

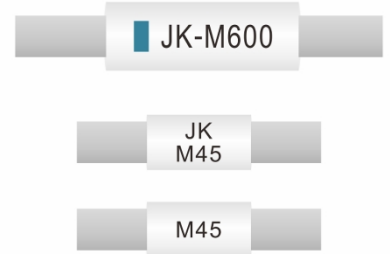


Polymer PTC Resettable Fuse For Battery Protection

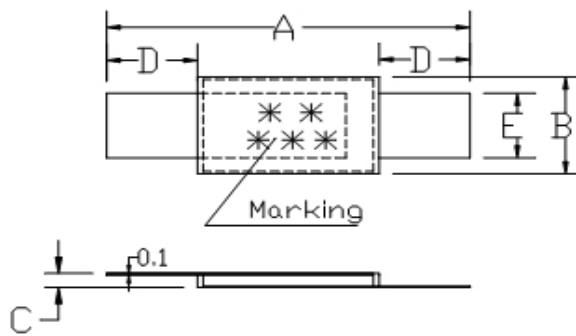
JK-M Series

Features:

- ◇ Strap devices, Axial leaded
- ◇ Protection for NiCd/NiMH rechargesble battery packs,Li-ion/Polymer Li-ion battery
- ◇ Available in lead-free version
- ◇ Agency recognition:UL、CSA、TUV



Product Dimensions



Unit : mm  
JK-M Series

Model	A		B		C		D		E	
	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
JK-M120	13	15	3.0	3.6	0.6	1.0	3.5	5.5	2.2	2.4
JK-M140	13	15	3.0	3.6	0.6	1.0	3.5	5.5	2.2	2.4
JK-M175	13	15	3.0	3.6	0.6	1.0	3.5	5.5	2.2	2.4
JK-M190	13	15	3.0	3.6	0.6	1.0	3.5	5.5	2.2	2.4
JK-M210	13	15	3.0	3.6	0.6	1.0	3.5	5.5	2.2	2.4
JK-M260	13	15	3.0	3.6	0.6	1.0	3.5	5.5	2.2	2.4
JK-M270	13	15	3.0	3.6	0.6	1.0	3.5	5.5	2.2	2.4
JK-M300	13	15	3.0	3.6	0.6	1.0	3.5	5.5	2.2	2.4
JK-M350	14.5	17	3.0	3.6	0.6	1.0	3.5	5.5	2.2	2.4
JK-M370	14.5	17	3.0	3.6	0.6	1.0	3.5	5.5	2.2	2.4
JK-M400	14.5	17	3.0	3.6	0.6	1.0	3.5	5.5	2.2	2.4

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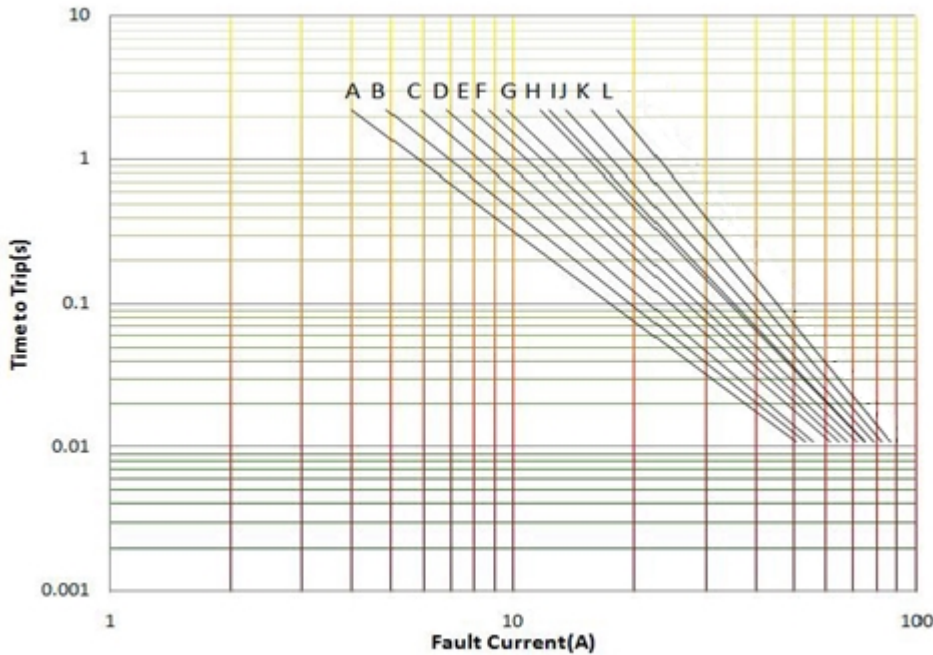
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JK-M430	14.5	17	3.0	3.6	0.6	1.0	3.5	5.5	2.2	2.4
JK-M450	21.5	23.3	3.50	3.90	0.55	1.0	4.5	6.5	2.2	2.4
JK-M500	21.5	23.3	3.50	3.90	0.55	1.0	4.5	6.5	2.2	2.4
JK-M550	21.5	23.3	3.50	3.90	0.55	1.0	4.5	6.5	2.2	2.4
JK-M600	20.9	23.1	4.6	5.5	0.60	1.00	4.0	6.0	3.8	4.2
JK-M650	20.9	23.1	4.6	5.5	0.60	1.00	4.0	6.0	3.8	4.2
JK-M700	20.9	23.1	4.6	5.5	0.60	1.00	4.0	6.0	3.8	4.2
JK-M730	20.9	23.1	4.6	5.5	0.60	1.00	4.0	6.0	3.8	4.2
JK-M800	20.9	23.1	4.6	5.5	0.60	1.00	4.0	6.0	3.8	4.2
JK-M850	20.9	23.1	4.6	5.5	0.60	1.00	4.0	6.0	3.8	4.2
JK-M900	20.9	23.1	4.6	5.5	0.60	1.00	4.0	6.0	3.8	4.2
JK-M950	20.9	23.1	4.6	5.5	0.60	1.00	4.0	6.0	3.8	4.2
JK-M1000	23.9	27.1	6.6	7.5	0.60	1.00	4.0	6.0	4.8	5.2

Typical Time-to-Trip Charts at 25°C



- A--- JK-M120
- B--- JK- M140
- C--- JK- M175
- D--- JK-M190
- E--- JK-M210
- F--- JK-M260
- G--- JK-M270
- H--- JK-M300
- I--- JK-M350
- J--- JK-M370
- K--- JK-M400
- L--- JK-M430

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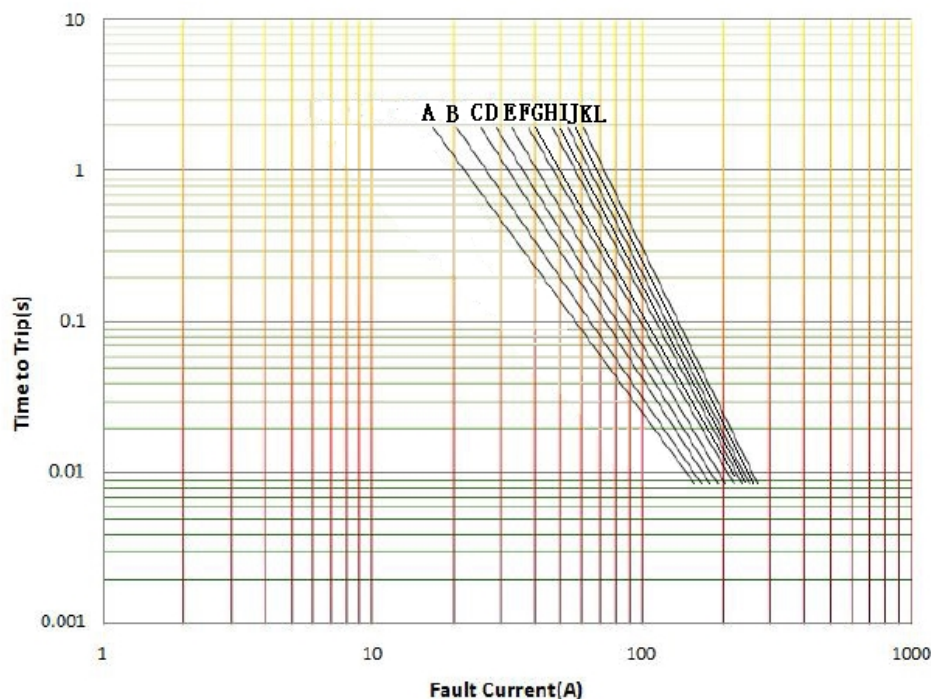
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- A--- JK-M450
- B--- JK- M500
- C--- JK- M550
- D--- JK-M600
- E--- JK-M650
- F--- JK-M700
- G--- JK-M750
- H--- JK-M800
- I--- JK-M850
- J--- JK-M900
- K--- JK-M950
- L--- JK-M1000

Thermal Derating Chart-IH (A)

JK-M Series

Model	Maximum ambient operating temperatures (°C)							
	-40	-20	0	25	40	50	60	70
JK-M120	2.00	1.80	1.55	1.20	1.00	0.85	0.70	0.55
JK-M140	2.40	2.10	1.80	1.40	1.14	0.97	0.80	0.63
JK-M175	3.10	2.65	2.25	1.75	1.40	1.25	1.05	0.85
JK-M190	3.60	3.10	2.60	1.90	1.60	1.30	1.20	1.00
JK-M210	3.60	3.20	2.80	2.10	1.84	1.40	1.34	1.10
JK-M260	4.50	3.95	3.35	2.60	2.15	1.85	1.70	1.15
JK-M270	4.60	4.00	3.40	2.70	2.20	1.90	1.60	1.30
JK-M300	5.20	4.50	3.85	3.00	2.45	2.10	1.75	1.40
JK-M350	5.90	5.20	4.50	3.50	2.80	2.40	2.00	1.60
JK-M370	6.10	5.40	4.70	3.70	3.00	2.50	2.10	1.70
JK-M400	6.20	5.50	4.80	4.00	3.30	2.80	2.50	2.00
JK-M430	6.30	5.60	4.90	4.30	3.50	3.00	2.70	2.20
JK-M450	6.40	5.70	5.05	4.50	4.05	3.70	3.40	3.05
JK-M500	6.95	6.20	5.60	5.00	4.50	4.10	3.80	3.40
JK-M550	7.60	6.80	6.15	5.50	4.95	4.50	4.25	3.85
JK-M600	8.25	7.40	6.65	6.00	5.40	5.00	4.70	4.30

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JK-M650	8.90	8.05	7.20	6.50	5.80	5.45	5.10	4.70
JK-M700	9.60	8.70	7.70	7.00	6.20	5.80	5.40	5.05
JK-M730	9.85	9.00	8.00	7.30	6.45	6.05	5.65	5.25
JK-M800	10.40	9.80	8.80	8.00	7.00	6.60	6.20	5.80
JK-M850	11.25	10.40	9.40	8.50	7.50	7.00	6.75	6.10
JK-M900	12.10	11.00	9.95	9.00	7.95	7.40	6.90	6.40
JK-M950	12.60	11.50	10.0	9.50	8.40	7.90	7.25	6.75
JK-M1000	13.15	12.00	11.00	10.00	8.90	8.40	7.65	7.10

## Electrical Characteristic

Model	I <sub>hold</sub> (A)	I <sub>trip</sub> (A)	V <sub>max</sub> (V)	I <sub>max</sub> (A)	P <sub>d</sub> (W)	I <sub>trip</sub> Current(A)	T <sub>trip</sub> Time(S)	R <sub>min</sub> (mΩ)	R <sub>max</sub> (mΩ)	R <sub>1max</sub> (mΩ)
JK-M120	1.20	3.50	10	50	1.00	6.0	5.0	0.015	0.035	0.070
JK-M140	1.40	3.60	10	50	1.00	7.0	5.0	0.010	0.020	0.040
JK-M175	1.75	4.30	10	50	1.00	8.75	5.0	0.009	0.018	0.036
JK-M190	1.90	4.90	10	50	1.00	9.50	3.0	0.007	0.014	0.028
JK-M210	2.10	5.60	10	50	1.00	10.50	3.0	0.007	0.014	0.028
JK-M260	2.60	6.00	10	50	1.00	13.00	3.0	0.006	0.014	0.028
JK-M270	2.70	6.20	10	50	1.00	13.50	3.0	0.006	0.014	0.028
JK-M300	3.00	8.00	10	50	1.30	15.00	3.0	0.005	0.013	0.026
JK-M350	3.50	8.80	10	50	1.30	17.50	3.0	0.005	0.013	0.026
JK-M370	3.70	9.00	10	50	1.30	18.50	5.0	0.005	0.013	0.026
JK-M400	4.00	9.60	10	50	1.50	20.00	5.0	0.004	0.012	0.024
JK-M430	4.30	10.00	10	50	1.50	21.50	5.0	0.004	0.012	0.024
JK-M450	4.50	10.80	10	50	1.50	22.50	5.0	0.004	0.012	0.024
JK-M500	5.00	12.00	10	50	1.50	25.00	5.0	0.003	0.011	0.022
JK-M550	5.50	13.00	10	50	1.50	27.50	5.0	0.003	0.011	0.022
JK-M600	6.00	13.00	10	50	1.50	30.00	5.0	0.003	0.009	0.018
JK-M650	6.50	13.00	10	50	1.50	32.50	5.0	0.002	0.008	0.016
JK-M700	7.00	14.00	10	50	1.50	35.00	5.0	0.002	0.007	0.015
JK-M730	7.30	15.00	10	50	1.50	36.50	5.0	0.002	0.007	0.014
JK-M800	8.00	17.00	10	50	1.50	40.00	5.0	0.002	0.005	0.010
JK-M850	8.50	17.50	10	50	1.50	42.00	5.0	0.002	0.005	0.010
JK-M900	9.00	18.00	10	50	1.50	45.00	5.0	0.002	0.005	0.010
JK-M950	9.50	19.00	10	50	1.50	47.50	5.0	0.002	0.004	0.010
JK-M1000	10.00	20.00	10	50	1.50	50.00	5.0	0.001	0.004	0.010

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**Marking System**

JK - M □□□

Hold Current

Product Series

Jinke Mark

**Test Procedures And Requirements**

Test	Test Conditions	Accept/Reject Criteria
Resistance	In still air @ 25°C	$R_{min} \leq R \leq R_{max}$
Time to Trip	Specified current, $V_{max}$ , 25°C	Tmaximum Time to Trip
Hold Current	30min, at $I_H$	No trip
Trip Cycle Life	$V_{max}$ , $I_{max}$ , 1000cycles	No arcing or burning
Trip Endurance	$V_{max}$ , 24hours	No arcing or burning

**Physical Characteristics and Environmental Specifications**
**Physical Characteristics**

Lead material	0.10mm nominal thickness,quarter-hard nickel
Coating	Epoxy Resin
Tape material	Polyester

**Environmental Specifications**

Test	Conditions	Resistance Change
Passive aging	-40°C,1000hours	$\leq R_{1max}$
	85°C,1000hours	$\leq R_{1max}$
Humidity aging	60°C/95%RH.1000hours	$\leq R_{1max}$
Vibration	ML-STD-883C,Method 2026	No change

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## Electrical Specifications:

$I_{hold}$ =Hold current: maximum current device will not trip in 25°C still air.

$I_{trip}$ = Trip current: minimum current device will always trip in 25°C still air.

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

$I_{max}$ =Maximum fault current device can withstand without damage at rated voltage( $V_{max}$ ).

$P_{d max}$ = Power dissipated when device is in the tripped state in 25°C still air environment at rated voltage.

Max Time-to-trip=Maximum time to trip(s) at assigned current.

$R_{min}$ =Minimum device resistance prior to tripping at 25°C.

$R_{max}$ =Maximum device resistance prior to tripping at 25°C.

$R_{1max}$ =Maximum device resistance one hour after it is tripped at 25°C

## Packaging and Storage

**Packaging**

Bulk,500/1000pcs per bag

**Storage**

The maximum ambient temperature shall not exceed 40°C. Storage temperatures higher than 40°C could result in the deformation of packaging materials. The maximum relative humidity recommended for storage is 70%. High humidity with high temperature can accelerate the oxidation of the solder plating on the termination and reduce the solderability of the components. Sealed plastic bags with desiccant shall be used to reduce the oxidation of the termination and shall only be opened prior to use. The products shall not be stored in areas where harmful gases containing sulfur or chlorine are present.

**Warning:**

Operation beyond the maximum ratings or improper use may result in device damage and possible electrical arcing and flame. The devices are intended for protection against occasional overcurrent or overtemperature fault conditions and should not be used when repeated fault conditions or prolonged trip events are anticipated. Contamination of the PPTC material with certain silicon based oils or some aggressive solvents can adversely impact the performance of the devices. Device performance can be impacted negatively if devices are handled in a manner inconsistent with recommended electronic, thermal and mechanical procedures for electronic components. Operation in circuit with a large inductance can generate a circuit voltage ( $L di/dt$ ) above the rated voltage of the resettable device.

**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 independently evaluate and test the suitability of each product. JinRui makes no warranties as to the accuracy or completeness of the information and disclaims any liability resulting from its use. JinRui's only obligations are those in the JinRui Standard Terms and Conditions of Sale and in no case will JinRui be liable for any incidental, indirect, or consequential damages arising from the sale, resale, or misuse of its products. JinRui reserves the right to change or update, without notice, any information contained in this specification.

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