

### Electronics Discharge Sensitive Device Protection

This Quality assurance provision applies to all electronic components and or assemblies that have any components classified BELOW AS ESD SENSITIVE. The supplier is to supply manufacturing part description information of the devices and declare in the CoC that the product has been packaged in appropriate packaging to prevent part damage (MILDTL-81997, Type II (re-closeable)).

ELECTROSTATIC DISCHARGE (ESD) SENSITIVE DEVICES Item (part, component, or assembly) is electrostatic discharge sensitive (ESDS) and must be transported and stored in ESD protective packaging. ESD protective packaging shall have a layer of low charge generation, dissipative material for intimate contact with ESDS device and a layer of electrostatic discharge shielding material. These layers may be combined into a single protective material or utilized as separate products.

- Static dissipative materials shall have a surface resistance of greater than or equal to  $1 \times 10^4$  ohms but less than  $1 \times 10^{11}$  ohms. o Acceptable materials shall comply with one of the following or equivalent:

- o Bags: MIL-DTL-117, Type 1, Class F, Style 1 (heat sealable)

- o Bags, cushioned: MIL-DTL-81997, Type II (re-closeable)

- o Cushioning: A-A-3129 or PPP-C-795, Class 2 or PPP-C-1797, Type II

- Electrostatic discharge shielding materials are capable of attenuating an electrostatic discharge when formed into a container. The calculated energy allowed inside a static discharge shielding bag shall be less than 50 nanojoules when tested according to ANSI/ESD STM11.31.

- o Acceptable materials shall comply with one of the following, or equivalent:

- \* Material: MIL-PRF-81705, Type III (heat sealable)

- \* Bags: MIL-DTL-117, Type II, Class H, Style 2 (heat sealable)

- \* Bags, cushioned: MIL-DTL-81997, Type I (re-closable)

Note: Static dissipative materials alone do not provide electrostatic discharge shielding. Reference ANSI/ESD S541, Packaging Materials for ESD Sensitive Items, for further guidance. Lead or terminal configurations for all items shall be maintained as manufactured without causing loads or stresses capable of causing damage to the item. Materials used to maintain item position and lead or terminal configuration shall permit item removal without damage to the item. Assemblies containing ESDS items that are completely enclosed in housings made of conductive material shall have any external connectors and plugs (power or signal) covered with conductive caps/plugs. If bags or pouches are not transparent allowing identification of contents without removal, a label stating contents shall be affixed to the outside of the bag or pouch. ESDS items shall be identified. Individual packs, multi-unit packs, exterior packaging, and paperwork (packing lists, inspection reports, travelers, and other paperwork)

accompanying the hardware shall be marked in accordance with ANSI/ESD S8.1. Items not packaged in accordance with this T&C shall be rejected and returned to supplier.