



SEA & LAND ELECTRONIC CORP.

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ALPHA-TOP TECHNOLOGY CORP.

WWW.ALPHA-TOP.CN

APPROVAL SHEET

MODEL NO.: R60-020

CUSTOMER:

CUSTOMER'S APPROVAL:

AUTHORIZED SIGNATURE/STAMP:

DATE

MANUFACTURER:

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Submitted by: Chen
Approved by: YC Lin
DATE: 16-Mar-22



R60-020

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 60V and a load to be
protected, including:
- Industrial controls
- Automotive electronics
- Medical products

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)	Rimin (Ω)	R1max (Ω)	UL	TUV-PS
R60-020	60	40	0.20	0.40	0.41	1.00	2.2	1.25	4.40	✓	✓

I_{hold} = Hold Current : maximum current device will sustain for 4 hours without tripping in 25°C still air.
I_{trip} = Trip Current : minimum current at which the device will trip in 25°C still air.
V_{max} = Maximum voltage device can withstand without damage at rated current (I_{max}).
I_{max} = Maximum fault current device can withstand without damage at rated voltage (V_{max}).
P_d = Power dissipated from device when in the tripped state at 25°C still air.
Ri min/max = Minimum/Maximum resistance of device in initial (un-soldered) state.
R1 max = 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	
In case of special use, please contact our engineer	

Agency Approvals :



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



R 50274672

Regulation/Standard:



2015/863/EU



EN14582



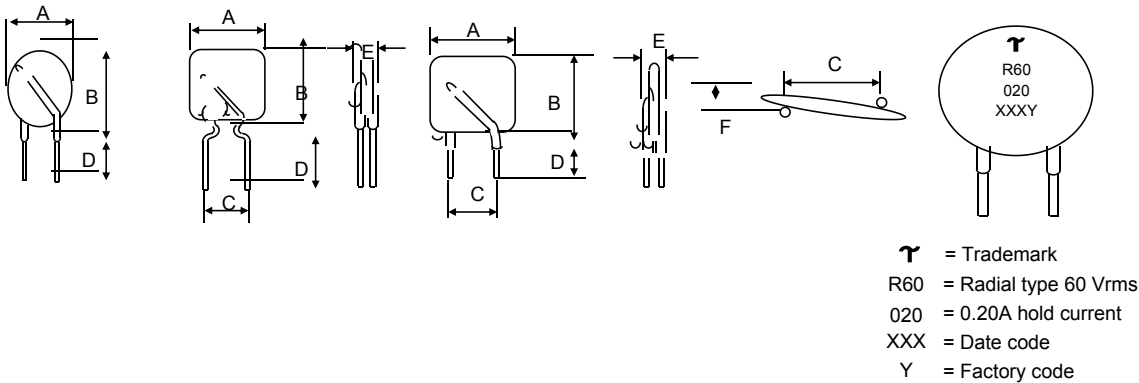
WARNING:

- 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 ($L di/dt$) 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
R60-020	7.4	12.7	5.1	7.6	3.1	1.0	Kink

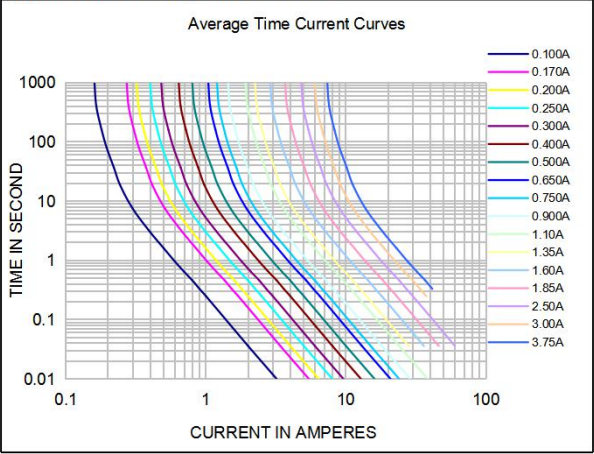
Dimensions



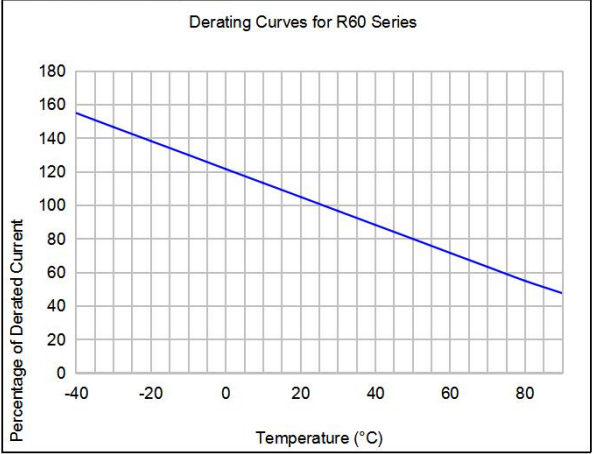
Physical Characteristics

Lead Material :
R60-020 : Tin-plated copper-clad steel, 0.205mm² (24AWG), Φ0.51mm(0.020 in).
Lead Solderability : MIL-STD-202, Method 208E

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
R60-020	0.31	0.27	0.24	0.20	0.16	0.14	0.13	0.11	0.08

Order information

R60	020	K or S	R or U	Model	Reel Q'ty	Bag Q'ty
Radial type 60 V	Hold Current 0.20A	K=Kink leads S=Straight leads	R= Tape & Reel U= Bulk packaged	R60-020	3000	500

Tape & Reel packaging per EIA468-B standard.

Labeling Information



Sea & Land Electronic Corp.



Model:
Part no.:
Spec.:
Lot no.:
Q'ty:

倉儲：密封！溫度：18~33°C/濕度：30~60% A