



REPORT

issued by an Accredited Laboratory



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Datum/Date Beteckning/Reference Sida/Page
2003-09-25 F316875-F24 1(1)

Equipment Authorization measurements on GSM Base station Transceiver unit with FCC ID: B5KCKRC1311004-1 in cabinet RBS 2207 (4 enclosures)

Test object

Transceiver Unit dTRU-19, KRC 131 1004/1, R5B

Summary

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

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REPORT

Datum/Date
2003-09-25

Beteckning/Reference
F316875-F24

Sida/Page
1 (1)
Encl. 1

FCC ID: B5KCKRC1311004-1

Description - Equipment Under Test (EUT)

Equipment: GSM Base station transceiver 1900 MHz

Tx Frequency range: 1930.2-1989.2 MHz

Tested Channels:

Radiated measurements:

ARFCN	Frequency	Configuration
512	1930.2 MHz	dTRU with internal combiner plus TCC
635	1954.8 MHz	dTRU with internal combiner
660	1959.8 MHz	dTRU with internal combiner
785	1984.8 MHz	dTRU without internal combiner
810	1989.8 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 witnesses

Lars Hagbjörk, Ericsson AB
Mats Iregren, Ericsson AB



REPORT

Datum/Date
2003-09-25

Beteckning/Reference
F316875-F24

Sida/Page
1 (2)
Encl. 2

FCC ID: B5KCKRC1311004-1

Field strength of spurious radiation measurements according to 47CFR 2.1053

Date 2003-09-24	Temperature 21 °C ± 3 °C	Humidity 34 % ± 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
EMCO Horn Antenna 3116	2003-09	503 279
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: 47 dBm

Output power without internal combiner: 45 dBm

Output power with internal combiner: 41.5 dBm

Mode: **GMSK**

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

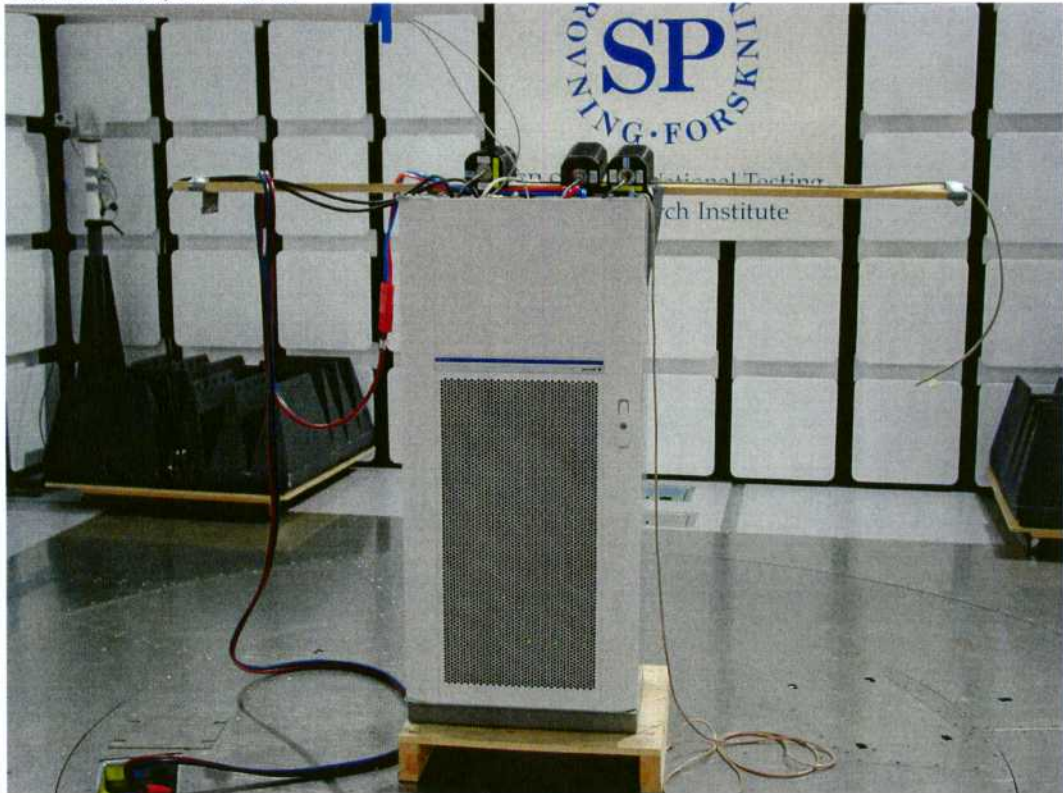
Limits

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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FCC ID: B5KCKRC1311004-1

Cabinet 2207, 24 V DC:





REPORT

Datum/Date
2003-09-25

Beteckning/Reference
F316875-F24

Sida/Page
1 (1)
Encl. 3

FCC ID: B5KCKRC1311004-1

EUT Hardware configuration list RBS 2207

Unit	Product Number	Serial Number	Revision
Cabinet	BFM 107 137/1	A534305579	R1A
ACCU-01	BMG 980 07/1	S792065777	R2A
FCU-01	BGM 136 1001/2	B991152935	R3A
DC FILTER-01	KFE 101 1145/1	X181032307	R1C
CDU shelf	BFL 119 406/1	X71	R3A
CDU-G 19	BFL 119 153/1	A40003K800	R5A
CDU-G 19	BFL 119 153/1	A40003KAUC	R5A
CDU-G 19	BFL 119 153/1	A40003S9K4	R5A
PSU/DXU/TRU shelf	BFX 901 27/1	S76	P1A
IDM 02	BMG 980 28/1	T671100801	RA
PSU-DC	BML 231 202/1	TL92154183	R3B
PSU-DC	BML 231 202/1	TL92121177	R3B
DXU-21A	BOE 602 14/1	X510231705	R10B
Dummy	SXX 107 5029/1	S76	R1C
dTRU-19 EDGE	KRC 131 1004/2	AE50094077	R1G
dTRU-19 EDGE	KRC 131 1004/2	AE50098312	R1G
dTRU-19	KRC 131 1004/1	AE50235941	R5B

Software	Revision
LZY 213 1192_2	P2FD

Description of EUT

The EUT is a 1900 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.

FCC ID: B5KCKRC1311004-1

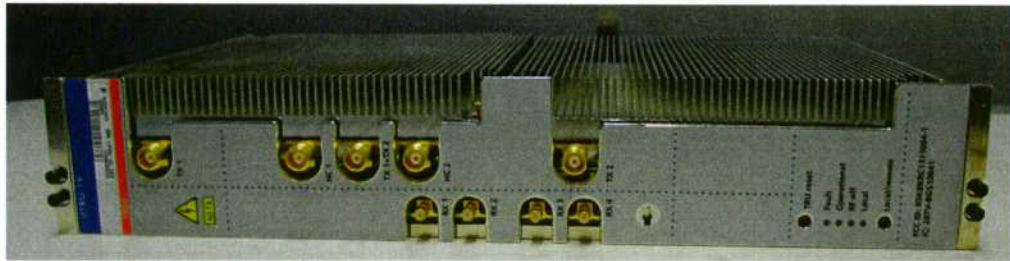
Photos

Transceiver Unit KRC 131 1004/1, R5B

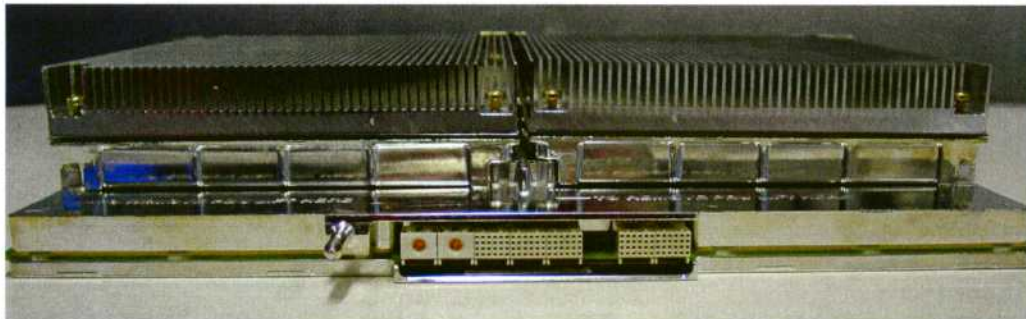
FCC ID label:



Front side

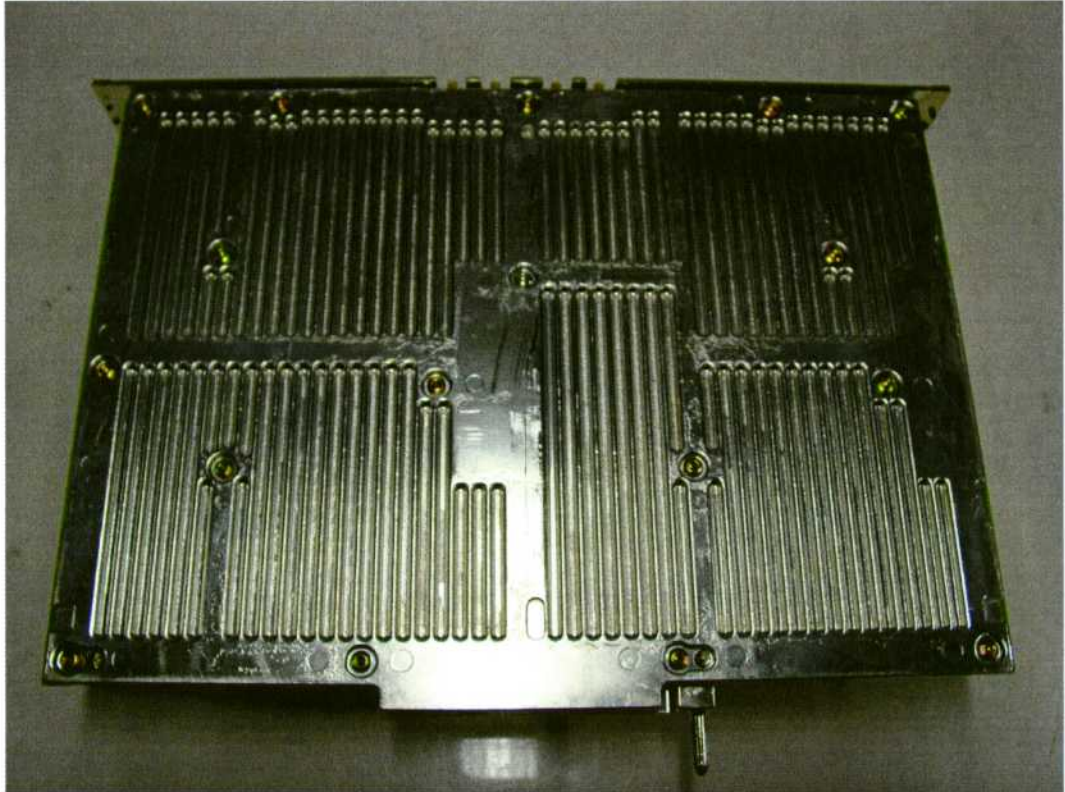


Rear side

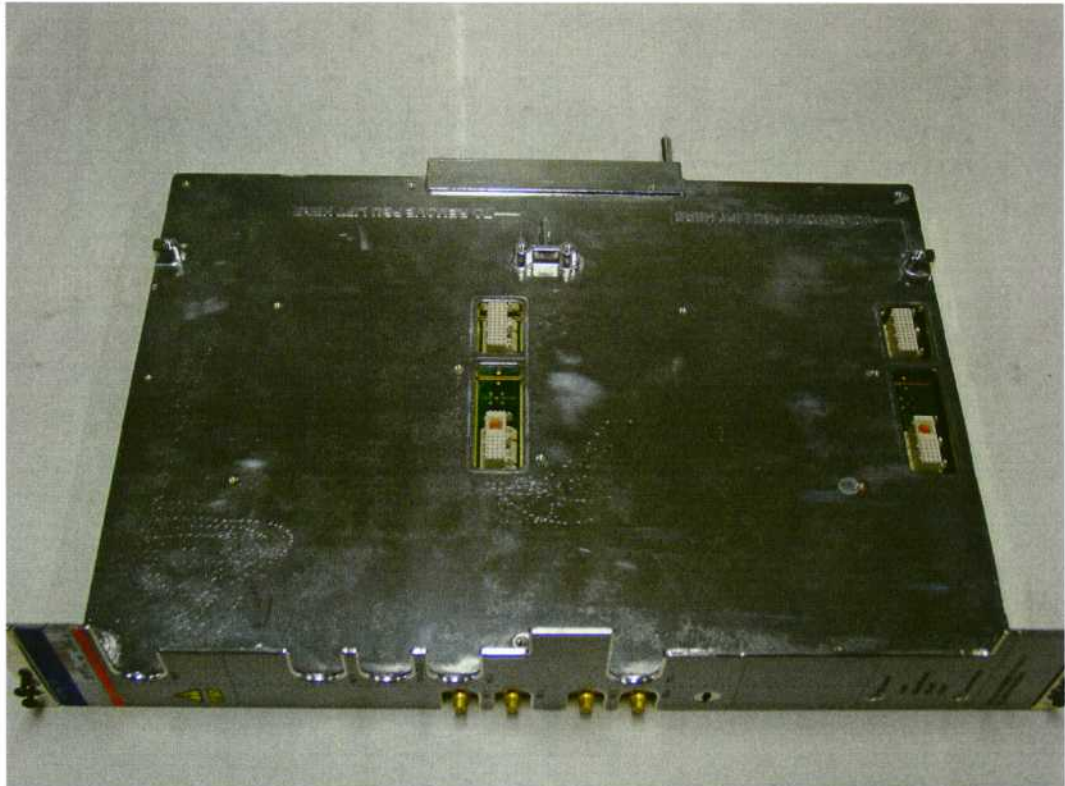


FCC ID: B5KCKRC1311004-1

Bottom side

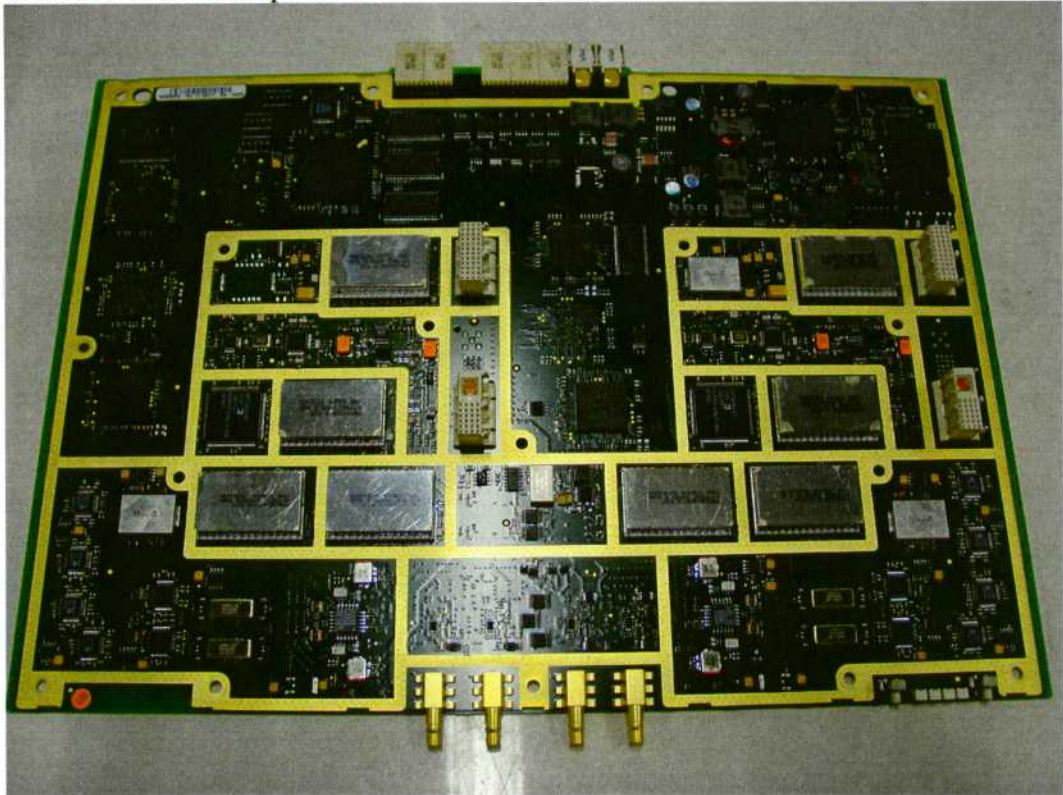


Main board

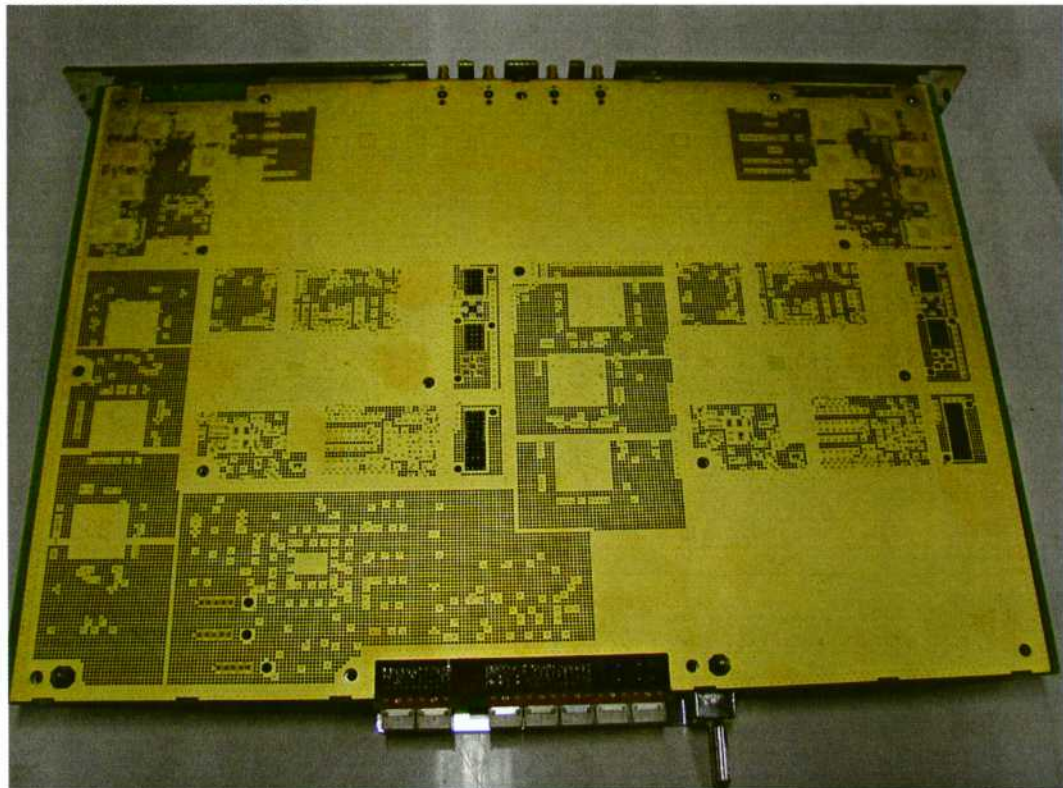


FCC ID: B5KCKRC1311004-1

Main board- PCB component side



Main board- PCB rear side



FCC ID: B5KCKRC1311004-1

PA1- PCB component side



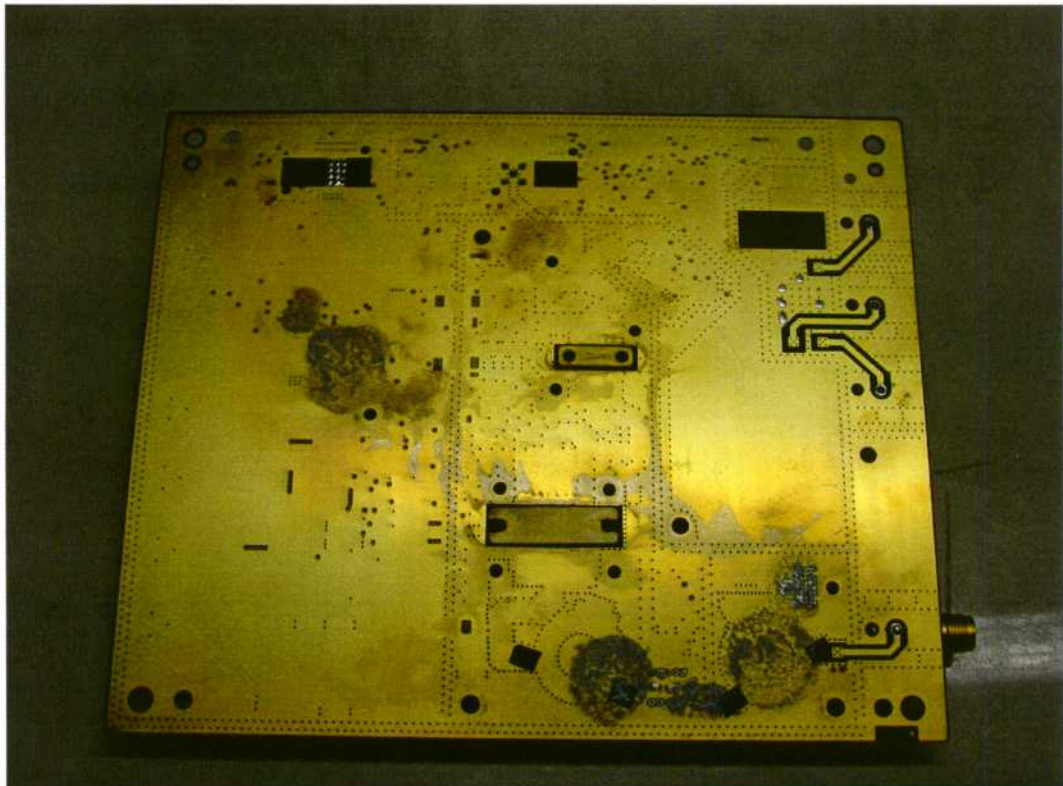
PA1- PCB rear side



PA2- PCB component side



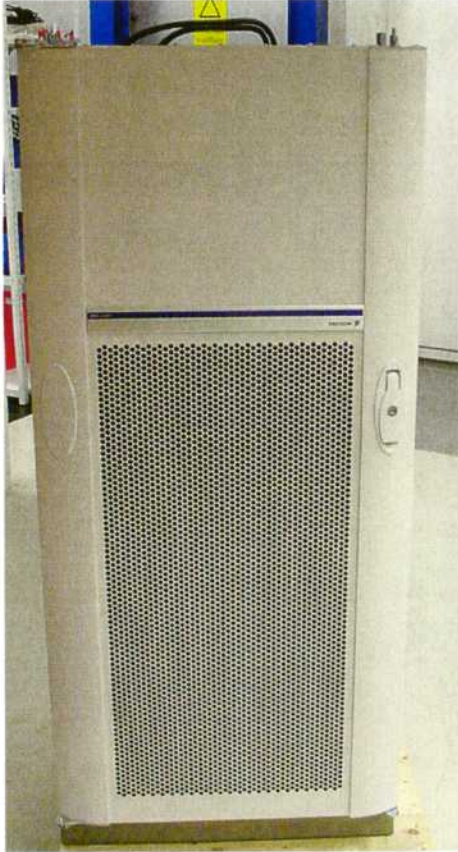
PA2- PCB rear side



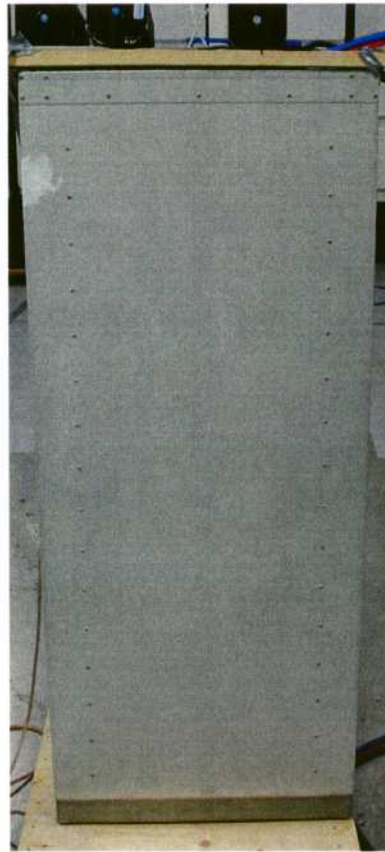
FCC ID: B5KCKRC1311004-1

RBS 2207 Cabinet, 24 Volt DC system

Front view

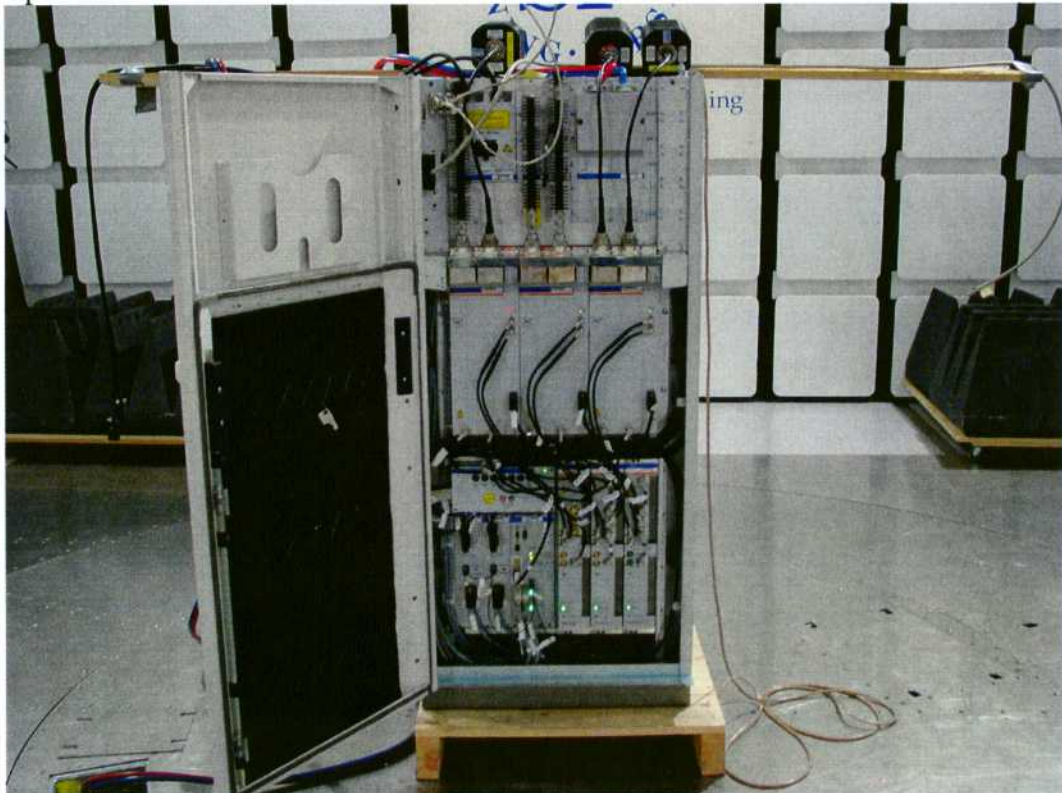


Rear view

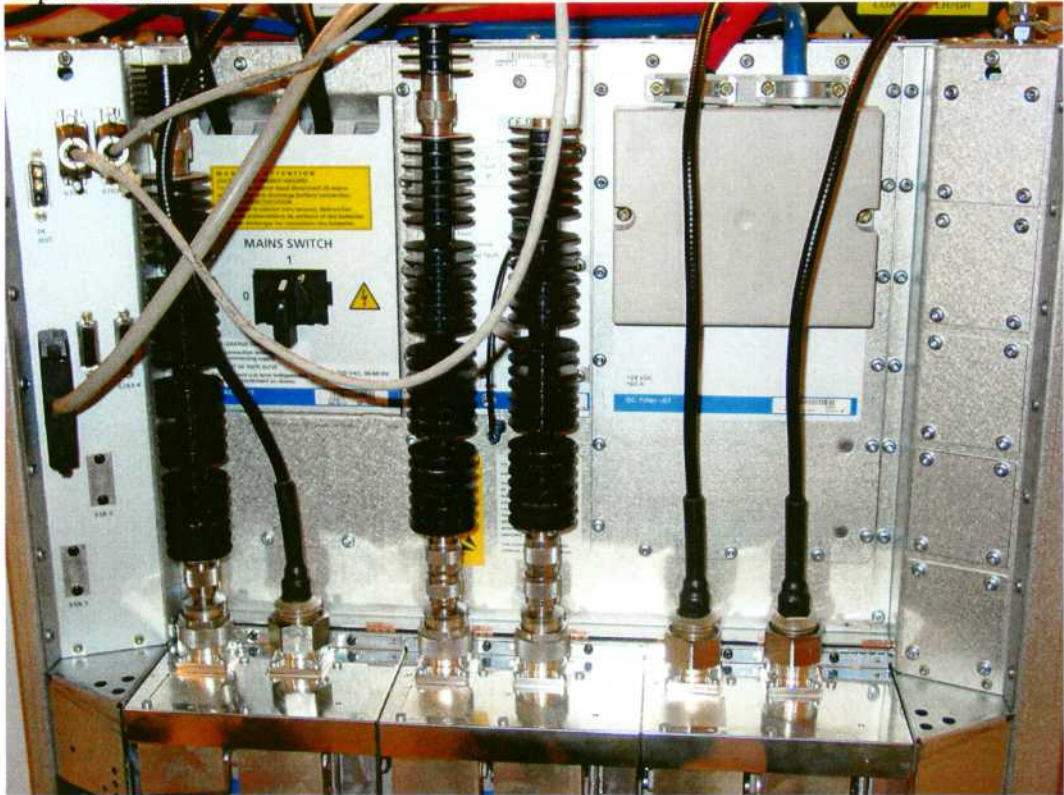


FCC ID: B5KCKRC1311004-1

Open door view



Top shelf view



Middle shelf view



Bottom shelf view

