

ANSI/ESD S20.20 – 2014

ESD Association Standard: Provides guidelines to protect electrical and electronic parts, assemblies and equipment from electrostatic discharge.

- **Handles Class-0**
ANSI 20.20 (< 20 volts) — in addition to compliance with Class-0 protocols
- **Does Not Handle Class-0**
ANSI 20.20 (100 volt maximum)

IEC 61340-5-1:2007 IECEE.ORG

The European equivalent to ANSI/ESD S20.20.

See ANSI 20.20 - 2014 (above)

Applications

- Electronics Manufacturing
- Microelectronics Fabrication
- Circuit Boards Assembly
- Electronics Test and Repair
- Cleanroom
- R&D
- Computer Manufacturing
- Military Base Electronics

• FAA STD 019f

Standard for lightning protection, grounding, bonding and shielding requirements.

• MOTOROLA R56

Public safety and telecommunications standards and guidelines for the installation of equipment, infrastructure, and facilities for communications centers.

• ATIS-0600321

Telecommunications industry standard for applications where people access a computer keyboard while continually wearing a headset.

Applications

- All network-operator dispatch operations— e.g. 9-1-1 call centers
- Mission-critical Call Centers
- Communications Centers
- Networked Offices
- Government Mission-critical Areas
- Control Rooms
- Flight Towers
- All FAA/flight support areas (and 019e designation)

• DOD 4145.26-M

Safety standards for Department of Defense and private industry ammunition and explosives (AE) operations.

Applications

- Defense Contractors
- Facilities performing AE work
- AE Services
- Companies Covered Under DoD

NFPA 99 National Fire Protection Association-Defunct Standard for Conductive Flooring

Establishes criteria for health care services to minimize the hazards of fire, explosion, and electricity.

In 2015, all references to conductive flooring were removed from this standard.

Applications

No longer valid

Mil STD 1686 (converted to ANSI/ESD S20.20)

The parent document for all ESD Association standards and is the main reference for Auditing an ESD Control Program.

Applications

Anyone auditing an ESD program

• IBM Data Center Recommendations

IBM-recommended guidelines to minimize static-electricity buildup in a data centers. Safety recommendation: minimum floor resistance >150,000 ohms (1.5×10^5).

Applications

- Data Centers
- Server Rooms

ESD Test Methods

ANSI/ESD STM7.1-2013

Tests resistive properties of flooring materials.

ANSI/ESD STM97.1-2015

Measures the electrical system resistance of floor materials in combination with persons wearing static-control footwear.

ANSI/ESD STM97.2-2016

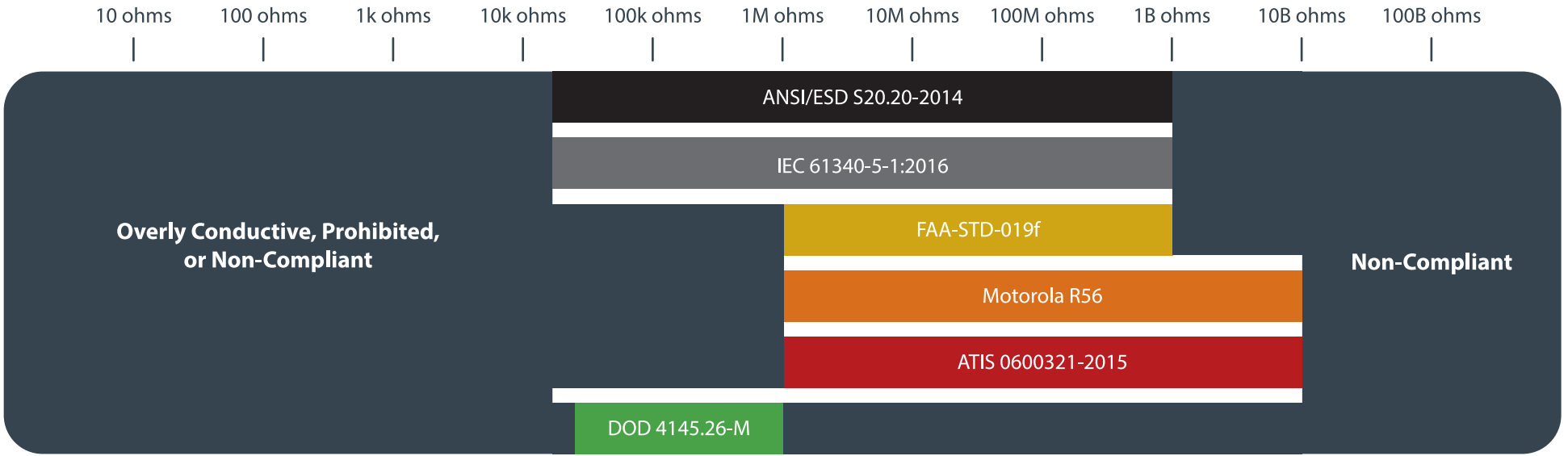
Measures the voltage on a person in combination with floor materials and static control footwear, shoes or other devices.

ASTM F150-06(2013)

Tests electrical resistance of resilient flooring.

AATCC 134

Electrostatic Propensity of Carpets. Standard carpet industry test, uses laboratory simulation to assess static generation when a person walks across the carpet.



Standard	Minimum Resistance (ohms)	Maximum Resistance (ohms)
ANSI/ESD S20.20-2014	25,000	1,000,000,000
IEC 61340-5-1:2016	25,000	1,000,000,000
FAA-STD-019f	1,000,000	1,000,000,000
Motorola R56	1,000,000	10,000,000,000
ATIS 0600321-2015	1,000,000	10,000,000,000
DOD 4145.26-M	40,000 (@ 500v)	1,000,000