

# PolySwitch® PTC Devices

**Overcurrent Protection Device** 

PRODUCT: AHEF1000

DOCUMENT: SCD27216 REV LETTER: D

REV DATE: JULY 26, 2016

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## **Specification Status: Released**

Electrical Rating

Voltage: 32 V<sub>DC</sub> MAX Current: 100 A MAX

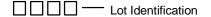
Insulating Material:

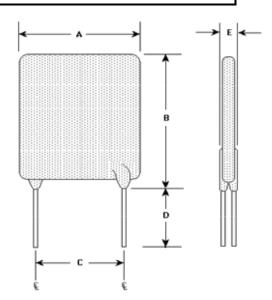
Cured, Flame Retardant Epoxy Polymer

Lead Material:

18 AWG Tin Plated Copper

Part Marking:





### TABLE I. INSTALLATION ENVELOPE DIMENSIONS:

	Α		В		С		D		E	
	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX
mm:		23.5		27.9	9.4	10.9	7.6			4.0
in*:		(0.93)		(1.10)	(0.37)	(0.43)	(0.30)			(0.16)

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

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

I HOLD	CURRENT		INITIAL		TIME TO TRIP	R <sub>a MAX</sub>	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, 50 A	AT 25°C	AT 25°C
HOLD	HOLD	TRIP	MIN	MAX	MAX	MAX	TYP
10.0	10.0	20.0	0.0060	0.0105	15	0.016	7.0

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 Compliant





<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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