



New
2010 (EIA 0805)
MF-PSMF Series

APPLICATION NOTE

Medical Solutions

Resettable PTC Thermistors for Medical Equipment



Resettable PTC thermistors or polymer PTC resettable fuses are common overcurrent protection devices in consumer electronics such as personal computers, game consoles, mobile phones and set top boxes. They also protect a wide variety of circuits in automobiles, industrial equipment and telecommunication networks. In addition to these high profile market segments, resettable PTC thermistors have become a more popular circuit protection solution in the medical equipment field.

Applications

Data ports

Micro motors

Test and measurement devices

PC based medical equipment

Portable medical equipment

USB communication link

Medical Demands

The medical market is growing. There are different reasons for new and enhanced demands for medical care. The aging population is requiring more sophisticated and longer-term health care. This has driven the need for advanced medical electronic devices and raised expectations that new technologies will enhance the quality and length of patients' lives. Home health care products are expected to become one of the fastest growing segments of the medical device industry. In recent years, these products have become increasingly more sophisticated and are now used in a wider variety of situations.

Reliability of Medical Equipment

Medical equipment that can measure and control is the basis of modern medical health care. There is a wide field of devices such as glucose meters, oxygen meters, cholesterol meters, digital thermometers and blood pressure monitors that are becoming prolific. Most of these devices communicate with a PC to read out and view all the measured data, e.g. blood pressure. This communication is usually run via a communications bus such as USB.



Tools for Designers

[Design kits](#)

[Samples](#)

[Data sheets](#)

USB Designed PTC Devices

The standard 4532 (EIA 1812) sized series of PTCs, the MF-MSMF series, has long been the standard PTC of choice among USB port designers for I/O devices. This series has now been complemented with the smallest PTC on the market, the new MF-PSMF series. Because of its small size, this device is ideal for compact portable medical equipment (excluding critical life support applications). This new MF-PSMF050 model is the latest of Bourns® line of Multifuse® Resettable PTC Thermistors to help manufacturers design reliable and durable medical products.

Small Size, High Speed

The developers of the latest control equipment have taken the opportunity to use the smallest of the Bourns® PTC family: the 2010 (EIA 0805) sized MF-PSMF Series. Despite the small package size, this product family contains models with significant current-carrying abilities from 0.10 A to 1.1 A. Along with the size advantage, the new MF-PSMF series is the fastest operating of all Bourns® Multifuse® Resettable PTC thermistors.

For further technical support and for complete circuit protection solutions, please visit www.bourns.com