

Applicant:	Kyocera
FCC ID:	V65S1360
Report #:	CT-S1360-24-0513-R0

RF Emissions Test Report

FCC Part 24

For

Kyocera Corporation
c/o Kyocera Communication Inc.

Product:	CDMA Phone
Model:	S1360

Applicant:	Kyocera
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ATTESTATION

The tested device complies with the requirements in respect of all parameters subject to the test.

The test results and statements relate only to the items tested.

The test equipment used was suitable for the tests performed and within manufacturer's published specifications and operating parameters.

The test methods were consistent with the methods described in the relevant standards.

Product:	CDMA Cellular Phone with Bluetooth
Model #:	S1360
FCC ID:	V65S1360
Tested in accordance with:	FCC Part 24
Test performed by:	CompTest Services LLC
Test Requested by:	Kyocera Corporation c/o Kyocera Communication Inc 8611 Balboa Avenue San Diego, CA 92121 United States
Date of Test:	May 13 - 17, 2013

Responsible Engineer

Benjamin Nguyen

Benjamin Nguyen
Test Engineer

Reviewed and approved by:

Kelly Hill

Kelly Hill
Quality Manager



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1 SUMMARY OF TESTING

Section #	Rule Part	Test Description	Verdict
4	FCC § 2.1046	Conducted Power	Pass
5	FCC § 24.232	Radiated Power	Pass
6	FCC § 2.1049, 24.238	Occupied Bandwidth	Pass
7	FCC § 2.1051, 24.238	Spurious Emissions at Antenna Terminals	Pass
8	FCC § 2.1053, 24.238	Transmitter Radiated Spurious Emissions	Pass
9	FCC § 15.109	Receiver Spurious Emissions	Pass
10	FCC § 2.1055, 24.235	Transmitter RF Carrier Frequency Stability	Pass
11	FCC § 2.1093	Exposure of Humans to RF Fields	Pass

2 EQUIPMENT UNDER TEST INFORMATION

EUT Serial Number:	268435457816732379
Type:	[] Prototype, [X] Pre-Production, [] Production
Equipment Category:	Portable
RF Exposure Environment:	General Population / Uncontrolled
Antenna:	Internal Antenna
Detachable Antenna:	No
External Input:	Audio/Digital Data
Quantity:	Quantity production is planned
Multiple Access Scheme:	CDMA
Emission Designators:	1M25F9W
FCC Rule Parts:	§24E
Modes:	1900 CDMA
TX Frequency (MHz):	1850 - 1910
Conducted Output Power (dBm):	24.5

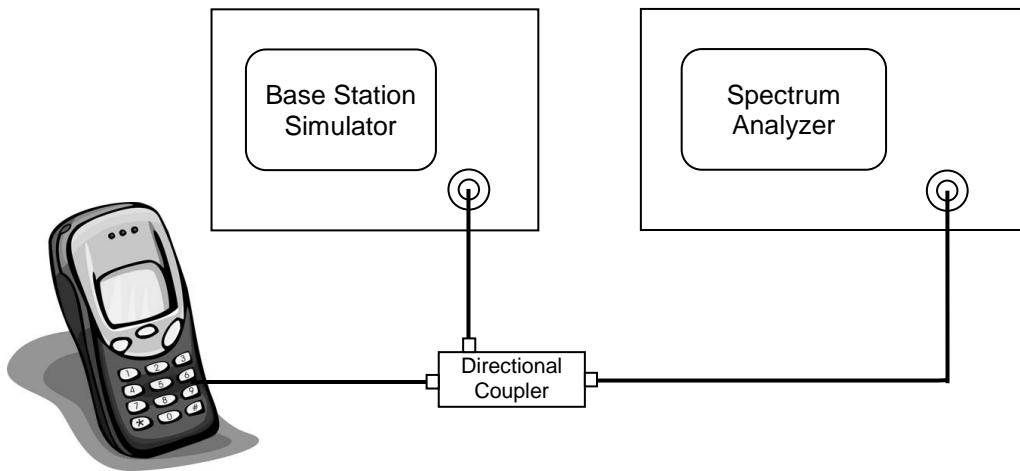


3 TEST FACILITIES

The test sites and measurement facilities used to collect data are located at 8611 Balboa Avenue, San Diego, CA 92123, USA

4 TEST SETUP

All CDMA measurements were conducted with a base station simulator to establish a CDMA link with the equipment under test (EUT). To investigate the response of the EUT the main antenna RF output port of the EUT was connected to the input of the spectrum analyzer with a RF cable. The amplitude of the spectrum analyzer is corrected for the cable insertion loss and any other applicable losses. A fully charged battery was used as a power supply voltage, except for the Transmitter RF Carrier Frequency Stability test a dummy battery connected to a power supply was used.



To justify on the selection of applicable configurations, the EUT was pre-tested under all Radio Configuration and Service Option operation modes to determine the worst-case scenario.

The following CDMA configuration was determined and reported as worst-case for all measurements:

Radio Configuration:	RC1
Service Options:	SO55
Data Rate:	Full Rate



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5 CONDUCTED RF OUTPUT POWER

5.1 Test Configuration

FCC: § 2.1046

The EUT was connected to a Universal Power Meter through a RF cable. The cable loss was taken into account for accurate power measurement. The EUT was set at low, mid, high channels and each frequency band to investigate the conducted power.

5.2 Test Results

Mode	Frequency (MHz)	Channel	Conducted Power (dBm)
CDMA 1900	1851.25	25	24.72
	1880	600	24.78
	1908.75	1175	24.76

6 RADIATED RF OUTPUT POWER

6.1 Test Configuration

FCC: § 24.232

The test was performed in Compliance Certification Service using substitution method. See separated radiated emission report for details.



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7 PEAK-AVERAGE RATIO

7.1 Test Configuration

FCC: § 24.232(d)

The RF output of the EUT was connected to the input of the spectrum analyzer (S.A.) with sufficient attenuation. The spectrum analyzer Complementary Cumulative Distribution Function (CCDF) function is utilized to determine the largest deviation between average and peak power of the EUT.

For Digital: Modulate with full rate and all up power control bit.

S.A. Setting	RBW	VBW
Power Stat CCDF	5MHz	auto

Limits: <13 dB

7.2 Test Result

Figure	Description	Mode	Result
7-1	CCDF @ Ch600	CDMA 1900	Pass



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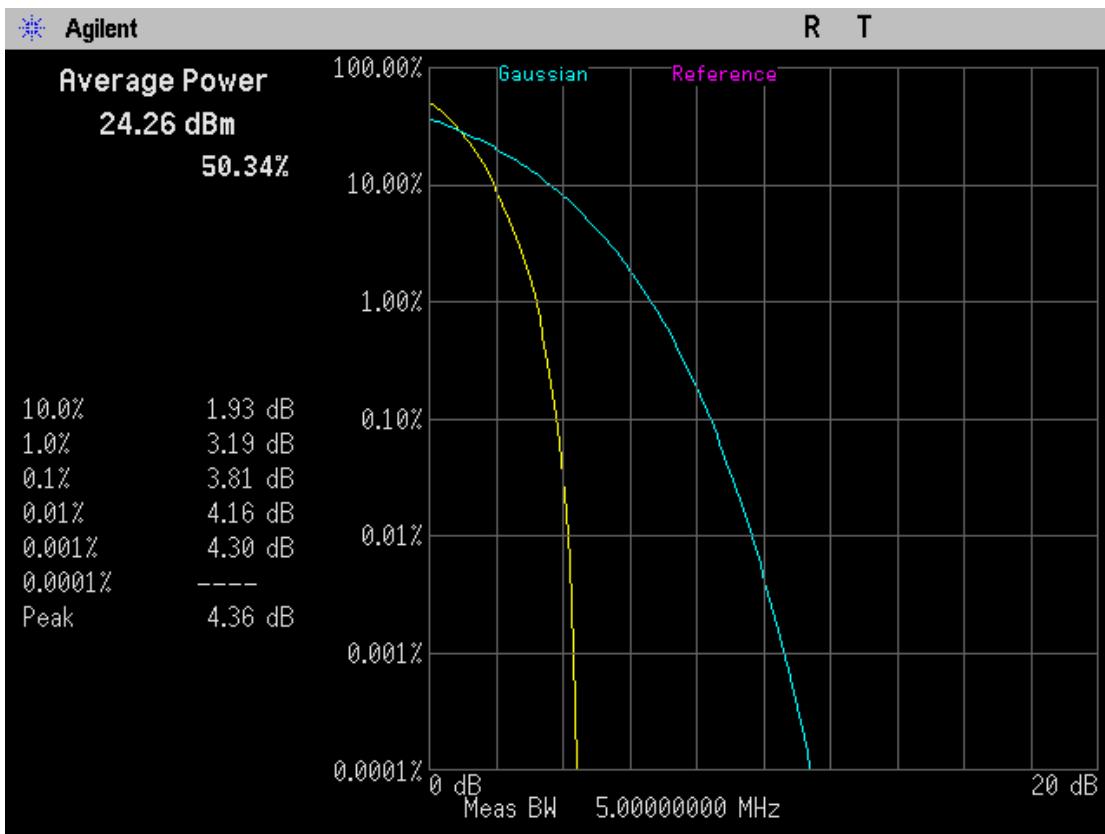


Figure 7-1 CCDF @ CH 600



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8 OCCUPIED BANDWIDTH

8.1 Test Configuration

FCC: § 2.1049, § 24.238

The RF output of the EUT was connected to the input of the spectrum analyzer (S.A.) with sufficient attenuation. The spectrum with no modulation was recorded.

For Digital: Modulate with full rate all up power control bit.

S.A. Setting	RBW	VBW
Bandwidth Measurement	30KHz	300kHz
Band Edge Measurement	13kHz	51kHz

Limits: Bandwidth: N/A

Bandedge: -13dBm

8.2 Test Result

Figure	Description	Mode	Result
8-1	CDMA @ CH600	CDMA 1900	Pass
8-2	Lower Band Edge @ CH 25		Pass
8-3	Upper Band Edge @ CH 1175		Pass



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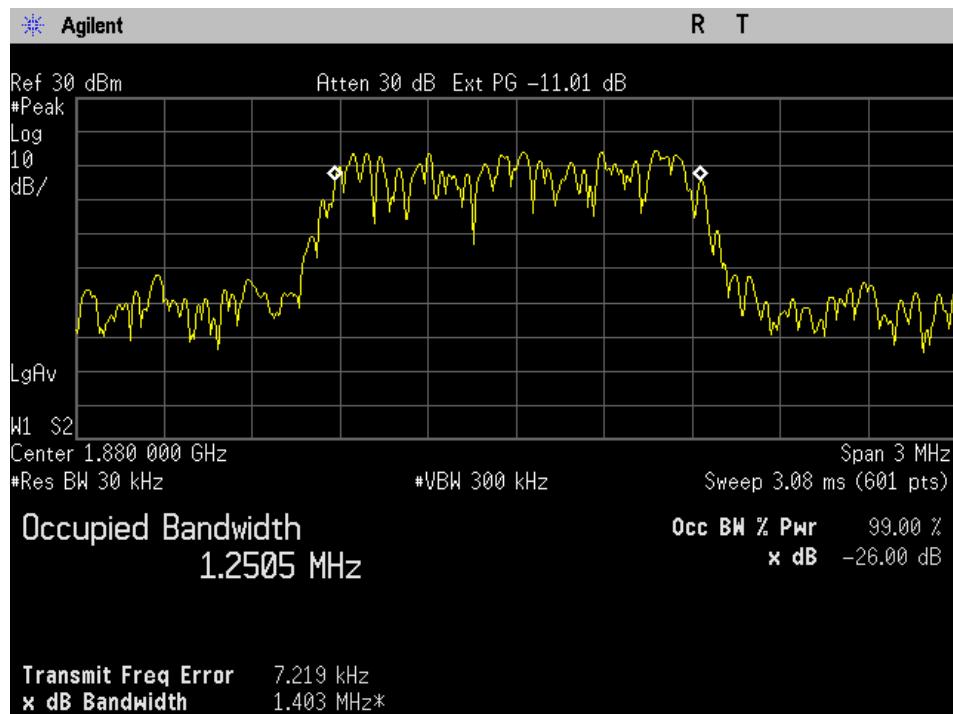
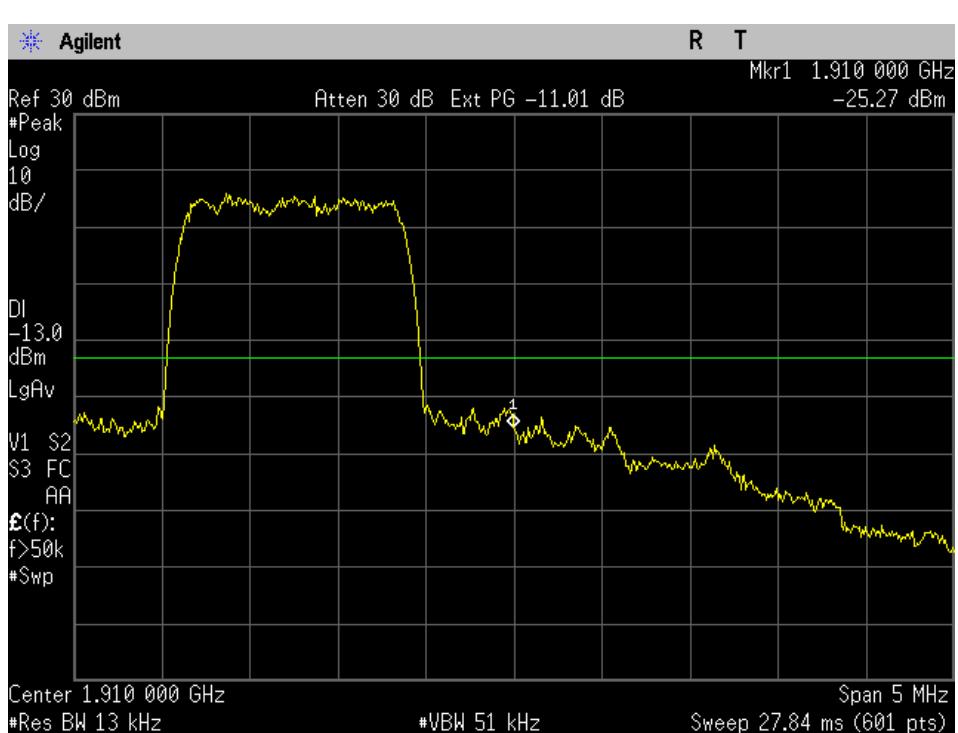


Figure 8-1 CDMA 1900 @ CH 600



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9 SPURIOUS EMISSIONS AT ANTENNA TERMINALS

9.1 Test Configuration

FCC: § 2.1051, § 22.917(e)(f), § 24.238

Measurement Procedures:

Out of Band: 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.

S.A. Setting	RBW	VBW
Spurious Emissions Measurement	1MHz	1MHz

Limits: -13dBm

9.2 Test Result

Figure	Channel	Plot Description	Result
9-1	25	CDMA 1900 Conducted spurious emissions 25MHz to 20GHz	Pass
9-2	600		Pass
9-3	1175		Pass



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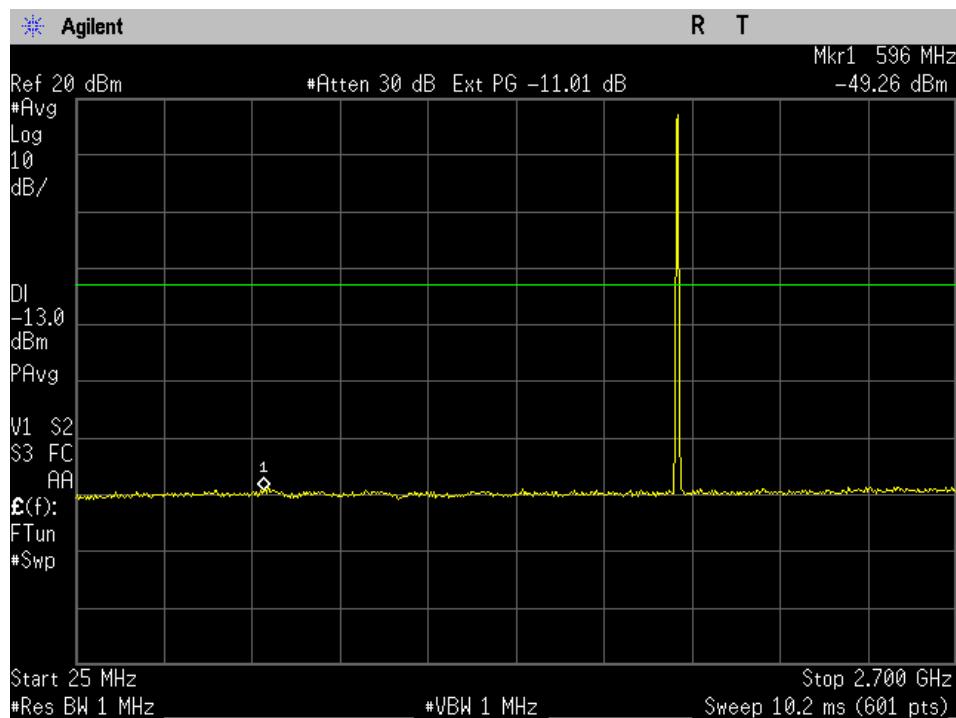


Figure 9-1a CDMA 1900 - Conducted Spurious Emission (CH 25)

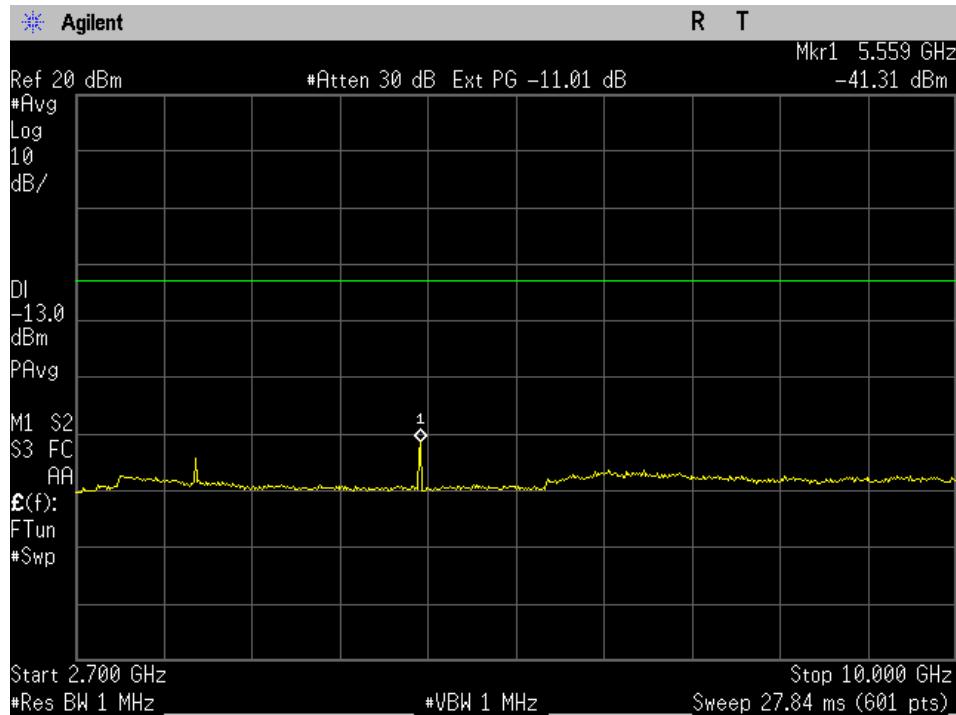


Figure 9-1b CDMA 1900 - Conducted Spurious Emission (CH 25)



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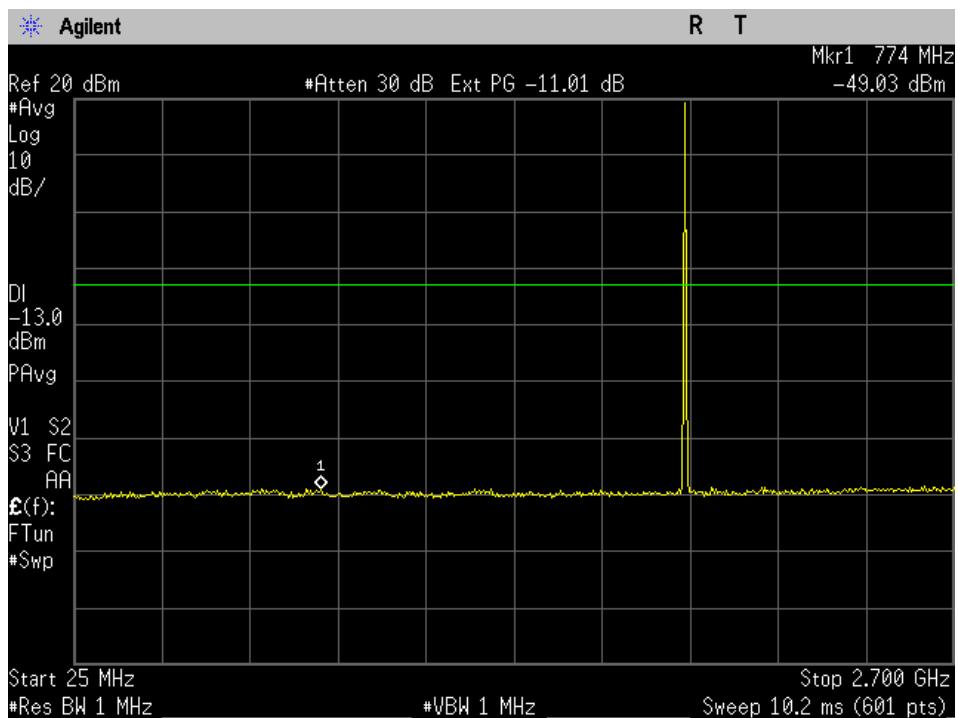


Figure 9-2a CDMA 1900 - Conducted Spurious Emission (CH 600)

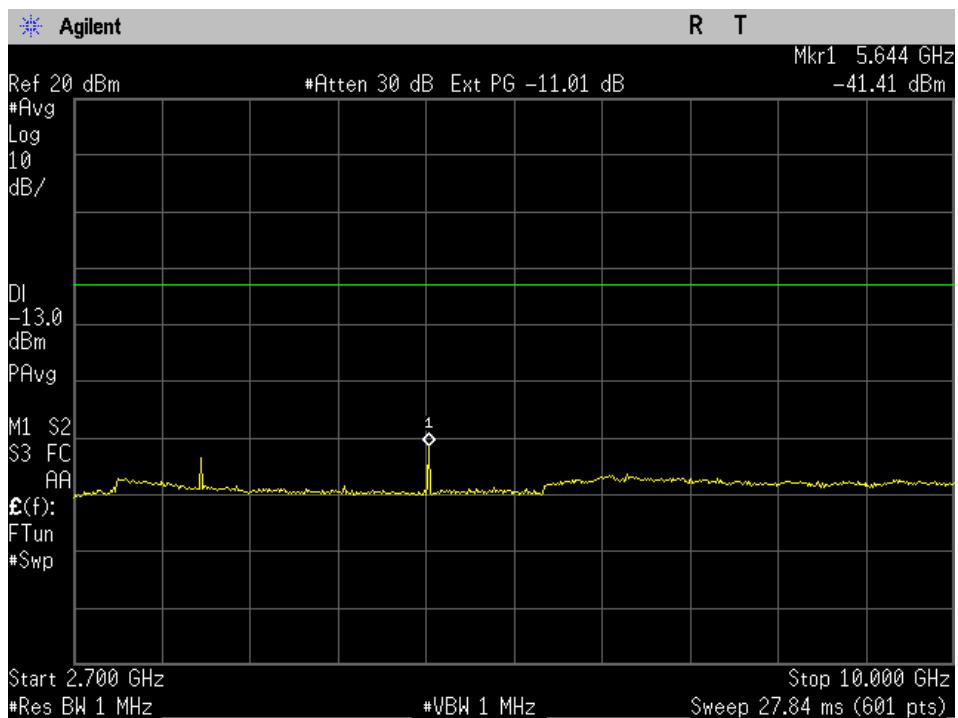


Figure 9-2b CDMA 1900 - Conducted Spurious Emission (CH 600)



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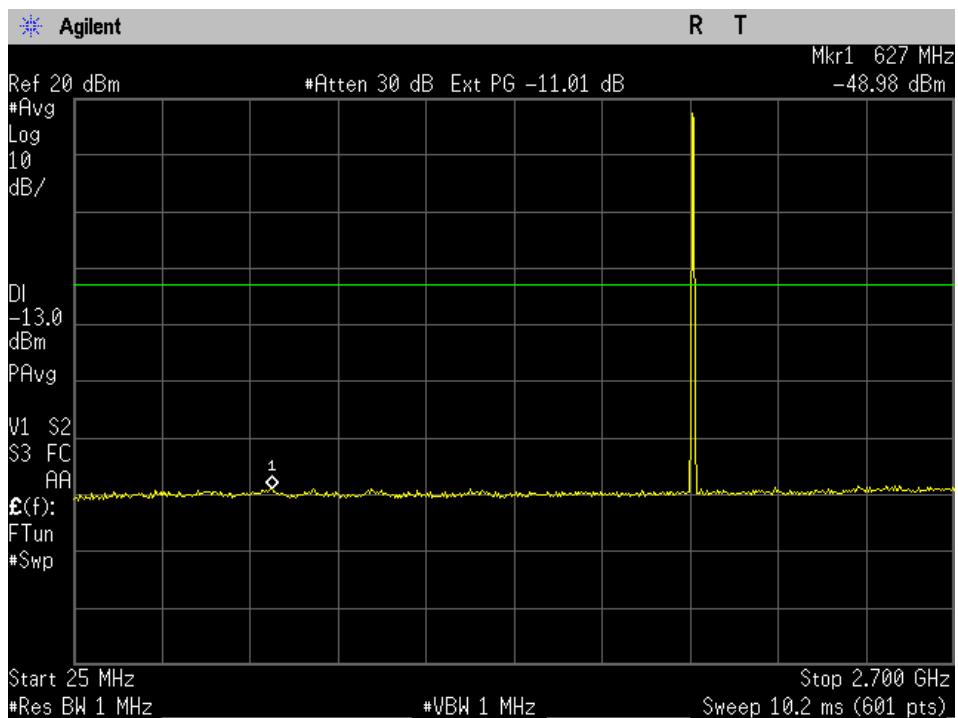


Figure 9-3a CDMA 1900 - Conducted Spurious Emission (CH 1175)

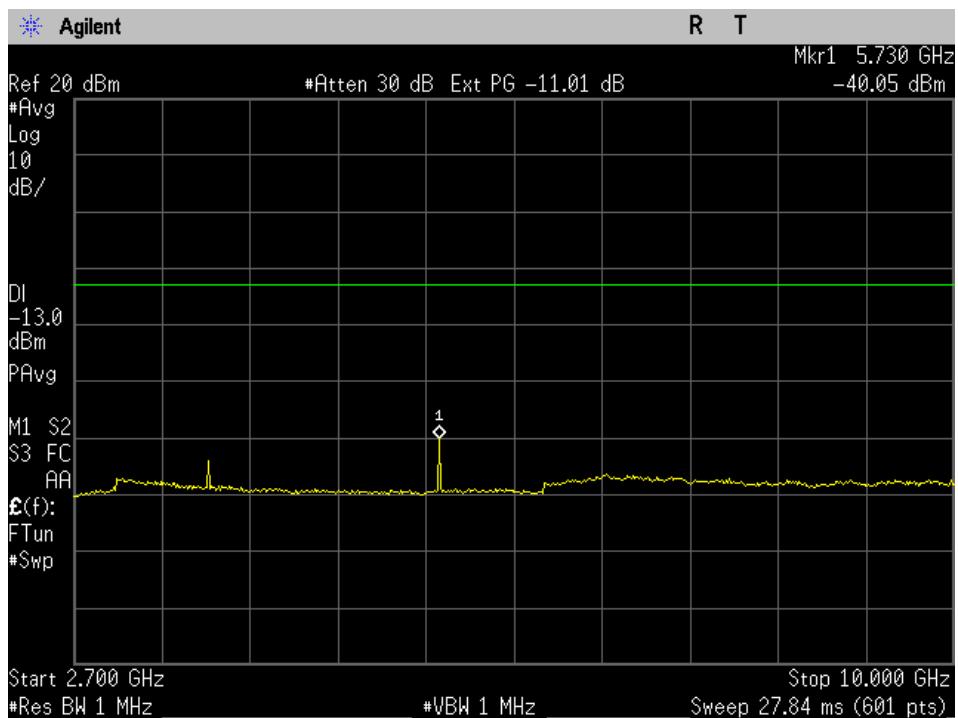


Figure 9-3b CDMA 1900 - Conducted Spurious Emission (CH 1175)

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10 TRANSMITTER RADIATED SPURIOUS EMISSIONS

10.1 Test Configuration and Result

FCC: § 2.1053, § 24.238

The radiated spurious emission test was performed at Compliance Certification Service. The test report is attached in a separate attachment.

11 RECEIVER SPURIOUS EMISSIONS

11.1 Receiver Spurious Emissions

FCC: § 15.109

The receiver radiated spurious emission test was performed at Compliance Certification Service. The test report is attached in a separate attachment.

12 TRANSMITTER RF CARRIER FREQUENCY STABILITY

12.1 Test Configuration

FCC: § 2.1055, § 24.235

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. Only the mid channel of each frequency band was investigated.

Limits:

Tx Frequency	Channel	Limit
1880 MHz	600	+/- 2.5 ppm (+/-4700 Hz)

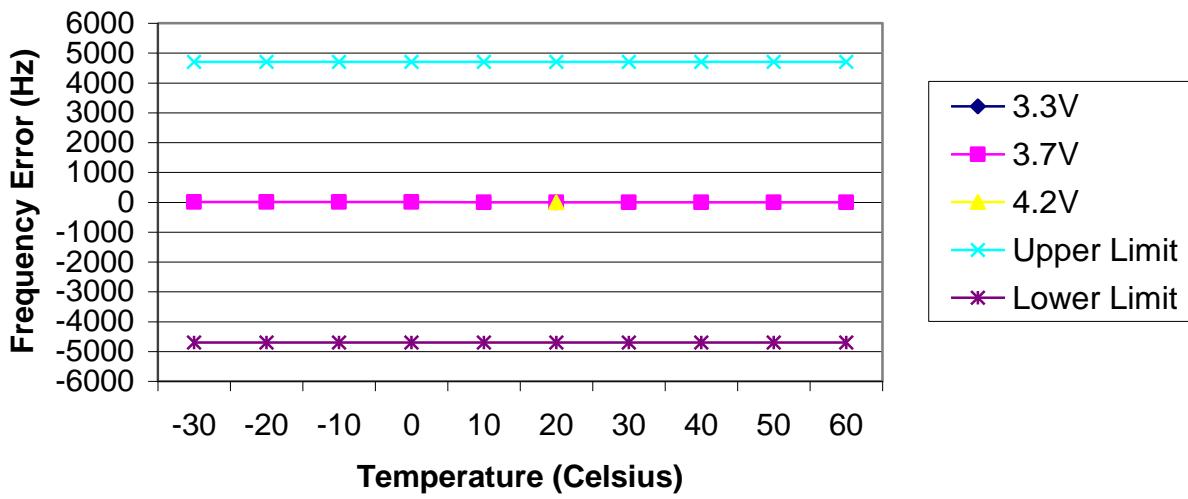


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12.2 Test Result

Temperature (°C)	Deviation of Carrier (Hz)			Specification (Hz)		Result
	3.3V (Battery endpoint)	3.7V	4.2V (115%)	Lower limit	Upper limit	
-30	-6.26	6.12	-7.14	-4700	4700	Pass
-20		7.54		-4700	4700	
-10		5.78		-4700	4700	
0		5.18		-4700	4700	
10		-7.26		-4700	4700	
20		-6.26		-4700	4700	
30		-6.84		-4700	4700	
40		-7.14		-4700	4700	
50		-7.33		-4700	4700	
60		-6.99		-4700	4700	

CDMA1900 MHz Transmitter RF Carrier Stability Over Temperature and Voltage



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13 EXPOSURE OF HUMANS TO RF FIELDS (SAR)

13.1 Test Configuration and Result

FCC: § 2.1093

The SAR test report is attached in a separate attachment.

14 TEST EQUIPMENT

The test equipment utilized to perform the tests documented in this report has been calibrated in accordance with the manufacturer's recommendations and is traceable to recognized national standards.

Description	Manufacturer	Model No.	Serial No.	Cal Due Date
Spectrum Analyzer	Agilent	E4405B	US41441217	12/11/13
Wireless Communications Test Set	Agilent	8960	GB44052789	12/02/13
Temperature Chamber	Test Equity	ZH2-033-033-H/AC	ZZ9622421	08/03/13