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Datum/Date 2003-05-21 Beteckning/Reference F304879-F24 Rev 1 Sida/Page 1(1)

Application for Certification: Tower Mounted Booster (3 enclosures)

Test object

TMB 1900

115/230 V AC:

Article no: LGP 01101 TMB 1900, Serial no: 01101X2A1A031110247 and
Article no: LGP 01105 TMB 1900, Serial no: 01105X1A1A031110259

48 V DC:

Article no: LGP 01102 TMB 1900, Serial no: 01102X1A1A031110253 and
Article no: LGP 01106 TMB 1900, Serial no: 01106X1A1A031110265

FCC ID.:MKALGP011-nn

Summary

Standard	Compliant	Enclosure	Remarks
FCC CFR 47 part 24			
24.238 Field strength of spurious radiation	Yes	2	

SP Swedish National Testing and Research Institute Electronics - EMC


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REPORT

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Description - Equipment Under Test (EUT)

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Uplink

Frequency range: 1850-1910 MHz
Nominal Gain: 5-15 dB
Supply voltage: 80-300 VAC or 48 V DC
Power consumption @+ 43 dBm out 250 W

Downlink

Frequency range: 1930-1990 MHz

Application data

Equipment: TMB 1900
Product no: LGP 01101, LGP 01102, LGP 01105, LGP 01106
FCC ID.: MKALGP011-nn

Applicant: LGP Telecom AB
Kolonnvägen 22
P.O Box 1178
SE-171 23 Solna
Sweden

Manufacturer: See Applicant.

Manufacturer's Representative: Martin Lundhagen /Manager System Design & Verification
Göran Waernström / Manager Quality Assurance

Purpose of test

The purpose of the tests is to verify compliance to the performance characteristics specified in FCC CFR47.

Reservation

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

Delivery of test object

The test object was delivered: 2003-03-18 and 2003-05-12.

Test witness

Thomas Scherrer Tangen, LGP TELECOM AB (2003-03-18--19)

Operational test mode during measurements

The TMB was supplied with 115 V AC. 48 V DC and 230 V AC power was also tested. The TMB got one 1950 MHz signal and one 1970 MHz signal to the BTS ports from signalgenerators via power amplifiers outside the chamber. The output power from the TMB was +43 dBm on both antenna ports. The antenna port cables were terminated outside the anechoic chamber. The EUT was connected to ground.

Functional test equipment

Functional test equipment	Serial number
R&S SMT 06 signalgenerator	SP 503 290
R&S SMR 40 signalgenerator	SP 503 254
AR100S1G4 power amplifier	SP 503 118
MA-LTD AM43-1.8-2-40-47 OPT2 power amplifier	001
AM 43 power amplifier	0010762
LGP 01201 CIU	011201X2F50000886
HP Omnibook XE3 computer	--
TMB Manager D103272-X1L rev. 1 PC software	--

Field strength of spurious radiation measurements according to 47CFR 24.238

Date	Temperature	Humidity
2003-03-18	20 °C ± 3 °C	26 % ± 5 %
2003-05-13	22 °C ± 3 °C	36 % ± 5 %

Test set-up and Procedure

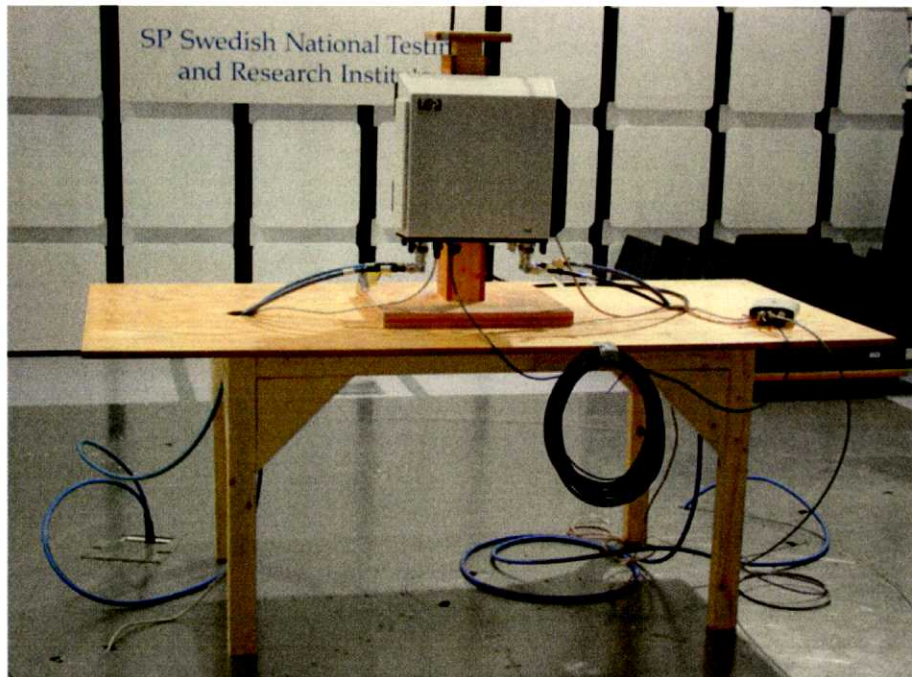
The measurement procedure is per ANSI/TIA/EIA-603-1992. The chamber is listed at FCC, Columbia with registration number: 93866. The test site also complies with RSS 212, Issue 1, Industry Canada file no. :IC 3482.

Measurements were done at 3 m distance in the frequency range 9 kHz-18 GHz and at 1 m in the range 18-20 GHz.

Measurement equipment	Calibration Due	SP number
Anechoic chamber	-	15:115
R&S ESI 40	2003-08	503 125
R&S ESI 26	2003-05	503 292
Control computer	-	503 479
Software: R&S ES-K1, ver. 1.60	-	-
Chase Bilog antenna CBL 6111A	2003-12	503 182
EMCO loop antenna 6502	2004-07	502 916
EMCO Horn Antenna 3115	2004-11	502 175
EMCO Horn Antenna 3116	2003-09	503 279
MITEQ Low Noise Amplifier	2003-07	503 277
Testo 615, Temperature and humidity meter	2003-08	503 505

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

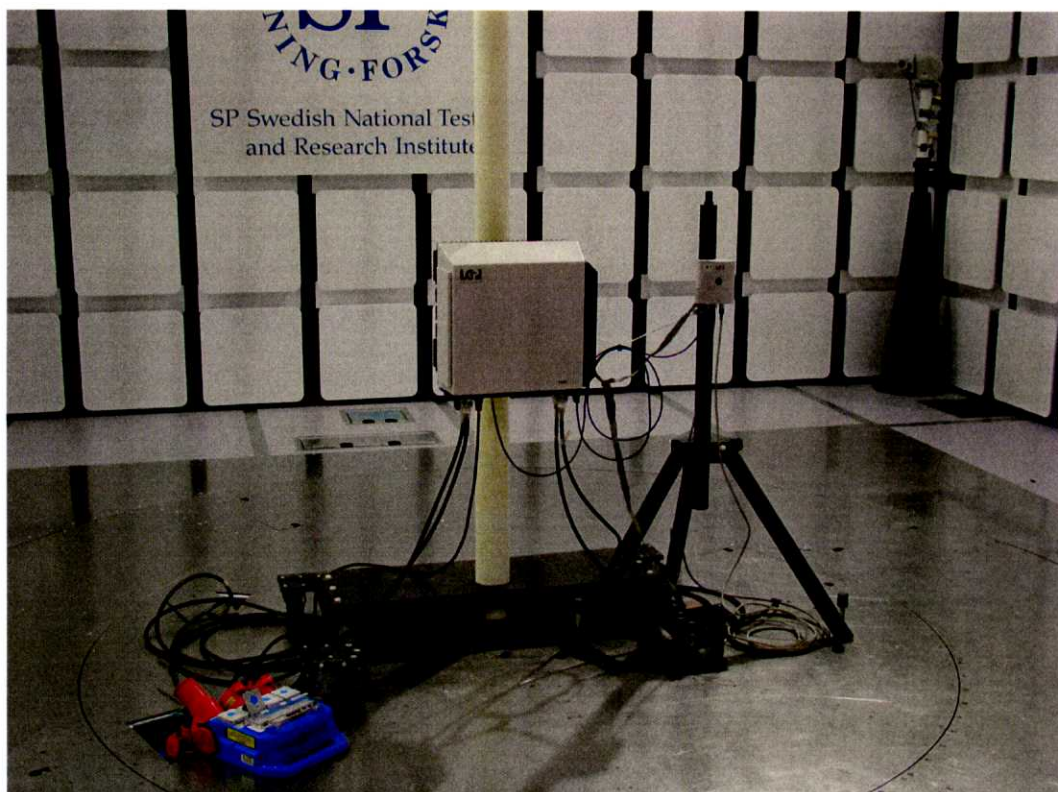
230 V AC:



48 V DC:



115 V AC:





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Results

Mode: 115/230V AC

Frequency (MHz)	Spurious emission level (dBm)	
	Vertical (9k-30MHz: Longitudinal)	Horizontal (9k-30MHz: Perpendicular)
0.009-20 000	All emission > 20 dB below limit	All emission > 20 dB below limit
Measurement uncertainty		4.7 dB

Mode: 48V DC

Frequency (MHz)	Spurious emission level (dBm)	
	Vertical (9k-30MHz: Longitudinal)	Horizontal (9k-30MHz: Perpendicular)
0.009-20 000	All emission > 20 dB below limit	All emission > 20 dB below limit
Measurement uncertainty		4.7 dB

Complies?	Yes
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