



# 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	KRG0300300
PART NO.	KRG0300300IRY(RoHS+HF)
APPLICATION	
CUSTOMER P/N	
ISSUE DATE	Dec.01.2020
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



<b>INDEX</b>	<b>Page</b>
■ Part Number Code	1
■ Structure and Dimensions	2
■ Electrical Characteristics	2
■ Reliability	3
■ Soldering Recommendation	4
■ Typical Time-to-Trip Curves at 23°C	5
■ Thermal Derating Curve	5
■ RoHS Compliant Declaration	6
■ Warehouse Storage Conditions of Products	6
■ Taping and Dimensions	6
■ Taping and Dimensions	7
■ Safety Approvals	8
■ Certificates	9

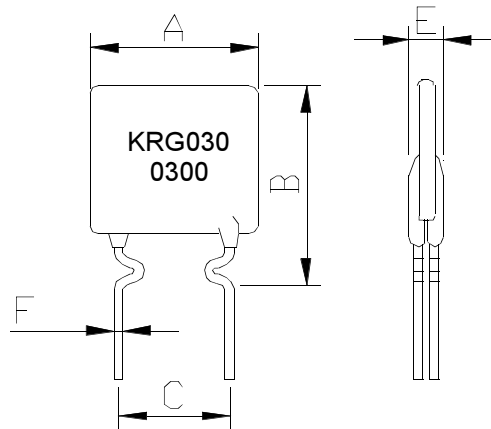
Part Number Code

Example :

**K**      **R**      **G**      **030**      **0300**      **I**      **R**      **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	G	General
(4)	Vmax. Operation	030	30 V
(5)	I hold	0300	3.0A @ 23°C
(6)	Appearance	I	Inner Kink Lead
(7)	Packaging	R	Taping & Reel
(8)	Optional Suffix	Y	RoHS+HF compliance

### Structure and Dimensions



( unit : mm )

A	B	C typ.	E	F
10.2~11.4	12.4~21.8	5.0±0.8	1.8~3.5	0.8±0.02

### Electrical Characteristics (23 °C)

Part No.	V max.	I max.	I hold @ 23°C	I trip @ 23°C	Pd (max.)
	(V)	(A)	(A)	(A)	(W)
KRG0300300IRY	30	40	3.00	6.00	2.00

Part No.	Max.time to trip		Resistance (Ω)		Operating / storage temperature
			Initial (Ri)	Post trip (R1)	
	(A)	(Sec.)	min.	max.	(°C)
KRG0300300IRY	15.00	10.8	0.020	0.080	-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 .

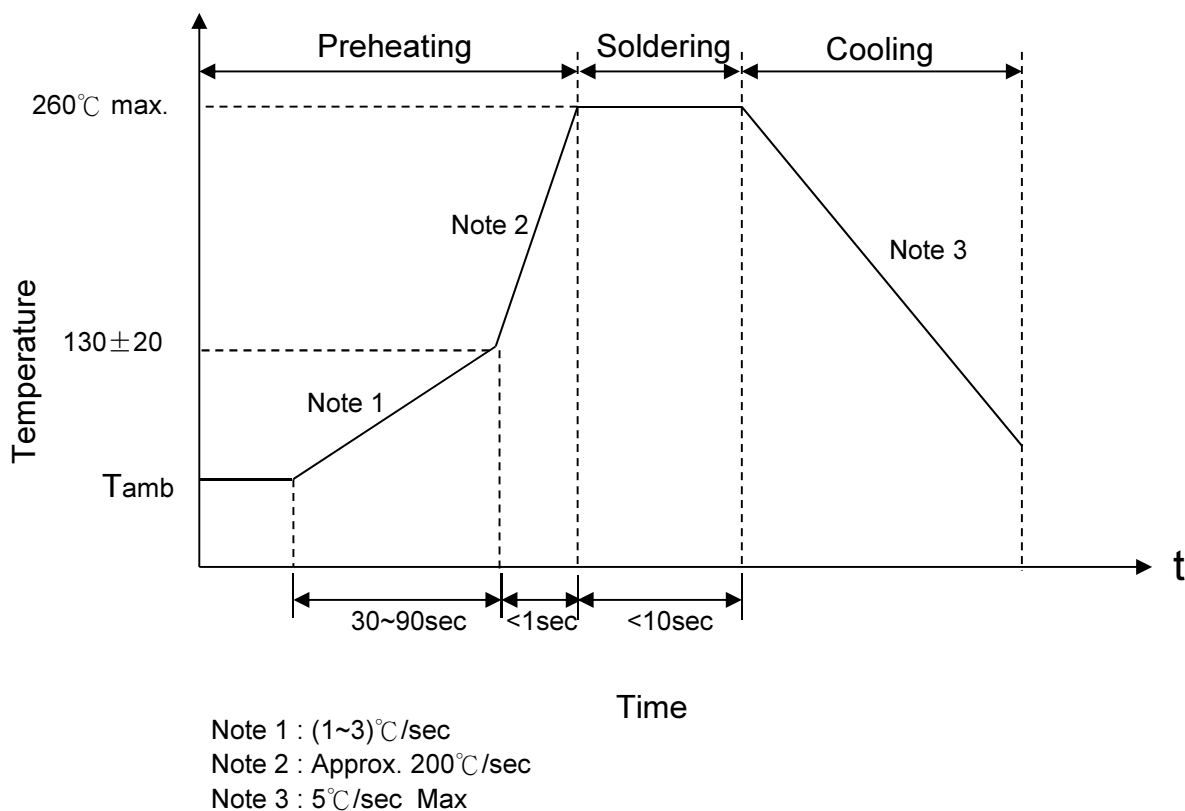
**Caution:Operation beyond the specified rating or improper use may result in damage and possible arcing and flame.**

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	V <sub>max</sub> ,120% I <sub>max</sub> ,50 cycles + V <sub>max</sub> ,300% I <sub>trip</sub> ,6000 cycles	No arcing or burring
Aging	UL 1434	V <sub>max</sub> , I <sub>trip</sub> ≤ I ≤ I <sub>max</sub> , 1000±24hrs	No arcing or burring
Resistance to Soldering Heat	IEC60068-2-58	260 ± 5 °C , 10 ± 1 sec	R <sub>f</sub> <R <sub>1max</sub> No visible damage

## Soldering Recommendation

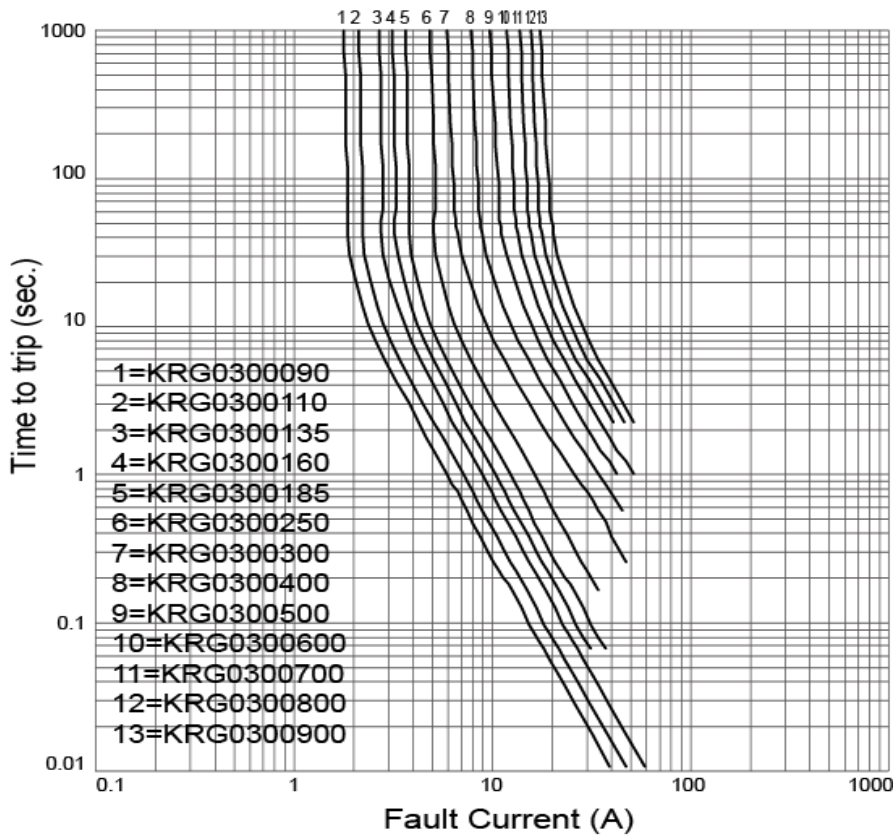
### Wave Soldering Profile



### Recommended Reworking Conditions with Soldering Iron

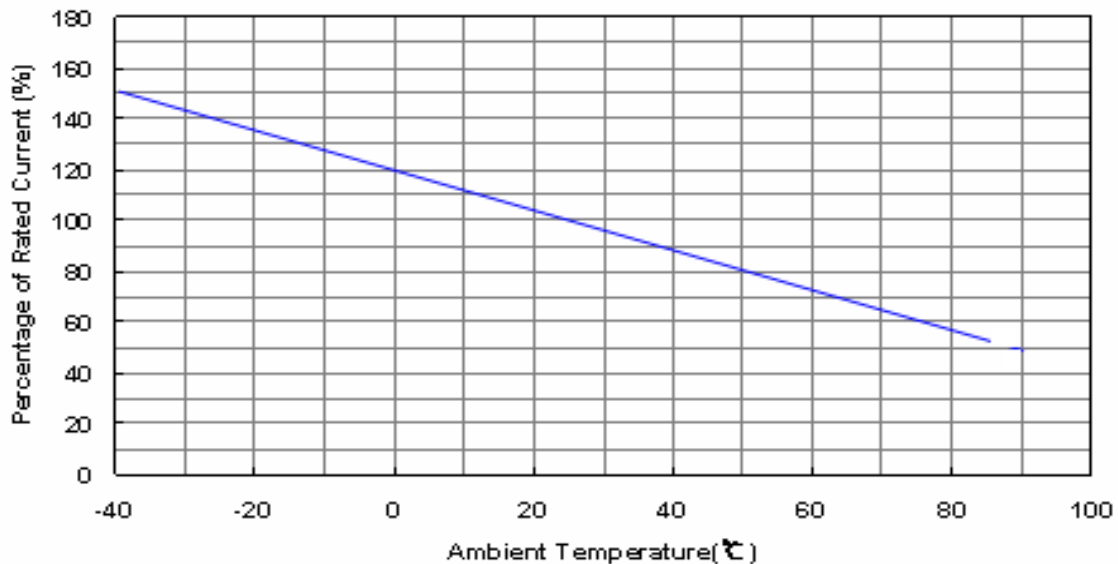
Item	Conditions
Temperature of Soldering Iron-tip	360°C (max.)
Soldering Time	3 sec (max.)
Distance from Thermistor	2 mm (min.)

Typical Time-to-Trip Curves at 23 °C



Thermal Derating Curve

Derating Curve for KRG030 Series



Model	Ambient Operation Temperature KRG030								
	-40°C	-20°C	0°C	23°C	40°C	50°C	60°C	70°C	85°C
KRG0300300	4.59	4.08	3.6	3.0	2.61	2.34	1.85	1.83	1.5



### 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

Taping and Dimensions

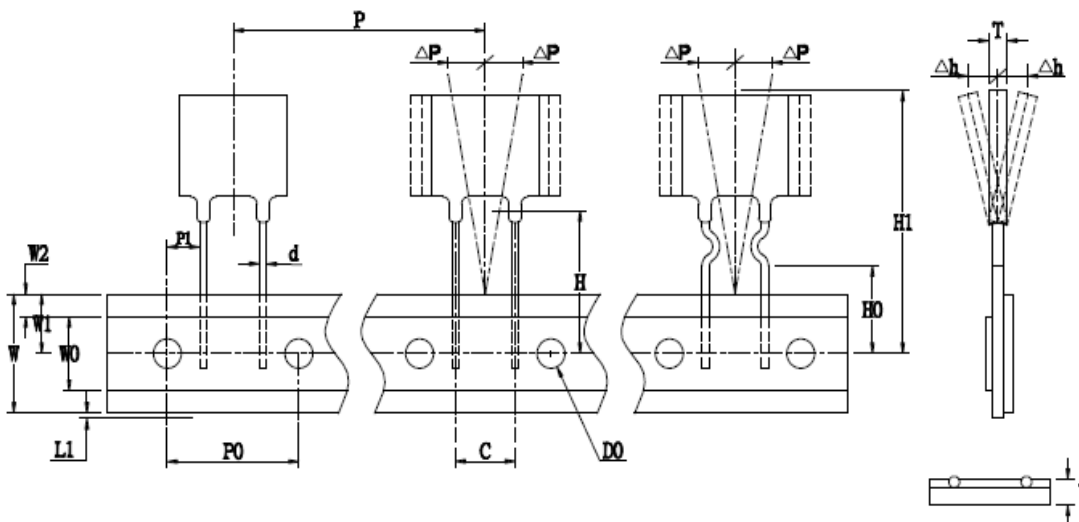


Figure 1

Reel & Direction

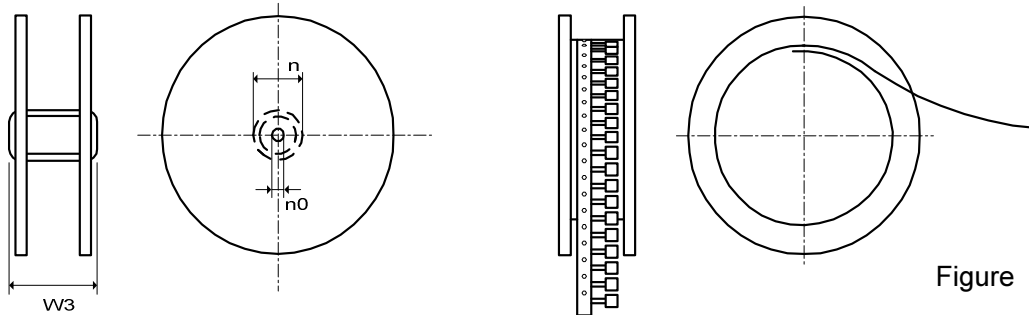


Figure 2

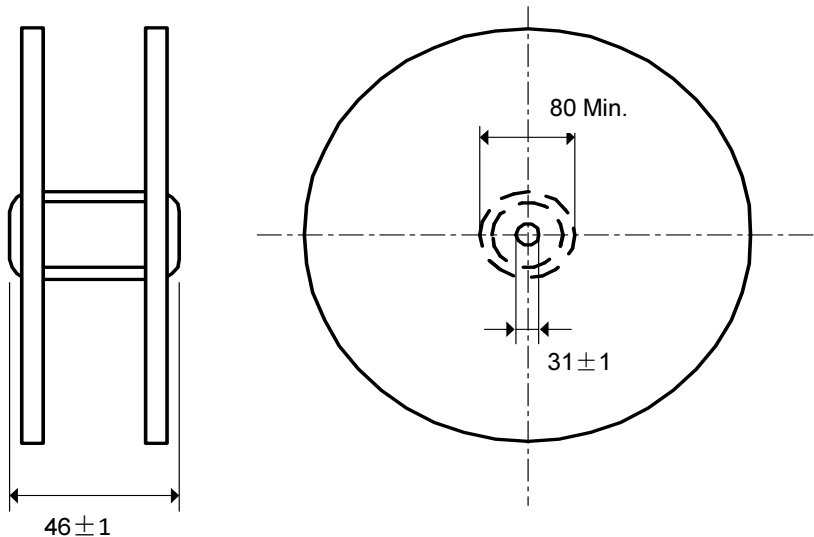
Radial Leded Devices Series Tape and Reel Specifications

Devices taped using EIA468-B/IEC286-2 standards. See table below and Figures 1 and 2 for details

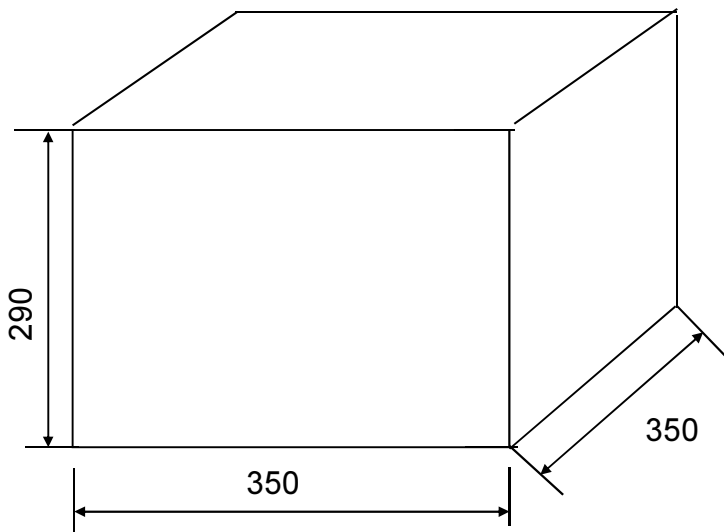
Dimension Description	Dimension(mm)	Tolerance(mm)
P0	12.7	±0.3
P1	3.85	±0.7
P	12.7	±1.0
H0	16	±0.5
W	18	+1/-0.5
W0	12.0	±1.5
F	5.0	±0.8
H1	32.2	Max.
W1	9.0	+0.75/-0.5
W2	3.0	Max.
D0	4.0	±0.2
L1	0.5	Max.
T	0.6	±0.2
Δp	1	Max.
Δh	2	Max.
d	0.8	±0.02

Standard Packing

(1) Quantity (2000pcs/reel)



(2) Quantity ( 5 reels / Carton )



(Unit:mm)

---

Safety Approvals (Certified Model/Type : KRG0300300)



\* UL 1434 / cUL recognized (File # E138827)



\* TUV recognized (File R50285055)

Certificates

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

Test Report

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