



THINKING ELECTRONIC INDUSTRIAL CO., LTD.

HEAD OFFICE: 12F, No.93, Dashun 1st Rd., Zuoying Dist., Kaohsiung, Taiwan
TEL: 886-7-5577660 FAX: 886-7-5570560

MANUFACTURING SITE

- KAOHSIUNG FACTORY 1: No. 51, Kaifa Rd., N.E.P.Z, Kaohsiung City 81170, Taiwan
TEL: 886-7-9616668 FAX: 886-7-9616698
- KAOHSIUNG FACTORY 2: No. 2-2, Xinjian S. Rd., N.E.P.Z., Kaohsiung City 81170, Taiwan
TEL: 886-7-9630001 FAX: 886-7-3635113
- CHANGZHOU FACTORY: No.6 Longmen Rd., Wujin High & New-Tech Industrial
Development Zone, Changzhou, Jiangsu, China 213161
TEL:86-519-86578999 FAX:86-519-86558643
- DONG GUAN FACTORY: No.45, East Rd., Sha-Tao Dist., Chang-An Town,
Dongguan City, Guangdong, China 523863
TEL:86-769-85542016 FAX:86-769-85546890
- YICHANG FACTORY: No. 283 Xiaoting Avenue, Xiaoting Dist., Yichang
City 443007, Hubei, China
TEL:86-717-6510010 FAX:86-717-6511430



SPECIFICATION FOR APPROVAL

CUSTOMER	立創電子
CERTIFIED MODEL/TYPE	KRL1200050
PART NO.	KRL1200050SBY (RoHS+HF)
APPLICATION	
CUSTOMER P/N	
ISSUE DATE	Jul.06.2022
REV. NO.	
REV. DATE	

FOR CUSTOMER APPROVAL	CHECKED BY
	<i>Haili Gong</i>
	APPROVED BY
	<i>Huaifang Zhang</i>





REVISED RECORD SHEET

REV. NO	REV. DATE	REVISED CONTENT



INDEX	Page
■ Part Number Code	1
■ Structure and Dimensions	2
■ Electrical Characteristics	2
■ Reliability	3
■ Soldering Recommendation	4
■ RoHS Compliant Declaration	5
■ Warehouse Storage Conditions of Products	5
■ Safety Approvals	6
■ Certificates	6

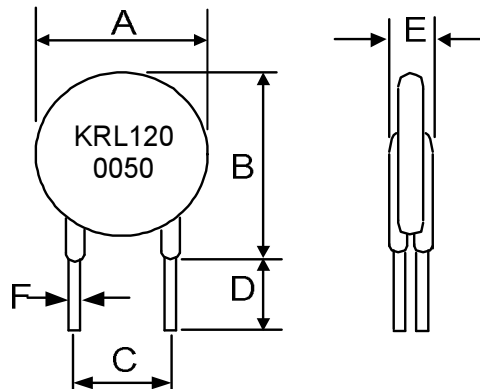
Part Number Code

Example :

K **R** **L** **120** **0050** **S** **B** **Y**
(1) (2) (3) (4) (5) (6) (7) (8)

No.	Item	Digit	Specification
(1)	Product Type	K	Thinking Polymer PTC Resettable Fuse
(2)	Form Factor	R	Radial Series
(3)	Usage	L	Line-Voltage
(4)	Vmax. Operation	120	120 V
(5)	I hold	0050	0.50A @ 23°C
(6)	Shape of Lead	S	Straight lead
(7)	Packaging	B	Bulk
(8)	Optional Suffix	Y	RoHS+HF compliance

Structure and Dimensions



(unit : mm)

A	B	C	D	E	F typ.
7.7~9.0	7.6~12.3	5±0.8	7.6~11.6	2.6~3.8	0.6±0.02

Electrical Characteristics (23 °C)

Part No.	V max.	I max.	I hold @ 23°C	I trip @ 23°C	Pd (typ.)
	(V)	(A)	(A)	(A)	(W)
KRL1200050SBY	120	3	0.50	1.00	1.56

Part No.	Max.time to trip		Resistance (Ω)		Operating / storage temperature
			Initial (Ri)	Post trip (R1)	
	(A)	(Sec.)	min.	max.	(°C)
KRL1200050SBY	2.50	6.0	0.5	1.2	-40 ~ +85

Ihold=Hold current :maximum current device will pass without interruption at 23°C still air unless otherwise specified.

Itrip=Trip current :minimum current that will switch the device from low resistance to high resistance at 23°C still air unless otherwise specified.

Vmax=Maximum voltage device can withstand without damage at rated current.

Imax=Maximum current device can withstand without damage at rated voltage .

Pd=Power dissipated from device while the tripped state at 23°C still air unless otherwise specified.

Rimin=Minimum resistance of device prior to tripping at 23°C .

Rimax=Maximum resistance of device prior to tripping at 23°C .

R1max=Maximum resistance of the device one hour after tripping at 23°C .

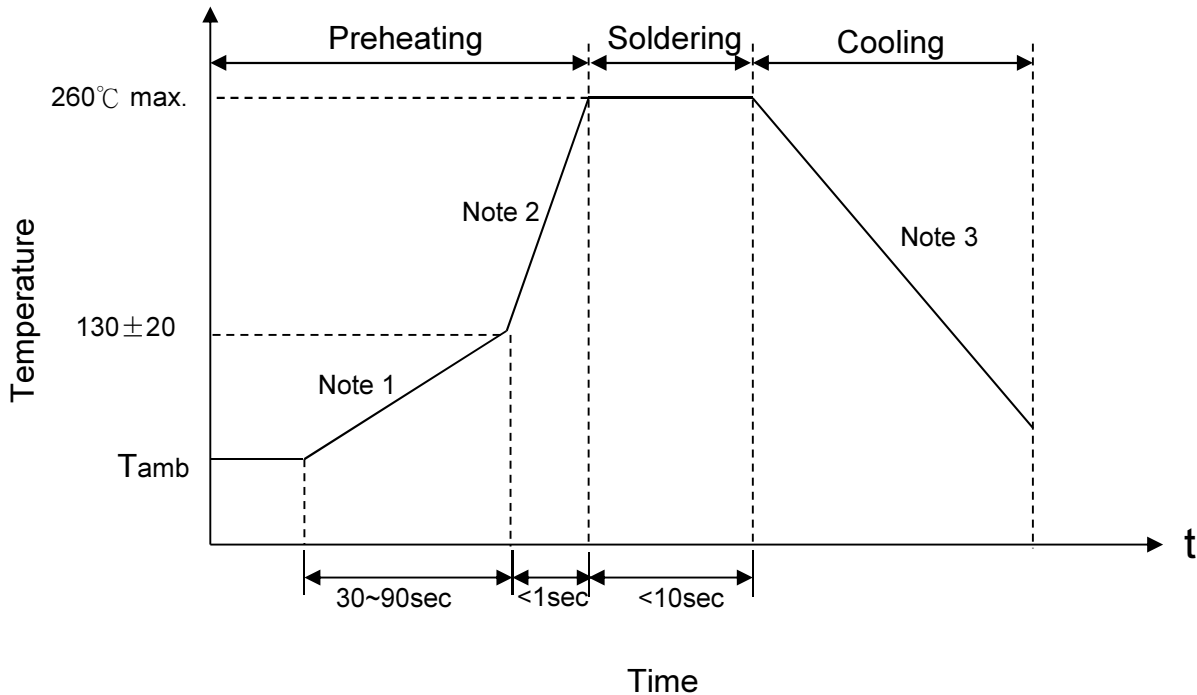
Caution:Operation beyond the specified rating or improper use may result in damage and possible arcing and flame.

Reliability

Item	Standard	Test conditions/Methods	Specifications
Passive Aging	IEC60738-1	85±5°C, 1000±24hrs	±5% typical resistance change
Humidity Aging	IEC60068-2-78	85±5°C, 80~85%RH, 1000±5hrs	±5% typical resistance change
Rapid Change of Temperature	IEC60738-1	85±5/-40±5°C, 10 cycles, Duration:30min	±5% typical resistance change
Overload Endurance	UL 1434	Vmax, 120% Imax ,50 cycles + Vmax, 300% Itrip ,6000 cycles	No arcing or burning
Aging	UL 1434	Vmax, Itrip ≤ I ≤ Imax , 1000±24hrs	No arcing or burning
Resistance to Soldering Heat	IEC60068-2-58	260 ± 5 °C , 10 ± 1 sec	Rf < R1max No visible damage

Soldering Recommendation

Wave Soldering Profile



Note 1 : (1~3)°C/sec
Note 2 : Approx. 200°C/sec

Recommended Reworking Conditions with Soldering Iron

Item	Conditions
Temperature of Soldering Iron-tip	360°C (max.)
Soldering Time	3 sec (max.)
Distance from Thermistor	2 mm (min.)

RoHS Compliant Declaration

We hereby declare that the components delivered to your company are compliant with RoHS directive 2015/863/EU.

Warehouse Storage Conditions of Products

(I) Storage Conditions :

- 1.Storage Temperature : $-10^{\circ}\text{C} \sim +40^{\circ}\text{C}$
- 2.Relative Humidity : $\leq 75\% \text{RH}$
- 3.Keep away from corrosive atmosphere and sunlight.

(II) Period of Storage : 1 year

Safety Approvals (Certified Model/Type : KRL1200050)



* UL 1434 / cUL recognized (File # E138827)



* TUV recognized (File # R 50279312)

Certificates

- (1) IATF 16949 certificate
- (2) ISO 9001 certificate

Test Report

- (1) RoHS test report
- (2) Halogen-free test report