SMD Solder and Cleaning Recommendations

Vishay's sealed surface mount components are designed to withstand the processes related to infrared, vapor phase reflow and dual wave soldering. They are sealed against flux by means of an O-ring seal or press fit and can withstand exposure to all commonly used defluxing solvents.

1. Flux and Solder Recommendations

Vishay's sealed surface mount devices can be used with R type flux to OA. It is always advisable not to use a flux of an activity level greater than that necessary to achieve optimum yields for solder wetting.

Fluxes of RA and OA activity levels are corrosive and therefore must be removed. It is advisable that all type of fluxes be removed by cleaning due to the possibility of corrosion.

Suggested solder composition is Sn63/Pb37. Typical solder paste print thickness would be 8 to 10 mil thick.

2. Reflow of Solder and Soldering Recommendations

Normal preheating is required to activate flux and minimize thermal shock to components. Temperature slopes measured at the component side of the PCB should be kept below 180°C per minute.

Dual Wave Soldering: 230°C to 260°C solder temperature for a period of not more than 10 seconds.

IR Reflow Soldering: 220°C to 240°C case temperature for a period of not more than 15 seconds.

Vapor Phase Reflow: vapor with 215°C condensation temperature for a period not more than 2 minutes.

3. Washing Recommendations

Cooling down time after soldering and before exposure to defluxing solvents is required. The component body temperature when exposed to cleaning should not exceed 60°C.

Cleaning spray rinse is recommended with pressures of not greater than 60 psi (5.5 Kg-cm2) for a period not to exceed 15-20 seconds.

Appropriate defluxing Solvent/Aqueous:

- 1-1-1 Trichloroethane
- Aqueous detergent solutions
- Terpene based semiaqueous
- Ester/Ether based solvents
- Freon (TE, TMS, TF)
- Methanol
- HSA - HCFC

4. Adjustment Recommendations

Adjustments of components should be done only after part has reached ambient temperature and cleaning solvent has evaporated (10 minutes).