

# SS32C~SS320C

Rev. B Feb.-2021

## 描述 / Descriptions

表面贴装肖特基整流二极管，反向电压：20~200V，正向电流：3.0A，SMC 封装。

Surface Mount Schottky Barrier Rectifier, Reverse Voltage: 20 to 200 V, Forward Current:3.0A ,SMC package.

## 特征 / Features

低功耗，高效率，正向浪涌电流大，适用于低压高频逆变器和极性保护，适用于表面贴装，无卤产品。

Low power loss, high efficiency, High forward surge current capability, For use in low voltage, high frequency inverters, and polarity protection applications,For surface mounted applications.Halogen free product.

## 用途 / Applications

一般用途.

General purpose.

## 内部等效电路 / Equivalent Circuit

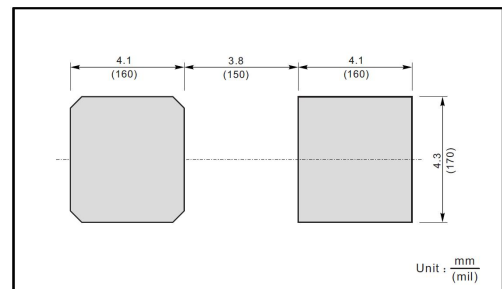


## 引脚排列 / Pinning



| 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 |
|---|-----------------|--------------|-------|-------|-------|--------|--------|--------|--------|------------|
|   |                 | SS32C        | SS34C | SS36C | SS38C | SS310C | SS312C | SS315C | SS320C |            |
| Maximum Repetitive Peak Reverse Voltage   | $V_{RRM}$       | 20           | 40    | 60    | 80    | 100    | 120    | 150    | 200    | V          |
| Maximum RMS voltage   | $V_{RMS}$       | 14           | 28    | 42    | 56    | 70     | 84     | 105    | 140    | V          |
| Maximum DC Blocking Voltage   | $V_{DC}$        | 20           | 40    | 60    | 80    | 100    | 120    | 150    | 200    | V          |
| Maximum Average Forward Rectified Current   | $I_{F(AV)}$     | 3.0          |       |       |       |        |        |        |        | A          |
| Peak Forward Surge Current, 8.3ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method) | $I_{FSM}$       | 80           |       |       |       |        |        |        |        | A          |
| Typical Junction Capacitance <sup>1)</sup>  | $C_i$           | 450          |       |       | 350   |        |        |        |        | pF         |
| Typical Thermal Resistance <sup>2)</sup>  | $R_{\theta JA}$ | 50           |       |       |       |        |        |        |        | °C/W       |
| Operating Junction Temperature Range  | $T_j$           | -55~+150     |       |       |       |        |        |        |        | °C         |
| Storage Temperature Range   | $T_{stg}$       | -55~+150     |       |       |       |        |        |        |        | °C         |

Note:

- 1) Measured at 1MHz and applied reverse voltage of 4 V D.C.
- 2) P.C.B. mounted with 2.0 X 2.0" (5 X 5 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 |
|--|--------------|-------------------------|--------------|-------|-------|-------|--------|--------|--------|--------|------------|
|  |              |                         | SS32C        | SS34C | SS36C | SS38C | SS310C | SS312C | SS315C | SS320C |            |
| Max Instantaneous Forward Voltage                      | $V_F$        | $I_F=3.0A$              | 0.55         |       | 0.70  | 0.85  |        |        | 0.95   | V      |            |
| Maximum DC Reverse Current at Rated DC Reverse Voltage | $I_R$        | $T_a=25^\circ C$        | 0.5          |       |       | 0.3   |        |        |        |        | mA         |
|  |              | $T_a=100^\circ C$       | 5.0          |       |       | 3.0   |        |        |        |        |            |

电参数曲线图 / Electrical Characteristic Curve

Fig.1 Forward Current Derating Curve

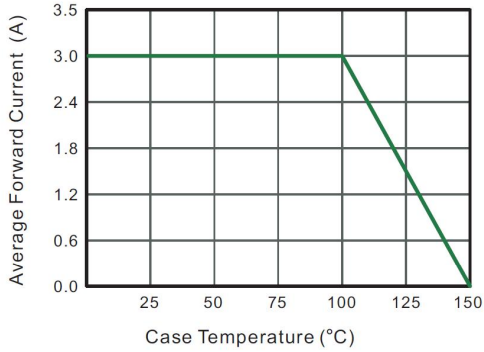


Fig.2 Typical Reverse Characteristics

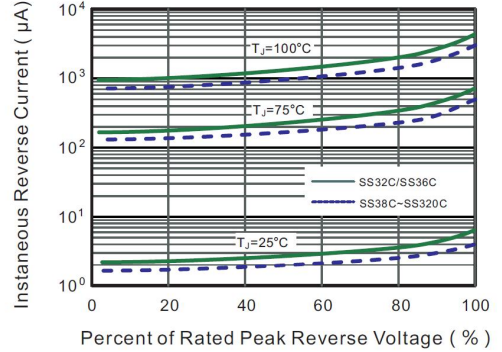


Fig.3 Typical Forward Characteristic

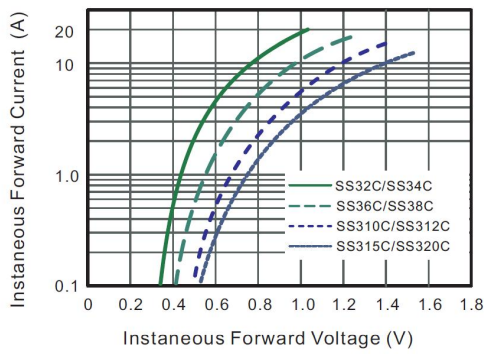


Fig.4 Typical Junction Capacitance

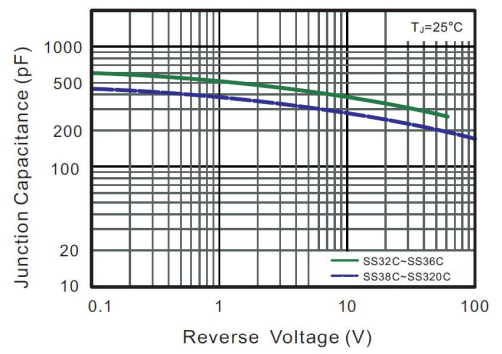


Fig.5 Maximum Non-Repetitive Peak Forward Surge Current

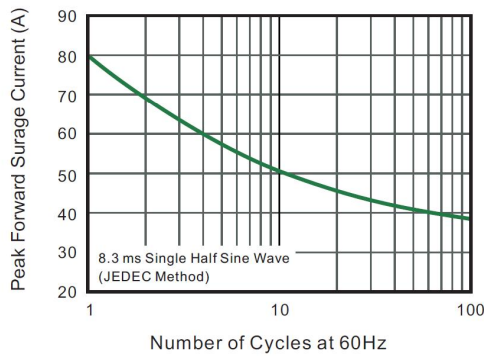
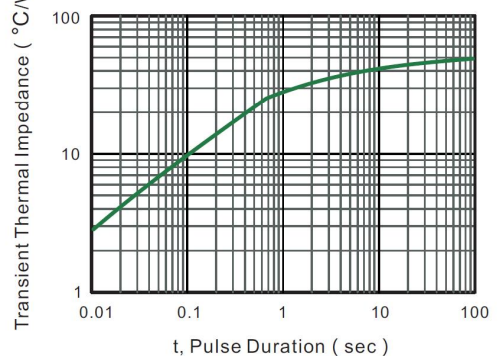
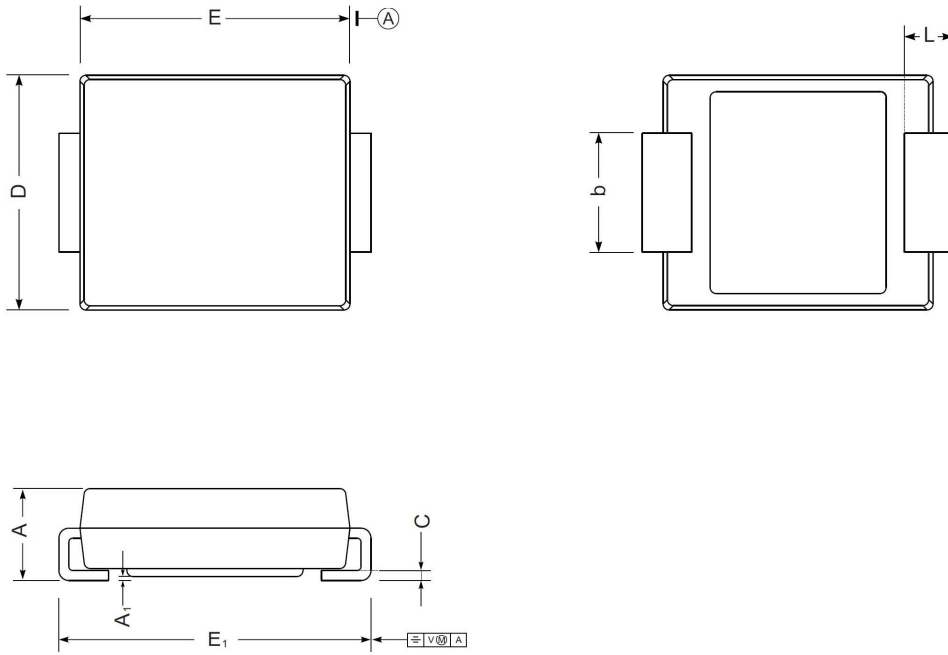


Fig.6- Typical Transient Thermal Impedance



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 |
|-------------|--------------|
| SS32C       | SS32         |
| SS34C       | SS34         |
| SS36C       | SS36         |
| SS38C       | SS38         |
| SS310C      | SS310        |
| SS312C      | SS312        |
| SS315C      | SS315        |
| SS320C      | SS320        |

印章说明 / Marking Instructions



说明

SS32 : 为型号代码

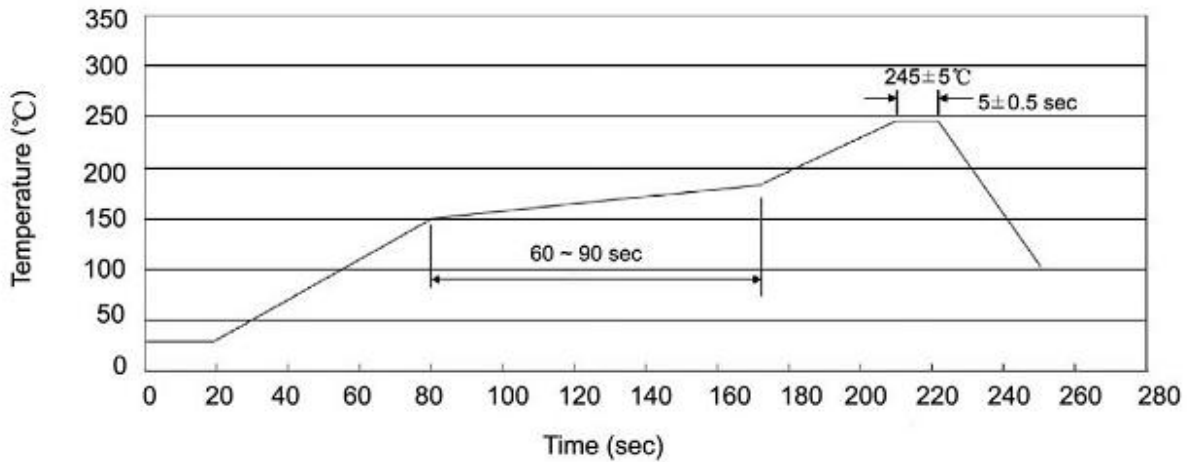
\*\*\*\* : 为生产批号追溯码, 第 1 个\*为年月代码, 后面 3 个\*为当月小批号代码

Note:

SS32 : 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 150 ~ 180°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:150~180°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**

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