

**ELECTROMAGNETIC EMISSIONS COMPLIANCE REPORT
INTENTIONAL RADIATOR CERTIFICATION TO
FCC PART 95H REQUIREMENTS**

OF

TELEMETRY MONITORING SYSTEM

MODEL No.: TMS-6016

BRAND NAME: MINDRAY

FCC ID: VUOTMS6016

REPORT NO: WE07110002

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Prepared for

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d.b.a.

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VERIFICATION OF COMPLIANCE

Applicant:	SHENZHEN MINDRAY BIO-MEDICAL ELECTRONICS CO., LTD. Mindray Building, Keji 12 th Road South, High-tech Industrial Park, Nanshan, Shenzhen 518057, P.R. China
Product Description:	Telemetry Monitoring System
Brand Name:	MINDRAY
Model Number:	TMS-6016
Serial Number:	N/A
File Number:	WE07110002
Date of Test:	Nov 22, 2006 ~ Dec 02, 2006

We hereby certify that:

The above equipment was tested by SHENZHEN HUATONGWEI INTERNATIONAL INSPECTION CO., LTD. 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), TIA/EIA 603 and the energy emitted by the sample EUT tested as described in this report is in compliance with radiated emission limits of FCC Rules Part 95 H.

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

Approved By



Jimmy Li / Executive Manager
SHENZHEN HUA TONG WEI
INTERNATIONAL INSPECTION CO., LTD

Reviewed By



Tracy Qi / RF Engineer
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1. GENERAL INFORMATION

1.1 PROCUCT DESCRIPTION

The SHENZHEN MINDRAY BIO-MEDICAL ELECTRONICS CO., LTD.'s Model: TMS-6016 or the "EUT" as referred to in this report is designed by way of utilizing the FM modulation achieves the system operating.

* The test data gathered are from typical production samples provided by the manufacturer. A major technical description of EUT is described as following:

- a). Antenna Designation: Inner
- b). Power Supply: DC 3 V by battery
- c). Operating Frequency Range
Frequency Range: 608 ~ 614MHz

1.2 RELATED SUBMITTSL(S) / GRANT(S)

This submittal(s) (test report) is intended for FCC ID: VUOTMS6016 filing to comply with the FCC Part 95H requirements

1.3 TEST METHODOLOGY

The radiated emission testing was performed according to the procedures of ANSI C63.4; TIA/EIA 603 and FCC CFR 47 2.1046, 2.1047, 2.1049, 2.1051, 2.1053 and 2.1055.

1.4 TEST FACILITY

The fully anechoic chamber test site and conducted measurement facility used to collect the radiated data is located on the address of SHENZHEN HUATONGWEI INTERNATIONAL INSPECTION CO., LTD Huatongwei Building, Keji Rd. 12 S., High-tech Park, Nanshan District, Shenzhen, Guangdong, P.R.China

The fully anechoic chamber Test Sites and the Line Conducted labs are constructed and calibrated to meet the FCC requirements in documents ANSI C63.4: 2003 and CISPR 22/EN 55022 requirements.

1.5 SPECIAL ACCESSORIES

Not available for this EUT intended for grant.

1.6 EQUIPMENT MODIFICATIONS

Not available for this EUT intended for grant.

1.7 EQUIPMENT

Radiated emissions are measured with one or more of the following types of linearly polarized antennas: tuned dipole, biconical, log periodic, bi-log, and/or ridged waveguide, horn. Spectrum analyzers with preselectors and quasi-peak detectors are used to perform radiated measurements.

Conducted emissions are measured with Line Impedance Stabilization Networks and EMI Test Receivers.

Calibrated wideband preamplifiers, coaxial cables, and coaxial attenuators are also used for making measurements.

All receiving equipment conforms to CISPR Publication 16-1, "Radio Interference Measuring Apparatus and Measurement Methods."

1.8 LABORATORY ACCREDITATIONS AND LISTINGS

The test facility is recognized, certified, or accredited by the following organizations:

CNAS-Lab Code: L1225

Shenzhen Huatongwei International Inspection Co., Ltd has been assessed and proved to be in compliance with CNAS-CL01 Accreditation Criteria for Testing and Calibration Laboratories (identical to ISO/IEC 17025: 2005 General Requirements) for the Competence of Testing and Calibration Laboratories, Date of Registration: August 02, 2007. Valid time is until March 04, 2009.

A2LA-Lab Cert. No. 2243.01

Shenzhen Huatongwei International Inspection Co., Ltd, EMC Laboratory has been accredited by A2LA for technical competence in the field of electrical testing, and proved to be in compliance with ISO/IEC 17025: 1999 General Requirements for the Competence of Testing and Calibration Laboratories and any additional program requirements in the identified field of testing. Valid time is from Aug 24, 2005 to Sept 30, 2009

FCC-Registration No.: 662850

Shenzhen Huatongwei International Inspection Co., Ltd, EMC Laboratory has been registered and fully described in a report filed with the FCC (Federal Communications Commission). The acceptance letter from the FCC is maintained in our files. Registration 662850, Renewal date September 12, 2006.

IC-Registration No.: 5377

The 3m Alternate Test Site of Shenzhen Huatongwei International Inspection Co., Ltd has been registered by Certification and Engineering Bureau of Industry Canada for the performance of radiated measurements with Registration No. 5377 on November 28th, 2005.

ACA

Shenzhen Huatongwei International Inspection Co., Ltd, EMC Laboratory can also perform testing for the Australian C-Tick mark as a result of our A2LA accreditation.

NEMKO-Aut. No.: ELA125

Shenzhen Huatongwei International Inspection Co., Ltd has been assessed the quality assurance system, the testing facilities, qualifications and testing practices of the relevant parts of the organization. The quality assurance system of the Laboratory has been validated against ISO/IEC 17025:2005 or equivalent. The laboratory also fulfils the conditions described in Nemko Document NLA-10.

VCCI

The 3m Semi-anechoic chamber (12.2m×7.95m×6.7m) and Shielded Room (8m×4m×3m) of Shenzhen Huatongwei International Inspection Co., Ltd has been registered in accordance with the Regulations for Voluntary Control Measures with Registration No.: R-2484. Date of Registration: December 20, 2006. Valid time is until December 19, 2009. Main Ports Conducted Interference Measurement of Shenzhen Huatongwei International Inspection Co., Ltd has been registered in accordance with the Regulations for Voluntary Control Measures with Registration No.: C-2726. Date of Registration: December 20, 2006. Valid time is until December 19, 2009.

IECEE CB

Shenzhen Huatongwei International Inspection Co Ltd has been assessed and determined to fully comply with the requirements of ISO/IEC 17025: 2005-05, The Basic Rules, IECEE 01: 2006-10 and Rules of Procedure IECEE 02: 2006-10, and the relevant IECEE CB-Scheme Operational Documents.

It is therefore entitled to operate as a CB Testing Laboratory under the responsibility of Nemko A/S. This certificate remains valid until May 25th 2009 at which time it will be reissued by the IECEE Executive Secretary upon successful completion of the normally scheduled 3-year Reassessment Program administered by the IECEE CB Scheme.

DNV

Shenzhen Huatongwei International Inspection Co Ltd has been found to comply with the requirements of DNV towards subcontractor of EMC and safety testing services in conjunction with the EMC and Low voltage Directives and in the voluntary field. The acceptance is based on a formal quality Audit and follow-ups according to relevant parts of ISO/IEC Guide 17025(2005), in accordance with the requirements of the DNV Laboratory Quality Manual towards subcontractors. Valid until 09 Jul, 2010.

2. SYSTEM TEST CONFIGURATION

2.1 EUT CONFIGURATION

The EUT configuration for testing is installed on RF field strength measurement to meet the Commission’s 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 normal operating mode. The TX frequency was fixed which was for the purpose of the measurements.

2.3 GENERAL TECHNICAL REQUIREMENTS AND SUMMARY OF TEST RESULTS

The EUT has been tested according to the following specifications:

Standard	Test Type	Result	Notes
FCC Part 95 H: 2002 Section 95.1115(a)	Transmitter Fundamental Field strength	PASS	Complies
FCC Part 95 H: 2002 Section 2.1046	Output Power Measurement(ERP)	PASS	Complies
FCC Part 95 H: 2002 Section 95.1115(d)/2.1049	Occupied Bandwidth	PASS	Complies
FCC Part 95 H: 2002 Section 95.1115(b)/2.1053	Out of Band Radiated Emission	PASS	Complies
FCC Part 95 H: 2002 Section 95.1115(e)/2.1055	Frequency Stability Vs. Temperature Vs. Voltage	PASS	Complies

2.4 CONFIGURATION OF TESTED SYSTEM

Fig. 2-1 Configuration of Tested System



3 DESCRIPTION OF TEST MODES

The EUT has been tested under normal operating condition. Three channels (the top, the middle and the bottom) are chosen for testing.

4. CONDUCTED EMISSION TEST

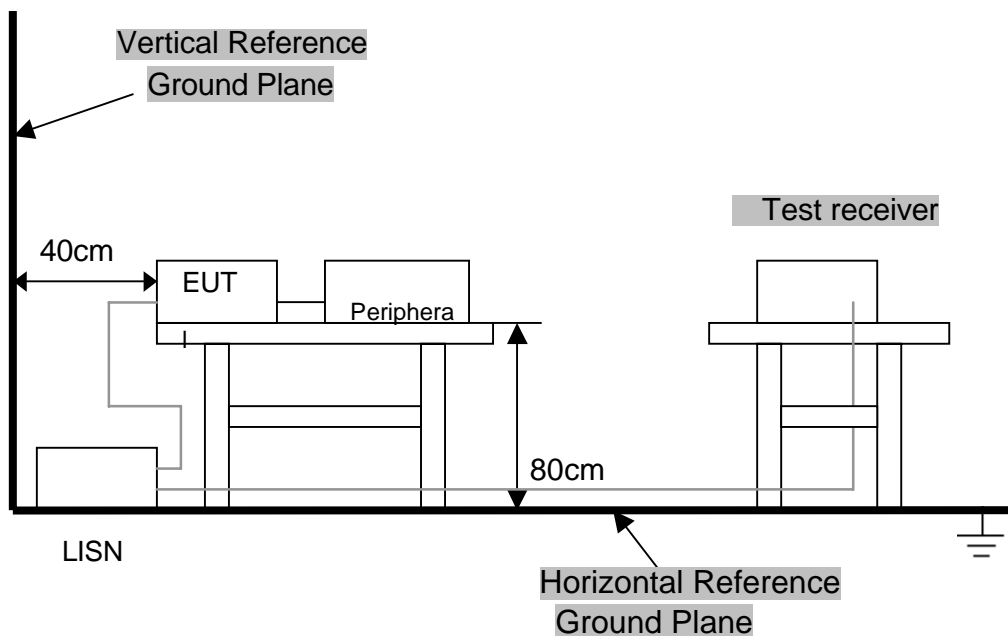
4.1 MEASUREMENT PROCEDURE

The EUT was tested according to ANSI C63.4 - 2003. The frequency spectrum from 0.15 MHz to 30 MHz was investigated. The LISN used was 50 ohm / 50 u Henry as specified by section 5.1 of ANSI C63.4 - 2003. Cables and peripherals were moved to find the maximum emission levels for each frequency.

Note: The EUT will not be operated during charging the battery with the power adapter.

4.2 TEST SETUP BLOCK DIAGRAM

(Block diagram of configuration)



For the actual test configuration, Please refer to the related items – Photos of Testing.

4.3 TEST EQUIPMENT USED:

Conducted Emission Test Site # 3				
Name of Equipment	Manufacturer	Model	Serial Number	Calibration Due
ARTIFICIAL MAINS	ROHDE&SCHWARZ	ESH2-Z5	100028	10/25/2008
EMI TEST RECEIVER	ROHDE &SCHWARZ	ESCS 30	100038	10/25/2008
PULSE LIMITER	ROHDE&SCHWARZ	ESHSZ2	100044	10/25/2008
EMI TEST SOFTWARE	ROHDE&SCHWARZ	ES-K1 V1.71	N/A	10/25/2008

4.4 CONDUCTED POWER LINE EMISSION LIMITS

FCC Part 15 Paragraph 15.107 (dBuV)		
Frequency Range (MHz)	Class A QP/AV	Class B QP/AV
0.15 – 0.5	79/66	66-56/56-46
0.5 – 5.0	73/60	56/46
5.0 - 30	73/60	60/50

NOTE: In the above table, the tighter limit applies at the band edges.

4.5 TEST RESULTS

Owing to the DC operation of EUT, this test item is not performed.

5. OUTPUT POWER MEASUREMENT (ERP)

5.1 MEASUREMENT EQUIPMENT USED

Radiated Emission Test Site # 4				
Name of Equipment	Manufacturer	Model	Serial Number	Calibration Due
ULTRA-BROADBAND ANTENNA	ROHDE & SCHWARZ	HL562	100015	10//2008
LOOP ANTENNA	ROHDE & SCHWARZ	HFH2-Z2	100020	10//2008
HORN ANTENNA	ROHDE & SCHWARZ	HF906	100039	10//2008
EMI TEST RECEIVER	ROHDE & SCHWARZ	ESI 26	100009	10//2008
RF TEST PANEL	ROHDE & SCHWARZ	TS / RSP	335015/ 0017	N/A
TURNTABLE	ETS	2088	2149	N/A
ANTENNA MAST	ETS	2075	2346	N/A
SIGNAL GENERATOR	ROHDE & SCHWARZ	SML02	100507	10/2008
EMI TEST SOFTWARE	ROHDE & SCHWARZ	ES-K1 V1.71	N/A	10//2008

Remark: Each piece of equipment is scheduled for calibration once a year.

5.2 MEASUREMENT METHOD

On a test site, the equipment shall be placed at the specified height on a support, and in the position closest to normal use as declared by the manufacturer.

The test antenna shall be oriented initially for vertical polarization and shall be chosen to correspond to the frequency of the transmitter.

The output of the test antenna shall be connected to the measuring receiver.

The transmitter shall be switched on, if possible, without modulation and the measuring receiver shall be tuned to the frequency of the transmitter under test.

The test antenna shall be raised and lowered through the specified range of height until a maximum signal level is detected by the measuring receiver.

The transmitter shall then be rotated through 360° in the horizontal plane, until the maximum signal level is detected by the measuring receiver. The test antenna shall be raised and lowered again through the specified range of height until a maximum signal level is detected by the measuring receiver. The maximum signal level detected by the measuring receiver shall be noted. The transmitter shall be replaced by a substitution antenna.

The substitution antenna shall be orientated for vertical polarization and the length of the substitution antenna shall be adjusted to correspond to the frequency of the transmitter.

The substitution antenna shall be connected to a calibrated signal generator.

If necessary, the input attenuator setting of the measuring receiver shall be adjusted in order to increase the sensitivity of the measuring receiver.

The test antenna shall be raised and lowered through the specified range of height to ensure that the maximum signal is received.

The input signal to the substitution antenna shall be adjusted to the level that produces a

level detected by the measuring receiver, that is equal to the level noted while the transmitter radiated power was measured, corrected for the change of input attenuator setting of the measuring receiver.

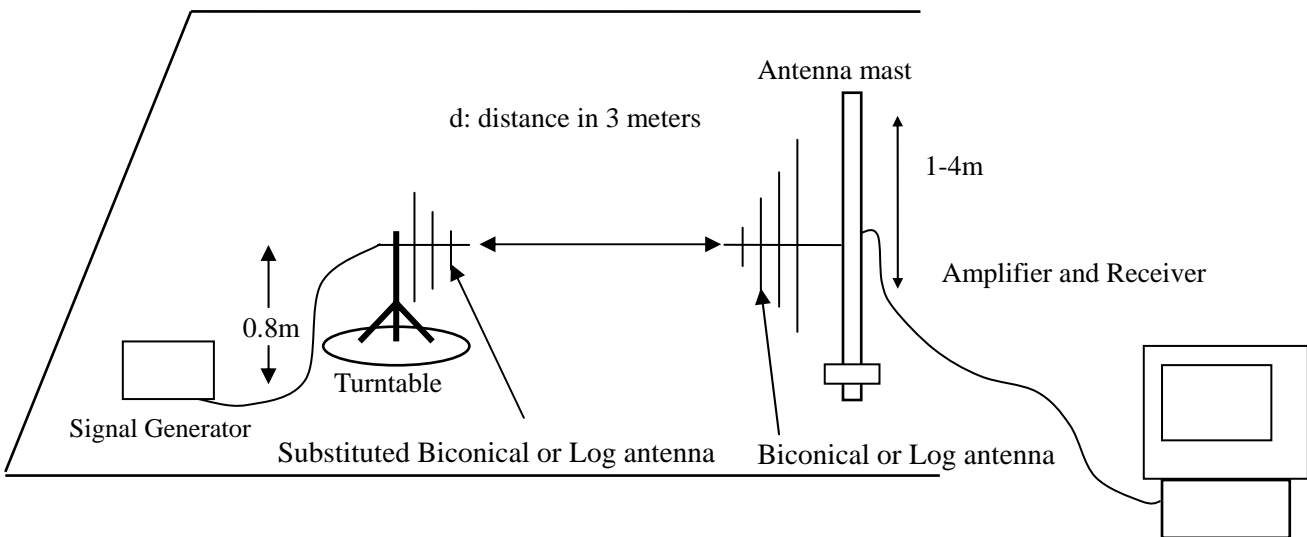
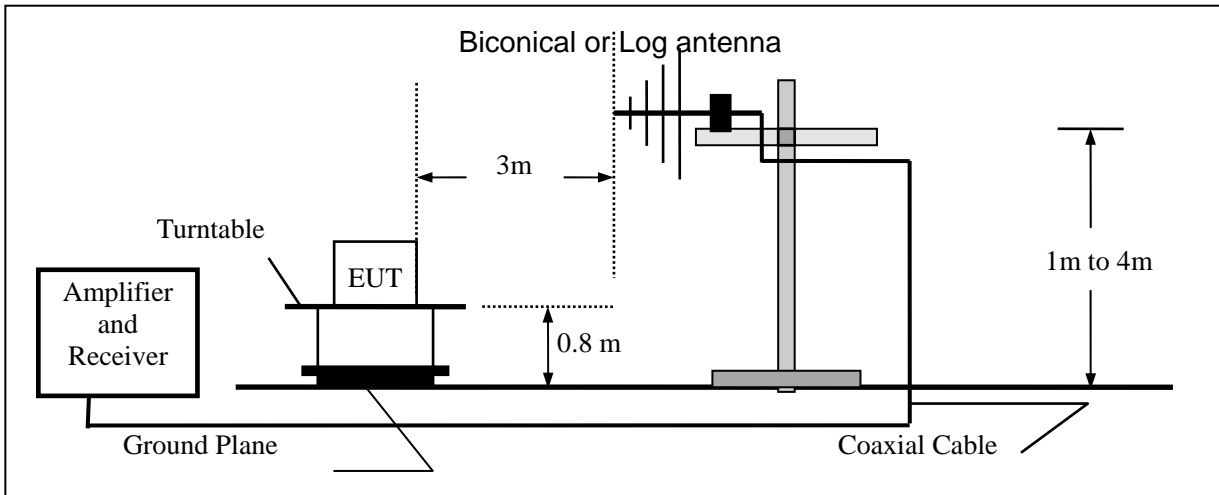
The input level to the substitution antenna shall be recorded as power level, corrected for any change of input attenuator setting of the measuring receiver.

The measurement shall be repeated with the test antenna and the substitution antenna orientated for horizontal polarization.

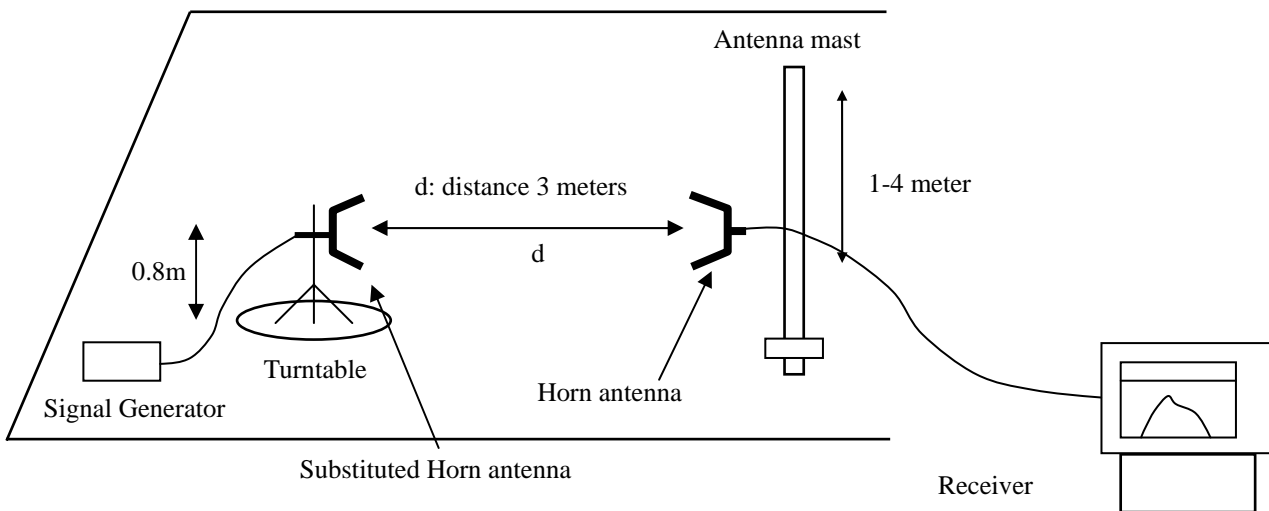
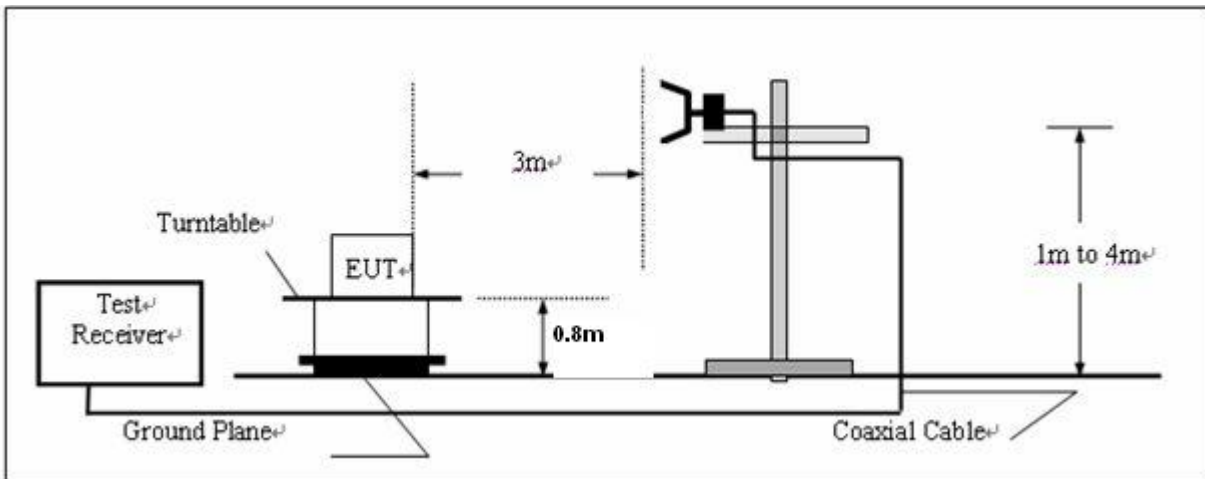
The measure of the effective radiated power is the larger of the two levels recorded at the input to the substitution antenna, corrected for gain of the substitution antenna if necessary.

TEST CONFIGURATION

Below 1GHz



Above 1GHz



5.3 TEST RESULTS:

Frequency (MHz)	S.G level (dBm)	Antenna Polarization	Ant Gain dBi	Cable Loss dB	ERP (dBm)	Limit (dBm)	Margin (dB)
608.3	-8.30	H	3.0	0.6	-5.90	10.8	-16.70
608.3	-8.40	V	3.0	0.6	-6.00	10.8	-16.80

Frequency (MHz)	S.G level (dBm)	Antenna Polarization	Ant Gain dBi	Cable Loss (dB)	ERP (dBm)	Limit (dBm)	Margin (dB)
611.0	-7.60	H	3.0	0.6	-5.20	10.8	-16.00
611.0	-12.00	V	3.0	0.6	-9.60	10.8	-20.40

Frequency (MHz)	S.G level (dBm)	Antenna Polarization	Ant Gain dBi	Cable Loss (dB)	ERP (dBm)	Limit (dBm)	Margin (dB)
613.7	-9.10	H	3.0	0.6	-6.70	10.8	-17.50
613.7	-10.90	V	3.0	0.6	-8.50	10.8	-19.30

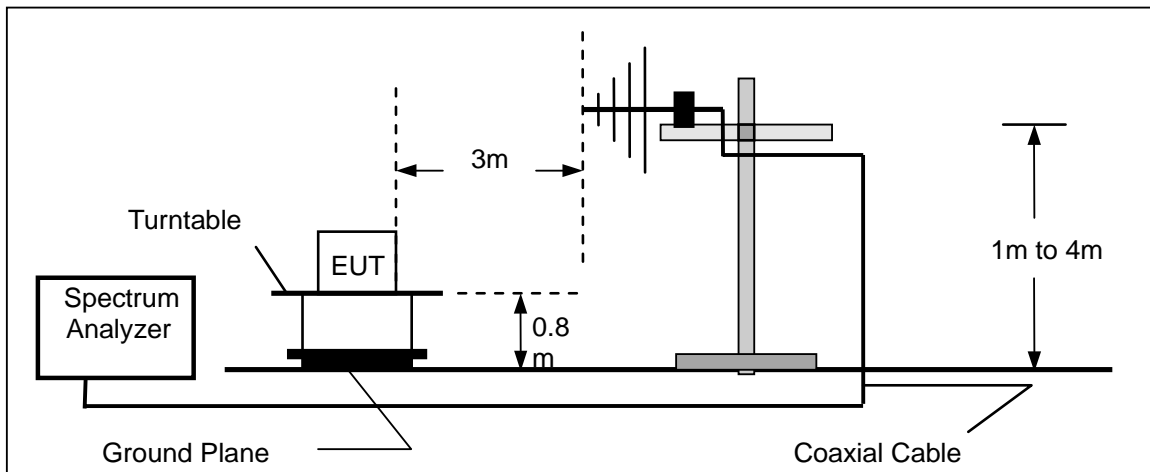
Remark: ERP=S.G level+Ant Gain-Cable Loss

6. OCCUPIED BANDWIDTH

6.1 MEASUREMENT PROCEDURE

1. The EUT was placed on a turn table which is 0.8m above ground plane.
2. Set EUT as normal operation
3. Based on FCC Part15 C Section 15.239(a): RBW= 10KHz. VBW= 30 KHz, Span=500 KHz.
4. The useful radiated emission from the EUT was detected by the spectrum analyzer with peak detector.

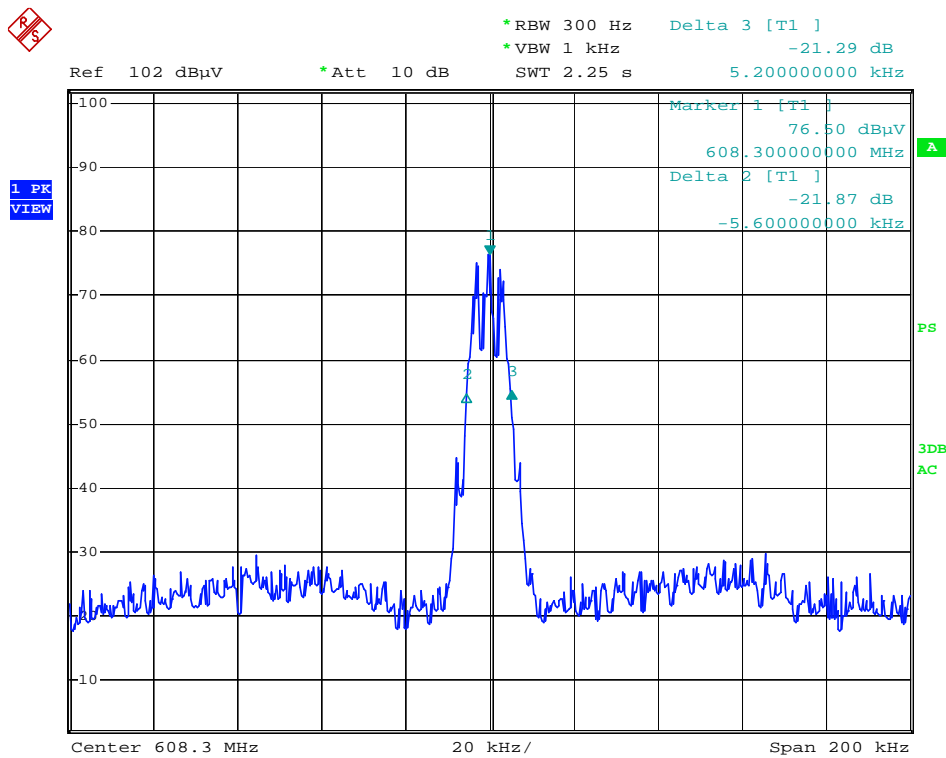
6.2 TEST SETUP BLOCK DIAGRAM



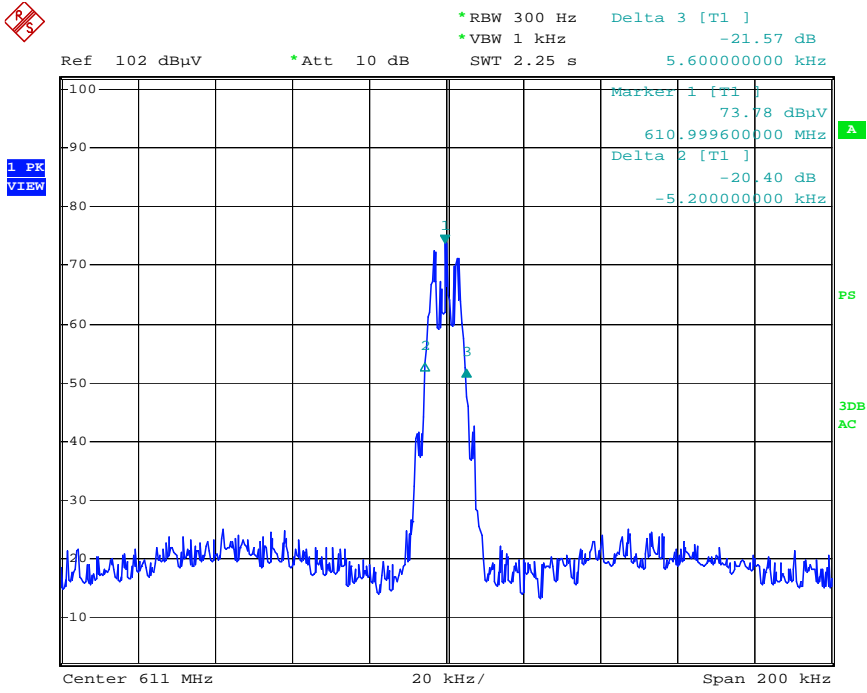
6.3 MEASUREMENT EQUIPMENT USED:

3/5 Anechoic Chamber Radiation Test Site # 4					
EQUIPMENT TYPE	MFR	MODEL NUMBER	SERIAL NUMBER	LAST CAL.	CAL DUE.
ULTRA-BROADBAND ANTENNA	ROHDE & SCHWARZ	HL562	100015	2007/10	2008/10
EMI TEST RECEIVER	ROHDE & SCHWARZ	ESI 26	100009	2007/10	2008/10
RF TEST PANEL	ROHDE & SCHWARZ	TS / RSP	335015/ 0017	N/A	N/A
TURNTABLE	ETS	2088	2149	N/A	N/A
ANTENNA MAST	ETS	2075	2346	N/A	N/A
EMI TEST SOFTWARE	ROHDE & SCHWARZ	ES-K1 V1.71	N/A	2007/10	2008/10

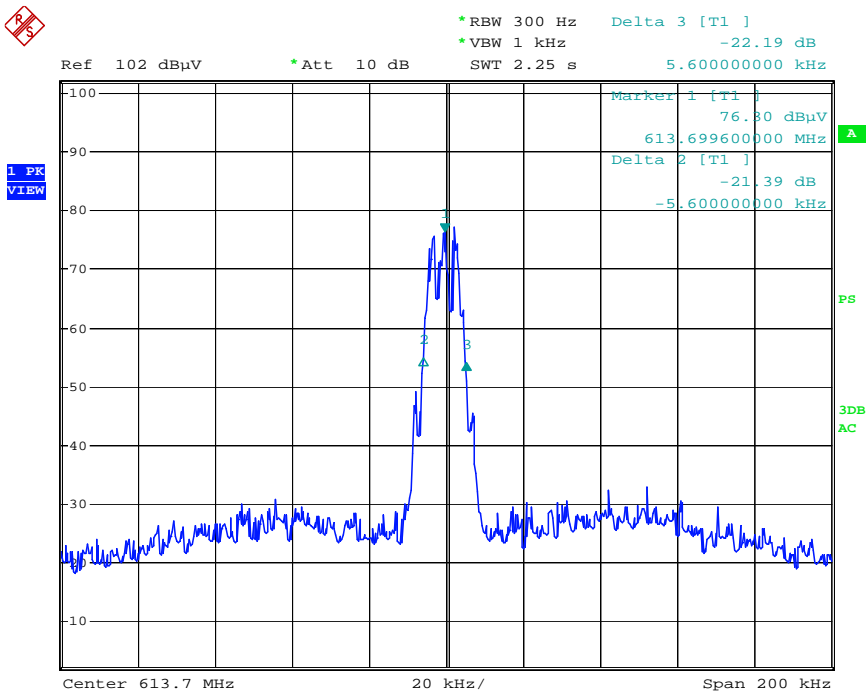
6.4 TEST RESULTS:



Date: 25.DEC.2007 13:47:25



Date: 25.DEC.2007 13:52:46



Date: 25.DEC.2007 13:51:07

TEST RESULTS: THE UNIT DOES MEET THE FCC REQUIREMENTS.

7. RADIATED EMISSION TEST

7.1 MEASUREMENT PROCEDURE

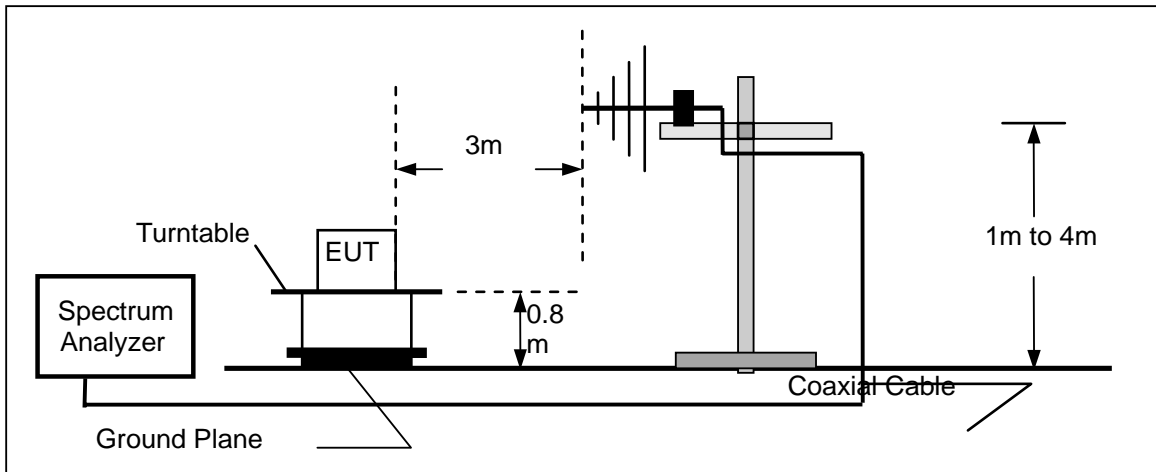
1. The EUT was placed on a turn table which is 0.8m above ground plane.
2. Maximum procedure was performed on at least ten highest emissions to ensure EUT compliance.
3. And also, each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical.
4. Repeat above procedures until all frequency measurements have been completed.

Note:

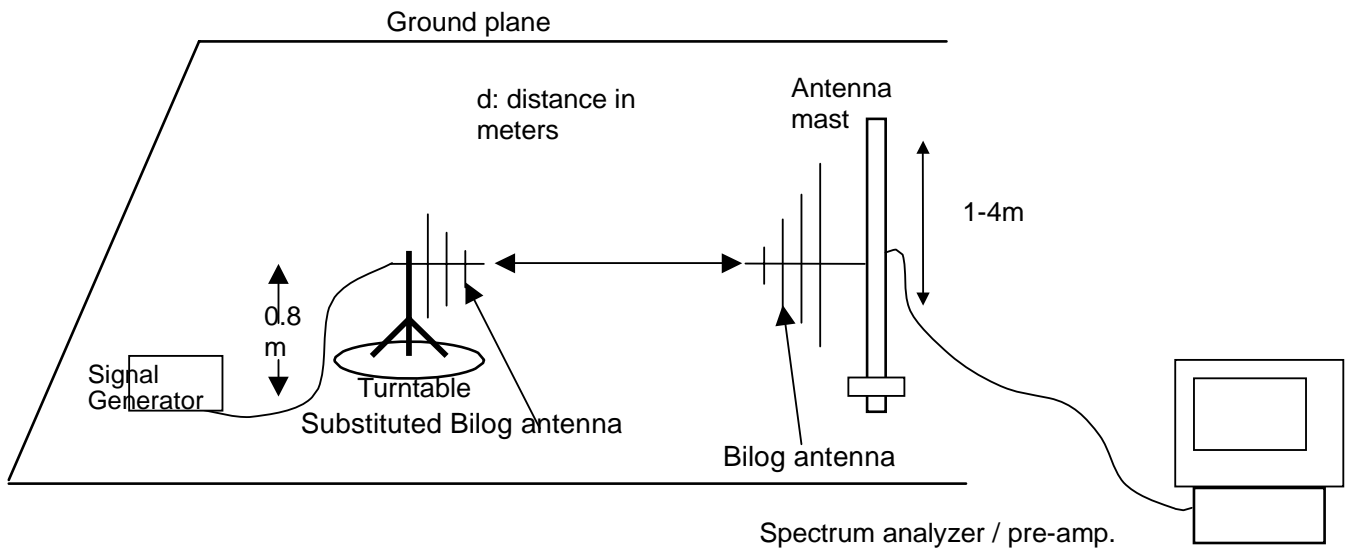
Three axes are chosen for pretest, the Z axis is the worst mode for final test.

7.2 TEST SETUP BLOCK DIAGRAM

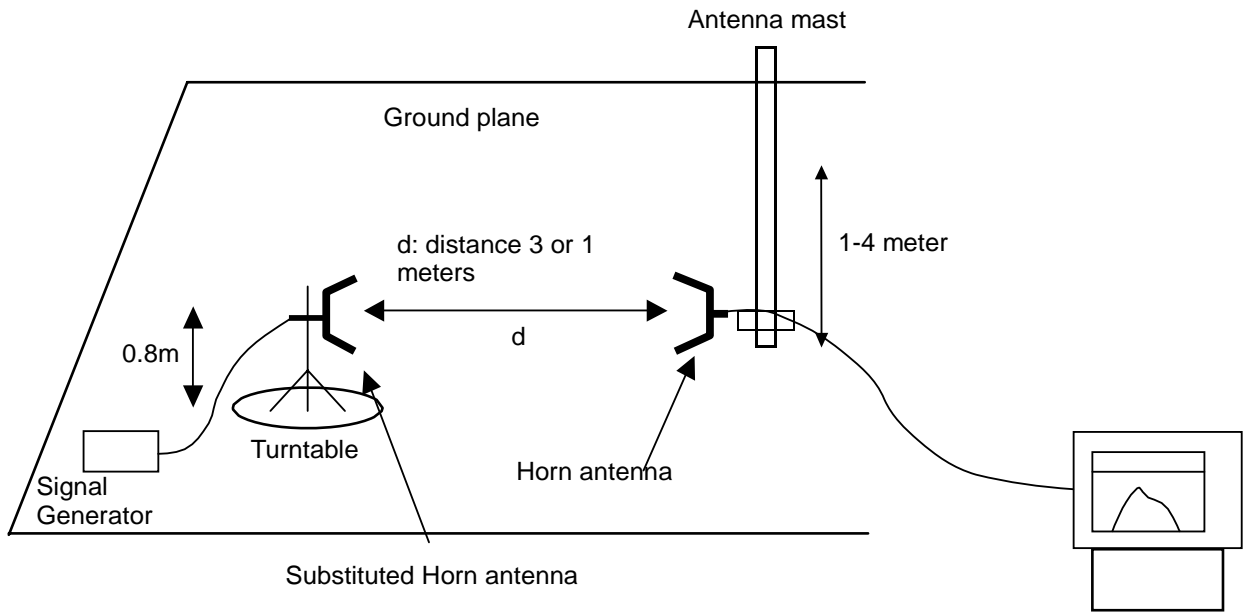
(Block diagram of configuration)



Radiation below 1GHz



Radiation above 1GHz



7.3 MEASUREMENT EQUIPMENT USED:

3/5 Anechoic Chamber Radiation Test Site # 4					
EQUIPMENT TYPE	MFR	MODEL NUMBER	SERIAL NUMBER	LAST CAL.	CAL DUE.
ULTRA-BROADBAND ANTENNA	ROHDE & SCHWARZ	HL562	100015	2007/10	2008/10
EMI TEST RECEIVER	ROHDE & SCHWARZ	ESI 26	100009	2007/10	2008/10
Double-Ridged-Waveguide Horn Antenna	ROHDE & SCHWARZ	HF906	100039	2007/10	2008/10
RF TEST PANEL	ROHDE & SCHWARZ	TS / RSP	335015/ 0017	N/A	N/A
TURNTABLE	ETS	2088	2149	N/A	N/A
ANTENNA MAST	ETS	2075	2346	N/A	N/A
EMI TEST SOFTWARE	ROHDE & SCHWARZ	ES-K1 V1.71	N/A	2007/10	2008/10

7.4 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	

7.5 TEST RESULTS:

TEST DATA

Frequency (MHz)	Read dBuV PK	Polar	Ant Height m	Ant./CL Amp.CF(dB) dB	Result FS dBuV/m PK	Limit dBuV/m	Margin dBuV/m PK
608.3	66.5	H	1.2	22.8	89.3	106	-16.7
608.3	66.4	V	1.1	22.8	89.2	106	-16.8

Frequency (MHz)	Read dBuV PK	Polar	Ant Height m	Ant./CL Amp.CF(dB) dB	Result FS dBuV/m PK	Limit dBuV/m	Margin dBuV/m PK
611.0	67.1	H	1.2	22.9	90.0	106	-16.0
611.0	62.7	V	1.1	22.9	85.6	106	-20.4

Frequency (MHz)	Read dBuV PK	Polar	Ant Height m	Ant./CL Amp.CF(dB) dB	Result FS dBuV/m PK	Limit dBuV/m	Margin dBuV/m PK
613.7	65.5	H	1.2	23.0	88.5	106	-17.5
613.7	63.7	V	1.1	23.0	86.7	106	-19.3

Remark:

- (1) Measuring frequencies from 25 MHz to the 1GHz.
- (2) The IF bandwidth of EMI Test Receiver between 25MHz to 1GHz was 120KHz.

Operation Mode: Transmitting Mode

Test Date: Nov 22, 2007

Fundamental Frequency: 608.3 MHz / 611 MHz / 613.7 MHz

Test By: Tracy Qi

Rules Part No.: FCC Part 95H

Temperature: 23°C

Humidity: 53 %

Requirements: OUT-OF-BAND EMISSIONS SHALL NOT EXCEED:

30 -88 MHz	40.0 dBuV/m	MEASURED AT 3 METERS
88 - 216 MHz	43.5 dBuV/m	
216 - 960 MHz	46.0 dBuV/m	
ABOVE 960 MHz	54.0 dBuV/m	

608.3 MHz

Frequency (MHz)	Read (dBuV)	Ant./CL Amp.CF(dB)	Result (dBuV/m)	Polar H/V	Ant Height(m)	Limit (dBuV/m)	Margin (dB)
397.40	10.1	20.1	30.2	H	2.0	46.0	-15.8
1216.6	41.5	-10.4	31.1	H	2.0	54.0	-22.9
Other	--		--				

Frequency (MHz)	Read (dBuV)	Ant./CL Amp.CF(dB)	Result (dBuV/m)	Polar H/V	Ant Height(m)	Limit (dBuV/m)	Margin (dB)
922.20	5.5	25.5	31.0	V	2.1	46.0	-15.0
1216.6	41.0	-10.4	30.6	V	2.3	54.0	-23.4
Other	--		--				

611.0 MHz

Frequency (MHz)	Read (dBuV)	Ant./CL Amp.CF(dB)	Result (dBuV/m)	Polar H/V	Ant Height(m)	Limit (dBuV/m)	Margin (dB)
935.90	6.3	25.5	31.8	H	2.0	46.0	-14.2
1222.00	41.1	-10.1	31.0	H	2.1	54.0	-23.0
Other	--		--				

Frequency (MHz)	Read (dBuV)	Ant./CL Amp.CF(dB)	Result (dBuV/m)	Polar H/V	Ant Height(m)	Limit (dBuV/m)	Margin (dB)
955.30	6.0	25.6	31.6	V	2.0	46.0	-14.4
1222.00	40.9.	-10.1	30.8	V	2.3	54.0	-23.2
Other	--		--				

613.7 MHz

Frequency (MHz)	Read (dBuV)	Ant./CL Amp.CF(dB)	Result (dBuV/m)	Polar H/V	Ant Height(m)	Limit (dBuV/m)	Margin (dB)
372.10	10.9	18.6	29.5	H	2.0	46.0	-16.5
1227.40	41.5.	-9.8	31.7	H	2.2	54.0	-22.3
Other	--		--				

Frequency (MHz)	Read (dBuV)	Ant./CL Amp.CF(dB)	Result (dBuV/m)	Polar H/V	Ant Height(m)	Limit (dBuV/m)	Margin (dB)
30.00	2.1	21.2	23.3	V	2.0	40.0	-16.7
1227.40	41.3.	-9.8	31.5	V	2.3	54.0	-22.5
Other	--		--				

SAMPLE CALCULATION: FSdBuV/m = MR (dBuV) + ACFdB.

Remark:

- (1) Measuring frequencies from 30 MHz to the 6.5 GHz.
- (2) Radiated emissions measured in frequency range from 30 MHz to 1000MHz were made with an instrument using Peak detector mode.
- (3) "F" denotes fundamental frequency; "H" denotes spurious frequency. "E" denotes Band edge 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) The IF bandwidth of SPA 30 MHz to 1GHz was 100KHz,
- (6) Above 1 GHz, the RBW= 1000KHz. VBW= 3000 KHz. Peak detector mode.

TEST RESULTS: THE UNIT DOES MEET THE FCC REQUIREMENTS.

8. FREQUENCY STABILITY MEASUREMENT

8.1 MEASUREMENT PROCEDURE

Measurements were performed with the EUT operating under extremes of temperature in 10 degree increments within the range -20 to 60 degrees C.

Measurements were also performed at voltage extremes between the declared nominal supply voltage and at the declared endpoint voltage (for battery operated equipment) or by varying the primary supply voltage from 85% to 115% of the nominal value for all other equipment types. The requirement was to determine the frequency stability of the device under specified environmental operating conditions.

The EUT was switched off for a minimum of 30 minutes between each stage of testing while the environmental chamber stabilized at the next temperature within the stated temperature range.

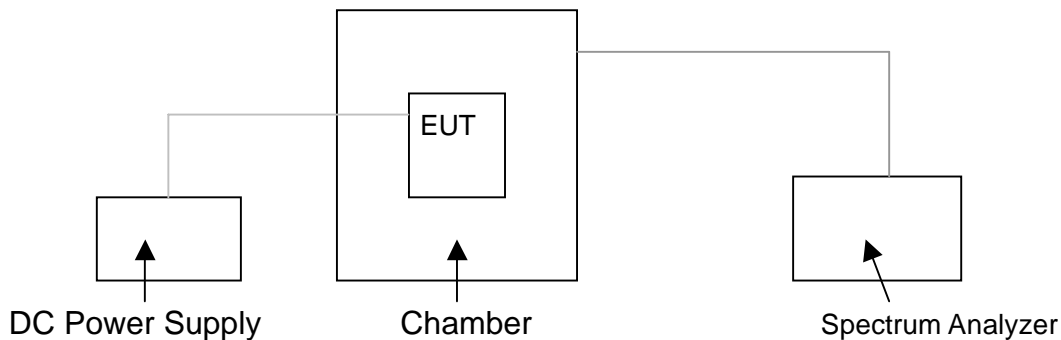
Once the environmental chamber had reached thermal equilibrium, the nominal frequency of the EUT was measured and recorded. The recorded frequency was compared to the appropriate operating frequency band edge.

In order to show compliance, the measured frequency must remain within the declared frequency band.

8.2 TEST SETUP BLOCK DIAGRAM

(Setup block diagram of configuration)

TEST SETUP:



8.3 MEASUREMENT EQUIPMENT USED:

Name of Equipment	Manufacturer	Model	Serial Number	Calibration Due
Communication Test Set	HP	HP8920B	US35010135	10/25/2008
Climate Chamber	ESPEC	EL-10KA	05107008	10/25/2008

8.4 TEST RESULTS:

Results Top Channel (613.70 MHz)

Temp (°C)	Freq. Error (Hz)	Measured Freq. (MHz)	Upper Band Edge Limit(MHz)	Margin (MHz)	Result
-30	1310	613.70131	614.0	0.29869	Complied
-20	1280	613.70128	614.0	0.29872	Complied
-10	1010	613.70101	614.0	0.29899	Complied
0	780	613.70078	614.0	0.29922	Complied
10	280	613.70028	614.0	0.29972	Complied
20	180	613.70018	614.0	0.29982	Complied
30	280	613.70028	614.0	0.29972	Complied
40	280	613.70028	614.0	0.29972	Complied
50	480	613.70048	614.0	0.29952	Complied
60	500	613.70050	614.0	0.29950	Complied

Supply Voltage (V)	Freq. Error (Hz)	Measured Freq. (MHz)	Upper Band Edge Limit(Mhz)	Margin (MHz)	Result
3.4	70	613.70007	614.0	0.29993	Complied
3.0	50	613.70005	614.0	0.29995	Complied
2.0	80	613.70008	614.0	0.29992	Complied

Results Bottom Channel (608.30 MHz)

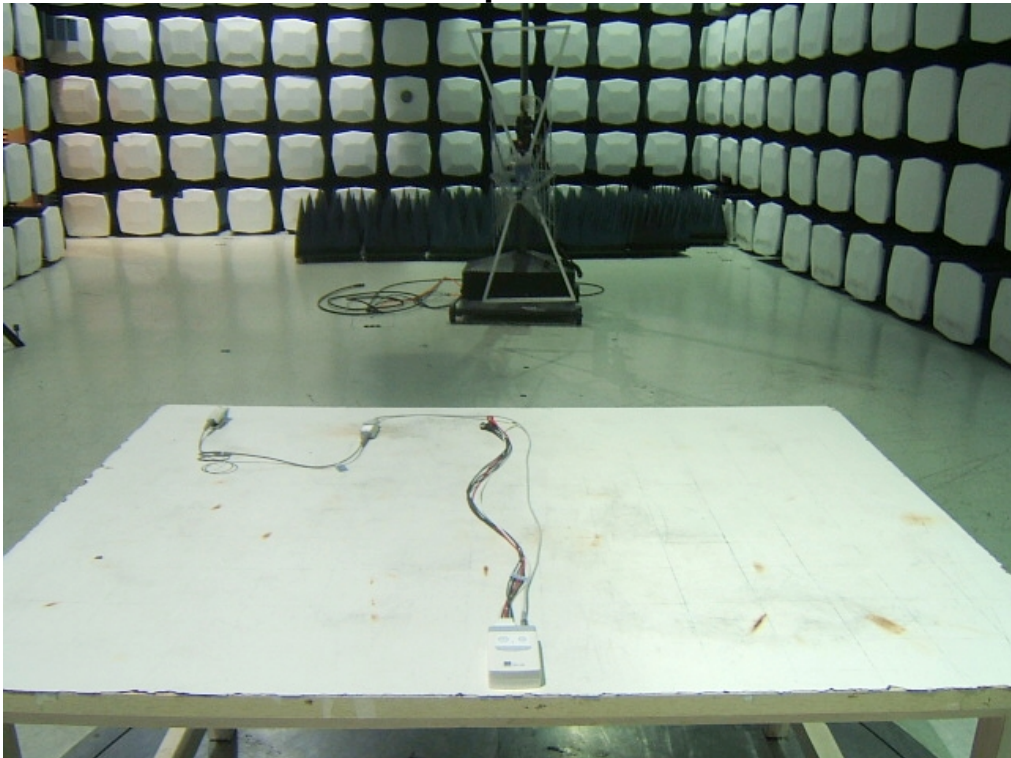
Temp (°C)	Freq. Error (Hz)	Measured Freq. (MHz)	Low Band Edge Limit(MHz)	Margin (MHz)	Result
-30	2180	608.30218	608.0	0.30218	Complied
-20	2100	608.30210	608.0	0.30210	Complied
-10	1080	608.30108	608.0	0.30108	Complied
0	1010	608.30101	608.0	0.30101	Complied
10	800	608.30080	608.0	0.30080	Complied
20	800	608.30080	608.0	0.30080	Complied
30	800	608.30080	608.0	0.30080	Complied
40	1000	608.30100	608.0	0.30100	Complied
50	1100	608.30110	608.0	0.30110	Complied
60	1100	608.30110	608.0	0.30110	Complied

Supply Voltage (V)	Freq. Error (Hz)	Measured Freq. (MHz)	Low Band Edge Limit(Mhz)	Margin (MHz)	Result
3.4	100	608.30010	608.0	0.30010	Complied
3.0	60	608.30006	608.0	0.30006	Complied
2.0	90	608.30009	608.0	0.30009	Complied

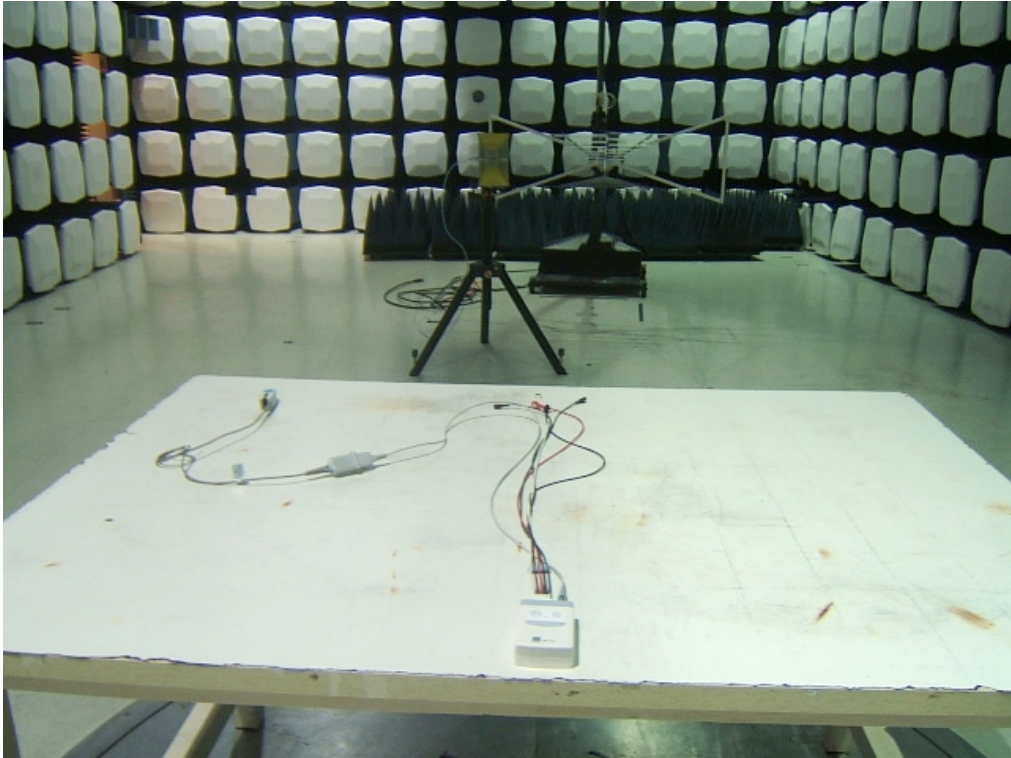
APPENDIX 1

PHOTOGRAPHS OF TEST SETUP

Test Setup Photo-1



Test Setup Photo-2



APPENDIX 2

PHOTOGRAPHS OF EUT

External of EUT





Internal view of EUT



