

CTS Resistor Networks - RoHS Advantages



Introduction

The CTS Series 766, 767 and 768 leaded surface mount resistor networks provide a unique RoHS advantage. The advantage is best understood by comparing competitive constructions to the CTS design.

Competitor's Molded Plastic Construction

The molded plastic package begins by screening the resistors and then attaching the terminals to a small ceramic element using a high temperature Sn/Pb solder. This assembly of resistors and terminals is then encased in a molded piece of plastic. The high temperature Sn/Pb solder makes the electrical connection between the resistors and terminals, but more importantly its 300°C+ melting point is required to prevent solder reflow during circuit board assembly, which could cause shorts. Typically the lead content found in this type of package would be greater than 10% of the product's average mass, considered to be very high by RoHS standards.

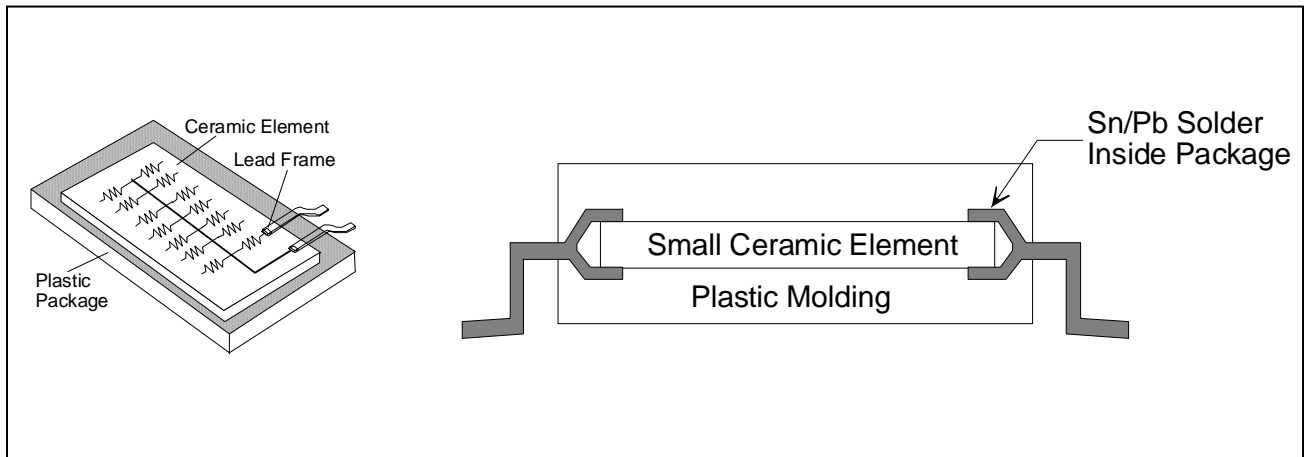


Figure 1. Isometric and Cross-Section View of Competitive Molded Plastic Package

CTS Solid Ceramic Package

The solid ceramic package is a one-piece body, which allows CTS to insert and solder the terminals from the outside of the package (shown in figure 2). A lead-free Sn/Ag solder construction, which is capable of withstanding a reflow during the circuit board assembly process, is used to comply with RoHS guidelines.

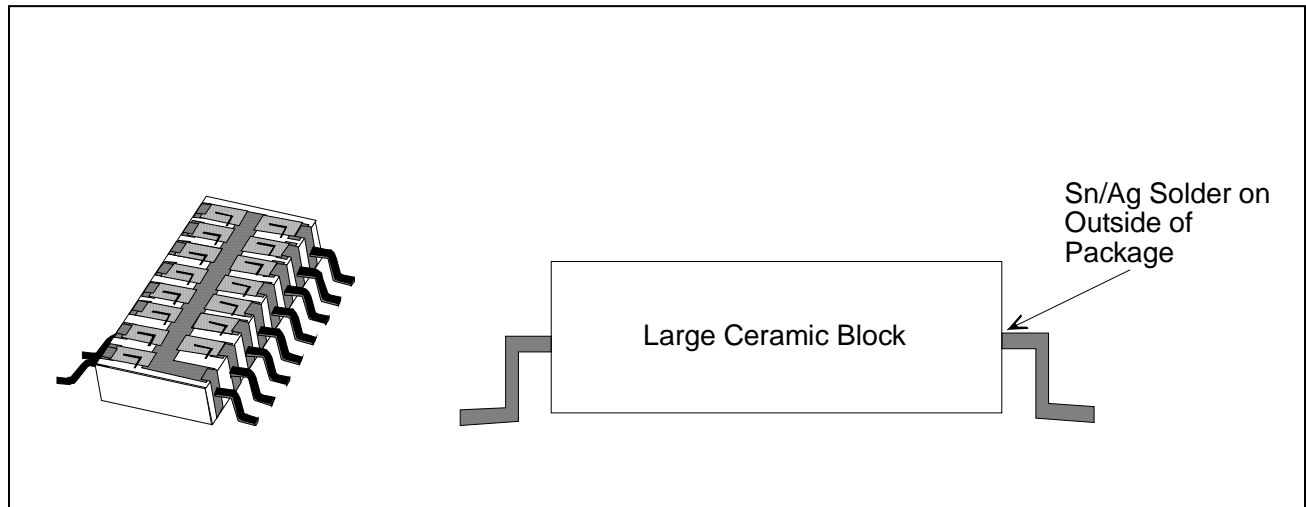


Figure 2. Isometric and Cross-Section of a CTS Solid Ceramic Package

Conclusion

CTS' solid ceramic construction is an environmentally friendly solution. It has other proven advantages including the reduced chance of internal dendrite growth, which could cause shorts, and the ability to operate at higher temperatures. These qualities translate into long-term reliability and are yet another reason to select CTS Series 766, 767 and 768 products. The RoHS compliant products are now available by adding "P" to the Part Number suffix (Ex. 766161103GP).

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