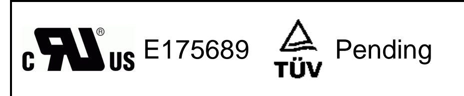
ECE — The Name You Can Trust!

# SURFACE MOUNT PTC
# RSM (1210) MODEL




## FEATURES

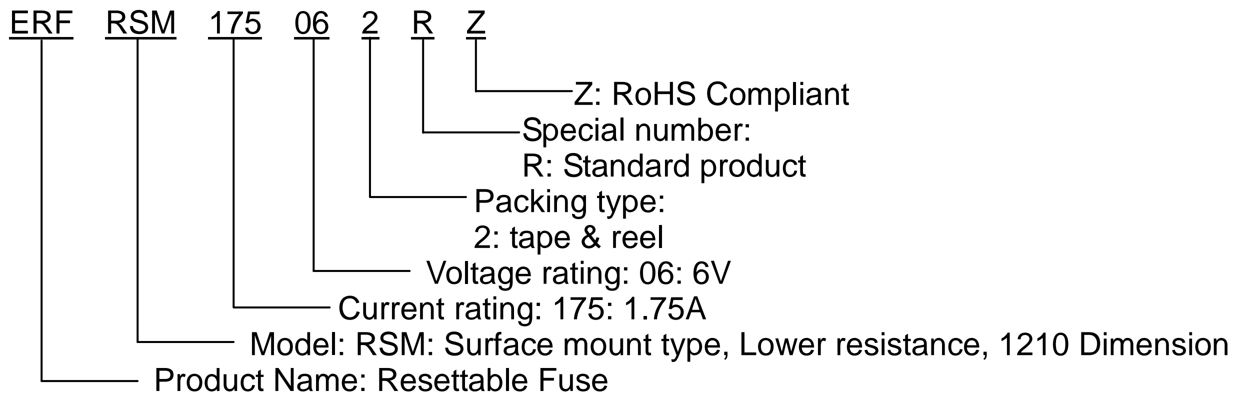
- 1210 Dimension, surface mount, solid state
- Faster time to trip than standard SMD devices
- Lower resistance than standard SMD devices
- Operation current: 1.75A~3.00A
- Maximum voltage: 6Vdc
- Temperature range: -40℃ to 85℃
- Tape and reel available on most models

## APPLICATIONS

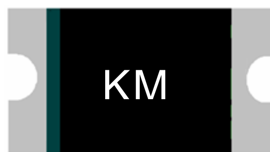
◆ Almost anywhere there High-density boards is a low voltage power supply and a load to be protected including:

- Computers & peripherals
- General electronics
- Automotive applications

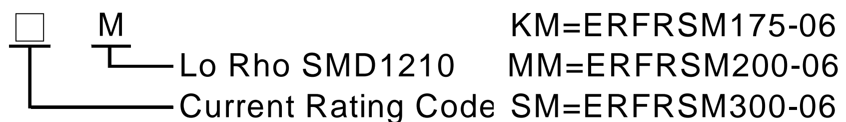
## PART NUMBERING SYSTEM




## Marking system



Example



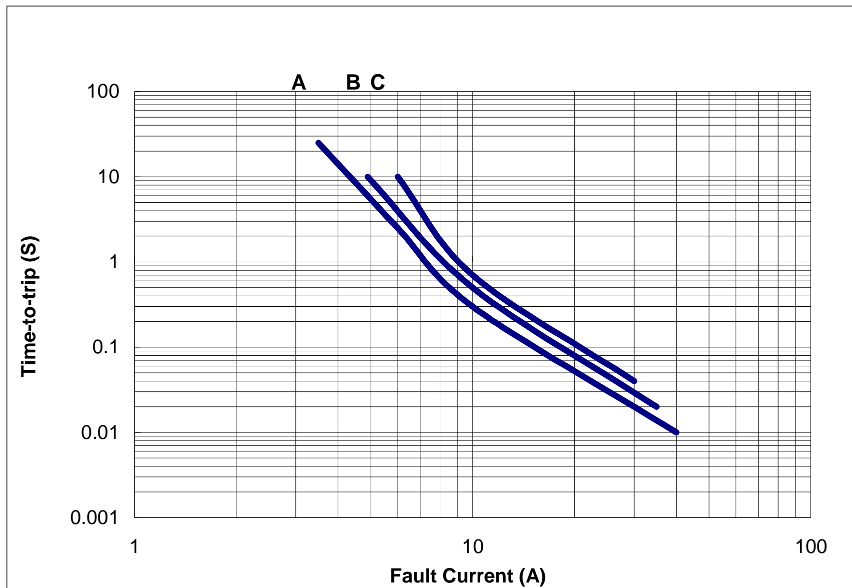

KM=ERFRSM175-06
MM=ERFRSM200-06
SM=ERFRSM300-06

## Electrical characteristics(23℃)

| Part Number | Hold Current | Trip Current | Rated Voltage | Max Current | Typical Power | Max time to trip | | Resistance Tolerance | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Current | Time | RMIN | R1MAX |
| | $I_H$, A | $I_T$, A | $V_{MAX}$, Vdc | $I_{MAX}$, A | Pd, W | Amp | Sec | Ω | Ω |
| RSM175 | 1.75 | 3.50 | 6 | 100 | 1.0 | 8.00 | 2.50 | 0.006 | 0.040 |
| RSM200 | 2.00 | 4.90 | 6 | 100 | 1.0 | 8.00 | 3.00 | 0.005 | 0.024 |
| RSM300 | 3.00 | 8.00 | 6 | 100 | 1.0 | 17.5 | 4.00 | 0.004 | 0.018 |

$I_H$=Hold current-maximum current at which the device will not trip at 23℃ still air.
$I_T$=Trip current-minimum current at which the device will always trip at 23℃ still air.
$V_{MAX}$=Maximum voltage device can withstand without damage at rated current.
$I_{MAX}$= Maximum fault current device can withstand without damage at rated voltage (V max).
Pd=Typical power dissipated from device when in the tripped state in 23℃ still air environment.
$R_{MIN}$=Minimum device resistance at 23℃.
$R1_{MAX}$=Maximum device resistance at 23℃ 1 hour after tripping .

## Typical time-to-trip-at 23℃

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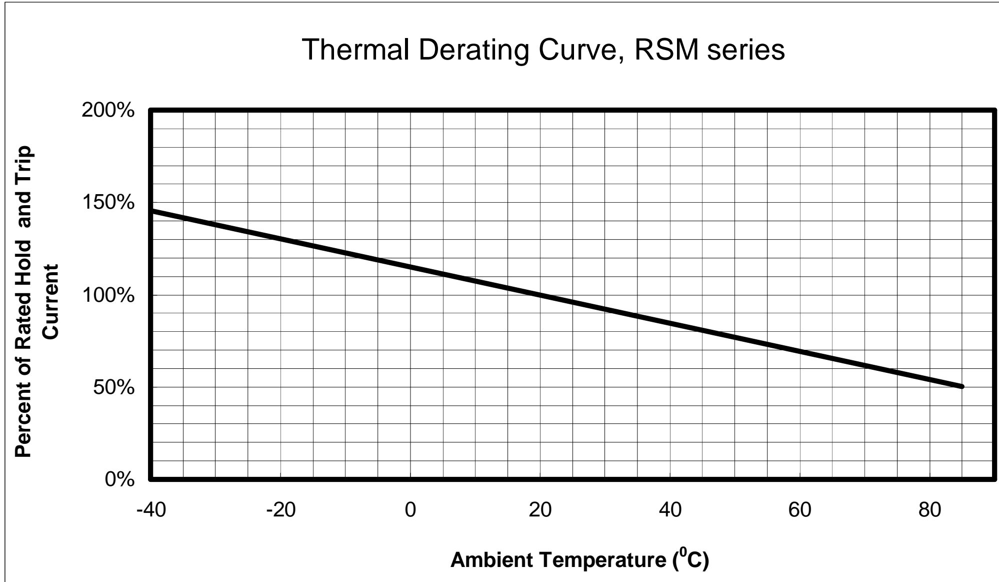
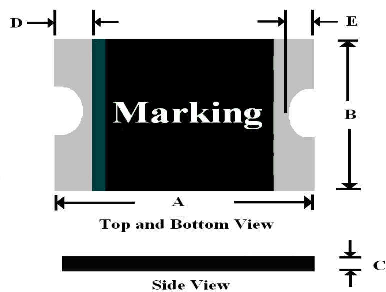
## Thermal Derating Curve




## RSM Product Dimensions (UNIT: mm)

| Part Number | A | | B | | C | | D | | E | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Min | Max | Min | Max | Min | | Min | Max | Min | Max |
| RSM175 | 3.00 | 3.43 | 2.35 | 2.80 | 0.40 | 0.75 | 0.25 | 0.75 | 0.10 | 0.45 |
| RSM200 | 3.00 | 3.43 | 2.35 | 2.80 | 0.40 | 0.75 | 0.25 | 0.75 | 0.10 | 0.45 |
| RSM300 | 3.00 | 3.43 | 2.35 | 2.80 | 0.60 | 1.00 | 0.25 | 0.75 | 0.10 | 0.45 |

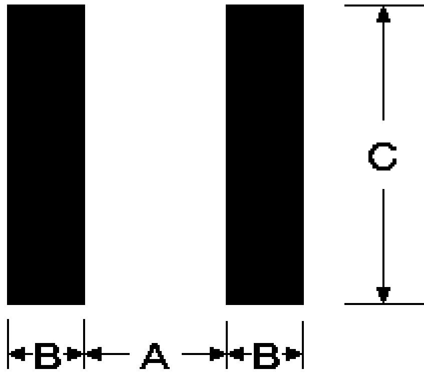



## Standard Package for Reference

| P/N | Reel/Tape | P/N | Reel/Tape |
|---|---|---|---|
| RSM175 | 4.0K | RSM300 | 4.0K |
| RSM200 | 4.0K | | |

## Pad Layouts and Soldering Reflow Recommendations

The dimension in the table below provide the recommended pad layout for each surface mount device




| Pad dimensions(millimeters) | | | |
|---|---|---|---|
| Device | A Nominal | B Nominal | C Nominal |
| SL MODEL | 5.10 | 2.30 | 5.60 |
| SB MODEL | 3.40 | 1.50 | 4.60 |
| SD/RSD MODEL | 3.45 | 1.78 | 3.50 |
| SM/RSM MODEL | 2.00 | 1.00 | 2.80 |
| SN/RSN MODEL | 2.00 | 1.00 | 1.90 |
| SR/RSR MODEL | 1.20 | 1.00 | 1.50 |
| SS/RSS MODEL | 0.80 | 0.60 | 0.80 |

## SOLDERING REFLOW (LEAD FREE)

1.Suggested reflow methods: IR, vapor phase oven, hot air oven.
2.Recommended maximum paste thickness is 0.25mm.
3.Devices are not designed to wave soldered to the bottom side of the board.

## CAUTION

If reflow temperatures exceed the recommended standard, devices may not be able to meet the performance requirements.