

ELECTROMAGNETIC EMISSIONS COMPLIANCE REPORT**INTENTIONAL RADIATOR CERTIFICATION TO
FCC PART 15 SUBPART C REQUIREMENT***OF*

Product Name: MINIMUM AD PIPE CHEROKEE

Brand Name: N/A

Model Name: 10751

Model Difference: N/A

FCC ID: WLK08081801

Report No.: ER/2008/70018

Issue Date: Aug. 05, 2008

FCC Rule Part: §15.249

Prepared for: NANJING QUEST TECHNOLOGY CO. LTD
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VERIFICATION OF COMPLIANCE

Applicant: NANJING QUEST TECHNOLOGY CO. LTD
NO. 288, MENLI YAOHUA VILLAGE, YAOHUA STREET, QIXIA
DIST, NANJING CITY, JIANGSU PROVINCE, CHINA

Product Description: INIUM AD PIPE CHEROKEE

Brand Name: N/A

FCC ID Number: WLK08081801

Model No.: 10751

Model Difference: N/A

File Number: ER/2008/70018

Date of test: Jul 18, 2008 ~Aug. 02, 2008

Date of EUT Received: Jul 17, 2008

We hereby certify that:

The above equipment was tested by SGS Taiwan Ltd. Electronics & Communication Laboratory. The test data, data evaluation, test procedures, and equipment configurations shown in this report were made in accordance with the procedures given in ANSI C63.4 (2003) and the energy emitted by the sample EUT tested as described in this report is in compliance with conducted and radiated emission limits of FCC Rules Part 15.249.

The test results of this report relate only to the tested sample identified in this report.

Test By:*Brian Chang***Date**

Aug. 05, 2008

*Brian Chang/Engineer***Prepared By:***Jason Wu***Date**

Aug. 05, 2008

*Jason Wu/Engineer***Approved By:***Vincent Su***Date**

Aug. 05, 2008

Vincent Su/Manager

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Version

Version No.	Date	Description
00	Aug. 05, 2008	Initial creation of document

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1. GENERAL INFORMATION

1.1 Product Description

The **NANJING QUEST TECHNOLOGY CO. LTD**, Model: 10751 (referred to as the EUT in this report) is a 2.4G Radio Control.

A major technical descriptions of EUT is described as following:

A). Operation Frequency: 2405MHz ~ 2480MHz, 76 channels

B). Modulation Type: GFSK

C). Power Supply: 6Vdc battery

D). Antenna Designation: Micro-strip Antenna, 2.14dBi, and no consideration of replacement.
Please see EUT photo for details.

1.2 Related Submittal(s) / Grant (s)

This submittal(s) (test report) is intended for **FCC ID: WLK08081801** filing to comply with Section 15.249 of the FCC Part 15, Subpart C Rules.

1.3 Test Methodology

Both conducted and radiated testing were performed according to the procedures in ANSI C63.4 (2003). Radiated testing was performed at an antenna to EUT distance 3 meters.

1.4 Test Facility

The measurement facilities used to collect the 3m Radiated Emission and AC power line conducted data are located on the address of SGS Taiwan Ltd. No. 134, Wu Kung Rd., Wuku Industrial Zone, Taipei Country, Taiwan which are constructed and calibrated to meet the FCC requirements in documents ANSI C63.4: 2003. FCC Registration Number are: 990257 and 236194, Canada Registration Number: 4620A-1.

The 10 m Open Area Test Sites located on the address of SGS Taiwan Ltd. No. 29, Pau-Tou-Tsuo Valley Chia-Pau Tsuen, Linkou Hsiang, Taipei county, which is constructed and calibrated to meet the CISPR 22/EN 55022 requirements. SGS Site No. 1(3 & 10 meters) and FCC Registration Number: 94644.

1.5 Special Accessories

Not available for this EUT intended for grant.

1.6 Equipment Modifications

Not available for this EUT intended for grant.

2. System Test Configuration

2.1 EUT Configuration

The EUT configuration for testing is installed on RF field strength measurement to meet the Commissions requirement and operating in a manner which intends to maximize its emission characteristics in a continuous normal application.

2.2 EUT Exercise

The Transmitter was operated in the engineering operating mode. the Tx frequency was fixed which was for the purpose of the measurements.

2.3 Test Procedure

2.3.1 Conducted Emissions

The EUT is a placed on as turn table which is 0.8 m above ground plane. According to the requirements in Section 7 and 13 of ANSI C63.4-2003. Conducted emissions from the EUT measured in the frequency range between 0.15 MHz and 30MHz using CISPR Quasi-Peak and Average detector mode.

2.3.2 Radiated Emissions

The EUT is a placed on as turn table which is 0.8 m above ground plane. The turn table shall rotate 360 degrees to determine the position of maximum emission level. EUT is set 3m away from the receiving antenna which varied from 1m to 4m to find out the highest emission. And also, each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical. In order to find out the max. emission, the relative positions of this hand-held transmitter(EUT) was rotated through three orthogonal axes and measurement procedures for electric field radiated emissions above 1 GHz the EUT measurement is to be made "while keeping the antenna in the 'cone of radiation' from that area and pointed at the area both in azimuth and elevation, with polarization oriented for maximum response." is still within the 3dB illumination BW of the measurement antenna. according to the requirements in Section 8 and 13 and Subclause 8.3.1.2 of ANSI C63.4-2003.

2.4 Limitation

(1) Conducted Emission

According to section 15.207(a) Conducted Emission Limits is as following.

Frequency (MHz)	Conducted Limit (dBuV)	
	Quasi-Peak	Average
0.15 – 0.5	66 - 56	56 - 46
0.5 – 5	56	46
5 - 30	60	50

(2) Radiated Emission 15.249(a)

The field strength of emissions from intentional radiators operated within these frequency bands shall comply with the following.

Frequency (MHz)	Field strength of Fundamental	Field strength of Harmonics	Distance (m)
902 - 928	50 mV/m (94dBuV/m)	500 uV/m (54dBuV/m)	3
2400 – 2483.5	50 mV/m (94dBuV/m)	500 uV/m (54dBuV/m)	3
5725 – 5875	50 mV/m (94dBuV/m)	500 uV/m (54dBuV/m)	3
24.0 – 24.25 GHz	250 mV/m (107.95dBuV/m)	2500 uV/m (67.95dBuV/m)	3

(3) Radiated Emission 15.249 (d)

Emission Radiated outside of the specified frequency bands, except for harmonics, shall be attenuated by at least 50dB below the level of the fundamental or to the general radiated emission limits in Section 15.209 as below, whichever is the lesser attenuation.

Frequency (MHz)	Field strength $\mu\text{V/m}$	Distance (m)	Field strength at 3m $\text{dB}\mu\text{V/m}$
1.705-30	30	30	69.54
30-88	100	3	40
88-216	150	3	43.5
216-960	200	3	46
Above 960	500	3	54

(4) Radiated Emission 15.249(e)

For frequencies above 1000MHz, the above field strength limits are based on average limits. The peak field strength of any emission shall not exceed the maximum permitted average limits specified above by more than 20dB under any condition of modulation.

Remark: 1. Emission level in $\text{dB}\mu\text{V/m} = 20 \log (\mu\text{V/m})$

2. Measurement was performed at an antenna to the closed point of EUT distance of meters.

3. Only spurious frequency is permitted to locate within the Restricted Bands specified in provision of ξ 15.205

4. Emission spurious frequency which appearing within the Restricted Bands specified in provision of ξ 15.205, then the general radiated emission limits in ξ 15.209 apply.

2.5 Configuration of Tested System

Fig. 2-1 Configuration of TX

EUT

Table 2-2 Equipment Used in Tested System

Item	Equipment	Mfr/Brand	Model/ Type No.	FCC ID	Series No.	Data Cable	Power Cord
1.	N/A						

Note: All the above equipment/cables were placed in worse case positions to maximize emission signals during emission test.

Grounding: Grounding was in accordance with the manufacturer's requirements and conditions for the intended use.

3. Summary of Test Results

FCC Rules	Description Of Test	Result
§15.207	Conducted Emission	N/A
§15.249(a)(e)	Radiated Emission	Compliant
§15.249(d)	26dB band width Measurement	Compliant

Description of test modes:

The EUT has been tested under operating condition.

EUT staying in continuous transmitting mode. Channel Low(2405MHz), Mid (2442MHz) and High (2480MHz) with highest data rate were chosen for full testing.

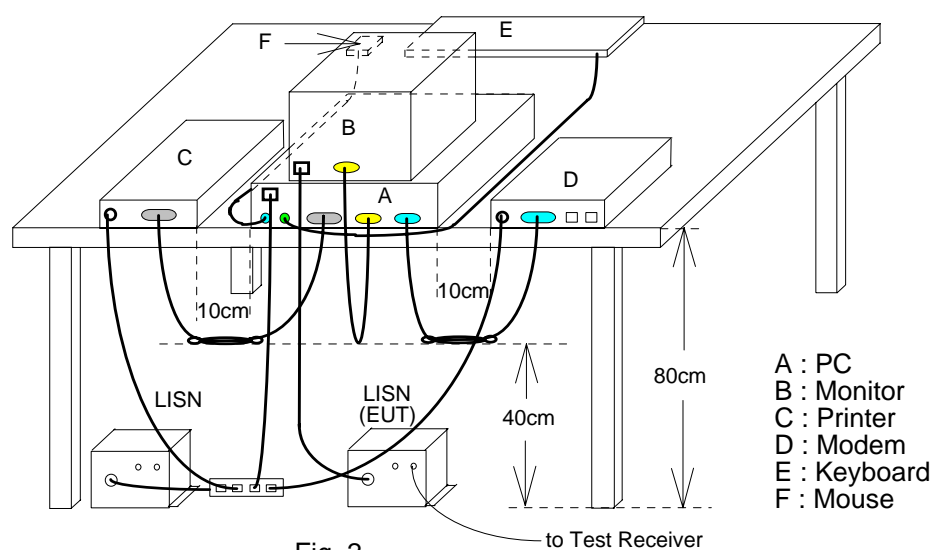
The field strength of spurious radiation emission was measured as EUT stand-up position (H mode) and lie down position (E1, E2 mode) The worst-case of H below 1GHz and H and E1 position above 1GHz were reported.

4. Conducted Emissions Test

4.1 Measurement Procedure:

1. The EUT was placed on a table which is 0.8m above ground plane.
2. Maximum procedure was performed on the six highest emissions to ensure EUT compliance.
3. Repeat above procedures until all frequency measured were complete.

4.2 Test SET-UP (Block Diagram of Configuration)



4.3 Measurement Equipment Used:

Conducted Emission Test Site					
EQUIPMENT TYPE	MFR	MODEL NUMBER	SERIAL NUMBER	LAST CAL.	CAL DUE.
EMC Analyzer	HP	8594EM	3624A00203	09/02/2007	09/03/2008
EMI Test Receiver	R&S	ESCS30	828985/004	06/09/2008	06/08/2009
Transient Limiter	HP	11947A	3107A02062	09/02/2007	09/03/2008
LISN	Rolf-Heine	NNB-2/16Z	99012	12/31/2007	12/30/2008
LISN	Rolf-Heine	NNB-2/16Z	99013	12/24/2007	12/23/2008
Coaxial Cables	N/A	No. 3, 4	N/A	12/01/2007	12/01/2208

4.4 Measurement Result: N/A, It's powered by battery.

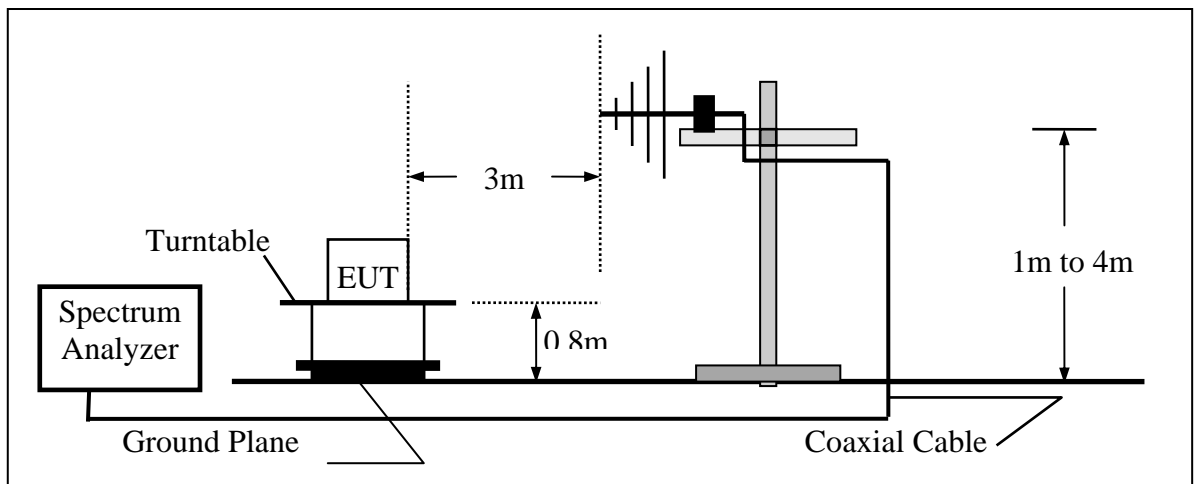
5. Radiated Emission Test

5.1 Measurement Procedure

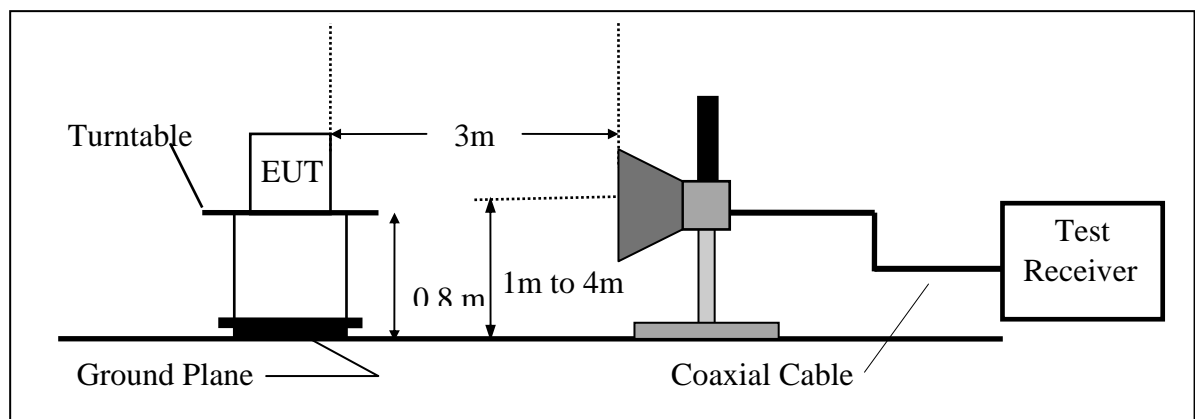
1. The EUT was placed on a turntable that is 0.8m above ground plane.
2. When measurement procedures for electric field radiated emissions above 1 GHz the EUT measurement is to be made “while keeping the antenna in the ‘cone of radiation’ from that area and pointed at the area both in azimuth and elevation, with polarization oriented for maximum response.” is still within the 3dB illumination BW of the measurement antenna.
3. Maximum procedure was performed on the six highest emissions to ensure EUT compliance.
4. And also, each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical.
5. Repeat above procedures until all frequency measured were complete.

5.2 Test SET-UP (Block Diagram of Configuration)

(A) Radiated Emission Test Set-Up, Frequency Below 1000MHz



(B) Radiated Emission Test Set-UP Frequency Over 1 GHz



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5.3 Measurement Equipment Used:

966 Chamber					
EQUIPMENT TYPE	MFR	MODEL NUMBER	SERIAL NUMBER	LAST CAL.	CAL DUE.
Spectrum Analyzer	Agilent	E4446A	MY43360126	04/19/2008	04/18/2009
Spectrum Analyzer	Agilent	E7405A	US41160416	07/04/2008	07/03/2009
Bi-log Antenna	SCHWAZBECK	VULB9163	152	06/03/2008	06/02/2009
Horn antenna	SCHWAZBECK	BBHA 9120D	309/320	01/22/2008	01/21/2009
Horn antenna	SCHWAZBECK	BBHA 9170	184/185	07/04/2008	07/03/2009
Pre-Amplifier	HP	8447D	2944A09469	01/05/2008	01/04/2009
Pre-Amplifier	HP	8494B	3008A00578	01/05/2008	01/04/2009
Turn Table	HD	DT420	N/A	N.C.R	N.C.R
Antenna Tower	HD	MA240-N	240/657	N.C.R	N.C.R
Controller	HD	HD100	N/A	N.C.R	N.C.R
Low Loss Cable	HUBER+SUHNER	SUCOFLEX 104PEA-10M	10m	01/05/2008	01/04/2009
Low Loss Cable	HUBER+SUHNER	SUCOFLEX 104PEA-3M	3m	01/05/2008	01/04/2009
Site NSA	SGS	966 chamber	N/A	11/17/2007	11/16/2008

5.4 Field Strength Calculation

The field strength is calculated by adding the Antenna Factor and Cable Factor and subtracting the Amplifier Gain and Duty Cycle Correction Factor(if any) from the measured reading. The basic equation with a sample calculation is as follows:

$$FS = RA + AF + CL - AG$$

Where	FS = Field Strength	CL = Cable Attenuation Factor (Cable Loss)
	RA = Reading Amplitude	AG = Amplifier Gain
	AF = Antenna Factor	

5.5 Measurement Result

5.5.1 Radiated Spurious Emission Measurement Result (below 1GHz)

Operation Mode	TX (H)	Test Date	Aug. 02, 2008
Fundamental Frequency	2405MHz	Test By	Brian
Temperature	25	Pol	Ver./Hor
Humidity	65 %		

Freq. (MHz)	Ant.Pol. H/V	Detector Mode (PK/QP)	Reading (dBuV)	Factor (dB)	Actual FS (dBuV/m)	Limit3m (dBuV/m)	Safe Margin (dB)
51.34	V	Peak	41.61	-14.19	27.42	40.00	-12.58
101.78	V	Peak	41.30	-16.87	24.43	43.50	-19.07
177.44	V	Peak	36.14	-14.38	21.76	43.50	-21.74
276.38	V	Peak	34.87	-13.48	21.39	46.00	-24.61
526.64	V	Peak	35.93	-8.04	27.89	46.00	-18.11
706.09	V	Peak	33.19	-4.91	28.28	46.00	-17.72
51.34	H	Peak	46.81	-14.19	32.62	40.00	-7.38
75.59	H	Peak	41.36	-17.13	24.23	40.00	-15.77
140.58	H	Peak	37.51	-13.65	23.86	43.50	-19.64
177.44	H	Peak	36.50	-14.38	22.12	43.50	-21.38
276.38	H	Peak	34.70	-13.48	21.22	46.00	-24.78
361.74	H	Peak	32.82	-11.33	21.49	46.00	-24.51

Remark :

- (1) Measuring frequencies from 30 MHz to the 1GHz °
- (2) Radiated emissions measured in frequency range from 30 MHz to 1000MHz were made with an instrument using Peak/QP detector mode.
- (3) Data of measurement within this frequency range shown “ - ” in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- (4) The IF bandwidth of SPA between 30MHz to 1GHz was 100KHz, VBW=300KHz.

Operation Mode TX (H)
 Fundamental Frequency 2442MHz
 Temperature 25
 Humidity 65 %

Test Date Aug. 02, 2008
 Test By Brian
 Pol Ver./Hor

Freq. (MHz)	Ant.Pol. H/V	Detector Mode (PK/QP)	Reading (dBuV)	Factor (dB)	Actual FS (dBuV/m)	Limit3m (dBuV/m)	Safe Margin (dB)
51.34	V	Peak	40.47	-14.19	26.28	40.00	-13.72
101.78	V	Peak	40.66	-16.87	23.79	43.50	-19.71
138.64	V	Peak	36.80	-13.80	23.00	43.50	-20.50
177.44	V	Peak	35.60	-14.38	21.22	43.50	-22.28
533.43	V	Peak	34.93	-7.96	26.97	46.00	-19.03
706.09	V	Peak	34.33	-4.91	29.42	46.00	-16.58
51.34	H	Peak	47.45	-14.19	33.26	40.00	-6.74
75.59	H	Peak	41.21	-17.13	24.08	40.00	-15.92
140.58	H	Peak	39.97	-13.65	24.32	43.50	-19.18
177.44	H	Peak	36.38	-14.38	22.00	43.50	-21.50
327.79	H	Peak	33.49	-12.36	21.13	46.00	-24.87
706.09	H	Peak	33.24	-4.91	28.33	46.00	-17.67

Remark :

- (1) Measuring frequencies from 30 MHz to the 1GHz。
- (2) Radiated emissions measured in frequency range from 30 MHz to 1000MHz were made with an instrument using Peak/QP detector mode.
- (3) Data of measurement within this frequency range shown “ - ” in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- (4) The IF bandwidth of SPA between 30MHz to 1GHz was 100KHz, VBW=300KHz.

Operation Mode TX (H)
Fundamental Frequency 2480MHz
Temperature 25
Humidity 65 %

Test Date Aug. 02, 2008
Test By Brian
Pol Ver./Hor

Freq. (MHz)	Ant.Pol. H/V	Detector Mode (PK/QP)	Reading (dBuV)	Factor (dB)	Actual FS (dBuV/m)	Limit3m (dBuV/m)	Safe Margin (dB)
51.34	V	Peak	40.45	-14.19	26.26	40.00	-13.74
90.14	V	Peak	40.76	-17.62	23.14	43.50	-20.36
138.64	V	Peak	36.42	-13.80	22.62	43.50	-20.88
177.44	V	Peak	35.04	-14.38	20.66	43.50	-22.84
543.13	V	Peak	37.08	-7.74	29.43	46.00	-16.66
706.09	V	Peak	33.45	-4.91	28.54	46.00	-17.46
51.34	H	Peak	47.40	-14.19	33.21	40.00	-6.79
75.59	H	Peak	41.03	-17.13	23.90	40.00	-16.10
140.58	H	Peak	36.23	-13.65	22.58	43.50	-20.92
177.44	H	Peak	36.84	-14.38	22.46	43.50	-21.04
543.13	H	Peak	34.75	-7.74	27.01	46.00	-18.99
706.09	H	Peak	33.23	-4.91	28.32	46.00	-17.68

Remark :

- (1) Measuring frequencies from 30 MHz to the 1GHz .
- (2) Radiated emissions measured in frequency range from 30 MHz to 1000MHz were made with an instrument using Peak/QP detector mode.
- (3) Data of measurement within this frequency range shown “ - ” in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- (4) The IF bandwidth of SPA between 30MHz to 1GHz was 100KHz, VBW=300KHz.

5.5.2 Radiated Spurious Emission Measurement Result (above 1GHz)

Operation Mode: TX (E1)
 Fundamental Frequency: 2405MHz
 Temperature : 25
 Humidity : 65 %

Test Date : Aug. 02, 2008
 Test By: Brian
 Pol: Vertical

Freq. (MHz)	Ant. Pol. H/V	Peak Reading (dBuV)	AV Reading (dBuV)	Factor (dB)	Actual Peak FS (dBuV/m)	Actual AV FS (dBuV/m)	Peak Limit at 3m (dBuV/m)	AV Limit at 3m (dBuV/m)	Margin (dB)	
2405.0	V	84.96	--	-1.30	83.66	--	114.00	94.00	-10.34	F
4810.0	V	--	--			--	74.00	54.00		H
7215.0	V	--	--			--	74.00	54.00		H
9620.0	V	--	--			--	74.00	54.00		H
12025.0	V	--	--			--	74.00	54.00		H
14430.0	V	--	--			--	74.00	54.00		H
16835.0	V	--	--			--	74.00	54.00		H
19240.0	V	--	--			--	74.00	54.00		H
21645.0	V	--	--			--	74.00	54.00		H
24050.0	V	--	--			--	74.00	54.00		H

Remark :

- (1) Measuring frequencies from 30MHz to the 10th of fundamental frequency .
- (2) Field strength limits for frequency above 1000MHz are based on average limits. However, Peak mode field strength shall not exceed the average limits specified plus 20dB
- (3) "F" denotes fundamental frequency; "H" denotes harmonics frequency. "S" denotes spurious frequency.
- (4) Data of measurement within this frequency range shown " - " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- (5) Spectrum Peak mode IF bandwidth Setting : 1GHz- 26GHz, RBW= 1MHz, Sweep time= 200 ms., the VBW setting was 3 MHz.
- (6) Spectrum AV mode IF B bandwidth Setting : 1GHz- 26GHz, RBW= 1MHz, VBW= 10Hz, Sweep time= 200 ms.

5.5.2 Radiated Spurious Emission Measurement Result (above 1GHz)

Operation Mode: TX (E1)

Test Date : Aug. 02, 2008

Fundamental Frequency: 2405MHz

Test By: Brian

Temperature : 25

Pol: Horizontal

Humidity : 65 %

Freq. (MHz)	Ant. Pol. H/V	Peak Reading (dBuV)	AV Reading (dBuV)	Factor (dB)	Actual Peak FS (dBuV/m)	Actual AV FS (dBuV/m)	Peak Limit at 3m (dBuV/m)	AV Limit at 3m (dBuV/m)	Margin (dB)	
2405.0	H	94.13	93.23	-1.30	92.83	91.93	114.00	94.00	-2.07	F
4810.0	H	--	--			--	74.00	54.00		H
7215.0	H	--	--			--	74.00	54.00		H
9620.0	H	--	--			--	74.00	54.00		H
12025.0	H	--	--			--	74.00	54.00		H
14430.0	H	--	--			--	74.00	54.00		H
16835.0	H	--	--			--	74.00	54.00		H
19240.0	H	--	--			--	74.00	54.00		H
21645.0	H	--	--			--	74.00	54.00		H
24050.0	H	--	--			--	74.00	54.00		H

Remark:

- (1) Measuring frequencies from 30MHz to the 10th of fundamental frequency .
- (2) Field strength limits for frequency above 1000MHz are based on average limits. However, Peak mode field strength shall not exceed the average limits specified plus 20dB
- (3) "F" denotes fundamental frequency; "H" denotes harmonics frequency. "S" denotes spurious frequency.
- (4) Data of measurement within this frequency range shown " - " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- (5) Spectrum Peak mode IF bandwidth Setting : 1GHz- 26GHz, RBW= 1MHz, Sweep time= 200 ms., the VBW setting was 3 MHz.
- (6) Spectrum AV mode IF B bandwidth Setting : 1GHz- 26GHz, RBW= 1MHz, VBW= 10Hz, Sweep time= 200 ms.

5.5.2 Radiated Spurious Emission Measurement Result (above 1GHz)

Operation Mode: TX (E1)
 Fundamental Frequency: 2442MHz
 Temperature : 25
 Humidity : 65 %

Test Date : Aug. 02, 2008
 Test By: Brian
 Pol: Vertical

Freq.	Ant.	Pol.	Peak Reading	AV Reading	Factor	Actual Peak FS	Actual AV FS	Peak Limit at 3m	AV Limit at 3m	Margin	
(MHz)		H/V	(dBuV)	(dBuV)	(dB)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dB)	
2442.0		V	85.12	--	-1.12	84.00	--	114.00	94.00	-10.00	F
4884.0		V	--	--			--	74.00	54.00		H
7326.0		V	--	--			--	74.00	54.00		H
9768.0		V	--	--			--	74.00	54.00		H
12210.0		V	--	--			--	74.00	54.00		H
14652.0		V	--	--			--	74.00	54.00		H
17094.0		V	--	--			--	74.00	54.00		H
19536.0		V	--	--			--	74.00	54.00		H
21978.0		V	--	--			--	74.00	54.00		H
24420.0		V	--	--			--	74.00	54.00		H

Remark :

- (1) Measuring frequencies from 30MHz to the 10th of fundamental frequency .
- (2) Field strength limits for frequency above 1000MHz are based on average limits. However, Peak mode field strength shall not exceed the average limits specified plus 20dB
- (3) "F" denotes fundamental frequency; "H" denotes harmonics frequency. "S" denotes spurious frequency.
- (4) Data of measurement within this frequency range shown " - " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- (5) Spectrum Peak mode IF bandwidth Setting : 1GHz- 26GHz, RBW= 1MHz, Sweep time= 200 ms., the VBW setting was 3 MHz.
- (6) Spectrum AV mode IF B bandwidth Setting : 1GHz- 26GHz, RBW= 1MHz, VBW= 10Hz, Sweep time= 200 ms.

5.5.2 Radiated Spurious Emission Measurement Result (above 1GHz)

Operation Mode: TX (E1)

Test Date : Aug. 02, 2008

Fundamental Frequency: 2442MHz

Test By: Brian

Temperature : 25

Pol: Horizontal

Humidity : 65 %

Freq. (MHz)	Ant. Pol. H/V	Peak Reading (dBuV)	AV Reading (dBuV)	Factor (dB)	Actual Peak FS (dBuV/m)	Actual AV FS (dBuV/m)	Peak Limit at 3m (dBuV/m)	AV Limit at 3m (dBuV/m)	Margin (dB)	
2442.0	H	94.23	93.67	-1.12	93.11	92.55	114.00	94.00	-1.45	F
4884.0	H	--	--			--	74.00	54.00		H
7326.0	H	--	--			--	74.00	54.00		H
9768.0	H	--	--			--	74.00	54.00		H
12210.0	H	--	--			--	74.00	54.00		H
14652.0	H	--	--			--	74.00	54.00		H
17094.0	H	--	--			--	74.00	54.00		H
19536.0	H	--	--			--	74.00	54.00		H
21978.0	H	--	--			--	74.00	54.00		H
24420.0	H	--	--			--	74.00	54.00		H

Remark:

- (1) Measuring frequencies from 30MHz to the 10th of fundamental frequency .
- (2) Field strength limits for frequency above 1000MHz are based on average limits. However, Peak mode field strength shall not exceed the average limits specified plus 20dB
- (3) "F" denotes fundamental frequency; "H" denotes harmonics frequency. "S" denotes spurious frequency.
- (4) Data of measurement within this frequency range shown " - " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- (5) Spectrum Peak mode IF bandwidth Setting : 1GHz- 26GHz, RBW= 1MHz, Sweep time= 200 ms., the VBW setting was 3 MHz.
- (6) Spectrum AV mode IF B bandwidth Setting : 1GHz- 26GHz, RBW= 1MHz, VBW= 10Hz, Sweep time= 200 ms.

5.5.2 Radiated Spurious Emission Measurement Result (above 1GHz)

Operation Mode: TX (E1)

Test Date : Aug. 02, 2008

Fundamental Frequency: 2480MHz

Test By: Brian

Temperature : 25

Pol: Vertical

Humidity : 65 %

Freq. (MHz)	Ant. Pol. H/V	Peak Reading (dBuV)	AV Reading (dBuV)	Factor (dB)	Actual Peak FS (dBuV/m)	Actual AV FS (dBuV/m)	Peak Limit at 3m (dBuV/m)	AV Limit at 3m (dBuV/m)	Margin (dB)	
2480.0	V	85.32	--	-0.92	84.40	--	114.00	94.00	-9.60	F
4960.0	V	--	--			--	74.00	54.00		H
7440.0	V	--	--			--	74.00	54.00		H
9920.0	V	--	--			--	74.00	54.00		H
12400.0	V	--	--			--	74.00	54.00		H
14880.0	V	--	--			--	74.00	54.00		H
17360.0	V	--	--			--	74.00	54.00		H
19840.0	V	--	--			--	74.00	54.00		H
22320.0	V	--	--			--	74.00	54.00		H
24800.0	V	--	--			--	74.00	54.00		H

Remark :

- (1) Measuring frequencies from 30MHz to the 10th of fundamental frequency .
- (2) Field strength limits for frequency above 1000MHz are based on average limits. However, Peak mode field strength shall not exceed the average limits specified plus 20dB
- (3) "F" denotes fundamental frequency; "H" denotes harmonics frequency. "S" denotes spurious frequency.
- (4) Data of measurement within this frequency range shown " - " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- (5) Spectrum Peak mode IF bandwidth Setting : 1GHz- 26GHz, RBW= 1MHz, Sweep time= 200 ms., the VBW setting was 3 MHz.
- (6) Spectrum AV mode IF B bandwidth Setting : 1GHz- 26GHz, RBW= 1MHz, VBW= 10Hz, Sweep time= 200 ms.

5.5.2 Radiated Spurious Emission Measurement Result (above 1GHz)

Operation Mode: TX (E1)

Test Date : Aug. 02, 2008

Fundamental Frequency: 2480MHz

Test By: Brian

Temperature : 25

Pol: Horizontal

Humidity : 65 %

Freq. (MHz)	Ant. Pol. H/V	Peak Reading (dBuV)	AV Reading (dBuV)	Factor (dB)	Actual Peak FS (dBuV/m)	Actual AV FS (dBuV/m)	Peak Limit at 3m (dBuV/m)	AV Limit at 3m (dBuV/m)	Margin (dB)	
2480.0	H	94.70	93.45	-0.92	93.78	92.53	114.00	94.00	-1.47	F
4960.0	H	--	--			--	74.00	54.00		H
7440.0	H	--	--			--	74.00	54.00		H
9920.0	H	--	--			--	74.00	54.00		H
12400.0	H	--	--			--	74.00	54.00		H
14880.0	H	--	--			--	74.00	54.00		H
17360.0	H	--	--			--	74.00	54.00		H
19840.0	H	--	--			--	74.00	54.00		H
22320.0	H	--	--			--	74.00	54.00		H
24800.0	H	--	--			--	74.00	54.00		H

Remark:

- (1) Measuring frequencies from 30MHz to the 10th of fundamental frequency.
- (2) Field strength limits for frequency above 1000MHz are based on average limits. However, Peak mode field strength shall not exceed the average limits specified plus 20dB
- (3) "F" denotes fundamental frequency; "H" denotes harmonics frequency. "S" denotes spurious frequency.
- (4) Data of measurement within this frequency range shown " - " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- (5) Spectrum Peak mode IF bandwidth Setting : 1GHz- 26GHz, RBW= 1MHz, Sweep time= 200 ms., the VBW setting was 3 MHz.
- (6) Spectrum AV mode IF B bandwidth Setting : 1GHz- 26GHz, RBW= 1MHz, VBW= 10Hz, Sweep time= 200 ms.
- (6) Spectrum AV mode IF B bandwidth Setting : 1GHz- 26GHz, RBW= 1MHz, VBW= 10Hz, Sweep time= 200 ms.

5.5.2 Radiated Spurious Emission Measurement Result (above 1GHz)

Operation Mode: TX (H)

Test Date : Aug. 02, 2008

Fundamental Frequency: 2405MHz

Test By: Brian

Temperature : 25

Pol: Vertical

Humidity : 65 %

Freq. (MHz)	Ant. Pol. H/V	Peak Reading (dBuV)	AV Reading (dBuV)	Factor (dB)	Actual Peak FS (dBuV/m)	Actual AV FS (dBuV/m)	Peak Limit at 3m (dBuV/m)	AV Limit at 3m (dBuV/m)	Margin (dB)	
2405.0	V	85.33	--	-1.30	84.03	--	114.00	94.00	-9.97	F
4810.0	V	47.66	46.47	6.02	53.68	52.49	74.00	54.00	-1.51	H
7215.0	V	--	--			--	74.00	54.00		H
9620.0	V	--	--			--	74.00	54.00		H
12025.0	V	--	--			--	74.00	54.00		H
14430.0	V	--	--			--	74.00	54.00		H
16835.0	V	--	--			--	74.00	54.00		H
19240.0	V	--	--			--	74.00	54.00		H
21645.0	V	--	--			--	74.00	54.00		H
24050.0	V	--	--			--	74.00	54.00		H

Remark :

- (1) Measuring frequencies from 30MHz to the 10th of fundamental frequency .
- (2) Field strength limits for frequency above 1000MHz are based on average limits. However, Peak mode field strength shall not exceed the average limits specified plus 20dB
- (3) "F" denotes fundamental frequency; "H" denotes harmonics frequency. "S" denotes spurious frequency.
- (4) Data of measurement within this frequency range shown " - " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- (5) Spectrum Peak mode IF bandwidth Setting : 1GHz- 26GHz, RBW= 1MHz, Sweep time= 200 ms., the VBW setting was 3 MHz.
- (6) Spectrum AV mode IF B bandwidth Setting : 1GHz- 26GHz, RBW= 1MHz, VBW= 10Hz, Sweep time= 200 ms.

Radiated Spurious Emission Measurement Result (above 1GHz)

Operation Mode: TX (H))
 Fundamental Frequency: 2405MHz
 Temperature : 25
 Humidity : 65 %

Test Date : Aug. 02, 2008
 Test By: Brian
 Pol: Horizontal

Freq. (MHz)	Ant. Pol. H/V	Peak Reading (dBuV)	AV Reading (dBuV)	Factor (dB)	Actual Peak FS (dBuV/m)	Actual AV FS (dBuV/m)	Peak Limit at 3m (dBuV/m)	AV Limit at 3m (dBuV/m)	Margin (dB)	
2405.0	H	94.39	93.53	-1.30	93.09	92.23	114.00	94.00	-1.77	F
4810.0	H	43.81	--	6.02	49.83	--	74.00	54.00	-4.17	H
7215.0	H	--	--			--	74.00	54.00		H
9620.0	H	--	--			--	74.00	54.00		H
12025.0	H	--	--			--	74.00	54.00		H
14430.0	H	--	--			--	74.00	54.00		H
16835.0	H	--	--			--	74.00	54.00		H
19240.0	H	--	--			--	74.00	54.00		H
21645.0	H	--	--			--	74.00	54.00		H
24050.0	H	--	--			--	74.00	54.00		H

Remark:

- (1) Measuring frequencies from 30MHz to the 10th of fundamental frequency.
- (2) Field strength limits for frequency above 1000MHz are based on average limits. However, Peak mode field strength shall not exceed the average limits specified plus 20dB
- (3) "F" denotes fundamental frequency; "H" denotes harmonics frequency. "S" denotes spurious frequency.
- (4) Data of measurement within this frequency range shown " - " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- (5) Spectrum Peak mode IF bandwidth Setting : 1GHz- 26GHz, RBW= 1MHz, Sweep time= 200 ms., the VBW setting was 3 MHz.
- (6) Spectrum AV mode IF B bandwidth Setting : 1GHz- 26GHz, RBW= 1MHz, VBW= 10Hz, Sweep time= 200 ms.

Radiated Spurious Emission Measurement Result (above 1GHz)

Operation Mode: TX (H)
 Fundamental Frequency: 2442MHz
 Temperature : 25
 Humidity : 65 %

Test Date : Aug. 02, 2008
 Test By: Brian
 Pol: Vertical

Freq. (MHz)	Ant.Pol. H/V	Peak Reading (dBuV)	AV Reading (dBuV)	Factor (dB)	Actual Peak FS (dBuV/m)	Actual AV FS (dBuV/m)	Peak Limit at 3m (dBuV/m)	AV Limit at 3m (dBuV/m)	Margin (dB)	
2442.0	V	85.32	--	-1.12	84.20	--	114.00	94.00	-9.80	F
4884.0	V	47.00	46.01	6.17	53.17	52.18	74.00	54.00	-1.82	H
7326.0	V	--	--			--	74.00	54.00		H
9768.0	V	--	--			--	74.00	54.00		H
12210.0	V	--	--			--	74.00	54.00		H
14652.0	V	--	--			--	74.00	54.00		H
17094.0	V	--	--			--	74.00	54.00		H
19536.0	V	--	--			--	74.00	54.00		H
21978.0	V	--	--			--	74.00	54.00		H
24420.0	V	--	--			--	74.00	54.00		H

Remark :

- (1) Measuring frequencies from 30MHz to the 10th of fundamental frequency .
- (2) Field strength limits for frequency above 1000MHz are based on average limits. However, Peak mode field strength shall not exceed the average limits specified plus 20dB
- (3) "F" denotes fundamental frequency; "H" denotes harmonics frequency. "S" denotes spurious frequency.
- (4) Data of measurement within this frequency range shown " - " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- (5) Spectrum Peak mode IF bandwidth Setting : 1GHz- 26GHz, RBW= 1MHz, Sweep time= 200 ms., the VBW setting was 3 MHz.
- (6) Spectrum AV mode IF B bandwidth Setting : 1GHz- 26GHz, RBW= 1MHz, VBW= 10Hz, Sweep time= 200 ms.

Radiated Spurious Emission Measurement Result (above 1GHz)

Operation Mode: TX (H)
 Fundamental Frequency: 2442MHz
 Temperature : 25
 Humidity : 65 %

Test Date : Aug. 02, 2008
 Test By: Brian
 Pol: Horizontal

Freq. (MHz)	Ant. Pol. H/V	Peak Reading (dBuV)	AV Reading (dBuV)	Factor (dB)	Actual Peak FS (dBuV/m)	Actual AV FS (dBuV/m)	Peak Limit at 3m (dBuV/m)	AV Limit at 3m (dBuV/m)	Margin (dB)	
2442.0	H	94.39	93.45	-1.12	93.27	92.33	114.00	94.00	-1.67	F
4884.0	H	42.78	--	6.17	48.95	--	74.00	54.00	-5.05	H
7326.0	H	--	--			--	74.00	54.00		H
9768.0	H	--	--			--	74.00	54.00		H
12210.0	H	--	--			--	74.00	54.00		H
14652.0	H	--	--			--	74.00	54.00		H
17094.0	H	--	--			--	74.00	54.00		H
19536.0	H	--	--			--	74.00	54.00		H
21978.0	H	--	--			--	74.00	54.00		H
24420.0	H	--	--			--	74.00	54.00		H

Remark:

- (1) Measuring frequencies from 30MHz to the 10th of fundamental frequency.
- (2) Field strength limits for frequency above 1000MHz are based on average limits. However, Peak mode field strength shall not exceed the average limits specified plus 20dB
- (3) "F" denotes fundamental frequency; "H" denotes harmonics frequency. "S" denotes spurious frequency.
- (4) Data of measurement within this frequency range shown " - " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- (5) Spectrum Peak mode IF bandwidth Setting : 1GHz- 26GHz, RBW= 1MHz, Sweep time= 200 ms., the VBW setting was 3 MHz.
- (6) Spectrum AV mode IF B bandwidth Setting : 1GHz- 26GHz, RBW= 1MHz, VBW= 10Hz, Sweep time= 200 ms.

Radiated Spurious Emission Measurement Result (above 1GHz)

Operation Mode: TX (H)
 Fundamental Frequency: 2480MHz
 Temperature : 25
 Humidity : 65 %

Test Date : Aug. 02, 2008
 Test By: Brian
 Pol: Vertical

Freq. (MHz)	Ant. Pol. H/V	Peak Reading (dBuV)	AV Reading (dBuV)	Factor (dB)	Actual Peak (dBuV/m)	Actual AV (dBuV/m)	Peak Limit at 3m (dBuV/m)	AV Limit at 3m (dBuV/m)	Margin (dB)	
2480.0	V	85.84	--	-0.92	84.92	--	114.00	94.00	-9.08	F
4960.0	V	45.66	44.96	6.36	52.02	51.32	74.00	54.00	-2.68	H
7440.0	V	--	--			--	74.00	54.00		H
9920.0	V	--	--			--	74.00	54.00		H
12400.0	V	--	--			--	74.00	54.00		H
14880.0	V	--	--			--	74.00	54.00		H
17360.0	V	--	--			--	74.00	54.00		H
19840.0	V	--	--			--	74.00	54.00		H
22320.0	V	--	--			--	74.00	54.00		H
24800.0	V	--	--			--	74.00	54.00		H

Remark :

- (1) Measuring frequencies from 30MHz to the 10th of fundamental frequency .
- (2) Field strength limits for frequency above 1000MHz are based on average limits. However, Peak mode field strength shall not exceed the average limits specified plus 20dB
- (3) "F" denotes fundamental frequency; "H" denotes harmonics frequency. "S" denotes spurious frequency.
- (4) Data of measurement within this frequency range shown " - " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- (5) Spectrum Peak mode IF bandwidth Setting : 1GHz- 26GHz, RBW= 1MHz, Sweep time= 200 ms., the VBW setting was 3 MHz.
- (6) Spectrum AV mode IF B bandwidth Setting : 1GHz- 26GHz, RBW= 1MHz, VBW= 10Hz, Sweep time= 200 ms.

Radiated Spurious Emission Measurement Result (above 1GHz)

Operation Mode: TX (H)
 Fundamental Frequency: 2480MHz
 Temperature : 25
 Humidity : 65 %

Test Date : Aug. 02, 2008
 Test By: Brian
 Pol: Horizontal

Freq. (MHz)	Ant. Pol. H/V	Peak Reading (dBuV)	AV Reading (dBuV)	Factor (dB)	Actual Peak FS (dBuV/m)	Actual AV FS (dBuV/m)	Peak Limit at 3m (dBuV/m)	AV Limit at 3m (dBuV/m)	Margin (dB)	
2480.0	H	94.75	93.70	-0.92	93.83	92.78	114.00	94.00	-1.22	F
4960.0	H	43.25	--	6.36	49.61	--	74.00	54.00	-4.39	H
7440.0	H	--	--			--	74.00	54.00		H
9920.0	H	--	--			--	74.00	54.00		H
12400.0	H	--	--			--	74.00	54.00		H
14880.0	H	--	--			--	74.00	54.00		H
17360.0	H	--	--			--	74.00	54.00		H
19840.0	H	--	--			--	74.00	54.00		H
22320.0	H	--	--			--	74.00	54.00		H
24800.0	H	--	--			--	74.00	54.00		H

Remark:

- (1) Measuring frequencies from 30MHz to the 10th of fundamental frequency.
- (2) Field strength limits for frequency above 1000MHz are based on average limits. However, Peak mode field strength shall not exceed the average limits specified plus 20dB
- (3) "F" denotes fundamental frequency; "H" denotes harmonics frequency. "S" denotes spurious frequency.
- (4) Data of measurement within this frequency range shown " - " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- (5) Spectrum Peak mode IF bandwidth Setting : 1GHz- 26GHz, RBW= 1MHz, Sweep time= 200 ms., the VBW setting was 3 MHz.
- (6) Spectrum AV mode IF B bandwidth Setting : 1GHz- 26GHz, RBW= 1MHz, VBW= 10Hz, Sweep time= 200 ms.
- (6) Spectrum AV mode IF B bandwidth Setting : 1GHz- 26GHz, RBW= 1MHz, VBW= 10Hz, Sweep time= 200 ms.

6. 26 dB BandWidth Measurement

6.1 Measurement Procedure

1. The EUT was placed on a turn table which is 0.8m above ground plane.
2. Set ETU normal operating mode.
3. Set SPA Center Frequency = fundamental frequency, RBW, VBW = 100KHz, Span = 3MHz.
4. Set SPA Max hold. Mark peak, -26dB.

6.2 Test SET-UP (Block Diagram of Configuration)

Same as 4.2 Radiated Emission Measurement.

6.3 Measurement Equipment Used:

Same as 4.2 Radiated Emission Measurement.

6.4 Measurement Results:

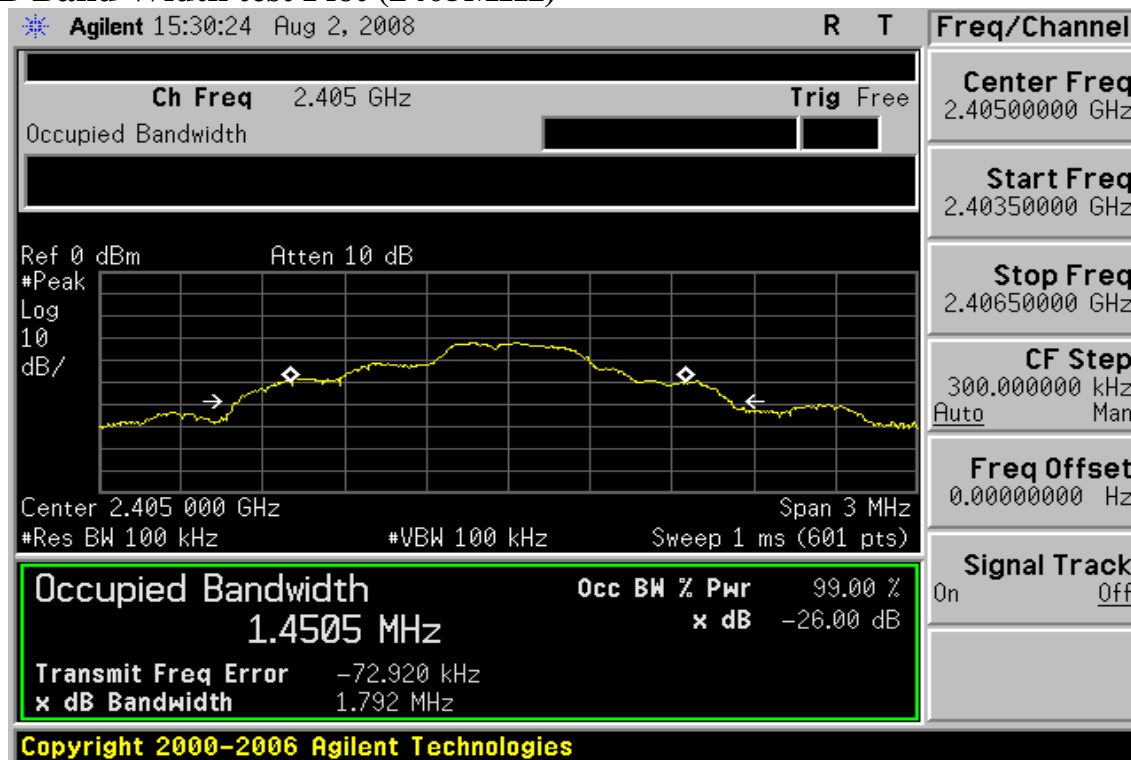
2405MHz Channel = 1.792MHz

2442MHz Channel = 1.854MHz

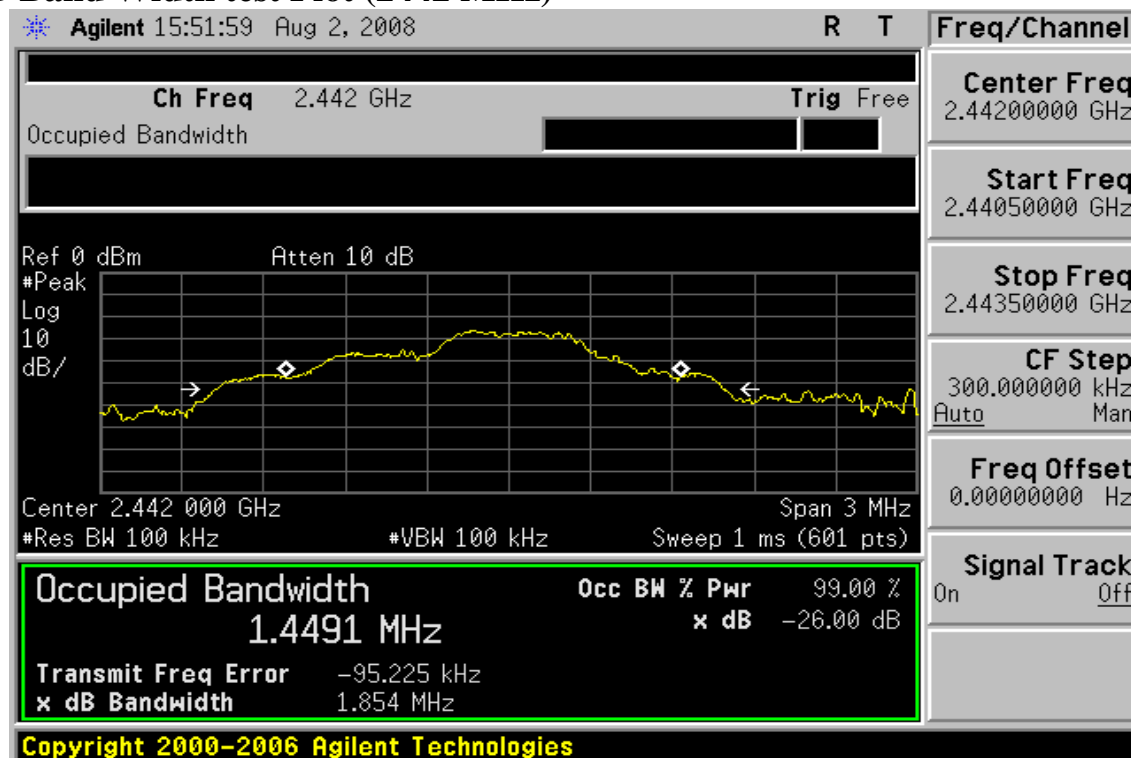
2480MHz Channel = 1.982MHz

Refer to attached data chart.

26dB Band Width test Plot (2405MHz)



26dB Band Width test Plot (2442 MHz)



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26dB Band Width test Plot (2480 MHz)

