

PolySwitch® **PTC Devices**

Overcurrent Protection Device

PRODUCT: AHRF450S-1

DOCUMENT: SCD26368 **REV LETTER: D REV DATE: JULY 26, 2016** PAGE NO.: 1 OF 2

Specification Status: Released

Electrical Rating Voltage: 16V_{DC} MAX

Insulating Material:

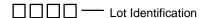
Cured, Flame Retardant Epoxy Polymer

Lead Material:

20 AWG Tin Plated Copper (0.8 mm [0.032] nom. diameter)

Part Marking:

- Manufacturer's Mark XX H4.5 and Part Identification



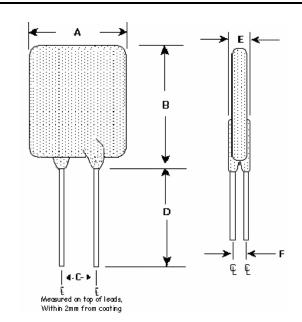


TABLE I. INSTALLATION ENVELOPE DIMENSIONS:

	А		В		С		D		E		F
	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	TYP
mm:		10.4		14.3	4.3	5.8	25.4			3.0	1.2
in*:		(0.41)		(0.56)	(0.17)	(0.23)	(1.0)			(0.12)	(0.05)

^{*}Rounded off approximation

TABLE II. PERFORMANCE RATINGS:

CURRENT		TIME TO	RESISTANCE		R _{a MAX}	TRIPPED-	
RATINGS		TRIP				STATE	
						POWER	
						DISSIPATION	
AMF	PS	SECONDS AT	OHMS		OHMS	WATTS AT	
AT 25°C		25°C, 22.5 A	AT 2	25°C	AT 25°C	25°C	
HOLD	TRIP	MAX	MIN	MAX		TYP	
4.5	8.7	4.0	0.017	0.036	0.054	3.6	

Reference Documents: PS400, PS300 (reference for R_{1 MAX})

This specification takes precedence over documents referenced herein. Precedence:

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





^{*} 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, 16V, 200A
Fault Current Durability	350 cycles, 16V/100A
End-of-life Mode Verification	1750 cycles, 16V/100A
Jump Start Endurance (see note 1)	3 cycles, 26V, 1 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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