

AHCA-BM

Automotive high voltage 6.3 mm x 32 mm fast-acting fuse



Product features

- High voltage ceramic tube fuse
- Compact 3AB 6.3 mm x 32 mm (1/4" x 1 1/4") fuse
- Fast-acting performance
- 450 Vac rating
- PCB terminal mount
- Very high interrupting ratings to help safely protect against dangerous high fault currents

Applications

- On-board power conversion (Inverter, OBC, PDU) for xEVs
- Stationary EV charging stations
- Single phase and 3-phase UPS and VFD (Vac input for rectifier and Vdc input/battery)
- Industrial control panels and UL508A panel shops
- Energy storage and battery management systems
- High voltage power conversion (AC/DC, AC/AC, DC/DC, DC/AC)

Environmental compliance



Ordering part number

AHCA-BM-1P

Family name

Terminal code

Packaging

- 90 pieces in a tray, 10 trays (900 pcs) in a carton

Terminal code

- **-1P**
Copper with bright Nickel plating
- **-PCBHT**
Copper with bright Nickel plating



Powering Business Worldwide

Electrical characteristics

Amp rating	1.5 In maximum	2.0 In maximum	3.0 In maximum
AHCA-BM	30 minutes	30 minutes	10 seconds

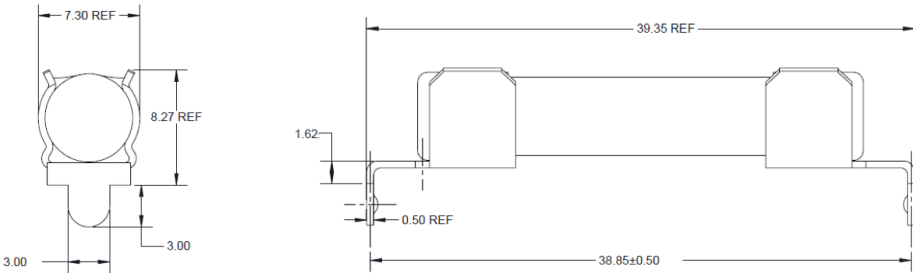
Product specifications

Part number	Current rating* (A)	Voltage rating (Vac)	Interrupting rating @ rated voltage (A)	Nominal cold resistance (Ω)
AHCA-BM	40	450	10,000	0.0029

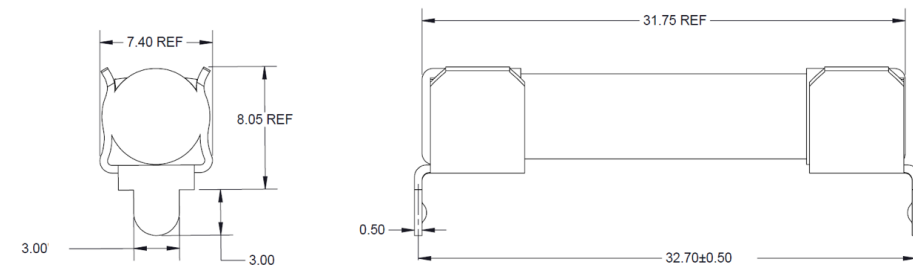
* Carries 32 A for minimum of 4 hours at +85 °C .

Dimensions- mm
Drawing not to scale

AHCA-BM-1P



AHCA-BM-PCBHT



General specifications

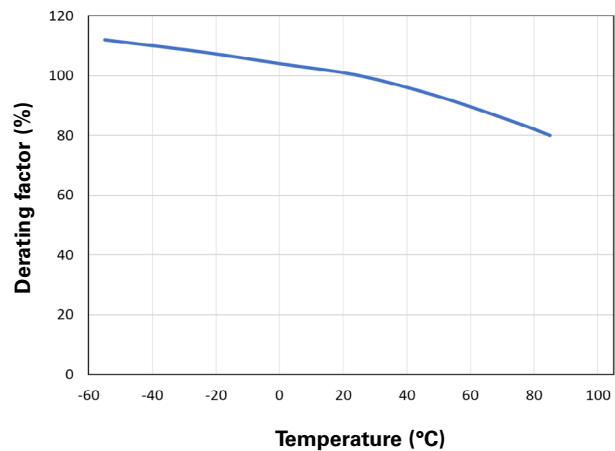
Operating temperature: -55 °C to +85 °C with proper correction factor applied

Terminal strength: MIL-STD-202G, Method 211A, Test Condition A, Pull force 10N/10S

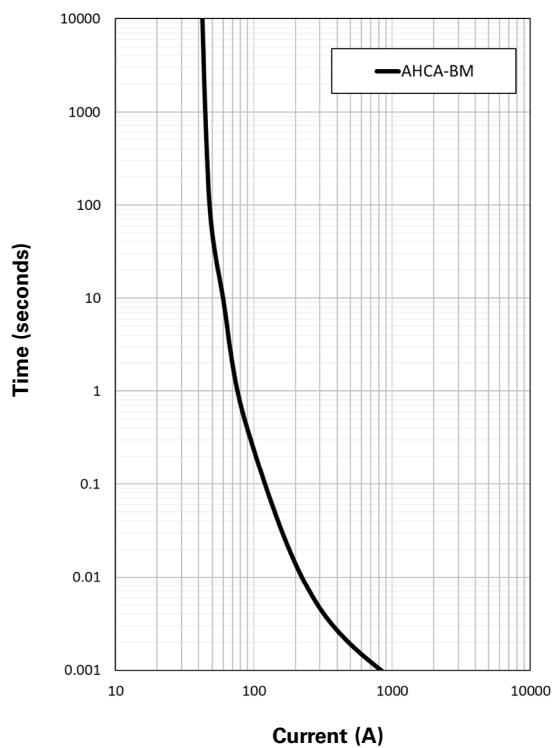
Resistance to solder heat: MIL-STD202 Method 210, Condition B, temperature +260 ±5 °C for 10±1 s

Solderability: J-STD-002, No steam aging. Immersion conditions: +250 °C+/-3 °C, 3 s +/- 0.3 s

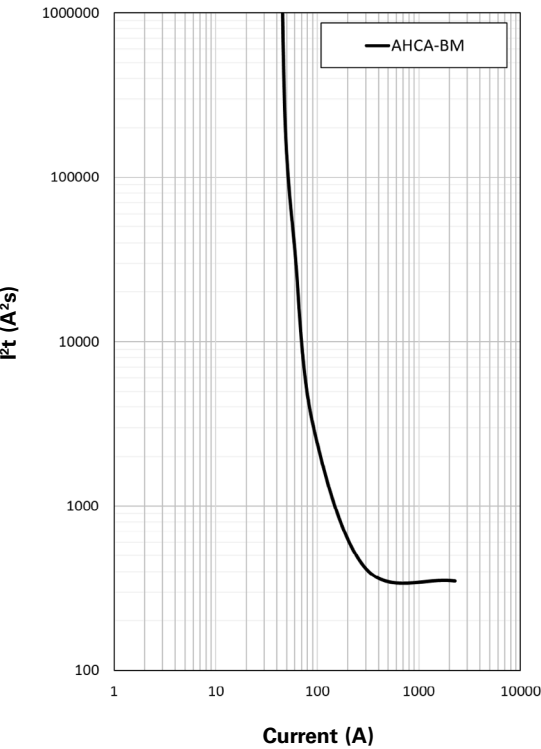
Temperature derating curve



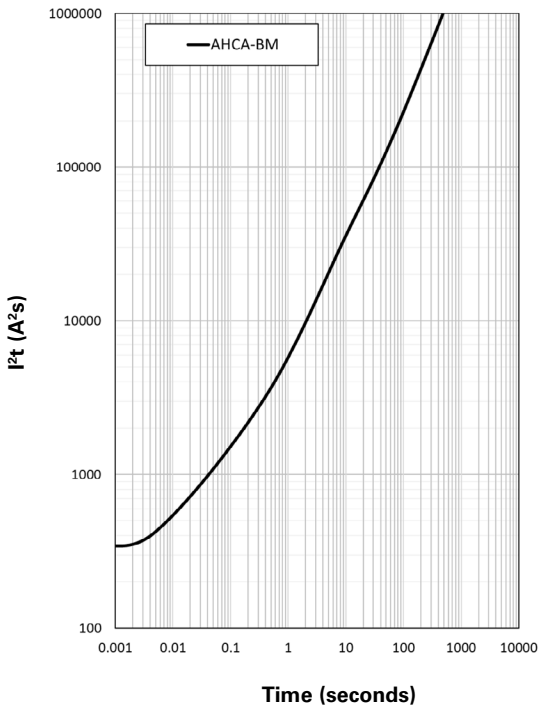
Current vs. time curve



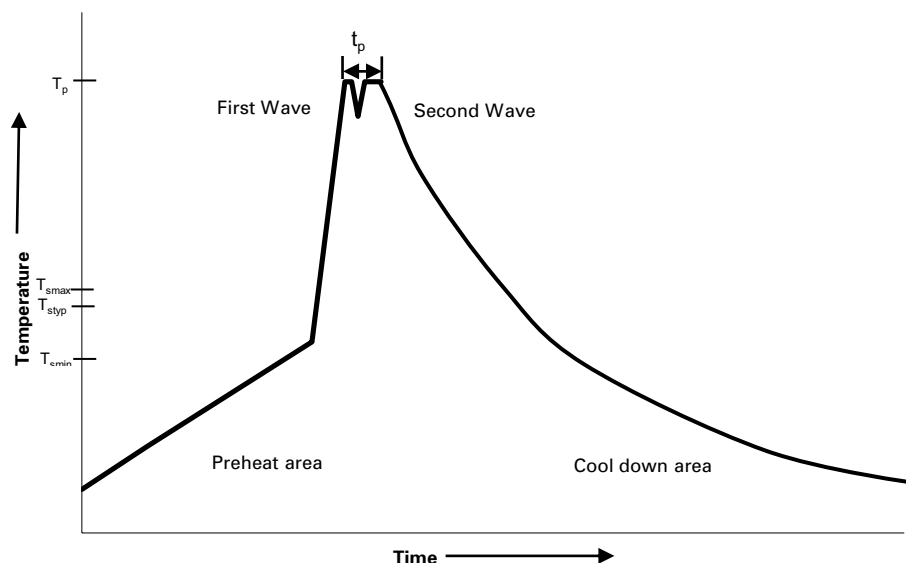
I²t vs. current curve



I²t vs. time curve



Wave solder profile



Reference EN 61760-1:2006

Profile feature	Standard SnPb solder	Lead (Pb) free solder
Preheat		
• Temperature min. (T_{smin})	100 °C	100 °C
• Temperature typ. (T_{styp})	120 °C	120 °C
• Temperature max. (T_{smax})	130 °C	130 °C
• Time (T_{smin} to T_{smax}) (t_s)	70 seconds	70 seconds
Δ preheat to max Temperature	150 °C max.	150 °C max.
Peak temperature (T_p)*	235 °C – 260 °C	250 °C – 260 °C
Time at peak temperature (t_p)	10 seconds max 5 seconds max each wave	10 seconds max 5 seconds max each wave
Ramp-down rate	~ 2 K/s min ~3.5 K/s typ ~5 K/s max	~ 2 K/s min ~3.5 K/s typ ~5 K/s max
Time 25 °C to 25 °C	4 minutes	4 minutes

Manual solder

+350 °C (4-5 seconds by soldering iron), generally manual/hand soldering is not recommended

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