



**TEST REPORT CONCERNING THE COMPLIANCE OF
A TRANSMITTER FOR A REMOTE KEYLESS ENTRY
SYSTEM (RKE), BRAND VALEO, MODEL 736744-A,
WITH 47 CFR PART 15 (2006-08-14).**

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

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Test specification(s): 47 CFR Part 15 (2006-08-14)
Description of EUT: Transmitter for a Remote Keyless Entry System
Manufacturer: Valeo Securite Habitacle
Brand mark: VALEO
Model: 736744-A
FCC ID: N5F736744-A

MEASUREMENT/TECHNICAL REPORT

Valeo Securite Habitacle

Model : 736744-A

FCC ID: N5F736744-A

April 25, 2007

This report concerns:	Original grant/certification	Class 2 change	Verification
Equipment type:	Transmitter for a Remote Keyless Entry System (RKE)		
Deferred grant requested per 47 CFR 0.457(d)(1)(ii) ?	Yes	No	n.a.
Report prepared by:	Name	: O.H. Hoekstra	
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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 C63.4-2003. 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: April 25, 2007

Signature:

H.J. Pieters

Project Manager TNO Electronic Products & Services (EPS) B.V.





Test specification(s): 47 CFR Part 15 (2006-08-14)
Description of EUT: Transmitter for a Remote Keyless Entry System
Manufacturer: Valeo Securite Habitable
Brand mark: VALEO
Model: 736744-A
FCC ID: NSF736744-A

Description of test item

Test item : Transmitter for a Remote Keyless Entry System (RKE)
Manufacturer : Valeo Securite Habitable
Brand : VALEO
Model : 736744-A
Serial number(s) : 44
Revision : A
Receipt date : April 20, 2007

Applicant information

Applicant's representative : Mr. J. Hugot
Company : Valeo Securite Habitable
Address : 42, rue Le Corbusier
Postal code : 94042
City : CRETEIL Cedex
PO-box : -
Postal code : -
City : -
Country : France
Telephone number : +33 1 56 71 53 83
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Test(s) performed

Location : Niekerk
Test(s) started : April 23, 2007
Test(s) completed : April 24, 2007
Purpose of test(s) : Equipment Authorisation (Certification).

Test specification(s) : 47 CFR Part 15 (2006-08-14)

Test engineers : O.H. Hoekstra

Report written by : O.H. Hoekstra

Report date : April 25 , 2007

This report is in conformity with NEN-EN-ISO/IEC 17025: 2000.

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The test results relate only to the item(s) tested.

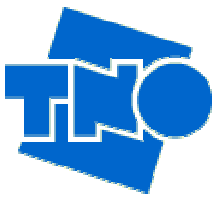


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1 General information.

1.1 Product description.

1.1.1 Introduction.

The EUT is a Radio Frequency (RF) Remote Keyless Entry System (RKE) that allows the driver to remotely control the door locking and unlocking of his vehicle.

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 below.

EUT	:	Transmitter for a Remote Keyless Entry System (RKE)
Manufacturer	:	Valeo Securite Habitacle
Brand	:	VALEO
Model	:	736744-A
Serial number	:	44
Voltage input rating	:	3 VDC (battery type CR2032)
Current input rating	:	--
Frequency	:	315 MHz (314.96 MHz to 315.04 MHz)
Antenna	:	internal
Remarks	:	none



Flap key, brand VALEO, model 736744-A



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FCC ID: NSF736744-A

1.3.1 Description of input and output ports.

The EUT is battery operated only and there are no actual input and output ports present.

1.4 Test methodology.

The test methodology used is based on the requirements of 47 CFR Part 15 (2006-08-14), sections 15.205, 15.225 and 15.209.

The test methods, which have been used, are based on ANSI C63.4: 2003.

Radiated emission tests above 30 MHz were performed at a measurement distance of 3 meters.

Radiated emission tests below 30 MHz were performed at a measurement distance of 3 meters and if necessary at 10 and 30 meters. To calculate the field strength level from these results to the appropriate distance at which the limit is specified, the computation method in appendix 1 has been applied.

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 2, section 2.948.

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 Test conditions.

Normal test conditions.

Temperature (*)	: +15°C to +35°C
Relative humidity(*)	: 20 % to 75 %
Supply voltage	: not applicable, the equipment under test is battery operated
Air pressure	: 950 – 1050 hPa

* When it was impracticable to carry out the tests under these conditions, a note to this effect stating the ambient temperature and relative humidity during the tests are stated separately.



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2 System test configuration.

2.1 Justification.

The justification and manipulation of cables and equipment in order to simulate a worst-case behavior of the test setup has been carried out as prescribed in ANSI C63.4: 2003.

2.2 EUT mode of operation.

The EUT has been tested in modulated transmit mode, i.e. the EUT is transmitting while continuously transmitting data.

All test set ups have been documented in pictures in the documentation package which will be submitted to the Commission

2.3 Special accessories.

No special accessories are used and/or needed to achieve compliance with the applicable 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 Block diagram of the EUT.

The block diagram is available in the technical documentation package which will be submitted to the Commission.

2.6 Schematics of the EUT.

The schematics are available in the technical documentation package which will be submitted to the Commission.

2.7 Part list of the EUT.

The part list is available in the technical documentation package which will be submitted to the Commission.



3 Radiated emission data.

3.1 Radiated field strength measurements (30 MHz – 3150 MHz, E-field).

3.1.1 Average and Quasi peak values of the emissions

Frequency (MHz)	Measurement results dB(μ V)/m @ 3 metres		Detector	Limits dB(μ V)/m @ 3 metres	Margin (dB)		Result
	Vertical	Horizontal			Vertical	Horizontal	
30-315	< 20.0	< 20.0	QP	40.0-55.6	< -20.0	< -20.0	PASS
315	74.1	75.3	AV	75.6	-1.5	-0.3	PASS
630	33.5	30.6	AV	55.6	-22.1	-25.0	PASS
945	< 27.0	< 27.0	AV	55.6	< -28.6	< -28.6	PASS
1260	26.8	27.4	AV	55.6	-28.8	-28.2	PASS
1575	34.1	35.5	AV	54.0	-19.9	-18.5	PASS
1890	< 30.0	< 30.0	AV	55.6	< -25.6	< -25.6	PASS
2205	38.4	41.3	AV	54.0	-15.6	-12.7	PASS
2520	25.8	27.8	AV	55.6	-29.8	-27.8	PASS
2520-3150	< 30.0	< 30.0	AV	54.0-55.6	< -24.0	< -24.0	PASS


Table 1: Radiated emissions of the EUT, Average and Quasi peak values.

The results of the radiated emission tests, carried out in accordance with 47 CFR Part 15, section 15.231, are depicted in table 1.

Notes:

1. (AV) average detector
2. (QP) quasi peak detector
3. The reported field strength values are the worst case values at the indicated frequency, obtained by rotation of the EUT and orientation of the antenna.
4. Up to the 10 th harmonic of the transmit frequency of 315 MHz

Test engineer

signature : 

Name : O.H. Hoekstra

Date : April 24, 2007



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3.1.2 Peak values of the emissions

Frequency (MHz)	Measurement results dB(μ V)/m @ 3 metres		Detector	Limits dB(μ V)/m @ 3 metres	Margin (dB)		Result
	Vertical	Horizontal			Vertical	Horizontal	
315	80.1	81.3	PK	95.6	-15.5	-14.3	PASS
630	39.5	36.6	PK	75.6	-36.1	-39.0	PASS
945	< 33.0	< 33.0	PK	75.6	< -42.6	< -42.6	PASS
1260	32.8	33.4	PK	75.6	-42.8	-42.2	PASS
1575	40.1	41.5	PK	74.0	-33.9	-32.5	PASS
1890	< 36.0	< 36.0	PK	75.6	< -39.6	< -39.6	PASS
2205	44.4	47.3	PK	74.0	-29.6	-26.7	PASS
2520	31.8	33.8	PK	75.6	-43.8	-41.8	PASS
2520-3150	< 36.0	< 36.0	PK	74.0-75.6	< -38.0	< -38.0	PASS

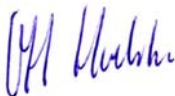
Table 2: Radiated emissions of the EUT, Peak values.

The results of the radiated emission tests, carried out in accordance with 47 CFR Part 15, section 15.35, are depicted in table 2.

Notes:

1. (PK) peak detector.
2. Only for frequencies where average radiated emission measurements are specified.
3. The reported field strength values are the worst case values at the indicated frequency, obtained by rotation of the EUT and orientation of the antenna.
4. Up to the 10 th harmonic of the transmit frequency of 315 MHz.

Test engineer

signature : 

Name : O.H. Hoekstra

Date : April 24, 2007



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3.2 Radiated field strength measurements (frequency range of 0.009-30 MHz, H-field).

Frequency (MHz)	Measurement results dB μ V/m		Limits Part 15.209 (μ V)/m
	3 meters	10 meters	
0.009 - 0.490	n.i.	n.i.	2400/F(kHz) (300 m)
0.490-1.705	n.i.	n.i.	24000/F(kHz) (30 m)
1.705 - 30.0	n.i.	n.i.	30 (30 m)

Table 3: Radiated emissions of the EUT.

The results of the radiated emission tests, carried out in accordance with 47 CFR Part 15, sections 15.205 and 15.209, are depicted in table 3.

Notes:

1. Frequency range: 9-90 kHz and 110-490 kHz: Average detector (AV) used during measurements. Other frequencies: Quasi peak detector (QP) is used.
2. n.i. indicates that no field strength values related to the EUT could be measured for the listed frequency or for the listed frequency range.
3. The reported field strength values are the worst case values at the indicated frequency, obtained by rotation of the EUT and orientation of the antenna.

Test engineer

signature

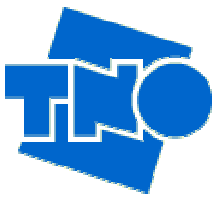
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Name

: O.H. Hoekstra

Date

: April 24, 2007



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4 Conducted emission data.

4.1 Conducted emission data of the EUT (full configuration).

Not applicable, the EUT is battery operated only.

5 Carrier stability under special conditions.

5.1 Carrier stability with respect to the operating frequency.

5.1.1 Frequency stability (on 315 MHz) in accordance with 47 CFR Part 15:

No particular requirements other than in section 3 of this report.

From measurements performed as indicated below, the frequency stability will not cause non-compliant situations with respect to exclusion bands or emissions outside permissible bands (band edges).

Stability under special conditions	Measured frequency (kHz)	Frequency deviation kHz
Temperature (°C)		
+21.0	314998.35 (reference)	N.A.
-20.0	314998.75	+0.40
+50.0	314995.25	-3.10

5.1.2 Amplitude stability (on 315 MHz) in accordance with 47 CFR Part 15, section 15.31 (e).

Not applicable, the EUT is battery operated only.

Measurement data has been derived using new batteries.

Test engineer

Signature : 

Name : O.H. Hoekstra

Date : April 24, 2007




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6 Bandwidth of the emission.

The bandwidth of emission shall be no wider than 0.25% of the center frequency for devices operating above 70 MHz and below 900 MHz. Bandwidth is determined at the points 20 dB down from the modulated carrier.

Temperature (°C)	Minimum frequency (kHz)	Maximum frequency (kHz)	Bandwidth of the emission	
			(kHz)	%
+21.0	314931.8	315069.0	137.2	0.044
-20.0	314932.5	315068.3	135.8	0.043
+50.0	314945.3	315066.8	121.5	0.039

Test engineer

Signature : 

Name : O.H. Hoekstra

Date : April 24, 2007



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7 Plots of measurement data

For reference purposes and visualization of spectrum analyzer settings during the measurements, a selection of plots of measurement data is included in this test report.

Test engineer

Signature

:

A handwritten signature in blue ink, appearing to read 'O.H. Hoekstra'.

Name

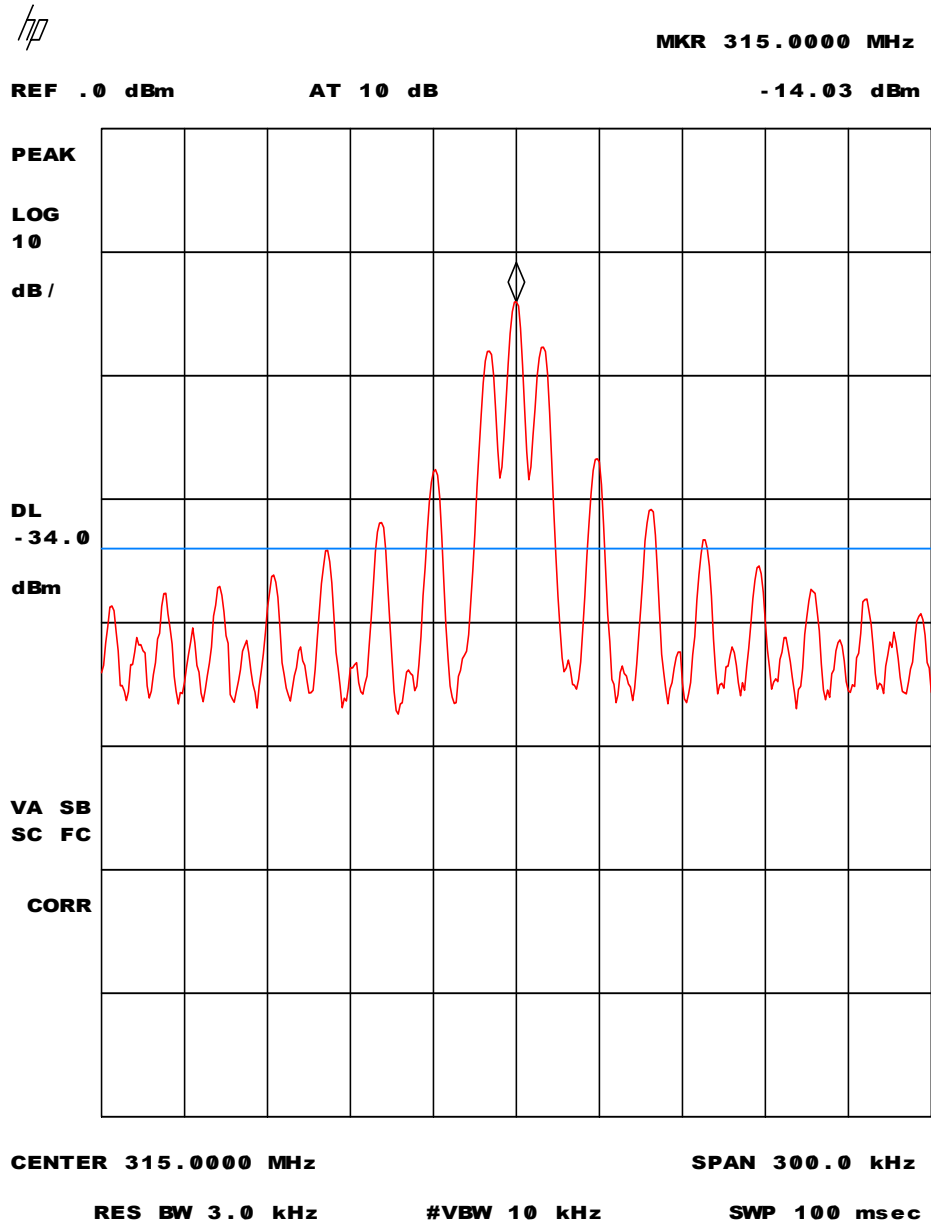
: O.H. Hoekstra

Date

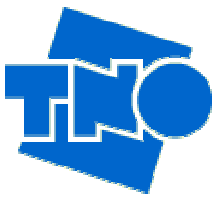
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7.1 Bandwidth of the emission



Plot 1 – Bandwidth of the emission



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8 List of utilized test equipment.

Inventory number	Description	Brand	Model
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
12533	Signalgenerator	MARCONI	2032
12605	Calibrated dipole 28MHz-1GHz	Emco	3121c
12640	Temperature chamber	Heraeus	VEM03/500
13664	Spectrum analyzer	HP	HP8593E
13078	Preamplifier 0.1 GHz - 12 GHz	Miteq	AMF-3D-001120-35-14p
13886	Open Area testsite	Comtest	--
14051	Anechoic room	Comtest	--
15633	Biconilog Testantenna	Chase	CBL 6111B
15667	Measuring receiver	R&S	ESCS 30