

# CETECOM ICT Services GmbH

Radio Satellite Communication

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RSC11

issue test report consist of 17 Pages

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Recognized by the  
Federal Communications Commission  
**FCC-Identification Number: 90462**  
**TCB ID: DE 001**



Accredited by the  
German Accreditation Council  
**DAR-Registration Number**  
**TTI-P-G 166/98**



Independent ETSI  
compliance test house



**Accredited Bluetooth™ Test Facility (BQTF)**

**Addendum to report no.:2\_3127-01-01/03**

**FCC Part 22**

**1222101-BV**

**FCC ID: PY71222101**

**IC : 4170B-1222101**

CETECOM – ICT Services GmbH

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### 1 General information

#### 1.1 Notes

The test results of this test report relate exclusively to the test item specified in 1.5. The CETECOM ICT Services GmbH does not assume responsibility for any conclusions and generalizations drawn from the test results with regard to other specimens or samples of the type of the equipment represented by the test item. The test report may only be reproduced or published in full. Reproduction or publication of extracts from the report requires the prior written approval of the CETECOM ICT Services GmbH.

#### 1.2 Testing laboratory

CETECOM ICT Services GmbH

Untertürkheimer Straße 6 - 10

66117 Saarbrücken

Germany

Telephone : + 49 681 598 - 9100

Telefax : + 49 681 598 - 9075

E-mail : Michael.Berg@ict.cetecom.de

Internet : www.cetecom-ict.de

#### Accredited testing laboratory

The Test laboratory (area of testing) is accredited according to DIN EN ISO/IEC 17025.

DAR registration number: TTI-P-G-166/98

Listed by : Federal Communications Commission (FCC)

Identification/Registration No : 90462

**Accredited Bluetooth™ Test Facility (BQTF)**

*BLUETOOTH™ is a trademark owned by Bluetooth SIG, Inc. and licensed to CETECOM*

## 1.3 Details of applicant

**Name** : Sony Ericsson Mobile Communication AB  
**Street** : Nya Vattentorget  
**City** : 22188 Lund  
**Country** : Sweden  
**Telephone** : +46-46-193-242  
**Telefax** : +46-46-193-295  
**Contact** : Mr. Bo G. Johansson  
**Telephone** : +46-46-193-242  
**e-mail** :

## 1.4 Application details

Date of receipt of application : 2003-08-18  
Date of receipt of test item : 2003-08-18  
Date of test : 2003-08-18

## 1.5 Test item

Type of equipment : **Dual Band GSM Mobile Phone (PCS 850/1900 MHz)**  
Type designation : 1222101-BV  
Manufacturer : Applicant  
Street :  
City :  
Country :  
Serial number : IMEI : 00.1003.00.059014.0  
**Additional informations:** :  
Frequency : 1850 – 1910 MHz and 824 – 849 MHz  
Type of modulation : 300KGXW  
Number of channels : 300 (PCS1900) and 125 (PCS850)  
Antenna : Integral antenna  
Power supply : 3,6V DC Li-Ion  
Output power GSM 850 : cond.: 33.0dBm Peak , ERP: 26.5 dBm (Burst);  
EIRP: 28.6 dBm (Burst)  
Output power GSM 1900 : cond : 30.4 dBm Peak , ERP: 30.3 dBm (Burst);  
EIRP: 32.4 dBm (Burst)  
Type of equipment : Temperature range : -30°C - +60°C  
FCC – ID : PY71222101  
IC : 4170B-1222101  
Hardware : P2A  
Software : P1B

**1.6 Test standards:** **FCC Part 22**

2 Technical test

## FCC PART 22H / 24E BLOCK EDGE REQUIREMENTS

### 2.1 Summary of test results

No deviations from the technical specification(s) were ascertained in the course of the tests performed.

### FINAL VERDICT: PASS

Technical responsibility for area of testing :

2003-08-18 RSC 8411 Berg M.

Date

Section Name

Signature



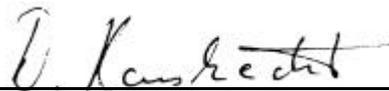
Technical responsibility for area of testing :

2003-08-18 RSC8412 Hausknecht D.

Date

Section Name

Signature



**2.2 Testreport**

**TEST REPORT**

**Addendum to**

**Test report no. : 2\_3127-01-01/03**

**TEST REPORT REFERENCE**

**LIST OF MEASUREMENTS**

**PARAMETER TO BE MEASURED**

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**PART PCS850**

**BLOCKEDGE COMPLIANCE**

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**FCC PART 22H / 24E BLOCK EDGE REQUIREMENTS**

We recently decided that the Rules require compliance to be shown at ALL block edges for Part 22H and 24E devices whether portable, mobile or base transmitters. In the past, we had relied on just the upper and lower band edge plots/data tables to represent block edge compliance for radiated and conducted emissions for all blocks. However, we now believe that the potential use of these blocks requires the submission of plots/data tables for all blocks. Therefore, we will be requiring all test labs and TCB's to submit plots or data showing compliance for all block edges in accordance with the following paragraph.

Each block will require 2 plots/data tables... one upper edge, and one lower edge, for the worse-case modulation type only. The worse-case modulation type may be determined by the applicant or test lab through preliminary testing. For Cellular transmitters, this will require 8 plots/data tables to be submitted for the 4 blocks (See diagram below). For PCS transmitters, this will require 12 plots/data tables to be submitted for the 6 blocks (See diagram below). The plots/data tables should represent compliance with out-of-block emissions as tested using spectrum analyzer settings specified in 22.917(b) or 24.238, as appropriate.

**BLOCK 1: 824 – 835 MHz (A\* Low + A)**

**BLOCK 2: 835 – 845 MHz (B)**

**BLOCK 3: 845 – 846.5 MHz (A\* High)**

**BLOCK 4: 846.5 – 849 MHz (B\*)**

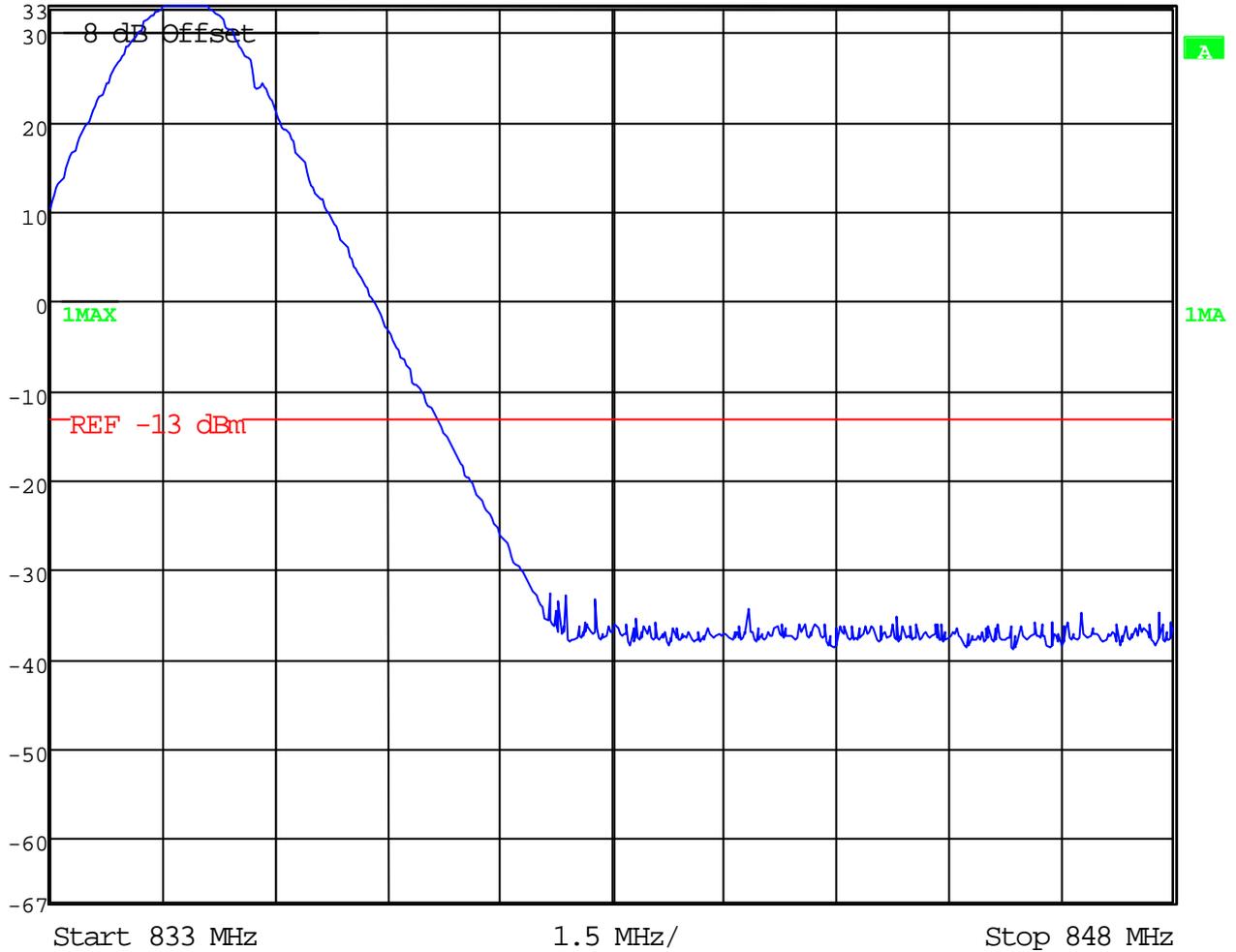


## Block 1 high channel



Ref Lvl  
33 dBm

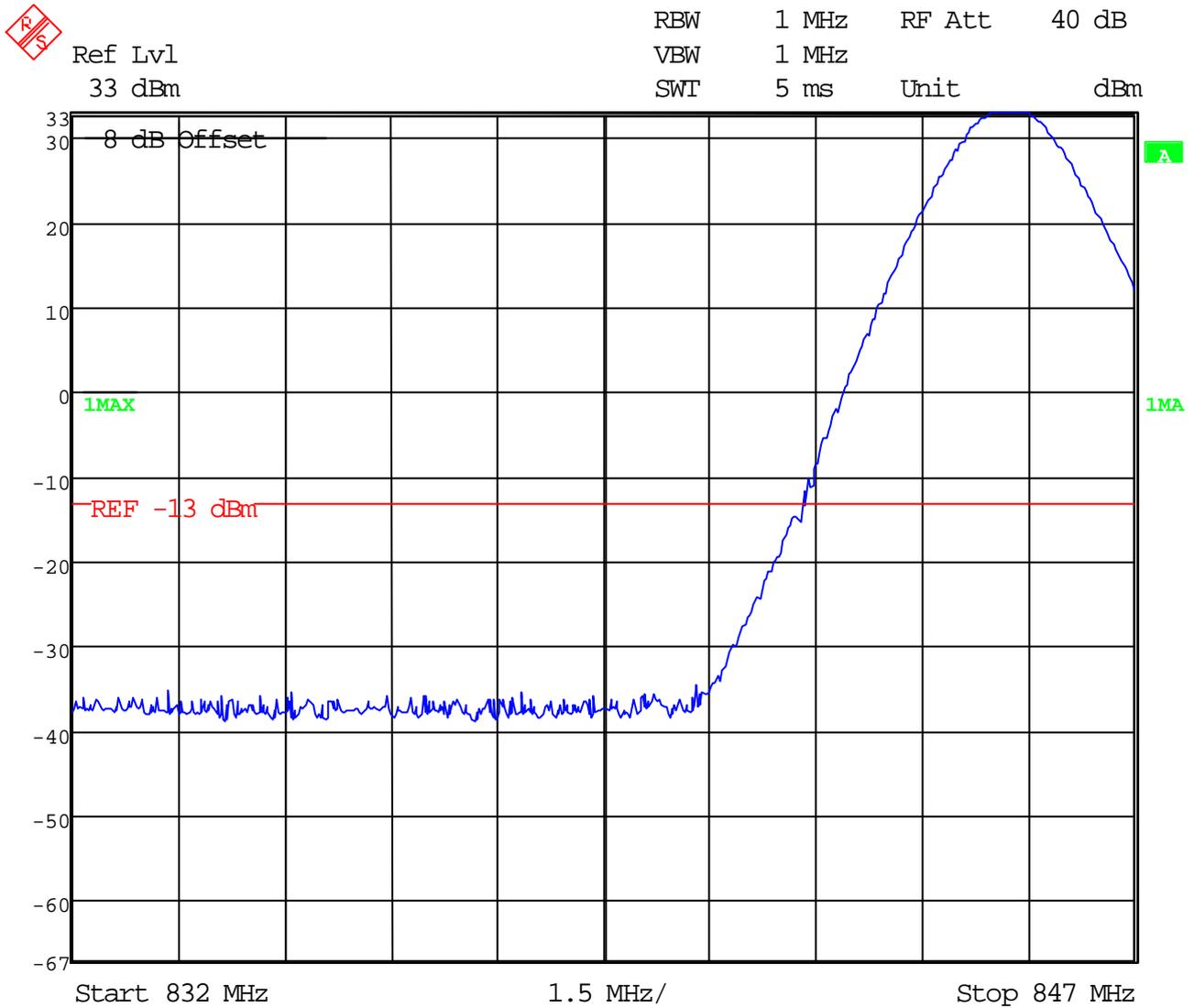
RBW	1 MHz	RF Att	40 dB
VBW	1 MHz		
SWT	5 ms	Unit	dBm





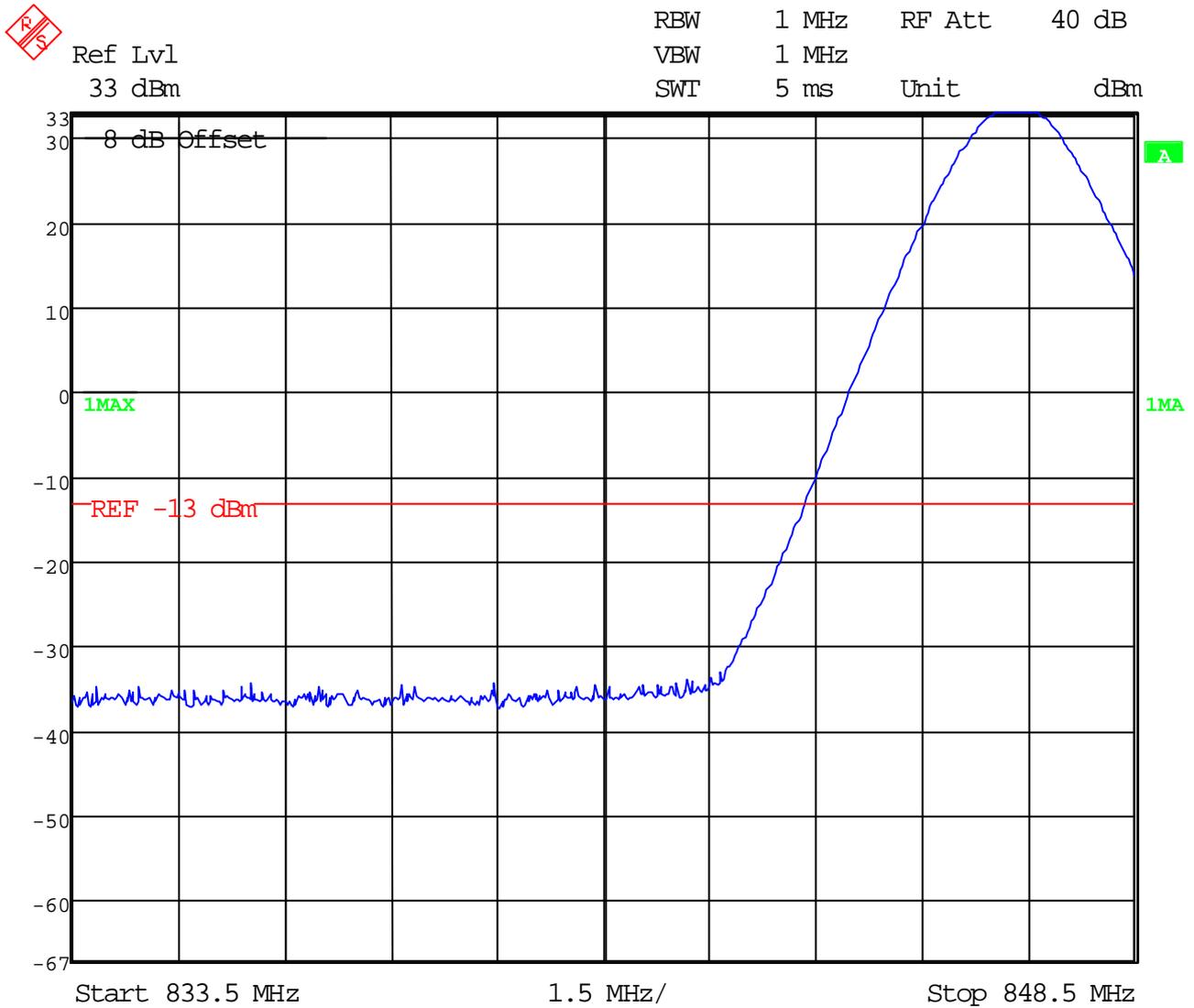


Block 3 low channel

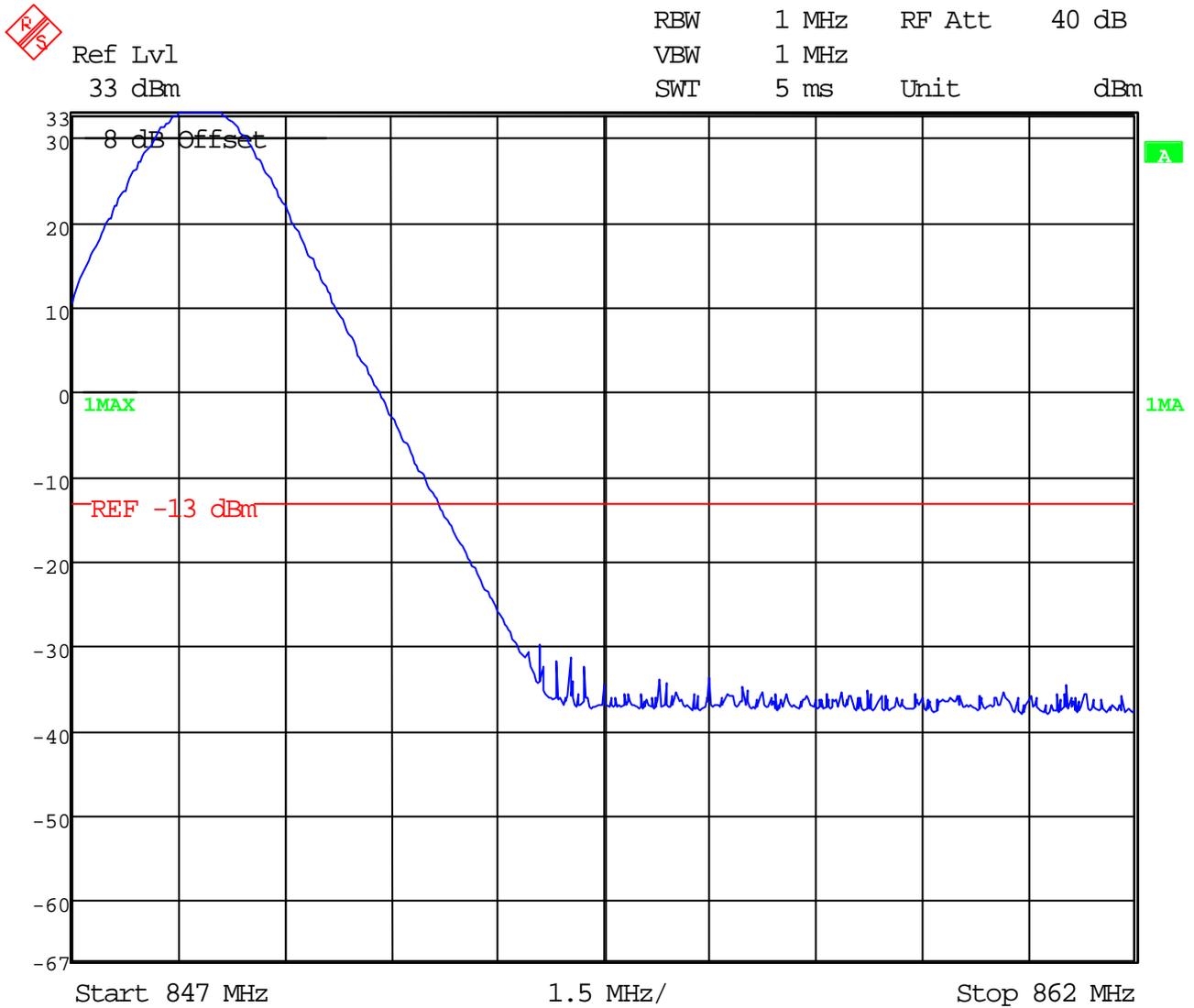




Block 4 low channel



Block 4 high channel



**TEST EQUIPMENT AND ANCILLARIES USED FOR TESTS**

To simplify the identification on each page of the test equipment used, on each page of the test report, each item of test equipment and ancillaries such as cables are identified (numbered) by the Test Laboratory, below.

No	Instrument/Ancillary	Type	Manufacturer	Serial No.
01	Spectrum Analyzer	8566 A	Hewlett-Packard	1925A00257
02	Analyzer Display	8566 A	Hewlett-Packard	1925A00860
03	Oscilloscope	7633	Tektronix	230054
04	Radio Communication Analyzer	CMTA 54	Rohde & Schwarz	894 043/010
05	System Power Supply	6038 A	Hewlett-Packard	2848A07027
06	Signal Generator	8111 A	Hewlett-Packard	2215G00867
07	Signal Generator	8662 A	Hewlett-Packard	2224A01012
08	Function Generator	AFGU	Rohde & Schwarz	862 480/032
09	Regulating Transformer	MPL	Erfi	91350
10	LISN	NNLA 8120	Schwarzbeck	8120331
11	Relay-Matrix	PSU	Rohde & Schwarz	893 285/020
12	Power-Meter	436 A	Hewlett-Packard	2101A12378
13	Power-Sensor	8484 A	Hewlett-Packard	2237A10156
14	Power-Sensor	8482 A	Hewlett-Packard	2237A00616
15	Modulation Meter	9008	Racal-Dana	2647
16	Frequency Counter	5340 A	Hewlett-Packard	1532A03899
17	Anechoic Chamber	---	MWB	87400/002
18	Spectrum Analyzer	85660 B	Hewlett-Packard	2747A05306
19	Analyzer Display	85662 A	Hewlett-Packard	2816A16541
20	Quasi Peak Adapter	85650 A	Hewlett-Packard	2811A01131
21	RF-Preselector	85685 A	Hewlett-Packard	2833A00768
22	Biconical Antenna	3104	Emco	3758
23	Log. Per. Antenna	3146	Emco	2130
24	Double Ridged Horn	3115	Emco	3088
25	EMI-Test receiver	ESAI	Rohde & Schwarz	863 180/013
26	EMI-Analyzer-Display	ESAI-D	Rohde & Schwarz	862 771/008
27	Biconical Antenna	HK 116	Rohde & Schwarz	888 945/013
28	Log. Per. Antenna	HL 223	Rohde & Schwarz	825 584/002
29	Relay-Switch-Unit	RSU	Rohde & Schwarz	375 339/002
30	Highpass	HM985955	FSY Microwave	001
31	Amplifier	P42-GA29	Tron-Tech	B 23602
32	Anechoic Chamber		Frankonia	
33	Control Computer	PSM 7	Rohde & Schwarz	834 621/004
34	EMI Test Receiver	ESMI	Rohde & Schwarz	827 063/010
35	EMI Test Receiver	Display	Rohde & Schwarz	829 808/010

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No	Instrument/Ancillary	Type	Manufacturer	Serial No.
36	Control Computer	HD 100	Deisel	100/322/93
37	Relay Matrix	PSN	Rohde & Schwarz	829 065/003
38	Control Unit	GB 016 A2	Rohde & Schwarz	344 122/008
39	Relay Switch Unit	RSU	Rohde & Schwarz	316 790/001
40	Power Supply	6032A	Hewlett Packard	2846A04063
41	Spectrum Monitor	EZM	Rohde & Schwarz	883 720/006
42	Measuring Receiver	ESH 3	Rohde & Schwarz	890 174/002
43	Measuring Receiver	ESVP	Rohde & Schwarz	891 752/005
44	Bicon Ant. 20-300MHz	HK 116	Rohde & Schwarz	833 162/011
45	Logper Ant. 0.3-1 GHz	HL 223	Rohde & Schwarz	832 914/010
46	Amplifier 0.1-4 GHz	AFS4	Miteq Inc.	206461
47	Logper Ant. 1-18 GHz	HL 024 A2	Rohde & Schwarz	342 662/002
48	Polarisation Network	HL 024 Z1	Rohde & Schwarz	341 570/002
49	Double Ridged Horn Antenna 1-26.5 GHz	3115	EMCO	9107-3696
50	Microw. Sys. Amplifier 0.5- 26.5 GHz	8317A	Hewlett Packard	3123A00105
51	Audio Analyzer	UPD	Rohde & Schwarz	1030.7500.04
52	Controler	PSM 7	Rohde & Schwarz	883 086/026
53	DC V-Network	ESH3-Z6	Rohde & Schwarz	861 406/005
54	DC V-Network	ESH3-Z6	Rohde & Schwarz	893 689/012
55	AC 2 Phase V-Network	ESH3-Z5	Rohde & Schwarz	861 189/014
56	AC 2 Phase V-Network	ESH3-Z5	Rohde & Schwarz	894 981/019
57	AC-3 Phase V-Network	ESH2-Z5	Rohde & Schwarz	882 394/007
58	Power Supply	6032A	Rohde & Schwarz	2933A05441
59	RF-Test Receiver	ESVP.52	Rohde & Schwarz	881 487/021
60	Spectrum Monitor	EZM	Rohde & Schwarz	883 086/026
61	RF-Test Receiver	ESH3	Rohde & Schwarz	881 515/002
62	Relay Matrix	PSU	Rohde & Schwarz	882 943/029
63	Relay Matrix	PSU	Rohde & Schwarz	828 628/007
64	Spectrum Analyzer	FSIQ 26	Rohde & Schwarz	119.6001.27
65	Spectrum Analyzer	HP 8565E	Hewlett Packard	3473A00773
66				
67				
68				