



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 24 SUBPART CERTIFICATION REPORT

Model Tested:	GT-I9000
FCC ID (Requested):	A3LGTI9000
Report No:	FH-054-R2
Job No:	FH-054
Date issued:	April 7, 2010

- Abstract -

All measurement reported here in accordance with FCC Rules, 47CFR
Part2, Part24

Prepared By

KJ KWON – Test Engineer

Authorized By

WT JANG – Technical Manager

TABLE OF CONTENT

MEASUREMENT REPORT	Page
1. FCC Certification Information	3
1.1 §2.1033 General Information	3
2. INTRODUCTION	4
2.1 General.....	4
3. MEASURING INSTRUMENT CALIBRATION	5
4. TEST EQUIPMENT LIST	6
5. FCC 3G MEASUREMENT PROCEDURES.....	7
5.1 Effective Radiated Power / Equivalent Isotropic Radiated Power	8
5.2 Radiated Spurious & Harmonic Emission	9
5.3 Occupied Bandwidth	11
5.4 Spurious and Harmonic Emissions at Antenna Terminal.....	11
5.4.1 Occupied Bandwidth Emission Limits	11
5.4.2 Conducted Spurious Emission.....	13
5.5 Frequency Stability / Temperature Variation	14
6. TEST DATA	15
6.1 Conducted Output Power	15
6.2 Equivalent Isotropic Radiated Power(E.I.R.P.)	16
6.3 PCS WCDMA Radiated Spurious & Harmonic measurement.....	17
6.4 PCS WCDMA Radiated Spurious & Harmonic Conversion Table	18
6.5 Frequency Stability	19
6.5.1 PCS WCDMA Frequency Stability Table	19
6.5.2 PCS WCDMA Frequency Stability Graph.....	20
7. SAMPLE CALCULATION	22
7.1 Emission Designator.....	22
8. CONCLUSION	23
9. TEST PLOT	24

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: A3LGTI9000
- Model: GT-I9000
- Quantity: Quantity production is planned
- Emission Designators: 4M16F9W(PCS WCDMA)
- Tx Freq. Range: 1852.4 - 1907.6 MHz (PCS WCDMA)
- Rx Freq. Range: 1932.4 - 1987.6 MHz (PCS WCDMA)
- Max. Power Rating: 0.151 W PCS WCDMA(21.78dBm)
- FCC Classification(s): PCS Licensed Portable Tx Held to Ear (PCE)
- Equipment (EUT) Type: 850/1900 GSM/EDGE/GPRS and 1900 WCDMA Phone with
Bluetooth, WLAN and HSPA
- Modulation(s): WCDMA
- Frequency Tolerance: $\pm 0.00025\%$ (2.5ppm)
- FCC Rule Part(s): §24(E), §2.
- Dates of Test: April 1-2, 2010
- Place of Test: SAMSUNG Lab,
- Test Report S/N: FH-054-R2

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 the rotating device at the same height and at a distance of 3-meters from the receive antenna. The rotating device which can rotate horizontal axis was mounted on the turn unit to facilitate rotation around a vertical axis. The measurement was made for each horizontal/vertical position combination with receive antenna horizontally polarized. This measurement was repeated with receive antenna vertically polarized.

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 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.

- End of page -

4. TEST EQUIPMENT LIST

Name Of Equipment	Model	Serial No.	Due Date
Spectrum Analyzer	ESI26	836119/010	2010-10-20
	E4440A(3Hz~26.5GHz)	MY46187454	2011-03-08
	E4440A(3Hz~26.5GHz)	MY41000236	2010-04-14
Network Analyzer	8753E	JP38160590	2010-06-19
Pre-Amplifier	8449B	3008A00691	2010-12-15
Communication test set	8960	MY47510060	2011-03-08
	8960	GB42230535	2010-12-18
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	360306/011	2010-06-13
Dipole Antenna	UHA 9105	9105-2412	2011-10-06
	UHA 9105	9105-2413	2010-06-13
Power Supply	E3640A	MY40003594	2010-06-19
	E3640A	MY40003595	2010-06-19
	E3632A	MY40022438	2011-03-05
Divider	11636B	51946	2011-06-25
	11636B	51942	2011-07-09
	11636B	56918	2011-08-31
High Pass Filter	WHK/3.0/18G-10SS	492	Not Required
	WHK/3.5/18G-10SS	4	Not Required
Environmental Chamber	SH-241	92000549	2010-11-11
	SH-241	92000548	2010-11-11
Shielded Fully Anechoic Chamber	CHAMBER	ANT0001	Not Required

5. FCC 3G MEASUREMENT PROCEDURES

The maximum output power is a measure of the maximum power the UE can transmit (i.e. the actual power as would be measured assuming no measurement error) in a band width of at least (1+a) times the chip rate of the radio access mode

The default test configuration is configure an established radio link between the UE and a communication test set using a 12.2kbps RMC (reference measurement channel) configured in Test Loop Mode 1. Maximum output is verified according to 3GPP TS 34.121 Section 5.2

1. Configure TCP (Transmit Power Control) set to "All 1" S.
2. RMC and AMR connections at 12.2kbps are measured under 3.4kbps SRB (signaling radio bearer)
3. Measure the mean power of the UE in a bandwidth of at least (1+a)times the chip rate o the radio access mode. The mean power shall be averaged over at least one timeslot.

Table1
3GPP TS 34.121 Nominal Maximum Output Power

Operating Band	Power Class3		Power Class 4	
	Power (dBm)	Tol (dB)	Power (dBm)	Tol (dB)
Band II	+24	+1/-3	+21	+2/-2

		HSDPA Inactive		HSDPA Active
Operating Band	Channel	12.2 kbps RMC	12.2 kbps AMR	12.2 kbps RMC
PCS WCDMA	9262	22.66	22.64	21.54
	9400	22.87	22.84	21.79
	9538	22.83	22.77	21.68

5.1 Effective Radiated Power / Equivalent Isotropic Radiated Power

Test Set-up for the ERP/EIRP TEST

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

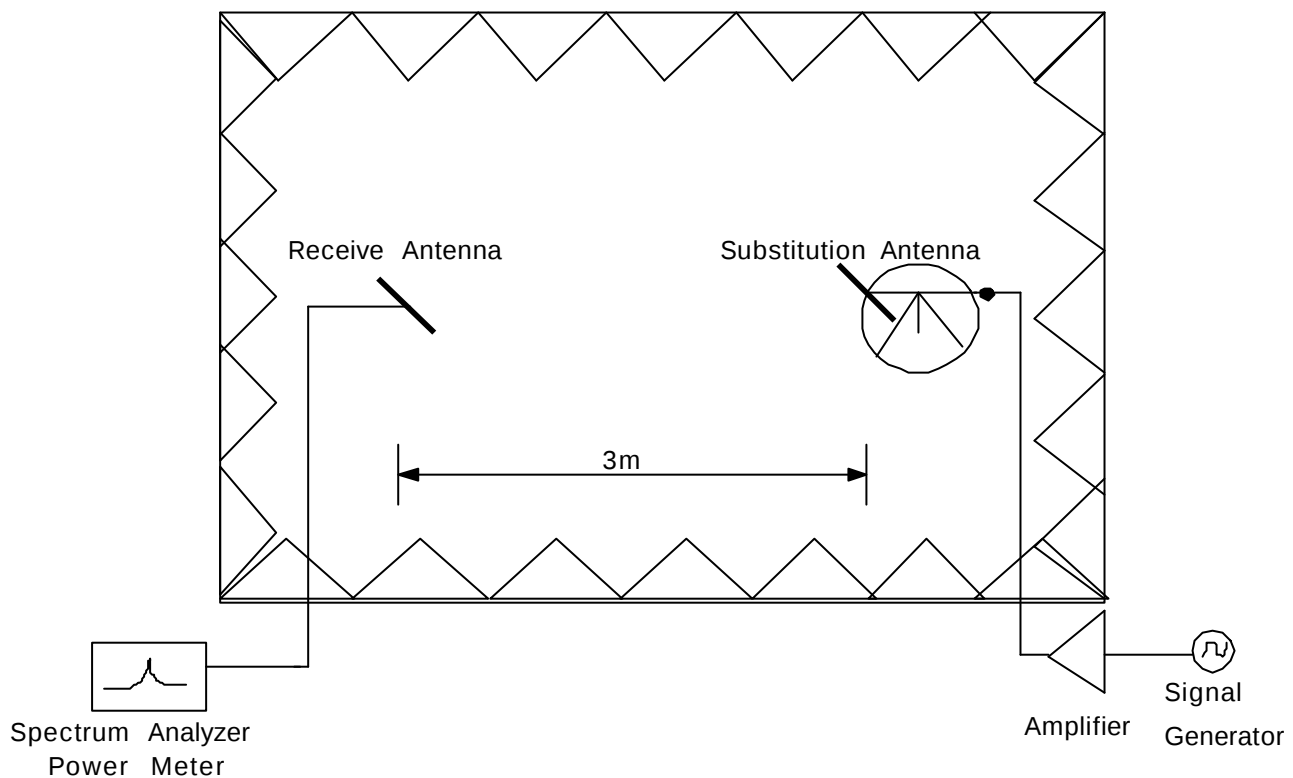


Figure 3. Diagram of ERP/EIRP test Set-up

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

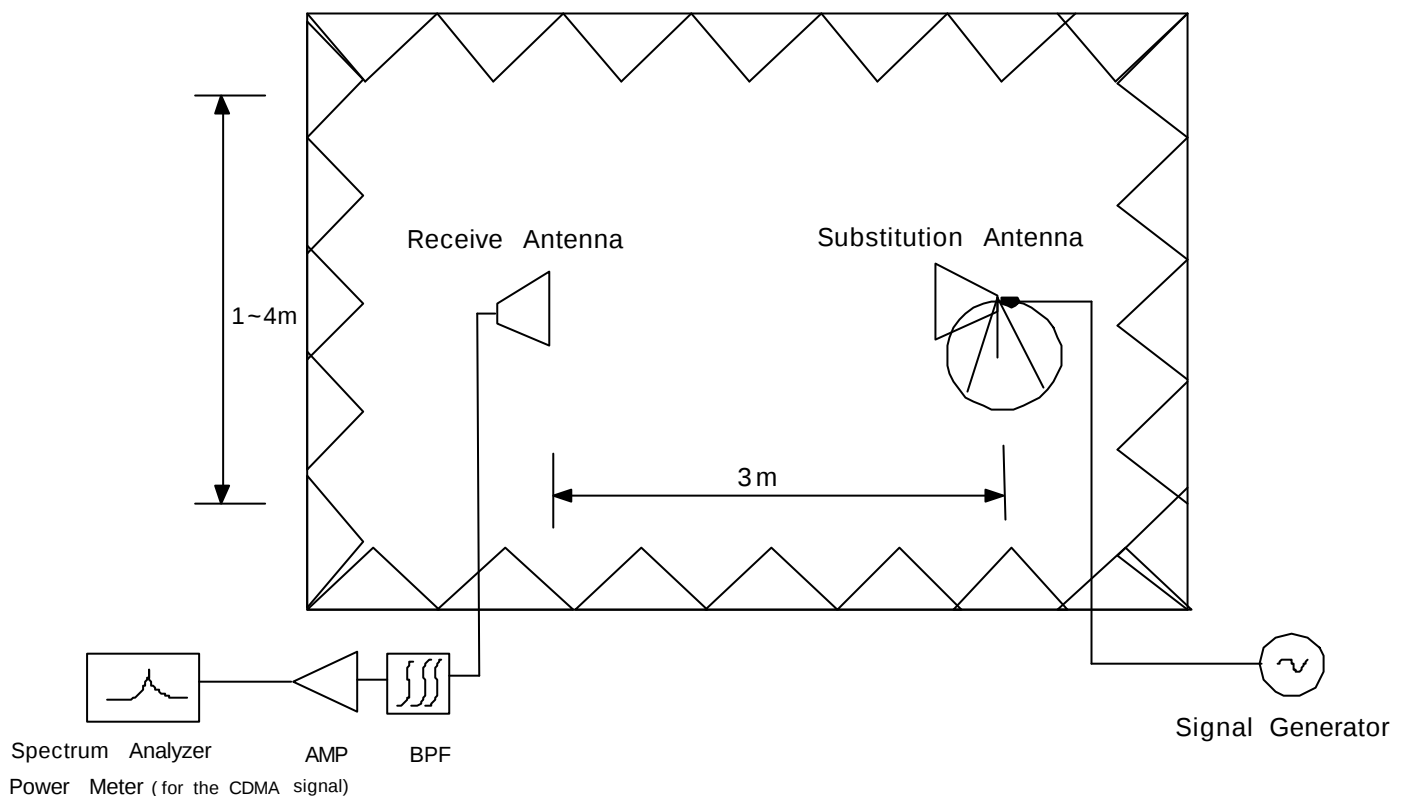


Figure 4. Diagram of Radiated Spurious & Harmonic test Set-up

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 10th 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 600 PCS Mode 2nd Harmonic(3760MHz)



The receive analyzer reading at 3meters with the EUT on the turntable was -81.0dBm . The gain of the substituted antenna is 8.1dBi . The signal generator connected to the substituted antenna terminals is adjusted to produce a reading of -81.0dBm of the receive analyzer. The loss of the cable between the signal generator and the terminals of the substituted antenna is 2.0dB at 3760MHz . So 6.1dB is added to the signal generator reading of -30.9dBm yielding -24.8dBm . The fundamental EIRP was 25.5dBm so this harmonic was $25.5\text{dBm} - (-24.8) = 50.3\text{dBc}$.

- End of page -

5.3 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.

5.4 Spurious and Harmonic Emissions at Antenna Terminal

5.4.1 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.

- End of page -

BLOCK	Freq. Range (MHz) Transmitter (Tx)	Freq. Range (MHz) 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) Transmitter (Tx)	Freq. Range (MHz) 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

BLOCK	Freq. Range (MHz) Transmitter (Tx)	Freq. Range (MHz) Receiver (Rx)
A	1710 – 1720	2110 – 2120
B	1720 – 1730	2120 – 2130
C	1730 – 1735	2130 – 2135
D	1735 – 1740	2135 – 2140
E	1740 – 1745	2140 – 2145
F	1745 – 1755	2145 – 2155

Table 3. Broadband AWS Service Frequency Blocks

5.4.2 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 -13 dBm, calculation shown below.

$$43 + 10\log(0.333 \text{ W}) = 38.22 \text{ dB}$$

$$25.22 \text{ dBm} - 38.22 \text{ dB} = -13 \text{ dBm}$$

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 -13 dBm 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. (PCS Mode : 10MHz to 20GHz). A display line was placed at -13 dBm to show compliance. The high, lowest and a middle channel were tested for out of band measurements.

Plots are shown herein.

5.5 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 ± 0.00025 (± 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.

- End of page -

6. TEST DATA

6.1 Conducted Output Power

A base station simulator was used to establish communication with the Samsung 850/1900 GSM/EDGE/GPRS and 1900 WCDMA Phone with Bluetooth, WLAN and HSPA FCC ID: A3LGTI9000. 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. The WCDMA conducted powers are reported below, respectively.

UMTS Conducted Powers						
3GPP Release Version	Mode	3GPP 34.121 Subtest	Celluar Band[dBm]			MPR
			9662	9800	9938	
99	WCDMA	12.2 kbps RMC	22.66	22.87	22.83	-
99		12.2 kbps AMR	22.64	22.84	22.77	-
6	HSDPA	12.2 kbps RMC	21.54	21.79	21.68	-
6	HSUPA	Subtest1	22.42	21.76	21.63	0
6		Subtest2	20.62	20.72	20.68	2
6		Subtest3	21.20	21.32	21.25	1
6		Subtest4	21.00	20.99	20.36	2
6		Subtest5	21.92	22.54	22.17	0

Table 6.1 WCDMA Conducted Output Powers

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

Supply Voltage : 3.7VDC

Modulation : PCS WCDMA

■ Reference level

Frequency (MHz)	Output (dBm)	Polarization	P/M (dBm)	Ant gain (dBi)	Ref level (dBm)
1852.4	21.00	H	-18.32	9.60	-27.92
		V	-17.88	9.60	-27.48
1880.0	22.00	H	-16.98	9.60	-26.58
		V	-17.28	9.60	-26.88
1907.6	22.00	H	-17.47	9.60	-27.07
		V	-17.18	9.60	-26.78

■ Result

Frequency (MHz)	From EUT Tested level (dBm)	Polarization (H/V)	Azimuth (angle)	EIRP (dBm)	EIRP (W)	Battery
1852.4	-27.81	V	216/90	20.67	0.117	Standard
1880.0	-27.10	V	223/90	21.78	0.151	Standard
1907.6	-27.10	V	211/90	21.68	0.147	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 PCS WCDMA Radiated Spurious & Harmonic measurement

Operating Frequency : 1852.4 MHz(Low), 1880.00 MHz(Middle), 1907.60 MHz(High)

Measured Output Power : 21.78 dBm = 0.151 W

Modulation Signal : PCS

Limit : $43 + 10\log_{10}(P) = 34.78\text{dBc}$

■ Result

Channel	Harmonic	Frequency (MHz)	From EUT Tested level (dBm)	POL (H/V)	Result (dBc)
9262	2	3704.80	-67.99	V	65.96
	3	5557.20	-66.42	V	58.40
	4	7409.60	-68.79	V	56.27
	5	9262.00	-	-	-
	6	11114.40	-	-	-
	7	12966.80	-	-	-
9400	2	3760.00	-67.23	H	64.93
	3	5640.00	-66.29	V	57.99
	4	7520.00	-67.73	V	55.56
	5	9400.00	-	-	-
	6	11280.00	-	-	-
	7	13160.00	-	-	-
9538	2	3815.20	-66.96	H	63.57
	3	5722.80	-67.63	H	58.93
	4	7630.40	-68.38	V	55.72
	5	9538.00	-	-	-
	6	11445.60	-	-	-
	7	13353.20	-	-	-

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 10th 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 PCS WCDMA Radiated Spurious & Harmonic Conversion Table

Date : April 1-2, 2010.

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)
9262	2	3704.80	-14.91	12.40	-10.50	-36.94	-36.57	-68.12	-67.99	-44.18	-44.42
	3	5557.20	-17.69	12.90	-8.20	-42.68	-42.80	-66.56	-66.42	-36.88	-36.62
	4	7409.60	-20.43	10.50	-3.10	-47.33	-46.96	-68.82	-68.79	-34.49	-34.83
	5	9262.00	-23.63	11.20	-0.60	-51.79	-50.45	-	-	-	-
	6	11114.40	-26.86	11.60	2.30	-54.95	-55.26	-	-	-	-
	7	12966.80	-28.80	12.90	2.90	-58.88	-58.56	-	-	-	-
9400	2	3760.00	-15.19	12.40	-10.20	-37.08	-37.05	-67.23	-67.65	-43.15	-43.60
	3	5640.00	-17.78	12.90	-8.10	-42.73	-43.08	-67.45	-66.29	-37.72	-36.21
	4	7520.00	-20.67	10.60	-2.90	-47.12	-46.95	-68.45	-67.73	-34.33	-33.78
	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	-	-	-	-
9538	2	3815.20	-14.23	12.40	-11.20	-38.02	-38.68	-66.96	-67.47	-41.94	-41.79
	3	5722.80	-18.11	13.00	-7.90	-43.48	-43.49	-67.63	-67.68	-37.15	-37.19
	4	7630.40	-21.16	11.20	-3.00	-47.29	-47.44	-68.76	-68.38	-34.47	-33.94
	5	9538.00	-23.54	11.70	-1.20	-52.60	-52.08	-68.80	-68.77	-29.20	-29.69
	6	11445.60	-26.84	11.70	2.10	-56.26	-56.23	-	-	-	-
	7	13353.20	-28.23	12.30	2.90	-60.44	-59.84	-	-	-	-

6.5 Frequency Stability

6.5.1 PCS WCDMA Frequency Stability Table

Operating Frequency : 1,880,000,000 Hz

Channel : 9400

Reference Voltage : 3.7VDC

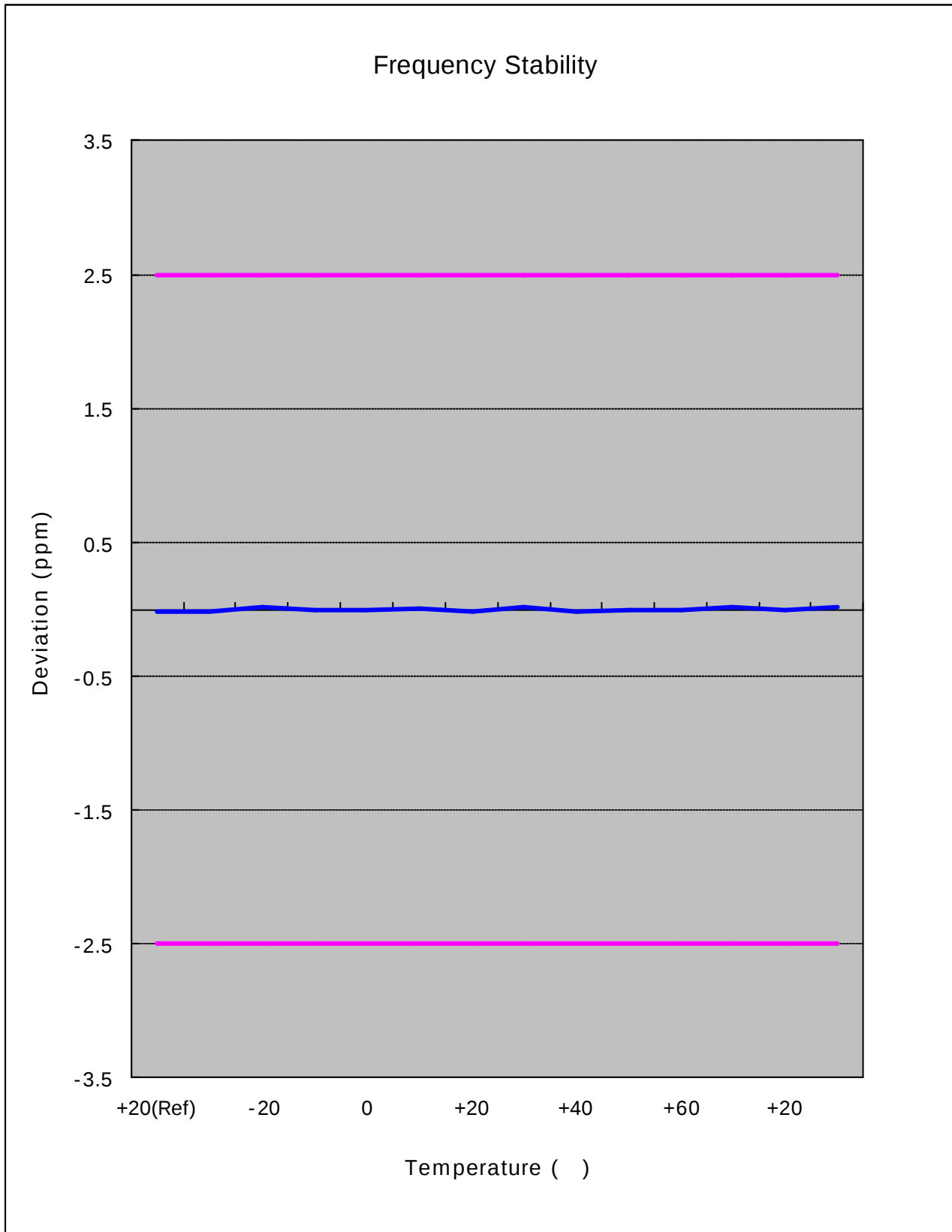
Deviation Limit : ± 0.00025 % or 2.5ppm

Voltage (%)	Power (VDC)	Temp. (°C)	Frequency Error (Hz)	Frequency (Hz)	Deviation (%)	ppm
100%	3.70	+20(Ref)	-5.00	1,879,999,995	0.000000	-0.003
100%		-30	34.60	1,880,000,035	0.000002	0.018
100%		-20	28.60	1,880,000,029	0.000002	0.015
100%		-10	35.30	1,880,000,035	0.000002	0.019
100%		0	15.00	1,880,000,015	0.000001	0.008
100%		+10	-20.80	1,879,999,979	-0.000001	-0.011
100%		+20	-5.00	1,879,999,995	0.000000	-0.003
100%		+30	-20.90	1,879,999,979	-0.000001	-0.011
100%		+40	39.10	1,880,000,039	0.000002	0.021
100%		+50	-23.70	1,879,999,976	-0.000001	-0.013
100%		+60	26.40	1,880,000,026	0.000001	0.014
85%	3.35	+20	-40.00	1,879,999,960	-0.000002	-0.021
115%	4.26	+20	29.10	1,880,000,029	0.000002	0.015
Batt. Endpoint	3.35	+20	-40.00	1,879,999,960	-0.000002	-0.021

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

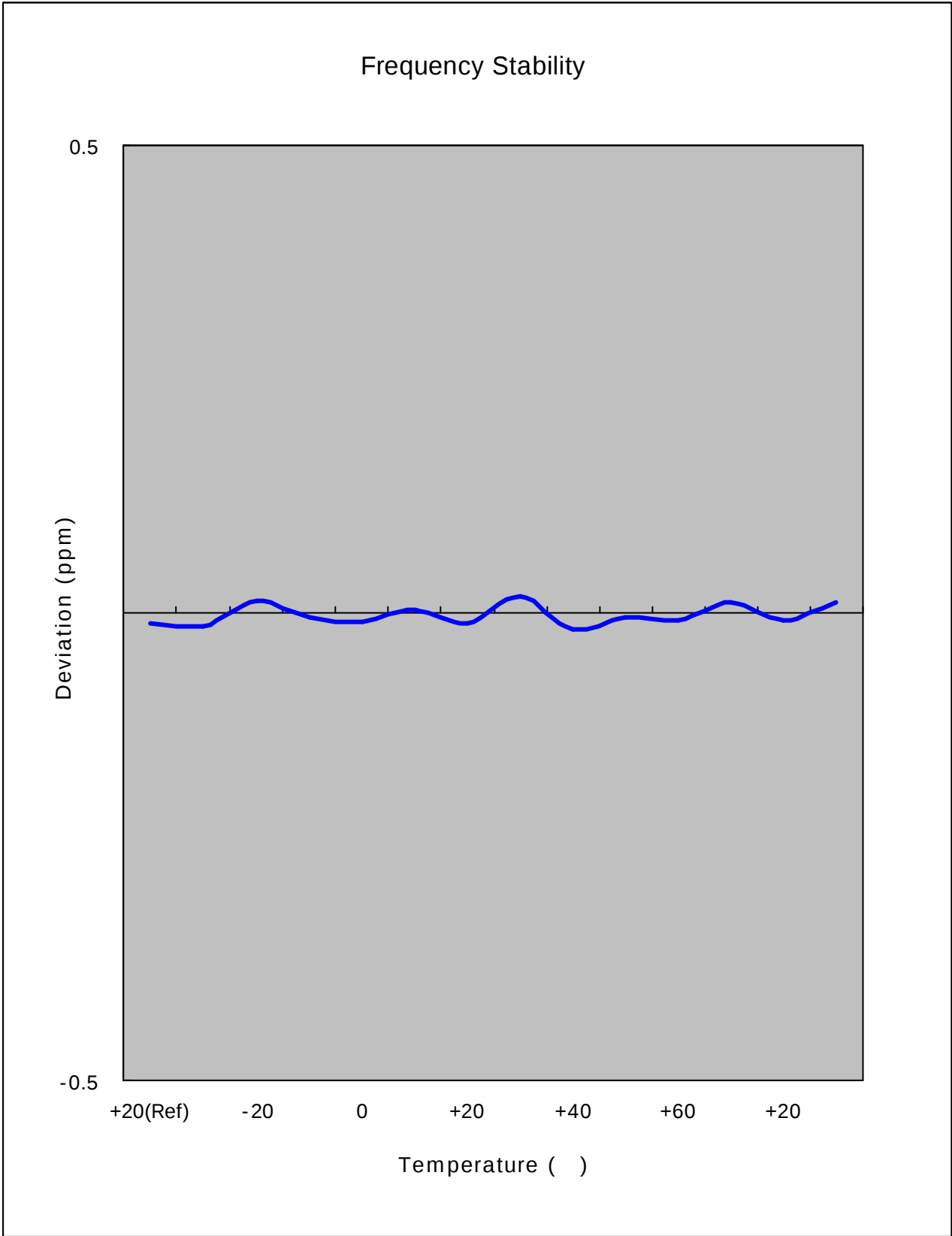
The EUT is tested down to the battery end point

6.5.2 PCS WCDMA Frequency Stability Graph



- End of page -

Zoom In



7. SAMPLE CALCULATION

7.1 Emission Designator

Emission Designator = 4M16F9W

CDMA BW = 4.16MHz

F = Frequency Modulation

9 = Composite Digital Info

W = Combination(Audio/Data)

(Measured at the 99.75% power bandwidth)

- End of page –



8. CONCLUSION

The data collected shows that the SAMSUNG 850/1900 GSM/EDGE/GPRS and 1900 WCDMA Phone with Bluetooth, WLAN and HSPA FCC ID : A3LGT19000 complies with all the requirements of Parts 2, 24 of the FCC Rules.

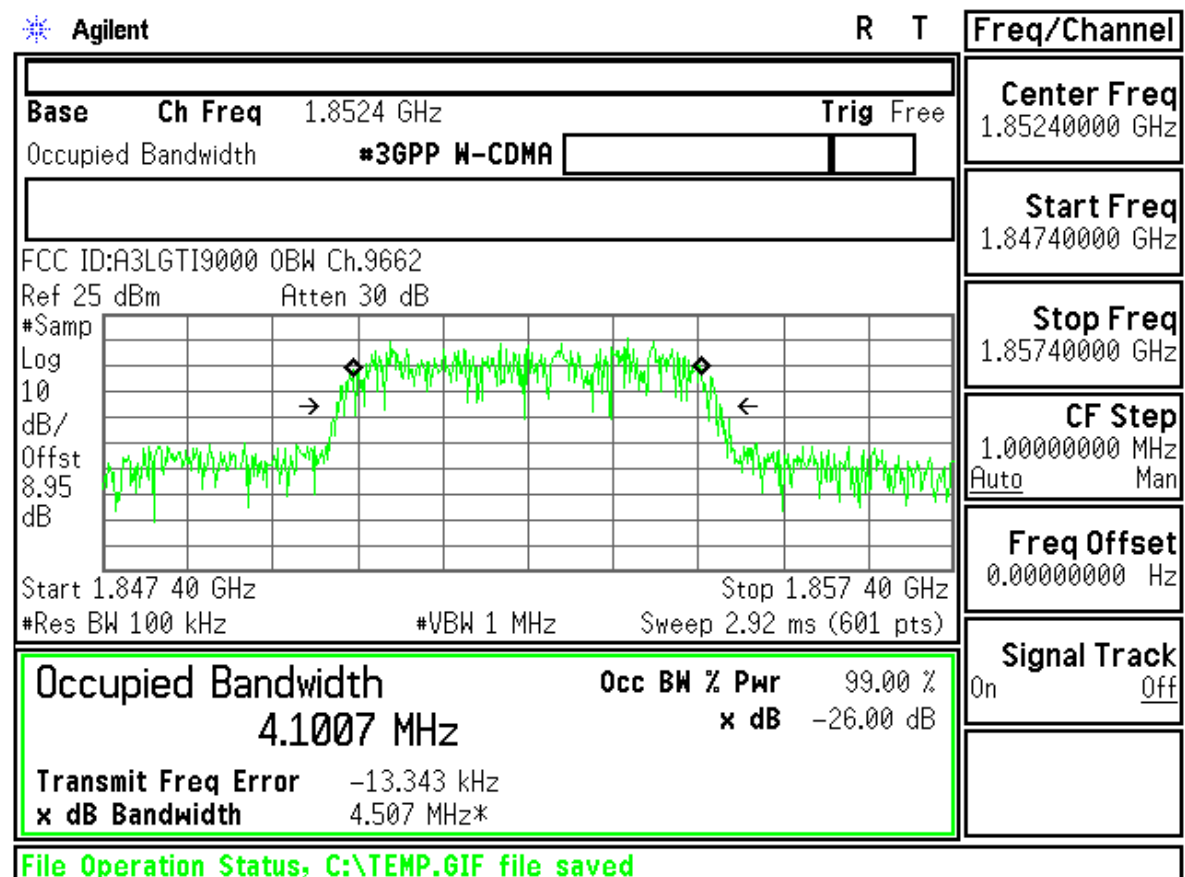
- End of page -

9. TEST PLOT

Measurement/Instrument Screen													
Control		Waveform Quality							Call Parms				
Waveform Quality Setup ▾			Minimum		Maximum		Average		Cell Power				
	EVM (%):		3.02		3.27		3.14		-104.00				
	Frequency Error (Hz):		-7.71		5.89		-0.68		dBm/3.84 MHz				
	Origin Offset (dB):		-42.97		-40.80		-41.67		Channel Type				
	Phase Error (°):		1.38		1.56		1.46		12.2k RNC				
	Mag Error (%):		1.78		1.88		1.84						
	Time Error (chips):		-0.25		-0.24		-0.25		Paging Service				
		Max PCDE:		-41.14 dB at Cch.64.16:0				RB Test Mode					
50 / 50									Single				
Calibrate Measurements		Thermal Power											
		Thermal Power											
		22.66 dBm											
Swap Window Positions													
		Single											
				Active Cell Connected				Sys Type: UTRA FDD					
1 of 2						IntRef		Offset		R T			
												1 of 3	

Control		Waveform Quality							Call Parms			
Waveform Quality Setup ▾				Minimum	Maximum	Average	Cell Power					
		EVM (%):		4.12	4.37	4.19	-104.00					
		Frequency Error (Hz):		-8.36	8.94	3.46	dBm/3.84 MHz					
		Origin Offset (dB):		-44.32	-41.24	-42.79	Channel Type					
		Phase Error (°):		1.72	1.90	1.78	12.2k RNC					
		Mag Error (%):		2.74	2.88	2.82	Paging Service					
		Time Error (chips):		-0.27	-0.25	-0.26						
		Max PCDE: -40.60 dB at Cch.64.16:0					RB Test Mode					
		50 / 50					Single					
		Thermal Power										
Calibrate Measurements		Thermal Power 22.87 dBm 										

Control	Waveform Quality										Call Parms			
Waveform Quality Setup ▾			Minimum		Maximum		Average		Cell Power					
	EVM (%):		5.18		5.39		5.27		-104.00					
	Frequency Error (Hz):		-9.96		7.35		1.46		dBm/3.84 MHz					
	Origin Offset (dB):		-45.29		-42.71		-44.03		Channel Type					
	Phase Error (°):		2.08		2.26		2.16		12.2k RMC					
	Mag Error (%):		3.61		3.77		3.68							
	Time Error (chips):		-0.14		-0.14		-0.14		Paging Service					
		Max PCDE:		-39.44 dB		at Cch.64.16:0				RB Test Mode				
50 / 50										Single				
Calibrate Measurements	Thermal Power													
	Thermal Power													
	22.83 dBm													
	Single													
Swap Window Positions			Active Cell Connected				Sys Type: UTRA FDD							
1 of 2					IntRef		Offset		R T				1 of 3	



Agilent

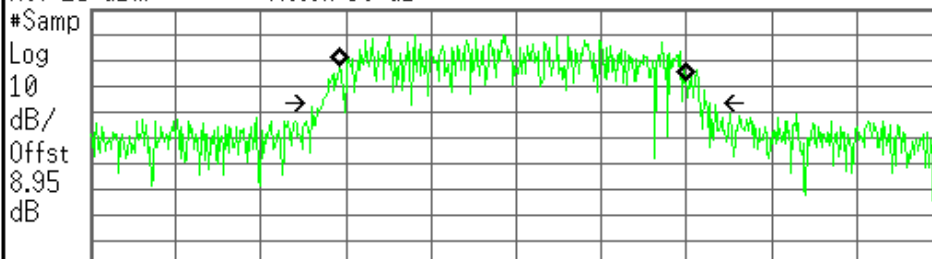
R T

Freq/Channel

Base Ch Freq 1.88 GHz Trig Free
Occupied Bandwidth #3GPP W-CDMA

FCC ID:A3LGTI9000 0BW Ch.9800

Ref 25 dBm Atten 30 dB



Start 1.875 00 GHz Stop 1.885 00 GHz

#Res BW 100 kHz #VBW 1 MHz Sweep 2.92 ms (601 pts)

Occupied Bandwidth 4.0737 MHz
Occ BW % Pwr 99.00 %
x dB -26.00 dB
Transmit Freq Error -47.100 kHz
x dB Bandwidth 4.512 MHz*

Center Freq
1.88000000 GHz

Start Freq
1.87500000 GHz

Stop Freq
1.88500000 GHz

CF Step
1.00000000 MHz
Auto Man

Freq Offset
0.00000000 Hz

Signal Track
On Off

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

Agilent

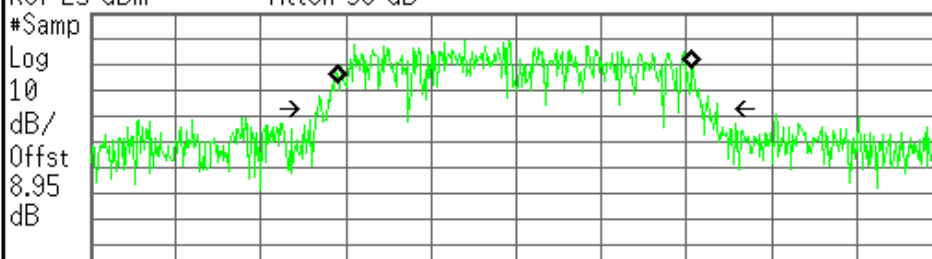
R T

Freq/Channel

Base Ch Freq 1.9076 GHz Trig Free
Occupied Bandwidth #3GPP W-CDMA

FCC ID:A3LGTI9000 0BW Ch.9938

Ref 25 dBm Atten 30 dB



Start 1.902 60 GHz Stop 1.912 60 GHz

#Res BW 100 kHz #VBW 1 MHz Sweep 2.92 ms (601 pts)

Occupied Bandwidth 4.1579 MHz
Occ BW % Pwr 99.00 %
x dB -26.00 dB
Transmit Freq Error -14.973 kHz
x dB Bandwidth 4.687 MHz*

Center Freq
1.90760000 GHz

Start Freq
1.90260000 GHz

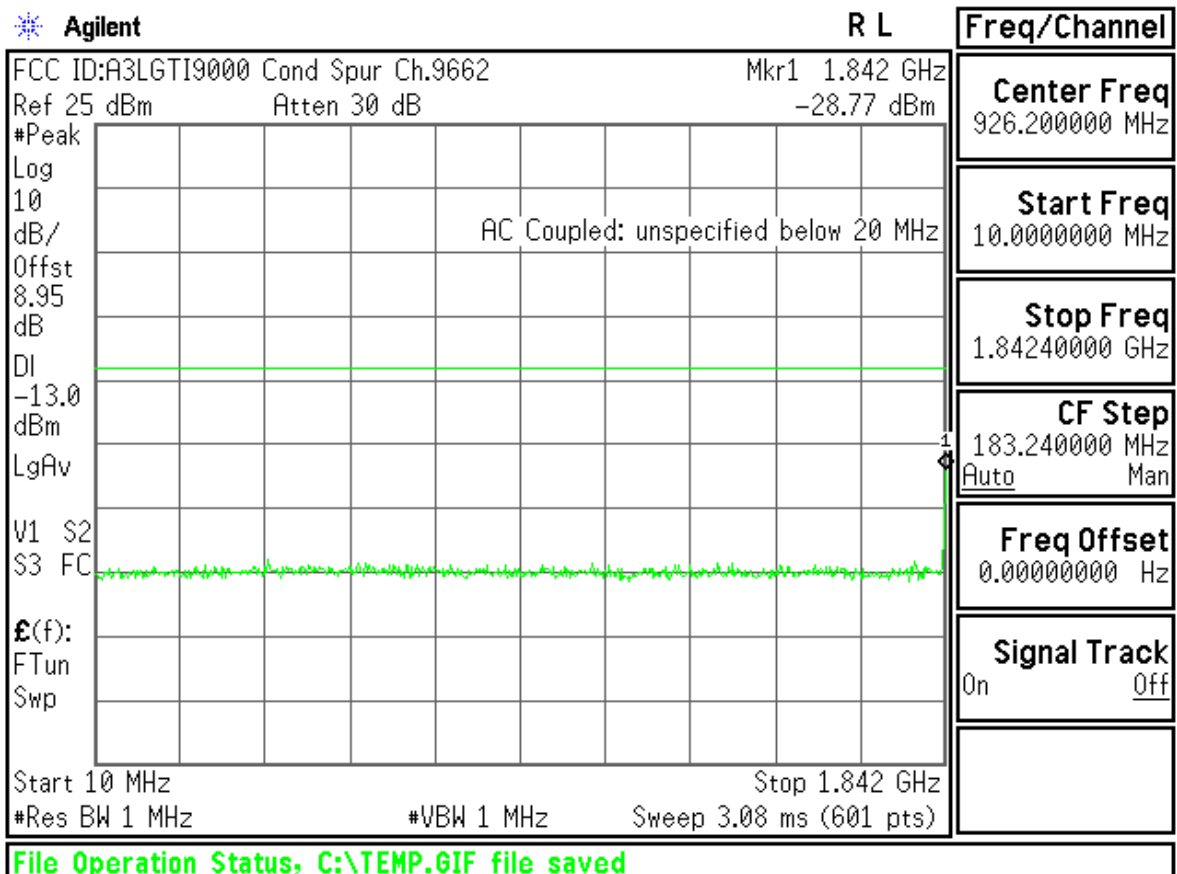
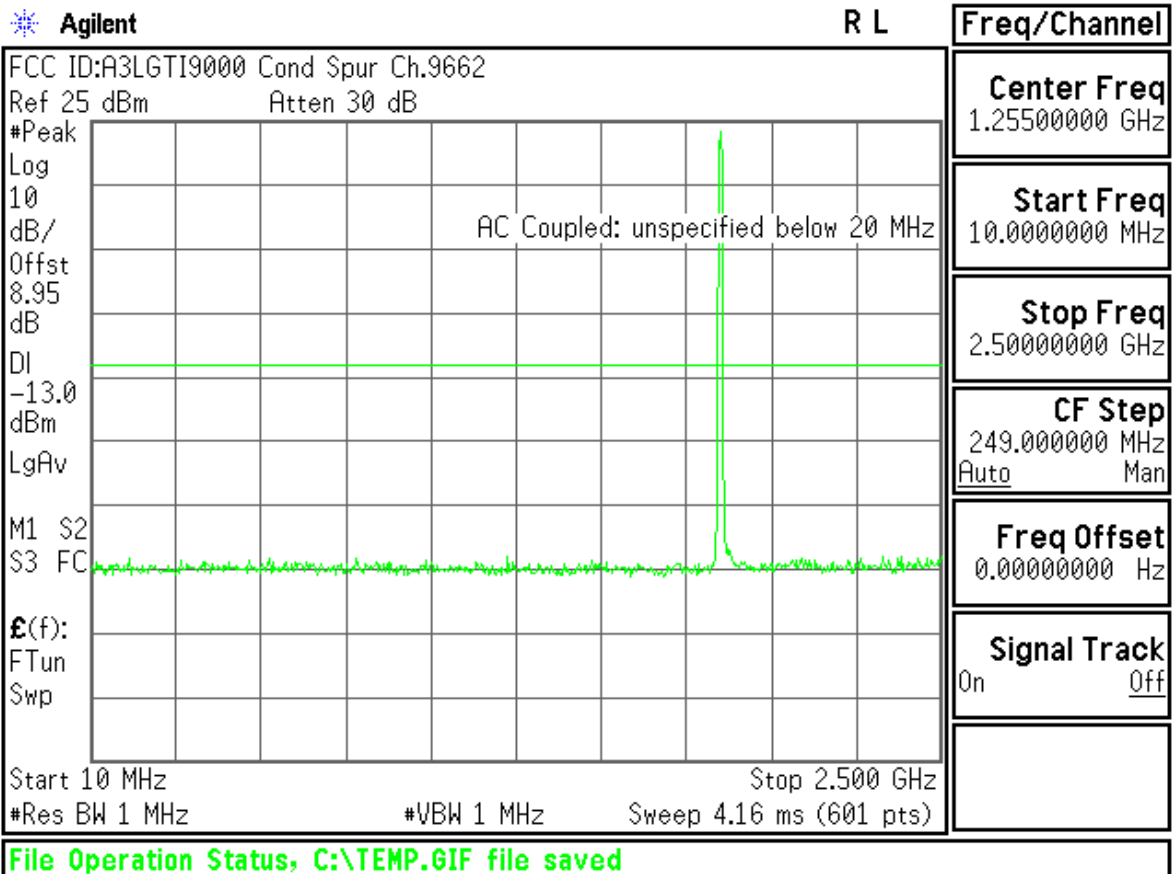
Stop Freq
1.91260000 GHz

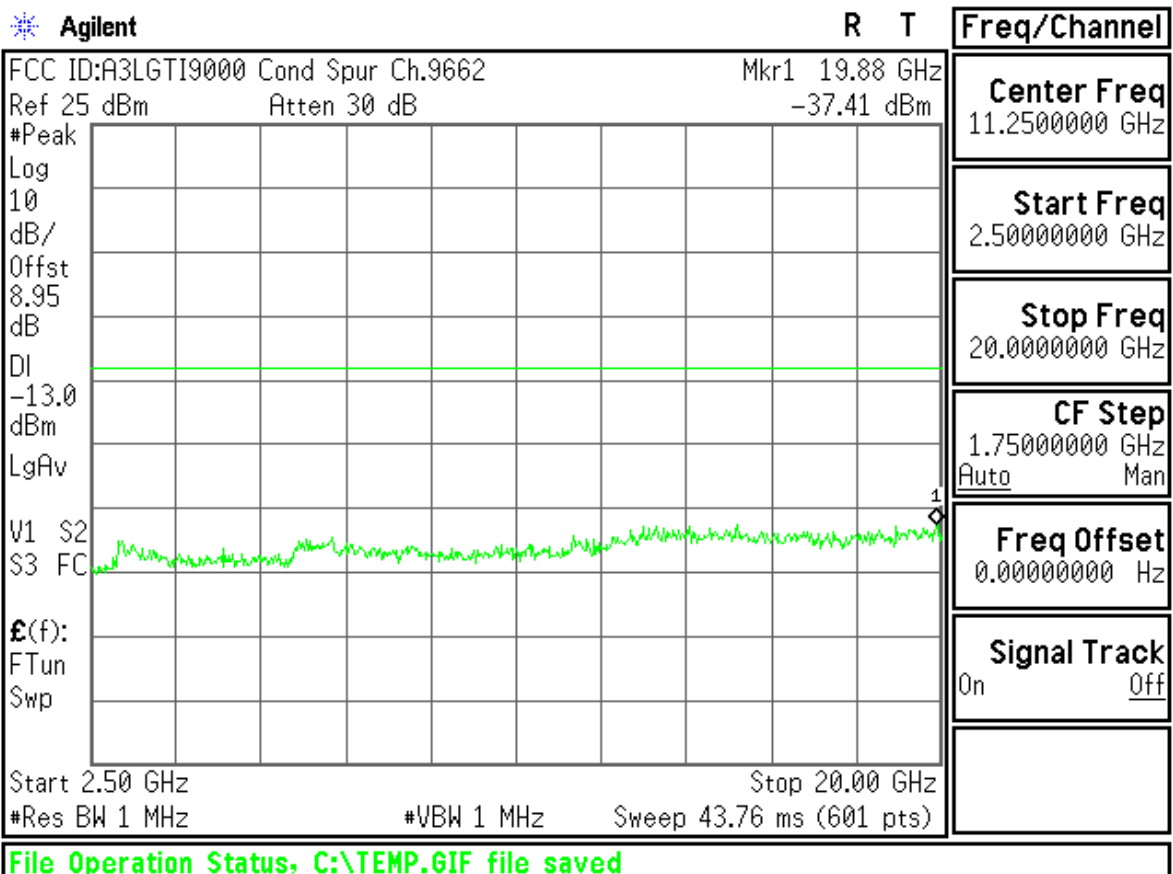
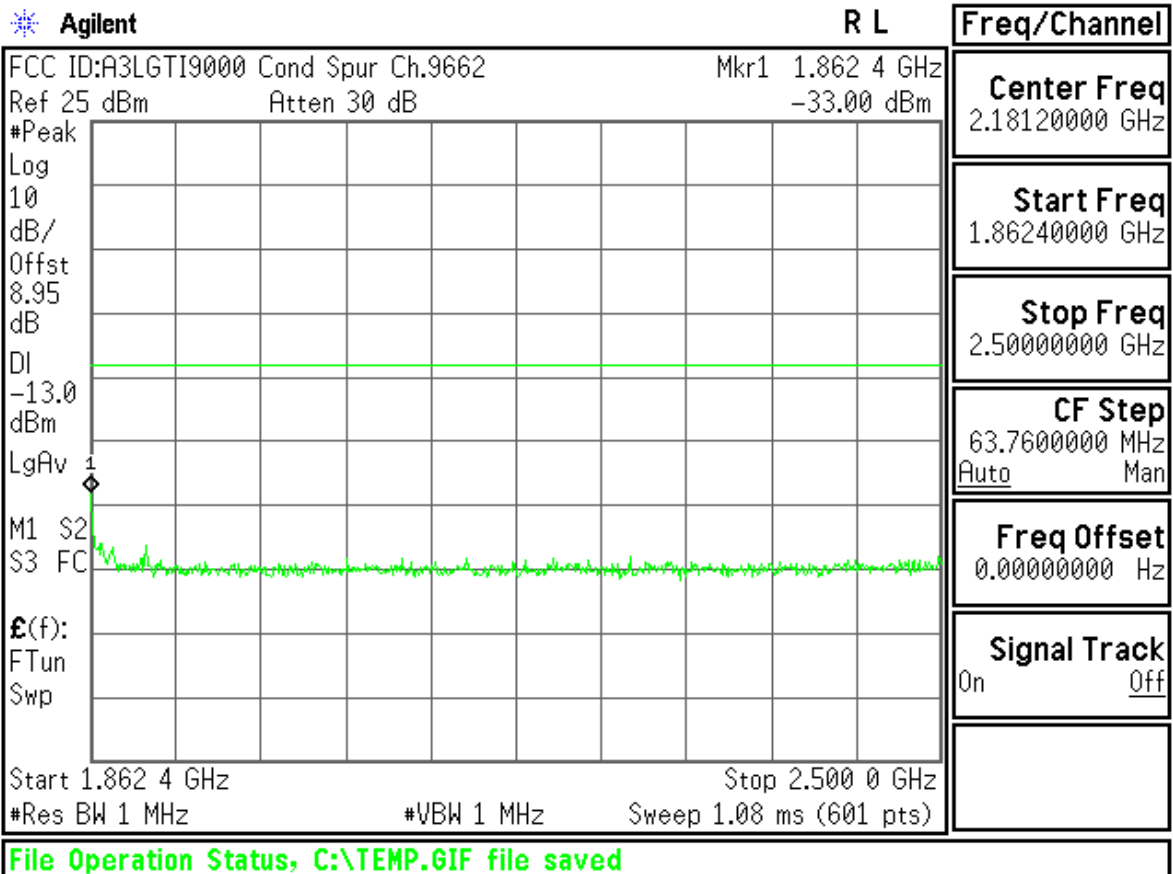
CF Step
1.00000000 MHz
Auto Man

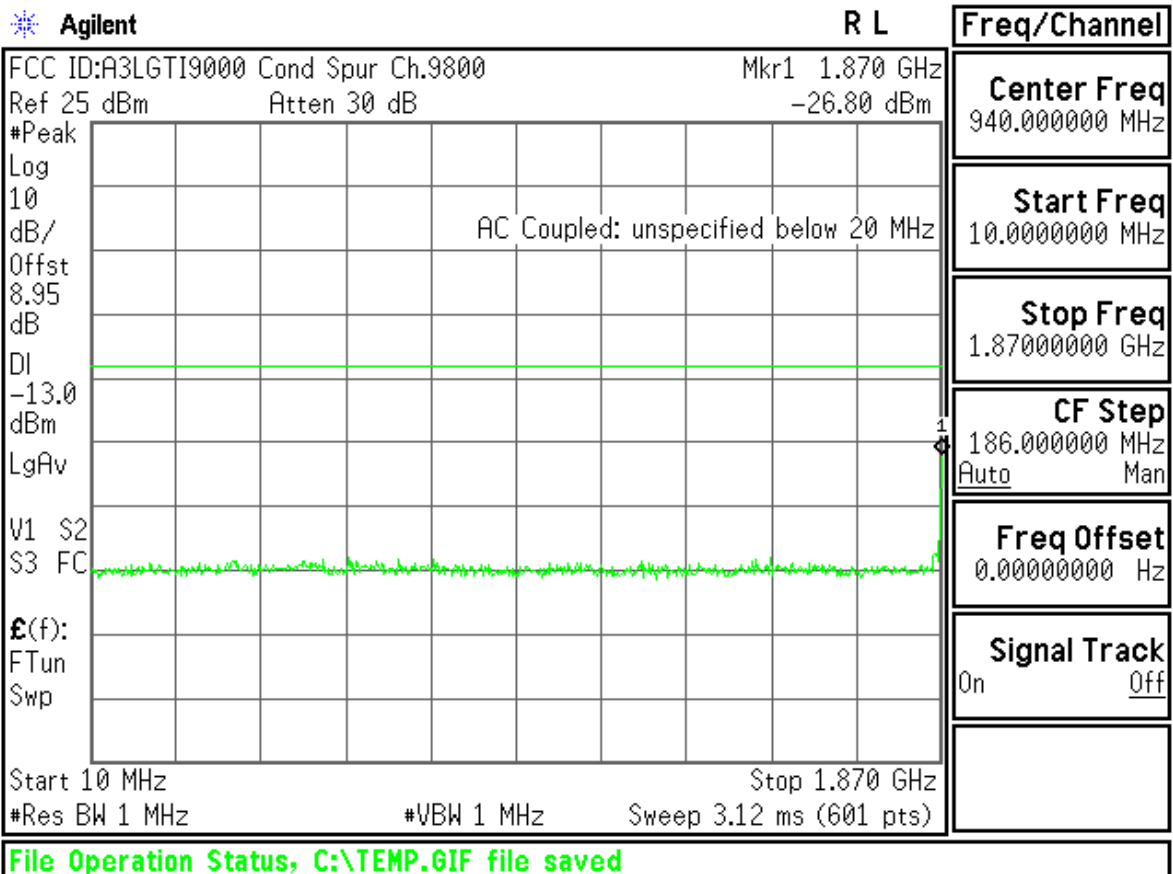
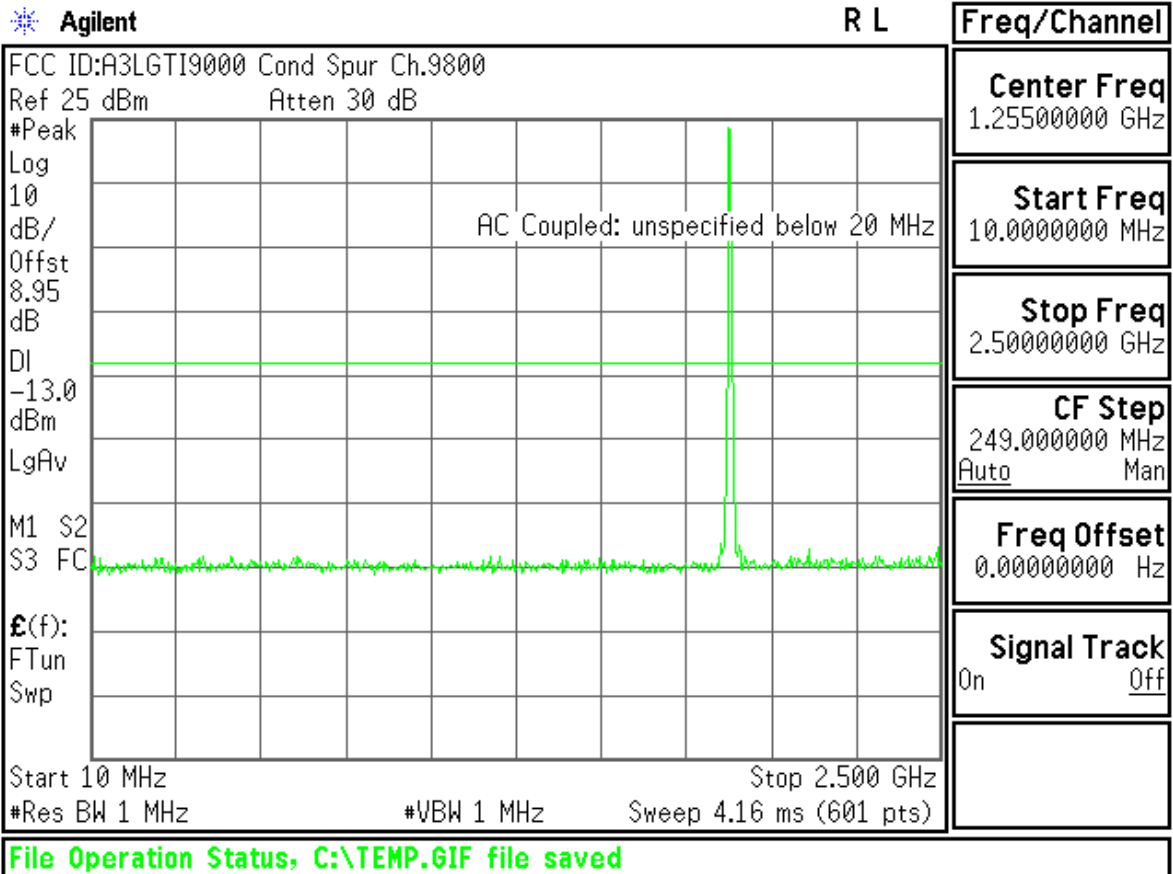
Freq Offset
0.00000000 Hz

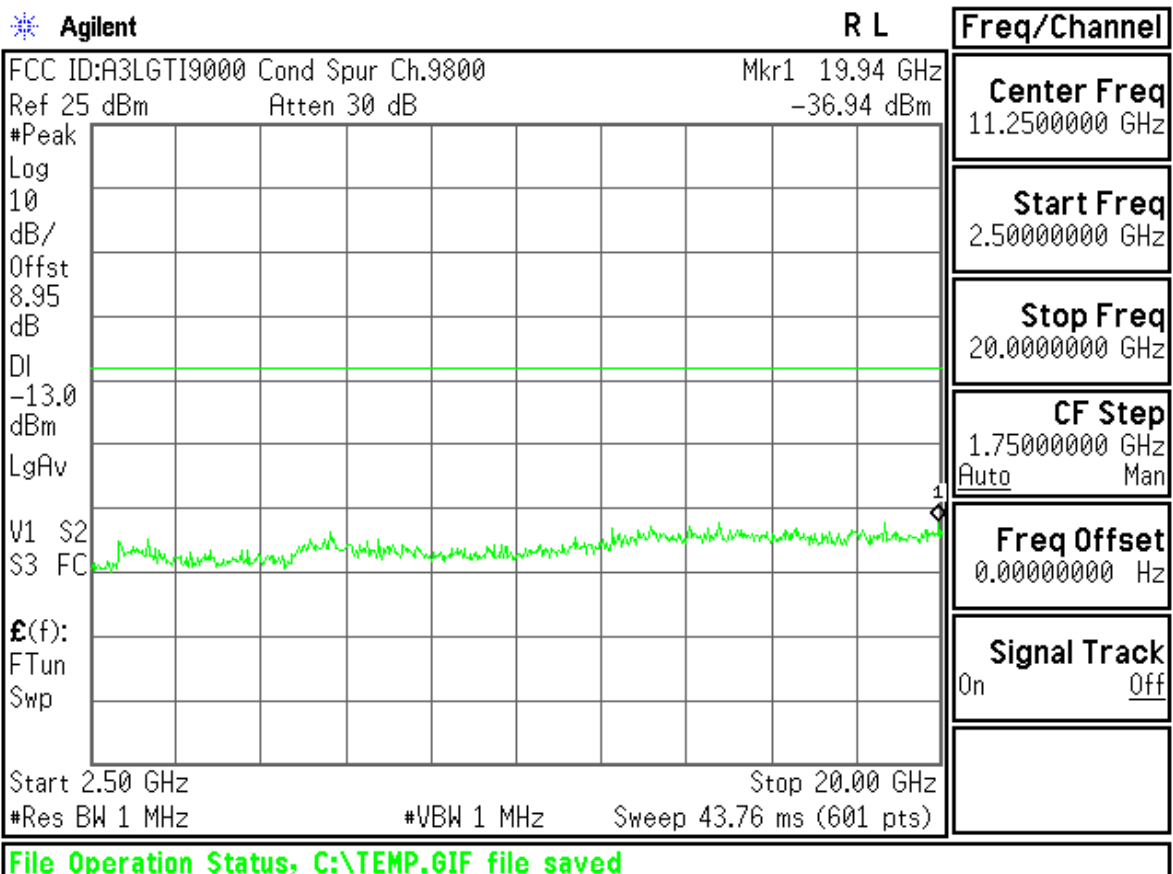
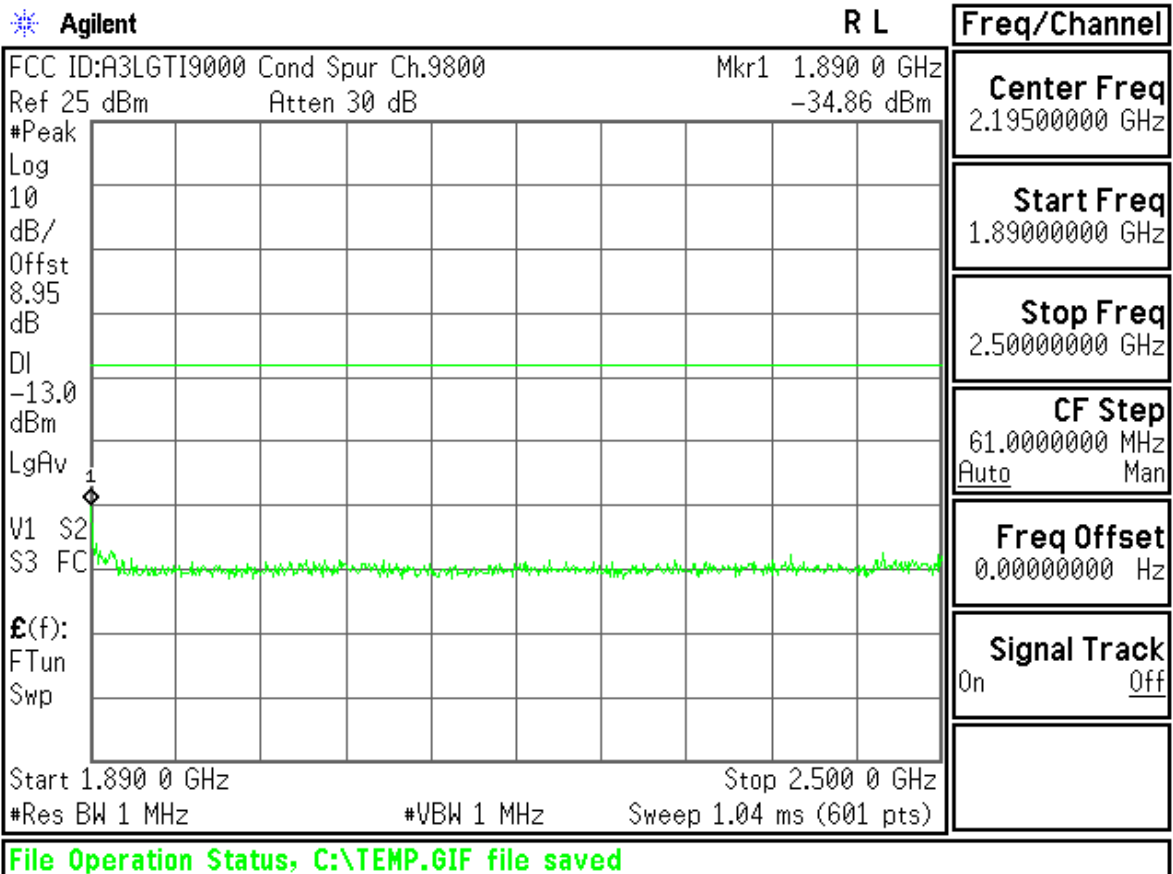
Signal Track
On Off

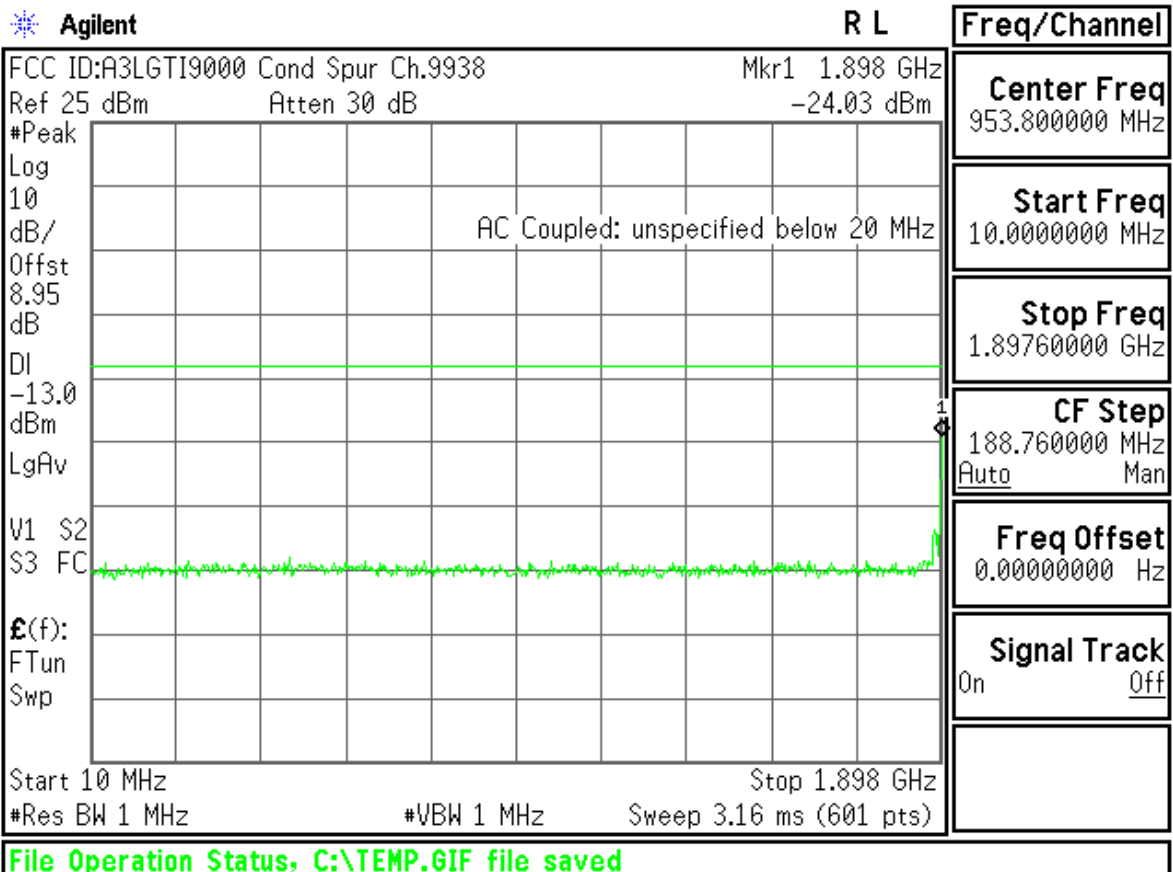
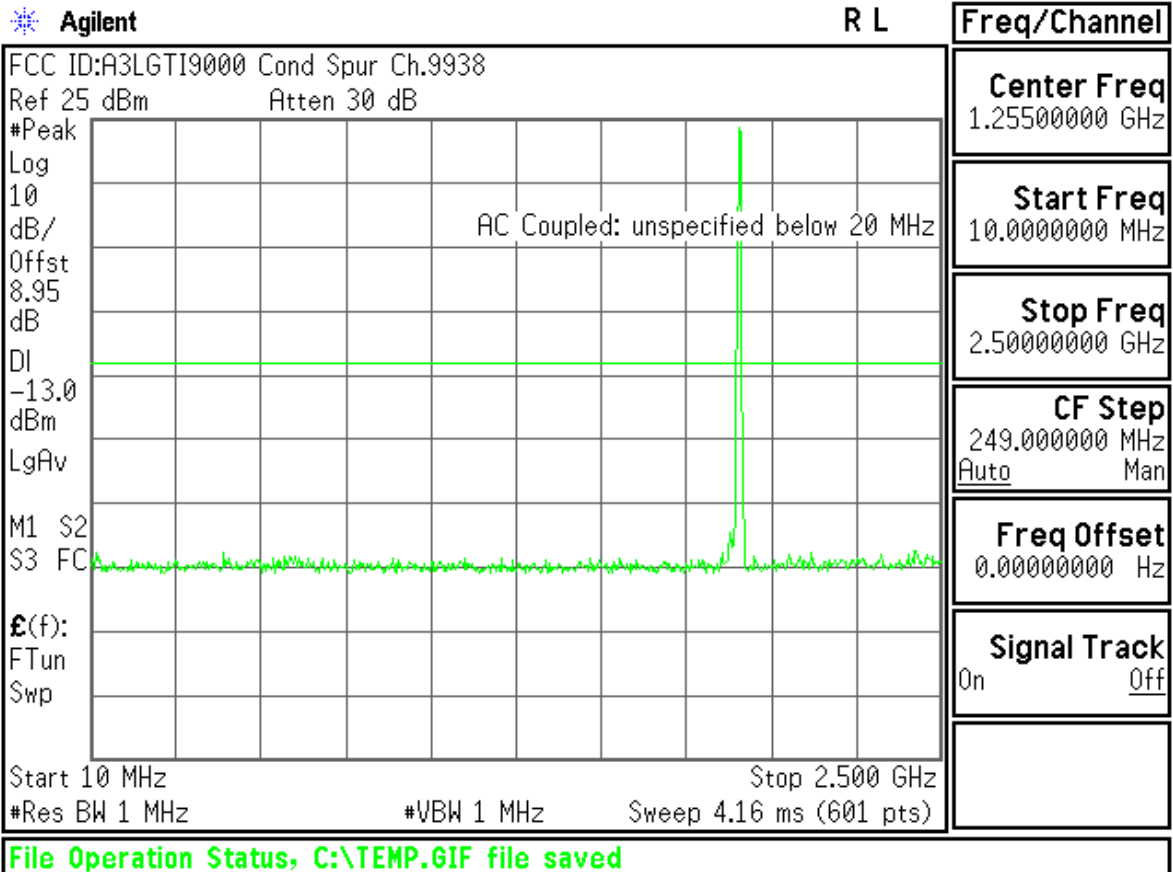
File Operation Status, C:\TEMP.GIF file saved







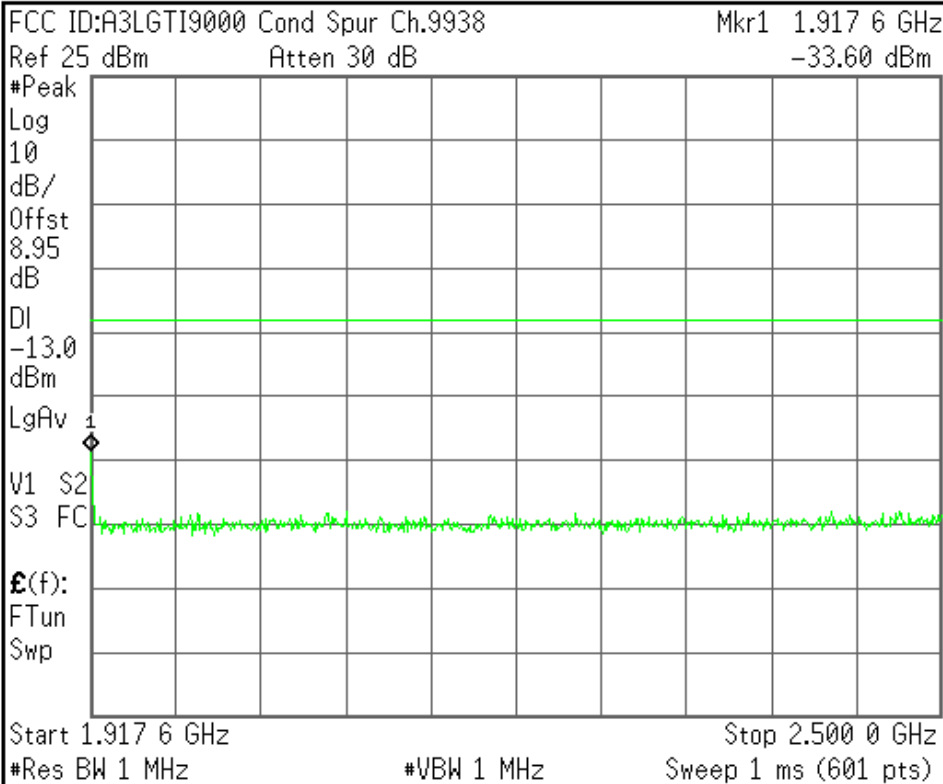




Agilent

R L

Freq/Channel



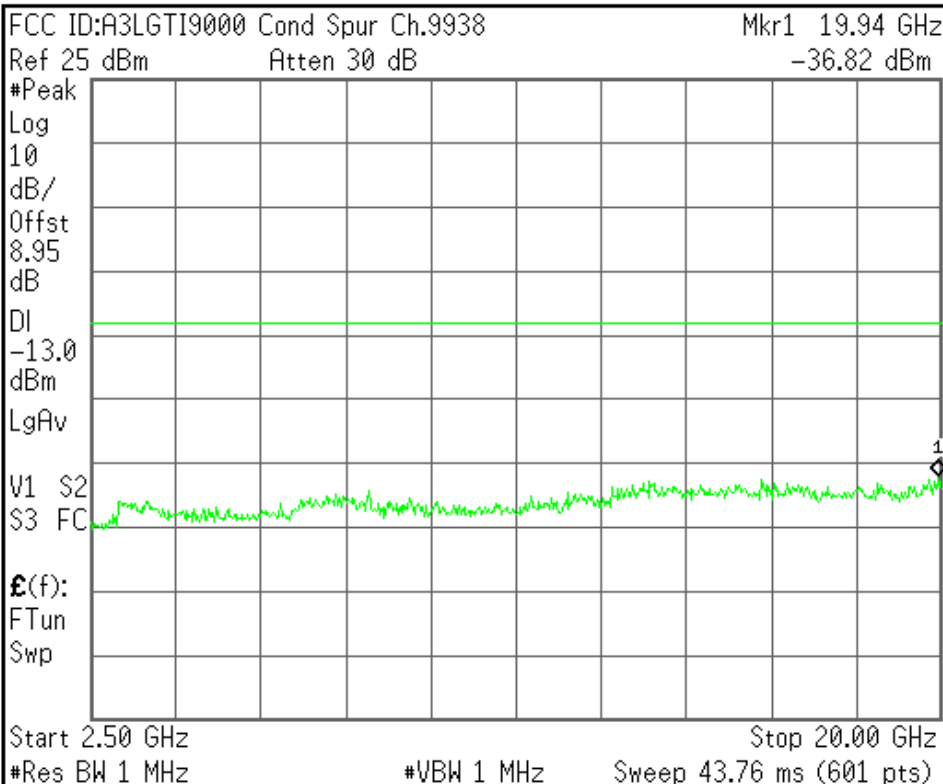
Center Freq 2.20880000 GHz
Start Freq 1.91760000 GHz
Stop Freq 2.50000000 GHz
CF Step 58.2400000 MHz Auto Man
Freq Offset 0.00000000 Hz
Signal Track On Off

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

Agilent

R L

Freq/Channel



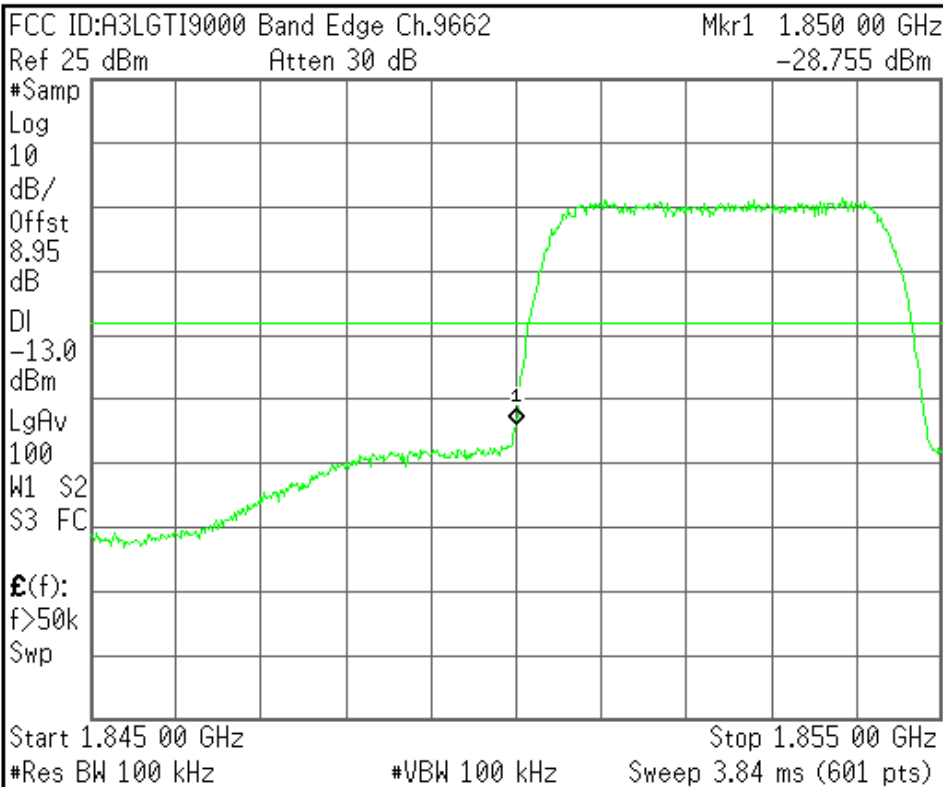
Center Freq 11.2500000 GHz
Start Freq 2.50000000 GHz
Stop Freq 20.0000000 GHz
CF Step 1.75000000 GHz Auto Man
Freq Offset 0.00000000 Hz
Signal Track On Off

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

Agilent

R T

Freq/Channel



Center Freq
1.85000000 GHz

Start Freq
1.84500000 GHz

Stop Freq
1.85500000 GHz

CF Step
1.00000000 MHz
Auto Man

Freq Offset
0.00000000 Hz

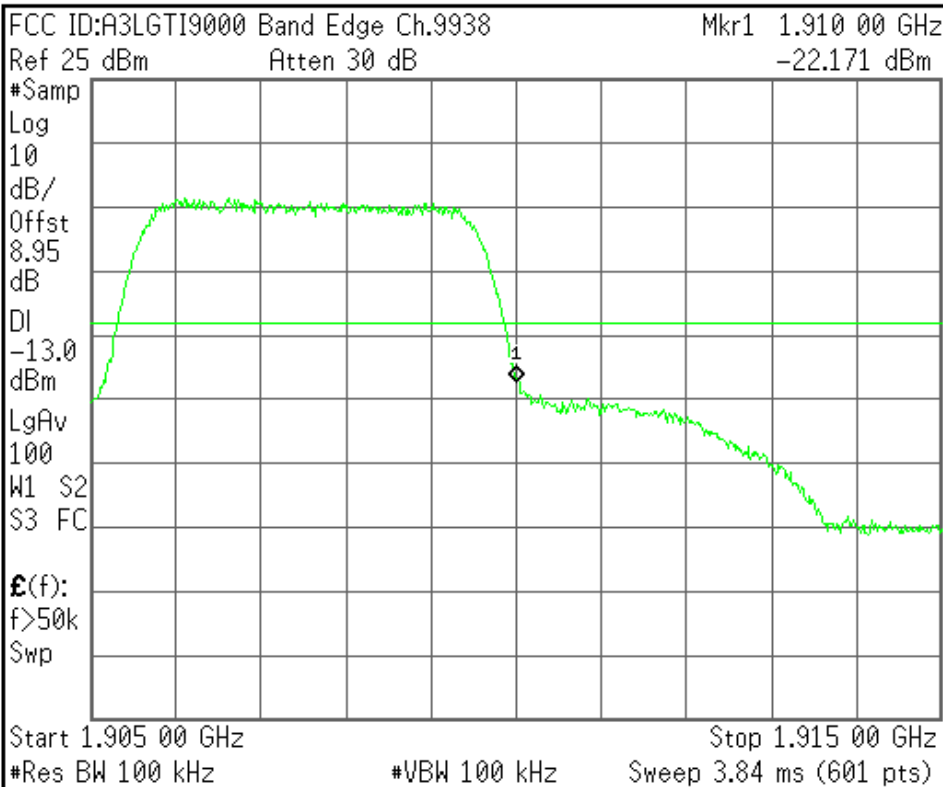
Signal Track
On Off

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

Agilent

R T

Freq/Channel



Center Freq
1.91000000 GHz

Start Freq
1.90500000 GHz

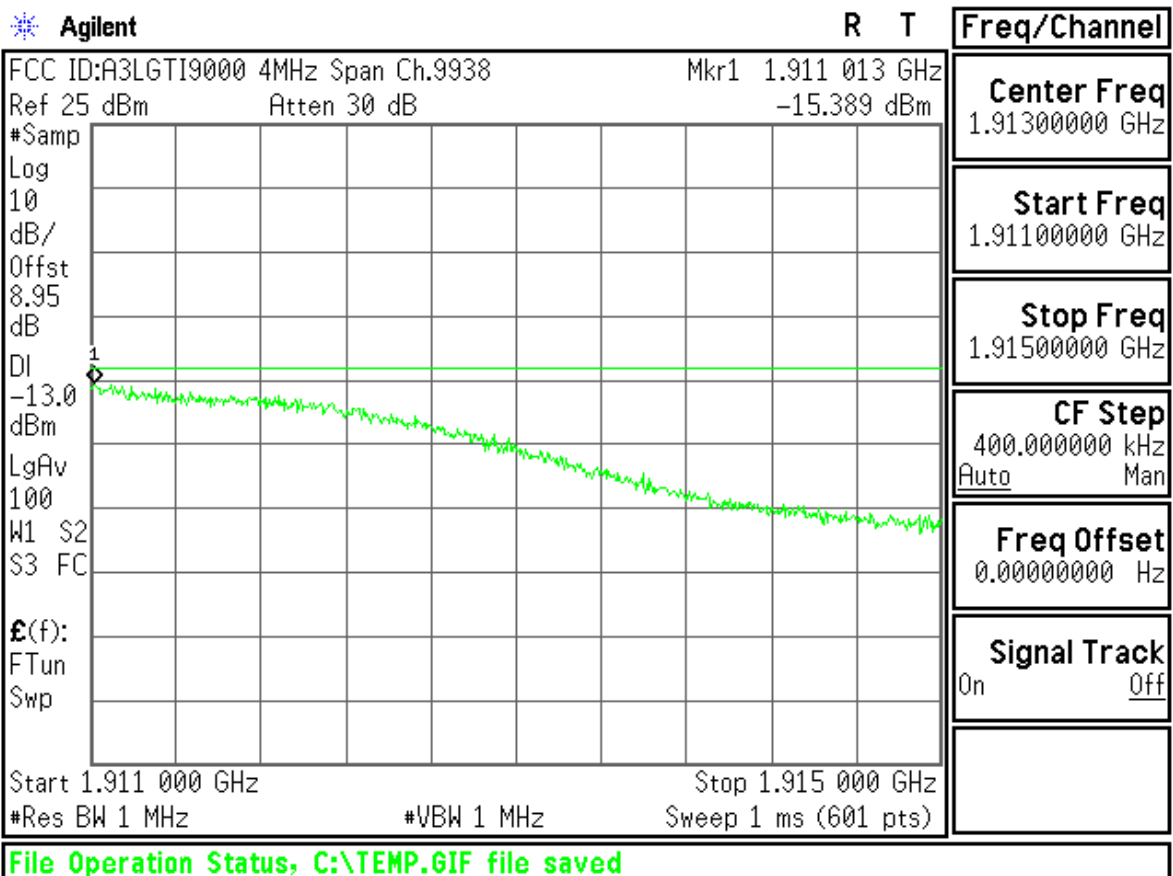
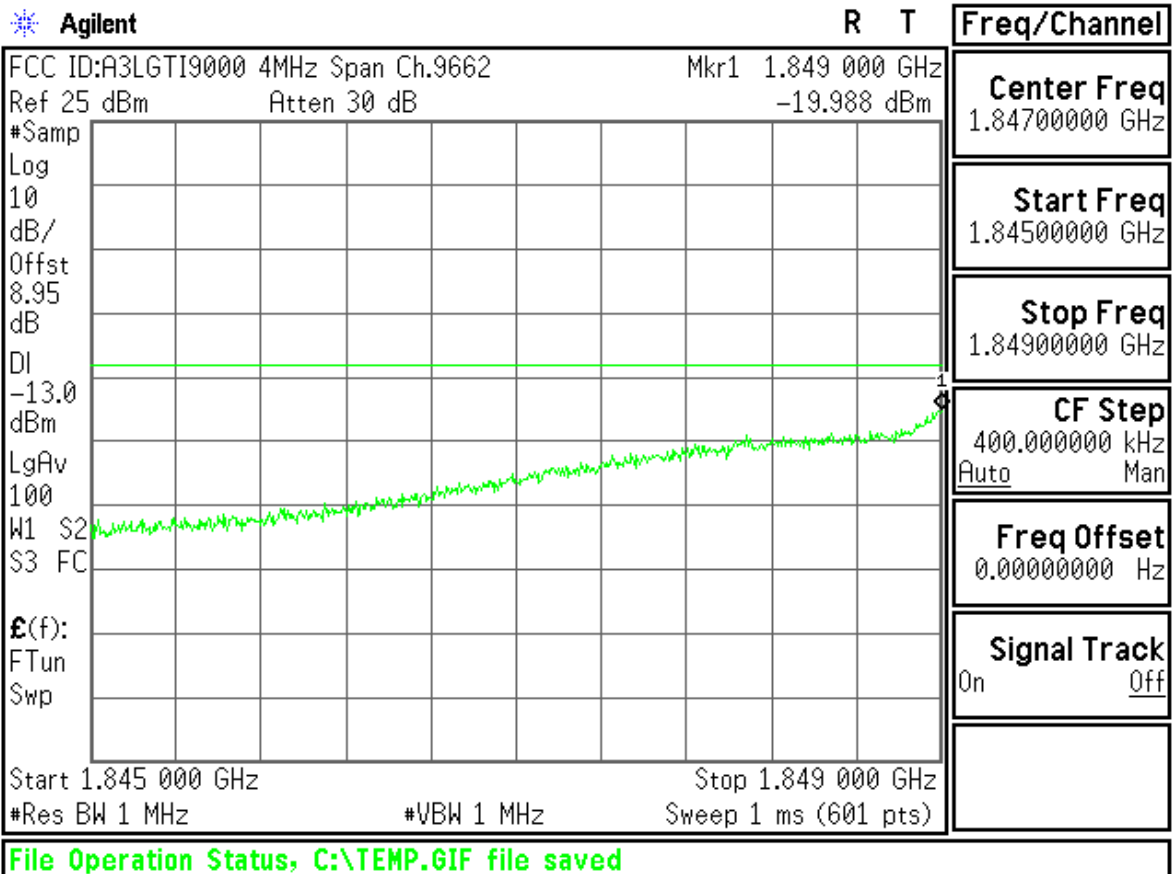
Stop Freq
1.91500000 GHz

CF Step
1.00000000 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:A3LGTI9000 P.A.R Ch.9800

▲ Mkr1 0 Hz

Ref 30 dBm

Atten 40 dB

2.31 dB

#Peak

Log

10

dB/

Offst

8.95

dB

#LgAv

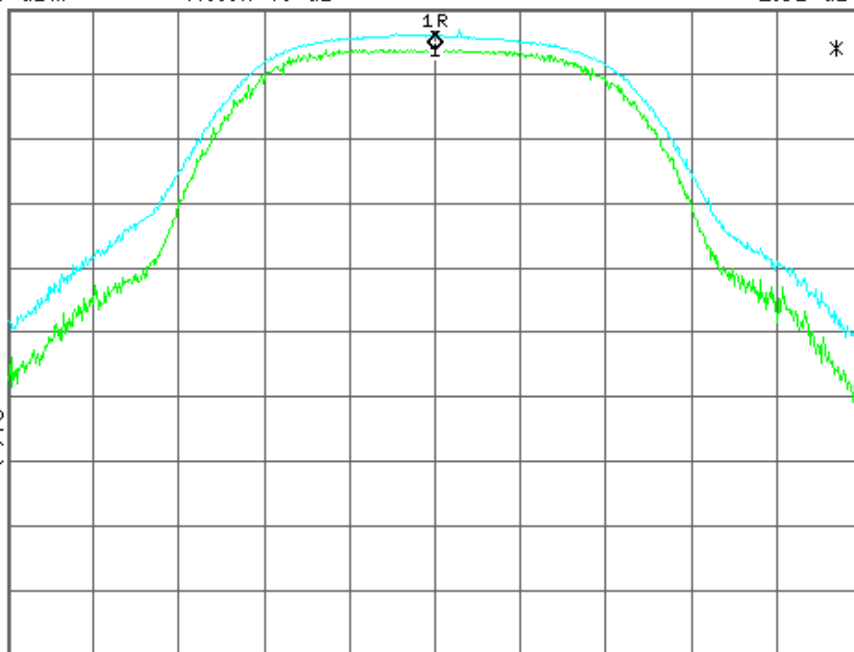
V1 V2

S3 FC

£(f):

FTun

Swp



Center 1.880 00 GHz

Span 20 MHz

#Res BW 5 MHz

VBW 5 MHz

Sweep 1 ms (601 pts)

Center Freq
1.88000000 GHz

Start Freq
1.87000000 GHz

Stop Freq
1.89000000 GHz

CF Step
2.00000000 MHz
Auto Man

Freq Offset
0.00000000 Hz

Signal Track
On Off

Copyright 2000-2005 Agilent Technologies