



香 港 標 準 及 檢 定 中 心  
**Hong Kong Standards and Testing Centre**

Date : 2005-06-07  
No. : HM153887

**TEST REPORT**

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**Applicant:** Repidtrade (H.K.) Co., Ltd.  
Flat F, 9/F., Valiant Industrial Centre,  
12 Au Pui Wan Street, Fotan, N.T., Hong Kong.

**Description of Samples:** Model name: AIR-SCAN®V  
Model no.: SP-127  
Brand name: Sporty's  
FCC ID: R7ERTSP127V2

**Date Samples Received:** 2005-04-05

**Date Tested:** 2005-04-27

**Investigation Requested:** FCC PART 15 SUBPART B

**Conclusions:** The submitted product COMPLIED with the requirements of Federal Communications Commission [FCC] Rules and Regulations Part 15. The tests were performed in accordance with the standards described above and on Section 2.2 in this Test Report.

**Remarks:** ----

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K C Lee, EMD  
DAR Approved Signatory

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**Appendix A**

List of Measurement Equipment

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**Appendix B**

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### 1.0 General Details

#### 1.1 Test Laboratory

The Hong Kong Standards and Testing Centre Ltd.  
EMC Laboratory  
10 Dai Wang Street, Taipo Industrial Estate  
New Territories, Hong Kong

Telephone: 852 2666 1888  
Fax: 852 2664 4353

#### 1.2 Applicant Details

##### Applicant

Repidtrade (H.K.) Co., Ltd.  
Flat F, 9/F., Valiant Industrial Centre,  
12 Au Pui Wan Street, Fotan, N.T., Hong Kong.

HKSTC Code Number for Applicant

REH003

##### Manufacturer

Golden Wealth Industrial Limited.  
Flat G, 9/F., Valiant Industrial Centre,  
12 Au Pui Wan Street, Fotan, N.T., Hong Kong.

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**1.3 Equipment Under Test [EUT]**  
**Description of Sample**

Model Name: AIR-SCAN®V  
Manufacturer: Golden Wealth Industrial Limited.  
Brand Name: Sporty's  
Model Number: SP-127  
Band Combination: FM / Air Band  
Input Voltage: 9Vd.c. ("C" size Alkaline battery x 6) with jack  
The AC/DC Adaptor used for the tests was provided by  
the applicant with the following details: Model Number:  
T3515-09D-300, Input: 120Vd.c. 60Hz 5.3W, Output:  
9Vd.c. 300mA

**1.3.1 Description of EUT Operation**

The Equipment Under Test (EUT) is a Repidtrade (H.K.) Co., Ltd., AIR-SCAN®V.

**1.4 Date of Order**

2005-04-05

**1.5 Submitted Sample(s):**

2 samples per model

**1.6 Test Duration**

2004-04-27

**1.7 Country of Origin**

China

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**1.8 Additional Information of EUT**

User Manual  
Part List  
Circuit Diagram  
Printed Circuit Board [PCB] Layout  
Block diagram  
FCC Label

	Submitted	Not Available
User Manual	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Part List	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Circuit Diagram	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Printed Circuit Board [PCB] Layout	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Block diagram	<input checked="" type="checkbox"/>	<input type="checkbox"/>
FCC Label	<input checked="" type="checkbox"/>	<input type="checkbox"/>

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**2.0 Technical Details**

**2.1 Investigations Requested**

Perform ElectroMagnetic Interference measurement in accordance with FCC 47CFR [Codes of Federal Regulations] Part 15 and ANSI C63.4: 2003 for FCC Certification.

**2.2 Test Standards and Results Summary Tables**

EMISSION Results Summary						
Test Condition	Test Requirement	Test Method	Class / Severity	Test Result		
				Pass	Failed	N/A
Radiated Emissions, 30MHz to 1GHz	FCC 47CFR 15.109	ANSI C63.4:2003	Class B	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Conducted Emissions on AC, 0.15MHz to 30MHz	FCC 47CFR 15.107	ANSI C63.4:2003	Class B	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Note: N/A - Not Applicable

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### 3.0 Test Results

#### 3.1 Emission

##### 3.1.1 Radiated Emissions (30 – 1000MHz)

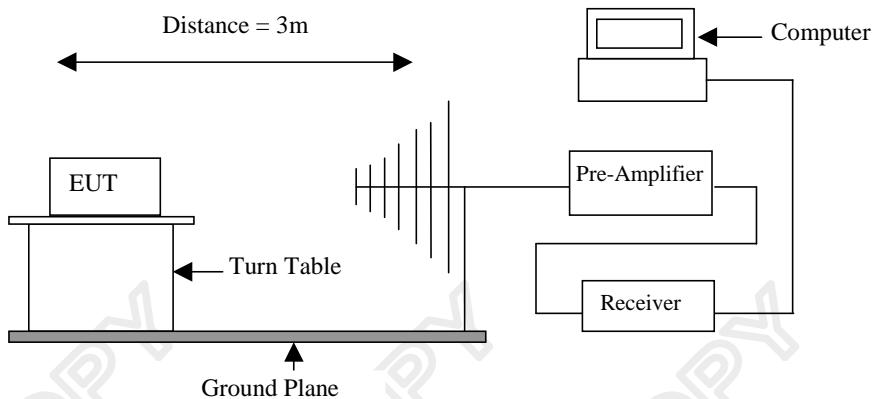
Test Requirement: FCC 47CFR 15.109  
Test Method: ANSI C63.4:2003  
Test Date: 2004-04-27  
Mode of Operation: FM Band & Air Band

#### Test Method:

The sample was placed 0.8m above the ground plane on the OATS \*. Measurements in both horizontal and vertical polarities were performed. During the test, each emission was maximized by: having the EUT continuously working, investigated all operating modes, rotated about all 3 axis (X, Y & Z) and considered typical configuration to obtain worst position, manipulating interconnecting cables, rotating turntable, varying antenna height from 1m to 4m in both horizontal and vertical polarizations. The emissions worst-case are shown in Test Results of the following pages.

\*: OATS [Open Area Test Site] located at HKSTC with a metal ground plane filed with the FCC pursuant to section 2.948 of the FCC rules, with Registration Number: 607756.

#### Test Setup:



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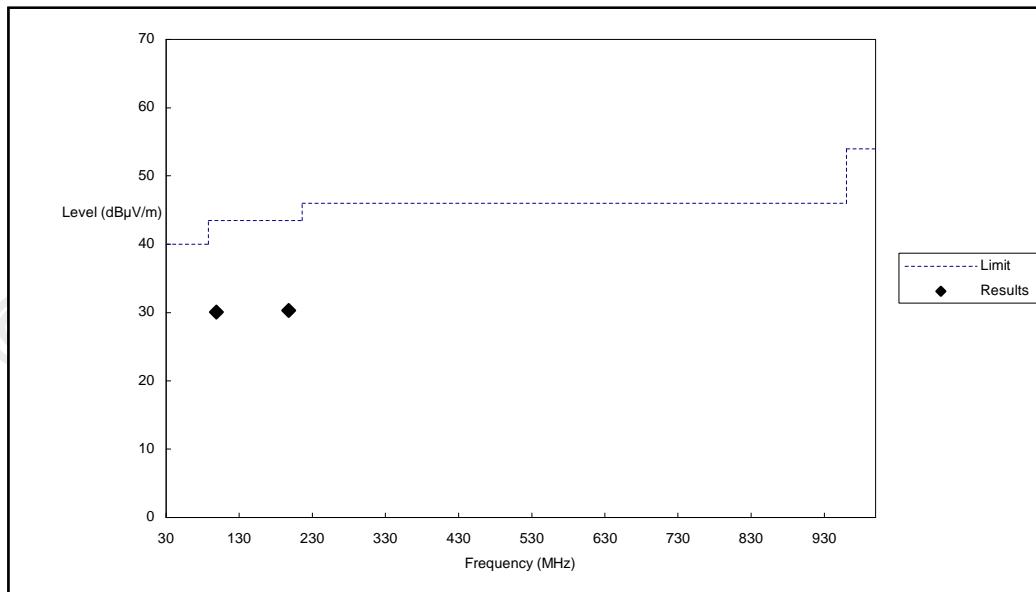
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**Limits for Radiated Emissions [FCC 47 CFR 15.109 Class B]:**

Frequency Range [MHz]	Quasi-Peak Limits [ $\mu$ V/m]
30-88	100
88-216	150
216-960	200
Above960	500

The emission limits shown in the above table are based on measurement employing a CISPR quasi-peak detector and above 1000MHz are based on measurements employing an average detector.

**Results of FM Band: PASS**



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Results of FM Band: PASS

Radiated Emissions Quasi-Peak						
Turned Frequency MHz	Emission Frequency MHz	Measured Level @3m dB $\mu$ V/m	Limit @3m dB $\mu$ V/m	Measured Level @3m $\mu$ V/m	Limit @3m $\mu$ V/m	E-Field Polarity
88.1	98.8	20.4	43.5	10.5	150	Horizontal
	197.6	18.5	43.5	8.4	150	Horizontal
88.1	98.8	18.7	43.5	8.6	150	Vertical
	197.6	13.6	43.5	4.8	150	Vertical

Remark:

IF = 10.70MHz

Calculated measurement uncertainty : 30MHz to 1GHz ±4.1dB

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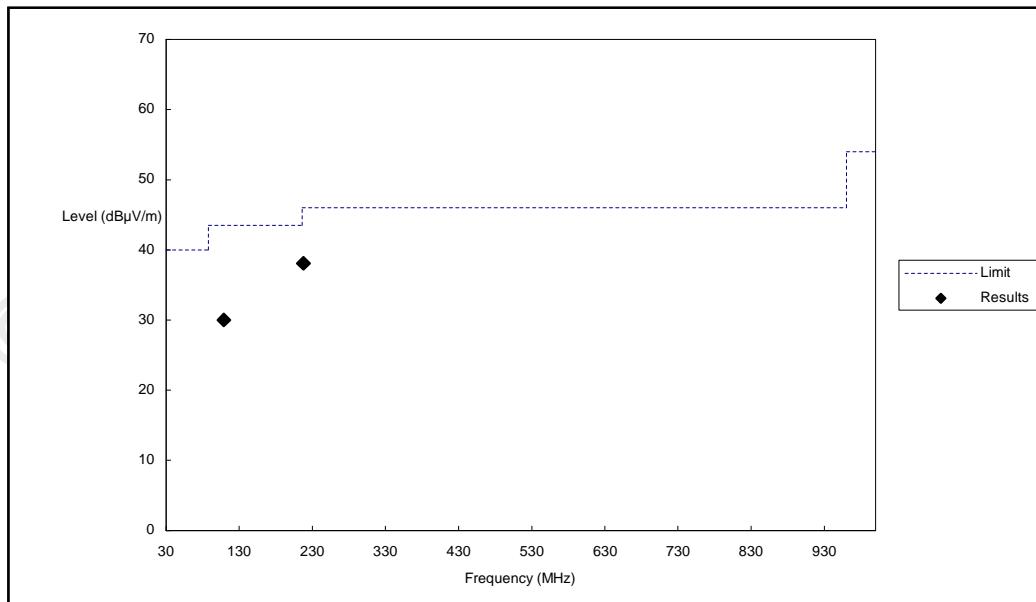
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**Limits for Radiated Emissions [FCC 47 CFR 15.109 Class B]:**

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Results of FM Band: PASS

Radiated Emissions Quasi-Peak						
Turned Frequency MHz	Emission Frequency MHz	Measured Level @3m dB $\mu$ V/m	Limit @3m dB $\mu$ V/m	Measured Level @3m $\mu$ V/m	Limit @3m $\mu$ V/m	E-Field Polarity
98.3	109.2	30.0	43.5	31.6	150	Horizontal
	218.0	38.1	46.0	80.4	200	Horizontal
98.3	109.2	29.1	43.5	28.5	150	Vertical
	218.0	27.4	46.0	23.4	200	Vertical

Remark:

Calculated measurement uncertainty : 30MHz to 1GHz  $\pm 4.1$ dB

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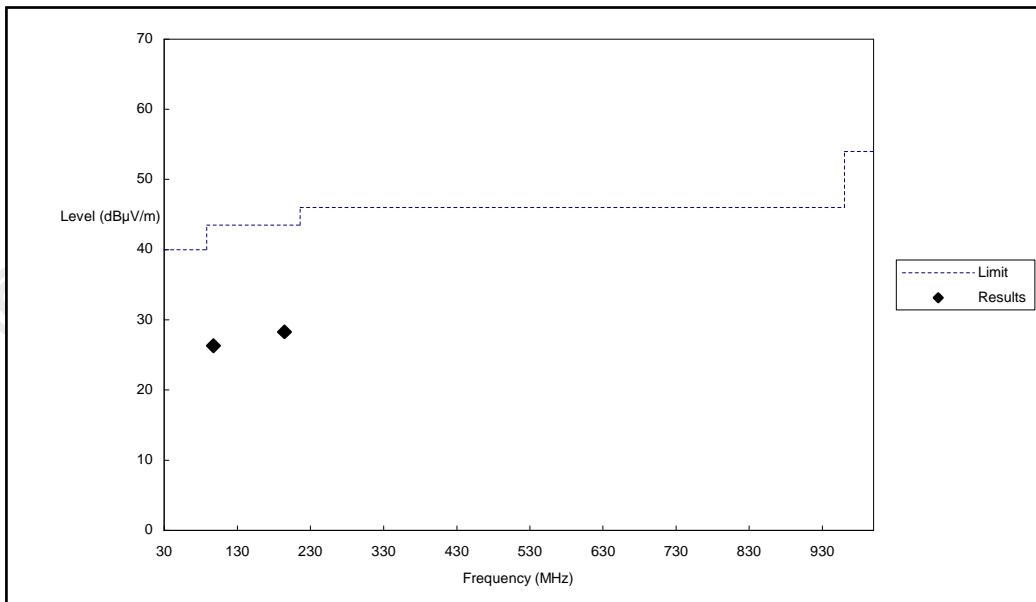
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**Results of FM Band: PASS**



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Radiated Emissions Quasi-Peak						
Turned Frequency MHz	Emission Frequency MHz	Measured Level @3m dB $\mu$ V/m	Limit @3m dB $\mu$ V/m	Measured Level @3m $\mu$ V/m	Limit @3m $\mu$ V/m	E-Field Polarity
108.0	97.3	26	43.5	20.0	150	Horizontal
	194.6	28.3	43.5	26.0	150	Horizontal
108.0	97.3	26.3	43.5	20.7	150	Vertical
	194.6	23.9	43.5	15.7	150	Vertical

Remark:

Calculated measurement uncertainty : 30MHz to 1GHz  $\pm 4.1$ dB

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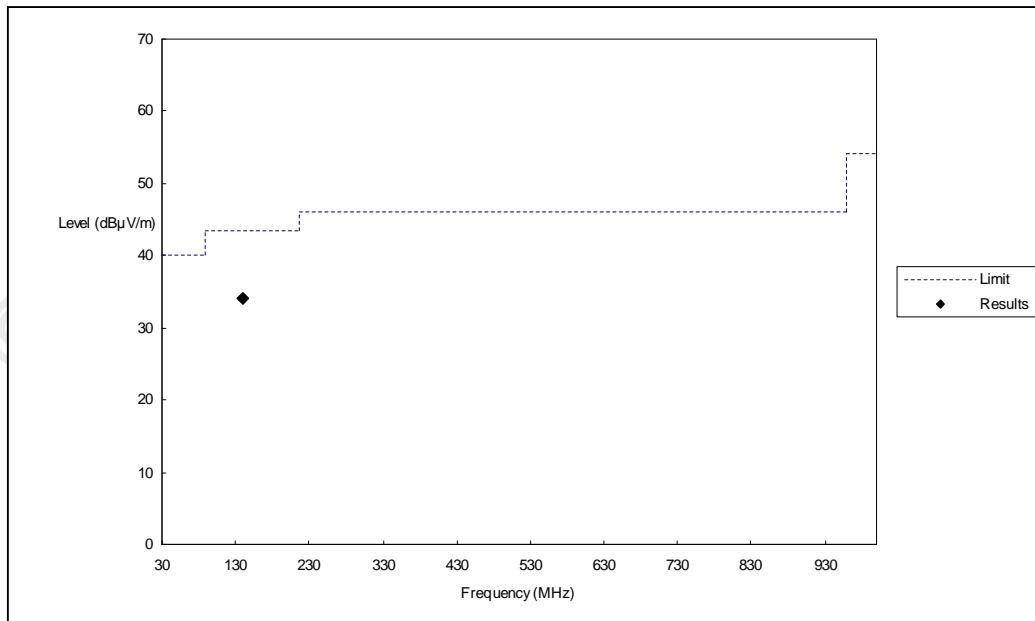
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Frequency Range [MHz]	Quasi-Peak Limits [ $\mu$ V/m]
30-88	100
88-216	150
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Above960	500

The emission limits shown in the above table are based on measurement employing a CISPR quasi-peak detector and above 1000MHz are based on measurements employing an average detector.

**Results of Air Band: PASS**



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**Results of Air Band: PASS**

Radiated Emissions Quasi-Peak						
Turned Frequency MHz	Emission Frequency MHz	Measured Level @3m dB $\mu$ V/m	Limit @3m dB $\mu$ V/m	Measured Level @3m $\mu$ V/m	Limit @3m $\mu$ V/m	E-Field Polarity
118	139.4	34.1	43.5	50.7	150	Horizontal
	139.4	33.7	43.5	48.4	150	Vertical

Remark:

Calculated measurement uncertainty : 30MHz to 1GHz  $\pm 4.1$ dB

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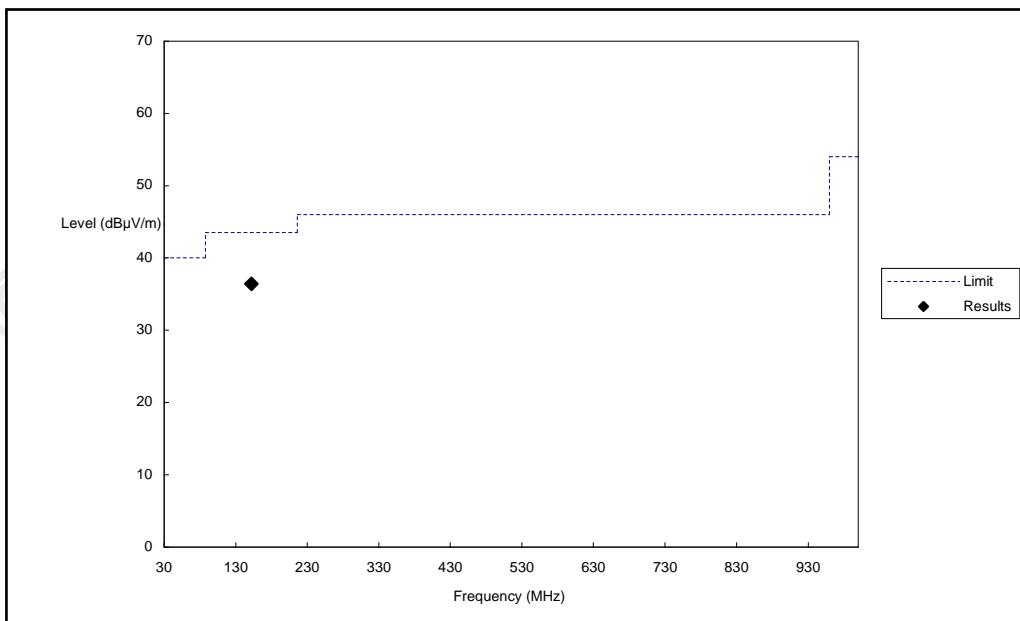
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Frequency Range [MHz]	Quasi-Peak Limits [ $\mu$ V/m]
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Turned Frequency MHz	Emission Frequency MHz	Measured Level @3m dB $\mu$ V/m	Limit @3m dB $\mu$ V/m	Measured Level @3m $\mu$ V/m	Limit @3m $\mu$ V/m	E-Field Polarity
130.5	151.9	36.4	43.5	66.1	150	Horizontal
	151.9	35.8	43.5	61.7	150	Vertical

Remark:

Calculated measurement uncertainty : 30MHz to 1GHz  $\pm 4.1$ dB

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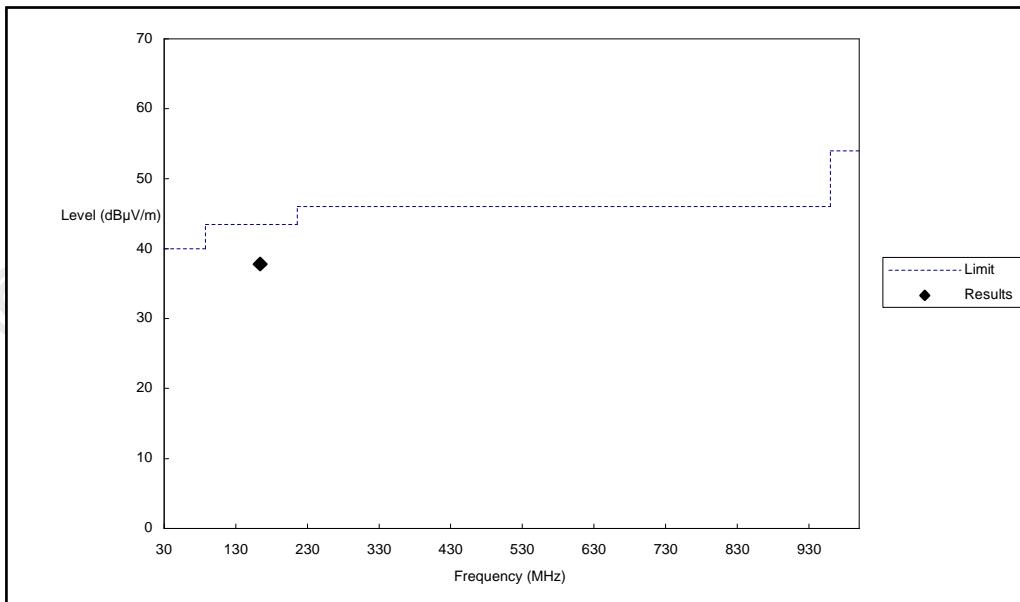
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**Limits for Radiated Emissions [FCC 47 CFR 15.109 Class B]:**

Frequency Range [MHz]	Quasi-Peak Limits [ $\mu$ V/m]
30-88	100
88-216	150
216-960	200
Above960	500

The emission limits shown in the above table are based on measurement employing a CISPR quasi-peak detector and above 1000MHz are based on measurements employing an average detector.

**Results of Air Band: PASS**



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Results of Air Band: PASS

Radiated Emissions Quasi-Peak						
Turned Frequency MHz	Emission Frequency MHz	Measured Level @3m dB $\mu$ V/m	Limit @3m dB $\mu$ V/m	Measured Level @3m $\mu$ V/m	Limit @3m $\mu$ V/m	E-Field Polarity
143.0	164.3	37.8	43.5	77.6	150	Horizontal
143.0	164.3	36.1	43.5	63.8	150	Vertical

Remark:

Calculated measurement uncertainty : 30MHz to 1GHz  $\pm 4.1$ dB

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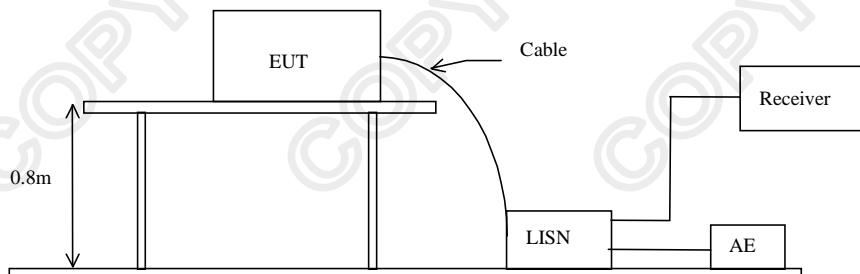
**3.1.1 Conducted Emissions (0.15MHz to 30MHz)**

Test Requirement: FCC 47CFR 15.107  
Test Method: ANSI C63.4:2003  
Test Date: 2005-04-27  
Mode of Operation: FM Band & Air Band

**Test Method:**

The test was performed in accordance with ANSI C63.4: 2003, with the following: an initial measurement was performed in peak and average detection mode on the live line. Any emissions recorded within 30dB of the relevant limit line were re-measured using quasi-peak and average detection on the live and neutral lines with the worst case recorded in the table of results.

**Test Setup:**



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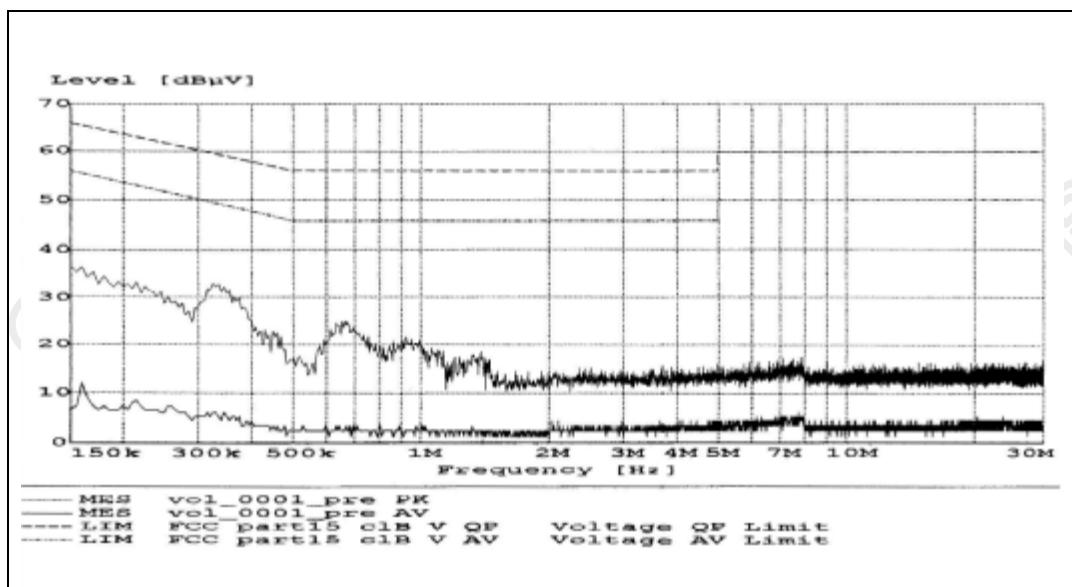
**Limits for Conducted Emissions (FCC 47 CFR 15.107):**

Frequency Range [MHz]	Quasi-Peak Limits [dB $\mu$ V]	Average [dB $\mu$ V]
0.15-0.5	66 to 56*	56 to 46*
0.5-5.0	56	46
5.0-30.0	60	50

\* Decreases with the logarithm of the frequency.

Limits for Conducted Emissions Test, please refer to limit lines (Quasi-Peak and Average) in the following diagram labelled as (QP and AV).

**Results of FM Band: PASS**



Conductor Live or Neutral	Frequency MHz	Quasi-peak		Average	
		Level dB $\mu$ V/m	Limit dB $\mu$ V/m	Level dB $\mu$ V/m	Limit dB $\mu$ V/m
<b>NO EMISSION DETECTED WITHIN 20dB OF THE FCC LIMITS</b>					

Remark:

Calculated measurement uncertainty :  $\pm 2.8$ dB

-\*- Emission greater than 30dB below limit line.

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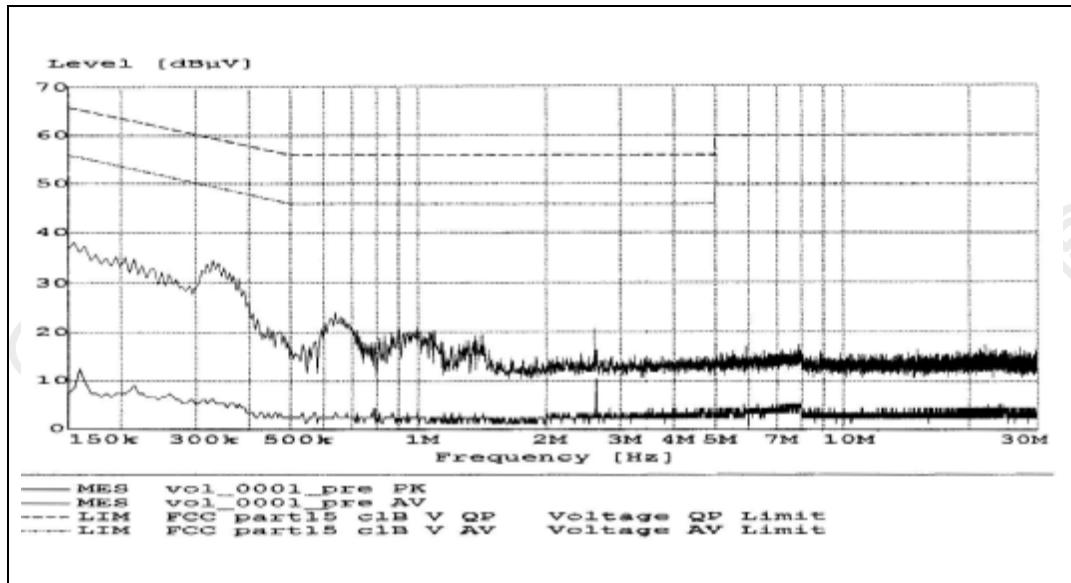
**Limits for Conducted Emissions (FCC 47 CFR 15.107):**

Frequency Range [MHz]	Quasi-Peak Limits [dB $\mu$ V]	Average [dB $\mu$ V]
0.15-0.5	66 to 56*	56 to 46*
0.5-5.0	56	46
5.0-30.0	60	50

\* Decreases with the logarithm of the frequency.

Limits for Conducted Emissions Test, please refer to limit lines (Quasi-Peak and Average) in the following diagram labelled as (QP and AV).

**Results of Air Band: PASS**



Conductor Live or Neutral	Frequency MHz	Quasi-peak		Average	
		Level dB $\mu$ V/m	Limit dB $\mu$ V/m	Level dB $\mu$ V/m	Limit dB $\mu$ V/m
<b>NO EMISSION DETECTED WITHIN 20dB OF THE FCC LIMITS</b>					

Remark:

Calculated measurement uncertainty :  $\pm 2.8$ dB

-\*- Emission greater than 30dB below limit line.

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**Appendix A**

**List of Measurement Equipment**

**Radiated Emission**

EQP NO.	DESCRIPTION	MANUFACTURER	MODEL NO.	SERIAL NO.	LAST CAL
EM007	SPECTRUM ANALYZER	HEWLETT PACKARD	HP85660B	3144A21192	15/06/04
EM008	SPECTRUM ANALYZER DISPLAY	HEWLETT PACKARD	HP85662A	3144A20514	15/06/04
EM009	QUASI PEAK ADAPTOR	HEWLETT PACKARD	HP85650A	3303A01702	15/06/04
EM010	RF PRESELECTOR	HEWLETT PACKARD	HP85685A	3221A01410	15/06/04
EM011	ATTENUATOR/SWITCH	HEWLETT PACKARD	HP11713A	2508A10595	15/06/04
EM012	PRE-AMPLIFIER	HEWLETT PACKARD	HP8449B	3008A00262	15/06/04
EM020	HORN ANTENNA	ETS-Linggren	3115	4032	30/07/03
EM022	LOOP ANTENNA	ETS-Linggren	6502	1189-2424	19/09/03
EM072	SIGNAL GENERATOR	HEWLETT PACKARD	8640B	1948A11892	N/A
EM083	OPEN AREA TEST SITE	HKSTC	N/A	N/A	08/02/03
EM131	EMC ANALYZER	HEWLETT PACKARD	8595EM	3710A00155	13/01/04
EM145	EMI TEST RECEIVER	ROHDE & SCHWARZ	ESCS 30	830245/021	04/10/04
EM195	ANTENNA POSITIONING MAST	ETS-Linggren	2075	2368	N/A
EM196	MULTI-DEVICE CONTROLLER	ETS-Linggren	2090	1662	N/A
EM215	MULTIDEVICE CONTROLER	ETS-Linggren	2090	00024676	N/A
EM216	MINI MAST SYSTEM	ETS-Linggren	2075	00026842	N/A
EM217	ELECTRIC POWERED TURNTABLE	ETS-Linggren	2088	00029144	N/A
EM218	ANECHOIC CHAMBER	ETS-Linggren	FACT-3	--	19/03/04
EM219	BICONILOG ANTENNA	ETS-Linggren	3142C	00029071	28/10/03
EM218	ETS ANECHOIC CHAMBER	EMCO	Fact-3	N/A	15/03/04
EM215	MULTI-DEVICE CONTROLLER	EMCO	2090	00024676	N/A
EM216	ANTENNA POSITIONING MAST	EMCO	2070	00024727	N/A

**Line Conducted**

EQP NO.	DESCRIPTION	MANUFACTURER	MODEL NO.	SERIAL NO.	LAST CAL
EM078	VARIAC	SHANGHAI VOLTAGE	TDGC-3/0.5	N/A	CM
EM081	SMALL SCREENED ROOM	MIKO INST HK	N/A	N/A	27/01/05
EM119	LISN	ROHDE & SCHWARZ	ESH3-Z5	0831.5518.52	14/10/04
EM127	ISOLATION TRANSFORMER 220 TO 300V	WING SUN	N/A	N/A	CM
EM142	PULSE LIMITER	ROHDE & SCHWARZ	ESH3Z2	357.8810.52	04/08/04
EM181	EMI TEST RECEIVER	ROHDE & SCHWARZ	ESIB7	100072	06/01/04
EM154	SHIELDING ROOM	SIEMENA MATSUSHITA COMPONENTS	N/A	803-740-057-99A	27/01/05
EM197	LISN	ETS-Linggren	4825/2	1193	05/06/04
EM213	DIGITAL POWER METER	VICNOBL	VIP120	00277	14/09/04

**Remarks:-**

CM Corrective Maintenance  
N/A Not Applicable or Not Available  
TBD To Be Determined

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**Appendix B**

**Photographs of EUT**

Front View of the product



Rear View of the product



Inner Circuit Top View



Inner Circuit Bottom View



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**Photographs of EUT**

Measurement of Radiated Emission Test Set Up



Measurement of Conducted Emission Test Set Up



\*\*\*\*\* End of Test Report \*\*\*\*\*

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