Leiditech

HL30-050~900 Series

Positive Thermal Coefficent Diodes

Features：

- ✧ RoHS Compliant ＆ Halogen Free
- ✧ Radial-leaded Devices
- ✧ Cured，flame retardant epoxy polymer insulating material meets UL94V-0 requirements
- ✧ Operation Current: 0.5A~9A ，Maximum Voltage：30Vdc，Operating Temperature：-40℃ TO 85℃
- ✧ UL qulified

Product Dimensions

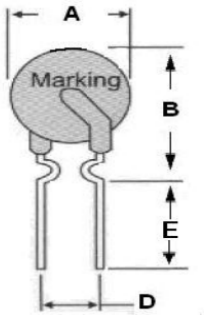


Fig.1

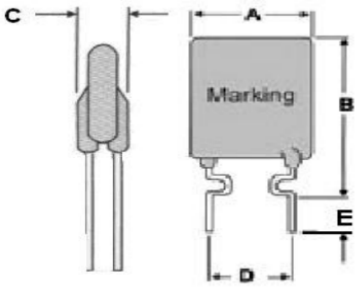


Fig.2

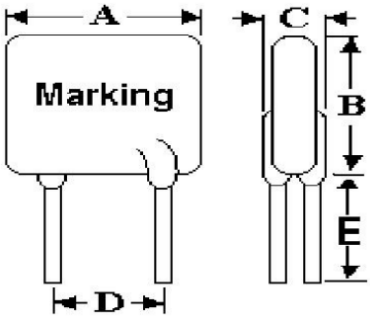


Fig.3

Unit ： mm

HL30 Series

Model	Dimensions（mm）					Lead material	Shape
	A(max)	B(max)	C(max)	D(typ)	E(min)	Tinned metal(mm)	Fig
HL30-050	7.4	12.7	3.0	5.1	4.6	24AWG/Φ0.5	1
HL30-075	7.4	13.0	3.0	5.1	4.6	24AWG/Φ0.5	1
HL30-090	7.4	18.5	3.0	5.1	4.6	24AWG/Φ0.5	2
HL30-110	7.4	18.5	3.0	5.1	4.6	24AWG/Φ0.5	2
HL30-120	7.4	18.5	3.0	5.1	4.6	24AWG/Φ0.5	2
HL30-135	9.2	17.6	3.0	5.1	4.6	24AWG/Φ0.5	2
HL30-160	9.2	20.2	3.0	5.1	4.6	24AWG/Φ0.5	2
HL30-185	9.2	20.2	3.0	5.1	4.6	24AWG/Φ0.5	2
HL30-200	15.2	20.2	3.0	5.1	4.6	24AWG/Φ0.5	2
HL30-250	13.2	22.4	3.0	5.1	4.6	24AWG/Φ0.5	2
HL30-300	13.2	20.4	3.0	5.1	4.6	20 AWG/Φ0.8	3
HL30-400	14.0	23.7	3.0	5.1	4.6	20 AWG/Φ0.8	3
HL30-500	14.0	23.7	3.0	10.2	4.6	20 AWG/Φ0.8	3

HL30-600	17.2	27.0	3.0	10.2	4.6	20 AWG/Φ0.8	3
HL30-700	17.2	27.0	3.0	10.2	4.6	20 AWG/Φ0.8	3
HL30-800	23.5	29.2	3.0	10.2	4.6	20 AWG/Φ0.8	3
HL30-900	23.5	29.2	3.0	10.2	4.6	20 AWG/Φ0.8	3

Note: Dimensions in the A, B, C are the maximum sizes, all typical values of D is at the tolerance of ± 0.75mm.

Thermal Derating Chart-I_H（A）

Model	Maximum ambient operating temperature（℃）									
	-40℃	-20℃	0℃	25℃	30℃	40℃	50℃	60℃	70℃	85
HL30 series	137%	130%	115%	100%	91%	83%	77%	68%	61%	52%

Electrical Characteristics

Model	I_H(A)	I_T (A)	Vmax	Imax	P_d	Maximum Time-to-Trip		Resistance（mΩ）	
			$V_{(DC)}$	A	W	Current （A）	Time（S）	R_{min}	R_{max}
HL30-050	0.5	1.0	30	40	0.5	2.5	5.0	250	600
HL30-075	0.75	1.5	30	40	0.6	3.75	5.0	200	370
HL30-090	0.90	1.8	30	40	0.7	4.5	8.0	100	220
HL30-110	1.10	2.2	30	40	0.7	5.5	8.0	70	200
HL30-120	1.20	2.4	30	40	0.8	6.0	8.0	80	180
HL30-135	1.35	2.7	30	40	0.8	6.75	8.0	70	160
HL30-160	1.60	3.2	30	40	0.9	8.0	8.0	60	140
HL30-185	1.85	3.7	30	40	1.0	9.25	8.0	50	120
HL30-200	2.00	4.0	30	40	1.2	10.0	11	40	100
HL30-250	2.50	5.0	30	40	1.2	12.5	11	30	80
HL30-300	3.00	6.0	30	40	2.0	15.0	11	30	70
HL30-400	4.00	8.0	30	40	2.5	20.0	12.7	10	60
HL30-500	5.00	10	30	40	3.0	25.0	14.5	10	50
HL30-600	6.00	12	30	40	3.5	30.0	16	5	40
HL30-700	7.00	14	30	40	3.8	35.0	17.5	5	30
HL30-800	8.00	16	30	40	4.0	40.0	18.8	5	25
HL30-900	9.00	18	30	40	4.2	40.0	20	5	20

I_H=Hold current:Maximum current at which the device will not interruptin 25℃ still air.

I_T=Trip current:Minimum current at which the device from low resistance to high resistance in 25℃ still air.

V_{max}=Maximum continuousvoltage device can withstand without damage at rated current.

I_{max}=Maximum fault current device can withstand without damage at rated voltage.

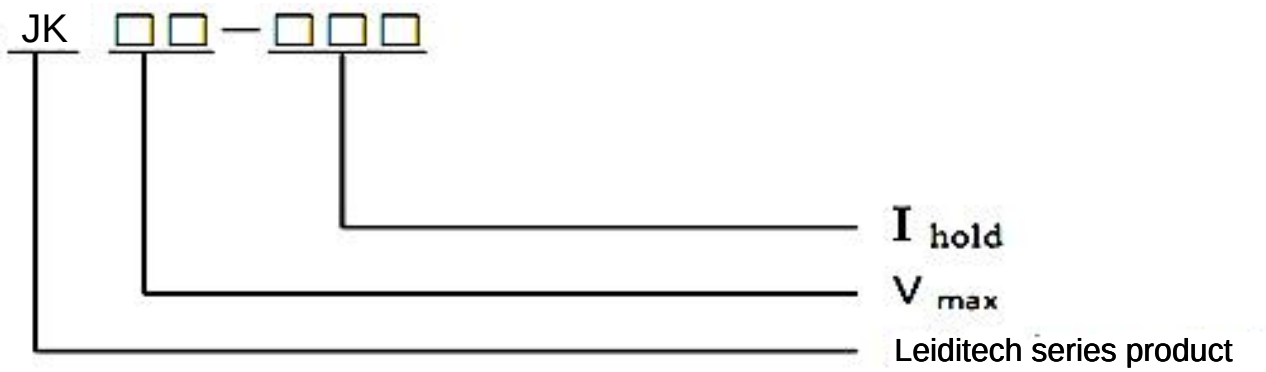
Maximum Time-to-trip:Maximum time to trip at assigned current.

P_d=Typical power dissipation:Typical amount of power dissipated from the device when in 25℃ still air environment.

R_{min}=Minimum resistance of device at 25℃ prior to tripping.

R_{max}=Maximum resistance of device at 25℃ prior to tripping.

Marking System



Environmental Specifications

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

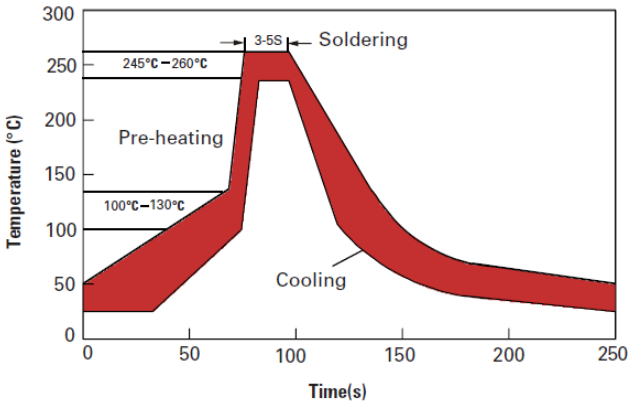
Solderingmethod

Wave Soldering

Soldering Temperature:245℃~260℃

Soldering Time:≤5sec

Soldering Position: Resettable fuse lead and the distance fromthe bottom ≥ 6mm



Manual soldering

Soldering Temperature:250℃~280℃

Soldering Time: ≤3sec

Soldering Position: Resettable fuse lead and the distance fromthe bottom ≥ 6mm

The maximum ambient temperature shall not exceed 40℃.Storage temperature higher than 40℃ 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 substancesare present.

Warning:

• Please read this specification before using the product.

• Use PPTC beyond the maximum ratings or improper use may result in device damage，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 above the rated voltage of the PPTC.

• Avoid impact PPTC device its thermal expansion like placed under pressure or installed in limited space. • Contamination of the PPTC material with certain silicon based oils or some aggressive solvents can adversely impact the performance of the devices.PPTC can be cleaned by standard methods.

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