

# 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<sub>DC</sub> MAX Current: 100 A MAX

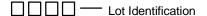
Insulating Material:

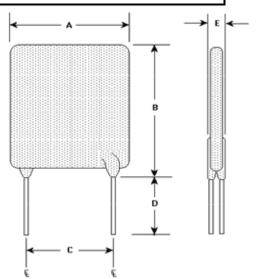
Cured, Flame Retardant Epoxy Polymer

Lead Material:

20 AWG Tin Plated Copper

Part Marking:





### **TABLE I. INSTALLATION ENVELOPE DIMENSIONS:**

	Α		В		С		D		Е	
	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)

<sup>\*</sup>Rounded off approximation

#### **TABLE II. PERFORMANCE RATINGS:**

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

Reference Documents: PS400, PS300 (reference for R<sub>1 MAX</sub>)

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 ELV Compliant Pb-Free Halogen Free\*

Directive 2002/95/EC Compliant

Directive 2000/53/EC



HF

<sup>\*</sup> Halogen Free refers to: Br≤900ppm, Cl≤900ppm, Br+Cl≤1500ppm.



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### 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

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