

Abstract

Present invention aims to provide a PTC thermister which uses a conductive polymer having a positive temperature coefficient and has a high withstand voltage and high reliability and in which no failure in electrical connection occurs in side electrode even when a mechanical stress occurs due to the thermal shock by repeated thermal expansion of the conductive polymer sheet. It also aims to provide a method to manufacture above PTC thermister. To achieve the above pourpose, the PTC thermister of the present invention comprises (1)a laminated body made by alternately laminating conductive polymer sheets and inner electrodes,(2) outer electrodes disposed on top and bottoms of said laminated body and (3) multi-layered side electrodes disposed at the center of both sides of said laminated body and is electrically coupled with said inner electrodes and said outer electrodes. And, a side of laminated body have an area on which side electrode layer is formed and areas on which side electrode is not formed. A method for manufacturing a PTC thermistor comprises the steps of (1) forming a laminated body by sandwiching a conductive polymer sheet with metal foils, and then integrating them by heat pressing ,(2) sandwiching the laminated body and conductive polymer sheets from the top and bottom by metal foils, and integrating them by heat pressing. A multi-layered PTC thermistor is obtained by repeating above processes.