NEW PRODUCT BRIEF

Bourns® Model MF-RHS Series Multifuse® High Temperature Polymer PTC Resettable Fuses

INTRODUCTION

Bourns has expanded its portfolio of 125 °C rated polymer PTC resettable fuse thermistors with the new MF-RHS Model Series. Part of Bourns' successful line of high temperature PPTC resettable fuses, this series is available in a radial configuration with standard straight leads or optional kinked leads.

These added 125 °C rated Multifuse® Polymer PTC (PPTC) devices are specifically designed to provide robust, cost-effective overcurrent and overtemperature protection in certain harsh environments where high ambient operating temperatures are prevalent and long-life reliability is crucial. The series provides hold currents up to 13 A with maximum currents of 100 A and maximum voltages up to 42 VDC. This allows designers to more precisely and confidently specify overcurrent protection into designs where operating temperatures may exceed 85 °C. Bourns' offering of high temperature SMD and radial PPTC devices also provides enhanced thermal derating performance compared to traditional 85 °C rated consumer-grade models, allowing engineers to design around higher trip current ratings at elevated operating temperatures.

FEATURES

- Resettable polymer PTC thermistors for high reliability overcurrent and overtemperature protection
- Operating temperature range from -40 °C to +125 °C
- High hold currents (up to 13 A) at elevated ambient operating temperatures, with lower thermal derating factors compared to traditional 85 °C rated consumer-grade models
- Up to 42 VDC and 100 A maximum ratings
- Tape and reel packaging for automated assembly
- UL and CSA recognized
- RoHS compliant*
- Halogen free**

PRODUCT FIT

The requirement for a wider selection of robust overcurrent and overtemperature protection solutions. Additional requirements around higher temperature ratings and long-life performance make the new Bourns' high temperature PPTC series an ideal cost-effective design solutions continues to climb. The need for robust highly reliable protection is applicable in IoT industrial automation applications, within cloud-based networking systems and smart home appliances. Bourns® high temperature PPTC devices help eliminate the worry of temperature-based nuisance tripping across all such applications while providing enhanced, high-reliability overcurrent and overtemperature protection in space-saving surface mount and radial packages.

BENEFITS

- Higher operating temperature ratings (125 °C) provide effective overcurrent and overtemperature protection in certain harsh environments and high reliability applications
- Available in a variety of current and voltage ratings to support a range of markets and applications
- Backed by Bourns' world-class customer service and technical support, and available throughout Bourns' global network of authorized distributors

APPLICATIONS

This expansion of high temperature rated Multifuse® PPTC devices, highlights Bourns' continued commitment to meet the dynamic high ambient temperature application design needs of its customers through the development of innovative and effective resettable overcurrent and overtemperature protection solutions. Typical applications for the 125 °C rated MF-RHS, model family include but are not limited to:

- High reliability electronic equipment required to operate without failure at high ambient temperatures including data storage, climate control, industrial sensors, motor drives and lighting systems
- Industrial transportation, communication, security, and consumer electronic equipment where high reliability and extended life is essential

**RoHS Directive 2015/863, Mar 31, 2015 and Annex.*
***Bourns considers a product to be "halogen free" if (a) the Bromine (Br) content is 900 ppm or less; (b) the Chlorine (Cl) content is 900 ppm or less; and (c) the total Bromine (Br) and Chlorine (Cl) content is 1500 ppm or less.*

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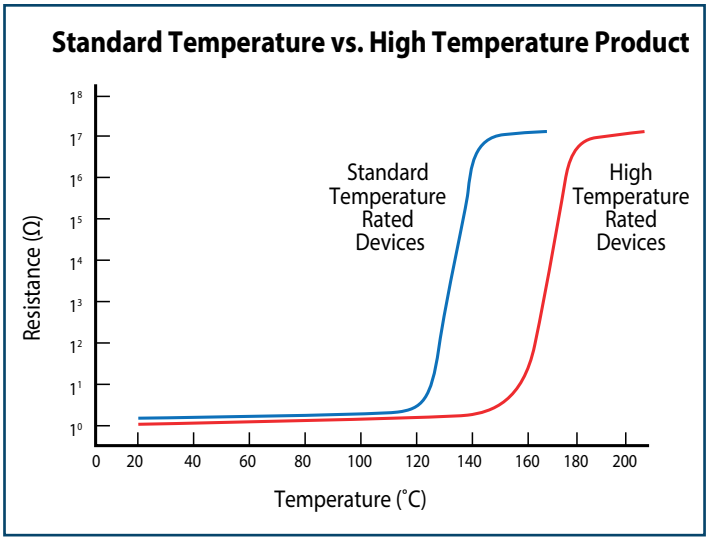
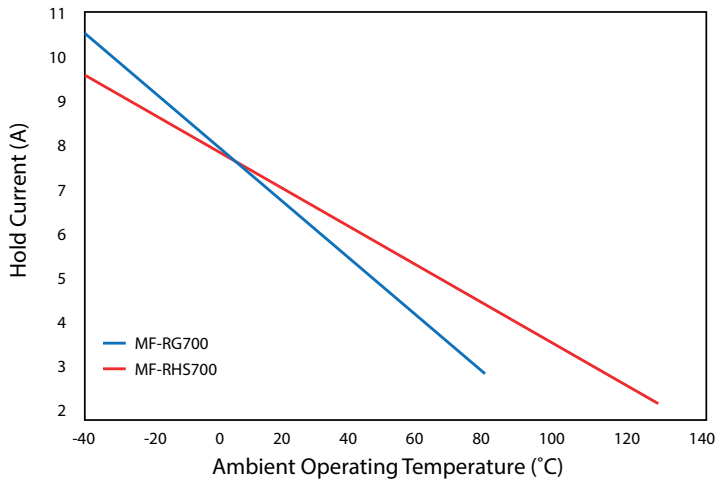
PRODUCT CHARACTERISTICS

Series	Photo	Footprint	V_{max}	I_{hold} (A)	Operating Temp. (°C)	Agency Recognition	AEC-Q200 Compliant
MF-RHS		—	16 VDC	3.5 – 13.0	-40 to +125	UL CSA	—

RESISTANCE-TEMPERATURE CURVE



THERMAL DERATING GRAPH & TABLE



Series	Ambient Operating Temperature (˚C)									
	-40	-20	0	+23	+40	+50	+60	+70	+85	+125
MF-RG700	10.30	9.30	8.40	7.00	6.20	5.60	5.00	4.40	3.30	
MF-RHS700	9.40	8.60	7.90	7.00	6.40	5.80	5.40	4.90	4.40	2.00

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