

# FCC RF Test Report

APPLICANT : TELEEPOCH Limited  
EQUIPMENT : CDMA Mobile Phone  
BRAND NAME : OPEN MOBILE \ PUBLIC MOBILE  
MODEL NAME : M570  
FCC ID : U46-M570A  
STANDARD : 47 CFR Part 2, 27(L)  
CLASSIFICATION : PCS Licensed Transmitter Held to Ear (PCE)  
TX FREQUENCY RANGE : 1711.25 ~ 1753.75 MHz  
Rx FREQUENCY RANGE : 2111.25 ~ 2135.75 MHz  
MAX. EIRP POWER : 0.94 W  
EMISSION DESIGNATOR : 1M28F8W

The product was received on Apr. 19, 2011 and completely tested on May 10, 2011. We, SPORTON INTERNATIONAL 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 compliance with the applicable technical standards.

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

Reviewed by:



Jones Tsai / Manager



**SPORTON INTERNATIONAL(KUNSHAN) INC.**  
**No. 3-2, PingXiang Road, Kunshan, Jiangsu Province, P.R.C.**



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## REVISION HISTORY

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FG0N0835-01	Rev. 01	Initial issue of report	May 26, 2011

## SUMMARY OF TEST RESULT

Report Section	FCC Rule	IC Rule	Description	Limit	Result	Remark
3.1	§2.1046	NA	Conducted Output Power	NA	PASS	-
3.2	§27.50(d)(2)	RSS-139 (6.4) SRSP-513(5.1.2)	Equivalent Isotropic Radiated Power	< 1 Watts	PASS	-
3.3	§2.1049 §27.53(g)	RSS-139 (6.5)	Occupied Bandwidth	NA	PASS	-
3.4	§2.1049 §27.53(g)	RSS-139 (6.5)	Band Edge Measurement	< 43+10log <sub>10</sub> (P[Watts])	PASS	-
3.5	§2.1049 §27.53(g)	RSS-139 (6.5)	Conducted Emission	< 43+10log <sub>10</sub> (P[Watts])	PASS	-
3.6	§2.1049 §27.53(g)	RSS-139 (6.5)	Field Strength of Spurious Radiation	< 43+10log <sub>10</sub> (P[Watts])	PASS	-
3.7	§2.1055 §27.54	RSS-139 (6.3)	Frequency Stability Temperature & Voltage	< 2.5 ppm	PASS	Under limit 18.40 dB at 3462 MHz

# 1 General Description

## 1.1 Applicant

**TELEEPOCH Limited**

5A, B1 Building, Digital Tech Zone, High-Tech Park(South), Nanshan District, Shenzhen, Guangdong Province, China

## 1.2 Manufacturer

**TELEEPOCH Limited**

5A, B1 Building, Digital Tech Zone, High-Tech Park(South), Nanshan District, Shenzhen, Guangdong Province, China

## 1.3 Feature of Equipment Under Test

Product Feature & Specification	
Equipment	CDMA Mobile Phone
Brand Name	OPEN MOBILE \ PUBLIC MOBILE
Model Name	M570
FCC ID	U46-M570A
Tx Frequency	1710 ~ 1755 MHz
Rx Frequency	2110 ~ 2155 MHz
Maximum Output Power to Antenna	24.45 dBm
Maximum ERP/EIRP	0.94 W (29.71 dBm)
Antenna Type	Fixed Internal Antenna
HW Version	M570-MAIN-V1.3
SW Version	AI2_PUBLIC_Bv7.66
Type of Modulation	QPSK
Type of Emission	1M28F8W
EUT Stage	Production Unit

**Remark:**

1. For other wireless features of this EUT, the test report will be issued separately.
2. This test report recorded only product characteristics and test results of PCS Licensed Transmitter Held to Ear (PCE).
3. The above EUT's information was declared by manufacturer. Please refer to the specifications or user's manual for more detailed description.

## 1.4 Testing Site

<b>Test Site</b>	SPORTON INTERNATIONAL (KUNSHAN) INC.	
<b>Test Site Location</b>	No. 3-2, PingXiang Road, Kunshan, Jiangsu Province, P.R.C. TEL: +86-0512-5790-0158 FAX: +86-0512-5790-0958	
<b>Test Site No.</b>	<b>Sporton Site No.</b>	
	TH01-KS	03CH01-KS

## 1.5 Applied Standards

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

- ♦ Preliminary Guidance for Receiving Applications for Certification of 3G Device. May 9, 2006.
- ♦ 47 CFR Part 2, 27(L)
- ♦ ANSI / TIA / EIA-603-C-2004
- ♦ IC RSS-139 Issue 2

**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 (DoC), recorded in a separate test report.

## 1.6 Ancillary Equipment List

Item	Equipment	Trade Name	Model No.	FCC ID	Data Cable	Power Cord
1.	Base Station	R&S	CMU200	N/A	N/A	Unshielded, 1.8 m

## 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.

Frequency range investigated for radiated emission: 30MHz to 18000 MHz.

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

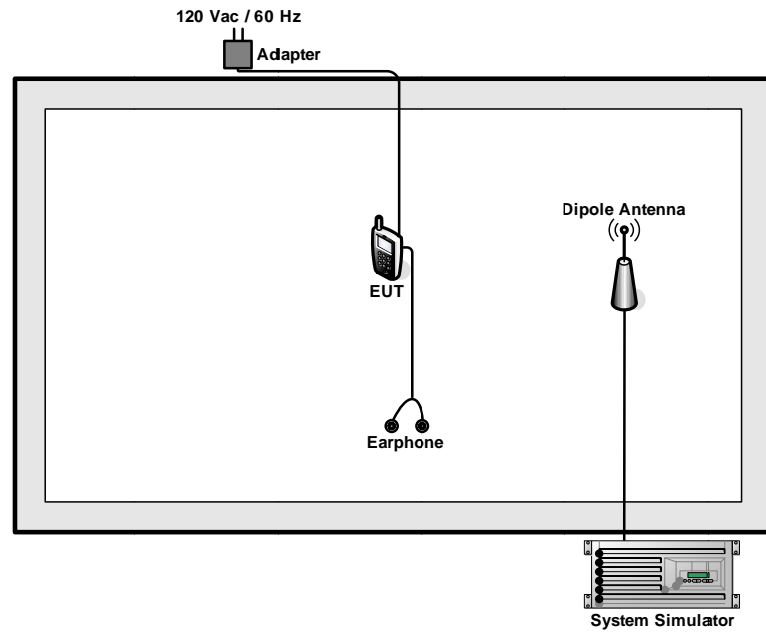
**Note:**

1. The maximum RF output power level is 1xRTT RC1+SO55 mode for CDMA2000 BC15 on QPSK link; only this mode was used for all tests.
2. Because there are individual antennas for each CDMA2000 and Bluetooth, the co-location test modes are not required.

The conducted power tables are as follows:

Conducted Power (*Unit: dBm)			
Band	CDMA2000 BC15		
Channel	25	450	875
Frequency	1711.25	1732.50	1753.75
1xRTT RC1+SO55	24.45	23.99	23.18
1xRTT RC3+SO55	24.44	24.00	23.18
1xRTT RC3+SO32(+ F-SCH)	24.34	24.08	23.08
1xRTT RC3+SO32(+SCH)	24.32	24.05	23.06

## 2.2 Connection Diagram of Test System





### **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.

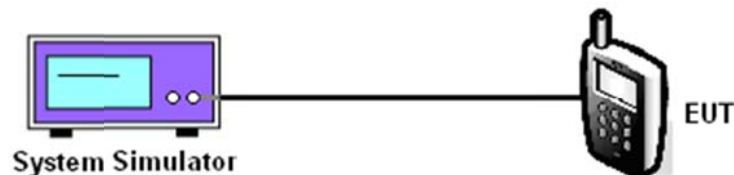
##### **3.1.2 Measuring Instruments**

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.

##### **3.1.4 Test Setup**



**3.1.5 Test Result of Conducted Output Power**

CDMA2000 BC15					
Test Mode	Test Status	Channel	Frequency (MHz)	Conducted Power (dBm)	Conducted Power (Watts)
CDMA 2000 1xRTT	RC1+SO55	25 (Low)	1711.25	24.45	0.28
		450 (Mid)	1732.50	23.99	0.26
		875 (High)	1753.75	23.18	0.21

## **3.2 Effective Isotropic Radiated Power Measurement**

### **3.2.1 Description of the EIRP Measurement**

Equivalent Isotropic radiated power output measurements by substitution method according to ANSI / TIA / EIA-603-C-2004. Mobile and portable (hand-held) stations operating in the 1710-1755 MHz band are limited to a peak EIRP of 1 watt.

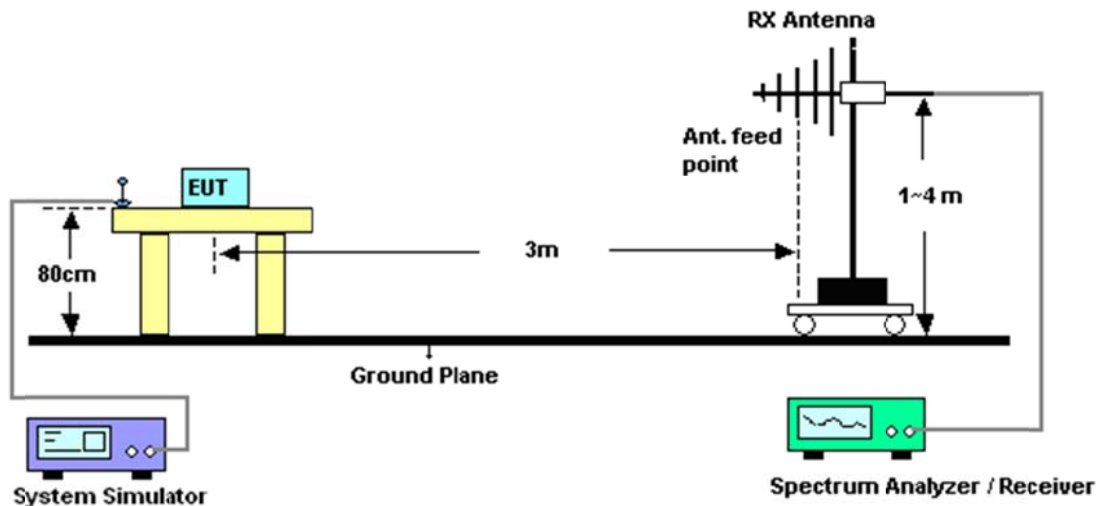
### **3.2.2 Measuring Instruments**

See list of measuring instruments of this test report.

### **3.2.3 Test Procedures**

1. The EUT was placed on an non-conductive rotating platform with 0.8 meter height in a semi-anechoic chamber. The radiated emission at the fundamental frequency was measured at 3 m with a test antenna and a spectrum analyzer with RBW= 3MHz, VBW= 3MHz, and peak detector settings.
2. During the measurement, the EUT was enforced in maximum power and linked with a base station. The highest emission was recorded from analyzer power level (LVL) from the 360 degrees rotation of the turntable and the test antenna raised and lowered over a range from 1 to 4 meters in both horizontally and vertically polarized orientations.
3. Effective Isotropic Radiated Power (EIRP) was measured by substitution method according to TIA/EIA-603-C. The EUT was replaced by dipole antenna (substitution antenna) at same location, and then a known power from S.G. was applied into the dipole antenna through a Tx cable, and then recorded the maximum Analyzer reading through raised and lowered the test antenna. The correction factor (in dB) = S.G. - Tx Cable loss + Substitution antenna gain - Analyzer reading. Then the EUT's EIRP was calculated with the correction factor,  $EIRP = LVL + \text{Correction factor}$ .

### 3.2.4 Test Setup



### 3.2.5 Test Result of EIRP

CDMA2000 BC15 1xRTT_RC1+SO55 Radiated Power EIRP				
Horizontal Polarization				
Frequency (MHz)	LVL (dBm)	Correction Factor (dB)	EIRP (dBm)	EIRP (W)
1711.25	-10.13	37.07	26.94	0.49
1731.25	-16.52	38.52	22.00	0.16
1753.75	-13.25	38.07	24.82	0.30
Vertical Polarization				
Frequency (MHz)	LVL (dBm)	Correction Factor (dB)	EIRP (dBm)	EIRP (W)
1711.25	-9.02	38.73	29.71	0.94
1731.25	-10.13	38.31	28.18	0.66
1753.75	-9.92	38.03	28.11	0.65

\* EIRP = LVL (dBm) + Correction Factor (dB)

### 3.3 Occupied Bandwidth and Band Edge Measurement

#### 3.3.1 Description of Occupied Bandwidth Measurement

The emission bandwidth is defined as the width of the signal between two points, located at the 2 sides of the carrier frequency, outside of which all emissions are attenuated at least 26 dB below the transmitter power.

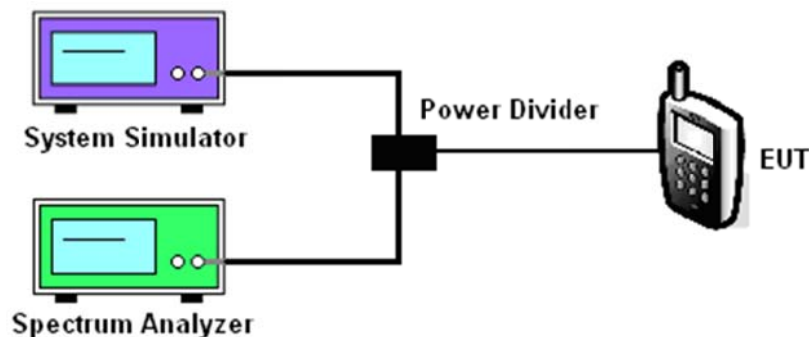
#### 3.3.2 Measuring Instruments

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 99% and 26 dB occupied bandwidth (BW) of the middle channel for the highest RF powers were measured.

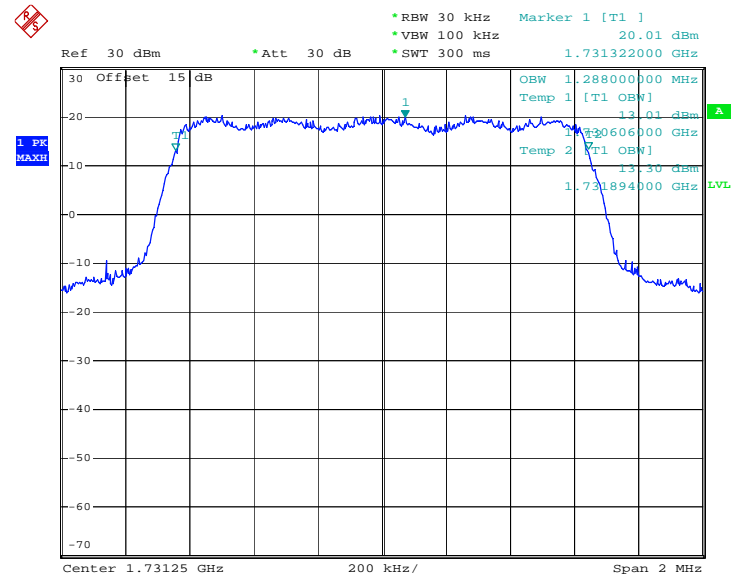
#### 3.3.4 Test Setup



### 3.3.5 Test Result (Plots) of Occupied Bandwidth

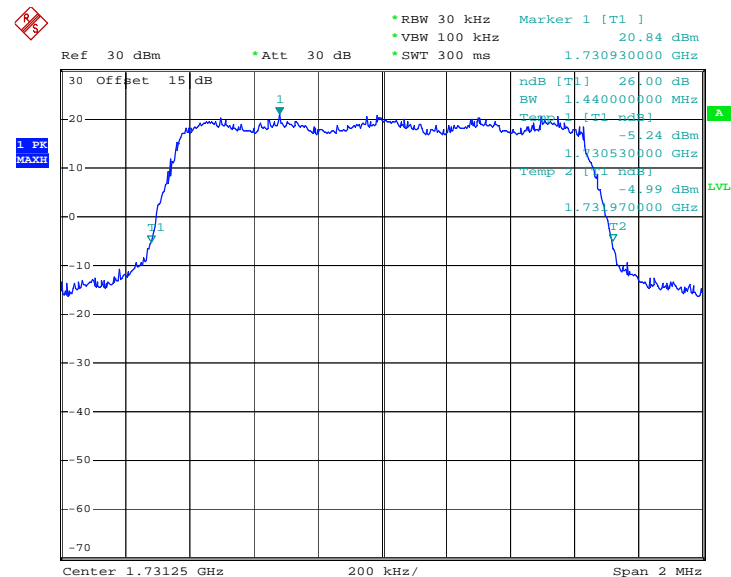
<b>Band :</b>	CDMA2000 BC15	<b>Power Stage :</b>	High
<b>Test Mode :</b>	1xRTT_RC1+SO55		

#### 99% Occupied Bandwidth Plot on Channel 450



Date: 30.APR.2011 16:10:12

#### 26dB Bandwidth Plot on Channel 450



Date: 30.APR.2011 16:05:44

## **3.4 Band Edge Measurement**

### **3.4.1 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.

### **3.4.2 Measuring Instruments**

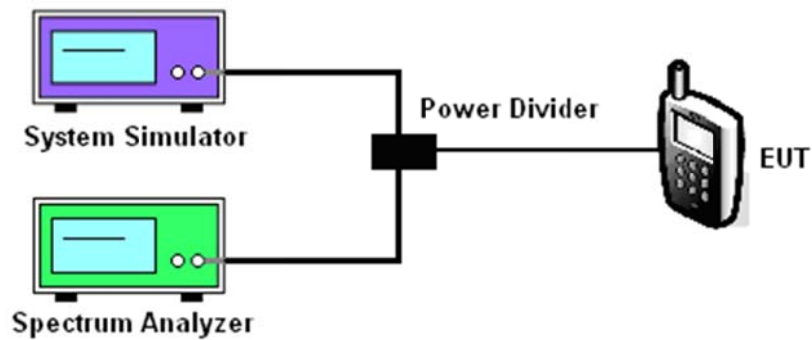
See list of measuring instruments of this test report.

### **3.4.3 Test Procedures**

1. The EUT was connected to Spectrum Analyzer and Base Station via power divider.
2. The band edges of low and high channels for the highest RF powers were measured. Setting RBW as roughly BW/100.
3. The RBW was replaced by 10 kHz, due to the spectrum analyzer IF-Filter including an excess of the limit. A worst case correction factor of  $10 \log (1\% \text{ BW/measurement RBW})$  was implemented.

### 3.4.4 Test Setup

<Conducted Band Edge >

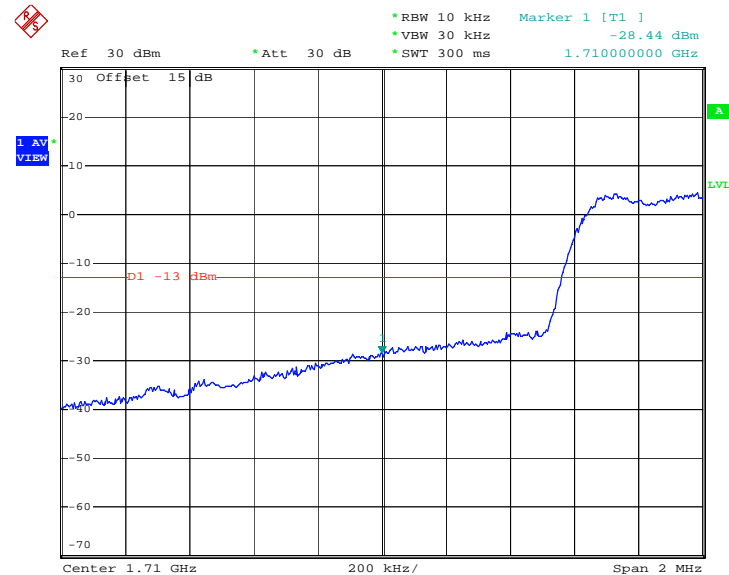




### 3.4.5 Test Result (Plots) of Conducted Band Edge

<b>Band :</b>	CDMA2000 BC15	<b>Power Stage :</b>	High
<b>Test Mode :</b>	1xRTT_RC1+SO55		

#### Lower Band Edge Plot on Channel 25



Date: 30.APR.2011 15:51:19

#### Higher Band Edge Plot on Channel 875



Date: 11.MAY.2011 20:22:05

### 3.5 Conducted Emission Measurement

#### 3.5.1 Description of Conducted Emission 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.

It is measured by means of a calibrated spectrum analyzer and scanned from 30 MHz up to a frequency including its 10<sup>th</sup> harmonic.

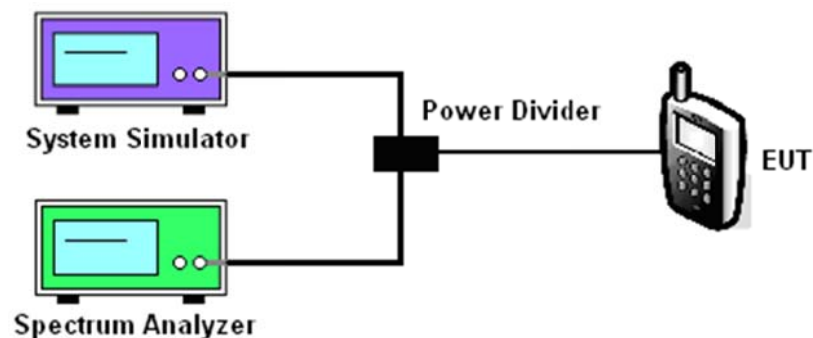
#### 3.5.2 Measuring Instruments

See list of measuring instruments of this test report.

#### 3.5.3 Test Procedures

1. The EUT was connected to spectrum analyzer and base station via power divider.
2. The middle channel for the highest RF power within the transmitting frequency was measured.
3. The conducted spurious emission for the whole frequency range was taken.

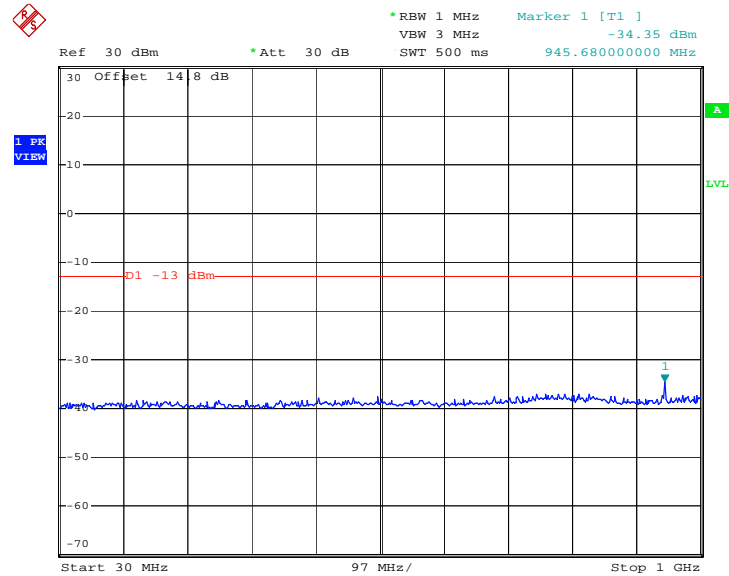
#### 3.5.4 Test Setup



### 3.5.5 Test Result (Plots) of Conducted Emission

<b>Band :</b>	CDMA2000 BC15	<b>Power Stage :</b>	High
<b>Test Mode :</b>	1xRTT_RC1+SO55		

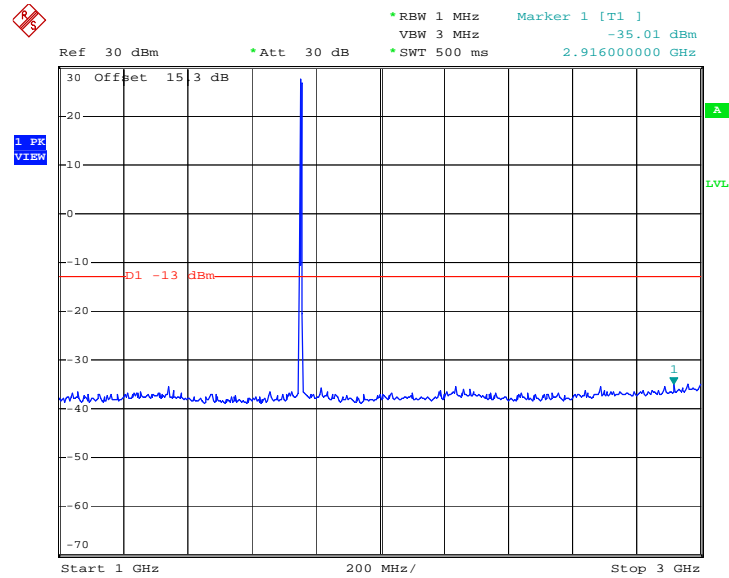
**Conducted Emission Plot between 30MHz ~ 1GHz**



Date: 30.APR.2011 16:18:35

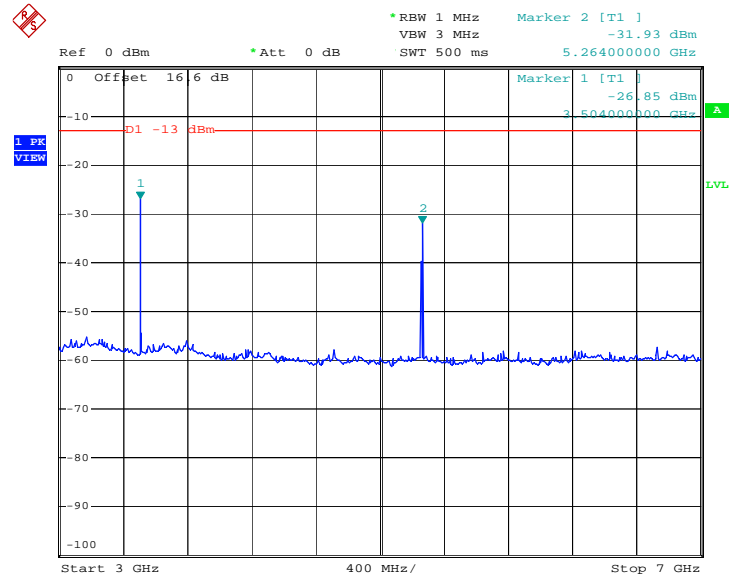


Conducted Emission Plot between 1GHz ~ 3GHz

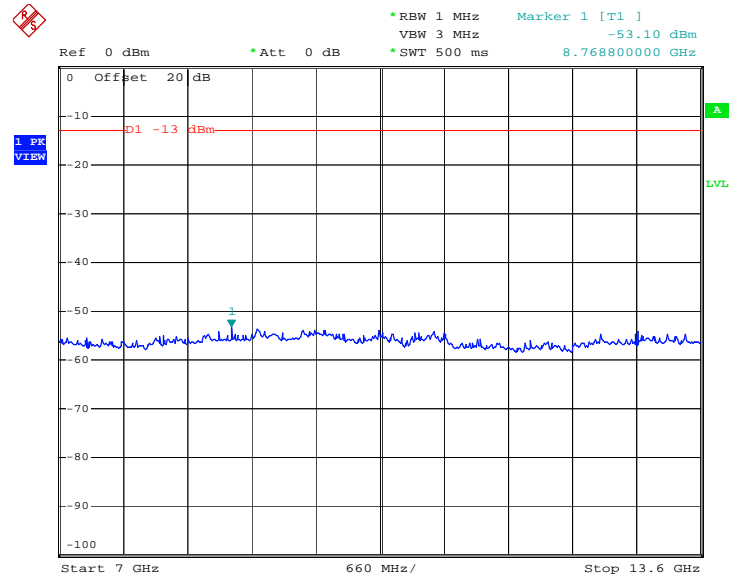


Date: 30.APR.2011 16:19:45

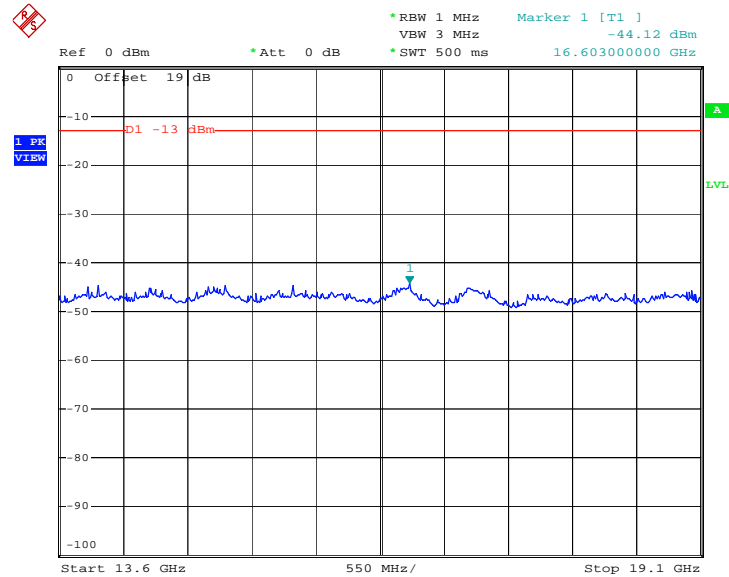
Conducted Emission Plot between 3GHz ~ 7GHz



Date: 30.APR.2011 16:21:14

**Conducted Emission Plot between 7GHz ~ 13.6GHz**


Date: 30.APR.2011 16:22:22

**Conducted Emission Plot between 13.6GHz ~ 18GHz**


Date: 30.APR.2011 16:23:15

## **3.6 Field Strength of Spurious Radiation Measurement**

### **3.6.1 Description of Field Strength of Spurious Radiated Measurement**

The radiated spurious emission was measured by substitution method according to ANSI / TIA / EIA-603-C-2004. 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.

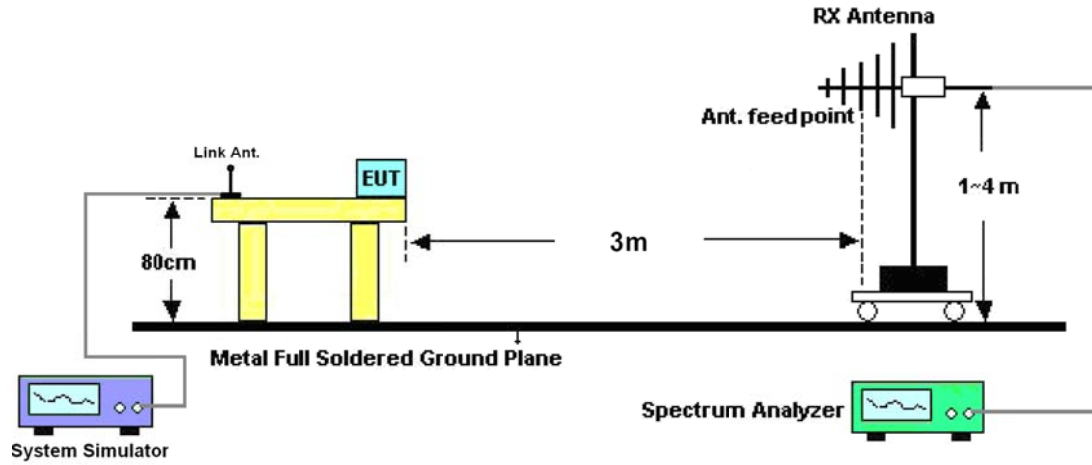
### **3.6.2 Measuring Instruments**

See list of measuring instruments of this test report.

### **3.6.3 Test Procedures**

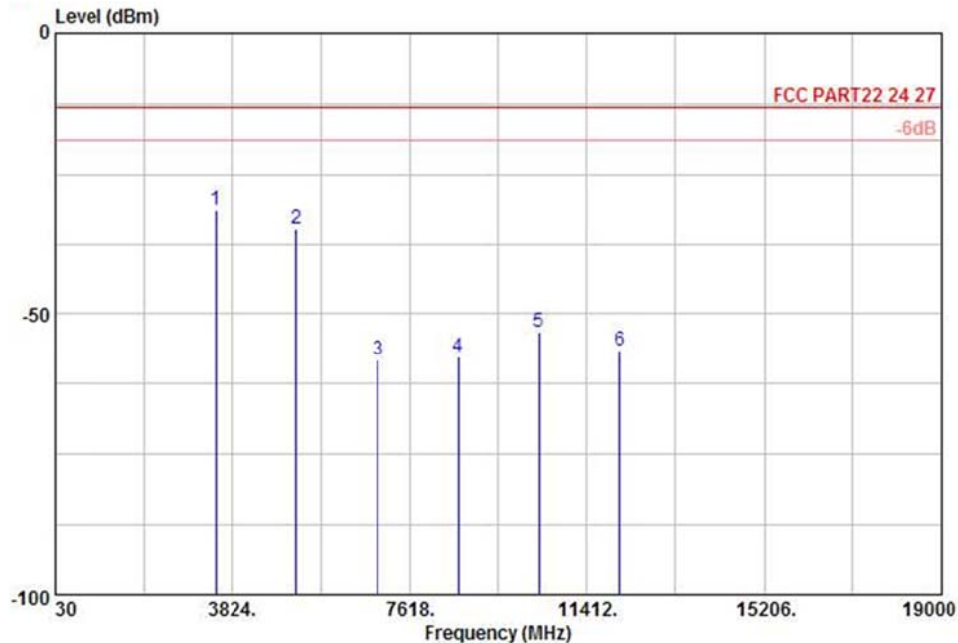
1. The EUT was placed on a rotatable wooden table with 0.8 meter about ground.
2. The EUT was set 3 meters from the receiving antenna, which was mounted on the antenna tower.
3. The table was rotated 360 degrees to determine the position of the highest spurious emission.
4. The height of the receiving 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, Sweep = 500ms, 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. Emission level (dBm) = output power + substitution Gain.

### 3.6.4 Test Setup



**3.6.5 Test Result of Field Strength of Spurious Radiated**

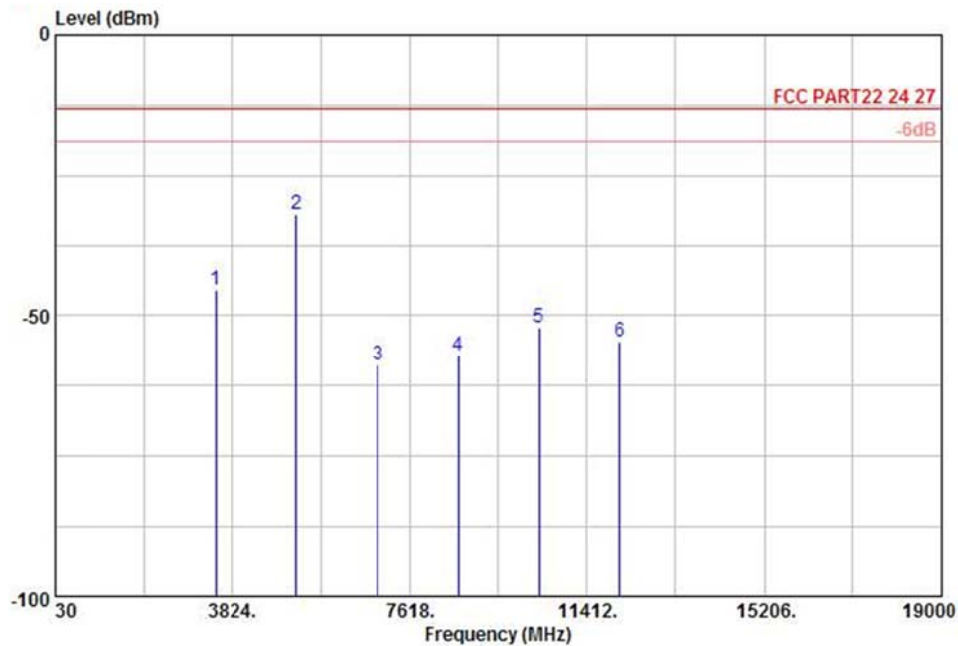
<b>Band :</b>	CDMA2000 BC15	<b>Temperature :</b>	20~21°C
<b>Test Mode :</b>	1xRTT_RC1+SO55	<b>Relative Humidity :</b>	40~41%
<b>Test Engineer :</b>	Cloud Peng	<b>Polarization :</b>	Horizontal
<b>Remark :</b>	Spurious emissions within 30-1000MHz were found more than 20dB below limit line.		



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	-31.40	-13	-18.40	-47.06	-38.20	1.42	7.54	H	Pass
5194	-34.69	-13	-21.69	-49.70	-68.60	1.58	9.80	H	Pass
6925	-58.34	-13	-45.34	-67.40	-67.90	1.69	11.51	H	Pass
8656	-57.57	-13	-44.57	-65.64	-58.70	2.12	12.86	H	Pass
10387.5	-53.08	-13	-40.08	-65.82	-54.80	2.31	12.90	H	Pass
12118.75	-56.41	-13	-43.41	-70.43	-53.00	2.57	13.10	H	Pass



<b>Band :</b>	CDMA2000 BC15	<b>Temperature :</b>	20~21°C
<b>Test Mode :</b>	1xRTT_RC1+SO55	<b>Relative Humidity :</b>	40~41%
<b>Test Engineer :</b>	Cloud Peng	<b>Polarization :</b>	Vertical
<b>Remark :</b>	Spurious emissions within 30-1000MHz were found more than 20dB below limit line.		



Site : 03CH01-KS  
Condition: FCC PART22 24 27 HF EIRP FACTOR-09020 VERTICAL

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	-45.38	-13	-32.38	-53.22	-43.20	1.42	7.54	V	Pass
5192	-32.00	-13	-19.00	-52.64	-70.30	1.58	9.80	V	Pass
6925	-58.66	-13	-45.66	-67.42	-64.60	1.69	11.51	V	Pass
8659	-57.09	-13	-44.09	-65.76	-56.60	2.12	12.86	V	Pass
10387.5	-52.16	-13	-39.16	-64.95	-53.60	2.31	12.90	V	Pass
12118.75	-54.69	-13	-41.69	-69.03	-52.20	2.57	13.10	V	Pass

## **3.7 Frequency Stability Measurement**

### **3.7.1 Description of Frequency Stability Measurement**

The frequency stability shall be measured by variation of ambient temperature and variation of primary supply voltage to ensure that the fundamental emission stays within the authorized frequency block. The frequency stability of the transmitter shall be maintained within  $\pm 0.00025\%$  ( $\pm 2.5\text{ppm}$ ) of the center frequency.

### **3.7.2 Measuring Instruments**

See list of measuring instruments of this test report.

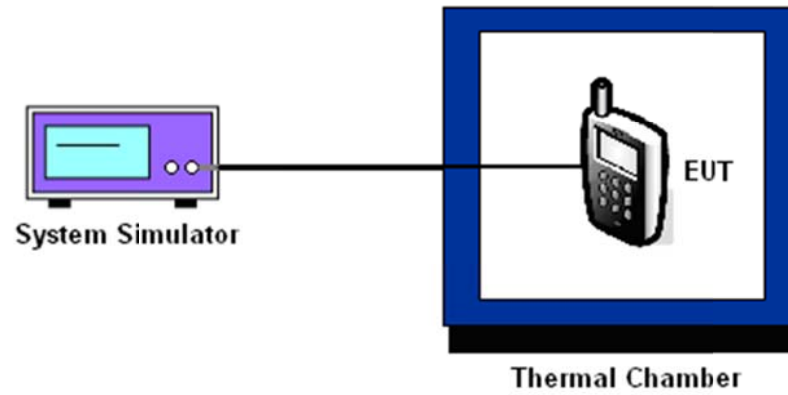
### **3.7.3 Test Procedures for Temperature Variation**

1. The EUT was set up in the thermal chamber and connected with the base station.
2. With power OFF, the temperature was decreased to  $-30^{\circ}\text{C}$  and the EUT was stabilized for three hours. Power was applied and the maximum change in frequency was recorded within one minute.
3. With power OFF, the temperature was raised in  $10^{\circ}\text{C}$  step up to  $50^{\circ}\text{C}$ . The EUT was stabilized at each step for at least half an hour. Power was applied and the maximum frequency change was recorded within one minute.
4. If the EUT can not be turned on at  $-30^{\circ}\text{C}$ , the testing lowest temperature will be raised in  $10^{\circ}\text{C}$  step until the EUT can be turned on.

### **3.7.4 Test Procedures for Voltage Variation**

1. The EUT was placed in a temperature chamber at  $25\pm 5^{\circ}\text{C}$  and connected with the base station.
2. The power supply voltage to the EUT was varied from BEP to 115% of the nominal value measured at the input to the EUT.
3. The variation in frequency was measured for the worst case.

### 3.7.5 Test Setup



### 3.7.6 Test Result of Temperature Variation

<b>Band :</b>	CDMA2000 BC15	<b>Channel :</b>	450
<b>Test Mode :</b>	1xRTT_RC1+SO55	<b>Limit (ppm) :</b>	2.5

Temperature (°C)	Freq. Dev. (Hz)	Deviation (ppm)	Result
-30	N/A	N/A	PASS
-20	N/A	N/A	
-15	-21	-0.01	
-10	19	0.01	
0	15	0.01	
10	17	0.01	
20	18	0.01	
30	-25	-0.01	
40	-17	-0.01	
50	-14	-0.01	

**Note:**

1. The EUT stops transmitting at temperatures -20°C, -30°C.
2. The manufacturer declared that the EUT could work properly between temperatures -15°C~50°C.

### 3.7.7 Test Result of Voltage Variation

Band & Channel	Mode	Voltage (Volt)	Freq. Dev. (Hz)	Deviation (ppm)	Limit (ppm)	Result
CDMA2000 BC15 CH450	1xRTT RC1+SO55	3.8	-10	-0.01	2.5	PASS
		BEP	-28	-0.01		
		4.2	-17	-0.01		

**Note :**

1. Normal Voltage = 3.8V.
2. Battery End Point (BEP) = 3.4 V.

## 4 List of Measuring Equipments

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Due Date	Remark
Spectrum Analyzer	R&S	FSP40	100319	9kHz~40GHz	Jan. 07, 2011	Jan. 06, 2012	Conducted (TH01-KS)
Power Meter	Aglient	E4416A	MY45101555	N/A	Aug. 24, 2010	Aug. 23, 2011	Conducted (TH01-KS)
Power Sensor	Aglient	E9327A	MY44421198	N/A	Aug. 24, 2010	Aug. 23, 2011	Conducted (TH01-KS)
Thermal Chamber	Ten Billion	TTC-B3S	TBN-960502	N/A	Dec. 28, 2010	Dec. 27, 2011	Conduction (TH01-KS)
DC Power Supply	TOPWARD	3306D	N/A	N/A	N/A	N/A	Conduction (TH01-KS)
EMI Receiver	R&S	ESCI7	100768	9kHz~7GHz	Jun. 22, 2010	Jun. 21, 2011	Conduction (CO01-KS)
LISN	MessTec	AN3016	60103	9kHz~30MHz	Jan. 07, 2011	Jan. 06, 2012	Conduction (CO01-KS)
LISN	MessTec	AN3016	60105	9kHz~30MHz	Jan. 07, 2011	Jan. 06, 2012	Conduction (CO01-KS)
AC Power	Chroma	61602	ABP00000081	N/A	Nov. 10, 2010	Nov. 09, 2011	Conduction (CO01-KS)
System Simulator	R&S	CMU200	837587/066	Full-Band	Jan. 07, 2011	Jan. 06, 2012	Conduction (CO01-KS)
GPS Station	T&E	GS-50	N/A	N/A	N/A	N/A	Conduction (CO01-KS)
EMI Test	R&S	ESCI	100534	9kHz~3GHz	Nov. 16, 2010	Nov. 15, 2011	Radiation (03CH01-KS)
Spectrum	R&S	FSP40	100319	9kHz~40GHz	Jan. 07, 2011	Jan. 06, 2012	Radiation (03CH01-KS)
Bilog Antenna	SCHAFFNER	CBL6112D	23182	25MHz~2GHz	Dec. 07, 2010	Dec. 06, 2011	Radiation (03CH01-KS)
Double Ridge Horn Antenna	EMCO	3117	00075959	1MHz~18GHz	Jan. 07, 2011	Jan. 06, 2012	Radiation (03CH01-KS)
Amplifier	Wireless	FPA-6592	060004	30MHz~2GHz	Dec. 09, 2010	Dec. 08, 2011	Radiation (03CH01-KS)
Active horn antenna	com-power	AHA-118	701023	1G-18GHz	Nov. 09, 2010	Nov. 08, 2011	Radiation (03CH01-KS)
Signal Generator	R&S	SMR40	100455	10G-40GHz	Jan. 07, 2011	Jan. 06, 2012	Radiation (03CH01-KS)
SHE-EHF Horn	Schwarzbeck	BBHA9170	BBHA170249	15-40GHz	Oct. 15, 2010	Oct. 14, 2011	Radiation (03CH01-KS)
Loop Antenna	R&S	HFH2-Z2	860004/00	9G-30GHz	Jul. 29, 2010	Jul. 28, 2011	Radiation (03CH01-KS)
Bluetooth Base Station	R&S	CBT	100783	N/A	Aug. 17, 2010	Aug. 16, 2011	Radiation (03CH01-KS)

## 5 Uncertainty of Evaluation

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

Contribution	Uncertainty of $X_i$		$u(X_i)$
	dB	Probability Distribution	
Receiver Reading	0.41	Normal (k=2)	0.21
Antenna Factor Calibration	0.83	Normal (k=2)	0.42
Cable Loss Calibration	0.25	Normal (k=2)	0.13
Pre-Amplifier Gain Calibration	0.27	Normal (k=2)	0.14
RCV/SPA Specification	2.50	Rectangular	0.72
Antenna Factor Interpolation for Frequency	1.00	Rectangular	0.29
Site Imperfection	1.43	Rectangular	0.83
Mismatch	+0.39 / -0.41	U-Shape	0.28
<b>Combined Standard Uncertainty <math>U_c(y)</math></b>	<b>1.27</b>		
<b>Measuring Uncertainty for a Level of Confidence of 95% (<math>U = 2U_c(y)</math>)</b>	<b>2.54</b>		

### Uncertainty of Radiated Emission Measurement (1 GHz ~ 40 GHz)

Contribution	Uncertainty of $X_i$		$u(X_i)$	$C_i$	$C_i * u(X_i)$
	dB	Probability Distribution			
Receiver Reading	$\pm 0.10$	Normal (k=2)	0.10	1	0.10
Antenna Factor Calibration	$\pm 1.70$	Normal (k=2)	0.85	1	0.85
Cable Loss Calibration	$\pm 0.50$	Normal (k=2)	0.25	1	0.25
Receiver Correction	$\pm 2.00$	Rectangular	1.15	1	1.15
Antenna Factor Directional	$\pm 1.50$	Rectangular	0.87	1	0.87
Site Imperfection	$\pm 2.80$	Triangular	1.14	1	1.14
Mismatch Receiver VSWR $\Gamma_1 = 0.197$ Antenna VSWR $\Gamma_2 = 0.194$ Uncertainty = $20\text{Log}(1-\Gamma_1\Gamma_2)$	+0.34 / -0.35	U-Shape	0.244	1	0.244
<b>Combined Standard Uncertainty <math>U_c(y)</math></b>	<b>2.36</b>				
<b>Measuring Uncertainty for a Level of Confidence of 95% (<math>U = 2U_c(y)</math>)</b>	<b>4.72</b>				