

## **Cambridge Sensotec Limited - Electrostatic Discharge (ESD) Policy**

### **ESD Description**

Electrostatic discharge (ESD), is "the transfer of an electrostatic charge between bodies at different electrostatic potentials (voltages), caused by direct contact or induced by an electrostatic field."

Simply walking across a carpeted floor and touching a metal doorknob can often create a small shock on our fingers. This shock results when two materials are rubbed together or separated rapidly. One material tends to attract electrons away from the other material. This leaves differently charged voltage levels on each material. When a charge or uncharged region is brought into close proximity with an oppositely charged region, electrostatic discharge may occur because of the attraction of unlike charges. If this electrostatic discharge occurs near electronic components, the components may be damaged or destroyed.

ESD damage to electronic component and assemblies can potentially be a major problem for the electronics industry. This is because most ESD damage is caused unknowingly by individuals inspecting, sorting, or installing ESD sensitive devices. Devices that aren't destroyed during handling may nevertheless be damaged. This damage is known as "latent" damage and is often not detectable by routine quality tests. The damage could appear after the device is installed in its host equipment.


### **Controlling ESD**

Cambridge Sensotec maintains the following procedures in its ESD management program:

1. Grounding cords have been installed on every table and bench top where product is processed while still vulnerable to ESD. The conductive centre layer provides a lower resistance path to ground for quick dissipation of static charges.
2. Grounded Wrist Straps are used by all personnel handling, inspecting PC boards. Wrist straps provide an electrical path between the ground and the sensitive device handler, thereby eliminating or substantially reducing ESD voltages generated by the handler.
3. Static Shielding Conductive Tote Boxes and Static Shielding Bags are used for the storage and transportation of any ESD sensitive electronic component and loaded PC boards. The tote boxes and the shielding bags protect their contents from any external static fields that may cause ESD damage.
4. Conductive Floor mats have been installed in the product assembly room. The mat is made to conduct static charges from personnel to ground and to prevent static build-up while being walked upon.

5. Grounded Foot Straps are used by all personnel who are not stationary within the containment areas and who handle sensitive components. These grounded foot straps provide an excellent path to ground of any unwanted static energies.
6. Periodic testing of the effectiveness of the measures described in 1-5 will be undertaken no less than every month.
7. All ESD sensitive devices are packaged in static dissipative bags with warning labels for transportation.
8. All personnel working with ESD sensitive devices have been fully trained in ESD control methods and the use of ESD materials in protected areas.
9. In addition to the training of personnel, all ESD protected areas are clearly identified by prominently displayed signs.

Cambridge Sensotec's ESD management program has, as far as is reasonably practicable, eliminated all ESD damage that can occur during the manufacturing/assembly process.

Signed: 

Date: .....20/06/2024.....

Mark Swetnam  
Managing Director