

Because the **LP73** and **LT73** uses a resistive film technology the following points should be considered when designing into the circuit.

- 1) The self-heating, generated by the component, may change its own resistance value.
- 2) Review the heat resistance data because at elevated temperatures, above 70°C, the LP73 and LT73 component may have significant drift. This drift should be accounted for in the circuit design.
- 3) Water soluble fluxes are not recommended. Water soluble fluxes are very aggressive in stripping off oxides and if you do not completely clean the residue off, then it will continue to eat away at the base metal.
- 4) Hand soldering at high temperatures can cause contamination. This contamination & high temperature may cause deterioration of the overcoat, which could lead to field failures.
- 5) Exposure to: harsh ultrasonic cleaning after mounting; shower washing; covering with masking tapes may cause the termination(s) to peel. Caution should be taken when cleaning is performed.
- 6) Please follow all ESD safety rules to prevent any unwanted changes in the resistance value. An ESD event as small as 500V could cause a change in resistance.
- 7) Coating, potting and molding can affect the mounted components resistance value. (e.g. expansion or shrinkage of the resistor overcoat, resistance drift)
- 8) Fail-safe design:
To prevent serious damage to human, animal and plant life, please use appropriate "fail-safe" measures (e.g. using protective circuits or equipment, circuit redundancy) especially where the applications require a high reliability (e.g. medical, traffic or transportation, signals, aerospace, fuel or gases and other critical applications, which may not be listed).
- 9) Detailed application guides and heat resistance tables are available from any KOA office or representative.

Because the **LA73** and **NT73** uses a resistive film technology the following points should be considered when designing into the circuit.

- 1) The self-heating, generated by the component, may change its own resistance value.
- 2) Review the heat resistance data because at elevated temperatures, above 70°C, the LA73 and NT73 component may have significant resistance drift which should be accounted for in the circuit design.
- 3) Exposure to: harsh ultrasonic cleaning after mounting; shower washing; covering with masking tapes may cause the termination(s) to peel. Caution should be taken when cleaning is performed.
- 4) Please follow all ESD safety rules to prevent any unwanted changes in the resistance value. An ESD event as small as 300V could cause a change in resistance.
- 5) The resistors can be damaged by the following: sulfuric acid, hydrogen chloride, sulfurous acid, nitrogen oxides (NO_x) and hydrogen sulfide.
 - a) The acid gases can corrode the coatings, films and/or electrodes causing the resistance value to change.
 - b) Hydrogen Sulfide gas, even in amounts of a few ppm concentrations, can cause the inner electrodes to form Flowers of sulfur, which could result in the termination disconnecting from the resistive paste.
- 6) Coating, potting and molding can affect the mounted components resistance value. (e.g. expansion or shrinkage of the resistor overcoat, resistance drift)
- 7) Fail-safe design:
To prevent serious damage to human, animal and plant life, please use appropriate "fail-safe" measures (e.g. using protective circuits or equipment, circuit redundancy) especially where the applications require a high reliability (e.g. medical, traffic or transportation, signals, aerospace, fuel or gases and other critical applications, which may not be listed).
- 8) Detailed application guides and heat resistance tables are available from any KOA office or representative.