



683-3, Yubang-Dong, Yongin-Si, Kyunggi-Do, Korea. 449-080  
 Tel: +82-31-321-2664 Fax: +82-31-321-1664  
<http://www.digitalemc.com>

**CERTIFICATE OF COMPLIANCE  
 FCC Part 15B Certification**


Dates of Tests: August 09 ~ 11, 2004  
 Test Report S/N:DR50110408C  
 Test Site : DIGITAL EMC CO., LTD.

FCC ID.

**E2XOMR6000R**

APPLICANT

**SAMSUNG Electro-Mechanics Co., Ltd.**

- FCC Classification** : **Part 15 Class B Computing Device Peripheral**
- Device name** : Receiver
- Manufacturer** : Dongguan Samsung Electro-Mechanics Co., Ltd.  
 Quan-Tang Village, Liao-Bu Town, Dong-Guan City, Guang-Dong  
 Province P.R CHINA P.C:523425
- Brand** : 
- Model name** : OMR6000R
- Test Device Serial number** : Identical prototype
- FCC Rule Part(s)** : FCC Part 15 Subpart B; ANSI C-63.4-2001
- Data of issue** : August 12, 2004

**I attest to the accuracy of data. All measurements reported herein were performed by me or were made under my supervision and are correct to the best of my knowledge and belief. I assume full responsibility for the completeness of these measurements and vouch for the qualifications of all persons taking them.**



NVLAP LAB CODE 200559-0

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## 1. General information's

This report contains the result of tests performed by:

DIGITAL EMC CO., LTD.

Address : 683-3, Yubang-Dong, Yongin-Si, Kyunggi-Do, Korea. 449-080

<http://www.digitalemc.com> E-mail : demc@unitel.co.kr

Tel: +82-31-321-2664 Fax: +82-31-321-1664

Quality control in the testing laboratory is implemented as per ISO/IEC 17025 which is the "General requirements for the competents of calibration and testing laboratory".

This laboratory is accredited by NVLAP for NVLAP Lab. Code : 200559-0.

**Test operator: engineer**

August 12, 2004

Won -Jong LEE

Data

Name

Signature

**Report Reviewed By: manager**

August 12, 2004

Dong -Min JUNG

Data

Name

Signature

Ordering party:

Company name : SAMSUNG Electro-Mechanics Co., Ltd.

Address : 314, Maethan-3Dong, Paldal-Ku,

City/town : Suwon City, Kyunggi Do

Country : Korea

Zip code : 442-743

Date of order : July 27, 2004

Att. : Mr. Jun-Hwan, Lim

## 2. Information's about test item

### E2XOMR6000R

#### 2.1 Equipment information

Equipment model name	OMR6000R
Type of equipment	RECEIVER
High Frequency	26.79 MHz, 26.5 MHz
Interface method	USB (Version1.1Low Speed )
Receiver Sensitivity	-90dBm@7KHzDev. SINAD>12dBm

#### 2.2 Tested environment

Temperature	: 15 ~ 35 (°C)
Relative humidity content	: 20 ~ 75 %
Air pressure	: 86 ~ 103 kPa
Details of power supply	: AC120V 60Hz

#### 2.3 Ancillary Equipment

Equipment	Model No.	Serial No.	Manufacturer
Notebook	PP02X	8K493A01	DELL
Printer	2225C	3245S12493	HP
Receiver(EUT)	OMR6000R	N/A	Samsung
Keyboard	OMR6000K	N/A	Samsung
Mouse	OMR6000M	N/A	Samsung
Mic	N/A	N/A	N/A
Earphone	N/A	N/A	N/A

#### 2.4 EMI Suppression Device(s)/Modifications

None

### 3. Test Report

#### 3.1 Summary of tests

FCC Part Section(s)	Parameter	Status (note 1)
<b>Transmitter requirements</b>		
15.109	Radiated Emission	C
15.107	Conducted Emissions	C
Note 1: C= Complies    NC=Not Complies    NT=Not Tested    NA=Not Applicable		

The sample was tested according to the following specification:

FCC Parts 15B; ANSI C-63.4-2001

### 3.2 Transmitter requirements

#### 3.2.1 Radiated Emission

**Procedure:**

The EUT was placed on a 0.8m high wooden table inside a shielded enclosure. An antenna was placed near the EUT and measurements of frequencies and amplitudes of field strengths were recorded for reference during final measurements. For final radiated testing, measurements were performed in a OATS. Measurements were performed with the EUT oriented in 3 orthogonal axis and rotated 360 degrees to determine worst-case orientation for maximum emissions.

The spectrum analyzer is set to:

Frequency Range = 30 MHz ~ 10<sup>th</sup> harmonic.

RBW = 120 kHz ( 30MHz ~ 1 GHz)

= 1 MHz (1 GHz ~ 10<sup>th</sup> harmonic )

Trace = max hold

Sweep = auto

VBW ≥ RBW

Detector function = peak / Quasi-peak / average

**Measurement Result: Complies**

- Refer to the Next page

**Minimum Standard: FCC Part 15.109**

Frequency (MHz)	Limit (uV/m) @ 3m
30 ~ 88	100 **
88 ~ 216	150 **
216 ~ 960	200 **
Above 960	500

TEST EQUIPMENT USED: 02, 22, 30, 31, 33, 34, 39, 40, 41, 47, 49

**Radiated Emissions**

**Measurement Data:**

Remark: the other emission is less than 10dB.

**Test mode : Receiving mode**



DIGITAL EMC Co., Ltd.  
 883-2, Yubang-Dong, Yongin-Si,  
 Kyunggi-Do, Korea. 483-080  
 Tel:+82-31- 321 - 2664 Fax:+82-31- 321 - 1664  
 demc@unitel.co.kr ,www.digitalemc.com

Tested by Mr.

Data# 749 File# C:\Program Files\rokmc.EMI Date: 08-11-2004

Site : DIGITAL EMC Co., Ltd.  
 Condition : FCC CLASS-B 3m DEMC NEW 3(2003)  
 MODEL NO : OMR6000R  
 MEMO :  
 POWER : 120V 60Hz

	Freq	Remark	Read Level	Probe Factor	Cable Loss	Preamp Factor	Level	Limit Line	Over Limit	
	MHz		dBuV	dB	dB	dB	dBuV/m	dBuV/m	dB	
1	42.120	H	48.84	13.77	1.77	28.33	-12.79	36.05	40.00	-3.95
2	56.570	V	46.50	8.40	1.34	28.35	-18.61	27.89	40.00	-12.11
3	56.670	H	50.00	8.37	1.34	28.35	-18.64	31.36	40.00	-8.64
4	68.800	H	47.50	6.15	1.94	28.37	-20.28	27.22	40.00	-12.78
5	71.220	V	43.99	6.03	1.94	28.37	-20.40	23.59	40.00	-16.41
6	112.450	H	50.50	11.33	2.00	28.32	-14.99	35.51	43.50	-7.99
7	117.300	V	42.50	11.95	2.00	28.28	-14.33	28.17	43.50	-15.33
8	124.570	H	45.00	12.88	2.00	28.24	-13.36	31.64	43.50	-11.86
9	131.850	V	40.00	13.43	2.00	28.20	-12.77	27.23	43.50	-16.27
10	139.120	H	43.00	13.95	2.00	28.16	-12.21	30.79	43.50	-12.71
11	151.250	H	42.00	14.78	2.00	28.10	-11.32	30.68	43.50	-12.82
12	192.470	H	37.00	16.13	2.00	27.93	-9.80	27.20	43.50	-16.30

### 3.2.2 Conducted Emission.

**Procedure:**

The conducted emissions are measured in the shielded room with a spectrum analyzer in peak hold. While the measurement, EUT had its receiving function. Emissions closest to the limit are measured in the quasi-peak mode (QP) with the tuned receiver using a bandwidth of 9 kHz. The emissions are maximized further by cable manipulation and Exerciser operation. The highest emissions relative to the limit are listed.

**Measurement Data: Complies**

- This EUT was not applied because During the charging mode, The EUT can't do the transmission.

**Minimum Standard: FCC Part 15.107/EN 55022**

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

\* Decreases with the logarithm of the frequency

**Measurement Setup**

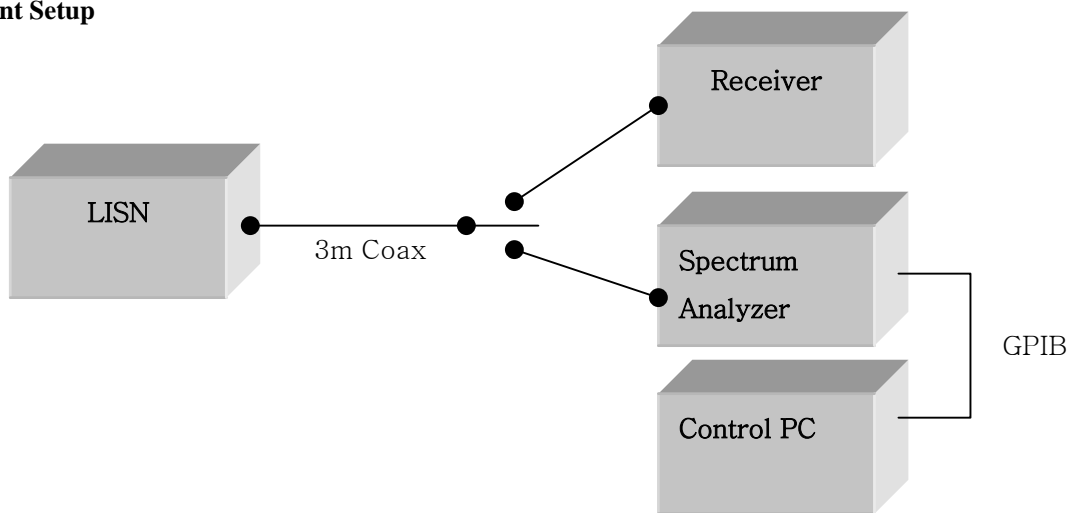
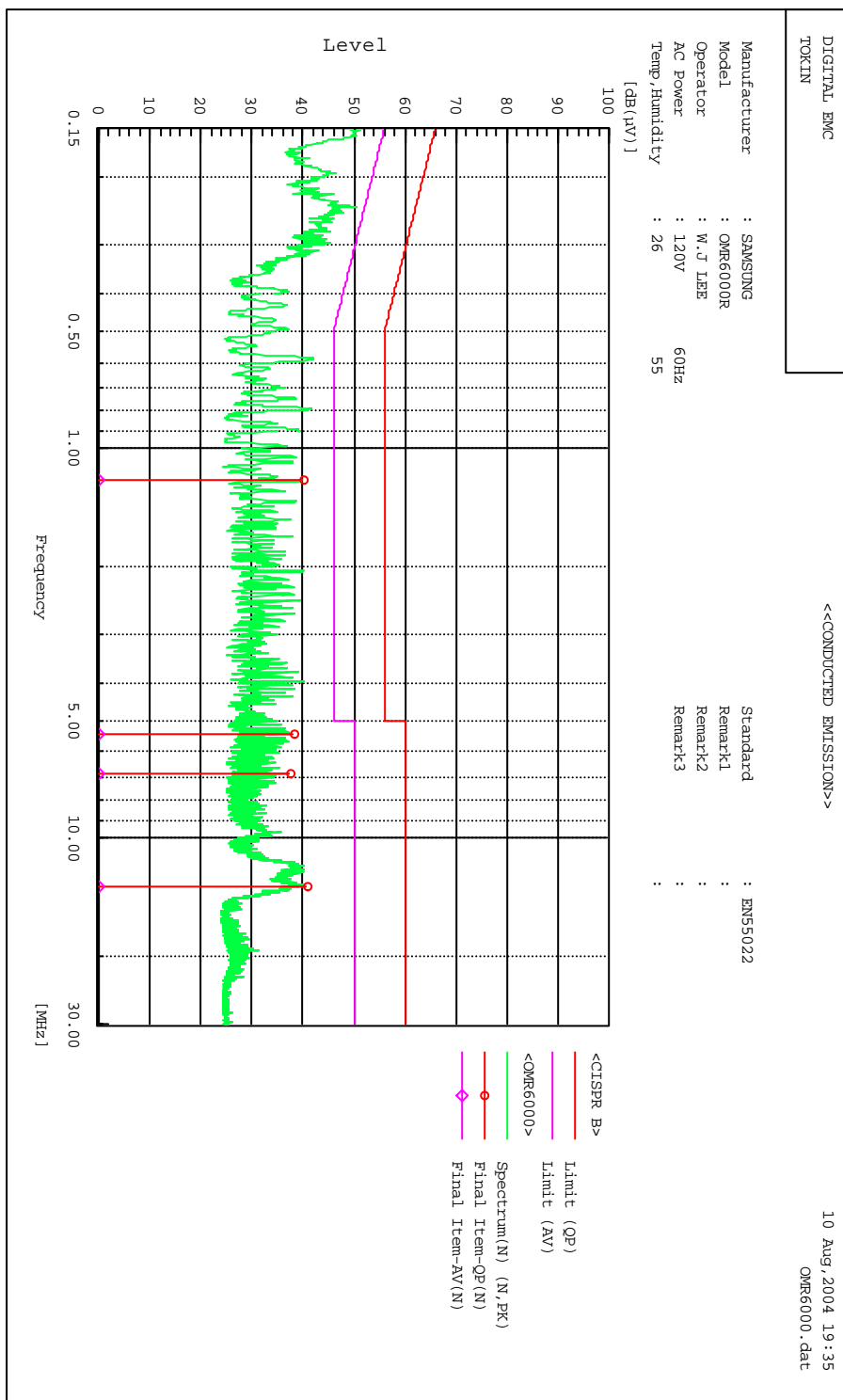


Figure 2: Measurement setup for AC Conducted Emission

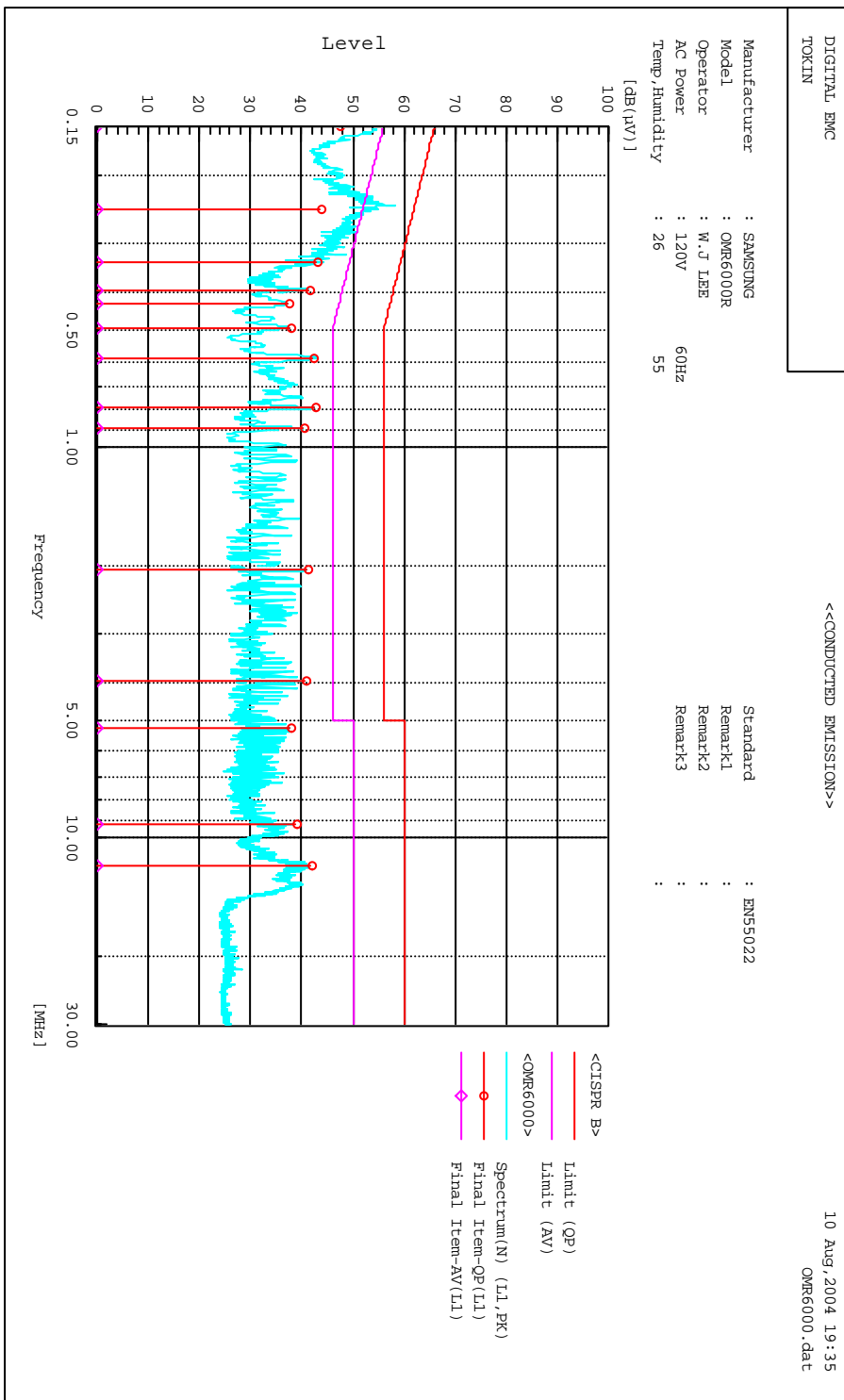
TEST EQUIPMENT USED: 42, 43, 44, 45, 46, 48



Neutral / Graph



Line / Graph



\*\*\*\*\*  
 <<CONDUCTED EMISSION>>  
 \*\*\*\*\*  
 DIGITAL EMC \*\*\*\*\*  
 \*\*\*\*\*  
 10 Aug, 2004 19:35  
 OMR6000.dat

Standard : EN55022  
 Manufacturer : SAMSUNG  
 Model : OMR6000R  
 Operator : W.J LEE  
 AC Power : 120V 60Hz  
 Temp, Humidity : 26 55  
 Remark1 :  
 Remark2 :  
 Remark3 :

\*\*\*\*\*  
 Final Result  
 \*\*\*\*\*

--- N Phase ---

No.	Frequency	Reading	Reading	c.f	Result	Result	Limit	Limit	Margin	Margin	Remark
	[MHz]	QP	AV	[dB]	QP	AV	QP	AV	QP	AV	
1	1.205	40.0	0.0	0.2	40.2	0.0	56.0	46.0	15.8	0.0	
2	5.418	37.7	0.0	0.5	38.2	0.0	60.0	50.0	21.8	0.0	
3	13.250	40.5	0.0	0.5	41.0	0.0	60.0	50.0	19.0	0.0	
4	6.818	37.2	0.0	0.5	37.7	0.0	60.0	50.0	22.3	0.0	

--- I1 Phase ---

No.	Frequency	Reading	Reading	c.f	Result	Result	Limit	Limit	Margin	Margin	Remark
	[MHz]	QP	AV	[dB]	QP	AV	QP	AV	QP	AV	
1	0.150	45.7	0.0	1.8	47.5	0.0	66.0	56.0	18.5	0.0	
2	0.246	42.8	0.0	1.0	43.8	0.0	61.9	51.9	18.1	0.0	
3	0.393	41.2	0.0	0.5	41.7	0.0	58.0	48.0	16.3	0.0	
4	0.493	37.8	0.0	0.3	38.1	0.0	56.1	46.1	18.0	0.0	
5	0.428	37.2	0.0	0.4	37.6	0.0	57.3	47.3	19.7	0.0	
6	0.335	42.3	0.0	0.7	43.0	0.0	59.3	49.3	16.3	0.0	
7	0.587	42.1	0.0	0.3	42.4	0.0	56.0	46.0	13.6	0.0	
8	0.788	42.5	0.0	0.3	42.8	0.0	56.0	46.0	13.2	0.0	
9	2.060	41.2	0.0	0.2	41.4	0.0	56.0	46.0	14.6	0.0	
10	3.950	40.3	0.0	0.6	40.9	0.0	56.0	46.0	15.1	0.0	
11	0.894	40.4	0.0	0.3	40.7	0.0	56.0	46.0	15.3	0.0	
12	5.216	37.6	0.0	0.5	38.1	0.0	60.0	50.0	21.9	0.0	
13	9.244	38.3	0.0	0.7	39.0	0.0	60.0	50.0	21.0	0.0	
14	11.764	41.5	0.0	0.7	42.2	0.0	60.0	50.0	17.8	0.0	

APPENDIX

**TEST EQUIPMENT USED FOR TESTS**

To facilitate inclusion on each page of the test equipment used for related tests, each item of test equipment.

	Type	Manufacturer	Model	Cal.Due.Date (dd/mm/yy)	S/N
01	Spectrum Analyzer	Agilent	E4404B	22/11/04	US41061134
02	Spectrum Analyzer	H.P	8563E	25/09/04	3551A04634
03	Power Meter	H.P	EPM-442A	15/07/05	GB37170413
04	Power Sensor	H.P	8481A	15/07/05	3318A96332
05	Frequency Counter	H.P	5342A	26/09/04	2119A04450
06	Multifunction Synthesizer	H.P	8904A	15/10/04	3633A08404
07	Signal Generator	H.P	8673D	26/09/04	2844A00753
08	Signal Generator	H.P	E4421A	29/04/05	US37230529
09	Signal Generator	H.P	8657A	05/06/05	3430U02049
10	Audio Analyzer	H.P	8903B	18/04/05	3011A0944B
11	Modulation Analyzer	H.P	8901B	21/04/05	3028A03029
12	Sensor Module	H.P	11722A	21/04/05	3111A04665
13	Oscilloscope	LeCroy	9314A	27/08/04	93144390
14	CDMA Mobile Station Test Set	H.P	8924C	09/09/04	US35360688
15	Power Splitter	WEINSCHTEL	1593	23/04/05	332
16	BAND Reject Filter	Microwave circuits INC.	NO308372	22/12/04	3125-01DC0312
17	BAND Reject Filter	Wainwright	WRCG1750	19/08/04	SN2
18	AC Power supply	DAEKWANG	5KVA	03/04/05	N/A
19	DC Power Supply	H.P	6622A	24/03/05	465487
20	Attenuator (30dB)	H.P	8498A	23/05/05	50101
21	Attenuator (10dB)	WEINSCHTEL	23-10-34	15/10/04	BP4387
22	HORN ANT	EMCO	3115	04/04/05	6419
23	HORN ANT	EMCO	3115	10/01/05	21097
24	HORN ANT	A.H.Systems	SAS-574	27/11/04	154
25	HORN ANT	A.H.Systems	SAS-574	14/11/04	155
26	Dipole Antenna	Schwarzbeck	VHA9103	04/10/04	2116

	Type	Manufacturer	Model	Cal.Due.Date (dd/mm/yy)	S/N
27	Dipole Antenna	Schwarzbeck	VHA9103	04/10/04	2117
28	Dipole Antenna	Schwarzbeck	UHA9105	04/10/04	2261
29	Dipole Antenna	Schwarzbeck	UHA9105	04/10/04	2262
30	RFI/FIELD Intensity Meter	Kyorits	KNM-504D	07/07/05	SN-161-4
31	Frequency Converter	Kyorits	KCV-604C	07/07/05	4-230-3
32	TEMP & HUMIDITY Chamber	JISCO	J-RHC2	14/09/04	021031
33	Log Periodic Antenna	Schwarzbeck	UHALP9108A1	23/10/04	1098
34	Biconical Antenna	Schwarzbeck	VHA9103	23/10/04	VHA91031946
35	Digital Multimeter	H.P	34401A	07/04/05	3146A13475
36	Attenuator (10dB)	WEINSCHEL	23-10-34	15/10/04	BP4386
37	High-Pass Filter	ANRITSU	MP526	12/05/05	M27756
38	Attenuator (3dB)	Agilent	8491B	15/10/04	58177
39	Amplifier (25dB)	Agilent	8447D	21/06/05	2944A10144
40	Position Controller	TOKIN	5901T	N/A	14173
41	Driver	TOKIN	5902T2	N/A	14174
42	Spectrum Analyzer	H.P	8591E	23/05/05	3649A05889
43	RFI/FIELD Intensity Meter	Kyorits	KNW-2402	07/07/05	4N-170-3
44	LISN	Kyorits	KNW-407	29/08/04	8-317-8
45	LISN	Kyorits	KNW-242	22/08/04	8-654-15
46	CVCF	NF Electronic	4400	N/A	344536 4420064
47	Software	ToYo EMI	EP5/RE	N/A	Ver 2.0.800
48	Software	ToYo EMI	EP5/CE	N/A	Ver 2.0.801
49	Software	AUDIX	e3	N/A	Ver 3.0
50	Software	Agilent	Benchlink	N/A	A.01.09 021211