

HCRTP-MINI-B

HCRTP-MINI-B

High Current Reflowable Thermal Protection Mini (HCRTP-MINI-B) Device is a low-resistance, robust surface mountable thermal protector. It has a set open temperature and can be installed using reliable, lead-free, Surface Mount Device (SMD) assembly and reflow processes.

The new HCRTP-MINI-B device, recently added to the RTP family, can help withstand the demanding environmental, life and reliability requirements of automotive and industrial applications, including shock, vibration, temperature cycling and humidity exposures. In the field, the HCRTP-MINI-B device opens if its internal junction exceeds the device's specified open temperature. Temperature increases can have multiple sources, one of which is component failure (e.g., when using power components such as a powerFET, capacitor, resistor, triac, etc.) The HCRTP-MINI-B device open temperature is selected so that the device does not open within normal component operating windows, but it does open in a thermal runaway event and before the melt temperature of typical lead-free solders.

Specifications

| | |
|------------------------------|--------------------|
| Interrupting Rating: | 500A @ 16 VDC |
| Voltage Rating: | 16 VDC |
| Operating Temperature Range: | -55°C to + 150°C |
| Initial Resistance: | 50μΩ Min, 85μΩ Max |

Ordering Information

| Part Number | Part Description | Package Size |
|-------------|------------------|--------------|
| RF4539-000 | HCRTP-MINI-B | 4000 |

Referenced Performance

| Performance | | Min | Typ. | Max | Units |
|-------------------------|-------------|-----|------|-----|-------|
| Post Reflow Resistance* | @ 23+/-3°C | 50 | 100 | 150 | μΩ |
| | @ 150+/-3°C | 110 | 155 | 200 | |
| Hold Current | @ 23+/-3°C | | | 90 | A |
| | @ 140+/-3°C | | | 45 | |
| Max Interrupt Current | 16 VDC | | | 500 | A |
| Open Temperature | Zero Bias | 212 | 220 | 228 | °C |

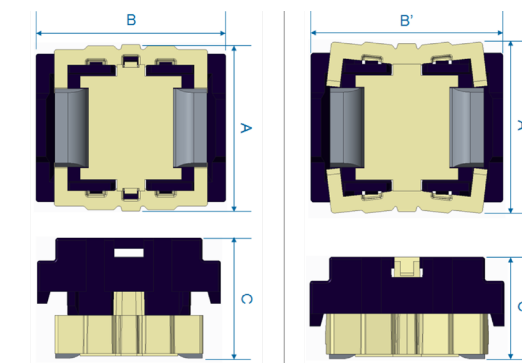
*Post reflow Resistance should be measured by a 4 wired method



* Halogen Free refers to: Br≤900ppm, Cl≤900ppm, Br+Cl≤1500ppm.

Dimensions

Dimensions in mm



Before Mechanical Arming

| | A | | B | | C | |
|----|-------|-------|-------|-------|-------|-------|
| | Min | Max | Min | Max | Min | Max |
| mm | 6.14 | 7.14 | 7.00 | 8.00 | 4.80 | 5.20 |
| in | 0.242 | 0.281 | 0.276 | 0.315 | 0.189 | 0.205 |

After Mechanical Arming

| | A' | | B' | | C' | |
|----|-------|-------|-------|-------|-------|-------|
| | Min | Max | Min | Max | Min | Max |
| mm | 6.83 | 7.83 | 7.00 | 8.00 | 3.80 | 4.20 |
| in | 0.269 | 0.308 | 0.276 | 0.315 | 0.150 | 0.165 |

Rev 07302019

Littelfuse products are not designed for, and shall not be used for, any purpose (including, without limitation, automotive, military, aerospace, medical, life-saving, life-sustaining or nuclear facility applications, devices intended for surgical implant into the body, or any other application in which the failure or lack of desired operation of the product may result in personal injury, death, or property damage) other than those expressly set forth in applicable Littelfuse product documentation. Warranties granted by Littelfuse shall be deemed void for products used for any purpose not expressly set forth in applicable Littelfuse documentation. Littelfuse shall not be liable for any claims or damages arising out of products used in applications not expressly intended by Littelfuse as set forth in applicable Littelfuse documentation. The sale and use of Littelfuse products is subject to Littelfuse Terms and Conditions of Sale, unless otherwise agreed by Littelfuse.