



## STACKPOLE'S FUSIBLE RESISTOR SOLUTIONS FOR SMOKE DETECTOR APPLICATIONS

RALEIGH, NC - Stackpole Electronics, Inc. has two resistor series designed for smoke detector applications. These applications require resistors with various levels of surge handling and the conflicting requirement of fusing or failing without collateral damage. For less robust applications, such as those that do not have to withstand high voltage short duration pulses, there is the economical FRN Series. The FRN Series is a fusible version of the popular RN Series axial leaded, metal film resistor and is designed to open very quickly and predictably under continuous overloads. Guaranteed fusing time is less than 30 seconds under power magnification levels ranging from 12 times to 25 times rated power, depending on resistance value. Typical fusing times are normally 10 seconds. This fusing characteristic is maintained by careful control of the film materials and manufacturing processes, including the trimming process during calibration.

The WWF Series is a fusible wirewound resistor type. The standard WWF Series can withstand several hundred surges of several thousand volts reliably and with very little resistance shift, yet will open in less than 10 seconds when subjected to overloads of 25 to 50 times rated power. However, by changing core sizes, resistance wire alloys and diameters, and passivation materials, Stackpole can tailor the resistor behavior to fit a wide variety of application and design requirements. For higher level smoke detector applications, the fusible resistor used must survive more than 400 surges of 6KV, yet it must fuse very quickly such that the amount of heat produced prior to fusing is kept to a minimum. The combination of these two requirements can also be seen in the white goods industry. Even though it is very difficult to comply with both requirements, the WWF Series from Stackpole is capable of providing a consistent and reliably fusing characteristic. Stackpole is currently developing a version of the WWF Series that will be recognized under UL 1412 and can also offer fusing wirewounds in a surface mount package. The FRN Series is available bulk, ammo, and tape and reel packaging.

Pricing varies with size and resistance value.

The WWF Series is available in tape and reel packaging. Pricing can vary greatly with size, resistance value, tolerance, and device characteristics.

For More Information Contact NAC:

Product Management

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