



SCOPE OF ACCREDITATION TO ISO/IEC 17025:2005

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ELECTRICAL (EMC)

Valid to: January 31, 2013

Certificate Number: 0803.05

In recognition of the successful completion of the A2LA evaluation process, accreditation is granted to this laboratory to perform the following Emissions, Immunity, Wireless and Military tests for electrical equipment:

The following test sites are accredited for the test descriptions as indicated below:

|         |   |
|---------|---|
| Site C1 | EMC Emissions (EU Only) Testing<br>EMC Immunity (Susceptibility) Testing, and<br>Military / Automotive / Aerospace Emissions and Immunity Testing |
| Site C2 | EMC Emissions (EU Only) Testing and<br>EMC Immunity (Susceptibility) Testing  |
| Site C3 | EMC Emissions and Transmitter Characteristics Testing<br>Military / Automotive / Aerospace Emissions Testing                                      |
| Site M1 | Military / Automotive / Aerospace Emissions and Immunity Testing  |
| Site M3 | Military / Automotive / Aerospace Emissions and Immunity Testing  |

The following test standards are accredited to the indicated test site(s):

AUSTRALIA / NEW ZEALAND

| <u>STANDARD</u>  | <u>CAPABLE SITE(S)</u> | <u>DESCRIPTION OF STANDARD</u>  |
|------------------|------------------------|---|
| AS/NZS 4245.1    | C1, C2 & C3            | Information Technology - Telecommunications and Information Exchange between Systems - Open Systems Interconnection - Transport Protocol Identification Mechanism |
| AS/NZS 4251.1    | C3                     | Electromagnetic Compatibility (EMC) - Generic Emission Standard - Residential, Commercial and Light Industry  |
| AS/NZS 4251.2    | C3                     | Electromagnetic Compatibility (EMC) - Generic Emission Standard - Industrial Environments   |
| AS/NZS 61000-6-1 | C1 & C2                | Electromagnetic Compatibility (EMC) - Generic Standards. Immunity for Residential, Commercial and Light-Industrial Environments                                   |
| AS/NZS 61000-6-2 | C1 & C2                | Electromagnetic Compatibility (EMC) - Part 6-2 Generic Standards Immunity for Industrial Environments   |

**AUSTRALIA / NEW ZEALAND (CONTINUED)**

| <b><u>STANDARD</u></b>                  | <b><u>CAPABLE<br/>SITE(S)</u></b> | <b><u>DESCRIPTION OF STANDARD</u></b>  |
|---|-----------------------------------|--|
| AS/NZS 61000-6-3                        | C3                                | Electromagnetic Compatibility (EMC) Part 6-3 Emission Standard for Residential, Commercial and Light-Industrial Environments                           |
| AS/NZS 61000-6-4                        | C3                                | Electromagnetic Compatibility (EMC) Part 6-4 Emission Standard for Industrial Environments   |
| AS/NZS 4268                             | C3                                | Radio Equipment and Systems - Short Range Devices - Limits and Methods of Measurement  |
| AS/NZS 4448                             | C3                                | Limits and Methods of Measurement of Radio Disturbance Characteristics for the Protection of Receivers used on Board Vehicles                          |
| AS/NZS CISPR 11                         | C3                                | Industrial, Scientific and Medical (ISM) Radio-Frequency Equipment - Electromagnetic Disturbance Characteristics - Limits and Methods of Measurement   |
| AS/NZS CISPR 14.1<br>(excluding clicks) | C3                                | Electromagnetic Compatibility (EMC) - Requirements for Household Appliances, Electric Tools and Similar Apparatus - Emission                           |
| AS/NZS CISPR 14.2                       | C1 & C2                           | Electromagnetic Compatibility (EMC) - Requirements for Household Appliances, Electric Tools and Similar Apparatus - Immunity - Product Family Standard |
| AS/NZS CISPR 22                         | C3                                | Information Technology Equipment - Radio Disturbance Characteristics - Limits and Methods of Measurement   |

**TELCORDIA / BELLCORE**

| <b><u>STANDARD</u></b> | <b><u>CAPABLE<br/>SITE(S)</u></b> | <b><u>DESCRIPTION OF STANDARD</u></b>   |
|------------------------|-----------------------------------|---|
| GR-499-CORE            | C1, C2 & C3                       | Transport Systems Generic Requirements (TSGR) Common Requirements [Sections 14.1, 14.2, 4.3]  |
| GR-1089-CORE           | C1, C2 & C3                       | Electromagnetic Compatibility (EMC) and Electrical Safety Generic Criteria for Network Telecommunication Equipment [Sections 2, 3 & 4] [Excluding Section 4.7, First and Second Level AC Power Fault Tests] |

**CANADA**

| <b><u>STANDARD</u></b>   | <b><u>CAPABLE<br/>SITE(S)</u></b> | <b><u>DESCRIPTION OF STANDARD</u></b>  |
|--|-----------------------------------|--|
| <b>* Indicates on-site test services available for indicated standards<sup>4</sup></b> |                                   |  |
| BETS-1*  | C3                                | Technical Standards and Requirements for Low Power Announce Transmitters in the Frequency Bands 525-1,705 KHz and 88-107.5 MHz |
| BETS-4*  | C3                                | Technical Standards and Requirements for Television Broadcasting Transmitters  |
| BETS-5*  | C3                                | Technical Standards and Requirements for AM Broadcasting Transmitters  |
| BETS-6*  | C3                                | Technical Standards and Requirements for FM Broadcasting Transmitters  |
| BETS-7   | C3                                | Technical Standards and Requirements for Radio Apparatus Capable of Receiving Broadcasting                                     |
| BETS-8*  | C3                                | Technical Standards and Requirements for FM Transmitters Operating in Small Remote Communities                                 |

**CANADA (CONTINUED)**

| <b><u>STANDARD</u></b> | <b><u>CAPABLE<br/>SITE(S)</u></b> | <b><u>DESCRIPTION OF STANDARD</u></b>   |
|------------------------|-----------------------------------|---|
| BETS-9                 | C3                                | Technical Standards and Requirements for Television Transmitters Operating in Small Remote Communities  |
| ICES 001               | C3                                | Industrial, Scientific and Medical (ISM) Radio Frequency Generators   |
| ICES 003               | C3                                | Digital Apparatus   |
| ICES 004               | C3                                | Alternating Current High Voltage Power Systems  |
| ICES 005               | C3                                | Radio Frequency Lighting Devices  |
| ICES 006               | C3                                | AC Wire Carrier Current Devices (Unintentional Radiators)   |
| RSS-102                | C3                                | Evaluation Procedure for Mobile and Portable Radio Transmitters With Respect to Health Canada's Safety Code 6 for Exposure of Humans to Radio Frequency Fields                                  |
| RSS-111                | C3                                | Broadband Public Safety Equipment Operating in the Band 4940-4990 MHz   |
| RSS-112                | C3                                | Land Mobile and Fixed Equipment Operating in the Band 1670-1675 MHz   |
| RSS-117                | C3                                | Land and Coast Station Transmitters using A1, A2, A3, A2H, or A3H Emissions Operating in the 200 - 535 KHz Band   |
| RSS-118                | C3                                | Land and Subscriber Stations: Voice, Data and Tone Modulated, Angle Modulation Radiotelephone Transmitters and Receivers Operating in the Cellular Mobile Bands 824 - 849 MHz and 869 - 894 MHz |
| RSS-119                | C3                                | Land Mobile and Fixed Radio Transmitters and Receivers, 27.41 to 960 MHz  |
| RSS-123                | C3                                | Low Power Licensed Radiocommunication Devices   |
| RSS-125                | C3                                | Land Mobile and Fixed Radio Transmitters and Receivers, 1.705 to 50.0 MHz, Primarily Amplitude Modulated  |
| RSS-127                | C3                                | Air-Ground Equipment Operating in the Bands 849-851 MHz and 894-896 MHz   |
| RSS-129                | C3                                | 800 MHz Dual-Mode CDMA Cellular Telephones  |
| RSS-131                | C3                                | Zone Enhancers for the Land Mobile Service  |
| RSS-132                | C3                                | 800 MHz Cellular Telephones Employing New Technologies  |
| RSS-133                | C3                                | 2 GHz Personal Communication Services   |
| RSS-134                | C3                                | 900 MHz Narrowband Personal Communications Services   |
| RSS-135                | C3                                | Digital Scanner Receivers   |
| RSS-136                | C3                                | Land and Mobile Station Radiotelephone Transmitters and Receivers Operating in the 26.960 - 27.410 MHz General Radio Service Band   |
| RSS-137                | C3                                | Location and Monitoring Service (902 - 928 MHz)   |
| RSS-138                | C3                                | Commercial Shipborne Radar in the 2900 - 3100 MHz, 5470 - 5650 MHz and 9225 - 9500 MHz Bands  |
| RSS-139                | C3                                | Advanced Wireless Services Equipment Operating in the Bands 1710 - 1755 MHz and 2110 - 2155 MHz   |
| RSS-141                | C3                                | Aeronautical Radiocommunication Equipment in the Frequency Band 117.975 - 137 MHz   |
| RSS-142                | C3                                | Narrowband Multipoint Communication Systems in the 1427 - 1430 MHz and 1493.5 - 1496.5 MHz Bands  |

**CANADA (CONTINUED)**

| <b><u>STANDARD</u></b> | <b><u>CAPABLE<br/>SITE(S)</u></b> | <b><u>DESCRIPTION OF STANDARD</u></b>   |
|------------------------|-----------------------------------|---|
| RSS-170                | C3                                | Satellite Mobile Earth Stations   |
| RSS-181                | C3                                | Coast and Ship Station Single Sideband Radiotelephone Transmitters and Receivers Operating in the 1 605 - 28000 KHz Band  |
| RSS-182                | C3                                | Maritime Radio Transmitters and Receivers in the Band 156 - 162.5 MHz   |
| RSS-188                | C3                                | Global Maritime Distress and Safety System (GMDSS)  |
| RSS-191                | C3                                | Local Multipoint Communication Systems in the 28 GHz Band; Point-to-Point and Point-to-Multipoint Broadband Communication Systems in the 24 GHz and 38 GHz Bands        |
| RSS-192                | C3                                | Fixed Wireless Access Equipment Operating in the Band 3450 - 3650 MHz   |
| RSS-193                | C3                                | Multipoint and Point-to-Point Communication Systems (MCS) in the Fixed Service Operating in the 2150 - 2160 MHz, 2500 - 2596 MHz and 2686 - 2690 MHz Bands              |
| RSS-194                | C3                                | Fixed Wireless Access Equipment Operating in the Band 953-960 MHz   |
| RSS-195                | C3                                | Wireless Communications Service Equipment Operating in the Bands 2305 - 2320 MHz and 2345 - 2360 MHz  |
| RSS-196                | C3                                | Point-to-Multipoint Broadband Equipment Operating in the Bands 512-608 MHz and 614-698 MHz for Rural Remote Broadband Systems (RRBS) (TV Channels 21 to 51)             |
| RSS-197                | C3                                | Wireless Broadband Access Equipment Operating in the Band 3650-3700 MHz   |
| RSS-199                | C3                                | Broadband Radio Service (BRS) Equipment Operating in the Band 2500-2690 MHz   |
| RSS-210                | C3                                | Low Power License-exempt Radiocommunication Devices (All Frequency Bands)   |
| RSS-213                | C3                                | 2 GHz License - Exempt Personal Communications Service Devices (PCS)  |
| RSS-215                | C3                                | Analogue Scanner Receivers  |
| RSS-220                | C3                                | Devices Using Ultra-Wideband (UWB) Technology   |
| RSS-243                | C3                                | Active Medical Implant Communications System Devices in the 402 - 405 MHz Band  |
| RSS-287                | C3                                | Emergency Position Indicating Radio Beacons (EPIRB), Emergency Locator Transmitters (ELT), Personal Locator Beacons (PLB), and Maritime Survivor Locator Devices (MSLD) |
| RSS-310                | C3                                | Low-power Licence-exempt Radiocommunication Devices (All Frequency Bands) Category II Equipment   |
| RSS-GEN                | C3                                | General Requirements and Information for the Certification of Radiocommunication Equipment  |

**EUROPEAN UNION**

**STANDARD**

**CAPABLE  
SITE(S)**

**DESCRIPTION OF STANDARD**

**EMC Directive 2004/108/EC Standards**

**\* Indicates on-site test services available for indicated standards<sup>4</sup>**

|                    |             |   |
|--------------------|-------------|---|
| EN 12015           | C1, C2 & C3 | Electromagnetic Compatibility - Product Family Standard For Lifts, Escalators And Passenger Conveyors - Emission  |
| EN 12016           | C1 & C2     | Electromagnetic Compatibility - Product Family Standard For Lifts, Escalators And Passenger Conveyors - Immunity  |
| EN 300 386         | C1, C2 & C3 | Electromagnetic compatibility and radio spectrum matters (ERM); Telecommunication network equipment; Electromagnetic compatibility (EMC) requirements   |
| EN 50065-1         | C1, C2 & C3 | Specification for signaling on low-voltage electrical installations in the frequency range 3 KHz to 148.5 KHz - Part 1 General requirements, frequency bands and electromagnetic disturbances   |
| EN 50065-2-1, 2, 3 | C1, C2 & C3 | Specification for signaling on low-voltage electrical installations in the frequency range 3 KHz to 148.5 KHz - Part 2 Immunity requirements for mains communications equipment and systems operating in the range of frequencies 95 kHz to 148,5 kHz |
| EN 50083-2         | C1, C2 & C3 | Cable networks for television signals, sound signals and interactive services - Part 2 Electromagnetic compatibility for equipment  |
| EN 50121-1         | C1, C2 & C3 | Railway applications - Electromagnetic compatibility - Part 1 General   |
| EN 50121-3-2       | C1, C2 & C3 | Railway applications - Electromagnetic compatibility - Part 3-2 Rolling stock - Apparatus   |
| EN 50121-4         | C1, C2 & C3 | Railway applications - Electromagnetic compatibility - Part 4 Emission and immunity of the signalling and telecommunications apparatus  |
| EN 50130-4         | C1, C2 & C3 | Alarm systems - Part 4 Electromagnetic compatibility - Product family standard: immunity requirements for components of fire, intruder and social alarm systems   |
| EN 50270           | C1, C2 & C3 | Electromagnetic compatibility - Electrical apparatus for the detection and measurement of combustible gases, toxic gases or oxygen  |
| EN 50370-1         | C3          | Electromagnetic compatibility (EMC) - Product family standard for machine tools - Part 1 Emissions.   |
| EN 50370-2         | C1 & C2     | Electromagnetic Compatibility (EMC) - Product family standard for machine tools - Part 2 Immunity   |
| EN 55011           | C1, C2 & C3 | Industrial, scientific and medical (ISM) radio-frequency equipment - Radio disturbance characteristics - Limits and methods of measurement  |
| EN 55013           | C1,C2 & C3  | Sound and television broadcast receivers and associated equipment - Radio disturbance characteristics - Limits and methods of measurement   |

**EUROPEAN UNION (CONTINUED)**

| <b><u>STANDARD</u></b>                 | <b><u>CAPABLE<br/>SITE(S)</u></b> | <b><u>DESCRIPTION OF STANDARD</u></b>  |
|--|-----------------------------------|--|
| EN 55014-1<br>(excluding clicks)       | C1, C2 & C3                       | Electromagnetic compatibility - Requirements for household appliances, electric tools and similar apparatus - Part 1 Emission  |
| EN 55014-2                             | C1 & C2                           | Electromagnetic compatibility - Requirements for household appliances, electric tools and similar apparatus - Part 2 Immunity - Product family standard  |
| EN 55015                               | C1, C2 & C3                       | Limits and methods of measurement of radio disturbance characteristics of electrical lighting and similar equipment  |
| EN 55020<br>(excluding section 5.8)    | C1 & C2                           | Sound and television broadcast receivers and associated equipment - Immunity characteristics - Limits and methods of measurement   |
| EN 55022*                              | C3                                | Information technology equipment - Radio disturbance characteristics - Limits and methods of measurement   |
| EN 55022 (2006)*                       | C3                                | Information technology equipment - Radio disturbance characteristics - Limits and methods of measurement [omits amendment(s)]  |
| EN 55024                               | C1 & C2                           | Information technology equipment - Immunity characteristics - Limits and methods of measurement  |
| EN 55103-1                             | C1, C2 & C3                       | Electromagnetic compatibility - Product family standard for audio, video, audio-visual and entertainment lighting control apparatus for professional use - Emission                                      |
| EN 55103-2                             | C1 & C2                           | Electromagnetic compatibility - Product family standard for audio, video, audio-visual and entertainment lighting control apparatus for professional use - Immunity                                      |
| EN 60730-1                             | C1, C2 & C3                       | Automatic Electrical Controls for Household and Similar Use- Part 1 General Requirements [EMC sections only]   |
| EN 60730-2-5 thru 9,<br>11, 13, 14, 18 | C1, C2 & C3                       | Automatic electrical controls for household and similar use - Part 2 Particular requirements   |
| EN 60945                               | C1, C2 & C3                       | Maritime navigation and radiocommunication equipment and systems - General requirements - Methods of testing and required test results   |
| EN 60974-10                            | C1, C2 & C3                       | Arc welding equipment - Part 10 Electromagnetic compatibility (EMC) requirements   |
| EN 61000-3-2                           | C1, C2 & C3                       | Electromagnetic compatibility (EMC) - Part 3 Limits - Section 2 Limits for harmonic current emissions (equipment input current less than/equal to 16 A per phase)  |
| EN 61000-3-3                           | C1, C2 & C3                       | Electromagnetic compatibility (EMC) - Part 3 Limits - Section 3 Limitation of voltage fluctuations and flicker in low-voltage supply systems for equipment with rated current less than or equal to 16 A |

**EUROPEAN UNION (CONTINUED)**

| <b><u>STANDARD</u></b> | <b><u>CAPABLE<br/>SITE(S)</u></b> | <b><u>DESCRIPTION OF STANDARD</u></b>  |
|------------------------|-----------------------------------|--|
| EN 61000-6-1           | C1 & C2                           | Electromagnetic compatibility (EMC) generic standards - Immunity for residential, commercial and light-industrial environments   |
| EN 61000-6-2           | C1 & C2                           | Electromagnetic compatibility (EMC) - Part 6-2 Generic standards immunity for industrial environments  |
| EN 61000-6-3           | C1, C2 & C3                       | Electromagnetic compatibility (EMC) Part 6-3 Emission standard for residential, commercial and light-industrial environments   |
| EN 61000-6-4           | C1, C2 & C3                       | Electromagnetic compatibility (EMC) Part 6-4 Emission standard for industrial environments   |
| EN 61204-3             | C1, C2 & C3                       | Low voltage power supplies, D.C. output - Part 3 Electromagnetic compatibility (EMC)   |
| EN 61326-1             | C1, C2 & C3                       | Electrical equipment for measurement, control and laboratory use - EMC requirements - Part 1 General requirements  |
| EN 61326-2-1 thru 5    | C1, C2 & C3                       | Electrical equipment for measurement, control and laboratory use - EMC requirements - Part 2-1 Particular requirements - Test configurations, operational conditions and performance criteria          |
| EN 61547               | C1 & C2                           | Equipment for general lighting purposes - EMC immunity requirements  |
| EN 62040-2             | C1, C2 & C3                       | Uninterruptible power systems (UPS) - Part 2 Electromagnetic compatibility (EMC) requirements  |
| EN 62061               | C1, C2 & C3                       | Safety of machinery – functional safety of safety related electrical, electronic & programmable control systems ( <i>note: only capable of performing EMC testing for section 6.4.3, ref Annex E</i> ) |

**R&TTE Directive 99/5/EC Standards  
(excluding article 3.1a, safety provisions)**

**\* Indicates on-site test services available for indicated standards<sup>4</sup>**

|              |             |   |
|--------------|-------------|---|
| EN 300 086-2 | C1, C2 & C3 | Electromagnetic compatibility (EMC) and Radio spectrum Matters (ERM) - Land Mobile Service - Radio equipment with an internal or external RF connector intended primarily for analogue speech - Part 2 Harmonized EN covering essential requirements under article 3.2 of the R&TTE Directive   |
| EN 300 113-2 | C1, C2 & C3 | Electromagnetic compatibility (EMC) and Radio spectrum Matters (ERM) - Land mobile service - Radio equipment intended for the transmission of data (and/or speech) using constant or non-constant envelope modulation and having an antenna connector - Part 2 Harmonized EN covering essential requirements under article 3.2 of the R&TTE Directive |
| EN 300 162-2 | C1, C2 & C3 | Electromagnetic compatibility (EMC) and Radio spectrum Matters (ERM); Radiotelephone transmitters and receivers for the maritime mobile service operating in VHF bands; Part 2: Harmonized EN covering essential requirements of article 3.2 of the R&TTE Directive   |

**EUROPEAN UNION (CONTINUED)**

| <b><u>STANDARD</u></b> | <b><u>CAPABLE<br/>SITE(S)</u></b> | <b><u>DESCRIPTION OF STANDARD</u></b>   |
|------------------------|-----------------------------------|---|
| EN 300 162-3           | C1, C2 & C3                       | Electromagnetic compatibility and Radio spectrum Matters (ERM) - Radiotelephone transmitters and receivers for the maritime mobile service operating in VHF bands - Part 3 Harmonized EN covering essential requirements of article 3.3 (e) of the R&TTE Directive                                      |
| EN 300 219-2           | C1, C2 & C3                       | Electromagnetic compatibility and Radio spectrum Matters (ERM) - Land Mobile Service; Radio equipment transmitting signals to initiate a specific response in the receiver - Part 2 Harmonized EN covering essential requirements under article 3.2 of the R&TTE Directive                              |
| EN 300 220-2           | C1, C2 & C3                       | Electromagnetic compatibility and Radio spectrum Matters (ERM) - Short Range Devices (SRD) - Radio equipment to be used in the 25 MHz to 1000 MHz frequency range with power levels ranging up to 500 mW, Part 2 Harmonized EN covering essential requirements under article 3.2 of the R&TTE Directive |
| EN 300 224-2           | C1,C2 &C3                         | Electromagnetic compatibility and Radio spectrum Matters (ERM) - On-site paging service - Part 2 Harmonized EN under article 3.2 of the R&TTE Directive   |
| EN 300 328             | C1, C2 & C3                       | Electromagnetic compatibility and Radio spectrum Matters (ERM) - Wideband Transmission systems - Data transmission equipment operating in the 2.4 GHz ISM band and using spread spectrum modulation techniques - Harmonized EN covering essential requirements under article 3.2 of the R&TTE Directive |
| EN 300 330-2           | C1, C2 & C3                       | Electromagnetic compatibility and Radio spectrum Matters (ERM) - Short Range Devices (SRD) - Radio equipment in the frequency range 9 KHz to 25 MHz and inductive loop systems in the frequency range 9 KHz to 30 MHz - Part 2 Harmonized EN under article 3.2 of the R&TTE Directive                   |
| EN 300 422-2           | C1,C2 &C3                         | Electromagnetic compatibility and Radio spectrum Matters (ERM) - Wireless microphones in the 25 MHz to 3 GHz frequency range - Part 2 Harmonized EN under article 3.2 of the R&TTE Directive  |
| EN 300 433-2           | C1, C2 & C3                       | Electromagnetic compatibility and Radio spectrum Matters (ERM) - Land Mobile Service - Double Side Band (DSB) and/or Single Side Band (SSB) amplitude modulated citizen's band radio equipment - Part 2 Harmonized EN covering essential requirements under article 3.2 of R&TTE Directive              |
| EN 300 440-2           | C1, C2 & C3                       | Electromagnetic compatibility and Radio spectrum Matters (ERM) - Short range devices - Radio equipment to be used in the 1 GHz to 40 GHz frequency range - Part 2 Harmonized EN under article 3.2 of the R&TTE Directive  |
| EN 300 454-2           | C1, C2 & C3                       | Electromagnetic compatibility and Radio spectrum Matters (ERM) - Wide band audio links - Part 2 Harmonized EN under article 3.2 of the R&TTE Directive  |

**EUROPEAN UNION (CONTINUED)**

| <b><u>STANDARD</u></b> | <b><u>CAPABLE<br/>SITE(S)</u></b> | <b><u>DESCRIPTION OF STANDARD</u></b>  |
|------------------------|-----------------------------------|--|
| EN 301 357-2           | C1, C2 & C3                       | Electromagnetic compatibility and Radio spectrum Matters (ERM) - Cordless audio devices in the range 25 MHz to 2 000 MHz - Consumer radio microphones and in-ear monitoring systems operating in the CEPT harmonized band 863 MHz to 865 MHz - Part 2 Harmonized EN under article 3.2 of the R&TTE Directive |
| EN 301 489-1           | C1, C2 & C3                       | Electromagnetic compatibility and Radio spectrum Matters (ERM) - ElectroMagnetic Compatibility (EMC) standard for radio equipment and services - Part 1 Common technical requirements  |
| EN 301 489-2 thru 32   | C1, C2 & C3                       | Electromagnetic compatibility and Radio spectrum Matters (ERM) - ElectroMagnetic Compatibility (EMC) standard for radio equipment and services Parts 2-32, specific conditions   |
| EN 301 502             | C1, C2 & C3                       | Harmonized EN for Global System for Mobile communications (GSM) - Base Station and Repeater equipment covering essential requirements under article 3.2 of the R&TTE directive   |
| EN 301 753             | C1, C2 & C3                       | Fixed Radio Systems - Multipoint equipment and antennas - Generic harmonized standard for multipoint digital fixed radio systems and antennas covering the essential requirements under article 3.2 of the Directive 1999/5/EC   |
| EN 301 840-2           | C1, C2 & C3                       | Electromagnetic compatibility and Radio spectrum Matters (ERM) - Digital wireless microphones operating in the CEPT harmonized band 1785 MHz to 1 800 MHz - Part 2 Harmonized EN under article 3.2 of the R&TTE Directive  |
| EN 301 893             | C1, C2 & C3                       | Broadband Radio Access Networks (BRAN) - 5 GHz hiGH performance RLAN - Harmonized EN covering essential requirements of article 3.2 of the R&TTE Directive   |
| EN 301 908-1 thru 12   | C1, C2 & C3                       | Electromagnetic compatibility and Radio spectrum Matters (ERM) - Base Stations (BS), Repeaters and User Equipment (UE) for IMT-2000 Third-Generation cellular networks   |
| EN 302 064-2           | C1, C2 & C3                       | Electromagnetic compatibility and Radio spectrum Matters (ERM) - Wireless Video Links (WVL) operating in the 1.3 GHz to 50 GHz frequency band - Part 2 Harmonized EN under article 3.2 of the R&TTE Directive  |
| EN 302 065             | C1 & C2                           | Electromagnetic compatibility and Radio spectrum Matters (ERM) - Ultra WideBand (UWB) technologies for communication purposes - Harmonized EN covering the essential requirements of article 3.2 of the R&TTE Directive  |
| EN 302 208-2           | C1, C2 & C3                       | Electromagnetic compatibility and Radio spectrum Matters (ERM) - Radio Frequency Identification Equipment operating in the band 865 MHz to 868 MHz with power levels up to 2 W - Part 2 Harmonized EN under article 3.2 of the R&TTE Directive   |
| EN 302 291-2           | C1, C2 & C3                       | Electromagnetic compatibility and Radio spectrum Matters (ERM) - Short Range Devices (SRD) - Close Range Inductive Data Communication equipment operating at 13,56 MHz - Part 2 Harmonised EN under article 3.2 of the R&TTE Directive   |

**EUROPEAN UNION (CONTINUED)**

| <b><u>STANDARD</u></b>                | <b><u>CAPABLE<br/>SITE(S)</u></b> | <b><u>DESCRIPTION OF STANDARD</u></b>   |
|---------------------------------------|-----------------------------------|---|
| EN 302 500-2                          | C1, C2 & C3                       | Electromagnetic compatibility and Radio spectrum Matters (ERM) - Short Range Devices (SRD) using Ultra WideBand (UWB) technology - Location tracking equipment operating in the frequency range from 6 GHz to 8.5 GHz - Part 2<br>Harmonized EN covering essential requirements of Article 3.2 of the R&TTE Directive |
| EN 302 502                            | C1, C2 & C3                       | Broadband Radio Access Networks (BRAN) – 5.8 GHz fixed broadband data transmitting systems - Harmonized EN covering the essential requirements of article 3.2 of the R&TTE Directive  |
| EN 55022*                             | C3                                | Information technology equipment - Radio disturbance characteristics - Limits and methods of measurement  |
| EN 55022 (2006)*                      | C3                                | Information technology equipment - Radio disturbance characteristics - Limits and methods of measurement [omits amendment A1]   |
| EN 61000-3-2                          | C1, C2 & C3                       | Electromagnetic compatibility (EMC) - Part 3 Limits - Section 2 Limits for harmonic current emissions (equipment input current less than/equal to 16 A per phase)   |
| EN 61000-3-3                          | C1, C2 & C3                       | Electromagnetic compatibility (EMC) - Part 3 Limits - Section 3 Limitation of voltage fluctuations and flicker in low-voltage supply systems for equipment with rated current less than or equal to 16 A  |
| EN 61000-6-1                          | C1 & C2                           | Electromagnetic compatibility (EMC) generic standards. Immunity for residential, commercial and light-industrial environments   |
| EN 61000-6-2                          | C1 & C2                           | Electromagnetic compatibility (EMC) - Part 6-2 Generic standards immunity for industrial environments   |
| EN 61000-6-3                          | C1, C2 & C3                       | Electromagnetic compatibility (EMC) Part 6-3 Emission standard for residential, commercial and light-industrial environments  |
| EN 61000-6-4                          | C1, C2 & C3                       | Electromagnetic compatibility (EMC) Part 6-4 Emission standard for industrial environments  |
| Medical Directive 93/42/EEC Standards |                                   |   |
| EN 60601-1-2                          | C1, C2 & C3                       | Medical electrical equipment - Part 1-2 General requirements for safety - Collateral standard - Electromagnetic compatibility - Requirements and tests  |
| EN 60601-2-2                          | C1, C2 & C3                       | Medical electrical equipment – Part 2-2 Particular requirements for the safety of high frequency surgical equipment   |
| EN 60601-2-4                          | C1, C2 & C3                       | Medical electrical equipment - Part 2-4 Particular requirements for the safety of cardiac defibrillators [EMC sections only]  |
| EN 60601-2-10                         | C1, C2 & C3                       | Medical electrical equipment - Part 2.10 Particular requirements for the safety of nerve and muscle stimulators [EMC sections only]   |
| EN 60601-2-12                         | C1, C2 & C3                       | Medical electrical equipment - Part 2-12 Particular requirements for the safety of lung ventilators - Critical care ventilators [EMC sections only]   |

**EUROPEAN UNION (CONTINUED)**

| <b><u>STANDARD</u></b>                  | <b><u>CAPABLE<br/>SITE(S)</u></b> | <b><u>DESCRIPTION OF STANDARD</u></b>   |
|---|-----------------------------------|---|
| EN 60601-2-22                           | C1, C2 & C3                       | Medical electrical equipment - Part 2 Particular requirements for the safety of diagnostic and therapeutic laser equipment [EMC sections only]  |
| EN 60601-2-24                           | C1, C2 & C3                       | Medical electrical equipment - Part 2-24 Particular requirements for the safety of infusion pumps and controllers [EMC sections only]   |
| EN 60601-2-34                           | C1, C2 & C3                       | Medical electrical equipment - Part 2-34 Particular requirements for the safety, including essential performance, of invasive blood pressure monitoring equipment [EMC sections only] |
| EN 60601-2-37                           | C1, C2 & C3                       | Medical electrical equipment - Part 2-37 Particular requirements for the safety of ultrasonic medical diagnostic and monitoring equipment [EMC sections only]                         |
| EN 61326-2-6                            | C1, C2 & C3                       | Particular requirements – in vitro diagnostic medical equipment   |
| Other Standards                         |                                   |   |
| EN 12184                                | C1, C2 & C3                       | Electrically Powered Wheelchairs, Scooters And Their Chargers - Requirements And Test Methods [Section 9.8 Only]  |
| EN 50204                                | C1 & C2                           | Radiated electromagnetic field from digital radio telephones - Immunity test (900MHz - 5MHz Keyed Carrier)  |
| EN 61000-4-2*                           | C1 & C2                           | Electromagnetic compatibility (EMC) - Part 4-2 Testing and measurement techniques - Electrostatic discharge immunity test   |
| EN 61000-4-3                            | C1 & C2                           | Electromagnetic compatibility (EMC) - Part 4-3 Testing and measurement techniques - Radiated, radio-frequency, electromagnetic field immunity test                                    |
| EN 61000-4-4*                           | C1 & C2                           | Electromagnetic compatibility (EMC) - Part 4-4 Testing and measurement techniques - Electrical fast transient/burst immunity test   |
| EN 61000-4-5*                           | C1 & C2                           | Electromagnetic compatibility (EMC) - Part 4-5 Testing and measurement techniques - Surge immunity test   |
| EN 61000-4-6*                           | C1 & C2                           | Electromagnetic compatibility (EMC) - Part 4-6 Testing and measurement techniques - Immunity to conducted disturbances, induced by radio-frequency fields                             |
| EN 61000-4-8*                           | C1 & C2                           | Electromagnetic compatibility (EMC) - Part 4 Testing and measurement techniques - Section 8 Power frequency magnetic field immunity test basic EMC publication                        |
| EN 61000-4-11*                          | C1 & C2                           | Electromagnetic compatibility (EMC) - Part 4 Testing and measuring techniques - Section 11 Voltage dips, short interruptions and voltage variations immunity tests                    |
| Directives – Old Approach               |                                   |   |
| 75/322/EEC -<br>2000/2/EC<br>2006/96/EC | M1 & C3                           | On the suppression of radio interference produced by agricultural or forestry tractors (electromagnetic compatibility)  |
| 72/245/EEC -<br>2009/19/EC              | M1 & C3                           | On the approximation of the laws of the Member States relating to the suppression of radio interference produced by spark-ignition engines fitted to motor vehicles                   |
| 97/24/EC -<br>2009/108/EC Chapter       | M1 & C3                           | On certain components & characteristics of 2 or 3 wheel motor vehicles  |

**IDA SINGAPORE**

| <b><u>STANDARD</u></b> | <b><u>CAPABLE SITE(S)</u></b> | <b><u>DESCRIPTION OF STANDARD</u></b>  |
|------------------------|-------------------------------|--|
| IDA TS CT-CTS          | C3                            | Technical specification for cordless telephone and cordless telecommunication systems [excluding dect and phs] |
| IDA TS SRD             | C3                            | Technical specification for short range devices  |
| IDA TS AR              | C3                            | Technical specification for amateur radio equipment  |
| IDA TS 3G-BS           | C3                            | Technical specification for imt-2000 third generation (3g) cellular base station and repeater system           |
| IDA TS WBA             | C3                            | Technical specification for wireless broadband access (WBA) equipment  |
| IDA TS LMR             | C3                            | Technical specification for land mobile radio equipment  |
| IDA TS RPG             | C3                            | Technical specification for radio pagers (for public paging service)   |
| IDA TS UWB             | C1, C2 & C3                   | Technical Specification for Ultra Wideband (UWB) Devices   |
| IDA TS EMC             | C1, C2 & C3                   | EMC requirements for telecommunication equipment   |
| IDA TS GMPCS           | C3                            | Technical specification for Global Mobile Personal Communication by Satellite (GMPCS) Terminals                |
| IDA TS GSM-MT          | C3                            | Technical specification for GSM Mobile Terminals   |
| IDA TS GSM-BS          | C3                            | Technical specification for GSM base station and repeater equipment  |
| IDA TS 3G-MT           | C3                            | Technical specification for IMT-2000 third generation (3G) cellular mobile terminals                           |

**INTERNATIONAL STANDARD**

| <b><u>STANDARD</u></b>   | <b><u>CAPABLE SITE(S)</u></b> | <b><u>DESCRIPTION OF STANDARD</u></b>  |
|--|-------------------------------|--|
| <b>* Indicates on-site test services available for indicated standards<sup>4</sup></b> |                               |  |
| CISPR 11   | C3                            | Industrial, scientific and medical (ISM) radio-frequency equipment - Electromagnetic disturbance characteristics - Limits and methods of measurement     |
| CISPR 13   | C3                            | Sound and television broadcast receivers and associated equipment - Radio disturbance characteristics - Limits and methods of measurement                |
| CISPR 14-1<br>(excluding clicks)   | C3                            | Electromagnetic compatibility - Requirements for household appliances, electric tools and similar apparatus - Part 1 Emission                            |
| CISPR 14-2   | C1 & C2                       | Electromagnetic compatibility - Requirements for household appliances, electric tools, and similar apparatus - Part 2 Immunity - Product Family Standard |
| CISPR 15   | C3                            | Limits and methods of measurement of radio disturbance characteristics of electrical lighting and similar equipment                                      |
| CISPR 20<br>(excluding section 5.8)  | C1, C2 & C3                   | Sound and television broadcast receivers and associated equipment - Immunity characteristics - Limits and methods of measurement                         |
| CISPR 22*  | C3                            | Information technology equipment - Radio disturbance characteristics - Limits and methods of measurement   |
| CISPR 22 (2006)*   | C3                            | Information technology equipment - Radio disturbance characteristics - Limits and methods of measurement   |
| CISPR 22 (1997)  | C3                            | Information technology equipment - Radio disturbance characteristics - Limits and methods of measurement   |

**INTERNATIONAL (CONTINUED)**

| <b><u>STANDARD</u></b>                    | <b><u>CAPABLE SITE(S)</u></b> | <b><u>DESCRIPTION OF STANDARD</u></b>  |
|---|-------------------------------|--|
| CISPR 25<br>(excluding section 5 and 6.5) | C1, C2 & C3                   | Radio disturbance characteristics for the protection of receivers used on board vehicles, boats, and on devices - Limits and methods of measurement  |
| IEC 60601-1-2                             | C1, C2 & C3                   | Medical electrical equipment - Part 1 General requirements for safety 2 Collateral standard - Electromagnetic compatibility - Requirements and tests   |
| IEC 60601-2-2                             | C1, C2 & C3                   | Medical electrical equipment – Part 2-2 Particular requirements for the safety of high frequency surgical equipment  |
| IEC 60601-2-47                            | C1, C2 & C3                   | Medical electrical equipment – Part 2-47 2 Particular requirements for the safety, including essential performance, of ambulatory electrocardiographic systems.  |
| IEC 60533                                 | C1, C2 & C3                   | Electromagnetic compatibility of electrical and electronic installations in ships  |
| IEC 60945                                 | C1, C2 & C3                   | Maritime navigation and radiocommunication equipment and systems - General requirements - Methods of testing and required test results   |
| IEC 61000-4-2*                            | C1 & C2                       | Electromagnetic compatibility (EMC) - Part 4-2 Testing and measurement techniques - Electrostatic discharge immunity test  |
| IEC 61000-4-3                             | C1 & C2                       | Electromagnetic compatibility (EMC) - Part 4-3 Testing and measurement techniques - Radiated, radio-frequency, electromagnetic field immunity test   |
| IEC 61000-4-4*                            | C1 & C2                       | Electromagnetic compatibility (EMC) - Part 4-4 Testing and measurement techniques - Electrical fast transient/burst immunity test  |
| IEC 61000-4-5*                            | C1 & C2                       | Electromagnetic compatibility (EMC) - Part 4-5 Testing and measurement techniques - Surge immunity test  |
| IEC 61000-4-6*                            | C1 & C2                       | Electromagnetic compatibility (EMC) - Part 4-6 Testing and measurement techniques - Immunity to conducted disturbances, induced by radio-frequency fields  |
| IEC 61000-4-8*                            | C1 & C2                       | Electromagnetic compatibility (EMC) - Part 4 Testing and measurement techniques - Section 8 Power frequency magnetic field immunity test basic EMC publication   |
| IEC 61000-4-11*                           | C1 & C2                       | Electromagnetic compatibility (EMC) - Part 4 Testing and measuring techniques - Section 11 Voltage dips, short interruptions and voltage variations immunity tests   |
| IEC 61131-2                               | C1, C2 & C3                   | Programmable controllers<br>Part 2 Equipment requirements and tests [EMC sections only]  |
| IEC 61326-1                               | C1, C2 & C3                   | Electrical equipment for measurement, control and laboratory use - EMC requirements - Part 1 General requirements  |
| IEC 61326-2-1 thru 5                      | C1, C2 & C3                   | Electrical equipment for measurement, control and laboratory use - EMC requirements - Part 2-1 Particular requirements - Test configurations, operational conditions and performance criteria  |
| IEC 61326-2-6                             | C1, C2 & C3                   | Particular requirements – in vitro diagnostic medical equipment  |
| IEC 61326-3-1                             | C1, C2 & C3                   | Electrical equipment for measurement, control and laboratory use - EMC requirements - Part 3-1 Immunity requirements for safety-related systems and for equipment intended to perform safety-related functions (functional safety) - General industrial applications |

**INTERNATIONAL (CONTINUED)**

| <b><u>STANDARD</u></b> | <b><u>CAPABLE SITE(S)</u></b> | <b><u>DESCRIPTION OF STANDARD</u></b>   |
|------------------------|-------------------------------|---|
| IEC 61326-3-2          | C1, C2 & C3                   | Electrical equipment for measurement, control and laboratory use - EMC requirements - Part 3-2 Immunity requirements for safety-related systems and for equipment intended to perform safety-related functions (functional safety) - Industrial applications with specified electromagnetic environment |
| IEC 62061              | C1, C2 & C3                   | Safety of machinery – functional safety of safety related electrical, electronic & programmable control systems ( <i>note: only capable of performing EMC testing for section 6.4.3, ref Annex E</i> )  |

**ISO**

| <b><u>STANDARD</u></b>              | <b><u>CAPABLE SITE(S)</u></b> | <b><u>DESCRIPTION OF STANDARD</u></b>  |
|-------------------------------------|-------------------------------|--|
| 7637-2                              | M1 & C3                       | Road vehicles - Electrical disturbances from conduction and coupling - Part 2 Electrical transient conduction along supply lines only  |
| 7637-3<br>(excluding section 3.4.2) | M1 & C3                       | Road vehicles - Electrical disturbances from conduction and coupling - Part 2 Vehicles with nominal 12 V or 24 V supply voltage - Electrical transient transmission by capacitive and inductive coupling via lines other than supply lines |
| 11452-2                             | M1 & C3                       | Road vehicles - Component test methods for electrical disturbances from narrowband radiated electromagnetic energy - Part 2 Absorber-lined shielded enclosure  |
| 11452-3                             | M1 & C3                       | Road vehicles - Component test methods for electrical disturbances from narrowband radiated electromagnetic energy - Part 3 Transverse electromagnetic (TEM) cell  |
| 11452-4                             | M1 & C3                       | Road vehicles - Component test methods for electrical disturbances from narrowband radiated electromagnetic energy - Part 4 Bulk current injection (BCI)   |
| 11452-8                             | M1 & C3                       | Road vehicles - Component test methods for electrical disturbances from narrowband radiated electromagnetic energy - Part 8 Immunity to magnetic fields  |
| 13766                               | M1 & C3                       | Earth-moving machinery - Electromagnetic compatibility   |
| 14982                               | M1 & C3                       | Agricultural and forestry machinery - Electromagnetic compatibility - Test methods and acceptance criteria   |

**JAPAN**

| <b><u>STANDARD</u></b>    | <b><u>CAPABLE SITE(S)</u></b> | <b><u>DESCRIPTION OF STANDARD</u></b>   |
|---------------------------|-------------------------------|---|
| VCCI V-1                  | C3                            | Agreement of voluntary control council for interference by information technology equipment |
| VCCI V-2                  | C3                            | Rules for Voluntary control measures  |
| VCCI V-3<br>(up to 6 GHz) | C3                            | Technical Requirements  |

**KOREA****STANDARD****CAPABLE  
SITE(S)****DESCRIPTION OF STANDARD**

|                        |             |   |
|------------------------|-------------|---|
| RRA NOTICE 2009-50     | C3          | Type Approval of Telecommunications Terminal Equipment  |
| RRA NOTICE 2009-48     | C3          | Designation and Management of Testing Laboratories for Broadcasting and Communications Equipment  |
| KCC NOTICE 2009-40     | C1, C2 & C3 | Type Official Approval, Type registration, EMC registration for Broadcasting and Communications Equipment.                                  |
| RRL NOTICE 2007-97     | C3          | Technical requirements for the radio equipment of aeronautical mobile service and aeronautical radio navigation service                     |
| RRL NOTICE 2007-75     | C3          | Technical requirements for the radio equipment of telecommunication service   |
| RRA NOTICE 2011-10     | C3          | Conformity assessment procedure for type official approval and type registration of radio equipment.  |
| RRL NOTICE 2007-80     | C3          | Technical requirements for the radio equipment for other services than broadcasting, maritime, aeronautical and telecommunications service. |
| RRL NOTICE 2007-98     | C3          | Technical requirements for the radio equipment for maritime mobile service & maritime radio navigation service                              |
| RRA NOTICE 2011-5      | C3          | Technical requirements for EMI  |
| RRA NOTICE 2011-6      | C1 & C2     | Technical requirements for EMS  |
| RRA NOTICE 2010-5      | C3          | Conformity assessment procedure for electromagnetic interference  |
| RRA NOTICE 2010-6      | C1 & C2     | Conformity assessment procedure for electromagnetic susceptibility  |
| KN 11 (2008-5)         | C3          | CISPR 11 (2004-6)   |
| KN 13 (2008-5)         | C3          | CISPR 13 (2006-3)   |
| KN 14-1 (2008-5)       | C3          | CISPR 14-1 (2005-11)  |
| (excluding clicks)     |             |   |
| KN 22 (2008-5)         | C3          | CISPR 22 (2005-4) – <i>[Note: 5 meter or less test distance – excluding testing under 1GHz]</i>   |
| KN 41 (2008-5)         | C3          | EC directive 95/54 (1995-5)   |
| KN 50 (2008-5)         | C3          | IEC 62236-1-5 (2000-9)  |
| KN 301 489-1 (2008-5)  | C3          | EN 301 489-1 V1.5.1 (2004-11)   |
| KN 301 489-7 (2008-5)  | C3          | EN 301 489-7 V1.2.1 (2002-8)  |
| KN 301 489-17 (2008-5) | C3          | EN 301 489-17 V1.2.1 (2002-8)   |
| KN 301 489-24 (2008-5) | C3          | EN 301 489-24 V1.3.1 (2005-11)  |
| KN 15 (2008-5)         | C3          | CISPR 15 (2007-1)   |
| KN 60 (2008-05)*       | C3          | Conformity assessment procedure for interference of power-line communication equipment  |
| KN 61000-4-2 (2008-5)  | C1 & C2     | IEC 61000-4-2 (2001-4)  |
| KN 61000-4-3 (2008-5)  | C1 & C2     | IEC 61000-4-3 (2006-2)  |
| KN 61000-4-4 (2008-5)  | C1 & C2     | IEC 61000-4-4 (2004-7)  |
| KN 61000-4-5 (2008-5)  | C1 & C2     | IEC 61000-4-5 (2005-11)   |
| KN 61000-4-6 (2008-5)  | C1 & C2     | IEC 61000-4-6 (2004-11)   |
| KN 61000-4-8 (2008-5)  | C1 & C2     | IEC 61000-4-8 (2001-3)  |
| KN 61000-4-11 (2008-5) | C1 & C2     | IEC 61000-4-11 (2004-3)   |

**KOREA (CONTINUED)**

| <b><u>STANDARD</u></b>                    | <b><u>CAPABLE SITE(S)</u></b> | <b><u>DESCRIPTION OF STANDARD</u></b> |
|---|-------------------------------|---------------------------------------|
| KN 60601-1-2 (2008-5)                     | C1 & C2                       | IEC 60601-1-2 (2004-11)               |
| KN 14-2 (2008-5)                          | C1 & C2                       | CISPR 14-2 (2001-11)                  |
| KN 20 (2008-5)<br>(excluding section 5.8) | C1 & C2                       | CISPR 20 (1998-8)                     |
| KN 24 (2008-5)                            | C1 & C2                       | CISPR 24 (2002-10)                    |
| KN 41 (2008-5)                            | C1 & C2                       | EC directive 95/54 (1995-5)           |
| KN 51 (2008-5)                            | C1 & C2                       | IEC 62236-1~5 (2000-9)                |
| KN 301 489-1 (2008-5)                     | C1 & C2                       | EN 301 489-1 V1.5.1 (2004-11)         |
| KN 301 489-7 (2008-5)                     | C1 & C2                       | EN 301 489-7 V1.2.1 (2002-8)          |
| KN 301 489-17 (2008-5)                    | C1 & C2                       | EN 301 489-17 V1.2.1 (2002-8)         |
| KN 301 489-24 (2008-5)                    | C1 & C2                       | EN 301 489-24 V1.3.1 (2005-11)        |

**SAE**

| <b><u>STANDARD</u></b> | <b><u>CAPABLE SITE(S)</u></b> | <b><u>DESCRIPTION OF STANDARD</u></b>  |
|------------------------|-------------------------------|--|
| J1752-2                | C1, C3, M1 & M3               | Measurement of radiated emissions from integrated circuits - surface scan method (loop probe method) 10 MHz to 3 GHz   |
| J551-1                 | C1 & C3                       | Performance levels and methods of measurement of electromagnetic compatibility of vehicles, boats (up to 15 m), and machines (16.6 Hz to 18 GHz)   |
| J551-2                 | C1 & C3                       | Test limits and methods of measurement of radio disturbance characteristics of vehicles, motorboats, and spark-ignited engine- driven devices  |
| J551-4                 | C1 & C3                       | Test limits and methods of measurement of radio disturbance characteristics of vehicles and devices, broadband and narrowband, 150 KHz to 1000 MHz   |
| J551-5                 | C1 & C3                       | Performance levels and methods of measurement of magnetic and electric field strength from electric vehicles, broadband, 9 KHz to 30 MHz   |
| J551-11                | C1, M1& M3                    | Vehicle electromagnetic immunity - off-vehicle source  |
| J551-12                | C1, M1& M3                    | Vehicle electromagnetic immunity - on-board transmitter simulation   |
| J551-13                | C1, M1& M3                    | (R) vehicle electromagnetic immunity - bulk current injection  |
| J551-15                | C1, M1& M3                    | Performance level and methods of measurement of electromagnetic compatibility of vehicles, boats (up to 15 m), and machines 50 Hz to 15 GHz Part 15 vehicle electromagnetic immunity - electrostatic discharge (ESD) |
| J551-17                | C1, M1& M3                    | (R) vehicle electromagnetic immunity - power line magnetic fields  |
| J1113-4                | C3                            | Immunity to radiated electromagnetic fields – Bulk current injection (BCI) method  |
| J1113-11               | C1, M1& M2                    | Immunity to conducted transients on power leads  |
| J1113-12               | C3                            | Electrical interference by conduction and coupling – capacitive and inductive coupling via lines other than supply lines   |
| J1113-13               | C3                            | Electromagnetic compatibility measurement procedure for vehicle components – part 13 immunity to electrostatic discharge   |

**SAE (CONTINUED)**

| <b><u>STANDARD</u></b> | <b><u>CAPABLE SITE(S)</u></b> | <b><u>DESCRIPTION OF STANDARD</u></b>  |
|------------------------|-------------------------------|--|
| J1113-21               | C1, M1& M2                    | Electrical interference by conduction and coupling - coupling clamp and chattering relay   |
| J1113-22               | C1, M1& M2                    | Electromagnetic compatibility measurement procedure for vehicle components - Part 22 - Immunity to radiated magnetic fields  |
| J1113-41               | C1, M1& M2                    | Limits and methods of measurement of radio disturbance characteristics of components and modules for the protection of receivers used on board vehicles  |
| J1455                  | C1, M1& M2                    | Joint SAE/TMC recommended environmental practices for electronic equipment design (heavy-duty trucks)<br>[Sections: 4.11.1.1, 4.11.1.2, 4.11.2.2.1, 4.11.2.2.3, 4.11.2.2.4.1, 4.11.2.2.5, 4.11.3 (except 1113-23)] |
| J1752-3                | C1, C2 & C3, M1 & M2          | (R) measurement of radiated emissions from integrated circuits - tem/wideband tem (GTEM) cell method; tem cell (150 KHz to 1 GHz), wideband tem cell (150 KHz to 8GHz) [up to 1.2GHz]                              |

**TAIWAN**  
**STANDARD**

| <b><u>STANDARD</u></b>       | <b><u>CAPABLE SITE(S)</u></b> | <b><u>DESCRIPTION OF STANDARD</u></b>   |
|------------------------------|-------------------------------|---|
| CNS 13306                    | C1, C2 & C3                   | Specification for radio disturbance and immunity measuring apparatus and methods Part 1 Radio disturbance and immunity measuring apparatus.   |
| CNS 13438<br>(1GHz to 6 GHz) | C3                            | Limits and methods of measurement of radio interference characteristics of information technology equipment (ITE) –<br>[Note: 5 meter or less test distance – excluding testing under 1GHz] |
| CNS 13439                    | C3                            | Limits and methods of measurement of radio interference characteristics of sound and television broadcast receiver and associated equipment.  |
| CNS 13803                    | C3                            | Limits and methods of measurement of electromagnetic disturbance characteristics of industrial, scientific and medical (ISM) radio-frequency equipment.                                     |

**UNITED STATES**  
**STANDARD**

| <b><u>STANDARD</u></b>                    | <b><u>CAPABLE SITE(S)</u></b> | <b><u>DESCRIPTION OF STANDARD</u></b>  |
|---|-------------------------------|--|
| 47 CFR PART 11                            | C3                            | Emergency alert system (EAS)   |
| 47 CFR PART 15<br>(excluding DFS testing) | C3                            | Radio frequency devices  |
| 47 CFR PART 18                            | C3                            | Industrial, scientific and medical equipment   |
| 47 CFR PART 22                            | C3                            | Public mobile services   |
| 47 CFR PART 24                            | C3                            | Personal communications services   |
| 47 CFR PART 25                            | C3                            | Satellite communications   |
| 47 CFR PART 27                            | C3                            | Miscellaneous wireless communication services  |
| 47 CFR PART 73                            | C3                            | Radio broadcast services   |
| 47 CFR PART 74                            | C3                            | Experimental radio, auxiliary, and special broadcast and other program distributional services |
| 47 CFR PART 80                            | C3                            | Stations in the maritime services  |
| 47 CFR PART 87                            | C3                            | Aviation services  |

**UNITED STATES (CONTINUED)**

| <b><u>STANDARD</u></b>                | <b><u>CAPABLE<br/>SITE(S)</u></b> | <b><u>DESCRIPTION OF STANDARD</u></b>  |
|---------------------------------------|-----------------------------------|--|
| 47 CFR PART 90                        | C3                                | Private land mobile radio services   |
| 47 CFR PART 95                        | C3                                | Personal radio services  |
| 47 CFR PART 97                        | C3                                | Amateur radio services   |
| 47 CFR PART 101                       | C3                                | Fixed microwave services   |
| ANSI RESNA WC<br>VOL.2                | C1, C2 & C3                       | Electrically powered wheelchairs, scooters and their chargers -<br>Requirements and test methods<br>[section 21 only]  |
| DO 160A/B/C/D/<br>E/F/G               | C1, C3,<br>M1 & M3                | Environmental conditions and test procedures of airborne<br>equipment [sections: 15-22 & 25]   |
| MIL-STD-461A/B/C,<br>MIL-STD-462A/B/C | C1, C3,<br>M1 & M3                | Electromagnetic emission and susceptibility requirements for the<br>control of electromagnetic interference<br>[Emissions tests sections: CE01-07, RE01-03]  |
| MIL-STD-461A/B/C,<br>MIL-STD-462A/B/C | C1, M1& M3                        | Electromagnetic emission and susceptibility requirements for the<br>control of electromagnetic interference<br>[Susceptibility tests CS01-12, RS01-03, RS06]   |
| MIL-STD-461D/E/F                      | C1, C3,<br>M1 & M3                | Electromagnetic emission and susceptibility requirements for the<br>control of electromagnetic interference<br>[Emissions tests sections: CE101, 102 & CE106, RE101-103]   |
| MIL-STD-461D/E/F                      | C1, M1& M3                        | Electromagnetic emission and susceptibility requirements for the<br>control of electromagnetic interference<br>[Susceptibility tests CS101, CS103, CS104, CS105, CS109,<br>CS114, CS115, CS116, RS101, RS103]  |
| FCC – Unlicensed<br>Radio<br>A1 to A4 | C3                                | A1: 47 CFR Parts 11 (Emergency Alert System (EAS)),<br>15 (Radio Frequency Devices) and 18 (Industrial, Scientific, and<br>Medical Equipment); FCC OST/MP-5 (1986); ANSI C63.4<br>(2003 and 2009); ANSI C63.10 (2009)<br><br>A2: 47 CFR Part 15 (Radio Frequency Devices);<br>ANSI C63.4 (2003 and 2009); ANSI C63.10 (2009)<br><br>A3: 47 CFR Part 15 (Radio Frequency Devices);<br>ANSI C63.17:2006; ANSI C63.10 (2009);<br>IEEE Std 1528:2003; Std IEEE 1528A:2005<br><br>A4: 47 CFR Part 15 (Radio Frequency Devices);<br>ANSI C63.10 (2009); IEEE Std 1528:2003;<br>Std IEEE 1528A:2005 |

**UNITED STATES (CONTINUED)**

| <b><u>STANDARD</u></b>              | <b><u>CAPABLE<br/>SITE(S)</u></b> | <b><u>DESCRIPTION OF STANDARD</u></b>  |
|-------------------------------------|-----------------------------------|--|
| FCC – Licensed<br>Radio<br>B1 to B4 | C3                                | B1: 47 CFR Parts 2 (Frequency Allocations and Radio Treaty Matters; General Rules and Regulations), 22 (Public Mobile Services), 24 (Personal Communications Services), 25 (Satellite Communications), and 27 (Miscellaneous Wireless Communications Services); ANSI/TIA-603-C (2004), Land Mobile FM or PM Communications Equipment Measurement and Performance Standard; IEEE Std 1528:2003; Std IEEE 1528A:2005<br><br>B2: 47 CFR Parts 2 (Frequency Allocations and Radio Treaty Matters; General Rules and Regulations), 22 (Public Mobile Services), 74 (Experimental Radio Auxiliary, Special Broadcast and Other Program Distributional Services), 90 (Private Land Mobile Radio Services), 95 (Personal Radio Services), and 97 (Amateur Radio Services); ANSI/TIA-603-C (2004), Land Mobile FM or PM Communications Equipment Measurement and Performance Standard<br><br>B3: 47 CFR Parts 2 (Frequency Allocations and Radio Treaty Matters; General Rules and Regulations); 80 (Stations in the Maritime Services), 87 (Aviation Services); ANSI/TIA-603-C (2004), Land Mobile FM or PM Communications Equipment Measurement and Performance Standard<br><br>B4: 47 CFR Parts 2 (Frequency Allocations and Radio Treaty Matters; General Rules and Regulations); 27 (Broadband Radio Services (BRS) and Educational Broadband Services (EBS)), 74 (Experimental Radio Auxiliary, Special Broadcast and Other Program Distributional Services), and 101 (Fixed Microwave Services); ANSI/TIA-603-C (2004), Land Mobile FM or PM Communications Equipment Measurement and Performance Standard |

For the FCC tests noted directly above, the laboratory is accredited in accordance with the test methods listed, as required per FCC TCB PROGRAM ROLES AND RESPONSIBILITIES dated January 6, 2011, Section 12 Scope of Accreditation for TCB Laboratory:

The testing laboratory portion of the TCB shall be accredited to ISO/IEC 17025 with a scope of accreditation covering the regulations and measurement procedures listed in Table 2<sup>12</sup>. It should be noted that further guidance on the measurement techniques to be used for a given regulation may be found in the associated report and order, FCC public notice, FCC bulletin or interpretation found on the FCC KDB.



Notes:

1. Limitations for listed standards are indicated by square brackets.
2. Scope excludes protocol sections of applicable standards.
3. Scope includes references to basic standards or test methods specified within the governing standard; consequently, the basic standard references need not be identified on this scope document.
4. This laboratory meets A2LA R104 – *General Requirements: Accreditation of Field Testing and Field Calibration Laboratories* for these tests or calibrations.



The American Association for Laboratory Accreditation

World Class Accreditation

# Accredited Laboratory

A2LA has accredited

## CKC LABORATORIES, INC.

*Bothell, WA*

for technical competence in the field of

### Electrical Testing

This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2005 *General Requirements for the Competence of Testing and Calibration Laboratories*. 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*).

Presented this 9<sup>th</sup> day of May 2011.



A handwritten signature in black ink, reading "Peter Abney", written over a horizontal line.

President & CEO  
For the Accreditation Council  
Certificate Number 0803.05  
Valid to January 31, 2013

*For the tests or types of tests to which this accreditation applies, please refer to the laboratory's Electrical Scope of Accreditation.*