

PolySwitch® PTC Devices

Overcurrent Protection Device

PRODUCT: AHRL500

DOCUMENT: SCD29612 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

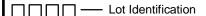
Lead Material:

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

Marking:

Manufacturer's Mark

X L5 and Part Identification



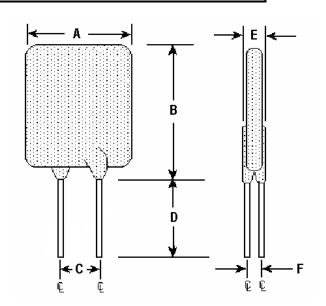


TABLE I. DIMENSIONS:

	Α		В		С		D		E		F
	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	TYP
mm:		9.2		14.1	4.3	5.8	7.6			3.0	1.2
in*:		(0.36)		(0.56)	(0.17)	(0.23)	(0.30)			(0.12)	(0.05)

^{*}Rounded off approximation

TABLE II. PERFORMANCE RATINGS:

CURRENT		TIME TO TRIP	INITIAL		R ₁ MAX	TRIPPED-STATE
RATIGNS			RESISTANCE			POWER
			VALUES			DISSIPATION
AMPS		SECONDS AT	OHMS		OHMS	WATTS AT
AT 25°C		25°C, 25.0A	AT 25°C		AT 25°C	25°C 16V
HOLD	TRIP	MAX	MIN	MAX		TYP
5.0	10.0	5.8	0.0135	0.0240	0.0380	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 ELV Compliant Pb-Free Halogen Free

Halogen Free

Directive 2011/65/EU 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/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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