PolySwitch® PTC Devices

Overcurrent Protection Device

PRODUCT : AHEF500

DOCUMENT : SCD27258
REV LETTER : D
REV DATE: JULY 26, 2016
PAGE NO.: 1 OF 2

Specification Status: Released

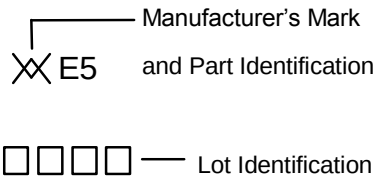
Electrical Rating

Voltage: 32 V_{DC} MAX
Current: 100 A MAX

Insulating Material:
Cured, Flame Retardant Epoxy Polymer

Lead Material:
20 AWG Tin Plated Copper

Part Marking:



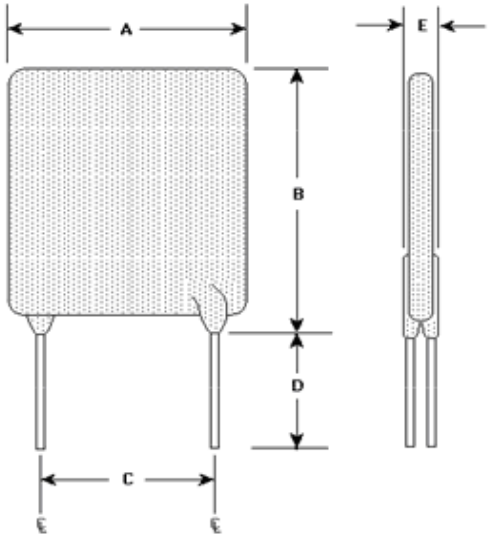


TABLE I. INSTALLATION ENVELOPE DIMENSIONS:

	A		B		C		D		E	
	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX
mm:	--	14.0	--	24.1	4.3	5.8	11.5	--	--	3.8
in*:	--	(0.55)	--	(0.95)	(0.17)	(0.23)	(0.45)	--	--	(0.15)

*Rounded off approximation

TABLE II. PERFORMANCE RATINGS:

I HOLD RATED CURRENT	CURRENT RATINGS		INITIAL RESISTANCE VALUES		TIME TO TRIP	R_{aMAX}	TRIPPED-STATE POWER DISSIPATION
AMPS AT 25°C HOLD	AMPS AT 25°C HOLD	TRIP	OHMS AT 25°C MIN	MAX	SECONDS AT 25°C, 25 A MAX	OHMS AT 25°C MAX	WATTS AT 25°C TYP
5.0	5.0	10.0	0.015	0.025	9.0	0.040	5.3

Reference Documents: PS400, PS300 (reference for $R_{1\ MAX}$)
Precedence: This specification takes precedence over documents referenced herein.
Effectivity: Reference documents shall be the issue in effect on the date of invitation for bid.
CAUTION: Operation beyond the rated voltage or current may result in rupture, electrical arcing or flame.

Materials Information

ROHS Compliant — Directive 2002/95/EC Compliant

ELV Compliant — Directive 2000/53/EC Compliant

Pb-Free

Halogen Free*

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

TABLE III. AUTOMOTIVE SPECIFIC STRESS TESTS AND TEST CONDITIONS:

ELECTRICAL STRESS TESTS	TEST CONDITIONS (see note 2)
ESD Voltage Withstand (see note 1)	25kV
Short Circuit Fault Current Durability	25 cycles, 32V, 200A
Fault Current Durability	350 cycles, 32V/100A
End-of-life Mode Verification	1750 cycles, 32V/100A
Jump Start Endurance (see note 1)	3 cycles, 48V, 2 minute duration
Load Dump Endurance (see note 1)	10 cycles, 86.5V

Note 1: The PolySwitch devices are tested in series with a load resistance and the voltages specified in the test conditions are shared between the PolySwitch device and the load resistance as specified in PS400.

Note 2: Please refer to Appendix A of PS400 for the detailed test procedures