



THE AMERICAN ASSOCIATION FOR
LABORATORY ACCREDITATION

ACCREDITED LABORATORY

A2LA has accredited

Southwest Research Institute
San Antonio, 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 18 June 2005*).



Presented this 18th day of September 2006.

A handwritten signature in black ink, appearing to read "Peter Abney".

President
For the Accreditation Council
Certificate Number 1110.01
Valid to: March 31, 2008

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

SCOPE OF ACCREDITATION TO ISO/IEC 17025: 2005

SOUTHWEST RESEARCH INSTITUTE
Electromagnetic Compatibility Research (EMCR) Section
6220 Culebra Road
San Antonio, TX 78228-0510
Tim Fey Phone: 210 522 3253

ELECTRICAL (EMC)

Valid to: March 31, 2008

Certificate Number: 1110.01

In recognition of the successful completion of the A2LA evaluation process, accreditation is granted to this laboratory to perform the following electromagnetic compatibility (EMC/EMI) tests:

Test Technology

Test Method(s)

Product Family Generic Standards

EN50081-1; EN50081-1 (1992);
EN50081-2; EN50081-2 (1993);
EN50082-1; EN50082-1 (1997);
EN55012; EN55012 (2002);
EN55022; EN55022 (1998) / A1 (2000) / A2 (2003);
EN55024; EN55024 (1994) / A1 (2001) / A2 (2003);
EN61000-6-1; EN61000-6-1 (2001);
EN61000-6-2; EN61000-6-2 (1999/2001);
EN61000-6-3; EN61000-6-3 (2001);
EN61000-6-4; EN61000-6-4 (2001);
EN300 386; EN300 386 v1.3.2 (2003-05);
EN300 132-2; EN300 132-2 v2.1.1 (2003-01);
Telcordia GR-1089-CORE, Issue 2 (1999);
Telcordia GR-1089-CORE, Issue 3 (2002);
IEC60601-1-2; IEC 60601-1-2 (2001-09)

Radiated Emissions Measurements
(H-field 30 Hz-30 MHz)

CFR 47 FCC Part 15 (ANSI C63.4: 2003);
CFR 47 FCC Part 18 (FCC MP-5: 1986);
Telcordia GR-1089-CORE, Issue 2 (1999);
Telcordia GR-1089-CORE, Issue 3 (2002);
MIL-STD-462D 1993 (Methods RE101);
MIL-STD 461E 1999 (Methods RE101)

Radiated Emissions Measurements
(E-field 10 kHz-18 GHz)

CFR 47, FCC Part 15 (ANSI C63.4: 2001);
CFR 47 FCC Part 18 (FCC MP-5: 1986);
EN 55022, EN55022 (1998);
EN55011, EN55011 (1998);
CISPR11, CISPR11 (2003);
CISPR 22, CISPR22 (1997);
CNS 13438
Telcordia GR-1089-CORE, Issue 2 (1999);
Telcordia GR-1089-CORE, Issue 3 (2002);
MIL-STD-462D 1993 (Method RE102);
MIL-STD 461E 1999 (Method RE102)

Conducted Emissions Measurements
(LISN 10 kHz -30 MHz)

CFR 47, FCC Part 15 (ANSI C63.4: 2003);
CFR 47 FCC Part 18 (FCC MP-5: 1986);
EN 55022, EN55022 (1998);
EN55011, EN55011 (1998);
CISPR11, CISPR11 (2003);
CISPR 22, CISPR22 (1997);
CNS 13438
Telcordia GR-1089-CORE, Issue 2 (1999);
Telcordia GR-1089-CORE, Issue 3 (2002);
MIL-STD-462D 1993 (Method CE102);
MIL-STD 461E 1999 (Method CE102);

Conducted Emissions Measurements
(Current Probe 10 Hz-1 GHz)

Telcordia GR-1089-CORE, Issue 2 (1999);
Telcordia GR-1089-CORE, Issue 3 (2002);
MIL-STD-462D 1993 (Methods, CE101);
MIL-STD 461E 1999 (Methods CE101)

Electrostatic Discharge

IEC 61000-4-2, EN 61000-4-2, EN61000-4-2 (2001)
IEC61000-4-2 (1995) / A1 (1998) / A2 (2000);

Radiated Immunity
(E-field 10 kHz to 18 GHz)

Telcordia GR-1089-CORE, Issue 2 (1999);
Telcordia GR-1089-CORE, Issue 3 (2002);
MIL-STD-462D 1993 (Method RS103);
MIL-STD 461E 1999 (Method RS103);
IEC61000-4-3 (2001) / A1 (1998) / A2 (2000, 2002)
EN 61000-4-3, EN61000-4-3 (2003)

Radiated Immunity
(H-field 30 Hz to 100 kHz)

MIL-STD-462D 1993 (Method RS101)
MIL-STD 461E 1999 (Method RS101)

Conducted Immunity

IEC61000-4-6 (1996) / A1 (2000, 2001, 2003);
Telcordia GR-1089-CORE, Issue 2 (1999);
Telcordia GR-1089-CORE, Issue 3 (2002);
MIL-STD-462D: 1993 (Methods CS101, CS114);
MIL-STD 461E: 1999 (Methods CS101, CS114);
EN61000-4-6
EN61000-4-6 (2003)

Electrical Fast Transient/Burst Immunity

IEC61000-4-4
IEC61000-4-4 (1995) / A1 (2000) / A2 (2001)

Surge Immunity & Voltage Spikes

IEC61000-4-5
IEC61000-4-5 (1995) / A1 (2000, 2001)

Voltage Dips, Short Interruptions

IEC61000-4-11
IEC61000-4-11 (1994) / A1 (2000)

Harmonic Current Emissions

EN61000-3-2
EN61000-3-2 (2000)

Voltage Fluctuations and Flicker

EN61000-3-3
EN61000-3-3 (1995) / A1 (2001)