

제306호(1/5)

## 국제공인시험기관인정서

기 관 명 : LG전자(주) MC 규격인증 Lab.

대 표 자 : 남 용

법인등록번호 : 110111-2487050

사업자등록번호 : 119-85-14557

법 인 주 소 : 서울특별시 영등포구 여의도동 20

사 업 장 소 제 지 : 서울특별시 금천구 가산동 60-39

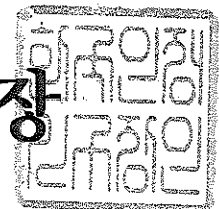
유효기간 : 2011년 2월 23일 ~ 2015년 2월 22일

인정분야 및 범위 : 별첨

상기 시험기관을 KS Q ISO/IEC 17025:2006 인정요건 및 국가표준기본법 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.

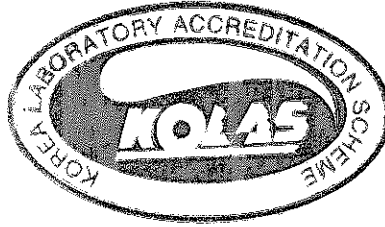
2011년 2월 23일

한국인정기구장



“이면 기재사항”

1. 2006. 12. 26 : 최초인정
2. 2007. 06. 14 : KS A ISO/IEC 17025 : 2006 및 공인기관인정제도운영요령 개정에 따른  
인정서 재발급
3. 2011. 02 .23 : 갱신 인정

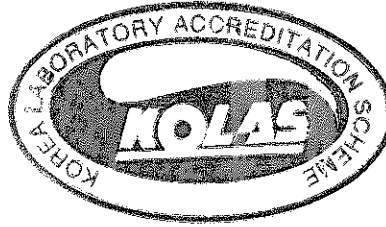


제 306 호 (2/5)

### 3. 전기시험

#### 3.008 유/무선 통신기기

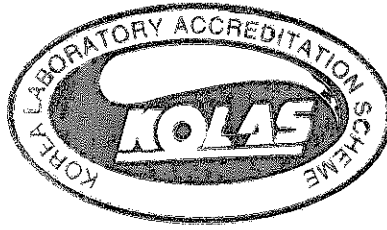
| 규격번호   | 규격명  |
|--|--|
| CTIA Certification Test Plan for Mobile Station Over the Air Performance : Rev.2.2.2, 2008 | Method of Measurement for Radiated RF Power and Receiver Performance   |
| 전파연구소고시 제2008-16호 : 2008   | 전자파흡수율 측정기준  |
| EN 50360 : 2001  | Product Standard to demonstrate the Compliance of mobile phones with the basic restrictions related to human exposure to electromagnetic fields  |
| EN 62209-1 : 2006  | Human exposure to radio frequency fields from hand-held and body-mounted wireless communication devices - Human models, instrumentation, and procedures — Part 1: Procedure to determine the specific absorption rate (SAR) for hand-held devices used in close proximity to the ear (frequency range of 300 MHz to 3 GHz) |
| FCC/OET Bulletin 65 Supplement C : 2001  | Evaluating Compliance with FCC Guidelines for Human Exposure to Radio frequency Electromagnetic Fields   |
| ANSI/IEEE C95.1 : 2005   | Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3 kHz to 300 GHz   |
| ANSI / IEEE C63.19 : 2007  | American National Standard Methods of Measurement of Compatibility between Wireless Communications Devices and Hearing Aids  |
| CTIA Test Plan for Hearing Aid Compatibility Revision 1.0 : 2006                           | CTIA Test Plan for Hearing Aid Compatibility   |
| 3GPP TS 34.114 V9.0.0 : 2010   | User Equipment (UE) / Mobile Station (MS) Over The Air (OTA) antenna performance ; Conformance testing   |



제 306 호 (3/5)

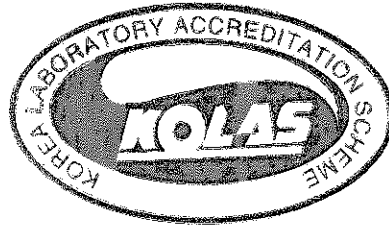
3.011 전자기 적합성

| 규격번호                             | 규격명   |
|----------------------------------|---|
| AS/NZS CISPR 22 :2003            | AS/NZS CISPR 22 :2003<br>Information technology equipment -<br>Radio disturbance characteristic Limit and methods of<br>measurement   |
| EN 55022 : 2006 + A1:2007        | Information technology equipment -<br>Radio disturbance characteristic Limit and methods of<br>measurement  |
| EN 55024 : 2003                  | Information technology equipment Immunity characteristic<br>Limit and methods of measurement<br>* 2절 Normative Reference 중 "Testing and measurement<br>techniques-Section 8:Power frequency magnetic field<br>immunity test" 제외 |
| EN 61000-4-2 : 2009              | Electromagnetic Compatibility (EMC)<br>Part 4-2 : Testing and measurement techniques<br>- Electrostatic discharge immunity test   |
| EN 61000-4-3 : 2006<br>+ A1:2008 | Electromagnetic Compatibility (EMC)<br>Part 4-3 : Testing and measurement techniques<br>- Radiated, radio-frequency, electromagnetic field immunity<br>test   |
| EN 61000-4-4 : 2004              | Electromagnetic Compatibility (EMC)<br>Part 4-4 : Testing and measurement techniques<br>- Electrical fast transient/burst immunity test   |
| EN 61000-4-5 : 2006              | Electromagnetic Compatibility (EMC)<br>Part 4-5 : Testing and measurement techniques<br>- Surge immunity test   |
| EN 61000-4-6 : 2007<br>+ A1:2009 | Electromagnetic Compatibility (EMC)<br>Part 4-6 : Testing and measurement techniques<br>- Immunity disturbances, induced by radio-frequency fields<br>* 6.2.2항 Clamp Injection Device 제외  |
| EN 61000-4-11 : 2004             | Electromagnetic Compatibility (EMC)<br>Part 4-11 : Testing and measurement techniques<br>-Voltage dips, short interruptions and voltage variations<br>immunity tests  |
| EN 301 489-1 V1.8.1 : 2008       | Electromagnetic compatibility and Radio spectrum Matters<br>(ERM) ;<br>ElectroMagnetic Compatibility (EMC) standard for radio<br>equipment and services ;<br>Part 1 : Common technical requirements                             |



제 306 호 (4/5)

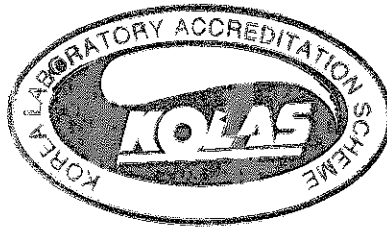
| 규격번호                        | 규격명  |
|-----------------------------|--|
| EN 301 489-7 V1.3.1 : 2005  | Electromagnetic compatibility and Radio spectrum Matters (ERM) ;<br>ElectroMagnetic Compatibility (EMC) standard for radio equipment and services ;<br>Part 7 : Specific conditions for mobile and portable radio and ancillary equipment of digital cellular radio telecommunications systems (GSM and DCS) |
| EN 301 489-17 V2.1.1 : 2009 | Electromagnetic compatibility and Radio spectrum Matters (ERM) ;<br>ElectroMagnetic Compatibility (EMC) standard for radio equipment and services ;<br>Part 17 : Specific conditions for 2,4 GHz wideband transmission systems and 5 GHz high performance RLAN equipment                                     |
| EN 301 489-24 V1.4.1 : 2007 | Electromagnetic compatibility and Radio spectrum Matters (ERM) ;<br>ElectroMagnetic Compatibility (EMC) standard for radio equipment and services ;<br>Part 24 : Specific conditions for IMT-2000 CDMA Direct Spread (UTRA) for Mobile and portable (UE) radio and ancillary equipment                       |
| KN 22 : 2008                | 정보기기류 장애 방지 시험 방법  |
| KN 24 : 2008                | 정보기기류 내성 시험 방법<br>* 2절 표준참고문헌 중 “4부:시험과 측정 기술-8절:전원 주파수 자기장 내성 시험” 제외  |
| KN 61000-4-2 : 2008         | 정전기방전 내성 시험 방법   |
| KN 61000-4-3 : 2008         | 방사성 RF 전자기장 내성 시험 방법   |
| KN 61000-4-4 : 2008         | EFT/버스트 내성 시험 방법   |



제 306 호 (5/5)

| 규격번호                                   | 규격명  |
|--|--|
| KN 61000-4-5 : 2008                    | 서지 내성 시험방법   |
| KN 61000-4-6 : 2008                    | 전도성 RF 전자기장 내성 시험 방법   |
| KN 61000-4-11 : 2008                   | 전압 강하, 순간 정전 내성 시험 방법  |
| CISPR 22 : 2003                        | Information technology equipment -<br>Radio disturbance characteristics -<br>Limits and methods of measurement   |
| CISPR 24 : 1997<br>+ A1:2001 + A2:2002 | Information technology equipment -<br>Immunity characteristics -<br>Limits and methods of measurement<br>* 2절 Normative Reference 중 "Testing and measurement<br>techniques-Section 8:Power frequency magnetic field<br>immunity test" 제외                             |
| IEC 61000-4-2 : 2008                   | Electromagnetic compatibility (EMC)<br>Part 4-2 : Testing and measurement techniques<br>- Electrostatic discharge immunity test  |
| IEC 61000-4-3 : 2008                   | Electromagnetic compatibility (EMC)<br>Part 4-3 : Testing and measurement techniques<br>- Radiated, radio-frequency, electromagnetic field<br>immunity test  |
| IEC 61000-4-4 : 2004                   | Electromagnetic compatibility (EMC)<br>Part 4-4 : Testing and measurement techniques<br>- Electrical fast transient/burst immunity test  |
| IEC 61000-4-5 : 2005                   | Electromagnetic compatibility (EMC)<br>Part 4-5 : Testing and measurement techniques<br>- Surge immunity test  |
| IEC 61000-4-6 : 2008                   | Electromagnetic Compatibility (EMC)<br>Part 4-6 : Testing and measurement techniques<br>- Immunity to conducted disturbances, induced by<br>radio-frequency fields   |
| IEC 61000-4-11 : 2004                  | Electromagnetic compatibility (EMC)<br>Part 4-11 : Testing and measurement techniques<br>- Voltage dips, short interruptions and voltage variations<br>immunity tests  |
| ANSI C63.4 : 2003                      | American National Standard for Methods of Measurement of<br>Radio-Noise Emissions from Low-Voltage Electrical and<br>Electronic Equipment in the Range of 9 kHz to 40 GHz<br>* 제외항목: 12.1절 "Measurement of receivers"<br>12.2절 "Measurement of TV interface devices" |
| FCC CFR 47 Part 15 : 2005              | Part 15 : Radio frequency Devices<br>*15.107절 "Conducted limits"<br>*15.109절 "Radiated emission limits"에만 적용   |

끝.



No. 306 (1/5)

## CERTIFICATE OF ACCREDITATION

Name of Laboratory : MC Certification Laboratory

Representative : Yong, Nam

Address of Headquarters : 20, Yeouido-dong, Youngdungpo-gu, Seoul, Korea

Address of Laboratory : 60-39, Kasan-dong, Kumchin-gu, Seoul, Korea

Duration : February 23, 2011 ~ February 22, 2015

Scope of Accreditation

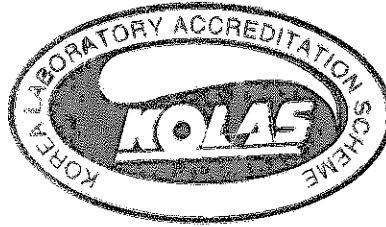
(Scope of Accreditation is described in the accompanying Annex)

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 Communique dated 8 January 2009).

Feb 23, 2011

**Administrator,**

**Korea Laboratory Accreditation Scheme(KOLAS)**

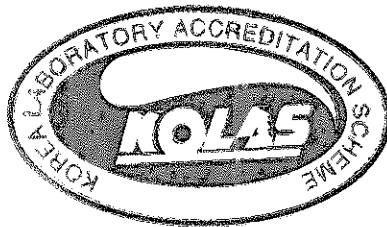


No.306 (2/5)

### 3. Electric Test

#### 3.008 Wire/Radio Telecommunication Devices

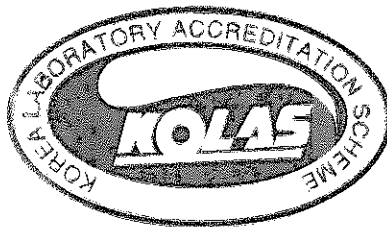
| Test method  | Standard designation  |
|--|---|
| CTIA Certification Test Plan for Mobile Station Over the Air Performance : Rev.2.2.2, 2008 | Method of Measurement for Radiated RF Power and Receiver Performance  |
| 전파연구소고시 제2008-16호 : 2008   | Measurement Method of Specific Absorption Rate  |
| EN 50360 : 2001  | Product Standard to demonstrate the Compliance of mobile phones with the basic restrictions related to human exposure to electromagnetic fields   |
| EN 62209-1 : 2006  | Human exposure to radio frequency fields from hand-held and body-mounted wireless communication devices - Human models, instrumentation, and procedures -- Part 1: Procedure to determine the specific absorption rate (SAR) for hand-held devices used in close proximity to the ear (frequency range of 300 MHz to 3 GHz) |
| FCC/OET Bulletin 65 Supplement C : 2001  | Evaluating Compliance with FCC Guidelines for Human Exposure to Radio frequency Electromagnetic Fields  |
| ANSI/IEEE C95.1 : 2005   | Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3 kHz to 300 GHz  |
| ANSI / IEEE C63.19 : 2007  | American National Standard Methods of Measurement of Compatibility between Wireless Communications Devices and Hearing Aids   |
| CTIA Test Plan for Hearing Aid Compatibility Revision 1.0 : 2006                           | CTIA Test Plan for Hearing Aid Compatibility  |
| 3GPP TS 34.114 V9.0.0 : 2010   | User Equipment (UE) / Mobile Station (MS) Over The Air (OTA) antenna performance ; Conformance testing  |



No.306 (3/5)

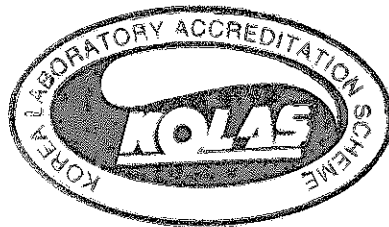
### 3.011 Electro-Magnetic Compatibility

| Test method                      | Standard designation  |
|----------------------------------|---|
| AS/NZS CISPR 22 :2003            | AS/NZS CISPR 22 :2003<br>Information technology equipment -<br>Radio disturbance characteristic Limit and methods of measurement  |
| EN 55022 : 2006 + A1:2007        | Information technology equipment -<br>Radio disturbance characteristic Limit and methods of measurement   |
| EN 55024 : 2003                  | Information technology equipment Immunity characteristic<br>Limit and methods of measurement<br>* Exclusion :<br>Clause 2 "Testing and measurement techniques-Section 8:Power frequency magnetic field immunity test" |
| EN 61000-4-2 : 2009              | Electromagnetic Compatibility (EMC)<br>Part 4-2 : Testing and measurement techniques<br>- Electrostatic discharge immunity test   |
| EN 61000-4-3 : 2006<br>+ A1:2008 | Electromagnetic Compatibility (EMC)<br>Part 4-3 : Testing and measurement techniques<br>- Radiated, radio-frequency, electromagnetic field immunity test  |
| EN 61000-4-4 : 2004              | Electromagnetic Compatibility (EMC)<br>Part 4-4 : Testing and measurement techniques<br>- Electrical fast transient/burst immunity test   |
| EN 61000-4-5 : 2006              | Electromagnetic Compatibility (EMC)<br>Part 4-5 : Testing and measurement techniques<br>- Surge immunity test   |
| EN 61000-4-6 : 2007<br>+ A1:2009 | Electromagnetic Compatibility (EMC)<br>Part 4-6 : Testing and measurement techniques<br>- Immunity disturbances, induced by radio-frequency fields<br>* Exclusion : Clause 6.2.2 "Clamp Injection Device"             |
| EN 61000-4-11 : 2004             | Electromagnetic Compatibility (EMC)<br>Part 4-11 : Testing and measurement techniques<br>-Voltage dips, short interruptions and voltage variations immunity tests   |
| EN 301 489-1 V1.8.1 : 2008       | Electromagnetic compatibility and Radio spectrum Matters (ERM) ;<br>ElectroMagnetic Compatibility (EMC) standard for radio equipment and services ;<br>Part 1 : Common technical requirements                         |



No.306 (4/5)

| Test method                 | Standard designation   |
|-----------------------------|--|
| EN 301 489-7 V1.3.1 : 2005  | Electromagnetic compatibility and Radio spectrum Matters (ERM) ;<br>ElectroMagnetic Compatibility (EMC) standard for radio equipment and services ;<br>Part 7 : Specific conditions for mobile and portable radio and ancillary equipment of digital cellular radio telecommunications systems (GSM and DCS) |
| EN 301 489-17 V2.1.1 : 2009 | Electromagnetic compatibility and Radio spectrum Matters (ERM) ;<br>ElectroMagnetic Compatibility (EMC) standard for radio equipment and services ;<br>Part 17 : Specific conditions for 2,4 GHz wideband transmission systems and 5 GHz high performance RLAN equipment                                     |
| EN 301 489-24 V1.4.1 : 2007 | Electromagnetic compatibility and Radio spectrum Matters (ERM) ;<br>ElectroMagnetic Compatibility (EMC) standard for radio equipment and services ;<br>Part 24 : Specific conditions for IMT-2000 CDMA Direct Spread (UTRA) for Mobile and portable (UE) radio and ancillary equipment                       |
| KN 22 : 2008                | Radio disturbance characteristic Limit and methods of measurement  |
| KN 24 : 2008                | Information technology equipment Immunity characteristic Limit and methods of measurement<br>* Exclusion : Clause 2 Section 4-8  |
| KN 61000-4-2 : 2008         | Testing and measurement techniques<br>- Electrostatic discharge immunity test  |
| KN 61000-4-3 : 2008         | Testing and measurement techniques<br>- Radiated, radio-frequency, electromagnetic field immunity test   |
| KN 61000-4-4 : 2008         | Testing and measurement techniques<br>- Electrical fast transient/burst immunity test  |



No.306 (5/5)

| Test method                            | Standard designation   |
|--|--|
| KN 61000-4-5 : 2008                    | Testing and measurement techniques<br>- Surge immunity test  |
| KN 61000-4-6 : 2008                    | Testing and measurement techniques<br>- Immunity disturbances, induced by radio-frequency fields   |
| KN 61000-4-11 : 2008                   | Testing and measurement techniques<br>- Voltage dips, short interruptions and voltage variations immunity tests  |
| CISPR 22 : 2003                        | Information technology equipment -<br>Radio disturbance characteristics -<br>Limits and methods of measurement   |
| CISPR 24 : 1997<br>+ A1:2001 + A2:2002 | Information technology equipment -<br>Immunity characteristics -<br>Limits and methods of measurement<br>* Exclusion :<br>Clause 2 "Testing and measurement techniques-Section 8:Power frequency magnetic field immunity test"   |
| IEC 61000-4-2 : 2008                   | Electromagnetic compatibility (EMC)<br>Part 4-2 : Testing and measurement techniques<br>- Electrostatic discharge immunity test  |
| IEC 61000-4-3 : 2008                   | Electromagnetic compatibility (EMC)<br>Part 4-3 : Testing and measurement techniques<br>- Radiated, radio-frequency, electromagnetic field immunity test   |
| IEC 61000-4-4 : 2004                   | Electromagnetic compatibility (EMC)<br>Part 4-4 : Testing and measurement techniques<br>- Electrical fast transient/burst immunity test  |
| IEC 61000-4-5 : 2005                   | Electromagnetic compatibility (EMC)<br>Part 4-5 : Testing and measurement techniques<br>- Surge immunity test  |
| IEC 61000-4-6 : 2008                   | Electromagnetic Compatibility (EMC)<br>Part 4-6 : Testing and measurement techniques<br>- Immunity to conducted disturbances, induced by radio-frequency fields  |
| IEC 61000-4-11 : 2004                  | Electromagnetic compatibility (EMC)<br>Part 4-11 : Testing and measurement techniques<br>- Voltage dips, short interruptions and voltage variations immunity tests   |
| ANSI C63.4 : 2003                      | American National Standard for Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9 kHz to 40 GHz<br>* Exclusion : Clause 12.1 "Measurement of receivers"<br>Clause 12.2 "Measurement of TV interface devices" |
| FCC CFR 47 Part 15 : 2005              | Part 15 : Radio frequency Devices<br>* Application only Clause 15.107 "Conducted limits"<br>Clause 15.109 "Radiated emission limits"   |