

### Features:

- ✧ Radial led Devices
- ✧ Cured, flame retardant epoxy polymer insulating material meets UL94V-0
- ✧ Bulk packaging, or tape and reel available on most models
- ✧ UL qualified
- ✧ ROHS compliant and lead-free

### Product Dimensions

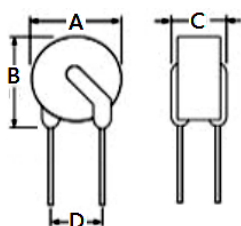


Fig.1

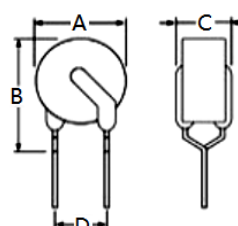


Fig.2

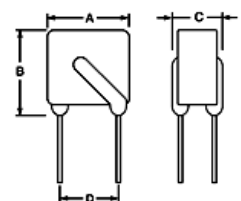


Fig.3

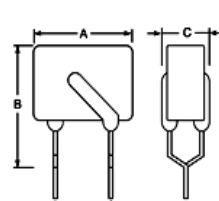


Fig.4

Unit : mm

Model	Dimensions (mm)				Lead material	Shape
	A(max)	B(max)	C(max)	D(typ)	Tinned matel(mm)	Fig
HL250-020	7.4	12.7	4.5	5.1	22AWG/Φ0.6	1
HL250-030	7.4	12.7	4.5	5.1	22AWG/Φ0.6	1
HL250-040	7.4	12.7	4.5	5.1	22AWG/Φ0.6	1/2
HL250-050	7.4	12.7	4.5	5.1	22AWG/Φ0.6	1/2
HL250-060	7.4	12.7	4.5	5.1	22AWG/Φ0.6	1/2
HL250-080	7.4	12.7	4.5	5.1	22AWG/Φ0.6	2
HL250-090	7.4	12.7	4.5	5.1	22AWG/Φ0.6	2
HL250-100	7.8	12.6	4.5	5.1	22AWG/Φ0.6	1
HL250-110	7.0	12.6	4.5	5.1	22AWG/Φ0.6	4
HL250-120	7.0	12.6	4.5	5.1	22AWG/Φ0.6	4
HL250-145	7.0	12.6	4.5	5.1	22AWG/Φ0.6	4
HL250-180	10.2	14.5	3.8	5.1	22AWG/Φ0.6	2



HL250-200	12.0	17.0	4.5	5.1	22AWG/Φ0.6	3
HL250-400	12.0	17.0	4.5	5.1	22AWG/Φ0.6	3
HL250-600	16.0	18.0	4.5	5.1	22AWG/Φ0.6	3
HL250-800	20.0	22.5	4.5	5.1	20 AWG/Φ0.8	3
HL250-1000	20	22.5	4.5	5.1	20 AWG/Φ0.8	3
HL250-1200	22	28	4.5	5.1	20 AWG/Φ0.8	3
HL250-1500	25	30	4.5	5.1	20 AWG/Φ0.8	3
HL250-2000	26	32	4.5	10.2	20 AWG/Φ0.8	3

Note: ① Dimensions A, B, C are the maximum sizes, all typical values of D is the tolerance of  $\pm 0.75\text{mm}$ .

#### Thermal Derating Chart-IH (A)

Model	Maximum ambient operating temperatures (°C)								
	-40°C	-20°C	0°C	25°C	40°C	50°C	60°C	70°C	85°C
HL250-020	0.030	0.026	0.023	0.020	0.017	0.015	0.014	0.012	0.009
HL250-030	0.044	0.040	0.035	0.030	0.026	0.023	0.020	0.018	0.014
HL250-040	0.059	0.053	0.047	0.040	0.034	0.031	0.027	0.024	0.018
HL250-050	0.074	0.066	0.059	0.050	0.043	0.039	0.034	0.031	0.023
HL250-060	0.089	0.079	0.070	0.060	0.051	0.046	0.041	0.037	0.027
HL250-080	0.118	0.106	0.094	0.080	0.068	0.062	0.054	0.049	0.036
HL250-090	0.133	0.119	0.105	0.090	0.077	0.069	0.061	0.055	0.041
HL250-100	0.148	0.132	0.117	0.100	0.085	0.077	0.068	0.061	0.045
HL250-110	0.163	0.145	0.129	0.110	0.094	0.085	0.075	0.067	0.050
HL250-120	0.178	0.158	0.140	0.120	0.102	0.092	0.082	0.073	0.054
HL250-145	0.215	0.191	0.170	0.145	0.123	0.112	0.099	0.088	0.065
HL250-180	0.266	0.238	0.211	0.180	0.153	0.139	0.122	0.110	0.081
HL250-200	0.296	0.264	0.234	0.200	0.170	0.154	0.136	0.122	0.090
HL250-400	0.592	0.528	0.468	0.400	0.340	0.308	0.272	0.244	0.180
HL250-600	0.888	0.792	0.702	0.600	0.510	0.462	0.408	0.366	0.270
HL250-800	1.184	1.056	0.936	0.800	0.680	0.616	0.544	0.488	0.360
HL250-1000	1.480	1.320	1.170	1.000	0.850	0.770	0.680	0.610	0.450
HL250-1200	1.776	1.584	1.404	1.200	1.020	0.924	0.816	0.732	0.540
HL250-1500	2.220	1.980	1.755	1.500	1.275	1.155	1.020	0.915	0.675
HL250-2000	2.960	2.640	2.340	2.000	1.700	1.540	1.360	1.220	0.900

## Electrical Characteristic

Model	I <sub>h</sub> (mA)	I <sub>t</sub> (mA)	V <sub>max</sub> interrupt (V)	I <sub>max</sub> (A)	P <sub>d</sub> (w)	Maximum Time to Trip		Resistance(Ω)
						Current(A)	Time(S)	R <sub>min</sub> - R <sub>max</sub>
HL250-020	20	45	250	3	1.0	0.5	0.5	80-160
HL250-030	30	65	250	3	1.0	0.5	0.5	60-120
HL250-040	40	80	250	3	1.0	0.5	1.5	30-60
HL250-050	50	100	250	3	1.0	0.5	2	25-50
HL250-060	60	120	250	3	1.0	0.5	2	20-60
HL250-080	80	160	250	3	1.0	1	0.5	12-22
HL250-090	90	180	250	3	1.0	1	0.8	10-20
HL250-100	100	200	250	3	1.0	1	1	10-20
HL250-110	110	220	250	3	1.0	1	2.0	6-12
HL250-120	120	240	250	3	1.0	1	2.0	6-11
HL250-145	145	290	250	3	1.0	1	5.0	3.5-6.5
HL250-180	180	650	250	3	1.8	3	3.0	1.0-2.2
HL250-200	200	400	250	5	2.4	3	5	3-6
HL250-400	400	800	250	5	2.8	3	8	1-3
HL250-600	600	1200	250	5	3.2	3	12	0.6-2.0
HL250-800	800	1600	250	5	3.6	4	18	0.4-1.0
HL250-1000	1000	2000	250	7	3.6	5	20	0.3-0.8
HL250-1200	1200	2400	250	7	3.6	6	20	0.2-0.8
HL250-1500	1500	3000	250	7	4.8	7.5	20	0.2-0.6
HL250-2000	2000	4000	250	10	4.8	10	20	0.2-0.4

I<sub>h</sub>=Hold current:Maximum current at which the device will not interrupt in 25°C still air.

I<sub>t</sub>=Trip current:Minimum current at which the device from low resistance to high resistance in 25°C still air.

V<sub>max</sub>=Maximum continuous voltage device can withstand without damage at rated current.

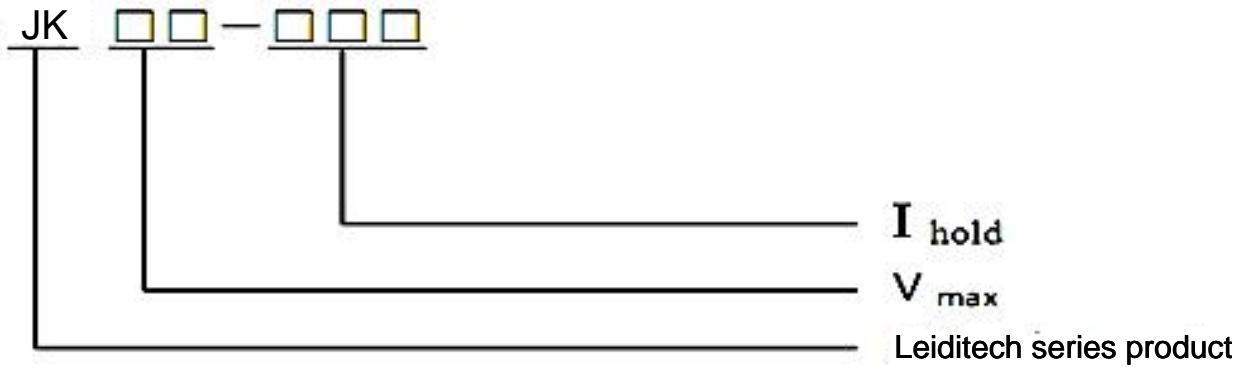
I<sub>max</sub>=Maximum fault current device can withstand without damage at rated voltage.

T<sub>trip</sub>=Maximum time to trip(s) at assigned current.

P<sub>d</sub>=Typical power dissipation:Typical amount of power dissipated from the device when in 25°C still air environment.

R<sub>min</sub>=Minimum resistance of device at 25°C prior to tripping.

## Marking System



## Environmental Specifications

Test	Conditions	Resistance change
Passive aging	+85°C, 1000 hours	±8% typical
Humidity aging	+85°C, 85%R.H.1000 hours	±8% typical
Thermal shock	+125°C to -55°C, 10 Times	±12% typical
SolventResistance	MIL-STD-202, Method 215F	No change
Vibration	MIL-STD-202, Method 201	No change

## Soldering method

### Wave Soldering

Soldering Temperature:260°C~270°C

Soldering Time:≤3sec.

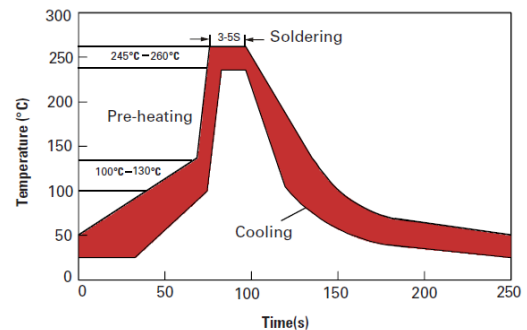
Soldering Position: Resettable fuse wire and the bottom ≥ 6mm。

### Manual soldering

Soldering Temperature:250°C~280°C

Soldering Time: ≤3sec.

Soldering Position: Resettable fuse wire and the bottom ≥ 6mm。



### Storage

The maximum ambient temperature shall not exceed 40°C. Storage temperature higher than 40°C could result in the deformation of packaging materials. The maximum relative humidity recommended for storage is 70%. High humidity with high temperature can accelerate the oxidation of the solder plating on the leads and reduce the solderability of the components. Sealed plastic bags with desiccant shall be used to reduce the oxidation of the leads and shall only be opened prior to use. The products shall not be stored in areas where harmful gases containing acid or alkali or other harmful substances are present.

#### NOTICE

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