



#### 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

#### Applications

- Almost anywhere there is a low voltage power supply, up to 16V and a load to be protected, including:
- Personal computer
  - Medical electronics
  - Personal care product

## R16 Series

Alpha-Top (Sea & Land Alliance)

Model	V <sub>max</sub> (Vdc)	I <sub>max</sub> (A)	I <sub>hold</sub> (A)	I <sub>trip</sub> (A)	P <sub>d</sub> Typ. (W)	Maximum Time To Trip		Resistance		Agency Approval	
						Current (A)	Time (Sec)	R <sub>i min</sub> (Ω)	R <sub>1 max</sub> (Ω)	UL	TUV
R16-090	16	100	0.90	1.80	0.60	8.00	1.2	0.070	0.180		
R16-110	16	100	1.10	2.20	0.70	8.00	2.3	0.050	0.140		
R16-135	16	100	1.35	2.70	0.80	8.00	4.5	0.040	0.120		
R16-160	16	100	1.60	3.20	0.90	8.00	9.0	0.030	0.110		
R16-185	16	100	1.85	3.70	1.00	8.00	10.0	0.030	0.090		
R16-250	16	100	2.50	5.00	1.20	12.50	5.0	0.020	0.060		
R16-300	16	100	3.00	5.10	2.30	9.00	10.0	0.034	0.105		
R16-400	16	100	4.00	6.80	2.40	12.00	10.0	0.020	0.063		
R16-500	16	100	5.00	8.50	2.60	15.00	10.0	0.014	0.044	✓	
R16-600	16	100	6.00	10.20	2.80	18.00	10.0	0.009	0.030	✓	
R16-700	16	100	7.00	11.90	3.00	21.00	10.0	0.006	0.021	✓	
R16-800	16	100	8.00	13.60	3.00	24.00	10.0	0.005	0.018	✓	
R16-900	16	100	9.00	15.30	3.30	27.00	10.0	0.004	0.015	✓	
R16-1000	16	100	10.00	17.00	3.60	30.00	30.0	0.003	0.012	✓	
R16-1100	16	100	11.00	18.70	3.70	33.00	30.0	0.003	0.010	✓	
R16-1200	16	100	12.00	20.40	4.20	36.00	30.0	0.002	0.009	✓	
R16-1400	16	100	14.00	23.80	4.60	70.00	30.0	0.002	0.009	✓	
R16-1800	16	100	16.00	27.20	4.80	80.00	30.0	0.002	0.008		

**I<sub>hold</sub>** = Hold Current : maximum current device will sustain for 4 hours without tripping in 25°C still air.

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

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

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

**P<sub>d</sub>** = Power dissipated from device when in the tripped state at 25°C still air.

**R<sub>i min/max</sub>** = Minimum/Maximum resistance of device in initial (un-soldered) state.

**R<sub>1 max</sub>** = Maximum resistance of device at 25°C measured one hour after tripping.

**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	

Agency Approvals :



E201504(Alpha-Top)/E319079(Sea&Land)

Regulation/Standard:



2002/95/EC



EN14582

#### PHYSICAL SPECIFICATIONS :

**Materials : Leads**

R16-090~250 : Tin plated copper-clad steel, 24 AWG (0.51mm/0.020" Dia.)

R16-300~1100 : Tin plated copper, 20 AWG (0.81mm/0.032" Dia.)

R16-1200~1800 : Tin plated copper, 18 AWG (1.0mm/0.04" Dia.)

**Lead Solderability** : MIL-STD-202, Method 208

**Device Labeling** : Device is marked with Logo, amperage rating , voltage rating & date code.

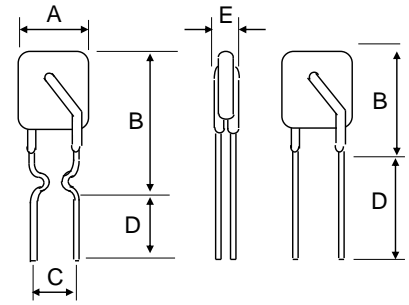


# R16 Series

Alpha-Top (Sea & Land Alliance)

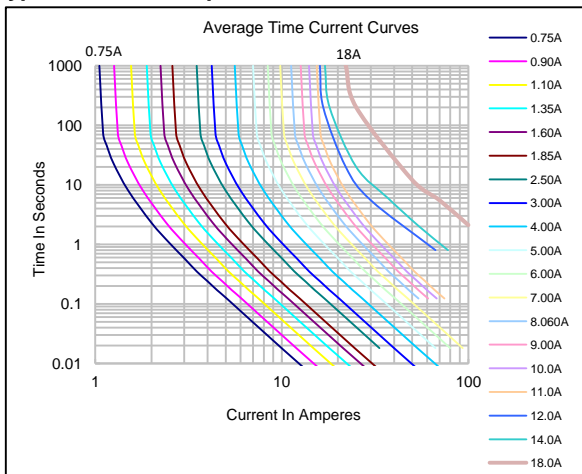
## Physical Dimensions (Unit: mm)

Model	A	B	C	D	E	Lead Style
	Max.	Max.	Typ.	Min.	Max.	
R16-090	7.40	12.20	5.10	7.6	3.1	Kink
R16-110	7.40	14.20	5.10	7.6	3.1	Kink
R16-135	8.90	13.50	5.10	7.6	3.1	Kink
R16-160	8.90	15.20	5.10	7.6	3.1	Kink
R16-185	10.20	15.70	5.10	7.6	3.1	Kink
R16-250	10.40	14.30	5.10	7.6	3.1	Kink
R16-300	8.80	11.80	5.10	7.6	3.1	Straight
R16-400	9.50	12.50	5.10	7.6	3.1	Straight
R16-500	9.80	14.60	5.10	7.6	3.1	Straight
R16-600	11.60	14.60	5.10	7.6	3.1	Straight
R16-700	13.00	17.20	5.10	7.6	3.1	Straight
R16-800	14.50	20.00	5.10	7.6	3.1	Straight
R16-900	14.50	20.00	5.10	7.6	3.1	Straight
R16-1000	17.50	24.50	10.20	7.6	3.1	Straight
R16-1100	17.50	24.50	10.20	7.6	3.1	Straight
R16-1200	17.50	24.50	10.20	7.6	3.1	Straight
R16-1400	20.50	28.00	10.20	7.6	3.1	Straight
R16-1800	25.70	32.30	10.20	7.6	3.1	Straight

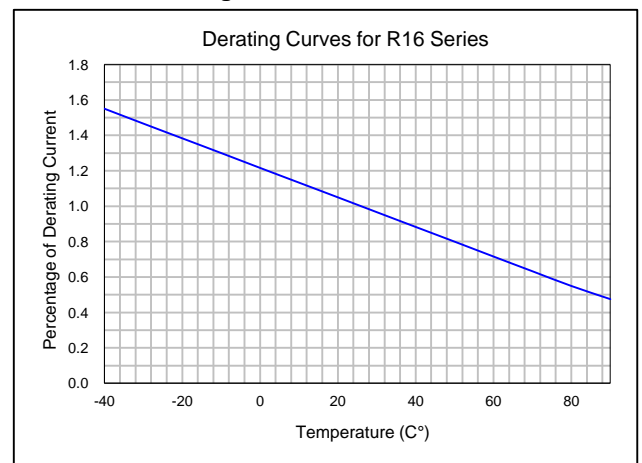


Note : Stand-offs only used for R16-090 ~ R16-250

## Typical Time-To-Trip Curve at 25°C



## Thermal Derating Curve



## Packing :

Model	Reel QTY	Bag QTY
R16-090 ~ R16- 250	3000	500
R16-300 ~ R16- 600	-	1000
R16-700 ~ R16- 900	-	500
R16-1000 ~ R16-1800	-	200

Tape & Reel packaging per EIA468 standard.



**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 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.