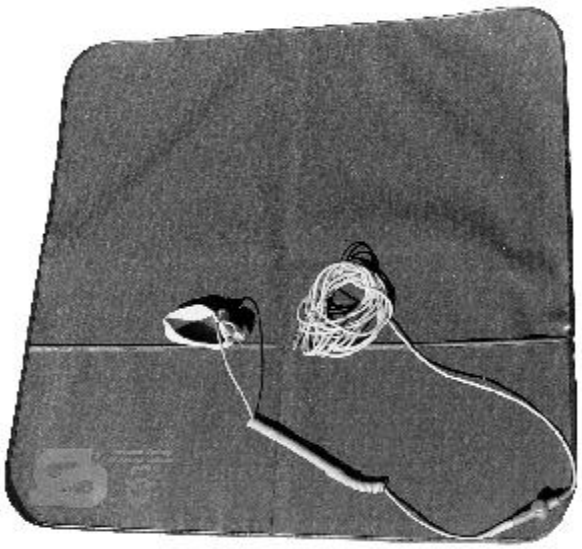
ELECTROSTATIC DISCHARGE (ESD) PROTECTIVE DEVICES



Static electricity can damage electronic circuits, and the low-voltage integrated circuits commonly used throughout the electronics industry are especially susceptible. To address the problem, industry-wide procedures have been adopted that significantly reduce the often invisible damage caused by ESD during handling, shipping and storage of electronic components and assemblies. These procedures are aimed at increasing electronic equipment reliability and have been implemented for some time at Safetran's Electronic Division. Customers are strongly encouraged to adopt similar practices to reduce the likelihood of equipment damage occurring in the field due to ESD. Some of the basic protective procedures include:

- Personnel should be electrically grounded before handling ESD-sensitive components, modules and assemblies.
- Always keep components and modules in anti-static bags and larger assemblies wrapped in static shielding material designed for the purpose. Label bags and wrapping material with the proper warnings to personnel handling the enclosed items.
- Utilize only anti-static cushioning material in equipment shipping and storage containers.

In an effort to further reduce the effects of ESD, extensive research and testing of a variety of ESD protective devices has been conducted by personnel at Safetran's Electronic Division. As a result, Safetran is now offering a number of protective devices to aid customers in implementing their own ESD protection programs. Included among these devices are:

- A field service kit consisting of a static-dissipating mat equipped with a 360-degree conductive wrist strap complete with grounding cord with built-in safety resistor for personnel protection. In addition to serving as a portable dissipating work surface, the mat is equipped with large pockets which can be used to safely transport modules in the event static-shielding bags are not available when modules are removed from equipment cases or card cages.

- A valuable option for use with the field service mat is a wrist strap tester. This device provides a quick and reliable means of verifying the current-limiting resistance of the wrist strap attached to the field service mat. The wrist strap tester also checks for continuity from the wearer's skin to ground and detects poorly fitting, worn out, or dirty wrist straps. Using the tester on a regular basis to verify the integrity of the grounding system will ensure maximum protection from ESD-induced damage in the field.

- For transporting and storing printed circuit modules, Safetran offers cushioned, metalized, zip-closure, static-shielding bags designed to not only afford protection from ESD damage but from physical damage as well. When sealed, the bag completely surrounds the enclosed module in a protective barrier. Each bag is equipped with a caution label to indicated the static-sensitive nature of its contents.

- Special three-layer, static dissipating work bench matting to combat ESD problems in the workshop environment. While designed primarily for workbench surfaces, the matting can also be used in shipping and receiving areas. The special matting is available in pre-cut, 2-foot by 6-foot and 2-foot by 100-foot rolls.

For information regarding ESD material applications or product specifications, contact the Technical Support Staff at Safetran's Electronic Division, Rancho Cucamonga, California. In addition, ESD awareness classes are also available.

ORDERING INFORMATION

To order, specify description and part number.

Description	Part Number
ESD Field Service Kit (consisting of Static-Dissipating Field Service Mat with Wrist Strap)	Z860-00002-0000
GAM-2 Wrist Strap Tester	Z815-00068-0000
Static Shielding Bag, 10 x 12 Inches	Z860-00003-0000
Special Static Dissipating Matting 2X6 Ft. Roll 2X100 Ft. Roll	 Z860-00001-0006 Z860-00001-0100