

JK-mSMD020-60V PPTC DEVICES

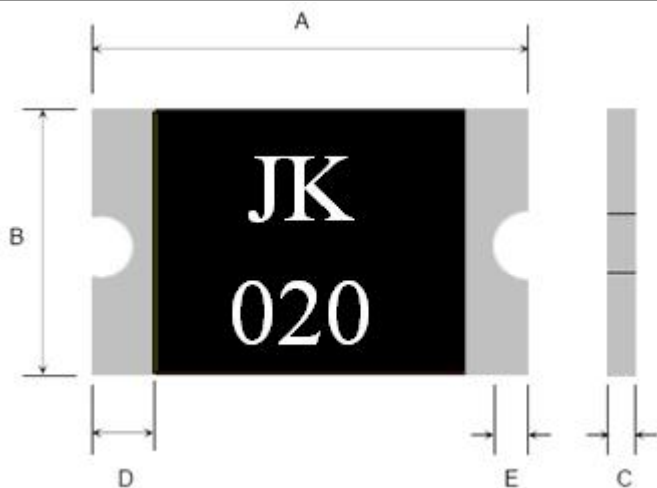
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金瑞电子材料
Jinrui Electronic material



Terminal pad materials :Tin-Plated Nickle-copper

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

Marking : JK020=1812(020)

Table1 :DIMENTION(Unit : mm)

Model	Marking	A		B		C		D	E
		Min.	Max.	Min.	Max.	Min.	Max	Min.	Min
JK-mSMD020-60V	JK020	4.37	4.73	3.07	3.41	0.50	1.00	0.30	0.25

Table2 :PERFORMANCE RATINGS:

Model	V _{max} (Vdc)	I _{max} (A)	I _{hold} @25°C (A)	I _{trip} @25°C (A)	P _d Typ (W)	Maximum Time To Trip		Resistance		
						Current (A)	Time (Sec)	R _i min (Ω)	R _i typ (Ω)	R _i max (Ω)
JK-mSMD020-60V	60.0	100	0.20	0.40	0.8	8.0	0.02	0.350	0.800	5.000

Table3:Test Conditons and Standards

Item	Test Conditon	Standard
Initial Resistance	25°C	0.350~5.000Ω
I _H	25°C, 0.20A, 60min	No Trip
T _{trip}	25°C, 8.0A	≤0.02s
Trip endurance	60V, 100A, 1hr	No arcing or burning

Operating Temperature: -40°C TO 85°C

Packaging: Bulk ,1500 pcs per bag

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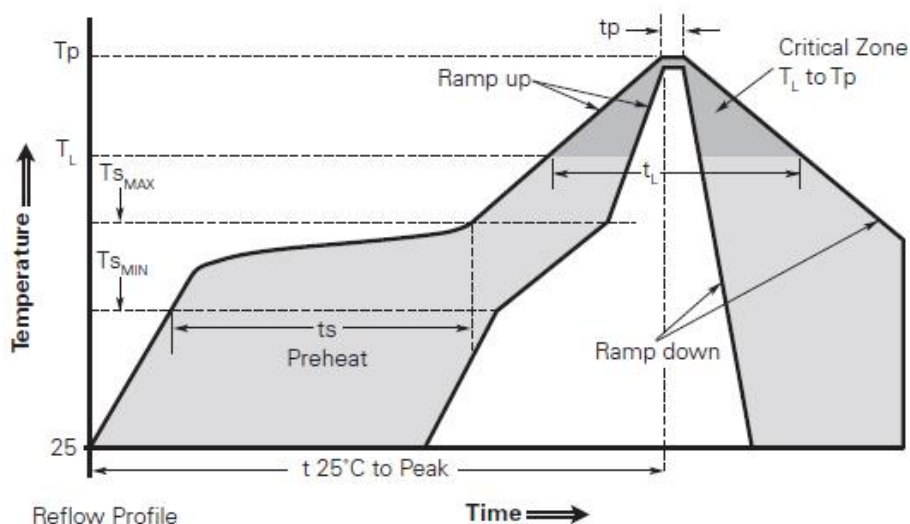
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Solder reflow conditions



Profile Feature	Pb-Free Assembly
Average ramp up rate (T_{S_MAX} to T_p)	3°C/second max.
Preheat	
• Temperature min. (T_{S_MIN})	150°C
• Temperature max. (T_{S_MAX})	200°C
• Time (t_{S_MIN} to t_{S_MAX})	60-120 seconds
Time maintained above:	
• Temperature (T_L)	217°C
• Time (t_L)	60-150 seconds
Peak/Classification temperature (T_p)	260°C
Time within 5°C of actual peak temperature	
Time (t_p)	30 seconds max.
Ramp down rate	3°C/second max.
Time 25°C to peak temperature	8 minutes max.

Note: All temperatures refer to topside of the package, measured on the package body surface.

- Recommended reflow methods: IR, vapor phase oven, hot air oven, N2 environment for lead-free.
- Devices are not designed to be wave soldered to the bottom side of the board.
- Recommended maximum paste thickness is 0.25mm (0.010inch).
- Devices can be cleaned using standard industry methods and solvents.
- Soldering temperature profile meets RoHs leadfree process.

Notes: If reflow temperatures exceed the recommended profile, devices may not meet the performance requirements

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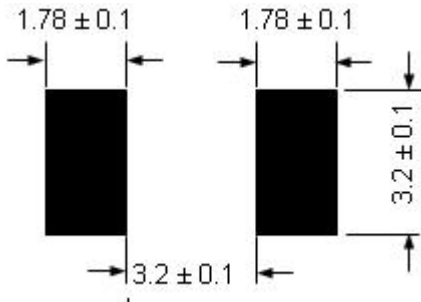
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Recommended pad layout (mm)



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 profile could negatively impact solderability performance of our devices.

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