

**Test Report****From****Kyocera Wireless Corp****Single-Band Single-mode CDMA Cellular Phone****FCC Part 22 & 24 Certification  
IC RSS-129 & 133****FCC ID: OVFKWC-KX17****Models: KX17****STATEMENT OF CERTIFICATION**

*The data, data evaluation and equipment configuration represented herein are a true and accurate representation of the measurements of the sample's radio frequency interference emissions characteristics as of the dates and at the times of the test under the conditions herein specified.*

**STATEMENT OF COMPLIANCE**

*This product has been shown to be capable of compliance with the applicable technical standards as indicted in the measurement report and was tested in accordance with the measurement procedures specified in §2.947.*

Test performed by:	Jagadish Nadakuduti Regulatory Engineer	Date of Test:	5/18/2005 – 5/25/2005
Report Prepared by:	Jagadish Nadakuduti Regulatory Engineer	Date of Report:	5/24/2005
Report Reviewed by:	Lin Lu Engineer, Principal	Date of Review:	5/26/2005
Tests that required an OATS site were performed by Nemko.			

**TABLE OF CONTENTS**

1	General Information.....	3
2	Product Description .....	4
3	Electronic Serial Numbers (ESN) Protection.....	5
4	FCC Compliance Emergency 911.....	5
5	TTY compliance.....	5
6	Transmitter RF Power Output.....	6
6.1	Conducted Power .....	6
6.2	Radiated Power .....	7
7	Occupied Bandwidth.....	8
8	Spurious Emissions At Antenna Terminals.....	9
9	Transmitter Radiated Spurious Emissions Measured Data.....	14
10	Receiver Spurious Emissions .....	14
11	Transmitter RF Carrier Frequency Stability.....	14
11.1	CDMA 800 Mode .....	15
12	Exposure of Humans to RF Fields (SAR).....	16
13	Test Equipment .....	16

**1 General Information**

<b>Applicant:</b>	Kyocera Wireless Corp 10300 Campus Point Drive San Diego CA 92121
<b>FCC ID:</b>	OVFKWC-KX17
<b>Product:</b>	Single-Band Single-mode Cellular Phone
<b>Model Numbers:</b>	KX17
<b>EUT Serial Number:</b>	97DX----1B24TS
<b>Type:</b>	<input type="checkbox"/> Prototype, <input checked="" type="checkbox"/> Pre-Production, <input type="checkbox"/> Production
<b>Device Category:</b>	Portable
<b>RF Exposure Environment:</b>	General Population / Uncontrolled
<b>Antenna:</b>	Internal Antenna
<b>Detachable Antenna:</b>	No
<b>External Input:</b>	Audio/Digital Data
<b>Quantity:</b>	Quantity production is planned
<b>FCC Rule Parts:</b>	§22H
<b>Modes:</b>	800 CDMA
<b>Multiple Access Scheme:</b>	CDMA
<b>TX Frequency (MHz):</b>	824 – 849
<b>Emission Designators:</b>	1M25F9W
<b>Max. Output Power (W)</b>	0.144 ERP

## 2 Product Description

The OVFKWC-KX17 phones are Single-mode Single-Band 1XRTT products. The phones have assisted GPS software feature enabled to meet the emergency location requirements of the FCC's E911 Phase II mandate. The Single-mode architecture is defined as 800MHz cellular CDMA.

The phone is designed in compliance with the technical specifications for compatibility of mobile and base stations in the Cellular Radio telephone service contained in "Cellular System Mobile Station -Land Station Compatibility Specification" as specified in OET Bulletin 53 and TIA Standards



### **3 Electronic Serial Numbers (ESN) Protection**

The Single-mode Phone, FCC ID: OVFKWC-KX17 uses ESN. The ESN is a unique identification number to each phone, which is contained in the Numeric Assignment Module and is automatically transmitted to the base station whenever a call is placed. The ESN is stored in an EPROM and is isolated from fraudulent contact and tampering. Any attempt to change the ESN will render the portable phone inoperative.

The phone complies with all requirements for ESN under Part 22.919.

### **4 FCC Compliance Emergency 911**

<b>FCC § 22.921</b>
When an emergency 911 call is originated by the user, the mobile will attempt to acquire any available system and originate the emergency call on that system, disregarding restrictions set by the roaming list. The FCC NPRM WT99-13, CC94-102 automatic analog A/B roaming option has been implemented for 911 emergency calls. The phones have Global Positioning System (GPS) support.

### **5 TTY compliance**

<b>FCC § 255 of the Telecom Act</b>
The OVFKWC-KX17 phone models have been designed for TTY Compliance with Cellular Compatibility Standard.

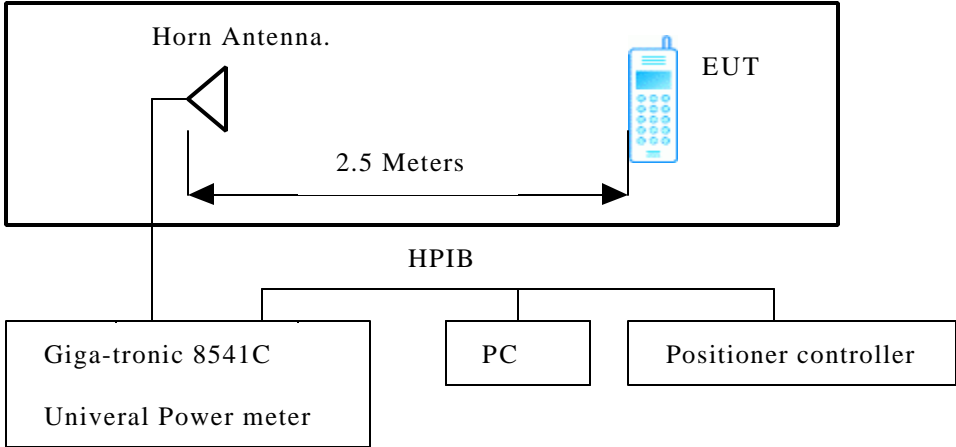
## 6 Transmitter RF Power Output

### 6.1 Conducted Power

<b>FCC:</b> § 2.1046	<b>IC:</b> RSS-129 §7.1, RSS-133 §6.2
<b>Measurement Procedures:</b>  The RF output power was measured using a Giga-tronics 8541C Universal Power Meter and HP 8594E Spectrum Analyzer that has the CDMA personality option. Terminated to a resistive coaxial load of 50 ohms.	

Mode	Frequency (MHz)	Channel	Power (dBm)
CDMA 800	824.70	1013	23.90
	836.49	383	23.88
	848.31	777	23.86

## 6.2 Radiated Power

<b>FCC:</b> § 22.913, § 24.232	<b>IC:</b> RSS-129 §7.1 and §9.1, RSS-133 §6.2
<b>Measurement Procedures:</b>  <p>The EUT (SN: 97DX----1B277D) was positioned on a 2-axis non-conductive positioner inside an anechoic chamber.</p> <p>The EUT conducted power was set by the phone control software. During tests, the phone was rotated 360 degree in azimuth and elevation by an automated antenna measurement workstation. Maximum radiated power was recorded using a Giga-tronics 8541C Universal Power Meter. All measurement results are EIRP in dBm. For ERP, subtract 2.1 dB from the EIRP data.</p>	
<p style="text-align: center;">Anechonic Chamber</p>  <pre> graph TD     subgraph Chamber [Anechonic Chamber]         direction LR         Antenna[Horn Antenna.]         EUT[EUT]         Antenna -- "2.5 Meters" --- EUT     end     Antenna --- HPiB[HPiB]     HPiB --- Meter[Giga-tronics 8541C Universal Power meter]     HPiB --- PC[PC]     HPiB --- Controller[Positioner controller] </pre>	

Mode	Frequency (MHz)	Channel	Max. Power (dBm)	Ref.
CDMA 800	824.70	1013	20.2	ERP
	836.49	383	20.6	
	848.31	777	21.6	

## 7 Occupied Bandwidth

<b>FCC:</b> § 2.1049, § 22.917(b)(d), § 24.238	<b>IC:</b> RSS-129 §6.3, §8.1
<b>Measurement Procedures:</b> The RF output of the EUT was connected to the input of the spectrum analyzer with sufficient attenuation. The spectrum with no modulation was recorded.  <u>In Digital Mode:</u> Modulate with full rate.	

### List of Figures

Figure	Mode	Description
7-1	CDMA 800	CDMA @ CH 383

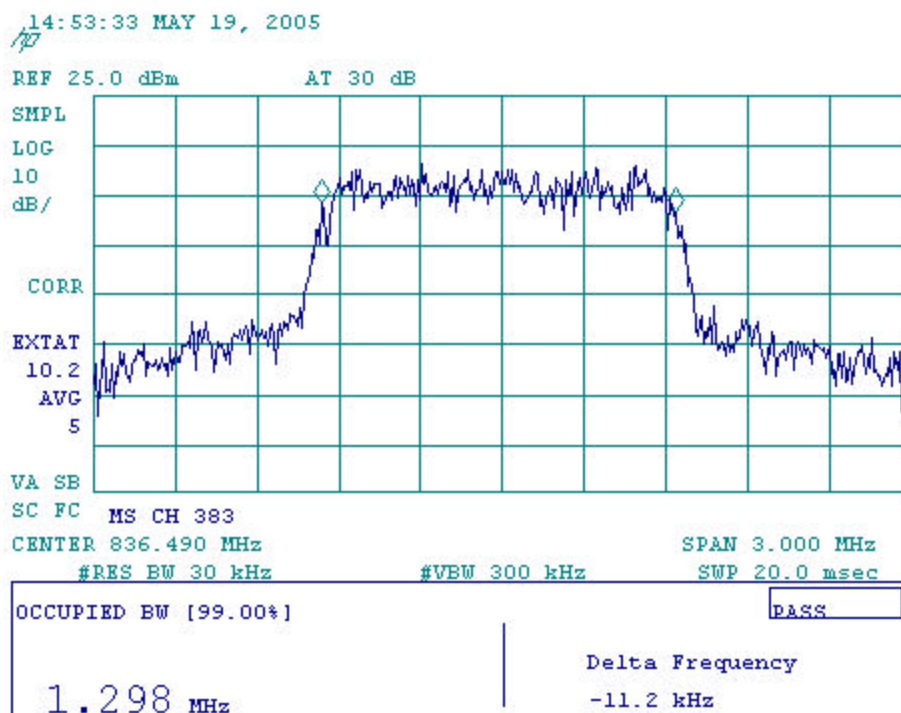


Figure 7-1 CDMA 800 @ CH 383



## 8 Spurious Emissions At Antenna Terminals

<b>FCC:</b>	<b>§ 2.1051, § 22.917(e)(f), § 24.238</b>	<b>IC:</b>	<b>RSS-129 §6.3, §8.1, RSS-133 §6.3</b>
<b>Measurement Procedures:</b>			
<p><u>Out of Band:</u> The RF output of the EUT was connected to the input of the spectrum analyzer with sufficient attenuation. The modulating signal was applied accordingly. The frequency spectrum was investigated from the lowest frequency signal generated up to at least the tenth harmonic of the fundamental.</p> <p><u>Base Band:</u> Spectrum was investigated from 869-894 MHz for Cellular.</p>			

### List of Figures:

Figure	Mode	Channel	Plot Description
8-1	CDMA 800	1013	Emissions in base station frequency range, 869 - 894 MHz
8-2			Conducted spurious emissions, 9kHz to 10GHz
8-3		383	Emissions in base station frequency range, 869 - 894 MHz
8-4			Conducted spurious emissions, 9kHz to 10GHz
8-5		777	Emissions in base station frequency range, 869 - 894 MHz
8-6			Conducted spurious emissions, 9kHz to 10GHz

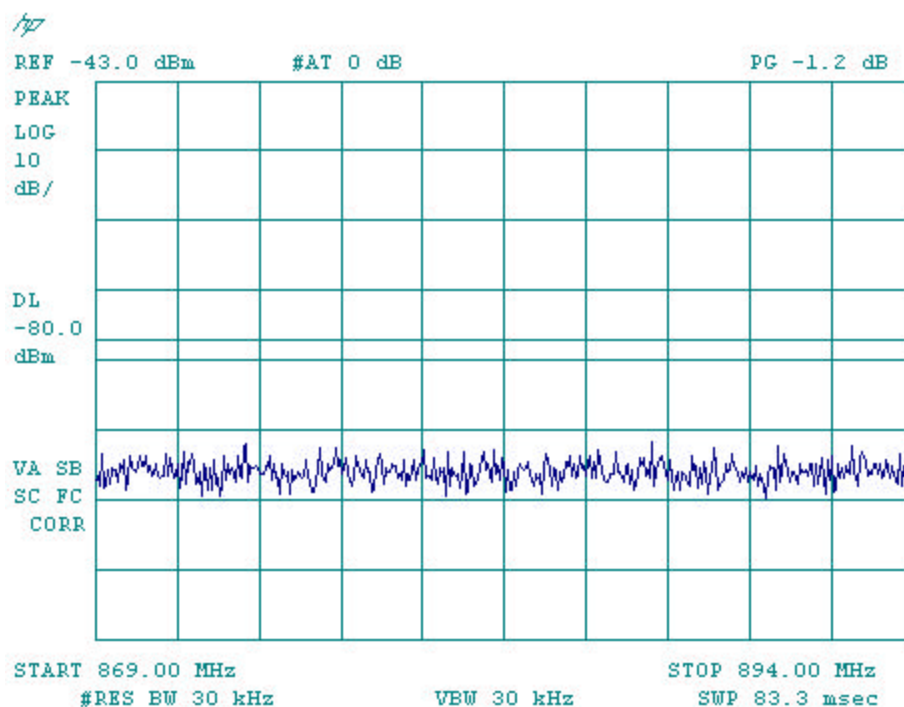


Figure 8-1 CDMA 800 - Emissions in base station frequency range (CH 1013)

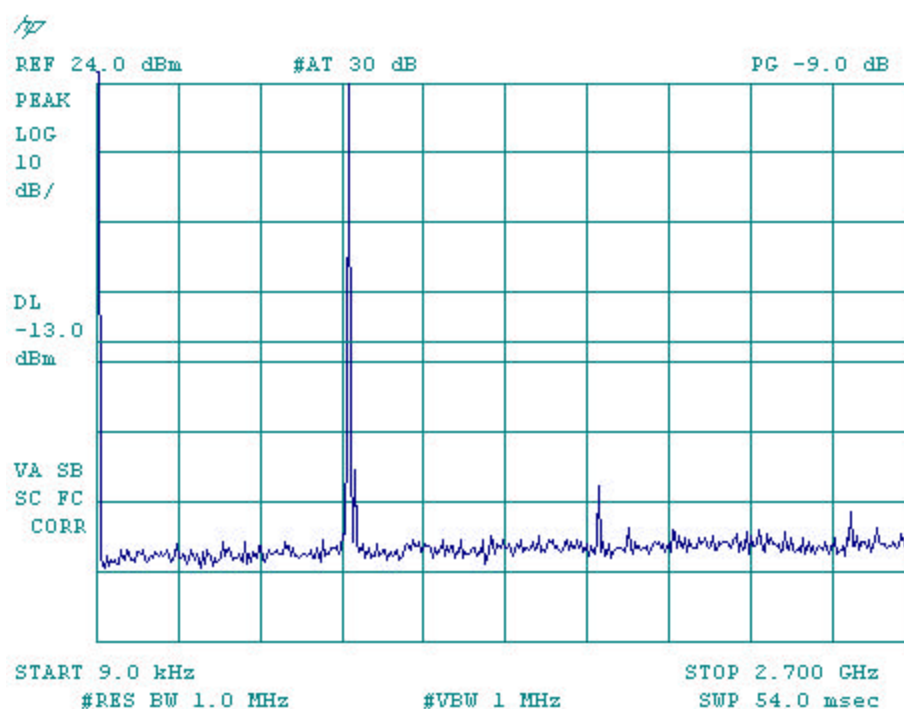


Figure 8-2a CDMA 800 – Conducted Spurious Emission (CH 1013)

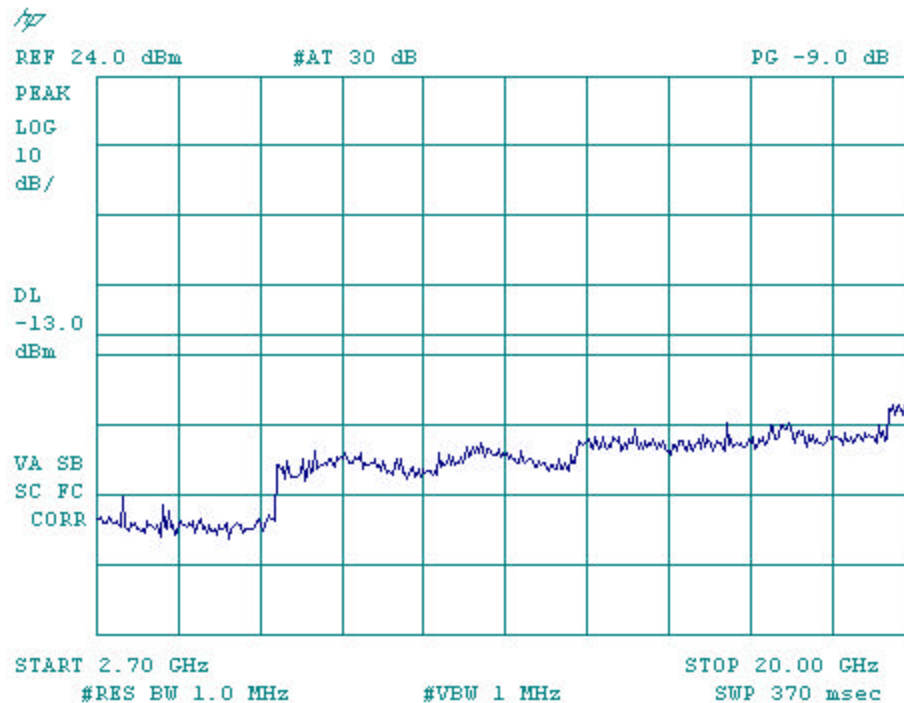


Figure 8-2b CDMA 800 – Conducted Spurious Emission (CH 1013)

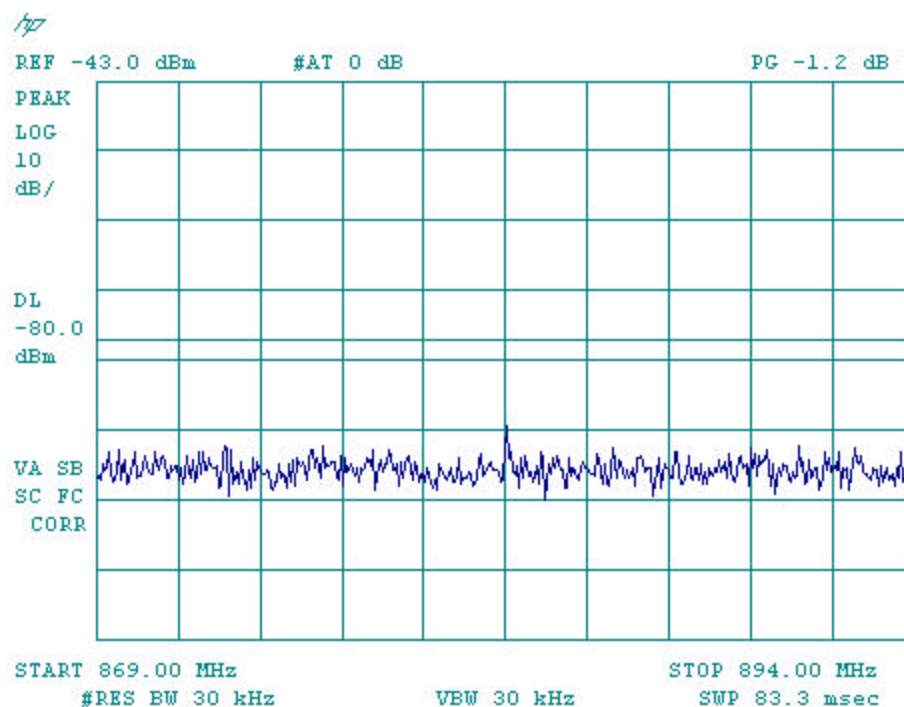


Figure 8-3 CDMA 800 - Emissions in base station frequency range (CH 383)

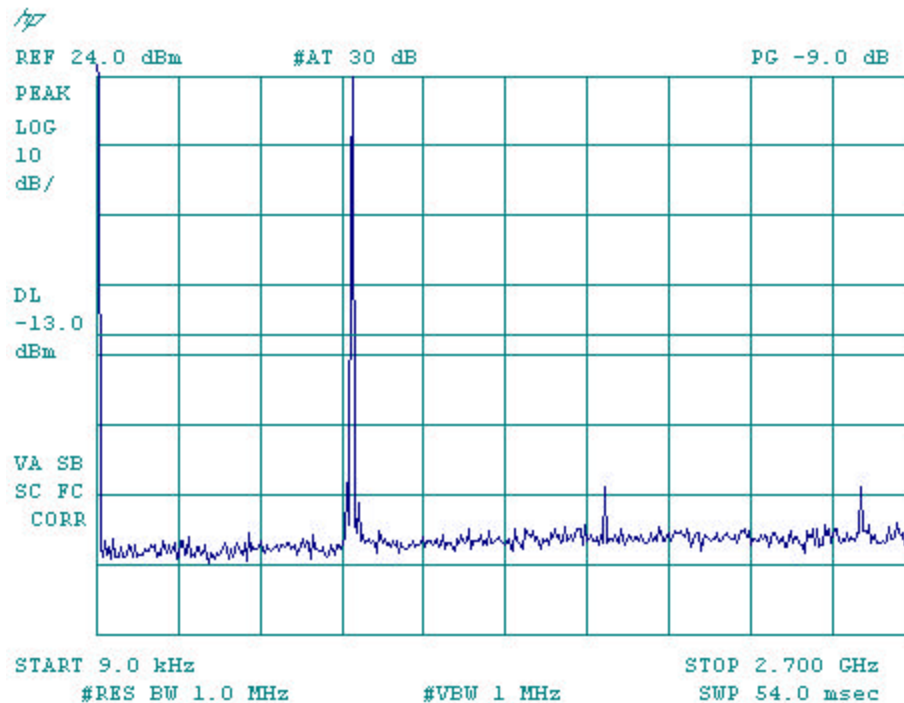


Figure 8-4a CDMA 800 – Conducted Spurious Emission (CH 383)

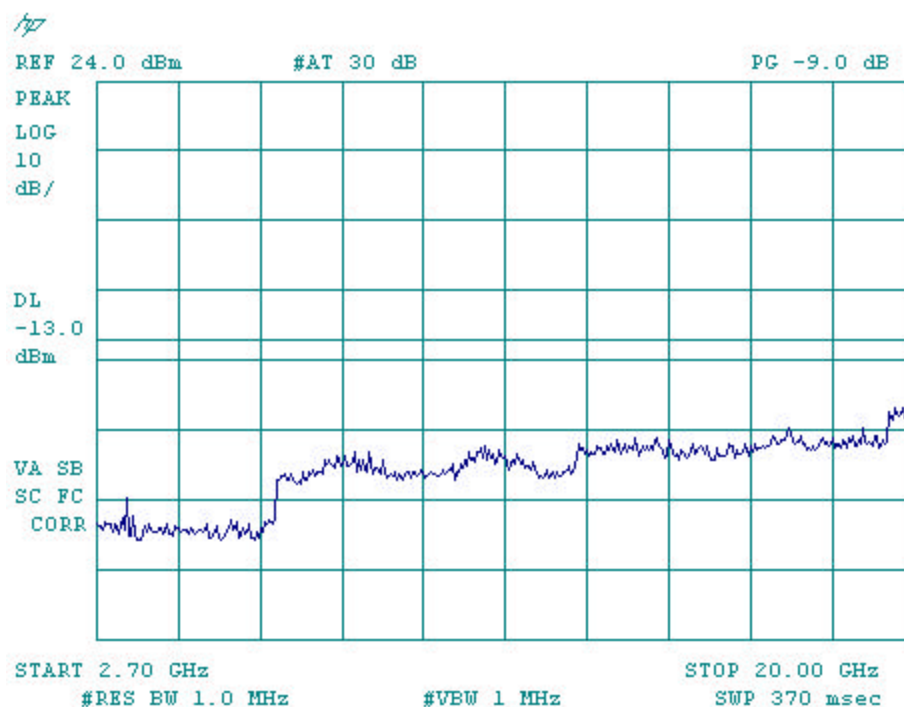


Figure 8-4b CDMA 800 – Conducted Spurious Emission (CH 383)

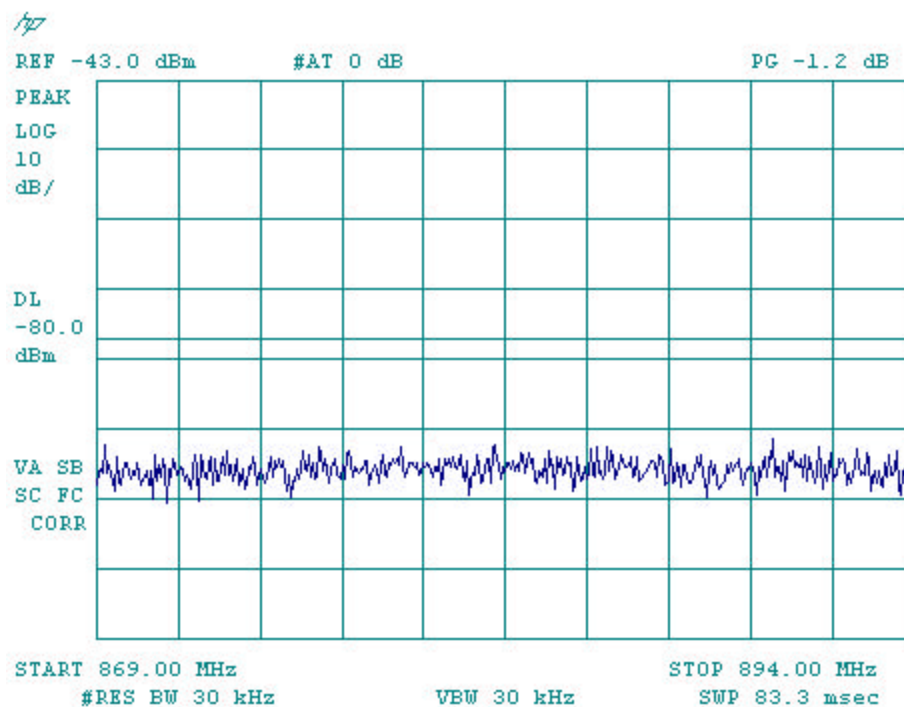


Figure 8-5 CDMA 800 - Emissions in base station frequency range (CH 777)

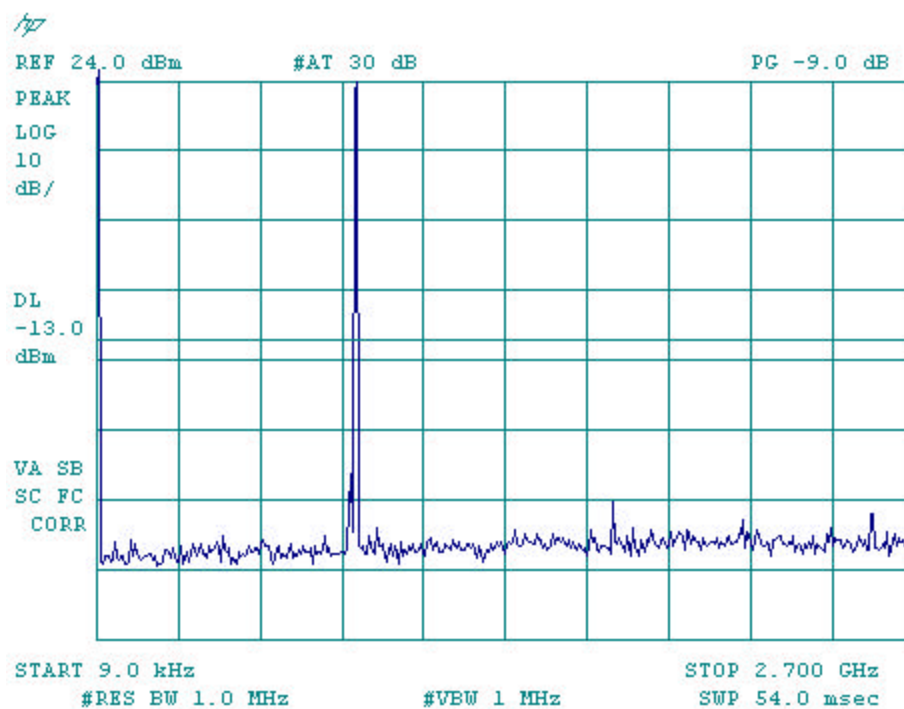


Figure 8-6a CDMA 800 – Conducted Spurious Emission (CH 777)

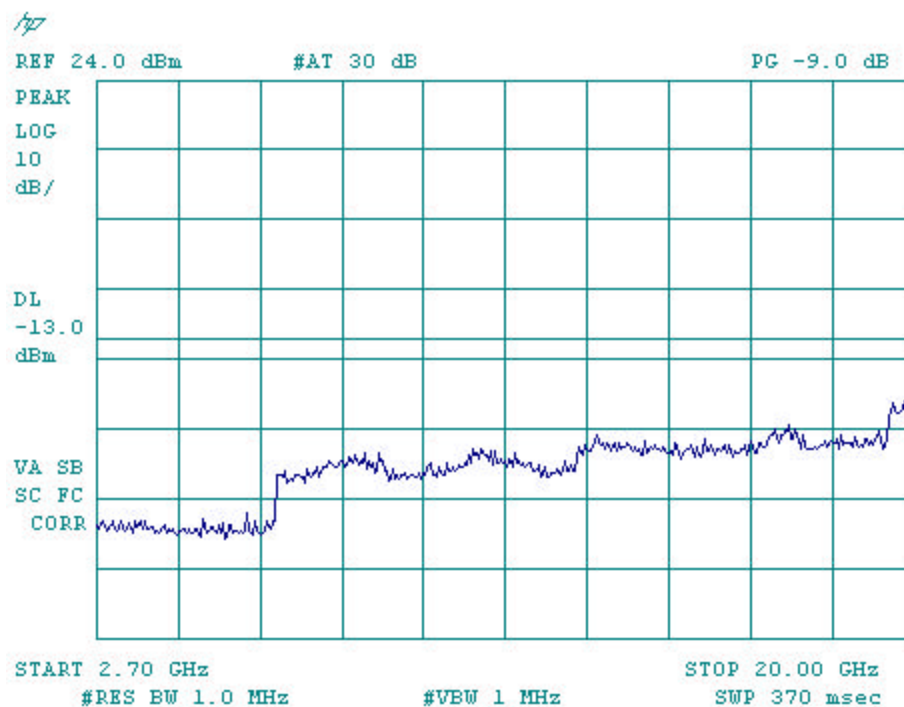


Figure 8-6b CDMA 800 – Conducted Spurious Emission (CH 777)

**9 Transmitter Radiated Spurious Emissions Measured Data**

<b>FCC:</b> § 2.1053, § 22.91, § 24.238	<b>IC:</b> RSS-129 §8.1, RSS-133 §6.3
<b>Measurement Procedures:</b>  The radiated spurious emission test was performed at Nemko in San Diego, California. The test report is attached in a separate attachment.	

**10 Receiver Spurious Emissions**

<b>FCC:</b> § 15.109	<b>IC:</b> RSS-129 §10, RSS-133 §9
<b>Measurement Procedures:</b>  The receiver radiated spurious emission test was performed at Nemko in San Diego, California. The test report is attached in a separate attachment.	

**11 Transmitter RF Carrier Frequency Stability**

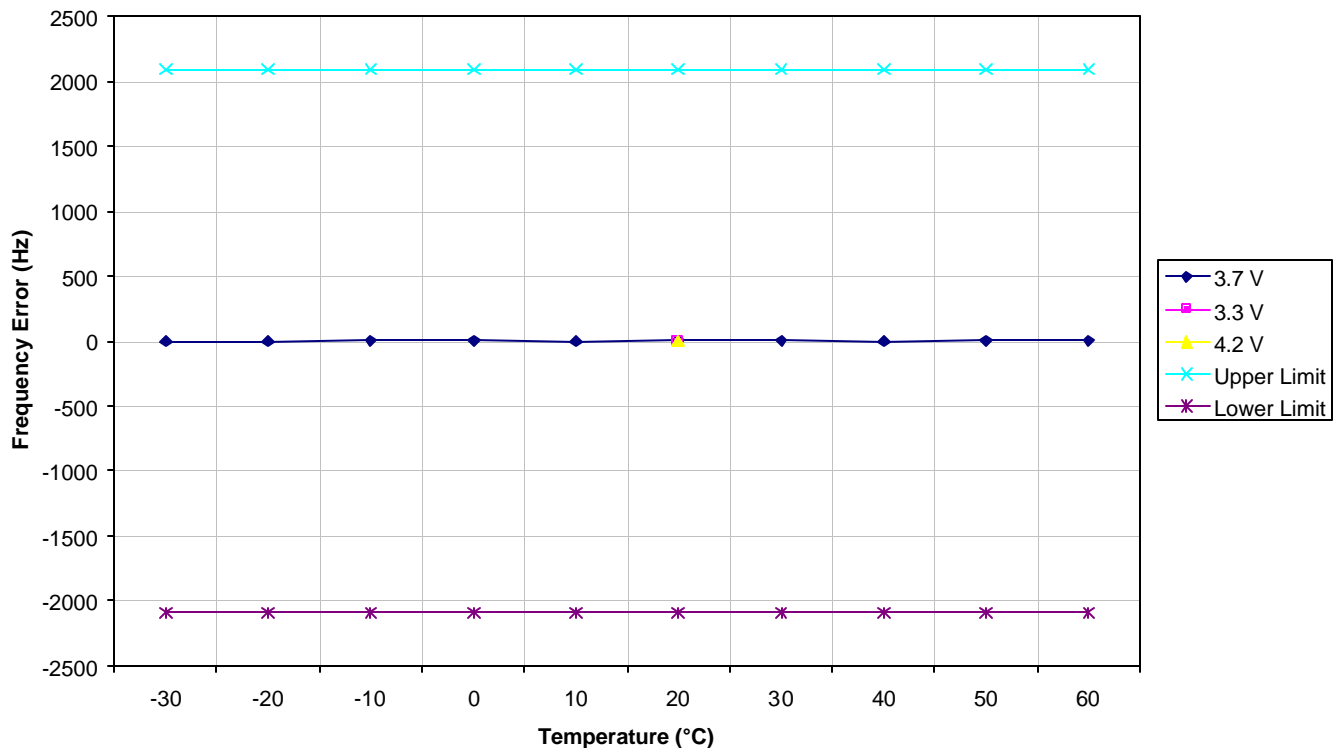
<b>FCC:</b> § 2.1055, § 22.355, § 24.235	<b>IC:</b> RSS-129 §7.2 and §9.2, RSS-133 §7
<b>Measurement Procedures:</b>  The EUT was placed in an environmental chamber. The RF output of the EUT was connected to Agilent 8960 Series 10 E5515C. A power supplier was connected as primary voltage supply.	

## 11.1 CDMA 800 Mode

<b>Tx Frequency:</b>	836.49 MHz	<b>Voltage :</b>	3.7V
<b>Tolerance:</b>	+/- 2.5 Ppm (+/- 2091 Hz)	<b>Ch:</b>	383

Temperature (°C)	Deviation of Carrier (Hz)			Specification (Hz)	
	3.3V (Battery endpoint)	3.7V	4.26V (115%)	Lower limit	Upper limit
-30		1.04		-2091	2091
-20		0.11		-2091	2091
-10		1.20		-2091	2091
0		0.29		-2091	2091
10		1.21		-2091	2091
20	<b>0.6</b>	<b>0.82</b>	<b>1.56</b>	-2091	2091
30		1.34		-2091	2091
40		0.12		-2091	2091
50		1.69		-2091	2091
60		1.31		-2091	2091

**OVFKWC-KX17 CDMA 800 MHz Transmit RF Carrier Stability Over Temperature and Voltage**



**12 Exposure of Humans to RF Fields (SAR)**

The SAR Test Report is showed in a separate attachment as Exhibit 9.

**13 Test Equipment**

Description	Manufacturer	Model Number	Serial Number	Cal Due Date
Power Meter	Giga-tronics	8541C	1835203	12/20/2005
Power Meter Sensor	Giga-tronics	80601A	1830321	12/20/2005
Spectrum Analyzer	Hewlett Packard	8593EM	3710A00203	03/14/2006
Spectrum Analyzer	Hewlett Packard	8594E	3810A04238	04/16/2006
Spectrum Analyzer	Rohde & Schwarz	FSEA	001854	03/04/2006
Wireless Communications Test Set	Agilent	8960	US41140252	09/16/2006
CDMA Mobile Station Test Set	Hewlett Packard	8924C	US37482647	09/16/2006
Temperature Chamber	CSZ	Z2033	Z9343034	03/11/2006