

## SMDY1 Series / SMDY1...S Series

### GENERAL

Vishay offers a wide product selection of safety capacitor for EMI / RFI suppression. Safety capacitor classified as Y1 were previously offered as leaded single disc components. With the introduction of the SMDY1 series / SMDY1...S series, Vishay offers now as well a SMD solution for Y1 classified safety capacitor. This document provides recommendations for the soldering of the SMDY1 series / SMDY1...S series to a PCB. If the component is placed in the vicinity of a heat generating component the increase in ambient temperature must be considered.

### REFLOW SOLDERING

In a reflow soldering line the temperature of components can vary according to the mass and size of the component, absorption coefficient of the surface, size of the PCB, packing density and / or radiation / convection energy. This can lead to different temperatures of smaller and bigger components. It is recommended to measure the packing temperature of the component while it is being transported through the furnace. Thereby it can be ensured that the maximum allowable temperature is not exceeded. In Fig. 1 a typical lead (Pb)-free reflow soldering profile is depicted, and the associating parameters are given in Table 1.

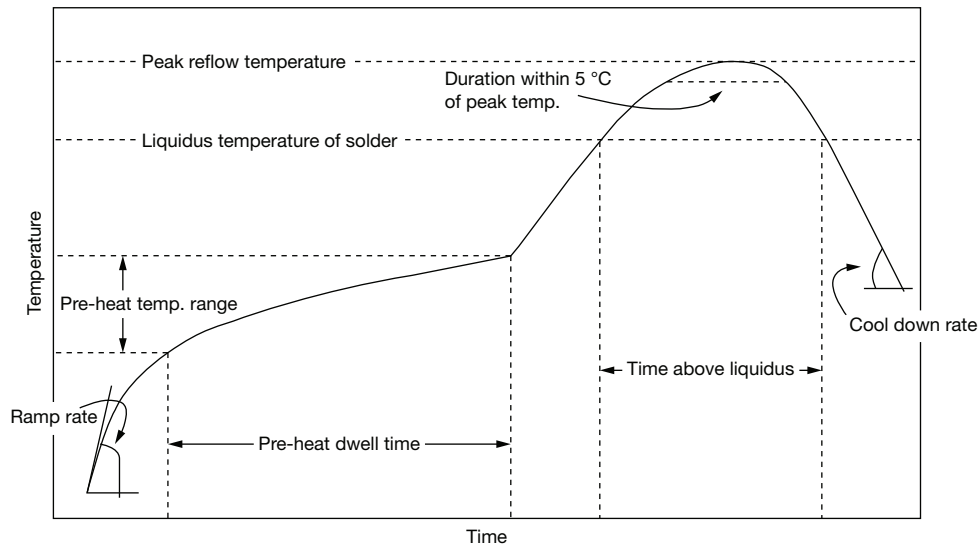


Fig. 1 - Typical Lead (Pb)-Free Reflow Soldering Profile for SMDY1 Series / SMDY1...S Series

<b>PARAMETER OF TYPICAL REFLOW SOLDERING PROFILE FOR SMDY1 SERIES / SMDY1...S SERIES</b>	
<b>LEAD (Pb)-FREE ASSEMBLY</b>	
Pre-heat temperature range	150 °C to 200 °C
Pre-heat dwell time	60 s to 120 s
Ramp-up rate	3 °C/s max.
Liquidus temperature of solder	~ 217 °C
Time maintained above liquidus	60 s to 150 s
Peak reflow temperature (package body temperature)	245 °C max.
Time within 5 °C of peak temperature	30 s max.
Cool down rate	6 °C/s max.
Time 25 °C to peak temperature	8 minutes max.