

Electrostatic Solutions Technical Brief No. 1

Technical Report IEC61340-5-1: *Protection of electronic devices from electrostatic phenomena – General Requirements*

Overview

The IEC 61340-5-1 Technical Report *Protection of electronic devices from electrostatic phenomena – General Requirements* was developed from earlier Standards including EN100015. It is accompanied by a User Guide IEC61340-5-2 that gives additional information to help the user implement IEC61340-5-1.

IEC61340-5-1 specifies general requirements for the design, use and control of a protected area so that electrostatic sensitive devices (ESDS), having sensitivity of 100V (Human Body Model test) or higher, can be handled with minimal risk of damage from procurement through to end of life. The Technical Report covers:

- ❑ Signs and markings
- ❑ The electrostatic protected area (EPA) including requirements for protective equipment, construction of the EPA
- ❑ Working practices
- ❑ Field work
- ❑ Protective packaging
- ❑ Training requirements
- ❑ Quality responsibilities
- ❑ Periodic Audit instructions

An Annex describes test methods to be used to verify the performance of equipment, materials and packaging for use in protection of ESDS.

The Technical Report does not cover health and safety requirements. Compliance with local health and safety regulations and practices should always be observed and take precedence over ESD requirements.

Special care may be required in implementing static damage prevention measures under the following conditions:

Low humidity

The electrostatic properties of materials are very dependent on atmospheric humidity. A controlled humidity of 50 %rh suits most circumstances. If humidity reduces below 20 %rh the user should ensure that materials and equipment selected will perform effectively under operational conditions.

Clean room conditions

Some techniques in use for ESD protection do not satisfy constraints of clean rooms (class 100 or tighter). Alternative materials are being developed for clean room conditions.

Where high voltages may be present

If high voltages greater than 250VAC or 500VDC are present then particular care must be taken to ensure safety requirements are considered.

The information given here is believed to be correct but no liability is accepted for any consequences arising from the application of the information. For full information refer to IEC6340-5-1 and IEC61340-5-2 original documents.

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