

## Handling Guidelines for Military Solid State Relays (MSSR)

1. Do not drop, throw, or in any way mishandle individual relays or cartons containing relays.
2. Store relays in a humidity-controlled, shock- and vibration-free environment. Storage temperature range limits are  $-25^{\circ}\text{C}$  to  $+85^{\circ}\text{C}$ , however, when possible, relays should be stored in an ambient environment.
3. Do not expose relays to humid condition such that condensation may be formed due to sudden drop in temperature. Relays shall be stored in condensation free condition.
4. Do not stack heavy objects directly onto relays.
5. All MSSR shall be treated as Electrostatic Discharge (ESD) sensitive and shall be handled accordingly. Always work in ESD protected station and wear wrist strap before handling the device.
6. When removing relays from packs, do so with extreme care. Do not allow the relays to fall onto any hard surface during unpacking. Do not "pour" the relays from the packing. Do not allow relays to fall onto the floor.
7. When transferring relays to a production area after unpacking, do so only in a suitable container, transport the devices in anti-static container, taking care not to drop the relays into the container, or to drop, throw or mishandle the container in any way.
8. For either metal-cover relays that are hermetically sealed or plastic relays that are not hermetically sealed, any damage to the casing, leads, or connector may compromise the relay's performance and reliability.
9. Do not reform or reshape plastic relay leads from the original configuration. Trimming relay leads after through hole mounting is acceptable.
10. Never subject relays to ultrasonic cleaning environment.
11. Do not submerge plastic relays, which are not hermetically sealed, in cleaning solution or spray aqueous cleaning solution directly onto relays.
12. All plastic relays that are not hermetically sealed (except MSL-1 rated), must be baked before use. After bake, relays must be mounted within 8 hours. Relays must be baked again if this 8 hour time period is exceeded. The recommended bake profile is  $125^{\circ}\text{C}$  for 8 hours.
13. After the reflow/mounting process, relays should be baked again after cleaning, prior to a second reflow, or prior to conformal coating.
14. Unless otherwise specified, do not subject relays and relay terminals to reflow solder temperatures above  $245^{\circ}\text{C}$ , 6 seconds maximum. If hand soldering is used, the solder iron tip shall be properly grounded. Observe IPC J-HDBK- 001, paragraph 6.1.0.1 guidelines for heat sensitive components when hand soldering relays.
15. If reshipping product do so in original packaging from factory.
16. Relays should not be exposed to any process or environment that exceeds any limits within this guideline or any published specification that applies to the relay.