A Test Lab Techno Corp.

Changan Lab：No. 140 -1, Changan Street, Bade City, Taoyuan County, Taiwan R.O.C.
Tel：886-3-271-0188 / Fax：886-3-271-0190

P22 & P24 Test Report

Test Report No.	：	**1007FR11**
Applicant	：	**XAC Automation Corporation** **4F., NO.30, INDUSTRY E. RD. IX, SCIENCE-BASED INDUSTRIAL PARK, HSIN-CHU,Taiwan, R.O.C.**
Manufacturer	：	**XAC Automation Corporation**
Model Name	：	**Portable Terminal**
Trade Mark	：	**FDC**
Model Number	：	**FD-400Ti**
FCC ID	：	**MQT-FD400TICDMA**
Tx Frequency Range	：	**824.7 - 848.3MHz (CDMA/1XEVDO 850)** **1851.3 - 1908.8MHz (CDMA/1XEVDO 1900)**
Dates of Test	：	**Dec. 16 ~ 17, 2008**
Test Specification	：	**47 CFR Part 22H, 24E and Part 2 and 24, ANSI/TIA-603-C-2004**
Location of Test Lab.	：	**Chang-an Lab.**

1. The test operations have to be performed with cautious behavior, the test results are as attached.
2. The test results are under chamber environment of A Test Lab Techno Corp. A Test Lab Techno Corp. does not assume responsibility for any conclusions and generalizations drawn from the test results with regard to other specimens or samples.
3. The measurement report has to be written approval of A Test Lab Techno Corp. It may only be reproduced or published in full.

Miller Lee **20100706**
Approve Signer

Gary Wu **20100706**
Review Signer

Contents

1. General Information

Applicant	:	XAC Automation Corporation 4F., NO.30, INDUSTRY E. RD. IX, SCIENCE-BASED INDUSTRIAL PARK, HSIN-CHU,Taiwan, R.O.C.
Manufacturer	:	XAC Automation Corporation 4F., NO.30, INDUSTRY E. RD. IX, SCIENCE-BASED INDUSTRIAL PARK, HSIN-CHU,Taiwan, R.O.C.
Product Name	:	Portable Terminal
Trade Mark	:	FDC
Model Number	:	FD-400Ti
FCC ID	:	MQT-FD400TICDMA
TX Frequency	:	824.7 - 848.3 MHz (CDMA / 1XEVDO 850) 1851.1 - 1908.8 MHz (CDMA / 1XEVDO 1900)
RX Frequency	:	824.7 - 848.3 MHz (CDMA / 1XEVDO 850) 1851.3 - 1908.8 MHz (CDMA / 1XEVDO 1900)
Antenna Type	:	Internal Antenna
Maximum Output Power to Antenna (Conducted)	:	22.75 dBm (CDMA 850) 23.94 dBm (CDMA 1900) 21.61 dBm (1XEVDO 850) 22.80 dBm (1XEVDO 1900)
Max. ERP/EIRP Power	:	0.670 W / 28.26 dBm ERP (CDMA 850) 1.439 W / 31.58 dBm EIRP (CDMA 1900) 0.638 W / 28.05 dBm ERP (1XEVDO 850) 1.387 W / 31.42 dBm EIRP (1XEVDO 1900)
Type of Emission	:	CDMA 850 : 1M27F9W CDMA 1900 : 1M27F9W 1XEVDO 850 : 1M27F9W 1XEVDO 1900 : 1M27F9W
Power Rating (DC , Voltage and Current of RF element or PA)	:	7.4V / 2200mAh(Lithiumion)
Digital Modulation Emission	:	QPSK/BPSK (CDMA/1XEVDO850) QPSK/BPSK (CDMA/1XEVDO1900)
Software Ver.	:	00431207
Hardware Ver.	:	B10
Power Supply Type	:	AC Adapter
DC Power Cord	:	Shielded USB Cable, 1.5 meter, Cigarette Plug
Adapter	:	LI SHIN INTERNATIONAL ENTERPRISE CORP. LSE0107A1240
DUT Stage	:	Production Unit

2. Test Configuration of Equipment under Test

2.1 Test Manner

1. The spurious emission measurements were carried out in semi-anechoic chamber with 3-meter test range.
2. During all testing, EUT is in link mode with base station emulator at maximum power level. Frequency range investigated: radiated emission 30 MHz to 9000 MHz for CDMA850; 30MHz to 19000 MHz for CDMA 1900.

2.2 Test Mode

Preliminary tests were performed in different data mode to find the worst case. The data mode shown in the table below is the worst-case rate (Blue color). Investigation has been done on all the possible configurations for searching the worst cases. The following table is a list of the test modes shown in this test report.

Bands	Channel	Frequency (MHz)		Conducted Power (dBm)	Worst
CDMA850	1013	Low	824.7	**22.49**	☐
	384	Mid	836.5	**22.75**	■
	777	High	848.3	**22.44**	☐
CDMA 1900	25	Low	1851.3	**23.68**	☐
	600	Mid	1880.0	**23.78**	☐
	1175	High	1908.8	**23.94**	■
1XEVDO 850	1013	Low	824.7	**21.58**	☐
	384	Mid	836.5	**21.61**	☐
	777	High	848.3	**21.58**	☐
1XEVDO 1900	25	Low	1851.3	**22.70**	☐
	600	Mid	1880.0	**22.80**	☐
	1175	High	1908.8	**22.62**	☐

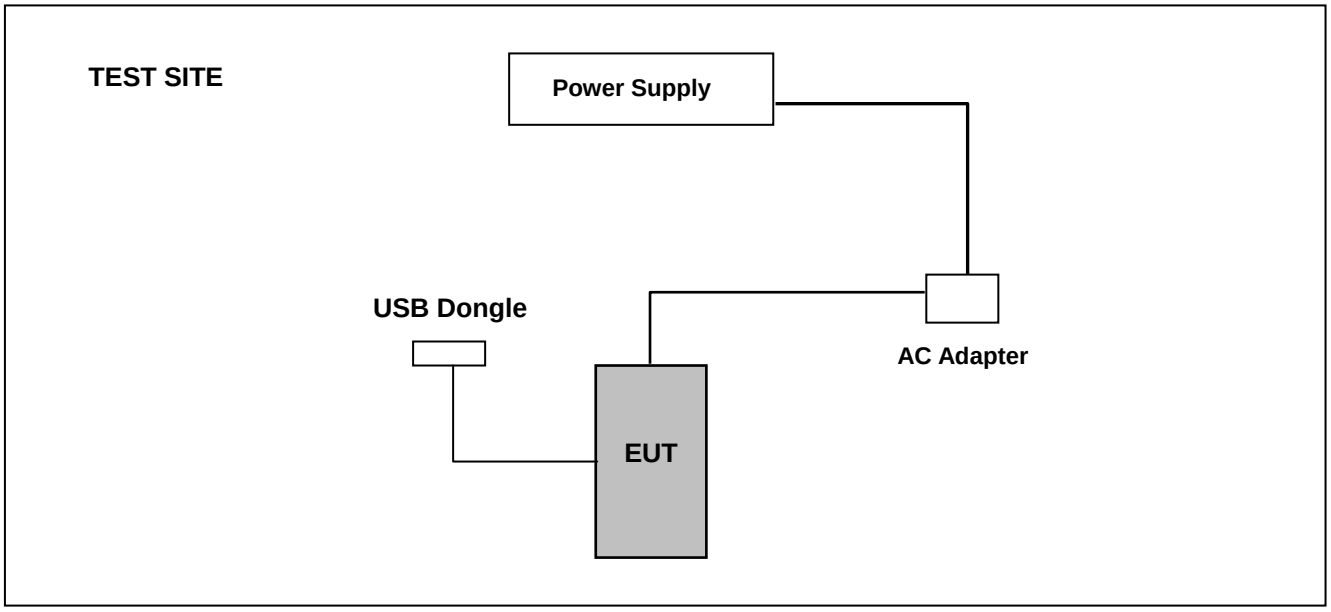
Test Mode List					
Section	DESCRIPTION OF TEST	CDMA 850	1XEVDO 850	CDMA 1900	1XEVDO 1900
4.2	RF Output Power	■	■	■	■
4.3	ERP / EIRP	■	■	■	■
4.4	Occupied Bandwidth & Band Edge Measurement	■	■	■	■
4.5	Conducted Spurious Emission	■	□	■	□
4.6	Field Strength of Spurious Radiation	■	□	■	□
4.7	Frequency Stability vs. Temperature	■	□	■	□
4.8	Frequency Stability vs. Voltage	■	□	■	□
4.9	AC Power Conducted Emissions Requirements	■	□	■	□

Comment:

1. The CDMA 850's RF Output Power value was more high than 1XEVDO 850 condition. The CDMA 850 be testing all items.

2. The CDMA 1900's RF Output Power value was more high than 1XEVDO1900 condition. The CDMA 1900 be testing all items.

2.3 Connection Diagram of Test System



During EMI testing (LINK) the EUT (Portable Terminal)'s Power port was connected to AC Adapter. The EUT (Portable Terminal)'s USB port connected to USB Dongle(512M Byte).

2.4 Ancillary Equipment List

1. Base Station(R&S) CMU200 106656
2. Power Supply (GW) 12P3A H281001

3. General Information of Test Site

Test Site Location: No. 140 -1, Changan Street, Bade City, Taoyuan County, Taiwan R.O.C.
TEL: 886-3-271-0188 FAX: 886-3-271-0190

Registration Number：854525
Designation Number：TW1330

The chamber meets the characteristics of ANSI C63.4-2006. This site is on file with the FCC.

3.1 Test Voltage

DC 7.4V / 2200mAh (Battery)

3.2 Test in Compliance with

47 CFR Part 22H, 24E and Part 2 and 24, ANSI/TIA-603-C-2004

3.3 Frequency Range Investigated

1. Radiation: from 30 MHz to 9000 MHz for CDMA 850.
2. Radiation: from 30 MHz to 19000 MHz for CDMA 1900.

3.4 Test Distance

The test distance of radiated emission from antenna to EUT is 3 m.

4. Test Data and Test Result

4.1 List of Measurements and Examinations

FCC Rule	DESCRIPTION OF TEST	Result	Section
§ 2.1046	RF Output Power	Passed	4.2
§ 22.913 § 24.232	ERP / EIRP	Passed	4.3
§ 2.1049 § 22.917 § 24.238(b)	Occupied Bandwidth & Band Edge Measurement	Passed	4.4
§ 2.1051	Conducted Emission	Passed	4.5
§ 2.1053	Field Strength of Spurious Radiation	Passed	4.6
§ 2.1055 § 22.355 § 24.235	Frequency Stability vs. Temperature	Passed	4.7
§ 2.1055 § 22.355 § 24.235	Frequency Stability vs. Voltage	Passed	4.8
§ 15.207	AC Power Conducted Emissions Requirements	Passed	4.9

4.2 RF Output Power

4.2.1 Measurement Instruments：

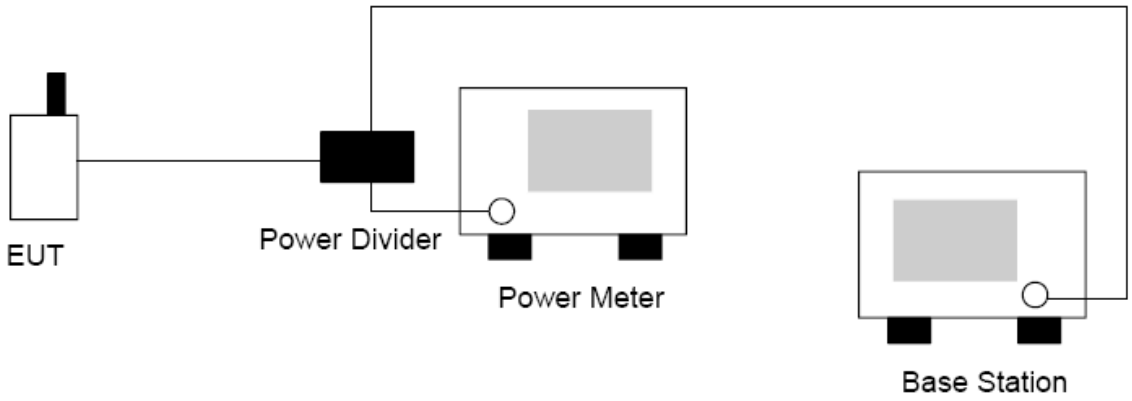
As described in chapter 5 of this test report.

4.2.2 Test Procedure：

The measurement is made according to ANSI/TIA-603-C-2004 as follows:

1. The transmitter output was connected to power meter and base station through power divider.
2. Set base station for EUT at GSM 850: PCL=5 and PCS 1900: PCL=0.
3. Set base station for EUT at WCDMA Band V and WCDMA Band II, power level was set to maximum.
4. Set base station for EUT at CDMA850 and CDMA1900, power level was set to maximum.
5. Select lowest, middle, and highest channels for each band.

4.2.3 Test Setup Layout：



4.2.4 Test Result：

Bands	Channel	Frequency (MHz)		Conducted Power (dBm)	Conducted Power (Watts)
CDMA 850	1013	Low	824.7	**22.49**	**0.177**
	384	Mid	836.5	**22.75**	**0.188**
	777	High	848.3	**22.44**	**0.175**

Note: The testing result was used peak detector.

Bands	Channel	Frequency (MHz)		Conducted Power (dBm)	Conducted Power (Watts)
CDMA 1900	25	Low	1851.3	**23.68**	**0.233**
	600	Mid	1880.0	**23.78**	**0.239**
	1175	High	1908.8	**23.94**	**0.248**

Note: The testing result was used peak detector.

Bands	Channel	Frequency (MHz)		Conducted Power (dBm)	Conducted Power (Watts)
1XEVDO 850	1013	Low	824.7	**21.58**	**0.144**
	384	Mid	836.5	**21.61**	**0.145**
	777	High	848.3	**21.58**	**0.144**

Note: The testing result was used peak detector.

Bands	Channel	Frequency (MHz)		Conducted Power (dBm)	Conducted Power (Watts)
1XEVDO 1900	25	Low	1851.3	**22.70**	**0.186**
	600	Mid	1880.0	**22.80**	**0.191**
	1175	High	1908.8	**22.62**	**0.183**

Note: The testing result was used peak detector.

4.3 ERP / EIRP Measurement

Equivalent isotropic radiated power measurements by substitution method according to ANSI/TIA/EIA-603-B-2002.

4.3.1 Measurement Instruments

As described in chapter 5 of this test report.

4.3.2 Test Procedure

The phone was tested in an anechoic chamber with a 3-axis position system that permits taking complete spherical scans of the EUT's 3-axis radiation patterns. For all tests, the phone was supported in a free space type environment, vertically oriented in the chamber. Tests were done for CDMA 850 three frequencies (824.70, 836.52 and 848.31 MHz) and CDMA 1900 three frequencies (1851.25, 1880.00, and 1909.80 MHz).
GSM measurements were made with the phone placed in a call using the CMU200 mobile station test set. The phone was weakly coupled to the test set and configured to transmit in full data rate mode.
The radiated power was measured using ETS-LINDGREN OTA Chamber in "Peak" mode. From these measurements, the software calculates the angle at which maximum radiated power occurs for each case, and the radiated power at this angle was extracted from the data.

Each individual data point in a radiated power or sensitivity measurement is referred to as the effective isotropic radiated power or effective isotropic sensitivity. That is, the desired information is how the measured quantity relates to the same quantity from an isotropic radiator. Thus, the reference measurement must relate the power received or transmitted at the EUT test equipment (spectrum analyzer or communication tester) back to the power transmitted or received at a theoretical isotropic radiator. The total path loss then, is just the difference in dB between the power transmitted or received at the isotropic radiator and that seen at the test equipment (see follow Figure 1).

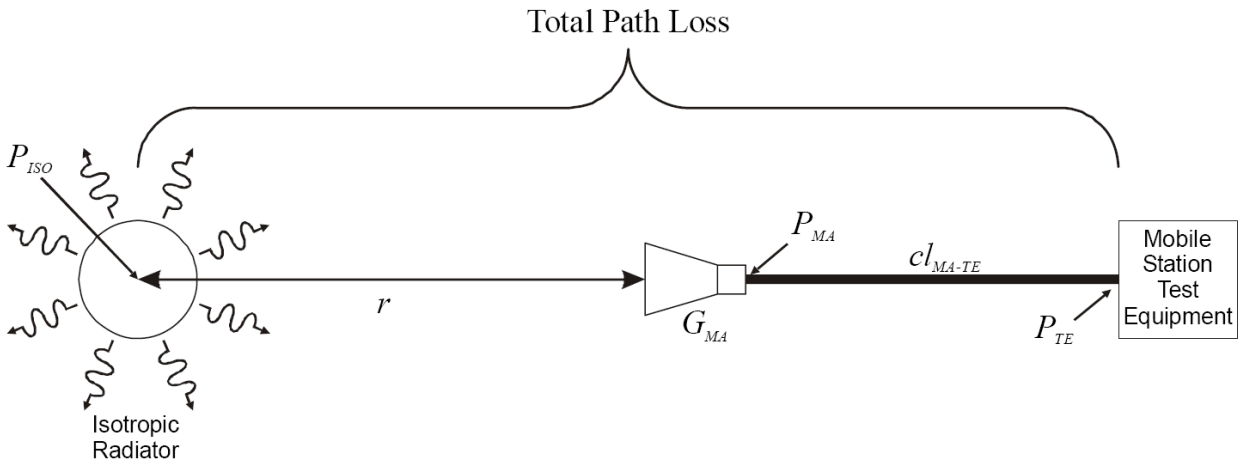


Figure 1. THEORETICAL CASE FOR DETERMINING PATH LOSS

In equation form, this becomes:

Equation 1

$$PL = P_{ISO} - P_{TE},$$

where PL is the total path loss, P_{ISO} is the power radiated by the theoretical isotropic radiator, and P_{TE} is the power received at the test equipment port. As can be seen in Figure 1, this quantity includes the range path loss due to the range length r, the gain of the measurement antenna, and any loss terms associated with the cabling, connections, amplifiers, splitters, etc. between the measurement antenna and the test equipment port.

Figure 2 shows a typical real world configuration for measuring the path loss. In this case, a reference antenna with known gain is used in place of the theoretical isotropic source. The path loss may then be determined from the power into the reference antenna by adding the gain of the reference antenna. That is:

Equation 2

$$P_{ISO} = P_{RA} + G_{RA},$$

where P_{RA} is the power radiated by reference antenna, and G_{RA} is the gain of the reference antenna, so that:

Equation 3

$$PL = P_{RA} + G_{RA} - P_{TE},$$

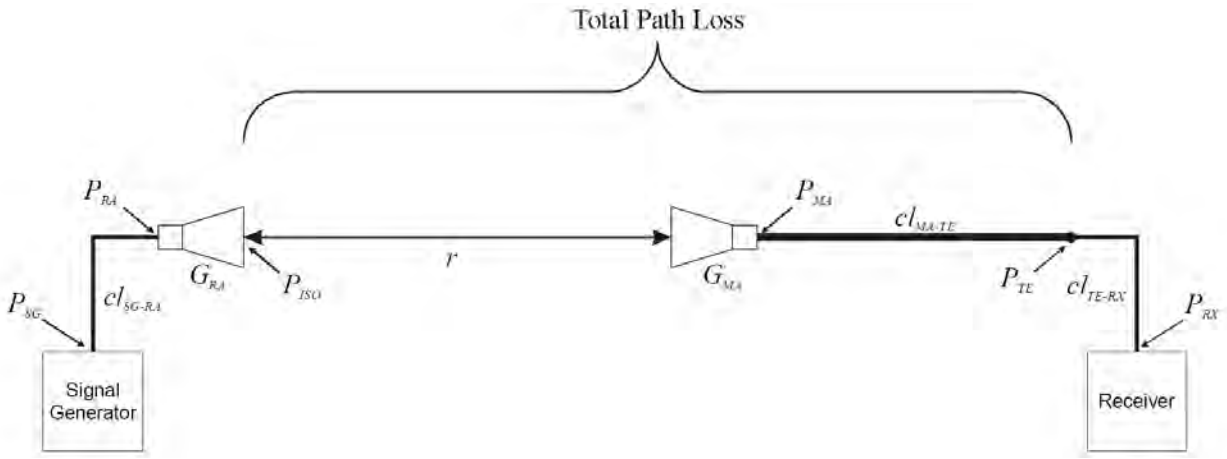


Figure 2. TYPICAL CONFIGURATION FOR MEASURING PATH LOSS

In order to determine P_{RA}, it is necessary to perform a cable reference measurement to remove the effects of the cable loss between signal generator and reference antenna, and between the test equipment port and the receiver. This establishes a reference point at the input to the reference antenna. Figure 3 illustrates the cable reference measurement configuration. Assuming the power level at the signal generator is fixed, it is easy to show that the difference between P_{RA} and P_{TE} in Figure 2 is given by:

Equation 4

$$P_{RA} - P_{TE} = P_{RX}' - P_{RX},$$

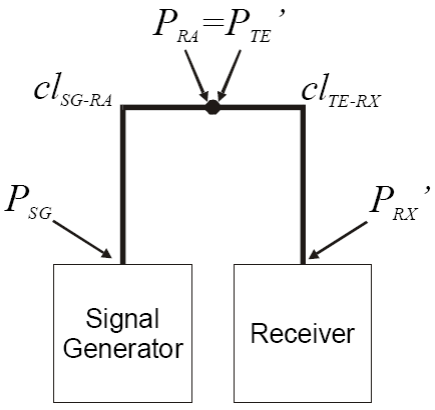


Figure 3. CABLE REFERENCE CALIBRATION CONFIGURATION

Where $P_{RX'}$ is the power measured at the receiver during the cable reference test, and P_{RX} is the power measured at the receiver during the range path loss measurement in Figure 2. Thus, the path loss is then just given by:

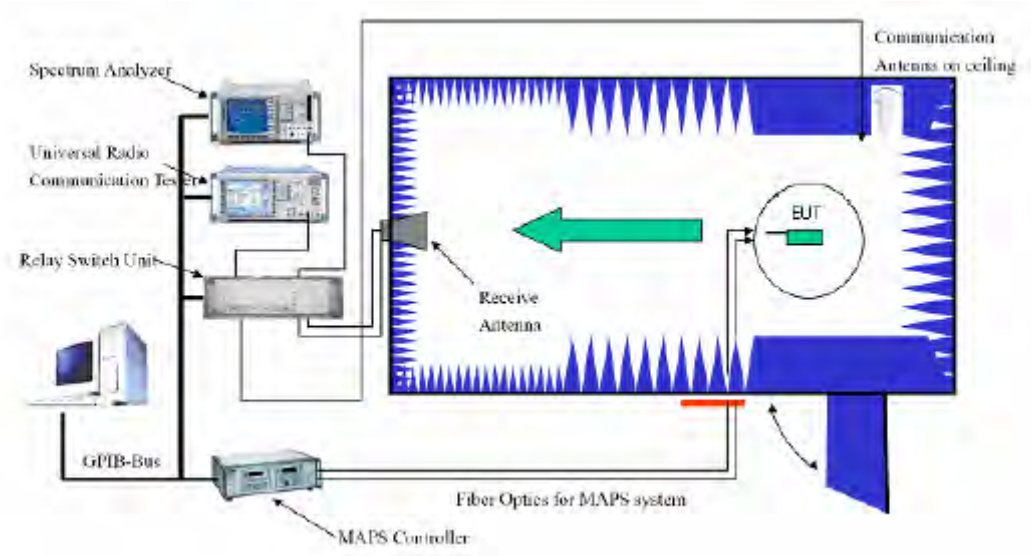
Equation 5

$$PL = G_{RA} + P_{RX}\text{'} - P_{RX'}$$

$$EIRP = P_t + P_L$$

P_t = Often referred to as antenna output power

4.3.3 Test Setup Layout of ERP/EIRP



4.3.4 Test Result

CDMA 850 Radiated Power ERP				
Maximum Output Power				
Frequency (MHz)	Read Level (dBm)	Correction factor (dBm)	ERP (dBm)	ERP (W)
824.7	76.82	-49.50	**27.32**	**0.540**
836.52	77.96	-49.70	**28.26**	**0.670**
848.31	75.89	-49.70	**26.19**	**0.416**

CDMA 1900 Radiated Power EIRP				
Maximum Output Power				
Frequency (MHz)	Read Level (dBm)	Correction factor (dBm)	EIRP (dBm)	EIRP (W)
1851.3	86.64	-55.40	**31.24**	**1.330**
1880.0	87.18	-55.60	**31.58**	**1.439**
1908.8	85.96	-55.70	**30.26**	**1.061**

1XVDO 850 Radiated Power ERP				
Maximum Output Power				
Frequency (MHz)	Read Level (dBm)	Correction factor (dBm)	ERP (dBm)	ERP (W)
824.7	77.00	-49.50	**27.50**	**0.562**
836.52	77.75	-49.70	**28.05**	**0.638**
848.31	75.73	-49.70	**26.03**	**0.401**

1XVDO 1900 Radiated Power EIRP				
Maximum Output Power				
Frequency (MHz)	Read Level (dBm)	Correction factor (dBm)	EIRP (dBm)	EIRP (W)
1851.3	86.46	-55.40	**31.06**	**1.276**
1880.0	87.02	-55.60	**31.42**	**1.388**
1908.8	85.74	-55.70	**30.04**	**1.009**

Note:

1. ERP/EIRP = Read Level + Correction factor.
2. For CDMA signals, a peak detector is used, with RBW = VBW = 3 MHz.
3. For WCDMA signals, a peak detector is used with RBW = VBW = 5MHz.
4. For AMPS, GSM, and NADC TDMA signals, a peak detector is used, with RBW = VBW= 1 MHz.

4.4 Occupied Bandwidth and Band Edge Measurement

4.4.1 Measurement Instruments

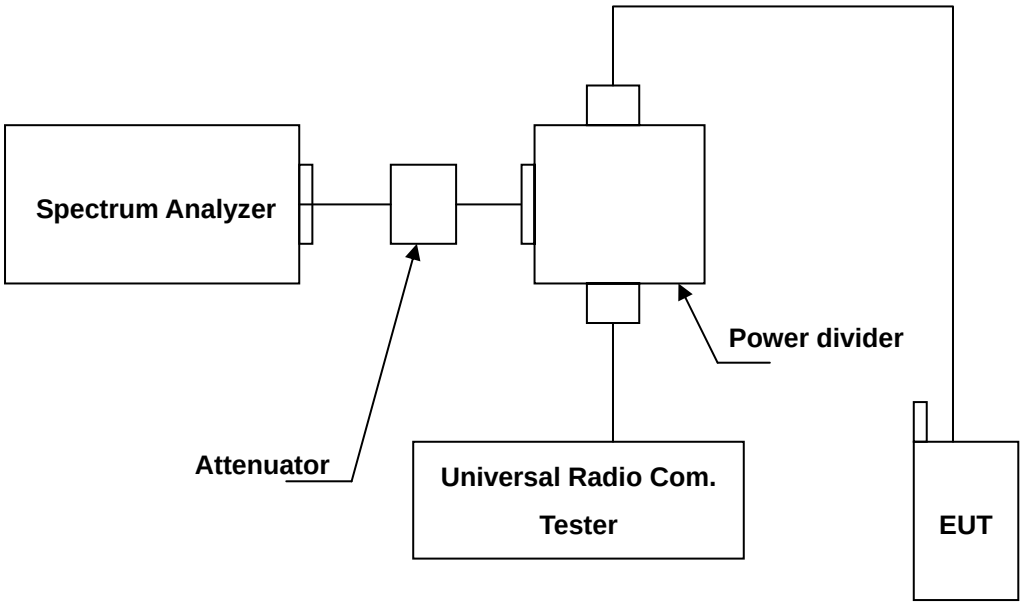
As described in chapter 5 of this test report.

4.4.2 Test Procedure

The measurement is made according to FCC rules part 22 and 24:

1. The EUT was connected to Spectrum Analyzer and Base Station via power divider.
2. The occupied bandwidth of middle channel for the highest and lowest RF powers was measured.
3. The band edge of low and high channels for the highest RF powers within the transmitting frequency band were measured. Setting RBW as roughly BW/100.
4. The band edge setting:
   a. RB=3 kHz; VB=3 kHz for GSM 850 and PCS 1900.
   b. RB=100 kHz; VB=100 kHz for WCDMA Band V and WCDMA Band II.
   c. RB=13 kHz; VB=13 kHz for CDMA 850 and CDMA 1900.

4.4.3 Test Setup Layout



4.4.4 Occupied Bandwidth Test Result

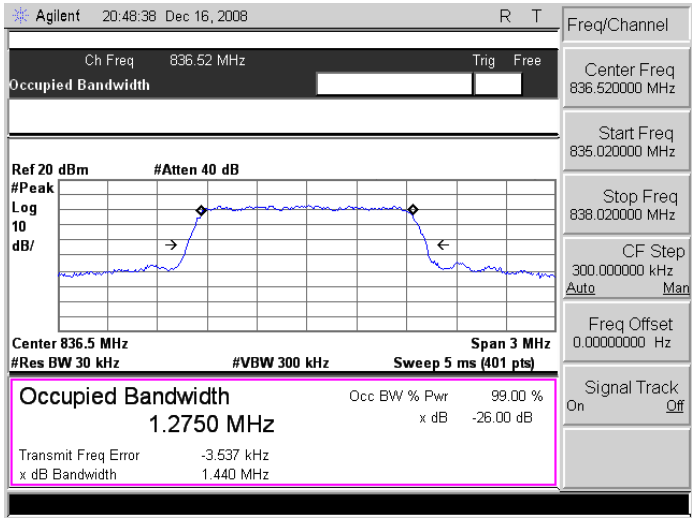
CDMA 850		
Channel	**Frequency (MHz)**	**Output Power - 26 dBc Bandwidth (kHz)**
1013	824.70	**1.2750**
384	836.52	**1.2733**
777	848.31	**1.2768**
RB:3KHz , VBW:10KHz		

CDMA 1900		
Channel	**Frequency (MHz)**	**Output Power - 26 dBc Bandwidth (kHz)**
25	1851.25	**1.2748**
600	1880.00	**1.2734**
1175	1908.75	**1.2693**
RB:3KHz , VBW:10KHz		

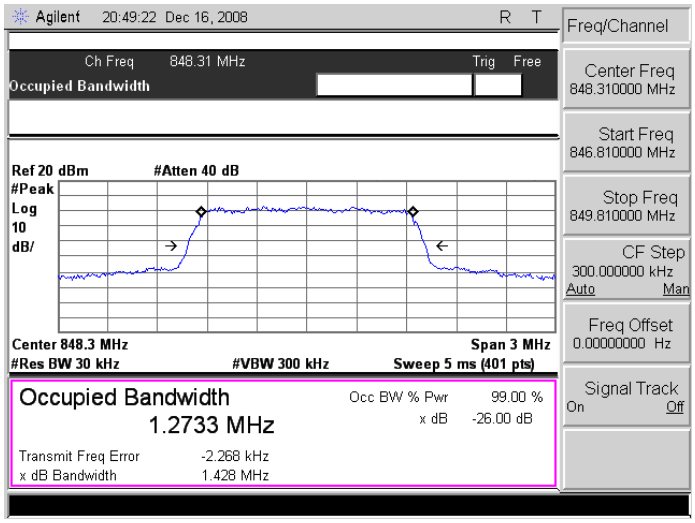
1XEVDO 850		
Channel	**Frequency (MHz)**	**Output Power - 26 dBc Bandwidth (MHz)**
1013	824.70	**1.2681**
384	836.52	**1.2707**
777	848.31	**1.2655**
RB:30KHz , VBW:300KHz		

1XEVDO 1900		
Channel	**Frequency (MHz)**	**Output Power - 26 dBc Bandwidth (MHz)**
25	1851.25	**1.2747**
600	1880.00	**1.2643**
1175	1908.75	**1.2727**
RB:30KHz , VBW:300KHz		

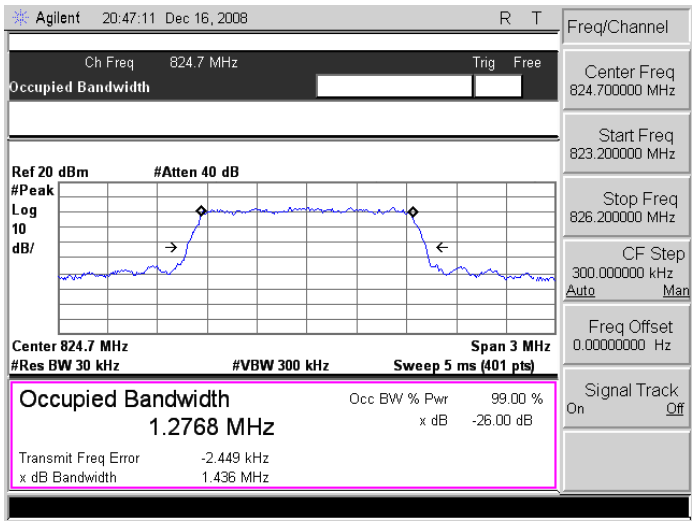
Test Mode: CDMA 850 CH128 99% Occupied Bandwidth



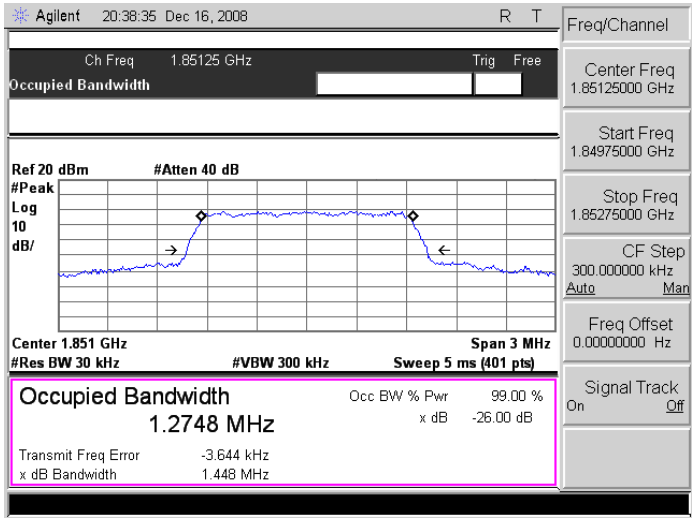
Test Mode: CDMA 850 CH190 99% Occupied Bandwidth



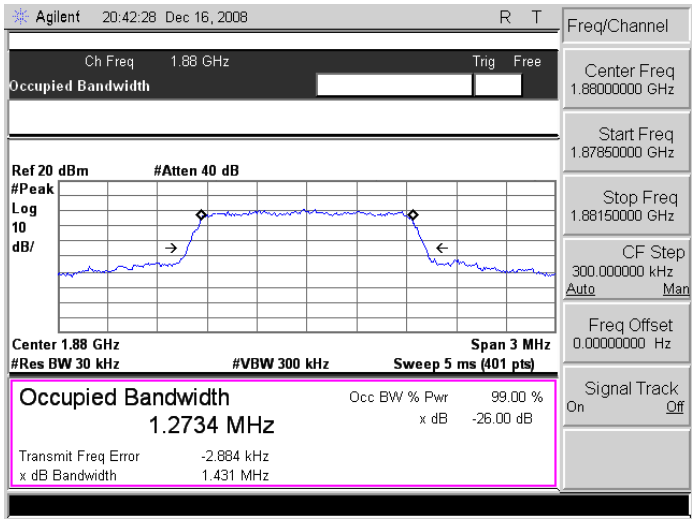
Test Mode: CDMA 850 CH251 99% Occupied Bandwidth



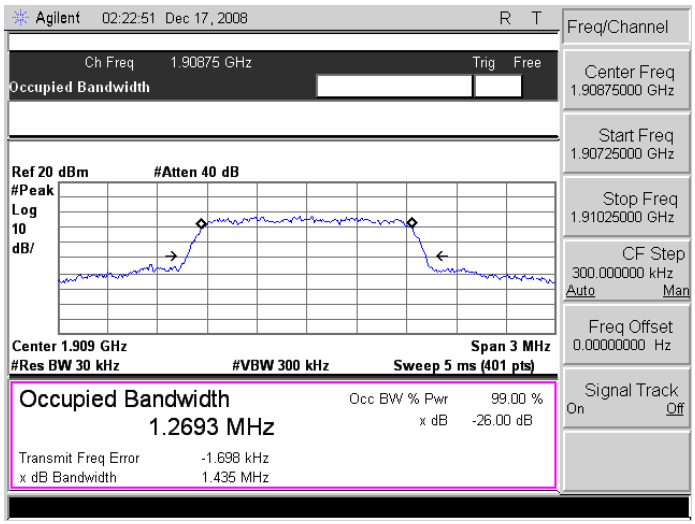
Test Mode: CDMA 1900 CH512 99% Occupied Bandwidth



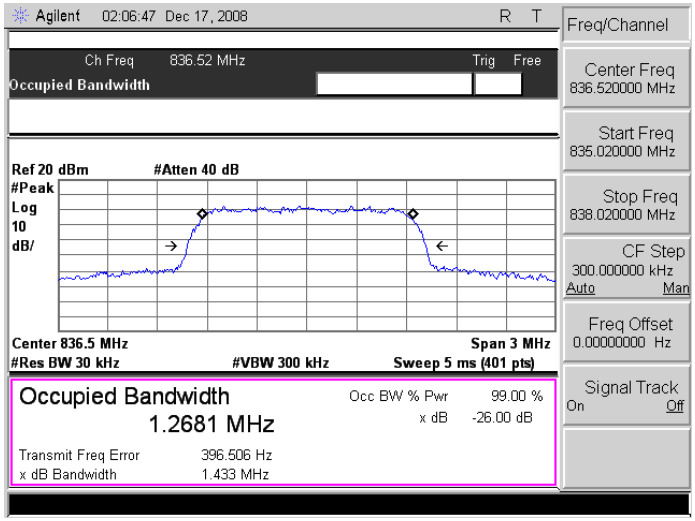
Test Mode: CDMA 1900 CH661 99% Occupied Bandwidth



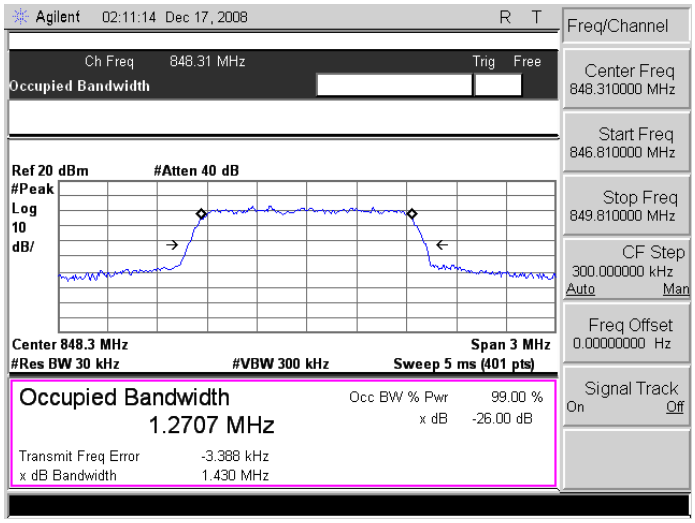
Test Mode: CDMA 1900 CH810 99% Occupied Bandwidth



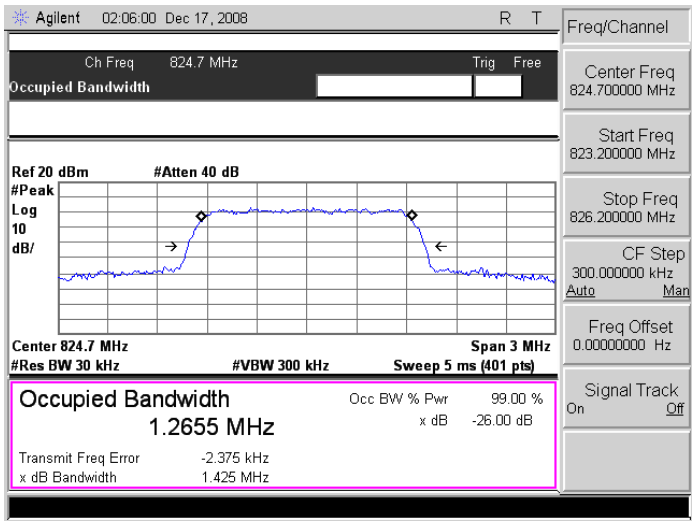
Test Mode: 1XEVDO 850 CH128 99% Occupied Bandwidth



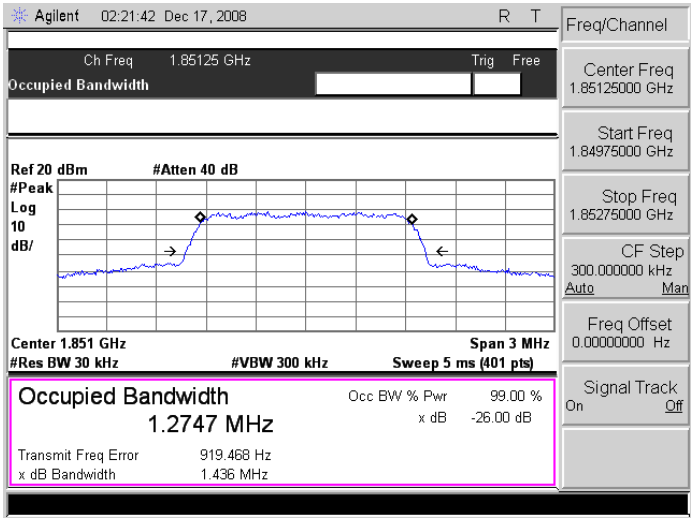
Test Mode: 1XEVDO 850 CH190 99% Occupied Bandwidth



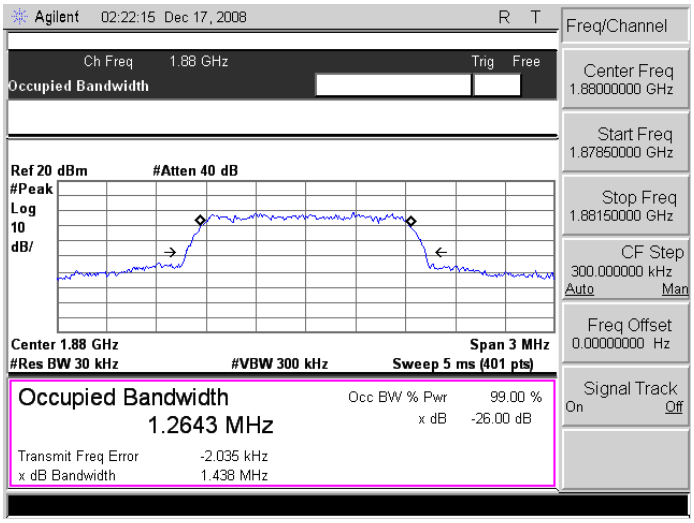
Test Mode: 1XEVDO 850 CH251 99% Occupied Bandwidth



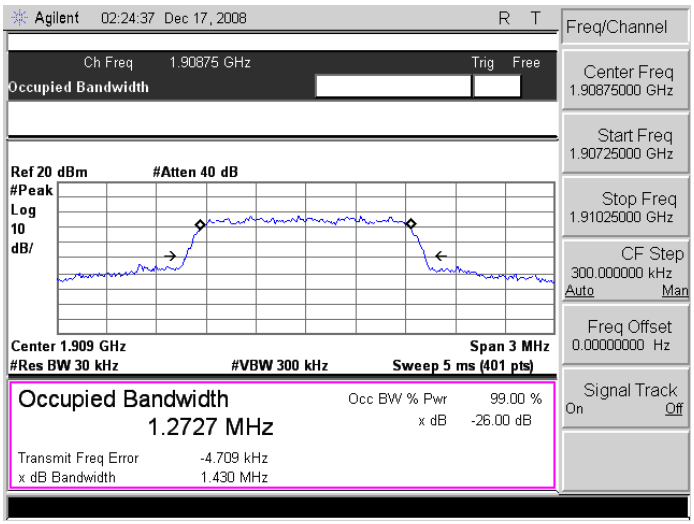
Test Mode: 1XEVDO 1900 CH512 99% Occupied Bandwidth



Test Mode: 1XEVDO 1900 CH661 99% Occupied Bandwidth

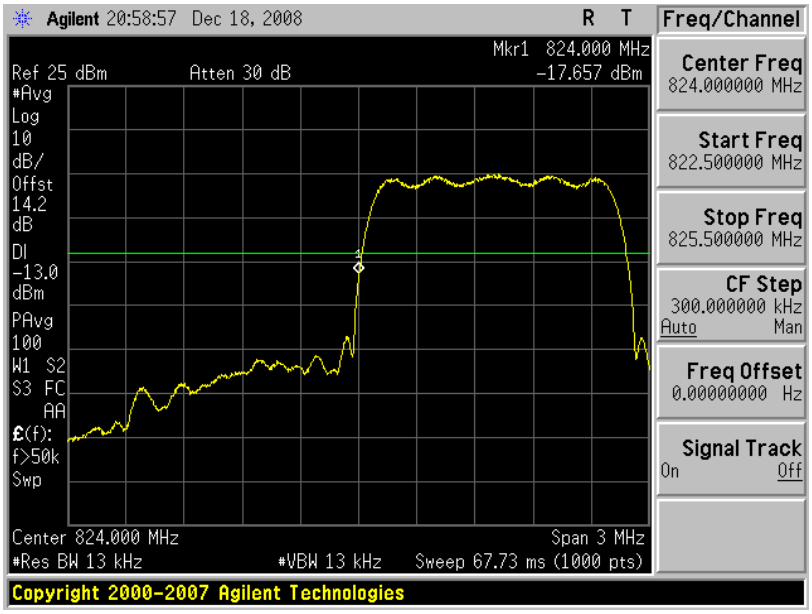


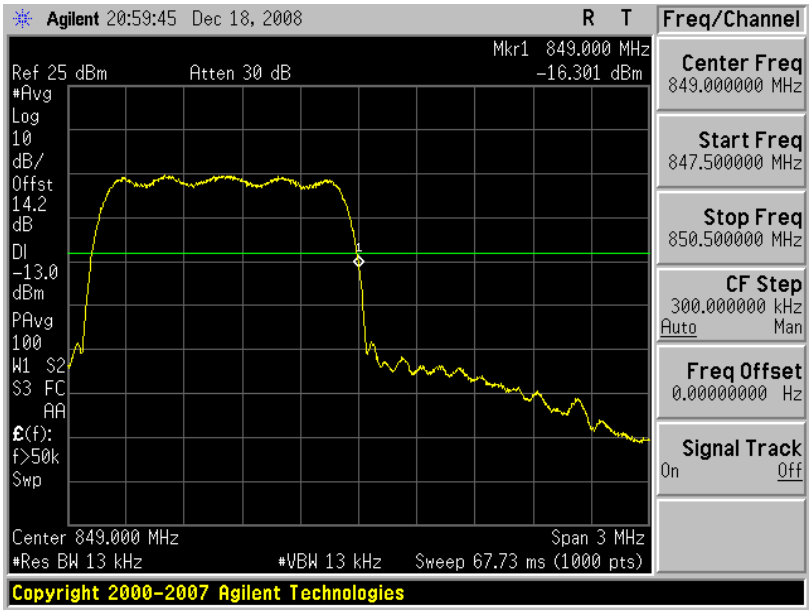
Test Mode: 1XEVDO 1900 CH810 99% Occupied Bandwidth



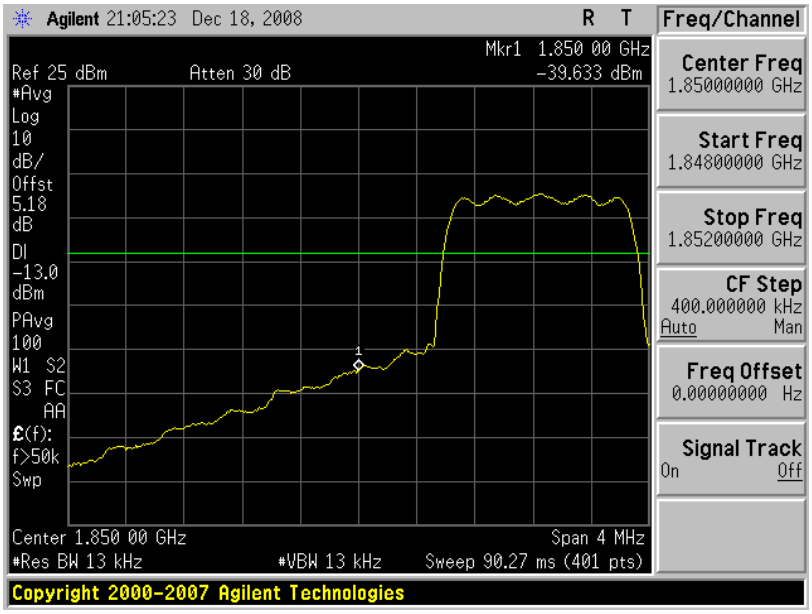
4.4.5 Band Edge Test Result

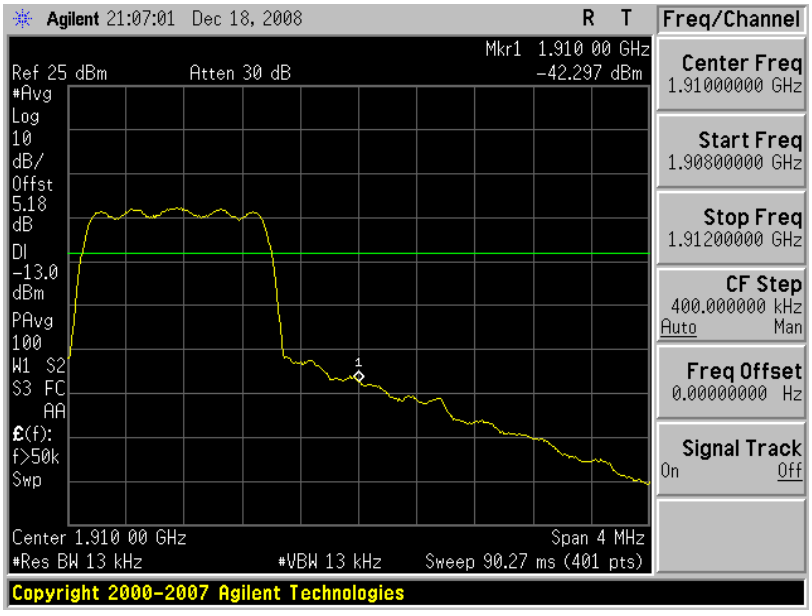
CDMA 850				
Band	**Channel**	**Frequency (MHz)**	**Bandwidth (dBm)**	**Limit (dBm)**
Lower	1013	824.70	**-17.657**	-13
Higher	777	848.31	**-16.301**	-13





CDMA 1900				
Band	**Channel**	**Frequency (MHz)**	**Bandwidth (dBm)**	**Limit (dBm)**
Lower	25	1851.25	**-39.633**	-13
Higher	1175	1908.75	**-42.297**	-13





4.5 Conducted Emission

4.5.1 Measurement Instruments

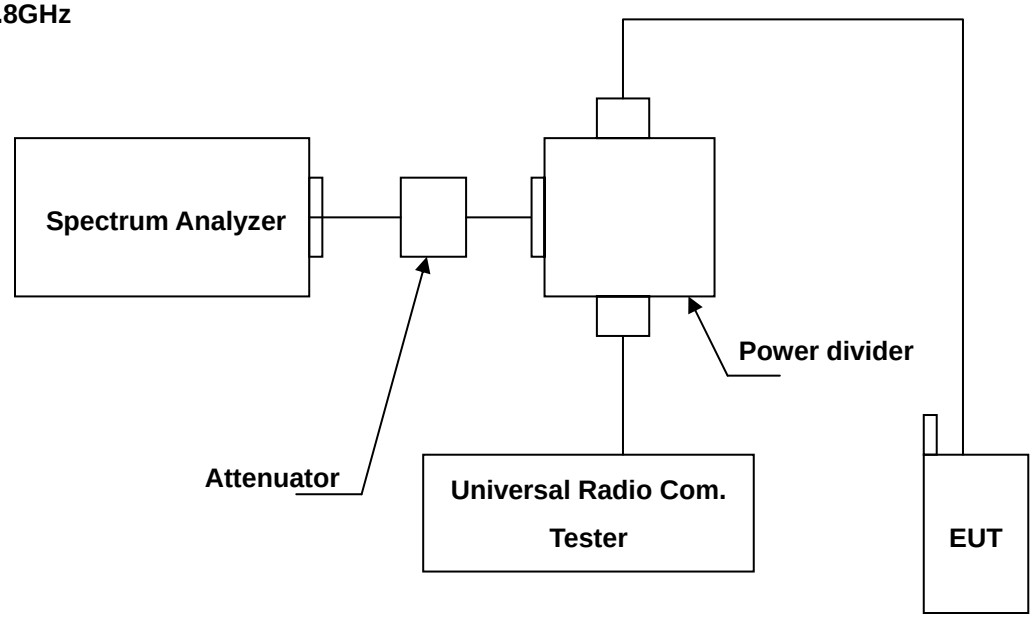
As described in chapter 5 of this test report.

4.5.2 Test Procedure

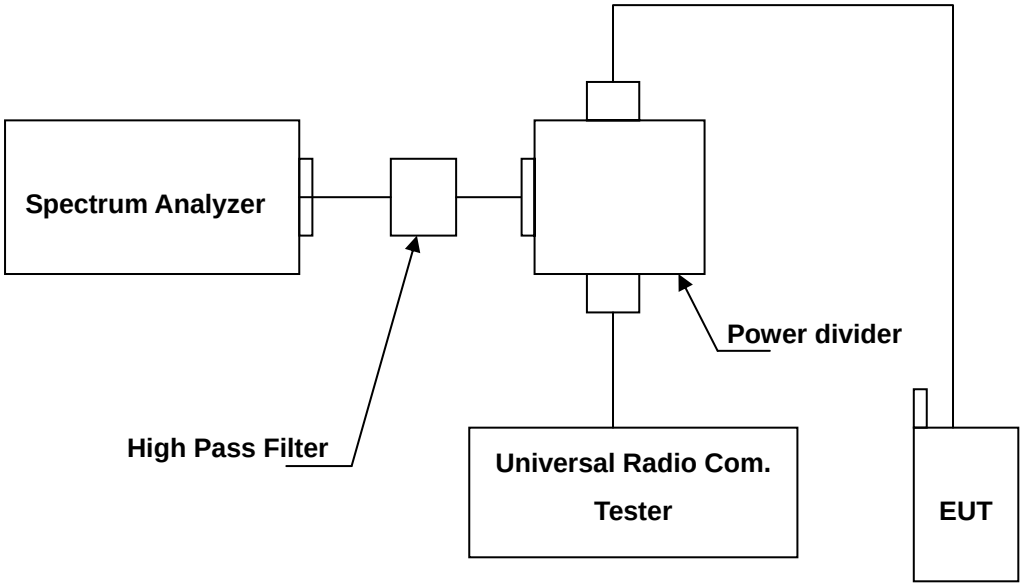
1. The EUT was connected to Spectrum Analyzer and Base Station via power divider.
2. The middle channel for the highest RF power within the transmitting frequency was measured.
3. The conducted spurious emission for the whole frequency range was taken.
4. Test setting at CDMA 850 RB>100 kHz, VB>100 kHz; CDMA 1900 RB>1MHz, VB>1MHz.'
5.

4.5.3 Test Setup Layout

Below 2.8GHz



Above 2.8GHz



4.5.4 Test Result

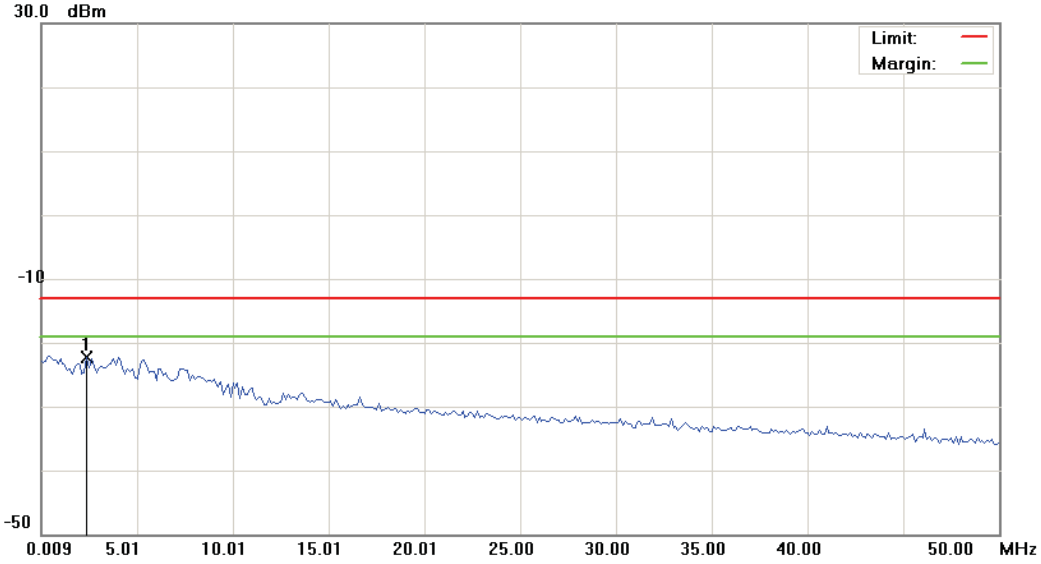
Applicant	: XAC Automation Corporation
Model No	: FD-400Ti
EUT	: Portable Terminal
Test Mode	: CDMA 850 (Low CH1013 / Middle CH384 / High CH 777)
	CDMA 1900 (Low CH25 / Middle CH600 / High CH1175)
Test Date	: 12/16/2008

Please refer to next pager of detail testing data.

Note: Amplitude= Reading Amplitude + Factor (Cable loss + Filter Amplitude= Insertion loss)

(Auto calculate in spectrum analyzer)

File :ED400(CH1013) Data :#1 Date: 2008/12/16 Time: 下午 11:43:23



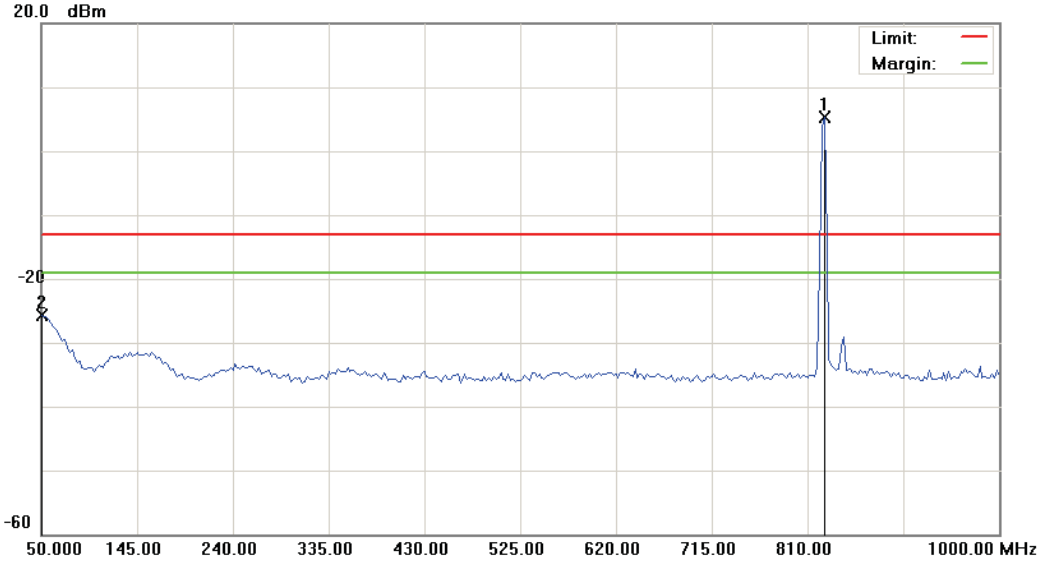
Site:		Polarization:	***Conducted po***
Limit:	FCC Part 22 conducted(9k-12.75G)	Power:	AC 110V/60Hz
EUT:	Portable Terminal	Distance:	
M/N:	FD-400Ti		
Mode:	CDMA 850		
Note:	CH1013		

Temperature:	26 ℃
Humidity:	55 %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBm	dB	dBm	dBm	dB	Detector	cm	degree	Comment
1	*	2.3835	-53.16	30.88	-22.28	-13.00	-9.28	peak			

*:Maximum data x:Over limit !:over margin

File :ED400(CH1013) Data :#2 Date: 2008/12/16 Time: 下午 11:43:45

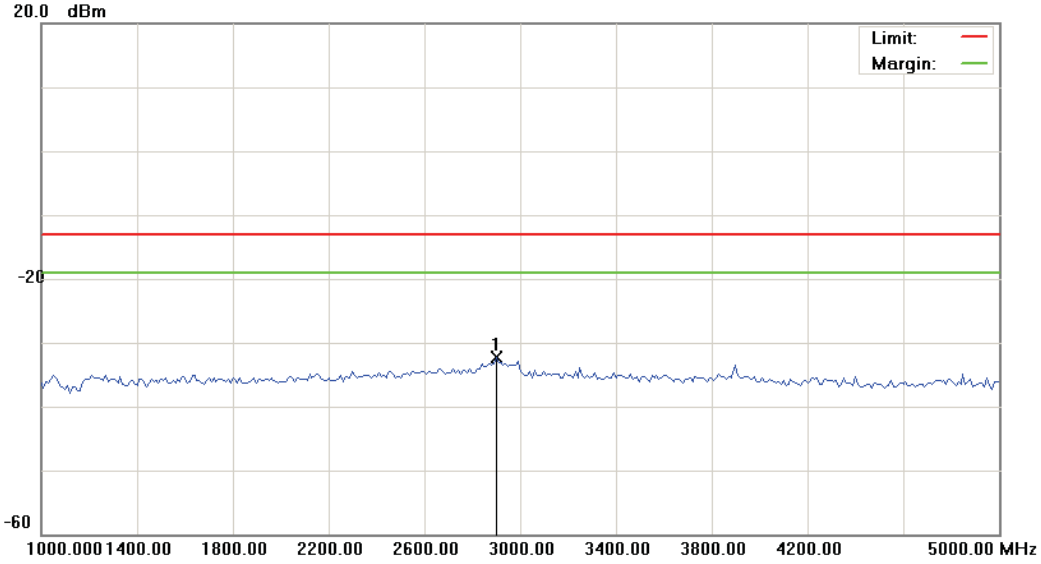


Site:	Polarization: *Conducted po*	Temperature: 26 ℃
Limit: FCC Part 22 conducted(9k-12.75G)	Power: AC 110V/60Hz	Humidity: 55 %
EUT: Portable Terminal	Distance:	
M/N: FD-400Ti		
Mode: CDMA 850		
Note: CH1013		

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBm	dB	dBm	dBm	dB	Detector	cm	degree	Comment
1	*	826.6250	1.41	3.86	5.27	-13.00	18.27	peak			Main Frequency
2		50.0000	-40.35	14.69	-25.66	-13.00	-12.66	peak			

*:Maximum data x:Over limit !:over margin

File :ED400(CH1013) Data :#3 Date: 2008/12/16 Time: 下午 10:49:14

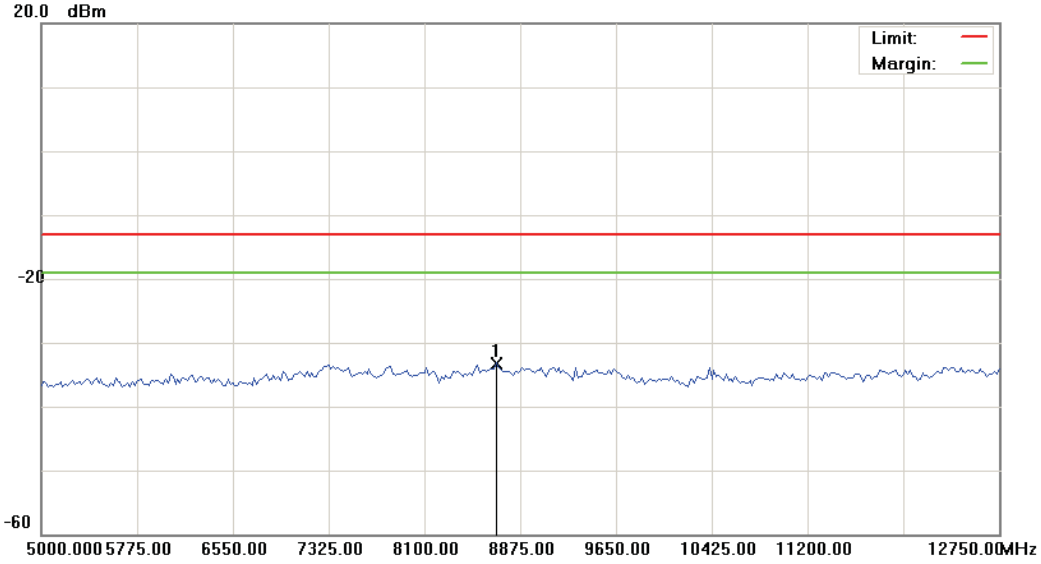


Site:		Polarization:	***Conducted po***
Limit:	FCC Part 22 conducted(9k-12.75G)	Power:	AC 110V/60Hz
EUT:	Portable Terminal	Distance:	
M/N:	FD-400Ti		
Mode:	CDMA 850		
Note:	CH1013		

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBm	dB	dBm	dBm	dB	Detector	cm	degree	Comment
1	*	2900.000	-37.06	4.76	-32.30	-13.00	-19.30	peak			

*:Maximum data x:Over limit !:over margin

File :ED400(CH1013) Data :#4 Date: 2008/12/16 Time: 下午 10:49:36

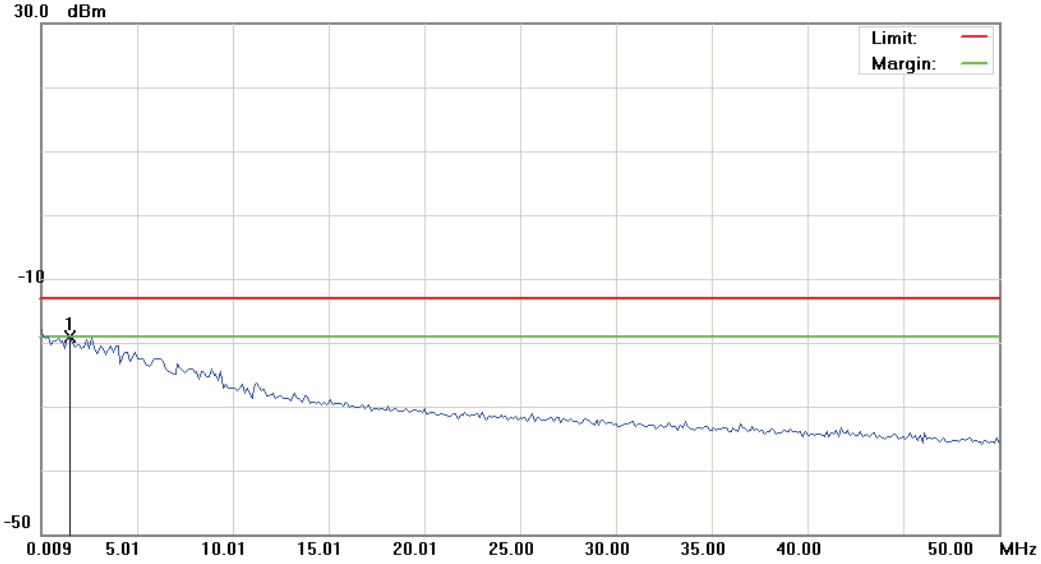


Site:		Polarization:	*Conducted po*	Temperature: 26 ℃
Limit:	FCC Part 22 conducted(9k-12.75G)	Power:	AC 110V/60Hz	Humidity: 55 %
EUT:	Portable Terminal	Distance:		
M/N:	FD-400Ti			
Mode:	CDMA 850			
Note:	CH1013			

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBm	dB	dBm	dBm	dB	Detector	cm	degree	Comment
1	*	8681.250	-38.72	5.52	-33.20	-13.00	-20.20	peak			

*:Maximum data x:Over limit !:over margin

File :ED400(CH384) Data :#1 Date: 2008/12/16 Time: 下午 11:45:57

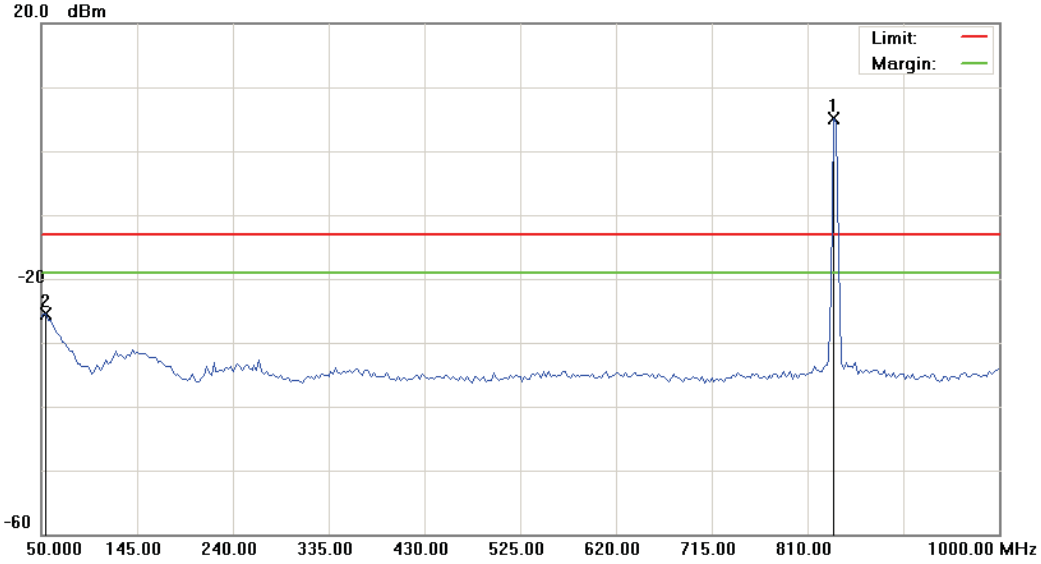


Site:	Polarization: Conducted po	Temperature: 26 ℃
Limit: FCC Part 22 conducted(9k-12.75G)	Power: AC 110V/60Hz	Humidity: 55 %
EUT: Portable Terminal	Distance:	
M/N: FD-400Ti		
Mode: CDMA 850		
Note: CH384		

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBm	dB	dBm	dBm	dB	Detector	cm	degree	Comment
1	*	1.5084	-50.46	31.41	-19.05	-13.00	-6.05	peak			

*:Maximum data x:Over limit !:over margin

File :ED400(CH384) Data :#2 Date: 2008/12/16 Time: 下午 11:46:19

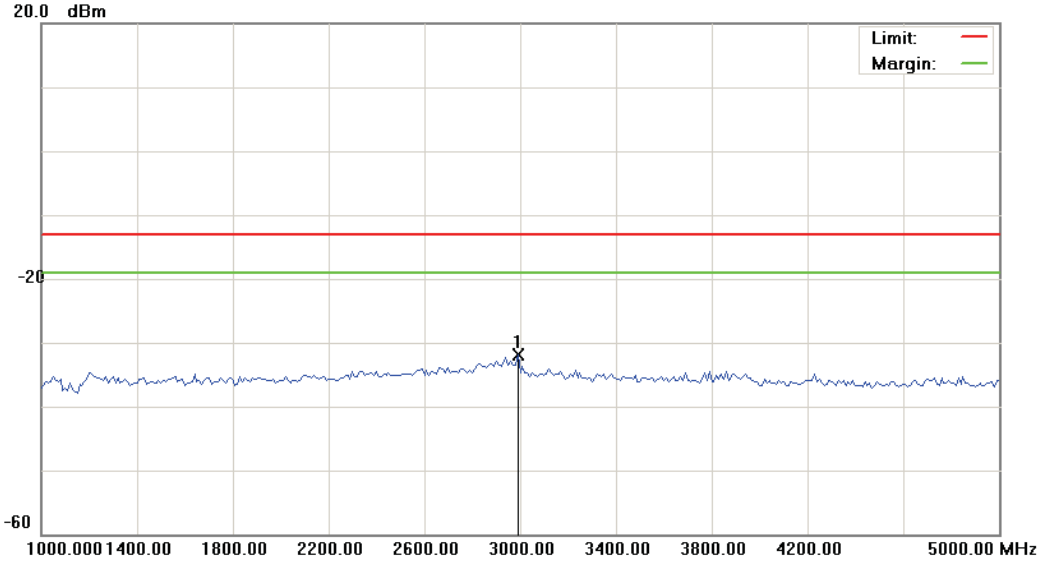


Site:	Polarization: *Conducted po*	Temperature: 26 ℃
Limit: FCC Part 22 conducted(9k-12.75G)	Power: AC 110V/60Hz	Humidity: 55 %
EUT: Portable Terminal	Distance:	
M/N: FD-400Ti		
Mode: CDMA 850		
Note: CH384		

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBm	dB	dBm	dBm	dB	Detector	cm	degree	Comment
1	*	836.1250	1.16	3.96	5.12	-13.00	18.12	peak			Main Frequency
2		54.7500	-39.35	13.85	-25.50	-13.00	-12.50	peak			

*:Maximum data x:Over limit !:over margin

File :ED400(CH384) Data :#3 Date: 2008/12/16 Time: 下午 10:50:32

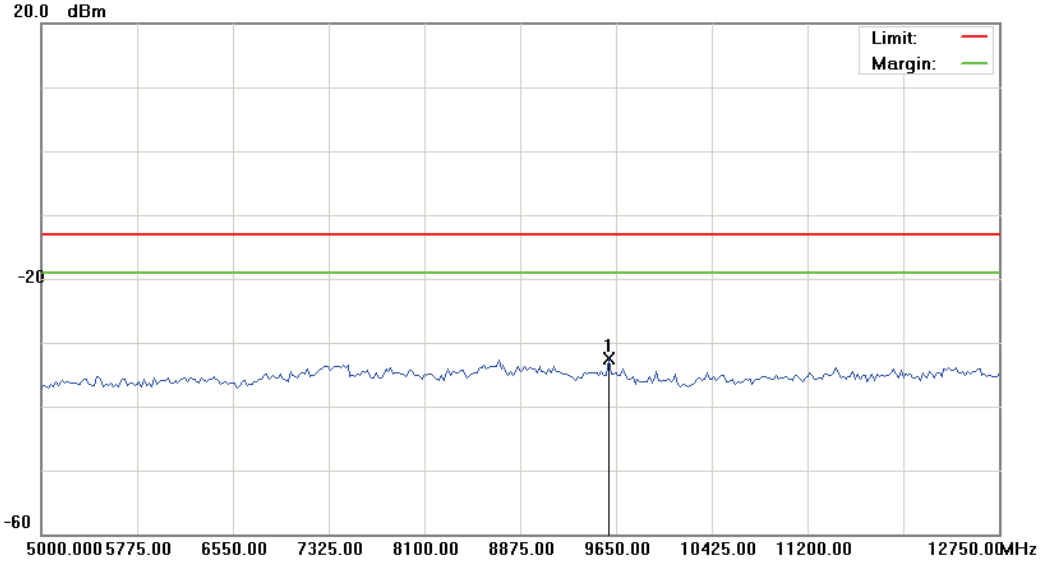


Site:		Polarization:	***Conducted po***
Limit:	FCC Part 22 conducted(9k-12.75G)	Power:	AC 110V/60Hz
EUT:	Portable Terminal	Distance:	
M/N:	FD-400Ti		
Mode:	CDMA 850		
Note:	CH384		

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBm	dB	dBm	dBm	dB	Detector	cm	degree	Comment
1	*	2990.000	-36.46	4.53	-31.93	-13.00	-18.93	peak			

*:Maximum data x:Over limit !:over margin

File :ED400(CH384) Data :#4 Date: 2008/12/16 Time: 下午 10:50:53

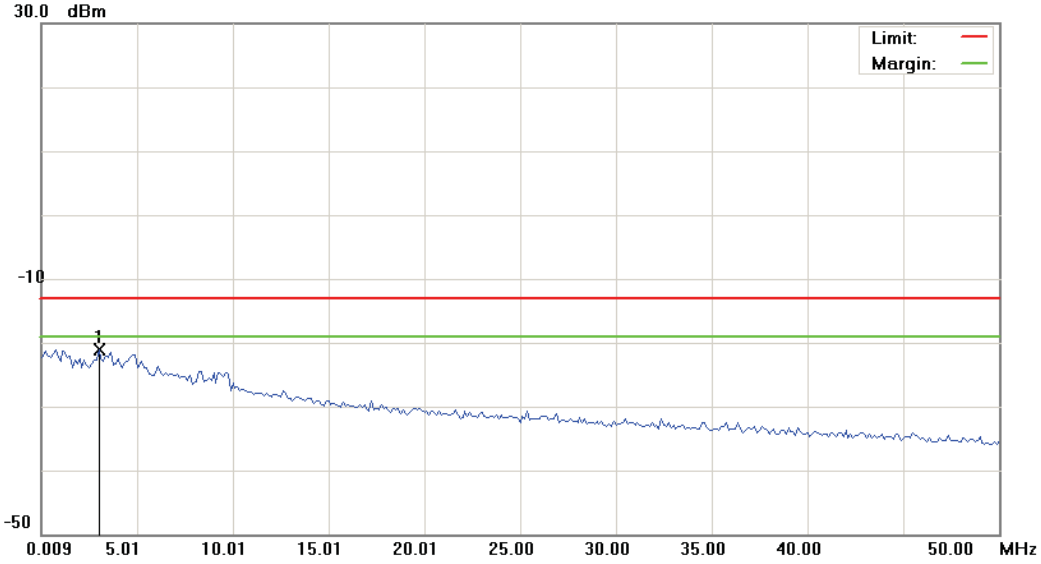


Site:		Polarization:	***Conducted po***
Limit:	FCC Part 22 conducted(9k-12.75G)	Power:	AC 110V/60Hz
EUT:	Portable Terminal	Distance:	
M/N:	FD-400Ti		
Mode:	CDMA 850		
Note:	CH384		

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBm	dB	dBm	dBm	dB	Detector	cm	degree	Comment
1	*	9591.875	-37.75	5.27	-32.48	-13.00	-19.48	peak			

*:Maximum data x:Over limit !:over margin

File :ED400(CH777) Data :#1 Date: 2008/12/16 Time: 下午 11:47:36

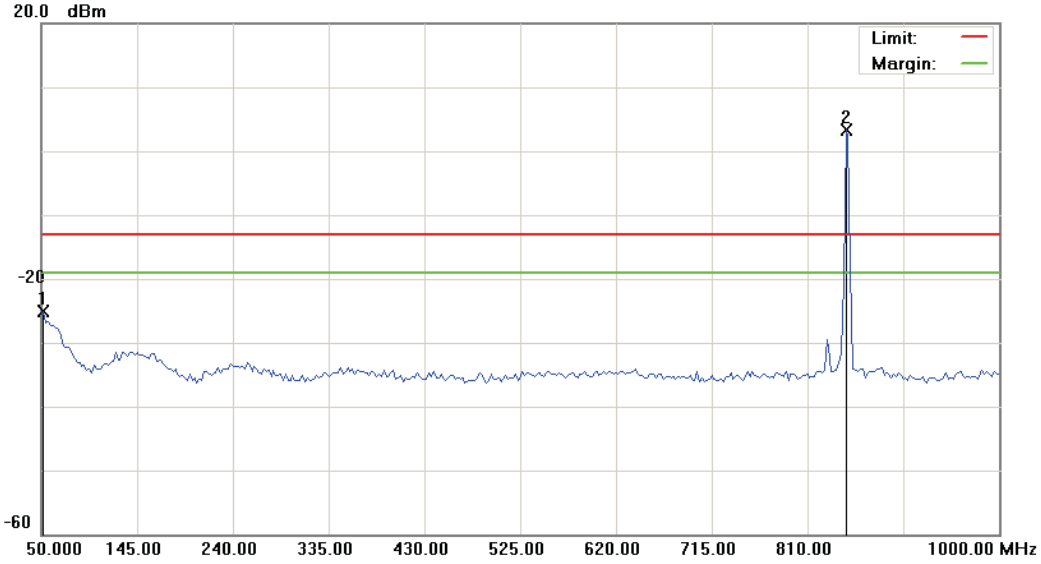


Site:	Polarization: *Conducted po*	Temperature: 26 ℃
Limit: FCC Part 22 conducted(9k-12.75G)	Power: AC 110V/60Hz	Humidity: 55 %
EUT: Portable Terminal	Distance:	
M/N: FD-400Ti		
Mode: CDMA 850		
Note: CH777		

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBm	dB	dBm	dBm	dB	Detector	cm	degree	Comment
1	*	3.0085	-51.62	30.52	-21.10	-13.00	-8.10	peak			

*:Maximum data x:Over limit !:over margin

File :ED400(CH777) Data :#2 Date: 2008/12/16 Time: 下午 11:47:57

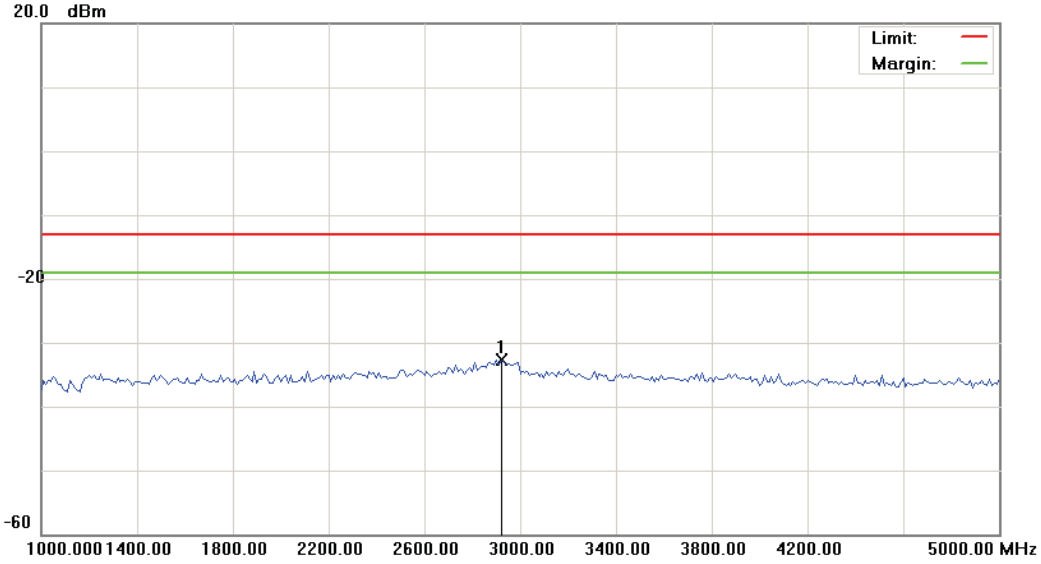


Site:		Polarization:	***Conducted po***
Limit:	FCC Part 22 conducted(9k-12.75G)	Power:	AC 110V/60Hz
EUT:	Portable Terminal	Distance:	
M/N:	FD-400Ti		
Mode:	CDMA 850		
Note:	CH777		

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBm	dB	dBm	dBm	dB	Detector	cm	degree	Comment
1		52.3750	-39.33	14.27	-25.06	-13.00	-12.06	peak			
2	*	848.0000	-0.71	3.98	3.27	-13.00	16.27	peak			Main Frequency

*:Maximum data x:Over limit !:over margin

File :ED400(CH777) Data :#3 Date: 2008/12/16 Time: 下午 10:52:05

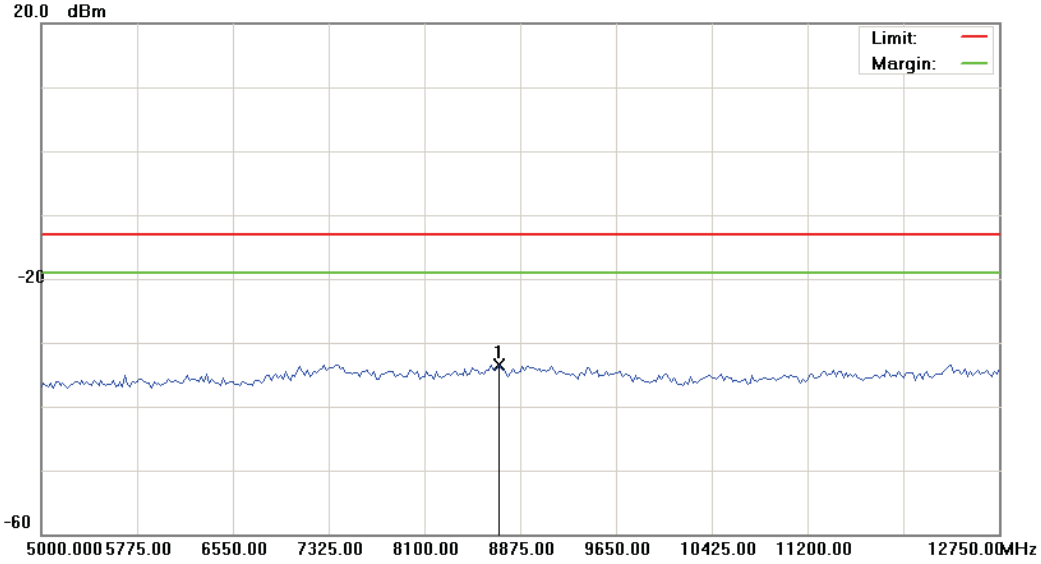


Site:		Polarization:	***Conducted po***
Limit:	FCC Part 22 conducted(9k-12.75G)	Power:	AC 110V/60Hz
EUT:	Portable Terminal	Distance:	
M/N:	FD-400Ti		
Mode:	CDMA 850		
Note:	CH777		

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBm	dB	dBm	dBm	dB	Detector	cm	degree	Comment
1	*	2920.000	-37.44	4.69	-32.75	-13.00	-19.75	peak			

*:Maximum data x:Over limit !:over margin

File :ED400(CH777) Data :#4 Date: 2008/12/16 Time: 下午 10:52:27

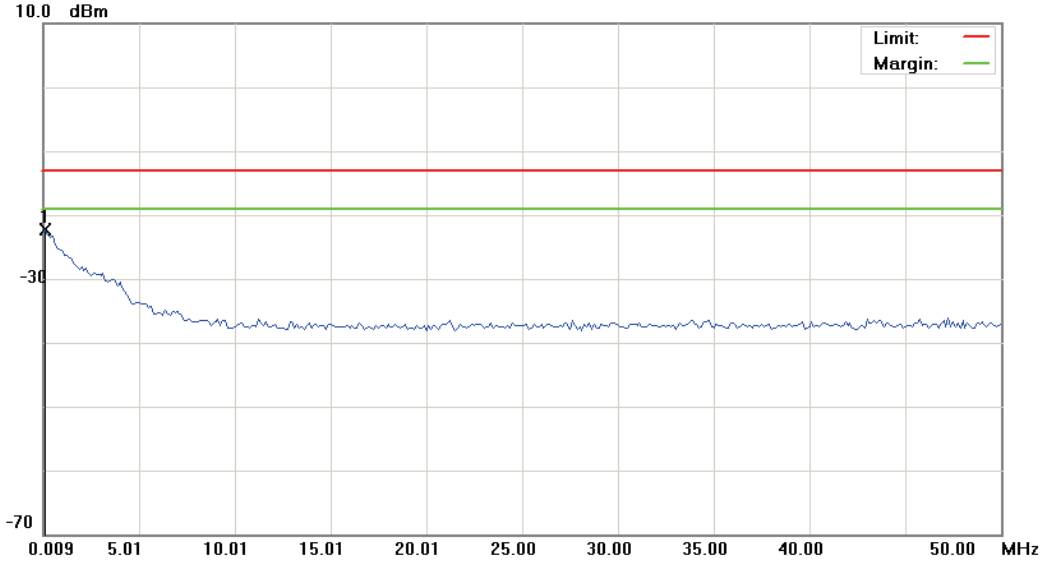


Site:		Polarization:	***Conducted po***
Limit:	FCC Part 22 conducted(9k-12.75G)	Power:	AC 110V/60Hz
EUT:	Portable Terminal	Distance:	
M/N:	FD-400Ti		
Mode:	CDMA 850		
Note:	CH777		

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBm	dB	dBm	dBm	dB	Detector	cm	degree	Comment
1	*	8700.625	-38.71	5.24	-33.47	-13.00	-20.47	peak			

*:Maximum data x:Over limit !:over margin

File :ED400(CH25) Data :#1 Date: 2008/12/16 Time: 下午 07:42:38



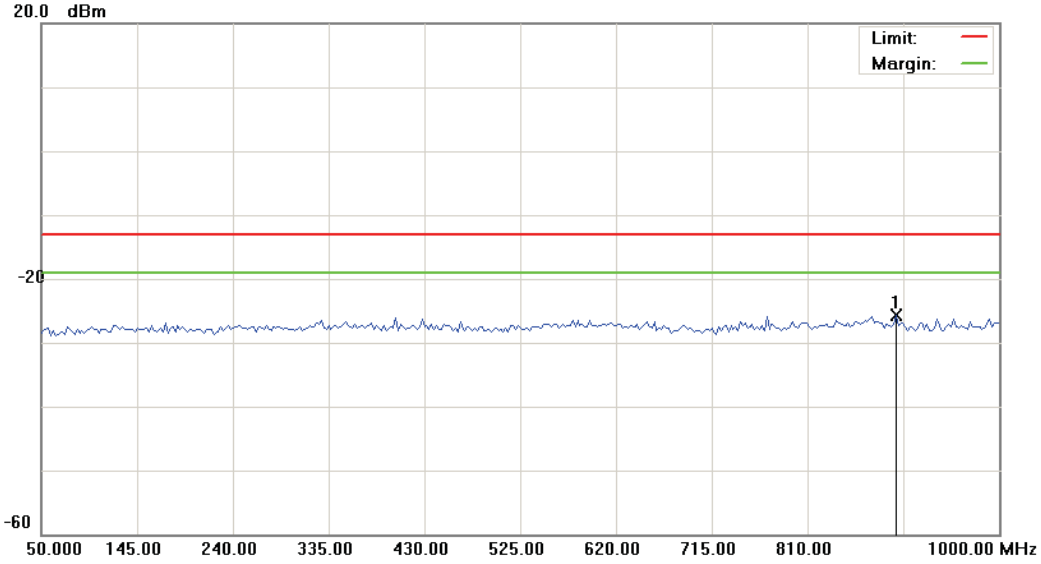
Site:		Polarization:	***Conducted po***
Limit:	FCC Part 24 conducted(9k-12.75G)	Power:	AC 110V/60Hz
EUT:	Portable Terminal	Distance:	
M/N:	FD-400Ti		
Mode:	CDMA 1900		
Note:	CH25		

Temperature:	26 ℃
Humidity:	55 %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBm	dB	dBm	dBm	dB	Detector	cm	degree	Comment
1	*	0.1340	-34.77	12.48	-22.29	-13.00	-9.29	peak			

*:Maximum data x:Over limit !:over margin

File :ED400(CH25) Data :#2 Date: 2008/12/16 Time: 下午 07:42:59

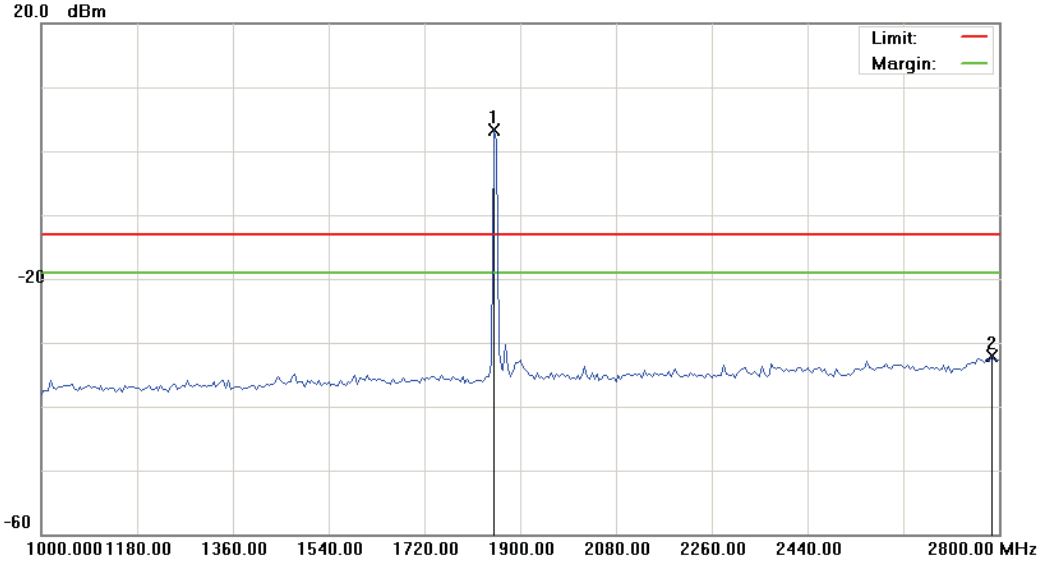


Site:	Polarization: *Conducted po*	Temperature: 26 ℃
Limit: FCC Part 24 conducted(9k-12.75G)	Power: AC 110V/60Hz	Humidity: 55 %
EUT: Portable Terminal	Distance:	
M/N: FD-400Ti		
Mode: CDMA 1900		
Note: CH25		

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBm	dB	dBm	dBm	dB	Detector	cm	degree	Comment
1	*	897.8750	-38.91	13.25	-25.66	-13.00	-12.66	peak			

*:Maximum data x:Over limit !:over margin

File :ED400(CH25) Data :#3 Date: 2008/12/16 Time: 下午 11:33:52

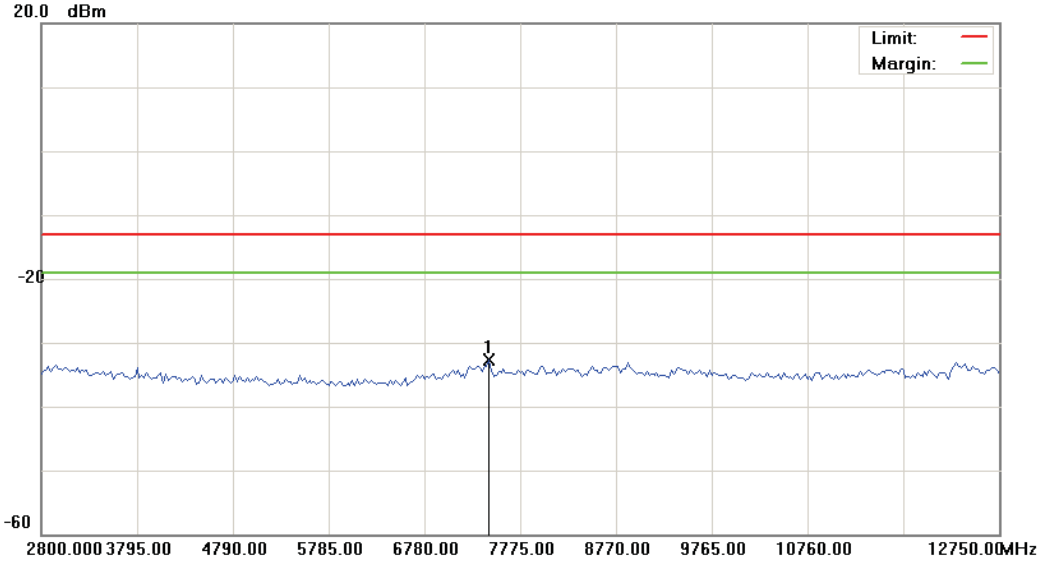


Site:		Polarization:	***Conducted po***
Limit:	FCC Part 24 conducted(9k-12.75G)	Power:	AC 110V/60Hz
EUT:	Portable Terminal	Distance:	
M/N:	FD-400Ti		
Mode:	CDMA 1900		
Note:	CH25		

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBm	dB	dBm	dBm	dB	Detector	cm	degree	Comment
1	*	1850.500	-1.05	4.26	3.21	-13.00	16.21	peak			Main Frequency
2		2786.500	-37.90	5.89	-32.01	-13.00	-19.01	peak			

*:Maximum data x:Over limit !:over margin

File :ED400(CH25) Data :#4 Date: 2008/12/16 Time: 下午 10:59:03

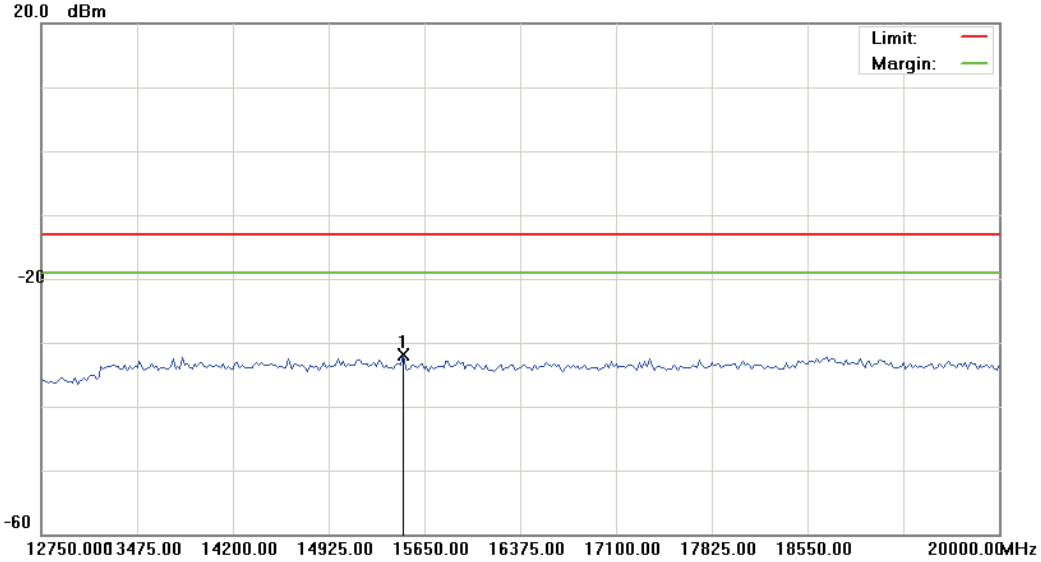


Site:		Polarization:	***Conducted po***
Limit:	FCC Part 24 conducted(9k-12.75G)	Power:	AC 110V/60Hz
EUT:	Portable Terminal	Distance:	
M/N:	FD-400Ti		
Mode:	CDMA 1900		
Note:	CH25		

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBm	dB	dBm	dBm	dB	Detector	cm	degree	Comment
1	*	7451.625	-37.93	5.21	-32.72	-13.00	-19.72	peak			

*:Maximum data x:Over limit !:over margin

File :ED400(CH25) Data :#5 Date: 2008/12/16 Time: 下午 10:59:25

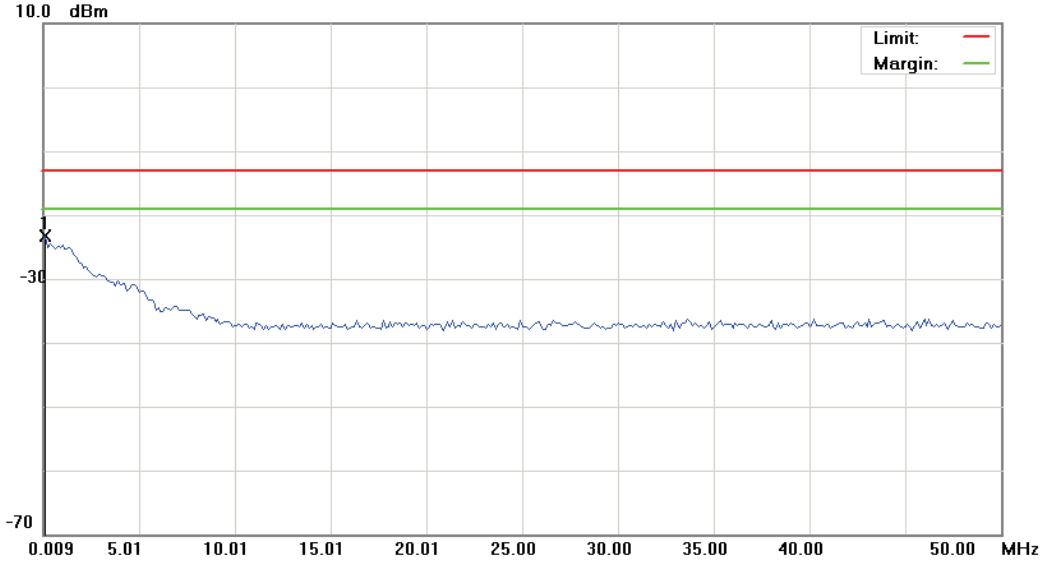


Site:	Polarization: Conducted po	Temperature: 26 ℃
Limit: FCC Part 24 conducted(9k-12.75G)	Power: AC 110V/60Hz	Humidity: 55 %
EUT: Portable Terminal	Distance:	
M/N: FD-400Ti		
Mode: CDMA 1900		
Note: CH25		

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBm	dB	dBm	dBm	dB	Detector	cm	degree	Comment
1	*	15486.875	-38.04	6.15	-31.89	-13.00	-18.89	peak			

*:Maximum data x:Over limit !:over margin

File :ED400(CH600) Data :#1 Date: 2008/12/16 Time: 下午 07:44:01



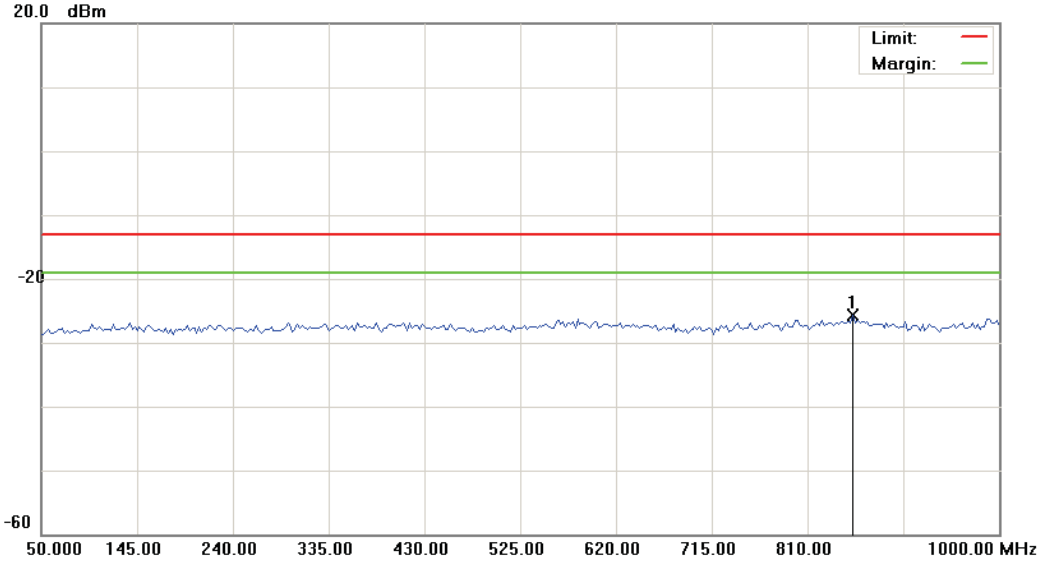
Site:		Polarization:	Conducted po
Limit:	FCC Part 24 conducted(9k-12.75G)	Power:	AC 110V/60Hz
EUT:	Portable Terminal	Distance:	
M/N:	FD-400Ti		
Mode:	CDMA 1900		
Note:	CH600		

Temperature:	26 ℃
Humidity:	55 %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBm	dB	dBm	dBm	dB	Detector	cm	degree	Comment
1	*	0.1340	-35.82	12.48	-23.34	-13.00	-10.34	peak			

*:Maximum data x:Over limit !:over margin

File :ED400(CH600) Data :#2 Date: 2008/12/16 Time: 下午 07:44:22

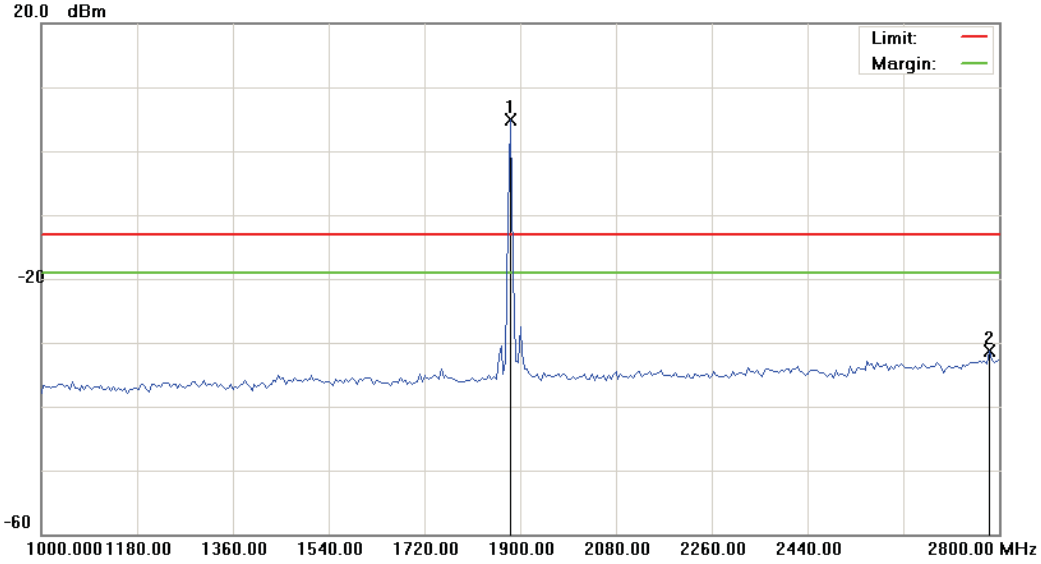


Site:	Polarization: *Conducted po*	Temperature: 26 ℃
Limit: FCC Part 24 conducted(9k-12.75G)	Power: AC 110V/60Hz	Humidity: 55 %
EUT: Portable Terminal	Distance:	
M/N: FD-400Ti		
Mode: CDMA 1900		
Note: CH600		

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBm	dB	dBm	dBm	dB	Detector	cm	degree	Comment
1	*	855.1250	-38.96	13.23	-25.73	-13.00	-12.73	peak			

*:Maximum data x:Over limit !:over margin

File :ED400(CH600) Data :#3 Date: 2008/12/16 Time: 下午 11:35:46

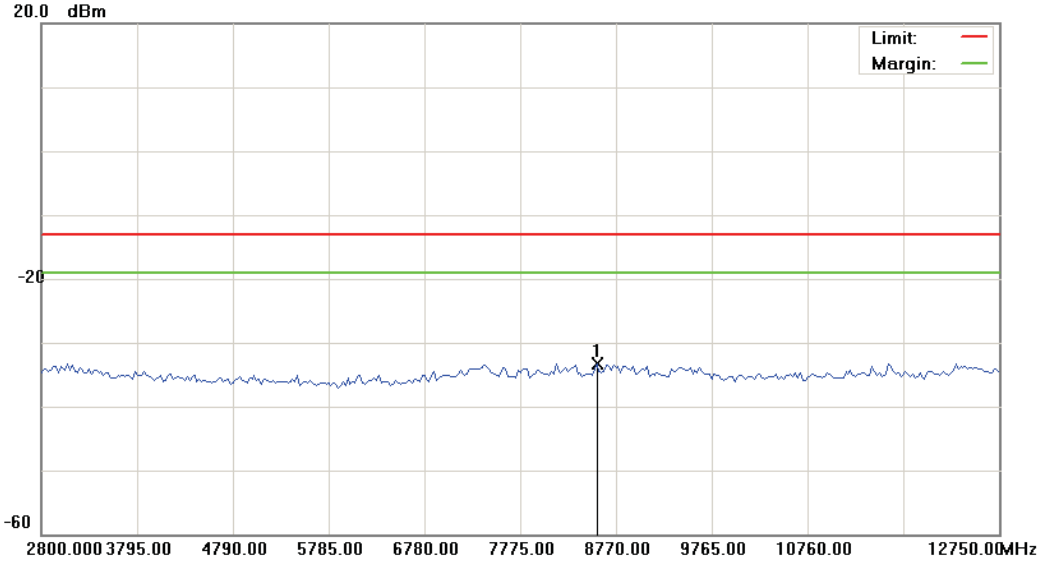


Site:		Polarization:	***Conducted po***
Limit:	FCC Part 24 conducted(9k-12.75G)	Power:	AC 110V/60Hz
EUT:	Portable Terminal	Distance:	
M/N:	FD-400Ti		
Mode:	CDMA 1900		
Note:	CH600		

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBm	dB	dBm	dBm	dB	Detector	cm	degree	Comment
1	*	1882.000	0.01	4.83	4.84	-13.00	17.84	peak			Main Frequency
2		2782.000	-37.13	5.88	-31.25	-13.00	-18.25	peak			

*:Maximum data x:Over limit !:over margin

File :ED400(CH600) Data :#4 Date: 2008/12/16 Time: 下午 11:00:19

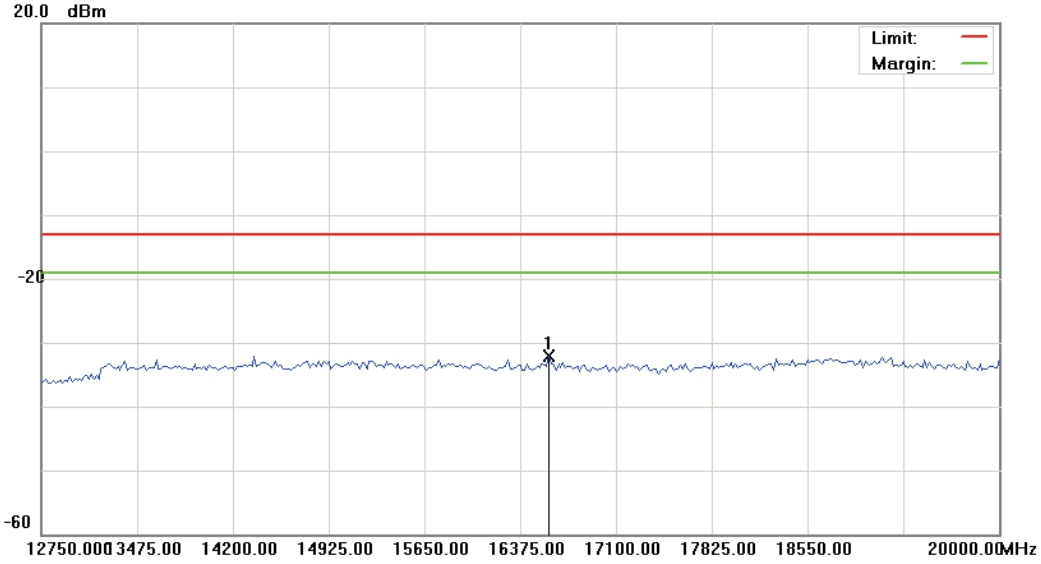


Site:		Polarization:	***Conducted po***
Limit:	FCC Part 24 conducted(9k-12.75G)	Power:	AC 110V/60Hz
EUT:	Portable Terminal	Distance:	
M/N:	FD-400Ti		
Mode:	CDMA 1900		
Note:	CH600		

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBm	dB	dBm	dBm	dB	Detector	cm	degree	Comment
1	*	8571.000	-38.78	5.55	-33.23	-13.00	-20.23	peak			

*:Maximum data x:Over limit !:over margin

File :ED400(CH600) Data :#5 Date: 2008/12/16 Time: 下午 11:00:40

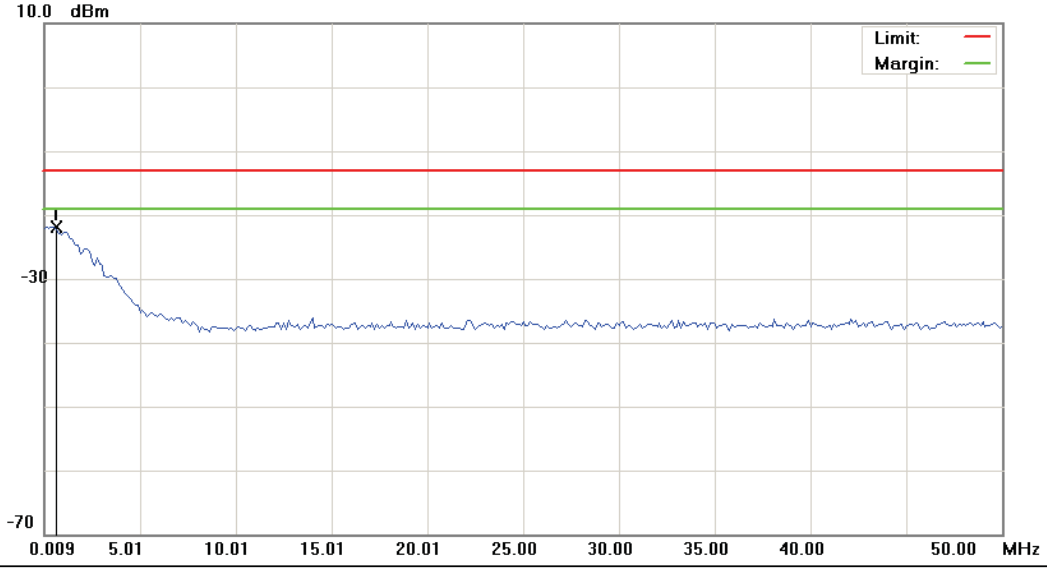


Site:		Polarization:	Conducted po
Limit:	FCC Part 24 conducted(9k-12.75G)	Power:	AC 110V/60Hz
EUT:	Portable Terminal	Distance:	
M/N:	FD-400Ti		
Mode:	CDMA 1900		
Note:	CH600		

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBm	dB	dBm	dBm	dB	Detector	cm	degree	Comment
1	*	16592.500	-38.58	6.47	-32.11	-13.00	-19.11	peak			

*:Maximum data x:Over limit !:over margin

File :ED400(CH1175) Data :#1 Date: 2008/12/16 Time: 下午 07:45:12



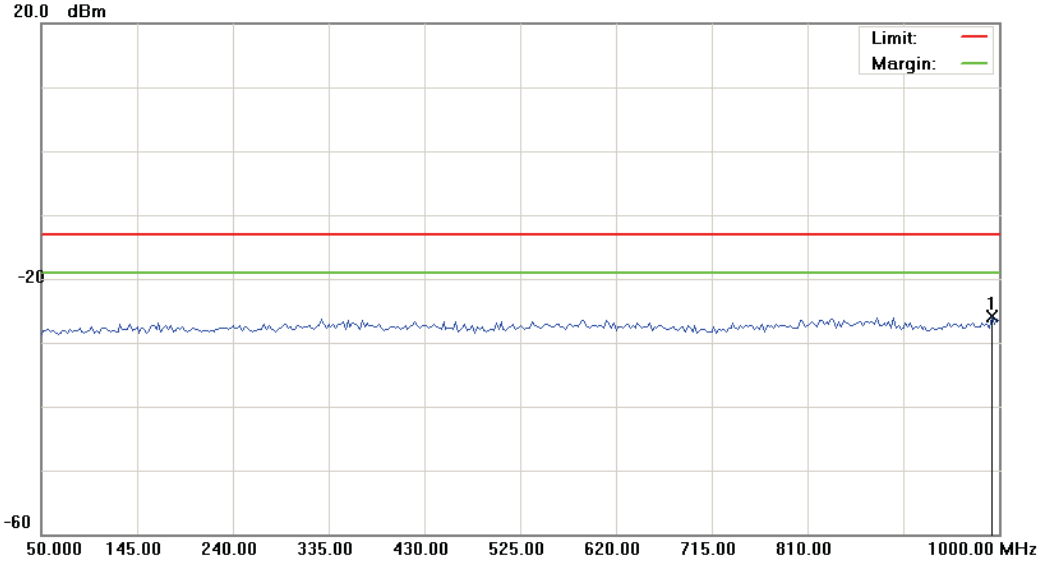
Site:		Polarization:	***Conducted po***
Limit:	FCC Part 24 conducted(9k-12.75G)	Power:	AC 110V/60Hz
EUT:	Portable Terminal	Distance:	
M/N:	FD-400Ti		
Mode:	CDMA 1900		
Note:	CH1175		

Temperature:	26 ℃
Humidity:	55 %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBm	dB	dBm	dBm	dB	Detector	cm	degree	Comment
1	*	0.5090	-34.74	12.79	-21.95	-13.00	-8.95	peak			

*:Maximum data x:Over limit !:over margin

File :ED400(CH1175) Data :#2 Date: 2008/12/16 Time: 下午 07:45:34



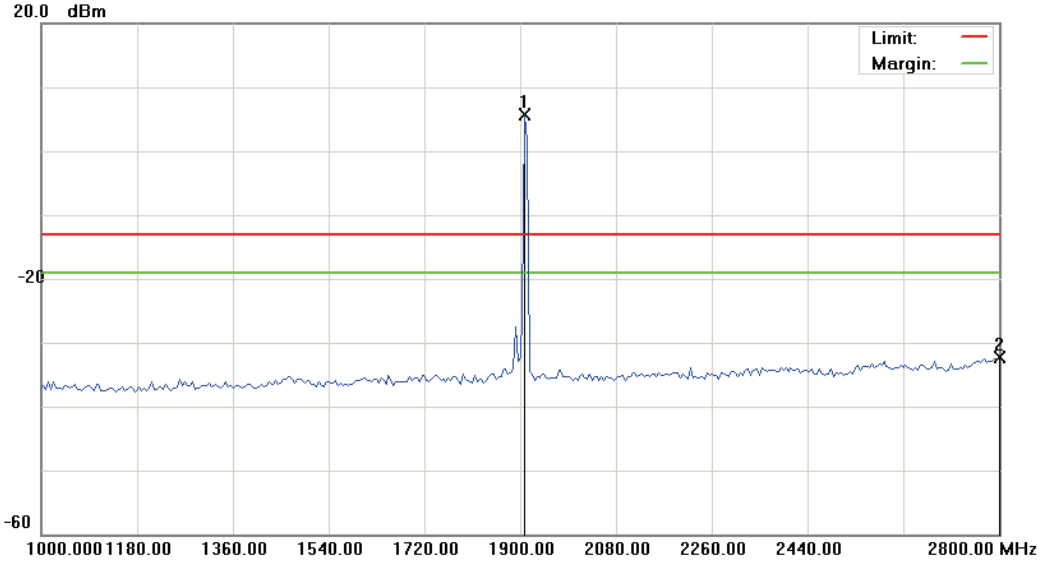
Site:		Polarization:	***Conducted po***
Limit:	FCC Part 24 conducted(9k-12.75G)	Power:	AC 110V/60Hz
EUT:	Portable Terminal	Distance:	
M/N:	FD-400Ti		
Mode:	CDMA 1900		
Note:	CH1175		

Temperature:	26 ℃
Humidity:	55 %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBm	dB	dBm	dBm	dB	Detector	cm	degree	Comment
1	*	992.8750	-39.10	13.25	-25.85	-13.00	-12.85	peak			

*:Maximum data x:Over limit !:over margin

File :ED400(CH1175) Data :#3 Date: 2008/12/16 Time: 下午 11:37:06

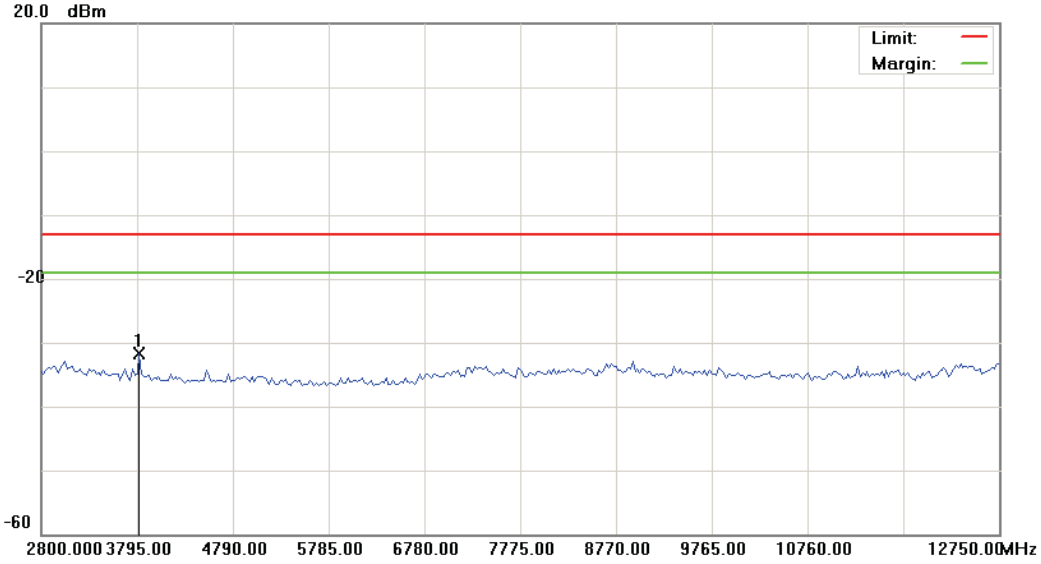


Site:	Polarization: *Conducted po*	Temperature: 26 ℃
Limit: FCC Part 24 conducted(9k-12.75G)	Power: AC 110V/60Hz	Humidity: 55 %
EUT: Portable Terminal	Distance:	
M/N: FD-400Ti		
Mode: CDMA 1900		
Note: CH1175		

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBm	dB	dBm	dBm	dB	Detector	cm	degree	Comment
1	*	1909.000	-0.11	5.80	5.69	-13.00	18.69	peak			Main Frequency
2		2800.000	-38.17	5.91	-32.26	-13.00	-19.26	peak			

*:Maximum data x:Over limit !:over margin

File :ED400(CH1175) Data :#4 Date: 2008/12/16 Time: 下午 11:01:35

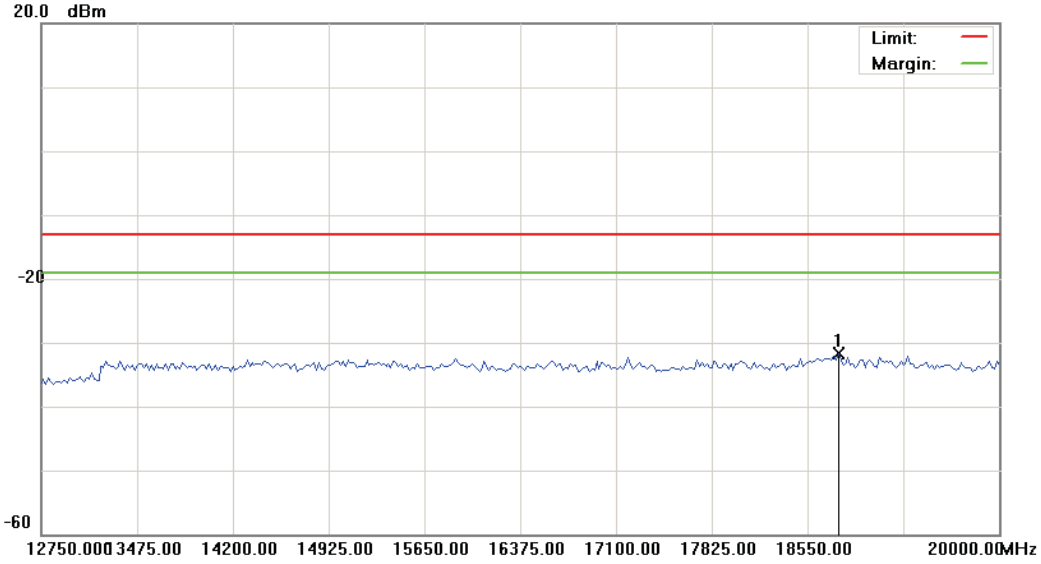


Site:		Polarization:	***Conducted po***
Limit:	FCC Part 24 conducted(9k-12.75G)	Power:	AC 110V/60Hz
EUT:	Portable Terminal	Distance:	
M/N:	FD-400Ti		
Mode:	CDMA 1900		
Note:	CH1175		

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBm	dB	dBm	dBm	dB	Detector	cm	degree	Comment
1	*	3819.875	-36.56	4.91	-31.65	-13.00	-18.65	peak			

*:Maximum data x:Over limit !:over margin

File :ED400(CH1175) Data :#5 Date: 2008/12/16 Time: 下午 11:01:57



Site:		Polarization:	***Conducted po***
Limit:	FCC Part 24 conducted(9k-12.75G)	Power:	AC 110V/60Hz
EUT:	Portable Terminal	Distance:	
M/N:	FD-400Ti		
Mode:	CDMA 1900		
Note:	CH1175		

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBm	dB	dBm	dBm	dB	Detector	cm	degree	Comment
1	*	18785.625	-38.79	7.09	-31.70	-13.00	-18.70	peak			

*:Maximum data x:Over limit !:over margin

4.6 Field Strength of Spurious Radiation

Equivalent isotropic radiated Power Measurements by substitution method according to ANSI/TIA/EIA-603-A .

4.6.1 Measurement Instruments

As described in chapter 5 of this test report.

4.6.2 Test Procedure

The measurement is made according to ANSI/TIA-603-C-2004 as follows:
The equipment under test is placed inside the semi-anechoic chamber on a wooden table at the turntable center. For each spurious frequency, the antenna mast is raised and lowered from 1 to 4 meters and the turntable is rotated 360 degrees to obtain a maximum reading on the spectrum analyzer. This is repeated for both horizontal and vertical polarizations of the receive antenna.

The equipment under test is then replaced with a substitution antenna fed by a signal generator. With the signal generator tuned to a particular spurious frequency, the antenna mast is raised and lowered from 1 to 4 meters to obtain a maximum reading at the spectrum analyzer. The output of the signal generator is then adjusted until a reading identical to that obtained with the actual transmitter is achieved.

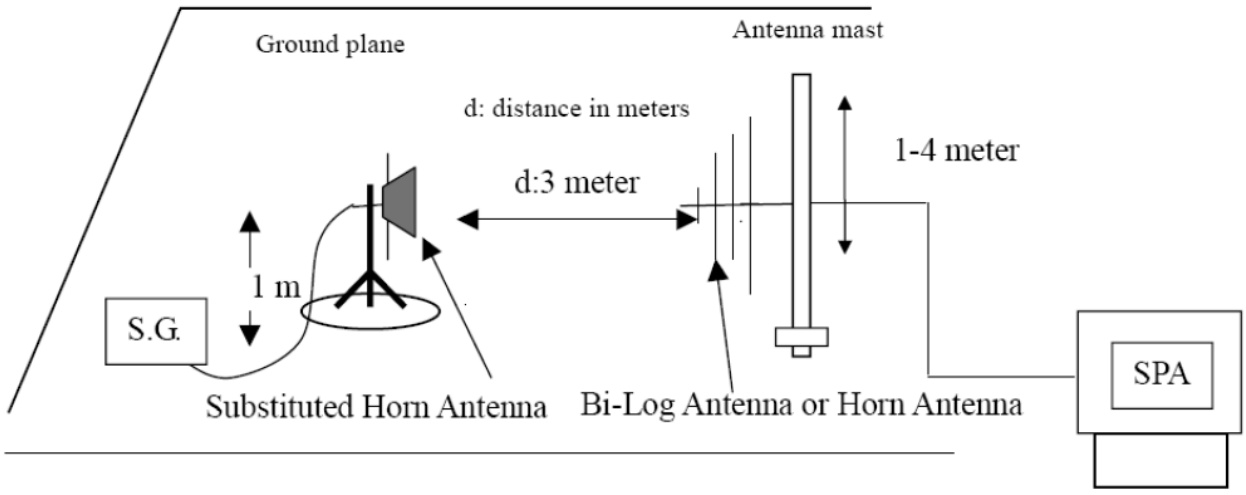
The power in dBm of each spurious emission is calculated by correcting the signal generator level for cable loss and gain of the substitution antenna referenced to a dipole. A fully charged battery was used for the supply voltage.

The settings of the receiver were as follows:

Units	dBm
Resolution Bandwidth	1 MHz
Video Bandwidth	Auto
Sweep Time	Auto

4.6.3 Test Setup Layout

Substituted Method Test Set-up



4.6.4 Test Result

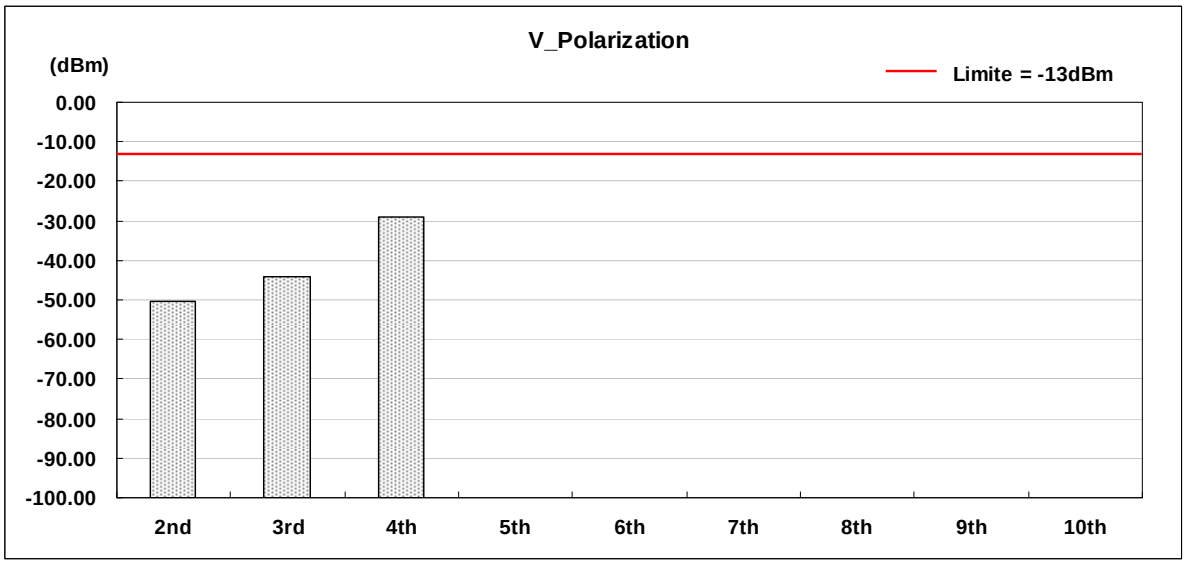
4.6.4.1 CDMA 850 Test Result

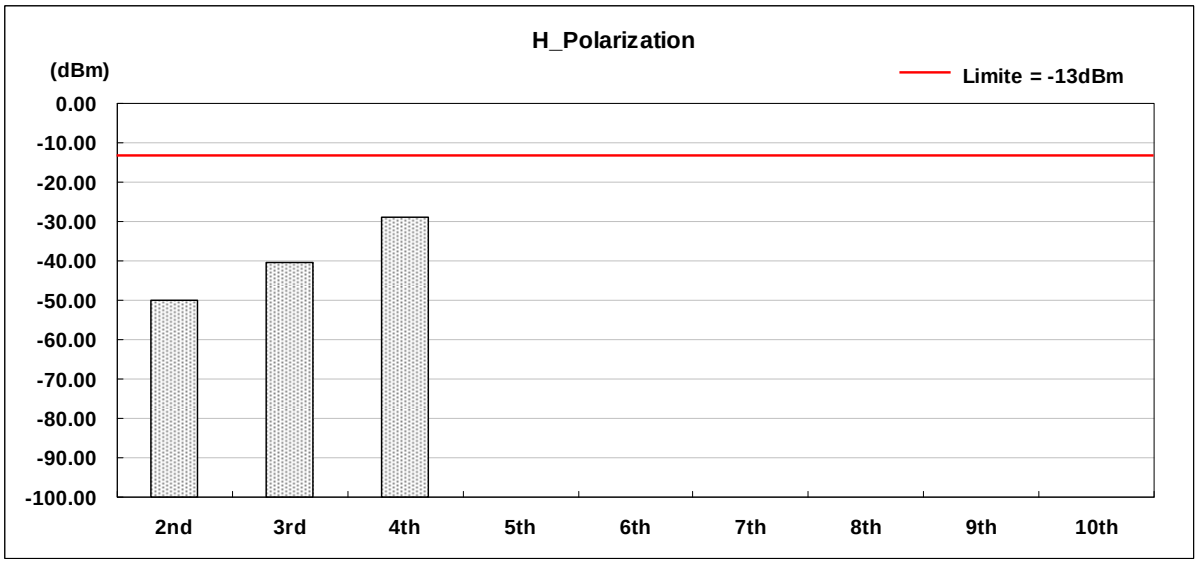
Applicant : XAC Automation Corporation
Model No : FD-400Ti
EUT : Portable Terminal
Test Mode : CDMA 850 (Low CH1013)
Test Date : 12/17/2008

Harmonic	Frequency (MHz)	Polarization	FCC Max. Limit	S.G Power	Substitution Antenna Gain	Cable Loss	Peak Output Power
			(dBm)	(dBm)	(dBi)	(dBm)	(dBm)
2nd	1649.4	V	-13	-60.40	10.74	0.59	-50.25
3rd	2474.1	V	-13	-54.00	10.68	0.63	-43.95
4th	3298.8	V	-13	-38.97	10.80	0.78	-28.95
5th	4123.5	V	-13	*	*	*	
6th	4948.2	V	-13	*	*	*	
7th	5772.9	V	-13	*	*	*	
8th	6597.6	V	-13	*	*	*	
9th	7422.3	V	-13	*	*	*	
10th	8247.0	V	-13	*	*	*	
2nd	1649.4	H	-13	-60.29	10.74	0.59	-50.14
3rd	2474.1	H	-13	-50.56	10.68	0.63	-40.51
4th	3298.8	H	-13	-39.09	10.80	0.78	-29.07
5th	4123.5	H	-13	*	*	*	
6th	4948.2	H	-13	*	*	*	
7th	5772.9	H	-13	*	*	*	
8th	6597.6	H	-13	*	*	*	
9th	7422.3	H	-13	*	*	*	
10th	8247.0	H	-13	*	*	*	

Notes:

1. * Indicates the spurious emission could not be detected due to noise limitations or ambients.
2. Each emission reported reflects the highest absolute level at the specific harmonic for the low, mid, and high channels at maximum power.
3. The Spectrum was investigated from 30 MHz to the tenth harmonic of the fundamental.
4. ERP = S.G Power (dBm) + Substitution Antenna Gain (dBd) - Cable Loss (dB)
   ERP = S.G Power (dBm) + Substitution Antenna Gain (dBi) - Cable Loss (dB)





Applicant : XAC Automation Corporation

Model No : FD-400Ti

EUT : Portable Terminal

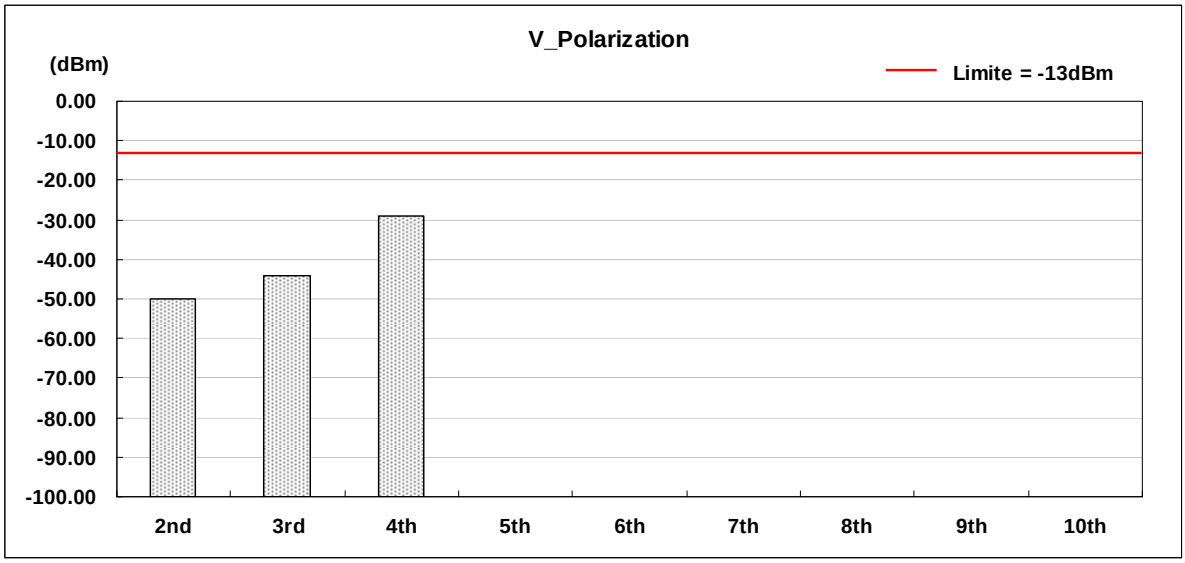
Test Mode : CDMA 850 (Middle CH384)

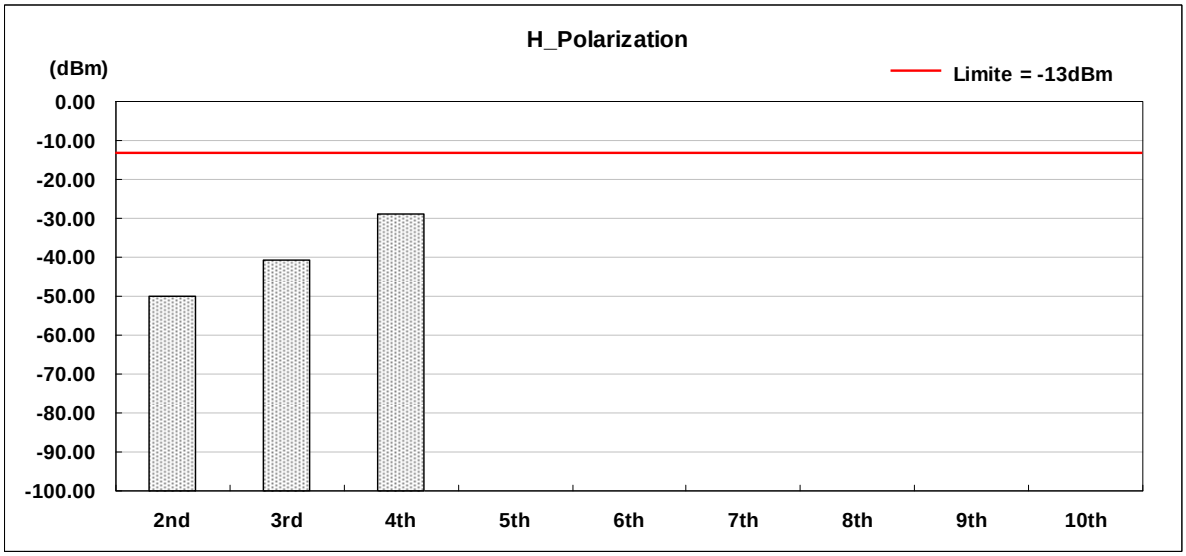
Test Date : 12/17/2008

Harmonic	Frequency (MHz)	Polarization	FCC Max. Limit	S.G Power	Substitution Antenna Gain	Cable Loss	Peak Output Power
			(dBm)	(dBm)	(dBi)	(dBm)	(dBm)
2nd	1673.0	V	-13	-60.33	10.74	0.59	-50.18
3rd	2509.6	V	-13	-54.21	10.68	0.63	-44.16
4th	3346.1	V	-13	-39.12	10.80	0.78	-29.10
5th	4182.6	V	-13	*	*	*	
6th	5019.1	V	-13	*	*	*	
7th	5855.6	V	-13	*	*	*	
8th	6692.2	V	-13	*	*	*	
9th	7528.7	V	-13	*	*	*	
10th	8365.2	V	-13	*	*	*	
2nd	1673.0	H	-13	-60.33	10.74	0.59	-50.18
3rd	2509.6	H	-13	-50.79	10.68	0.63	-40.74
4th	3346.1	H	-13	-38.88	10.80	0.78	-28.86
5th	4182.6	H	-13	*	*	*	
6th	5019.1	H	-13	*	*	*	
7th	5855.6	H	-13	*	*	*	
8th	6692.2	H	-13	*	*	*	
9th	7528.7	H	-13	*	*	*	
10th	8365.2	H	-13	*	*	*	

Notes:

1. * Indicates the spurious emission could not be detected due to noise limitations or ambients.
2. Each emission reported reflects the highest absolute level at the specific harmonic for the low, mid, and high channels at maximum power.
3. The Spectrum was investigated from 30 MHz to the tenth harmonic of the fundamental.
4. ERP = S.G Power (dBm) + Substitution Antenna Gain (dBd) - Cable Loss (dB)
   ERP = S.G Power (dBm) + Substitution Antenna Gain (dBi) - Cable Loss (dB)





Applicant : XAC Automation Corporation

Model No : FD-400Ti

EUT : Portable Terminal

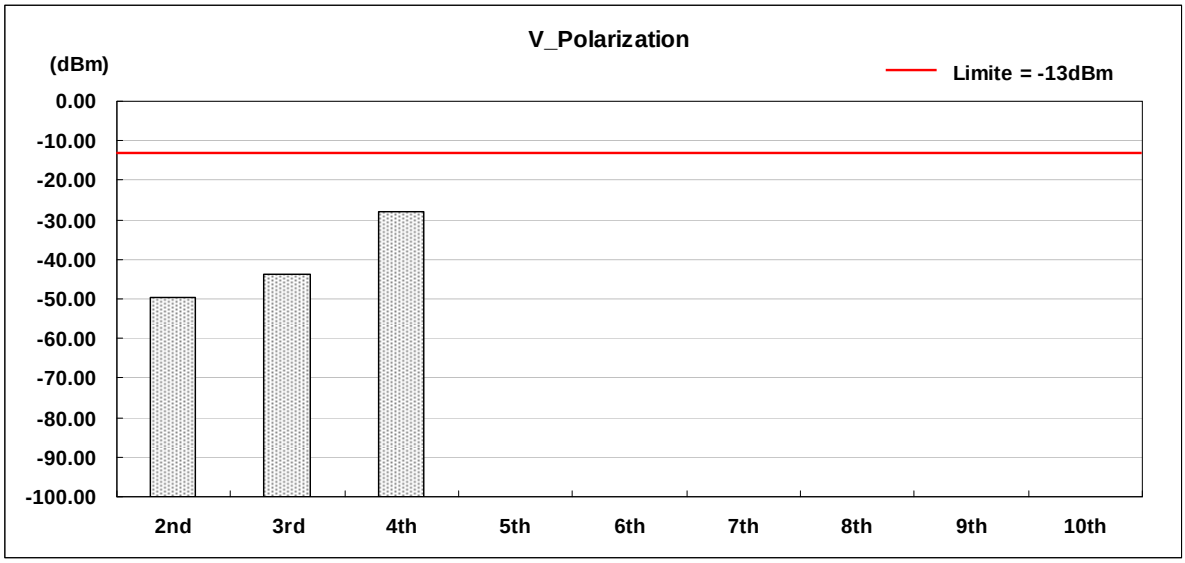
Test Mode : CDMA 850 (High CH 777)

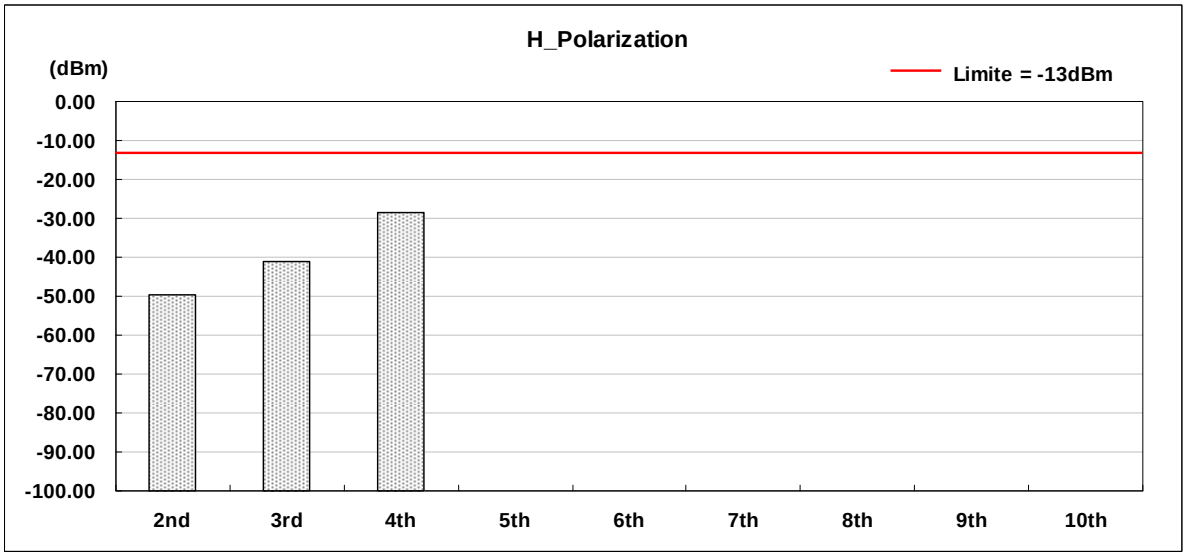
Test Date : 12/17/2008

Harmonic	Frequency (MHz)	Polarization	FCC Max. Limit	S.G Power	Substitution Antenna Gain	Cable Loss	Peak Output Power
			(dBm)	(dBm)	(dBi)	(dBm)	(dBm)
2nd	1696.6	V	-13	-59.72	10.74	0.59	-49.57
3rd	2544.9	V	-13	-53.62	10.68	0.63	-43.57
4th	3393.2	V	-13	-37.85	10.80	0.78	-27.83
5th	4241.6	V	-13	*	*	*	
6th	5089.9	V	-13	*	*	*	
7th	5938.2	V	-13	*	*	*	
8th	6786.5	V	-13	*	*	*	
9th	7634.8	V	-13	*	*	*	
10th	8483.1	V	-13	*	*	*	
2nd	1696.6	H	-13	-59.85	10.74	0.59	-49.70
3rd	2544.9	H	-13	-50.99	10.68	0.63	-40.94
4th	3393.2	H	-13	-38.67	10.80	0.78	-28.65
5th	4241.6	H	-13	*	*	*	
6th	5089.9	H	-13	*	*	*	
7th	5938.2	H	-13	*	*	*	
8th	6786.5	H	-13	*	*	*	
9th	7634.8	H	-13	*	*	*	
10th	8483.1	H	-13	*	*	*	

Notes:

1. * Indicates the spurious emission could not be detected due to noise limitations or ambients.
2. Each emission reported reflects the highest absolute level at the specific harmonic for the low, mid, and high channels at maximum power.
3. The Spectrum was investigated from 30 MHz to the tenth harmonic of the fundamental.
4. ERP = S.G Power (dBm) + Substitution Antenna Gain (dBd) - Cable Loss (dB)
   ERP = S.G Power (dBm) + Substitution Antenna Gain (dBi) - Cable Loss (dB)





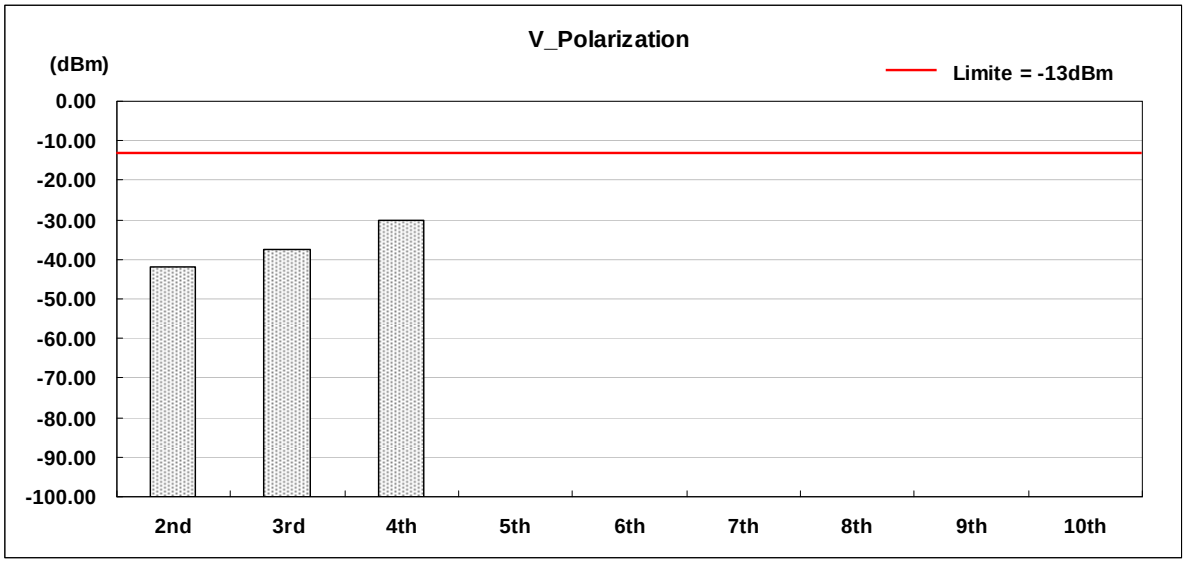
4.6.4.2 CDMA 1900 Test Result

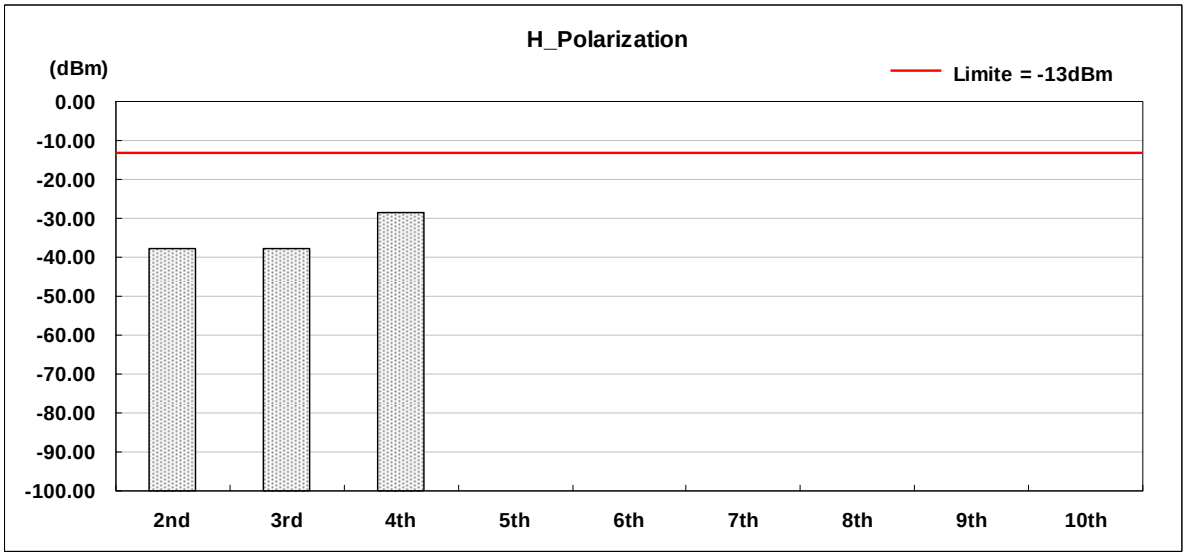
Applicant : XAC Automation Corporation
Model No : FD-400Ti
EUT : Portable Terminal
Test Mode : CDMA 1900 (Low CH25)
Test Date : 12/17/2008

Harmonic	Frequency (MHz)	Polarization	FCC Max. Limit	S.G Power	Substitution Antenna Gain	Cable Loss	Peak Output Power
			(dBm)	(dBm)	(dBi)	(dBm)	(dBm)
2nd	3702.5	V	-13	-52.08	10.79	0.58	-41.87
3rd	5553.8	V	-13	-47.61	10.71	0.63	-37.53
4th	7405.0	V	-13	-40.21	10.81	0.78	-30.18
5th	9256.3	V	-13	*	*	*	
6th	11107.5	V	-13	*	*	*	
7th	12958.8	V	-13	*	*	*	
8th	14810.0	V	-13	*	*	*	
9th	16661.3	V	-13	*	*	*	
10th	18512.5	V	-13	*	*	*	
2nd	3702.5	H	-13	-47.88	10.79	0.58	-37.67
3rd	5553.8	H	-13	-47.87	10.71	0.63	-37.79
4th	7405.0	H	-13	-38.67	10.81	0.78	-28.64
5th	9256.3	H	-13	*	*	*	
6th	11107.5	H	-13	*	*	*	
7th	12958.8	H	-13	*	*	*	
8th	14810.0	H	-13	*	*	*	
9th	16661.3	H	-13	*	*	*	
10th	18512.5	H	-13	*	*	*	

Notes:

1. * Indicates the spurious emission could not be detected due to noise limitations or ambients.
2. Each emission reported reflects the highest absolute level at the specific harmonic for the low, mid, and high channels at maximum power.
3. The Spectrum was investigated from 30 MHz to the tenth harmonic of the fundamental.
4. ERP = S.G Power (dBm) + Substitution Antenna Gain (dBd) - Cable Loss (dB)
   ERP = S.G Power (dBm) + Substitution Antenna Gain (dBi) - Cable Loss (dB)





Applicant : XAC Automation Corporation

Model No : FD-400Ti

EUT : Portable Terminal

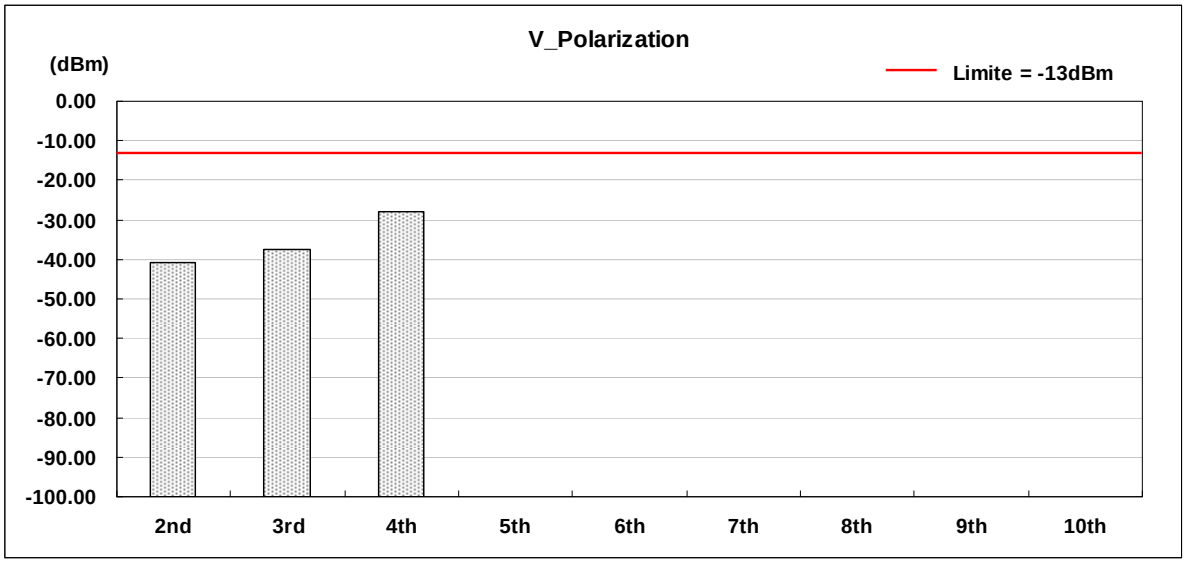
Test Mode : CDMA 1900 (Middle CH600)

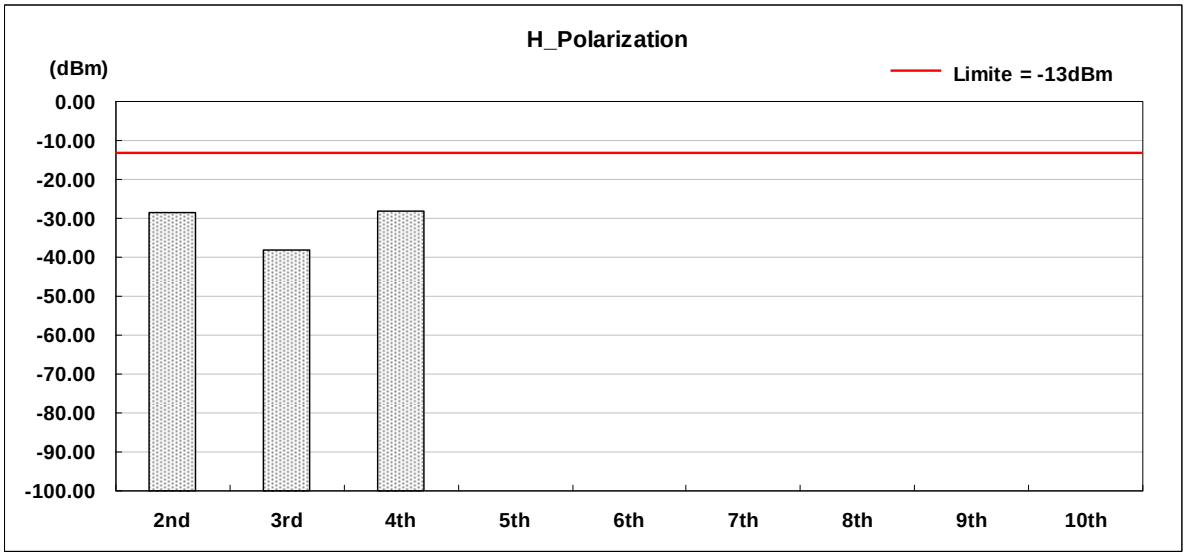
Test Date : 12/17/2008

Harmonic	Frequency (MHz)	Polarization	FCC Max. Limit	S.G Power	Substitution Antenna Gain	Cable Loss	Peak Output Power
			(dBm)	(dBm)	(dBi)	(dBm)	(dBm)
2nd	3760.0	V	-13	-51.14	10.79	0.58	-40.93
3rd	5640.0	V	-13	-47.55	10.71	0.63	-37.47
4th	7520.0	V	-13	-37.92	10.81	0.78	-27.89
5th	9400.0	V	-13	*	*	*	
6th	11280.0	V	-13	*	*	*	
7th	13160.0	V	-13	*	*	*	
8th	15040.0	V	-13	*	*	*	
9th	16920.0	V	-13	*	*	*	
10th	18800.0	V	-13	*	*	*	
2nd	3760.0	H	-13	-38.62	10.79	0.58	-28.41
3rd	5640.0	H	-13	-48.11	10.71	0.63	-38.03
4th	7520.0	H	-13	-38.00	10.81	0.78	-27.97
5th	9400.0	H	-13	*	*	*	
6th	11280.0	H	-13	*	*	*	
7th	13160.0	H	-13	*	*	*	
8th	15040.0	H	-13	*	*	*	
9th	16920.0	H	-13	*	*	*	
10th	18800.0	H	-13	*	*	*	

Notes:

1. * Indicates the spurious emission could not be detected due to noise limitations or ambients.
2. Each emission reported reflects the highest absolute level at the specific harmonic for the low, mid, and high channels at maximum power.
3. The Spectrum was investigated from 30 MHz to the tenth harmonic of the fundamental.
4. ERP = S.G Power (dBm) + Substitution Antenna Gain (dBd) - Cable Loss (dB)
   ERP = S.G Power (dBm) + Substitution Antenna Gain (dBi) - Cable Loss (dB)





Applicant : XAC Automation Corporation

Model No : FD-400Ti

EUT : Portable Terminal

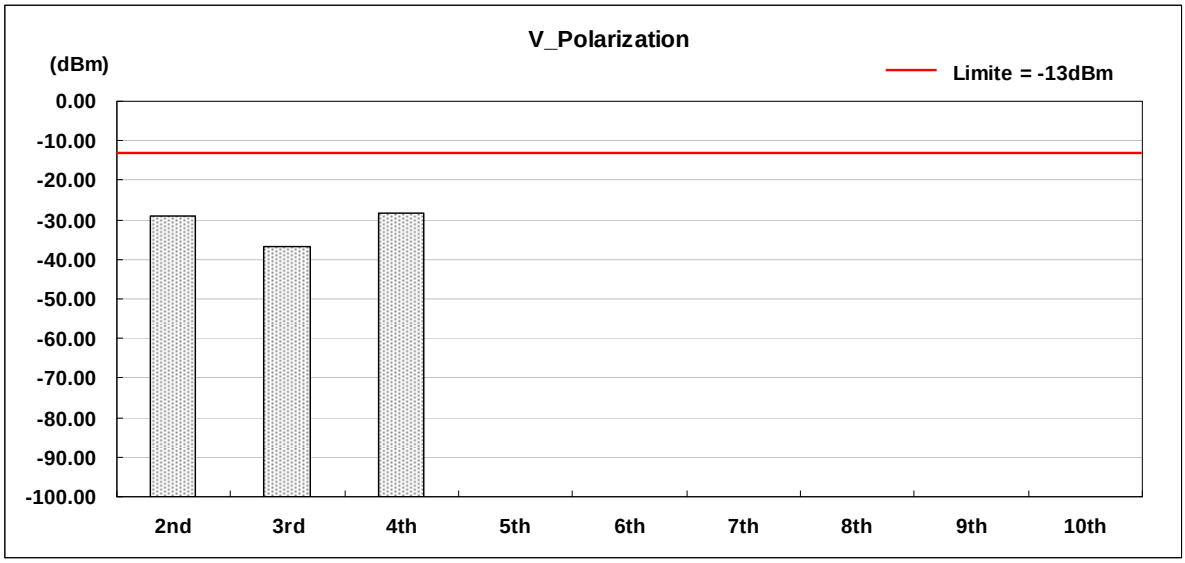
Test Mode : CDMA 1900 (High CH 1175)

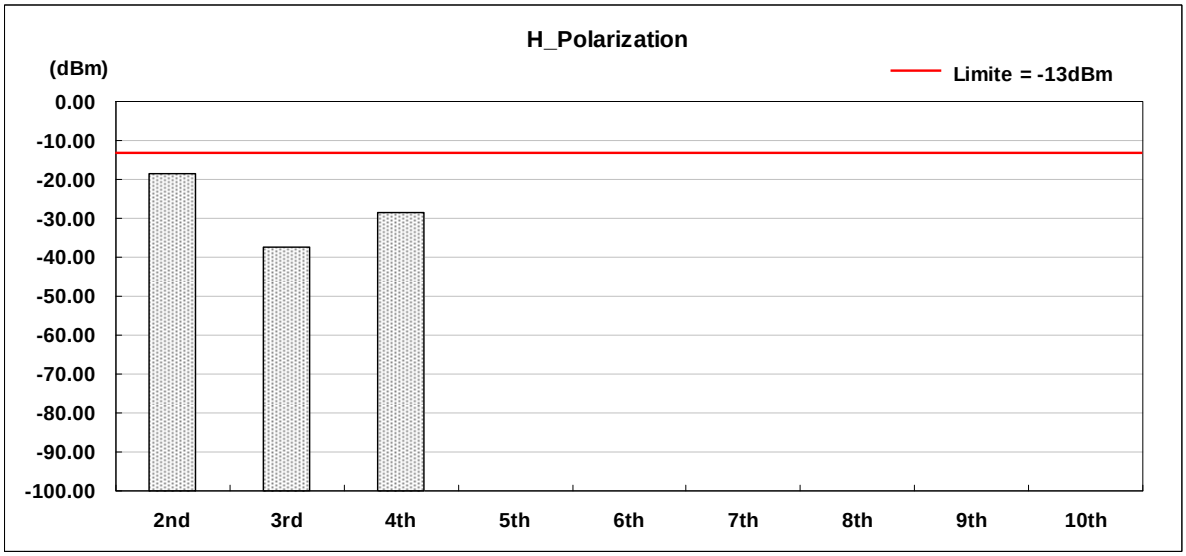
Test Date : 12/17/2008

Harmonic	Frequency (MHz)	Polarization	FCC Max. Limit	S.G Power	Substitution Antenna Gain	Cable Loss	Peak Output Power
			(dBm)	(dBm)	(dBi)	(dBm)	(dBm)
2nd	3817.5	V	-13	-39.40	10.79	0.58	-29.19
3rd	5726.3	V	-13	-46.97	10.71	0.63	-36.89
4th	7635.0	V	-13	-38.17	10.81	0.78	-28.14
5th	9543.8	V	-13	*	*	*	
6th	11452.5	V	-13	*	*	*	
7th	13361.3	V	-13	*	*	*	
8th	15270.0	V	-13	*	*	*	
9th	17178.8	V	-13	*	*	*	
10th	19087.5	V	-13	*	*	*	
2nd	3817.5	H	-13	-28.57	10.79	0.58	-18.36
3rd	5726.3	H	-13	-47.57	10.71	0.63	-37.49
4th	7635.0	H	-13	-38.56	10.81	0.78	-28.53
5th	9543.8	H	-13	*	*	*	
6th	11452.5	H	-13	*	*	*	
7th	13361.3	H	-13	*	*	*	
8th	15270.0	H	-13	*	*	*	
9th	17178.8	H	-13	*	*	*	
10th	19087.5	H	-13	*	*	*	

Notes:

1. * Indicates the spurious emission could not be detected due to noise limitations or ambients.
2. Each emission reported reflects the highest absolute level at the specific harmonic for the low, mid, and high channels at maximum power.
3. The Spectrum was investigated from 30 MHz to the tenth harmonic of the fundamental.
4. ERP = S.G Power (dBm) + Substitution Antenna Gain (dBd) - Cable Loss (dB)
   ERP = S.G Power (dBm) + Substitution Antenna Gain (dBi) - Cable Loss (dB)





4.7 Frequency Stability (Temperature Variation)

4.7.1 Measurement Instrument

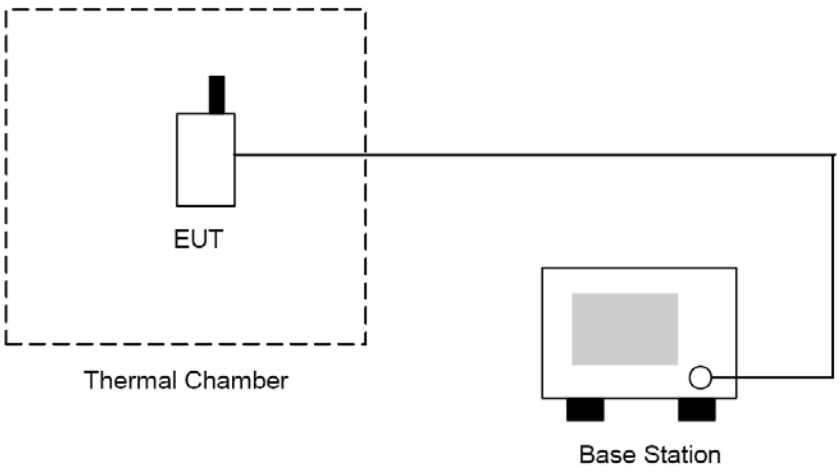
As described in chapter 5 of this test report.

4.7.2 Test Procedure

The measurement is made according to FCC rules part 22 and 24:

1. The EUT and test equipment were set up as shown on the following section.
2. With all power removed, the temperature was decreased to -30℃ and permitted to stabilize for three hours. Power was applied and the maximum change in frequency was note within one minute.
3. With power OFF, the temperature was raised in 10℃ steps. The sample was permitted to stabilize at each step for at least one-half hour. Power was applied and the maximum frequency change was noted within one minute.
4. The temperature tests were performed for the worst case.
5. Test data was recorded.

4.7.3 Test Setup Layout



4.7.4 Test Result

Test Mode: CDMA 850 CH384

Temperature (℃)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)
-30	**23.96**	**0.029**	0.1
-20	**25.78**	**0.031**	0.1
-10	**33.67**	**0.040**	0.1
0	**24.76**	**0.030**	0.1
10	**35.19**	**0.042**	0.1
20	**38.22**	**0.046**	0.1
30	**35.41**	**0.042**	0.1
40	**21.66**	**0.026**	0.1
50	**25.18**	**0.030**	0.1

Test Mode: CDMA 1900 CH600

Temperature (℃)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)
-30	**39.61**	**0.021**	0.1
-20	**40.62**	**0.022**	0.1
-10	**31.67**	**0.017**	0.1
0	**35.48**	**0.019**	0.1
10	**30.15**	**0.016**	0.1
20	**40.03**	**0.021**	0.1
30	**38.38**	**0.020**	0.1
40	**35.41**	**0.019**	0.1
50	**33.39**	**0.018**	0.1

4.8 Frequency Stability (Voltage Variation)

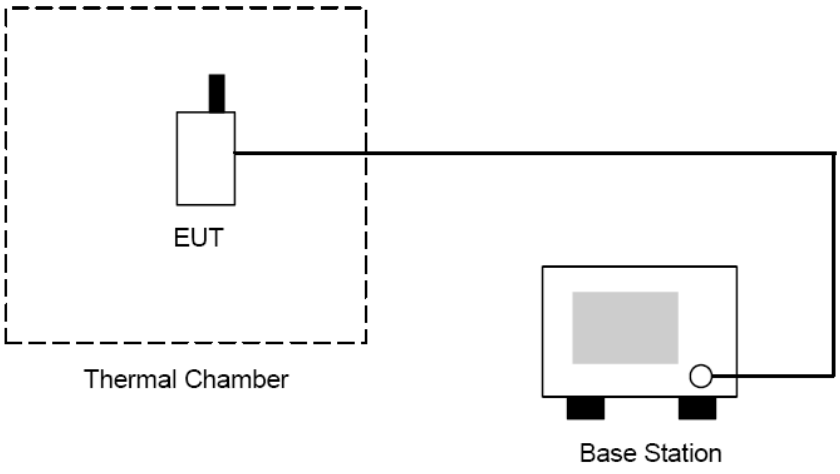
4.8.1 Measurement Instrument

As described in chapter 5 of this test report.

4.8.2 Test Procedure

1. The EUT was placed in a temperature chamber at 25±5 ℃ and connected as the following section.
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.

4.8.3 Test Setup Layout



4.8.4 Test Result

Test Mode: CDMA 850 CH384

Level	Voltage [V]	Deviation [Hz]	Deviation [ppm]	Limit [ppm]
Battery full point	4.25	**25.78**	**0.031**	0.1
Normal	3.70	**28.69**	**0.034**	0.1
Battery cut-off point	3.20	**29.61**	**0.035**	0.1

Test Mode: CDMA 1900 CH600

Level	Voltage [V]	Deviation [Hz]	Deviation [ppm]	Limit [ppm]
Battery full point	4.25	**34.72**	**0.018**	1
Normal	3.70	**33.68**	**0.018**	1
Battery cut-off point	3.20	**30.49**	**0.016**	1

4.9 AC Power Conducted Emissions Requirements

4.9.1 Measurement Instrument

As described in chapter 5 of this test report.

4.9.2 Test Procedure

The measurement is made according to FCC rules15.207:

The power line conducted emission measurements were performed in a shielded enclosure. The EUT was assembled on a wooden table which is 80 centimeters high, was placed 40 centimeters from the back wall and at least 1 meter from the sidewall.

Power was fed to the EUT from the public utility power grid through a line filter and EMCO Model 3162/2 SH Line Impedance Stabilization Networks (LISN). The LISN housing, measuring instrumentation case, ground plane, etc., were electrically bonded together at the same RF potential. The Spectrum analyzer was connected to the AC line through an isolation transformer. The 50-ohm output of the LISN was connected to the spectrum analyzer directly. Conducted emission levels were in the CISPR quasi-peak detection mode. The analyzer's 6 dB bandwidth was set to 9 KHz. No post-detector video filter was used.

The spectrum was scanned from 150 KHz to 30 MHz. The physical arrangement of the test system and associated cabling was varied (within the scope of arrangements likely to be encountered in actual use) to determine the effect on the unit's emanations in amplitude and frequency. All spurious emission frequencies were observed. The highest emission amplitudes relative to the appropriate limit were measured and have been recorded in paragraph 2.6.

4.9.3 Test condition

EUT tested in accordance with the specifications given by the Manufacturer, and exercised in the most unfavorable manner.

4.9.4 Conducted Emissions Limits

Frequency range (MHz)	Limits (dBuV)	
	Quasi-peak	Average
0.15 to 0.50	66 to 56	56 to 46
0.50 to 5.0	56	46
5.0 to 30	60	50

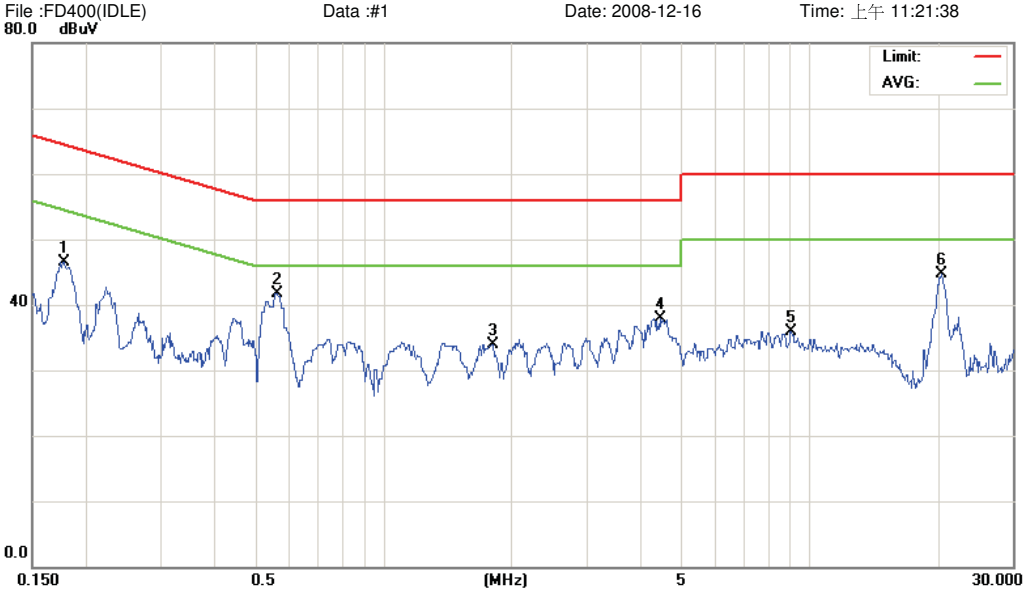
4.9.5 Test Result

4.9.5.1 IDLE Mode Test Result

Applicant	: XAC Automation Corporation
Model No	: FD-400Ti
EUT	: Portable Terminal
Test Mode	: IDLE
	CDMA 850 _ CH384
	CDMA 1900 _ CH25
Test Date	: 12/16/2008

Please refer to next pager of detail testing data.

File :FD400(IDLE) Data :#1 Date: 2008-12-16 Time: 上午 11:21:38



Site site#1 Phase: *L1* Temperature: 26 ℃

Limit: CISPR22 Class B Conduction(QP) Power: AC 110V/60Hz Humidity: 55 %

EUT: Portable Terminal

M/N: FD-400Ti

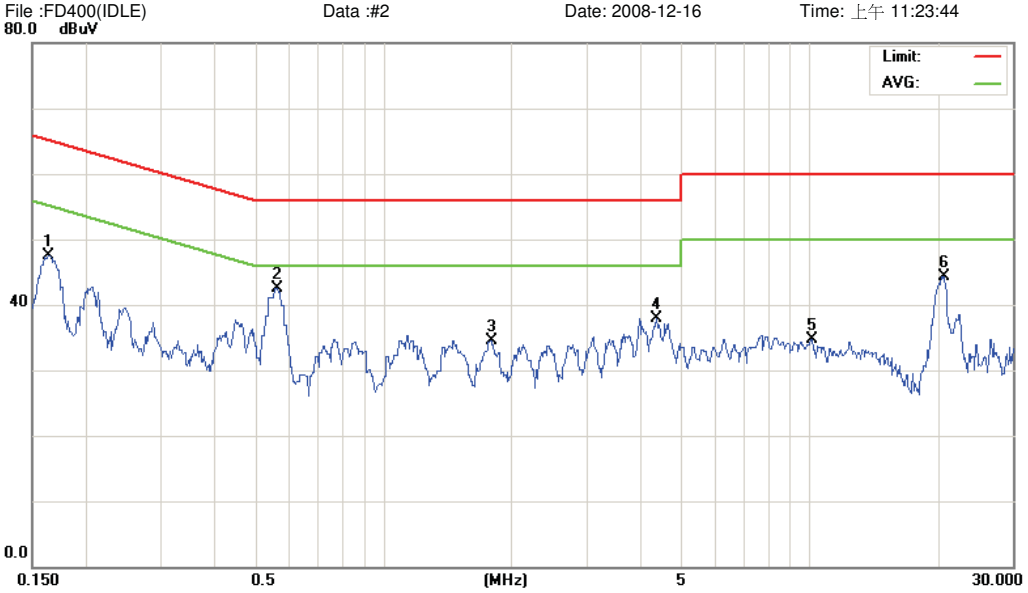
Mode: IDLE

Note:

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		0.1773	36.85	9.74	46.59	64.61	-18.02	peak	
2	*	0.5630	31.82	9.79	41.61	56.00	-14.39	peak	
3		1.8050	24.12	9.82	33.94	56.00	-22.06	peak	
4		4.4420	27.98	10.02	38.00	56.00	-18.00	peak	
5		9.0500	25.72	10.09	35.81	60.00	-24.19	peak	
6		20.3500	34.42	10.36	44.78	60.00	-15.22	peak	

*:Maximum data x:Over limit !:over margin ●Reference Only

File :FD400(IDLE) Data :#2 Date: 2008-12-16 Time: 上午 11:23:44



Site site#1 Phase: *L2* Temperature: 26 ℃

Limit: CISPR22 Class B Conduction(QP) Power: AC 110V/60Hz Humidity: 55 %

EUT: Portable Terminal

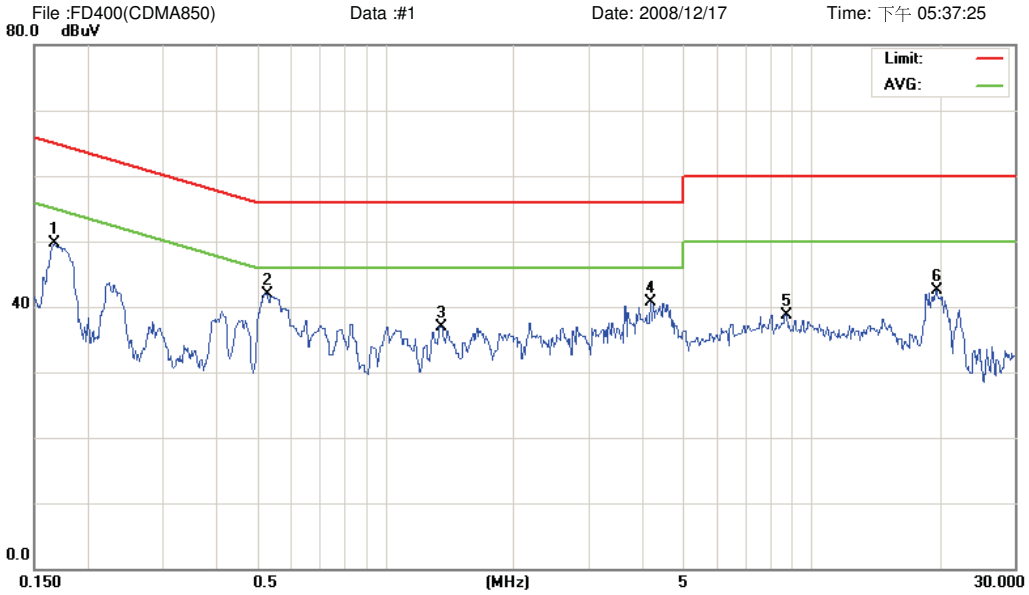
M/N: FD-400Ti

Mode: IDLE

Note:

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		0.1633	37.77	9.73	47.50	65.29	-17.79	peak	
2	*	0.5630	32.70	9.79	42.49	56.00	-13.51	peak	
3		1.7870	24.66	9.82	34.48	56.00	-21.52	peak	
4		4.3610	27.93	10.01	37.94	56.00	-18.06	peak	
5		10.1000	24.56	10.08	34.64	60.00	-25.36	peak	
6		20.6000	33.83	10.43	44.26	60.00	-15.74	peak	

*:Maximum data x:Over limit !:over margin ●Reference Only



Site site#1 Phase: *L1* Temperature: 26 ℃

Limit: CISPR22 Class B Conduction(QP) Power: AC 110V/60Hz Humidity: 55 %

EUT: Portable Terminal

M/N: FD-400Ti

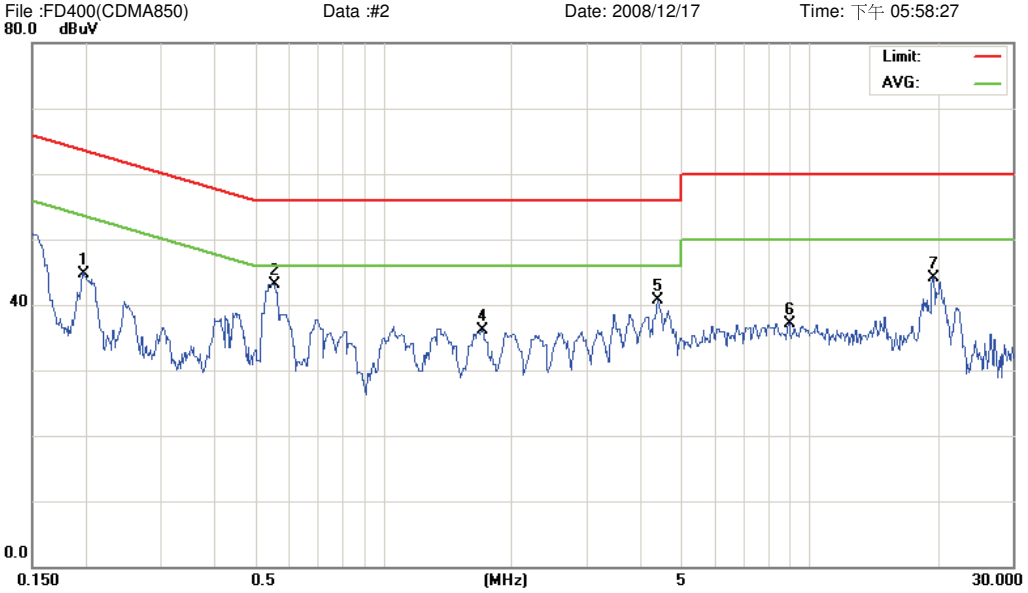
Mode: CDMA850

Note: CH384

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		0.1668	39.92	9.73	49.65	65.11	-15.46	peak	
2	*	0.5270	32.10	9.79	41.89	56.00	-14.11	peak	
3		1.3460	27.16	9.82	36.98	56.00	-19.02	peak	
4		4.1810	30.72	9.98	40.70	56.00	-15.30	peak	
5		8.7000	28.63	10.09	38.72	60.00	-21.28	peak	
6		19.5500	32.15	10.28	42.43	60.00	-17.57	peak	

*:Maximum data x:Over limit !:over margin ●Reference Only

File :FD400(CDMA850) Data :#2 Date: 2008/12/17 Time: 下午 05:58:27



Site site#1 Phase: *L2* Temperature: 26 ℃

Limit: CISPR22 Class B Conduction(QP) Power: AC 110V/60Hz Humidity: 55 %

EUT: Portable Terminal

M/N: FD-400Ti

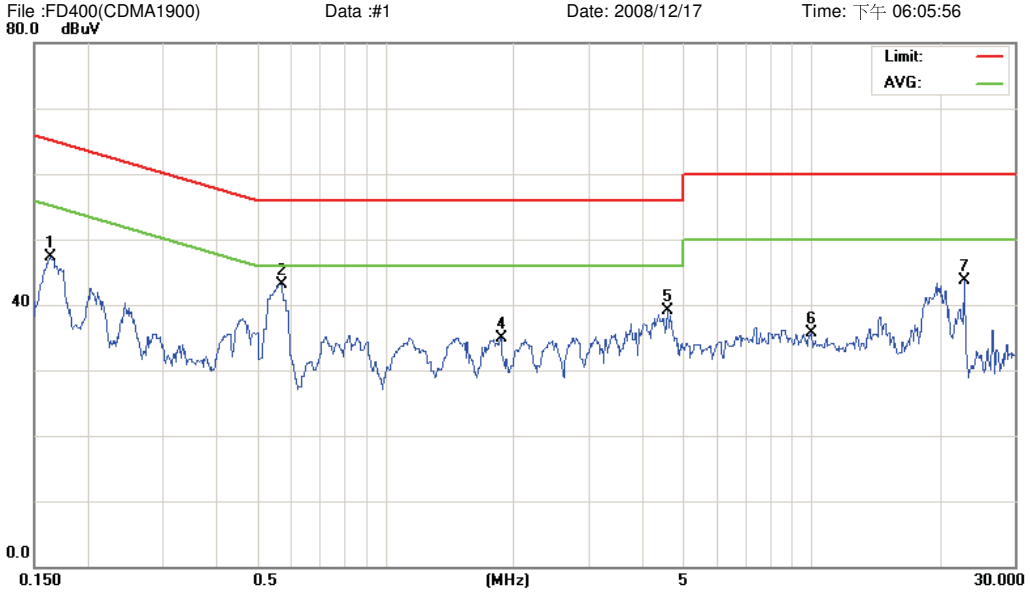
Mode: CDMA850

Note: CH384

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		0.1969	35.06	9.74	44.80	63.74	-18.94	peak	
2		0.5540	33.33	9.79	43.12	56.00	-12.88	peak	
3	*	0.5540	26.21	9.79	36.00	46.00	-10.00	AVG	
4		1.7060	26.24	9.82	36.06	56.00	-19.94	peak	
5		4.3970	30.60	10.01	40.61	56.00	-15.39	peak	
6		8.9500	26.95	10.09	37.04	60.00	-22.96	peak	
7		19.5000	33.92	10.28	44.20	60.00	-15.80	peak	

*:Maximum data x:Over limit !:over margin ●Reference Only

File :FD400(CDMA1900) Data :#1 Date: 2008/12/17 Time: 下午 06:05:56



Site site#1 Phase: *L1* Temperature: 26 ℃

Limit: CISPR22 Class B Conduction(QP) Power: AC 110V/60Hz Humidity: 55 %

EUT: Portable Terminal

M/N: FD-400Ti

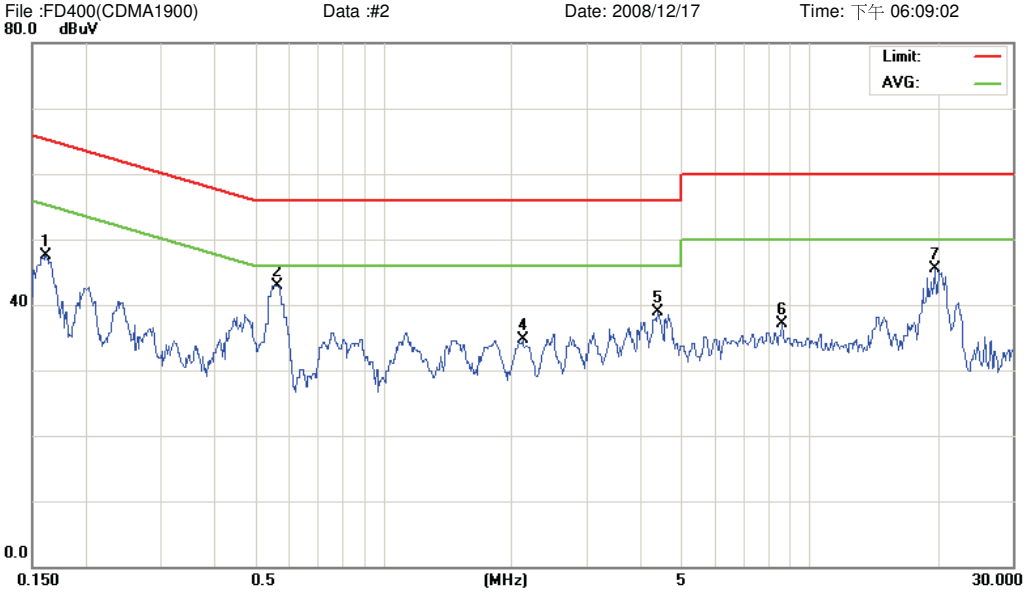
Mode: CDMA1900

Note: CH25

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		0.1640	37.62	9.73	47.35	65.25	-17.90	peak	
2		0.5720	33.38	9.79	43.17	56.00	-12.83	peak	
3	*	0.5720	28.71	9.79	38.50	46.00	-7.50	AVG	
4		1.8590	25.00	9.82	34.82	56.00	-21.18	peak	
5		4.5949	29.12	10.02	39.14	56.00	-16.86	peak	
6		10.0000	25.55	10.08	35.63	60.00	-24.37	peak	
7		22.8500	33.32	10.35	43.67	60.00	-16.33	peak	

*:Maximum data x:Over limit !:over margin ●Reference Only

File :FD400(CDMA1900) Data :#2 Date: 2008/12/17 Time: 下午 06:09:02



Site site#1 Phase: *L2* Temperature: 26 ℃

Limit: CISPR22 Class B Conduction(QP) Power: AC 110V/60Hz Humidity: 55 %

EUT: Portable Terminal

M/N: FD-400Ti

Mode: CDMA1900

Note: CH25

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		0.1612	37.71	9.73	47.44	65.40	-17.96	peak	
2		0.5630	33.16	9.79	42.95	56.00	-13.05	peak	
3	*	0.5630	26.31	9.79	36.10	46.00	-9.90	AVG	
4		2.1199	24.76	9.87	34.63	56.00	-21.37	peak	
5		4.4060	28.84	10.02	38.86	56.00	-17.14	peak	
6		8.6000	26.95	10.09	37.04	60.00	-22.96	peak	
7		19.6000	35.14	10.27	45.41	60.00	-14.59	peak	

*:Maximum data x:Over limit !:over margin ●Reference Only

5. List of Measurement Equipments

Manufacturer	Name of Equipment	Type/Model	Serial Number	Calibration	
				Last Cal.	Due Date
Agilent	Spectrum analyzer	E4408B	MY45107753	Jun. 05, 2008	Jun. 05, 2009
R&S	Receiver	ESCI	100367	Jun. 05, 2008	Jun. 05, 2009
SCHWARZBECK	Trilog Broadband Antenna	VULB 9163	9163-270	Jun. 26, 2008	Jun. 26, 2009
SCHWARZBECK	Broadband Horn Antenna	BBHA 9120D	9120D-550	Jun. 26, 2008	Jun. 26, 2009
SCHWARZBECK	Broadband Horn Antenna	BBHA 9170	9170-320	Jun. 09, 2008	Aug. 07, 2009
Agilent	Amplifier	8447D	2944A10961	Jun. 10, 2008	Jun. 10, 2009
Universal Radio Communication Tester	ROHDE & SCHWARZ	CMU200	112387	Oct. 31, 2008	Oct. 31, 2009
Universal Radio Communication Tester	Agilent	E5515C (8960)	GB47020167	Apr. 17, 2008	Apr. 17, 2009
Spectrum Analyzer	Agilent	E4445A	MY45300744	Apr. 17, 2008	Apr. 17, 2009
Loop Dipole	ETS-Lindgren	3127-1880	00052640	Jul. 02, 2008	Jul. 02, 2009
Loop Dipole	ETS-Lindgren	3127-836	00055272	Jul. 02, 2008	Jul. 02, 2009
Sleeve Dipole	ETS-Lindgren	3126-1845	00056670	Jun. 29, 2008	Jun. 29, 2009
Sleeve Dipole	ETS-Lindgren	3126-880	00052705	Jun. 29, 2008	Jun. 29, 2009
Anechoic Chamber	ETS-Lindgren	AMS 8500	S/N 102165	NA	
High Pass Filter	MICRO-TRONICS	HPM50108	020	NA	
High Pass Filter	MICRO-TRONICS	HPM50111	021	NA	
Circularly Polarized Communication Antennas	EMCO	3102	00051714	NA	
Pattern Measurement Software	ETS-Lindgren	EMQuest™ EMQ-100	NA	NA	
Desktop Computer with Windows XP		Dell Computers	NA	NA	
Antenna Positioner Controller	EMCO	2090	00052447	NA	
MAPS Positioner	EMCO	2010/2015	NA	NA	
Filter	K&L	5TNF-1700/ 2000-0.1N/N	166	NA	
Filter	K&L	3TNF-800/ 1000-0.2N/N	274	NA	
Attenuator	RADIALL	R41572000	0603033073	NA	
Splitter	Powercom	SGR-GFQ-2-D	41106609	NA	
Power divider	Agilent	87302C	3239A00760	NA	

6. Uncertainty Evaluation

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

Contribution	Uncertainty of Xi		$U(Xi)$
	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-shaped	0.28
combined standard uncertainty Uc(y)	**1.27**		
Measuring uncertainty for a level of confidence of 95% U=2Uc(y)	**2.54**		

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

Contribution	Uncertainty of Xi		$U(Xi)$	Ci	$Ci * U(Xi)$
	dB	Probability Distributio			
Receiver reading	±0.10	Normal(k=1)	0.10	1	0.10
Antenna factor calibration	±1.70	Normal(k=2)	0.85	1	0.85
Cable loss calibration	±0.50	Normal(k=2)	0.25	1	0.25
Receiver Correction	±2.00	Rectangular	1.15	1	1.15
Antenna Factor Directional	±1.50	Rectangular	0.87	1	0.87
Site imperfection	±2.80	Triangular	1.14	1	1.14
Mismatch Receiver VSWR $\sqrt{1}$ = 0.197 Antenna VSWR $\sqrt{2}$ = 0.194 Uncertainty=20log(1-$\sqrt{1} * \sqrt{2} * \sqrt{3}$)	+0.34/-0.35	U-shaped	0.244	1	0.244
Combined standard uncertainty Uc(y)	**2.36**				
Measuring uncertainty for a level of confidence of 95% U=2Ue(y)	**4.72**				