

### 描述 / Descriptions

表面贴装整流二极管，反向电压：50V~1000V，正向电流：3.0A，SMC封装。  
Surface Mount General Purpose Silicon Rectifiers, Reverse Voltage：50 to1000V,Forward Current:3.0A ,SMC thin package.

### 特征 / Features

玻璃钝化芯片，无铅符合欧盟 RoHS 指令 2011/65/EU，适用表面贴装。无卤产品。  
Glass Passivated Chip Junction, Lead free in comply with EU RoHS 2011/65/EU directives, For surface mounted applications. Halogen free product.

### 用途 / Applications

一般用途。  
General purpose.

### 内部等效电路 / Equivalent Circuit

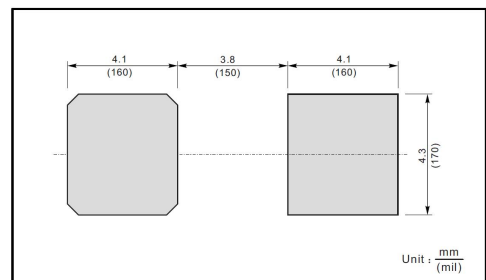


### 引脚排列 / Pinning



| PIN | DESCRIPTION |
|-----|-------------|
| 1   | Cathode     |
| 2   | Anode       |

The recommended mounting pad size



### 印章代码 / Marking

见印章说明。 See Marking Instructions.

**极限参数 / Absolute Maximum Ratings(Ta=25°C)**

| 参数<br>Parameter  | 符号<br>Symbol    | 数值<br>Rating |      |      |      |      |      |      | 单位<br>Unit |
|--|-----------------|--------------|------|------|------|------|------|------|------------|
|  |                 | S3AC         | S3BC | S3DC | S3GC | S3JC | S3KC | S3MC |            |
| Maximum Repetitive Peak Reverse Voltage  | $V_{RRM}$       | 50           | 100  | 200  | 400  | 600  | 800  | 1000 | V          |
| Maximum RMS voltage  | $V_{RMS}$       | 35           | 70   | 140  | 280  | 420  | 560  | 700  | V          |
| Maximum DC Blocking Voltage  | $V_{DC}$        | 50           | 100  | 200  | 400  | 600  | 800  | 1000 | V          |
| Maximum Average Forward Rectified Current  | $I_{F(AV)}$     | 3.0          |      |      |      |      |      |      | A          |
| Peak Forward Surge Current 8.3 ms Single Half Sine Wave Superimposed on Rated Load | $I_{FSM}$       | 90           |      |      |      |      |      |      | A          |
| Typical Junction Capacitance at VR=4V f=1MHz                                       | $C_j$           | 40           |      |      |      |      |      |      | pF         |
| Typical Thermal Resistance <sup>1)</sup>   | $R_{\theta JA}$ | 40           |      |      |      |      |      |      | °C/W       |
|  | $R_{\theta JC}$ | 16           |      |      |      |      |      |      |            |
| Operating and Storage Temperature Range  | $T_j, T_{stg}$  | -55~+150     |      |      |      |      |      |      | °C         |

Note:

1) P.C.B. mounted with 2.0 X 2.0" (5 X5 cm) copper pad areas.

**电性能参数 / Electrical Characteristics(Ta=25°C)**

| 参数<br>Parameter   | 符号<br>Symbol | 测试条件<br>Test Conditions | 数值<br>Rating |      |      |      |      |      |      | 单位<br>Unit |
|---|--------------|-------------------------|--------------|------|------|------|------|------|------|------------|
|   |              |                         | S3AC         | S3BC | S3DC | S3GC | S3JC | S3KC | S3MC |            |
| Maximum Instantaneous Forward Voltage                   | $V_F$        | $I_F=3.0A$              | 1.0          |      |      |      |      |      |      | V          |
| Maximum DC Reverse Current at Rated DC Blocking Voltage | $I_R$        | $T_a=25^\circ C$        | 5.0          |      |      |      |      |      |      | $\mu A$    |
|   |              | $T_a=125^\circ C$       | 100          |      |      |      |      |      |      | $\mu A$    |

电参数曲线图 / Electrical Characteristic Curve

Fig.1 Forward Current Derating Curve

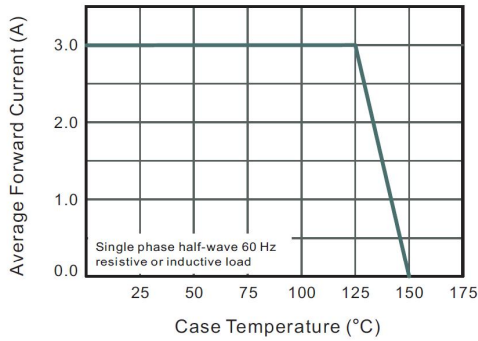


Fig.2 Typical Reverse Characteristics

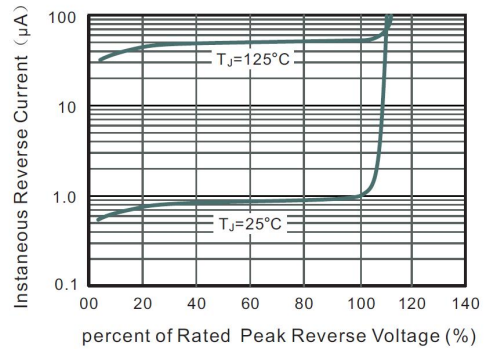


Fig.3 Typical Forward Characteristic

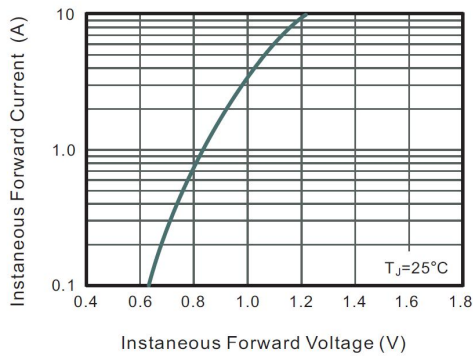


Fig.4 Typical Junction Capacitance

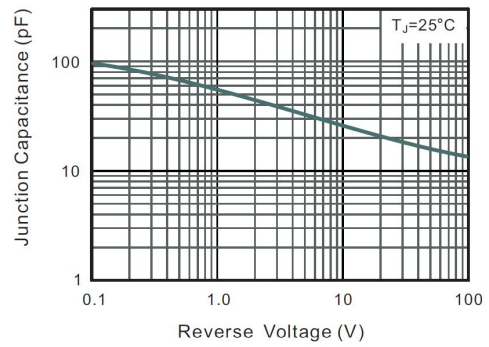
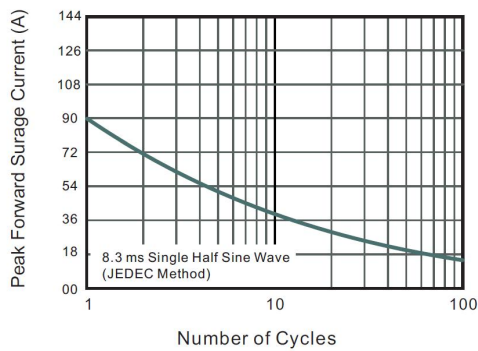
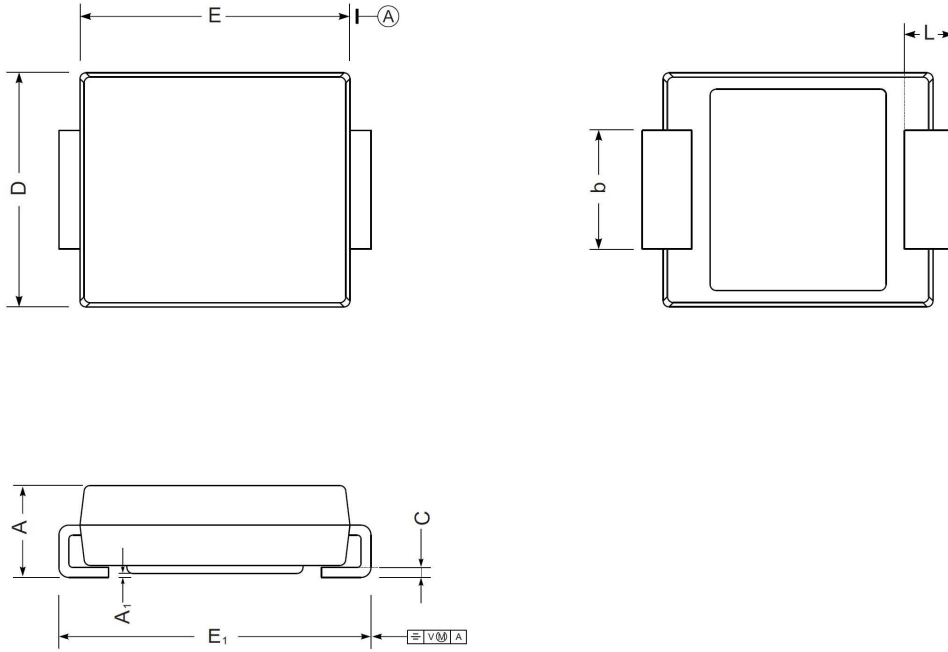


Fig.6 Maximum Non-Repetitive Peak Forward Surge Current



外形尺寸图 / Package Dimensions

SMC



SMC mechanical data

| UNIT |     | A    | E   | D   | E <sub>1</sub> | A <sub>1</sub> | C    | L   | b    |
|------|-----|------|-----|-----|----------------|----------------|------|-----|------|
| mm   | max | 2.62 | 7.0 | 6.2 | 8.0            | 0.21           | 0.31 | 1.6 | 3.25 |
|      | min | 2.00 | 6.5 | 5.6 | 7.6            | 0.05           | 0.15 | 0.9 | 2.75 |
| mil  | max | 103  | 276 | 244 | 315            | 8.3            | 12   | 63  | 128  |
|      | min | 79   | 256 | 220 | 299            | 2.0            | 5.9  | 35  | 108  |

## Marking

| Type number | Marking code |
|-------------|--------------|
| S3AC        | S3A          |
| S3BC        | S3B          |
| S3DC        | S3D          |
| S3GC        | S3G          |
| S3JC        | S3J          |
| S3KC        | S3K          |
| S3MC        | S3M          |

印章说明 / Marking Instructions



说明：

S3A： 为型号代码

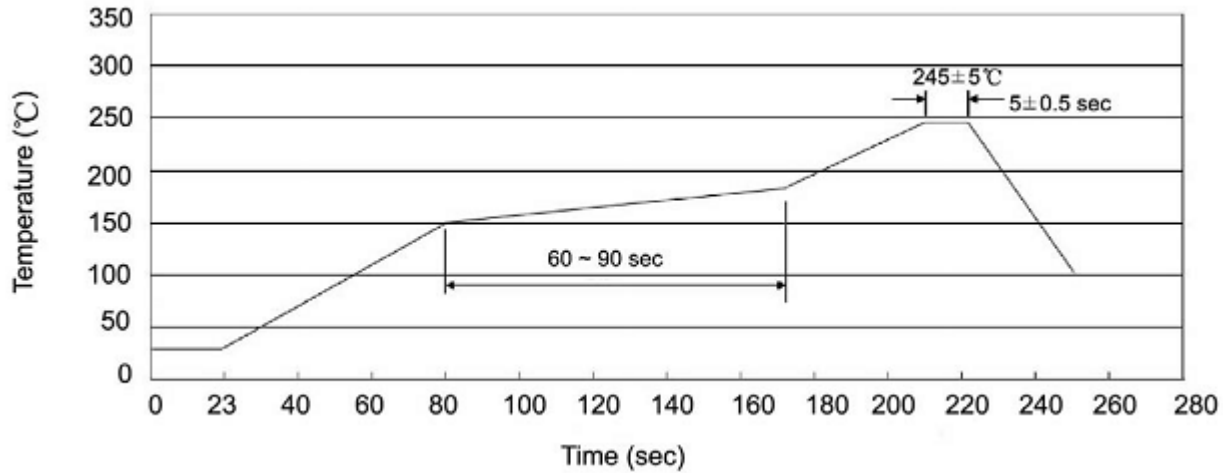
\*\*\*\*： 为生产批号追溯码，第1个\*为年月代码，后面3个\*为当月小批号代码

Note:

S3A： Product Type Code

\*\*\*\*： Lot No. Code ,The 1st \* means:YM Code ,The last 3 \* means:little Lot No Code

**回流焊温度曲线图(无铅) / Temperature Profile for IR Reflow Soldering(Pb-Free)**



说明：

- 1、预热温度 25 ~ 150°C，时间 60 ~ 90sec;
- 2、峰值温度 245±5°C，时间持续为 5±0.5sec;
- 3、焊接制程冷却速度为 2 ~ 10°C/sec.

Note:

- 1.Preheating:25~150°C, Time:60~90sec.
- 2.Peak Temp.:245±5°C, Duration:5±0.5sec.
3. Cooling Speed: 2~10°C/sec.

**耐焊接热试验条件 / Resistance to Soldering Heat Test Conditions**

温度：260±5°C

时间：10±1 sec.

Temp.:260±5°C

Time:10±1 sec

**包装规格 / Packaging SPEC.**

卷盘包装 / REEL

| Package Type<br>封装形式 | Units 包装数量         |                         |                        |                              |                        | Dimension 包装尺寸 (unit: mm <sup>3</sup> ) |             |             |
|----------------------|--------------------|-------------------------|------------------------|------------------------------|------------------------|---|-------------|-------------|
|                      | Units/Reel<br>只/卷盘 | Reels/Inner Box<br>卷盘/盒 | Units/Inner Box<br>只/盒 | Inner Boxes/Outer Box<br>盒/箱 | Units/Outer Box<br>只/箱 | Reel                                    | Inner Box 盒 | Outer Box 箱 |
| SMC                  | 3000               | 2                       | 6000                   | 6                            | 36000                  | 13" ×16                                 | 337X337X49  | 380X335X366 |

**使用说明 / Notices**