

## »Performance Specification

| Model           | Marking | V <sub>max</sub><br>(Vdc) | I <sub>max</sub><br>(A) | I <sub>hold</sub><br>@25°C<br>(A) | I <sub>trip</sub><br>@25°C<br>(A) | P <sub>d</sub><br>Typ.<br>(W) | Maximum        |               | Resistance                |                          |
|-----------------|---------|---------------------------|-------------------------|-----------------------------------|-----------------------------------|-------------------------------|----------------|---------------|---------------------------|--------------------------|
|                 |         |                           |                         |                                   |                                   |                               | Time To Trip   |               | R <sub>i min</sub><br>(Ω) | R <sub>1max</sub><br>(Ω) |
|                 |         |                           |                         |                                   |                                   |                               | Current<br>(A) | Time<br>(Sec) |                           |                          |
| SMD0805-005/15N | 1       | 15.0                      | 30                      | 0.05                              | 0.15                              | 0.5                           | 0.5            | 1.50          | 1.500                     | 18.000                   |
| SMD0805-010/15N | 1       | 15.0                      | 30                      | 0.10                              | 0.30                              | 0.5                           | 0.5            | 1.50          | 0.750                     | 6.000                    |
| SMD0805-020/09N | 2       | 9.0                       | 30                      | 0.20                              | 0.50                              | 0.5                           | 8.0            | 0.02          | 0.550                     | 3.500                    |
| SMD0805-035/06N | 3       | 6.0                       | 30                      | 0.35                              | 0.75                              | 0.5                           | 8.0            | 0.10          | 0.200                     | 1.200                    |
| SMD0805-035/12N | 3       | 12.0                      | 30                      | 0.35                              | 0.75                              | 0.5                           | 8.0            | 0.10          | 0.200                     | 1.200                    |
| SMD0805-050/06N | 5       | 6.0                       | 30                      | 0.50                              | 1.00                              | 0.5                           | 8.0            | 0.10          | 0.100                     | 0.850                    |
| SMD0805-050/12N | 5       | 12.0                      | 30                      | 0.50                              | 1.00                              | 0.5                           | 8.0            | 0.10          | 0.100                     | 0.850                    |
| SMD0805-050/16N | 5       | 16.0                      | 30                      | 0.50                              | 1.00                              | 0.5                           | 8.0            | 0.10          | 0.100                     | 0.850                    |
| SMD0805-050/24N | 5       | 24.0                      | 30                      | 0.50                              | 1.00                              | 0.5                           | 8.0            | 0.10          | 0.100                     | 0.850                    |
| SMD0805-075/06N | 7       | 6.0                       | 35                      | 0.75                              | 1.50                              | 0.6                           | 8.0            | 0.20          | 0.070                     | 0.385                    |
| SMD0805-075/12N | 7       | 12.0                      | 35                      | 0.75                              | 1.50                              | 0.6                           | 8.0            | 0.20          | 0.070                     | 0.385                    |
| SMD0805-100/06N | 0       | 6.0                       | 35                      | 1.00                              | 1.95                              | 0.6                           | 8.0            | 0.30          | 0.040                     | 0.230                    |
| SMD0805-100/12N | 0       | 12.0                      | 35                      | 1.00                              | 1.95                              | 0.6                           | 8.0            | 0.30          | 0.040                     | 0.230                    |
| SMD0805-110/06N | 0       | 6.0                       | 35                      | 1.10                              | 2.20                              | 0.6                           | 8.0            | 0.30          | 0.035                     | 0.210                    |
| SMD0805-110/12N | 0       | 12.0                      | 35                      | 1.10                              | 2.20                              | 0.6                           | 8.0            | 0.30          | 0.035                     | 0.210                    |
| SMD0805-125/06N | 12      | 6.0                       | 35                      | 1.25                              | 2.50                              | 1.5                           | 8.0            | 0.60          | 0.025                     | 0.140                    |
| SMD0805-150/06N | 15      | 6.0                       | 35                      | 1.50                              | 3.00                              | 1.0                           | 8.0            | 0.50          | 0.015                     | 0.130                    |

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.

## »Environmental Specifications

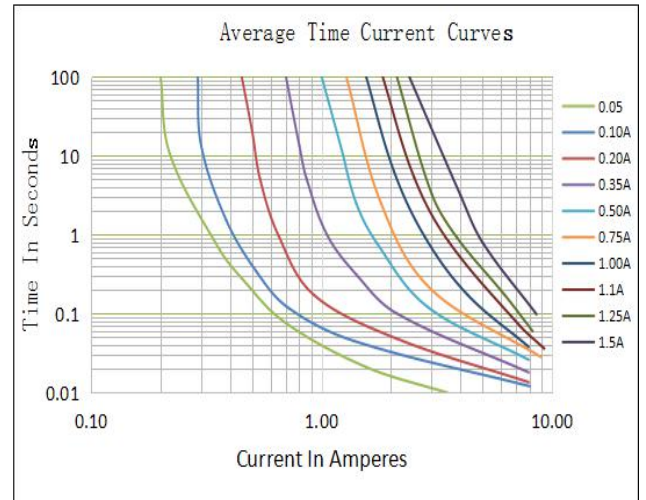
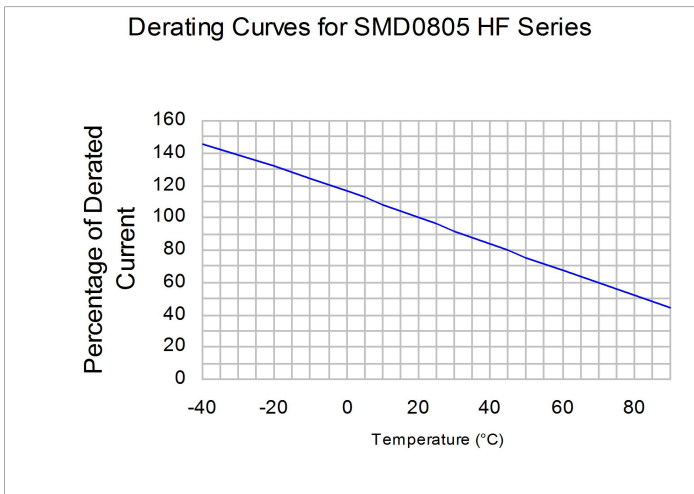
| Test   | Conditions                  | Resistance change |
|--|-----------------------------|-------------------|
| Passive aging  | +85°C, 1000 hrs.            | ±5% typical       |
| Humidity aging   | +85°C, 85% R.H. , 168 hours | ±5% typical       |
| Thermal shock  | +85°C to -40°C, 20 times    | ±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 |                             |                   |

»Thermal Derating Chart Recommended Hold Current(A) at Ambient Temperature(°C)

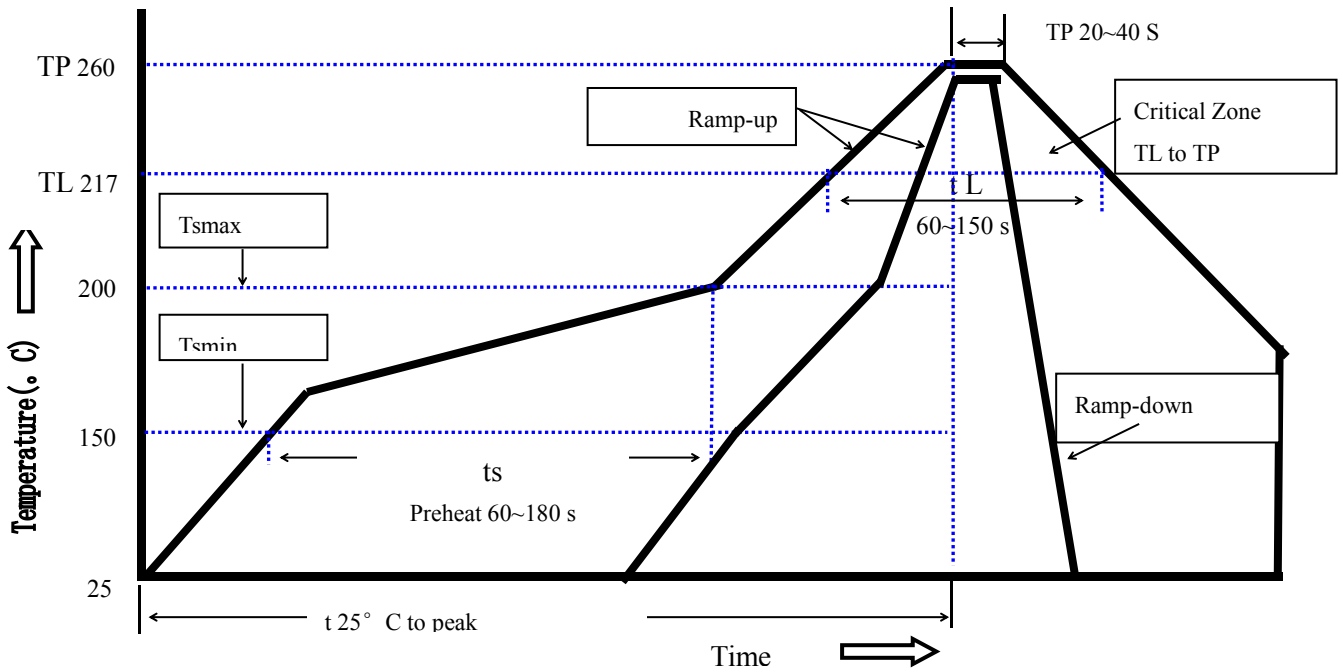
| Model        | Ambient Operation Temperature |       |       |       |       |       |       |       |       |
|--------------|-------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|
|              | -40°C                         | -20°C | 0°C   | 25°C  | 40°C  | 50°C  | 60°C  | 70°C  | 85°C  |
| SMD0805-005N | 0.070                         | 0.060 | 0.055 | 0.050 | 0.040 | 0.035 | 0.030 | 0.025 | 0.015 |
| SMD0805-010N | 0.14                          | 0.12  | 0.11  | 0.10  | 0.08  | 0.07  | 0.06  | 0.05  | 0.03  |
| SMD0805-020N | 0.28                          | 0.25  | 0.23  | 0.20  | 0.17  | 0.14  | 0.12  | 0.10  | 0.07  |
| SMD0805-035N | 0.47                          | 0.44  | 0.39  | 0.35  | 0.30  | 0.27  | 0.24  | 0.20  | 0.14  |
| SMD0805-050N | 0.68                          | 0.62  | 0.55  | 0.50  | 0.40  | 0.37  | 0.33  | 0.29  | 0.23  |
| SMD0805-075N | 1.00                          | 0.90  | 0.79  | 0.75  | 0.63  | 0.57  | 0.53  | 0.41  | 0.34  |
| SMD0805-100N | 1.35                          | 1.25  | 1.15  | 1.00  | 0.82  | 0.74  | 0.65  | 0.55  | 0.42  |
| SMD0805-110N | 1.45                          | 1.35  | 1.20  | 1.10  | 0.92  | 0.84  | 0.75  | 0.65  | 0.52  |
| SMD0805-125N | 1.65                          | 1.53  | 1.36  | 1.25  | 1.05  | 0.95  | 0.85  | 0.74  | 0.59  |
| SMD0805-150N | 1.98                          | 1.84  | 1.63  | 1.50  | 1.26  | 1.14  | 1.02  | 0.88  | 0.71  |

»Thermal Derating Curve

» Average Time-Current Curve



»Soldering Parameters



| Profile Feature                     | Pb-Free Assembly   |
|-------------------------------------|--------------------|
| Average Ramp-Up Rate(Ts max to T p) | 3°C/second max.    |
| Preheat                             |                    |
| -Temperature Min(Ts min)            | 150°C              |
| -Temperature Max(Ts max)            | 200°C              |
| -Time(Ts min to Ts max)             | 60~180 seconds     |
| Time maintained above:              |                    |
| -Temperature(TL)                    | 217°C              |
| -Time(tL)                           | 60~150 seconds     |
| Peak Temperature(Tp)                | 260°C              |
| Ramp-Down Rate                      | 6°C/second max.    |
| Time 25°C to Peak Temperature       | 8 minutes max      |
| Storage Condition                   | 0°C~35°C,30%-60%RH |

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

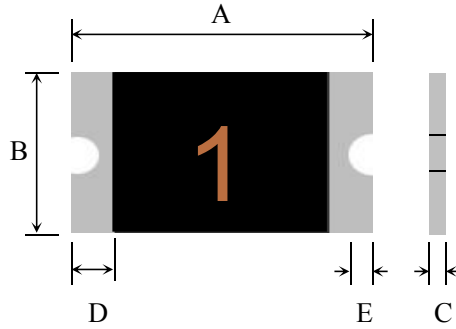
Recommended maximum paste thickness is 0.25mm

Devices can be cleaned using standard industry methods and solvents.

Note 1:All temperature refer to topside of the package, measured on the package body surface.

Note 2: If reflow temperatures exceed the recommended profile, devices may not meet the performance requirements.

»Physical Dimensions(mm.)



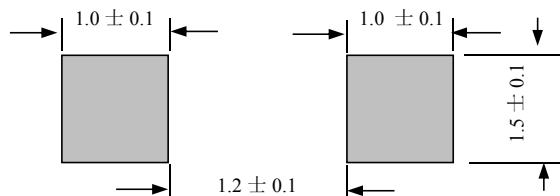
| 型號              | A    |      | B    |      | C    |      | D    | E    |
|-----------------|------|------|------|------|------|------|------|------|
|                 | Min. | Max. | Min. | Max. | Min. | Max. | Min. | Min. |
| SMD0805-005N    | 2.00 | 2.20 | 1.20 | 1.50 | 0.40 | 0.90 | 0.20 | 0.10 |
| SMD0805-010N    | 2.00 | 2.20 | 1.20 | 1.50 | 0.40 | 0.90 | 0.20 | 0.10 |
| SMD0805-020N    | 2.00 | 2.20 | 1.20 | 1.50 | 0.35 | 0.80 | 0.20 | 0.10 |
| SMD0805-035N    | 2.00 | 2.20 | 1.20 | 1.50 | 0.35 | 0.80 | 0.20 | 0.10 |
| SMD0805-035/12N | 2.00 | 2.20 | 1.20 | 1.50 | 0.35 | 0.80 | 0.20 | 0.10 |
| SMD0805-050N    | 2.00 | 2.20 | 1.20 | 1.50 | 0.35 | 0.80 | 0.20 | 0.10 |
| SMD0805-050/12N | 2.00 | 2.20 | 1.20 | 1.50 | 0.35 | 0.80 | 0.20 | 0.10 |
| SMD0805-050/16N | 2.00 | 2.20 | 1.20 | 1.50 | 0.50 | 1.10 | 0.20 | 0.10 |
| SMD0805-050/24N | 2.00 | 2.20 | 1.20 | 1.50 | 0.50 | 1.10 | 0.20 | 0.10 |
| SMD0805-075N    | 2.00 | 2.20 | 1.20 | 1.50 | 0.50 | 1.00 | 0.20 | 0.10 |
| SMD0805-075/N   | 2.00 | 2.20 | 1.20 | 1.50 | 0.50 | 1.00 | 0.20 | 0.10 |
| SMD0805-100N    | 2.00 | 2.20 | 1.20 | 1.50 | 0.70 | 1.20 | 0.20 | 0.10 |
| SMD0805-100/12N | 2.00 | 2.20 | 1.20 | 1.50 | 0.70 | 1.20 | 0.20 | 0.10 |
| SMD0805-110N    | 2.00 | 2.20 | 1.20 | 1.50 | 0.70 | 1.20 | 0.20 | 0.10 |
| SMD0805-110/12N | 2.00 | 2.20 | 1.20 | 1.50 | 0.70 | 1.20 | 0.20 | 0.10 |
| SMD0805-125N    | 2.00 | 2.20 | 1.20 | 1.50 | 1.00 | 1.50 | 0.20 | 0.10 |
| SMD0805-150N    | 2.00 | 2.20 | 1.20 | 1.50 | 1.00 | 1.50 | 0.20 | 0.10 |

**Termination Pad Characteristics**

Terminal pad materials: Tin-plated Nickel-Copper

Terminal pad solder ability: Meets EIA specification RS186-9E and ANSI/J-STD-002 Category 3.

»Recommended Pad Layout (mm.)



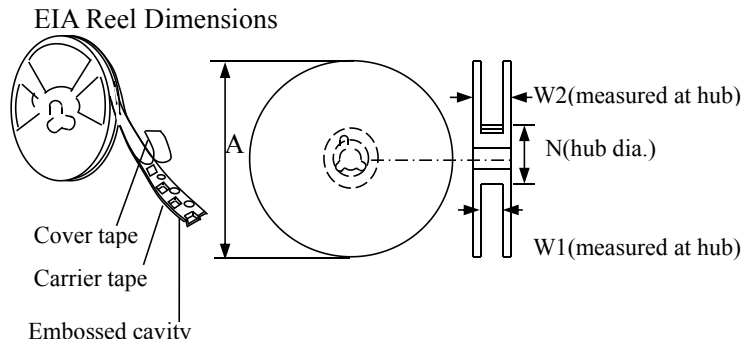
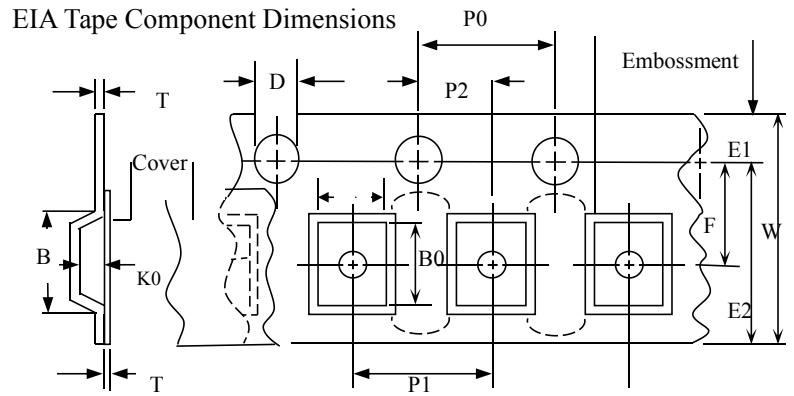
»Packaging Quantity

| Part Number                 | Quantity       |
|-----------------------------|----------------|
| SMD0805-005.010.020.035.050 | 5,000 pcs/reel |
| SMD0805-075.100.110.125     | 4,000 pcs/reel |
| SMD0805-150                 | 3,500 pcs/reel |

Tape & reel packaging per EIA481-1

»Tape And Reel Specifications (mm)

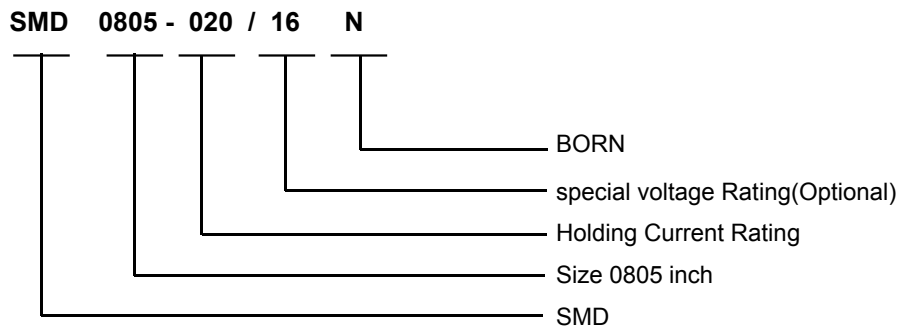
| Governing Specifications | EIA 481-1      |
|--------------------------|----------------|
| W                        | 8.0 ± 0.3      |
| P0                       | 4.0 ± 0.10     |
| P1                       | 4.0 ± 0.10     |
| P2                       | 2.0 ± 0.05     |
| A0                       | 1.45 ± 0.10    |
| B0                       | 2.30 ± 0.10    |
| B1max.                   | 4.35           |
| D0                       | 1.55 + 0.1, -0 |
| F                        | 3.5 ± 0.05     |
| E1                       | 1.75 ± 0.10    |
| E2min.                   | 6.25           |
| T                        | 0.25           |
| T1max.                   | 0.1            |
| K0                       | 0.74 ± 0.1     |
| Leader min.              | 390            |
| Trailer min.             | 160            |
| Reel Dimensions          |                |
| A max.                   | 178            |
| N min.                   | 60             |
| W1                       | 9.0 ± 0.5      |
| W2                       | 12.0 ± 0.05    |



**Storage And Handling**

- Storage conditions: 35°C max, 30%-60% R.H.
- Devices may not meet specified performance if storage conditions are exceeded.

**Part Number System**



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