PolySwitch® PTC Devices

Overcurrent Protection Device

PRODUCT: AHRL450

DOCUMENT: SCD29611
REV LETTER: A
REV DATE: AUGUST 7, 2020

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
XX L4.5 and Part Identification
□□□□ Lot Identification

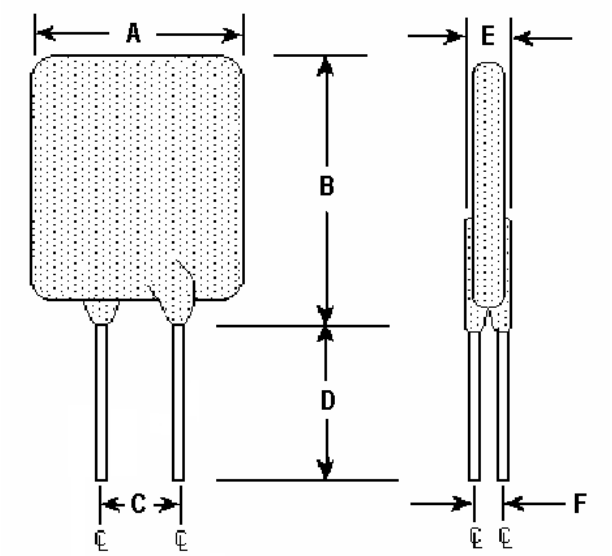

TABLE I. DIMENSIONS:

	A		B		C		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 RATIGNS		TIME TO TRIP	INITIAL RESISTANCE VALUES		$R_{1\ MAX}$	TRIPPED-STATE POWER DISSIPATION
AMPS AT 25°C		SECONDS AT 25°C, 22.5A	OHMS AT 25°C		OHMS AT 25°C	WATTS AT 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.
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 2011/65/EU Compliant

ELV Compliant — Directive 2000/53/EC Compliant

Pb-Free

Halogen Free HF

* 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, 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