



SCOPE OF ACCREDITATION TO ISO/IEC 17025:2017

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ELECTRICAL

Valid To: April 30, 2026

Certificate Number: 6568.01

In recognition of the successful completion of the A2LA evaluation process, (including an assessment of the organization's compliance with A2LA's FDA ASCA Accreditation Program¹ requirements), accreditation is granted to this organization to perform the following tests:

Test Technology:

Test Method(s)²:

Medical electrical equipment – Part 1: General requirements for basic safety and essential performance

IEC 60601-1, EN 60601-1;
ANSI/AAMI ES60601-1;
CAN/CSA-C22.2 No. 60601-1

Medical electrical equipment - Part 1: General requirements for basic safety and essential performance – Collateral standard: Radiation protection in diagnostic X-ray equipment

IEC 60601-1-3, EN 60601-1-3;
CAN/CSA-C22.2 No. 60601-1-3

Medical electrical equipment - Part 1: General requirements for basic safety and essential performance – Collateral standard: Usability

IEC 60601-1-6, EN 60601-1-6;
CAN/CSA-C22.2 No. 60601-1-6

Medical devices - Application of usability engineering to medical devices

IEC 62366; EN 62366; IEC 62366-1;
EN 62366-1; CSA IEC 62366-1;
ANSI/AAMI/IEC 62366-1

Medical electrical equipment - Part 1: General requirements for basic safety and essential performance – Collateral standard: General requirements, tests and guidance for alarm systems in medical electrical equipment and medical electrical systems

IEC 60601-1-8; EN 60601-1-8;
ANSI/AAMI/IEC 60601-1-8;
CAN/CSA-C22.2 No. 60601-1-8

Medical electrical equipment - Part 1-9: General requirements for basic safety and essential performance – Collateral standard: Requirements for environmentally conscious design

IEC 60601-1-9; EN 60601-1-9;
CAN/CSA C22.2 No. 60601-1-9

Test Technology:

Medical electrical equipment - Part 1-10: General requirements for basic safety and essential performance – Collateral standard: Requirements for the development of physiologic closed-loop controllers

Medical electrical equipment - Part 1: General requirements for basic safety and essential performance – Collateral standard: Requirements for medical electrical equipment and medical electrical systems used in the home healthcare environment

Medical electrical Equipment -- Part 1-12: General requirements for basic safety and essential performance - Collateral Standard: Requirements for medical electrical equipment and medical electrical systems used in the emergency medical services environment

Medical electrical equipment – Part 2-2: Particular requirements for the basic safety and essential performance of high frequency surgical equipment and high frequency surgical accessories

Medical electrical equipment - Part 2-10: Particular requirements for the basic safety and essential performance of nerve and muscle stimulators

Medical electrical equipment – Part 2-18: Particular requirements for basic safety and essential performance of endoscopic equipment

Medical electrical equipment – Part 2-22: Particular requirements for basic safety and essential performance of surgical, cosmetic, therapeutic and diagnostic laser equipment

Safety of laser products - Part 1: Equipment classification and requirements

Medical electrical equipment – Part 2-24: Particular requirements for basic safety and essential performance of infusion pumps and controllers

Test Method(s)²:

IEC 60601-1-10; EN 60601-1-10;
CSA C22.2 NO. 60601-1-10

IEC 60601-1-11; EN 60601-1-11;
ANSI/AAMI HA60601-1-11;
CAN/CSA-C22.2 No. 60601-1-11

IEC 60601-1-12; EN 60601-1-12;
ANSI/AAMI/IEC 60601-1-12;
CAN/CSA-C22.2 No. 60601-1-12

IEC 60601-2-2, EN IEC 60601-2-2;
ANSI/AAMI/IEC 60601-2-2;
CSA C22.2 NO. 60601-2-2

IEC 60601-2-10; EN 60601-2-10;
CAN/CSA-C22.2 No.60601-2-10A

IEC 60601-2-18; EN 60601-2-18;
CAN/CSA-C22.2 No. 60601-2-18

IEC 60601-2-22; EN IEC 60601-2-22;
CAN/CSA-C22.2 No. 60601-2-22

IEC 60825-1; EN 60825-1;
CSA E60825-1

IEC 60601-2-24; EN 60601-2-24;
CAN/CSA-C22.2 No. 60601-2-24

Test Technology:

Medical electrical equipment - Part 2-25:
Particular requirements for the basic safety and essential performance of electrocardiographs

Medical electrical equipment – Part 2-26:
Particular requirements for the basic safety and essential performance of electroencephalographs

Medical electrical equipment – Part 2-27:
Particular requirements for the basic safety and essential performance of electrocardiographic monitoring equipment

Medical electrical equipment – Part 2-28:
Particular requirements for the basic safety and essential performance of X-ray tube assemblies for medical diagnosis

Medical electrical equipment – Part 2-30:
Particular requirements for basic safety and essential performance of automated non-invasive sphygmomanometers

Medical electrical equipment – Part 2-34:
Particular requirements for the basic safety and essential performance of invasive blood pressure monitoring equipment

Medical electrical equipment – Part 2-36:
Particular requirements for the basic safety and essential performance of equipment for extracorporeally induced lithotripsy

Medical electrical equipment – Part 2-37:
Particular requirements for basic safety and essential performance of ultrasonic medical diagnostic and monitoring equipment

Medical electrical equipment – Part 2-40:
Particular requirements for basic safety and essential performance of electromyographs and evoked response equipment

Medical electrical equipment – Part 2-41:
Particular requirements for basic safety and essential performance of surgical luminaires and luminaires for diagnosis

Test Method(s)²:

IEC 60601-2-25; EN 60601-2-25;
ANSI/AAMI/IEC 60601-2-25;
CAN/CSA C22.2 No. 60601-2-25

IEC 80601-2-26; EN 80601-2-26;
CAN/CSA-C22.2 No. 60601-2-26

IEC 60601-2-27; EN 60601-2-27;
ANSI/AAMI/IEC 60601-2-27;
CAN/CSA C22.2 No. 60601-2-27

IEC 60601-2-28; EN 60601-2-28;
CSA C22.2 No. 60601-2-28

IEC 80601-2-30; EN IEC 80601-2-30;
AAMI/IEC 80601-2-30;
CSA C22.2 NO. 80601-2-30

IEC 60601-2-34; EN 60601-2-34;
CAN/CSA C22.2 No. 60601-2-34

IEC 60601-2-36; EN 60601-2-36;
CAN/CSA-C22.2 No. 60601-2-36

IEC 60601-2-37; EN 60601-2-37;
CAN/CSA-C22.2 No. 60601-2-37

IEC 60601-2-40; EN 60601-2-40;
CAN/CSA-C22.2 No. 60601-2-40

IEC 60601-2-41; EN 60601-2-41;
CAN/CSA-C22.2 No. 60601-2-41

Test Technology:

Medical electrical equipment – Part 2-43:
Particular requirements for basic safety and essential performance of X-ray equipment for interventional procedures

Medical electrical equipment – Part 2-44:
Particular requirements for basic safety and essential performance of X-ray equipment for computed tomography

Medical electrical equipment - Part 2-45:
Particular requirements for basic safety and essential performance of mammographic X-ray equipment and mammographic stereotactic devices

Medical electrical equipment - Part 2-46:
Particular requirements for basic safety and essential performance of operating tables

Medical electrical equipment – Part 2-47:
Particular requirements for the basic safety and essential performance of ambulatory electrocardiographic systems

Medical electrical equipment - Part 2-49:
Particular requirements for the basic safety and essential performance of multifunction patient monitoring equipment

Medical electrical equipment - Part 2-52:
Particular requirements for the basic safety and essential performance of medical beds

Medical electrical equipment – Part 2-54:
Particular requirements for basic safety and essential performance of X-ray equipment for radiography and radioscopy

Medical electrical equipment - Part 2-55:
Particular requirements for the basic safety and essential performance of respiratory gas monitors

Medical electrical equipment – Part 2-56:
Particular requirements for basic safety and essential performance of clinical thermometers for body temperature measurement

Test Method(s):

IEC 60601-2-43; EN 60601-2-43;
CAN/CSA C22.2 No. 60601-2-43

IEC 60601-2-44; EN 60601-2-44;
CAN/CSA-C22.2 No. 60601-2-44

IEC 60601-2-45; EN 60601-2-45;
CAN/CSA-C22.2 No. 60601-2-45

IEC 60601-2-46; EN IEC 60601-2-46;
CSA C22.2 No. 60601-2-46

IEC 60601-2-47; EN 60601-2-47;
ANSI/AAMI/IEC 60601-2-47;
CAN/CSA C22.2 No. 60601-2-47

IEC 80601-2-49; EN 80601-2-49;
ANSI/AAMI/ MP80601-2-49;
CAN/CSA-C22.2 No. 60601-2-49

IEC 60601-2-52; EN 60601-2-52;
CAN/CSA-C22.2 No. 60601-2-52

IEC 60601-2-54; EN 60601-2-54;
CAN/CSA-C22.2 No. 60601-2-54

ISO 80601-2-55; EN ISO 80601-2-55;
CAN/CSA-C22.2 No. 80601-2-55

ISO 80601-2-56; EN ISO 80601-2-56

Test Technology:

Test Method(s):

Medical electrical equipment – Part 2-57:
Particular requirements for basic safety and essential performance of non-laser light source equipment intended for therapeutic, diagnostic, monitoring, and cosmetic/aesthetic use

IEC 60601-2-57; EN 60601-2-57;
CAN/CSA-C22.2 No. 60601-2-57

Medical electrical equipment – Part 2-59:
Particular requirements for the basic safety and essential performance of screening thermographs for human febrile temperature screening

IEC 80601-2-59; EN IEC 80601-2-59;
CAN/CSA-C22.2 No. 80601-2-59

Medical electrical equipment – Part 2-60:
Particular requirements for basic safety and essential performance of dental equipment

IEC 80601-2-60; EN IEC 80601-2-60;
CAN/CSA-C22.2 No. 80601-2-60

Dentistry - Patient Chair

ISO 6875; EN ISO 6875

Dentistry - Dental units – Part 1: General requirements and test methods

ISO 7494-1; EN ISO 7494-1

Dentistry - Dental units – Part 2: Air, water, suction, and wastewater systems

ISO 7494-2; EN ISO 7494-2

Dentistry - Operating lights

ISO 9680; EN ISO 9680

Medical electrical equipment – Part 2-61:
Particular requirements for basic safety and essential performance of pulse oximeter equipment

ISO 80601-2-61; EN ISO 80601-2-61;
CAN/CSA-C22.2 No. 80601-2-61

Medical electrical equipment – Part 2-62:
Particular requirements for the basic safety and essential performance of high intensity therapeutic ultrasound (HITU) equipment

IEC 60601-2-62; EN 60601-2-62;
CAN/CSA-C22.2 No. 60601-2-62

Medical electrical equipment – Part 2-63:
Particular requirements for basic safety and essential performance of dental extra-oral X-ray equipment

IEC 60601-2-63; EN 60601-2-63;
CAN/CSA-C22.2 No. 60601-2-63

Medical electrical equipment – Part 2-65:
Particular requirements for basic safety and essential performance of dental intra-oral X-ray equipment

IEC 60601-2-65; EN 60601-2-65;
CAN/CSA-C22.2 No. 60601-2-65

Medical electrical equipment - Part 2-66:
Particular requirements for the basic safety and essential performance of hearing instruments and hearing instrument systems

IEC 60601-2-66; EN IEC 60601-2-66;
CAN/CSA-C22.2 No. 60601-2-66

Test Technology:

Medical Electrical Equipment – Part 2-67:
Particular Requirements for basic safety and
Essential Performance of oxygen conserving
equipment

Medical electrical equipment – Part 2-69:
Particular requirements for basic safety and
essential performance of oxygen concentrator
equipment

Medical electrical equipment – Part 2-77:
Particular requirements for the basic safety and
essential performance of robotically assisted
surgical equipment

Medical electrical equipment – Part 2-78:
Particular requirements for basic safety and
essential performance of medical robots for
rehabilitation, assessment, compensation, or
alleviation

Medical electrical equipment – Part 2-83:
Particular requirements for the basic safety and
essential performance of home light therapy
equipment

Medical suction equipment – Part 1: Electrically
powered suction equipment

Medical Suction Equipment – Part 3: Suction
equipment powered from a vacuum or positive
pressure gas source

Hoists for the transfer of disabled persons –
Requirements and test methods

Non-invasive sphygmomanometers – Part 1:
Requirements and test methods for
non-automated measurement type

Anaesthetic and respiratory equipment –
Nebulizing systems and components

Standard specification for infrared
thermometers for intermittent
determination of patient temperature

Medical vehicles and their equipment –
Road ambulances

Test Method(s)²:

ISO 80601-2-67; EN ISO 80601-2-67

ISO 80601-2-69; EN ISO 80601-2-69;
CAN/CSA-C22.2 No.80601-2-69

IEC 80601-2-77; EN IEC 80601-2-77;
ANSI/AAMI 80601-2-77;
CSA C22.2 No. 80601-2-77

IEC 80601-2-78; EN IEC 80601-2-78;
ANSI/AAMI/IEC 80601-2-78;
CSA C22.2 No. 80601-2-78

IEC 60601-2-83; EN IEC 60601-2-83

ISO 10079-1; EN ISO 10079-1;
CAN/CSA-ISO 10079-1

ISO 10079-3; EN ISO 10079-3;
CSA ISO 10079-3

ISO 10535; EN ISO 10535; CSA Z10535.1

ISO 81060-1; EN ISO 81060-1;
AAMI / ANSI / ISO 81060-1

ISO 27427; EN ISO 27427;
CSA ISO 27427

ASTM E 1965-1998

EN 1789

Test Technology:**Test Method(s):**

Medical vehicles and their equipment – Air ambulances – Part 1: Requirements for medical devices used in air ambulances

EN 13718-1

Safety requirements for electrical equipment for measurement, control, and laboratory use – Part 1: General requirements

IEC 61010-1; EN 61010-1;
CAN/CSA-C22.2 No. 61010-1;
UL61010-1

Safety requirements for electrical equipment for measurement, control, and laboratory use – Part 2-010: Particular requirements for laboratory equipment for the heating of materials

IEC 61010-2-010; EN IEC 61010-2-010;
CSA C22.2 No. 61010-2-010;
UL 61010-2-010

Safety requirements for electrical equipment for measurement, control, and laboratory use – Part 2-011: Particular requirements for refrigerating equipment

IEC 61010-2-011; EN IEC 61010-2-011;
CSA C22.2 No. 61010-2-011;
UL 61010-2-011

Safety Requirements for electrical equipment for measurement, control, and laboratory use – Part 2-020: Particular requirements for laboratory centrifuges

IEC 61010-2-020; EN 61010-2-020;
CAN/CSA-C22.2 No. 61010-2-020;
UL 61010-2-020

Safety requirements for electrical equipment for measurement, control, and laboratory use – Part 2-040: Particular requirements for sterilizers and washer-disinfectors used to treat medical materials

IEC 61010-2-040; EN IEC 61010-2-040;
CSA C22.2 No. 61010-2-040;
UL 61010-2-040

Safety requirements for electrical equipment for measurement, control, and laboratory use – Part 2-051: Particular requirements for laboratory equipment for mixing and stirring

IEC 61010-2-051; EN IEC 61010-2-051;
CSA C22.2 No. 61010-2-051;
UL 61010-2-051

Safety requirements for electrical equipment for measurement, control and laboratory use - Part 2-081: Particular requirements for automatic and semi-automatic laboratory equipment for analysis and other purposes

IEC 61010-2-081; EN IEC 61010-2-081;
CSA C22.2 No. 61010-2-081;
UL 61010-2-081

Medical electrical equipment – Part 2-1: Particular requirements for the basic safety and essential performance of electron accelerators in the range 1 MeV to 50 MeV

IEC 60601-2-1;
EN IEC 60601-2-1

Medical electrical equipment - Part 2-4: Particular requirements for the basic safety and essential performance of cardiac defibrillators

IEC 60601-2-4;
EN 60601-2-4;
ANSI/AAMI/IEC 60601-2-4;
CAN/CSA-C22.2 NO. 60601-2-4

Test Technology:

Test Method(s):

Medical electrical equipment - Part 2-8: Particular requirements for basic safety and essential performance of therapeutic X-ray equipment operating in the range 10 kV to 1 MV

EN 60601-2-8;
IEC 60601-2-8;
CAN/CSA-C22.2 NO. 60601-2-8

Medical electrical equipment Part 2-12: Particular requirements for basic safety and essential performance of critical care ventilators

CAN/CSA-C22.2 No. 80601-2-12;
ISO 80601-2-12;
EN ISO 80601-2-12

Medical electrical equipment - Part 2-13: Particular requirements for basic safety and essential performance of an anaesthetic workstation

ISO 80601-2-13;
EN ISO 80601-2-13;
CAN/CSA-C22.2 NO. 80601-2-13;
ISO 80601-2-13;
EN ISO 80601-2-13

Medical electrical equipment – Part 2-19: Particular requirements for basic safety and essential performance of infant incubators

CAN/CSA-C22.2 No.60601-2-19;
ANSI/AAMI/IEC 60601-2-19;
IEC 60601-2-19;
EN IEC 60601-2-19

Medical electrical equipment – Part 2-20: Particular requirements for basic safety and essential performance of infant transport incubators

ANSI/AAMI/IEC 60601-2-20;
CSA C22.2 NO. 60601-2-20;
IEC 60601-2-20;
EN IEC 60601-2-20

Medical electrical equipment – Part 2-21: Particular requirements for basic safety and essential performance of infant radiant warmers

ANSI/AAMI/IEC 60601-2-21;
CAN/CSA-C22.2 No.60601-2-21;
IEC 60601-2-21;
EN IEC 60601-2-21

Electrical medical equipment - Part 2-68: Particular requirements for the basic safety and essential performance of X-ray-based image-guided radiotherapy equipment for use with electron accelerators, light ion beam therapy equipment and radionuclide beam therapy equipment

IEC 60601-2-68;
EN 60601-2-68;
CAN/CSA-C22.2 No. 60601-2-68

Medical electrical equipment – Part 2-70: Particular requirements for basic safety and essential performance of sleep apnoea breathing therapy equipment

ISO 80601-2-70;
EN ISO 80601-2-70;
CAN/CSA C22.2 No. 80601-2-70

Medical electrical equipment - Part 2-72: Particular requirements for basic safety and essential performance of home healthcare environment ventilators for ventilator-dependent patients

ISO 80601-2-72;
EN ISO 80601-2-72;
CAN/CSA-C22.2 No.80601-2-72

Test Technology:**Test Method(s)²:**

Medical electrical equipment – Part 2-74:
Particular requirements for basic safety and
essential performance of respiratory humidifying
equipment

ISO 80601-2-74;
EN ISO 80601-2-74;
CSA C22.2 No.80601-2-74

Medical electrical equipment - Part 2-79:
Particular requirements for basic safety and
essential performance of ventilatory support
equipment for ventilatory impairment

ISO 80601-2-79
EN ISO 80601-2-79
CSA C22.2 No. 80601-2-79

Medical electrical equipment - Part 2-80:
Particular requirements for basic safety and
essential performance of ventilatory support
equipment for ventilatory insufficiency

ISO 80601-2-80;
EN ISO 80601-2-80;
CSA C22.2 No. 80601-2-80

Medical Electrical Equipment - Part 2-84:
Particular Requirements For Basic Safety And
Essential Performance Of Emergency And
Transport Ventilators

ISO 80601-2-84;
CSA C22.2 No. 80601-2-84

Medical Electrical Equipment - Part 2-87:
Particular Requirements For Basic Safety And
Essential Performance Of High-frequency
Ventilators

ISO 80601-2-87;
EN ISO 80601-2-87

Medical electrical equipment —Part 2-90:
Particular requirements for basic safety and
essential performance of respiratory high-flow
therapy equipment

ISO 80601-2-90;
EN ISO 80601-2-90

Dentistry - Mobile dental units and dental patient
chairs - Part 1: General requirements

ISO 5467-1;
EN ISO 5467-1

Dentistry - Mobile dental units and dental patient
chairs - Part 2: Air, water, suction and wastewater
systems

ISO 5467-2;
EN ISO 5467-2

Medical Suction Equipment - Part 4: General
Requirements

ISO 10079-4;
EN ISO 10079-4

Implants for surgery - Active implantable medical
devices - Part 1: General requirements for safety,
marking and for information to be provided by the
manufacturer

ISO 14708-1;
EN ISO 14708-1

Respiratory equipment - Particular requirements
for basic safety and essential performance of
infant cardiorespiratory monitors

ISO 18778;
EN ISO 18778

<u>Test Technology:</u>	<u>Test Method(s)²:</u>
Electrically powered wheelchairs, scooters and their chargers - Requirements and test methods	EN 12184
Wheelchairs-Part 1 : Determination of static stability	ISO 7176-1
Wheelchairs-Part 2: Determination of dynamic stability of electrically powered wheelchairs	ISO 7176-2
Wheelchairs-Part 3: Determination of effectiveness of brakes	ISO 7176-3
Wheelchairs-Part 4: Energy consumption of electric wheelchairs and scooters for determination of theoretical distance range	ISO 7176-4
Wheelchairs-Part 5: Determination of dimensions, mass and manoeuvring space	ISO 7176-5
Wheelchairs-Part 6: Determination of maximum speed of electrically powered wheelchairs	ISO 7176-6
Wheelchairs-Part 7: Measurement of seating and wheel dimensions	ISO 7176-7
Wheelchairs-Part 8: Requirements and test methods for static, impact and fatigue strengths	ISO 7176-8
Wheelchairs-Part 9: Climatic tests for electric wheelchairs	ISO 7176-9
Wheelchairs-Part 10: Determination of obstacle-climbing ability of electrically powered wheelchairs	ISO 7176-10
Wheelchairs-Part 13 Determination of coefficient of friction of test surfaces	ISO 7176-13
Wheelchairs-Part 14: Power and control systems for electrically powered wheelchairs and scooters - Requirements and test methods	ISO 7176-14
Wheelchairs-Part 15: Requirements for information disclosure, documentation and labelling	ISO 7176-15
Wheelchairs-Part 25: Batteries and chargers for powered wheelchairs	ISO 7176-25

Test Technology:

Safety requirements for electrical equipment for measurement, control and laboratory use - Part 2-101: Particular requirements for laboratory equipment for in vitro diagnostic (IVD) medical equipment

Dentistry—Powered polymerization activators

Wheelchair seating Part 10: Resistance to ignition of postural support devices Requirements and test method

***Unintentional Radiators
Emissions***

Radiated and Conducted

Harmonic Current Emissions

Voltage Fluctuations and Flicker

Test Method(s)²:

IEC 61010-2-101;
EN IEC 61010-2-101;
CSA C22.2 No. 61010-2-101;
UL 61010-2-101

ISO 10650;
EN ISO 10650

ISO 16840-10

CFR 47, FCC Part 15 Subpart B
(using ANSI C63.4:2014);
CFR 47, FCC Part 18 (using MP-5:1986);
ICES-GEN; ICES-001; ICES-005; ICES-003;
IEC 61000-6-3; EN 61000-6-3;
BS EN 61000-6-3; GB 17799.3;
IEC 61000-6-4; EN 61000-6-4;
BS EN IEC 61000-6-4; GB 17799.4;
CISPR 11; EN 55011; BS EN 55011; GB 4824;
CISPR 14-1; EN 55014-1; BS EN 55014-1;
GB 4343.1; GB/T 9254;
CISPR 32; AS/NZS CISPR 32; EN 55032;
VCCI-CISPR 32; BS EN 55032
CISPR 15; EN 55015; AS/NZS CISPR 15;
BS EN IEC 55015; GB/T 17743;
IEC 60601-1-2; EN 60601-1-2;
BS EN 60601-1-2;
YY 0505; YY 9706.102
IEC 61326-1; EN 61326-1; BS EN 61326-1;
GB/T 18268.1;
IEC 61326-2-6; EN IEC 61326-2-6;
BS EN IEC 61326-2-6;
GB/T 18268.26-2010;
ETSI EN 300 386

GB 17625.1;
IEC 61000-3-2; EN 61000-3-2;
EN IEC 61000-3-2; BS EN IEC 61000-3-2;
SANS 61000-3-2; SASO-IEC-GSO-61000-3-2

GB/T 17625.2;
IEC 61000-3-3; EN 61000-3-3;
BS EN 61000-3-3; GB/T 17625.7;
IEC 61000-3-11; EN 61000-3-11;
BS EN 61000-3-11;

Test Technology:

Test Method(s)²:

Voltage Fluctuations and Flicker (*continued*)

SANS 61000-3-3;
SASO-IEC-61000-3-11

Click

GB 4824; CISPR 11; EN 55011; BS EN 55011;
GB 4343.1; CISPR 14-1;
EN 55014-1; BS EN 55014-1

Disturbance Power

GB 4343.1;
CISPR 14-1; EN 55014-1;
BS EN 55014-1

Immunity

ESD

IEC 61000-4-2; EN 61000-4-2;
BS EN 61000-4-2; GB/T 17626.2;
SANS 61000-4-2;
SASO-IEC-61000-4-2

Fast Transients

IEC 61000-4-4; EN 61000-4-4;
BS EN 61000-4-4; GB/T 17626.4;
SANS 61000-4-4;
SASO-IEC-61000-4-4

Surge

IEC 61000-4-5; EN 61000-4-5;
BS EN 61000-4-5; GB/T 17626.5;
SANS 61000-4-5;
SASO-GSO-IEC-61000-4-5

Conducted Immunity

IEC 61000-4-6; EN 61000-4-6;
BS EN 61000-4-6; GB/T 17626.6;
SANS 61000-4-6;
SASO-IEC-61000-4-6

Voltage Dips, Interrupts

IEC 61000-4-11; EN 61000-4-11;
BS EN IEC 61000-4-11; GB/T 17626.11;
SANS 61000-4-11;
SASO-GSO-IEC-61000-4-11

Power Magnetic Fields

IEC 61000-4-8;
EN 61000-4-8;
BS EN 61000-4-8;
SANS 61000-4-8;
SASO-IEC-61000-4-8

Radiated Field Immunity (9kHz~30MHz)

IEC 61000-4-39;
EN 61000-4-39;
BS EN 61000-4-39;
SASO-IEC-61000-4-39

Radiated Immunity
(80MHz~6GHz, 10V/m@3m, 30V/m@1m)

IEC 61000-4-3;
EN IEC 61000-4-3;

Test Technology:

Radiated Immunity
(80MHz~6GHz, 10V/m@3m, 30V/m@1m)
(continued)

Harmonics and
interharmonics including mains signalling at a.c.
power port, low frequency
immunity tests

EMC Medical

Generic / Product Family / Specific Standards

Test Method(s)²:

EN 61000-4-3;
BS EN 61000-4-3;
SANS 61000-4-3;
SASO-GSO-IEC-61000-4-3

IEC 61000-4-13;
EN 61000-4-13;
BS EN 61000-4-13;
SANS 61000-4-13;
SASO-IEC-61000-4-13

IEC 60601-1-2; IEC 60118-13;
IEC TR 60601-4-2; EN 60601-1-2;
BS EN 60601-1-2; ISO 7176-21;
ANSI RESNA WC-2:2019 Section 21;
ANSI/AAMI/IEC 60601-1-2;
CAN/CSA-C22.2 No. 60601-1-2

IEC 61000-6-1; EN 61000-6-1;
BS EN IEC 61000-6-1; GB/T 17799.1;
IEC 61000-6-2; EN 61000-6-2;
BS EN IEC 61000-6-2; GB/T 17799.2;
IEC 61000-6-3; EN 61000-6-3;
BS EN 61000-6-3; GB 17799.3;
IEC 61000-6-4; EN 61000-6-4;
BS EN IEC 61000-6-4; GB 17799.4;
CISPR 11; EN 55011; BS EN 55011;
GB 4824; YY 0505;
CISPR 14-1; EN 55014-1;
BS EN 55014-1; GB 4343.1;
CISPR 14-2; EN 55014-2; BS EN 55014-2;
GB/T 4343.2; GB/T 9254; CISPR 24; EN 55024;
BS EN 55024; GB/T 17618;
IEC 61326-1; EN 61326-1;
BS EN 61326-1; GB/T 18268.1;
ETSI EN 300 386;
CISPR 15; EN 55015; AS/NZS CISPR 15;
BS EN IEC 55015; GB/T 17743;
IEC 61547; EN 61547; BS EN 61547;
GB/T 18595;
CISPR 32; EN 55032; AS/NZS CISPR 32;
VCCI-CISPR 32; BS EN 55032;
CISPR 35; EN 55035; BS EN 55035;
YY 9706.102;
EN IEC 61326-1; BS EN IEC 61326-1;
IEC 61326-2-6; EN IEC 61326-2-6;
BS EN IEC 61326-2-6; GB/T 18268.26;
SANS 211;
SANS 214-1;
SANS 214-2;

Test Technology:

Generic / Product Family / Specific Standards
(continued)

Test Method(s)²:

SANS 2332;
SANS 60601-1-2;
SANS 61326-1;
SANS 61000-6 -1;
SANS 61000-6-2;
SANS 61000-6-3;
SANS 61000-6-4;
SANS 2335;
SANS 215;
SANS 61547;
SASO-IEC-61326-1;
SASO-IEC-61326-2-1;
SASO-IEC-61326-2-2;
SASO-IEC-61326-2-3;
SASO-IEC-61326-2-4;
SASO-IEC-61326-2-5;
SASO-IEC-61326-2-6;
SASO-CISPR-14 -1;
SASO-CISPR-14-2;
SASO-GSO-CISPR-15;
SASO-IEC-61547;
SASO-IEC-TR-61547-1;
SASO-IEC-61547-1;
SASO-IEC-CISPR-32;
SASO-CISPR-24;
SASO-CISPR-11;
SASO-GSO-IEC-61000-6-3;
SASO-IEC-61204-3

Intentional Radiators
Unlicensed

CFR 47, FCC Part 15 Subpart C,
CFR 47, FCC Part 15 Subpart E,
CFR 47, FCC Part 15 Subpart F
(all using ANSI C63.10:2013) (*up to 40 GHz*);
FCC KDB Publication: 905462 D02 UNII DFS
Compliance Procedure New Rules v02;
ANSI C63.10:2020

Wideband transmission systems; Data transmission equipment operating in the 2,4 GHz ISM band and using wide band modulation techniques; Harmonized Standard covering the essential requirements of article 3.2 of Directive 2014/53/EU

ETSI EN 300 328

5 GHz RLAN; Harmonized Standard covering the essential requirements
Harmonized Standard covering the essential requirements of article 3.2 of Directive 2014/53/EU

ETSI EN 301 893

Test Technology:

Test Method(s)²:

Short Range Devices (SRD); Radio equipment to be used in the 1 GHz to 40 GHz frequency range; Harmonized Standard covering the essential requirements of article 3.2 of Directive 2014/53/EU

ETSI EN 300 440

Wireless Access Systems (WAS); 5,8 GHz fixed broadband data transmitting systems; Harmonized Standard for access to radio spectrum

ETSI EN 302 502

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; Harmonized Standard covering the essential requirements of article 3.2 of Directive 2014/53/EU

ETSI EN 300 330

Product Specific EMC

ETSI EN 301 489-1;
ETSI EN 301 489-3;
ETSI EN 301 489-17;
ETSI EN 301 489-33;
ETSI EN 301 489-34

General Requirements for Compliance of Radio Apparatus (ISED)

RSS-GEN

Digital Transmission Systems (DTSs), Frequency Hopping Systems (FHSs) and License-Exempt Local Area Network (LE-LAN) Devices

RSS-247

License-Exempt Radio Apparatus: Category I Equipment

RSS-210

Wireless Power Transfer Devices

RSS-216

Japan

ARIB STD-T66;
Article 2 Paragraph 1 item 19;
Article 2 Paragraph 1 item 19-2-2;
ARIB STD-33;
Article 2 Paragraph 1 item 19-2;
Article 2 Paragraph 1 item 19-2-3;
ARIB STD-T71;
Article 2 Paragraph 1 item 19-3;
Article 2 Paragraph 1 item 19-3-2;
Article 2 Paragraph 1 item 19-3-3;
MIC Notice No.88

Australia

AS/NZS 4268

Test Technology:

Test Method(s)²:

RF Exposure Assessment

(up to 40 GHz)

EU

EN 62479; EN 62311; EN 50663; EN 50665

Canada

RSS-102; RSS-102 Measurement (RF Exp.)

Australia

AS/NZS 2772.1;
AS/NZS 2772.2

Bluetooth Radio and Protocol Conformance

Testing - BT SIG

Primary Scope Options

RF:1; RF-PHY:1; RF-PHY:2; LE Protocols:1;
LE Protocols:2

Supplemental Scope Options

Host Layers;
Traditional Profiles and Protocols;
GATT-Based Profile & Service

Testing Activities performed under the scope of the U.S FDA ASCA Pilot Program Specifications: *Basic Safety and Essential Performance of Medical Electrical Equipment, Medical Electrical Systems, and Laboratory Medical Equipment – Standards Specific Information for the Accreditation Scheme for Conformity Assessment (ASCA) Pilot Program* published on September 25th, 2020, and in accordance with all requirements of *A2LA R256 Specific Requirements- FDA ASCA Program*¹:

Standards

ASCA DocNumber

ES60601-1:2005/(R)2012 & A1:2012 C1:2009/(R)2012 & A2:2010/(R)2012 (Cons. Text) [Incl. AMD2:2021]	19-46
IEC 61010-1 Edition 3.1 2017-01 CONSOLIDATED VERSION	19-34
IEC 60601-1-2 Edition 4.1 2020-09 CONSOLIDATED VERSION	19-36
IEC 60601-1-3 Edition 2.2 2021-01 CONSOLIDATED VERSION	12-336
IEC 60601-1-6 Edition 3.2 2020-07 CONSOLIDATED VERSION	5-132
IEC 60601-1-8 Edition 2.2 2020-07 CONSOLIDATED VERSION	5-131
IEC 60601-1-10 Edition 1.2 2020-07 CONSOLIDATED VERSION	19-37
IEC 60601-1-11 Edition 2.1 2020-07 CONSOLIDATED VERSION	19-38
ANSI AAMI HA60601-1-11:2015 [Including AMD1:2021]	19-47
IEC 60601-1-12 Edition 1.1 2020-07 CONSOLIDATED VERSION	19-39
ANSI AAMI IEC 60601-1-12:2016 [Including AMD 1:2021]	19-39
IEC 60601-2-2 Edition 6.0 2017-03	6-389
ANSI AAMI IEC 60601-2-2:2017	6-389
IEC 60601-2-10 Edition 2.1 2016-04	17-16
IEC 60601-2-18 Edition 3.0 2009-08	9-114
IEC 60601-2-22 Edition 3.1 2012-10	12-268
IEC 60601-2-25 Edition 2.0 2011-10	3-105
ANSI AAMI IEC 60601-2-25:2011/(R)2016	3-105
IEC 60601-2-27 Edition 3.0 2011-03	3-126
ANSI AAMI IEC 60601-2-27:2011(R)2016	3-126
IEC 60601-2-28 Edition 3.0 2017-06	12-309



IEC 80601-2-30 Edition 2.0 2018-03	3-123
ANSI AAMI IEC 80601-2-30:2018	3-123
IEC 60601-2-34 Edition 3.0 2011-05	3-115
IEC 60601-2-36 Edition 2.0 2014-04	9-119
IEC 60601-2-37 Edition 2.1 2015	12-293
IEC 60601-2-43 Edition 2.2 2019-10 CONSOLIDATED VERSION	12-329
IEC 60601-2-43 Edition 3.0 2022-12	12-351
IEC 60601-2-44 Edition 3.2 2016	12-302
IEC 60601-2-45 Edition 3.1 2015	12-294
IEC 60601-2-47 Edition 2.0 2012-02	3-155
ANSI AAMI IEC 60601-2-47:2012/(R)2016	3-155
IEC 60601-2-52 Edition 1.0 2009-12	6-321
IEC 60601-2-52 Edition 1.1 2015-03 CONSOLIDATED VERSION	6-489
IEC 60601-2-54 Edition 2.0 2022-09	12-348
ISO 80601-2-55 Second Edition 2018-02	1-140
ISO 80601-2-56 Second Edition 2017-03	6-421
IEC 60601-2-57 Edition 1.0 2011-01	12-242
IEC 80601-2-59 Edition 2.0 2017-09	6-405
IEC 80601-2-60 Edition 2.0 2019-06	4-262
ISO 80601-2-61 Second Edition 2017-12 (Corrected Version 2018-02)	1-139
IEC 60601-2-62 Edition 1.0 2013-07	12-281
IEC 60601-2-63 Edition 1.2 2021-05 CONSOLIDATED VERSION	12-339
IEC 60601-2-65 Edition 1.2 2021-05 CONSOLIDATED VERSION	12-340
ISO 80601-2-69 Second Edition 2020-11	1-148
IEC 80601-2-77 Edition 1.0 2019-07	6-438
ANSI AAMI IEC 80601-2-77:2020	6-438
IEC/TR 60601-4-2 Edition 1.0 2016-05	19-19
IEC 60601-2-1 Edition 4.0 2020-10	12-338
IEC 60601-2-8 Edition 2.1 b:2015	12-301
80601-2-12 Second edition 2020-02	1-146
ISO 80601-2-13 Second edition 2022-04	1-165
IEC 60601-2-19 Edition 3.0 2020-09	6-461
IEC 60601-2-20 Edition 3.0 2020-09	6-462
IEC 60601-2-21 Edition 3.0 2020-09	6-463
IEC 60601-2-68 Edition 1.0 2014-09	12-319
ISO 80601-2-70 Second edition 2020-11	1-151
ISO 80601-2-72 Second edition 2023-06	1-163
ISO 80601-2-74 First edition 2017-05	1-138
ISO 80601-2-79 First edition 2018-07	1-143
ISO 80601-2-80 First edition 2018-07	1-144
ISO 80601-2-84 First edition 2020-07	1-160
ISO 80601-2-87 First edition 2021-04	1-152

¹ These methods have been assessed by A2LA according to A2LA's FDA ASCA Program requirements. Accreditation by A2LA does not imply FDA ASCA-Accreditation. All ASCA-accreditation decisions for testing laboratory applications are made solely by the FDA, a list of approved laboratories can be found at FDA.gov.

²The laboratory is only accredited for testing activities outlined within the test methods listed above. Reference to any other activity within these standards, such as risk management or risk assessment, does not fall within the laboratory's accredited capabilities.

Testing Activities Performed in Support of FCC Certification in Accordance with 47 Code of Federal Regulations and FCC KDB 974614, Appendix A, Table A.1 ³:

Rule Subpart/Technology	Test Method	Maximum Frequency (MHz)
<u>Unintentional Radiators</u> Part 15B	ANSI C63.4:2014	40000
<u>Industrial, Scientific, and Medical Equipment</u> Part 18	FCC MP-5:1986	40000
<u>Intentional Radiators</u> Part 15C	ANSI C63.10:2013	40000
<u>U-NII without DFS Intentional Radiators</u> Part 15E	ANSI C63.10:2013	40000
<u>U-NII with DFS Intentional Radiators</u> Part 15E	FCC KDB 905462 D02 (v02)	40000
<u>Ultra-Wideband Operation</u> Part 15F	ANSI C63.10:2013	40000

³ Accreditation does not imply acceptance to the FCC equipment authorization program. Please see the FCC website (<https://apps.fcc.gov/oetcf/eas/>) for a listing of FCC approved.

⁴ Exclusions Table

Standard	Exclusion item
IEC 60601-1, EN 60601-1; ANSI/AAMI ES60601-1; CAN/CSA-C22.2 No. 60601-1	11.4 ME EQUIPMENT and ME SYSTEMS intended for use with flammable anaesthetics;
	11.7 Biocompatibility of ME EQUIPMENT and ME SYSTEMS
ASTM E 1965-1998	5.5 Special Requirements about clinical Accuracy
	6.2 Clinical Accuracy Tests
ISO 80601-2-56; EN ISO 80601-2-56	201.102 Clinical accuracy validation
ISO 7494-1; EN ISO 7494-1	5.1.7 Biocompatibility
	5.1.10.2 Flammability
ISO 80601-2-61; EN ISO 80601-2-61; CAN/CSA-C22.2 No. 80601-2-61	201.12.1.101 SpO2 accuracy of pulse oximeter equipment



Standard	Exclusion item
ISO 80601-2-67; EN ISO 80601-2-67	201.11.7 Biocompatibility of ME equipment and ME systems
ISO 10079-1; EN ISO 10079-1; CAN/CSA-ISO 10079-1	4.3 Clinical investigation
	4.4 Biophysical or modelling research
ISO 10079-3; EN ISO 10079-3; CSA ISO 10079-3	4.3 Clinical investigation
	4.4 Biophysical or modelling research
ISO 81060-1; EN ISO 81060-1; AAMI / ANSI / ISO 81060-1	11 Biocompatibility
ISO 27427; EN ISO 27427; CSA ISO 27427	8 Biocompatibility
IEC 60601-2-36; EN 60601-2-36; CAN/CSA-C22.2 No. 60601-2-36	201.11.7 Biocompatibility
ISO 80601-2-72; EN ISO 80601-2-72; CAN/CSA-C22.2 No.80601-2-72	201.11.7 Biocompatibility of ME equipment and ME systems
ISO 80601-2-74; EN ISO 80601-2-74; CSA C22.2 No.80601-2-74	201.11.7 Biocompatibility of ME equipment and ME systems
ISO 80601-2-79 EN ISO 80601-2-79 CSA C22.2 No. 80601-2-79	201.11.7 Biocompatibility Test
ISO 80601-2-80; EN ISO 80601-2-80; CSA C22.2 No. 80601-2-80	201.11.7 Biocompatibility Test
ISO 80601-2-84; CSA C22.2 No. 80601-2-84	201.11.7 Biocompatibility Test
ISO 80601-2-87; EN ISO 80601-2-87	201.11.7 18562-1:2017 Biocompatibility Test
ISO 80601-2-90; EN ISO 80601-2-90	201.11.7 18562-1:2017 Biocompatibility Test



Accredited Laboratory

A2LA has accredited

DEKRA TESTING AND CERTIFICATION (SHANGHAI) LTD., GUANGZHOU BRANCH

Guangzhou, People's Republic of China

for technical competence in the field of

Electrical Testing

This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2017 *General requirements for the competence of testing and calibration laboratories*. This laboratory also meets A2LA R256 - *Specific Requirements - FDA ASCA Program*. 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 April 2017).



Presented this 26th day of April 2024.

A blue ink signature of Trace McInturff, written in a cursive style.

Mr. Trace McInturff, Vice President, Accreditation Services
For the Accreditation Council
Certificate Number 6568.01
Valid to April 30, 2026

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