



제64호(1/6)

## 국제공인시험기관인정서

기 관 명 : 자동차부품연구원

대 표 자 : 이 기 섭

법 인 등 록 번 호 : 114671-0006266

사업자등록번호 : 312-82-04676

법 인 주 소 : 충청남도 천안시 동남구 풍세면 용정리 74번지

사 업 장 소 재 지 : 충청남도 천안시 동남구 풍세면 용정리 74번지

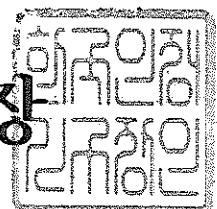
유효 기 간 : 2008년 8월 18일 ~ 2012년 8월 17일

인정분야 및 범위 : 별첨

상기 시험기관을 KS Q ISO/IEC 17025:2006 인정요건 및 국가표준  
기본법 제23조의 규정에 의거하여 국제공인시험기관으로 인정합니다. 또한  
ISO-ILAC-IAF 공동성명(2009.1.8)에 언급된 바와 같이 인정된 분야 및 범위에  
대한 기술적 능력과 시험기관 품질경영시스템이 적절함을 인정합니다.

2011년 6월 17일

한 국 인 정 기 구 장



“이면기재사항”

1. 1997. 8. 6 : 최초인정
2. 2002. 10. 22 : 갱신인정
3. 2003. 6. 12 : 기술책임자 변경(유승을 → 최만엽, 한범석 → 박동규)
4. 2004. 4. 13 : 추가인정(2항목)
5. 2005. 3. 29 : 갱신인정
6. 2005. 6. 29 : 품질책임자 변경(이일수 → 전용규)
7. 2008. 8. 18 : 대표자 변경(노영욱 → 유영상), 갱신 및 추가인정
8. 2009. 4. 17 : 대표자 변경(유영상 → 이기섭)
9. 2011. 6. 17 : 특별사후관리 및 추가인정(28항목)



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## 2. 화학시험

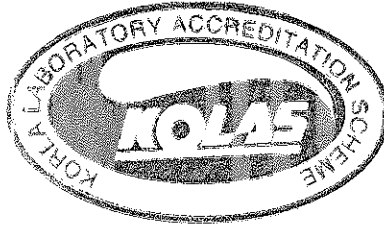
### 2.012. 가스류

규격번호	규격명
지식경제부고시 제2010-93호 (2010. 04.26)	자동차의 에너지소비효율 및 등급표시에 관한 규정
환경부고시 제2009-289호 (2009.12.31)	<p>제작자동차 시험검사 및 절차에 관한 규정</p> <p>[별표1] CVS-75 모드 측정방법</p> <p>2-1. 배출가스 측정방법</p> <p>다. 배출가스측정</p> <p>(2) 배기가스분석</p> <p>- CO, CO<sub>2</sub>, NO<sub>x</sub>, HC 및 CH<sub>4</sub></p> <p>[별표4] ECE15+EUDC 모드 측정방법</p> <p>3. 배출가스 측정방법</p> <p>라. 배기가스 계산</p> <p>(1) 일산화탄소, 이산화탄소, 질소산화물</p> <p>(2) 디젤탄화수소</p>

## 3. 전기시험

### 3.011 전자기적합성

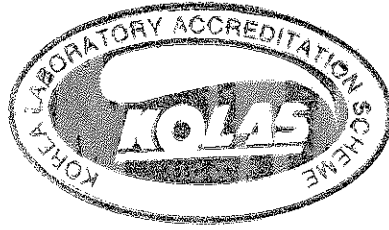
규격번호	규격명
KS C CISPR 25:2002	<p>차량용 수신기 보호를 위한 전기자기 장애 특성 측정 방법 및 측정의 한계값</p> <p>(적용제외)</p> <p>15. 컴포넌트 / 모듈로 부터의 복사성 방출 - TEM (cell) 방식</p> <p>16. 컴포넌트에서 발생하는 복사성 방해 한계값 - TEM 셀(cell) 방식(리드 프레임-EUT 방식과 EUT 단일방식)</p> <p>17. 집적 회로로부터의 복사성 방해 한계값 - TEM 셀 (cell) 방식</p>
KS R ISO 11452-1:2002	도로 차량-협대역의 전자기 에너지 방사에 의한 전기 외란 -구성 요소 시험 방법-제1부: 일반 및 정의
KS R ISO 11452-2:2002	도로 차량-협대역의 전자기 에너지 방사에 의한 전기 외란 -부품 시험 방법-제2부: 흡수재 장착실



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### 3.011 전자기적합성

규격번호	규격명
KS R ISO 11452-4:2002	도로 차량-협대역의 전자기 에너지 방사에 의한 전기 외란 -부품 시험 방법-제4부:충전류 주입(BCI)
KS R ISO 11452-5:2002	도로 차량-협대역의 전자기 에너지 방사에 의한 전기 외란 -부품 시험 방법-제4부:스트립라인
KS R ISO 7637-1:2004	도로 차량-전도성,결합성 전기장해- 제1부:용어의 정의 및 일 반고려사항
KS R ISO 7637-2:2004	도로 차량-전도성,결합성 전기장해-제2부: 24V용 상용차량- 전원 공급선의 과도전도
KS R ISO 7637-3:2004	도로 차량-전도성,결합성 전자파장해- 제3부:12V 혹은 24V 용 차량-전원 공급선 이외의 전선을 통한 용량성 및 유도성 결합에 의한 과도전송
IEC CISPR 25:2008	Vehicles, boats and internal combustion engines - Radio disturbance characteristics - Limits and methods of measurement for the protection of on-board receivers (적용제외) 5 Measurement of emissions received by an antenna on the same vehicle 6.5 Radiated emissions from components/ modules. TEM cell method 6.6 Radiated emissions from components/ modules. Stripline method
ISO 10605:2008	Road vehicles - Test methods for electrical disturbances from electrostatic discharge
ISO 11452-1:2005	Road vehicles - Component test methods for electrical disturbances from narrowband radiated electromagnetic energy - Part 1: General principles and terminology
ISO 11452-2:2004	Road vehicles - Component test methods for electrical disturbances from narrowband radiated electromagnetic energy - Part 2: Absorber-lined shielded enclosure
ISO 11452-4:2005	Road vehicles - Component test methods for electrical disturbances from narrowband radiated electromagnetic energy - Part 4: Bulk current injection (BCI)



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### 3.011 전자기적합성

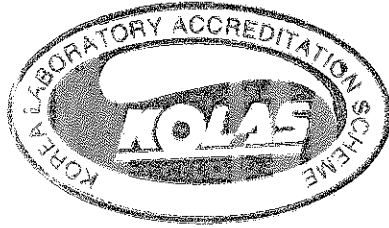
규격번호	규격명
ISO 11452-5:2002	Road vehicles - Component test methods for electrical disturbances from narrowband radiated electromagnetic energy - Part 5 Stripline
ISO 11452-8:2007	Road vehicles - Component test methods for electrical disturbances from narrowband radiated electromagnetic energy - Part 8: Immunity to magnetic fields
ISO 16750-2:2006	Road vehicles - Environmental conditions and testing for electrical and electronic equipment - Part 2: Electrical loads
ISO 7637-1:2002	Road vehicles - Electrical disturbances from conduction and coupling - Part 1: Definitions and general considerations
ISO 7637-2:2004	Road vehicles - Electrical disturbances from conduction and coupling - Part 2: Electrical transient conduction along supply lines only
ISO 7637-3:2007	Road vehicles - Electrical disturbances from conduction and coupling - Part 3: Electrical transient transmission by capacitive and inductive coupling via lines other than supply lines
SAE J 1113/2:2004	Electromagnetic Compatibility Measurement Procedures and Limits for Vehicle Components (Except Aircraft) - Conducted Immunity, 15 Hz to 250 kHz - All Leads
SAE J 1113/4:2004	Immunity to Radiated Electromagnetic Fields Bulk Current Injection (BCI) Method
SAE J 1113/11:2007	Immunity to Conducted Transients on Power Leads
SAE J 1113/12:2006	Electrical Interference by Conduction and Coupling - Coupling clamp and Chattering Relay
SAE J 1113/13:2004	Electromagnetic Compatibility Measurement Procedure for Vehicle Components Part 13: Immunity to Electrostatic Discharge



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### 3.011 전자기적합성

규격번호	규격명
SAE J 1113/21:2005	Electromagnetic Compatibility Measurement Procedure for Vehicle Components Part 21: Immunity to Electromagnetic Fields, 30 MHz to 18 GHz, Absorber-Lined Chamber
SAE J 1113/22:2003	Electromagnetic Compatibility Measurement Procedure for Vehicle Components Part 22: Immunity to Radiated Magnetic Fields
SAE J 1113-23:2002	Electromagnetic Compatibility Measurement Procedure for Vehicle Components Part 23: Stripline
SAE J 1113/42:2006	Electromagnetic Compatibility - Component Test Procedure Part 42: Conducted Transient Emissions
JASO D 001:1994	General rules of environmental testing methods for automotive electronic equipment
ECE R-10.02:2004	Uniform provisions concerning the approval of vehicles with regard to electromagnetic compatibility (적용제외) Annex 4: Method of measuring broadband electromagnetic disturbances generated by vehicles Annex 5: Method of measuring narrowband electromagnetic disturbances generated by vehicles Annex 6: Method of testing vehicle immunity to electromagnetic radiation
KS B 6945:2007	전자파 적합성 - 엘리베이터, 에스컬레이터 및 수평 보행기 제품군 규격 - 내성 (적용제외) 전압강하, 순시정전
KS B 6955:2007	전자파 적합성 - 엘리베이터, 에스컬레이터 및 수평 보행기 제품군 규격 - 방사
EN 55011:2007	Industrial, scientific and medical (ISM) radio-frequency equipment - Radio disturbance characteristics - Limits and methods of measurement

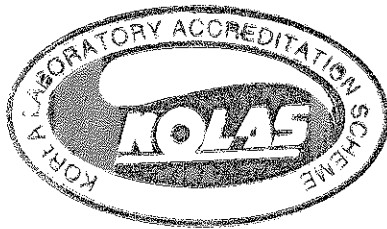


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3.011 전자기적합성

규격번호	규격명
EN 61000-4-2:2005	Electromagnetic compatibility - Part 4 : Testing and measurement techniques - Section 2 : Electromagnetic discharge immunity test - Basic EMC publication
EN 61000-4-3:2003	Electromagnetic compatibility - Part 4 : Testing and measurement techniques - Section 3 : Radiated, radio-frequency, electromagnetic field immunity test
EN 61000-4-4:2004	Electromagnetic compatibility - Part 4 : Testing and measurement techniques - Section 4 : Electrical fast transient/burst immunity test - Basic EMC publication
EN 50121-1:2006	Railway applications-Electromagnetic compatibility Part 1 : General
EN 50121-2:2006	Railway applications-Electromagnetic compatibility Part 2 : Emission of the whole railway system to the outside world
EN 50121 3-1:2006	Railway applications - Electromagnetic compatibility Part 3-1 : Rolling Stock - Train and complete vehicle
EN 50121 3-2:2006	Railway applications - Electromagnetic compatibility Part 3-2 : Rolling Stock - Apparatus
EN 50121 4:2006	Railway applications - Electromagnetic compatibility Part 4 : Emission and Immunity of the signalling and telecommunications apparatus
EN 50121 5:2006	Railway applications - Electromagnetic compatibility Part 5 : Emission and immunity of fixed power supply installations and apparatus
MIL-STD-461E:1999	Department of defense interface standard requirements for the control of electromagnetic interference characteristics of subsystems and equipment (적용제외) 5.5 항 CE102, 5.6 항 CE106, 5.7 항 CS101, 5.8 항 CS103, 5.9 항 CS104, 5.10 항 CS105, 5.11 항 CS109, 5.17 항 RE103, 5.20 항 RS105

끝.



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## CERTIFICATE OF ACCREDITATION

Name of Laboratory : Korea Automotive Technology Institute

Representative : Lee, Ki Sub

Address of Headquarters : 74 Yongjung-ri, Pungse-myun, Namdong-ku  
Chonan, Chungnam, 330-912, Korea

Address of Laboratory : 74 Yongjung-ri, Pungse-myun, Namdong-ku  
Chonan, Chungnam, 330-912, Korea

Duration : Aug. 18, 2008 ~ Aug. 17, 2012

Scope of Accreditation

(Scope of Accreditation is described in the accompanying Annex)

This testing laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025 : 2005. This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system (refer to joint ISO-ILAC-IAF Communiqué dated 8 January 2009).

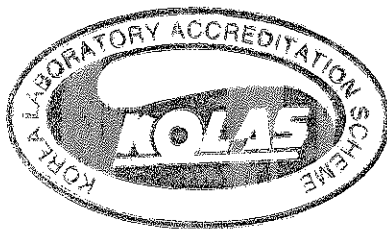
June. 17, 2011

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Administrator,

Korea Laboratory Accreditation Scheme(KOLAS)





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## **2. Chemical Test**

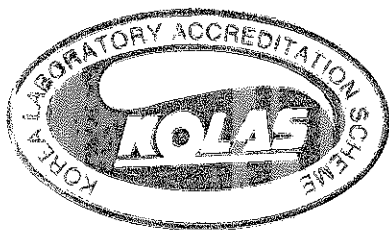
### **2.012. Gas**

<b>Test method</b>	<b>Standard designation</b>
Ministry of Knowledge Economy, Notice No. 2010-93 (2010.04.26.)	Regulations on the energy consumption efficiency and grade labeling of vehicle
Ministry of Environment, Notice No. 2009-289 (2009.12.31.)	Regulations on the test inspection and procedure of manufactured vehicle [Annex 1] CVS-75 mode method of measurement 2-1. Emission method of measurement C. Emission measurement (2) Emission measurement analysis - CO, CO <sub>2</sub> , NO <sub>x</sub> , HC 및 CH <sub>4</sub> [Annex 4] ECE15+EUDC mode measurement method 3. Emission measurement method D. Emission calculation (1) CO, CO <sub>2</sub> , NO <sub>x</sub> (2) THC(Diesel)

## **3. Electrical Test**

### **3.011 Electromagnetic Compatibility**

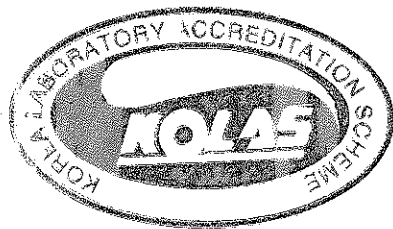
<b>Test method</b>	<b>Standard designation</b>
KS C CISPR 25:2002	Vehicles, Boats, and Internal Combustion Engine Driven. Devices - Radio Disturbance Characteristics - Limits and Methods of Measurement for the Protection of Receivers Exception : 15. Radiated emissions from components/modules - TEM cell method 16. Limits for radiated disturbances from components- TEM(cell) Method 17. Limits for radiated from integrated circuits - TEM cell method
KS R ISO 11452-1:2002	Road vehicles - Electrical disturbances by narrowbandradiated electromagnetic energy - Component test methods - Part 1 : General and definitions



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### 3.011 Electromagnetic Compatibility

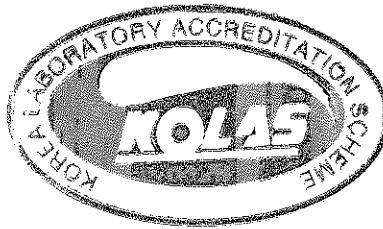
Test method	Standard designation
KS R ISO 11452-2:2002	Road vehicles – Electrical disturbances by narrowband radiated electromagnetic energy – Component test methods – Part 2 : Absorber-lined chamber
KS R ISO 11452-4:2002	Road vehicles – Electrical disturbances by narrowband radiated electromagnetic energy – Component test methods – Part 4 : Bulk current injection (BCI)
KS R ISO 11452-5:2002	Road vehicles – Electrical disturbances by narrowband radiated electromagnetic energy – Component test methods – Part 5 : Stripline
KS R ISO 7637-1:2004	Road vehicles – Electrical disturbances from conduction and coupling – Part 1 : Definitions and general considerations
KS R ISO 7637-2:2004	Road vehicles – Electrical disturbance by conduction and coupling – Part 2 : Commercial vehicles with nominal 24 V supply voltage – Electrical transient conduction along supply lines only
KS R ISO 7637-3:2004	Road vehicles – Electrical disturbance by conduction and coupling – Part 3 : Vehicles with nominal 12V or 24V supply voltage – Electrical transient transmission by capacitive and inductive coupling via lines other than supply lines
IEC CISPR 25:2008	Vehicles, boats and internal combustion engines – Radio disturbance characteristics – Limits and methods of measurement for the protection of on-board receivers Exception : 5. Measurement of emissions received by an antenna on the same vehicle 6.5 Radiated emissions from components / modules. TEM cell method 6.6 Radiated emissions from components / modules. Stripline method
ISO 10605:2008	Road vehicles – Test methods for electrical disturbances from electrostatic discharge



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### 3.011 Electromagnetic Compatibility

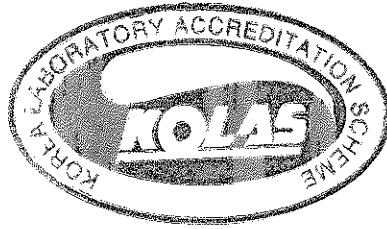
Test method	Standard designation
ISO 11452-1:2005	Road vehicles - Component test methods for electrical disturbances from narrowband radiated electromagnetic energy - Part 1: General principles and terminology
ISO 11452-2:2004	Road vehicles - Component test methods for electrical disturbances from narrowband radiated electromagnetic energy - Part 2: Absorber-lined shielded enclosure
ISO 11452-4:2005	Road vehicles - Component test methods for electrical disturbances from narrowband radiated electromagnetic energy - Part 4: Bulk current injection (BCI)
ISO 11452-5:2002	Road vehicles - Component test methods for electrical disturbances from narrowband radiated electromagnetic energy - Part 5 Stripline
ISO 11452-8:2007	Road vehicles - Component test methods for electrical disturbances from narrowband radiated electromagnetic energy - Part 8: Immunity to magnetic fields
ISO 16750-2:2006	Road vehicles - Environmental conditions and testing for electrical and electronic equipment - Part 2: Electrical loads
ISO 7637-1:2002	Road vehicles - Electrical disturbances from conduction and coupling - Part 1: Definitions and general considerations
ISO 7637-2:2004	Road vehicles - Electrical disturbances from conduction and coupling - Part 2: Electrical transient conduction along supply lines only
ISO 7637-3:2007	Road vehicles - Electrical disturbances from conduction and coupling - Part 3: Electrical transient transmission by capacitive and inductive coupling via lines other than supply lines
SAE J 1113/2:2004	Electromagnetic Compatibility Measurement Procedures and Limits for Vehicle Components (Except Aircraft) - Conducted Immunity, 15 Hz to 250 kHz - All Leads
SAE J 1113/4:2004	Immunity to Radiated Electromagnetic Fields Bulk Current Injection (BCI) Method



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### 3.011 Electromagnetic Compatibility

Test method	Standard designation
SAE J 1113/11:2007	Immunity to Conducted Transients on Power Leads
SAE J 1113/12:2006	Electrical Interference by Conduction and Coupling - Coupling clamp and Chattering Relay
SAE J 1113/13:2004	Electromagnetic Compatibility Measurement Procedure for Vehicle Components Part 13: Immunity to Electrostatic Discharge
SAE J 1113/21:2005	Electromagnetic Compatibility Measurement Procedure for Vehicle Components Part 21: Immunity to Electromagnetic Fields, 30 MHz to 18 GHz, Absorber-Lined Chamber
SAE J 1113/22:2003	Electromagnetic Compatibility Measurement Procedure for Vehicle Components Part 22: Immunity to Radiated Magnetic Fields
SAE J 1113-23:2002	Electromagnetic Compatibility Measurement Procedure for Vehicle Components Part 23: Stripline
SAE J 1113/42:2006	Electromagnetic Compatibility-Component Test Procedure Part 42: Conducted Transient Emissions
JASO D 001:1994	General rules of environmental testing methods for automotive electronic equipment
ECE R-10.02:2004	Uniform provisions concerning the approval of vehicles with regard to electromagnetic compatibility Exception : Annex 4: Method of measuring broadband electromagnetic disturbances generated by vehicles Annex 5: Method of measuring narrowband electromagnetic disturbances generated by vehicles Annex 6: Method of testing vehicle immunity to electromagnetic radiation
KS B 6945:2007	Electromagnetic compatibility - Product family standard for lifts, escalators and passenger conveyors - Immunity Exception : Voltage drop, Short interruptions
KS B 6955:2007	Electromagnetic compatibility - Product family standard for lifts, escalators and passenger conveyors - Emission



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### 3.011 Electromagnetic Compatibility

Test method	Standard designation
EN 55011:2007	Industrial, scientific and medical (ISM) radio-frequency equipment – Radio disturbance characteristics – Limits and methods of measurement
EN 61000-4-2:2005	Electromagnetic compatibility – Part 4 : Testing and measurement techniques – Section 2 : Electromagnetic discharge immunity test – Basic EMC publication
EN 61000-4-3:2003	Electromagnetic compatibility – Part 4 : Testing and measurement techniques – Section 3 : Radiated, radio-frequency, electromagnetic field immunity test
EN 61000-4-4:2004	Electromagnetic compatibility – Part 4 : Testing and measurement techniques – Section 4 : Electrical fast transient/burst immunity test – Basic EMC publication
EN 50121-1:2006	Railway applications–Electromagnetic compatibility Part 1 : General
EN 50121-2:2006	Railway applications–Electromagnetic compatibility Part 2 : Emission of the whole railway system to the outside world
EN 50121 3-1:2006	Railway applications – Electromagnetic compatibility Part 3-1 : Rolling Stock – Train and complete vehicle
EN 50121 3-2:2006	Railway applications – Electromagnetic compatibility Part 3-2 : Rolling Stock – Apparatus
EN 50121 4:2006	Railway applications–Electromagnetic compatibility Part 4 : Emission and Immunity of the signalling and telecommunications apparatus
EN 50121 5:2006	Railway applications–Electromagnetic compatibility Part 5 : Emission and immunity of fixed power supply installations and apparatus
MIL-STD-461E:1999	Department of defense interface standard requirements for the control of electromagnetic interference characteristics of subsystems and equipment Exception : 5.5 CE102, 5.6 CE106, 5.7 CS101, 5.8 CS103, 5.9 CS104, 5.10 CS105, 5.11 CS109, 5.17 RE103, 5.20 RS105

The end.