



REPORT

issued by an Accredited Laboratory



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Equipment Authorization measurements on GSM Base station Transceiver unit with FCC ID: B5KBR1311005-1 in cabinet RBS 2207 (4 enclosures)

Test object

Transceiver Unit dTRU-8, KRC 131 1005/1, R1E

Summary

Standard	Compliant	Enclosure	Remarks
FCC CFR 47			
2.1053 Field strength of spurious radiation	Yes	2	

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Description - Equipment Under Test (EUT)

Equipment: GSM Base station transceiver 800 MHz

Tx Frequency range: 869.2-893.8 MHz

Tested Channels:

Radiated measurements:

ARFCN	Frequency	Configuration
128	869.2 MHz	dTRU with internal combiner plus TCC
165	874.2 MHz	dTRU with internal combiner
190	879.2 MHz	dTRU with internal combiner
226	888.8 MHz	dTRU without internal combiner
251	893.8 MHz	dTRU without internal combiner

Three modes tested at the same time to simulate worst case: with internal combiner, without internal combiner and with internal combiner plus TCC.

Manufacturer's representative: Per Helmersson, Ericsson AB

Purpose of test

The purpose of the tests is to verify compliance to the performance characteristics specified in FCC CFR47 when the EUT is operational in the 2207 cabinet.

Reservation

The test results in this report apply only to the particular Equipment Under Test (EUT) as declared in the report.

Reference

Measurements were done according to relevant parts of the following standards:
ANSI/TIA/EIA-603-2000
J-STD007A Vol 1

Delivery of test object

The test object was delivered: 2003-09-12

Test engineers

Nina Johansson
Peter Grahn

Test witness

Mats Iregren, Ericsson AB



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Field strength of spurious radiation measurements according to 47CFR 2.1053

Date 2003-09-23	Temperature 21 °C ± 3 °C	Humidity 42 % ± 5 %
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Test set-up and Procedure

The measurement procedure is per ANSI/TIA/EIA-603. The chamber is listed at FCC, Columbia with registration number: 93866. The test site also complies with RSS 212, Issue 1, Industry Canada file no.:IC 3482.

Measurements were done at 3 m distance. The transmitter was modulated with pseudorandom data during the measurements.

Measurement equipment	Calibration Due	SP number
Anechoic chamber	-	15:115
R&S ESI 40	2004-07	503 125
Control computer	-	503 479
Software: R&S ES-K1, ver. 1.60	-	-
Chase Bilog antenna CBL 6111A	2003-12	503 182
EMCO Horn Antenna 3115	2004-11	502 175
MITEQ Low Noise Amplifier	2004-04	503 277
Testo 610, Temperature and humidity meter	2003-12	502 658

The test set-up during the spurious radiation measurements can be seen in the pictures on page 2.

Results

The three modes tested at the same time: with internal combiner, without internal combiner and with internal combiner plus TCC.

Nominal Voltage: 24 V DC

Output power TCC: 49 dBm

Output power without internal combiner: 46 dBm

Output power with internal combiner: 43 dBm

Mode: **GMSK**

Frequency (MHz)	Spurious emission level (dBm)	
	Vertical	Horizontal
30-10 000	All emission > 20 dB below limit	All emission > 20 dB below limit
Measurement uncertainty		4.7 dB

Limits

The power of any emission outside the frequency band shall be attenuated below the transmitter power (P) by at least $43 + 10 \log P$ dB.

Complies?	Yes
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Cabinet 2207, 24 V DC:





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EUT Hardware configuration list RBS 2207

Unit	Product Number	Serial Number	Revision
Cabinet	BFM 107 137/1	534305580	R1A
DCCU-01	BMG 980 07/2	S792036507	R1A
FCU-01	BGM 136 1001/2	A3300B0FPY	R2A
DC FILTER-01	KFE 101 1145/1	X181032305	R1C
CDU shelf	BFL 119 406/1	X71	R3A
CDU-G 8	BFL 119 155/1	A4000496WW	R2G
CDU-G 8	BFL 119 155/1	A4000496X3	R2G
CDU-G 8	BFL 119 155/1	A4000496X5	R2G
PSU/DXU/TRU shelf	BFX 901 27/1	S76	P1A
IDM 02	BMG 980 28/1	T671100794	RA
PSU-DC	BMR 960 014/1	A081746905	R2E
PSU-DC	BMR 960 014/1	A081952337	R2E
DXU-21A	BOE 602 14/1	X510231700	R10B
Dummy	SXX 107 5029/1	S76	R1C
dTRU-8 EDGE	KRC 131 1005/2	AE50265817	R2C
dTRU-8 EDGE	KRC 131 1005/2	AE50265822	R2C
dTRU-8	KRC 131 1005/1	AE50266990	R1E

Software	Revision
LZY 213 1192_2	P2FD

Description of EUT

The EUT is an 800 MHz GSM Base station configured with 3 double transceiver units that are designed to provide mobile telephone users with a connection to a mobile network or the PSTN.

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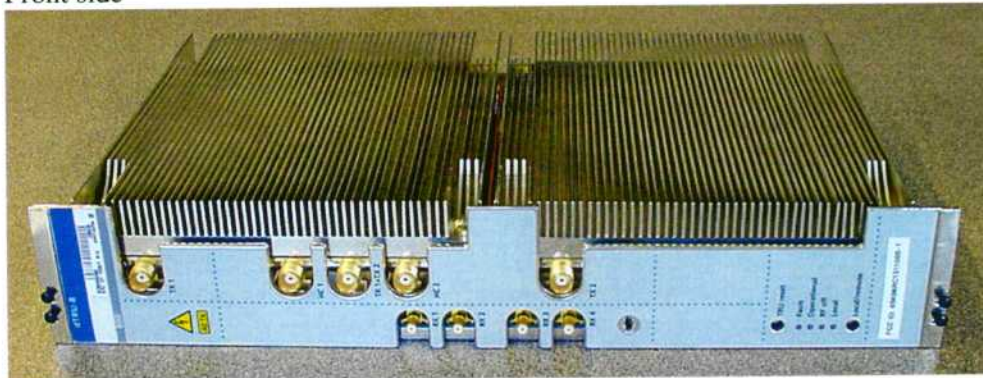
Photos

Transceiver Unit KRC 131 1005/1, R1E

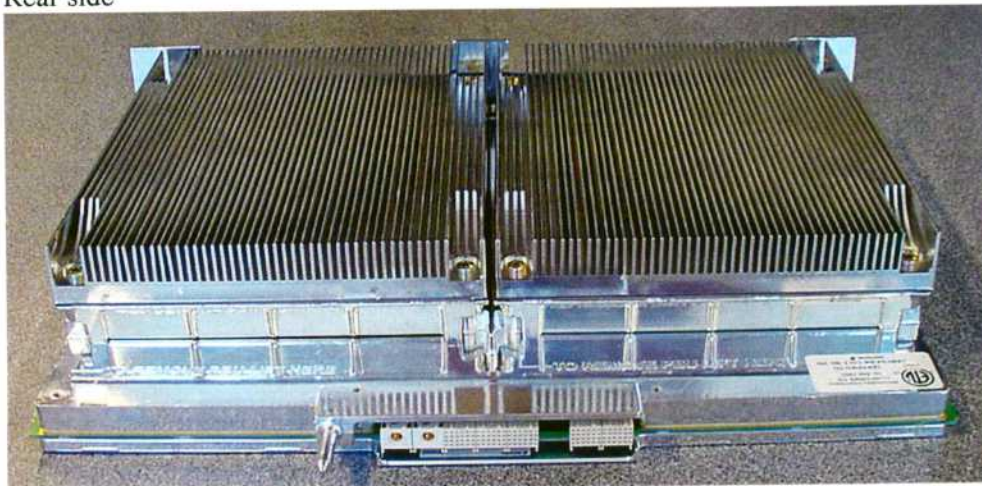
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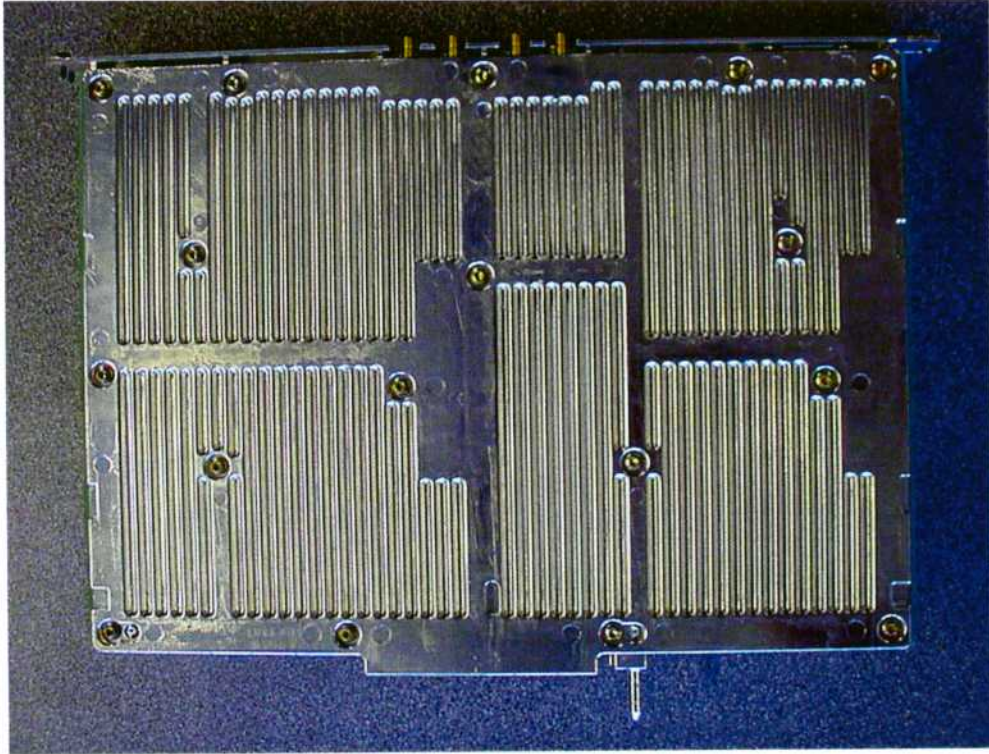
Front side



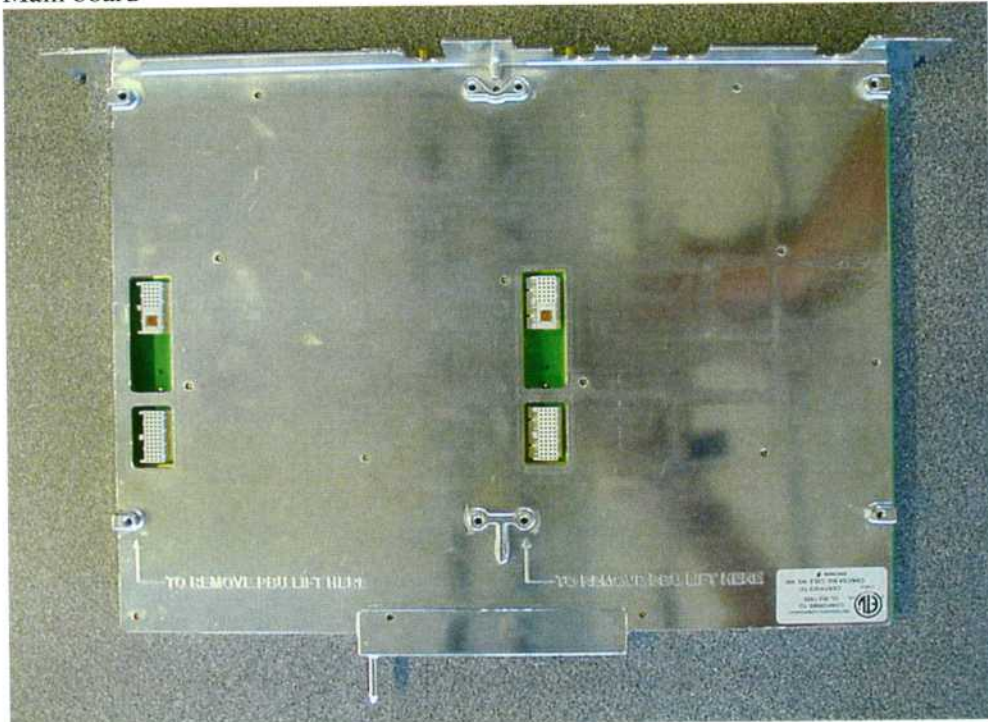
Rear side



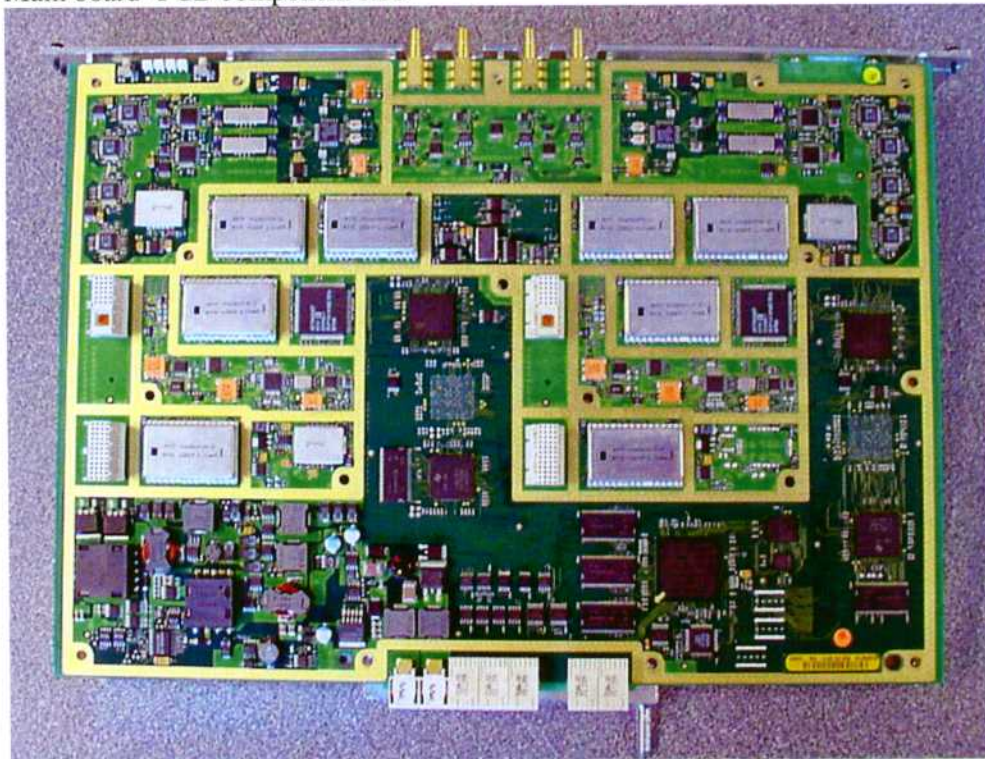
Bottom side



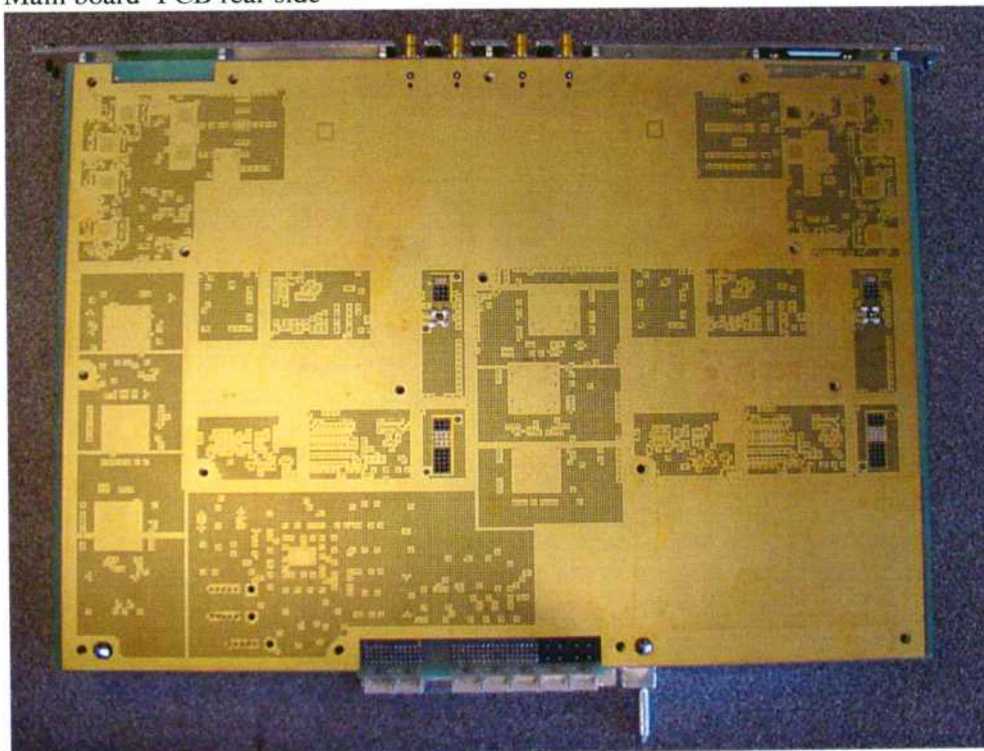
Main board



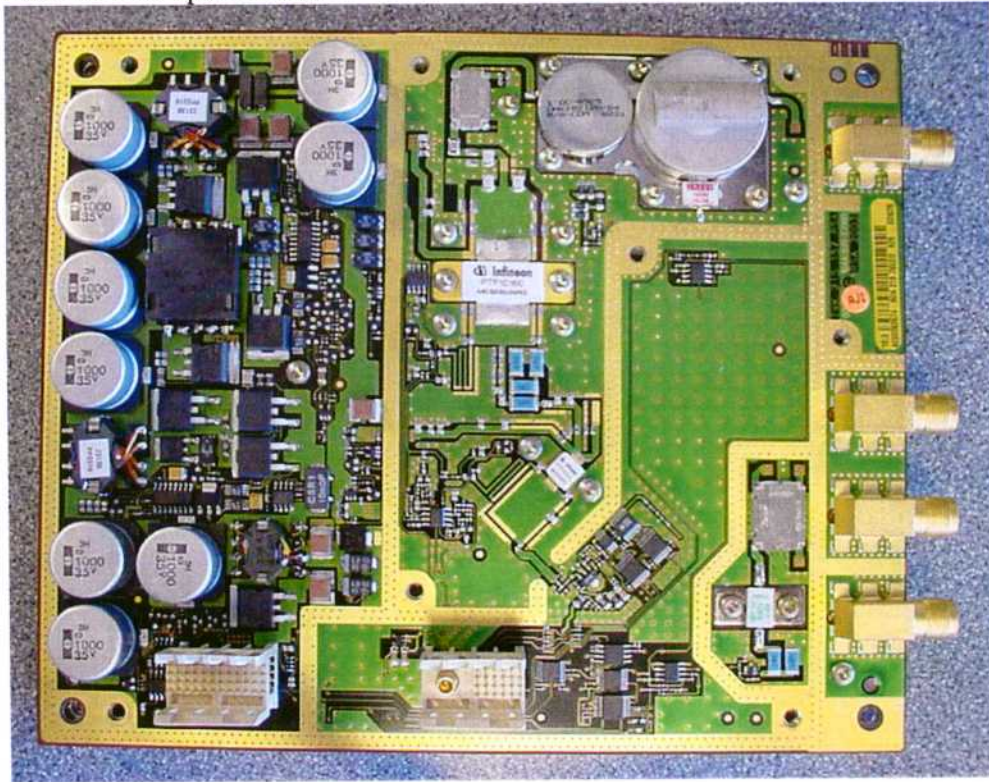
Main board- PCB component side



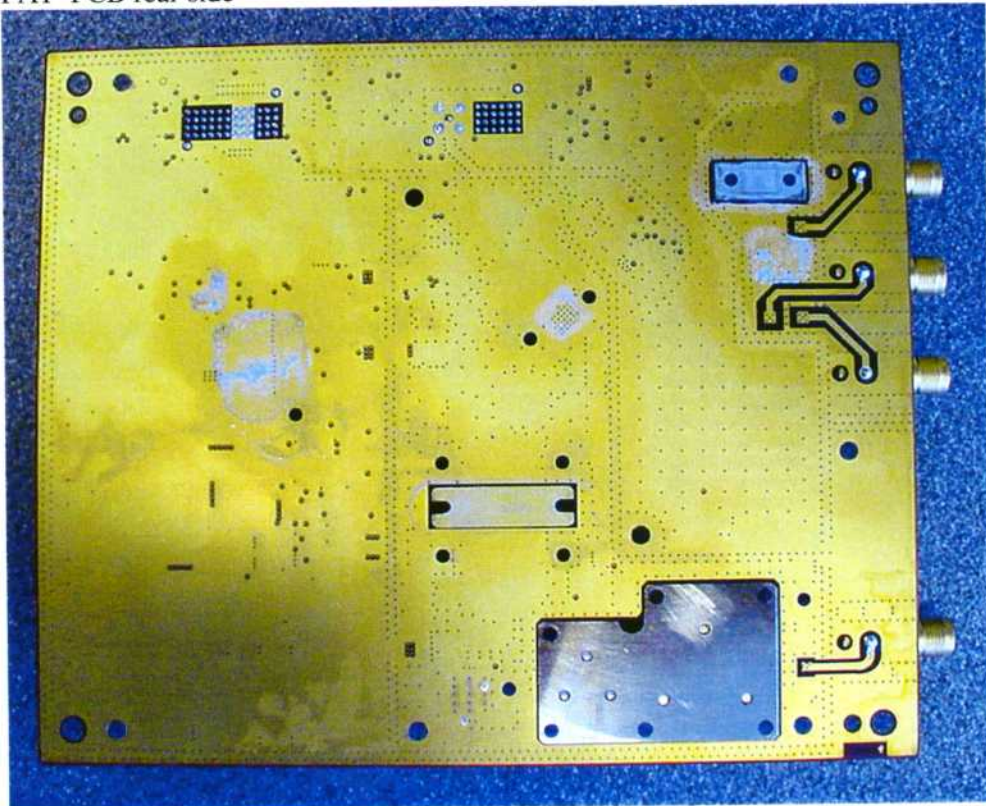
Main board- PCB rear side



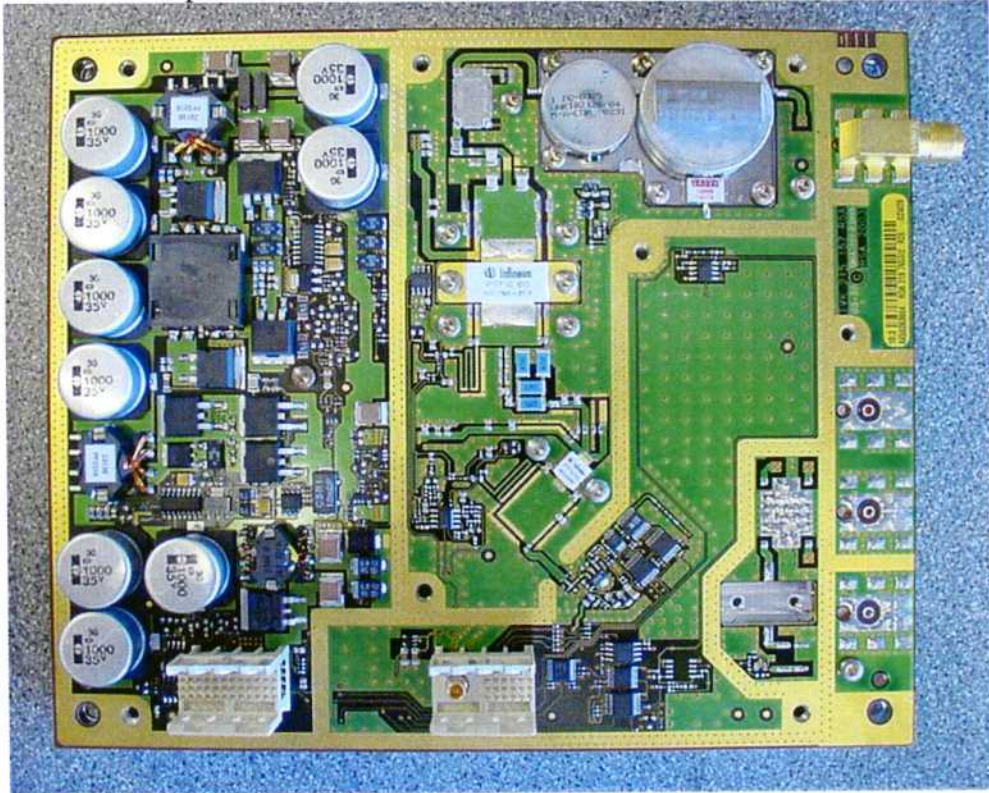
PA1- PCB component side



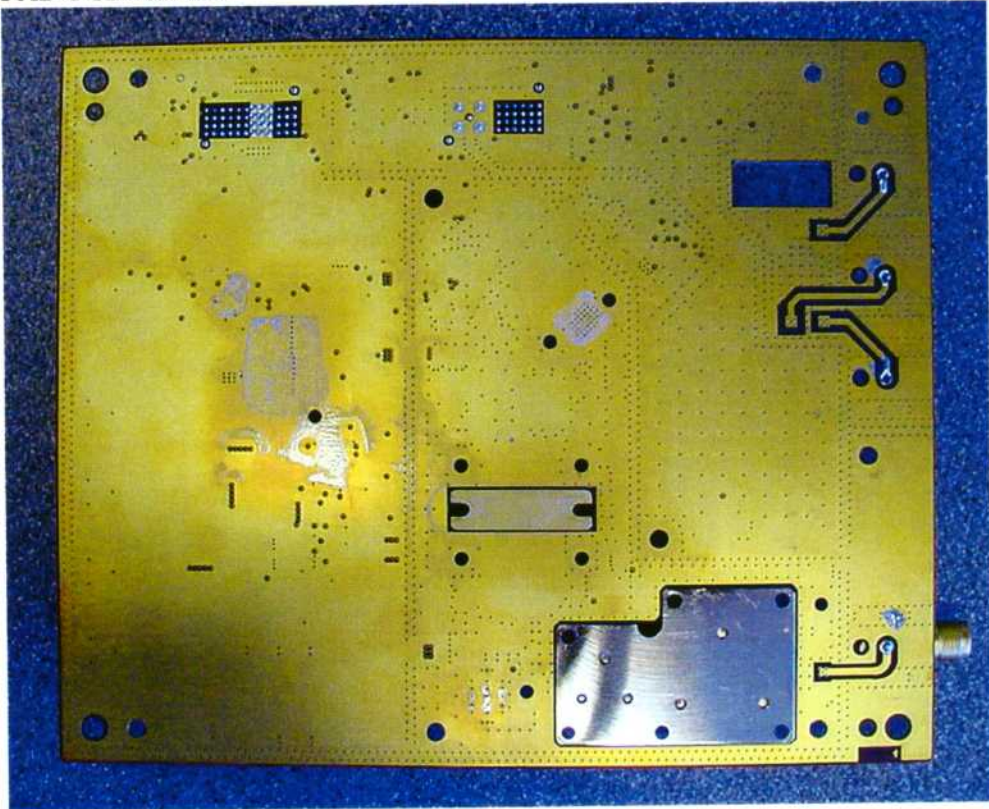
PA1- PCB rear side



PA2- PCB component side



PA2- PCB rear side

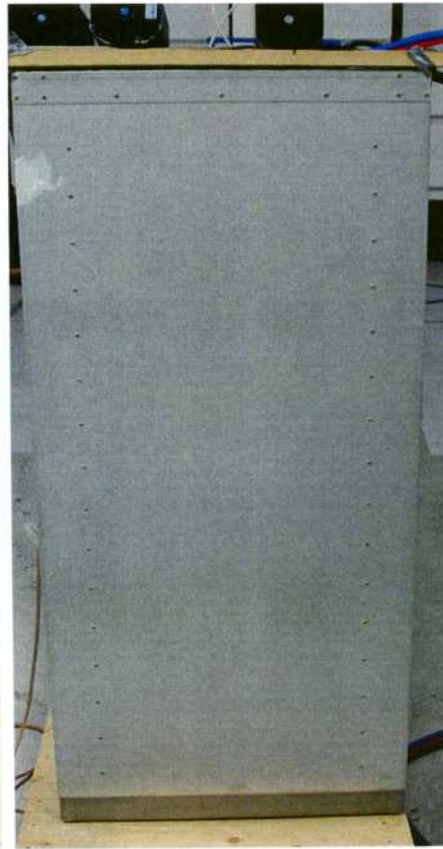


RBS 2207 Cabinet, 24 Volt DC system

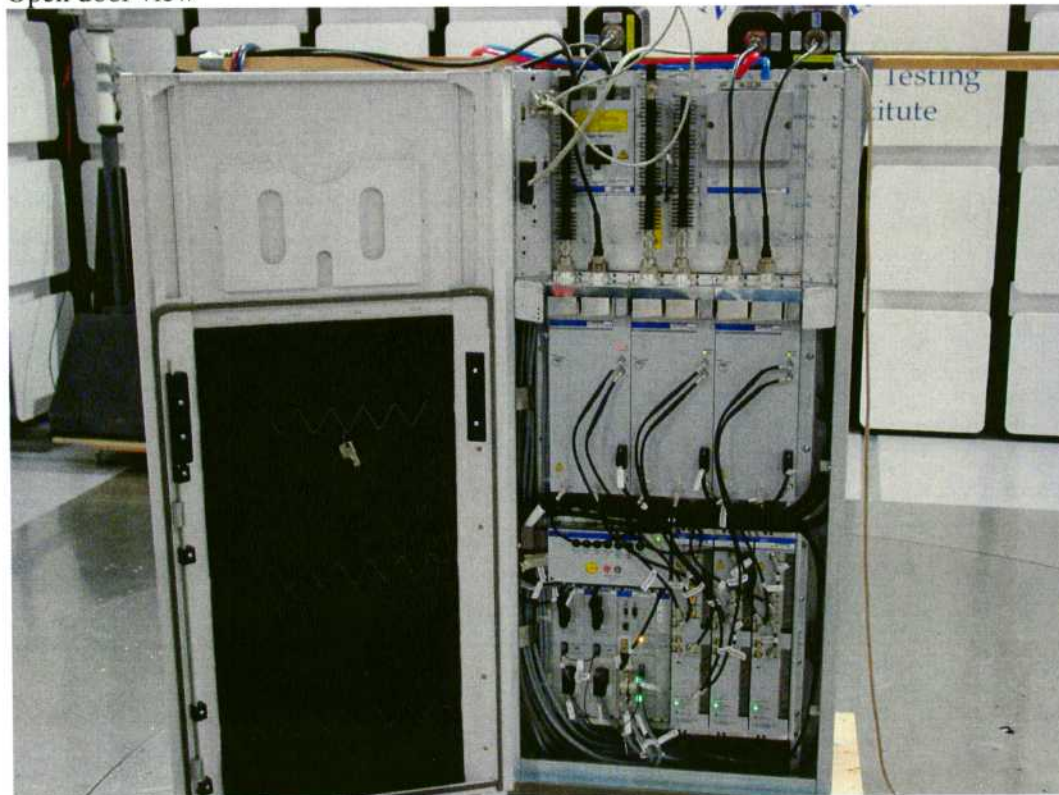
Front view



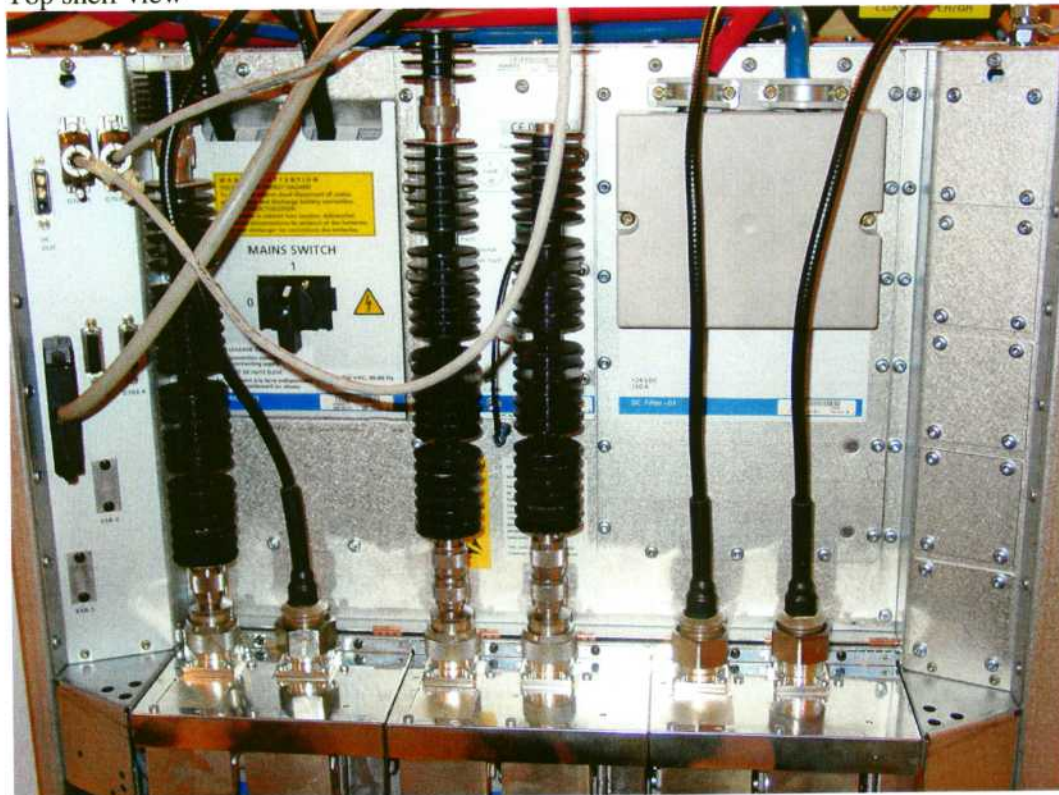
Rear view



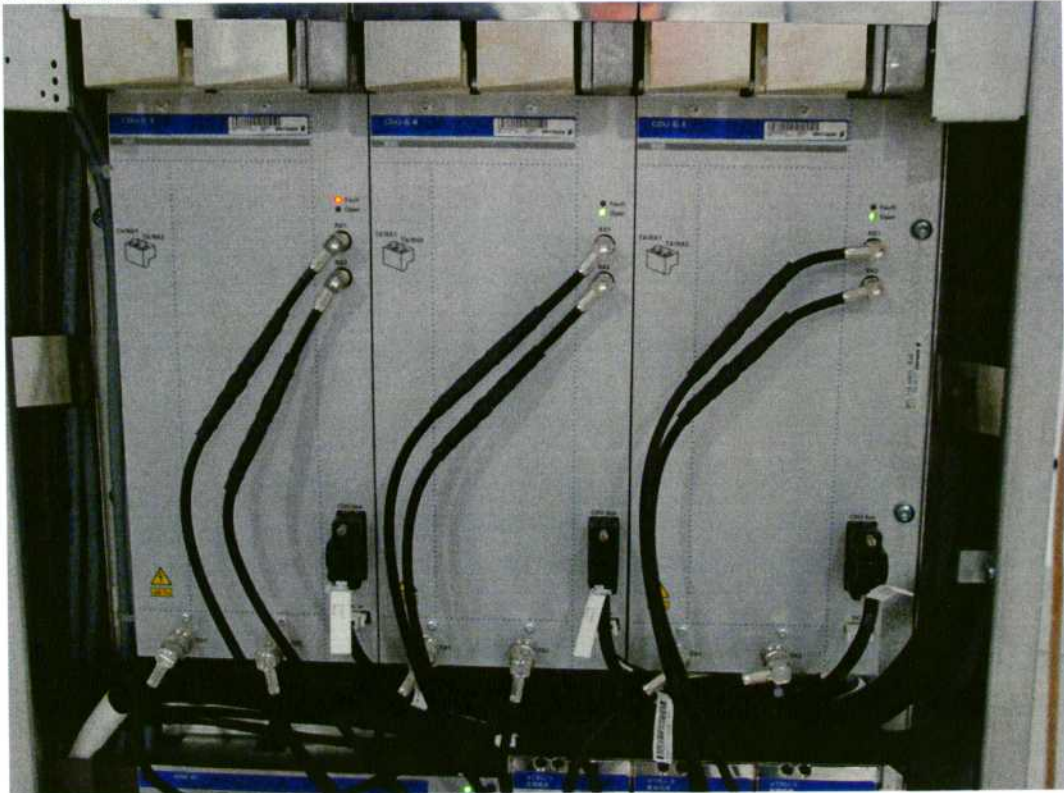
Open door view



Top shelf view



Middle shelf view



Bottom shelf view

