



SEA & LAND ELECTRONIC CORP.

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ALPHA-TOP TECHNOLOGY CORP.

WWW.ALPHA-TOP.CN

APPROVAL SHEET

MODEL NO.: R60-110

CUSTOMER:

CUSTOMER'S APPROVAL:

AUTHORIZED SIGNATURE/STAMP:

DATE

MANUFACTURER:

HEAD OFFICE:

13F.,No.120-10,Sec.3,Zhongshan Rd.,Zhonghe Dist.,New Taipei City 23544,Taiwan
Tel: 886-2-8221-2567
Fax:882-2-2225-7268
E-mail:service@chipfast.com.tw

China Branch:

Factory Building B)Shuangpeng,Weibu Village, Qiuchang Town,
Huiyang District, Huizhou City, Guangdong Province, P.R.C.)
Tel: 86-752-3562001
Fax:86-752-3558696
E-mail:service@atpptc.com

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



R60-110

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
R60-110	60	40	1.10	2.20	1.50	5.50	8.2	0.13	0.38	✓	✓

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



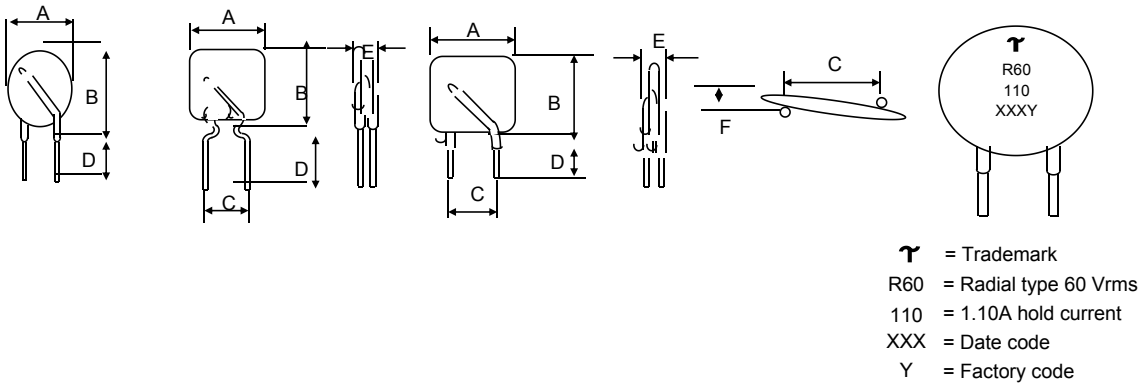
WARNING:

- 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
R60-110	13.0	18.0	5.1	7.6	3.1	1.2	Straight

Dimensions



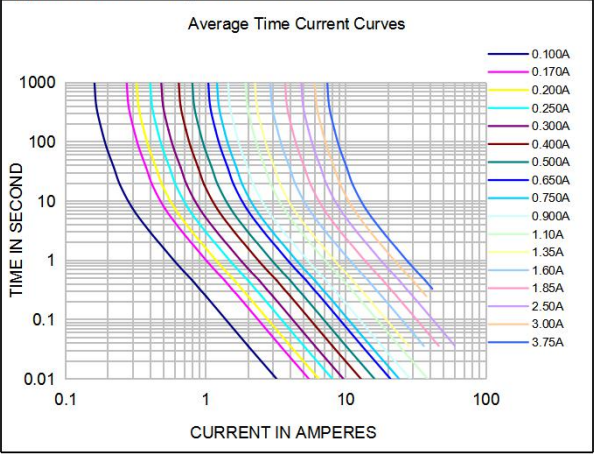
Physical Characteristics

Lead Material :

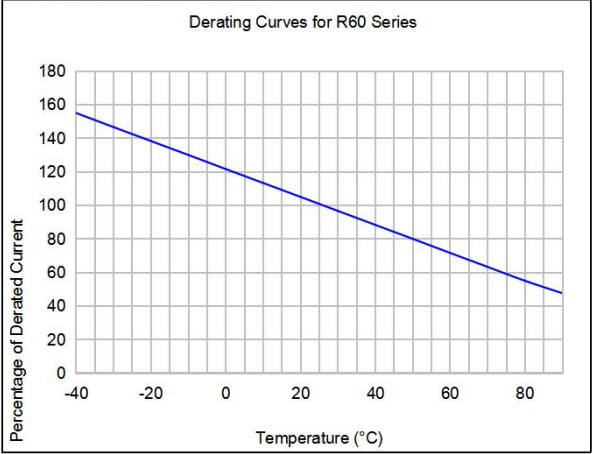
R60-110: Tin-plated copper , 0.52mm² (20AWG), Φ0.81mm(0.032 in).

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
R60-110	1.71	1.50	1.31	1.10	0.89	0.79	0.69	0.59	0.44

Order information

R60	110	K or S	R or U	Model	Reel Q'ty	Bag Q'ty
Radial type 60 V	Hold Current 1.10A	K=Kink leads S=Straight leads	R= Tape & Reel U= Bulk packaged	R60-110	1500	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℃/濕度：30~60% A