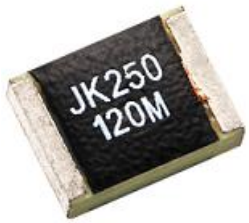
Resettable Fuse PTC SMD 250 Series

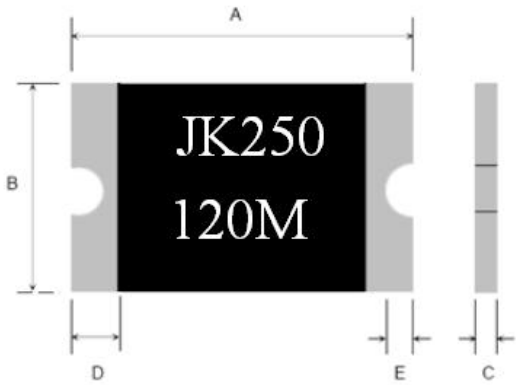
Features

RoHS

RoHS Compliant
faster tripping, Surface mountable, Solid state
Operation Current: 0.1A~0.2A
Maximum Voltage: 250Vdc
Operating Temperature：-40℃ to +85℃
Agency recognition: RoHS



Dimensions Unit: mm



Terminal pad materials :Tin-Plated Nickle-copper
Terminal pad solderability : Meets EIA specification RS 186-9E and ANSI/J-STD-002 Category 3.

Part number	Marking	A		B		C		D	Certification		Delivery Time	
		Min	max	Min	Max	Min	Max	Min	UL	TUV	in stock	Produce
JK250-100M	JK250 100M	8.5	9.5	6.0	7.5	2.5	3.5	0.50	-	-	3days	18days
JK250-110M	JK250 110M	8.5	9.5	6.0	7.5	2.5	3.5	0.50	-	-	3days	18days
JK250-120M	JK250 120M	8.5	9.5	6.0	7.5	2.5	3.5	0.50	-	-	3days	18days
JK250-145M	JK250 145M	8.5	9.5	6.0	7.5	2.5	3.5	0.50	-	-	3days	18days
JK250-180M	JK250 180M	8.5	9.5	6.0	7.5	2.5	3.5	0.50	-	-	3days	18days
JK250-200M	JK250 200M	8.5	9.5	6.0	7.5	2.5	3.5	0.50	-	-	3days	18days

Electrical characteristics(25℃)

Part Number	I_{Hold}	I_{Trip}	V_{max}	I_{max}	Maximum Time to Trip		Resistance（Ω）			Delivery Time		Replacement
	mA	mA	DC	A	Current（A）	Time（S）	R_{imin}	R_{ityp}	$R1_{max}$	in stock	Produce	DIP part number
JK250-100M	100	200	250	3	1.0	2.0	-	-	-	3days	18days	= JK250-100U
JK250-110M	110	220	250	3	1.0	2.0	-	-	-	3days	18days	= JK250-110U
JK250-120M	120	240	250	3	1.0	2.0	6	14	25	3days	18days	= JK250-120U
JK250-145M	145	290	250	3	1.0	2.0	-	-	-	3days	18days	= JK250-145U
JK250-180M	180	360	250	3	1.0	2.0	-	-	-	3days	18days	= JK250-180U
JK250-200M	200	400	250	3	1.0	2.0	-	-	-	3days	18days	= JK250-200U

I_{hold} = Hold Current. Maximum current device will not trip in 25°C still air.

I_{trip} = Trip Current. Minimum current at which the device will always trip in 25°C still air.

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

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

Pd=Maximum power dissipation when device is in the tripped state in 25°C still air environment at rated voltage.

$Ri_{min/max}$ = Minimum/Maximum device resistance prior to tripping at 25°C.

$R1_{max}$ = Maximum device resistance is measured one hour post reflow.

Part number System

JK- 250 -xxx M

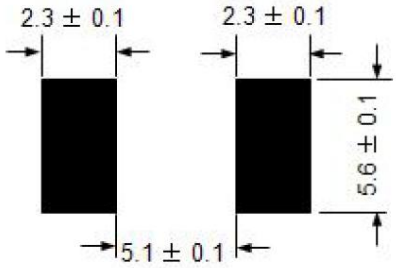
- Surface Mount Device
- Holding Current Rating
- 250V max
- Our Mark



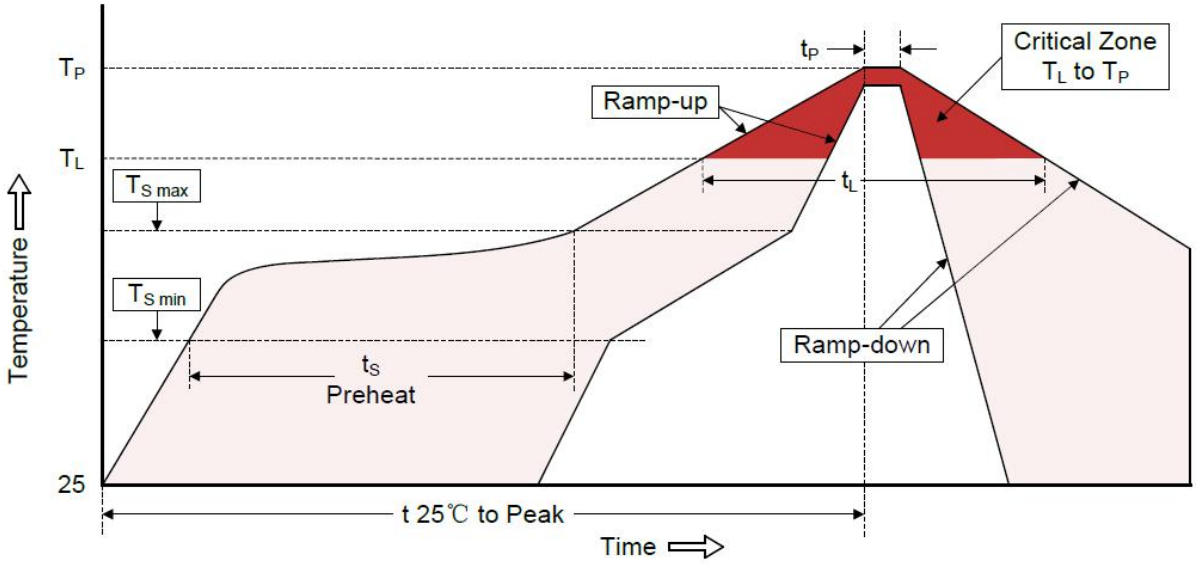
Test Conditions and Standards (JK250-120M)

Item	Test Conditions	Standard
Initial Resistance	25℃	6~14Ω
Hold Current	25℃,120mA,60min	No Trip
Time to Trip	25℃,1.0A	≤2.0s
Trip Endurance	250V,3A,15min	No arcing or burning

Recommended Pad layout(mm)



Solder reflow conditions



Profile Feature	Pb-Free Assembly
Average ramp-up rate (TS maxto TP)	3℃/second max.
Preheat -Temperature Min (TS min) -Temperature Max (TS max) -Time (min to max) (TS min to TS max)	 150℃ 200℃ 60-180 seconds
Time maintained above: -Temperature (TL) -Time (tL)	 217℃ 60-150 seconds
Peak Temperature (TP)	260℃
Time within 5℃of actual PeakTemperature (tP)	20-40 seconds
Ramp-down Rate	3℃/second max.
Time 25℃to Peak Temperature	8 minutes max.
StorageCondition	0℃~35℃, ≤70%RH

• Recommended reflow methods: IR, vapor phase oven, hot air oven, N2 environment for lead-free

Solder reflow conditions

RoHS

·Devices are not designed to be wave soldered to the bottom side of the board.
·Recommended maximum paste thickness is 0.25mm (0.010 inch)
·Device can be cleaned using standard industry methods and solvents.
·Soldering temprature profile meets RoHs leadfree process.
Note : If reflow temperatures exceed the recommended profile, devices may not meet the performance Requirements

Packaging Quantity

Part Number	Quantity	Part Number	Quantity	Part Number	Quantity
JK250-100M	1000PCS	JK250-110M	1000PCS	JK250-120M	1000PCS
JK250-145M	1000PCS	JK250-180M	1000PCS	JK250-200M	1000PCS

Storage

The maximum ambient temperature shall not exceed 38℃. Storage temperatures higher than 38℃ could result in the deformation of packaging materials. The maximum relative humidity recommended for storage is 60%. 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

• Use PPTC beyond the maximum ratings or improper use may result in device damage and possible electrical arcing and flame.
• PPTC are intended for protection against occasional over current or over temperature fault conditions and should not be used when repeated fault conditions or prolonged trip events are anticipated.
• Device performance can be impacted negatively if devices are handled in a manner inconsistent with recommended electronic, thermal, and mechanical procedures for electronic components.
• Use PPTC with a large inductance in circuit will generate a circuit voltage (L di/dt) above the rated voltage of the PPTC.
• Avoid impact PPTC device its thermal expansion like placed under pressure or installed in limited space.
• Contamination of the PPTC material with certain silicon based oils or some aggressive solvents can adversely impact the performance of the devices.PPTC SMD can be cleaned by standard methods.
• Requests that customers comply with our recommended solder pad layouts and recommended reflow profile. Improper board layouts or reflow profilecould negatively impact solderability performance of our devices.

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.HUAAN makes on warranties as to the acduracy or completeness of the information and disclaims any liatility resulting form its use, HUAAN's only obligations are those im the HUAAN Standard Rerms and Conditions of Sale and in no case will HUAAN be liable for any incidental,imdirect,or consequential damages arising from the sale,resale,or misues of its products. HUAAN reserves the right to change of update, without notice, any information contained in this specification.