



# Variant FCC RF Test Report

APPLICANT : ZTE CORPORATION  
EQUIPMENT : cdma2000 Digital Mobile Handset  
BRAND NAME : ZTE  
MODEL NAME : N8000  
FCC ID : Q78-N8000  
STANDARD : FCC 47 CFR Part 2, 22(H), 24(E), 27(L)  
CLASSIFICATION : PCS Licensed Transmitter Held to Ear (PCE)

This is a variant report which is only valid together with the original test report. The product was received on Aug. 03, 2013 and testing was completed on Sep. 04, 2013. We, SPORTON INTERNATIONAL (SHENZHEN) INC., would like to declare that the tested sample has been evaluated in accordance with the procedures given in ANSI / TIA / EIA-603-C-2004 and shown to be compliant with the applicable technical standards.

The test results in this report apply exclusively to the tested model / sample. Without written approval of SPORTON INTERNATIONAL (SHENZHEN) INC., the test report shall not be reproduced except in full.

Reviewed by: Joseph Lin / Supervisor

Approved by: Jones Tsai / Manager



Testing Laboratory  
2353

## **SPORTON INTERNATIONAL (SHENZHEN) INC.**

**No. 3 Building, the third floor of south, Shahe River west, Fengzeyuan warehouse, Nanshan District, Shenzhen, Guangdong, P.R.C.**



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### SUMMARY OF TEST RESULT

Report Section	FCC Rule	Description	Limit	Result	Remark
3.1	§2.1046	Conducted Output Power	N/A	PASS	-
3.2	§22.913(a)(2)	Effective Radiated Power	< 7 Watts	PASS	-
3.2	§24.232(c)	Equivalent Isotropic Radiated Power	< 2 Watts	PASS	-
3.2	§27.50(d)(4)	Equivalent Isotropic Radiated Power	< 1 Watts	PASS	-
3.3	§2.1051 §22.917(a) §24.238(a) §27.53(g)	Band Edge Measurement	< 43+10log10(P[Watts])	PASS	-
3.4	§2.1053 §22.917(a) §24.238(a) §27.53(g)	Field Strength of Spurious Radiation	< 43+10log10(P[Watts])	PASS	Under limit 36.91 dB at 2510.000 MHz



# 1 General Description

## 1.1 Applicant

**ZTE CORPORATION**

ZTE Plaza, Keji Road South, Hi-Tech Industrial Park, Nanshan District, Shenzhen, Guangdong, P.R.China

## 1.2 Manufacturer

**ZTE CORPORATION**

ZTE Plaza, Keji Road South, Hi-Tech Industrial Park, Nanshan District, Shenzhen, Guangdong, P.R.China

## 1.3 Feature of Equipment Under Test

Product Feature	
Equipment	cdma2000 Digital Mobile Handset
Brand Name	ZTE
Model Name	N8000
FCC ID	Q78-N8000
EUT supports Radios application	CDMA/EV-DO/WLAN 2.4GHz 11bgn (HT20)/ Bluetooth v2.1 + EDR
HW Version	QB8655-03A_V1CMB_B
SW Version	N8000_CKT_D201
EUT Stage	Identical Prototype

**Remark:** The above EUT's information was declared by manufacturer. Please refer to the specifications or user's manual for more detailed description.

## 1.4 Product Specification of Equipment Under Test

Product Specification subjective to this standard	
Tx Frequency	CDMA2000 BC0: 824.70 MHz ~ 848.31 MHz CDMA2000 BC1: 1851.25 MHz ~ 1908.75 MHz CDMA2000 BC15 : 1711.25 ~ 1753.75 MHz
Rx Frequency	CDMA2000 BC0: 869.70 MHz ~ 893.31 MHz CDMA2000 BC1: 1931.25 MHz ~ 1988.75 MHz CDMA2000 BC15 : 2111.25 ~ 2153.75 MHz
Maximum Output Power to Antenna	CDMA2000 BC0 : 24.05 dBm CDMA2000 BC1 : 23.43 dBm CDMA2000 BC15 : 23.43 dBm
Antenna Type	Fixed Internal Antenna
Type of Modulation	CDMA2000 : QPSK CDMA2000 1xEV-DO : QPSK/8PSK

### 1.5 Modification of EUT

No modifications are made to the EUT during all test items.

### 1.6 Maximum ERP/EIRP Power

FCC Rule	System	Type of Modulation	Maximum ERP/EIRP (W)
Part 22	CDMA2000 BC0 1xRTT	QPSK	0.1069
Part 24	CDMA2000 BC1 1xRTT	QPSK	0.4364
Part 27	CDMA2000 BC15 1xRTT	QPSK	0.4470

### 1.7 Testing Site

<b>Test Site</b>	SPORTON INTERNATIONAL (SHENZHEN) INC.		
<b>Test Site Location</b>	No. 3 Building, the third floor of south, Shahe River west, Fengzeyuan warehouse, Nanshan District, Shenzhen, Guangdong, P.R.C. TEL: +86-755-3320-2398		
<b>Test Site No.</b>	<b>Sporton Site No.</b>		<b>FCC Registration No.</b>
	TH01-SZ	03CH01-SZ    OTA01-SZ	831040

### 1.8 Applied Standards

According to the specifications of the manufacturer, the EUT must comply with the requirements of the following standards:

- 47 CFR Part 2, 22(H), 24(E), 27(L)
- ANSI / TIA / EIA-603-C-2004
- FCC KDB 971168 D01 Power Meas. License Digital Systems v02r01

**Remark:**

1. All test items were verified and recorded according to the standards and without any deviation during the test.
2. This EUT has also been tested and complied with the requirements of FCC Part 15, Subpart B, recorded in a separate test report.

## 2 Test Configuration of Equipment Under Test

### 2.1 Test Mode

During all testing, EUT is in link mode with base station emulator at maximum power level. The spurious emission measurements were carried out in semi-anechoic chamber with 3-meter test range, and EUT is rotated on three test planes to find out the worst emission. (Z plane)

Frequency range investigated for radiated emission is as follows:

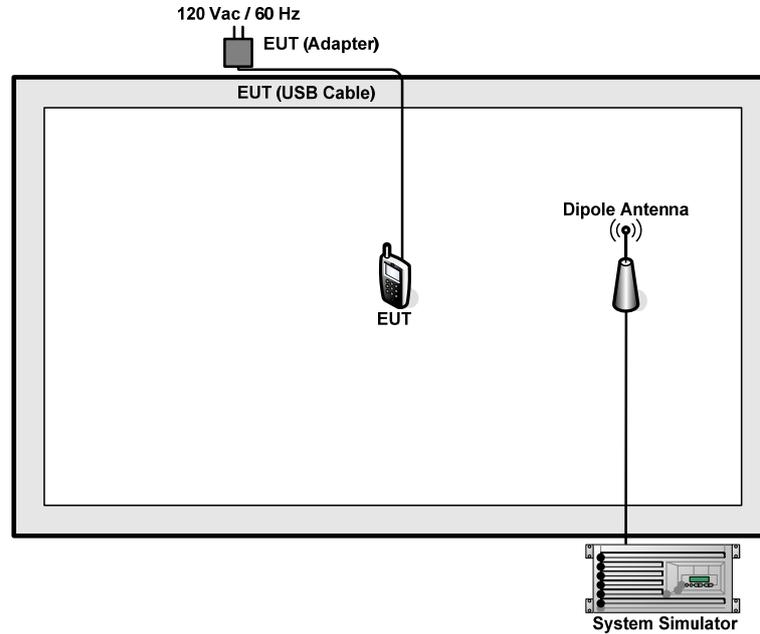
1. 30 MHz to 9000 MHz for CDMA2000 BC0.
2. 30 MHz to 19000 MHz for CDMA2000 BC1.
3. 30 MHz to 18000 MHz for CDMA2000 BC15.

Test Modes		
Band	Radiated TCs	Conducted TCs
CDMA2000 BC0	■ 1xRTT Link Mode	■ 1xRTT Link Mode
CDMA2000 BC1	■ 1xRTT Link Mode	■ 1xRTT Link Mode
CDMA2000 BC15	■ 1xRTT Link Mode	■ 1xRTT Link Mode

The conducted power tables are as follows:

Conducted Power (*Unit: dBm)									
Band	CDMA2000 BC0			CDMA2000 BC1			CDMA2000 BC15		
Channel	1013	384	777	25	600	1175	25	425	875
Frequency	824.7	836.52	848.31	1851.25	1880	1908.75	1711.25	1731.25	1753.75
1xRTT RC1 SO55	23.69	23.61	23.98	23.45	23.38	23.46	23.43	23.22	23.26
1xRTT RC3 SO55	23.72	23.62	24.05	23.43	23.40	23.42	23.39	23.20	23.24
1xRTT RC3 SO32(+ F-SCH)	23.69	23.61	23.90	23.42	23.40	23.42	23.35	23.17	23.26
1xRTT RC3 SO32(+SCH)	23.75	23.60	23.92	23.41	23.42	23.41	23.35	23.18	23.25
1xEVDO RTAP 153.6Kbps	23.56	23.52	23.79	23.31	23.34	23.38	23.41	23.19	23.31
1xEVDO RETAP 4096Bits	23.68	23.67	24.02	23.41	23.36	23.47	23.37	23.23	23.31

## 2.2 Connection Diagram of Test System



## 2.3 Support Unit used in test configuration and system

Item	Equipment	Trade Name	Model No.	FCC ID	Data Cable	Power Cord
1.	System Simulator	Agilent	E5515C	N/A	N/A	Unshielded, 1.8 m
2.	DC Power Supply	TOPWORD	3303DR	N/A	N/A	Unshielded, 1.8 m



## **2.4 Measurement Results Explanation Example**

**For all conducted test items:**

The offset level is set in the spectrum analyzer to compensate the RF cable loss and attenuator factor between EUT conducted output port and spectrum analyzer. With the offset compensation, the spectrum analyzer reading level is exactly the EUT RF output level.

The spectrum analyzer offset is derived from RF cable loss and attenuator factor.

*Offset = RF cable loss + attenuator factor.*

Following shows an offset computation example with cable loss 4.2 dB and 10dB attenuator.

Example :

$$\begin{aligned} \text{Offset(dB)} &= \text{RF cable loss(dB)} + \text{attenuator factor(dB)}. \\ &= 4.2 + 10 = 14.2 \text{ (dB)} \end{aligned}$$

### 3 Test Result

#### 3.1 Conducted Output Power Measurement

##### 3.1.1 Description of the Conducted Output Power Measurement

A base station simulator was used to establish communication with the EUT. Its parameters were set to transmit the maximum power on the EUT. The measured power in the radio frequency on the transmitter output terminals shall be reported.

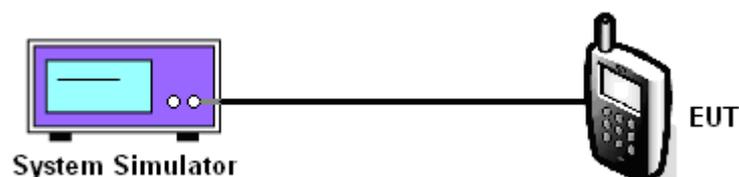
##### 3.1.2 Measuring Instruments

See list of measuring instruments of this test report.

##### 3.1.3 Test Procedures

1. The transmitter output port was connected to base station.
2. Set EUT at maximum power through base station.
3. Select lowest, middle, and highest channels for each band and different modulation.
4. Measure the maximum burst average power for GSM and maximum average power for other modulation signal.

##### 3.1.4 Test Setup



**3.1.5 Test Result of Conducted Output Power**

CDMA2000 BC0			
Test Mode	CDMA 2000 1xRTT		
Test Status	RC3+SO55		
Channel	1013 (Low)	384 (Mid)	777 (High)
Frequency (MHz)	824.70	836.52	848.31
Conducted Power (dBm)	23.72	23.62	24.05
Conducted Power (Watts)	0.24	0.23	0.25

CDMA2000 BC1			
Test Mode	CDMA 2000 1xRTT		
Test Status	RC3+SO55		
Channel	25 (Low)	600 (Mid)	1175 (High)
Frequency (MHz)	1851.25	1880.00	1908.75
Conducted Power (dBm)	23.43	23.40	23.42
Conducted Power (Watts)	0.22	0.22	0.22

CDMA2000 BC15			
Test Mode	CDMA 2000 1xRTT		
Test Status	RC1+SO55		
Channel	25 (Low)	425 (Mid)	875 (High)
Frequency (MHz)	1711.25	1731.25	1753.75
Conducted Power (dBm)	23.43	23.22	23.26
Conducted Power (Watts)	0.22	0.21	0.21

**Note:** maximum average power for CDMA2000.



## 3.2 Effective Radiated Power and Effective Isotropic Radiated Power Measurement

### 3.2.1 Description of the ERP/EIRP Measurement

The substitution method, in ANSI / TIA / EIA-603-C-2004, was used for ERP/EIRP measurement, and the spectrum analyzer configuration follows KDB 971168 D01 Power Meas. License Digital Systems v02. The ERP of mobile transmitters must not exceed 7 Watts and the EIRP of mobile transmitters are limited to 2 Watts.

### 3.2.2 Measuring Instruments

See list of measuring instruments of this test report.

### 3.2.3 Test Procedures

1. The EUT was placed on a turntable with 1.5 meter height in a fully anechoic chamber.
2. The EUT was set at 3 meters from the receiving antenna, which was mounted on the antenna tower.
3. GSM operating modes: Set RBW= 1MHz, VBW= 3MHz, RMS detector over burst;  
UMTS operating modes: Set RBW= 100 kHz, VBW= 300 kHz, RMS detector over frame, and use channel power option with bandwidth=5MHz, per section 4.0 of KDB 971168 D01.
4. The table was rotated 360 degrees to determine the position of the highest radiated power.
5. The height of the receiving antenna is adjusted to look for the maximum ERP/EIRP.
6. Taking the record of maximum ERP/EIRP.
7. A dipole antenna was substituted in place of the EUT and was driven by a signal generator.
8. The conducted power at the terminal of the dipole antenna is measured.
9. Repeat step 3 to step 5 to get the maximum ERP/EIRP of the substitution antenna.
10.  $ERP/EIRP = P_s + E_t - E_s + G_s = P_s + R_t - R_s + G_s$

$P_s$  (dBm) : Input power to substitution antenna.

$G_s$  (dBi or dBd) : Substitution antenna Gain.

$E_t = R_t + AF$

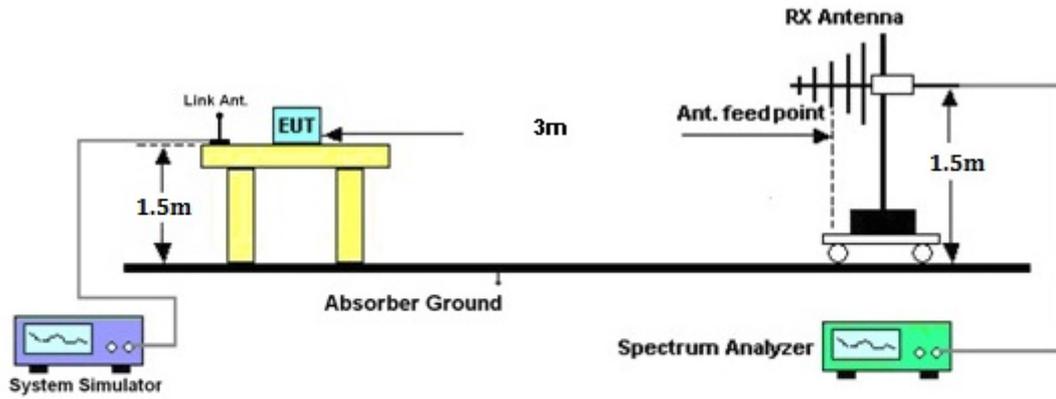
$E_s = R_s + AF$

AF (dB/m) : Receive antenna factor

$R_t$  : The highest received signal in spectrum analyzer for EUT.

$R_s$  : The highest received signal in spectrum analyzer for substitution antenna.

### 3.2.4 Test Setup





3.2.5 Test Result of ERP

CDMA2000 BC0 1xRTT_RC3+SO55 Radiated Power ERP						
Horizontal Polarization						
Frequency (MHz)	Rt (dBm)	Rs (dBm)	Ps (dBm)	Gs (dBd)	ERP (dBm)	ERP (W)
824.70	-26.75	-48.12	0.00	-1.08	20.29	0.1069
836.52	-28.06	-48.28	0.00	-0.93	19.29	0.0848
848.31	-27.31	-48.35	0.00	-0.76	20.28	0.1068
Vertical Polarization						
Frequency (MHz)	Rt (dBm)	Rs (dBm)	Ps (dBm)	Gs (dBd)	ERP (dBm)	ERP (W)
824.70	-39.40	-47.97	0.00	-1.08	7.49	0.0056
836.52	-40.15	-48.01	0.00	-0.93	6.93	0.0049
848.31	-38.76	-48.05	0.00	-0.76	8.53	0.0071



3.2.6 Test Result of EIRP

CDMA2000 BC1 1xRTT_RC3+SO55 Radiated Power EIRP						
Horizontal Polarization						
Frequency (MHz)	Rt (dBm)	Rs (dBm)	Ps (dBm)	Gs (dBi)	EIRP (dBm)	EIRP (W)
1851.25	-27.44	-51.88	0.00	1.96	26.40	0.4364
1880.00	-28.61	-52.99	0.00	2.00	26.38	0.4342
1908.75	-30.48	-54.28	0.00	1.98	25.78	0.3788
Vertical Polarization						
Frequency (MHz)	Rt (dBm)	Rs (dBm)	Ps (dBm)	Gs (dBi)	EIRP (dBm)	EIRP (W)
1851.25	-28.16	-52.13	0.00	1.96	25.93	0.3914
1880.00	-29.06	-53.17	0.00	2.00	26.11	0.4087
1908.75	-30.35	-54.13	0.00	1.98	25.76	0.3769

CDMA2000 BC15 1xRTT_RC1+SO55 Radiated Power EIRP						
Horizontal Polarization						
Frequency (MHz)	Rt (dBm)	Rs (dBm)	Ps (dBm)	Gs (dBi)	EIRP (dBm)	EIRP (W)
1711.25	-28.56	-51.88	0.00	1.96	25.28	0.3374
1731.25	-28.90	-52.99	0.00	2.00	26.09	0.4064
1753.75	-29.76	-54.28	0.00	1.98	26.50	0.4470
Vertical Polarization						
Frequency (MHz)	Rt (dBm)	Rs (dBm)	Ps (dBm)	Gs (dBi)	EIRP (dBm)	EIRP (W)
1711.25	-28.62	-52.13	0.00	1.96	25.47	0.3524
1731.25	-29.24	-53.17	0.00	2.00	25.93	0.3921
1753.75	-29.96	-54.13	0.00	1.98	26.15	0.4121

### 3.3 Band Edge Measurement

#### 3.3.1 Description of Band Edge Measurement

The power of any emission outside of the authorized operating frequency ranges must be lower than the transmitter power (P) by a factor of at least  $43 + 10 \log (P)$  dB.

#### 3.3.2 Measuring Instruments

See list of measuring instruments of this test report.

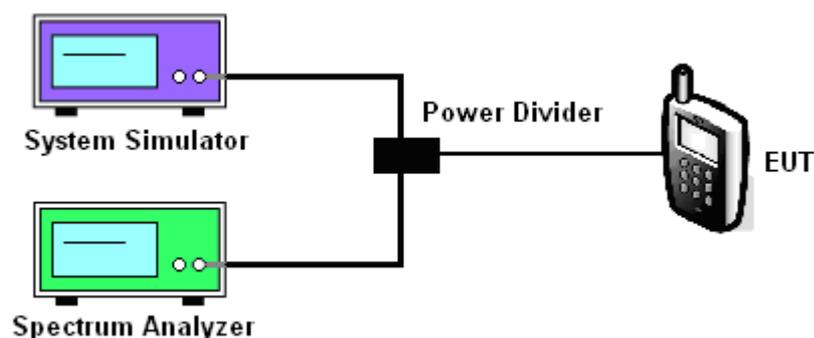
#### 3.3.3 Test Procedures

1. The EUT was connected to Spectrum Analyzer and Base Station via power divider.
2. The RF output of EUT was connected to the spectrum analyzer by RF cable and attenuator. The path loss was compensated to the results for each measurement.
3. The band edges of low and high channels for the highest RF powers were measured. Setting RBW as roughly  $BW/100$ .
4. The RBW was replaced by 10 kHz, slightly smaller than the value in (2), due to the spectrum analyzer limitation to set the exact value. A worst case correction factor of  $10 \cdot \log (1\% \text{ emission-BW/measurement RBW})$  was compensated.
5. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.
6. The limit line is derived from  $43 + 10\log(P)$  dB below the transmitter power P(Watts)
 
$$= P(W) - [43 + 10\log(P)] \text{ (dB)}$$

$$= [30 + 10\log(P)] \text{ (dBm)} - [43 + 10\log(P)] \text{ (dB)}$$

$$= -13\text{dBm}.$$

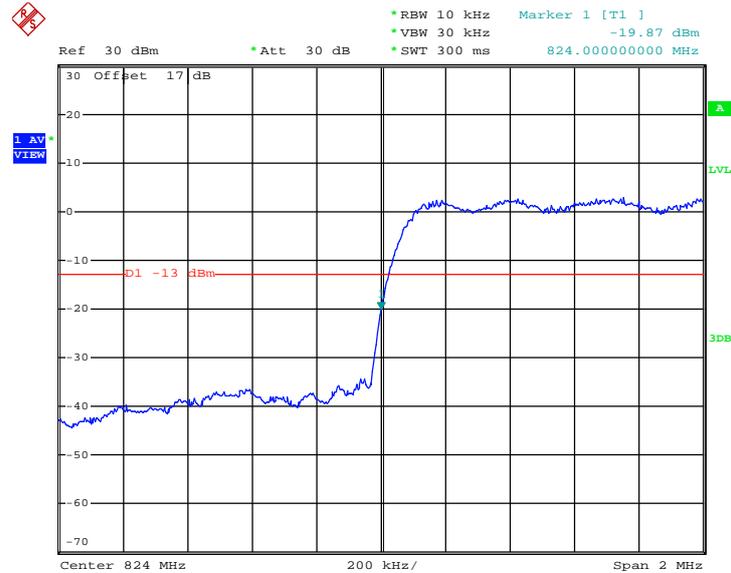
#### 3.3.4 Test Setup



### 3.3.5 Test Result (Plots) of Conducted Band Edge

Band :	CDMA2000 BC0	Test Mode :	1xRTT_RC3+SO55(QPSK)
Correction Factor :	1.55dB	Maximum 26dB Bandwidth :	1.428MHz
Band Edge :	-18.32dBm	Measurement Value :	-19.87dBm

Lower Band Edge Plot on Channel 1013 (824.7 MHz)



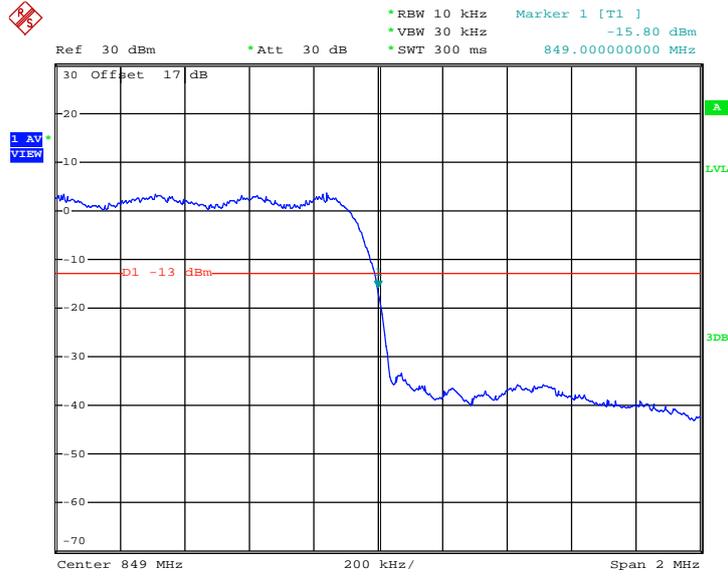
Date: 30.AUG.2013 16:23:35

1. Correction Factor(dB)=  $10\log(1\% \text{ Emission BW/RBW})$
2. Band Edge= Measurement Value + Correction Factor(dB)



Band :	CDMA2000 BC0	Test Mode :	1xRTT_RC3+SO55(QPSK)
Correction Factor :	1.55dB	Maximum 26dB Bandwidth :	1.428MHz
Band Edge :	-14.25dBm	Measurement Value :	-15.80dBm

Higher Band Edge Plot on Channel 777 (848.31 MHz)



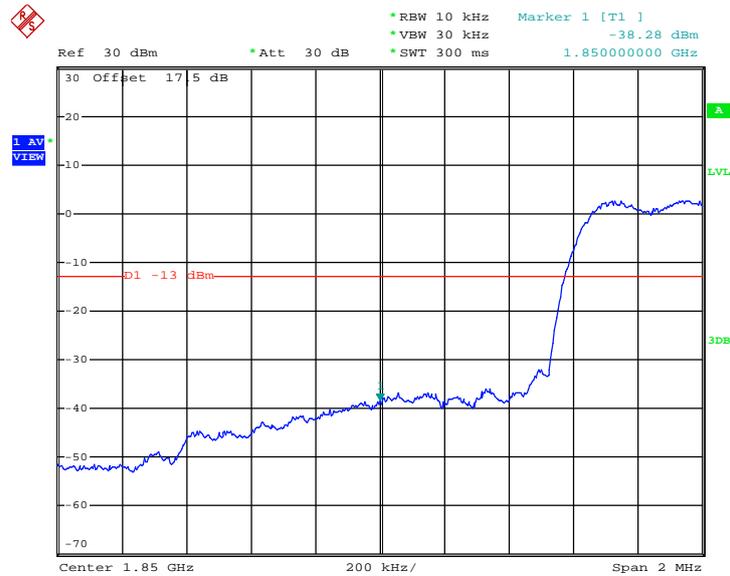
Date: 30.AUG.2013 16:22:59

1. Correction Factor(dB)=  $10\log(1\% \text{ Emission BW/RBW})$
2. Band Edge= Measurement Value + Correction Factor(dB)



<b>Band :</b>	CDMA2000 BC1	<b>Test Mode :</b>	1xRTT_RC3+SO55 (QPSK)
<b>Correction Factor :</b>	1.55dB	<b>Maximum 26dB Bandwidth:</b>	1.428MHz
<b>Band Edge :</b>	-36.73dBm	<b>Measurement Value :</b>	-38.28dBm

Lower Band Edge Plot on Channel 25 (1851.25 MHz)



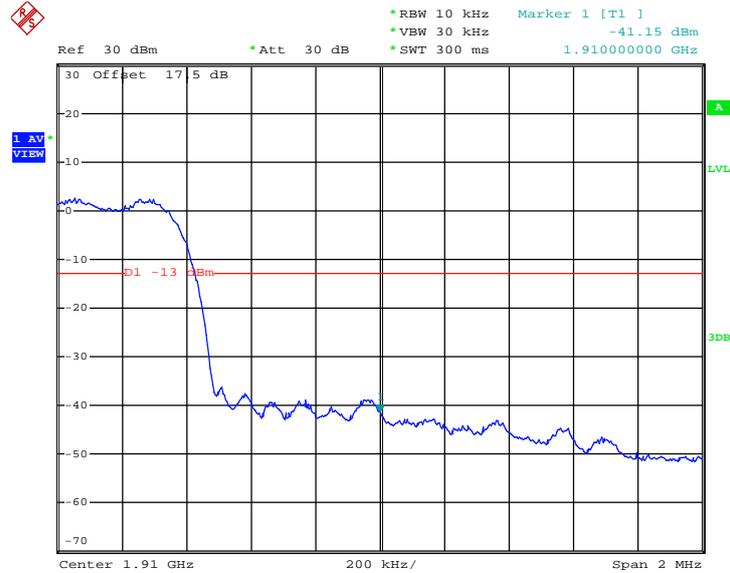
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1. Correction Factor(dB)= 10log(1% Emission BW/RBW)
2. Band Edge= Measurement Value + Correction Factor(dB)



Band :	CDMA2000 BC1	Test Mode :	1xRTT_RC3+SO55(QPSK)
Correction Factor :	1.55dB	Maximum 26dB Bandwidth:	1.428MHz
Band Edge :	-39.60dBm	Measurement Value :	-41.15dBm

Higher Band Edge Plot on Channel 1175 (1908.75 MHz)



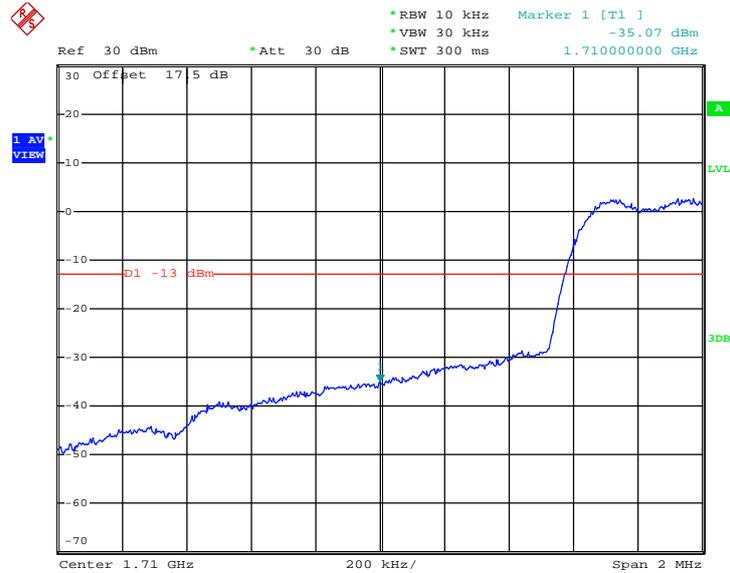
Date: 30.AUG.2013 16:25:28

1. Correction Factor(dB)=  $10\log(1\% \text{ Emission BW/RBW})$
2. Band Edge= Measurement Value + Correction Factor(dB)



Band :	CDMA2000 BC15	Test Mode :	1xRTT_RC1+SO55(QPSK)
Correction Factor :	1.57dB	Maximum 26dB Bandwidth:	1.436MHz
Band Edge :	-33.50dBm	Measurement Value :	-35.07dBm

Lower Band Edge Plot on Channel 25 (1711.25 MHz)



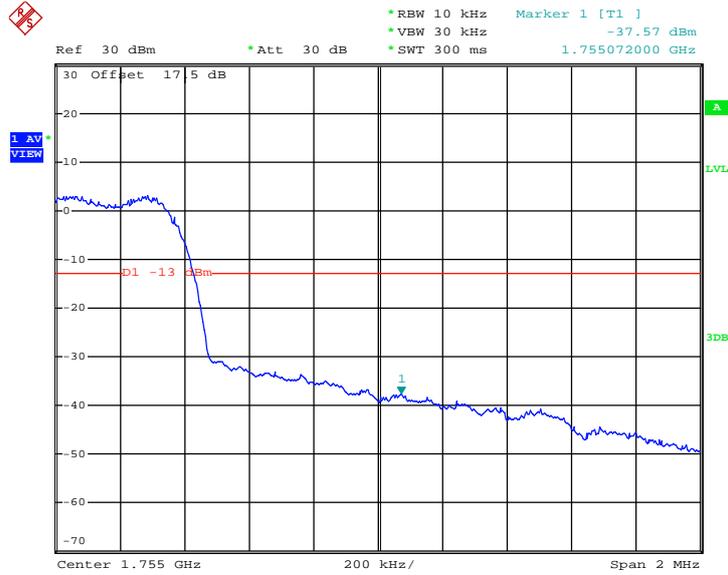
Date: 30.AUG.2013 16:52:57

1. Correction Factor(dB)=  $10\log(1\% \text{ Emission BW/RBW})$
2. Band Edge= Measurement Value + Correction Factor(dB)



Band :	CDMA2000 BC15	Test Mode :	1xRTT_RC1+SO55(QPSK)
Correction Factor :	1.57dB	Maximum 26dB Bandwidth:	1.436MHz
Band Edge :	-36.00dBm	Measurement Value :	-37.57dBm

Higher Band Edge Plot on Channel 875 (1753.75 MHz)



Date: 30.AUG.2013 16:54:09

1. Correction Factor(dB)=  $10\log(1\% \text{ Emission BW/RBW})$
2. Band Edge= Measurement Value + Correction Factor(dB)

## 3.4 Field Strength of Spurious Radiation Measurement

### 3.4.1 Description of Field Strength of Spurious Radiated Measurement

The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitter power (P) by a factor of at least  $43 + 10 \log (P)$  dB. The spectrum is scanned from 30 MHz up to a frequency including its 10th harmonic.

### 3.4.2 Measuring Instruments

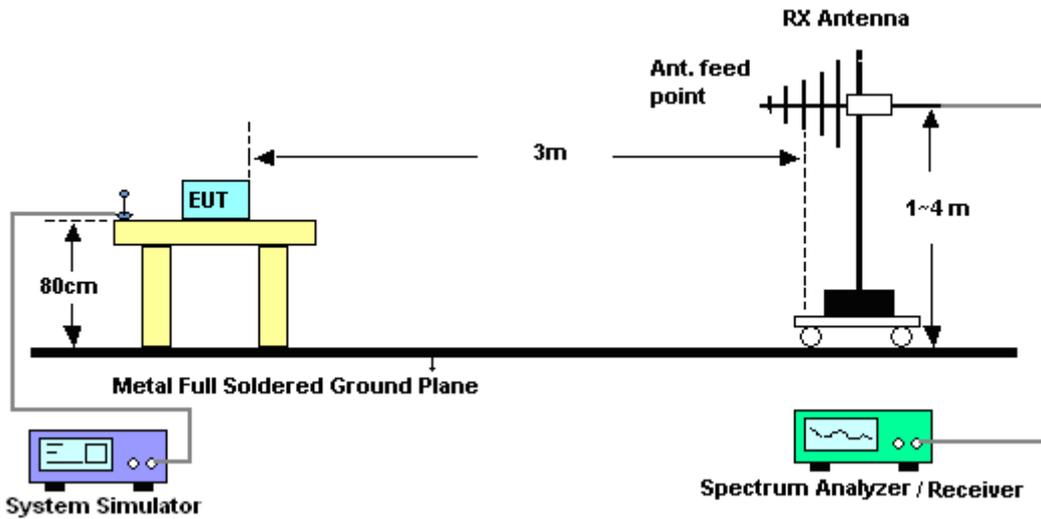
See list of measuring instruments of this test report.

### 3.4.3 Test Procedures

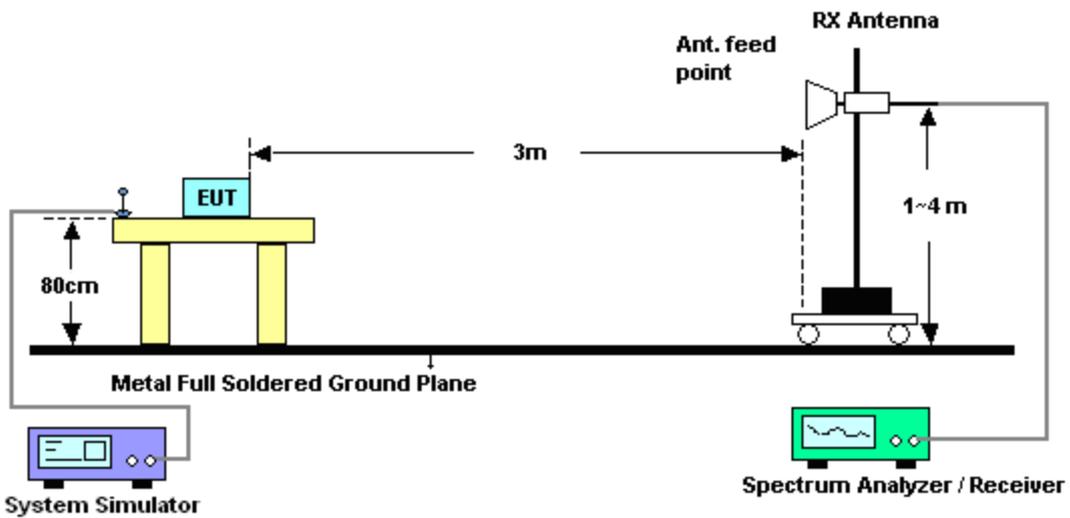
1. The EUT was placed on a rotatable wooden table with 0.8 meter above ground.
2. The EUT was set 3 meters from the receiving antenna, which was mounted on the antenna tower.
3. The table was rotated 360 degrees to determine the position of the highest spurious emission.
4. The height of the receiving antenna is varied between one meter and four meters to search the maximum spurious emission for both horizontal and vertical polarizations.
5. Make the measurement with the spectrum analyzer's RBW = 1MHz, VBW = 3MHz, taking the record of maximum spurious emission.
6. A horn antenna was substituted in place of the EUT and was driven by a signal generator.
7. Tune the output power of signal generator to the same emission level with EUT maximum spurious emission.
8. Taking the record of output power at antenna port.
9. Repeat step 7 to step 8 for another polarization.
10.  $EIRP \text{ (dBm)} = S.G. \text{ Power} - Tx \text{ Cable Loss} + Tx \text{ Antenna Gain}$
11.  $ERP \text{ (dBm)} = EIRP - 2.15$

### 3.4.4 Test Setup

For radiated emissions from 30MHz to 1GHz



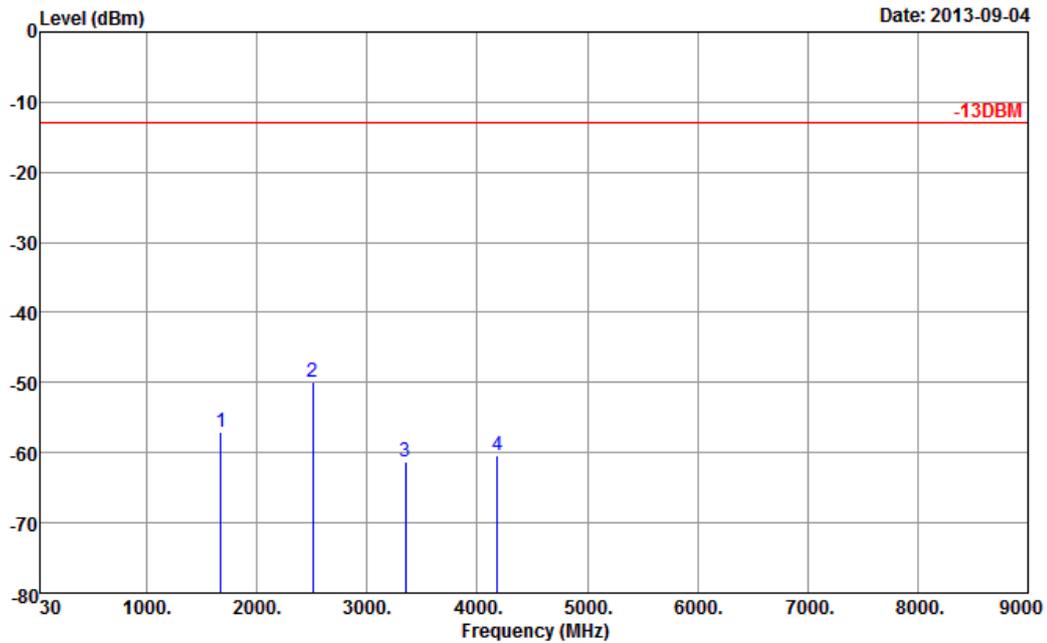
For radiated emissions above 1GHz





3.4.5 Test Result of Field Strength of Spurious Radiated

<b>Band :</b>	CDMA2000 BC0	<b>Temperature :</b>	24~25°C
<b>Test Mode :</b>	1xRTT_RC3+SO55 (QPSK)	<b>Relative Humidity :</b>	49~52%
<b>Test Engineer :</b>	Robin Luo	<b>Polarization :</b>	Horizontal
<b>Remark :</b>	Spurious emissions within 30-1000MHz were found more than 20dB below limit line.		



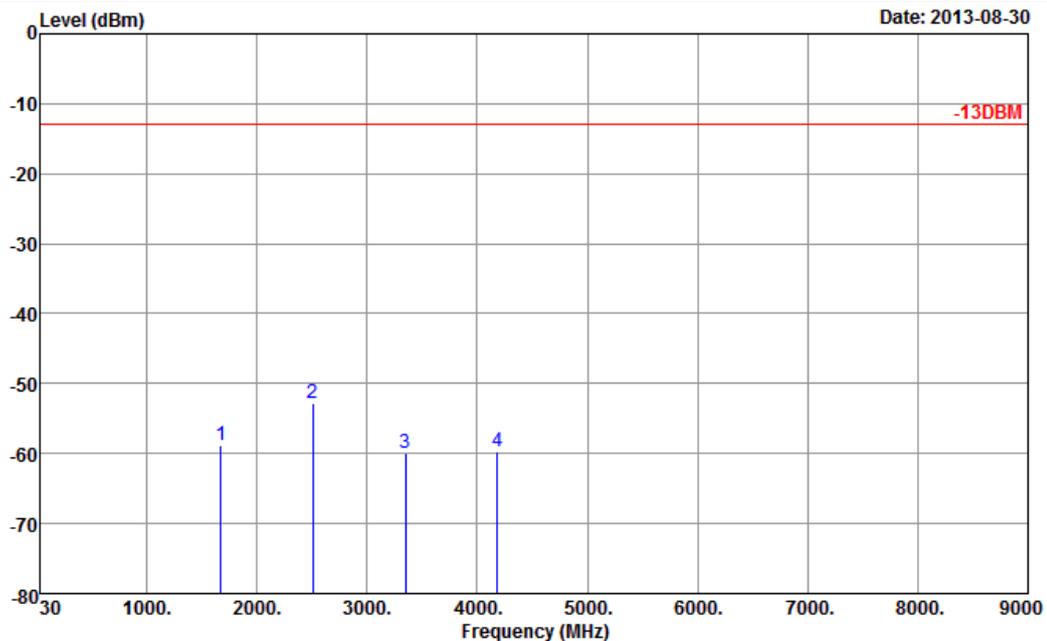
Site : 03CH01-SZ  
 Condition : -13DBM HF\_EIRP\_H\_130101 HORIZONTAL  
 Project : (FG) 280303-01

Plane : Z

Frequency ( MHz )	ERP ( dBm )	Limit ( dBm )	Over Limit ( dB )	SPA Reading ( dBm )	S.G. Power ( dBm )	TX Cable loss ( dB )	TX Antenna Gain ( dBi )	Polarization ( H/V )	Result
1672	-57.02	-13	-44.02	-69.94	-59.99	0.88	6.00	H	Pass
2510	-49.91	-13	-36.91	-71.46	-52.52	1.08	5.84	H	Pass
3346	-61.31	-13	-48.31	-71.91	-65.68	1.14	7.66	H	Pass
4182	-60.48	-13	-47.48	-75.24	-65.75	1.37	8.79	H	Pass



Band :	CDMA2000 BC0	Temperature :	24~25°C
Test Mode :	1xRTT_RC3+SO55 (QPSK)	Relative Humidity :	49~52%
Test Engineer :	Robin Luo	Polarization :	Vertical
Remark :	Spurious emissions within 30-1000MHz were found more than 20dB below limit line.		



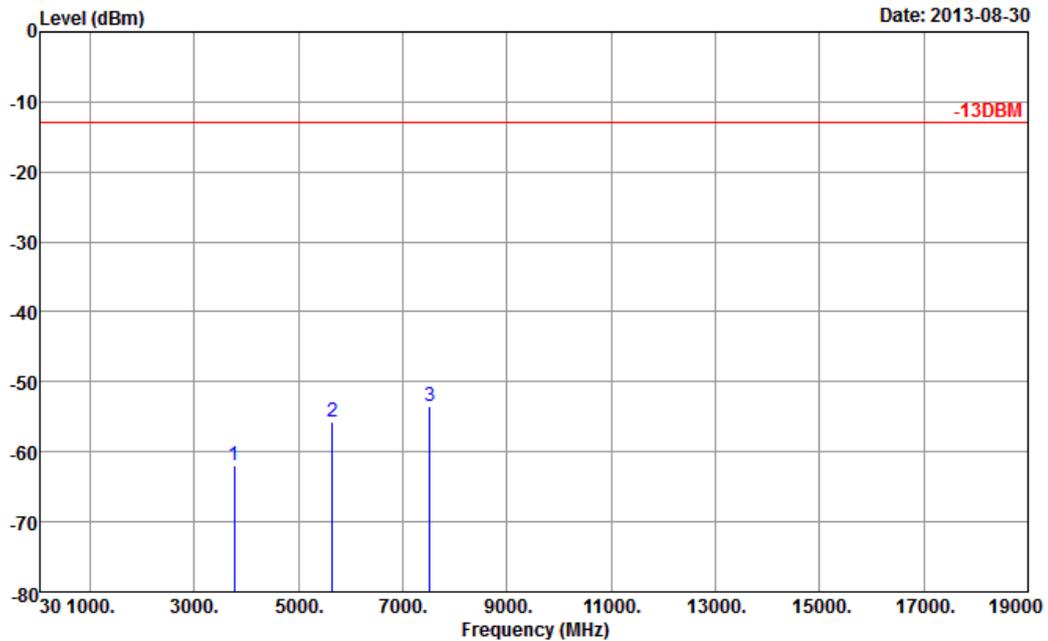
Site : 03CH01-SZ  
 Condition : -13DBM HF\_EIRP\_V\_130101 VERTICAL  
 Project : (FG) 280303-01

Plane : Z

Frequency ( MHz )	ERP ( dBm )	Limit ( dBm )	Over Limit ( dB )	SPA Reading ( dBm )	S.G. Power ( dBm )	TX Cable loss ( dB )	TX Antenna Gain ( dBi )	Polarization ( H/V )	Result
1672	-58.72	-13	-45.72	-69.35	-61.69	0.88	6.00	V	Pass
2510	-52.78	-13	-39.78	-71.63	-55.39	1.08	5.84	V	Pass
3346	-59.96	-13	-46.96	-71.39	-64.33	1.14	7.66	V	Pass
4182	-59.83	-13	-46.83	-75.05	-65.10	1.37	8.79	V	Pass



Band :	CDMA2000 BC1	Temperature :	24~25°C
Test Mode :	1xRTT_RC3+SO55(QPSK)	Relative Humidity :	49~52%
Test Engineer :	Robin Luo	Polarization :	Horizontal
Remark :	Spurious emissions within 30-1000MHz were found more than 20dB below limit line.		



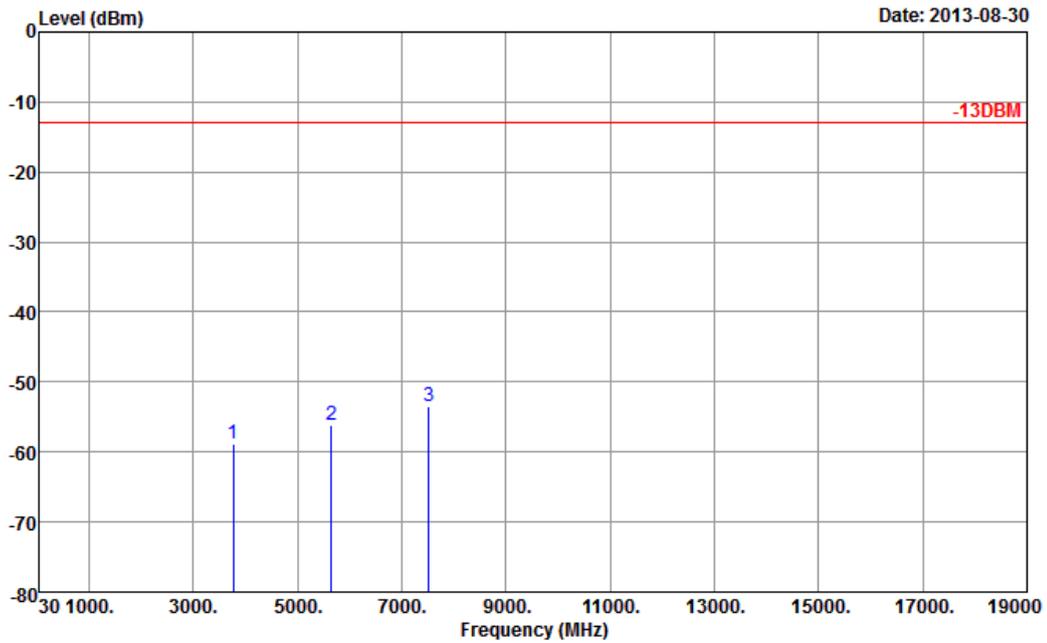
Site : 03CH01-SZ  
 Condition : -13DBM HF\_EIRP\_H\_130101 HORIZONTAL  
 Project : (FG) 280303-01

Plane : Z

Frequency ( MHz )	EIRP ( dBm )	Limit ( dBm )	Over Limit ( dB )	SPA Reading ( dBm )	S.G. Power ( dBm )	TX Cable loss ( dB )	TX Antenna Gain ( dBi )	Polarization ( H/V )	Result
3760	-62.01	-13	-49.01	-74.16	-68.75	1.28	8.02	H	Pass
5640	-55.78	-13	-42.78	-73.77	-64.20	1.58	10.00	H	Pass
7520	-53.52	-13	-40.52	-75.46	-63.84	1.78	12.10	H	Pass



Band :	CDMA2000 BC1	Temperature :	24~25°C
Test Mode :	1xRTT_RC3+SO55(QPSK)	Relative Humidity :	49~52%
Test Engineer :	Robin Luo	Polarization :	Vertical
Remark :	Spurious emissions within 30-1000MHz were found more than 20dB below limit line.		



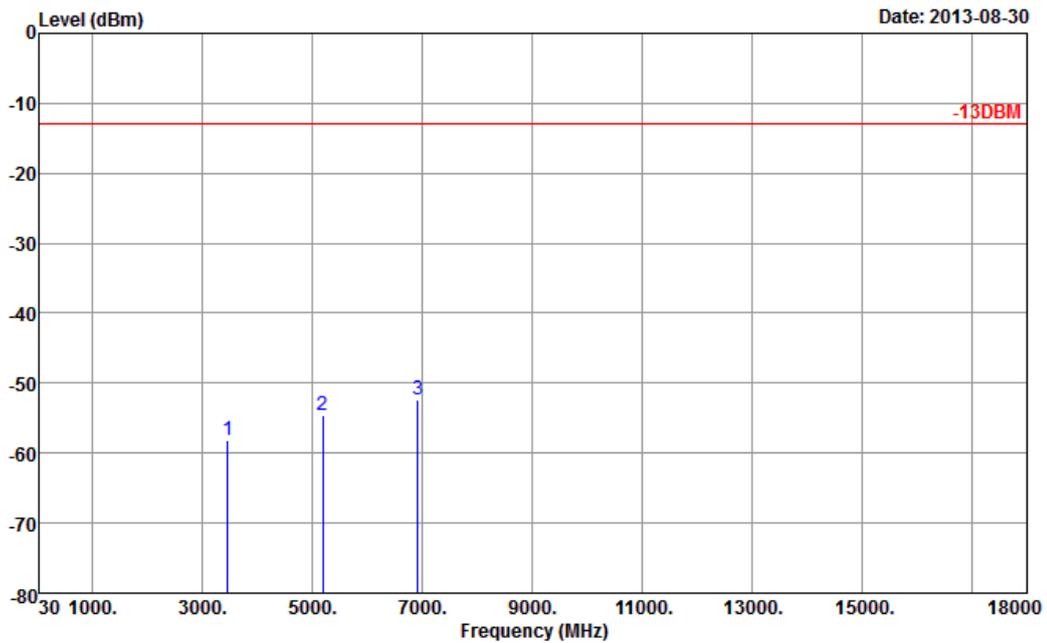
Site : 03CH01-SZ  
 Condition : -13DBM HF\_EIRP\_V\_130101 VERTICAL  
 Project : (FG) 280303-01

Plane : Z

Frequency ( MHz )	EIRP ( dBm )	Limit ( dBm )	Over Limit ( dB )	SPA Reading ( dBm )	S.G. Power ( dBm )	TX Cable loss ( dB )	TX Antenna Gain ( dBi )	Polarization ( H/V )	Result
3760	-58.90	-13	-45.90	-73.93	-65.64	1.28	8.02	V	Pass
5640	-56.18	-13	-43.18	-73.26	-64.60	1.58	10	V	Pass
7520	-53.47	-13	-40.47	-75.72	-63.79	1.78	12.1	V	Pass



<b>Band :</b>	CDMA2000 BC15	<b>Temperature :</b>	24~25°C
<b>Test Mode :</b>	1xRTT_RC1+SO55(QPSK)	<b>Relative Humidity :</b>	49~52%
<b>Test Engineer :</b>	Robin Luo	<b>Polarization :</b>	Horizontal
<b>Remark :</b>	Spurious emissions within 30-1000MHz were found more than 20dB below limit line.		



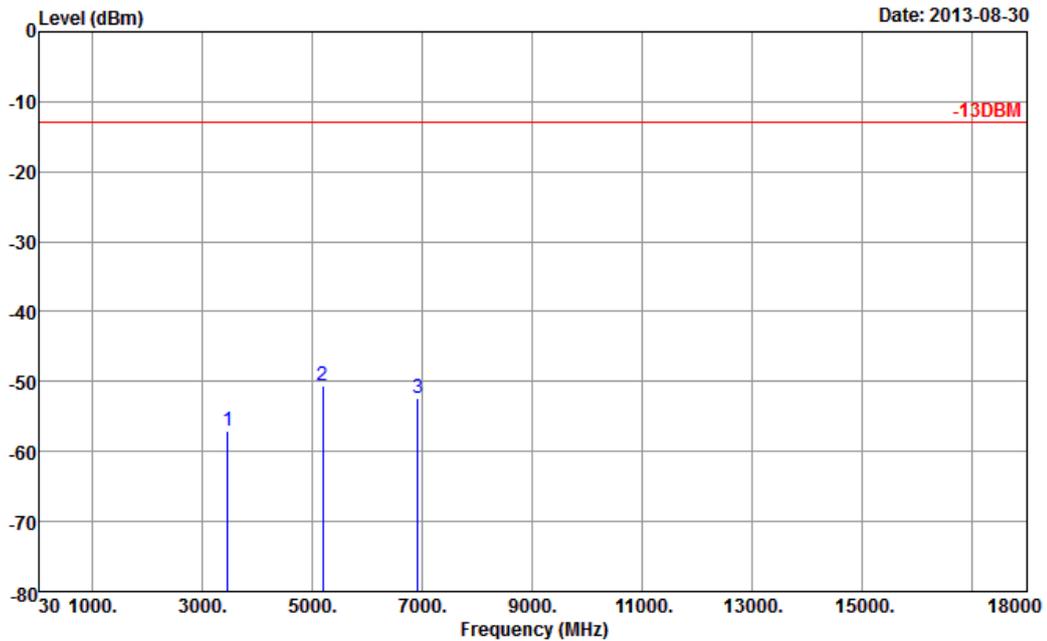
Site : 03CH01-SZ  
 Condition : -13DBM HF\_EIRP\_H\_130101 HORIZONTAL  
 Project : (FG) 280303-01

Plane : Z

Frequency ( MHz )	EIRP ( dBm )	Limit ( dBm )	Over Limit ( dB )	SPA Reading ( dBm )	S.G. Power ( dBm )	TX Cable loss ( dB )	TX Antenna Gain ( dBi )	Polarization ( H/V )	Result
3462.00	-58.20	-13	-45.20	-69.28	-38.20	1.15	7.54	H	Pass
5194.00	-54.52	-13	-41.52	-73.48	-68.60	1.51	9.80	H	Pass
6925.00	-52.40	-13	-39.40	-76.02	-67.90	1.75	11.51	H	Pass



Band :	CDMA2000 BC15	Temperature :	24~25°C
Test Mode :	1xRTT_RC1+SO55 (QPSK)	Relative Humidity :	49~52%
Test Engineer :	Robin Luo	Polarization :	Vertical
Remark :	Spurious emissions within 30-1000MHz were found more than 20dB below limit line.		



Site : 03CH01-SZ  
 Condition : -13DBM HF\_EIRP\_V\_130101 VERTICAL  
 Project : (FG) 280303-01

Plane : Z

Frequency ( MHz )	EIRP ( dBm )	Limit ( dBm )	Over Limit ( dB )	SPA Reading ( dBm )	S.G. Power ( dBm )	TX Cable loss ( dB )	TX Antenna Gain ( dBi )	Polarization ( H/V )	Result
3462	-56.98	-13	-43.98	-69.84	-43.20	1.15	7.54	V	Pass
5194	-50.51	-13	-37.51	-69.91	-70.30	1.51	9.80	V	Pass
6925	-52.44	-13	-39.44	-75.77	-64.60	1.75	11.51	V	Pass



## 4 List of Measuring Equipment

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Spectrum Analyzer	R&S	FSP30	101400	9kHz~30GHz	Mar. 28, 2013	Aug. 30, 2013	Mar. 27, 2014	Conducted (TH01-SZ)
Spectrum Analyzer	R&S	FSV30	100845	9kHz~30GHz	Nov. 06, 2012	Aug. 30, 2013	Nov. 05, 2013	Conducted (TH01-SZ)
Power Meter	Anritsu	ML2495A	1218010	N/A	Mar. 28, 2013	Aug. 30, 2013	Mar. 27, 2014	Conducted (TH01-SZ)
Power Sensor	Anritsu	MA2411B	1207253	N/A	Mar. 28, 2013	Aug. 30, 2013	Mar. 27, 2014	Conducted (TH01-SZ)
Thermal Chamber	Hongzhan	LP-150U	HD20120425	N/A	Mar. 28, 2013	Aug. 30, 2013	Mar. 27, 2014	Conducted (TH01-SZ)
Spectrum Analyzer	Agilent Technologies	N9038A	MY52260185	20Hz~26.5GHz	Apr. 04, 2013	Aug. 30, 2013~ Sep. 04, 2013	Apr. 03, 2014	Radiation (03CH01-SZ)
Double Ridge Horn Antenna	ETS Lindgren	3117	00119436	1GHz~18GHz	Oct. 12, 2012	Aug. 30, 2013~ Sep. 04, 2013	Oct. 11, 2013	Radiation (03CH01-SZ)
Bilog Antenna	SCHAFFNER	CBL6112B	2614	30MHz~2GHz	Nov. 03, 2012	Aug. 30, 2013~ Sep. 04, 2013	Nov. 02, 2013	Radiation (03CH01-SZ)
Amplifier	ADVANTEST	BB525C	E9007003	9kHz~3GHz Gain 30dB	Mar. 28, 2013	Aug. 30, 2013~ Sep. 04, 2013	Mar. 27, 2014	Radiation (03CH01-SZ)
Amplifier	Yiai	AV3860B	04030	2GHz~26.5GHz	Mar. 28, 2013	Aug. 30, 2013~ Sep. 04, 2013	Mar. 27, 2014	Radiation (03CH01-SZ)
SHF-EHF-Horn	Schwarzbeck	BBHA9170	BBHA91702 49	14GHz~40GHz	Nov. 23, 2012	Aug. 30, 2013~ Sep. 04, 2013	Nov. 22, 2013	Radiation (03CH01-SZ)
Turn Table	EM Electronice	EM 1000	N/A	0 ~ 360 degree	N/A	Aug. 30, 2013~ Sep. 04, 2013	N/A	Radiation (03CH01-SZ)
Antenna Mast	EM Electronice	EM 1000	N/A	1 m ~ 4 m	N/A	Aug. 30, 2013~ Sep. 04, 2013	N/A	Radiation (03CH01-SZ)
Spectrum Analyzer	R&S	FSP 7	100818	9kHz~7GHz	Aug. 22, 2012	Aug. 16, 2013	Aug. 20, 2013	ERP/EIRP (OTA01-SZ)
Quad-Ridged Horn	ETS-Lindgren	3164-08	00102954	700MHz~10000 MHz	N/A	Aug. 16, 2013	N/A	ERP/EIRP (OTA01-SZ)
Multi-Devices Controller	ETS-Lindgren	2090-OPT1	00108147	N/A	N/A	Aug. 16, 2013	N/A	ERP/EIRP (OTA01-SZ)
Switch Control Mainframe	Agilent	3499A	MY42005451	N/A	N/A	Aug. 16, 2013	N/A	ERP/EIRP (OTA01-SZ)



## 5 Uncertainty of Evaluation

### Uncertainty of Radiated Emission Measurement (30 MHz ~ 1000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% ( $U = 2Uc(y)$ )	2.54
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### Uncertainty of Radiated Emission Measurement (1 GHz ~ 40 GHz)

Measuring Uncertainty for a Level of Confidence of 95% ( $U = 2Uc(y)$ )	4.72
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