TEST REPORT CONCERNING THE COMPLIANCE OF AN ANTI PILFERAGE SYSTEM, BRAND NEDAP, MODEL NCC1/NR2/NT2/IO WITH 47 CFR PART 15 (2003-12-08).

FCC listed	: 90828
Industry Canada	: IC3501
VCCI registered	: R-1518, C-1598

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MEASUREMENT/TECHNICAL REPORT

NEDAP N.V.

Model : NCC1/NR2/NT2/IO

FCC ID: CGD IQ

May 18, 2004

This report concerns:	Original grant/certification ~~Class 2 change~~ ~~Verification~~		
Equipment type:	Anti Pilferage system operating in the 8.2 MHz range		
Deferred grant requested per 47 CFR 0.457(d)(1)(ii) ?	~~Yes~~	~~No~~	n.a.

Report prepared by:	Name	: J. Schuurmans
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The data taken for this test and report herein was done in accordance with 47 CFR Part 15 and the measurement procedures of ANSI C63.4-1992. TNO Electronic Products & Services (EPS) B.V. at Niekerk, The Netherlands, certifies that the data is accurate and contains a true representation of the emission profile of the Equipment Under Test (EUT) on the date of the test as noted in the test report. I have reviewed the test report and find it to be an accurate description of the test(s) performed and the EUT so tested.

Date: May 19, 2004 Signature: 

P. de Beer
TNO Electronic Products & Services (EPS) B.V.

Description of test item

Test item	:	Anti Pilferage system
Manufacturer	:	N.V. Nederlandsche Apparatenfabriek NEDAP
Brand	:	NEDAP
Model	:	NCC1 NR2NT2 IO
Serial number	:	p925 001
Revision	:	n.a.
Receipt number	:	n.a.
Receipt date	:	January, 2004

Applicant information

Applicant's representative	:	Mr. J. Hulshof
Company	:	N.V. Nederlandsche Apparatenfabriek NEDAP
Address	:	Parallelweg 2
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City	:	Groenlo
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Country	:	Netherlands
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Test(s) performed

Location	:	Niekerk
Test(s) started	:	January 5, 2004
Test(s) completed	:	February 10, 2004
Purpose of test(s)	:	FCC equipment authorization
Test specification(s)	:	47 CFR Part 15 (2003-12-08)

Test engineers : J. Schuurmans, 

H.J. Pieters, 

P.A.J.M Robben 

Report written by : J. Schuurmans 

Project leader: : H.J.Pieters 

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1 General information.

1.1 Product description.

1.1.1 Introduction.

The NEDAP NCC1/NR2/NT2/IO has been developed as a shop-lifting system detection system for clothes-shops. A miniature responder (called wafer) is attached to the clothes to be protected. These wafers are removed after paying. In the event of theft, they are still present and are detected when they enter the vicinity of the detection pillars consisting of a transmitter and a receiver pillar. The pillars form one or more passages and are located at the exit of the shop.

1.1.2 Choice of operating frequency.

The operating frequency of the NEDAP NCC1/NR2/NT2/IO system is 8.2 MHz ± 700 kHz.

1.1.3 Operating principles.

The heart of the EAS system is the wafer. The wafer contains a resonant circuit, consisting of an air cored loop and a capacitor. If the loop enters an alternating magnetic field, such as that of a primary transmitting loop, an electric voltage is generated in the windings. If the frequency of the alternating magnetic field corresponds to the resonant frequency of the wafer (determined by the self-inductance of the loop and the capacity of the capacitor), the voltage over the loop will cause an alternating current in the series connection of the coil and the capacitor. The current in the loop then generates its own, secondary, alternating magnetic field, which is 90 degrees phase shifted. This secondary field induces a voltage in the receiver antenna and is phase sensitive detected.

In this way energy is absorbed from the transmitting circuit by the wafer circuit. This energy is dissipated in the loss resistance, which should be connected in series with the loop and capacitor in the wafer.

The entire system consists of a central control unit, the NCC1/NR2/NT2/IO. The NCC offers multiple ways of building a system. The minimum requirement is the connection of two antenna’s, which together for an entrance or exit port. Up to two pairs of antennas may be connected at the same time. Instead of an extra pair of antenna’s, the system can be expanded with a NR2/NT2/IO. The NR/NT2/IO gives the possibility two connect two extra pairs of antennas. Last but not least, the system may be expanded by up to 8 Customer Counting sensors, using IR technology.

The antennas always contain passive matching circuitry. In addition they may contain electronics and wiring to accommodate customer counting using IR technology.

In all possible configurations the NCC is the unit where signal and frequency generation is performed

The NCC offers also the possibility to connect a PAGSLS 433. This device is triggered when the system is in alarm mode, and pages a 433 MHz receiver which is typically worn by security personnel in shops.

1.2 Related submittal(s) and/or Grant(s).

Not applicable.

1.3 Tested system details.

Details and an overview of the system and all of its components, as it has been tested, may be found in table 1 below. FCC ID's are stated in this overview where applicable. The EUT is listed in the first row of the table below.

Description	Manufacturer	Model number	Serial number	FCC ID	Cable descriptions
Central Control Unit	NEDAP N.V.	NCC1/NT2/NR 2/IO	R929 B 002	CGD IQ	Unshielded DC power cable RG59U coaxial cables with factory ferrite beads.
Antenna pairs	NEDAP N.V.	See overview	(-)	CGD IQ	Coaxial cables with ferrite beads
Expansion Unit	NEDAP N.V.	NCC1/NR2/NT 2/IO	R925 014	CGD IQ	Coaxial cable for supply and frequency synchronization
Switched Mode Power Supply	NEDAP N.V.	Ps/ncc	P 926 001	N.A.	Unshielded DC power cable
Multiplex filter	NEDAP	MD-PG45	R 9090023	CGD IQ	N-wire cable

1.4 Test methodology.

The test methodology used is based on the requirements of 47 CFR Part 15 (2003-12-08), sections 15.207, 15.205, 15.209 and 15.225.

The test methods, which have been used, are based on ANSI C63.4: 1992.

Radiated emission tests above 30 MHz were performed at a measurement distance of 3 meters. Below 30 MHz the radiated emission tests were carried out at measurement distances of 3 and 10 meters. The test results regarding the radiated emission tests on frequencies below 30 MHz have been extrapolated in order to determine the field strength of the measured values at measurement distances of 30 and 300 meters (as required by 47 CFR Part 15).

The receivers are switching automatically to the right bandwidth in accordance with CISPR 16. This is implemented in the receiver. The antenna factors are programmed in the test receiver. The receiver automatically calculates the appropriate correction factor for the utilized antenna and also the appropriate antenna factor for the cable loss. The total correction is automatically added to the measured value.

1.5 Test facility.

The Federal Communications Commission has reviewed the technical characteristics of the test facilities at TNO Electronic Products & Services (EPS) B.V., located in Niekerk, 9822 TL Smidshornerweg 18, The Netherlands, and has found these test facilities to be in compliance with the requirements of 47 CFR Part 15, section 2.948, per October 23, 2000.

The description of the test facilities has been filed at the Office of the Federal Communications Commission under registration number 90828. The facility has been added to the list of laboratories performing these test services for the public on a fee basis.

The list of all public test facilities is available on the Internet at http://www.fcc.gov.

1.6 Product labeling.

In accordance with 47 CFR Part 15.19 (a)(3) the following text shall be placed on a label, which is attached to the NCC:

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

In accordance with 47 CFR Part 2.925 (a)(1), the FCC ID shall be placed on a label, which is attached to the all other system components.

For further details about the labeling requirements (size, legibility, etc.) as set by the Federal Communications Commission see 47 CFR Part 15.19 (a)(3), 47 CFR Part 15.19 (b)(2), 47 CFR Part 15.19 (b)(4), 47 CFR Part 2.925 and 47 CFR Part 2.926.

2 System test configuration.

2.1 Justification.

The system was configured for testing in a typical fashion (as a customer would normally use it). During all tests the EUT was set up to function in accordance with the manufacturer's instructions.

The justification and manipulation of cables and equipment in order to simulate a worst-case behaviour of the test setup has been carried out as prescribed in ANSI C63.4: 1992.

2.2 EUT mode of operation.

Radiated and conducted emission measurements were carried out when the system was active and was generating a continuous transmitting signal. In addition, the system was tested while a tag was placed in the detection field, triggering the alarm mode of the system.

2.3 Special accessories.

No special accessories are used and/or needed to achieve compliance with the appropriate sections of 47 CFR Part 15.

2.4 Equipment modifications.

No modifications have been made to the equipment in order to achieve compliance with the appropriate sections of 47 CFR Part 15.

2.5 Configuration of the tested system.

Unit title	:	Anti Pilferage system
Model number	:	NCC/NR2/NT2/IO
Part number	:	9887172
FCC ID	:	CGD IQ
Frequency range	:	8.2 MHz +/- 700 kHz (sweeping operation
Description/details	:	See section 1.1 of this test report
Power supply	:	30 Volts DC (Powered by external power supply)
Clock Oscillator(s)	:	32 MHz
Cabinet & Screening	:	Metal
Interface Cable(s)	:	Shielded data/DC power cable, 50 Ohms RG59U cable with factory fitted ferrite beads
Method of screening	:	Not applicable
Method of grounding	:	Not applicable

2.6 Tested operating configurations.

The flexibility of the system is such that it can be installed in many configurations. The rationale of the tested setup is that all antennas have to be tested, as well as all possible extensions. From all combinations it was decided before testing based on good engineering practice and judgement what was expected to be the worst case configurations. The tested configuration are described below.

Note 1) Power adapter in all configurations the same.
Note 2) All configuration master NCC1/NR2/NT2/IO (in the table NCC1).
Note 3): The configuration numbers are intentionally not monotonously increasing.
Note 4): The configurations are described in block diagrams in the papers annexed to this report.

Configuration name	Master	Antenna pair 1	Antenna pair 2	PAGSLS 433	MUX filter	Auxiliary unit	Slave unit
IV	NCC1	E38OIDCC	E38OID	NO	NO	NO	YES
V	NCC1	PG30CC	PG30PCC	NO	NO	NO	YES
IX	NCC1	EQ45	EQ45CC	NO	NO	NO	NO
X	NCC1	EQ30	EQ30CC	NO	NO	NO	NO
XI	NCC1	PG30	PG30CC	NO	NO	NO	NO
XII	NCC1	PG30PPCC	E38 OID	NO	NO	NO	NO
XIII	NCC1	PG30PCC	F-CCRXTX	NO	NO	RELAY	NO
XIII-A	NCC1	PG30PPC	W_CC	NO	NO	INPUT	NO
XVIII	NCC1	PG30CC	PG30	NO	YES	NO	YES

2.7 Block diagram of the EUT.

The block diagram is available in the technical documentation package as an addendum to this test report.

2.8 Schematics of the EUT.

The schematics are available in the technical documentation package as an addendum to this test report.

2.9 Part list of the EUT.

The part list is available in the technical documentation package as an addendum to this test report.

Diagram(s) of the tested configuration
The block diagrams of the tested configurations are annexed to the report.

3 Radiated emission data.

3.1 Frequency range of 30 -1000 MHz, E-field.

3.1.1 Radiated field strength measurement, configuration IV, passive mode.

Frequency (MHz)	Measurement results dB(µV)/m @ 3 metres Quasi-peak		Limits dB(µV)/m @ 3 metres Quasi-peak	Margin (dB) Quasi-peak		Result
	Vertical	Horizontal		Vertical	Horizontal	
30.00	28.2	<<	40.0	-11.8	n.a	PASS
36.00	26.8	<<	40.0	-13.2	n.a.	PASS
60.00	20.3	15.0	40.0	-19.7	-25.0	PASS
87.19	26.6	21.0	40.0	-13.4	-19.0	PASS
90.00	26.3	28.3	43.5	-17.2	-15.2	PASS
97.80	28.0	<<	43.5	-15.5	n.a.	PASS
98.30	27.2	21.9	43.5	-16.3	-21.6	PASS
144.21	21.7	20.1	43.5	-21.8	-23.4	PASS
193.60	25.5	24.4	43.5	-18.0	-19.1	PASS
215.90	26.3	26.7	43.5	-17.2	-16.8	PASS
439.40	33.3	25.7	46.0	-12.7	-20.3	PASS
449.92	32.0	25.2	46.0	-14.0	-20.8	PASS
458.75	32.5	26.9	46.0	-13.5	-19.1	PASS
509.80	29.9	<<	46.0	-16.1	n.a.	PASS
589.82	31.9	<<	46.0	-14.1	n.a.	PASS
622.59	32.7	<<	46.0	-13.3	n.a.	PASS
689.82	33.1	<<	46.0	-12.9	n.a.	PASS

Table 1: radiated emission passive mode

The results of the radiated emission tests, carried out in accordance with 47 CFR Part 15, sections 15.205, 15.209, 15.223 (a) and 15.231 (a)(4), 15.231 (b), with the EUT operating in continuous transmit mode on 8.2 MHz +/- 700 kHz, are depicted in table 1.

Note:
1) Field strength values of radiated emissions at frequencies not listed in table 1 are more than 20 dB below the applicable limit.
2) n.a. means not applicable.
3) << means no emission above noise floor.
4) Passive mode means that the system is standby (alarm is off).

Test engineer:

Signature : 

Name : P.A.J.M. Robben

Date : January 21, 2004

3.1.2 Radiated field strength measurements, configuration IV, active mode.

Frequency (MHz)	Measurement results dB(µV)/m @ 3 metres Quasi-peak		Limits dB(µV)/m @ 3 metres Quasi-peak	Margin (dB) Quasi-peak		Result
	Vertical	Horizontal		Vertical	Horizontal	
30.00	28.5	n.a.	40.0	-11.5	n.a.	PASS
36.00	27.0	n.a.	40.0	-13.0	-n.a.	PASS
60.00	22.2	14.7	40.0	-17.8	-25.3	PASS
87.19	18.7	n.a.	40.0	-21.3	n.a.	PASS
90.00	25.3	22.1	43.5	-18.2	-21.4	PASS
97.80	16.5	n.a.	43.5	-27.0	n.a.	PASS
98.30	24.1	18.0	43.5	-19.4	-25.5	PASS
144.21	19.5	17.4	43.5	-24.0	-26.1	PASS
193.60	23.4	20.3	43.5	-20.1	-23.2	PASS
215.90	28.8	29.7	43.5	-14.7	-13.8	PASS
439.40	38.6	29.3	46.0	-7.4	-16.7	PASS
449.92	34.9	26.8	46.0	-11.1	-19.2	PASS
458.75	32.6	25.3	46.0	-13.4	-20.7	PASS
509.80	30.4	n.a.	46.0	-15.6	n.a.	PASS
589.82	30.0	n.a.	46.0	-16.0	n.a.	PASS
622.59	31.8	n.a.	46.0	-14.2	n.a.	PASS
689.82	29.9	n.a.	46.0	-16.1	n.a.	PASS

Table 2: radiated emission active mode

The results of the radiated emission tests, carried out in accordance with 47 CFR Part 15, sections 15.205, 15.209, 15.223 (a) and 15.231 (a)(4), 15.231 (b),with the EUT operating in activated continuous transmit mode on 8.2 MHz +/- 700 kHz, are depicted in table 2

Note:

1. Field strength values of radiated emissions at frequencies not listed in table 2 are more than 20 dB below the applicable limit.
2. Active mode means the system is detecting a tag (alarm sounds)
3. << means no emission above noise floor.
4. Passive mode means that the system is standby (alarm is off).

Test engineer:

Signature : 

Name : P.A.J.M. Robben

Date : January 21, 2004

3.1.3 Radiated field strength measurement, configuration V, passive mode.

Frequency (MHz)	Measurement results dB(µV)/m @ 3 metres Quasi-peak		Limits dB(µV)/m @ 3 metres Quasi-peak	Margin (dB) Quasi-peak		Result
	Vertical	Horizontal		Vertical	Horizontal	
30.00	26.5	<<	40.0	-13.5	n.a.	PASS
33.78	31.6	24.8	40.0	-8.4	-15.2	PASS
57.82	21.7	13.4	40.0	-18.3	-26.6	PASS
60.02	24.1	17.3	40.0	-15.9	-22.7	PASS
61.55	21.7	10.9	40.0	-18.3	-29.1	PASS
73.07	25.6	17.7	40.0	-14.4	-22.3	PASS
76.14	28.0	18.0	40.0	-12.0	-22.0	PASS
90.04	33.1	28.8	43.5	-10.4	-14.7	PASS
120.00	20.4	20.5	43.5	-23.1	-23.0	PASS
200.00	19.6	14.2	43.5	-23.9	-29.3	PASS
215.90	24.5	23.1	43.5	-19.0	-20.4	PASS
294.91	20.6	26.0	46.0	-25.4	-20.0	PASS
330.11	21.4	<<	46.0	-24.6	n.a.	PASS
425.91	35.4	26.8	46.0	-10.6	-19.2	PASS
461.95	34.0	24.4	46.0	-12.0	-21.6	PASS

Table 3: radiated emission passive mode

The results of the radiated emission tests, carried out in accordance with 47 CFR Part 15, sections 15.205, 15.209, 15.233 (a) and 15.231 (a)(4), 15.231 (b), with the EUT operating in continuous transmit mode on 8.2 MHz +/- 700 kHz, are depicted in table 3.

Note:

1. Field strength values of radiated emissions at frequencies not listed in table 3 are more than 20 dB below the applicable limit.
2. n.a. means not applicable.
3. << means no emission above noise floor.
4. Passive mode means that the system is standby (alarm is off).

Test engineer:

Signature : 

Name : P.A.J.M. Robben

Date : January 20, 2004

3.1.4 Radiated field strength measurements, configuration V, active mode.

Frequency (MHz)	Measurement results dB(µV)/m @ 3 metres Quasi-peak		Limits dB(µV)/m @ 3 metres Quasi-peak	Margin (dB) Quasi-peak		Result
	Vertical	Horizontal		Vertical	Horizontal	
30.00	25.9	<<	40.0	-14.1	n.a.	PASS
33.78	32.9	24.7	40.0	-7.1	-15.3	PASS
57.82	22.1	13.6	40.0	-17.9	-26.4	PASS
60.02	24.0	18.0	40.0	-16.0	-22.0	PASS
61.55	21.9	11.2	40.0	-18.1	-28.8	PASS
73.07	25.9	17.4	40.0	-14.1	-22.6	PASS
76.14	27.4	17.3	40.0	-12.6	-22.7	PASS
90.04	33.6	27.1	43.5	-9.9	-16.4	PASS
120.00	22.0	21.4	43.5	-21.5	-22.1	PASS
200.00	19.9	14.7	43.5	-23.6	-28.8	PASS
215.90	23.5	23.8	43.5	-20.0	-19.7	PASS
294.91	26.3	25.8	46.0	-19.7	-20.2	PASS
330.11	25.2	25.2	46.0	-20.8	-20.8	PASS
425.91	34.8	28.0	46.0	-11.2	-18.0	PASS
461.95	29.0	27.1	46.0	-17.0	-18.9	PASS

Table 4: radiated emission active mode

The results of the radiated emission tests, carried out in accordance with 47 CFR Part 15, sections 15.205, 15.209, 15.233 (a) and 15.231 (a)(4), 15.231 (b), with the EUT operating in activated continuous transmit mode on 8.2 MHz +/- 700 kHz, are depicted in table 4.

Note:

1. Field strength values of radiated emissions at frequencies not listed in table 4 are more than 20 dB below the applicable limit.
2. Active mode means the system is detecting a tag (alarm sounds).
3. << means no emission above noise floor.
4. Passive mode means that the system is standby (alarm is off).

Test engineer:

Signature : 

Name : P.A.J.M. Robben

Date : January 21, 2004

3.1.5 Radiated field strength measurement, configuration IX, passive mode.

Frequency (MHz)	Measurement results dB(µV)/m @ 3 metres Quasi-peak		Limits dB(µV)/m @ 3 metres Quasi-peak	Margin (dB) Quasi-peak		Result
	Vertical	Horizontal		Vertical	Horizontal	
120.00	26.7	22.7	43.5	-16.8	-20.8	PASS
150.00	<<	32.5	43.5	n.a.	-11.0	PASS
163.84	23.6	30.8	43.5	-19.9	-12.7	PASS
177.00	<<	31.4	43.5	n.a.	-12.1	PASS
180.00	27.3	39.8	43.5	-16.2	-3.7	PASS
193.58	25.6	36.6	43.5	-17.9	-6.9	PASS
196.61	29.0	35.5	43.5	-14.5	-8.0	PASS
210.00	29.5	39.4	43.5	-14.0	-4.1	PASS
229.38	26.7	38.1	46.0	-19.3	-7.9	PASS
240.00	31.4	33.2	46.0	-14.6	-12.8	PASS
262.14	32.9	31.1	46.0	-13.1	-14.9	PASS
270.00	28.0	38.4	46.0	-18.0	-7.6	PASS
294.91	31.1	35.5	46.0	-14.9	-10.5	PASS
300.00	32.1	35.6	46.0	-13.9	-10.4	PASS
327.68	39.9	31.1	46.0	-6.1	-14.9	PASS
330.00	40.8	36.8	46.0	-5.2	-9.2	PASS
360.00	34.0	39.5	46.0	-12.0	-6.5	PASS
390.00	35.6	41.2	46.0	-10.4	-4.8	PASS
420.00	32.2	39.3	46.0	-13.8	-6.7	PASS
425.98	36.0	35.4	46.0	-10.0	-10.6	PASS
433.91	65.9	59.6	80.8	-14.9	-21.2	PASS
450.00	<<	37.3	46.0	n.a.	-8.7	PASS
458.75	41.1	37.4	46.0	-4.9	-8.6	PASS
491.52	40.3	40.7	46.0	-5.7	-5.3	PASS
524.29	31.7	34.7	46.0	-14.3	-11.3	PASS
867.82	47.6	41.3	61.6	-14.0	-20.3	PASS

Table 5: radiated emission passive mode

The results of the radiated emission tests, carried out in accordance with 47 CFR Part 15, sections 15.205, 15.209, 15.223 (a) and 15.231 (a)(4), 15.231 (b), with the EUT operating in continuous transmit mode on 8.2 MHz +/- 700 kHz, are depicted in table 5.

Note:

1. Field strength values of radiated emissions at frequencies not listed in table 5 are more than 20 dB below the applicable limit.
2. n.a. means not applicable.
3. << means no emission above noise floor.
4. Passive mode means that the system is standby (alarm is off).

Test engineer:

Signature : 

Name : J. Schuurmans

Date : January 21, 2004

3.1.6 Radiated field strength measurements, configuration IX, active mode.

Frequency (MHz)	Measurement results dB(µV)/m @ 3 metres Quasi-peak		Limits dB(µV)/m @ 3 metres Quasi-peak	Margin (dB) Quasi-peak		Result
	Vertical	Horizontal		Vertical	Horizontal	
120.00	26.7	22.7	43.5	-16.8	-20.8	PASS
150.00	<<	32.5	43.5	n.a.	-11.0	PASS
163.84	23.6	30.8	43.5	-19.9	-12.7	PASS
177.00	<<	31.4	43.5	n.a.	-12.1	PASS
180.00	27.3	39.8	43.5	-16.2	-3.7	PASS
193.58	25.6	35.6	43.5	-17.9	-7.9	PASS
196.61	29.0	36.6	43.5	-14.5	-6.9	PASS
210.00	29.5	40.4	43.5	-14.0	-3.1	PASS
229.38	26.7	38.1	46.0	-19.3	-7.9	PASS
240.00	31.4	33.2	46.0	-14.6	-12.8	PASS
262.14	32.9	31.1	46.0	-13.1	-14.9	PASS
270.00	28.0	39.3	46.0	-18.0	-6.7	PASS
294.91	31.1	36.1	46.0	-14.9	-9.9	PASS
300.00	32.1	36.1	46.0	-13.9	-9.9	PASS
327.68	39.9	36.8	46.0	-6.1	-9.2	PASS
330.00	40.8	36.8	46.0	-5.2	-9.2	PASS
360.00	34.0	39.5	46.0	-12.0	-6.5	PASS
390.00	35.6	41.2	46.0	-10.4	-4.8	PASS
420.00	32.2	39.3	46.0	-13.8	-6.7	PASS
425.98	36.0	35.4	46.0	-10.0	-10.6	PASS
433.91	65.9	59.6	80.8	-14.9	-21.2	PASS
450.00	<<	37.3	46.0	n.a.	-8.7	PASS
450.00	<<	37.3	46.0	n.a.	-8.7	PASS
458.75	41.1	37.4	46.0	-4.9	-8.6	PASS
491.52	40.3	40.7	46.0	-5.7	-5.3	PASS
524.29	31.7	34.7	46.0	-14.3	-11.3	PASS
867.82	47.6	41.3	61.6	-14.0	-20.3	PASS

Table 6: radiated emission active mode

The results of the radiated emission tests, carried out in accordance with 47 CFR Part 15, sections 15.205, 15.209 and 15.223 (a) and 15.231 (a)(4), 15.231 (b), with the EUT operating in activated continuous transmit mode on 8.2 MHz +/- 700 kHz, are depicted in table 6.

Note:

1. Field strength values of radiated emissions at frequencies not listed in table 6 are more than 20 dB below the applicable limit.
2. Active mode means the system is detecting a tag (alarm sounds).
3. << means no emission above noise floor.
4. Passive mode means that the system is standby (alarm is off).

Test engineer:

Signature : 

Name : J. Schuurmans

Date : January 21, 2004

3.1.7 Radiated field strength measurement, configuration X, passive mode.

Frequency (MHz)	Measurement results dB(µV)/m @ 3 metres Quasi-peak		Limits dB(µV)/m @ 3 metres Quasi-peak	Margin (dB) Quasi-peak		Result
	Vertical	Horizontal		Vertical	Horizontal	
90.00	29.1	26.1	43.5	-14.4	-17.4	PASS
262.14	24.2	25.7	46.0	-21.8	-20.3	PASS
622.59	35.6	36.2	46.0	-10.4	-9.8	PASS

Table 7: radiated emission passive mode

The results of the radiated emission tests, carried out in accordance with 47 CFR Part 15, sections 15.205, 15.209, 15.223 (a) and 15.231 (a)(4), 15.231 (b), with the EUT operating in continuous transmit mode on 8.2 MHz +/- 700 kHz, are depicted in table 7.

Note:

1. Field strength values of radiated emissions at frequencies not listed in table 7 are more than 20 dB below the applicable limit.
2. n.a. means not applicable.
3. << means no emission above noise floor.
4. Passive mode means that the system is standby (alarm is off).

Test engineer:

Signature : 

Name : J. Schuurmans

Date : January 21, 2004

3.1.8 Radiated field strength measurements, configuration X, active mode.

Frequency (MHz)	Measurement results dB(µV)/m @ 3 metres Quasi-peak		Limits dB(µV)/m @ 3 metres Quasi-peak	Margin (dB) Quasi-peak		Result
	Vertical	Horizontal		Vertical	Horizontal	
90.00	29.1	26.1	43.5	-14.4	-17.4	PASS
262.14	24.2	25.7	46.0	-21.8	-20.3	PASS
622.59	35.6	36.2	46.0	-10.4	-9.8	PASS

Table 8: radiated emission active mode

The results of the radiated emission tests, carried out in accordance with 47 CFR Part 15, sections 15.205, 15.209,15.223 (a) and 15.231 (a)(4), 15.231 (b) with the EUT operating in activated continuous transmit mode on 8.2 MHz +/- 700 kHz, are depicted in table 8.

Note:
1) Field strength values of radiated emissions at frequencies not listed in table 8 are more than 20 dB below the applicable limit.
2) Active mode means the system is detecting a tag (alarm sounds).
3) << means no emission above noise floor.
4) Passive mode means that the system is standby (alarm is off).

Test engineer:

Signature : 

Name : J. Schuurmans

Date : January 15, 2004

3.1.9 Radiated field strength measurement, configuration XI, passive mode.

Frequency (MHz)	Measurement results dB(µV)/m @ 3 metres Quasi-peak		Limits dB(µV)/m @ 3 metres Quasi-peak	Margin (dB) Quasi-peak		Result
	Vertical	Horizontal		Vertical	Horizontal	
90.00	25.1	18.1	43.5	-18.4	-25.4	PASS
589.82	34.8	<<	46.0	-11.2	n.a.	PASS
622.59	28.6	<<	46.0	-17.4	n.a.	PASS
630.00	34.7	<<	46.0	-11.3	n.a.	PASS

Table 9: radiated emission passive mode

The results of the radiated emission tests, carried out in accordance with 47 CFR Part 15, sections 15.205, 15.209 15.223 (a) and 15.231 (a)(4), 15.231 (b), with the EUT operating in continuous transmit mode on 8.2 MHz +/- 700 kHz, are depicted in table 9.

Notes:
1) Field strength values of radiated emissions at frequencies not listed in table 9 are more than 20 dB below the applicable limit.
2) Active mode means the system is detecting a tag (alarm sounds).
3) << means no emission above noise floor.
4) Passive mode means that the system is standby (alarm is off).

Test engineer:

Signature : 

Name : J. Schuurmans

Date : January 15, 2004

3.1.10 Radiated field strength measurements, configuration XI, active mode.

Frequency (MHz)	Measurement results dB(µV)/m @ 3 metres Quasi-peak		Limits dB(µV)/m @ 3 metres Quasi-peak	Margin (dB) Quasi-peak		Result
	Vertical	Horizontal		Vertical	Horizontal	
90.00	<<	<<	43.5	n.a.	n.a.	PASS
589.82	<<	<<	46.0	n.a.	n.a.	PASS
622.59	32.2	<<	46.0	-13.8	n.a.	PASS
630.00	30.8	<<	46.0	-15.2	n.a.	PASS

Table 10: radiated emission active mode

The results of the radiated emission tests, carried out in accordance with 47 CFR Part 15, sections 15.205, 15. 15.223 (a) and 15.231 (a)(4), 15.231 (b), with the EUT operating in activated continuous transmit mode on 8.2 MHz +/- 700 kHz, are depicted in table 10.

Notes:
1) Field strength values of radiated emissions at frequencies not listed in table 10 are more than 20 dB below the applicable limit.
2) Active mode means the system is detecting a tag (alarm sounds).
3) << means no emission above noise floor.
4) Passive mode means that the system is standby (alarm is off).

Test engineer:

Signature : 

Name : J. Schuurmans

Date : January 15, 2004

3.1.11 Radiated field strength measurement, configuration XII, passive mode.

Frequency (MHz)	Measurement results dB(µV)/m @ 3 metres Quasi-peak		Limits dB(µV)/m @ 3 metres Quasi-peak	Margin (dB) Quasi-peak		Result
	Vertical	Horizontal		Vertical	Horizontal	
60.00	17.4	16.9	40.0	-22.6	-23.1	PASS
61.55	20.9	11.3	40.0	-19.1	-28.7	PASS
67.35	21.3	14.3	40.0	-18.7	-25.7	PASS
83.66	22.2	16.5	40.0	-17.8	-23.5	PASS
209.61	18.3	15.0	43.5	-25.2	-28.5	PASS
333.36	22.9	21.2	46.0	-23.1	-24.8	PASS
394.36	25.8	26.8	46.0	-20.2	-19.2	PASS

Table 11: radiated emission passive mode

The results of the radiated emission tests, carried out in accordance with 47 CFR Part 15, sections 15.205, 15.209, 15.223 (a) and 15.231 (a)(4), 15.231 (b), with the EUT operating in continuous transmit mode on 8.2 MHz +/- 700 kHz, are depicted in table 11.

Notes:
1) Field strength values of radiated emissions at frequencies not listed in table 11 are more than 20 dB below the applicable limit.
2) Active mode means the system is detecting a tag (alarm sounds).
3) << means no emission above noise floor.
4) Passive mode means that the system is standby (alarm is off).

Test engineer:

Signature : 

Name : P.A.J.M. Robben

Date : January 20, 2004

3.1.12 Radiated field strength measurements, configuration XII, active mode.

Frequency (MHz)	Measurement results dB(µV)/m @ 3 metres Quasi-peak		Limits dB(µV)/m @ 3 metres Quasi-peak	Margin (dB) Quasi-peak		Result
	Vertical	Horizontal		Vertical	Horizontal	
90.00	<<	<<	43.5	n.a.	n.a.	PASS
589.82	<<	<<	46.0	n.a.	n.a.	PASS
622.59	32.2	<<	46.0	-13.8	n.a.	PASS
630.00	30.8	<<	46.0	-15.2	n.a.	PASS

Table 12: radiated emission active mode

The results of the radiated emission tests, carried out in accordance with 47 CFR Part 15, sections 15.205, 15.209 15.223 (a) and 15.231 (a)(4), 15.231 (b), with the EUT operating in activated continuous transmit mode on 8.2 MHz +/- 700 kHz, are depicted in Table 12.

Note:
1) Field strength values of radiated emissions at frequencies not listed in table 12 are more than 20 dB below the applicable limit.
2) Active mode means the system is detecting a tag (alarm sounds).
3) << means no emission above noise floor.
4) Passive mode means that the system is standby (alarm is off).

Test engineer:

Signature : 

Name : P.A.J.M. Robben

Date : January 20, 2004

3.1.13 Radiated field strength measurement, configuration XIII, passive mode.

Frequency (MHz)	Measurement results dB(µV)/m @ 3 metres Quasi-peak		Limits dB(µV)/m @ 3 metres Quasi-peak	Margin (dB) Quasi-peak		Result
	Vertical	Horizontal		Vertical	Horizontal	
60.00	25.2	19.6	40.0	-14.8	-20.4	PASS
87.24	22.1	13.1	40.0	-17.9	-26.9	PASS
90.00	27.4	20.7	43.5	-16.1	-22.8	PASS
98.30	26.7	22.2	43.5	-16.8	-21.3	PASS
104.20	22.3	<<	43.5	-21.2	n.a.	PASS
158.30	27.9	24.1	43.5	-15.6	-19.4	PASS
215.90	25.9	26.2	43.5	-17.6	-17.3	PASS
449.37	32.0	27.3	46.0	-14.0	-18.7	PASS
449.99	36.1	29.5	46.0	-9.9	-16.5	PASS
458.75	31.8	27.1	46.0	-14.2	-18.9	PASS
491.52	33.0	<<	46.0	-13.0	n.a.	PASS
509.70	30.3	<<	46.0	-15.7	n.a.	PASS
589.82	31.8	<<	46.0	-14.2	n.a.	PASS
622.59	29.9	<<	46.0	-16.1	n.a.	PASS

Table 13: radiated emission passive mode.

The results of the radiated emission tests, carried out in accordance with 47 CFR Part 15, sections 15.205, 15.209, 15.223 (a) and 15.231 (a)(4), 15.231 (b), with the EUT operating in continuous transmit mode on 8.2 MHz +/- 700 kHz, are depicted in table 13.

Note:
1) Field strength values of radiated emissions at frequencies not listed in table 13 are more than 20 dB below the applicable limit.
2) Active mode means the system is detecting a tag (alarm sounds).
3) << means no emission above noise floor.
4) Passive mode means that the system is standby (alarm is off).

Test engineer:

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Name : P.A.J.M. Robben

Date : January 20, 2004

3.1.14 Radiated field strength measurements, configuration XIII, active mode.

Frequency (MHz)	Measurement results dB(µV)/m @ 3 metres Quasi-peak		Limits dB(µV)/m @ 3 metres Quasi-peak	Margin (dB) Quasi-peak		Result
	Vertical	Horizontal		Vertical	Horizontal	
60.00	21.1	18.6	40.0	-18.9	-21.4	PASS
87.24	22.9	12.9	40.0	-17.1	-27.1	PASS
90.00	26.5	20.6	43.5	-17.0	-22.9	PASS
98.30	28.0	22.4	43.5	-15.5	-21.1	PASS
104.20	22.0	<<	43.5	-21.5	n.a.	PASS
158.30	27.5	23.7	43.5	-16.0	-19.8	PASS
215.90	25.2	25.9	43.5	-18.3	-17.6	PASS
449.37	33.2	27.8	46.0	-12.8	-18.2	PASS
449.99	33.2	28.1	46.0	-12.8	-17.9	PASS
458.75	31.3	26.6	46.0	-14.7	-19.4	PASS
491.52	32.3	<<	46.0	-13.7	n.a.	PASS
509.70	30.1	<<	46.0	-15.9	n.a.	PASS
589.82	31.8	<<	46.0	-14.2	n.a.	PASS
622.59	29.3	<<	46.0	-16.7	n.a.	PASS

Table 14: radiated emission active mode.

The results of the radiated emission tests, carried out in accordance with 47 CFR Part 15, sections 15.205, 15. , 15.223 (a) and 15.231 (a)(4), 15.231 (b), with the EUT operating in activated continuous transmit mode on 8.2 MHz +/- 700 kHz, are depicted in table 14.

Note:
1) Field strength values of radiated emissions at frequencies not listed in table 14 are more than 20 dB below the applicable limit.
2) Active mode means the system is detecting a tag (alarm sounds).
3) << means no emission above noise floor.
4) Passive mode means that the system is standby (alarm is off).

Test engineer:

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Date : January 20, 2004

3.1.15 Radiated field strength measurement, configuration XIII-a, passive mode.

Frequency (MHz)	Measurement results dB(µV)/m @ 3 metres Quasi-peak		Limits dB(µV)/m @ 3 metres Quasi-peak	Margin (dB) Quasi-peak		Result
	Vertical	Horizontal		Vertical	Horizontal	
60.00	23.4	19.7	40.0	-16.6	-20.3	PASS
90.00	23.3	18.7	43.5	-20.2	-24.8	PASS
98.30	24.7	21.6	43.5	-18.8	-21.9	PASS
104.20	19.4	<<	43.5	-24.1	n.a.	PASS
215.90	25.1	25.1	43.5	-18.4	-18.4	PASS
449.37	40.3	28.4	46.0	-5.7	-17.6	PASS
449.99	37.9	30.5	46.0	-8.1	-15.5	PASS
458.75	34.9	29.7	46.0	-11.1	-16.3	PASS
491.52	32.8	<<	46.0	-13.2	n.a.	PASS
509.70	28.5	<<	46.0	-17.5	n.a.	PASS
589.82	30.3	<<	46.0	-15.7	n.a.	PASS
622.59	30.2	<<	46.0	-15.8	n.a.	PASS

Table 15: radiated emission passive mode

The results of the radiated emission tests, carried out in accordance with 47 CFR Part 15, sections 15.205, 15. , 15.223 (a) and 15.231 (a)(4), 15.231 (b), with the EUT operating in continuous transmit mode on 8.2 MHz +/- 700 kHz, are depicted in table 15.

Note:
1) Field strength values of radiated emissions at frequencies not listed in table 15 are more than 20 dB below the applicable limit.
2) Active mode means the system is detecting a tag (alarm sounds).
3) << means no emission above noise floor.
4) Passive mode means that the system is standby (alarm is off).

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Date : January 21, 2004

3.1.16 Radiated field strength measurements, configuration XIII-a, active mode.

Frequency (MHz)	Measurement results dB(µV)/m @ 3 metres Quasi-peak		Limits dB(µV)/m @ 3 metres Quasi-peak	Margin (dB) Quasi-peak		Result
	Vertical	Horizontal		Vertical	Horizontal	
60.00	21.9	20.0	40.0	-18.1	-20.0	PASS
90.00	<<	<<	43.5	n.a.	n.a.	PASS
98.30	24.3	21.6	43.5	-19.2	-21.9	PASS
104.20	<<	<<	43.5	n.a.	n.a.	PASS
215.90	25.5	25.6	43.5	-18.0	-17.9	PASS
449.37	34.8	29.6	46.0	-11.2	-16.4	PASS
449.99	36.2	29.6	46.0	-9.8	-16.4	PASS
458.75	34.0	28.9	46.0	-12.0	-17.1	PASS
491.52	30.9	<<	46.0	-15.1	n.a.	PASS
509.70	29.9	<<	46.0	-16.1	n.a.	PASS
589.82	29.5	<<	46.0	-16.5	n.a.	PASS
622.59	29.7	<<	46.0	-16.3	n.a.	PASS

Table 16: radiated emission active mode

The results of the radiated emission tests, carried out in accordance with 47 CFR Part 15, sections 15.205, 15. , 15.223 (a) and 15.231 (a)(4), 15.231 (b), with the EUT operating in activated continuous transmit mode on 8.2 MHz +/- 700 kHz, are depicted in table 16.

Note:
1) Field strength values of radiated emissions at frequencies not listed in table 16 are more than 20 dB below the applicable limit.
2) Active mode means the system is detecting a tag (alarm sounds).
3) << means no emission above noise floor.
4) Passive mode means that the system is standby (alarm is off).

Test engineer:

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Name : P.A.J.M. Robben

Date : January 21, 2004

3.1.17 Radiated field strength measurement, configuration XVIII, passive mode.

Frequency (MHz)	Measurement results dB(µV)/m @ 3 metres Quasi-peak		Limits dB(µV)/m @ 3 metres Quasi-peak	Margin (dB) Quasi-peak		Result
	Vertical	Horizontal		Vertical	Horizontal	
30.00	29.2	20.7	40.0	-10.8	-19.3	PASS
35.00	31.4	21.9	40.0	-8.7	-18.2	PASS
32.75	34.0	23.7	40.0	-6.0	-16.3	PASS
37.62	24.2	17.4	40.0	-15.8	-22.6	PASS
61.52	23.0	12.9	40.0	-17.0	-27.1	PASS
60.00	25.7	18.8	40.0	-14.3	-21.2	PASS
73.07	26.7	16.5	40.0	-13.3	-23.5	PASS
82.48	22.6	22.3	40.0	-17.4	-17.7	PASS
90.00	28.1	<<	43.5	-15.4	n.a.	PASS
142.77	23.9	22.4	43.5	-19.6	-21.1	PASS
173.12	29.4	20.2	43.5	-14.1	-23.3	PASS
180.22	25.5	17.2	43.5	-18.0	-26.3	PASS
193.41	28.2	19.9	43.5	-15.3	-23.6	PASS
294.91	25.3	22.5	46.0	-20.7	-23.5	PASS
450.03	33.0	35.0	46.0	-13.0	-11.0	PASS

Table 17: radiated emission passive mode

The results of the radiated emission tests, carried out in accordance with 47 CFR Part 15, sections 15.205, 15. , 15.223 (a) and 15.231 (a)(4), 15.231 (b), with the EUT operating in continuous transmit mode on 8.2 MHz +/- 700 kHz, are depicted in table 17.

Note:
1) Field strength values of radiated emissions at frequencies not listed in table 17 are more than 20 dB below the applicable limit.
2) Active mode means the system is detecting a tag (alarm sounds).
3) << means no emission above noise floor.
4) Passive mode means that the system is standby (alarm is off).

Test engineer:

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Name : J. Schuurmans

Date : January 20, 2004

3.1.18 Radiated field strength measurements, configuration XVIII, active mode.

Frequency (MHz)	Measurement results dB(µV)/m @ 3 metres Quasi-peak		Limits dB(µV)/m @ 3 metres Quasi-peak	Margin (dB) Quasi-peak		Result
	Vertical	Horizontal		Vertical	Horizontal	
30.00	29.7	19.4	40.0	-10.3	-20.6	PASS
35.00	31.5	22.1	40.0	-8.6	-18.0	PASS
32.75	26.9	23.6	40.0	-13.1	-16.4	PASS
37.62	24.7	17.5	40.0	-15.3	-22.5	PASS
61.52	23.3	12.6	40.0	-16.7	-27.4	PASS
60.00	24.4	19.2	40.0	-15.6	-20.8	PASS
73.07	26.2	17.5	40.0	-13.8	-22.5	PASS
82.48	23.9	14.7	40.0	-16.1	-25.3	PASS
90.00	23.8	<<	43.5	-19.7	n.a.	PASS
142.77	26.8	22.1	43.5	-16.7	-21.4	PASS
173.12	27.7	20.5	43.5	-15.8	-23.0	PASS
180.22	23.1	17.4	43.5	-20.4	-26.1	PASS
193.41	23.2	16.6	43.5	-20.3	-26.9	PASS
294.91	25.5	24.3	46.0	-20.5	-21.7	PASS
450.03	35.6	32.3	46.0	-10.4	-13.7	PASS

Table 18: radiated emission active mode

The results of the radiated emission tests, carried out in accordance with 47 CFR Part 15, sections 15.205, 15. , 15.223 (a) and 15.231 (a)(4), 15.231 (b), with the EUT operating in activated continuous transmit mode on 8.2 MHz +/- 700 kHz, are depicted in table 18.

Note:
1) Field strength values of radiated emissions at frequencies not listed in table 18 are more than 20 dB below the applicable limit.
2) Active mode means the system is detecting a tag (alarm sounds).
3) << means no emission above noise floor.
4) Passive mode means that the system is standby (alarm is off).

Test engineer:

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Name : J. Schuurmans

Date : January 20, 2004

3.2 Frequency range of 0.009-30 MHz, H-field.

3.2.1 Radiated field strength measurements, configuration IV, passive mode.

Frequency (MHz)	Measurement results dBµV Quasi-peak		Antenna factor	Cable loss	Measurement results dB(µV)/m Quasi-peak (calculated)	Limits Part 15.209 dB(µV)/m (calculated)
	3 meters	10 meters	dB	dB		
0.009 - 0.490	<<	<<	16.0	1	<10.0	48.5 – 13.8 (300 m)
0.490 - 1.705	<<	<<	16.0	1	<10.0	33.8 – 22.9 (30 m)
1.705 – 7.4	<<	<<	15.9	1	<10.0	30.0 (30 m)
7.57	39.10	15.00	15.9	1	8.91 (30 m)	40 (30 m)
8.70	47.8	24.7	15.9	1	19.52(30 m)	40 (30 m)
8.7 –10	<<	<<	15.9	1	<10.0	40 (30 m)
10-30	<<	<<	15.9	1	<10.0	30 (30 m)

Table 19: Sweeping passive

The results of the radiated emission tests, carried out in accordance with 47 CFR Part 15, sections 15.205 and 15.209 and 15.223, with the EUT operating in continuous transmit mode on 8.2 MHz +/- 700 kHz, are depicted in table 19.

Notes: - A total work out of the calculated measurement result can be found in the Appendix 1.

- Frequency range: 9-90 kHz Average detector used during measurements.
  110-490 kHz Average detector used during measurements.
- The radiated field strengths were measured at a distance of 3 and 10 meters.

  << indicates that no field strength values could be measured on the listed frequencies or in the listed frequency range.
- Field strength values of radiated emissions at frequencies not listed in table 19 are more than 20 dB below the applicable limit.
- Sweeping passive means the system is standby (alarm is off).

Test engineer:

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Name : P.A.J.M. Robben

Date : January 20, 2004

3.2.2 Radiated field strength measurements, configuration IV, active mode.

Frequency (MHz)	Measurement results dBµV Quasi-peak		Antenna factor	Cable loss	Measurement results dB(µV)/m Quasi-peak (calculated)	Limits Part 15.209 dB(µV)/m (calculated)
	3 meters	10 meters	dB	dB		
0.009 - 0.490	<<	<<	16.0	1	<10.0	48.5 – 13.8 (300 m)
0.490 - 1.705	<<	<<	16.0	1	<10.0	33.8 – 22.9 (30 m)
1.705 – 7.4	<<	<<	15.9	1	<10.0	30.0 (30 m)
7.57	21.30	9.50	15.9	1	14.6 (30 m)	40 (30 m)
8.70	28.6	13.5	15.9	1	15.6 (30 m)	40 (30 m)
8.7 –10	<<	<<	15.9	1	<10.0	40 (30 m)
10-30	<<	<<	15.9	1	<10.0	30 (30 m)

Table 20: Sweeping active

The results of the radiated emission tests, carried out in accordance with 47 CFR Part 15, sections 15.205 and 15.209 and 15.223, with the EUT operating in continuous transmit mode on 8.2 MHz +/- 700 kHz, are depicted in table 20

Notes:

- A total work out of the calculated measurement result can be found in the Appendix 1.
- Frequency range: 9-90 kHz Average detector used during measurements.
  110-490 kHz Average detector used during measurements.
- The radiated field strengths were measured at a distance of 3 and 10 meters.
- << indicates that no field strength values could be measured on the listed frequencies or in the listed frequency range.
- Field strength values of radiated emissions at frequencies not listed in table 20 are more than 20 dB below the applicable limit.

Sweeping active means the system is detecting a tag (alarm sounds).

Test engineer

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Name : P.A.J.M Robben

Date : January 21, 2004

3.2.3 Radiated field strength measurements, of configuration IV, sweep stopped.

Frequency (MHz)	Measurement results dBµV Quasi-peak		Antenna factor	Cable loss	Measurement results dB(µV)/m Quasi-peak (calculated)	Limits Part 15.223 dB(µV)/m (calculated	Limits Part 15.209 dB(µV)/m (calculated)
	3 meters	10 meters	dB	dB			
7.58581	44.8	29.7	15.9	1	31.8	40 (30m)	n.a.
15.1716	<0	<0	15.9	1	n.a.	n.a.	30 (30m)
22.7574	<0	<0	15.9	1	n.a.	n.a.	30 (30m)
8.69727	50.9	19.5	15.9	1	6.	40 (30m)	n.a.
17.3945	<0	<0	15.9	1	n.a.	n.a.	30 (30m)
26.0918	<0	<0	15.9	1	n.a.	n.a.	30 (30m)

Table 21: Sweep stopped

The results of the radiated emission tests, carried out in accordance with 47 CFR Part 15, sections 15.205 and 15.209 and 15.223, with the EUT operating in sweep stopped mode are depicted in table 21.

Notes:
- A total work out of the calculated measurement result can be found in the Appendix 1.
- The radiated field strengths were measured at a distance of 3 and 10 meters.
- n.a. that the limit is not applicable.
- Field strength values of radiated emissions at frequencies not listed in table 21 are more than 20 dB below the applicable limit.

Test engineer

Signature : 

Name : P.A.J.M Robben

Date : January 21, 2004

3.2.4 Radiated field strength measurements, configuration V, passive mode.

Frequency (MHz)	Measurement results dBµV Quasi-peak		Antenna factor	Cable loss	Measurement results dB(µV)/m Quasi-peak (calculated)	Limits Part 15.209 dB(µV)/m (calculated)
	3 meters	10 meters	dB	dB		
0.009 - 0.490	<<	<<	16.0	1	<10.0	48.5 – 13.8 (300 m)
0.490 - 1.705	<<	<<	16.0	1	<10.0	33.8 – 22.9 (30 m)
1.705 – 7.4	<<	<<	15.9	1	<10.0	30.0 (30 m)
7.57	50.10	25.10	15.9	1	18.2 (30 m)	40 (30 m)
8.70	49.9	26.8	15.9	1	21.6(30 m)	40 (30 m)
8.7 –10	<<	<<	15.9	1	<10.0	40 (30 m)
10-30	<<	<<	15.9	1	<10.0	30 (30 m)

Table 22: Sweeping passive

The results of the radiated emission tests, carried out in accordance with 47 CFR Part 15, sections 15.205 and 15.209 and 15.223, with the EUT operating in continuous transmit mode on 8.2 MHz +/- 700 kHz, are depicted in table 22.

Notes:

- A total work out of the calculated measurement result can be found in the Appendix 1.
- Frequency range: 9-90 kHz Average detector used during measurements.
- 110-490 kHz Average detector used during measurements.
- The radiated field strengths were measured at a distance of 3 and 10 meters.
- << indicates that no field strength values could be measured on the listed frequencies or in the listed frequency range.
- Field strength values of radiated emissions at frequencies not listed in table 22 are more than 20 dB below the applicable limit.
- Sweeping passive means the system is standby (alarm is off).

Test engineer

Signature : 

Name : P.A.J.M Robben

Date : January 20, 2004

3.2.5 Radiated field strength measurements, configuration V, active mode.

Frequency (MHz)	Measurement results dBµV Quasi-peak		Antenna factor	Cable loss	Measurement results dB(µV)/m Quasi-peak (calculated)	Limits Part 15.209 dB(µV)/m (calculated)
	3 meters	10 meters	dB	dB		
0.009 - 0.490	<<	<<	16.0	1	<10.0	48.5 – 13.8 (300 m)
0.490 - 1.705	<<	<<	16.0	1	<10.0	33.8 – 22.9 (30 m)
1.705 – 7.4	<<	<<	15.9	1	<10.0	30.0 (30 m)
7.57	50.10	25.10	15.9	1	18.2 (30 m)	40 (30 m)
8.70	49.9	26.8	15.9	1	21.6 (30 m)	40 (30 m)
8.7 –10	<<	<<	15.9	1	<10.0	40 (30 m)
10-30	<<	<<	15.9	1	<10.0	30 (30 m)

Table 23: Sweeping active.

The results of the radiated emission tests, carried out in accordance with 47 CFR Part 15, sections 15.205 and 15.209 and 15.223, with the EUT operating in continuous transmit mode on 8.2 MHz +/- 700 kHz, are depicted in table 23.

Notes:
- A total work out of the calculated measurement result can be found in the Appendix 1.
- Frequency range: 9-90 kHz Average detector used during measurements.
  110-490 kHz Average detector used during measurements.
- The radiated field strengths were measured at a distance of 3 and 10 meters.
- << indicates that no field strength values could be measured on the listed frequencies or in the listed frequency range.
- Field strength values of radiated emissions at frequencies not listed in table 23 are more than 20 dB below the applicable limit.
- Sweeping active means the system is detecting a tag (alarm sounds).

.

Test engineer

Signature : 

Name : P.A.J.M Robben

Date : January 20, 2004

3.2.6 Radiated field strength measurements, of configuration V, sweep stopped.

Frequency (MHz)	Measurement results dBµV Quasi-peak		Antenna factor	Cable loss	Measurement results dB(µV)/m Quasi-peak (calculated)	Limits Part 15.223 dB(µV)/m (calculated	Limits Part 15.209 dB(µV)/m (calculated)
	3 meters	10 meters	dB	dB			
7.58	62.7	37.7	15.9	1	30.8	40 (30m)	n.a.
15.16	<5	<5	15.9	1	<5	n.a.	30 (30m)
22.74	<5	<5	15.9	1	<5	n.a.	30 (30m)
8.69001	62.5	39.7	15.9	1	34.8	40 (30m)	n.a.
17.38	<5	<0	15.9	1	<5	n.a.	30 (30m)
26.07	<5	<0	15.9	1	<5	n.a.	30 (30m)

Table 24: Sweep stopped

The results of the radiated emission tests, carried out in accordance with 47 CFR Part 15, sections 15.205 and 15.209 and 15.223, with the EUT operating in sweep stopped mode are depicted in table 24.

Notes:
- A total work out of the calculated measurement result can be found in the Appendix 1.
- The radiated field strengths were measured at a distance of 3 and 10 meters.
- n.a. that the limit is not applicable.
- Field strength values of radiated emissions at frequencies not listed in table 24 are more than 20 dB below the applicable limit.

Test engineer

Signature : 

Name : P.A.J.M Robben

Date : January, 20 2004

3.2.7 Radiated field strength measurements, configuration IX, passive mode.

Frequency (MHz)	Measurement results dBµV Quasi-peak		Antenna factor	Cable loss	Measurement results dB(µV)/m Quasi-peak (calculated)	Limits Part 15.209 dB(µV)/m (calculated)
	3 meters	10 meters	dB	dB		
0.009 - 0.490	<<	<<	16.0	1	<10.0	48.5 – 13.8 (300 m)
0.490 - 1.705	<<	<<	16.0	1	<10.0	33.8 – 22.9 (30 m)
1.705 – 7.4	<<	<<	15.9	1	<10.0	30.0 (30 m)
7.57	50.10	25.10	15.9	1	18.2 (30 m)	40 (30 m)
8.70	49.9	26.8	15.9	1	21.6(30 m)	40 (30 m)
8.7 –10	<<	<<	15.9	1	<10.0	40 (30 m)
10-30	<<	<<	15.9	1	<10.0	30 (30 m)

Table 25: Sweeping passive.

The results of the radiated emission tests, carried out in accordance with 47 CFR Part 15, sections 15.205 and 15.209 and 15.223, with the EUT operating in continuous transmit mode on 8.2 MHz +/- 700 kHz, are depicted in table 25.

Notes:

- A total work out of the calculated measurement result can be found in the Appendix 1.
- Frequency range: 9-90 kHz Average detector used during measurements.
  110-490 kHz Average detector used during measurements.
- The radiated field strengths were measured at a distance of 3 and 10 meters.
- << indicates that no field strength values could be measured on the listed frequencies or in the listed frequency range.
- Field strength values of radiated emissions at frequencies not listed in table 25 are more than 20 dB below the applicable limit.
- Sweeping passive means the system is standby (alarm is off).

Test engineer

Signature : 

Name : J. Schuurmans

Date : January 27, 2004

3.2.8 Radiated field strength measurements, configuration IX, active mode.

Frequency (MHz)	Measurement results dBµV Quasi-peak		Antenna factor	Cable loss	Measurement results dB(µV)/m Quasi-peak (calculated)	Limits Part 15.209 dB(µV)/m (calculated)
	3 meters	10 meters	dB	dB		
0.009 - 0.490	<<	<<	16.0	1	<10.0	48.5 – 13.8 (300 m)
0.490 - 1.705	<<	<<	16.0	1	<10.0	33.8 – 22.9 (30 m)
1.705 – 7.4	<<	<<	15.9	1	<10.0	30.0 (30 m)
7.57	50.10	25.10	15.9	1	18.2 (30 m)	40 (30 m)
8.70	49.9	26.8	15.9	1	21.6 (30 m)	40 (30 m)
8.7 –10	<<	<<	15.9	1	<10.0	40 (30 m)
10-30	<<	<<	15.9	1	<10.0	30 (30 m)

Table 26: Sweeping active

The results of the radiated emission tests, carried out in accordance with 47 CFR Part 15, sections 15.205 and 15.209 and 15.223, with the EUT operating in continuous transmit mode on 8.2 MHz +/- 700 kHz, are depicted in table 26.

Notes:

- A total work out of the calculated measurement result can be found in the Appendix 1.
- Frequency range: 9-90 kHz Average detector used during measurements.
  110-490 kHz Average detector used during measurements.
- The radiated field strengths were measured at a distance of 3 and 10 meters.
- << indicates that no field strength values could be measured on the listed frequencies or in the listed frequency range.
- Field strength values of radiated emissions at frequencies not listed in table 26 are more than 20 dB below the applicable limit.
- Sweeping active means the system is detecting a tag (alarm sounds).

Test engineer

Signature : 

Name : J. Schuurmans

Date : January 27, 2004

3.2.9 Radiated field strength measurements, of configuration IX, sweep stopped.

Frequency (MHz)	Measurement results dBµV Quasi-peak		Antenna factor	Cable loss	Measurement results dB(µV)/m Quasi-peak (calculated)	Limits Part 15.223 dB(µV)/m (calculated	Limits Part 15.209 dB(µV)/m (calculated)
	3 meters	10 meters	dB	dB			
7.58	62.7	37.7	15.9	1	30.8	40 (30m)	n.a.
15.16	<5	<5	15.9	1	n.a.	n.a.	30 (30m)
22.74	<5	<5	15.9	1	n.a.	n.a.	30 (30m)
8.69001	62.5	39.7	15.9	1	34.8	40 (30m)	n.a.
17.38	<5	<0	15.9	1	n.a.	n.a.	30 (30m)
26.07	<5	<0	15.9	1	n.a.	n.a.	30 (30m)

Table 27: Sweep stopped

The results of the radiated emission tests, carried out in accordance with 47 CFR Part 15, sections 15.205 and 15.209 and 15.223, with the EUT operating in sweep stopped mode are depicted in table 27.

Notes:
- A total work out of the calculated measurement result can be found in the Appendix 1.
- The radiated field strengths were measured at a distance of 3 and 10 meters.
- n.a. that the limit is not applicable.
- Field strength values of radiated emissions at frequencies not listed in table 27 are more than 20 dB below the applicable limit.

Test engineer

Signature : 

Name : J. Schuurmans

Date : January 27, 2004

3.2.10 Radiated field strength measurements, configuration X, passive mode.

Frequency (MHz)	Measurement results dBµV Quasi-peak		Antenna factor	Cable loss	Measurement results dB(µV)/m Quasi-peak (calculated)	Limits Part 15.209 dB(µV)/m (calculated)
	3 meters	10 meters	dB	dB		
0.009 - 0.490	<<	<<	16.0	1	<10.0	48.5 – 13.8 (300 m)
0.490 - 1.705	<<	<<	16.0	1	<10.0	33.8 – 22.9 (30 m)
1.705 – 7.4	<<	<<	15.9	1	<10.0	30.0 (30 m)
7.57	49.20	23.50	15.9	1	16.0 (30 m)	40 (30 m)
8.70	52.7	30	15.9	1	25.2(30 m)	40 (30 m)
8.7 –10	<<	<<	15.9	1	<10.0	40 (30 m)
10-30	<<	<<	15.9	1	<10.0	30 (30 m)

Table 28: Sweeping passive

The results of the radiated emission tests, carried out in accordance with 47 CFR Part 15, sections 15.205 and 15.209 and 15.223, with the EUT operating in continuous transmit mode on 8.2 MHz +/- 700 kHz, are depicted in Table 28.

Notes:

- A total work out of the calculated measurement result can be found in the Appendix 1.
- Frequency range: 9-90 kHz Average detector used during measurements.
  110-490 kHz Average detector used during measurements.
- The radiated field strengths were measured at a distance of 3 and 10 meters.
- << indicates that no field strength values could be measured on the listed frequencies or in the listed frequency range.
- Field strength values of radiated emissions at frequencies not listed in table 28 are more than 20 dB below the applicable limit.
- Sweeping passive means the system is standby (alarm is off).

.

Test engineer

Signature : 

Name : J. Schuurmans

Date : January 27, 2004

3.2.11 Radiated field strength measurements, configuration X, active mode.

Frequency (MHz)	Measurement results dBµV Quasi-peak		Antenna factor	Cable loss	Measurement results dB(µV)/m Quasi-peak (calculated)	Limits Part 15.209 dB(µV)/m (calculated)
	3 meters	10 meters	dB	dB		
0.009 - 0.490	<<	<<	16.0	1	<10.0	48.5 – 13.8 (300 m)
0.490 - 1.705	<<	<<	16.0	1	<10.0	33.8 – 22.9 (30 m)
1.705 – 7.4	<<	<<	15.9	1	<10.0	30.0 (30 m)
7.57	48.60	23.60	15.9	1	16.7 (30 m)	40 (30 m)
8.70	52.7	30	15.9	1	25.2 (30 m)	40 (30 m)
8.7 –10	<<	<<	15.9	1	<10.0	40 (30 m)
10-30	<<	<<	15.9	1	<10.0	30 (30 m)

Table 29: Sweeping active.

The results of the radiated emission tests, carried out in accordance with 47 CFR Part 15, sections 15.205 and 15.209 and 15.223, with the EUT operating in continuous transmit mode on 8.2 MHz +/- 700 kHz, are depicted in table 29.

Notes:

- A total work out of the calculated measurement result can be found in the Appendix 1.
- Frequency range: 9-90 kHz Average detector used during measurements.
  110-490 kHz Average detector used during measurements.
- The radiated field strengths were measured at a distance of 3 and 10 meters.
- << indicates that no field strength values could be measured on the listed frequencies or in the listed frequency range.
- Field strength values of radiated emissions at frequencies not listed in table 29 are more than 20 dB below the applicable limit.
- Sweeping active means the system is detecting a tag (alarm sounds).

Test engineer

Signature : 

Name : J. Schuurmans

Date : January 27, 2004

3.2.12 Radiated field strength measurements, of configuration X, sweep stopped.

Frequency (MHz)	Measurement results dBµV Quasi-peak		Antenna factor	Cable loss	Measurement results dB(µV)/m Quasi-peak (calculated)	Limits Part 15.223 dB(µV)/m (calculated	Limits Part 15.209 dB(µV)/m (calculated)
	3 meters	10 meters	dB	dB			
7.58565	62.1	35.9	15.9	1	27.9	40 (30m)	n.a.
15.1713	<5	<5	15.9	1	<5	n.a.	30 (30m)
22.757	<5	<5	15.9	1	<5	n.a.	30 (30m)
8.68688	66.2	42.3	15.9	1	36.4	40 (30m)	n.a.
17.3948	<5	<0	15.9	1	<5	n.a.	30 (30m)
26.0922	<5	<0	15.9	1	<5	n.a.	30 (30m)

Table 30: Sweep stopped

The results of the radiated emission tests, carried out in accordance with 47 CFR Part 15, sections 15.205 and 15.209 and 15.223, with the EUT operating in sweep stopped mode are depicted in table 30.

Notes:
- A total work out of the calculated measurement result can be found in the Appendix 1.
- The radiated field strengths were measured at a distance of 3 and 10 meters.
- n.a. that the limit is not applicable.
- Field strength values of radiated emissions at frequencies not listed in table 30 are more than 20 dB below the applicable limit.

Test engineer

Signature : 

Name : J. Schuurmans

Date : January 27, 2004

3.2.13 Radiated field strength measurements, configuration XI, passive mode.

Frequency (MHz)	Measurement results dBµV Quasi-peak		Antenna factor	Cable loss	Measurement results dB(µV)/m Quasi-peak (calculated)	Limits Part 15.209 dB(µV)/m (calculated)
	3 meters	10 meters	dB	dB		
0.009 - 0.490	<<	<<	16.0	1	<10.0	48.5 – 13.8 (300 m)
0.490 - 1.705	<<	<<	16.0	1	<10.0	33.8 – 22.9 (30 m)
1.705 – 7.4	<<	<<	15.9	1	<10.0	30.0 (30 m)
7.57	49.20	23.50	15.9	1	16.0 (30 m)	40 (30 m)
8.70	49.2	26.4	15.9	1	21.5(30 m)	40 (30 m)
8.7 –10	<<	<<	15.9	1	<10.0	40 (30 m)
10-30	<<	<<	15.9	1	<10.0	30 (30 m)

Table 31: Sweeping passive

The results of the radiated emission tests, carried out in accordance with 47 CFR Part 15, sections 15.205 and 15.209 and 15.223, with the EUT operating in continuous transmit mode on 8.2 MHz +/- 700 kHz, are depicted in table 31.

Notes:

- A total work out of the calculated measurement result can be found in the Appendix 1.
- Frequency range: 9-90 kHz Average detector used during measurements.
  110-490 kHz Average detector used during measurements.
- The radiated field strengths were measured at a distance of 3 and 10 meters.
- << indicates that no field strength values could be measured on the listed frequencies or in the listed frequency range.
- Field strength values of radiated emissions at frequencies not listed in table 31 are more than 20 dB below the applicable limit.
- Sweeping passive means the system is standby (alarm is off).

Test engineer

Signature : 

Name : J. Schuurmans

Date : January 27, 2004

3.2.14 Radiated field strength measurements, configuration XI, active mode.

Frequency (MHz)	Measurement results dBµV Quasi-peak		Antenna factor	Cable loss	Measurement results dB(µV)/m Quasi-peak (calculated)	Limits Part 15.209 dB(µV)/m (calculated)
	3 meters	10 meters	dB	dB		
0.009 - 0.490	<<	<<	16.0	1	<10.0	48.5 – 13.8 (300 m)
0.490 - 1.705	<<	<<	16.0	1	<10.0	33.8 – 22.9 (30 m)
1.705 – 7.4	<<	<<	15.9	1	<10.0	30.0 (30 m)
7.57	49.00	23.60	15.9	1	16.3 (30 m)	40 (30 m)
8.70	49.2	26.3	15.9	1	21.3 (30 m)	40 (30 m)
8.7 –10	<<	<<	15.9	1	<10.0	40 (30 m)
10-30	<<	<<	15.9	1	<10.0	30 (30 m)

Table 32: Sweeping active

The results of the radiated emission tests, carried out in accordance with 47 CFR Part 15, sections 15.205 and 15.209 and 15.223, with the EUT operating in continuous transmit mode on 8.2 MHz +/- 700 kHz, are depicted in table 32

Notes:

- A total work out of the calculated measurement result can be found in the Appendix 1.
- Frequency range: 9-90 kHz Average detector used during measurements.
  110-490 kHz Average detector used during measurements.
- The radiated field strengths were measured at a distance of 3 and 10 meters.
- << indicates that no field strength values could be measured on the listed frequencies or in the listed frequency range.
- Field strength values of radiated emissions at frequencies not listed in table 32 are more than 20 dB below the applicable limit.
- Sweeping active means the system is detecting a tag (alarm sounds).

Test engineer

Signature : 

Name : J. Schuurmans

Date : January 27, 2004

3.2.15 Radiated field strength measurements, of configuration XI, sweep stopped.

Frequency (MHz)	Measurement results dBµV Quasi-peak		Antenna factor	Cable loss	Measurement results dB(µV)/m Quasi-peak (calculated)	Limits Part 15.223 dB(µV)/m (calculated	Limits Part 15.209 dB(µV)/m (calculated)
	3 meters	10 meters	dB	dB			
7.58565	61.2	36.3	15.9	1	29.5	40 (30m)	n.a.
15.1713	<5	<5	15.9	1	<5	n.a.	30 (30m)
22.757	<5	<5	15.9	1	<5	n.a.	30 (30m)
8.68688	61.5	38.9	15.9	1	34.2	40 (30m)	n.a.
17.3948	<5	<0	15.9	1	<5	n.a.	30 (30m)
26.0922	<5	<0	15.9	1	<5	n.a.	30 (30m)

Table 33: Sweep stopped

The results of the radiated emission tests, carried out in accordance with 47 CFR Part 15, sections 15.205 and 15.209 and 15.223, with the EUT operating in sweep stopped mode are depicted in table 33.

Notes:
- A total work out of the calculated measurement result can be found in the Appendix 1.
- The radiated field strengths were measured at a distance of 3 and 10 meters.
- n.a. that the limit is not applicable.
- Field strength values of radiated emissions at frequencies not listed in table 33 are more than 20 dB below the applicable limit.

Test engineer

Signature : 

Name : J. Schuurmans

Date : January 27, 2004

3.2.16 Radiated field strength measurements, configuration XII, passive mode.

Frequency (MHz)	Measurement results dBµV Quasi-peak		Antenna factor	Cable loss	Measurement results dB(µV)/m Quasi-peak (calculated)	Limits Part 15.209 dB(µV)/m (calculated)
	3 meters	10 meters	dB	dB		
0.009 - 0.490	<<	<<	16.0	1	<10.0	48.5 – 13.8 (300 m)
0.490 - 1.705	<<	<<	16.0	1	<10.0	33.8 – 22.9 (30 m)
1.705 – 7.4	<<	<<	15.9	1	<10.0	30.0 (30 m)
7.57	47.10	19.90	15.9	1	11.0 (30 m)	40 (30 m)
8.70	48.1	19.9	15.9	1	10.1(30 m)	40 (30 m)
8.7 –10	<<	<<	15.9	1	<10.0	40 (30 m)
10-30	<<	<<	15.9	1	<10.0	30 (30 m)

Table 34: Sweeping passive

The results of the radiated emission tests, carried out in accordance with 47 CFR Part 15, sections 15.205 and 15.209 and 15.223, with the EUT operating in continuous transmit mode on 8.2 MHz +/- 700 kHz, are depicted in table 34.

Notes:

- A total work out of the calculated measurement result can be found in the Appendix 1.
- Frequency range: 9-90 kHz Average detector used during measurements.
  110-490 kHz Average detector used during measurements.
- The radiated field strengths were measured at a distance of 3 and 10 meters.
- << indicates that no field strength values could be measured on the listed frequencies or in the listed frequency range.
- Field strength values of radiated emissions at frequencies not listed in table 34 are more than 20 dB below the applicable limit.
- Sweeping passive means the system is standby (alarm is off).

Test engineer

Signature : 

Name : J. Schuurmans

Date : January 27, 2004

3.2.17 Radiated field strength measurements, configuration XII, active mode.

Frequency (MHz)	Measurement results dBµV Quasi-peak		Antenna factor	Cable loss	Measurement results dB(µV)/m Quasi-peak (calculated)	Limits Part 15.209 dB(µV)/m (calculated)
	3 meters	10 meters	dB	dB		
0.009 - 0.490	<<	<<	16.0	1	<10.0	48.5 – 13.8 (300 m)
0.490 - 1.705	<<	<<	16.0	1	<10.0	33.8 – 22.9 (30 m)
1.705 – 7.4	<<	<<	15.9	1	<10.0	30.0 (30 m)
7.57	47.10	19.90	15.9	1	11.0 (30 m)	40 (30 m)
8.70	48.1	19.9	15.9	1	10.1 (30 m)	40 (30 m)
8.7 –10	<<	<<	15.9	1	<10.0	40 (30 m)
10-30	<<	<<	15.9	1	<10.0	30 (30 m)

Table 35: Sweeping active.

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The results of the radiated emission tests, carried out in accordance with 47 CFR Part 15, sections 15.205 and 15.209 and 15.223, with the EUT operating in continuous transmit mode on 8.2 MHz +/- 700 kHz, are depicted in table 35.

Notes:

- A total work out of the calculated measurement result can be found in the Appendix 1.
- Frequency range: 9-90 kHz Average detector used during measurements.
  110-490 kHz Average detector used during measurements.
- The radiated field strengths were measured at a distance of 3 and 10 meters.
- << indicates that no field strength values could be measured on the listed frequencies or in the listed frequency range.
- Field strength values of radiated emissions at frequencies not listed in table 35 are more than 20 dB below the applicable limit.
- Sweeping active means the system is detecting a tag (alarm sounds).

Test engineer

Signature : 

Name : J. Schuurmans

Date : January 27, 2004

3.2.18 Radiated field strength measurements, of configuration XII, sweep stopped.

Frequency (MHz)	Measurement results dBµV Quasi-peak		Antenna factor	Cable loss	Measurement results dB(µV)/m Quasi-peak (calculated)	Limits Part 15.223 dB(µV)/m (calculated	Limits Part 15.209 dB(µV)/m (calculated)
	3 meters	10 meters	dB	dB			
7.58565	60.6	38.7	15.9	1	34.6	40 (30m)	n.a.
15.1713	<5	<5	15.9	1	<5	n.a.	30 (30m)
22.757	<5	<5	15.9	1	<5	n.a.	30 (30m)
8.68688	60.3	30.4	15.9	1	19.2	40 (30m)	n.a.
17.3948	<5	<0	15.9	1	<5	n.a.	30 (30m)
26.0922	<5	<0	15.9	1	<5	n.a.	30 (30m)

Table 36: Sweep stopped

The results of the radiated emission tests, carried out in accordance with 47 CFR Part 15, sections 15.205 and 15.209 and 15.223, with the EUT operating in sweep stopped mode are depicted in table 36.

Notes:
- A total work out of the calculated measurement result can be found in the Appendix 1.
- The radiated field strengths were measured at a distance of 3 and 10 meters.
- n.a. that the limit is not applicable.
- Field strength values of radiated emissions at frequencies not listed in table 36 are more than 20 dB below the applicable limit.

Test engineer

Signature : 

Name : J. Schuurmans

Date : January 27, 2004

3.2.19 Radiated field strength measurements, configuration XIII, passive mode.

Frequency (MHz)	Measurement results dBµV Quasi-peak		Antenna factor	Cable loss	Measurement results dB(µV)/m Quasi-peak (calculated)	Limits Part 15.209 dB(µV)/m (calculated)
	3 meters	10 meters	dB	dB		
0.009 - 0.490	<<	<<	16.0	1	<10.0	48.5 – 13.8 (300 m)
0.490 - 1.705	<<	<<	16.0	1	<10.0	33.8 – 22.9 (30 m)
1.705 – 7.4	<<	<<	15.9	1	<10.0	30.0 (30 m)
7.57	51.7	26.0	15.9	1	18.5 (30 m)	40 (30 m)
8.70	51.5	27.6	15.9	1	21.7(30 m)	40 (30 m)
8.7 –10	<<	<<	15.9	1	<10.0	40 (30 m)
10-30	<<	<<	15.9	1	<10.0	30 (30 m)

Table 37: Sweeping passive

The results of the radiated emission tests, carried out in accordance with 47 CFR Part 15, sections 15.205 and 15.209 and 15.223, with the EUT operating in continuous transmit mode on 8.2 MHz +/- 700 kHz, are depicted in table 37.

Notes:

- A total work out of the calculated measurement result can be found in the Appendix 1.
- Frequency range: 9-90 kHz Average detector used during measurements.
  110-490 kHz Average detector used during measurements.
- The radiated field strengths were measured at a distance of 3 and 10 meters.
- << indicates that no field strength values could be measured on the listed frequencies or in the listed frequency range.
- Field strength values of radiated emissions at frequencies not listed in table 37 are more than 20 dB below the applicable limit.
- Sweeping passive means the system is standby (alarm is off).

Test engineer

Signature : 

Name : J. Schuurmans

Date : January 27, 2004

3.2.20 Radiated field strength measurements, configuration XIII, active mode.

Frequency (MHz)	Measurement results dBµV Quasi-peak		Antenna factor	Cable loss	Measurement results dB(µV)/m Quasi-peak (calculated)	Limits Part 15.209 dB(µV)/m (calculated)
	3 meters	10 meters	dB	dB		
0.009 - 0.490	<<	<<	16.0	1	<10.0	48.5 – 13.8 (300 m)
0.490 - 1.705	<<	<<	16.0	1	<10.0	33.8 – 22.9 (30 m)
1.705 – 7.4	<<	<<	15.9	1	<10.0	30.0 (30 m)
7.57	47.10	19.90	15.9	1	11.0 (30 m)	40 (30 m)
8.70	48.1	19.9	15.9	1	10.1 (30 m)	40 (30 m)
8.7 –10	<<	<<	15.9	1	<10.0	40 (30 m)
10-30	<<	<<	15.9	1	<10.0	30 (30 m)

Table 38: Sweeping active

The results of the radiated emission tests, carried out in accordance with 47 CFR Part 15, sections 15.205 and 15.209 and 15.223, with the EUT operating in continuous transmit mode on 8.2 MHz +/- 700 kHz, are depicted in table 38.

Notes:

- A total work out of the calculated measurement result can be found in the Appendix 1.
- Frequency range: 9-90 kHz Average detector used during measurements.
  110-490 kHz Average detector used during measurements.
- The radiated field strengths were measured at a distance of 3 and 10 meters.
- << indicates that no field strength values could be measured on the listed frequencies or in the listed frequency range.
- Field strength values of radiated emissions at frequencies not listed in table 38 are more than 20 dB below the applicable limit.
- Sweeping active means the system is detecting a tag (alarm sounds).

Test engineer

Signature : 

Name : J. Schuurmans

Date : January 27, 2004

3.2.21 Radiated field strength measurements, of configuration XIII, Sweep stopped.

Frequency (MHz)	Measurement results dBµV Quasi-peak		Antenna factor	Cable loss	Measurement results dB(µV)/m Quasi-peak (calculated)	Limits Part 15.223 dB(µV)/m (calculated	Limits Part 15.209 dB(µV)/m (calculated)
	3 meters	10 meters	dB	dB			
7.58565	62.3	39	15.9	1	33.6	40 (30m)	n.a.
15.1713	<5	<5	15.9	1	<5	n.a.	30 (30m)
22.757	<5	<5	15.9	1	<5	n.a.	30 (30m)
8.68688	59.7	37	15.9	1	32.2	40 (30m)	n.a.
17.3948	<5	<0	15.9	1	<5	n.a.	30 (30m)
26.0922	<5	<0	15.9	1	<5	n.a.	30 (30m)

Table 39: Sweep stopped

The results of the radiated emission tests, carried out in accordance with 47 CFR Part 15, sections 15.205 and 15.209 and 15.223, with the EUT operating in sweep stopped mode are depicted in table 39.

Notes:
- A total work out of the calculated measurement result can be found in the Appendix 1.
- The radiated field strengths were measured at a distance of 3 and 10 meters.
- n.a. that the limit is not applicable.
- Field strength values of radiated emissions at frequencies not listed in table 39 are more than 20 dB below the applicable limit.

Test engineer

Signature : 

Name : J. Schuurmans

Date : January 27, 2004

3.2.22 Radiated field strength measurements, configuration XIII-a, passive mode.

Frequency (MHz)	Measurement results dBµV Quasi-peak		Antenna factor	Cable loss	Measurement results dB(µV)/m Quasi-peak (calculated)	Limits Part 15.209 dB(µV)/m (calculated)
	3 meters	10 meters	dB	dB		
0.009 - 0.490	<<	<<	16.0	1	<10.0	48.5 – 13.8 (300 m)
0.490 - 1.705	<<	<<	16.0	1	<10.0	33.8 – 22.9 (30 m)
1.705 – 7.4	<<	<<	15.9	1	<10.0	30.0 (30 m)
7.57	51.70	26.00	15.9	1	18.5 (30 m)	40 (30 m)
8.70	51.5	27.6	15.9	1	21.7(30 m)	40 (30 m)
8.7 –10	<<	<<	15.9	1	<10.0	40 (30 m)
10-30	<<	<<	15.9	1	<10.0	30 (30 m)

Table 40: Sweeping passive

The results of the radiated emission tests, carried out in accordance with 47 CFR Part 15, sections 15.205 and 15.209 and 15.223, with the EUT operating in continuous transmit mode on 8.2 MHz +/- 700 kHz, are depicted in table 40.

Notes:

- A total work out of the calculated measurement result can be found in the Appendix 1.
- Frequency range: 9-90 kHz Average detector used during measurements.
  110-490 kHz Average detector used during measurements.
- The radiated field strengths were measured at a distance of 3 and 10 meters.
- << indicates that no field strength values could be measured on the listed frequencies or in the listed frequency range.
- Field strength values of radiated emissions at frequencies not listed in table 40 are more than 20 dB below the applicable limit.
- Sweeping passive means the system is standby (alarm is off).

Test engineer

Signature : 

Name : P.A.J.M Robben

Date : January 21, 2004

3.2.23 Radiated field strength measurements, configuration XIII-a, active mode.

Frequency (MHz)	Measurement results dBµV Quasi-peak		Antenna factor	Cable loss	Measurement results dB(µV)/m Quasi-peak (calculated)	Limits Part 15.209 dB(µV)/m (calculated)
	3 meters	10 meters	dB	dB		
0.009 - 0.490	<<	<<	16.0	1	<10.0	48.5 – 13.8 (300 m)
0.490 - 1.705	<<	<<	16.0	1	<10.0	33.8 – 22.9 (30 m)
1.705 – 7.4	<<	<<	15.9	1	<10.0	30.0 (30 m)
7.57	51.70	26.00	15.9	1	18.5 (30 m)	40 (30 m)
8.70	51.5	27.6	15.9	1	21.7 (30 m)	40 (30 m)
8.7 –10	<<	<<	15.9	1	<10.0	40 (30 m)
10-30	<<	<<	15.9	1	<10.0	30 (30 m)

Table 41: Sweeping active

The results of the radiated emission tests, carried out in accordance with 47 CFR Part 15, sections 15.205 and 15.209 and 15.223, with the EUT operating in continuous transmit mode on 8.2 MHz +/- 700 kHz, are depicted in table 41.

Notes:

- A total work out of the calculated measurement result can be found in the Appendix 1.
- Frequency range: 9-90 kHz Average detector used during measurements.
  110-490 kHz Average detector used during measurements.
- The radiated field strengths were measured at a distance of 3 and 10 meters.
- << indicates that no field strength values could be measured on the listed frequencies or in the listed frequency range.
- Field strength values of radiated emissions at frequencies not listed in table 41 are more than 20 dB below the applicable limit.
- Sweeping passive means the system is standby (alarm is off).

Test engineer

Signature : 

Name : P.A.J.M Robben

Date : January 21, 2004

3.2.24 Radiated field strength measurements, of configuration XIII-a Sweep stopped.

Frequency (MHz)	Measurement results dBµV Quasi-peak		Antenna factor	Cable loss	Measurement results dB(µV)/m Quasi-peak (calculated)	Limits Part 15.223 dB(µV)/m (calculated	Limits Part 15.209 dB(µV)/m (calculated)
	3 meters	10 meters	dB	dB			
7.58565	62.3	39	15.9	1	33.6	40 (30m)	n.a.
15.1713	<5	<5	15.9	1	<5	n.a.	30 (30m)
22.757	<5	<5	15.9	1	<5	n.a.	30 (30m)
8.68688	59.7	37	15.9	1	32.2	40 (30m)	n.a.
17.3948	<5	<0	15.9	1	<5	n.a.	30 (30m)
26.0922	<5	<0	15.9	1	<5	n.a.	30 (30m)

Table 42: Sweep stopped

The results of the radiated emission tests, carried out in accordance with 47 CFR Part 15, sections 15.205 and 15.209 and 15.223, with the EUT operating in sweep stopped mode are depicted in table 42.

Notes:
- A total work out of the calculated measurement result can be found in the Appendix 1.
- The radiated field strengths were measured at a distance of 3 and 10 meters.
- n.a. that the limit is not applicable.
- Field strength values of radiated emissions at frequencies not listed in table 3 are more than 20 dB below the applicable limit.

Test engineer

Signature : 

Name : P.A.J.M Robben

Date : January 21, 2004

3.3 Conducted emission data.

3.3.1 Conducted emission, Configuration IV, passive mode.

Frequency (MHz)	Measurement results dB(µV) Neutral		Measurement results dB(µV) Line 1		Limits dB(µV)		Margin (dB) Neutral		Margin (dB) Line 1		Result
	QP	AV	QP	AV	QP	AV	QP	AV	QP	AV	
0.15	24.3	21.3	25.8	24.4	66.0	56.0	-41.7	-34.7	-40.2	-31.6	PASS
0.17	37.5	28.4	41.0	35.0	65.0	55.0	-27.5	-26.6	-24.0	-20.0	PASS
0.30	26.1	16.8	25.9	21.3	60.2	50.2	-34.1	-33.4	-34.3	-28.9	PASS
0.65	18.1	8.8	16.6	13.0	56.0	46.0	-37.9	-37.2	-39.4	-33.0	PASS
1.59	19.6	19.3	19.7	18.7	56.0	46.0	-36.4	-26.7	-36.3	-27.3	PASS
3.47	18.6	15.5	14.6	4.7	56.0	46.0	-37.4	-30.5	-41.4	-41.3	PASS
5.00	14.7	8.4	21.0	18.7	56.0	46.0	-41.3	-37.6	-35.0	-27.3	PASS
7.00	18.8	13.1	5.8	3.4	60.0	50.0	-41.2	-36.9	-54.2	-46.6	PASS
8.89	13.4	7.3	15.6	12.5	60.0	50.0	-46.6	-42.7	-44.4	-37.5	PASS
11.73	15.0	8.3	15.9	13.4	60.0	50.0	-45.0	-41.7	-44.1	-36.6	PASS
13.56	52.5	31.3	54.1	34.6	60.0	50.0	-7.5	-18.7	-5.9	-15.4	PASS
18.50	12.9	5.8	13.1	2.7	60.0	50.0	-47.1	-44.2	-46.9	-47.3	PASS

Table 43 passive mode

The results of the conducted emission tests, carried out in accordance with 47 CFR Part 15, section 15.207, at the 110 Volts AC mains connection terminals of the AC/DC power supply connected to the EUT and with the EUT operating in continuous sweep mode on 8.2 +/- 700 kHz, are depicted in table table 43.

Note: During the measurement it was taken into account that the main operating frequency of 8.2 MHz of the EUT could be present on the 110 Volts AC mains connection terminals. The possible occurrence of this frequency of 8.2 MHz and its harmonics, throughout the range of 8.2 MHz +/- 700 kHz to 30 MHz, was checked during the measurement. The conducted emissions on frequencies which are not listed in table 4 were found to be below 25 dB(µV) on both line 1 and line 2.

Passive mode means the system was standby (alarm off).

Test engineer

Signature : 

Name : J. Schuurmans

Date : January 29, 2004

3.3.2 Conducted emission, Configuration IV active mode.

Frequency (MHz)	Measurement results dB(µV) Neutral		Measurement results dB(µV) Line 1		Limits dB(µV)		Margin (dB) Neutral		Margin (dB) Line 1		Result
	QP	AV	QP	AV	QP	AV	QP	AV	QP	AV	
0.15	24.3	21.3	25.8	24.4	66.0	56.0	-41.7	-34.7	-40.2	-31.6	PASS
0.17	37.5	28.4	41.0	35.0	65.0	55.0	-27.5	-26.6	-24.0	-20.0	PASS
0.30	26.1	16.8	25.9	21.3	60.2	50.2	-34.1	-33.4	-34.3	-28.9	PASS
0.65	18.1	8.8	16.6	13.0	56.0	46.0	-37.9	-37.2	-39.4	-33.0	PASS
1.59	19.6	19.3	19.7	18.7	56.0	46.0	-36.4	-26.7	-36.3	-27.3	PASS
3.47	18.6	15.5	14.6	4.7	56.0	46.0	-37.4	-30.5	-41.4	-41.3	PASS
5.00	14.7	8.4	21.0	18.7	56.0	46.0	-41.3	-37.6	-35.0	-27.3	PASS
7.00	18.8	13.1	5.8	3.4	60.0	50.0	-41.2	-36.9	-54.2	-46.6	PASS
8.89	13.4	7.3	15.6	12.5	60.0	50.0	-46.6	-42.7	-44.4	-37.5	PASS
11.73	15.0	8.3	15.9	13.4	60.0	50.0	-45.0	-41.7	-44.1	-36.6	PASS
13.56	52.5	31.3	54.1	34.6	60.0	50.0	-7.5	-18.7	-5.9	-15.4	PASS
18.50	12.9	5.8	13.1	2.7	60.0	50.0	-47.1	-44.2	-46.9	-47.3	PASS

Table 44 active mode

The results of the conducted emission tests, carried out in accordance with 47 CFR Part 15, section 15.207, at the 110 Volts AC mains connection terminals of the AC/DC power supply connected to the EUT and with the EUT operating in continuous sweep mode on 8.2 +/- 700 kHz, are depicted in table table 44.

Note: During the measurement it was taken into account that the main operating frequency of 8.2 MHz of the EUT could be present on the 110 Volts AC mains connection terminals. The possible occurrence of this frequency of 8.2 MHz and its harmonics, throughout the range of 8.2 MHz +/- 700 kHz to 30 MHz, was checked during the measurement. The conducted emissions on frequencies which are not listed in table 44 were found to be below 25 dB(µV) on both line 1 and line 2.

Active mode means the system was detecting a tag (alarm on).

Test engineer

Signature : 

Name : J. Schuurmans

Date : January 29, 2004

3.3.3 Conducted emission, Configuration IV, sweep stopped.

Frequency (MHz)	Measurement results dB(µV) Neutral		Measurement results dB(µV) Line 1		Limits dB(µV)		Margin (dB) Neutral		Margin (dB) Line 1		Result
	QP	AV	QP	AV	QP	AV	QP	AV	QP	AV	
7 (a)	24.3	21.3	25.8	24.4	66.0	56.0	-41.7	-34.7	-40.2	-31.6	PASS
14 (b)	37.5	28.4	41.0	35.0	66.0	56.0	-27.5	-26.6	-24.0	-20.0	PASS
21 (c)	26.1	16.8	25.9	21.3	66.0	56.0	-34.1	-33.4	-34.3	-28.9	PASS
8 (d)	18.1	8.8	16.6	13.0	66.0	56.0	-37.9	-37.2	-39.4	-33.0	PASS
17 (e)	19.6	19.3	19.7	18.7	66.0	56.0	-36.4	-26.7	-36.3	-27.3	PASS
25 (f)	18.6	15.5	14.6	4.7	66.0	56.0	-37.4	-30.5	-41.4	-41.3	PASS

Table 45 sweep stopped mode

The results of the conducted emission tests, carried out in accordance with 47 CFR Part 15, section 15.207, at the 110 Volts AC mains connection terminals of the AC/DC power supply connected to the EUT and with the EUT operating in sweep stopped mode on 8.2 +/- 700 kHz, are depicted in table table 45.

Note: During the measurement it was taken into account that the main operating frequency of 8.2 MHz of the EUT could be present on the 110 Volts AC mains connection terminals. The possible occurrence of this frequency of 8.2 MHz and its harmonics, throughout the range of 8.2 MHz +/- 700 kHz to 30 MHz, was checked during the measurement. The conducted emissions on frequencies which are not listed in table 45 were found to be below 25 dB(µV) on both line 1 and line 2.

Sweep stopped mode means the system was detecting a tag (alarm off).

(a) means the sweep is stopped at the beginning of the range at the given frequency
(b) second harmonic from a
(c) third harmonic from a
(d) means the sweepis stopped at the end of the sweep range at the given frequency
(e) second harmonic from d
(f) third harmonic from d

Test engineer

Signature : 

Name : J. Schuurmans

Date : January 29, 2004

3.3.4 Conducted emission, Configuration V, passive mode.

Frequency (MHz)	Measurement results dB(µV) Neutral		Measurement results dB(µV) Line 1		Limits dB(µV)		Margin (dB) Neutral		Margin (dB) Line 1		Result
	QP	AV	QP	AV	QP	AV	QP	AV	QP	AV	
0.15	36.6	8.2	37.5	8.2	66.0	56.0	-29.4	-47.8	-28.5	-47.8	PASS
0.18	34.6	32.1	34.9	31.9	64.7	54.7	-30.1	-22.6	-29.8	-22.8	PASS
0.27	31.5	25.1	31.5	26.5	61.3	51.3	-29.8	-26.2	-29.8	-24.8	PASS
0.31	30.7	22.6	30.5	22.6	56.0	46.0	-25.3	-23.4	-25.5	-23.4	PASS
0.53	26.9	16.1	27.4	15.5	56.0	46.0	-29.1	-29.9	-28.6	-30.5	PASS
1.02	26.0	11.0	26.6	12.0	56.0	46.0	-30.0	-35.0	-29.4	-34.0	PASS
1.74	31.4	16.0	32.5	15.6	56.0	46.0	-24.6	-30.0	-23.5	-30.4	PASS
2.38	34.3	18.6	36.0	20.7	56.0	46.0	-21.7	-27.4	-20.0	-25.3	PASS
3.22	37.2	20.1	36.9	21.5	56.0	46.0	-18.8	-25.9	-19.1	-24.5	PASS
4.99	38.8	26.7	38.1	24.9	60.0	50.0	-21.2	-23.3	-21.9	-25.1	PASS
6.70	37.9	28.4	38.6	27.9	60.0	50.0	-22.1	-21.6	-21.4	-22.1	PASS
7.57	36.3	24.2	35.6	22.3	60.0	50.0	-23.7	-25.8	-24.4	-27.7	PASS
8.70	43.9	20.7	42.4	18.5	60.0	50.0	-16.1	-29.3	-17.6	-31.5	PASS
15.14	26.9	19.1	26.5	19.2	60.0	50.0	-33.1	-30.9	-33.5	-30.8	PASS
17.40	26.1	18.9	25.6	18.5	60.0	50.0	-33.9	-31.1	-34.4	-31.5	PASS
22.71	20.7	12.4	20.2	13.0	60.0	50.0	-39.3	-37.6	-39.8	-37.0	PASS
26.10	19.2	11.9	20.1	12.2	60.0	50.0	-40.8	-38.1	-39.9	-37.8	PASS
29.99	19.3	11.8	23.0	16.0	60.0	50.0	-40.7	-38.2	-37.0	-34.0	PASS

Table 46 passive mode

The results of the conducted emission tests, carried out in accordance with 47 CFR Part 15, section 15.207, at the 110 Volts AC mains connection terminals of the AC/DC power supply connected to the EUT and with the EUT operating in continuous sweep mode on 8.2 +/- 700 kHz, are depicted in table Table 46.

Note: During the measurement it was taken into account that the main operating frequency of 8.2 MHz of the EUT could be present on the 110 Volts AC mains connection terminals. The possible occurrence of this frequency of 8.2 MHz and its harmonics, throughout the range of 8.2 MHz +/- 700 kHz to 30 MHz, was checked during the measurement. The conducted emissions on frequencies which are not listed in table 4 were found to be below 25 dB(µV) on both line 1 and line 2.

Passive mode means the system was standby (alarm off).

Test engineer

Signature : 

Name : J. Schuurmans

Date : January 29, 2004

3.3.5 Conducted emission, Configuration V, active mode.

Frequency (MHz)	Measurement results dB(µV) Neutral		Measurement results dB(µV) Line 1		Limits dB(µV)		Margin (dB) Neutral		Margin (dB) Line 1		Result
	QP	AV	QP	AV	QP	AV	QP	AV	QP	AV	
0.15	35.5	8.1	37.1	8.0	66.0	56.0	-30.5	-47.9	-28.9	-48.0	PASS
0.18	34.7	32.5	35.1	32.2	64.7	54.7	-30.0	-22.2	-29.6	-22.5	PASS
0.27	30.9	25.6	31.1	25.6	61.3	51.3	-30.4	-25.7	-30.2	-25.7	PASS
0.31	31.2	23.1	31.5	24.6	59.9	49.9	-28.7	-26.8	-28.4	-25.3	PASS
0.53	27.6	16.2	28.1	17.6	56.0	46.0	-28.4	-29.8	-27.9	-28.4	PASS
1.02	26.4	11.5	28.1	12.0	56.0	46.0	-29.6	-34.5	-27.9	-34.0	PASS
1.74	32.0	14.2	33.0	15.5	56.0	46.0	-24.0	-31.8	-23.0	-30.5	PASS
2.38	35.1	18.1	35.2	18.5	56.0	46.0	-20.9	-27.9	-20.8	-27.5	PASS
3.22	34.7	26.3	38.0	22.0	56.0	46.0	-21.3	-19.7	-18.0	-24.0	PASS
4.99	40.2	25.6	40.5	26.5	56.0	46.0	-15.8	-20.4	-15.5	-19.5	PASS
6.70	40.2	27.5	39.7	28.1	60.0	50.0	-19.8	-22.5	-20.3	-21.9	PASS
7.57	36.3	26.4	36.0	21.7	60.0	50.0	-23.7	-23.6	-24.0	-28.3	PASS
8.70	43.0	19.9	42.1	18.6	60.0	50.0	-17.0	-30.1	-17.9	-31.4	PASS
15.14	27.2	19.9	27.0	18.6	60.0	50.0	-32.8	-30.1	-33.0	-31.4	PASS
17.40	26.4	18.9	26.3	18.8	60.0	50.0	-33.6	-31.1	-33.7	-31.2	PASS
22.71	20.5	12.8	20.0	12.4	60.0	50.0	-39.5	-37.2	-40.0	-37.6	PASS
26.10	19.8	12.2	19.4	12.1	60.0	50.0	-40.2	-37.8	-40.6	-37.9	PASS
29.99	20.0	12.2	22.7	15.6	60.0	50.0	-40.0	-37.8	-37.3	-34.4	PASS

Table 47 active mode

The results of the conducted emission tests, carried out in accordance with 47 CFR Part 15, section 15.207, at the 110 Volts AC mains connection terminals of the AC/DC power supply connected to the EUT and with the EUT operating in continuous sweep mode on 8.2 +/- 700 kHz, are depicted in table table 47.

Note: During the measurement it was taken into account that the main operating frequency of 8.2 MHz of the EUT could be present on the 110 Volts AC mains connection terminals. The possible occurrence of this frequency of 8.2 MHz and its harmonics, throughout the range of 8.2 MHz +/- 700 kHz to 30 MHz, was checked during the measurement. The conducted emissions on frequencies which are not listed in table 4 were found to be below 25 dB(µV) on both line 1 and line 2.

Active mode means the system was detecting a tag (alarm off).

Test engineer

Signature : 

Name : J. Schuurmans

Date : January 29, 2004

3.3.6 Conducted emission, Configuration V, sweep stopped.

Frequency (MHz)	Measurement results dB(µV) Neutral		Measurement results dB(µV) Line 1		Limits dB(µV)		Margin (dB) Neutral		Margin (dB) Line 1		Result
	QP	AV	QP	AV	QP	AV	QP	AV	QP	AV	
7.57 (a)	46.5	33.5	48.9	33.5	60.0	50.0	-13.5	-16.5	-11.1	-16.5	PASS
15.14 (b)	26.4	19.2	26.1	18.8	60.0	50.0	-33.6	-30.8	-33.9	-31.2	PASS
22.70 (c)	18.8	11.9	19.8	11.5	60.0	50.0	-41.2	-38.1	-40.2	-38.5	PASS
8.66 (d)	56.6	37.1	54.9	35.8	60.0	50.0	-3.4	-12.9	-5.1	-14.2	PASS
17.32 (e)	27.4	19.4	26.6	18.8	60.0	50.0	-32.6	-30.6	-33.4	-31.2	PASS
25.98 (f)	21.1	13.4	20.4	12.7	60.0	50.0	-38.9	-36.6	-39.6	-37.3	PASS

Table 48 sweep stopped mode

The results of the conducted emission tests, carried out in accordance with 47 CFR Part 15, section 15.207, at the 110 Volts AC mains connection terminals of the AC/DC power supply connected to the EUT and with the EUT operating in sweep stopped mode on 8.2 +/- 700 kHz, are depicted in table table 48.

Note: During the measurement it was taken into account that the main operating frequency of 8.2 MHz of the EUT could be present on the 110 Volts AC mains connection terminals. The possible occurrence of this frequency of 8.2 MHz and its harmonics, throughout the range of 8.2 MHz +/- 700 kHz to 30 MHz, was checked during the measurement. The conducted emissions on frequencies which are not listed in table 4 were found to be below 25 dB(µV) on both line 1 and line 2.

Sweep stopped mode means the system was detecting a tag (alarm off).

(a) means the sweep is stopped at the beginning of the range at the given frequency
(b) second harmonic from a
(c) third harmonic from a
(d) means the sweepis stopped at the end of the sweep range at the given frequency
(e) second harmonic from d
(f) third harmonic from d

Test engineer

Signature : 

Name : J. Schuurmans

Date : January 29, 2004

3.3.7 Conducted emission, Configuration IX, passive mode.

Frequency (MHz)	Measurement results dB(µV) Neutral		Measurement results dB(µV) Line 1		Limits dB(µV)		Margin (dB) Neutral		Margin (dB) Line 1		Result
	QP	AV	QP	AV	QP	AV	QP	AV	QP	AV	
0.15	42.5	33.4	39.2	30.8	66.0	56.0	-23.5	-22.6	-26.8	-25.2	PASS
0.24	38.7	38.5	38.1	37.7	62.0	52.0	-23.3	-13.5	-23.9	-14.3	PASS
0.30	32.9	30.1	33.0	30.5	60.4	50.4	-27.5	-20.3	-27.4	-19.9	PASS
0.35	33.7	31.4	33.0	30.7	59.1	49.1	-25.4	-17.7	-26.1	-18.4	PASS
0.39	31.2	26.1	30.7	25.7	58.1	48.1	-26.9	-22.0	-27.4	-22.4	PASS
0.44	25.5	20.3	24.5	19.4	57.1	47.1	-31.6	-26.8	-32.6	-27.7	PASS
0.54	31.8	24.6	30.9	24.1	56.0	46.0	-24.2	-21.4	-25.1	-21.9	PASS
0.68	30.7	21.4	28.2	19.6	56.0	46.0	-25.3	-24.6	-27.8	-26.4	PASS
1.02	32.1	19.5	31.1	18.5	56.0	46.0	-23.9	-26.5	-24.9	-27.5	PASS
1.99	36.1	17.6	35.5	18.2	56.0	46.0	-19.9	-28.4	-20.5	-27.8	PASS
3.90	37.1	27.0	38.8	24.5	56.0	46.0	-18.9	-19.0	-17.2	-21.5	PASS
4.53	40.4	28.9	40.2	25.5	56.0	46.0	-15.6	-17.1	-15.8	-20.5	PASS
5.94	41.6	26.1	41.6	28.4	60.0	50.0	-18.4	-23.9	-18.4	-21.6	PASS
7.57	41.1	21.3	41.6	25.9	60.0	50.0	-18.9	-28.7	-18.4	-24.1	PASS
8.70	44.0	15.8	45.2	21.1	60.0	50.0	-16.0	-34.2	-14.8	-28.9	PASS
15.14	23.4	16.5	24.7	16.6	60.0	50.0	-36.6	-33.5	-35.3	-33.4	PASS
17.40	23.4	17.8	23.0	15.5	60.0	50.0	-36.6	-32.2	-37.0	-34.5	PASS
22.71	16.3	18.8	18.0	10.8	60.0	50.0	-43.7	-31.2	-42.0	-39.2	PASS
26.10	25.8	18.8	27.0	20.4	60.0	50.0	-34.2	-31.2	-33.0	-29.6	PASS
29.99	25.3	9.5	25.5	18.4	60.0	50.0	-34.7	-40.5	-34.5	-31.6	PASS

Table 49 passive mode

The results of the conducted emission tests, carried out in accordance with 47 CFR Part 15, section 15.207, at the 110 Volts AC mains connection terminals of the AC/DC power supply connected to the EUT and with the EUT operating in continuous sweep mode on 8.2 +/- 700 kHz, are depicted in table table 49.

Note: During the measurement it was taken into account that the main operating frequency of 8.2 MHz of the EUT could be present on the 110 Volts AC mains connection terminals. The possible occurrence of this frequency of 8.2 MHz and its harmonics, throughout the range of 8.2 MHz +/- 700 kHz to 30 MHz, was checked during the measurement. The conducted emissions on frequencies which are not listed in table 4 were found to be below 25 dB(µV) on both line 1 and line 2.

Passive mode means the system was standby (alarm off).

Test engineer

Signature : 

Name : J. Schuurmans

Date : January 27, 2004

3.3.8 Conducted emission, Configuration IX active mode.

Frequency (MHz)	Measurement results dB(µV) Neutral		Measurement results dB(µV) Line 1		Limits dB(µV)		Margin (dB) Neutral		Margin (dB) Line 1		Result
	QP	AV	QP	AV	QP	AV	QP	AV	QP	AV	
0.15	42.5	33.4	39.2	30.8	66.0	56.0	-23.5	-22.6	-26.8	-25.2	PASS
0.24	38.7	38.5	38.1	37.7	62.0	52.0	-23.3	-13.5	-23.9	-14.3	PASS
0.30	32.9	30.1	33.0	30.5	60.4	50.4	-27.5	-20.3	-27.4	-19.9	PASS
0.35	33.7	31.4	33.0	30.7	59.1	49.1	-25.4	-17.7	-26.1	-18.4	PASS
0.39	31.2	26.1	30.7	25.7	58.1	48.1	-26.9	-22.0	-27.4	-22.4	PASS
0.44	25.5	20.3	24.5	19.4	57.1	47.1	-31.6	-26.8	-32.6	-27.7	PASS
0.54	31.8	24.6	30.9	24.1	56.0	46.0	-24.2	-21.4	-25.1	-21.9	PASS
0.68	30.7	21.4	28.2	19.6	56.0	46.0	-25.3	-24.6	-27.8	-26.4	PASS
1.02	32.1	19.5	31.1	18.5	56.0	46.0	-23.9	-26.5	-24.9	-27.5	PASS
1.99	36.1	17.6	35.5	18.2	56.0	46.0	-19.9	-28.4	-20.5	-27.8	PASS
3.90	37.1	27.0	38.8	24.5	56.0	46.0	-18.9	-19.0	-17.2	-21.5	PASS
4.53	40.4	28.9	40.2	25.5	56.0	46.0	-15.6	-17.1	-15.8	-20.5	PASS
5.94	41.6	26.1	41.6	28.4	60.0	50.0	-18.4	-23.9	-18.4	-21.6	PASS
7.57	41.1	21.3	41.6	25.9	60.0	50.0	-18.9	-28.7	-18.4	-24.1	PASS
8.70	44.0	15.8	45.2	21.1	60.0	50.0	-16.0	-34.2	-14.8	-28.9	PASS
15.14	23.4	16.5	24.7	16.6	60.0	50.0	-36.6	-33.5	-35.3	-33.4	PASS
17.40	23.4	17.8	23.0	15.5	60.0	50.0	-36.6	-32.2	-37.0	-34.5	PASS
22.71	16.3	18.8	18.0	10.8	60.0	50.0	-43.7	-31.2	-42.0	-39.2	PASS
26.10	25.8	18.8	27.0	20.4	60.0	50.0	-34.2	-31.2	-33.0	-29.6	PASS
29.99	25.3	9.5	25.5	18.4	60.0	50.0	-34.7	-40.5	-34.5	-31.6	PASS

Table 50 active mode

The results of the conducted emission tests, carried out in accordance with 47 CFR Part 15, section 15.207, at the 110 Volts AC mains connection terminals of the AC/DC power supply connected to the EUT and with the EUT operating in continuous sweep mode on 8.2 +/- 700 kHz, are depicted in table table 50.

Note: During the measurement it was taken into account that the main operating frequency of 8.2 MHz of the EUT could be present on the 110 Volts AC mains connection terminals. The possible occurrence of this frequency of 8.2 MHz and its harmonics, throughout the range of 8.2 MHz +/- 700 kHz to 30 MHz, was checked during the measurement. The conducted emissions on frequencies which are not listed in table 4 were found to be below 25 dB(µV) on both line 1 and line 2.

Active mode means the system was detecting a tag (alarm off).

Test engineer

Signature : 

Name : J. Schuurmans

Date : January 27, 2004

3.3.9 Conducted emission, Configuration IX, sweep stopped.

Frequency (MHz)	Measurement results dB(µV) Neutral		Measurement results dB(µV) Line 1		Limits dB(µV)		Margin (dB) Neutral		Margin (dB) Line 1		Result
	QP	AV	QP	AV	QP	AV	QP	AV	QP	AV	
7.58 (a)	54.9	47.7	55.2	47.7	60.0	50.0	-5.1	-2.3	-4.8	-2.3	PASS
15.15 (b)	24.4	15.6	25.0	16.5	60.0	50.0	-35.6	-34.4	-35.0	-33.5	PASS
22.72 (c)	17.7	11.0	19.2	12.2	60.0	50.0	-42.3	-39.0	-40.8	-37.8	PASS
8.69 (d)	59.8	49.9	57.2	49.8	60.0	50.0	-0.2	-0.1	-2.8	-0.2	PASS
17.36 (e)	28.6	23.7	31.1	25.2	60.0	50.0	-31.4	-26.3	-28.9	-24.8	PASS
26.03 (f)	35.0	28.6	36.3	30.0	60.0	50.0	-25.0	-21.4	-23.7	-20.0	PASS

Table 51 sweep stopped

The results of the conducted emission tests, carried out in accordance with 47 CFR Part 15, section 15.207, at the 110 Volts AC mains connection terminals of the AC/DC power supply connected to the EUT and with the EUT operating in sweep stopped mode on 8.2 +/- 700 kHz, are depicted in table table 51.

Note: During the measurement it was taken into account that the main operating frequency of 8.2 MHz of the EUT could be present on the 110 Volts AC mains connection terminals. The possible occurrence of this frequency of 8.2 MHz and its harmonics, throughout the range of 8.2 MHz +/- 700 kHz to 30 MHz, was checked during the measurement. The conducted emissions on frequencies which are not listed in table 4 were found to be below 25 dB(µV) on both line 1 and line 2.

(a) means the sweep is stopped at the beginning of the range at the given frequency
(b) second harmonic from a
(c) third harmonic from a
(d) means the sweepis stopped at the end of the sweep range at the given frequency
(e) second harmonic from d
(f) third harmonic from d

Test engineer

Signature : 

Name : J. Schuurmans

Date : January 27, 2004

3.3.10 Conducted emission, Configuration X, passive mode.

Frequency (MHz)	Measurement results dB(µV) Neutral		Measurement results dB(µV) Line 1		Limits dB(µV)		Margin (dB) Neutral		Margin (dB) Line 1		Result
	QP	AV	QP	AV	QP	AV	QP	AV	QP	AV	
0.15	39.3	29.8	37.3	27.7	66.0	56.0	-26.7	-26.2	-28.7	-28.3	PASS
0.24	37.6	37.3	37.5	37.0	62.0	52.0	-24.4	-14.7	-24.5	-15.0	PASS
0.29	32.3	29.3	32.2	29.2	60.5	50.5	-28.2	-21.2	-28.3	-21.3	PASS
0.34	33.0	30.0	32.5	29.4	59.2	49.2	-26.2	-19.2	-26.7	-19.8	PASS
0.39	30.0	25.1	28.8	24.2	58.1	48.1	-28.1	-23.0	-29.3	-23.9	PASS
0.44	25.0	19.8	24.1	18.6	57.1	47.1	-32.1	-27.3	-33.0	-28.5	PASS
0.54	30.5	23.5	28.9	22.6	56.0	46.0	-25.5	-22.5	-27.1	-23.4	PASS
0.68	29.1	19.4	26.8	18.0	56.0	46.0	-26.9	-26.6	-29.2	-28.0	PASS
1.07	30.0	17.4	29.9	16.9	56.0	46.0	-26.0	-28.6	-26.1	-29.1	PASS
1.99	35.1	17.3	33.9	16.8	56.0	46.0	-20.9	-28.7	-22.1	-29.2	PASS
2.90	38.0	19.9	37.0	20.1	56.0	46.0	-18.0	-26.1	-19.0	-25.9	PASS
3.86	37.5	22.8	36.5	22.4	56.0	46.0	-18.5	-23.2	-19.5	-23.6	PASS
4.49	36.7	24.0	38.0	25.0	56.0	46.0	-19.3	-22.0	-18.0	-21.0	PASS
5.91	40.5	27.1	40.1	28.0	60.0	50.0	-19.5	-22.9	-19.9	-22.0	PASS
6.86	37.5	22.8	36.5	22.4	60.0	50.0	-22.5	-27.2	-23.5	-27.6	PASS
7.57	42.4	23.1	42.6	21.1	60.0	50.0	-17.6	-26.9	-17.4	-28.9	PASS
8.70	39.4	19.2	39.6	17.8	60.0	50.0	-20.6	-30.8	-20.4	-32.2	PASS
15.14	23.8	15.0	23.3	15.0	60.0	50.0	-36.2	-35.0	-36.7	-35.0	PASS
17.50	20.1	12.9	20.9	13.2	60.0	50.0	-39.9	-37.1	-39.1	-36.8	PASS
22.71	6.5	9.5	17.2	10.0	60.0	50.0	-53.5	-40.5	-42.8	-40.0	PASS
26.10	24.8	17.9	26.4	19.4	60.0	50.0	-35.2	-32.1	-33.6	-30.6	PASS
29.90	23.4	16.0	24.9	17.8	60.0	50.0	-36.6	-34.0	-35.1	-32.2	PASS

Table 52 passive mode

The results of the conducted emission tests, carried out in accordance with 47 CFR Part 15, section 15.207, at the 110 Volts AC mains connection terminals of the AC/DC power supply connected to the EUT and with the EUT operating in continuous sweep mode on 8.2 +/- 700 kHz, are depicted in table table 52.

Note: During the measurement it was taken into account that the main operating frequency of 8.2 MHz of the EUT could be present on the 110 Volts AC mains connection terminals. The possible occurrence of this frequency of 8.2 MHz and its harmonics, throughout the range of 8.2 MHz +/- 700 kHz to 30 MHz, was checked during the measurement. The conducted emissions on frequencies which are not listed in table 4 were found to be below 25 dB(µV) on both line 1 and line 2.

Passive mode means the system was standby (alarm off).

Test engineer

Signature : 

Name : J. Schuurmans

Date : January 27, 2004

3.3.11 Conducted emission, Configuration X active mode.

Frequency (MHz)	Measurement results dB(µV) Neutral		Measurement results dB(µV) Line 1		Limits dB(µV)		Margin (dB) Neutral		Margin (dB) Line 1		Result
	QP	AV	QP	AV	QP	AV	QP	AV	QP	AV	
0.15	37.6	22.3	37.0	21.1	66.0	56.0	-28.4	-33.7	-29.0	-34.9	PASS
0.24	37.3	37.0	37.2	36.8	62.0	52.0	-24.7	-15.0	-24.8	-15.2	PASS
0.29	33.0	30.7	33.1	30.8	60.5	50.5	-27.5	-19.8	-27.4	-19.7	PASS
0.34	33.0	30.8	32.8	30.5	59.2	49.2	-26.2	-18.4	-26.4	-18.7	PASS
0.39	31.1	27.2	31.0	26.6	58.1	48.1	-27.0	-20.9	-27.1	-21.5	PASS
0.44	23.0	18.0	22.5	17.1	57.1	47.1	-34.1	-29.1	-34.6	-30.0	PASS
0.54	30.9	24.9	30.7	24.4	56.0	46.0	-25.1	-21.1	-25.3	-21.6	PASS
0.68	30.5	22.0	30.1	21.2	56.0	46.0	-25.5	-24.0	-25.9	-24.8	PASS
1.07	31.6	19.5	30.9	18.5	56.0	46.0	-24.4	-26.5	-25.1	-27.5	PASS
1.99	35.5	18.1	33.9	17.8	56.0	46.0	-20.5	-27.9	-22.1	-28.2	PASS
2.90	38.6	20.9	38.1	20.2	56.0	46.0	-17.4	-25.1	-17.9	-25.8	PASS
3.86	39.8	24.0	37.9	22.5	56.0	46.0	-16.2	-22.0	-18.1	-23.5	PASS
4.49	40.6	26.0	35.0	20.1	56.0	46.0	-15.4	-20.0	-21.0	-25.9	PASS
5.92	39.0	25.0	41.6	27.2	60.0	50.0	-21.0	-25.0	-18.4	-22.8	PASS
7.57	39.0	24.8	42.7	20.5	60.0	50.0	-21.0	-25.2	-17.3	-29.5	PASS
8.70	43.4	16.8	39.6	19.4	60.0	50.0	-16.6	-33.2	-20.4	-30.6	PASS
15.14	22.6	14.1	24.2	16.0	60.0	50.0	-37.4	-35.9	-35.8	-34.0	PASS
17.50	19.6	12.2	20.8	12.9	60.0	50.0	-40.4	-37.8	-39.2	-37.1	PASS
22.71	16.1	9.3	17.4	10.1	60.0	50.0	-43.9	-40.7	-42.6	-39.9	PASS
26.10	25.2	17.7	27.2	19.9	60.0	50.0	-34.8	-32.3	-32.8	-30.1	PASS
29.90	23.9	16.9	25.9	18.3	60.0	50.0	-36.1	-33.1	-34.1	-31.7	PASS

Table 53 active mode

The results of the conducted emission tests, carried out in accordance with 47 CFR Part 15, section 15.207, at the 110 Volts AC mains connection terminals of the AC/DC power supply connected to the EUT and with the EUT operating in continuous sweep mode on 8.2 +/- 700 kHz, are depicted in table table 53.

Note: During the measurement it was taken into account that the main operating frequency of 8.2 MHz of the EUT could be present on the 110 Volts AC mains connection terminals. The possible occurrence of this frequency of 8.2 MHz and its harmonics, throughout the range of 8.2 MHz +/- 700 kHz to 30 MHz, was checked during the measurement. The conducted emissions on frequencies which are not listed in table 4 were found to be below 25 dB(µV) on both line 1 and line 2.

Active mode means the system was detecting a tag (alarm off).

Test engineer

Signature : 

Name : J. Schuurmans

Date : January 27, 2004

3.3.12 Conducted emission, Configuration X, sweep stopped.

Frequency (MHz)	Measurement results dB(µV) Neutral		Measurement results dB(µV) Line 1		Limits dB(µV)		Margin (dB) Neutral		Margin (dB) Line 1		Result
	QP	AV	QP	AV	QP	AV	QP	AV	QP	AV	
7.57 (a)	54.7	46.8	54.9	47.2	60.0	50.0	-5.3	-3.2	-5.1	-2.8	PASS
15.14 (b)	20.6	11.9	22.5	12.9	60.0	50.0	-39.4	-38.1	-37.5	-37.1	PASS
22.72 (c)	25.9	17.7	27.4	18.7	60.0	50.0	-34.1	-32.3	-32.6	-31.3	PASS
8.66 (e)	56.7	43.1	57.0	44.9	60.0	50.0	-3.3	-6.9	-3.0	-5.1	PASS
17.31 (f)	24.0	13.7	24.6	13.7	60.0	50.0	-36.0	-36.3	-35.4	-36.3	PASS
25.97 (g)	16.6	9.2	18.0	10.1	60.0	50.0	-43.4	-40.8	-42.0	-39.9	PASS

Table 54 sweep stopped mode

The results of the conducted emission tests, carried out in accordance with 47 CFR Part 15, section 15.207, at the 110 Volts AC mains connection terminals of the AC/DC power supply connected to the EUT and with the EUT operating in sweep stopped mode on 8.2 +/- 700 kHz, are depicted in table table 54.

Note: During the measurement it was taken into account that the main operating frequency of 8.2 MHz of the EUT could be present on the 110 Volts AC mains connection terminals. The possible occurrence of this frequency of 8.2 MHz and its harmonics, throughout the range of 8.2 MHz +/- 700 kHz to 30 MHz, was checked during the measurement. The conducted emissions on frequencies which are not listed in table 4 were found to be below 25 dB(µV) on both line 1 and line 2.

(a) means the sweep is stopped at the beginning of the range at the given frequency
(b) second harmonic from a
(c) third harmonic from a
(d) means the sweepis stopped at the end of the sweep range at the given frequency
(e) second harmonic from d
(f) third harmonic from d

Test engineer

Signature : 

Name : J. Schuurmans

Date : January 27, 2004

3.3.13 Conducted emission, Configuration XI, passive mode.

Frequency (MHz)	Measurement results dB(µV) Neutral		Measurement results dB(µV) Line 1		Limits dB(µV)		Margin (dB) Neutral		Margin (dB) Line 1		Result
	QP	AV	QP	AV	QP	AV	QP	AV	QP	AV	
0.15	38.1	28.2	36.2	26.8	66.0	56.0	-27.9	-27.8	-29.8	-29.2	PASS
0.24	36.9	36.4	36.9	36.2	62.0	52.0	-25.1	-15.6	-25.1	-15.8	PASS
0.29	31.4	28.3	31.4	28.4	60.5	50.5	-29.1	-22.2	-29.1	-22.1	PASS
0.34	32.4	29.7	31.9	29.0	59.2	49.2	-26.8	-19.5	-27.3	-20.2	PASS
0.39	28.3	24.4	28.1	23.7	58.1	48.1	-29.8	-23.7	-30.0	-24.4	PASS
0.44	23.3	17.9	22.9	17.3	57.1	47.1	-33.8	-29.2	-34.2	-29.8	PASS
0.54	30.1	23.4	28.5	22.5	56.0	46.0	-25.9	-22.6	-27.5	-23.5	PASS
0.68	28.1	19.9	27.3	18.8	56.0	46.0	-27.9	-26.1	-28.7	-27.2	PASS
1.02	30.6	18.0	28.7	17.0	56.0	46.0	-25.4	-28.0	-27.3	-29.0	PASS
1.99	24.7	17.6	23.7	16.8	56.0	46.0	-31.3	-28.4	-32.3	-29.2	PASS
2.90	36.0	18.7	36.4	19.0	56.0	46.0	-20.0	-27.3	-19.6	-27.0	PASS
6.86	33.6	17.2	33.7	18.7	60.0	50.0	-26.4	-32.8	-26.3	-31.3	PASS
4.49	35.4	20.5	38.0	23.9	56.0	46.0	-20.6	-25.5	-18.0	-22.1	PASS
5.93	40.3	28.1	39.9	27.5	60.0	50.0	-19.7	-21.9	-20.1	-22.5	PASS
7.57	40.9	23.9	40.8	21.0	60.0	50.0	-19.1	-26.1	-19.2	-29.0	PASS
8.70	35.0	16.2	34.7	16.8	60.0	50.0	-25.0	-33.8	-25.3	-33.2	PASS
15.14	23.2	14.7	23.4	14.6	60.0	50.0	-36.8	-35.3	-36.6	-35.4	PASS
17.40	19.4	11.9	23.8	14.7	60.0	50.0	-40.6	-38.1	-36.2	-35.3	PASS
22.71	16.1	9.1	17.0	9.9	60.0	50.0	-43.9	-40.9	-43.0	-40.1	PASS
26.10	24.3	17.5	25.6	18.5	60.0	50.0	-35.7	-32.5	-34.4	-31.5	PASS
29.99	22.4	15.0	24.0	16.6	60.0	50.0	-37.6	-35.0	-36.0	-33.4	PASS

Table 55 passive mode

The results of the conducted emission tests, carried out in accordance with 47 CFR Part 15, section 15.207, at the 110 Volts AC mains connection terminals of the AC/DC power supply connected to the EUT and with the EUT operating in continuous sweep mode on 8.2 +/- 700 kHz, are depicted in table table 55.

Note: During the measurement it was taken into account that the main operating frequency of 8.2 MHz of the EUT could be present on the 110 Volts AC mains connection terminals. The possible occurrence of this frequency of 8.2 MHz and its harmonics, throughout the range of 8.2 MHz +/- 700 kHz to 30 MHz, was checked during the measurement. The conducted emissions on frequencies which are not listed in table 4 were found to be below 25 dB(µV) on both line 1 and line 2.

Passive mode means the system was standby (alarm off).

Test engineer

Signature : 

Name : J. Schuurmans

Date : January 27, 2004

3.3.14 Conducted emission, Configuration XI, active mode.

Frequency (MHz)	Measurement results dB(µV) Neutral		Measurement results dB(µV) Line 1		Limits dB(µV)		Margin (dB) Neutral		Margin (dB) Line 1		Result
	QP	AV	QP	AV	QP	AV	QP	AV	QP	AV	
0.15	36.9	29.1	35.4	20.5	66.0	56.0	-29.1	-26.9	-30.6	-35.5	PASS
0.24	36.6	36.2	36.6	36.0	62.1	52.1	-25.5	-15.9	-25.5	-16.1	PASS
0.29	32.1	29.7	32.1	29.7	60.5	50.5	-28.4	-20.8	-28.4	-20.8	PASS
0.34	32.7	36.8	32.2	29.8	59.3	49.3	-26.6	-12.5	-27.1	-19.5	PASS
0.39	30.5	26.7	30.2	25.8	58.2	48.2	-27.7	-21.5	-28.0	-22.4	PASS
0.43	21.3	15.5	20.3	14.6	57.2	47.2	-35.9	-31.7	-36.9	-32.6	PASS
0.53	30.5	24.8	30.0	24.1	56.0	46.0	-25.5	-21.2	-26.0	-21.9	PASS
0.68	30.2	22.0	28.8	21.2	56.0	46.0	-25.8	-24.0	-27.2	-24.8	PASS
1.01	31.1	19.5	30.1	18.7	56.0	46.0	-24.9	-26.5	-25.9	-27.3	PASS
1.98	33.3	15.1	31.4	16.1	56.0	46.0	-22.7	-30.9	-24.6	-29.9	PASS
2.91	40.5	27.8	29.7	27.5	56.0	46.0	-15.5	-18.2	-26.3	-18.5	PASS
3.86	34.5	17.2	32.2	16.9	56.0	46.0	-21.5	-28.8	-23.8	-29.1	PASS
4.47	40.1	22.9	38.7	21.2	56.0	46.0	-15.9	-23.1	-17.3	-24.8	PASS
5.93	41.4	27.0	41.3	27.0	60.0	50.0	-18.6	-23.0	-18.7	-23.0	PASS
7.57	40.8	20.0	40.9	20.8	60.0	50.0	-19.2	-30.0	-19.1	-29.2	PASS
8.70	33.4	14.9	33.5	16.0	60.0	50.0	-26.6	-35.1	-26.5	-34.0	PASS
15.14	23.3	14.7	24.0	14.6	60.0	50.0	-36.7	-35.3	-36.0	-35.4	PASS
17.40	19.0	11.4	20.3	12.2	60.0	50.0	-41.0	-38.6	-39.7	-37.8	PASS
22.71	16.5	9.2	17.0	9.7	60.0	50.0	-43.5	-40.8	-43.0	-40.3	PASS
26.10	25.4	17.6	26.9	19.1	60.0	50.0	-34.6	-32.4	-33.1	-30.9	PASS
29.90	23.8	15.8	24.8	16.9	60.0	50.0	-36.2	-34.2	-35.2	-33.1	PASS

Table 56 active mode

The results of the conducted emission tests, carried out in accordance with 47 CFR Part 15, section 15.207, at the 110 Volts AC mains connection terminals of the AC/DC power supply connected to the EUT and with the EUT operating in continuous sweep mode on 8.2 +/- 700 kHz, are depicted in table table 56

Note: During the measurement it was taken into account that the main operating frequency of 8.2 MHz of the EUT could be present on the 110 Volts AC mains connection terminals. The possible occurrence of this frequency of 8.2 MHz and its harmonics, throughout the range of 8.2 MHz +/- 700 kHz to 30 MHz, was checked during the measurement. The conducted emissions on frequencies which are not listed in table 4 were found to be below 25 dB(µV) on both line 1 and line 2.

Active mode means the system was detecting a tag (alarm off).

Test engineer

Signature :
Name : J. Schuurmans

Date : January 27, 2004

3.3.15 Conducted emission, Configuration XI, sweep stopped.

Frequency (MHz)	Measurement results dB(µV) Neutral		Measurement results dB(µV) Line 1		Limits dB(µV)		Margin (dB) Neutral		Margin (dB) Line 1		Result
	QP	AV	QP	AV	QP	AV	QP	AV	QP	AV	
7.57 (a)	53.5	43.0	53.7	43.0	60.0	50.0	-6.5	-7.0	-6.3	-7.0	PASS
15.14 (b)	24.0	14.7	24.8	14.7	60.0	50.0	-36.0	-35.3	-35.2	-35.3	PASS
22.72 (c)	16.5	9.3	17.8	9.9	60.0	50.0	-43.5	-40.7	-42.2	-40.1	PASS
8.66 (e)	46.2	39.9	47.7	41.4	60.0	50.0	-13.8	-10.1	-12.3	-8.6	PASS
17.31 (f)	20.2	11.8	21.1	12.3	60.0	50.0	-39.8	-38.2	-38.9	-37.7	PASS
25.97 (g)	26.1	17.5	27.0	8.5	60.0	50.0	-33.9	-32.5	-33.0	-41.5	PASS

Table 57 sweep stopped mode

The results of the conducted emission tests, carried out in accordance with 47 CFR Part 15, section 15.207, at the 110 Volts AC mains connection terminals of the AC/DC power supply connected to the EUT and with the EUT operating in sweep stopped mode on 8.2 +/- 700 kHz, are depicted in table table 57.

Note: During the measurement it was taken into account that the main operating frequency of 8.2 MHz of the EUT could be present on the 110 Volts AC mains connection terminals. The possible occurrence of this frequency of 8.2 MHz and its harmonics, throughout the range of 8.2 MHz +/- 700 kHz to 30 MHz, was checked during the measurement. The conducted emissions on frequencies which are not listed in table 4 were found to be below 25 dB(µV) on both line 1 and line 2.

(a) means the sweep is stopped at the beginning of the range at the given frequency
(b) second harmonic from a
(c) third harmonic from a
(d) means the sweepis stopped at the end of the sweep range at the given frequency
(e) second harmonic from d
(f) third harmonic from d

Test engineer

Signature : 

Name : J. Schuurmans

Date : January 27, 2004

3.3.16 Conducted emission, Configuration XII, passive mode.

Frequency (MHz)	Measurement results dB(µV) Neutral		Measurement results dB(µV) Line 1		Limits dB(µV)		Margin (dB) Neutral		Margin (dB) Line 1		Result
	QP	AV	QP	AV	QP	AV	QP	AV	QP	AV	
0.15	39.3	29.4	36.7	27.0	66.0	56.0	-26.7	-26.6	-29.3	-29.0	PASS
0.24	36.8	36.8	36.8	36.5	62.0	52.0	-25.2	-15.2	-25.2	-15.5	PASS
0.29	31.2	29.1	31.1	29.1	60.5	50.5	-29.3	-21.4	-29.4	-21.4	PASS
0.34	33.4	32.6	33.0	31.6	59.2	49.2	-25.8	-16.6	-26.2	-17.6	PASS
0.38	29.4	26.4	28.1	25.9	58.3	48.3	-28.9	-21.9	-30.2	-22.4	PASS
0.43	22.6	19.7	21.5	18.5	57.2	47.2	-34.6	-27.5	-35.7	-28.7	PASS
0.54	28.9	25.7	28.5	24.4	56.0	46.0	-27.1	-20.3	-27.5	-21.6	PASS
0.68	27.8	22.3	27.3	20.9	56.0	46.0	-28.2	-23.7	-28.7	-25.1	PASS
1.02	30.4	19.6	28.7	19.0	56.0	46.0	-25.6	-26.4	-27.3	-27.0	PASS
1.99	24.5	18.3	33.3	15.3	56.0	46.0	-31.5	-27.7	-22.7	-30.7	PASS
2.91	38.4	26.4	37.5	25.9	56.0	46.0	-17.6	-19.6	-18.5	-20.1	PASS
3.88	37.4	18.7	36.4	19.2	56.0	46.0	-18.6	-27.3	-19.6	-26.8	PASS
4.47	38.8	20.5	38.5	22.1	56.0	46.0	-17.2	-25.5	-17.5	-23.9	PASS
5.93	40.8	25.2	40.6	23.6	60.0	50.0	-19.2	-24.8	-19.4	-26.4	PASS
7.57	49.8	24.4	49.6	24.1	60.0	50.0	-10.2	-25.6	-10.4	-25.9	PASS
8.70	43.4	19.2	48.7	19.7	60.0	50.0	-16.6	-30.8	-11.3	-30.3	PASS
15.14	23.3	14.2	24.0	15.0	60.0	50.0	-36.7	-35.8	-36.0	-35.0	PASS
17.40	22.4	13.6	23.9	15.2	60.0	50.0	-37.6	-36.4	-36.1	-34.8	PASS
22.71	15.3	8.8	16.6	9.4	60.0	50.0	-44.7	-41.2	-43.4	-40.6	PASS
26.10	23.9	16.0	25.0	17.2	60.0	50.0	-36.1	-34.0	-35.0	-32.8	PASS
29.99	22.5	14.9	23.9	16.2	60.0	50.0	-37.5	-35.1	-36.1	-33.8	PASS

Table 58 passive mode

The results of the conducted emission tests, carried out in accordance with 47 CFR Part 15, section 15.207, at the 110 Volts AC mains connection terminals of the AC/DC power supply connected to the EUT and with the EUT operating in continuous sweep mode on 8.2 +/- 700 kHz, are depicted in table table 58.

Note: During the measurement it was taken into account that the main operating frequency of 8.2 MHz of the EUT could be present on the 110 Volts AC mains connection terminals. The possible occurrence of this frequency of 8.2 MHz and its harmonics, throughout the range of 8.2 MHz +/- 700 kHz to 30 MHz, was checked during the measurement. The conducted emissions on frequencies which are not listed in table 4 were found to be below 25 dB(µV) on both line 1 and line 2.

Passive mode means the system was standby (alarm off)

Test engineer

Signature : 

Name : J. Schuurmans

Date : January 27, 2004

3.3.17 Conducted emission, Configuration XII, active mode.

Frequency (MHz)	Measurement results dB(µV) Neutral		Measurement results dB(µV) Line 1		Limits dB(µV)		Margin (dB) Neutral		Margin (dB) Line 1		Result
	QP	AV	QP	AV	QP	AV	QP	AV	QP	AV	
0.15	36.3	20.8	36.1	19.9	66.0	56.0	-29.7	-35.2	-29.9	-36.1	PASS
0.24	36.7	36.5	36.5	36.3	62.0	52.0	-25.3	-15.5	-25.5	-15.7	PASS
0.29	32.0	30.3	31.8	30.1	60.5	50.5	-28.5	-20.2	-28.7	-20.4	PASS
0.34	31.3	30.0	31.5	29.7	59.2	49.2	-27.9	-19.2	-27.7	-19.5	PASS
0.38	19.9	16.2	19.0	16.0	58.3	48.3	-38.4	-32.1	-39.3	-32.3	PASS
0.43	30.5	26.5	30.3	26.0	57.2	47.2	-26.7	-20.7	-26.9	-21.2	PASS
0.54	30.0	23.9	28.6	22.7	56.0	46.0	-26.0	-22.1	-27.4	-23.3	PASS
0.68	30.8	20.4	30.1	19.1	56.0	46.0	-25.2	-25.6	-25.9	-26.9	PASS
1.02	32.0	14.4	31.0	14.7	56.0	46.0	-24.0	-31.6	-25.0	-31.3	PASS
1.99	40.1	28.0	38.8	27.3	56.0	46.0	-15.9	-18.0	-17.2	-18.7	PASS
2.91	37.0	19.5	40.5	19.7	56.0	46.0	-19.0	-26.5	-15.5	-26.3	PASS
3.88	41.1	23.5	41.0	23.0	56.0	46.0	-14.9	-22.5	-15.0	-23.0	PASS
4.47	41.8	24.9	41.8	25.0	56.0	46.0	-14.2	-21.1	-14.2	-21.0	PASS
5.93	48.7	22.7	48.8	24.1	60.0	50.0	-11.3	-27.3	-11.2	-25.9	PASS
7.57	47.6	18.5	48.0	19.9	60.0	50.0	-12.4	-31.5	-12.0	-30.1	PASS
8.70	23.8	13.6	24.6	14.3	60.0	50.0	-36.2	-36.4	-35.4	-35.7	PASS
15.14	18.8	10.8	19.2	11.3	60.0	50.0	-41.2	-39.2	-40.8	-38.7	PASS
17.40	16.5	9.0	17.7	10.0	60.0	50.0	-43.5	-41.0	-42.3	-40.0	PASS
22.71	25.0	16.6	26.7	18.3	60.0	50.0	-35.0	-33.4	-33.3	-31.7	PASS
26.10	22.3	14.5	24.4	16.9	60.0	50.0	-37.7	-35.5	-35.6	-33.1	PASS
29.99	28.8	27.7	30.3	27.7	60.0	50.0	-31.2	-22.3	-29.7	-22.3	PASS

Table 59 active mode

The results of the conducted emission tests, carried out in accordance with 47 CFR Part 15, section 15.207, at the 110 Volts AC mains connection terminals of the AC/DC power supply connected to the EUT and with the EUT operating in continuous sweep mode on 8.2 +/- 700 kHz, are depicted in table table 59.

Note: During the measurement it was taken into account that the main operating frequency of 8.2 MHz of the EUT could be present on the 110 Volts AC mains connection terminals. The possible occurrence of this frequency of 8.2 MHz and its harmonics, throughout the range of 8.2 MHz +/- 700 kHz to 30 MHz, was checked during the measurement. The conducted emissions on frequencies which are not listed in table 4 were found to be below 25 dB(µV) on both line 1 and line 2.

active mode means the system was detecting a tag (alarm off).

Test engineer

Signature : 

Name : J. Schuurmans

Date : January 27, 2004

3.3.18 Conducted emission, Configuration XII, sweep stopped.

Frequency (MHz)	Measurement results dB(µV) Neutral		Measurement results dB(µV) Line 1		Limits dB(µV)		Margin (dB) Neutral		Margin (dB) Line 1		Result
	QP	AV	QP	AV	QP	AV	QP	AV	QP	AV	
7.57 (a)	42.1	35.4	43.4	33.2	60.0	50.0	-17.9	-14.6	-16.6	-16.8	PASS
15.14 (b)	23.1	13.7	23.9	14.0	60.0	50.0	-36.9	-36.3	-36.1	-36.0	PASS
22.72 (c)	15.3	8.8	16.6	9.6	60.0	50.0	-44.7	-41.2	-43.4	-40.4	PASS
8.66 (d)	54.4	46.3	54.4	47.8	60.0	50.0	-5.6	-3.7	-5.6	-2.2	PASS
17.31 (e)	21.0	13.2	22.7	14.3	60.0	50.0	-39.0	-36.8	-37.3	-35.7	PASS
25.97 (f)	23.5	15.7	26.2	17.3	60.0	50.0	-36.5	-34.3	-33.8	-32.7	PASS

Table 60 sweep stopped

The results of the conducted emission tests, carried out in accordance with 47 CFR Part 15, section 15.207, at the 110 Volts AC mains connection terminals of the AC/DC power supply connected to the EUT and with the EUT operating in sweep stopped mode on 8.2 +/- 700 kHz, are depicted in table table 60.

Note: During the measurement it was taken into account that the main operating frequency of 8.2 MHz of the EUT could be present on the 110 Volts AC mains connection terminals. The possible occurrence of this frequency of 8.2 MHz and its harmonics, throughout the range of 8.2 MHz +/- 700 kHz to 30 MHz, was checked during the measurement. The conducted emissions on frequencies which are not listed in table 4 were found to be below 25 dB(µV) on both line 1 and line 2.

(a) means the sweep is stopped at the beginning of the range at the given frequency
(b) second harmonic from a
(c) third harmonic from a
(d) means the sweepis stopped at the end of the sweep range at the given frequency
(e) second harmonic from d
(f) third harmonic from d

Test engineer

Signature : 

Name : J. Schuurmans

Date : January 27, 2004

3.3.19 Conducted emission, Configuration XIII, passive mode.

Frequency (MHz)	Measurement results dB(µV) Neutral		Measurement results dB(µV) Line 1		Limits dB(µV)		Margin (dB) Neutral		Margin (dB) Line 1		Result
	QP	AV	QP	AV	QP	AV	QP	AV	QP	AV	
0.15	40.4	27.7	37.0	23.4	66.0	56.0	-25.6	-28.3	-29.0	-32.6	PASS
0.165	41.4	36.5	37.9	34.7	65.8	55.8	-24.4	-19.3	-27.9	-21.1	PASS
0.21	32.5	30.7	32.4	30.1	63.4	53.4	-30.9	-22.7	-31.0	-23.3	PASS
0.26	36.4	34.5	36.2	34.3	61.5	51.5	-25.1	-17.0	-25.3	-17.2	PASS
0.31	22.2	15.9	22.1	16.4	60.0	50.0	-37.8	-34.1	-37.9	-33.6	PASS
0.36	28.6	22.2	27.3	21.0	58.7	48.7	-30.1	-26.5	-31.4	-27.7	PASS
0.52	26.1	15.8	25.5	15.5	56.0	46.0	-29.9	-30.2	-30.5	-30.5	PASS
1.36	29.8	13.4	28.6	12.6	56.0	46.0	-26.2	-32.6	-27.4	-33.4	PASS
2.13	33.4	16.6	32.1	17.6	56.0	46.0	-22.6	-29.4	-23.9	-28.4	PASS
5.32	38.1	21.0	36.6	19.6	60.0	50.0	-21.9	-29.0	-23.4	-30.4	PASS
4.04	37.1	22.0	36.5	20.9	56.0	46.0	-18.9	-24.0	-19.5	-25.1	PASS
6.40	35.5	24.7	36.1	24.7	60.0	50.0	-24.5	-25.3	-23.9	-25.3	PASS
7.57	43.9	20.3	49.5	21.0	60.0	50.0	-16.1	-29.7	-10.5	-29.0	PASS
8.70	47.4	14.2	47.0	14.5	60.0	50.0	-12.6	-35.8	-13.0	-35.5	PASS
15.14	22.9	14.8	23.0	15.9	60.0	50.0	-37.1	-35.2	-37.0	-34.1	PASS
17.40	17.9	10.9	19.1	11.2	60.0	50.0	-42.1	-39.1	-40.9	-38.8	PASS
22.71	17.0	10.0	16.6	10.0	60.0	50.0	-43.0	-40.0	-43.4	-40.0	PASS
26.10	21.4	14.5	16.6	10.3	60.0	50.0	-38.6	-35.5	-43.4	-39.7	PASS
29.99	20.8	13.6	21.8	14.5	60.0	50.0	-39.2	-36.4	-38.2	-35.5	PASS

Table 61 passive mode

The results of the conducted emission tests, carried out in accordance with 47 CFR Part 15, section 15.207, at the 110 Volts AC mains connection terminals of the AC/DC power supply connected to the EUT and with the EUT operating in continuous sweep mode on 8.2 +/- 700 kHz, are depicted in table table 61.

Note: During the measurement it was taken into account that the main operating frequency of 8.2 MHz of the EUT could be present on the 110 Volts AC mains connection terminals. The possible occurrence of this frequency of 8.2 MHz and its harmonics, throughout the range of 8.2 MHz +/- 700 kHz to 30 MHz, was checked during the measurement. The conducted emissions on frequencies which are not listed in table 4 were found to be below 25 dB(µV) on both line 1 and line 2.

Passive mode means the system was standby (alarm off).

Test engineer

Signature : 

Name : J. Schuurmans

Date : January 27, 2004

3.3.20 Conducted emission, Configuration XIII, active mode.

Frequency (MHz)	Measurement results dB(µV) Neutral		Measurement results dB(µV) Line 1		Limits dB(µV)		Margin (dB) Neutral		Margin (dB) Line 1		Result
	QP	AV	QP	AV	QP	AV	QP	AV	QP	AV	
0.15	41.0	35.4	37.9	33.7	66.0	56.0	-25.0	-20.6	-28.1	-22.3	PASS
0.21	32.4	30.1	32.3	29.9	63.4	53.4	-31.0	-23.3	-31.1	-23.5	PASS
0.26	36.7	34.4	36.5	24.5	61.5	51.5	-24.8	-17.1	-25.0	-27.0	PASS
0.31	25.5	17.8	25.0	19.2	60.0	50.0	-34.5	-32.2	-35.0	-30.8	PASS
0.36	28.2	22.2	27.3	21.9	58.7	48.7	-30.5	-26.5	-31.4	-26.8	PASS
0.52	24.2	14.6	23.4	14.1	56.0	46.0	-31.8	-31.4	-32.6	-31.9	PASS
1.36	28.5	11.6	27.1	11.1	56.0	46.0	-27.5	-34.4	-28.9	-34.9	PASS
2.13	32.7	16.0	31.6	14.8	56.0	46.0	-23.3	-30.0	-24.4	-31.2	PASS
5.32	35.6	21.5	35.8	22.6	60.0	50.0	-24.4	-28.5	-24.2	-27.4	PASS
4.04	36.6	22.4	36.0	21.0	56.0	46.0	-19.4	-23.6	-20.0	-25.0	PASS
6.40	36.5	26.5	34.8	24.7	60.0	50.0	-23.5	-23.5	-25.2	-25.3	PASS
7.57	49.0	21.6	49.0	21.4	60.0	50.0	-11.0	-28.4	-11.0	-28.6	PASS
8.70	47.1	16.0	48.0	15.6	60.0	50.0	-12.9	-34.0	-12.0	-34.4	PASS
15.14	22.9	14.8	23.4	15.0	60.0	50.0	-37.1	-35.2	-36.6	-35.0	PASS
17.40	18.3	10.9	19.3	12.2	60.0	50.0	-41.7	-39.1	-40.7	-37.8	PASS
22.71	16.1	9.5	16.6	9.4	60.0	50.0	-43.9	-40.5	-43.4	-40.6	PASS
26.10	21.6	14.4	21.8	14.8	60.0	50.0	-38.4	-35.6	-38.2	-35.2	PASS
29.99	21.5	13.8	22.8	14.8	60.0	50.0	-38.5	-36.2	-37.2	-35.2	PASS

Table 62 active mode

The results of the conducted emission tests, carried out in accordance with 47 CFR Part 15, section 15.207, at the 110 Volts AC mains connection terminals of the AC/DC power supply connected to the EUT and with the EUT operating in continuous sweep mode on 8.2 +/- 700 kHz, are depicted in table table 62.

Note: During the measurement it was taken into account that the main operating frequency of 8.2 MHz of the EUT could be present on the 110 Volts AC mains connection terminals. The possible occurrence of this frequency of 8.2 MHz and its harmonics, throughout the range of 8.2 MHz +/- 700 kHz to 30 MHz, was checked during the measurement. The conducted emissions on frequencies which are not listed in table 4 were found to be below 25 dB(µV) on both line 1 and line 2.

Active mode means the system was detecting a tag (alarm off).

Test engineer

Signature : 

Name : J. Schuurmans

Date : January 27, 2004

3.3.21 Conducted emission, Configuration XIII, sweep stopped.

Frequency (MHz)	Measurement results dB(µV) Neutral		Measurement results dB(µV) Line 1		Limits dB(µV)		Margin (dB) Neutral		Margin (dB) Line 1		Result
	QP	AV	QP	AV	QP	AV	QP	AV	QP	AV	
7.57 9 (a)	43.1	31.5	50.4	34.1	60.0	50.0	-16.9	-18.5	-9.6	-15.9	PASS
15.14 (b)	22.2	14.9	23.5	15.9	60.0	50.0	-37.8	-35.1	-36.5	-34.1	PASS
22.72 (c)	15.4	8.6	15.9	8.6	60.0	50.0	-44.6	-41.4	-44.1	-41.4	PASS
8.66 (e)	47.3	32.3	45.0	31.1	60.0	50.0	-12.7	-17.7	-15.0	-18.9	PASS
17.31 (f)	21.0	11.2	20.1	11.9	60.0	50.0	-39.0	-38.8	-39.9	-38.1	PASS
25.97 (g)	21.4	13.6	22.6	14.2	60.0	50.0	-38.6	-36.4	-37.4	-35.8	PASS

Table 63 sweep stopped

The results of the conducted emission tests, carried out in accordance with 47 CFR Part 15, section 15.207, at the 110 Volts AC mains connection terminals of the AC/DC power supply connected to the EUT and with the EUT operating in sweep stopped mode on 8.2 +/- 700 kHz, are depicted in table table 63.

Note: During the measurement it was taken into account that the main operating frequency of 8.2 MHz of the EUT could be present on the 110 Volts AC mains connection terminals. The possible occurrence of this frequency of 8.2 MHz and its harmonics, throughout the range of 8.2 MHz +/- 700 kHz to 30 MHz, was checked during the measurement. The conducted emissions on frequencies which are not listed in table 4 were found to be below 25 dB(µV) on both line 1 and line 2.

(a) means the sweep is stopped at the beginning of the range at the given frequency
(b) second harmonic from a
(c) third harmonic from a
(d) means the sweepis stopped at the end of the sweep range at the given frequency
(e) second harmonic from d
(f) third harmonic from d

Test engineer

Signature : 

Name : J. Schuurmans

Date : January 27, 2004

3.3.22 Conducted emission, Configuration XIII-a, passive mode.

Frequency (MHz)	Measurement results dB(µV) Neutral		Measurement results dB(µV) Line 1		Limits dB(µV)		Margin (dB) Neutral		Margin (dB) Line 1		Result
	QP	AV	QP	AV	QP	AV	QP	AV	QP	AV	
0.15	41.9	23.0	39.5	23.9	66.0	56.0	-24.1	-33.0	-26.5	-32.1	PASS
0.16	43.5	37.4	41.1	35.5	65.7	55.7	-22.2	-18.3	-24.6	-20.2	PASS
0.21	34.5	31.9	33.6	30.9	63.3	53.3	-28.8	-21.4	-29.7	-22.4	PASS
0.26	37.4	33.5	37.0	32.4	61.5	51.5	-24.1	-18.0	-24.5	-19.1	PASS
0.31	23.4	16.0	32.2	15.5	59.9	49.9	-36.5	-33.9	-27.7	-34.4	PASS
0.36	30.8	22.0	29.9	20.7	58.6	48.6	-27.8	-26.6	-28.7	-27.9	PASS
0.47	26.7	16.4	25.6	15.5	56.6	46.6	-29.9	-30.2	-31.0	-31.1	PASS
0.68	26.7	14.4	25.8	13.5	56.0	46.0	-29.3	-31.6	-30.2	-32.5	PASS
0.73	27.3	13.6	26.7	13.7	56.0	46.0	-28.7	-32.4	-29.3	-32.3	PASS
1.09	29.9	13.6	27.4	12.0	56.0	46.0	-26.1	-32.4	-28.6	-34.0	PASS
1.99	32.4	18.0	30.1	14.4	56.0	46.0	-23.6	-28.0	-25.9	-31.6	PASS
4.23	37.6	24.8	37.1	23.9	56.0	46.0	-18.4	-21.2	-18.9	-22.1	PASS
7.57	37.1	22.9	38.3	22.2	60.0	50.0	-22.9	-27.1	-21.7	-27.8	PASS
8.70	45.3	16.1	45.3	15.8	60.0	50.0	-14.7	-33.9	-14.7	-34.2	PASS
15.14	24.3	17.0	25.2	17.7	60.0	50.0	-35.7	-33.0	-34.8	-32.3	PASS
17.40	19.1	12.1	20.1	12.5	60.0	50.0	-40.9	-37.9	-39.9	-37.5	PASS
22.71	19.0	12.0	20.4	12.3	60.0	50.0	-41.0	-38.0	-39.6	-37.7	PASS
26.10	25.0	18.5	25.9	19.0	60.0	50.0	-35.0	-31.5	-34.1	-31.0	PASS
29.99	22.5	15.3	23.5	16.3	60.0	50.0	-37.5	-34.7	-36.5	-33.7	PASS

Table 64 passive mode

The results of the conducted emission tests, carried out in accordance with 47 CFR Part 15, section 15.207, at the 110 Volts AC mains connection terminals of the AC/DC power supply connected to the EUT and with the EUT operating in continuous sweep mode on 8.2 +/- 700 kHz, are depicted in table table 64.

Note: During the measurement it was taken into account that the main operating frequency of 8.2 MHz of the EUT could be present on the 110 Volts AC mains connection terminals. The possible occurrence of this frequency of 8.2 MHz and its harmonics, throughout the range of 8.2 MHz +/- 700 kHz to 30 MHz, was checked during the measurement. The conducted emissions on frequencies which are not listed in table 4 were found to be below 25 dB(µV) on both line 1 and line 2.

Passive mode means the system was standby (alarm off).

Test engineer

Signature : 

Name : J. Schuurmans

Date : January 28, 2004

3.3.23 Conducted emission, Configuration XIII-a, active mode.

Frequency (MHz)	Measurement results dB(µV) Neutral		Measurement results dB(µV) Line 1		Limits dB(µV)		Margin (dB) Neutral		Margin (dB) Line 1		Result
	QP	AV	QP	AV	QP	AV	QP	AV	QP	AV	
0.15	42.7	35.7	40.5	33.0	66.0	56.0	-23.3	-20.3	-25.5	-23.0	PASS
0.15	42.9	36.9	40.9	34.7	65.9	55.9	-23.0	-19.0	-25.0	-21.2	PASS
0.20	33.6	31.0	33.3	30.4	63.5	53.5	-29.9	-22.5	-30.2	-23.1	PASS
0.25	37.5	34.1	37.4	33.5	61.7	51.7	-24.2	-17.6	-24.3	-18.2	PASS
0.30	25.9	18.8	26.2	19.0	60.1	50.1	-34.2	-31.3	-33.9	-31.1	PASS
0.36	30.1	21.9	28.4	20.4	58.8	48.8	-28.7	-26.9	-30.4	-28.4	PASS
0.46	26.6	17.1	25.9	16.0	56.7	46.7	-30.1	-29.6	-30.8	-30.7	PASS
0.72	25.0	13.2	24.8	12.4	56.0	46.0	-31.0	-32.8	-31.2	-33.6	PASS
1.10	28.3	11.7	26.9	11.1	56.0	46.0	-27.7	-34.3	-29.1	-34.9	PASS
2.00	32.7	17.1	32.4	17.2	56.0	46.0	-23.3	-28.9	-23.6	-28.8	PASS
4.19	37.3	24.4	37.0	25.3	56.0	46.0	-18.7	-21.6	-19.0	-20.7	PASS
7.57	37.1	22.2	38.5	21.9	60.0	50.0	-22.9	-27.8	-21.5	-28.1	PASS
8.70	44.0	16.1	45.0	16.2	60.0	50.0	-16.0	-33.9	-15.0	-33.8	PASS
15.14	23.6	16.2	24.7	17.8	60.0	50.0	-36.4	-33.8	-35.3	-32.2	PASS
17.40	19.4	12.5	20.2	13.0	60.0	50.0	-40.6	-37.5	-39.8	-37.0	PASS
22.71	18.0	10.7	19.3	12.0	60.0	50.0	-42.0	-39.3	-40.7	-38.0	PASS
26.10	24.8	17.9	25.9	19.1	60.0	50.0	-35.2	-32.1	-34.1	-30.9	PASS
29.99	22.5	15.2	23.5	16.3	60.0	50.0	-37.5	-34.8	-36.5	-33.7	PASS

Table 65 active mode

The results of the conducted emission tests, carried out in accordance with 47 CFR Part 15, section 15.207, at the 110 Volts AC mains connection terminals of the AC/DC power supply connected to the EUT and with the EUT operating in continuous sweep mode on 8.2 +/- 700 kHz, are depicted in table table 65.

Note: During the measurement it was taken into account that the main operating frequency of 8.2 MHz of the EUT could be present on the 110 Volts AC mains connection terminals. The possible occurrence of this frequency of 8.2 MHz and its harmonics, throughout the range of 8.2 MHz +/- 700 kHz to 30 MHz, was checked during the measurement. The conducted emissions on frequencies which are not listed in table 4 were found to be below 25 dB(µV) on both line 1 and line 2.

Active mode means the system was detecting a tag (alarm off).

Test engineer

Signature : 

Name : J. Schuurmans

Date : January 28, 2004

3.3.24 Conducted emission, Configuration XIII-a, sweep stopped.

Frequency (MHz)	Measurement results dB(µV) Neutral		Measurement results dB(µV) Line 1		Limits dB(µV)		Margin (dB) Neutral		Margin (dB) Line 1		Result
	QP	AV	QP	AV	QP	AV	QP	AV	QP	AV	
7.56 (a)	53.5	34.7	54.1	34.5	60.0	50.0	-6.5	-15.3	-5.9	-15.5	PASS
15.13 (b)	23.2	15.6	23.8	16.0	60.0	50.0	-36.8	-34.4	-36.2	-34.0	PASS
22.69 (c)	31.5	18.5	17.9	10.8	60.0	50.0	-28.5	-31.5	-42.1	-39.2	PASS
8.65 (d)	57.4	37.7	59.4	38.8	60.0	50.0	-2.6	-12.3	-0.6	-11.2	PASS
17.31 (e)	18.6	10.5	20.0	12.1	60.0	50.0	-41.4	-39.5	-40.0	-37.9	PASS
25.96 (f)	21.8	14.1	23.0	15.1	60.0	50.0	-38.2	-35.9	-37.0	-34.9	PASS

Table 66 sweep stopped mode

The results of the conducted emission tests, carried out in accordance with 47 CFR Part 15, section 15.207, at the 110 Volts AC mains connection terminals of the AC/DC power supply connected to the EUT and with the EUT operating in sweep stopped mode on 8.2 +/- 700 kHz, are depicted in table table 66.

Note: During the measurement it was taken into account that the main operating frequency of 8.2 MHz of the EUT could be present on the 110 Volts AC mains connection terminals. The possible occurrence of this frequency of 8.2 MHz and its harmonics, throughout the range of 8.2 MHz +/- 700 kHz to 30 MHz, was checked during the measurement. The conducted emissions on frequencies which are not listed in table 4 were found to be below 25 dB(µV) on both line 1 and line 2.

(a) means the sweep is stopped at the beginning of the range at the given frequency
(b) second harmonic from a
(c) third harmonic from a
(d) means the sweepis stopped at the end of the sweep range at the given frequency
(e) second harmonic from d
(f) third harmonic from d

Test engineer

Signature : 

Name : J. Schuurmans

Date : January 28, 2004

3.3.25 Conducted emission, Configuration XVIII, passive mode.

Frequency (MHz)	Measurement results dB(µV) Neutral		Measurement results dB(µV) Line 1		Limits dB(µV)		Margin (dB) Neutral		Margin (dB) Line 1		Result
	QP	AV	QP	AV	QP	AV	QP	AV	QP	AV	
0.15	37.2	8.2	36.6	8.2	66.0	56.0	-28.8	-47.8	-29.4	-47.8	PASS
0.18	34.0	32.5	33.0	7.2	64.6	54.6	-30.6	-22.1	-31.6	-47.4	PASS
0.22	25.7	22.2	25.4	21.0	62.8	52.8	-37.1	-30.6	-37.4	-31.8	PASS
0.27	27.7	26.0	28.0	27.1	61.2	51.2	-33.5	-25.2	-33.2	-24.1	PASS
0.31	28.3	26.4	28.4	27.0	60.0	50.0	-31.7	-23.6	-31.6	-23.0	PASS
0.49	23.2	26.3	24.8	18.2	56.2	46.2	-33.0	-19.9	-31.4	-28.0	PASS
0.71	25.7	16.0	27.0	16.8	56.0	46.0	-30.3	-30.0	-29.0	-29.2	PASS
0.97	24.9	16.3	26.0	12.1	56.0	46.0	-31.1	-29.7	-30.0	-33.9	PASS
1.18	26.1	16.2	27.7	11.1	56.0	46.0	-29.9	-29.8	-28.3	-34.9	PASS
1.59	30.3	20.2	31.3	16.5	56.0	46.0	-25.7	-25.8	-24.7	-29.5	PASS
2.27	33.4	24.0	35.6	16.5	56.0	46.0	-22.6	-22.0	-20.4	-29.5	PASS
2.88	34.8	22.3	35.9	15.1	56.0	46.0	-21.2	-23.7	-20.1	-30.9	PASS
3.92	36.7	25.5	37.0	17.2	56.0	46.0	-19.3	-20.5	-19.0	-28.8	PASS
4.71	38.2	27.6	37.4	19.6	56.0	46.0	-17.8	-18.4	-18.6	-26.4	PASS
6.41	40.1	24.2	40.3	23.1	60.0	50.0	-19.9	-25.8	-19.7	-26.9	PASS
7.57	43.5	23.9	43.6	22.2	60.0	50.0	-16.5	-26.1	-16.4	-27.8	PASS
8.10	43.9	21.0	44.7	21.7	60.0	50.0	-16.1	-29.0	-15.3	-28.3	PASS
8.70	44.9	19.8	45.6	20.4	60.0	50.0	-15.1	-30.2	-14.4	-29.6	PASS
15.14	26.4	15.8	27.0	16.1	60.0	50.0	-33.6	-34.2	-33.0	-33.9	PASS
16.20	27.4	16.6	27.4	16.5	60.0	50.0	-32.6	-33.4	-32.6	-33.5	PASS
17.40	24.9	14.8	25.6	15.3	60.0	50.0	-35.1	-35.2	-34.4	-34.7	PASS
22.61	19.3	11.6	19.8	11.5	60.0	50.0	-40.7	-38.4	-40.2	-38.5	PASS
24.30	18.0	10.9	18.3	9.7	60.0	50.0	-42.0	-39.1	-41.7	-40.3	PASS
26.10	22.4	13.8	21.4	22.5	60.0	50.0	-37.6	-36.2	-38.6	-27.5	PASS
29.99	25.5	18.0	25.4	17.2	60.0	50.0	-34.5	-32.0	-34.6	-32.8	PASS

Table 67 passive mode

The results of the conducted emission tests, carried out in accordance with 47 CFR Part 15, section 15.207, at the 110 Volts AC mains connection terminals of the AC/DC power supply connected to the EUT and with the EUT operating in continuous sweep mode on 8.2 +/- 700 kHz, are depicted in table table 67.

Note: During the measurement it was taken into account that the main operating frequency of 8.2 MHz of the EUT could be present on the 110 Volts AC mains connection terminals. The possible occurrence of this frequency of 8.2 MHz and its harmonics, throughout the range of 8.2 MHz +/- 700 kHz to 30 MHz, was checked during the measurement. The conducted emissions on frequencies which are not listed in table 4 were found to be below 25 dB(µV) on both line 1 and line 2.

Passive mode means the system was standby (alarm off).

Test engineer

Signature : 

Name : J. Schuurmans

Date : January 16, 2004

3.3.26 Conducted emission, Configuration XVIII, active mode.

Frequency (MHz)	Measurement results dB(µV) Neutral		Measurement results dB(µV) Line 1		Limits dB(µV)		Margin (dB) Neutral		Margin (dB) Line 1		Result
	QP	AV	QP	AV	QP	AV	QP	AV	QP	AV	
0.15	37.2	8.2	36.6	8.2	66.0	56.0	-28.8	-47.8	-29.4	-47.8	PASS
0.18	34.0	32.5	33.0	7.2	64.6	54.6	-30.6	-22.1	-31.6	-47.4	PASS
0.22	25.7	22.2	25.4	21.0	62.8	52.8	-37.1	-30.6	-37.4	-31.8	PASS
0.27	27.7	26.0	28.0	27.1	61.2	51.2	-33.5	-25.2	-33.2	-24.1	PASS
0.31	28.3	26.4	28.4	27.0	60.0	50.0	-31.7	-23.6	-31.6	-23.0	PASS
0.49	23.2	26.3	24.8	18.2	56.2	46.2	-33.0	-19.9	-31.4	-28.0	PASS
0.71	25.7	16.0	27.0	16.8	56.0	46.0	-30.3	-30.0	-29.0	-29.2	PASS
0.97	24.9	16.3	26.0	12.1	56.0	46.0	-31.1	-29.7	-30.0	-33.9	PASS
1.18	26.1	16.2	27.7	11.1	56.0	46.0	-29.9	-29.8	-28.3	-34.9	PASS
1.59	30.3	20.2	31.3	16.5	56.0	46.0	-25.7	-25.8	-24.7	-29.5	PASS
2.27	33.4	24.0	35.6	16.5	56.0	46.0	-22.6	-22.0	-20.4	-29.5	PASS
2.88	34.8	22.3	35.9	15.1	56.0	46.0	-21.2	-23.7	-20.1	-30.9	PASS
3.92	36.7	25.5	37.0	17.2	56.0	46.0	-19.3	-20.5	-19.0	-28.8	PASS
4.71	38.2	27.6	37.4	19.6	56.0	46.0	-17.8	-18.4	-18.6	-26.4	PASS
6.41	40.1	24.2	40.3	23.1	60.0	50.0	-19.9	-25.8	-19.7	-26.9	PASS
7.57	43.5	23.9	43.6	22.2	60.0	50.0	-16.5	-26.1	-16.4	-27.8	PASS
8.10	43.9	21.0	44.7	21.7	60.0	50.0	-16.1	-29.0	-15.3	-28.3	PASS
8.70	44.9	19.8	45.6	20.4	60.0	50.0	-15.1	-30.2	-14.4	-29.6	PASS
15.14	26.4	15.8	27.0	16.1	60.0	50.0	-33.6	-34.2	-33.0	-33.9	PASS
16.20	27.4	16.6	27.4	16.5	60.0	50.0	-32.6	-33.4	-32.6	-33.5	PASS
17.40	24.9	14.8	25.6	15.3	60.0	50.0	-35.1	-35.2	-34.4	-34.7	PASS
22.61	19.3	11.6	19.8	11.5	60.0	50.0	-40.7	-38.4	-40.2	-38.5	PASS
24.30	18.0	10.9	18.3	9.7	60.0	50.0	-42.0	-39.1	-41.7	-40.3	PASS
26.10	22.4	13.8	21.4	22.5	60.0	50.0	-37.6	-36.2	-38.6	-27.5	PASS

Table 68 Active mode

The results of the conducted emission tests, carried out in accordance with 47 CFR Part 15, section 15.207, at the 110 Volts AC mains connection terminals of the AC/DC power supply connected to the EUT and with the EUT operating in continuous sweep mode on 8.2 +/- 700 kHz, are depicted in table table 68.

Note: During the measurement it was taken into account that the main operating frequency of 8.2 MHz of the EUT could be present on the 110 Volts AC mains connection terminals. The possible occurrence of this frequency of 8.2 MHz and its harmonics, throughout the range of 8.2 MHz +/- 700 kHz to 30 MHz, was checked during the measurement. The conducted emissions on frequencies which are not listed in table 4 were found to be below 25 dB(µV) on both line 1 and line 2.

Active mode means the system was detecting a tag (alarm off).

Test engineer

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Name : J. Schuurmans

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3.3.27 Conducted emission, Configuration XVIII, sweep stopped.

Frequency (MHz)	Measurement results dB(µV) Neutral		Measurement results dB(µV) Line 1		Limits dB(µV)		Margin (dB) Neutral		Margin (dB) Line 1		Result
	QP	AV	QP	AV	QP	AV	QP	AV	QP	AV	
7.58 (a)	56.1	49.1	56.8	49.9	60.0	50.0	-3.9	-0.9	-3.2	-0.1	PASS
15.16 (b)	26.1	16.2	28.4	16.6	60.0	50.0	-33.9	-33.8	-31.6	-33.4	PASS
22.73 (c)	20.0	12.5	20.0	28.4	60.0	50.0	-40.0	-37.5	-40.0	-21.6	PASS
8.64 (d)	57.6	49.1	58.1	49.9	60.0	50.0	-2.4	-0.9	-1.9	-0.1	PASS
17.28 (e)	25.4	19.6	26.4	17.6	60.0	50.0	-34.6	-30.4	-33.6	-32.4	PASS
25.93 (f)	26.0	20.9	27.6	22.2	60.0	50.0	-34.0	-29.1	-32.4	-27.8	PASS

Table 69 sweep stopped mode

The results of the conducted emission tests, carried out in accordance with 47 CFR Part 15, section 15.207, at the 110 Volts AC mains connection terminals of the AC/DC power supply connected to the EUT and with the EUT operating in sweep stopped mode on 8.2 +/- 700 kHz, are depicted in table 69.

Note: During the measurement it was taken into account that the main operating frequency of 8.2 MHz of the EUT could be present on the 110 Volts AC mains connection terminals. The possible occurrence of this frequency of 8.2 MHz and its harmonics, throughout the range of 8.2 MHz +/- 700 kHz to 30 MHz, was checked during the measurement. The conducted emissions on frequencies which are not listed in table 4 were found to be below 25 dB(µV) on both line 1 and line 2.

(a) means the sweep is stopped at the beginning of the range at the given frequency
(b) second harmonic from a
(c) third harmonic from a
(d) means the sweepis stopped at the end of the sweep range at the given frequency
(e) second harmonic from d
(f) third harmonic from d

Test engineer

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3.4 Measurements of bandwidth of the emission.

As per CFR 47 Part 15.223 (a), plots show emission of sweeping system, measured using a loop antenna placed in the detection field of the antenna pairs.

3.4.1 Configuration IV: plot of bandwidth of the emission

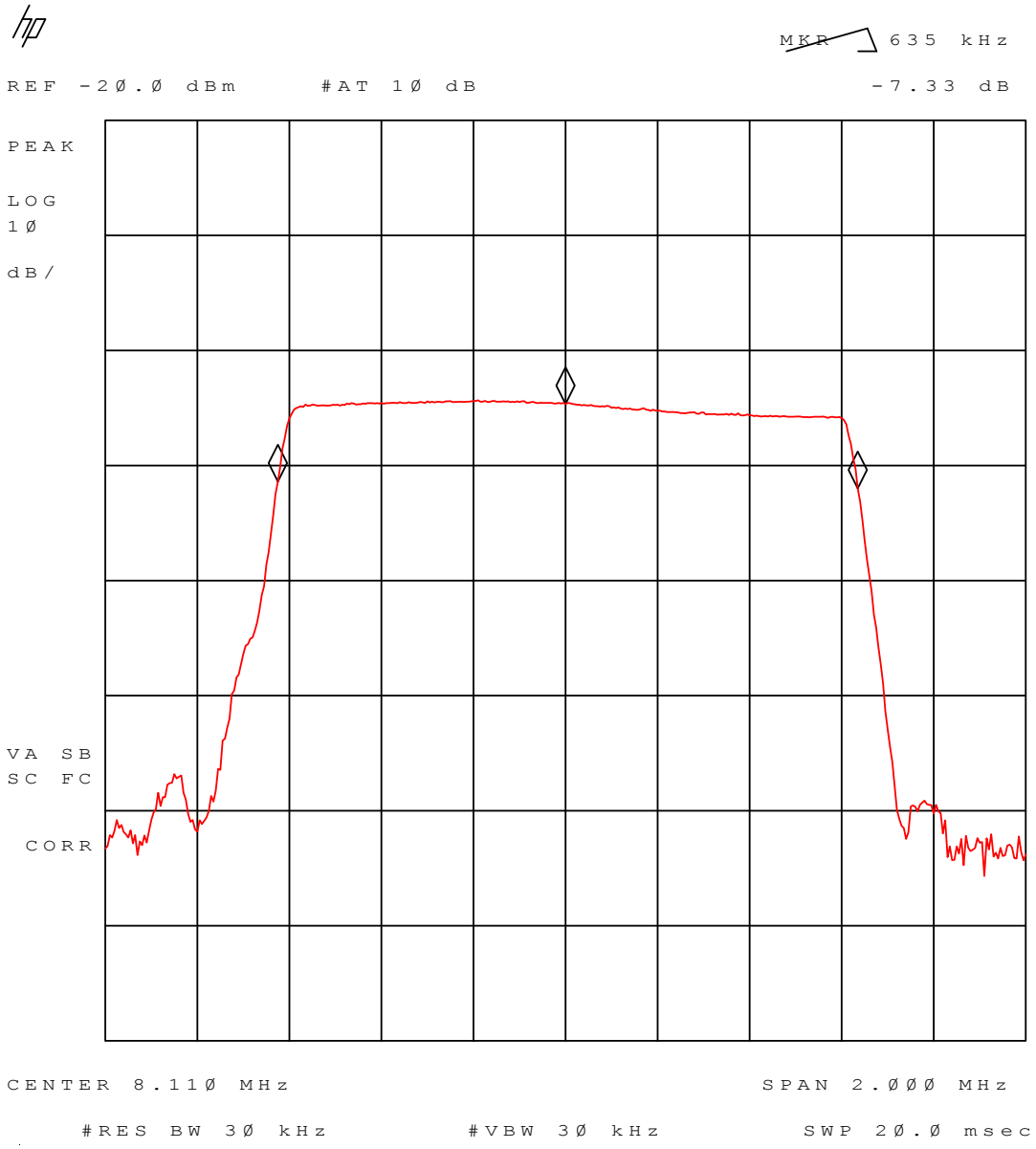

Figure 1 Emission bandwidth plot

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Name : J. Schuurmans

Date : January 20, 2004

3.4.2 Configuration V: plot of bandwidth of the emission.

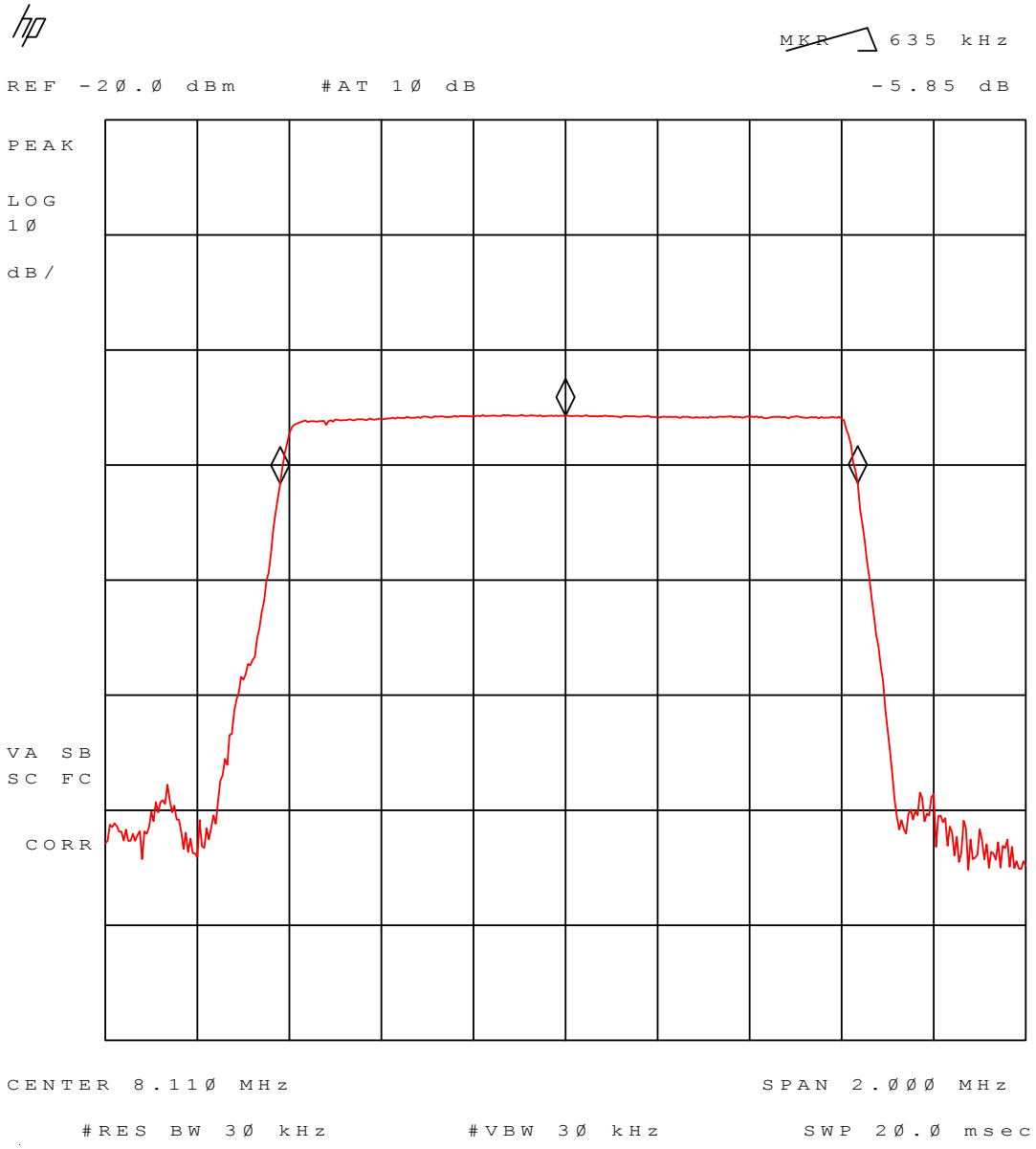

Figure 2 Emission bandwidth plot.

Test engineer

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Date : January 20, 2004

3.4.3 Configuration IX: plot of bandwidth of the emission.

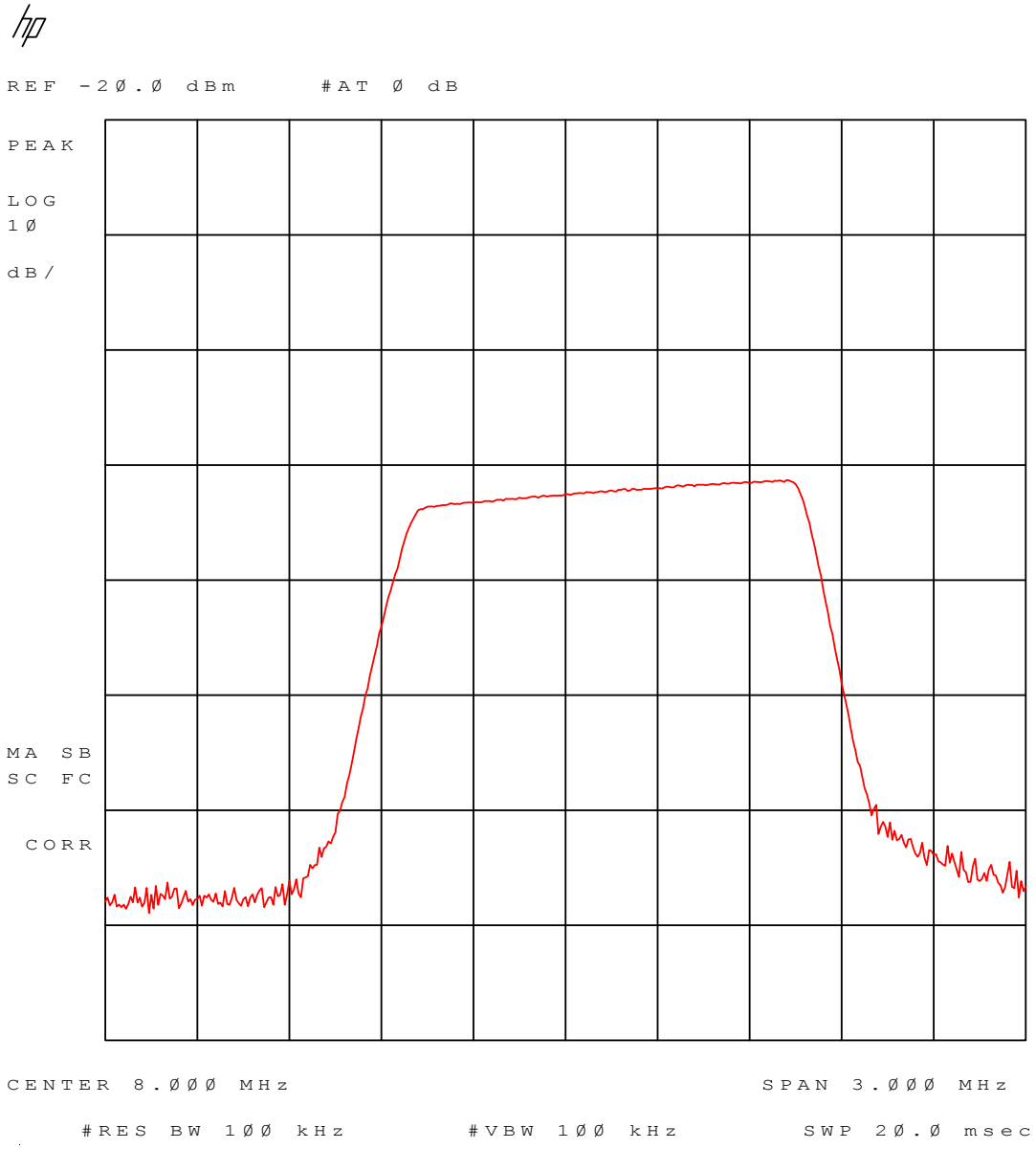

Figure 3 Emission bandwidth plot

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Date : January 20, 2004

3.4.4 Configuration X: plot of bandwidth of the emission.

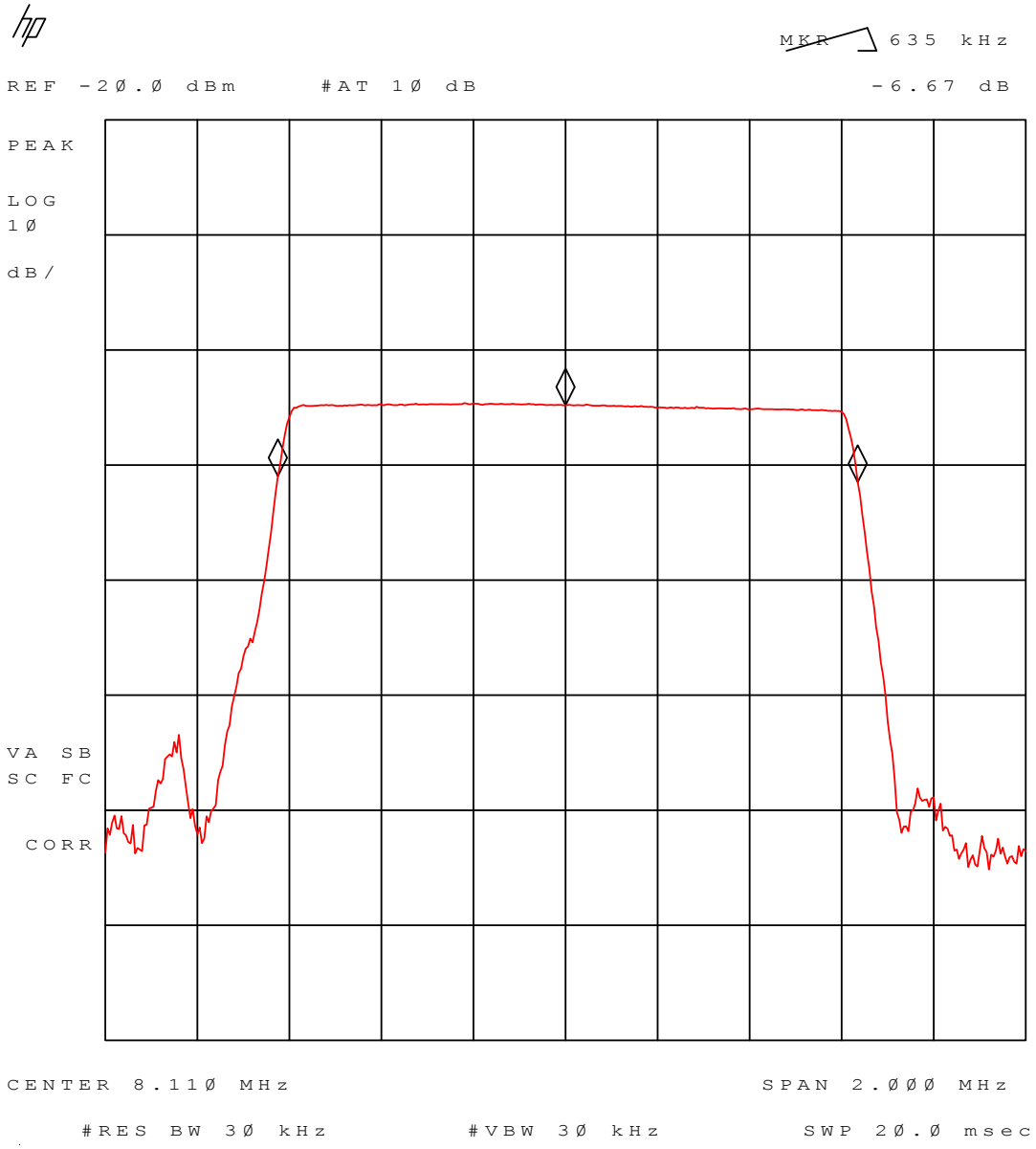

Figure 4 Emission bandwidth plot

Test engineer

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Date : January 20, 2004

3.4.5 Configuration XI: plot of bandwidth of the emission.

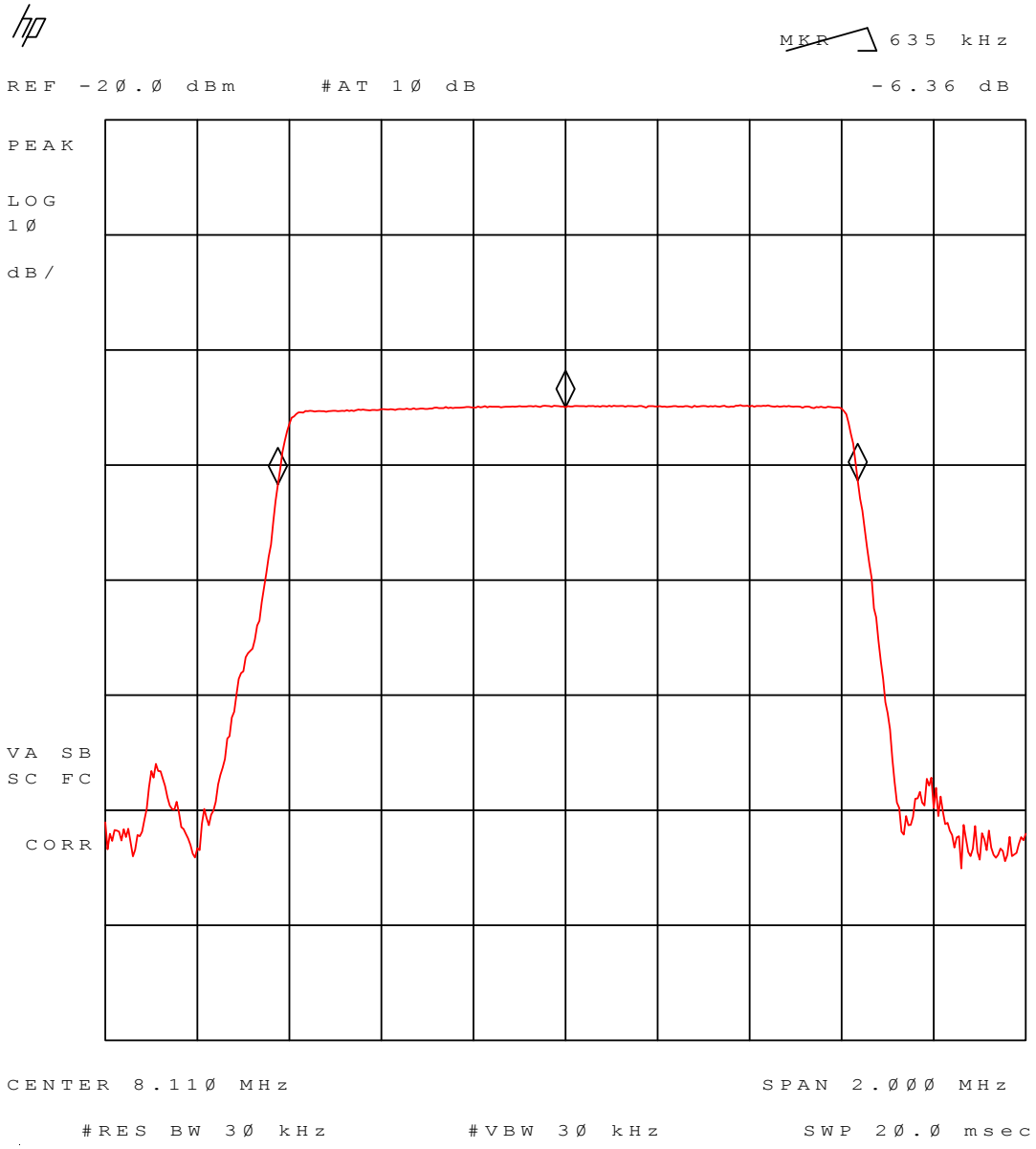

Figure 5 Emission bandwidth plot

Test engineer

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Date : January 20, 2004

3.4.6 Configuration XII: plot of bandwidth of the emission.

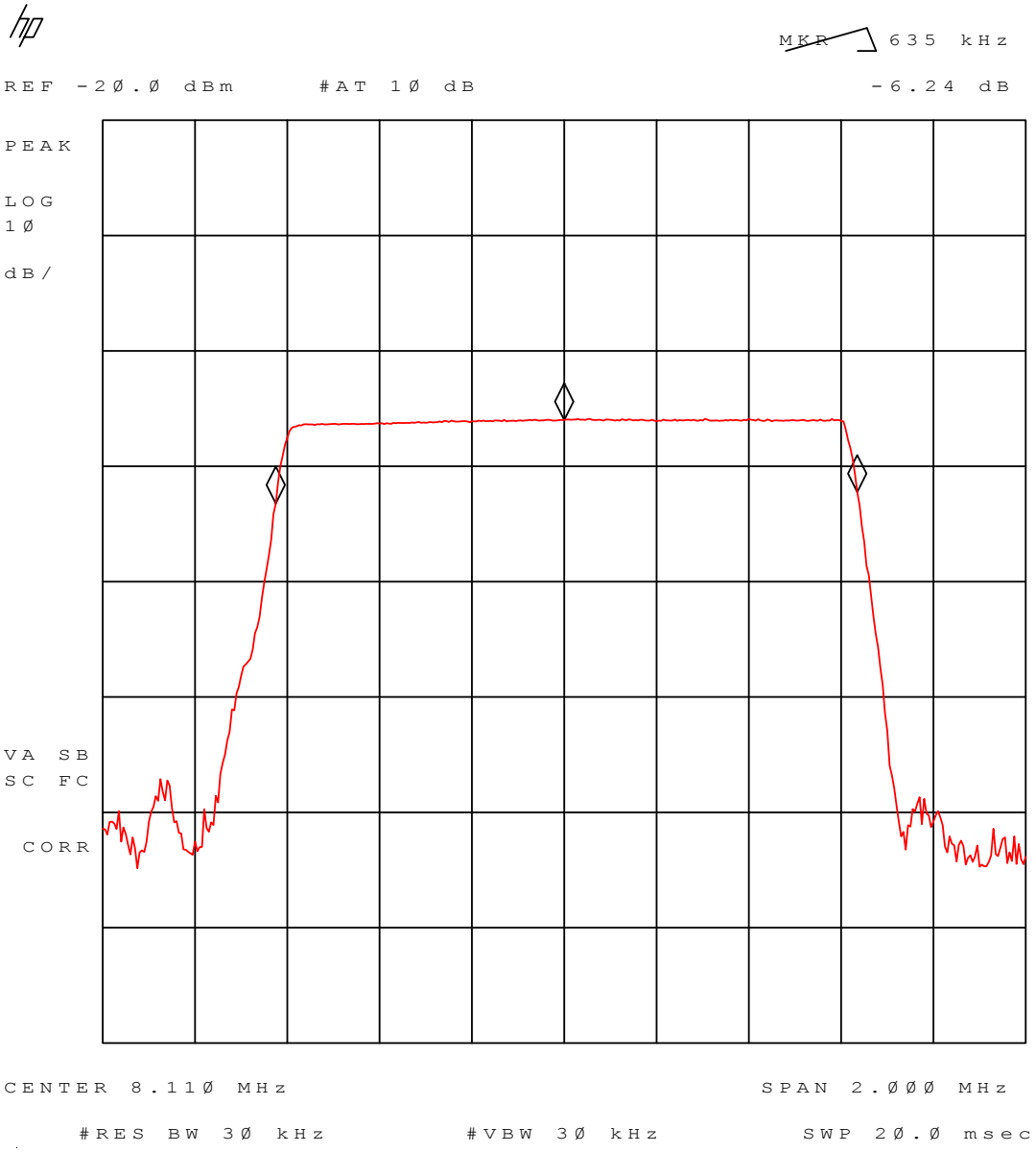

Figure 6 Emission bandwidth plot

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Date : January 20, 2004

3.4.7 Configuration XIII: plot of bandwidth of the emission.

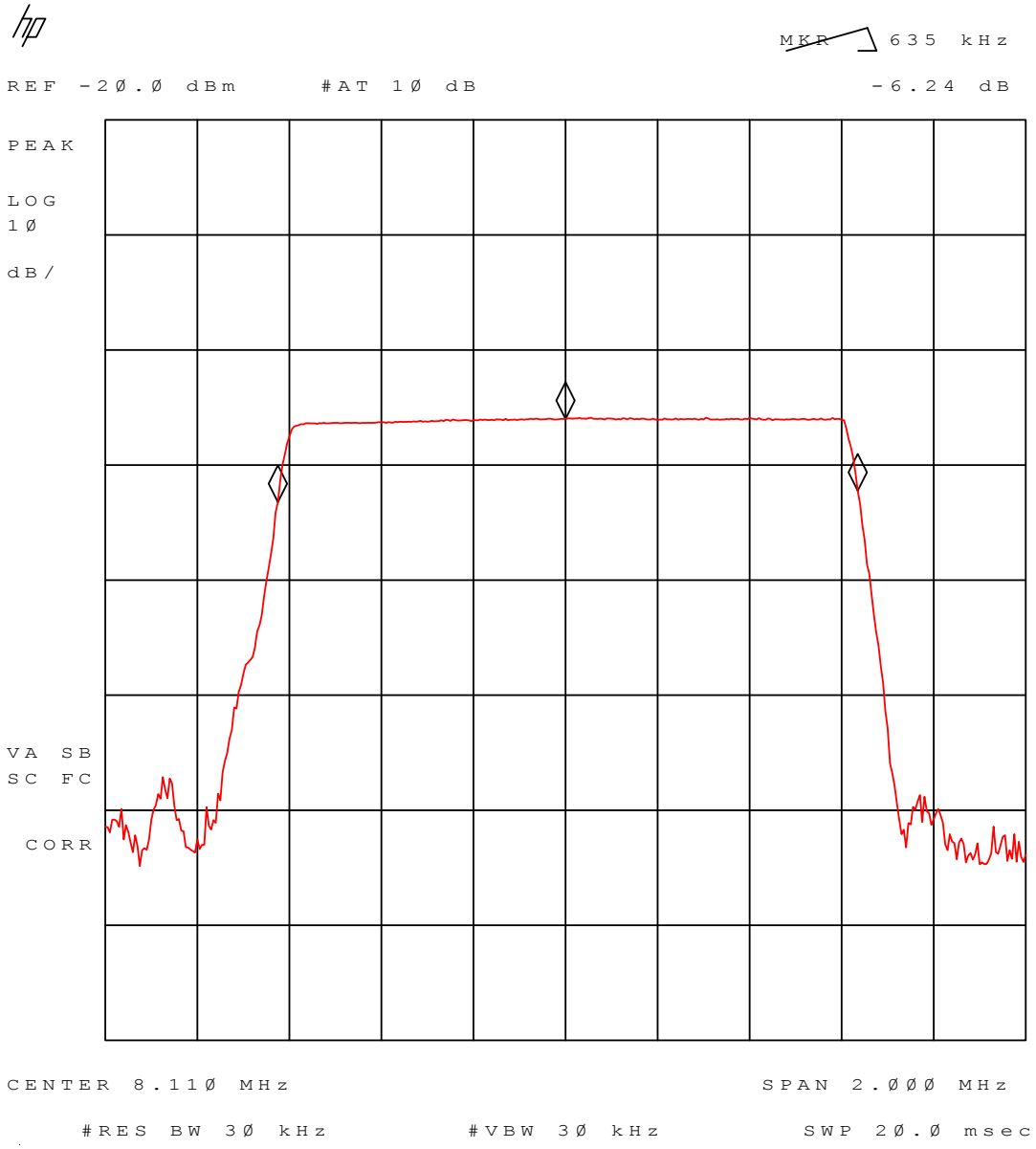

Figure 7 Emission bandwidth plot

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3.4.8 Configuration XIII-a: plot of bandwidth of the emission.

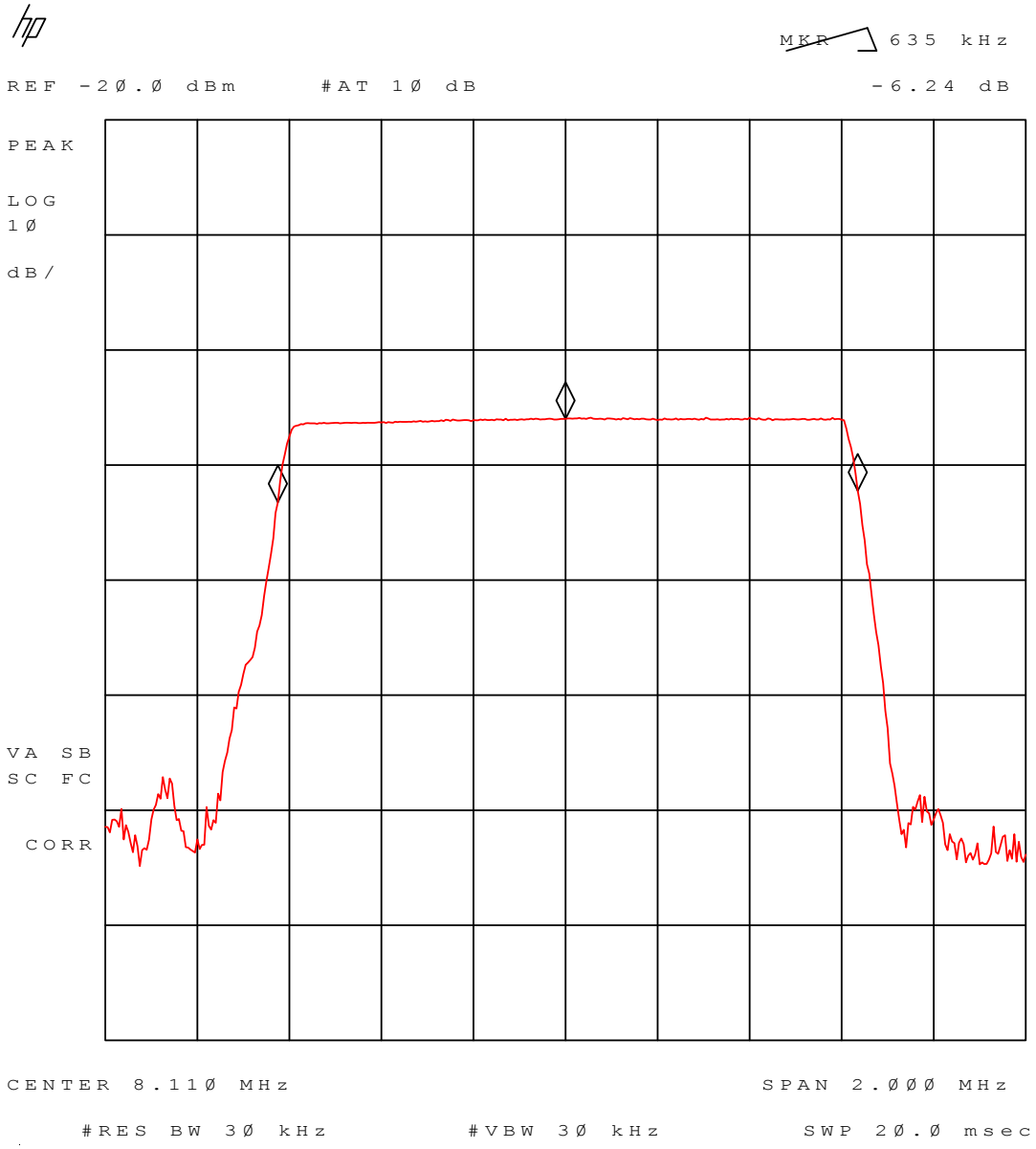

Figure 8 Emission bandwidth plot

Test engineer

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Name : J. Schuurmans

Date : January 20, 2004

3.4.9 Configuration XVIII: plot of bandwidth of the emission.

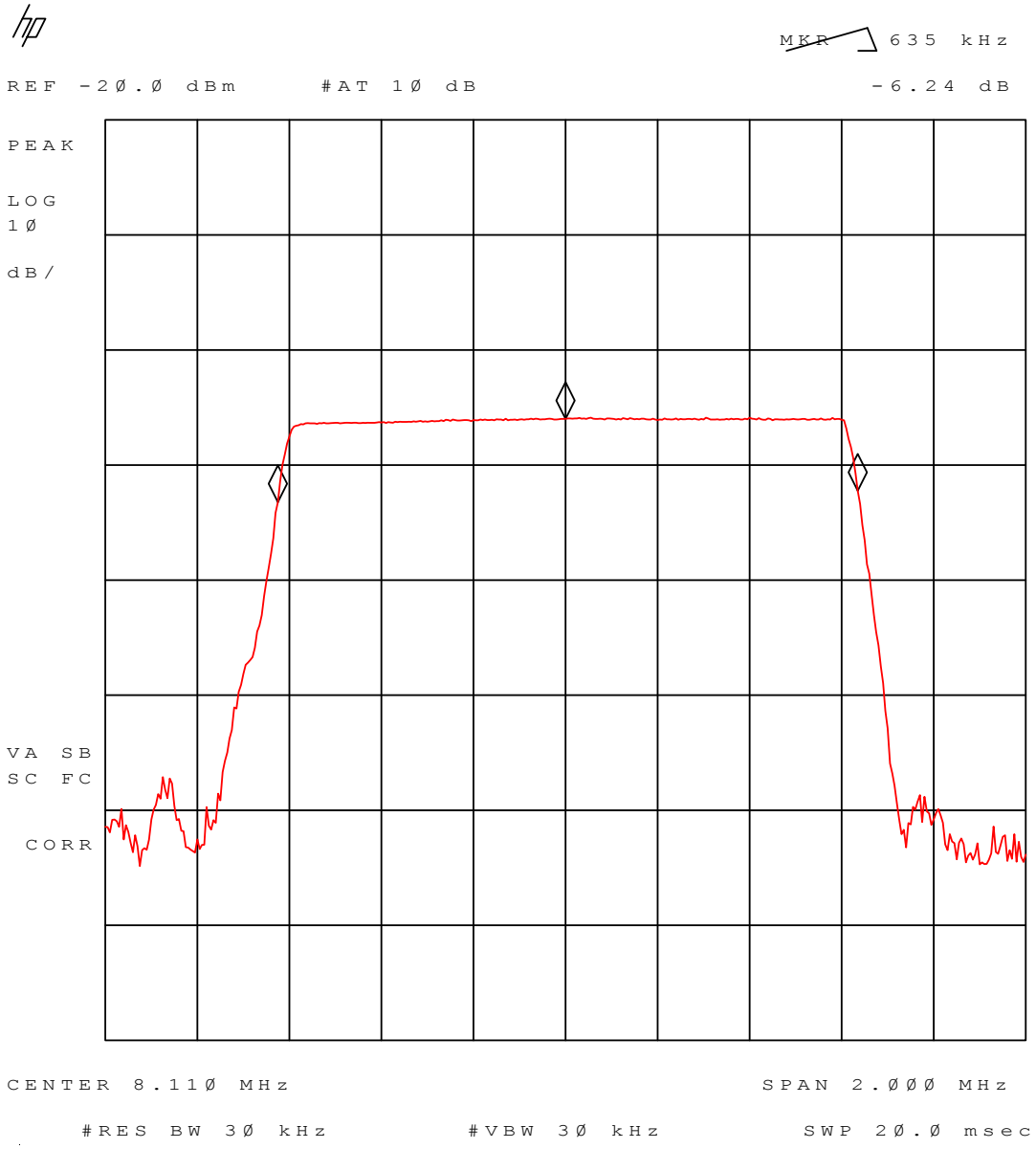

Figure 9 Emission bandwidth plot

Test engineer

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Name : J. Schuurmans

Date :20 January 20, 2004

4 List of utilized test equipment.

Inventory number	Description	Brand	Type
12471	Biconical antenna 20MHz-200MHz	EATON	94455-1
12473	Log-per antenna 200-1000MHz	EATON	96005
12476	Antenna mast	EMCO	TR3
12477	Antenna mast 1-4 mtr	Poelstra	--
12482	Loop antenna	EMCO	6507
12483	Guidehorn	EMCO	3115
12484	Guidehorn	EMCO	3115
12488	Guidehorn 18 - 26.5 GHz	EMCO	RA42-K-F-4B-C
12533	Signalgenerator	MARCONI	2032
12559	Digital storage oscilloscope	Le Croy	9310M
12561	DC Power Supply 20A/70V	DELTA	SM7020D
12567	Plotter	HP	7440A
12605	calibrated dipole 28MHz-1GHz	Emco	3121c
12608	HF milliwattmeter	Hewlett Packard	HP435a
12609	Power sensor 10MHz-18GHz	Hewlett Packard	HP8481A
12636	Polyester chamber	Polyforce	--
12640	Temperature chamber	Heraeus	VEM03/500
13664	Spectrum analyzer	HP	HP8593E
13078	Preamplifier 0.1 GHz - 12 GHz	Miteq	AMF-3D-001120-35-14p
13452	Digital multi meter	HP	34401A
13526	Signalgenerator 20 GHz	Hewlett & Packard	83620A
13594	Preamplifier 10 GHz - 25 GHz	Miteq	AMF-6D-100250-10p
13886	Open Area testsite	Comtest	--
14051	Anechoic room	Comtest	--
14450	2.4 GHz bandrejectfilter	BSC	XN-1783
15633	Biconilog Testantenna	Chase	CBL 6111B
15667	Measuring receiver	R&S	ESCS 30
99045	DC Power Supply 3A/30V	DELTA	E030/3
99055	Non-conducting support	NMi	--
99061	Non-conducting support 150cm	NMi	--
99068	Detector N-F/BNC-F	Radiall	R451576000
99069	Cable 5m RG214	NMi	--
99071	Cable 10m RG214	NMi	--
99076	Bandpassfilter 4 - 10 GHz	Reactel	7AS-7G-6G-511
99077	Regulating trafo	RFT	LTS006
99112	Tripod	Chase	--
99136	Bandpassfilter 10 - 26.5 GHz	Reactel	9HS-10G/26.5G-S11

Calculated measurements results radiated field strength, H-Field

General Formula:

d_s = short distance; H_s is field strength at short distance

d_l = long distance; H_l is field strength at long distance

$$(d_s/d_l))^n = H_l/H_s \text{ ……..[eq1]}$$

$$n \log(d_s/d_l) = \log(H_l/H_s) \text{ or } n = \log(H_l/H_s) / \log(d_s/d_l)$$

Calculation of n, for measured field strengths

H_s = 66.9 dBµV/m = 2213.1 µV/m

H_l = 41.9 dBµV/m = 124.45 µV/m

n = log(124.45/2213.1) / log(3/10)

n = 2.39

Calculated field strength at new distance, from the 10 meter value:

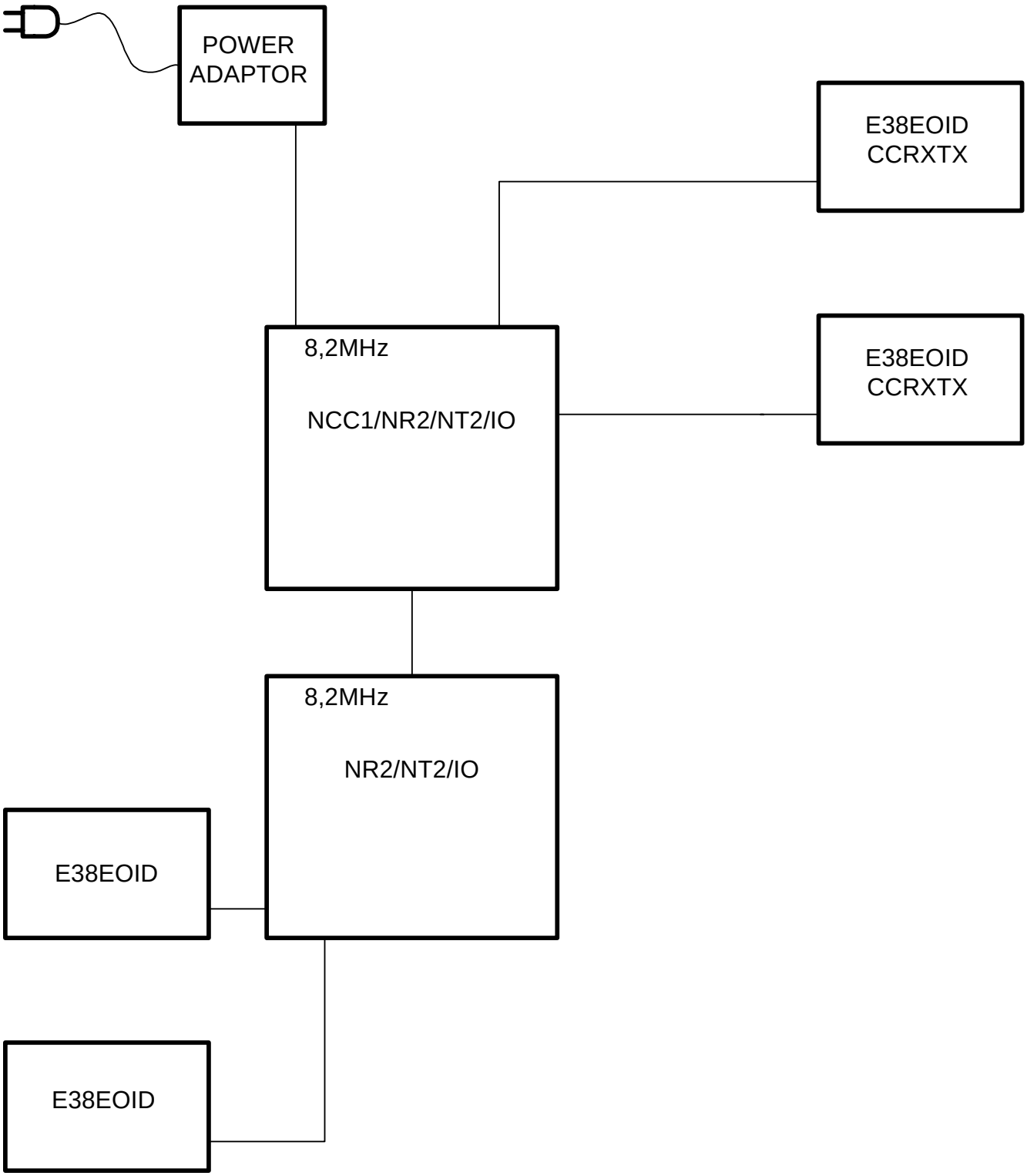
H_s now becomes H_s = 124.45 µV/m and d_s=10

Assume d_l =30

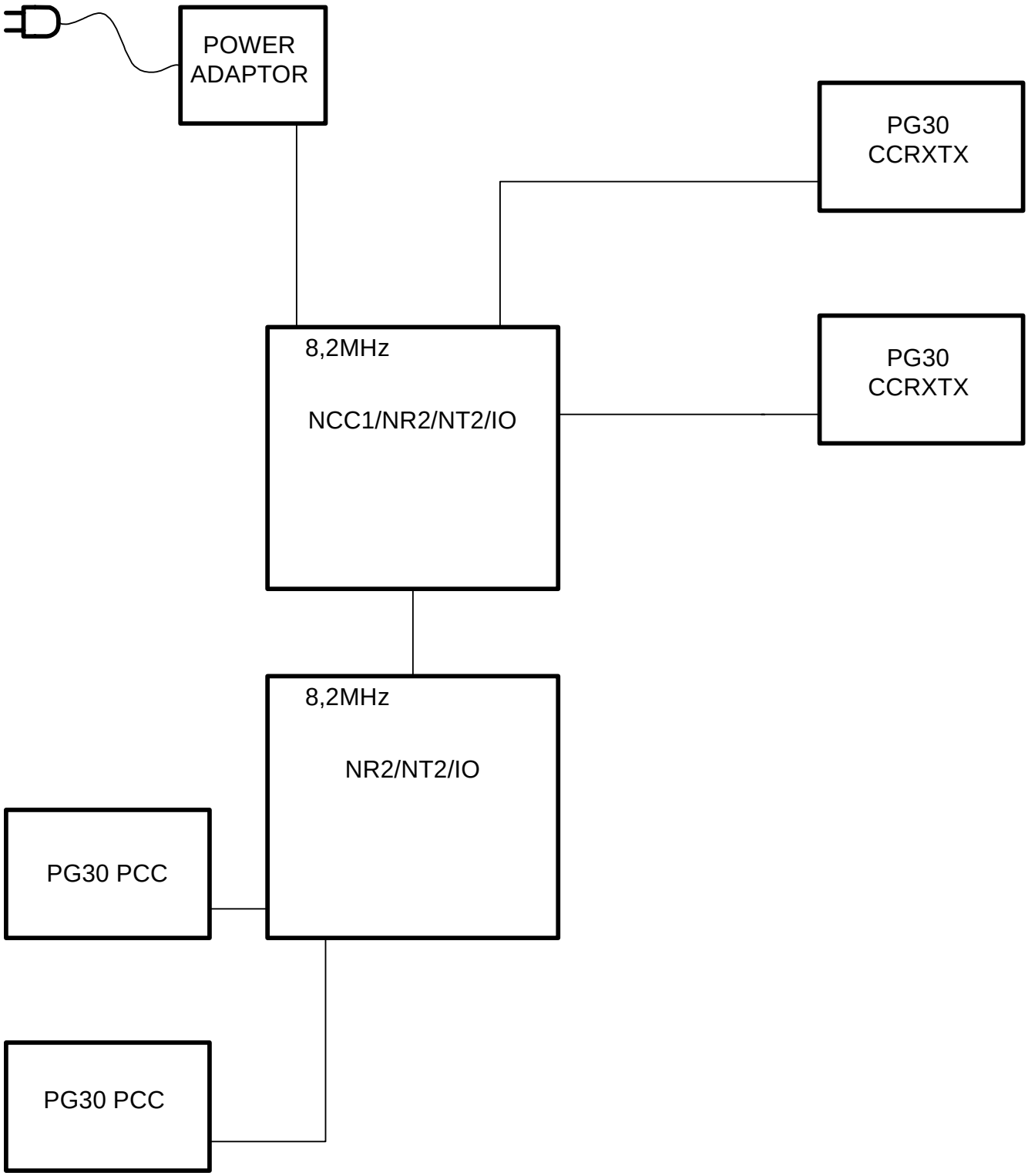
Now from [eq1] H_l becomes:

$H_l = H_s * (d_l/ds)^{-n}$

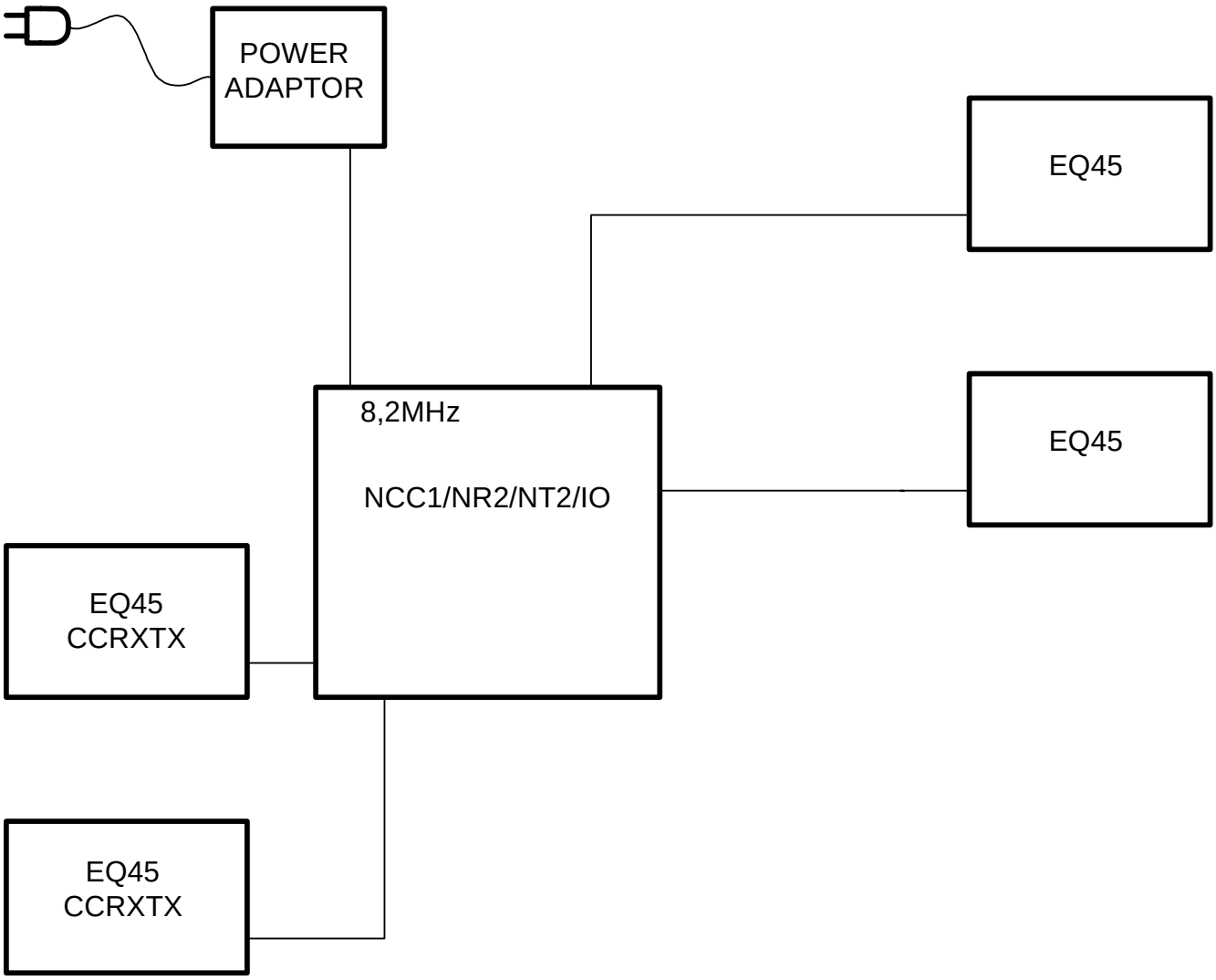
So $H_l = 124.45 * (30/10)^{-2.39}$ = 9.00 uV/m or 19.1 dBuV



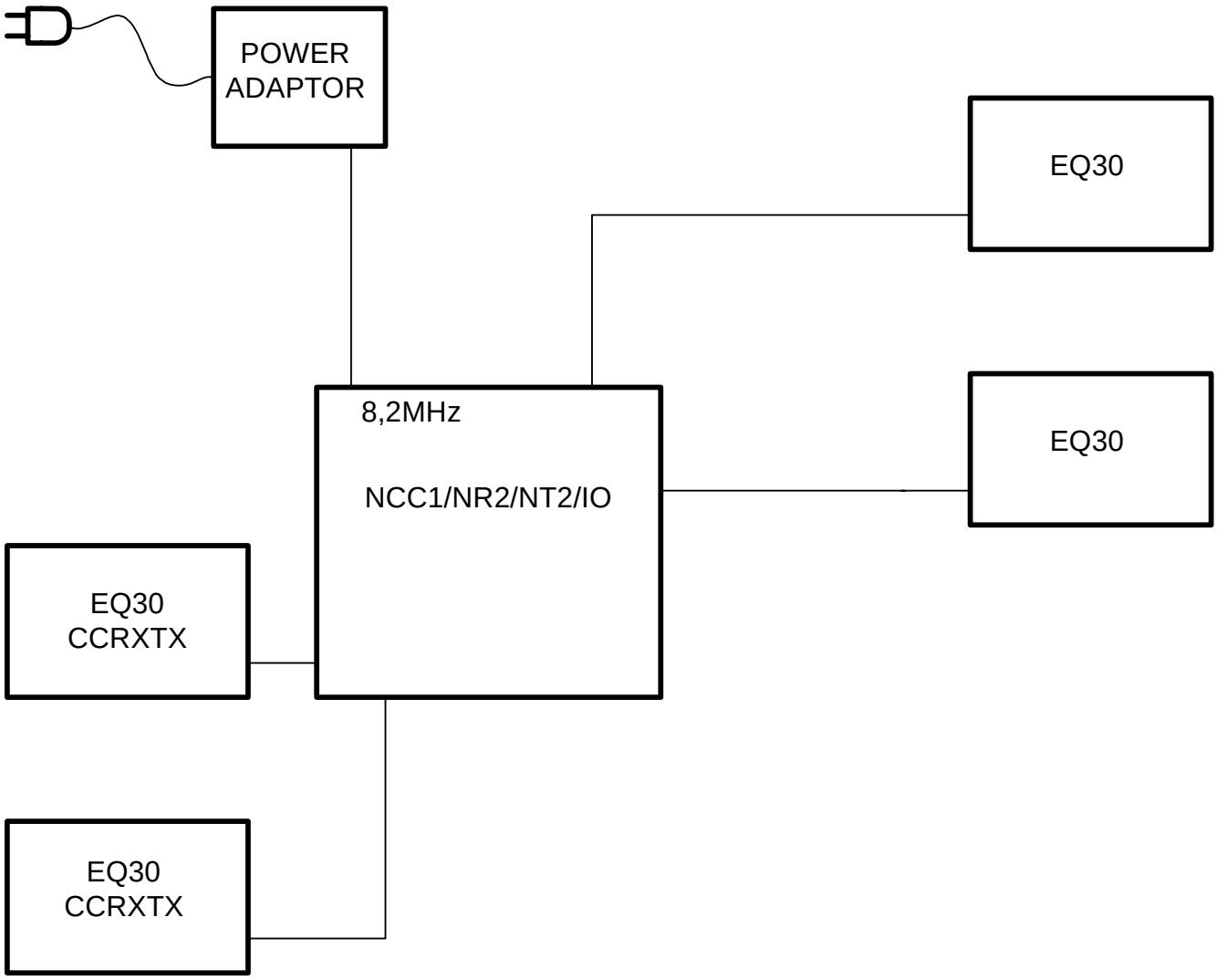
Configuration 4.



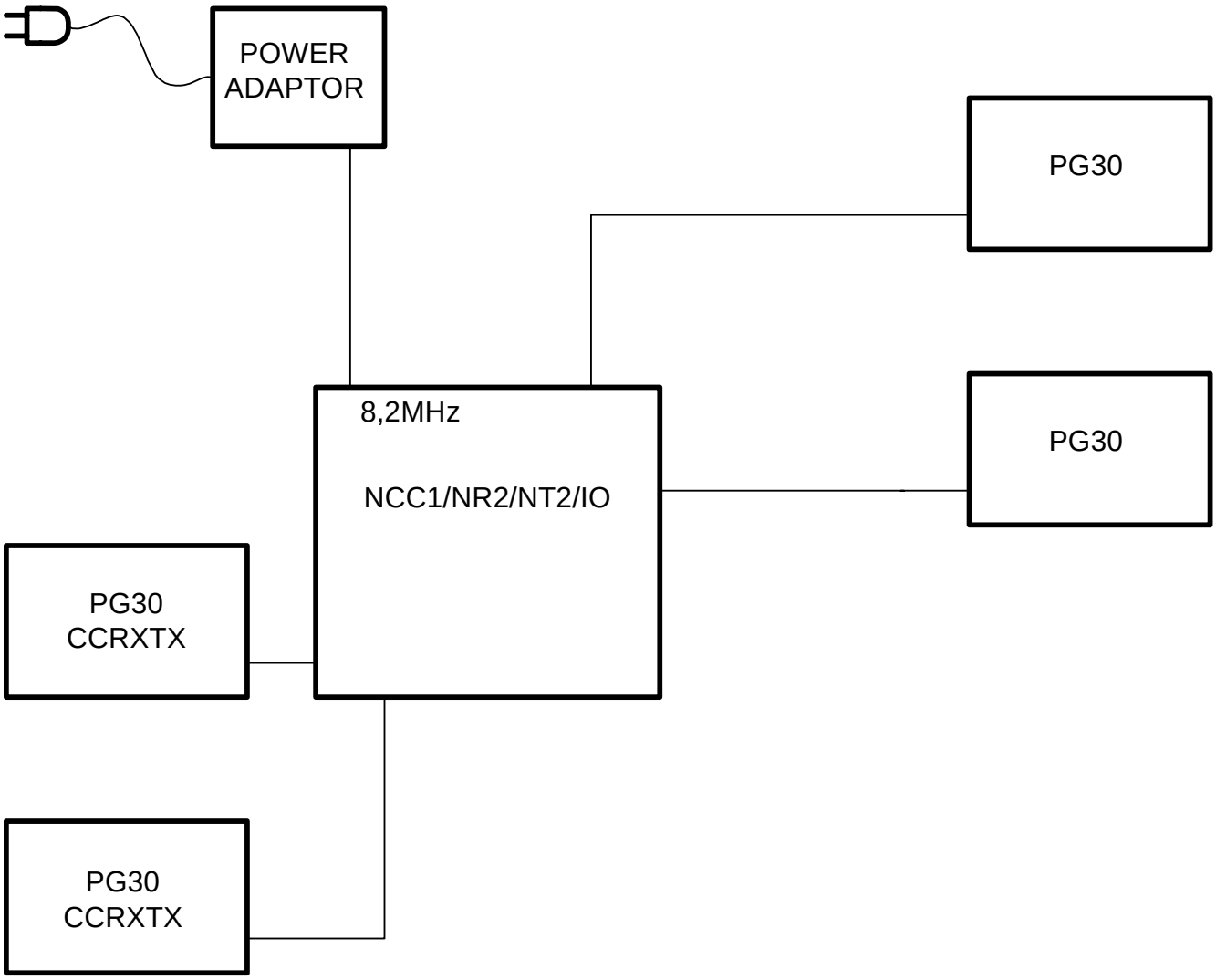
Configuration 5.



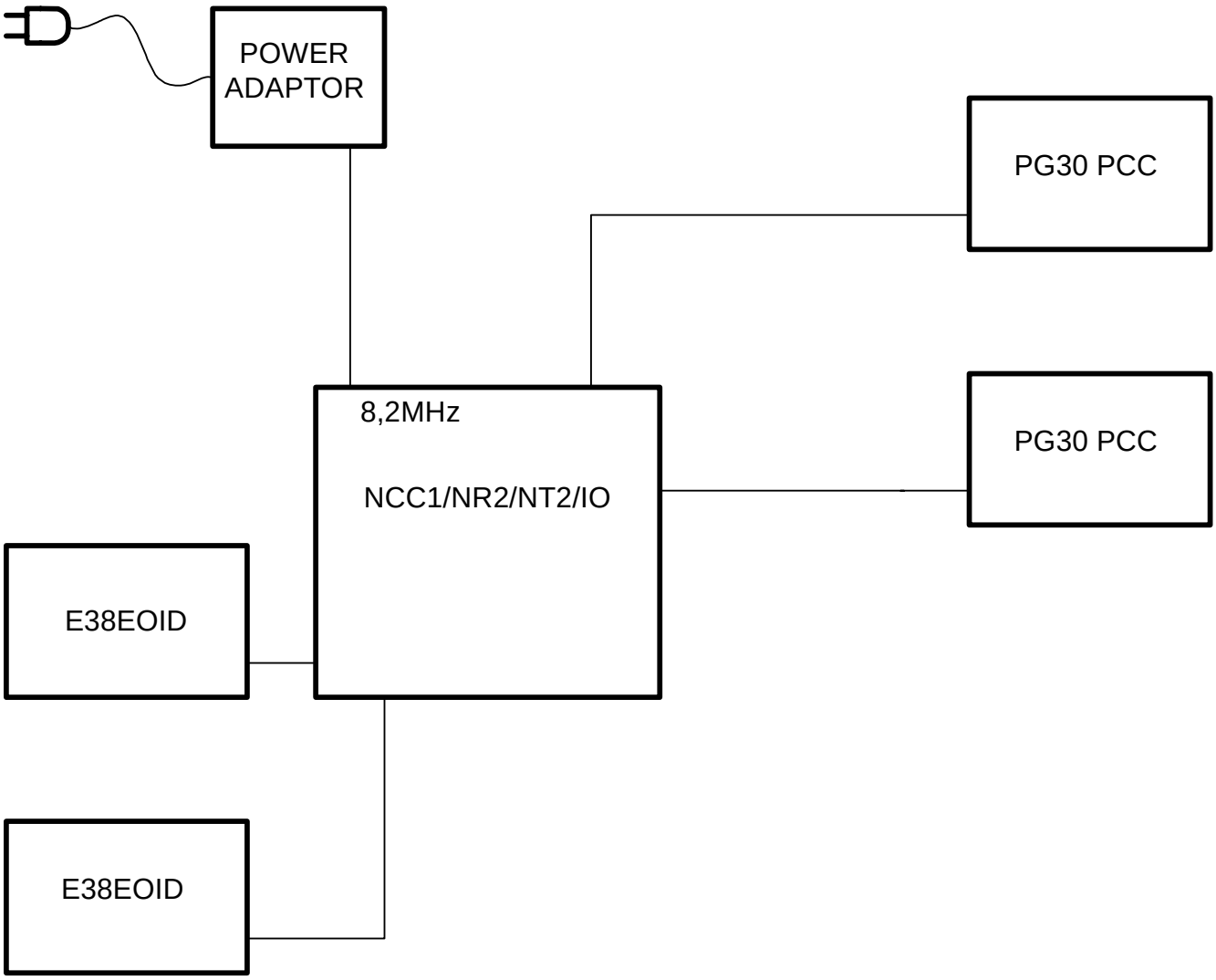
Configuration 9.



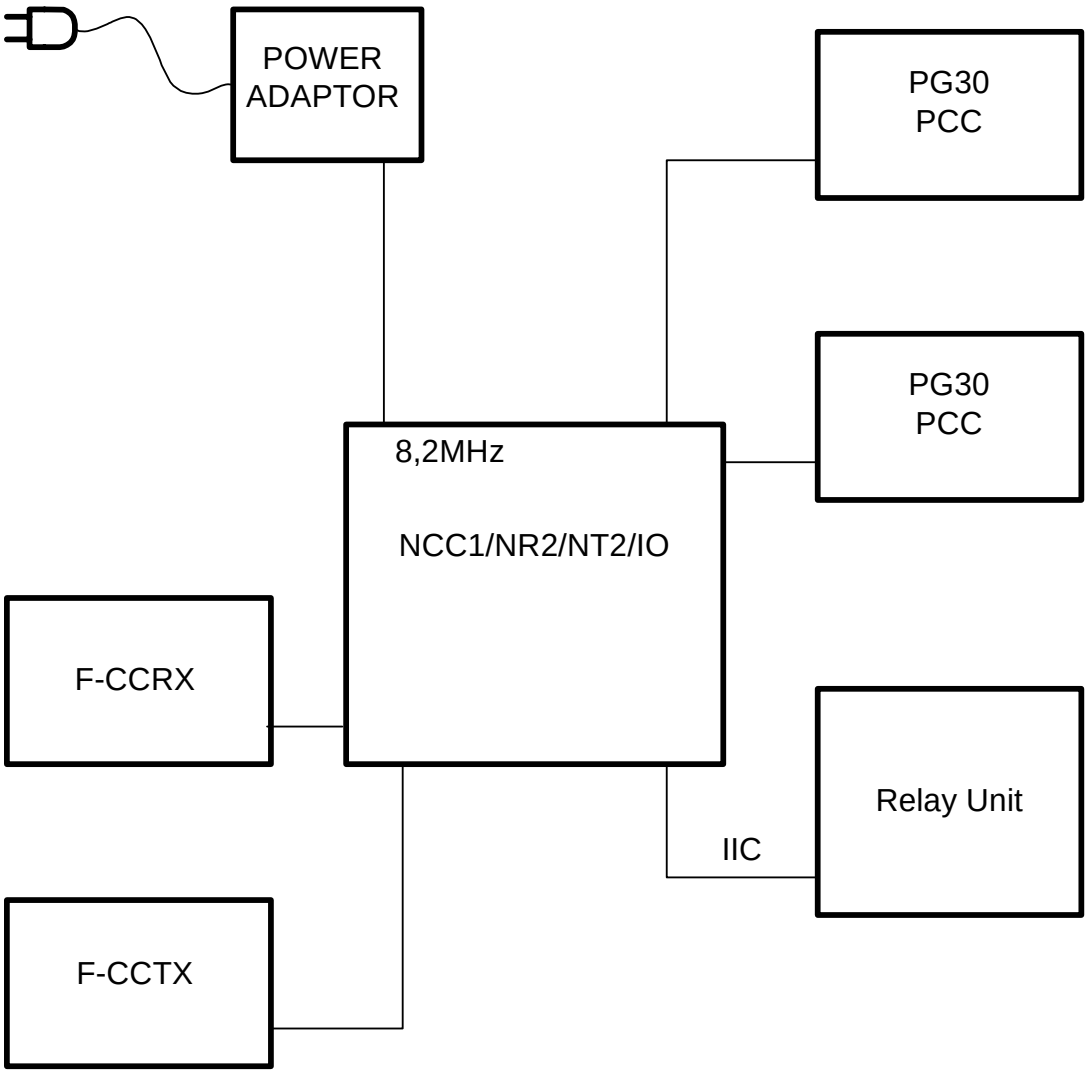
Configuration 10.



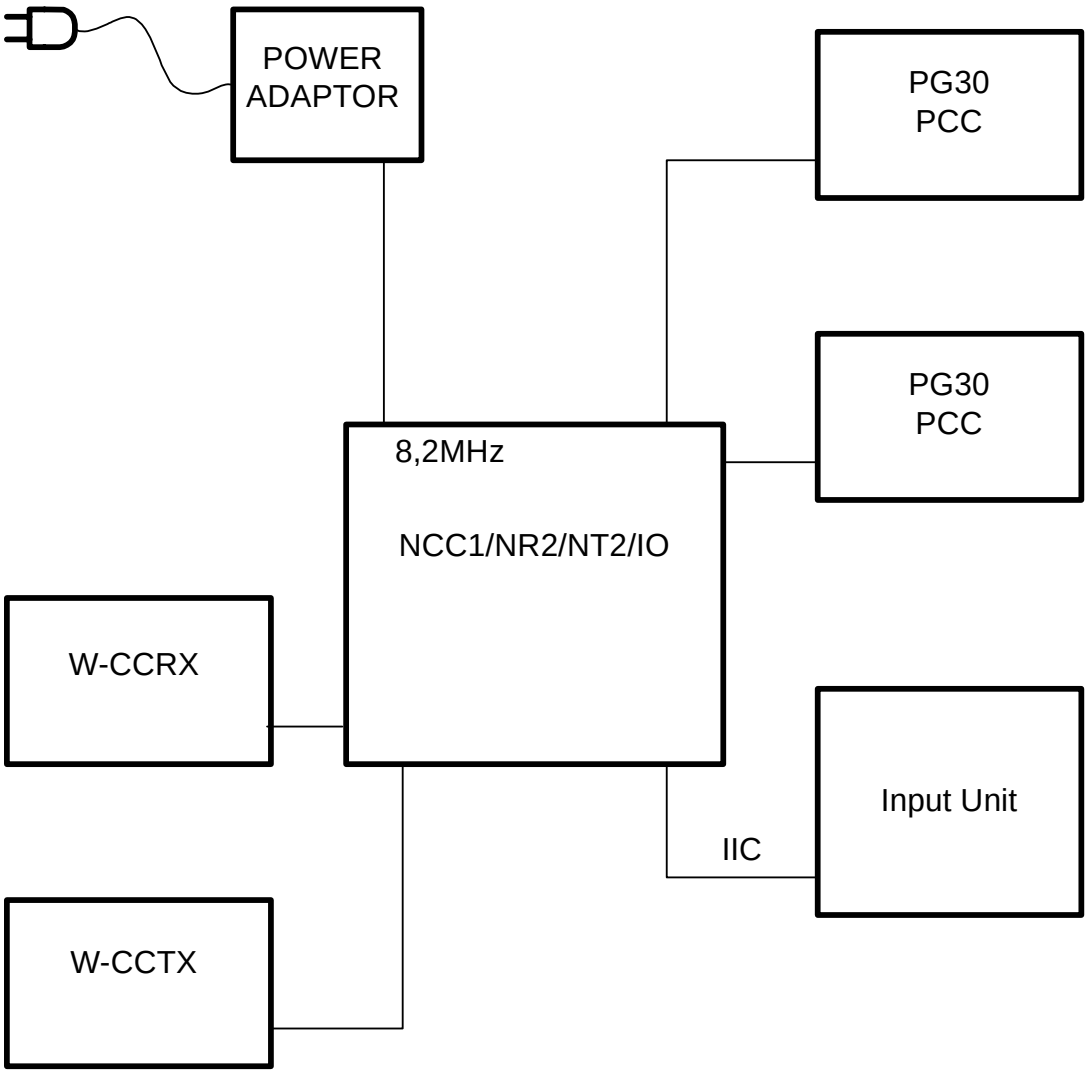
Configuration 11.



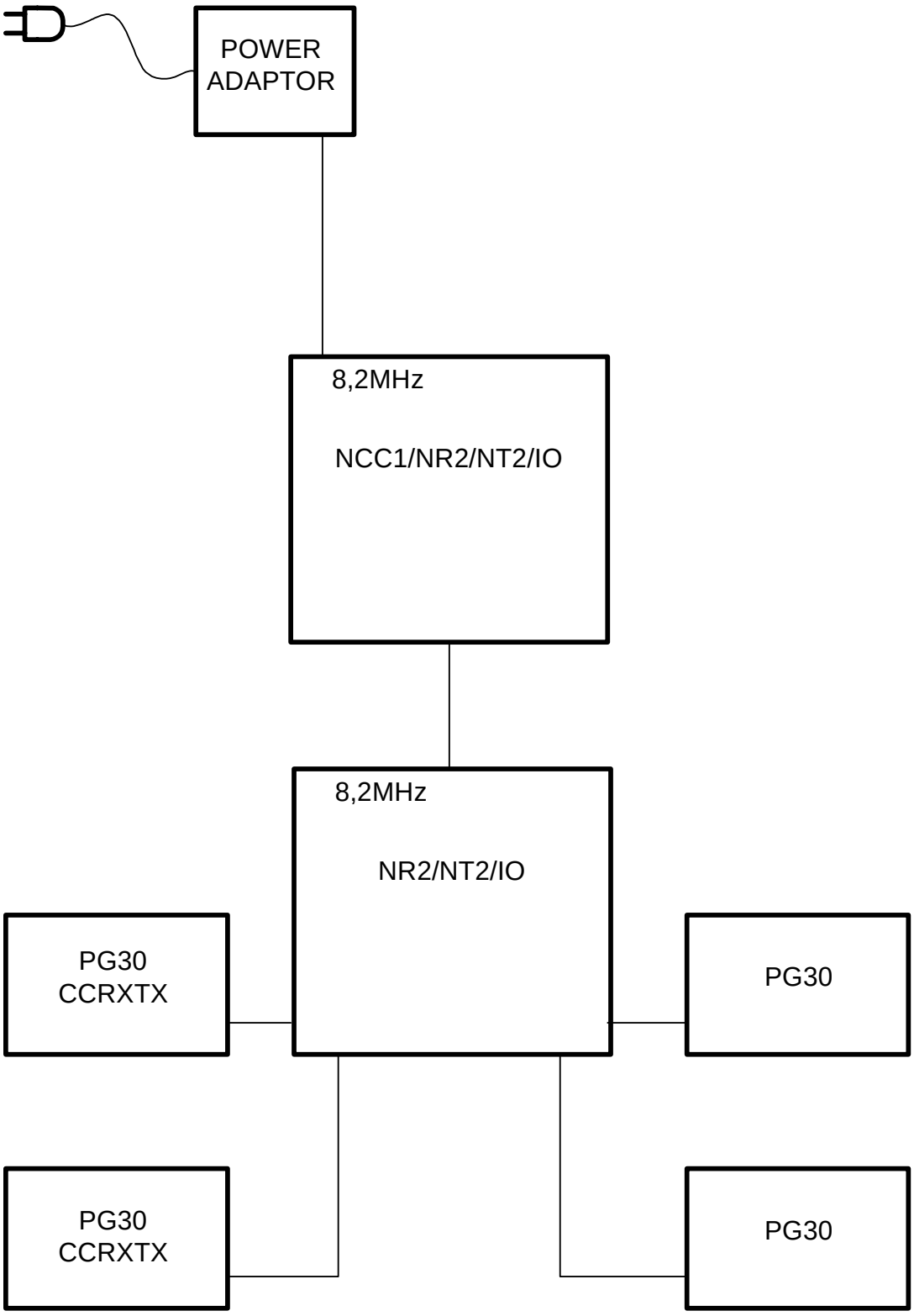
Configuration 12.



Configuration 13.



Configuration 13A.



Configuration 18.