



**FCC CFR47 PART 22H and 24E  
CERTIFICATION  
TEST REPORT**

**FOR**

**EUT: WIRELESS POS TERMINAL**

**MODEL NUMBER: LMT-3000S**

**FCC ID: SRVLMT-3000S**

**REPORT NUMBER: 04I3098-1**

**ISSUE DATE: DECEMBER 2, 2004**

*Prepared for*  
**LINUDIX CO., LTD**  
**ANYANG K-CENTER 6F, 1591-9 KWANYANG-DONG,**  
**DONGAN-GU ANYANG**  
**GYEONGGI, 431-060, KOREA**

*Prepared by*  
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LAB CODE:200065-0

Revision History

Rev.	Revisions	Revised By
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## 1. ATTESTATION OF TEST RESULTS

**COMPANY NAME:** LINUDIX CO., LTD  
ANYANG K-CENTER 6F, 1591-9  
KWANYANG-DONG, DONGAN-GU  
ANYANG, GYEONGGI 431-060, KORAE

**EUT DESCRIPTION:** WIRELESS POS TERMINAL

**MODEL:** LMT-3000S

**SERIAL NUMBER:** CCS# 01493

**DATE TESTED:** NOVEMBER 15-21, 2004

APPLICABLE STANDARDS	
STANDARD	TEST RESULTS
FCC PART 22H and 24E	NO NON-COMPLIANCE NOTED
DIGITAL DEVICE CONFIGURATION:	NO NON-COMPLIANCE NOTED
FCC PART 15 SUBPART B	

Compliance Certification Services, Inc. tested the above equipment in accordance with the requirements set forth in the above standards. The test results show that the equipment tested is capable of demonstrating compliance with the requirements as documented in this report.

**Note:** The results documented in this report apply only to the tested sample, under the conditions and modes of operation as described herein. This document may not be altered or revised in any way unless done so by Compliance Certification Services and all revisions are duly noted in the revisions section. Any alteration of this document not carried out by Compliance Certification Services will constitute fraud and shall nullify the document. No part of this report may be used to claim product certification, approval, or endorsement by NVLAP, NIST, or any government agency.

Approved & Released For CCS By:



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THU CHAN  
EMC SUPERVISOR  
COMPLIANCE CERTIFICATION SERVICES

Tested By:



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CHIN PANG  
EMC TECHNICIAN  
COMPLIANCE CERTIFICATION SERVICES

## 2. TEST METHODOLOGY

The tests documented in this report were performed in accordance with TIA/EIA 603A (2001), ANSI C63.4-2003, FCC CFR 47 Part 2, FCC CFR 47 Part 15 and FCC CFR 47 Part 22 and Part 24.

## 3. FACILITIES AND ACCREDITATION

The test sites and measurement facilities used to collect data are located at 561F Monterey Road, Morgan Hill, California, USA. The sites are constructed in conformance with the requirements of ANSI C63.4, ANSI C63.7 and CISPR Publication 22. All receiving equipment conforms to CISPR Publication 16-1, "Radio Interference Measuring Apparatus and Measurement Methods."

CCS is accredited by NVLAP, Laboratory Code 200065-0. The full scope of accreditation can be viewed at <http://www.ccsemc.com>.

## 4. CALIBRATION AND UNCERTAINTY

### 4.1. MEASURING INSTRUMENT CALIBRATION

The measuring equipment utilized to perform the tests documented in this report has been calibrated in accordance with the manufacturer's recommendations, and is traceable to recognized national standards.

### 4.2. MEASUREMENT UNCERTAINTY

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the apparatus:

PARAMETER	UNCERTAINTY
Radiated Emission, 30 to 200 MHz	+/- 3.3 dB
Radiated Emission, 200 to 1000 MHz	+4.5 / -2.9 dB
Radiated Emission, 1000 to 2000 MHz	+4.5 / -2.9 dB
Power Line Conducted Emission	+/- 2.9 dB

Uncertainty figures are valid to a confidence level of 95%.

## 5. EQUIPMENT UNDER TEST

### 5.1. DESCRIPTION OF EUT

The EUT is a Wireless POS Terminal Transceiver, which is operating in the 824.2 – 848.8 MHz and 1850.2 – 1909.8 MHz bands.

The radio module is manufactured by Sony Ericsson Mobile Communications AB, and it's certified by TCB as a Modular Approval on 10/02/2003 under FCC ID: PY76220511

All data in this report is applicable to the model number documented in Section 1 above with radiated emissions measurements.

### 5.2. MAXIMUM OUTPUT POWER

The transmitter has a maximum peak ERP / EIRP output power as follows:

824 to 849 MHz Authorized Band

Frequency Range (MHz)	Modulation	Conducted Peak Output Power (dBm)	Output ERP (dBm)	Output ERP (mW)
824.2 - 848.8	GSM	31.5	31.00	1258.93

1850 to 1910 MHz Authorized Band

Frequency Range (MHz)	Modulation	Conducted Peak Output Power (dBm)	Output EIRP (dBm)	Output EIRP (mW)
1850.2 - 1909.8	GSM	27.5	29.00	794.33

### **5.3. DESCRIPTION OF AVAILABLE ANTENNAS**

The radio utilizes an Omni-directional antenna.

### **5.4. SOFTWARE AND FIRMWARE**

The EUT is tested with Communication Tester CMU200 support equipment during testing.

### **5.5. WORST-CASE CONFIGURATION AND MODE**

The worst-case mode is determined as the mode with the highest output power. Since both GSM and GPRS modes have a similar maximum output power. So, all radiated emissions data were taken with GSM mode, and the highest measured radiated output power were at 837MHz for FCC22 and 1910MHz for FCC24.

## 5.6. DESCRIPTION OF TEST SETUP

### SUPPORT EQUIPMENT

PERIPHERAL SUPPORT EQUIPMENT LIST				
Description	Manufacturer	Model	Serial Number	FCC ID
AC Adapter	Sunlin Electronic	SR642-CE	NA	DOC

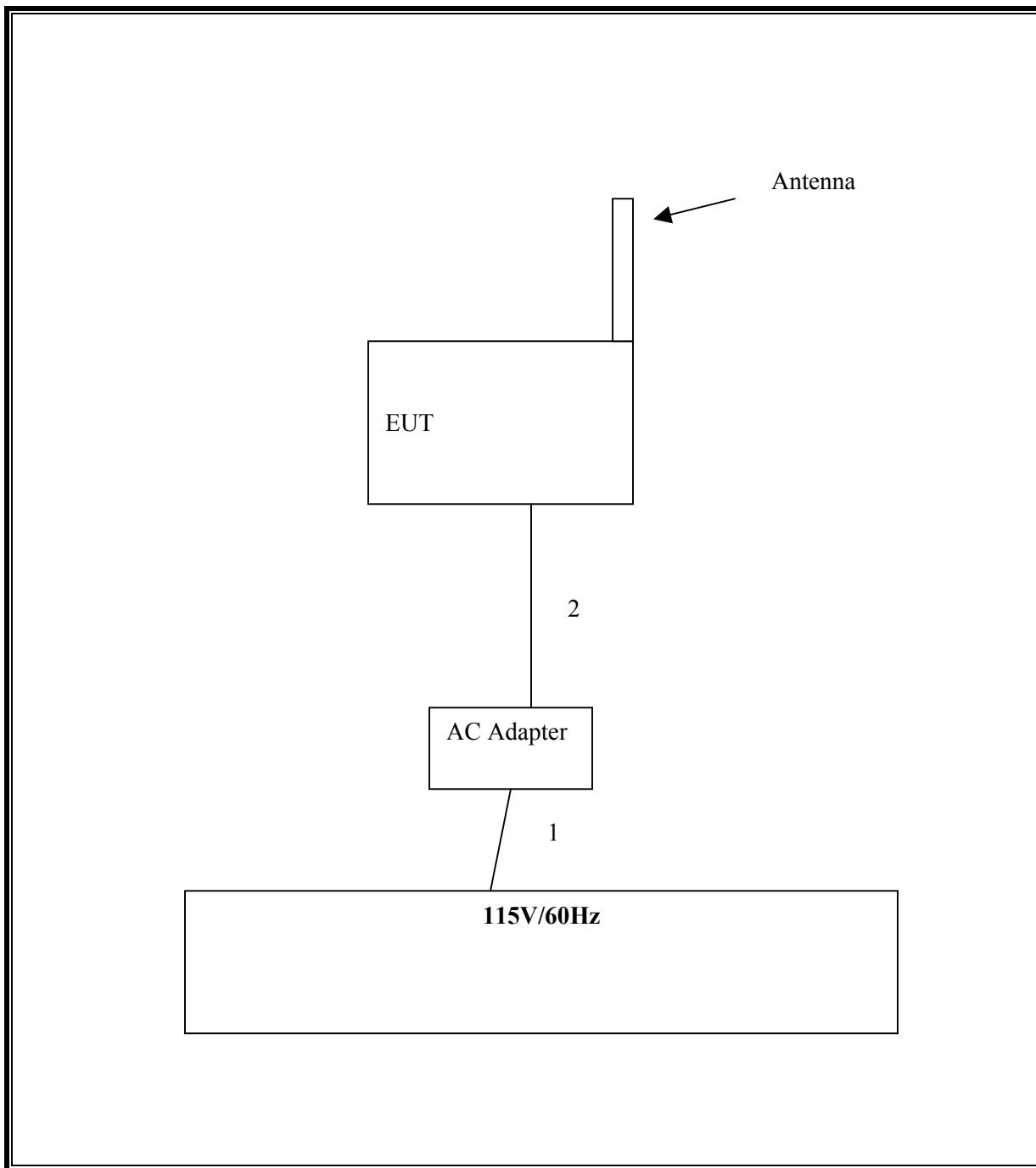
### I/O CABLES

I/O CABLE LIST						
Cable No.	Port	# of Identical Ports	Connector Type	Cable Type	Cable Length	Remarks
1	AC	1	US 115V	Un-shielded	2m	Bundled AC Cable for LC test
2	DC	2	DC	Un-shielded	1m	N/A

### TEST SETUP

The EUT is installed as a stand-alone device during the tests, and communication with the tester CMU200 support equipment.

**SETUP DIAGRAM FOR TESTS**



### **SETUP FOR DIGITAL DEVICE TESTS**

### **SUPPORT EQUIPMENT**

<b>PERIPHERAL SUPPORT EQUIPMENT LIST</b>				
<b>Description</b>	<b>Manufacturer</b>	<b>Model</b>	<b>Serial Number</b>	<b>FCC ID</b>
Laptop	HP	Pavilion	ze4101	DoC
Mouse	Logitech	M-M35	LZA60603264	DZL210365
Printer	HP	2225C	2541S41679	BS46XU2225C
Earphone	Certitek	NA	NA	NA
AC Adapter	HP	ADP-75HB	MVT0240165081	DoC
AC Adapter	Sunlin Electronic	SR642-CE	NA	DOC

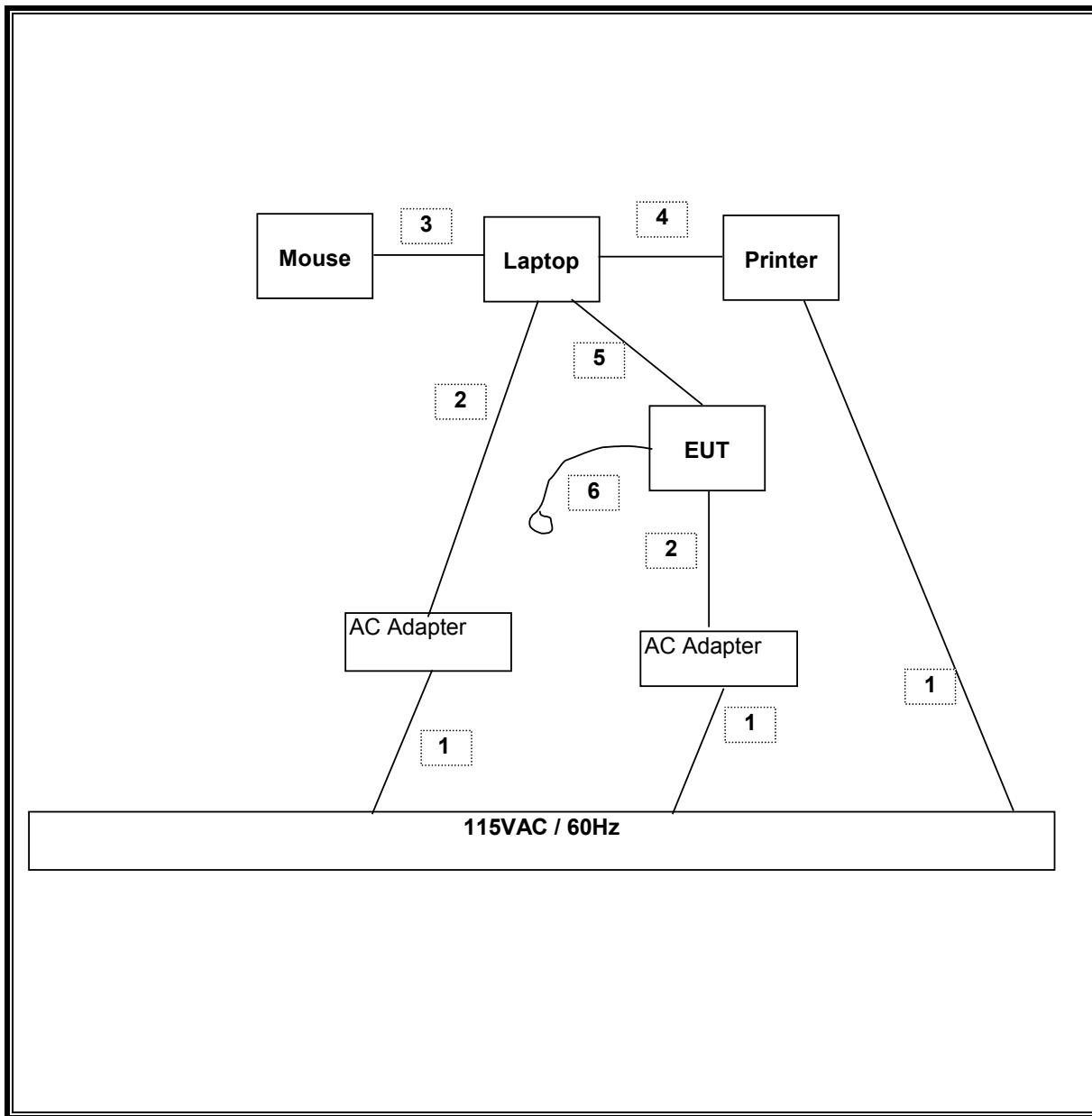
### **I/O CABLES**

<b>I/O CABLE LIST</b>						
<b>Cable No.</b>	<b>Port</b>	<b># of Identical Ports</b>	<b>Connector Type</b>	<b>Cable Type</b>	<b>Cable Length</b>	<b>Remarks</b>
1	AC	3	US 115V	Un-shielded	2m	Bundled AC Cable for LC test
2	DC	2	DC	Un-shielded	1m	N/A
3	Mouse	1	PS/2	Un-shielded	2m	N/A
4	Parallel	1	DB25	Shielded	2m	N/A
5	Serial	1	DB9	Shielded	1m	Connected from EUT to PC
6	Ear Phone	1	Din	Un-shielded	2m	N/A

### **TEST SETUP**

The EUT is connected to a laptop computer system during the tests with minimum configuration. Test software exercised the radio card.

**SETUP DIAGRAM FOR DIGITAL DEVICE TESTS**



## 6. TEST AND MEASUREMENT EQUIPMENT

The following test and measurement equipment was utilized for the tests documented in this report:

TEST EQUIPMENT LIST				
Description	Manufacturer	Model	Serial Number	Cal Due
Spectrum Analyzer 20 Hz ~ 44 GHz	Agilent	E4446A	US42070220	4/1/2005
Amplifier 1-26GHz	MITEQ	NSP2600-SP	924342	8/17/05
Antenna, Horn 1 ~ 18 GHz	EMCO	3115	2238	9/12/05
30MHz---- 2Ghz	Sunol Sciences	JB1 Antenna	A121003	12/22/04
EMI Receiver, 9 kHz ~ 2.9 GHz	HP	8542E	3942A00286	11/21/04
RF Filter Section	HP	85420E	3705A00256	11/21/04
EMI Test Receiver	R & S	ESHS 20	827129/006	10/22/05
LISN, 10 kHz ~ 30 MHz	FCC	LISN-50/250-25-2	2023	8/30/05
LISN, 10 kHz ~ 30 MHz	Solar	8012-50-R-24-BNC	837990	10/21/05
Antenna, Horn 1 ~ 18 GHz	EMCO	3115	9001-3245	9/12/05
Communication Tester	R & S	CMU 200	838114/032	12/1/04
Signal Generator 2 -40 GHz	R & S	SMP04	DE 34210	5/2/05
1.5GHz HPF	MicroTronic	HPM13193	1	CNR
2.7GHz HPF	MicroTronic	HPM13194	2	CNR
Tune Dipole	ETS	DB-4	1629	6/14/05

## 7. LIMITS AND RESULTS

### 7.1. RF POWER OUTPUT

#### LIMIT

22.913(a) The ERP of mobile transmitters and auxiliary test transmitters must not exceed 7 Watts.

24.232(b) Mobile/portable stations are limited to 2 watts e.i.r.p. peak power and the equipment must employ means to limit the power to the minimum necessary for successful communications.

#### TEST PROCEDURE

ANSI / TIA / EIA 603 Clause 2.2.17

#### RESULTS

No non-compliance noted.

**850GSM Output Power (ERP)**

f MHz	SA reading (dBuV/m)	Ant. Pol. (H/V)	SG reading (dBm)	CL (dB)	Gain (dBi)	Gain (dBd)	ERP (dBm)	Limit (dBm)	Margin (dB)	Notes
<b>low Ch</b>										
824.000	102.1	V	29.7	3.4	6.7	4.6	30.9	38.5	-7.6	
824.000	95.0	H	22.2	3.4	6.7	4.6	23.3	38.5	-15.2	
<b>Mid Ch</b>										
837.000	102.1	V	29.9	3.4	6.7	4.6	31.0	38.5	-7.5	
837.000	95.0	H	22.3	3.4	6.7	4.6	23.4	38.5	-15.1	
<b>High Ch</b>										
849.00	101.3	V	29.1	3.4	6.7	4.6	30.3	38.5	-8.2	
849.00	94.1	H	21.5	3.4	6.7	4.6	22.7	38.5	-15.8	

**1900GSM Output Power (EIRP)**

f GHz	SA reading (dBuV/m)	Ant. Pol. (H/V)	SG reading (dBm)	CL (dB)	Gain (dBi)	Gain (dBd)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Notes
<b>Low Channel</b>										
1.850	88.7	V	21.0	1.4	7.2	5.0	26.8	33.0	-6.2	
1.850	88.5	H	21.5	1.4	7.2	5.0	27.3	33.0	-5.7	
<b>Mid Channel</b>										
1.880	89.1	V	21.5	1.4	7.2	5.1	27.4	33.0	-5.6	
1.880	88.5	H	21.6	1.4	7.2	5.1	27.5	33.0	-5.5	
<b>High Channel</b>										
1.910	90.5	V	23.1	1.4	7.2	5.1	29.0	33.0	-4.0	
1.910	89.8	H	23.1	1.4	7.2	5.1	29.0	33.0	-4.0	

## 7.2. FIELD STRENGTH OF SPURIOUS RADIATION

### LIMIT

§22.917 (a) Out of band emissions. The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least  $43 + 10 \log (P)$  dB.

### TEST PROCEDURE

ANSI / TIA / EIA 603 Clause 3.2.12 & FCC 22.917 (b)

### RESULTS

No non-compliance noted.

**850GSM Spurious & Harmonic (ERP)**

11/17/04 High Frequency Substitution Measurement Compliance Certification Services, Morgan Hill 5m Chamber Site																												
<b>Test Engr:</b> Chin Pang <b>Project #:</b> 04I3098-1 <b>Company:</b> <b>EUT Descrip.:</b> Wireless POS Terminal <b>EUT M/N:</b> LMT-3000S <b>Test Target:</b> FCC Part 22 <b>Mode Oper:</b> TX, 850MHz																												
<b>Test Equipment:</b> <table border="1"> <tr> <td>EMCO Horn 1-18GHz</td> <td>Horn &gt; 18GHz</td> <td>Limit</td> </tr> <tr> <td>T60; S/N: 2238 @3m</td> <td></td> <td>FCC 22</td> </tr> <tr> <td colspan="3"> <input checked="" type="checkbox"/> High Pass Filter         </td> </tr> <tr> <td colspan="3"> <b>Hi Frequency Cables</b>  <input type="checkbox"/> (2 ft) <input type="checkbox"/> (2 ~ 3 ft) <input checked="" type="checkbox"/> (4 ~ 6 ft) <input checked="" type="checkbox"/> (12 ft)         </td> </tr> <tr> <td colspan="3"> <b>Pre-amplifier 1-26GHz</b>          T87 Miteq 924342         </td> </tr> <tr> <td colspan="3"> <b>Pre-amplifier 26-40GHz</b> </td> </tr> </table>											EMCO Horn 1-18GHz	Horn > 18GHz	Limit	T60; S/N: 2238 @3m		FCC 22	<input checked="" type="checkbox"/> High Pass Filter			<b>Hi Frequency Cables</b> <input type="checkbox"/> (2 ft) <input type="checkbox"/> (2 ~ 3 ft) <input checked="" type="checkbox"/> (4 ~ 6 ft) <input checked="" type="checkbox"/> (12 ft)			<b>Pre-amplifier 1-26GHz</b> T87 Miteq 924342			<b>Pre-amplifier 26-40GHz</b>		
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<b>f</b> <b>GHz</b>	<b>SA reading</b> <b>(dBuV/m)</b>	<b>Ant. Pol.</b> <b>(H/V)</b>	<b>SG reading</b> <b>(dBm)</b>	<b>CL</b> <b>(dB)</b>	<b>Gain</b> <b>(dBi)</b>	<b>Gain</b> <b>(dBd)</b>	<b>ERP</b> <b>(dBm)</b>	<b>Limit</b> <b>(dBm)</b>	<b>Margin</b> <b>(dB)</b>	<b>Notes</b>																		
<b>low ch</b>																												
1.648	80.3	V	-30.0	2.1	7.0	4.8	-27.3	-13.0	-14.3																			
2.472	69.0	V	-38.0	2.6	8.2	6.0	-34.6	-13.0	-21.6																			
3.296	62.3	V	-43.0	3.0	9.3	7.1	-38.9	-13.0	-25.9																			
4.121	59.3	V	-44.7	3.5	9.8	7.6	-40.5	-13.0	-27.5																			
4.945	52.0	V	-51.7	3.9	10.9	8.7	-46.9	-13.0	-33.9																			
1.648	76.0	H	-33.6	2.1	7.0	4.8	-30.9	-13.0	-17.9																			
2.472	75.0	H	-31.8	2.6	8.2	6.0	-28.4	-13.0	-15.4																			
3.296	62.0	H	-43.2	3.0	9.3	7.1	-39.1	-13.0	-26.1																			
4.121	58.9	H	-44.7	3.5	9.8	7.6	-40.6	-13.0	-27.6																			
4.945	49.3	H	-54.1	3.9	10.9	8.7	-49.3	-13.0	-36.3																			
<b>Mid ch</b>																												
1.673	78.6	V	-31.6	2.1	7.0	4.8	-28.8	-13.0	-15.8																			
2.510	72.0	V	-34.9	2.6	8.3	6.1	-31.4	-13.0	-18.4																			
3.346	62.5	V	-42.7	3.1	9.3	7.2	-38.6	-13.0	-25.6																			
4.183	58.8	V	-45.1	3.5	9.9	7.7	-40.9	-13.0	-27.9																			
5.019	50.5	V	-51.9	4.0	11.0	8.8	-47.1	-13.0	-34.1																			
1.673	82.4	H	-27.1	2.1	7.0	4.8	-24.4	-13.0	-11.4																			
2.510	73.0	H	-33.7	2.6	8.3	6.1	-30.2	-13.0	-17.2																			
3.346	65.2	H	-39.9	3.1	9.3	7.2	-35.8	-13.0	-22.8																			
4.183	67.8	H	-35.8	3.5	9.9	7.7	-31.6	-13.0	-18.6																			
5.019	51.0	H	-50.4	4.0	11.0	8.8	-45.6	-13.0	-32.6																			
<b>high ch</b>																												
1.697	78.0	V	-32.0	2.1	7.0	4.9	-29.3	-13.0	-16.3																			
2.546	72.6	V	-34.3	2.6	8.3	6.2	-30.7	-13.0	-17.7																			
3.395	62.2	V	-42.9	3.1	9.3	7.2	-38.8	-13.0	-25.8																			
4.244	60.6	V	-43.3	3.6	10.0	7.8	-39.1	-13.0	-26.1																			
5.092	52.4	V	-49.9	4.0	11.0	8.9	-45.0	-13.0	-32.0																			
1.697	82.9	H	-26.4	2.1	7.0	4.9	-23.7	-13.0	-10.7																			
2.546	76.0	H	-30.7	2.6	8.3	6.2	-27.1	-13.0	-14.1																			
3.395	63.4	H	-41.6	3.1	9.3	7.2	-37.5	-13.0	-24.5																			
4.244	64.8	H	-38.8	3.6	10.0	7.8	-34.5	-13.0	-21.5																			
5.092	51.3	H	-50.0	4.0	11.0	8.9	-45.1	-13.0	-32.1																			

**1900GSM Spurious & Harmonic (EIRP)**

<p>11/17/04 High Frequency Substitution Measurement          Compliance Certification Services, Morgan Hill 5m Chamber Site</p> <p>Test Engg: Chin Pang          Project #:04I3098-1          Company:          EUT Descrip.: Wireless POS Terminal          EUT M/N:LMT-3000S          Test Target:FCC Part 24          Mode Oper:TX, 1900MHz</p> <p><u>Test Equipment:</u></p> <table border="1"> <tr> <td>EMCO Horn 1-18GHz</td> <td>Horn &gt; 18GHz</td> <td>Limit</td> <td><input checked="" type="checkbox"/> High Pass Filter</td> </tr> <tr> <td>T60; S/N: 2238 @3m</td> <td></td> <td>FCC 24</td> <td></td> </tr> <tr> <td colspan="4">                     Hi Frequency Cables                       <input type="checkbox"/> (2 ft) <input type="checkbox"/> (2 ~ 3 ft) <input checked="" type="checkbox"/> (4 ~ 6 ft) <input checked="" type="checkbox"/> (12 ft)   Pre-amplifier 1-26GHz   T87 Miteq 924342   Pre-amplifier 26-40GHz                 </td> </tr> </table> <table border="1"> <thead> <tr> <th>f GHz</th> <th>SA reading (dBuV/m)</th> <th>Ant. 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(H/V)</th> <th>SG reading (dBm)</th> <th>CL (dB)</th> <th>Gain (dBi)</th> <th>Gain (dEd)</th> <th>EIRP (dBm)</th> <th>Limit (dBm)</th> <th>Margin (dB)</th> <th>Notes</th> </tr> </thead> <tbody> <tr> <td colspan="11"><b>low Ch</b></td> </tr> <tr> <td>3.700</td> <td>57.6</td> <td>V</td> <td>-47.0</td> <td>3.3</td> <td>9.5</td> <td>7.3</td> <td>-40.8</td> <td>-13.0</td> <td>-27.8</td> <td></td> </tr> <tr> <td>5.550</td> <td>52.0</td> <td>V</td> <td>-49.5</td> <td>4.2</td> <td>11.1</td> <td>9.0</td> <td>-42.6</td> <td>-13.0</td> <td>-29.6</td> <td></td> </tr> <tr> <td>7.400</td> <td>53.1</td> <td>V</td> <td>-44.8</td> <td>4.8</td> <td>11.2</td> <td>9.1</td> <td>-36.4</td> <td>-13.0</td> <td>-25.4</td> <td></td> </tr> <tr> <td>9.250</td> <td>49.0</td> <td>V</td> <td>-45.4</td> <td>5.4</td> <td>10.8</td> <td>8.7</td> <td>-40.0</td> <td>-13.0</td> <td>-27.0</td> <td></td> </tr> <tr> <td>3.700</td> <td>59.3</td> <td>H</td> <td>-45.2</td> <td>3.3</td> <td>9.5</td> <td>7.3</td> <td>-39.0</td> <td>-13.0</td> <td>-26.0</td> <td></td> </tr> <tr> <td>5.550</td> <td>51.0</td> <td>H</td> <td>-49.5</td> <td>4.2</td> <td>11.1</td> <td>9.0</td> <td>-42.6</td> <td>-13.0</td> <td>-29.6</td> <td></td> </tr> <tr> <td>7.400</td> <td>48.4</td> <td>H</td> <td>-48.7</td> <td>4.8</td> <td>11.2</td> <td>9.1</td> <td>-42.3</td> <td>-13.0</td> <td>-29.3</td> <td></td> </tr> <tr> <td>9.250</td> <td>47.6</td> <td>H</td> <td>-46.8</td> <td>5.4</td> <td>10.8</td> <td>8.7</td> <td>-41.4</td> <td>-13.0</td> <td>-28.4</td> <td></td> </tr> <tr> <td colspan="11"><b>Mid Ch</b></td> </tr> <tr> <td>3.760</td> <td>59.4</td> <td>V</td> <td>-45.1</td> <td>3.3</td> <td>9.5</td> <td>7.4</td> <td>-38.9</td> <td>-13.0</td> <td>-25.9</td> <td></td> </tr> <tr> <td>5.640</td> <td>51.3</td> <td>V</td> <td>-50.0</td> <td>4.3</td> <td>11.2</td> <td>9.0</td> <td>-43.1</td> <td>-13.0</td> <td>-30.1</td> <td></td> </tr> <tr> <td>7.520</td> <td>48.7</td> <td>V</td> <td>-49.0</td> <td>4.9</td> <td>11.2</td> <td>9.1</td> <td>-42.6</td> <td>-13.0</td> <td>-29.6</td> <td></td> </tr> <tr> <td>9.400</td> <td>48.5</td> <td>V</td> <td>-45.8</td> <td>5.4</td> <td>11.0</td> <td>8.9</td> <td>-40.2</td> <td>-13.0</td> <td>-27.2</td> <td></td> </tr> <tr> <td>3.760</td> <td>60.6</td> <td>H</td> <td>-43.8</td> <td>3.3</td> <td>9.5</td> <td>7.4</td> <td>-37.5</td> <td>-13.0</td> <td>-24.5</td> <td></td> </tr> <tr> <td>5.640</td> <td>52.0</td> <td>H</td> <td>-48.3</td> <td>4.3</td> <td>11.2</td> <td>9.0</td> <td>-41.4</td> <td>-13.0</td> <td>-28.4</td> <td></td> </tr> <tr> <td>7.520</td> <td>47.4</td> <td>H</td> <td>-49.5</td> <td>4.9</td> <td>11.2</td> <td>9.1</td> <td>-43.1</td> <td>-13.0</td> <td>-30.1</td> <td></td> </tr> <tr> <td>9.400</td> <td>46.6</td> <td>H</td> <td>-47.7</td> <td>5.4</td> <td>11.0</td> <td>8.9</td> <td>-42.1</td> <td>-13.0</td> <td>-29.1</td> <td></td> </tr> <tr> <td colspan="11"><b>High Ch</b></td> </tr> <tr> <td>3.818</td> <td>61.5</td> <td>V</td> <td>-42.9</td> <td>3.3</td> <td>9.5</td> <td>7.4</td> <td>-36.7</td> <td>-13.0</td> <td>-23.7</td> <td></td> </tr> <tr> <td>6.727</td> <td>51.0</td> <td>V</td> <td>-48.2</td> <td>4.6</td> <td>11.3</td> <td>9.1</td> <td>-41.5</td> <td>-13.0</td> <td>-28.5</td> <td></td> </tr> <tr> <td>7.636</td> <td>52.2</td> <td>V</td> <td>-45.2</td> <td>4.9</td> <td>11.2</td> <td>9.1</td> <td>-38.9</td> <td>-13.0</td> <td>-25.9</td> <td></td> </tr> <tr> <td>9.545</td> <td>48.0</td> <td>V</td> <td>-46.1</td> <td>5.5</td> <td>11.2</td> <td>9.1</td> <td>-40.4</td> <td>-13.0</td> <td>-27.4</td> <td></td> </tr> <tr> <td>3.818</td> <td>60.6</td> <td>H</td> <td>-43.7</td> <td>3.3</td> <td>9.5</td> <td>7.4</td> <td>-37.5</td> <td>-13.0</td> <td>-24.5</td> <td></td> </tr> <tr> <td>6.727</td> <td>55.1</td> <td>H</td> <td>-43.4</td> <td>4.6</td> <td>11.3</td> <td>9.1</td> <td>-36.8</td> <td>-13.0</td> <td>-23.8</td> <td></td> </tr> <tr> <td>7.636</td> <td>49.2</td> <td>H</td> <td>-47.4</td> <td>4.9</td> <td>11.2</td> <td>9.1</td> <td>-41.1</td> <td>-13.0</td> <td>-28.1</td> <td></td> </tr> <tr> <td>9.545</td> <td>46.4</td> <td>H</td> <td>-47.7</td> <td>5.5</td> <td>11.2</td> <td>9.1</td> <td>-42.0</td> <td>-13.0</td> <td>-29.0</td> <td></td> </tr> </tbody> </table>												EMCO Horn 1-18GHz	Horn > 18GHz	Limit	<input checked="" type="checkbox"/> High Pass Filter	T60; S/N: 2238 @3m		FCC 24		Hi Frequency Cables <input type="checkbox"/> (2 ft) <input type="checkbox"/> (2 ~ 3 ft) <input checked="" type="checkbox"/> (4 ~ 6 ft) <input checked="" type="checkbox"/> (12 ft) Pre-amplifier 1-26GHz T87 Miteq 924342 Pre-amplifier 26-40GHz				f GHz	SA reading (dBuV/m)	Ant. 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## 8. DIGITAL DEVICE CONFIGURATION - LIMITS AND RESULTS

### 8.1. RADIATED EMISSIONS

#### TEST PROCEDURE

ANSI C63.4

#### CLASS B LIMITS

§15.107 (a) Except for Class A digital devices, the field strength of radiated emissions from unintentional radiators at a distance of 3 meters shall not exceed the following values:

Limits for radiated disturbance of Class B ITE at measuring distance of 3 m	
Frequency range (MHz)	Quasi-peak limits (dB $\mu$ V/m)
30 to 88	40
88 to 216	43.5
216 to 960	46
Above 960 MHz	54

Note: The lower limit shall apply at the transition frequency.

#### RESULTS

No non-compliance noted:

### 8.1.1. WORST-CASE RADIATED EMISSIONS BELOW 1 GHz

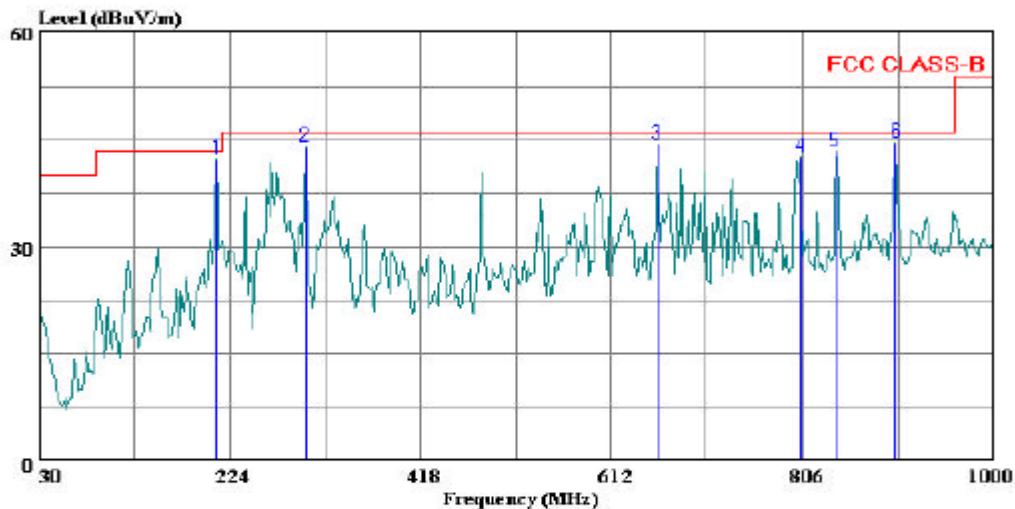
#### SPURIOUS EMISSIONS 30 TO 1000 MHz (WORST-CASE CONFIGURATION, HORIZONTAL)

##### HORIZONTAL PLOT



561F Monterey Road  
Morgan Hill, CA 95037  
Tel: (408) 463-0888  
Fax: (408) 463-0885

Data#: 20 File#: Linudix 3098.EMI Date: 11-21-2004 Time: 14:15:01



Condition: FCC CLASS-B HORIZONTAL  
Test Operator: : Chin Pang  
Project #: : 04I3098-1  
Company: : Linudix Co., LTD  
EUT: : Wireless POS Terminal  
Model No: : LMT-3000S  
Configuration: : EUT/PC/Monitor/Modem/Printer  
Target of Test: : FCC Class B  
Mode of Operation: Normal

HORIZONTAL DATA

Page: 1

Freq	Remark	Read	Factor	Limit	Over	Limit
		Level		Level	Line	
MHz		dBuV		dBuV/m	dBuV/m	
1	211.390 Peak	56.67	-14.21	42.46	43.50	-1.04
2	300.630 Peak	55.08	-11.00	44.08	46.00	-1.92
3	659.530 Peak	49.85	-5.43	44.42	46.00	-1.58
4	803.090 Peak	46.04	-3.42	42.62	46.00	-3.38
5	838.980 Peak	46.34	-3.04	43.30	46.00	-2.70
6	900.090 Peak	46.53	-1.98	44.55	46.00	-1.45

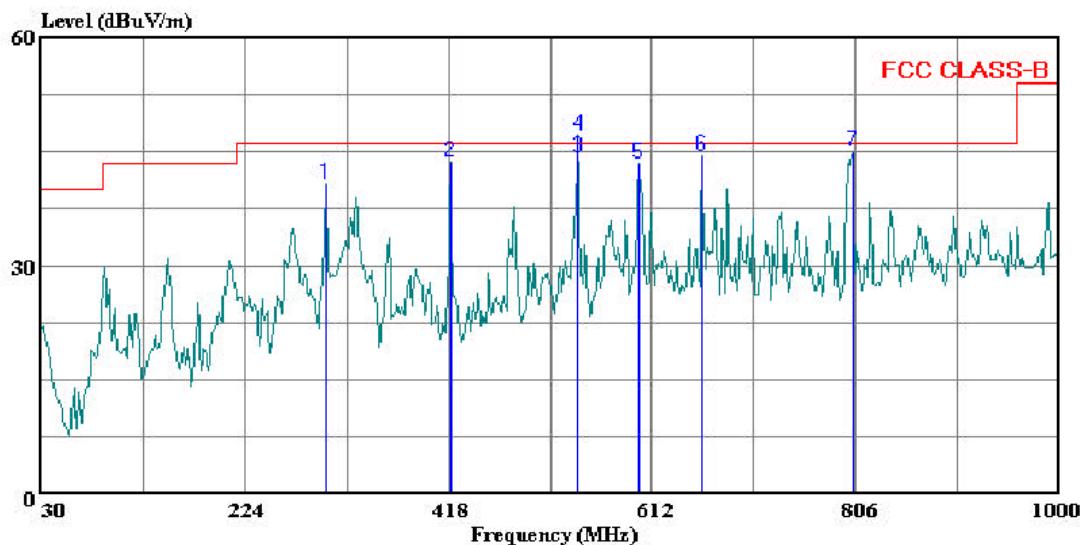
**SPURIOUS EMISSIONS 30 TO 1000 MHz (WORST-CASE CONFIGURATION, VERTICAL)**

VERTICAL PLOT



561F Monterey Road  
Morgan Hill, CA 95037  
Tel: (408) 463-0888  
Fax: (408) 463-0885

Data#: 18 File#: Linudix 3098.EMI Date: 11-21-2004 Time: 14:12:17



(Audix ATC)

Trace: 15

Ref Trace:

Condition: FCC CLASS-B VERTICAL  
Test Operator: Chin Pang  
Project #: 04I3098-1  
Company: Linudix Co., LTD  
EUT: Wireless POS Terminal  
Model No: LMT-3000S  
Configuration: EUT/PC/Monitor/Modem/Printer  
Target of Test: FCC Class B  
Mode of Operation: Normal

VERTICAL DATA

Page: 1

Freq	Remark	Read	Limit		Over		
		Level	Factor	Level		Line	
MHz		dBuV	dB	dBuV/m	dBuV/m	dB	
1	300.630	Peak	51.61	-11.00	40.61	46.00	-5.39
2	419.940	Peak	52.88	-9.26	43.62	46.00	-2.38
3	541.190	QP	51.80	-7.52	44.28	46.00	-1.72
4 *	541.190	Peak	54.72	-7.52	47.20	46.00	1.20
5	599.390	Peak	50.04	-6.57	43.47	46.00	-2.53
6	659.530	Peak	49.90	-5.43	44.47	46.00	-1.53
7	803.090	Peak	48.38	-3.42	44.96	46.00	-1.04

## 8.2. POWERLINE CONDUCTED EMISSIONS

### LIMIT

§15.107 (a) (a) Except for Class A digital devices, for equipment that is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies within the band 150 kHz to 30 MHz shall not exceed the limits in the following table, as measured using a 50  $\mu$  H/50 ohms line impedance stabilization network (LISN). Compliance with the provisions of this paragraph shall be based on the measurement of the radio frequency voltage between each power line and ground at the power terminal. The lower limit applies at the band edges.

Frequency of Emission (MHz)	Conducted Limit (dBuV)	
	Quasi-peak	Average
0.15-0.5	66 to 56 <sup>*</sup>	56 to 46 <sup>*</sup>
0.5-5	56	46
5-30	60	50

<sup>\*</sup> Decreases with the logarithm of the frequency.

### TEST PROCEDURE

ANSI C63.4

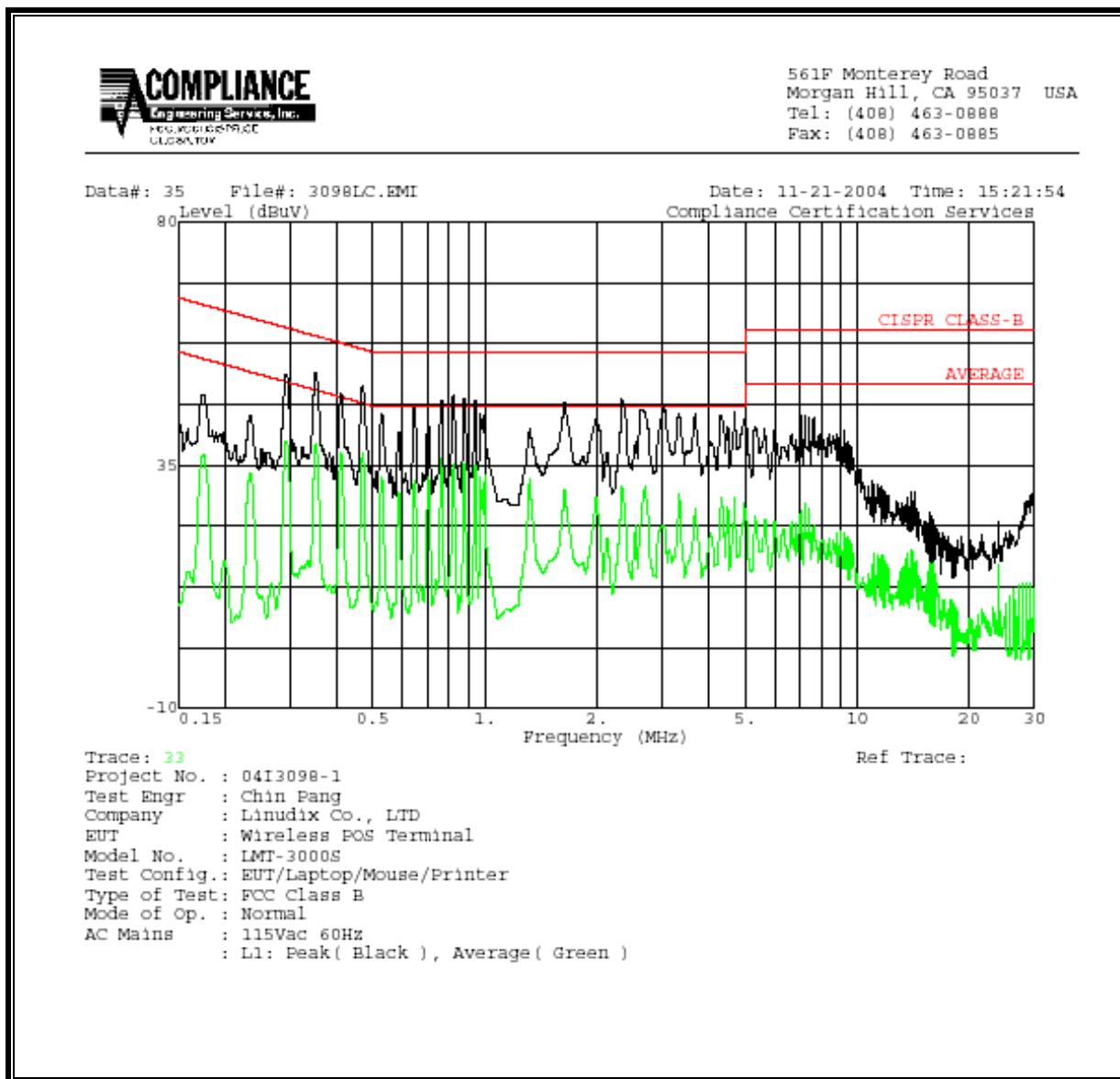
### RESULTS

No non-compliance noted:

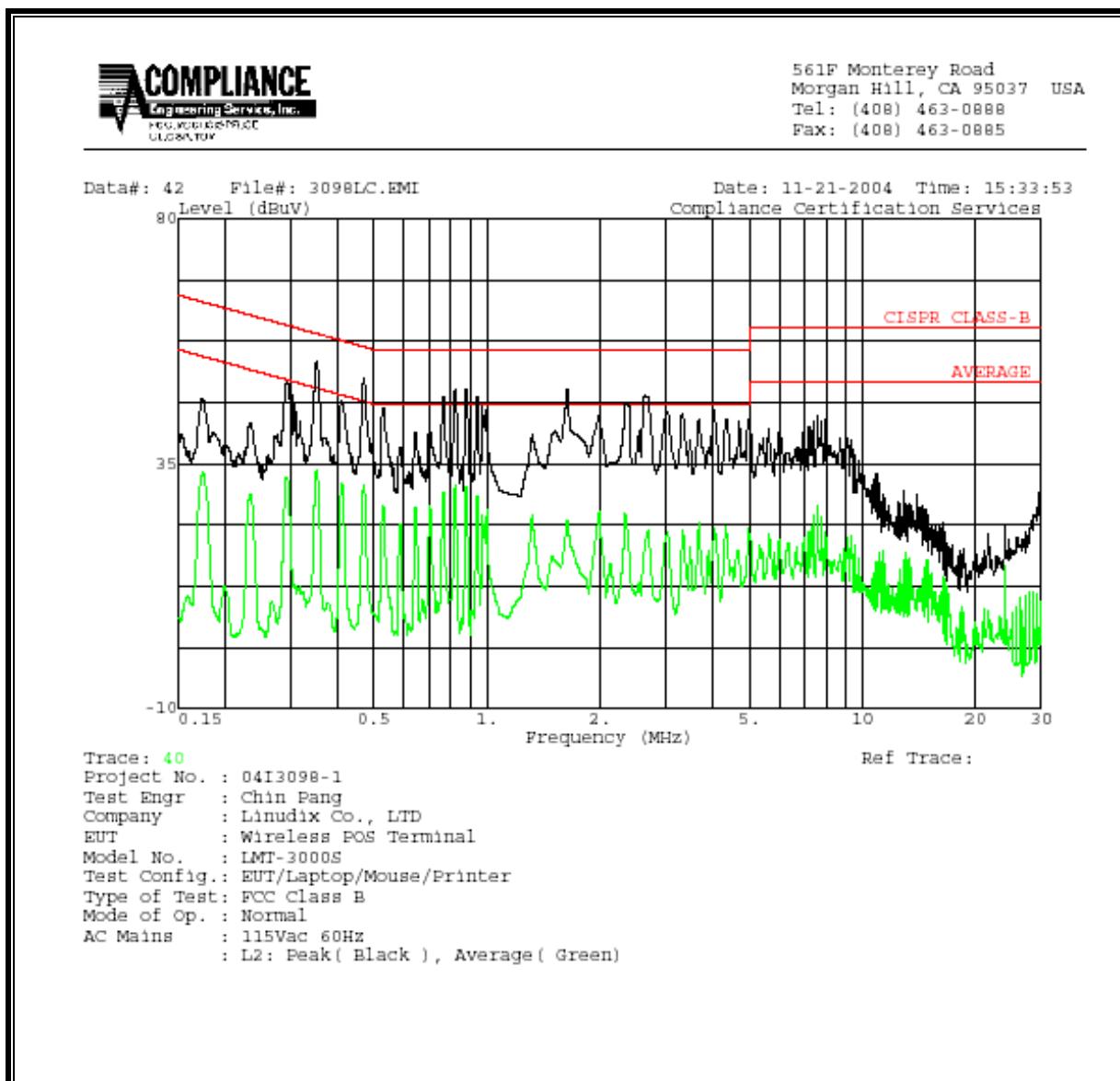
**6 WORST EMISSIONS**

CONDUCTED EMISSIONS DATA (115VAC 60Hz)									
Freq. (MHz)	Reading			Closs (dB)	Limit	EN B	Margin		Remark
	PK (dBuV)	QP (dBuV)	AV (dBuV)				QP	AV	
0.29	51.68	--	39.39	0.00	60.50	50.50	-8.82	-11.11	L1
0.35	52.26	--	39.06	0.00	58.94	48.94	-6.68	-9.88	L1
0.47	49.84	--	37.32	0.00	56.50	46.50	-6.66	-9.18	L1
0.35	53.72	--	33.93	0.00	58.92	48.92	-5.20	-14.99	L2
0.47	50.58	--	31.26	0.00	56.50	46.50	-5.92	-15.24	L2
1.64	48.52	--	24.54	0.00	56.00	46.00	-7.48	-21.46	L2
6 Worst Data									

**LINE 1 RESULTS**



**LINE 2 RESULTS**



## 9. SETUP PHOTOS

### RADIATED RF MEASUREMENT SETUP FOR PORTABLE CONFIGURATION



X-AXIS BACK PHOTO





Y-AXIS BACK PHOTO

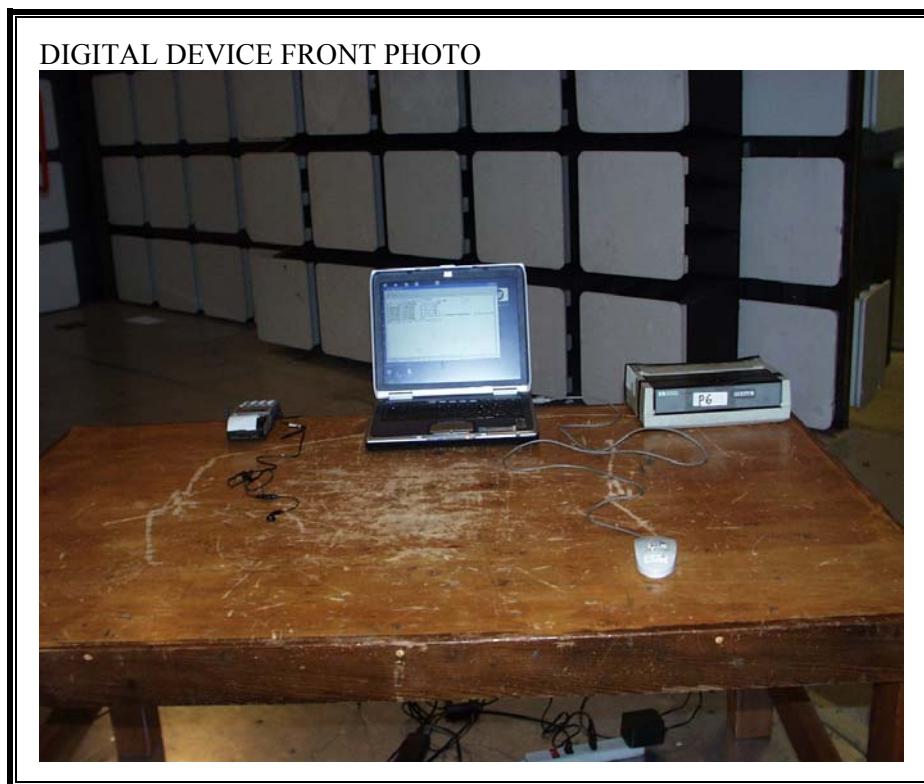


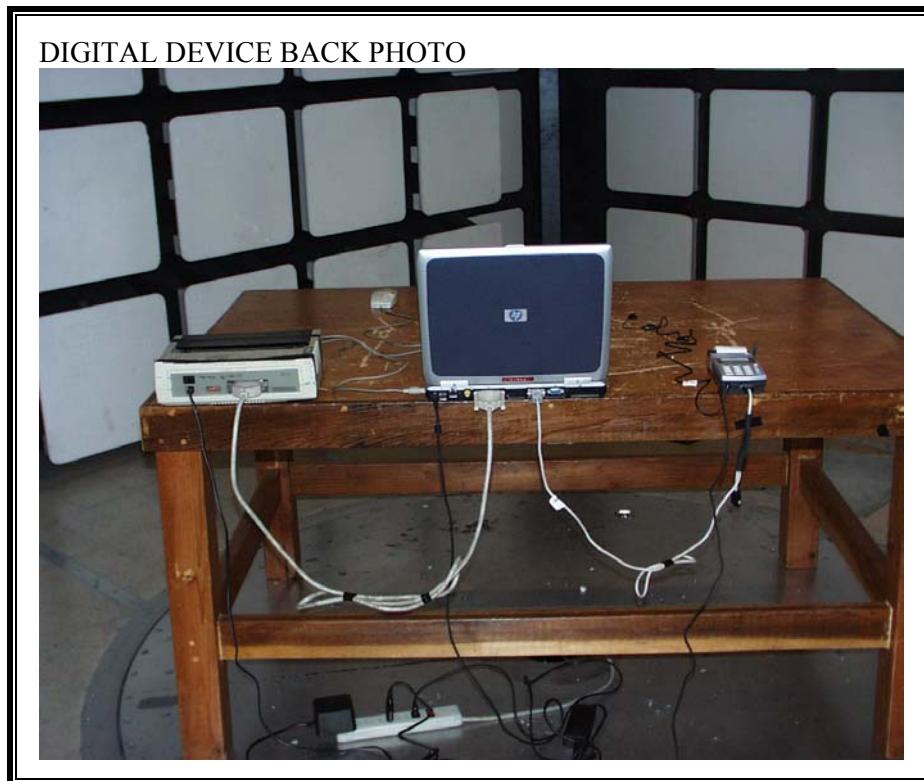


Z-AXIS BACK PHOTO

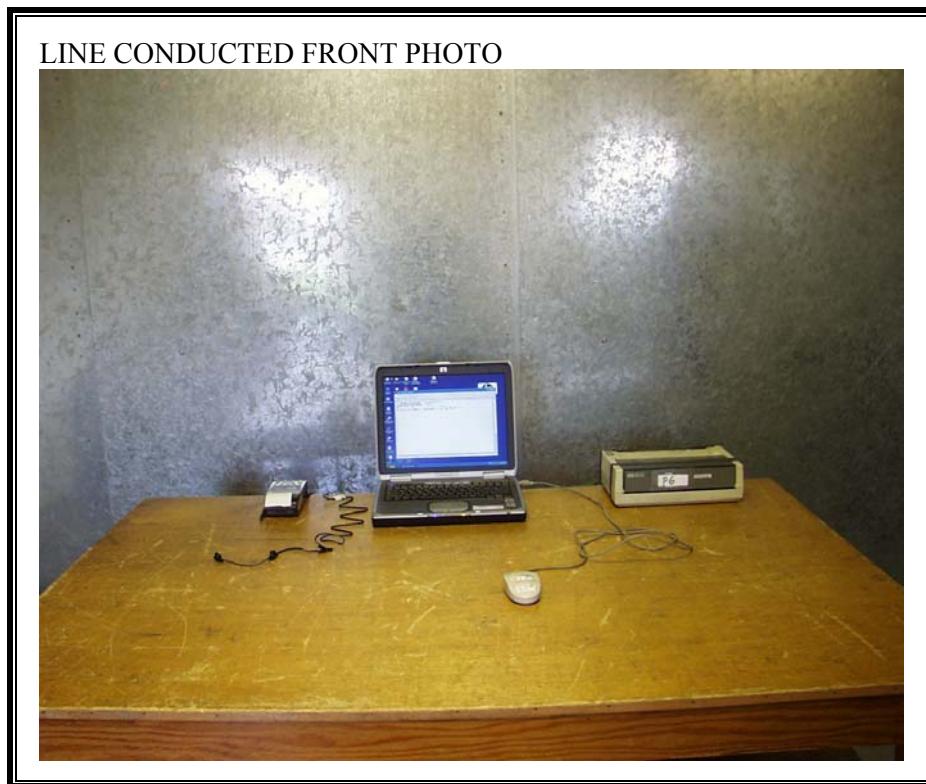


**DIGITAL DEVICE RADIATED EMISSIONS SETUP**





**POWERLINE CONDUCTED EMISSIONS MEASUREMENT SETUP**



LINE CONDUCTED BACK PHOTO



**END OF REPORT**