



COMPENSATED DEVICES, INC.

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1N5712-1/1N5712UR-1/CDLL5712/CDLL2810 HANDLING AND ASSEMBLY GUIDELINES

COMM. JAN, JANTX, JANTXY, CDS PRODUCT

A. Device Junction Damage from ESD Voltages

These devices can be damaged by ESD voltages as low as 300 volts. Therefore, extreme care must be taken during handling to observe all ESD handling precautions as outlined in DOD-HDBK-263 and MIL-STD-1686.

B. Device Junction Damage Due to Mechanical Stress

Because of the small junction area required to meet the capacitance specifications and the rigid metallurgical bond utilized, it is possible to damage the junction from external mechanical stress. This stress can be caused by any of the following:

1. Lead cut and form, tape and reel, and automatic testing on equipment not adjusted properly.
2. Solder dipping or assembly without proper temperature ramp times.
3. Use of rigid staking compounds.
4. Epoxy potting without conformal coating.
5. Device to printed circuit board coefficient of expansion mismatch (surface mount only).
6. Thermal cycling in conjunction with the conditions described in 3, 4, and 5 above.

This junction damage occurs without visual glass cracking, therefore to determine if junction damage occurred during handling and/or assembly, I_{r1} should be measured. (CDI's in-house I_{r1} limit is 60nA @ 16 volts.)

If I_{r1} exceeds this limit, the junction has been damaged and steps should be taken to determine the cause. If assistance is required, please contact our Engineering Department.