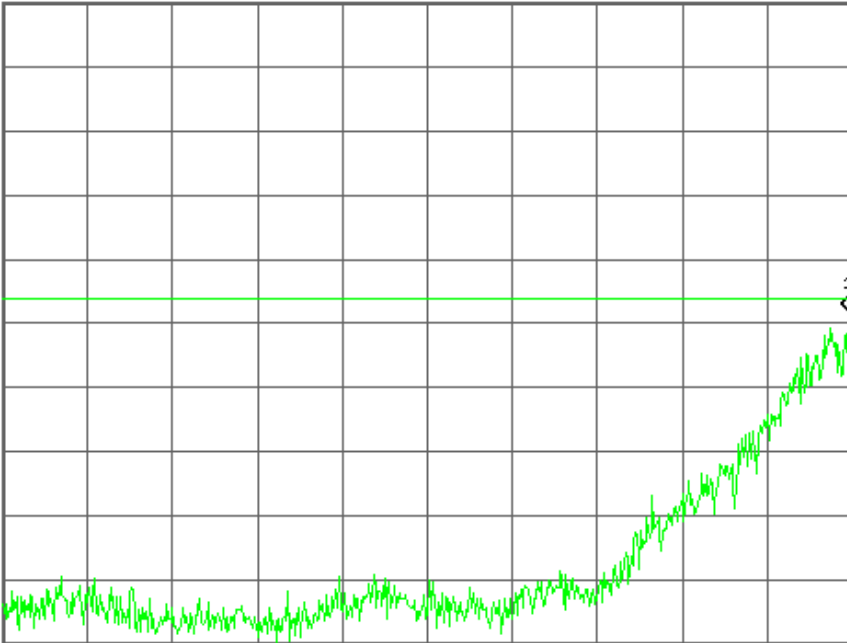
M1 S2

S3 FC

£(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:A3LGTB7320L Band Edge Ch.251

Ref 33 dBm Atten 40 dB

#Avg

Log

10

dB/

Offst

7.83

dB

DI

-13.0

dBm

#LgAv

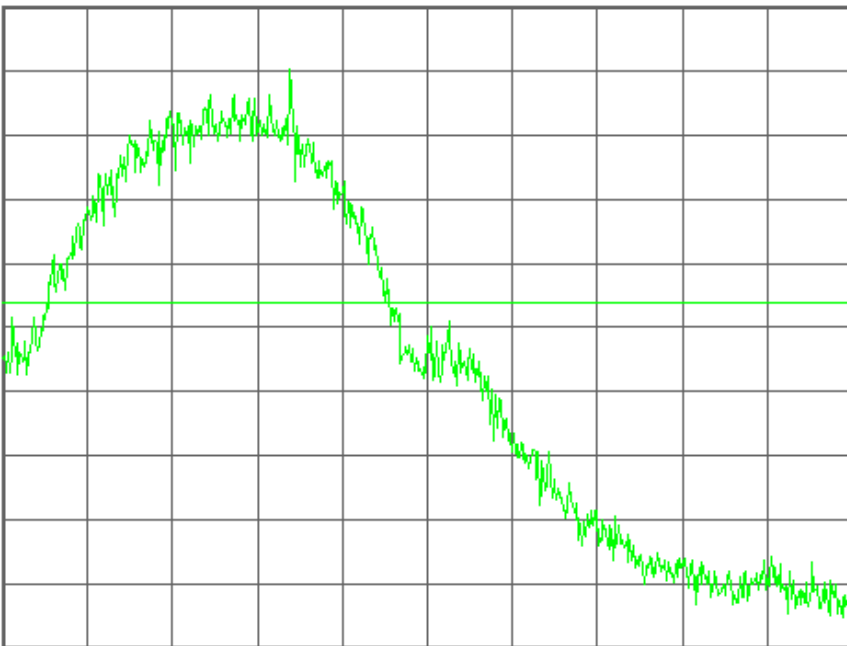
M1 S2

S3 FC

£(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:A3LGTB7320L Band Edge Ch.251

Mkr1 849.014 7 MHz

Ref 33 dBm Atten 40 dB

-16.90 dBm

#Avg

Log

10

dB/

Offst

7.83

dB

DI

-13.0

dBm

#LgAv

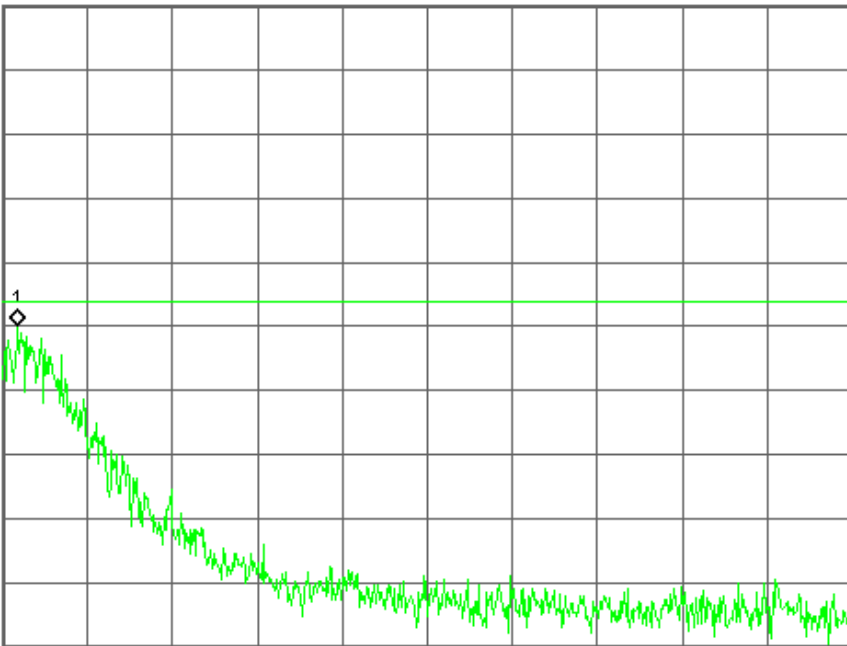
M1 S2

S3 FC

£(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:A3LGTB7320L 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 %
243.4622 kHz	<b>x dB</b>	-26.00 dB
<b>Transmit Freq Error</b>	-172.160 Hz	
<b>x dB Bandwidth</b>	305.311 kHz	

Freq/Channel	
<b>Center Freq</b>	1.85020000 GHz
<b>Start Freq</b>	1.84970000 GHz
<b>Stop Freq</b>	1.85070000 GHz
<b>CF Step</b>	100.000000 kHz 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 T

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

Occupied Bandwidth

FCC ID:A3LGTB7320L 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 %
240.3677 kHz	<b>x dB</b>	-26.00 dB
<b>Transmit Freq Error</b>	-370.296 Hz	
<b>x dB Bandwidth</b>	315.396 kHz	

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

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

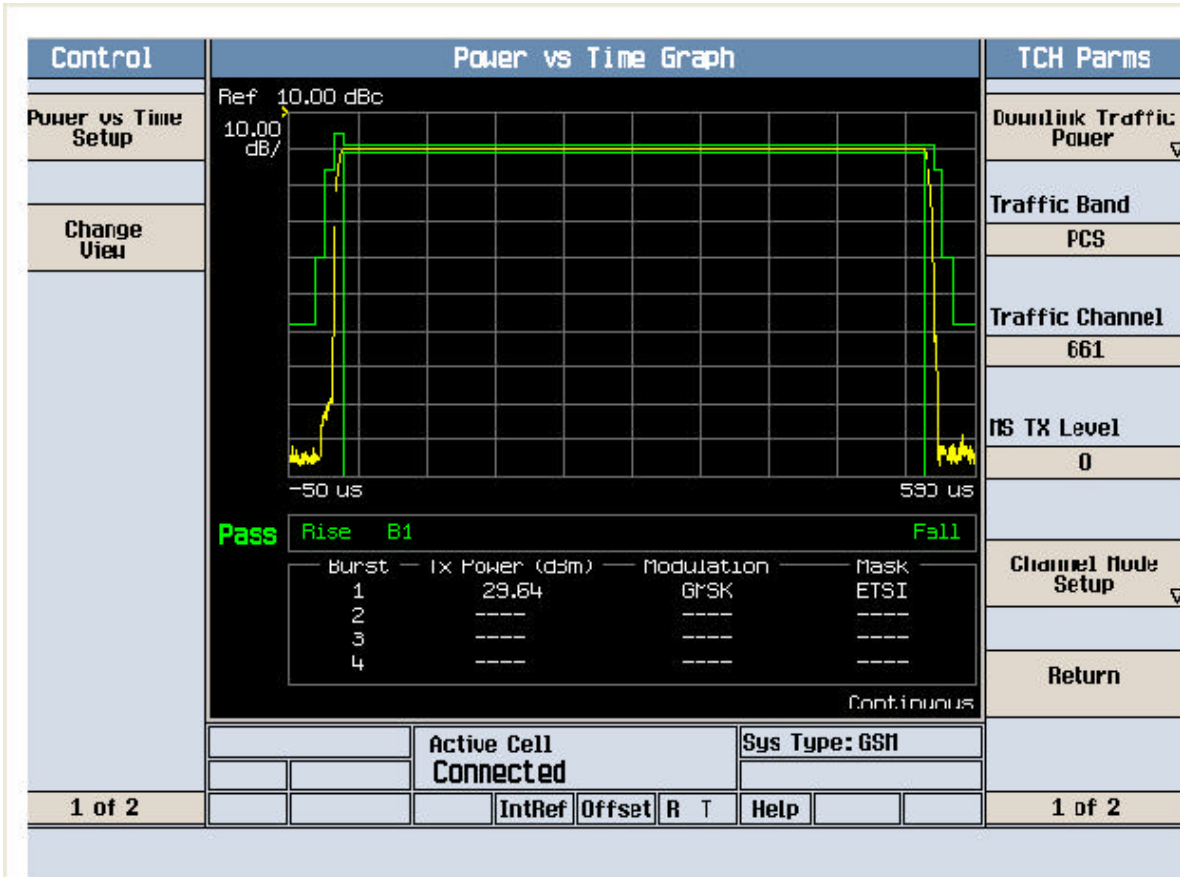
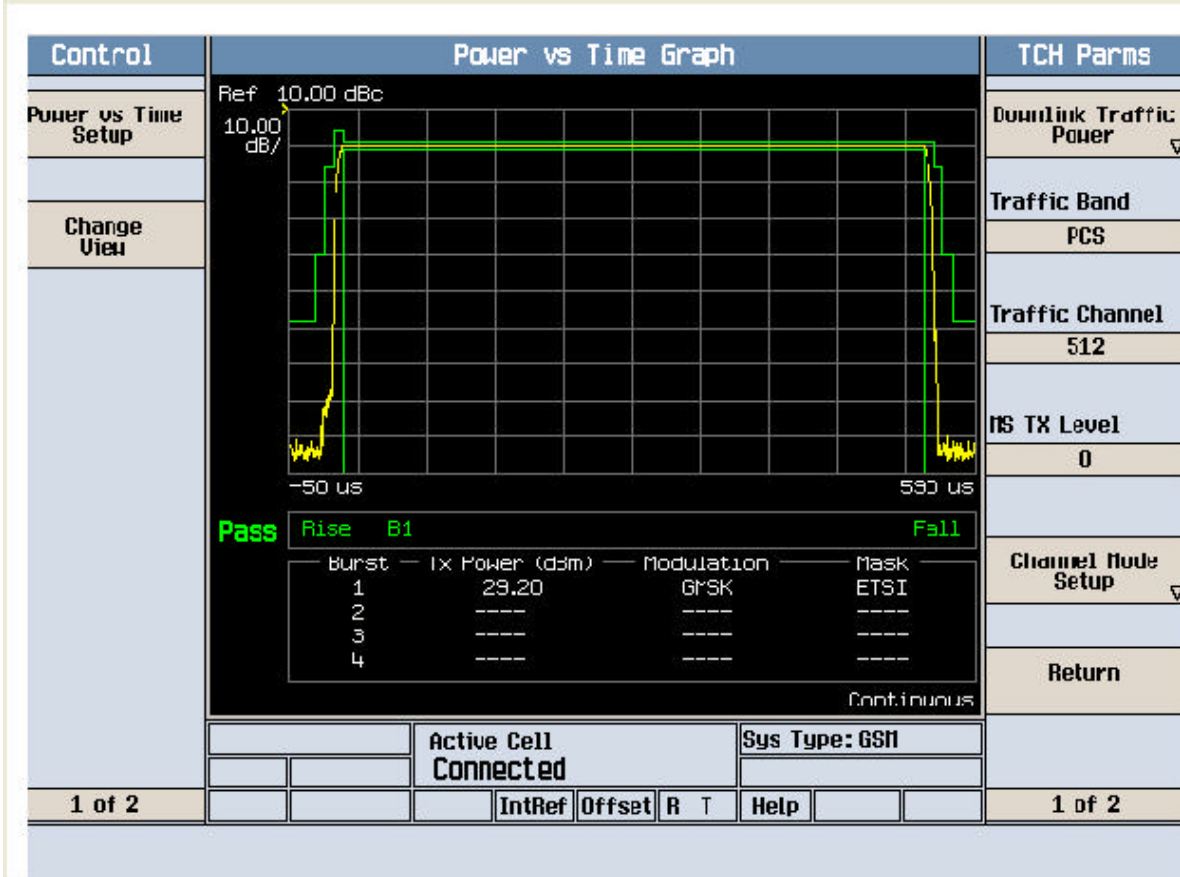
<b>Ch Freq</b> 1.9098 GHz <span style="float: right;"><b>Trig</b> Free</span> Occupied Bandwidth <span style="float: right;">[ ] [ ]</span>	<b>Center Freq</b> 1.90980000 GHz								
FCC ID:A3LGTB7320L 0BW Ch.810 Ref 30 dBm Atten 40 dB	<b>Start Freq</b> 1.90930000 GHz								
#Peak Log 10 dB/ Offst 8.89 dB	<b>Stop Freq</b> 1.91030000 GHz								
	<b>CF Step</b> 100.000000 kHz Auto Man								
Center 1.909 800 GHz <span style="float: right;">Span 1 MHz</span> #Res BW 3 kHz <span style="margin-left: 100px;">#VBW 3 kHz</span> <span style="margin-left: 100px;">#Sweep 1 s (601 pts)</span>	<b>Freq Offset</b> 0.00000000 Hz								
<table style="width:100%; border-collapse: collapse;"> <tr> <td style="width:50%;"><b>Occupied Bandwidth</b></td> <td style="width:50%;"><b>Occ BW % Pwr</b> 99.00 %</td> </tr> <tr> <td style="text-align: center;">247.1095 kHz</td> <td style="text-align: center;"><b>x dB</b> -26.00 dB</td> </tr> <tr> <td><b>Transmit Freq Error</b></td> <td>-47.797 Hz</td> </tr> <tr> <td><b>x dB Bandwidth</b></td> <td>302.409 kHz</td> </tr> </table>	<b>Occupied Bandwidth</b>	<b>Occ BW % Pwr</b> 99.00 %	247.1095 kHz	<b>x dB</b> -26.00 dB	<b>Transmit Freq Error</b>	-47.797 Hz	<b>x dB Bandwidth</b>	302.409 kHz	<b>Signal Track</b> On Off
<b>Occupied Bandwidth</b>	<b>Occ BW % Pwr</b> 99.00 %								
247.1095 kHz	<b>x dB</b> -26.00 dB								
<b>Transmit Freq Error</b>	-47.797 Hz								
<b>x dB Bandwidth</b>	302.409 kHz								
File Operation Status, C:\TEMP.GIF file saved									

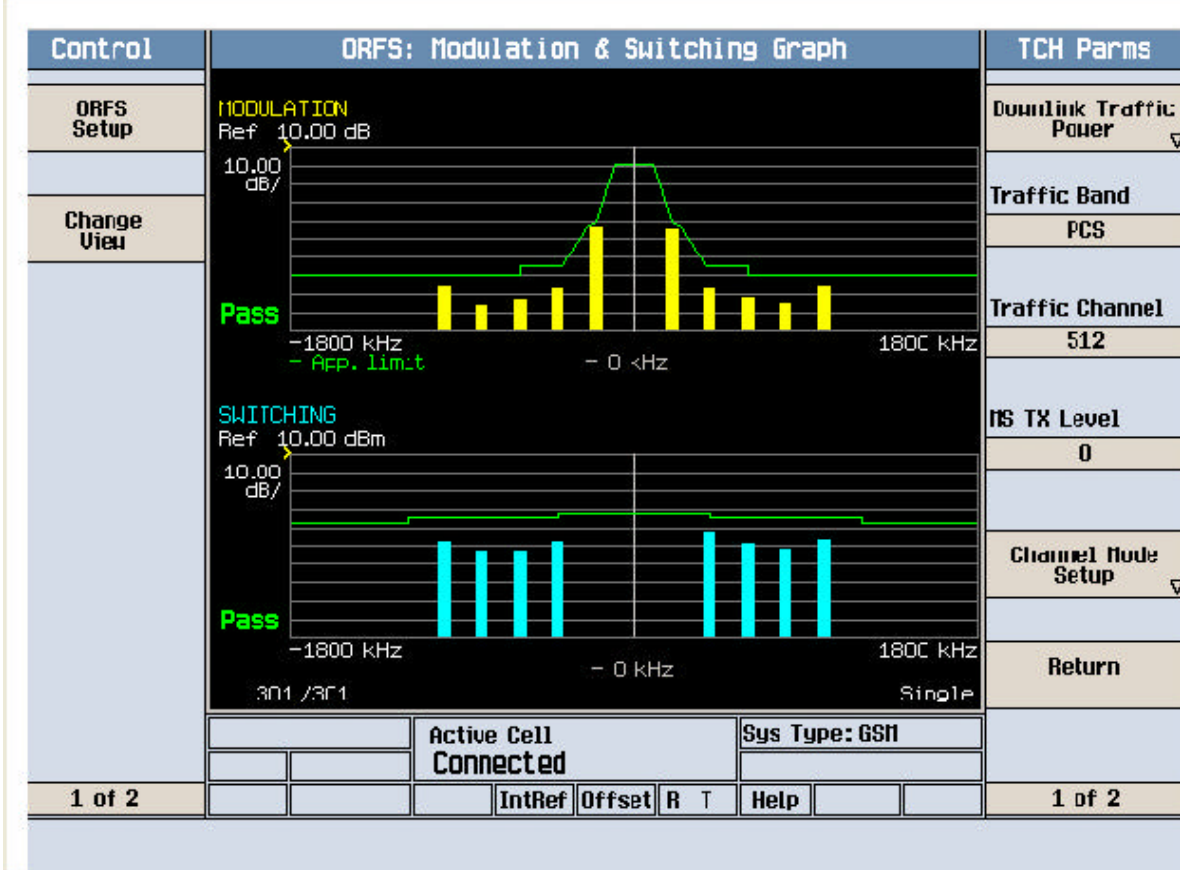
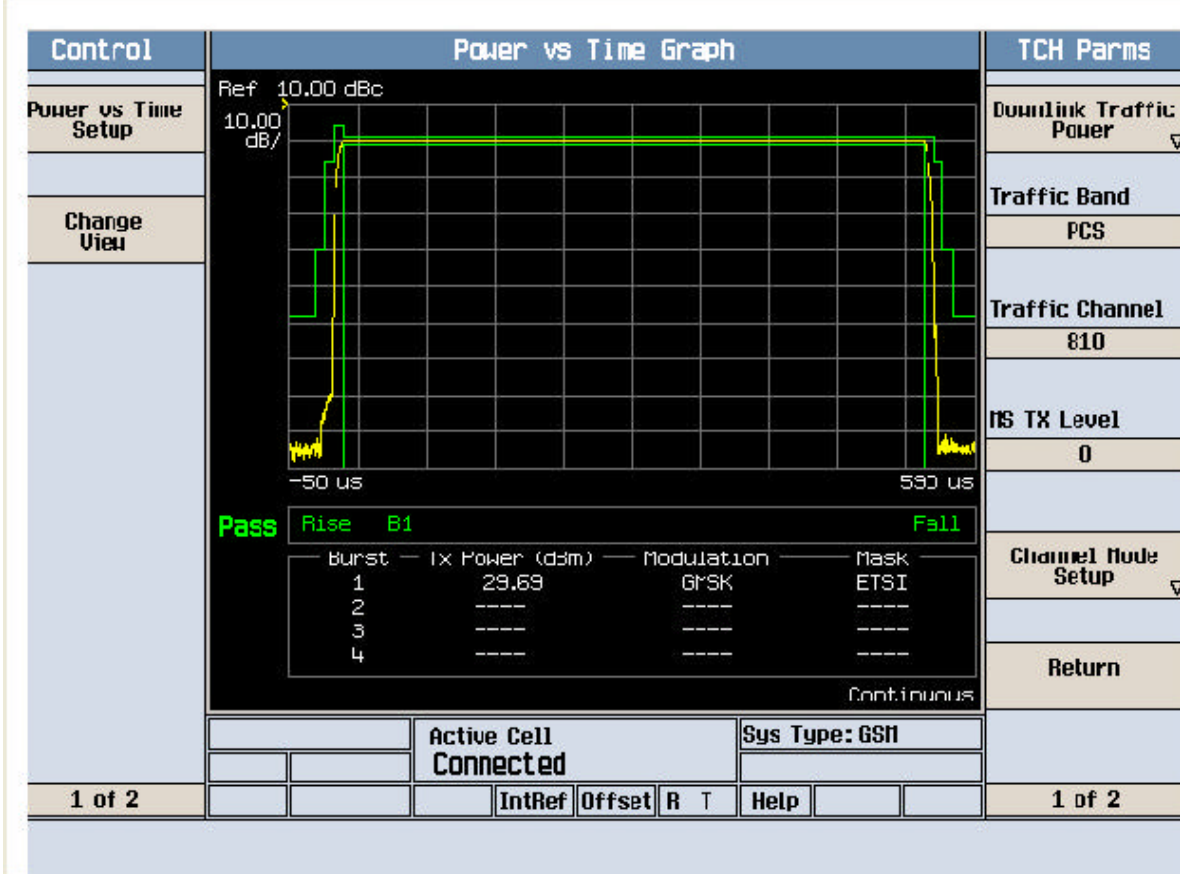
FCC ID : A3LGTB7320L Transmit Power 512CH

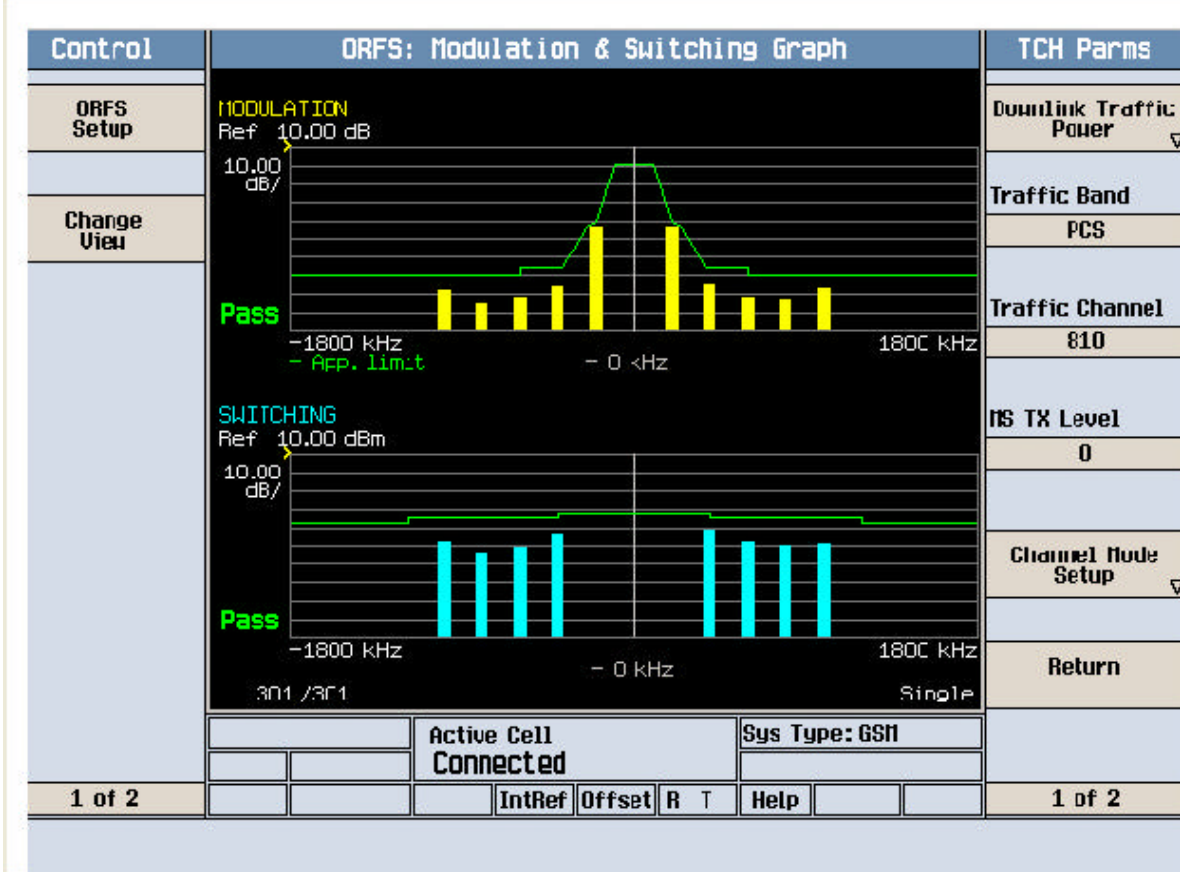
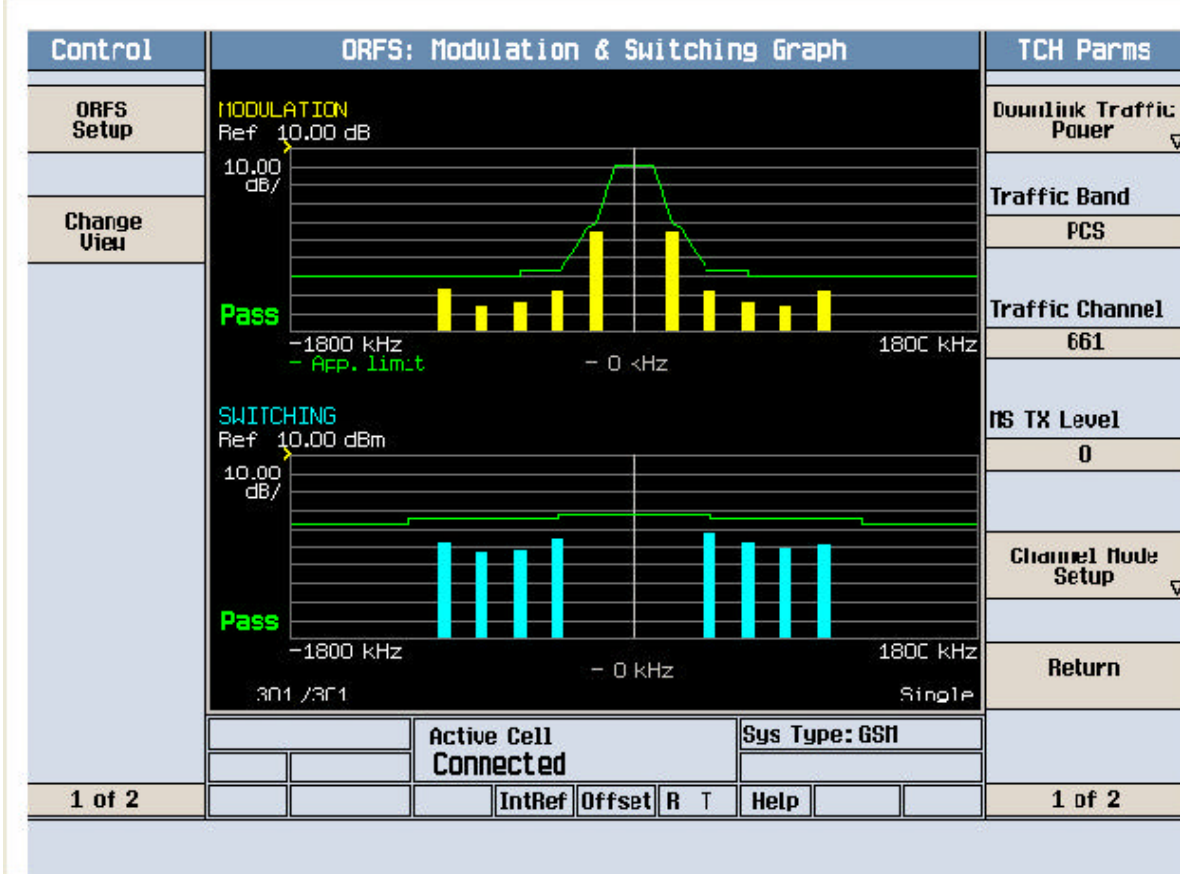
Measurement/Instrument Screen																																	
Control	Transmit Power						TCH Parms																										
Transmit Power Setup	<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <th></th> <th>Burst 1</th> <th>Burst 2</th> <th>Burst 3</th> <th>Burst 4</th> </tr> <tr> <td>Burst Power</td> <td>29.27</td> <td>----</td> <td>----</td> <td>----</td> </tr> <tr> <td>Estimated Carrier Power</td> <td>29.27</td> <td>----</td> <td>----</td> <td>----</td> </tr> </table>							Burst 1	Burst 2	Burst 3	Burst 4	Burst Power	29.27	----	----	----	Estimated Carrier Power	29.27	----	----	----	Downlink Traffic Power Traffic Band PCS Traffic Channel 512											
	Burst 1	Burst 2	Burst 3	Burst 4																													
Burst Power	29.27	----	----	----																													
Estimated Carrier Power	29.27	----	----	----																													
Supp Monitor Positions	<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <th colspan="4" style="text-align: center;">Phase &amp; Frequency Error</th> </tr> <tr> <th></th> <th>Peak Phase °</th> <th>RMS Phase °</th> <th>Frequency Hz</th> </tr> <tr> <td>Minimum</td> <td>2.27</td> <td>0.90</td> <td>-4.18</td> </tr> <tr> <td>Maximum</td> <td>4.90</td> <td>1.63</td> <td>19.93</td> </tr> <tr> <td>Average</td> <td>3.57</td> <td>1.31</td> <td>9.47</td> </tr> <tr> <td>Pass/Fail</td> <td>Pass</td> <td>Pass</td> <td>Pass</td> </tr> </table>						Phase & Frequency Error					Peak Phase °	RMS Phase °	Frequency Hz	Minimum	2.27	0.90	-4.18	Maximum	4.90	1.63	19.93	Average	3.57	1.31	9.47	Pass/Fail	Pass	Pass	Pass	MS TX Level 0 Channel Mode Setup Return		
Phase & Frequency Error																																	
	Peak Phase °	RMS Phase °	Frequency Hz																														
Minimum	2.27	0.90	-4.18																														
Maximum	4.90	1.63	19.93																														
Average	3.57	1.31	9.47																														
Pass/Fail	Pass	Pass	Pass																														
1 of 2	Active Cell Connected <span style="float: right;">Sys Type: GSM</span>						1 of 2																										
	IntRef	Offset	R T	Help																													

Measurement/Instrument Screen										
Control	Transmit Power							TCH Parms		
Transmit Power Setup ▾					Burst 1	Burst 2	Burst 3	Burst 4	Downlink Traffic Power ▾	
	Burst Power				29.75	----	----	----	Traffic Band	
Swap Window Positions	Estimated Carrier Power				29.75	----	----	----	PCS	
								Single	Traffic Channel	661
Phase & Frequency Error										
		Peak Phase °		RMS Phase °		Frequency Hz		MS TX Level		
Minimum		2.39		0.97		-6.08		0		
Maximum		5.08		1.59		15.85		Channel Mode Setup ▾		
Average		3.56		1.26		6.28		Return		
Pass/Fail		Pass		Pass		Pass				
		50 / 50				Single				
		Active Cell Connected				Sys Type: GSM				
1 of 2				IntRef	Offset	R T	Help	1 of 2		

Measurement/Instrument Screen										
Control	Transmit Power							TCH Parms		
Transmit Power Setup ▾					Burst 1	Burst 2	Burst 3	Burst 4	Downlink Traffic Power ▾	
	Burst Power				29.81	----	----	----	Traffic Band	
Swap Window Positions	Estimated Carrier Power				29.81	----	----	----	PCS	
								Single	Traffic Channel	810
Phase & Frequency Error										
		Peak Phase °		RMS Phase °		Frequency Hz		MS TX Level		
Minimum		2.50		1.09		-9.67		0		
Maximum		4.68		1.55		11.78		Channel Mode Setup ▾		
Average		3.57		1.29		1.00		Return		
Pass/Fail		Pass		Pass		Pass				
		50 / 50				Single				
		Active Cell Connected				Sys Type: GSM				
1 of 2				IntRef	Offset	R T	Help	1 of 2		



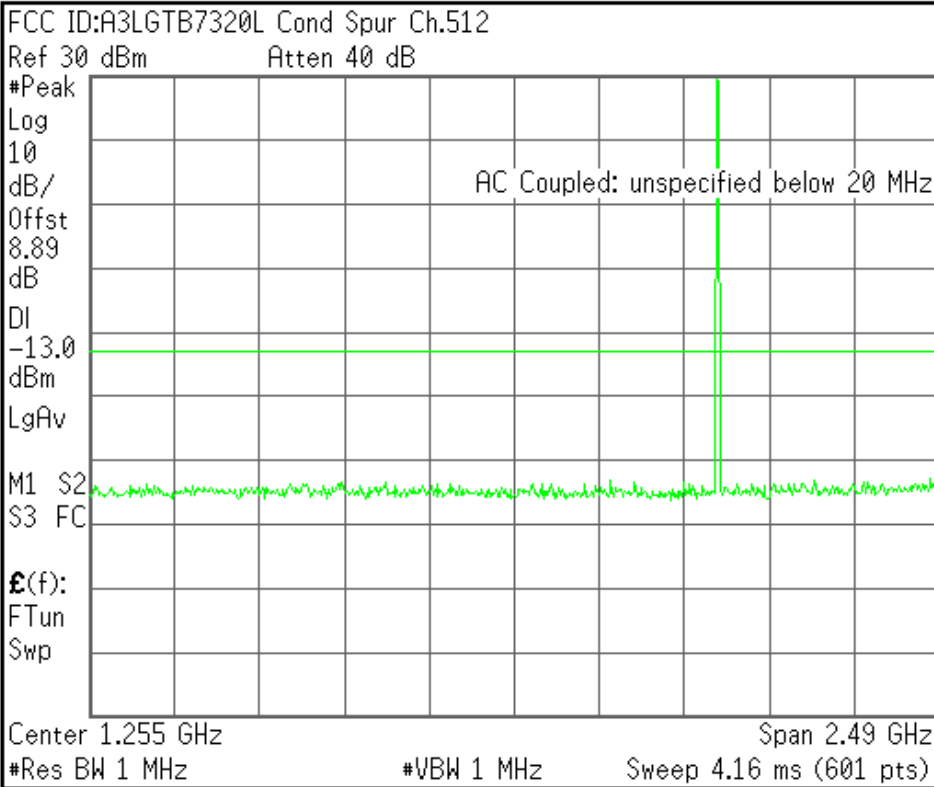




Agilent

R L

Freq/Channel



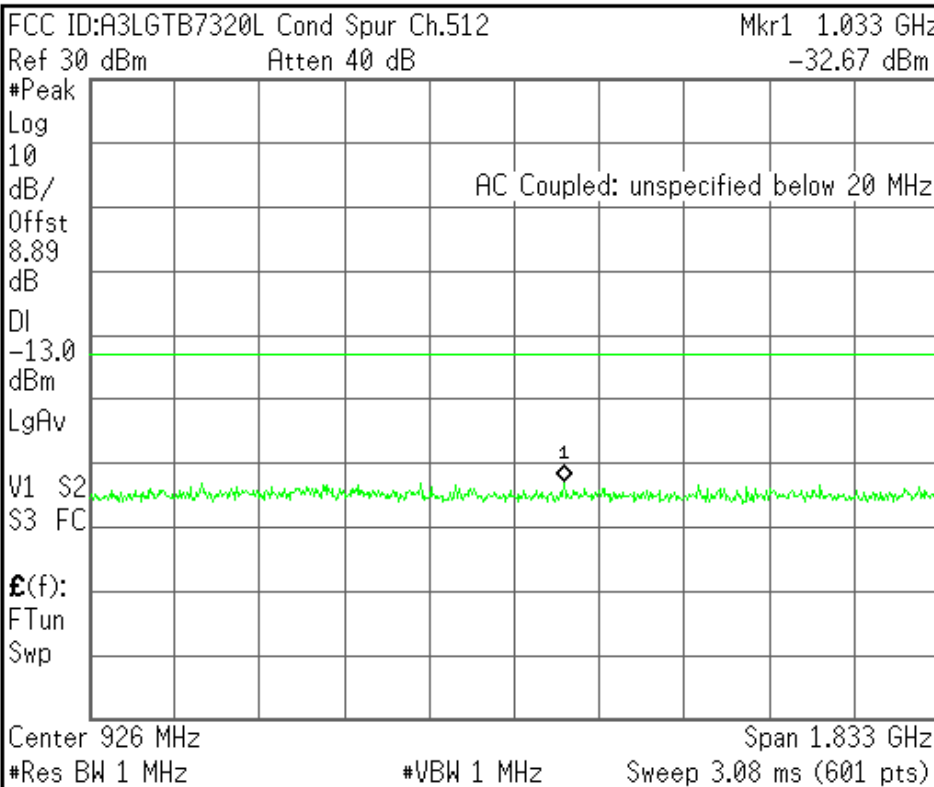
<b>Center Freq</b> 1.25500000 GHz
<b>Start Freq</b> 10.00000000 MHz
<b>Stop Freq</b> 2.50000000 GHz
<b>CF Step</b> 249.000000 MHz Auto Man
<b>Freq Offset</b> 0.00000000 Hz
<b>Signal Track</b> On Off

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Agilent

R L

Freq/Channel



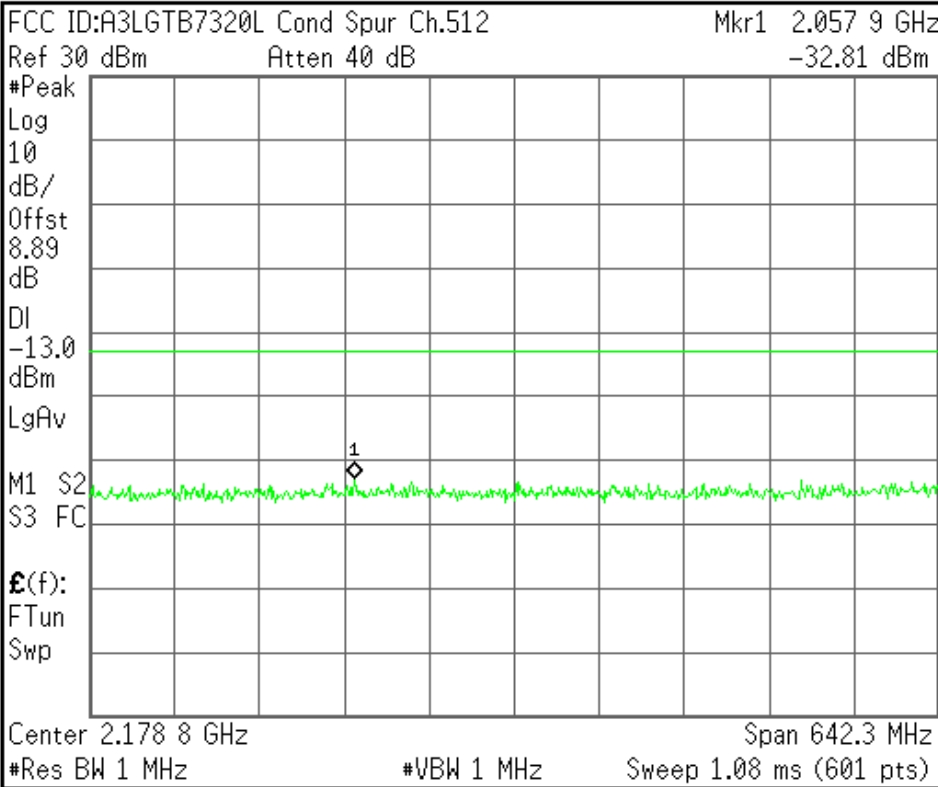
<b>Center Freq</b> 926.350000 MHz
<b>Start Freq</b> 10.00000000 MHz
<b>Stop Freq</b> 1.84270000 GHz
<b>CF Step</b> 183.270000 MHz Auto Man
<b>Freq Offset</b> 0.00000000 Hz
<b>Signal Track</b> On Off

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

Agilent

R L

Freq/Channel



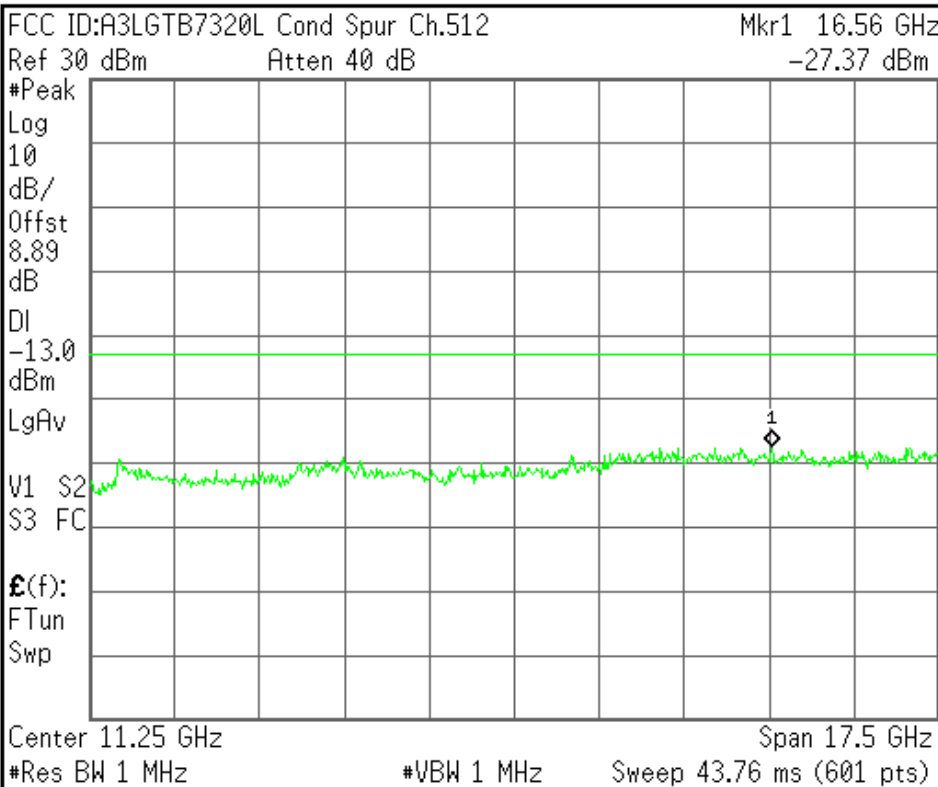
<b>Center Freq</b> 2.17885000 GHz
<b>Start Freq</b> 1.85770000 GHz
<b>Stop Freq</b> 2.50000000 GHz
<b>CF Step</b> 64.2300000 MHz Auto Man
<b>Freq Offset</b> 0.00000000 Hz
<b>Signal Track</b> On Off

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

Agilent

R T

Freq/Channel



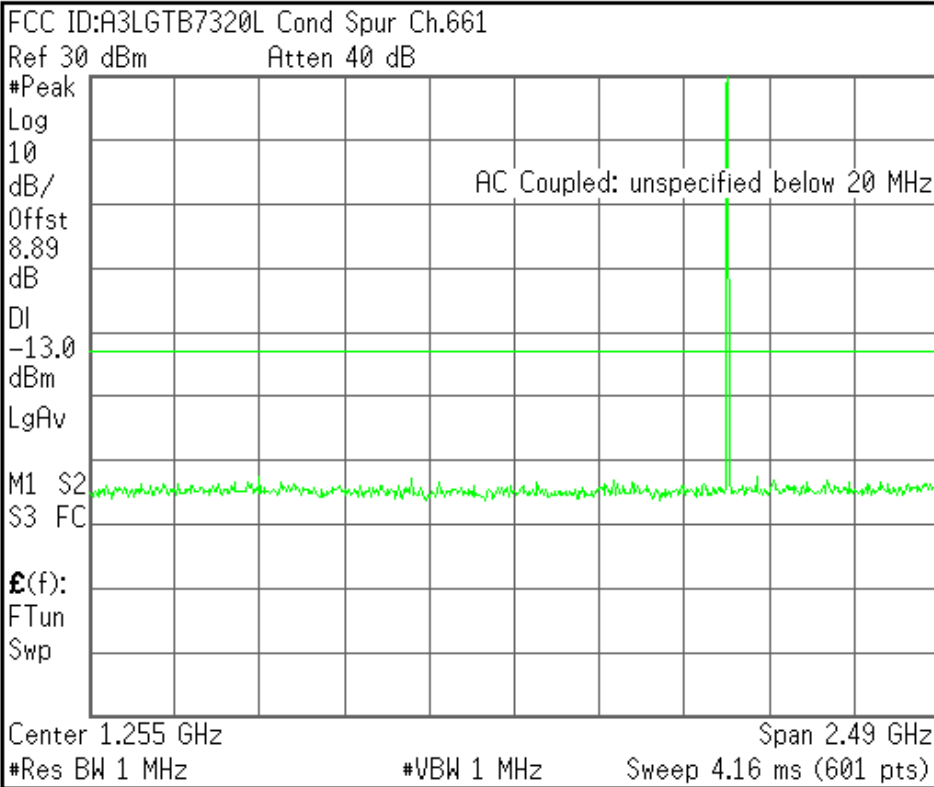
<b>Center Freq</b> 11.2500000 GHz
<b>Start Freq</b> 2.50000000 GHz
<b>Stop Freq</b> 20.0000000 GHz
<b>CF Step</b> 1.75000000 GHz Auto Man
<b>Freq Offset</b> 0.00000000 Hz
<b>Signal Track</b> On Off

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

Agilent

R L

Freq/Channel



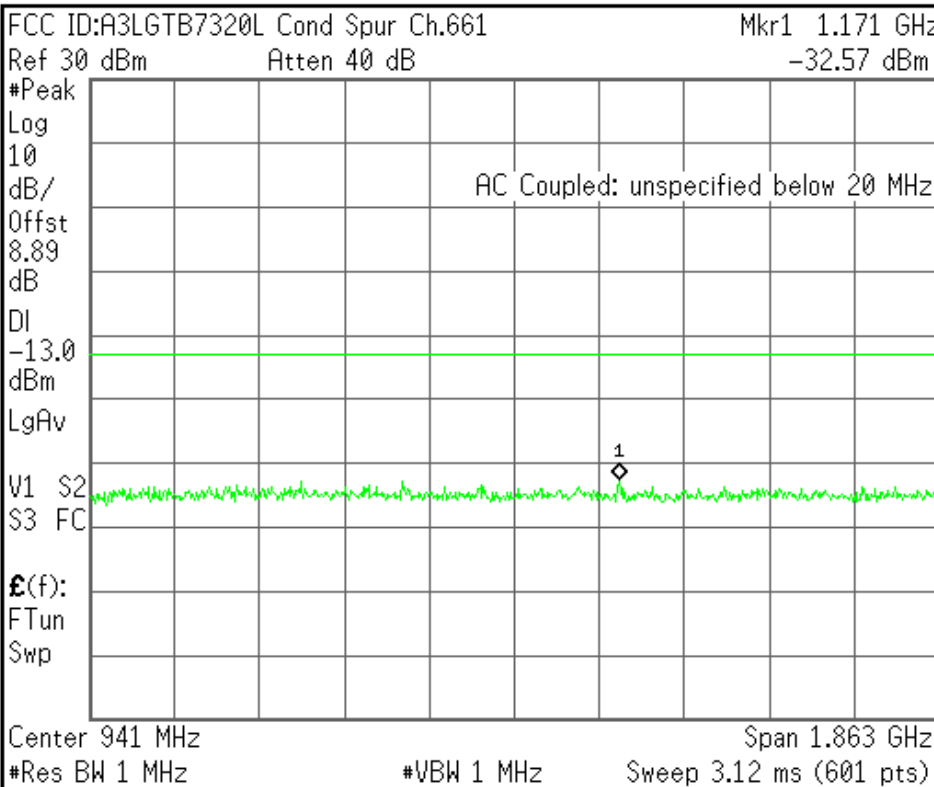
<b>Center Freq</b> 1.25500000 GHz
<b>Start Freq</b> 10.00000000 MHz
<b>Stop Freq</b> 2.50000000 GHz
<b>CF Step</b> 249.0000000 MHz Auto Man
<b>Freq Offset</b> 0.00000000 Hz
<b>Signal Track</b> On Off

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

Agilent

R L

Freq/Channel



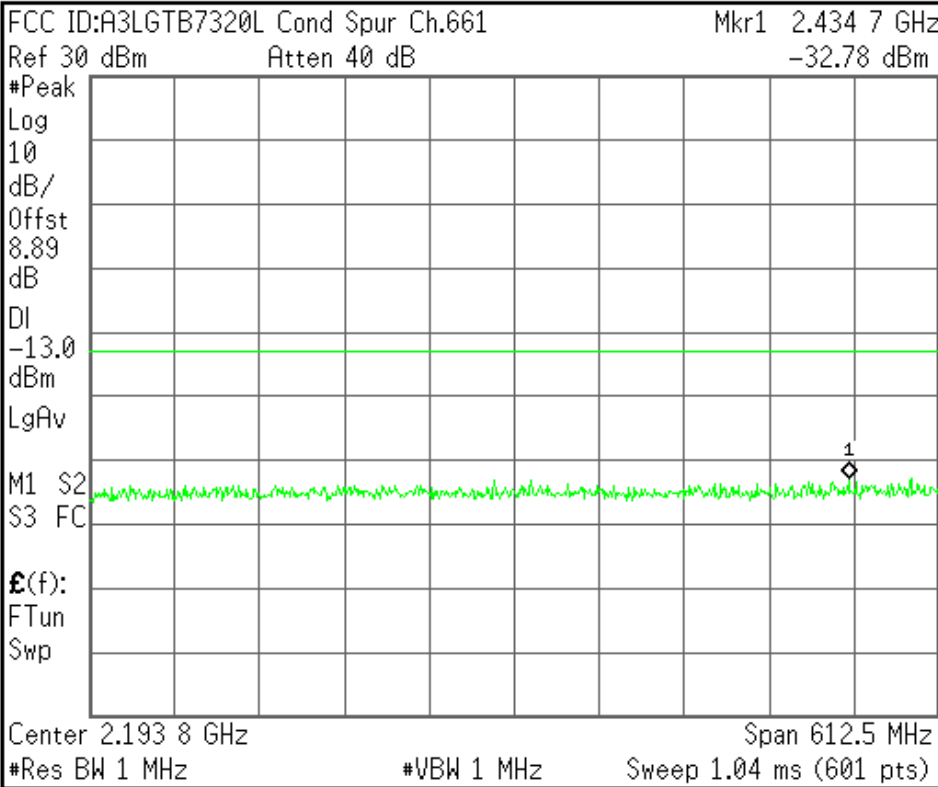
<b>Center Freq</b> 941.250000 MHz
<b>Start Freq</b> 10.00000000 MHz
<b>Stop Freq</b> 1.87250000 GHz
<b>CF Step</b> 186.2500000 MHz Auto Man
<b>Freq Offset</b> 0.00000000 Hz
<b>Signal Track</b> On Off

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

Agilent

R L

Freq/Channel



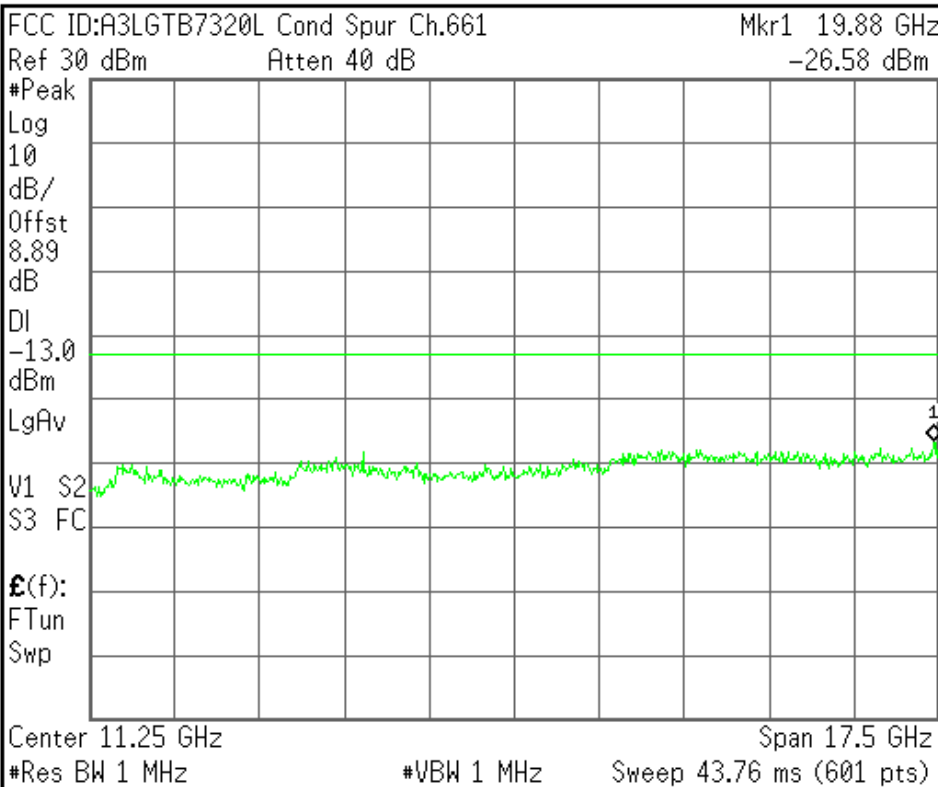
<b>Center Freq</b> 2.19375000 GHz
<b>Start Freq</b> 1.88750000 GHz
<b>Stop Freq</b> 2.50000000 GHz
<b>CF Step</b> 61.2500000 MHz Auto Man
<b>Freq Offset</b> 0.00000000 Hz
<b>Signal Track</b> On Off

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

Agilent

R L

Freq/Channel



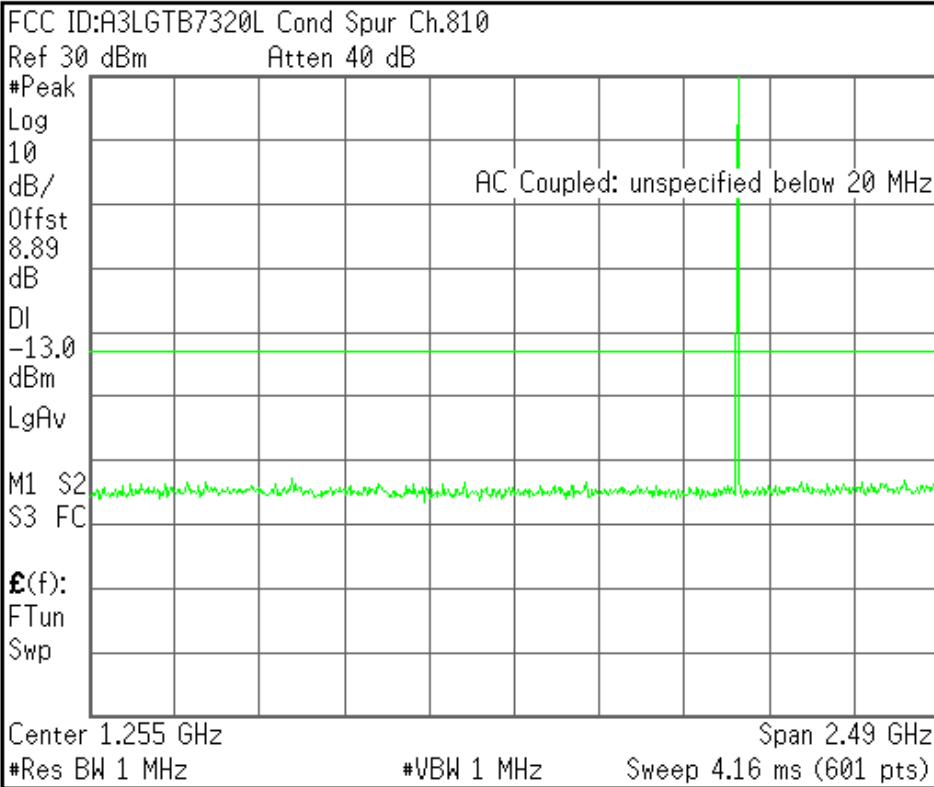
<b>Center Freq</b> 11.2500000 GHz
<b>Start Freq</b> 2.50000000 GHz
<b>Stop Freq</b> 20.0000000 GHz
<b>CF Step</b> 1.75000000 GHz Auto Man
<b>Freq Offset</b> 0.00000000 Hz
<b>Signal Track</b> On Off

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

Agilent

R L

Freq/Channel



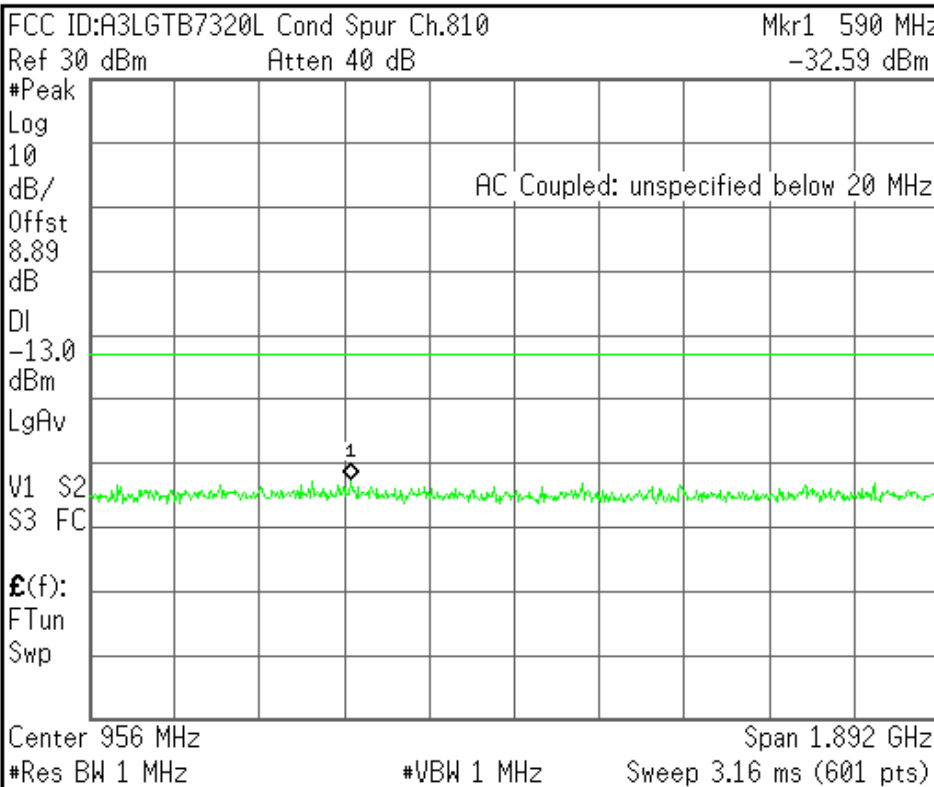
<b>Center Freq</b> 1.25500000 GHz
<b>Start Freq</b> 10.00000000 MHz
<b>Stop Freq</b> 2.50000000 GHz
<b>CF Step</b> 249.000000 MHz Auto Man
<b>Freq Offset</b> 0.00000000 Hz
<b>Signal Track</b> On Off

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

Agilent

R L

Freq/Channel



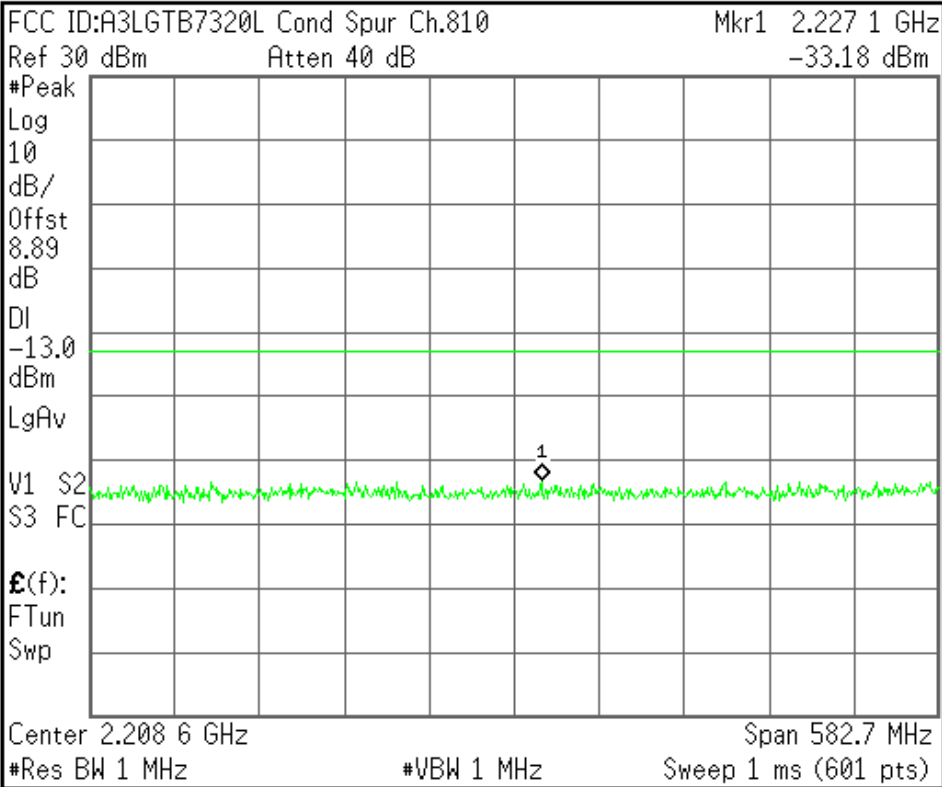
<b>Center Freq</b> 956.150000 MHz
<b>Start Freq</b> 10.00000000 MHz
<b>Stop Freq</b> 1.90230000 GHz
<b>CF Step</b> 189.230000 MHz Auto Man
<b>Freq Offset</b> 0.00000000 Hz
<b>Signal Track</b> On Off

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

Agilent

R L

Freq/Channel



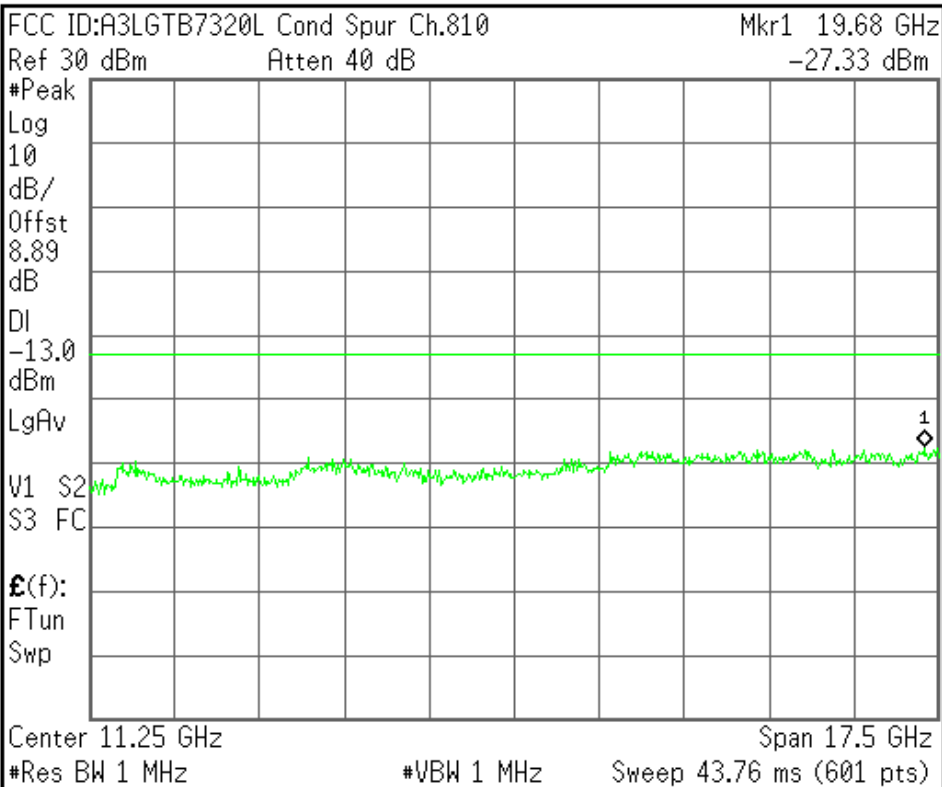
<b>Center Freq</b> 2.20865000 GHz
<b>Start Freq</b> 1.91730000 GHz
<b>Stop Freq</b> 2.50000000 GHz
<b>CF Step</b> 58.2700000 MHz Auto Man
<b>Freq Offset</b> 0.00000000 Hz
<b>Signal Track</b> On Off

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

Agilent

R L

Freq/Channel



<b>Center Freq</b> 11.2500000 GHz
<b>Start Freq</b> 2.50000000 GHz
<b>Stop Freq</b> 20.0000000 GHz
<b>CF Step</b> 1.75000000 GHz 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

FCC ID:A3LGTB7320L Band Edge Ch.512

Ref 30 dBm Atten 40 dB

#Avg

Log

10

dB/

Offst

8.89

dB

DI

-13.0

dBm

PAvg

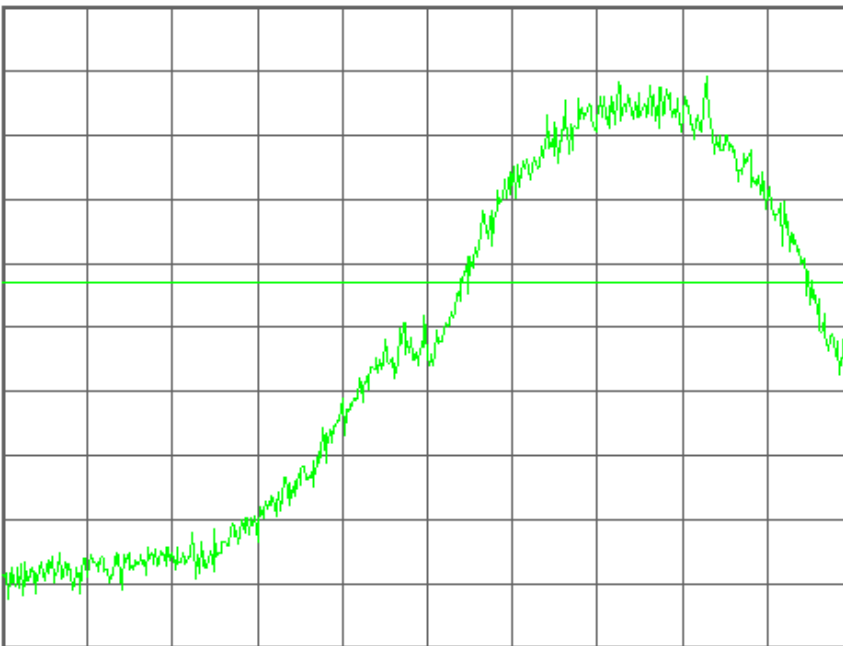
M1 S2

S3 FC

£(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:A3LGTB7320L Band Edge Ch.512

Mkr1 1.849 977 3 GHz

Ref 30 dBm Atten 40 dB

-19.98 dBm

#Avg

Log

10

dB/

Offst

8.89

dB

DI

-13.0

dBm

PAvg

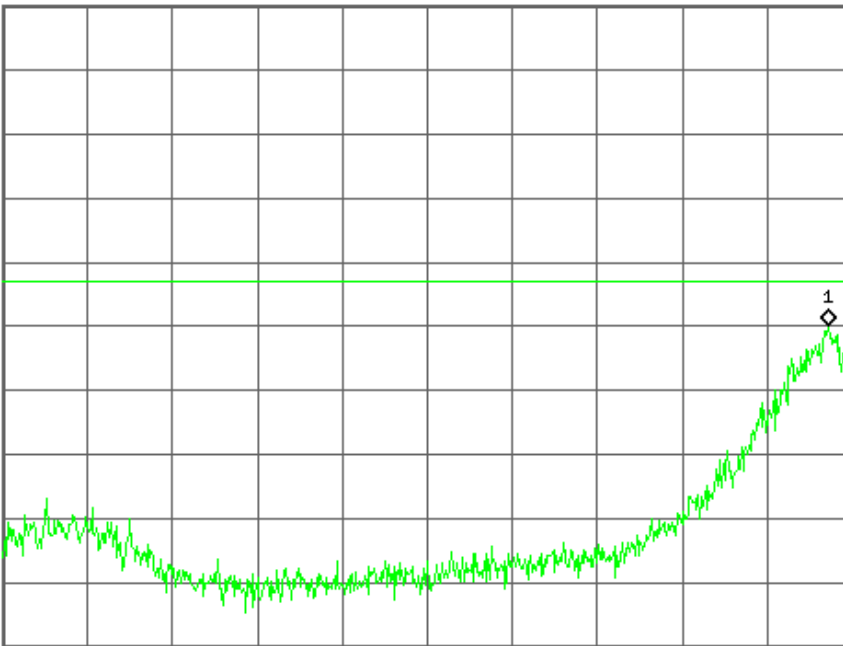
M1 S2

S3 FC

£(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

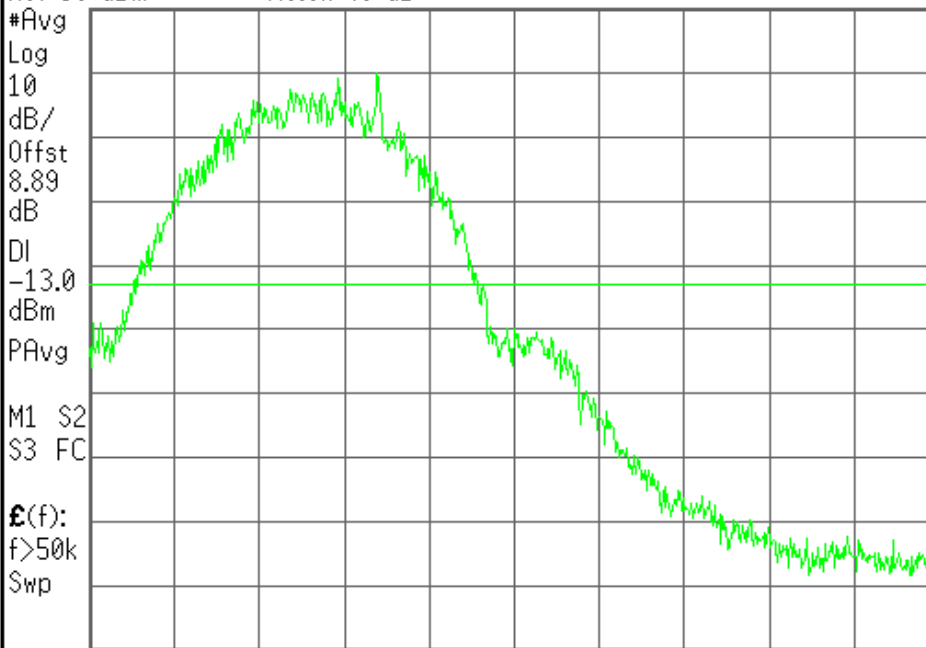
Agilent

R L

Freq/Channel

FCC ID:A3LGTB7320L Band Edge Ch.810

Ref 30 dBm Atten 40 dB



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

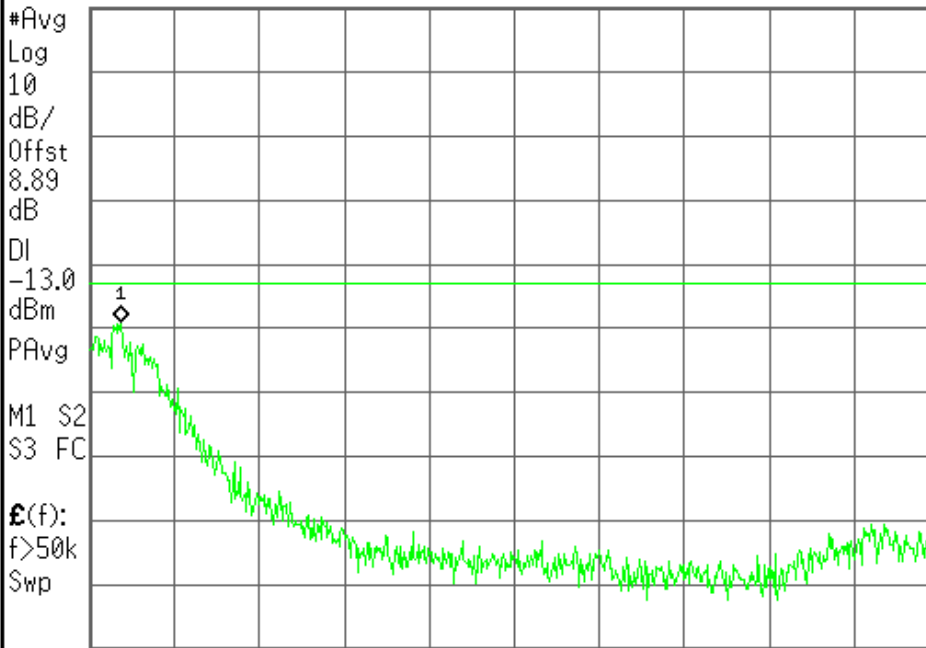
Freq/Channel

FCC ID:A3LGTB7320L Band Edge Ch.810

Mkr1 1.910 021 8 GHz

Ref 30 dBm Atten 40 dB

-18.89 dBm



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

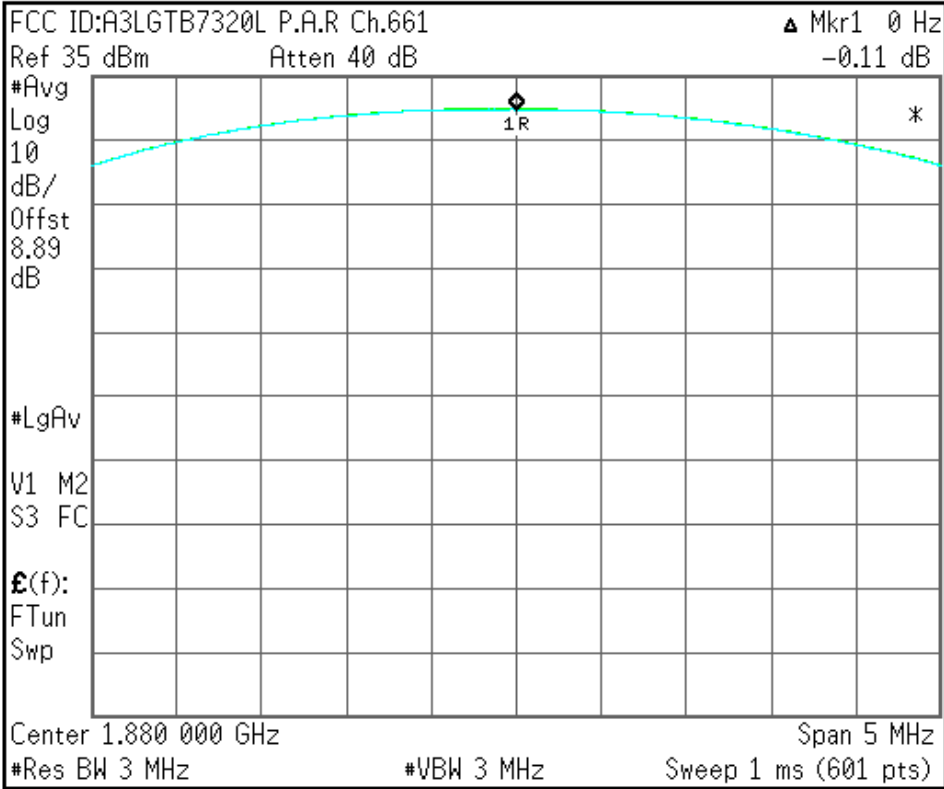
Stop Freq  
1.91081000 GHz

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

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EDGE850

Agilent

R T

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

Occupied Bandwidth

FCC ID:A3LGTB7320L 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 %
242.8340 kHz	<b>x dB</b>	-26.00 dB
<b>Transmit Freq Error</b>	1.909 kHz	
<b>x dB Bandwidth</b>	304.286 kHz	

Freq/Channel	
<b>Center Freq</b>	824.200000 MHz
<b>Start Freq</b>	823.700000 MHz
<b>Stop Freq</b>	824.700000 MHz
<b>CF Step</b>	100.000000 kHz 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 T

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

Occupied Bandwidth

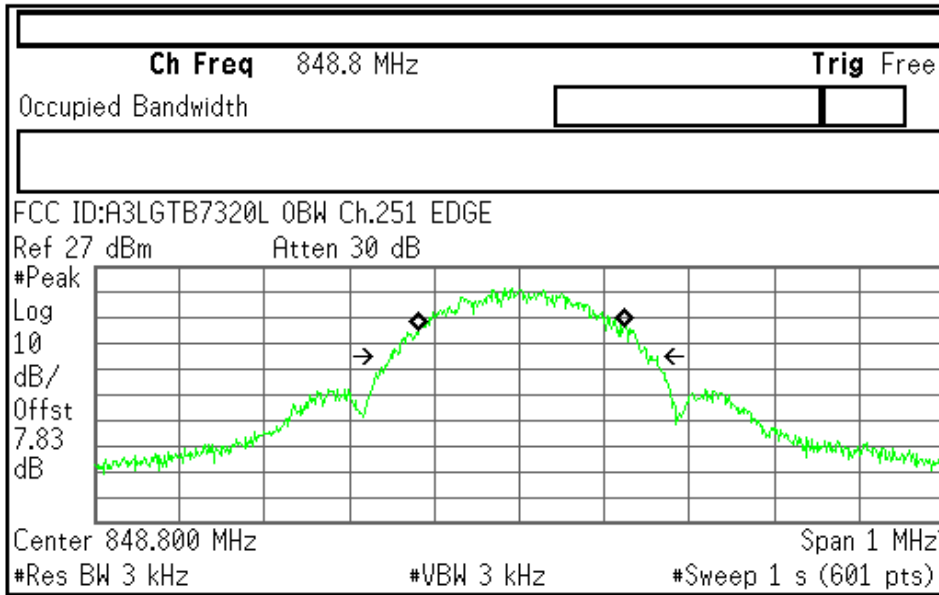
FCC ID:A3LGTB7320L 0BW Ch.190 EDGE  
Ref 27 dBm Atten 30 dB

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 %
241.6876 kHz	<b>x dB</b>	-26.00 dB
<b>Transmit Freq Error</b>	829.143 Hz	
<b>x dB Bandwidth</b>	308.632 kHz	

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

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



<b>Center Freq</b> 848.800000 MHz
<b>Start Freq</b> 848.300000 MHz
<b>Stop Freq</b> 849.300000 MHz
<b>CF Step</b> 100.000000 kHz Auto Man
<b>Freq Offset</b> 0.00000000 Hz
<b>Signal Track</b> On Off

<b>Occupied Bandwidth</b> 244.7449 kHz	<b>Occ BW % Pwr</b> 99.00 %
<b>Transmit Freq Error</b> 2.995 kHz	<b>x dB</b> -26.00 dB
<b>x dB Bandwidth</b> 305.395 kHz	

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

FCC ID : A3LGTB7320L Transmit Power 128CH EDGE

Measurement/Instrument Screen						
Control	EGPRS Transmit Power				PDTCB Parms	
EGPRS Transmit Power Setup	EPK Burst Power		EPK Est Carrier Power		Downlink Traffic Power	
	Minimum	Maximum	Minimum	Maximum	Traffic Band	
	26.44 dBm	27.73 dBm	27.12 dBm	27.15 dBm	GSM850	
	Average	Std Dev	Average	Std Dev	Traffic Channel	
27.08 dBm	0.23 dBm	27.14 dBm	0.00 dBm	128		
	200 /200		Single		HS TX Level	
					Modulation Coding Scheme	
					Return	
	Active Cell Transferring			Sys Type: EGPRS		
1 of 2			IntRef	Offset	R T	1 of 2

Measurement/Instrument Screen															
Control	EGPRS Transmit Power							PDCH Parms							
EGPRS Transmit Power Setup ▾	EPK Burst Power			EPK Est Carrier Power				Downlink Traffic Power ▾							
	Minimum	Maximum		Minimum	Maximum			Traffic Band							
	26.45 dBm	27.70 dBm		27.10 dBm	27.13 dBm			GS1850							
	Average	Std Dev		Average	Std Dev			Traffic Channel							
27.04 dBm	0.22 dBm		27.12 dBm	0.00 dBm			190								
	200 /200							Single							
	Active Cell Transferring							Sys Type: EGPRS							
														NS TX Level ▾	
														Modulation Coding Scheme ▾	
								Return							
1 of 2				IntRef	Offset	R	T		1 of 2						

Measurement/Instrument Screen															
Control	EGPRS Transmit Power							PDCH Parms							
EGPRS Transmit Power Setup ▾	EPK Burst Power			EPK Est Carrier Power				Downlink Traffic Power ▾							
	Minimum	Maximum		Minimum	Maximum			Traffic Band							
	26.29 dBm	27.58 dBm		27.04 dBm	27.06 dBm			GS1850							
	Average	Std Dev		Average	Std Dev			Traffic Channel							
26.99 dBm	0.21 dBm		27.05 dBm	0.00 dBm			251								
	200 /200							Single							
	Active Cell Transferring							Sys Type: EGPRS							
														NS TX Level ▾	
														Modulation Coding Scheme ▾	
								Return							
1 of 2				IntRef	Offset	R	T		1 of 2						

Agilent

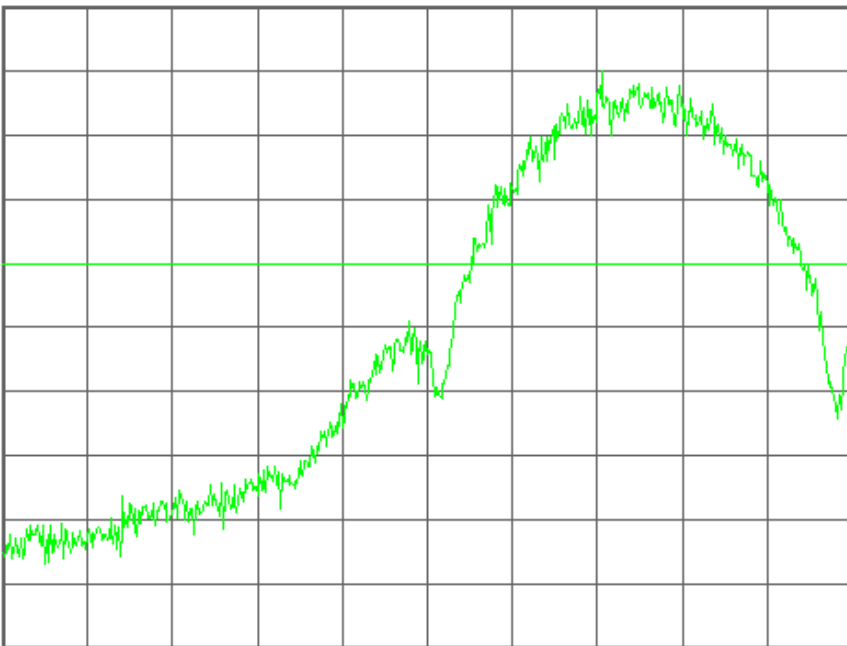
R L

Freq/Channel

FCC ID:A3LGTB7320L Band Edge Ch.128 EDGE

Ref 27 dBm Atten 30 dB

#Avg  
Log  
10  
dB/  
Offst  
7.83  
dB  
DI  
-13.0  
dBm  
#LgAv  
M1 S2  
S3 FC  
£(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

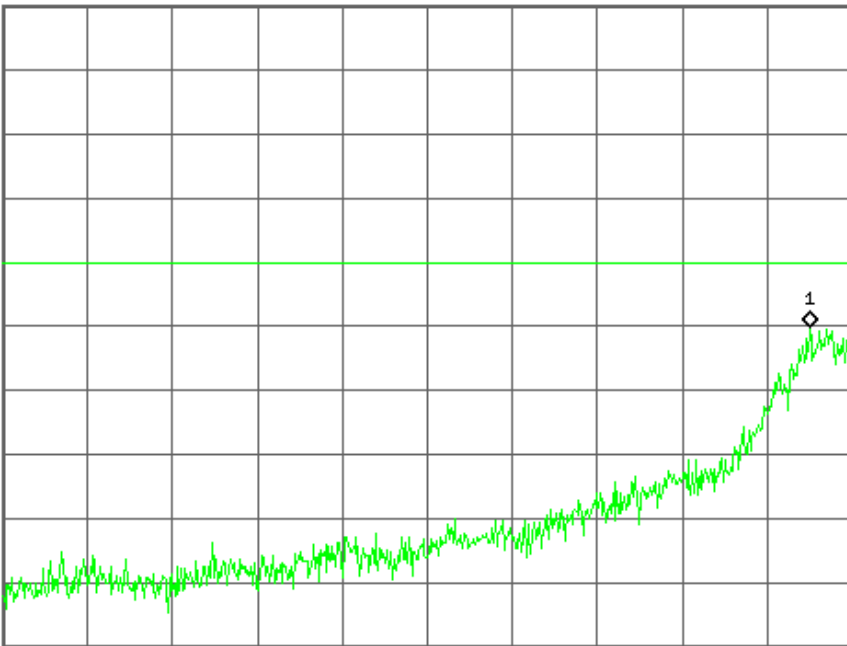
FCC ID:A3LGTB7320L Band Edge Ch.128 EDGE

Mkr1 823.959 9 MHz

Ref 27 dBm Atten 30 dB

-23.29 dBm

#Avg  
Log  
10  
dB/  
Offst  
7.83  
dB  
DI  
-13.0  
dBm  
#LgAv  
M1 S2  
S3 FC  
£(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

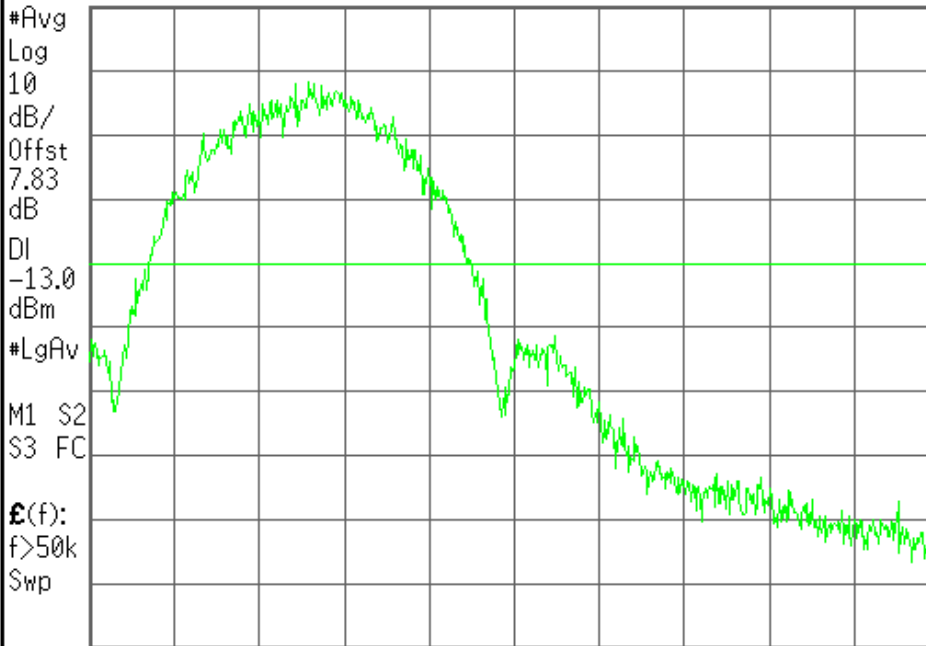
Agilent

R L

Freq/Channel

FCC ID:A3LGTB7320L Band Edge Ch.251 EDGE

Ref 27 dBm Atten 30 dB



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

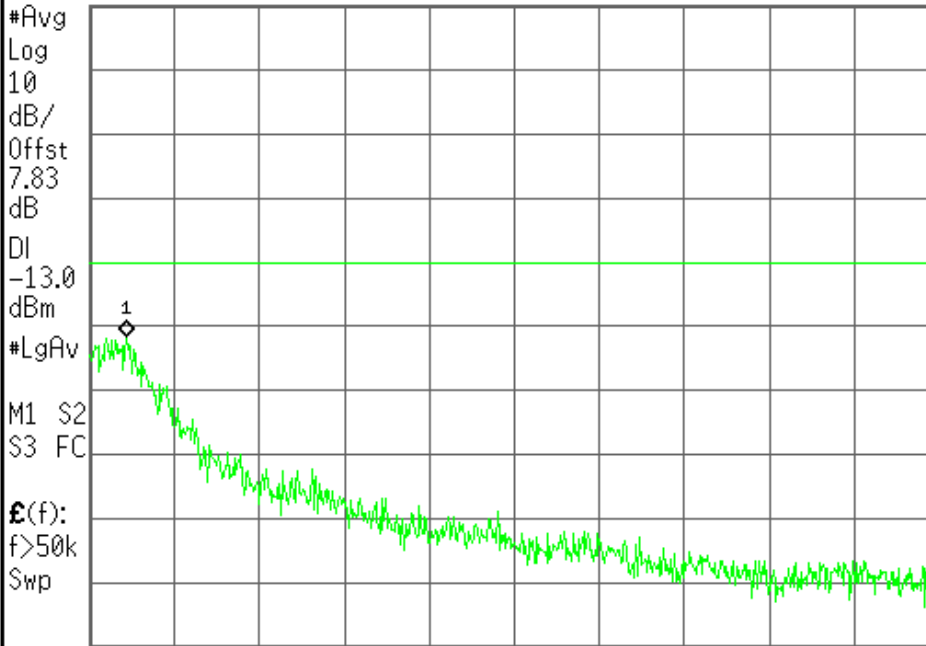
Freq/Channel

FCC ID:A3LGTB7320L Band Edge Ch.251 EDGE

Mkr1 849.034 8 MHz

Ref 27 dBm Atten 30 dB

-24.53 dBm



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

EDGE1900

Agilent

R T

Freq/Channel

Ch Freq 1.8502 GHz Trig Free

Occupied Bandwidth

Center Freq  
1.85020000 GHz

Start Freq  
1.84970000 GHz

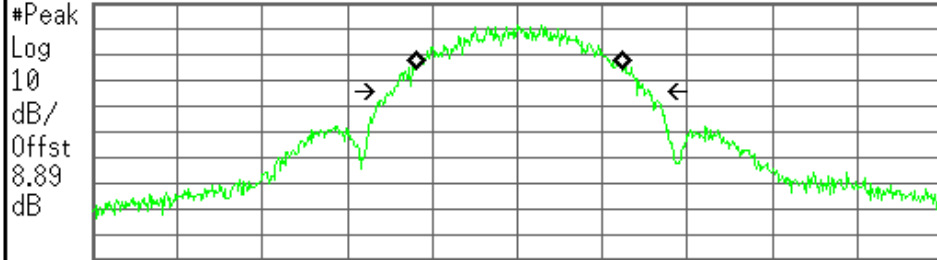
Stop Freq  
1.85070000 GHz

CF Step  
100.000000 kHz  
Auto Man

Freq Offset  
0.00000000 Hz

Signal Track  
On Off

FCC ID:A3LGTB7320L 0BW Ch.512 EDGE  
Ref 26 dBm Atten 30 dB



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

**Occupied Bandwidth** Occ BW % Pwr 99.00 %  
245.8256 kHz x dB -26.00 dB

Transmit Freq Error 1.303 kHz  
x dB Bandwidth 304.958 kHz

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

Agilent

R T

Freq/Channel

Ch Freq 1.88 GHz Trig Free

Occupied Bandwidth

Center Freq  
1.88000000 GHz

Start Freq  
1.87950000 GHz

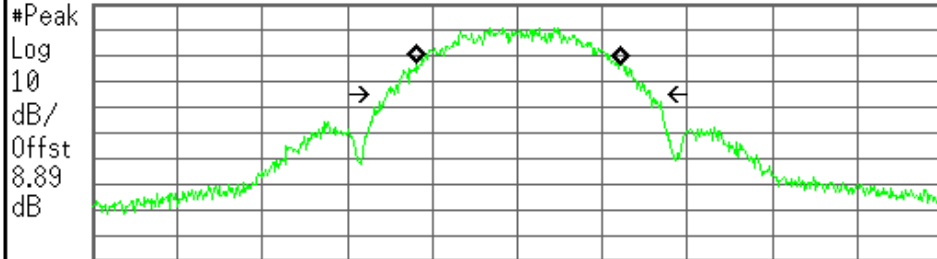
Stop Freq  
1.88050000 GHz

CF Step  
100.000000 kHz  
Auto Man

Freq Offset  
0.00000000 Hz

Signal Track  
On Off

FCC ID:A3LGTB7320L 0BW Ch.661 EDGE  
Ref 26 dBm Atten 30 dB



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

**Occupied Bandwidth** Occ BW % Pwr 99.00 %  
245.1100 kHz x dB -26.00 dB

Transmit Freq Error 1.278 kHz  
x dB Bandwidth 314.649 kHz

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

Ch Freq 1.9098 GHz Trig Free

Occupied Bandwidth

FCC ID:A3LGTB7320L 0BW Ch.810 EDGE  
 Ref 26 dBm Atten 30 dB

Center 1.909 800 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 %
242.8407 kHz	<b>x dB</b>	-26.00 dB
<b>Transmit Freq Error</b>	-754.704 Hz	
<b>x dB Bandwidth</b>	296.697 kHz	

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

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

FCC ID : A3LGTB7320L Transmit Power 512CH EDGE

Measurement/Instrument Screen						
Control	EGPRS Transmit Power				PDCH Parms	
EGPRS Transmit Power Setup	EPK Burst Power		EPK Est Carrier Power		Downlink Traffic Power	
	Minimum	Maximum	Minimum	Maximum	Traffic Band	
	25.28 dBm	26.48 dBm	25.91 dBm	25.94 dBm	PCS	
	Average	Std Dev	Average	Std Dev	Traffic Channel	
25.85 dBm	0.23 dBm	25.93 dBm	0.01 dBm	512		
	200 /200		Single		HS TX Level	
					Modulation Coding Scheme	
					Return	
	Active Cell Transferring			Sys Type: EGPRS		
1 of 2			IntRef	Offset	R T	1 of 2

Measurement/Instrument Screen															
Control	EGPRS Transmit Power							PDCH Parms							
EGPRS Transmit Power Setup ▾	EPSK Burst Power			EPSK Est Carrier Power				Downlink Traffic Power ▾							
	Minimum	Maximum		Minimum	Maximum			Traffic Band							
	25.55 dBm	26.82 dBm		26.34 dBm	26.36 dBm			PCS							
	Average	Std Dev		Average	Std Dev			Traffic Channel							
26.27 dBm	0.24 dBm		26.35 dBm	0.00 dBm			661								
	200 /200							Single							
	Active Cell Transferring							Sys Type: EGPRS							
														NS TX Level ▾	
														Modulation Coding Scheme ▾	
								Return							
1 of 2				IntRef	Offset	R	T		1 of 2						

Measurement/Instrument Screen															
Control	EGPRS Transmit Power							PDCH Parms							
EGPRS Transmit Power Setup ▾	EPSK Burst Power			EPSK Est Carrier Power				Downlink Traffic Power ▾							
	Minimum	Maximum		Minimum	Maximum			Traffic Band							
	25.62 dBm	26.96 dBm		26.32 dBm	26.35 dBm			PCS							
	Average	Std Dev		Average	Std Dev			Traffic Channel							
26.26 dBm	0.22 dBm		26.33 dBm	0.01 dBm			810								
	200 /200							Single							
	Active Cell Transferring							Sys Type: EGPRS							
														NS TX Level ▾	
														Modulation Coding Scheme ▾	
								Return							
1 of 2				IntRef	Offset	R	T		1 of 2						

Agilent

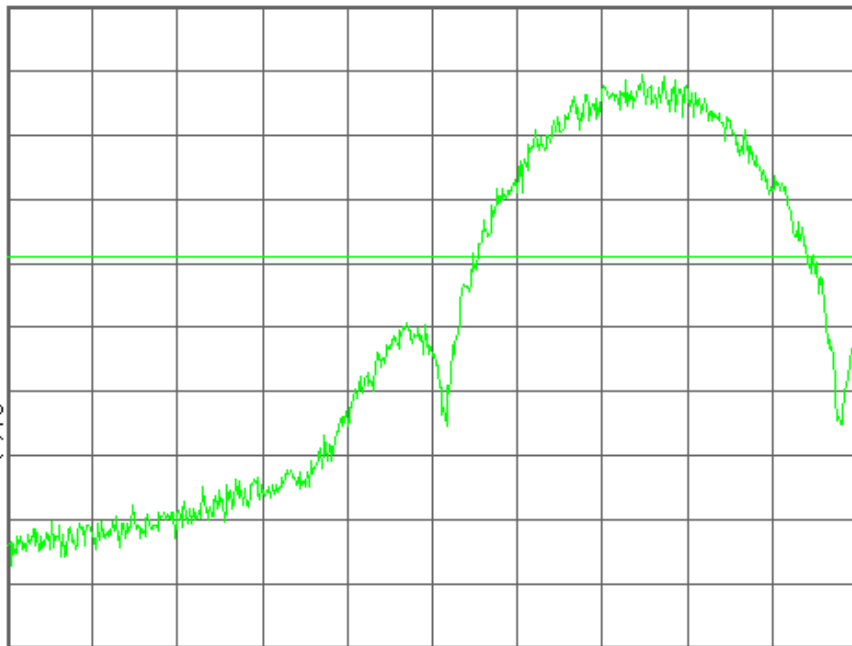
R L

Freq/Channel

FCC ID:A3LGTB7320L Band Edge Ch.512 EDGE

Ref 26 dBm Atten 30 dB

#Avg  
Log  
10  
dB/  
Offst  
8.89  
dB  
DI  
-13.0  
dBm  
PAvg  
M1 S2  
S3 FC  
£(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

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R T

Freq/Channel

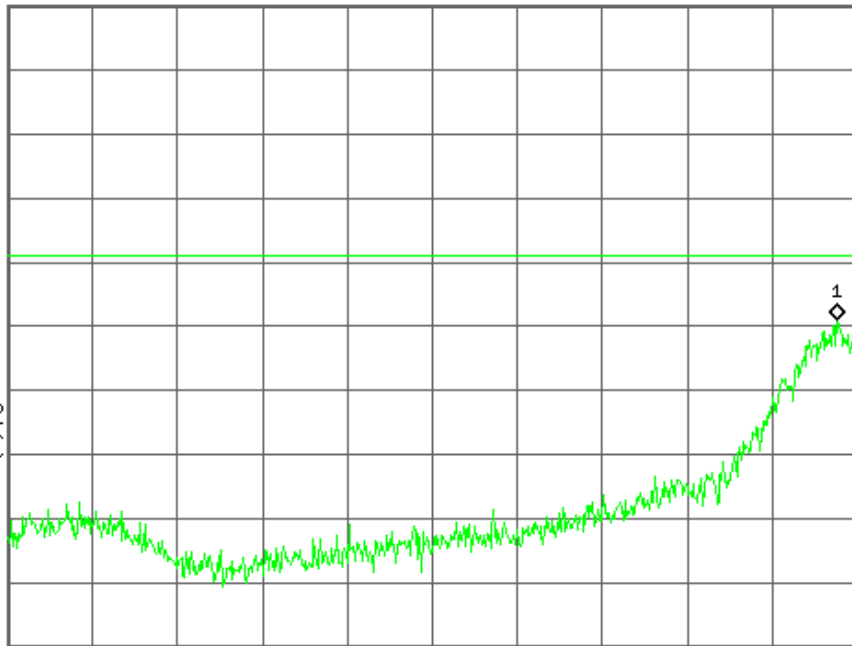
FCC ID:A3LGTB7320L Band Edge Ch.512 EDGE

Mkr1 1.849 981 3 GHz

Ref 26 dBm Atten 30 dB

-22.96 dBm

#Avg  
Log  
10  
dB/  
Offst  
8.89  
dB  
DI  
-13.0  
dBm  
PAvg  
M1 S2  
S3 FC  
£(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

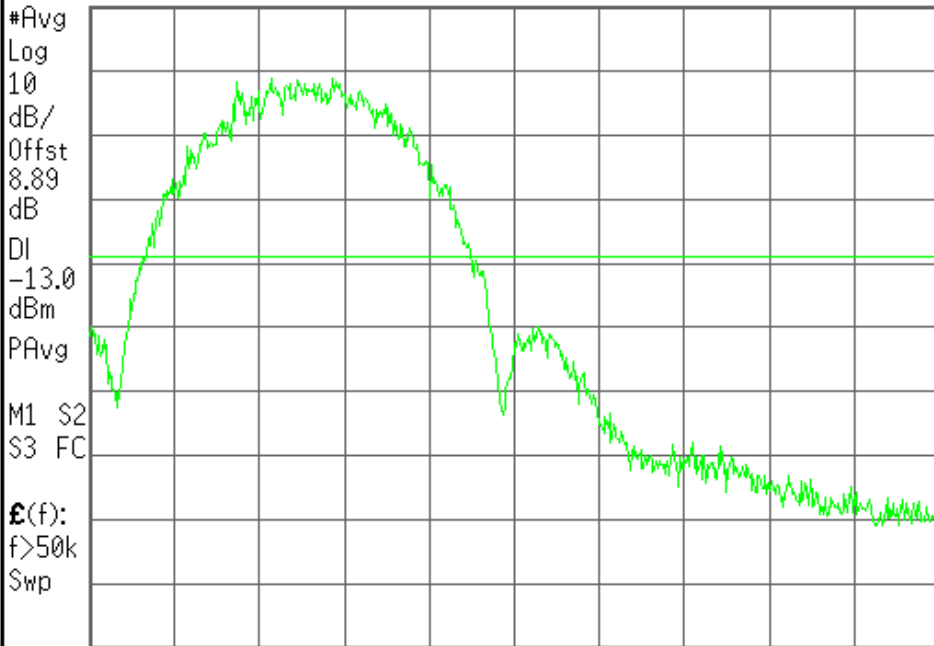
Agilent

R L

Freq/Channel

FCC ID:A3LGTB7320L Band Edge Ch.810 EDGE

Ref 26 dBm Atten 30 dB



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

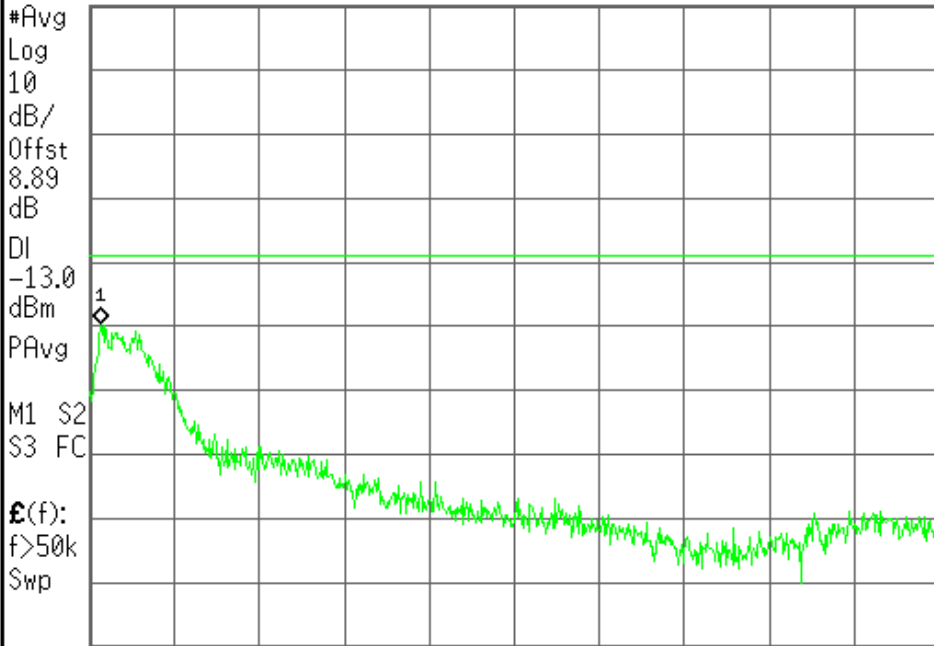
Freq/Channel

FCC ID:A3LGTB7320L Band Edge Ch.810 EDGE

Mkr1 1.910 002 3 GHz

Ref 26 dBm Atten 30 dB

-23.69 dBm



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

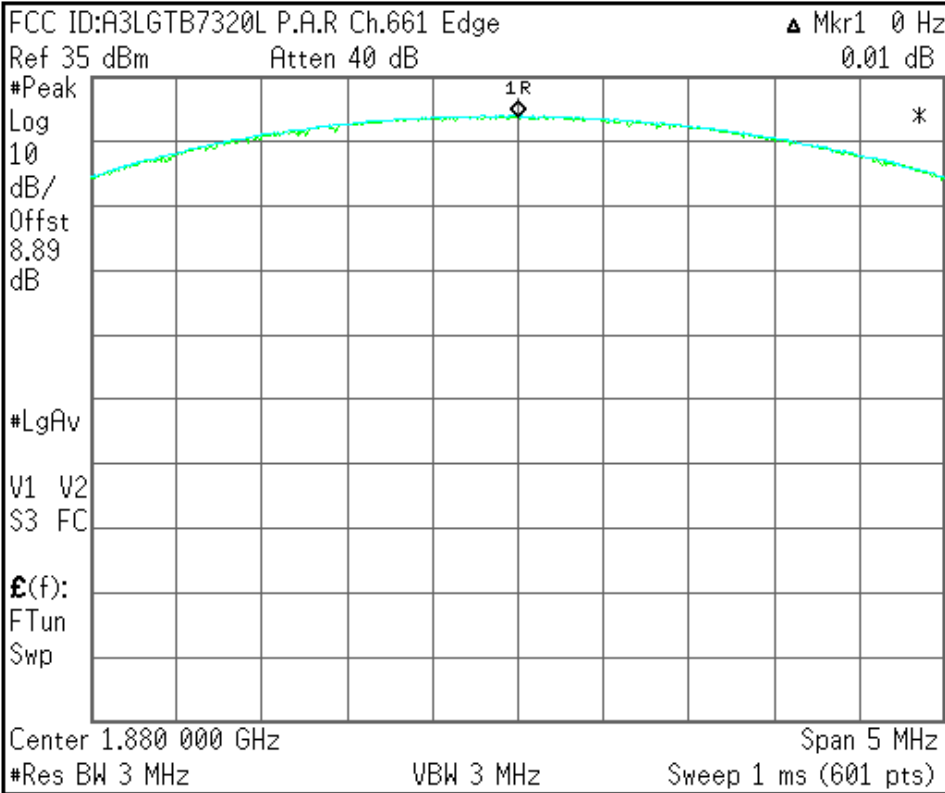
Stop Freq  
1.91081000 GHz

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

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