



SCOPE OF ACCREDITATION TO ISO/IEC 17025:2005

NATIONAL TECHNICAL SYSTEMS (NTS)
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ELECTRICAL (EMC)

Valid to: December 31, 2013

Certificate Number: 0214.19

In recognition of the successful completion of the A2LA evaluation process, accreditation is granted to this laboratory to perform the following tests:

<u>Test Technology</u>	<u>Test Capabilities</u>	<u>Test Method(s)</u>
<i>Emissions</i> Radiated Emissions	60 Hz to 40 GHz	AS/NZS CISPR 22; AT&T-TP76200; CFR 47 FCC, Part 15 Subpart B (using ANSI C63.4:2003); CAN/CSA-CEI/IEC CISPR 22:2002; CISPR 22 (up to 6 GHz); CISPR 11 Ed.4 + A1:2004; CISPR 16; EN 55022 (up to 6 GHz); EN 55011; EN 50081; EN 61326; ETSI EN 300 386; GR-1089-CORE; KN 22 (up to 6 GHz); MIL-PRF 28800F; MIL-STD 461 (Methods RE101, RE102, RE103); RTCA/DO-160 C-G (Sections 15, 21); VCCI V-3 (up to 6 GHz); CNS 13438 (up to 6 GHz)

Test Technology**Test Capabilities****Test Method(s)***Emissions (Cont'd)*Conducted
Emissions

30 Hz to 100 MHz

GR-1089-CORE;
MIL-STD 461 (Methods CE101, CE102);
MIL-PRF 28800F;
RTCA/DO-160 C-G (Section 21);
AS/NZS CISPR 22;
CFR 47 FCC, Part 15 Subpart B
(using ANSI C63.4-2003);
CAN/CSA-CEI/IEC CISPR 22:2002;
CISPR 22;
CISPR 11 Ed.4 + A1:2004;
CISPR 16;
CISPR 25;
CNS 13438;
EN 55022;
EN 55011;
EN 61000-6-4;
EN 61326;
ETSI EN 300 386;
KN 22;
VCCI V-3*Immunity*Radiated
Immunity

10 kHz to 40 GHz

AT&T-TP76200;
GR-1089-CORE;
EN 61000-6-1;
EN 61000-6-2;
EN 60601-1-2-1;
ETSI EN 300 386;
IEC/EN 55104;
KN/IEC/EN 61000-4-3;
MIL-STD 461 (Methods RS101, RS103);
MIL-PRF 28800F;
IEEE P1613;
RTCA/DO-160 C-G (Section 20)Conducted
Immunity10 kHz to
400MHzGR-1089-CORE;
MIL-STD 1399;
MIL-STD 461 B-F (Methods CS101, CS102, CS103,
CS104, CS105, CS109, CS114, CS115, CS116);
MIL-PRF 28800F;
RTCA/DO160C-G (Section 16, 17, 18,19, 20, 22);
KN/IEC/EN 61000-4-6;
KN/IEC/EN 55024;
EN 60601-1-2-1

Test Technology**Test Capabilities****Test Method(s)***Immunity (Cont'd)*Current
HarmonicsAS/NZS 61000.3.2;
IEC/EN 61000-3-2

Flicker

AS/NZS 61000.3.3;
IEC/EN 61000-3-3Electrostatic
Discharge (ESD)15 kV air,
8 kV contactGR-1089-CORE;
MIL-PRF 28800F;
RTCA/DO-160 C-G (Section 25);
KN/EN/IEC 61000-4-2
KN/EN/IEC 61326;
EN 60601-1-2-1;
EN 50082;
AT&T-TP76200Electrical Fast
Transient/BurstMIL-PRF 28800F;
EN/KN/IEC 61000-4-4;
EN 61326;
EN 55024;
IEEE P1613;
AT&T-TP76200

Surge Immunity

EN 61326;
EN 50082;
EN 60601-1-2-1;
GR-1089-CORE;
IEEE P1613;
KN/IEC/EN 55024;
KN/IEC/EN 61000-4-5;
K20; K21;
RTCA/DO-160 C-G (Section 22)Power Frequency
Magnetic Field
Immunity

EN/KN/IEC 61000-4-8

Voltage Dips, Short
Interruptions and
Line Voltage
Variations

EN/KN/IEC 61000-4-11

DC Power
TransientsMIL-STD 704 A-F;
EN 300 132;
ANSI T1.315;
ATT-TP-76200;
ATT-TP- 76450Lightning/AC
Power CrossGR-1089-CORE;
MIL-STD 704 A-F

<u>Test Technology</u>	<u>Test Capabilities</u>	<u>Test Method(s)</u>
Steady State Power Induction		GR-1089-CORE; ETSI 300 386; AT&T-TP76200
DC Potential		GR-1089-CORE; AT&T-TP76200
Electrical Safety		GR 1089-CORE; AT&T-TP76200
Bonding & Grounding		GR 1089-CORE; AT&T-TP76200
Insulation Resistance		GR-49-CORE; GR-937-CORE; GR-950-CORE; GR-2916-CORE
Energy Efficiency for Telecom. Equipment		ATIS-0600015; VZ.TPR.9205; IEEE P1613
Heat Dissipation		ATIS-0600010; GR-63-CORE
DC Power Port		GR-1089-CORE (Section 10)
Generic and Product Family Standards		IEC/EN 61000-6-3; IEC/EN 61000-6-4; CISPR 24; EN 55024; KN 24; CISPR 25; EN 61326; ETSI EN 300 386

Technical Regulations for the Republic of Korea

Technical Requirements for Electromagnetic Interference (RRA Public Notification 2011-24, Dec 23, 2011)
 Conformity Assessment Procedure for Electromagnetic Interference (RRA Announce 2011-30, Dec 23, 2011)
 Technical Requirements for Electromagnetic Susceptibility (RRA Public Notification 2011-25, Dec 23, 2011)
 Conformity Assessment Procedure for Electromagnetic Susceptibility (RRA Announce 2011-31, Dec 23, 2011)



The American Association for Laboratory Accreditation

World Class Accreditation

Accredited Laboratory

A2LA has accredited

NATIONAL TECHNICAL SYSTEMS (NTS)

Plano, TX

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 23rd day of February 2012.



A handwritten signature in black ink, reading "Peter Abney".

President & CEO
For the Accreditation Council
Certificate Number 0214.19
Valid to December 31, 2013

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