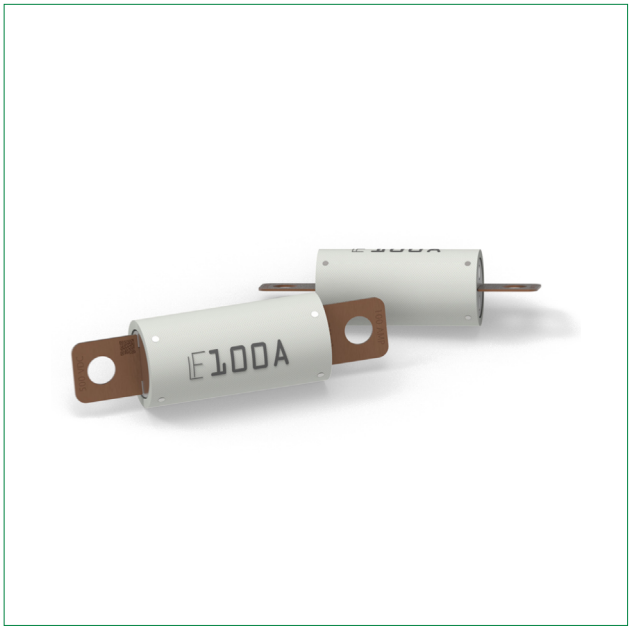
20EV Series

High Voltage Fuses – Rated 500 V DC

RoHS



Description

Bolt down 20EV automotive fuses can be installed in most EVs and hybrid passenger vehicles for circuit protection.

Features & Benefits

- Interrupting Rating of 20 kA @ 500 V DC
- Voltage Rating of 500 V DC
- Typical weight of 35 g
- Operates from -40 °C to +125 °C
- Refers to ISO 8820-8
- Melamine body with UL 94 flammability ratings of V-0
- End caps in zinc alloy
- Terminal in copper alloy
- Mounting Torque M6 of 6 ±1 Nm (ISO prescription) 10 Nm (Max. allowed)

Applications

- Use the 20EV high voltage fuses to protect circuits in EV and Hybrid passenger vehicles

Additional Information

Resources

Samples

See Disclaimer Notice

Specifications

Voltage Rating:	500 V DC
Interrupting Rating:	20 kA @ 500 V DC
Recommended Environmental Temperature:	–40 ˚C to +125 ˚C
Terminals Material:	Copper Alloy
Housing Material:	Melamine (U.L. 94 Flammability rating – V0)
End caps Material:	Zinc Alloy
Recommended Mounting Torque M6:	6±1 Nm (ISO prescription) 10 Nm (Max allowed)
Net Weight per Fuse:	35±5 g
Refers To:	ISO 8820-8

***Note:** Tin plating's temperature limit is ≈130 ˚C. Silver plating allows up to 150 ˚C at the terminal interface.

Ordering Information

Part Number	Termination	Package Size
20EVxxx.ZXBDMC	M6 Bolt Down	320

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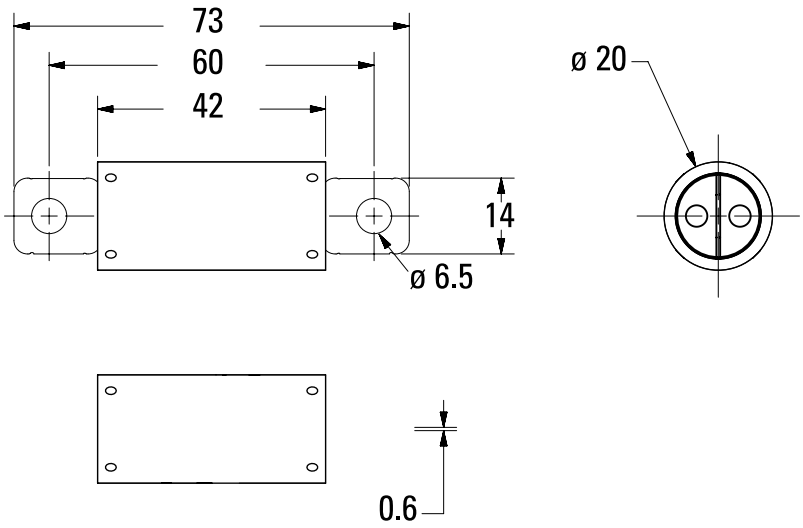
Ratings

Part Number	Current Rating (A)	Test Cable Size (mm^2)	Typ. Voltage Drop (mV)	Max. Voltage Drop Spec at 100% IR (mV)	Typ. Cold Resistance (mΩ)	Typical Melting I^2t (A^2s)
20EV060.ZXBDMC*	60	5	137	250	1.78	7600
20EV070.ZXBDMC*	70	10	142	250	1.5	11 100
20EV080.ZXBDMC*	80	10	145	250	1.35	23 150
20EV100.ZXBDMC*	100	20	132	250	0.90	24 400
20EV125.ZXBDMC*	125	20	160	200	0.73	34 000

***** Products in development - Final values for voltage drop, resistance, melting I^2t and T/C curves will be generated from PV tests data.
Please contact Littelfuse® for more details regarding availability timing.
Note: The typical I^2t is an average value calculated from the breaking capacity tests by using the melting time before the arcing occurs.

Dimensions

Dimensions in mm. Please refer to the outline drawing for dimensions and tolerances.



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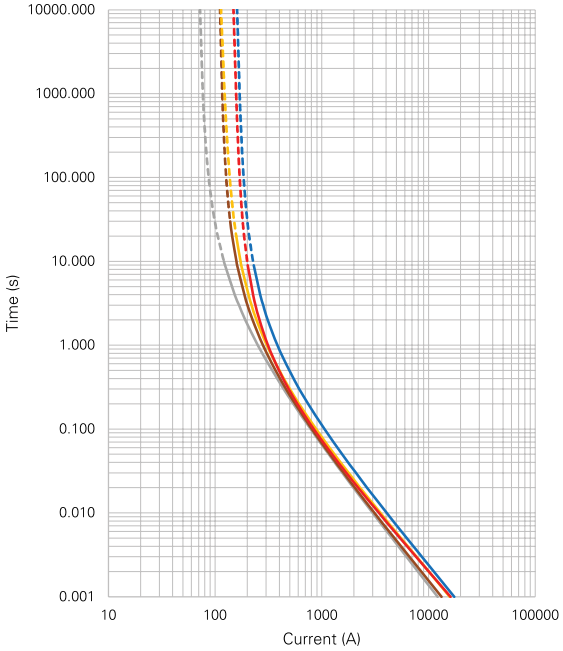
Time-Current Characteristic



% of Rating	Opening Time Min. / Max. (s)
110	14 400 / -
200	1.0 / 300
300	0.2 / 30
500	0.05 / 1.0

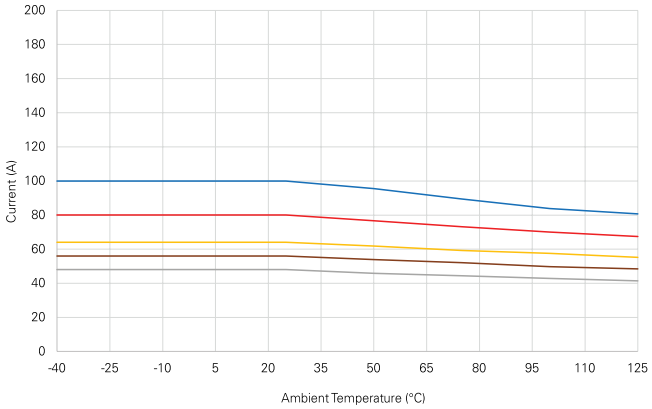
60 A
70 A
80 A
100 A
125 A

Note: Current recommendation may be impacted by the final condition of the application (terminals characteristics, wire size etc..). Please contact Littelfuse® for more information.

Typical Rerating Curves

Temperature security margin is 20%.

Please contact Littelfuse® for Details Regarding Rerating Test Set Up.



	Max. allowed current load (A) at ambient temperature based on typical derating						
	-40 °C	0 °C	20 °C	65 °C	85 °C	110 °C	125 °C
60 A	48	48	48	45	44	42	41
70 A	56	56	56	53	51	49	48
80 A	64	64	64	61	58	57	56
100 A	80	80	80	75	72	69	67
125 A	100	100	100	94	90	86	84

60 A
70 A
80 A
100 A
125 A

Note: Current recommendation may be impacted by the final condition of the application (terminals characteristics, wire size etc..). Please contact Littelfuse® for more information.