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[MCCFB1206TFF/375](#)

EN

This Datasheet is presented by
the manufacturer

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Dieses Datenblatt wird vom
Hersteller bereitgestellt

FR

Cette fiche technique est
présentée par le fabricant

Fast-Acting SMD Fuses 1206

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**RoHS
Compliant**



Description

The SMD fuses stand out due to their ultra-small size and excellent electrical performance, reliability and quality. The solder-free design provides outstanding on-off and temperature cycling characteristics during operation and also makes our SMD fuses more heat and shock tolerant than typical subminiature fuses.

Applications

Industrial products such as cellphones, DVD players, battery packs, hard disk drives and digital cameras.

Features

- AEC-Q200 automotive grade certified
- Compatible with reflow and wave soldering
- Ceramic and glass construction
- Excellent environmental integrity
- One time positive disconnect
- Lead-free and Halogen-free
- Designed to UL 248-14

Specifications

| | |
|-----------------------|---|
| Operating Temperature | : -55°C to +125°C |
| Storage Conditions | : +10°C to +60°C |
| Relative Humidity | : ≤ 75% yearly average without dew, maximum 30 days at 95% |
| Vibration Resistance | : 24 cycles at 15 min. each 10-60Hz at 0.75mm amplitude 60-2000Hz at 10g acceleration |

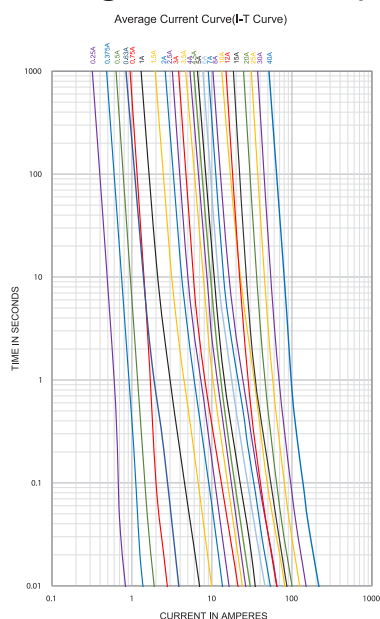
Electrical Characteristics

Time vs Current Characteristics Table

(measured with constant current power supply)

| Time vs Current Characteristics | | | |
|---------------------------------|------|------|------|
| Rated current | 100% | 250% | 350% |
| 0.25A to 5A | >4h | <5s | - |
| 6A to 20A | >4h | - | <5s |

Average Time Current (I-T) Curves



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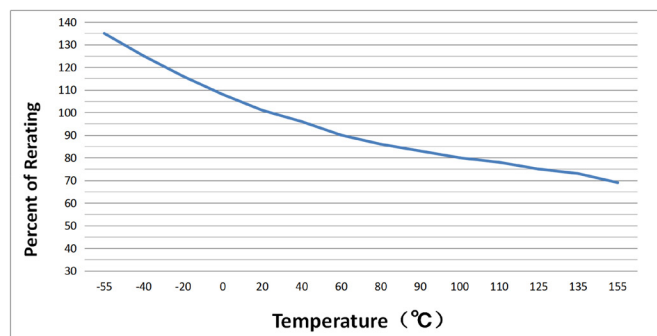
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Electrical Characteristics at 25°C

| Amp Code | Rated Current | Rated Voltage DC | Typical Voltage Drop (mV) | Breaking Capacity | Typical Melting I ² T (A ² s) | Typical Cold Resistance (mΩ) | Alpha Mark |
|----------|---------------|----------------------------------|---------------------------|--|---|------------------------------|------------|
| 0250 | 0.25A | 72VDC 63VDC 32VDC 24VDC | 1400 | 50A@72V DC 50A@63V DC 50A@32V DCC 300A@24V DC | 0.00043 | 3500 | .25 |
| 0375 | 0.375A | | 715 | | 0.00083 | 1750 | E |
| 0500 | 0.5A | | 648 | | 0.0025 | 1000 | 0.5 |
| 0750 | 0.75A | | 605 | | 0.0058 | 540 | .75 |
| 1100 | 1A | | 515 | | 0.13 | 465 | H |
| 1150 | 1.5A | | 365 | | 0.16 | 215 | K |
| 1200 | 2A | | 315 | | 0.42 | 120 | N |
| 1250 | 2.5A | | 242 | | 0.66 | 75 | O |
| 1300 | 3A | | 185 | | 1.41 | 48 | P |
| 1400 | 4A | | 175 | | 1.75 | 33 | S |
| 1500 | 5.00A | 32VDC | 143 | 50A@32V DC | 2.92 | 20 | T |
| 1700 | 7.00A | 24VDC | 141 | 300A@24V DC | 12.7 | 11.75 | 7 |
| 1800 | 8.00A | 32VDC 24VDC | 112 | 150A@32V DC 300A@24V DC | 14.5 | 8.25 | M |
| 2100 | 10.00A | | 105 | | 20.5 | 6.50 | U |
| 2120 | 12.00A | | 88 | | 11.6 | 5.00 | 12 |
| 2150 | 15.00A | | 80 | | 16.8 | 3.65 | 15 |
| 2200 | 20.00A | | 65 | | 47.8 | 1.75 | 20 |

1. DC Interrupting Rating (Measured at rated voltage, time constant of less than 50 microseconds, battery source)
2. DC Cold Resistance are measured at <10% of rated current in ambient temperature of 25°C
3. Typical Pre-arcing I²t are measured at 10In Current

Temperature Re-rating Curve



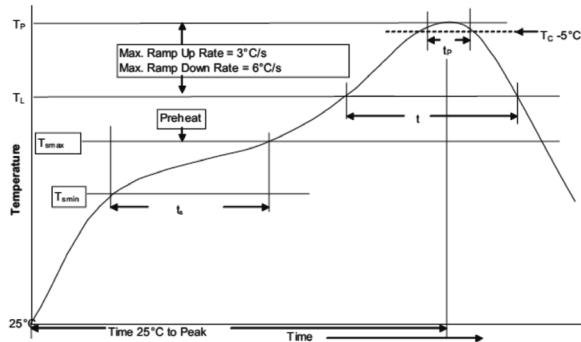
Normal ambient temperature : 23 ±3°C

Operating temperature : -55°C ~ +150°C, with proper correction factor applied

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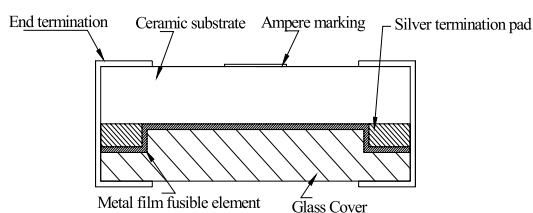
Soldering Parameters



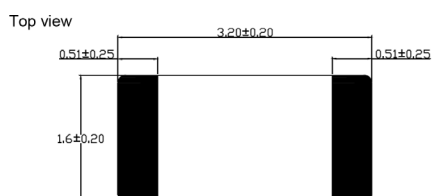
1. Infrared Reflow:
Temperature: 260°C
Time: 5S
Recommend reflow profile
2. Wave Soldering:
Reservoir Temperature: 260°C
Time in Reservoir: 10sec Max.

| Profile Feature | | Pb-Free Assembly |
|---|--------------------------|------------------|
| Average Ramp-UP Rate(Tsmax to Tp) | | 3°C/s Max. |
| Preheat | Temperature Min (Ts min) | 150°C |
| | Temperature Max (Ts max) | 200°C |
| | Time (Tmin to Ts max) | 60sec to 120sec |
| Liquidous temperature(TL) | | 217°C |
| Time at liquidous(tL) | | 60 to 150S |
| Peak package body temperature (Tp) | | 260°C |
| Time (tp) within 5°C of the specified classification temperature (Tc) | | 30S |
| Average ramp-down rate (Tp to Tsmax) | | 6°C/s Max. |
| Time (25°C to Peak Temperature) | | 8 Minutes Max. |

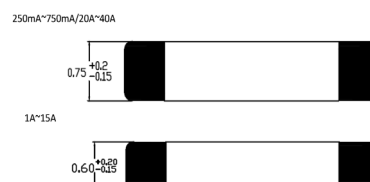
Mechanical Specifications



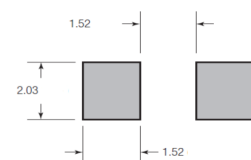
Diagram



Side view



Recommended Land Pattern



Dimensions : Millimetres

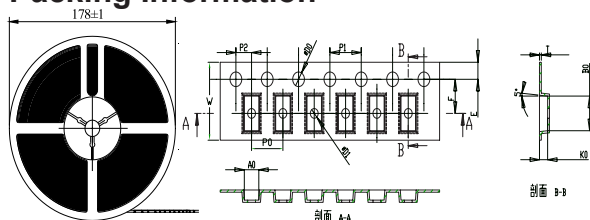
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Packing Information



1A to 15A

| P2 | P0×10 | t | A0 | B0 | K0 |
|---------|---------|------------|-----------|-----------|-----------|
| 2 ±0.05 | 40 ±0.2 | 0.25 ±0.05 | 1.85 ±0.1 | 3.56 ±0.1 | 1.04 ±0.1 |

| W | E | F | D0 | D1 | P0 | P1 |
|--------|-----------|-----------|-------------|--------|---------|---------|
| 8 ±0.2 | 1.75 ±0.1 | 3.5 ±0.05 | 1.5 +0.1/-0 | 1 ±0.1 | 4 ±0.05 | 4 ±0.01 |

0.25A to 0.75A & 20A to 40A

| W | E | F | D0 | D1 | P0 | P1 | P2 | P0×10 | t | A0 | B0 | K0 |
|--------|-----------|-----------|-------------|--------|---------|---------|---------|---------|------------|-----------|-----------|-----------|
| 8 ±0.2 | 1.75 ±0.1 | 3.5 ±0.05 | 1.5 +0.1/-0 | 1 ±0.1 | 4 ±0.05 | 4 ±0.01 | 2 ±0.05 | 40 ±0.2 | 0.25 ±0.05 | 1.85 ±0.1 | 3.56 ±0.1 | 1.27 ±0.1 |

Part Number Table

| Description | Part Number |
|---|------------------|
| SMD Fuse, Fast-Acting, 0.25A, 32V DC, 1206 | MCCFB1206TFF/250 |
| SMD Fuse, Fast-Acting, 0.375A, 32V DC, 1206 | MCCFB1206TFF/375 |
| SMD Fuse, Fast-Acting, 0.5A, 32V DC, 1206 | MCCFB1206TFF/500 |
| SMD Fuse, Fast-Acting, 0.5A, 72V DC, 1206 | MP001605 |
| SMD Fuse, Fast-Acting, 0.75A, 32V DC, 1206 | MCCFB1206TFF/750 |
| SMD Fuse, Fast-Acting, 1A, 32V DC, 1206 | MCCFB1206TFF/1 |
| SMD Fuse, Fast-Acting, 1A, 72V DC, 1206 | MP001599 |
| SMD Fuse, Fast-Acting, 1.5A, 32V DC, 1206 | MCCFB1206TFF/1.5 |
| SMD Fuse, Fast-Acting, 1.5A, 72V DC, 1206 | MP001600 |
| SMD Fuse, Fast-Acting, 2A, 32V DC, 1206 | MCCFB1206TFF/2 |
| SMD Fuse, Fast-Acting, 2.5A, 32V DC, 1206 | MCCFB1206TFF/2.5 |
| SMD Fuse, Fast-Acting, 2.5A, 72V DC, 1206 | MP001601 |
| SMD Fuse, Fast-Acting, 3A, 32V DC, 1206 | MCCFB1206TFF/3 |
| SMD Fuse, Fast-Acting, 4A, 32V DC, 1206 | MCCFB1206TFF/4 |
| SMD Fuse, Fast-Acting, 5A, 32V DC, 1206 | MP001602 |
| SMD Fuse, Fast-Acting, 7A, 32V DC, 1206 | MCCFB1206TFF/7 |
| SMD Fuse, Fast-Acting, 8A, 32V DC, 1206 | MCCFB1206TFF/8 |
| SMD Fuse, Fast-Acting, 10A, 32V DC, 1206 | MCCFB1206TFF/10 |
| SMD Fuse, Fast-Acting, 12A, 32V DC, 1206 | MCCFB1206TFF/12 |
| SMD Fuse, Fast-Acting, 15A, 32V DC, 1206 | MCCFB1206TFF/15 |
| SMD Fuse, Fast-Acting, 20A, 32V DC, 1206 | MCCFB1206TFF/20 |

Dimensions : Millimetres

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