TEST REPORT

FCC RULES Part 15 Subpart C

Report File No.	: STROR-05-048
Date of Issue	: Dec. 01, 2005
Kind of Product	: RF Keyless Entry System(Transmitter)
Model Name	: OKA-642T
FCC ID	: OSLOKA-642T
Manufacturer	: Omron Automotive Electronics Korea Co., Ltd.
Serial No.	: -
Test Result	: Complied

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SGS Testing Korea Co., Ltd. 18-34, Sanbon-dong, Gunpo-si, Gyeonggi-do, Korea, 435-040
Tel. +82 31 428 5700 / Fax. +82 31 427 2371 www.sgstesting.co.kr

VERIFICATION OF COMPLIANCE

Applicant :	Omron Automotive Electronics Korea Co., Ltd.
Kind of Product :	RF Keyless Entry System(Transmitter)
Brand Name :	-
Model Name :	OKA-642T
Model Difference :	-
Report File No. :	STROR-05-048
Date of test :	Nov. 21, 2005 ~ Dec. 01, 2005
Receiver EUT :	-

APPLICABLE STANDARDS	
STANDARD	**TEST RESULT**
Part 15 Subpart C §15.231	Complied

The above equipment was tested by SGS Testing Korea Co., Ltd. for compliance with the requirements set forth in the FCC RULES Part 15 Subpart §15.209 & §15.231. The results of testing in this report apply to the product system that was tested only. Other similar equipment will not necessarily produce the same results due to production tolerance and measurement uncertainties.

Tested By:  ***Date*** **Dec. 01, 2005**

Feel Jeong

Approved By  ***Date*** **Dec. 01, 2005**

Albert Lim

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1. 1. GENERAL DESCRIPTION OF EUT

The Omron Automotive Electronics Korea Co., Ltd., Model OKA-642T is a transmitter that it controls locking and unlocking the door.

2. GENERAL INFORMATION OF EUT

Transmitter

Power Supply	DC 3 V, 5 mA
Operating Frequency	307.9 MHz
Modulation Type	FSK
Operating Temperature	- 20 ? ~ + 60 ?
Frequency Generation	SAW resonator
Communication method	One-way
Channel Number	1 CH
Antenna Type	Built-in on the PCB in the EUT

3. Test Procedure

The test procedures are performed following the test stands ANSI C.63.4-2003, if applicable.

3.1 Conducted Emission

Testing was performed according ANSI C.63.4-2003 in a shielded room with peripherals placed on a table, 0.8m high over a metal floor.
It was located more than required distance away from the shield room wall.

3.2 Radiated Emission

Testing was performed according ANSI C.63.4-2003 at open field test site. The EUT was placed in a 0.8m high table along with the peripherals.
The turn table was separated from the antenna distance 3 meters. Cables were placed in a position to produce maximum emissions as determined by experimentation and operation mode was selected for maximum. The frequencies and amplitudes of maximum emission were measured at vary azimuths, antenna heights and antenna polarities. Reported are maximized emission levels.

4. Test Condition

4.1 Test Configuration

The device was configured for testing in a typical fashion (as a customer would normally use it). During the tests, the EUT and the supported equipments were installed to meet FCC requirement and operated in a manner, which tends to maximize its emission level in a typical application.

Conducted Emission Test

It's not applicable, because the EUT supplies from a DC battery.

Radiated Emission Test

Preliminary radiated emission tests were conducted using the procedure in ANSI C63.4-2003 clause 8.3.1.1. to determine the worst operating condition. Final radiated emission tests were measured at 3 meter open field test site. To complete the test configuration required by the FCC, the EUT was tested in all three orthogonal planes.

4.2 EUT Operation

EUT was tested according to the following operation modes provided by the specifications given by the manufacturer, and reported the worst emissions.

4.3 Peripherals / Support Equipment Used

Following peripheral devices and interface cables were connected during the measurement.

Type of Peripheral Equipment Used:

Description	Model Name	Serial NO	Manufacturer
-	-	-	-

5. Field Strength FCC Part 15, Subpart C, Section 15.231(b)

The following table shows the highest levels of radiated emissions on both polarizations of horizontal and vertical.

Humidity Level : 48 % Temperature: 25 ?

Radiated Emissions			Ant	Correction Factors		Total	FCC Limit	
Frequency (MHz)	Reading (dBuV/m)	Detect Mode	Pol.	Ant. (dB/m)	Cable (dB)	Actual (dBuV/m)	AV Limit (dBuV/m)	Margin (dB)
307.86	46.9	Peak	H	15.89	1.84	64.63	75.19	10.56

Test Equipment Used

EQUIPMENT	MANUFACTURER	MODEL	CAL DUE.
Test Receiver	Rohde & Schwarz	ESIB 26	Mar. 2006
Log-periodic Antenna	Rohde & Schwarz	UHALP9107	May 2006
Anechoic Chamber	Seo Young EMC	-	-

6. Spurious Emission FCC Part 15, Subpart C, Section 15.231(b)

The following table shows the highest levels of radiated emissions on both polarizations of horizontal and vertical.

Humidity Level : 48 % Temperature: 25 ?

Radiated Emissions			Ant	Correction Factors		Total	FCC Limit	
Frequency (MHz)	Reading (dBuV/m)	Detect Mode	Pol.	Ant. (dB/m)	Cable (dB)	Actual (dBuV/m)	AV Limit (dBuV/m)	Margin (dB)
615.726	17.6	Peak	H	21.40	2.58	41.58	55.19	13.61
923.589	13.5	Peak	H	24.81	3.25	41.56	55.19	13.63
1231.452	13.1	Peak	H	24.34	3.59	41.03	55.19	14.16
1539.315	14.2	Peak	H	25.36	4.06	43.62	54.00	10.38

Remark: Other spurious frequencies were not found up to 4000 MHz
To get a maximum emission level from the EUT, the EUT was moved throughout the XY, XZ, and YZ planes.

Notes :

1. H: Horizontal polarization, V: Vertical polarization
2. Emission Level =Reading +Antenna Factor + Cable Loss
3. A peak limit is 20 dB above the average limit

Test Equipment Used

EQUIPMENT	MANUFACTURER	MODEL	CAL DUE.
Test Receiver	Rohde & Schwarz	ESIB 26	Mar. 2006
Log-periodic Antenna	Rohde & Schwarz	UHALP9107	May 2006
Horn Antenna	Schwarzbeck	BBHA9120D(0600)	Jul.2006
Biconical Antenna	Schwarzbeck	VHA9103	Mar.2006
Anechoic Chamber	Seo Young EMC	-	-

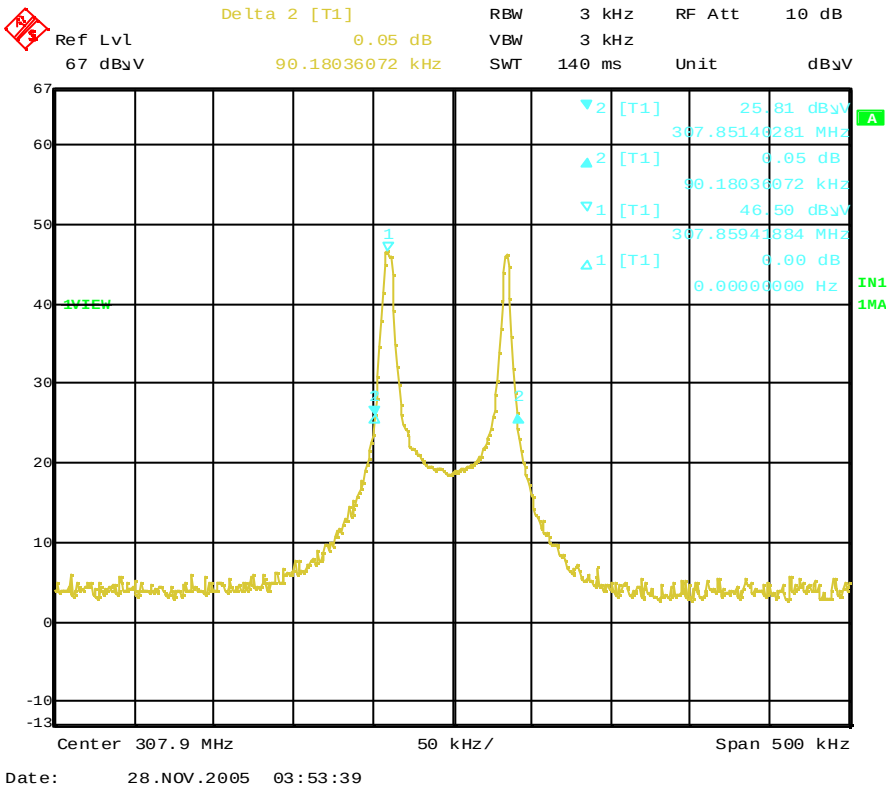
7. Bandwidth of Operation Frequency FCC Part 15, Subpart C, Section 15.231(c)

Humidity Level : 49 % Temperature: 24 ℃

Limit of 20 dB Bandwidth : 307.9 MHz*0.0025=770 kHz

Frequency (MHz)	Bandwidth of the emission. (kHz)	Limit (kHz)	Remark
307.9	90.18	770	The point 20 dB down from the modulated carrier

The plot of test result is attached as below



Test Equipment Used

EQUIPMENT	MANUFACTURER	MODEL	CAL DUE.
Test Receiver	Rohde & Schwarz	ESIB 26	Mar. 2006
Log-periodic Antenna	Rohde & Schwarz	UHALP9107	May 2006
Anechoic Chamber	Seo Young EMC	-	-

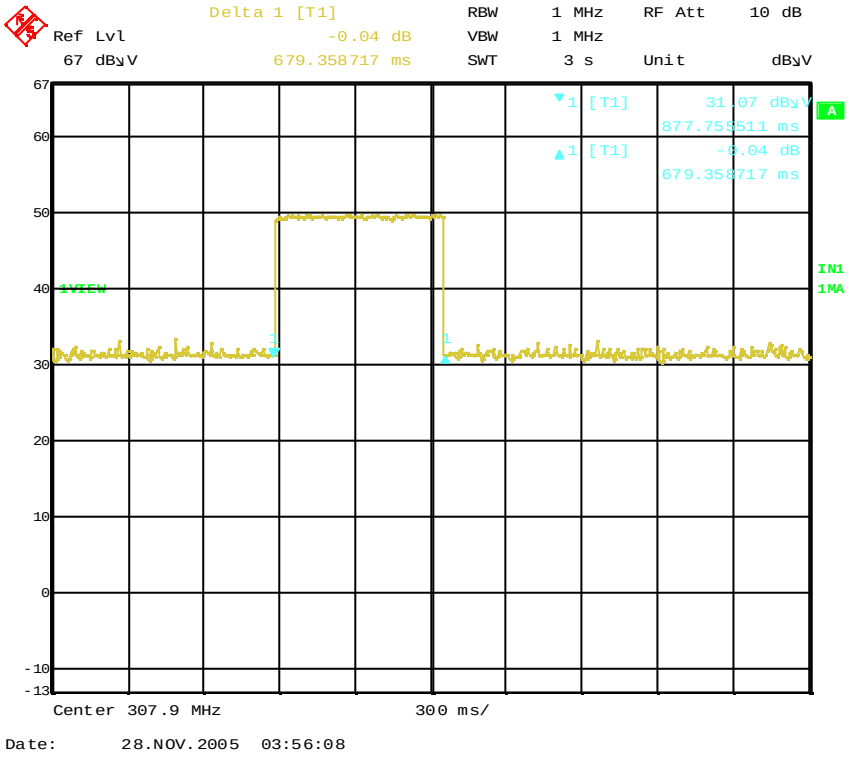
8. Transmission Time FCC Part 15, Subpart C, Section 15.231(a) (1)

Humidity Level : 49 % Temperature: 24 ℃

Limit of Transmission Time : A manually operated transmitter shall employ a switch that will automatically deactivate the transmitter within not more than 5 seconds of being released.

Frequency (MHz)	Transmission Time (sec)	Limit (sec)	Pass/Fail
307.9	0.679	5	Pass

The plot of test result is attached as below



Test Equipment Used

EQUIPMENT	MANUFACTURER	MODEL	CAL DUE.
Test Receiver	Rohde & Schwarz	ESIB 26	Mar. 2006
Log-periodic Antenna	Rohde & Schwarz	UHALP9107	May 2006
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9. Attachment A – Photo of the test set up