

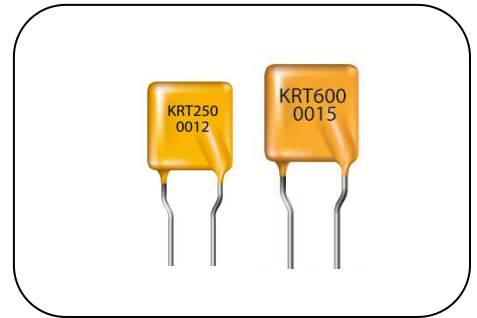
# Polymer PTC Resettable Fuse: KRT Series

## Radial Lead Type For Telecom Applications



### ■ Features

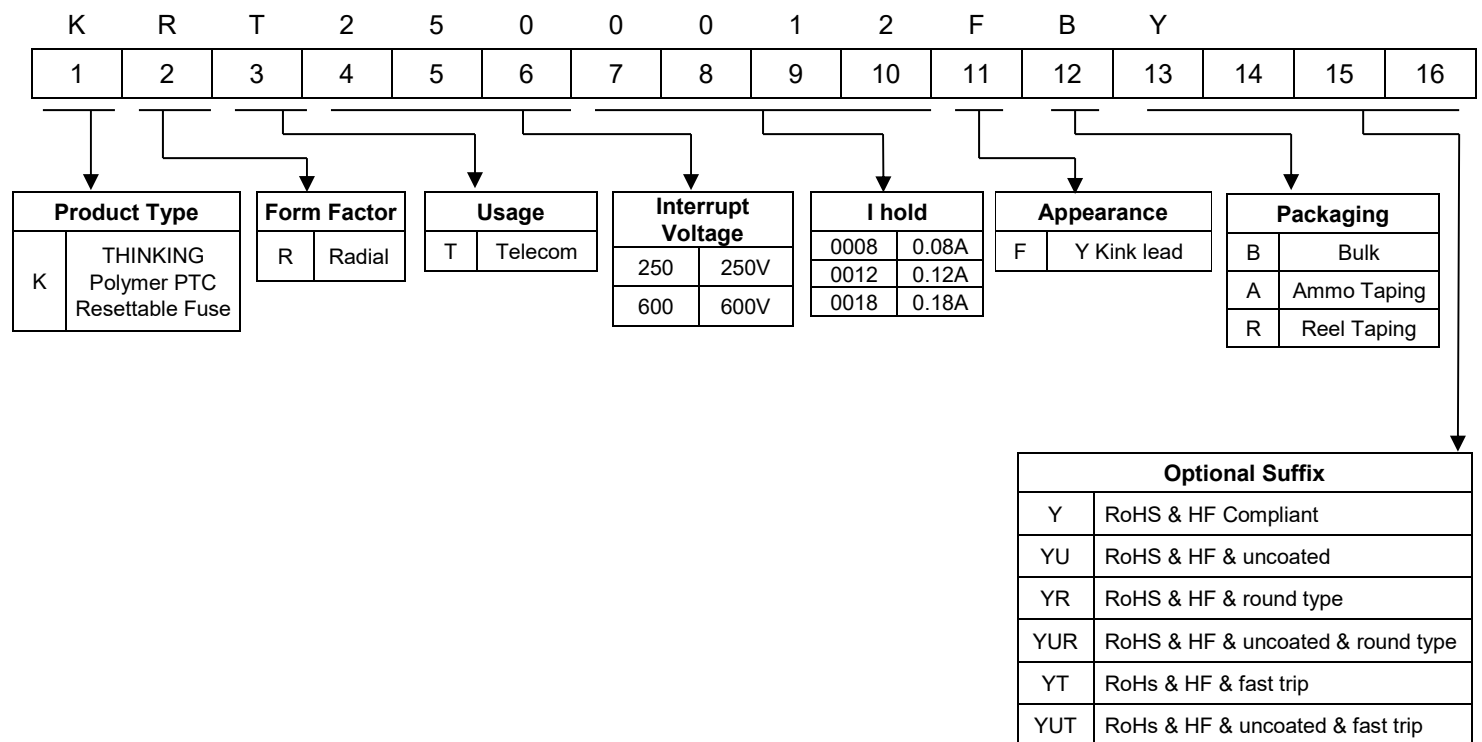
1. RoHS & Halogen-Free (HF) compliant
2. Hold current ratings from 0.08 A to 0.18A
3. High operating voltage rating :100Vdc/250Vdc
4. Resettable for over-current protection
5. Operating & storage temperature ranges: -40°C ~ +85°C
6. Agency recognition: UL / cUL / TUV



### ■ Recommended Applications

1. Telecommunication
2. Network equipment
3. Set-top box

### ■ Part Number Code



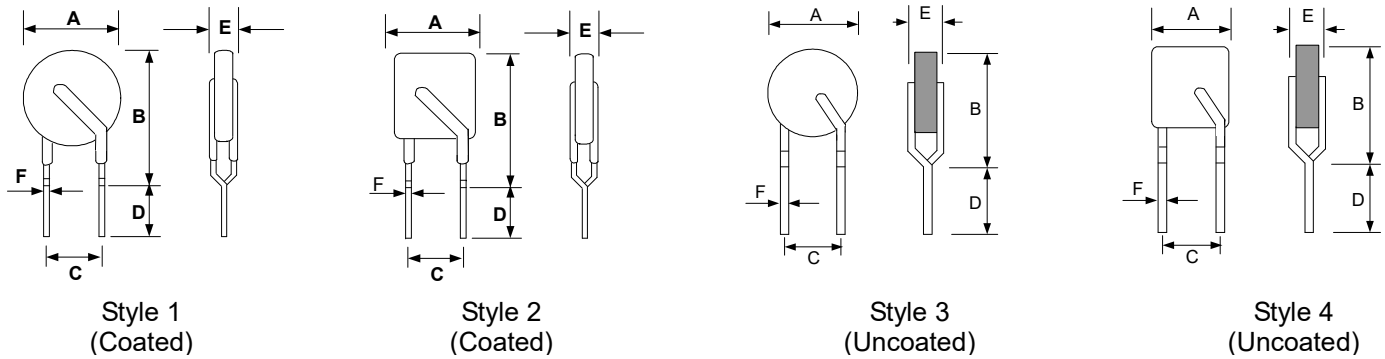
# Polymer PTC Resettable Fuse: KRT Series

## Radial Lead Type For Telecom Applications



### Structure and Dimensions

#### KRT250 Series

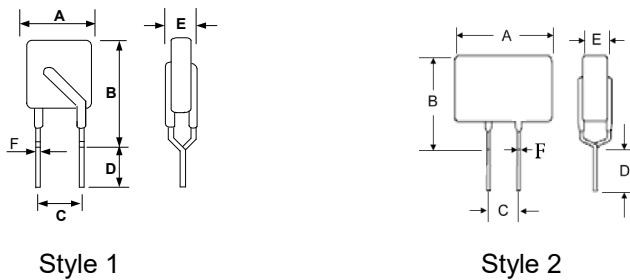


Marking: Coated device is marked with product type, max. interrupt voltage, and I hold.

(Unit: mm)

Part No.	A		B		C		D		E		F		Figure
	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Style
KRT2500008	4.7	6.3	4.7	9.6	4.2	5.8	4.7	8.7	2.7	4.6	0.58	0.62	1
KRT2500008-U	4.7	5.1	4.7	9.1	4.2	5.8	4.7	8.7	2.7	3.8	0.58	0.62	3
KRT2500008-T	4.7	6.3	4.7	9.9	4.2	5.8	4.7	8.7	2.7	4.6	0.58	0.62	1
KRT2500011	5.2	6.8	5.2	9.9	4.2	5.8	4.7	8.7	2.7	4.6	0.58	0.62	1
KRT2500011-U	5.2	5.9	5.2	9.4	4.2	5.8	4.7	8.7	2.7	3.8	0.58	0.62	3
KRT2500012	5.5	7.0	5.5	11.0	4.2	5.8	4.7	8.7	2.7	4.6	0.58	0.62	2
KRT2500012-U	5.5	6.0	5.5	10.0	4.2	5.8	4.7	8.7	2.7	3.8	0.58	0.62	4
KRT2500012-UT	5.5	6.0	5.5	10.0	4.2	5.8	4.7	8.7	2.7	3.8	0.58	0.62	4
KRT2500012-T	5.5	7.0	5.5	11.0	4.2	5.8	4.7	8.7	2.7	4.6	0.58	0.62	2
KRT2500015	5.5	7.0	5.5	11.0	4.2	5.8	4.7	8.7	2.7	4.6	0.58	0.62	2
KRT2500015-U	5.5	6.0	5.5	10.0	4.2	5.8	4.7	8.7	2.7	3.8	0.58	0.62	4
KRT2500015-T	5.5	7.0	5.5	11.0	4.2	5.8	4.7	8.7	2.7	4.6	0.58	0.62	2
KRT2500018	6.2	11.0	6.2	12.6	4.2	5.8	4.7	8.7	2.7	4.6	0.58	0.62	2
KRT2500018-U	6.2	10.4	6.2	12.6	4.2	5.8	4.7	8.7	2.7	3.8	0.58	0.62	4
KRT2500018R	8.0	11.0	8.0	12.0	4.2	5.8	4.7	8.7	2.7	3.8	0.58	0.62	1
KRT2500018UR	8.0	9.8	8.0	12.0	4.2	5.8	4.7	8.7	2.7	3.5	0.58	0.62	3

#### KRT600 Series



(Unit: mm)

Part No.	A		B		C		D		E		F		Figure
	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Style
KRT6000015	7.6	9.0	7.6	12.5	4.2	5.8	4.7	8.7	3.5	5.2	0.58	0.62	1
KRT6000016	7.6	16.0	7.6	12.6	4.2	5.8	4.7	8.7	3.5	6.0	0.58	0.62	1
KRT6000040	7.6	14.8	7.8	13.1	4.2	5.8	4.7	8.7	3.5	5.2	0.58	0.62	2

# Polymer PTC Resettable Fuse: KRT Series

## Radial Lead Type For Telecom Applications



### ■ Electrical Characteristics at 23°C

#### KRT250 Series

Part No.	V <sub>max.</sub>	V <sub>interrupt</sub>	I <sub>max.</sub>	I <sub>hold</sub>	I <sub>trip</sub>	Pd (Typ.)	Maximum Time to Trip		Resistance		Safety Approvals		
	(V <sub>dc</sub> )	(V <sub>ac</sub> )	(A)	(A)	(A)	(W)	Current	Time	Initial Ri	Post Trip R1			
	(V <sub>dc</sub> )	(V <sub>ac</sub> )	(A)	(A)	(A)	(W)	(A)	(Sec.)	Min. (Ω)	Max. (Ω)	UL/cUL	TUV	CQC
KRT2500008	100	250	3.00	0.08	0.16	1.00	0.35	4.00	14.00	33.00	√	√	√
KRT2500008-U	100	250	3.00	0.08	0.16	1.00	0.35	4.00	14.00	33.00	√	√	√
KRT2500008-T	100	250	3.00	0.08	0.16	1.00	0.35	2.50	15.00	33.00	√	√	√
KRT2500011	100	250	3.00	0.11	0.22	1.00	1.00	2.00	5.00	16.00	√	√	√
KRT2500011-U	100	250	3.00	0.11	0.22	1.00	1.00	2.00	5.00	16.00	√	√	√
KRT2500012	100	250	3.00	0.12	0.24	1.00	1.00	2.00	4.00	16.00	√	√	√
KRT2500012-U	100	250	3.00	0.12	0.24	1.00	1.00	2.00	6.00	16.00	√	√	√
KRT2500012-UT	100	250	3.00	0.12	0.24	1.00	1.00	0.70(typ.) 1.5(max.)	7.00	16.00	√	√	√
KRT2500012-T	100	250	3.00	0.12	0.24	1.00	1.00	0.70(typ.) 1.2(max.)	7.00	16.00	√	√	√
KRT2500015	100	250	3.00	0.145	0.29	1.00	1.00	2.50	3.00	14.00	√	√	√
KRT2500015-U	100	250	3.00	0.145	0.29	1.00	1.00	2.50	3.50	14.00	√	√	√
KRT2500015-T	100	250	3.00	0.145	0.29	1.00	1.00	1.50	5.40	14.00	√	√	√
KRT2500018	100	250	10.00	0.18	0.65	1.50	1.50	11.00	0.80	4.00	√	√	√
KRT2500018-U	100	250	10.00	0.18	0.65	1.50	1.50	10.00	0.80	4.00	√	√	√
KRT2500018R	100	250	10.00	0.18	0.65	1.50	3.00	2.00	0.80	4.00	√	√	√
KRT2500018UR	100	250	10.00	0.18	0.65	1.50	3.00	2.00	0.80	4.00	√	√	√

#### KRT 600 series

Part No.	V <sub>max.</sub>	V <sub>interrupt</sub>	I <sub>max.</sub>	I <sub>hold</sub>	I <sub>trip</sub>	Pd (Typ.)	Maximum Time to Trip		Resistance		Safety Approvals		
	(V <sub>dc</sub> )	(V <sub>ac</sub> )	(A)	(A)	(A)	(W)	Current	Time	Initial Ri	Post Trip R1			
	(V <sub>dc</sub> )	(V <sub>ac</sub> )	(A)	(A)	(A)	(W)	(A)	(Sec.)	Min. (Ω)	Max. (Ω)	UL/cUL	TUV	CQC
KRT6000015	250	600	3.00	0.15	0.30	1.00	1.00	4.00	6.00	17.00	√	√	√
KRT6000016	250	600	3.00	0.16	0.32	1.70	1.00	7.50	4.00	18.00	√	√	√
KRT6000040	100	600	3.00	0.40	1.00	1.70	3.00	4.00	0.95	1.90	√	√	√

Note: UL&cUL File No: E138827

TUV File No: R50161442, J50218395

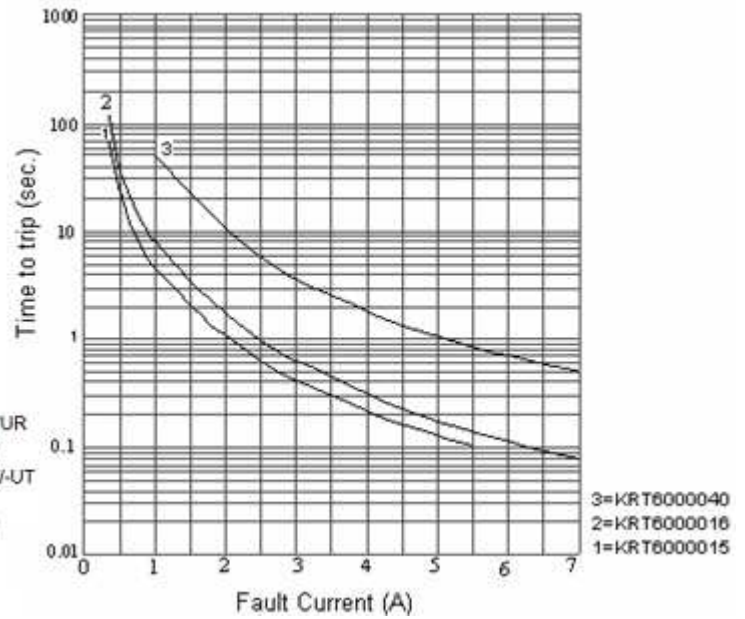
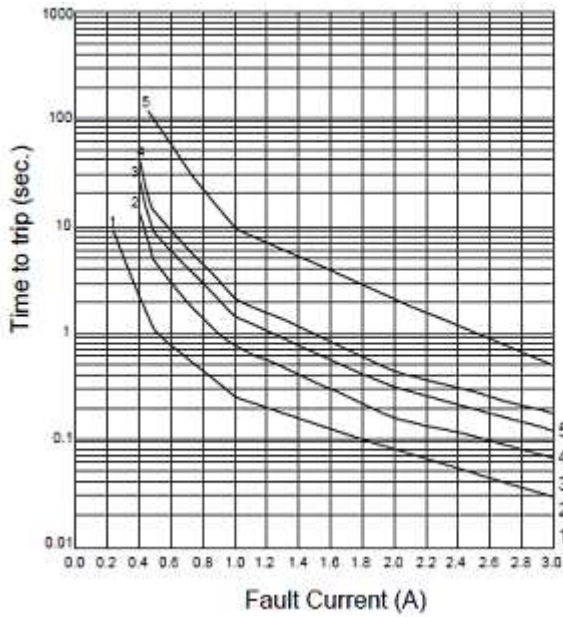
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# Polymer PTC Resettable Fuse: KRT Series

## Radial Lead Type For Telecom Applications

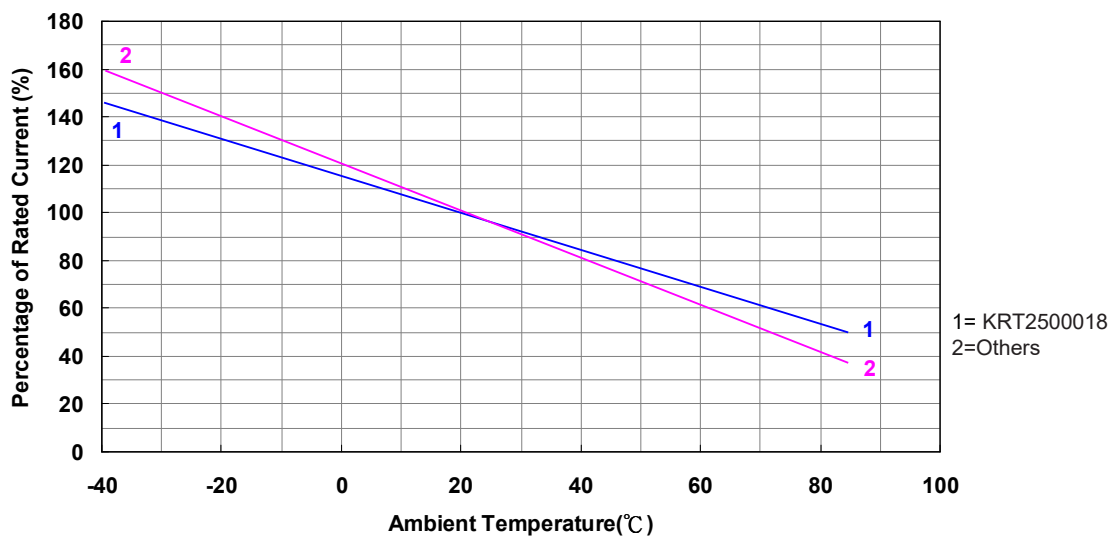


### Typical Time to Trip Curves at 23°C



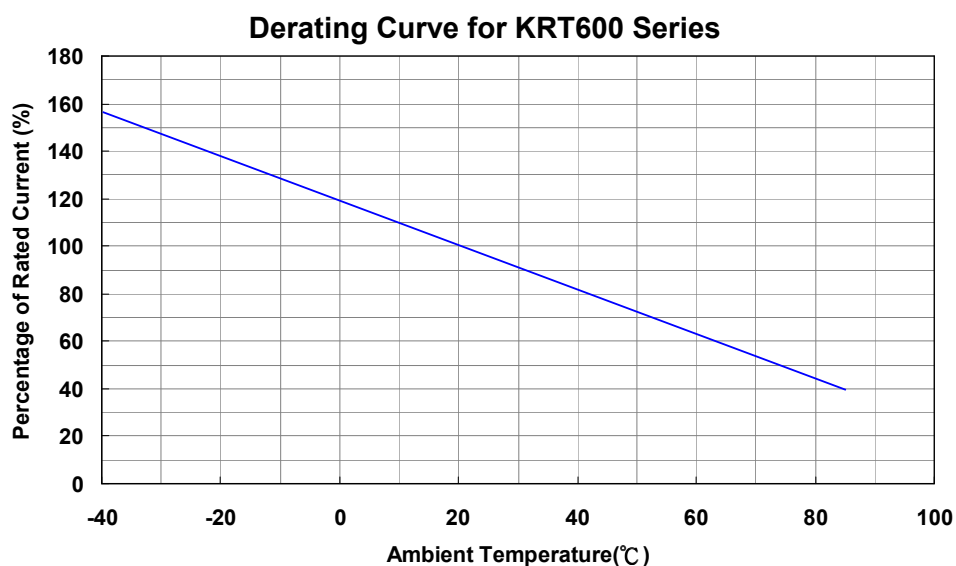
### Ihold & Itrip Thermal Derating Curve

Derating Curve for KRT250 Series



# Polymer PTC Resettable Fuse: KRT Series

## Radial Lead Type For Telecom Applications



### ■ Ihold Thermal Derating Chart

(Unit: A)

Part No.	Ambient Temperature								
	-40°C	-20°C	0°C	23°C	40°C	50°C	60°C	70°C	85°C
KRT2500008	0.128	0.112	0.096	<b>0.08</b>	0.064	0.056	0.0488	0.0416	0.032
KRT2500008-U	0.128	0.112	0.096	<b>0.08</b>	0.064	0.056	0.0488	0.0416	0.032
KRT2500008-T	0.128	0.112	0.096	<b>0.08</b>	0.064	0.056	0.0488	0.0416	0.032
KRT2500011	0.176	0.154	0.132	<b>0.11</b>	0.088	0.077	0.0671	0.0572	0.044
KRT2500011-U	0.176	0.154	0.132	<b>0.11</b>	0.088	0.077	0.0671	0.0572	0.044
KRT2500012	0.192	0.168	0.144	<b>0.12</b>	0.096	0.084	0.0732	0.0624	0.048
KRT2500012-U	0.192	0.168	0.144	<b>0.12</b>	0.096	0.084	0.0732	0.0624	0.048
KRT2500012-UT	0.192	0.168	0.144	<b>0.12</b>	0.096	0.084	0.0732	0.0624	0.048
KRT2500012-T	0.192	0.168	0.144	<b>0.12</b>	0.096	0.084	0.0732	0.0624	0.048
KRT2500015	0.240	0.210	0.180	<b>0.15</b>	0.120	0.105	0.0915	0.0780	0.060
KRT250015-U	0.240	0.210	0.180	<b>0.15</b>	0.120	0.105	0.0915	0.0780	0.060
KRT250015-T	0.240	0.210	0.180	<b>0.15</b>	0.120	0.105	0.0915	0.0780	0.060
KRT2500018	0.288	0.252	0.216	<b>0.18</b>	0.144	0.126	0.1098	0.0936	0.072
KRT2500018-U	0.288	0.252	0.216	<b>0.18</b>	0.144	0.126	0.1098	0.0936	0.072
KRT2500018R	0.261	0.234	0.212	<b>0.18</b>	0.158	0.144	0.1260	0.1170	0.094
KRT2500018UR	0.261	0.234	0.212	<b>0.18</b>	0.158	0.144	0.1260	0.1170	0.094
KRT6000015	0.240	0.210	0.180	<b>0.15</b>	0.120	0.105	0.0915	0.0780	0.060
KRT6000016	0.256	0.224	0.192	<b>0.16</b>	0.128	0.112	0.0976	0.0832	0.064
KRT6000040	0.640	0.560	0.480	<b>0.40</b>	0.320	0.270	0.230	0.190	0.130

# Polymer PTC Resettable Fuse: KRT Series

## Radial Lead Type For Telecom Applications



### ■ Reliability

Item	Standard	Test Conditions / Methods	Criteria
Resistance to Soldering Heat	IEC 60068-2-58	260 ± 5 °C , 10 ± 1 sec	Rf<R1max No visible damage
Passive Aging	IEC 60738-1	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	IEC 60738-1	85±5/-40±5°C, 10 cycles, Duration: 30min	±5% typical resistance change
Overload and Endurance Test	UL 1434	Vmax, 120% Imax, 50 cycles Vmax, 300% Itrip, 6000 cycles	No visible damage
Aging Test	UL 1434	Vmax, Itrip ≤ I ≤ Imax, 1000±24hrs	No visible damage

### ■ Packaging

Devices are taped according to IEC 60286-2 standard. See table below and Figure1 to Figure 3 for details.

Dimension description	IEC Mark	Dimension (mm)	Tolerance (mm)
Sprocket hole pitch	P <sub>0</sub>	12.70	±0.3
Ordinate to adjacent component lead	P <sub>1</sub>	3.85	±0.7
Device pitch KRT2500008-KRT2500018, KRT6000015	P	12.70	±1.0
Device pitch KRT6000016		25.40	
Lead spacing	F	5.00	±0.8
Lead diameter	d	0.60	±0.02
Carrier tape width	W	18.00	+1/-0.5
Top distance between tape edges	W <sub>2</sub>	3.00	Max
Hold-down tape width	W <sub>0</sub>	12.00	±1.5
Sprocket hole position	W <sub>1</sub>	9.00	+0.75/-0.5
Abscissa to top	H <sub>1</sub>	32.20	Max.
Abscissa to plane (kinked lead)	H <sub>0</sub>	16.00	±0.5
Sprocket hole diameter	D <sub>0</sub>	4.00	±0.2
Lead protrusion	L <sub>1</sub>	0.50	Max
Tape thickness	T	0.60	±0.2
Body lateral deviation	Δh	2.00	Max.
Body tape plane deviation	Δp	1.00	Max.
Reel width	W <sub>3</sub>	46.00	±1
Reel diameter		340.00	±10
Arbor hole diameter	n <sub>0</sub>	31.00	±1
Core diameter	n	80.00	Min.

# Polymer PTC Resettable Fuse: KRT Series

## Radial Lead Type For Telecom Applications



- Taping Specification

Fig. 1 For KRT2500008, KRT2500011, KRT2500018R, KRT2500018UR

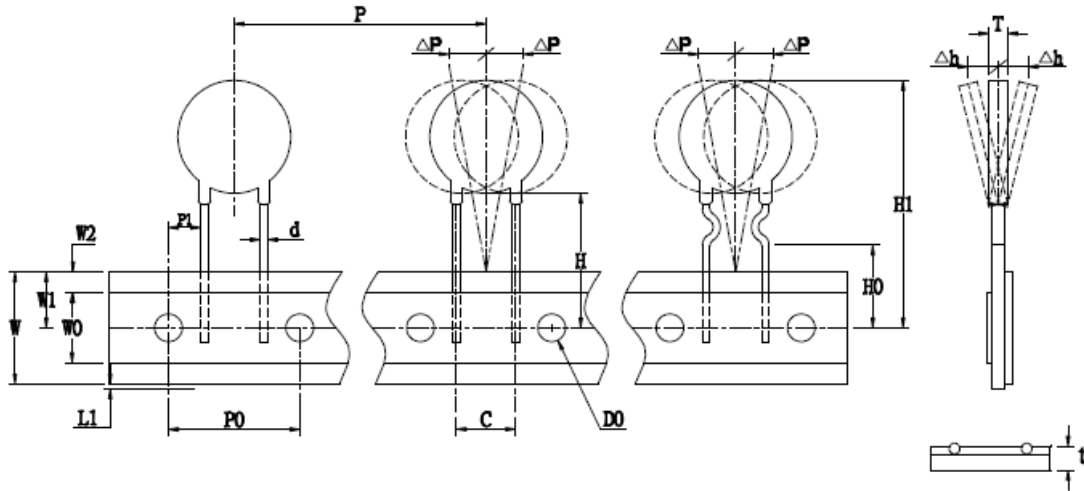
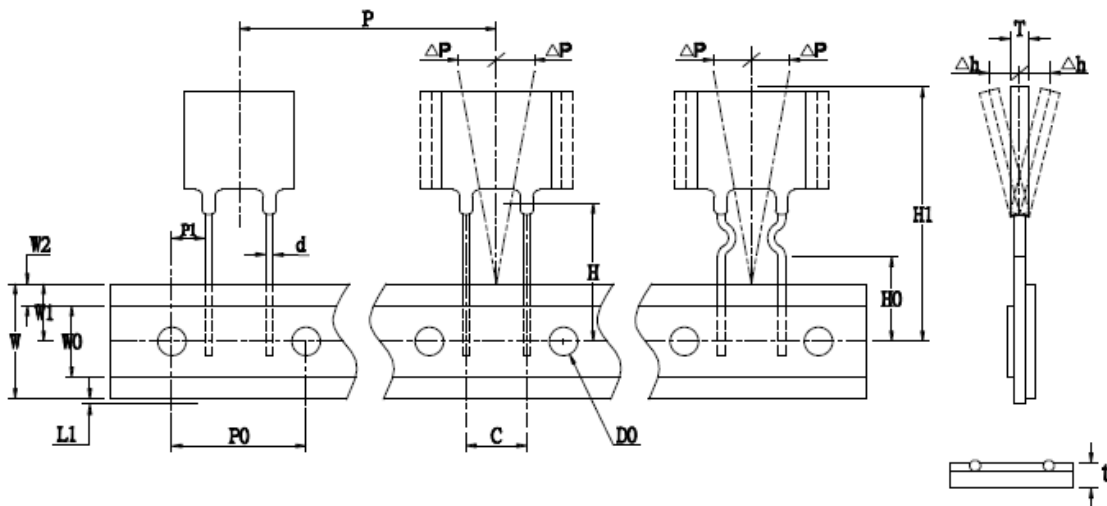


Fig. 2 For KRT2500012~KRT2500018, KRT6000015, KRT6000016



- Reel Specification

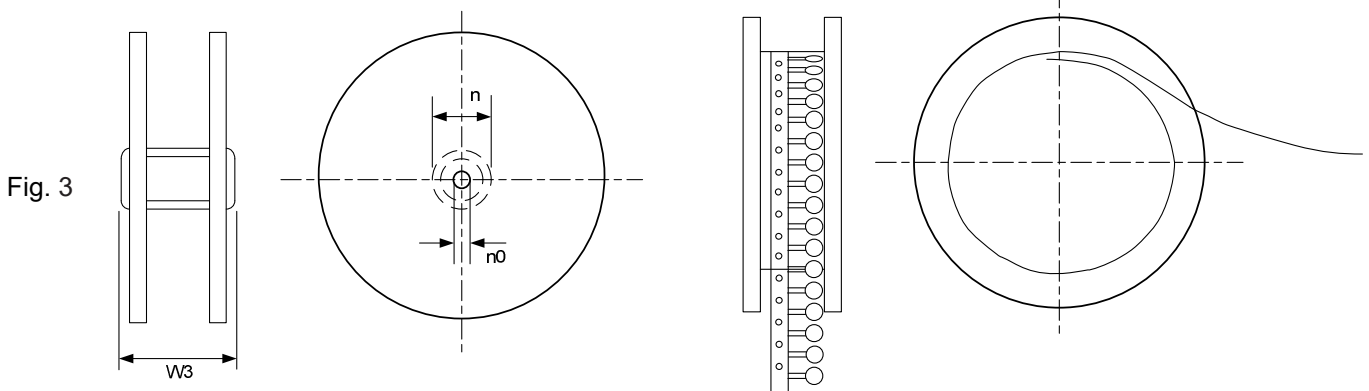


Fig. 3

# Polymer PTC Resettable Fuse: KRT Series

## Radial Lead Type For Telecom Applications



### ■ Quantity

#### ● Bulk Packing

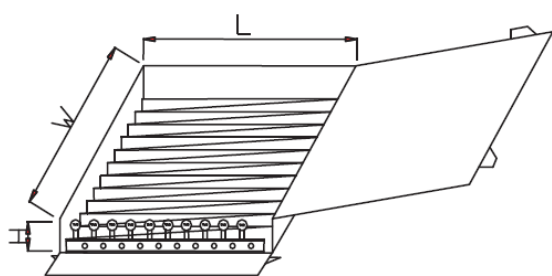
Series	Quantity (pcs/bag)
KRT250 (0008~0015)	300
KRT2500018	200
KRT600 series	100

#### ● Reel Packing

Series	Quantity (pcs/reel)
KRT250 (0008~0015)	1,500
KRT2500018, KRT6000015, KRT6000016, KRT6000040	1,200

#### ● Ammo Packing

Series	Quantity (pcs/box)
KRT250 series	1,200
KRT600 series	500



(Unit: mm)

Series	W	L	H
KRT250/KRT600	345	275	55

### ■ Warehouse 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