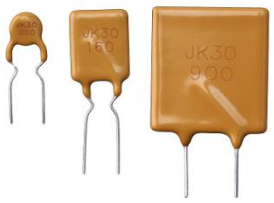
Polymer PTC Resettable Fuse JK30 Series

Features:

- ✧ RoHS Compliant & Halogen Free
- ✧ Radial leaded Devices
- ✧ Cured, flame retardant epoxy polymer insulating material meets UL94V-0 requirements
- ✧ Operation Current: 0.5A~9A ,Maximum Voltage: 30Vdc, Operating Temperature: -40℃ TO 85℃
- ✧ Agency recognition: UL、TUV

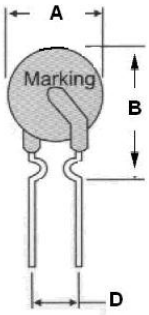


No.E217453

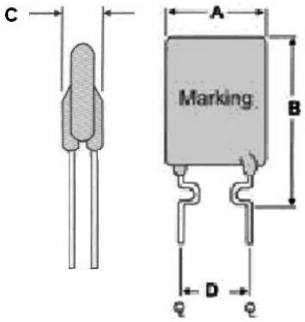
TÜVRheinland®
Precisely Right.
No. R 50243478

RoHS Compliant

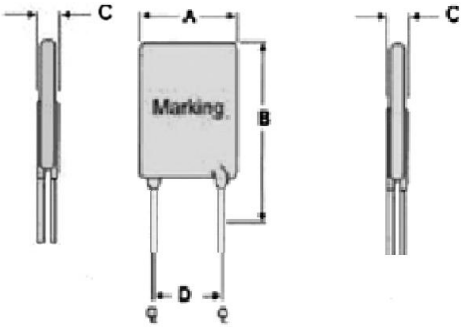
Product Dimensions



Pig.1



Pig.2



Pig.3

Unit : mm

JK30 Series

Model	Dimensions（mm）				Lead material	Shape
	A(max)	B(max)	C(max)	D(typ)	Tinned matel(mm)	Fig
JK30-050	7.4	12.7	3.0	5.1	24AWG/Φ0.5	1
JK30-075	7.4	13.0	3.0	5.1	24AWG/Φ0.5	1
JK30-090	7.4	18.5	3.0	5.1	24AWG/Φ0.5	2
JK30-110	7.4	18.5	3.0	5.1	24AWG/Φ0.5	2
JK30-120	7.4	18.5	3.0	5.1	24AWG/Φ0.5	2
JK30-135	9.2	17.6	3.0	5.1	24AWG/Φ0.5	2
JK30-160	9.2	20.2	3.0	5.1	24AWG/Φ0.5	2
JK30-185	9.2	20.2	3.0	5.1	24AWG/Φ0.5	2
JK30-200	15.2	20.2	3.0	5.1	24AWG/Φ0.5	2
JK30-250	13.2	22.4	3.0	5.1	24AWG/Φ0.5	2
JK30-300	13.2	20.4	3.0	5.1	20 AWG/Φ0.8	3

JK30-400	14.0	23.7	3.0	5.1	20 AWG/Φ0.8	3
JK30-500	14.0	23.7	3.0	10.2	20 AWG/Φ0.8	3
JK30-600	17.2	27.0	3.0	10.2	20 AWG/Φ0.8	3
JK30-700	17.2	27.0	3.0	10.2	20 AWG/Φ0.8	3
JK30-800	23.5	29.2	3.0	10.2	20 AWG/Φ0.8	3
JK30-900	23.5	29.2	3.0	10.2	20 AWG/Φ0.8	3

Note: ① Dimensions A, B, C is the maximum size, D values are typical tolerance of ± 0.50mm

Thermal Derating Chart-IH（A）

JK30 Series

Model	Maximum ambient operating temperatures（℃）									
	-40	-20	0	25	40	50	60	70	80	85
JK30-050	0.72	0.65	0.57	0.5	0.45	0.41	0.38	0.34	0.30	0.25
JK30-075	1.08	0.97	0.86	0.75	0.68	0.62	0.57	0.51	0.45	0.37
JK30-090	1.30	1.17	1.03	0.9	0.81	0.74	0.69	0.61	0.54	0.45
JK30-110	1.59	1.43	1.26	1.1	1.0	0.91	0.84	0.74	0.67	0.55
JK30-120	1.74	1.56	1.38	1.2	1.09	0.99	0.92	0.81	0.73	0.6
JK30-135	1.95	1.75	1.55	1.35	1.22	1.12	1.03	0.91	0.82	0.67
JK30-160	2.32	2.08	1.84	1.6	1.45	1.32	1.23	1.08	0.97	0.8
JK30-185	2.68	2.40	2.12	1.85	1.68	1.53	1.42	1.25	1.12	0.92
JK30-200	2.9	2.6	2.3	2	1.82	1.66	1.54	1.36	1.22	1
JK30-250	3.62	3.25	2.87	2.5	2.27	2.07	1.92	1.7	1.52	1.25
JK30-300	4.35	3.9	3.45	3	2.73	2.49	2.31	2.04	1.83	1.5
JK30-400	5.8	5.2	4.6	4	3.64	3.32	3.08	2.72	2.44	2
JK30-500	7.25	6.5	5.75	5	4.55	4.15	3.85	3.4	3.05	2.5
JK30-600	8.7	7.8	6.9	6	5.46	4.98	4.62	4.08	3.66	3
JK30-700	10.15	9.1	8.05	7	6.37	5.81	5.39	4.76	4.27	3.5
JK30-800	11.6	10.4	9.2	8	7.28	6.64	6.16	5.44	4.88	4
JK30-900	13.05	11.7	10.35	9	8.19	7.47	6.93	6.12	5.49	4.5

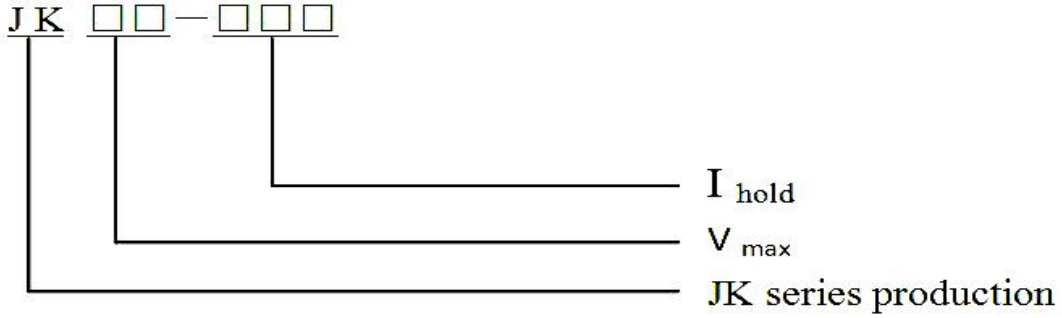
Electrical Characteristic

JK30 Series

Model	I_{Hold}(A)	I_{Trip} (A)	Vmax	Imax	$P_{d\ Max}$	Maximum Time to Trip		Resistance（mΩ）	
			$V_{(DC)}$	A	W	Current （A）	Time（S）	R_{min}	R_{max}
JK30-050	0.5	1.0	30	40	0.5	2.5	5.0	250	600
JK30-075	0.75	1.5	30	40	0.6	3.75	5.0	200	370
JK30-090	0.90	1.8	30	40	0.7	4.5	8.0	100	220
JK30-110	1.10	2.2	30	40	0.7	5.5	8.0	70	200
JK30-120	1.20	2.4	30	40	0.8	6.0	8.0	80	180
JK30-135	1.35	1.7	30	40	0.8	6.75	8.0	70	160

JK30-160	1.60	3.2	30	40	0.9	8.0	8.0	60	140
JK30-185	1.85	3.7	30	40	1.0	9.25	8.0	50	120
JK30-200	2.00	4.0	30	40	1.2	10.0	11	40	100
JK30-250	2.50	5.0	30	40	1.2	12.5	11	30	80
JK30-300	3.00	6.0	30	40	2.0	15.0	11	30	70
JK30-400	4.00	8.0	30	40	2.5	20.0	12.7	10	60
JK30-500	5.00	10	30	40	3.0	25.0	14.5	10	50
JK30-600	6.00	12	30	40	3.5	30.0	16	5	40
JK30-700	7.00	14	30	40	3.8	35.0	17.5	5	30
JK30-800	8.00	16	30	40	4.0	40.0	18.8	5	25
JK30-900	9.00	18	30	40	4.2	40.0	20	5	20

Marking System



Test Procedures And Requirements

JK30 Series

Test	Test Conditions	Accept/Reject Criteria
Resistance	In still air @ 25℃	$R_{min} \leq R \leq R_{max}$
Time to Trip	Specified current，V_{max}，25℃	Tmaximum Time to Trip
Hold Current	60min，at I_H	No trip
Trip Cycle Life	Vmax，Imax，100cycles	No arcing or burning
Trip Endurance	Vmax，24hours	No arcing or burning

Physical Characteristics and Environmental Specifications

Physical Characteristics

JK30 Series

Test	Conditions	Resistance change
Passive aging	+85℃，1000hrs	±8% typical
Humidity aging	+85℃，85%R.H.1000hrs	±8% typical
Thermal shock	+125℃ to -55℃，10times	±12% typical
Resistance to solvent	MIL-STD-202，Method 215	No change
Vibration	MIL-STD-202，Method 201	No change

Operation Condition

1 Ambient temperature: -40℃～85℃

2 Humidity: ≤95%HR(40℃)

3 Atmospheric pressure: 86Kpa ~106Kpa.

4 Vibration frequency: 10Hz ~ 50Hz.

5 Acceleration: 98m/s2.

6 Storage temperature: -40℃~85℃.

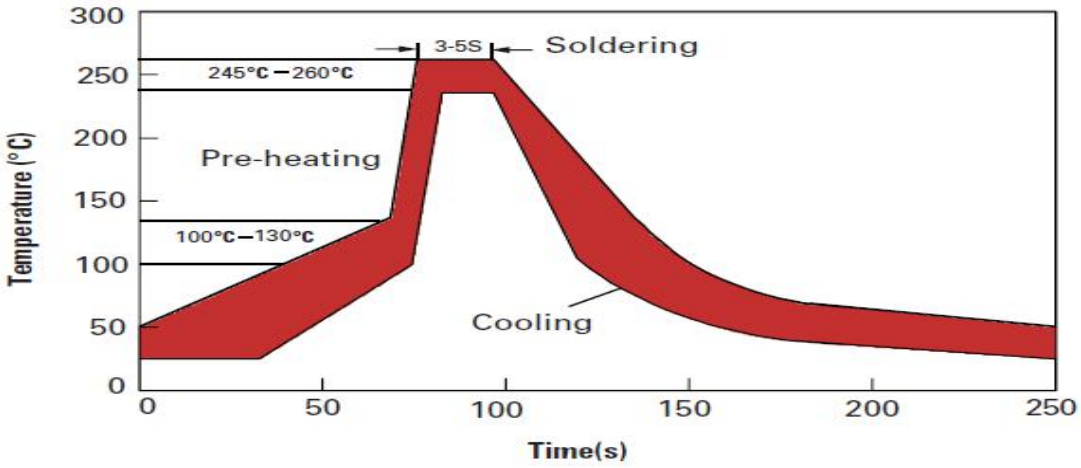
7Soldering

7.1 Wave Soldering:

Soldering Temperature:240℃~270℃

Soldering Time:≤5sec.

Soldering Position: Resettable fuse wire and the bottom ≥ 6mm。



recommended curve

7.2 Manual soldering

Soldering Temperature:280℃~300℃

Soldering Time: ≤2sec.

Soldering Position: Resettable fuse wire and the bottom ≥ 6mm。

Electrical Specifications:

I_H=Hold current:maximum current at which the device will not trip at 25℃ still air.

I_T=Trip current:minimum current at which the device will nalways at 25℃ still air.

V_{max}=Maximum voltage device can withstand without damage at rated current.

I_{max}=Maximum fault current device can withstand tithout damage at rated voltage.

T_{trip}=Maximum time to trip(s) at assigned current.

P_d=Typical power dissipation:typical amount of power dissipated by the decice when in state air environment.

R_{min}=Minimum device resistance at 25℃ prior to tripping.

R_{max}=Maximum device resistance at 25℃ prior to tripping.

Packaging and Storage		
JK30-050～JK30-250	1000Pcs/Bag	or 2000Pcs/Box
JK30-300～JK30-500	500 Pcs/Bag	
JK30-600～JK30-900	200 Pcs/Bag	

Warning:

PPTC devices are intended for protection against occasional over-current or over-temperature fault conditions,and should not be used when repeated fault conditions are anticipated.Operation beyond maximum tatings of improper use may result in device damage and possible electrical arcing and flame.

Notes：

The specification is intended to present application,product and technical data to assist the user in selecting PPTC circuit production devices,However,users should imdependently evaluate and test the suitability of each product.JinRui makes on warranties as to the acduracy or completeness of the information and disclaims any liatility resulting form its use,JinRui's only obligations are those im the JinRui Standard Rerms and Conditions of Sale and in no case will JinRui be liable for any incidental,imdirect,or consequential damages arising from the sale,resale,or misues of its products.JinRui reserves the right to change of update,without notice,any information contained in this specification.