

/ Revised record

| Rev. No. | Rev. Date | Rev. Content | Rev. Description | Rev. Impact | Rev. Reference |
|----------|------------|--------------|---|-------------|----------------|
| E | 2017-11 | | | | |
| F | 2019-3-15 | ALL | \$ % & ' M1~M7 () ' SMAF ' * † Ž + , ' 1- % & * . S1AF~S1MF/ 2- 0 1 * . S1MF/****/ 2 3 4 5 | 6 7 8 | 9 : ; |
| G | 2019-6-4 | 1- 4- 6 | < = > ? @ < A B C D E () F G H I D - 0 1 D | 6 7 8 | J : K |
| H | 2020-3-23 | 5- 6 | 0 1 L M F | N O | J : K |
| I | 2021-11-17 | 2 | C _j =9pF* . C _j =15pF R _{JA} =115°C/W改为R _{JA} =80°C/W增 加R _{JC} , 更新参数曲线图、回流 焊图。 | N O | J : K |
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/ Descriptions

表面贴装整流二极管，反向电压：50V~1000V，正向电流：1.0A，薄型 SMAF 封装。

Surface Mount General Purpose Silicon Rectifiers,Reverse Voltage:50 to1000V,Forward Current:1.0A,SMAF thin package.

/ Features

玻璃钝化芯片，无铅符合欧盟 RoHS 指令 2011/65/EU；适用于表面贴装，便于优化设计。无卤产品。
Glass Passivated Chip Junction,Lead free in comply with EU RoHS 2011/65/EU directives,For surface mounted applications,Easy to pick and place.Halogen free product.

/ Applications

一般用途。

General purpose.

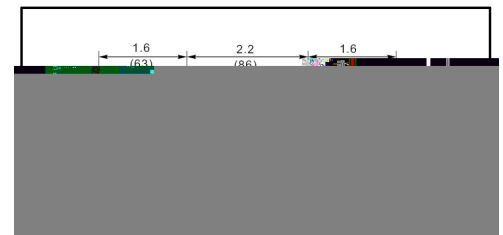
/ Equivalent Circuit



/ Pinning



The recommended mounting pad size



/ Marking

见印章说明。 See Marking Instructions.

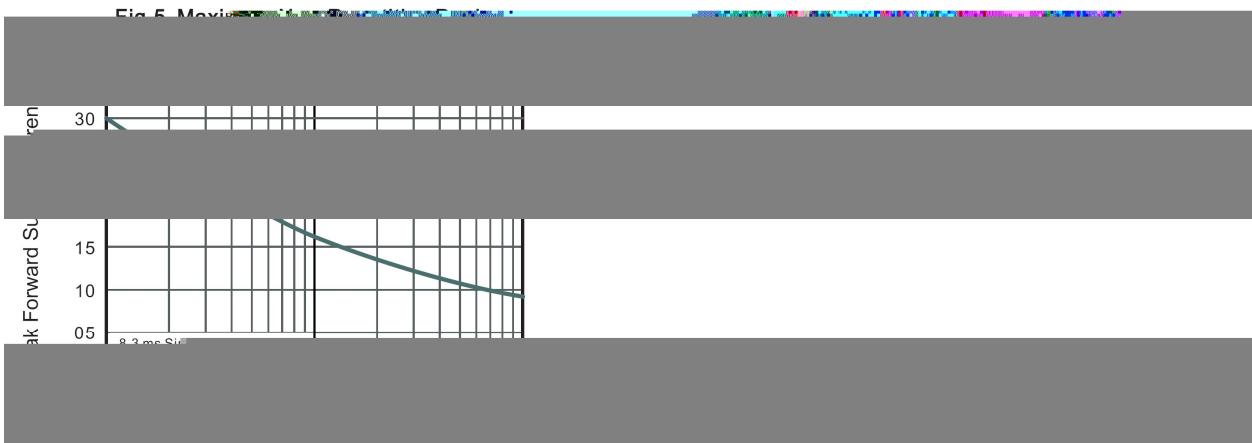
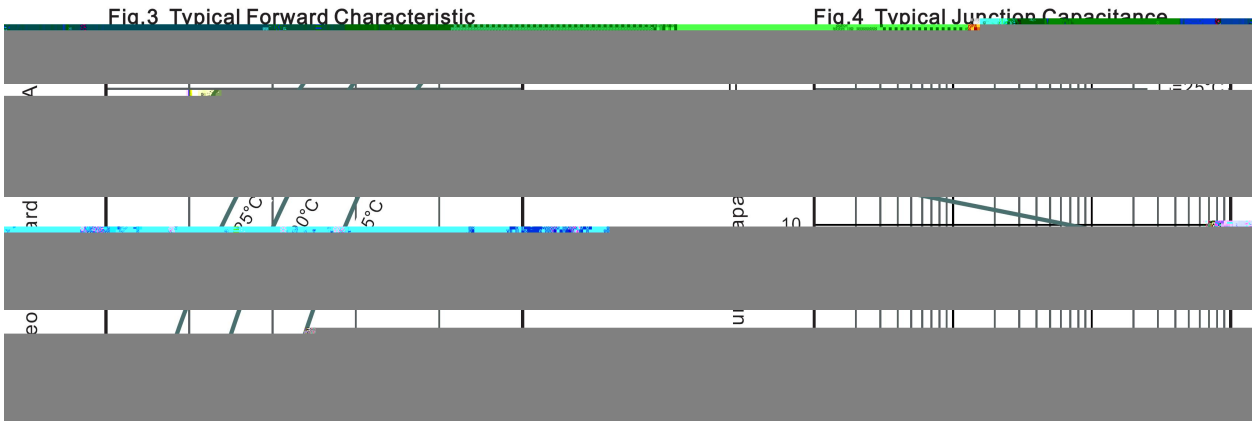
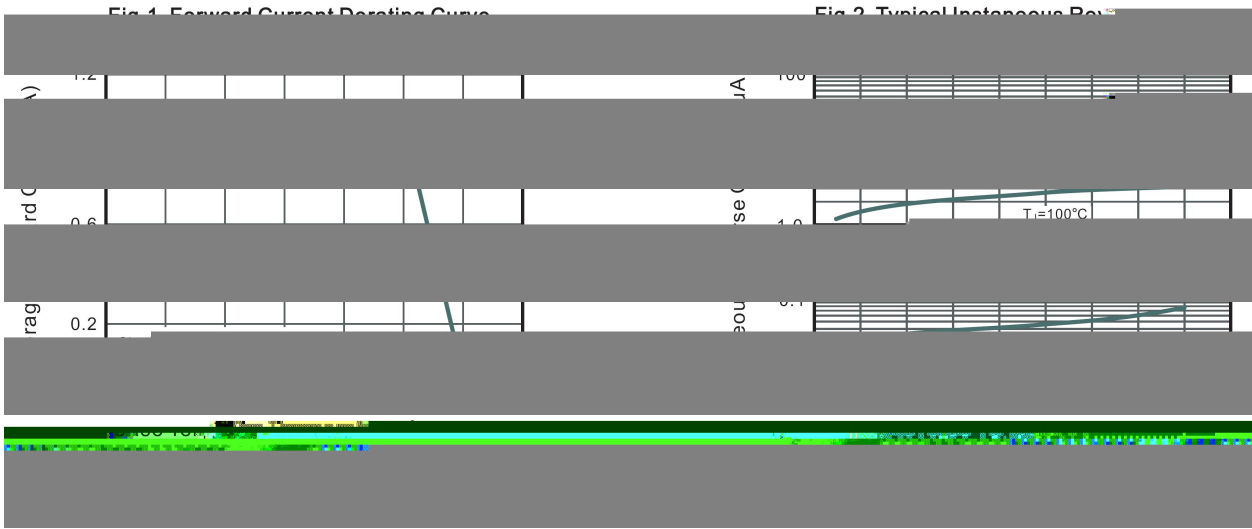
| 参数 Parameter | 符号 Symbol | 数值 Rating | | | | | | | 单位 Unit |
|--|----------------------|--------------|------|------|------|------|------|------|---------------------------|
| | | S1AF | S1BF | S1DF | S1GF | S1JF | S1KF | S1MF | |
| Maximum Repetitive Peak Reverse Voltage | V_{RRM} | 50 | 100 | 200 | 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 at $T_a = 65^\circ\text{C}$ | $I_{F(AV)}$ | 1.0 | | | | | | | A |
| Peak Forward Surge Current 8.3ms Single Half Sine Wave Superimposed on Rated Load (JEDEC Method) | I_{FSM} | 30 | | | | | | | A |
| Typical Junction Capacitance ¹⁾ | C_j | 15 | | | | | | | pF |
| Typical Thermal Resistance ²⁾ | R_{JA} R_{JC} | 80 27 | | | | | | | $^\circ\text{C}/\text{W}$ |
| Operating and Storage Temperature Range | T_j, T_{stg} | -55~+150 | | | | | | | $^\circ\text{C}/\text{W}$ |

Note:

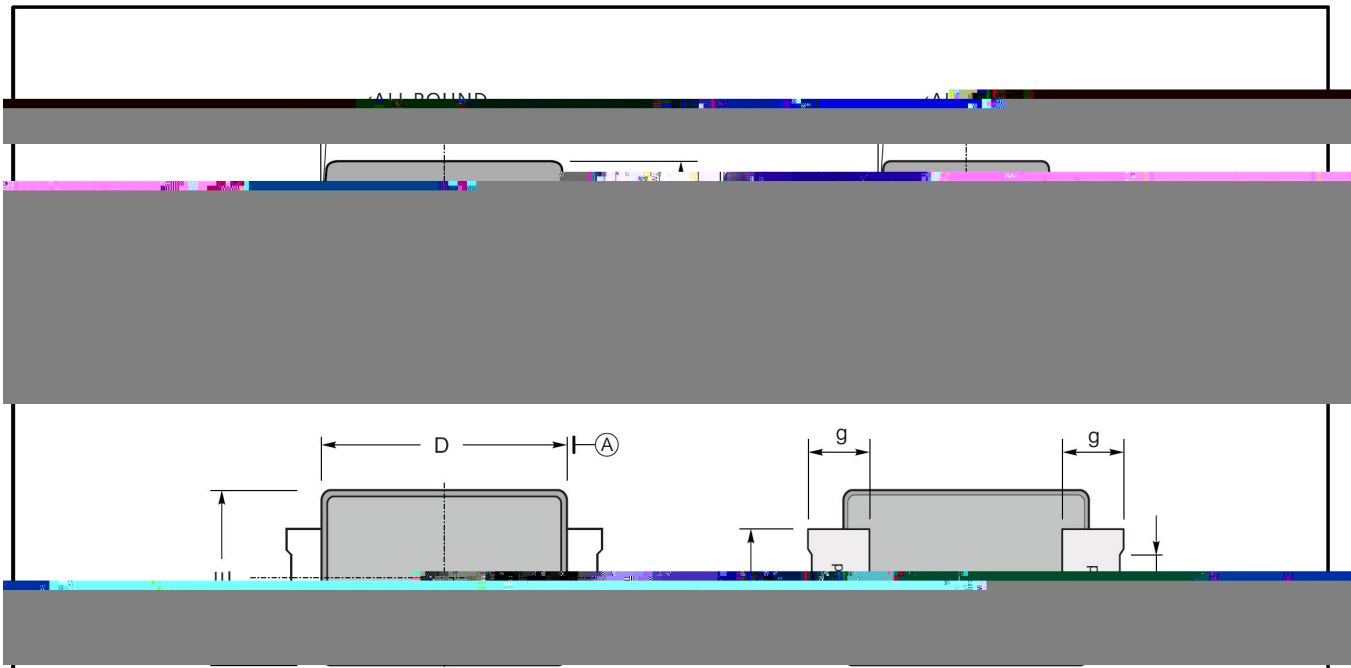
- 1). Measured at 1 MHz and applied reverse voltage of 4 V.D.C
- 2). P.C.B. mounted with 0.2X0.2"(5X5mm) copper pad areas.

| 参数 Parameter | 符号 Symbol | 测试条件 Test Conditions | 数值 Rating | | | | | | 单位 Unit |
|---|--------------|-------------------------|--------------|------|------|------|------|------|---------------|
| | | | S1AF | S1BF | S1DF | S1GF | S1JF | S1KF | |
| Maximum Instantaneous Forward Voltage | V_F | $I_F=1.0\text{A}$ | 1.1 | | | | | | V |
| Maximum DC Reverse Current at Maximum DC Blocking Voltage | I_R | $T_a=25^\circ\text{C}$ | 5.0 | | | | | | μA |
| | | $T_a=125^\circ\text{C}$ | 50 | | | | | | μA |

/ Electrical Characteristic Curve



/ Package Dimensions



Top View

Bottom View

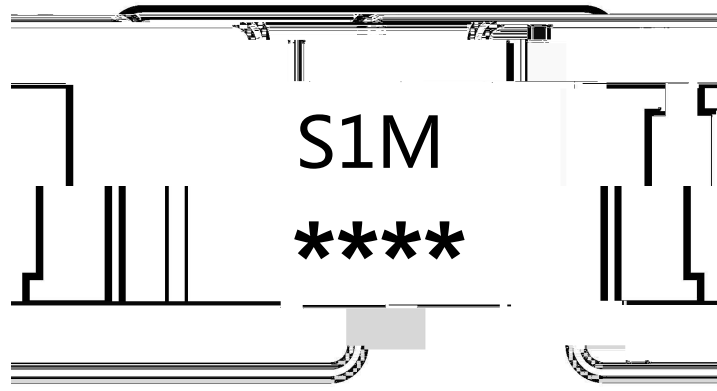
| UNIT | | A | C | D | E | e | g | H _E | b | ∠ |
|------|-----|-----|------|-----|-----|-----|-----|----------------|------|---|
| | max | 1.2 | 0.20 | 3.7 | 2.7 | 1.6 | 1.2 | 4.9 | 1.05 | |
| | min | 0.9 | 0.12 | 3.3 | 2.4 | 1.3 | 0.8 | 4.4 | 0.65 | |

/ Marking Instructions

Marking

| Marking code | Type number | M |
|--------------|-------------|---|
| S1A | S1AF | |
| S1B | S1BF | |
| S1DF | S1D | |
| S1GF | S1G | |
| S1JF | S1J | |
| S1KF | S1K | |
| S1M | S1MF | |

/ Marking Instructions



S1M

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3

Note:

S1M

Product Type Code

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

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Note:

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|---|---------|-----------|--|
| 1 | 150 180 | 60 90sec; | 1.Preheating:150~180°C, Time:60~90sec. |
| 2 | 245±5 | 5±0.5sec; | 2.Peak Temp.:245±5°C, Duration:5±0.5sec. |
| 3 | 2 | 10°C/sec. | 3. Cooling Speed: 2~10°C/sec. |

/ Resistance to Soldering Heat Test Conditions

260±5°C 10±1 sec. Temp.:260±5°C Time:10±1 sec

/ Packaging SPEC.

/ REEL

| Package Type | Units | Dimension (unit mm ³) |
|----------------|---------------------------------------|-----------------------------------|
| 只 卷盘 卷盘 盒 | 只 盒 盒 箱 只 箱 | |