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 SUBPART CERTIFICATION REPORT

Model Tested:	**SGH-A411**
FCC ID (Requested):	**A3LSGHA411**
Report No:	**FE-011-R2**
Job No:	**FE-011**
Date issued:	**February 15, 2007**

- Abstract –
All measurement reported herein accordance with FCC Rules, 47CFR Part2, Part22.

Prepared By

SH ONG– Test Engineer

Checked By

WW JANG –Manager

Authorized By

SH PARK – Senior Manager

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MEASUREMENT REPORT Page

MEASUREMENT REPORT

1. FCC Certification Information

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

1.1 §2.1033 General Information

· Applicant Name:	SAMSUNG ELECRONICS CO., LTD.
· Address:	416 Maetan3-Dong, Yeongtong-Gu, Suwon City Gyeonggi-Do, Korea 443-742
· Attention	SungJoo KIM, Engineering Manager (QA Lab)
· FCC ID:	A3LSGHA411
· Quantity:	Quantity production is planned
· Emission Designators:	249KGXW(GSM1900), 242KG7W(GSM1900 EDGE) 4M17F9W(Cellular WCDMA)
· Tx Freq. Range:	1850.2MHz -1909.8MHz (GSM1900) 826.40-846.60MHz (Cellular WCDMA)
· Rx Freq. Range:	1930.2MHz - 1989.8MHz (GSM1900) 871.40-891.60 MHz (Cellular WCDMA)
· Max. Power Rating:	1.172 W EIRP GSM1900 (30.69dBm) 0.942 W EIRP GSM1900 EDGE(29.74dBm) 0.200 W ERP WCDMA(23.00dBm)
· FCC Classification(s):	Licensed Portable Tx Held to Ear (PCE)
· Equipment (EUT) Type:	Dual-Band PCS GSM/WCDMA Phone with Bluetooth
· Modulation(s):	WCDMA
· Frequency Tolerance:	±0.00025% (2.5ppm)
· FCC Rule Part(s):	§22(H), §24(E), §2
· Dates of Test:	January 30 - 31, 2007
· Place of Test:	SAMSUNG Lab,
· Test Report S/N:	FE-011-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.

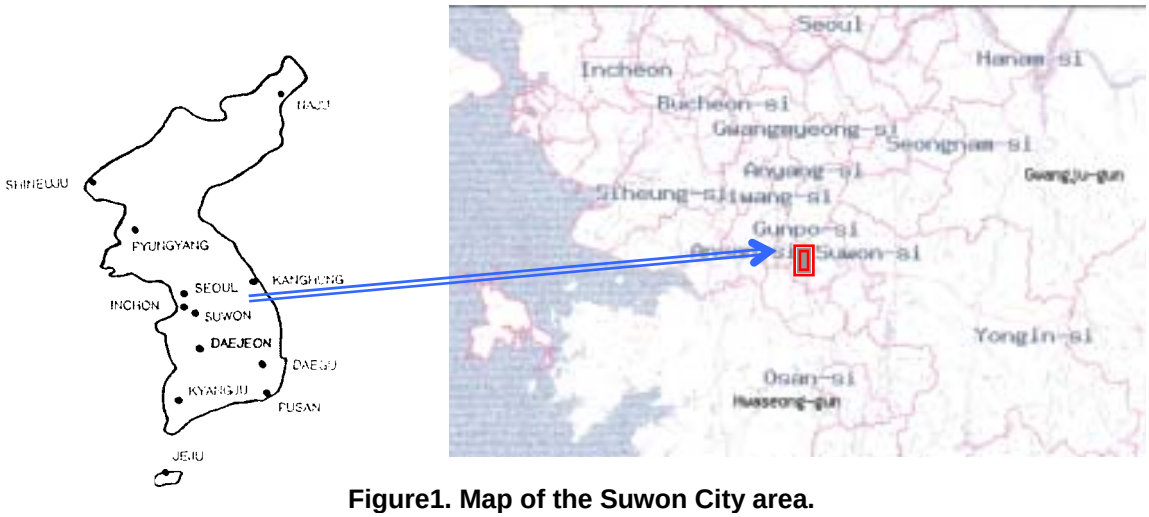

Figure1. Map of the Suwon City area.

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 a wooden 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.

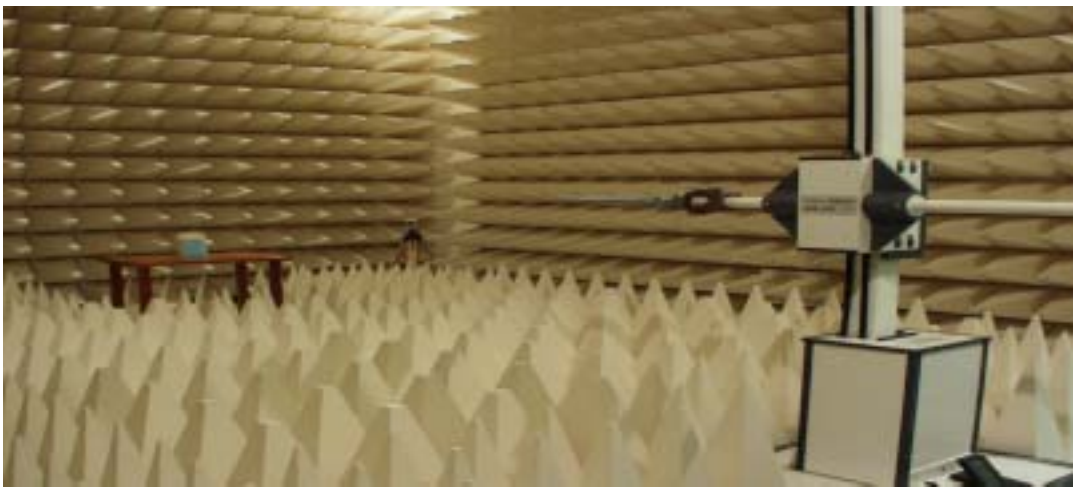

Figure2. Photograph of 3m Fully-Anechoic Chamber

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**.**

- End of page -

4. TEST EQUIPMENT LIST

Name Of Equipment	Model	Serial No.	Due Date
Spectrum Analyzer	ESI26	836119/010	2007-10-01
	E4440A(3Hz~26.5GHz)	MY41000236	2007-04-14
	E4440A(3Hz~26.5GHz)	MY41000233	2007-07-21
Signal Generator	SMR20	835197/030	2008-01-11
Network Analyzer	8753E	JP38160590	2007-06-26
Power Sensor	8485A	3318A19924	2007-09-24
Power Meter	E4419B	GB41293846	2007-09-06
Pre-Amplifier	8449B	3008A00691	2008-01-02
Communication test set	8960	GB42230535	2008-01-02
	8960	GB42360886	2007-07-03
Antenna Master	MA240	240/618	Not Required
Controller	HD100	100/756	Not Required
Environmental Chamber	SH-241	92000549	2007-11-16
Horn Antenna	HF906	360306/011	2007-03-31
Communication test set	CMU200	109162	2007-10-17
Dipole Antenna	3121C-DB4	9007-588	2007-05-29
Receive Antenna	HL040	353255/020	2007-04-25
Power Supply	E3640A	MY40003594	2007-06-28
Receive Antenna	E3640A	MY40003595	2007-05-19
Divider	11636B	51946	Not Required
	11636B	51942	Not Required
High Pass Filter	WHK1.0/15G-10SS	1	Not Required
	WHK/3.5/18G-10SS	4	Not Required
Shielded Fully Anechoic Chamber	CHAMBER	ANT0001	Not Required

5. DESCRIPTION OF TESTS

5.1 Conducted Output Power

Measurement Conditions for UMTS

The handset was placed into a simulated call using a base station simulator in a shielded chamber. Such test signals offer a consistent means for testing a recommended for evaluating EMC measurements. All measurement were taken with a fully charged battery. The base station simulator configurations were set so as to achieve and maintain the EUT's maximum output power level. Power measurements were performed using the digital average power function of the base station simulator.

Output Power Verification

The maximum output power is verified on the High, Middle and Low channels according to the general descriptions in section 5.2 of 3GPP TS 34.121, using the appropriate RMC or AMR with TPC (transmit power control) set to all "1's". Results for all applicable physical channel configurations (DPCCH, DPDCH and spreading codes) should be tabulated in the test report. All Configurations that are not supported by the DUT or cannot be measured due to technical or equipment limitations should be clearly identified.

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
Band V	+24	+1/-3	+21	+2/-2

Operating Band	Channel	12.2 kbps RMC	12.2 kbps AMR
Cellular WCDMA	4132	22.66dBm	22.66dBm
	4183	22.95dBm	23.07dBm
	4233	23.05dBm	22.94dBm

5.2 Effective Radiated Power

Test Set-up for the ERP/EIRP TEST

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

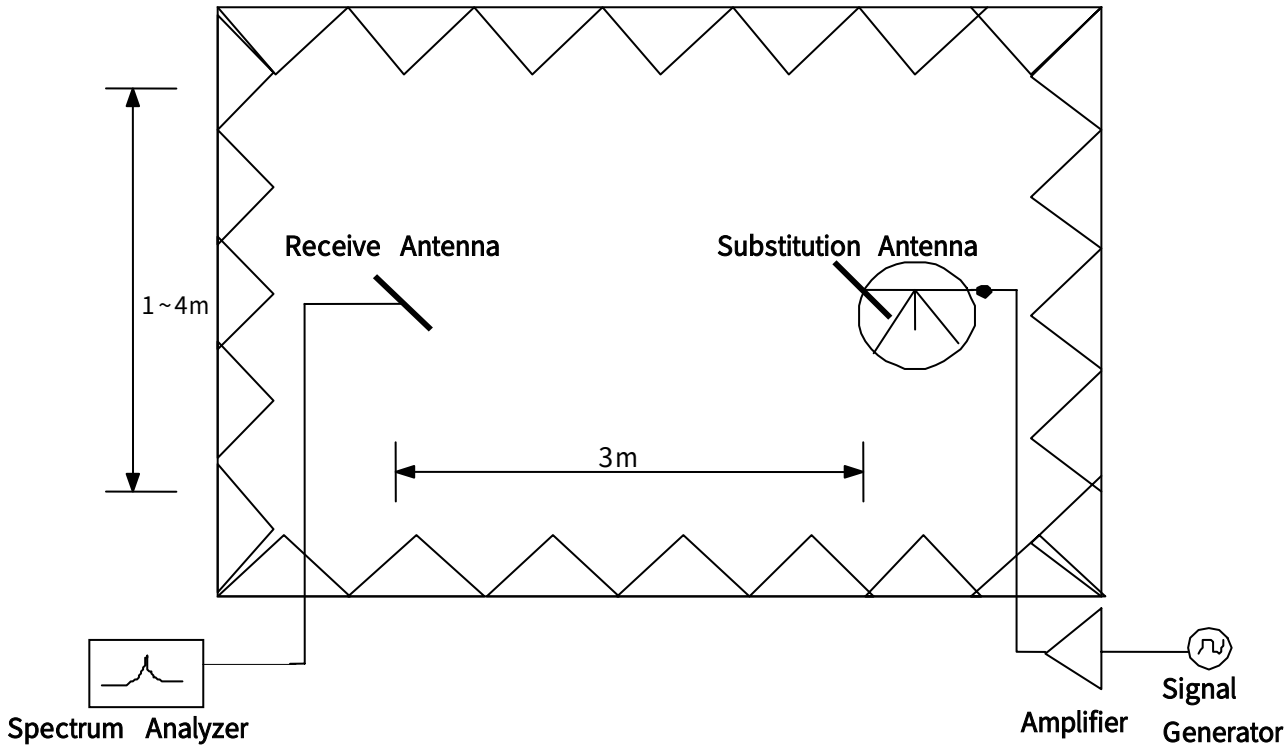

Figure 3. Diagram of ERP/EIRP test Set-up

The EUT was placed on a Non-conducted turntable 3-meters from the receive antenna. The receive antenna height and turntable rotation was adjusted for the highest reading on the receive spectrum analyzer. For CDMA signals, an average detector is used, with RBW=VBW=3MHz, SPAN=10MHz. For WCDMA signals, an average detector is used, with RBW=VBW=5MHz, 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 is recorded.

5.3 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

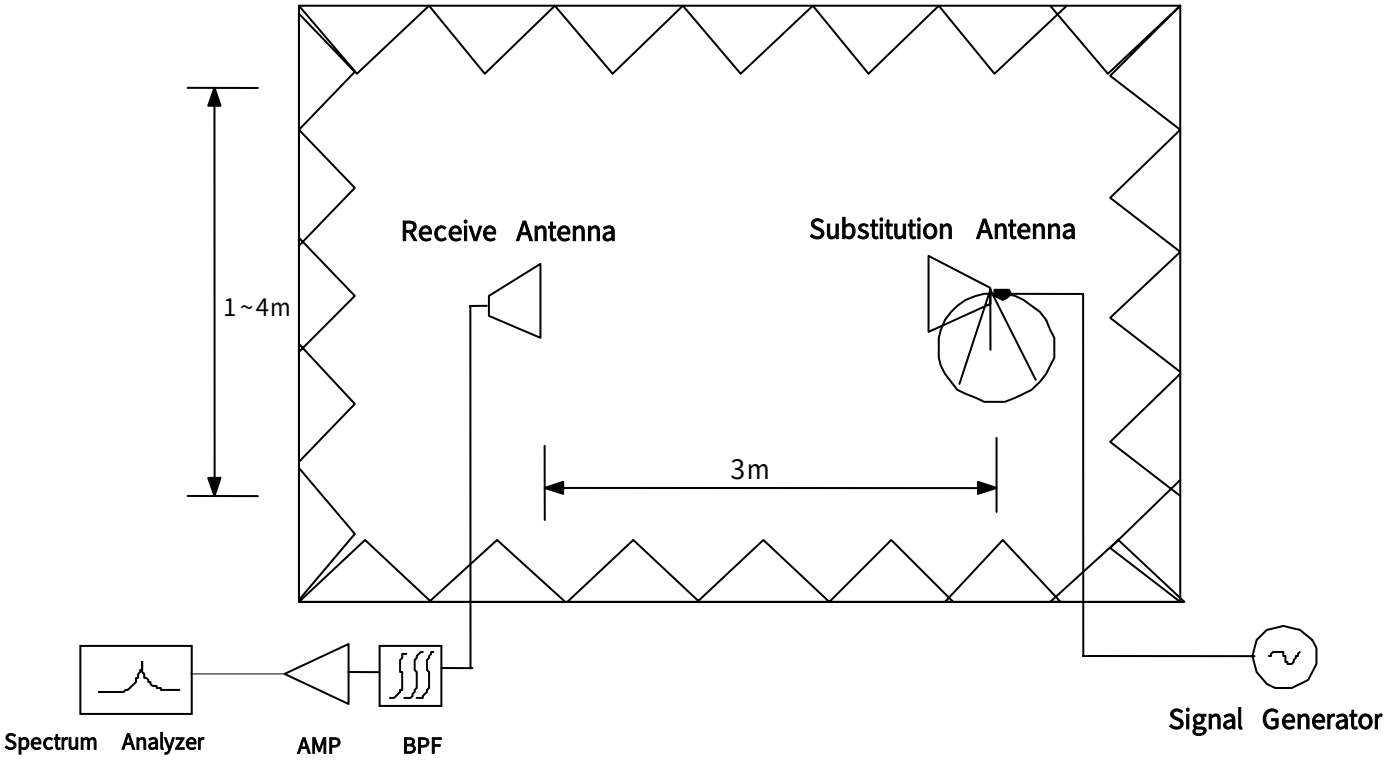

Figure 4. Diagram of Radiated Spurious & Harmonic test Set-up

The EUT was placed on a Non-conducted turntable 3-meters from the receive antenna. The receive antenna height and turntable rotation 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 only values that could be measured were 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 4132 WCDMA Mode 2nd Harmonic(1652.8MHz)

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 1652.8MHz. So 6.1dB is added to the signal generator reading of –30.9dBm yielding –24.8dBm. The fundamental ERP was 25.5dBm so this harmonic was 25.5dBm –(-24.8)= 50.3dBc .

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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 Emissions 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.

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 1. CDMA 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+10log (P)dB. Limit equivalent to –13dBm, calculation shown below.

43 + 10log (0.200 W) = 36.00dB
23.00 dBm –36.00 dB = -13 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 –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. 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.

- End of page -

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 ±0.0001 (±1ppm) 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 Effective Radiated Power(E.R.P.)

Supply Voltage : 3.7VDC

Modulation : WCDMA

■ Reference level

Frequency (MHz)	Output (dBm)	Polarization	S/A (dBm)	Ant gain (dBd)	Ref level (dBm)
826.40	22.50	H	-15.81	0.00	-15.81
		V	-14.34	0.00	-14.34
836.60	23.50	H	-15.29	0.00	-15.29
		V	-13.84	0.00	-13.84
846.60	22.00	H	-16.30	0.00	-16.30
		V	-14.81	0.00	-14.81

■ Result

Frequency (MHz)	From EUT Tested level (dBm)	Polarization (H/V)	Azimuth (angle)	ERP (dBm)	ERP (W)	Battery
826.40	-15.69	H1	181	22.62	0.183	Standard
836.60	-15.29	H1	184	23.00	0.200	Standard
846.60	-16.58	H1	180	21.72	0.149	Standard

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

Radiated measurements at 3 meters by Substitution Method

6.2 Radiated Spurious & Harmonic measurement

Field Strength of SPURIOUS Radiation

Operating Frequency : 826.40 MHz(Low), 836.60MHz(Middle), 846.60MHz(High)

Measured Output Power : 23.00 dBm = 0.200 W

Modulation Signal : WCDMA

Limit : 43 + 10log$_{10}$(P) = 36.00 dBc

■ **Result**

Channel	Harmonic	Frequency (MHz)	From EUT Tested level (dBm)	POL (H/V)	Result (dBc)
4132	2	1652.80	-53.84	H2	66.78
	3	2479.20	-67.15	H1	75.37
	4	3305.60	-68.32	V	72.23
	5	4132.00	-	-	-
	6	4958.40	-	-	-
	7	5784.80	-	-	-
4183	2	1673.20	-58.93	H2	71.09
	3	2509.80	-66.86	V	74.40
	4	3346.40	-68.57	V	72.74
	5	4183.00	-	-	-
	6	5019.60	-	-	-
	7	5856.20	-	-	-
4233	2	1693.20	-55.25	H2	66.43
	3	2539.80	-66.55	H2	74.35
	4	3386.40	-68.94	V	72.31
	5	4233.00	-	-	-
	6	5079.60	-	-	-
	7	5926.20	-	-	-

Radiated Spurious Emission measurements at 3 meters by Substitution Method

6.3 Radiated Spurious & Harmonic Conversion Table

Date : 2007 . 01. 31

Test Engineer : JH HAN

① Tx Cable loss
② Tx Horn Ant Gain
③ Rx Cable loss + HPF Insertion loss + Attenuator
④ Pre-Amp gain
⑤ Air loss
⑥ Tested Level from EUT
⑦ = ⑥ + ⑤ + ③ - ④
⑧ = ERP +2.14- ⑦

CH	Har	Frequency (MHz)	① Tx CL (dB)	② Horn Gain (dB)	Tx Level @ (S/G 0dBm)	⑥ Tested Level EUT : H (dBm)	⑥ Tested Level EUT : V (dBm)	⑦ Amplitude of Emission EUT : H (dBm)	⑦ Amplitude of Emission EUT : V (dBm)	⑧ Result EUT : H (dBc)	⑧ Result EUT : V (dBc)
4132	2	1652.80	7.05	8.03	0.98	-53.84	-54.47	-41.64	-42.50	66.78	67.64
	3	2479.20	8.91	9.55	0.64	-67.15	-67.94	-50.23	-50.53	75.37	75.67
	4	3305.60	10.70	9.64	-1.06	-68.25	-68.32	-47.80	-47.09	72.94	72.23
	5	4132.00	11.99	10.67	-1.32	-	-	-	-	-	-
	6	4958.40	13.20	11.05	-2.15	-	-	-	-	-	-
	7	5784.80	14.67	11.23	-3.44	-	-	-	-	-	-
4183	2	1673.20	7.12	8.03	0.91	-58.93	-60.22	-45.95	-46.87	71.09	72.01
	3	2509.80	9.02	9.55	0.53	-67.10	-66.86	-50.26	-49.26	75.40	74.40
	4	3346.40	10.54	9.64	-0.90	-68.06	-68.57	-47.65	-47.60	72.79	72.74
	5	4183.00	12.14	10.67	-1.47	-	-	-	-	-	-
	6	5019.60	13.62	11.05	-2.57	-	-	-	-	-	-
	7	5856.20	14.70	11.23	-3.47	-	-	-	-	-	-
4233	2	1693.20	7.17	8.03	0.86	-55.25	-56.89	-41.29	-43.09	66.43	68.23
	3	2539.80	9.05	9.55	0.50	-66.55	-67.71	-49.21	-49.43	74.35	74.57
	4	3386.40	10.55	9.64	-0.91	-68.11	-68.94	-47.22	-47.17	72.36	72.31
	5	4233.00	12.07	10.67	-1.40	-	-	-	-	-	-
	6	5079.60	13.80	11.05	-2.75	-	-	-	-	-	-
	7	5926.20	14.93	11.23	-3.70	-	-	-	-	-	-

6.4 Frequency Stability

6.4.1 Frequency Stability Table

Operating Frequency : 836,600,000 Hz

Channel : 4183

Reference Voltage : 3.7VDC

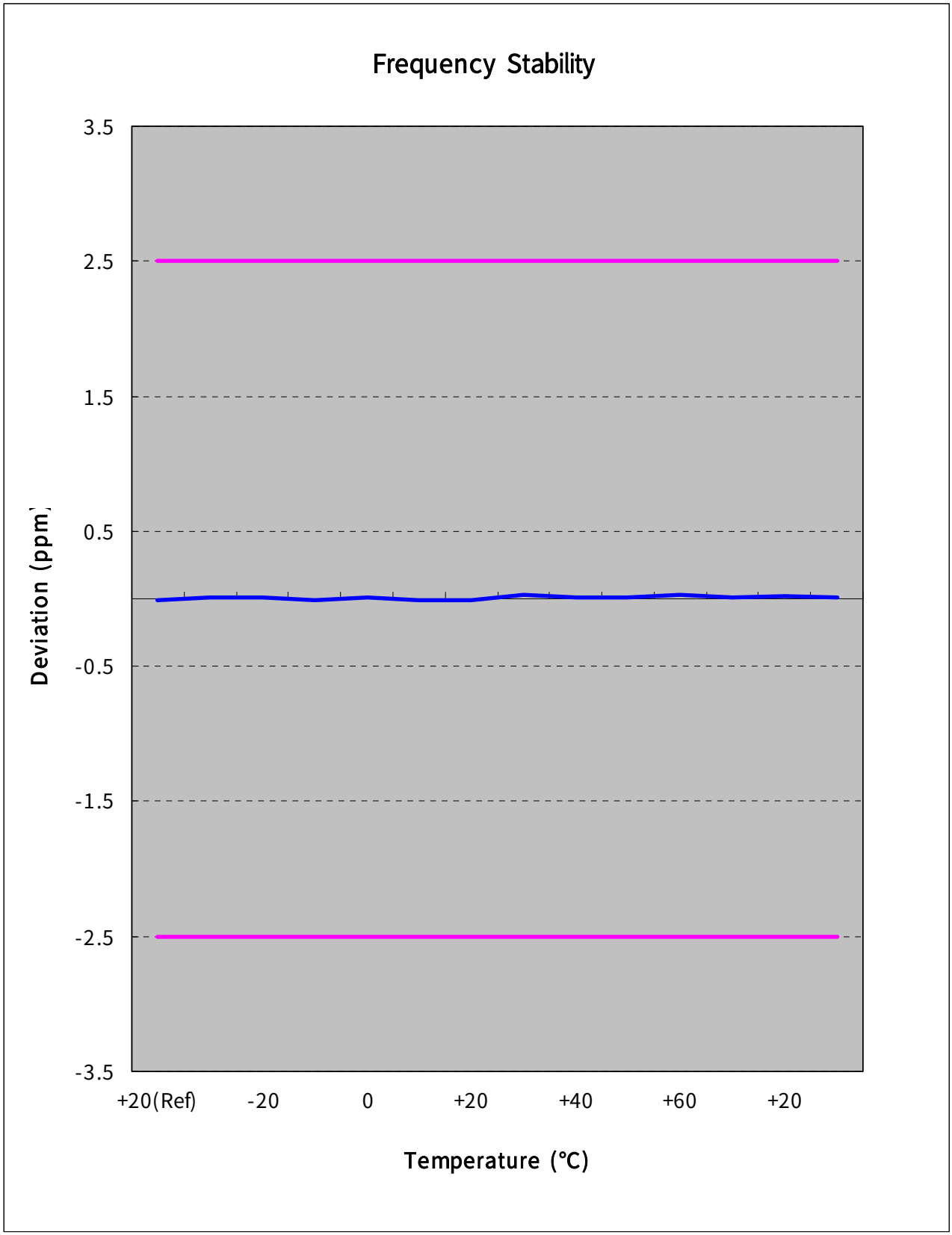
Deviation Limit : ±0.00025 % or 2.5ppm

Voltage (%)	Power (VDC)	Temp. (°C)	Frequency Error (Hz)	Frequency (Hz)	Deviation (%)	ppm
100%	3.70	+20(Ref)	-6.35	836,599,994	-0.000001	-0.008
100%		-30	10.46	836,600,010	0.000001	0.013
100%		-20	11.92	836,600,012	0.000001	0.014
100%		-10	-8.55	836,599,991	-0.000001	-0.010
100%		0	10.29	836,600,010	0.000001	0.012
100%		+10	-7.96	836,599,992	-0.000001	-0.010
100%		+20	-6.35	836,599,994	-0.000001	-0.008
100%		+30	23.84	836,600,024	0.000003	0.028
100%		+40	10.19	836,600,010	0.000001	0.012
100%		+50	7.22	836,600,007	0.000001	0.009
100%		+60	26.38	836,600,026	0.000003	0.032
85%	3.25	+20	10.15	836,600,010	0.000001	0.012
115%	4.26	+20	16.54	836,600,017	0.000002	0.020
Batt.Endpoint	3.25	+20	10.15	836,600,010	0.000001	0.012

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

6.4.2 Frequency Stability Graph



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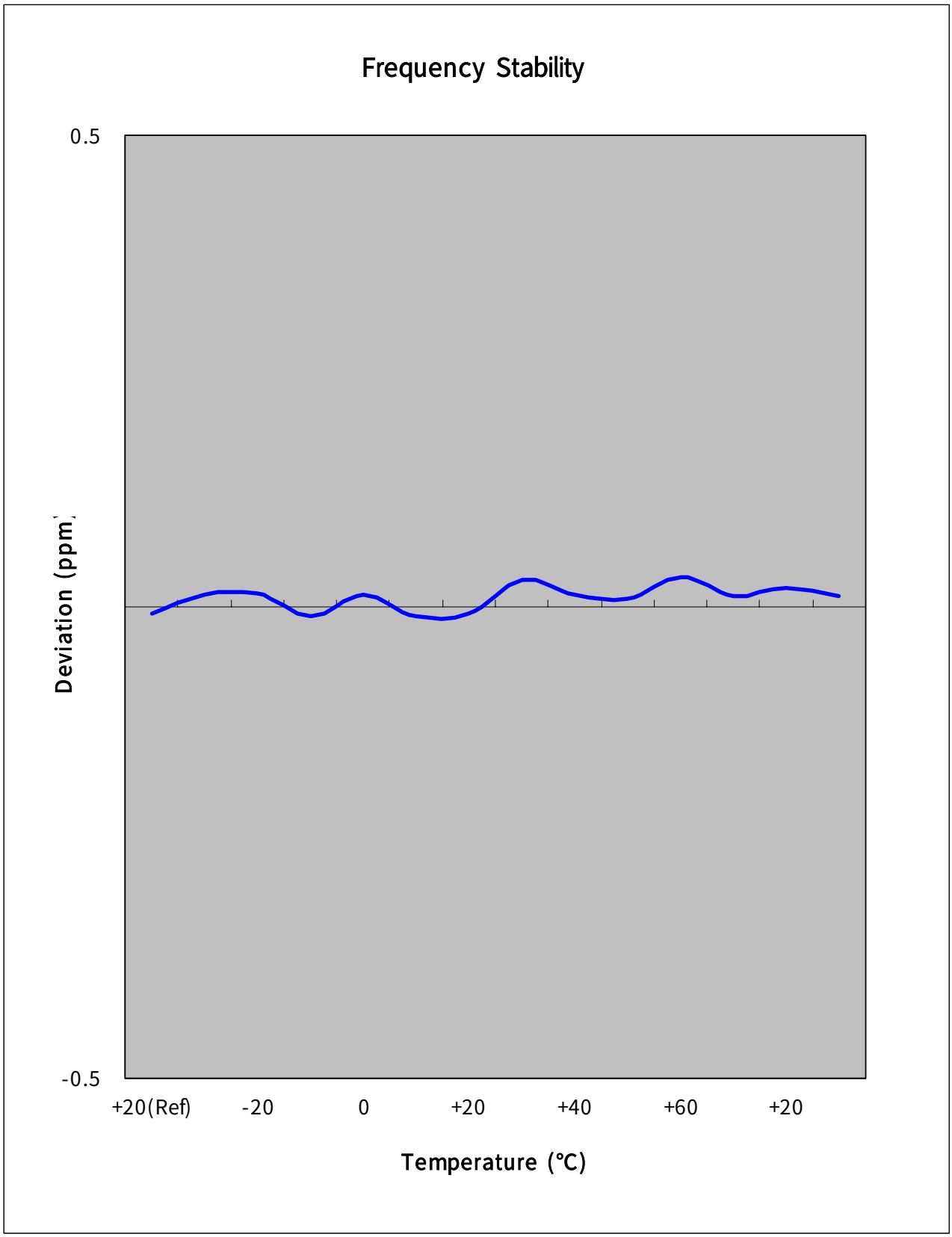
Zoom In



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7. SAMPLE CALCULATION

7.1 Emission Designator

Emission Designator = 4M18F9W

Calculation : 2M + 2DK
WCDMA BW = 4.18MHz
F = Frequency Modulation
9 = Composite Digital Info
W = Combination(Audio/Data)
(Measured at the 99.75% power bandwidth)

- End of page -

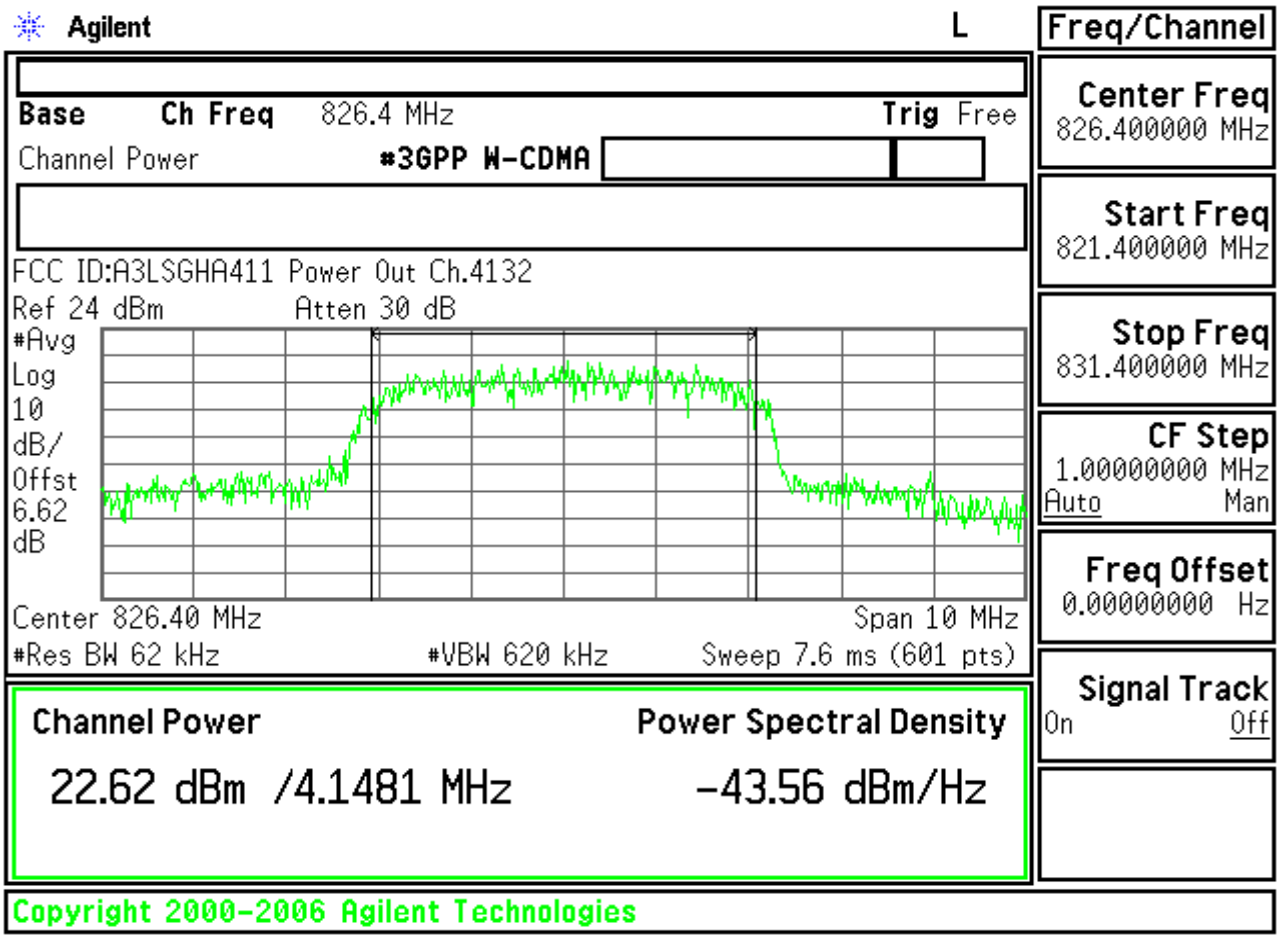
8. CONCLUSION

The data collected shows that the SAMSUNG Dual Mode PCS GSM/EDGE/Cellular WCDMA Phone with Bluetooth.
FCC ID : A3LSGHA411 complies with all the requirements of Parts 2,22 of the FCC Rules.

- End of page -

9. TEST PLOTS

- End of page -


Agilent
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Freq/Channel
Base Ch Freq 826.4 MHz
Trig Free
Channel Power
#3GPP W-CDMA
FCC ID:A3LSGHA411 Power Out Ch.4132
Ref 24 dBm
Atten 30 dB
#Avg
Log
10
dB/
Offst
6.62
dB
Center 826.40 MHz
Span 10 MHz
#Res BW 62 kHz
#VBW 620 kHz
Sweep 7.6 ms (601 pts)
Channel Power
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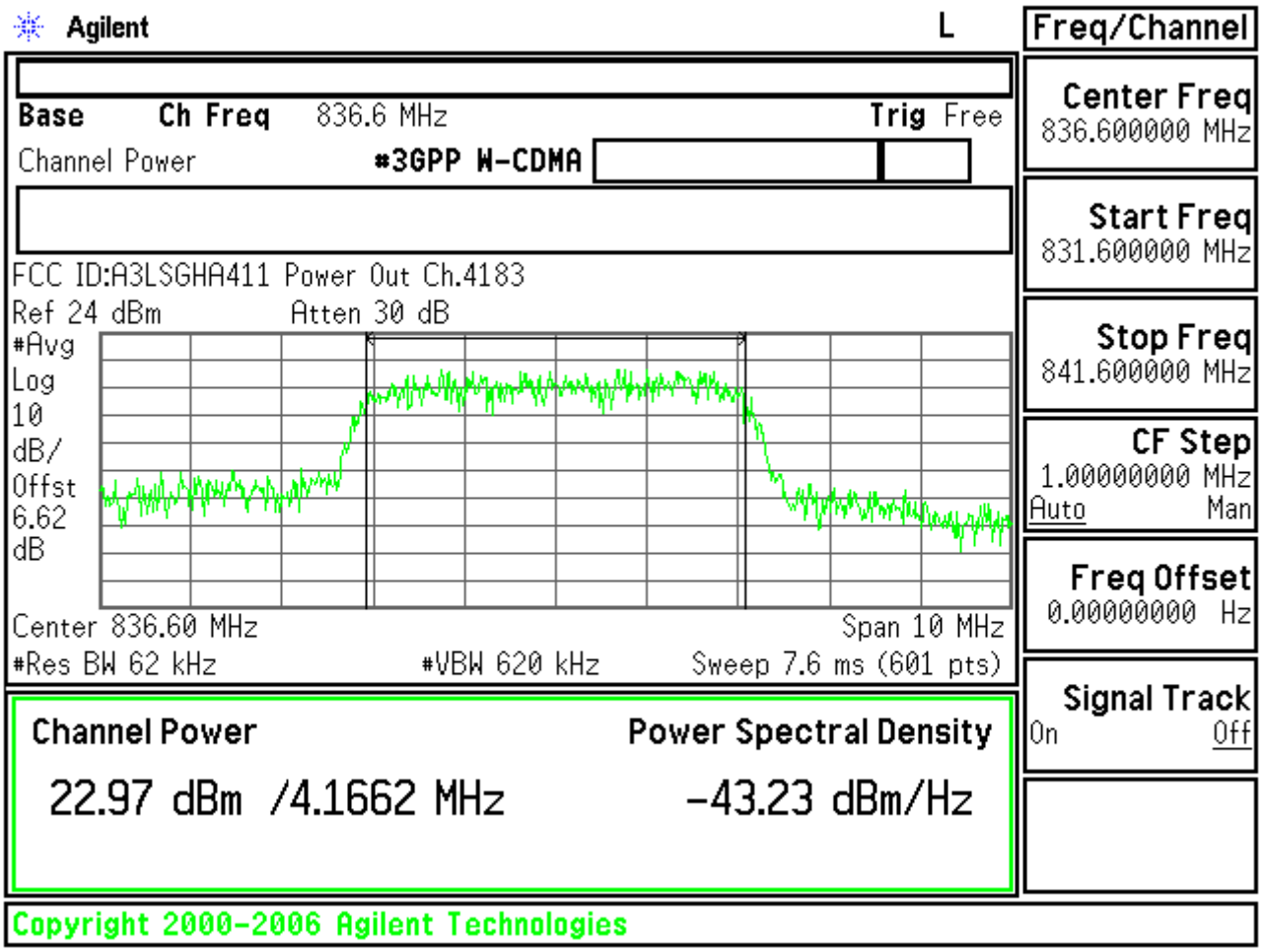
Agilent
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Trig Free
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FCC ID:A3LSGHA411 Power Out Ch.4183
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Atten 30 dB
#Avg
Log
10
dB/
Offst
6.62
dB
Center 836.60 MHz
Span 10 MHz
#Res BW 62 kHz
#VBW 620 kHz
Sweep 7.6 ms (601 pts)
Channel Power
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Power Spectral Density
-43.23 dBm/Hz
Center Freq
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Start Freq
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Stop Freq
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CF Step
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Man
Freq Offset
0.00000000 Hz
Signal Track
On
Off
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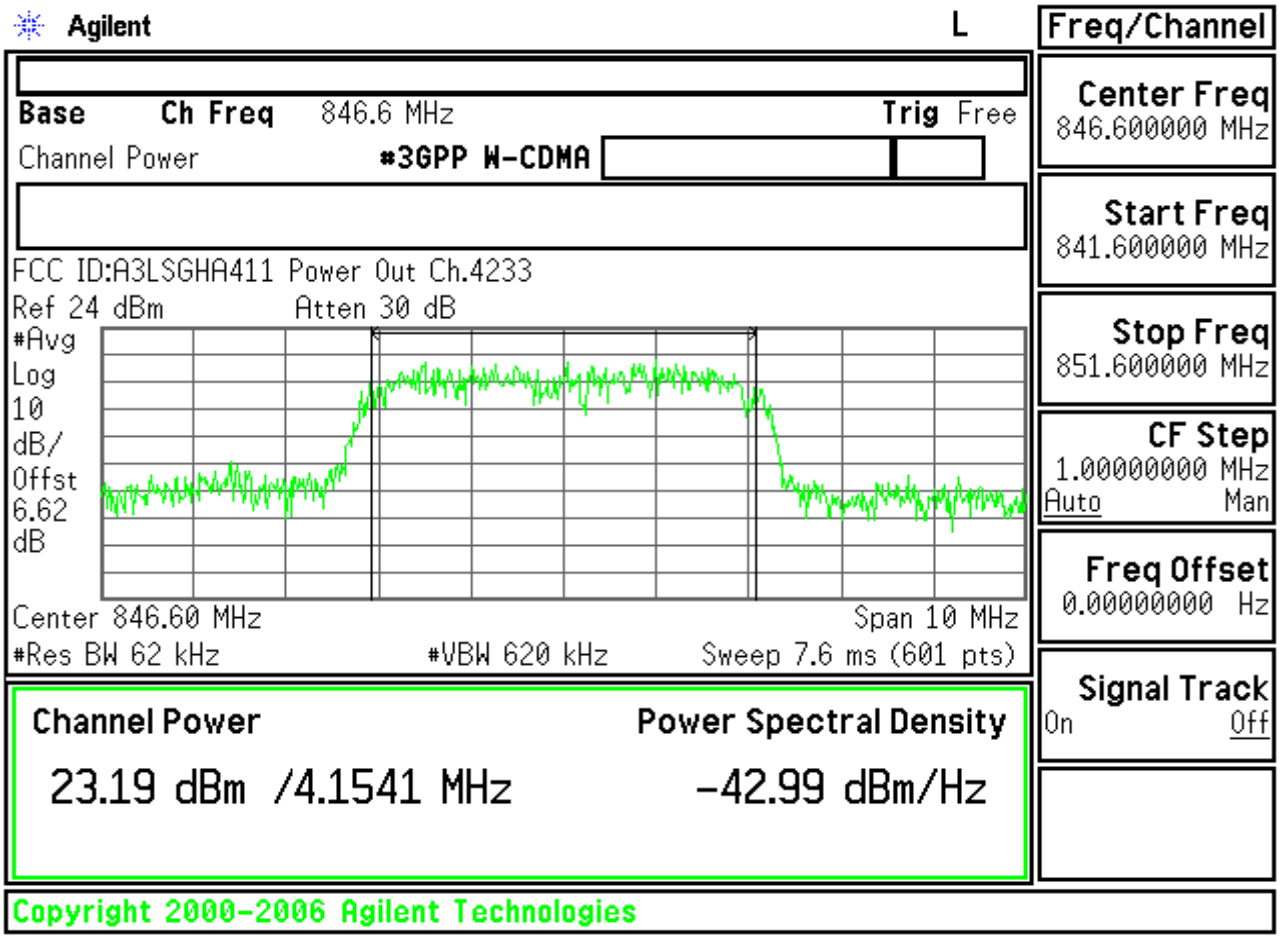
Agilent
L
Freq/Channel
Base Ch Freq 846.6 MHz
Trig Free
Channel Power
#3GPP W-CDMA
FCC ID:A3LSGHA411 Power Out Ch.4233
Ref 24 dBm
Atten 30 dB
#Avg
Log
10
dB/
Offst
6.62
dB
Center 846.60 MHz
Span 10 MHz
#Res BW 62 kHz
#VBW 620 kHz
Sweep 7.6 ms (601 pts)
Channel Power
23.19 dBm /4.1541 MHz
Power Spectral Density
-42.99 dBm/Hz
Center Freq
846.600000 MHz
Start Freq
841.600000 MHz
Stop Freq
851.600000 MHz
CF Step
1.00000000 MHz
Auto
Man
Freq Offset
0.00000000 Hz
Signal Track
On
Off
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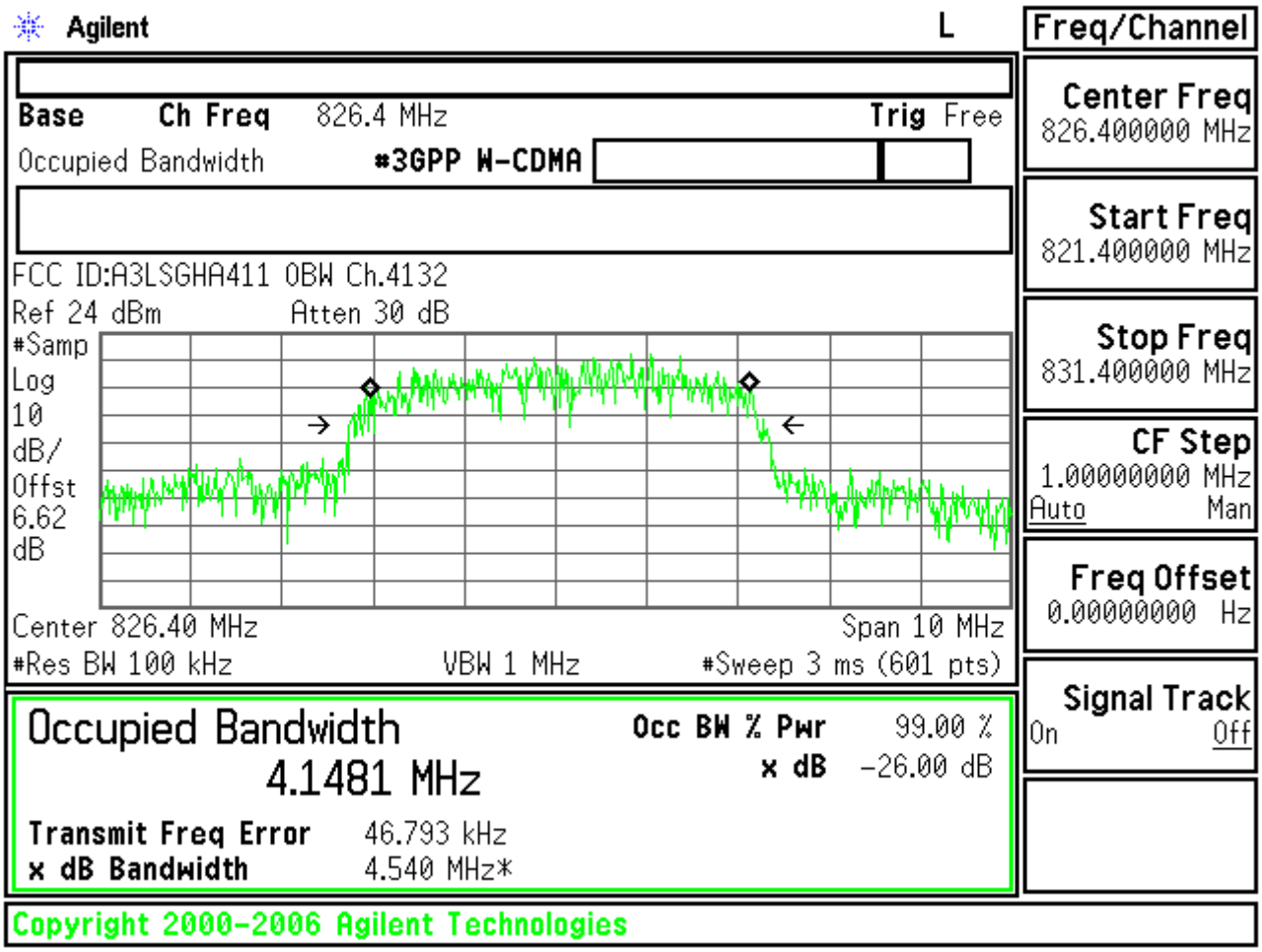
Agilent
L
Freq/Channel
Base Ch Freq 826.4 MHz
Trig Free
Occupied Bandwidth
#3GPP W-CDMA
FCC ID:A3LSGHA411 OBW Ch.4132
Ref 24 dBm
Atten 30 dB
#Samp
Log
10
dB/
Offst
6.62
dB
Center 826.40 MHz
Span 10 MHz
#Res BW 100 kHz
VBW 1 MHz
#Sweep 3 ms (601 pts)
Occupied Bandwidth
4.1481 MHz
Occ BW % Pwr 99.00 %
x dB -26.00 dB
Transmit Freq Error 46.793 kHz
x dB Bandwidth 4.540 MHz*
Center Freq
826.400000 MHz
Start Freq
821.400000 MHz
Stop Freq
831.400000 MHz
CF Step
1.00000000 MHz
Auto
Man
Freq Offset
0.00000000 Hz
Signal Track
On
Off
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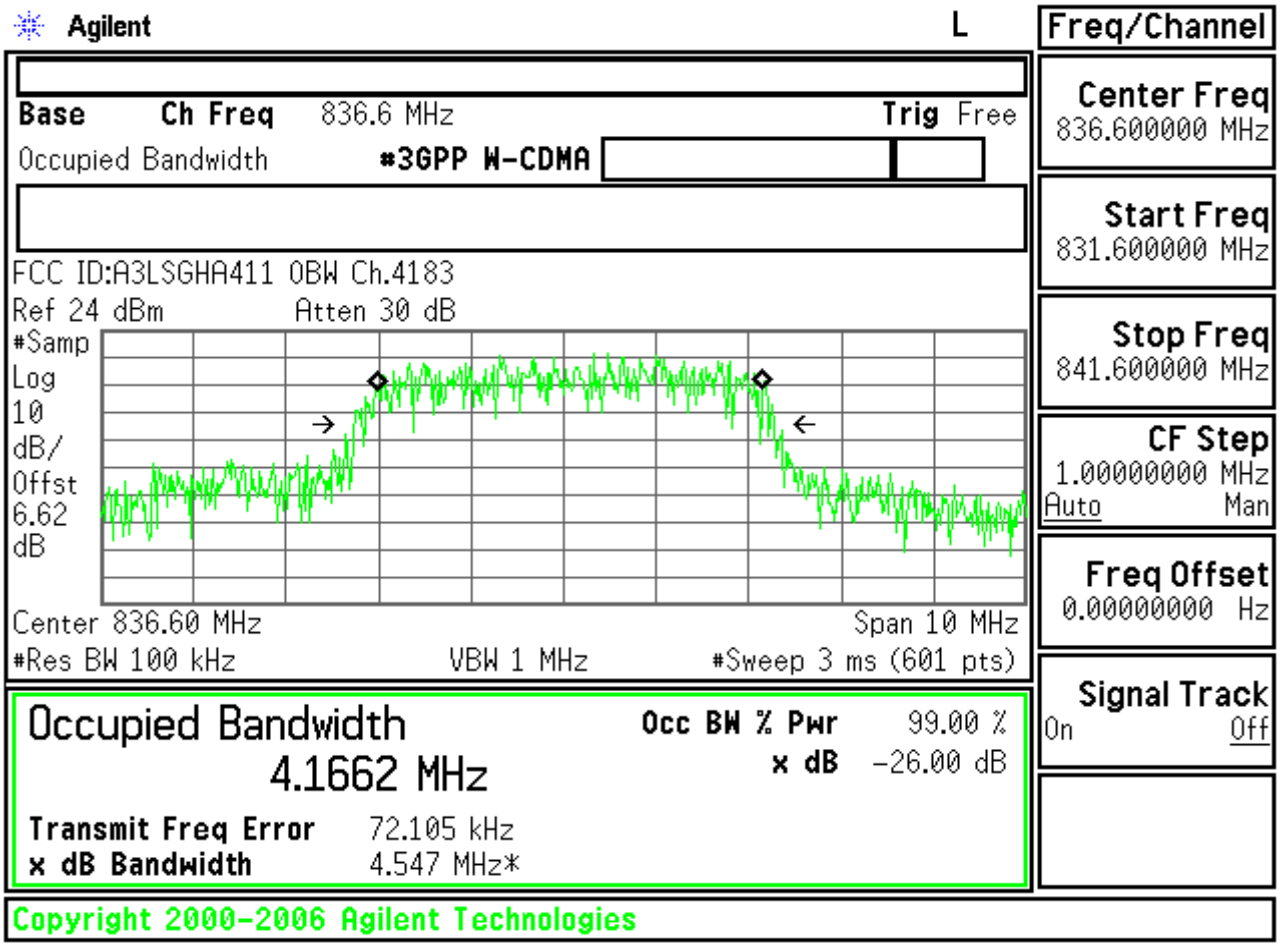
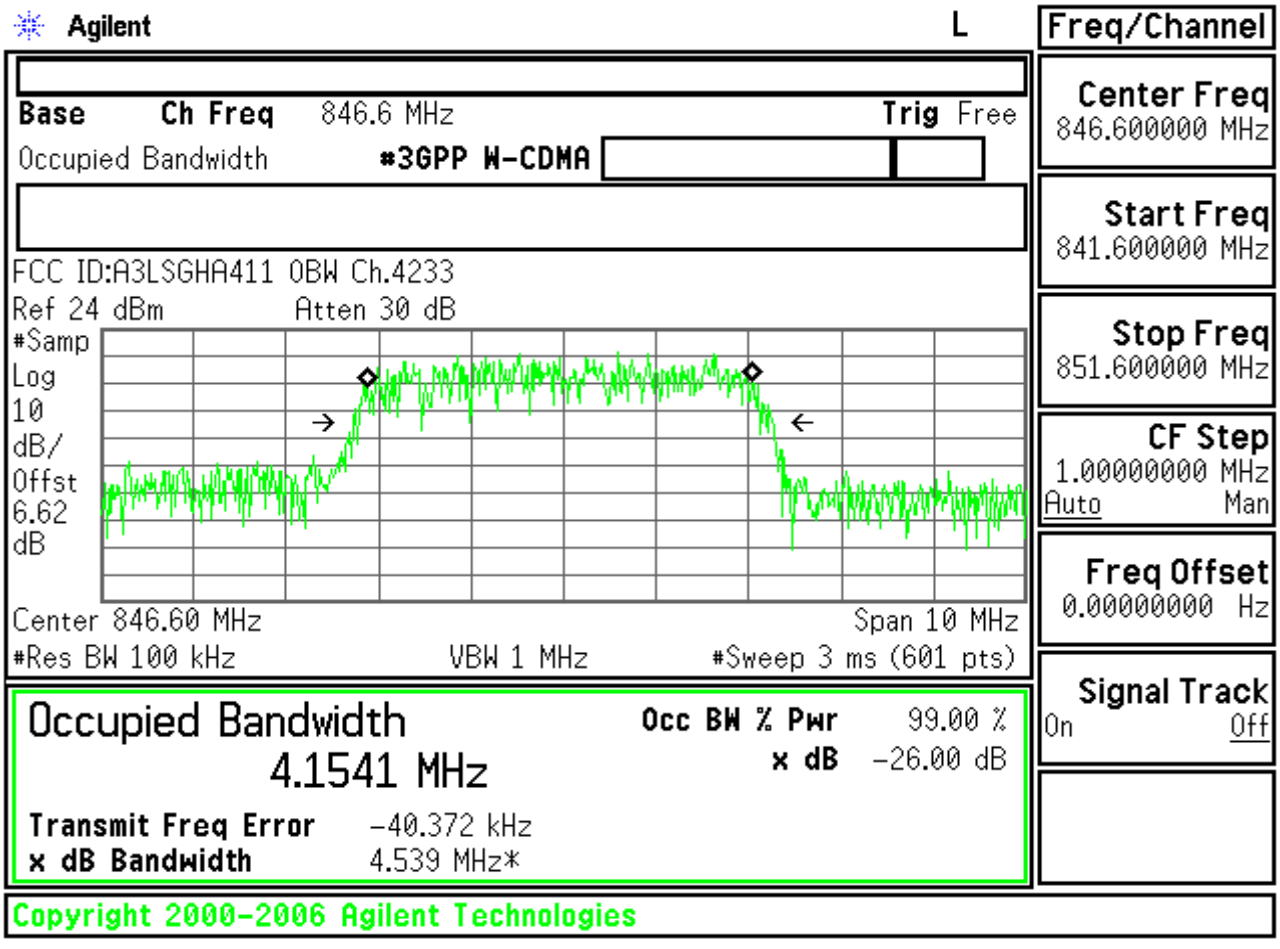
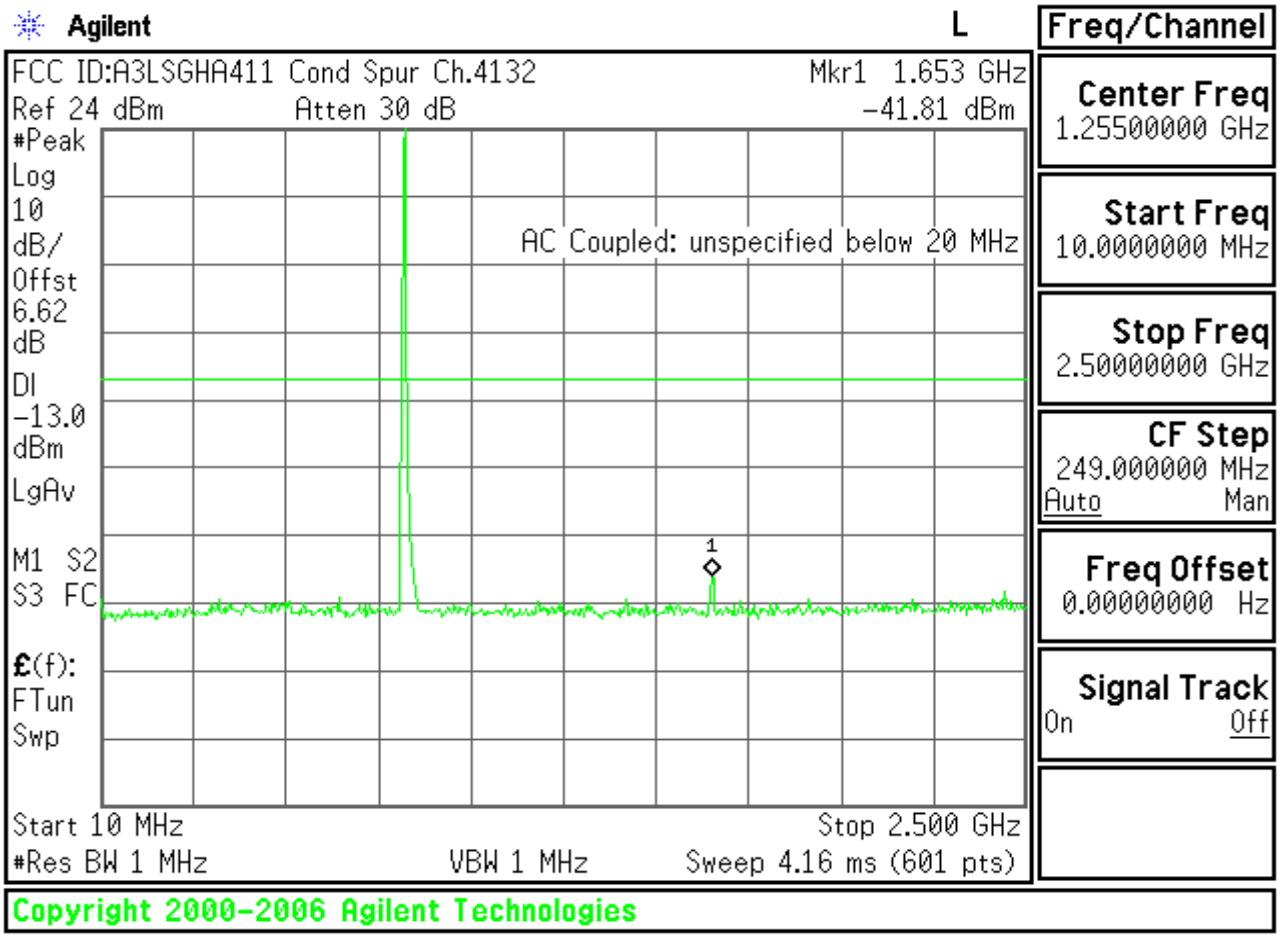
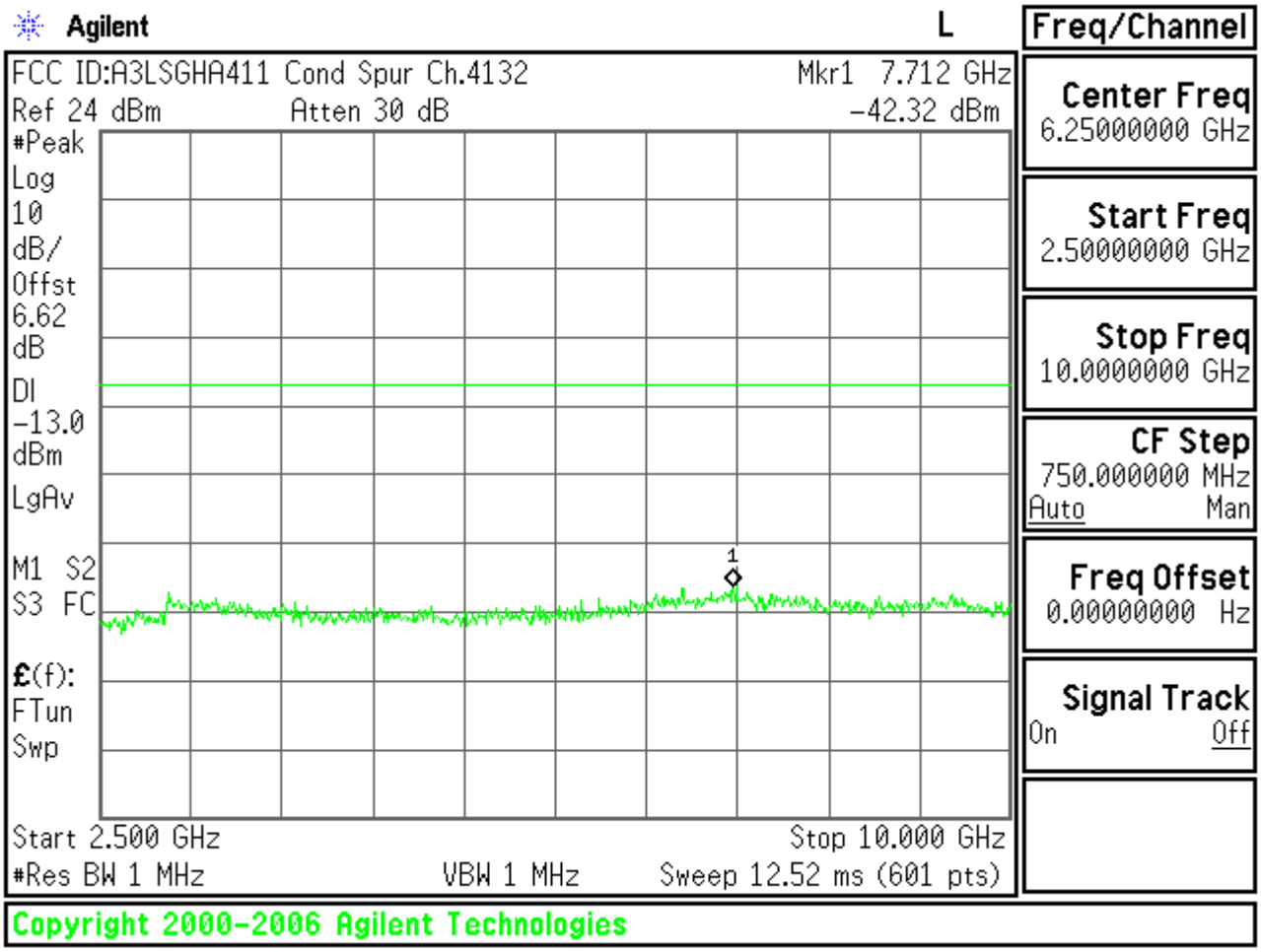
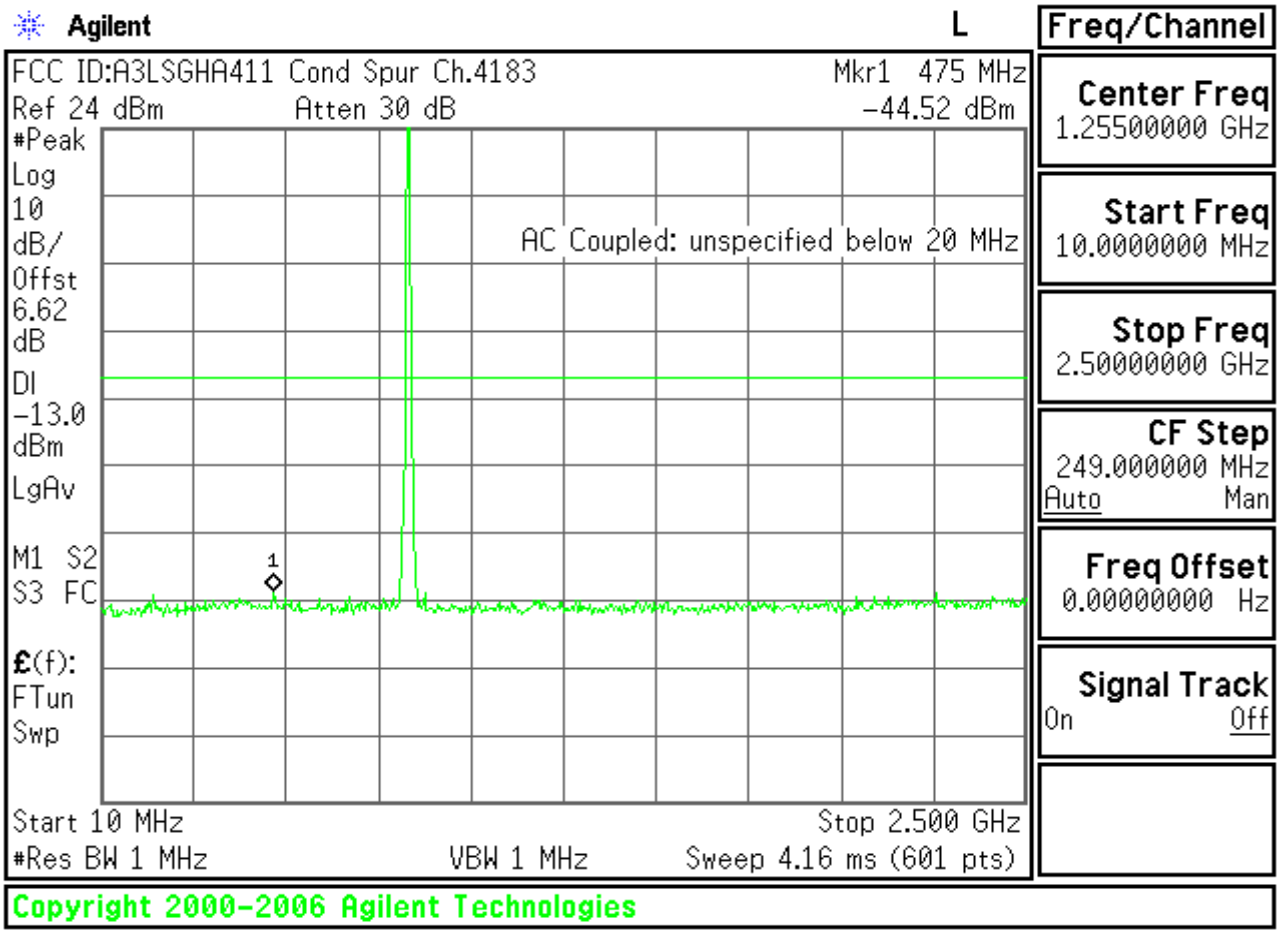
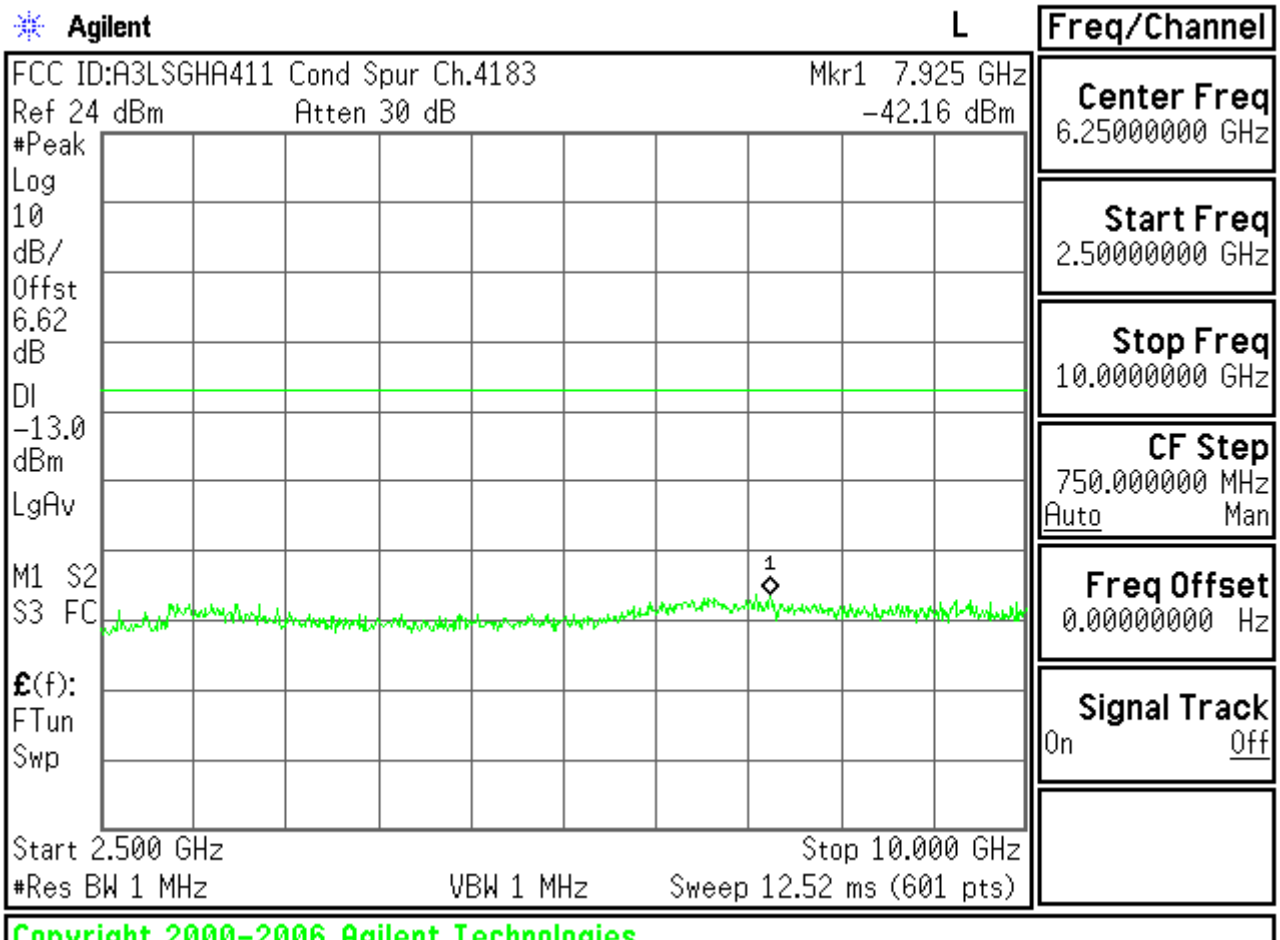

Agilent
L
Freq/Channel
Base Ch Freq 836.6 MHz
Trig Free
Occupied Bandwidth
#3GPP W-CDMA
FCC ID:A3LSGHA411 OBW Ch.4183
Ref 24 dBm
Atten 30 dB
#Samp
Log
10
dB/
Offst
6.62
dB
Center 836.60 MHz
Span 10 MHz
#Res BW 100 kHz
VBW 1 MHz
#Sweep 3 ms (601 pts)
Occupied Bandwidth
4.1662 MHz
Occ BW % Pwr 99.00 %
x dB -26.00 dB
Transmit Freq Error 72.105 kHz
x dB Bandwidth 4.547 MHz*
Center Freq
836.600000 MHz
Start Freq
831.600000 MHz
Stop Freq
841.600000 MHz
CF Step
1.00000000 MHz
Auto Man
Freq Offset
0.00000000 Hz
Signal Track
On Off
Copyright 2000-2006 Agilent Technologies

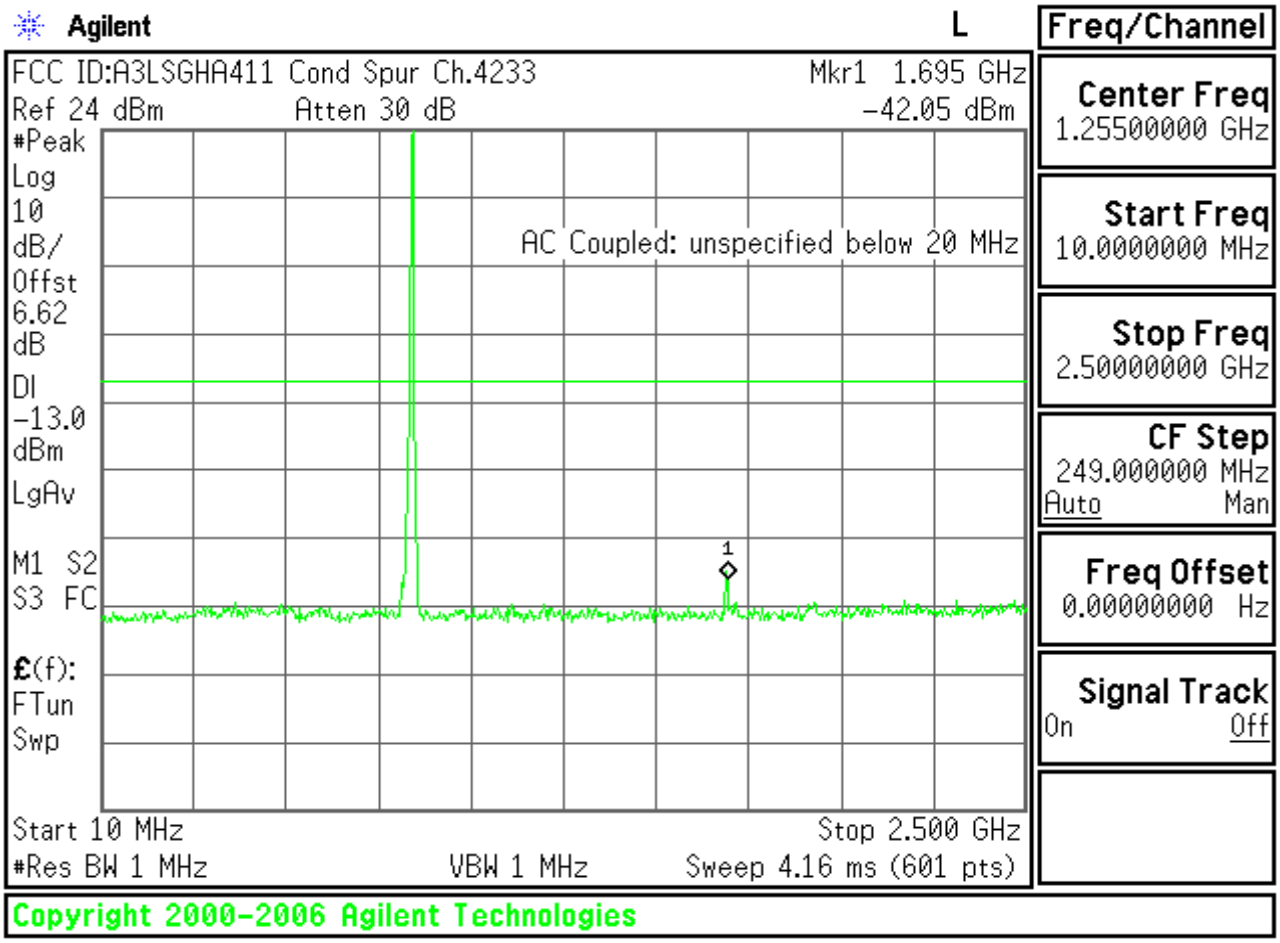

Agilent
L
Freq/Channel
Base Ch Freq 846.6 MHz
Trig Free
Occupied Bandwidth
#3GPP W-CDMA
FCC ID:A3LSGHA411 OBW Ch.4233
Ref 24 dBm
Atten 30 dB
#Samp
Log
10
dB/
Offst
6.62
dB
Center 846.60 MHz
Span 10 MHz
#Res BW 100 kHz
VBW 1 MHz
#Sweep 3 ms (601 pts)
Occupied Bandwidth
4.1541 MHz
Occ BW % Pwr 99.00 %
x dB -26.00 dB
Transmit Freq Error -40.372 kHz
x dB Bandwidth 4.539 MHz*
Center Freq
846.600000 MHz
Start Freq
841.600000 MHz
Stop Freq
851.600000 MHz
CF Step
1.00000000 MHz
Auto Man
Freq Offset
0.00000000 Hz
Signal Track
On Off
Copyright 2000-2006 Agilent Technologies

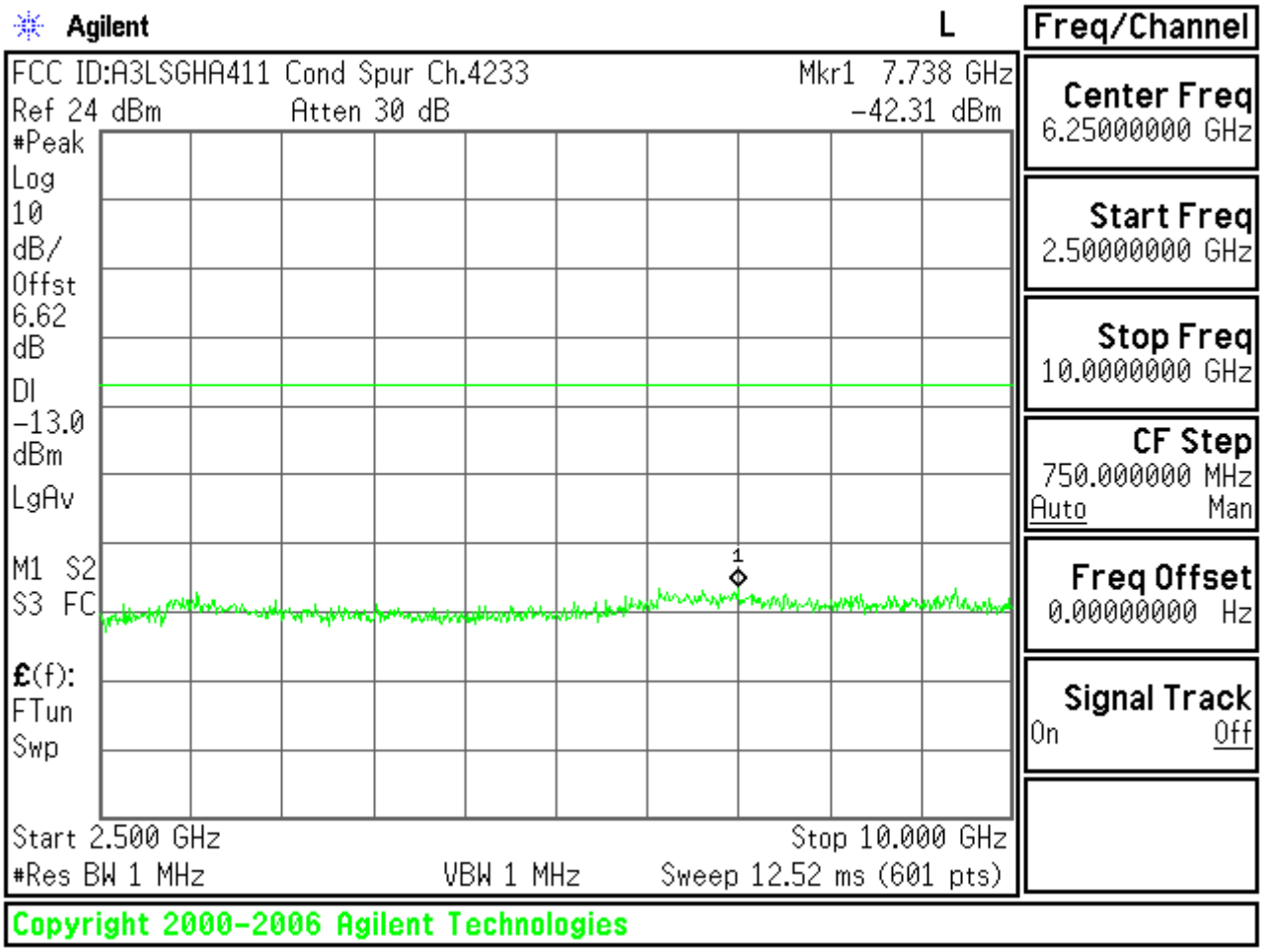

Agilent
L
FCC ID:A3LSGHA411 Cond Spur Ch.4132
Mkr1 1.653 GHz
Ref 24 dBm
Atten 30 dB
-41.81 dBm
#Peak
Log
10
dB/
Offst
6.62
dB
Dl
-13.0
dBm
LgAv
M1 S2
S3 FC
£(f):
FTun
Swp
AC Coupled: unspecified below 20 MHz
Start 10 MHz
Stop 2.500 GHz
#Res BW 1 MHz
VBW 1 MHz
Sweep 4.16 ms (601 pts)
Freq/Channel
Center 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
Copyright 2000-2006 Agilent Technologies

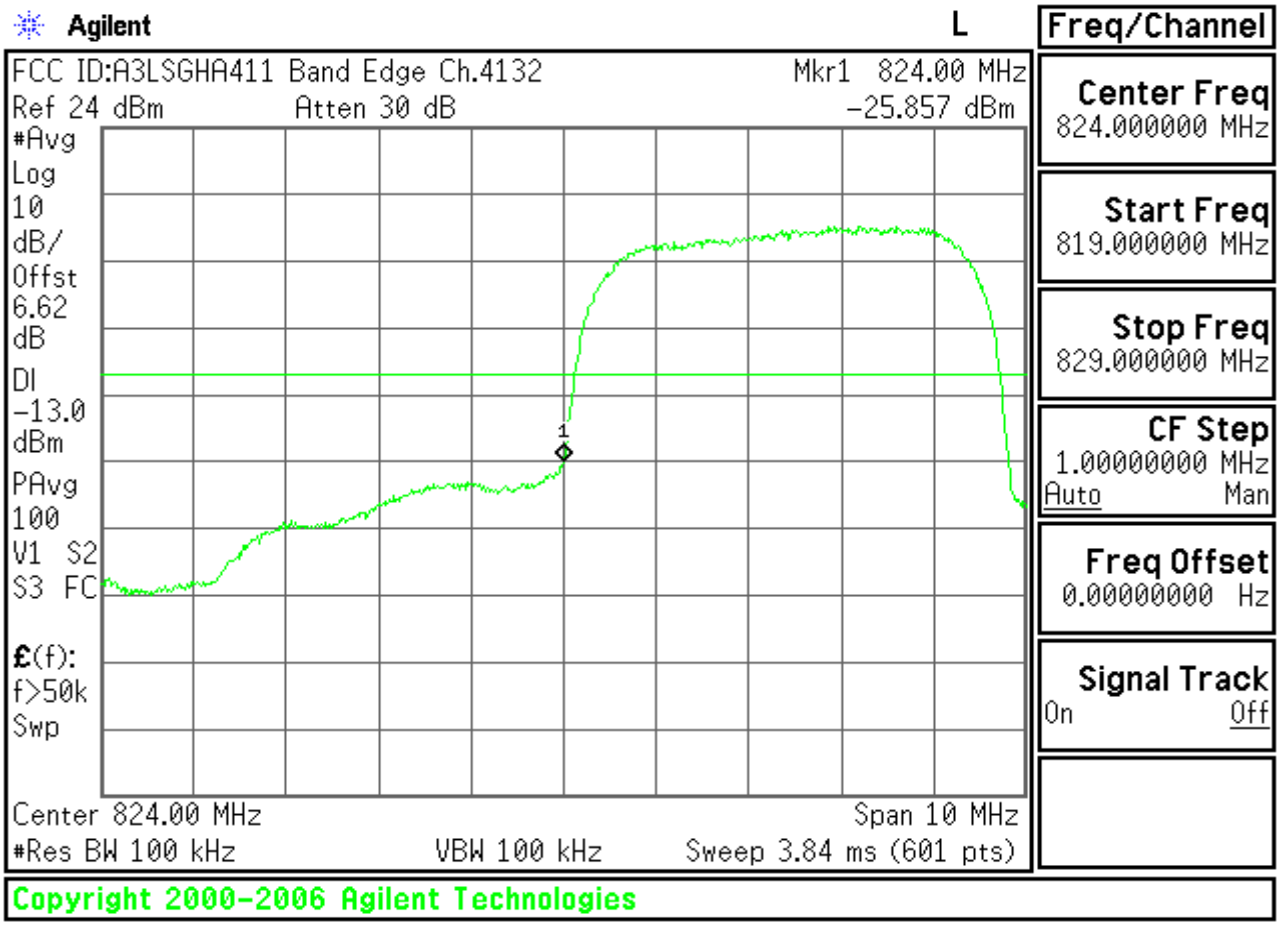

Agilent
L
FCC ID:A3LSGHA411 Cond Spur Ch.4132
Mkr1 7.712 GHz
Ref 24 dBm
Atten 30 dB
-42.32 dBm
#Peak
Log
10
dB/
Offst
6.62
dB
Dl
-13.0
dBm
LgAv
M1 S2
S3 FC
£(f):
FTun
Swp
Start 2.500 GHz
Stop 10.000 GHz
#Res BW 1 MHz
VBW 1 MHz
Sweep 12.52 ms (601 pts)
Freq/Channel
Center Freq
6.25000000 GHz
Start Freq
2.50000000 GHz
Stop Freq
10.0000000 GHz
CF Step
750.000000 MHz
Auto
Man
Freq Offset
0.00000000 Hz
Signal Track
On
Off
Copyright 2000-2006 Agilent Technologies


Agilent
L
FCC ID:A3LSGHA411 Cond Spur Ch.4183
Mkr1 475 MHz
Ref 24 dBm
Atten 30 dB
-44.52 dBm
#Peak
Log
10
dB/
Offst
6.62
dB
Dl
-13.0
dBm
LgAv
M1 S2
S3 FC
£(f):
FTun
Swp
AC Coupled: unspecified below 20 MHz
Start 10 MHz
Stop 2.500 GHz
#Res BW 1 MHz
VBW 1 MHz
Sweep 4.16 ms (601 pts)
Freq/Channel
Center Freq
1.25500000 GHz
Start Freq
10.0000000 MHz
Stop Freq
2.50000000 GHz
CF Step
249.000000 MHz
Auto
Man
Freq Offset
0.000000000 Hz
Signal Track
On
Off
Copyright 2000-2006 Agilent Technologies


Agilent
L
FCC ID:A3LSGHA411 Cond Spur Ch.4183
Mkr1 7.925 GHz
Ref 24 dBm
Atten 30 dB
-42.16 dBm
#Peak
Log
10
dB/
Offst
6.62
dB
Dl
-13.0
dBm
LgAv
M1 S2
S3 FC
£(f):
FTun
Swp
Start 2.500 GHz
Stop 10.000 GHz
#Res BW 1 MHz
VBW 1 MHz
Sweep 12.52 ms (601 pts)
Freq/Channel
Center Freq
6.25000000 GHz
Start Freq
2.50000000 GHz
Stop Freq
10.0000000 GHz
CF Step
750.000000 MHz
Auto
Man
Freq Offset
0.000000000 Hz
Signal Track
On
Off
Copyright 2000-2006 Agilent Technologies


Agilent
L
FCC ID:A3LSGHA411 Cond Spur Ch.4233
Mkr1 1.695 GHz
Ref 24 dBm
Atten 30 dB
-42.05 dBm
#Peak
Log
10
dB/
Offst
6.62
dB
Dl
-13.0
dBm
LgAv
M1 S2
S3 FC
£(f):
FTun
Swp
AC Coupled: unspecified below 20 MHz
Start 10 MHz
Stop 2.500 GHz
#Res BW 1 MHz
VBW 1 MHz
Sweep 4.16 ms (601 pts)
Freq/Channel
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
Copyright 2000-2006 Agilent Technologies


Agilent
L
FCC ID:A3LSGHA411 Cond Spur Ch.4233
Mkr1 7.738 GHz
Ref 24 dBm
Atten 30 dB
-42.31 dBm
#Peak
Log
10
dB/
Offst
6.62
dB
Dl
-13.0
dBm
LgAv
M1 S2
S3 FC
£(f):
FTun
Swp
Start 2.500 GHz
Stop 10.000 GHz
#Res BW 1 MHz
VBW 1 MHz
Sweep 12.52 ms (601 pts)
Freq/Channel
Center Freq
6.25000000 GHz
Start Freq
2.50000000 GHz
Stop Freq
10.0000000 GHz
CF Step
750.000000 MHz
Auto
Man
Freq Offset
0.00000000 Hz
Signal Track
On
Off
Copyright 2000-2006 Agilent Technologies


Agilent
L
FCC ID:A3LSGHA411 Band Edge Ch.4132
Mkr1 824.00 MHz
Ref 24 dBm
Atten 30 dB
-25.857 dBm
#Avg
Log
10
dB/
Offst
6.62
dB
Dl
-13.0
dBm
PAvg
100
V1 S2
S3 FC
£(f):
f>50k
Swp
Center 824.00 MHz
Span 10 MHz
#Res BW 100 kHz
VBW 100 kHz
Sweep 3.84 ms (601 pts)
Freq/Channel
Center Freq
824.000000 MHz
Start Freq
819.000000 MHz
Stop Freq
829.000000 MHz
CF Step
1.00000000 MHz
Auto
Man
Freq Offset
0.00000000 Hz
Signal Track
On
Off
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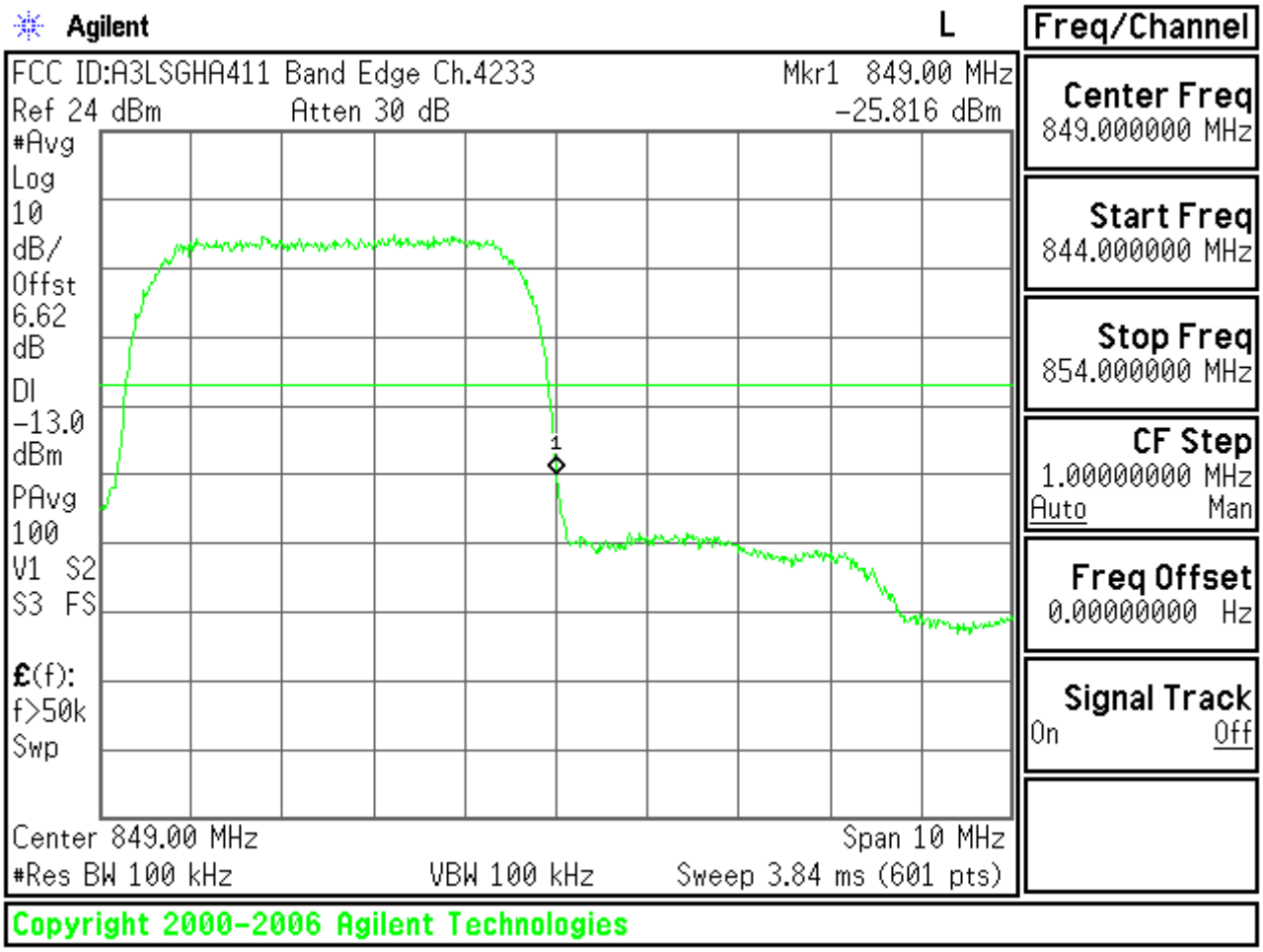
Agilent
L
FCC ID:A3LSGHA411 Band Edge Ch.4233
Mkr1 849.00 MHz
Ref 24 dBm
Atten 30 dB
-25.816 dBm
#Avg
Log
10
dB/
Offst
6.62
dB
Dl
-13.0
dBm
PAvg
100
V1 S2
S3 FS
£(f):
f>50k
Swp
Center 849.00 MHz
Span 10 MHz
#Res BW 100 kHz
VBW 100 kHz
Sweep 3.84 ms (601 pts)
Freq/Channel
Center Freq
849.000000 MHz
Start Freq
844.000000 MHz
Stop Freq
854.000000 MHz
CF Step
1.00000000 MHz
Auto
Man
Freq Offset
0.00000000 Hz
Signal Track
On
Off
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