

Polymer PTC Resettable Fuse: KRG Series



30V Lead Type

■ Features

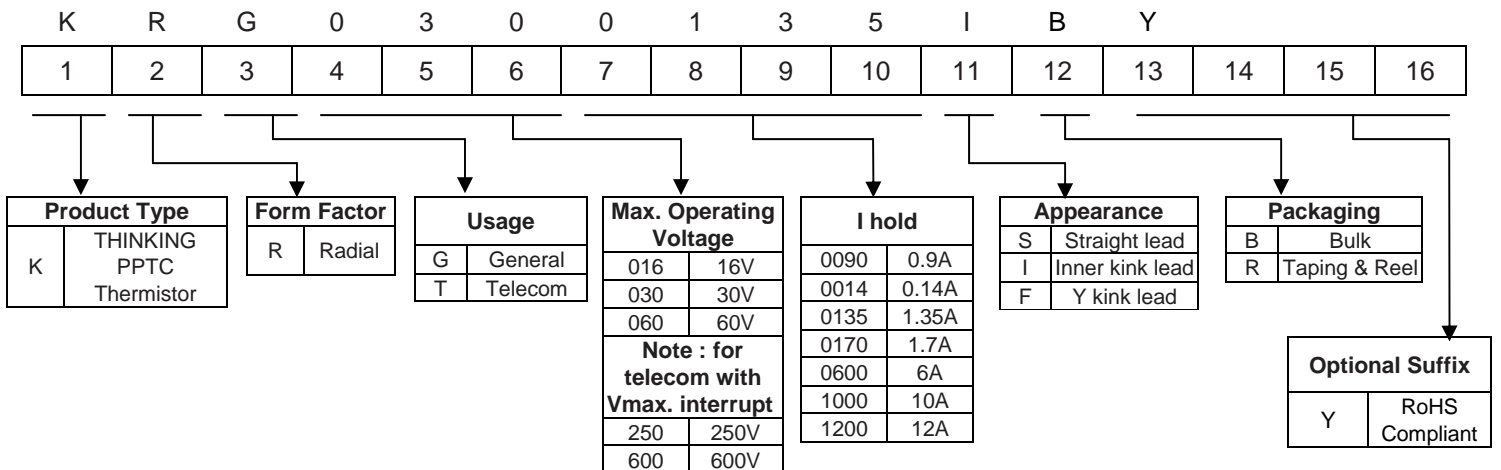
1. RoHS compliant
2. Radial leaded devices
3. Broadest range of resettable devices available in the industry
4. Current ratings from 0.9 to 9A
5. Maximum voltage is 30V
6. Operating temperature range: -40 ~ +85°C
7. Agency Recognition: UL /cUL/TUV



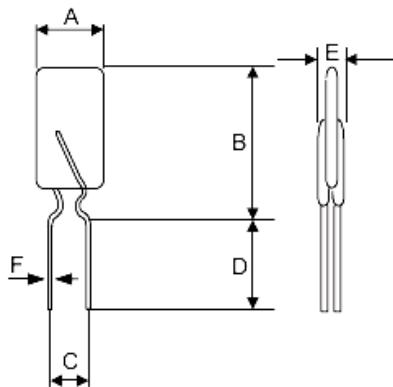
■ Recommended Applications

1. Motors, fans and blowers
2. Keyboard / mouse
3. Transformers
4. Industrial controls
5. Automotive electronics

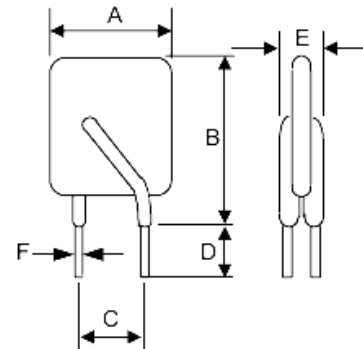
■ Part Number Code



■ Structure and Dimensions



Inner kink lead (I type)



Straight lead (S type)

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(Unit: mm)

Part No.	A	B		C	D	E	F
	Max.	S type	I type	Typ.	Typ.	Max.	Typ.
KRG0300090	7.4	12.2	12.2	5.0±0.8	10.5±0.5	3.0	0.5±0.02
KRG0300110	7.4	14.2	14.2	5.0±0.8	10.5±0.5	3.0	0.5±0.02
KRG0300135	8.9	13.5	13.5	5.0±0.8	10.5±0.5	3.0	0.5±0.02
KRG0300160	8.9	15.2	15.2	5.0±0.8	10.5±0.5	3.0	0.5±0.02
KRG0300185	10.2	15.7	15.7	5.0±0.8	10.5±0.5	3.0	0.5±0.02
KRG0300250	11.4	18.3	20.5	5.0±0.8	10.5±0.5	3.0	0.5±0.02
KRG0300300	11.4	17.3	21.8	5.0±0.8	11.0±0.8	3.0	0.8±0.02
KRG0300400	14.0	20.1	24.6	5.0±0.8	11.0±0.8	3.0	0.8±0.02
KRG0300500	14.0	24.9	26.6	10.0±0.8	11.0±0.8	3.0	0.8±0.02
KRG0300600	16.5	24.9	29.4	10.0±0.8	11.0±0.8	3.0	0.8±0.02
KRG0300700	19.1	26.7	31.2	10.0±0.8	11.0±0.8	3.0	0.8±0.02
KRG0300800	21.6	29.2	33.7	10.0±0.8	11.0±0.8	3.0	0.8±0.02
KRG0300900	24.1	29.7	34.2	10.0±0.8	11.0±0.8	3.0	0.8±0.02

■ Electrical Characteristics(23°C)

Part No.	Vmax.	I _{max.}	I _{hold} @ 23°C	I _{trip} @ 23°C	P _d (Typ.)	Maximum time to trip		Resistance (Ω)			Safety approvals	
	(V _{dc})	(A)	(A)	(A)	(W)	(A)	(Sec.)	Initial (R _i)		Post trip (R ₁)	UL/cUL	TUV
								Min.	Max.	Max.		
KRG0300090	30	40	0.90	1.8	0.6	4.50	5.90	0.070	0.120	0.22	√	√
KRG0300110	30	40	1.10	2.2	0.7	5.50	6.60	0.050	0.100	0.17	√	√
KRG0300135	30	40	1.35	2.7	0.8	6.75	7.30	0.040	0.080	0.13	√	√
KRG0300160	30	40	1.60	3.2	0.9	8.00	8.00	0.030	0.070	0.11	√	√
KRG0300185	30	40	1.85	3.7	1.0	9.25	8.70	0.030	0.060	0.09	√	√
KRG0300250	30	40	2.50	5.0	1.2	12.50	10.30	0.020	0.040	0.07	√	√
KRG0300300	30	40	3.00	6.0	2.0	15.00	10.80	0.020	0.050	0.08	√	√
KRG0300400	30	40	4.00	8.0	2.5	20.00	12.70	0.010	0.030	0.05	√	√
KRG0300500	30	40	5.00	10.0	3.0	25.00	14.50	0.010	0.030	0.05	√	√
KRG0300600	30	40	6.00	12.0	3.5	30.00	16.00	0.005	0.020	0.04	√	√
KRG0300700	30	40	7.00	14.0	3.8	35.00	17.50	0.005	0.020	0.03	√	√
KRG0300800	30	40	8.00	16.0	4.0	40.00	18.80	0.005	0.013	0.02	√	√
KRG0300900	30	40	9.00	18.0	4.2	45.00	20.00	0.005	0.010	0.02	√	√

Note: UL&cUL File No. E138827

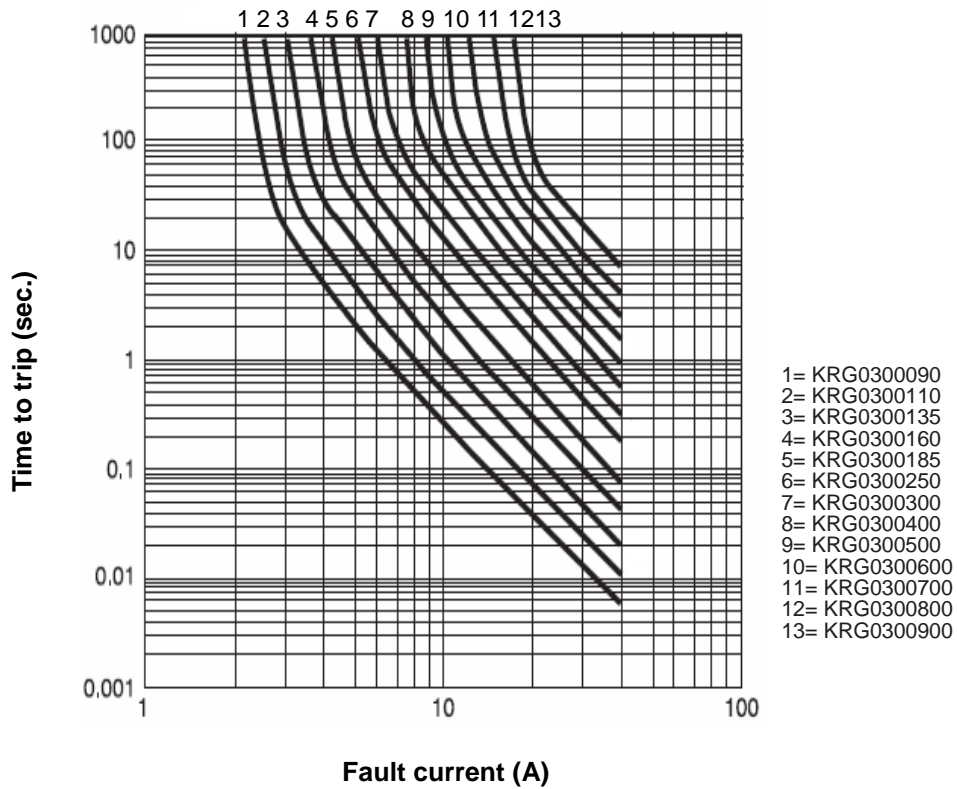
TUV File No. R50066618

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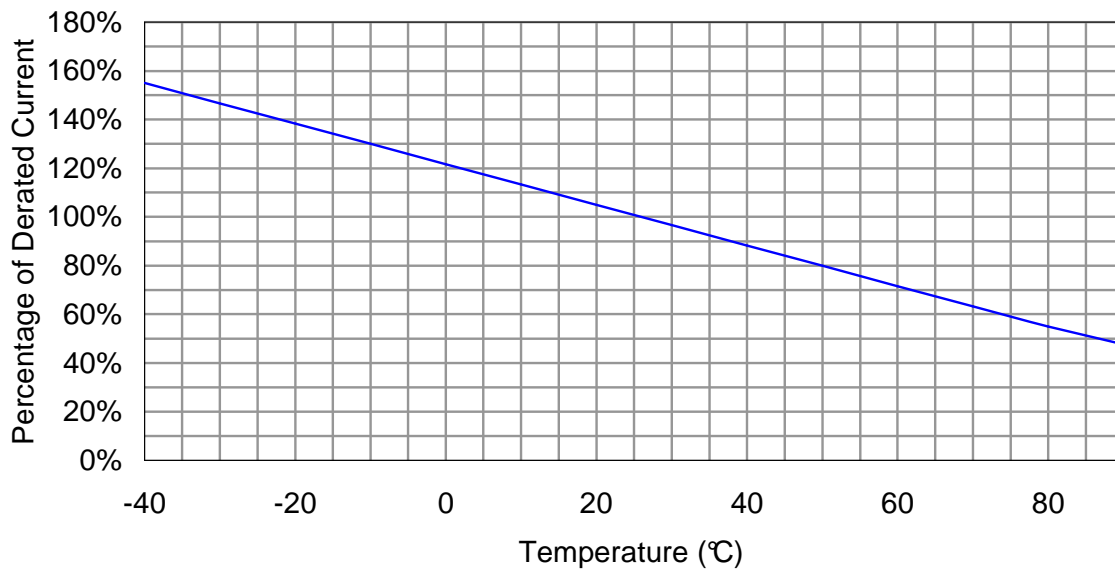


■ Typical Time to Trip Curves at 23°C



■ Thermal Derating Curve

Derating Curves for KRG 030 Series



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■ Reliability

Item	Standard	Test condition/methods	Criteria
Passive Aging	IEC60738-1	85±5°C, 1000±24hrs	±5% typical resistance change
Humidity storage	Specification Standard	85±5°C, 80~85%RH, 1000±24hrs	±5% typical resistance change
Rapid Change of Temperature	IEC60738-1	85±5/-40±5°C, 10 cycles	±5% typical resistance change
Overload Endurance	UL 1434	Vmax, 120% Imax, 50 cycles Vmax, 300% Itrip, 6000 cycles	No arcing or burring
Trip endurance	UL 1434	Vmax, Itrip ≤ I ≤ Imax, 1000±24hrs	No arcing or burring

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■ Packaging

Devices taped using EIA468-B/IEC286-2 standards. See table below and Fig. 1~3 for details.

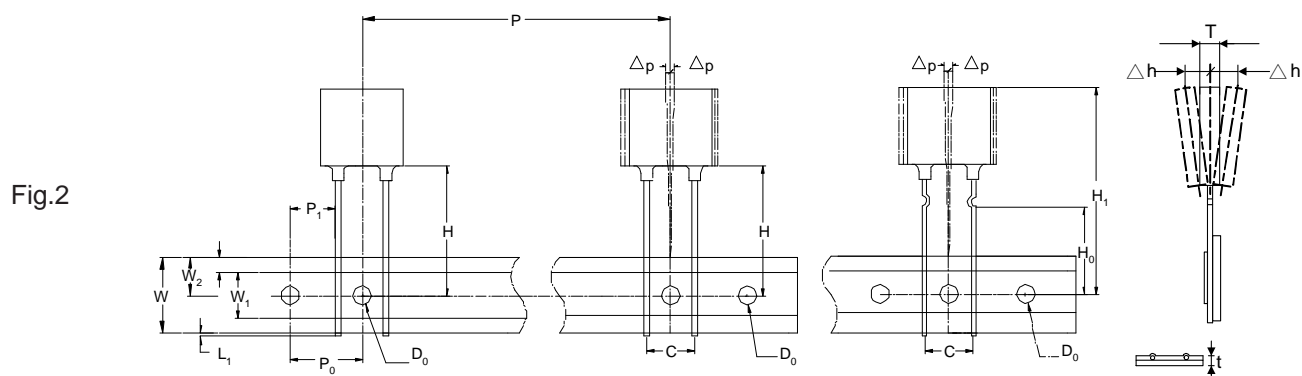
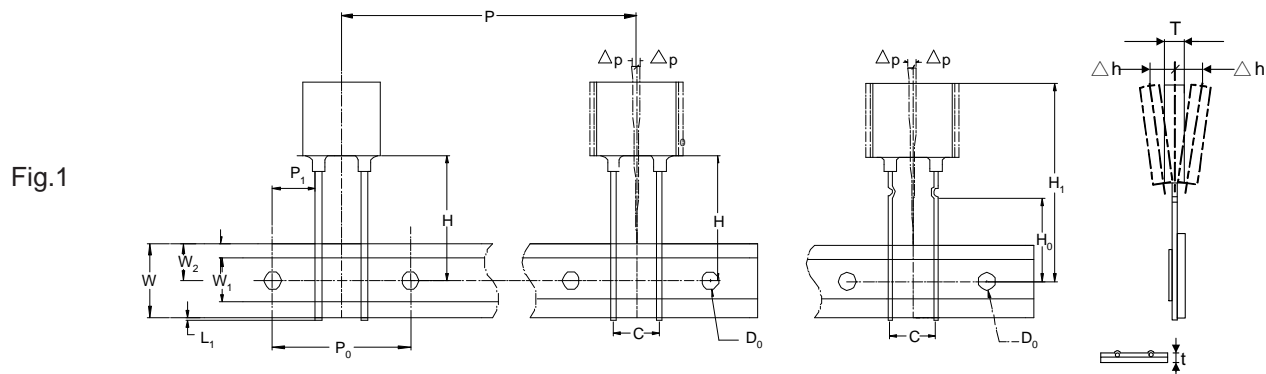
Dimension description	IEC Mark	Dimension (mm)	Tolerance (mm)
Sprocket hole pitch	P ₀	12.7	±0.3
Ordinate to adjacent component lead KRG0300090~KRG0300300	P ₁	3.6	±1.0
Ordinate to adjacent component lead KRG0300400	P ₁	3.45	±1.0
Ordinate to adjacent component lead KRG0300500~KRG0300900	P ₁	7.3	±1.0
Device pitch KRG0300090~KRG0300300	P	12.7	±1.0
Device pitch KRG0300400~KRG0300900	P	25.4	±1.0
Lead spacing	C	See " Structure and Dimensions"	--
Carrier tape width	W	18	±1.0
Top distance between tape edges	W ₀	3.0	Max
Hold-down tape width	W ₁	12	±1.0
Sprocket hole position	W ₂	9.0	+0.75/-0.5
Abscissa to top KRG0300090~KRG0300300	H ₁	32.2	Max.
Abscissa to top KRG0300400~KRG0300900		47.5	
Abscissa to plane (straight lead)	H	18.0	+2/-0
Abscissa to plane (kinked lead)	H ₀	16.0	±0.5
Sprocket hole diameter	D ₀	4	±0.2
Lead protrusion	L ₁	1	Max.
Tape thickness	t	0.9	Max.
Body lateral deviation	Δh	0	±1.0
Body tape plane deviation	Δp	0	±1.3
Reel width	W ₃	56	Max.
Reel diameter		340	±10
Arbor hole diameter	n ₀	31	±1
Core diameter	n	80	Min.

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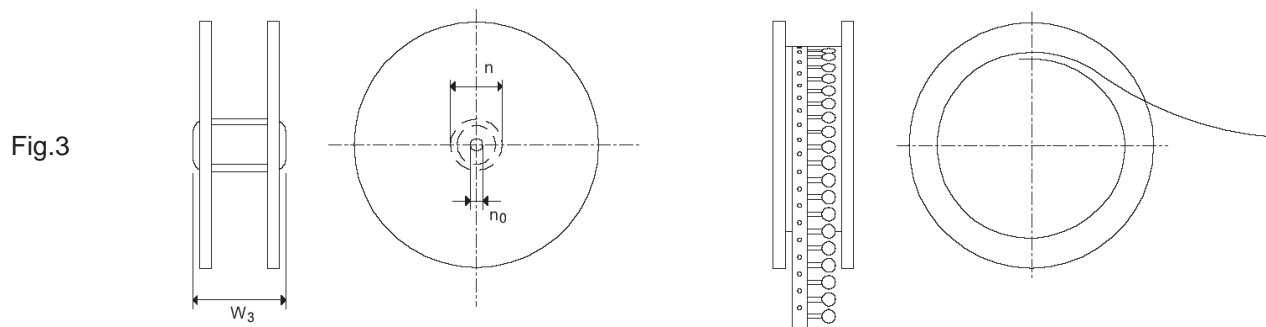
● Taping Specification



Note:

1. For KRG0300090-KRG0300400, please refer to Fig. 1.
2. For KRG0300500-KRG0300900, please refer to Fig. 2.

● Reel Specification



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■ Quantity

Bulk packing

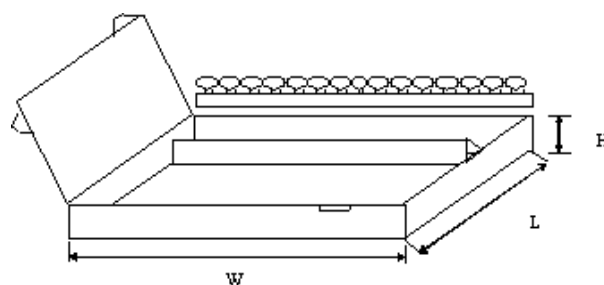
Series	Quantity (PCS/Bag)
KRG030 (0090~0135)	1000
KRG030 (0160~0600)	500
KRG030 (0700~0900)	250

Reel packing

Series	Quantity (PCS/Reel)
KRG030 (0090~0160)	3000
KRG030 (0185~0300)	2000
KRG030 (0400~0900)	1000

Ammo packing

Series	Quantity (PCS/Box)
KRG030 (0090~0300)	1500
KRG030 (0400~0700)	1000
KRG030 (0800~0900)	500



Unit: mm

W	L	H
348	185	73

■ Storage Conditions of Products

- 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.
- Period of Storage : 1 year