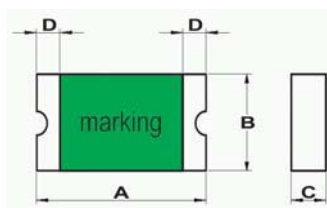
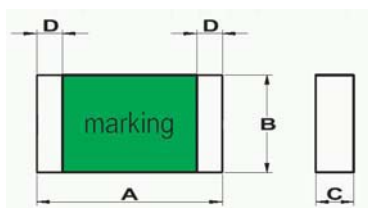


PPTC RESETTABLE FUSE

SMD Type-1812 Series

Construction and Dimension:



Style 1

Style 2

Unit:mm

| Model | A | | B | | C | | D | |
|---------------|------|------|------|------|------|------|------|------|
| | Min. | Max. | Min. | Max. | Min. | Max. | Min. | Max. |
| 1812SMD010 | 4.25 | 4.80 | 3.00 | 3.50 | 0.25 | 2.00 | 0.30 | 1.00 |
| 1812SMD014 | 4.25 | 4.80 | 3.00 | 3.50 | 0.25 | 2.00 | 0.30 | 1.00 |
| 1812SMD020 | 4.25 | 4.80 | 3.00 | 3.50 | 0.25 | 1.80 | 0.30 | 1.00 |
| 1812SMD035 | 4.25 | 4.80 | 3.00 | 3.50 | 0.25 | 1.50 | 0.30 | 1.00 |
| 1812SMD050 | 4.25 | 4.80 | 3.00 | 3.50 | 0.25 | 1.30 | 0.30 | 1.00 |
| 1812SMD075 | 4.25 | 4.80 | 3.00 | 3.50 | 0.25 | 1.30 | 0.30 | 1.00 |
| 1812SMD075/24 | 4.25 | 4.80 | 3.00 | 3.50 | 0.25 | 1.30 | 0.30 | 1.00 |
| 1812SMD110 | 4.25 | 4.80 | 3.00 | 3.50 | 0.25 | 1.30 | 0.30 | 1.00 |
| 1812SMD110/16 | 4.25 | 4.80 | 3.00 | 3.50 | 0.25 | 2.00 | 0.30 | 1.00 |
| 1812SMD125 | 4.25 | 4.80 | 3.00 | 3.50 | 0.25 | 1.50 | 0.30 | 1.00 |
| 1812SMD150 | 4.25 | 4.80 | 3.00 | 3.50 | 0.25 | 1.50 | 0.30 | 1.00 |
| 1812SMD160 | 4.25 | 4.80 | 3.00 | 3.50 | 0.25 | 1.50 | 0.30 | 1.00 |
| 1812SMD200 | 4.25 | 4.80 | 3.00 | 3.50 | 0.25 | 3.00 | 0.30 | 1.00 |
| 1812SMD260 | 4.25 | 4.80 | 3.00 | 3.50 | 0.25 | 3.00 | 0.30 | 1.00 |

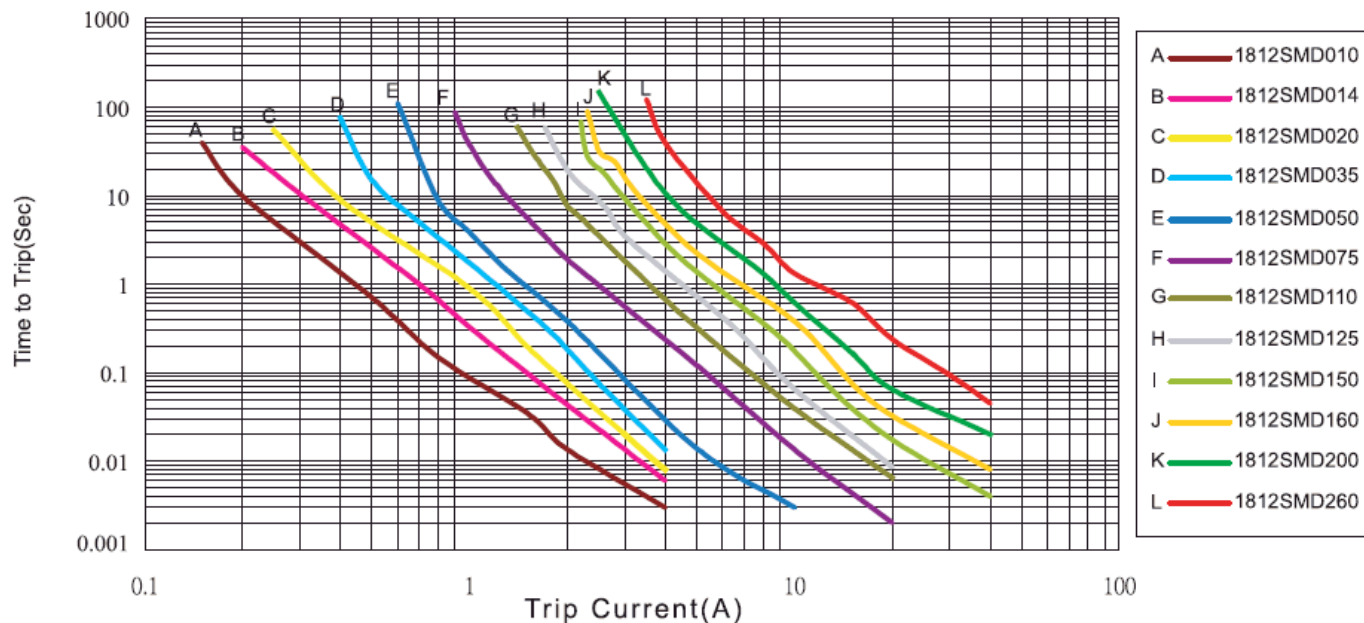
Electrical Characteristics at 23⁰C

| Model | V max (Volts) | I max (Amps) | I hold (Amps) | I trip (Amps) | R min (Ω) | R max (Ω) | R1 max (Ω) | P (d) (Watts) | Style |
|---------------|---------------|--------------|---------------|---------------|-----------|-----------|------------|---------------|-------|
| 1812SMD010 | 30.0 | 10 | 0.10 | 0.30 | 0.700 | 7.00 | 17.0 | 0.8 | 1 |
| 1812SMD014 | 60.0 | 10 | 0.14 | 0.34 | 0.600 | 4.00 | 8.0 | 0.8 | 1 |
| 1812SMD020 | 30.0 | 10 | 0.20 | 0.40 | 0.400 | 2.90 | 6.0 | 0.8 | 1 |
| 1812SMD035 | 3.0 | 40 | 0.35 | 0.75 | 0.200 | 0.80 | 3.00 | 0.8 | 1 |
| 1812SMD050 | 15.0 | 40 | 0.50 | 1.00 | 0.150 | 0.60 | 1.20 | 0.8 | 1 |
| 1812SMD075 | 13.2 | 40 | 0.75 | 1.50 | 0.110 | 0.45 | 0.60 | 0.8 | 1 |
| 1812SMD075/24 | 24.0 | 40 | 0.75 | 1.50 | 0.110 | 0.45 | 0.60 | 0.8 | 1 |
| 1812SMD110 | 6.0 | 40 | 1.10 | 2.20 | 0.040 | 0.15 | 0.40 | 0.8 | 1 |
| 1812SMD110/16 | 16.0 | 40 | 1.10 | 2.20 | 0.040 | 0.15 | 0.40 | 0.8 | 1 |
| 1812SMD125 | 6.0 | 40 | 1.25 | 2.50 | 0.040 | 0.08 | 0.25 | 0.8 | 2 |
| 1812SMD150 | 6.0 | 40 | 1.50 | 3.00 | 0.020 | 0.06 | 0.20 | 0.9 | 2 |
| 1812SMD160 | 6.0 | 40 | 1.60 | 3.20 | 0.020 | 0.05 | 0.20 | 1.0 | 2 |
| 1812SMD200 | 6.0 | 40 | 2.00 | 4.00 | 0.015 | 0.05 | 0.15 | 1.2 | 2 |
| 1812SMD260 | 6.0 | 40 | 2.60 | 5.20 | 0.010 | 0.03 | 0.10 | 1.3 | |

PPTC RESETTABLE FUSE

SMD Type-1812 Series

Construction and Dimension:



Thermal Derating Chart

| TEMP(°C) | - 40 | - 20 | 0 | 23 | 40 | 50 | 60 | 70 | 85 |
|---------------|------|------|------|------|------|------|------|------|------|
| 1812SMD010 | 0.15 | 0.13 | 0.11 | 0.10 | 0.08 | 0.08 | 0.07 | 0.06 | 0.05 |
| 1812SMD014 | 0.20 | 0.18 | 0.16 | 0.14 | 0.12 | 0.11 | 0.10 | 0.08 | 0.07 |
| 1812SMD020 | 0.29 | 0.26 | 0.23 | 0.20 | 0.17 | 0.16 | 0.14 | 0.13 | 0.11 |
| 1812SMD035 | 0.50 | 0.45 | 0.40 | 0.35 | 0.29 | 0.26 | 0.24 | 0.21 | 0.19 |
| 1812SMD050 | 0.71 | 0.66 | 0.59 | 0.50 | 0.43 | 0.40 | 0.37 | 0.31 | 0.28 |
| 1812SMD075 | 1.00 | 0.95 | 0.89 | 0.75 | 0.65 | 0.60 | 0.54 | 0.46 | 0.41 |
| 1812SMD075/24 | 1.00 | 0.95 | 0.89 | 0.75 | 0.65 | 0.60 | 0.54 | 0.46 | 0.41 |
| 1812SMD110 | 1.55 | 1.40 | 1.30 | 1.10 | 0.95 | 0.88 | 0.80 | 0.70 | 0.61 |
| 1812SMD110/16 | 1.55 | 1.40 | 1.30 | 1.10 | 0.95 | 0.88 | 0.80 | 0.70 | 0.61 |
| 1812SMD125 | 1.80 | 1.60 | 1.40 | 1.25 | 1.10 | 1.00 | 0.90 | 0.80 | 0.70 |
| 1812SMD150 | 2.05 | 1.95 | 1.75 | 1.50 | 1.30 | 1.20 | 1.10 | 0.93 | 0.85 |
| 1812SMD160 | 2.25 | 2.00 | 1.85 | 1.60 | 1.40 | 1.29 | 1.20 | 0.95 | 0.90 |
| 1812SMD200 | 2.90 | 2.60 | 2.30 | 2.00 | 1.70 | 1.60 | 1.40 | 1.25 | 1.10 |
| 1812SMD260 | 3.65 | 3.30 | 2.95 | 2.60 | 2.21 | 2.05 | 1.83 | 1.64 | 1.43 |

PPTC RESETTABLE FUSE

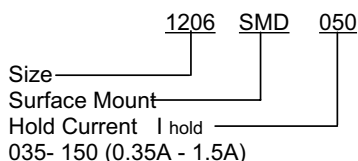
Definition of Electrical Characteristics

- V_{max} : Maximum voltage the device can withand without damage at rated current.
- I_{max} : Maximum fault current the device can withand without damage at rated voltage.
- I_{hold} : Hold current; Maximum current at which the device will not trip in 23°C still air.
- I_{trip} : Trip current; Minimum current at which the device will trip in 23°C still air.
- R_{min} : Minimum device resistance in initial state at 23°C.
- R_{max} : Maximum device resistance in initial state at 23°C.
- $R1_{max}$: Maximum device resistance at 23°C measured 1 hours after tripping.
- $P(d)$: Maximum power dissipated from device when in the tripped state in 23°C still air.

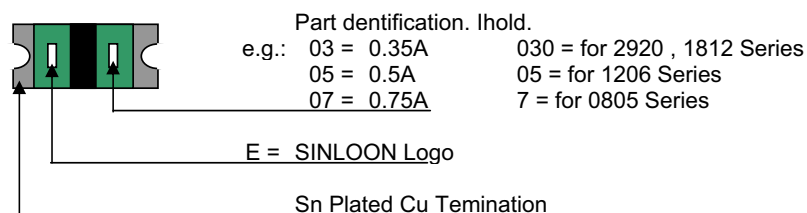
Test and Environmental Characteristics

| Items | Specification/Condition | Accept Criteria |
|--------------------------|---|-------------------------------------|
| Initial resistance | In still air at 23°C | $R_{min} \leq R \leq R_{max}$ |
| Time to trip | At specified current, V_{max} at 23°C | Refer to time-to-trip chart |
| Hold current | 30 min., at I_{hold} | No trip |
| Trip endurance | V_{max} , I_{max} , 100 cycles | No arcing or burning |
| Trip aging | V_{max} , 48 hours | No arcing or burning |
| Max.device surface temp. | In tripped state | 125°C max. |
| Passive aging | 85°C, 1000 hours | ± 10% typical resistance change |
| Humidity aging | 85°C, 85% RH, 1000 hours | ± 10% typical resistance change |
| Thermal shock | 85°C/-40°C, 10 times | +5 ~ -20% typical resistance change |

Ordering Information



Part Marking



Note: All drawing are not in scale and layout may vary.
All oarts dimension is in millimeter unless otherwise specified.
Teminal material is Tin (Sn) plated Copper (Cu)

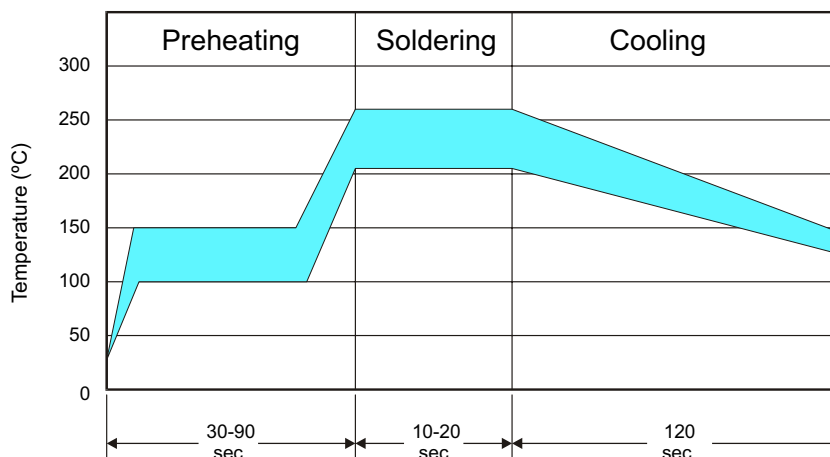
Agency Approval: UL File Number: Pending
 c-UL File Number: Pending
 TUV File Number: Pending

Product Packing

| Type | Series | Packing type | Quantity |
|------|---------|----------------|----------|
| SMD | 0805SMD | Reel Packahing | 3000 |
| | 1206SMD | | 3000 |
| | 1812SMD | | 1500 |
| | 2920SMD | | 2000 |
| | | | Reel |

Reflow

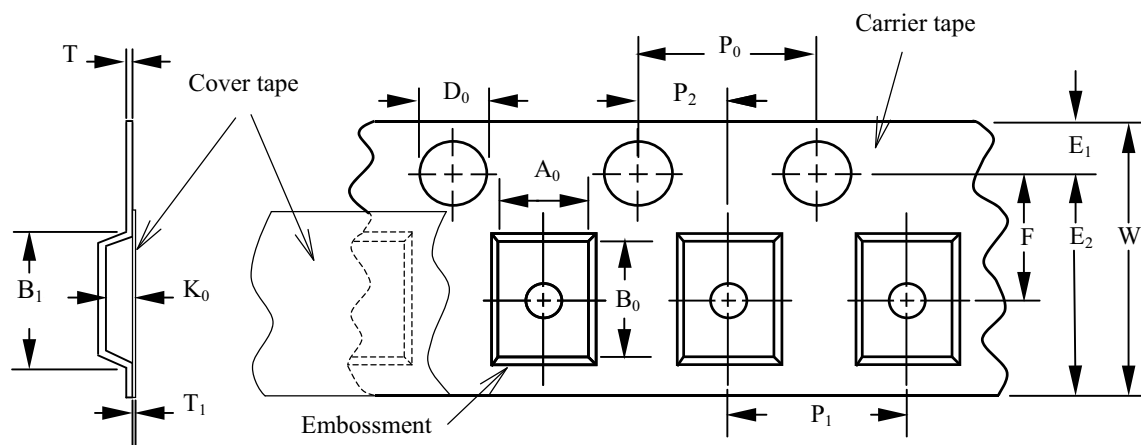
- The recommended reflow profile is shown as the figure at right hand side.
- A maximum solder paste of thickness 0.25mm is recommended.
- Hot air, infra-red, vapor phase reflowing are recommended.



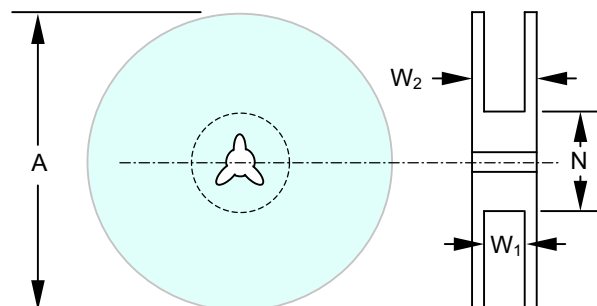
WARNING:

- Devices may not meet specifications if reflow temperatures exceed the recommended profile.
- Operation beyond maximum ratings or improper use may result in device damage and possible electrical arcing, flaming or explosion.
- The devices may not meet specified ratings if storage conditions exceeded 40°C and 70% relative humidity.
- The devices are intended to protect against occasional over-current or over-temperature fault conditions and should not be used when there are repeated fault conditions or prolonged trip events.
- The devices should not be placed under pressure or installed in spaces that would prevent thermal expansion, due to any prohibition of thermal expansion of the devices might result improper protection of fault conditions.
- **MAYLOON** reserves the right to change any information or specification within this data book without notice.

Tape & Reel Packaging Specification per EIA481-1 Type: 1812SMD



| Parameter as EIA481-1 | Dimensions (mm) |
|-----------------------|------------------|
| W | 12.00 ± 0.30 |
| P ₀ | 4.00 ± 0.10 |
| P ₁ | 8.00 ± 0.10 |
| P ₂ | 2.00 ± 0.05 |
| A ₀ | 3.50 ± 0.23 |
| B ₀ | 5.10 ± 0.15 |
| B ₁ max. | 8.2 |
| D ₀ | 1.50 +0.10/-0.00 |
| F | 5.50 ± 0.05 |
| E ₁ | 1.75 ± 0.10 |
| E ₂ min. | 10.25 |
| T max. | 0.6 |
| T ₁ max. | 0.1 |
| K ₀ | 0.90 ± 0.15 |



| Parameter as EIA481-1 | Dimensions (mm) |
|-----------------------|-----------------|
| A max. | 185 |
| N min. | 50 |
| W1 | 12.4 +2.0/-0.0 |
| W2 max. | 18.4 |