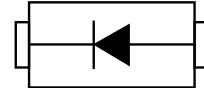


**Feature**

- Ultra Small mold type. SMC
- Low  $I_R$
- High reliability.


**Applications**

- Low current rectification

**Construction**

- Silicon epitaxial planar

**Mechanical Characteristics**

- Lead finish:100% matte Sn(Tin)
- Mounting position: Any
- Qualified max reflow temperature:260°C
- Device meets MSL 1 requirements
- Pure tin plating: 7 ~ 17  $\mu\text{m}$
- Pin flatness :  $\leq 3\text{mil}$

**Electrical characteristics per line@25°C**

| Parameter       | Symbol | Min. | Typ. | Max. | Unit | Conditions       |
|-----------------|--------|------|------|------|------|------------------|
| Forward voltage | $V_F$  | -    | -    | 0.55 | V    | $I_F=3\text{A}$  |
| Reverse current | $I_R$  | -    | -    | 0.5  | mA   | $V_R=40\text{V}$ |

**Absolute maximum rating@25°C**

| Parameter   | Symbol    | limits      | Unit |
|---|-----------|-------------|------|
| Reverse voltage (DC)  | $V_{RM}$  | 40          | V    |
| Average rectified forward current   | $I_o$     | 3           | A    |
| Peak Forward Surge Current 8.3ms Single Half Sine Wave Superimposed on Rated Load | $I_{FSM}$ | 80          | A    |
| Operating Junction temperature Range  | $T_j$     | -55 to 125  | °C   |
| Storage temperature   | $T_{stg}$ | -40 to +125 | °C   |

Typical Characteristics

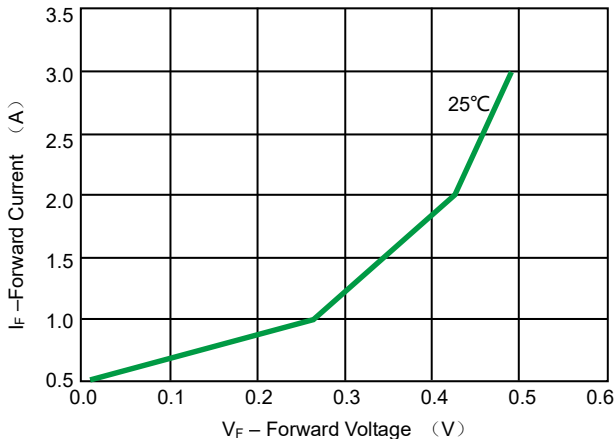


Fig 1. Forward Voltage

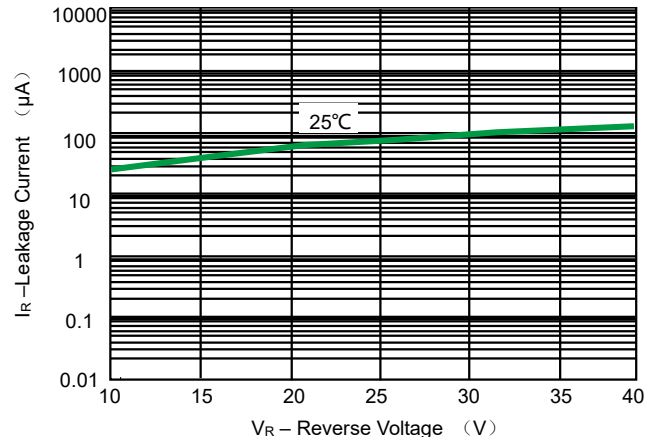


Fig 2. Leakage Current

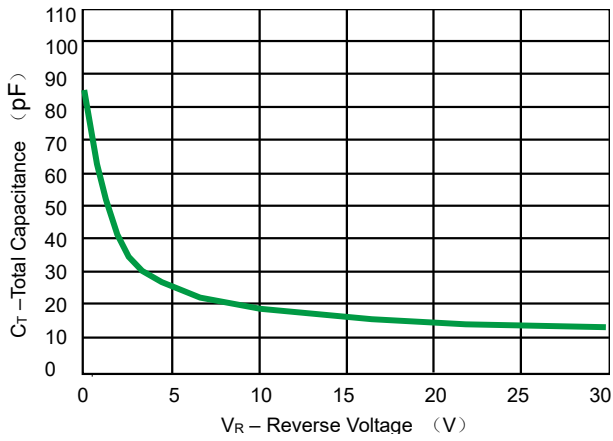
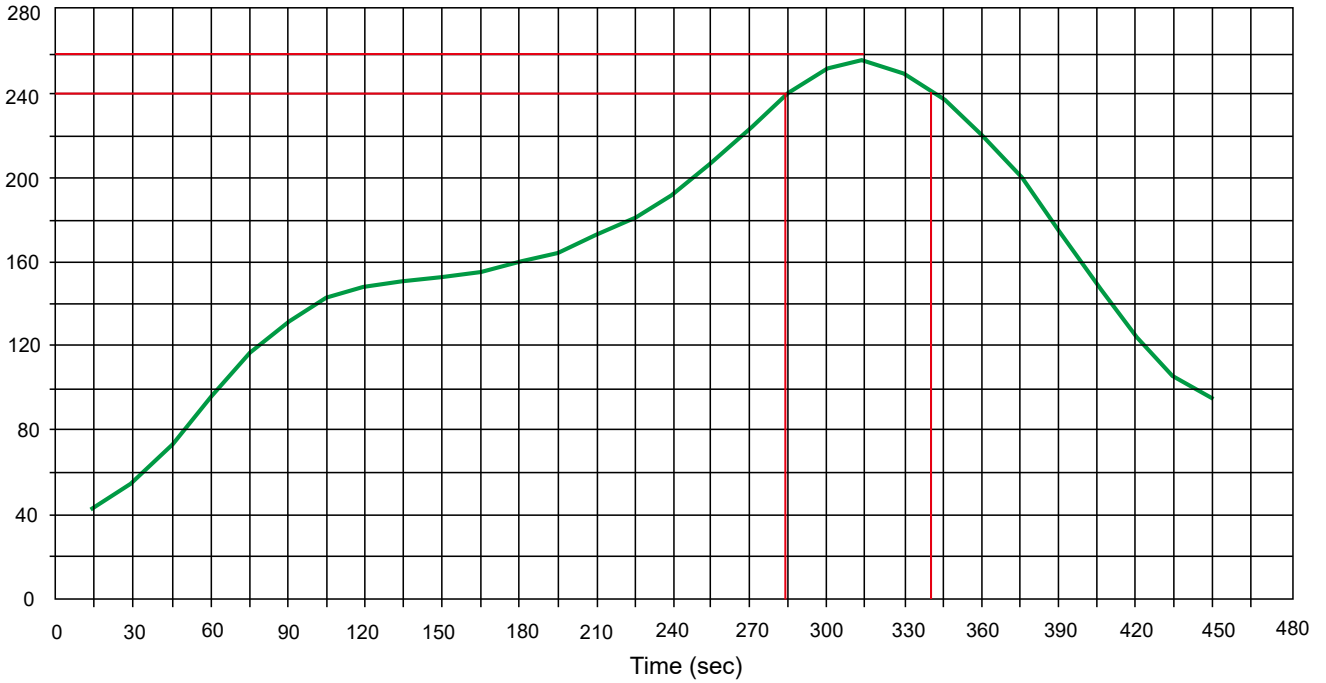


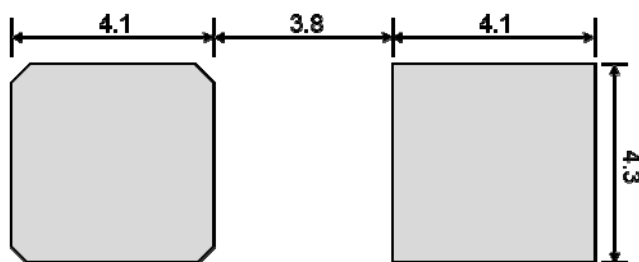
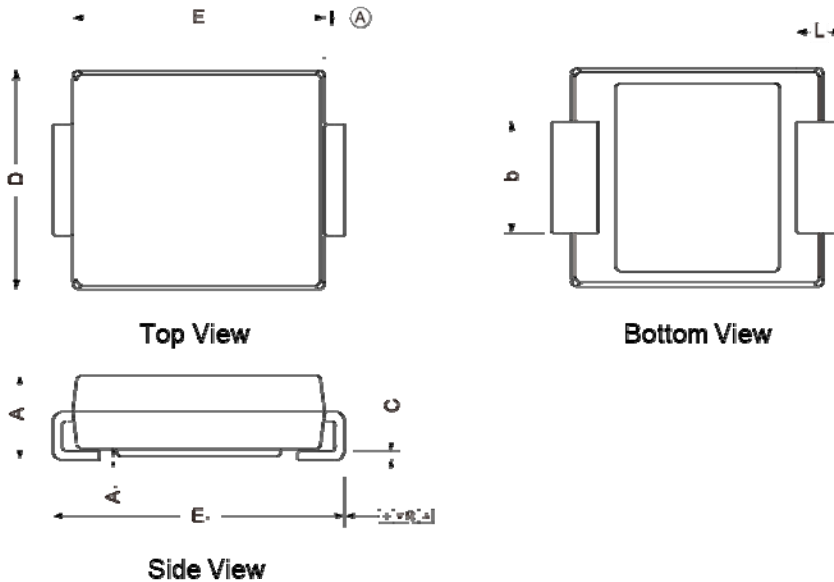
Fig 3. Total Capacitance

Solder Reflow Recommendation

Peak Temp=257°C, Ramp Rate=0.802deg. °C/sec



Product dimension(SMC)



Suggested PCB Layout

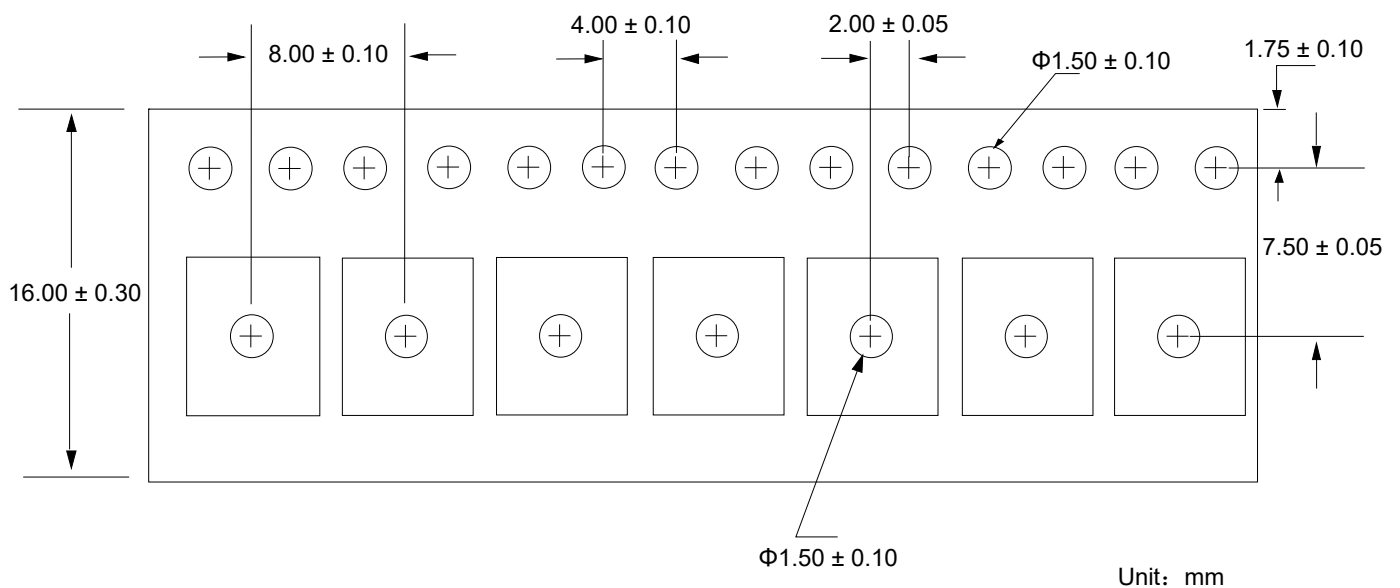
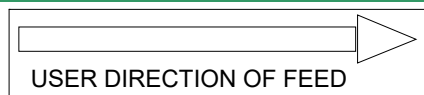
Unit:mm

| Dim            | Millimeters |      | Inches |       |
|----------------|-------------|------|--------|-------|
|                | Min         | Max  | Min    | Max   |
| A              | 2.00        | 2.62 | 0.079  | 0.103 |
| E              | 6.50        | 7.00 | 0.256  | 0.276 |
| D              | 5.60        | 6.20 | 0.220  | 0.244 |
| E <sub>1</sub> | 7.50        | 8.00 | 0.299  | 0.315 |
| A <sub>1</sub> | 0.05        | 0.21 | 0.002  | 0.008 |
| C              | 0.15        | 0.31 | 0.006  | 0.012 |
| L              | 0.90        | 1.60 | 0.035  | 0.063 |
| b              | 2.75        | 3.25 | 0.108  | 0.128 |


Ordering information

| Device    | Package       | Reel | Shipping           |
|-----------|---------------|------|--------------------|
| PSBDC40V3 | SMC (Pb-Free) | 13"  | 3000 / Tape & Reel |

Load with information




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