



SEA & LAND ELECTRONIC CORP.

[www.sealand-pptc.com](http://www.sealand-pptc.com)

ALPHA-TOP TECHNOLOGY CORP.

[www.alpha-top.cn](http://www.alpha-top.cn)

## APPROVAL SHEET

MODEL NO.: R16-500

CUSTOMER:

CUSTOMER'S APPROVAL:

AUTHORIZED SIGNATURE/STAMP:

DATE

MANUFACTURER:

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Submitted by: Chen  
Approved by: YC Lin  
DATE: 16-Oct-23

SEA & LAND ELECTRONIC CORP.



#### Features

- Radial Leaded Devices
- Cured, flame retardant epoxy polymer  
insulating material meets  
UL 94V-0 requirements
- Bulk packaging, or tape and reel  
available on most models

**R16-500**

Alpha-Top (Sea & Land Alliance)

#### Electrical Properties

Model	$V_{max}$	$I_{max}$	$I_{hold}$	$I_{trip}$	$P_d$	Maximum Time To Trip		Resistance		Agency Approval	
	(Vdc)	(A)	(A)	(A)	Typ. (W)	Current (A)	Time (Sec)	$R_{i_{min}}$ ( $\Omega$ )	$R_{1_{max}}$ ( $\Omega$ )	UL	TUV
R16-500	16	100	5.00	8.50	2.60	15.00	10.0	0.014	0.044		

**I<sub>hold</sub>** = Hold Current. Maximum current device will not trip in 25°C still air.

**I<sub>trip</sub>** = Trip Current. Minimum current at which the device will always trip in 25°C still air.

**V<sub>max Operating</sub>** = Maximum operating voltage (Vdc) device can withstand without damage at rated current.

**V<sub>max Interrupt</sub>** = Maximum interrupt voltage (Vac) device can withstand without damage at rated current.

**I<sub>max</sub>** = Maximum fault current device can withstand without damage at rated voltage (V<sub>max</sub>).

**R<sub>imin/max</sub>** = Minimum/Maximum device resistance prior to tripping at 25°C

**R<sub>1max</sub>** = Maximum device resistance one hour after it is tripped at 25°C.

**CAUTION** : Operation beyond the specified ratings may result in damage and possible arcing and flame.

#### Environmental Specifications

Test	Conditions
Passive aging	+85°C, 1000 hrs
Humidity aging	+85°C, 85% R.H., 1000 hrs
Thermal shock	+85°C to -40°C, 20 times
Resistance to solvent	MIL-STD-202, Method 215
Vibration	MIL-STD-202, Method 201
Ambient operating /storage conditions : - 40 °C to +85 °C	
Maximum surface temperature of the device in the tripped state is 125 °C	
In case of special use, please contact our engineer	

#### Agency Approvals :

Regulation/Standard:



2015/863/EU



EN14582



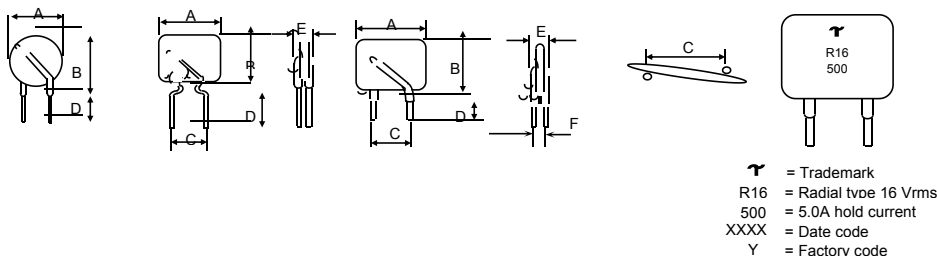
#### WARNING:

- Use PPTC beyond the maximum ratings or improper use may result in device damage and possible electrical arcing and flame.
- PPTC are intended for protection against occasional over current or over temperature fault conditions and should not be used when repeated fault conditions or prolonged trip events are anticipated.
- Device performance can be impacted negatively if devices are handled in a manner inconsistent with recommended electronic, thermal, and mechanical procedures for electronic components.
- Use PPTC with a large inductance in circuit will generate a circuit voltage ( $L \cdot di/dt$ ) above the rated voltage of the PPTC.
- Avoid impact PPTC device its thermal expansion like placed under pressure or installed in limited space.

Physical Dimensions (Unit: mm/inch)

Model	A Max.	B Max.	C Typ.	D Min.	E Max.	F Max.	Lead Style
R16-500	10.20	15.70	5.10	7.6	3.0	1.7	Straight

Dimensions



Physical Characteristics

Lead Material :

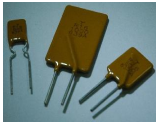
R16-090 ~ 250: Tin-plated copper-clad steel, 0.205mm<sup>2</sup> (24AWG),  $\Phi$  0.51mm(0.020 in).

R16-300 ~ 1100: Tin-plated copper, 0.52mm<sup>2</sup> (20AWG),  $\Phi$  0.81mm(0.032 in).

R16-1100 ~ 1600: Tin-plated copper, 0.79mm<sup>2</sup> (20AWG),  $\Phi$  1.0mm(0.039 in).

Lead Solderability : MIL-STD-202, Method 208

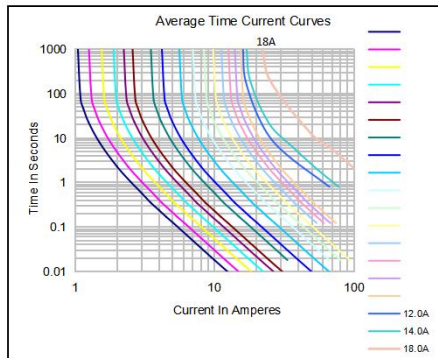
0	7.40	10.20	5.10	7.60	3.00	3.00	1.2	Straight
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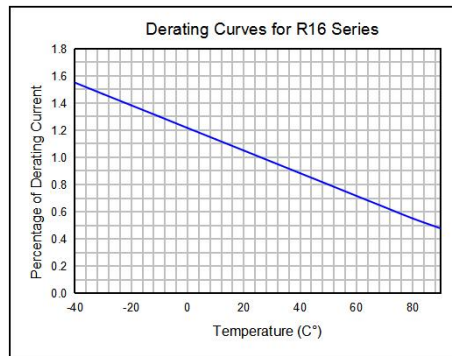
## R16-500

Alpha-Top (Sea & Land Alliance)

### Typical Time-To-Trip Curve at 25°C



### Thermal Derating Curve



### $I_{hold}$ versus temperature

Model	Maximum ambient operating temperature ( $T_{mao}$ ) vs. hold current ( $I_{hold}$ )								
	-40°C	-20°C	0°C	25°C	40°C	50°C	60°C	70°C	85°C
R16-500	7.30	6.60	6.00	5.00	4.25	3.85	3.60	2.95	2.25

### Packing :

Model	Reel QTY	Bag QTY
R16-500		1000

Tape & Reel packaging per EIA468-B standard.

### Labeling Information

