

Polymer PTC Resettable Fuse: KRG Series

60V Lead Type



■ Features

1. RoHS compliant
2. Radial leaded devices
3. Broadest range of resettable devices available in the industry
4. Current ratings from 0.1 to 3.75A
5. Maximum voltage is 60V
6. Operating temperature range : -40 ~ +85°C
7. Agency Recognition :UL /cUL/TUV



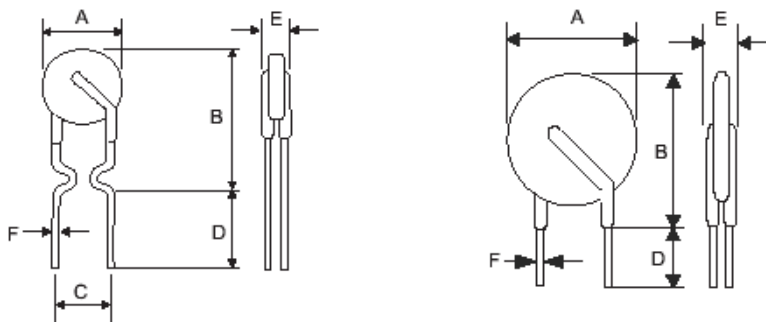
■ Recommended Applications

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

■ Part Number Code

K	R	G	0	6	0	0	1	3	5	I	B	Y			
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Product Type		Form Factor		Usage		Max. Operating Voltage		I hold		Appearance		Packaging		Optional Suffix	
K	THINKING PPTC Thermistor	R	Radial	G	General	016	16V	0008	0.08A	S	Straight lead	B	Bulk	Y	RoHS Compliant
				T	Telecom	030	30V	0090	0.9A	I	Inner Kink	R	Taping & Reel		
						060	60V	0014	0.14A	F	Y Kink				
						Note : for telecom with Vmax. interrupt		0135	1.35A						
								0170	1.7A						
								0600	6A						
								1000	10A						
						250	250V	1200	12A						
						600	600V								

■ Structure and Dimensions



Marking: Device is marked Vmax. operation , I hold

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Part no	A	B	C	D	E	F
	Max.	Max.	Typ.	Typ.	Max.	Typ.
KRG0600010	7.4	12.7	5.0±0.8	10.5±0.5	3.0	0.5±0.02
KRG0600017	7.4	12.7	5.0±0.8	10.5±0.5	3.0	0.5±0.02
KRG0600020	7.4	12.2	5.0±0.8	10.5±0.5	3.0	0.5±0.02
KRG0600025	7.4	12.7	5.0±0.8	10.5±0.5	3.0	0.5±0.02
KRG0600030	7.4	13.0	5.0±0.8	10.5±0.5	3.0	0.5±0.02
KRG0600040	7.6	13.5	5.0±0.8	10.5±0.5	3.0	0.5±0.02
KRG0600050	7.6	13.7	5.0±0.8	10.5±0.5	3.0	0.5±0.02
KRG0600065	9.7	14.5	5.0±0.8	10.5±0.5	3.0	0.5±0.02
KRG0600075	10.4	15.2	5.0±0.8	10.5±0.5	3.0	0.5±0.02
KRG0600090	11.7	15.7	5.0±0.8	10.5±0.5	3.0	0.5±0.02
KRG0600110	13.0	18.0	5.0±0.8	11.0±0.8	3.0	0.8±0.02
KRG0600135	14.5	19.6	5.0±0.8	11.0±0.8	3.0	0.8±0.02
KRG0600160	16.3	21.3	5.0±0.8	11.0±0.8	3.0	0.8±0.02
KRG0600185	17.8	22.9	5.0±0.8	11.0±0.8	3.0	0.8±0.02
KRG0600250	21.3	26.4	10.0±0.8	11.0±0.8	3.0	0.8±0.02
KRG0600300	24.9	30.0	10.0±0.8	11.0±0.8	3.0	0.8±0.02
KRG0600375	28.4	33.5	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		
KRG0600010	60	40	0.10	0.20	0.38	0.50	4.0	2.500	4.500	7.50	✓	✓
KRG0600017	60	40	0.17	0.34	0.48	0.85	3.0	3.300	5.210	8.00	✓	✓
KRG0600020	60	40	0.20	0.40	0.41	1.00	2.2	1.830	2.750	4.40	✓	✓
KRG0600025	60	40	0.25	0.50	0.45	1.25	2.5	1.250	1.950	3.00	✓	✓
KRG0600030	60	40	0.30	0.60	0.49	1.50	3.0	0.880	1.330	2.10	✓	✓
KRG0600040	60	40	0.40	0.80	0.56	2.00	3.8	0.550	0.860	1.29	✓	✓
KRG0600050	60	40	0.50	1.00	0.77	2.50	4.0	0.500	0.770	1.17	✓	✓
KRG0600065	60	40	0.65	1.30	0.88	3.25	5.3	0.310	0.480	0.72	✓	✓
KRG0600075	60	40	0.75	1.50	0.92	3.75	6.3	0.250	0.400	0.60	✓	✓
KRG0600090	60	40	0.90	1.80	0.99	4.50	7.2	0.200	0.310	0.47	✓	✓
KRG0600110	60	40	1.10	2.20	1.50	5.50	8.2	0.150	0.250	0.38	✓	✓
KRG0600135	60	40	1.35	2.70	1.70	6.75	9.6	0.120	0.190	0.30	✓	✓
KRG0600160	60	40	1.60	3.20	1.90	8.00	11.4	0.090	0.140	0.22	✓	✓
KRG0600185	60	40	1.85	3.70	2.10	9.25	12.6	0.080	0.120	0.19	✓	✓
KRG0600250	60	40	2.50	5.00	2.50	12.50	15.6	0.050	0.080	0.13	✓	✓
KRG0600300	60	40	3.00	6.00	2.80	15.00	19.8	0.040	0.060	0.10	✓	✓
KRG0600375	60	40	3.75	7.50	3.20	18.75	24.0	0.030	0.050	0.08	✓	✓

Note 1: UL&cUL File No. E138827

TUV File No. R50066618

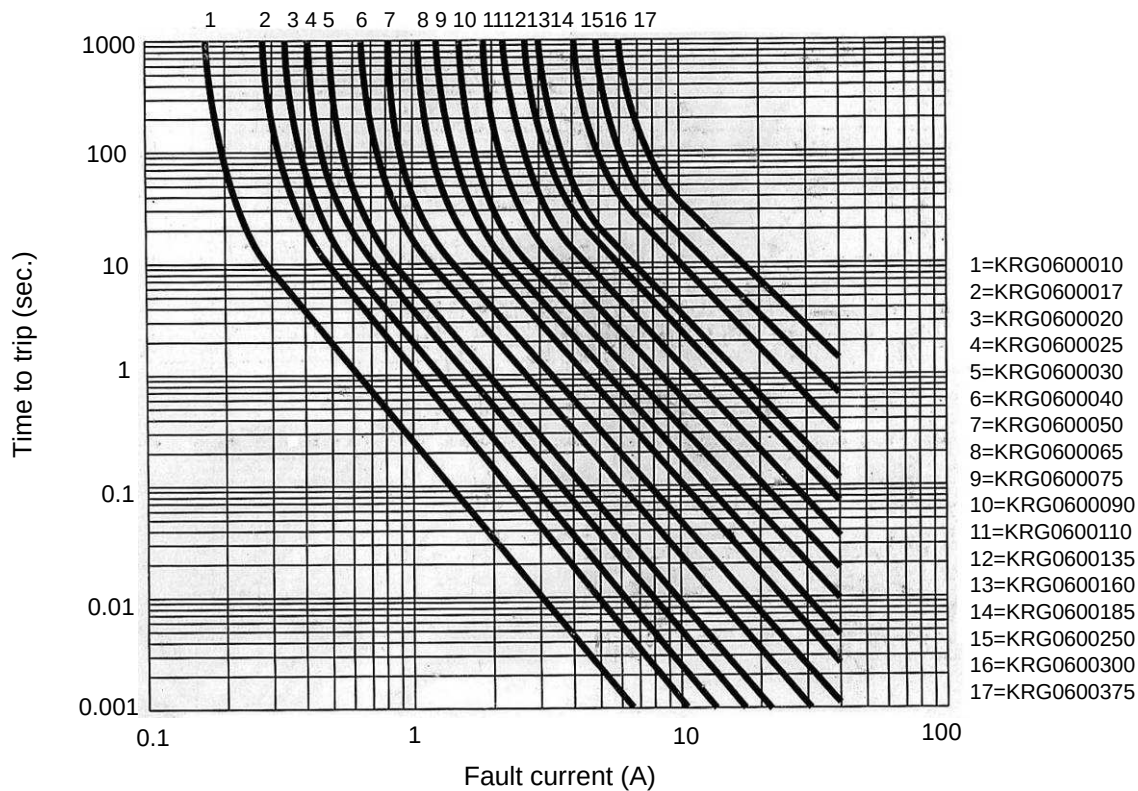
Note 2: Other Vmax rating are available upon request.

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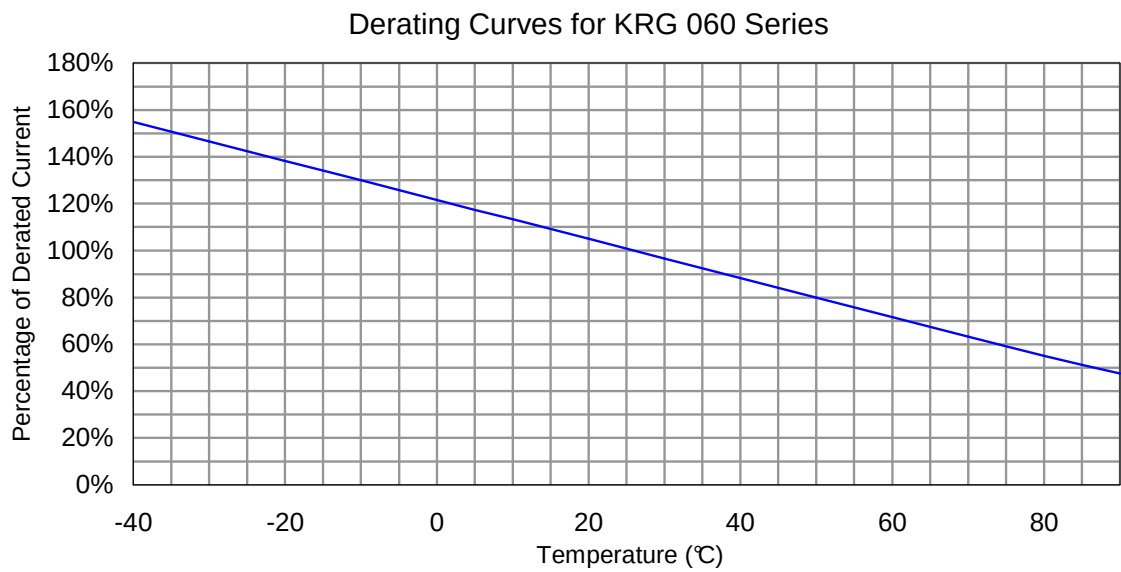
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Typical Time to Trip Curves at 23°C



Thermal Derating Curve



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■ Reliability

Item	Standard	Test Condition/methods	Criteria
Passive Aging	IEC60738-1	85±5℃, 1000±24hrs	±5% typical resistance change
Humidity storage	Specification Standard	85±5℃, 80~85%RH, 1000±24hrs	±5% typical resistance change
Rapid Change of Temperature	IEC60738-1	85±5/-40±5℃, 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 KRG0600010~KRG0600090	P ₁	3.6	±1.0
Ordinate to adjacent component lead KRG0600110~KRG0600185	P ₁	3.45	±1.0
Ordinate to adjacent component lead KRG0600250~KRG0600300	P ₁	7.3	±1.0
Device pitch KRG0600010~KRG0600090	P	12.7	±1.0
Device pitch KRG0600110~KRG0600300	P	25.4	±1.0
Device pitch KRG0600375	P	38.1	±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 KRG0600010~KRG0600090	H ₁	32.2	Max.
Abscissa to top KRG0600110~ KRG0600300		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

Fig.1

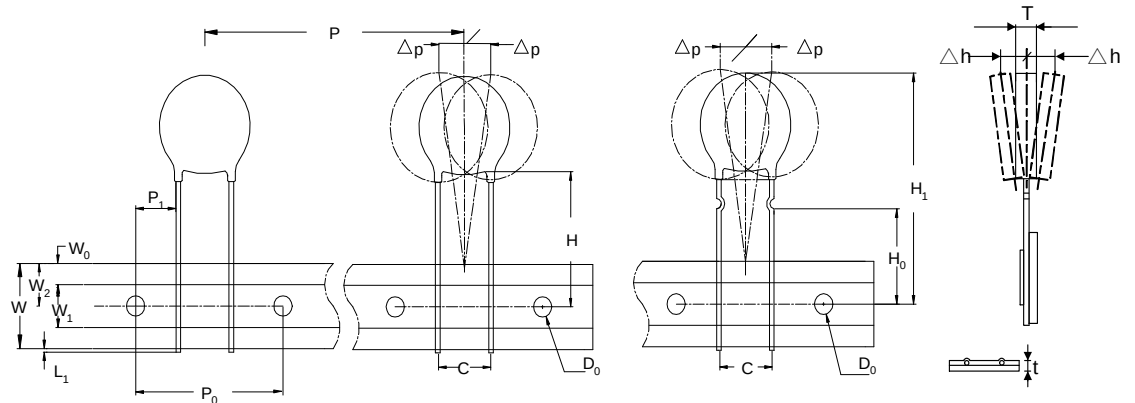
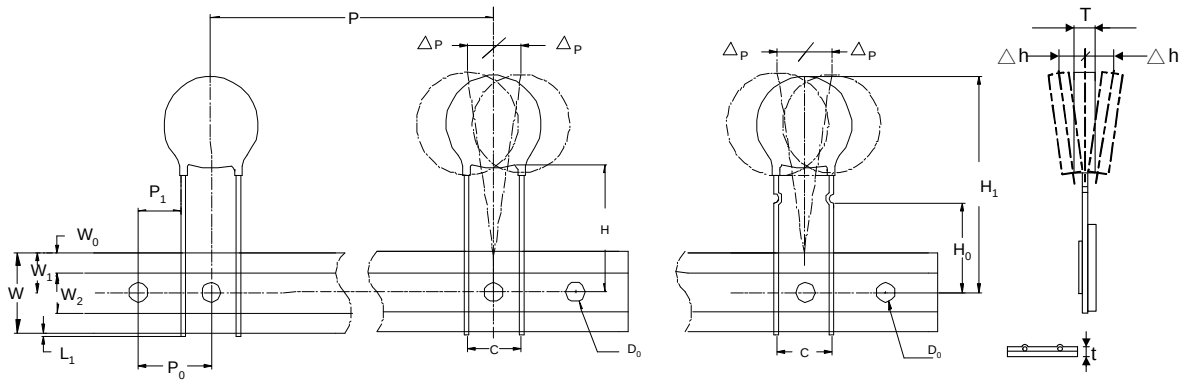


Fig.2

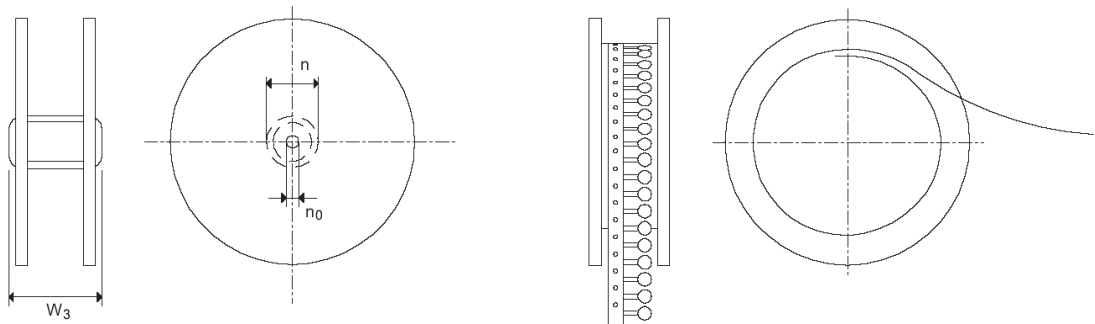


Note:

1. For KRG0600010-KRG0600185, please refer to Fig. 1.
2. For KRG0600250-KRG0600375, please refer to Fig. 2.

● Reel Specification

Fig.3



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■ Quantity

● Bulk packing

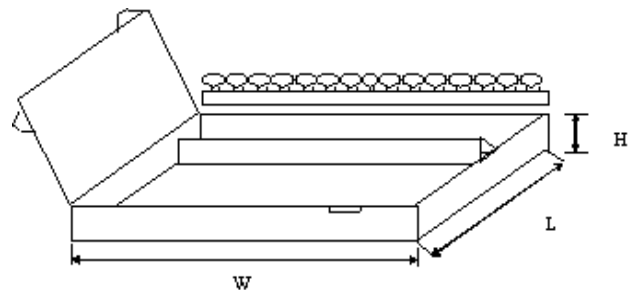
Series	Quantity (PCS/Bag)
KRG060 (0010~0025)	1000
KRG060 (0030~0185)	500
KRG060 (0250~0375)	250

● Reel packing

Series	Quantity (PCS/Reel)
KRG060 (0010, 0020~0040)	3000
KRG0600017	2500
KRG060 (0050~0090)	2000
KRG060 (0110~0185)	1500
KRG060 (0250~0375)	1000

● Ammo packing

Series	Quantity (PCS/Box)
KRG060 (0010~0040)	2000
KRG060 (0050~0090)	1500
KRG060 (0110~0375)	1000



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