

Test report

99643930

based on:

FCC Part 15 Subpart C, section 15.209; subpart B
section 15.109 (10-1-04 Edition); RSS-210, issue 5
(Nov. 2001 edition)

Receiver/ Immobilizer
VALEO
S0044-A

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This report comprises of four modules. The total number of pages is: 14

Main module

1 Introduction

This report contains the result of tests performed by:

Telefication bv
Edisonstraat 12a
6902 PK Zevenaar
The Netherlands

Telefication complies with the accreditation criteria for test laboratories as laid down in ISO/IEC 17025:1999. The accreditation covers the quality system of the laboratory as well as the specific activities as described in the authorized annex bearing the accreditation number L021 and is granted on 30 November 1990 by the Dutch Council For Accreditation (RvA: Raad voor Accreditatie). The copyright of this test report is owned by Telefication bv and may not be reproduced except in full without the written approval of Telefication bv.

Ordering party:

Company name	:	VALEO SECURITE HABITACLE
Address	:	42, rue le Corbusier
Zipcode	:	94042
City/town	:	Créteil Cedex
Country	:	France
Date of order	:	13 April 2005

2 Product

A sample of the following product was submitted for testing:

Product name	:	Receiver/ Immobilizer
Product category	:	Intentional radiators
Manufacturer	:	VALEO SECURITE HABITACLE
Trade mark	:	VALEO
Type designation	:	S0044-A
FCC ID	:	N5FS0044A
Emission designator	:	5K00K1DAN
Hardware version	:	--
Software version	:	--
Serial number	:	--

3 Test schedule

Tests were carried out in accordance with the specification detailed in chapter 6 "Summary" of this report.

Tests were carried out at the following locations:

- Telefication, Zevenaar
- TNO EPS, Niekerk

The sample of the product was received on:

- 19 April 2005

Tests were carried out on:

- 22 April - 30 May 2005

4 Product documentation

For production of this report the following product documentation was used:

Description	Date	Identification
Technical approval document	8 April 2005	No. 633020-4301-001-B

5 Observations and comments

The sample operates together with transmitter type S0084A of the same manufacturer.

6 Summary

The product is intended for use in the following application area:

VEHICULAR

The sample was tested according to the following specifications:

FCC Part 15 Subpart C, section 15.209 (10-1-04 Edition);
FCC Part 15 Subpart B section 15.109 (10-1-04 Edition);
RSS-210, Issue 5 (Nov. 2001 edition)

7 Conclusions

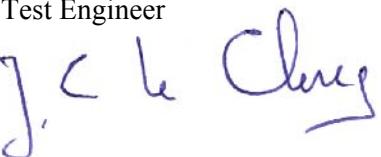
The sample of the product showed **NO NON-COMPLIANCES** to the specification stated in chapter 6 of this report.

The results of the tests as stated in this report, are exclusively applicable to the product item as identified in this report. Telefication does not accept any responsibility for the results stated in this report, with respect to the properties of product items not involved in these tests.

All tests are performed by:

name : ing. P.A. Suringa
function : Senior Engineer Radio/EMC
signature : 

Review of test methods and report by:

name : ing. J.C. le Clercq
function : Test Engineer
signature : 

The above conclusions have been verified by the following signatory:

date : 1 June 2005
name : J.P. van de Poll
function : Co-ordinator Test Group
signature : 

Test results module

8 Summary

According to FCC Part 15 subparts B/C, sections 15.109/15.209 the following tests have been performed:

Port	Reference	Phenomena	Result
Enclosure	section 15.209	Radiated emissions	P
Enclosure	section 15.109	Radiated emissions	P

Results:

P = pass
F = fail

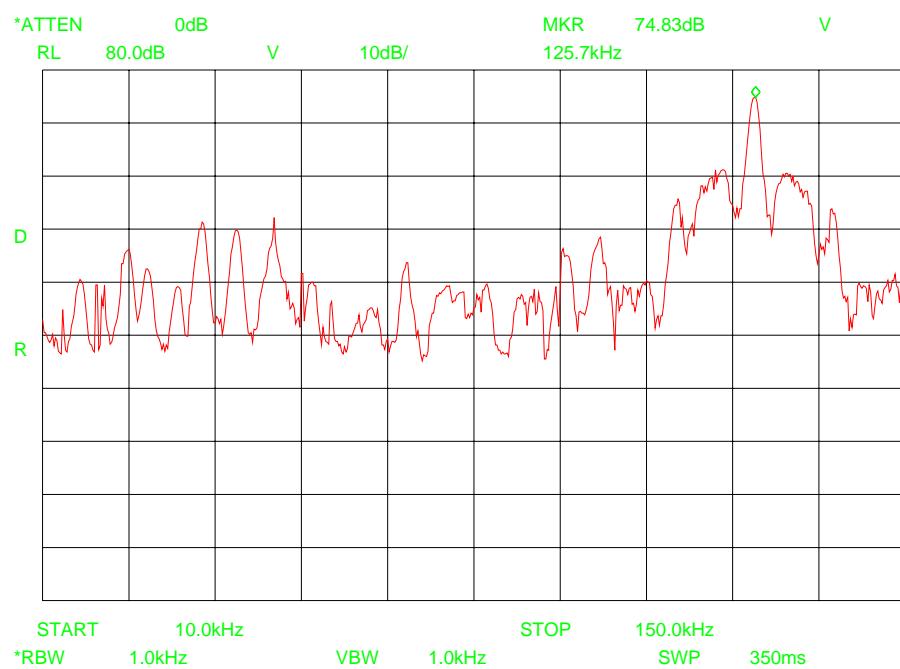
NA = not applicable
NP = not performed

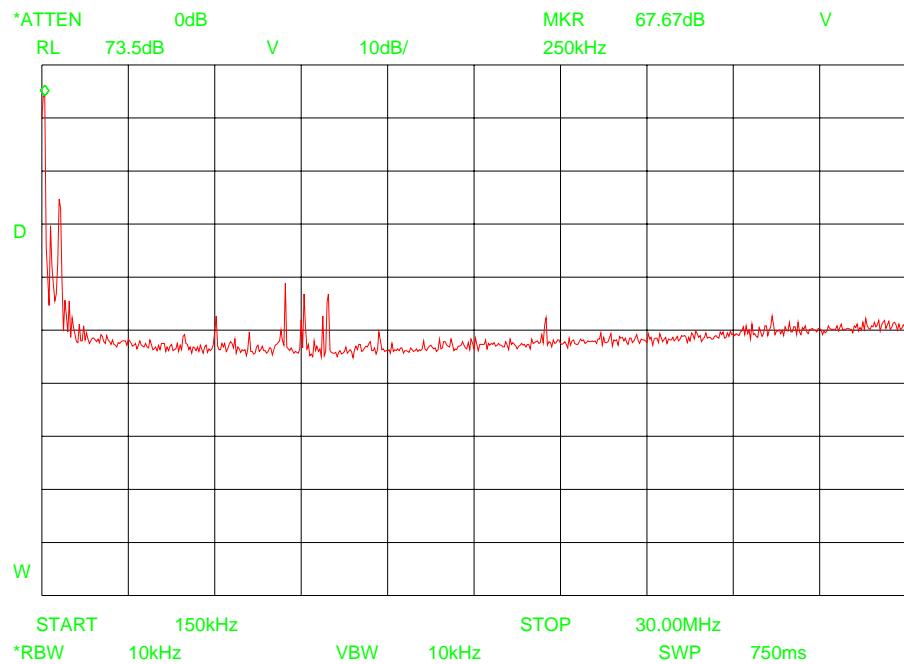
9 Emission tests

1.1 Field strength of emissions (< 30 MHz)

Compliance standard : FCC part 15, subpart C, section 15.209.
Method of test : ANSI C63.4-2001, sections 5.3 & 8.2.1; FCC part 15, subpart A, section 15.31 (f)(2), 15.33, 15.35.
Justification : Exploratory measurements have been carried out in a large triple loop antenna.
Compliance measurements have been carried out at 3 m distance on an Open Area Test Site (OATS) without ground plane.
An inverse linear distance extrapolation factor of -40 dB/decade has been applied to determine the result at a distance of 30/300 meters.

Test results :
(dB μ V/m, exploratory)





Test results :
 (dB μ V/m, compliance)

Orientation of EUT: plane of EUT's loop parallel to plane of receive loop antenna			
Frequency (kHz)	Test result @ 3 m distance (dB μ V/m)	Extrapolation to 300 m distance (dB μ V/m)	Limit (dB μ V/m)
125.1	37.3 (AV)	-42.7	25.7 @ 300 m
125.1	63.5 (PK)	-16.5	45.7 @ 300 m
252.0	10.0 (AV)	-70	19.6 @ 300 m
252.0	14.0 (PK)	-66	39.6 @ 300 m
375.9	\leq 6.5 (AV)	\leq -73.5	16.1 @ 300 m
375.9	13.5 (PK)	-66.5	36.1 @ 300 m
10,000	\leq 33.5 (QP)	\leq -6.5	29.5 @ 30 m
16,000	\leq 29.5 (QP)	\leq -10.5	29.5 @ 30 m

Remark: results due to other EUT orientations proved to be considerably lower than the results above.

Test equipment used: (Item numbers)	1, 2, 4, 6
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Item numbers refer to the used test equipment module.

1.2 Field strength of unwanted emissions (> 30 MHz)

Compliance standard : FCC part 15, subpart C, section 15.209;
subpart B, section 15.109.

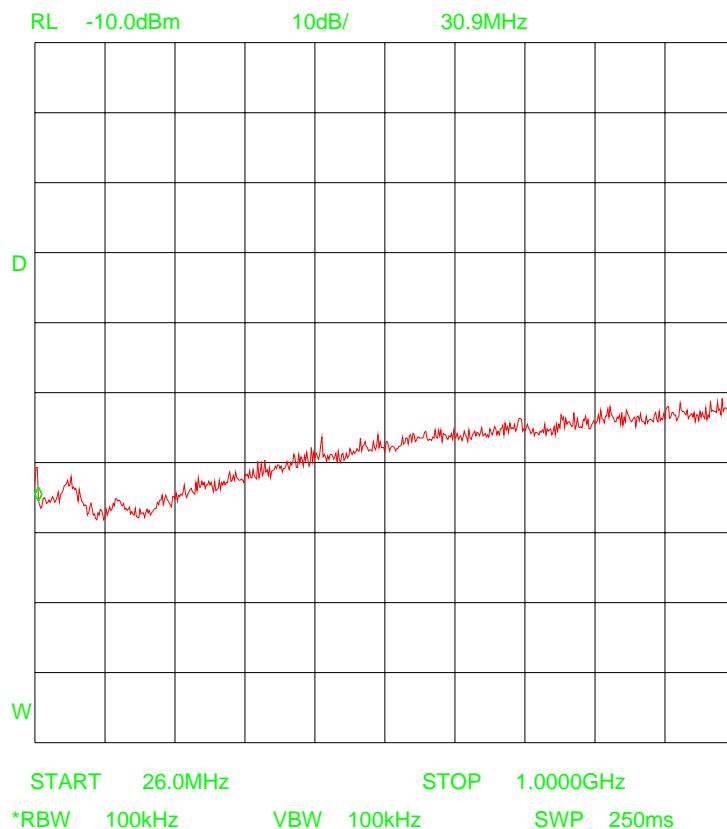
Method of test : ANSI C63.4-2001, sections 5.4, 8.2.3 & 8.3.1.2; FCC part 15,
subpart A, section 15.31 (f)(2), 15.33, 15.35.

Justification : Exploratory measurements have been performed in a compact full
anechoic room (CFAC).
Compliance measurements have been performed at
the Open Area Test Site of:
TNO Electronic Products & Services (EPS) B.V
Smidshornerweg 18
9822 TL Niekerk
The Netherlands

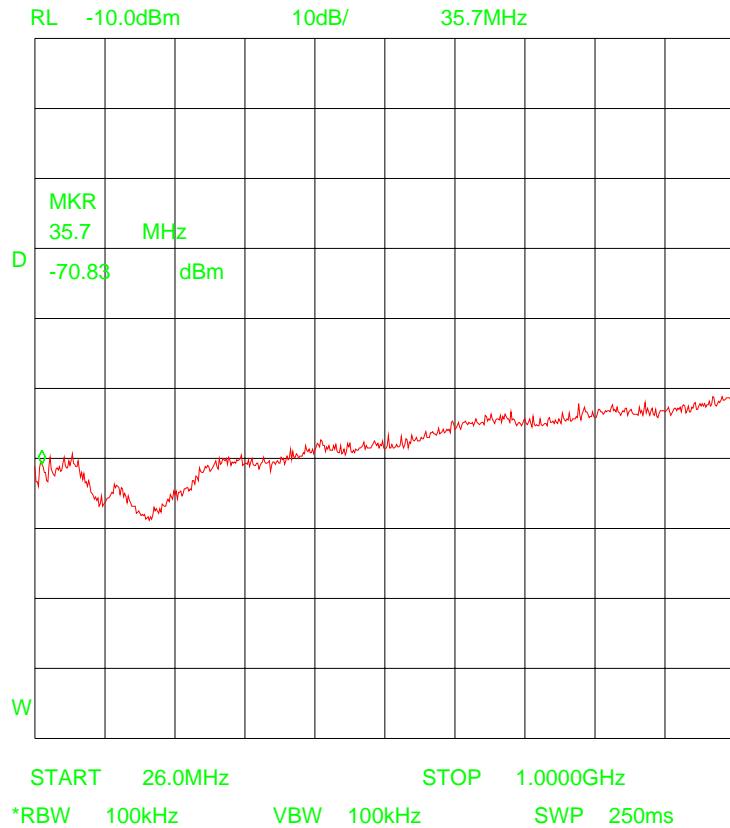
FCC listed : 90828
Industry Canada : IC3501

Test results
(dBm e.r.p., exploratory):

Horizontal polarization



Vertical polarization



Test results :
(dB μ V/m, compliance)

Frequency (MHz)	Polarization (H/V)	Test result @ 3 m distance (dB μ V/m)	Limit (dB μ V/m)
32.7	H	27.6 (QP)	40.0
32.7	V	35.6 (QP)	40.0

Test equipment used: (Item numbers)	5, 6, 7, 8, 9, 10
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Item numbers refer to the used test equipment module.

Used test equipment module

This module contains the list of test equipment used.

Ref	Description	Telefication ident.	Manufacturer	Model
1	Test receiver	TE 00205	R & S	ESH3
2	Active loop antenna	TE 00746	R & S	HFH 2-Z2
3	Test receiver	TE 00091	R & S	ESV(P)
4	Large triple loop antenna	TE 01066	Telefication	--
5	Logper/bow-tie antenna	TE 00700	EMCO	3143
6	Spectrum analyzer	TE 00481	HP	8563E
7	Compact anechoic chamber (CFAC)	TE 01064	Euroshield	RFD-F-100

The following measurement equipment is used at TNO EPS Niekerk:

8	Test receiver	S/n 15667	Rohde & Schwarz	ESCS 30
9	Open Area Test Site	13886	Comtest	TNO EPS
10	Biconilog antenna	S/n 15633	Chase	CBL6111B

Cross reference table

Transmitter	
CNR RSS-210 Issue 5	FCC 47 CFR Ch. 1 part 15, subpart C (10-1-04 Edition)
Tables 3, 7	§ 15.209
Category I non - scanning receiver	
CNR RSS-210 Issue 5	FCC 47 CFR Ch. 1 part 15 subpart B (10-1-04 Edition)
Par. 7.3	§ 15.109