

## Resettable Fuse PTC 60V Series

### Features

RoHS Compliant & Halogen Free

Radial leaded Devices

Cured, flame retardant epoxy polymer insulating material meets UL94V-0 requirements

Operation Current: 0.05A~5A , Maximum Voltage: 60Vdc,

Operating Temperature: -40°C to +85°C

Agency recognition:



### Dimensions(Unit:mm)

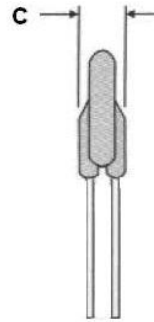
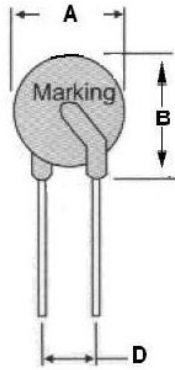
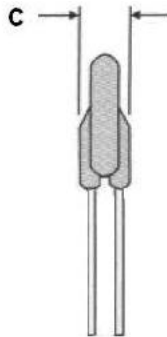
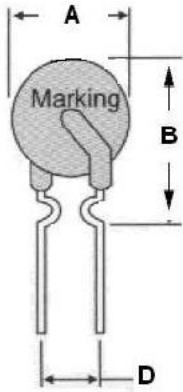


Fig.1

Fig.2

Part number	Dimensions(mm)				Lead material	Shape	Certification		Delivery Time	
	A(max)	B(max)	C(max)	D(Typ)	Tinned Matel(mm)	Fig	UL	TUV	in stock	Produce
JK60-005	5.0	8.5	3	5.10	24 AWG/ Φ0.5	Fig1	-	√	3days	14days
JK60-010	5.50	9.5	3	5.10	24 AWG/ Φ0.5	Fig1	√	√	3days	14days
JK60-017	7.4	12.7	3	5.10	24 AWG/ Φ0.5	Fig1	√	√	3days	14days
JK60-020	7.4	12.7	3	5.10	24 AWG/ Φ0.5	Fig1	√	√	3days	14days
JK60-025	7.4	12.7	3	5.10	24 AWG/ Φ0.5	Fig1	√	√	3days	14days
JK60-030	7.4	13.0	3	5.10	24 AWG/ Φ0.5	Fig1	√	√	3days	14days
JK60-040	7.8	16.2	3	5.10	24 AWG/ Φ0.5	Fig1	√	√	3days	14days
JK60-050	7.8	16.2	3	5.10	24 AWG/ Φ0.5	Fig1	√	√	3days	14days
JK60-065	9.7	17.8	3	5.10	22 AWG/ Φ0.6	Fig1	√	√	3days	14days
JK60-075	10.4	18.4	3	5.10	22 AWG/ Φ0.6	Fig1	√	√	3days	14days
JK60-090	11.7	18.4	3	5.10	22 AWG/ Φ0.6	Fig1	√	√	3days	14days

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Part number	Dimensions(mm)				Lead material	Shape	Certification		Delivery Time	
	A(max)	B(max)	C(max)	D(Typ)	Tinned Matel(mm)	Fig	UL	TUV	in stock	Produce
JK60-110	13.0	18.0	3	5.10	20 AWG/ Φ0.8	Fig2	-	√	3days	14days
JK60-135	14.5	19.6	3	5.1	20 AWG/ Φ0.8	Fig2	√	√	3days	14days
JK60-160	16.3	21.3	3	5.1	20 AWG/ Φ0.8	Fig2	√	√	3days	14days
JK60-185	17.8	22.9	3	5.1	20 AWG/ Φ0.8	Fig2	√	√	3days	14days
JK60-200	17.8	22.9	3	5.1	20 AWG/ Φ0.8	Fig2	-	-	3days	14days
JK60-250	21.3	26.4	3	10.2	20 AWG/ Φ0.8	Fig2	√	√	3days	14days
JK60-300	21.3	26.4	3	10.2	20 AWG/ Φ0.8	Fig2	√	√	3days	14days
JK60-375	28.5	33.5	3	10.2	20 AWG/ Φ0.8	Fig2	√	√	3days	14days
JK60-500	28.5	33.5	3	10.2	20 AWG/ Φ0.8	Fig2	-	-	3days	14days

Note: Dimensions A,B,C is the maximum size,D Values is typical tolernce of ±0.5mm

thermal Derating Chart-IH(A)

Maximum ambient operating temperatures °C										
Part Number	-40°C	-20°C	0°C	25°C	40°C	50°C	60°C	70°C	80°C	85°C
JK60-005	0.08	0.07	0.06	0.05A	0.04	0.04	0.03	0.03	0.02	0.02
JK60-010	0.15	0.13	0.12	0.10A	0.09	0.08	0.07	0.06	0.05	0.04
JK60-017	0.25	0.23	0.20	0.17A	0.15	0.13	0.12	0.10	0.09	0.06
JK60-020	0.30	0.27	0.24	0.20A	0.18	0.16	0.14	0.12	0.10	0.08
JK60-025	0.37	0.34	0.30	0.25A	0.22	0.20	0.18	0.15	0.13	0.10
JK60-030	0.45	0.40	0.35	0.30A	0.27	0.24	0.21	0.19	0.16	0.12
JK60-040	0.60	0.54	0.47	0.40A	0.36	0.32	0.28	0.25	0.21	0.16
JK60-050	0.75	0.68	0.59	0.50A	0.45	0.40	0.36	0.31	0.27	0.20
JK60-065	0.97	0.88	0.77	0.65A	0.58	0.52	0.46	0.41	0.35	0.26
JK60-075	1.12	1.02	0.89	0.75A	0.67	0.60	0.54	0.47	0.40	0.30
JK60-090	1.35	1.22	1.07	0.90A	0.81	0.73	0.64	0.56	0.48	0.36
JK60-110	1.65	1.49	1.31	1.10A	0.99	0.89	0.79	0.69	0.59	0.44
JK60-135	2.02	1.83	1.60	1.35A	1.21	1.09	0.97	0.85	0.72	0.54
JK60-160	2.40	2.17	1.90	1.60A	1.44	1.29	1.15	1.00	0.86	0.64
JK60-185	2.77	2.51	2.20	1.85A	1.66	1.49	1.33	1.16	1.00	0.74

Thermal Derating Chart-IH(A)



Maximum ambient operating temperatures °C										
Part Number	-40°C	-20°C	0°C	25°C	40°C	50°C	60°C	70°C	80°C	85°C
JK60-200	3.00	2.72	2.38	2.0A	1.80	1.62	1.44	1.26	1.08	0.80
JK60-250	3.75	3.40	2.97	2.5A	2.25	2.02	1.80	1.57	1.35	1.00
JK60-300	4.50	4.08	3.57	3.0A	2.70	2.43	2.16	1.89	1.62	1.20
JK60-375	5.62	5.10	4.46	3.75A	3.37	3.03	2.70	2.36	2.02	1.50
JK60-500	7.50	6.80	5.95	5.0A	4.50	4.05	3.60	3.15	2.70	2.00

Electrical characteristics(25°C)

Part Number	I <sub>Hold</sub>	I <sub>Trip</sub>	V <sub>max</sub>	I <sub>max</sub>	P <sub>d</sub> Max	Maximum Time to Trip		Nominal resistance (Ω)		Certification		Delivery Time	
	A	A	DC	A	W	Current (A)	Time (S)	R <sub>min</sub>	R <sub>max</sub>	UL	TUV	in stock	Produce
JK60-005	0.05	0.15	60V	40	0.26	0.25	8	7.30	20	-	√	3days	14days
JK60-010	0.10	0.30	60V	40	0.38	0.50	5	2.50	7.50	√	√	3days	14days
JK60-017	0.17	0.34	60V	40	0.48	0.85	5	2.00	5.21	√	√	3days	14days
JK60-020	0.20	0.40	60V	40	0.41	1.00	5	1.50	2.84	√	√	3days	14days
JK60-025	0.25	0.50	60V	40	0.45	1.25	5	1.00	1.95	√	√	3days	14days
JK60-030	0.30	0.60	60V	40	0.49	1.50	5	0.76	1.38	√	√	3days	14days
JK60-040	0.40	0.80	60V	40	0.56	2.00	5	0.55	0.88	√	√	3days	14days
JK60-050	0.50	1.00	60V	40	0.77	2.50	5	0.50	0.79	√	√	3days	14days
JK60-065	0.65	1.30	60V	40	0.88	3.25	5	0.31	0.50	√	√	3days	14days
JK60-075	0.75	1.50	60V	40	0.92	3.75	5	0.25	0.42	√	√	3days	14days
JK60-090	0.90	1.80	60V	40	0.99	4.50	5	0.20	0.33	√	√	3days	14days
JK60-110	1.10	2.20	60V	40	1.5	5.50	8	0.15	0.27	-	√	3days	14days
JK60-135	1.35	2.70	60V	40	1.7	6.75	8	0.12	0.21	√	√	3days	14days
JK60-160	1.60	3.20	60V	40	1.9	8.00	8	0.09	0.16	√	√	3days	14days
JK60-185	1.85	3.70	60V	40	2.1	9.25	8	0.08	0.14	√	√	3days	14days
JK60-200	2.00	4.00	60V	40	2.3	10.00	8	0.07	0.14	-	-	3days	14days
JK60-250	2.50	5.00	60V	40	2.5	12.50	8	0.05	0.10	√	√	3days	14days
JK60-300	3.00	6.00	60V	40	2.8	15.00	8	0.04	0.08	√	√	3days	14days
JK60-375	3.75	7.50	60V	40	3.2	18.75	24	0.03	0.06	√	√	3days	14days
JK60-500	5.0	10.0	60V	40	3.5	25.00	24	0.02	0.06	-	-	3days	14days

I<sub>Hold</sub>=Hold current:maximum current at which the device will not trip at 25°C still air.

I<sub>Trip</sub>=Trip current:minimum current at which the device will nalways at 25°C still air.

V<sub>max</sub>=Maximum voltage device can withstand without damage at rated current.

I<sub>max</sub>=Maximum fault current device can withstand tithout damage at rated voltage.

Specifications are subject to change without notice

Tel: +86-755-27465585

## Electrical characteristics(25°C)

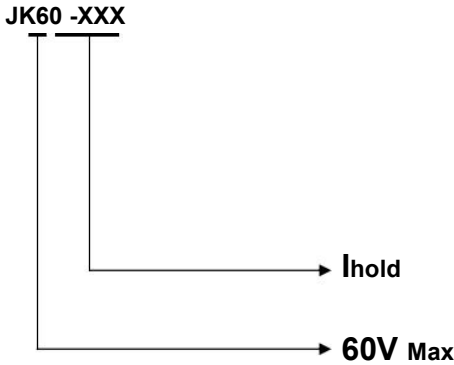
T<sub>trip</sub>=Maximum time to trip(s) at assigned current.

P<sub>d</sub>=Typical power dissipation:typical amount of power dissipated by the device when in state air environment.

R<sub>min</sub>=Minimum device resistance at 25°C prior to tripping.

R<sub>max</sub>=Maximum device resistance at 25°C prior to tripping.

## Marking System



## Test Procedures and Requirements

Test	Test Conditions	Accept/Reject Criteria
Resistance	In still air @ 25°C	R <sub>min</sub> ≤ R ≤ R <sub>max</sub>
Time to Trip	Specified current, V <sub>max</sub> , 25°C	T <sub>maximum</sub> Time to Trip
Hold Current	60min ,at I <sub>H</sub>	No trip
Trip Cycle Life	V <sub>max</sub> , I <sub>max</sub> , 100cycles	No arcing or burning
Trip Endurance	V <sub>max</sub> , 24hours	No arcing or burning

## Physical Characteristics and Environmental Specifications

### Physical Characteristics

Test	Conditions	Resistance change
Passive aging	+85°C, 1000hrs	±8% typical
Humidity aging	+85°C, 85%R.H.1000hrs	±8% typical
Thermal shock	+125°C to -55°C, 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°C ~ +85°C      2 Humidity: ≤95%HR(40°C)

3 Atmospheric pressure: 86Kpa ~106Kpa.

4 Vibration frequency: 10Hz ~ 50Hz.      5 Acceleration: 98m/s<sup>2</sup>.

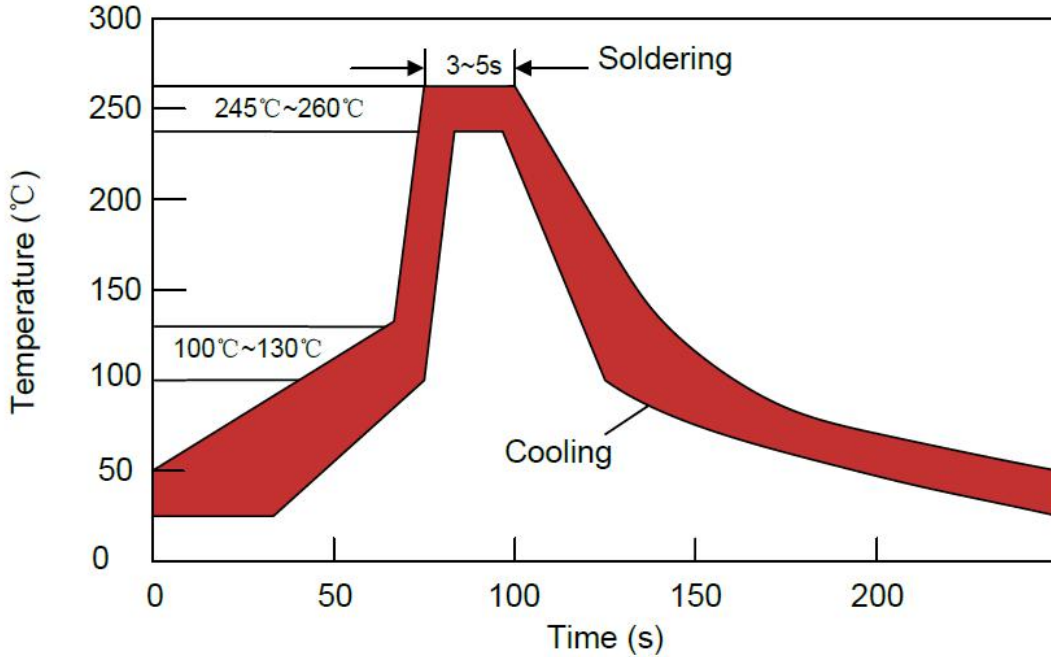
6 Storage temperature: -40°C ~85°C.

#### 7.1 Wave Soldering:

Soldering Temperature:240°C~270°C    Soldering Time:≤5sec.

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

Wave Soldering Recommendation Parameters



7.2 Manual soldering

Soldering Temperature: 280°C ~ 300°C

Soldering Time: ≤ 2sec.

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

Packing quantity:

JK60-005 ~ JK60-110	1000pcs/Bag or 2000pcs/Box
JK60-135 ~ JK60-200	500pcs/Bag
JK60-250 ~ JK60-500	200pcs/Bag



Warning:

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