

SAMSUNG ELECTRONICS Co., Ltd., Regulatory Compliance Group IT R&D Center 416, Maetan-3Dong, Youngtong-Gu, Suwon-city, Gyeonggi-Do, Korea 442-600

# FCC CFR47 PART 22 & 24 SUBPART CERTIFICATION REPORT

Model Tested:

SCH-i730

Additional Model:

FCC ID (Requested):

Report No:

Job No:

Date issued:

SCH-i731,SCH-i732 SCH-i733,SCH-i734 A3LSCHI730

FB-056-R1

FB-056

Sep.30,2004

Abstract –

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

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# **MEASUREMENT REPORT**

# **<u>1. FCC Certification Information</u>**

The following information is in accordance with FCC Rules, 47CFR Rart2, Subpart J, Sections 2.1033 – 2.1055.

## 1.1 §2.1033 General Information

•	Applicant Name: Address:	SAMSUNG ELECRONICS CO., LTD. 416, Maetan-3Dong, Youngtong-Gu, Suwon City Gyeonggi-Do, KOREA 442-600
•	Attention:	Wallace Oh, Engineering Manager (QA Lab)
•	FCC ID:	A3LSCHI730
•	Additional Model:	SCH-i731, SCH-i732, SCH-i733, SCH-i734
•	Quantity: Emission Designators:	Quantity production is planned 1M25F9W
•	Tx Freq. Range:	824.70-848.31MHz (CDMA) 1851.25-1908.75MHz (PCS CDMA)
•	Rx Freq. Range:	869.70-893.31 MHz (CDMA) 1931.25-1988.75 MHz (PCS CDMA)
	Max. Power Rating:	0.513 W ERP CDMA( 27.10 dBm) 0.536 W EIRP PCS CDMA ( 27.29 dBm)
	FCC Classification(s):	Licensed Portable Tx Held to Ear (PCE)
•	Equipment (EUT) Type:	Dual-Mode Dual-Band CDMA/PCS Phone
•	Modulation(s):	CDMA
•	Frequency Tolerance:	±0.00025% (2.5ppm)
•	FCC Rule Part(s):	§24(E), §22(H), §2.
•	Dates of Test:	Sep. 21, 27-28, 2004
•	Place of Test:	SAMSUNG Lab,
•	Test Report S/N:	FB-056-R1



# 2. INTRODUCTION

#### 2.1 General

These measurement test were conducted at **SAMSUNG ELECTRONICS CO., LTD(SUWON)**. The site address is 416,Maetan-3Dong, Youngtong-Gu, Suwon City, Gyeonggi-Do, KOREA 442-600 The site have 1 Fully-anechoic chamber and measurement facility.





#### **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.



Figure 2. 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
	ESI26	836119/010	2005-09-20
Spectrum Analyzer	E4440A(3Hz~26.5GHz)	MY41000236	2004-11-07
	E4440A(3Hz~26.5GHz)	MY41000233	2004-11-14
Circuit Comparator	SMIQ03B	83824/021	2005-01-15
Signal Generator	SMR20	835197/030	2005-01-15
Power Meter	E4419B	GB41293846	2005-09-21
Damas Ganasa	8481B	3318A10325	2004-10-06
Power Sensor	8485A	3318A19924	2005-09-20
Amplifier	5S1G4	304866	2004-11-17
Pre-Amplifier	8449B	3008A00691	2005-01-16
O	8960	GB42230535	2004-11-17
Communication test set	8960	GB42360886	2004-11-10
Antenna Master	MA0001	ANT0967	Not Required
Controller	HD100	100/756	Not Required
	PL-4S	13005454	2005-07-31
Environmental Chamber	SH-241	92000548	2004-12-04
	SH-241	92000549	2004-12-04
Llaw Astana	HF906	360306/011	2005-03-11
Horn Antenna	HF906	100134	2005-05-02
Dinala Antonna	3121C-DB4	9007-587	2004-10-21
Dipole Antenna	3121C-DB4	9007-588	2004-10-21
Dessive Antonno	HL040	353255/019	2005-08-13
Receive Antenna	HL040	353255/020	2005-06-07
Attenuator	8494A	3308A31997	2005-01-17
Allenualor	8496A	3308A14426	2005-01-17
Directional Couplar	4278-311-2	B3679637	2005-01-14
Directional Coupler	4278-111-2	B103DC8722	2005-01-14
	WHK1.0/15G-10SS	1	Not Required
High Doog Filter	WHK1.0/15G-10SS	1	Not Required
High Pass Filter	WHK/3.5/18G-10SS	3	Not Required
	WHK/3.5/18G-10SS	4	Not Required
Shielded Semi-Anechoic Chamber	RF0002	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-A-2001, Aug. 15, 2001:

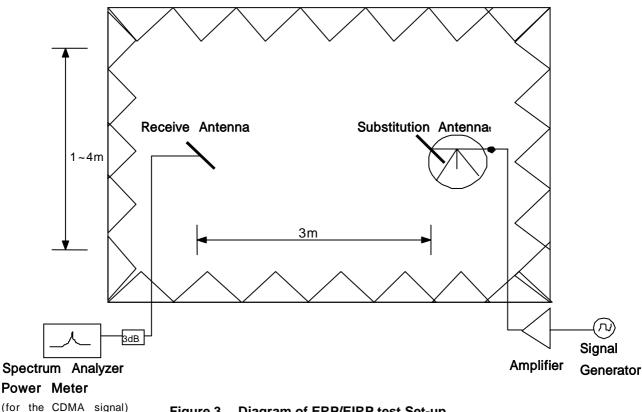


Figure 3. Diagram of ERP/EIRP test Set-up

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 & PCS 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 is recorded.



# 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-A-2001, Aug. 15, 2001

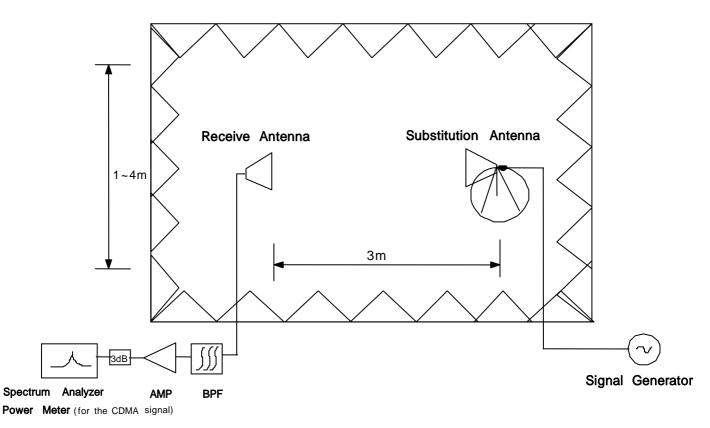


Figure 4. Diagram of Radiated Spurious & Harmonic test Set-up

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 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 600 PCS Mode 2<sup>nd</sup> Harmonic(3760MHz)

The receive analyzer reading at 3 meters 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 25.5dBm -(-24.8)=50.3dBc.



## 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.



BLOCK	Freq. Range (MHz) Transmitter (Tx)	Freq. Range (MHz) Receiver (Rx)	
A	1850 – 1865	1930 – 1945	
В	1870 – 1885	1950 – 1965	
С	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
В	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**

#### 5.4.2 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+10log (P)dB. Limit equivalent to -13dBm, calculation shown below.

43 + 10log ( 0.513 W) = 40.10 dB 27.10 dBm - 40.10 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. (PCS 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.



## 5.5 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  $\pm 0.0001 (\pm 1)$  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 +50°C allowing at least two hours at each temperature for stabilization. In all measurements the frequency is measured within three minutes after re-applying power to the transmitter.
- 7. The artificial load is mounted external to the temperature chamber.

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



# 6. TEST DATA

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

Supply Voltage : 3.7VDC

**Modulation : CDMA** 

#### **Reference level**

Frequency (MHz)	Output (dBm)	Polarization	P/M (dBm)	Ant gain (dBi)	Ref level (dBm)
835.89	25.00	Н	-13.63	0.00	-13.63
		V	-12.35	0.00	-12.35

#### Result

Frequency (MHz)	From EUT Tested level (dBm)	Polarization (H/V)	Azimuth (angle)	ERP (dBm)	ERP (W)	Battery
824.70	-11.53	H1	359	27.10	0.513	Extended
835.89	-13.12	H1	360	25.51	0.356	Extended
848.31	-11.75	H1	358	26.88	0.488	Extended
848.31	-11.96	H1	356	26.67	0.465	Standard

### Radiated measurements at 3 meters by Substitution Method



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

Supply Voltage : 3.7VDC

Modulation : PCS

#### **Reference level**

Frequency (MHz)	Output (dBm)	Polarization	P/M (dBm)	Ant gain (dBi)	Ref level (dBm)
1851.25	27.00	Н	-12.50	8.26	-20.76
1001.20	21.00	V	-12.18	8.26	-20.44
1880.00	27.00	Н	-12.50	8.16	-20.66
1880.00		V	-12.18	8.16	-20.34
1908.75	27.00	Н	-12.50	8.30	-20.80
		V	-12.18	8.30	-20.48

#### Result

Frequency (MHz)	From EUT Tested level (dBm)	Polarization (H/V)	Azimuth (angle)	EIRP (dBm)	EIRP (W)	Battery
1851.25	-20.95	H1	112	26.81	0.480	Standard
1880.00	-20.54	H1	349	27.12	0.515	Standard
1908.75	-20.51	H1	340	27.29	0.536	Standard
1908.75	-20.70	H1	340	27.10	0.513	Extended

## Radiated measurements at 3 meters by Substitution Method



# 6.3 Cellular CDMA Radiated Spurious & Harmonic measurement

## Field Strength of SPURIOUS Radiation

Operating Frequency : 824.70 MHz(Low), 835.89MHz(Middle), 848.31MHz(High)

Measured Output Power : 27.10 dBm = 0.513W

Modulation Signal : CDMA

## Limit : 43 + 10log<sub>10</sub>(P) = 40.10 dBc

Result

Channel	Harmonic	Frequency (MHz)	From EUT Tested level (dBm)	POL (H/V)	Result (dBc)
	2	1649.40	-30.93	H1	48.08
	3	2474.10	-33.40	H2	45.65
1013	4	3298.80	-51.46	H2	61.31
1010	5	4123.50	-45.78	H2	51.59
	6	4948.20	-64.32	H1	68.33
	7	5772.90	-	-	-
	2	1671.78	-30.02	H1	46.50
	3	2507.67	-43.12	H1	54.73
363	4	3343.56	-57.34	H1	66.99
505	5	4179.45	-54.45	H1	60.25
	6	5015.34	-65.31	V	68.45
	7	5851.23	-	-	-
	2	1696.62	-34.21	V	48.52
	3	2544.93	-38.88	H1	50.33
777	4	3393.24	-53.45	H1	63.47
	5	4241.55	-52.27	H1	59.21
	6	5089.86	-65.06	V	67.62
	7	5938.17	-	-	-

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



# 6.4 PCS CDMA Radiated Spurious & Harmonic measurement

## Field Strength of SPURIOUS Radiation

Operating Frequency : 1851.25 MHz(Low), 1880.00 MHz(Middle), 1908.75MHz(High)

Measured Output Power : 27.29 dBm = 0.536 W

Modulation Signal : PCS

## Limit : 43 + 10log<sub>10</sub>(P) = 40.29 dBc

#### Result

Channel	Harmonic	Frequency (MHz)	From EUT Tested level (dBm)	POL (H/V)	Result (dBc)
	2	3702.50	-49.64	H1	52.01
	3	5553.75	-62.89	V	62.10
25	4	7405.00	-68.59	H1	63.47
20	5	9256.25	-68.04	H2	58.49
	6	11107.50	-	-	-
	7	12958.75	-	-	-
	2	3760.00	-45.62	H1	48.99
	3	5640.00	-63.73	H1	63.71
600	4	7520.00	-67.39	H1	62.01
000	5	9400.00	-67.52	H2	58.91
	6	11280.00	-	-	-
	7	13160.00	-	-	-
	2	3817.50	-45.10	H1	48.88
	3	5726.25	-65.05	H2	63.97
1175	4	7635.00	-68.41	H1	62.87
	5	9543.75	-66.90	H1	57.40
	6	11452.50	-	-	-
	7	13361.25	-	-	-

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



# 6.5 CDMA Radiated Spurious & Harmonic Conversion Table

Date :	2004 . 09 . 28 .	
Test Eng	jineer : WW JANG	

Tx Cable loss
Tx Horn Ant Gain
Rx Cable loss + HPF Insertion loss + Attenuator
Pre-Amp gain
Air loss
Tested Level from EUT
= + + -
= ERP +2.14-

СН	Har	Frequency (MHz)	Tx CL (dB)	Horn Gain (dB)	Tx Level @ (S/G 0dBm)	Tested Level EUT : H (dBm)	Tested Level EUT : V (dBm)	Amplitude of Emission EUT : H (dBm)	Amplitude of Emission EUT : V (dBm)	Result EUT : H (dBc)	Result EUT : V (dBc)
	2	1649.40	6.94	7.68	0.74	-30.93	-33.64	-18.84	-21.19	48.08	50.43
1013	3	2474.10	8.69	9.19	0.50	-33.40	-38.49	-16.41	-20.27	45.65	49.51
	4	3298.80	10.83	9.00	-1.83	-51.46	-55.05	-32.07	-34.19	61.31	63.43
	5	4123.50	11.78	10.19	-1.59	-45.78	-49.22	-22.35	-24.85	51.59	54.09
	6	4948.20	13.18	10.16	-3.02	-64.32	-65.93	-39.09	-39.97	68.33	69.21
	7	5772.90	14.35	10.54	-3.81	-	-	-	-	-	-
	2	1671.78	7.06	7.68	0.62	-30.02	-32.46	-17.26	-19.19	46.50	48.43
	3	2507.67	8.84	9.19	0.35	-43.12	-47.72	-25.49	-28.57	54.73	57.81
363	4	3343.56	10.81	9.00	-1.81	-57.34	-61.95	-37.75	-40.51	66.99	69.75
303	5	4179.45	12.00	10.19	-1.81	-58.33	-59.38	-31.01	-34.76	60.25	64.00
	6	5015.34	13.49	10.16	-3.33	-64.60	-65.31	-39.41	-39.21	68.65	68.45
	7	5851.23	14.43	10.54	-3.89	-	-	-	-	-	-
	2	1696.62	7.14	7.68	0.54	-34.89	-34.21	-20.18	-19.28	49.42	48.52
	3	2544.93	8.91	9.19	0.28	-38.88	-47.16	-20.99	-28.23	50.23	57.47
777	4	3393.24	10.91	9.00	-1.91	-53.45	-58.43	-34.23	-37.57	63.47	66.81
	5	4241.55	12.09	10.19	-1.90	-52.27	-56.45	-29.97	-32.29	59.21	61.53
	6	5089.86	13.66	10.16	-3.50	-64.98	-65.06	-38.64	-38.38	67.88	67.62
	7	5938.17	15.05	10.54	-4.51	-	-	-	-	-	-



# 6.6 PCS Radiated Spurious & Harmonic Conversion Table

Tx Cable loss
Tx Horn Ant Gain
Rx Cable loss + HPF Insertion loss + Attenuator
Pre-Amp gain
Air loss
Tested Level from EUT
= + + -
= EIRP -

Date : 2004 . 09 . 27 .

Test Engineer : WW JANG

СН	Har	Frequency (MHz)	Tx CL (dB)	Horn Gain (dB)	Tx Level @ (S/G 10dBm)	Tested Level EUT : H (dBm)	Tested Level EUT : V (dBm)	Amplitude of Emission EUT : H (dBm)	Amplitude of Emission EUT : V (dBm)	Result EUT : H (dBc)	Result EUT : V (dBc)
	2	3702.50	11.19	8.77	7.58	-49.64	-54.01	-24.72	-28.73	52.01	56.02
	3	5553.75	14.65	10.26	5.61	-63.18	-62.89	-35.14	-34.81	62.43	62.10
25	4	7405.00	16.72	10.51	3.79	-68.59	-68.58	-36.18	-37.48	63.47	64.77
25	5	9256.25	19.31	11.67	2.36	-68.04	-68.22	-31.20	-31.51	58.49	58.80
	6	11107.50	21.32	13.19	1.87	-	-	-	-	-	-
	7	12958.75	23.84	12.90	-0.94	-	-	-	-	-	-
	2	3760.00	11.45	8.77	7.32	-45.62	-50.69	-21.70	-26.03	48.99	53.32
	3	5640.00	14.39	10.26	5.87	-63.73	-65.35	-36.42	-37.23	63.71	64.52
600	4	7520.00	16.80	10.51	3.71	-67.39	-67.80	-34.72	-36.35	62.01	63.64
000	5	9400.00	19.51	11.67	2.16	-67.52	-68.18	-31.62	-32.64	58.91	59.93
	6	11280.00	21.20	13.19	1.99	-	-	-	-	-	-
	7	13160.00	24.07	12.90	-1.17	-	-	-	-	-	-
	2	3817.50	11.57	8.77	7.20	-45.10	-50.11	-21.59	-25.97	48.88	53.26
	3	5726.25	14.58	10.26	5.68	-65.05	-66.08	-36.68	-37.20	63.97	64.49
1175	4	7635.00	17.16	10.51	3.35	-68.41	-68.57	-35.58	-36.17	62.87	63.46
	5	9543.75	19.94	11.67	1.73	-66.90	-68.40	-30.11	-32.19	57.40	59.48
	6	11452.50	21.45	13.19	1.74	-	-	-	-	-	-
	7	13361.25	24.24	12.90	-1.34	-	-	-	-	-	-



# 6.7 Frequency Stability

## 6.7.1 CDMA Frequency Stability Table

Operating Frequency : 835,890,000 Hz

Channel : 363

Reference Voltage : 3.7VDC

### Deviation Limit : ±0.00025 % or 2.5ppm

Voltage (%)	Power (VDC)	Temp. ( <sup>o</sup> C)	Frequency Error (Hz)	Frequency (Hz)	Deviation (%)	ppm
100%		+20(Ref)	-5.54	835,889,994	-0.000001	-0.007
100%		-30	-5.40	835,889,995	-0.000001	-0.006
100%		-20	5.24	835,890,005	0.000001	0.006
100%		-10	-4.85	835,889,995	-0.000001	-0.006
100%		0	4.57	835,890,005	0.000001	0.005
100%	3.70	+10	6.01	835,890,006	0.000001	0.007
100%		+20	-5.54	835,889,994	-0.000001	-0.007
100%		+30	4.91	835,890,005	0.000001	0.006
100%		+40	-5.14	835,889,995	-0.000001	-0.006
100%		+50	3.76	835,890,004	0.000000	0.004
100%		+60	4.32	835,890,004	0.000001	0.005
85%	3.38	+20	6.47	835,890,006	0.000001	0.008
115%	4.26	+20	4.98	835,890,005	0.000001	0.006
Batt.Endpoint	3.38	+20	6.47	835,890,006	0.000001	0.008

The EUT is tested down to the battery end point



## 6.7.2 PCS Frequency Stability Table

Operating Frequency : 1,880,000,000 Hz

Channel: 600

Reference Voltage : 3.7VDC

## Deviation Limit : ±0.00025 % or 2.5ppm

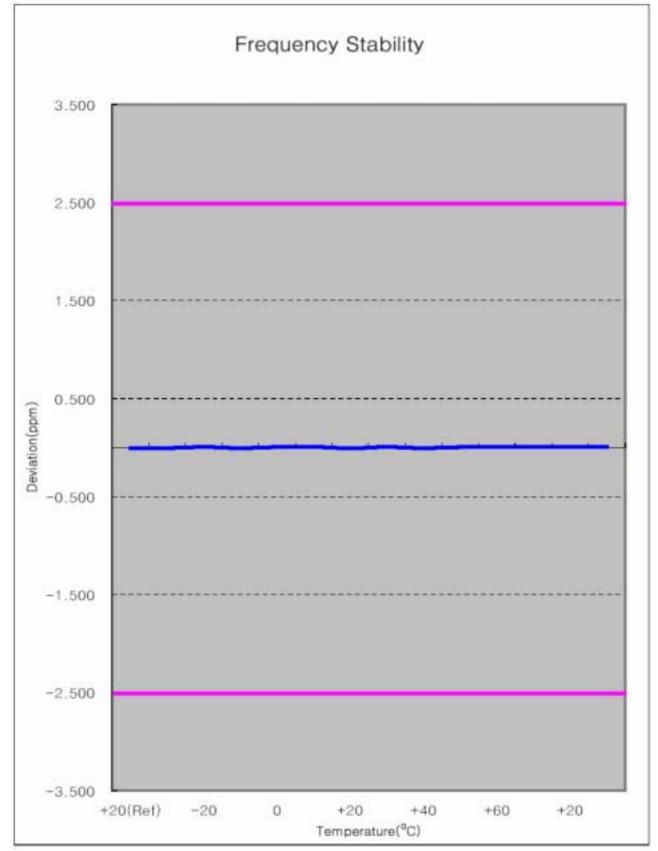
Voltage (%)	Power (VDC)	Temp. ( <sup>o</sup> C)	Frequency Error (Hz)	Frequency (Hz)	Deviation (%)	ppm
100%		+20(Ref)	4.93	1,880,000,005	0.000000	0.003
100%		-30	7.90	1,880,000,008	0.000000	0.004
100%		-20	6.45	1,880,000,006	0.000000	0.003
100%		-10	5.93	1,880,000,006	0.000000	0.003
100%		0	-5.68	1,879,999,994	0.000000	-0.003
100%	3.70	+10	4.93	1,880,000,005	0.000000	0.003
100%		+20	4.85	1,880,000,005	0.000000	0.003
100%		+30	5.12	1,880,000,005	0.000000	0.003
100%		+40	-6.17	1,879,999,994	0.000000	-0.003
100%		+50	-3.98	1,879,999,996	0.000000	-0.002
100%		+60	-4.05	1,879,999,996	0.000000	-0.002
85%	3.39	+20	-7.56	1,879,999,992	0.000000	-0.004
115%	4.26	+20	-7.46	1,879,999,993	0.000000	-0.004
Batt.Endpoint	3.39	+20	-7.56	1,879,999,992	0.000000	-0.004

# 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

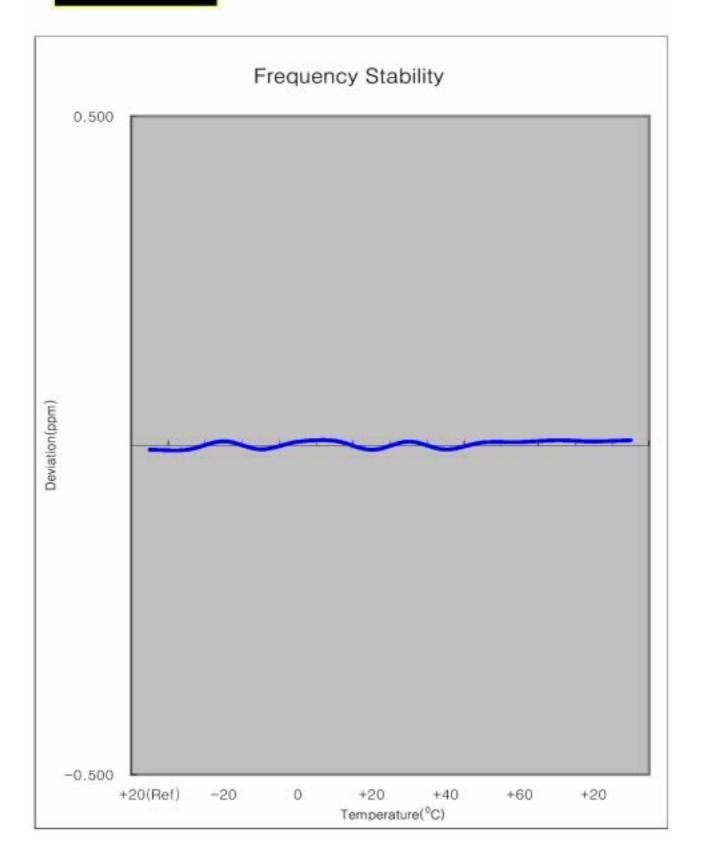


## 6.7.3 CDMA Frequency Stability Graph



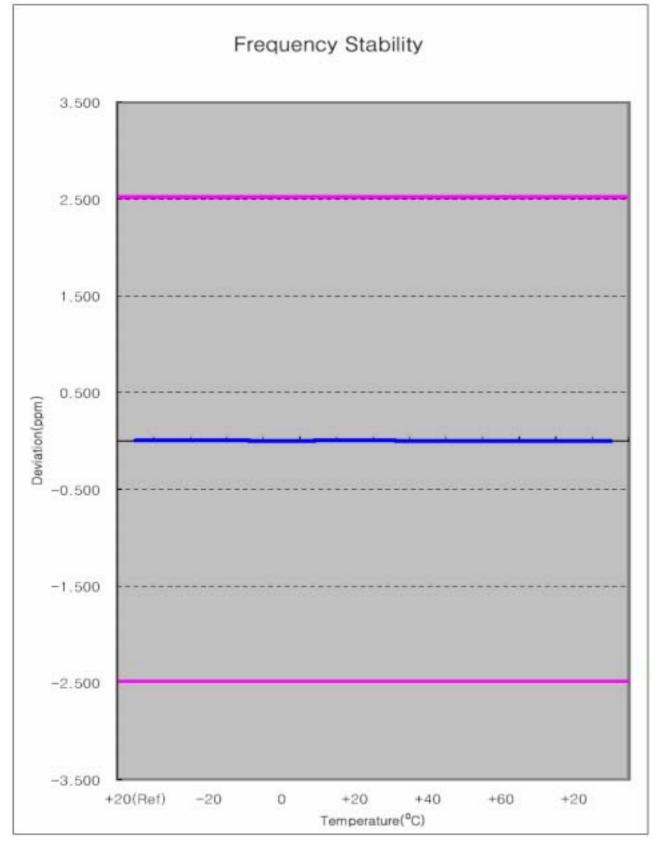


# Zoom In



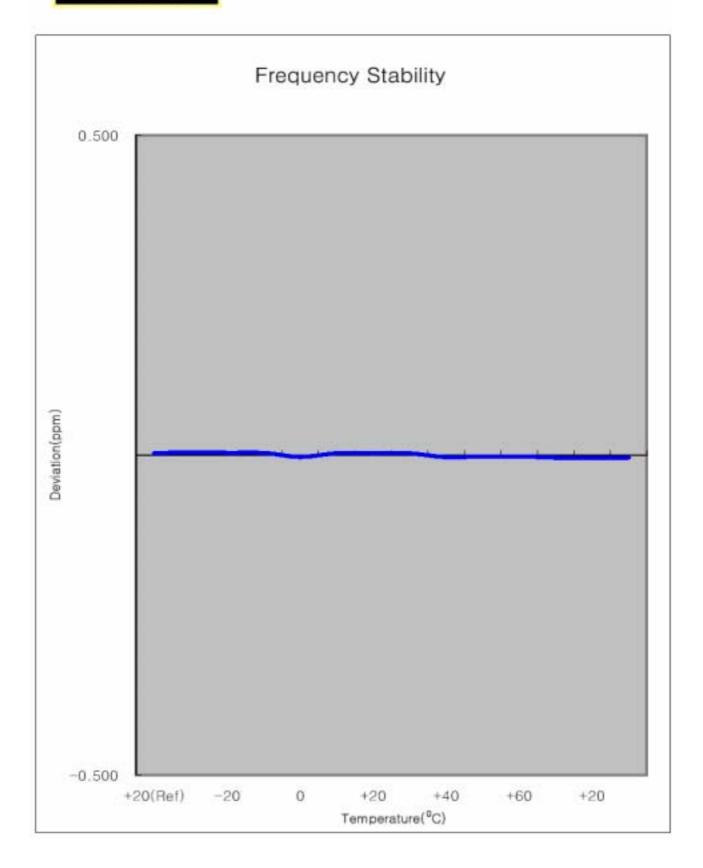


# 6.7.4 PCS Frequency Stability Graph





# Zoom In





# **7. SAMPLE CALCULATION**

# 7.1 Emission Designator

Emission Designator = 1M25F9W

Calculation : 2M + 2DK CDMA BW = 1.25MHz F = Frequency Modulation 9 = Composite Digital Info W = Combination(Audio/Data) (Measured at the 99.75% power bandwidth)



# **8. CONCLUSION**

The data collected shows that the SAMSUNG Dual-Mode Dual-Band CDMA/PCS Phone. FCC ID : A3LSCHI730 complies with all the requirements of Parts 2,22,24 of the FCC Rules.



# 9. TEST PLOTS

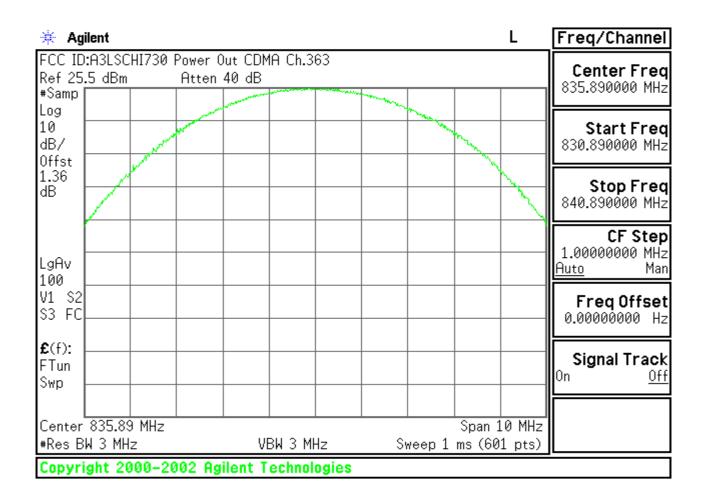
# A3LSCHI730(CDMA)

* Agilent	L Freq/Channel
<b>Ch Freq</b> 824.7 MHz Channel Power	Trig Free Center Freq 824.700000 MHz
FCC ID:A3LSCHI730 Power Out CDMA Ch.1013	Start Freq 823.200000 MHz
Ref 25.5 dBm Atten 40 dB #Avg Log	Ahren And And And And And And And And And An
10 dB/ 0ffst 1.36	White the second
dB Center 824.700 MHz	Span 3 MHz
#Res BW 30 kHz #VBW 300 kHz Channel Power	z #Sweep 20 ms (601 pts) Signal Track Power Spectral Density On <u>Off</u>
25.50 dBm /1.2300 MHz	-34.90 dBm/Hz
Copyright 2000–2002 Agilent Technologi	es

* Agilent L	Freq/Channel
Ch Freq 835.89 MHz Trig Free Channel Power	Center Freq 835.890000 MHz
FCC ID:A3LSCHI730 Power Out CDMA Ch.363	<b>Start Freq</b> 834.390000 MHz
Ref 25.5 dBm         Atten 40 dB           #Avg	<b>Stop Freq</b> 837.390000 MHz
dB/ Offst 1.36	<b>CF Step</b> 300.000000 kHz <u>Auto</u> Man
dB	FreqOffset 0.00000000 Hz
*Res BW 30 kHz     *VBW 300 kHz     *Sweep 20 ms (601 pts)       Channel Power     Power Spectral Density	<b>Signal Track</b> <sup>On <u>Off</u></sup>
25.56 dBm /1.2300 MHz -34.84 dBm/Hz	
Copyright 2000–2002 Agilent Technologies	

* Agilent L	Freq/Channel
Ch Freq 848.31 MHz Trig Free Channel Power	Center Freq 848.310000 MHz
FCC ID:A3LSCHI730 Power Out CDMA Ch.777	Start Freq 846.810000 MHz
Ref 25.5 dBm         Atten 40 dB           #Avg	<b>Stop Freq</b> 849.810000 MHz
dB/ Offst 1.36	<b>CF Step</b> 300.000000 kHz <u>Auto</u> Man
dB         Span 3 MHz           Center 848.310 MHz         Span 3 MHz	FreqOffset 0.00000000 Hz
*Res BW 30 kHz     *VBW 300 kHz     *Sweep 20 ms (601 pts)       Channel Power     Power Spectral Density	Signal Track
25.50 dBm /1.2300 MHz -34.90 dBm/Hz	
Copyright 2000–2002 Agilent Technologies	

🔆 Agile	ent									L	Freq/Channel
FCC ID:F Ref 25.5 #Samp		1730	Power ( Atten		IA Ch.1	013	man and				Center Freq 824.700000 MHz
Log 10 dB/ Offst		are a construction of the second s						northe terrest			Start Freq 819.700000 MHz
1.36 dB										A A A	Stop Freq 829.700000 MHz
LgAv 100											<b>CF Step</b> 1.00000000 MHz <u>Auto</u> Man
V1 S2 S3 FC_											FreqOffset 0.00000000 Hz
£(f): FTun Swp											<b>Signal Track</b> <sup>On <u>Off</u></sup>
Center 8 #Res BW	3 MHz				BM 3 MF		Sv	veep 1	Span 1 ms (60	.0 MHz 1 pts)	
Copyrig	ht 200	0-20	102 Ag	ilent T	echnol	ogies					



🔆 Agilent			L Freq/Channel							
FCC ID:A3LSCHI730 Pow Ref 25.5 dBm At #Samp	ver Out CDMA Ch.777 ten 40 dB	~~~~	Center Freq 848.310000 MHz							
Log 10 dB/			Start Freq 843.310000 MHz							
0ffst 1.36 dB			Stop Freq 853.310000 MHz							
LgAv			<b>CF Step</b> 1.00000000 MHz <u>Auto</u> Man							
V1 S2 S3 FC			Freq Offset 0.00000000 Hz							
£(f): FTun Swp			Signal Track On <u>Off</u>							
Center 848.31 MHz #Res BW 3 MHz	VBW 3 MHz	Span 1 Sweep 1 ms (60)	l0 MHz 1 pts)							
Copyright 2000–2002 Agilent Technologies										

* Agilent L	Freq/Channel
Ch Freq 848.31 MHz Trig Free Occupied Bandwidth	Center Freq 848.310000 MHz
FCC ID:A3LSCHI730 OBW CDMA Ch.777	Start Freq 846.810000 MHz
Ref 25.5 dBm Atten 40 dB #Samp Log 10	<b>Stop Freq</b> 849.810000 MHz
dB/ Offst 1.36	<b>CF Step</b> 300.000000 kHz <u>Auto</u> Man
dB         Span 3 MHz           Center 848.310 MHz         \$	FreqOffset 0.00000000 Hz
*Res BW 30 kHz         *VBW 300 kHz         *Sweep 20 ms (601 pts)           Occupied Bandwidth         Occ BW % Pwr         99.00 %           1.2782 MHz         × dB         -26.00 dB	Signal Track <sup>On <u>Off</u></sup>
Transmit Freq Error       -2.738 kHz         x dB Bandwidth       1.397 MHz*         Copyright 2000-2002 Agilent Technologies	

	ilent									L	Freq/Channel
FCC ID Ref -5 #Avg		HI730	Rx Spur #Atter		on CDM	A 		Mkr1		62 MHz 2 dBm	Center Freq 881.500000 MHz
Log 10 dB/ Offst											Start Freq 869.000000 MHz
1.39 dB DI	all-abbury	1	n dente and	horanteatra	. Anglymyneyd	k		when		Wheel the Margaret	<b>Stop Freq</b> 894.000000 MHz
-80.0 dBm PAvg											<b>CF Step</b> 2.50000000 MHz <u>Auto</u> Man
M1 S2 S3 FC											FreqOffset 0.00000000 Hz
€(f): FTun Swp											<b>Signal Track</b> On <u>Off</u>
Start 869.00 MHz         Stop 894.00 MHz           #Res BW 1 MHz         \$weep 1 ms (601 pts)											
Copyright 2000–2002 Agilent Technologies											

Her 23.3 dbm       Htten 40 db       -10.20 dbm       1.25500000 GHz         Log       10       AC Coupled       Start Freq         10       AC Coupled       Stop Freq         0ffst       1.36       Stop Freq         1.36       Stop Freq       2.5000000 GHz         01       1       CF Step         -13.0       Image: Stop Freq       2.49.000000 MHz         UgAv       Image: Stop Freq       2.49.000000 MHz         Image: Stop Freq       Image: Stop Freq       2.49.000000 MHz         Image: Stop Freq       Image: Stop Freq       2.50000000 MHz         Image: Stop Freq       Image: Stop Freq       1.255000000 MHz         Image: Stop Freq       Image: Stop Freq       2.50000000 MHz         Image: Stop Freq       Image: Stop Freq       2.50000000 MHz         Image: Stop Freq       Image: Stop Freq       2.50000000 MHz         Image: Stop Freq       Image: Stop Freq       1.255000000 MHz         Image: Stop Freq       Image: Stop Freq       1.255000000 MHz	🔆 Ag	ilent									L	Freq/Channel
10       dB/       AC Coupled       Start Freq         0ffst       1.36       AC Coupled       10.0000000 MHz         1.36       AB       AC Coupled       Stop Freq         DI       -13.0       AC Coupled       Stop Freq         January       AB       AC Coupled       Stop Freq         January       AC Coupled       Stop Freq       2.50000000 GHz         January       AC Coupled       AC Coupled       Stop Freq         January       AC Coupled       AC Coupled       Stop Freq         January       AC Coupled       AC Coupled       AC Coupled         Stop Couple       AC Coupled       AC Coupled       AC Coupled         Stop Couple	Ref 25 #Peak		HI730 (			)MA Ch.	1013		Mk			Center Freq 1.25500000 GHz
1.36 dB DI −13.0 dBm LgAv       Image: Comparison of the second se	10 dB/									AC C	Coupled	Start Freq 10.0000000 MHz
dBm         LgAv         CF Step           LgAv         M1 S2	1.36 dB DI							<u>1</u>				<b>Stop Freq</b> 2.50000000 GHz
S3_FC         Interference	dBm							•				<b>CF Step</b> 249.000000 MHz <u>Auto</u> Man
Signal Track	\$3 FC		Malene water	hatistlansan	, have	an markan da ba	an a	~~~	material		andread	FreqOffset 0.00000000 Hz
Center 1.255 GHz Span 2.49 GHz	FTun											<b>Signal Track</b> <sup>On <u>Off</u></sup>
#Res BW 1 MHz         VBW 1 MHz         Sweep 4.16 ms (601 pts)												

* Agilent L	Freq/Channel
FCC ID:A3LSCHI730 Cond Spurs CDMA Ch.1013 Mkr1 3.300 GHz Ref 25.5 dBm Atten 40 dB -35.15 dBm #Peak	Center Freq 6.25000000 GHz
Log 10 48/ 48/ 48/ 48/ 48/ 48/ 48/ 48/ 48/ 48/	<b>Start Freq</b> 2.50000000 GHz
1.36 dB DI	<b>Stop Freq</b> 10.0000000 GHz
-13.0 dBm LgAv	<b>CF Step</b> 750.000000 MHz <u>Auto</u> Man
M1 S2 S3 FC	FreqOffset 0.00000000 Hz
£(f):	<b>Signal Track</b> On <u>Off</u>
Center 6.250 GHz Span 7.5 GHz #Res BW 1 MHz VBW 1 MHz Sweep 12.52 ms (601 pts)	

🔆 Agilent		L	Freq/Channel					
#Peak	Spurs CDMA Ch.363 40 dB	Mkr1 1.670 GHz -18.69 dBm	Center Freq 1.25500000 GHz					
Log 10 dB/ Offst		AC Coupled	Start Freq 10.0000000 MHz					
1.36 dB DI		1	<b>Stop Freq</b> 2.5000000 GHz					
-13.0 dBm LgAv			<b>CF Step</b> 249.000000 MHz <u>Auto</u> Man					
M1 S2 S3 FC	was white growing which my	and a property and a second a second a second a second a se	FreqOffset 0.00000000 Hz					
£(f): FTun Swp			<b>Signal Track</b> On <u>Off</u>					
Center 1.255 GHz #Res BW 1 MHz	VBW 1 MHz	Span 2.49 GHz Sweep 4.16 ms (601 pts)						
Copyright 2000-2002 Agilent Technologies								

🔆 Ag	jilent									L	Freq/Channel
	):A3LSC .5 dBm	HI730	Cond Sp Atten		MA Ch.	363		Mk		50 GHz 57 dBm	Center Freq 6.25000000 GHz
Log 10 dB/ Offst											Start Freq 2.50000000 GHz
1.36 dB DI											<b>Stop Freq</b> 10.0000000 GHz
-13.0 dBm LgAv		1									<b>CF Step</b> 750.000000 MHz <u>Auto</u> Man
M1 S2 S3 FC		n handle delayers	naddown	water	lature and the second	anog maken	umm	-holl-leave	ange generated	and the second	FreqOffset 0.00000000 Hz
<b>£</b> (f): FTun Swp											<b>Signal Track</b> On <u>Off</u>
#Res B	6.250 W 1 MH	z			3W 1 MH		Sweep	12.52		.5 GHz 1 pts)	
Copyri	Copyright 2000–2002 Agilent Technologies										

🔆 Ag	ilent									L	Freq/Channel
Ref 25. #Peak		HI730	Cond Sp Atten		DMA Ch.	777		Mk		99 GHz 7 dBm	Center Freq 1.25500000 GHz
Log 10 dB/ Offst									AC C	oupled	Start Freq 10.0000000 MHz
1.36 dB DI							1-				<b>Stop Freq</b> 2.50000000 GHz
-13.0 dBm LgAv							<b></b>				<b>CF Step</b> 249.000000 MHz <u>Auto</u> Man
		renterman	den the second	or lowe	aunahing		m	ndundersk		and when	FreqOffset 0.00000000 Hz
<b>£</b> (f): FTun Swp											<b>Signal Track</b> <sup>On <u>Off</u></sup>
#Res B	1.255 W 1 MH:	z			  BW 1 MI		Swee	S p 4.16	ipan 2.4 ms (60		
Copyri	Copyright 2000–2002 Agilent Technologies										

🔆 Ag	jilent									L	Freq/Channel
	):A3LSC .5 dBm	HI730	Cond Sp Atten		MA Ch.	777		Mk		100 GHz 27 dBm	Center Freq 6.25000000 GHz
Log 10 dB/ Offst											<b>Start Freq</b> 2.50000000 GHz
1.36 dB DI											<b>Stop Freq</b> 10.0000000 GHz
-13.0 dBm LgAv		4									<b>CF Step</b> 750.000000 MHz <u>Auto</u> Man
M1 S2 S3 FC	hanger	Munund	www.	Yorin Vinterland	hydrawstryfan	manna	un der der der	neverteelle	manant	the contract of the last	FreqOffset 0.00000000 Hz
<b>£</b> (f): FTun Swp											<b>Signal Track</b> <sup>On <u>Off</u></sup>
#Res B	6.250 W 1 MH	z			3W 1 MH		Sweep	12.52	•	7.5 GHz 01 pts)	
Copyri	Copyright 2000–2002 Agilent Technologies										

🔆 Agilent							L	Freq/Channel			
FCC ID:A3LSC Ref 25.5 dBm #Samp		dge CDMA Ch 40 dB	.1013		Mkr1		00 MHz 5 dBm	Center Freq 824.000000 MHz			
Log 10 dB/ Offst			,		*****			Start Freq 823.000000 MHz			
1.36 dB DI								Stop Freq 825.000000 MHz			
-13.0 dBm LgAv 100	An and the state of the state o		<u> </u>					<b>CF Step</b> 200.000000 kHz <u>Auto</u> Man			
W1 S2 S3 FC	A							FreqOffset 0.00000000 Hz			
€(f): f>50k Swp								<b>Signal Track</b> <sup>On <u>Off</u></sup>			
Center 824.00 #Res BW 13 kl	łz	#VBW 13		Sweep	45.16	•	2 MHz 1 pts)				
Lopyright 20	100-2002 Hg	Copyright 2000–2002 Agilent Technologies									

🔆 Agi	ilent									L	Freq/Channel
FCC ID Ref 25. #Samp		HI730 I	Band E⊄ Atten	-	MA Ch.7	777		Mkr1		100 MHz 19 dBm	Center Freq 849.000000 MHz
Log 10 dB/ Offst				where here							Start Freq 848.000000 MHz
1.36 dB DI											<b>Stop Freq</b> 850.000000 MHz
-13.0 dBm LgAv 100						l	mar				<b>CF Step</b> 200.000000 kHz <u>Auto</u> Man
W1 S2 S3 FC							- 12-14 V		the way was a second	monen	FreqOffset 0.00000000 Hz
<b>£</b> (f): f>50k Swp											Signal Track <sup>On <u>Off</u></sup>
Center #Res B				#V	BW 3 M	Hz	Sweep	34.44		2 MHz 1 pts)	
Copyright 2000–2002 Agilent Technologies											

🔆 Ag	ilent									L	Freq/Channel
	:A3LSCI .5 dBm		4MHz SF Atten		MA Ch.1	1013		Mkr1		93 MHz 8 dBm	Center Freq 821.000000 MHz
Log 10 dB/ Offst											Start Freq 819.000000 MHz
1.36 dB DI											<b>Stop Freq</b> 823.000000 MHz
-13.0 dBm LgAv 100										1	<b>CF Step</b> 400.000000 kHz <u>Auto</u> Man
W1 S2 S3 FC								and and a second	mon		FreqOffset 0.00000000 Hz
<b>£</b> (f): f>50k Swp				<u>~~~~</u>							<b>Signal Track</b> On <u>Off</u>
#Res B	821.00 W 100	kHz			W 100		Swee	p 1.56		4 MHz 1 pts)	
Copyri	Copyright 2000–2002 Agilent Technologies										

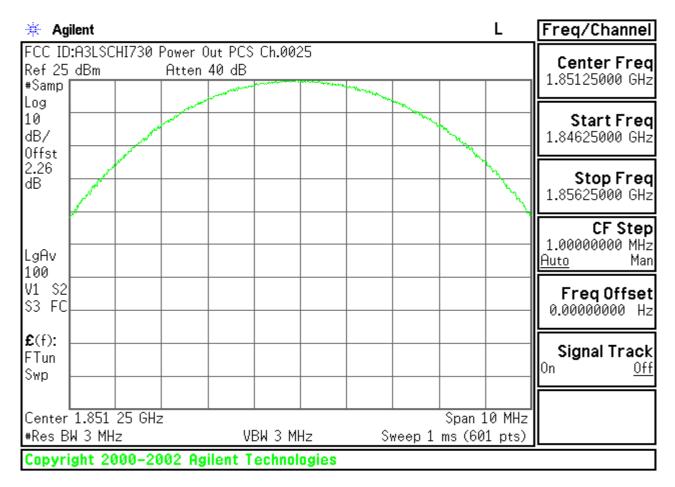
🔆 Agilent				L	Freq/Channel
FCC ID:A3LSCHI730 4 Ref 25.5 dBm #Samp	4MHz SPAN CD Atten 40 dB	MA Ch.777	Mkr1	850.007 MHz -33.448 dBm	Center Freq 852.000000 MHz
Log 10 dB/ Offst					Start Freq 850.000000 MHz
1.36 dB DI					<b>Stop Freq</b> 854.000000 MHz
-13.0 dBm LgAv 1 100 �~					<b>CF Step</b> 400.000000 kHz <u>Auto</u> Man
W1 S2	Martin -				FreqOffset 0.00000000 Hz
£(f): f>50k Swp				um m	Signal Track <sup>On <u>Off</u></sup>
Center 852.000 MHz #Res BW 100 kHz		3W 100 kHz	Sweep 1.56	Span 4 MHz ms (601 pts)	
Copyright 2000-20	002 Agilent T	echnologies			

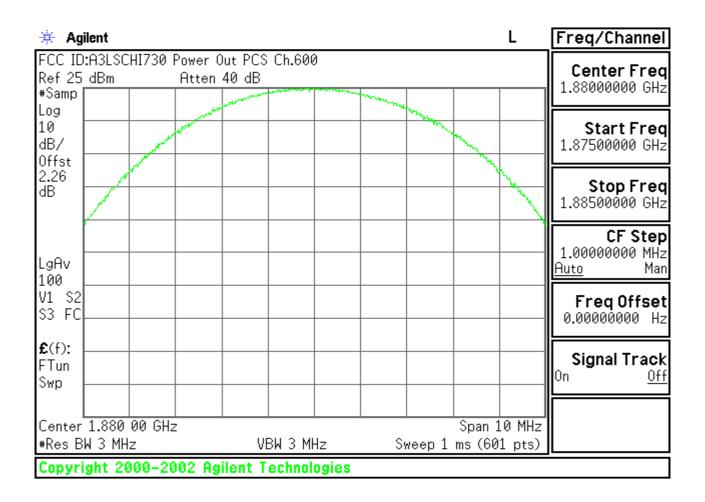
A3LSPHI730(PCS)

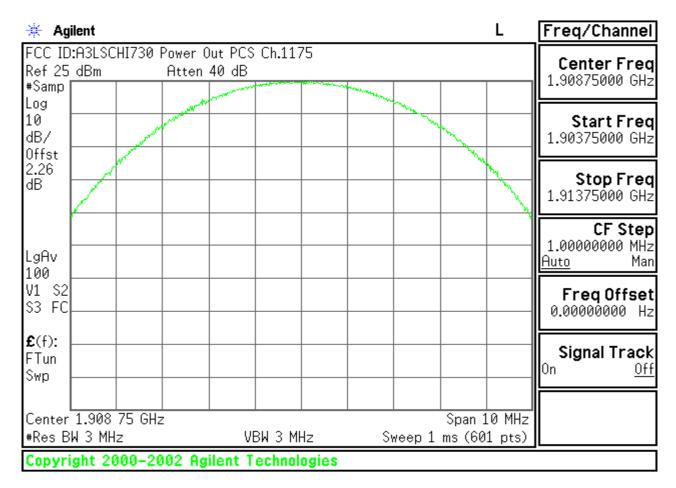
* Agilent L	Freq/Channel
Ch Freq 1.85125 GHz Trig Free Channel Power	Center Freq 1.85125000 GHz
FCC ID:A3LSCHI730 Power Out PCS Ch.0025	<b>Start Freq</b> 1.84975000 GHz
Ref 25 dBm Atten 40 dB #Avg	<b>Stop Freq</b> 1.85275000 GHz
dB/ Offst www.www.www. 2.26	<b>CF Step</b> 300.000000 kHz <u>Auto</u> Man
dB Center 1.851 250 GHz Span 3 MHz	FreqOffset 0.00000000 Hz
#Res BW 30 kHz     #VBW 300 kHz     #Sweep 20 ms (601 pts)       Channel Power     Power Spectral Density	<b>Signal Track</b> <sup>On <u>Off</u></sup>
25.03 dBm /1.2500 MHz -35.94 dBm/Hz	
File Operation Status, C:\0025.GIF file saved	

* Agilent L	Freq/Channel
Ch Freq 1.88 GHz Trig Free Channel Power	Center Freq 1.88000000 GHz
FCC ID:A3LSCHI730 Power Out PCS Ch.600	Start Freq 1.87850000 GHz
Ref 25 dBm         Atten 40 dB           #Avg	<b>Stop Freq</b> 1.88150000 GHz
dB/ Offst 2.26	<b>CF Step</b> 300.000000 kHz <u>Auto</u> Man
dB         Span 3 MHz           Center 1.880 000 GHz         \$	FreqOffset 0.00000000 Hz
#Res BW 30 kHz     #VBW 300 kHz     #Sweep 20 ms (601 pts)       Channel Power     Power Spectral Density	<b>Signal Track</b> <sup>On <u>Off</u></sup>
25.05 dBm /1.2500 MHz -35.92 dBm/Hz	
Copyright 2000–2002 Agilent Technologies	

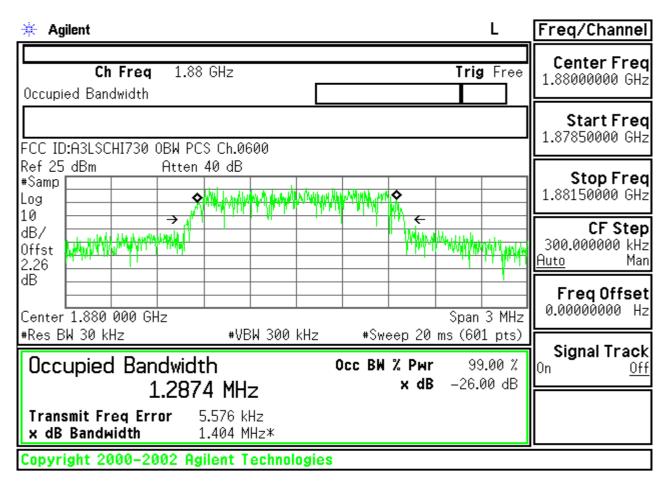
* Agilent L	Freq/Channel
Ch Freq 1.90875 GHz Trig Free Channel Power	Center Freq 1.90875000 GHz
FCC ID:A3LSCHI730 Power Out PCS Ch.1175	<b>Start Freq</b> 1.90725000 GHz
Ref 25 dBm Atten 40 dB #Avg Log 10	<b>Stop Freq</b> 1.91025000 GHz
dB/ Offst 2.26	<b>CF Step</b> 300.000000 kHz <u>Auto</u> Man
dB	FreqOffset 0.00000000 Hz
#Res BW 30 kHz     #VBW 300 kHz     #Sweep 20 ms (601 pts)       Channel Power     Power Spectral Density	<b>Signal Track</b> <sup>On <u>Off</u></sup>
25.06 dBm /1.2500 MHz -35.91 dBm/Hz	
Copyright 2000–2002 Agilent Technologies	







Ch Freq 1.85125 GHz Trig Free	Center Freq
Occupied Bandwidth	1.85125000 GHz
FCC ID:A3LSCHI730 OBW PCS Ch.0025	Start Freq 1.84975000 GHz
Ref 25 dBm Atten 40 dB #Samp Log 10	<b>Stop Freq</b> 1.85275000 GHz
dB/ Offst 2.26	<b>CF Step</b> 300.000000 kHz <u>Auto</u> Man
dB	FreqOffset 0.00000000 Hz
#Res BW 30 kHz         #VBW 300 kHz         #Sweep 20 ms (601 pts)           Occupied Bandwidth         Occ BW % Pwr         99.00 %           1.2847 MHz         × dB         -26.00 dB	Signal Track <sup>On <u>Off</u></sup>
Transmit Freq Error -6.255 kHz x dB Bandwidth 1.379 MHz* Copyright 2000-2002 Agilent Technologies	



🔆 Agile	ent								L	Freq/Channel
Ref 25 o ≢Peak [		30 Cond S Atten		S Ch.00	025				989 MHz .99 dBm	Center Freq 1.25500000 GHz
Log 10 - dB/ - Offst -								AC	Coupled	Start Freq 10.0000000 MHz
2.26 dB - DI -										<b>Stop Freq</b> 2.50000000 GHz
-13.0 dBm LgAv							L.			<b>CF Step</b> 249.000000 MHz <u>Auto</u> Man
M1 S2 S3 FC	and the second second	Mar wat the season	1 0				n h	www.	proproved by a set	FreqOffset 0.00000000 Hz
£(f): _ FTun Swp _										<b>Signal Track</b> On <u>Off</u>
Start 10 #Res BW	1 MHz			3W 1 M		Swee		•	500 GHz 01 pts)	
Copyrig	ht 2000	-2002 Ag	ilent T	echnol	ogies					

🔆 Ag	jilent									L	Freq/Channel
Ref 25 #Peak		CHI730	Cond Sp Atten		S Ch.00	925		М		3.70 GHz .94 dBm	Center Freq 11.2500000 GHz
Log 10 dB/ Offst											Start Freq 2.50000000 GHz
2.26 dB DI -13.0											<b>Stop Freq</b> 20.0000000 GHz
dBm LgAv											<b>CF Step</b> 1.75000000 GHz <u>Auto</u> Man
M1 S2 S3 FC	when		ne have	halan tana	Herman Mar	ward when	alone with	manafalligap	-underla	, and the second	FreqOffset 0.00000000 Hz
<b>£</b> (f): FTun Swp											<b>Signal Track</b> <sup>On <u>Off</u></sup>
Start 2 #Res B				VI	BW 1 MH		Sweep		•	.00 GHz 01 pts)	
Copyr	ight 2	2000-2	002 Ag	ilent T	echnol	ogies					

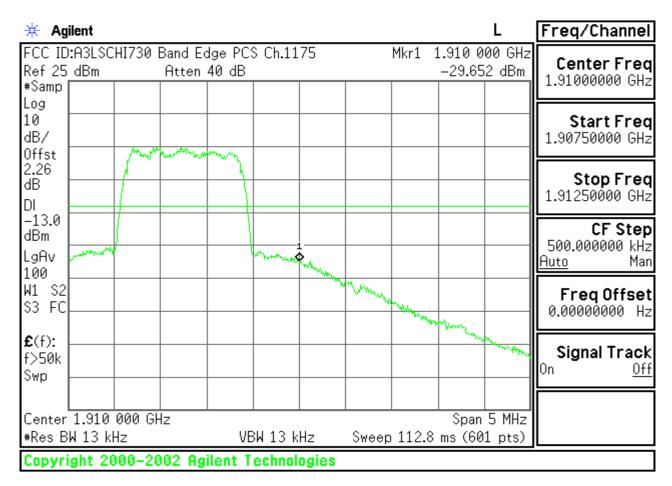
🔆 Agilent										L	Freq/Channel
FCC ID:A3I Ref 25 dBi #Peak		Cond Sp Atten		S Ch.00	600			Mkr		18 GHz 0 dBm	Center Freq 1.25500000 GHz
Log 10 dB/ Offst									AC C	oupled	Start Freq 10.0000000 MHz
2.26 dB DI											<b>Stop Freq</b> 2.50000000 GHz
-13.0 dBm LgAv											<b>CF Step</b> 249.000000 MHz <u>Auto</u> Man
M1 S2 S3 FC	nadas an Iannador		attern and the second		mmmh	er playment and	J	Lung	Antonia di Cana	mananahi	FreqOffset 0.00000000 Hz
£(f): FTun Swp											<b>Signal Track</b> <sup>On <u>Off</u></sup>
Start 10 M #Res BW 1	MHz			BW 1 M		Swee	p 4.:		op 2.50 ms (60	00 GHz 1 pts)	
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🔆 Agilent		L	Freq/Channel
Ref 25 dBm F #Peak	ond Spurs PCS Ch.0600 Atten 40 dB	Mkr1 3.75 GHz -20.52 dBm	Center Freq 11.2500000 GHz
Log 10 dB/ Offst			Start Freq 2.50000000 GHz
2.26 dB DI			<b>Stop Freq</b> 20.0000000 GHz
dBm			<b>CF Step</b> 1.75000000 GHz <u>Auto</u> Man
M1 S2 Martine S3 FC	- Marth and desire rowing a second	and the second of the second s	FreqOffset 0.00000000 Hz
£(f): FTun Swp			Signal Track <sup>On <u>Off</u></sup>
Start 2.50 GHz #Res BW 1 MHz	VBW 1 MHz	Stop 20.00 GHz Sweep 43.76 ms (601 pts)	
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Ref 25 #Peak	):A3LSC dBm	HI730	Cond Sp Atten		S Ch.11	175			Mkr		83 GHz 3 dBm	Center Freq 1.25500000 GHz
Log 10 dB/ Offst										AC C	oupled	Start Freq 10.0000000 MHz
2.26 dB DI												<b>Stop Freq</b> 2.5000000 GHz
-13.0 dBm LgAv							1					<b>CF Step</b> 249.000000 MHz <u>Auto</u> Man
M1 S2 S3 FC	In the set Analytic setting		~~***	mpe-tenjerter	~~*~~	an a	, Ż., u	and the		L-1-9-2-1-9-2-19-14	unmente	FreqOffset 0.00000000 Hz
<b>£</b> (f): FTun Swp												<b>Signal Track</b> <sup>On <u>Off</u></sup>
#Res B	LO MHz W 1 MH				3W 1 M		Swee	 p 4.1		op 2.50 ms (60	00 GHz 1 pts)	
Copyr	ight 20	00-20	)02 Ag	ilent T	echnol	ogies						

🔆 Agila	ent									L	Freq/Channel
FCC ID:f Ref 25 ( #Peak		HI730	Cond Sµ Atten		S Ch.1:	175		MI		.81 GHz .4 dBm	Center Freq 11.2500000 GHz
Log 10 dB/ Offst											Start Freq 2.50000000 GHz
2.26 dB - DI -											<b>Stop Freq</b> 20.0000000 GHz
-13.0 dBm LgAv	\$ •										<b>CF Step</b> 1.75000000 GHz <u>Auto</u> Man
M1 S2 S3 FC	ml	union in the	or all all with a	and the second	whom	vhuvalower	an a	nor-lynnyyyny	laft-schertar	handes from	FreqOffset 0.00000000 Hz
£(f): _ FTun Swp _											<b>Signal Track</b> <sup>On <u>Off</u></sup>
Start 2.5 #Res BW				lV	3W 1 M	l Hz	Sweep	St 43.76	•	00 GHz 1 pts)	
Copyrig	ht 20	00-20	102 Ag	ilent T	echnol	ogies					_

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FCC ID:A3LSCHI730 Ref 25 dBm #Samp	Band Edge PC: Atten 40 dB	S Ch.0025	Mkr1	1.850 000 GHz -35.202 dBm	<b>Center Freq</b> 1.85000000 GHz
Log 10 dB/ Offst			Murtu ma		Start Freq 1.84750000 GHz
2.26 dB DI					<b>Stop Freq</b> 1.85250000 GHz
-13.0 dBm LgAv 100		1 stranger			<b>CF Step</b> 500.000000 kHz <u>Auto</u> Man
W1 S2 S3 FC		The stand of the s			FreqOffset 0.00000000 Hz
£(f): f>50k Swp					<b>Signal Track</b> On <u>Off</u>
Center 1.850 000 G #Res BW 13 kHz		BW 13 kHz	Sweep 112.8	Span 5 MHz ms (601 pts)	
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	C ID:A3LSCHI730 4MHz SPAN PCS Ch.0025 Mkr1 1.848 993 GH f 25 dBm Atten 40 dB -23.758 dBn										Center Freq 1.84700000 GHz
Log 10 dB/											<b>Start Freq</b> 1.84500000 GHz
Offst 2.26 dB DI											<b>Stop Freq</b> 1.84900000 GHz
-13.0 dBm LgAv 100									- And and a start of the	The second secon	<b>CF Step</b> 400.000000 kHz <u>Auto</u> Man
W1 S2 S3 FC	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	and the second			647.4649.4649.4	·····	The second s	A. Augustan (Arrist			FreqOffset 0.00000000 Hz
<b>£</b> (f): FTun Swp											<b>Signal Track</b> <sup>On <u>Off</u></sup>
Center 1.847 000 GHz Span 4 MHz #Res BW 1 MHz VBW 1 MHz Sweep 1 ms (601 pts)											
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Ref 25 dBm #Samp	0 4MHz SPAN PCS Atten 40 dB	Ch.1175		013 GHz 001 dBm	<b>Center Freq</b> 1.91300000 GHz			
Log 10 dB/ Offst					<b>Start Freq</b> 1.91100000 GHz			
2.26 dB DI					<b>Stop Freq</b> 1.91500000 GHz			
-13.0 1 dBm LgAv 100	Martin and a start water and a start				<b>CF Step</b> 400.000000 kHz <u>Auto</u> Man			
W1 S2 S3 FC		and an and an and an and a second	man and the second	1000000	FreqOffset 0.00000000 Hz			
£(f): FTun Swp					Signal Track <sup>On <u>Off</u></sup>			
Center 1.913 000 #Res BW 1 MHz	n 4 MHz 601 pts)							
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