

High Current Thermal Fuse



The HCTF EL series is especially designed for high current applications with an operating temperature up to 160 °C. In case of excess heat in the range of the functioning temperature of $(235 \pm 15) \text{ }^\circ\text{C}$ the thermo fuse opens automatically and disconnects the circuit. Typical applications are automotive power electronics that are connected to steady battery power (B+ or terminal number 30).

FEATURES

- Functioning temperature: $\vartheta_F = (235 \pm 15) \text{ }^\circ\text{C}$
- Holding temperature: $\vartheta_H = 160 \text{ }^\circ\text{C}$
- Current: $\leq 80 \text{ A}$
- Suitable for resistive welding systems
- Material categorization: for definitions of compliance please see www.vishay.com/doc?99912


RoHS
COMPLIANT

APPLICATIONS

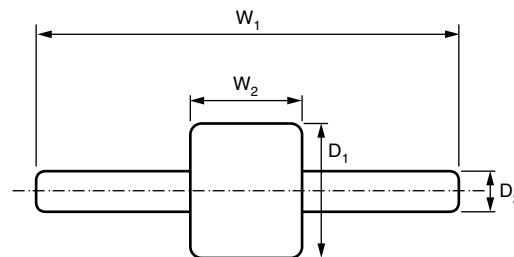
- Automotive
 - Fan control units
 - ABS
 - Diesel glow plug relays
 - Diesel pre-heaters
 - Electric coolant pumps

TECHNICAL SPECIFICATIONS	
DESCRIPTION	HCTF 235 EL
Functioning temperature ϑ_F	$(235 \pm 15) \text{ }^\circ\text{C}$
Holding temperature ϑ_H (1000 h)	160 °C
Voltage U_{DC}	24 V
Current $I_{DC}^{(1)}$	$\leq 80 \text{ A}$
Cold resistance R_{cold}	$\leq 0.1 \text{ m}\Omega$
Residual resistance R_s	$> 1 \text{ M}\Omega$

Note

⁽¹⁾ Current rating depends on external thermal resistivity

DIMENSIONS



DIMENSIONS - Mass and relevant physical dimensions					
TYPE	W_1 (mm)	W_2 (mm)	$D_1^{(1)}$ (mm)	D_2 (mm)	MASS (g)
HCTF EL	26 ± 0.5	6.5 ± 0.5	7.7 ± 0.3	1.8 ± 0.2	1.45 ± 0.3

Note

⁽¹⁾ Between sleek surfaces



PART NUMBER AND PRODUCT DESCRIPTION (1)																	
PART NUMBER: HCTF235L280000BR00																	
H	C	T	F	2	3	5	L	2	8	0	0	0	0	B	R	0	0
TYPE / FUNCTIONING TEMPERATURE HCTF235		TOLERANCE L = ± 15 °C		SPECIAL 1 digit 2 = weldable extended length			CURRENT Current in mA. 80000 = 80 A		PACKAGING BR		SPECIAL Up to 2 digits 00 = standard						
PRODUCT DESCRIPTION: HCTF 235 15 °C EL BR 80A0																	
HCTF	235	15 °C	EL	BR	80A0												
TYPE HCTF	FUNCTIONING TEMPERATURE 235	TOLERANCE ± 15 °C	SPECIAL EL = extended length	PACKAGING BR	CURRENT 80A0 = 80 A												

Note

(1) Products can be ordered using either the PART NUMBER or the PRODUCT DESCRIPTION

PACKAGING						
TYPE	CODE	QUANTITY	CARRIER TAPE	WIDTH	PITCH	REEL DIAMETER
HCTF EL	BR	750	Blister tape acc. IEC 60286-3 Type III	44 mm	12 mm	360 mm/14.2"

ASSEMBLY

The high current thermal fuse HCTF 235 EL is suitable for processing on e.g. automatic electric resistance welding or crimping assembly systems. Any deformation and overheating of the component body to levels above the holding temperature has to be avoided during the assembly.

MATERIALS

Vishay acknowledges the following systems for the regulation of hazardous substances:

- IEC 62474, Material Declaration for Products of and for the Electrotechnical Industry, with the list of declarable substances given therein (1)
- The Global Automotive Declarable Substance List (GADSL) (2)
- The REACH regulation (1907/2006/EC) and the related list of substances with very high concern (SVHC) (3) for its supply chain

The products do not contain any of the banned substances as per IEC 62474, GADSL, or the SVHC list, see www.vishay.com/how/leadfree.

Hence the products fully comply with the following directives:

- 2000/53/EC End-of-Life Vehicle Directive (ELV) and Annex II (ELV II)
- 2011/65/EU Restriction of the Use of Hazardous Substances Directive (RoHS) with amendment 2015/863/EU
- 2012/19/EU Waste Electrical and Electronic Equipment Directive (WEEE)

Vishay pursues the elimination of conflict minerals from its supply chain, see the Conflict Minerals Policy at www.vishay.com/doc?49037.

Notes

- (1) The IEC 62474 list of declarable substances is maintained in a dedicated database, which is available at <http://std.iec.ch/iec62474>
- (2) The Global Automotive Declarable Substance List (GADSL) is maintained by the American Chemistry Council and available at www.gadsl.org
- (3) The SVHC list is maintained by the European Chemical Agency (ECHA) and available at <http://echa.europa.eu/candidate-list-table>



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