

**Performance Specification**

| Model       | I <sub>hold</sub> | I <sub>trip</sub> | V <sub>max</sub> | V <sub>max</sub> | I <sub>max</sub> | P <sub>d</sub> | Maximum Time |      | Resistance          |                     |                     |
|-------------|-------------------|-------------------|------------------|------------------|------------------|----------------|--------------|------|---------------------|---------------------|---------------------|
|             |                   |                   | Operating        | Interrupt        |                  |                | To Trip      |      | R <sub>i min.</sub> | R <sub>i max.</sub> | R <sub>1 max.</sub> |
|             | (mA)              | (mA)              | (Vdc)            | (Vrms)           | (A)              | Typ.           | Current      | Time | (Ω)                 | (Ω)                 | (Ω)                 |
| JK250-020U  | 20                | 45                | 60               | 250              | 3                | 1.00           | 0.5          | 0.4  | 70                  | 160                 | 240                 |
| JK250-030U  | 30                | 65                | 60               | 250              | 3                | 1.00           | 0.5          | 0.5  | 50                  | 120                 | 180                 |
| JK250-040U  | 40                | 80                | 60               | 250              | 3                | 1.00           | 0.5          | 1.0  | 30                  | 60                  | 100                 |
| JK250-060U  | 60                | 120               | 60               | 250              | 3                | 1.00           | 0.5          | 0.5  | 20                  | 60                  | 90                  |
| JK250-080U  | 80                | 160               | 60               | 250              | 3                | 1.00           | 1.00         | 0.4  | 12                  | 22                  | 33                  |
| JK250-090U  | 90                | 180               | 60               | 250              | 3                | 1.00           | 1.00         | 0.5  | 10                  | 20                  | 31                  |
| JK250-100U  | 100               | 200               | 60               | 250              | 3                | 1.00           | 1.00         | 1.0  | 10                  | 12                  | 20                  |
| JK250-110U  | 110               | 220               | 60               | 250              | 3                | 1.00           | 1.00         | 1.2  | 6.0                 | 12                  | 16                  |
| JK250-120U  | 120               | 240               | 60               | 250              | 3                | 1.00           | 1.00         | 1.2  | 6.0                 | 12                  | 16                  |
| JK250-145U  | 145               | 290               | 60               | 250              | 3                | 1.00           | 1.00         | 4    | 3.5                 | 6.5                 | 14                  |
| JK250-180T  | 180               | 650               | 60               | 250              | 10               | 1.00           | 1.00         | 1.5  | 1.0                 | 2.2                 | 4.0                 |
| JK250-180U  | 180               | 650               | 60               | 250              | 10               | 1.00           | 3.00         | 1.5  | 2.0                 | 4.0                 | 6.0                 |
| JK250-200U  | 200               | 400               | 60               | 250              | 10               | 1.00           | 3.00         | 5.0  | 3.0                 | 6.0                 | 9.0                 |
| JK250-400U  | 400               | 800               | 60               | 250              | 10               | 1.00           | 3.00         | 8.0  | 1.0                 | 3.0                 | 6.0                 |
| JK250-600U  | 600               | 1200              | 60               | 250              | 10               | 1.00           | 3.00         | 12.0 | 0.6                 | 1.7                 | 4.5                 |
| JK250-800U  | 800               | 1600              | 60               | 250              | 10               | 1.50           | 5.00         | 18.0 | 0.4                 | 1.0                 | 3.0                 |
| JK250-1000U | 1000              | 2000              | 60               | 250              | 10               | 1.50           | 5.00         | 20.0 | 0.3                 | 0.8                 | 2.5                 |
| JK250-1200U | 1200              | 2400              | 60               | 250              | 10               | 1.50           | 6.00         | 20.0 | 0.2                 | 0.8                 | 2.5                 |
| JK250-1500U | 1500              | 3000              | 60               | 250              | 10               | 1.50           | 7.50         | 20.0 | 0.2                 | 0.6                 | 2.0                 |
| JK250-2000U | 2000              | 4000              | 60               | 250              | 10               | 1.50           | 10.00        | 20.0 | 0.2                 | 0.4                 | 1.5                 |

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

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

I<sub>hold</sub> = Hold Current. Maximum current device will not trip in 25°C still air.

I<sub>trip</sub> = Trip Current. Minimum current at which the device will always trip in 25°C still air.

P<sub>d</sub> = Power dissipation when device is in the tripped state in 25°C still air environment at rated voltage.

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

R<sub>1max</sub> = Maximum device resistance is measured one hour post reflow.

CAUTION : Operation beyond the specified ratings may result in damage and possible arcing and flame.

## Physical Dimensions(mm.)

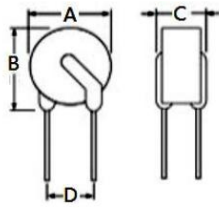


Fig.1

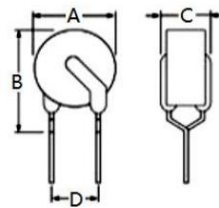


Fig.2

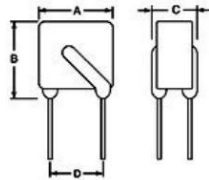


Fig.3

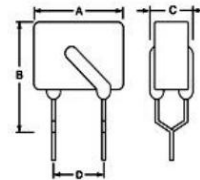


Fig.4

| Model       | Dimensions (mm) |        |        |        | Lead material    | Shape |
|-------------|-----------------|--------|--------|--------|------------------|-------|
|             | A(max)          | B(max) | C(max) | D(typ) | Tinned metal(mm) | Fig   |
| JK250-020U  | 7.4             | 12.7   | 4.5    | 5.1    | 22AWG/Φ0.6       | 1     |
| JK250-030U  | 7.4             | 12.7   | 4.5    | 5.1    | 22AWG/Φ0.6       | 1     |
| JK250-040U  | 7.4             | 12.7   | 4.5    | 5.1    | 22AWG/Φ0.6       | 1/2   |
| JK250-050U  | 7.4             | 12.7   | 4.5    | 5.1    | 22AWG/Φ0.6       | 1/2   |
| JK250-060U  | 7.4             | 12.7   | 4.5    | 5.1    | 22AWG/Φ0.6       | 1/2   |
| JK250-080U  | 7.4             | 12.7   | 4.5    | 5.1    | 22AWG/Φ0.6       | 2     |
| JK250-090U  | 7.4             | 12.7   | 4.5    | 5.1    | 22AWG/Φ0.6       | 2     |
| JK250-100U  | 7.8             | 12.6   | 4.5    | 5.1    | 22AWG/Φ0.6       | 1     |
| JK250-110U  | 7.0             | 12.6   | 4.5    | 5.1    | 22AWG/Φ0.6       | 4     |
| JK250-120U  | 7.0             | 12.6   | 4.5    | 5.1    | 22AWG/Φ0.6       | 4     |
| JK250-145U  | 7.0             | 12.6   | 4.5    | 5.1    | 22AWG/Φ0.6       | 4     |
| JK250-180T  | 10.2            | 14.5   | 3.8    | 5.1    | 22AWG/Φ0.6       | 2     |
| JK250-180U  | 9.0             | 11.0   | 4.5    | 5.1    | 22AWG/Φ0.6       | 4     |
| JK250-200U  | 12.0            | 17.0   | 4.5    | 5.1    | 22AWG/Φ0.6       | 3     |
| JK250-400U  | 12.0            | 17.0   | 4.5    | 5.1    | 22AWG/Φ0.6       | 3     |
| JK250-600U  | 16.0            | 18.0   | 4.5    | 5.1    | 22AWG/Φ0.6       | 3     |
| JK250-800U  | 20.0            | 22.5   | 4.5    | 5.1    | 20 AWG/Φ0.8      | 3     |
| JK250-1000U | 20              | 22.5   | 4.5    | 5.1    | 20 AWG/Φ0.8      | 3     |
| JK250-1200U | 22              | 28     | 4.5    | 5.1    | 20 AWG/Φ0.8      | 3     |
| JK250-1500U | 25              | 30     | 4.5    | 5.1    | 20 AWG/Φ0.8      | 3     |
| JK250-2000U | 26              | 32     | 4.5    | 10.2   | 20 AWG/Φ0.8      | 3     |

Unit : mm

 Note: Dimensions in the A, B, C are the maximum sizes, all typical values of D is at the tolerance of  $\pm 0.75\text{mm}$ .



### Environmental Specifications

| Test                  | Conditions                  | Resistance change |
|-----------------------|-----------------------------|-------------------|
| Passive aging         | +85°C, 1000 hrs.            | ±5% typical       |
| Humidity aging        | +85°C, 85% R.H. , 168 hours | ±5% typical       |
| Thermal shock         | +85°C to -40°C, 20 times    | ±33% typical      |
| Resistance to solvent | MIL-STD-202, Method 215     | No change         |
| Vibration             | MIL-STD-202, Method 201     | No change         |

Ambient operating conditions : - 40 °C to +85 °C

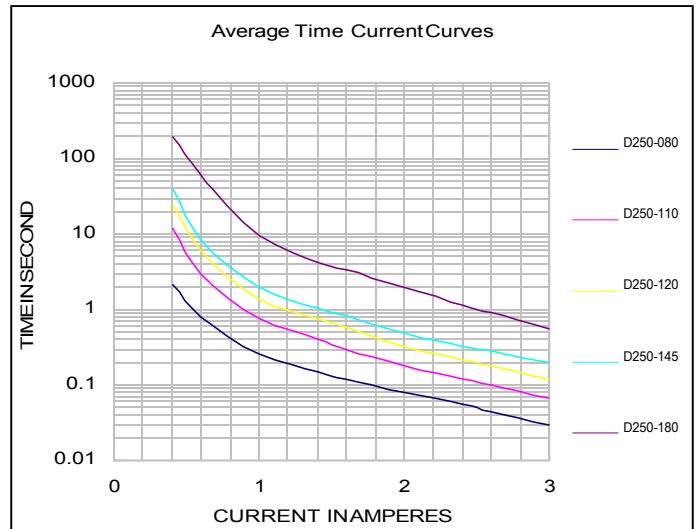
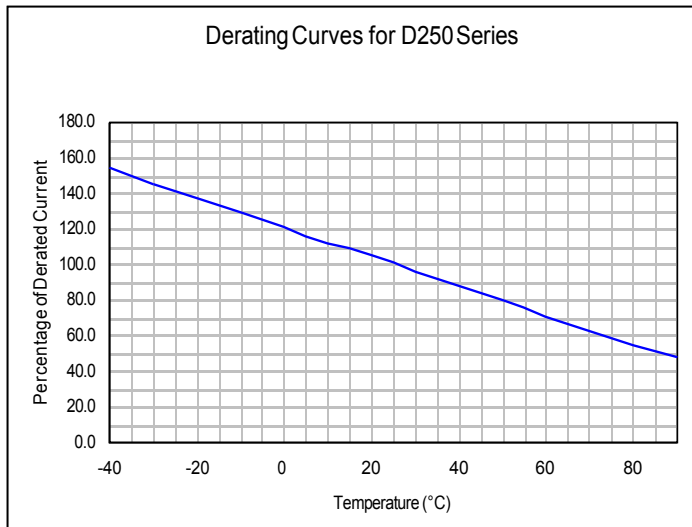
Maximum surface temperature of the device in the tripped state is 125 °C

### Agency Approval and Environmental Compliance

| Agency | File Number | Regulation   | Standard   |
|--------|-------------|--|------------|
| UL     | pending     |  | 2002/95/EC |
| TUV    | pending     |  | R50077227  |

## Thermal Derating Curve

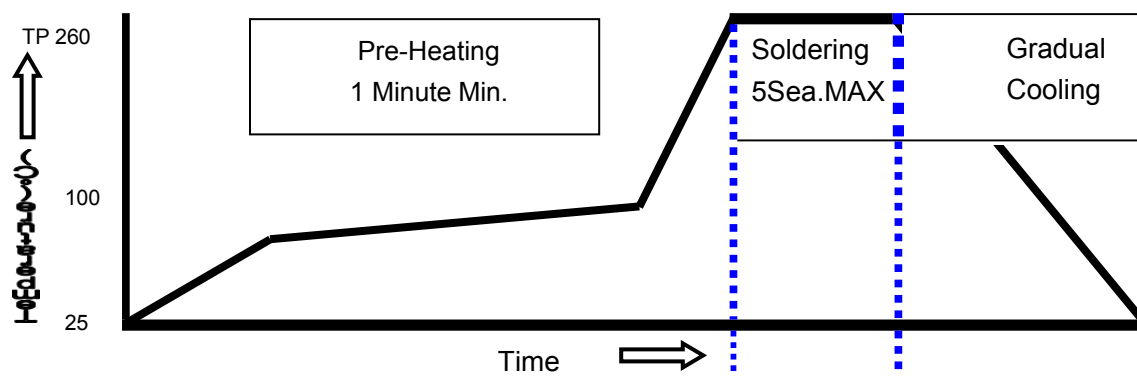
## Average Time-Current Curve



## I<sub>hold</sub> Versus Temperature

| Model        | Maximum ambient operating temperature ( °C ) |       |      |      |      |      |      |      |      |      |
|--------------|--|-------|------|------|------|------|------|------|------|------|
|              | -40°C  | -20°C | 0°C  | 25°C | 30°C | 40°C | 50°C | 60°C | 70°C | 85°C |
| JK250 series | 148%   | 132%  | 117% | 100% | 91%  | 85%  | 77%  | 68%  | 61%  | 45%  |

## Soldering Parameters

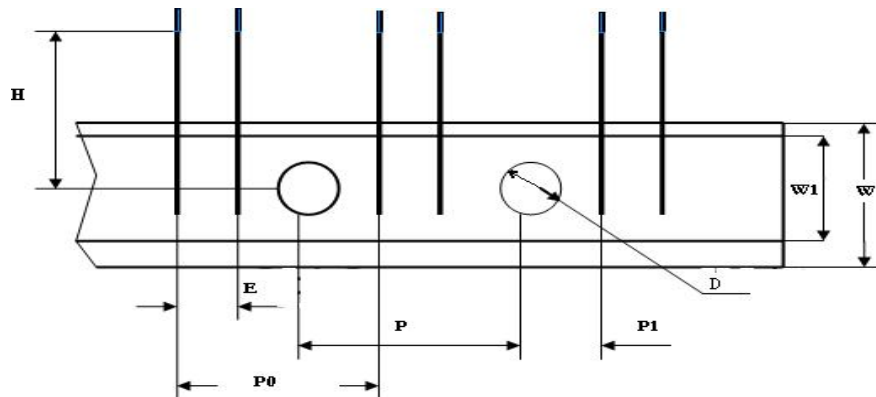


### WAVE SOLDERING INFORMATIONS

|                  |   |
|------------------|---|
| Pre-Heating Zone | Max. ramping rate should not exceed 4°C/Sec.    |
| Soldering Zone   | Max. solder temperature should not exceed 260°C |
| Cooling Zone     | Cooling by natural convection in air.           |

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## Packaging Quantity



| E         | P        | P0       | P1         | W1       | w      | H          | D         |
|-----------|----------|----------|------------|----------|--------|------------|-----------|
| 5.0±0.5mm | 12.7±1mm | 12.7±1mm | 3.85±0.7mm | 12 (min) | 18±1mm | 16.5±1.0mm | 4.0±0.5mm |

Package Qty: 1000PCS/small box, 10 boxes/Carton

Small Box Dim: 330 (±4) mm×245 (±3) mm×43 (±2) mm

Carton Dim: 500 (±5) mm×350 (±4) mm×265 (±3) mm

| JK250   | 120     | U               | Reel Q'ty | Bag Q'ty |
|---------|---------|-----------------|-----------|----------|
| Product | Hold    | T= Pre-tripped  | 1000PCS   | 1000PCS  |
| name    | Current | U= Uncoated     |           |          |
| 250V    | (mA)    | Blank= Standard |           |          |

Tape & Reel packaging per EIA468-B standard.

## Warehouse Storage Conditions of Product s

(1) Storage Conditions :

- a.Storage Temperature : -10℃~+40℃
- b.Relative Humidity : ≅75%RH
- c. Keep away from corrosive atmosphere and sunlight.

(2) Period of Storage : 1 year

Website: <http://www.jksemit.com>

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