

PolySwitch® **PTC Devices**

Overcurrent Protection Device

PRODUCT: AHRL450

DOCUMENT: SCD29611 **REV LETTER: A** REV DATE: AUGUST 7, 2020 PAGE NO.: 1 OF 2

Specification Status: Released

Electrical Rating Voltage: 16VDC MAX Current: 50A MAX

Insulating Material:

Cured, Flame Retardant Epoxy Polymer Meets UL94 V-0 Requirements

Lead Material:

20 AWG Tin Plated Copper (0.81 mm [0.032in.] nom. diameter)

Marking:

Manufacturer's Mark

X L4.5 and Part Identification

Lot Identification

TABLE I. DIMENSIONS:

	Α		В		С		D		E		F
	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	TYP
mm:		8.4		14.1	4.3	5.8	7.6			3.0	1.2
in*:	-	(0.33)		(0.56)	(0.17)	(0.23)	(0.30)			(0.12)	(0.05)

*Rounded off approximation

TABLE II. PERFORMANCE RATINGS:

CURRENT		TIME TO TRIP	INITIAL		R1 MAX	TRIPPED-STATE	
RATIGNS			RESISTANCE			POWER	
			VALUES			DISSIPATION	
AMPS		SECONDS AT	OHMS		OHMS	WATTS AT	
AT 25°C		25°C, 22.5A	AT 25°C		AT 25°C	25°C 16V	
HOLD	TRIP	MAX	MIN	MAX		TYP	
4.5	9.0	5.5	0.0145	0.0260	0.0400	3.5	

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

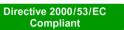
Materials Information **ROHS Compliant**

ELV Compliant

Pb-Free

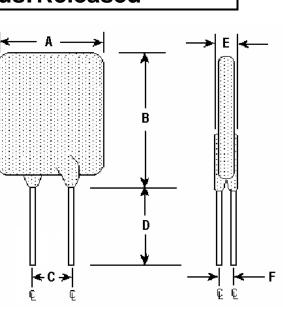








* Halogen Free refers to: Br≤900ppm, Cl≤900ppm, Br+Cl≤1500ppm





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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/50A
End-of-life Mode Verification	1750 cycles, 16V/50A
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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