

Polymer PTC Resettable Fuse For Battery Protection

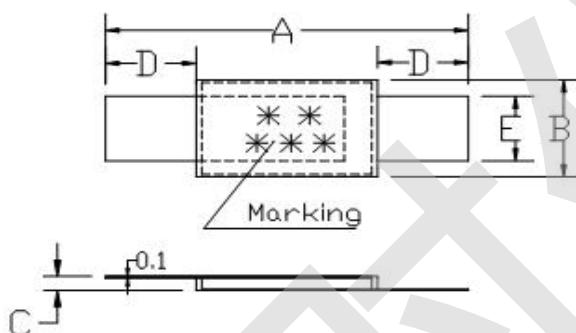
JK-P Series

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-P Series

Model	A		B		C		D		E	
	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
JK-P070	17.0	22.1	4.9	5.5	0.4	1.0	3.5	6.0	3.8	4.2
JK-P100	17.0	22.1	4.9	5.5	0.4	1.0	3.5	6.0	3.8	4.2
JK-P120	17.0	22.1	4.9	5.5	0.4	1.0	3.5	6.0	3.8	4.2
JK-P175	20.9	23.1	4.6	5.5	0.4	1.0	3.5	6.0	3.8	4.2
JK-P180	20.9	23.1	4.6	5.5	0.4	1.0	3.5	6.0	3.8	4.2
JK-P190	20.9	23.1	4.6	5.5	0.4	1.0	3.5	6.0	3.8	4.2
JK-P200	20.9	23.1	4.6	5.5	0.4	1.0	3.5	6.0	3.8	4.2
JK-P210	20.9	23.1	4.6	5.5	0.4	1.0	3.5	6.0	3.8	4.2
JK-P260	20.9	23.1	4.6	5.5	0.4	1.0	3.5	6.0	3.8	4.2
JK-P300	24.0	27.5	6.9	7.5	0.4	1.0	4.0	7.5	4.8	5.2
JK-P350	24.0	27.5	6.9	7.5	0.4	1.0	4.0	7.5	4.8	5.2
JK-P380	24.0	27.5	6.9	7.5	0.4	1.0	4.0	7.5	4.8	5.2

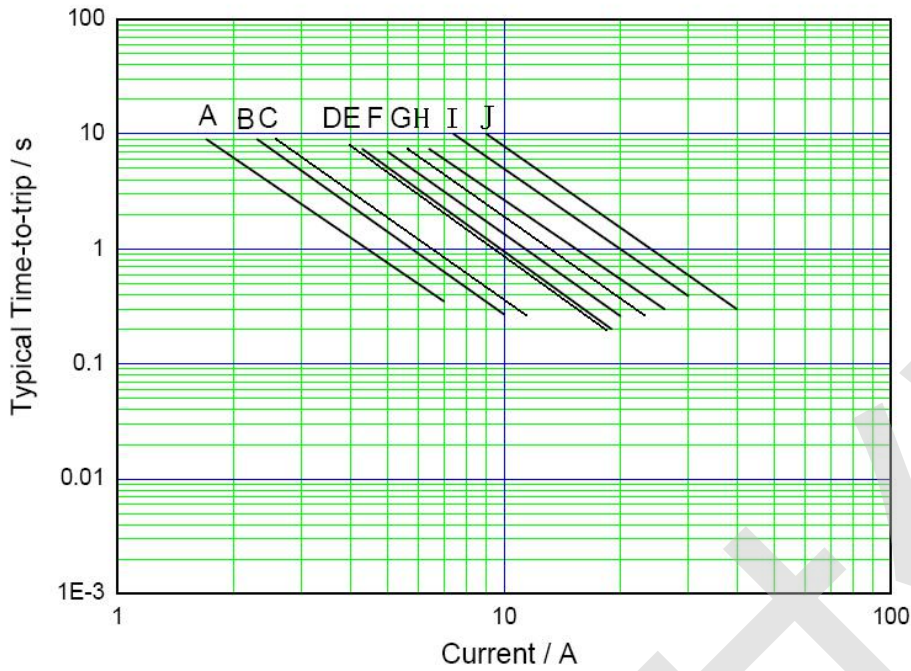
JK-P420	24.0	27.5	9.8	10.5	0.4	1.0	4.0	7.5	4.8	5.2
JK-P450	24.0	27.5	9.8	10.5	0.4	1.0	4.0	7.5	4.8	5.2
JK-P550	24.0	27.5	9.8	10.5	0.4	1.0	4.0	7.5	4.8	5.2
JK-P600	27.1	29.1	13.9	14.5	0.4	1.0	4.1	5.5	5.9	6.6
JK-P730	27.1	29.1	13.9	14.5	0.4	1.0	4.1	5.5	5.9	6.6
JK-P900	45.4	47.6	7.9	8.5	0.4	1.0	4.6	6.2	5.9	6.1
JK-P1410	58.0	60.0	13.4	14.0	0.4	1.0	4.2	5.8	5.9	6.1

Thermal Derating Chart-IH (A)
JK-P Series

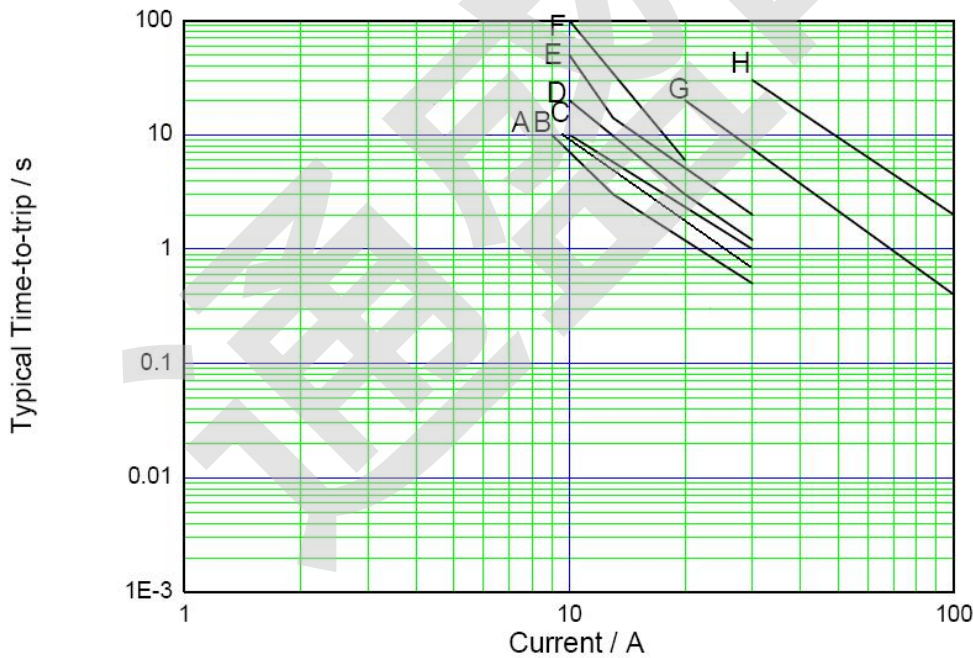
Part number	Maximum ambient operating temperatures (°C)									
	-40	-20	0	25	40	50	60	70	80	85
JK-P070	1.1	1.0	0.8	0.7	0.5	0.4	0.3	0.2	0.2	0.1
JK-P100	1.8	1.6	1.4	1.0	0.8	0.7	0.6	0.4	0.3	0.2
JK-P120	1.9	1.7	1.5	1.2	1.0	0.9	0.8	0.6	0.5	0.4
JK-P175	2.5	2.2	2.0	1.75	1.4	1.3	1.2	1.0	0.9	0.8
JK-P180	2.6	2.3	2.1	1.8	1.5	1.4	1.3	1.1	1.0	0.9
JK-P190	2.8	2.5	2.3	1.9	1.6	1.5	1.4	1.2	1.1	1.0
JK-P200	3.1	2.8	2.5	2.0	1.7	1.6	1.5	1.3	1.2	1.1
JK-P210	3.3	3.0	2.7	2.1	1.8	1.7	1.6	1.4	1.3	1.2
JK-P260	3.8	3.4	3.1	2.6	2.2	2.0	1.9	1.7	1.4	1.3
JK-P300	5.0	4.5	4.0	3.0	2.7	2.5	2.1	1.8	1.6	1.4
JK-P350	5.3	4.8	4.3	3.5	3.0	2.7	2.5	2.1	1.8	1.7
JK-P380	5.4	4.9	4.4	3.8	3.3	3.0	2.8	2.5	2.3	2.1
JK-P420	6.3	5.7	5.1	4.2	3.6	3.3	3.0	2.6	2.2	2.1
JK-P450	6.5	5.8	5.3	4.5	3.9	3.6	3.3	2.9	2.6	2.4
JK-P550	7.6	6.9	6.2	5.5	4.7	4.3	4.0	3.6	3.2	3.0
JK-P600	8.7	7.8	7.1	6.0	5.2	4.7	4.4	3.9	3.4	3.2
JK-P730	10.5	9.5	8.6	7.3	6.3	5.7	5.4	4.7	4.2	4.0
JK-P900	12.7	11.4	10	9.0	7.5	6.8	6.2	5.5	4.9	4.5
JK-P1410	19.9	17.8	15.7	14.1	11.8	10.8	9.7	8.7	7.7	7.2



Typical Time-to-Trip Charts at 25°C



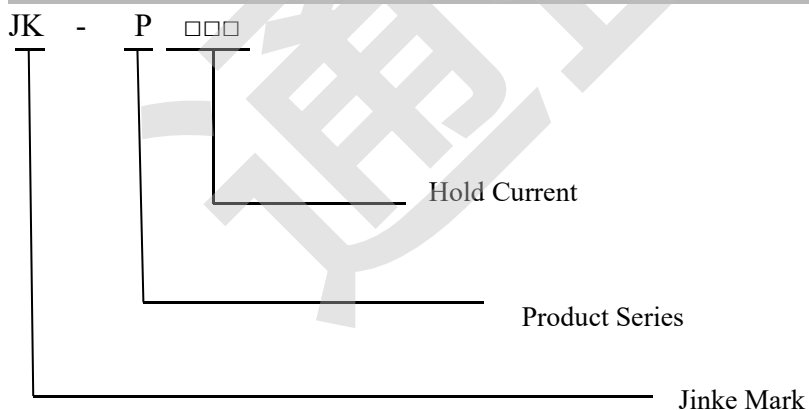
- A----JK-P070
- B----JK-P100
- C----JK-P120
- D----JK-P175
- E----JK-P180
- F----JK-P190
- G----JK-P200
- H----JK-P210
- I----JK-P260
- J----JK-P300



- A--- JK-P350
- B--- JK-P420
- C--- JK-P450
- D--- JK-P550
- E--- JK-P600
- F--- JK-P730
- G--- JK-P900
- H--- JK-P1410

Electrical Characteristic

Model	I_{hold} (A)	I_{trip} (A)	V_{max} (V)	I_{max} (A)	P_d (W)	I_{trip} Current(A)	T_{trip} Time(S)	R_{min} (Ω)	R_{max} (Ω)	R_{1max} (Ω)
JK-P070	0.70	1.45	16	100	1.60	3.5	5.0	0.100	0.200	0.400
JK-P100	1.00	2.50	16	100	1.60	5.0	5.0	0.070	0.130	0.260
JK-P120	1.20	2.70	16	100	1.60	6.0	5.0	0.060	0.120	0.240
JK-P175	1.75	3.80	16	100	1.60	8.5	5.0	0.030	0.065	0.130
JK-P180	1.80	3.80	16	100	1.60	9.0	5.0	0.030	0.060	0.120
JK-P190	1.90	4.20	16	100	1.60	9.5	5.0	0.025	0.045	0.090
JK-P200	2.00	4.40	16	100	1.60	10.0	5.0	0.020	0.040	0.080
JK-P210	2.10	4.40	16	100	1.60	10.5	5.0	0.020	0.035	0.070
JK-P260	2.60	5.20	16	100	1.60	13.0	5.0	0.015	0.030	0.060
JK-P300	3.00	6.30	24	100	2.40	15.0	5.0	0.015	0.031	0.062
JK-P350	3.50	7.00	24	100	2.40	17.5	5.0	0.017	0.031	0.062
JK-P380	3.80	7.60	24	100	2.40	19.0	5.0	0.013	0.022	0.044
JK-P420	4.20	8.30	24	100	2.00	21.0	5.0	0.012	0.024	0.048
JK-P450	4.50	9.00	20	100	2.00	22.5	5.0	0.011	0.020	0.040
JK-P550	5.50	10.50	20	100	2.00	27.5	5.0	0.009	0.016	0.032
JK-P600	6.00	11.70	20	100	2.80	30.0	5.0	0.007	0.014	0.028
JK-P730	7.30	14.10	20	100	3.30	36.5	5.0	0.005	0.012	0.024
JK-P900	9.00	16.70	20	100	3.80	45.0	5.0	0.006	0.010	0.020
JK-P1410	14.10	26.20	20	100	6.00	70.5	5.0	0.003	0.005	0.010

Marking System


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	0.125mm nominal thickness, quarter-hard nickel
Tape material	Polyester

Environmental Specifications

Test	Conditions	Resistance Change
Passive aging	70°C, 1000hours	±10%
Humidity aging	85°C/85%RH. 7days	±5%
Vibration	MIL-STD-883C, Test Condition A	No change

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 any information contained in this specification without notice.